

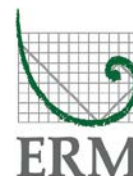
**Contract No. HY/2012/07  
Tuen Mun – Chek Lap Kok Link –  
Southern Connection Viaduct Section**

*Forty-Second Monthly EM&A Report*

12 May 2017

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

[www.erm.com](http://www.erm.com)



# Contract No. HY/2012/07


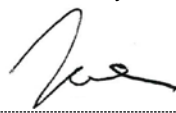


## Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section

**Environmental Resources Management**

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

*Forty-Second Monthly EM&A Report*

**Document Code: 0215660\_42nd Monthly EM&A\_20170512.doc**

Client:  Gammon		Project No:  0215660			
Summary:  This document presents the Forty-Second Monthly EM&A Report for Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section.		Date: 12 May 2017			
		Approved by:  			
		Mr Craig Reid Partner			
		Certified by:  			
		Mr Jovy Tam ET Leader			
	Forty-Second Monthly EM&A Report	VAR	JT	CAR	12/05/17
Revision	Description	By	Checked	Approved	Date
<p>This report has been prepared by Environmental Resources Management the trading name of 'ERM Hong-Kong, Limited', with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client.</p> <p>We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.</p>		<p>Distribution</p> <p><input type="checkbox"/> Internal</p> <p><input checked="" type="checkbox"/> Public</p> <p><input type="checkbox"/> Confidential</p>			
		 			



Ref.: HYDHZMBEEM00\_0\_5359L.17

15 May 2017

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

By Fax (3691 2899) and By Post

Attention: Mr. Daniel Ip

Dear Mr. Ip,

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

**Contract No. HY/2012/07 TM-CLKL Southern Connection Viaduct  
Section  
42<sup>nd</sup> Monthly EM&A Report for April 2017 (EP-354/2009/D)**

Reference is made to the Monthly Environmental Monitoring and Audit (EM&A) Report (April 2017) (ET's ref.: "0215660\_42nd Monthly EM&A\_20170512.doc" dated 12 May 2017) certified by the ET Leader and provided to us via e-mail on 12 May 2017.

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

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, PSC, ENPO Site

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- Appendix G Impact Air Quality Monitoring Results and Graphical Presentation
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## EXECUTIVE SUMMARY

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

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

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

This is the Forty-second Monthly EM&A report presenting the EM&A works carried out during the period from 1 to 30 April 2017 for the Southern Connection Viaduct Section in accordance with the Updated EM&A Manual of the TM-CLK Link Project. As informed by the Contractor, major activities in the reporting period included:

### *Marine Works*

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

- Installation of deck segment and pier head segment.

#### ***Land-based Works***

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

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

24-hour TSP Monitoring	6 sessions
1-hour TSP Monitoring	6 sessions
Noise Monitoring	6 sessions
Impact Water Quality Monitoring	12 sessions
Impact Dolphin Monitoring	2 sessions
Joint Environmental Site Inspection	4 sessions

#### **Breaches of Action and Limit Levels for Air Quality**

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

#### **Breaches of Action and Limit Levels for Noise**

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

#### **Breaches of Action and Limit Levels for Water Quality**

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

#### **Impact Dolphin Monitoring**

During this month of dolphin monitoring, no unacceptable impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) was noticeable from general observations. Due to monthly variation in dolphin occurrence within the Study Area, it would be more appropriate to draw conclusion on whether any impacts on dolphins have been detected related to the construction activities of the TM-CLKL Southern

Connection Viaduct Section in the quarterly EM&A reports, in which comparison on distribution, group size and encounter rates of dolphins between the quarterly impact monitoring period and baseline monitoring period will be made.

Daily marine mammal exclusion zone monitoring was undertaken during the period of marine works under this Contract. No sighting of the Chinese White Dolphin was recorded in April 2017 during the exclusion zone monitoring.

### **Environmental Complaints, Non-compliance & Summons**

There was one (1) complaint referred by Environmental Project Office (ENPO) on 18 April 2017 regarding suspected muddy water discharge from Hong Kong - Zhuhai - Macao Bridge Hong Kong Boundary Crossing Facilities (HKBCF) reported in the news on 17 April 2017 in the reporting period. As the incident is under investigation, a detailed investigation report will be provided in the next reporting period.

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 May 2017 include the following:

#### ***Marine Works***

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

#### ***Land-based Works***

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



## **Future Key Issues**

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of May 2017 are mainly associated with dust, noise, marine water quality, marine ecology and waste management issues.

## 1.1

## BACKGROUND

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

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

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

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

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

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

## **1.2 SCOPE OF REPORT**

This is the Forty-second 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 April 2017.

## **1.3 ORGANIZATION STRUCTURE**

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

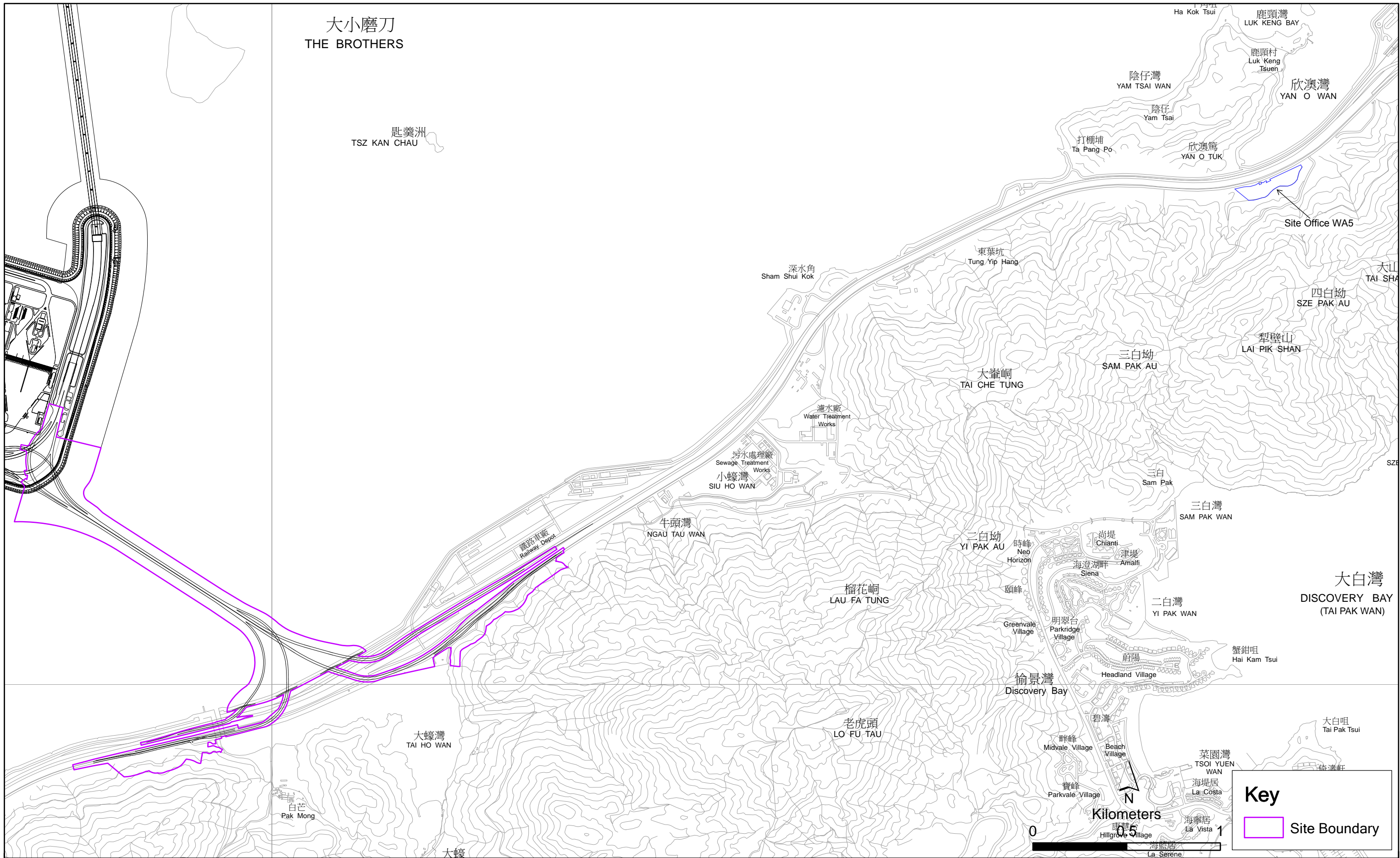


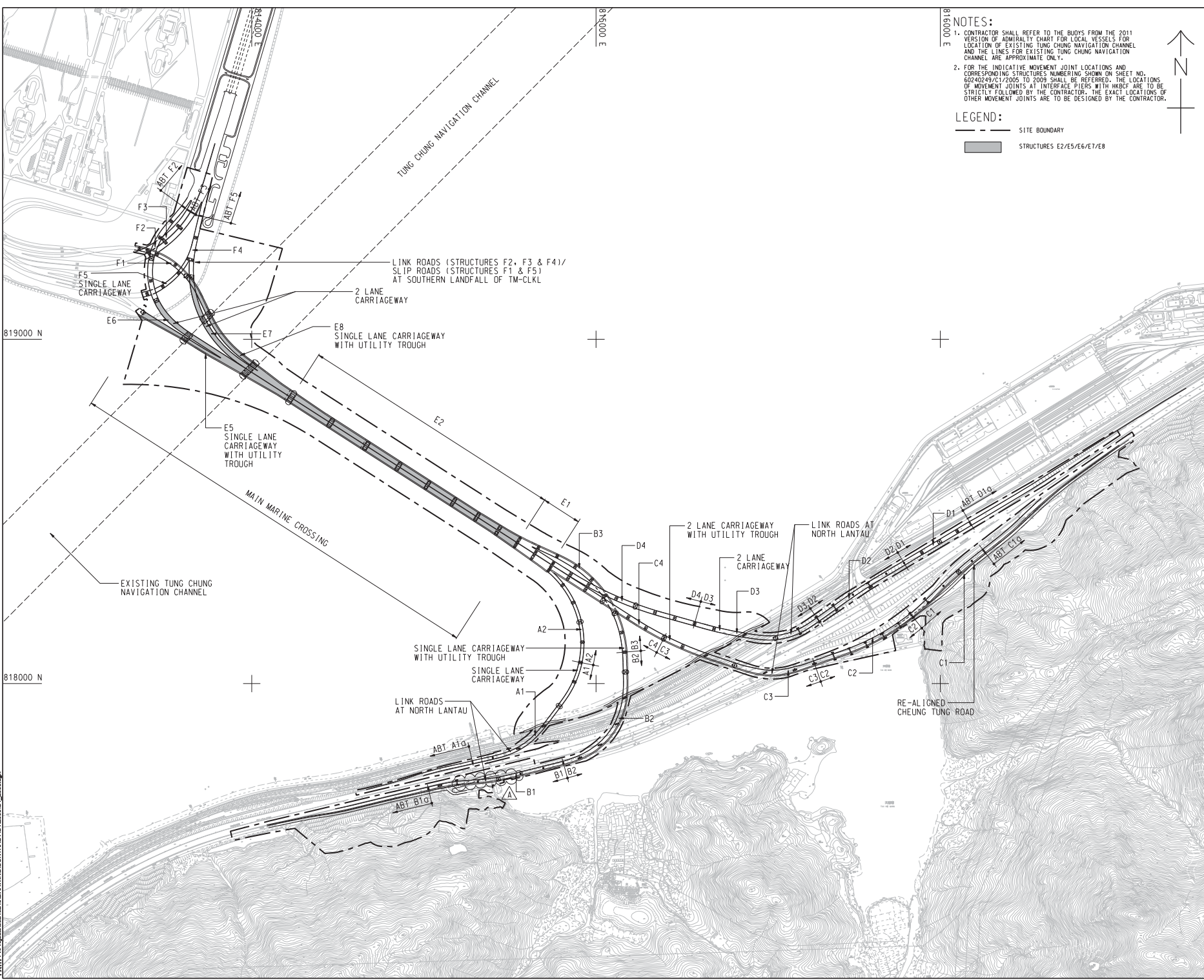
Figure 1.1

General Layout Plan of the Project

Environmental  
Resources  
Management



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 Project Management: Hinkley  
 Designer: LHM/BB  
 Checker: SLYT  
 Approver: CWN  
 ISO AT 50mm x 61mm  
 Only



**NOTES:**

- CONTRACTOR SHALL REFER TO THE BUOYS FROM THE 2011 VERSION OF ADMIRALTY CHART FOR LOCAL VESSELS FOR LOCATION OF EXISTING TUNG CHUNG NAVIGATION CHANNEL AND THE LINES FOR EXISTING TUNG CHUNG NAVIGATION CHANNEL ARE APPROXIMATE ONLY.
- FOR THE INDICATIVE MOVEMENT JOINT LOCATIONS AND CORRESPONDING STRUCTURES NUMBERING SHOWN ON SHEET NO. 60240249/C1/2005 TO 2009 SHALL BE REFERRED. THE LOCATIONS OF MOVEMENT JOINTS AT INTERFACE PIERS WITH HKBCF ARE TO BE STRICTLY FOLLOWED BY THE CONTRACTOR. THE EXACT LOCATIONS OF OTHER MOVEMENT JOINTS ARE TO BE DESIGNED BY THE CONTRACTOR.

**LEGEND:**

— SITE BOUNDARY

▬ STRUCTURES E2/E5/E6/E7/E8



**AECOM**

**PROJECT**  
TUEN MUN - CHEK LAP KOK LINK

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

**CLIENT**  
路政署  
HIGHWAYS DEPARTMENT  
香港路政署  
Hong Kong Project Management Office

**CONSULTANT**  
AECOM Asia Company Ltd.  
www.aecom.com

**SUB-CONSULTANTS**

# Figure 1.2a

**ISSUE/REVISION**

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**STATUS**

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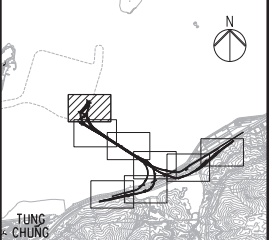
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**CONTRACT NO.**  
HY/2012/07

**SHEET TITLE**  
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GENERAL LAYOUT PLAN

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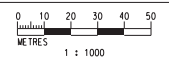


**KEY PLAN**

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

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 FOR CONTINUATION  
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C	SUBMISSION	RC	09/13				

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Client: **路政署 HIGHWAYS DEPARTMENT**  
 路政署 香港特別行政區 運輸署  
 Hong Kong - Zhuhai - Macao Bridge  
 Hong Kong Project Management Office

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

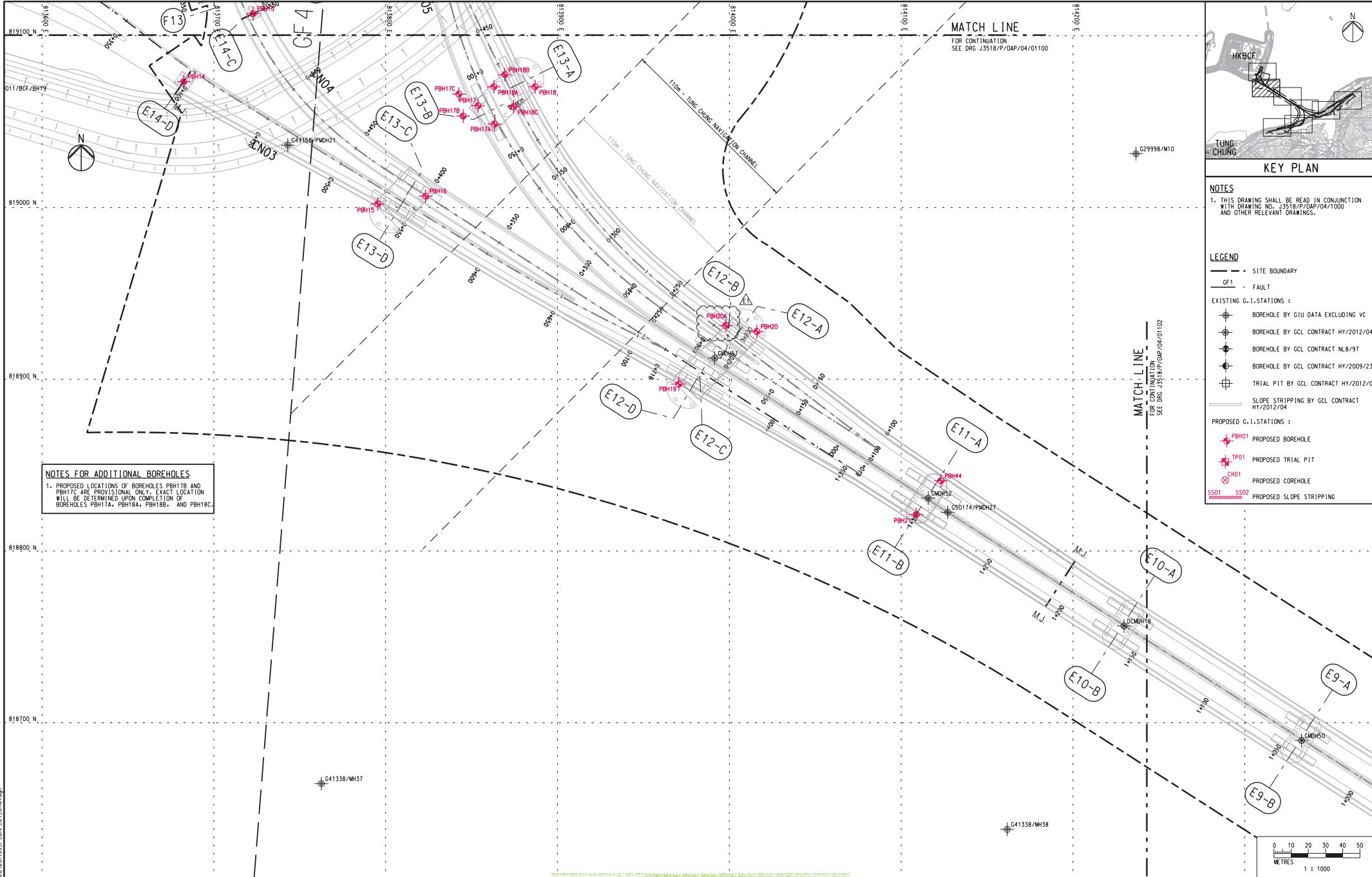
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**Contract No. HY/2012/07**  
**Tuen Mun - Chek Lap Kok Link**  
**Southern Connection Viaduct Section**

Originator: **ARUP**

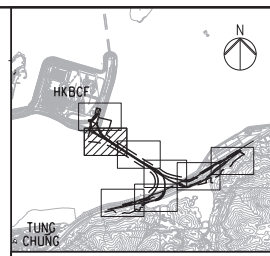
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FOR CONTINUATION  
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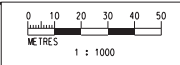


KEY PLAN

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

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



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D	SUBMISSION	RC	10/13				
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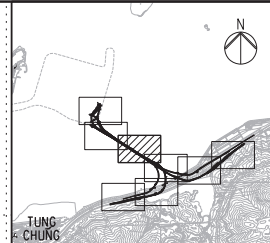
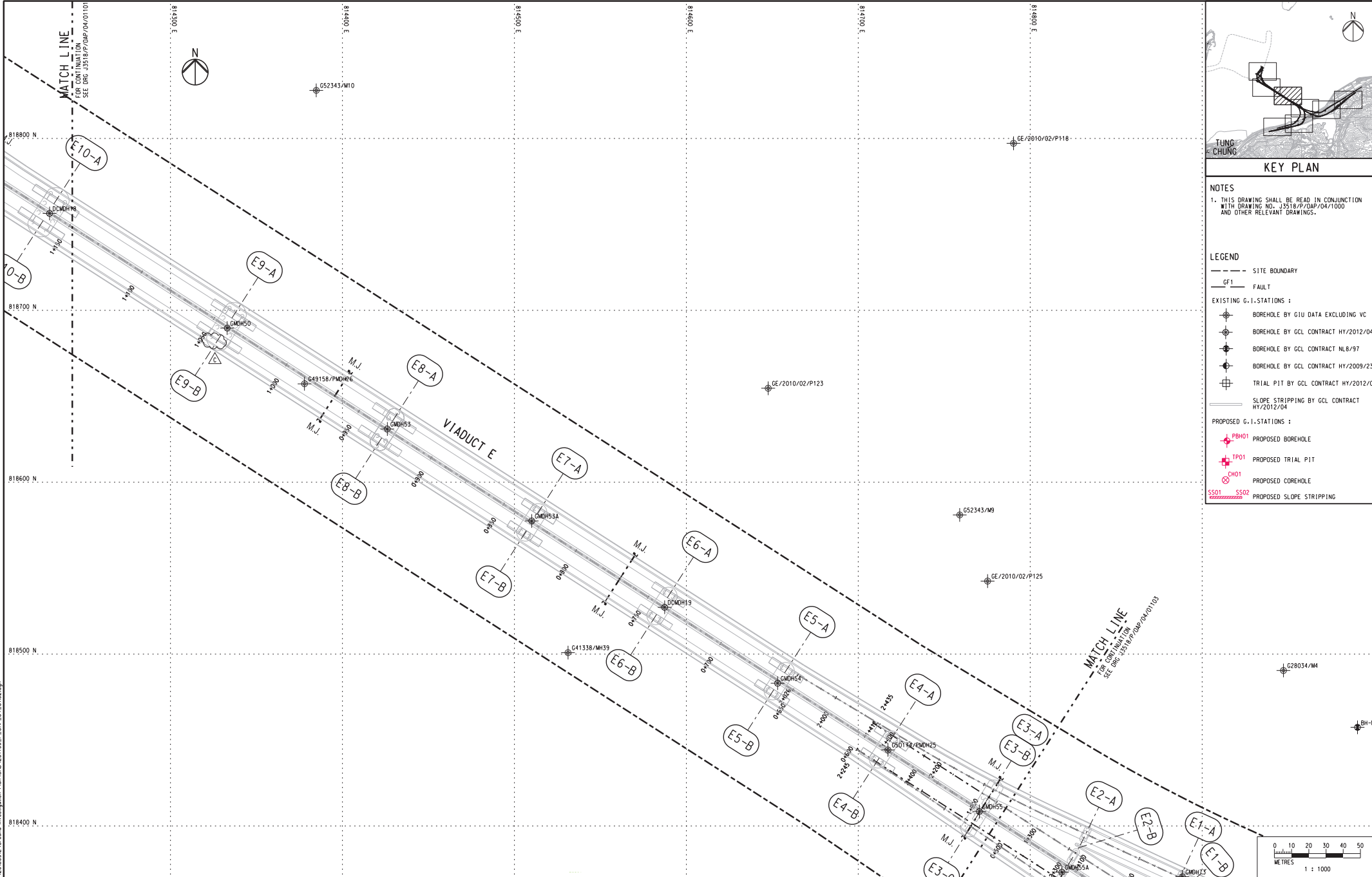
  

Client	路政署 HIGHWAYS DEPARTMENT 香港渠务局 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office
Supervising Officer	AECOM
Contractor	Gammon
Originator	ARUP

Project Title	Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section
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Drawing no.	J3518/P/OAP/04/01101
Rev.	E1

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**KEY PLAN**

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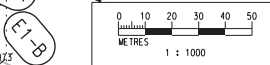
- LEGEND**
- SITE BOUNDARY
  - GF1- FAULT

EXISTING G.I.-STATIONS :

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

PROPOSED G.I.-STATIONS :

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



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

Checked	Approved
DS	DOP

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

Supervising Officer

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

Contractor

Originator

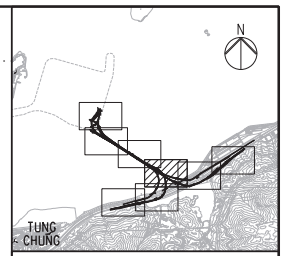
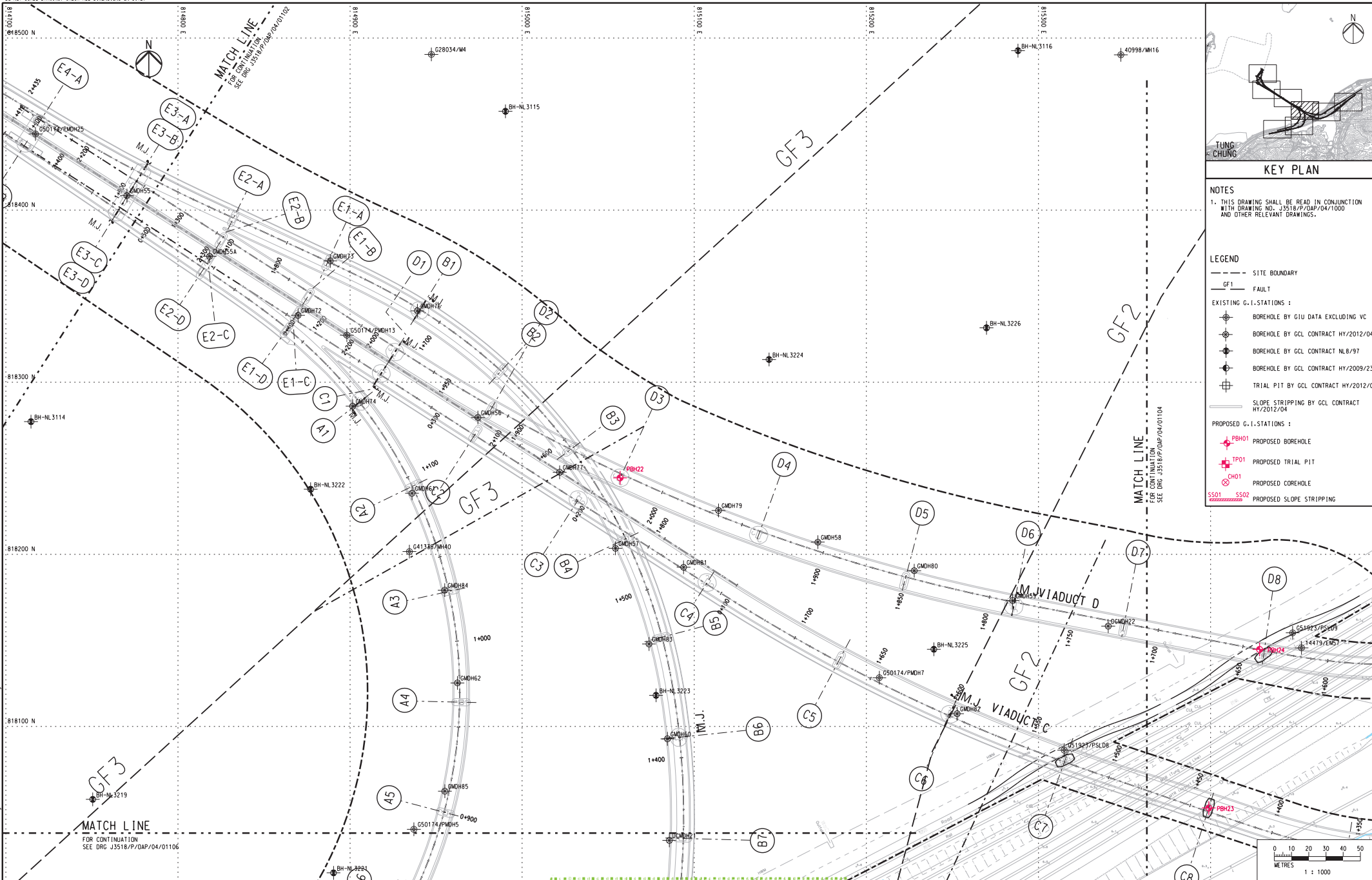
Drawing title  
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Drawing no. J3518/P/OAP/04/01102 Rev. C

Printed by : 12/09/2013  
 File name : J:\3518\9 Ground Investigation Plan\CAD\23498\_P\_OAP\_04\_01102.dgn



DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.



**NOTES**

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

**LEGEND**

--- SITE BOUNDARY

- - - FAULT

EXISTING G.I.-STATIONS :

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

PROPOSED G.I.-STATIONS :

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

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

Checked	Approved
DS	DOP

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

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

Supervising Officer: **AECOM**

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

Contractor: **Gammon**

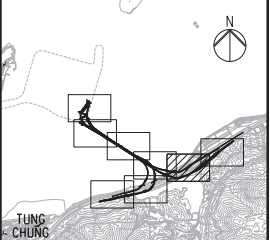
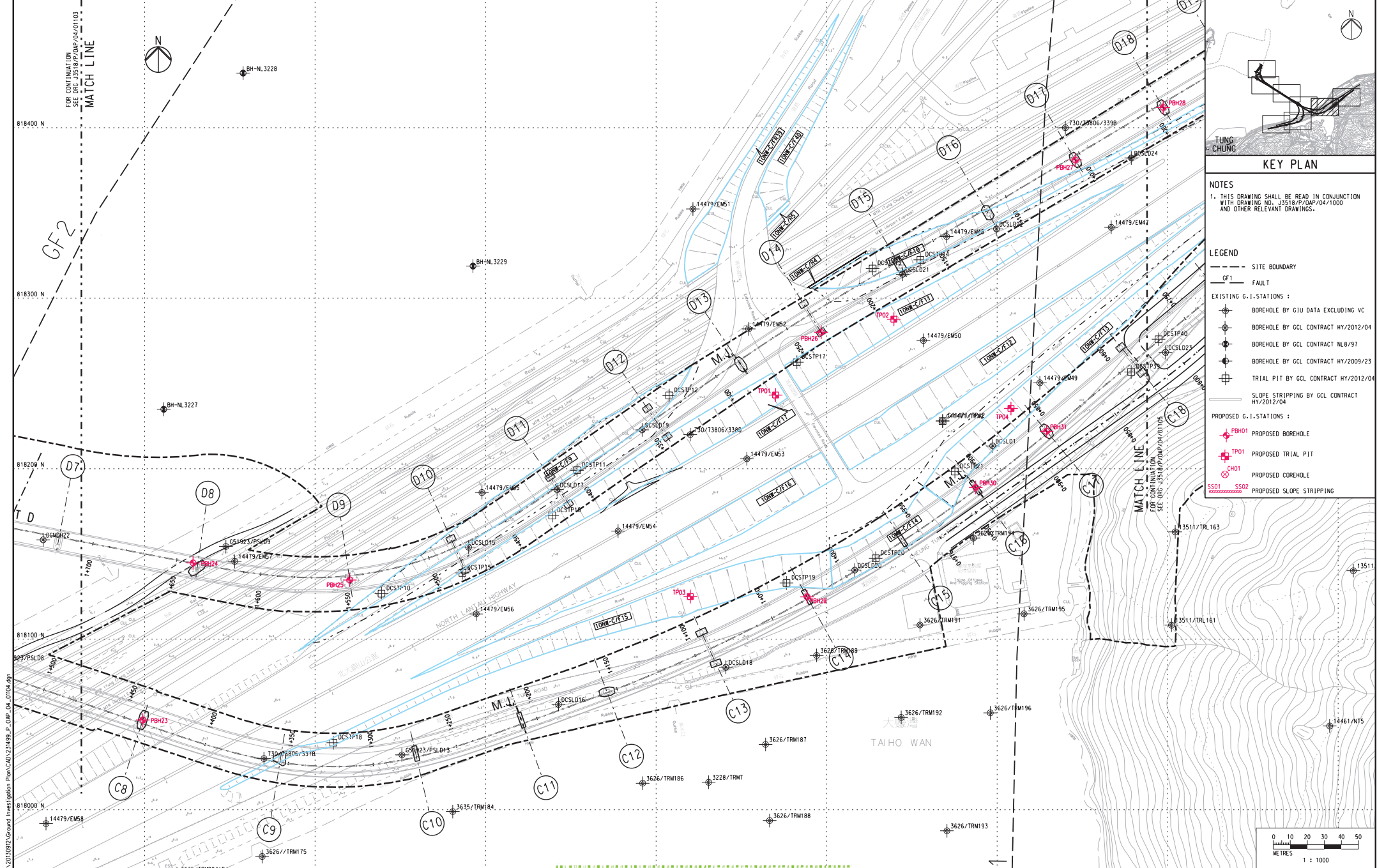
Originator: **ARUP**

Drawing title: **Figure 1.2e**

Drawing no. **J3518/P/OAP/04/01103** Rev. **c**

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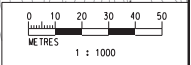
DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.



**KEY PLAN**

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

- LEGEND**
- - - SITE BOUNDARY
  - - - FAULT
  - - - GF1
  - 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  
 HIGHWAYS 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**

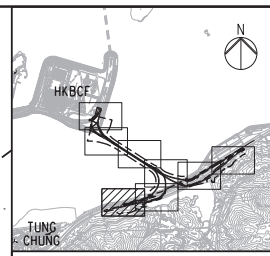
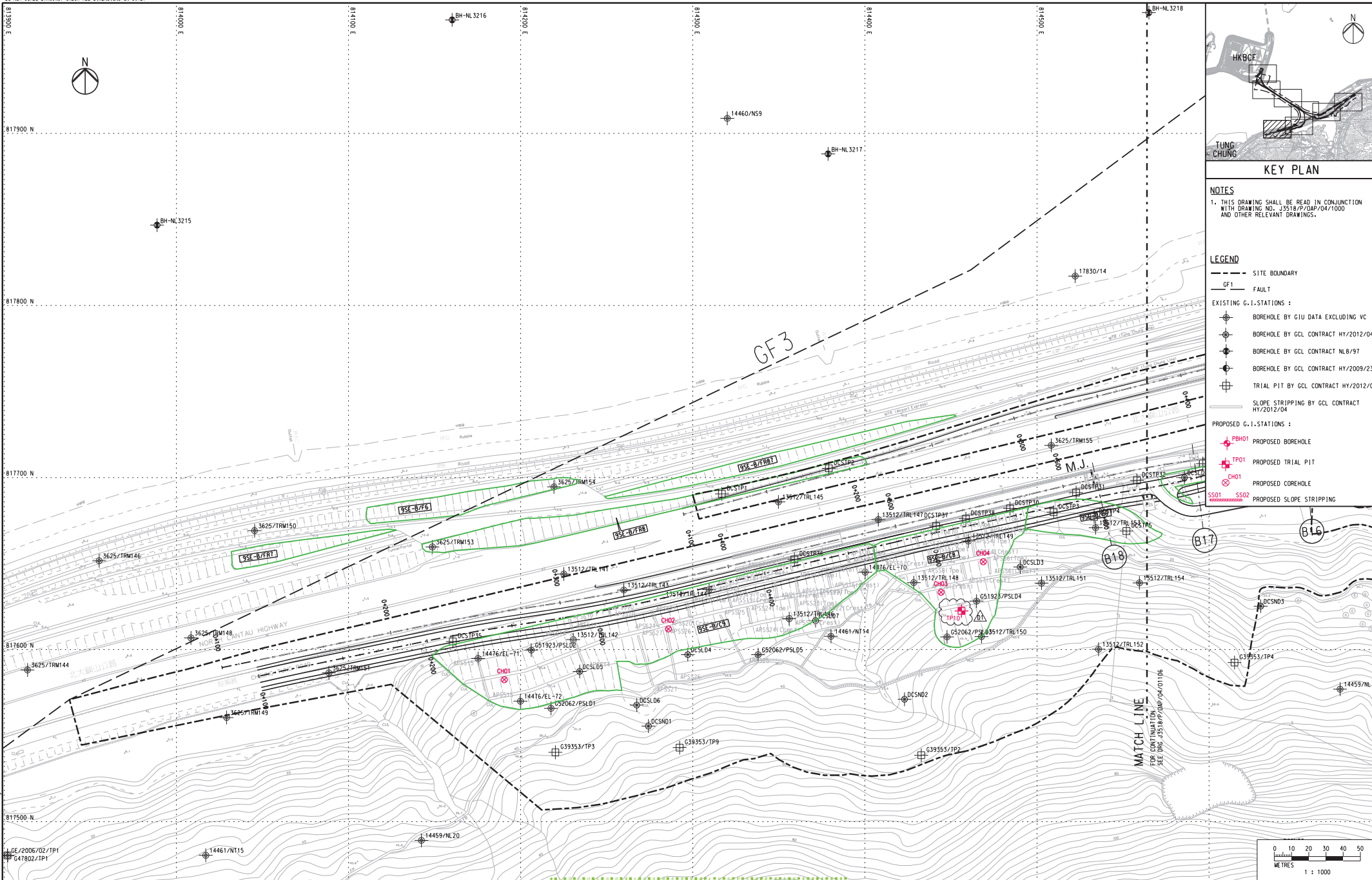
**Originator**  
**ARUP**

**Drawing title**  
**Figure 1.2f**

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

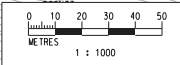
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DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.



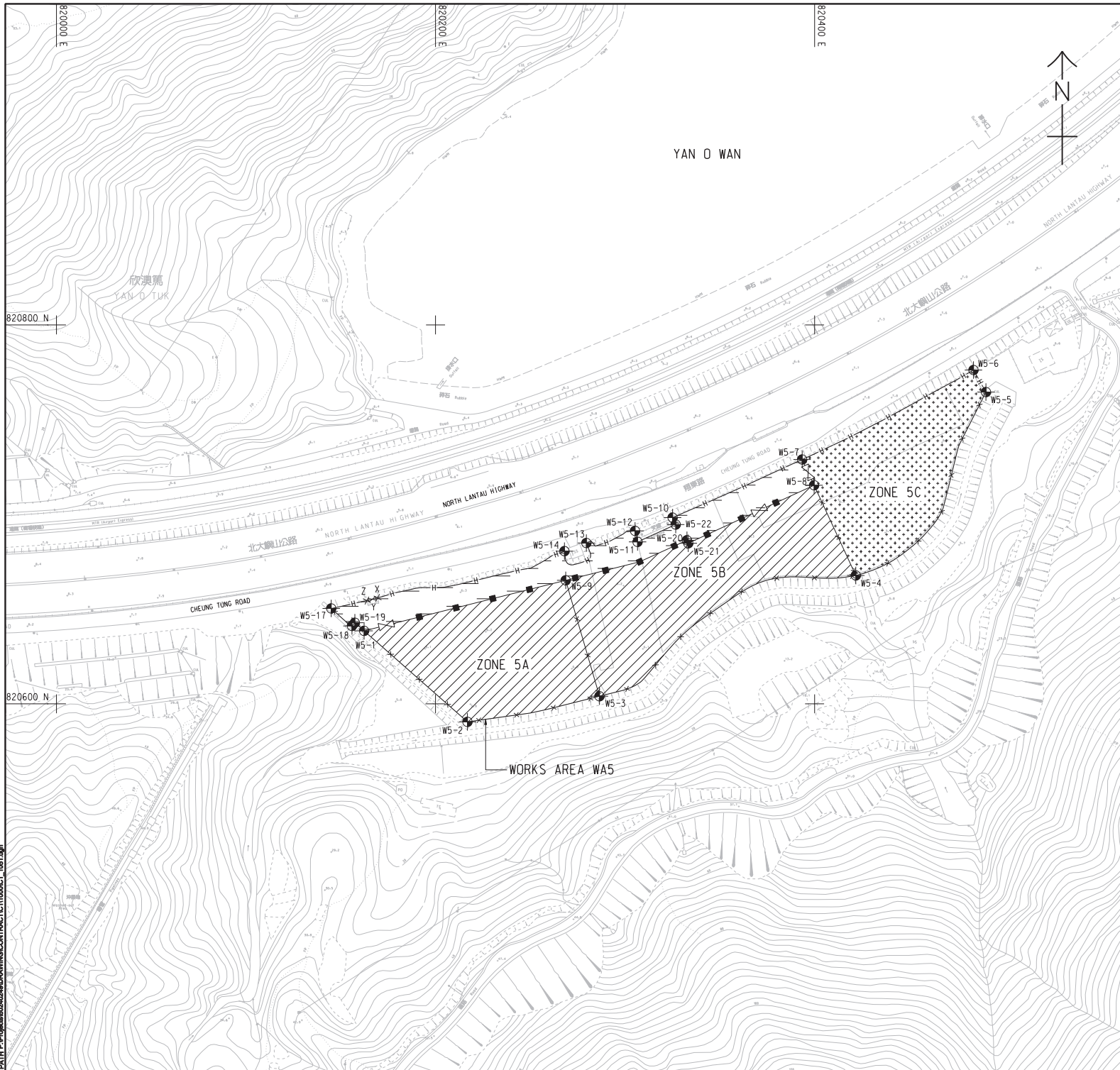
**NOTES**  
 1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. J3518/P/OAP/04/1000 AND OTHER RELEVANT DRAWINGS.

- LEGEND**
- SITE BOUNDARY
  - GF1 FAULT
  - EXISTING G.I. STATIONS:
    - ⊕ BOREHOLE BY GIU DATA EXCLUDING VC
    - ⊕ BOREHOLE BY GCL CONTRACT HY/2012/04
    - ⊕ BOREHOLE BY GCL CONTRACT NL6/97
    - ⊕ BOREHOLE BY GCL CONTRACT HY/2009/23
    - ⊕ TRIAL PIT BY GCL CONTRACT HY/2012/04
  - SLOPE STRIPPING BY GCL CONTRACT HY/2012/04
  - PROPOSED G.I. STATIONS:
    - ⊕ PBH01 PROPOSED BOREHOLE
    - ⊕ TP01 PROPOSED TRIAL PIT
    - ⊕ CH01 PROPOSED COREHOLE
    - SS01 SS02 PROPOSED SLOPE STRIPPING




Rev   Description   By   Date   Rev   Description   By   Date		Drawn   Date		Client		Project Title		Drawing title	
A   SUBMISSION   RC   07/13		RL   07/13		路政署 HIGHWAYS DEPARTMENT 港珠澳大桥香港工程管理局 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office		Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section		Figure 1.2g	
B   SUBMISSION   RC   07/13		Checked   Approved		Supervising Officer   Contractor		Originator		Drawing no. J3518/P/OAP/04/01107   Rev. D1	
C   SUBMISSION   RC   09/13		DS   DOP		AECOM   Gammon		ARUP		Scale: 1:1000 @ A1 / 1:2000 @ A3	
D1   FOR INTERNAL REVIEW   RC   11/13		Scale		1:1000 @ A1 / 1:2000 @ A3		1:1000 @ A1 / 1:2000 @ A3		1:1000 @ A1 / 1:2000 @ A3	







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**NOTES:**

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE WORKS AREA KEY PLAN IN SHEET NO. 60240249/C1/1000.
- THE SETTING OUT INFORMATION AND WORKS AREA CONDITIONS SHOWN IN THIS DRAWING ARE FOR REFERENCE ONLY. THE WORKS AREA BOUNDARY SHALL BE IN ACCORDANCE WITH THE ENGINEERING CONDITIONS FOR TEMPORARY GOVERNMENT LAND ALLOCATION NO. T15 619. IN CASE OF DISCREPANCY BETWEEN THE BOUNDARY SHOWN ON THIS DRAWING AND THE BOUNDARY INDICATED ON THE ENGINEERING CONDITIONS, THE LATTER SHALL PREVAIL.
- DEMARCATION OF THE WORKS AREA SHALL BE DETERMINED ON SITE.
- REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NOS. H6110 AND H6111 FOR DETAILS OF HOARDING.
- REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NOS. H6121 AND H6122 FOR DETAILS OF CHAIN LINK FENCE.
- REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NO. H6121 FOR DETAILS OF GATE.
- CHAIN LINK FENCE SHALL BE ERECTED ALONG THE WORKS AREA BOUNDARY. THE ALIGNMENT AND EXTENT OF CHAIN LINK FENCE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISING OFFICER.
- THE LOCATION AND WIDTH OF GATE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISING OFFICER.
- NO STRUCTURES SHALL BE ERECTED OTHER THAN SUCH STRUCTURES NOT EXCEEDING TWO STOREYS IN HEIGHT, WHICH ARE APPROVED BY THE DISTRICT LANDS OFFICER AS BEING APPROPRIATE FOR THE USE OF THE SITE AS A WORKS AREA.
- THE TENTATIVE OCCUPATION PERIOD SHALL BE REFERRED TO EMPLOYER'S REQUIREMENTS PART 2 AND PART 14 SECTION 1 CLAUSE 1.45A.
- THE WORKS AREAS SHOWN ON THIS DRAWING ARE TO BE SHARE-USED AMONG THE CONTRACTS OF TM-CLK RELATED CONTRACTS. THE AREAS HATCHED WITH  ARE TENTATIVELY ALLOCATED FOR THE USE OF THIS CONTRACT.
- THE COMMON AREA SHALL BE CONCRETE PAVED BY THE CONTRACTOR.

**LEGEND:**

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

**SETTING OUT COORDINATES OF WORKS AREA W5**

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

**ISSUE/REVISION**

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

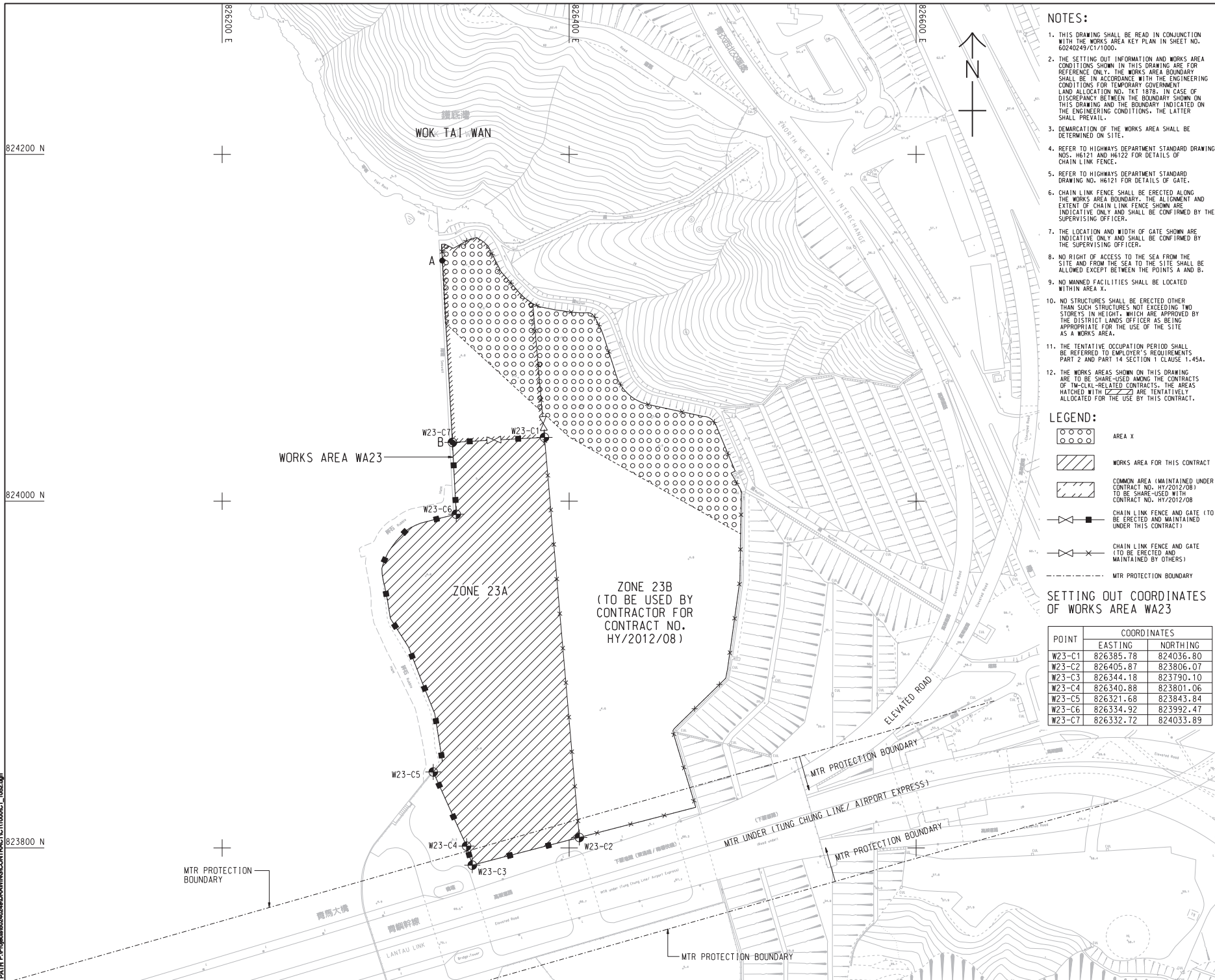
**STATUS**

SCALE	DIMENSION UNIT
A1:1000	METRES

**KEY PLAN**

**Figure 1.2h**

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**NOTES:**

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE WORKS AREA KEY PLAN IN SHEET NO. 60240249/CT1/000.
- THE SETTING OUT INFORMATION AND WORKS AREA CONDITIONS SHOWN IN THIS DRAWING ARE FOR REFERENCE ONLY. THE WORKS AREA BOUNDARY SHALL BE IN ACCORDANCE WITH THE ENGINEERING CONDITIONS FOR TEMPORARY GOVERNMENT LAND ALLOCATION NO. TKT 1879. IN CASE OF DISCREPANCY BETWEEN THE BOUNDARY SHOWN ON THIS DRAWING AND THE BOUNDARY INDICATED ON THE ENGINEERING CONDITIONS, THE LATTER SHALL PREVAIL.
- DEMARICATION OF THE WORKS AREA SHALL BE DETERMINED ON SITE.
- REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NOS. H6121 AND H6122 FOR DETAILS OF CHAIN LINK FENCE.
- REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NO. H6121 FOR DETAILS OF GATE.
- CHAIN LINK FENCE SHALL BE ERRECTED ALONG THE WORKS AREA BOUNDARY. THE ALIGNMENT AND EXTENT OF CHAIN LINK FENCE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISING OFFICER.
- THE LOCATION AND WIDTH OF GATE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISING OFFICER.
- NO RIGHT OF ACCESS TO THE SEA FROM THE SITE AND FROM THE SEA TO THE SITE SHALL BE ALLOWED EXCEPT BETWEEN THE POINTS A AND B.
- NO MANNED FACILITIES SHALL BE LOCATED WITHIN AREA X.
- NO STRUCTURES SHALL BE ERRECTED OTHER THAN SUCH STRUCTURES NOT EXCEEDING TWO STOREYS IN HEIGHT, WHICH ARE APPROVED BY THE DISTRICT LANDS OFFICER AS BEING APPROPRIATE FOR THE USE OF THE SITE AS A WORKS AREA.
- THE TENTATIVE OCCUPATION PERIOD SHALL BE REFERRED TO EMPLOYER'S REQUIREMENTS PART 2 AND PART 14 SECTION 1 CLAUSE 1.45A.
- THE WORKS AREAS SHOWN ON THIS DRAWING ARE TO BE SHARE-USED AMONG THE CONTRACTS OF TM-CLKL-RELATED CONTRACTS. THE AREAS HATCHED WITH [diagonal lines] ARE TENTATIVELY ALLOCATED FOR THE USE BY THIS CONTRACT.

**LEGEND:**

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

**SETTING OUT COORDINATES OF WORKS AREA WA23**

POINT	COORDINATES	
	EASTING	NORTHING
W23-C1	826385.78	824036.80
W23-C2	826405.87	823806.07
W23-C3	826344.18	823790.10
W23-C4	826340.88	823801.06
W23-C5	826321.68	823843.84
W23-C6	826354.92	823992.47
W23-C7	826332.72	824033.89

**AECOM**

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

**CLIENT**  
 路政署 HIGHWAYS DEPARTMENT  
 港務局 港務工程管理局  
 Hong Kong - Zhuhai - Hainan Bridge  
 Hong Kong Project Management Office

**CONSULTANT**  
 AECOM Asia Company Ltd.  
 www.aecom.com

**SUB-CONSULTANTS**  
 2411000018

**ISSUE/REVISION**

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

**STATUS**

**SCALE**  
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**DIMENSION UNIT**  
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 METRES

**KEY PLAN**

**PROJECT NO.**  
 60240249

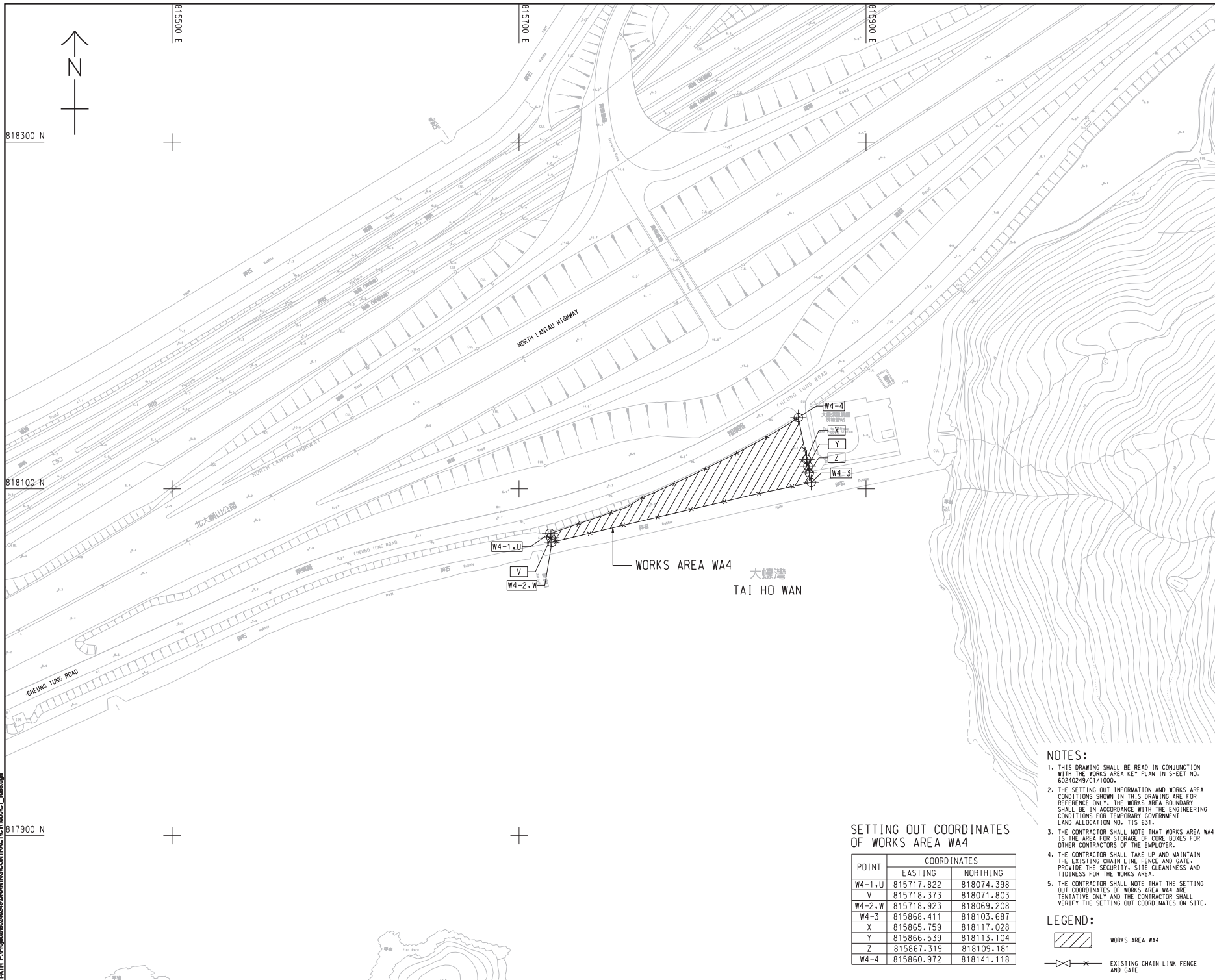
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 HY/2012/07

**SHEET TITLE**  
 WORKS AREA AND HOARDING PLAN

**SHEET NUMBER**  
 60240249/CT1/052

SHEET 2 OF 2

**Figure 1.2i**



SETTING OUT COORDINATES OF WORKS AREA WA4

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

- NOTES:**
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE WORKS AREA KEY PLAN IN SHEET NO. 60240249/C1/100.
  - THE SETTING OUT INFORMATION AND WORKS AREA CONDITIONS SHOWN IN THIS DRAWING ARE FOR REFERENCE ONLY. THE WORKS AREA BOUNDARY SHALL BE IN ACCORDANCE WITH THE ENGINEERING CONDITIONS FOR TEMPORARY GOVERNMENT LAND ALLOCATION NO. T15 631.
  - THE CONTRACTOR SHALL NOTE THAT WORKS AREA WA4 IS THE AREA FOR STORAGE OF CORE BOXES FOR OTHER CONTRACTORS OF THE EMPLOYER.
  - THE CONTRACTOR SHALL TAKE UP AND MAINTAIN THE EXISTING CHAIN LINK FENCE AND GATE. PROVIDE THE SECURITY, SITE CLEANLINESS AND TIDINESS FOR THE WORKS AREA.
  - THE CONTRACTOR SHALL NOTE THAT THE SETTING OUT COORDINATES OF WORKS AREA WA4 ARE TENTATIVE ONLY AND THE CONTRACTOR SHALL VERIFY THE SETTING OUT COORDINATES ON SITE.

**LEGEND:**

WORKS AREA WA4

EXISTING CHAIN LINK FENCE AND GATE

**AECOM**

**PROJECT**  
 TUEN MUN - CHEK LAP KOK LINK

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

**CLIENT**  
 路政署 DEPARTMENT OF HIGHWAYS  
 港務局 港務工程管理局  
 Hong Kong + Zhuhai + Hainan Bridge  
 Hong Kong Project Management Office

**CONSULTANT**  
 AECOM Asia Company Ltd.  
 www.aecom.com

**SUB-CONSULTANTS**

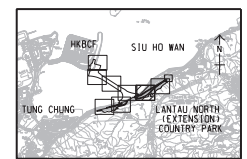
# Figure 1.2j

**ISSUE/REVISION**

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

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**DIMENSION UNIT**  
 METRES



**PROJECT NO.**  
 60240249

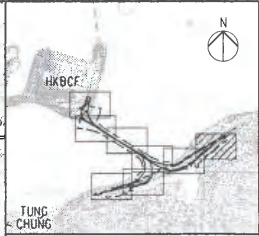
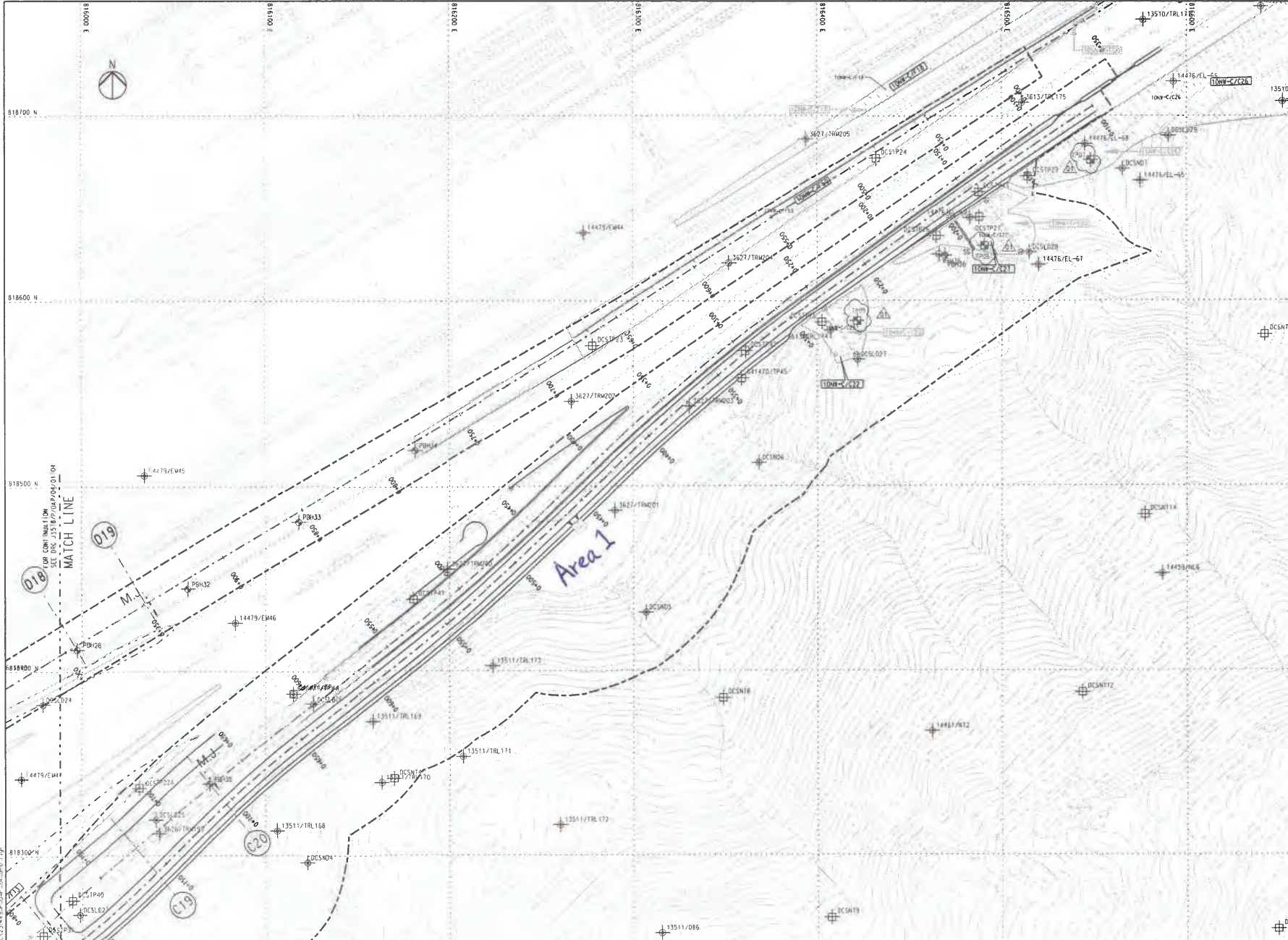
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 HY/2012/07

**SHEET TITLE**  
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**SHEET NUMBER**  
 60240249/C1/1053

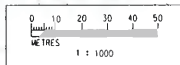
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**NOTES**  
 THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. J3518/P/OAP/04/1000 AND OTHER RELEVANT DRAWINGS.

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

Scale	Contractor	Originator
1:1000 @ A1 / 1:2000 @ A3	<b>AZCOM</b>	<b>GAMMON</b>

**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

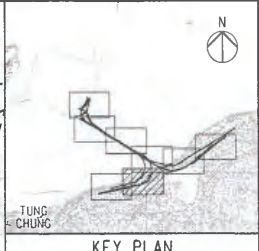
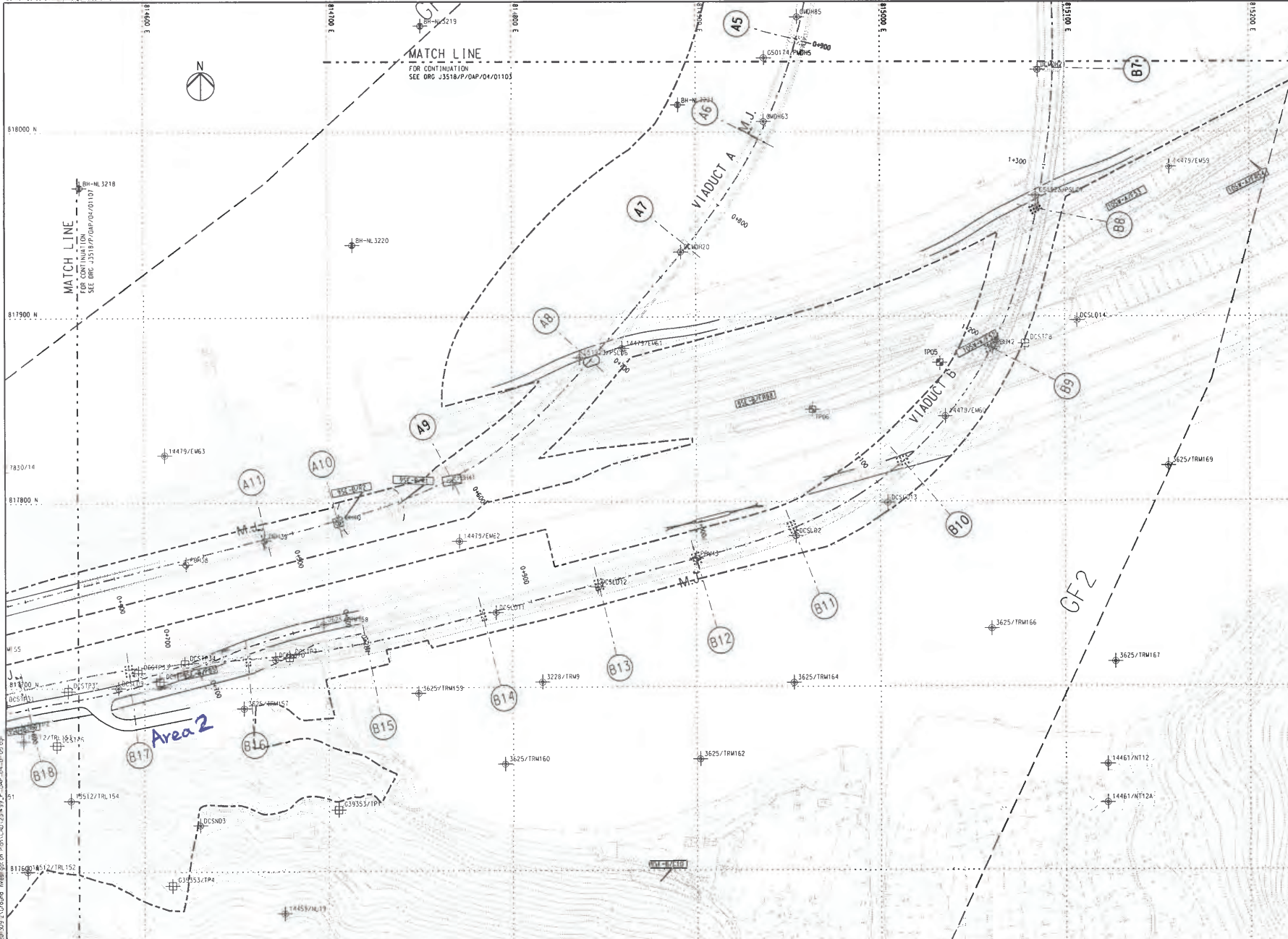
**Contractor**  
**ARUP**

**Drawing title**  
**Figure 1.2k**

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

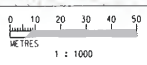
1:1000 @ A1 / 1:2000 @ A3  
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**NOTES**  
 1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. J3518/P/OAP/04/1000 AND OTHER RELEVANT DRAWINGS.

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



Rev	Description	By	Date	Rev	Description	By	Date
A	SUBMISSION	RL	07/13				
B	SUBMISSION	RL	07/13				
C	SUBMISSION	RL	07/13				

Drawn	Date	Client	<b>路政署 HIGHWAYS DEPARTMENT</b> 港珠澳大橋香港工程管理有限公司 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office
RL	07/13	Project Title Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section	
Checked	Approved	Supervising Officer	Originator
DS	DOP	ARUP	ARUP
Scale	1:1000 @ A1 / 1:2000 @ A3	Drawing no. J3518/P/OAP/04/01106 Rev c	



**Table 1.1 Contact Information of Key Personnel**

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

#### **1.4 SUMMARY OF CONSTRUCTION WORKS**

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

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

##### ***Marine Works***

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

##### ***Land-based Works***

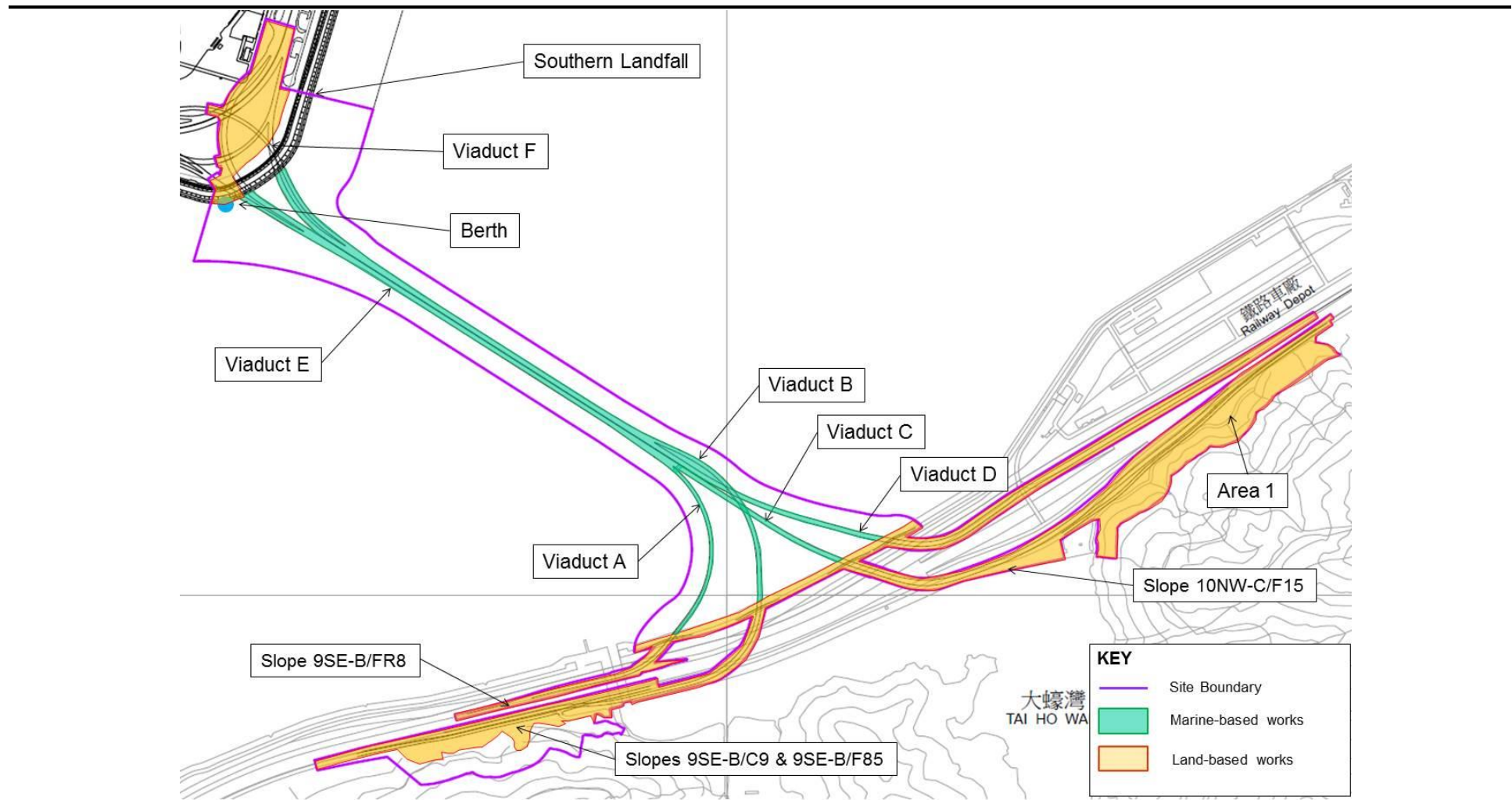
- Pier construction;
- Re-alignment of Cheung Tung Road;
- Road works along North Lantau Highway;

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

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

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

Figure 1.3 Locations of Major Construction Activities in the Reporting Month



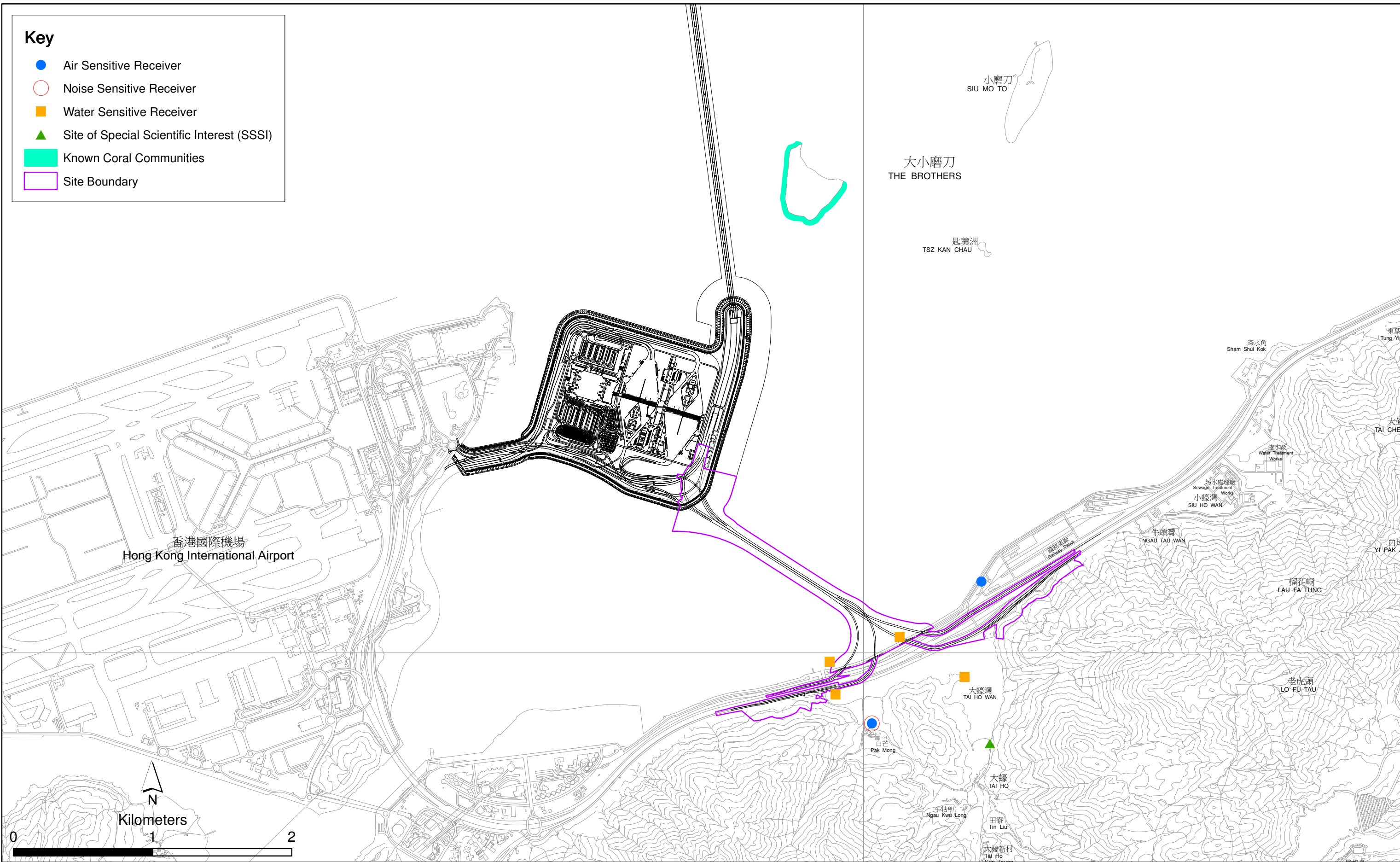


Figure 1.4

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

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

## 2.1 AIR QUALITY

### 2.1.1 Monitoring Requirements and Equipment

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

**Table 2.1** *Locations of Impact Air Quality Monitoring Stations*

Monitoring Station	Location	Description	Monitoring Dates
ASR 9	MTR Depot	On the ground nearby MTR Depot Entrance	3, 6, 12, 18, 24 and 27 April 2017
ASR 8A	Area 4	On ground at the works area, Area 4	3, 6, 12, 18, 24 and 27 April 2017

High Volume Samplers (HVSs) were used for carried out 1-hour and 24-hour TSP monitoring on 3, 6, 12, 18, 24 and 27 April 2017 at ASR8A and ASR9 in accordance with the requirements of the Updated EM&A Manual. The TSP monitoring stations are illustrated in *Figure 2.1* and detailed in *Table 2.1*. Wind meter was deployed at Area 4 for logging wind speed and wind direction. Copies of the calibration certificates for the equipment are presented in *Appendix E*. Details of the deployed equipment are given in *Table 2.2*.

**Key**

- Alternative Air Monitoring Station
- Site Boundary

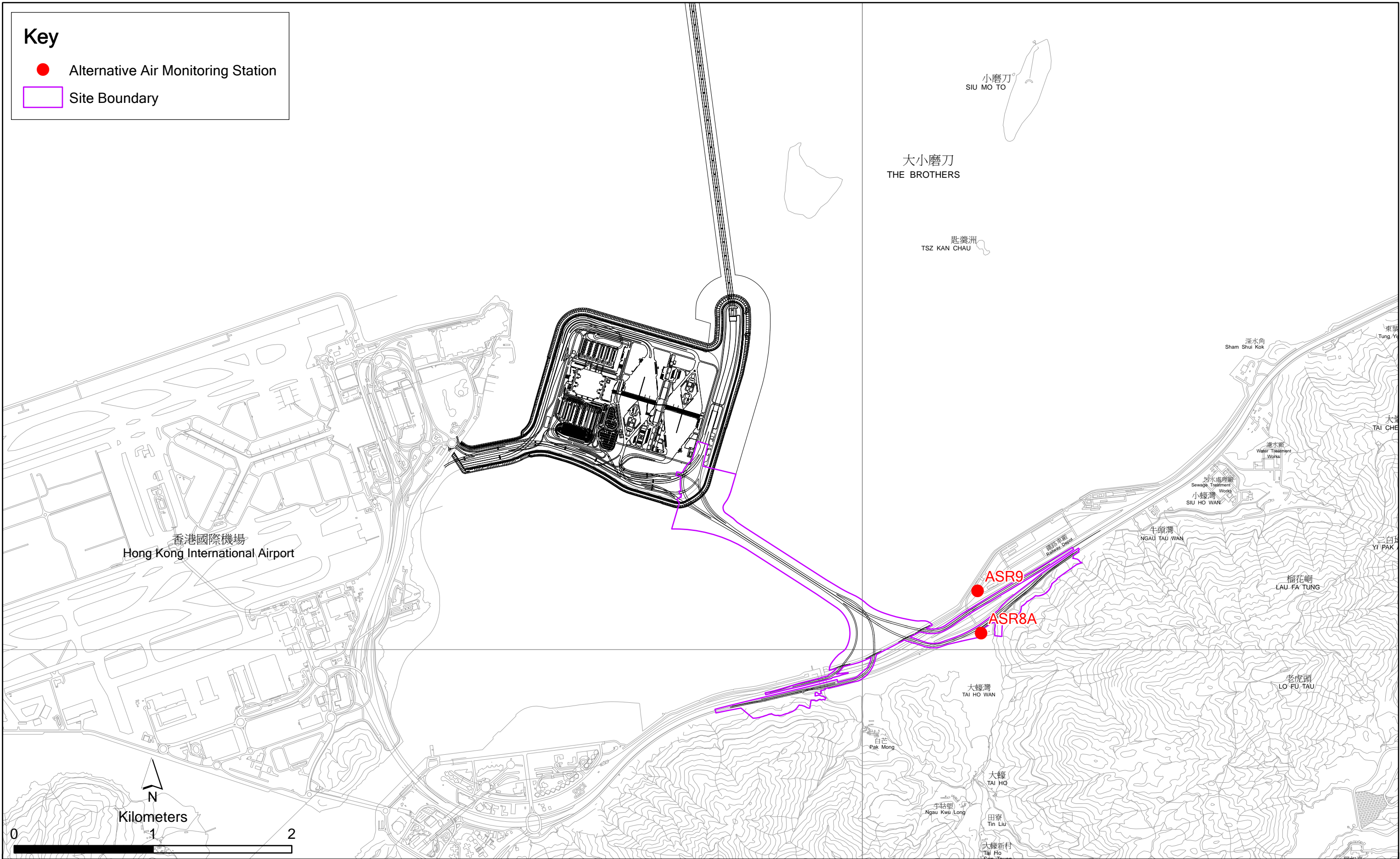


Figure 2.1

Locations of Air Quality Monitoring Stations

**Table 2.2 Air Quality Monitoring Equipment**

<b>Equipment</b>	<b>Brand and Model</b>
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 April 2017 is provided in *Appendix F*.

**2.1.3 Results and Observations**

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

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

<b>Monitoring Station</b>	<b>Average (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Range (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Action Level (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Limit Level (<math>\mu\text{g}/\text{m}^3</math>)</b>
ASR 8A	90	59-115	394	500
ASR 9	141	50-231	393	500

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

<b>Monitoring Station</b>	<b>Average (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Range (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Action Level (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Limit Level (<math>\mu\text{g}/\text{m}^3</math>)</b>
ASR 8A	51	42-62	178	260
ASR 9	65	50-74	178	260

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

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

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

## 2.2 NOISE MONITORING

### 2.2.1 Monitoring Requirements and Equipment

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

Noise monitoring was performed on 3, 6, 12, 18, 24 and 27 April 2017 using sound level meter at the designated monitoring station NSR1A (*Figure 2.2; Table 2.5*) in accordance with the requirements stipulated in the Updated EM&A Manual. Acoustic calibrator was deployed to check the sound level meters at a known sound pressure level. Details of the deployed equipment are provided in *Table 2.6*. Copies of the calibration certificates for the equipment are presented in *Appendix E*.

**Table 2.5** *Location of Impact Noise Monitoring Station*

Monitoring Station	Location	Description	Parameter	Frequency and Duration	Monitoring Dates
NSR 1A	Pak Mong Village Pavilion	On the ground at the village entrance	30-minute measurement at each monitoring station between 0700 and 1900 on normal weekdays (Monday to Saturday). $L_{eq}$ , $L_{10}$ and $L_{90}$ would be recorded.	At least once per week	3, 6, 12, 18, 24 and 27 April 2017

**Table 2.6** *Noise Monitoring Equipment*

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





Figure 2.2

Location of Noise Monitoring Station

## 2.2.2 *Monitoring Schedule for the Reporting Month*

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

## 2.2.3 *Results and Observations*

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

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

	Average , dB(A), Leq (30mins)	Range, dB(A), Leq (30mins)	Limit Level, dB(A), Leq (30mins)
NSR 1A	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, hammering and excavation works, nearby traffic noise and aircraft noise.

## 2.3 *WATER QUALITY MONITORING*

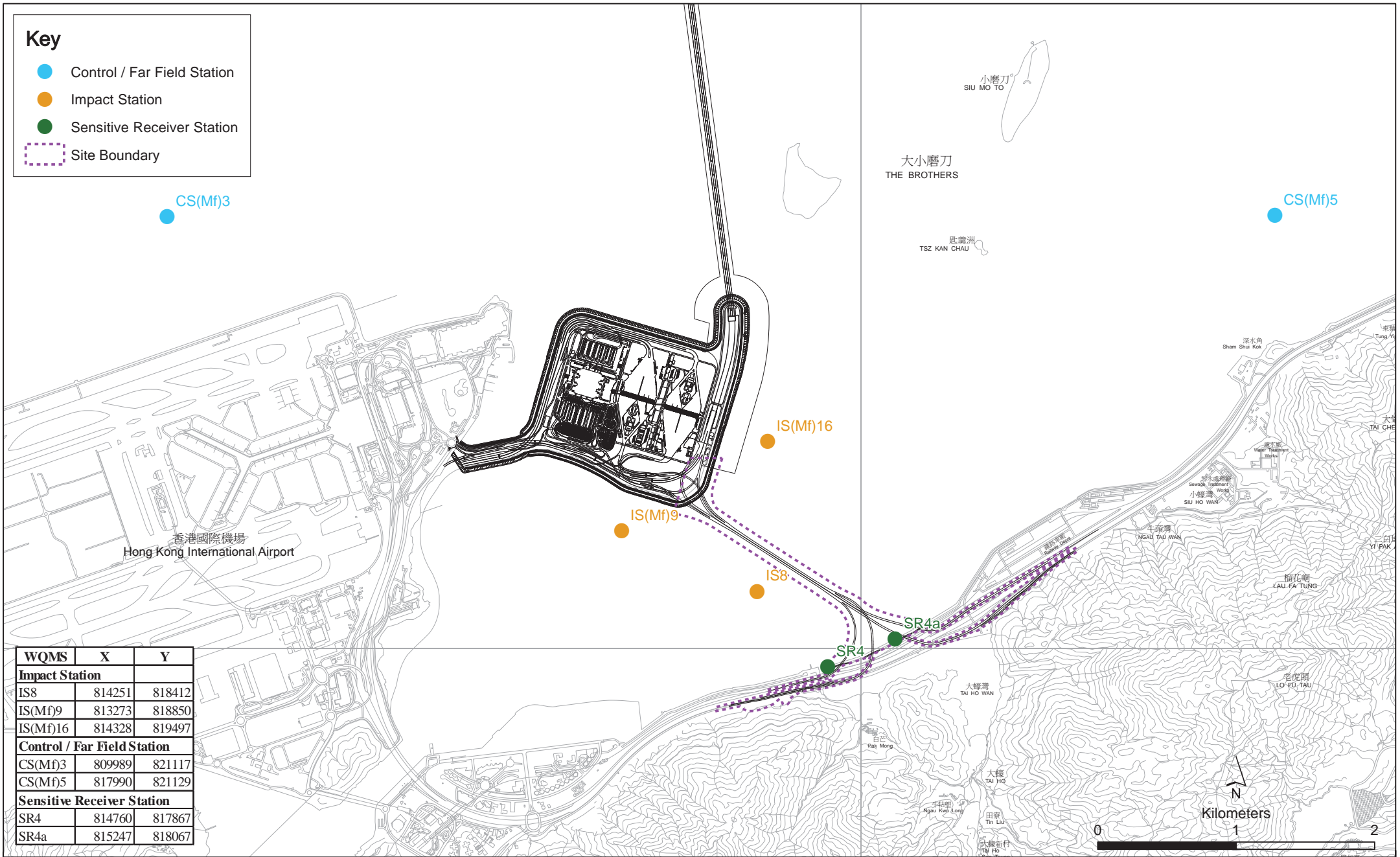
### 2.3.1 *Monitoring Requirements and Equipment*

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

Figure 2.3

Locations of Water Quality Monitoring Stations

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

Station ID	Type	Coordinates		*Parameters, unit	Frequency	Depth
		Easting	Northing			
IS(Mf)9	Impact Station (Close to HKBCF construction site)	813273	818850	<ul style="list-style-type: none"> <li>• Temperature(°C)</li> <li>• pH (pH unit)</li> <li>• Turbidity (NTU)</li> <li>• Water depth (m)</li> <li>• Salinity (ppt)</li> <li>• Dissolved Oxygen (DO) (mg/L and % of saturation)</li> <li>• Suspended Solid (SS) (mg/L)</li> </ul>	Impact monitoring: 3 days per week, at mid-flood and mid-ebb tides during the construction period of the Contract	3 water depths: 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted
IS(Mf)16	Impact Station (Close to HKBCF construction site)	814328	819497			
IS8	Impact Station (Close to HKBCF construction site)	814251	818412			
SR4	Sensitive receiver (Tai Ho Inlet)	814760	817867			
SR4a	Sensitive receiver	815247	818067			
CS(Mf)3	Control Station	809989	821117			
CS(Mf)5	Control Station	817990	821129			

\*Notes:

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

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

**Table 2.9** *Water Quality Monitoring Equipment*

Equipment	Brand and Model
DO and Salinity	YSI Pro2030
Turbidity meter	HACH Model 2100Q
pH meter	HANNA HI8314 / 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 April 2017 is provided in *Appendix F*. The water quality monitoring on 04 April 2017 was cancelled due to suspension of marine works during holiday.

### 2.3.3 *Results and Observations*

In total of 12 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 Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) from the Contract. In order to fulfil the EM&A requirements and make good use of available resources, the on-going impact line transect dolphin monitoring data collected by HyD's Contract No. HY/2011/03 Hong Kong-Zhuhai-Macao Bridge. Hong Kong Link Road - Section between Scenic Hill and Hong Kong Boundary Crossing Facilities on the monthly basis is adopted to avoid duplicates of survey effort.

### 2.4.2 *Monitoring equipment*

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

**Table 2.10** *Dolphin Monitoring Equipment*

<b>Equipment</b>	<b>Model</b>
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.

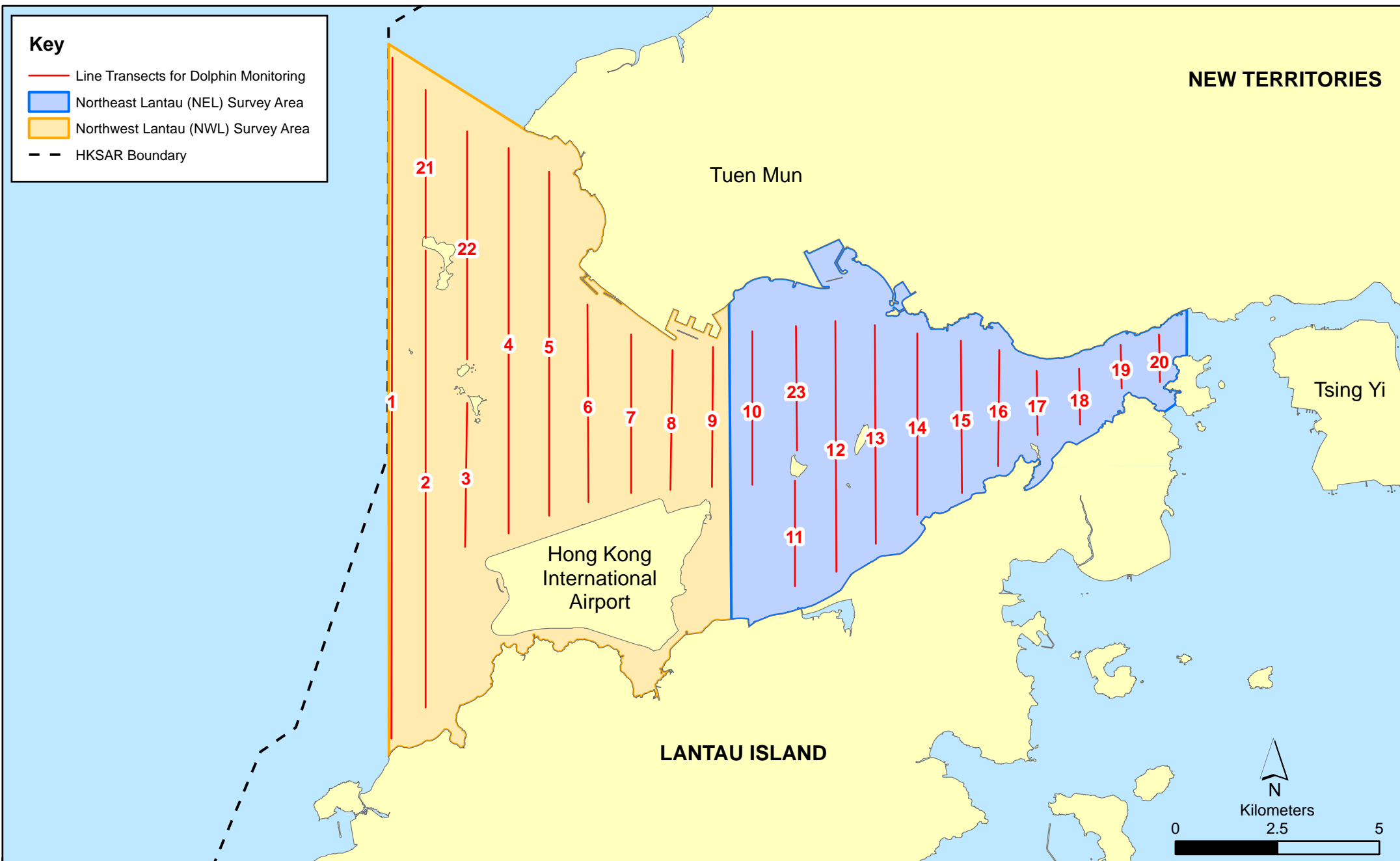


Figure 2.4

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 12, 20, 24 and 26 April 2017 (*Appendix F*).

## 2.4.7 *Results and Observations*

A total of 273.33 km of survey effort was collected, with 100.0% 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 April 2017. Among the two areas, 105.03 km and 168.30 km of survey effort were collected from NEL and NWL survey areas, respectively. The total survey effort conducted on primary and secondary lines were 189.06 km and 84.27 km, respectively. The survey efforts are summarized in *Appendix K*.

One (1) group of 2 Chinese White Dolphins were sighted during the two sets of monitoring surveys in April 2017. The lone (1) dolphin sighting was made in NWL, while none was sighted in NEL. During the surveys in April 2017, the sighting was made during on-effort search on primary lines. The dolphin group was not associated with operating fishing vessel and was 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 April 2017 are shown in *Tables 2.12 & 2.13*.

**Table 2.12 *Individual Survey Event Encounter Rates***

		Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)	Encounter rate (ANI) (no. of dolphins from all on-effort sightings per 100 km of survey effort)
		Primary Lines Only	Primary Lines Only
NEL	Set 1: Apr 12 <sup>th</sup> / 20 <sup>th</sup>	0.0	0.0
	Set 2: Apr 24 <sup>th</sup> / 26 <sup>th</sup>	0.0	0.0
NWL	Set 1: Apr 12 <sup>th</sup> / 20 <sup>th</sup>	1.7	3.4
	Set 2: Apr 24 <sup>th</sup> / 26 <sup>th</sup>	0.0	0.0

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

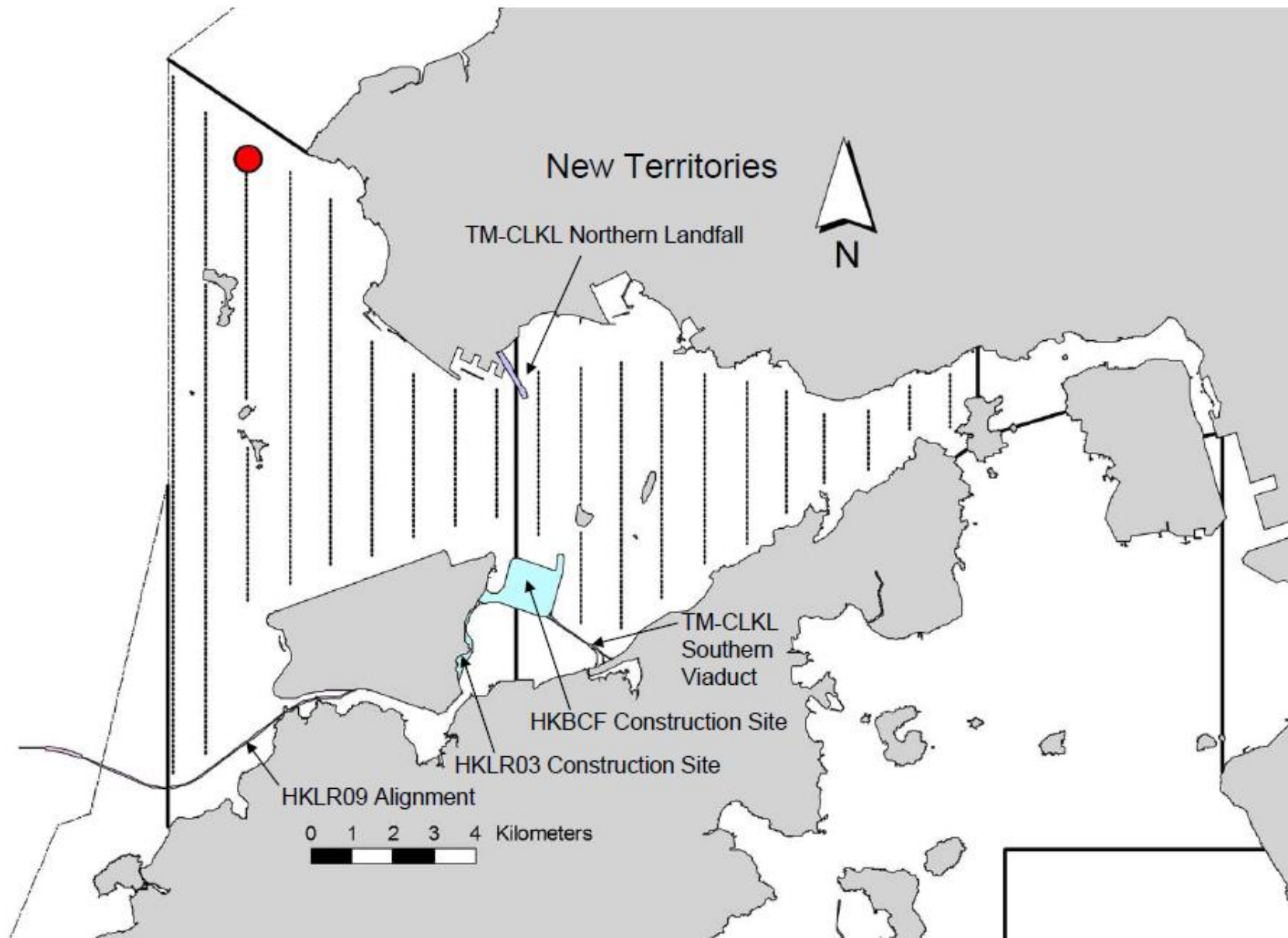


Figure 2.5

Date 7/10/2016

HY/2012/07 TM-CLKL Southern Connection Viaduct Section  
 The distribution of dolphin sightings during the reporting period  
 (Source: Adopted from HKLR03 Monitoring Survey in April 2017)

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
<b>Northeast Lantau</b>	0.0	0.0	0.0	0.0
<b>Northwest Lantau</b>	0.8	0.6	1.6	1.2

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

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

**2.4.8 Marine Mammal Exclusion Zone Monitoring**

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

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

**2.5 EM&A SITE INSPECTION**

Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting month, four (4) site inspections were carried out on 5, 12, 19 and 27 April 2017.

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

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

<b>Inspection Date</b>	<b>Environmental Observations</b>	<b>Recommendations/ Remarks</b>
5 April 2017	<p>Southern Landfall (Portion A) (Portion S-c)</p> <ul style="list-style-type: none"> <li>Retained water inside drip tray should be cleared.</li> <li>Chemical containers were observed not placed in drip tray.</li> <li>Watering should be maintained on unpaved road for dust suppression.</li> <li>Soil bund was observed not properly maintained.</li> </ul>	<p>Southern Landfall (Portion A) (Portion S-c)</p> <ul style="list-style-type: none"> <li>The Contractor was reminded to clear retained water inside drip tray.</li> <li>The Contractor was reminded to place chemical containers in drip tray.</li> <li>The Contractor was reminded to maintain watering on unpaved road.</li> <li>The Contractor was reminded to properly maintain soil bund to avoid surface runoff.</li> </ul>
12 April 2017	<p>Viaduct D (Pier D12)</p> <ul style="list-style-type: none"> <li>Chemical containers were observed not placed in drip tray.</li> </ul> <p>Viaduct D (Pier D18)</p> <ul style="list-style-type: none"> <li>Drip tray was observed not properly plugged.</li> </ul> <p>Ramp D (Area I)</p> <ul style="list-style-type: none"> <li>Chemical containers were observed not placed in drip tray.</li> </ul>	<p>Viaduct D (Pier D12)</p> <ul style="list-style-type: none"> <li>The Contractor was reminded to remove the chemical containers and placed them in drip tray.</li> </ul> <p>Viaduct D (Pier D18)</p> <ul style="list-style-type: none"> <li>The Contractor was reminded to properly plug the drip tray.</li> </ul> <p>Ramp D (Area I)</p> <ul style="list-style-type: none"> <li>The Contractor was reminded to remove the chemical containers and placed them in drip tray.</li> </ul>
19 April 2017	<p>Viaduct E (Pier E8)</p> <ul style="list-style-type: none"> <li>Retained water inside drip tray should be cleared.</li> <li>NRMM label should be displayed clearly on generator.</li> <li>Chemical containers were observed not placed in drip tray.</li> </ul> <p>Viaduct E (Pier E10)</p> <ul style="list-style-type: none"> <li>General refuse should be cleared from site.</li> <li>Chemical containers were observed not placed in drip tray.</li> </ul>	<p>Viaduct E (Pier E8)</p> <ul style="list-style-type: none"> <li>The Contractor was reminded to clear retained water inside drip tray.</li> <li>The Contractor was reminded to display NRMM label clearly on generator</li> <li>The Contractor was reminded to remove the chemical containers and placed them in drip tray.</li> </ul> <p>Viaduct E (Pier E10)</p> <ul style="list-style-type: none"> <li>The Contractor was reminded to clear general refuse at site.</li> <li>The Contractor was reminded to remove the chemical containers and placed them in drip tray.</li> </ul>
27 April 2017	<p>Viaduct E (Pier E9)</p> <ul style="list-style-type: none"> <li>Chemical containers were observed not placed in drip tray.</li> <li>Retained water inside drip tray should be cleared.</li> </ul> <p>Viaduct C (Pier C11)</p> <ul style="list-style-type: none"> <li>Sand bunds should be provided to prevent surface runoff.</li> </ul>	<p>Viaduct E (Pier E9)</p> <ul style="list-style-type: none"> <li>The Contractor was reminded to remove the chemical containers and placed them in drip tray.</li> <li>The Contractor was reminded to clear retained water inside drip tray.</li> </ul> <p>Viaduct C (Pier C11)</p> <ul style="list-style-type: none"> <li>The Contractor was reminded to provide sand bunds to prevent surface runoff.</li> </ul>

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

## 2.6 WASTE MANAGEMENT STATUS

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

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

**Table 2.15 Quantities of Different Waste Generated in the Reporting Period**

Month/Year	Inert C&D Materials <sup>(a)</sup> (m <sup>3</sup> )	Imported Fill (m <sup>3</sup> )	Inert Construction Waste Re-used (m <sup>3</sup> )	Non-inert Construction Waste <sup>(b)</sup> (kg)	Recyclable Materials <sup>(c)</sup> (kg)	Chemical Wastes (kg)	Marine Sediment (m <sup>3</sup> )	
							Category L	Category M (M <sub>p</sub> & M <sub>f</sub> )
April 2017	4,409	0	1058	130,680	5,233	0	0	0

**Notes:**

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

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

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

**2.7 ENVIRONMENTAL LICENSES AND PERMITS**

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

**Table 2.16 Summary of Environmental Licensing and Permit Status**

License/ Permit	License or Permit No.	Date of Issue	Date of Expiry	License/ Permit Holder	Remarks
Environmental Permit	EP-354/2009/D	13 March 2015	N/A	HyD	Tuen Mun- Chek Lap Kok Link
Environmental Permit	EP-353/2009/K	11 April 2016	N/A	HyD	Hong Kong Boundary Crossing Facilities
Construction Dust Notification	361571	5 Jul 2013	N/A	GCL	
Construction Dust Notification	362093	17 Jul 2013	N/A	GCL	For Area 23
Chemical Waste Registration	5213-961-G2380-13	10 Oct 2013	N/A	GCL	Chemical waste produced in Contract No. HY/2012/07 (Area 1 adjacent to Cheng Tung Road, Siu Ho Wan)
Chemical Waste Registration	5213-961-G2380-14	10 Oct 2013	N/A	GCL	Chemical waste produced in Contract No. HY/2012/07 (Area 2 adjacent to Cheung Tung Road, Pak Mong Village)
Chemical Waste Registration	5213-974-G2588-03	4 Nov 2013	N/A	GCL	Chemical waste produced in Contract No. HY/2012/07 (WA5 adjacent to Cheung Tung Road, Yam O)
Chemical Waste Registration	5213-951-G2380-17	12 Jun 2014	N/A	GCL	Viaducts A, B, C, D & E
Construction Waste Disposal Account	7017735	10 Jul 2013	N/A	GCL	-
Construction Waste Disposal Account	7019470	3 Mar 2014	N/A	GCL	Vessel CHIT Account
Waste Water Discharge License	WT00019017-2014	13 May 2014	31 May 2019	GCL	Discharge for marine portion
Waste Water Discharge License	WT00019018-2014	13 May 2014	31 May 2019	GCL	Discharge for land portion
Construction Noise Permit for night works and works in general holidays	GW-RW0708-16	20 Dec 2016	18 Jun 2017	GCL	General works at WA5
Construction Noise Permit for night works and works in general holidays	GW-RS1309-16	20 Dec 2016	19 Jun 2017	GCL	Broad Permit for Whole Site Areas
Construction Noise Permit for night works and works in general holidays	GW-RS0157-17	28 Feb 2017	31 May 2017	GCL	Broad Permit for Segment Launching at Land Portion
Construction Noise Permit for night works and works in general holidays	GW-RS1044-16	14 Oct 2016	13 Apr 2017	GCL	Pre-casted pile cap shell installation at E8-E13
Construction Noise Permit for night works and works in general holidays	GW-RS0295-17	13 Apr 2017	12 Oct 2017	GCL	Pre-casted pile cap shell installation at E8-E13
Marine Dumping Permit	EP-MD-17-153	01 Jan 2017	30 Jun 2017	GCL	For dumping Type I sediment

## 2.8 **IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES**

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

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

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

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

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

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

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

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

There was one (1) complaint referred by Environmental Project Office (ENPO) on 18 April 2017 regarding suspected muddy water discharge from Hong Kong - Zhuhai - Macao Bridge Hong Kong Boundary Crossing Facilities (HKBCF) reported in the news on 17 April 2017 in the reporting period. As the incident is under investigation, a detailed investigation report will be provided in the next reporting period.

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 May 2017 will be:

##### *Marine Works*

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

##### *Land-based Works*

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

#### 3.2 *KEY ISSUES FOR THE COMING MONTH*

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of May 2017 are mainly associated with dust, noise, marine water quality, marine ecology and waste management issues.

#### 3.3 *MONITORING SCHEDULE FOR THE COMING MONTH*

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

## 4.1

## CONCLUSIONS

This Forty-second Monthly EM&A Report presents the findings of the EM&A activities undertaken during the period from 1 to 30 April 2017 in accordance with the Updated EM&A Manual and the requirements of the Environmental Permits (EP-354/2009/D and EP-353/2009/K).

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

One (1) group of 2 Chinese White Dolphins was sighted during the two sets of monitoring surveys in April 2017. During this month of dolphin monitoring, no unacceptable impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) was noticeable from general observations.

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

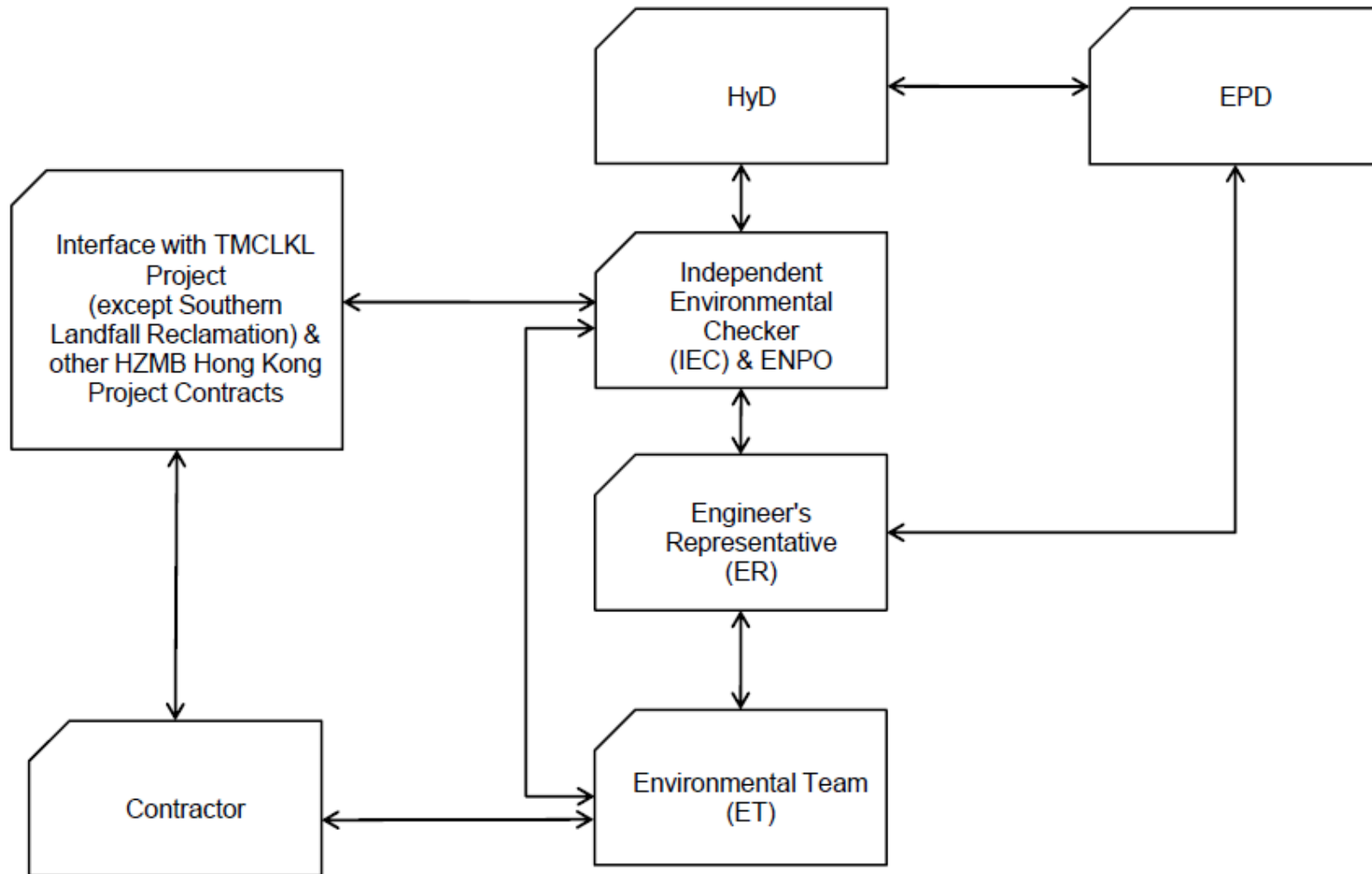
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There was no notification of summons or successful prosecution recorded in the reporting period.

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	2017																								
										April				May				June				July												
											20	27	03	10	17	24	01	08	15	22	29	05	12	19	26	03	10	17	24					
<b>Contract Milestones</b>																																		
<b>Key Dates for Completion</b>																																		
<b>Stage of the Works</b>																																		
<b>Completion Date</b>																																		
<b>General</b>																																		
KD03	KD3 - Stage 3: TCSS Along NLH Near Viaduct C, D (EoT 8-Apr-16)		0		0	21-Apr-17*		08-Apr-16	-377	0%																								
<b>Portion Handover Dates</b>																																		
<b>Possession of the Works Area</b>																																		
<b>Access Dates</b>																																		
<b>General</b>																																		
POS02-6B	Portion A - Area 6B (To be confirmed)		0	21-Apr-17*	0		20-Dec-16		-122	0%																								
<b>Design</b>																																		
<b>Detailed Design</b>																																		
<b>General Submissions</b>																																		
<b>Reports &amp; Manuals</b>																																		
<b>General</b>																																		
ARDD0037-7	Preparation of Seismic Performance Report Viaduct F - AP12.03		160	21-Aug-15 A	16	11-May-17	22-Mar-17	10-Apr-17	-22	90%																								
ARDD0037-8	IC/SO Approval of Seismic Performance Report Viaduct F - AP12.03		75	12-May-17	75	09-Aug-17	11-Apr-17	14-Jul-17	-22	0%																								
ARDD0040-2	IC/SO Approval of Operation and Maintenance Manual - AP08.00		75	20-Oct-15 A	16	11-May-17	26-Jun-17	14-Jul-17	53	75%																								
ARDD0042-2	IC/SO Approval of O&M Facility Provisions DDA - BP11.01		75	14-Jan-15 A	16	11-May-17	26-Jun-17	14-Jul-17	53	75%																								
<b>Slope Works Near Viaduct A</b>																																		
<b>Feature 9SE-B/FR8, B/R1, B/R2</b>																																		
<b>Slope Works Design</b>																																		
ARDD0596	Preparation of remaining portion of Slope FR8 Combined AIP/DDA - CP11.		35	21-Apr-17	35	03-Jun-17	21-Mar-16	05-May-16	-319	0%																								
ARDD0596-1	IC/SO Approval of Slope Combined AIP/DDA - CP11.01		60	05-Jun-17	60	14-Aug-17	06-May-16	18-Jul-16	-319	0%																								
<b>Slope Works Near Viaduct C</b>																																		
<b>Feature 10NW-C/C22, C/C26, C/C27, C/F13, C/F14, C/F15</b>																																		
<b>Slope Works Design</b>																																		
ARDD0589-1	Preparation of Slope Combined AIP/DDA - CP13.01		60	21-Jan-17 A	8	29-Apr-17	07-Jul-16	15-Jul-16	-234	90%																								
ARDD0589-2	IC/SO Approval of Combined AIP/DDA - CP13.01		28	02-May-17	28	05-Jun-17	16-Jul-16	17-Aug-16	-234	0%																								
ARDD0590	Newfill slopes PF1 & PF2 Preparation of Combined AIP/DDA - CP13.01		60	21-Jan-17 A	0	05-Apr-17 A				100%																								
ARDD0590-1	New fill slopes PF1 & PF2 IC/SO Approval of combined AIP/DDA - CP13.0		28	06-Apr-17 A	18	13-May-17	05-Jul-16	25-Jul-16	-236	35%																								
<b>Slope Works Near Viaduct D</b>																																		
<b>Feature 10NW-C/R4, C/F9, C/F10, C/F11, C/F17, C/F50</b>																																		
<b>Slope Works Design</b>																																		
ARDD0603	IC/SO Approval of Slope Combined AIP/DDA -CP14.01		75	16-Dec-14 A	0	31-Mar-17 A				100%																								
ARDD0603-1	IC/SO Approval of Slope Combined AIP/DDA -CP14.01		0		0	31-Mar-17 A				100%																								
<b>Watermain, Drainage &amp; Utility Diversions</b>																																		
<b>General</b>																																		
<b>Design</b>																																		
ARDD0629	IC/SO Approval of Waterworks, Drainage & Utility DDA - BP20.01		75	22-Jul-14 A	22	18-May-17	31-Aug-17	25-Sep-17	109	70%																								
ARDD0629-1	IC/SO Approval of Waterworks, Drainage & Utility DDA - BP20.01		0		0	18-May-17		25-Sep-17	109	0%																								
ARDD0629-2	Gov't Approval of Submissions for Waterworks, Drainage & Utility Diversior		75	02-Jan-14 A	22	18-May-17	31-Aug-17	25-Sep-17	109	70%																								
<b>Viaduct Approach Ramp Retaining Walls</b>																																		
<b>Abutment &amp; Approach Ramp B</b>																																		
<b>Design</b>																																		
ARDD0664	Approach B - IC/SO Approval of Approach Ramp B DDA -DP21.01		75	14-Oct-14 A	4	25-Apr-17	26-Jun-20	30-Jun-20	942	95%																								
ARDD0664-1	Approach B - IC/SO Approval of Approach Ramp B DDA -DP21.01		0		0	25-Apr-17		30-Jun-20	942	0%																								
<b>Abutment &amp; Approach Ramp F</b>																																		
<b>Design</b>																																		
ARDD0676	Approach F - IC/SO Approval of Approach Ramp F DDA -DP24.01		75	23-Dec-14 A	34	02-Jun-17	19-Apr-17	31-May-17	-2	50%																								
ARDD0676-1	Approach F - IC/SO Approval of Approach Ramp F DDA -DP24.01		0		0	02-Jun-17		31-May-17	-2	0%																								
<b>Segment Target Geometry &amp; Erection Engineering</b>																																		
<b>Viaduct A</b>																																		

■ Actual Work  
■ Planned Bar  
■ Critical Bar  
◆ Milestone

Project ID: TMCLK-DWPI-1-M47  
 Layout: J3518-DWP-3MRP Submission - M47  
 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-Apr-17)**

Date	Revision	Checked	Approved
30-Nov-...		PKN	GL
31-Mar-17		PKN	GL
28-Apr-17		PKN	GL

**DWG. No.:**  
**J3518/GCL/PGM/3MRP-M47**

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										April						May						June						July						
										20	27	03	10	17	24	01	08	15	22	29	05	12	19	26	03	10	17	24						
<b>Design</b>																																		
ARDD0718	Viaduct A - Target Geometry Analysis	20	21-Mar-17 A	0	13-Apr-17 A				100%	[Gantt bar: 21-Mar-17 to 13-Apr-17]																								
ARDD0719-5	Viaduct A - Issue Erection Manual	20	21-Mar-17 A	0	13-Apr-17 A				100%	[Gantt bar: 21-Mar-17 to 13-Apr-17]																								
<b>Viaduct E5 &amp; E6</b>																																		
<b>Design</b>																																		
ARDD0734	Viaduct E5 & E6 - Segment Geometry Schedules	10	05-May-14 A	34	02-Jun-17	06-Aug-16	14-Sep-16	-208	75%	[Gantt bar: 05-May-14 to 02-Jun-17]																								
TGP0570	Viaduct E5 & E6 - Issue of Optimised Casting Data and Segment Catalogue	40	30-Apr-15 A	34	02-Jun-17	06-Aug-16	14-Sep-16	-208	75%	[Gantt bar: 30-Apr-15 to 02-Jun-17]																								
TGP0590	Viaduct E5 & E6 - Issue Erection Manual	10	03-Jun-17	10	14-Jun-17	15-Sep-16	27-Sep-16	-208	0%	[Gantt bar: 03-Jun-17 to 14-Jun-17]																								
<b>Viaduct E7 &amp; E8</b>																																		
<b>Design</b>																																		
ARDD0739	Viaduct E7 & E8 - Segment Geometry Schedules	10	05-May-14 A	34	02-Jun-17	06-Aug-16	14-Sep-16	-208	75%	[Gantt bar: 05-May-14 to 02-Jun-17]																								
TGP0760	Viaduct E7 & E8 - Issue of Optimised Casting Data and Segment Catalogue	40	31-Jul-15 A	34	02-Jun-17	06-Aug-16	14-Sep-16	-208	75%	[Gantt bar: 31-Jul-15 to 02-Jun-17]																								
TGP0790	Viaduct E7 & E8 - Issue Erection Manual	10	03-Jun-17	10	14-Jun-17	15-Sep-16	27-Sep-16	-208	0%	[Gantt bar: 03-Jun-17 to 14-Jun-17]																								
<b>Viaduct F</b>																																		
<b>Design</b>																																		
ARDD0752	Viaduct F - Erection Sequence Analysis	13	21-Apr-17	13	08-May-17	16-Jul-16	30-Jul-16	-226	0%	[Gantt bar: 21-Apr-17 to 08-May-17]																								
ARDD0753	Viaduct F - Target Geometry Analysis	30	09-May-17	30	13-Jun-17	01-Aug-16	03-Sep-16	-226	0%	[Gantt bar: 09-May-17 to 13-Jun-17]																								
ARDD0754	Viaduct F - Segment Geometry Schedules	10	14-Jun-17	10	24-Jun-17	05-Sep-16	15-Sep-16	-226	0%	[Gantt bar: 14-Jun-17 to 24-Jun-17]																								
ARDD0754-1	Viaduct F - Issue of Pierhead Segments Bridge F1, F2, F3, F4 & F5	0		0	24-Jun-17		30-Jun-20	893	0%	[Milestone: 24-Jun-17]																								
ARDD0754-3	Viaduct F - Issue of Casting Data and Segment Catalogue Bridge F1, F3 (f	0		0	24-Jun-17		30-Jun-20	893	0%	[Milestone: 24-Jun-17]																								
ARDD0754-4	Viaduct F - Issue of Casting Data and Segment Catalogue Bridge F2, F4, F	0		0	24-Jun-17		15-Sep-16	-226	0%	[Milestone: 24-Jun-17]																								
ARDD0754-5	Viaduct F - Issue Erection Manual	30	26-Jun-17	30	31-Jul-17	17-Sep-16	24-Oct-16	-226	0%	[Gantt bar: 26-Jun-17 to 31-Jul-17]																								
<b>Procurement</b>																																		
<b>Deck Segment Installation Equipment</b>																																		
<b>Travelling Hanging Beams (Self-Launch)</b>																																		
<b>Viaduct A to F</b>																																		
<b>Equipment Delivery</b>																																		
PR67080	Steelworks for Self-Launching System - Batch 2	0		0	31-Mar-17 A				100%	[Milestone: 31-Mar-17]																								
PR67090	Steelworks for Self-Launching System - Batch 3	0		0	18-Apr-17 A				100%	[Milestone: 18-Apr-17]																								
PR67100	2 nos. Hydraulic Cylinder & Associated Accessories for Spare	0		0	18-Apr-17 A				100%	[Milestone: 18-Apr-17]																								
PR67110	Power Pack for Hydraulic System for Self-Launching System	0		0	18-Apr-17 A				100%	[Milestone: 18-Apr-17]																								
<b>Precast Deck Segments</b>																																		
<b>Preliminaries</b>																																		
<b>Viaduct F</b>																																		
<b>General</b>																																		
MBBE0056	Precast Segment Mould Fabrication & Erection (Viaduct F1 to F5)	52	13-Feb-17 A	0	18-Apr-17 A				100%	[Gantt bar: 13-Feb-17 to 18-Apr-17]																								
<b>Viaduct A - Bridge A2-A1</b>																																		
<b>Segment Manufacture</b>																																		
<b>General</b>																																		
MBAE0130-1	A: Progressive Segment Manufacture (179 Nr)	180	13-Jun-16 A	31	29-May-17	03-May-16	08-Jun-16	-287	90%	[Gantt bar: 13-Jun-16 to 29-May-17]																								
<b>Viaduct E - Bridge E2</b>																																		
<b>Segment Manufacture</b>																																		
<b>General</b>																																		
MBEE0130-7	E2: Progressive Segment Manufacture (404 Nr)	376	06-May-15 A	28	25-May-17	04-Jan-16	04-Feb-16	-382	95%	[Gantt bar: 06-May-15 to 25-May-17]																								
<b>Viaduct E - Bridge E5, E6, E7, E8</b>																																		
<b>Segment Manufacture</b>																																		
<b>General</b>																																		
MBEE0130-9	E5-6-7-8: Progressive Segment Manufacture (544Nr)	360	06-May-15 A	120	12-Sep-17	17-Sep-16	13-Feb-17	-173	70%	[Gantt bar: 06-May-15 to 12-Sep-17]																								
<b>Viaduct F - Bridge F1-F5</b>																																		
<b>Segment Manufacture</b>																																		
<b>General</b>																																		
MBFE0130-1	F: Progressive Segment Manufacture (300 Nr)	252	27-Oct-16 A	150	19-Oct-17	16-Jan-17	21-Jul-17	-75	50%	[Gantt bar: 27-Oct-16 to 19-Oct-17]																								
<b>Precast Parapets &amp; Barriers</b>																																		
<b>Viaduct A to F</b>																																		
<b>Precast Parapet Manufacture</b>																																		

■ Actual Work  
■ Planned Bar  
■ Critical Bar  
◆ Milestone

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										April					May					June					July									
											20	27	03	10	17	24	01	08	15	22	29	05	12	19	26	03	10	17	24					
<b>General</b>																																		
PP6011-01	Viaduct A - Precast Parapets/Barriers Production	90	01-Sep-16 A	83	31-Jul-17	04-Jun-16	10-Sep-16	-260	50%	[Gantt bar: 04-Jun-16 to 10-Sep-16, 50% complete]																								
PP6011-02	Viaduct B - Precast Parapets/Barriers Production	120	03-May-16 A	32	31-May-17	05-Aug-16	10-Sep-16	-209	75%	[Gantt bar: 05-Aug-16 to 10-Sep-16, 75% complete]																								
PP6011-03	Viaduct C - Precast Parapets/Barriers Production	120	01-Apr-16 A	12	06-May-17	29-Apr-16	13-May-16	-289	85%	[Gantt bar: 29-Apr-16 to 13-May-16, 85% complete]																								
PP6011-04	Viaduct D - Precast Parapets/Barriers Production	120	01-Mar-16 A	12	06-May-17	29-Apr-16	13-May-16	-289	85%	[Gantt bar: 29-Apr-16 to 13-May-16, 85% complete]																								
PP6011-05	Viaduct E - Precast Parapets/Barriers Production	180	02-Jul-16 A	136	30-Sep-17	16-May-16	26-Oct-16	-277	40%	[Gantt bar: 16-May-16 to 26-Oct-16, 40% complete]																								
PP6011-06	Viaduct F - Precast Parapets/Barriers Production	198	03-Jul-17*	198	28-Feb-18	18-Feb-17	18-Oct-17	-107	0%	[Gantt bar: 18-Feb-17 to 18-Oct-17, 0% complete]																								
<b>Bearings</b>																																		
<b>Viaduct A</b>																																		
<b>Bearing Design &amp; Manufacture</b>																																		
<b>General</b>																																		
PPBRA5	SO review & comment on design submission - Viaduct A	36	21-Oct-16 A	0	25-Mar-17 A				100%	[Gantt bar: 21-Oct-16 to 25-Mar-17, 100% complete]																								
PPBRA6	Bearing Design Amendment & re-issue - Viaduct A	12	27-Mar-17 A	0	10-Apr-17 A				100%	[Gantt bar: 27-Mar-17 to 10-Apr-17, 100% complete]																								
PPBRA7	Manufacture of Bearing - Viaduct A	54	21-Oct-16 A	0	20-Apr-17 A				100%	[Gantt bar: 21-Oct-16 to 20-Apr-17, 100% complete]																								
PPBRA8	Testing Bearing - Viaduct A	18	21-Apr-17	18	13-May-17	27-Jul-16	16-Aug-16	-217	0%	[Gantt bar: 27-Jul-16 to 16-Aug-16, 0% complete]																								
PPBRA9	Bearing Delivery - Viaduct A	48	15-May-17	48	11-Jul-17	17-Aug-16	14-Oct-16	-217	0%	[Gantt bar: 17-Aug-16 to 14-Oct-16, 0% complete]																								
PPBRA99	Site preparation Bearings for Viaduct A	6	12-Jul-17	6	18-Jul-17	15-Oct-16	21-Oct-16	-217	0%	[Gantt bar: 15-Oct-16 to 21-Oct-16, 0% complete]																								
<b>Viaduct C</b>																																		
<b>Bearing Design &amp; Manufacture</b>																																		
<b>General</b>																																		
PPBRC6	Bearing Design Ammendment & re-issue - Viaduct C	11	21-Apr-17	11	05-May-17	10-Jun-20	22-Jun-20	929	0%	[Gantt bar: 10-Jun-20 to 22-Jun-20, 0% complete]																								
PPBRC99	Site preparation Bearings for Viaduct C	6	06-May-17	6	12-May-17	23-Jun-20	30-Jun-20	929	0%	[Gantt bar: 23-Jun-20 to 30-Jun-20, 0% complete]																								
<b>Viaduct D</b>																																		
<b>Bearing Design &amp; Manufacture</b>																																		
<b>General</b>																																		
PPBRD99	Site preparation Bearings for Viaduct D	38	21-Apr-17	38	07-Jun-17	16-May-20	30-Jun-20	908	0%	[Gantt bar: 16-May-20 to 30-Jun-20, 0% complete]																								
<b>Viaduct E</b>																																		
<b>Bearing Design &amp; Manufacture</b>																																		
<b>General</b>																																		
PP7290	Site preparation Bearings for Viaduct E2	18	27-Apr-16 A	13	08-May-17	12-Nov-16	26-Nov-16	-127	90%	[Gantt bar: 12-Nov-16 to 26-Nov-16, 90% complete]																								
PP7360	Site preparation Bearings for Viaduct E1	18	10-Feb-15 A	3	24-Apr-17	17-Nov-16	19-Nov-16	-123	95%	[Gantt bar: 17-Nov-16 to 19-Nov-16, 95% complete]																								
PPBRE6	Bearing Design Amendment & re-issue - Viaduct E (E1, E2, E5, E6, E7 & E8)	12	15-Nov-16 A	9	02-May-17	15-Aug-16	24-Aug-16	-201	80%	[Gantt bar: 15-Aug-16 to 24-Aug-16, 80% complete]																								
PPBRE7	Manufacture of Bearing - Viaduct E (E1, E2, E5, E6, E7 & E8)	54	02-Jun-14 A	13	08-Jun-17	14-Sep-16	29-Sep-16	-201	75%	[Gantt bar: 14-Sep-16 to 29-Sep-16, 75% complete]																								
PPBRE8	Testing Bearing - Viaduct E (E1, E2, E5, E6, E7 & E8)	24	03-Aug-15 A	1	22-Jun-17	15-Oct-16	15-Oct-16	-201	65%	[Gantt bar: 15-Oct-16 to 15-Oct-16, 65% complete]																								
PPBRE9	Bearing Delivery - Viaduct E (E1, E2, E5, E6, E7 & E8)	48	19-Nov-14 A	59	04-Aug-17	17-Sep-16	26-Nov-16	-201	55%	[Gantt bar: 17-Sep-16 to 26-Nov-16, 55% complete]																								
<b>Viaduct F</b>																																		
<b>Bearing Design &amp; Manufacture</b>																																		
<b>General</b>																																		
PPBRF6	Bearing Design Amendment & re-issue - Viaduct F	12	09-Mar-17 A	0	05-Apr-17 A				100%	[Gantt bar: 09-Mar-17 to 05-Apr-17, 100% complete]																								
PPBRF7	Manufacture of Bearing - Viaduct F	60	28-Mar-17 A	42	12-Jun-17	25-Jul-16	10-Sep-16	-219	15%	[Gantt bar: 25-Jul-16 to 10-Sep-16, 15% complete]																								
PPBRF8	Testing Bearing - Viaduct F	12	13-Jun-17	12	26-Jun-17	12-Sep-16	26-Sep-16	-219	0%	[Gantt bar: 12-Sep-16 to 26-Sep-16, 0% complete]																								
PPBRF9	Bearing Delivery - Viaduct F	34	27-Jun-17	34	05-Aug-17	27-Sep-16	07-Nov-16	-219	0%	[Gantt bar: 27-Sep-16 to 07-Nov-16, 0% complete]																								
<b>Movement Joints</b>																																		
<b>Viaduct A to F</b>																																		
<b>MJ Design &amp; Manufacture</b>																																		
<b>General</b>																																		
PP6MJ02-1	MJ Design Approval	96	26-May-14 A	0	31-Mar-17 A				100%	[Gantt bar: 26-May-14 to 31-Mar-17, 100% complete]																								
PP6MJ02-2	Manufacture & delivery of MJ	180	01-Apr-17 A	159	31-Oct-17	11-Jan-16	26-Jul-16	-376	10%	[Gantt bar: 11-Jan-16 to 26-Jul-16, 10% complete]																								
<b>Construction</b>																																		
<b>Foundation &amp; Substructure Works</b>																																		
<b>Viaduct A - Bridge A2</b>																																		
<b>Pier A2 (A2d)</b>																																		
<b>Pier Head Segment</b>																																		
A02-C5210	A2 - PHS - Temporary Platform	12	08-Mar-17 A	0	21-Mar-17 A				100%	[Gantt bar: 08-Mar-17 to 21-Mar-17, 100% complete]																								
A02-C5310	A2 - Install PH Segment (1 nr)	2	22-Mar-17 A	0	23-Mar-17 A				100%	[Gantt bar: 22-Mar-17 to 23-Mar-17, 100% complete]																								
A02-C5410	A2 - PHS Diaphragm - Rebar, Formwork, Concreting	30	24-Mar-17 A	10	04-May-17	10-May-16	21-May-16	-281	65%	[Gantt bar: 10-May-16 to 21-May-16, 65% complete]																								

■ Actual Work  
■ Planned Bar  
■ Critical Bar  
◆ Milestone

Project ID: TMCLK-DWPI-1-M47  
 Layout: J3518-DWP-3MRP Submission - M47  
 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-Apr-17)**

Date	Revision	Checked	Approved
30-Nov-...		PKN	GL
31-Mar-17		PKN	GL
28-Apr-17		PKN	GL

**DWG. No.:**  
**J3518/GCL/PGM/3MRP-M47**

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete	2017																								
										April				May				June				July												
											20	27	03	10	17	24	01	08	15	22	29	05	12	19	26	03	10	17	24					
A02-C5420	A2 - PHS Diaphragm - Curing & Striking of Forms	12	05-May-17	12	18-May-17	23-May-16	04-Jun-16	-281	0%																									
<b>Pier A3 (A2c)</b>																																		
<b>Pier Head Segment</b>																																		
A03-C5210	A3 - PHS - Temporary Platform	12	08-Mar-17 A	0	21-Mar-17 A				100%																									
A03-C5310	A3 - Install PH Segment (1 nr)	2	22-Mar-17 A	0	23-Mar-17 A				100%																									
A03-C5410	A3 - PHS Diaphragm - Rebar, Formwork, Concreting	30	31-Mar-17 A	16	11-May-17	07-Jun-16	25-Jun-16	-258	45%																									
A03-C5420	A3 - PHS Diaphragm - Curing & Striking of Forms	12	12-May-17	12	25-May-17	27-Jun-16	11-Jul-16	-258	0%																									
<b>Pier A5 (A2a)</b>																																		
<b>Pier Head Segment</b>																																		
A05-C5410	A5 - PHS Diaphragm - Rebar, Formwork, Concreting	30	01-Feb-17 A	0	23-Mar-17 A				100%																									
A05-C5420	A5 - PHS Diaphragm - Curing & Striking of Forms	12	24-Mar-17 A	0	06-Apr-17 A				100%																									
<b>Viaduct A - Bridge A1</b>																																		
<b>Pier A9 (A1c)</b>																																		
<b>Pier Head Segment</b>																																		
A09-C5210	A9 - PHS - Temporary Platform	12	22-Mar-17 A	0	05-Apr-17 A				100%																									
A09-C5310	A9 - Install PH Segment (1 nr)	2	06-Apr-17 A	0	07-Apr-17 A				100%																									
A09-C5410	A9 - PHS Diaphragm - Rebar, Formwork, Concreting	36	21-Apr-17	36	05-Jun-17	23-Feb-16	08-Apr-16	-342	0%																									
A09-C5420	A9 - PHS Diaphragm - Curing & Striking of Forms	10	06-Jun-17	10	16-Jun-17	09-Apr-16	20-Apr-16	-342	0%																									
<b>Pier A10 (A1b)</b>																																		
<b>Pier Head Segment</b>																																		
A10-C5210	A10 - PHS - Temporary Platform	12	21-Apr-17	12	06-May-17	16-Apr-16	29-Apr-16	-300	0%																									
A10-C5310	A10 - Install PH Segment (1 nr)	2	09-May-17*	2	10-May-17	03-May-16	04-May-16	-300	0%																									
A10-C5410	A10 - PHS Diaphragm - Rebar, Formwork, Concreting	36	11-May-17	36	22-Jun-17	05-May-16	17-Jun-16	-300	0%																									
A10-C5420	A10 - PHS Diaphragm - Curing & Striking of Forms	12	23-Jun-17	12	07-Jul-17	18-Jun-16	02-Jul-16	-300	0%																									
<b>Pier A11 (A1a)</b>																																		
<b>Pier Head Segment</b>																																		
A11-C5210	A11 - PHS - Temporary Platform	12	08-May-17	12	20-May-17	21-Jun-16	05-Jul-16	-259	0%																									
A11-C5310	A11 - Install PH Segment (1nr)	2	22-May-17*	2	23-May-17	06-Jul-16	07-Jul-16	-259	0%																									
<b>Ramp A</b>																																		
<b>Abutment &amp; Approach Ramp A</b>																																		
<b>Ramp Structure</b>																																		
ARA-C6140	Ramp A - Remaining RE Wall (Bay 7 to 11) with Backfill	111	02-Mar-17 A	72	18-Jul-17	18-Feb-16	18-May-16	-346	35%																									
ARA-C6142	Ramp A - Remaining RC Wall (Bay Wa2-Wa5 & Bay 9-12) with Backfill	120	19-Jul-17	120	08-Dec-17	24-May-16	15-Oct-16	-342	0%																									
<b>Viaduct B - Bridge B1</b>																																		
<b>Pier B17 (B1c)</b>																																		
<b>Pile Cap</b>																																		
B17-C3120	B17/B18 - Pile Cap Excavation/ELS Incl. Watermain/Gasmain Diversion	65	23-Feb-17 A	20	16-May-17	15-Feb-16	08-Mar-16	-349	65%																									
B17-C3130	B17 - Pile Cap Break Pile Head & Weld Steel Plate	4	17-May-17	4	20-May-17	09-Mar-16	12-Mar-16	-349	0%																									
B17-C3210	B17 - Pile Cap Blinding, Rebar, Formwork, Concrete	10	22-May-17	10	02-Jun-17	14-Mar-16	24-Mar-16	-349	0%																									
B17-C3310	B17 - Pile Cap Curing, Strike Formwork, CJ Prep	3	03-Jun-17	3	06-Jun-17	29-Mar-16	31-Mar-16	-349	0%																									
<b>Pier</b>																																		
B17-C4110	B17 - Pier Scaffold, Rebar, Formwork, Concrete (1st Lift)	7	07-Jun-17	7	14-Jun-17	01-Apr-16	09-Apr-16	-349	0%																									
B17-C4210	B17 - Pier Scaffold, Rebar, Formwork, Concrete (2nd Lift)	10	15-Jun-17	10	26-Jun-17	11-Apr-16	21-Apr-16	-349	0%																									
B17-C4310	B17 - Pier Curing, Remove Formwork	3	27-Jun-17	3	29-Jun-17	22-Apr-16	25-Apr-16	-349	0%																									
<b>Pier Head Segment</b>																																		
B17-C5210	B17 - PHS - Temporary Platform	3	30-Jun-17	3	04-Jul-17	26-Apr-16	28-Apr-16	-349	0%																									
B17-C5310	B17 - Install PH Segment & Fix (1 nr)	2	05-Jul-17	2	06-Jul-17	29-Apr-16	30-Apr-16	-349	0%																									
B17-C5410	B17 - PHS Diaphragm - Rebar, Formwork, Concreting	22	07-Jul-17	22	01-Aug-17	03-May-16	28-May-16	-349	0%																									
<b>Pier B18 (B1b)</b>																																		
<b>Pile Cap</b>																																		
B18-C3110	B18 - Pile Cap Break Pile Head & Weld Steel Plate	4	03-Jun-17	4	07-Jun-17	26-Apr-16	29-Apr-16	-326	0%																									
B18-C3210	B18 - Pile Cap Blinding, Rebar, Formwork, Concrete	10	08-Jun-17	10	19-Jun-17	30-Apr-16	12-May-16	-326	0%																									
B18-C3310	B18 - Pile Cap Curing, Strike Formwork, CJ Prep	3	20-Jun-17	3	22-Jun-17	13-May-16	17-May-16	-326	0%																									
<b>Pier</b>																																		
B18-C4110	B18 - Pier Scaffold, Rebar, Formwork, Concrete	7	23-Jun-17	7	30-Jun-17	18-May-16	25-May-16	-326	0%																									
B18-C4210	B18 - Pier Curing, Remove Formwork	3	03-Jul-17	3	05-Jul-17	26-May-16	28-May-16	-326	0%																									
<b>Pier Head Segment</b>																																		
B18-C5210	B18 - PHS - Construct Abutment Wall	24	06-Jul-17	24	02-Aug-17	30-May-16	27-Jun-16	-326	0%																									

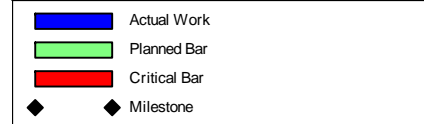
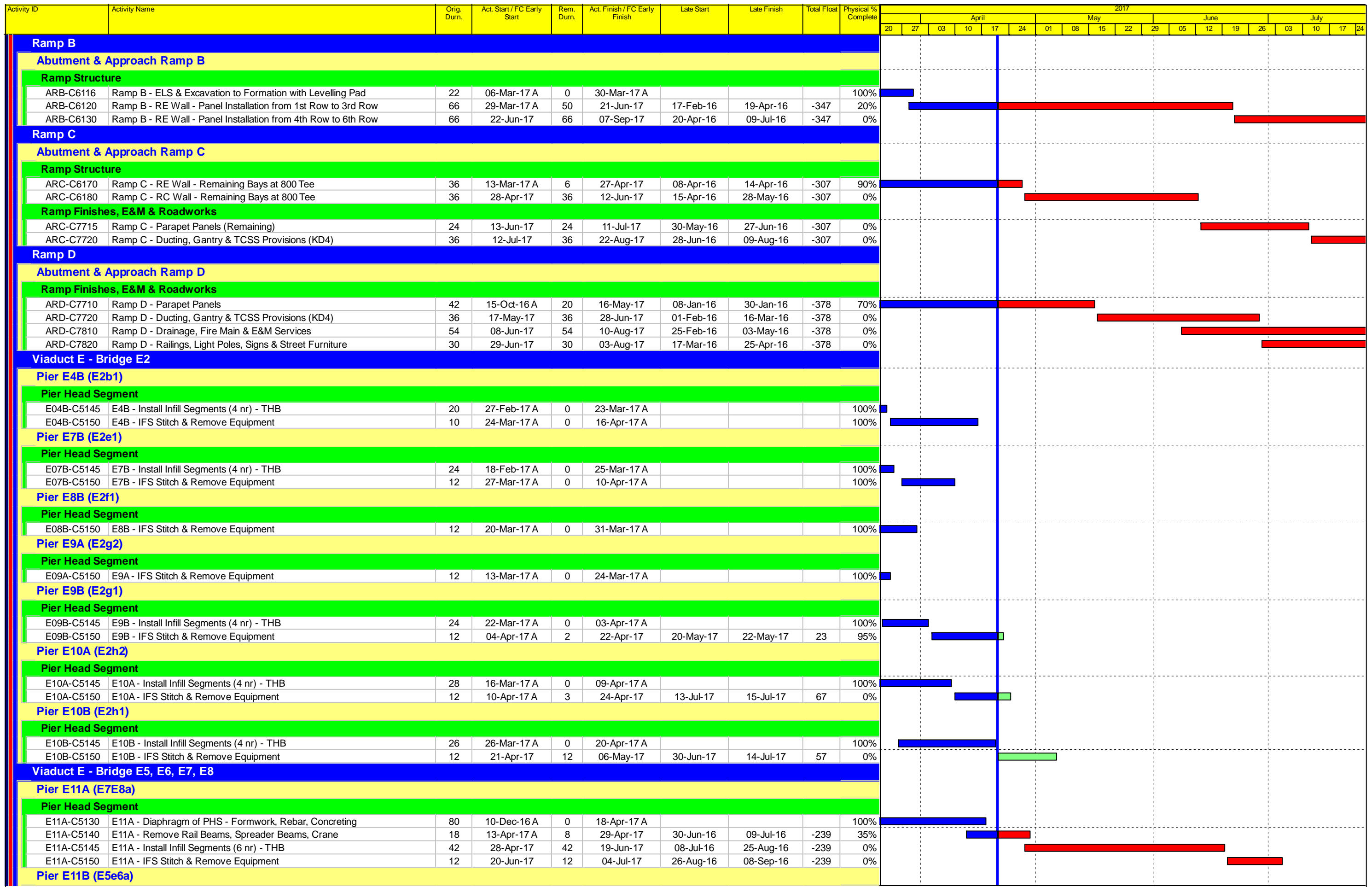
Actual Work  
 Planned Bar  
 Critical Bar  
 Milestone

Project ID: TMCLK-DWPI-1-M47  
 Layout: J3518-DWP-3MRP Submission - M47  
 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 4 of 13 Pages)**  
**(Progress as of 21-Apr-17)**

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30-Nov-...		PKN	GL
31-Mar-17		PKN	GL
28-Apr-17		PKN	GL

**DWG. No.:**  
**J3518/GCL/PGM/3MRP-M47**



Project ID: TMCLK-DWPI-1-M47  
 Layout: J3518-DWP-3MRP Submission - M47  
 Filter: TASK filters: 3-Month Lookahead, No CC  
 Milestones, No Level of Effort.

**Tuen Mun - Chek Lap Kok Link - Southern Connection**  
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**(Progress as of 21-Apr-17)**

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31-Mar-17		PKN	GL
28-Apr-17		PKN	GL

**DWG. No.:**  
**J3518/GCL/PGM/3MRP-M47**

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete	2017																								
										April						May				June				July										
										20	27	03	10	17	24	01	08	15	22	29	05	12	19	26	03	10	17	24						
<b>Pier Head Segment</b>																																		
E11B-C5130	E11B - Diaphragm of PHS - Formwork, Rebar, Concreting	81	19-Dec-16 A	7	28-Apr-17	23-Aug-16	30-Aug-16	-194	85%																									
E11B-C5140	E11B - Remove Rail Beams, Spreader Beams, etc	12	29-Apr-17	12	15-May-17	31-Aug-16	13-Sep-16	-194	0%																									
E11B-C5145	E11B - Install Infill Segments (6 nr) - THB	29	16-May-17	29	19-Jun-17	14-Sep-16	20-Oct-16	-194	0%																									
E11B-C5150	E11B - IFS Stitch & Remove Equipment	12	20-Jun-17	12	04-Jul-17	21-Oct-16	03-Nov-16	-194	0%																									
<b>Pier E12A (E8b)</b>																																		
<b>Pier Head Segment / Infill Segment</b>																																		
E12A-C5130	E12A - Diaphragm of PHS - Formwork, Rebar, Concreting	74	28-Feb-17 A	33	01-Jun-17	21-Jul-16	27-Aug-16	-222	50%																									
E12A-C5140	E12A - Remove Rail Beams, Spreader Beams, Brackets	15	02-Jun-17	15	19-Jun-17	29-Aug-16	14-Sep-16	-222	0%																									
E12A-C5145	E12A - Install Infill Segments (6 nr) - THB	36	19-Jun-17	36	31-Jul-17	14-Sep-16	28-Oct-16	-222	0%																									
<b>Pier E12B (E7b)</b>																																		
<b>Pier Head Segment / Infill Segment</b>																																		
E12B-C5130	E12B - Diaphragm of PHS - Formwork, Rebar, Concreting	76	10-Feb-17 A	20	16-May-17	15-Dec-16	10-Jan-17	-99	60%																									
E12B-C5140	E12B - Remove Rail Beams, Spreader Beams, Brackets	15	17-May-17	15	03-Jun-17	11-Jan-17	27-Jan-17	-99	0%																									
E12B-C5145	E12B - Install Infill Segments (6 nr) - THB	48	05-Jun-17	48	31-Jul-17	01-Feb-17	28-Mar-17	-99	0%																									
<b>Pier E12C (E6b)</b>																																		
<b>Pier Head Segment / Infill Segment</b>																																		
E12C-C5130	E12C - Diaphragm of PHS - Formwork, Rebar, Concreting	76	24-Jan-17 A	10	04-May-17	22-Feb-17	04-Mar-17	-46	80%																									
E12C-C5140	E12C - Remove Rail Beams, Spreader Beams, Brackets, Crane	15	05-May-17	15	22-May-17	06-Mar-17	22-Mar-17	-46	0%																									
E12C-C5145	E12C - Install Infill Segments (6 nr) - THB	46	23-May-17	46	17-Jul-17	23-Mar-17	22-May-17	-46	0%																									
E12C-C5150	E12C - IFS Stitch & Remove Equipment	12	18-Jul-17	12	31-Jul-17	23-May-17	06-Jun-17	-46	0%																									
<b>Pier E12D (E5b)</b>																																		
<b>Pier Head Segment / Infill Segment</b>																																		
E12D-C5130	E12D - Diaphragm of PHS - Formwork, Rebar, Concreting	76	07-Mar-17 A	43	13-Jun-17	30-Aug-16	21-Oct-16	-188	40%																									
E12D-C5140	E12D - Remove Rail Beams, Spreader Beams, Brackets	15	14-Jun-17	15	30-Jun-17	22-Oct-16	08-Nov-16	-188	0%																									
E12D-C5145	E12D - Install Infill Segments (6 nr) - THB	38	30-Jun-17	38	14-Aug-17	08-Nov-16	21-Dec-16	-188	0%																									
<b>Pier E13A (E8c)</b>																																		
<b>Pier Head Segment / Infill Segment</b>																																		
E13A-C5120	E13A - Install PH Segment (4 nr)	9	23-Mar-17 A	0	31-Mar-17 A				100%																									
E13A-C5130	E13A - Diaphragm of PHS - Formwork, Rebar, Concreting	76	01-Apr-17 A	63	07-Jul-17	16-Dec-16	06-Mar-17	-98	20%																									
E13A-C5140	E13A - Remove Rail Beams, Spreader Beams, Brackets, Crane	30	08-Jul-17	30	11-Aug-17	07-Mar-17	11-Apr-17	-98	0%																									
<b>Pier E13B (E7c)</b>																																		
<b>Pier Head Segment / Infill Segment</b>																																		
E13B-C5130	E13B - Diaphragm of PHS - Formwork, Rebar, Concreting	76	21-Mar-17 A	53	24-Jun-17	21-Jul-16	21-Sep-16	-222	30%																									
E13B-C5140	E13B - Remove Rail Beams, Spreader Beams, Brackets	16	26-Jun-17	16	14-Jul-17	22-Sep-16	12-Oct-16	-222	0%																									
<b>Pier E13C (E6c)</b>																																		
<b>Pier Head Segment / Infill Segment</b>																																		
E13C-C5120	E13C - Install PH Segment (4 nr)	9	20-Mar-17 A	0	27-Mar-17 A				100%																									
E13C-C5130	E13C - Diaphragm of PHS - Formwork, Rebar, Concreting	76	28-Mar-17 A	59	03-Jul-17	08-Aug-16	18-Oct-16	-207	25%																									
E13C-C5140	E13C - Remove Rail Beams, Spreader Beams, Brackets	16	04-Jul-17	16	21-Jul-17	19-Oct-16	05-Nov-16	-207	0%																									
<b>Pier E13D (E5c)</b>																																		
<b>Pier Head Segment / Infill Segment</b>																																		
E13D-C5120	E13D - Install PH Segment (4 nr)	9	09-Mar-17 A	0	03-Apr-17 A				100%																									
E13D-C5130	E13D - Diaphragm of PHS - Formwork, Rebar, Concreting	76	04-Apr-17 A	65	10-Jul-17	17-Aug-16	03-Nov-16	-199	15%																									
E13D-C5140	E13D - Remove Rail Beams, Spreader Beams, Brackets, Crane	16	11-Jul-17	16	28-Jul-17	04-Nov-16	22-Nov-16	-199	0%																									
<b>Pier E14A (E8d)</b>																																		
<b>Pile Cap</b>																																		
E14A-C3210	E14A Pile Cap - Blinding, Formwork, Rebar, Concrete	19	18-Mar-17 A	1	21-Apr-17	10-Jun-16	10-Jun-16	-256	95%																									
E14A-C3310	E14A Pile Cap - Curing, Remove Formwork, Backfill	12	22-Apr-17	12	08-May-17	11-Jun-16	24-Jun-16	-256	0%																									
<b>Pier</b>																																		
E14A-C4110	E14A Pier - Scaffold, Rebar, Formwork, Concrete (1st Lift)	13	29-Apr-17	13	16-May-17	18-Jun-16	04-Jul-16	-256	0%																									
E14A-C4210	E14A Pier - Scaffold, Rebar, Formwork, Concrete (2nd Lift)	18	17-May-17	18	07-Jun-17	05-Jul-16	25-Jul-16	-256	0%																									
E14A-C4310	E14A Pier - Scaffold, Rebar, Formwork, Concrete (3rd Lift)	18	08-Jun-17	18	28-Jun-17	26-Jul-16	15-Aug-16	-256	0%																									
E14A-C4410	E14A Pier - Scaffold, Rebar, Formwork, Concrete (4th Lift)	18	29-Jun-17	18	20-Jul-17	16-Aug-16	05-Sep-16	-256	0%																									
<b>Pier E14B (E7d)</b>																																		
<b>Pile Cap</b>																																		
E14B-C3210	E14B Pile Cap - Blinding, Formwork, Rebar, Concrete	19	18-Mar-17 A	7	28-Apr-17	14-Jul-16	21-Jul-16	-228	60%																									
E14B-C3310	E14B Pile Cap - Curing, Remove Formwork, Backfill	12	29-Apr-17	12	15-May-17	22-Jul-16	04-Aug-16	-228	0%																									

- Actual Work
- Planned Bar
- Critical Bar
- Milestone

Project ID: TMCLK-DWPI-1-M47  
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 Filter: TASK filters: 3-Month Lookahead, No CC  
 Milestones, No Level of Effort.

**Tuen Mun - Chek Lap Kok Link - Southern Connection**  
**3-Month Rolling Programme (Page 6 of 13 Pages)**  
 (Progress as of 21-Apr-17)

Date	Revision	Checked	Approved
30-Nov-...		PKN	GL
31-Mar-17		PKN	GL
28-Apr-17		PKN	GL

**DWG. No.:**  
**J3518/GCL/PGM/3MRP-M47**

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete	2017																								
										April						May						June						July						
										20	27	03	10	17	24	01	08	15	22	29	05	12	19	26	03	10	17	24						
<b>Pier</b>																																		
E14B-C4110	E14B Pier - Scaffold, Rebar, Formwork, Concrete (1st Lift)	13	16-May-17	13	31-May-17	05-Aug-16	19-Aug-16	-228	0%																									
E14B-C4210	E14B Pier - Scaffold, Rebar, Formwork, Concrete (2nd Lift)	18	01-Jun-17	18	21-Jun-17	20-Aug-16	09-Sep-16	-228	0%																									
E14B-C4310	E14B Pier - Scaffold, Rebar, Formwork, Concrete (3rd Lift)	18	22-Jun-17	18	13-Jul-17	10-Sep-16	03-Oct-16	-228	0%																									
E14B-C4410	E14B Pier - Curing, Remove Formwork	5	14-Jul-17	5	19-Jul-17	04-Oct-16	08-Oct-16	-228	0%																									
<b>Pier Head Segment</b>																																		
E14B-C5110	E14B Pier Head - Scaffold, Temp Works	17	20-Jul-17	17	08-Aug-17	11-Oct-16	29-Oct-16	-228	0%																									
<b>Pier E14C (E6d)</b>																																		
<b>Pile Cap</b>																																		
E14C-C3210	E14C Pile Cap - Blinding, Formwork, Rebar, Concrete	19	06-Mar-17 A	0	19-Apr-17 A				100%																									
E14C-C3310	E14C Pile Cap - Curing, Remove Formwork, Backfill	12	20-Apr-17 A	11	05-May-17	02-Dec-16	14-Dec-16	-110	5%																									
<b>Pier</b>																																		
E14C-C4110	E14C Pier - Scaffold, Rebar, Formwork, Concrete (1st Lift)	13	06-May-17	13	20-May-17	15-Dec-16	31-Dec-16	-110	0%																									
E14C-C4210	E14C Pier - Scaffold, Rebar, Formwork, Concrete (2nd Lift)	18	22-May-17	18	12-Jun-17	03-Jan-17	23-Jan-17	-110	0%																									
E14C-C4310	E14C Pier - Scaffold, Rebar, Formwork, Concrete (3rd Lift)	18	13-Jun-17	18	04-Jul-17	24-Jan-17	16-Feb-17	-110	0%																									
E14C-C4410	E14C Pier - Scaffold, Rebar, Formwork, Concrete (4th Lift)	18	05-Jul-17	18	25-Jul-17	17-Feb-17	09-Mar-17	-110	0%																									
<b>Pier E14D (E5d)</b>																																		
<b>Foundation - Bored Piles</b>																																		
E14D-C2210	E14D EB Pile - Curing & Sonic Test + Full Core	18	29-Nov-16 A	0	10-Apr-17 A				100%																									
<b>Pile Cap</b>																																		
E14D-C3110	E14D Pile Cap - Excavate, Break Pile Head	15	11-Apr-17 A	9	02-May-17	08-Jun-16	18-Jun-16	-257	0%																									
E14D-C3210	E14D Pile Cap - Blinding, Formwork, Rebar, Concrete	19	04-May-17	19	25-May-17	20-Jun-16	12-Jul-16	-257	0%																									
E14D-C3310	E14D Pile Cap - Curing, Remove Formwork, Backfill	12	26-May-17	12	09-Jun-17	13-Jul-16	26-Jul-16	-257	0%																									
<b>Pier</b>																																		
E14D-C4110	E14D Pier - Scaffold, Rebar, Formwork, Concrete (1st Lift)	13	03-Jun-17	13	17-Jun-17	20-Jul-16	03-Aug-16	-257	0%																									
E14D-C4210	E14D Pier - Scaffold, Rebar, Formwork, Concrete (2nd Lift)	18	19-Jun-17	18	10-Jul-17	04-Aug-16	24-Aug-16	-257	0%																									
E14D-C4310	E14D Pier - Scaffold, Rebar, Formwork, Concrete (3rd Lift)	18	11-Jul-17	18	31-Jul-17	25-Aug-16	14-Sep-16	-257	0%																									
<b>Temporary Tower Between Pier E14D &amp; E13D</b>																																		
E14D-C5710	E14D-E13D Temp Tower - Remove Rock Armour	18	23-May-17	18	13-Jun-17	18-Jul-16	06-Aug-16	-250	0%																									
E14D-C5720	E14D-E13D Temp Tower - Install Pipe Piles (8 nr)	45	14-Jun-17	45	05-Aug-17	08-Aug-16	29-Sep-16	-250	0%																									
<b>Viaduct F - Bridge F1</b>																																		
<b>Pier F1 (F1b)</b>																																		
<b>Pile Cap</b>																																		
F01-C3210	F1 Pile Cap - Blinding, Formwork, Rebar, Concrete	19	11-Mar-17 A	0	11-Apr-17 A				100%																									
F01-C3310	F1 Pile Cap - Curing, Remove Formwork, Backfill	12	12-Apr-17 A	7	28-Apr-17	29-Jun-16	07-Jul-16	-240	40%																									
<b>Pier</b>																																		
F01-C4110	F1 Pier - Scaffold, Rebar, Formwork, Concrete (1st Lift)	13	29-Apr-17	13	16-May-17	08-Jul-16	22-Jul-16	-240	0%																									
F01-C4210	F1 Pier - Scaffold, Rebar, Formwork, Concrete (2nd Lift)	18	17-May-17	18	07-Jun-17	23-Jul-16	12-Aug-16	-240	0%																									
F01-C4310	F1 Pier - Scaffold, Rebar, Formwork, Concrete (3rd Lift)	18	08-Jun-17	18	28-Jun-17	13-Aug-16	02-Sep-16	-240	0%																									
F01-C4410	F1 Pier - Scaffold, Rebar, Formwork, Concrete (4th Lift)	18	29-Jun-17	18	20-Jul-17	03-Sep-16	24-Sep-16	-240	0%																									
<b>Pier F2 (F1c)</b>																																		
<b>Foundation - Bored Piles</b>																																		
F02-C2130	F2 Fr Pile - Sleeve, Casing, Excavate, Rebar, Concrete (2nd) P1	16	28-Feb-17 A	0	24-Mar-17 A				100%																									
F02-C2140	F2 Fr Pile - Sleeve, Casing, Excavate, Rebar, Concrete (3rd) P3	15	30-Mar-17 A	9	02-May-17	03-Jun-16	14-Jun-16	-261	0%																									
F02-C2210	F2 Fr Pile - Curing & Sonic Test	18	04-May-17	18	24-May-17	15-Jun-16	06-Jul-16	-261	0%																									
F02-C2220	F2 Fr Pile - Full Depth Core & Test	12	18-May-17	12	01-Jun-17	29-Jun-16	13-Jul-16	-261	0%																									
<b>Pile Cap</b>																																		
F02-C3110	F2 Pile Cap - Excavate, Break Pile Head	15	02-Jun-17*	15	19-Jun-17	14-Jul-16	30-Jul-16	-261	0%																									
F02-C3210	F2 Pile Cap - Blinding, Formwork, Rebar, Concrete	19	20-Jun-17	19	12-Jul-17	01-Aug-16	22-Aug-16	-261	0%																									
F02-C3310	F2 Pile Cap - Curing, Remove Formwork, Backfill	12	13-Jul-17	12	26-Jul-17	23-Aug-16	05-Sep-16	-261	0%																									
<b>Pier</b>																																		
F02-C4110	F2 Pier - Scaffold, Rebar, Formwork, Concrete (1st Lift)	13	20-Jul-17	13	03-Aug-17	30-Aug-16	13-Sep-16	-261	0%																									
<b>Pier F3 (F1d)</b>																																		
<b>Foundation - Bored Piles</b>																																		
F03-C2180	F3 Fr Pile - Sleeve, Casing, Excavate, Rebar, Concrete (3rd) P3	15	16-Mar-17 A	0	07-Apr-17 A				100%																									
F03-C2190	F3 Fr Pile - Sleeve, Casing, Excavate, Rebar, Concrete (1st) P1 -Replacer	18	10-Apr-17 A	12	06-May-17	18-Aug-16	31-Aug-16	-198	30%																									
F03-C2210	F3 Fr Pile - Curing & Sonic Test	18	08-May-17	18	27-May-17	01-Sep-16	22-Sep-16	-198	0%																									
F03-C2220	F3 Fr Pile - Full Depth Core & Test	12	22-May-17	12	05-Jun-17	15-Sep-16	29-Sep-16	-198	0%																									
<b>Pile Cap</b>																																		

■ Actual Work  
■ Planned Bar  
■ Critical Bar  
◆ Milestone

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**Tuen Mun - Chek Lap Kok Link - Southern Connection**  
**3-Month Rolling Programme (Page 7 of 13 Pages)**  
**(Progress as of 21-Apr-17)**

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30-Nov-...		PKN	GL
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**DWG. No.:**  
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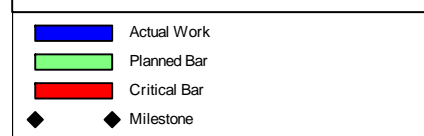
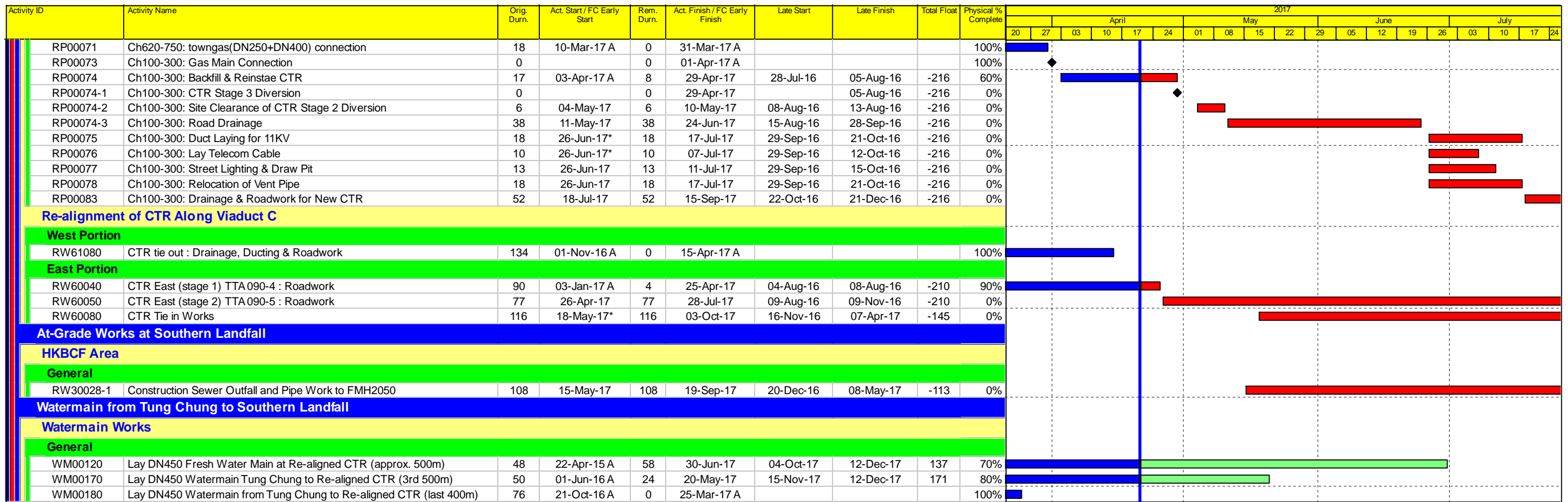












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**Tuen Mun - Chek Lap Kok Link - Southern Connection**  
**3-Month Rolling Programme (Page 13 of 13 Pages)**  
**(Progress as of 21-Apr-17)**

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**DWG. No.:**  
**J3518/GCL/PGM/3MRP-M47**

## 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	
<b>AIR QUALITY</b>									
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		✓
<b>NOISE</b>									
5.11	Section 4	Noise monitoring	All existing representative sensitive receivers / during North Lantau Viaduct construction	Contractor	EM&A Manual		Y		✓
<b>WATER QUALITY</b>									
<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	✓
<b>ECOLOGY</b>									
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 <sup>2</sup> 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		<b>Completed in October 2014</b>
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		✓
<b>LANDSCAPE AND VISUAL</b>									
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
<b>WASTE</b>									
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"> <li>- suitable for the substance to be held, resistant to corrosion, maintained in good conditions and securely closed;</li> <li>- Having a capacity of &lt;450L unless the specifications have been approved by the EPD; and</li> <li>- 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;</li> <li>- Enclosed with at least 3 sides;</li> <li>- 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;</li> </ul>	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"> <li>- Adequate ventilation;</li> <li>- Sufficiently covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary); and</li> <li>- Incompatible materials are adequately separated.</li> </ul>							
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		✓
<b>CULTURAL HERITAGE</b>									
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 $\text{mg}/\text{L}$ <sup>(a)</sup>	<u>Surface and Middle</u> <b>5.0 mg/L</b>	<u>Surface and Middle</u> <b>4.2 mg/L</b>
	<u>Bottom</u> <b>4.7 mg/L</b>	<u>Bottom</u> <b>3.6 mg/L</b>
Turbidity in NTU (Depth-averaged <sup>(b), (c)</sup> )	120% of upstream control station at the same tide of the same day and 95%-ile of baseline data, i.e., <b>27.5 NTU</b>	130% of upstream control station at the same tide of the same day and 99%-ile of baseline data, i.e., <b>47.0 NTU</b>
SS in $\text{mg}/\text{L}$ (Depth-averaged <sup>(b), (c)</sup> )	120% of upstream control station at the same tide of the same day and 95%-ile of baseline data, i.e., <b>23.5 mg/L</b>	130% of upstream control station at the same tide of the same day and 10mg/L for WSD Seawater Intakes at Tuen Mun and 99%-ile of baseline data, i.e., <b>34.4 mg/L</b>

**Notes:**

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

- (a) For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
- (b) "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths
- (c) For turbidity and SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
- (d) All figures given in the table are used for reference only, and EPD may amend the figures whenever it is considered as necessary

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

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

	North Lantau Social Cluster	
	NEL	NWL
Action Level	STG < 70% of baseline & ANI < 70% of baseline	STG < 70% of baseline & ANI < 70% of baseline
Limit Level	[STG < 40% of baseline & ANI < 40% of baseline] and STG < 40% of baseline & ANI < 40% of baseline	

**Notes:**

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

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

	North Lantau Social Cluster	
	NEL	NWL
Action Level	STG < 4.2 & ANI < 15.5	STG < 6.9 & ANI < 31.3
Limit Level	[STG < 2.4 & ANI < 8.9] and [STG < 3.9 & ANI < 17.9]	

Appendix E

## Calibration Certificates of Monitoring Equipments

High-Volume TSP Sampler  
5-Point Calibration Record

Location : ASR8(A)  
 Calibrated by : P.F. Yeung  
 Date : 28/03/2017

Sampler

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

Calibration Orifice and Standard Calibration Relationship

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

Standard Condition

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

Calibration Condition

Pa (hpa) : 1015  
 Ta(K) : 293

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.9	3.482	1.688	54	54.51
2	13 holes	9.6	3.128	1.519	48	48.46
3	10 holes	7.0	2.671	1.302	42	42.40
4	7 holes	4.5	2.141	1.050	34	34.32
5	5 holes	2.5	1.596	0.791	26	26.25

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

Sampler Calibration Relationship (Linear Regression)

Slope(m): 31.202 Intercept(b): 1.567 Correlation Coefficient(r): 0.9994

Checked by: Magnum Fan

Date: 01/04/2017



High-Volume TSP Sampler  
5-Point Calibration Record

Location : ASR9  
 Calibrated by : P.F. Yeung  
 Date : 28/03/2017

Sampler

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

Calibration Orifice and Standard Calibration Relationship

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

Standard Condition

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

Calibration Condition

Pa (hpa) : 1015  
 Ta(K) : 293

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.6	3.438	1.667	58	58.55
2	13 holes	9.2	3.062	1.488	51	51.48
3	10 holes	6.8	2.632	1.283	44	44.42
4	7 holes	4.4	2.118	1.039	36	36.34
5	5 holes	2.6	1.628	0.806	27	27.26

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): 35.784 Intercept(b): -1.348 Correlation Coefficient(r): 0.9995

Checked by: Magnum Fan

Date: 01/04/2017



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

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

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

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

DATA TABULATION

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

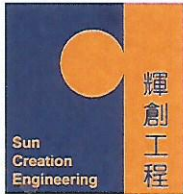
CALCULATIONS

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

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

For subsequent flow rate calculations:

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



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

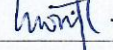
DATE OF TEST / 測試日期 : 15 June 2016

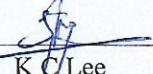
### TEST RESULTS / 測試結果

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.

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# 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

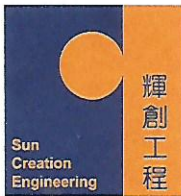
### 5.2 Frequency Accuracy

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.



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

## TEST SPECIFICATIONS / 測試規範

Calibration check

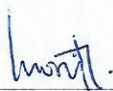
DATE OF TEST / 測試日期 : 11 July 2016

## 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 <sub>A</sub>	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 <sub>A</sub>	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 <sub>A</sub>	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 <sub>A</sub>	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 <sub>C</sub>	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.

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## Performance Check of Turbidity Meter

Equipment Ref. No. : ET/0505/014                      Manufacturer : HACH  
Model No. : 2100Q                                      Serial No. : 13110C029448  
Date of Calibration : 25/02/2017                      Due Date : 24/05/2017

Theoretical Value of Turbidity Standard (NTU)	Measured Value (NTU)	Difference % *
20	20.4	2.0
100	98.2	-1.8
800	775	-3.1

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

Acceptance Criteria

Difference : -5 % to 5 %

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

Prepared by : *B. Li*

Checked by : *AL*





## Internal Calibration & Performance Check of pH Meter

Equipment Ref. No. : ET/EW/007/005                      Manufacturer : HANNA  
 Model No. : HI 8314                                      Serial No. : 08246095  
 Date of Calibration : 27/03/2017                      Calibration Due Date : 26/04/2017

### Liquid Junction Error

003/5.2/002/09 (20°C)

Primary Standard Solution Used : Phosphate      Ref No. of Primary Solution: 003/5.2/002/10 (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 ( $\Delta pH_j$ ) =  $\Delta pH - \Delta pH_{1/2} =$  0.02 / 0.02

### Shift on Stirring

pH of buffer solution (with stirring),  $pH_s =$  6.90 / 6.92  
 Shift on stirring,  $\Delta pH_s = pH_s - pH(S) - \Delta pH_j =$  0.01 / 0.02

### 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/0521/018 / ET/0521/019  
 Temperature record from the reference thermometer ( $T_R$ ):            25.0 / 20.0 °C  
 Temperature record from the ATC ( $T_{ATC}$ ):                      24.8 / 19.9 °C  
 Temperature Difference,  $|T_R - T_{ATC}|$                       0.2 / 0.1 °C  
 Correction    +0.2 / +0.1 °C

### Acceptance Criteria

Performance Characteristic		Acceptable Range
Liquid Junction Error	$\Delta pH_j$	$\leq 0.05$
Shift on Stirring	$\Delta pH_s$	$\leq 0.02$
Noise	$\Delta pH_n$	$\leq 0.02$
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: \_\_\_\_\_ *Hs*

Checked by : \_\_\_\_\_ *AL*



## Internal Calibration & Performance Check of pH Meter

Equipment Ref. No. : ET/EW007/008      Manufacturer : HANNA  
 Model No. : HI9125      Serial No. : H0040409  
 Date of Calibration : 30/03/2017      Calibration Due Date : 29/04/2017

### Liquid Junction Error

003/5.2/002/09 (20°C)

Primary Standard Solution Used : Phosphate      Ref No. of Primary Solution: 003/5.2/002/10 (25°C)  
 Temperature of Solution :      25.0 / 20.0       $\Delta pH_{1/2} =$  0.080 / 0.080  
 pH value of diluted buffer :      6.98 / 6.99      pH (S) = 6.865 / 6.881  
 $\Delta pH = pH(S) - pH$  of diluted buffer = 0.115 / 0.109 (Observed Deviation)  
 Liquid Junction Error ( $\Delta pH_j$ ) =  $\Delta pH - \Delta pH_{1/2} =$  0.04 / 0.03

### Shift on Stirring

pH of buffer solution (with stirring),  $pH_s =$  6.91 / 6.92  
 Shift on stirring,  $\Delta pH_s = pH_s - pH(S) - \Delta pH_j =$  0.01 / 0.01

### 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/0521/018 / ET/0521/019  
 Temperature record from the reference thermometer ( $T_R$ ): 25.0 / 20.0 °C  
 Temperature record from the ATC ( $T_{ATC}$ ): 24.9 / 19.9 °C  
 Temperature Difference,  $|T_R - T_{ATC}|$  0.1 / 0.1 °C  
 Correction +0.1 / +0.1 °C

### Acceptance Criteria

Performance Characteristic		Acceptable Range
Liquid Junction Error	$\Delta pH_j$	$\leq 0.05$
Shift on Stirring	$\Delta pH_s$	$\leq 0.02$
Noise	$\Delta pH_n$	$\leq 0.02$
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>19/01/2017</u>	Calibration Due Date : <u>18/04/2017</u>

**Temperature Verification**

Ref. No. of Reference Thermometer : ET/0521/017  
 Ref. No. of Water Bath : ---

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

**Standardization of sodium thiosulphate (Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>) solution**

Reagent No. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> titrant	CPE/012/4.5/001/15	Reagent No. of 0.025N K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>	CPE/012/4.4/002/16
		Trial 1	Trial 2
Initial Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)		0.00	10.35
Final Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)		10.35	20.70
Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used (ml)		10.35	10.35
Normality of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> solution (N)		0.02415	0.02415
Average Normality (N) of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> solution (N)		0.02415	
Acceptance criteria, Deviation		Less than ± 0.001N	

Calculation: Normality of Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, N = 0.25 / ml Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> used

**Linearity Checking**

**Determination of dissolved oxygen content by Winkler Titration \***

Purging Time (min)	2		5		10	
	1	2	1	2	1	2
Initial Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	0.00	11.40	23.00	0.00	6.10	9.90
Final Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	11.40	23.00	29.60	6.10	9.90	13.80
Vol. (V) of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used (ml)	11.40	11.60	6.60	6.10	3.80	3.90
Dissolved Oxygen (DO), mg/L	7.39	7.52	4.28	3.95	2.46	2.53
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L		Less than + 0.3mg/L	

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

Purging time, min	DO meter reading, mg/L			Winkler Titration result *, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
2	7.35	7.42	7.39	7.39	7.52	7.46	0.94
5	4.24	4.13	4.19	4.28	3.95	4.12	1.68
10	2.51	2.58	2.55	2.46	2.53	2.50	1.98
Linear regression coefficient				0.9998			



## Internal Calibration Report of Dissolved Oxygen Meter

### Zero Point Checking

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

### Salinity Checking

Reagent No. of NaCl (10ppt)	CPE/012/4.7/003/33	Reagent No. of NaCl (30ppt)	CPE/012/4.8/003/33
-----------------------------	--------------------	-----------------------------	--------------------

### Determination of dissolved oxygen content by Winkler Titration \*\*

Salinity (ppt)	10		30	
Trial	1	2	1	2
Initial Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	0.00	10.90	21.80	31.20
Final Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	10.90	21.80	31.20	40.60
Vol. (V) of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used (ml)	10.90	10.90	9.40	9.40
Dissolved Oxygen (DO), mg/L	7.07	7.07	6.09	6.09
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L	

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

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result**, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	7.21	7.18	7.2	7.07	7.07	7.07	1.82
30	6.13	6.18	6.16	6.09	6.09	6.09	1.14

### Acceptance Criteria

- (1) 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

: Bianco

Approved by:

[Signature]



### Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No. : <u>ET/EW/008/007</u>	Manufacturer : <u>YSI</u>
Model No. : <u>Pro 2030</u>	Serial No. : <u>12H101061</u>
Date of Calibration : <u>18/02/2017</u>	Calibration Due Date : <u>17/05/2017</u>

**Temperature Verification**

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

Ref. No. of Water Bath : ---

	Temperature (°C)			
	Reference Thermometer reading	Measured	Corrected	
		20.4		19.9
DO Meter reading	Measured	20.1	Difference	-0.2

**Standardization of sodium thiosulphate (Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>) solution**

Reagent No. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> titrant	CPE/012/4.5/001/15	Reagent No. of 0.025N K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>	CPE/012/4.4/002/17
		Trial 1	Trial 2
Initial Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)		0.00	10.30
Final Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)		10.30	20.65
Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used (ml)		10.30	10.35
Normality of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> solution (N)		0.02427	0.02415
Average Normality (N) of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> solution (N)		0.02421	
Acceptance criteria, Deviation		Less than ± 0.001N	

Calculation: Normality of Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, N = 0.25 / ml Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> used

**Linearity Checking**

**Determination of dissolved oxygen content by Winkler Titration \***

Purging Time (min)	2		5		10	
	1	2	1	2	1	2
Initial Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	0.00	11.40	22.60	0.00	6.70	11.10
Final Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	11.40	22.60	29.40	6.70	11.10	15.40
Vol. (V) of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used (ml)	11.40	11.20	6.80	6.70	4.40	4.30
Dissolved Oxygen (DO), mg/L	7.41	7.28	4.42	4.35	2.86	2.79
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	7.54	7.49	7.52	7.41	7.28	7.35	2.29
5	4.28	2.89	3.59	4.42	4.35	4.39	20.05
10	2.95	2.89	2.92	2.86	2.79	2.83	3.13
Linear regression coefficient						0.9965	



## 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/012/4.7/003/34	Reagent No. of NaCl (30ppt)	CPE/012/4.8/003/34
-----------------------------	--------------------	-----------------------------	--------------------

### *Determination of dissolved oxygen content by Winkler Titration \*\**

Salinity (ppt)	10		30	
Trial	1	2	1	2
Initial Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	0.00	10.80	21.70	31.00
Final Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	10.80	21.70	31.00	40.20
Vol. (V) of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used (ml)	10.80	10.90	9.30	9.20
Dissolved Oxygen (DO), mg/L	7.02	7.08	6.04	5.98
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	7.12	7.08	7.1	7.02	7.08	7.05	0.71
30	6.02	6.03	6.03	6.04	5.98	6.01	0.33

### *Acceptance Criteria*

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

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

# Delete as appropriate

Calibrated by

:

Approved by :



## Performance Check of Salinity Meter

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

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

S/001/9

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

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

Acceptance Criteria

Difference : -10 % to 10 %

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

Checked by : *Bianco*

Approved by : *CTL*



## Performance Check of Salinity Meter

Equipment Ref. No. : ET/EW/008/007 Manufacturer : YSI  
Model No. : Pro 2030 Serial No. : 12H 101061  
Date of Calibration : 18/02/2017 Due Date : 17/05/2017

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

S/001/9

Salinity Standard Value (ppt)	Measured Salinity (ppt)	Difference * (%)
30.0	29.6	-1.33

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

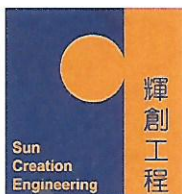
### Acceptance Criteria

Difference : -10 % to 10 %

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

Checked by : Brian 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 ± 2)°C      Relative Humidity / 相對濕度 : (55 ± 20)%  
Line Voltage / 電壓 : ---

## TEST SPECIFICATIONS / 測試規範


Calibration check

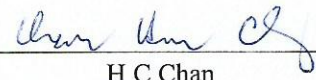
DATE OF TEST / 測試日期 : 27 October 2016

## TEST RESULTS / 測試結果

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

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

Tested By :   
測試 : \_\_\_\_\_  
T L Shek  
Assistant Engineer

Certified By :   
核證 : \_\_\_\_\_  
H C Chan  
Engineer

Date of Issue : 28 October 2016  
簽發日期

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

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



輝創工程有限公司

Sun Creation Engineering Limited

Calibration and Testing Laboratory

# Certificate of Calibration 校正證書

Certificate No. : C165934  
證書編號

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

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

- Test procedure : MA130N.
- Results :

### Air Velocity

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

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

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

### Note :

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

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

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

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)

**ENVIROTECH SERVICES CO.**

**Calibration Report of Wind Meter**

Date of Calibration : 18 April 2017

Brand of Test Meter: Global Water

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

Direction Sensor: WE570 (S/N:153500564)

Location : Pak Mong, Siu Ho Wan

Procedures :

- 1. Wind Still Test: The wind speed sensor was hold by hand until it keep still
- 2. Wind Speed Test: The wind meter was on-site calibrated against the Anemometer
- 3. Wind Direction Test : The wind meter was on-site calibrated against the marine compass at four directions

Results:

Wind Still Test

Wind Speed (m/s)
0.00

Wind Speed Test

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

Wind Direction Test

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

Calibrated by: Ho  
Yeung Ping Fai  
(Technical Officer)

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

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 April 2017)**

Alternative Noise Monitoring at Pak Mong Village Entrance

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

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

Alternative Air Quality Monitoring at WA4 and MTRC Depot Entrance

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

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

Alternative Noise Monitoring at Pak Mong Village Entrance

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

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 May 2017)**

Alternative Air Quality Monitoring at WA4 and MTRC Depot Entrance

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

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 (April 2017)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						01-Apr <b>WQM</b> Mid-Flood 9:23 (07:38 - 11:08) Mid-Ebb 16:04 (14:19 - 17:49)
02-Apr	03-Apr	04-Apr	05-Apr	06-Apr	07-Apr	08-Apr
		WQM is cancelled due to suspension of marine works during holiday		<b>WQM</b> Mid-Ebb 10:19 (08:34 - 12:04) Mid-Flood 15:26 (13:41 - 17:11)		<b>WQM</b> Mid-Ebb 11:48 (10:03 - 13:33) Mid-Flood 17:24 (15:39 - 19:09)
09-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr
		<b>WQM</b> Mid-Ebb 13:14 (11:29 - 14:59) Mid-Flood 19:33 (17:48 - 21:18)		<b>WQM</b> Mid-Flood 7:56 (06:11 - 09:41) Mid-Ebb 14:14 (12:29 - 15:59)		<b>WQM</b> Mid-Flood 8:47 (07:02 - 10:32) Mid-Ebb 15:20 (13:35 - 17:05)
16-Apr	17-Apr	18-Apr	19-Apr	20-Apr	21-Apr	22-Apr
		<b>WQM</b> Mid-Flood 10:12 (08:27 - 11:57) Mid-Ebb 17:31 (15:46 - 19:16)		<b>WQM</b> Mid-Ebb 8:51 (07:45 - 10:00) Mid-Flood 12:58 (11:13 - 14:43)		<b>WQM</b> Mid-Ebb 10:35 (08:50 - 12:20) Mid-Flood 15:43 (13:58 - 17:28)
23-Apr	24-Apr	25-Apr	26-Apr	27-Apr	28-Apr	29-Apr
		<b>WQM</b> Mid-Ebb 12:18 (10:33 - 14:03) Mid-Flood 18:24 (16:39 - 20:09)		<b>WQM</b> Mid-Ebb 13:34 (11:49 - 15:19) Mid-Flood 20:08 (18:23 - 21:53)		<b>WQM</b> Mid-Flood 8:19 (06:34 - 10:04) Mid-Ebb 15:02 (13:17 - 16:47)
30-Apr						



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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	01-May	02-May	03-May	04-May	05-May	06-May
		<b>WQM</b> Mid-Flood 10:31 (08:46 - 12:16) Mid-Ebb 17:44 (15:59 - 19:29)		<b>WQM</b> Mid-Ebb 8:48 (07:03 - 10:33) Mid-Flood 13:48 (12:03 - 15:33)		<b>WQM</b> Mid-Ebb 10:45 (09:00 - 12:30) Mid-Flood 16:20 (14:35 - 18:05)
07-May	08-May	09-May	10-May	11-May	12-May	13-May
		<b>WQM</b> Mid-Ebb 12:20 (10:35 - 14:05) Mid-Flood 18:45 (17:00 - 20:30)		<b>WQM</b> Mid-Ebb 13:23 (11:38 - 15:08) Mid-Flood 20:08 (18:23 - 21:53)		<b>WQM</b> Mid-Flood 7:45 (06:00 - 09:30) Mid-Ebb 14:26 (14:19 - 17:49)
14-May	15-May	16-May	17-May	18-May	19-May	20-May
		<b>WQM</b> Mid-Flood 9:16 (07:31 - 11:01) Mid-Ebb 16:16 (14:31 - 18:01)		<b>WQM</b> Mid-Flood 10:45 (09:00 - 12:30) Mid-Ebb 17:57 (16:12 - 19:42)		<b>WQM</b> Mid-Ebb 9:06 (07:21 - 10:51) Mid-Flood 13:58 (12:13 - 15:43)
21-May	22-May	23-May	24-May	25-May	26-May	27-May
		<b>WQM</b> Mid-Ebb 11:13 (09:28 - 12:58) Mid-Flood 17:19 (15:34 - 19:04)		<b>WQM</b> Mid-Ebb 12:34 (10:49 - 14:19) Mid-Flood 19:12 (17:27 - 20:57)		<b>WQM</b> Mid-Flood 7:15 (05:30 - 09:00) Mid-Ebb 14:04 (12:19 - 15:49)
28-May	29-May	30-May	31-May			
		<b>WQM</b> Mid-Flood 9:27 (07:42 - 11:12) Mid-Ebb 16:32 (14:47 - 18:17)				

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 April 2017)**

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

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

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

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

Appendix G

Impact Air Quality  
Monitoring Results and  
Graphical Presentation

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

Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)		
TMCLKL	HY/2012/07	2017-04-03	ASR8A	8:25	1-hr TSP	103	394	500		
TMCLKL	HY/2012/07	2017-04-03	ASR8A	9:27	1-hr TSP	59				
TMCLKL	HY/2012/07	2017-04-03	ASR8A	10:29	1-hr TSP	68				
TMCLKL	HY/2012/07	2017-04-06	ASR8A	8:10	1-hr TSP	87				
TMCLKL	HY/2012/07	2017-04-06	ASR8A	9:12	1-hr TSP	103				
TMCLKL	HY/2012/07	2017-04-06	ASR8A	10:14	1-hr TSP	72				
TMCLKL	HY/2012/07	2017-04-12	ASR8A	9:04	1-hr TSP	115				
TMCLKL	HY/2012/07	2017-04-12	ASR8A	10:06	1-hr TSP	99				
TMCLKL	HY/2012/07	2017-04-12	ASR8A	11:08	1-hr TSP	107				
TMCLKL	HY/2012/07	2017-04-18	ASR8A	8:44	1-hr TSP	94				
TMCLKL	HY/2012/07	2017-04-18	ASR8A	9:46	1-hr TSP	74				
TMCLKL	HY/2012/07	2017-04-18	ASR8A	10:48	1-hr TSP	80				
TMCLKL	HY/2012/07	2017-04-24	ASR8A	9:20	1-hr TSP	102				
TMCLKL	HY/2012/07	2017-04-24	ASR8A	10:22	1-hr TSP	68				
TMCLKL	HY/2012/07	2017-04-24	ASR8A	11:24	1-hr TSP	103				
TMCLKL	HY/2012/07	2017-04-27	ASR8A	8:41	1-hr TSP	70				
TMCLKL	HY/2012/07	2017-04-27	ASR8A	9:43	1-hr TSP	111				
TMCLKL	HY/2012/07	2017-04-27	ASR8A	10:45	1-hr TSP	105				
					Average	90				
					Min.	59				
					Max.	115				

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

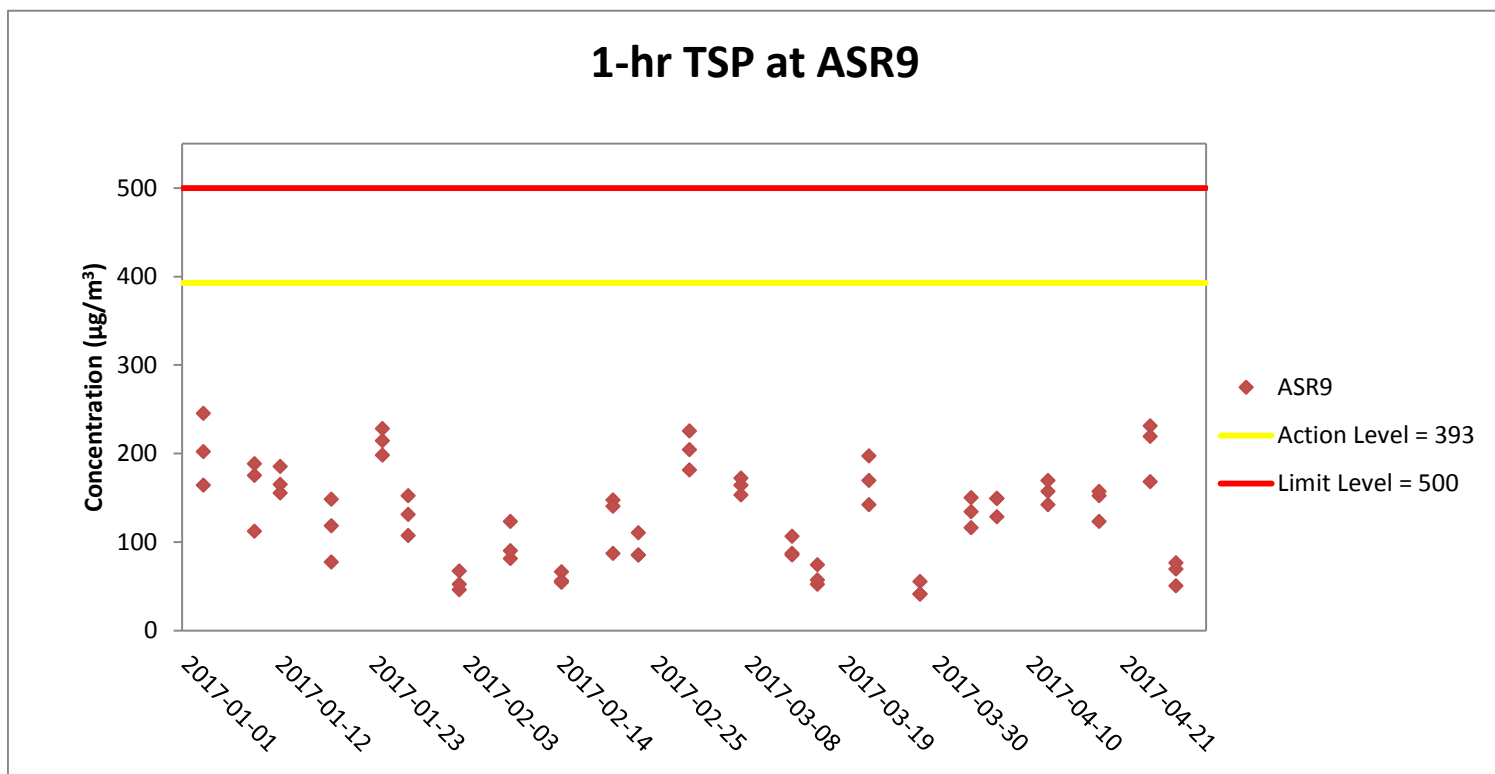
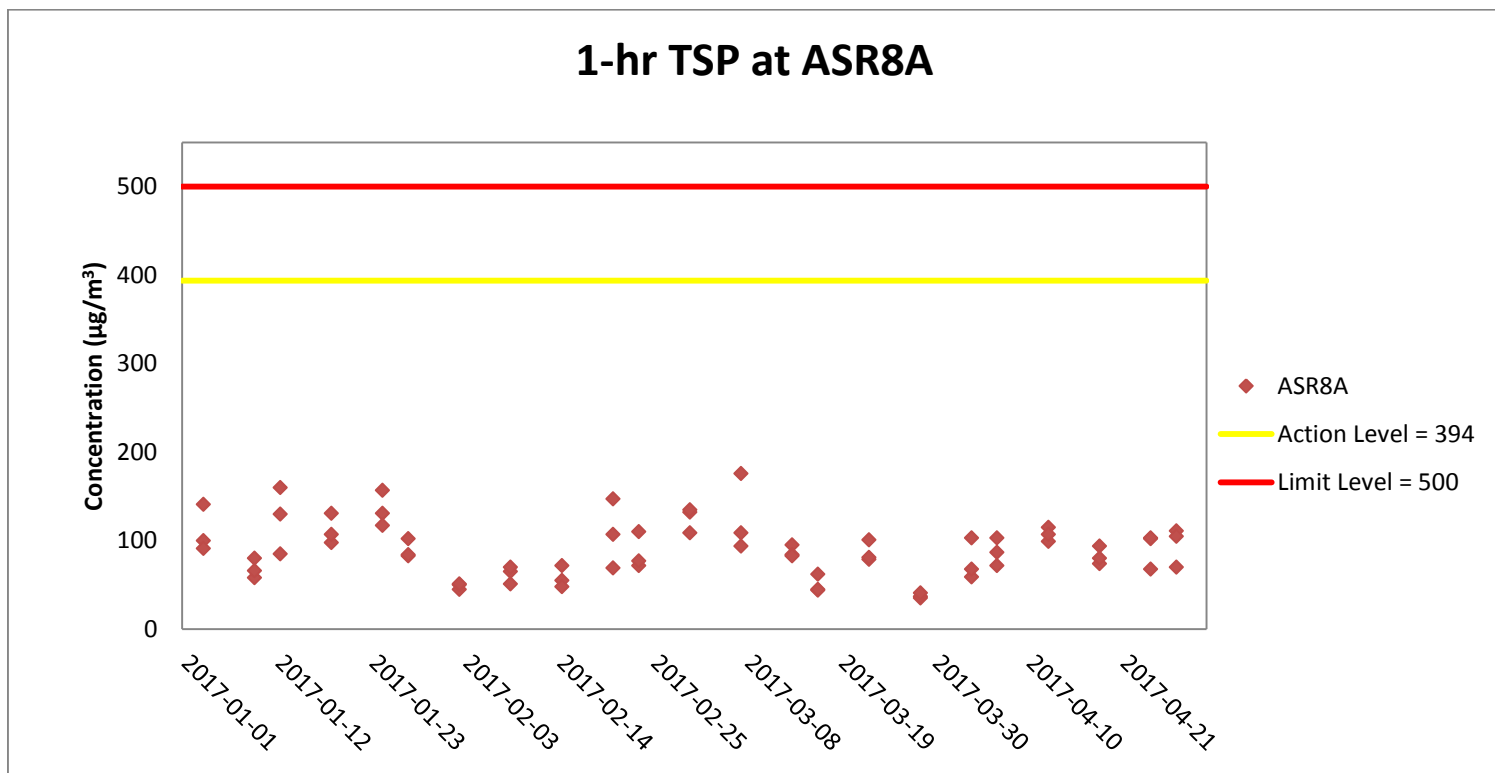
Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)		
TMCLKL	HY/2012/07	2017-04-03	ASR9	8:35	1-hr TSP	134	393	500		
TMCLKL	HY/2012/07	2017-04-03	ASR9	9:37	1-hr TSP	116				
TMCLKL	HY/2012/07	2017-04-03	ASR9	10:39	1-hr TSP	150				
TMCLKL	HY/2012/07	2017-04-06	ASR9	8:20	1-hr TSP	149				
TMCLKL	HY/2012/07	2017-04-06	ASR9	9:22	1-hr TSP	149				
TMCLKL	HY/2012/07	2017-04-06	ASR9	10:24	1-hr TSP	128				
TMCLKL	HY/2012/07	2017-04-12	ASR9	9:15	1-hr TSP	142				
TMCLKL	HY/2012/07	2017-04-12	ASR9	10:17	1-hr TSP	157				
TMCLKL	HY/2012/07	2017-04-12	ASR9	11:19	1-hr TSP	169				
TMCLKL	HY/2012/07	2017-04-18	ASR9	8:55	1-hr TSP	152				
TMCLKL	HY/2012/07	2017-04-18	ASR9	9:57	1-hr TSP	157				
TMCLKL	HY/2012/07	2017-04-18	ASR9	10:59	1-hr TSP	123				
TMCLKL	HY/2012/07	2017-04-24	ASR9	9:30	1-hr TSP	231				
TMCLKL	HY/2012/07	2017-04-24	ASR9	10:32	1-hr TSP	168				
TMCLKL	HY/2012/07	2017-04-24	ASR9	11:34	1-hr TSP	219				
TMCLKL	HY/2012/07	2017-04-27	ASR9	8:52	1-hr TSP	50				
TMCLKL	HY/2012/07	2017-04-27	ASR9	9:54	1-hr TSP	69				
TMCLKL	HY/2012/07	2017-04-27	ASR9	10:56	1-hr TSP	76				
					Average	141				
					Min.	50				
					Max.	231				

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

Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2012/07	2017-04-03	ASR8A	11:31	24-hr TSP	48	178	260
TMCLKL	HY/2012/07	2017-04-06	ASR8A	11:16	24-hr TSP	51		
TMCLKL	HY/2012/07	2017-04-12	ASR8A	12:10	24-hr TSP	50		
TMCLKL	HY/2012/07	2017-04-18	ASR8A	11:50	24-hr TSP	54		
TMCLKL	HY/2012/07	2017-04-24	ASR8A	12:26	24-hr TSP	62		
TMCLKL	HY/2012/07	2017-04-27	ASR8A	11:47	24-hr TSP	42		
						Average	51	
						Min.	42	
						Max.	62	

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

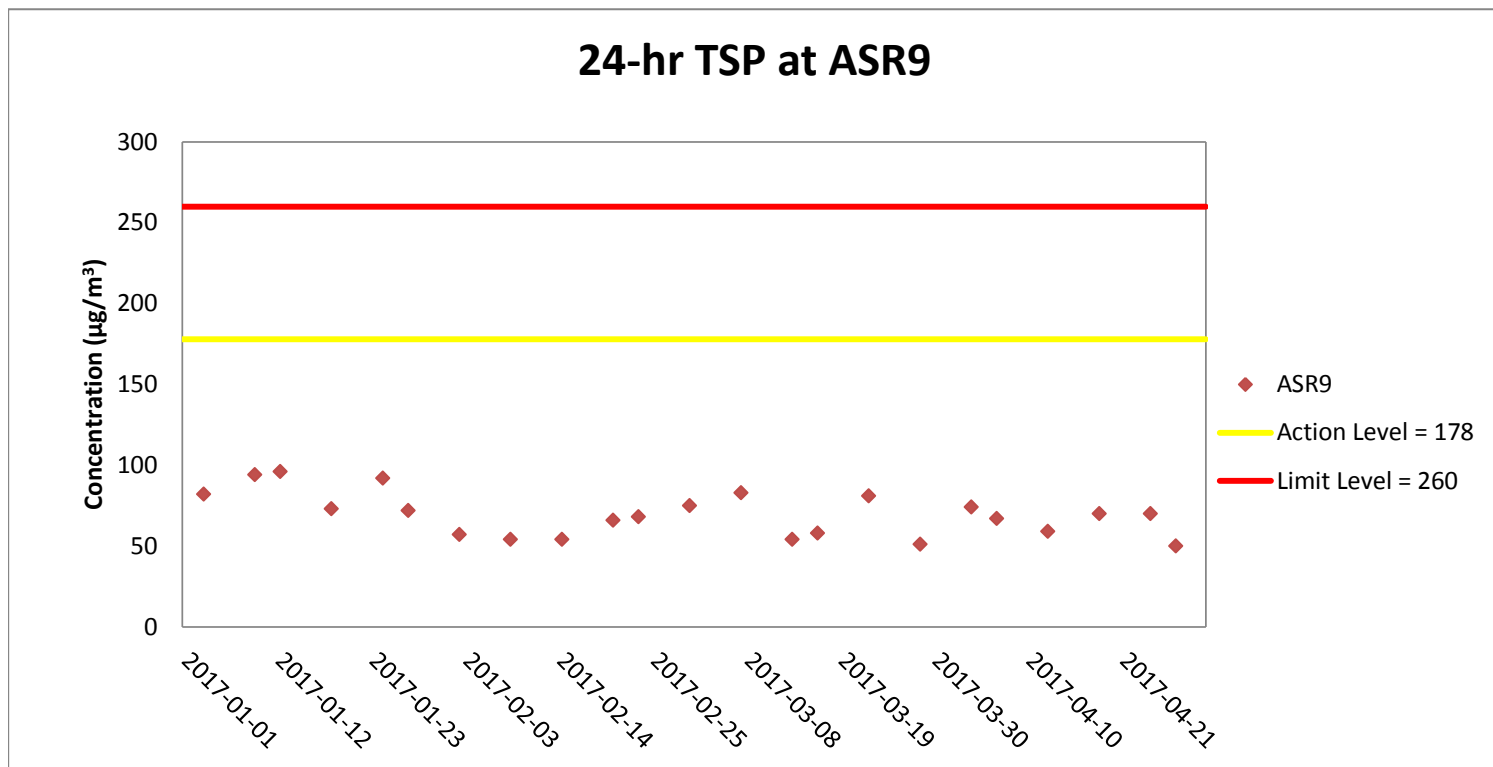
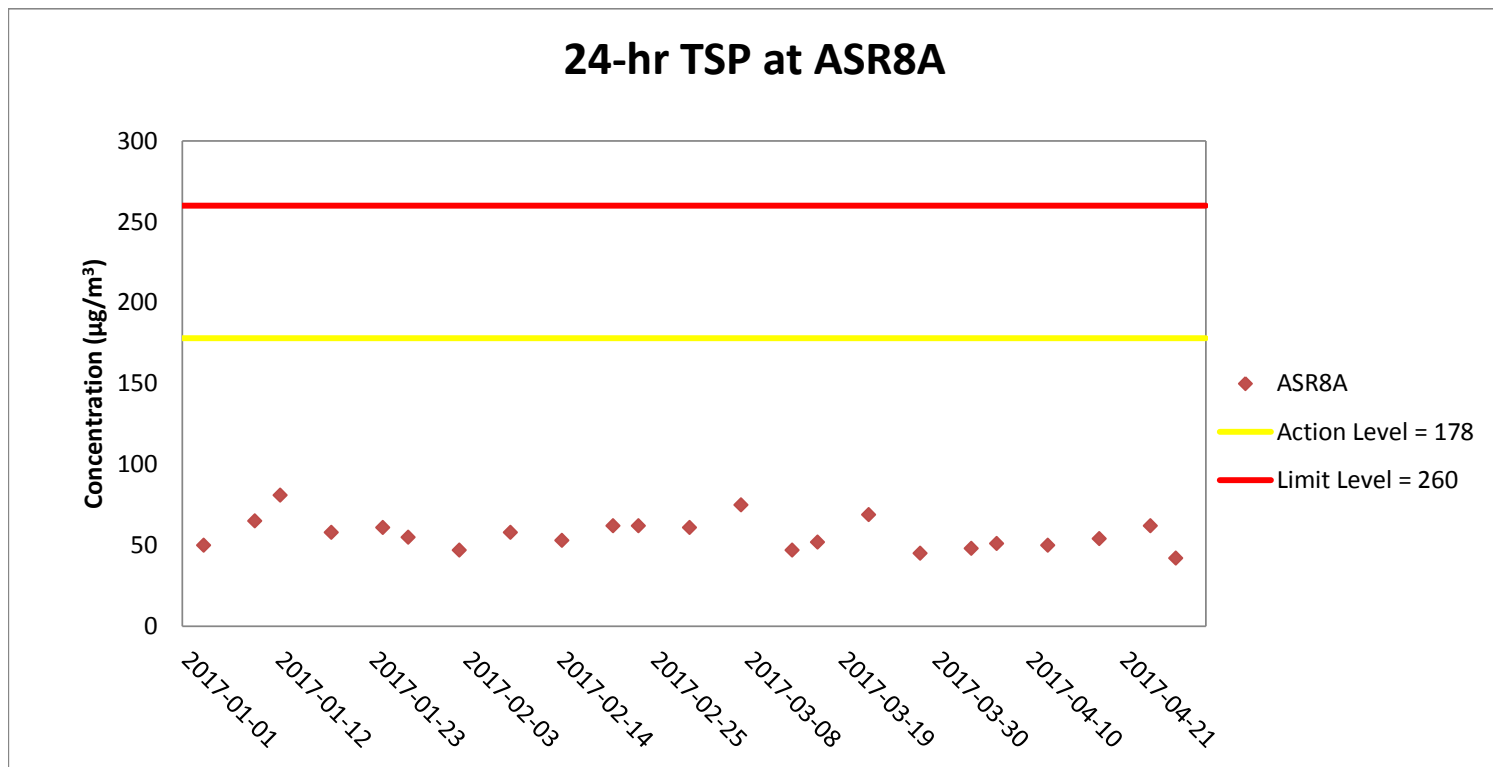
Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2012/07	2017-04-03	ASR9	11:41	24-hr TSP	74	178	260
TMCLKL	HY/2012/07	2017-04-06	ASR9	11:26	24-hr TSP	67		
TMCLKL	HY/2012/07	2017-04-12	ASR9	12:21	24-hr TSP	59		
TMCLKL	HY/2012/07	2017-04-18	ASR9	12:01	24-hr TSP	70		
TMCLKL	HY/2012/07	2017-04-24	ASR9	12:36	24-hr TSP	70		
TMCLKL	HY/2012/07	2017-04-27	ASR9	11:58	24-hr TSP	50		
						Average	65	
						Min.	50	
						Max.	74	



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)
2017/4/3	0	0.1	167
2017/4/3	1	0.0	139
2017/4/3	2	0.0	50
2017/4/3	3	0.0	96
2017/4/3	4	0.1	95
2017/4/3	5	0.0	156
2017/4/3	6	0.1	182
2017/4/3	7	0.0	169
2017/4/3	8	0.0	154
2017/4/3	9	0.9	154
2017/4/3	10	1.3	141
2017/4/3	11	1.3	155
2017/4/3	12	0.8	137
2017/4/3	13	1.7	130
2017/4/3	14	1.3	134
2017/4/3	15	1.2	115
2017/4/3	16	0.8	143
2017/4/3	17	0.3	95
2017/4/3	18	0.4	70
2017/4/3	19	0.1	88
2017/4/3	20	0.0	126
2017/4/3	21	0.1	109
2017/4/3	22	0.0	128
2017/4/3	23	0.1	103
2017/4/4	0	0.1	62
2017/4/4	1	0.1	50
2017/4/4	2	0.1	68
2017/4/4	3	0.1	77
2017/4/4	4	0.1	76
2017/4/4	5	0.0	82
2017/4/4	6	0.0	101
2017/4/4	7	0.0	87
2017/4/4	8	0.4	120
2017/4/4	9	1.5	164
2017/4/4	10	0.7	139
2017/4/4	11	1.4	166
2017/4/4	12	1.1	152
2017/4/4	13	1.3	163
2017/4/4	14	1.5	146
2017/4/4	15	2.4	160
2017/4/4	16	1.7	141
2017/4/4	17	1.3	139
2017/4/4	18	1.7	164
2017/4/4	19	1.9	162
2017/4/4	20	0.9	158
2017/4/4	21	0.1	147
2017/4/4	22	0.0	141
2017/4/4	23	0.0	79
2017/4/6	0	0.6	166
2017/4/6	1	0.0	104
2017/4/6	2	0.0	216
2017/4/6	3	0.0	210
2017/4/6	4	0.0	118
2017/4/6	5	0.0	116
2017/4/6	6	0.0	167
2017/4/6	7	0.0	86
2017/4/6	8	0.3	161
2017/4/6	9	1.3	174
2017/4/6	10	2.3	176
2017/4/6	11	1.8	170
2017/4/6	12	2.2	168
2017/4/6	13	2.5	185
2017/4/6	14	1.5	197
2017/4/6	15	0.5	193
2017/4/6	16	1.0	190
2017/4/6	17	1.2	164
2017/4/6	18	0.7	188
2017/4/6	19	0.4	178
2017/4/6	20	0.4	152
2017/4/6	21	0.3	192
2017/4/6	22	0.0	167
2017/4/6	23	0.1	137
2017/4/7	0	0.0	174

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
2017/4/7	1	0.0	135
2017/4/7	2	0.0	64
2017/4/7	3	0.2	116
2017/4/7	4	1.1	186
2017/4/7	5	0.1	170
2017/4/7	6	0.0	175
2017/4/7	7	0.3	92
2017/4/7	8	2.0	153
2017/4/7	9	2.2	178
2017/4/7	10	2.6	169
2017/4/7	11	2.7	165
2017/4/7	12	1.9	164
2017/4/7	13	2.0	159
2017/4/7	14	2.8	150
2017/4/7	15	2.8	159
2017/4/7	16	1.4	152
2017/4/7	17	2.6	149
2017/4/7	18	2.1	159
2017/4/7	19	1.9	160
2017/4/7	20	2.9	149
2017/4/7	21	2.1	152
2017/4/7	22	2.4	139
2017/4/7	23	1.1	164
2017/4/12	0	0.8	221
2017/4/12	1	0.1	134
2017/4/12	2	0.0	231
2017/4/12	3	0.0	246
2017/4/12	4	0.1	271
2017/4/12	5	0.0	314
2017/4/12	6	0.1	111
2017/4/12	7	0.1	114
2017/4/12	8	0.2	136
2017/4/12	9	0.0	221
2017/4/12	10	0.0	67
2017/4/12	11	0.1	192
2017/4/12	12	0.3	158
2017/4/12	13	0.1	230
2017/4/12	14	0.0	202
2017/4/12	15	1.9	174
2017/4/12	16	0.5	125
2017/4/12	17	0.1	212
2017/4/12	18	0.2	196
2017/4/12	19	0.1	101
2017/4/12	20	0.0	148
2017/4/12	21	0.0	76
2017/4/12	22	0.0	68
2017/4/12	23	0.1	75
2017/4/13	0	0.0	112
2017/4/13	1	0.1	160
2017/4/13	2	0.2	79
2017/4/13	3	0.0	166
2017/4/13	4	0.1	57
2017/4/13	5	0.0	80
2017/4/13	6	0.1	97
2017/4/13	7	0.0	152
2017/4/13	8	0.0	133
2017/4/13	9	0.1	261
2017/4/13	10	0.0	197
2017/4/13	11	0.1	159
2017/4/13	12	0.0	174
2017/4/13	13	0.0	230
2017/4/13	14	0.0	200
2017/4/13	15	0.0	247
2017/4/13	16	0.0	159
2017/4/13	17	0.0	118
2017/4/13	18	0.1	164
2017/4/13	19	0.4	134
2017/4/13	20	0.2	155
2017/4/13	21	0.0	148
2017/4/13	22	0.1	183
2017/4/13	23	0.0	144
2017/4/18	0	0.1	177
2017/4/18	1	0.2	171

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
2017/4/18	2	0.0	130
2017/4/18	3	0.3	163
2017/4/18	4	0.1	172
2017/4/18	5	0.0	178
2017/4/18	6	0.0	189
2017/4/18	7	0.0	140
2017/4/18	8	0.0	113
2017/4/18	9	0.1	183
2017/4/18	10	0.2	58
2017/4/18	11	0.1	130
2017/4/18	12	0.1	156
2017/4/18	13	0.0	105
2017/4/18	14	0.1	182
2017/4/18	15	0.0	180
2017/4/18	16	0.0	140
2017/4/18	17	0.0	183
2017/4/18	18	0.1	154
2017/4/18	19	0.2	180
2017/4/18	20	0.1	172
2017/4/18	21	0.1	184
2017/4/18	22	0.2	173
2017/4/18	23	0.1	163
2017/4/19	0	0.3	170
2017/4/19	1	0.3	181
2017/4/19	2	0.1	176
2017/4/19	3	0.2	170
2017/4/19	4	0.1	164
2017/4/19	5	0.1	198
2017/4/19	6	0.0	177
2017/4/19	7	0.0	168
2017/4/19	8	0.2	125
2017/4/19	9	0.0	252
2017/4/19	10	0.2	154
2017/4/19	11	0.3	167
2017/4/19	12	0.7	197
2017/4/19	13	1.8	228
2017/4/19	14	2.3	212
2017/4/19	15	1.5	186
2017/4/19	16	2.6	191
2017/4/19	17	2.5	182
2017/4/19	18	2.0	181
2017/4/19	19	0.2	106
2017/4/19	20	0.1	118
2017/4/19	21	0.2	156
2017/4/19	22	0.9	155
2017/4/19	23	1.7	159
2017/4/24	0	1.4	183
2017/4/24	1	0.7	215
2017/4/24	2	0.9	123
2017/4/24	3	0.2	127
2017/4/24	4	0.1	141
2017/4/24	5	0.1	160
2017/4/24	6	0.4	153
2017/4/24	7	0.7	195
2017/4/24	8	1.2	182
2017/4/24	9	1.1	199
2017/4/24	10	2.1	174
2017/4/24	11	1.3	151
2017/4/24	12	0.6	169
2017/4/24	13	0.3	152
2017/4/24	14	2.1	185
2017/4/24	15	2.5	170
2017/4/24	16	1.2	155
2017/4/24	17	1.8	186
2017/4/24	18	2.6	171
2017/4/24	19	3.3	164
2017/4/24	20	3.7	167
2017/4/24	21	1.5	180
2017/4/24	22	0.7	173
2017/4/24	23	1.2	158
2017/4/25	0	1.2	174
2017/4/25	1	0.4	200
2017/4/25	2	0.4	184
2017/4/25	3	0.7	172
2017/4/25	4	2.2	196

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
2017/4/25	5	5.3	171
2017/4/25	6	4.7	171
2017/4/25	7	2.9	166
2017/4/25	8	2.7	160
2017/4/25	9	1.8	166
2017/4/25	10	1.6	155
2017/4/25	11	1.7	152
2017/4/25	12	2.0	169
2017/4/25	13	0.7	153
2017/4/25	14	1.3	165
2017/4/25	15	1.0	133
2017/4/25	16	2.5	175
2017/4/25	17	2.5	190
2017/4/25	18	0.4	185
2017/4/25	19	0.6	184
2017/4/25	20	0.5	169
2017/4/25	21	0.0	107
2017/4/25	22	0.1	185
2017/4/25	23	0.9	159
2017/4/27	0	0.0	57
2017/4/27	1	0.0	175
2017/4/27	2	0.0	79
2017/4/27	3	0.0	93
2017/4/27	4	0.1	175
2017/4/27	5	0.0	123
2017/4/27	6	0.0	135
2017/4/27	7	0.1	164
2017/4/27	8	0.0	144
2017/4/27	9	0.2	81
2017/4/27	10	0.1	254
2017/4/27	11	0.0	297
2017/4/27	12	0.1	231
2017/4/27	13	0.1	237
2017/4/27	14	0.1	328
2017/4/27	15	0.0	283
2017/4/27	16	0.0	316
2017/4/27	17	0.1	340
2017/4/27	18	0.1	306
2017/4/27	19	0.2	282
2017/4/27	20	0.4	262
2017/4/27	21	0.1	214
2017/4/27	22	0.0	161
2017/4/27	23	0.0	151
2017/4/28	0	0.1	301
2017/4/28	1	0.0	156
2017/4/28	2	0.0	161
2017/4/28	3	0.0	155
2017/4/28	4	0.0	75
2017/4/28	5	0.1	73
2017/4/28	6	0.0	164
2017/4/28	7	0.0	183
2017/4/28	8	0.2	107
2017/4/28	9	0.0	210
2017/4/28	10	0.0	227
2017/4/28	11	0.0	235
2017/4/28	12	0.2	275
2017/4/28	13	1.1	169
2017/4/28	14	2.4	176
2017/4/28	15	2.6	187
2017/4/28	16	2.1	173
2017/4/28	17	1.7	157
2017/4/28	18	1.8	154
2017/4/28	19	2.2	153
2017/4/28	20	2.2	161
2017/4/28	21	2.1	160
2017/4/28	22	1.1	146
2017/4/28	23	0.3	142

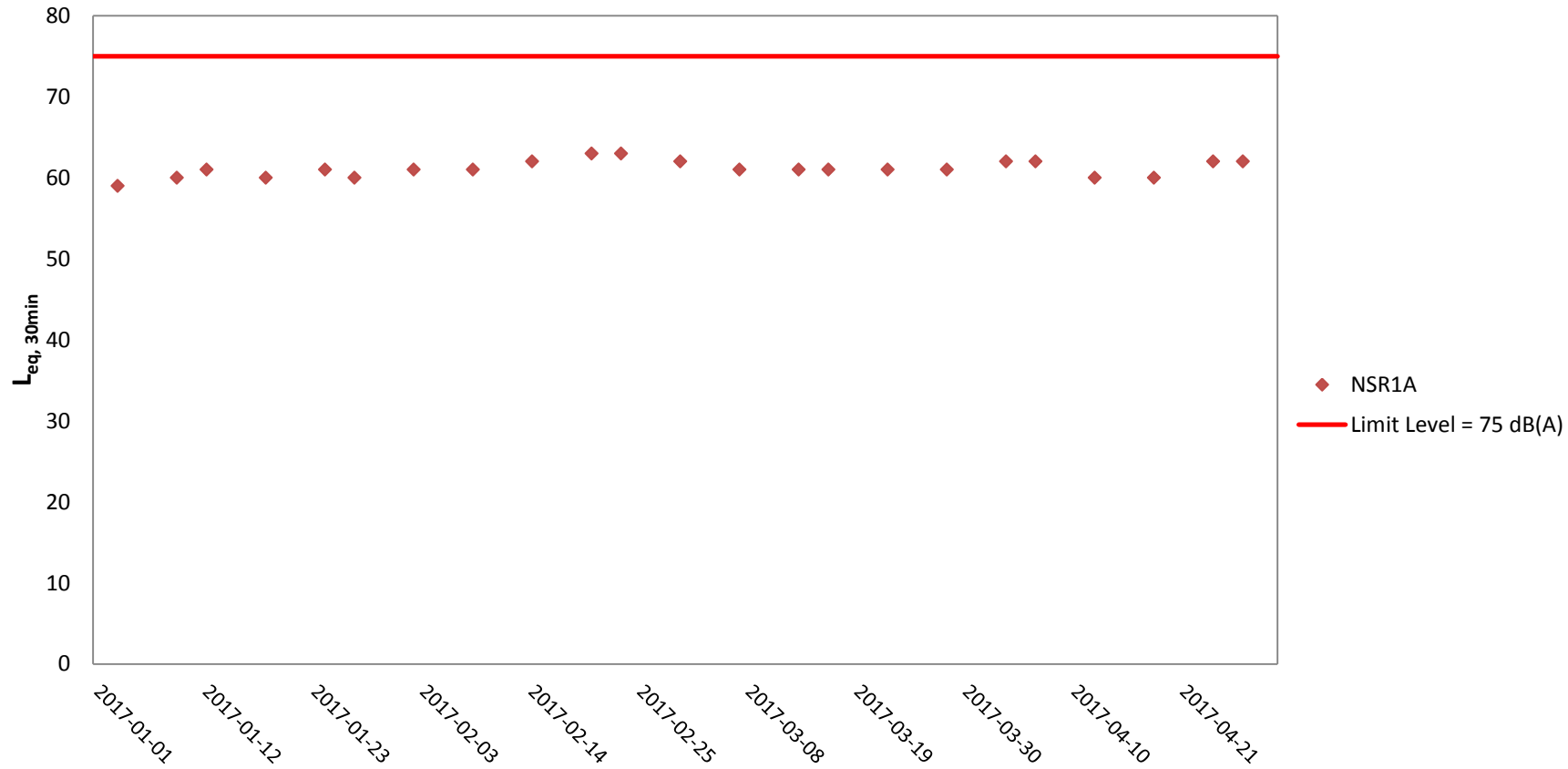
Appendix I

Impact Noise Monitoring  
Results and Graphical  
Presentation

Appendix I-1 Noise Monitoring Results

Project	Works	Date (yyyy-mm-dd)	Station	Weather Condition	Time (hh:mm, 24hour)	Noise Level for 30-min, dB(A)			Limit Level dB(A)	Wind Speed (m/s)	Noise Meter Model/ID	Calibrator Model/ID
						Leq	L10	L90				
TMCLKL	HY/2012/07	2017-04-03	NSR1A	Sunny	9:47	62	64	59	75	0.3	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2017-04-06	NSR1A	Sunny	10:35	62	64	58	75	0.2	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2017-04-12	NSR1A	Cloudy	10:27	60	61	57	75	0.3	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2017-04-18	NSR1A	Sunny	10:07	60	62	57	75	0.3	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2017-04-24	NSR1A	Cloudy	10:35	62	64	58	75	0.2	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2017-04-27	NSR1A	Cloudy	11:06	62	64	59	75	0.3	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	2017-04-01	Mid-Flood	CS(Mf)5	8:40	Surface	1	1	18.9	7.81	28	7.09	8.04	11.5
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	CS(Mf)5	8:40	Surface	1	2	19	7.85	27.9	7.05	8.12	11.7
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	CS(Mf)5	8:40	Middle	2	1	19	7.8	28	7.16	8.42	12
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	CS(Mf)5	8:40	Middle	2	2	19.1	7.83	28.1	7.13	8.37	12.1
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	CS(Mf)5	8:40	Bottom	3	1	19.2	7.78	28.1	7.02	8.62	12.5
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	CS(Mf)5	8:40	Bottom	3	2	19.2	7.81	28.2	6.99	8.71	12.7
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	SR4a	9:07	Surface	1	1	18.9	7.79	27.8	7.02	7.89	11.4
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	SR4a	9:07	Surface	1	2	18.9	7.82	27.9	6.98	7.94	11.6
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	SR4a	9:07	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	SR4a	9:07	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	SR4a	9:07	Bottom	3	1	19	7.8	27.9	6.9	8.12	11.8
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	SR4a	9:07	Bottom	3	2	18.9	7.83	27.9	6.87	8.2	11.8
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	SR4	9:24	Surface	1	1	18.9	7.81	27.9	6.95	7.69	11
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	SR4	9:24	Surface	1	2	19	7.84	27.9	6.98	7.76	11.1
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	SR4	9:24	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	SR4	9:24	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	SR4	9:24	Bottom	3	1	19	7.86	28	6.92	7.92	11.6
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	SR4	9:24	Bottom	3	2	19	7.82	27.9	6.9	7.97	11.6
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS8	9:40	Surface	1	1	19	7.77	27.9	7.05	7.48	10.6
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS8	9:40	Surface	1	2	19	7.8	28	7.01	7.55	10.7
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS8	9:40	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS8	9:40	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS8	9:40	Bottom	3	1	19	7.83	28	6.94	7.82	11.3
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS8	9:40	Bottom	3	2	19.1	7.79	28	6.91	7.79	11.2
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS(Mf)16	10:00	Surface	1	1	19	7.78	28	6.84	7.74	10.9
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS(Mf)16	10:00	Surface	1	2	19.1	7.84	28	6.87	7.82	11.1
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS(Mf)16	10:00	Middle	2	1	19.1	7.8	28	6.76	7.94	11.4
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS(Mf)16	10:00	Middle	2	2	19.1	7.83	28.1	6.79	8	11.6
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS(Mf)16	10:00	Bottom	3	1	19.2	7.86	28.3	6.86	8.31	12.1
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS(Mf)16	10:00	Bottom	3	2	19.2	7.81	28.3	6.88	8.37	12.2
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS(Mf)9	10:22	Surface	1	1	19.2	7.84	28	6.93	7.93	11.4
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS(Mf)9	10:22	Surface	1	2	19.3	7.88	28	6.9	7.99	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	2017-04-01	Mid-Flood	IS(Mf)9	10:22	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS(Mf)9	10:22	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS(Mf)9	10:22	Bottom	3	1	19.3	7.8	28	6.87	8.08	11.7
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	IS(Mf)9	10:22	Bottom	3	2	19.3	7.83	28.1	6.84	8.13	11.9
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	CS(Mf)3	10:42	Surface	1	1	19.3	7.81	28	7.15	8.13	11.5
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	CS(Mf)3	10:42	Surface	1	2	19.3	7.78	28.1	7.12	8.2	11.7
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	CS(Mf)3	10:42	Middle	2	1	19.3	7.76	28.1	7.07	8.35	12
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	CS(Mf)3	10:42	Middle	2	2	19.3	7.79	28.1	7.04	8.41	12.1
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	CS(Mf)3	10:42	Bottom	3	1	19.3	7.84	28.1	6.93	8.49	12.4
TMCLKL	HY/2012/07	2017-04-01	Mid-Flood	CS(Mf)3	10:42	Bottom	3	2	19.3	7.81	28.2	6.9	8.54	12.6
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	CS(Mf)5	16:30	Surface	1	1	18.8	8.06	27.9	6.76	8.11	11.7
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	CS(Mf)5	16:30	Surface	1	2	18.9	8.08	27.9	6.79	8.14	11.6
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	CS(Mf)5	16:30	Middle	2	1	19	7.93	28	6.85	8.27	12
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	CS(Mf)5	16:30	Middle	2	2	19	7.95	28.1	6.88	8.29	12
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	CS(Mf)5	16:30	Bottom	3	1	19.1	7.86	28.2	6.99	8.36	12
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	CS(Mf)5	16:30	Bottom	3	2	19.2	7.88	28.3	7.02	8.39	11.9
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	SR4a	16:10	Surface	1	1	18.9	7.85	27.8	6.87	7.75	10.9
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	SR4a	16:10	Surface	1	2	19	7.88	27.9	6.89	7.78	11
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	SR4a	16:10	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	SR4a	16:10	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	SR4a	16:10	Bottom	3	1	19.1	8.04	28	7.07	7.94	11.4
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	SR4a	16:10	Bottom	3	2	19.2	8.07	28.1	7.09	7.97	11.5
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	SR4	15:47	Surface	1	1	18.9	8.06	28	6.89	7.99	11.4
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	SR4	15:47	Surface	1	2	18.9	8.03	28	6.91	8.01	11.5
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	SR4	15:47	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	SR4	15:47	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	SR4	15:47	Bottom	3	1	19	8.12	28.1	7.12	8.24	11.9
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	SR4	15:47	Bottom	3	2	19.1	8.15	28.2	7.15	8.27	12.1
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS8	15:24	Surface	1	1	19	7.94	27.9	7	7.64	10.9
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS8	15:24	Surface	1	2	19.1	7.92	28	7.03	7.67	11
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS8	15:24	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS8	15:24	Middle	2	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	2017-04-01	Mid-Ebb	IS8	15:24	Bottom	3	1	19.2	8.11	28.1	7.14	7.76	11.3
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS8	15:24	Bottom	3	2	19.3	8.14	28.2	7.17	7.79	11.3
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS(Mf)16	15:02	Surface	1	1	18.9	8.09	28	6.98	8.13	11.7
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS(Mf)16	15:02	Surface	1	2	18.9	8.11	28	7	8.11	11.5
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS(Mf)16	15:02	Middle	2	1	19	7.89	28.1	7.09	8.3	12.1
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS(Mf)16	15:02	Middle	2	2	19.1	7.91	28.2	7.11	8.33	12.1
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS(Mf)16	15:02	Bottom	3	1	19.2	8.05	28.3	7.25	8.4	12.1
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS(Mf)16	15:02	Bottom	3	2	19.2	8.07	28.4	7.28	8.42	12
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS(Mf)9	14:40	Surface	1	1	19	7.94	27.9	6.87	8.24	12
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS(Mf)9	14:40	Surface	1	2	19.1	7.97	28	6.89	8.27	12.1
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS(Mf)9	14:40	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS(Mf)9	14:40	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS(Mf)9	14:40	Bottom	3	1	19.2	8.07	28.1	7.04	8.39	12.1
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	IS(Mf)9	14:40	Bottom	3	2	19.3	8.05	28.2	7.07	8.41	12.3
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	CS(Mf)3	14:18	Surface	1	1	18.9	8.12	28	7.06	8.35	11.9
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	CS(Mf)3	14:18	Surface	1	2	19	8.1	28	7.03	8.38	12
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	CS(Mf)3	14:18	Middle	2	1	19.1	7.96	28.1	7.13	8.44	12.2
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	CS(Mf)3	14:18	Middle	2	2	19.2	7.94	28.2	7.11	8.47	12.4
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	CS(Mf)3	14:18	Bottom	3	1	19.3	8.2	28.3	7.24	8.5	12.5
TMCLKL	HY/2012/07	2017-04-01	Mid-Ebb	CS(Mf)3	14:18	Bottom	3	2	19.4	8.23	28.4	7.27	8.53	12.5
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	CS(Mf)5	13:41	Surface	1	1	20	7.81	28	6.97	6.99	9.8
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	CS(Mf)5	13:41	Surface	1	2	20.1	7.8	28	6.96	6.92	10
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	CS(Mf)5	13:41	Middle	2	1	20.2	7.93	28.1	7.11	7.12	10.2
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	CS(Mf)5	13:41	Middle	2	2	20.1	7.95	28.2	7.13	7.18	10.3
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	CS(Mf)5	13:41	Bottom	3	1	20.3	8.02	28.4	7.27	7.22	10.5
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	CS(Mf)5	13:41	Bottom	3	2	20.3	8.06	28.3	7.29	7.25	10.6
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	SR4a	14:01	Surface	1	1	20	8.01	28	7.12	7.16	10.4
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	SR4a	14:01	Surface	1	2	20.1	8.02	27.9	7.1	7.22	10.5
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	SR4a	14:01	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	SR4a	14:01	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	SR4a	14:01	Bottom	3	1	20.1	8.07	28.1	7.26	7.03	10.2
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	SR4a	14:01	Bottom	3	2	20.1	8.06	28	7.24	7.09	10.2

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	2017-04-06	Mid-Flood	SR4	14:23	Surface	1	1	19.9	7.92	28.1	7.33	6.83	9.8
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	SR4	14:23	Surface	1	2	20	7.93	28.2	7.36	6.77	9.7
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	SR4	14:23	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	SR4	14:23	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	SR4	14:23	Bottom	3	1	20.1	7.99	28.3	7.22	6.91	10.1
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	SR4	14:23	Bottom	3	2	20.1	8.01	28.2	7.2	6.95	10.1
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS8	14:45	Surface	1	1	20.1	7.99	28.2	7.25	6.98	9.9
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS8	14:45	Surface	1	2	20	7.97	28.2	7.24	6.92	9.8
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS8	14:45	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS8	14:45	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS8	14:45	Bottom	3	1	20.2	8.02	28.3	7.43	7.02	10.1
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS8	14:45	Bottom	3	2	20.1	8.05	28.2	7.46	7.07	10.2
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS(Mf)16	15:05	Surface	1	1	20	8.1	28.1	7.43	6.72	9.5
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS(Mf)16	15:05	Surface	1	2	20.1	8.08	28	7.4	6.77	9.6
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS(Mf)16	15:05	Middle	2	1	20.1	7.82	28.2	7.55	6.92	10
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS(Mf)16	15:05	Middle	2	2	20.2	7.84	28.1	7.57	6.97	10.1
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS(Mf)16	15:05	Bottom	3	1	20.4	7.96	28.4	7.48	7.03	10.3
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS(Mf)16	15:05	Bottom	3	2	20.3	7.99	28.3	7.46	7.11	10.4
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS(Mf)9	15:25	Surface	1	1	20	7.95	28.1	7.21	6.97	10
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS(Mf)9	15:25	Surface	1	2	20	7.97	28.2	7.23	6.95	9.9
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS(Mf)9	15:25	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS(Mf)9	15:25	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS(Mf)9	15:25	Bottom	3	1	20.1	7.86	28.3	7.19	6.84	9.9
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	IS(Mf)9	15:25	Bottom	3	2	20	7.88	28.2	7.18	6.79	9.9
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	CS(Mf)3	15:45	Surface	1	1	19.9	7.81	28	7.31	6.82	9.7
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	CS(Mf)3	15:45	Surface	1	2	20	7.79	28	7.3	6.88	9.8
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	CS(Mf)3	15:45	Middle	2	1	20.1	7.74	28.1	7.35	6.74	9.7
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	CS(Mf)3	15:45	Middle	2	2	20	7.77	28	7.36	6.79	9.8
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	CS(Mf)3	15:45	Bottom	3	1	20.2	7.95	28.3	7.41	7.11	10.4
TMCLKL	HY/2012/07	2017-04-06	Mid-Flood	CS(Mf)3	15:45	Bottom	3	2	20.1	7.98	28.2	7.43	7.03	10.3
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	CS(Mf)5	11:50	Surface	1	1	19.9	7.84	27.7	6.86	7.29	10.5
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	CS(Mf)5	11:50	Surface	1	2	20	7.86	27.8	6.88	7.31	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	2017-04-06	Mid-Ebb	CS(Mf)5	11:50	Middle	2	1	20.1	8	28	6.97	7.47	10.8
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	CS(Mf)5	11:50	Middle	2	2	20.1	8.02	28.1	6.99	7.49	10.9
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	CS(Mf)5	11:50	Bottom	3	1	20.2	7.94	28.2	7.14	7.55	10.8
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	CS(Mf)5	11:50	Bottom	3	2	20.2	7.97	28.3	7.12	7.57	10.7
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	SR4a	11:35	Surface	1	1	19.8	7.94	27.8	6.92	7.43	10.4
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	SR4a	11:35	Surface	1	2	19.9	7.97	27.9	6.94	7.45	10.5
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	SR4a	11:35	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	SR4a	11:35	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	SR4a	11:35	Bottom	3	1	20	8.05	28	7.05	7.5	10.8
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	SR4a	11:35	Bottom	3	2	20.1	8.07	28	7.08	7.53	10.8
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	SR4	11:05	Surface	1	1	19.7	8.07	27.9	7.13	6.99	10
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	SR4	11:05	Surface	1	2	19.8	8.09	28	7.16	7.01	10.1
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	SR4	11:05	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	SR4	11:05	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	SR4	11:05	Bottom	3	1	19.8	7.93	28.1	7.28	7.13	10.3
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	SR4	11:05	Bottom	3	2	19.9	7.95	28.2	7.3	7.16	10.5
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS8	10:43	Surface	1	1	19.9	7.85	28.1	7.2	7.14	10.2
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS8	10:43	Surface	1	2	20	7.89	28.2	7.23	7.17	10.3
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS8	10:43	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS8	10:43	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS8	10:43	Bottom	3	1	20.1	8.01	28.3	7.3	7.35	10.7
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS8	10:43	Bottom	3	2	20.2	8.03	28.2	7.32	7.38	10.7
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS(Mf)16	10:20	Surface	1	1	19.9	8.19	28	7.31	7.05	10.2
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS(Mf)16	10:20	Surface	1	2	19.9	8.21	28	7.33	7.07	10
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS(Mf)16	10:20	Middle	2	1	20	7.95	28.1	7.44	7.14	10.4
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS(Mf)16	10:20	Middle	2	2	20.1	7.98	28.2	7.47	7.17	10.4
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS(Mf)16	10:20	Bottom	3	1	20.2	8.04	28.3	7.5	7.24	10.4
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS(Mf)16	10:20	Bottom	3	2	20.2	8.07	28.4	7.53	7.27	10.4
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS(Mf)9	9:57	Surface	1	1	19.9	8.06	27.9	7.04	7.04	10.3
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS(Mf)9	9:57	Surface	1	2	19.9	8.08	28	7.07	7.07	10.3
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS(Mf)9	9:57	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS(Mf)9	9:57	Middle	2	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	2017-04-06	Mid-Ebb	IS(Mf)9	9:57	Bottom	3	1	20	8.13	28.1	7.13	7.13	10.3
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	IS(Mf)9	9:57	Bottom	3	2	20.1	8.15	28.2	7.15	7.15	10.4
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	CS(Mf)3	9:34	Surface	1	1	19.8	7.87	27.8	7.15	6.94	9.9
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	CS(Mf)3	9:34	Surface	1	2	19.9	7.89	27.9	7.17	6.97	10
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	CS(Mf)3	9:34	Middle	2	1	20	8.04	28	7.25	7.15	10.4
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	CS(Mf)3	9:34	Middle	2	2	20.1	8.07	28.1	7.27	7.13	10.4
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	CS(Mf)3	9:34	Bottom	3	1	20.2	8.12	28.2	7.35	7.25	10.7
TMCLKL	HY/2012/07	2017-04-06	Mid-Ebb	CS(Mf)3	9:34	Bottom	3	2	20.3	8.1	28.3	7.37	7.27	10.7
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	CS(Mf)5	15:39	Surface	1	1	20.8	7.78	27.8	7.07	7.54	10.6
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	CS(Mf)5	15:39	Surface	1	2	20.9	7.77	27.9	7.11	7.5	10.8
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	CS(Mf)5	15:39	Middle	2	1	20.9	7.85	27.9	7.34	7.88	11.3
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	CS(Mf)5	15:39	Middle	2	2	20.9	7.82	28	7.3	7.85	11.3
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	CS(Mf)5	15:39	Bottom	3	1	20.9	7.88	28	7.29	7.94	11.5
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	CS(Mf)5	15:39	Bottom	3	2	21	7.88	28.1	7.26	7.9	11.5
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	SR4a	16:03	Surface	1	1	20.9	7.86	27.8	6.98	7.67	11.1
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	SR4a	16:03	Surface	1	2	20.9	7.87	27.7	6.94	7.7	11.2
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	SR4a	16:03	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	SR4a	16:03	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	SR4a	16:03	Bottom	3	1	20.9	7.9	27.8	7.24	7.49	10.9
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	SR4a	16:03	Bottom	3	2	20.8	7.91	27.9	7.28	7.45	10.7
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	SR4	16:25	Surface	1	1	20.9	7.92	27.9	7.3	7.17	10.3
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	SR4	16:25	Surface	1	2	20.8	7.87	27.8	7.27	7.22	10.3
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	SR4	16:25	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	SR4	16:25	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	SR4	16:25	Bottom	3	1	21	7.98	27.9	7.21	7.3	10.7
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	SR4	16:25	Bottom	3	2	21	7.97	27.9	7.17	7.36	10.7
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS8	16:35	Surface	1	1	20.7	7.9	27.8	7.14	6.87	9.8
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS8	16:35	Surface	1	2	20.8	7.87	27.7	7.1	6.9	9.8
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS8	16:35	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS8	16:35	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS8	16:35	Bottom	3	1	20.9	7.94	28	7.19	7.44	10.7
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS8	16:35	Bottom	3	2	21	7.95	27.9	7.23	7.48	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	2017-04-08	Mid-Flood	IS(Mf)16	17:00	Surface	1	1	20.8	7.96	28	7.44	7.03	9.9
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS(Mf)16	17:00	Surface	1	2	20.8	7.98	27.9	7.47	7.07	10
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS(Mf)16	17:00	Middle	2	1	20.9	8.01	28	7.57	7.27	10.5
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS(Mf)16	17:00	Middle	2	2	21	8.03	28.1	7.54	7.23	10.5
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS(Mf)16	17:00	Bottom	3	1	21	8.02	28.1	7.52	7.2	10.5
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS(Mf)16	17:00	Bottom	3	2	21	8.02	28.2	7.55	7.24	10.6
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS(Mf)9	17:30	Surface	1	1	20.8	8.02	27.9	7.17	6.96	10
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS(Mf)9	17:30	Surface	1	2	20.7	8.01	27.9	7.14	6.91	9.9
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS(Mf)9	17:30	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS(Mf)9	17:30	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS(Mf)9	17:30	Bottom	3	1	20.9	8.05	27.9	7.33	7.51	10.9
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	IS(Mf)9	17:30	Bottom	3	2	20.9	8.04	28	7.29	7.55	11
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	CS(Mf)3	17:55	Surface	1	1	20.8	8.02	28	7.26	6.96	9.9
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	CS(Mf)3	17:55	Surface	1	2	20.9	8.02	27.9	7.29	6.92	9.9
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	CS(Mf)3	17:55	Middle	2	1	21	8.03	28.1	7.42	7.3	10.5
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	CS(Mf)3	17:55	Middle	2	2	20.9	8.04	28.2	7.45	7.22	10.4
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	CS(Mf)3	17:55	Bottom	3	1	21	8.04	28.2	7.47	7.67	11.2
TMCLKL	HY/2012/07	2017-04-08	Mid-Flood	CS(Mf)3	17:55	Bottom	3	2	21	8.04	28.2	7.45	7.64	11.2
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	CS(Mf)5	13:05	Surface	1	1	20.4	8.06	28	6.69	7.39	10.6
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	CS(Mf)5	13:05	Surface	1	2	20.5	8.08	28.1	6.72	7.41	10.5
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	CS(Mf)5	13:05	Middle	2	1	20.6	8.13	28.2	6.85	7.55	10.9
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	CS(Mf)5	13:05	Middle	2	2	20.6	8.15	28.2	6.88	7.58	11
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	CS(Mf)5	13:05	Bottom	3	1	20.7	7.92	28.3	6.59	7.66	11
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	CS(Mf)5	13:05	Bottom	3	2	20.8	7.94	28.4	6.62	7.68	10.9
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	SR4a	12:40	Surface	1	1	20.5	7.93	27.9	6.88	7.55	10.6
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	SR4a	12:40	Surface	1	2	20.6	7.9	28	6.85	7.58	10.7
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	SR4a	12:40	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	SR4a	12:40	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	SR4a	12:40	Bottom	3	1	20.7	8.03	28.2	6.99	7.68	11.1
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	SR4a	12:40	Bottom	3	2	20.8	8.05	28.3	7.02	7.7	11.1
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	SR4	12:20	Surface	1	1	20.5	8.05	28.1	6.93	7.05	10.1
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	SR4	12:20	Surface	1	2	20.6	8.08	28.2	6.95	7.08	10.2
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	SR4	12:20	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	2017-04-08	Mid-Ebb	SR4	12:20	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	SR4	12:20	Bottom	3	1	20.7	8.13	28.3	7.11	7.16	10.4
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	SR4	12:20	Bottom	3	2	20.8	8.11	28.4	7.13	7.19	10.5
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS8	12:05	Surface	1	1	20.6	7.93	27.9	7.07	6.85	9.8
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS8	12:05	Surface	1	2	20.6	7.95	28	7.09	6.88	9.8
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS8	12:05	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS8	12:05	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS8	12:05	Bottom	3	1	20.7	8.12	28.1	7.25	7.04	10.2
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS8	12:05	Bottom	3	2	20.8	8.15	28.2	7.27	7.07	10.3
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS(Mf)16	11:40	Surface	1	1	20.5	8.06	27.9	7.13	7.18	10.3
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS(Mf)16	11:40	Surface	1	2	20.6	8.09	28	7.11	7.19	10.2
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS(Mf)16	11:40	Middle	2	1	20.7	7.93	28.1	7.36	7.25	10.6
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS(Mf)16	11:40	Middle	2	2	20.8	7.95	28.2	7.33	7.27	10.5
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS(Mf)16	11:40	Bottom	3	1	20.9	8.11	28.3	6.97	7.34	10.6
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS(Mf)16	11:40	Bottom	3	2	21	8.13	28.4	6.99	7.32	10.5
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS(Mf)9	11:25	Surface	1	1	20.6	7.85	28.1	6.89	7.13	10.4
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS(Mf)9	11:25	Surface	1	2	20.6	7.88	28.2	6.91	7.15	10.4
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS(Mf)9	11:25	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS(Mf)9	11:25	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS(Mf)9	11:25	Bottom	3	1	20.7	8.04	28.3	7.05	7.26	10.5
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	IS(Mf)9	11:25	Bottom	3	2	20.8	8.07	28.3	7.08	7.28	10.6
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	CS(Mf)3	11:03	Surface	1	1	20.4	8.4	27.9	7.09	6.97	9.9
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	CS(Mf)3	11:03	Surface	1	2	20.5	8.07	28	7.12	6.99	10
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	CS(Mf)3	11:03	Middle	2	1	20.6	8.13	28.1	7.2	7.13	10.3
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	CS(Mf)3	11:03	Middle	2	2	20.6	8.11	28.2	7.23	7.11	10.4
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	CS(Mf)3	11:03	Bottom	3	1	20.7	7.93	28.3	7.09	7.3	10.7
TMCLKL	HY/2012/07	2017-04-08	Mid-Ebb	CS(Mf)3	11:03	Bottom	3	2	20.8	7.95	28.4	7.06	7.32	10.8
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	CS(Mf)5	17:48	Surface	1	1	20.6	8.16	28.1	7.25	6.76	9.5
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	CS(Mf)5	17:48	Surface	1	2	20.7	8.18	28.2	7.27	6.79	9.8
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	CS(Mf)5	17:48	Middle	2	1	20.8	7.93	28.3	7.34	6.8	9.7
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	CS(Mf)5	17:48	Middle	2	2	20.7	7.96	28.4	7.4	6.83	9.8
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	CS(Mf)5	17:48	Bottom	3	1	20.9	8.04	28.5	7.33	6.95	10.1
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	CS(Mf)5	17:48	Bottom	3	2	20.9	8.08	28.6	7.35	6.93	10.1

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	2017-04-11	Mid-Flood	SR4a	18:10	Surface	1	1	20.5	7.93	27.9	7.07	6.83	9.9
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	SR4a	18:10	Surface	1	2	20.5	7.96	28	7.09	6.86	10
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	SR4a	18:10	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	SR4a	18:10	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	SR4a	18:10	Bottom	3	1	20.6	8.09	28.1	7.14	7.04	10.2
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	SR4a	18:10	Bottom	3	2	20.7	8.11	28.2	7.17	7.07	10.2
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	SR4	18:32	Surface	1	1	20.6	8.12	28	7.2	6.78	9.7
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	SR4	18:32	Surface	1	2	20.6	8.15	28.1	7.23	7.81	9.7
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	SR4	18:32	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	SR4	18:32	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	SR4	18:32	Bottom	3	1	20.8	7.93	28.2	7.4	6.99	10.2
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	SR4	18:32	Bottom	3	2	20.9	7.95	28.3	7.42	7.01	10.2
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS8	18:55	Surface	1	1	20.5	7.82	27.9	7.34	7.05	10
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS8	18:55	Surface	1	2	20.6	7.84	28	7.37	7.08	10.1
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS8	18:55	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS8	18:55	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS8	18:55	Bottom	3	1	20.7	8.07	28.1	7.45	7.13	10.3
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS8	18:55	Bottom	3	2	20.8	8.05	28.2	7.48	7.15	10.3
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS(Mf)16	19:15	Surface	1	1	20.6	7.94	28	7.13	7	9.9
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS(Mf)16	19:15	Surface	1	2	20.7	7.97	28.1	7.15	7.03	10
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS(Mf)16	19:15	Middle	2	1	20.8	8.05	28.2	7.2	7.13	10.3
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS(Mf)16	19:15	Middle	2	2	20.8	8.08	28.3	7.23	7.15	10.4
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS(Mf)16	19:15	Bottom	3	1	20.9	8.13	28.4	7.36	7.22	10.5
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS(Mf)16	19:15	Bottom	3	2	20.8	8.15	28.4	7.38	7.25	10.6
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS(Mf)9	19:39	Surface	1	1	20.4	7.73	27.9	7.24	6.75	9.7
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS(Mf)9	19:39	Surface	1	2	20.5	7.75	27.8	7.27	6.77	9.7
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS(Mf)9	19:39	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS(Mf)9	19:39	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS(Mf)9	19:39	Bottom	3	1	20.7	7.84	28	7.34	6.83	9.9
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	IS(Mf)9	19:39	Bottom	3	2	20.6	7.87	28.1	7.37	6.86	10
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	CS(Mf)3	20:00	Surface	1	1	20.6	8.02	27.8	7.35	6.89	9.8
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	CS(Mf)3	20:00	Surface	1	2	20.7	8.04	27.9	7.38	6.92	9.9
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	CS(Mf)3	20:00	Middle	2	1	20.8	7.93	28	7.4	7.04	10.1

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	2017-04-11	Mid-Flood	CS(Mf)3	20:00	Middle	2	2	20.9	7.95	28.1	7.42	7.07	10.2
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	CS(Mf)3	20:00	Bottom	3	1	21	7.83	28.2	7.25	7.13	10.4
TMCLKL	HY/2012/07	2017-04-11	Mid-Flood	CS(Mf)3	20:00	Bottom	3	2	21.1	7.86	28.3	7.28	7.15	10.5
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	CS(Mf)5	14:18	Surface	1	1	20.8	8.1	28	7.12	6.85	9.9
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	CS(Mf)5	14:18	Surface	1	2	20.7	8.08	27.9	7.14	6.92	9.8
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	CS(Mf)5	14:18	Middle	2	1	20.9	7.95	28.1	7.25	6.99	10.1
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	CS(Mf)5	14:18	Middle	2	2	21	7.9	28	7.28	7.03	10.2
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	CS(Mf)5	14:18	Bottom	3	1	21.1	7.86	28.3	7.29	7.11	10.2
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	CS(Mf)5	14:18	Bottom	3	2	21	7.88	28.2	7.3	7.16	10.2
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	SR4a	13:56	Surface	1	1	20.6	7.88	28	6.95	7.11	10
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	SR4a	13:56	Surface	1	2	20.7	7.85	27.9	6.92	7.18	10.1
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	SR4a	13:56	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	SR4a	13:56	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	SR4a	13:56	Bottom	3	1	20.8	7.95	28.1	7.02	7.05	10.2
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	SR4a	13:56	Bottom	3	2	20.8	7.97	28	7.05	7.1	10.2
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	SR4	13:41	Surface	1	1	20.7	8.05	27.9	7.14	6.98	10
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	SR4	13:41	Surface	1	2	20.8	8.09	27.9	7.1	6.92	10
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	SR4	13:41	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	SR4	13:41	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	SR4	13:41	Bottom	3	1	20.9	8.11	28	7.25	7.13	10.3
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	SR4	13:41	Bottom	3	2	20.9	8.13	27.9	7.28	7.2	10.5
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS8	13:27	Surface	1	1	20.6	7.89	28	7.05	7.28	10.4
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS8	13:27	Surface	1	2	20.7	7.92	27.9	7.08	7.33	10.5
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS8	13:27	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS8	13:27	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS8	13:27	Bottom	3	1	20.8	7.95	28	7.21	7.19	10.4
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS8	13:27	Bottom	3	2	20.9	7.99	28.1	7.23	7.24	10.5
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS(Mf)16	13:09	Surface	1	1	20.9	7.91	27.9	6.97	7.23	10.4
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS(Mf)16	13:09	Surface	1	2	20.8	7.93	28	6.99	7.29	10.4
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS(Mf)16	13:09	Middle	2	1	20.9	8.04	28.2	7.13	7.17	10.5
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS(Mf)16	13:09	Middle	2	2	20.9	8.06	28.1	7.16	7.12	10.3
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS(Mf)16	13:09	Bottom	3	1	21.1	7.86	28.3	7.28	7.34	10.6
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS(Mf)16	13:09	Bottom	3	2	21	7.89	28.3	7.26	7.39	10.6

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	2017-04-11	Mid-Ebb	IS(Mf)9	12:54	Surface	1	1	20.6	7.81	27.9	7.05	6.91	10.1
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS(Mf)9	12:54	Surface	1	2	20.7	7.83	27.9	7.01	6.95	10.1
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS(Mf)9	12:54	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS(Mf)9	12:54	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS(Mf)9	12:54	Bottom	3	1	20.8	7.89	28	7.18	7.17	10.3
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	IS(Mf)9	12:54	Bottom	3	2	20.7	7.93	27.9	7.22	7.21	10.5
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	CS(Mf)3	12:29	Surface	1	1	20.7	7.99	27.9	7.26	7.12	10.1
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	CS(Mf)3	12:29	Surface	1	2	20.8	7.96	27.8	7.24	7.18	10.3
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	CS(Mf)3	12:29	Middle	2	1	20.8	8.02	27.9	7.16	7.34	10.6
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	CS(Mf)3	12:29	Middle	2	2	20.8	8.03	27.9	7.12	7.29	10.6
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	CS(Mf)3	12:29	Bottom	3	1	20.9	8.09	28.1	7.29	7.44	10.9
TMCLKL	HY/2012/07	2017-04-11	Mid-Ebb	CS(Mf)3	12:29	Bottom	3	2	21	8.13	28	7.27	7.37	10.8
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	CS(Mf)5	7:30	Surface	1	1	21.6	7.68	28.1	7.21	8.43	11.8
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	CS(Mf)5	7:30	Surface	1	2	21.6	7.73	28	7.18	8.52	12.3
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	CS(Mf)5	7:30	Middle	2	1	21.6	7.71	28.1	7.27	8.7	12.4
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	CS(Mf)5	7:30	Middle	2	2	21.5	7.74	28.1	7.24	8.66	12.5
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	CS(Mf)5	7:30	Bottom	3	1	21.5	7.76	28.3	7.11	8.93	12.9
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	CS(Mf)5	7:30	Bottom	3	2	21.5	7.8	28.3	7.09	9.01	13.2
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	SR4a	7:55	Surface	1	1	21.6	7.64	28.1	7.15	8.29	12
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	SR4a	7:55	Surface	1	2	21.6	7.67	28.1	7.12	8.34	12.2
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	SR4a	7:55	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	SR4a	7:55	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	SR4a	7:55	Bottom	3	1	21.6	7.68	28.1	7.17	8.59	12.5
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	SR4a	7:55	Bottom	3	2	21.6	7.66	28.1	7.2	8.67	12.5
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	SR4	8:08	Surface	1	1	21.6	7.66	28.1	7.1	8.38	12
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	SR4	8:08	Surface	1	2	21.6	7.7	28	7.07	8.43	12.1
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	SR4	8:08	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	SR4	8:08	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	SR4	8:08	Bottom	3	1	21.6	7.74	28.1	7.03	8.73	12.7
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	SR4	8:08	Bottom	3	2	21.5	7.71	28.1	7	7.66	12.6
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS8	8:22	Surface	1	1	21.6	7.68	28.1	7.14	8.23	11.7
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS8	8:22	Surface	1	2	21.6	7.73	28	7.11	8.18	11.6
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS8	8:22	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	2017-04-13	Mid-Flood	IS8	8:22	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS8	8:22	Bottom	3	1	21.6	7.67	28.1	7.09	8.56	12.3
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS8	8:22	Bottom	3	2	21.6	7.7	28.1	7.05	8.64	12.4
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS(Mf)16	8:40	Surface	1	1	21.6	7.64	28.1	7.08	8.4	11.8
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS(Mf)16	8:40	Surface	1	2	21.6	7.63	28.2	7.05	8.48	12
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS(Mf)16	8:40	Middle	2	1	21.6	7.6	28.2	7.13	8.57	12.3
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS(Mf)16	8:40	Middle	2	2	21.6	7.64	28.2	7.15	8.5	12.3
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS(Mf)16	8:40	Bottom	3	1	21.5	7.66	28.2	7.01	8.8	12.8
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS(Mf)16	8:40	Bottom	3	2	21.5	7.68	28.3	6.98	8.92	13
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS(Mf)9	9:00	Surface	1	1	21.6	7.66	28.1	7.2	8.5	12.2
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS(Mf)9	9:00	Surface	1	2	21.5	7.68	28	7.16	8.43	12.1
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS(Mf)9	9:00	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS(Mf)9	9:00	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS(Mf)9	9:00	Bottom	3	1	21.5	7.63	28.1	7.1	8.7	12.6
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	IS(Mf)9	9:00	Bottom	3	2	21.5	7.65	28.1	7.07	8.78	12.8
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	CS(Mf)3	9:30	Surface	1	1	21.6	7.68	28.1	7.27	8.56	12.2
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	CS(Mf)3	9:30	Surface	1	2	21.6	7.7	28	7.3	8.62	12.3
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	CS(Mf)3	9:30	Middle	2	1	21.6	7.73	28.1	7.23	8.27	11.9
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	CS(Mf)3	9:30	Middle	2	2	21.5	7.71	28.1	7.18	8.33	12
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	CS(Mf)3	9:30	Bottom	3	1	21.5	7.67	28.2	7.14	8.84	12.9
TMCLKL	HY/2012/07	2017-04-13	Mid-Flood	CS(Mf)3	9:30	Bottom	3	2	21.5	7.72	28.2	7.11	8.76	12.9
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	CS(Mf)5	14:40	Surface	1	1	21.5	8.04	27.9	6.94	8.67	12.5
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	CS(Mf)5	14:40	Surface	1	2	21.6	8.07	28	6.97	8.69	12.3
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	CS(Mf)5	14:40	Middle	2	1	21.7	8.13	28.1	7.05	8.84	12.8
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	CS(Mf)5	14:40	Middle	2	2	21.7	8.11	28.2	7.08	8.82	12.8
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	CS(Mf)5	14:40	Bottom	3	1	21.8	7.94	28.3	7.14	8.99	12.9
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	CS(Mf)5	14:40	Bottom	3	2	21.7	7.97	28.4	7.17	9.01	12.8
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	SR4a	14:15	Surface	1	1	21.6	7.93	27.9	6.85	8.45	11.8
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	SR4a	14:15	Surface	1	2	21.6	7.96	28	6.88	8.48	12
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	SR4a	14:15	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	SR4a	14:15	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	SR4a	14:15	Bottom	3	1	21.7	8.04	28.1	6.93	8.5	12.2
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	SR4a	14:15	Bottom	3	2	21.8	8.07	28.2	6.95	8.53	12.3

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	2017-04-13	Mid-Ebb	SR4	13:55	Surface	1	1	21.5	7.94	28.1	6.73	7.99	11.4
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	SR4	13:55	Surface	1	2	21.4	7.96	28.2	6.76	8.01	11.5
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	SR4	13:55	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	SR4	13:55	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	SR4	13:55	Bottom	3	1	21.6	8.07	28.3	6.88	8.24	11.9
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	SR4	13:55	Bottom	3	2	21.7	8.09	28.4	6.7	8.27	12.1
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS8	13:29	Surface	1	1	21.5	8.13	27.9	6.89	8.3	11.9
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS8	13:29	Surface	1	2	21.6	8.15	28	6.91	8.33	11.9
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS8	13:29	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS8	13:29	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS8	13:29	Bottom	3	1	21.7	7.93	28.1	7.06	8.45	12.3
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS8	13:29	Bottom	3	2	21.8	7.96	28.2	7.09	8.47	12.3
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS(Mf)16	13:05	Surface	1	1	21.4	7.93	27.8	6.95	8.55	12.3
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS(Mf)16	13:05	Surface	1	2	21.5	7.96	27.9	6.97	8.57	12.2
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS(Mf)16	13:05	Middle	2	1	21.6	8.04	28	7.24	8.68	12.7
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS(Mf)16	13:05	Middle	2	2	21.7	8.07	28.1	7.27	8.7	12.6
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS(Mf)16	13:05	Bottom	3	1	21.8	8.13	28.2	7.35	8.84	12.7
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS(Mf)16	13:05	Bottom	3	2	21.7	8.15	28.3	7.37	8.87	12.7
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS(Mf)9	12:47	Surface	1	1	21.4	7.73	27.9	7.04	8.66	12.6
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS(Mf)9	12:47	Surface	1	2	21.5	7.76	27.9	7.07	8.69	12.7
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS(Mf)9	12:47	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS(Mf)9	12:47	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS(Mf)9	12:47	Bottom	3	1	21.6	7.89	28	7.13	8.77	12.6
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	IS(Mf)9	12:47	Bottom	3	2	21.7	7.91	28.1	7.15	8.79	12.8
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	CS(Mf)3	12:29	Surface	1	1	21.5	7.64	28	7.13	8.44	12
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	CS(Mf)3	12:29	Surface	1	2	21.6	7.67	28.1	7.15	8.47	12.1
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	CS(Mf)3	12:29	Middle	2	1	21.7	7.84	28.2	7.28	8.59	12.5
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	CS(Mf)3	12:29	Middle	2	2	21.8	7.8	28.3	7.3	8.62	12.6
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	CS(Mf)3	12:29	Bottom	3	1	21.9	8.09	28.4	7.36	8.7	12.8
TMCLKL	HY/2012/07	2017-04-13	Mid-Ebb	CS(Mf)3	12:29	Bottom	3	2	21.8	8.11	28.4	7.33	8.73	12.8
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	CS(Mf)5	8:02	Surface	1	1	21.6	7.93	27.8	7.23	7.25	10.2
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	CS(Mf)5	8:02	Surface	1	2	21.7	7.9	27.9	7.26	7.28	10.5
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	CS(Mf)5	8:02	Middle	2	1	21.7	8.12	28	7.34	7.36	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	2017-04-15	Mid-Flood	CS(Mf)5	8:02	Middle	2	2	21.7	8.15	28.1	7.37	7.34	10.6
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	CS(Mf)5	8:02	Bottom	3	1	21.8	8.06	28.2	7.44	7.4	10.7
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	CS(Mf)5	8:02	Bottom	3	2	21.9	8.09	28.3	7.47	7.43	10.8
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	SR4a	8:24	Surface	1	1	21.5	8.04	27.9	6.94	7.04	10.2
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	SR4a	8:24	Surface	1	2	21.6	8.07	28	6.97	7.07	10.3
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	SR4a	8:24	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	SR4a	8:24	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	SR4a	8:24	Bottom	3	1	21.7	7.93	28.1	7.14	7.15	10.4
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	SR4a	8:24	Bottom	3	2	21.8	7.91	28.2	7.12	7.18	10.3
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	SR4	8:42	Surface	1	1	21.6	7.86	27.9	7.11	6.99	10
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	SR4	8:42	Surface	1	2	21.6	7.83	28	7.14	7.01	10
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	SR4	8:42	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	SR4	8:42	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	SR4	8:42	Bottom	3	1	21.7	8.13	28.1	7.29	7.25	10.6
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	SR4	8:42	Bottom	3	2	21.8	8.15	28.2	7.32	7.28	10.6
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS8	9:05	Surface	1	1	21.5	8.21	28.1	7.31	7.16	10.2
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS8	9:05	Surface	1	2	21.6	8.19	28.2	7.34	7.18	10.2
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS8	9:05	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS8	9:05	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS8	9:05	Bottom	3	1	21.7	8.16	28.3	7.45	7.33	10.6
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS8	9:05	Bottom	3	2	21.7	8.14	28.4	7.47	7.36	10.6
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS(Mf)16	9:25	Surface	1	1	21.4	7.86	28.2	7.26	7.04	9.9
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS(Mf)16	9:25	Surface	1	2	21.5	7.84	28.2	7.29	7.07	10
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS(Mf)16	9:25	Middle	2	1	21.6	7.99	28.3	7.37	7.19	10.4
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS(Mf)16	9:25	Middle	2	2	21.7	7.97	28.4	7.39	7.21	10.5
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS(Mf)16	9:25	Bottom	3	1	21.8	8.04	28.5	7.55	7.36	10.7
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS(Mf)16	9:25	Bottom	3	2	21.8	8.07	28.6	7.58	7.39	10.8
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS(Mf)9	9:50	Surface	1	1	21.6	7.84	28.2	7.24	7.43	10.7
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS(Mf)9	9:50	Surface	1	2	21.7	7.87	28.3	7.27	7.45	10.7
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS(Mf)9	9:50	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS(Mf)9	9:50	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS(Mf)9	9:50	Bottom	3	1	21.8	7.93	28.4	7.38	7.3	10.6
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	IS(Mf)9	9:50	Bottom	3	2	21.9	7.95	28.5	7.41	7.27	10.6

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	2017-04-15	Mid-Flood	CS(Mf)3	10:15	Surface	1	1	21.7	8.06	28.1	7.35	7.29	10.4
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	CS(Mf)3	10:15	Surface	1	2	21.6	8.09	28.2	7.38	7.31	10.5
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	CS(Mf)3	10:15	Middle	2	1	21.8	7.74	28.2	7.44	7.44	10.7
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	CS(Mf)3	10:15	Middle	2	2	21.9	7.77	28.2	7.41	7.47	10.8
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	CS(Mf)3	10:15	Bottom	3	1	22	7.88	28.3	7.59	7.5	11
TMCLKL	HY/2012/07	2017-04-15	Mid-Flood	CS(Mf)3	10:15	Bottom	3	2	21.9	7.9	28.4	7.61	7.53	11.1
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	CS(Mf)5	15:16	Surface	1	1	21.7	7.98	27.7	7.12	7.31	10.5
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	CS(Mf)5	15:16	Surface	1	2	21.6	7.99	27.8	7.14	7.38	10.5
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	CS(Mf)5	15:16	Middle	2	1	21.8	8.04	27.9	7.25	7.46	10.8
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	CS(Mf)5	15:16	Middle	2	2	21.7	8.09	27.8	7.23	7.51	10.9
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	CS(Mf)5	15:16	Bottom	3	1	21.9	8.11	28	7.36	7.59	10.9
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	CS(Mf)5	15:16	Bottom	3	2	21.8	8.13	28.1	7.38	7.5	10.7
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	SR4a	14:55	Surface	1	1	21.6	7.98	27.7	7.13	7.23	10.1
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	SR4a	14:55	Surface	1	2	21.5	8.02	27.8	7.1	7.29	10.3
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	SR4a	14:55	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	SR4a	14:55	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	SR4a	14:55	Bottom	3	1	21.7	8.06	27.8	6.84	7.11	10.2
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	SR4a	14:55	Bottom	3	2	21.6	8.09	27.9	6.86	7.15	10.3
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	SR4	14:42	Surface	1	1	21.6	7.88	27.8	6.95	7.25	10.4
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	SR4	14:42	Surface	1	2	21.7	7.92	27.7	6.93	7.31	10.5
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	SR4	14:42	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	SR4	14:42	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	SR4	14:42	Bottom	3	1	21.7	7.95	27.9	7.03	7.16	10.4
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	SR4	14:42	Bottom	3	2	21.7	7.96	27.8	7.05	7.1	10.4
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS8	14:28	Surface	1	1	21.7	8.07	28	7.22	7.25	10.4
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS8	14:28	Surface	1	2	21.6	8.09	27.9	7.2	7.19	10.3
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS8	14:28	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS8	14:28	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS8	14:28	Bottom	3	1	21.6	8.15	28.1	7.32	7.46	10.8
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS8	14:28	Bottom	3	2	21.6	8.19	28	7.35	7.52	10.9
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS(Mf)16	14:12	Surface	1	1	21.5	7.81	27.9	7.18	7.17	10.3
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS(Mf)16	14:12	Surface	1	2	21.6	7.83	27.8	7.15	7.11	10.1
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS(Mf)16	14:12	Middle	2	1	21.7	8.03	28.1	7.24	7.32	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	2017-04-15	Mid-Ebb	IS(Mf)16	14:12	Middle	2	2	21.6	8.07	28	7.26	7.26	10.5
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS(Mf)16	14:12	Bottom	3	1	21.8	7.91	28.2	7.44	7.4	10.7
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS(Mf)16	14:12	Bottom	3	2	21.7	7.94	28.1	7.47	7.48	10.7
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS(Mf)9	13:59	Surface	1	1	21.7	7.92	28	7.03	7.34	10.7
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS(Mf)9	13:59	Surface	1	2	21.7	7.96	28.1	7.07	7.39	10.8
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS(Mf)9	13:59	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS(Mf)9	13:59	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS(Mf)9	13:59	Bottom	3	1	21.8	8.09	28.2	7.26	7.46	10.7
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	IS(Mf)9	13:59	Bottom	3	2	21.7	8.11	28.2	7.29	7.51	11
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	CS(Mf)3	13:35	Surface	1	1	21.7	7.91	27.9	7.36	7.42	10.5
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	CS(Mf)3	13:35	Surface	1	2	21.6	7.94	28	7.33	7.36	10.5
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	CS(Mf)3	13:35	Middle	2	1	21.7	8.02	28	7.28	7.51	10.9
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	CS(Mf)3	13:35	Middle	2	2	21.7	8.07	28.1	7.24	7.59	11.1
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	CS(Mf)3	13:35	Bottom	3	1	21.8	7.84	28.2	7.4	7.67	11.3
TMCLKL	HY/2012/07	2017-04-15	Mid-Ebb	CS(Mf)3	13:35	Bottom	3	2	21.9	7.86	28.2	7.39	7.63	11.2
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	CS(Mf)5	9:27	Surface	1	1	22.5	8.07	28.3	7.16	7.19	10.1
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	CS(Mf)5	9:27	Surface	1	2	22.6	8.09	28.4	7.18	7.16	10.3
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	CS(Mf)5	9:27	Middle	2	1	22.5	7.84	28.5	7.25	7.27	10.4
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	CS(Mf)5	9:27	Middle	2	2	22.4	7.87	28.4	7.31	7.25	10.4
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	CS(Mf)5	9:27	Bottom	3	1	22.4	7.95	28.6	7.24	7.31	10.6
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	CS(Mf)5	9:27	Bottom	3	2	22.5	7.99	28.7	7.26	7.34	10.7
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	SR4a	9:49	Surface	1	1	22.4	7.84	28.5	6.98	6.95	10.1
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	SR4a	9:49	Surface	1	2	22.5	7.87	28.4	7	6.98	10.2
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	SR4a	9:49	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	SR4a	9:49	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	SR4a	9:49	Bottom	3	1	22.3	8	28.5	7.05	7.06	10.2
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	SR4a	9:49	Bottom	3	2	22.4	8.02	28.6	7.08	7.09	10.2
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	SR4	10:11	Surface	1	1	22.4	7.92	28.3	7.17	6.9	9.9
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	SR4	10:11	Surface	1	2	22.5	7.89	28.4	7.2	6.92	9.9
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	SR4	10:11	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	SR4	10:11	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	SR4	10:11	Bottom	3	1	22.5	8.02	28.5	7.35	7.16	10.5
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	SR4	10:11	Bottom	3	2	22.4	8.06	28.4	7.38	7.19	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	2017-04-18	Mid-Flood	IS8	10:33	Surface	1	1	22.4	8.12	28.5	7.22	7.07	10
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS8	10:33	Surface	1	2	22.3	8.1	28.6	7.25	7.09	10.1
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS8	10:33	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS8	10:33	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS8	10:33	Bottom	3	1	22.4	8.07	28.6	7.36	7.24	10.4
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS8	10:33	Bottom	3	2	22.5	8.05	28.7	7.38	7.27	10.5
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS(Mf)16	10:55	Surface	1	1	22.6	7.92	28.5	7.17	6.95	9.8
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS(Mf)16	10:55	Surface	1	2	22.5	7.9	28.4	7.2	7.98	9.9
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS(Mf)16	10:55	Middle	2	1	22.6	8.05	28.6	7.28	7.1	10.2
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS(Mf)16	10:55	Middle	2	2	22.6	8.03	28.7	7.3	7.12	10.3
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS(Mf)16	10:55	Bottom	3	1	22.7	8.1	28.7	7.46	7.27	10.6
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS(Mf)16	10:55	Bottom	3	2	22.6	8.13	28.8	7.49	7.3	10.7
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS(Mf)9	11:17	Surface	1	1	22.6	7.9	28.4	7.15	7.34	10.6
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS(Mf)9	11:17	Surface	1	2	22.6	7.93	28.5	7.18	7.36	10.5
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS(Mf)9	11:17	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS(Mf)9	11:17	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS(Mf)9	11:17	Bottom	3	1	22.5	7.99	28.6	7.29	7.21	10.5
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	IS(Mf)9	11:17	Bottom	3	2	22.6	8.01	28.5	7.32	7.18	10.5
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	CS(Mf)3	11:41	Surface	1	1	22.7	7.97	28.3	7.26	7.2	10.2
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	CS(Mf)3	11:41	Surface	1	2	22.6	8	28.4	7.29	7.22	10.3
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	CS(Mf)3	11:41	Middle	2	1	22.6	7.8	28.5	7.35	7.38	10.6
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	CS(Mf)3	11:41	Middle	2	2	22.5	7.83	28.6	7.32	7.34	10.6
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	CS(Mf)3	11:41	Bottom	3	1	22.5	7.94	28.6	7.5	7.41	10.8
TMCLKL	HY/2012/07	2017-04-18	Mid-Flood	CS(Mf)3	11:41	Bottom	3	2	22.6	7.96	28.7	7.52	7.44	10.9
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	CS(Mf)5	18:00	Surface	1	1	22.6	7.92	28.3	7.05	7.27	10.5
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	CS(Mf)5	18:00	Surface	1	2	22.7	7.99	28.3	7.09	7.3	10.4
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	CS(Mf)5	18:00	Middle	2	1	22.7	7.85	28.4	7.16	7.35	10.7
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	CS(Mf)5	18:00	Middle	2	2	22.8	7.8	28.5	7.17	7.39	10.7
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	CS(Mf)5	18:00	Bottom	3	1	22.8	7.87	28.6	7.1	7.44	10.6
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	CS(Mf)5	18:00	Bottom	3	2	22.8	7.91	28.7	7.14	7.49	10.6
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	SR4a	17:38	Surface	1	1	22.6	7.85	28.3	6.78	7.08	9.9
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	SR4a	17:38	Surface	1	2	22.7	7.87	28.4	6.73	7.16	10.1
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	SR4a	17:38	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	2017-04-18	Mid-Ebb	SR4a	17:38	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	SR4a	17:38	Bottom	3	1	22.7	7.93	28.5	6.86	7.19	10.4
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	SR4a	17:38	Bottom	3	2	22.8	7.99	28.6	6.89	7.23	10.4
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	SR4	17:14	Surface	1	1	22.5	7.84	28.2	7.02	7.08	10.1
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	SR4	17:14	Surface	1	2	22.6	7.89	28.2	7.07	7.13	10.3
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	SR4	17:14	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	SR4	17:14	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	SR4	17:14	Bottom	3	1	22.6	7.91	28.3	7.21	7.25	10.5
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	SR4	17:14	Bottom	3	2	22.6	7.99	28.4	7.26	7.29	10.6
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS8	16:54	Surface	1	1	22.6	7.94	28.3	7.12	7.19	10.3
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS8	16:54	Surface	1	2	22.6	7.98	28.4	7.16	7.22	10.3
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS8	16:54	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS8	16:54	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS8	16:54	Bottom	3	1	22.7	7.97	28.5	7.22	7.36	10.7
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS8	16:54	Bottom	3	2	22.6	7.99	28.6	7.28	7.4	10.7
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS(Mf)16	16:32	Surface	1	1	22.6	7.75	28.4	7.05	7.07	10.2
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS(Mf)16	16:32	Surface	1	2	22.7	7.79	28.5	7.08	7.11	10.1
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS(Mf)16	16:32	Middle	2	1	22.7	7.93	28.5	7.14	7.21	10.5
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS(Mf)16	16:32	Middle	2	2	22.8	7.98	28.6	7.18	7.25	10.5
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS(Mf)16	16:32	Bottom	3	1	22.8	7.96	28.7	7.33	7.36	10.6
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS(Mf)16	16:32	Bottom	3	2	22.8	7.99	28.8	7.38	7.41	10.6
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS(Mf)9	16:10	Surface	1	1	22.5	7.81	28.3	7.02	7.44	10.9
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS(Mf)9	16:10	Surface	1	2	22.6	7.87	28.4	7.05	7.48	10.9
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS(Mf)9	16:10	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS(Mf)9	16:10	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS(Mf)9	16:10	Bottom	3	1	22.7	7.96	28.5	7.15	7.35	10.6
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	IS(Mf)9	16:10	Bottom	3	2	22.7	7.93	28.6	7.18	7.39	10.8
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	CS(Mf)3	15:46	Surface	1	1	22.5	7.83	28.2	7.07	7.33	10.4
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	CS(Mf)3	15:46	Surface	1	2	22.5	7.88	28.2	7.11	7.37	10.5
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	CS(Mf)3	15:46	Middle	2	1	22.6	7.9	28.2	7.19	7.46	10.8
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	CS(Mf)3	15:46	Middle	2	2	22.7	7.94	28.3	7.16	7.48	10.9
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	CS(Mf)3	15:46	Bottom	3	1	22.7	7.97	28.4	7.36	7.52	11.1
TMCLKL	HY/2012/07	2017-04-18	Mid-Ebb	CS(Mf)3	15:46	Bottom	3	2	22.7	7.95	28.5	7.38	7.55	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	2017-04-20	Mid-Flood	CS(Mf)5	11:13	Surface	1	1	22.6	7.98	28.4	7.07	7.1	9.9
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	CS(Mf)5	11:13	Surface	1	2	22.7	8	28.5	7.09	7.07	10.2
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	CS(Mf)5	11:13	Middle	2	1	22.7	7.75	28.6	7.16	7.18	10.3
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	CS(Mf)5	11:13	Middle	2	2	22.8	7.78	28.7	7.22	7.16	10.3
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	CS(Mf)5	11:13	Bottom	3	1	22.8	7.86	28.7	7.15	7.22	10.5
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	CS(Mf)5	11:13	Bottom	3	2	22.7	7.9	28.8	7.17	7.25	10.6
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	SR4a	11:35	Surface	1	1	22.8	7.9	28.6	6.89	6.86	9.9
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	SR4a	11:35	Surface	1	2	22.7	7.93	28.5	6.91	6.89	10.1
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	SR4a	11:35	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	SR4a	11:35	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	SR4a	11:35	Bottom	3	1	22.6	8.06	28.6	6.96	6.97	10.1
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	SR4a	11:35	Bottom	3	2	22.7	8.08	28.7	6.99	7	10.1
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	SR4	11:57	Surface	1	1	22.8	7.83	28.6	7.08	6.81	9.7
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	SR4	11:57	Surface	1	2	22.9	7.8	28.7	7.11	6.83	9.8
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	SR4	11:57	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	SR4	11:57	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	SR4	11:57	Bottom	3	1	22.8	7.95	28.7	7.26	7.07	10.3
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	SR4	11:57	Bottom	3	2	22.9	7.97	28.8	7.29	7.1	10.3
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS8	12:19	Surface	1	1	23	8.03	28.8	7.13	6.98	9.9
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS8	12:19	Surface	1	2	22.9	8.01	28.7	7.16	7	9.9
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS8	12:19	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS8	12:19	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS8	12:19	Bottom	3	1	22.8	7.98	28.8	7.27	7.15	10.3
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS8	12:19	Bottom	3	2	22.9	7.96	28.9	7.29	7.18	10.3
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS(Mf)16	12:41	Surface	1	1	22.8	7.98	28.9	7.08	6.86	9.7
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS(Mf)16	12:41	Surface	1	2	22.9	7.96	29	7.11	6.89	9.8
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS(Mf)16	12:41	Middle	2	1	22.9	8.11	29	7.19	7.01	10.1
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS(Mf)16	12:41	Middle	2	2	23	8.09	28.9	7.21	7.03	10.2
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS(Mf)16	12:41	Bottom	3	1	23	8.16	29	7.37	7.18	10.5
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS(Mf)16	12:41	Bottom	3	2	22.9	8.19	29.1	7.4	7.21	10.5
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS(Mf)9	13:03	Surface	1	1	22.9	7.96	28.7	7.06	7.25	10.4
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS(Mf)9	13:03	Surface	1	2	22.8	7.99	28.8	7.09	7.27	10.4
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS(Mf)9	13:03	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	2017-04-20	Mid-Flood	IS(Mf)9	13:03	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS(Mf)9	13:03	Bottom	3	1	22.8	8.05	28.9	7.2	7.12	10.3
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	IS(Mf)9	13:03	Bottom	3	2	22.8	8.07	28.8	7.23	7.09	10.4
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	CS(Mf)3	13:27	Surface	1	1	22.9	8.03	28.8	7.17	7.11	10.1
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	CS(Mf)3	13:27	Surface	1	2	23	8.06	28.9	7.2	7.13	10.2
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	CS(Mf)3	13:27	Middle	2	1	22.9	7.86	28.9	7.26	7.29	10.5
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	CS(Mf)3	13:27	Middle	2	2	22.8	7.89	29	7.23	7.25	10.4
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	CS(Mf)3	13:27	Bottom	3	1	22.8	8	29.1	7.41	7.32	10.7
TMCLKL	HY/2012/07	2017-04-20	Mid-Flood	CS(Mf)3	13:27	Bottom	3	2	22.9	8.02	29	7.43	7.35	10.8
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	CS(Mf)5	9:45	Surface	1	1	22.6	7.89	28.3	6.94	7.23	10.4
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	CS(Mf)5	9:45	Surface	1	2	22.6	7.92	28.2	6.91	7.29	10.4
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	CS(Mf)5	9:45	Middle	2	1	22.5	7.84	28.5	7.05	7.15	10.4
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	CS(Mf)5	9:45	Middle	2	2	22.4	7.8	28.4	7.02	7.19	10.4
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	CS(Mf)5	9:45	Bottom	3	1	22.7	7.96	28.6	7.12	7.33	10.5
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	CS(Mf)5	9:45	Bottom	3	2	22.6	7.97	28.6	7.13	7.38	10.5
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	SR4a	9:29	Surface	1	1	22.5	7.81	28.4	6.64	7.23	10.1
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	SR4a	9:29	Surface	1	2	22.6	7.83	28.3	6.67	7.19	10.1
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	SR4a	9:29	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	SR4a	9:29	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	SR4a	9:29	Bottom	3	1	22.7	7.95	28.4	6.81	7.08	10.2
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	SR4a	9:29	Bottom	3	2	22.6	7.94	28.5	6.78	7.14	10.3
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	SR4	9:20	Surface	1	1	22.7	7.86	28.4	6.82	6.94	9.9
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	SR4	9:20	Surface	1	2	22.6	7.89	28.5	6.84	7.02	10.1
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	SR4	9:20	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	SR4	9:20	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	SR4	9:20	Bottom	3	1	22.6	7.93	28.6	7.07	7.24	10.5
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	SR4	9:20	Bottom	3	2	22.6	7.91	28.5	7.05	7.3	10.7
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS8	9:10	Surface	1	1	22.6	7.97	28.5	6.93	7.12	10.2
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS8	9:10	Surface	1	2	22.5	7.94	28.4	6.94	7.18	10.3
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS8	9:10	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS8	9:10	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS8	9:10	Bottom	3	1	22.5	7.91	28.5	7.13	7.39	10.7
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS8	9:10	Bottom	3	2	22.4	7.9	28.6	7.15	7.43	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	2017-04-20	Mid-Ebb	IS(Mf)16	8:58	Surface	1	1	22.4	7.86	28.6	6.74	6.85	9.9
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS(Mf)16	8:58	Surface	1	2	22.5	7.88	28.6	6.73	6.91	9.8
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS(Mf)16	8:58	Middle	2	1	22.6	7.94	28.7	6.92	7.14	10.4
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS(Mf)16	8:58	Middle	2	2	22.5	7.96	28.6	6.91	7.18	10.4
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS(Mf)16	8:58	Bottom	3	1	22.7	7.83	28.8	7.23	7.33	10.6
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS(Mf)16	8:58	Bottom	3	2	22.6	7.81	28.8	7.27	7.27	10.4
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS(Mf)9	8:47	Surface	1	1	22.6	7.91	28.4	6.95	7.38	10.8
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS(Mf)9	8:47	Surface	1	2	22.5	7.93	28.5	6.94	7.44	10.9
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS(Mf)9	8:47	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS(Mf)9	8:47	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS(Mf)9	8:47	Bottom	3	1	22.7	7.84	28.6	6.86	7.25	10.4
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	IS(Mf)9	8:47	Bottom	3	2	22.7	7.86	28.5	6.83	7.29	10.6
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	CS(Mf)3	8:30	Surface	1	1	22.7	7.95	28.7	7.03	7.35	10.4
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	CS(Mf)3	8:30	Surface	1	2	22.6	7.97	28.6	7.01	7.42	10.6
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	CS(Mf)3	8:30	Middle	2	1	22.6	7.89	28.6	7.12	7.49	10.9
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	CS(Mf)3	8:30	Middle	2	2	22.6	7.88	28.6	7.13	7.45	10.9
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	CS(Mf)3	8:30	Bottom	3	1	22.8	7.99	28.7	7.24	7.33	10.8
TMCLKL	HY/2012/07	2017-04-20	Mid-Ebb	CS(Mf)3	8:30	Bottom	3	2	22.7	8.02	28.8	7.27	7.39	10.9
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	CS(Mf)5	13:58	Surface	1	1	22.3	7.83	28.6	7.35	7.48	10.5
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	CS(Mf)5	13:58	Surface	1	2	22.4	7.86	28.7	7.38	7.5	10.8
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	CS(Mf)5	13:58	Middle	2	1	22.4	8.06	28.8	7.4	7.58	10.8
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	CS(Mf)5	13:58	Middle	2	2	22.4	8.03	28.7	7.43	7.61	11
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	CS(Mf)5	13:58	Bottom	3	1	22.5	7.96	28.9	7.25	7.74	11.2
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	CS(Mf)5	13:58	Bottom	3	2	22.4	7.98	28.8	7.23	7.77	11.3
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	SR4a	14:20	Surface	1	1	22.5	8.16	28.5	7.56	7.09	10.3
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	SR4a	14:20	Surface	1	2	22.4	8.13	28.6	7.59	7.11	10.4
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	SR4a	14:20	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	SR4a	14:20	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	SR4a	14:20	Bottom	3	1	22.4	7.99	28.7	7.43	7.25	10.5
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	SR4a	14:20	Bottom	3	2	22.4	8.02	28.8	7.41	7.27	10.5
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	SR4	14:43	Surface	1	1	22.4	7.86	27.6	7.27	7.45	10.7
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	SR4	14:43	Surface	1	2	22.4	7.89	27.7	7.29	7.47	10.7
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	SR4	14:43	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	2017-04-22	Mid-Flood	SR4	14:43	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	SR4	14:43	Bottom	3	1	22.5	8.07	27.8	7.34	7.51	11
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	SR4	14:43	Bottom	3	2	22.4	8.04	27.9	7.37	7.53	10.9
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS8	15:02	Surface	1	1	22.5	8.04	27.5	7.16	7.09	10.1
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS8	15:02	Surface	1	2	22.6	8.02	27.4	7.19	7.11	10.1
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS8	15:02	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS8	15:02	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS8	15:02	Bottom	3	1	22.5	8.15	27.6	7.23	7.18	10.3
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS8	15:02	Bottom	3	2	22.5	8.18	27.6	7.21	7.2	10.4
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS(Mf)16	15:22	Surface	1	1	22.3	7.91	27.6	7.41	6.94	9.8
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS(Mf)16	15:22	Surface	1	2	22.4	7.93	27.5	7.44	6.92	9.8
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS(Mf)16	15:22	Middle	2	1	22.3	8.12	27.7	7.55	7.13	10.3
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS(Mf)16	15:22	Middle	2	2	22.2	8.15	27.7	7.57	7.15	10.4
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS(Mf)16	15:22	Bottom	3	1	22.3	8.06	27.7	7.64	7.36	10.7
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS(Mf)16	15:22	Bottom	3	2	22.4	8.09	27.8	7.67	7.39	10.8
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS(Mf)9	15:45	Surface	1	1	22.4	8.16	28.7	7.35	7.14	10.3
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS(Mf)9	15:45	Surface	1	2	22.3	8.19	28.8	7.38	7.11	10.2
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS(Mf)9	15:45	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS(Mf)9	15:45	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS(Mf)9	15:45	Bottom	3	1	22.3	7.93	28.9	7.24	7.36	10.7
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	IS(Mf)9	15:45	Bottom	3	2	22.3	7.9	29	7.22	7.39	10.8
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	CS(Mf)3	16:10	Surface	1	1	22.3	7.93	28.8	7.45	7.3	10.4
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	CS(Mf)3	16:10	Surface	1	2	22.3	7.91	28.8	7.43	7.33	10.5
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	CS(Mf)3	16:10	Middle	2	1	22.4	8	28.9	7.36	7.44	10.7
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	CS(Mf)3	16:10	Middle	2	2	22.5	8.03	29	7.38	7.46	10.7
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	CS(Mf)3	16:10	Bottom	3	1	22.4	7.83	29.1	7.5	7.59	11.1
TMCLKL	HY/2012/07	2017-04-22	Mid-Flood	CS(Mf)3	16:10	Bottom	3	2	22.4	7.86	29.1	7.53	7.61	11.2
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	CS(Mf)5	9:50	Surface	1	1	22.5	8.01	28.9	7.34	8.12	11.7
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	CS(Mf)5	9:50	Surface	1	2	22.5	8.02	28.8	7.3	8.16	11.6
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	CS(Mf)5	9:50	Middle	2	1	22.3	7.98	29	7.27	7.97	11.6
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	CS(Mf)5	9:50	Middle	2	2	22.3	7.99	29.1	7.25	7.94	11.5
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	CS(Mf)5	9:50	Bottom	3	1	22.3	8.04	29.1	7.38	8.29	11.9
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	CS(Mf)5	9:50	Bottom	3	2	22.2	8.02	29.1	7.35	8.27	11.7

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	2017-04-22	Mid-Ebb	SR4a	10:13	Surface	1	1	22.5	7.94	28.8	7.14	7.38	10.3
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	SR4a	10:13	Surface	1	2	22.4	7.95	28.8	7.17	7.35	10.4
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	SR4a	10:13	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	SR4a	10:13	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	SR4a	10:13	Bottom	3	1	22.4	7.97	28.9	7.23	7.97	11.5
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	SR4a	10:13	Bottom	3	2	22.4	7.98	29	7.26	7.95	11.4
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	SR4	10:33	Surface	1	1	22.5	7.86	28.7	7.04	7.93	11.3
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	SR4	10:33	Surface	1	2	22.5	7.87	28.7	7.08	7.95	11.4
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	SR4	10:33	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	SR4	10:33	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	SR4	10:33	Bottom	3	1	22.3	7.9	28.9	7.17	8.38	12.2
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	SR4	10:33	Bottom	3	2	22.4	7.91	28.9	7.14	8.3	12.1
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS8	10:53	Surface	1	1	22.5	7.9	28.8	7.3	7.67	11
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS8	10:53	Surface	1	2	22.5	7.94	28.7	7.35	7.7	11
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS8	10:53	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS8	10:53	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS8	10:53	Bottom	3	1	22.4	7.98	28.9	7.25	8.25	12
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS8	10:53	Bottom	3	2	22.4	7.98	29	7.28	8.21	11.9
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS(Mf)16	11:15	Surface	1	1	22.4	8.01	28.8	7.12	7.24	10.4
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS(Mf)16	11:15	Surface	1	2	22.5	8.02	28.8	7.15	7.2	10.2
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS(Mf)16	11:15	Middle	2	1	22.3	8.02	29	7.26	7.79	11.4
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS(Mf)16	11:15	Middle	2	2	22.3	8.01	29.1	7.29	7.75	11.2
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS(Mf)16	11:15	Bottom	3	1	22.2	7.97	29.1	7.31	8.08	11.6
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS(Mf)16	11:15	Bottom	3	2	22.2	7.98	29	7.27	8.04	11.5
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS(Mf)9	11:43	Surface	1	1	22.4	7.95	28.8	7.17	7.47	10.9
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS(Mf)9	11:43	Surface	1	2	22.4	7.98	28.9	7.14	7.4	10.8
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS(Mf)9	11:43	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS(Mf)9	11:43	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS(Mf)9	11:43	Bottom	3	1	22.3	7.99	29	7.14	7.68	11.1
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	IS(Mf)9	11:43	Bottom	3	2	22.2	7.97	29	7.1	7.65	11.2
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	CS(Mf)3	12:05	Surface	1	1	22.4	7.9	28.9	7.25	7.87	11.2
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	CS(Mf)3	12:05	Surface	1	2	22.3	7.92	28.8	7.21	7.9	11.3
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	CS(Mf)3	12:05	Middle	2	1	22.3	7.87	28.9	7.34	8.12	11.8



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	2017-04-22	Mid-Ebb	CS(Mf)3	12:05	Middle	2	2	22.2	7.85	29	7.3	8.16	11.9
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	CS(Mf)3	12:05	Bottom	3	1	22.2	7.94	29	7.38	8.04	11.8
TMCLKL	HY/2012/07	2017-04-22	Mid-Ebb	CS(Mf)3	12:05	Bottom	3	2	22.1	7.95	29	7.35	8.08	11.9
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	CS(Mf)5	16:39	Surface	1	1	22.4	7.96	28.8	7.35	7.04	9.9
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	CS(Mf)5	16:39	Surface	1	2	22.5	7.99	28.9	7.38	7.07	10.2
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	CS(Mf)5	16:39	Middle	2	1	22.6	8.02	29	7.4	7.13	10.2
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	CS(Mf)5	16:39	Middle	2	2	22.6	8	29.1	7.43	7.15	10.3
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	CS(Mf)5	16:39	Bottom	3	1	22.5	7.83	29.1	7.55	7.29	10.6
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	CS(Mf)5	16:39	Bottom	3	2	22.4	7.86	29	7.56	7.32	10.7
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	SR4a	17:01	Surface	1	1	22.5	8.12	28.7	7.51	6.94	10.1
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	SR4a	17:01	Surface	1	2	22.5	8.1	28.8	7.53	6.97	10.2
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	SR4a	17:01	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	SR4a	17:01	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	SR4a	17:01	Bottom	3	1	22.4	7.86	28.9	7.6	7.04	10.2
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	SR4a	17:01	Bottom	3	2	22.5	7.89	28.9	7.63	7.07	10.2
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	SR4	17:24	Surface	1	1	22.3	8.16	27.9	7.34	7.21	10.3
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	SR4	17:24	Surface	1	2	22.4	8.19	28	7.27	7.23	10.3
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	SR4	17:24	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	SR4	17:24	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	SR4	17:24	Bottom	3	1	22.5	7.19	28.1	7.41	7.36	10.7
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	SR4	17:24	Bottom	3	2	22.5	7.94	28.2	7.43	7.39	10.7
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS8	17:45	Surface	1	1	22.4	7.91	28.1	7.22	6.98	9.9
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS8	17:45	Surface	1	2	22.4	7.94	28.2	7.24	7	9.9
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS8	17:45	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS8	17:45	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS8	17:45	Bottom	3	1	22.5	8.05	28.3	7.3	7.14	10.3
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS8	17:45	Bottom	3	2	22.6	8.08	28.2	7.33	7.17	10.3
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS(Mf)16	18:09	Surface	1	1	22.4	8.13	28	7.4	7.15	10.1
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS(Mf)16	18:09	Surface	1	2	22.5	8.1	28.1	7.43	7.18	10.2
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS(Mf)16	18:09	Middle	2	1	22.6	7.92	28.2	7.5	7.25	10.4
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS(Mf)16	18:09	Middle	2	2	22.7	7.95	28.3	7.53	7.27	10.5
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS(Mf)16	18:09	Bottom	3	1	22.7	7.85	28.4	7.6	7.3	10.7
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS(Mf)16	18:09	Bottom	3	2	22.8	7.81	28.3	7.63	7.32	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	2017-04-25	Mid-Flood	IS(Mf)9	18:30	Surface	1	1	22.5	7.93	28.4	7.34	6.97	10
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS(Mf)9	18:30	Surface	1	2	22.6	7.96	28.5	7.32	6.99	10
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS(Mf)9	18:30	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS(Mf)9	18:30	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS(Mf)9	18:30	Bottom	3	1	22.7	8.11	28.6	7.05	7.12	10.3
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	IS(Mf)9	18:30	Bottom	3	2	22.6	8.09	28.7	7.07	7.15	10.4
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	CS(Mf)3	18:45	Surface	1	1	22.4	8	28.5	7.14	7.24	10.3
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	CS(Mf)3	18:45	Surface	1	2	22.5	8.03	28.6	7.17	7.27	10.4
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	CS(Mf)3	18:45	Middle	2	1	22.6	7.93	28.6	7.25	7.35	10.6
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	CS(Mf)3	18:45	Middle	2	2	22.6	7.96	28.7	7.23	7.38	10.6
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	CS(Mf)3	18:45	Bottom	3	1	22.7	7.84	28.8	7.36	7.4	10.8
TMCLKL	HY/2012/07	2017-04-25	Mid-Flood	CS(Mf)3	18:45	Bottom	3	2	22.6	7.86	28.9	7.33	7.43	10.9
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	CS(Mf)5	13:47	Surface	1	1	22.5	7.89	28.7	7.26	7.54	10.9
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	CS(Mf)5	13:47	Surface	1	2	22.6	7.92	28.8	7.29	7.56	10.7
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	CS(Mf)5	13:47	Middle	2	1	22.4	8.12	28.8	7.31	7.64	11.1
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	CS(Mf)5	13:47	Middle	2	2	22.5	8.09	28.9	7.34	7.67	11.1
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	CS(Mf)5	13:47	Bottom	3	1	22.5	8.02	28.9	7.16	7.8	11.2
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	CS(Mf)5	13:47	Bottom	3	2	22.4	8.04	29	7.14	7.83	11.1
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	SR4a	13:23	Surface	1	1	22.5	8.1	28.7	7.47	7.15	10
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	SR4a	13:23	Surface	1	2	22.4	8.07	28.6	7.5	7.17	10.1
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	SR4a	13:23	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	SR4a	13:23	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	SR4a	13:23	Bottom	3	1	22.5	7.93	28.7	7.34	7.31	10.5
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	SR4a	13:23	Bottom	3	2	22.6	7.96	28.8	7.32	7.23	10.4
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	SR4	13:01	Surface	1	1	22.6	7.92	28.1	7.18	7.51	10.7
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	SR4	13:01	Surface	1	2	22.6	7.93	28.2	7.14	7.53	10.8
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	SR4	13:01	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	SR4	13:01	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	SR4	13:01	Bottom	3	1	22.6	8.13	28.4	7.25	7.57	11
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	SR4	13:01	Bottom	3	2	22.7	8.1	28.3	7.28	7.59	11.1
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	IS8	12:39	Surface	1	1	22.6	8.1	28.4	7.07	7.15	10.2
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	IS8	12:39	Surface	1	2	22.7	8.08	28.3	7.1	7.17	10.3
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	IS8	12:39	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	2017-04-25	Mid-Ebb	IS8	12:39	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	IS8	12:39	Bottom	3	1	22.7	8.09	28.6	7.14	7.24	10.5
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	IS8	12:39	Bottom	3	2	22.6	8.12	28.5	7.12	7.26	10.5
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	IS(Mf)16	12:17	Surface	1	1	22.8	7.82	28.2	7.32	7	10.1
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	IS(Mf)16	12:17	Surface	1	2	22.9	7.84	28.3	7.35	6.98	9.9
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	IS(Mf)16	12:17	Middle	2	1	22.7	8.03	28.4	7.46	7.19	10.5
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	IS(Mf)16	12:17	Middle	2	2	22.8	8.06	28.3	7.48	7.21	10.5
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	IS(Mf)16	12:17	Bottom	3	1	22.7	8.12	28.4	7.55	7.42	10.7
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	IS(Mf)16	12:17	Bottom	3	2	22.7	8.15	28.5	7.58	7.45	10.7
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	IS(Mf)9	11:55	Surface	1	1	22.4	8.07	28.6	7.26	7.2	10.5
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	IS(Mf)9	11:55	Surface	1	2	22.5	8.1	28.7	7.29	7.17	10.5
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	IS(Mf)9	11:55	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	IS(Mf)9	11:55	Middle	2	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	2017-04-25	Mid-Ebb	IS(Mf)9	11:55	Bottom	3	1	22.3	7.99	28.7	7.15	7.42	10.7
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	IS(Mf)9	11:55	Bottom	3	2	22.4	7.96	28.8	7.13	7.45	10.9
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	CS(Mf)3	11:33	Surface	1	1	22.5	7.99	28.6	7.36	7.39	10.5
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	CS(Mf)3	11:33	Surface	1	2	22.6	7.97	28.5	7.34	7.36	10.5
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	CS(Mf)3	11:33	Middle	2	1	22.6	8.06	28.7	7.27	7.5	10.9
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	CS(Mf)3	11:33	Middle	2	2	22.5	8.09	28.8	7.29	7.52	11
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	CS(Mf)3	11:33	Bottom	3	1	22.5	7.89	28.8	7.41	7.65	11.2
TMCLKL	HY/2012/07	2017-04-25	Mid-Ebb	CS(Mf)3	11:33	Bottom	3	2	22.4	7.92	28.9	7.44	7.67	11.3
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	CS(Mf)5	18:23	Surface	1	1	22.5	7.72	28.5	6.43	7.23	10.1
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	CS(Mf)5	18:23	Surface	1	2	22.6	7.71	28.4	6.46	7.2	10.4
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	CS(Mf)5	18:23	Middle	2	1	22.6	7.76	28.6	6.52	7.05	10.1
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	CS(Mf)5	18:23	Middle	2	2	22.6	7.78	28.7	6.48	7.01	10.1
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	CS(Mf)5	18:23	Bottom	3	1	22.5	7.75	28.7	6.49	7.12	10.3
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	CS(Mf)5	18:23	Bottom	3	2	22.6	7.74	28.8	6.45	7.16	10.5
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	SR4a	18:45	Surface	1	1	22.5	7.67	28.4	6.21	6.94	10.1
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	SR4a	18:45	Surface	1	2	22.5	7.69	28.4	6.17	6.9	10.1
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	SR4a	18:45	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	SR4a	18:45	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	SR4a	18:45	Bottom	3	1	22.5	7.78	28.6	6.16	7.04	10.2
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	SR4a	18:45	Bottom	3	2	22.4	7.8	28.6	6.19	7.08	10.2
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	SR4	19:05	Surface	1	1	22.5	7.74	28.4	6.52	7.11	10.2
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	SR4	19:05	Surface	1	2	22.4	7.73	28.5	6.55	7.15	10.2
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	SR4	19:05	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	SR4	19:05	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	SR4	19:05	Bottom	3	1	22.5	7.78	28.7	6.39	7.4	10.8
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	SR4	19:05	Bottom	3	2	22.5	7.76	28.6	6.36	7.44	10.8
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS8	19:27	Surface	1	1	22.4	7.68	28.4	6.38	6.93	9.8
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS8	19:27	Surface	1	2	22.4	7.7	28.4	6.35	6.87	9.8
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS8	19:27	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS8	19:27	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS8	19:27	Bottom	3	1	22.5	7.74	28.5	6.3	6.74	9.7
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS8	19:27	Bottom	3	2	22.5	7.75	28.6	6.27	6.8	9.8
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS(Mf)16	19:50	Surface	1	1	22.4	7.67	28.5	6.51	6.74	9.5

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	2017-04-27	Mid-Flood	IS(Mf)16	19:50	Surface	1	2	22.3	7.69	28.4	6.55	6.7	9.5
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS(Mf)16	19:50	Middle	2	1	22.5	7.74	28.6	6.57	6.92	10
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS(Mf)16	19:50	Middle	2	2	22.6	7.73	28.7	6.54	6.95	10.1
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS(Mf)16	19:50	Bottom	3	1	22.6	7.77	28.7	6.48	7.2	10.5
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS(Mf)16	19:50	Bottom	3	2	22.6	7.75	28.7	6.44	7.26	10.6
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS(Mf)9	20:05	Surface	1	1	22.4	7.7	28.5	6.17	7.02	10.1
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS(Mf)9	20:05	Surface	1	2	22.4	7.72	28.5	6.14	7.06	10.1
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS(Mf)9	20:05	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS(Mf)9	20:05	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS(Mf)9	20:05	Bottom	3	1	22.5	7.74	28.6	6.29	7.11	10.3
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	IS(Mf)9	20:05	Bottom	3	2	22.4	7.75	28.7	6.25	7.15	10.4
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	CS(Mf)3	20:26	Surface	1	1	22.4	7.67	28.5	6.49	6.82	9.7
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	CS(Mf)3	20:26	Surface	1	2	22.3	7.69	28.6	6.46	6.78	9.7
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	CS(Mf)3	20:26	Middle	2	1	22.4	7.74	28.7	6.57	6.64	9.6
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	CS(Mf)3	20:26	Middle	2	2	22.5	7.75	28.8	6.54	6.6	9.5
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	CS(Mf)3	20:26	Bottom	3	1	22.5	7.79	28.8	6.36	6.77	9.9
TMCLKL	HY/2012/07	2017-04-27	Mid-Flood	CS(Mf)3	20:26	Bottom	3	2	22.5	7.77	28.7	6.32	6.74	9.9
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	CS(Mf)5	14:50	Surface	1	1	22.6	7.64	28.6	6.26	6.81	9.8
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	CS(Mf)5	14:50	Surface	1	2	22.6	7.61	28.7	6.29	6.77	9.6
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	CS(Mf)5	14:50	Middle	2	1	22.6	7.67	28.7	6.23	7.03	10.2
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	CS(Mf)5	14:50	Middle	2	2	22.6	7.73	28.7	6.2	6.95	10.1
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	CS(Mf)5	14:50	Bottom	3	1	22.7	7.7	28.8	6.35	6.72	9.6
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	CS(Mf)5	14:50	Bottom	3	2	22.7	7.75	28.9	6.38	6.64	9.4
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	SR4a	14:27	Surface	1	1	22.5	7.63	28.7	6.3	7.06	9.9
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	SR4a	14:27	Surface	1	2	22.6	7.66	28.7	6.27	7.13	10.1
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	SR4a	14:27	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	SR4a	14:27	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	SR4a	14:27	Bottom	3	1	22.6	7.68	28.7	6.21	7.38	10.6
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	SR4a	14:27	Bottom	3	2	22.6	7.7	28.8	6.17	7.44	10.7
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	SR4	14:10	Surface	1	1	22.5	7.67	28.5	6.17	7.15	10.2
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	SR4	14:10	Surface	1	2	22.5	7.64	28.6	6.14	7.23	10.4
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	SR4	14:10	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	SR4	14:10	Middle	2	2						

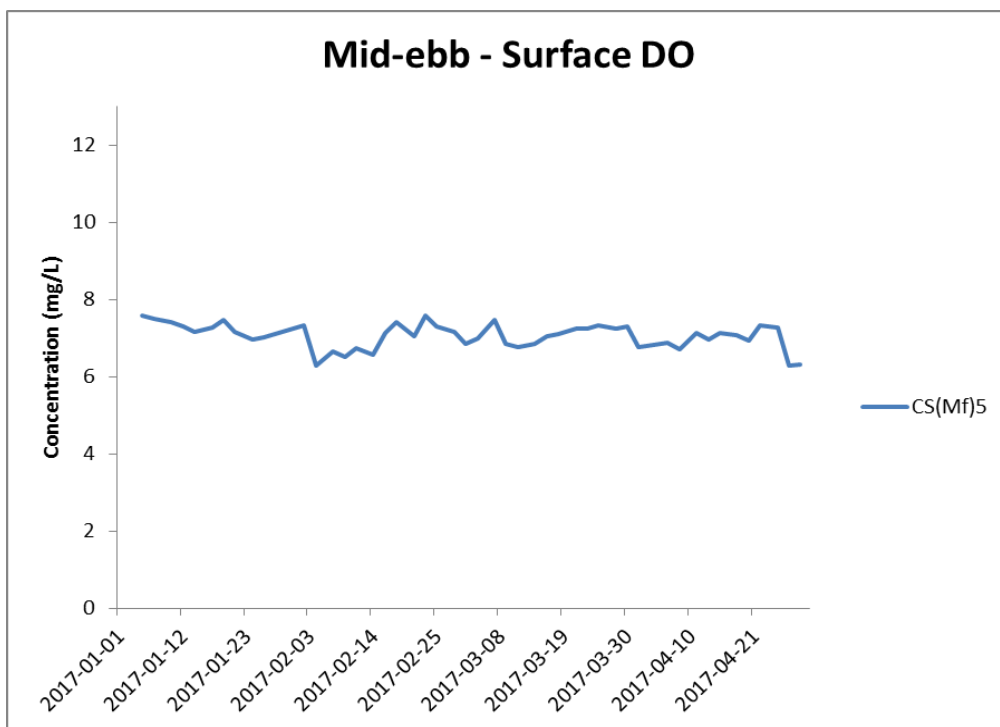
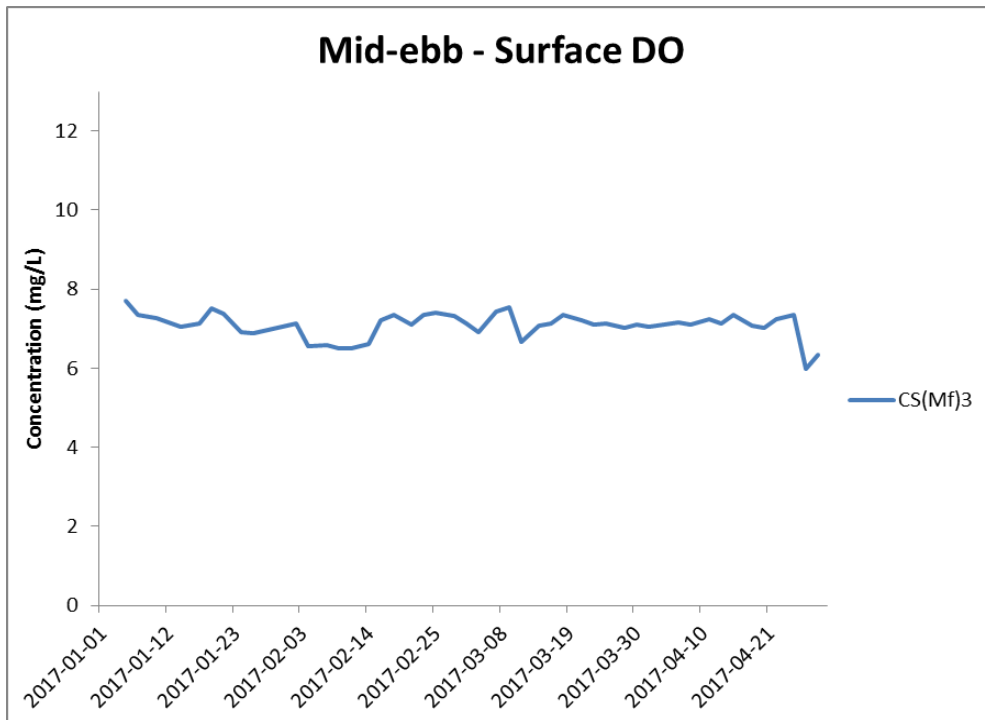
Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	SR4	14:10	Bottom	3	1	22.5	7.69	28.6	6.08	7.6	11
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	SR4	14:10	Bottom	3	2	22.5	7.73	28.7	6.05	7.53	11
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS8	13:53	Surface	1	1	22.5	7.74	28.7	6.33	7.08	10.1
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS8	13:53	Surface	1	2	22.5	7.8	28.6	6.29	7	10
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS8	13:53	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS8	13:53	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS8	13:53	Bottom	3	1	22.5	7.67	28.7	6.24	7.27	10.5
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS8	13:53	Bottom	3	2	22.5	7.73	28.7	6.2	7.34	10.6
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS(Mf)16	13:32	Surface	1	1	22.4	7.69	28.7	6.24	7.14	10.3
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS(Mf)16	13:32	Surface	1	2	22.5	7.72	28.7	6.19	7.23	10.3
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS(Mf)16	13:32	Middle	2	1	22.5	7.7	28.7	6.14	7.09	10.4
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS(Mf)16	13:32	Middle	2	2	22.5	7.73	28.8	6.1	7	10.2
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS(Mf)16	13:32	Bottom	3	1	22.6	7.77	28.9	6.4	6.78	9.8
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS(Mf)16	13:32	Bottom	3	2	22.6	7.74	29	6.36	6.83	9.8
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS(Mf)9	13:13	Surface	1	1	22.5	7.73	28.6	6.04	7.08	10.3
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS(Mf)9	13:13	Surface	1	2	22.5	7.69	28.7	6.01	6.69	10.2
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS(Mf)9	13:13	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS(Mf)9	13:13	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS(Mf)9	13:13	Bottom	3	1	22.5	7.69	28.7	6.22	7.34	10.6
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	IS(Mf)9	13:13	Bottom	3	2	22.5	7.72	28.7	6.18	7.28	10.6
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	CS(Mf)3	12:50	Surface	1	1	22.5	7.68	28.7	5.96	6.84	9.7
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	CS(Mf)3	12:50	Surface	1	2	22.5	7.63	28.8	5.99	6.92	9.9
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	CS(Mf)3	12:50	Middle	2	1	22.5	7.67	28.8	5.88	7.23	10.5
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	CS(Mf)3	12:50	Middle	2	2	22.5	7.71	28.9	5.85	7.29	10.6
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	CS(Mf)3	12:50	Bottom	3	1	22.6	7.76	29	6.07	7.07	10.4
TMCLKL	HY/2012/07	2017-04-27	Mid-Ebb	CS(Mf)3	12:50	Bottom	3	2	22.6	7.7	29	6.04	6.99	10.3
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	CS(Mf)5	7:34	Surface	1	1	22.5	7.74	28.8	6.52	6.72	9.4
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	CS(Mf)5	7:34	Surface	1	2	22.4	7.72	28.7	6.56	6.68	9.6
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	CS(Mf)5	7:34	Middle	2	1	22.6	7.76	28.9	6.34	6.94	9.9
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	CS(Mf)5	7:34	Middle	2	2	22.6	7.74	29	6.3	6.98	10.1
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	CS(Mf)5	7:34	Bottom	3	1	22.6	7.72	29	6.31	7.37	10.7
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	CS(Mf)5	7:34	Bottom	3	2	22.5	7.74	29	6.27	7.3	10.7
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	SR4a	8:00	Surface	1	1	22.4	7.68	28.7	6.46	6.39	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	2017-04-29	Mid-Flood	SR4a	8:00	Surface	1	2	22.5	7.69	28.7	6.42	6.35	9.3
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	SR4a	8:00	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	SR4a	8:00	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	SR4a	8:00	Bottom	3	1	22.5	7.73	28.9	6.57	6.82	9.9
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	SR4a	8:00	Bottom	3	2	22.6	7.71	28.9	6.54	6.86	9.9
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	SR4	8:20	Surface	1	1	22.5	7.7	28.7	6.36	6.07	8.7
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	SR4	8:20	Surface	1	2	22.5	7.72	28.7	6.31	6.01	8.6
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	SR4	8:20	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	SR4	8:20	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	SR4	8:20	Bottom	3	1	22.6	7.67	28.8	6.41	6.73	9.8
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	SR4	8:20	Bottom	3	2	22.5	7.69	28.8	6.45	6.7	9.7
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS8	8:40	Surface	1	1	22.5	7.74	28.8	6.46	6.45	9.2
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS8	8:40	Surface	1	2	22.4	7.71	28.7	6.49	6.4	9.1
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS8	8:40	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS8	8:40	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS8	8:40	Bottom	3	1	22.6	7.7	28.9	6.4	6.91	10
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS8	8:40	Bottom	3	2	22.6	7.72	28.9	6.37	6.95	10
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS(Mf)16	9:05	Surface	1	1	22.5	7.7	28.7	6.29	7.02	9.9
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS(Mf)16	9:05	Surface	1	2	22.5	7.68	28.8	6.33	7.06	10
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS(Mf)16	9:05	Middle	2	1	22.5	7.75	28.9	6.31	7.37	10.6
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS(Mf)16	9:05	Middle	2	2	22.6	7.74	29	6.28	7.33	10.6
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS(Mf)16	9:05	Bottom	3	1	22.6	7.71	29	6.37	7.11	10.4
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS(Mf)16	9:05	Bottom	3	2	22.6	7.73	29.1	6.34	7.15	10.4
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS(Mf)9	9:30	Surface	1	1	22.5	7.66	28.8	6.6	6.21	8.9
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS(Mf)9	9:30	Surface	1	2	22.5	7.68	28.8	6.55	6.26	9
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS(Mf)9	9:30	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS(Mf)9	9:30	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS(Mf)9	9:30	Bottom	3	1	22.5	7.68	28.9	6.57	6.84	9.9
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	IS(Mf)9	9:30	Bottom	3	2	22.4	7.65	29	6.53	6.8	9.9
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	CS(Mf)3	9:50	Surface	1	1	22.6	7.71	28.8	6.56	6.19	8.8
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	CS(Mf)3	9:50	Surface	1	2	22.5	7.73	28.8	6.59	6.15	8.8
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	CS(Mf)3	9:50	Middle	2	1	22.6	7.75	29	6.67	6.44	9.3
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	CS(Mf)3	9:50	Middle	2	2	22.6	7.76	29	6.63	6.4	9.2

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	2017-04-29	Mid-Flood	CS(Mf)3	9:50	Bottom	3	1	22.7	7.77	29.1	6.6	6.99	10.2
TMCLKL	HY/2012/07	2017-04-29	Mid-Flood	CS(Mf)3	9:50	Bottom	3	2	22.6	7.76	29.1	6.57	6.95	10.2
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	CS(Mf)5	15:28	Surface	1	1	22.4	8.13	28.6	6.31	7.05	10.2
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	CS(Mf)5	15:28	Surface	1	2	22.5	8.1	28.7	6.33	7.08	10.1
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	CS(Mf)5	15:28	Middle	2	1	22.6	7.96	28.8	6.44	7.14	10.4
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	CS(Mf)5	15:28	Middle	2	2	22.6	7.98	28.8	6.41	7.17	10.4
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	CS(Mf)5	15:28	Bottom	3	1	22.7	7.88	28.9	6.26	7.3	10.4
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	CS(Mf)5	15:28	Bottom	3	2	22.6	7.9	29	6.29	7.32	10.4
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	SR4a	15:00	Surface	1	1	22.5	7.92	28.7	6.4	6.59	9.2
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	SR4a	15:00	Surface	1	2	22.5	7.95	28.8	6.43	6.62	9.3
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	SR4a	15:00	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	SR4a	15:00	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	SR4a	15:00	Bottom	3	1	22.6	8.06	28.9	6.13	6.78	9.8
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	SR4a	15:00	Bottom	3	2	22.7	8.04	29	6.15	6.81	9.8
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	SR4	14:38	Surface	1	1	22.3	8.17	28.5	6.24	6.13	8.8
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	SR4	14:38	Surface	1	2	22.4	8.15	28.6	6.27	6.15	8.9
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	SR4	14:38	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	SR4	14:38	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	SR4	14:38	Bottom	3	1	22.5	7.93	28.7	6.39	6.32	9.2
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	SR4	14:38	Bottom	3	2	22.6	7.91	28.7	6.41	6.34	9.3
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS8	14:23	Surface	1	1	22.4	7.86	28.6	6.4	6.31	9
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS8	14:23	Surface	1	2	22.4	7.89	28.6	6.38	6.33	9.1
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS8	14:23	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS8	14:23	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS8	14:23	Bottom	3	1	22.5	8	28.7	6.47	6.45	9.4
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS8	14:23	Bottom	3	2	22.5	8.03	28.8	6.5	6.48	9.4
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS(Mf)16	14:00	Surface	1	1	22.4	7.91	28.4	6.13	6.89	9.9
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS(Mf)16	14:00	Surface	1	2	22.5	7.94	28.4	6.16	6.86	9.7
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS(Mf)16	14:00	Middle	2	1	22.6	8.16	28.5	6.22	6.94	10.1
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS(Mf)16	14:00	Middle	2	2	22.6	8.19	28.6	6.25	6.97	10.1
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS(Mf)16	14:00	Bottom	3	1	22.7	8.05	28.7	6.35	7.13	10.3
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS(Mf)16	14:00	Bottom	3	2	22.6	8.07	28.6	6.38	7.15	10.2
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS(Mf)9	13:38	Surface	1	1	22.4	7.99	28.6	6.48	6.4	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	2017-04-29	Mid-Ebb	IS(Mf)9	13:38	Surface	1	2	22.5	8.02	28.6	6.51	6.43	9.4
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS(Mf)9	13:38	Middle	2	1						
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS(Mf)9	13:38	Middle	2	2						
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS(Mf)9	13:38	Bottom	3	1	22.6	8.12	28.7	6.68	6.53	9.4
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	IS(Mf)9	13:38	Bottom	3	2	22.6	8.14	28.8	6.65	6.58	9.6
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	CS(Mf)3	13:17	Surface	1	1	22.5	7.86	28.4	6.32	6.33	9
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	CS(Mf)3	13:17	Surface	1	2	22.5	7.84	28.3	6.35	6.36	9.1
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	CS(Mf)3	13:17	Middle	2	1	22.6	7.97	28.6	6.41	6.4	9.3
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	CS(Mf)3	13:17	Middle	2	2	22.6	7.99	28.6	6.43	6.43	9.4
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	CS(Mf)3	13:17	Bottom	3	1	22.5	8.12	28.7	6.5	6.51	9.6
TMCLKL	HY/2012/07	2017-04-29	Mid-Ebb	CS(Mf)3	13:17	Bottom	3	2	22.4	8.1	28.6	6.53	6.54	9.6

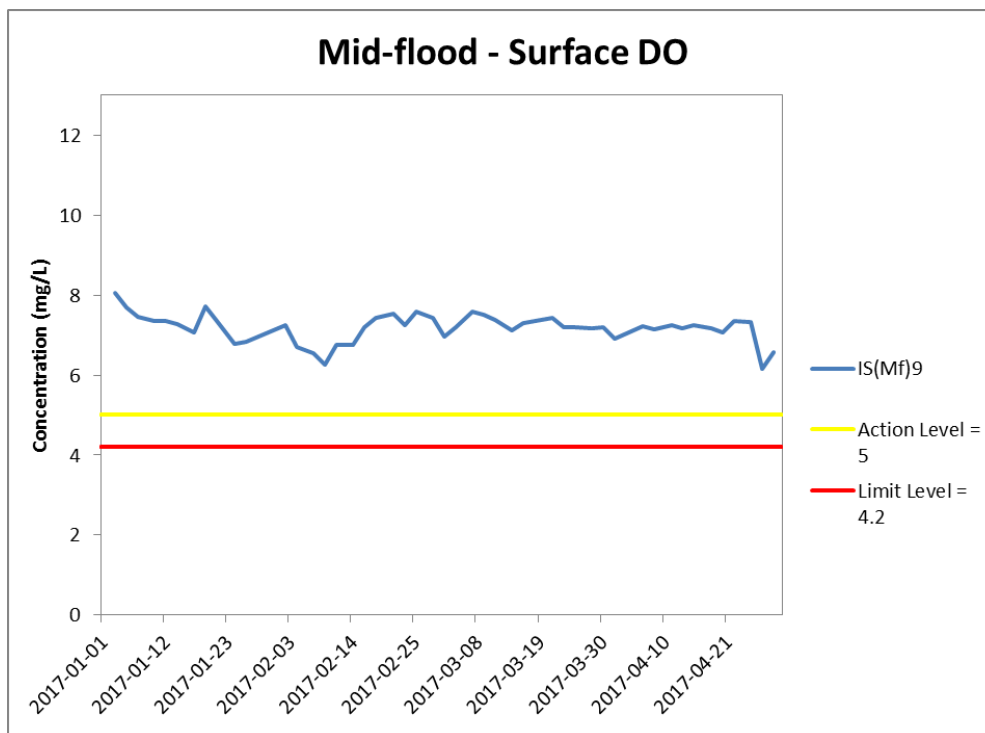
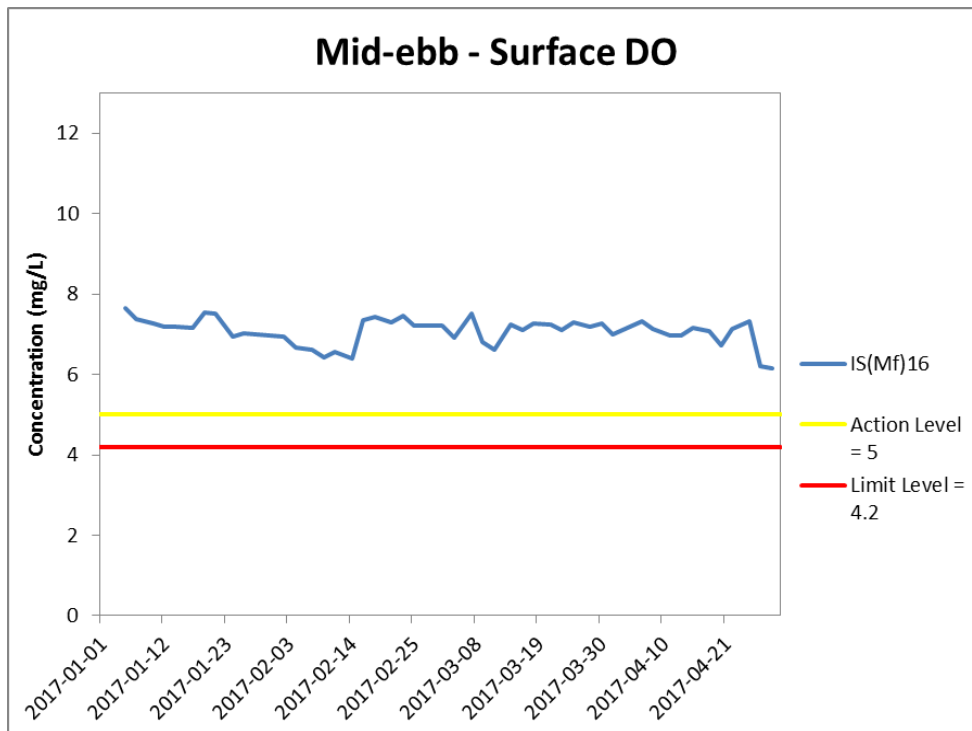


**Figure J1 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 January 2017 and 30 April 2017 at CS(Mf)3 and CS(Mf)5.**

*(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**



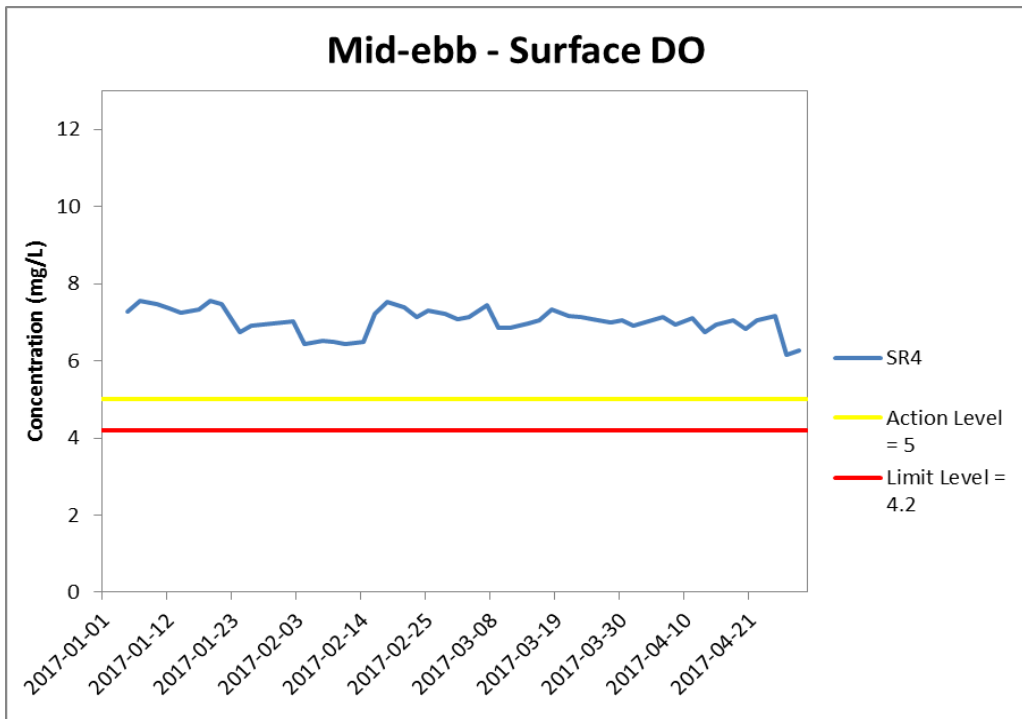
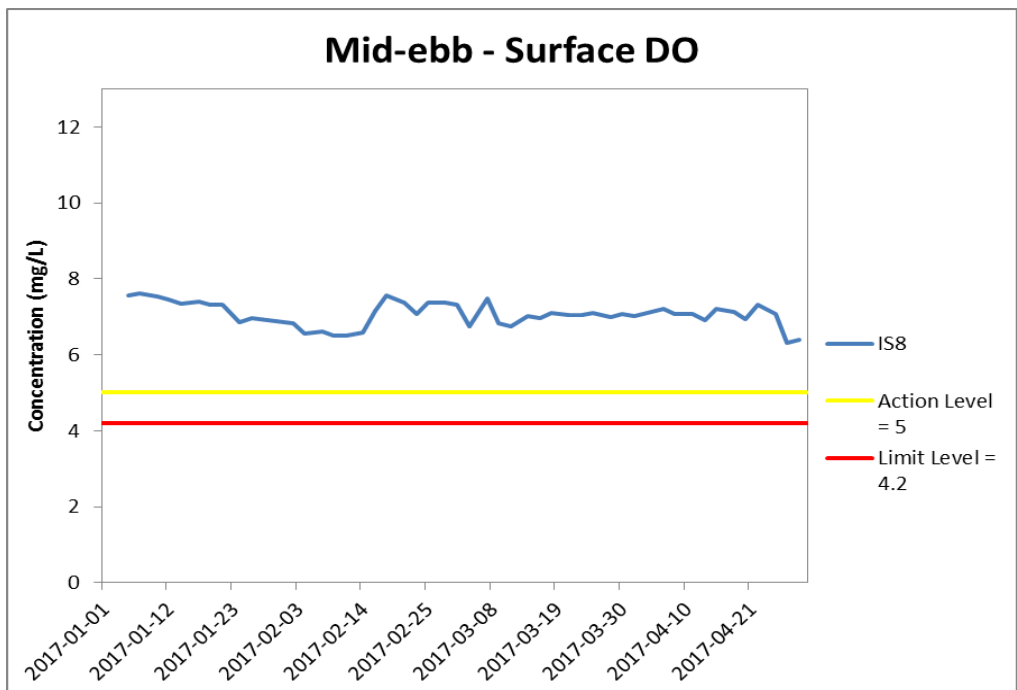


**Figure J2 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 January 2017 and 30 April 2017 at IS(Mf)16 and IS(Mf)9.**

*(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**



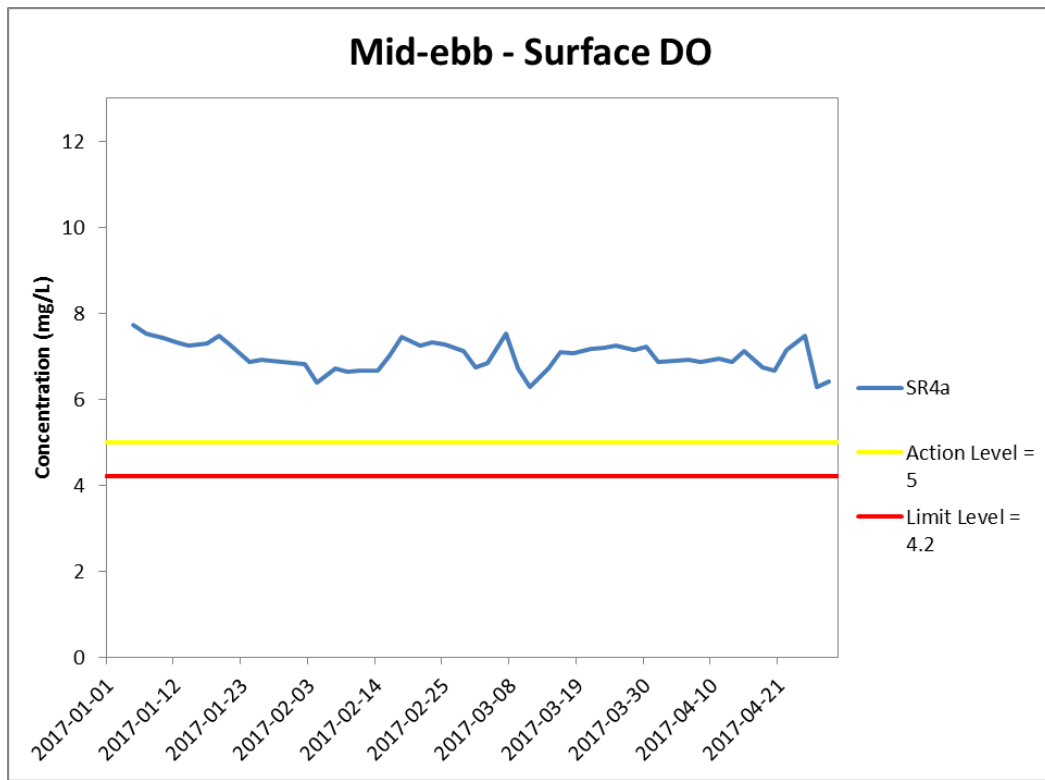


**Figure J3 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 January 2017 and 30 April 2017 at IS8 and SR4.**

*(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**



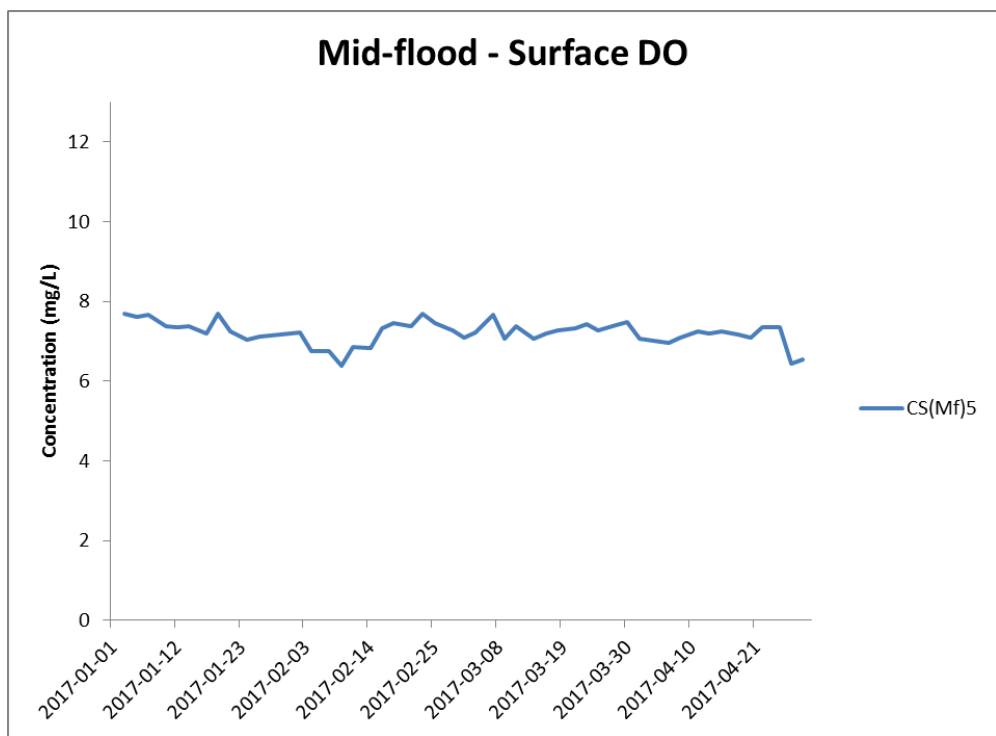
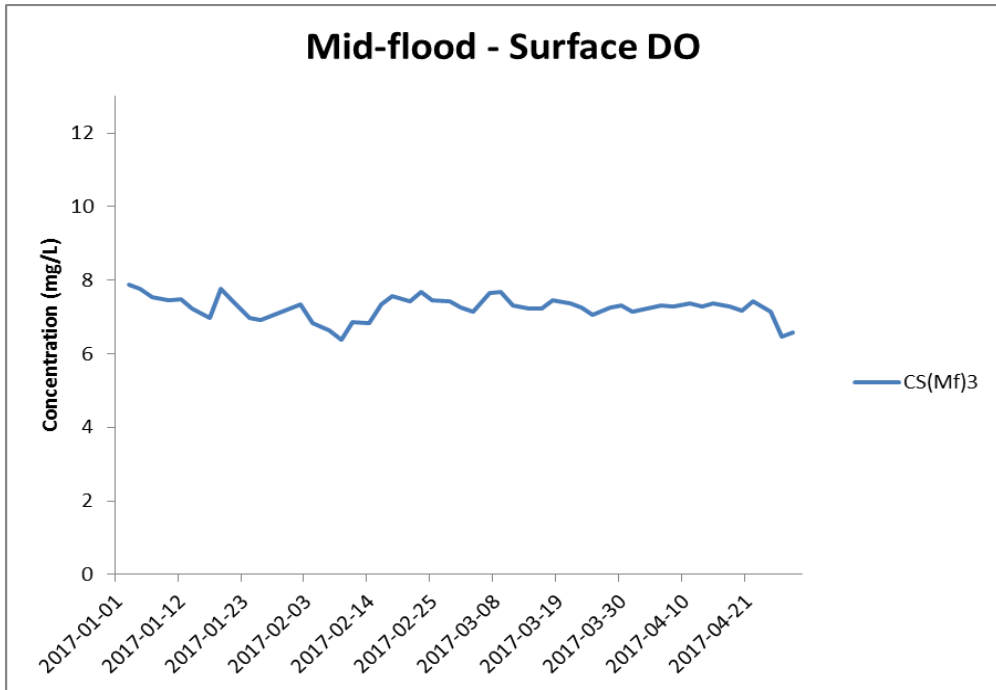


**Figure J4 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 January 2017 and 30 April 2017 at SR4a.**

*(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**



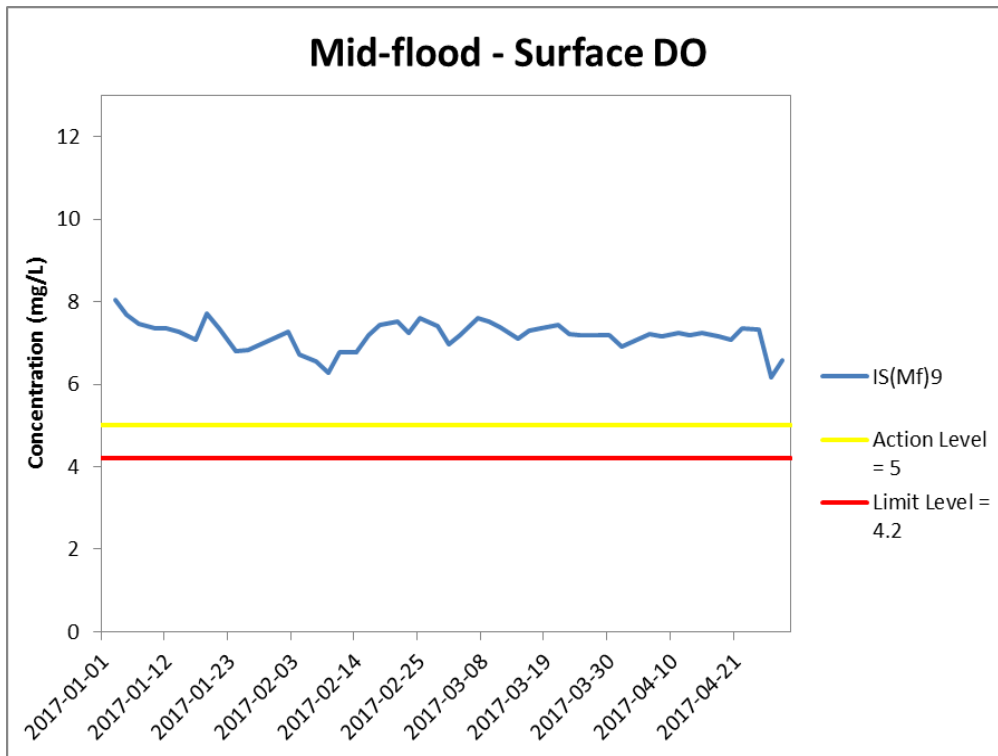
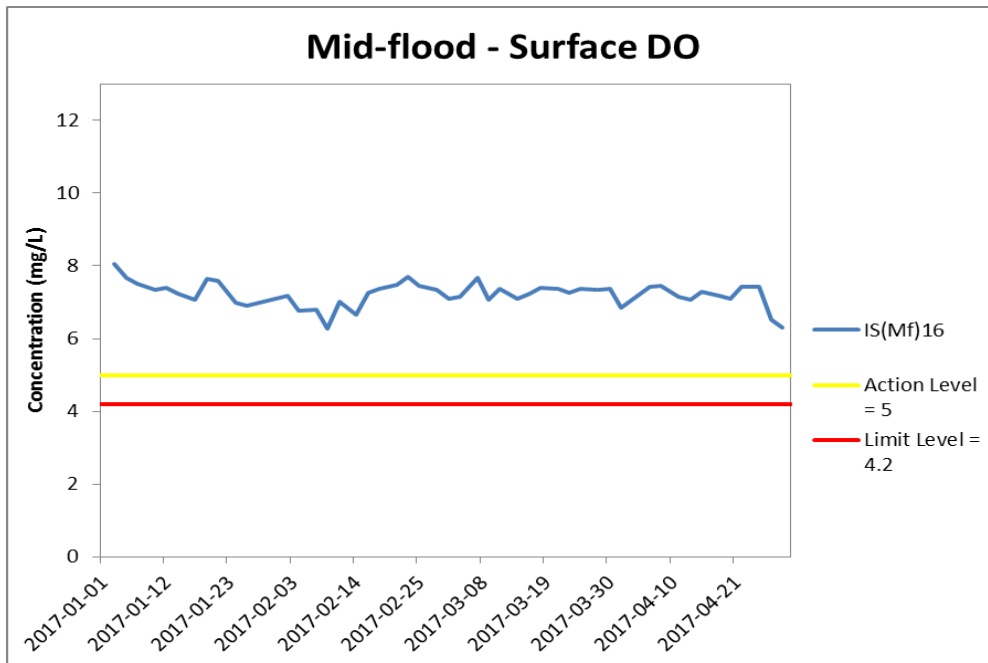


**Figure J5 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 January 2017 and 30 April 2017 at CS(Mf)3 and CS(Mf)5.**

*(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**



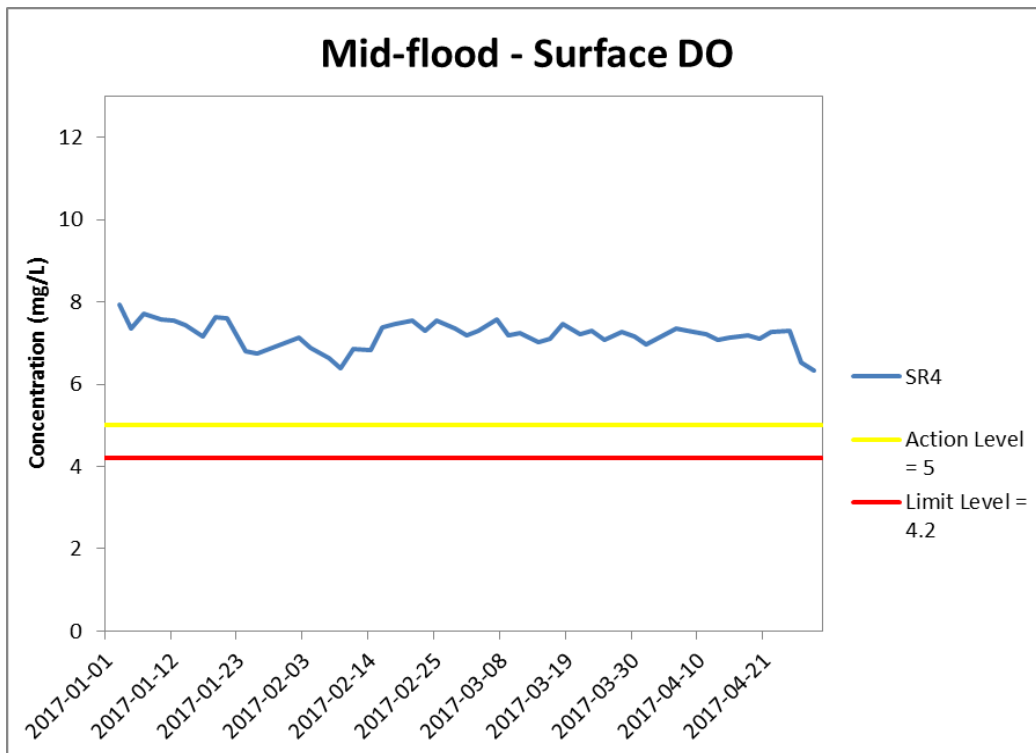
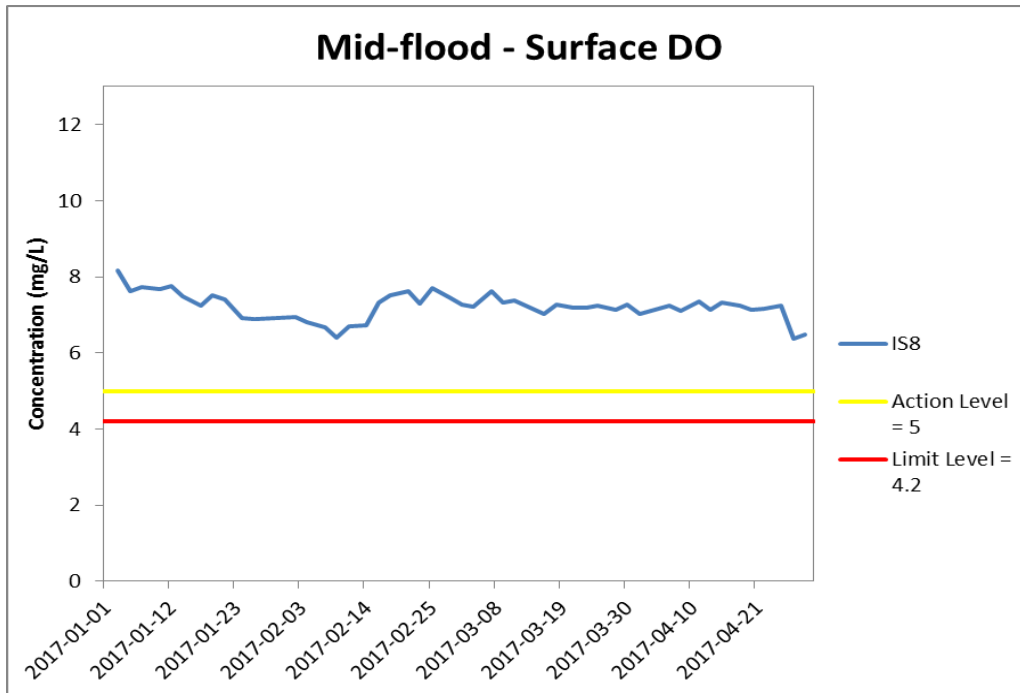


**Figure J6 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 January 2017 and 30 April 2017 at IS(Mf)16 and IS(Mf)9.**

*(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**





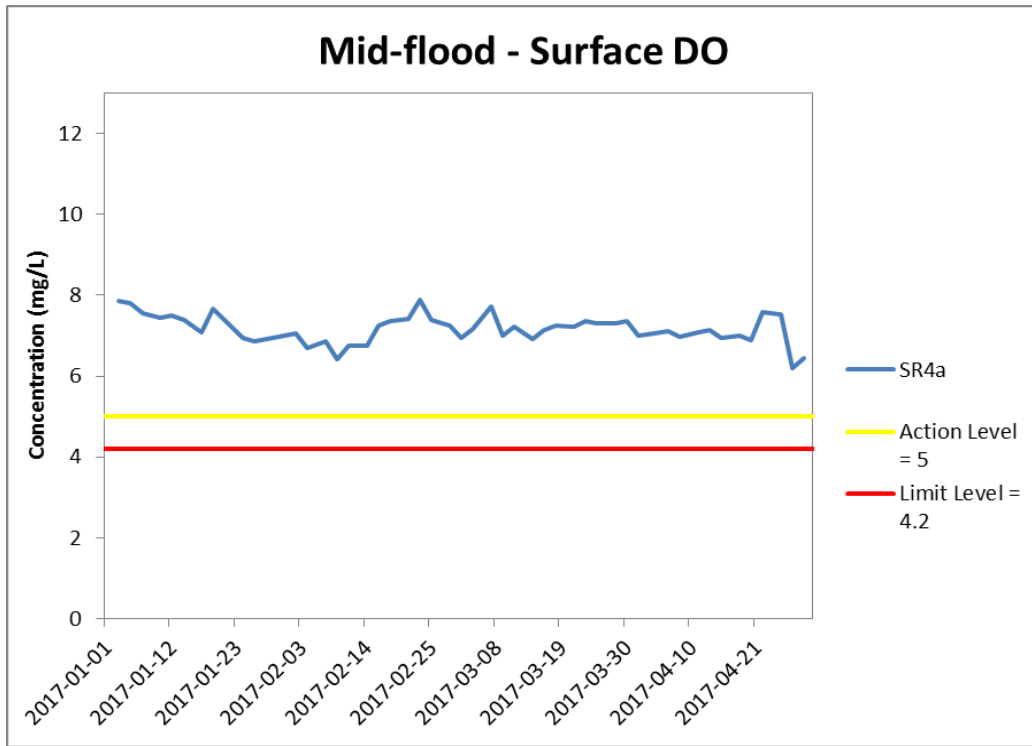
**Figure J7 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 January 2017 and 30 April 2017 at IS8 and SR4.**

*(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**





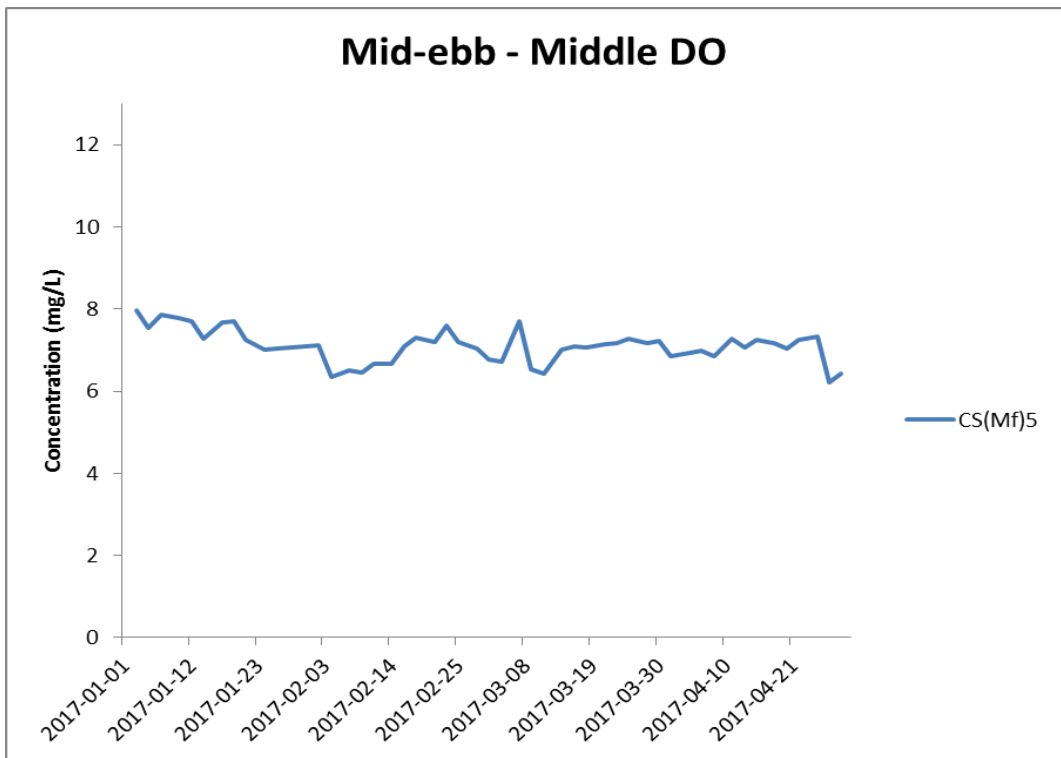
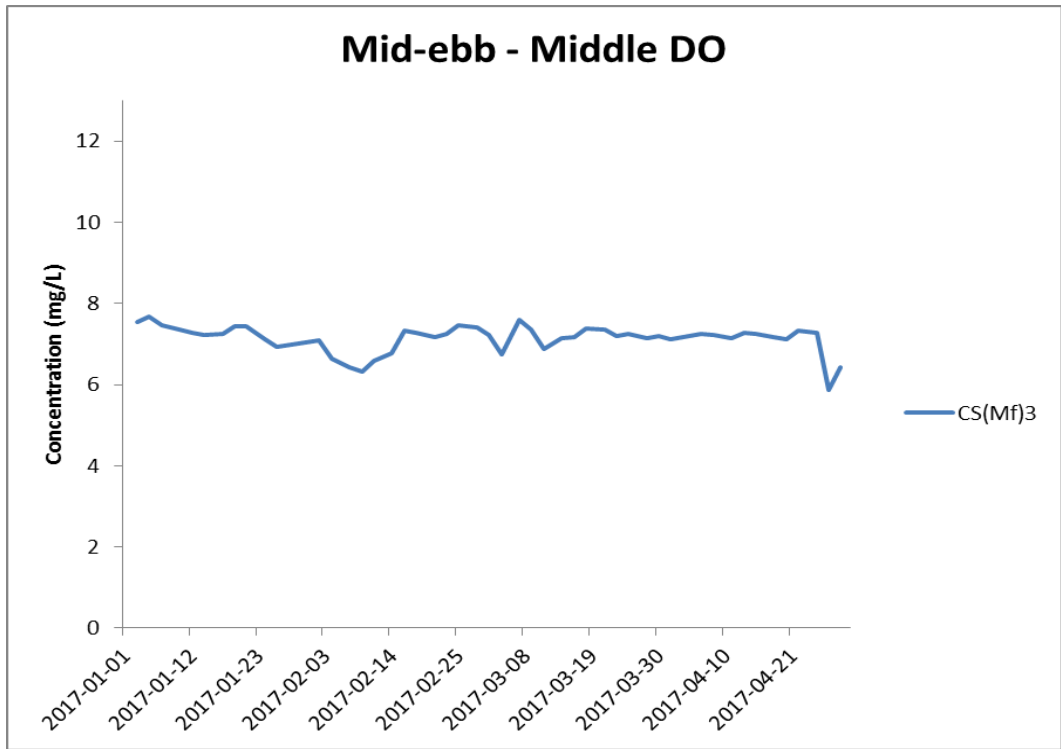


**Figure J8 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 January 2017 and 30 April 2017 at SR4a.**

*(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**



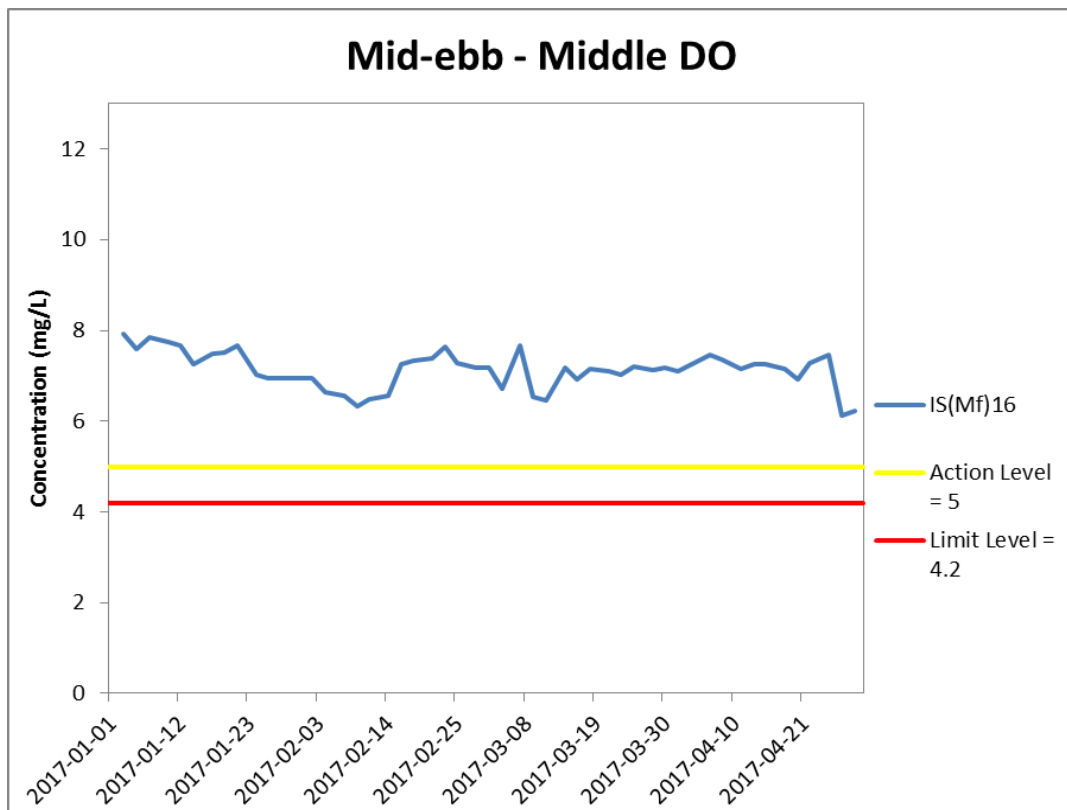


**Figure J9 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 1 January 2017 and 30 April 2017 at CS(Mf)3 and CS(Mf)5.**

*(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**



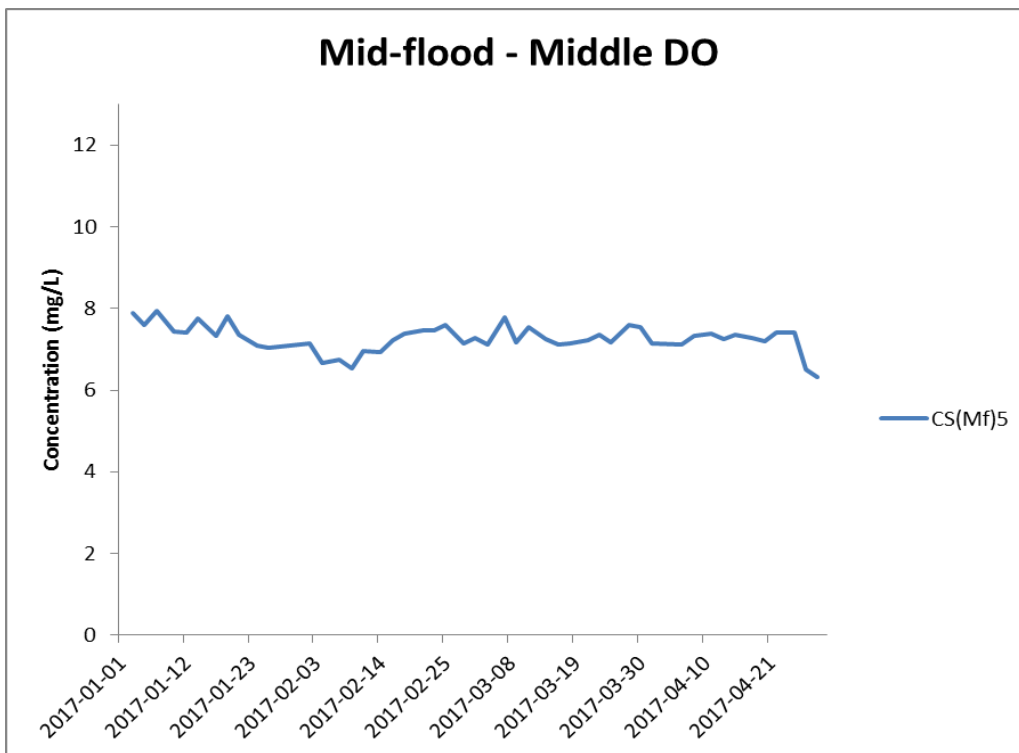
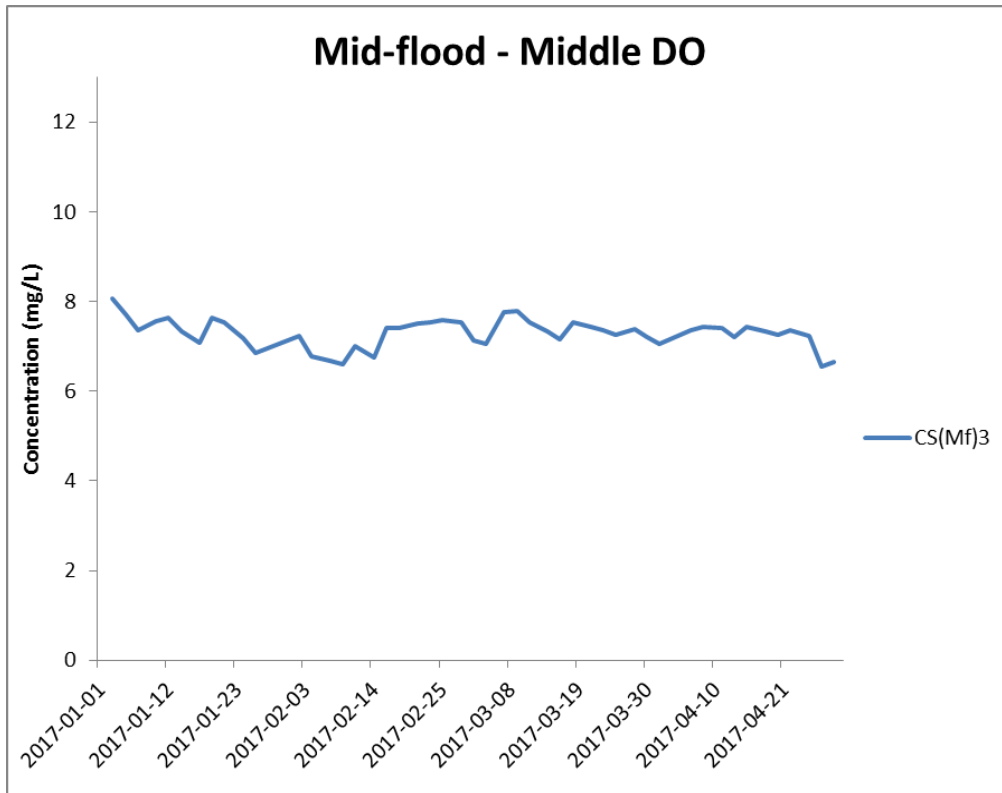


**Figure J10 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 1 January 2017 and 30 April 2017 at IS(Mf)16.**

*(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**

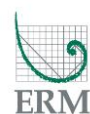


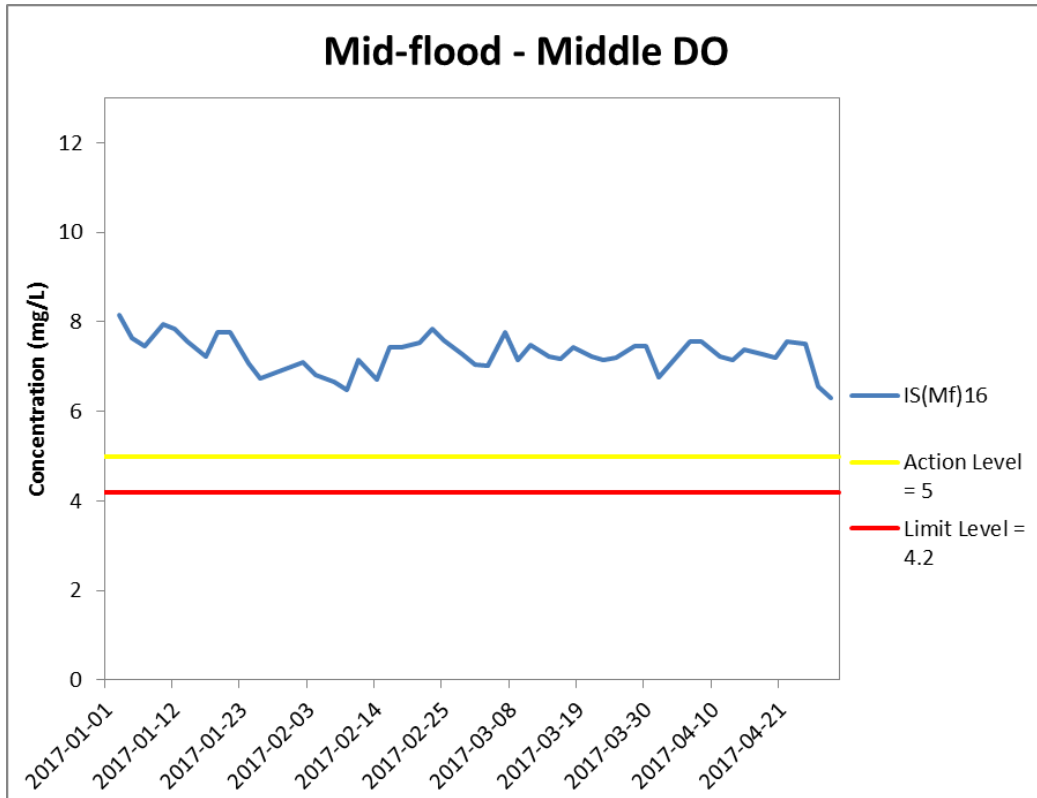


**Figure J11 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 1 January 2017 and 30 April 2017 at CS(Mf)3 and CS(Mf)5.**

*(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**



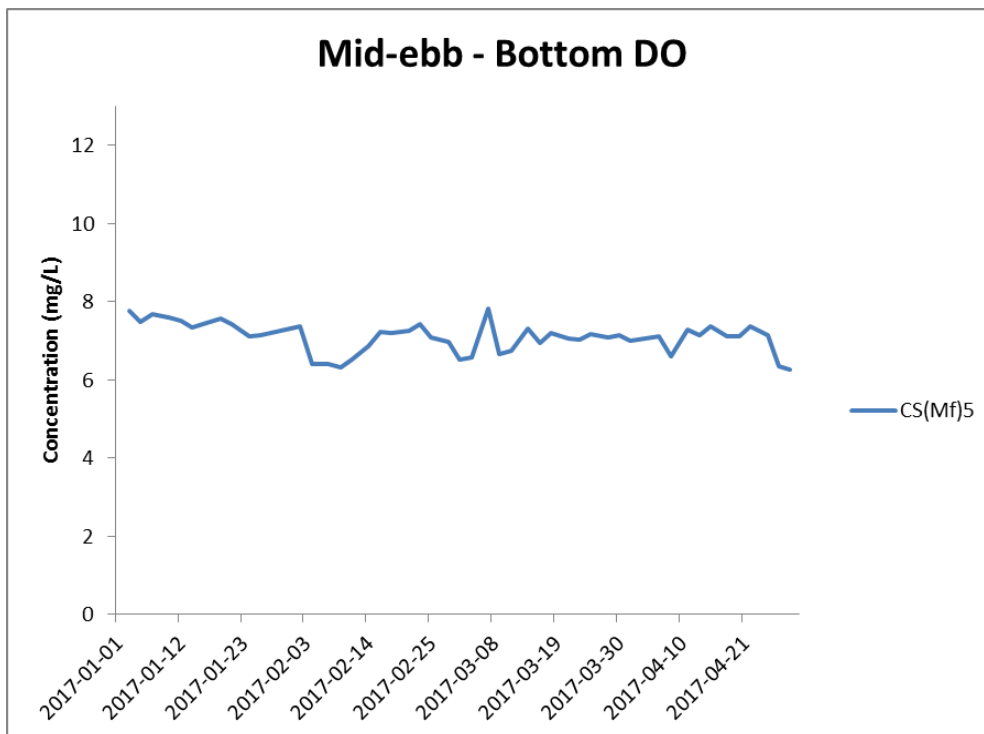
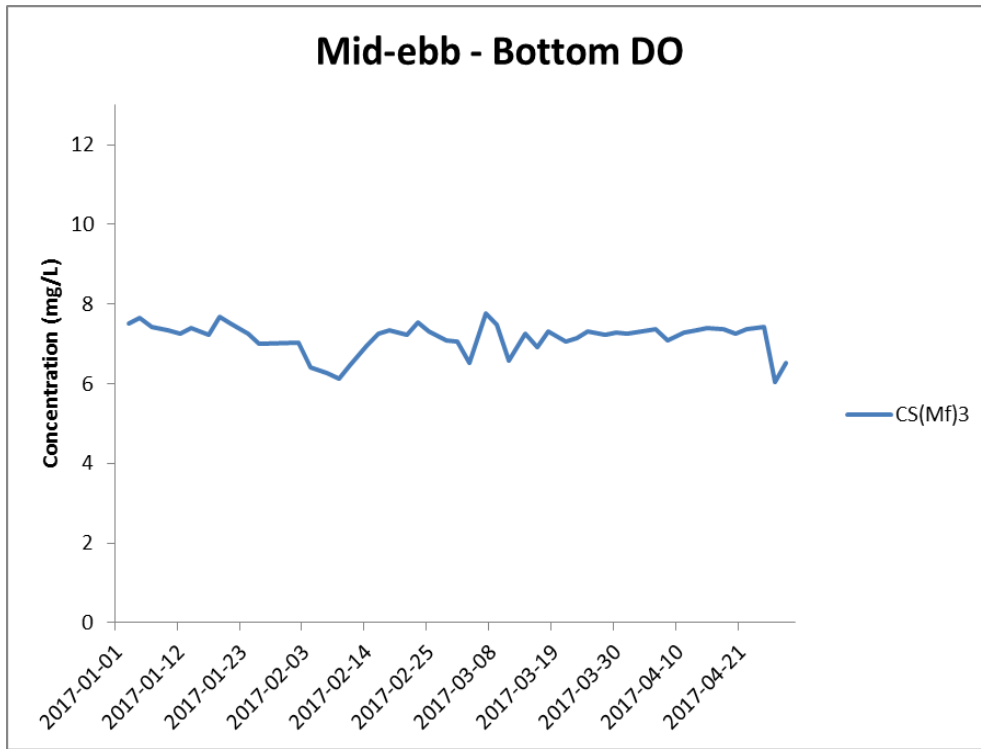


**Figure J12 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 1 January 2017 and 30 April 2017 at IS(Mf)16.**

*(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**



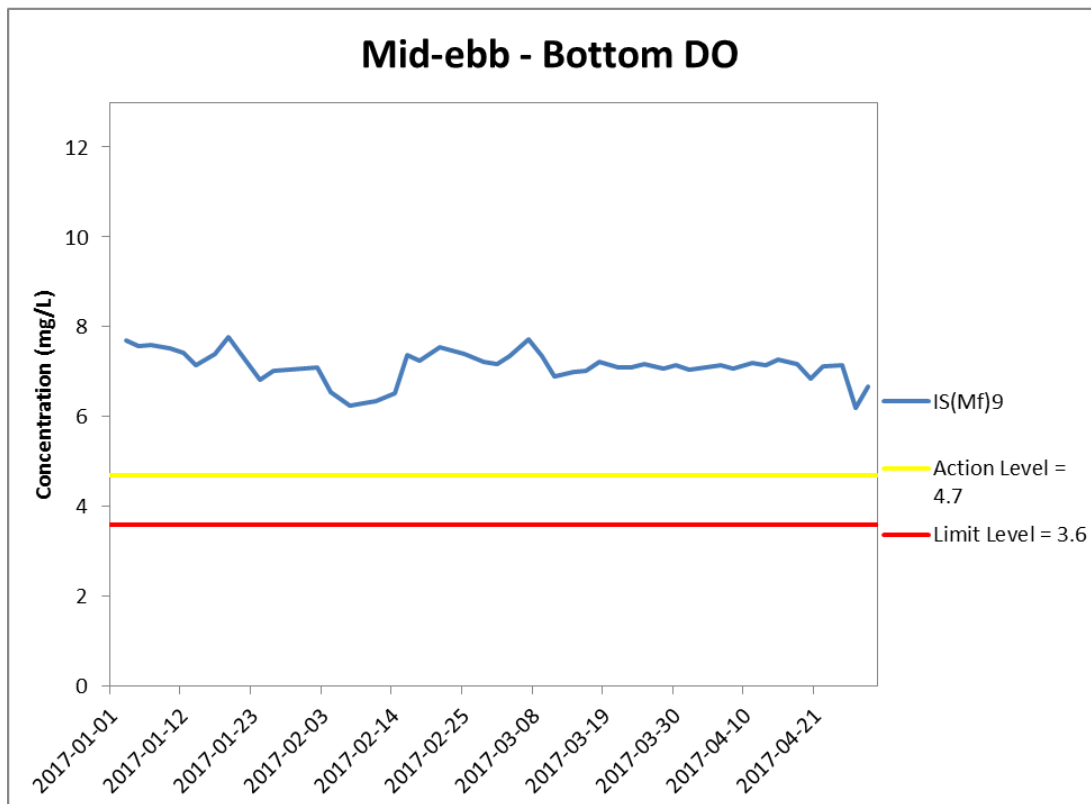
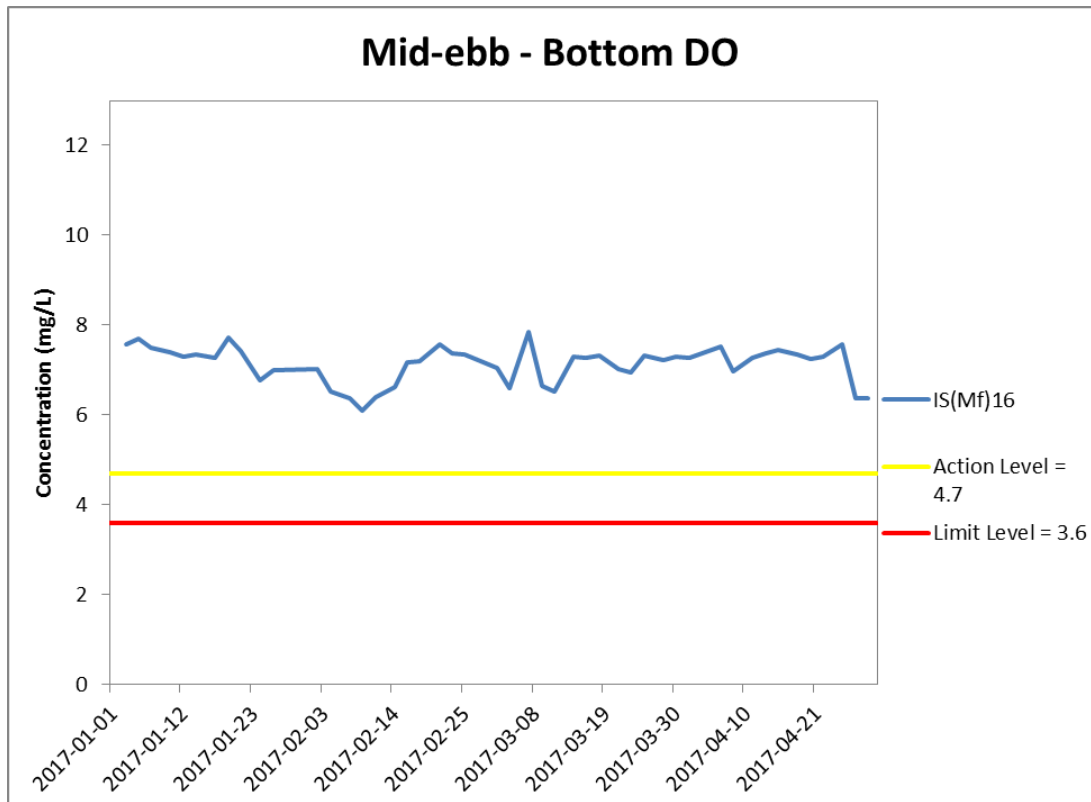


**Figure J13 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 January 2017 and 30 April 2017 at CS(Mf)3 and CS(Mf)5.**

*(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**



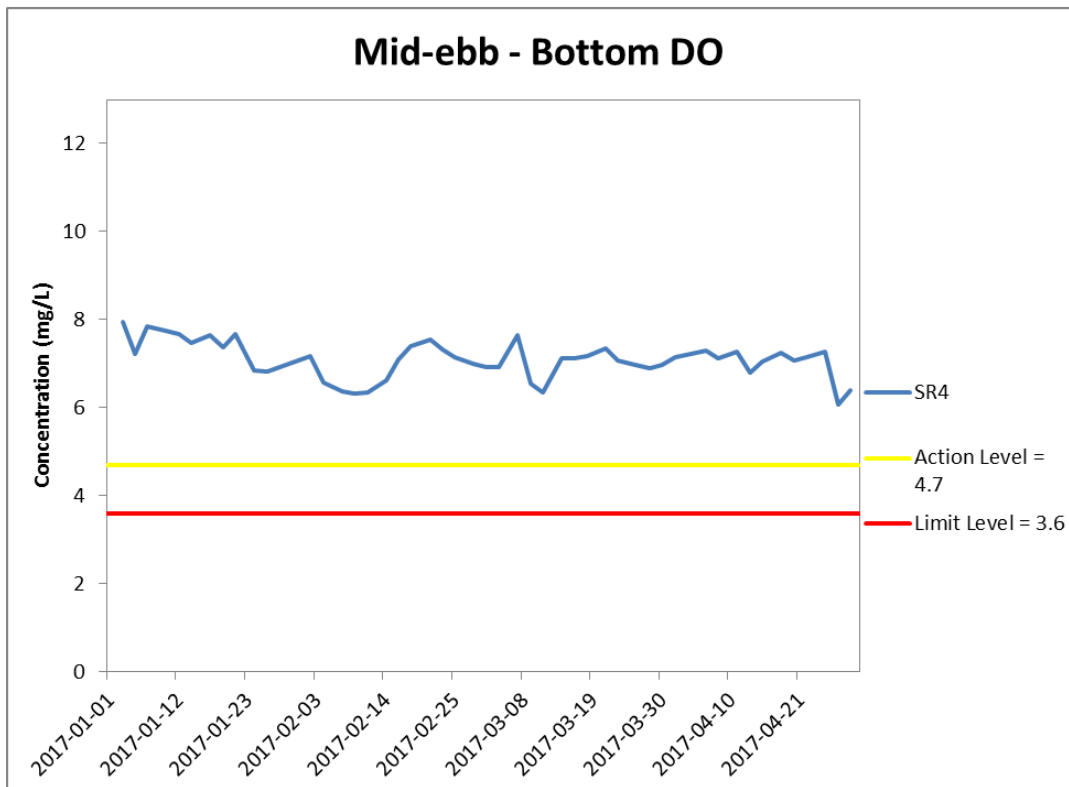
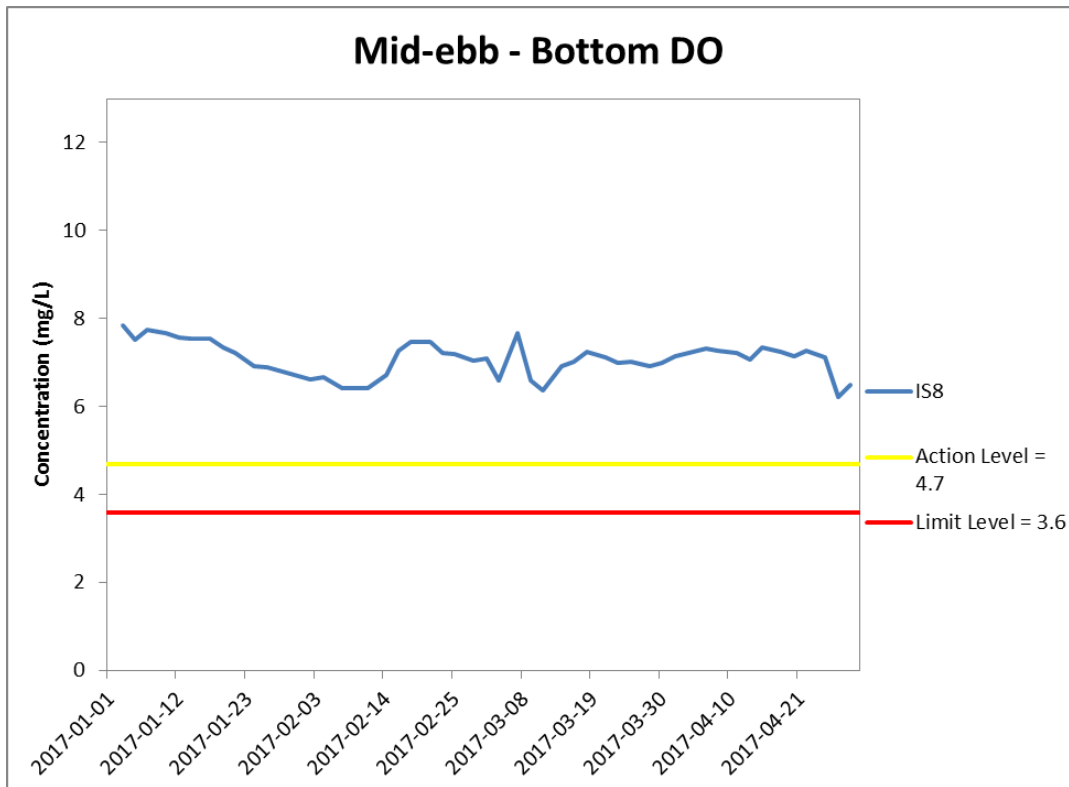


**Figure J14 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 January 2017 and 30 April 2017 at IS(Mf)16 and IS(Mf)9.**

*(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**





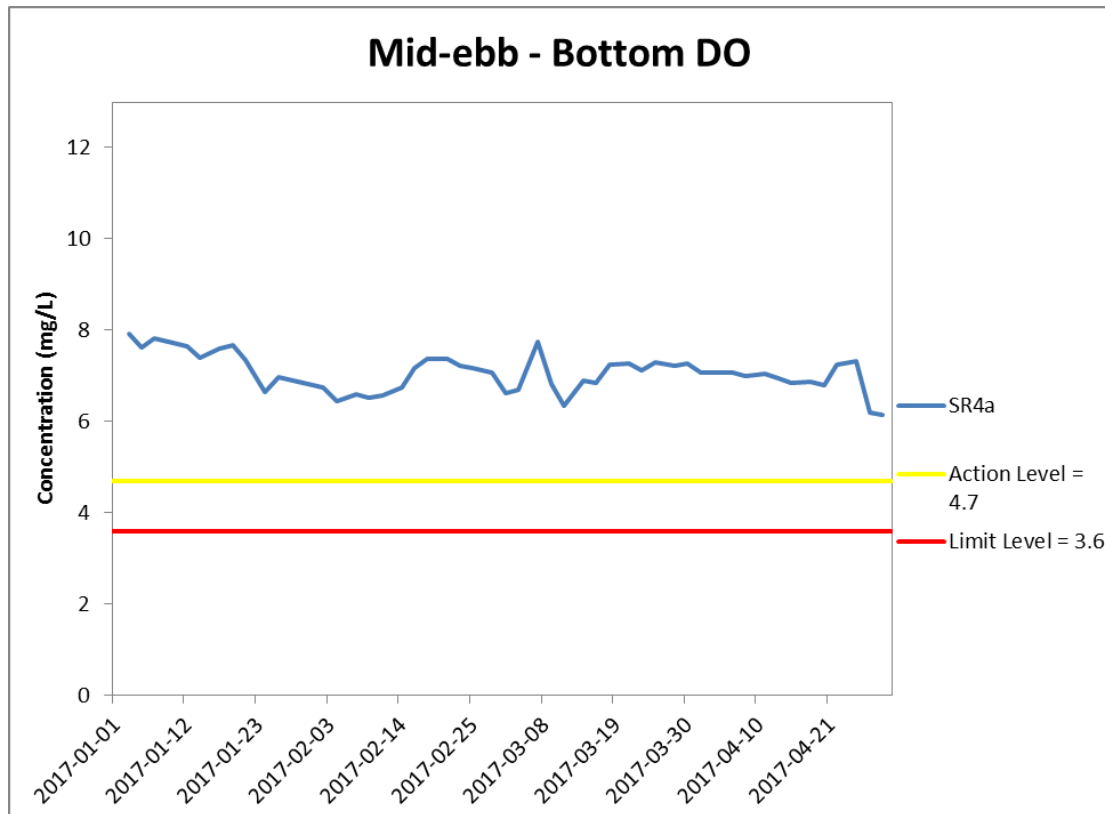
**Figure J15 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 January 2017 and 30 April 2017 at IS8 and SR4.**

*(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**





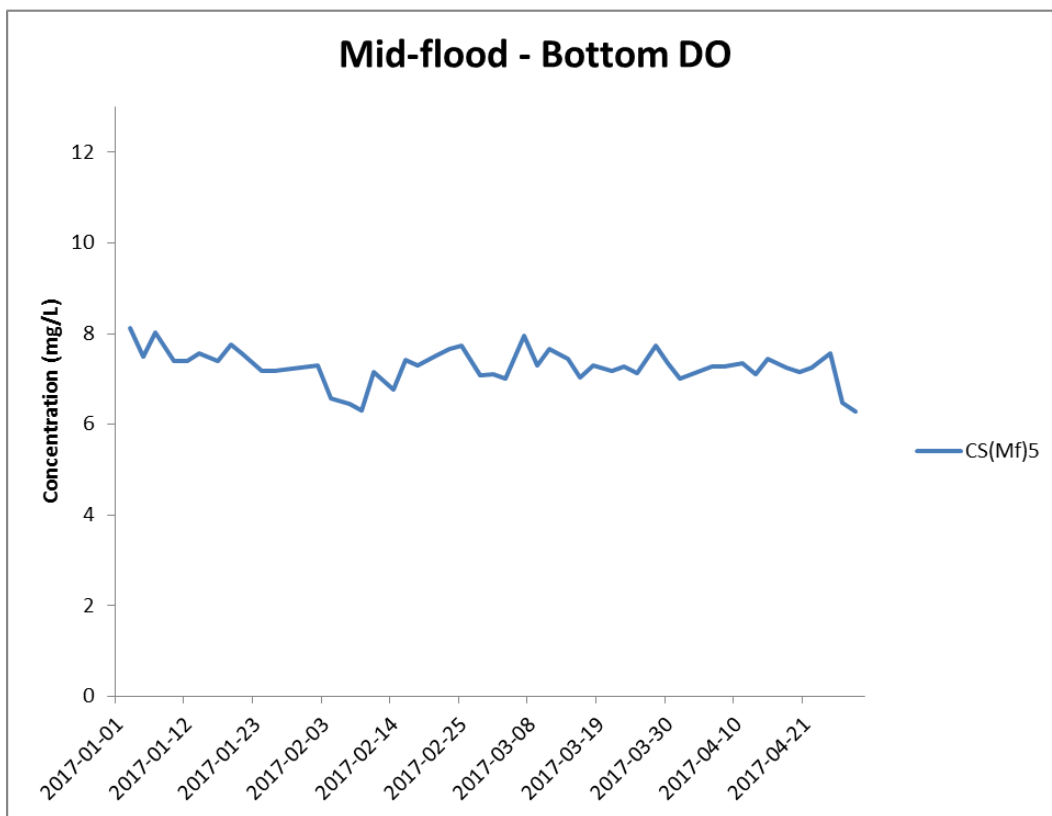
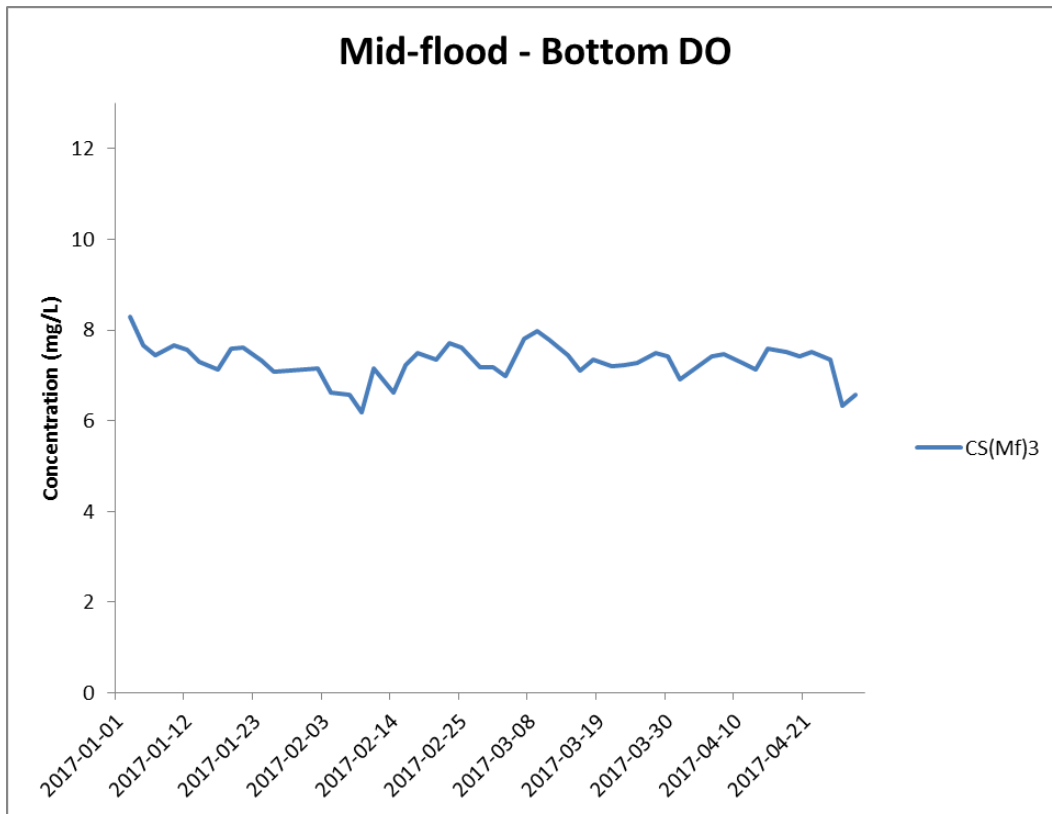


**Figure J16 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 January 2017 and 30 April 2017 at SR4a.**

*(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**



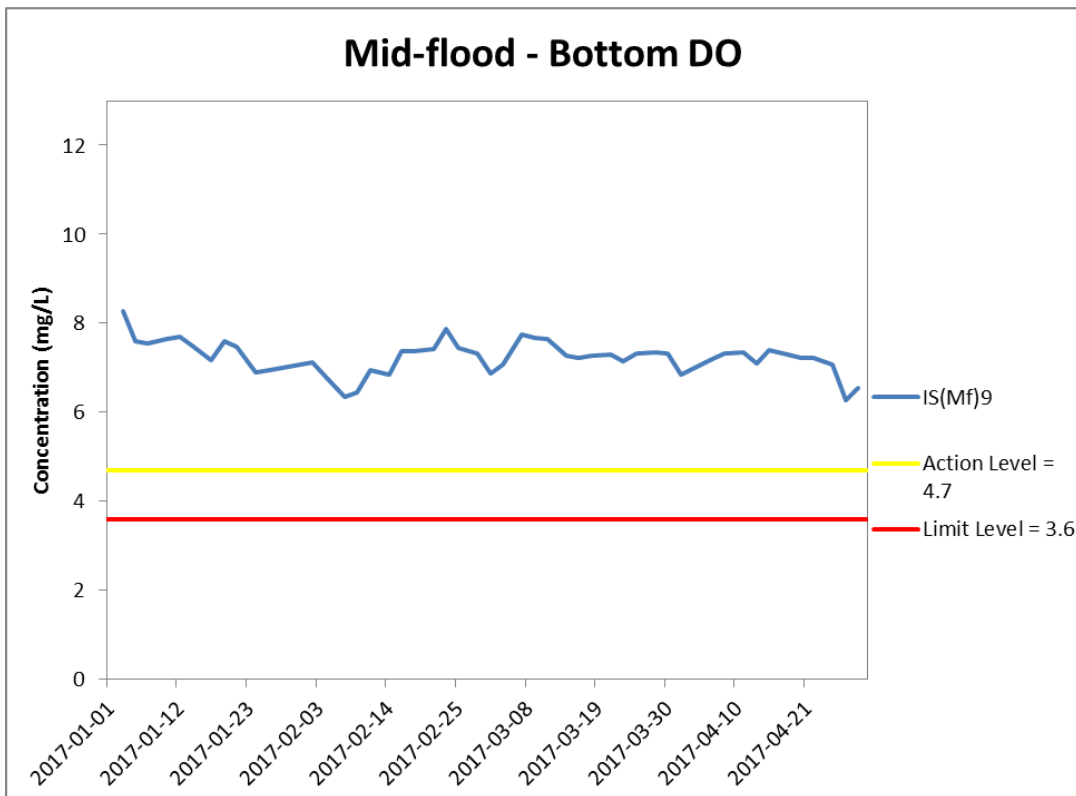
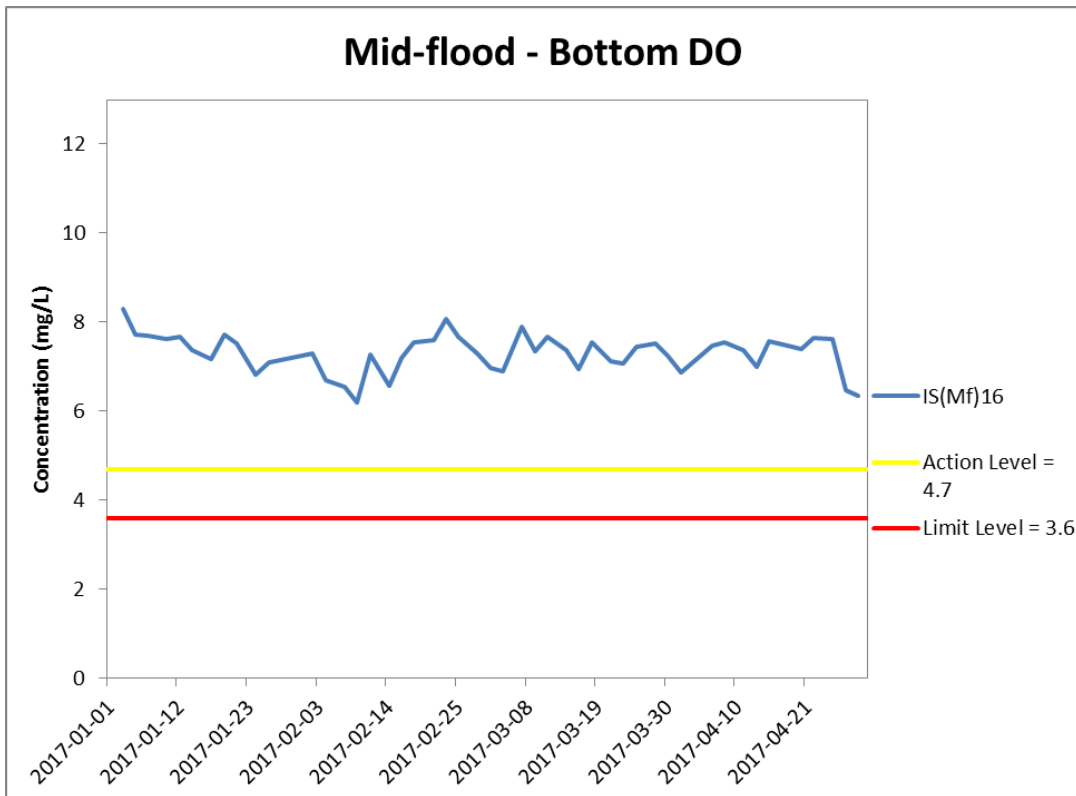


**Figure J17 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 January 2017 and 30 April 2017 at CS(Mf)3 and CS(Mf)5.**

*(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**



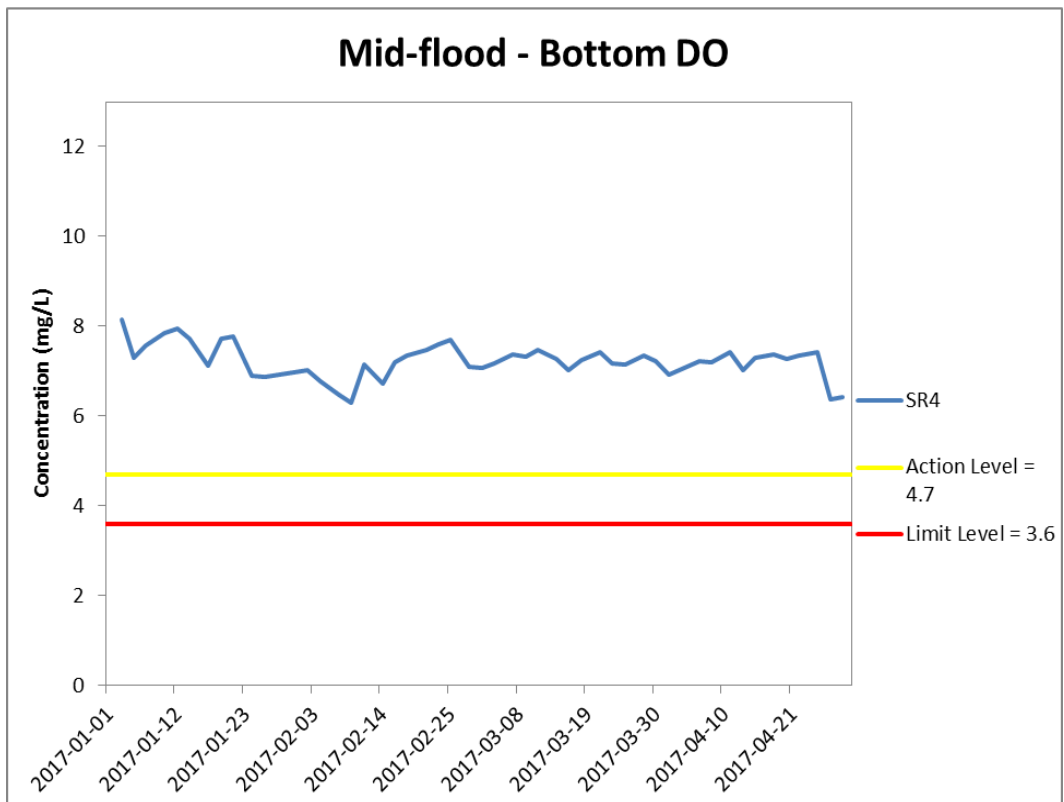
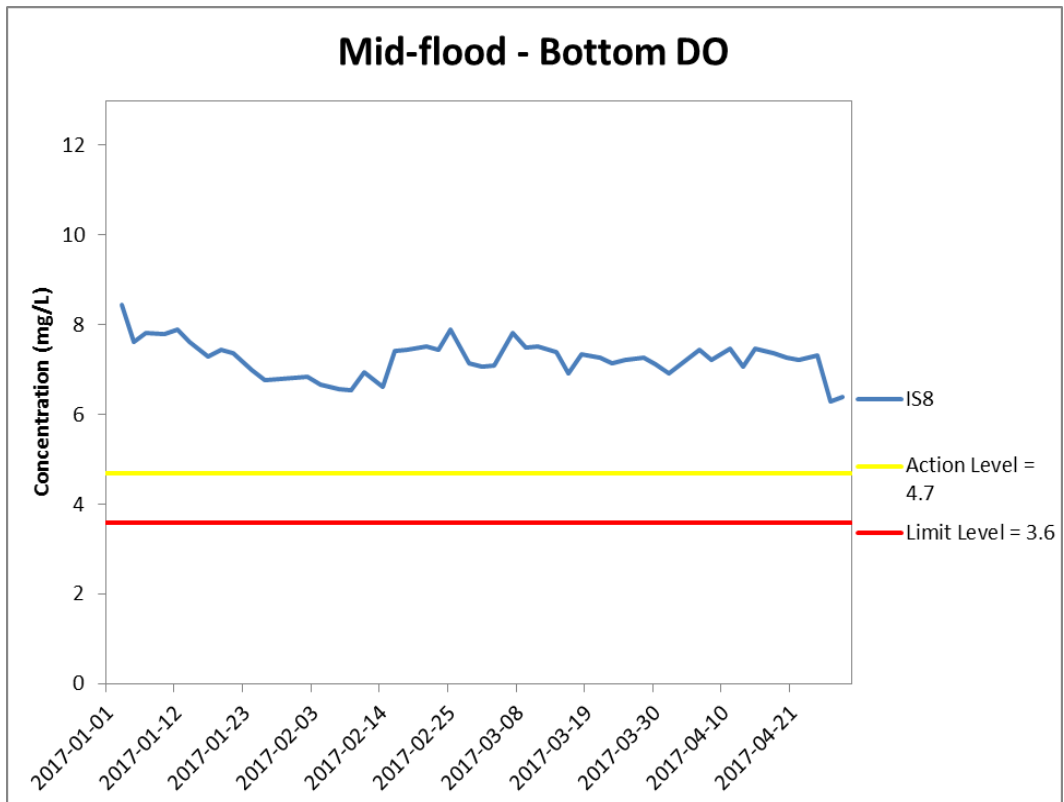


**Figure J18 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 January 2017 and 30 April 2017 at IS(Mf)16 and IS(Mf)9.**

*(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**



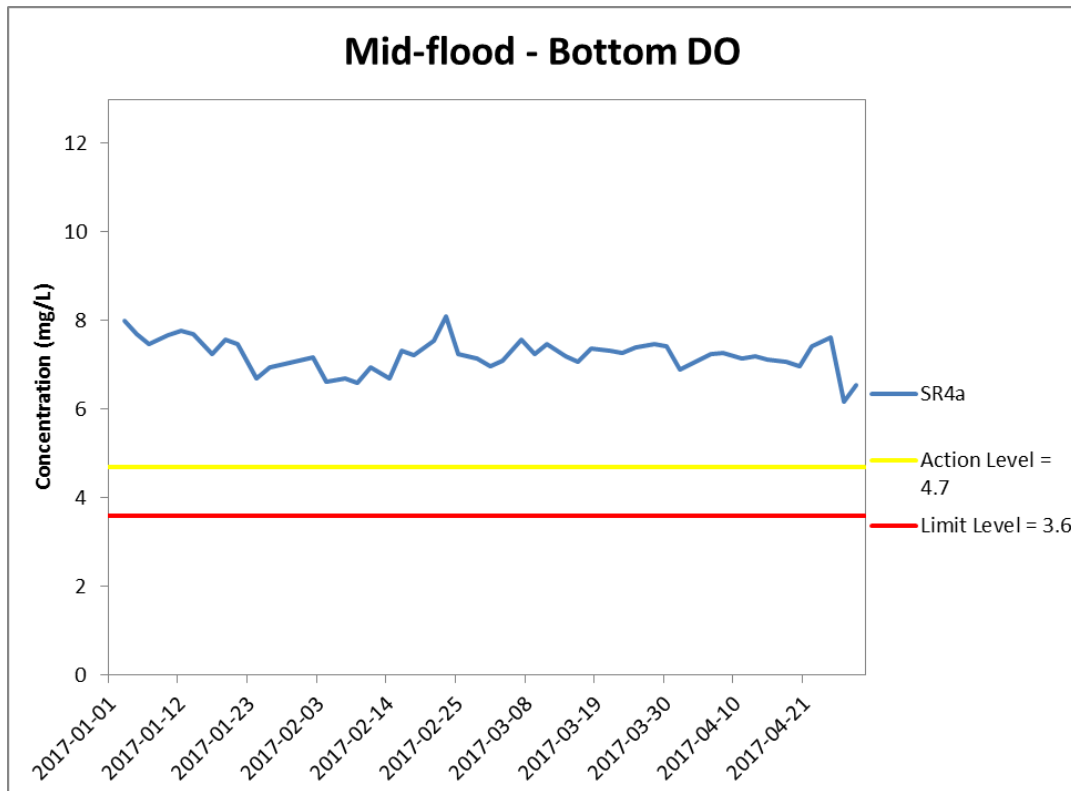


**Figure J19 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 January 2017 and 30 April 2017 at IS8 and SR4.**

*(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**



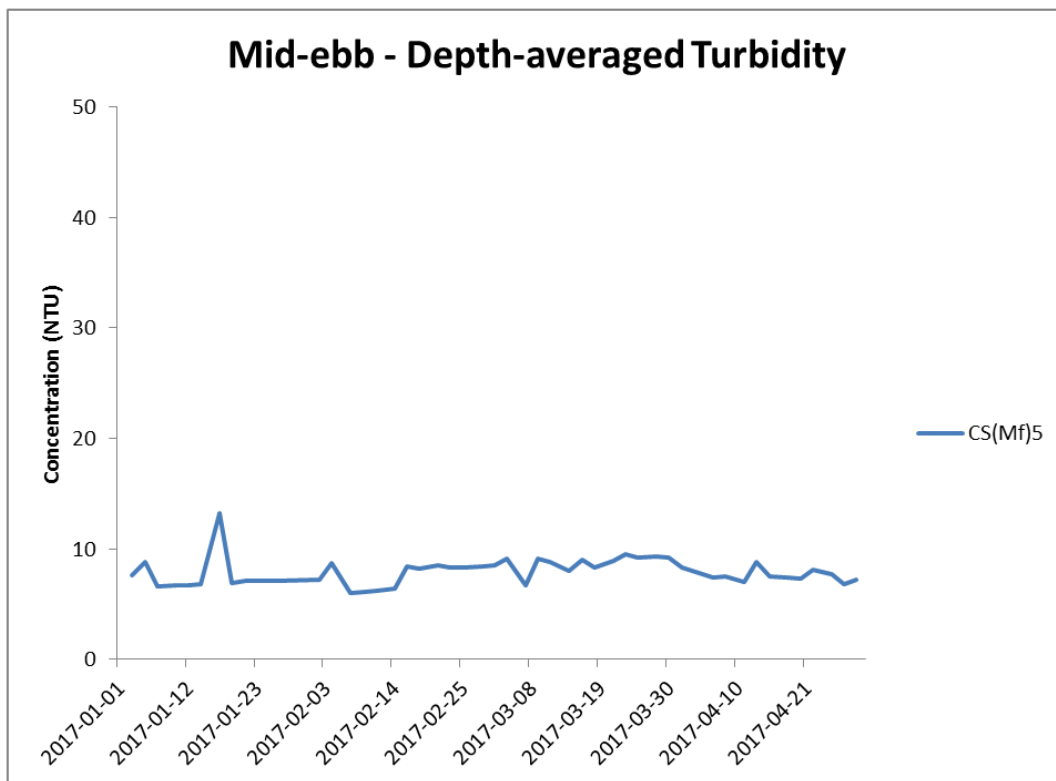
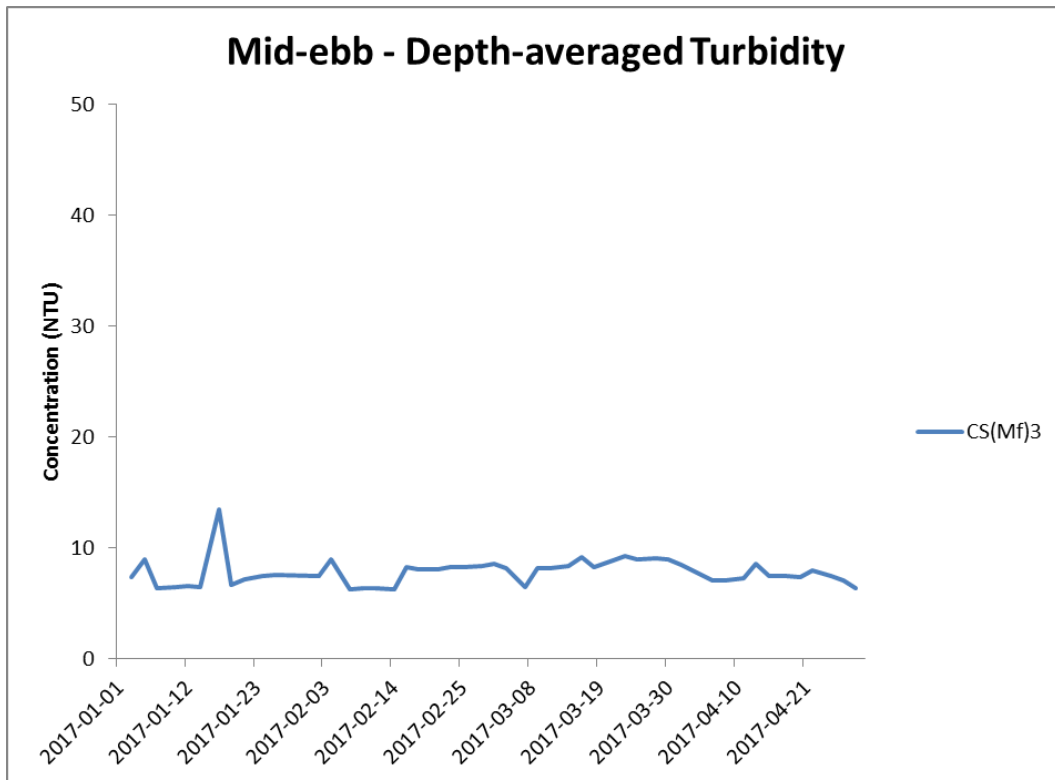


**Figure J20 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 January 2017 and 30 April 2017 at SR4a.**

*(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**



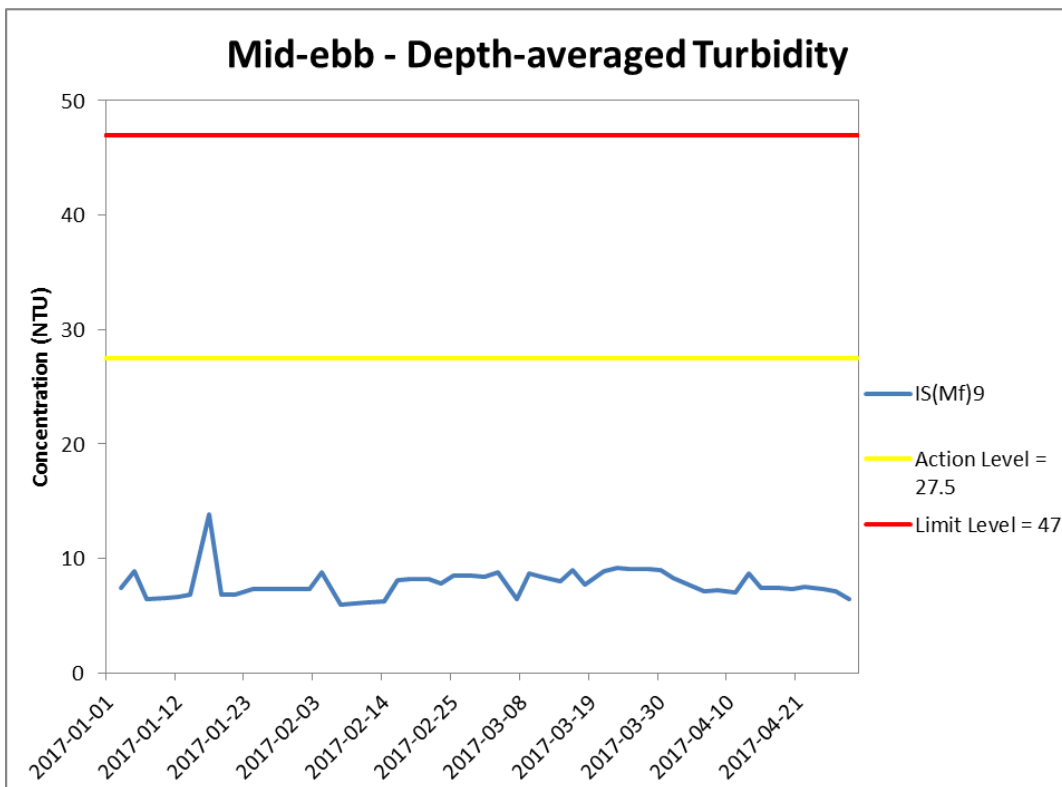
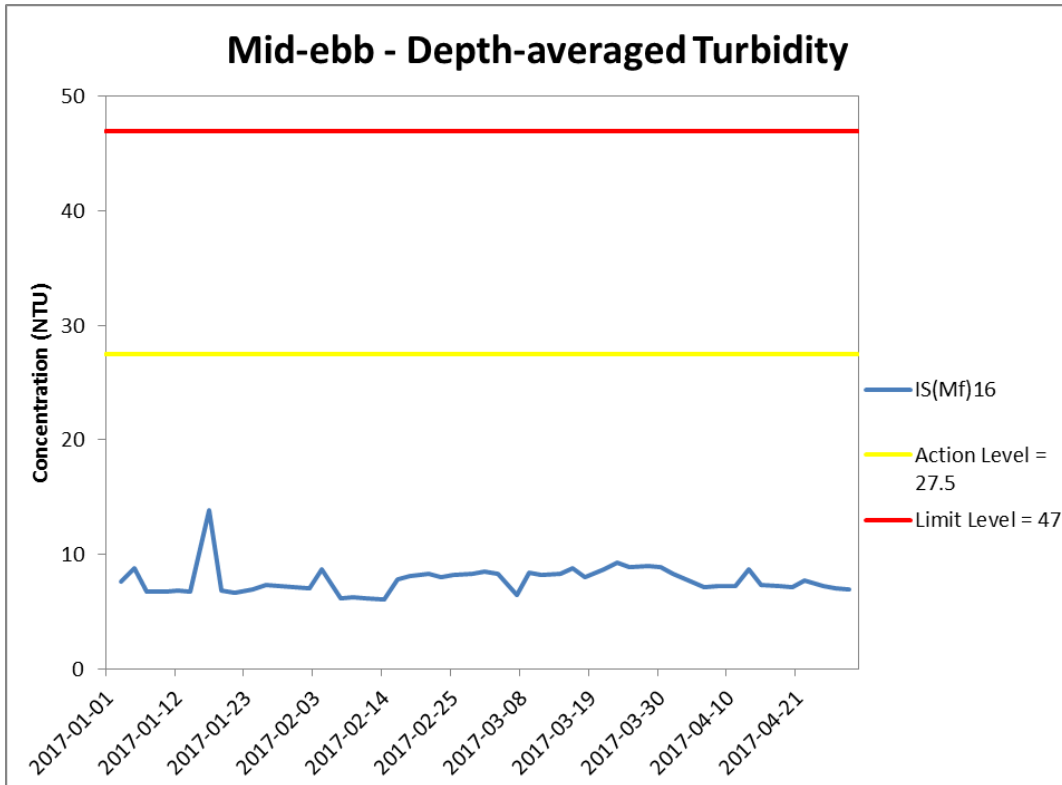


**Figure J21 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 January 2017 and 30 April 2017 at CS(Mf)3 and CS(Mf)5.**

*(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**



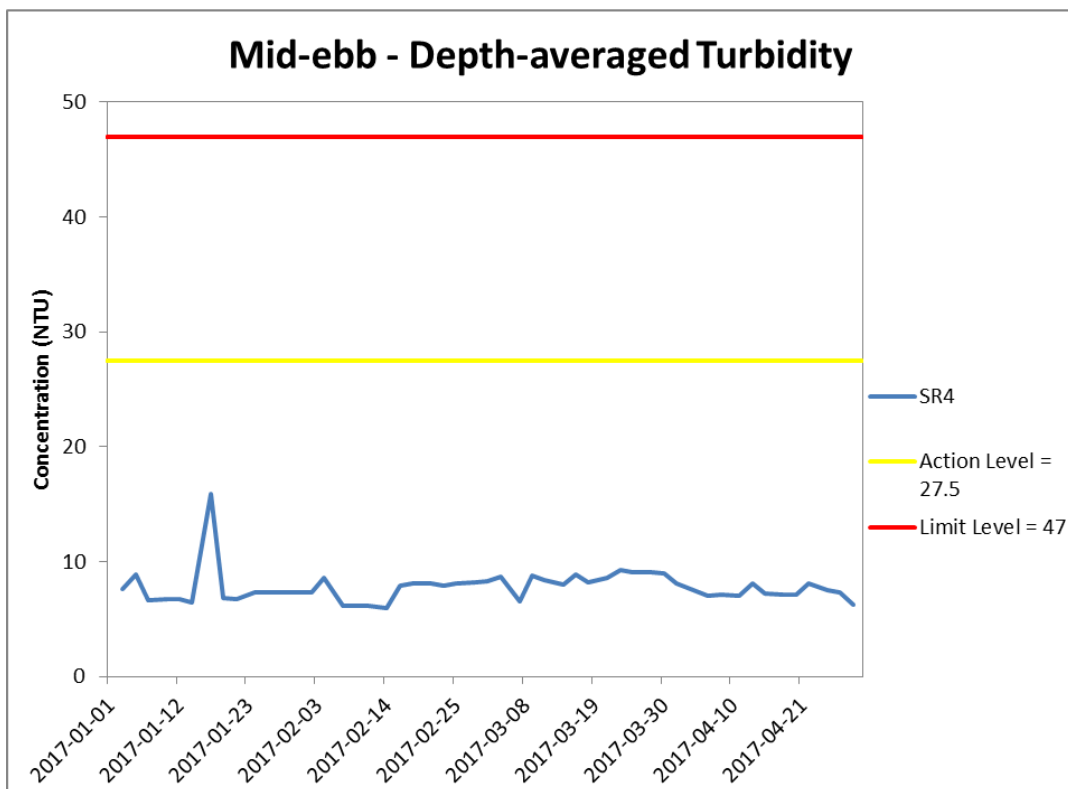
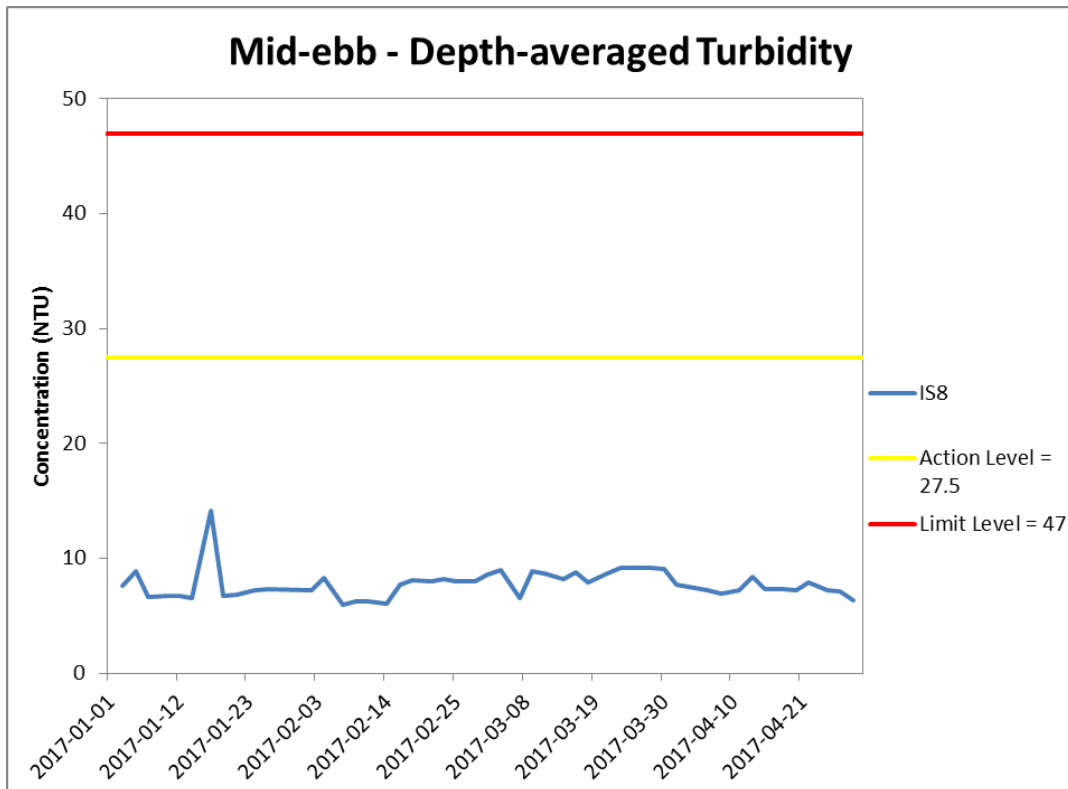


**Figure J22 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 January 2017 and 30 April 2017 at IS(Mf)16 and IS(Mf)9.**

*(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**





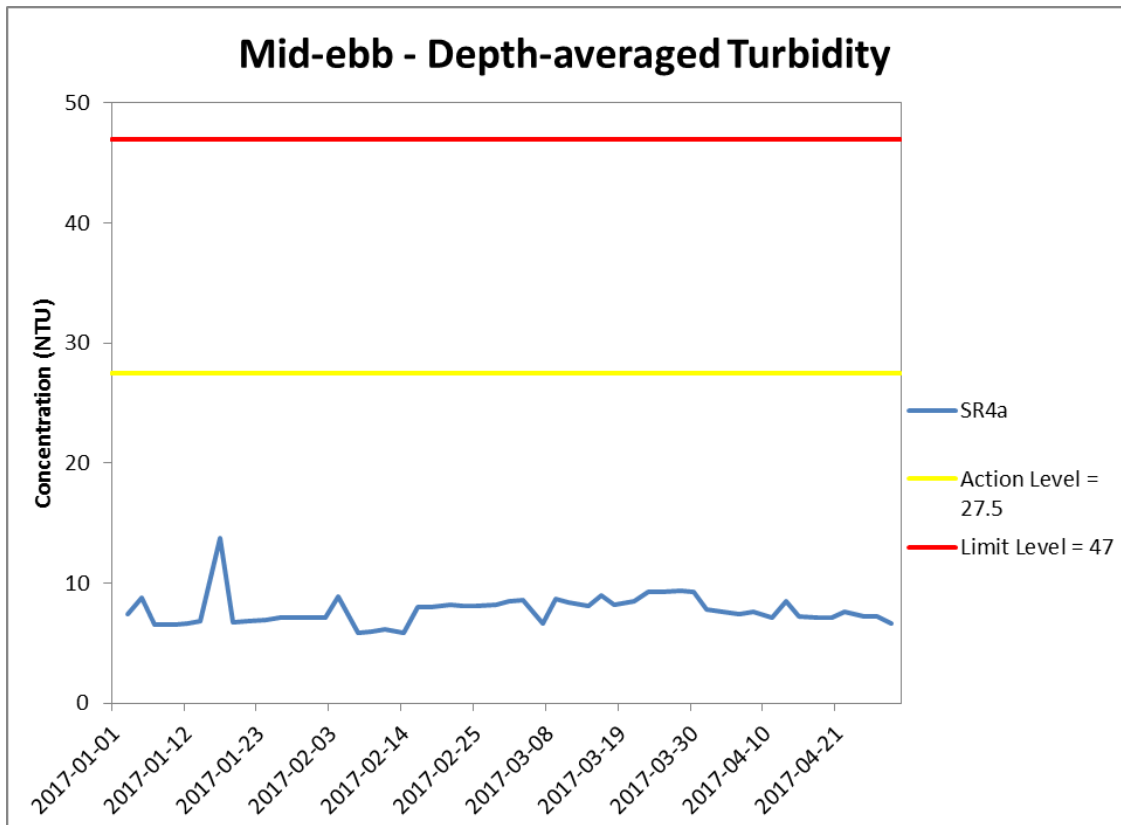
**Figure J23 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 January 2017 and 30 April 2017 at IS8 and SR4.**

*(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**





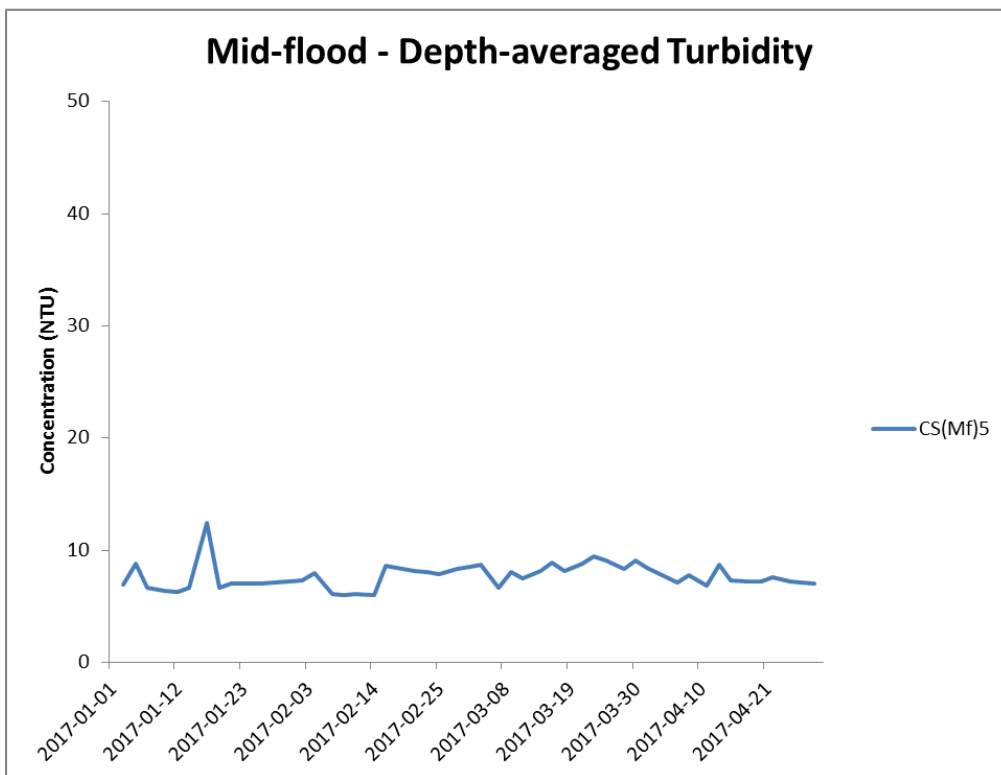
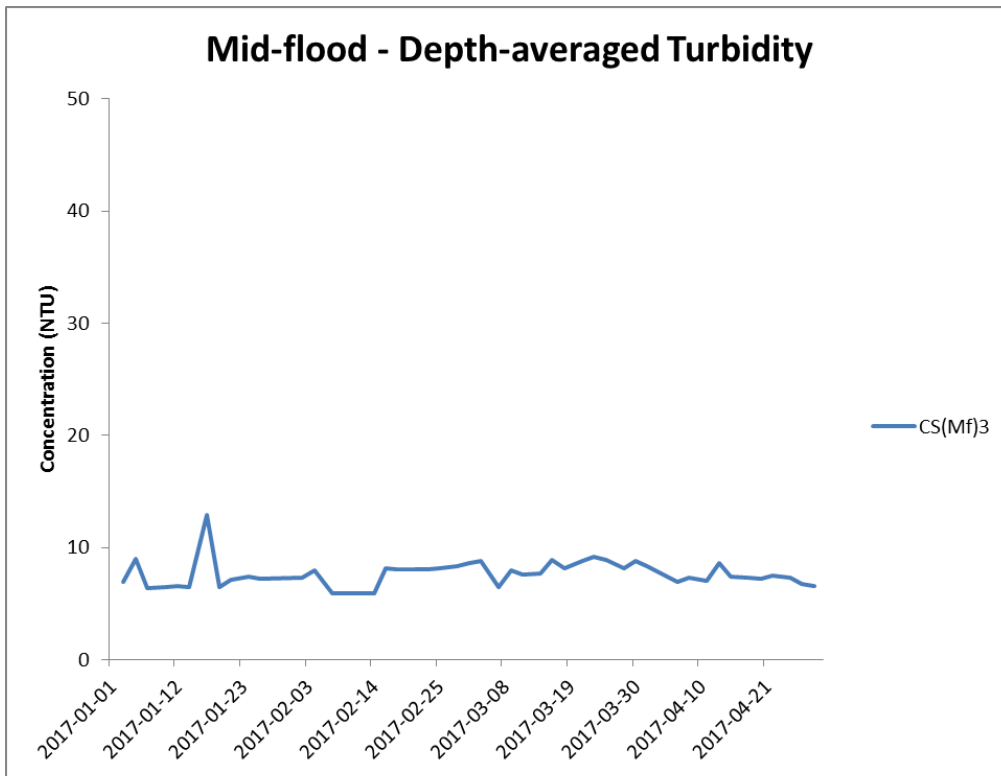


**Figure J24 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 January 2017 and 30 April 2017 at SR4a.**

*(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**



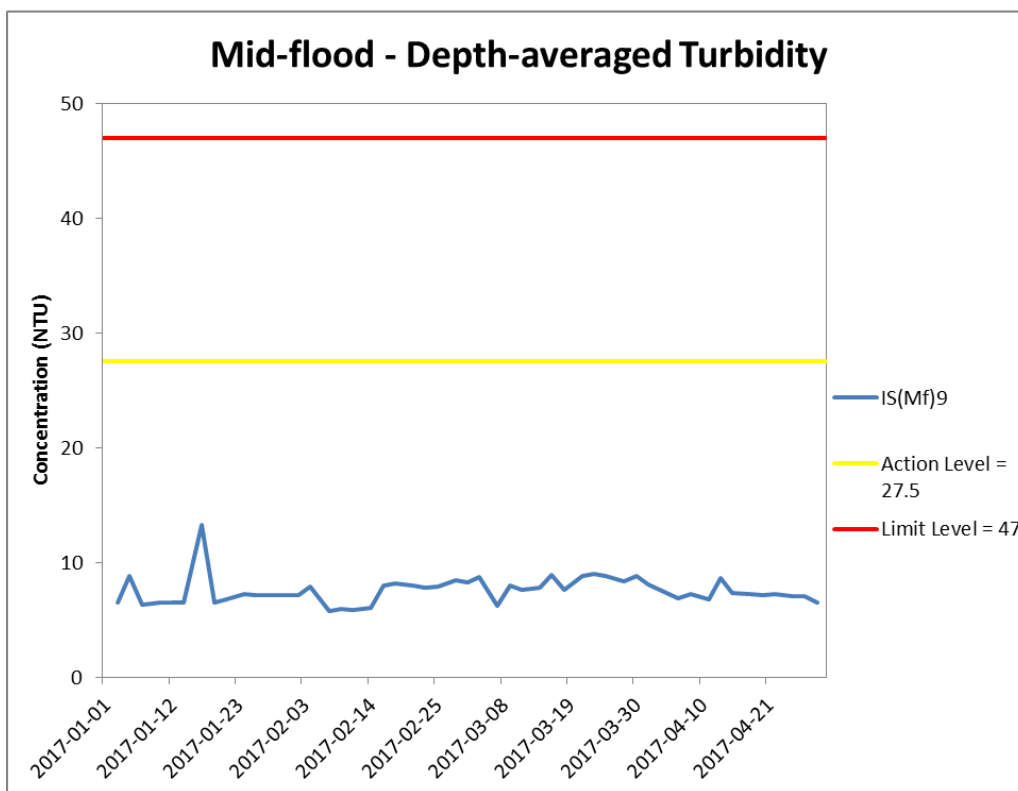
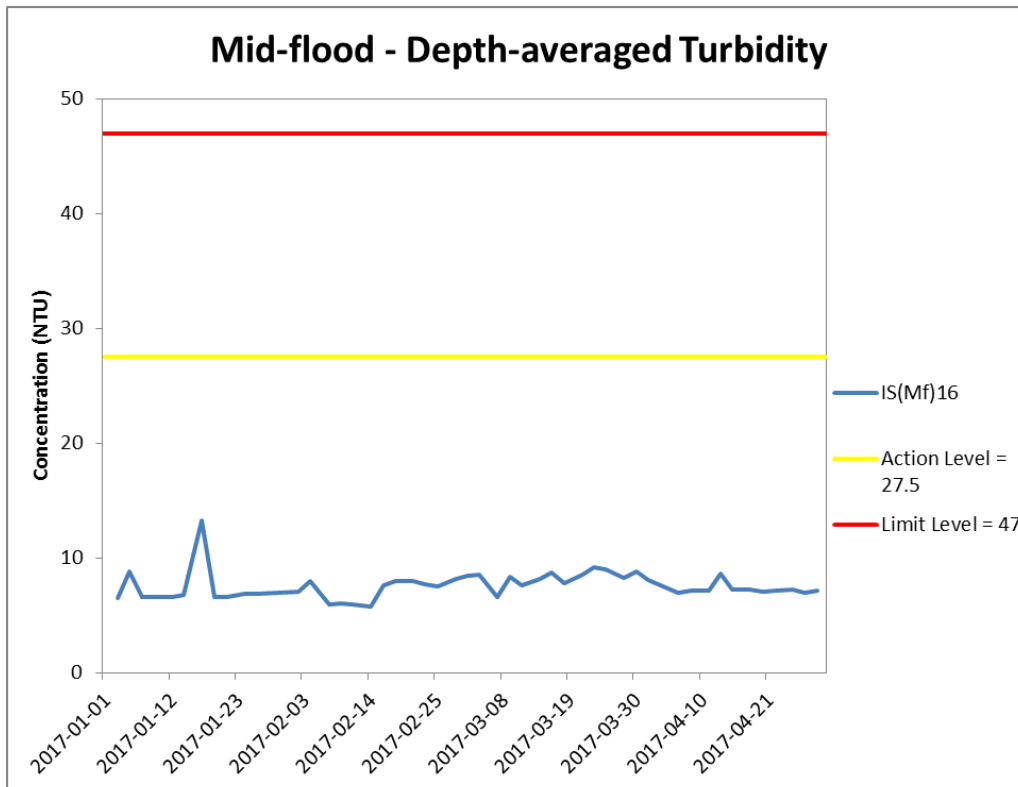


**Figure J25 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 January 2017 and 30 April 2017 at CS(Mf)3 and CS(MF)5.**

*(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**



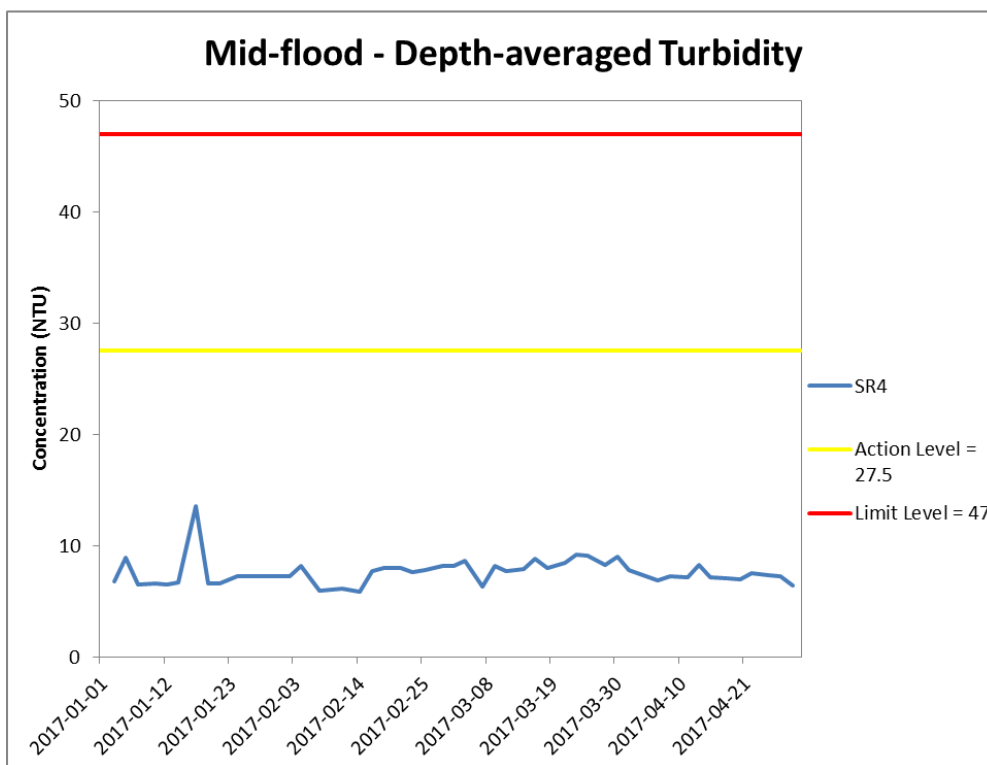
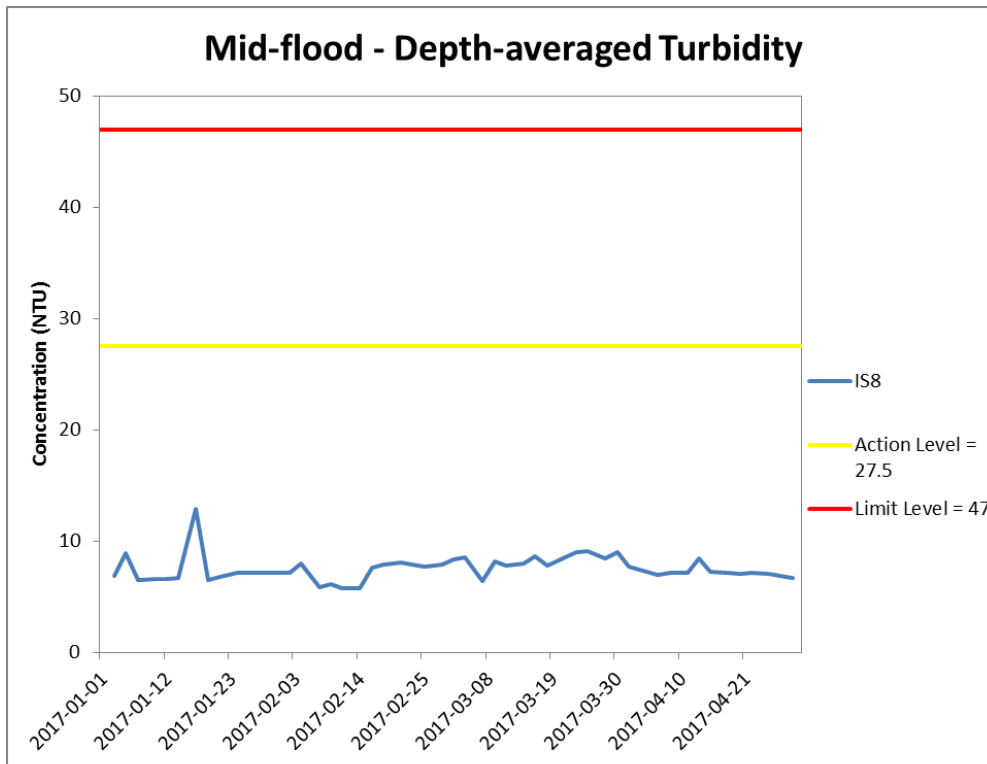


**Figure J26 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 January 2017 and 30 April 2017 at IS(Mf)16 and IS(Mf)9.**

*(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**



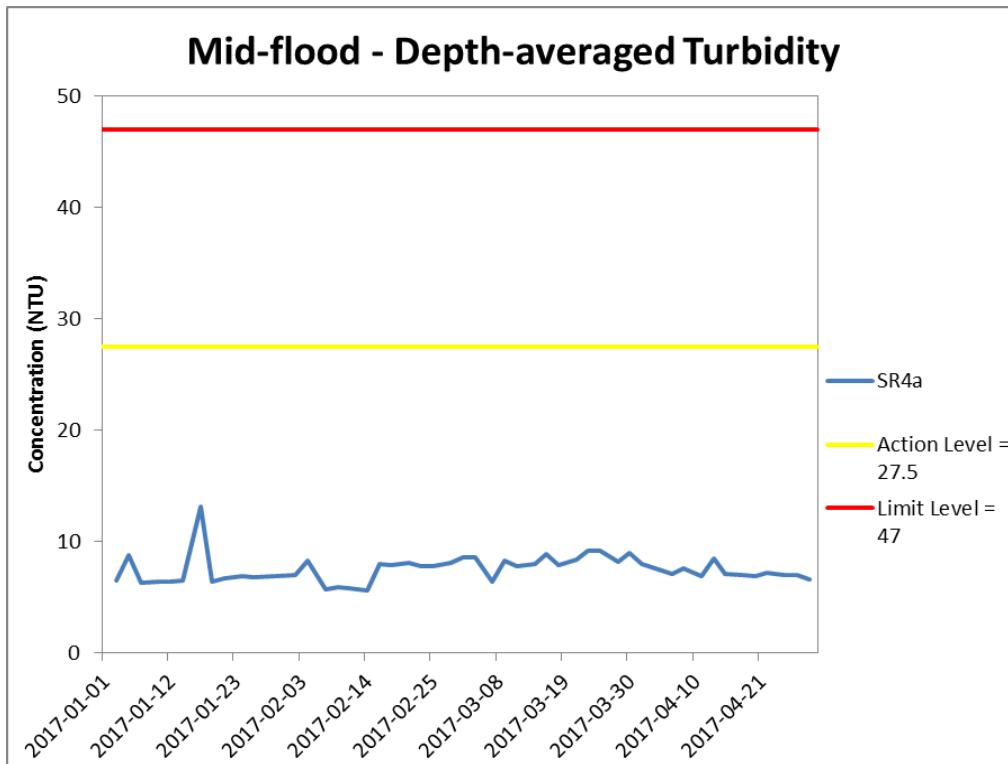


**Figure J27 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 January 2017 and 30 April 2017 at IS8 and SR4.**

*(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**



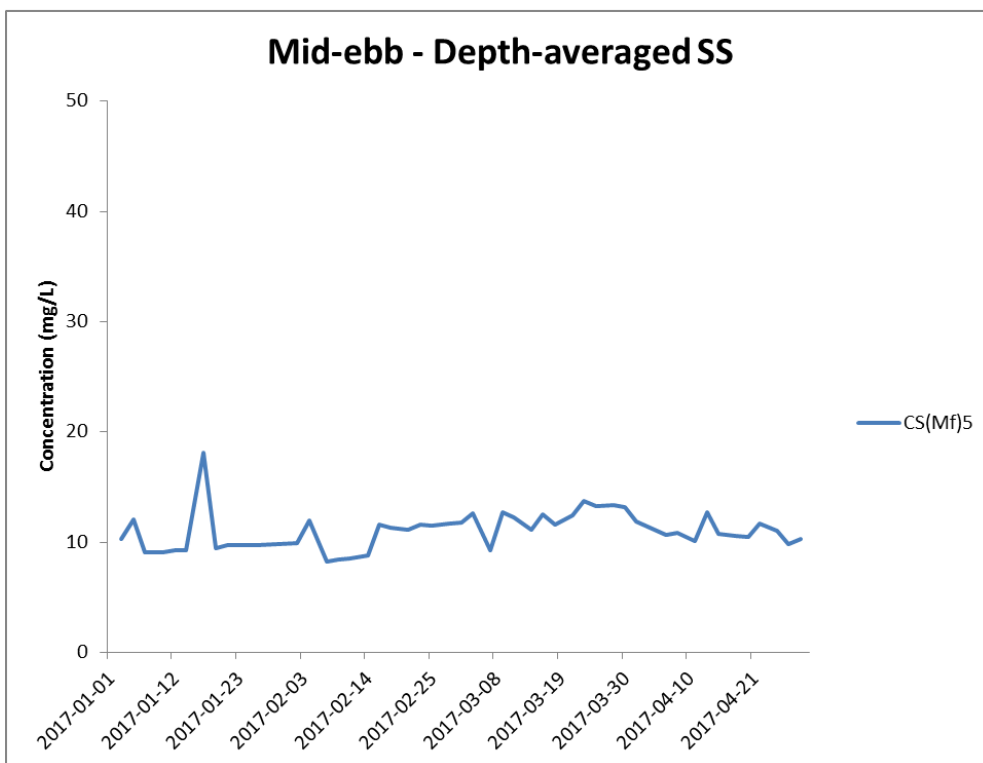
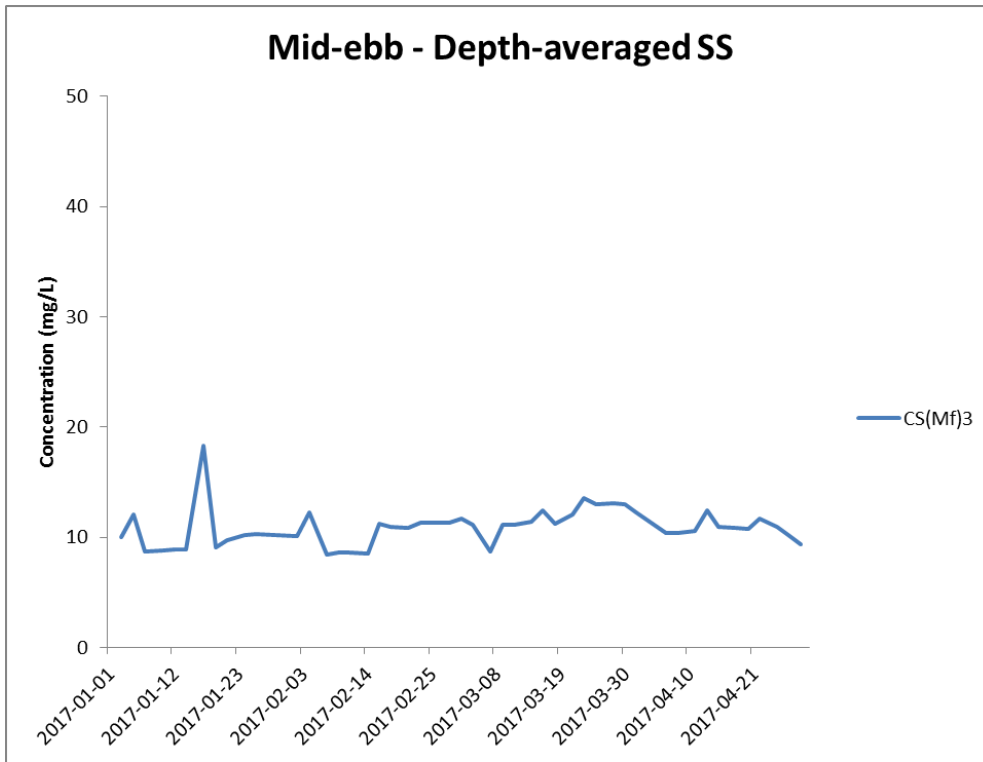


**Figure J28 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 January 2017 and 30 April 2017 at SR4a.**

*(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**



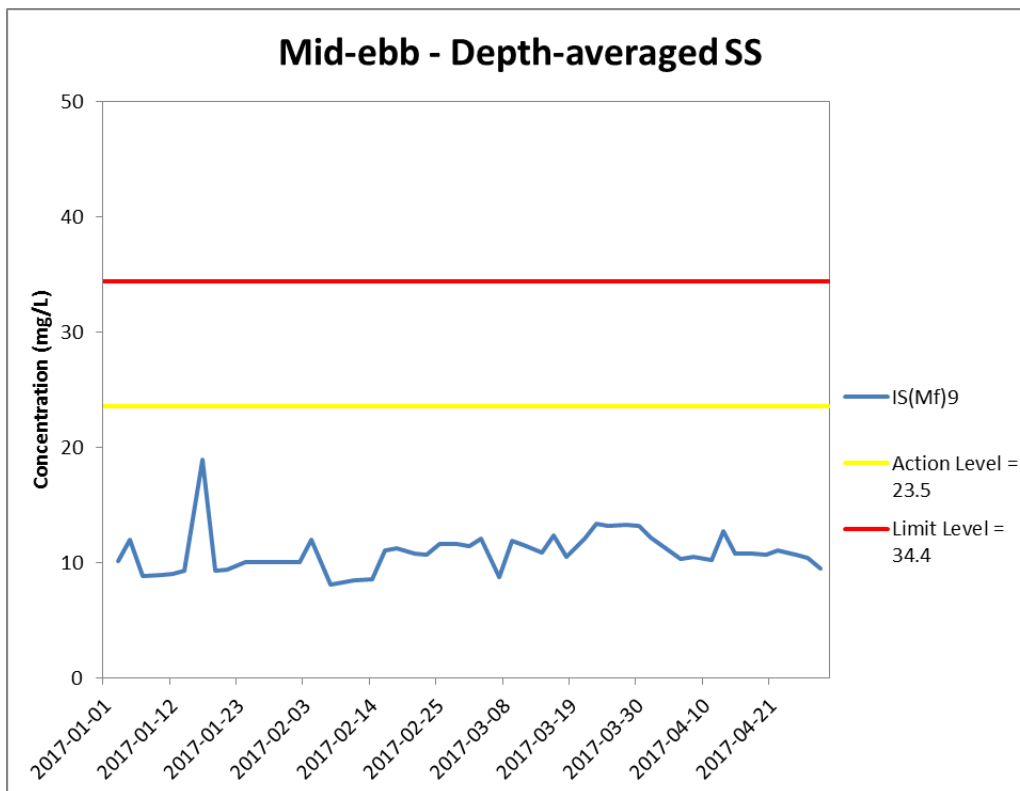
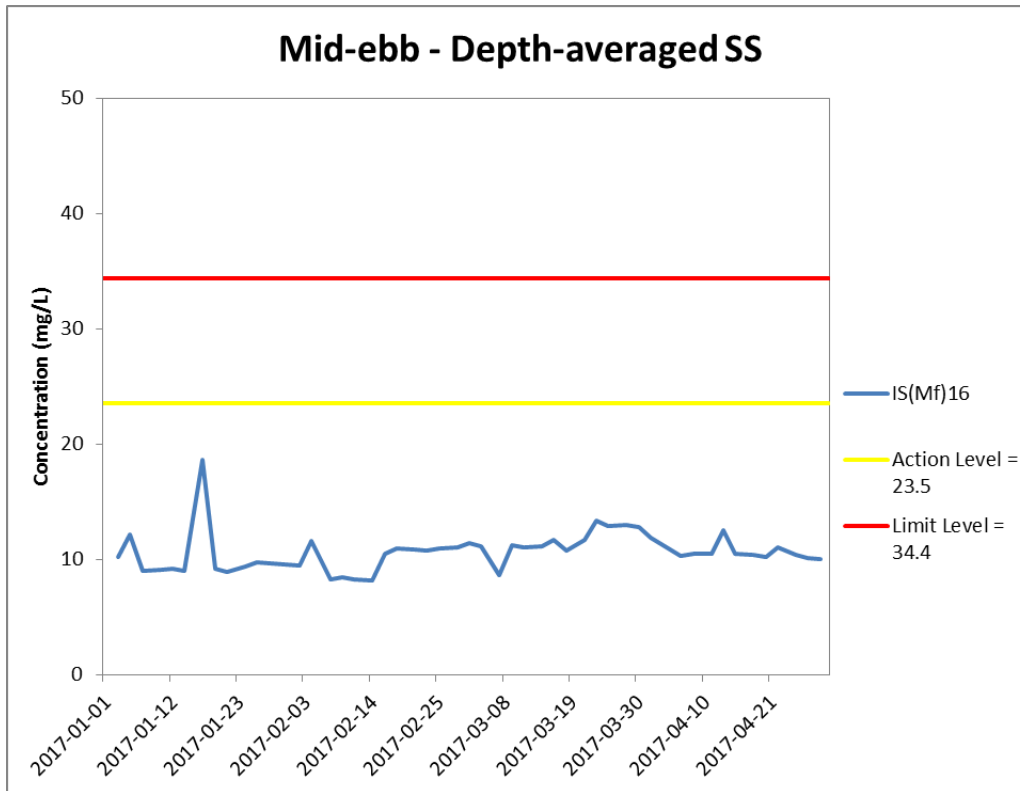


**Figure J29 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 January 2017 and 30 April 2017 at CS(Mf)3 and CS(Mf)5.**

*(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**



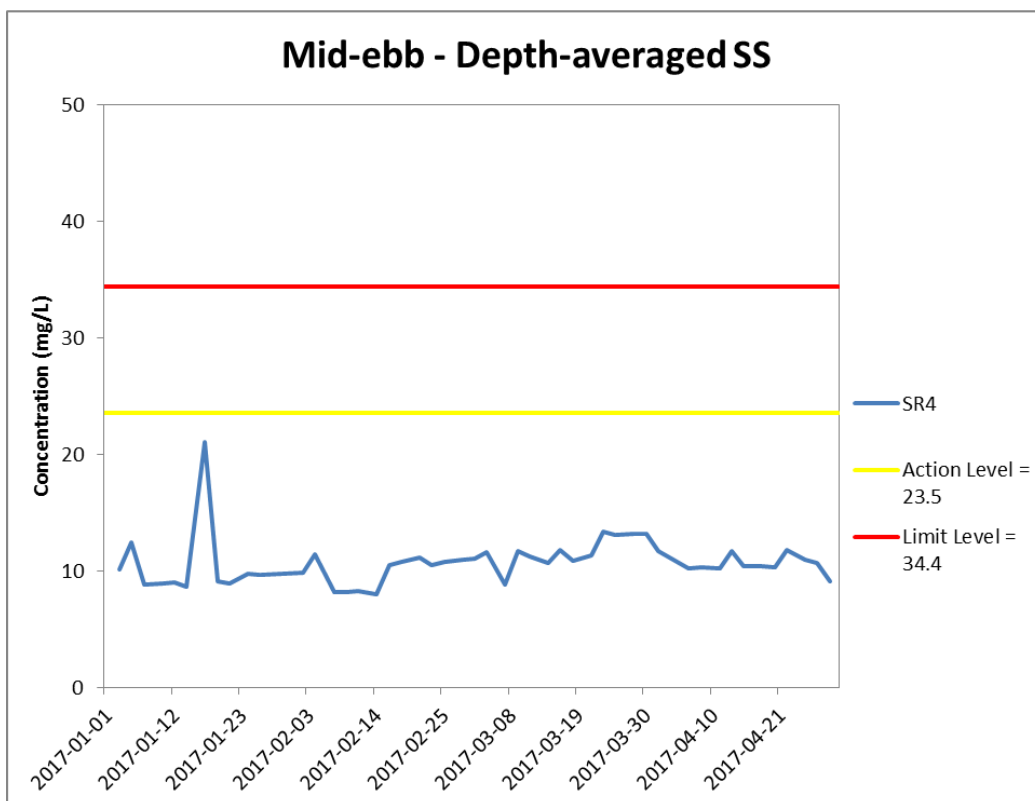
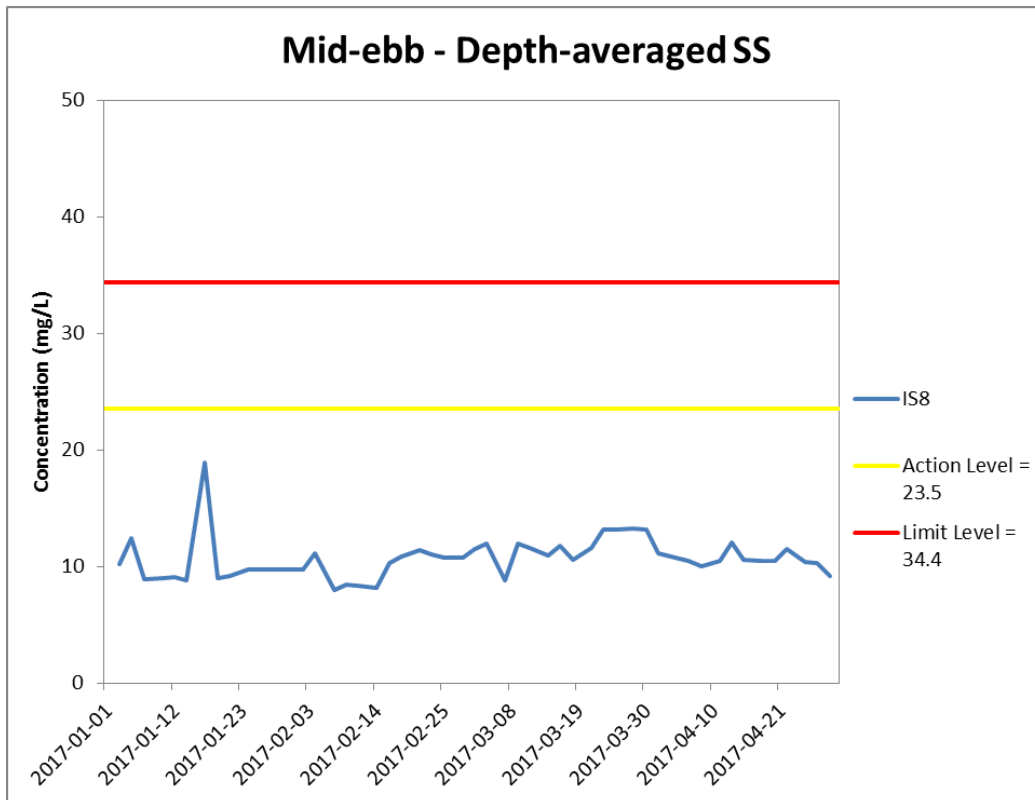


**Figure J30 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 January 2017 and 30 April 2017 at IS(Mf)16 and IS(Mf)9.**

*(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**





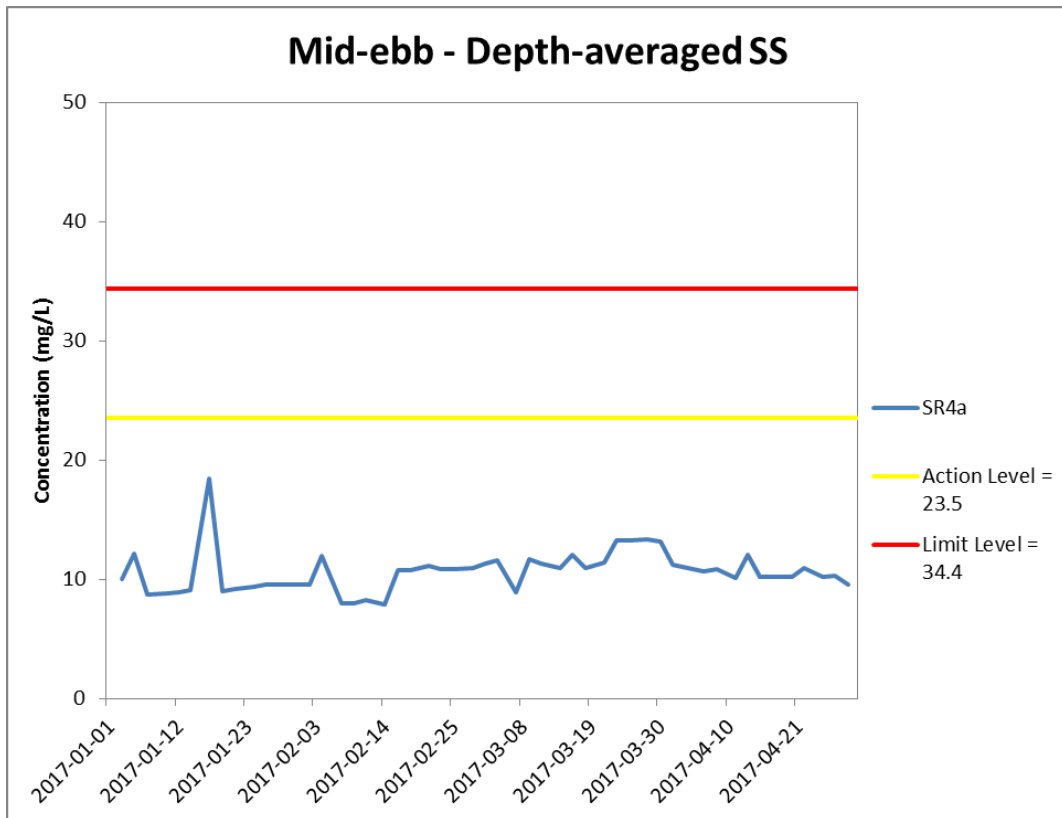
**Figure J31 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 January 2017 and 30 April 2017 at IS8 and SR4.**

*(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**





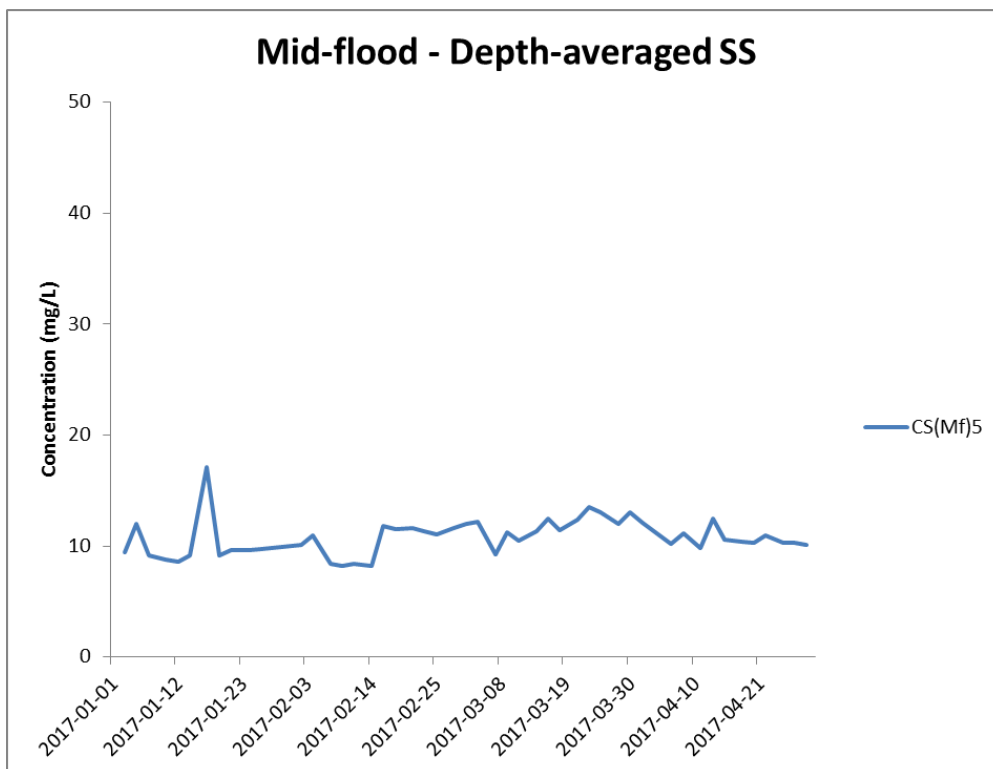
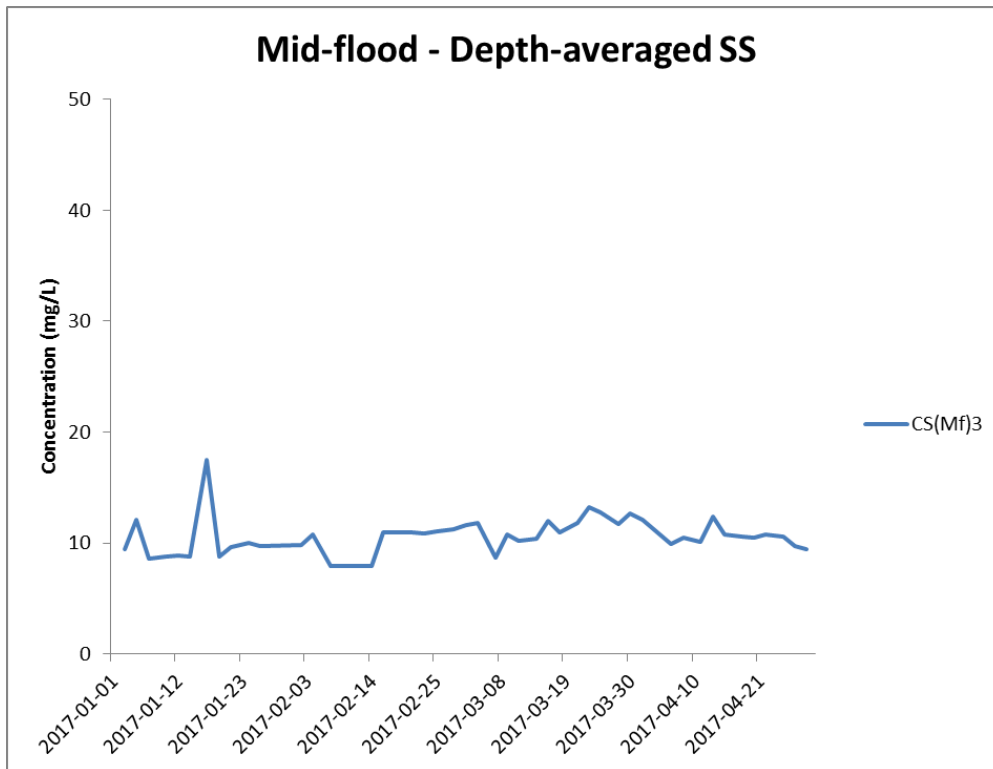


**Figure J32 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 January 2017 and 30 April 2017 at SR4a.**

*(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**



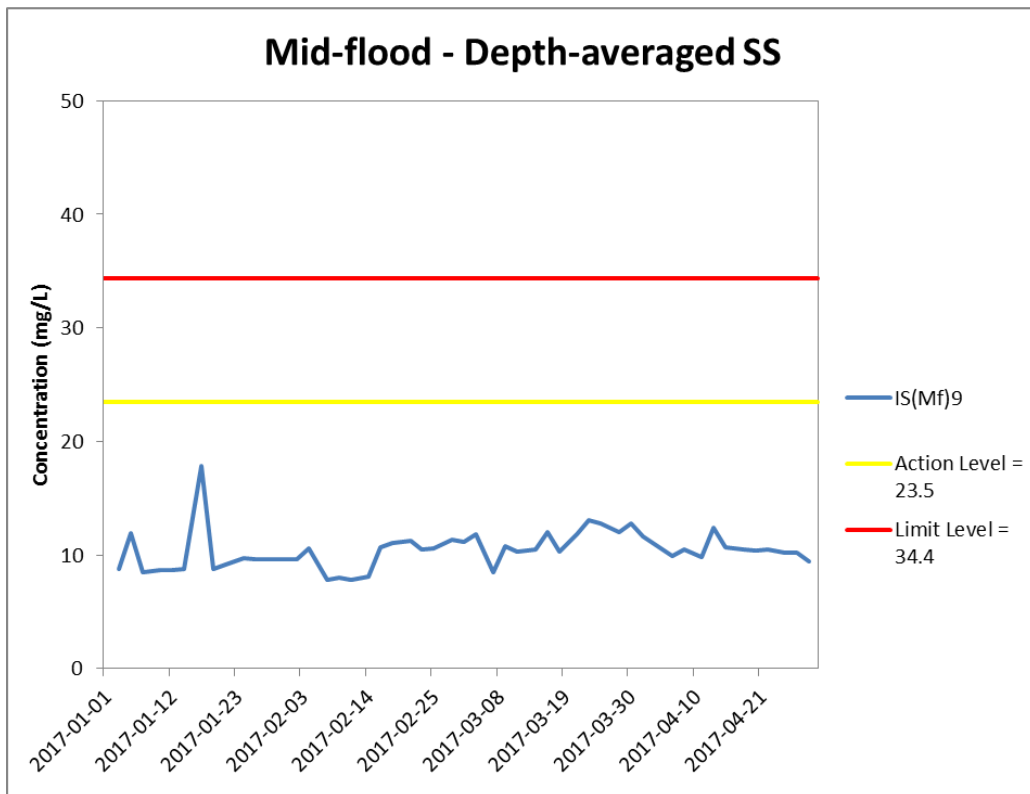
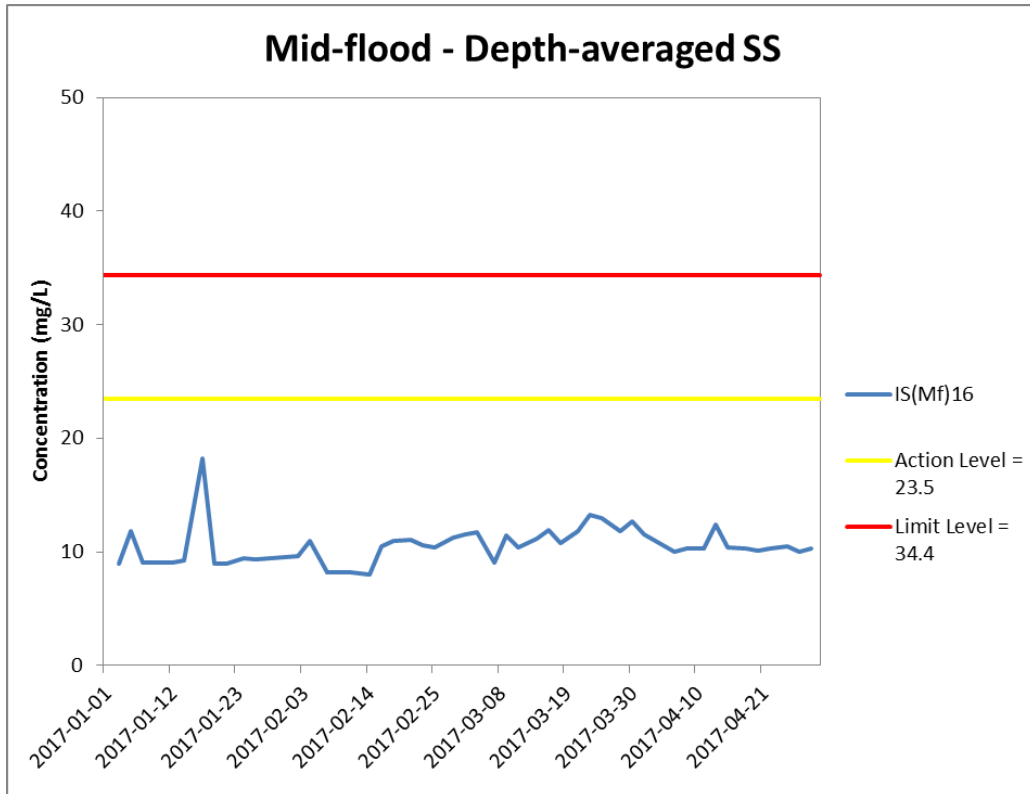


**Figure J33 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 January 2017 and 30 April 2017 at CS(Mf)3 and CS(Mf)5.**

*(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**



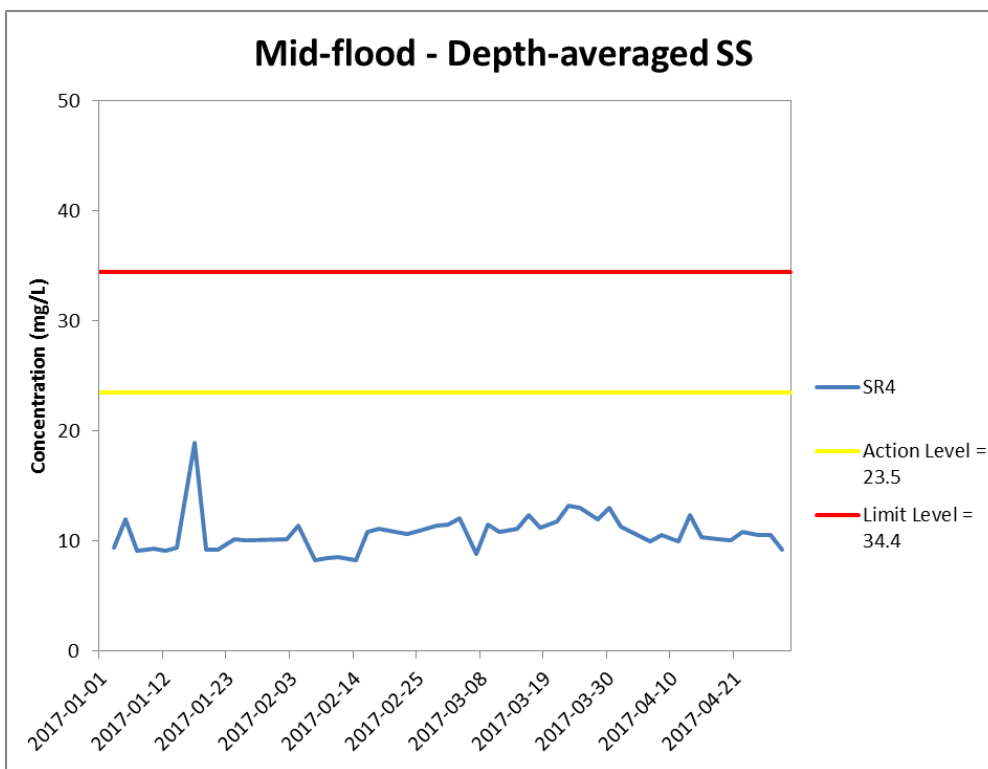
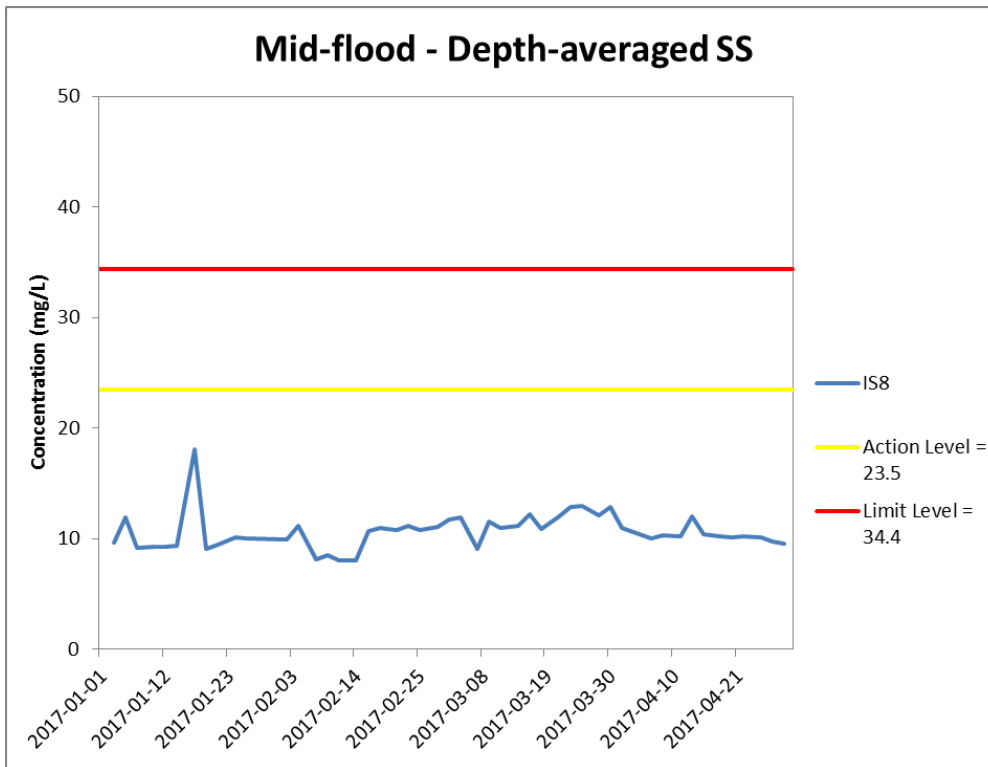


**Figure J34 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 January 2017 and 30 April 2017 at IS(Mf)16 and IS(Mf)9.**

*(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**



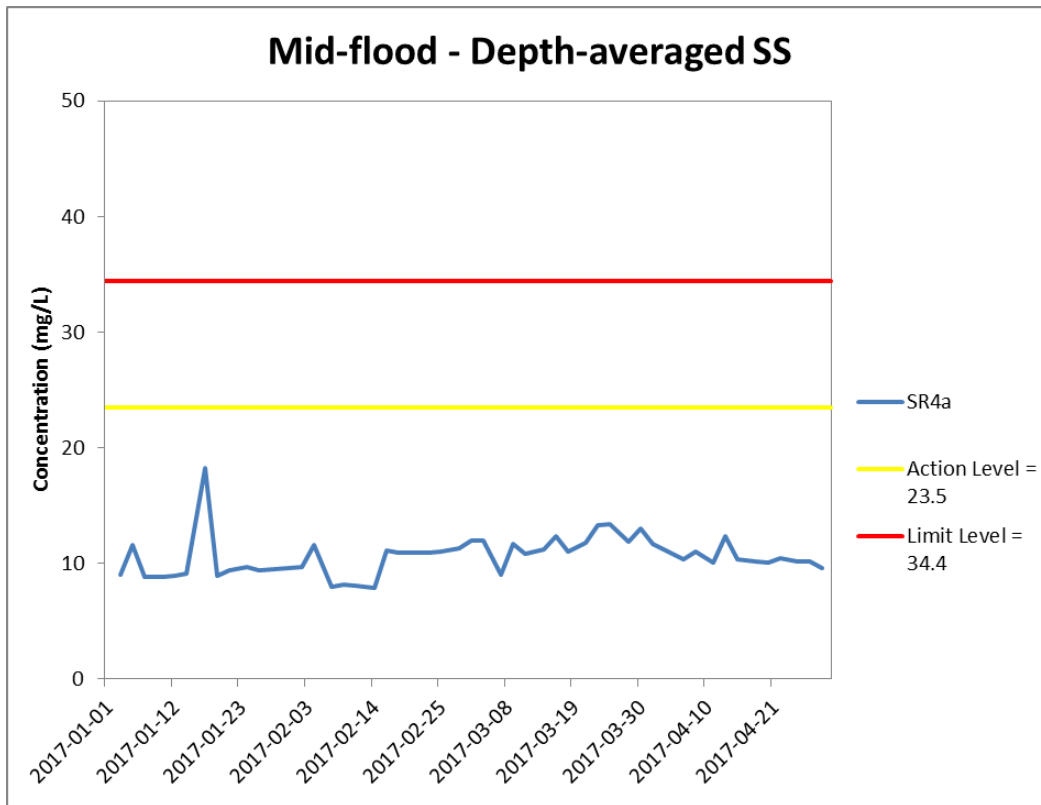


**Figure J35 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 January 2017 and 30 April 2017 at IS8 and SR4.**

*(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 January 2017 and 30 April 2017 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

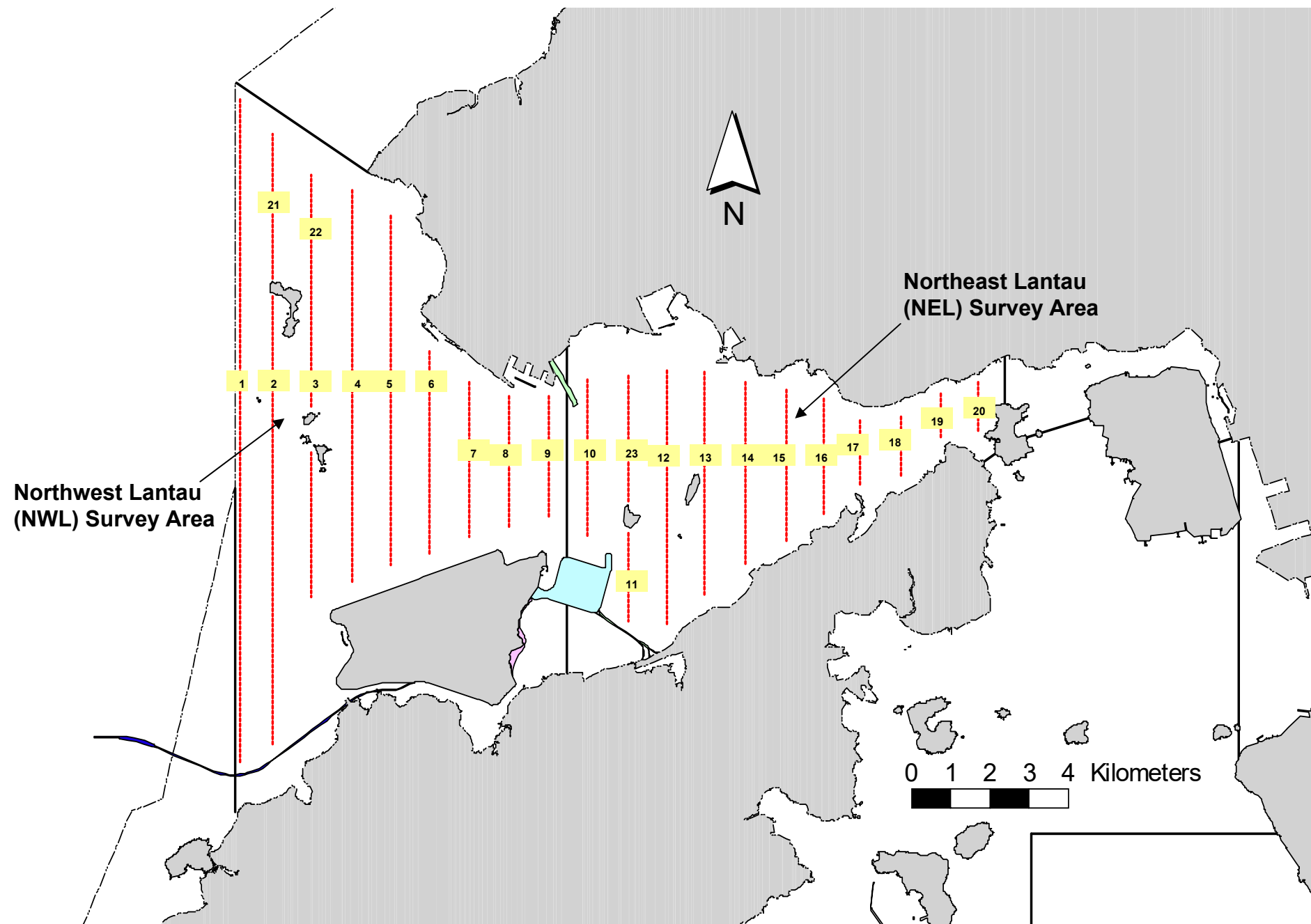


Figure 1. Transect Line Layout in Northwest and Northeast Lantau Survey Areas

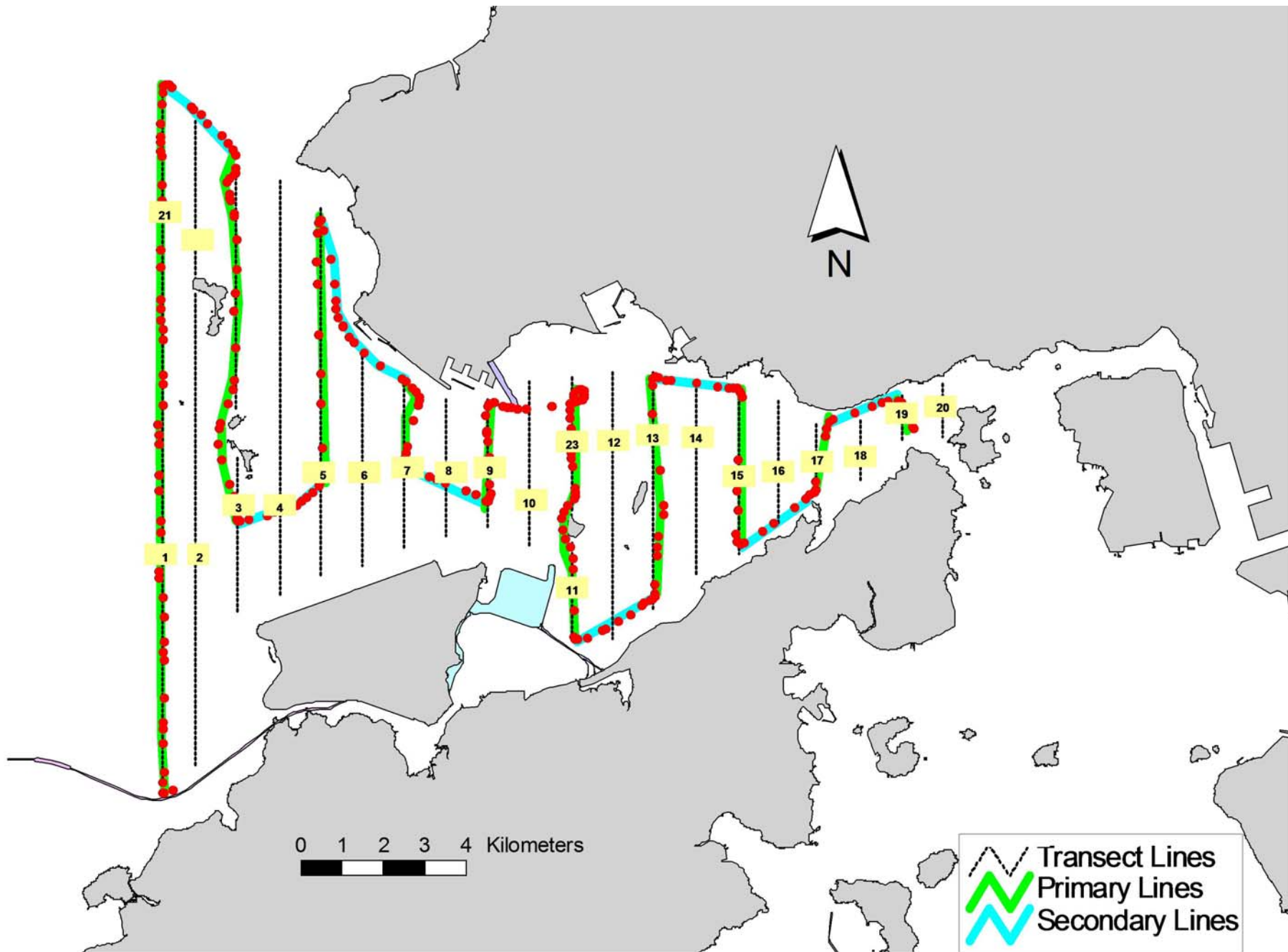


Figure 2. Survey Route on April 12<sup>th</sup>, 2017 (from HKLR03 project)



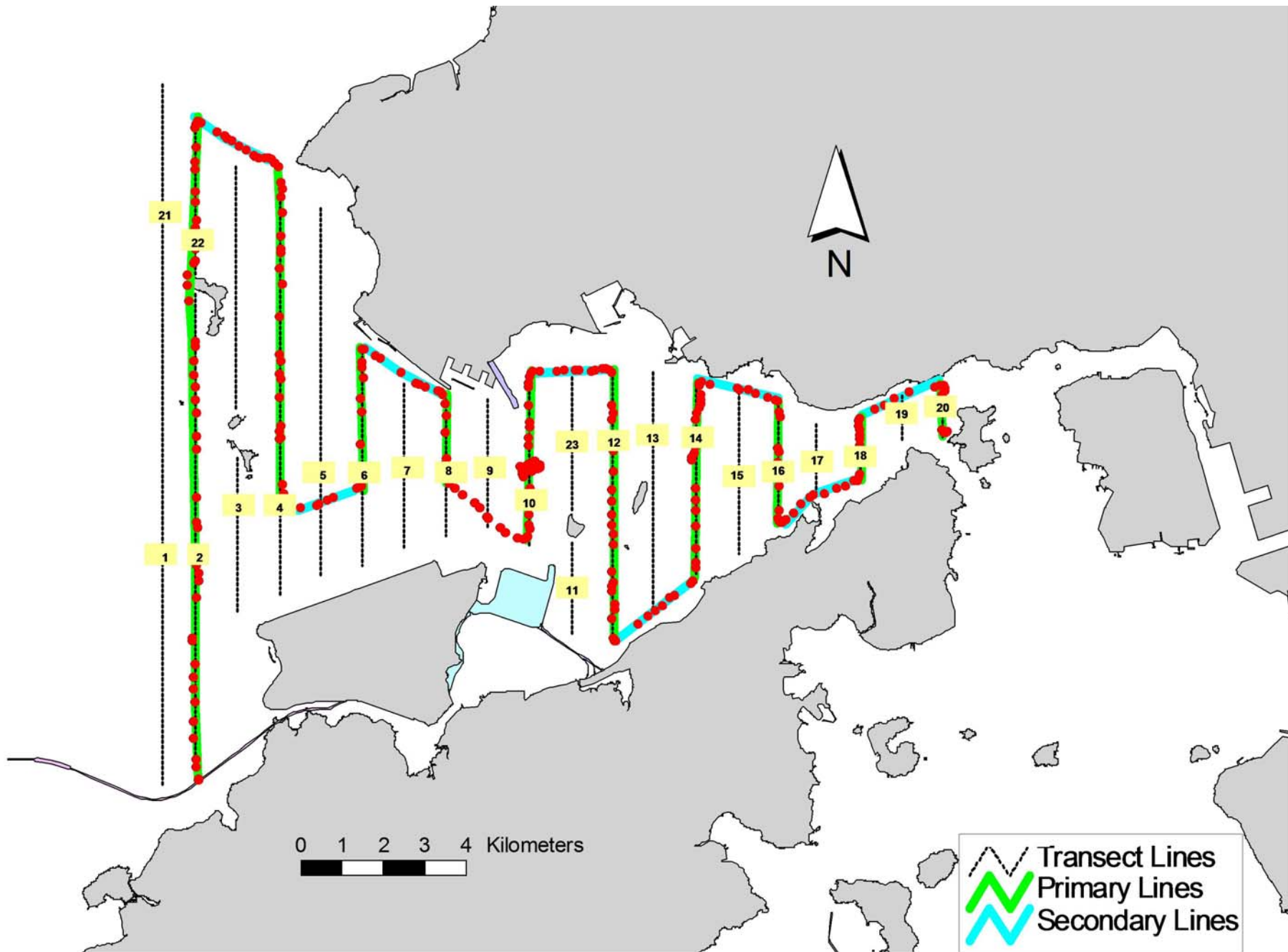


Figure 3. Survey Route on April 20<sup>th</sup>, 2017 (from HKLR03 project)

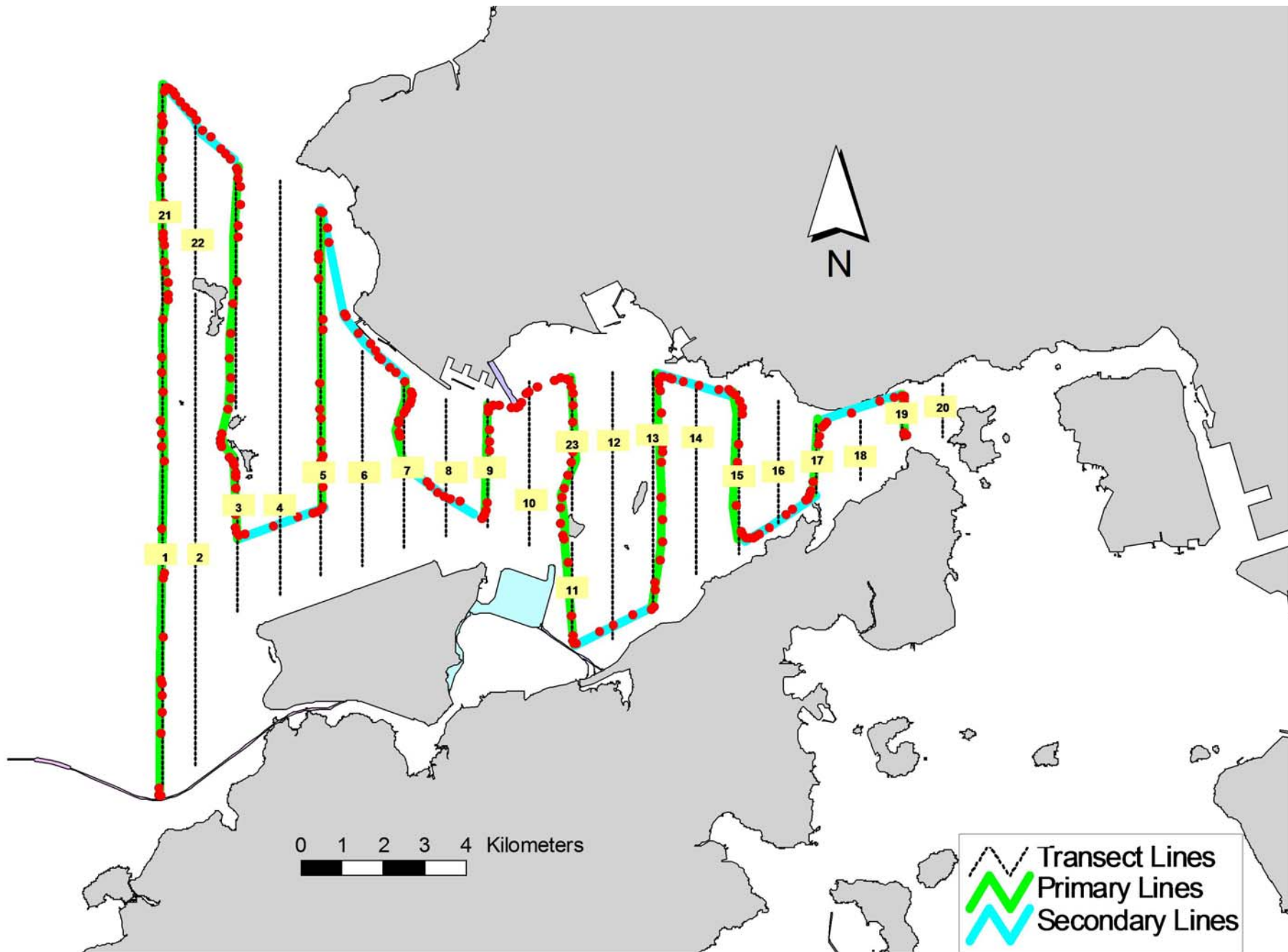


Figure 4. Survey Route on April 24<sup>th</sup>, 2017 (from HKLR03 project)

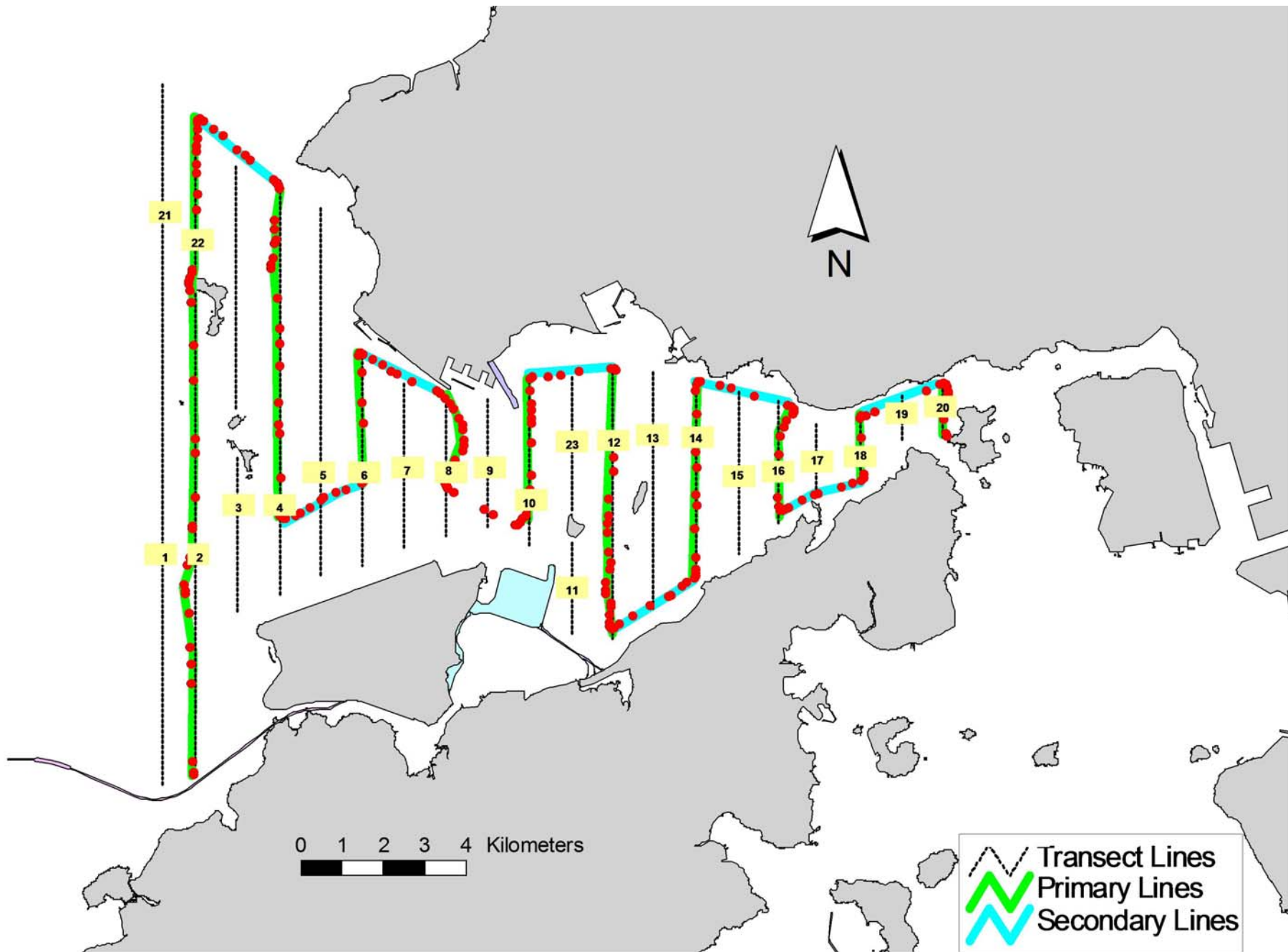


Figure 5. Survey Route on April 26<sup>th</sup>, 2017 (from HKLR03 project)

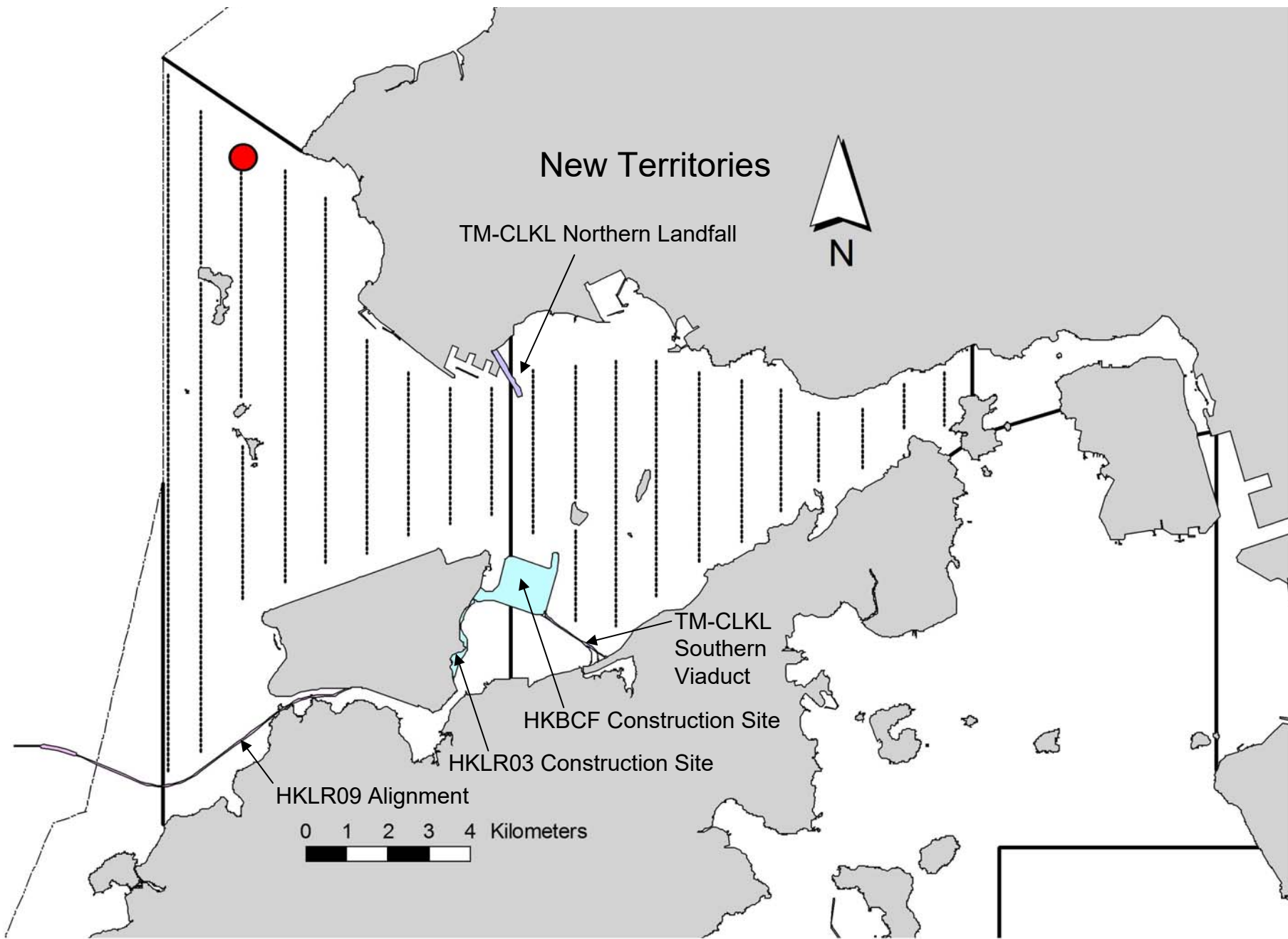


Figure 6. Distribution of Chinese White Dolphin Sightings during April 2017 HKLR03 Monitoring Surveys

## Appendix I. HKLR03 Survey Effort Database (April 2017)

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

DATE	AREA	BEAU	EFFORT	SEASON	VESSEL	TYPE	P/S
12-Apr-17	NW LANTAU	2	17.47	SPRING	STANDARD36826	HKLR	P
12-Apr-17	NW LANTAU	3	14.07	SPRING	STANDARD36826	HKLR	P
12-Apr-17	NW LANTAU	2	11.46	SPRING	STANDARD36826	HKLR	S
12-Apr-17	NW LANTAU	3	2.50	SPRING	STANDARD36826	HKLR	S
12-Apr-17	NE LANTAU	2	12.53	SPRING	STANDARD36826	HKLR	P
12-Apr-17	NE LANTAU	3	2.88	SPRING	STANDARD36826	HKLR	P
12-Apr-17	NE LANTAU	1	1.80	SPRING	STANDARD36826	HKLR	S
12-Apr-17	NE LANTAU	2	3.34	SPRING	STANDARD36826	HKLR	S
12-Apr-17	NE LANTAU	3	4.45	SPRING	STANDARD36826	HKLR	S
20-Apr-17	NW LANTAU	2	7.19	SPRING	STANDARD33706	HKLR	P
20-Apr-17	NW LANTAU	3	19.91	SPRING	STANDARD33706	HKLR	P
20-Apr-17	NW LANTAU	2	2.00	SPRING	STANDARD33706	HKLR	S
20-Apr-17	NW LANTAU	3	5.60	SPRING	STANDARD33706	HKLR	S
20-Apr-17	NE LANTAU	2	19.55	SPRING	STANDARD33706	HKLR	P
20-Apr-17	NE LANTAU	1	1.00	SPRING	STANDARD33706	HKLR	S
20-Apr-17	NE LANTAU	2	7.68	SPRING	STANDARD33706	HKLR	S
20-Apr-17	NE LANTAU	3	2.00	SPRING	STANDARD33706	HKLR	S
24-Apr-17	NW LANTAU	1	3.80	SPRING	STANDARD36826	HKLR	P
24-Apr-17	NW LANTAU	2	22.86	SPRING	STANDARD36826	HKLR	P
24-Apr-17	NW LANTAU	3	7.94	SPRING	STANDARD36826	HKLR	P
24-Apr-17	NW LANTAU	2	13.00	SPRING	STANDARD36826	HKLR	S
24-Apr-17	NE LANTAU	2	12.28	SPRING	STANDARD36826	HKLR	P
24-Apr-17	NE LANTAU	3	3.22	SPRING	STANDARD36826	HKLR	P
24-Apr-17	NE LANTAU	2	9.70	SPRING	STANDARD36826	HKLR	S
26-Apr-17	NW LANTAU	2	20.36	SPRING	STANDARD36826	HKLR	P
26-Apr-17	NW LANTAU	3	9.44	SPRING	STANDARD36826	HKLR	P
26-Apr-17	NW LANTAU	2	9.50	SPRING	STANDARD36826	HKLR	S
26-Apr-17	NW LANTAU	3	1.20	SPRING	STANDARD36826	HKLR	S
26-Apr-17	NE LANTAU	2	15.56	SPRING	STANDARD36826	HKLR	P
26-Apr-17	NE LANTAU	2	9.04	SPRING	STANDARD36826	HKLR	S

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

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

DATE	STG #	TIME	HRD SZ	AREA	BEAU	PSD	EFFORT	TYPE	NORTHING	EASTING	SEASON	BOAT ASSOC.	P/S
12-Apr-17	1	1123	2	NW LANTAU	2	20	ON	HKLR	829496	806462	SPRING	NONE	P

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

<b>ID#</b>	<b>DATE</b>	<b>STG#</b>	<b>AREA</b>
NL210	12/04/17	1	NW LANTAU



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



Appendix L

## Event Action Plan

*Appendix L1 Event/ Action Plan for Air Quality*

EVENT	ET <sup>(1)</sup>	ACTION		
		IEC <sup>(1)</sup>	SOR <sup>(1)</sup>	Contractor
<b>Action Level</b>				
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>1. Identify the source.</li> <li>2. Inform the IEC and the SOR.</li> <li>3. Repeat measurement to confirm finding.</li> <li>4. Increase monitoring frequency to daily.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by the ET.</li> <li>2. Check Contractor's working method.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Rectify any unacceptable practice</li> <li>2. Amend working methods if appropriate</li> </ol>
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Identify the source.</li> <li>2. Inform the IEC and the SOR.</li> <li>3. Repeat measurements to confirm findings.</li> <li>4. Increase monitoring frequency to daily.</li> <li>5. Discuss with the IEC and the Contractor on remedial actions required.</li> <li>6. If exceedance continues, arrange meeting with the IEC and the SOR.</li> <li>7. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by the ET.</li> <li>2. Check the Contractor's working method.</li> <li>3. Discuss with the ET and the Contractor on possible remedial measures.</li> <li>4. Advise the SOR on the effectiveness of the proposed remedial measures.</li> <li>5. Supervisor implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing.</li> <li>2. Notify the Contractor.</li> <li>3. Ensure remedial measures properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit proposals for remedial actions to IEC within 3 working days of notification</li> <li>2. Implement the agreed proposals</li> <li>3. Amend proposal if appropriate</li> </ol>

EVENT	ET <sup>(1)</sup>	ACTION		
		IEC <sup>(1)</sup>	SOR <sup>(1)</sup>	Contractor
<b>Limit Level</b>				
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>1. Identify the source.</li> <li>2. Inform the SOR and the DEP.</li> <li>3. Repeat measurement to confirm finding.</li> <li>4. Increase monitoring frequency to daily.</li> <li>5. Assess effectiveness of Contractor's remedial actions and keep the IEC, the DEP and the SOR informed of the results.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by the ET.</li> <li>2. Check Contractor's working method.</li> <li>3. Discuss with the ET and the Contractor on possible remedial measures.</li> <li>4. Advise the SOR on the effectiveness of the proposed remedial measures.</li> <li>5. Supervisor implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing.</li> <li>2. Notify the Contractor.</li> <li>3. Ensure remedial measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification</li> <li>3. Implement the agreed proposals</li> <li>4. Amend proposal if appropriate</li> </ol>
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Notify the IEC, the SOR, the DEP and the Contractor.</li> <li>2. Identify the source.</li> <li>3. Repeat measurements to confirm findings.</li> <li>4. Increase monitoring frequency to daily.</li> <li>5. Carry out analysis of the Contractor's working procedures to determine possible mitigation to be implemented.</li> <li>6. Arrange meeting with the IEC and the SOR to discuss the remedial actions to be taken.</li> <li>7. Assess effectiveness of the Contractor's remedial actions</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst the SOR, ET and the Contractor on the potential remedial actions.</li> <li>2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the SOR accordingly.</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing.</li> <li>2. Notify the Contractor.</li> <li>3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented.</li> <li>4. Ensure remedial measures are properly implemented.</li> <li>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.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance.</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification.</li> <li>3. Implement the agreed proposals.</li> <li>4. Resubmit proposals if problem still not under control.</li> <li>5. Stop the relevant activity of works as determined by the SOR until the exceedance is abated.</li> </ol>

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and keep the IEC, the DEP and  
the SOR informed of the results.

8. If the exceedance stops, cease  
additional monitoring.

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*Appendix L2 Event/ Action Plan for Construction Noise*

ACTION					
EVENT	ET	IEC	SOR	Contractor	
Action Level	<ol style="list-style-type: none"> <li>1. Notify the IEC and the Contractor.</li> <li>2. Carry out investigation.</li> <li>3. Report the results of investigation to the IEC and the Contractor.</li> <li>4. Discuss with the Contractor and formulate remedial measures.</li> <li>5. Increase monitoring frequency to check mitigation effectiveness.</li> </ol>	<ol style="list-style-type: none"> <li>1. Review the analysed results submitted by the ET.</li> <li>2. Review the proposed remedial measures by the Contractor and advise the SOR accordingly.</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing.</li> <li>2. Notify the Contractor.</li> <li>3. Require the Contractor to propose remedial measures for the analysed noise problem.</li> <li>4. Ensure remedial measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IEC</li> <li>2. Implement noise mitigation proposals</li> </ol>	
Limit Level	<ol style="list-style-type: none"> <li>1. Notify the IEC, the SOR, the DEP and the Contractor.</li> <li>2. Identify the source.</li> <li>3. Repeat measurement to confirm findings.</li> <li>4. Increase monitoring frequency.</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented.</li> <li>6. Inform the IEC, the SOR and the DEP the causes &amp; actions taken for the exceedances.</li> <li>7. Assess effectiveness of the Contractor's remedial actions and keep the IEC, the DEP and the SOR informed of the results.</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst the SOR, the ET and the Contractor on the potential remedial actions.</li> <li>2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the SOR accordingly.</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing.</li> <li>2. Notify the Contractor.</li> <li>3. Require the Contractor to propose remedial measures for the analysed noise problem.</li> <li>4. Ensure remedial measures are properly implemented.</li> <li>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.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification</li> <li>3. Implement the agreed proposals</li> <li>4. Resubmit proposals if problem still not under control</li> <li>5. Stop the relevant activity of works as determined by the SOR until the exceedance is abated.</li> </ol>	

**Appendix L3**      *Event/ Action Plan for Water Quality*

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

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

**Appendix L4 Implementation of Event-Action Plan for Dolphin Monitoring**

<b>Event</b>	<b>ET Leader</b>	<b>IEC</b>	<b>SOR</b>	<b>Contractor</b>
Action Level	<ol style="list-style-type: none"> <li>1. Repeat statistical data analysis to confirm findings;</li> <li>2. Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&amp;A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences;</li> <li>3. Identify source(s) of impact;</li> <li>4. Inform the IEC, SOR and Contractor;</li> <li>5. Check monitoring data.</li> <li>6. Review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor;</li> <li>2. Discuss monitoring results and findings with the ET and the Contractor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss monitoring with the IEC and any other measures proposed by the ET;</li> <li>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.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the SOR and confirm notification of the non-compliance in writing;</li> <li>2. Discuss with the ET and the IEC and propose measures to the IEC and the SOR;</li> <li>3. Implement the agreed measures.</li> </ol>



<b>Event</b>	<b>ET Leader</b>	<b>IEC</b>	<b>SOR</b>	<b>Contractor</b>
Limit Level	<ol style="list-style-type: none"> <li>1. Repeat statistical data analysis to confirm findings;</li> <li>2. Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&amp;A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences;</li> <li>3. Identify source(s) of impact;</li> <li>4. Inform the IEC, ER/SOR and Contractor of findings;</li> <li>5. Check monitoring data;</li> <li>6. Repeat review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary;</li> <li>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.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor;</li> <li>2. Discuss monitoring results and findings with the ET and the Contractor;</li> <li>3. Attend the meeting to discuss with ET, ER/SOR and Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures;</li> <li>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;</li> <li>5. Supervise / Audit the implementation of additional monitoring and/or any other mitigation measures and advise ER/SOR the results and findings accordingly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Attend the meeting to discuss with ET, IEC and Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures;</li> <li>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;</li> <li>3. Supervise the implementation of additional monitoring and/or any other mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the ER/SOR and confirm notification of the non-compliance in writing;</li> <li>2. Attend the meeting to discuss with ET, IEC and ER/SOR the necessity of additional dolphin monitoring and any other potential mitigation measures;</li> <li>3. Jointly submit with ET to IEC a proposal of additional dolphin monitoring and/or any other mitigation measures when necessary;</li> <li>4. Implement the agreed additional dolphin monitoring and/or any other mitigation measures.</li> </ol>

*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"> <li>1. Repeat statistical data analysis to confirm findings;</li> <li>2. Review all available and relevant data to ascertain if differences are as a result of natural variation or seasonal differences;</li> <li>3. Identify source(s) of impact;</li> <li>4. Inform the IEC, SO and Contractor;</li> <li>5. Check monitoring data;</li> <li>6. Carry out audit to ensure all dolphin protective measures are implemented fully and additional measures be proposed if necessary</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor;</li> <li>2. Discuss monitoring with the ET and the Contractor;</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with the IEC the repeat monitoring and any other measures proposed by the ET;</li> <li>2. Make agreement on measures to be implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the SO and confirm notification of the non-compliance in writing;</li> <li>2. Discuss with the ET and the IEC and propose measures to the IEC and the SO;</li> <li>3. Implement the agreed measures.</li> </ol>

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"> <li>1. Repeat statistical data analysis to confirm findings;</li> <li>2. Review all available and relevant data to ascertain if differences are as a result of natural variation or seasonal differences;</li> <li>3. Identify source(s) of impact;</li> <li>4. Inform the IEC, SO and Contractor;</li> <li>5. Check monitoring data;</li> <li>6. Carry out audit to ensure all dolphin protective measures are implemented fully and additional measures be proposed if necessary</li> <li>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.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor;</li> <li>2. Discuss monitoring with the ET and the Contractor;</li> <li>3. Review proposals for additional monitoring and any other measures submitted by the Contractor and advise ER accordingly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with the IEC the repeat monitoring and any other measures proposed by the ET;</li> <li>2. Make agreement on measures to be implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the SO and confirm notification of the non-compliance in writing;</li> <li>2. Discuss with the ET and the IEC and propose measures to the IEC and the SO;</li> <li>3. Implement the agreed measures.</li> </ol>

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

Appendix M

## Monthly Summary of Waste Flow Table

Contract No. : HY/2012/07

Tuen Mun Chek Lap Kok Link – Southern Connection Viaduct Section

Monthly Summary Waste Flow Table for 2017 (Year)

Month/Material	Actual Quantities of Inert C&D Materials Generation						Actual Quantities of C&D wastes Generation						Actual Quantities of Recyclables Generation			
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fills	Imported Fill	Marine Sediment, Cat. L	Marine Sediment, Cat. Mp	Marine Sediment, Cat. Mf	Marine Sediment, Cat. H	Chemical Waste	General Refuse	Metals	Felled trees	Paper/ cardboard packaging	Plastics
Unit	('000m <sup>3</sup> )	('000m <sup>3</sup> )	('000m <sup>3</sup> )	('000m <sup>3</sup> )	('000m <sup>3</sup> )	('000m <sup>3</sup> )	('000m <sup>3</sup> )	('000m <sup>3</sup> )	('000m <sup>3</sup> )	('000m <sup>3</sup> )	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)
Jan	4.591	0.717	0.474	-	4.118	-	-	-	-	3.521	99.840	-	-	0.140	-	-
Feb	5.034	1.585	0.166	-	4.869	-	-	-	-	-	127.720	-	-	0.091	-	-
Mar	6.575	0.937	0.498	-	6.077	-	-	-	-	6.000	87.910	-	-	0.077	-	-
Apr	5.467	0.791	1.058	-	4.409	-	-	-	-	-	130.680	-	5.170	0.063	-	-
May	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jun	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>SUB-TOTAL</b>	<b>21.667</b>	<b>4.030</b>	<b>2.195</b>	<b>-</b>	<b>19.472</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9.521</b>	<b>446.150</b>	<b>-</b>	<b>5.170</b>	<b>0.371</b>	<b>-</b>	<b>-</b>
Jul	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aug	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sep	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oct	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nov	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL</b>	<b>21.667</b>	<b>4.030</b>	<b>2.195</b>	<b>-</b>	<b>19.472</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9.521</b>	<b>446.150</b>	<b>-</b>	<b>5.170</b>	<b>0.371</b>	<b>-</b>	<b>-</b>

Notes :

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

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

3 - Broken concrete for recycling into aggregates.

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

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

Appendix N

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

*Appendix N1 Cumulative Statistics on Exceedances*

		Total No. recorded in this reporting month	Total No. recorded since project commencement
1-Hr TSP	Action	0	0
	Limit	0	0
24-Hr TSP	Action	0	2
	Limit	0	0
Noise	Action	0	0
	Limit	0	0
Water Quality	Action	0	2
	Limit	0	0
Impact Dolphin Monitoring	Action	0	9
	Limit	0	8

*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 (April 2017)	1	0	0
Total No. received since project commencement	10	0	0