

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

Thirty-seventh Monthly EM&A Report

13 December 2016

Environmental Resources Management
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Contract No. HY/2012/07





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

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Thirty-seventh Monthly EM&A Report

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Client: Gammon		Project No: 0215660			
Summary: This document presents the Thirty-seventh Monthly EM&A Report for Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section.		Date: 13 December 2016			
		Approved by: 			
		Mr Craig Reid Partner			
		Certified by: 			
		Mr Jovy Tam ET Leader			
	Thirty-seventh Monthly EM&A Report	VAR	JT	CAR	13/12/16
Revision	Description	By	Checked	Approved	Date
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Ref.: HYDHZMBEEM00_0_4853L.16

15 December 2016

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

By Fax (3691 2899) and By Post

Attention: Mr. Daniel Ip

Dear Mr. Ip,

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

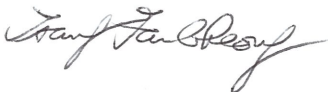
**Contract No. HY/2012/07 TM-CLKL Southern Connection Viaduct
Section
37th Monthly EM&A Report for November 2016 (EP-354/2009/D)**

Reference is made to the Monthly Environmental Monitoring and Audit (EM&A) Report (Nov. 2016) (ET's ref.: "0215660_37th Monthly EM&A_20161213.doc" dated 13 Dec. 2016) certified by the ET Leader and provided to us via e-mail on 15 Dec. 2016.

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

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

Yours sincerely,



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

c.c. HyD – Mr. Stephen Chan (By Fax: 3188 6614)
HyD – Mr. 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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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 Thirty-seventh Monthly EM&A report presenting the EM&A works carried out during the period from 1 to 30 November 2016 for the Southern Connection Viaduct Section in accordance with the Updated EM&A Manual of the TM-CLK Link Project. As informed by the Contractor, major activities in the reporting period included:

Marine Works

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

- Installation of deck segment and pier head segment.

Land-based Works

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

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

24-hour TSP Monitoring	6 sessions
1-hour TSP Monitoring	6 sessions
Noise Monitoring	6 sessions
Impact Water Quality Monitoring	13 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

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

Impact Dolphin Monitoring

One (1) Limit Level exceedance was observed for the quarterly dolphin monitoring data between September and November 2016, whilst no unacceptable impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Chinese White Dolphins was noticeable from general observations. Due to monthly variation in dolphin occurrence within the study area, it would be more appropriate to draw conclusion on whether any impacts on dolphins have been detected related to

the construction activities of the TM-CLKL Southern Connection Viaduct Section in the quarterly EM&A reports, where comparison on distribution, group size and encounter rates of dolphins between the quarterly impact monitoring period and baseline monitoring period will be made.

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

Environmental Complaints, Non-compliance & Summons

There was one (1) complaint received from EPD on 9 November 2016 regarding muddy plume caused by a barge's propeller wash near Tung Chung New Development Ferry Pier in the reporting period. Upon investigation, the complaint is considered not related to this Project.

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

Reporting Change

There was no reporting change in the reporting period.

Upcoming Works for the Next Reporting Period

Works to be undertaken in the next monitoring period of December 2016 include the following:

Marine Works

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

Land-based Works

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

Future Key Issues

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

1.1

BACKGROUND

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

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

Under *Contract No. HY/2012/07*, Gammon Construction Limited (GCL) is commissioned by the Highways Department (HyD) to undertake the design and construction of the Southern Connection Viaduct Section of TM-CLKL ("the Contract") while AECOM Asia Company Limited was appointed by HyD as the Supervising Officer. For implementation of the environmental monitoring and audit (EM&A) programme under the Contract, ERM-Hong Kong, Limited (ERM) has been appointed as the Environmental Team (ET). Ramboll Environ Hong Kong Ltd. was employed by HyD as the Independent Environmental Checker (IEC) and Environmental Project Office (ENPO) in accordance with *Environmental Permit No. EP-354/2009/A*. Further applications for variation of environmental permit (VEP), *EP-354/2009/B*, *EP-354/2009/C* and *EP-354/2009/D*, were granted on 28 January 2014, 10 December 2014 and 13 March 2015, respectively.

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

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

1.2 SCOPE OF REPORT

This is the Thirty-seventh 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 November 2016.

1.3 ORGANIZATION STRUCTURE

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

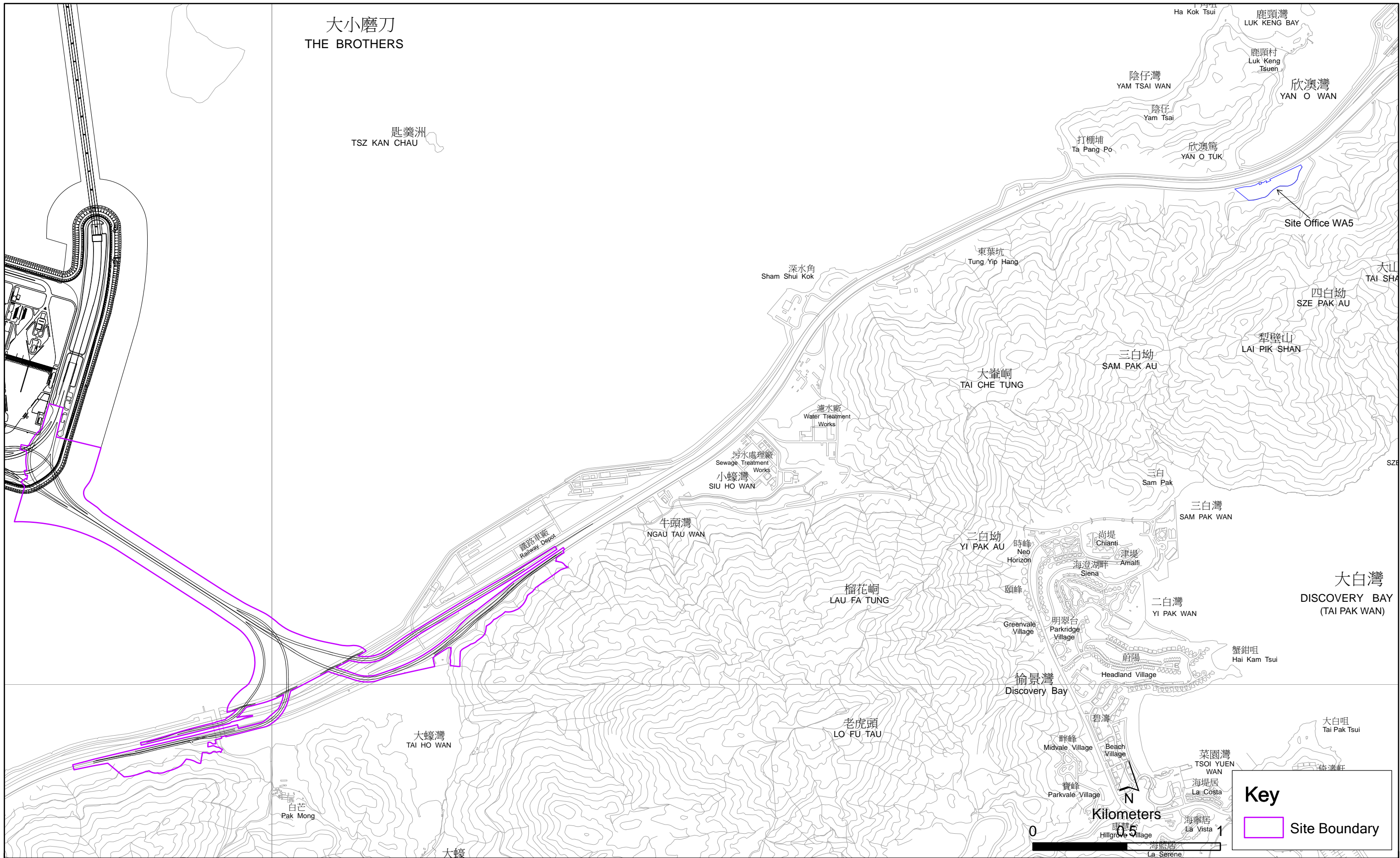


Figure 1.1

General Layout Plan of the Project

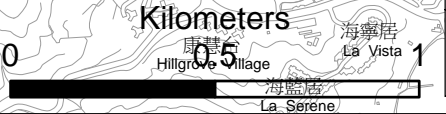
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Environmental
Resources
Management

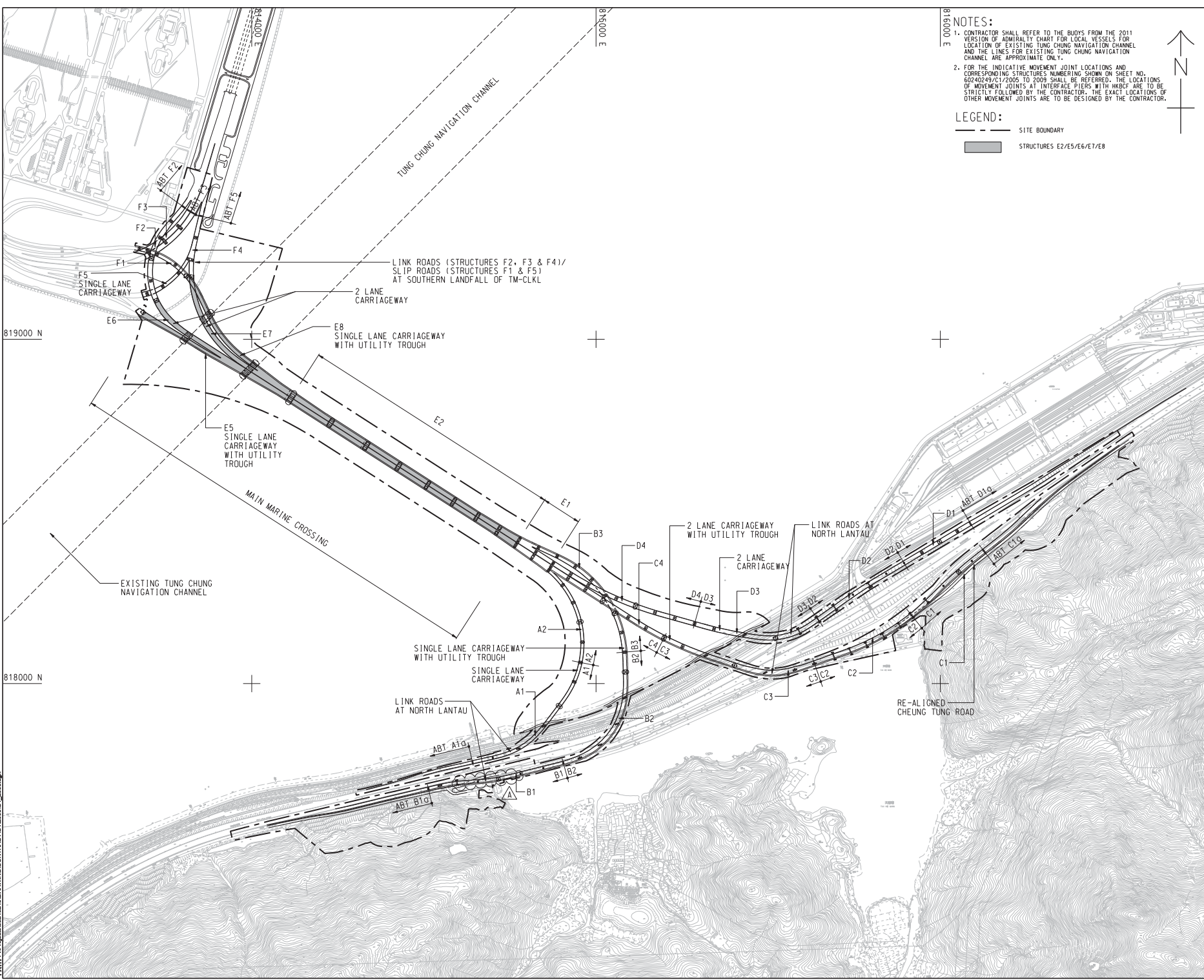


Key

Site Boundary



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 Designer: LHM/88 Checked: SLYT Approved: CWN
 Project Management Initials: ISO AT 50mm x 61mm
 Date: 12/11/2012



NOTES:

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

LEGEND:

- SITE BOUNDARY
- STRUCTURES E2/E5/E6/E7/E8

AECOM

PROJECT
TUEN MUN - CHEK LAP KOK LINK

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

CLIENT
路政署
HIGHWAYS DEPARTMENT
香港路政署工程處
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
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KEY PLAN

PROJECT NO.
60240249

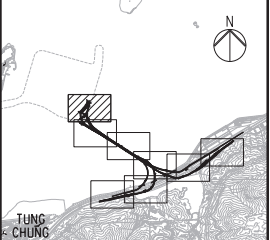
CONTRACT NO.
HY/2012/07

SHEET TITLE
SOUTHERN CONNECTION
GENERAL LAYOUT PLAN

SHEET NUMBER
60240249/C1/2000A

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KEY PLAN

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

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



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

Drawn	Date	Client
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Supervising Officer: **AECOM**

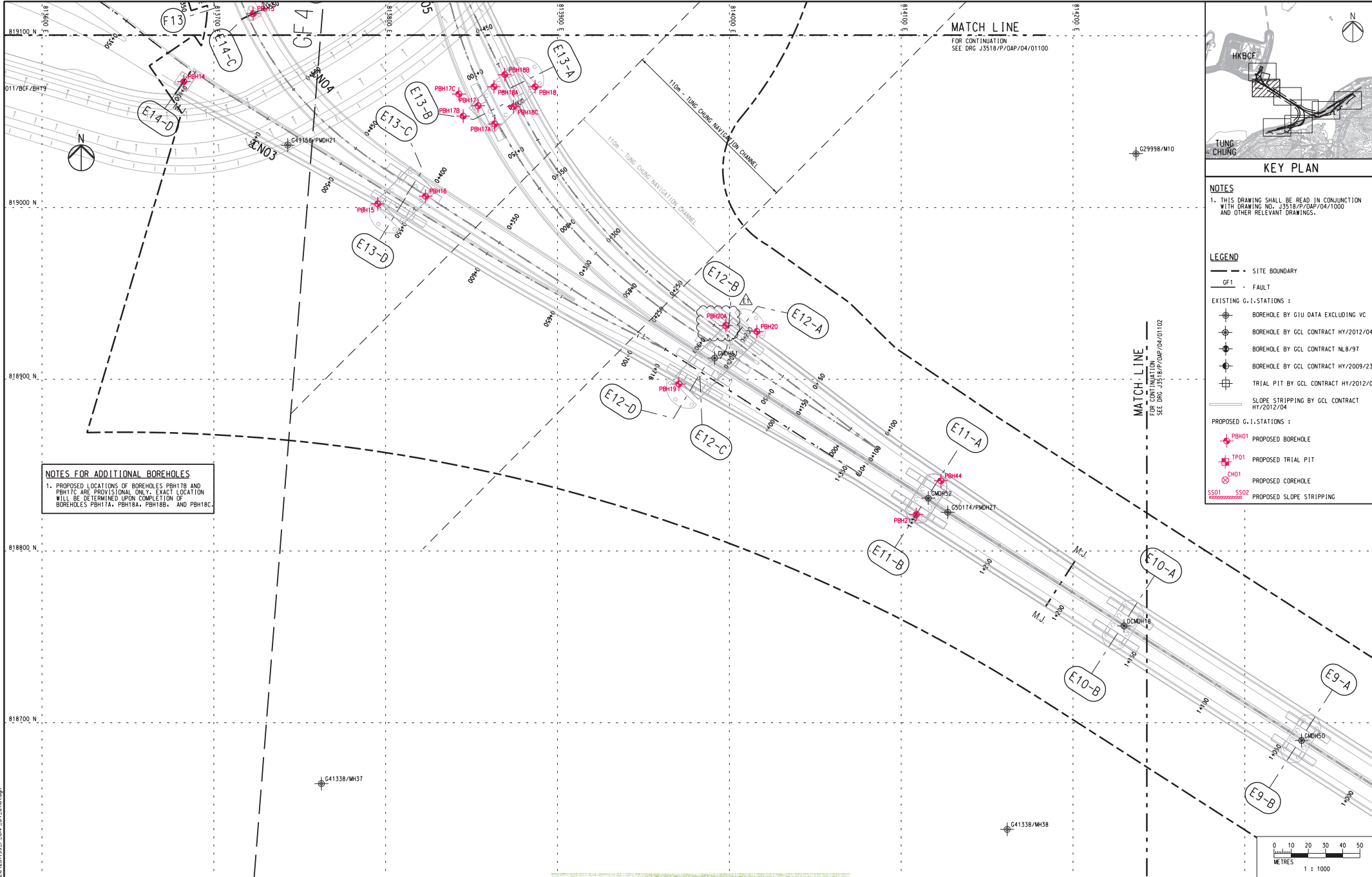
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Project Title
 Contract No. HY/2012/07
 Tuen Mun - Chek Lap Kok Link
 Southern Connection Viaduct Section

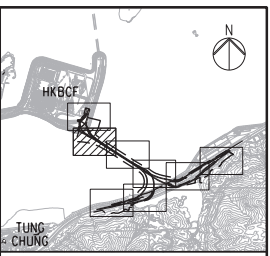
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NOTES FOR ADDITIONAL BOREHOLES
 1. PROPOSED LOCATIONS OF BOREHOLES PBH17B AND PBH17C ARE PROVISIONAL ONLY. EXACT LOCATION WILL BE DETERMINED UPON COMPLETION OF BOREHOLES PBH17A, PBH18A, PBH18B, AND PBH18C.



KEY PLAN

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- LEGEND**
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 - GF1 - FAULT
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 - ⊕ BOREHOLE BY GCL CONTRACT HY/2012/04
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 - ⊕ TP01 PROPOSED TRIAL PIT
 - ⊕ CH01 PROPOSED COREHOLE
 - SS01 SS02 PROPOSED SLOPE STRIPPING

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

Drawn	Date	Client
RL	07/13	HONG KONG HIGHWAYS DEPARTMENT

Checked	Date	Supervising Officer	Contractor
DS	DOP	AECOM	GAMMON

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Client
 路政署
HONG KONG HIGHWAYS DEPARTMENT
 香港路政署
 Hong Kong - Zhuhai - Macao Bridge
 Hong Kong Project Management Office

Supervising Officer
 AECOM

Contractor
 Gammon

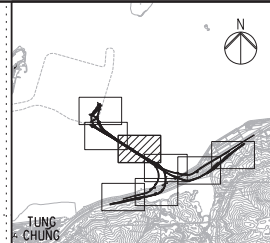
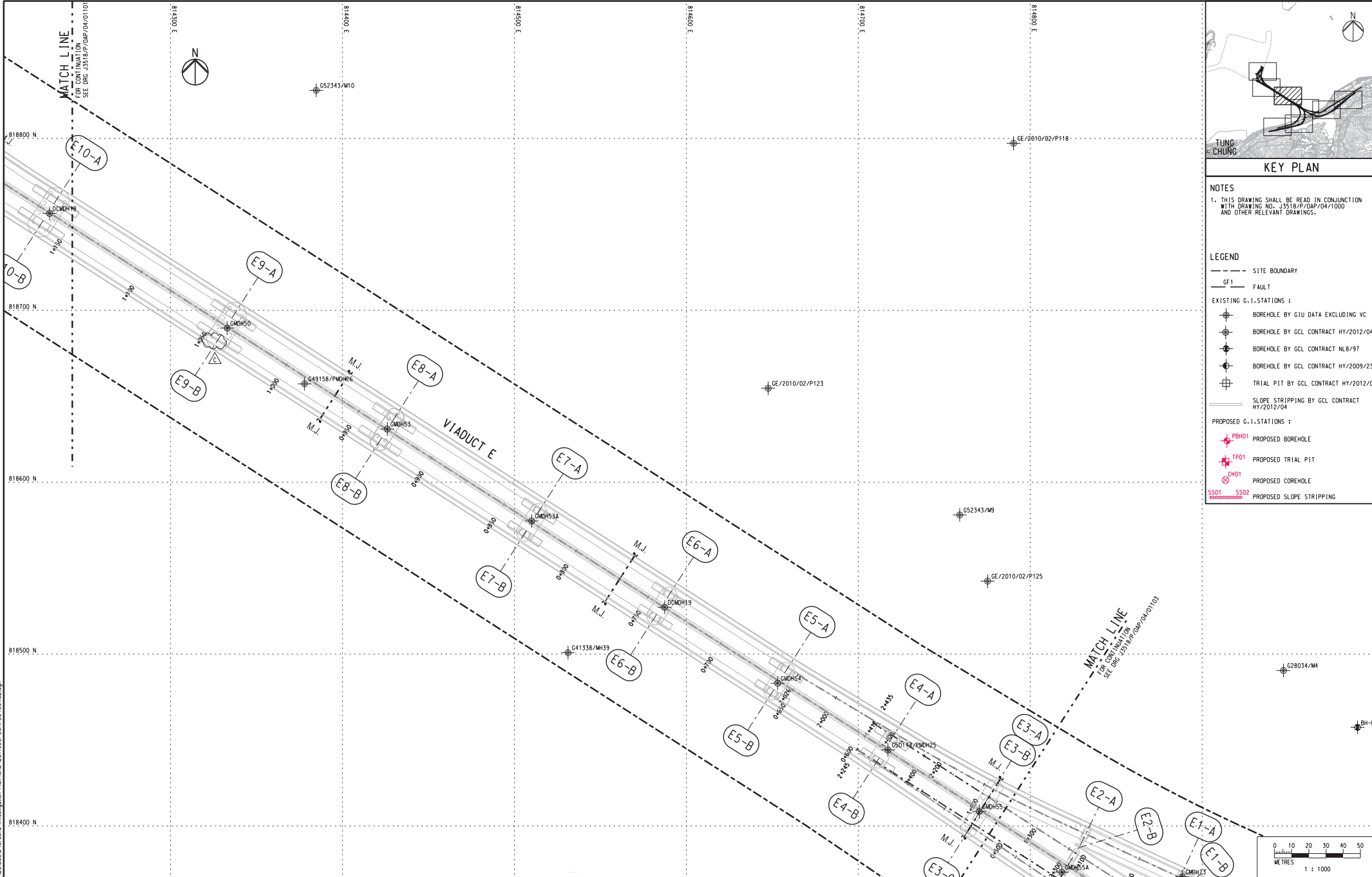
Project Title
 Contract No. HY/2012/07
 Tuen Mun - Chek Lap Kok Link
 Southern Connection Viaduct Section

Originator
 ARUP

Drawing title
Figure 1.2c

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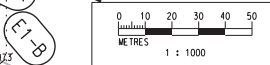
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 - ⊕ CH01 PROPOSED COREHOLE
 - SS01 SS02 PROPOSED SLOPE STRIPPING



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B	SUBMISSION	RC	07/13					Checked	Approved		
C	SUBMISSION	RC	09/13					DS	DOP		
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Client: 路政署 HIGHWAYS DEPARTMENT
 港珠澳大桥香港工程指挥部
 Hong Kong-Zhuhai-Macau Bridge
 Hong Kong Project Management Office

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

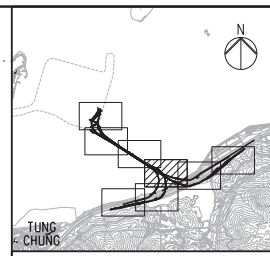
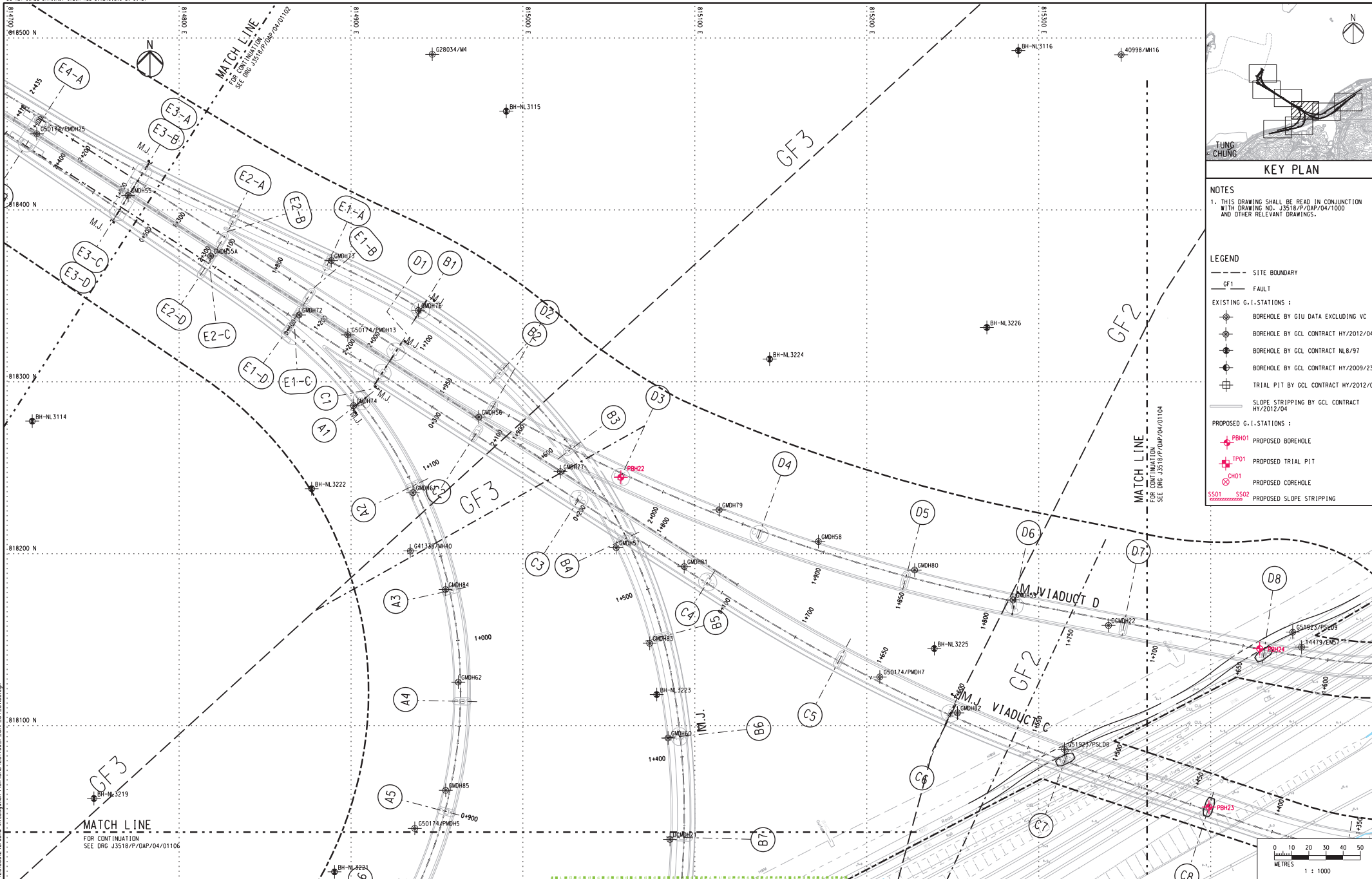
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 Tuen Mun - Chek Lap Kok Link
 Southern Connection Viaduct Section

Originator: **ARUP**

Drawing title: **Figure 1.2d**

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

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LEGEND

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



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

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DS	DOP

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

Supervising Officer
 AECOM

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

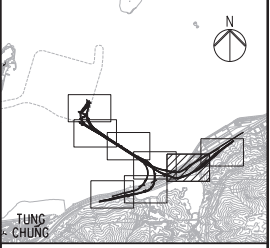
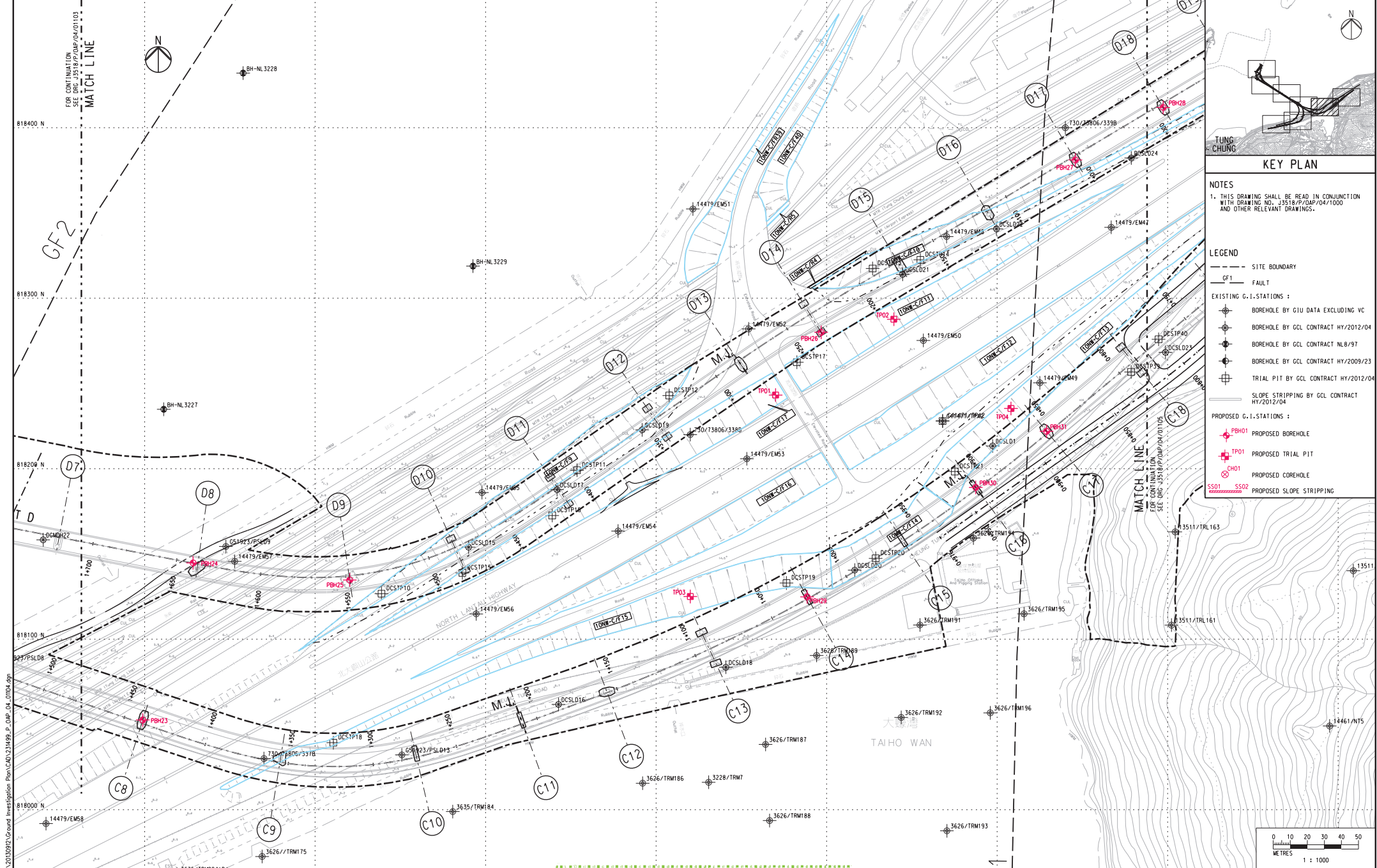
Contractor
 Gammon

Originator
 ARUP

Drawing title
Figure 1.2e

Drawing no. J3518/P/OAP/04/011003 Rev. c

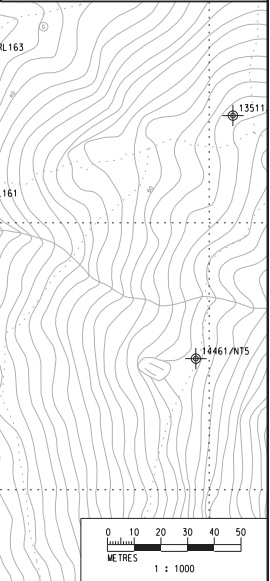
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KEY PLAN

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



Rev	Description	By	Date	Rev	Description	By	Date	Drawn	Date
A	SUBMISSION	RC	07/13					RL	07/13
B	SUBMISSION	RC	07/13					Checked	Approved
C	SUBMISSION	RC	09/13					DS	DOP
								Scale	1:1000 @ A1 / 1:2000 @ A3

Client
 路政署
 HIGWAYS DEPARTMENT
 港珠澳大橋香港工程總處
 Hong Kong - Zhuhai - Macao Bridge
 Hong Kong Project Management Office

Supervising Officer
 AECOM

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

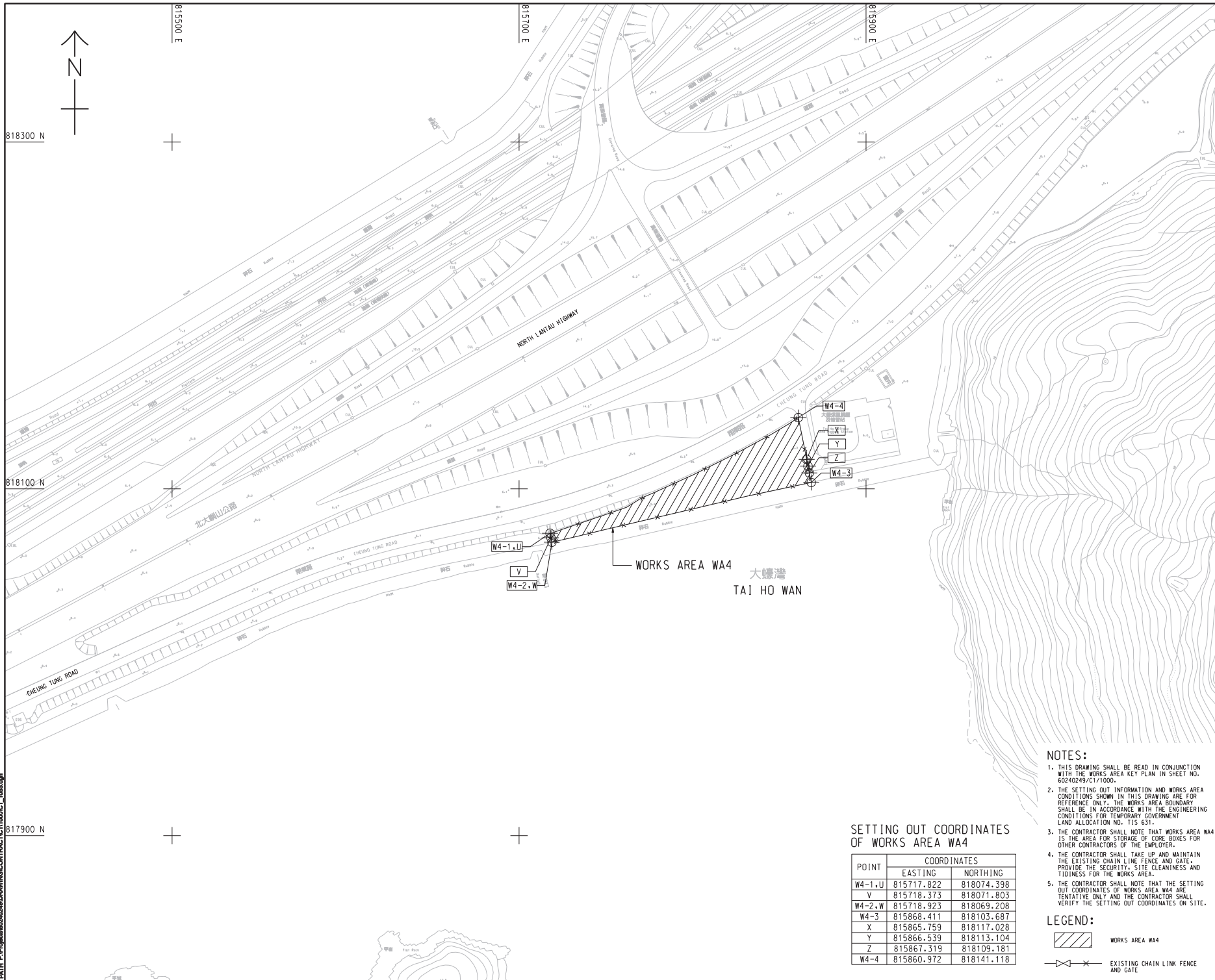
Contractor
 Gammon

Originator
 ARUP

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

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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/CT1/100.
- 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 NO. 60240249

TUEN MUN - CHEK LAP KOK LINK

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

CLIENT
 路政署 DEPARTMENT OF TRANSPORT
 香港公路管理工程處 HONG KONG HIGHWAYS DEPARTMENT
 香港公路管理工程處 Hong Kong Project Management Office

CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

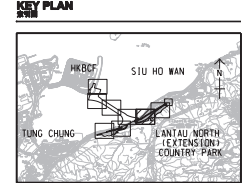
SUB-CONSULTANTS
 2012/11/16

Figure 1.2j

ISSUE/REVISION

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

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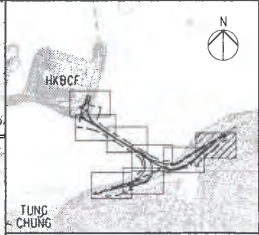
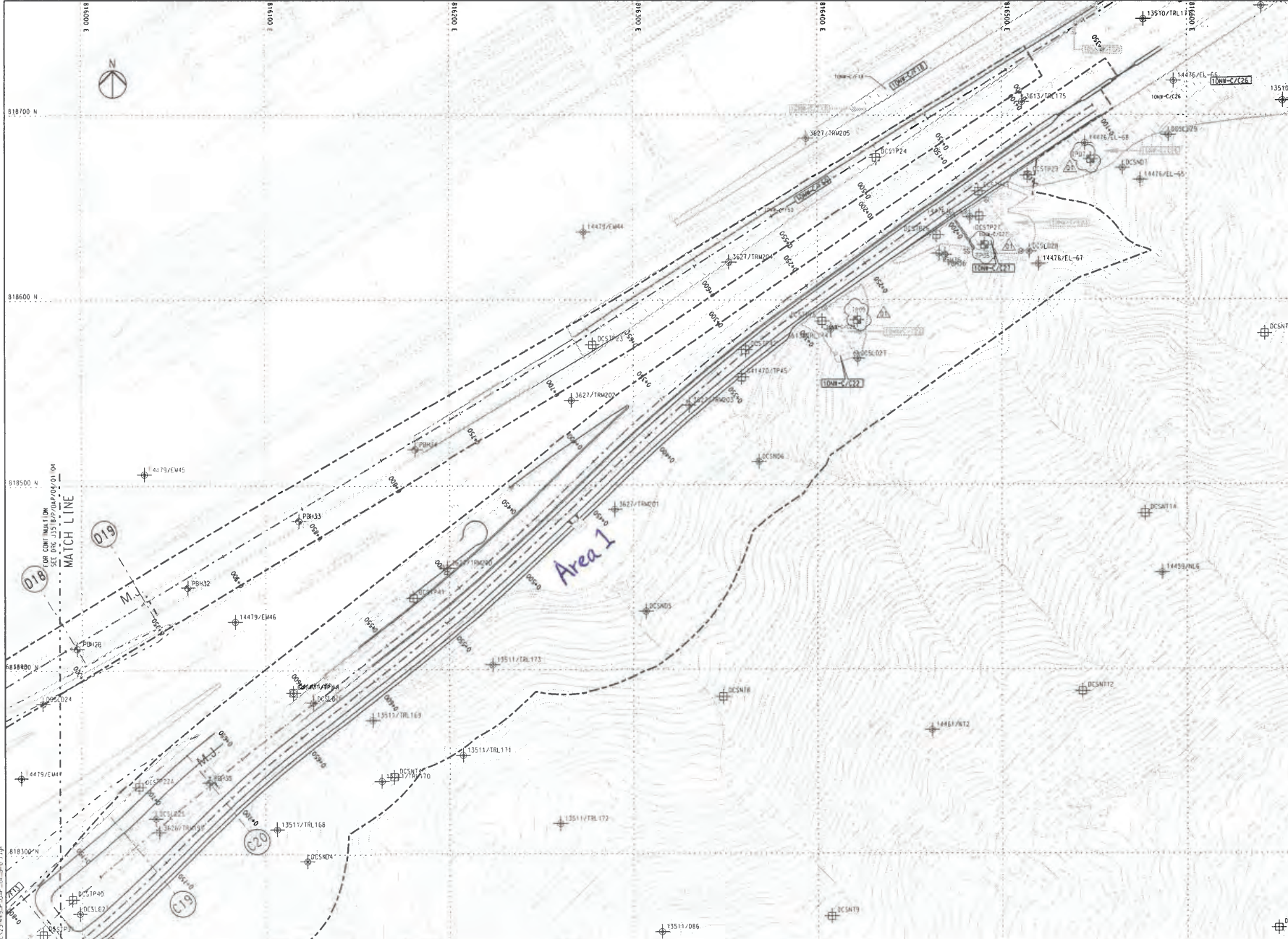
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SHEET TITLE: WORKS AREA WA4

SHEET NUMBER: 60240249/CT1/1053

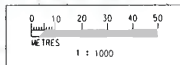
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- LEGEND**
- SITE BOUNDARY
 - GF1 FAULT
- EXISTING G.I. STATIONS :**
- ⊕ BOREHOLE BY GIU DATA EXCLUDING VC
 - ⊕ BOREHOLE BY GCL CONTRACT HY/2012/04
 - ⊕ BOREHOLE BY GCL CONTRACT N6.8/97
 - ⊕ BOREHOLE BY GCL CONTRACT HY/2009/23
 - ⊕ TRIAL PIT BY GCL CONTRACT HY/2012/04
 - ⊕ SLOPE STRIPPING BY GCL CONTRACT HY/2012/04
- PROPOSED G.I. STATIONS :**
- ⊕ BOREHOLE
 - ⊕ TRIAL PIT
 - ⊕ COREHOLE
 - ⊕ SLOPE STRIPPING



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

Drawn	Date	Client
RL	07/13	路政署 HIGHWAYS DEPARTMENT
Checked <td>Approved</td> <td>港珠澳大桥香港工程指挥部 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office</td>	Approved	港珠澳大桥香港工程指挥部 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office
DS	DOP	Supervising Officer

Client	路政署 HIGHWAYS DEPARTMENT 港珠澳大桥香港工程指挥部 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office	Project Title	Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section
Supervising Officer	AECOM	Contractor	Gammon
Originator	ARUP		

Drawing title
Figure 1.2k

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

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 was commenced on 31 October 2013. The three-month rolling construction programme is shown in *Appendix B*.

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

Marine Works

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

Land-based Works

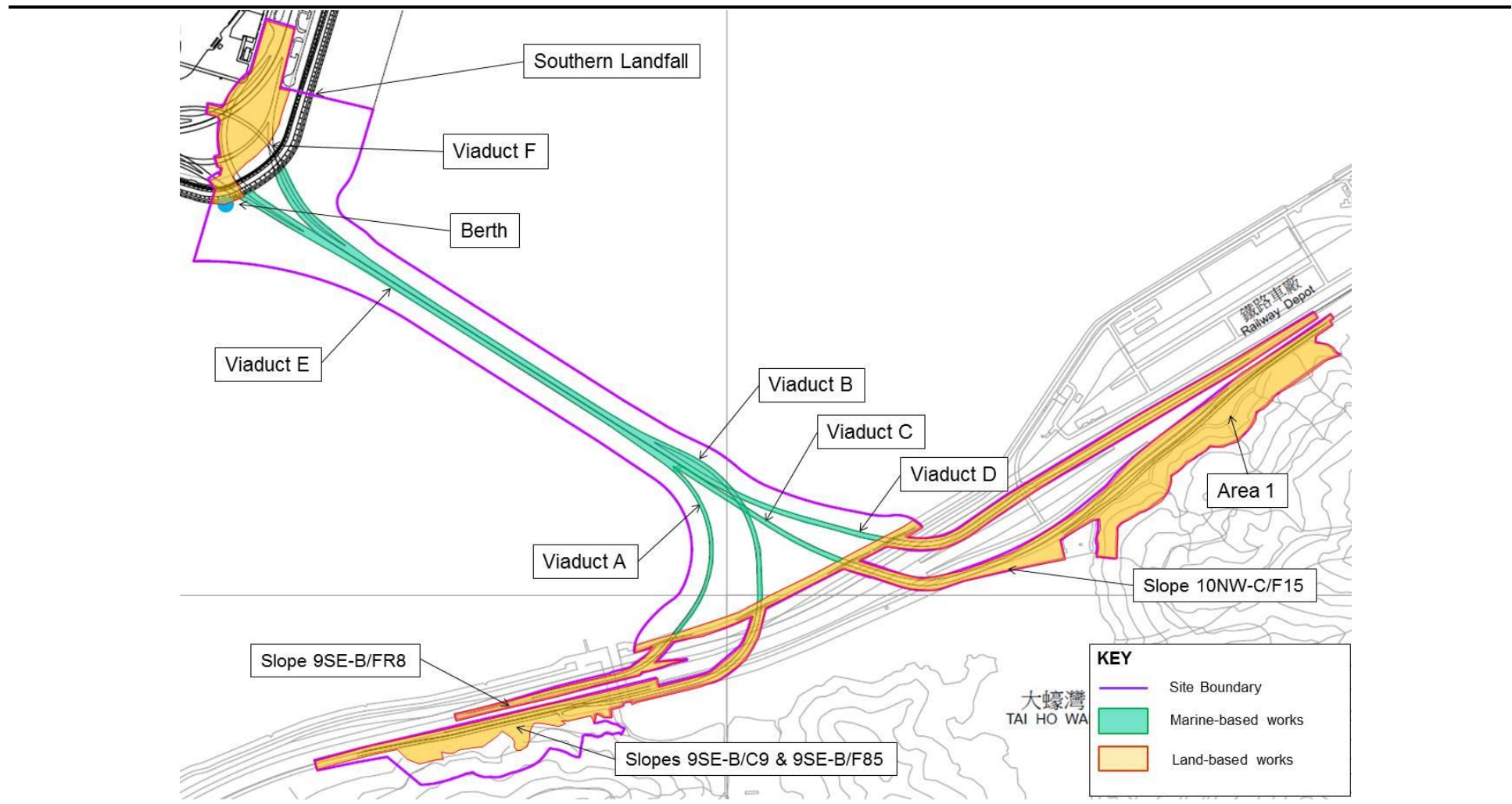
- Pier construction;
- Re-alignment of Cheung Tung Road;
- Road works along North Lantau Highway;

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

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

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

Figure 1.3 Locations of Major Construction Activities in the Reporting Month



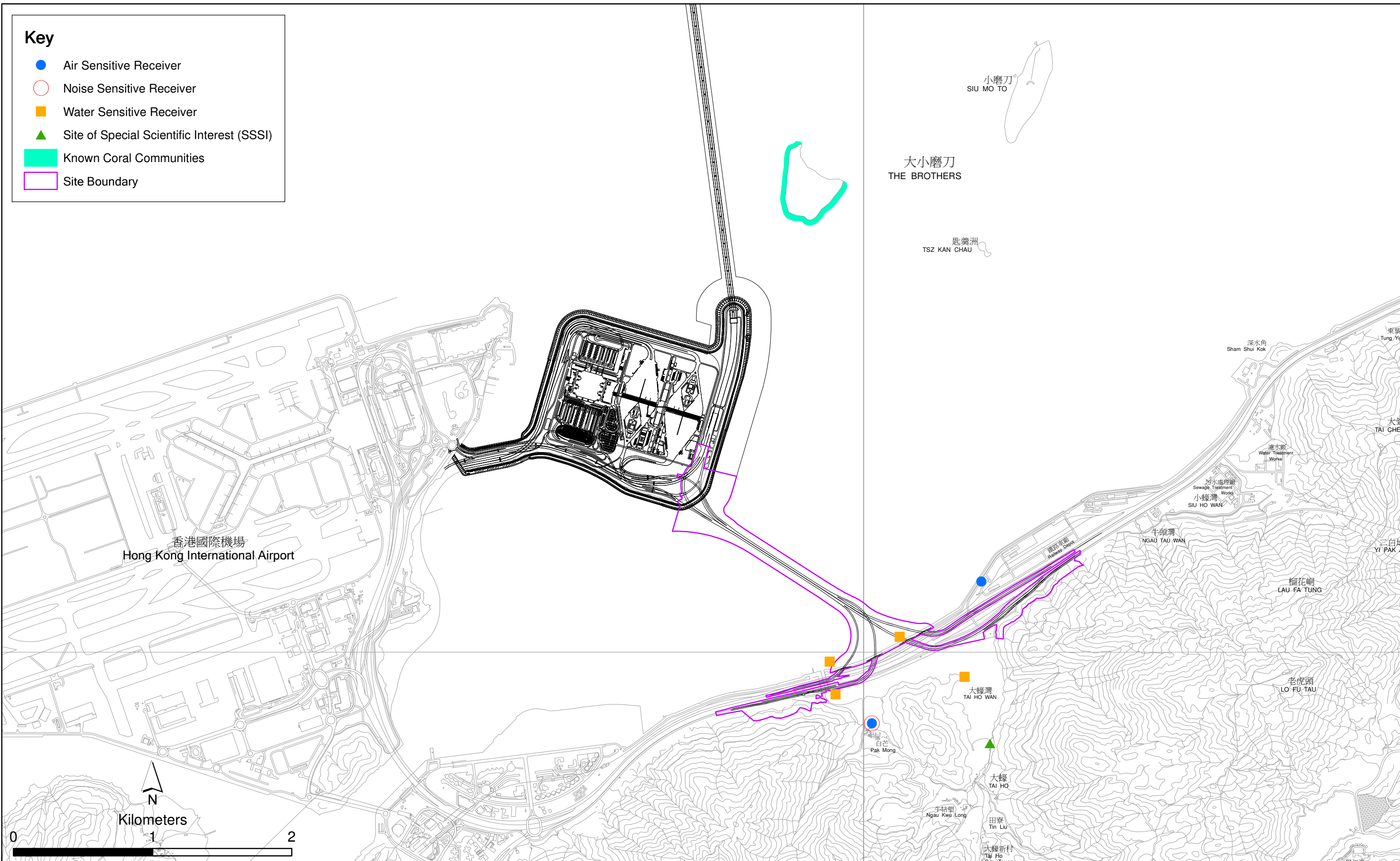


Figure 1.4

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

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Date: 18/5/2015

Environmental
Resources
Management



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	1, 7, 10, 16, 22 and 28 November 2016
ASR 8A	Area 4	On ground at the works area, Area 4	1, 7, 10, 16, 22 and 28 November 2016

High Volume Samplers (HVSs) were used for carried out 1-hour and 24-hour TSP monitoring on 1, 7, 10, 16, 22 and 28 November 2016 at ASR8A and ASR9 in accordance with the requirements of the Updated EM&A Manual. The TSP monitoring stations are illustrated in *Figure 2.1* and detailed in *Table 2.1*. Wind anemometer was deployed at Area 4 for logging wind speed and wind direction. Copies of the calibration certificates for the equipment are presented in *Appendix E*. Details of the deployed equipment are given in *Table 2.2*.

Key

- Alternative Air Monitoring Station
- Site Boundary

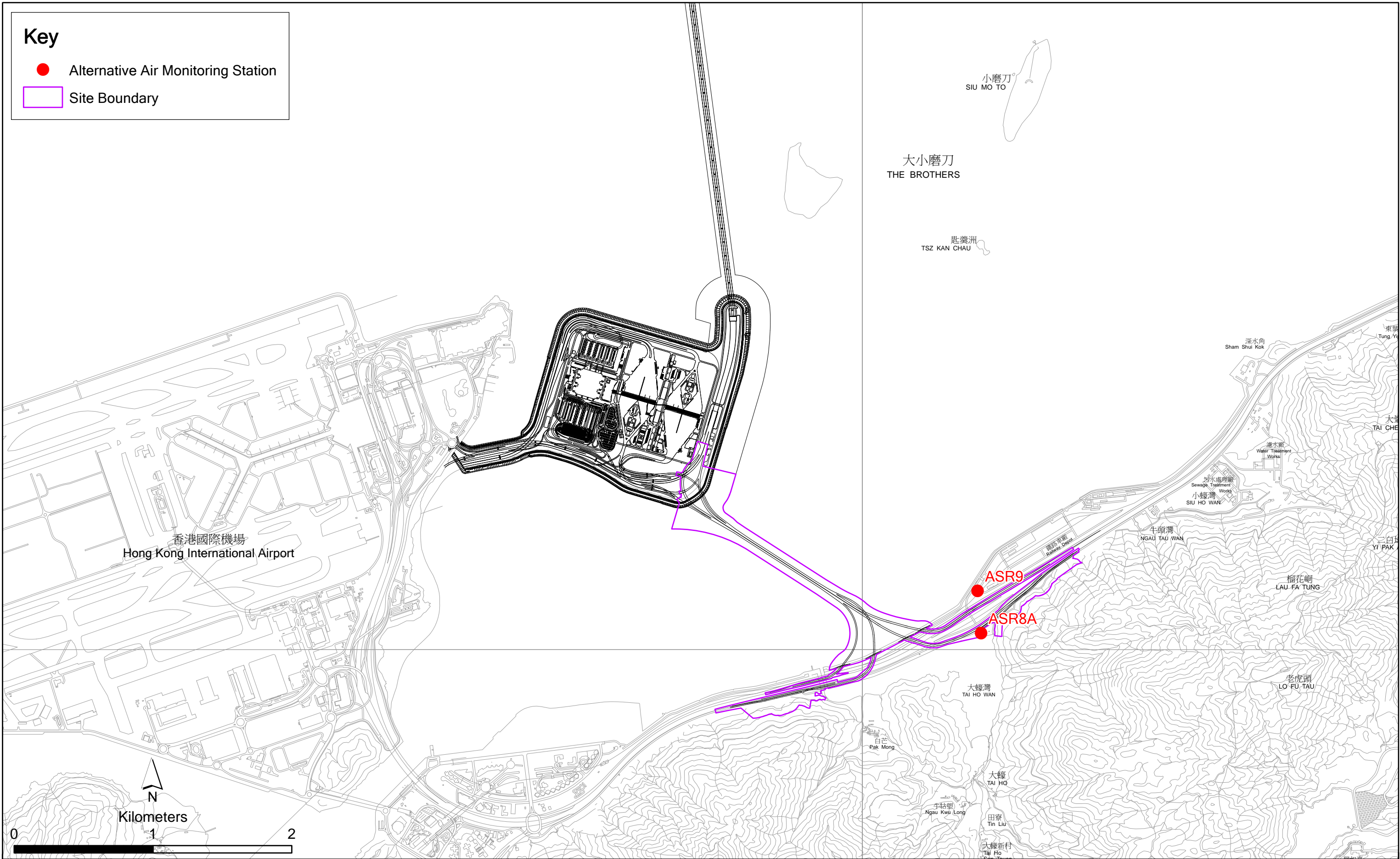


Figure 2.1

Locations of Air Quality Monitoring Stations

Table 2.2 *Air Quality Monitoring Equipment*

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

2.1.2 *Monitoring Schedule for the Reporting Month*

The schedule for air quality monitoring in November 2016 is provided in *Appendix F*.

2.1.3 *Results and Observations*

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

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

Monitoring Station	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
ASR 8A	64	43 - 91	394	500
ASR 9	101	56 - 172	393	500

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

Monitoring Station	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
ASR 8A	51	45 - 60	178	260
ASR 9	62	54 - 66	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 1, 7, 10, 16, 22 and 28 November 2016 by using sound level meter at the designated monitoring station NSR1A (*Figure 2.2; Table 2.5*) in accordance with the requirements stipulated in the Updated EM&A Manual. Acoustic calibrator was deployed to check the sound level meters at a known sound pressure level. Details of the deployed equipment are provided in *Table 2.6*. Copies of the calibration certificates for the equipment are presented in *Appendix E*.

Table 2.5 *Location of Impact Noise Monitoring Station*

Monitoring Station	Location	Description	Parameter	Frequency and Duration	Monitoring Dates
NSR 1A	Pak Mong Village Pavilion	On the ground at the village entrance	30-minute measurement at each monitoring station between 0700 and 1900 on normal weekdays (Monday to Saturday). L_{eq} , L_{10} and L_{90} would be recorded.	At least once per week	1, 7, 10, 16, 22 and 28 November 2016

Table 2.6 *Noise Monitoring Equipment*

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

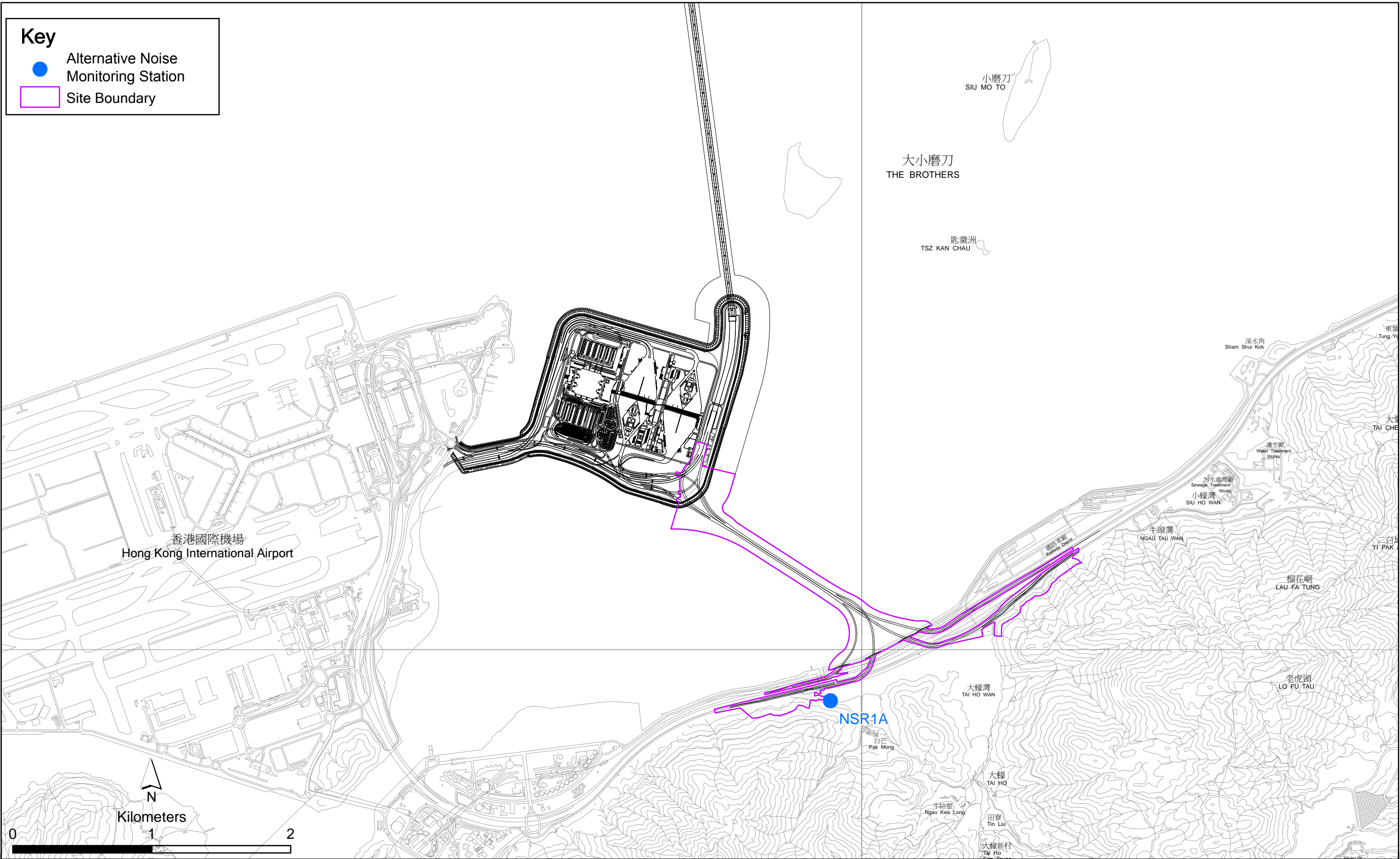


Figure 2.2

Location of Noise Monitoring Station

2.2.2 *Monitoring Schedule for the Reporting Month*

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

2.2.3 *Results and Observations*

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

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

	Average , dB(A), L _{eq} (30mins)	Range, dB(A), L _{eq} (30mins)	Limit Level, dB(A), L _{eq} (30mins)
NSR 1A	61	60 - 62	75

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

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

2.3 *WATER QUALITY MONITORING*

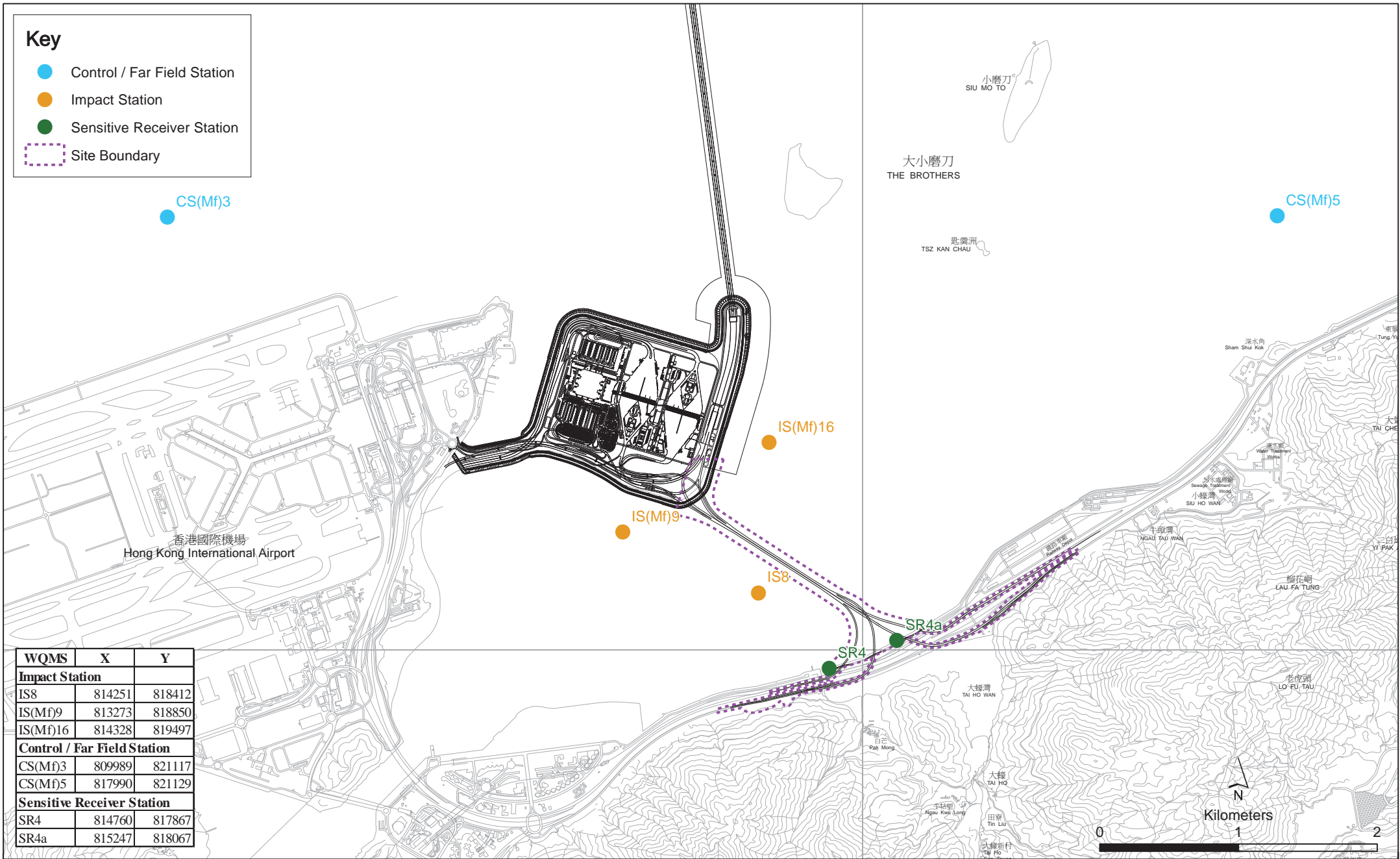
2.3.1 *Monitoring Requirements and Equipment*

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

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

Key

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



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

Figure 2.3

Locations of Water Quality Monitoring Stations

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

Station ID	Type	Coordinates		*Parameters, unit	Frequency	Depth
		Easting	Northing			
IS(Mf)9	Impact Station (Close to HKBCF construction site)	813273	818850	• 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	• Water depth (m) • Salinity (ppt) • Dissolved Oxygen (DO) (mg/L and % of saturation)		
IS8	Impact Station (Close to HKBCF construction site)	814251	818412			
SR4	Sensitive receiver (Tai Ho Inlet)	814760	817867	• Suspended Solid (SS) (mg/L)		
SR4a	Sensitive receiver	815247	818067			
CS(Mf)3	Control Station	809989	821117			
CS(Mf)5	Control Station	817990	821129			

*Notes:

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

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

Table 2.9 *Water Quality Monitoring Equipment*

Equipment	Brand and Model
DO and Salinity	YSI Pro2030
Turbidity meter	HACH Model 2100Q
pH meter	HANNA HI8314 / HANNA HI9125
Positioning Equipment	Koden913MK2 with KBG-3 DGPS antenna
Water Depth Detector	Speedtech Instrument SM-5
Water Sampler	Kemmerer 1520 (1520-C25) 2.2L with messenger

2.3.2 *Monitoring Schedule for the Reporting Month*

The schedule for water quality monitoring in November 2016 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*.

Neither Action nor Limit Levels exceedances was recorded at all monitoring stations for impact water quality monitoring in the reporting month. No action is thus required to be undertaken in accordance with the Event Action Plan presented in *Appendix L*.

2.4 *DOLPHIN MONITORING*

2.4.1 *Monitoring Requirements*

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

2.4.2 *Monitoring equipment*

Table 2.10 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.

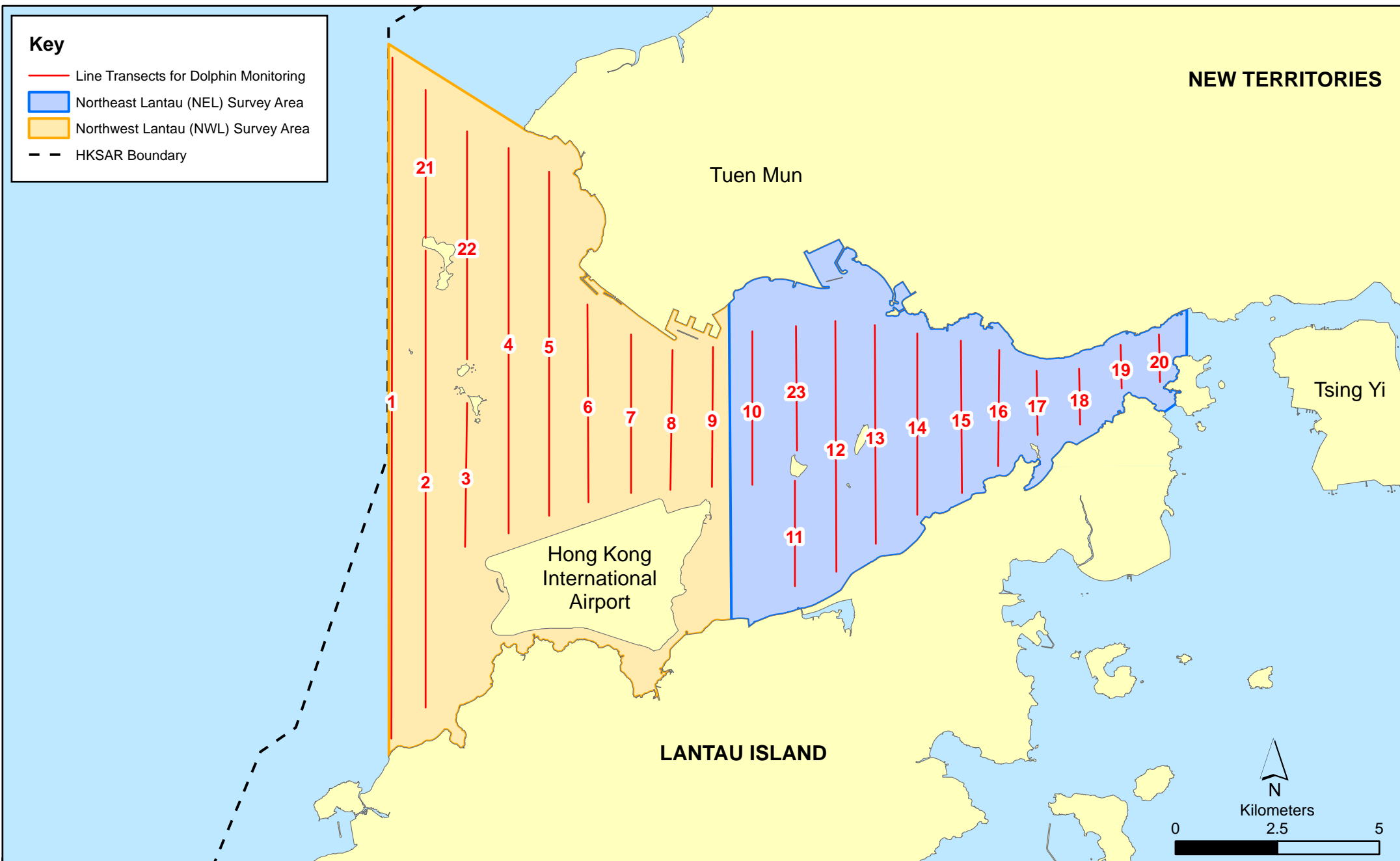


Figure 2.4

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	805475	815913	14	Start Point	817537	820220
2	End Point	805477	826654	14	End Point	817537	824613
3	Start Point	806464	819435	15	Start Point	818568	820735
3	End Point	806464	822911	15	End Point	818568	824433
4	Start Point	807518	819771	16	Start Point	819532	821420
4	End Point	807518	829230	16	End Point	819532	824209
5	Start Point	808504	820220	17	Start Point	820451	822125
5	End Point	808504	828602	17	End Point	820451	823671
6	Start Point	809490	820466	18	Start Point	821504	822371
6	End Point	809490	825352	18	End Point	821504	823761
7	Start Point	810499	820880	19	Start Point	822513	823268
7	End Point	810499	824613	19	End Point	822513	824321
8	Start Point	811508	821123	20	Start Point	823477	823402
8	End Point	811508	824254	20	End Point	823477	824613
9	Start Point	812516	821303	21	Start Point	805476	827081
9	End Point	812516	824254	21	End Point	805476	830562
10	Start Point	813525	820872	22	Start Point	806464	824033
10	End Point	813525	824657	22	End Point	806464	829598
11	Start Point	814556	818853	23	Start Point	814559	821739
11	End Point	814556	820992	23	End Point	814559	824768
12	Start Point	815542	818807				
12	End Point	815542	824882				

2.4.5 Action & Limit Levels

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

2.4.6 *Monitoring Schedule for the Reporting Month*

Dolphin monitoring was carried out on 2, 7, 18 and 22 November 2016 (*Appendix F*).

2.4.7 *Results and Observations*

A total of 296.00 km of survey effort was collected, with 96.8% 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 November 2016. Among the two areas, 112.90 km and 183.10 km of survey effort were collected from NEL and NWL survey areas respectively. The total survey effort conducted on primary and secondary lines were 212.52 km and 83.48 km respectively. The survey efforts are summarized in *Appendix K*.

Three (3) groups of 12 Chinese White Dolphins were sighted during the two sets of monitoring surveys in November 2016. All three (3) dolphin sightings were made in NWL, while none was sighted in NEL. During the surveys in November 2016, all three sightings were made on primary lines during on-effort search. One of the dolphin groups was associated with operating fishing vessel and none of the dolphin groups were sighted in the proximity of the Project's alignment. The distribution of dolphin sighting during the reporting month is shown in *Figure 2.5*.

Encounter rates of Chinese White Dolphins are deduced from the survey effort and on-effort sighting data made under favourable conditions (Beaufort 3 or below) in November 2016 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: Nov 2 nd / 7 th	0.0	0.0
	Set 2: Nov 18 th / 22 nd	0.0	0.0
NWL	Set 1: Nov 2 nd / 7 th	1.7	1.7
	Set 2: Nov 18 th / 22 nd	2.8	15.3

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

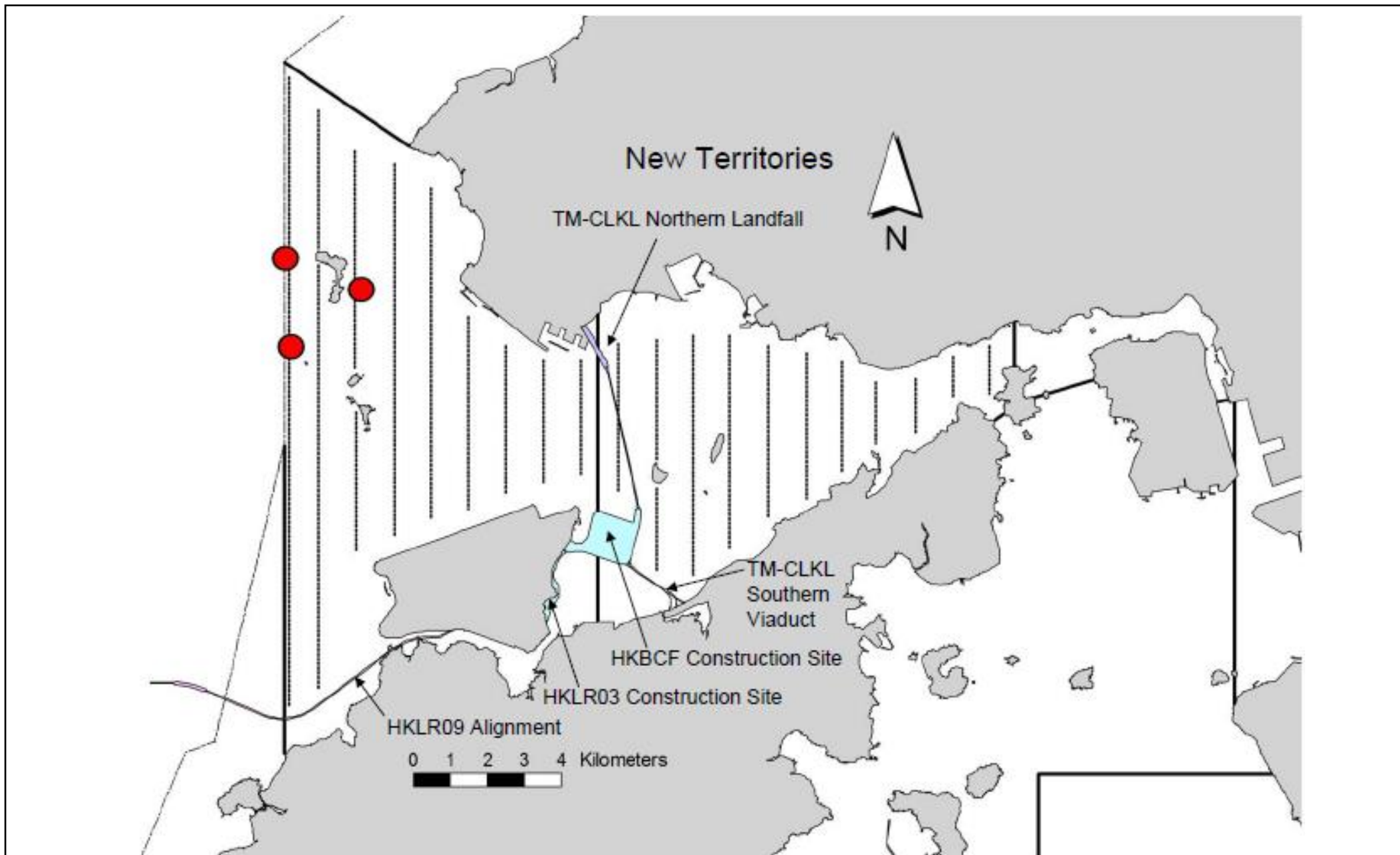


Figure 2.5

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 November 2016)

Date 7/10/2016

Environmental
 Resources
 Management



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	2.3	1.7	9.1	6.9

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

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

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

2.4.8 Marine Mammal Exclusion Zone Monitoring

Daily 250 m marine mammal exclusion zone monitoring was undertaken during the period of daytime marine works activities. No sighting of Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) were recorded in November 2016 during the exclusion zone monitoring.

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

2.5 EM&A SITE INSPECTION

Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting month, five (5) site inspections were carried out on 2, 9, 17, 24 and 30 November 2016.

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
2 November 2016	Pier E12 <ul style="list-style-type: none"> Chemical containers should be placed in drip tray. Water inside drip tray should be cleared. Air compressor was observed without NRMM labels displayed on site. 	Pier E12 <ul style="list-style-type: none"> The contractor was reminded to remove the chemical containers and place them in drip tray. The contractor was reminded to clear the water inside drip tray. The contractor was reminded to display the NRMM label on site.
9 November 2016	Viaduct C (C17) <ul style="list-style-type: none"> Accumulated general refuse was observed. Viaduct D (D13) <ul style="list-style-type: none"> Dusty materials near the wood chipping machine was observed 	Viaduct C (C17) <ul style="list-style-type: none"> The Contractor was reminded to clear the accumulated general refuse. Viaduct D (D13) <ul style="list-style-type: none"> The Contractor was reminded to clear the dusty materials.
17 November 2016	Viaduct D (D12) <ul style="list-style-type: none"> Unpaved area was dry. Viaduct D (D13) <ul style="list-style-type: none"> Chemical containers were not placed in drip tray. Viaduct D (D18 on the deck) <ul style="list-style-type: none"> Chemical containers were not placed in drip tray. Viaduct D (D19) <ul style="list-style-type: none"> Wetsep checklist was not displayed. 	Viaduct D (D12) <ul style="list-style-type: none"> Watering was applied immediately. Viaduct D (D13) <ul style="list-style-type: none"> The Contractor was reminded to remove the chemical containers and placed them in drip tray. Viaduct D (D18 on the deck) <ul style="list-style-type: none"> The Contractor was reminded to remove the chemical containers and placed them in drip tray. Viaduct D (D19) <ul style="list-style-type: none"> The Contractor was reminded to display the checklist on the wetsep.
24 November 2016	Pier E5 <ul style="list-style-type: none"> Accumulated general refuse was observed. Viaduct C (C17) <ul style="list-style-type: none"> Construction materials were placed too close to natural habitat. 	Pier E5 <ul style="list-style-type: none"> The Contractor was reminded to clear the accumulated general refuse. Viaduct C (C17) <ul style="list-style-type: none"> The Contractor was reminded to clear the construction materials from the natural habitat.
30 November 2016	Viaduct E (E6) <ul style="list-style-type: none"> Oily water inside drip tray was observed. Viaduct E (E12) <ul style="list-style-type: none"> Better housekeeping should be maintained. Seafront <ul style="list-style-type: none"> Chemical containers should be moved to storage area. 	Viaduct E (E6) <ul style="list-style-type: none"> Oily water was cleared immediately. Viaduct E (E12) <ul style="list-style-type: none"> The Contractor was reminded to keep tidy of the site and surroundings. Seafront <ul style="list-style-type: none"> The Contractor was reminded to move the chemical containers to chemical storage area.

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), chemical waste 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 Construction Waste Re-used (m ³)	Non-inert Construction Waste ^(b) (kg)	Recyclable Materials ^(c) (kg)	Chemical Wastes (kg)	Marine Sediment (m ³)	
							Category L	Category M (M _p & M _f)
November 2016	3,337	0	536	138,270	63	1,600	473	0

Notes:

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

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

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

2.7 ENVIRONMENTAL LICENSES AND PERMITS

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

Table 2.16 Summary of Environmental Licensing and Permit Status

License/ Permit	License or Permit No.	Date of Issue	Date of Expiry	License/ Permit Holder	Remarks
Environmental Permit	EP-354/2009/D	13 March 2015	N/A	HyD	Tuen Mun- Chek Lap Kok Link
Environmental Permit	EP-353/2009/K	11 April 2016	N/A	HyD	Hong Kong Boundary Crossing Facilities
Construction Dust Notification	361571	5 Jul 2013	N/A	GCL	
Construction Dust Notification	362093	17 Jul 2013	N/A	GCL	For Area 23
Chemical Waste Registration	5213-961-G2380-13	10 Oct 2013	N/A	GCL	Chemical waste produced in Contract No. HY/2012/07 (Area 1 adjacent to Cheng Tung Road, Siu Ho Wan)
Chemical Waste Registration	5213-961-G2380-14	10 Oct 2013	N/A	GCL	Chemical waste produced in Contract No. HY/2012/07 (Area 2 adjacent to Cheung Tung Road, Pak Mong Village)
Chemical Waste Registration	5213-974-G2588-03	4 Nov 2013	N/A	GCL	Chemical waste produced in Contract No. HY/2012/07 (WA5 adjacent to Cheung Tung Road, Yam O)
Chemical Waste Registration	5213-951-G2380-17	12 Jun 2014	N/A	GCL	Viaducts A, B, C, D & E
Construction Waste Disposal Account	7017735	10 Jul 2013	N/A	GCL	-
Construction Waste Disposal Account	7019470	3 Mar 2014	N/A	GCL	Vessel CHIT Account
Waste Water Discharge License	WT00019017-2014	13 May 2014	31 May 2019	GCL	Discharge for marine portion
Waste Water Discharge License	WT00019018-2014	13 May 2014	31 May 2019	GCL	Discharge for land portion
Construction Noise Permit for night works and works in general holidays	GW-RW0339-16	17 Jun 2016	19 Dec 2016	GCL	General works at WA5
Construction Noise Permit for night works and works in general holidays	GW-RS1045-16	14 Oct 2016	13 Apr 2017	GCL	For Broad Permit
Construction Noise Permit for night works and works in general holidays	GW-RS0958-16	15 Sep 2016	30 Nov 2016	GCL	Broad Permit for Segment Launching at Land Portion
Construction Noise Permit for night works and works in general holidays	GW-RS0718-16	13 Jul 2016	13 Jan 2017	GCL	Pre-casted pile cap shell installation at E10-E13
Construction Noise Permit for night works and works in general holidays	GW-RS1044-16	14 Oct 2016	13 Apr 2017	GCL	Pre-casted pile cap shell installation at E8-E13
Marine Dumping Permit	EP/MD/17-120	1 Nov 2016	30 Nov 2016	GCL	For dumping Type I (Dedicated Site) and Type II sediment
Marine Dumping Permit	EP/MD/17-115	20 Oct 2016	31 Dec 2016	GCL	For dumping Type I sediment

2.8 *IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES*

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

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

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

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

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

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

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

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

There was one (1) complaint regarding muddy plume caused by a barge's propeller wash near Tung Chung New Development Ferry Pier in the reporting period. Upon investigation, the complaint is considered not related to this Project. Detailed investigation report is presented in *Appendix N*.

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

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



Figure 2.6

Environmental Complaint Handling Procedure

3 *FUTURE KEY ISSUES*

3.1 *CONSTRUCTION PROGRAMME FOR THE COMING MONTH*

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

Marine Works

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

Land-based Works

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

3.2 *KEY ISSUES FOR THE COMING MONTH*

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

3.3 *MONITORING SCHEDULE FOR THE COMING MONTH*

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

4.1 CONCLUSIONS

This Thirty-seventh Monthly EM&A Report presents the findings of the EM&A activities undertaken during the period from 1 to 30 November 2016 in accordance with the Updated EM&A Manual and the requirements of the Environmental Permits (*EP-354/2009/D* and *EP-353/2009/K*).

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

Three (3) groups of 12 Chinese White Dolphins were sighted during the two sets of monitoring surveys in November 2016. One (1) Limit Level exceedance was observed for the quarterly dolphin monitoring data between September and November 2016, whilst no unacceptable impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Chinese White Dolphins was noticeable from general observations.

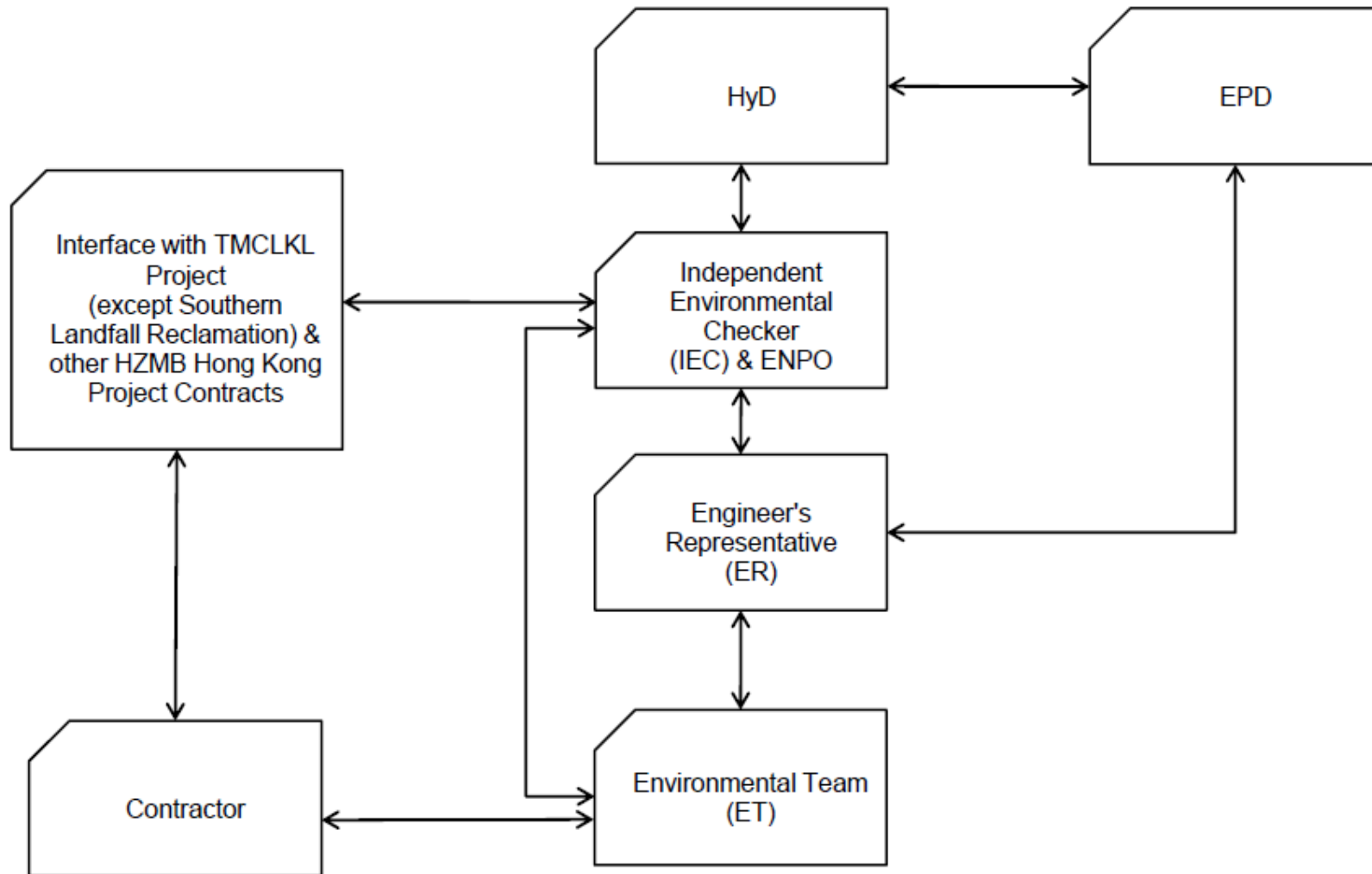
Environmental site inspection was carried out five (5) times in November 2016. Recommendations on remedial actions were given to the Contractor for the deficiencies identified during the site audits.

There was one (1) complaint regarding muddy plume caused by a barge's propeller wash near Tung Chung New Development Ferry Pier in the reporting period. Upon investigation, the complaint is considered not related to this Project. There was no notification of summons or successful prosecution recorded in the reporting period.

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

Appendix A

Project Organization for Environmental Works



↔ 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	2016												2017								
										November						December						January			February					
										24	31	07	14	21	28	05	12	19	26	02	09	16	23	30	06	13	20			
Contract Milestones																														
Key Dates for Completion																														
Stage of the Works																														
Completion Date																														
General																														
KD03	KD3 - Stage 3: TCSS Along NLH Near Viaduct C, D (EoT 5-Apr-16)		0		0	06-Dec-16*		05-Apr-16	-245	0%																				
Portion Handover Dates																														
Possession of the Works Area																														
Access Dates																														
General																														
POS02-6B	Portion A - Area 6B (To be confirmed)		0	31-Dec-16*	0		15-Dec-15		-382	0%																				
Design																														
Detailed Design																														
General Submissions																														
Reports & Manuals																														
General																														
ARDD0037-7	Preparation of Seismic Performance Report Viaduct F - AP12.03		160	21-Aug-15 A	16	08-Dec-16	16-Mar-16	07-Apr-16	-203	100%																				
ARDD0037-8	IC/SO Approval of Seismic Performance Report Viaduct F - AP12.03		75	09-Dec-16	75	13-Mar-17	08-Apr-16	08-Jul-16	-203	0%																				
ARDD0040-2	IC/SO Approval of Operation and Maintenance Manual - AP08.00		75	20-Oct-15 A	16	08-Dec-16	20-Jun-16	08-Jul-16	-128	0%																				
ARDD0042-2	IC/SO Approval of O&M Facility Provisions DDA - BP11.01		75	14-Jan-15 A	16	08-Dec-16	20-Jun-16	08-Jul-16	-128	50%																				
Slope Works Near Viaduct A																														
Feature 9SE-B/FR8, B/R1, B/R2																														
Slope Works Design																														
ARDD0596	Preparation of remaining portion of Slope FR8 Combined AIP/DDA - CP11.		35	21-Nov-16	35	03-Jan-17	18-Dec-15	30-Jan-16	-273	0%																				
ARDD0596-1	IC/SO Approval of Slope Combined AIP/DDA - CP11.01		60	04-Jan-17	60	17-Mar-17	01-Feb-16	18-Apr-16	-273	0%																				
Slope Works Near Viaduct C																														
Feature 10NW-C/C22, C/C26, C/C27, C/F13, C/F14, C/F15																														
Slope Works Design																														
ARDD0589-1	Preparation of Slope Combined AIP/DDA - CP13.01		60	03-Jan-17*	60	16-Mar-17	19-Jul-16	27-Sep-16	-138	0%																				
ARDD0590	Newfill slopes PF1 & PF2 Preparation of Combined AIP/DDA - CP13.01		60	21-Nov-16	60	04-Feb-17	05-Jul-16	12-Sep-16	-116	0%																				
ARDD0590-1	New fill slopes PF1 & PF2 IC/SO Approval of combined AIP/DDA - CP13.0		28	06-Feb-17	28	09-Mar-17	13-Sep-16	18-Oct-16	-116	0%																				
Slope Works Near Viaduct D																														
Feature 10NW-C/R4, C/F9, C/F10, C/F11, C/F17, C/F50																														
Slope Works Design																														
ARDD0603	IC/SO Approval of Slope Combined AIP/DDA - CP14.01		75	16-Dec-14 A	24	17-Dec-16	25-Jan-16	24-Feb-16	-244	75%																				
ARDD0603-1	IC/SO Approval of Slope Combined AIP/DDA - CP14.01		0		0	17-Dec-16		24-Feb-16	-244	0%																				
ARDD0604-2	IC/SO Approval of Slope Combined AIP/DDA - CP14.02		75	18-May-15 A	0	24-Oct-16 A				100%																				
ARDD0604-3	IC/SO Approval of Revised Slope Combined AIP/DDA - CP14.02		0		0	24-Oct-16 A				100%																				
Watermain, Drainage & Utility Diversions																														
General																														
Design																														
ARDD0629	IC/SO Approval of Waterworks, Drainage & Utility DDA - BP20.01		75	22-Jul-14 A	22	15-Dec-16	01-Mar-16	29-Mar-16	-216	95%																				
ARDD0629-1	IC/SO Approval of Waterworks, Drainage & Utility DDA - BP20.01		0		0	15-Dec-16		29-Mar-16	-216	0%																				
ARDD0629-2	Gov't Approval of Submissions for Waterworks, Drainage & Utility Diversior		75	02-Jan-14 A	22	15-Dec-16	01-Mar-16	29-Mar-16	-216	95%																				
Viaduct Approach Ramp Retaining Walls																														
Abutment & Approach Ramp B																														
Design																														
ARDD0664	Approach B - IC/SO Approval of Approach Ramp B DDA - DP21.01		75	14-Oct-14 A	4	24-Nov-16	09-Mar-16	12-Mar-16	-209	95%																				
ARDD0664-1	Approach B - IC/SO Approval of Approach Ramp B DDA - DP21.01		0		0	24-Nov-16		12-Mar-16	-209	0%																				
Abutment & Approach Ramp F																														
Design																														
ARDD0676	Approach F - IC/SO Approval of Approach Ramp F DDA - DP24.01		75	23-Dec-14 A	34	31-Dec-16	13-May-16	23-Jun-16	-158	70%																				
ARDD0676-1	Approach F - IC/SO Approval of Approach Ramp F DDA - DP24.01		0		0	31-Dec-16		23-Jun-16	-158	0%																				
Segment Target Geometry & Erection Engineering																														

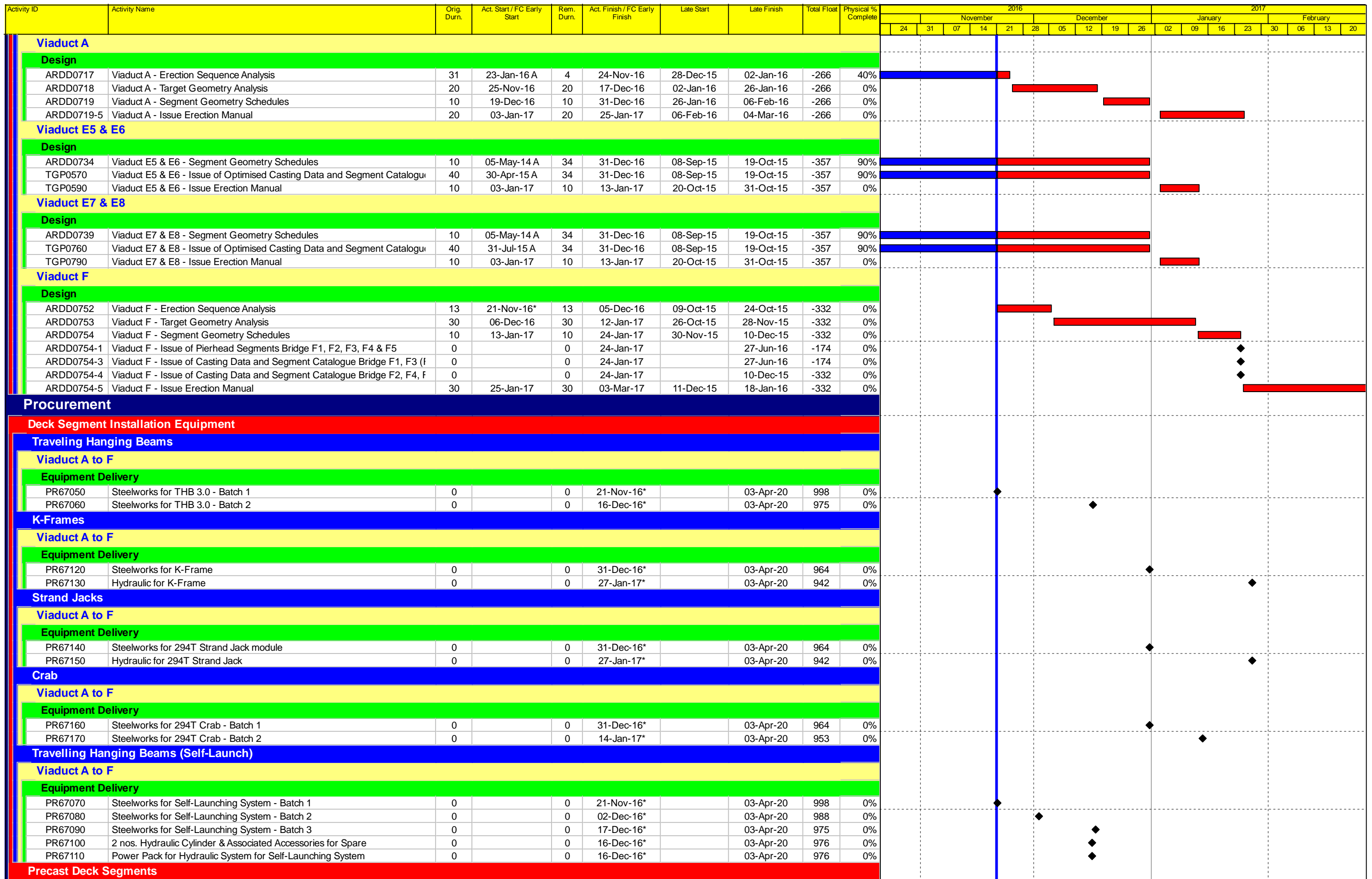
■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

Project ID: TMCLK-DWPH-M42
 Layout: J3518-DWP-3MRP Submission - M42
 Filter: TASK filters: 3-Month Lookahead, No CC
 Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 1 of 13 Pages)
(Progress as of 21-Nov-16)

Date	Revision	Checked	Approved
03-Oct-16		PKN	HF
31-Oct-16		PKN	GL
30-Nov-...		PKN	GL

DWG. No.:
J3518/GCL/PGM/3MRP-M42



■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

Project ID: TMCLK-DWPH-M42
 Layout: J3518-DWP-3MRP Submission - M42
 Filter: TASK filters: 3-Month Lookahead, No CC
 Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 2 of 13 Pages)
(Progress as of 21-Nov-16)

Date	Revision	Checked	Approved
03-Oct-16		PKN	HF
31-Oct-16		PKN	GL
30-Nov-...		PKN	GL

DWG. No.:
J3518/GCL/PGM/3MRP-M42

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	2016												2017															
										November						December						January			February												
										24	31	07	14	21	28	05	12	19	26	02	09	16	23	30	06	13	20										
Preliminaries																																					
Viaduct F																																					
General																																					
MBBE0054	Precast Segment Mould Design (Viaduct F1 to F5)	42	01-Sep-16 A	16	08-Dec-16	11-Apr-16	28-Apr-16	-185	0%																												
MBBE0056	Precast Segment Mould Fabrication & Erection (Viaduct F1 to F5)	52	25-Nov-16	52	27-Jan-17	15-Apr-16	17-Jun-16	-185	0%																												
Viaduct A - Bridge A2-A1																																					
Segment Manufacture																																					
General																																					
MBAE0130-1	A: Progressive Segment Manufacture (179 Nr)	180	13-Jun-16 A	144	20-May-17	08-Dec-15	06-Jun-16	-282	10%																												
Viaduct C - Bridge C4-C1																																					
Segment Manufacture																																					
General																																					
MBCE0130-1	C: Progressive Segment Manufacture (385 Nr)	265	19-May-15 A	9	30-Nov-16	27-Aug-15	07-Sep-15	-366	41%																												
Viaduct D - Bridge D3-D1																																					
Segment Manufacture																																					
General																																					
MBDE0130-7	D: Progressive Segment Manufacture (305 Nr)	315	05-May-15 A	0	26-Oct-16 A				100%																												
Viaduct E - Bridge E1																																					
Segment Manufacture																																					
General																																					
MBEE0130-5	E1: Progressive Segment Manufacture (188 Nr)	456	08-Apr-15 A	30	24-Dec-16	19-Dec-15	26-Jan-16	-272	95.2%																												
Viaduct E - Bridge E2																																					
Segment Manufacture																																					
General																																					
MBEE0130-7	E2: Progressive Segment Manufacture (404 Nr)	376	06-May-15 A	126	27-Apr-17	21-Dec-15	28-May-16	-271	34.8%																												
Viaduct E - Bridge E5, E6, E7, E8																																					
Segment Manufacture																																					
General																																					
MBEE0130-9	E5-6-7-8: Progressive Segment Manufacture (544Nr)	360	06-May-15 A	245	18-Sep-17	15-Oct-15	12-Aug-16	-327	11.2%																												
Viaduct F - Bridge F1-F5																																					
Segment Manufacture																																					
General																																					
MBFE0130-1	F: Progressive Segment Manufacture (300 Nr)	252	25-Nov-16	252	30-Sep-17	15-Apr-16	17-Feb-17	-185	0%																												
Precast Parapets & Barriers																																					
Viaduct A to F																																					
Precast Parapet Manufacture																																					
General																																					
PP6011-01	Viaduct A - Precast Parapets/Barriers Production	90	01-Sep-16 A	178	30-Jun-17	02-Feb-16	08-Sep-16	-237	0%																												
PP6011-02	Viaduct B - Precast Parapets/Barriers Production	120	03-May-16 A	152	31-May-17	15-Feb-16	18-Aug-16	-229	0%																												
PP6011-03	Viaduct C - Precast Parapets/Barriers Production	120	01-Apr-16 A	128	29-Apr-17	03-Dec-15	12-May-16	-286	0%																												
PP6011-04	Viaduct D - Precast Parapets/Barriers Production	120	01-Mar-16 A	128	29-Apr-17	03-Dec-15	12-May-16	-286	0%																												
PP6011-05	Viaduct E - Precast Parapets/Barriers Production	180	02-Jul-16 A	256	30-Sep-17	08-Dec-15	20-Oct-16	-282	0%																												
Bearings																																					
Viaduct A																																					
Bearing Design & Manufacture																																					
General																																					
PPBRA5	SO review & comment on design submission - Viaduct A	36	21-Oct-16 A	10	01-Dec-16	21-Jan-16	01-Feb-16	-247	0%																												
PPBRA6	Bearing Design Amendment & re-issue - Viaduct A	12	02-Dec-16	12	15-Dec-16	02-Feb-16	18-Feb-16	-247	0%																												
PPBRA7	Manufacture of Bearing - Viaduct A	54	21-Oct-16 A	28	22-Dec-16	14-Jan-16	18-Feb-16	-253	0%																												
PPBRA8	Testing Bearing - Viaduct A	18	23-Dec-16	18	16-Jan-17	19-Feb-16	10-Mar-16	-253	0%																												
PPBRA9	Bearing Delivery - Viaduct A	48	17-Jan-17	48	16-Mar-17	11-Mar-16	11-May-16	-253	0%																												
Viaduct C																																					
Bearing Design & Manufacture																																					
General																																					

■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

Project ID: TMCLK-DWPH-M42
 Layout: J3518-DWP-3MRP Submission - M42
 Filter: TASK filters: 3-Month Lookahead, No CC
 Milestones, No Level of Effort.

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

Date	Revision	Checked	Approved
03-Oct-16		PKN	HF
31-Oct-16		PKN	GL
30-Nov-...		PKN	GL

DWG. No.:
J3518/GCL/PGM/3MRP-M42

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	2016												2017					
										November						December						January			February		
										24	31	07	14	21	28	05	12	19	26	02	09	16	23	30	06	13	20
PPBRC6	Bearing Design Ammendment & re-issue - Viaduct C	11	21-Nov-16	11	02-Dec-16	16-Mar-20	27-Mar-20	981	0%																		
PPBRC99	Site preparation Bearings for Viaduct C	6	03-Dec-16	6	09-Dec-16	28-Mar-20	03-Apr-20	981	0%																		
Viaduct D																											
Bearing Design & Manufacture																											
General																											
PPBRD99	Site preparation Bearings for Viaduct D	38	21-Nov-16	38	06-Jan-17	17-Feb-16	05-Apr-16	-227	0%																		
Viaduct E																											
Bearing Design & Manufacture																											
General																											
PP7290	Site preparation Bearings for Viaduct E2	18	27-Apr-16 A	13	05-Dec-16	10-Mar-16	24-Mar-16	-208	0%																		
PP7360	Site preparation Bearings for Viaduct E1	18	10-Feb-15 A	2	22-Nov-16	02-Apr-20	03-Apr-20	996	0%																		
PPBRE3	Bearing design and submission - Viaduct E (E1, E2, E5, E6, E7 & E8)	12	28-Nov-13 A	3	23-Nov-16	08-Dec-15	10-Dec-15	-282	85%																		
PPBRE4	Design check by ICE - Viaduct E (E1, E2, E5, E6, E7 & E8)	24	04-Apr-14 A	3	07-Dec-16	22-Dec-15	24-Dec-15	-282	85%																		
PPBRE5	SO review & comment on design submission - Viaduct E (E1, E2, E5, E6, E7 & E8)	36	26-Sep-14 A	0	21-Dec-16	11-Jan-16	11-Jan-16	-282	100%																		
PPBRE6	Bearing Design Amendment & re-issue - Viaduct E (E1, E2, E5, E6, E7 & E8)	12	22-Dec-16	12	07-Jan-17	12-Jan-16	25-Jan-16	-282	0%																		
PPBRE7	Manufacture of Bearing - Viaduct E (E1, E2, E5, E6, E7 & E8)	54	02-Jun-14 A	13	07-Jan-17	11-Jan-16	25-Jan-16	-282	100%																		
PPBRE8	Testing Bearing - Viaduct E (E1, E2, E5, E6, E7 & E8)	24	03-Aug-15 A	0	23-Jan-17	11-Feb-16	11-Feb-16	-282	100%																		
PPBRE9	Bearing Delivery - Viaduct E (E1, E2, E5, E6, E7 & E8)	48	19-Nov-14 A	59	08-Mar-17	13-Jan-16	24-Mar-16	-282	100%																		
Viaduct F																											
Bearing Design & Manufacture																											
General																											
PPBRF1	Preliminary Design of Bearings - Viaduct F	60	21-Oct-16 A	34	31-Dec-16	29-Jul-15	07-Sep-15	-391	0%																		
PPBRF3	Bearing design and submission - Viaduct F	12	03-Jan-17	12	16-Jan-17	08-Sep-15	21-Sep-15	-391	0%																		
PPBRF4	Design check by ICE - Viaduct F	12	17-Jan-17	12	02-Feb-17	22-Sep-15	07-Oct-15	-391	0%																		
PPBRF5	SO review & comment on design submission - Viaduct F	24	03-Feb-17	24	02-Mar-17	06-Nov-15	03-Dec-15	-367	0%																		
PPBRF7	Manufacture of Bearing - Viaduct F	48	03-Feb-17	48	30-Mar-17	08-Oct-15	03-Dec-15	-391	0%																		
Movement Joints																											
Viaduct A to F																											
MJ Design & Manufacture																											
General																											
PP6MJ01	Design & Submission of MJ	138	08-Feb-14 A	8	29-Nov-16	10-Mar-16	18-Mar-16	-208	30%																		
PP6MJ02-1	MJ Design Approval	96	26-May-14 A	32	29-Dec-16	01-Mar-16	11-Apr-16	-216	40%																		
PP6MJ02-2	Manufacture & delivery of MJ	150	30-Nov-16	150	07-Jun-17	10-Mar-16	09-Sep-16	-216	0%																		
Construction																											
Foundation & Substructure Works																											
Viaduct A - Bridge A2																											
Pier A1 (A2e)																											
Pier Head Segment																											
A01-C5210	A1 - PHS - Temporary Platform	12	19-Dec-16	12	04-Jan-17	12-Feb-16	25-Feb-16	-255	0%																		
A01-C5310	A1 - Install PH Segment A1-A2 (1 nr)	2	05-Jan-17*	2	06-Jan-17	26-Feb-16	27-Feb-16	-255	0%																		
A01-C5320	A1 - Install PH Segment A1-E1 (1 nr)	2	07-Jan-17*	2	09-Jan-17	29-Feb-16	01-Mar-16	-255	0%																		
Pier A4 (A2b)																											
Pier Head Segment																											
A04-C5210	A4 - PHS - Temporary Platform	12	26-Jan-17	12	11-Feb-17	01-Mar-16	15-Mar-16	-269	0%																		
A04-C5310	A4 - Install PH Segment (1nr)	2	13-Feb-17*	2	14-Feb-17	15-Mar-16	17-Mar-16	-269	0%																		
A04-C5410	A4 - PHS Diaphragm - Rebar, Formwork, Concreting	30	15-Feb-17	30	21-Mar-17	17-Mar-16	26-Apr-16	-269	0%																		
Pier A5 (A2a)																											
Pier Head Segment																											
A05-C5210	A5 - PHS - Temporary Platform	12	23-Dec-16	12	09-Jan-17	26-Jan-16	12-Feb-16	-270	0%																		
A05-C5310	A5 - Install PH Segment (1 nr)	2	10-Jan-17*	2	11-Jan-17	12-Feb-16	15-Feb-16	-270	0%																		
A05-C5410	A5 - PHS Diaphragm - Rebar, Formwork, Concreting	30	12-Jan-17	30	18-Feb-17	15-Feb-16	21-Mar-16	-270	0%																		
A05-C5420	A5 - PHS Diaphragm - Curing & Striking of Forms	6	20-Feb-17	6	25-Feb-17	21-Mar-16	01-Apr-16	-269	0%																		
Pier A6 (A1f)																											
Pier Head Segment																											
A06-C5210	A6 - PHS - Temporary Platform	12	30-Nov-16	12	13-Dec-16	12-Jan-16	25-Jan-16	-263	0%																		
A06-C5310	A6 - Install PH Segment A6-A5 (1 nr)	2	14-Dec-16*	2	15-Dec-16	26-Jan-16	27-Jan-16	-263	0%																		
A06-C5320	A6 - Install PH Segment A6-A7 (1 nr)	2	21-Dec-16*	2	22-Dec-16	28-Jan-16	29-Jan-16	-267	0%																		

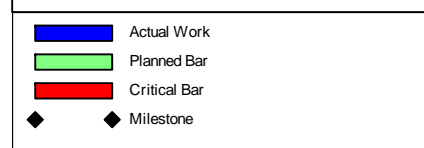
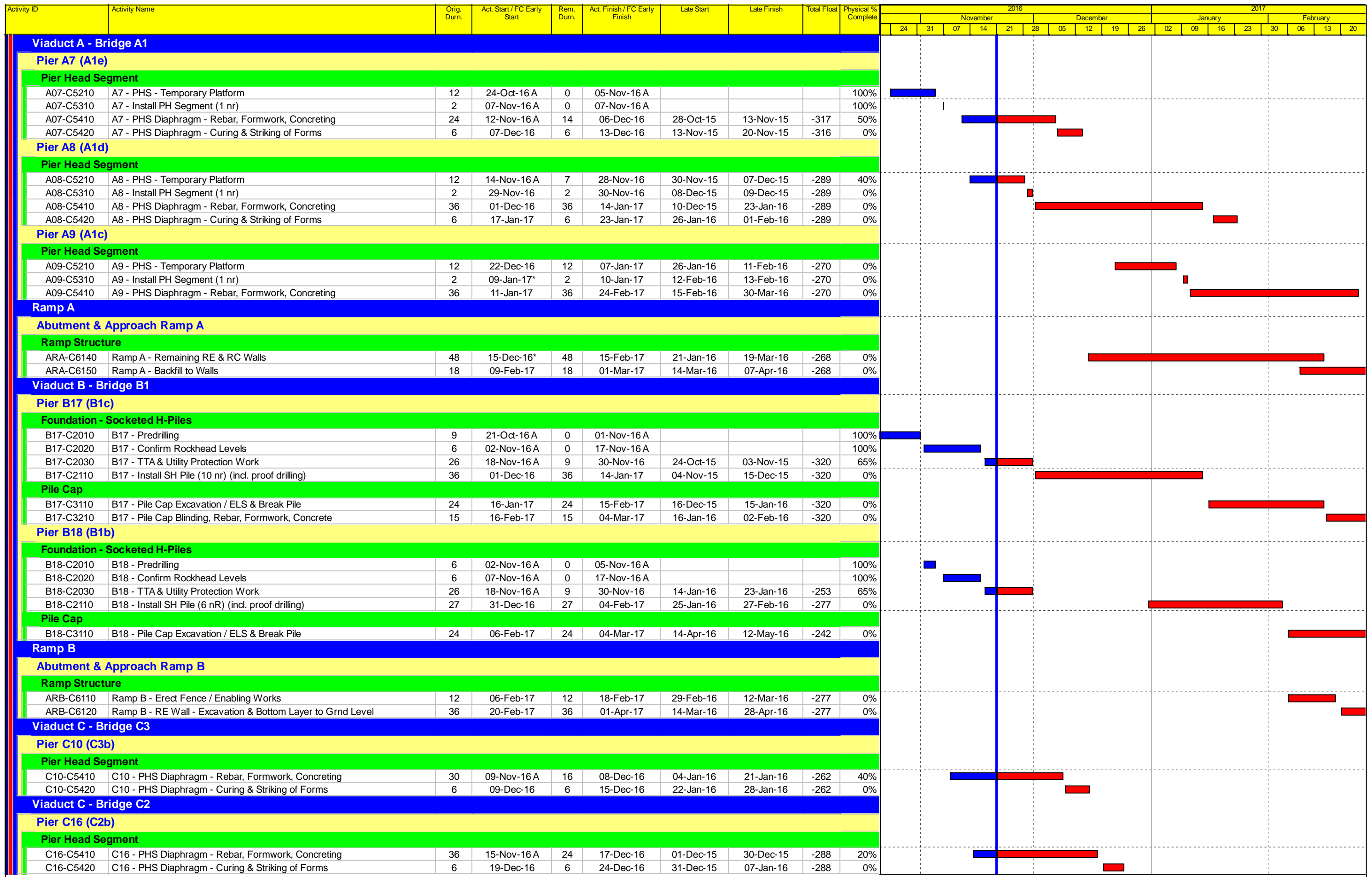
■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

Project ID: TMCLK-DWPH-M42
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Tuen Mun - Chek Lap Kok Link - Southern Connection
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Tuen Mun - Chek Lap Kok Link - Southern Connection
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J3518/GCL/PGM/3MRP-M42

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	2016												2017					
										November						December						January			February		
										24	31	07	14	21	28	05	12	19	26	02	09	16	23	30	06	13	20
Viaduct C - Bridge C1																											
Pier C17 (C2a)																											
Pier Head Segment																											
C17-C5410	C17 - PHS & Diaphragm - Rebar, Formwork, Concreting	42	26-Aug-16 A	0	31-Oct-16 A				100%																		
C17-C5420	C17 - PHS Diaphragm - Curing & Striking of Forms	6	01-Nov-16 A	0	07-Nov-16 A				100%																		
Ramp C																											
Abutment & Approach Ramp C																											
Ramp Structure																											
ARC-C6140	Ramp C - RC Wall - Backfill	12	16-May-16 A	22	15-Dec-16	15-Jan-16	12-Feb-16	-252	90%																		
ARC-C6150	Ramp C - Utility - Termination of 800 Tee	72	21-Sep-16 A	22	15-Dec-16	15-Jan-16	12-Feb-16	-252	0%																		
ARC-C6160	Ramp C - Utility - Remove 800 Tee & Backfill	12	16-Dec-16	12	31-Dec-16	13-Feb-16	26-Feb-16	-252	0%																		
ARC-C6170	Ramp C - RE Wall - Remaining Bays at 800 Tee	36	03-Jan-17	36	16-Feb-17	27-Feb-16	13-Apr-16	-252	0%																		
ARC-C6180	Ramp C - RC Wall - Remaining Bays at 800 Tee	36	17-Feb-17	36	30-Mar-17	14-Apr-16	27-May-16	-252	0%																		
Ramp Finishes, E&M & Roadworks																											
ARC-C7710	Ramp C - Parapet Panels (Initial)	24	26-Sep-16 A	30	24-Dec-16	21-Apr-16	27-May-16	-176	0%																		
Viaduct D - Bridge D2																											
Pier D9 (D3c)																											
Pier Head Segment																											
D09-C5410	D9 - PHS Diaphragm - Rebar, Formwork, Concreting	36	29-Aug-16 A	0	09-Nov-16 A				100%																		
D09-C5420	D9 - PHS Diaphragm - Curing & Striking of Forms	6	10-Nov-16 A	0	17-Nov-16 A				100%																		
Pier D13 (D2d)																											
Pier Head Segment																											
D13-C5410	D13 - PHS Diaphragm - Rebar, Formwork, Concreting	42	12-Sep-16 A	27	21-Dec-16	13-Jan-16	16-Feb-16	-254	40%																		
D13-C5420	D13 - PHS Diaphragm - Curing, Striking of Forms, Remove Scaffold	15	22-Dec-16	15	11-Jan-17	17-Feb-16	04-Mar-16	-254	0%																		
Ramp D																											
Abutment & Approach Ramp D																											
Ramp Structure																											
ARD-C6140	Ramp D - Box Structure Bay 1 & Bay 8	55	07-Mar-16 A	9	30-Nov-16	16-Mar-16	29-Mar-16	-203	80%																		
ARD-C6150	Ramp D - Backfill Embankment	90	02-Nov-15 A	22	15-Dec-16	16-Mar-16	14-Apr-16	-203	70%																		
Ramp Finishes, E&M & Roadworks																											
ARD-C7710	Ramp D - Parapet Panels	42	15-Oct-16 A	46	16-Jan-17	16-Mar-16	13-May-16	-203	0%																		
ARD-C7720	Ramp D - Ducting, Gantry & TCSS Provisions (KD4)	36	03-Jan-17	36	16-Feb-17	29-Apr-16	13-Jun-16	-203	0%																		
ARD-C7810	Ramp D - Drainage, Fire Main & E&M Services	54	24-Jan-17	54	30-Mar-17	23-May-16	26-Jul-16	-203	0%																		
ARD-C7820	Ramp D - Railings, Light Poles, Signs & Street Furniture	30	17-Feb-17	30	23-Mar-17	09-Aug-16	12-Sep-16	-156	0%																		
Viaduct E - Bridge E2																											
Pier E4A (E2b2)																											
Pier Head Segment																											
E04A-C5130	E4A - Diaphragm of PHS - Formwork, Rebar, Concreting	77	04-Jun-16 A	9	01-Dec-16	09-Mar-16	19-Mar-16	-208	85%																		
E04A-C5140	E4A - Remove Rail Beams, Megashore Towers. Crane	17	13-Oct-16 A	16	08-Dec-16	09-Mar-16	30-Mar-16	-209	50%																		
E04A-C5145	E4A - Install Infill Segments (4 nr) - THB	26	14-Nov-16 A	26	20-Dec-16	04-Mar-16	07-Apr-16	-213	25%																		
E04A-C5150	E4A - IFS Stitch & Remove Equipment	9	21-Dec-16	9	03-Jan-17	08-Apr-16	18-Apr-16	-213	0%																		
Pier E4B (E2b1)																											
Pier Head Segment																											
E04B-C5130	E4B - Diaphragm of PHS - Formwork, Rebar, Concreting	125	14-Sep-16 A	40	09-Jan-17	25-May-16	12-Jul-16	-149	60%																		
E04B-C5140	E4B - Remove Rail Beams, Megashore Towers	8	10-Jan-17	8	18-Jan-17	13-Jul-16	21-Jul-16	-149	0%																		
E04B-C5145	E4B - Install Infill Segments (4 nr) - THB	21	19-Jan-17	21	15-Feb-17	22-Jul-16	15-Aug-16	-149	0%																		
E04B-C5150	E4B - IFS Stitch & Remove Equipment	10	16-Feb-17	10	27-Feb-17	16-Aug-16	26-Aug-16	-149	0%																		
Pier E5A (E2c2)																											
Pier Head Segment																											
E05A-C5130	E5A - Diaphragm of PHS - Formwork, Rebar, Concreting	88	23-Aug-16 A	0	19-Nov-16 A				100%																		
E05A-C5140	E5A - Remove Rail Beams, Crane	14	01-Nov-16 A	15	07-Dec-16	25-Nov-15	11-Dec-15	-293	30%																		
E05A-C5145	E5A - Install Infill Segments (4 nr) - THB	23	12-Nov-16 A	24	17-Dec-16	21-Nov-15	18-Dec-15	-296	25%																		
E05A-C5150	E5A - IFS Stitch & Remove Equipment	12	19-Dec-16	12	04-Jan-17	19-Dec-15	05-Jan-16	-296	0%																		
Pier E5B (E2c1)																											
Pier Head Segment																											
E05B-C5130	E5B - Diaphragm of PHS - Formwork, Rebar, Concreting	73	08-Sep-16 A	6	26-Nov-16	22-Dec-15	30-Dec-15	-270	85%																		
E05B-C5140	E5B - Remove Rail Beams	8	17-Nov-16 A	14	06-Dec-16	19-Dec-15	07-Jan-16	-272	30%																		

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

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Tuen Mun - Chek Lap Kok Link - Southern Connection
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										November					December				January			February						
										24	31	07	14	21	28	05	12	19	26	02	09	16	23	30	06	13	20	
Viaduct E - Bridge E5, E6, E7, E8																												
Pier E11A (E7E8a)																												
Pier																												
E11A-C4050	E11A Pier - Curing, CJ, Remove Formwork & Falsework	12	15-Oct-16 A	0	05-Nov-16 A				100%	[Bar chart showing 100% completion]																		
Pier Head Segment																												
E11A-C5110	E11A - Temp. Work, Grillages, Spreader Beams, Rail Beams	21	28-Oct-16 A	5	25-Nov-16	21-Sep-15	25-Sep-15	-346	80%	[Bar chart showing 80% completion]																		
E11A-C5120	E11A - Install PH Segment (4 nr)	9	26-Nov-16	9	06-Dec-16	26-Sep-15	08-Oct-15	-346	0%	[Bar chart showing 0% completion]																		
E11A-C5130	E11A - Diaphragm of PHS - Formwork, Rebar, Concreting	80	07-Dec-16	80	16-Mar-17	09-Oct-15	14-Jan-16	-346	0%	[Bar chart showing 0% completion]																		
Pier E11B (E5e6a)																												
Pier																												
E11B-C4040	E11B Pier - TW, Rebar, Formwork, Concreting - Upper Arm (Solid)	50	26-Aug-16 A	0	04-Nov-16 A				100%	[Bar chart showing 100% completion]																		
E11B-C4050	E11B Pier - Curing, CJ, Remove Formwork & Falsework	12	05-Nov-16 A	0	18-Nov-16 A				100%	[Bar chart showing 100% completion]																		
Pier Head Segment																												
E11B-C5110	E11B - Temp. Work, Spreader Beams, Rail Beams	21	21-Nov-16	21	14-Dec-16	11-Apr-15	06-May-15	-480	0%	[Bar chart showing 0% completion]																		
E11B-C5120	E11B - Install PH Segment (4 nr)	7	15-Dec-16	7	22-Dec-16	07-May-15	14-May-15	-480	0%	[Bar chart showing 0% completion]																		
E11B-C5130	E11B - Diaphragm of PHS - Formwork, Rebar, Concreting	81	23-Dec-16	81	03-Apr-17	15-May-15	20-Aug-15	-480	0%	[Bar chart showing 0% completion]																		
Pier E12A (E8b)																												
Pile Cap Dolphin																												
E12A-C3130	E12A - Dolphin - Marine Pile Cap - Fixings, Dewatering & Trim Pile	11	03-Jan-17*	11	14-Jan-17	07-Nov-16	18-Nov-16	-46	0%	[Bar chart showing 0% completion]																		
E12A-C3150	E12A - Dolphin - Marine Pile Cap - Rebar, Concreting	5	16-Jan-17	5	20-Jan-17	19-Nov-16	24-Nov-16	-46	0%	[Bar chart showing 0% completion]																		
E12A-C3160	E12A - Dolphin - Marine Pile Cap - CJ preparation & Curing	3	21-Jan-17	3	24-Jan-17	25-Nov-16	28-Nov-16	-46	0%	[Bar chart showing 0% completion]																		
Pier																												
E12A-C4040	E12A Pier - TW, Rebar, Formwork, Concreting - Upper Arm (Solid)	47	10-Oct-16 A	9	30-Nov-16	22-Apr-15	02-May-15	-471	70%	[Bar chart showing 70% completion]																		
E12A-C4050	E12A Pier - Curing, CJ, Remove Formwork & Falsework	12	01-Dec-16	12	14-Dec-16	04-May-15	16-May-15	-471	0%	[Bar chart showing 0% completion]																		
Pier Head Segment / Infill Segment																												
E12A-C5110	E12A - Temp. Work, Grillages, Megashore Towers, Rail Beams	28	15-Dec-16	28	19-Jan-17	18-May-15	19-Jun-15	-471	0%	[Bar chart showing 0% completion]																		
E12A-C5120	E12A - Install PH Segment (4 nr)	10	20-Jan-17	10	03-Feb-17	22-Jun-15	03-Jul-15	-471	0%	[Bar chart showing 0% completion]																		
E12A-C5130	E12A - Diaphragm of PHS - Formwork, Rebar, Concreting	78	04-Feb-17	78	12-May-17	04-Jul-15	06-Oct-15	-471	0%	[Bar chart showing 0% completion]																		
Pier E12B (E7b)																												
Pier																												
E12B-C4050	E12B Pier - TW, Rebar, Formwork, Concreting - Upper Arm (Solid)	52	31-Aug-16 A	0	16-Nov-16 A				100%	[Bar chart showing 100% completion]																		
E12B-C4060	E12B Pier - Curing, CJ, Remove Formwork & Falsework	12	17-Nov-16 A	9	30-Nov-16	30-Oct-15	09-Nov-15	-315	30%	[Bar chart showing 30% completion]																		
Pier Head Segment / Infill Segment																												
E12B-C5110	E12B - Temp. Work, Grillages, Megashore Towers, Rail Beams	29	01-Dec-16	29	06-Jan-17	10-Nov-15	12-Dec-15	-315	0%	[Bar chart showing 0% completion]																		
E12B-C5120	E12B - Install PH Segment (4 nr)	8	07-Jan-17	8	16-Jan-17	14-Dec-15	22-Dec-15	-315	0%	[Bar chart showing 0% completion]																		
E12B-C5130	E12B - Diaphragm of PHS - Formwork, Rebar, Concreting	81	17-Jan-17	81	28-Apr-17	23-Dec-15	06-Apr-16	-315	0%	[Bar chart showing 0% completion]																		
Pier E12C (E6b)																												
Pier																												
E12C-C4040	E12C Pier - TW, Rebar, Formwork, Concreting - Upper Arm (Solid)	47	22-Sep-16 A	0	20-Nov-16 A				100%	[Bar chart showing 100% completion]																		
E12C-C4050	E12C Pier - Curing, CJ, Remove Formwork & Falsework	12	21-Nov-16	12	03-Dec-16	22-Oct-15	04-Nov-15	-322	0%	[Bar chart showing 0% completion]																		
Pier Head Segment / Infill Segment																												
E12C-C5110	E12C - Temp. Work, Grillages, Megashore Towers, Rail Beams	28	05-Dec-16	28	09-Jan-17	05-Nov-15	07-Dec-15	-322	0%	[Bar chart showing 0% completion]																		
E12C-C5120	E12C - Install PH Segment (4 nr)	10	10-Jan-17	10	20-Jan-17	08-Dec-15	18-Dec-15	-322	0%	[Bar chart showing 0% completion]																		
E12C-C5130	E12C - Diaphragm of PHS - Formwork, Rebar, Concreting	79	21-Jan-17	79	02-May-17	19-Dec-15	30-Mar-16	-322	0%	[Bar chart showing 0% completion]																		
Pier E12D (E5b)																												
Pier																												
E12D-C4030	E12D Pier - TW, Rebar, Formwork, Concreting - Lower Arm (Solid)	28	19-Jul-16 A	0	29-Oct-16 A				100%	[Bar chart showing 100% completion]																		
E12D-C4040	E12D Pier - TW, Rebar, Formwork, Concreting - Upper Arm (Solid)	36	31-Oct-16 A	18	10-Dec-16	09-Apr-15	29-Apr-15	-482	50%	[Bar chart showing 50% completion]																		
E12D-C4050	E12D Pier - Curing, CJ, Remove Formwork & Falsework	12	12-Dec-16	12	24-Dec-16	30-Apr-15	14-May-15	-482	0%	[Bar chart showing 0% completion]																		
Pier Head Segment / Infill Segment																												
E12D-C5110	E12D - Temp. Work, Grillages, Megashore Towers, Rail Beams	28	28-Dec-16	28	02-Feb-17	15-May-15	17-Jun-15	-482	0%	[Bar chart showing 0% completion]																		
E12D-C5120	E12D - Install PH Segment (4 nr)	10	03-Feb-17	10	14-Feb-17	18-Jun-15	30-Jun-15	-482	0%	[Bar chart showing 0% completion]																		
E12D-C5130	E12D - Diaphragm of PHS - Formwork, Rebar, Concreting	77	15-Feb-17	77	22-May-17	02-Jul-15	02-Oct-15	-482	0%	[Bar chart showing 0% completion]																		
Pier E13A (E8c)																												
Pier																												
E13A-C4040	E13A Pier - TW, Rebar, Formwork, Concreting - Upper Arm (Solid)	44	17-Oct-16 A	30	24-Dec-16	19-Mar-15	27-Apr-15	-496	20%	[Bar chart showing 20% completion]																		
E13A-C4050	E13A Pier - Curing, CJ, Remove Formwork & Falsework	12	28-Dec-16	12	11-Jan-17	28-Apr-15	12-May-15	-496	0%	[Bar chart showing 0% completion]																		
Pier Head Segment / Infill Segment																												

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

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Tuen Mun - Chek Lap Kok Link - Southern Connection
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Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete	2016											2017					
										November					December						January			February		
										24	31	07	14	21	28	05	12	19	26	02	09	16	23	30	06	13
Pile Cap																										
F01-C3110	F1 Pile Cap - Excavate, Break Pile Head	15	17-Jan-17	15	06-Feb-17	05-Aug-15	21-Aug-15	-431	0%																	
F01-C3210	F1 Pile Cap - Blinding, Formwork, Rebar, Concrete	19	07-Feb-17	19	28-Feb-17	22-Aug-15	14-Sep-15	-431	0%																	
Pier F2 (F1c)																										
Foundation - Bored Piles																										
F02-C2110	F2 Fr Pile - Set-up Plant & Install Sleeve	6	08-Feb-17*	6	14-Feb-17	01-Jun-15	06-Jun-15	-501	0%																	
F02-C2120	F2 Fr Pile - Excavate, Rebar, Concrete (1st) P1	12	15-Feb-17	12	28-Feb-17	08-Jun-15	22-Jun-15	-501	0%																	
Pier F3 (F1d)																										
Foundation - Bored Piles																										
F03-C2120	F3 Fr Pile - Excavate, Rebar, Concrete (1st) P1	12	30-Sep-16 A	0	22-Oct-16 A				100%																	
Viaduct F - Bridge F2																										
Pier F5 (F2c)																										
Foundation - Bored Piles																										
F05-C2120	F5 EB Pile - Excavate, Rebar, Concrete (1st) P3	12	05-Oct-16 A	0	29-Oct-16 A				100%																	
F05-C2130	F5 EB Pile - Excavate, Rebar, Concrete (2nd) P1	16	16-Nov-16 A	14	06-Dec-16	14-Apr-15	29-Apr-15	-478	20%																	
F05-C2140	F5 EB Pile - Excavate, Rebar, Concrete (3rd) P2	16	16-Dec-16*	16	06-Jan-17	30-Apr-15	19-May-15	-486	0%																	
F05-C2210	F5 EB Pile - Curing & Sonic Test	18	07-Jan-17	18	27-Jan-17	24-Oct-15	13-Nov-15	-358	0%																	
F05-C2220	F5 EB Pile - Full Depth Core & Test	12	01-Feb-17	12	14-Feb-17	14-Nov-15	27-Nov-15	-358	0%																	
Pier F6 (F2d)																										
Foundation - Bored Piles																										
F06-C2110	F6 EB Pile - Set-up Plant & Install Sleeve	7	30-Dec-16*	7	07-Jan-17	13-May-15	20-May-15	-486	0%																	
F06-C2120	F6 EB Pile - Excavate, Rebar, Concrete (1st) P1	13	09-Jan-17	13	23-Jan-17	21-May-15	05-Jun-15	-486	0%																	
F06-C2130	F6 EB Pile - Excavate, Rebar, Concrete (2nd) P2	12	04-Feb-17*	12	17-Feb-17	02-Dec-15	15-Dec-15	-346	0%																	
F06-C2140	F6 EB Pile - Excavate, Rebar, Concrete (3rd) P3	12	18-Feb-17	12	03-Mar-17	16-Dec-15	31-Dec-15	-346	0%																	
Pier F7 (F2e)																										
Foundation - Bored Piles																										
F07-C2110	F7 EB Pile - Set-up Plant & Install Sleeve	6	09-Nov-16 A	0	15-Nov-16 A				100%																	
F07-C2120	F7 EB Pile - Excavate, Rebar, Concrete (1st) P1	12	16-Nov-16 A	19	12-Dec-16	15-Oct-15	06-Nov-15	-327	0%																	
F07-C2130	F7 EB Pile - Excavate, Rebar, Concrete (2nd) P2	23	19-Dec-16*	23	17-Jan-17	07-Nov-15	03-Dec-15	-332	0%																	
F07-C2140	F7 EB Pile - Excavate, Rebar, Concrete (3rd) P3	23	23-Jan-17*	23	21-Feb-17	06-Apr-16	03-May-16	-240	0%																	
Viaduct F - Bridge F3																										
Pier F9 (F3d)																										
Foundation - Bored Piles																										
F09-C2110	F9 Fr Pile - Set-up Plant & Install Sleeve	12	25-Oct-16 A	0	31-Oct-16 A				100%																	
F09-C2120	F9 Fr Pile - Excavate, Rebar, Concrete (1st) P2 (Prelim. Pile)	12	01-Nov-16 A	0	20-Nov-16 A				100%																	
F09-C3130	F9 Fr Pile - Enabling Works for Load Test (Prelim. Pile)	20	21-Nov-16	20	13-Dec-16	13-Mar-15	09-Apr-15	-501	0%																	
F09-C3135	F9 Fr Pile - Install Kentledges for Load Test (Prelim. Pile)	30	14-Dec-16	30	20-Jan-17	10-Apr-15	15-May-15	-501	0%																	
F09-C3140	F9 Fr Pile - Carry Out Load Test (Prelim. Pile)	6	21-Jan-17	6	27-Jan-17	16-May-15	22-May-15	-501	0%																	
F09-C3145	F9 Fr Pile - Load Test Report Submission & Approval (Prelim. Pile)	6	01-Feb-17	6	07-Feb-17	23-May-15	30-May-15	-501	0%																	
F09-C3150	F9 Fr Pile - Remove Kentledges / Footing & Clear Area	36	01-Feb-17	36	14-Mar-17	01-Jun-15	14-Jul-15	-495	0%																	
Pier F10 (F3c)																										
Foundation - Bored Piles																										
F10-C2110	F10 EB Pile - Set-up Plant & Install Sleeve	12	10-Oct-16 A	0	22-Oct-16 A				100%																	
F10-C2120	F10 EB Pile - Excavate, Rebar, Concrete (1st) P1	14	24-Oct-16 A	0	11-Nov-16 A				100%																	
Viaduct F - Bridge F4																										
Pier F16 (F5a/F4a)																										
Foundation - Bored Piles																										
F16-C2110	F16 EB Pile - Set-up Plant & Install Sleeve	6	13-Feb-17*	6	18-Feb-17	07-Jul-15	13-Jul-15	-476	0%																	
F16-C2120	F16 EB Pile - Excavate, Rebar, Concrete (1st) P1	24	20-Feb-17	24	18-Mar-17	14-Jul-15	10-Aug-15	-476	0%																	
Viaduct F - Bridge F5																										
Pier F13 (F5d)																										
Foundation - Bored Piles																										
F13-C2140	F13 EB Pile - Excavate, Rebar, Concrete (3rd) P1	24	20-Dec-16*	24	19-Jan-17	24-Sep-15	24-Oct-15	-368	0%																	
F13-C2210	F13 EB Pile - Curing & Sonic Test	18	20-Jan-17	18	13-Feb-17	26-Oct-15	14-Nov-15	-368	0%																	
F13-C2220	F13 EB Pile - Full Depth Core & Test	12	14-Feb-17	12	27-Feb-17	16-Nov-15	28-Nov-15	-368	0%																	
Superstructure & Associated Works																										
Viaduct A																										

■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

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Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete	2016												2017								
										November						December						January			February					
										24	31	07	14	21	28	05	12	19	26	02	09	16	23	30	06	13	20			
Bridge A2																														
Deck Span Segment																														
A01-C6210	A1 - Install THB	3	13-Feb-17	3	15-Feb-17	02-Mar-16	04-Mar-16	-281	0%																					
A01-C6310	A1 - End Span to A2 (6 nr) - THB	21	16-Feb-17	21	11-Mar-17	05-Mar-16	01-Apr-16	-281	0%																					
A06-C6210	A6 - Install THB	3	12-Jan-17	3	14-Jan-17	30-Jan-16	02-Feb-16	-281	0%																					
A06-C6310	A6 - End Span to A5 (6 nr) - THB	21	16-Jan-17	21	11-Feb-17	03-Feb-16	01-Mar-16	-281	0%																					
Bridge A1																														
Deck Span Segment																														
A06-C6320	A6 - End Span to A7 (8 nr) - THB	21	16-Jan-17	21	11-Feb-17	03-Feb-16	01-Mar-16	-281	0%																					
A07-C6210	A7 - Install THB	3	14-Dec-16	3	16-Dec-16	21-Nov-15	24-Nov-15	-316	0%																					
A07-C6310	A7 - Cantilever Span (Initial 4 nr) - THB	9	17-Dec-16	9	29-Dec-16	25-Nov-15	04-Dec-15	-316	0%																					
A07-C6320	A7 - Install KF	6	30-Dec-16	6	06-Jan-17	05-Dec-15	11-Dec-15	-316	0%																					
A07-C6330	A7 - Cantilever Span (Remaining 12 nr) - KF	18	07-Jan-17	18	27-Jan-17	12-Dec-15	05-Jan-16	-316	0%																					
A08-C6310	A8 - Cantilever Span (Initial 4 nr) - Crane	12	24-Jan-17	12	09-Feb-17	02-Feb-16	18-Feb-16	-289	0%																					
Viaduct B																														
Bridge B3																														
Deck Finishes, E&M and Roadworks																														
VB3-C7710	Viaduct B3 - Parapet Panels	48	03-Jan-17*	48	02-Mar-17	16-Jun-16	11-Aug-16	-165	0%																					
VB3-C7720	Viaduct B3 - Gantry & TCSS Provisions (KD5)	36	17-Feb-17	36	30-Mar-17	29-Jul-16	08-Sep-16	-165	0%																					
Bridge B2																														
Deck Span Segment																														
B10-C6410	B10 - Cantilever Span (Remaining 9 nr) (NLH) - Crane	14	06-Nov-16 A	0	20-Nov-16 A				100%																					
Bridge B1																														
Deck Span Segment																														
B12-C6210	B12 - Falsework for End Span to B13	24	16-Dec-16	24	16-Jan-17	25-Apr-16	24-May-16	-195	0%																					
B12-C6310	B12 - End Span to B13 (7 nr) - Crane	14	17-Jan-17	14	04-Feb-17	25-May-16	10-Jun-16	-195	0%																					
B13-C6320	B13 - Cantilever Span (Remaining 20 nr) - Crane	30	08-Sep-16 A	0	26-Oct-16 A				100%																					
B14-C6310	B14 - Cantilever Span (24 nr) - Crane	48	12-Nov-16 A	34	31-Dec-16	18-Jan-16	29-Feb-16	-250	17%																					
B15-C6310	B15 - Cantilever Span (Initial 10 nr) - Crane	20	19-Dec-16	20	13-Jan-17	03-Feb-16	29-Feb-16	-260	0%																					
B15-C6320	B15 - Cantilever Span (Remaining 16 nr) - Crane	32	14-Jan-17	32	23-Feb-17	01-Mar-16	11-Apr-16	-260	0%																					
B16-C6310	B16 - Cantilever Span (24 nr) - Crane	28	13-Oct-16 A	24	17-Dec-16	06-Jan-16	02-Feb-16	-260	71%																					
Viaduct C																														
Bridge C4																														
Deck Span Segment																														
C03-C6510	C3 - Cantilever Span (22 nr) - LG2	10	20-Oct-16 A	0	31-Oct-16 A				100%																					
C04-C6210	C4 - Launch LG2 from C3 to C4	3	01-Nov-16 A	0	03-Nov-16 A				100%																					
C04-C6310	C4 - Cantilever Span (24 nr) - LG2	8	04-Nov-16 A	0	12-Nov-16 A				100%																					
C05-C6410	C5 - Launch LG2 from C4 to C5	3	14-Nov-16 A	0	15-Nov-16 A				100%																					
C05-C6510	C5 - Cantilever Span (Remaining 6 nr) - LG2	4	16-Nov-16 A	0	17-Nov-16 A				100%																					
Bridge C3																														
Deck Span Segment																														
C06-C6310	C6 - End Span to C7 (7 nr) - LG2	6	22-Dec-16	6	30-Dec-16	21-Sep-15	26-Sep-15	-373	0%																					
C07-C6410	C7 - Launch LG2 from C5 to C7 (MTR)	6	19-Nov-16 A	7	28-Nov-16	19-Aug-15	26-Aug-15	-373	15%																					
C07-C6510	C7 - Cantilever Span (24 nr) (MTR) - LG2	20	29-Nov-16	20	21-Dec-16	27-Aug-15	19-Sep-15	-373	0%																					
C08-C6210	C8 - Launch LG2 from C6 to C8 (MTR/NLH)	9	31-Dec-16	9	11-Jan-17	29-Sep-15	09-Oct-15	-373	0%																					
C08-C6310	C8 - Cantilever Span (24 nr) (MTR/NLH) - LG2	58	12-Jan-17	58	23-Mar-17	10-Oct-15	17-Dec-15	-373	0%																					
C09-C6310	C9 - Cantilever Span (Initial 12 nr) (NLH) - Crane	24	01-Nov-16 A	2	22-Nov-16	27-Jan-16	28-Jan-16	-242	92%																					
Bridge C2																														
Deck Span Segment																														
C11-C6210	C11 - Falsework for End Span to C12	24	10-Feb-17	24	09-Mar-17	18-Jan-16	17-Feb-16	-314	0%																					
C14-C6310	C14 - Cantilever Span (16 nr) - Crane	32	11-Oct-16 A	0	08-Nov-16 A				100%																					
C15-C6310	C15 - Cantilever Span (16 nr) - Crane & THB	36	16-Nov-16 A	32	29-Dec-16	31-Oct-15	07-Dec-15	-314	19%																					
C16-C6410	C16 - Falsework for End Span to C15	24	30-Dec-16	24	27-Jan-17	08-Dec-15	07-Jan-16	-314	0%																					
C16-C6510	C16 - End Span to C15 (4 nr) - Crane	8	01-Feb-17	8	09-Feb-17	08-Jan-16	16-Jan-16	-314	0%																					
Bridge C1																														
Deck Span Segment																														
C16-C6210	C16 - Falsework for End Span to C17	24	04-Feb-17	24	03-Mar-17	20-Feb-16	18-Mar-16	-283	0%																					
C17-C6310	C17 - Cantilever Span (Initial 2 nr) - Crane	8	14-Dec-16*	8	22-Dec-16	14-Jan-16	22-Jan-16	-273	0%																					
C17-C6320	C17 - Cantilever Span (Remaining 22 nr) - Crane	27	07-Jan-17	27	10-Feb-17	23-Jan-16	26-Feb-16	-283	0%																					

■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

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										November						December						January			February																									
										24	31	07	14	21	28	05	12	19	26	02	09	16	23	30	06	13	20																							
Slope 10NW-C/R4																																																		
M201170	10NW-C/R4 - Slope works	80	17-Feb-17	80	27-May-17	13-Jun-16	14-Sep-16	-204	0%																																									
Road Works Along NLH Eastbound																																																		
General																																																		
RW20078	NLH E/B (Gantries 324 - 328) - Construct Footing & A-frame	43	08-Sep-16 A	0	31-Oct-16 A				100%																																									
RW20078-1	NLH E/B (Gantries 324 - 328) - Prepare & Implement TTA to Erect Beams	23	01-Nov-16 A	6	26-Nov-16	16-Mar-16	22-Mar-16	-203	0%																																									
RW20078-2	NLH E/B (Gantries 324 - 328) - Erect Gantry Beams & Sign Faces	8	28-Nov-16	8	06-Dec-16	23-Mar-16	05-Apr-16	-203	0%																																									
At-Grade Works Along Cheung Tung Road																																																		
Slope Works Near Viaduct C																																																		
Slope 10NW-C/F15																																																		
SWVC6000	10NW-C/F15 - Slope works	42	18-Jan-17*	42	10-Mar-17	13-Aug-16	03-Oct-16	-129	0%																																									
Re-alignment of CTR Along Viaduct B																																																		
General																																																		
RP00064	Ch620-750: telecom, 11KV & 132KV ducting	20	20-Aug-15 A	56	27-Jan-17	02-Mar-16	11-May-16	-215	80%																																									
RP00071	Ch620-750: towngas(DN250+DN400) connection	32	19-Dec-16*	32	27-Jan-17	02-Apr-16	11-May-16	-215	0%																																									
RP00072	Ch620-700 DN1000 connection	1	12-Feb-17*	1	12-Feb-17	10-May-16	11-May-16	-277	0%																																									
RP00075	Ch100-300: duct laying for 11KV	20	28-Nov-16*	20	20-Dec-16	18-Apr-16	11-May-16	-185	0%																																									
RP00076	Ch100-300: lay telecom cable	10	02-Dec-16*	10	13-Dec-16	18-Mar-16	01-Apr-16	-211	0%																																									
RP00077	Ch100-300: street lighting & draw pit	13	14-Dec-16	13	30-Dec-16	02-Apr-16	18-Apr-16	-211	0%																																									
RP00078	Ch100-300: relocation of vent pipe	19	31-Dec-16	19	23-Jan-17	19-Apr-16	11-May-16	-211	0%																																									
RP00079	Ch100-300: watermain(DN450+DN1000)	142	29-Apr-15 A	12	03-Dec-16	16-Jan-16	30-Jan-16	-250	80%																																									
RP00080	Ch100-300: towngas(DN250)	6	05-Dec-16*	6	10-Dec-16	30-Jan-16	06-Feb-16	-250	0%																																									
RP00081	Ch100-300: towngas(DN400)	6	17-Nov-16 A	8	30-Nov-16	28-Jan-16	06-Feb-16	-240	60%																																									
RP00081-1	Ch100-300 Temp roadwork for CTR diversion	15	12-Dec-16	15	30-Dec-16	06-Feb-16	27-Feb-16	-250	0%																																									
RP00081-3	Ch100-300 watermain DN1000 remaining pipework and connection	58	31-Dec-16	58	14-Mar-17	27-Feb-16	11-May-16	-250	0%																																									
Re-alignment of CTR Along Viaduct C																																																		
West Portion																																																		
RW61012	Realign CTR (West of Abut C) - tie out drainage	100	03-Feb-17*	100	07-Jun-17	21-Oct-16	21-Feb-17	-84	0%																																									
RW61020	Realign CTR (West of Abut. C) - Utility diversion	90	24-Mar-15 A	124	25-Apr-17	10-Sep-16	11-Feb-17	-58	50%																																									
East Portion																																																		
RW60005	Realign CTR (East of Abut. C) - Drainage for tie-in	143	01-Dec-16*	143	31-May-17	15-Sep-15	09-Mar-16	-360	0%																																									
RW60010	Realign CTR (East of Abut. C) - GT325 footing + A frame erection	36	27-Apr-16 A	0	31-Oct-16 A				100%																																									
Watermain from Tung Chung to Southern Landfall																																																		
Watermain Works																																																		
General																																																		
WM00120	Lay DN450 Fresh Water Main at Re-aligned CTR (approx. 500m)	48	22-Apr-15 A	124	25-Apr-17	27-May-16	24-Oct-16	-147	40%																																									
WM00170	Lay DN450 Watermain Tung Chung to Re-aligned CTR (3rd 500m)	50	01-Jun-16 A	84	04-Mar-17	15-Jul-16	24-Oct-16	-107	50%																																									
WM00180	Lay DN450 Watermain from Tung Chung to Re-aligned CTR (last 400m)	76	21-Oct-16 A	50	20-Jan-17	24-Aug-16	24-Oct-16	-73	80%																																									

■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

Project ID: TMCLK-DWPH-M42
 Layout: J3518-DWP-3MRP Submission - M42
 Filter: TASK filters: 3-Month Lookahead, No CC
 Milestones, No Level of Effort.

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

Date	Revision	Checked	Approved
03-Oct-16		PKN	HF
31-Oct-16		PKN	GL
30-Nov-...		PKN	GL

DWG. No.:
J3518/GCL/PGM/3MRP-M42

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 10 mg/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 : 30/09/2016

Sampler

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

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 14 Mar 2016
 Slope (m) : 2.10326
 Intercept (b) : -0.06696
 Correlation Coefficient(r) : 0.99989

Standard Condition

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

Calibration Condition

Pa (hpa) : 1000
 Ta(K) : 304

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.4	3.321	1.611	55	54.10
2	13 holes	9.2	2.984	1.450	50	49.19
3	10 holes	6.8	2.565	1.251	43	42.30
4	7 holes	4.4	2.063	1.013	36	35.41
5	5 holes	2.7	1.616	0.800	28	27.55

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): 32.492 Intercept(b): 1.889 Correlation Coefficient(r): 0.9993

Checked by: Magnum Fan

Date: 04/10/2016

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR9
 Calibrated by : P.F. Yeung
 Date : 30/09/2016

Sampler

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

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 14 Mar 2016
 Slope (m) : 2.10326
 Intercept (b) : -0.06696
 Correlation Coefficient(r) : 0.99989

Standard Condition

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

Calibration Condition

Pa (hpa) : 1006
 Ta(K) : 303

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.8	3.379	1.638	56	55.09
2	13 holes	9.6	3.048	1.481	51	50.17
3	10 holes	7.2	2.640	1.287	45	44.27
4	7 holes	4.6	2.110	1.035	36	35.41
5	5 holes	2.8	1.646	0.814	28	27.54

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

Sampler Calibration Relationship (Linear Regression)

Slope(m): 33.438 Intercept(b): 0.661 Correlation Coefficient(r): 0.9994

Checked by: Magnum Fan

Date: 04/10/2016



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

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

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

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.4020	3.2	2.00
2	NA	NA	1.00	1.0060	6.4	4.00
3	NA	NA	1.00	0.9010	7.9	5.00
4	NA	NA	1.00	0.8590	8.8	5.50
5	NA	NA	1.00	0.7090	12.8	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
0.9866	0.7037	1.4078	0.9957	0.7102	0.8896
0.9824	0.9765	1.9909	0.9914	0.9855	1.2581
0.9803	1.0880	2.2259	0.9893	1.0980	1.4066
0.9792	1.1399	2.3345	0.9882	1.1504	1.4753
0.9738	1.3735	2.8155	0.9828	1.3862	1.7792
Qstd slope (m) = 2.10326			Qa slope (m) = 1.31703		
intercept (b) = -0.06696			intercept (b) = -0.04232		
coefficient (r) = 0.99989			coefficient (r) = 0.99989		
y axis = SQRT[H2O(Pa/760) (298/Ta)]			y axis = SQRT[H2O(Ta/Pa)]		

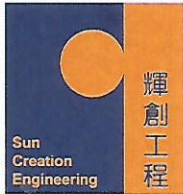
CALCULATIONS

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

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

For subsequent flow rate calculations:

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



輝創工程有限公司

Sun Creation Engineering Limited

Calibration and Testing Laboratory

Certificate of Calibration

校正證書

Certificate No. : C163248
證書編號

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

Description / 儀器名稱 : Sound Level Calibrator
Manufacturer / 製造商 : Rion
Model No. / 型號 : NC-73
Serial No. / 編號 : 10997142
Supplied By / 委託者 : Envirotech Services Co.
Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun,
New Territories, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : $(23 \pm 2)^{\circ}\text{C}$ Relative Humidity / 相對濕度 : $(55 \pm 20)\%$
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 15 June 2016

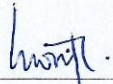
TEST RESULTS / 測試結果

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

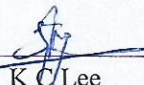
The test equipment used for calibration are traceable to National Standards via :

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

Tested By
測試


H T Wong
Technical Officer

Certified By
核證


K C Lee
Project Engineer

Date of Issue : 17 June 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室所書面批准。

Sun Creation Engineering Limited – Calibration & Testing Laboratory

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

輝創工程有限公司 – 校正及檢測實驗室

c/o 香港新界屯門興安里一號青山灣機樓四樓

Tel/電話: 2927 2606

Fax/傳真: 2744 8986

E-mail/電郵: callab@suncreation.com

Website/網址: www.suncreation.com

Page 1 of 2



Certificate of Calibration

校正證書

Certificate No. : C163248
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	C153519
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	93.7	± 0.5	± 0.2

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Spec.	Uncertainty of Measured Value (Hz)
1	0.985	1 kHz ± 2 %	± 1

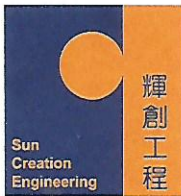
Remark : The uncertainties are for a confidence probability of not less than 95 %.

Note :

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

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. : C163758
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC16-1465) Date of Receipt / 收件日期 : 29 June 2016
Description / 儀器名稱 : Sound Level Meter
Manufacturer / 製造商 : Rion
Model No. / 型號 : NL-31
Serial No. / 編號 : 00603867
Supplied By / 委託者 : Envirotech Services Co.
Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun,
New Territories, Hong Kong

TEST CONDITIONS / 測試條件

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

TEST SPECIFICATIONS / 測試規範

Calibration check

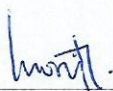
DATE OF TEST / 測試日期 : 11 July 2016

TEST RESULTS / 測試結果

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

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

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

Tested By : 
測試 : _____
H T Wong
Technical Officer

Certified By : 
核證 : _____
K C Lee
Project Engineer

Date of Issue : 12 July 2016
簽發日期

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

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Certificate of Calibration

校正證書

Certificate No. : C163758
證書編號

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- Self-calibration was performed before the test.
- The results presented are the mean of 3 measurements at each calibration point.
- Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C160077
CL281	Multifunction Acoustic Calibrator	PA160023

- Test procedure : MA101N.

- Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT Reading	IEC 61672 Class 1 Spec.
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	(dB)	(dB)
30 - 120	L _A	A	Fast	94.00	1	93.4	± 1.1

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	(dB)
30 - 120	L _A	A	Fast	94.00	1	93.4 (Ref.)
				104.00		103.4
				114.00		113.4

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

6.2 Time Weighting

UUT Setting				Applied Value		UUT Reading	IEC 61672 Class 1 Spec.
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	(dB)	(dB)
30 - 120	L _A	A	Fast	94.00	1	93.4	Ref.
			Slow			93.4	± 0.3

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. : C163758
證書編號

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L _A	A	Fast	94.00	63 Hz	67.1	-26.2 ± 1.5
					125 Hz	77.1	-16.1 ± 1.5
					250 Hz	84.7	-8.6 ± 1.4
					500 Hz	90.1	-3.2 ± 1.4
					1 kHz	93.4	Ref.
					2 kHz	94.7	+1.2 ± 1.6
					4 kHz	94.5	+1.0 ± 1.6
					8 kHz	92.4	-1.1 (+2.1 ; -3.1)
					12.5 kHz	89.5	-4.3 (+3.0 ; -6.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L _C	C	Fast	94.00	63 Hz	92.5	-0.8 ± 1.5
					125 Hz	93.2	-0.2 ± 1.5
					250 Hz	93.4	0.0 ± 1.4
					500 Hz	93.4	0.0 ± 1.4
					1 kHz	93.4	Ref.
					2 kHz	93.3	-0.2 ± 1.6
					4 kHz	92.7	-0.8 ± 1.6
					8 kHz	90.5	-3.0 (+2.1 ; -3.1)
					12.5 kHz	87.6	-6.2 (+3.0 ; -6.0)

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

- Mfr's Spec. : IEC 61672 Class 1

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

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

Note :

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

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。



Internal Calibration & Performance Check of pH Meter

Equipment Ref. No. : ET/EW007/007 Manufacturer : HANNA
Model No. : HI 8314 Serial No. : 08500489
Date of Calibration : 03/10/2016 Calibration Due Date : 02/11/2016

Liquid Junction Error

003/5.2/002/05 (20°C)

Primary Standard Solution Used : Phosphate Ref No. of Primary Solution: 003/5.2/002/06 (25°C)
Temperature of Solution : 25.0 / 20.0 $\Delta\text{pH}_{1/2} =$ 0.080 / 0.080
pH value of diluted buffer : 6.971 / 6.984 $\text{pH (S)} =$ 6.865 / 6.881
 $\Delta\text{pH} = \text{pH(S)} - \text{pH of diluted buffer} =$ 0.106 / 0.103 (Observed Deviation)
Liquid Junction Error (ΔpH_j) = $\Delta\text{pH} - \Delta\text{pH}_{1/2} =$ 0.026 / 0.023

Shift on Stirring

pH of buffer solution (with stirring), $\text{pH}_s =$ 6.901 / 6.912
Shift on stirring, $\Delta\text{pH}_s = \text{pH}_s - \text{pH(S)} - \Delta\text{pH}_j =$ 0.010 / 0.008

Noise

Noise, $\Delta\text{pH}_n =$ difference between max and min reading : 0.013 / 0.014

Verification of ATC

Ref. No. of reference thermometer used: ET/0521/019
Temperature record from the reference thermometer (T_R): 25.0 / 20.0 °C
Temperature record from the ATC (T_{ATC}): 24.8 / 19.8 °C
Temperature Difference, $|T_R - T_{ATC}|$ 0.2 / 0.2 °C
Correction +0.2 / +0.2 °C

Acceptance Criteria

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

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

Calibrated by: 

Checked by : 



Internal Calibration & Performance Check of pH Meter

Equipment Ref. No. : ET/EW007/008 Manufacturer : HANNA
 Model No. : HI9125 Serial No. : H0040409
 Date of Calibration : 02/11/2016 Calibration Due Date : 01/12/2016

Liquid Junction Error

003/5.2/002/05 (20°C)

Primary Standard Solution Used : Phosphate Ref No. of Primary Solution: 003/5.2/002/06 (25°C)
 Temperature of Solution : 25.0 / 20.0 $\Delta pH_{1/2} =$ 0.080 / 0.080
 pH value of diluted buffer : 6.97 / 6.98 pH (S) = 6.865 / 6.881
 $\Delta pH = pH(S) - pH \text{ of diluted buffer} =$ 0.105 / 0.099 (Observed Deviation)
 Liquid Junction Error (ΔpH_j) = $\Delta pH - \Delta pH_{1/2} =$ 0.02 / 0.02

Shift on Stirring

pH of buffer solution (with stirring), $pH_s =$ 6.900 / 6.910
 Shift on stirring, $\Delta pH_s = pH_s - pH(S) - \Delta pH_j =$ 0.010 / 0.010

Noise

Noise, $\Delta pH_n =$ difference between max and min reading : 0.01 / 0.01

Verification of ATC

Ref. No. of reference thermometer used: ET/0521/019
 Temperature record from the reference thermometer (T_R): 25.0 / 20.0 °C
 Temperature record from the ATC (T_{ATC}): 25.0 / 19.9 °C
 Temperature Difference, $|T_R - T_{ATC}|$ 0.0 / 0.1 °C
 Correction +0.0 / +0.1 °C

Acceptance Criteria

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

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

* Delete as appropriate

Calibrated by: _____

Checked by : _____



Internal Calibration Report of Dissolved Oxygen Meter

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

Temperature Verification

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

Ref. No. of Water Bath : ---

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

Standardization of sodium thiosulphate (Na₂S₂O₃) solution

Reagent No. of Na ₂ S ₂ O ₃ titrant	CPE/012/4.5/001/14	Reagent No. of 0.025N K ₂ Cr ₂ O ₇	CPE/012/4.4/002/14
		Trial 1	Trial 2
Initial Vol. of Na ₂ S ₂ O ₃ (ml)		0.00	10.35
Final Vol. of Na ₂ S ₂ O ₃ (ml)		10.35	20.75
Vol. of Na ₂ S ₂ O ₃ used (ml)		10.35	10.40
Normality of Na ₂ S ₂ O ₃ solution (N)		0.02415	0.02404
Average Normality (N) of Na ₂ S ₂ O ₃ solution (N)		0.02410	
Acceptance criteria, Deviation		Less than ± 0.001N	

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

Linearity Checking

*Determination of dissolved oxygen content by Winkler Titration **

Purging Time (min)	2		5		10	
	1	2	1	2	1	2
Trial						
Initial Vol. of Na ₂ S ₂ O ₃ (ml)	0.00	11.70	23.40	0.00	6.50	10.50
Final Vol. of Na ₂ S ₂ O ₃ (ml)	11.70	23.40	30.00	6.50	10.50	14.60
Vol. (V) of Na ₂ S ₂ O ₃ used (ml)	11.70	11.70	6.60	6.50	4.00	4.10
Dissolved Oxygen (DO), mg/L	7.57	7.57	4.27	4.21	2.59	2.65
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L		Less than + 0.3mg/L	

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

Purging time, min	DO meter reading, mg/L			Winkler Titration result *, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
2	7.44	7.51	7.48	7.57	7.57	7.57	1.20
5	4.19	4.19	4.19	4.27	4.21	4.24	1.19
10	2.52	2.54	2.53	2.59	2.65	2.62	3.50
Linear regression coefficient				0.9999			



Internal Calibration Report of Dissolved Oxygen Meter

Zero Point Checking

DO meter reading, mg/L	0.00
------------------------	------

Salinity Checking

Reagent No. of NaCl (10ppt)	CPE/012/4.7/003/29	Reagent No. of NaCl (30ppt)	CPE/012/4.8/003/29
-----------------------------	--------------------	-----------------------------	--------------------

Determination of dissolved oxygen content by Winkler Titration **

Salinity (ppt)	10		30	
	1	2	1	2
Trial				
Initial Vol. of Na ₂ S ₂ O ₃ (ml)	0.00	10.90	21.90	31.30
Final Vol. of Na ₂ S ₂ O ₃ (ml)	10.90	21.90	31.30	40.80
Vol. (V) of Na ₂ S ₂ O ₃ used (ml)	10.90	11.00	9.40	9.50
Dissolved Oxygen (DO), mg/L	7.05	7.12	6.08	6.15
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L	

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

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result**, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	7.11	7.15	7.13	7.05	7.12	7.09	0.56
30	6.08	6.04	6.06	6.08	6.15	6.12	0.99

Acceptance Criteria

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

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

Delete as appropriate

Calibrated by

:

Approved by :



Performance Check of Salinity Meter

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

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

Date of Calibration : 22/10/2016 Due Date : 21/01/2017

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

S/001/5

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

(*) $\text{Difference (\%)} = (\text{Measured Salinity} - \text{Salinity Standard value}) / \text{Salinity Standard value} \times 100$

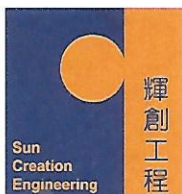
Acceptance Criteria

Difference : -10 % to 10 %

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

Checked by : [Signature]

Approved by : [Signature]



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 : $(23 \pm 2)^{\circ}\text{C}$ Relative Humidity / 相對濕度 : $(55 \pm 20)\%$
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範


Calibration check

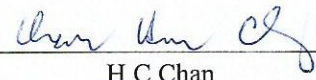
DATE OF TEST / 測試日期 : 27 October 2016

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.

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。

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

ENVIROTECH SERVICES CO.

Calibration Report of Wind Meter

Date of Calibration : 1 November 2016

Brand of Test Meter: Global Water

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

Direction 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)	Anemomete (m/s)
1.18	1.3
0.99	1.1
0.67	0.7

Wind Direction Test

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

Calibrated by: Fai
Yeung Ping Fai
(Technical Officer)

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

Appendix F

EM&A Monitoring Schedules

**HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Noise Monitoring Schedule (1 to 30 November 2016)**

Alternative Noise Monitoring at Pak Mong Village Entrance

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

**HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Air Quality Monitoring Schedule (1 to 30 November 2016)**

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	5-Nov
		1-hr TSP Monitoring 24-hr TSP Monitoring				
6-Nov	7-Nov	8-Nov	9-Nov	10-Nov	11-Nov	12-Nov
1-hr TSP Monitoring 24-hr TSP Monitoring				1-hr TSP Monitoring 24-hr TSP Monitoring		
13-Nov	14-Nov	15-Nov	16-Nov	17-Nov	18-Nov	19-Nov
			1-hr TSP Monitoring 24-hr TSP Monitoring			
20-Nov	21-Nov	22-Nov	23-Nov	24-Nov	25-Nov	26-Nov
		1-hr TSP Monitoring 24-hr TSP Monitoring				
27-Nov	28-Nov	29-Nov	30-Nov			
1-hr TSP Monitoring 24-hr TSP Monitoring						

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

Alternative Noise Monitoring at Pak Mong Village Entrance

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

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

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

Alternative Air Quality Monitoring at WA4 and MTRC Depot Entrance

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				01-Dec	02-Dec	03-Dec
				1-hr TSP Monitoring 24-hr TSP Monitoring		
04-Dec	05-Dec	06-Dec	07-Dec	08-Dec	09-Dec	10-Dec
			1-hr TSP Monitoring 24-hr TSP Monitoring			
11-Dec	12-Dec	13-Dec	14-Dec	15-Dec	16-Dec	17-Dec
		1-hr TSP Monitoring 24-hr TSP Monitoring				
18-Dec	19-Dec	20-Dec	21-Dec	22-Dec	23-Dec	24-Dec
1-hr TSP Monitoring 24-hr TSP Monitoring				1-hr TSP Monitoring 24-hr TSP Monitoring		
25-Dec	26-Dec	27-Dec	28-Dec	29-Dec	30-Dec	31-Dec
			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 (November 2016)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30-Oct	31-Oct	01-Nov	02-Nov	03-Nov	04-Nov	05-Nov
		WQM Mid-Flood 8:11 (06:26 - 09:56) Mid-Ebb 13:55 (12:10 - 15:40)		WQM Mid-Flood 9:27 (07:42 - 11:12) Mid-Ebb 15:02 (13:17 - 16:47)		WQM Mid-Flood 11:06 (09:21 - 12:51) Mid-Ebb 16:23 (14:38 - 18:08)
06-Nov	07-Nov	08-Nov	09-Nov	10-Nov	11-Nov	12-Nov
		WQM Mid-Flood 14:43 (12:58 - 16:28) Mid-Ebb 20:43 (16:58 - 22:28)		WQM Mid-Ebb 8:50 (07:05 - 10:35) Mid-Flood 16:03 (14:18 - 17:48)		WQM Mid-Ebb 10:48 (09:03 - 12:33) Mid-Flood 17:08 (15:23 - 18:53)
13-Nov	14-Nov	15-Nov	16-Nov	17-Nov	18-Nov	19-Nov
		WQM Mid-Ebb 13:20 (11:35 - 15:05) Mid-Flood 18:54 (17:09 - 20:39)		WQM Mid-Flood 9:31 (07:46 - 11:16) Mid-Ebb 15:00 (13:45 - 16:45)		WQM Mid-Flood 11:25 (09:40 - 13:10) Mid-Ebb 16:41 (14:56 - 18:26)
20-Nov	21-Nov	22-Nov	23-Nov	24-Nov	25-Nov	26-Nov
		WQM Mid-Flood 14:55 (13:10 - 16:40) Mid-Ebb 21:09 (19:24 - 22:54)		WQM Mid-Ebb 9:31 (07:46 - 11:16) Mid-Flood 16:08 (14:23 - 17:53)		WQM Mid-Ebb 11:09 (09:24 - 12:54) Mid-Flood 17:04 (15:19 - 18:49)
27-Nov	28-Nov	29-Nov	30-Nov	01-Dec	02-Dec	03-Dec
		WQM Mid-Ebb 13:02 (11:17 - 14:47) Mid-Flood 18:22 (16:37 - 20:07)		WQM Mid-Flood 8:46 (07:01 - 10:31) Mid-Ebb 14:11 (12:26 - 15:56)		WQM Mid-Flood 10:02 (08:17 - 11:47) Mid-Ebb 15:25 (13:40 - 17:10)

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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27-Nov	28-Nov	29-Nov	30-Nov	01-Dec	02-Dec	03-Dec
				WQM Mid-Flood 8:46 (07:01 - 10:31) Mid-Ebb 14:11 (12:26 - 15:56)		WQM Mid-Flood 10:02 (08:17 - 11:47) Mid-Ebb 15:25 (13:40 - 17:10)
04-Dec	05-Dec	06-Dec	07-Dec	08-Dec	09-Dec	10-Dec
		WQM Mid-Flood 12:41 (10:56 - 14:26) Mid-Ebb 18:12 (16:35 - 19:50)		WQM Mid-Flood 14:30 (12:45 - 16:15) Mid-Ebb 20:53 (19:08 - 22:38)		WQM Mid-Ebb 9:18 (07:33 - 11:03) Mid-Flood 15:50 (14:05 - 17:35)
11-Dec	12-Dec	13-Dec	14-Dec	15-Dec	16-Dec	17-Dec
		WQM Mid-Ebb 12:18 (10:33 - 14:03) Mid-Flood 17:49 (16:04 - 19:34)		WQM Mid-Flood 8:35 (06:50 - 10:20) Mid-Ebb 14:00 (12:15 - 15:45)		WQM Mid-Flood 10:13 (08:28 - 11:58) Mid-Ebb 15:32 (13:47 - 17:17)
18-Dec	19-Dec	20-Dec	21-Dec	22-Dec	23-Dec	24-Dec
		WQM Mid-Flood 12:45 (11:00 - 14:30) Mid-Ebb 18:24 (16:39 - 20:09)		WQM Mid-Ebb 6:58 (05:13 - 08:43) Mid-Flood 14:28 (12:43 - 16:13)		WQM Mid-Ebb 9:44 (07:59 - 11:29) Mid-Flood 15:47 (14:02 - 17:32)
25-Dec	26-Dec	27-Dec	28-Dec	29-Dec	30-Dec	31-Dec
		WQM Mid-Ebb 12:06 (10:21 - 13:51) Mid-Flood 17:20 (15:35 - 19:05)		WQM Mid-Flood 8:02 (06:17 - 09:47) Mid-Ebb 13:18 (11:33 - 15:03)		WQM Mid-Flood 9:09 (07:24 - 10:54) Mid-Ebb 14:29 (12:44 - 16:14)

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 30 November 2016)**

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

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

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

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	2016-11-01	ASR8A	8:10	1-hr TSP	77	394	500
TMCLKL	HY/2012/07	2016-11-01	ASR8A	9:12	1-hr TSP	69		
TMCLKL	HY/2012/07	2016-11-01	ASR8A	10:14	1-hr TSP	54		
TMCLKL	HY/2012/07	2016-11-07	ASR8A	8:00	1-hr TSP	54		
TMCLKL	HY/2012/07	2016-11-07	ASR8A	9:02	1-hr TSP	56		
TMCLKL	HY/2012/07	2016-11-07	ASR8A	10:04	1-hr TSP	56		
TMCLKL	HY/2012/07	2016-11-10	ASR8A	8:20	1-hr TSP	51	394	500
TMCLKL	HY/2012/07	2016-11-10	ASR8A	9:22	1-hr TSP	58		
TMCLKL	HY/2012/07	2016-11-10	ASR8A	10:24	1-hr TSP	53		
TMCLKL	HY/2012/07	2016-11-16	ASR8A	8:41	1-hr TSP	62		
TMCLKL	HY/2012/07	2016-11-16	ASR8A	9:43	1-hr TSP	43		
TMCLKL	HY/2012/07	2016-11-16	ASR8A	10:45	1-hr TSP	46		
TMCLKL	HY/2012/07	2016-11-22	ASR8A	8:44	1-hr TSP	89		
TMCLKL	HY/2012/07	2016-11-22	ASR8A	9:46	1-hr TSP	89		
TMCLKL	HY/2012/07	2016-11-22	ASR8A	10:48	1-hr TSP	75		
TMCLKL	HY/2012/07	2016-11-28	ASR8A	8:36	1-hr TSP	53		
TMCLKL	HY/2012/07	2016-11-28	ASR8A	9:38	1-hr TSP	65		
TMCLKL	HY/2012/07	2016-11-28	ASR8A	10:40	1-hr TSP	91		
					Average	64		
					Min.	43		
					Max.	91		

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

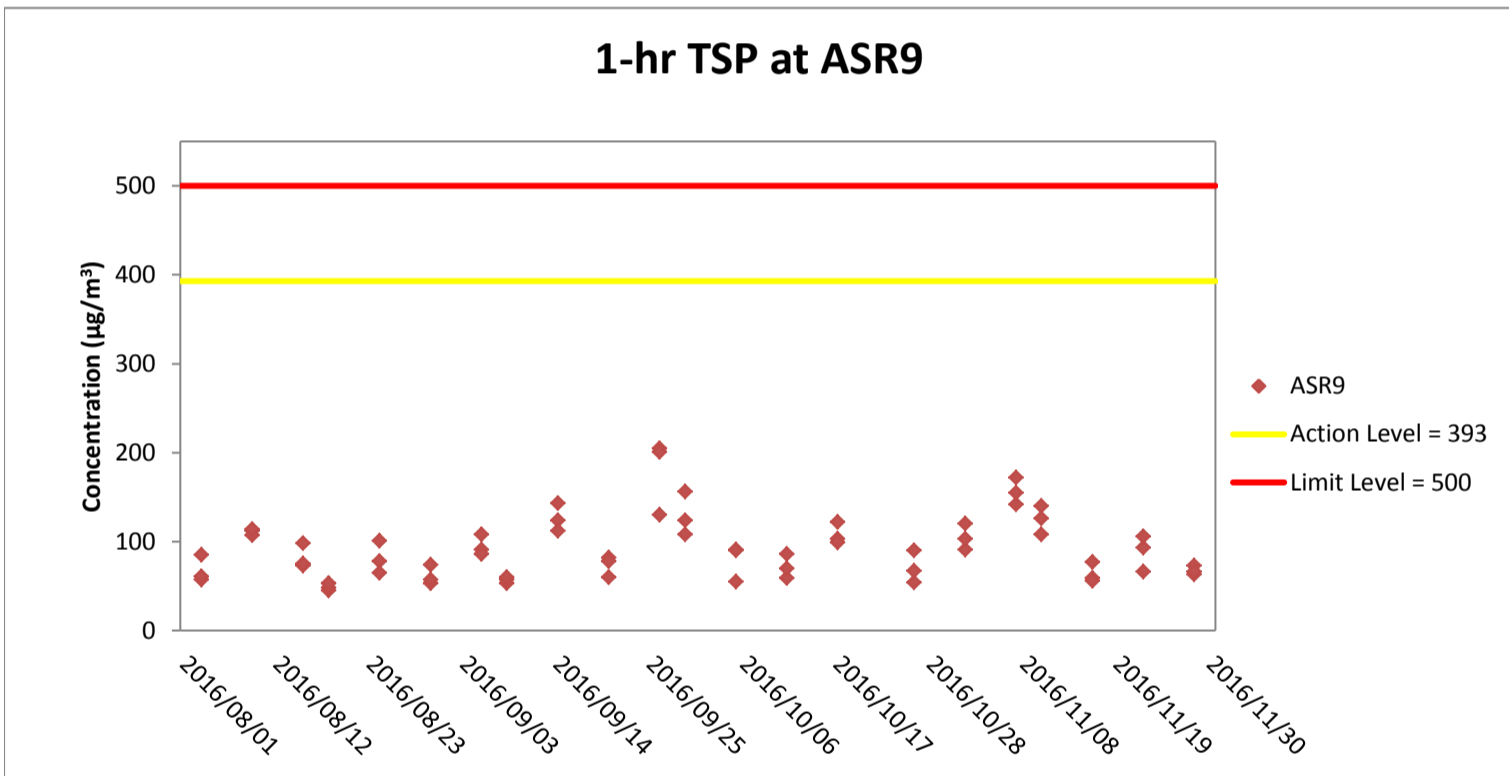
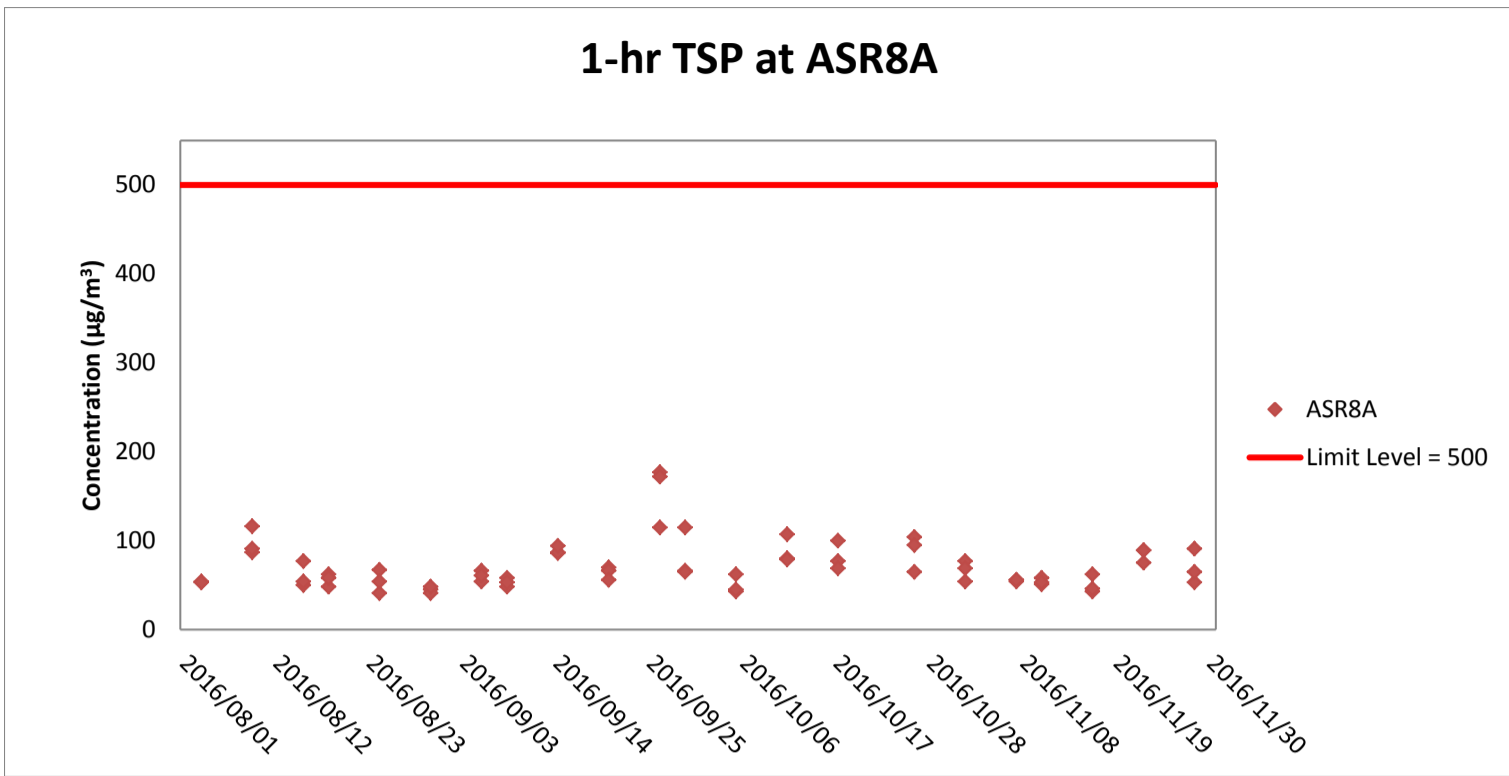
Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2012/07	2016-11-01	ASR9	8:20	1-hr TSP	91	393	500
TMCLKL	HY/2012/07	2016-11-01	ASR9	9:22	1-hr TSP	120		
TMCLKL	HY/2012/07	2016-11-01	ASR9	10:24	1-hr TSP	103		
TMCLKL	HY/2012/07	2016-11-07	ASR9	8:10	1-hr TSP	172		
TMCLKL	HY/2012/07	2016-11-07	ASR9	9:12	1-hr TSP	142		
TMCLKL	HY/2012/07	2016-11-07	ASR9	10:14	1-hr TSP	155		
TMCLKL	HY/2012/07	2016-11-10	ASR9	8:31	1-hr TSP	108	393	500
TMCLKL	HY/2012/07	2016-11-10	ASR9	9:33	1-hr TSP	140		
TMCLKL	HY/2012/07	2016-11-10	ASR9	10:35	1-hr TSP	126		
TMCLKL	HY/2012/07	2016-11-16	ASR9	8:51	1-hr TSP	59		
TMCLKL	HY/2012/07	2016-11-16	ASR9	9:53	1-hr TSP	77		
TMCLKL	HY/2012/07	2016-11-16	ASR9	10:55	1-hr TSP	56		
TMCLKL	HY/2012/07	2016-11-22	ASR9	8:55	1-hr TSP	93		
TMCLKL	HY/2012/07	2016-11-22	ASR9	9:57	1-hr TSP	66		
TMCLKL	HY/2012/07	2016-11-22	ASR9	10:59	1-hr TSP	106		
TMCLKL	HY/2012/07	2016-11-28	ASR9	9:48	1-hr TSP	63		
TMCLKL	HY/2012/07	2016-11-28	ASR9	10:50	1-hr TSP	73		
TMCLKL	HY/2012/07	2016-11-28	ASR9	11:52	1-hr TSP	66		
					Average	101		
					Min.	56		
					Max.	172		

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

Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2012/07	2016-11-01	ASR8A	11:16	24-hr TSP	60	178	260
TMCLKL	HY/2012/07	2016-11-07	ASR8A	11:06	24-hr TSP	47	178	260
TMCLKL	HY/2012/07	2016-11-10	ASR8A	11:26	24-hr TSP	45		
TMCLKL	HY/2012/07	2016-11-16	ASR8A	11:47	24-hr TSP	49		
TMCLKL	HY/2012/07	2016-11-22	ASR8A	11:50	24-hr TSP	54		
TMCLKL	HY/2012/07	2016-11-28	ASR8A	11:42	24-hr TSP	49		
						Average		
						Min.	45	
						Max.	60	

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

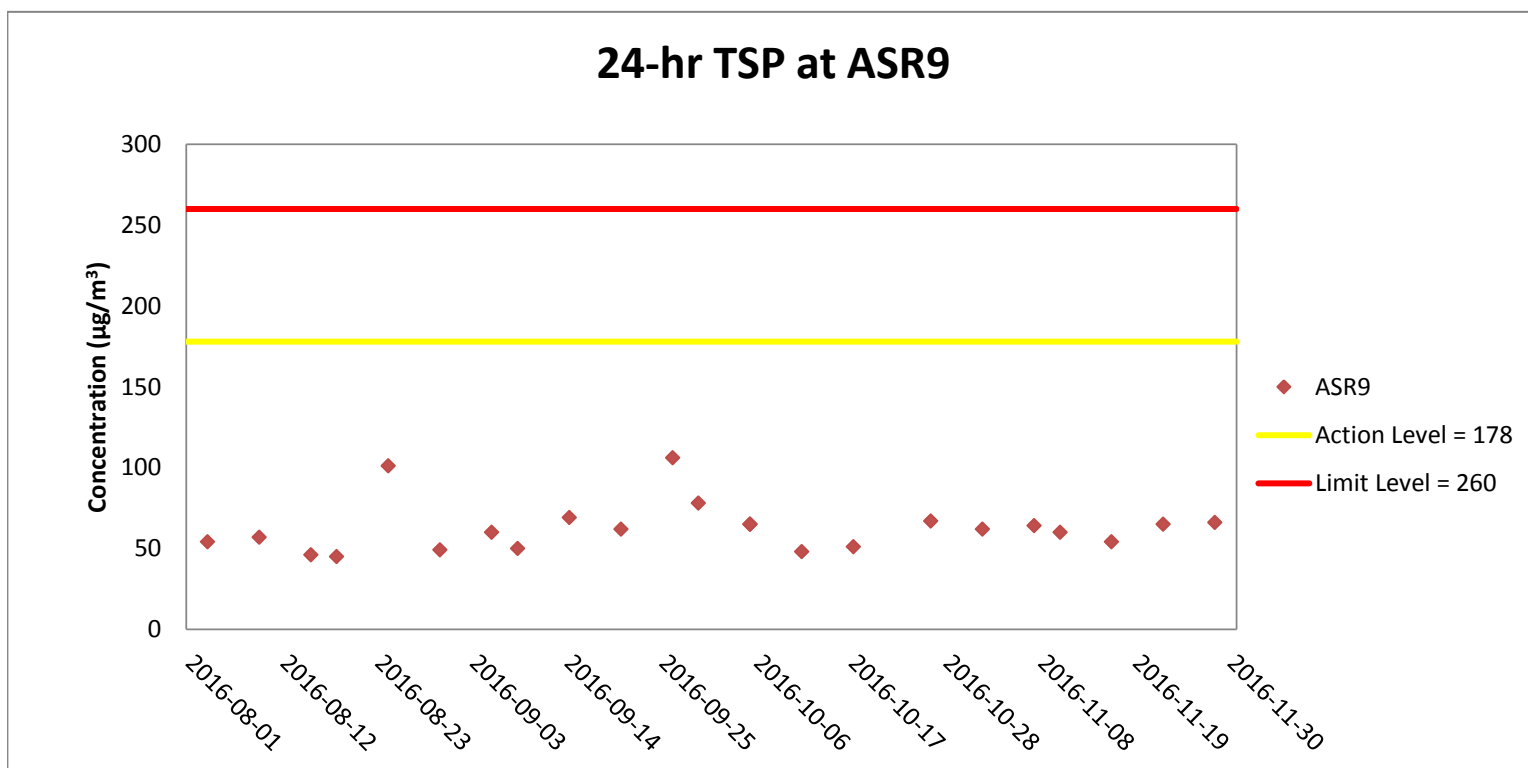
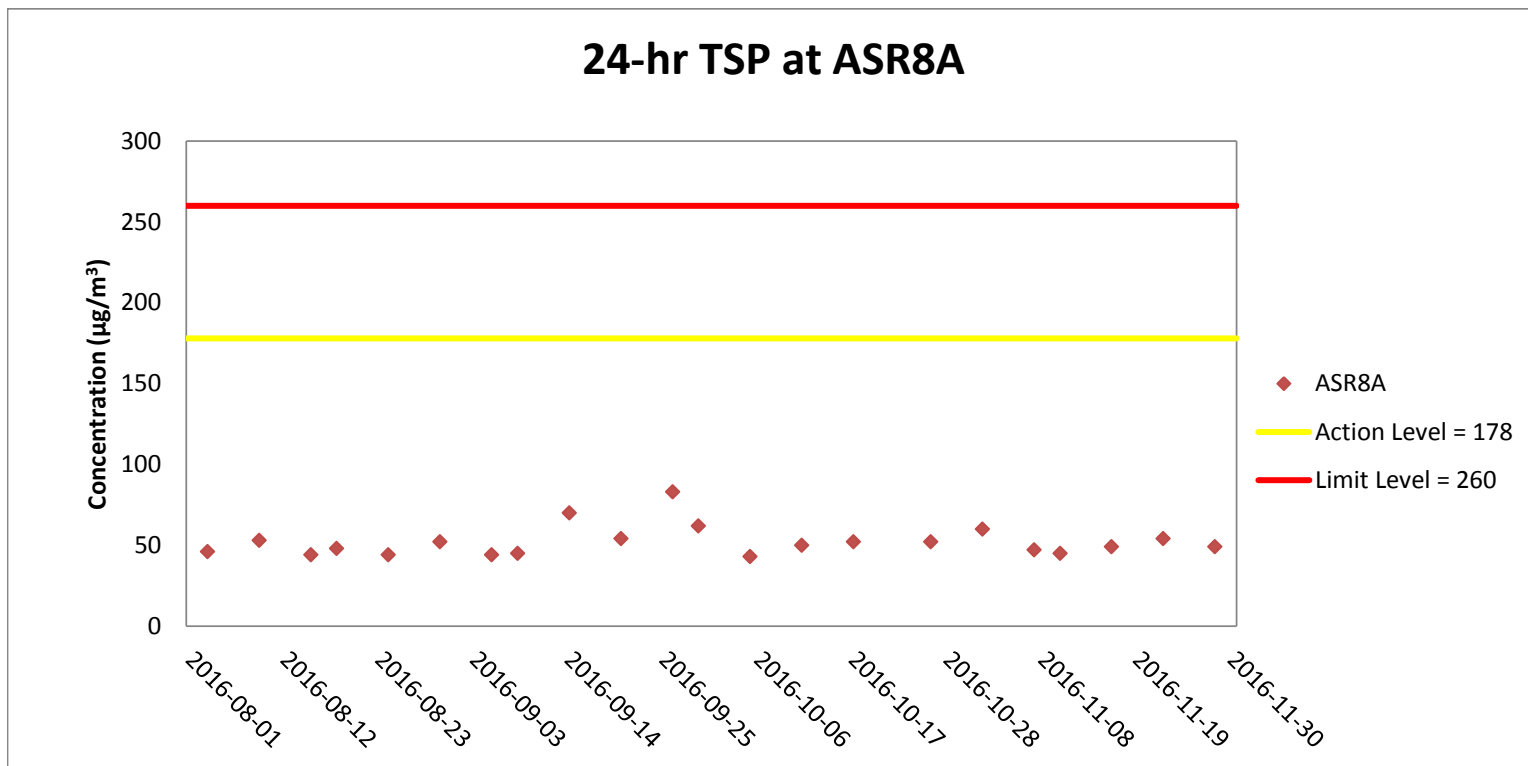
Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2012/07	2016-11-01	ASR9	11:26	24-hr TSP	62	178	260
TMCLKL	HY/2012/07	2016-11-07	ASR9	11:16	24-hr TSP	64	178	260
TMCLKL	HY/2012/07	2016-11-10	ASR9	11:37	24-hr TSP	60		
TMCLKL	HY/2012/07	2016-11-16	ASR9	11:57	24-hr TSP	54		
TMCLKL	HY/2012/07	2016-11-22	ASR9	12:01	24-hr TSP	65		
TMCLKL	HY/2012/07	2016-11-28	ASR9	11:52	24-hr TSP	66		
						Average		
						Min.	54	
						Max.	66	



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

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

Marine works within the reporting period include Construction and installation of pile caps; Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.



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

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

Marine works within the reporting period include Construction and installation of pile caps; Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Appendix H

Meteorological Data for the Reporting Month

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
2016/11/1	0	0.1	193
2016/11/1	1	0.2	136
2016/11/1	2	0.3	137
2016/11/1	3	0.1	95
2016/11/1	4	0.0	201
2016/11/1	5	0.1	162
2016/11/1	6	0.2	201
2016/11/1	7	0.5	264
2016/11/1	8	0.6	270
2016/11/1	9	0.5	295
2016/11/1	10	0.4	294
2016/11/1	11	0.3	238
2016/11/1	12	0.2	311
2016/11/1	13	0.0	310
2016/11/1	14	0.4	321
2016/11/1	15	0.2	269
2016/11/1	16	0.2	298
2016/11/1	17	0.0	251
2016/11/1	18	0.0	213
2016/11/1	19	0.0	185
2016/11/1	20	0.0	186
2016/11/1	21	0.1	141
2016/11/1	22	0.0	152
2016/11/1	23	0.0	317
2016/11/2	0	0.2	64
2016/11/2	1	0.1	81
2016/11/2	2	0.0	153
2016/11/2	3	0.1	153
2016/11/2	4	0.2	248
2016/11/2	5	0.1	96
2016/11/2	6	0.1	178
2016/11/2	7	0.1	177
2016/11/2	8	0.2	273
2016/11/2	9	0.2	246
2016/11/2	10	0.3	315
2016/11/2	11	0.3	314
2016/11/2	12	0.3	292
2016/11/2	13	0.6	309
2016/11/2	14	0.3	315
2016/11/2	15	0.2	315
2016/11/2	16	0.3	331
2016/11/2	17	0.1	242
2016/11/2	18	0.0	157
2016/11/2	19	0.3	315
2016/11/2	20	0.0	230
2016/11/2	21	0.2	171
2016/11/2	22	0.3	297
2016/11/2	23	0.1	270
2016/11/7	0	0.0	174
2016/11/7	1	0.0	180
2016/11/7	2	0.0	183
2016/11/7	3	0.0	185
2016/11/7	4	0.0	109
2016/11/7	5	0.0	170
2016/11/7	6	0.0	226
2016/11/7	7	0.0	215
2016/11/7	8	0.1	205
2016/11/7	9	0.8	174
2016/11/7	10	0.5	163
2016/11/7	11	1.2	154
2016/11/7	12	0.6	147
2016/11/7	13	0.8	160
2016/11/7	14	1.1	149
2016/11/7	15	1.1	150
2016/11/7	16	2.0	170
2016/11/7	17	2.1	177
2016/11/7	18	1.0	167
2016/11/7	19	1.3	176
2016/11/7	20	0.9	162
2016/11/7	21	1.9	173
2016/11/7	22	1.4	148

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
2016/11/7	23	1.0	150
2016/11/8	0	0.6	167
2016/11/8	1	0.1	165
2016/11/8	2	0.0	179
2016/11/8	3	0.0	227
2016/11/8	4	0.0	58
2016/11/8	5	0.0	85
2016/11/8	6	0.0	178
2016/11/8	7	0.0	192
2016/11/8	8	0.0	169
2016/11/8	9	0.0	243
2016/11/8	10	0.0	236
2016/11/8	11	0.0	290
2016/11/8	12	0.1	167
2016/11/8	13	0.0	163
2016/11/8	14	0.1	184
2016/11/8	15	0.2	194
2016/11/8	16	0.0	228
2016/11/8	17	0.0	331
2016/11/8	18	0.1	251
2016/11/8	19	0.1	301
2016/11/8	20	0.1	328
2016/11/8	21	0.1	178
2016/11/8	22	0.0	43
2016/11/8	23	0.0	78
2016/11/10	0	0.0	184
2016/11/10	1	0.4	139

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
2016/11/10	2	0.1	275
2016/11/10	3	0.2	249
2016/11/10	4	0.5	278
2016/11/10	5	0.3	306
2016/11/10	6	0.1	248
2016/11/10	7	0.1	275
2016/11/10	8	0.1	280
2016/11/10	9	0.0	263
2016/11/10	10	0.1	219
2016/11/10	11	0.1	228
2016/11/10	12	0.0	185
2016/11/10	13	0.2	179
2016/11/10	14	0.1	221
2016/11/10	15	0.3	145
2016/11/10	16	0.1	230
2016/11/10	17	0.2	225
2016/11/10	18	0.2	281
2016/11/10	19	0.1	303
2016/11/10	20	0.0	281
2016/11/10	21	0.1	275
2016/11/10	22	0.1	119
2016/11/10	23	0.1	229
2016/11/11	0	0.0	142
2016/11/11	1	0.1	297
2016/11/11	2	0.0	274
2016/11/11	3	0.1	333
2016/11/11	4	0.0	241
2016/11/11	5	0.0	97
2016/11/11	6	0.0	260
2016/11/11	7	0.0	212
2016/11/11	8	0.0	215
2016/11/11	9	0.0	232
2016/11/11	10	0.0	297
2016/11/11	11	0.1	227
2016/11/11	12	0.0	132
2016/11/11	13	0.0	261
2016/11/11	14	0.0	234
2016/11/11	15	0.0	48
2016/11/11	16	0.0	84
2016/11/11	17	0.1	166
2016/11/11	18	0.1	175
2016/11/11	19	0.1	181
2016/11/11	20	0.1	183
2016/11/11	21	0.0	182
2016/11/11	22	0.0	127
2016/11/11	23	0.4	121
2016/11/16	0	1.7	170
2016/11/16	1	1.1	163
2016/11/16	2	0.3	172
2016/11/16	3	0.9	167
2016/11/16	4	1.2	159
2016/11/16	5	0.6	156
2016/11/16	6	0.4	173
2016/11/16	7	0.2	159
2016/11/16	8	0.2	142
2016/11/16	9	0.4	130
2016/11/16	10	0.5	149
2016/11/16	11	0.7	150
2016/11/16	12	0.9	184
2016/11/16	13	1.1	156
2016/11/16	14	2.7	154
2016/11/16	15	2.7	158
2016/11/16	16	2.1	180
2016/11/16	17	1.9	174
2016/11/16	18	1.4	166
2016/11/16	19	2.4	167
2016/11/16	20	0.8	162
2016/11/16	21	1.9	159
2016/11/16	22	0.8	154
2016/11/16	23	0.2	94
2016/11/17	0	0.0	126

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
2016/11/17	1	0.1	176
2016/11/17	2	0.0	178
2016/11/17	3	0.0	155
2016/11/17	4	0.0	106
2016/11/17	5	0.3	116
2016/11/17	6	0.0	146
2016/11/17	7	0.0	159
2016/11/17	8	0.1	49
2016/11/17	9	0.1	162
2016/11/17	10	0.2	301
2016/11/17	11	0.1	297
2016/11/17	12	0.1	245
2016/11/17	13	0.4	241
2016/11/17	14	2.6	184
2016/11/17	15	3.3	183
2016/11/17	16	2.9	175
2016/11/17	17	2.5	188
2016/11/17	18	1.7	181
2016/11/17	19	0.0	106
2016/11/17	20	0.5	220
2016/11/17	21	0.1	102
2016/11/17	22	0.8	127
2016/11/17	23	1.3	189
2016/11/22	0	0.3	148
2016/11/22	1	0.4	158
2016/11/22	2	0.5	195
2016/11/22	3	0.5	174
2016/11/22	4	0.3	231
2016/11/22	5	1.5	189
2016/11/22	6	0.3	87
2016/11/22	7	0.1	70
2016/11/22	8	0.1	88
2016/11/22	9	0.1	91
2016/11/22	10	0.3	100
2016/11/22	11	0.0	118
2016/11/22	12	0.0	118
2016/11/22	13	0.1	76
2016/11/22	14	0.1	60
2016/11/22	15	0.7	178
2016/11/22	16	0.1	133
2016/11/22	17	0.1	113
2016/11/22	18	0.1	66
2016/11/22	19	0.1	85
2016/11/22	20	0.1	112
2016/11/22	21	0.1	101
2016/11/22	22	0.2	80
2016/11/22	23	0.0	104
2016/11/23	0	0.1	107
2016/11/23	1	0.0	148
2016/11/23	2	0.0	159
2016/11/23	3	0.0	171
2016/11/23	4	0.1	194
2016/11/23	5	0.0	159
2016/11/23	6	0.0	176
2016/11/23	7	0.0	177
2016/11/23	8	0.1	81
2016/11/23	9	0.0	77
2016/11/23	10	0.0	142
2016/11/23	11	0.0	336
2016/11/23	12	0.0	245
2016/11/23	13	0.0	49
2016/11/23	14	0.1	138
2016/11/23	15	0.1	201
2016/11/23	16	0.1	68
2016/11/23	17	0.2	269
2016/11/23	18	0.1	247
2016/11/23	19	0.2	298
2016/11/23	20	0.3	261
2016/11/23	21	0.1	321
2016/11/23	22	0.2	327
2016/11/23	23	0.3	287

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
2016/11/28	0	0.0	109
2016/11/28	1	0.2	99
2016/11/28	2	0.2	86
2016/11/28	3	0.1	79
2016/11/28	4	0.3	89
2016/11/28	5	0.1	278
2016/11/28	6	0.1	254
2016/11/28	7	0.1	201
2016/11/28	8	0.3	188
2016/11/28	9	0.2	323
2016/11/28	10	0.1	264
2016/11/28	11	0.0	235
2016/11/28	12	0.1	250
2016/11/28	13	0.6	189
2016/11/28	14	1.4	156
2016/11/28	15	0.9	144
2016/11/28	16	0.8	179
2016/11/28	17	0.2	156
2016/11/28	18	0.4	185
2016/11/28	19	0.3	191
2016/11/28	20	0.2	161
2016/11/28	21	0.1	131
2016/11/28	22	0.1	150
2016/11/28	23	0.0	157
2016/11/29	0	0.1	149
2016/11/29	1	0.0	142
2016/11/29	2	0.0	150
2016/11/29	3	0.0	121
2016/11/29	4	0.0	156
2016/11/29	5	0.0	193
2016/11/29	6	0.0	164
2016/11/29	7	0.0	179
2016/11/29	8	0.3	124
2016/11/29	9	0.1	158
2016/11/29	10	0.0	129
2016/11/29	11	0.0	195
2016/11/29	12	0.0	325
2016/11/29	13	0.0	331
2016/11/29	14	0.1	327
2016/11/29	15	0.0	321
2016/11/29	16	0.0	239
2016/11/29	17	0.1	237
2016/11/29	18	0.0	221
2016/11/29	19	0.0	149
2016/11/29	20	0.0	141
2016/11/29	21	0.0	184
2016/11/29	22	0.0	61
2016/11/29	23	0.0	75

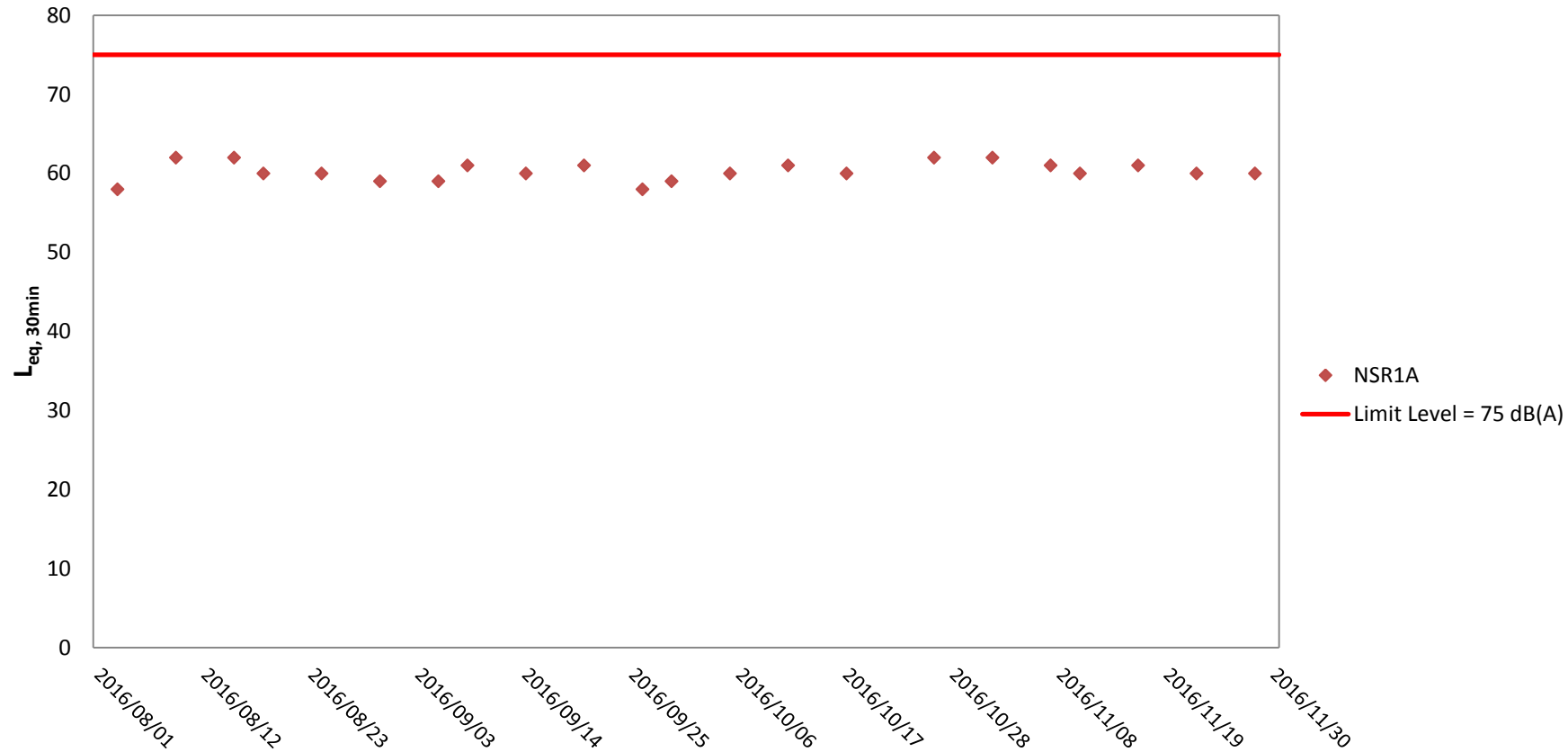
Appendix I

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	2016-11-01	NSR1A	Sunny	9:32	62	64	58	75	0.8	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2016-11-07	NSR1A	Sunny	9:22	61	63	57	75	0.3	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2016-11-10	NSR1A	Sunny	9:43	60	62	56	75	0.2	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2016-11-16	NSR1A	Sunny	10:04	61	63	56	75	0.3	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2016-11-22	NSR1A	Cloudy	11:09	60	62	54	75	0.3	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2016-11-28	NSR1A	Sunny	9:58	60	62	55	75	0.2	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
						Min.	60					
						Max.	62					
						Average	61					

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

Marine works within the reporting period include Construction and installation of pile caps; Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Appendix J

Impact Water Quality Monitoring Results and Graphical Presentation

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	CS(Mf)5	07:56	Surface	1	1	27.5	8.12	27.6	7.24	6.84	9.1
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	CS(Mf)5	07:56	Surface	1	2	27.4	8.1	27.7	7.22	6.86	9.1
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	CS(Mf)5	07:56	Middle	2	1	27.3	7.95	27.8	7.11	6.94	9.2
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	CS(Mf)5	07:56	Middle	2	2	27.3	7.93	27.8	7.09	6.96	9.3
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	CS(Mf)5	07:56	Bottom	3	1	27.2	7.86	27.9	6.94	7.12	9.6
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	CS(Mf)5	07:56	Bottom	3	2	27.1	7.84	28	6.92	7.14	9.7
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	SR4a	08:18	Surface	1	1	27.6	7.92	27.4	6.98	7.23	9.6
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	SR4a	08:18	Surface	1	2	27.5	7.94	27.5	7	7.25	9.6
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	SR4a	08:18	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	SR4a	08:18	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	SR4a	08:18	Bottom	3	1	27.4	8.12	27.6	6.73	7.36	10
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	SR4a	08:18	Bottom	3	2	27.3	8.14	27.7	6.75	7.34	10.1
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	SR4	08:40	Surface	1	1	27.6	7.92	27.5	7.23	7.02	9.3
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	SR4	08:40	Surface	1	2	27.5	7.94	27.5	7.25	7.04	9.4
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	SR4	08:40	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	SR4	08:40	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	SR4	08:40	Bottom	3	1	27.3	8.12	27.6	7.09	7.25	9.8
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	SR4	08:40	Bottom	3	2	27.3	8.14	27.7	7.07	7.27	9.8
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS8	08:57	Surface	1	1	27.5	8.04	27.6	7.3	7.25	9.6
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS8	08:57	Surface	1	2	27.4	8.02	27.7	7.32	7.27	9.7
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS8	08:57	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS8	08:57	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS8	08:57	Bottom	3	1	27.2	8.15	27.8	7.15	7.34	9.9
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS8	08:57	Bottom	3	2	27.3	8.17	27.9	7.17	7.36	10
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS(Mf)16	09:15	Surface	1	1	27.5	7.86	27.6	7.06	7.34	9.8
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS(Mf)16	09:15	Surface	1	2	27.5	7.84	27.7	7.08	7.36	9.8
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS(Mf)16	09:15	Middle	2	1	27.3	8.12	27.8	6.92	7.46	9.9
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS(Mf)16	09:15	Middle	2	2	27.2	8.14	27.8	6.94	7.48	9.9
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS(Mf)16	09:15	Bottom	3	1	27.1	7.96	27.9	6.75	7.56	10.2
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS(Mf)16	09:15	Bottom	3	2	27	7.94	28	6.77	7.58	10.3
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS(Mf)9	09:30	Surface	1	1	27.5	8.13	27.4	7.14	7.43	9.9
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS(Mf)9	09:30	Surface	1	2	27.4	8.11	27.5	7.12	7.45	9.9
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS(Mf)9	09:30	Middle	2	1						

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS(Mf)9	09:30	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS(Mf)9	09:30	Bottom	3	1	27.3	7.92	27.6	6.91	7.64	10.4
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	IS(Mf)9	09:30	Bottom	3	2	27.2	7.94	27.7	6.93	7.66	10.4
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	CS(Mf)3	09:42	Surface	1	1	27.6	7.93	27.5	7.02	7.08	9.4
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	CS(Mf)3	09:42	Surface	1	2	27.5	7.95	27.5	7.04	7.1	9.4
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	CS(Mf)3	09:42	Middle	2	1	27.4	7.86	27.6	6.85	7.24	9.6
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	CS(Mf)3	09:42	Middle	2	2	27.3	7.88	27.7	6.83	7.22	9.6
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	CS(Mf)3	09:42	Bottom	3	1	27.2	8.12	27.8	6.77	7.3	10
TMCLKL	HY/2012/07	2016-11-01	Mid-Flood	CS(Mf)3	09:42	Bottom	3	2	27.1	8.14	27.9	6.75	7.28	9.9
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	CS(Mf)5	14:24	Surface	1	1	27.4	7.87	27.3	6.95	7.38	9.9
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	CS(Mf)5	14:24	Surface	1	2	27.3	7.81	27.4	6.91	7.45	10
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	CS(Mf)5	14:24	Middle	2	1	27.3	7.8	27.5	6.93	7.32	9.8
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	CS(Mf)5	14:24	Middle	2	2	27.2	7.85	27.4	6.89	7.26	9.7
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	CS(Mf)5	14:24	Bottom	3	1	27.1	7.81	27.5	6.75	7.89	10.7
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	CS(Mf)5	14:24	Bottom	3	2	27	7.77	27.6	6.72	7.97	10.8
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	SR4a	14:00	Surface	1	1	27.3	7.78	27.4	6.87	7.54	10
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	SR4a	14:00	Surface	1	2	27.2	7.82	27.5	6.82	7.6	10.1
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	SR4a	14:00	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	SR4a	14:00	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	SR4a	14:00	Bottom	3	1	27.1	7.74	27.5	6.78	7.69	10.4
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	SR4a	14:00	Bottom	3	2	27.2	7.79	27.6	6.74	7.76	10.5
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	SR4	13:38	Surface	1	1	27.3	7.79	27.3	6.81	7.75	10.3
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	SR4	13:38	Surface	1	2	27.3	7.84	27.4	6.76	7.66	10.2
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	SR4	13:38	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	SR4	13:38	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	SR4	13:38	Bottom	3	1	27.3	7.81	27.5	6.71	7.83	10.4
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	SR4	13:38	Bottom	3	2	27.4	7.87	27.4	6.68	7.87	10.5
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS8	13:16	Surface	1	1	27.2	7.8	27.4	6.77	7.7	10.2
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS8	13:16	Surface	1	2	27.1	7.85	27.5	6.74	7.62	10.1
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS8	13:16	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS8	13:16	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS8	13:16	Bottom	3	1	27	7.87	27.5	6.61	7.89	10.7
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS8	13:16	Bottom	3	2	27.1	7.81	27.6	6.65	7.95	10.7

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS(Mf)16	12:54	Surface	1	1	27.3	7.87	27.4	6.85	7.81	10.4
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS(Mf)16	12:54	Surface	1	2	27.2	7.9	27.3	6.81	7.76	10.3
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS(Mf)16	12:54	Middle	2	1	27.2	7.75	27.4	6.72	7.7	10.2
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS(Mf)16	12:54	Middle	2	2	27.1	7.79	27.5	6.69	7.64	10.2
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS(Mf)16	12:54	Bottom	3	1	27	7.76	27.6	6.55	8.1	11
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS(Mf)16	12:54	Bottom	3	2	26.9	7.81	27.7	6.52	7.97	10.7
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS(Mf)9	12:32	Surface	1	1	27.2	7.9	27.3	6.8	7.7	10.2
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS(Mf)9	12:32	Surface	1	2	27.3	7.94	27.4	6.83	7.66	10.2
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS(Mf)9	12:32	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS(Mf)9	12:32	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS(Mf)9	12:32	Bottom	3	1	27	7.92	27.5	6.67	7.95	10.7
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	IS(Mf)9	12:32	Bottom	3	2	26.9	7.96	27.4	6.61	7.86	10.6
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	CS(Mf)3	12:10	Surface	1	1	27.1	7.98	27.2	6.88	7.46	9.9
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	CS(Mf)3	12:10	Surface	1	2	27.2	7.92	27.3	6.85	7.54	10
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	CS(Mf)3	12:10	Middle	2	1	27	7.85	27.4	6.9	7.32	9.7
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	CS(Mf)3	12:10	Middle	2	2	26.9	7.9	27.3	6.93	7.25	9.6
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	CS(Mf)3	12:10	Bottom	3	1	26.9	7.8	27.6	6.66	7.9	10.7
TMCLKL	HY/2012/07	2016-11-01	Mid-Ebb	CS(Mf)3	12:10	Bottom	3	2	26.8	7.84	27.7	6.63	7.98	10.9
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	CS(Mf)5	08:42	Surface	1	1	27.1	7.81	27.6	7.08	7.65	10.2
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	CS(Mf)5	08:42	Surface	1	2	27.2	7.83	27.5	7.11	7.72	10.3
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	CS(Mf)5	08:42	Middle	2	1	27.1	7.74	27.7	6.92	7.82	10.4
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	CS(Mf)5	08:42	Middle	2	2	27.1	7.71	27.6	6.96	7.89	10.5
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	CS(Mf)5	08:42	Bottom	3	1	26.9	7.88	27.9	6.77	7.96	10.7
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	CS(Mf)5	08:42	Bottom	3	2	26.8	7.86	27.8	6.74	7.85	10.7
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	SR4a	09:10	Surface	1	1	27.2	7.85	27.4	6.96	7.38	9.8
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	SR4a	09:10	Surface	1	2	27.1	7.81	27.5	6.95	7.49	10
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	SR4a	09:10	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	SR4a	09:10	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	SR4a	09:10	Bottom	3	1	27.1	7.73	27.6	6.84	7.54	10.3
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	SR4a	09:10	Bottom	3	2	27.2	7.7	27.5	6.82	7.58	10.5
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	SR4	09:28	Surface	1	1	27.1	7.78	27.4	6.92	7.61	10.1
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	SR4	09:28	Surface	1	2	27	7.76	27.5	6.91	7.68	10.2
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	SR4	09:28	Middle	2	1						

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	SR4	09:28	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	SR4	09:28	Bottom	3	1	27	7.73	27.6	6.74	7.78	10.5
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	SR4	09:28	Bottom	3	2	26.9	7.71	27.5	6.78	7.84	10.6
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS8	09:36	Surface	1	1	27.2	7.86	27.6	6.84	7.59	10.1
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS8	09:36	Surface	1	2	27.1	7.89	27.6	6.86	7.66	10.1
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS8	09:36	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS8	09:36	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS8	09:36	Bottom	3	1	27.1	7.79	27.6	6.64	7.72	10.4
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS8	09:36	Bottom	3	2	27	7.78	27.5	6.61	7.79	10.6
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS(Mf)16	09:55	Surface	1	1	27.2	7.81	27.5	7.03	7.74	10.3
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS(Mf)16	09:55	Surface	1	2	27.2	7.83	27.4	7.06	7.67	10.2
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS(Mf)16	09:55	Middle	2	1	27.1	7.86	27.5	6.73	7.96	10.6
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS(Mf)16	09:55	Middle	2	2	27.2	7.81	27.6	6.74	7.84	10.4
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS(Mf)16	09:55	Bottom	3	1	27	7.75	27.8	6.61	7.65	10.3
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS(Mf)16	09:55	Bottom	3	2	26.9	7.72	27.7	6.63	7.72	10.5
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS(Mf)9	10:16	Surface	1	1	27.1	7.76	27.4	6.83	7.49	10
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS(Mf)9	10:16	Surface	1	2	27	7.75	27.5	6.81	7.57	10.1
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS(Mf)9	10:16	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS(Mf)9	10:16	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS(Mf)9	10:16	Bottom	3	1	27	7.81	27.5	6.71	7.61	10.3
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	IS(Mf)9	10:16	Bottom	3	2	27	7.79	27.6	6.68	7.7	10.5
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	CS(Mf)3	10:43	Surface	1	1	27.2	7.71	27.5	6.74	7.61	10.1
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	CS(Mf)3	10:43	Surface	1	2	27.1	7.74	27.5	6.71	7.67	10.2
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	CS(Mf)3	10:43	Middle	2	1	27	7.84	27.7	6.86	7.23	9.6
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	CS(Mf)3	10:43	Middle	2	2	26.9	7.8	27.6	6.88	7.29	9.7
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	CS(Mf)3	10:43	Bottom	3	1	26.7	7.87	27.8	6.58	7.81	10.7
TMCLKL	HY/2012/07	2016-11-03	Mid-Flood	CS(Mf)3	10:43	Bottom	3	2	26.8	7.82	27.9	6.55	7.74	10.5
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	CS(Mf)5	15:31	Surface	1	1	27.3	7.87	27.6	6.99	7.71	10.3
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	CS(Mf)5	15:31	Surface	1	2	27.2	7.89	27.7	7.02	7.78	10.4
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	CS(Mf)5	15:31	Middle	2	1	27.1	7.8	27.7	6.83	7.88	10.6
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	CS(Mf)5	15:31	Middle	2	2	27.2	7.77	27.8	6.87	7.95	10.7
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	CS(Mf)5	15:31	Bottom	3	1	26.9	7.94	28	6.68	8.02	10.8
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	CS(Mf)5	15:31	Bottom	3	2	27	7.92	27.9	6.65	7.91	10.8

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	SR4a	15:07	Surface	1	1	27.3	7.91	27.5	6.87	7.44	9.9
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	SR4a	15:07	Surface	1	2	27.2	7.87	27.6	6.86	7.55	10
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	SR4a	15:07	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	SR4a	15:07	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	SR4a	15:07	Bottom	3	1	27.2	7.79	27.6	6.75	7.6	10.3
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	SR4a	15:07	Bottom	3	2	27.1	7.76	27.7	6.73	7.64	10.3
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	SR4	14:45	Surface	1	1	27.2	7.84	27.5	6.83	7.67	10.2
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	SR4	14:45	Surface	1	2	27.1	7.82	27.6	6.82	7.74	10.3
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	SR4	14:45	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	SR4	14:45	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	SR4	14:45	Bottom	3	1	27.1	7.79	27.7	6.65	7.84	10.4
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	SR4	14:45	Bottom	3	2	27	7.77	27.6	6.69	7.9	10.5
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS8	14:23	Surface	1	1	27.3	7.92	27.6	6.75	7.65	10.2
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS8	14:23	Surface	1	2	27.2	7.95	27.7	6.77	7.72	10.3
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS8	14:23	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS8	14:23	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS8	14:23	Bottom	3	1	27.2	7.85	27.7	6.55	7.78	10.5
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS8	14:23	Bottom	3	2	27.1	7.84	27.8	6.52	7.85	10.6
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS(Mf)16	14:01	Surface	1	1	27.3	7.87	27.5	6.94	7.8	10.4
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS(Mf)16	14:01	Surface	1	2	27.2	7.89	27.6	6.97	7.73	10.3
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS(Mf)16	14:01	Middle	2	1	27.1	7.89	27.7	6.64	8.02	10.7
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS(Mf)16	14:01	Middle	2	2	27.2	7.87	27.6	6.65	7.9	10.5
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS(Mf)16	14:01	Bottom	3	1	27.1	7.81	27.8	6.52	7.71	10.5
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS(Mf)16	14:01	Bottom	3	2	27	7.78	27.9	6.54	7.78	10.4
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS(Mf)9	13:39	Surface	1	1	27.2	7.82	27.5	6.74	7.55	10
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS(Mf)9	13:39	Surface	1	2	27.1	7.81	27.6	6.72	7.63	10.1
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS(Mf)9	13:39	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS(Mf)9	13:39	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS(Mf)9	13:39	Bottom	3	1	27	7.87	27.6	6.62	7.67	10.3
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	IS(Mf)9	13:39	Bottom	3	2	27.1	7.85	27.7	6.59	7.76	10.5
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	CS(Mf)3	13:17	Surface	1	1	27.3	7.77	27.5	6.65	7.67	10.2
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	CS(Mf)3	13:17	Surface	1	2	27.2	7.8	27.6	6.62	7.73	10.3
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	CS(Mf)3	13:17	Middle	2	1	27	7.9	27.7	6.77	7.29	9.7

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	CS(Mf)3	13:17	Middle	2	2	27.1	7.86	27.8	6.79	7.35	9.8
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	CS(Mf)3	13:17	Bottom	3	1	26.9	7.93	27.9	6.49	7.87	10.6
TMCLKL	HY/2012/07	2016-11-03	Mid-Ebb	CS(Mf)3	13:17	Bottom	3	2	26.8	7.88	28	6.46	7.8	10.6
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	CS(Mf)5	10:25	Surface	1	1	26.6	7.77	27.9	7.73	7.06	9.4
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	CS(Mf)5	10:25	Surface	1	2	26.7	7.8	28	7.68	7.13	9.5
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	CS(Mf)5	10:25	Middle	2	1	26.7	7.68	27.7	7.86	7.4	9.8
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	CS(Mf)5	10:25	Middle	2	2	26.7	7.72	27.7	7.9	7.32	9.7
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	CS(Mf)5	10:25	Bottom	3	1	26.6	7.7	27.9	7.8	9.06	12.2
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	CS(Mf)5	10:25	Bottom	3	2	26.6	7.67	28.1	7.77	8.89	12.1
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	SR4a	10:50	Surface	1	1	26.7	7.69	27.8	7.83	7.24	9.6
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	SR4a	10:50	Surface	1	2	26.8	7.73	27.8	7.79	7.16	9.5
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	SR4a	10:50	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	SR4a	10:50	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	SR4a	10:50	Bottom	3	1	26.7	7.75	27.8	7.68	7.54	10.3
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	SR4a	10:50	Bottom	3	2	26.7	7.7	27.7	7.73	7.62	10.5
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	SR4	11:06	Surface	1	1	26.7	7.74	27.7	7.76	7.08	9.4
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	SR4	11:06	Surface	1	2	26.7	7.8	27.6	7.71	7.01	9.3
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	SR4	11:06	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	SR4	11:06	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	SR4	11:06	Bottom	3	1	26.7	7.71	27.7	7.82	7.43	10
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	SR4	11:06	Bottom	3	2	26.7	7.69	27.7	7.8	7.36	9.9
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS8	11:23	Surface	1	1	26.7	7.68	27.7	7.9	7.07	9.4
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS8	11:23	Surface	1	2	26.8	7.72	27.7	7.86	7.15	9.5
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS8	11:23	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS8	11:23	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS8	11:23	Bottom	3	1	26.7	7.78	27.7	7.78	7.56	10.2
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS8	11:23	Bottom	3	2	26.7	7.75	27.8	7.75	7.5	10.2
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS(Mf)16	11:42	Surface	1	1	26.7	7.74	27.7	7.83	7.32	9.7
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS(Mf)16	11:42	Surface	1	2	26.7	7.8	27.8	7.8	7.26	9.7
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS(Mf)16	11:42	Middle	2	1	26.7	7.77	27.8	7.89	7.11	9.5
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS(Mf)16	11:42	Middle	2	2	26.7	7.71	27.8	7.92	7.17	9.5
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS(Mf)16	11:42	Bottom	3	1	26.7	7.68	27.9	7.74	7.74	10.4
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS(Mf)16	11:42	Bottom	3	2	26.8	7.72	27.9	7.71	7.66	10.4

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS(Mf)9	12:03	Surface	1	1	26.7	7.68	27.8	7.85	7.24	9.6
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS(Mf)9	12:03	Surface	1	2	26.7	7.73	27.8	7.81	7.16	9.5
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS(Mf)9	12:03	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS(Mf)9	12:03	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS(Mf)9	12:03	Bottom	3	1	26.7	7.77	27.8	7.75	7.38	10
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	IS(Mf)9	12:03	Bottom	3	2	26.7	7.72	27.8	7.72	7.44	10.1
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	CS(Mf)3	12:24	Surface	1	1	26.7	7.78	27.8	7.98	7.05	9.4
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	CS(Mf)3	12:24	Surface	1	2	26.8	7.8	27.8	7.95	7.11	9.5
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	CS(Mf)3	12:24	Middle	2	1	26.7	7.73	27.8	7.9	7.32	9.7
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	CS(Mf)3	12:24	Middle	2	2	26.7	7.75	27.7	7.87	7.26	9.7
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	CS(Mf)3	12:24	Bottom	3	1	26.7	7.67	27.8	7.73	9.34	12.8
TMCLKL	HY/2012/07	2016-11-05	Mid-Flood	CS(Mf)3	12:24	Bottom	3	2	26.7	7.71	27.9	7.7	9.26	12.6
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	CS(Mf)5	16:47	Surface	1	1	26.6	7.82	28.1	7.61	7.24	9.7
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	CS(Mf)5	16:47	Surface	1	2	26.5	7.85	28.2	7.63	7.26	9.7
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	CS(Mf)5	16:47	Middle	2	1	26.4	7.93	28.3	7.44	7.33	9.8
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	CS(Mf)5	16:47	Middle	2	2	26.3	7.95	28.3	7.42	7.35	9.8
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	CS(Mf)5	16:47	Bottom	3	1	26.3	8.12	28.4	7.35	7.46	10.1
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	CS(Mf)5	16:47	Bottom	3	2	26.3	8.14	28.4	7.33	7.48	10.2
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	SR4a	16:20	Surface	1	1	26.5	8.12	27.9	7.45	6.94	8.7
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	SR4a	16:20	Surface	1	2	26.4	8.14	28	7.47	6.96	9
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	SR4a	16:20	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	SR4a	16:20	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	SR4a	16:20	Bottom	3	1	26.4	7.88	28.1	7.33	7.14	9.6
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	SR4a	16:20	Bottom	3	2	26.4	7.9	28.1	7.35	7.16	9.7
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	SR4	15:58	Surface	1	1	26.5	7.83	28	7.58	7.45	9.9
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	SR4	15:58	Surface	1	2	26.5	7.85	28	7.6	7.47	9.9
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	SR4	15:58	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	SR4	15:58	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	SR4	15:58	Bottom	3	1	26.6	7.94	28.1	7.4	7.58	10.1
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	SR4	15:58	Bottom	3	2	26.5	7.96	28.2	7.38	7.6	10.1
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS8	15:38	Surface	1	1	26.4	8.14	27.9	7.74	7.26	9.7
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS8	15:38	Surface	1	2	26.5	8.12	27.9	7.72	7.28	9.7
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS8	15:38	Middle	2	1						

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS8	15:38	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS8	15:38	Bottom	3	1	26.3	7.94	28	7.53	7.43	10
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS8	15:38	Bottom	3	2	26.3	7.96	28.1	7.55	7.45	10.1
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS(Mf)16	15:16	Surface	1	1	26.6	7.84	28	7.62	7.39	9.8
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS(Mf)16	15:16	Surface	1	2	26.5	7.82	28	7.6	7.41	9.9
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS(Mf)16	15:16	Middle	2	1	26.5	8	28.1	7.73	7.48	9.9
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS(Mf)16	15:16	Middle	2	2	26.5	8.2	28.2	7.75	7.5	10
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS(Mf)16	15:16	Bottom	3	1	26.4	8.14	28.3	7.52	8.12	11
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS(Mf)16	15:16	Bottom	3	2	26.3	8.12	28.3	7.54	8.11	10.9
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS(Mf)9	15:00	Surface	1	1	26.5	7.76	28.2	7.6	7.45	9.9
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS(Mf)9	15:00	Surface	1	2	26.6	7.78	28.2	7.62	7.47	9.9
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS(Mf)9	15:00	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS(Mf)9	15:00	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS(Mf)9	15:00	Bottom	3	1	26.4	7.93	28.3	7.56	7.51	10.1
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	IS(Mf)9	15:00	Bottom	3	2	26.4	7.95	28.3	7.54	7.53	10.2
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	CS(Mf)3	14:38	Surface	1	1	26.4	8.12	28	7.51	7.35	9.8
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	CS(Mf)3	14:38	Surface	1	2	26.5	8.1	28	7.49	7.33	9.7
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	CS(Mf)3	14:38	Middle	2	1	26.4	7.93	28.1	7.33	7.42	9.9
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	CS(Mf)3	14:38	Middle	2	2	26.4	7.91	28.2	7.36	7.44	9.9
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	CS(Mf)3	14:38	Bottom	3	1	26.3	7.85	28.3	7.21	7.6	10.3
TMCLKL	HY/2012/07	2016-11-05	Mid-Ebb	CS(Mf)3	14:38	Bottom	3	2	26.4	7.87	28.4	7.19	7.62	10.4
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	CS(Mf)5	13:58	Surface	1	1	27.1	7.82	27.4	6.91	7.68	10
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	CS(Mf)5	13:58	Surface	1	2	27	7.86	27.5	6.93	7.59	9.9
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	CS(Mf)5	13:58	Middle	2	1	27	7.79	27.6	6.76	7.84	10.2
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	CS(Mf)5	13:58	Middle	2	2	26.9	7.74	27.5	6.73	7.79	10.1
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	CS(Mf)5	13:58	Bottom	3	1	26.7	7.81	27.7	6.61	7.96	10.6
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	CS(Mf)5	13:58	Bottom	3	2	26.8	7.76	27.8	6.59	7.85	10.4
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	SR4a	14:26	Surface	1	1	26.9	7.88	27.3	6.88	7.41	9.6
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	SR4a	14:26	Surface	1	2	27	7.83	27.4	6.86	7.49	9.7
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	SR4a	14:26	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	SR4a	14:26	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	SR4a	14:26	Bottom	3	1	26.9	7.78	27.5	6.71	7.63	10.1
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	SR4a	14:26	Bottom	3	2	26.9	7.76	27.4	6.73	7.55	10

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	SR4	14:46	Surface	1	1	27.1	7.74	27.5	7.03	7.64	9.9
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	SR4	14:46	Surface	1	2	27	7.73	27.4	7.06	7.58	9.9
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	SR4	14:46	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	SR4	14:46	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	SR4	14:46	Bottom	3	1	26.9	7.76	27.6	6.89	7.79	10.4
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	SR4	14:46	Bottom	3	2	26.8	7.78	27.5	6.87	7.72	10.3
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS8	15:05	Surface	1	1	27	7.71	27.3	6.96	7.36	9.6
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS8	15:05	Surface	1	2	27	7.75	27.4	6.95	7.42	9.6
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS8	15:05	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS8	15:05	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS8	15:05	Bottom	3	1	26.9	7.79	27.5	6.82	7.56	9.8
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS8	15:05	Bottom	3	2	27	7.83	27.4	6.8	7.68	10
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS(Mf)16	15:24	Surface	1	1	27	7.83	27.3	7.09	7.57	9.8
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS(Mf)16	15:24	Surface	1	2	27.1	7.8	27.4	7.07	7.64	9.9
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS(Mf)16	15:24	Middle	2	1	27	7.87	27.5	6.86	7.74	10.3
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS(Mf)16	15:24	Middle	2	2	26.9	7.84	27.4	6.88	7.81	10.4
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS(Mf)16	15:24	Bottom	3	1	26.8	7.72	27.6	6.74	7.95	10.7
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS(Mf)16	15:24	Bottom	3	2	26.7	7.74	27.5	6.7	7.9	10.7
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS(Mf)9	15:46	Surface	1	1	27.1	7.89	27.5	6.87	7.48	9.9
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS(Mf)9	15:46	Surface	1	2	27	7.86	27.4	6.84	7.57	10.1
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS(Mf)9	15:46	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS(Mf)9	15:46	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS(Mf)9	15:46	Bottom	3	1	27	7.72	27.5	6.64	7.83	10.6
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	IS(Mf)9	15:46	Bottom	3	2	26.9	7.73	27.5	6.61	7.74	10.5
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	CS(Mf)3	16:08	Surface	1	1	27.1	7.74	27.4	6.95	7.37	9.8
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	CS(Mf)3	16:08	Surface	1	2	27	7.78	27.4	6.91	7.42	9.9
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	CS(Mf)3	16:08	Middle	2	1	26.9	7.82	27.6	6.79	7.21	9.6
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	CS(Mf)3	16:08	Middle	2	2	26.9	7.85	27.5	6.77	7.28	9.7
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	CS(Mf)3	16:08	Bottom	3	1	26.7	7.79	27.7	6.52	7.86	10.7
TMCLKL	HY/2012/07	2016-11-08	Mid-Flood	CS(Mf)3	16:08	Bottom	3	2	26.8	7.83	27.7	6.55	7.91	10.7
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	CS(Mf)5	20:17	Surface	1	1	27	8.13	27.4	6.82	7.73	10.4
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	CS(Mf)5	20:17	Surface	1	2	27	8.15	27.5	6.84	7.75	10.4
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	CS(Mf)5	20:17	Middle	2	1	26.8	7.91	27.6	6.73	7.82	10.5

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	CS(Mf)5	20:17	Middle	2	2	26.9	7.93	27.6	6.71	7.8	10.5
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	CS(Mf)5	20:17	Bottom	3	1	26.8	7.86	27.7	6.55	7.94	10.7
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	CS(Mf)5	20:17	Bottom	3	2	26.8	7.88	27.7	6.53	7.96	10.8
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	SR4a	19:40	Surface	1	1	27.1	7.94	27.5	6.64	7.58	10.1
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	SR4a	19:40	Surface	1	2	27.1	7.96	27.5	6.66	7.6	10.1
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	SR4a	19:40	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	SR4a	19:40	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	SR4a	19:40	Bottom	3	1	27	8.13	27.6	6.43	7.73	10.4
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	SR4a	19:40	Bottom	3	2	26.9	8.15	27.7	6.45	7.75	10.5
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	SR4	18:59	Surface	1	1	27	7.85	27.5	6.92	8.04	10.7
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	SR4	18:59	Surface	1	2	26.9	7.87	27.6	6.94	8.06	10.7
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	SR4	18:59	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	SR4	18:59	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	SR4	18:59	Bottom	3	1	26.8	7.74	27.7	7.13	8.13	10.8
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	SR4	18:59	Bottom	3	2	26.8	7.72	27.8	7.15	8.15	10.8
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS8	18:22	Surface	1	1	27	8.12	27.5	6.75	7.55	10
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS8	18:22	Surface	1	2	27	8.14	27.4	6.77	7.57	10.1
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS8	18:22	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS8	18:22	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS8	18:22	Bottom	3	1	26.9	7.92	27.7	6.63	7.64	10.3
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS8	18:22	Bottom	3	2	26.8	7.94	27.8	6.61	7.66	10.3
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS(Mf)16	17:56	Surface	1	1	27.1	7.29	27.6	6.83	7.36	9.8
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS(Mf)16	17:56	Surface	1	2	27	7.31	27.6	6.85	7.38	9.8
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS(Mf)16	17:56	Middle	2	1	26.9	7.64	27.7	6.64	7.45	9.9
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS(Mf)16	17:56	Middle	2	2	26.9	7.66	27.8	6.66	7.47	9.9
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS(Mf)16	17:56	Bottom	3	1	26.8	7.82	27.9	6.47	7.55	10.3
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS(Mf)16	17:56	Bottom	3	2	26.7	7.8	27.9	6.49	7.57	10.1
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS(Mf)9	17:26	Surface	1	1	27	7.74	27.5	6.7	7.64	10.2
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS(Mf)9	17:26	Surface	1	2	27	7.76	27.6	6.72	7.66	10.2
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS(Mf)9	17:26	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS(Mf)9	17:26	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS(Mf)9	17:26	Bottom	3	1	27.1	7.83	27.7	6.53	7.73	10.4
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	IS(Mf)9	17:26	Bottom	3	2	27.1	7.85	27.7	6.55	7.75	10.5

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	CS(Mf)3	16:58	Surface	1	1	27.1	8.12	27.5	6.76	7.74	10.3
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	CS(Mf)3	16:58	Surface	1	2	27.1	8.14	27.5	6.78	7.76	10.3
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	CS(Mf)3	16:58	Middle	2	1	26.9	7.95	27.6	6.64	7.83	10.4
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	CS(Mf)3	16:58	Middle	2	2	27	7.97	27.6	6.66	7.85	10.4
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	CS(Mf)3	16:58	Bottom	3	1	26.8	8	27.7	6.51	8.12	11
TMCLKL	HY/2012/07	2016-11-08	Mid-Ebb	CS(Mf)3	16:58	Bottom	3	2	26.8	8.02	27.8	6.53	8.14	11.1
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	CS(Mf)5	14:18	Surface	1	1	25.2	7.55	27.6	8.12	7.47	9.8
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	CS(Mf)5	14:18	Surface	1	2	25.1	7.58	27.5	8.08	7.4	9.8
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	CS(Mf)5	14:18	Middle	2	1	25.2	7.54	27.7	8.01	7.19	9.5
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	CS(Mf)5	14:18	Middle	2	2	25.3	7.53	27.8	7.97	7.24	9.4
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	CS(Mf)5	14:18	Bottom	3	1	25.4	7.66	27.9	7.83	8.07	10.7
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	CS(Mf)5	14:18	Bottom	3	2	25.4	7.5	27.8	7.86	8.15	10.8
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	SR4a	14:40	Surface	1	1	25.2	7.64	27.5	8.01	7.29	9.5
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	SR4a	14:40	Surface	1	2	25.1	7.59	27.4	7.97	7.35	9.6
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	SR4a	14:40	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	SR4a	14:40	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	SR4a	14:40	Bottom	3	1	25.2	7.54	27.5	8.1	7.59	10
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	SR4a	14:40	Bottom	3	2	25.3	7.58	27.6	8.06	7.64	10.1
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	SR4	15:02	Surface	1	1	25.2	7.62	27.5	7.96	7.34	9.5
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	SR4	15:02	Surface	1	2	25.2	7.56	27.6	7.92	7.41	9.6
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	SR4	15:02	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	SR4	15:02	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	SR4	15:02	Bottom	3	1	25.1	7.54	27.7	7.84	7.74	10.4
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	SR4	15:02	Bottom	3	2	25.2	7.58	27.6	7.81	7.67	10.2
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS8	15:24	Surface	1	1	25	7.54	27.4	7.89	7.31	9.5
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS8	15:24	Surface	1	2	25.1	7.52	27.5	7.87	7.26	9.4
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS8	15:24	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS8	15:24	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS8	15:24	Bottom	3	1	25	7.63	27.6	7.94	7.53	9.8
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS8	15:24	Bottom	3	2	24.9	7.59	27.5	7.97	7.61	9.9
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS(Mf)16	15:46	Surface	1	1	25.2	7.56	27.5	7.92	7.19	9.3
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS(Mf)16	15:46	Surface	1	2	25.1	7.52	27.6	7.95	7.25	9.4
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS(Mf)16	15:46	Middle	2	1	25	7.59	27.6	7.87	7	9.3

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS(Mf)16	15:46	Middle	2	2	25.1	7.64	27.7	7.85	7.06	9.4
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS(Mf)16	15:46	Bottom	3	1	25.3	7.66	27.7	7.64	8.18	11
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS(Mf)16	15:46	Bottom	3	2	25.2	7.7	27.6	7.68	8.06	11
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS(Mf)9	16:08	Surface	1	1	25.1	7.61	27.5	8	6.99	9.3
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS(Mf)9	16:08	Surface	1	2	25.2	7.54	27.6	8.03	7.04	9.4
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS(Mf)9	16:08	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS(Mf)9	16:08	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS(Mf)9	16:08	Bottom	3	1	25.1	7.64	27.7	7.94	7.44	10.1
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	IS(Mf)9	16:08	Bottom	3	2	25.1	7.62	27.6	7.98	7.38	10
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	CS(Mf)3	16:32	Surface	1	1	25.1	7.52	27.5	8.19	6.85	9.1
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	CS(Mf)3	16:32	Surface	1	2	25	7.45	27.6	8.15	6.93	9.2
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	CS(Mf)3	16:32	Middle	2	1	25	7.61	27.6	8.07	7.15	9.5
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	CS(Mf)3	16:32	Middle	2	2	24.9	7.66	27.7	8.03	7.07	9.4
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	CS(Mf)3	16:32	Bottom	3	1	25	7.63	27.9	7.9	8.45	11.5
TMCLKL	HY/2012/07	2016-11-10	Mid-Flood	CS(Mf)3	16:32	Bottom	3	2	25	7.69	27.8	7.86	8.53	11.5
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	CS(Mf)5	10:16	Surface	1	1	25.1	7.49	27.4	8.06	7.56	10.1
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	CS(Mf)5	10:16	Surface	1	2	25.1	7.52	27.5	8.02	7.49	10
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	CS(Mf)5	10:16	Middle	2	1	25.1	7.48	27.5	7.95	7.28	9.8
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	CS(Mf)5	10:16	Middle	2	2	25	7.47	27.5	7.91	7.33	9.8
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	CS(Mf)5	10:16	Bottom	3	1	25.2	7.6	27.7	7.77	8.16	11
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	CS(Mf)5	10:16	Bottom	3	2	25.1	7.54	27.7	7.8	8.24	11.2
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	SR4a	09:57	Surface	1	1	25.1	7.58	27.4	7.95	7.38	9.8
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	SR4a	09:57	Surface	1	2	25.1	7.53	27.4	7.91	7.44	9.9
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	SR4a	09:57	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	SR4a	09:57	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	SR4a	09:57	Bottom	3	1	25.1	7.48	27.4	8.04	7.68	10.4
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	SR4a	09:57	Bottom	3	2	25.1	7.52	27.5	8	7.73	10.5
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	SR4	09:43	Surface	1	1	25	7.56	27.5	7.9	7.43	10.4
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	SR4	09:43	Surface	1	2	25.1	7.5	27.4	7.86	7.5	10.4
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	SR4	09:43	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	SR4	09:43	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	SR4	09:43	Bottom	3	1	25	7.48	27.6	7.78	7.83	10.8
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	SR4	09:43	Bottom	3	2	25	7.52	27.5	7.75	7.76	10.8

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS8	09:29	Surface	1	1	25	7.48	27.4	7.83	7.4	10
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS8	09:29	Surface	1	2	25	7.46	27.4	7.81	7.35	10.1
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS8	09:29	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS8	09:29	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS8	09:29	Bottom	3	1	25	7.57	27.4	7.88	7.62	10.3
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS8	09:29	Bottom	3	2	25	7.53	27.5	7.91	7.7	10.3
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS(Mf)16	09:10	Surface	1	1	25	7.5	27.5	7.86	7.28	9.8
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS(Mf)16	09:10	Surface	1	2	25.1	7.46	27.4	7.89	7.34	9.8
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS(Mf)16	09:10	Middle	2	1	25	7.53	27.5	7.81	7.09	9.4
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS(Mf)16	09:10	Middle	2	2	25	7.58	27.5	7.79	7.15	9.5
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS(Mf)16	09:10	Bottom	3	1	25.1	7.6	27.6	7.58	8.27	10.3
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS(Mf)16	09:10	Bottom	3	2	25.2	7.64	27.6	7.62	8.15	10.1
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS(Mf)9	08:56	Surface	1	1	25	7.55	27.5	7.94	7.08	10.2
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS(Mf)9	08:56	Surface	1	2	25	7.48	27.5	7.97	7.13	10.2
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS(Mf)9	08:56	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS(Mf)9	08:56	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS(Mf)9	08:56	Bottom	3	1	25	7.58	27.6	7.88	7.53	10.4
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	IS(Mf)9	08:56	Bottom	3	2	25	7.56	27.6	7.92	7.47	10.5
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	CS(Mf)3	08:35	Surface	1	1	24.9	7.46	27.4	8.13	6.94	9.2
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	CS(Mf)3	08:35	Surface	1	2	25	7.39	27.5	8.09	7.02	9.3
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	CS(Mf)3	08:35	Middle	2	1	25	7.55	27.5	8.09	7.24	9.6
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	CS(Mf)3	08:35	Middle	2	2	25	7.6	27.5	7.97	7.16	9.5
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	CS(Mf)3	08:35	Bottom	3	1	25.1	7.57	27.7	7.84	8.54	11.6
TMCLKL	HY/2012/07	2016-11-10	Mid-Ebb	CS(Mf)3	08:35	Bottom	3	2	25.1	7.63	27.8	7.8	8.62	11.7
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	CS(Mf)5	15:23	Surface	1	1	24.8	7.74	27.9	8.14	7.57	10.3
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	CS(Mf)5	15:23	Surface	1	2	24.7	7.76	27.8	8.11	7.64	10.4
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	CS(Mf)5	15:23	Middle	2	1	24.8	7.65	27.9	8.17	7.39	10.1
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	CS(Mf)5	15:23	Middle	2	2	24.9	7.7	28	8.15	7.44	10.1
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	CS(Mf)5	15:23	Bottom	3	1	24.9	7.66	28	7.91	7.98	11
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	CS(Mf)5	15:23	Bottom	3	2	24.8	7.71	28.1	7.87	8.07	11.1
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	SR4a	15:41	Surface	1	1	24.7	7.74	27.8	8.09	7.76	10.6
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	SR4a	15:41	Surface	1	2	24.6	7.69	27.9	8.05	7.68	10.4
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	SR4a	15:41	Middle	2	1						

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	SR4a	15:41	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	SR4a	15:41	Bottom	3	1	24.7	7.75	27.9	7.84	7.96	10.8
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	SR4a	15:41	Bottom	3	2	24.8	7.76	28	7.87	7.88	10.7
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	SR4	15:59	Surface	1	1	24.6	7.64	27.7	7.91	7.59	10.3
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	SR4	15:59	Surface	1	2	24.5	7.7	27.8	7.94	7.65	10.4
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	SR4	15:59	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	SR4	15:59	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	SR4	15:59	Bottom	3	1	24.6	7.66	27.8	7.76	7.86	10.9
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	SR4	15:59	Bottom	3	2	24.7	7.72	27.9	7.73	7.79	10.9
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS8	16:17	Surface	1	1	24.6	7.76	27.6	7.99	7.55	10.3
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS8	16:17	Surface	1	2	24.7	7.72	27.7	7.96	7.49	10.2
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS8	16:17	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS8	16:17	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS8	16:17	Bottom	3	1	24.7	7.74	27.8	7.84	7.86	10.8
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS8	16:17	Bottom	3	2	24.8	7.69	27.7	7.8	7.79	10.8
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS(Mf)16	16:35	Surface	1	1	24.6	7.69	27.7	8.11	7.4	10.1
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS(Mf)16	16:35	Surface	1	2	24.7	7.74	27.8	8.07	7.46	10.1
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS(Mf)16	16:35	Middle	2	1	24.8	7.71	27.9	8.19	7.59	10.2
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS(Mf)16	16:35	Middle	2	2	24.7	7.76	28	8.22	7.64	10.2
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS(Mf)16	16:35	Bottom	3	1	24.8	7.68	28	7.95	8.03	10.9
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS(Mf)16	16:35	Bottom	3	2	24.9	7.74	28.1	7.89	7.95	10.8
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS(Mf)9	16:53	Surface	1	1	24.5	7.79	27.7	8.22	7.47	9.9
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS(Mf)9	16:53	Surface	1	2	24.6	7.75	27.8	8.19	7.39	9.8
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS(Mf)9	16:53	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS(Mf)9	16:53	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS(Mf)9	16:53	Bottom	3	1	24.6	7.78	27.9	8.1	7.71	10.5
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	IS(Mf)9	16:53	Bottom	3	2	24.7	7.74	27.8	8.07	7.79	10.6
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	CS(Mf)3	17:11	Surface	1	1	27.3	7.74	27.6	8.4	7.25	9.6
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	CS(Mf)3	17:11	Surface	1	2	27.4	7.7	27.7	8.35	7.34	9.8
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	CS(Mf)3	17:11	Middle	2	1	27.6	7.79	27.8	8.22	7.16	9.6
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	CS(Mf)3	17:11	Middle	2	2	27.5	7.76	27.7	8.21	7.1	9.4
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	CS(Mf)3	17:11	Bottom	3	1	27.7	7.75	27.9	8.01	8.21	11.2
TMCLKL	HY/2012/07	2016-11-12	Mid-Flood	CS(Mf)3	17:11	Bottom	3	2	27.6	7.79	28	7.97	7.12	11

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	CS(Mf)5	11:58	Surface	1	1	24.7	7.68	27.7	8.08	7.66	10.2
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	CS(Mf)5	11:58	Surface	1	2	24.7	7.7	27.8	8.05	7.73	10.3
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	CS(Mf)5	11:58	Middle	2	1	24.7	7.59	27.8	8.11	7.48	10
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	CS(Mf)5	11:58	Middle	2	2	24.6	7.64	27.8	8.09	7.53	10.1
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	CS(Mf)5	11:58	Bottom	3	1	24.7	7.6	27.9	7.85	8.07	10.9
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	CS(Mf)5	11:58	Bottom	3	2	24.8	7.65	27.9	7.81	8.16	11.1
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	SR4a	11:36	Surface	1	1	24.6	7.68	27.7	8.03	7.85	10.4
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	SR4a	11:36	Surface	1	2	24.7	7.63	27.7	7.99	7.77	10.3
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	SR4a	11:36	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	SR4a	11:36	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	SR4a	11:36	Bottom	3	1	24.7	7.67	27.7	7.78	8.05	10.9
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	SR4a	11:36	Bottom	3	2	24.7	7.7	27.8	7.81	7.97	10.8
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	SR4	11:20	Surface	1	1	24.6	7.58	27.6	7.85	7.68	10.2
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	SR4	11:20	Surface	1	2	24.6	7.64	27.7	7.88	7.74	10.3
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	SR4	11:20	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	SR4	11:20	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	SR4	11:20	Bottom	3	1	24.6	7.6	27.7	7.7	7.95	10.6
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	SR4	11:20	Bottom	3	2	24.7	7.66	27.7	7.67	7.88	10.5
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS8	11:05	Surface	1	1	24.6	7.7	27.6	7.93	7.64	10.2
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS8	11:05	Surface	1	2	24.6	7.66	27.6	7.9	7.58	10.1
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS8	11:05	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS8	11:05	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS8	11:05	Bottom	3	1	24.6	7.68	27.7	7.78	7.89	10.7
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS8	11:05	Bottom	3	2	24.7	7.63	27.6	7.74	7.95	10.7
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS(Mf)16	10:45	Surface	1	1	24.6	7.63	27.6	8.05	7.49	10
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS(Mf)16	10:45	Surface	1	2	24.5	7.68	27.7	8.01	7.55	10
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS(Mf)16	10:45	Middle	2	1	24.6	7.65	27.7	8.13	7.68	10.2
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS(Mf)16	10:45	Middle	2	2	24.6	7.7	27.7	8.16	7.73	10.3
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS(Mf)16	10:45	Bottom	3	1	24.7	7.62	27.9	7.89	8.12	11
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS(Mf)16	10:45	Bottom	3	2	24.7	7.68	27.8	7.83	8.04	10.8
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS(Mf)9	10:28	Surface	1	1	24.5	7.73	27.6	8.16	7.56	10.1
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS(Mf)9	10:28	Surface	1	2	24.5	7.69	27.7	8.13	7.48	9.9
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS(Mf)9	10:28	Middle	2	1						

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS(Mf)9	10:28	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS(Mf)9	10:28	Bottom	3	1	24.5	7.72	27.7	8.04	7.8	10.5
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	IS(Mf)9	10:28	Bottom	3	2	24.6	7.68	27.8	8.01	7.88	10.6
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	CS(Mf)3	10:05	Surface	1	1	24.4	7.68	27.6	8.34	7.34	9.8
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	CS(Mf)3	10:05	Surface	1	2	24.5	7.64	27.6	8.29	7.43	9.9
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	CS(Mf)3	10:05	Middle	2	1	24.5	7.73	27.6	8.16	7.25	9.6
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	CS(Mf)3	10:05	Middle	2	2	24.5	7.7	27.7	8.13	7.19	9.6
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	CS(Mf)3	10:05	Bottom	3	1	24.6	7.69	27.9	7.95	8.3	11.2
TMCLKL	HY/2012/07	2016-11-12	Mid-Ebb	CS(Mf)3	10:05	Bottom	3	2	24.6	7.73	27.8	7.91	8.21	11.2
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	CS(Mf)5	17:09	Surface	1	1	25.8	7.73	27.8	6.96	8.39	11.4
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	CS(Mf)5	17:09	Surface	1	2	25.7	7.68	27.9	6.92	8.3	11.3
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	CS(Mf)5	17:09	Middle	2	1	25.7	7.73	28	7.05	8.44	11.5
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	CS(Mf)5	17:09	Middle	2	2	25.7	7.7	28	7.08	8.36	11.4
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	CS(Mf)5	17:09	Bottom	3	1	25.5	7.84	28.2	7.21	8.72	12
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	CS(Mf)5	17:09	Bottom	3	2	25.5	7.88	28.2	7.16	8.66	12
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	SR4a	17:35	Surface	1	1	25.8	7.98	28	7.29	7.6	10.3
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	SR4a	17:35	Surface	1	2	25.8	8.01	28	7.33	7.53	10.2
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	SR4a	17:35	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	SR4a	17:35	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	SR4a	17:35	Bottom	3	1	25.7	7.87	28.1	7.4	7.86	10.7
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	SR4a	17:35	Bottom	3	2	25.7	7.9	28	7.44	7.94	10.8
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	SR4	17:51	Surface	1	1	25.7	8.04	28	7.04	7.73	10.5
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	SR4	17:51	Surface	1	2	25.7	8.1	27.9	7	7.8	10.6
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	SR4	17:51	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	SR4	17:51	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	SR4	17:51	Bottom	3	1	25.5	7.87	28	7.12	8.34	11.6
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	SR4	17:51	Bottom	3	2	25.6	7.92	28	7.07	8.25	11.6
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS8	18:05	Surface	1	1	25.7	8.01	28	7.11	7.94	10.8
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS8	18:05	Surface	1	2	25.7	8.05	28.1	7.07	7.87	10.7
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS8	18:05	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS8	18:05	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS8	18:05	Bottom	3	1	25.7	8.07	28.1	7.24	8.28	11.4
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS8	18:05	Bottom	3	2	25.6	8.09	28.2	7.21	8.31	11.6

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS(Mf)16	18:22	Surface	1	1	25.7	7.7	28	7.26	8.01	10.9
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS(Mf)16	18:22	Surface	1	2	25.8	7.74	27.9	7.21	7.95	10.8
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS(Mf)16	18:22	Middle	2	1	25.7	7.8	28.1	7.4	7.8	10.5
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS(Mf)16	18:22	Middle	2	2	25.7	7.73	28.1	7.34	7.76	10.4
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS(Mf)16	18:22	Bottom	3	1	25.6	7.8	28.2	7.16	8.5	11.6
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS(Mf)16	18:22	Bottom	3	2	25.6	7.76	28.2	7.19	8.42	11.5
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS(Mf)9	18:44	Surface	1	1	25.7	7.78	28	6.84	8.04	10.7
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS(Mf)9	18:44	Surface	1	2	25.7	7.75	28	6.88	7.97	10.6
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS(Mf)9	18:44	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS(Mf)9	18:44	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS(Mf)9	18:44	Bottom	3	1	25.7	7.94	28.1	6.95	8.23	11.2
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	IS(Mf)9	18:44	Bottom	3	2	25.6	7.99	28.1	6.98	8.16	11.1
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	CS(Mf)3	19:02	Surface	1	1	25.7	8.08	28	7.05	8.24	11
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	CS(Mf)3	19:02	Surface	1	2	25.8	8.11	28.1	7.03	8.16	10.9
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	CS(Mf)3	19:02	Middle	2	1	25.7	7.97	28.1	7.3	8.87	11.9
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	CS(Mf)3	19:02	Middle	2	2	25.7	8	28.2	7.24	8.94	11.9
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	CS(Mf)3	19:02	Bottom	3	1	25.6	7.94	28.4	7.51	9.04	12.4
TMCLKL	HY/2012/07	2016-11-15	Mid-Flood	CS(Mf)3	19:02	Bottom	3	2	25.6	7.98	28.4	7.57	9.12	12.3
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	CS(Mf)5	14:45	Surface	1	1	25.5	7.68	27.9	6.85	8.22	11
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	CS(Mf)5	14:45	Surface	1	2	25.4	7.7	28	6.87	8.24	11
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	CS(Mf)5	14:45	Middle	2	1	25.4	7.84	28.1	7.14	8.36	11.2
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	CS(Mf)5	14:45	Middle	2	2	25.4	7.82	28.1	7.17	8.38	11.2
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	CS(Mf)5	14:45	Bottom	3	1	25.3	8	28.2	7.34	8.44	11.4
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	CS(Mf)5	14:45	Bottom	3	2	25.4	8.02	28.1	7.32	8.41	11.4
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	SR4a	14:20	Surface	1	1	25.4	8.12	28.1	7.46	7.38	9.8
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	SR4a	14:20	Surface	1	2	25.5	8.14	28.1	7.47	7.4	9.8
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	SR4a	14:20	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	SR4a	14:20	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	SR4a	14:20	Bottom	3	1	25.6	7.92	28	7.59	8.11	10.9
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	SR4a	14:20	Bottom	3	2	25.5	7.94	28.1	7.62	8.13	11
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	SR4	13:57	Surface	1	1	25.5	8.13	27.9	6.86	7.63	10.1
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	SR4	13:57	Surface	1	2	25.4	8.15	28	6.84	7.65	10.2
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	SR4	13:57	Middle	2	1						

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	SR4	13:57	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	SR4	13:57	Bottom	3	1	25.3	7.92	28.1	7.03	8.12	10.8
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	SR4	13:57	Bottom	3	2	25.4	7.9	28.1	7.05	8.1	10.8
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS8	13:40	Surface	1	1	25.5	7.93	28.1	7.13	8.16	10.9
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS8	13:40	Surface	1	2	25.5	7.95	28	7.16	8.19	10.9
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS8	13:40	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS8	13:40	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS8	13:40	Bottom	3	1	25.4	8.16	28.2	7.34	8.45	11.4
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS8	13:40	Bottom	3	2	25.4	8.19	28.2	7.31	8.47	11.4
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS(Mf)16	13:18	Surface	1	1	25.5	7.45	27.9	7.32	7.86	10.5
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS(Mf)16	13:18	Surface	1	2	25.5	7.47	28	7.3	7.89	10.5
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS(Mf)16	13:18	Middle	2	1	25.4	7.66	28.1	7.45	8.12	10.8
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS(Mf)16	13:18	Middle	2	2	25.3	7.68	28.1	7.47	8.1	10.8
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS(Mf)16	13:18	Bottom	3	1	25.4	7.73	28.1	7.28	8.35	11.4
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS(Mf)16	13:18	Bottom	3	2	25.5	7.75	28.1	7.26	8.37	11.2
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS(Mf)9	12:57	Surface	1	1	25.5	7.81	28	6.65	8.12	10.8
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS(Mf)9	12:57	Surface	1	2	25.4	7.83	28.1	6.67	8.14	10.8
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS(Mf)9	12:57	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS(Mf)9	12:57	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS(Mf)9	12:57	Bottom	3	1	25.6	8.24	28.2	6.84	8.35	11.2
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	IS(Mf)9	12:57	Bottom	3	2	25.5	8.22	28.2	6.86	8.37	11.3
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	CS(Mf)3	12:35	Surface	1	1	25.6	8.2	28.1	7.12	8.65	11.5
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	CS(Mf)3	12:35	Surface	1	2	25.5	8.22	28.1	7.14	8.67	11.5
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	CS(Mf)3	12:35	Middle	2	1	25.4	7.94	28.2	7.66	9.14	12.2
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	CS(Mf)3	12:35	Middle	2	2	25.4	7.96	28.3	7.68	9.16	12.2
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	CS(Mf)3	12:35	Bottom	3	1	25.3	8.03	28.4	7.79	9.34	12.6
TMCLKL	HY/2012/07	2016-11-15	Mid-Ebb	CS(Mf)3	12:35	Bottom	3	2	25.3	8.05	28.3	7.81	9.36	12.7
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	CS(Mf)5	09:16	Surface	1	1	25.7	7.66	27.9	6.95	8.73	11.7
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	CS(Mf)5	09:16	Surface	1	2	25.7	7.7	28	6.91	8.66	11.7
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	CS(Mf)5	09:16	Middle	2	1	25.7	7.73	28	6.99	8.85	11.9
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	CS(Mf)5	09:16	Middle	2	2	25.7	7.75	28	7.02	8.79	11.8
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	CS(Mf)5	09:16	Bottom	3	1	25.5	7.81	28.2	7.16	8.96	12.4
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	CS(Mf)5	09:16	Bottom	3	2	25.5	7.82	28.2	7.19	8.87	12.2

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	SR4a	09:40	Surface	1	1	25.7	7.94	28	7.08	7.94	10.8
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	SR4a	09:40	Surface	1	2	25.7	7.97	27.9	7.12	7.88	10.7
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	SR4a	09:40	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	SR4a	09:40	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	SR4a	09:40	Bottom	3	1	25.6	7.86	28	7.17	8.24	11.2
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	SR4a	09:40	Bottom	3	2	25.6	7.89	28.1	7.2	8.31	11.3
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	SR4	09:53	Surface	1	1	25.7	7.98	27.9	7.03	7.88	10.7
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	SR4	09:53	Surface	1	2	25.7	8.02	28	6.99	7.92	10.8
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	SR4	09:53	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	SR4	09:53	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	SR4	09:53	Bottom	3	1	25.7	7.95	28	7.07	8.34	11.6
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	SR4	09:53	Bottom	3	2	25.6	7.9	28.1	7.05	8.27	11.6
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS8	10:09	Surface	1	1	25.7	7.94	28	6.95	7.77	10.6
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS8	10:09	Surface	1	2	25.8	7.99	28	6.91	7.86	10.7
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS8	10:09	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS8	10:09	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS8	10:09	Bottom	3	1	25.7	8.03	28	7.04	8.14	11.2
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS8	10:09	Bottom	3	2	25.7	8	28	7	8.1	11.3
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS(Mf)16	10:24	Surface	1	1	25.8	7.86	27.9	7.15	7.95	10.8
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS(Mf)16	10:24	Surface	1	2	25.8	7.89	28	7.11	8.01	10.9
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS(Mf)16	10:24	Middle	2	1	25.7	7.77	28	7.3	7.73	10.4
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS(Mf)16	10:24	Middle	2	2	25.8	7.81	28	7.27	7.8	10.5
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS(Mf)16	10:24	Bottom	3	1	25.7	7.8	28.1	7.09	8.31	11.3
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS(Mf)16	10:24	Bottom	3	2	25.7	7.76	28.2	7.06	8.39	11.4
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS(Mf)9	10:45	Surface	1	1	25.7	7.78	27.9	6.9	7.95	10.6
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS(Mf)9	10:45	Surface	1	2	25.7	7.81	28	6.87	8.01	10.7
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS(Mf)9	10:45	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS(Mf)9	10:45	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS(Mf)9	10:45	Bottom	3	1	25.7	7.87	28	6.94	8.08	11
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	IS(Mf)9	10:45	Bottom	3	2	25.7	7.9	28.1	6.97	8.13	11.1
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	CS(Mf)3	11:00	Surface	1	1	25.7	8.05	28.1	7.05	8.12	10.8
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	CS(Mf)3	11:00	Surface	1	2	25.7	8.08	28	7.01	8.05	10.7
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	CS(Mf)3	11:00	Middle	2	1	25.7	7.97	28.2	7.17	8.33	11.2

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	CS(Mf)3	11:00	Middle	2	2	25.7	8	28.2	7.2	8.4	11.2
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	CS(Mf)3	11:00	Bottom	3	1	25.6	8.03	28.3	7.36	8.66	11.9
TMCLKL	HY/2012/07	2016-11-17	Mid-Flood	CS(Mf)3	11:00	Bottom	3	2	25.6	7.95	28.3	7.32	8.72	11.8
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	CS(Mf)5	15:30	Surface	1	1	25.8	7.79	28	6.87	8.45	11.3
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	CS(Mf)5	15:30	Surface	1	2	25.9	7.74	27.9	6.83	8.36	11.2
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	CS(Mf)5	15:30	Middle	2	1	25.7	7.79	28.1	6.96	8.5	11.4
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	CS(Mf)5	15:30	Middle	2	2	25.8	7.76	28	6.99	8.42	11.3
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	CS(Mf)5	15:30	Bottom	3	1	25.6	7.9	28.2	7.1	8.78	11.9
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	CS(Mf)5	15:30	Bottom	3	2	25.5	7.94	28.3	7.07	8.72	11.9
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	SR4a	15:13	Surface	1	1	25.7	8.04	28	7.2	7.66	10.2
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	SR4a	15:13	Surface	1	2	25.8	8.05	28.1	7.24	7.59	10.1
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	SR4a	15:13	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	SR4a	15:13	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	SR4a	15:13	Bottom	3	1	25.6	7.93	28.1	7.31	7.92	10.7
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	SR4a	15:13	Bottom	3	2	25.7	7.96	28.2	7.35	8	10.8
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	SR4	14:56	Surface	1	1	25.8	8.1	28	6.95	7.79	10.4
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	SR4	14:56	Surface	1	2	25.7	8.16	28.1	6.91	7.86	10.5
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	SR4	14:56	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	SR4	14:56	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	SR4	14:56	Bottom	3	1	25.7	7.93	28.1	7.03	8.4	11.2
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	SR4	14:56	Bottom	3	2	25.8	7.98	28.2	6.98	8.31	11.1
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS8	14:39	Surface	1	1	25.7	8.07	28.1	7.02	8	10.6
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS8	14:39	Surface	1	2	25.8	8.11	28.2	6.98	7.93	10.5
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS8	14:39	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS8	14:39	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS8	14:39	Bottom	3	1	25.6	8.13	28.3	7.15	8.34	11.3
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS8	14:39	Bottom	3	2	25.7	8.15	28.2	7.12	8.37	11.3
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS(Mf)16	14:21	Surface	1	1	25.8	7.76	28.1	7.32	8.07	10.7
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS(Mf)16	14:21	Surface	1	2	25.9	7.8	28	7.27	8.01	10.7
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS(Mf)16	14:21	Middle	2	1	25.8	7.86	28.1	7.46	7.86	10.5
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS(Mf)16	14:21	Middle	2	2	25.7	7.79	28.2	7.4	7.82	10.4
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS(Mf)16	14:21	Bottom	3	1	25.6	7.86	28.2	7.22	8.56	11.6
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS(Mf)16	14:21	Bottom	3	2	25.7	7.82	28.3	7.25	8.48	11.4

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS(Mf)9	14:03	Surface	1	1	25.8	7.84	28	6.75	8.1	10.8
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS(Mf)9	14:03	Surface	1	2	25.7	7.81	28.1	6.79	8.03	10.7
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS(Mf)9	14:03	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS(Mf)9	14:03	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS(Mf)9	14:03	Bottom	3	1	25.7	8	28.1	6.86	8.29	11.1
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	IS(Mf)9	14:03	Bottom	3	2	25.6	8.05	28.2	6.89	8.22	11.1
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	CS(Mf)3	13:45	Surface	1	1	25.8	8.14	28.2	6.96	8.3	11
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	CS(Mf)3	13:45	Surface	1	2	25.9	8.17	28.1	6.94	8.22	10.9
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	CS(Mf)3	13:45	Middle	2	1	25.8	8.03	28.2	7.21	8.93	11.9
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	CS(Mf)3	13:45	Middle	2	2	25.7	8.06	28.3	7.15	9	12
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	CS(Mf)3	13:45	Bottom	3	1	25.7	8	28.4	7.42	9.1	12.3
TMCLKL	HY/2012/07	2016-11-17	Mid-Ebb	CS(Mf)3	13:45	Bottom	3	2	25.6	8.04	28.5	7.48	9.18	12.5
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	CS(Mf)5	10:40	Surface	1	1	25.3	7.76	27.6	7.17	7.93	10.7
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	CS(Mf)5	10:40	Surface	1	2	25.4	7.75	27.7	7.14	7.91	10.7
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	CS(Mf)5	10:40	Middle	2	1	25.3	7.8	27.8	7.05	8.24	11.1
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	CS(Mf)5	10:40	Middle	2	2	25.3	7.82	27.8	7.01	8.28	11.1
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	CS(Mf)5	10:40	Bottom	3	1	25.3	7.79	27.8	6.96	8.49	11.7
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	CS(Mf)5	10:40	Bottom	3	2	25.2	7.78	27.9	6.92	8.41	11.6
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	SR4a	11:00	Surface	1	1	25.4	7.8	27.5	7.11	8.23	11.2
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	SR4a	11:00	Surface	1	2	25.5	7.81	27.6	7.07	8.2	11.2
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	SR4a	11:00	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	SR4a	11:00	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	SR4a	11:00	Bottom	3	1	25.4	7.77	27.7	7.01	8.19	11.1
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	SR4a	11:00	Bottom	3	2	25.3	7.78	27.7	7.04	8.11	11
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	SR4	11:18	Surface	1	1	25.4	7.74	27.6	7.24	7.37	10
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	SR4	11:18	Surface	1	2	25.4	7.74	27.6	7.2	7.34	10
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	SR4	11:18	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	SR4	11:18	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	SR4	11:18	Bottom	3	1	25.3	7.8	27.7	7.03	8.33	11.6
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	SR4	11:18	Bottom	3	2	25.3	7.8	27.7	7.06	8.3	11.6
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS8	11:36	Surface	1	1	25.5	7.7	27.6	7.18	7.82	10.6
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS8	11:36	Surface	1	2	25.5	7.69	27.5	7.14	7.79	10.6
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS8	11:36	Middle	2	1						

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS8	11:36	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS8	11:36	Bottom	3	1	25.4	7.78	27.7	7.12	8.29	11.4
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS8	11:36	Bottom	3	2	25.4	7.78	27.7	7.09	8.26	11.5
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS(Mf)16	11:55	Surface	1	1	25.5	7.72	27.6	7.21	7.9	10.7
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS(Mf)16	11:55	Surface	1	2	25.6	7.71	27.7	7.24	7.93	10.8
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS(Mf)16	11:55	Middle	2	1	25.3	7.76	27.8	7.1	8.54	11.4
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS(Mf)16	11:55	Middle	2	2	25.3	7.76	27.8	7.07	8.5	11.4
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS(Mf)16	11:55	Bottom	3	1	25.2	7.81	27.8	7.14	8.47	11.5
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS(Mf)16	11:55	Bottom	3	2	25.2	7.81	27.9	7.18	8.45	11.5
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS(Mf)9	12:30	Surface	1	1	25.5	7.8	27.5	7.39	8.09	10.8
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS(Mf)9	12:30	Surface	1	2	25.6	7.81	27.4	7.35	8.02	10.7
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS(Mf)9	12:30	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS(Mf)9	12:30	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS(Mf)9	12:30	Bottom	3	1	25.5	7.82	27.6	7.19	8.22	11.2
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	IS(Mf)9	12:30	Bottom	3	2	25.5	7.82	27.6	7.16	8.26	11.2
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	CS(Mf)3	12:55	Surface	1	1	25.6	7.76	27.6	7.42	7.87	10.5
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	CS(Mf)3	12:55	Surface	1	2	25.6	7.78	27.6	7.38	7.8	10.4
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	CS(Mf)3	12:55	Middle	2	1	25.3	7.84	27.8	7.17	8.3	11.1
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	CS(Mf)3	12:55	Middle	2	2	25.4	7.84	27.8	7.14	8.36	11.1
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	CS(Mf)3	12:55	Bottom	3	1	25.2	7.86	27.9	7.02	8.36	11.5
TMCLKL	HY/2012/07	2016-11-19	Mid-Flood	CS(Mf)3	12:55	Bottom	3	2	25.2	7.87	27.9	7.06	8.32	11.2
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	CS(Mf)5	16:41	Surface	1	1	25.6	7.73	27.7	7.09	8.34	11.2
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	CS(Mf)5	16:41	Surface	1	2	25.6	7.69	27.6	7.05	8.26	11.1
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	CS(Mf)5	16:41	Middle	2	1	25.6	7.77	27.7	7.13	8.11	10.9
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	CS(Mf)5	16:41	Middle	2	2	25.5	7.72	27.7	7.16	8.05	10.8
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	CS(Mf)5	16:41	Bottom	3	1	25.6	7.78	27.9	7.03	8.52	11.5
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	CS(Mf)5	16:41	Bottom	3	2	25.7	7.83	27.9	7.07	8.44	11.5
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	SR4a	16:18	Surface	1	1	25.5	7.68	27.6	7.04	7.85	10.4
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	SR4a	16:18	Surface	1	2	25.6	7.73	27.7	7.01	7.91	10.5
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	SR4a	16:18	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	SR4a	16:18	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	SR4a	16:18	Bottom	3	1	25.6	7.7	27.7	7.09	8.07	10.9
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	SR4a	16:18	Bottom	3	2	25.6	7.66	27.7	7.12	8.01	10.8

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	SR4	16:04	Surface	1	1	25.6	7.77	27.7	7.09	7.75	10.3
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	SR4	16:04	Surface	1	2	25.7	7.85	27.7	7.05	7.82	10.4
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	SR4	16:04	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	SR4	16:04	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	SR4	16:04	Bottom	3	1	25.7	7.88	27.8	6.94	7.95	10.6
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	SR4	16:04	Bottom	3	2	25.7	7.93	27.8	6.98	8.01	10.7
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS8	15:48	Surface	1	1	25.5	7.84	27.7	7.04	7.94	10.6
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS8	15:48	Surface	1	2	25.6	7.8	27.7	7.01	7.85	10.4
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS8	15:48	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS8	15:48	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS8	15:48	Bottom	3	1	25.6	7.94	27.8	7.09	8.06	10.9
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS8	15:48	Bottom	3	2	25.6	7.9	27.7	7.13	8	10.8
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS(Mf)16	15:30	Surface	1	1	25.5	7.77	27.6	7.08	8.05	10.7
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS(Mf)16	15:30	Surface	1	2	25.6	7.84	27.7	7.11	8	10.6
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS(Mf)16	15:30	Middle	2	1	25.6	7.8	27.7	7.18	7.92	10.5
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS(Mf)16	15:30	Middle	2	2	25.6	7.83	27.7	7.14	7.86	10.5
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS(Mf)16	15:30	Bottom	3	1	25.6	7.7	27.8	7.24	8.24	11.2
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS(Mf)16	15:30	Bottom	3	2	25.6	7.73	27.9	7.21	8.35	11.2
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS(Mf)9	15:14	Surface	1	1	25.5	7.73	27.7	7.18	7.83	10.4
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS(Mf)9	15:14	Surface	1	2	25.5	7.69	27.8	7.15	7.9	10.5
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS(Mf)9	15:14	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS(Mf)9	15:14	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS(Mf)9	15:14	Bottom	3	1	25.5	7.77	27.8	7.13	7.98	10.7
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	IS(Mf)9	15:14	Bottom	3	2	25.5	7.73	27.8	7.09	8.03	10.8
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	CS(Mf)3	14:56	Surface	1	1	25.4	7.86	27.7	7.25	8.05	10.7
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	CS(Mf)3	14:56	Surface	1	2	25.5	7.82	27.7	7.22	7.94	10.6
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	CS(Mf)3	14:56	Middle	2	1	25.5	7.79	27.7	7.13	8.23	10.9
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	CS(Mf)3	14:56	Middle	2	2	25.5	7.81	27.8	7.19	8.16	10.9
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	CS(Mf)3	14:56	Bottom	3	1	25.6	7.73	27.9	7.34	8.44	11.4
TMCLKL	HY/2012/07	2016-11-19	Mid-Ebb	CS(Mf)3	14:56	Bottom	3	2	25.6	7.69	27.9	7.31	8.37	11.4
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	CS(Mf)5	14:10	Surface	1	1	25.7	7.79	27.7	7.15	8.25	11.1
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	CS(Mf)5	14:10	Surface	1	2	25.8	7.75	27.6	7.11	8.17	11
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	CS(Mf)5	14:10	Middle	2	1	25.8	7.83	27.7	7.19	8.02	10.8

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	CS(Mf)5	14:10	Middle	2	2	25.9	7.78	27.8	7.22	7.96	10.7
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	CS(Mf)5	14:10	Bottom	3	1	25.9	7.84	27.9	7.09	8.43	11.6
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	CS(Mf)5	14:10	Bottom	3	2	25.8	7.89	28	7.13	8.35	11.5
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	SR4a	14:32	Surface	1	1	25.6	7.74	27.7	7.1	7.76	10.6
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	SR4a	14:32	Surface	1	2	25.7	7.79	27.6	7.07	7.82	10.6
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	SR4a	14:32	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	SR4a	14:32	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	SR4a	14:32	Bottom	3	1	25.7	7.76	27.7	7.15	7.98	10.9
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	SR4a	14:32	Bottom	3	2	25.8	7.72	27.8	7.18	7.92	10.8
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	SR4	14:54	Surface	1	1	25.7	7.83	27.7	7.15	7.66	10.4
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	SR4	14:54	Surface	1	2	25.6	7.91	27.6	7.11	7.73	10.5
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	SR4	14:54	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	SR4	14:54	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	SR4	14:54	Bottom	3	1	25.7	7.94	27.7	7	7.86	10.9
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	SR4	14:54	Bottom	3	2	25.8	7.99	27.8	7.04	7.92	11.1
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS8	15:16	Surface	1	1	25.6	7.9	27.8	7.1	8	10.9
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS8	15:16	Surface	1	2	25.5	7.86	27.7	7.07	7.91	10.8
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS8	15:16	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS8	15:16	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS8	15:16	Bottom	3	1	25.6	8	27.8	7.15	8.12	11.2
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS8	15:16	Bottom	3	2	25.7	7.96	27.9	7.19	8.06	11.2
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS(Mf)16	15:38	Surface	1	1	25.6	7.83	27.6	7.14	8.11	11
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS(Mf)16	15:38	Surface	1	2	25.7	7.9	27.7	7.17	8.06	11
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS(Mf)16	15:38	Middle	2	1	25.7	7.86	27.8	7.24	8.03	10.8
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS(Mf)16	15:38	Middle	2	2	25.6	7.89	27.7	7.2	7.92	10.6
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS(Mf)16	15:38	Bottom	3	1	25.7	7.76	27.9	7.3	8.3	11.3
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS(Mf)16	15:38	Bottom	3	2	25.8	7.79	28	7.27	8.41	11.4
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS(Mf)9	16:00	Surface	1	1	25.6	7.79	27.8	7.24	7.74	10.3
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS(Mf)9	16:00	Surface	1	2	25.5	7.75	27.9	7.21	7.81	10.4
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS(Mf)9	16:00	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS(Mf)9	16:00	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS(Mf)9	16:00	Bottom	3	1	25.6	7.83	27.9	7.19	7.89	10.7
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	IS(Mf)9	16:00	Bottom	3	2	25.7	7.79	28	7.15	7.94	10.8

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	CS(Mf)3	16:24	Surface	1	1	25.5	7.92	27.7	7.31	7.96	10.6
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	CS(Mf)3	16:24	Surface	1	2	25.6	7.88	27.8	7.28	7.85	10.4
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	CS(Mf)3	16:24	Middle	2	1	25.7	7.85	27.9	7.19	8.14	10.9
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	CS(Mf)3	16:24	Middle	2	2	25.6	7.87	27.8	7.25	8.07	10.7
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	CS(Mf)3	16:24	Bottom	3	1	25.7	7.79	28	7.4	8.35	11.4
TMCLKL	HY/2012/07	2016-11-22	Mid-Flood	CS(Mf)3	16:24	Bottom	3	2	25.8	7.75	27.9	7.37	8.28	11.2
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	CS(Mf)5	21:16	Surface	1	1	25.7	7.67	27.7	6.69	8.36	11.2
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	CS(Mf)5	21:16	Surface	1	2	25.7	7.69	27.6	6.72	8.39	11.2
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	CS(Mf)5	21:16	Middle	2	1	25.8	8.11	27.8	6.84	8.44	11.3
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	CS(Mf)5	21:16	Middle	2	2	25.7	8.13	27.8	6.86	8.42	11.3
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	CS(Mf)5	21:16	Bottom	3	1	25.8	8.05	27.9	6.99	8.55	11.5
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	CS(Mf)5	21:16	Bottom	3	2	25.8	8.07	27.8	7.01	8.57	11.7
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	SR4a	20:58	Surface	1	1	25.6	8.12	27.7	6.86	8.06	10.7
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	SR4a	20:58	Surface	1	2	25.7	8.15	27.8	6.88	8.09	10.8
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	SR4a	20:58	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	SR4a	20:58	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	SR4a	20:58	Bottom	3	1	25.8	7.92	27.9	7.13	8.14	11
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	SR4a	20:58	Bottom	3	2	25.8	7.95	27.9	7.16	8.17	11
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	SR4	20:43	Surface	1	1	25.6	8.12	27.5	6.97	8.13	10.8
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	SR4	20:43	Surface	1	2	25.6	8.14	27.6	6.99	8.16	10.9
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	SR4	20:43	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	SR4	20:43	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	SR4	20:43	Bottom	3	1	25.7	7.95	27.7	7.14	8.3	11
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	SR4	20:43	Bottom	3	2	25.7	7.97	27.7	7.16	8.33	11.1
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS8	20:28	Surface	1	1	25.7	7.94	27.6	6.83	8.22	10.9
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS8	20:28	Surface	1	2	25.6	7.96	27.6	6.86	8.24	11
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS8	20:28	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS8	20:28	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS8	20:28	Bottom	3	1	25.5	8.14	27.7	7.05	8.45	11.4
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS8	20:28	Bottom	3	2	25.6	8.17	27.8	7.08	8.47	11.4
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS(Mf)16	20:07	Surface	1	1	25.7	8	26.7	6.74	7.92	10.5
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS(Mf)16	20:07	Surface	1	2	25.7	8.02	26.6	6.76	7.95	10.6
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS(Mf)16	20:07	Middle	2	1	25.6	7.95	26.7	6.88	8.12	10.8

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS(Mf)16	20:07	Middle	2	2	25.5	7.98	26.8	6.91	8.14	10.8
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS(Mf)16	20:07	Bottom	3	1	25.5	8.12	26.8	7.14	8.3	11.3
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS(Mf)16	20:07	Bottom	3	2	25.5	8.14	26.7	7.17	8.33	11.2
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS(Mf)9	19:47	Surface	1	1	25.7	7.82	27.6	7.06	8.21	10.9
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS(Mf)9	19:47	Surface	1	2	25.7	7.84	27.7	7.09	8.23	10.9
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS(Mf)9	19:47	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS(Mf)9	19:47	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS(Mf)9	19:47	Bottom	3	1	25.5	8.16	27.8	7.25	8.46	11.3
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	IS(Mf)9	19:47	Bottom	3	2	25.6	8.14	27.8	7.23	8.49	11.5
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	CS(Mf)3	19:24	Surface	1	1	25.8	8.14	27.6	7.25	8.12	10.8
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	CS(Mf)3	19:24	Surface	1	2	25.7	8.12	27.6	7.28	8.15	10.8
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	CS(Mf)3	19:24	Middle	2	1	25.6	7.96	27.7	7.36	8.33	11.1
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	CS(Mf)3	19:24	Middle	2	2	25.7	7.98	27.8	7.39	8.36	11.1
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	CS(Mf)3	19:24	Bottom	3	1	25.8	7.84	27.9	7.45	8.47	11.4
TMCLKL	HY/2012/07	2016-11-22	Mid-Ebb	CS(Mf)3	19:24	Bottom	3	2	25.8	7.86	27.8	7.47	8.49	11.5
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	CS(Mf)5	14:23	Surface	1	1	24.2	7.74	27.3	7.49	7.99	10.9
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	CS(Mf)5	14:23	Surface	1	2	24.1	7.79	27.2	7.47	7.96	10.7
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	CS(Mf)5	14:23	Middle	2	1	24.3	7.73	27.4	7.32	8.32	11.2
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	CS(Mf)5	14:23	Middle	2	2	24.2	7.71	27.3	7.34	8.39	11.2
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	CS(Mf)5	14:23	Bottom	3	1	23.9	7.68	27.5	7.12	8.21	11.3
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	CS(Mf)5	14:23	Bottom	3	2	24	7.64	27.5	7.13	8.17	11.3
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	SR4a	14:47	Surface	1	1	24.3	7.67	27.2	7.72	7.38	10
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	SR4a	14:47	Surface	1	2	24.2	7.69	27.3	7.75	7.44	10.1
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	SR4a	14:47	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	SR4a	14:47	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	SR4a	14:47	Bottom	3	1	24.2	7.73	27.3	7.66	7.68	10.4
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	SR4a	14:47	Bottom	3	2	24.3	7.78	27.3	7.62	7.61	10.3
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	SR4	15:01	Surface	1	1	24.3	7.77	27.2	7.28	7.73	10.5
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	SR4	15:01	Surface	1	2	24.3	7.73	27.3	7.31	7.79	10.6
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	SR4	15:01	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	SR4	15:01	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	SR4	15:01	Bottom	3	1	24.2	7.71	27.3	7.36	7.95	11
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	SR4	15:01	Bottom	3	2	24.1	7.72	27.4	7.39	7.89	11

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS8	15:15	Surface	1	1	24.2	7.81	27.3	7.19	7.41	10.1
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS8	15:15	Surface	1	2	24.3	7.83	27.4	7.22	7.47	10.2
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS8	15:15	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS8	15:15	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS8	15:15	Bottom	3	1	24.2	7.84	27.4	7.12	7.68	10.6
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS8	15:15	Bottom	3	2	24.2	7.88	27.4	7.1	7.55	10.5
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS(Mf)16	15:31	Surface	1	1	24.2	7.86	27.2	7.33	7.83	10.6
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS(Mf)16	15:31	Surface	1	2	24.1	7.84	27.2	7.34	7.91	10.8
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS(Mf)16	15:31	Middle	2	1	24.1	7.81	27.3	7.41	7.65	10.3
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS(Mf)16	15:31	Middle	2	2	24.1	7.86	27.2	7.38	7.74	10.4
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS(Mf)16	15:31	Bottom	3	1	23.9	7.74	27.4	7.12	8.03	11
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS(Mf)16	15:31	Bottom	3	2	24	7.71	27.5	7.16	8.07	11.1
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS(Mf)9	15:51	Surface	1	1	24.2	7.78	27.4	7.41	7.69	10.2
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS(Mf)9	15:51	Surface	1	2	24.1	7.74	27.3	7.43	7.74	10.3
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS(Mf)9	15:51	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS(Mf)9	15:51	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS(Mf)9	15:51	Bottom	3	1	24	7.75	27.5	7.25	7.88	10.7
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	IS(Mf)9	15:51	Bottom	3	2	24	7.81	27.4	7.21	7.81	10.6
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	CS(Mf)3	16:10	Surface	1	1	24.1	7.75	27.2	7.38	7.96	10.6
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	CS(Mf)3	16:10	Surface	1	2	24.2	7.76	27.1	7.35	7.91	10.5
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	CS(Mf)3	16:10	Middle	2	1	24.3	7.82	27.3	7.16	8.07	10.8
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	CS(Mf)3	16:10	Middle	2	2	24.2	7.8	27.2	7.19	8.02	10.7
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	CS(Mf)3	16:10	Bottom	3	1	24.1	7.79	27.6	7.11	8.36	11.5
TMCLKL	HY/2012/07	2016-11-24	Mid-Flood	CS(Mf)3	16:10	Bottom	3	2	24	7.77	27.5	7.07	8.28	11.2
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	CS(Mf)5	10:56	Surface	1	1	24.3	7.71	27.2	7.3	7.72	10.3
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	CS(Mf)5	10:56	Surface	1	2	24.3	7.73	27.1	7.28	7.61	10.2
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	CS(Mf)5	10:56	Middle	2	1	24.2	7.46	27.1	7.16	7.92	10.6
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	CS(Mf)5	10:56	Middle	2	2	24.1	7.41	27.2	7.13	7.62	10.2
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	CS(Mf)5	10:56	Bottom	3	1	24	7.53	27.2	6.87	8.07	10.9
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	CS(Mf)5	10:56	Bottom	3	2	24	7.5	27.1	6.86	8.23	11.2
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	SR4a	10:26	Surface	1	1	24.2	7.53	27.2	7.65	7.45	9.9
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	SR4a	10:26	Surface	1	2	24.1	7.57	27.1	7.63	7.62	10.1
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	SR4a	10:26	Middle	2	1						

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	SR4a	10:26	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	SR4a	10:26	Bottom	3	1	23.9	7.72	27.1	7.49	7.89	10.7
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	SR4a	10:26	Bottom	3	2	23.9	7.75	27.2	7.47	7.63	10.3
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	SR4	10:08	Surface	1	1	24.3	7.83	27.1	7.02	7.82	10.4
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	SR4	10:08	Surface	1	2	24.2	7.8	27.3	7.09	8.03	10.7
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	SR4	10:08	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	SR4	10:08	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	SR4	10:08	Bottom	3	1	23.9	7.69	27.3	7.23	8.1	10.8
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	SR4	10:08	Bottom	3	2	23.8	7.72	27.2	7.29	7.85	10.4
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS8	09:49	Surface	1	1	24.1	7.79	27.2	7.16	7.91	10.5
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS8	09:49	Surface	1	2	24.2	7.74	27.1	7.13	7.65	10.2
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS8	09:49	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS8	09:49	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS8	09:49	Bottom	3	1	24	7.85	27.2	7.31	7.75	10.5
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS8	09:49	Bottom	3	2	23.9	7.89	27.2	7.35	7.53	10.2
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS(Mf)16	09:31	Surface	1	1	24.2	7.7	27.1	7.23	8.02	10.7
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS(Mf)16	09:31	Surface	1	2	24.2	7.73	27.1	7.29	8.16	10.9
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS(Mf)16	09:31	Middle	2	1	24.3	7.84	27.2	7.15	7.93	10.5
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS(Mf)16	09:31	Middle	2	2	24.2	7.81	27.1	7.18	7.83	10.4
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS(Mf)16	09:31	Bottom	3	1	24	7.79	27.4	7.09	7.83	10.6
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS(Mf)16	09:31	Bottom	3	2	24.1	7.77	27.5	7.05	7.71	10.3
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS(Mf)9	09:11	Surface	1	1	24.1	7.73	27.2	7.23	8	10.6
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS(Mf)9	09:11	Surface	1	2	24.2	7.76	27.2	7.28	8.16	10.9
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS(Mf)9	09:11	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS(Mf)9	09:11	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS(Mf)9	09:11	Bottom	3	1	23.9	7.83	27.1	7.03	7.92	10.6
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	IS(Mf)9	09:11	Bottom	3	2	23.8	7.85	27.2	7.06	7.87	10.6
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	CS(Mf)3	08:46	Surface	1	1	24.2	7.68	27.2	7.01	8.52	11.3
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	CS(Mf)3	08:46	Surface	1	2	24.2	7.65	27.1	7.04	8.63	11.5
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	CS(Mf)3	08:46	Middle	2	1	24.1	7.73	27.1	7.21	8.83	11.7
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	CS(Mf)3	08:46	Middle	2	2	24.2	7.78	27.2	7.18	8.58	11.4
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	CS(Mf)3	08:46	Bottom	3	1	23.9	7.61	27.5	7.31	8.22	11.1
TMCLKL	HY/2012/07	2016-11-24	Mid-Ebb	CS(Mf)3	08:46	Bottom	3	2	24	7.63	27.4	7.33	8.47	11.5

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	CS(Mf)5	15:19	Surface	1	1	24.4	7.74	27.1	7.24	8.42	11.6
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	CS(Mf)5	15:19	Surface	1	2	24.5	7.7	27.1	7.21	8.34	11.5
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	CS(Mf)5	15:19	Middle	2	1	24.5	7.68	27.4	7.09	8.66	12
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	CS(Mf)5	15:19	Middle	2	2	24.5	7.73	27.5	7.11	8.57	11.8
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	CS(Mf)5	15:19	Bottom	3	1	24.6	7.74	27.7	6.89	8.39	11.7
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	CS(Mf)5	15:19	Bottom	3	2	24.6	7.8	27.7	6.91	8.3	11.6
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	SR4a	15:44	Surface	1	1	24.4	7.64	27	7.45	7.89	10.9
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	SR4a	15:44	Surface	1	2	24.4	7.68	27.1	7.41	7.94	11
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	SR4a	15:44	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	SR4a	15:44	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	SR4a	15:44	Bottom	3	1	24.4	7.73	27.2	7.34	8.05	11.2
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	SR4a	15:44	Bottom	3	2	24.4	7.7	27.2	7.3	7.97	11.2
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	SR4	15:59	Surface	1	1	24.4	7.69	27.1	7.04	7.94	11
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	SR4	15:59	Surface	1	2	24.3	7.73	27.1	6.99	8.03	11.1
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	SR4	15:59	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	SR4	15:59	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	SR4	15:59	Bottom	3	1	24.3	7.64	27.2	7.09	8.24	11.6
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	SR4	15:59	Bottom	3	2	24.3	7.7	27.2	7.11	8.15	11.6
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS8	16:13	Surface	1	1	24.4	7.65	27.1	6.93	7.85	10.8
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS8	16:13	Surface	1	2	24.4	7.68	27.2	6.98	7.77	10.7
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS8	16:13	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS8	16:13	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS8	16:13	Bottom	3	1	24.4	7.67	27.1	6.87	8.06	11.4
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS8	16:13	Bottom	3	2	24.3	7.63	27.2	6.84	8	11.4
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS(Mf)16	16:30	Surface	1	1	24.3	7.75	26.9	7.09	7.94	11
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS(Mf)16	16:30	Surface	1	2	24.3	7.71	26.8	7.06	7.86	10.8
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS(Mf)16	16:30	Middle	2	1	24.3	7.66	27.4	6.94	7.8	10.5
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS(Mf)16	16:30	Middle	2	2	24.4	7.7	27.4	6.9	7.88	10.7
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS(Mf)16	16:30	Bottom	3	1	24.3	7.73	27.4	6.77	8.11	11.1
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS(Mf)16	16:30	Bottom	3	2	24.2	7.71	27.5	7.81	8.05	11
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS(Mf)9	16:52	Surface	1	1	24.3	7.67	27.3	7.17	7.94	10.6
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS(Mf)9	16:52	Surface	1	2	24.3	7.71	27.2	7.2	7.83	10.4
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS(Mf)9	16:52	Middle	2	1						

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS(Mf)9	16:52	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS(Mf)9	16:52	Bottom	3	1	24.2	7.73	27.3	7.08	8.05	10.9
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	IS(Mf)9	16:52	Bottom	3	2	24.2	7.7	27.3	7.04	8.13	11.1
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	CS(Mf)3	17:06	Surface	1	1	24.3	7.74	27.1	7.14	8.21	10.9
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	CS(Mf)3	17:06	Surface	1	2	24.3	7.71	27.2	7.11	8.16	10.9
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	CS(Mf)3	17:06	Middle	2	1	24.3	7.68	27.2	7.04	8.31	11.1
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	CS(Mf)3	17:06	Middle	2	2	24.2	7.73	27.3	7.01	8.27	11.2
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	CS(Mf)3	17:06	Bottom	3	1	24.3	7.74	27.4	6.87	8.6	12
TMCLKL	HY/2012/07	2016-11-26	Mid-Flood	CS(Mf)3	17:06	Bottom	3	2	24.2	7.77	27.4	6.91	8.53	11.8
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	CS(Mf)5	12:38	Surface	1	1	24.5	7.8	27.3	7.4	8.05	10.9
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	CS(Mf)5	12:38	Surface	1	2	24.4	7.85	27.4	7.38	8.02	10.9
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	CS(Mf)5	12:38	Middle	2	1	24.5	7.79	27.6	7.23	8.38	11.4
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	CS(Mf)5	12:38	Middle	2	2	24.4	7.77	27.5	7.25	8.45	11.5
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	CS(Mf)5	12:38	Bottom	3	1	24.5	7.74	27.6	7.03	8.27	11.4
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	CS(Mf)5	12:38	Bottom	3	2	24.6	7.7	27.7	7.05	8.23	11.4
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	SR4a	12:14	Surface	1	1	24.3	7.73	27.3	7.63	7.44	9.9
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	SR4a	12:14	Surface	1	2	24.4	7.75	27.4	7.66	7.5	10
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	SR4a	12:14	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	SR4a	12:14	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	SR4a	12:14	Bottom	3	1	24.4	7.79	27.4	7.57	7.74	10.4
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	SR4a	12:14	Bottom	3	2	24.5	7.84	27.5	7.53	7.67	10.4
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	SR4	11:52	Surface	1	1	24.2	7.83	27.3	7.19	7.79	10.4
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	SR4	11:52	Surface	1	2	24.3	7.79	27.4	7.22	7.85	10.4
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	SR4	11:52	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	SR4	11:52	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	SR4	11:52	Bottom	3	1	24.3	7.77	27.4	7.27	8.01	10.7
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	SR4	11:52	Bottom	3	2	24.2	7.78	27.5	7.3	7.95	10.6
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS8	11:30	Surface	1	1	24.1	7.87	27.4	7.1	7.47	9.9
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS8	11:30	Surface	1	2	24.2	7.89	27.5	7.13	7.53	10
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS8	11:30	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS8	11:30	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS8	11:30	Bottom	3	1	24.1	7.9	27.6	7.03	7.74	10.4
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS8	11:30	Bottom	3	2	24	7.94	27.5	7.01	7.61	10.3

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS(Mf)16	11:08	Surface	1	1	24	7.92	27.2	7.24	7.89	10.5
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS(Mf)16	11:08	Surface	1	2	24.1	7.9	27.3	7.25	7.97	10.6
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS(Mf)16	11:08	Middle	2	1	24.2	7.87	27.4	7.32	7.71	10.3
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS(Mf)16	11:08	Middle	2	2	24.1	7.92	27.3	7.29	7.8	10.4
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS(Mf)16	11:08	Bottom	3	1	24.3	7.8	27.5	7.03	8.09	11
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS(Mf)16	11:08	Bottom	3	2	24.3	7.77	27.6	7.07	8.13	10.9
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS(Mf)9	10:46	Surface	1	1	24.1	7.84	27.4	7.32	7.75	10.3
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS(Mf)9	10:46	Surface	1	2	24	7.8	27.5	7.34	7.8	10.4
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS(Mf)9	10:46	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS(Mf)9	10:46	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS(Mf)9	10:46	Bottom	3	1	24	7.81	27.6	7.16	7.94	10.8
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	IS(Mf)9	10:46	Bottom	3	2	23.9	7.87	27.5	7.12	7.87	10.7
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	CS(Mf)3	10:24	Surface	1	1	24	7.81	27.2	7.29	8.02	10.7
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	CS(Mf)3	10:24	Surface	1	2	24.1	7.82	27.3	7.26	7.97	10.6
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	CS(Mf)3	10:24	Middle	2	1	24.1	7.88	27.5	7.07	8.13	10.8
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	CS(Mf)3	10:24	Middle	2	2	24.2	7.86	27.4	7.1	8.08	10.7
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	CS(Mf)3	10:24	Bottom	3	1	24.2	7.85	27.6	7.02	8.42	11.4
TMCLKL	HY/2012/07	2016-11-26	Mid-Ebb	CS(Mf)3	10:24	Bottom	3	2	24.1	7.86	27.7	6.98	8.34	11.3
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	CS(Mf)5	16:37	Surface	1	1	23.3	7.71	28.4	7.95	8.07	11.1
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	CS(Mf)5	16:37	Surface	1	2	23.4	7.74	28.3	7.91	7.98	11
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	CS(Mf)5	16:37	Middle	2	1	23.4	7.79	28.5	7.82	8.25	11.4
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	CS(Mf)5	16:37	Middle	2	2	23.3	7.78	28.4	7.85	8.29	11.4
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	CS(Mf)5	16:37	Bottom	3	1	23.5	7.72	28.5	7.75	8.51	11.9
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	CS(Mf)5	16:37	Bottom	3	2	23.4	7.76	28.6	7.79	8.44	11.8
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	SR4a	17:03	Surface	1	1	23.4	7.88	28.2	8.29	7.96	11
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	SR4a	17:03	Surface	1	2	23.4	7.84	28.3	8.27	7.84	10.8
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	SR4a	17:03	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	SR4a	17:03	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	SR4a	17:03	Bottom	3	1	23.5	7.82	28.4	8.12	8.03	11.2
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	SR4a	17:03	Bottom	3	2	23.4	7.8	28.3	8.07	7.99	11.2
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	SR4	17:21	Surface	1	1	23.5	7.71	28.1	7.81	7.62	10.5
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	SR4	17:21	Surface	1	2	23.6	7.69	28.2	7.78	7.68	10.6
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	SR4	17:21	Middle	2	1						

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	SR4	17:21	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	SR4	17:21	Bottom	3	1	23.7	7.74	28.2	7.44	7.75	10.9
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	SR4	17:21	Bottom	3	2	23.6	7.78	28.1	7.41	7.7	10.9
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS8	17:38	Surface	1	1	23.4	7.74	28.3	7.94	7.54	10.4
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS8	17:38	Surface	1	2	23.3	7.78	28.2	7.9	7.37	10.2
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS8	17:38	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS8	17:38	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS8	17:38	Bottom	3	1	23.5	7.81	28.3	7.86	7.68	10.9
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS8	17:38	Bottom	3	2	23.4	7.77	28.4	7.83	7.72	11
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS(Mf)16	17:56	Surface	1	1	23.5	7.69	28.2	7.83	7.86	10.8
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS(Mf)16	17:56	Surface	1	2	23.4	7.73	28.1	7.86	7.79	10.8
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS(Mf)16	17:56	Middle	2	1	23.5	7.74	28.3	7.96	8.02	10.8
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS(Mf)16	17:56	Middle	2	2	23.5	7.79	28.2	7.99	8.09	11
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS(Mf)16	17:56	Bottom	3	1	23.3	7.8	28.4	7.74	8.14	11.2
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS(Mf)16	17:56	Bottom	3	2	23.2	7.79	28.5	7.71	8.08	11.1
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS(Mf)9	18:16	Surface	1	1	23.4	7.74	28.4	7.95	8.11	10.8
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS(Mf)9	18:16	Surface	1	2	23.5	7.71	28.3	7.91	8.02	10.7
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS(Mf)9	18:16	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS(Mf)9	18:16	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS(Mf)9	18:16	Bottom	3	1	23.5	7.68	28.4	7.71	7.96	10.8
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	IS(Mf)9	18:16	Bottom	3	2	23.5	7.72	28.4	7.68	7.89	10.7
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	CS(Mf)3	18:41	Surface	1	1	23.4	7.8	28.3	8.03	8.17	10.9
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	CS(Mf)3	18:41	Surface	1	2	23.5	7.83	28.2	8.01	8.08	10.7
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	CS(Mf)3	18:41	Middle	2	1	23.5	7.72	28.5	8.17	7.96	10.7
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	CS(Mf)3	18:41	Middle	2	2	23.6	7.76	28.4	8.15	7.99	10.8
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	CS(Mf)3	18:41	Bottom	3	1	23.4	7.71	28.5	7.92	8.23	11.4
TMCLKL	HY/2012/07	2016-11-29	Mid-Flood	CS(Mf)3	18:41	Bottom	3	2	23.3	7.67	28.6	7.9	8.29	11.4
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	CS(Mf)5	14:00	Surface	1	1	23.4	7.68	28.3	7.74	7.63	10.4
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	CS(Mf)5	14:00	Surface	1	2	23.4	7.72	28.4	7.81	7.74	10.5
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	CS(Mf)5	14:00	Middle	2	1	23.4	7.79	28.4	7.91	7.83	10.6
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	CS(Mf)5	14:00	Middle	2	2	23.5	7.81	28.4	7.88	7.9	10.7
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	CS(Mf)5	14:00	Bottom	3	1	23.4	7.74	28.4	8.13	8.16	11.3
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	CS(Mf)5	14:00	Bottom	3	2	23.4	7.78	28.5	8.08	8.22	11.3

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	SR4a	13:39	Surface	1	1	23.4	7.83	28.3	8.13	8.18	10.9
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	SR4a	13:39	Surface	1	2	23.4	7.89	28.4	8.09	8.07	10.7
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	SR4a	13:39	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	SR4a	13:39	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	SR4a	13:39	Bottom	3	1	23.4	7.86	28.4	7.98	8.26	11.2
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	SR4a	13:39	Bottom	3	2	23.5	7.91	28.4	8.06	8.17	11
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	SR4	13:27	Surface	1	1	23.4	7.58	28.2	7.68	7.83	10.4
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	SR4	13:27	Surface	1	2	23.4	7.62	28.2	7.63	7.9	10.5
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	SR4	13:27	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	SR4	13:27	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	SR4	13:27	Bottom	3	1	23.4	7.53	28.2	7.36	7.86	10.5
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	SR4	13:27	Bottom	3	2	23.4	7.48	28.3	7.29	7.92	10.5
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS8	13:14	Surface	1	1	23.4	7.68	28.2	7.83	7.73	10.3
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS8	13:14	Surface	1	2	23.4	7.71	28.3	7.78	7.82	10.4
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS8	13:14	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS8	13:14	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS8	13:14	Bottom	3	1	23.4	7.74	28.3	7.64	7.87	10.6
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS8	13:14	Bottom	3	2	23.4	7.71	28.3	7.69	7.74	10.4
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS(Mf)16	12:56	Surface	1	1	23.4	7.6	28.3	7.76	8.12	10.8
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS(Mf)16	12:56	Surface	1	2	23.4	7.57	28.3	7.81	8.2	10.9
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS(Mf)16	12:56	Middle	2	1	23.4	7.7	28.3	7.87	8.23	10.9
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS(Mf)16	12:56	Middle	2	2	23.4	7.67	28.4	7.96	8.31	11.1
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS(Mf)16	12:56	Bottom	3	1	23.4	7.65	28.4	8.23	8.36	11.4
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS(Mf)16	12:56	Bottom	3	2	23.5	7.69	28.4	8.18	8.29	11.1
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS(Mf)9	12:42	Surface	1	1	23.4	7.62	28.2	7.68	8.18	10.9
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS(Mf)9	12:42	Surface	1	2	23.4	7.67	28.2	7.71	8.21	10.9
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS(Mf)9	12:42	Middle	2	1						
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS(Mf)9	12:42	Middle	2	2						
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS(Mf)9	12:42	Bottom	3	1	23.4	7.71	28.3	7.53	8.31	11.3
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	IS(Mf)9	12:42	Bottom	3	2	23.4	7.68	28.3	7.6	8.26	11.2
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	CS(Mf)3	12:17	Surface	1	1	23.5	7.82	28.3	7.89	8.64	11.5
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	CS(Mf)3	12:17	Surface	1	2	23.5	7.79	28.3	7.82	8.53	11.3
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	CS(Mf)3	12:17	Middle	2	1	23.5	7.74	28.4	7.63	8.34	11.1

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	CS(Mf)3	12:17	Middle	2	2	23.5	7.79	28.4	7.71	8.41	11.2
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	CS(Mf)3	12:17	Bottom	3	1	23.4	7.86	28.4	8.17	8.69	11.7
TMCLKL	HY/2012/07	2016-11-29	Mid-Ebb	CS(Mf)3	12:17	Bottom	3	2	23.4	7.77	28.5	8.23	8.74	11.9

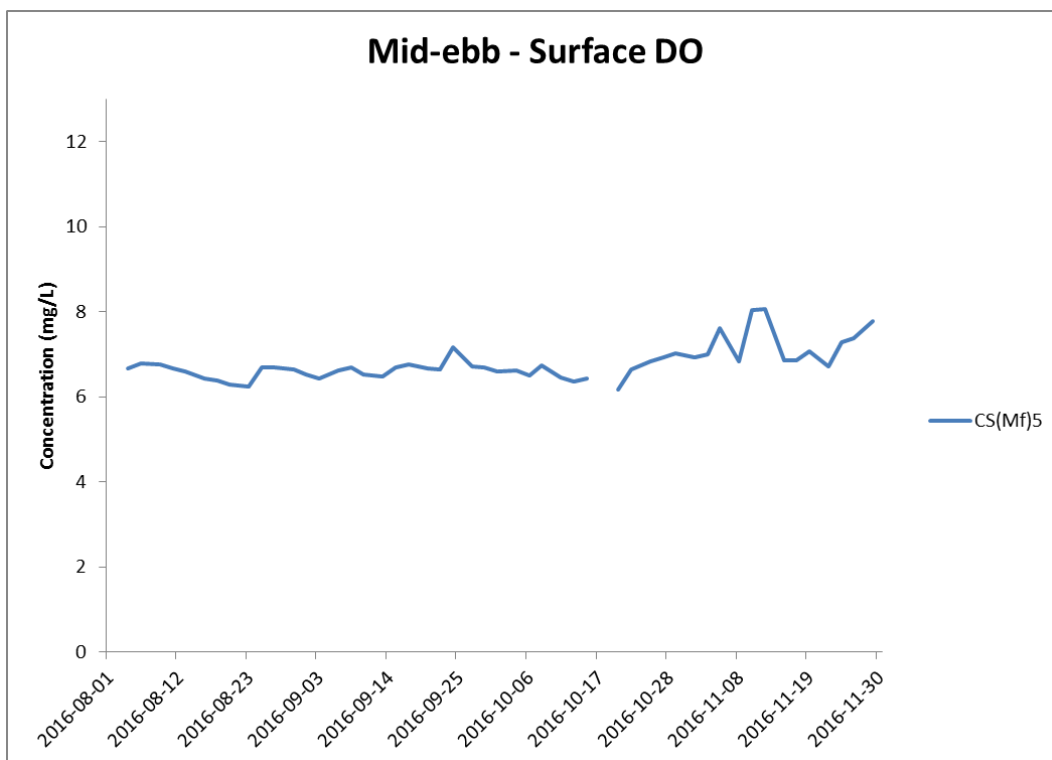
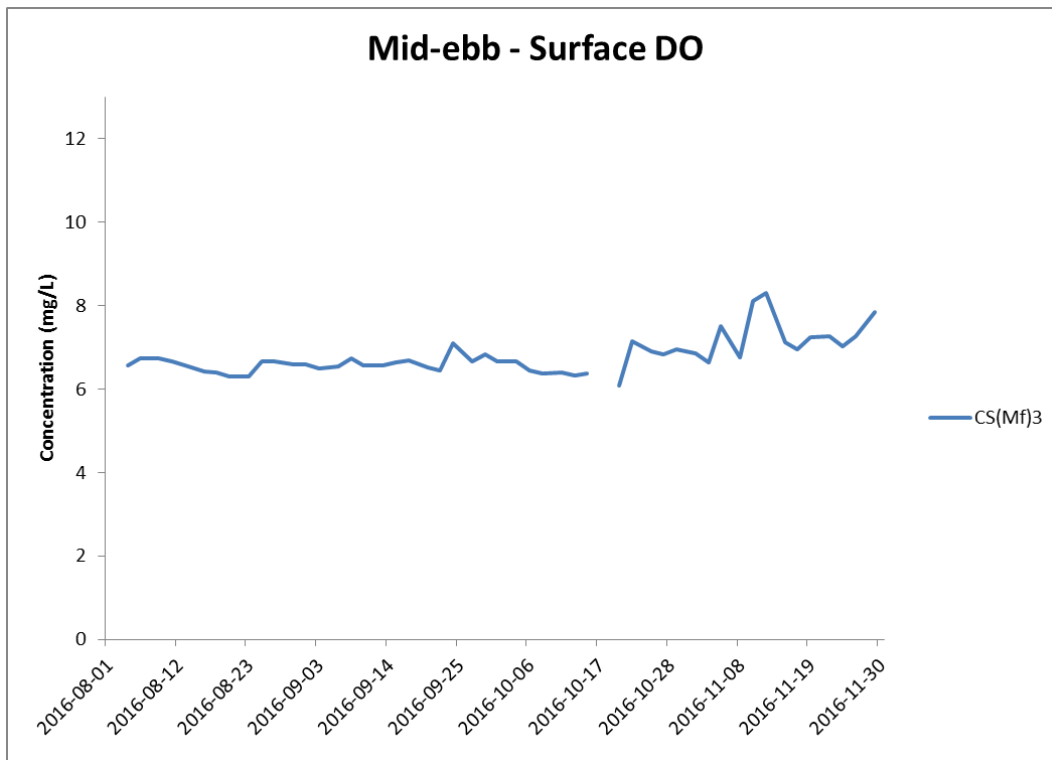


Figure J1 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 August and 30 November 2016 at CS(Mf)3 and CS(Mf)5.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

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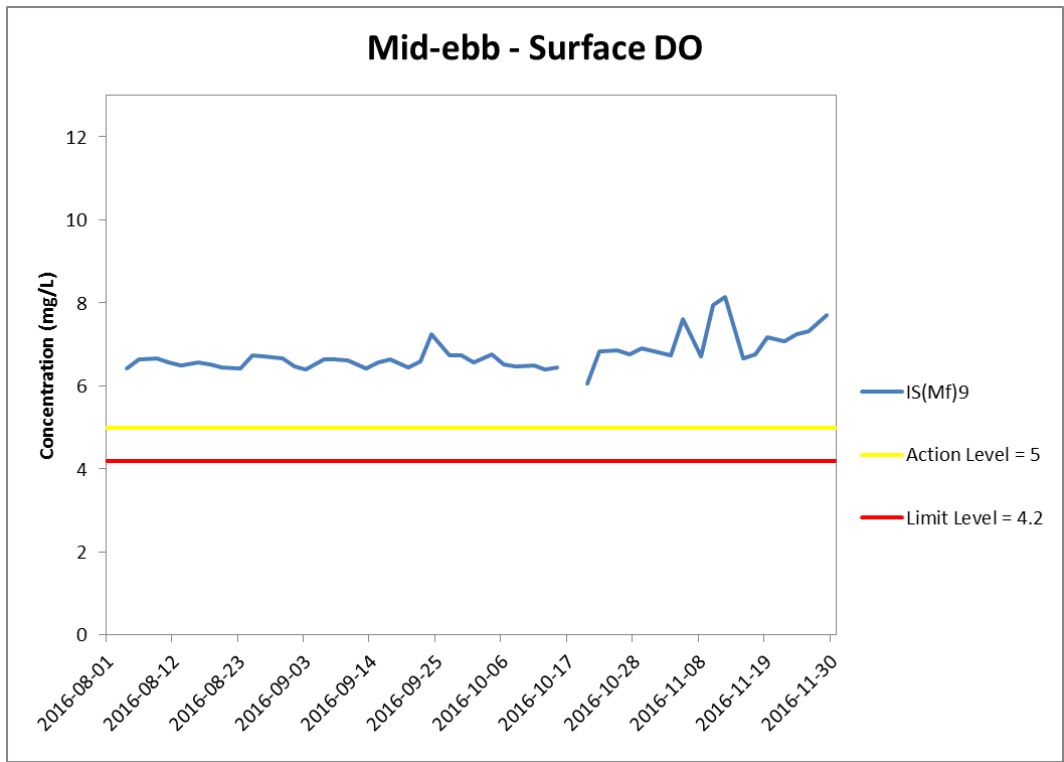
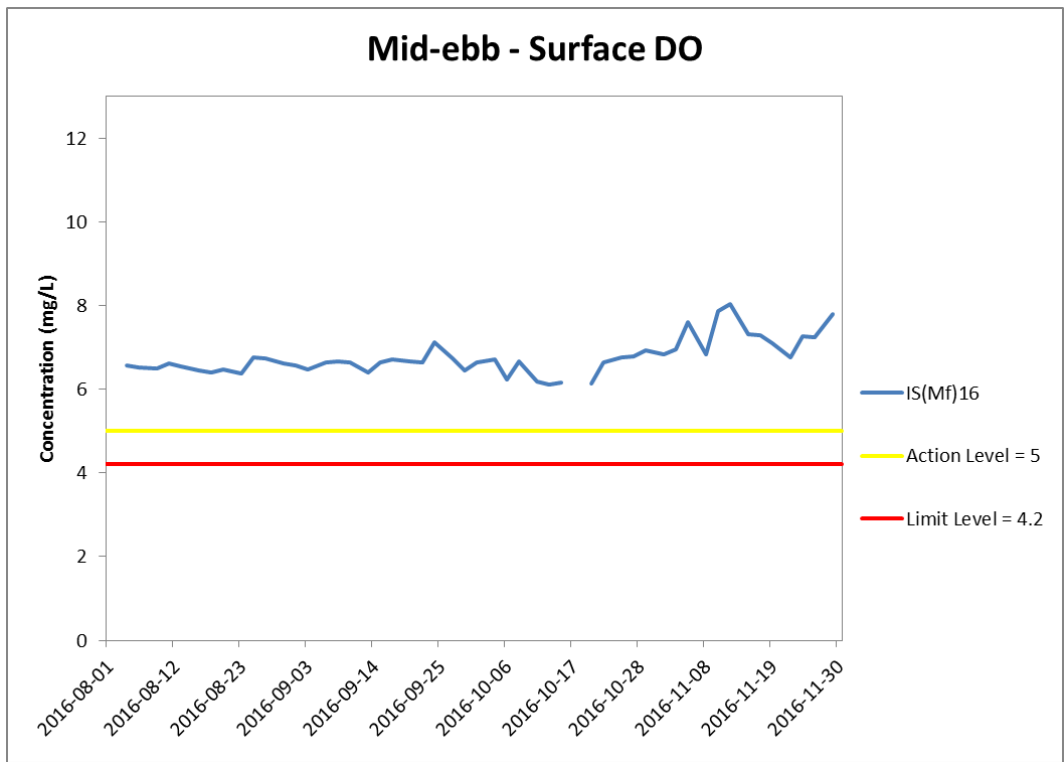


Figure J2 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 August and 30 November 2016 at IS(Mf)16 and IS(Mf)9.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

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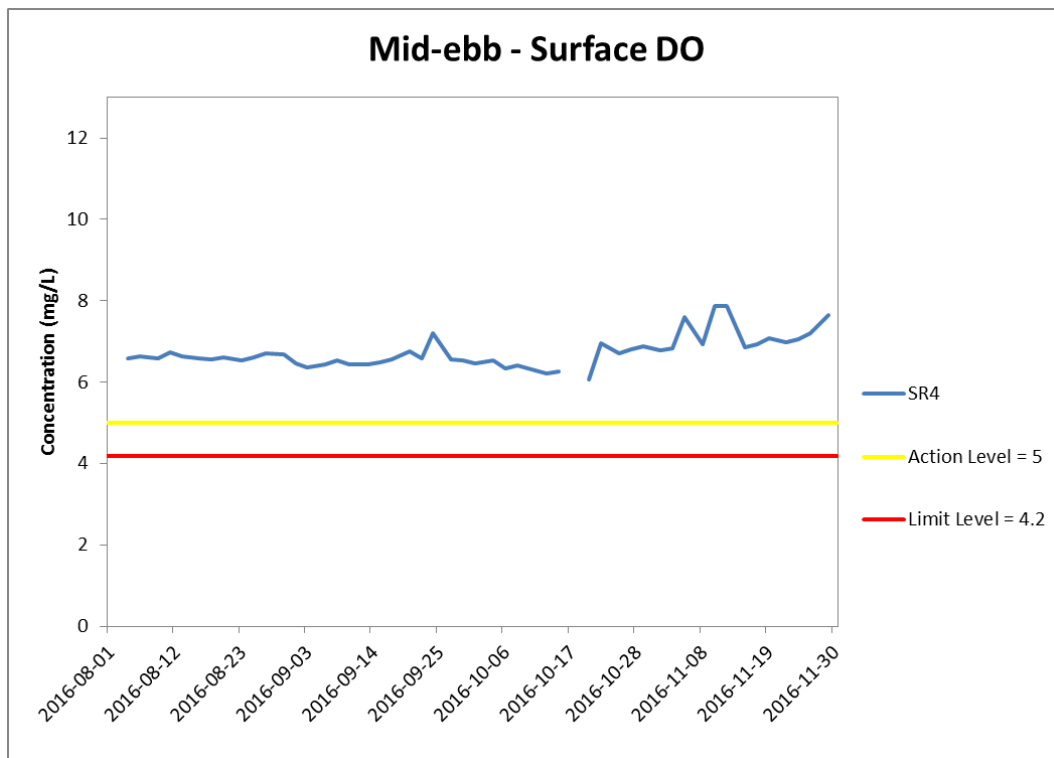
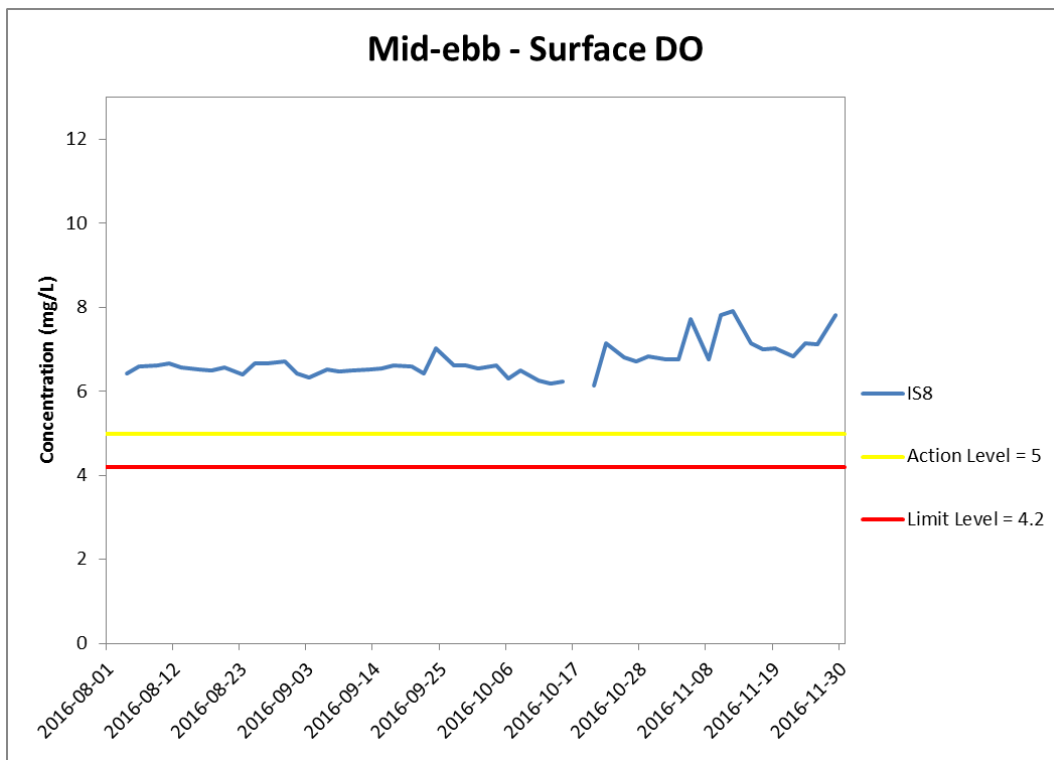


Figure J3 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 August and 30 November 2016 at IS8 and SR4.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

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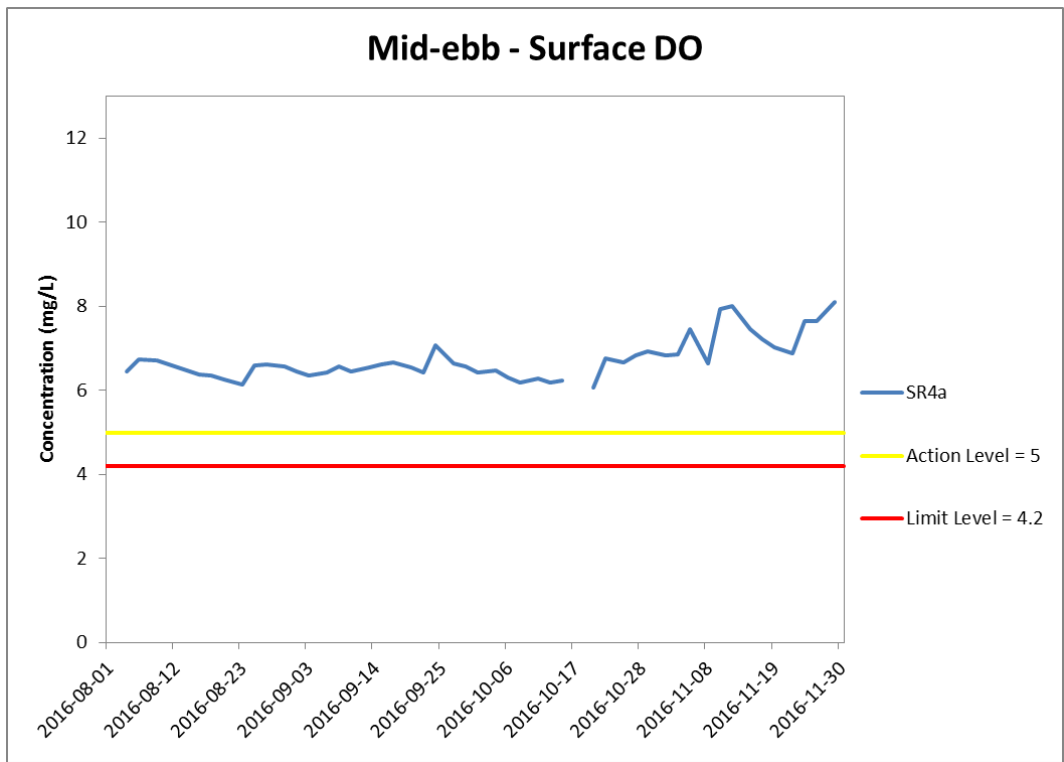


Figure J4 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 August and 30 November 2016 at SR4a.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

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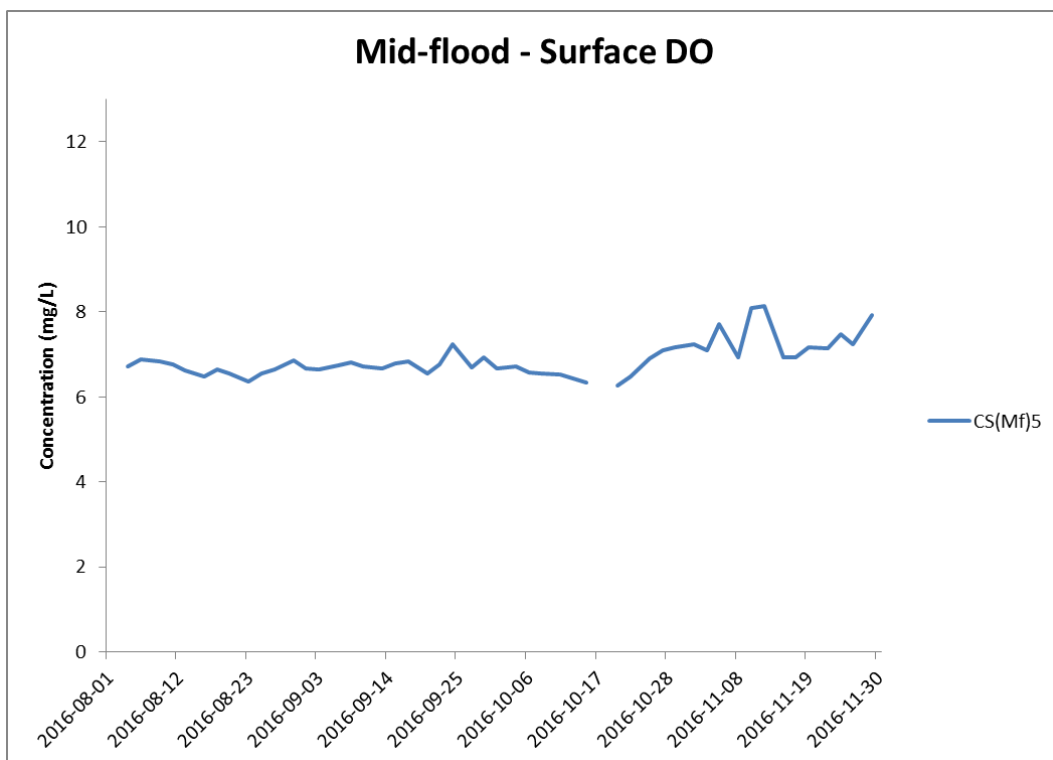
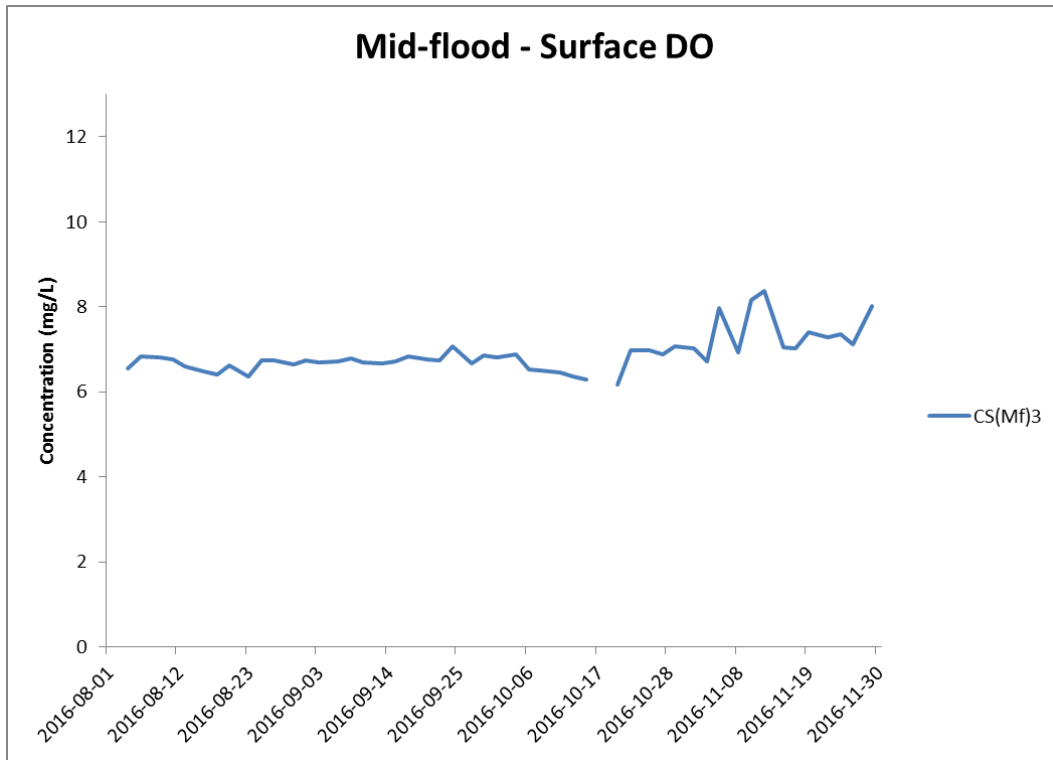


Figure J5 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 August and 30 November 2016 at CS(Mf)3 and CS(Mf)5.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

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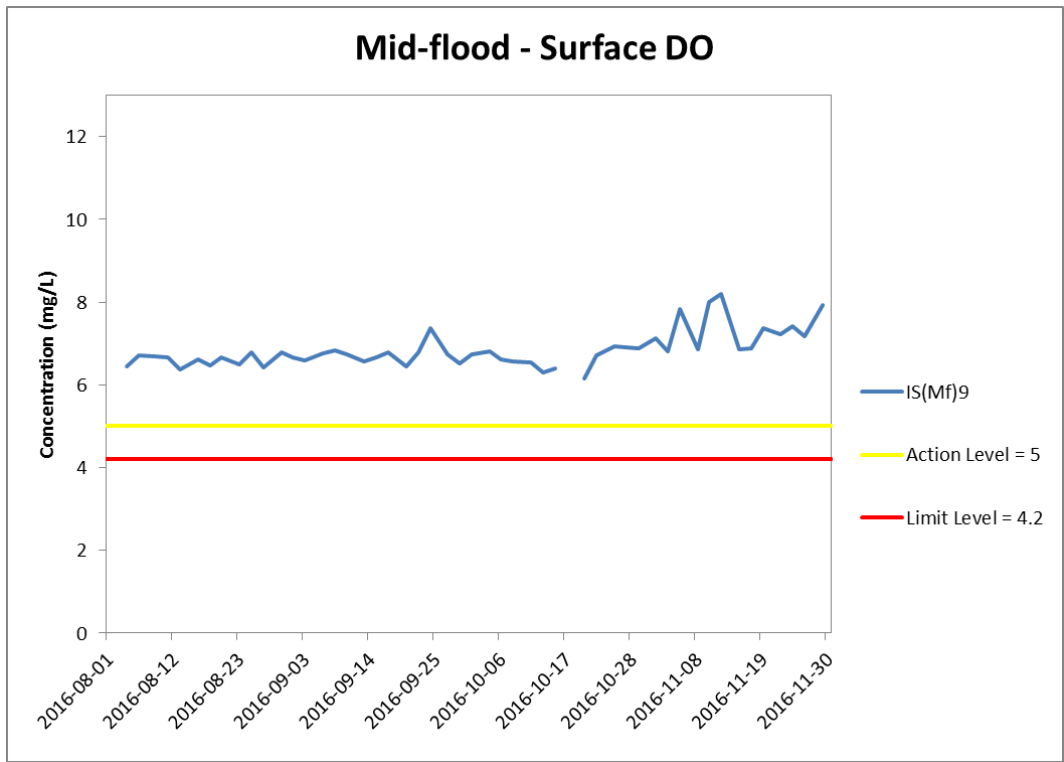
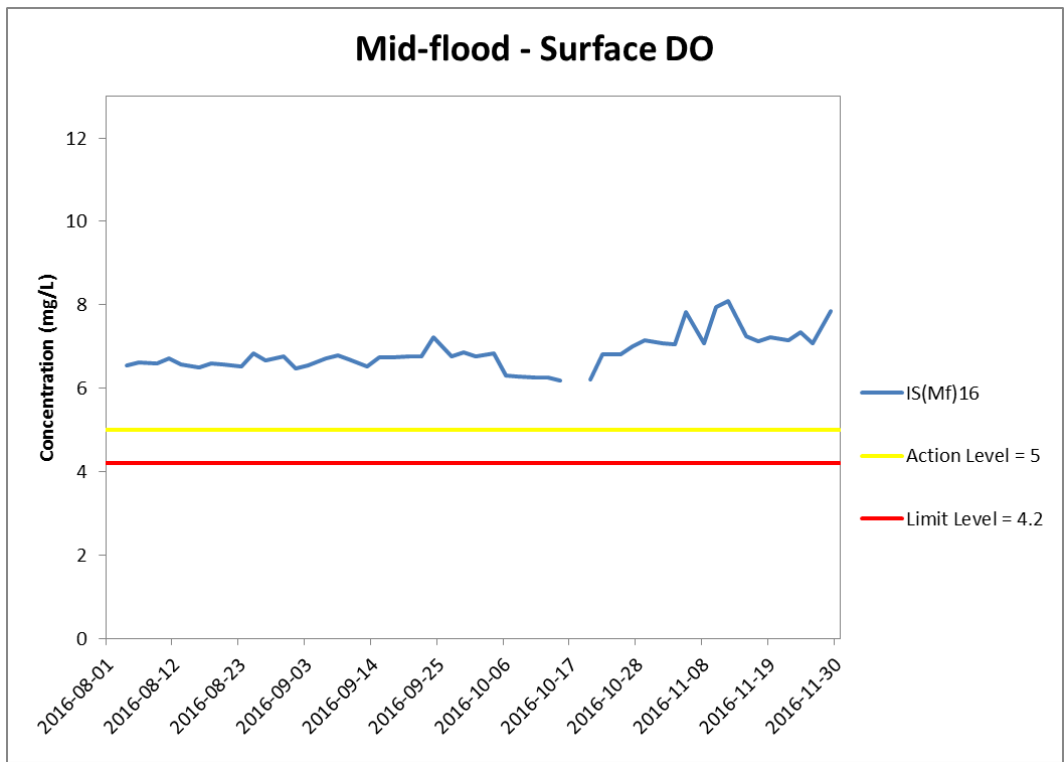


Figure J6 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 August and 30 November 2016 at IS(Mf)16 and IS(Mf)9.

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

Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

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Resources
Management**



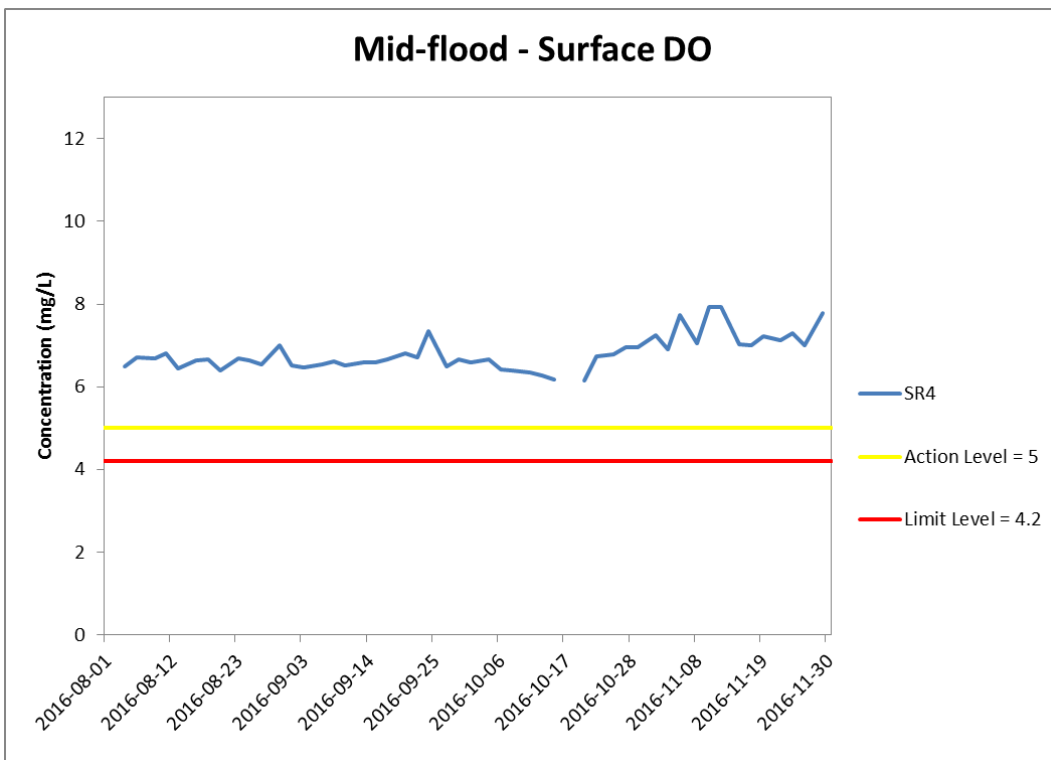
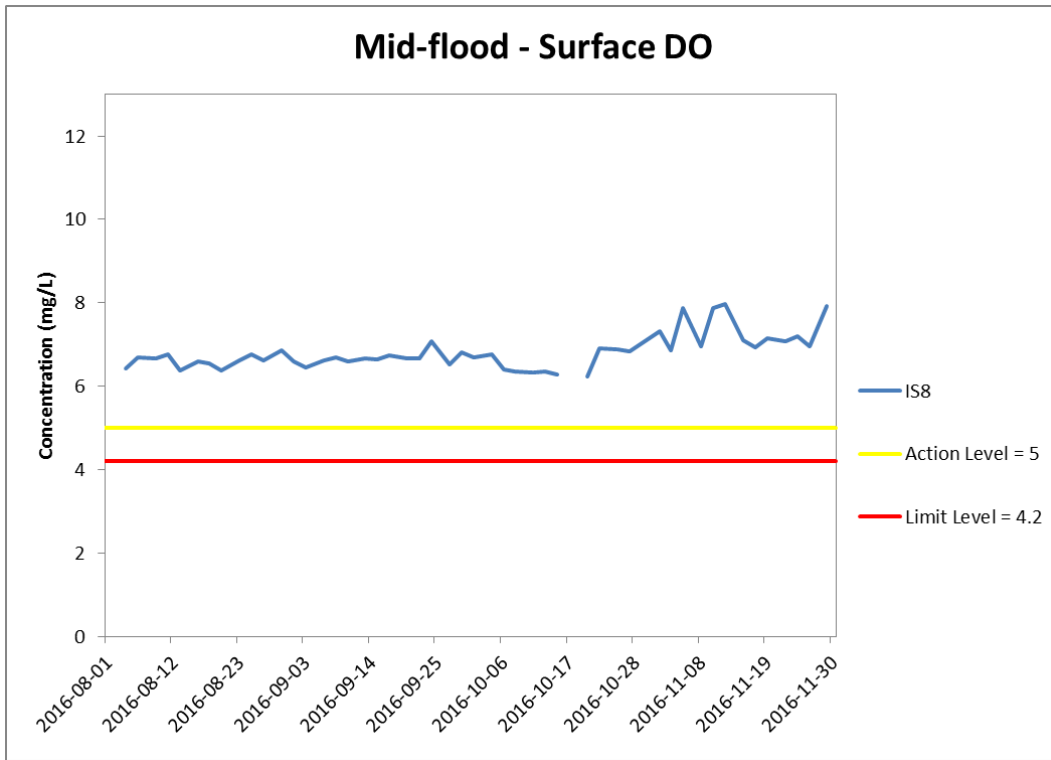


Figure J7 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 August and 30 November 2016 at IS8 and SR4.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



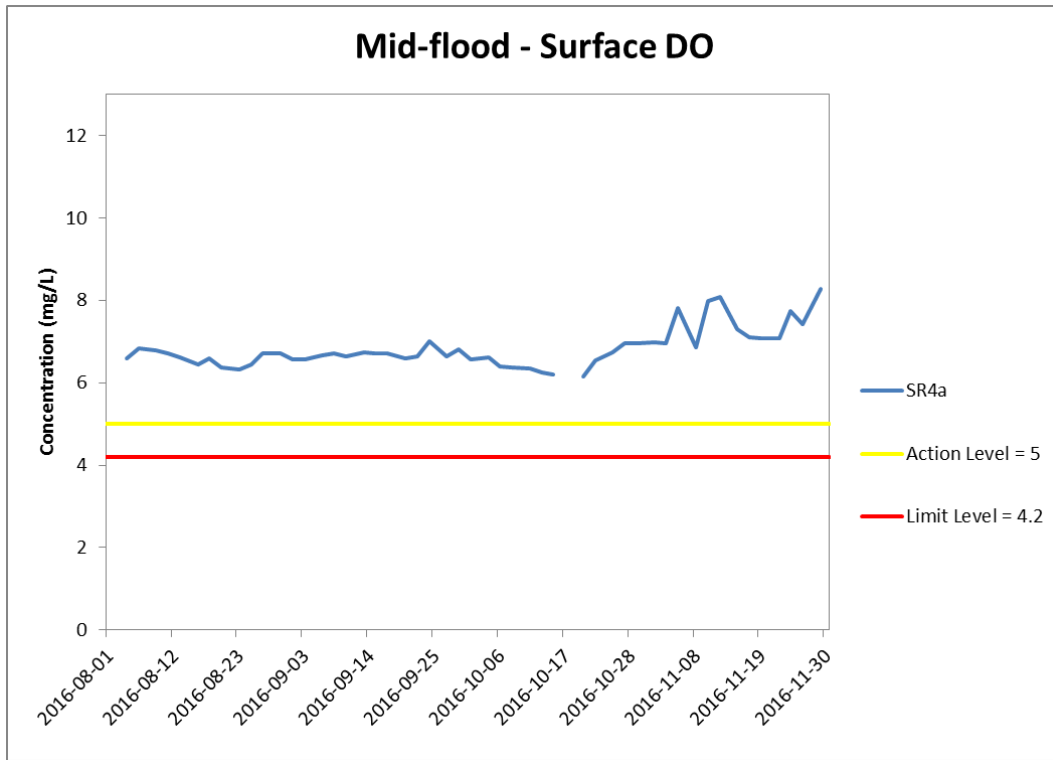


Figure J8 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 August and 30 November 2016 at SR4a.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



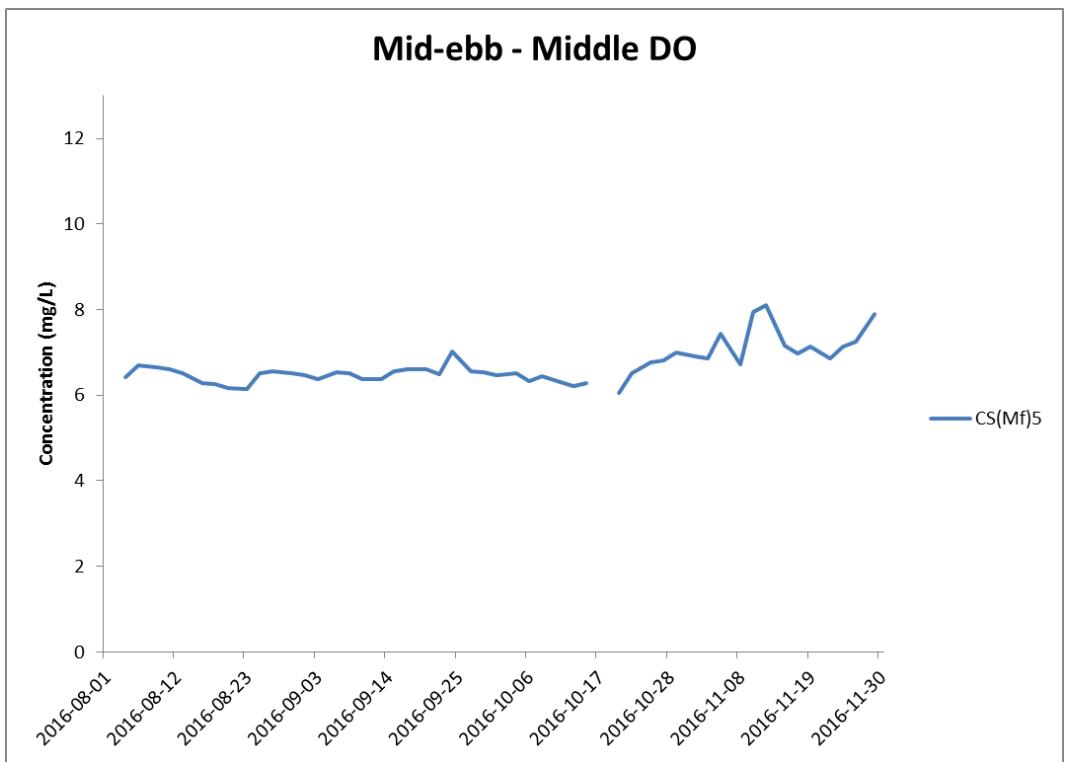
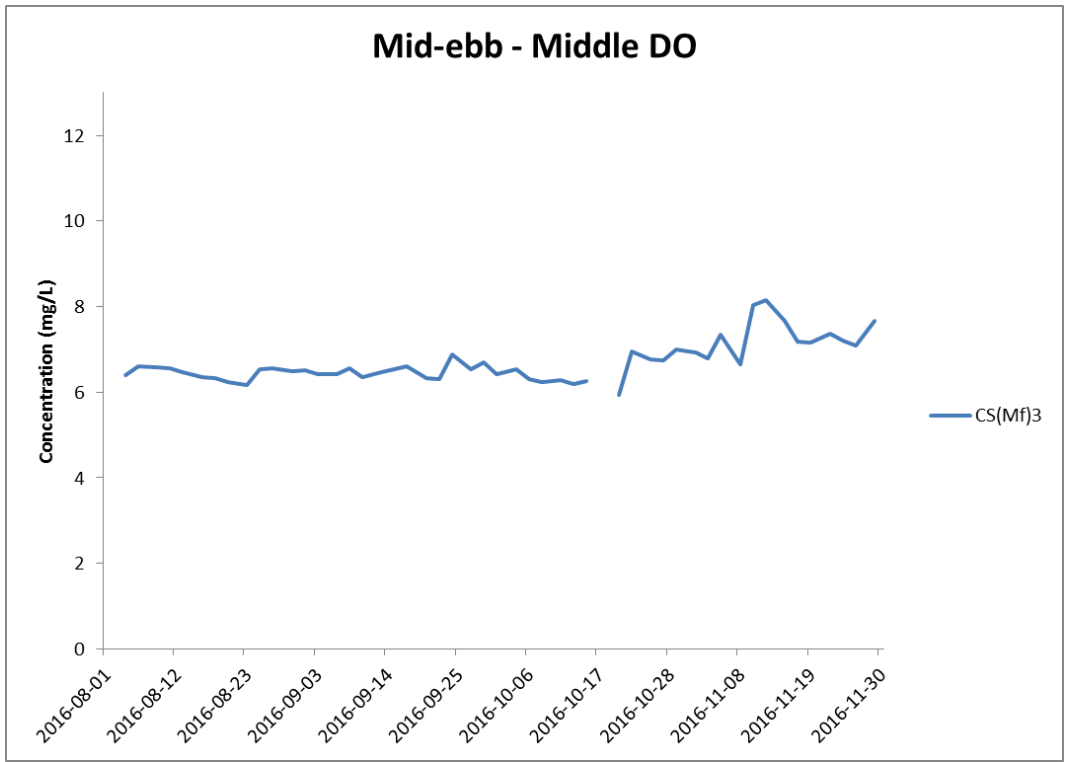


Figure J9 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 1 August and 30 November 2016 at CS(Mf)3 and CS(Mf)5.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



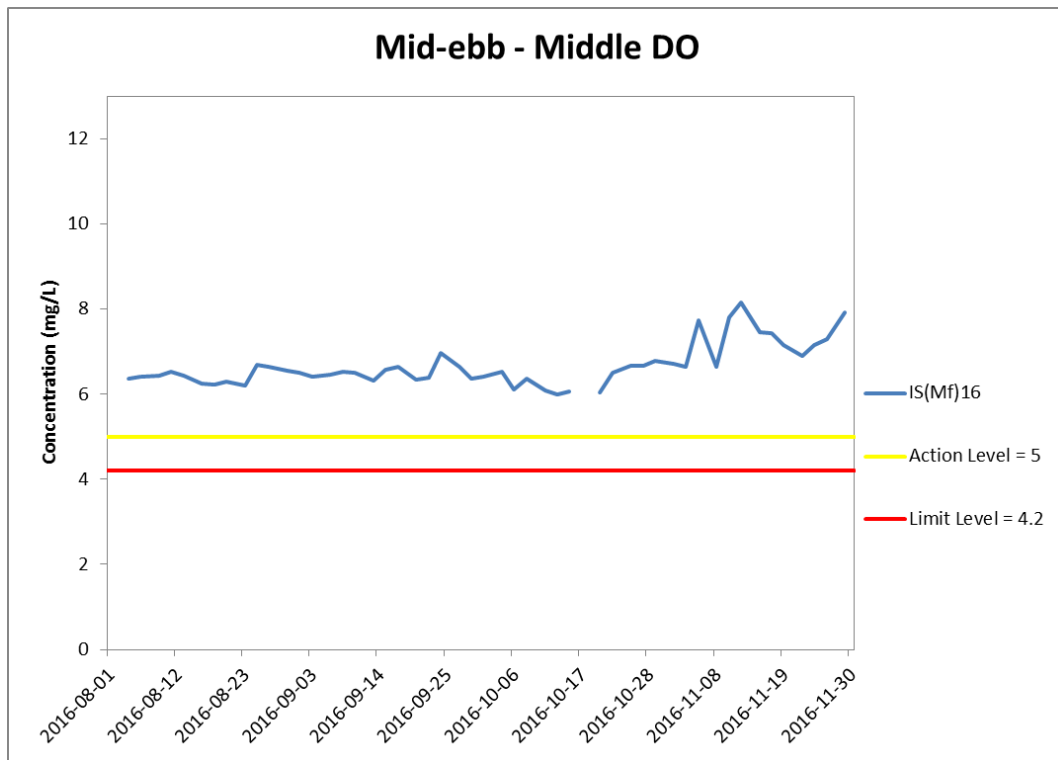


Figure J10 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 1 August and 30 November 2016 at IS(Mf)16.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



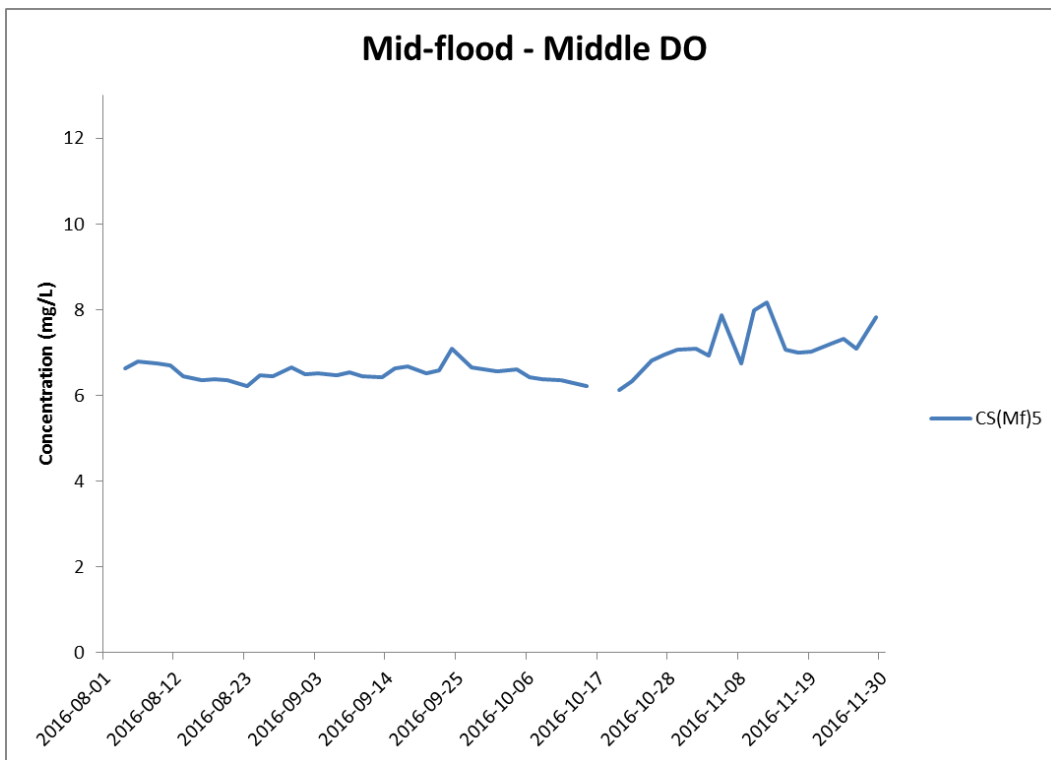
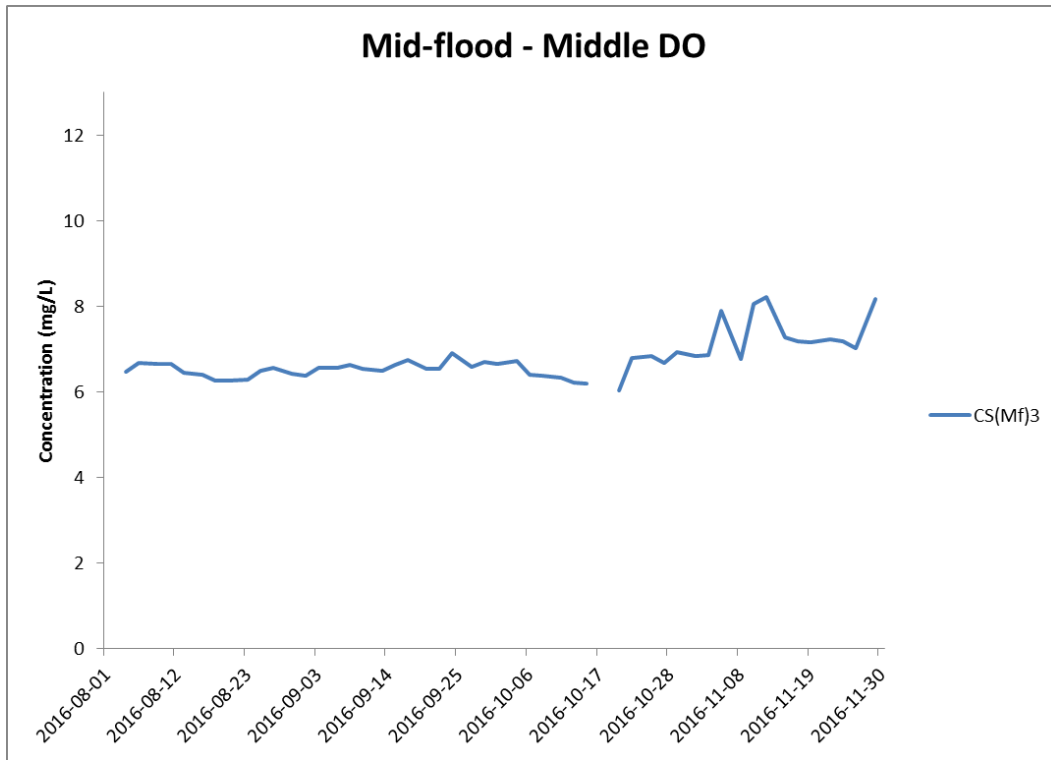


Figure J11 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 1 August and 30 November 2016 at CS(Mf)3 and CS(Mf)5.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



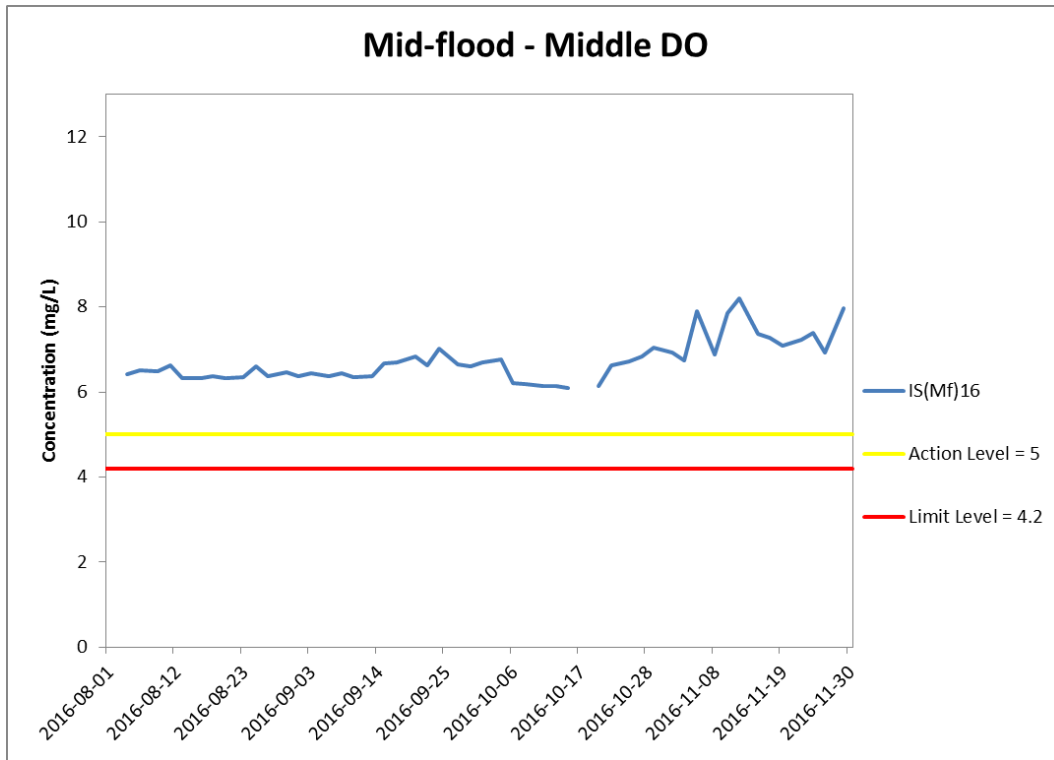


Figure J12 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 1 August and 30 November 2016 at IS(Mf)16.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



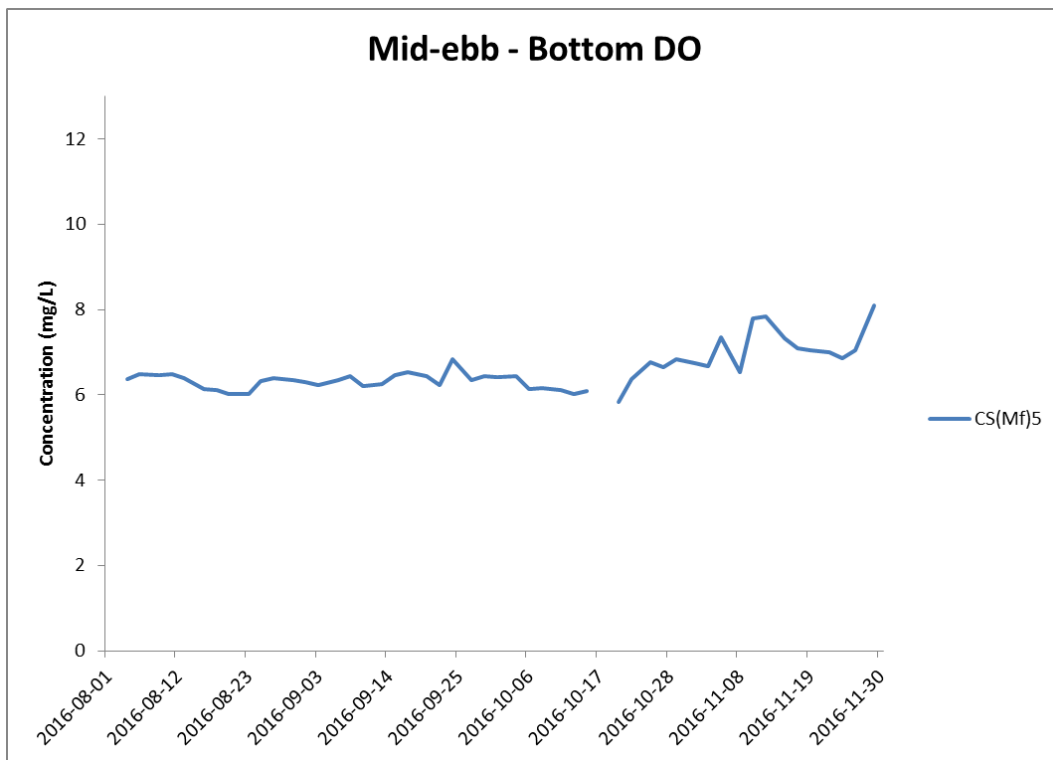
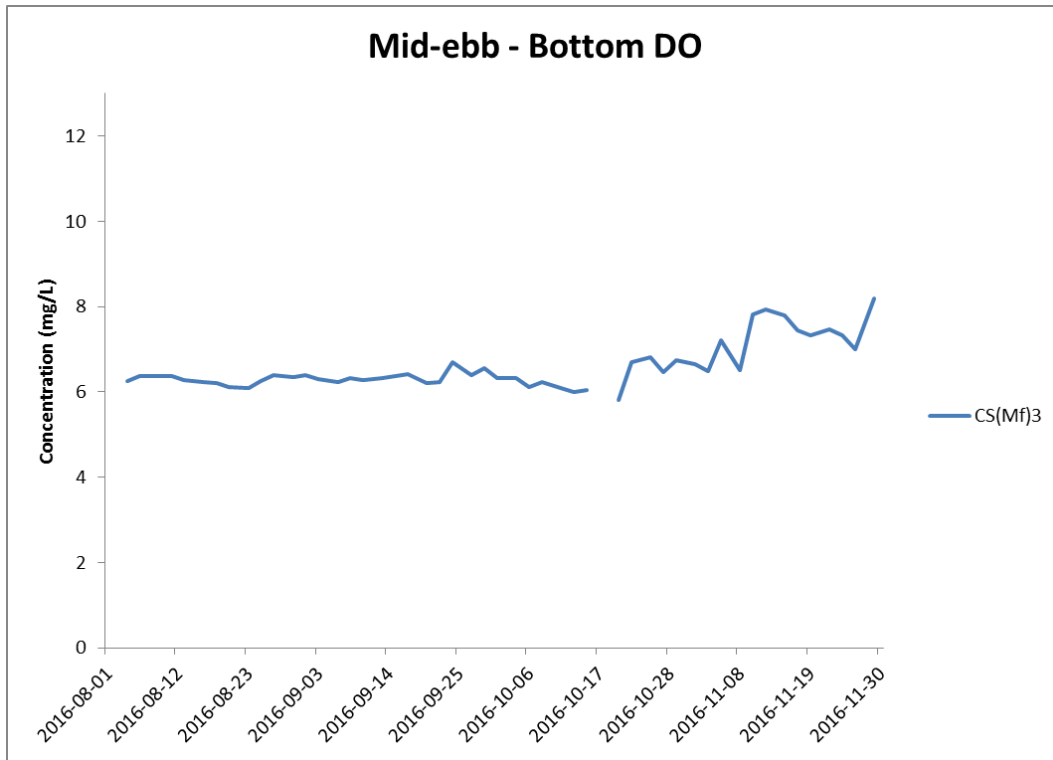


Figure J13 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 August and 30 November 2016 at CS(Mf)3 and CS(Mf)5.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



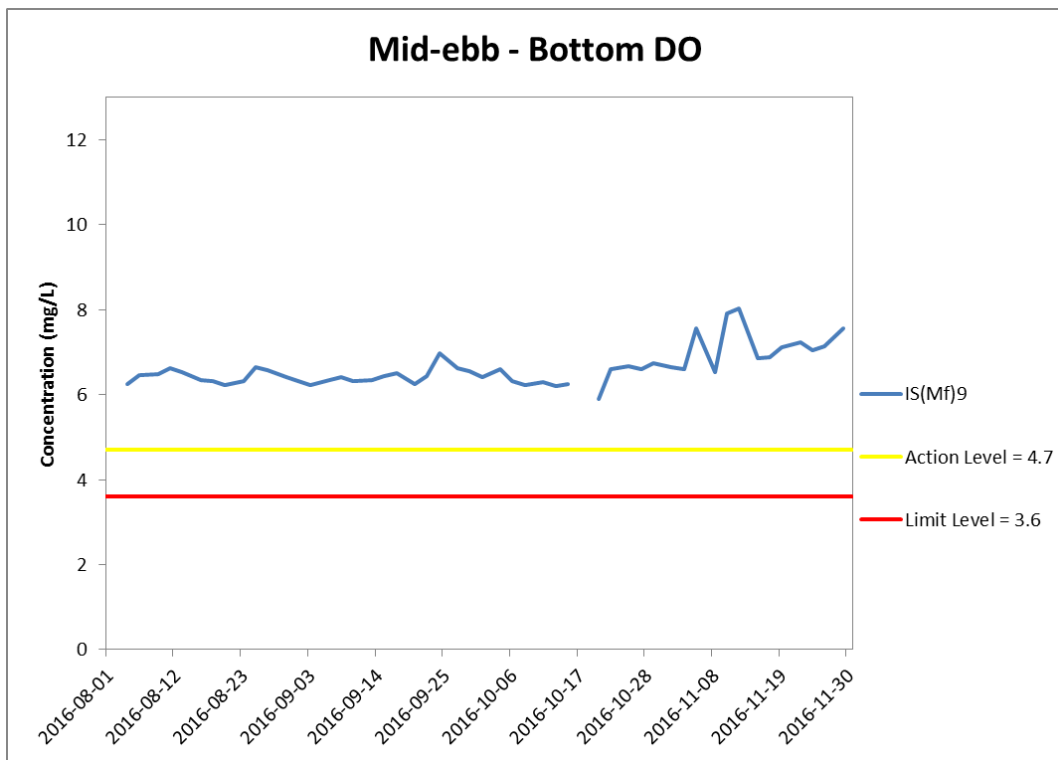
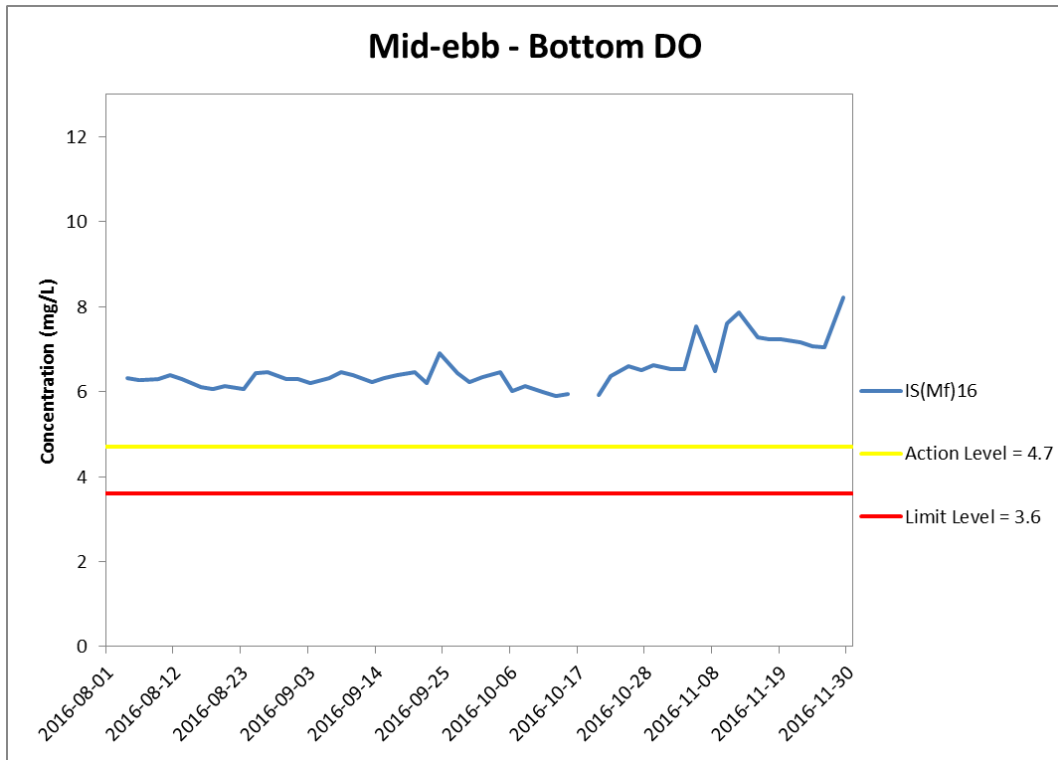


Figure J14 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 August and 30 November 2016 at IS(Mf)16 and IS(Mf)9.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



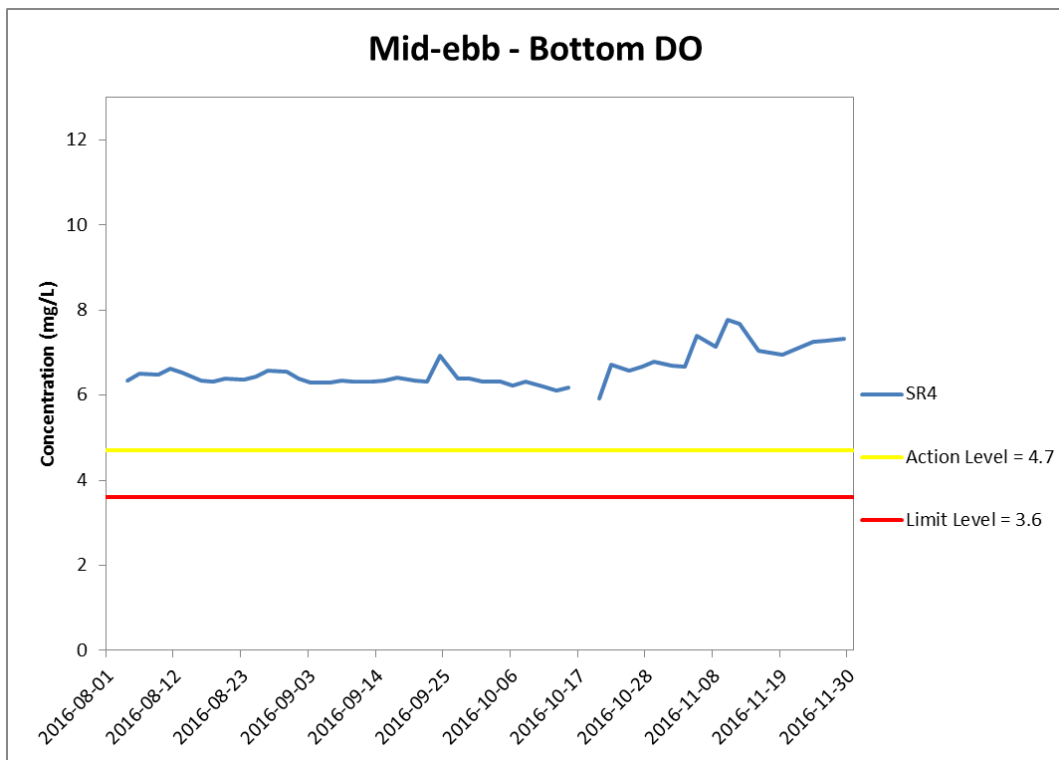
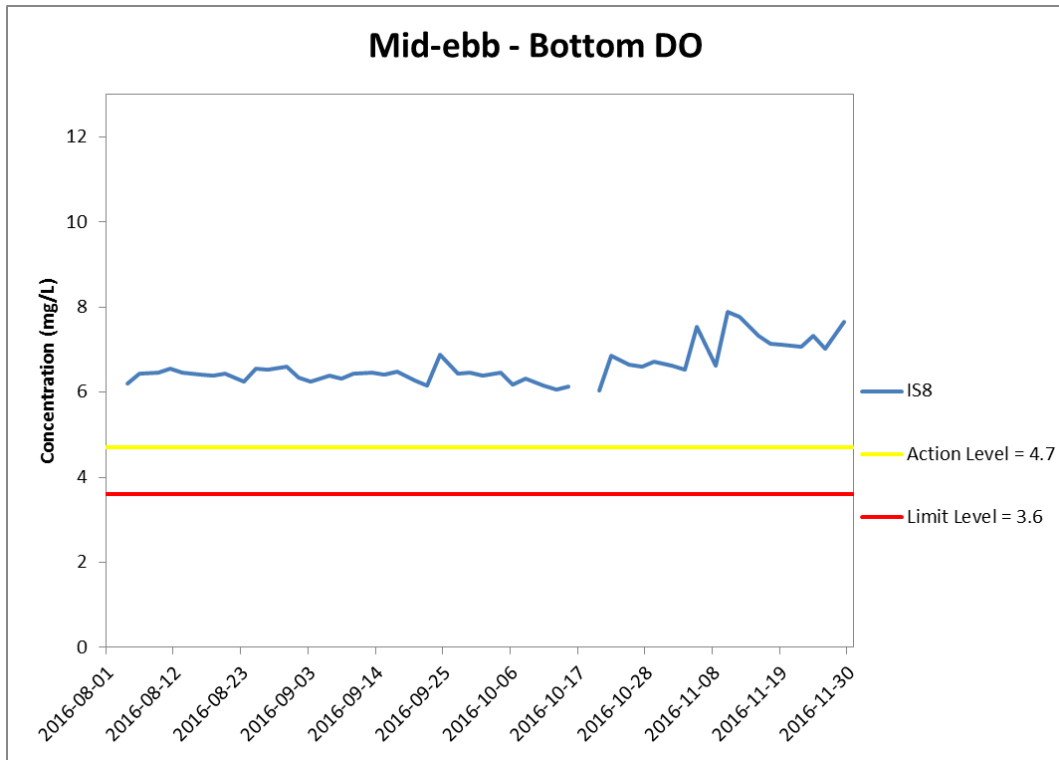


Figure J15 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 August and 30 November 2016 at IS8 and SR4.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



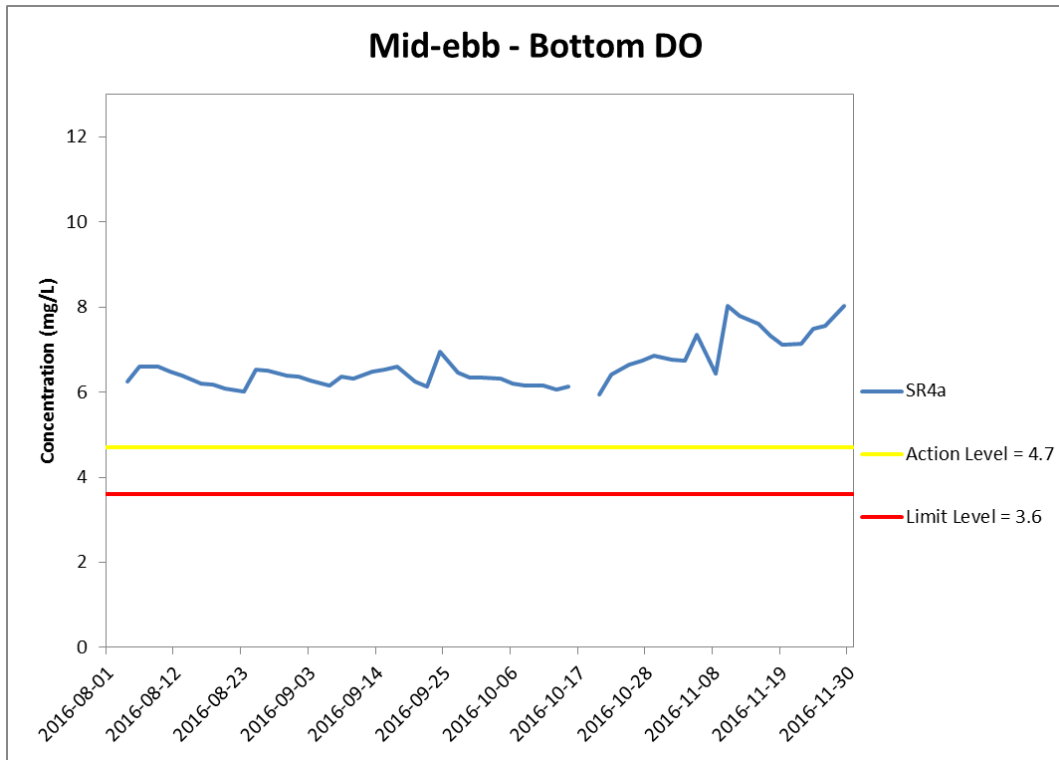


Figure J16 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 August and 30 November 2016 at SR4a.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



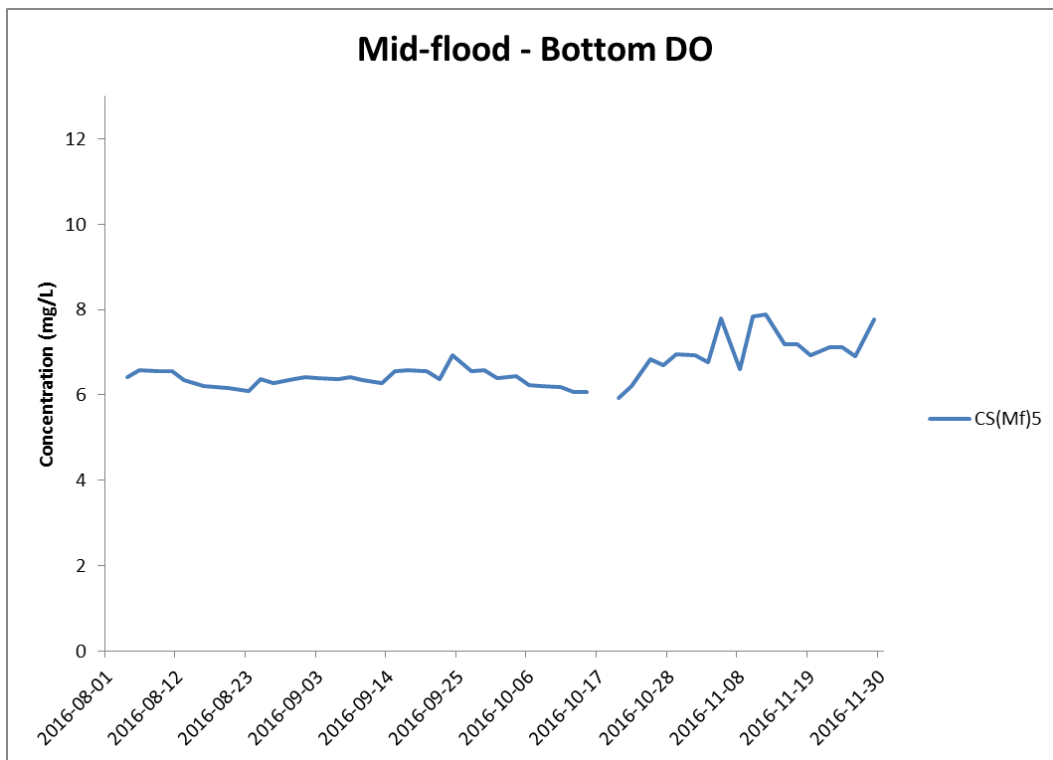
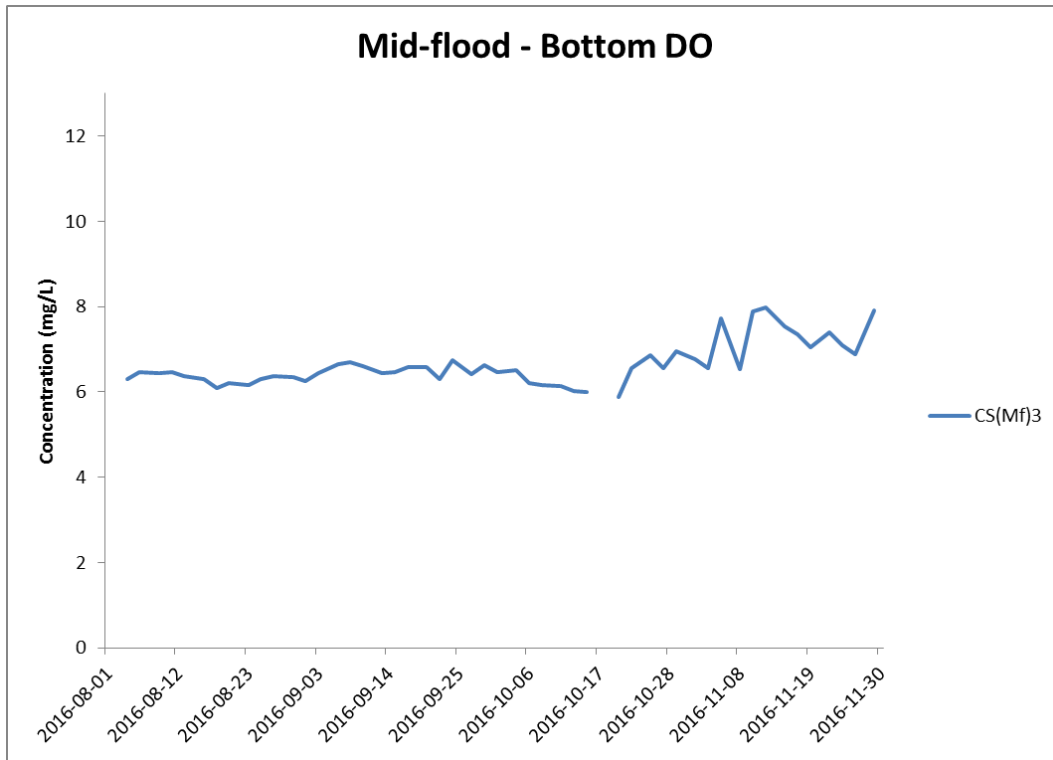


Figure J17 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 August and 30 November 2016 at CS(Mf)3 and CS(Mf)5.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



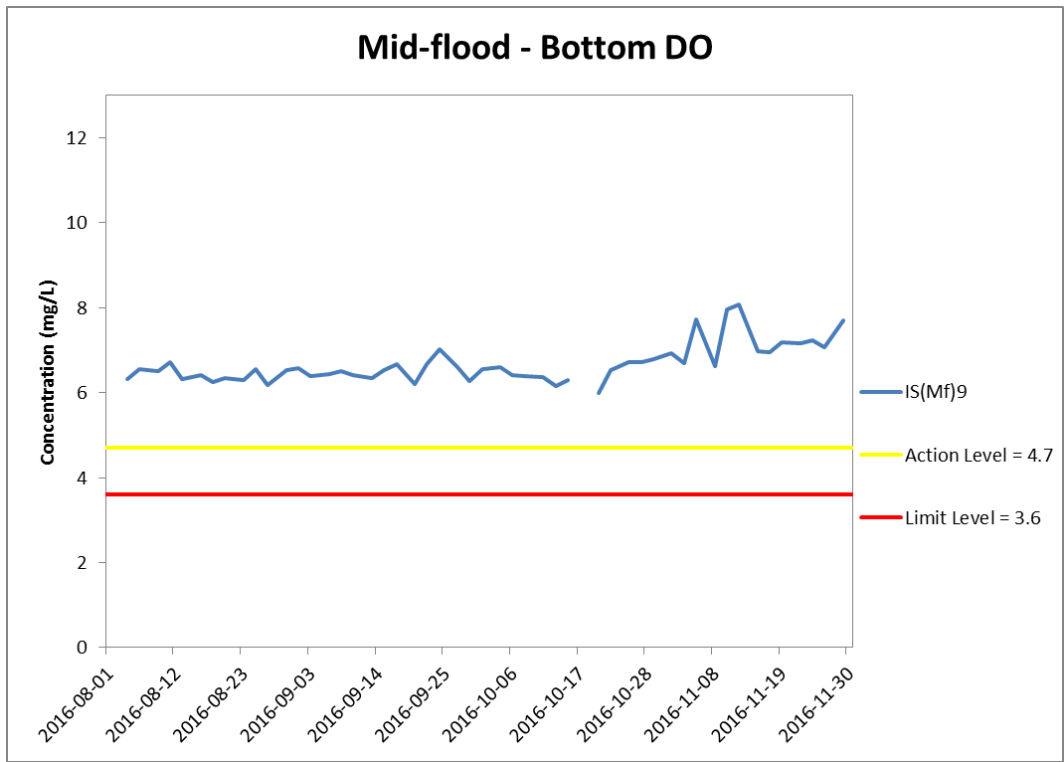
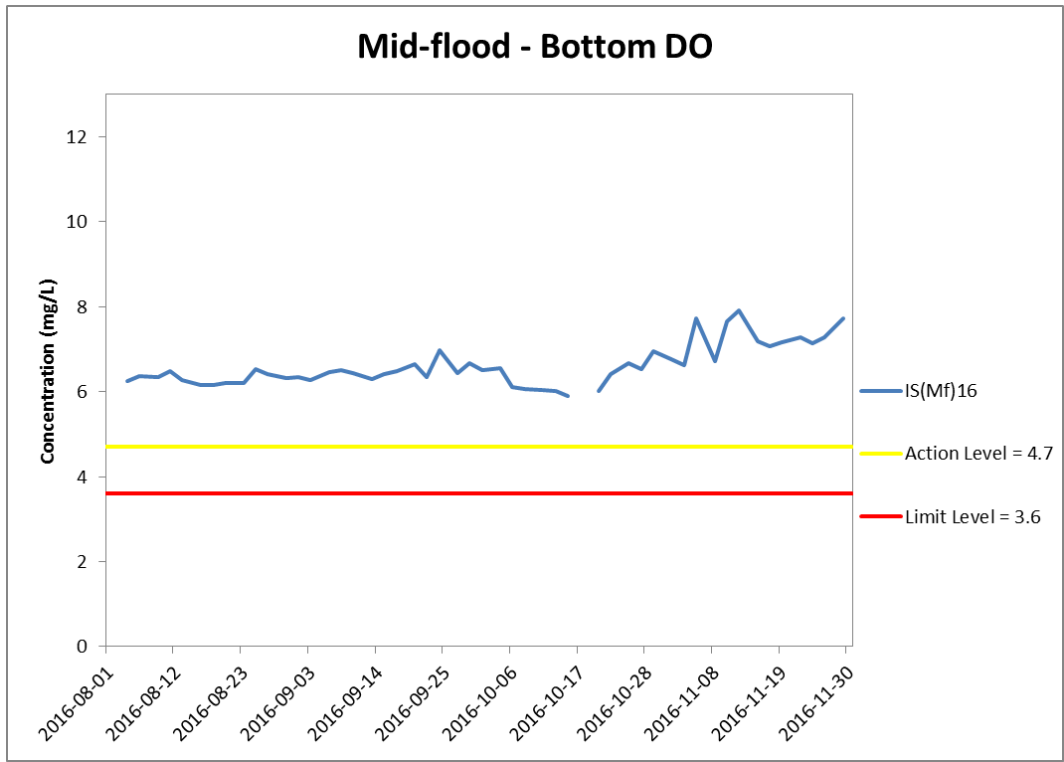


Figure J18 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 August and 30 November 2016 at IS(Mf)16 and IS(Mf)9.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



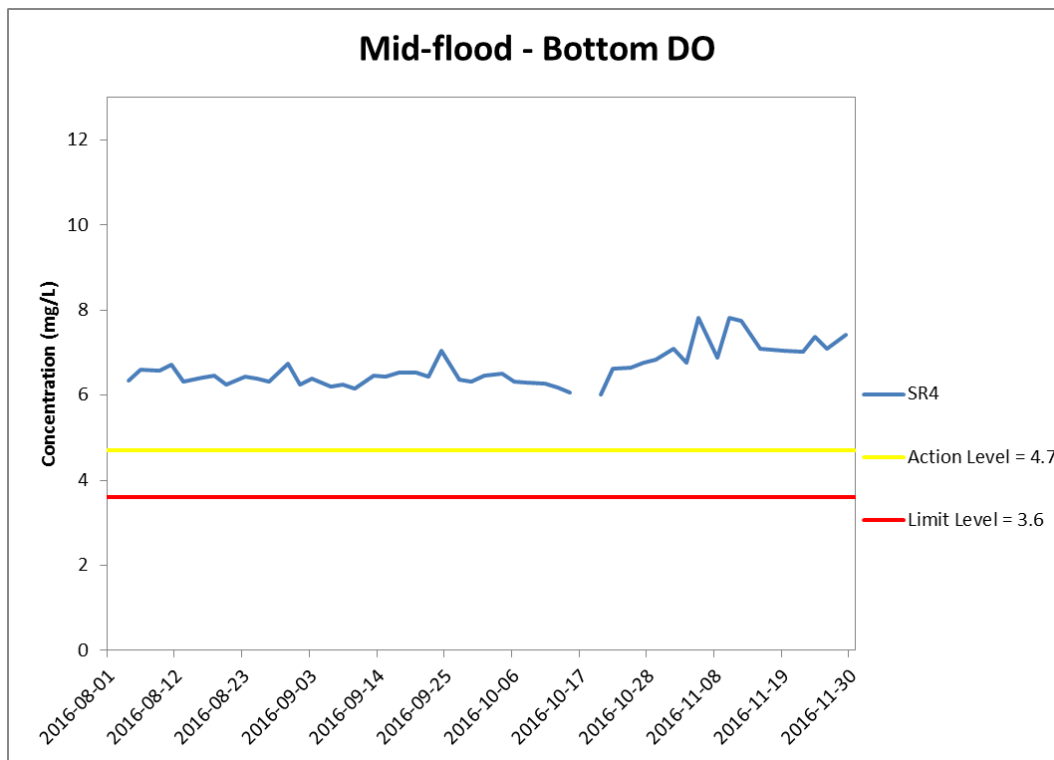
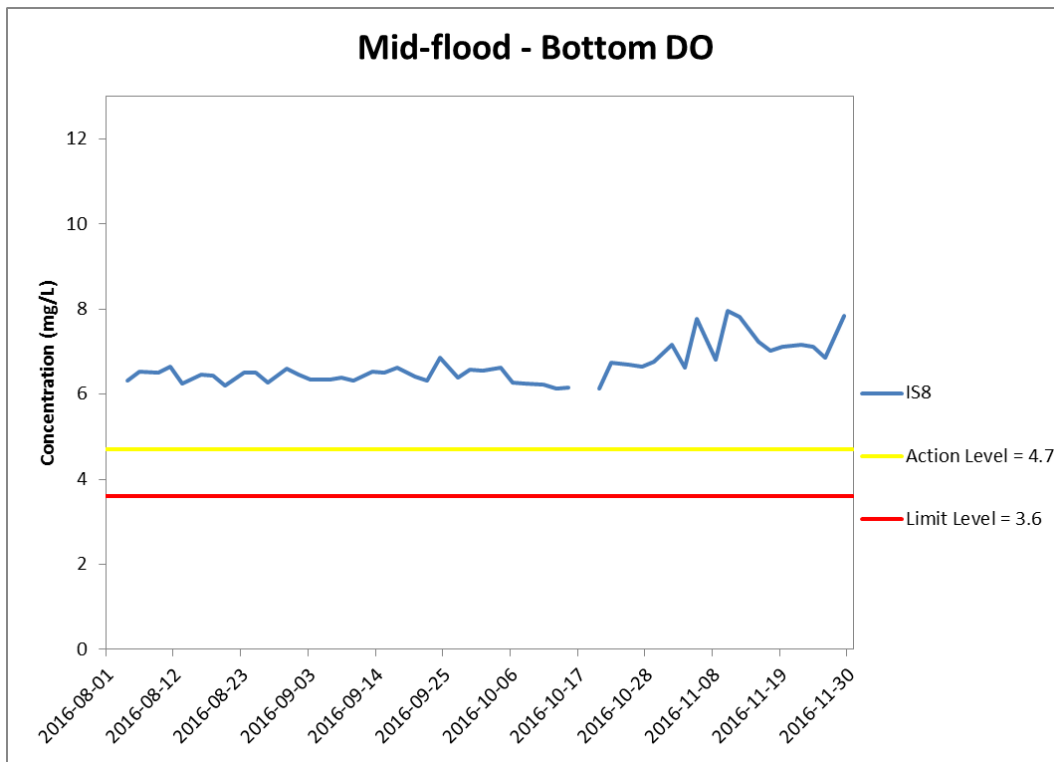


Figure J19 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 August and 30 November 2016 at IS8 and SR4.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



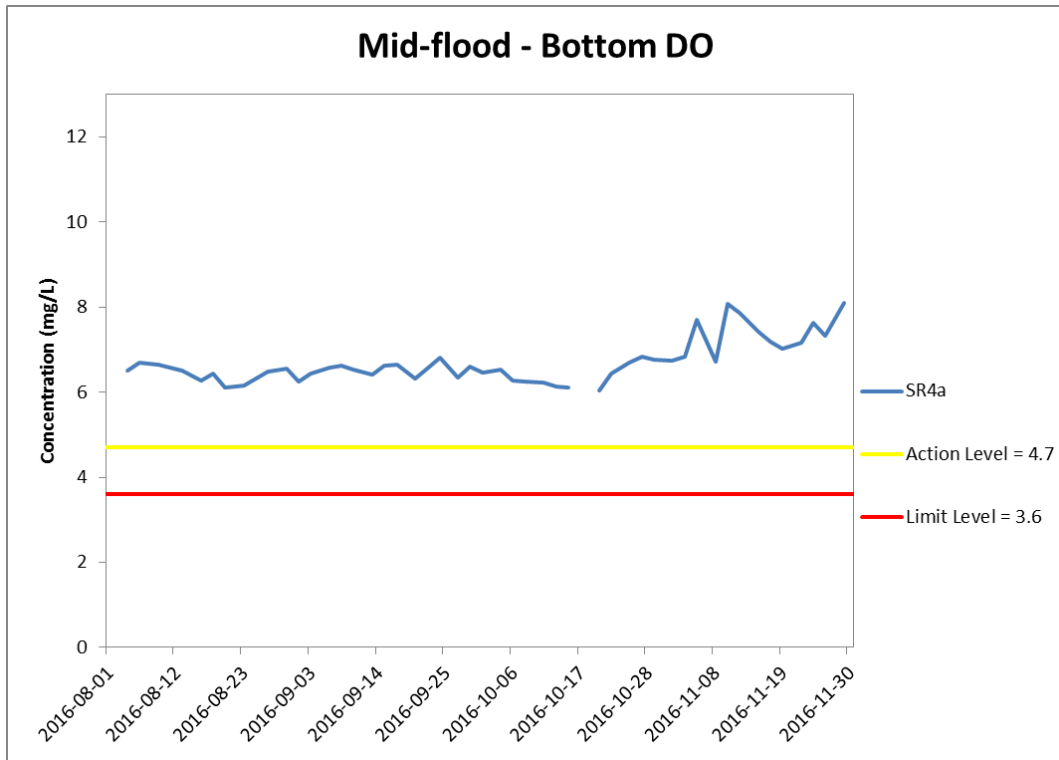


Figure J20 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 August and 30 November 2016 at SR4a.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



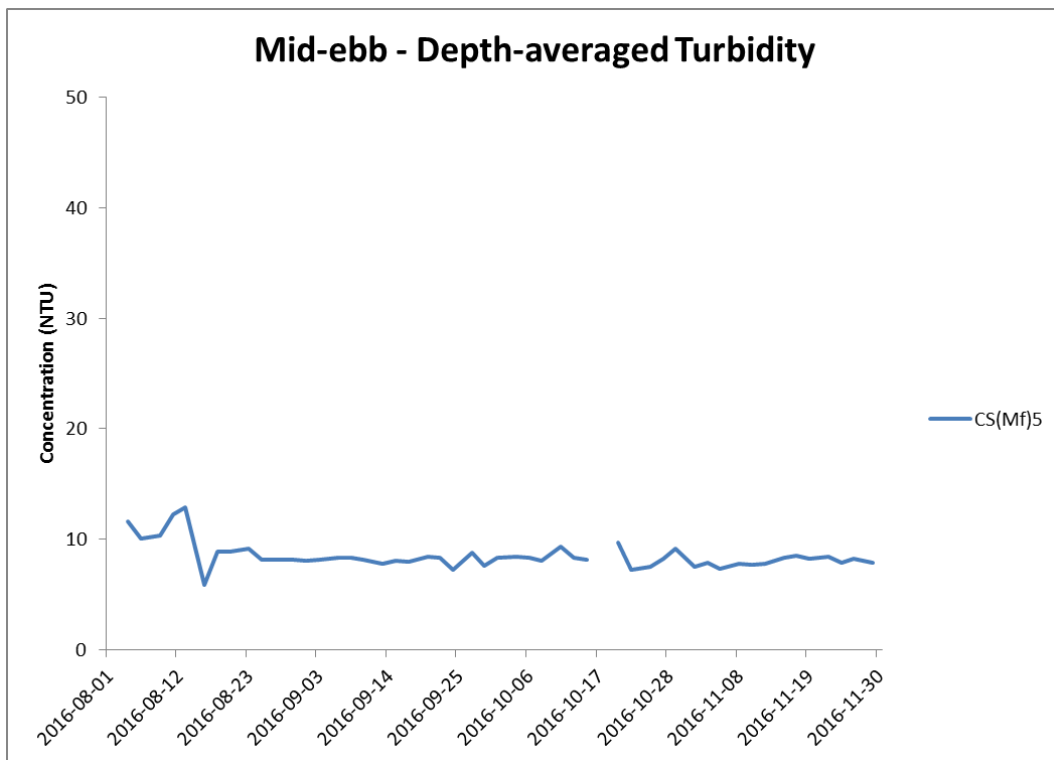
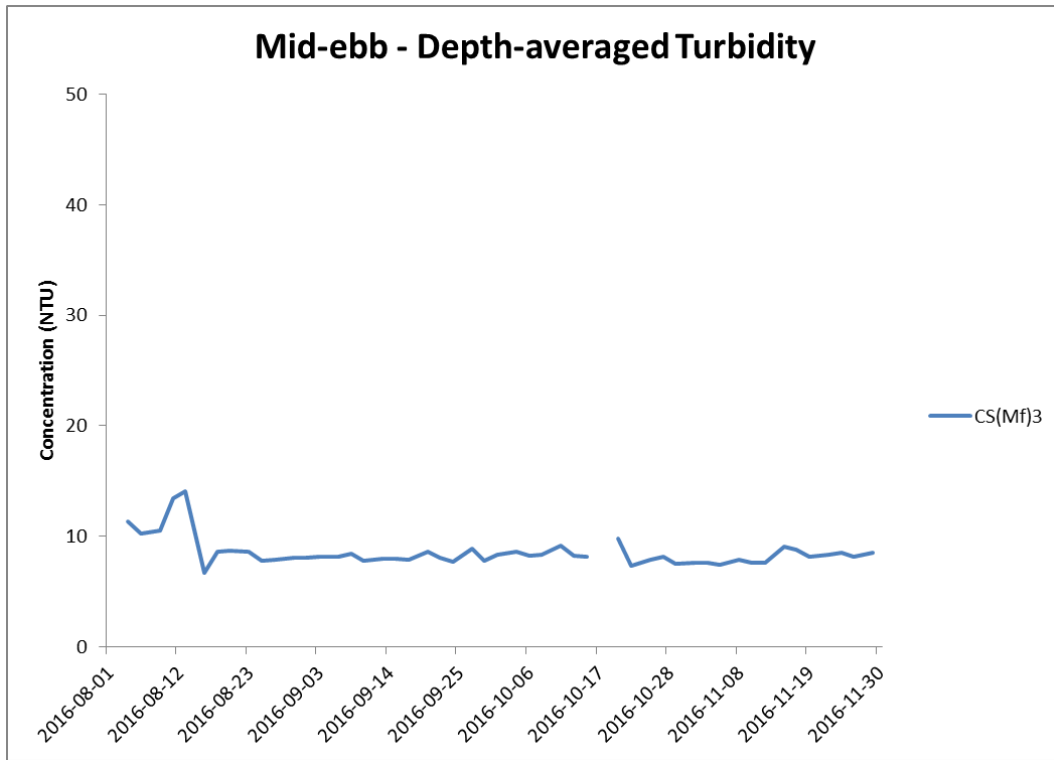


Figure J21 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 August and 30 November 2016 at CS(Mf)3 and CS(Mf)5.

*(Weather condition varied between sunny to rainy within the reporting period.)
Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
Resources
Management**



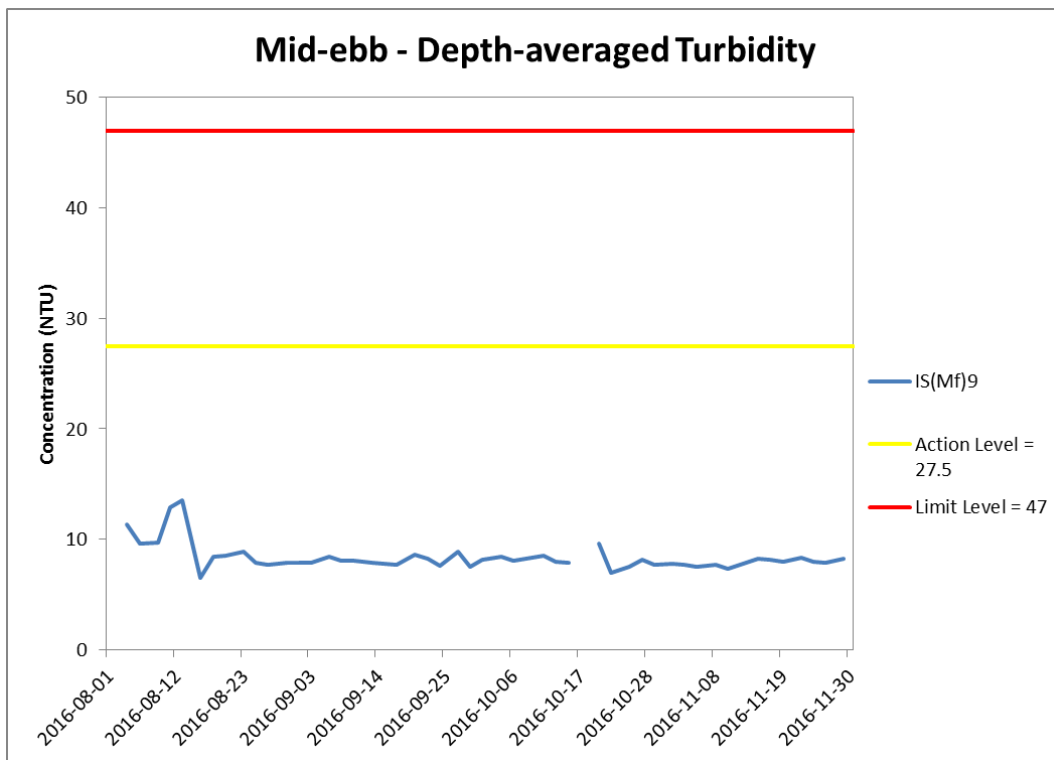
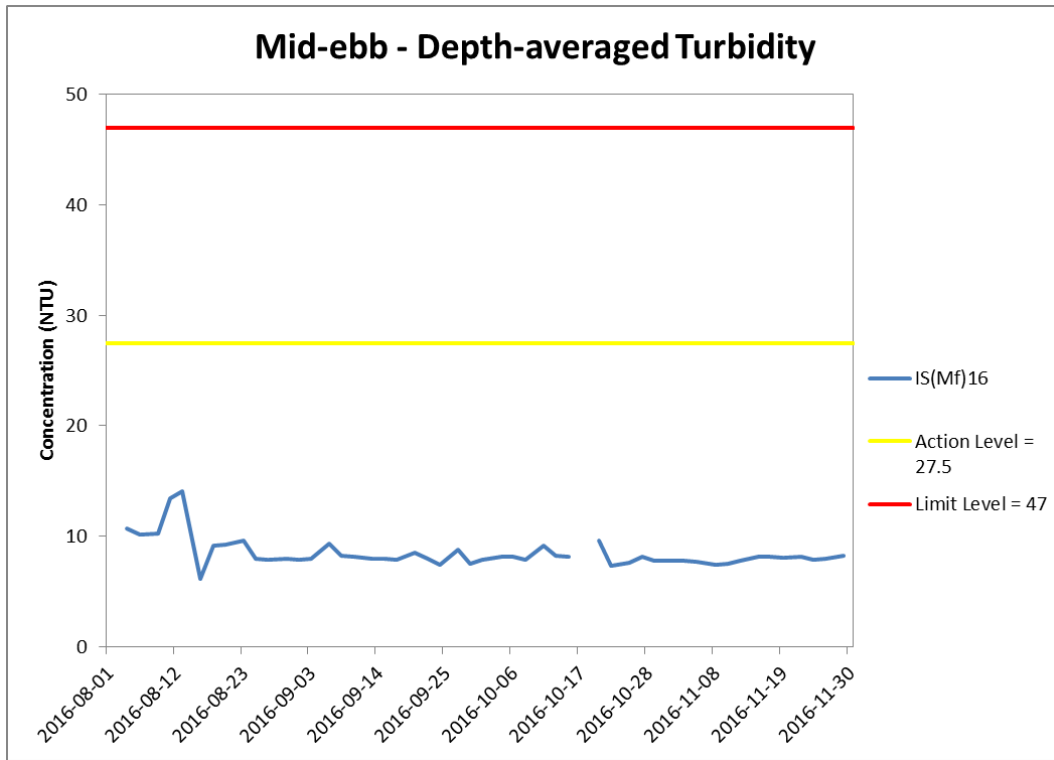


Figure J22 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 August and 30 November 2016 at IS(Mf)16 and IS(Mf)9.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



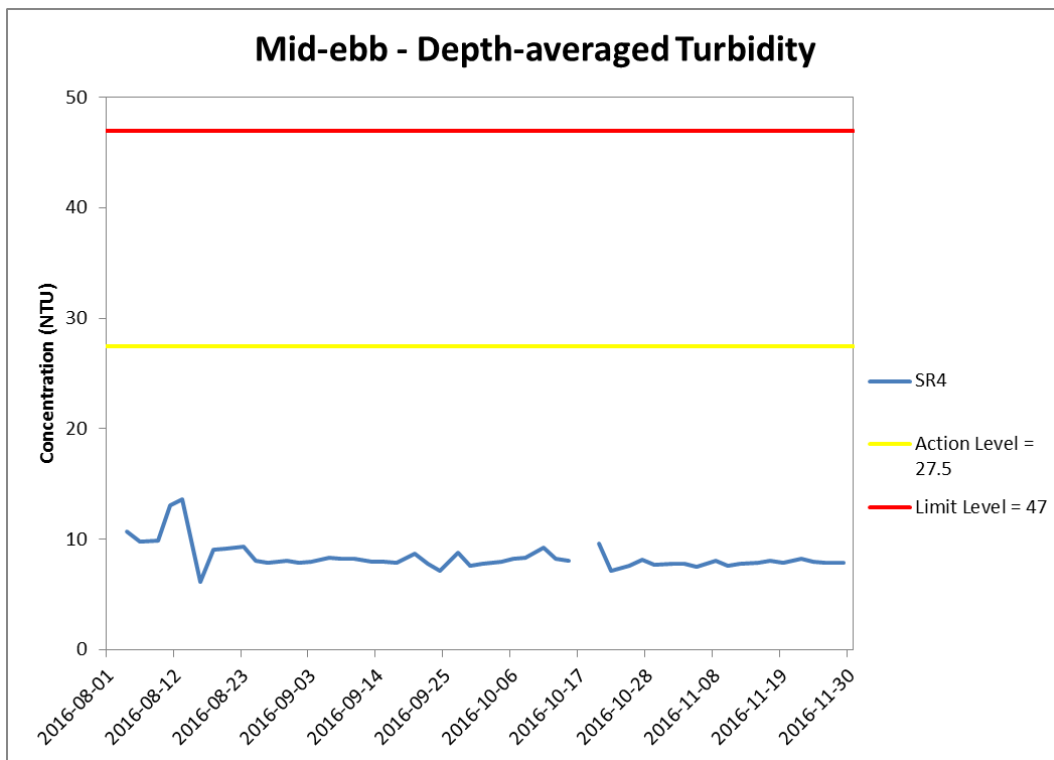
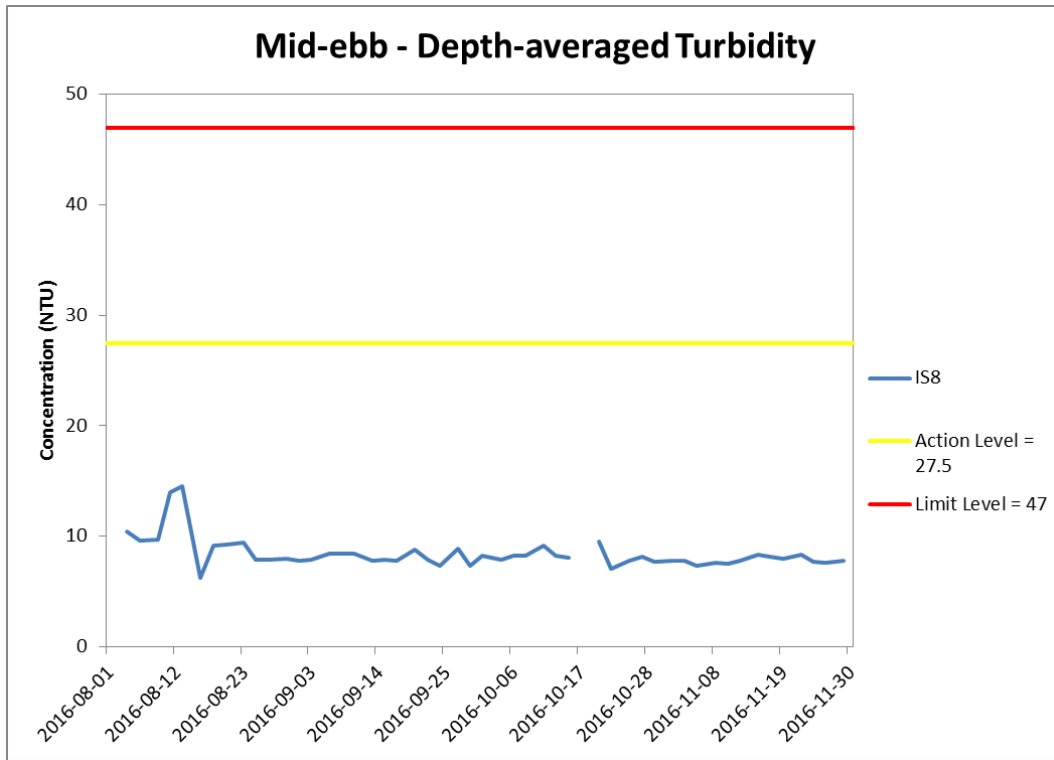


Figure J23 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 August and 30 November 2016 at IS8 and SR4.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



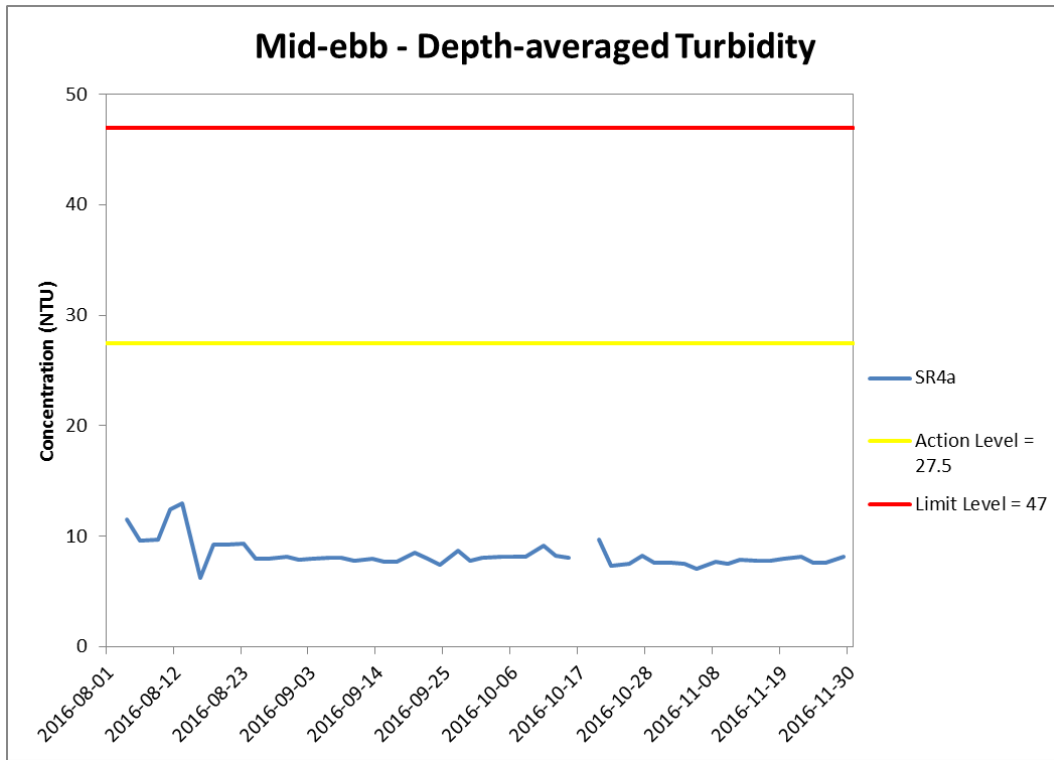


Figure J24 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 August and 30 November 2016 at SR4a.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



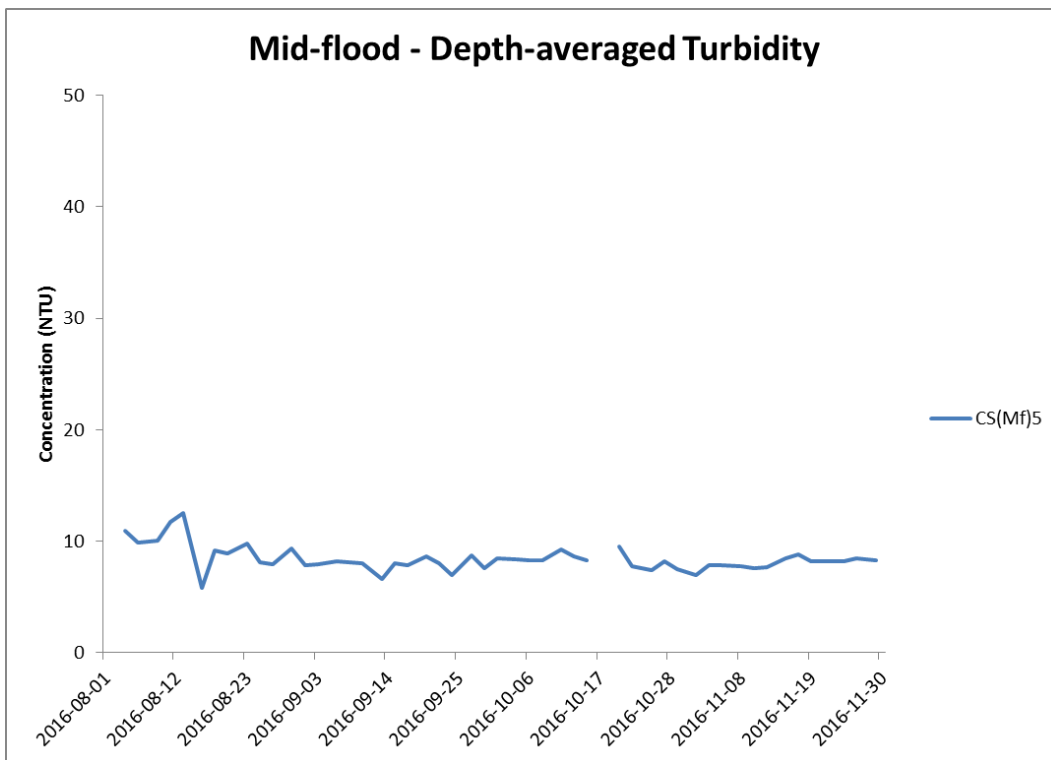
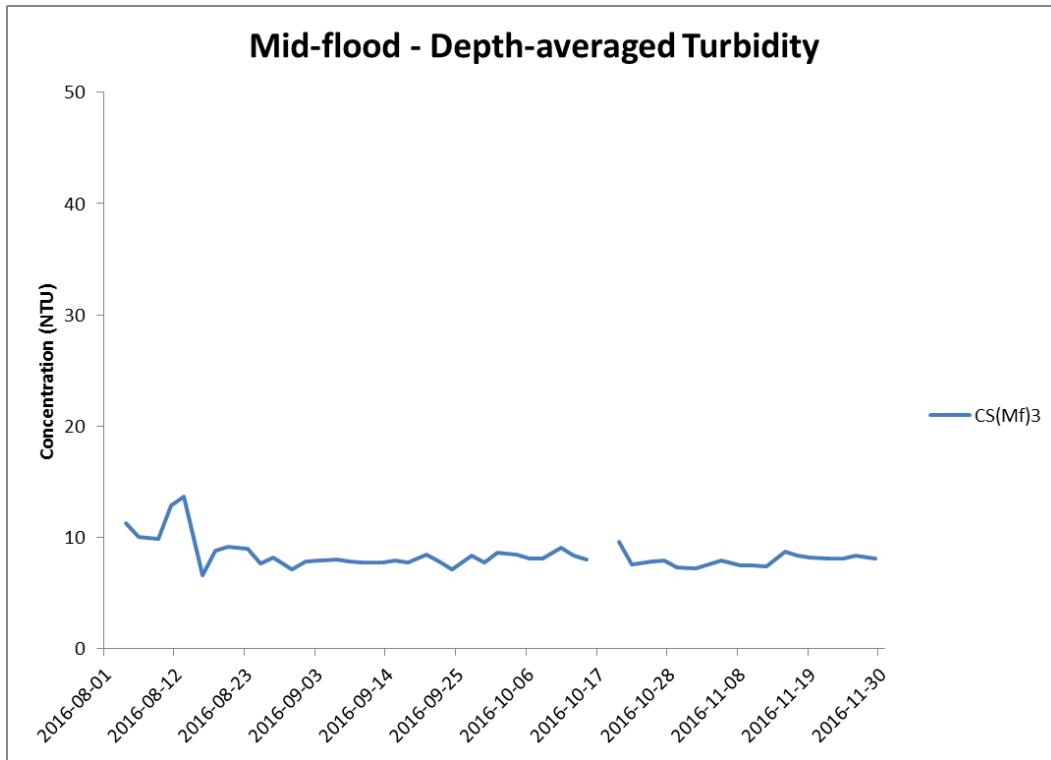


Figure J25 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 August and 30 November 2016 at CS(Mf)3 and CS(MF)5.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



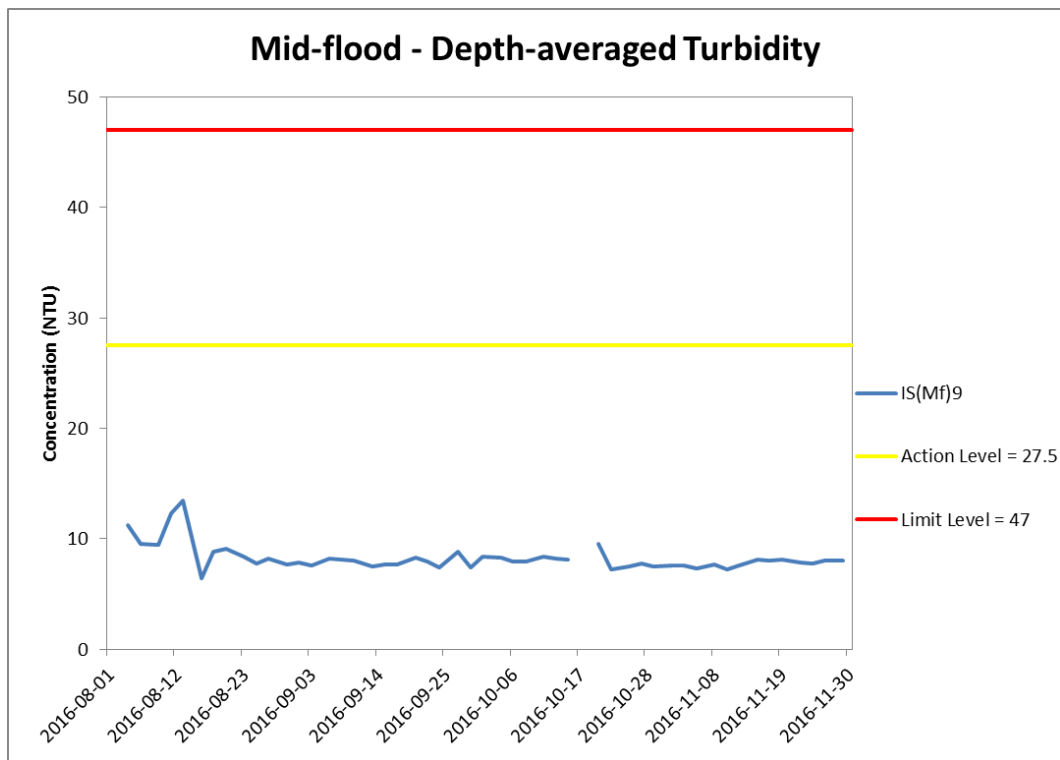
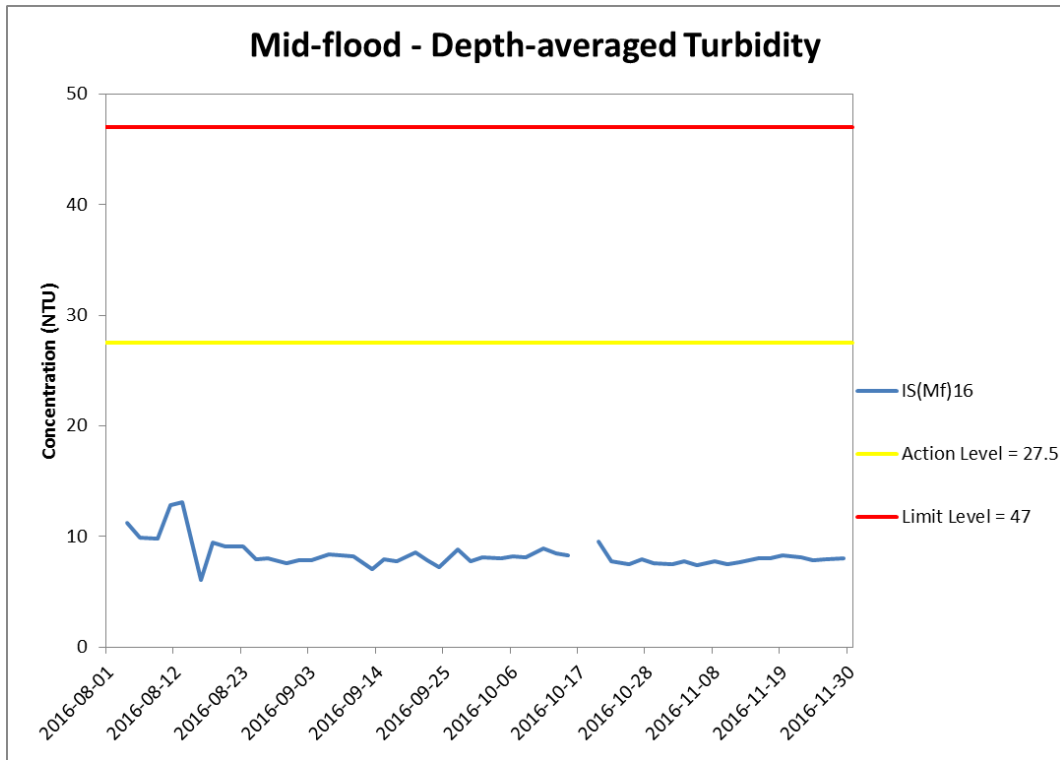


Figure J26 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 August and 30 November 2016 at IS(Mf)16 and IS(Mf)9.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



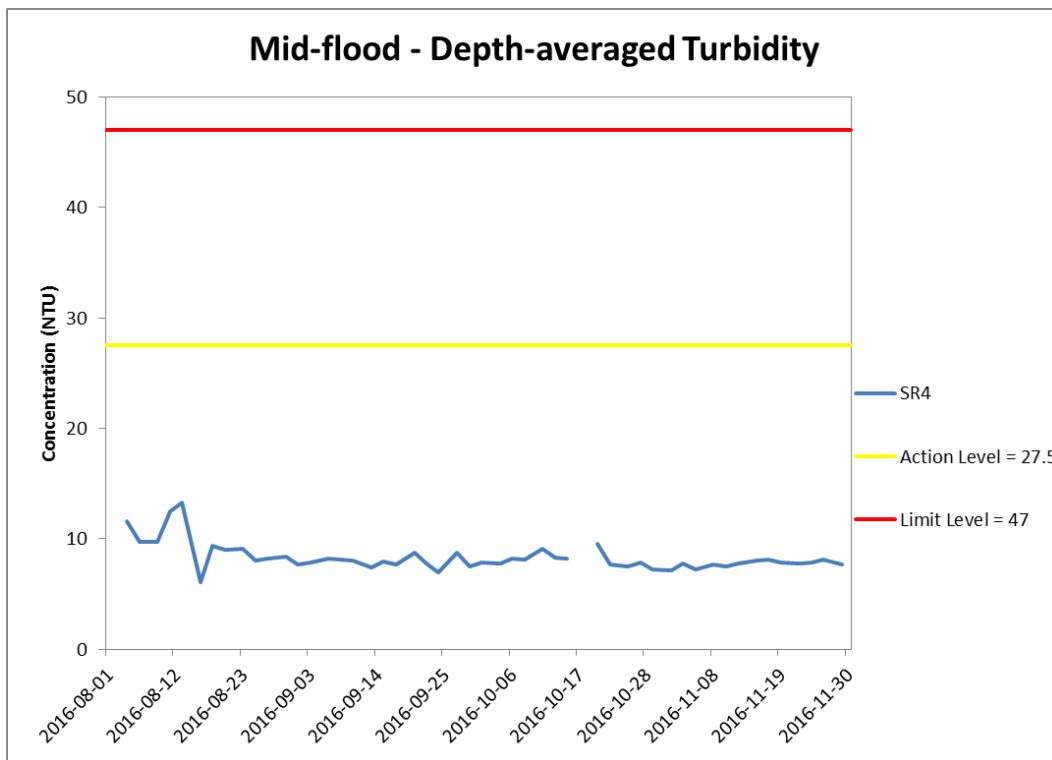
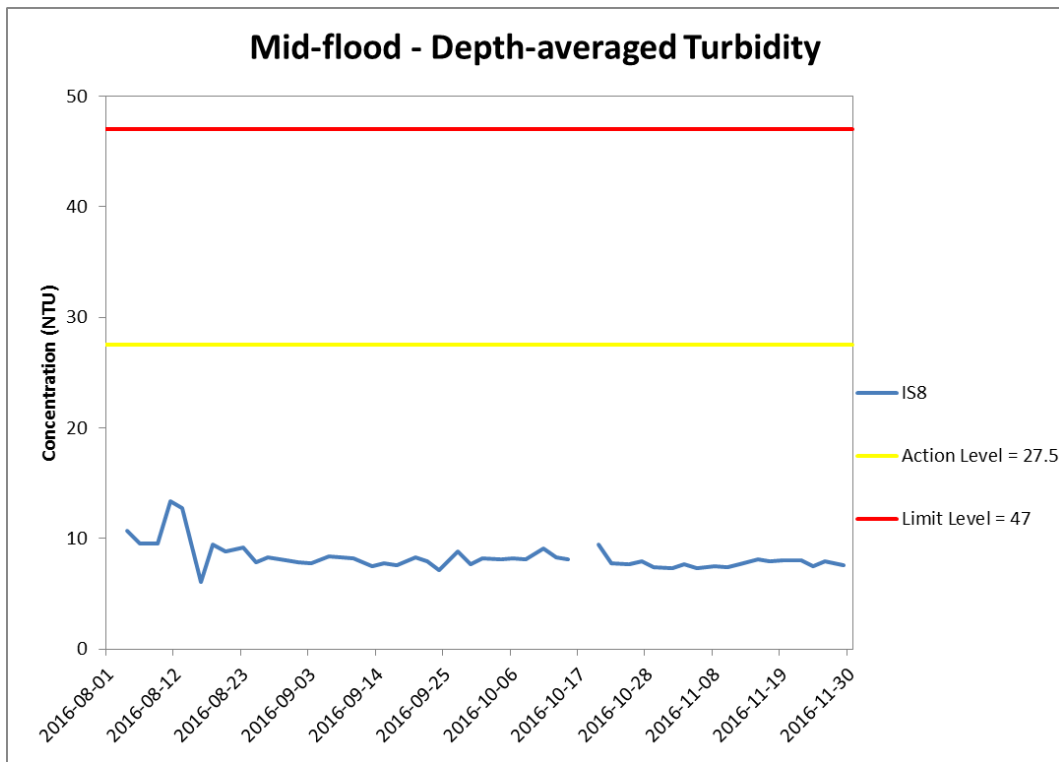


Figure J27 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 August and 30 November 2016 at IS8 and SR4.

*(Weather condition varied between sunny to rainy within the reporting period.)
Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
Resources
Management**



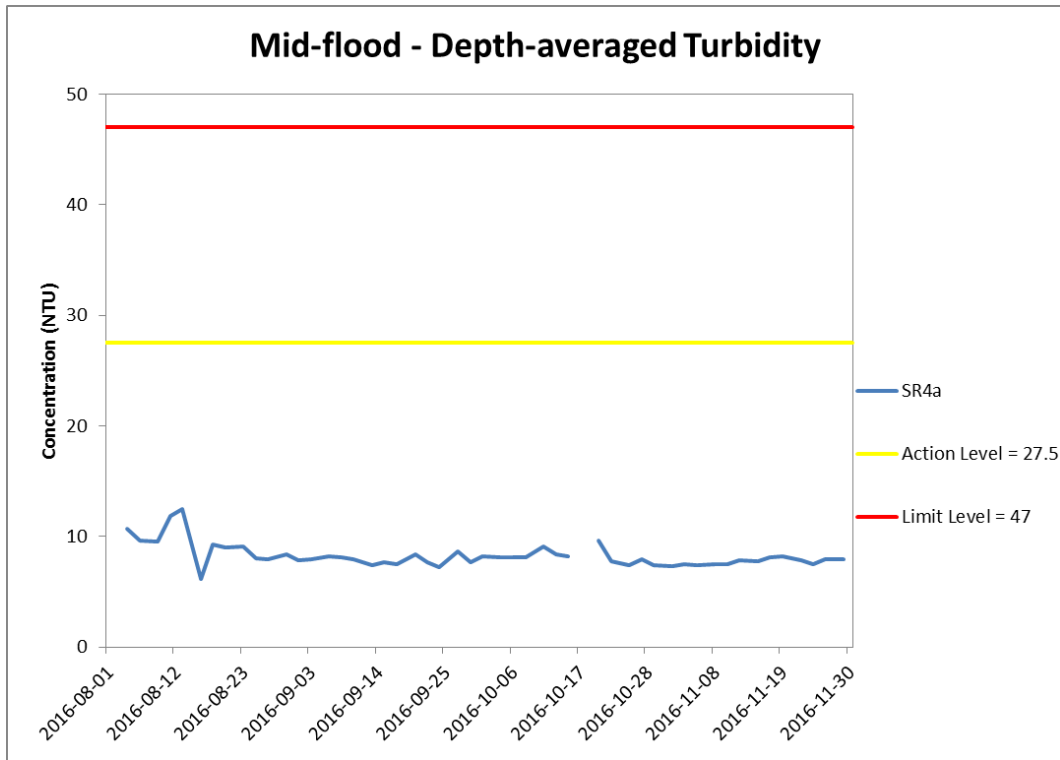


Figure J28 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 August and 30 November 2016 at SR4a.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



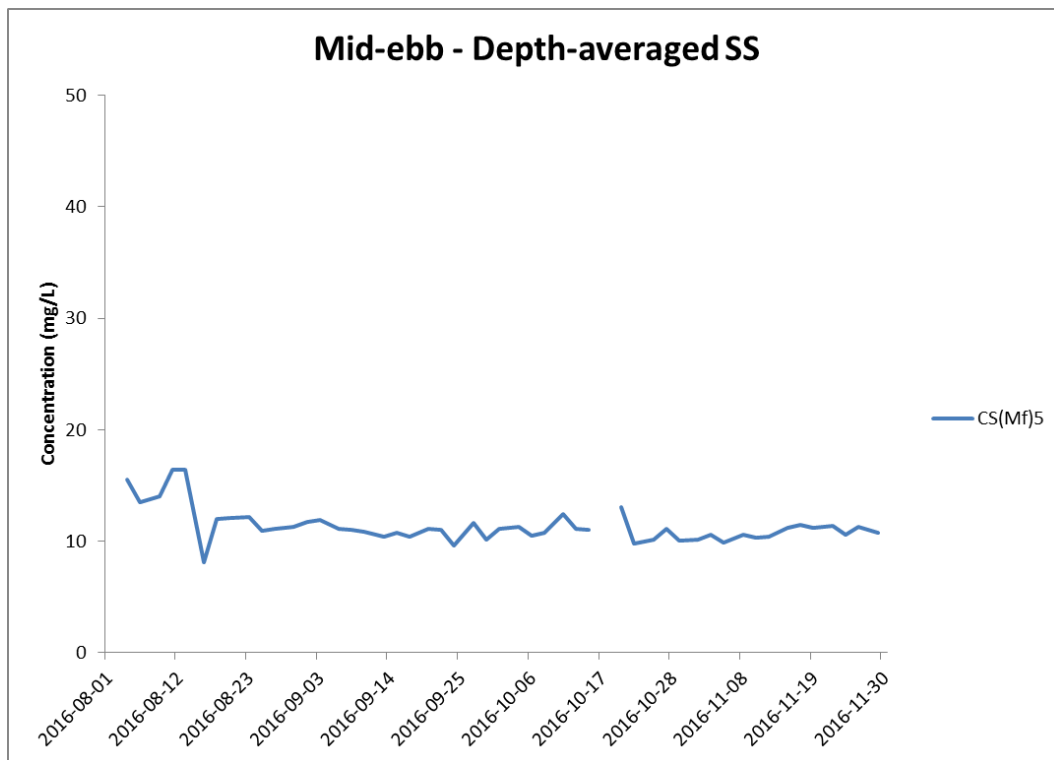
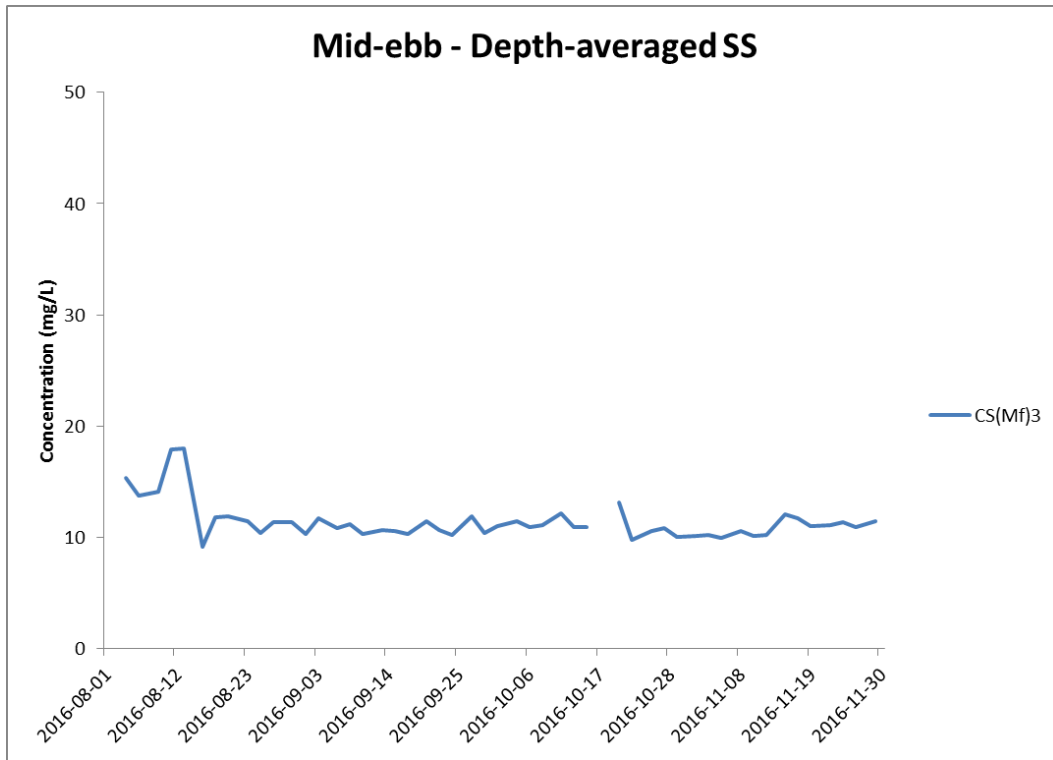


Figure J29 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 August and 30 November 2016 at CS(Mf)3 and CS(Mf)5.

*(Weather condition varied between sunny to rainy within the reporting period.)
Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
Resources
Management**



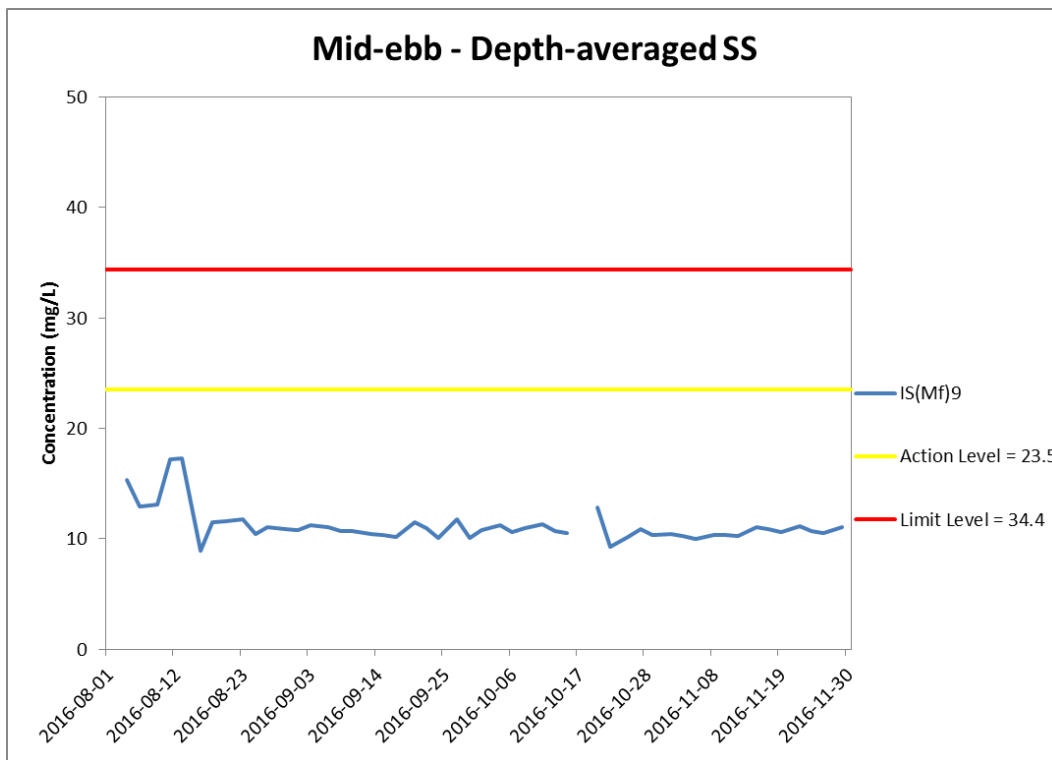
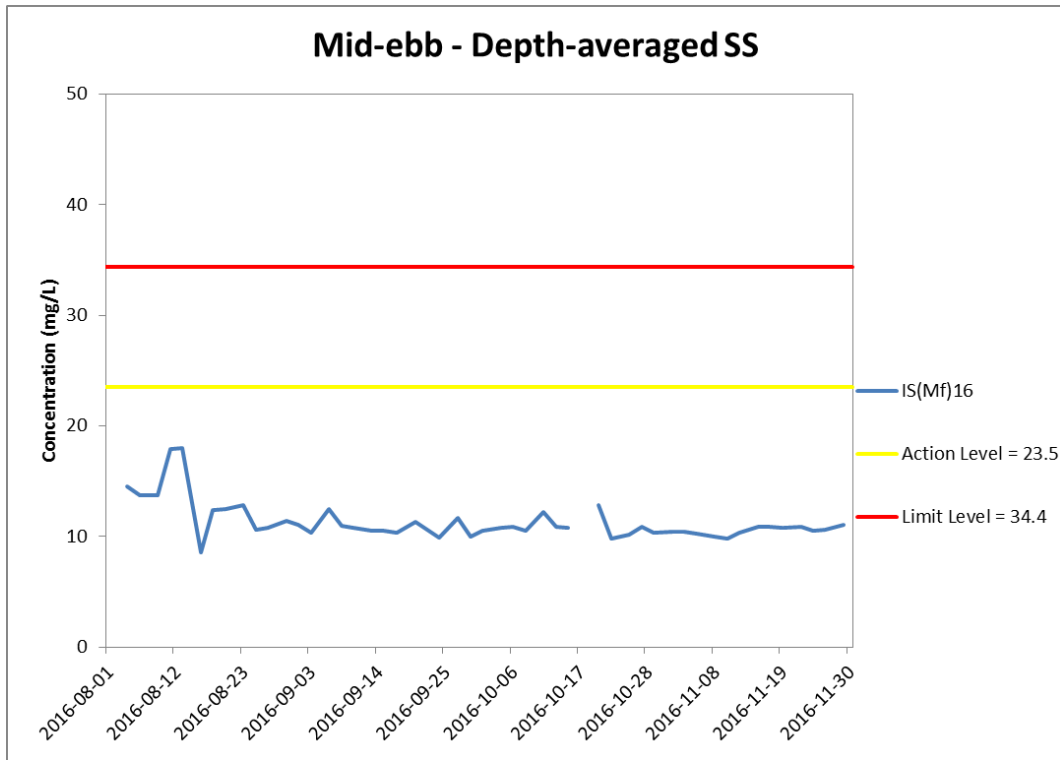


Figure J30 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 August and 30 November 2016 at IS(Mf)16 and IS(Mf)9.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



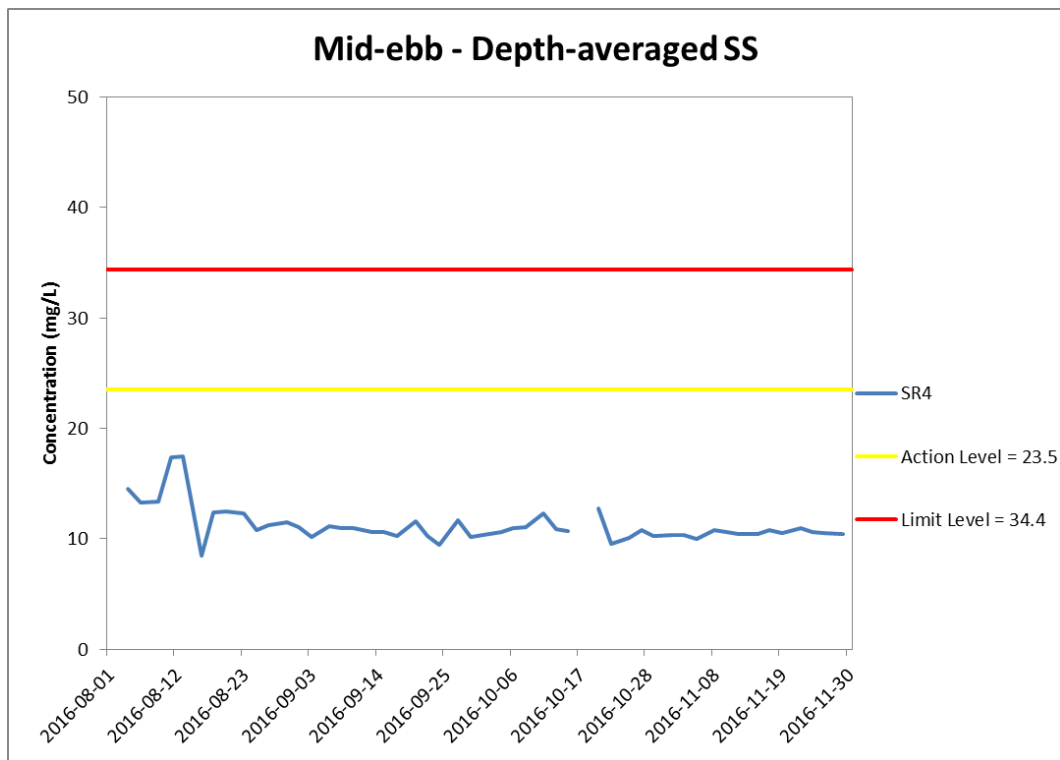
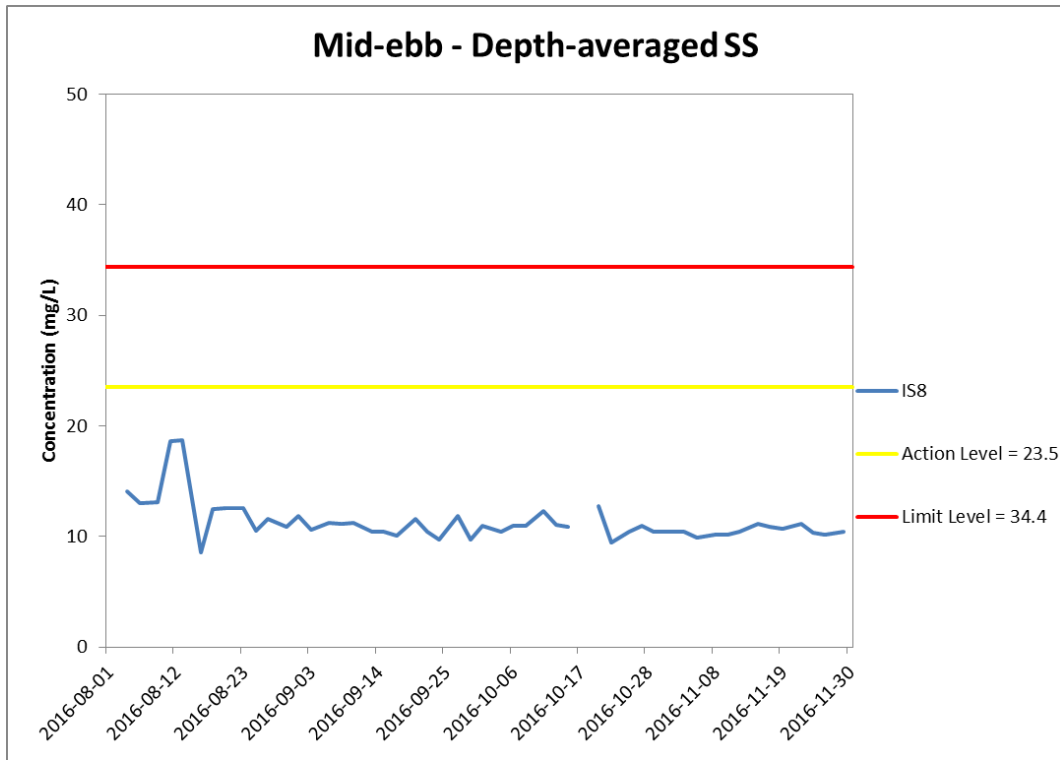


Figure J31 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 August and 30 November 2016 at IS8 and SR4.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



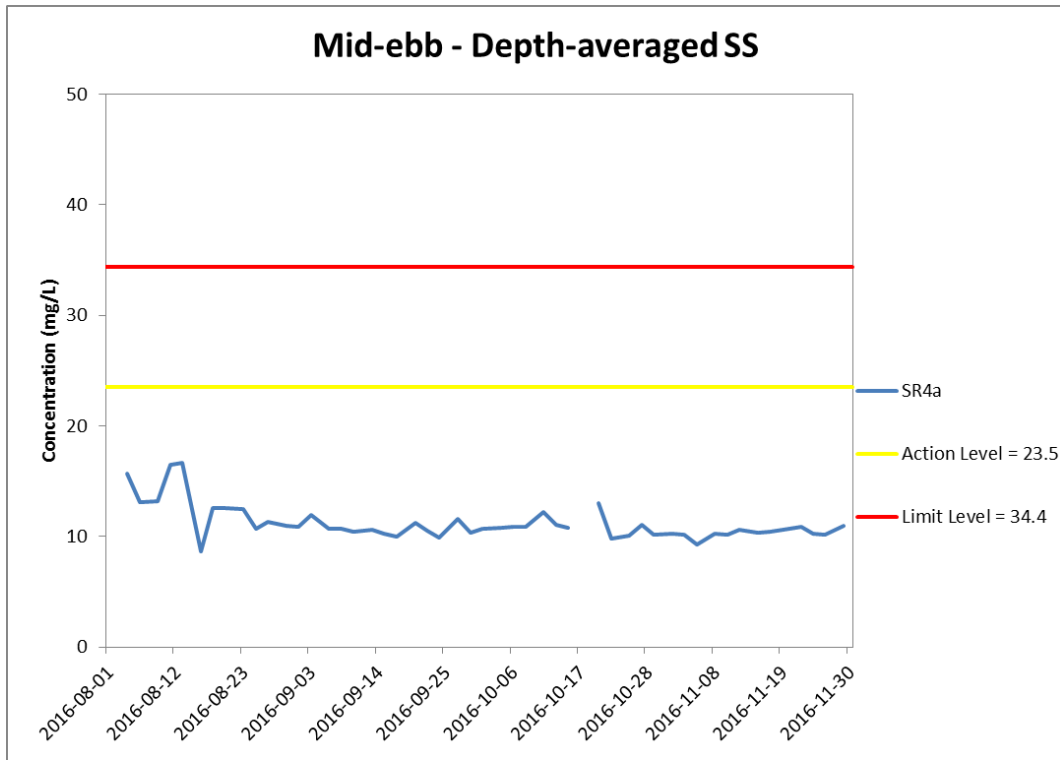


Figure J32 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 August and 30 November 2016 at SR4a.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



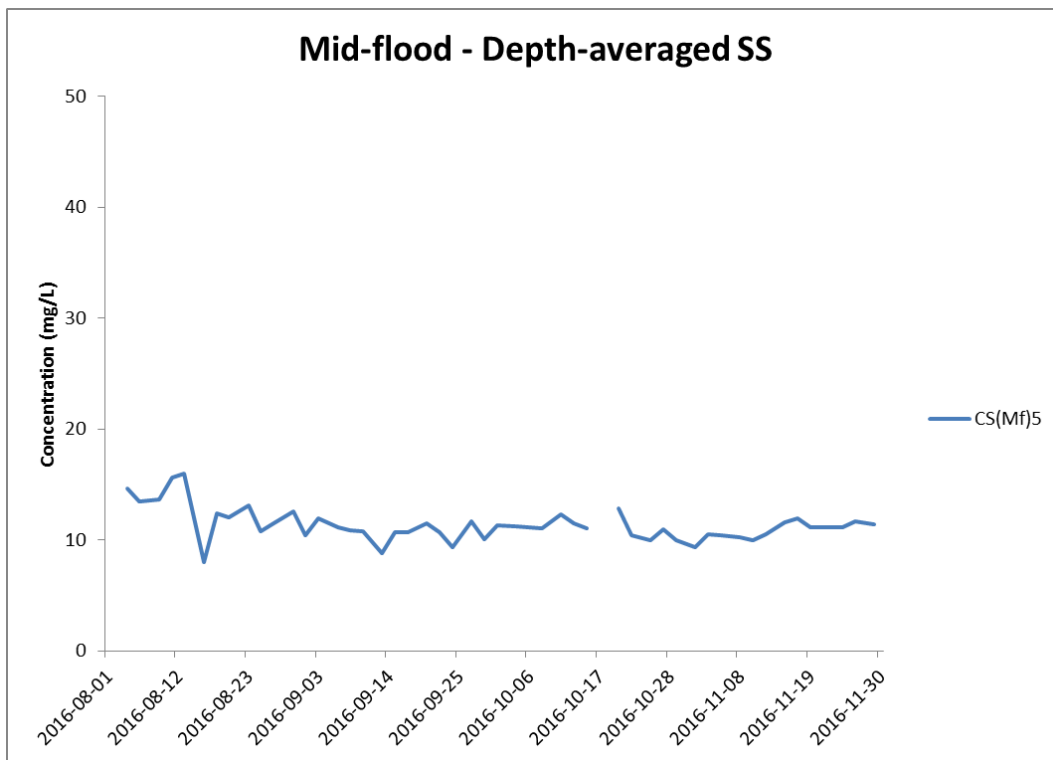
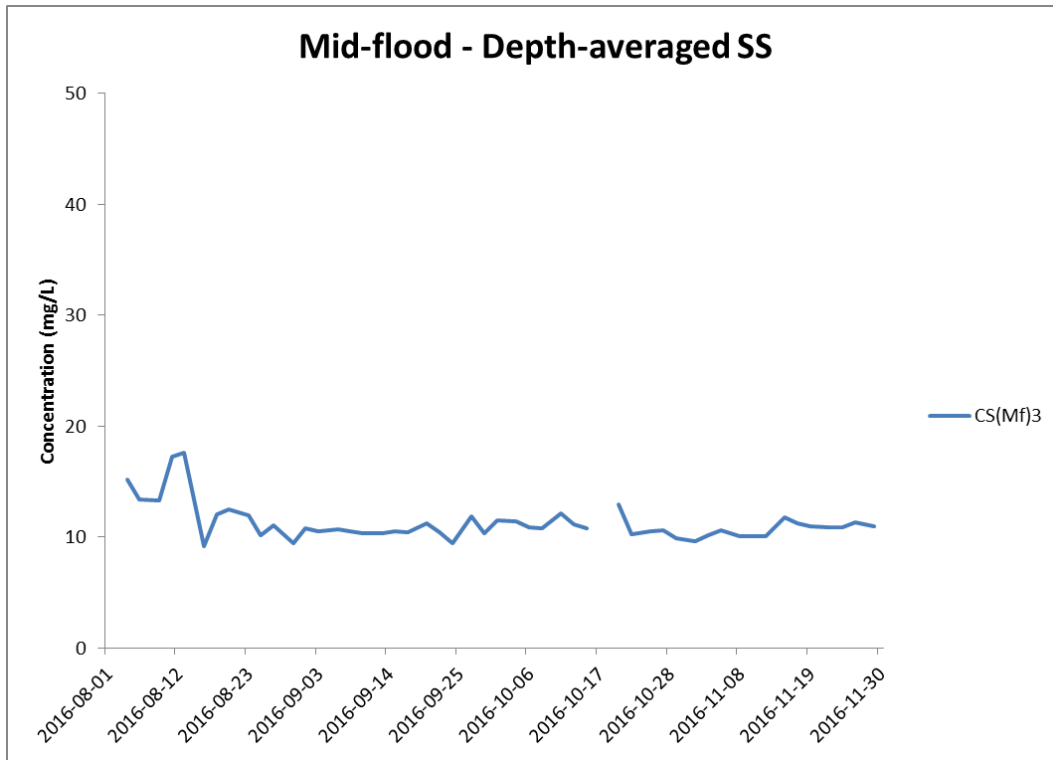


Figure J33 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 August and 30 November 2016 at CS(Mf)3 and CS(Mf)5.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



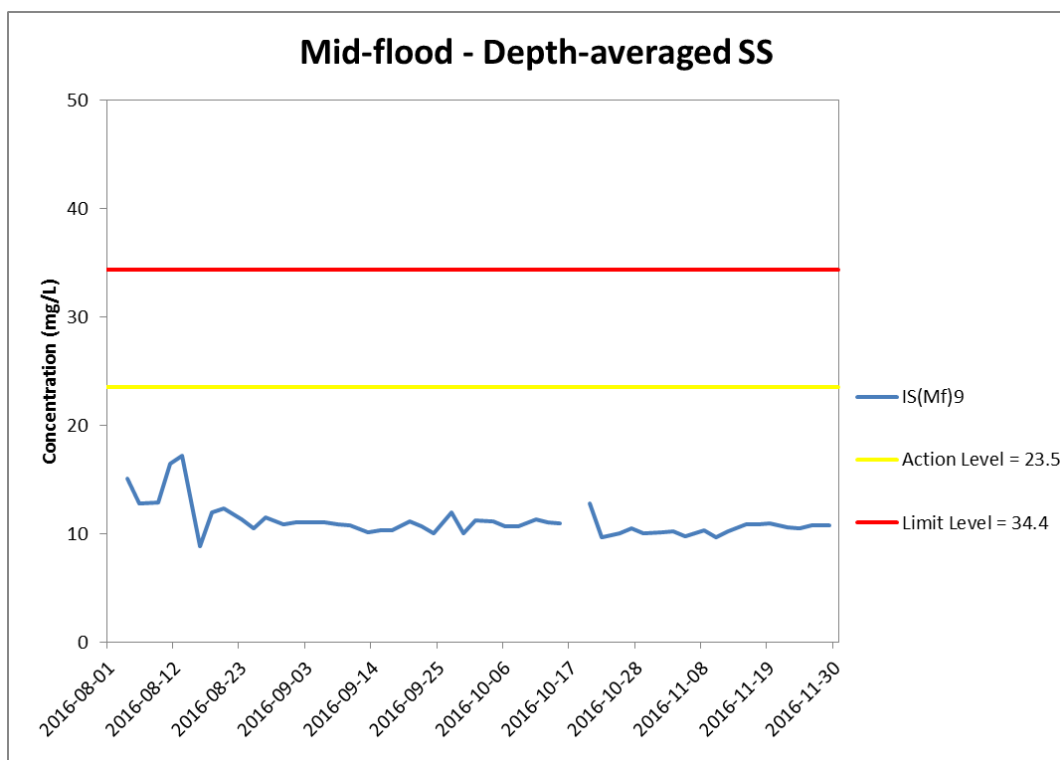
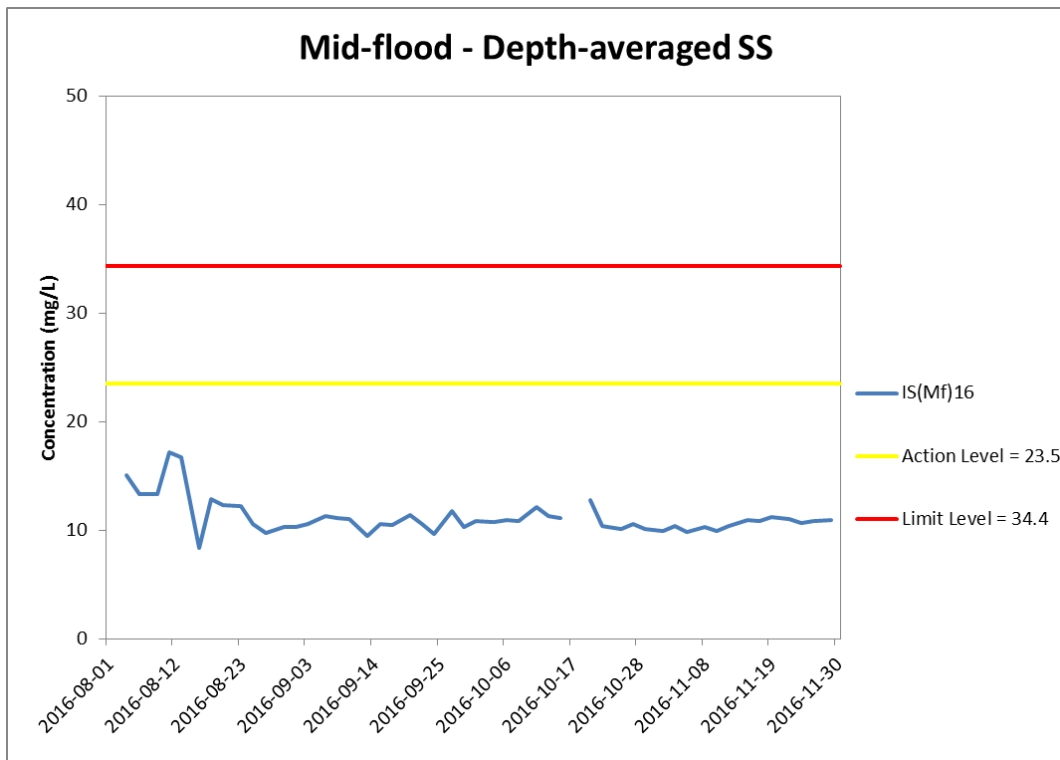


Figure J34 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 August and 30 November 2016 at IS(Mf)16 and IS(Mf)9.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



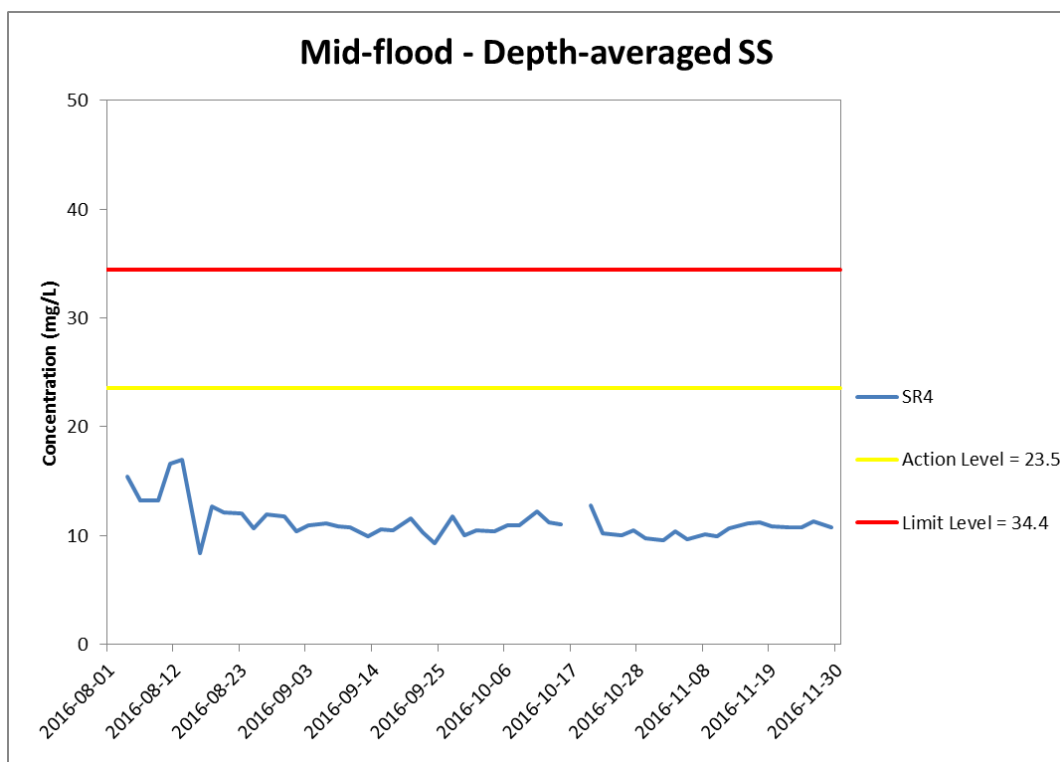
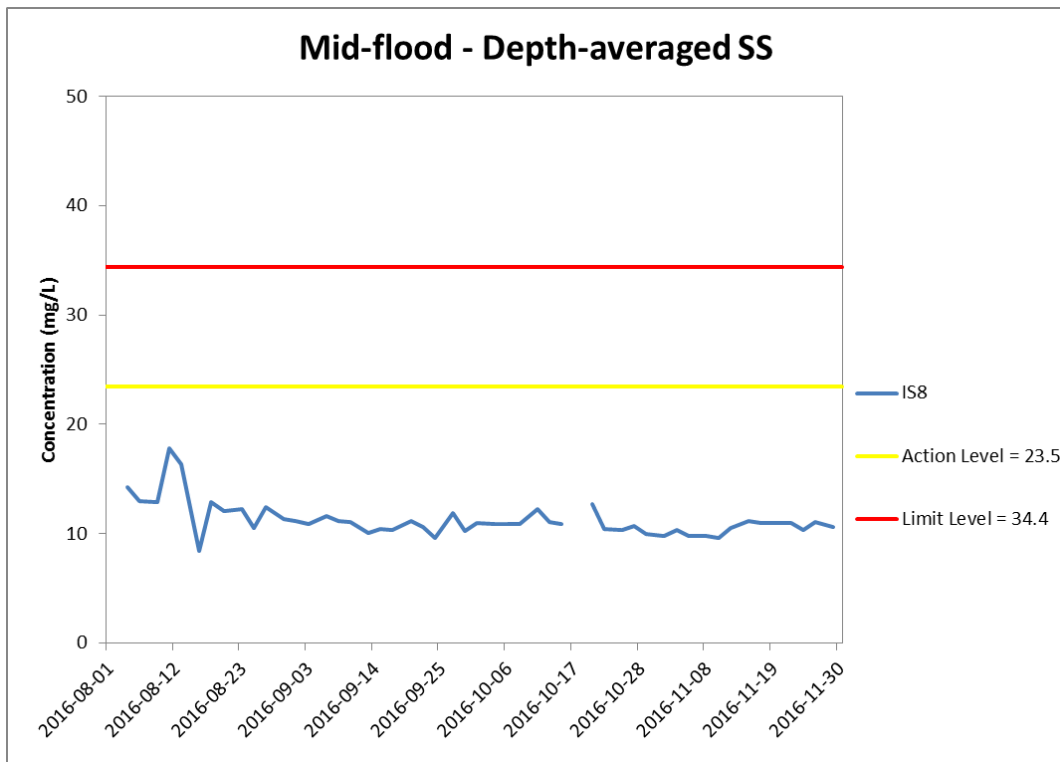


Figure J35 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 August and 30 November 2016 at IS8 and SR4.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



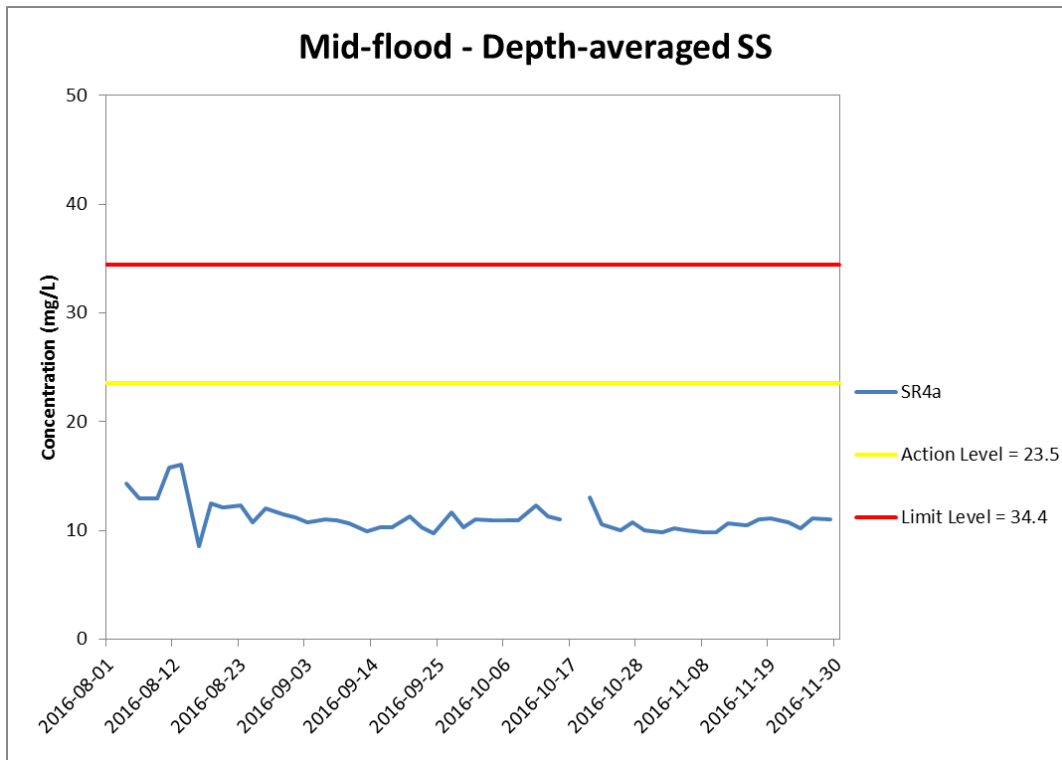


Figure J36 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 August and 30 November 2016 at SR4a.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.*

**Environmental
 Resources
 Management**



Appendix K

Impact Dolphin Monitoring Survey Results

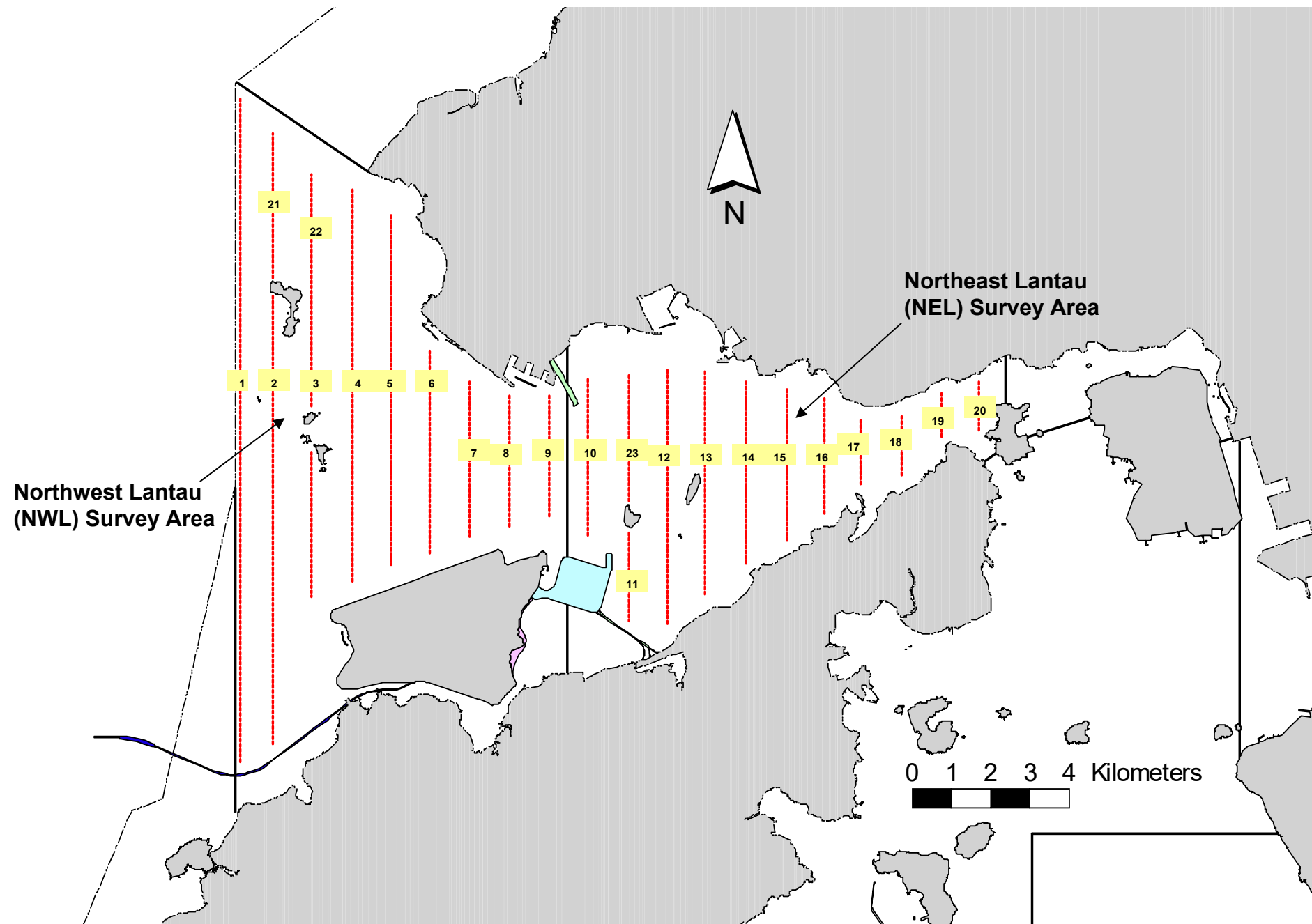


Figure 1. Transect Line Layout in Northwest and Northeast Lantau Survey Areas

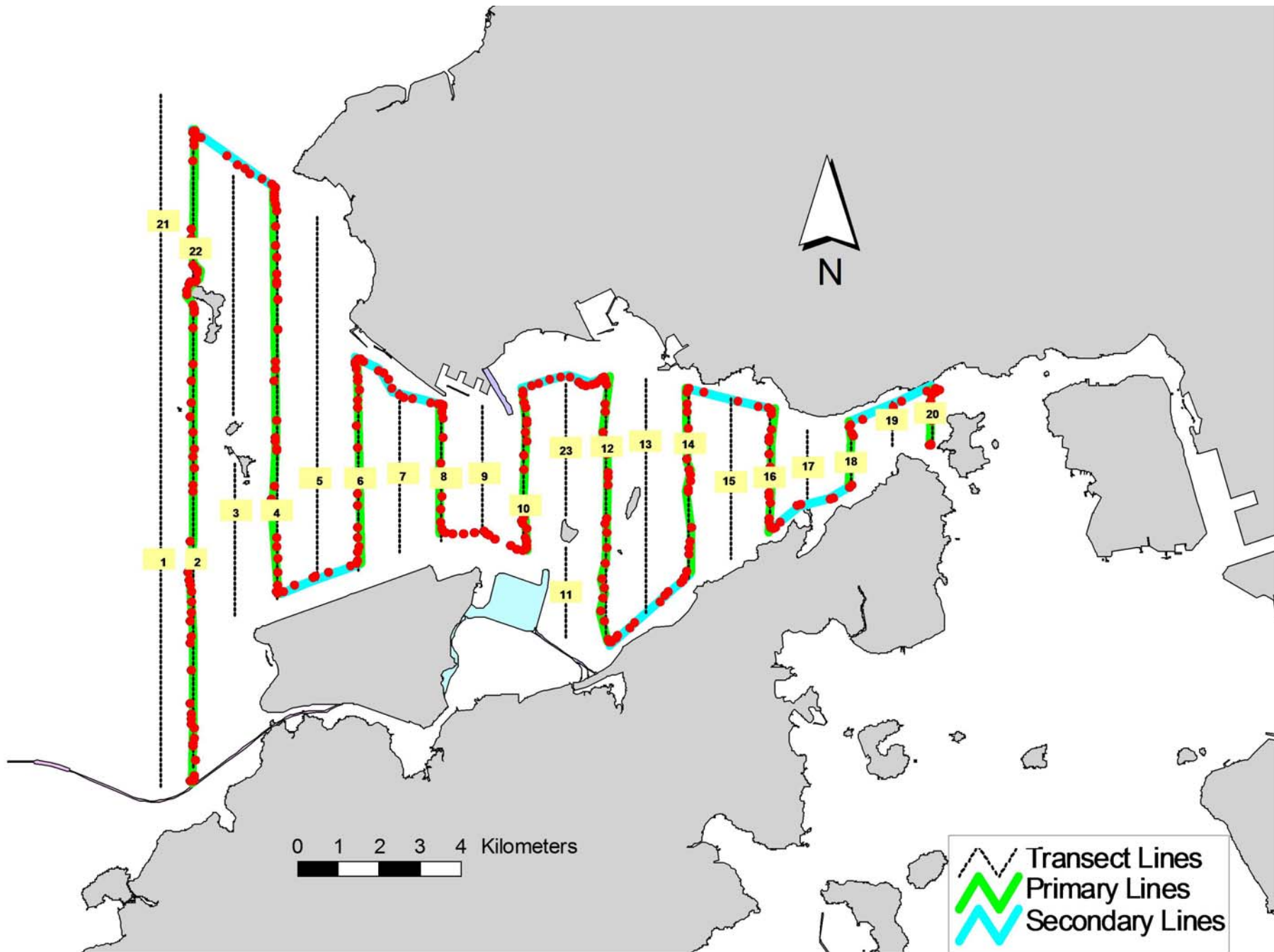


Figure 2. Survey Route on November 2nd, 2016 (HKLR03 project)

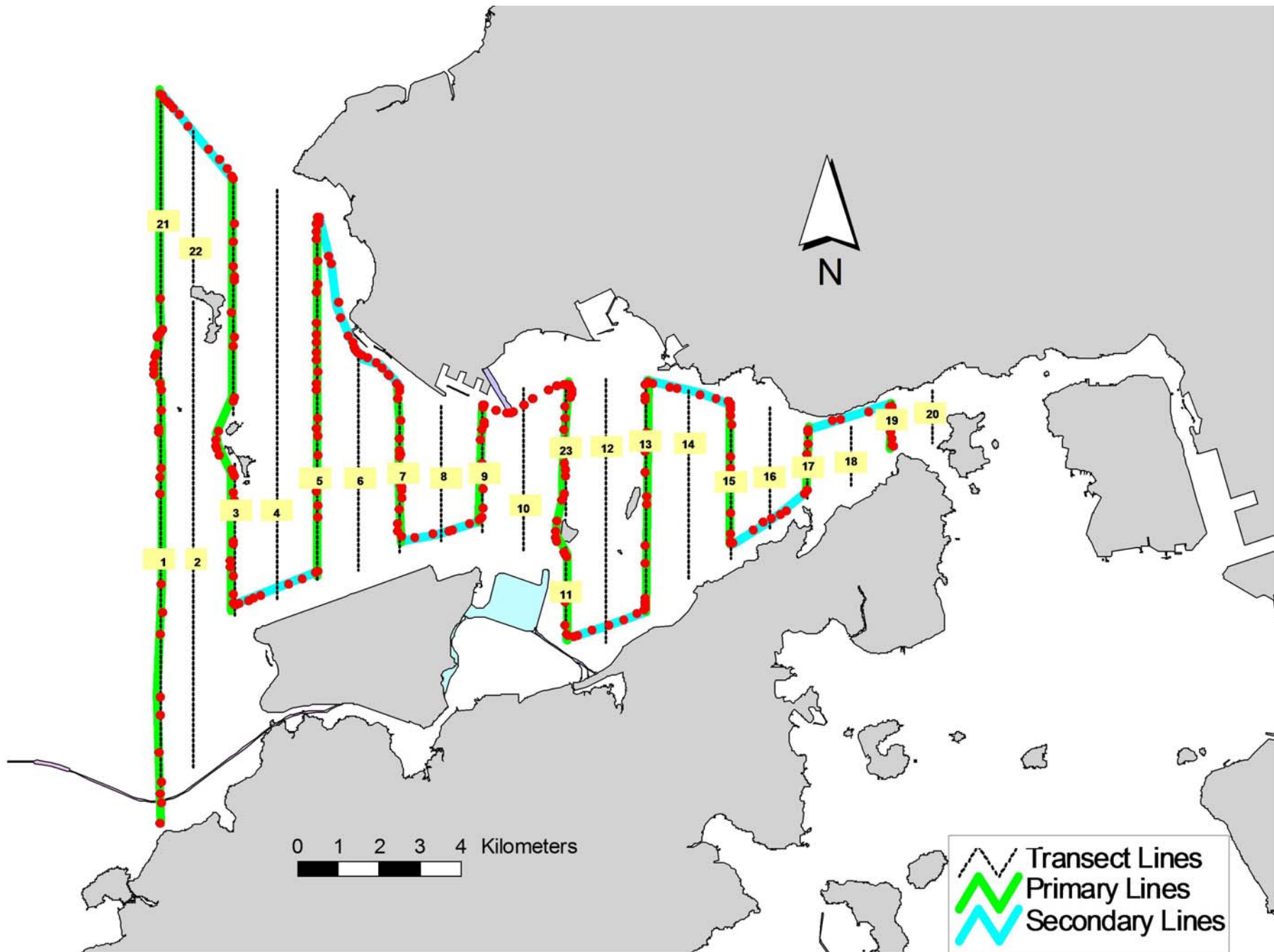


Figure 3. Survey Route on November 7th, 2016 (HKLR03 project)

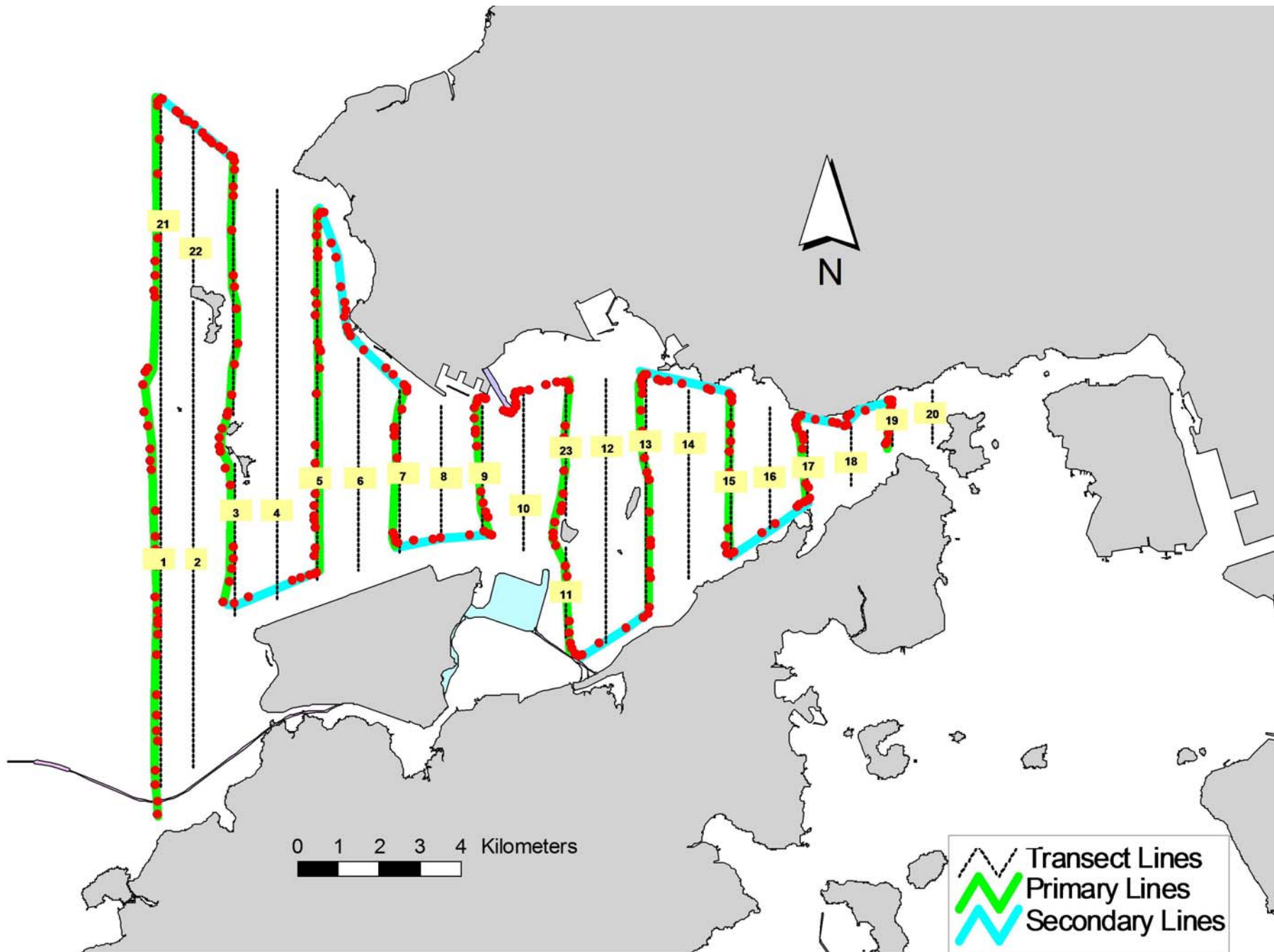


Figure 4. Survey Route on November 18th, 2016 (HKLR03 project)

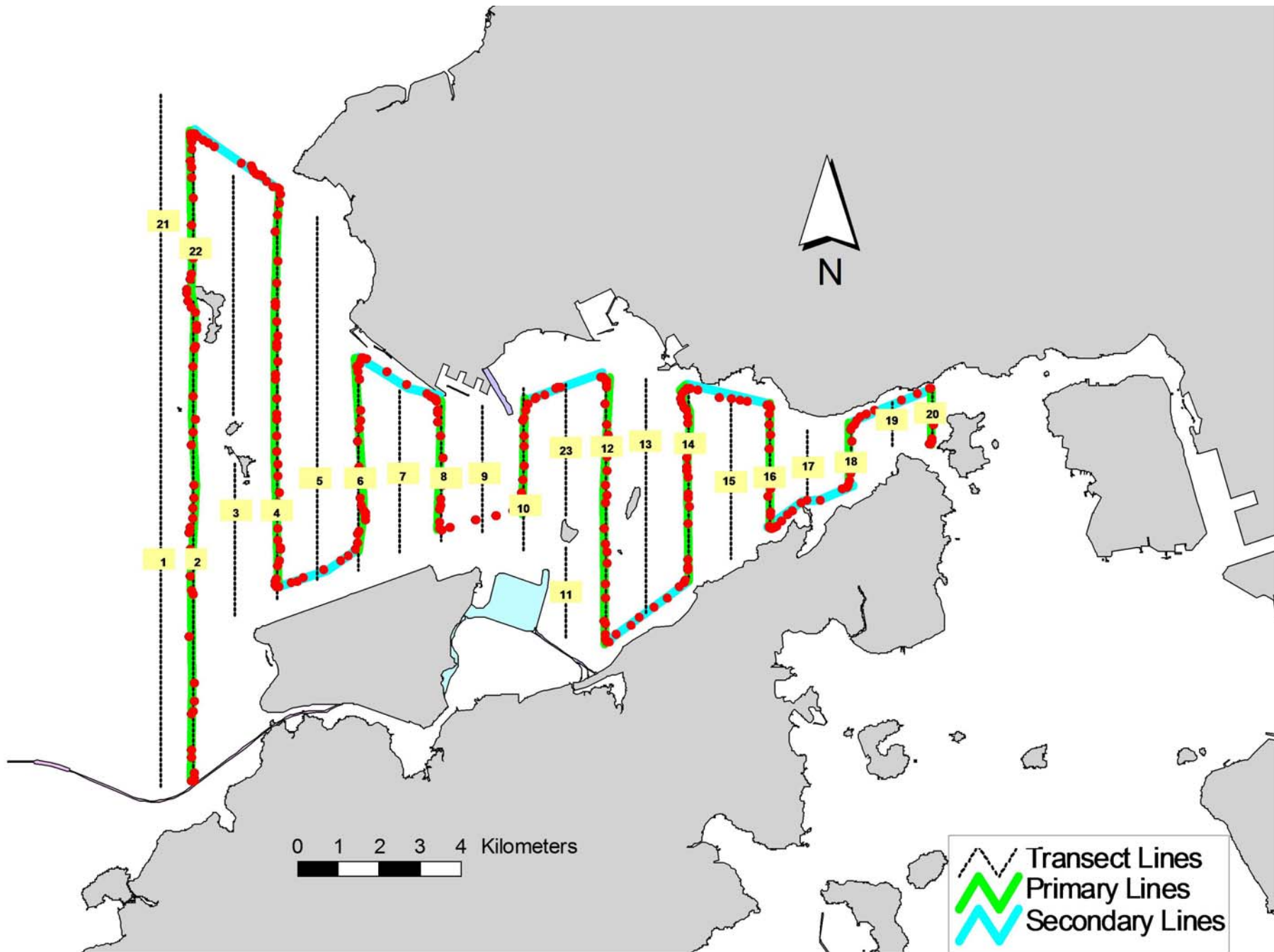


Figure 5. Survey Route on November 22nd, 2016 (HKLR03 project)

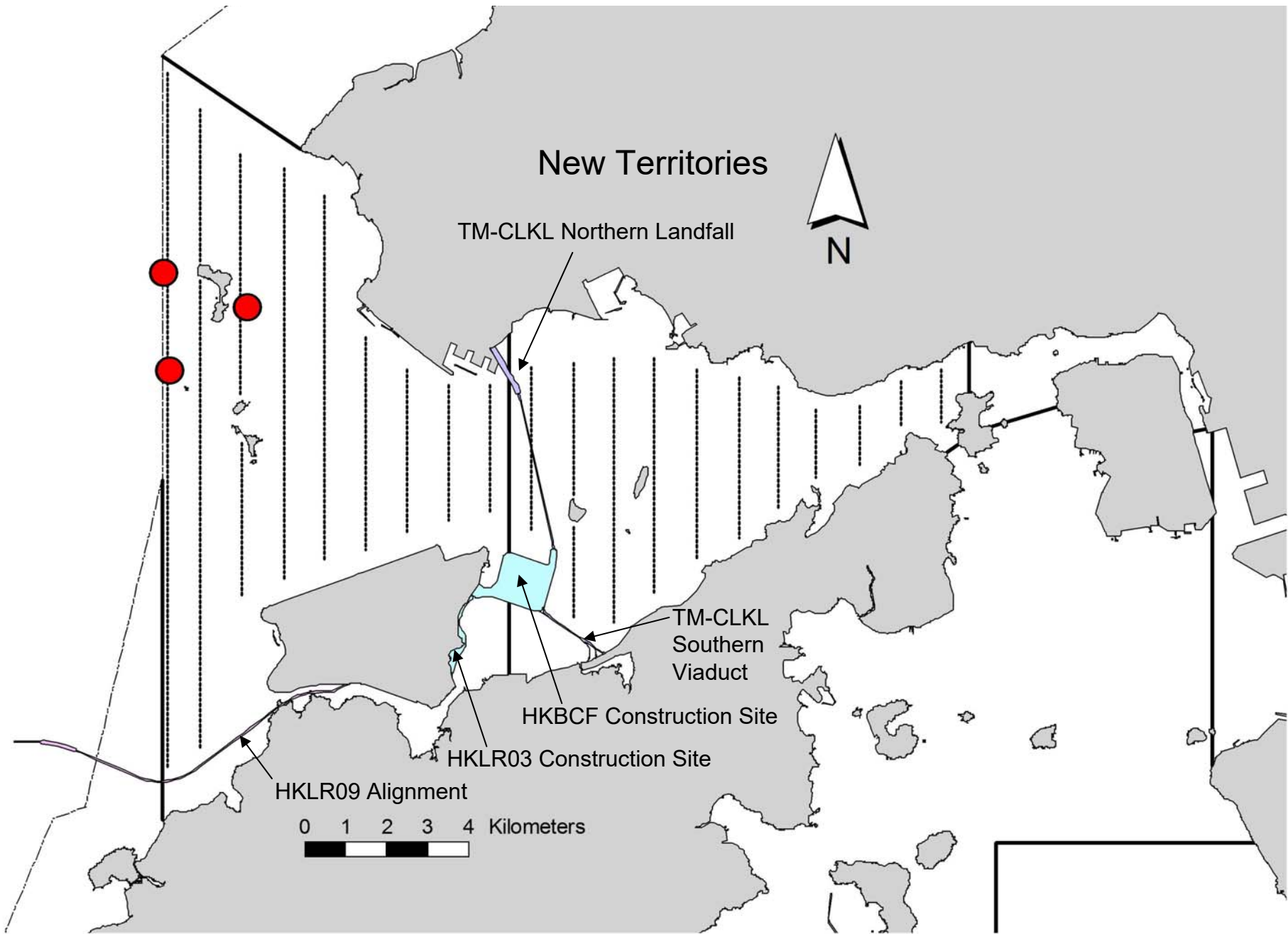


Figure 6. Distribution of Chinese White Dolphin Sightings during November 2016 HKLR03 Monitoring Surveys

Appendix I. HKLR03 Survey Effort Database (November 2016)

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

DATE	AREA	BEAU	EFFORT	SEASON	VESSEL	TYPE	P/S
2-Nov-16	NW LANTAU	2	3.00	AUTUMN	STANDARD36826	HKLR	P
2-Nov-16	NW LANTAU	3	19.06	AUTUMN	STANDARD36826	HKLR	P
2-Nov-16	NW LANTAU	4	9.44	AUTUMN	STANDARD36826	HKLR	P
2-Nov-16	NW LANTAU	2	2.50	AUTUMN	STANDARD36826	HKLR	S
2-Nov-16	NW LANTAU	3	5.40	AUTUMN	STANDARD36826	HKLR	S
2-Nov-16	NE LANTAU	2	4.13	AUTUMN	STANDARD36826	HKLR	P
2-Nov-16	NE LANTAU	3	15.46	AUTUMN	STANDARD36826	HKLR	P
2-Nov-16	NE LANTAU	2	4.21	AUTUMN	STANDARD36826	HKLR	S
2-Nov-16	NE LANTAU	3	7.40	AUTUMN	STANDARD36826	HKLR	S
7-Nov-16	NW LANTAU	2	37.21	AUTUMN	STANDARD31516	HKLR	P
7-Nov-16	NW LANTAU	3	0.90	AUTUMN	STANDARD31516	HKLR	P
7-Nov-16	NW LANTAU	2	13.39	AUTUMN	STANDARD31516	HKLR	S
7-Nov-16	NE LANTAU	2	14.34	AUTUMN	STANDARD31516	HKLR	P
7-Nov-16	NE LANTAU	3	1.00	AUTUMN	STANDARD31516	HKLR	P
7-Nov-16	NE LANTAU	2	7.66	AUTUMN	STANDARD31516	HKLR	S
7-Nov-16	NE LANTAU	3	0.80	AUTUMN	STANDARD31516	HKLR	S
18-Nov-16	NW LANTAU	1	1.90	AUTUMN	STANDARD31516	HKLR	P
18-Nov-16	NW LANTAU	2	38.57	AUTUMN	STANDARD31516	HKLR	P
18-Nov-16	NW LANTAU	1	1.70	AUTUMN	STANDARD31516	HKLR	S
18-Nov-16	NW LANTAU	2	11.23	AUTUMN	STANDARD31516	HKLR	S
18-Nov-16	NE LANTAU	2	17.54	AUTUMN	STANDARD31516	HKLR	P
18-Nov-16	NE LANTAU	2	10.66	AUTUMN	STANDARD31516	HKLR	S
22-Nov-16	NE LANTAU	2	17.43	AUTUMN	STANDARD36826	HKLR	P
22-Nov-16	NE LANTAU	3	1.32	AUTUMN	STANDARD36826	HKLR	P
22-Nov-16	NE LANTAU	2	10.95	AUTUMN	STANDARD36826	HKLR	S
22-Nov-16	NW LANTAU	2	29.12	AUTUMN	STANDARD36826	HKLR	P
22-Nov-16	NW LANTAU	3	2.10	AUTUMN	STANDARD36826	HKLR	P
22-Nov-16	NW LANTAU	2	7.58	AUTUMN	STANDARD36826	HKLR	S

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

(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
7-Nov-16	1	1103	1	NW LANTAU	2	211	ON	HKLR	824583	804711	AUTUMN	NONE	P
18-Nov-16	1	1352	7	NW LANTAU	1	99	ON	HKLR	826019	806609	AUTUMN	GILLNET	P
18-Nov-16	2	1459	4	NW LANTAU	2	440	ON	HKLR	826820	804551	AUTUMN	NONE	P

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

ID#	DATE	STG#	AREA
CH34	18/11/16	1	NW LANTAU
	18/11/16	2	NW LANTAU
NL136	18/11/16	1	NW LANTAU
	18/11/16	2	NW LANTAU
NL202	18/11/16	1	NW LANTAU
NL220	18/11/16	1	NW LANTAU
NL269	18/11/16	1	NW LANTAU
	18/11/16	2	NW LANTAU
NL320	18/11/16	1	NW LANTAU

CH34_20161118_1



NL136_20161118_1



NL202_20161118_1



NL220_20161118_1



NL269_20161118_1



NL320_20161118_1



CH34_20161118_2



NL136_20161118_2



NL269_20161118_2



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

Event	ET Leader	IEC	SOR	Contractor
	2. Identify source(s) of impact;		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;	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.
	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.	

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 2016 (Year)**

Month/Material	Actual Quantities of Inert C&D Materials Generation						Actual Quantities of C&D wastes Generation						Actual Quantities of Recyclables Generation			
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fills	Imported Fill	Marine Sediment, Cat. L	Marine Sediment, Cat. Mp	Marine Sediment, Cat. Mf	Marine Sediment, Cat. H	Chemical Waste	General Refuse	Metals	Felled trees	Paper/ cardboard packaging	Plastics
Unit	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)	
Jan	1.941	0.263	0.606	-	1.334	-	-	-	-	-	69.400	-	-	0.105	-	
Feb	0.783	0.185	0.092	-	0.692	-	-	-	-	-	85.890	-	-	0.112	-	
Mar	1.502	0.429	0.537	-	0.965	-	-	-	-	2.000	88.360	-	-	-	-	
Apr	1.354	0.402	0.789	-	0.565	-	-	-	-	3.000	79.580	-	8.640	0.084	-	
May	1.057	0.192	0.617	-	0.440	-	-	-	-	3.000	75.620	-	-	-	-	
Jun	0.499	0.277	0.116	-	0.383	-	-	-	-	-	103.270	-	-	0.105	-	
SUB-TOTAL	7.136	1.747	2.757	-	4.379	0.000	-	-	-	8.000	502.120	-	8.640	0.406	-	
Jul	0.507	0.211	0.230	-	0.277	-	-	-	-	2.200	94.760	-	1.540	0.350	-	
Aug	1.294	0.144	0.684	-	0.610	-	-	-	-	-	116.990	-	9.790	0.098	-	
Sep	2.584	0.155	0.270	-	2.314	-	-	-	-	-	130.060	-	-	0.105	-	
Oct	2.338	0.180	0.156	-	2.183	-	-	-	-	-	141.300	-	-	0.028	-	
Nov	3.873	0.328	0.536	-	3.337	-	0.473	-	-	1.600	138.270	-	-	0.063	-	
Dec				-		-	-	-	-	-		-	-		-	
TOTAL	17.731	2.765	4.632	-	13.099	-	0.473	-	-	11.800	1,123.500	-	19.970	1.050	-	

Notes :

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

Appendix N

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

Appendix N1 Cumulative Statistics on Exceedances

		Total No. recorded in this reporting month	Total No. recorded since project commencement
1-Hr TSP	Action	0	0
	Limit	0	0
24-Hr TSP	Action	0	2
	Limit	0	0
Noise	Action	0	0
	Limit	0	0
Water Quality	Action	0	2
	Limit	0	0
Impact Dolphin Monitoring	Action	0	9
	Limit	1	7

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

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Successful Prosecutions
This Reporting Month (November 2016)	1	0	0
Total No. received since project commencement	6	0	0



ENVIRONMENTAL COMPLAINT/ ENQUIRY FORM

Complaint/ Enquiry Received*
Date: 9 November 2016 Time: 14:49 From: Environmental Protection Department (EPD) Via: Email
Complainant/ Enquirer *: Name: Undisclosed Tel: Undisclosed Address: Undisclosed Media: Dust Noise Water Quality Other Description: One barge in travel was complained causing muddy plume by the barge's propeller wash near Tung Chung New Development Ferry Pier at 09:26am on 7 November 2016.

Investigation Report & Response

<p>The Contractor reviewed the vessel and operation records upon receiving the complaint. The location under complaint is confirmed far away from the project area of this Contract and the concerned barge is not from this Contract. This Contract also has no barge travelling from the area near Tung Chung New Development Ferry Pier in November 2016.</p> <p>According to ET's weekly site inspection record, Piers E12 and E13 where is the navigation channel (the works area adjacent to southern landfall, HKBCF) was visited on 2 November 2016. The construction activities were conducted within project site boundary. No muddy plume was observed in association with the construction activities during the site audit on 2 November 2016.</p> <p>Upon reviewing the Contractor's records and ET's site inspection record. The barge under complaint is considered not related to this Contract and the location under complaint is not in the project area of this Contract. Thus, the complaint is considered not related to this Contract.</p>
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Mitigation Measures and Follow-Up Actions Recommended to Contractor

<p>Since the complaint is considered not related to this Contract, no further action is required. EPD has reminded all Contractors of HKZMB Projects to avoid marine travel in the waters around Tung Chung town and south of Hong Kong International Airport during low tide (email dated 9/11/2016). The ET will keep checking whether the mitigation measures are properly implemented. Improvement actions will be advised if necessary.</p>
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Date of File Closed : 18 November 2016

Approved and Filed by:

A handwritten signature in black ink, appearing to read 'Jovy Tam'.

(Jovy Tam, ET Leader)
Date: 18 November 2016