

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

*Eighth Monthly EM&A Report*

15 July 2014

**Environmental Resources Management**  
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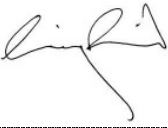



# Contract No. HY/2012/07 Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section

## Environmental Resources Management

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*Eighth Monthly EM&A Report*

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Client:  Gammon		Project No:  0215660			
Summary:  This document presents the Eighth Monthly EM&A Report for Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section.		Date: 15 July 2014			
		Approved by: 			
		<i>Mr Craig Reid Partner</i>			
		Certified by: 			
		<i>Mr Jovy Tam ET Leader</i>			
	Eighth Monthly EM&A Report	VAR	JT	CAR	15/07/14
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>		Distribution		 	
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Ref.: HYDHZMBEEM00\_0\_2069L.14

15 July 2014

AECOM  
Supervising Officer Representative's Office  
6 Hoi Kok Street,  
Tsuen Wan, N.T.

By Fax (2492 2057) and By Post

Attention: Mr. Daniel Ip

Dear Sir,

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

**Contract No. HY/2012/07 TM-CLKL Southern Connection Viaduct Section  
Monthly EM&A Report for June 2014 (EP-354/2009/B)**

Reference is made to the Monthly Environmental Monitoring and Audit (EM&A) Report (for Jun 2014) certified by the ET Leader (ET's ref.: "0215660\_8th Monthly EM&A\_20140715.doc" dated 15 July 2014) and provided to us via email on 15 July 2014.

We are pleased to inform you that we have no adverse comments on the captioned monthly EM&A Report. We write to verify the captioned submission in accordance with Condition 4.4 of EP-354/2009/B.

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

Yours sincerely,



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

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

Internal: DY, YH, ENPO Site

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## **EXECUTIVE SUMMARY**

Under *Contract No. HY/2012/07*, Gammon Construction Limited (GCL) is commissioned by the Highways Department (HyD) to undertake the design and construction of the Southern Connection Viaduct Section of the Tuen Mun – Chek Lap Kok Link Project (TM-CLK Link Project) while AECOM Asia Company Limited was appointed by HyD as the Supervising Officer. For implementation of the environmental monitoring and audit (EM&A) programme under the Contract, ERM-Hong Kong, Limited (ERM) has been appointed as the Environmental Team (ET). 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*. Another application for variation of environmental permit (VEP) (*EP-354/2009/B*) was granted on 28 January 2014.

The construction phase of the Contract commenced on 31 October 2013 and will be tentatively be 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 eighth monthly EM&A report presenting the EM&A works carried out during the period from 1 to 30 June 2014 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-based Works***

- Marine piling platform installation;
- Marine Piling at Viaduct B & E;
- Construction of rockfill platform at Viaduct D landing and
- Additional marine ground investigation (GI) and laboratory testing.

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

- Construction of pile cap superstructure of Viaduct B;
- Fence installation and relocation of Area 2, Viaduct A, B, C & D;
- Land Piling at Viaduct B;
- Piling platform installation for Viaduct B, D and E;
- Additional land GI, trial pits & lab testing;
- Utility surveys and
- Slope work of Slope 9SE-B/C8, 9SE-B/C9 & 9SE-B/F9.

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 noise 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 impact water quality monitoring in the reporting month.

### **Impact Dolphin Monitoring**

During this month of dolphin monitoring, no adverse impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Chinese White Dolphins was noticeable from general observations. Due to monthly variation in dolphin occurrence within the study area, it would be more appropriate to draw conclusion on whether any impacts on dolphins have been detected related to the construction activities of the TM-CLKL Southern Connection Viaduct Section in the quarterly EM&A reports, where comparison on distribution, group size and encounter rates of dolphins between the quarterly impact monitoring period and baseline monitoring period will be made.

Daily marine mammal exclusion zone monitoring was undertaken. No sighting of the Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) was recorded in June 2014 during the exclusion zone monitoring.

### **Coral Monitoring**

No Post-Translocation Coral Monitoring Exercise was conducted in the reporting month in June 2014.

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

One (1) complaint was referred by EPD on 23 June 2014 and was follow-up on 25 June 2014. The complaint was considered to be not related to this Contract.

No notification of summons and successful prosecution was received in the reporting month.

### **Reporting Change**

There was no reporting change required in the reporting period.

### **Upcoming Works for the Next Reporting Period**

Works to be undertaken in the next monitoring period of July 2014 include the following:

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

- Construction of Pile caps at Viaduct B;
- Marine piling platform installation;
- Marine Piling at Viaduct B & E;
- Construction of rockfill platform at Viaduct D landing and
- Additional marine ground investigation (GI) and laboratory testing

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

- Construction of pile cap superstructure of Viaduct B;
- Fence installation and relocation of Area 2, Viaduct A, B, C & D;
- Land Piling at Viaduct B;
- Piling platform installation for Viaduct B, C, D and E;
- Additional land GI, trial pits & lab testing;
- Utility surveys; and
- Slope work of Slope 9SE-B/C8, 9SE-B/C9 & 9SE-B/F9.

### **Future Key Issues**

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of July 2014 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-145/2009), 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-354/2009A) 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). 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*. Another application for variation of environmental permit (VEP) (*EP-354/2009/B*) was granted on 28 January 2014.

The construction phase of the Contract commenced on 31 October 2013 and will be tentatively be 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.

## 1.2 SCOPE OF REPORT

This is the eighth monthly EM&A Report under the *Contract No. HY/2012/07 Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section*. This report presents a summary of the environmental monitoring and audit works in June 2014.

## 1.3 ORGANIZATION STRUCTURE

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

**Table 1.1** *Contact Information of Key Personnel*

Party	Position	Name	Telephone	Fax
HyD (Highways Department)	Project Coordinator	Stanley Chan	2762 3406	3188 6614
	Senior Engineer	Steven Shum	2762 4133	3188 6614
SOR (AECOM Asia Company Limited)	Chief Resident Engineer	Daniel Ip	3553 3800	2492 2057
	Resident Engineer	Kingman Chan	3691 3950	3691 2899
ENPO / IEC (ENVIRON Hong Kong Ltd.)	ENPO Leader	Y.H. Hui	3465 2888	3465 2899
	IEC	Dr. F.C. Tsang	3465 2828	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-based Works*

- Marine piling platform installation
- Marine Piling at Viaduct B & E
- Construction of rockfill platform at Viaduct D landing

- Additional marine ground investigation (GI) and laboratory testing

***Land-based Works***

- Construction of pile cap superstructure of Viaduct B
- Fence installation and relocation of Area 2, Viaduct A, B, C & D
- Land Piling at Viaduct B
- Piling platform installation for Viaduct B, D and E
- Additional land GI, trial pits & lab testing
- Utility surveys
- Slope work of Slope 9SE-B/C8, 9SE-B/C9 & 9SE-B/F9

The general layout plan of the site showing the detailed works areas is shown in *Figures 1.1 to 1.12*. The Environmental Sensitive Receivers in the vicinity of the Project are shown in *Figure 1.13*.

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



Key

Site Boundary

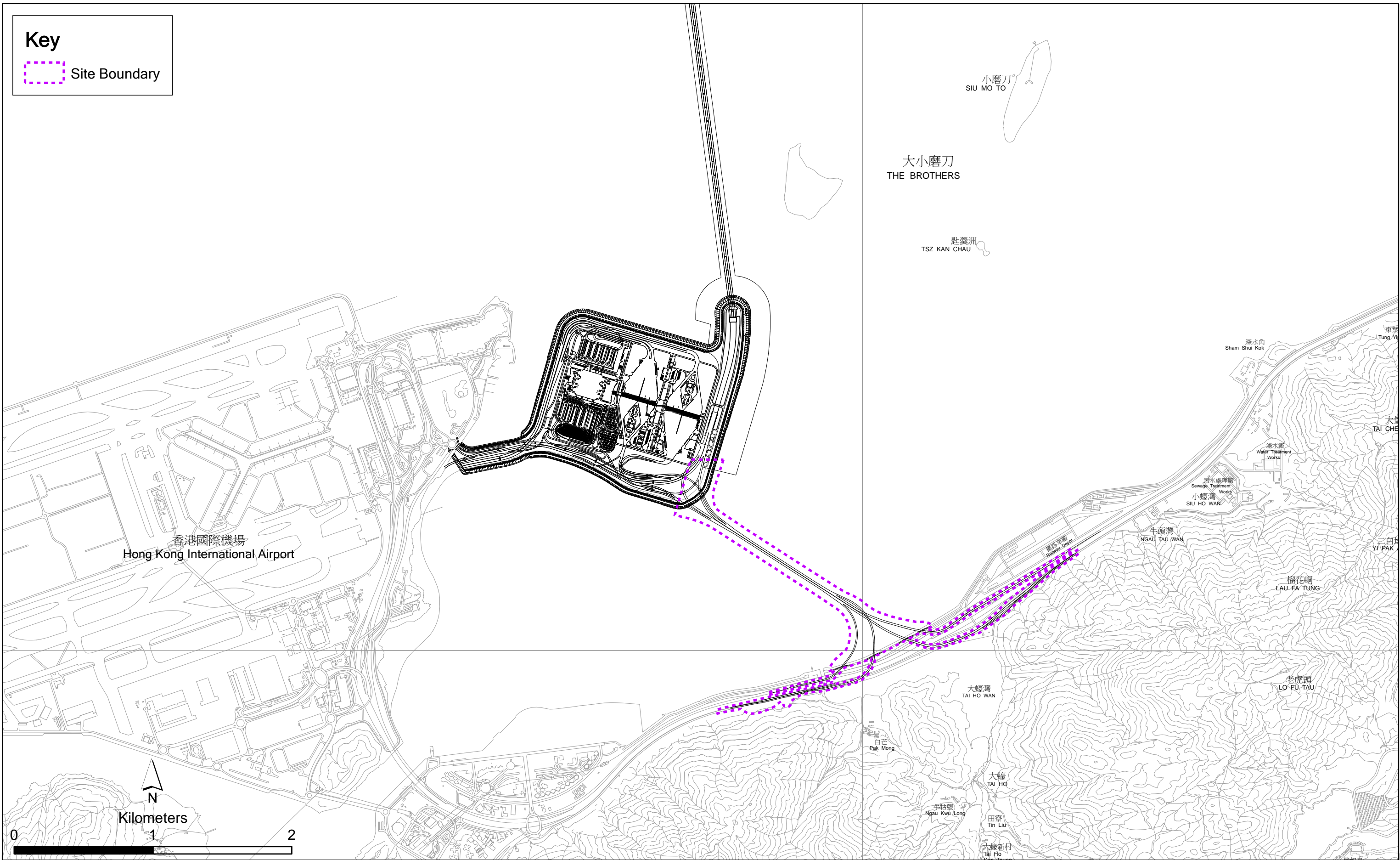
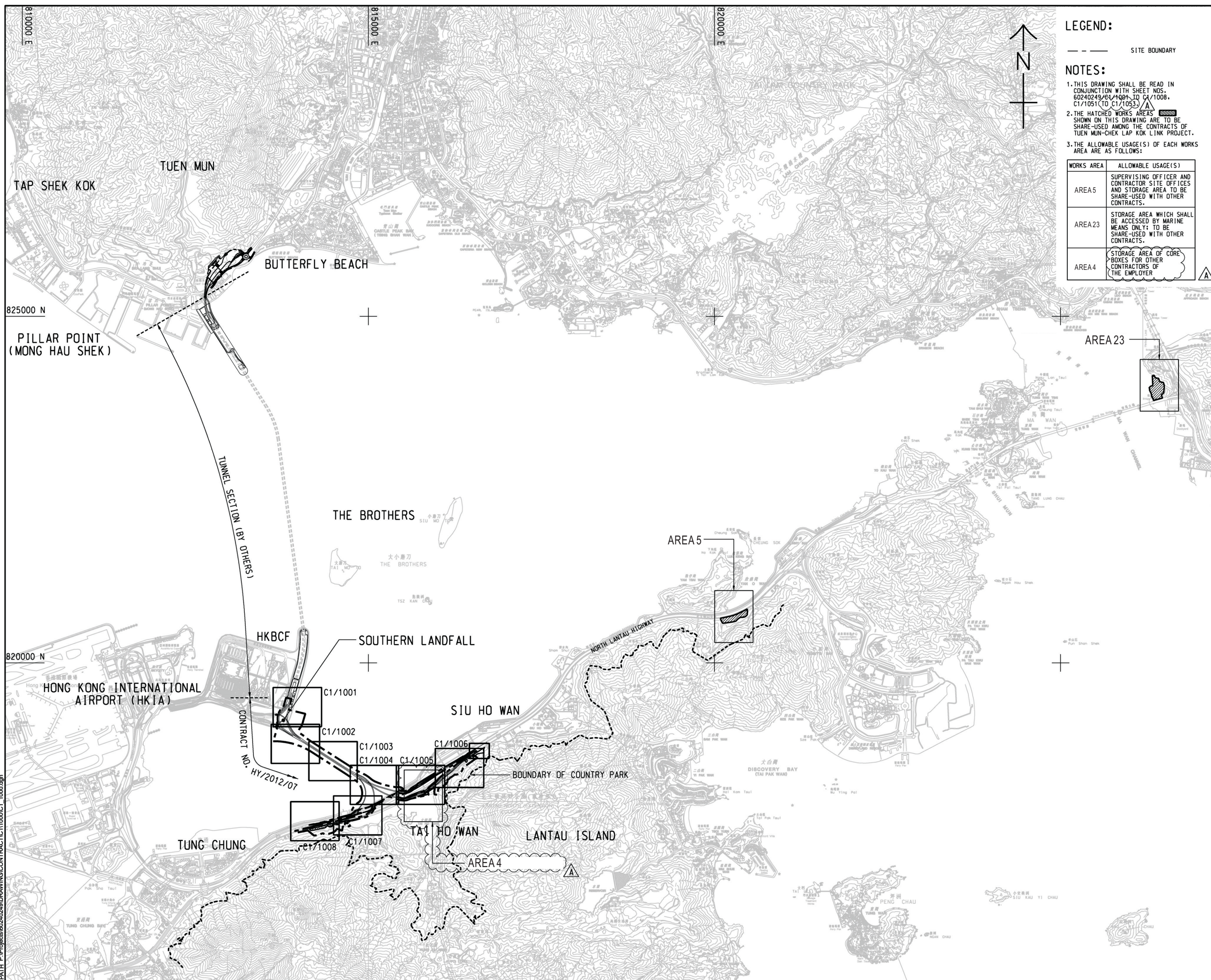


Figure 1.1

General Layout Plan of the Project



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**LEGEND:**

--- SITE BOUNDARY

**NOTES:**

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH SHEET NOS. 60240249/61/1001 TO C1/1008, C1/1051 (TO C1/1053).
2. THE HATCHED WORKS AREAS SHOWN ON THIS DRAWING ARE TO BE SHARE-USED AMONG THE CONTRACTS OF TUEN MUN-CHEK LAP KOK LINK PROJECT.
3. THE ALLOWABLE USAGE(S) OF EACH WORKS AREA ARE AS FOLLOWS:

WORKS AREA	ALLOWABLE USAGE(S)
AREA 5	SUPERVISING OFFICER AND CONTRACTOR SITE OFFICES AND STORAGE AREA TO BE SHARE-USED WITH OTHER CONTRACTS.
AREA 23	STORAGE AREA WHICH SHALL BE ACCESSED BY MARINE MEANS ONLY; TO BE SHARE-USED WITH OTHER CONTRACTS.
AREA 4	STORAGE AREA OF CORE BOXES FOR OTHER CONTRACTORS OF THE EMPLOYER



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

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

**CLIENT**  
 業主  
**HIGHWAYS DEPARTMENT**  
 港珠澳大橋香港工程管理有限公司  
 Hong Kong - Zhuhai - Macao Bridge  
 Hong Kong Project Management Office

**CONSULTANT**  
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**Fig.1.2**

**ISSUE/REVISION**  
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-	OCT. 12	TENDER DRAWING	CWN

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**KEY PLAN**  
 索引圖

**PROJECT NO.**  
 項目編號  
 60240249

**CONTRACT NO.**  
 合約編號  
 HY/2012/07

**SHEET TITLE**  
 圖紙名稱  
 LOCATION PLAN AND KEY PLAN

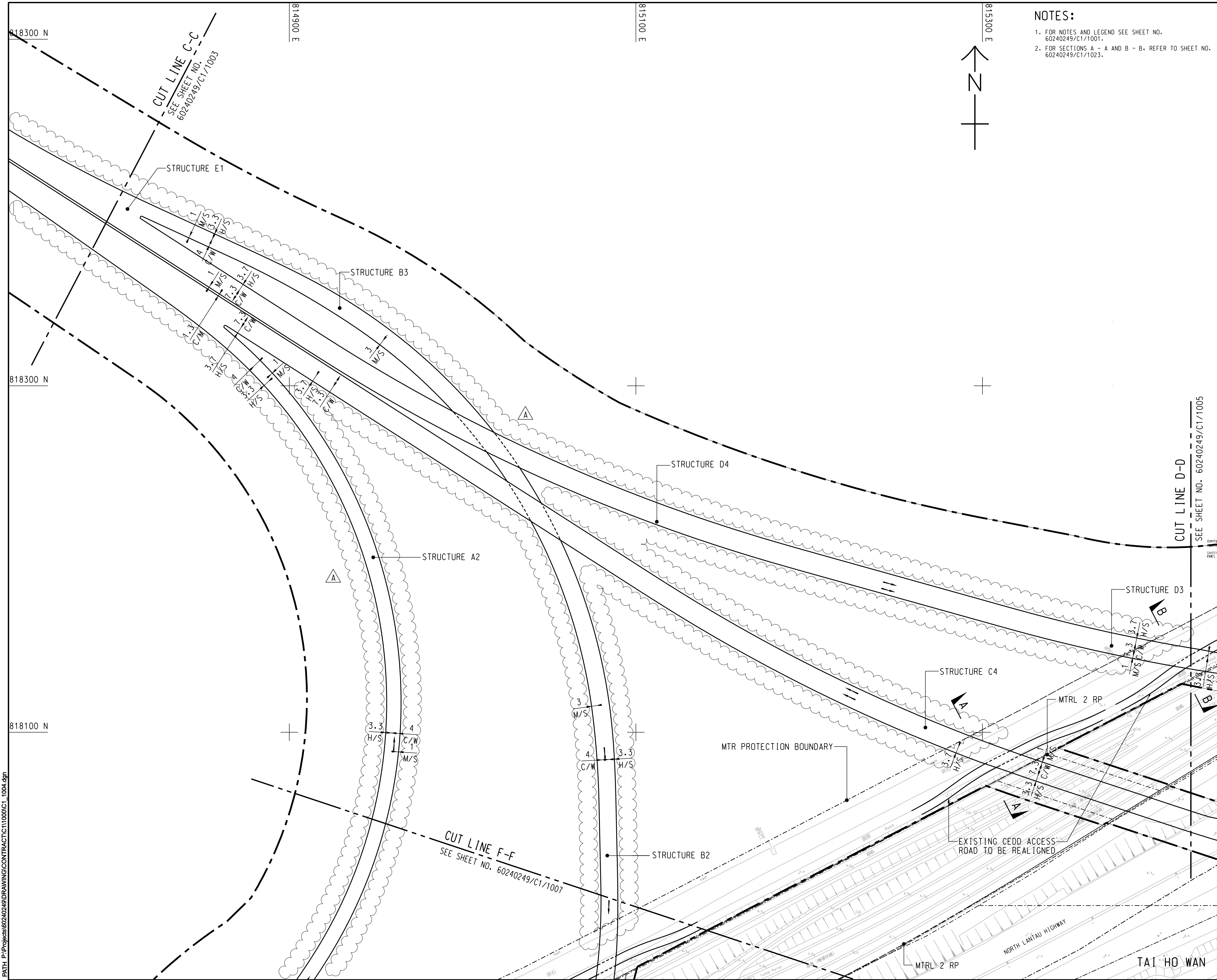
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**NOTES:**  
 1. FOR NOTES AND LEGEND SEE SHEET NO. 60240249/C1/1001.  
 2. FOR SECTIONS A - A AND B - B, REFER TO SHEET NO. 60240249/C1/1023.

**AECOM**

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

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

**CLIENT**  
 業主  
  
 路政署  
 HIGHWAYS DEPARTMENT  
 港珠澳大橋香港工程管理局  
 Hong Kong - Zhuhai - Macao Bridge  
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Fig1.3

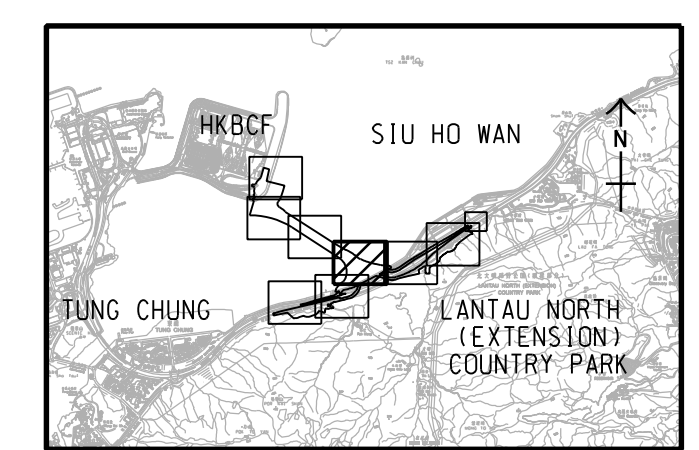
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 項目編號  
 60240249

**CONTRACT NO.**  
 合約編號  
 HY/2012/07

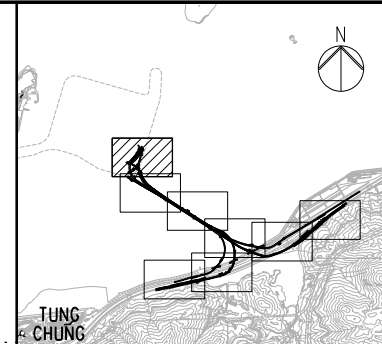
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SHEET 4 OF 8

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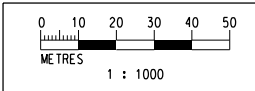


**KEY PLAN**

**NOTES**  
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- LEGEND**
- SITE BOUNDARY
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    - ⊕ 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  
 SEE DRG J3518/P/OAP/04/01101



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C	SUBMISSION	RC	09/13					DS	DOP
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								1:1000 @ A1 / 1:2000 @ A3	

Client  
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 HIGHWAYS DEPARTMENT  
 港珠澳大橋香港工程管理局  
 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

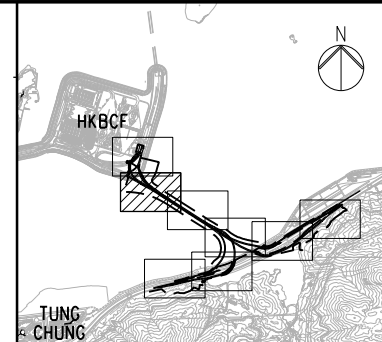
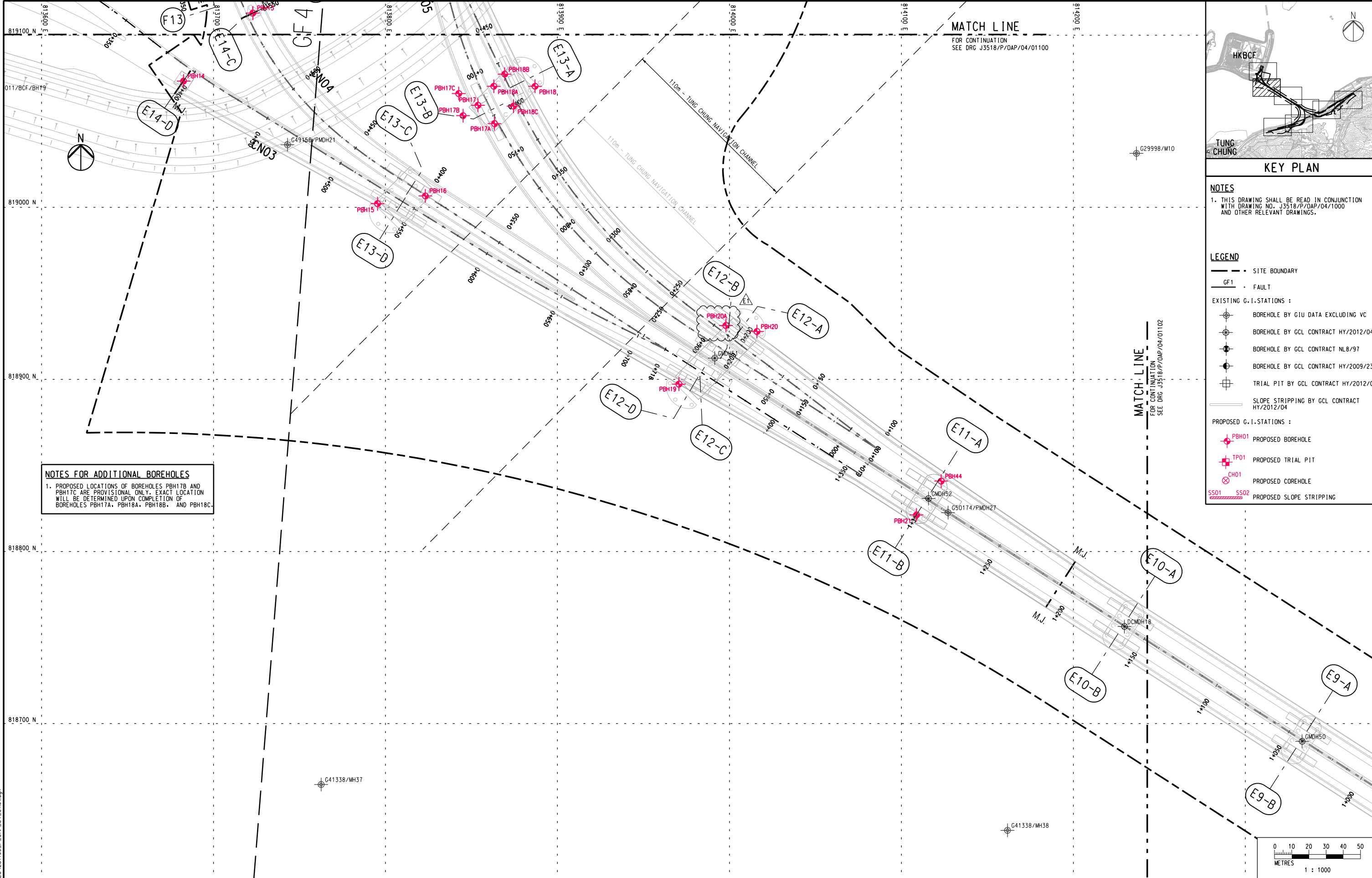
Contractor  
**Gammon**

Drawing title  
**PROPOSED GROUND INVESTIGATION PLAN**  
 (1)  
**Fig 1.4**  
 Drawing no. J3518/P/OAP/04/01100 Rev. C

Originator  
**ARUP**



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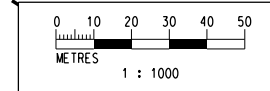
**KEY PLAN**

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

**LEGEND**

	SITE BOUNDARY
	FAULT
<b>EXISTING G.I. STATIONS :</b>	
	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
<b>PROPOSED G.I. STATIONS :</b>	
	PROPOSED BOREHOLE
	PROPOSED TRIAL PIT
	PROPOSED COREHOLE
	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.



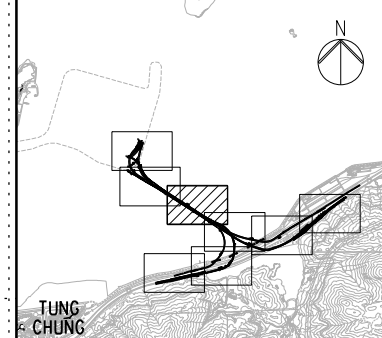
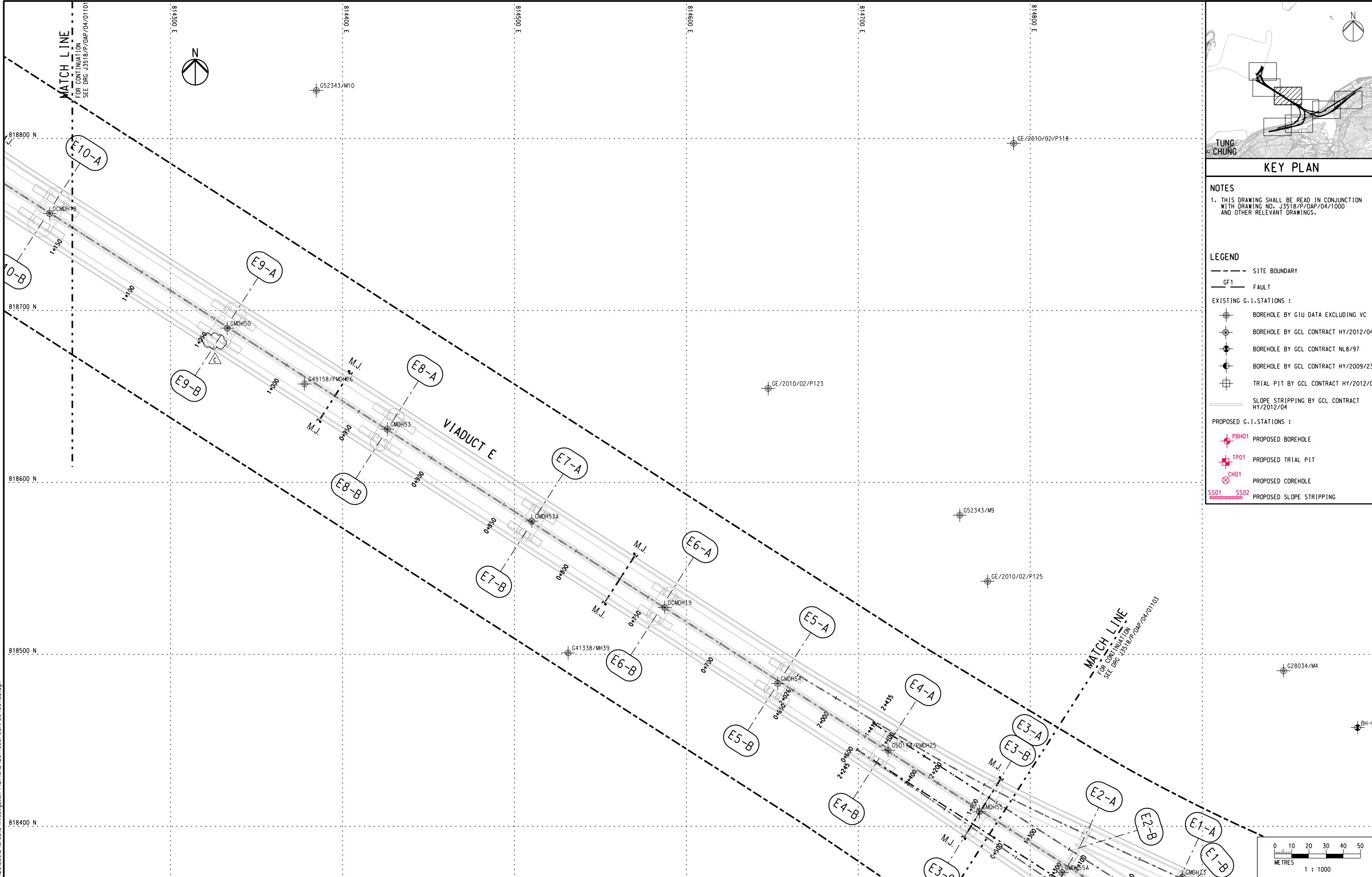
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B	SUBMISSION	RC	07/13					Checked	Approved
C	SUBMISSION	RC	09/13					DS	DOP
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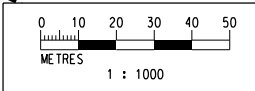
 <b>HIGHWAYS DEPARTMENT</b> 港珠澳大橋香港工程管理處 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office	Project Title <b>Contract No. HY/2012/07</b> <b>Tuen Mun - Chek Lap Kok Link</b> <b>Southern Connection Viaduct Section</b>	Drawing title <b>PROPOSED GROUND INVESTIGATION PLAN (2)</b> <b>Fig 1.5</b> Drawing no. <b>J3518/P/OAP/04/01101</b> Rev. <b>E1</b>
	Supervising Officer 	Contractor 



DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.



- KEY PLAN**
- 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 :**
- PBH01 PROPOSED BOREHOLE
  - TP01 PROPOSED TRIAL PIT
  - CHO1 PROPOSED COREHOLE
  - SS01 SS02 PROPOSED SLOPE STRIPPING

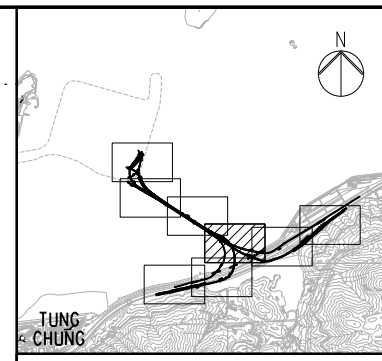
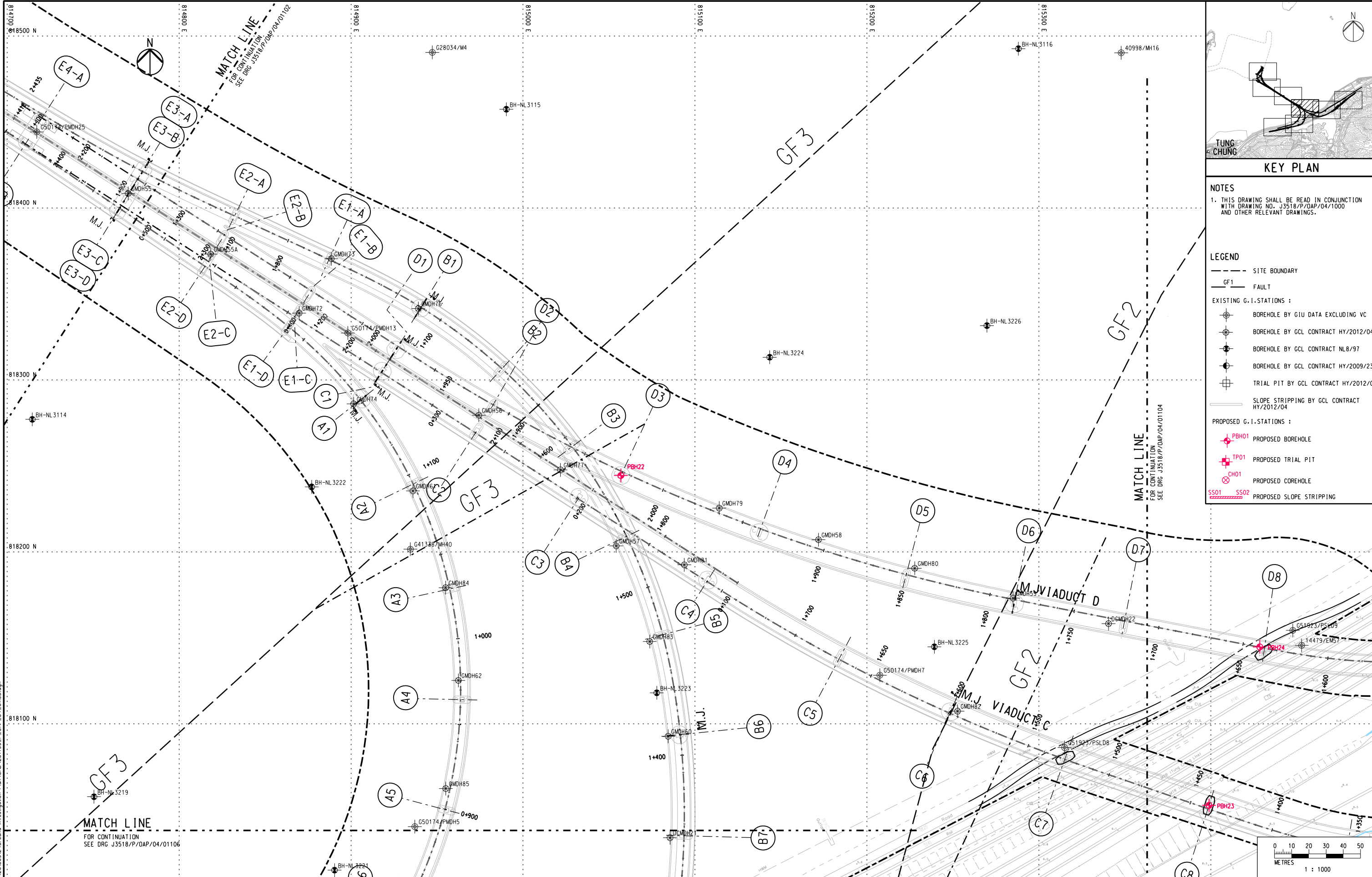


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B	SUBMISSION	RC	07/13					Checked	Approved
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Client <b>路政署</b> <b>HIGHWAYS DEPARTMENT</b> 港珠澳大橋香港工程管理處 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office	Project Title <b>Contract No. HY/2012/07</b> <b>Tuen Mun - Chek Lap Kok Link</b> <b>Southern Connection Viaduct Section</b>	Drawing title <b>PROPOSED GROUND INVESTIGATION PLAN</b> <b>(3)</b> <b>Fig 1.6</b>	
		Drawing no. <b>J3518/P/OAP/04/01102</b> Rev. <b>C</b>	
Supervising Officer <b>AECOM</b>	Contractor <b>Gammon</b>	Originator <b>ARUP</b>	

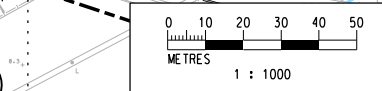
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**KEY PLAN**

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

- LEGEND**
- SITE BOUNDARY
  - GF1 FAULT
  - EXISTING G.I. STATIONS :
    - ⊕ BOREHOLE BY GIU DATA EXCLUDING VC
    - ⊕ BOREHOLE BY GCL CONTRACT HY/2012/04
    - ⊕ BOREHOLE BY GCL CONTRACT 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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Client  
**HIGHWAYS DEPARTMENT**  
 路政署  
 港珠澳大橋香港工程管理處  
 Hong Kong - Zhuhai - Macao Bridge  
 Hong Kong Project Management Office

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

Drawing title  
**PROPOSED GROUND INVESTIGATION PLAN**  
**(4)**  
**Fig 1.7**  
 Drawing no. **J3518/P/OAP/04/01103** Rev. **C**

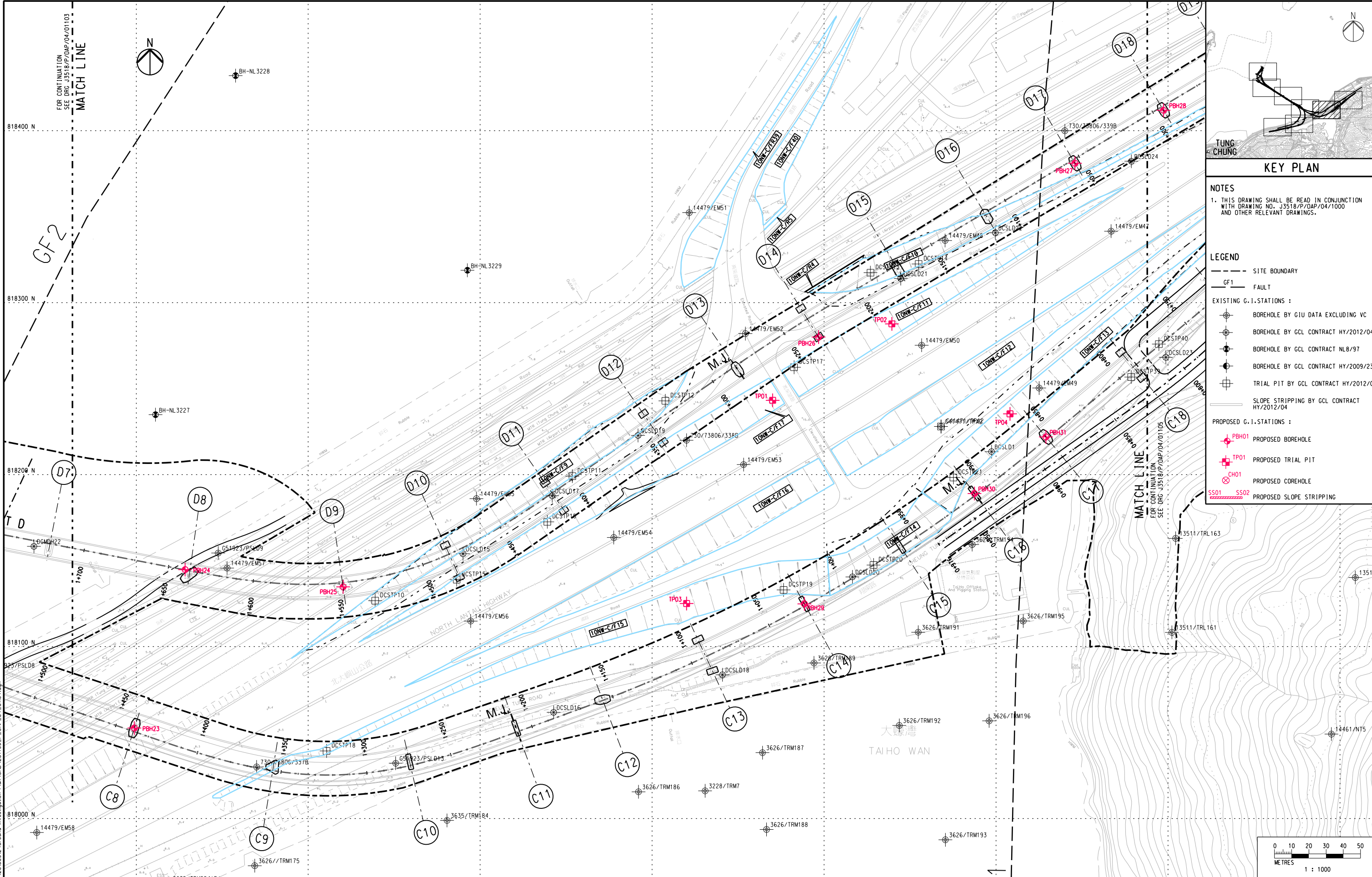
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**AECOM**

Contractor  
**Gammon**

Originator  
**ARUP**



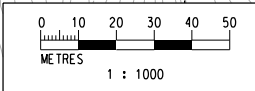
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**KEY PLAN**

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

- LEGEND**
- SITE BOUNDARY
  - GF1 FAULT
  - EXISTING G.I. STATIONS:
    - ⊕ BOREHOLE BY GIU DATA EXCLUDING VC
    - ⊕ BOREHOLE BY GCL CONTRACT HY/2012/04
    - ⊕ BOREHOLE BY GCL CONTRACT 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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B	SUBMISSION	RC	07/13					Checked	Approved
C	SUBMISSION	RC	09/13					DS	DOP
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Client  
**路政署**  
**HIGHWAYS DEPARTMENT**  
 港珠澳大橋香港工程管理局  
 Hong Kong - Zhuhai - Macao Bridge  
 Hong Kong Project Management Office

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

Drawing title  
**PROPOSED GROUND INVESTIGATION PLAN**  
**(5)**  
**Fig 1.8**  
 Drawing no. **J3518/P/OAP/04/01104** Rev. **C**

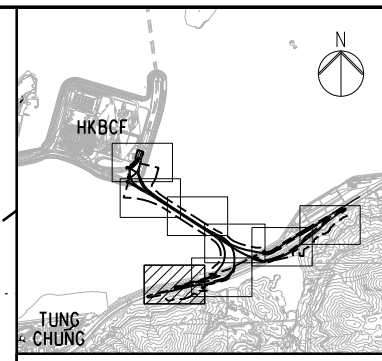
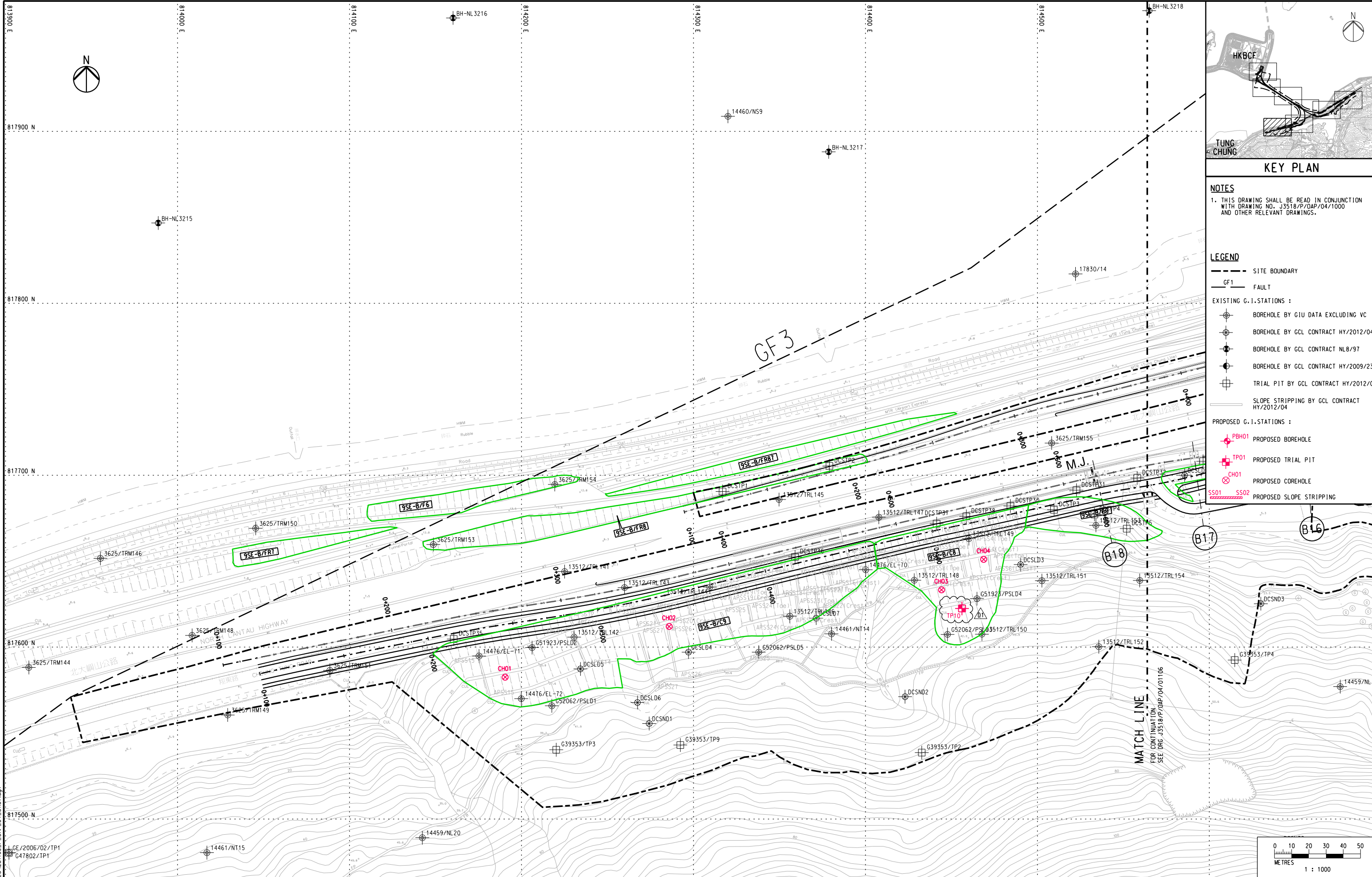
Supervising Officer  
**AECOM**

Contractor  
**Gammon**

Originator  
**ARUP**



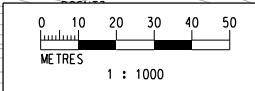
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**KEY PLAN**

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

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



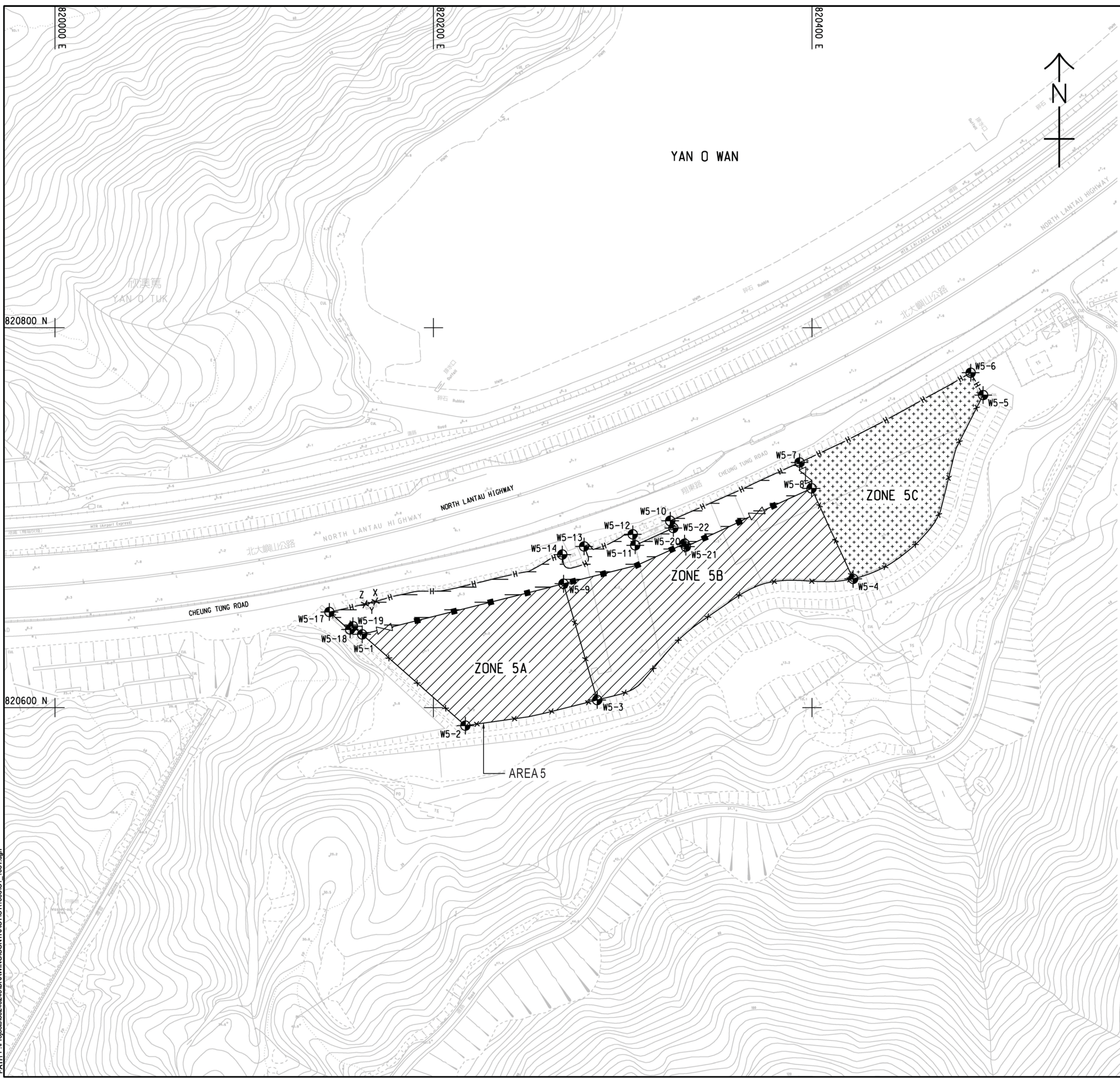
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B	SUBMISSION	RC	07/13					Checked	Approved
C	SUBMISSION	RC	09/13					DS	DOP
D1	FOR INTERNAL REVIEW	RC	11/13					Scale	
								1:1000 @ A1 / 1:2000 @ A3	

Client 路政署 HIGHWAYS DEPARTMENT 港珠澳大橋香港工程管理局 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office	Project Title Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section	Drawing title PROPOSED GROUND INVESTIGATION PLAN (6)	
		Fig 1.9 Drawing no. J3518/P/OAP/04/01107 Rev. D1	
Supervising Officer AECOM	Contractor Gammon	Originator ARUP	



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



**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.
- DEMARCATON 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 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 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 SHARED AMONG THE CONTRACTS OF TM-CLKL RELATED CONTRACTS. THE AREAS HATCHED WITH [diagonal lines] ARE TENTATIVELY ALLOCATED FOR THE USE BY THIS CONTRACT.
- THE COMMON AREA SHALL BE CONCRETE PAVED BY THE CONTRACTOR.

**LEGEND:**

- [diagonal lines] WORKS AREA UNDER THIS CONTRACT
- [cross-hatch] COMMON AREA (MAINTAINED UNDER THIS CONTRACT) TO BE SHARE-USED WITH OTHER CONTRACTS
- [stippled] WORKS AREA FOR THIS CONTRACT TO BE EARLY HANDED OVER BY THE CONTRACTOR.
- [H symbol] HOARDING AND GATE (TO BE ERRECTED AND MAINTAINED UNDER THIS CONTRACT)
- [chain link symbol] CHAIN LINK FENCE AND GATE (TO BE ERRECTED AND MAINTAINED BY OTHERS)
- [chain link symbol with X] CHAIN LINK FENCE AND GATE (TO BE ERRECTED AND MAINTAINED UNDER THIS CONTRACT)

**SETTING OUT COORDINATES OF AREA 5**

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



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

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

**CLIENT**  
 業主  
 路政署  
 HONG KONG - ZHUHAI - MACAO BRIDGE  
 港珠澳大橋香港工程管理有限公司  
 Hong Kong Project Management Office

**CONSULTANT**  
 顧問公司  
 AECOM Asia Company Ltd.  
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**SUB-CONSULTANTS**  
 分判工程師有限公司

Fig 1.10

**ISSUE/REVISION**

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

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**DIMENSION UNIT** METRES

**KEY PLAN**

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

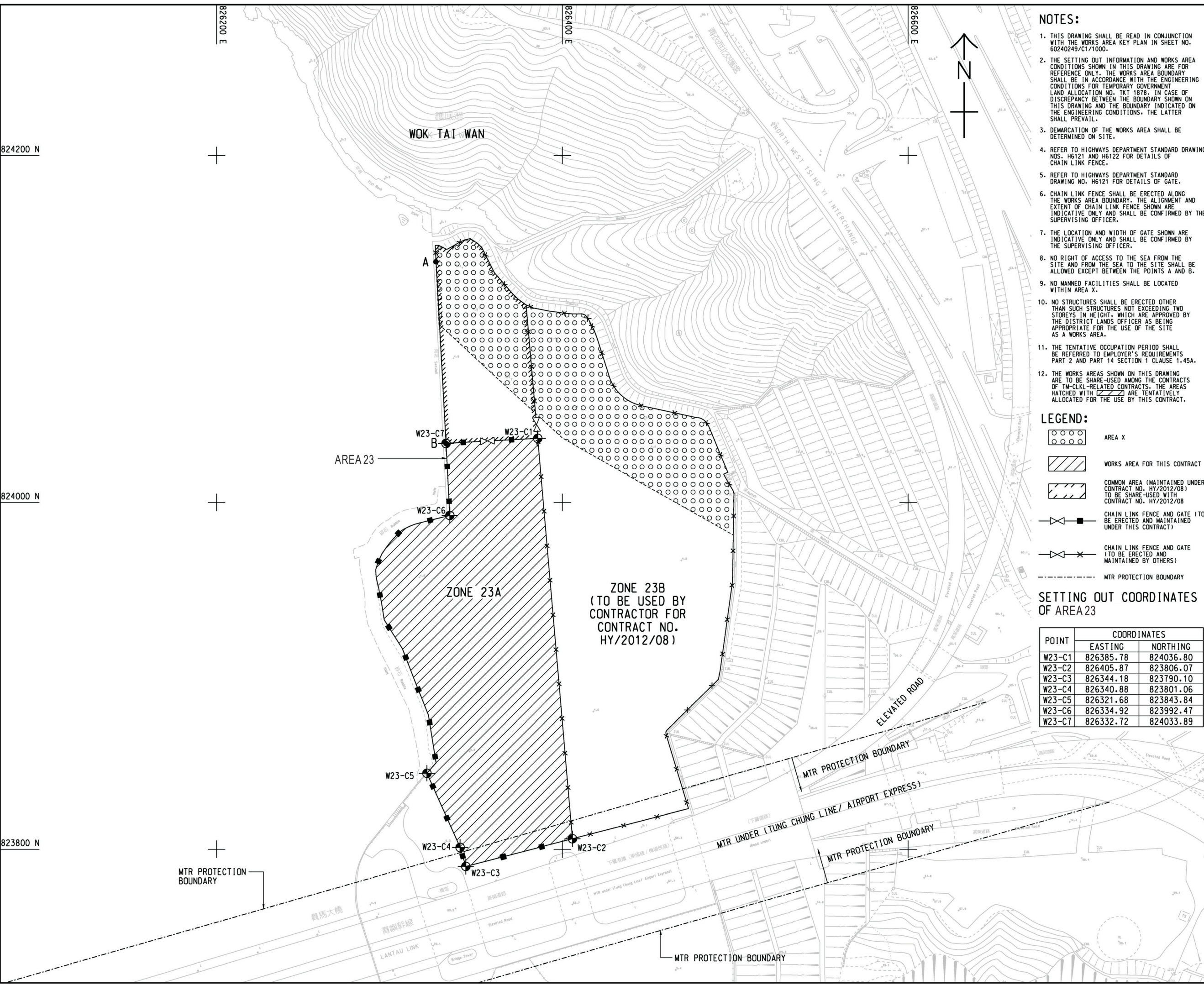
**SHEET TITLE**  
 圖紙名稱  
 WORKS AREA AND HOARDING PLAN

**SHEET NUMBER**  
 圖紙編號  
 60240249/C1/1051

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**NOTES:**

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE WORKS AREA KEY PLAN IN SHEET NO. 60240249/C1/1000.
2. THE SETTING OUT INFORMATION AND WORKS AREA CONDITIONS SHOWN IN THIS DRAWING ARE FOR REFERENCE ONLY. THE WORKS AREA BOUNDARY SHALL BE IN ACCORDANCE WITH THE ENGINEERING CONDITIONS FOR TEMPORARY GOVERNMENT LAND ALLOCATION NO. TKT 1878. IN CASE OF DISCREPANCY BETWEEN THE BOUNDARY SHOWN ON THIS DRAWING AND THE BOUNDARY INDICATED ON THE ENGINEERING CONDITIONS, THE LATTER SHALL PREVAIL.
3. DEMARCATION OF THE WORKS AREA SHALL BE DETERMINED ON SITE.
4. REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NOS. H6121 AND H6122 FOR DETAILS OF CHAIN LINK FENCE.
5. REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NO. H6121 FOR DETAILS OF GATE.
6. CHAIN LINK FENCE SHALL BE ERECTED ALONG THE WORKS AREA BOUNDARY. THE ALIGNMENT AND EXTENT OF CHAIN LINK FENCE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISING OFFICER.
7. THE LOCATION AND WIDTH OF GATE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISING OFFICER.
8. NO RIGHT OF ACCESS TO THE SEA FROM THE SITE AND FROM THE SEA TO THE SITE SHALL BE ALLOWED EXCEPT BETWEEN THE POINTS A AND B.
9. NO MANNED FACILITIES SHALL BE LOCATED WITHIN AREA X.
10. NO STRUCTURES SHALL BE ERECTED OTHER THAN SUCH STRUCTURES NOT EXCEEDING TWO STOREYS IN HEIGHT, WHICH ARE APPROVED BY THE DISTRICT LANDS OFFICER AS BEING APPROPRIATE FOR THE USE OF THE SITE AS A WORKS AREA.
11. THE TENTATIVE OCCUPATION PERIOD SHALL BE REFERRED TO EMPLOYER'S REQUIREMENTS PART 2 AND PART 14 SECTION 1 CLAUSE 1.45A.
12. THE WORKS AREAS SHOWN ON THIS DRAWING ARE TO BE SHARE-USED AMONG THE CONTRACTS OF TM-CLKL-RELATED CONTRACTS. THE AREAS HATCHED WITH ARE TENTATIVELY ALLOCATED FOR THE USE BY THIS CONTRACT.

**LEGEND:**

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

**SETTING OUT COORDINATES OF AREA 23**

POINT	COORDINATES	
	EASTING	NORTHING
W23-C1	826385.78	824036.80
W23-C2	826405.87	823806.07
W23-C3	826344.18	823790.10
W23-C4	826340.88	823801.06
W23-C5	826321.68	823843.84
W23-C6	826334.92	823992.47
W23-C7	826332.72	824033.89

**PROJECT**  
項目

**TUEN MUN - CHEK LAP KOK LINK**

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

**CLIENT**  
業主

路政署  
**HIGHWAYS DEPARTMENT**  
港務處大橋及橋樑工程管理處  
Hong Kong - Zhuhai - Macao Bridge  
Hong Kong Project Management Office

**CONSULTANT**  
工程顧問公司

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**SUB-CONSULTANTS**  
分判工程顧問公司

---

Fig 1.11

**ISSUE/REVISION**  
修訂

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

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**STATUS**  
階段

**SCALE**  
比例

**DIMENSION UNIT**  
尺寸單位

A1 : 1000 METRES

---

**KEY PLAN**  
索引圖

---

**PROJECT NO.**  
項目編號

**CONTRACT NO.**  
合約編號

60240249 HY/2012/07

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**SHEET TITLE**  
圖紙名稱

WORKS AREA AND HOARDING PLAN

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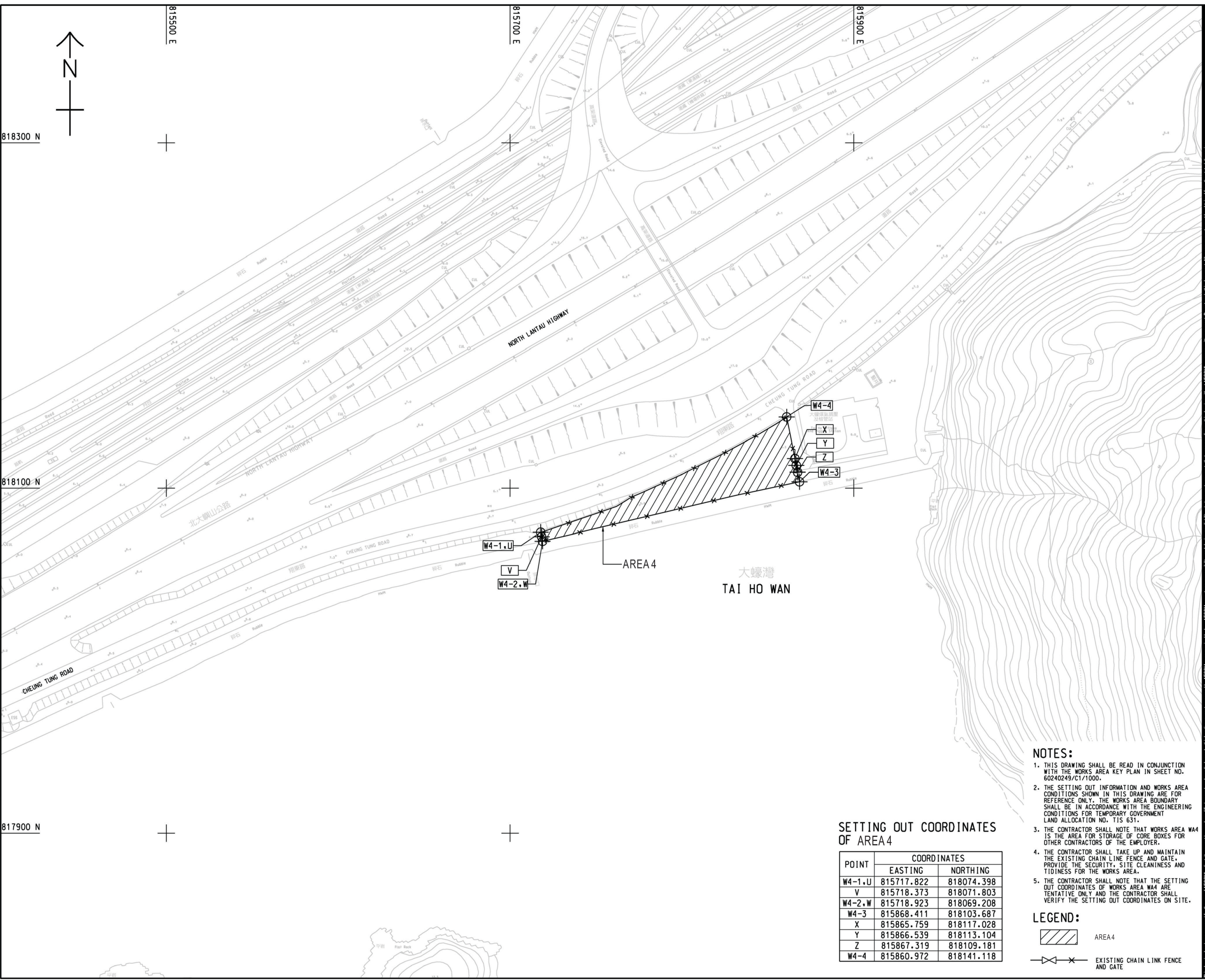
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圖紙編號

60240249/C1/1052

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 ISO A1 594mm x 841mm  
 CNY



**SETTING OUT COORDINATES OF AREA 4**

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/C1/1000.
- 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. T1S 631.
- THE CONTRACTOR SHALL NOTE THAT WORKS AREA W4 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 W4 ARE TENTATIVE ONLY AND THE CONTRACTOR SHALL VERIFY THE SETTING OUT COORDINATES ON SITE.

**LEGEND:**

- AREA 4
- EXISTING CHAIN LINK FENCE AND GATE



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

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

**CLIENT**  
 路政署  
**HIGHWAYS DEPARTMENT**  
 港粵澳大橋香港工程管理部  
 Hong Kong - Zhuhai - Macao Bridge  
 Hong Kong Project Management Office

**CONSULTANT**  
 工程顧問公司  
 AECOM Asia Company Ltd.  
 www.aecom.com

**SUB-CONSULTANTS**  
 分判工程顧問公司

Fig 1.12

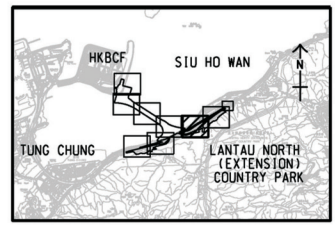
**ISSUE/REVISION**

I/R	DATE	DESCRIPTION	CHK.
-	NOV. 12	TENDER ADDENDUM NO. 1	CNY, CWN

**STATUS**  
 階段

**SCALE**      **DIMENSION UNIT**  
 比例      尺寸單位  
 A1 1 : 1000      METRES

**KEY PLAN**  
 索引圖



**PROJECT NO.**      **CONTRACT NO.**  
 項目編號      合約編號  
 60240249      HY/2012/07

**SHEET TITLE**  
 圖紙名稱  
 LOCATION OF AREA 4

**SHEET NUMBER**  
 圖紙編號  
 60240249/C1/1053

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**Key**

- Air Sensitive Receiver
- Noise Sensitive Receiver
- Water Sensitive Receiver
- ▲ Site of Special Scientific Interest (SSSI)
- Known Coral Communities
- Site Boundary

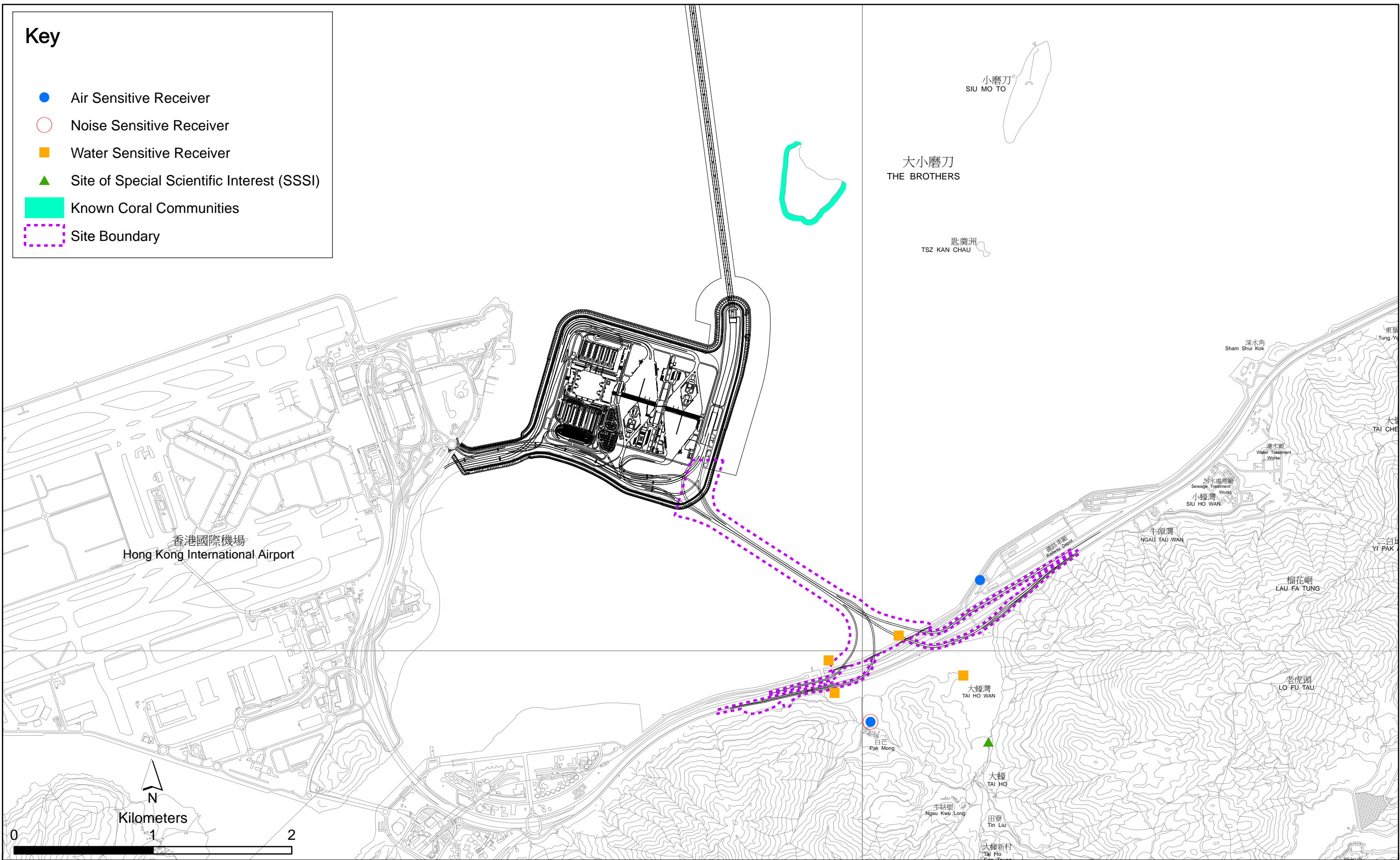


Figure 1.13

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

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Date: 11/4/2014

**Environmental  
Resources  
Management**



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

## 2.1 AIR QUALITY

### 2.1.1 Monitoring Requirements and Equipment

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

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

Monitoring Station	Location	Description	Monitoring Dates
ASR 8	Pak Mong Village Watch Tower	Rooftop of the premise	3, 9, 13, 19, 25 and 30 June 2014
ASR 8A	Area 4	On ground at the Area 4	

High Volume Samplers (HVSs) were used for carrying out 1-hour and 24-hr TSP monitoring on 3, 9, 13, 19, 25 and 30 June 2014 at ASR8 (Pak Mong Village Watch Tower) and ASR8A (Area 4) (*Figure 2.1; Table 2.1*) in accordance with the requirements stipulated in the Updated EM&A Manual. Wind anemometer was installed at the rooftop of Pak Mong Village Watch Tower for logging wind speed and wind direction. Details of the equipment deployed are given in *Table 2.2*. Copies of the calibration certificates for the equipment are presented in *Appendix E*.

**Table 2.2** *Air Quality Monitoring Equipment*

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



**Key**

- Original Monitoring Station
- Alternative Monitoring Station
- Site Boundary

AQMS	X	Y
ASR9A	815847.40	818508.64
ASR9C	816399.52	818946.65
ASR8	815059.45	817488.99
ASR8A	815856.14	818118.14

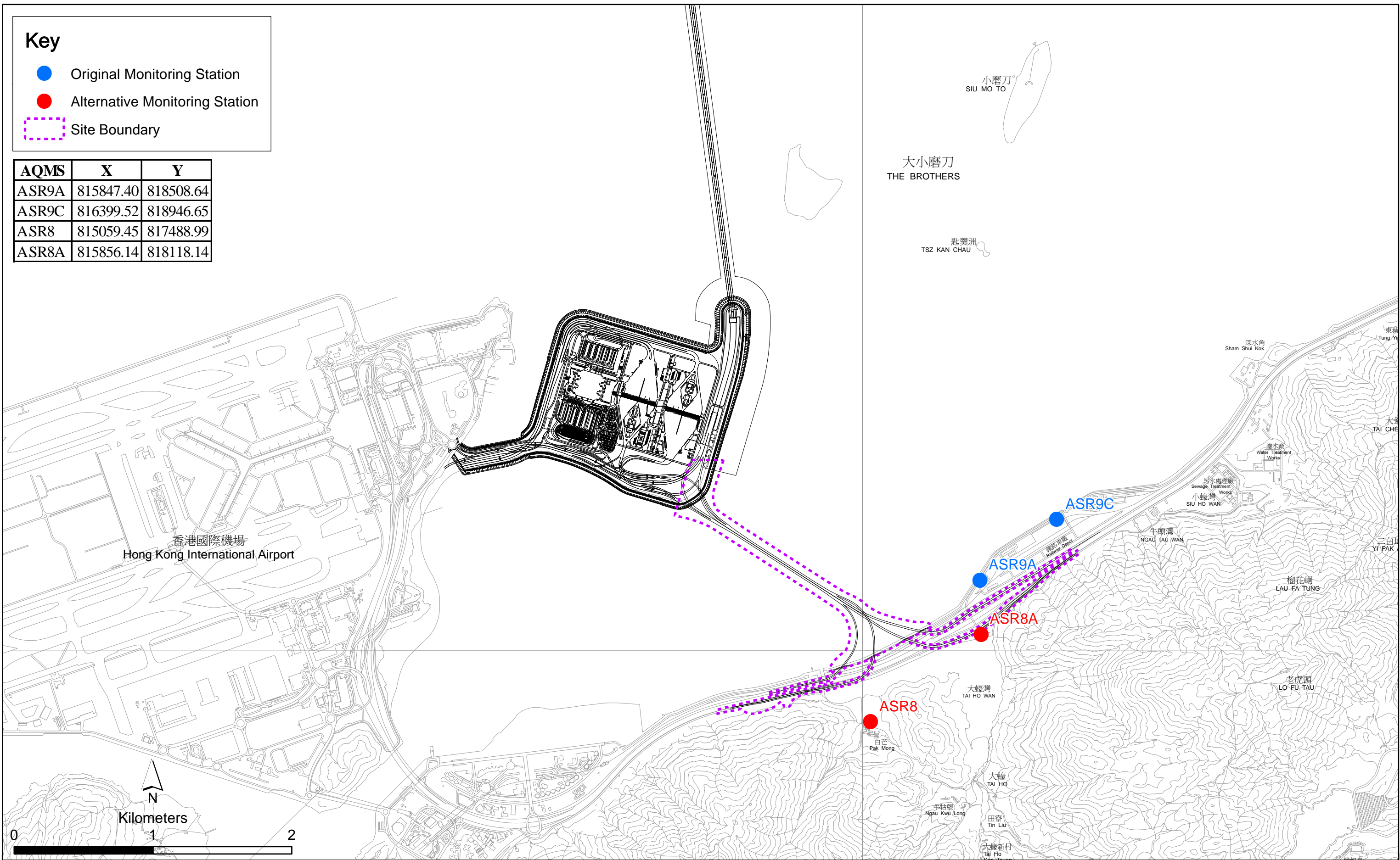


Figure 2.1

**Locations of Air Quality Monitoring Stations**

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Date: 6/12/2013

Remark: Air Quality Monitoring Stations ASR9A and ASR9C (Siu Ho Wan MTRC Depot) proposed in accordance with the Updated EM&A were temporarily relocated to ASR8A and ASR8, respectively.

**Environmental  
Resources  
Management**



## 2.1.2 *Monitoring Schedule for the Reporting Month*

The schedule for air quality monitoring in June 2014 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*

	Average ( $\mu\text{g}/\text{m}^3$ )	Range ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
ASR 8A	73	47-131	394	500
ASR 8	70	49-115	393	500

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

	Average ( $\mu\text{g}/\text{m}^3$ )	Range ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
ASR 8A	54	39-69	178	260
ASR 8	53	40-68	178	260

The major dust source 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 from the wind station, including wind speed and wind direction, is provided in *Appendix H*.

## 2.2 *NOISE MONITORING*

### 2.2.1 *Monitoring Requirements and Equipment*

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

Noise monitoring was performed on 3, 9, 13, 19, 25 and 30 June 2014 using sound level meter at the designated monitoring station NSR 1 (*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 equipment deployed are provided in *Table 2.6*. Copies of the calibration certificates for the equipment are presented in *Appendix E*.



**Key**

- Noise Monitoring Station
- Site Boundary

NMS	X	Y
NSR1	815059.45	817488.99

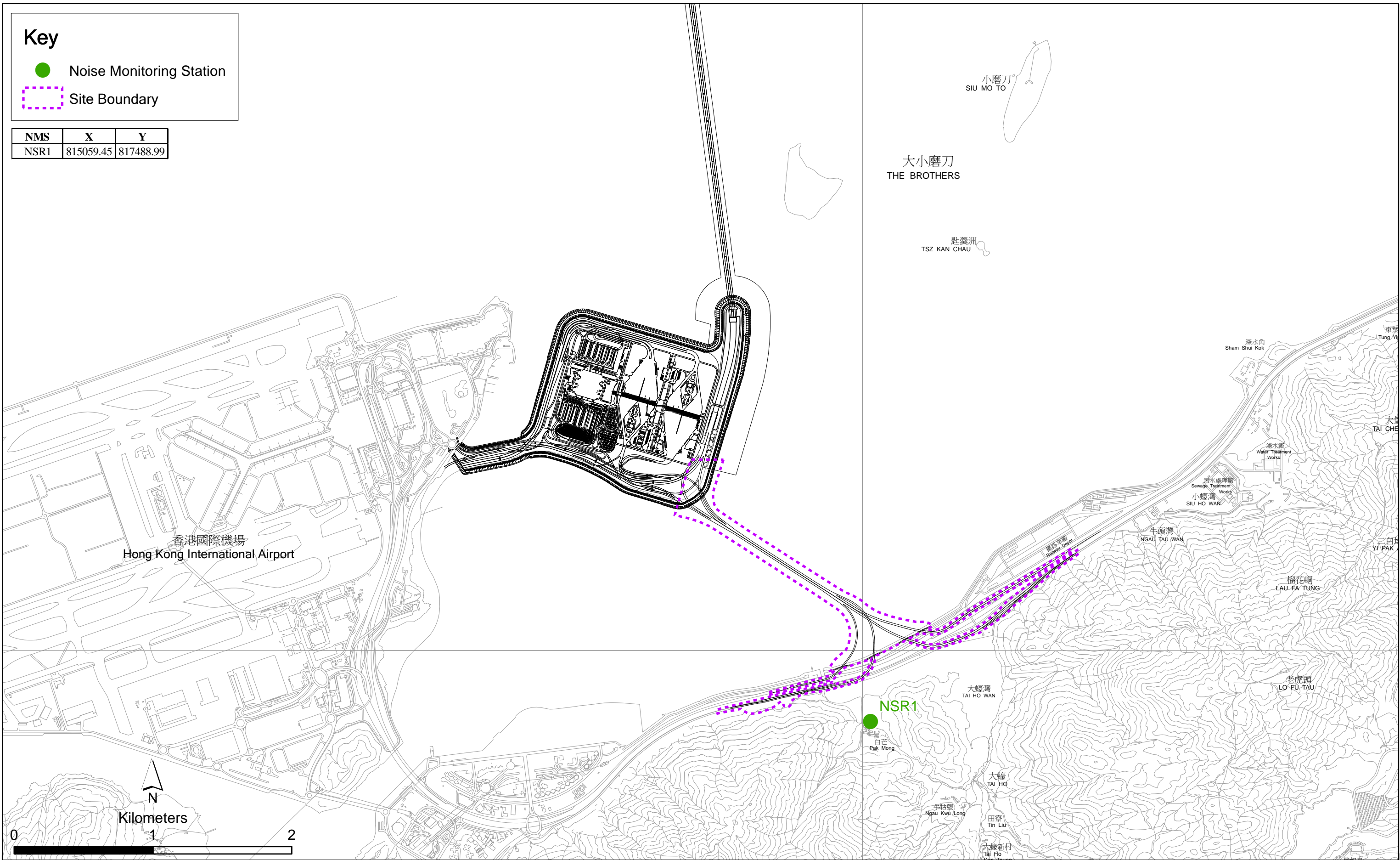


Figure 2.2

**Locations of Noise Monitoring Stations**

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

Monitoring Station	Location	Description	Parameter	Frequency and Duration	Monitoring Dates
NSR 1	Pak Mong Village Watch Tower	Rooftop of the premise	30-minute measurement at each monitoring station between 0700 and 1900 on normal weekdays (Monday to Saturday). $L_{eq}$ , $L_{10}$ and $L_{90}$ would be recorded.	At least once per week	3, 9, 13, 19, 25 and 30 June 2014

**Table 2.6 Noise Monitoring Equipment**

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

**2.2.2 Monitoring Schedule for the Reporting Month**

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

**2.2.3 Results and Observations**

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

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

	Average , dB(A), $L_{eq}$ (30mins)	Range, dB(A), $L_{eq}$ (30mins)	Limit Level, dB(A), $L_{eq}$ (30mins)
NSR 1	58	55-59	75



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

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

## 2.3 WATER QUALITY MONITORING

### 2.3.1 Monitoring Requirements and Equipment

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

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

**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> </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	<ul style="list-style-type: none"> <li>• Water depth (m)</li> <li>• Salinity (ppt)</li> <li>• DO (mg/L and % of saturation)</li> <li>• SS (mg/L)</li> </ul>		
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			

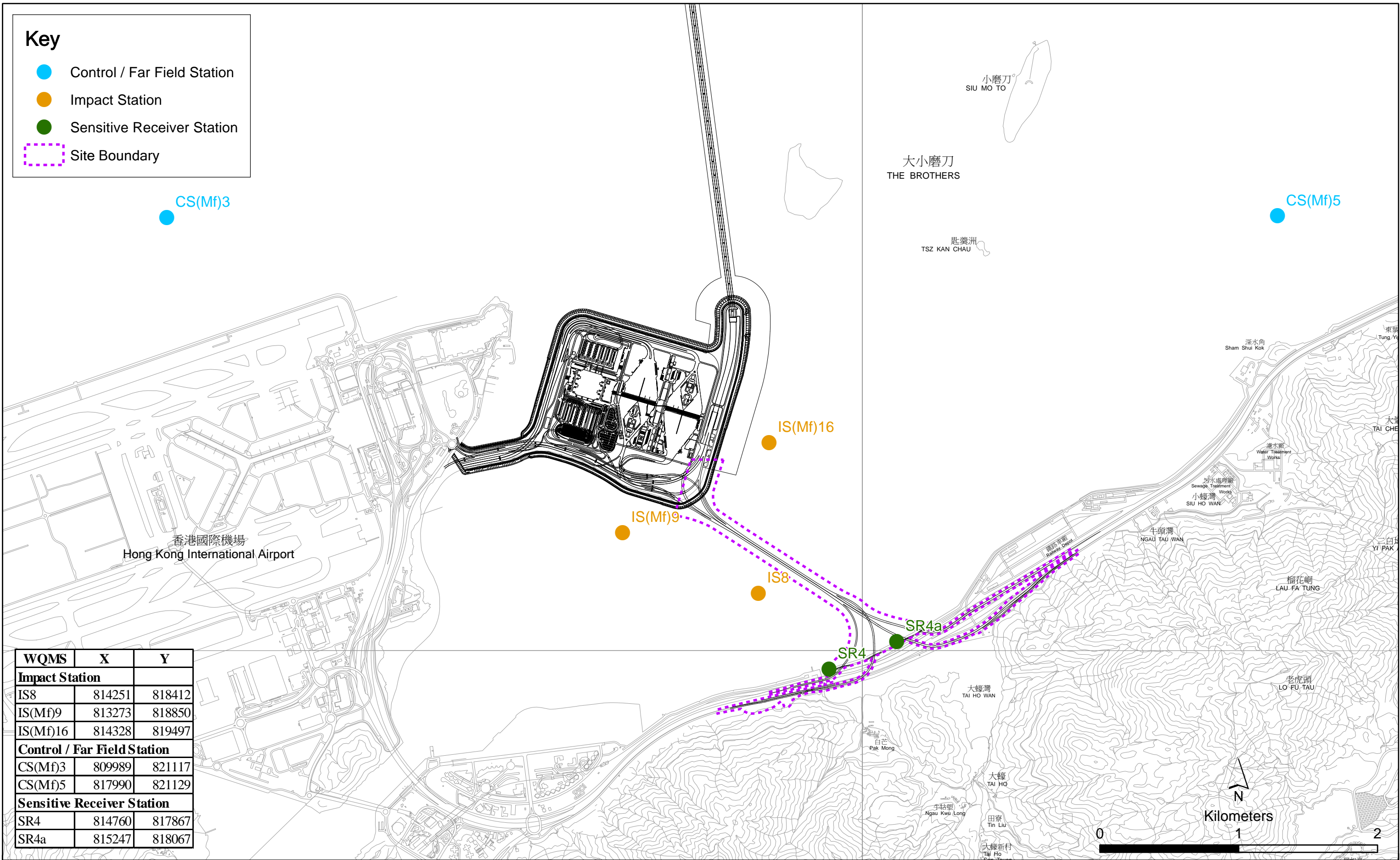
\*Notes:

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*.

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

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

**2.3.2**      **Monitoring Schedule for the Reporting Month**

The schedule for water quality monitoring in June 2014 is provided in *Appendix F*.

**2.3.3**      **Results and Observations**

A 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*.

No Action and Limit levels exceedances was recorded at all monitoring stations for impact water quality monitoring in the reporting month. No action is thus required to be undertaken in accordance with the Event Action Plan presented in *Appendix L*.

## 2.4 DOLPHIN MONITORING

### 2.4.1 Monitoring Requirements

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

### 2.4.2 Monitoring equipment

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

Table 2.10 Dolphin Monitoring Equipment

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

### 2.4.3 Monitoring Parameter, Frequencies and Duration

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

### 2.4.4 Monitoring Location

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

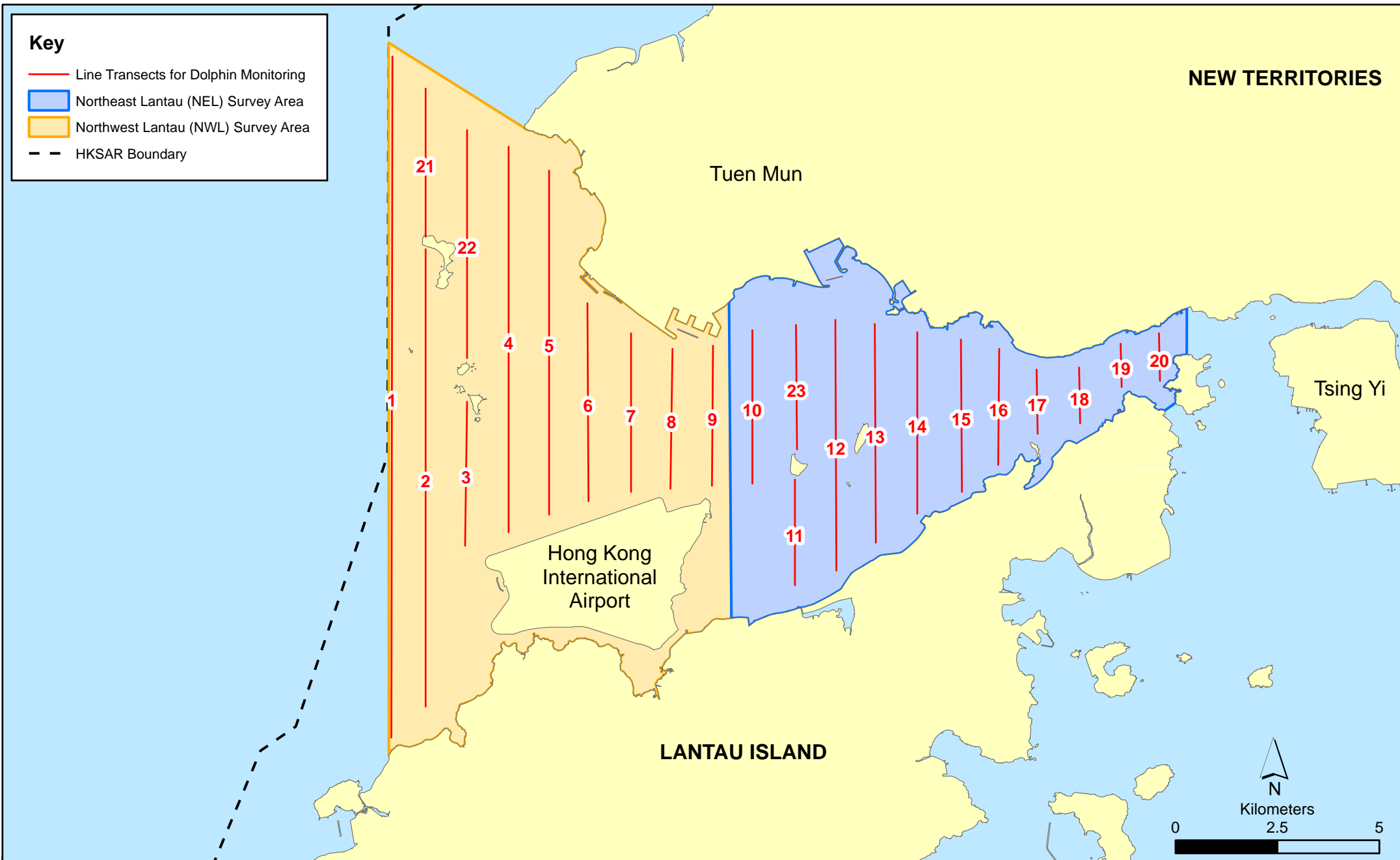


Figure 2.4

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

**Table 2.11 Impact Dolphin Monitoring Line Transect Co-ordinates**

Line No.		Easting	Northing		Line No.		Easting	Northing
1	Start Point	804671	814577		13	Start Point	816506	819480
1	End Point	804671	831404		13	End Point	816506	824859
2	Start Point	805475	815457		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	820690		19	Start Point	822513	823268
7	End Point	810499	824613		19	End Point	822513	824321
8	Start Point	811508	820847		20	Start Point	823477	823402
8	End Point	811508	824254		20	End Point	823477	824613
9	Start Point	812516	820892		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	818449		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 3, 5, 10 and 16 of June 2014 (*Appendix F*).

#### 2.4.7 *Results and Observations*

A total of 300.78 km of survey effort was collected, with 89.7% of the total survey effort being conducted under favourable weather conditions (i.e. Beaufort Sea State 3 or below with good visibility) during the survey in June 2014. Among the two areas, 116.40 km and 184.38 km of survey effort were collected from NEL and NWL survey areas respectively. The total survey effort conducted on primary and secondary lines were 215.36 km and 85.42 km respectively. The survey efforts are summarized in *Appendix K*.

A total of three (3) groups of seven (7) Chinese White Dolphins were sighted during the two sets of surveys in June 2014. All sightings were made in NWL during the two sets of surveys in June, with no dolphin being sighted at all in NEL. One sighting was made on primary lines during on-effort search, and none of the dolphin groups was associated with operating fishing vessel. No sighting was made in the proximity of TM-CLKL Southern Connection Viaduct Section. The distribution of dolphin sightings 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 June 2014 with the results presented in *Tables 2.12* and *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: Jun 3rd/5th	0.0	0.0
	Set 2: Jun 10th/16th	0.0	0.0
NWL	Set 1: Jun 3rd/5th	1.7	5.0
	Set 2: Jun 10th/16th	0.0	0.0

Note: Dolphin Encounter Rates are deduced from the two sets of surveys (two surveys in each set) in June 2014 in Northeast (NEL) and Northwest Lantau (NWL)



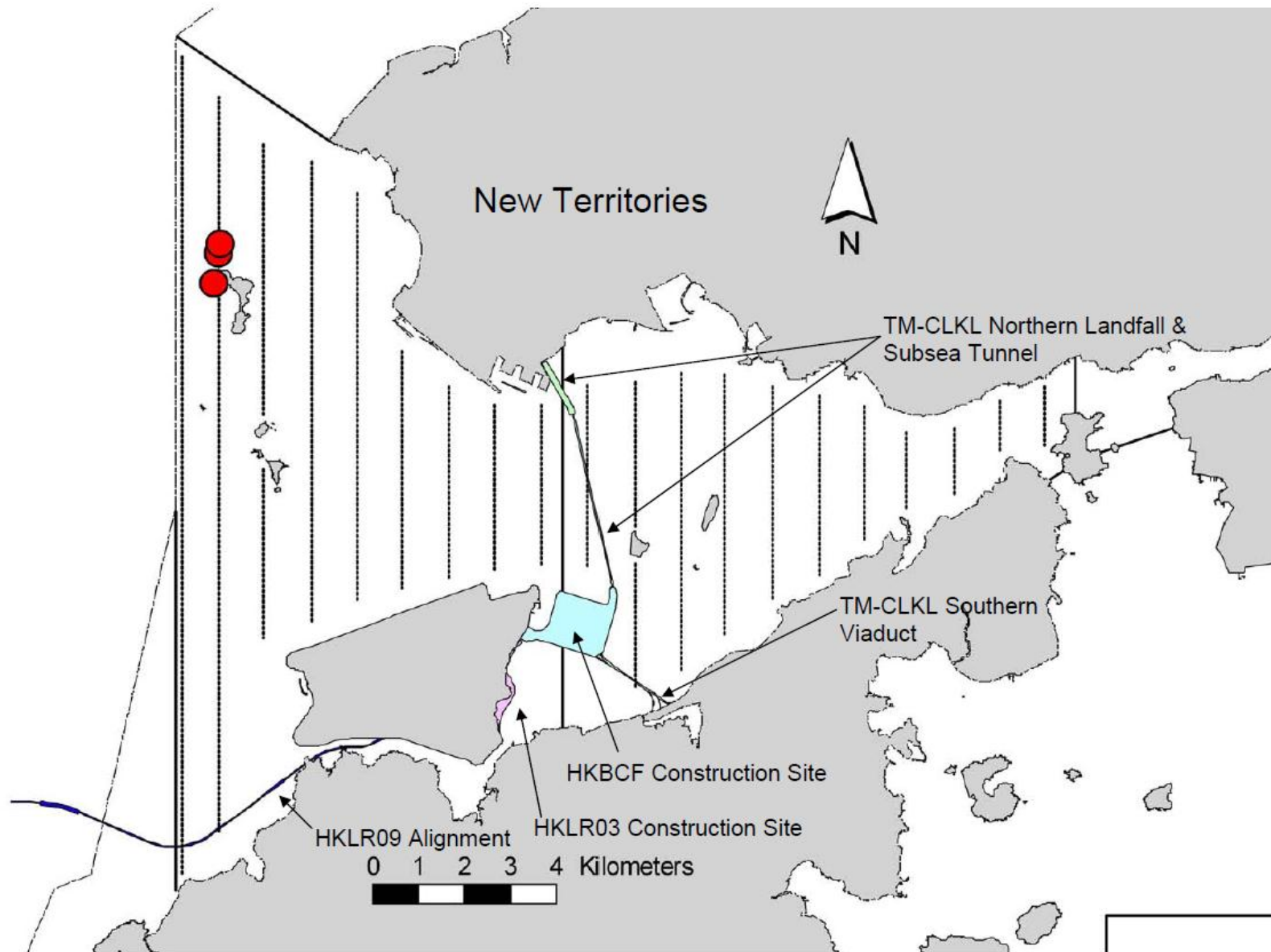


Figure 2.5

HY/2012/07 TM-CLKL Southern Connection Viaduct Section  
 The distribution of dolphin sightings during the reporting period  
 (Source: Adopted from HKLR03 Monitoring Survey in June 2014)

Date 07/03/2014

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>	0.9	1.3	2.6	3.9

Note: Overall dolphin encounter rates (sightings per 100km of survey effort) from all four surveys are conducted in June 2014 on primary lines only as well as both primary lines and secondary lines in Northeast and Northwest Lantau

The average group size of Chinese White Dolphins in June 2014 was 2.33 individuals per group, which was much lower than the ones recorded in previous months of dolphin monitoring. All dolphin groups were only composed of 1-3 animals. Detailed results of dolphin monitoring in this reporting month are presented in *Appendix K*.

During this month of dolphin monitoring, no adverse impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Chinese White Dolphins was noticeable from general observations.

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

#### **2.4.8 Marine Mammal Exclusion Zone Monitoring**

Daily 250 m marine mammal exclusion zone monitoring was undertaken during the period of dredging activities being undertaken. No sighting of Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) were recorded in June 2014 during the exclusion zone monitoring.

#### **2.5 CORAL MONITORING**

No Post-Translocation Monitoring Exercise was conducted in the reporting month in June 2014.

## 2.6

### *EM&A SITE INSPECTION*

Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting month, four (4) site inspections were carried out on 4, 11, 19 and 25 June 2014.

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

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

Inspection Date	Environmental Observations	Recommendations/ Remarks
4 June 2014	<p>E9</p> <ul style="list-style-type: none"> <li>Decoupling pad was not placed underneath the water pump and generator</li> </ul> <p>E10</p> <ul style="list-style-type: none"> <li>Chemical containers were placed at site without drip tray</li> <li>Oil stain was seen underneath the crane</li> </ul>	<p>E9</p> <ul style="list-style-type: none"> <li>The Contractor was advised to review the decoupling plan at site</li> </ul> <p>E10</p> <ul style="list-style-type: none"> <li>The Contractor was reminded to place the chemical containers on drip tray properly</li> <li>The Contractor was reminded to maintain all plants in properly and oil stain was immediately absorbed by absorbent.</li> </ul>
11 June 2014	<p>B9</p> <ul style="list-style-type: none"> <li>Drip tray was not plugged</li> </ul> <p>Seafront</p> <ul style="list-style-type: none"> <li>No acoustic decoupling pad was found for generators on platform</li> <li>Chemical containers were not placed in drip tray</li> <li>Drip trays for generators next to the office have no stopper</li> </ul>	<p>B9</p> <ul style="list-style-type: none"> <li>The Contractor was reminded to plug the drip tray properly</li> </ul> <p>Seafront</p> <ul style="list-style-type: none"> <li>Acoustic decoupling pad was suggested to be placed underneath the generators on platform</li> <li>Chemical containers at site should be placed in drip tray</li> <li>All drip trays used at site should be properly plugged</li> </ul>
19 June 2014	<p>Rockfill platform at Seafront</p> <ul style="list-style-type: none"> <li>A drip tray was found not plugged</li> </ul> <p>G23</p> <ul style="list-style-type: none"> <li>Chemical containers were not placed in drip tray</li> <li>Labels of chemical waste was found dropped off</li> </ul> <p>B2</p> <ul style="list-style-type: none"> <li>Drip tray was not plugged properly</li> </ul>	<p>Rockfill platform at Seafront</p> <ul style="list-style-type: none"> <li>The Contractor was reminded to plug the drip tray</li> </ul> <p>G23</p> <ul style="list-style-type: none"> <li>Chemical containers should be provided for chemical containers</li> <li>All chemical waste containers should be well-labelled</li> </ul> <p>B2</p> <ul style="list-style-type: none"> <li>The Contractor was reminded to plug drip tray properly</li> </ul>
25 June 2014	<p>B15</p> <ul style="list-style-type: none"> <li>Two chemical containers were placed randomly at site</li> <li>General refuse was observed scattered randomly at site</li> </ul> <p>B16</p> <ul style="list-style-type: none"> <li>Stagnant water was observed to be present in drip tray of a generator</li> <li>Stagnant water was observed to be accumulated in pit which is for placing excavated materials</li> </ul>	<p>B15</p> <ul style="list-style-type: none"> <li>The Contractor was advised to put them on drip tray properly</li> <li>The Contractor was advised to clear off any general refuse properly</li> </ul> <p>B16</p> <ul style="list-style-type: none"> <li>The Contractor was advised to clear away any stagnant water accumulated in drip tray in timely manner</li> <li>The Contractor was advised to clear away any stagnant water accumulated in pits in timely manner</li> </ul>

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

## 2.7 WASTE MANAGEMENT STATUS

The Contractor had 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), imported fill, recyclable materials and marine sediment. 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>i</sub> )
June 2014	382	99	120	77,290	21,120	0	338	322

**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.

## 2.8 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/A	8 Dec 2010	NA	HyD	Tuen Mun- Chek Lap Kok Link
Environmental Permit	EP-354/2009/B	28 Jan 2014	NA	HyD	Tuen Mun- Chek Lap Kok Link
Construction Dust Notification	361571	5 Jul 2013	NA	GCL	-
Construction Dust Notification	362093	17 Jul 2013	NA	GCL	For Area 23
Billing Account for Disposal	7017735	10 Jul 2013	End of Project	GCL	-
Chemical Waste Registration	5213-961-G2380-13	10 Oct 2013	NA	GCL	Chemical waste produced in Contract HY/2012/07 (Area 1 adjacent to Cheng Tung Road, Siu Ho Wan)
Chemical Waste Registration	5213-961-G2380-14	10 Oct 2013	NA	GCL	Chemical waste produced in Contract HY/2012/07 (Area 2 adjacent to Cheung Tung Road, Pak Mong Village)
Chemical Waste Registration	5213-974-G2588-03	4 Nov 2013	NA	GCL	Chemical waste produced in Contract HY/2012/07 (WA5 adjacent to Cheung Tung Road, Yam O)
Construction Waste Disposal Account	7017735	10 Jul 2013	NA	GCL	Waste disposal in Contract HY/2012/07
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	Nil	Application in process	NA	GCL	For Piling Works
Construction Noise Permit	GW-RS0419-14	15 May 2014	13 Nov 2014	GCL	For loading & unloading on NLH near Viaducts A

License/ Permit	License or Permit No.	Date of Issue	Date of Expiry	License/ Permit Holder	Remarks
Construction Noise Permit	GW-RS0226-14	30 Mar 2014	29 Sep 2014	GCL	& B For loading & unloading on NLH near Viaduct D
Construction Noise Permit	GW-RS0299-14	7 Apr 2014	5 Jul 2014	GCL	Pier B8 at CEDD Access Road
Construction Noise Permit	GW-RS0331-14	4 Apr 2014	6 Jul 2014	GCL	Broad permit for works at seafront & marine piers
Construction Noise Permit	GW-RS0338-14	4 Apr 2014	3 Jun 2014	GCL	For bored piling works between Pier E13 and HKBCF
Construction Noise Permit	GW-RS1423-13	11 Dec 2013	30 Apr 2014	GCL	Renewal for marine portion
Construction Noise Permit	GW-RW0123-14	27 Feb 2014	27 Aug 2014	GCL	For night works and works in general holiday at WA5
Dumping Permit/ Loading Permit (Type 1 – Open Sea Disposal)	(4) in EP/MD/14-075	25 Sep 2013	NA	GCL	-
Marine Dumping Permit	EP/MD/14-075	28 Jan 2014	27 Jul 2014	GCL	For dumping Type I Sediment
Marine Dumping Permit	EP/MD/15-028	1 Jun 2014	30 Jun 2014	GCL	For dumping Type I (Dedicated Site) and Type II sediment
Chemical Waste Registration	5213-951-G2380-17	12 Jun 2014	NA	GCL	Viaducts A, B, C, D & E
Construction Noise Permit for night works and works in general holidays	GW-RS0646-14	27 Jun 2014	26 Oct 2014	GCL	Broad Permit for Works at Seafront & Marine Piers & Pier B9
	GW-RS0647-14	28 Jun 2014	26 Oct 2014	GCL	Pier C7 & D8 at CEDD Access Road
Construction Noise Permit for night works and works in general holidays					
Marine Dumping Permit	EP/MD/15-028	1 Jun 2014	30 Jun 2014	GCL	For dumping Type I (Dedicated Site) and Type II sediment

## **2.9** *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.

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

Results for 1-hour TSP, 24-hour TSP, construction noise and impact water quality monitoring complied with the Action/ Limit levels in the reporting period. Cumulative statistics on exceedances is provided in *Appendix N*.

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

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

One (1) complaint was referred by EPD on 23 June 2014 regarding the discharge of muddy water from Site Access 9A to the nearby storm drains. The complaint was followed-up on 25 June 2014. As to the complaint was still being investigated in June, the completed complaint investigation report will be presented in the 9<sup>th</sup> monthly EM&A report.

No notification of summons and prosecution was received in the reporting period.

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

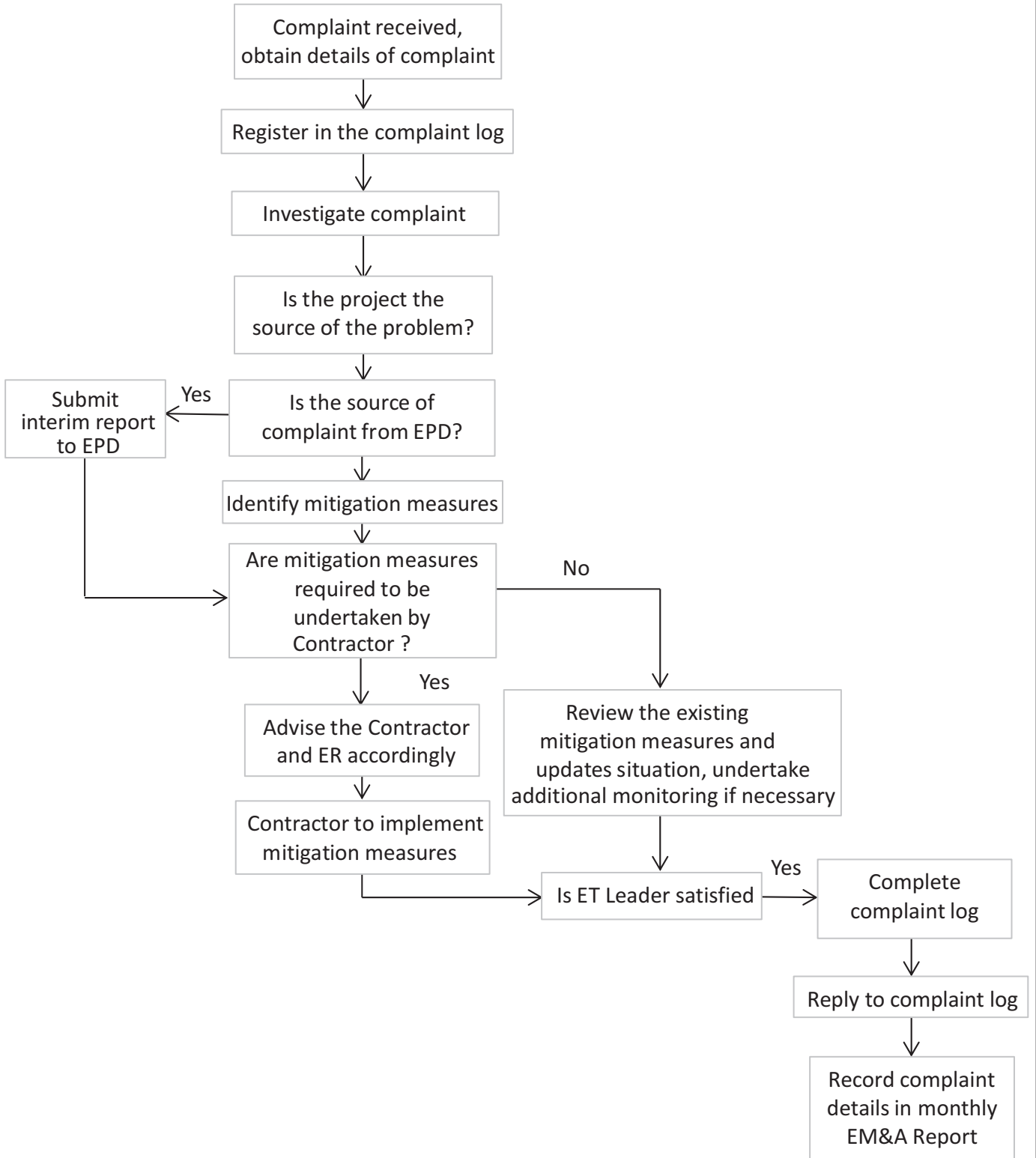


Figure 2.6

Environmental Complaint Handling Procedure



### 3 *FUTURE KEY ISSUES*

#### 3.1 *CONSTRUCTION PROGRAMME FOR THE COMING MONTHS*

As informed by the Contractor, the major works for this Contract in July 2014 will be:

##### *Marine Works*

- Construction of Pile caps at Viaduct B;
- Marine piling platform installation;
- Marine Piling at Viaduct B & E;
- Construction of rockfill platform at Viaduct D landing and
- Additional marine ground investigation (GI) and laboratory testing

##### *Land-based Works*

- Construction of pile cap superstructure of Viaduct B;
- Fence installation and relocation of Area 2, Viaduct A, B, C & D;
- Land Piling at Viaduct B;
- Piling platform installation for Viaduct B, C, D and E;
- Additional land GI, trial pits & lab testing;
- Utility surveys; and
- Slope work of Slope 9SE-B/C8, 9SE-B/C9 & 9SE-B/F9.

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

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of July 2014 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 schedule for environmental monitoring in July 2014 is provided in *Appendix F*.

#### 4.1 CONCLUSIONS

This Eighth Monthly EM&A Report presents the findings of the EM&A activities undertaken during the period from 1 to 30 June 2014, in accordance with the Updated EM&A Manual and the requirements of EP-354/2009/B.

Air quality (including 1-hour TSP and 24-hour TSP), noise, water quality, and dolphin monitoring were carried out in the reporting month. Results for 1-hr TSP, 24-hr TSP and noise monitoring complied with the Action and Limit levels in the reporting period. Two exceedances of Action Level in dissolved oxygen were recorded at control stations for the impact water quality monitoring

A total of three (3) groups of seven (7) Chinese White Dolphins were recorded during the two sets of surveys in June 2014. All sightings were made in NWL during the two sets of surveys in June 2014, with no dolphin being sighted at all in NEL. During this month of dolphin monitoring, no adverse impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Chinese White Dolphins was noticeable from general observations.

Environmental site inspection was carried out four (4) times in June 2014. Recommendations on remedial actions were given to the Contractor for the deficiencies identified during the site audits.

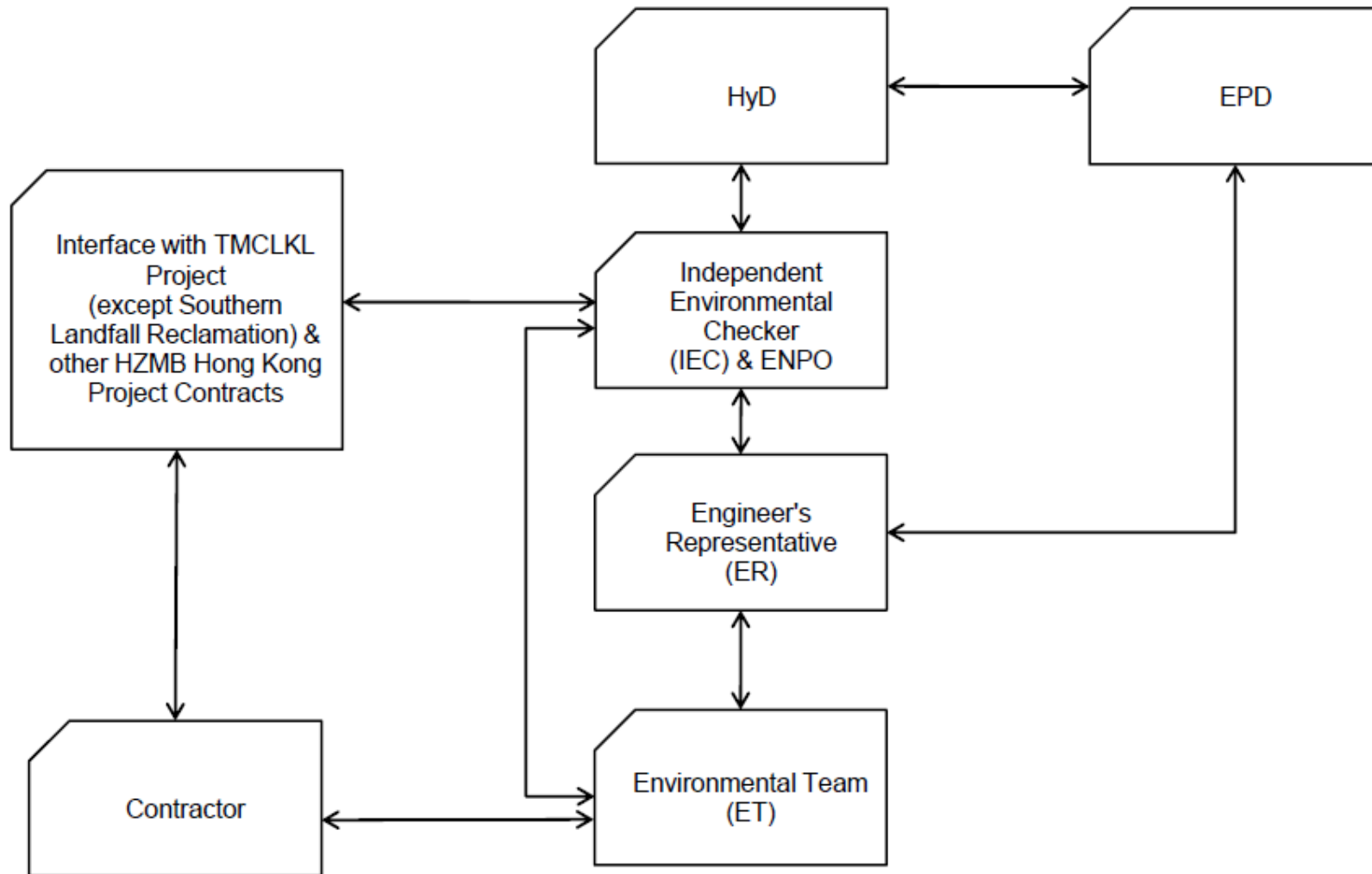
One (1) environmental complaint regarding the discharge of muddy water and soil to the nearby storm drains which was still being investigated in June.

No notification of summons and prosecution were received in the reporting month.

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

Appendix A

## Project Organization for Environmental Works



↔ Line of Communication

Appendix B

## Three-Month Rolling Construction Programme











Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	2014																																							
											June					July					August					September																								
											19	26	02	09	16	23	30	07	14	21	28	04	11	18	25	01	08	15																						
<b>Additional Marine GI</b>																																																		
PR02162	PBH17C (Pier E13B)	12	15-May-14 A	100%	0	26-May-14 A																																												
PR02163	PBH18A (Pier E13A)	12	27-May-14 A	100%	0	03-Jun-14 A																																												
PR02164	PBH17B (Pier E13B)	12	04-Jun-14 A	100%	0	12-Jun-14 A																																												
<b>Design Submissions</b>																																																		
<b>Detailed Design (v17)</b>																																																		
<b>Ground Investigation</b>																																																		
ARDD0009	Consultation with GEO	20	13-Aug-13 A	85%	3	25-Jun-14	01-Jul-14	03-Jul-14	6	57																																								
ARDD0010	IC/SO Approval of Ground Investigation Interpretative Report - AP03.00	75	13-Aug-13 A	20%	60	12-Sep-14	11-Apr-14	03-Jul-14	-51	0																																								
ARDD0010-1	IC/SO Approval of Ground Investigation Interpretative Report - AP03.00	0		0%	0	12-Sep-14		03-Jul-14	-51	0																																								
ARDD0013-1	Additional GI Fieldwork, Lab Testing and Permitting E5-E8	45	16-Jul-13 A	90%	5	27-Jun-14	27-Jun-14	03-Jul-14	5	86																																								
ARDD0013-2	Additional GI Fieldwork, Lab Testing and Permitting - Other areas	60	16-Jul-13 A	80%	12	08-Jul-14	18-Jun-14	03-Jul-14	-3	78																																								
ARDD0015-1	E5-E8 Interpretation	15	17-Sep-13 A	85%	2	25-Jun-14	01-Jul-14	03-Jul-14	7	103																																								
ARDD0015-2	Additional GI Interpretative Report - AP03.00	15	23-Jun-14	0%	15	11-Jul-14	28-Feb-14	20-Mar-14	-81	0																																								
ARDD0017-1	Earliest IC certificate for DDA-AP03.00	0		0%	0	22-Aug-14		03-Jul-14	-36	45																																								
ARDD0017-2	IC/SO Approval of Additional GI Interpretative Report - AP03.00	75	14-Jul-14	0%	75	24-Oct-14	21-Mar-14	03-Jul-14	-81	0																																								
<b>Surveys and Investigations</b>																																																		
ARDD0025	IC/SO Approval of Utility Report - AP04.00	75	22-Oct-13 A	40%	45	22-Aug-14	30-Jan-17	31-Mar-17	680	0																																								
ARDD0025-1	IC/SO Approval of Utility Report - AP04.00	0		0%	0	22-Aug-14		31-Mar-17	680	0																																								
<b>General Submissions</b>																																																		
ARDD0039	IC/SO Approval of Maintenance Matrix - AP07.00	75	08-May-14 A	20%	60	12-Sep-14	17-Jun-15	08-Sep-15	257	0																																								
ARDD0039-1	IC/SO Approval of Maintenance Matrix - AP07.00	0		0%	0	12-Sep-14		08-Sep-15	257	203																																								
ARDD0041-1	Preparation of O&M Facility Provisions AIP - BP11.00	50	30-May-14 A	100%	0	20-Jun-14 A																																												
ARDD0041-2	IC/SO Approval of O&M Facility Provisions AIP - BP11.00	75	23-Jun-14	0%	75	03-Oct-14	17-Dec-14	31-Mar-15	127	0																																								
<b>GCL Erection Sequence and Method</b>																																																		
ARDD0060-2	Receipt of Final Erection Sequence and Loads - Bridge A	0		0%	0	23-Jun-14		24-Sep-14	68	26																																								
ARDD0060-4	Receipt of Final Erection Sequence and Loads - Bridge C	0		0%	0	23-Jun-14		09-Jun-14	-10	2																																								
ARDD0060-5	Receipt of Final Erection Sequence and Loads - Bridge D	0		100%	0	21-May-14 A																																												
ARDD0060-7	Receipt of Final Erection Sequence and Loads - Bridge F	0		0%	0	23-Jun-14		06-Aug-14	33	10																																								
<b>Gazette and Alignment (assume no gazette change)</b>																																																		
ARDD0071	IC/SO Approval of Alignment DDA - BP01.01	75	24-Jan-14 A	60%	30	01-Aug-14	07-Feb-14	20-Mar-14	-96	0																																								
ARDD0071-1	Earliest IC Cert for Alignment DDA - BP01.01	0		0%	0	23-Jun-14		20-Mar-14	-66	30																																								
ARDD0071-2	IC/SO Approval of Alignment DDA - BP01.01	0		0%	0	01-Aug-14		20-Mar-14	-96	0																																								
<b>General Viaduct Submission</b>																																																		
ARDD0076	IC/SO Approval of Viaduct E&M Works AIP - BP21.00	68	15-Mar-14 A	20%	54	05-Sep-14	13-May-15	28-Jul-15	233	0																																								
ARDD0076-1	IC/SO Approval of Viaduct E&M Works AIP - BP21.00	0		0%	0	05-Sep-14		28-Jul-15	233	0																																								
ARDD0077	Preparation of Viaduct E&M Works DDA - BP21.01	30	01-Apr-14 A	100%	0	16-Jun-14 A																																												
ARDD0078	IC/SO Approval of Viaduct E&M Works DDA BP21.01	75	17-Jun-14 A	0%	75	03-Oct-14	15-Apr-15	28-Jul-15	212	0																																								
<b>Viaduct B</b>																																																		
<b>Viaduct Design</b>																																																		
ARDD0099-1	Viaduct B - Earliest IC Certificate for DP12.03	0		0%	0	23-Jun-14		27-May-14	-18	18																																								
ARDD0099-3	Viaduct B - IC/SO Approval of Sub & Superstructure DDA - DP12.03	75	04-Mar-14 A	20%	60	12-Sep-14	02-May-14	24-Jul-14	-36	0																																								
ARDD0099-5	Viaduct B - IC/SO Approval of Sub & Superstructure DDA - DP12.03	0		0%	0	12-Sep-14		24-Jul-14	-36	0																																								
<b>Associated Construction Milestones</b>																																																		
ARDD0128	Viaduct B - DDA approval ready for Commencement of Pilecaps (Marine)	0	13-Sep-14	0%	0			25-Jul-14	-50	0																																								
ARDD0128-1	Viaduct B - DDA approval ready for Commencement of Pilecaps (Land)	0	13-Sep-14	0%	0			28-Oct-14	45	10																																								
ARDD0129	Viaduct B - DDA approval ready for Initial Segment Casting	0	13-Sep-14	0%	0			01-Aug-14	-43	69																																								
<b>Viaduct E5 and E6</b>																																																		

	Project ID: J3518DWPPrD1-M13 Layout: J3518-DWP-3MRP submission - M13 Filter: TASK filters: 3-Month Lookahead, No Level of Effort.	<b>Tuen Mun - Chek Lap Kok Link - Southern Connection</b> <b>3-Month Rolling Programme (Page 5 of 27 Pages)</b> <b>(Progress as of 21-Jun-14)</b>				Date	Revision	Checked	Approved	<b>DWG. No.:</b>  <b>J3518/GCL/PGM/3MRP-M13</b>
		28-Jun-14		FZ						

















Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	2014															
											June				July				August				September			
											19	26	02	09	16	23	30	07	14	21	28	04	11	18	25	01
ARDD0713	Viaduct B - Target Geometry Analysis	20	06-Feb-14 A	90%	2	24-Jun-14	25-Apr-14	28-Apr-14	-41	0																
ARDD0714	Viaduct B - Segment Geometry Schedules	10	06-Mar-14 A	90%	1	23-Jun-14	28-Apr-14	28-Apr-14	-40	1																
ARDD0714-1	Viaduct B - Final Erection Geometry (Bridge B3)	0		0%	0	24-Jun-14		28-Apr-14	-41	0																
ARDD0714-2	Viaduct B - Final Erection Geometry (Bridge B2 & B1)	0		0%	0	05-Aug-14		09-Jun-14	-41	0																
<b>Viaduct D</b>																										
ARDD0726	Viaduct D - Confirmation of Erection Sequence from Freyssinet	0		0%	0	23-Jun-14		02-Jun-14	-14	0																
ARDD0727	Viaduct D - Erection Sequence Analysis	20	23-Jun-14	0%	20	18-Jul-14	03-Jun-14	30-Jun-14	-14	0																
ARDD0728	Viaduct D - Target Geometry Analysis	20	21-Jul-14	0%	20	15-Aug-14	01-Jul-14	28-Jul-14	-14	0																
ARDD0729	Viaduct D - Segment Geometry Schedules	10	18-Aug-14	0%	10	29-Aug-14	29-Jul-14	11-Aug-14	-14	0																
ARDD0729-1	Viaduct D - Final Erection Geometry (Bridge D3)	0		0%	0	29-Aug-14		11-Aug-14	-14	0																
<b>Viaduct E5 and E6</b>																										
ARDD0731	Viaduct E5 & E6 - Confirmation of Erection Sequence from Freyssinet	0		0%	0	23-Jun-14		09-Jun-14	-9	23																
ARDD0732	Viaduct E5 & E6 - Erection Sequence Analysis	30	24-Dec-13 A	25%	23	23-Jul-14	08-May-14	09-Jun-14	-32	0																
ARDD0733	Viaduct E5 & E6 - Target Geometry Analysis	30	04-Feb-14 A	25%	23	23-Jul-14	08-May-14	09-Jun-14	-32	0																
ARDD0734	Viaduct E5 & E6 - Segment Geometry Schedules	10	18-Mar-14 A	25%	8	02-Jul-14	29-May-14	09-Jun-14	-17	15																
ARDD0734-1	Viaduct E5 & E6 - Final Erection Geometry	0		0%	0	23-Jul-14		09-Jun-14	-32	25																
<b>Viaduct E7 &amp; E8</b>																										
ARDD0736	Viaduct E7 & E8 - Confirmation of Erection Sequence from Freyssinet	0		0%	0	23-Jun-14		30-May-14	-15	23																
ARDD0737	Viaduct E7 & E8 - Erection Sequence Analysis	30	24-Dec-13 A	25%	23	23-Jul-14	30-Apr-14	30-May-14	-38	0																
ARDD0738	Viaduct E7 & E8 - Target Geometry Analysis	30	04-Feb-14 A	25%	23	23-Jul-14	30-Apr-14	30-May-14	-38	0																
ARDD0739	Viaduct E7 & E8 - Segment Geometry Schedules	10	18-Mar-14 A	25%	8	02-Jul-14	21-May-14	30-May-14	-23	15																
ARDD0739-1	Viaduct E7 & E8 - Final Erection Geometry	0		0%	0	23-Jul-14		30-May-14	-38	25																
<b>Viaduct E1</b>																										
ARDD0741	Viaduct E1 - Confirmation of Erection Sequence from Freyssinet	0		0%	0	23-Jun-14		17-Apr-14	-46	0																
ARDD0742	Viaduct E1 - Erection Sequence Analysis	30	23-Jun-14	0%	30	01-Aug-14	18-Apr-14	29-May-14	-46	0																
ARDD0743	Viaduct E1 - Target Geometry Analysis	30	04-Aug-14	0%	30	12-Sep-14	30-May-14	10-Jul-14	-46	0																
ARDD0744	Viaduct E1 - Segment Geometry Schedules	10	15-Sep-14	0%	10	26-Sep-14	11-Jul-14	24-Jul-14	-46	0																
<b>Viaduct E2</b>																										
ARDD0746	Viaduct E2 - Confirmation of Erection Sequence from Freyssinet	0		0%	0	23-Jun-14		15-May-14	-26	23																
ARDD0747	Viaduct E2 - Erection Sequence Analysis	30	24-Dec-13 A	25%	23	23-Jul-14	15-Apr-14	15-May-14	-49	0																
ARDD0748	Viaduct E2 - Target Geometry Analysis	30	04-Feb-14 A	25%	23	23-Jul-14	15-Apr-14	15-May-14	-49	0																
ARDD0749	Viaduct E2 - Segment Geometry Schedules	10	18-Mar-14 A	25%	8	23-Jul-14	06-May-14	15-May-14	-49	0																
ARDD0749-1	Viaduct E2 - Final Erection Geometry	0		0%	0	23-Jul-14		15-May-14	-49	21																
<b>Reprovisioning Works</b>																										
<b>Chung Tung Road Realignment Viaduct B</b>																										
ARDD0804	Viaduct B - IC/SO Approval of AIP of CTR Reprovisioning Works AIP - BP33.00	68	31-Dec-13 A	40%	41	18-Aug-14	19-Dec-13	13-Feb-14	-132	0																
ARDD0804-1	Viaduct B - IC/SO Approval of AIP of CTR Reprovisioning Works AIP - BP33.00	0		0%	0	18-Aug-14		13-Feb-14	-132	0																
ARDD0805	Viaduct B - Preparation of CTR Reprovisioning Works DDA - BP33.01	30	25-Nov-13 A	100%	0	09-Jun-14 A																				
ARDD0806	Viaduct B - Submission of CTR Reprovisioning Works DDA - BP33.01	0		100%	0	10-Jun-14 A																				
ARDD0807	Viaduct B - IC/SO Approval of CTR Reprovisioning Works DDA - BP33.01	75	11-Jun-14 A	0%	75	03-Oct-14	27-Jan-14	09-May-14	-105	26																
<b>Chung Tung Road Realignment Viaduct C</b>																										
ARDD0881	Viaduct C - IC/SO Approval of AIP of CTR Reprovisioning Works AIP - BP34.00	68	04-Apr-14 A	20%	54	05-Sep-14	30-Dec-13	14-Mar-14	-124	0																
ARDD0881-1	Viaduct C - IC/SO Approval of AIP of CTR Reprovisioning Works AIP - BP34.00	0		0%	0	05-Sep-14		14-Mar-14	-124	0																
ARDD0883	Viaduct C - Preparation of CTR Reprovisioning Works DDA - BP34.01	30	06-Mar-14 A	100%	0	19-Jun-14 A																				
ARDD0885	Viaduct C - Submission of CTR Reprovisioning Works DDA - BP34.01	0		100%	0	19-Jun-14 A																				
ARDD0887	Viaduct C - IC/SO Approval of CTR Reprovisioning Works DDA - BP34.01	75	20-Jun-14 A	0%	75	03-Oct-14	24-Feb-14	06-Jun-14	-85	39																
<b>Remaining Reprovisioning Works (Viaduct A&amp;D)</b>																										
ARDD0813	Viaduct A&D - IC/SO Approval of AIP for Remaining Reprovisioning Works V-A&D BP35.00	68	30-Apr-14 A	20%	54	05-Sep-14	28-Apr-15	13-Jul-15	222	0																

	Project ID: J3518DWPPrD1-M13 Layout: J3518-DWP-3MRP submission - M13 Filter: TASK filters: 3-Month Lookahead, No Level of Effort.	<b>Tuen Mun - Chek Lap Kok Link - Southern Connection</b> <b>3-Month Rolling Programme (Page 12 of 27 Pages)</b> <b>(Progress as of 21-Jun-14)</b>	Date 28-Jun-14	Revision	Checked FZ	Approved	<b>DWG. No.:</b> <b>J3518/GCL/PGM/3MRP-M13</b>
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Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	2014																			
											June					July					August					September				
											19	26	02	09	16	23	30	07	14	21	28	04	11	18	25	01	08	15		
PR69100	Unloading Frame Type 1 Design	50	05-May-14 A	40%	30	28-Jul-14	10-Oct-14	13-Nov-14	90	17	[Gantt Bar: Green, June 19-26]																			
PR69110	Unloading Frame Type 1 Fabrication	95	23-Jun-14	0%	95	15-Oct-14	10-Oct-14	31-Jan-15	90	0	[Gantt Bar: Green, June 26-30]																			
<b>Type 2</b>																														
PR69170	Unloading Frame Type 2 Design	50	05-May-14 A	40%	30	28-Jul-14	18-May-15	23-Jun-15	267	17	[Gantt Bar: Green, July 07-14]																			
PR69180	Unloading Frame Type 2 Fabrication	95	23-Jun-14	0%	95	15-Oct-14	18-May-15	08-Sep-15	267	0	[Gantt Bar: Green, July 14-21]																			
<b>Type 3</b>																														
PR69220	Unloading Frame Type 3 Design	50	05-May-14 A	40%	30	28-Jul-14	17-Apr-14	27-May-14	-51	17	[Gantt Bar: Red, June 19-26]																			
PR69230	Unloading Frame Type 3 (Lantau) Fabrication	95	23-Jun-14	0%	95	15-Oct-14	17-Apr-14	13-Aug-14	-51	0	[Gantt Bar: Red, June 26-30]																			
<b>Type 4</b>																														
PR69250	Unloading Frame Type 4 Design	50	05-May-14 A	40%	30	28-Jul-14	29-Oct-14	02-Dec-14	106	17	[Gantt Bar: Green, July 07-14]																			
PR69260	Unloading Frame Type 4 (BCF) Fabrication	95	23-Jun-14	0%	95	15-Oct-14	29-Oct-14	23-Feb-15	106	0	[Gantt Bar: Green, July 14-21]																			
<b>Deck Segments &amp; Precast Pile Cap Shells</b>																														
<b>Preliminaries</b>																														
MBBC0014	Pile Cap Shell Mould Fabrication & Erection (M1 & M2)	50	07-Apr-14 A	95%	3	25-Jun-14	16-Jun-14	18-Jun-14	-6	85	[Gantt Bar: Blue, June 19-26]																			
MBBE0010	Set Up Precast Segment Casting Yard & Beds etc	176	15-Oct-13 A	80%	35	04-Aug-14	19-Jun-14	31-Jul-14	-2	91	[Gantt Bar: Red, July 07-14]																			
MBBE0012	Precast Segment Mould Design (Viaduct B)	42	15-Oct-13 A	30%	29	28-Jul-14	25-Feb-14	31-Mar-14	-93	0	[Gantt Bar: Red, July 14-21]																			
MBBE0014	Precast Segment Mould Fabrication & Assembly (Viaduct B)	52	28-Jul-14	0%	52	27-Sep-14	01-Apr-14	07-Jun-14	-93	0	[Gantt Bar: Red, July 21-28]																			
MBBE0018	Precast Segment Mould Design (Viaduct E5, E6, E7 & E8)	42	15-Oct-13 A	60%	17	12-Jul-14	19-Jun-14	09-Jul-14	-3	0	[Gantt Bar: Red, July 28-Aug 04]																			
MBBE0020	Precast Segment Mould Fabrication & Assembly (Viaduct E5, E6, E7 & E8)	52	12-Jul-14	0%	52	12-Sep-14	10-Jul-14	08-Sep-14	-3	63	[Gantt Bar: Red, August 04-11]																			
MBBE0024	Precast Segment Mould Design (Viaduct E2)	42	15-Oct-13 A	60%	17	12-Jul-14	26-May-14	14-Jun-14	-23	0	[Gantt Bar: Red, August 11-18]																			
MBBE0026	Precast Segment Mould Fabrication & Assembly (Viaduct E2)	52	12-Jul-14	0%	52	12-Sep-14	16-Jun-14	15-Aug-14	-23	58	[Gantt Bar: Red, August 18-25]																			
MBBE0030	Precast Segment Mould Design (Viaduct E1)	42	23-Jun-14	0%	42	11-Aug-14	09-Jul-14	26-Aug-14	13	0	[Gantt Bar: Green, August 25-31]																			
MBBE0032	Precast Segment Mould Fabrication & Assembly (Viaduct E1)	52	12-Aug-14	0%	52	14-Oct-14	27-Aug-14	29-Oct-14	13	32	[Gantt Bar: Green, September 01-08]																			
MBBE0036	Precast Segment Mould Design (Viaduct D)	42	23-Jun-14	0%	42	11-Aug-14	07-Jul-14	23-Aug-14	11	0	[Gantt Bar: Green, September 08-15]																			
MBBE0038	Precast Segment Mould Fabrication & Assembly (Viaduct D)	52	12-Aug-14	0%	52	14-Oct-14	25-Aug-14	27-Oct-14	11	45	[Gantt Bar: Green, September 15-22]																			
MBBE0042	Precast Segment Mould Design (Viaduct C)	42	30-Aug-14	0%	42	21-Oct-14	06-Dec-14	27-Jan-15	81	0	[Gantt Bar: Green, September 22-29]																			
MBBE0054	Precast Segment Mould Design (Viaduct F1 to F5)	42	17-Sep-14	0%	42	06-Nov-14	16-Jan-15	09-Mar-15	99	0	[Gantt Bar: Green, September 29-30]																			
<b>Viaduct B</b>																														
<b>Precast Pile Caps</b>																														
MBBC0120	B: Commence Pile Cap Shell Casting on Approval of DDA	0	10-Jun-14 A	100%	0						[Milestone: Diamond, June 19]																			
MBBC0130	B: Commence Pile Cap Shell Delivery	0	06-Aug-14	0%	0		10-Jun-14		-48	1	[Milestone: Diamond, June 26]																			
MBBC0130-1	B: Progressive Pile Cap Shell Manufacture & Delivery remaining shells (7 Nr)	81	06-Aug-14	0%	81	11-Nov-14	06-Jun-14	10-Sep-14	-51	0	[Gantt Bar: Red, July 28-Aug 04]																			
PP7050	Production of initial Viaduct B Marine Precast Pile Cap Shells	55	10-Jun-14 A	100%	0	21-Jun-14 A					[Gantt Bar: Blue, June 19-26]																			
<b>Materials</b>																														
<b>H-Piles</b>																														
PP7390	Procurement of Viaduct D Socketted H-Piles	70	21-Feb-14 A	60%	28	25-Jul-14	15-May-14	17-Jun-14	-32	6	[Gantt Bar: Red, July 07-14]																			
PP7470	Procurement of Viaduct C Socketted H-Piles	70	13-Aug-14	0%	70	05-Nov-14	09-Jul-14	29-Sep-14	-30	17	[Gantt Bar: Red, August 11-18]																			
<b>Reinforcement</b>																														
<b>Bored Piles</b>																														
PP7020	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct B Piles	24	28-Feb-14 A	28%	17	14-Jul-14	21-May-14	11-Jun-14	-26	0	[Gantt Bar: Red, July 07-14]																			
PP7100	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct E5 & E6 Piles	185	28-Jul-14	0%	185	11-Mar-15	19-Feb-14	04-Oct-14	-128	0	[Gantt Bar: Red, August 11-18]																			
PP7170	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct E7 & E8 Piles	185	28-Jul-14	0%	185	11-Mar-15	17-Mar-14	30-Oct-14	-106	0	[Gantt Bar: Red, August 18-25]																			
PP7240	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct E2 Piles	106	15-Apr-14 A	20%	85	03-Oct-14	30-Apr-14	11-Aug-14	-43	138	[Gantt Bar: Red, August 25-31]																			
PP7310	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct E1 Piles	36	23-Jun-14	0%	36	04-Aug-14	25-Apr-14	10-Jun-14	-47	0	[Gantt Bar: Red, September 01-08]																			
PP7380	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct D Piles	25	23-Jun-14	0%	25	22-Jul-14	19-May-14	17-Jun-14	-29	2	[Gantt Bar: Red, September 08-15]																			
PP7460	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct C Piles	35	16-Sep-14	0%	35	28-Oct-14	25-Aug-14	07-Oct-14	-18	14	[Gantt Bar: Red, September 15-22]																			
PP7620	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct F1 & F3 Piles	61	19-Sep-14	0%	61	01-Dec-14	27-Sep-14	09-Dec-14	7	0	[Gantt Bar: Red, September 22-29]																			
PP7690	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct F2, F4 & F5 Piles	73	19-Sep-14	0%	73	15-Dec-14	04-Dec-14	06-Mar-15	63	0	[Gantt Bar: Red, September 29-30]																			

<ul style="list-style-type: none"> <li><span style="color: blue;">█</span> Actual Work</li> <li><span style="color: green;">█</span> Planned Bar</li> <li><span style="color: red;">█</span> Critical Bar</li> <li>◆ Milestone</li> </ul>	Project ID: J3518DWPPrD1-M13 Layout: J3518-DWP-3MRP submission - M13 Filter: TASK filters: 3-Month Lookahead, No Level of Effort.	<b>Tuen Mun - Chek Lap Kok Link - Southern Connection</b> <b>3-Month Rolling Programme (Page 14 of 27 Pages)</b> <b>(Progress as of 21-Jun-14)</b>				Date	Revision	Checked	Approved	<b>DWG. No.:</b>  <b>J3518/GCL/PGM/3MRP-M13</b>
		28-Jun-14		FZ						













Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	2014																			
											June					July					August					September				
											19	26	02	09	16	23	30	07	14	21	28	04	11	18	25	01	08	15		
<b>Pier B12 (B2a)</b>																														
<b>Socketted H-Pile Installation</b>																														
GFXX334-2	B12 (B2a) - Install SH Pile (10 nr)	52	08-May-14 A	70%	16	11-Jul-14	05-Aug-14	22-Aug-14	36	0																				
GFXX354-5	B12 (B2a) - Selection of pile for loading test	24	11-Jul-14	0%	24	08-Aug-14	23-Aug-14	20-Sep-14	36	0																				
GFXX354-7	B12 (B2a) - Loading Test for pre-bored H-pile	36	08-Aug-14	0%	36	20-Sep-14	22-Sep-14	04-Nov-14	36	0																				
<b>Pile Cap Works</b>																														
SB2A0090	B12 (B2a) - Utility diversion & Cut Slope	36	20-Sep-14	0%	36	06-Nov-14	05-Nov-14	16-Dec-14	34	0																				
<b>Bridge B1</b>																														
<b>Pier B13 (B1g)</b>																														
<b>Socketted H-Pile Installation</b>																														
GFXX334-3	B13 (B1g) - Install SH Pile (13 nr)	52	23-Jun-14	0%	52	22-Aug-14	13-Sep-14	14-Nov-14	69	0																				
<b>Pile Cap Works</b>																														
SB1G0090	B13 (B1g) - Utility diversion & Cut slope	36	23-Aug-14	0%	36	11-Oct-14	15-Nov-14	29-Dec-14	64	0																				
<b>Pier B14 (B1f)</b>																														
<b>Socketted H-Pile Installation</b>																														
GFXX334-4	B14 (B1f) - Install SH Pile (13 nr)	52	23-Jun-14	0%	52	22-Aug-14	29-Jul-14	27-Sep-14	30	0																				
<b>Pile Cap Works</b>																														
SB1F0090	B14 (B1f) - Utility diversion & Cut slope	36	23-Aug-14	0%	36	11-Oct-14	29-Sep-14	13-Nov-14	27	0																				
<b>Pier B15 (B1e)</b>																														
<b>Pile Cap Works</b>																														
SB1E0094	B15 (B1e) - Utility diversion & cut slope	36	24-Jun-14	0%	36	14-Aug-14	19-Nov-14	02-Jan-15	109	0																				
SB1E0095	B15 (B1e) - Pile cap Excavation / ELS (incl. sheet piling)	24	15-Aug-14	0%	24	17-Sep-14	03-Jan-15	30-Jan-15	109	0																				
SB1E0096	B15 (B1e) - Pile Breakdown to cut-off etc.	4	18-Sep-14	0%	4	22-Sep-14	31-Jan-15	04-Feb-15	109	0																				
<b>Pier B16 (B1d)</b>																														
<b>Socketted H-Pile Installation</b>																														
GFXX317-4	B16 (B1d) - Confirm Rockhead Levels	8	15-Feb-14 A	100%	0	14-Jun-14 A																								
GFXX318-2	B16 (B1d) - Install SH Pile (10 nr)	35	20-May-14 A	100%	0	14-Jun-14 A																								
GFXX326-2	B16 (B1d) - Selection of pile for loading test	24	02-Jul-14	0%	24	29-Jul-14	27-Nov-14	27-Dec-14	124	0																				
GFXX326-4	B16 (B1d) - Loading Test for pre-bored H-pile	36	30-Jul-14	0%	36	10-Sep-14	27-Dec-14	09-Feb-15	124	0																				
<b>Pile Cap Works</b>																														
SB1D0090	B16 (B1d) - Pile cap Excavation / ELS (incl. sheet piling)	24	11-Sep-14	0%	24	11-Oct-14	09-Feb-15	12-Mar-15	122	0																				
<b>Pier B18 (B1b) &amp; Abutment B</b>																														
<b>Preliminary Works for Land Piling</b>																														
PB180030	B18 (B1b) - Install Geo. Instru. & Baseline Monitoring	36	23-Jun-14	0%	36	04-Aug-14	03-Nov-15	14-Dec-15	406	569																				
<b>Viaduct C</b>																														
<b>Milestones - Marine Foundation</b>																														
GFXX192	Viaduct C - ARUP issues Pile Spacing & Diameter for Temporary Platform Design	0		0%	0	21-Jun-14		31-Oct-14	109	109																				
<b>General - Preliminary Works for Land Piling</b>																														
ZC80040	Prepare/submit/approval of MTR Protective Fence submission for Viaduct C	60	13-May-14 A	100%	0	18-Jun-14 A																								
ZC80050	Implement TTMS for C9 to C20 for land piling preliminary works	12	21-Jul-14	0%	12	07-Aug-14	05-Sep-14	20-Sep-14	32	0																				
<b>Bridge C4</b>																														
<b>Pier C1 (C4e)</b>																														
<b>Foundation Works</b>																														
GFXX218	C1 (C4e) - Inst.Temp.Working Platform (Common Platform with Pier A1,C1,D1)	23	21-May-14 A	90%	2	25-Jun-14	10-Sep-14	12-Sep-14	67	0																				
GFXX219	C1 (C4e) - Predrilling (3 nos)	14	25-Jun-14	0%	14	12-Jul-14	13-Sep-14	29-Sep-14	67	0																				
GFXX219-2	C1 (C4e) - Confirm Rockhead Levels	8	12-Jul-14	0%	8	22-Jul-14	02-Jan-15	10-Jan-15	143	190																				
<b>Bridge C3</b>																														
<b>Pier C7 (C3e)</b>																														







Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	2014															
											June				July				August				September			
											19	26	02	09	16	23	30	07	14	21	28	04	11	18	25	01
PD110010	D11 (D3a) - Erect boundary fence / water filled barrier / remove existing fence	10	04-Jun-14 A	40%	6	30-Jun-14	08-Mar-14	14-Mar-14	-66	0																
PD110012	D11 (D3a) - Install Geo. Instru. & Baseline Monitoring	36	02-Jul-14	0%	36	12-Aug-14	15-Mar-14	30-Apr-14	-85	1																
PD110020	D11 (D3a) - Set up piling platform	10	14-Aug-14	0%	10	26-Aug-14	02-May-14	17-May-14	-64	0																
PD110030	D11(D3a) - Complete Civil Preparation Works for piling to commence	0		0%	0	26-Aug-14		17-May-14	-64	0																
<b>Socketted H-Pile Installation</b>																										
GFXX460-2	D11 (D3a) - Predrilling	17	27-Aug-14	0%	17	16-Sep-14	19-May-14	07-Jun-14	-84	0																
GFXX460-5	D11 (D3a) - Confirm Rockhead Levels	8	17-Sep-14	0%	8	25-Sep-14	09-Jun-14	17-Jun-14	-84	0																
<b>Pier D12 (D2e)</b>																										
<b>Preliminary Works for Land Piling</b>																										
PD120010	D12 (D2e) - Erect boundary fence / water filled barrier / remove existing fence	10	04-Jun-14 A	40%	6	30-Jun-14	05-Jun-14	17-Jun-14	-8	0																
PD120012	D12 (D2e) - Install Geo. Instru. & Baseline Monitoring	36	02-Jul-14	0%	36	12-Aug-14	19-Jun-14	31-Jul-14	-10	1																
PD120020	D12 (D2e) - Set up piling platform	10	14-Aug-14	0%	10	26-Aug-14	01-Aug-14	15-Aug-14	-8	0																
PD120030	D12 (D2e) - Complete Civil Preparation Works for piling to commence	0		0%	0	26-Aug-14		15-Aug-14	-8	0																
<b>Socketted H-Pile Installation</b>																										
GFXX460-3	D12 (D2e) - Predrilling	17	27-Aug-14	0%	17	16-Sep-14	16-Aug-14	04-Sep-14	-9	0																
GFXX460-6	D12 (D2e) - Confirm Rockhead Levels	8	17-Sep-14	0%	8	25-Sep-14	05-Sep-14	15-Sep-14	-9	0																
<b>Pier D13 (D2d)</b>																										
<b>Preliminary Works for Land Piling</b>																										
PD130010	D13 (D2d) - Erect boundary fence / water filled barrier	10	28-Aug-14	0%	10	11-Sep-14	05-Nov-14	15-Nov-14	52	0																
PD130012	D13 (D2d) - Install Geo. Instru. & Baseline Monitoring	36	12-Sep-14	0%	36	25-Oct-14	17-Nov-14	30-Dec-14	54	0																
<b>Bridge D1</b>																										
<b>Pier D14 (D2c)</b>																										
<b>Preliminary Works for Land Piling</b>																										
PD140012	D14 (D2c) - Install Geo. Instru. & Baseline Monitoring	36	23-Jun-14	0%	36	04-Aug-14	04-Jun-14	16-Jul-14	-16	0																
<b>Socketted H-Pile Installation</b>																										
GFXX445-1A	D14 (D2c) - Predrilling	18	11-Jun-14 A	100%	0	16-Jun-14 A																				
GFXX445-1A1	D14 (D2c) - Confirm Rockhead Levels	8	17-Jun-14 A	0%	8	02-Jul-14	08-Jul-14	16-Jul-14	12	28																
GFXX446-1A	D14 (D2c) - Installation of SH Pile (10 nr)	121	05-Aug-14	0%	121	29-Dec-14	17-Jul-14	08-Dec-14	-16	0																
<b>Pier D15 (D2b)</b>																										
<b>Preliminary Works for Land Piling</b>																										
PD150010	D15 (D2b) - Erect boundary fence / water filled barrier / remove existing fence	12	24-Apr-14 A	100%	0	29-May-14 A																				
PD150012	D15 (D2b) - Install Geo. Instru. & Baseline Monitoring	36	23-Jun-14	0%	36	04-Aug-14	21-Feb-14	03-Apr-14	-97	0																
PD150020	D15 (D2b) - Set up piling platform	20	05-Aug-14	0%	20	01-Sep-14	04-Apr-14	10-May-14	-73	0																
PD150030	D15 (D2b) - Complete Civil Preparation Works for piling to commence	0		0%	0	01-Sep-14		12-Jun-14	-53	0																
<b>Socketted H-Pile Installation</b>																										
GFXX445-2	D15 (D2b) - Predrilling	18	02-Sep-14	0%	18	23-Sep-14	13-Jun-14	04-Jul-14	-68	0																
<b>Pier D16 (D2a)</b>																										
<b>Preliminary Works for Land Piling</b>																										
PD160010	D16 (D2a) - Erect boundary fence / water filled barrier / remove existing fence	12	24-Apr-14 A	100%	0	29-May-14 A																				
PD160012	D16 (D2a) - Install Geo. Instru. & Baseline Monitoring	36	23-Jun-14	0%	36	04-Aug-14	24-Mar-14	10-May-14	-71	24																
PD160020	D16 (D2a) - Set up piling platform	20	02-Sep-14	0%	20	27-Sep-14	12-May-14	12-Jun-14	-73	0																
<b>Pier D17 (D1d)</b>																										
<b>Preliminary Works for Land Piling</b>																										
PD170010	D17 (D1d) - Erect boundary fence / water filled barrier / remove existing fence	12	24-Apr-14 A	100%	0	29-May-14 A																				
PD170012	D17 (D1d) - Install Geo. Instru. & Baseline Monitoring	36	23-Jun-14	0%	36	04-Aug-14	18-Sep-14	31-Oct-14	73	0																
PD170020	D17 (D1d) - Set up piling platform	20	05-Aug-14	0%	20	01-Sep-14	01-Nov-14	24-Nov-14	65	0																
PD170030	D17 (D1d) - Complete Civil Preparation Works for piling to commence	0		0%	0	01-Sep-14		24-Nov-14	65	43																
<b>Pier D18 (D1c)</b>																										

<ul style="list-style-type: none"> <li><span style="color: blue;">█</span> Actual Work</li> <li><span style="color: green;">█</span> Planned Bar</li> <li><span style="color: red;">█</span> Critical Bar</li> <li>◆ Milestone</li> </ul>	Project ID: J3518DWPPrD1-M13 Layout: J3518-DWP-3MRP submission - M13 Filter: TASK filters: 3-Month Lookahead, No Level of Effort.	<b>Tuen Mun - Chek Lap Kok Link - Southern Connection</b> <b>3-Month Rolling Programme (Page 23 of 27 Pages)</b> <b>(Progress as of 21-Jun-14)</b>	Date 28-Jun-14	Revision	Checked FZ	Approved	<b>DWG. No.:</b>  <b>J3518/GCL/PGM/3MRP-M13</b>
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Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	2014															
											June				July				August				September			
											19	26	02	09	16	23	30	07	14	21	28	04	11	18	25	01
<b>E3A, E3B, E3C &amp; E3D (E2a - 1/2/3/4)</b>																										
<b>Foundation Works - E3A, E3B, E3C &amp; E3D</b>																										
<b>Foundation Works</b>																										
GFXX036-1	E3 (E2a) - Confirm Rockhead levels	8	24-Apr-14 A	50%	4	26-Jun-14	12-Jul-14	16-Jul-14	16	10																
GFXX037	E3 (E2a) - Bored Piles (2.00m dia. x 6 nos)	90	15-Apr-14 A	84%	14	10-Jul-14	28-Jun-14	16-Jul-14	6	0																
GFXX038	E3 (E2a) - Sonic & Interface Coring x6no.	20	06-Aug-14	0%	20	28-Aug-14	04-Sep-14	27-Sep-14	25	0																
GFXX038-1	E3 (E2a) - Selection of bored pile for Full Depth Coring	24	01-Aug-14	0%	24	28-Aug-14	30-Aug-14	27-Sep-14	25	0																
GFXX038-2	E3 (E2a) - Bored Pile Full Depth Coring & Testing	24	29-Aug-14	0%	24	26-Sep-14	29-Sep-14	28-Oct-14	25	0																
<b>E4A &amp; E4B (E2b - 1/2)</b>																										
<b>Foundation Works - E4A &amp; E4B</b>																										
<b>Foundation Works</b>																										
GFXX040-1	E4 (E2b) - Inst.Temp.Working Platform (Light)	18	23-May-14 A	100%	0	04-Jun-14 A																				
GFXX041	E4 (E2b) - Predrilling (4 nos)	13	07-Jun-14 A	100%	0	18-Jun-14 A																				
GFXX041-1	E4 (E2b) - Confirm Rockhead levels	8	19-Jun-14 A	10%	7	02-Jul-14	13-Jun-14	21-Jun-14	-8	63																
GFXX042	E4 (E2b) - Bored Piles (2.20m dia. x 4 nos)	90	19-Jun-14 A	22%	70	15-Sep-14	24-Mar-14	21-Jun-14	-71	0																
GFXX043	E4 (E2b) - Sonic & Interface Coring x 4no.	12	15-Sep-14	0%	12	29-Sep-14	11-Jul-14	25-Jul-14	-54	0																
<b>E5A &amp; E5B (E2c - 1/2)</b>																										
<b>Foundation Works - E5A &amp; E5B</b>																										
<b>Foundation Works</b>																										
GFXX045-1	E5 (E2c) - Inst.Temp.Working Platform (Light)	7	23-Jun-14	0%	7	30-Jun-14	15-Apr-14	25-Apr-14	-53	0																
GFXX046	E5 (E2c) - Predrilling (4 nos)	22	02-Jul-14	0%	22	26-Jul-14	13-Oct-14	06-Nov-14	85	0																
GFXX046-1	E5 (E2c) - Confirm Rockhead levels	8	28-Jul-14	0%	8	05-Aug-14	07-Nov-14	15-Nov-14	85	120																
<b>E6A &amp; E6B (E2d - 1/2)</b>																										
<b>Foundation Works - E6A &amp; E6B</b>																										
<b>Foundation Works</b>																										
GFXX050	E6 (E2d) - Inst.Temp.Working Platform (Heavy)	18	23-Jun-14	0%	18	14-Jul-14	01-Apr-14	25-Apr-14	-64	0																
GFXX050-1	E6 (E2d) - Inst.Temp.Working Platform (Light)	7	15-Jul-14	0%	7	22-Jul-14	26-Apr-14	05-May-14	-64	0																
GFXX051	E6 (E2d) - Predrilling (4 nos)	18	23-Jul-14	0%	18	12-Aug-14	27-Nov-14	17-Dec-14	106	0																
GFXX051-1	E6 (E2d) - Confirm Rockhead levels	8	13-Aug-14	0%	8	21-Aug-14	18-Dec-14	29-Dec-14	106	217																
<b>E7A &amp; E7B (E2e - 1/2)</b>																										
<b>Foundation Works - E7A &amp; E7B</b>																										
<b>Foundation Works</b>																										
GFXX055	E7 (E2e) - Inst.Temp.Working Platforms (Heavy)	19	23-Jul-14	0%	19	13-Aug-14	07-May-14	28-May-14	-64	0																
GFXX055-1	E7 (E2e) - Inst.Temp.Working Platforms (Light)	7	14-Aug-14	0%	7	21-Aug-14	29-May-14	06-Jun-14	-64	0																
GFXX056	E7 (E2e) - Predrilling (5 nos)	26	22-Aug-14	0%	26	22-Sep-14	18-Oct-14	17-Nov-14	46	0																
<b>E8A &amp; E8B (E2f - 1/2)</b>																										
<b>Foundation Works - E8A &amp; E8B</b>																										
<b>Foundation Works</b>																										
GFXX060	E8 (E2f) - Inst.Temp.Working Platforms (Heavy)	32	22-Aug-14	0%	32	29-Sep-14	07-Jun-14	15-Jul-14	-64	0																
<b>E9A &amp; E9B (E2g - 1/2)</b>																										
<b>Foundation Works - E9A &amp; E9B</b>																										
<b>Foundation Works</b>																										
GFXX066	E9 (E2g) - Predrilling (6 nos)	22	12-Mar-14 A	100%	0	05-Jun-14 A																				
GFXX066-1	E9 (E2g) - Confirm Rockhead levels	8	06-Jun-14 A	50%	4	26-Jun-14	28-Feb-15	04-Mar-15	205	67																
GFXX067	E9 (E2g) - Bored Piles (2.00m dia. x 6 nr)	105	17-May-14 A	32%	71	16-Sep-14	04-Dec-14	04-Mar-15	138	0																
GFXX068	E9 (E2g) - Sonic & Interface Coring	12	16-Sep-14	0%	12	30-Sep-14	05-Mar-15	18-Mar-15	138	0																
<b>E10A &amp; E10B (E2h - 1/2)</b>																										
<b>Foundation Works - E10A &amp; E10B</b>																										







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 off site 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			✓
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		✓
8.15	6.5	Audit coral translocation success	Yam Tsui Wan (receptor site)/Post translocation	Contractor	TMEIA		Y		✓
7.13	6.5	Undertaken gabion wall works in Stream NL1 in the dry season	North Lantau slope works/dry	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	
			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		✓
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		n/a
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		✓
10.9	7.6	Recycle/Reuse all felled trees and vegetation, e.g.	All areas/detailed	Design	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	
		mulching (CM9)	design/ during construction	Consultant/ Contractor					
10.9	7.6	Compensatory tree planting shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Felling Application process under ETWBTC 3/2006 (CM10).	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Re-vegetation of affected woodland/shrubland with native species (OM1)	All areas/detailed design/ during construction/ during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a. To be implemented by AFCD/HyD/ L CSD
10.9	7.6	Tall buffer screen tree / shrub / climber planting should be incorporated to soften hard engineering structures and facilities (OM2)	All areas/detailed design/ during construction/ during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a To be implemented by HyD/LCSD
10.9	7.6	Streetscape elements (e.g. paving, signage, street furniture, lighting etc.) shall be sensitively designed in a manner that responds to the local context, and minimises potential negative landscape and visual impacts. Lighting units should be directional and minimise unnecessary light spill (OM3)	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a. To be implemented by HyD/LCSD
10.9	7.6	Structure, ornamental tree / shrub / climber planting should be provided along roadside amenity strips, central dividers and newly formed slopes to enhance the townscape quality and further greenery enhancement (OM4)	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a. To be implemented by HyD/LCSD
10.9	7.6	Aesthetically pleasing design (visually unobtrusive and non-reflective) as regard to the form, material and	All areas/detailed design/ during	Design Consultant/	TMEIA	Y	Y	Y	n/a. To be

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		finishes	construction / during operation	Contractor					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 where possible. Earth retaining structures and bored pile walls should be proposed to minimise the extent of cutting.	All areas / throughout construction period	Contractor	TMEIA		Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
12.6	8.1	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			✓
12.6	8.1	The Contractor shall be prohibited from disposing of C&D materials at any sensitive locations. The Contractor should propose the final disposal sites in the EMP and WMP for approval before implementation.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Stockpiled material shall be covered by tarpaulin and /or watered as appropriate to prevent windblown dust/ surface run off.	All areas / throughout construction period	Contractor	TMEIA		Y		↔
12.6	8.1	Excavated material in trucks shall be covered by tarpaulins to reduce the potential for spillage and dust generation.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Wheel washing facilities shall be used by all trucks leaving the site to prevent transfer of mud onto public roads.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Standard formwork or pre-fabrication should be used as far as practicable so as to minimise the C&D materials arising. The use of more durable formwork/plastic facing for construction works should be considered. The use of wooden hoardings should be avoided and metal hoarding should be used to facilitate recycling. Purchasing of construction materials should avoid over-ordering and wastage.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	The Contractor should recycle as many C&D	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	
		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.	construction period						
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> <li>- Adequate ventilation;</li> <li>- Sufficiently covered to prevent rainfall entering</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	
		(water collected within the bund must be tested and disposed of as chemical waste, if necessary); and - Incompatible materials are adequately separated.							
12.6	8.1	Waste oils, chemicals or solvents shall not be disposed of to drain,	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Adequate numbers of portable toilets should be provided for on-site workers. Portable toilets should be maintained in reasonable states, which will not deter the workers from utilising them.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Night soil should be regularly collected by licensed collectors.	All areas / throughout construction period	Contractor	TMEIA		Y		n/a
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 hardstanding;	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedure, including waste reduction, reuse and recycling.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Office wastes can be reduced by recycling of paper if such volume is sufficiently large to warrant collection. Participation in a local	Site Offices/ 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	
		collection scheme by the Contractor should be advocated. Waste separation facilities for paper, aluminium cans, plastic bottles, etc should be provided on-site.							
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 = 178	260
1 Hour TSP Level in $\mu\text{g}/\text{m}^3$	ASR9A/ASR8A = 394 ASR9C/ASR8 = 393	500

**Table D2** *Action and Limit Levels for Construction Noise (0700-1900 hrs of normal weekdays)*

Time Period	Action	Limit
0700-1900 hrs on normal weekdays	When one documented complaint is received	75* dB(A)

**Table D3** *Action and Limit Levels for Water Quality*

Parameter	Action Level#	Limit Level#
DO in mg/L <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 mg/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	
<b>Notes:</b>		
1.	STG means quarterly encounter rate of number of dolphin sightings, which is <b>6.00 in NEL</b> and <b>9.85 in NWL</b> during the baseline monitoring period	
2.	ANI means quarterly encounter rate of total number of dolphins, which is <b>22.19 in NEL</b> and <b>44.66 in NWL</b> 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 : ASR 8(A)  
 Calibrated by : P.F. Yeung  
 Date : 05/05/2014

Sampler

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

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454  
 Service Date : 24 Mar 2014  
 Slope (m) : 2.07593  
 Intercept (b) : -0.00102  
 Correlation Coefficient(r) : 0.99996

Standard Condition

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

Calibration Condition

Pa (hpa) : 1014  
 Ta(K) : 295

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	12.5	3.555	1.713	62	62.35
2	13 holes	10.0	3.180	1.532	56	56.31
3	10 holes	7.5	2.754	1.327	51	51.28
4	7 holes	4.9	2.226	1.073	44	44.25
5	5 holes	3.0	1.742	0.839	37	37.21

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): 28.230 Intercept(b): 13.666 Correlation Coefficient(r): 0.9992

Checked by: Magnum Fan

Date: 15/05/2014

High-Volume TSP Sampler  
5-Point Calibration Record

Location : ASR8  
 Calibrated by : P.F. Yeung  
 Date : 05/05/2014

Sampler

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

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454  
 Service Date : 24 Mar 2014  
 Slope (m) : 2.07593  
 Intercept (b) : -0.00102  
 Correlation Coefficient(r) : 0.99996

Standard Condition

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

Calibration Condition

Pa (hpa) : 1014  
 Ta(K) : 295

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.8	3.454	1.664	54	54.30
2	13 holes	9.8	3.148	1.517	49	49.27
3	10 holes	6.8	2.622	1.264	43	43.24
4	7 holes	4.6	2.157	1.039	36	36.20
5	5 holes	2.8	1.683	0.811	30	30.17

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): 28.017 Intercept(b): 7.361 Correlation Coefficient(r): 0.9990

Checked by: Magnum Fan

Date: 15/05/2014





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

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Mar 24, 2014 Rootmeter S/N 0438320 Ta (K) - 293  
 Operator Tisch Orifice I.D. - 2454 Pa (mm) - 758.19

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.4740	3.2	2.00
2	NA	NA	1.00	1.0340	6.4	4.00
3	NA	NA	1.00	0.9240	7.9	5.00
4	NA	NA	1.00	0.8820	8.8	5.50
5	NA	NA	1.00	0.7270	12.7	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
1.0103	0.6854	1.4245	0.9958	0.6755	0.8791
1.0061	0.9730	2.0146	0.9916	0.9590	1.2433
1.0040	1.0866	2.2524	0.9895	1.0709	1.3900
1.0028	1.1370	2.3623	0.9884	1.1206	1.4579
0.9976	1.3722	2.8491	0.9832	1.3524	1.7583
Qstd slope (m) = 2.07593			Qa slope (m) = 1.29991		
intercept (b) = -0.00102			intercept (b) = -0.00063		
coefficient (r) = 0.99996			coefficient (r) = 0.99996		
y axis = SQRT[H2O(Pa/760)(298/Ta)]			y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

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

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

For subsequent flow rate calculations:

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

# Certificate of Calibration

## 校正證書

Certificate No. : C134307  
證書編號**ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC13-1709)**

Description / 儀器名稱 : Sound Level Calibrator  
Manufacturer / 製造商 : Rion  
Model No. / 型號 : NC-73  
Serial No. / 編號 : 10997142  
Supplied By / 委託者 : Envirotech Services Co.  
Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road,  
Hong Kong

**TEST CONDITIONS / 測試條件**

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

**TEST SPECIFICATIONS / 測試規範**

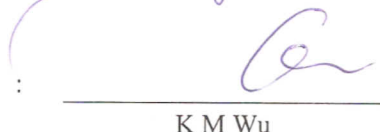
Calibration check

**DATE OF TEST / 測試日期** : 12 July 2013**TEST RESULTS / 測試結果**

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

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

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

Tested By  
測試  
K C LeeCertified By  
核證  
K M WuDate of Issue  
簽發日期

15 July 2013

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# Certificate of Calibration

## 校正證書

Certificate No. : C134307  
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	C133632
CL281	Multifunction Acoustic Calibrator	DC130171
TST150A	Measuring Amplifier	C120886

- 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	0.988	1 kHz ± 2 %	± 1

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

### Note :

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

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

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Sun Creation Engineering Limited – Calibration & Testing Laboratory

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輝創工程有限公司 – 校正及檢測實驗室

c/o 香港新界屯門興安里一號青山灣機樓四樓

Tel 電話: 2927 2606 Fax 傳真: 2744 8986 E-mail 電郵: callab@suncreation.com Website 網址: www.suncreation.com



# Certificate of Calibration

## 校正證書

Certificate No. : C141622

證書編號

ITEM TESTED / 送檢項目 ( Job No. / 序引編號 : IC14-0645 )

Date of Receipt / 收件日期 : 11 March 2014

Description / 儀器名稱 : Sound Level Meter

Manufacturer / 製造商 : Rion

Model No. / 型號 : NL-52

Serial No. / 編號 : 00131627

Supplied By / 委託者 : Envirotech Services Co.

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

### TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C

Relative Humidity / 相對濕度 : (55 ± 20)%

Line Voltage / 電壓 : ---

### TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 17 March 2014

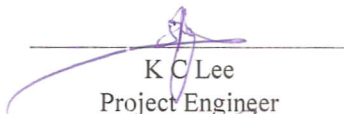
### TEST RESULTS / 測試結果

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


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

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

Tested By  
測試

  
K C Lee  
Project Engineer

Certified By  
核證

  
K M Wu  
Engineer

Date of Issue  
簽發日期

20 March 2014

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# Certificate of Calibration

## 校正證書

Certificate No. : C141622

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	C140016
CL281	Multifunction Acoustic Calibrator	DC130171

- Test procedure : MA101N.

- Results :

### 6.1 Sound Pressure Level

#### 6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 130	L <sub>A</sub>	A	Fast	94.00	1	94.1	± 1.1

#### 6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
30 - 130	L <sub>A</sub>	A	Fast	94.00	1	94.1 (Ref.)
				104.00		104.1
				114.00		114.1

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

### 6.2 Time Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 130	L <sub>A</sub>	A	Fast	94.00	1	94.1	Ref.
			Slow				

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. : C141622  
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)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 130	L <sub>A</sub>	A	Fast	94.00	63 Hz	67.8	-26.2 ± 1.5
					125 Hz	77.8	-16.1 ± 1.5
					250 Hz	85.4	-8.6 ± 1.4
					500 Hz	90.8	-3.2 ± 1.4
					1 kHz	94.1	Ref.
					2 kHz	95.3	+1.2 ± 1.6
					4 kHz	95.1	+1.0 ± 1.6
					8 kHz	93.0	-1.1 (+2.1 ; -3.1)
					12.5 kHz	89.6	-4.3 (+3.0 ; -6.0)

#### 6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 130	L <sub>A</sub>	C	Fast	94.00	63 Hz	93.2	-0.8 ± 1.5
					125 Hz	93.8	-0.2 ± 1.5
					250 Hz	94.0	0.0 ± 1.4
					500 Hz	94.1	0.0 ± 1.4
					1 kHz	94.1	Ref.
					2 kHz	93.9	-0.2 ± 1.6
					4 kHz	93.3	-0.8 ± 1.6
					8 kHz	91.1	-3.0 (+2.1 ; -3.1)
					12.5 kHz	87.7	-6.2 (+3.0 ; -6.0)

Remarks : - UUT Microphone Model No. : UC-59 & S/N : 04663

- 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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# Certificate of Calibration

## 校正證書

Certificate No. : C133573  
證書編號

### ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC13-1422)

Description / 儀器名稱 : Sound Level Meter  
Manufacturer / 製造商 : Rion  
Model No. / 型號 : NL-31  
Serial No. / 編號 : 00410224  
Supplied By / 委託者 : Envirotech Services Co.  
Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road,  
Hong Kong

### TEST CONDITIONS / 測試條件

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

### TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 14 June 2013

### TEST RESULTS / 測試結果

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

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

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

Tested By :   
測試 : K C Lee

Certified By :   
核證 : K K Wong

Date of Issue : 17 June 2013  
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. : C133573  
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	C130019
CL281	Multifunction Acoustic Calibrator	DC110233

- Test procedure : MA101N.

- Results :

### 6.1 Sound Pressure Level

#### 6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 120	L <sub>A</sub>	A	Fast	94.00	1	93.6	± 1.1

#### 6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
30 - 120	L <sub>A</sub>	A	Fast	94.00	1	93.6 (Ref.)
				104.00		103.6
				114.00		113.6

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

### 6.2 Time Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 120	L <sub>A</sub>	A	Fast	94.00	1	93.6	Ref.
			Slow			93.5	± 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. : C133573  
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	67.3	-26.2 ± 1.5
					125 Hz	77.3	-16.1 ± 1.5
					250 Hz	84.9	-8.6 ± 1.4
					500 Hz	90.3	-3.2 ± 1.4
					1 kHz	93.6	Ref.
					2 kHz	94.9	+1.2 ± 1.6
					4 kHz	94.8	+1.0 ± 1.6
					8 kHz	92.6	-1.1 (+2.1 ; -3.1)
					12.5 kHz	89.7	-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	92.7	-0.8 ± 1.5
					125 Hz	93.4	-0.2 ± 1.5
					250 Hz	93.6	0.0 ± 1.4
					500 Hz	93.7	0.0 ± 1.4
					1 kHz	93.7	Ref.
					2 kHz	93.5	-0.2 ± 1.6
					4 kHz	93.0	-0.8 ± 1.6
					8 kHz	90.7	-3.0 (+2.1 ; -3.1)
					12.5 kHz	87.9	-6.2 (+3.0 ; -6.0)

Remarks : - UUT Microphone Model No. : UC-53A & S/N : 307154

- 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/0505/010 Manufacturer : HACH

Model No. : 2100Q Serial No. : 11110 C 014260

Date of Calibration : 07/04/2014 Due Date : 06/07/2014

Theoretical Value of Turbidity Standard (NTU)	Measured Value (NTU)	Difference % *
20	19.5	-2.50
100	103	3.00
800	792	-1.00

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

Acceptance Criteria

Difference : -5 % to 5 %

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

Prepared by : 

Checked by : 





### Internal Calibration & Performance Check of pH Meter

Equipment Ref. No. : ET/EW/007/003      Manufacturer : HANNA  
 Model No. : HI 8314      Serial No. : 674469  
 Date of Calibration : 10/06/2014      Calibration Due Date : 09/07/2014

**Liquid Junction Error**

Primary Standard Solution Used : Phosphate      Ref No. of Primary Solution: 003/5.2/001/18  
 Temperature of Solution : 20.0       $\Delta\text{pH}_{\frac{1}{2}} = \underline{+0.08}$   
 pH value of diluted buffer : 6.77      pH (S) = 6.881  
 $\Delta\text{pH} = \text{pH(S)} - \text{pH of diluted buffer} = \underline{0.111}$  (Observed Deviation)  
 Liquid Junction Error ( $\Delta\text{pH}_j$ ) =  $\Delta\text{pH} - \Delta\text{pH}_{\frac{1}{2}} = \underline{0.031}$

**Shift on Stirring**

pH of buffer solution (with stirring),  $\text{pH}_s = \underline{6.92}$   
 Shift on stirring,  $\Delta\text{pH}_s = \text{pH}_s - \text{pH(S)} - \Delta\text{pH}_j = \underline{0.008}$

**Noise**

Noise,  $\Delta\text{pH}_n = \text{difference between max and min reading} : \underline{0.00}$

**Verification of ATC**

Ref. No. of reference thermometer used: ET/0521/008  
 Temperature record from the reference thermometer ( $T_R$ ): 19.6 °C  
 Temperature record from the ATC ( $T_{ATC}$ ): 19.5 °C  
 Temperature Difference,  $|T_R - T_{ATC}|$  : 0.1 °C

**Acceptance Criteria**

Performance Characteristic	Acceptable Range
Liquid Junction Error $\Delta\text{pH}_j$	$\leq 0.05$
Shift on Stirring $\Delta\text{pH}_s$	$\leq 0.02$
Noise $\Delta\text{pH}_n$	$\leq 0.02$
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 :       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>28/04/2014</u>	Calibration Due Date : <u>27/07/2014</u>

**Temperature Verification**

Ref. No. of Reference Thermometer : ET/0521/008  
 Ref. No. of Water Bath : ---

		Temperature (°C)		
Reference Thermometer reading	Measured	20.1	Corrected	19.7
DO Meter reading	Measured	19.6	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/012/4.5/001/8	Reagent No. of 0.025N K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>	CPE/012/4.4/001/26
		Trial 1	Trial 2
Initial Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)		0.00	10.20
Final Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)		10.20	20.45
Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used (ml)		10.20	10.25
Normality of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> solution (N)		0.02451	0.02439
Average Normality (N) of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> solution (N)		0.02445	
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	12.00	24.00	0.00	8.10	12.90
Final Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	12.00	24.00	32.00	8.10	12.90	17.60
Vol. (V) of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used (ml)	12.00	12.00	8.00	8.10	4.80	4.70
Dissolved Oxygen (DO), mg/L	7.88	7.88	5.25	5.32	3.15	3.08
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	7.65	7.58	7.62	7.88	7.88	7.88	3.35
5	5.34	5.39	5.37	5.25	5.32	5.29	1.50
10	3.21	3.17	3.19	3.15	3.08	3.12	2.22
Linear regression coefficient				0.9983			



## 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/012/4.7/002/19	Reagent No. of NaCl (30ppt)	CPE/012/4.8/002/19
-----------------------------	--------------------	-----------------------------	--------------------

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

Salinity (ppt)	10		30	
	1	2	1	2
Trial				
Initial Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	0.00	11.90	23.70	34.20
Final Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	11.90	23.70	34.20	44.80
Vol. (V) of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used (ml)	11.90	11.80	10.50	10.60
Dissolved Oxygen (DO), mg/L	7.81	7.75	6.89	6.96
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L	

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

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result**, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	7.86	7.79	7.83	7.81	7.75	7.78	0.64
30	6.95	6.99	6.97	6.89	6.96	6.93	0.58

### 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 : 28/04/2014 Due Date : 27/07/2014

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

S/001/5

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference * (%)
30.0	31.1	3.67

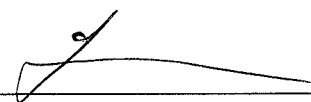
(\* ) Difference (%) = (Measured Salinity – Salinity Standard value) / Salinity Standard value x 100

Acceptance Criteria

Difference : -10 % to 10 %

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

Checked by : 

Approved by : 

# WATER

## Certification of Quality

This product has been tested in accordance with procedures established through Global Water Instrumentation's Quality Management System. This product meets or exceeds its manufacturing acceptance criteria.

<b>ITEM DESCRIPTION:</b>	Wind Direction
<b>MODEL NAME/ NUMBER:</b>	WE570
<b>PART NUMBER:</b>	ED0000
<b>SENSOR RANGE:</b>	0-360 °
<b>SENSOR OUTPUT:</b>	4.01-20.03 mA
<b>ACCURACY:</b>	1% of full scale
<b>POWER REQUIRED</b>	10-36 VDC
<b>SERIAL NUMBER:</b>	1337005143
<b>CABLE LENGTH:</b>	25 ft
<b>CERTIFICATES:</b>	CE Compliant

Contact  
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needs:

Water Level

Water Flow

Water Samplers

Water Quality

Weather

Remote Monitoring

Control

**Technician:** *Wright, Jess*

**Date:** 9/12/2013

NOT Global Water Instrumentation warrants that its products are free from defects in material & workmanship under normal use & service for a period of one year from date of original shipment from factory. Repaired components are warranted for a period of 90 days from shipment. Contact us for complete warranty details.



**Global Water**

a xylem brand

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International 1-979-690-5560  
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Our Service Address  
151 Graham Rd  
College Station, TX 77845



# ENVIROTECH SERVICES CO.

## Calibration Report of Wind Meter

Date of Calibration : 29 May 2014

Brand of Test Meter: Global Water

Model: Speed Sensor: WE550 (S/N:EC0000 )

Direction Sensor: WE570 (S/N:ED0000)

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)
0.23	0.2
1.25	1.2
2.06	2.2

#### Wind Direction Test

Global Wate (o)	Marine Compass (o)
269.99	270
0.00	0
90.01	90
180.01	180

Calibrated by:

Fai  
Yeung Ping Fai  
(Technical Officer)

Checked by :

Fat  
Ho Kam Fat  
(Senior Technical Officer)

# Certificate of Calibration 校正證書

Certificate No. : C143205  
證書編號

ITEM TESTED / 送檢項目 ( Job No. / 序引編號 : IC14-1304 )

Date of Receipt / 收件日期 : 19 May 2014

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

## TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C  
Line Voltage / 電壓 : ---

Relative Humidity / 相對濕度 : (55 ± 20)%

## TEST SPECIFICATIONS / 測試規範

Calibration check

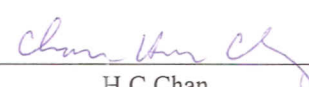
DATE OF TEST / 測試日期 : 26 May 2014

## TEST RESULTS / 測試結果

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

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

Tested By :   
測試 : \_\_\_\_\_  
H S Chung  
Technician

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

Date of Issue : 27 May 2014  
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. : C143205  
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
2.1	1.8	+0.3	0.2	2.0
4.1	4.0	+0.1	0.3	2.0
6.1	6.1	0.0	0.3	2.0
8.2	8.4	-0.2	0.3	2.0
10.1	10.4	-0.3	0.4	2.0

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

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

### Note :

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

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Appendix F

## EM&A Monitoring Schedules



**HY/2012/07 - Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section  
Impact Marine Water Quality Monitoring (WQM) Schedule (June14)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Jun	02-Jun	03-Jun	04-Jun	05-Jun	06-Jun	07-Jun
		<b>WQM</b> Mid-Flood 9:22 (07:37 - 11:07) Mid-Ebb 16:28 (14:43 - 18:13)		<b>WQM</b> Mid-Flood 11:02 (09:17 - 12:47) Mid-Ebb 17:53 (16:08 - 19:38)		<b>WQM</b> Mid-Ebb 8:37 (06:52 - 10:22) Mid-Flood 14:06 (12:21 - 15:51)
08-Jun	09-Jun	10-Jun	11-Jun	12-Jun	13-Jun	14-Jun
		<b>WQM</b> Mid-Ebb 10:59 (09:14 - 12:44) Mid-Flood 17:40 (15:55 - 19:25)		<b>WQM</b> Mid-Ebb 12:20 (10:35 - 14:05) Mid-Flood 19:22 (17:37 - 21:07)		<b>WQM</b> Mid-Ebb 13:47 (12:02 - 15:32) Mid-Flood 21:00 (19:15 - 22:45)
15-Jun	16-Jun	17-Jun	18-Jun	19-Jun	20-Jun	21-Jun
		<b>WQM</b> Mid-Flood 9:20 (07:35 - 11:05) Mid-Ebb 16:10 (14:25 - 17:55)		<b>WQM</b> Mid-Flood 11:33 (09:48 - 13:18) Mid-Ebb 18:00 (16:15 - 19:45)		<b>WQM</b> Mid-Ebb 8:34 (06:49 - 10:19) Mid-Flood 14:22 (12:37 - 16:07)
22-Jun	23-Jun	24-Jun	25-Jun	26-Jun	27-Jun	28-Jun
		<b>WQM</b> Mid-Ebb 11:14 (09:29 - 12:59) Mid-Flood 18:03 (16:18 - 19:48)		<b>WQM</b> Mid-Ebb 12:33 (10:48 - 14:18) Mid-Flood 19:33 (17:48 - 21:18)		<b>WQM</b> Mid-Ebb 13:47 (12:02 - 15:32) Mid-Flood 20:46 (19:03 - 22:33)
29-Jun	30-Jun	01-Jul	02-Jul	03-Jul	04-Jul	05-Jul

**HY/2012/07 - Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section  
Impact Marine Water Quality Monitoring (WQM) Schedule (June14)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Jun	02-Jun	03-Jun	04-Jun	05-Jun	06-Jun	07-Jun
		<b>WQM</b> Mid-Flood 9:22 (07:37 - 11:07) Mid-Ebb 16:28 (14:43 - 18:13)		<b>WQM</b> Mid-Flood 11:02 (09:17 - 12:47) Mid-Ebb 17:53 (16:08 - 19:38)		<b>WQM</b> Mid-Ebb 8:37 (06:52 - 10:22) Mid-Flood 14:06 (12:21 - 15:51)
08-Jun	09-Jun	10-Jun	11-Jun	12-Jun	13-Jun	14-Jun
		<b>WQM</b> Mid-Ebb 10:59 (09:14 - 12:44) Mid-Flood 17:40 (15:55 - 19:25)		<b>WQM</b> Mid-Ebb 12:20 (10:35 - 14:05) Mid-Flood 19:22 (17:37 - 21:07)		<b>WQM</b> Mid-Ebb 13:47 (12:02 - 15:32) Mid-Flood 21:00 (19:15 - 22:45)
15-Jun	16-Jun	17-Jun	18-Jun	19-Jun	20-Jun	21-Jun
		<b>WQM</b> Mid-Flood 9:20 (07:35 - 11:05) Mid-Ebb 16:10 (14:25 - 17:55)		<b>WQM</b> Mid-Flood 11:33 (09:48 - 13:18) Mid-Ebb 18:00 (16:15 - 19:45)		<b>WQM</b> Mid-Ebb 8:34 (06:49 - 10:19) Mid-Flood 14:22 (12:37 - 16:07)
22-Jun	23-Jun	24-Jun	25-Jun	26-Jun	27-Jun	28-Jun
		<b>WQM</b> Mid-Ebb 11:14 (09:29 - 12:59) Mid-Flood 18:03 (16:18 - 19:48)		<b>WQM</b> Mid-Ebb 12:33 (10:48 - 14:18) Mid-Flood 19:33 (17:48 - 21:18)		<b>WQM</b> Mid-Ebb 13:47 (12:02 - 15:32) Mid-Flood 20:46 (19:03 - 22:33)
29-Jun	30-Jun	01-Jul	02-Jul	03-Jul	04-Jul	05-Jul

**HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section  
Tentative Impact Noise Monitoring Schedule (1 Jun to 30 Jun 2014)**

Noise Monitoring at the rooftop of Pak Mong Village Watch Tower

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

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

**HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section  
Tentative Impact Air Quality Monitoring Schedule (1 Jun to 30 Jun 2014)**

Air Quality Monitoring at WA4 and rooftop of Pak Mong Village Watch Tower

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Jun	02-Jun	03-Jun	04-Jun	05-Jun	06-Jun	07-Jun
		1-hour TSP - 3 times 24-hour TSP - 1 time  <i>Impact AQM</i>				
08-Jun	09-Jun	10-Jun	11-Jun	12-Jun	13-Jun	14-Jun
	1-hour TSP - 3 times 24-hour TSP - 1 time  <i>Impact AQM</i>				1-hour TSP - 3 times 24-hour TSP - 1 time  <i>Impact AQM</i>	
15-Jun	16-Jun	17-Jun	18-Jun	19-Jun	20-Jun	21-Jun
				1-hour TSP - 3 times 24-hour TSP - 1 time  <i>Impact AQM</i>		
22-Jun	23-Jun	24-Jun	25-Jun	26-Jun	27-Jun	28-Jun
			1-hour TSP - 3 times 24-hour TSP - 1 time  <i>Impact AQM</i>			
29-Jun	30-Jun					
	1-hour TSP - 3 times 24-hour TSP - 1 time  <i>Impact AQM</i>					

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  
Tentative Impact Noise Monitoring Schedule (1 July to 31 July 2014)**

Noise Monitoring at the rooftop of Pak Mong Village Watch Tower

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

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

**HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section  
Tentative Impact Air Quality Monitoring Schedule (1 July to 31 July 2014)**

Air Quality Monitoring at WA4 and rooftop of Pak Mong Village Watch Tower

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		01-Jul	02-Jul	03-Jul	04-Jul	05-Jul
						1-hour TSP - 3 times 24-hour TSP - 1 time  <i>Impact AQM</i>
06-Jul	07-Jul	08-Jul	09-Jul	10-Jul	11-Jul	12-Jul
					1-hour TSP - 3 times 24-hour TSP - 1 time  <i>Impact AQM</i>	
13-Jul	14-Jul	15-Jul	16-Jul	17-Jul	18-Jul	19-Jul
				1-hour TSP - 3 times 24-hour TSP - 1 time  <i>Impact AQM</i>		
20-Jul	21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	26-Jul
			1-hour TSP - 3 times 24-hour TSP - 1 time  <i>Impact AQM</i>			
27-Jul	28-Jul	29-Jul	30-Jul	31-Jul		
		1-hour TSP - 3 times 24-hour TSP - 1 time  <i>Impact AQM</i>				

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 June to 31 June 2014)**

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

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 July to 31 July 2014)**

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

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	2014-06-03	ASR8A	8:05	1-hr TSP	54	394	500		
TMCLKL	HY/2012/07	2014-06-03	ASR8A	9:07	1-hr TSP	63				
TMCLKL	HY/2012/07	2014-06-03	ASR8A	10:09	1-hr TSP	66				
TMCLKL	HY/2012/07	2014-06-09	ASR8A	8:10	1-hr TSP	62				
TMCLKL	HY/2012/07	2014-06-09	ASR8A	9:12	1-hr TSP	77				
TMCLKL	HY/2012/07	2014-06-09	ASR8A	10:14	1-hr TSP	66				
TMCLKL	HY/2012/07	2014-06-13	ASR8A	8:00	1-hr TSP	94				
TMCLKL	HY/2012/07	2014-06-13	ASR8A	9:02	1-hr TSP	110				
TMCLKL	HY/2012/07	2014-06-13	ASR8A	10:04	1-hr TSP	85				
TMCLKL	HY/2012/07	2014-06-19	ASR8A	8:10	1-hr TSP	76				
TMCLKL	HY/2012/07	2014-06-19	ASR8A	9:12	1-hr TSP	80				
TMCLKL	HY/2012/07	2014-06-19	ASR8A	10:14	1-hr TSP	131				
TMCLKL	HY/2012/07	2014-06-25	ASR8A	8:05	1-hr TSP	70				
TMCLKL	HY/2012/07	2014-06-25	ASR8A	9:07	1-hr TSP	63				
TMCLKL	HY/2012/07	2014-06-25	ASR8A	10:09	1-hr TSP	65				
TMCLKL	HY/2012/07	2014-06-30	ASR8A	8:00	1-hr TSP	61				
TMCLKL	HY/2012/07	2014-06-30	ASR8A	9:02	1-hr TSP	47				
TMCLKL	HY/2012/07	2014-06-30	ASR8A	10:04	1-hr TSP	51				
						Average				
						Min.				
						Max.				

**1-hour TSP Monitoring Results at Air Quality Monitoring Station ASR8**

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	2014-06-03	ASR8	8:16	1-hr TSP	66	393	500		
TMCLKL	HY/2012/07	2014-06-03	ASR8	9:18	1-hr TSP	76				
TMCLKL	HY/2012/07	2014-06-03	ASR8	10:20	1-hr TSP	58				
TMCLKL	HY/2012/07	2014-06-09	ASR8	8:22	1-hr TSP	62				
TMCLKL	HY/2012/07	2014-06-09	ASR8	9:24	1-hr TSP	49				
TMCLKL	HY/2012/07	2014-06-09	ASR8	10:26	1-hr TSP	79				
TMCLKL	HY/2012/07	2014-06-13	ASR8	8:11	1-hr TSP	60				
TMCLKL	HY/2012/07	2014-06-13	ASR8	9:13	1-hr TSP	111				
TMCLKL	HY/2012/07	2014-06-13	ASR8	10:15	1-hr TSP	115				
TMCLKL	HY/2012/07	2014-06-19	ASR8	8:22	1-hr TSP	65				
TMCLKL	HY/2012/07	2014-06-19	ASR8	9:24	1-hr TSP	58				
TMCLKL	HY/2012/07	2014-06-19	ASR8	10:26	1-hr TSP	75				
TMCLKL	HY/2012/07	2014-06-25	ASR8	8:16	1-hr TSP	61				
TMCLKL	HY/2012/07	2014-06-25	ASR8	9:18	1-hr TSP	60				
TMCLKL	HY/2012/07	2014-06-25	ASR8	10:20	1-hr TSP	53				
TMCLKL	HY/2012/07	2014-06-30	ASR8	8:12	1-hr TSP	87				
TMCLKL	HY/2012/07	2014-06-30	ASR8	9:14	1-hr TSP	61				
TMCLKL	HY/2012/07	2014-06-30	ASR8	9:16	1-hr TSP	56				
						Average				
						Min.				
						Max.				



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

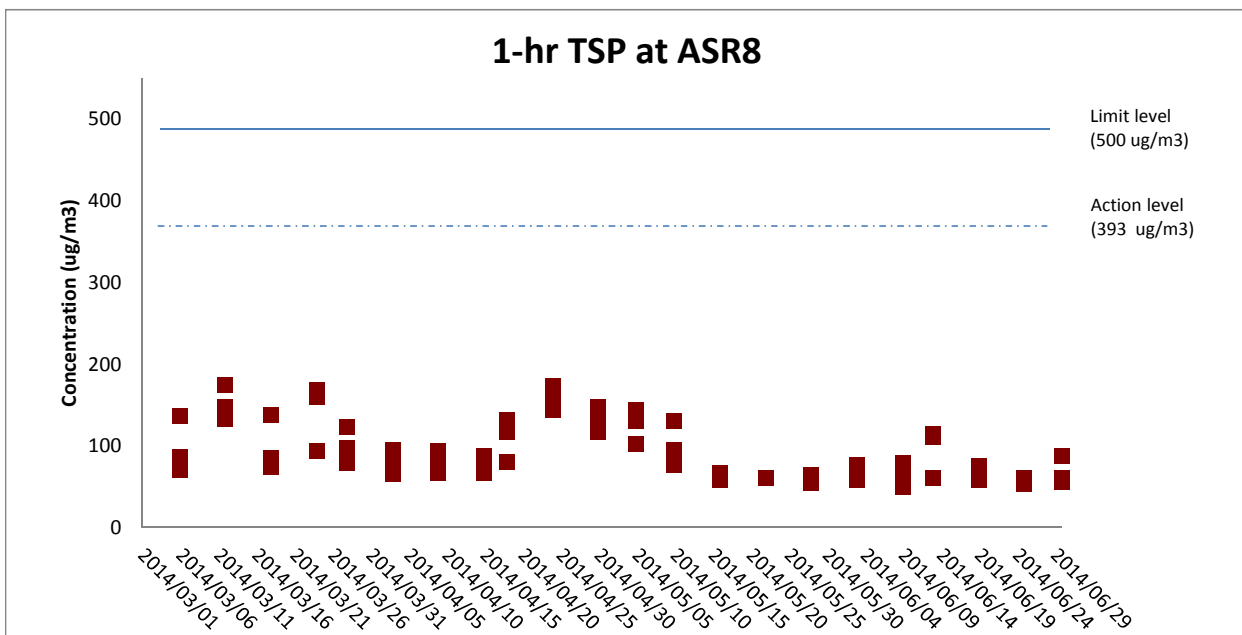
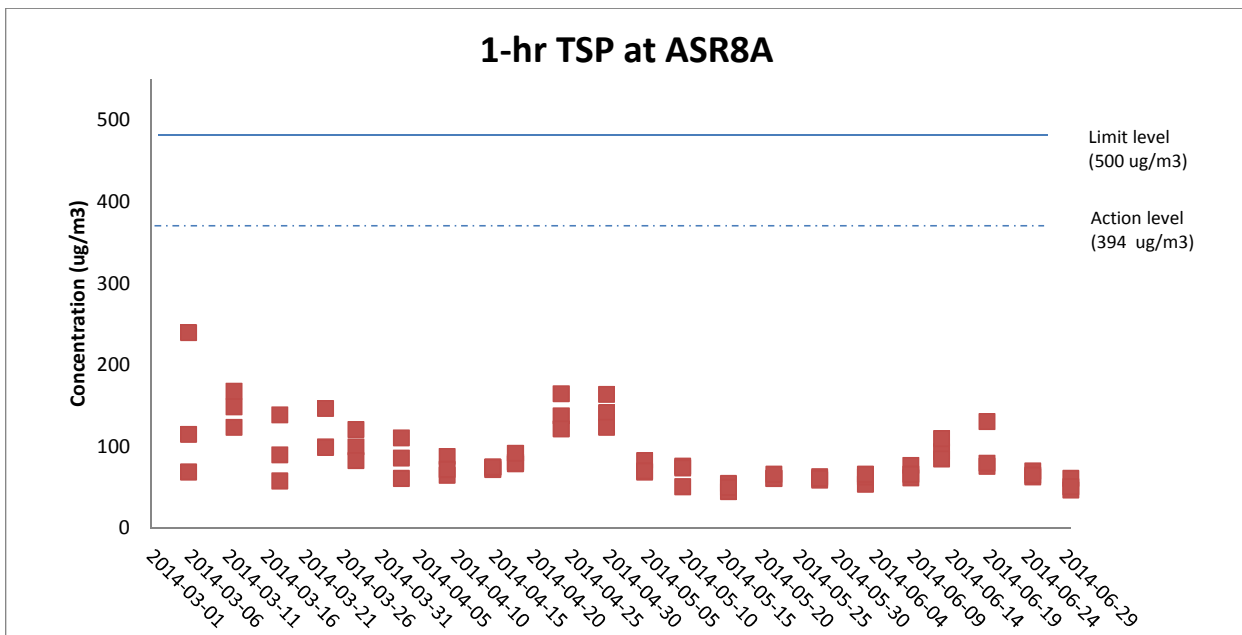
Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2012/07	2014-06-03	ASR8A	11:11	24-hr TSP	46	178	260
TMCLKL	HY/2012/07	2014-06-09	ASR8A	11:16	24-hr TSP	39		
TMCLKL	HY/2012/07	2014-06-13	ASR8A	11:06	24-hr TSP	59		
TMCLKL	HY/2012/07	2014-06-19	ASR8A	11:16	24-hr TSP	64		
TMCLKL	HY/2012/07	2014-06-25	ASR8A	11:11	24-hr TSP	69		
TMCLKL	HY/2012/07	2014-06-30	ASR8A	11:06	24-hr TSP	49		
						Average	54	
						Min.	39	
						Max.	69	

**24-hour TSP Monitoring Results at Air Quality Monitoring Station ASR8**

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	2014-06-03	ASR8	11:22	24-hr TSP	46	178	260
TMCLKL	HY/2012/07	2014-06-09	ASR8	11:28	24-hr TSP	51		
TMCLKL	HY/2012/07	2014-06-13	ASR8	11:16	24-hr TSP	64		
TMCLKL	HY/2012/07	2014-06-19	ASR8	11:28	24-hr TSP	68		
TMCLKL	HY/2012/07	2014-06-25	ASR8	11:11	24-hr TSP	48		
TMCLKL	HY/2012/07	2014-06-30	ASR8	11:18	24-hr TSP	40		
						Average	53	
						Min.	40	
						Max.	68	

Action Level Exceedance

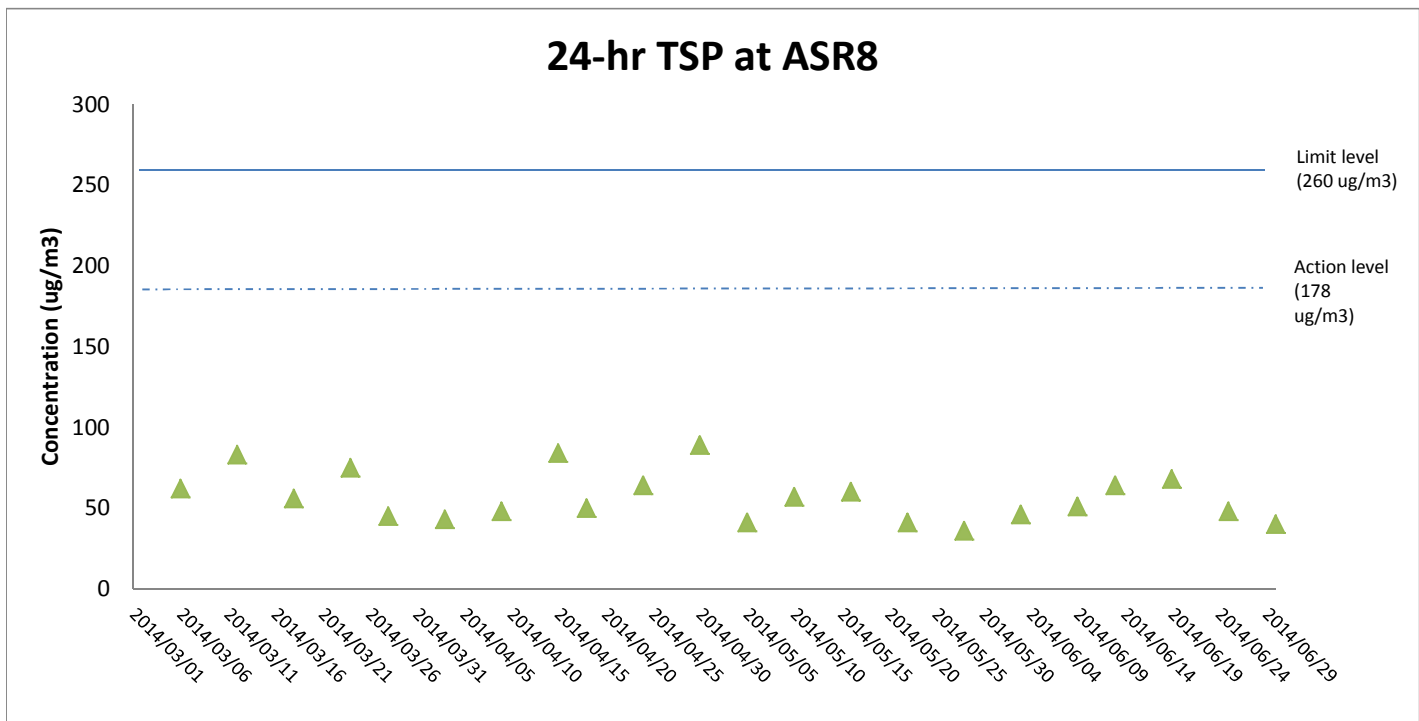
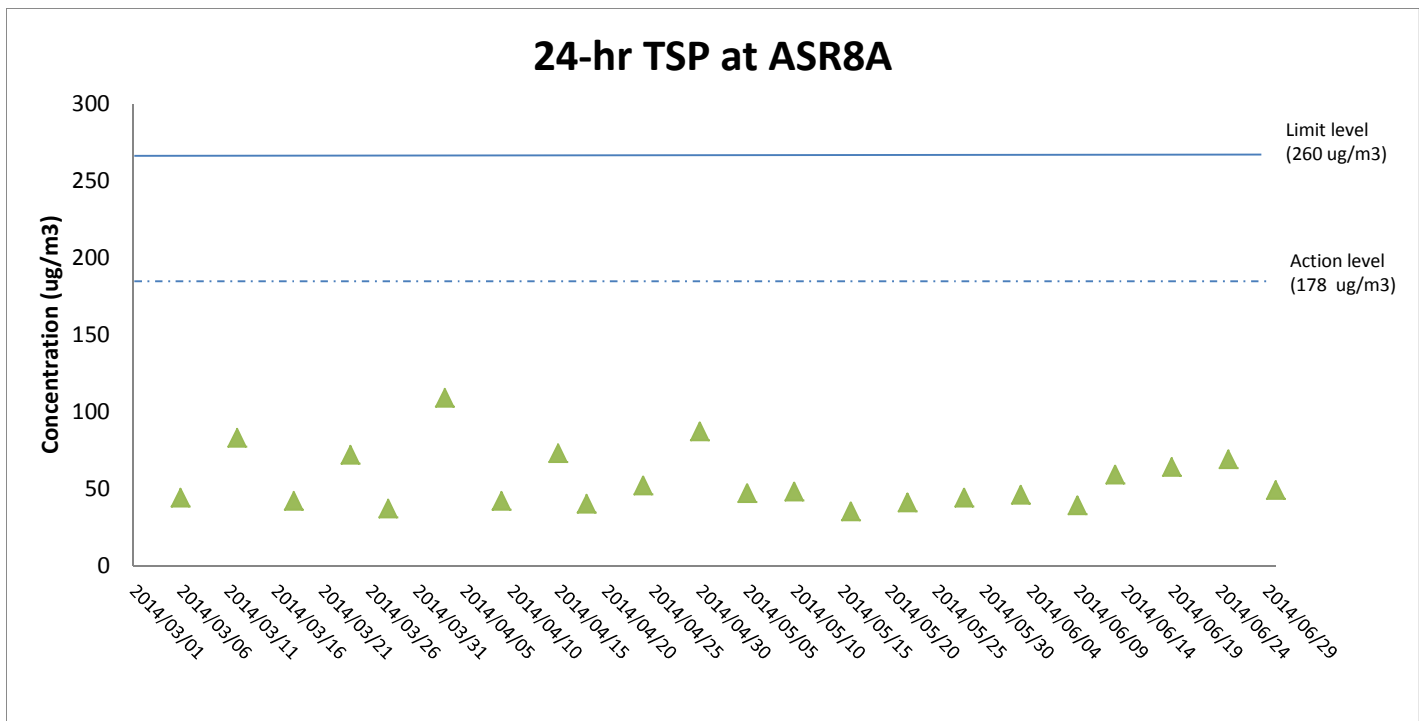
Limit Level Exceedance



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

Major construction works undertaken within the reporting period include site office erection, fence installation and relocation for Area 2, Viaduct A, B, C & D; construction of pile cap superstructure & land piling at Viaduct B and piling platform installation for Viaduct B, D & E.

Marine works within the reporting period include rockfill platform construction at Viaduct D landing, marine piling platform installation and marine piling at Viaducts B & E.



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

Major construction works undertaken within the reporting period include site office erection, fence installation and relocation for Area 2, Viaduct A, B, C & D; construction of pile cap superstructure & land piling at Viaduct B and piling platform installation for Viaduct B, D & E.

Marine works within the reporting period include rockfill platform construction at Viaduct D landing, marine piling platform installation and marine piling at Viaducts B & E.

Appendix H

## Meteorological Data for the Reporting Month

Date	Time	Wind speed (m/s)	Wind direction (degree)
03-06-2014	12:00:00 AM	0.03	156.05
03-06-2014	1:00:00 AM	0.12	132.63
03-06-2014	2:00:00 AM	0.23	153.08
03-06-2014	3:00:00 AM	0.19	199.41
03-06-2014	4:00:00 AM	0.02	213.23
03-06-2014	5:00:00 AM	0.02	206.50
03-06-2014	6:00:00 AM	0.04	174.58
03-06-2014	7:00:00 AM	0.08	185.28
03-06-2014	8:00:00 AM	0.05	81.25
03-06-2014	9:00:00 AM	0.02	162.38
03-06-2014	10:00:00 AM	0.01	175.13
03-06-2014	11:00:00 AM	0.04	210.58
03-06-2014	12:00:00 PM	0.30	87.66
03-06-2014	1:00:00 PM	0.52	218.40
03-06-2014	2:00:00 PM	0.37	232.22
03-06-2014	3:00:00 PM	0.15	190.20
03-06-2014	4:00:00 PM	0.00	184.04
03-06-2014	5:00:00 PM	0.01	190.00
03-06-2014	6:00:00 PM	0.04	176.39
03-06-2014	7:00:00 PM	0.04	175.03
03-06-2014	8:00:00 PM	0.07	178.81
03-06-2014	9:00:00 PM	0.02	179.48
03-06-2014	10:00:00 PM	0.05	143.27
03-06-2014	11:00:00 PM	0.03	175.37
04-06-2014	12:00:00 AM	0.10	158.71
04-06-2014	1:00:00 AM	0.02	186.89
04-06-2014	2:00:00 AM	0.01	179.66
04-06-2014	3:00:00 AM	0.02	183.11
04-06-2014	4:00:00 AM	0.02	193.39
04-06-2014	5:00:00 AM	0.03	199.82
04-06-2014	6:00:00 AM	0.03	127.06
04-06-2014	7:00:00 AM	0.01	61.05
04-06-2014	8:00:00 AM	0.22	134.26
04-06-2014	9:00:00 AM	0.44	91.83
04-06-2014	10:00:00 AM	0.03	127.09
04-06-2014	11:00:00 AM	0.46	157.23
04-06-2014	12:00:00 PM	0.15	146.26
04-06-2014	1:00:00 PM	0.27	157.16
04-06-2014	2:00:00 PM	0.42	216.19
04-06-2014	3:00:00 PM	0.24	214.68
04-06-2014	4:00:00 PM	0.01	221.12
04-06-2014	5:00:00 PM	0.00	191.31
04-06-2014	6:00:00 PM	0.06	129.86
04-06-2014	7:00:00 PM	0.10	165.09
04-06-2014	8:00:00 PM	0.18	172.11
04-06-2014	9:00:00 PM	0.02	199.93
04-06-2014	10:00:00 PM	0.02	163.89
04-06-2014	11:00:00 PM	0.06	191.43
09-06-2014	12:00:00 AM	0.44	138.26



Date	Time	Wind speed (m/s)	Wind direction (degree)
09-06-2014	1:00:00 AM	0.74	182.70
09-06-2014	2:00:00 AM	0.27	183.61
09-06-2014	3:00:00 AM	0.22	162.31
09-06-2014	4:00:00 AM	0.69	179.79
09-06-2014	5:00:00 AM	1.07	197.74
09-06-2014	6:00:00 AM	0.62	137.98
09-06-2014	7:00:00 AM	0.89	122.80
09-06-2014	8:00:00 AM	0.91	114.99
09-06-2014	9:00:00 AM	0.25	136.59
09-06-2014	10:00:00 AM	0.35	149.98
09-06-2014	11:00:00 AM	0.46	100.61
09-06-2014	12:00:00 PM	0.48	137.84
09-06-2014	1:00:00 PM	0.24	110.22
09-06-2014	2:00:00 PM	0.69	117.27
09-06-2014	3:00:00 PM	0.73	147.70
09-06-2014	4:00:00 PM	0.28	146.00
09-06-2014	5:00:00 PM	0.52	190.34
09-06-2014	6:00:00 PM	0.49	148.13
09-06-2014	7:00:00 PM	0.21	148.85
09-06-2014	8:00:00 PM	0.02	125.08
09-06-2014	9:00:00 PM	0.15	107.37
09-06-2014	10:00:00 PM	0.09	136.25
09-06-2014	11:00:00 PM	0.32	127.20
10-06-2014	12:00:00 AM	0.18	111.94
10-06-2014	1:00:00 AM	0.07	126.07
10-06-2014	2:00:00 AM	0.35	104.17
10-06-2014	3:00:00 AM	0.31	79.38
10-06-2014	4:00:00 AM	1.17	92.29
10-06-2014	5:00:00 AM	0.38	112.13
10-06-2014	6:00:00 AM	0.40	109.28
10-06-2014	7:00:00 AM	0.41	142.31
10-06-2014	8:00:00 AM	0.53	128.07
10-06-2014	9:00:00 AM	0.62	93.61
10-06-2014	10:00:00 AM	0.43	101.63
10-06-2014	11:00:00 AM	1.33	105.67
10-06-2014	12:00:00 PM	0.67	106.08
10-06-2014	1:00:00 PM	0.43	151.07
10-06-2014	2:00:00 PM	0.60	117.59
10-06-2014	3:00:00 PM	0.97	125.76
10-06-2014	4:00:00 PM	1.03	114.87
10-06-2014	5:00:00 PM	0.47	117.36
10-06-2014	6:00:00 PM	0.34	181.25
10-06-2014	7:00:00 PM	0.31	186.41
10-06-2014	8:00:00 PM	0.14	121.33
10-06-2014	9:00:00 PM	0.12	113.19
10-06-2014	10:00:00 PM	0.05	125.90
10-06-2014	11:00:00 PM	0.03	52.78
13-06-2014	12:00:00 AM	0.04	176.75
13-06-2014	1:00:00 AM	0.02	200.68

Date	Time	Wind speed (m/s)	Wind direction (degree)
13-06-2014	2:00:00 AM	0.02	214.10
13-06-2014	3:00:00 AM	0.03	193.58
13-06-2014	4:00:00 AM	0.08	170.54
13-06-2014	5:00:00 AM	0.07	188.13
13-06-2014	6:00:00 AM	0.10	188.30
13-06-2014	7:00:00 AM	0.01	117.41
13-06-2014	8:00:00 AM	0.02	154.25
13-06-2014	9:00:00 AM	0.00	246.43
13-06-2014	10:00:00 AM	0.09	144.02
13-06-2014	11:00:00 AM	0.54	99.48
13-06-2014	12:00:00 PM	1.40	103.05
13-06-2014	1:00:00 PM	0.68	101.71
13-06-2014	2:00:00 PM	0.14	151.92
13-06-2014	3:00:00 PM	0.27	125.90
13-06-2014	4:00:00 PM	0.66	131.18
13-06-2014	5:00:00 PM	0.85	142.10
13-06-2014	6:00:00 PM	0.54	136.05
13-06-2014	7:00:00 PM	0.26	139.17
13-06-2014	8:00:00 PM	0.31	106.13
13-06-2014	9:00:00 PM	0.05	121.68
13-06-2014	10:00:00 PM	0.51	169.77
13-06-2014	11:00:00 PM	0.18	131.78
13-06-2014	12:00:00 AM	0.03	125.50
14-06-2014	1:00:00 AM	0.38	118.79
14-06-2014	2:00:00 AM	0.06	226.39
14-06-2014	3:00:00 AM	0.04	159.19
14-06-2014	4:00:00 AM	0.03	164.44
14-06-2014	5:00:00 AM	0.03	204.11
14-06-2014	6:00:00 AM	0.02	216.82
14-06-2014	7:00:00 AM	0.01	218.55
14-06-2014	8:00:00 AM	0.03	256.34
14-06-2014	9:00:00 AM	0.08	252.81
14-06-2014	10:00:00 AM	0.14	262.13
14-06-2014	11:00:00 AM	0.08	264.60
14-06-2014	12:00:00 PM	0.03	199.56
14-06-2014	1:00:00 PM	0.10	231.91
14-06-2014	2:00:00 PM	0.20	241.52
14-06-2014	3:00:00 PM	0.55	211.37
14-06-2014	4:00:00 PM	0.25	243.56
14-06-2014	5:00:00 PM	0.25	229.53
14-06-2014	6:00:00 PM	0.24	135.61
14-06-2014	7:00:00 PM	0.34	174.76
14-06-2014	8:00:00 PM	0.27	172.57
14-06-2014	9:00:00 PM	0.15	148.09
14-06-2014	10:00:00 PM	0.02	140.11
14-06-2014	11:00:00 PM	0.02	228.83
19-06-2014	12:00:00 AM	0.13	164.44
19-06-2014	1:00:00 AM	0.07	196.92
19-06-2014	2:00:00 AM	0.03	191.57

Date	Time	Wind speed (m/s)	Wind direction (degree)
19-06-2014	3:00:00 AM	0.04	141.95
19-06-2014	4:00:00 AM	0.12	167.29
19-06-2014	5:00:00 AM	0.06	185.81
19-06-2014	6:00:00 AM	0.06	174.79
19-06-2014	7:00:00 AM	0.29	114.87
19-06-2014	8:00:00 AM	0.15	98.73
19-06-2014	9:00:00 AM	0.24	134.31
19-06-2014	10:00:00 AM	0.42	111.11
19-06-2014	11:00:00 AM	0.94	103.00
19-06-2014	12:00:00 PM	0.91	109.24
19-06-2014	1:00:00 PM	0.52	119.06
19-06-2014	2:00:00 PM	0.88	105.63
19-06-2014	3:00:00 PM	0.40	129.38
19-06-2014	4:00:00 PM	0.13	138.18
19-06-2014	5:00:00 PM	0.28	100.10
19-06-2014	6:00:00 PM	0.14	114.23
19-06-2014	7:00:00 PM	0.03	170.85
19-06-2014	8:00:00 PM	0.12	120.64
19-06-2014	9:00:00 PM	0.28	152.34
19-06-2014	10:00:00 PM	0.02	125.86
19-06-2014	11:00:00 PM	0.02	175.23
20-06-2014	12:00:00 AM	0.15	172.75
20-06-2014	1:00:00 AM	0.35	160.82
20-06-2014	2:00:00 AM	0.15	151.04
20-06-2014	3:00:00 AM	0.14	141.28
20-06-2014	4:00:00 AM	0.18	154.84
20-06-2014	5:00:00 AM	0.13	175.44
20-06-2014	6:00:00 AM	0.26	131.25
20-06-2014	7:00:00 AM	0.64	145.93
20-06-2014	8:00:00 AM	0.22	139.47
20-06-2014	9:00:00 AM	0.24	132.79
20-06-2014	10:00:00 AM	0.06	164.38
20-06-2014	11:00:00 AM	0.04	157.48
20-06-2014	12:00:00 PM	0.08	165.20
20-06-2014	1:00:00 PM	0.09	179.71
20-06-2014	2:00:00 PM	0.09	82.01
20-06-2014	3:00:00 PM	0.02	115.84
20-06-2014	4:00:00 PM	0.21	89.56
20-06-2014	5:00:00 PM	0.15	111.67
20-06-2014	6:00:00 PM	0.28	147.85
20-06-2014	7:00:00 PM	0.10	124.60
20-06-2014	8:00:00 PM	0.09	138.38
20-06-2014	9:00:00 PM	0.44	149.27
20-06-2014	10:00:00 PM	0.53	139.60
20-06-2014	11:00:00 PM	0.36	177.12
25-06-2014	12:00:00 AM	0.08	162.57
25-06-2014	1:00:00 AM	0.06	156.01
25-06-2014	2:00:00 AM	0.08	120.71
25-06-2014	3:00:00 AM	0.07	133.22

Date	Time	Wind speed (m/s)	Wind direction (degree)
25-06-2014	4:00:00 AM	0.15	127.31
25-06-2014	5:00:00 AM	0.57	154.76
25-06-2014	6:00:00 AM	0.10	111.91
25-06-2014	7:00:00 AM	0.05	193.93
25-06-2014	8:00:00 AM	0.14	103.68
25-06-2014	9:00:00 AM	0.26	92.04
25-06-2014	10:00:00 AM	0.17	195.12
25-06-2014	11:00:00 AM	0.21	204.71
25-06-2014	12:00:00 PM	0.31	182.08
25-06-2014	1:00:00 PM	0.02	84.12
25-06-2014	2:00:00 PM	0.02	78.42
25-06-2014	3:00:00 PM	0.09	105.60
25-06-2014	4:00:00 PM	0.37	152.24
25-06-2014	5:00:00 PM	0.25	129.61
25-06-2014	6:00:00 PM	0.22	141.00
25-06-2014	7:00:00 PM	0.25	132.40
25-06-2014	8:00:00 PM	0.10	193.23
25-06-2014	9:00:00 PM	0.22	130.99
25-06-2014	10:00:00 PM	0.06	165.05
25-06-2014	11:00:00 PM	0.10	150.61
26-06-2014	12:00:00 AM	0.18	174.13
26-06-2014	1:00:00 AM	0.03	120.46
26-06-2014	2:00:00 AM	0.03	169.40
26-06-2014	3:00:00 AM	0.32	169.59
26-06-2014	4:00:00 AM	0.05	168.61
26-06-2014	5:00:00 AM	0.11	218.06
26-06-2014	6:00:00 AM	0.04	167.35
26-06-2014	7:00:00 AM	0.11	167.39
26-06-2014	8:00:00 AM	0.12	229.57
26-06-2014	9:00:00 AM	0.14	168.38
26-06-2014	10:00:00 AM	0.65	33.91
26-06-2014	11:00:00 AM	0.50	130.16
26-06-2014	12:00:00 PM	0.49	164.47
26-06-2014	1:00:00 PM	0.16	139.84
26-06-2014	2:00:00 PM	0.57	122.94
26-06-2014	3:00:00 PM	0.83	84.40
26-06-2014	4:00:00 PM	0.81	96.94
26-06-2014	5:00:00 PM	0.91	78.80
26-06-2014	6:00:00 PM	0.45	111.97
26-06-2014	7:00:00 PM	0.35	103.66
26-06-2014	8:00:00 PM	0.47	168.20
26-06-2014	9:00:00 PM	0.32	125.42
26-06-2014	10:00:00 PM	0.37	161.47
26-06-2014	11:00:00 PM	0.02	174.47
30-06-2014	12:00:00 AM	0.10	154.86
30-06-2014	1:00:00 AM	0.29	147.21
30-06-2014	2:00:00 AM	0.11	131.62
30-06-2014	3:00:00 AM	0.14	138.79
30-06-2014	4:00:00 AM	0.16	132.96

Date	Time	Wind speed (m/s)	Wind direction (degree)
30-06-2014	5:00:00 AM	0.31	118.97
30-06-2014	6:00:00 AM	0.11	168.13
30-06-2014	7:00:00 AM	0.21	142.36
30-06-2014	8:00:00 AM	0.71	139.65
30-06-2014	9:00:00 AM	1.10	133.27
30-06-2014	10:00:00 AM	1.44	132.17
30-06-2014	11:00:00 AM	1.14	137.68
30-06-2014	12:00:00 PM	0.50	110.63
30-06-2014	1:00:00 PM	0.25	110.89
30-06-2014	2:00:00 PM	0.62	147.34
30-06-2014	3:00:00 PM	0.47	141.29
30-06-2014	4:00:00 PM	0.45	151.37
30-06-2014	5:00:00 PM	0.01	110.81
30-06-2014	6:00:00 PM	0.02	128.93
30-06-2014	7:00:00 PM	0.02	167.06
30-06-2014	8:00:00 PM	0.02	156.43
30-06-2014	9:00:00 PM	0.10	125.30
30-06-2014	10:00:00 PM	0.02	137.60
30-06-2014	11:00:00 PM	0.02	147.86
01-07-2014	12:00:00 AM	0.02	148.66
01-07-2014	1:00:00 AM	0.16	140.71
01-07-2014	2:00:00 AM	0.03	140.97
01-07-2014	3:00:00 AM	0.05	156.33
01-07-2014	4:00:00 AM	0.03	142.73
01-07-2014	5:00:00 AM	0.10	134.04
01-07-2014	6:00:00 AM	0.22	137.31
01-07-2014	7:00:00 AM	0.04	120.60
01-07-2014	8:00:00 AM	0.06	154.10
01-07-2014	9:00:00 AM	0.15	141.67
01-07-2014	10:00:00 AM	0.39	151.26
01-07-2014	11:00:00 AM	0.45	155.36
01-07-2014	12:00:00 PM	0.60	125.93
01-07-2014	1:00:00 PM	0.26	148.18
01-07-2014	2:00:00 PM	0.50	147.54
01-07-2014	3:00:00 PM	0.24	160.36
01-07-2014	4:00:00 PM	0.07	102.68
01-07-2014	5:00:00 PM	0.06	123.91
01-07-2014	6:00:00 PM	0.02	176.54
01-07-2014	7:00:00 PM	0.02	166.24
01-07-2014	8:00:00 PM	0.10	138.51
01-07-2014	9:00:00 PM	0.13	151.64
01-07-2014	10:00:00 PM	0.06	115.69
01-07-2014	11:00:00 PM	0.02	140.71



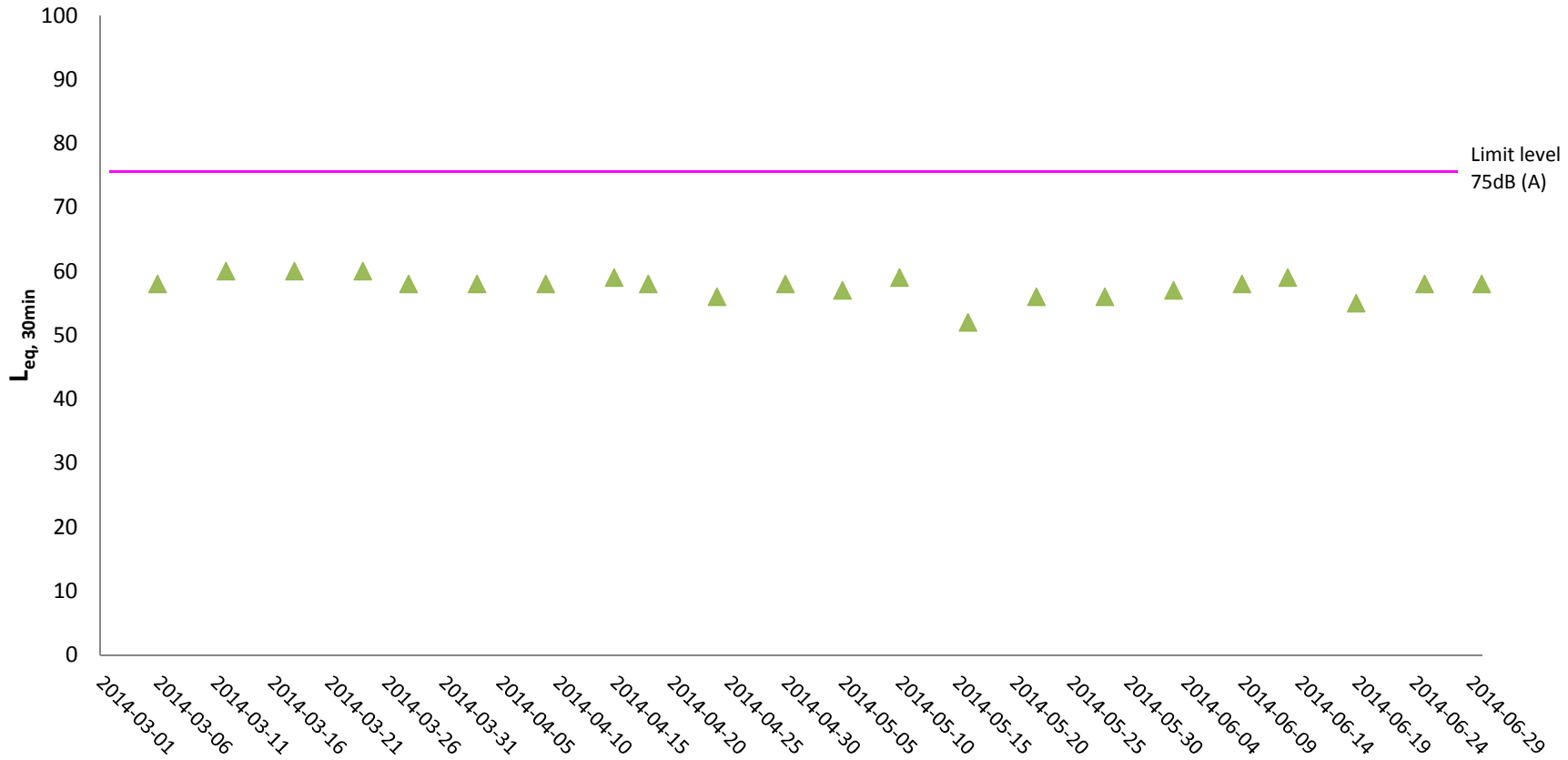
Appendix I

# Impact Noise Monitoring Results and Graphical Presentation

Appendix II Noise Monitoring Results

Project	Works	Date (yyyy-mm-dd)	Station	Weather Condition	Time (hh:mm, 24hour)	Noise Level for 30-min, dB(A)			Limit Level dB(A)	Temp (° C)	Wind Speed (m/s)	Noise Meter Model/ID	Calibrator Model/ID
						Leq	L10	L90					
TMCLKL	HY/2012/07	2014-06-09	NSR1	Sunny	9:28	58	61	54	75	27	0.2	RION NL31 (S/N 00410224)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2014-06-13	NSR1	Sunny	10:18	59	61	54	75	26	0.2	RION NL31 (S/N 00410224)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2014-06-19	NSR1	Sunny	9:28	55	57	53	75	29	0.5	RION NL31 (S/N 00410224)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2014-06-25	NSR1	Sunny	9:25	58	60	55	75	26	0.2	RION NL31 (S/N 00410224)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2014-06-30	NSR1	Sunny	9:17	58	61	54	75	28	3.5	RION NL31 (S/N 00410224)	RION NC73 (S/N 10997142)
						Min.	55						
						Max.	59						
						Average	58						

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



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

Major construction works undertaken within the reporting period include site office erection, fence installation and relocation for Area 2, Viaduct A, B, C & D; construction of pile cap superstructure & land piling at Viaduct B and piling platform installation for Viaduct B, D & E.

Marine works within the reporting period include rockfill platform construction at Viaduct D landing, marine piling platform installation and marine piling at Viaducts B & E.

Appendix J

## Impact Water Quality Monitoring Results and Graphical Presentation

## Appendix J Water Quality Monitoring Results

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	CS(Mf)5	Surface	1	1	1	14:43	28.3	7.70	17.90	6.18	3.38	3.3	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	CS(Mf)5	Surface	1	1	2	14:43	28.3	7.71	18.00	6.20	3.36	3.4	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	CS(Mf)5	Middle	5.3	2	1	14:43	28.2	7.73	18.40	6.12	3.11	4.1	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	CS(Mf)5	Middle	5.3	2	2	14:43	28.2	7.74	18.30	6.10	3.15	4.1	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	CS(Mf)5	Bottom	9.6	3	1	14:43	28.1	7.69	18.90	5.81	3.39	4.1	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	CS(Mf)5	Bottom	9.6	3	2	14:43	28.2	7.70	18.80	5.85	3.41	3.2	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	SR4a	Surface	1	1	1	15:13	28.3	7.74	18.00	6.01	3.06	3.2	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	SR4a	Surface	1	1	2	15:13	28.2	7.75	17.90	6.02	3.04	2.7	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	SR4a	Middle		2	1	15:13							2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	SR4a	Middle		2	2	15:13							2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	SR4a	Bottom	4.5	3	1	15:13	28.2	7.75	18.80	5.98	3.27	4.0	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	SR4a	Bottom	4.5	3	2	15:13	28.2	7.76	18.80	5.97	3.29	3.9	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	SR4	Surface	1	1	1	15:43	28.3	7.75	18.10	6.11	3.41	4.2	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	SR4	Surface	1	1	2	15:43	28.2	7.78	18.00	6.13	3.39	5.0	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	SR4	Middle		2	1	15:43							2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	SR4	Middle		2	2	15:43							2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	SR4	Bottom	4.3	3	1	15:43	28.2	7.79	18.90	6.07	3.87	4.6	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	SR4	Bottom	4.3	3	2	15:43	28.1	7.78	18.80	6.06	3.86	3.9	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS8	Surface	1	1	1	16:13	28.3	7.76	18.10	6.21	3.03	3.1	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS8	Surface	1	1	2	16:13	28.3	7.77	18.20	6.19	3.05	3.5	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS8	Middle		2	1	16:13							2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS8	Middle		2	2	16:13							2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS8	Bottom	4	3	1	16:13	28.2	7.79	18.80	5.99	3.19	4.5	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS8	Bottom	4	3	2	16:13	28.2	7.78	18.70	6.02	3.17	3.2	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS(Mf)16	Surface	1	1	1	16:43	28.3	7.79	18.20	6.27	3.15	2.7	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS(Mf)16	Surface	1	1	2	16:43	28.3	7.78	18.10	6.29	3.17	3.7	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS(Mf)16	Middle	4.4	2	1	16:43	28.2	7.77	18.30	6.31	3.34	2.9	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS(Mf)16	Middle	4.4	2	2	16:43	28.3	7.78	18.40	6.33	3.31	2.5	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS(Mf)16	Bottom	7.7	3	1	16:43	28.2	7.80	18.80	5.98	3.29	3.9	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS(Mf)16	Bottom	7.7	3	2	16:43	28.2	7.81	18.90	5.96	3.27	3.8	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS(Mf)9	Surface	1	1	1	17:13	28.3	7.77	18.00	6.24	3.21	2.7	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS(Mf)9	Surface	1	1	2	17:13	28.3	7.78	18.10	6.21	3.23	2.7	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS(Mf)9	Middle		2	1	17:13							2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS(Mf)9	Middle		2	2	17:13							2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS(Mf)9	Bottom	4.4	3	1	17:13	28.2	7.76	18.80	6.05	3.37	3.0	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	IS(Mf)9	Bottom	4.4	3	2	17:13	28.3	7.75	18.90	6.07	3.35	3.6	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	CS(Mf)3	Surface	1	1	1	17:43	28.3	7.76	17.90	6.27	3.27	3.1	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	CS(Mf)3	Surface	1	1	2	17:43	28.4	7.75	18.00	6.29	3.35	3.0	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	CS(Mf)3	Middle	6.2	2	1	17:43	28.3	7.78	18.30	6.23	3.64	2.9	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	CS(Mf)3	Middle	6.2	2	2	17:43	28.3	7.79	18.40	6.25	3.66	3.3	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	CS(Mf)3	Bottom	11.4	3	1	17:43	28.2	7.80	18.70	5.99	3.71	2.4	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Flood	Fine	CS(Mf)3	Bottom	11.4	3	2	17:43	28.3	7.79	18.90	5.97	3.69	2.4	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	CS(Mf)3	Surface	1	1	1	08:10	28.4	7.70	18.00	6.10	3.14	4.3	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	CS(Mf)3	Surface	1	1	2	08:10	28.3	7.72	18.10	6.14	3.16	3.5	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	CS(Mf)3	Middle	6	2	1	08:10	28.2	7.69	18.40	6.08	3.30	4.1	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	CS(Mf)3	Middle	6	2	2	08:10	28.1	7.68	18.30	6.07	3.34	4.1	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	CS(Mf)3	Bottom	11	3	1	08:10	28	7.68	18.80	5.86	3.51	4.3	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	CS(Mf)3	Bottom	11	3	2	08:10	28	7.67	18.70	5.80	3.56	4.0	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	SR4a	Surface	1	1	1	10:18	28.4	7.69	18.00	6.20	3.18	3.9	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	SR4a	Surface	1	1	2	10:18	28.4	7.70	18.10	6.24	3.15	3.3	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	SR4a	Middle		2	1	10:18							2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	SR4a	Middle		2	2	10:18							2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	SR4a	Bottom	4	3	1	10:18	28.1	7.78	18.70	6.16	3.80	3.7	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	SR4a	Bottom	4	3	2	10:18	28.1	7.77	18.70	6.19	3.82	3.2	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	SR4	Surface	1	1	1	09:41	28.4	7.79	18.00	6.29	3.16	4.1	2014-06-11



## Appendix J Water Quality Monitoring Results

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	SR4	Surface	1	1	2	09:41	28.3	7.80	18.00	6.24	3.10	4.3	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	SR4	Middle		2	1	09:41							2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	SR4	Middle		2	2	09:41							2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	SR4	Bottom	4	3	1	09:41	28	7.84	18.80	6.17	3.04	3.3	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	SR4	Bottom	4	3	2	09:41	28	7.83	18.70	6.11	3.01	3.0	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS8	Surface	1	1	1	09:18	28.3	7.72	18.10	6.44	3.30	2.9	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS8	Surface	1	1	2	09:18	28.3	7.70	18.00	6.48	3.34	3.5	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS8	Middle		2	1	09:18							2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS8	Middle		2	2	09:18							2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS8	Bottom	3.6	3	1	09:18	28	7.76	18.70	6.23	3.66	2.9	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS8	Bottom	3.6	3	2	09:18	28	7.74	18.70	6.29	3.69	3.3	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS(Mf)16	Surface	1	1	1	08:58	28.4	7.76	18.00	6.12	3.52	3.2	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS(Mf)16	Surface	1	1	2	08:58	28.3	7.75	18.00	6.14	3.53	2.5	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS(Mf)16	Middle	4	2	1	08:58	28.2	7.80	18.30	6.10	3.22	4.3	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS(Mf)16	Middle	4	2	2	08:58	28.2	7.81	18.40	6.09	3.29	3.0	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS(Mf)16	Bottom	7	3	1	08:58	28.1	7.84	18.70	5.80	3.43	3.6	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS(Mf)16	Bottom	7	3	2	08:58	28.1	7.83	18.60	5.84	3.46	4.0	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS(Mf)9	Surface	1	1	1	08:35	28.4	7.76	17.90	6.24	3.26	3.6	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS(Mf)9	Surface	1	1	2	08:35	28.4	7.75	18.00	6.20	3.20	3.2	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS(Mf)9	Middle		2	1	08:35							2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS(Mf)9	Middle		2	2	08:35							2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS(Mf)9	Bottom	4.2	3	1	08:35	28.1	7.80	18.70	6.10	3.34	4.1	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	IS(Mf)9	Bottom	4.2	3	2	08:35	28.1	7.82	18.70	6.08	3.31	3.4	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	CS(Mf)5	Surface	1	1	1	10:52	28.4	7.78	18.00	6.12	3.01	4.1	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	CS(Mf)5	Surface	1	1	2	10:52	28.5	7.80	18.00	6.13	3.09	3.8	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	CS(Mf)5	Middle	5.1	2	1	10:52	28.3	7.74	18.40	6.46	3.14	3.1	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	CS(Mf)5	Middle	5.1	2	2	10:52	28.3	7.75	18.40	6.40	3.12	4.5	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	CS(Mf)5	Bottom	9.2	3	1	10:52	28.1	7.80	18.80	6.04	3.46	3.6	2014-06-11
TMCLKL	HY/2012/07	2014-06-03	Mid-Ebb	Fine	CS(Mf)5	Bottom	9.2	3	2	10:52	28.1	7.81	18.70	6.01	3.48	4.0	2014-06-11

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	CS(Mf)5	Surface	1	1	1	10:07	28.6	7.73	18.00	6.18	2.01	1.2	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	CS(Mf)5	Surface	1	1	2	10:07	28.5	7.75	18.10	6.19	2.09	0.6	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	CS(Mf)5	Middle	5.3	2	1	10:07	28.3	7.69	18.40	6.52	2.14	1.4	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	CS(Mf)5	Middle	5.3	2	2	10:07	28.4	7.70	18.50	6.46	2.13	1.2	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	CS(Mf)5	Bottom	9.6	3	1	10:07	28.2	7.75	18.90	6.10	2.36	1.7	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	CS(Mf)5	Bottom	9.6	3	2	10:07	28.1	7.76	18.80	6.07	2.38	1.2	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	SR4a	Surface	1	1	1	10:23	28.4	7.64	18.10	6.26	2.00	1.3	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	SR4a	Surface	1	1	2	10:23	28.5	7.65	18.20	6.30	2.08	0.9	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	SR4a	Middle		2	1	10:23							2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	SR4a	Middle		2	2	10:23							2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	SR4a	Bottom	4.2	3	1	10:23	28.1	7.73	18.70	6.22	2.24	2.7	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	SR4a	Bottom	4.2	3	2	10:23	28.2	7.72	18.80	6.25	2.28	2.4	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	SR4	Surface	1	1	1	10:46	28.5	7.74	18.00	6.35	1.96	1.1	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	SR4	Surface	1	1	2	10:46	28.4	7.75	18.10	6.30	1.97	0.5	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	SR4	Middle		2	1	10:46							2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	SR4	Middle		2	2	10:46							2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	SR4	Bottom	4.4	3	1	10:46	28.1	7.79	18.90	6.23	2.14	2.3	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	SR4	Bottom	4.4	3	2	10:46	28	7.78	18.80	6.17	2.17	1.2	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS8	Surface	1	1	1	11:09	28.3	7.67	18.10	6.50	2.00	0.8	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS8	Surface	1	1	2	11:09	28.4	7.65	18.20	6.54	1.98	1.3	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS8	Middle		2	1	11:09							2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS8	Middle		2	2	11:09							2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS8	Bottom	3.8	3	1	11:09	28.1	7.71	18.70	6.29	2.19	1.0	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS8	Bottom	3.8	3	2	11:09	28	7.69	18.80	6.35	2.15	0.7	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS(Mf)16	Surface	1	1	1	11:32	28.5	7.71	18.10	6.18	2.04	0.7	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS(Mf)16	Surface	1	1	2	11:32	28.4	7.70	18.00	6.20	2.03	<0.5	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS(Mf)16	Middle	4.2	2	1	11:32	28.3	7.75	18.50	6.16	2.11	0.9	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS(Mf)16	Middle	4.2	2	2	11:32	28.2	7.76	18.40	6.15	2.10	0.8	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS(Mf)16	Bottom	7.4	3	1	11:32	28.1	7.79	18.70	5.86	2.23	0.7	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS(Mf)16	Bottom	7.4	3	2	11:32	28.2	7.78	18.80	5.90	2.21	0.9	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS(Mf)9	Surface	1	1	1	11:56	28.4	7.71	18.00	6.30	2.10	<0.5	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS(Mf)9	Surface	1	1	2	11:56	28.5	7.70	18.10	6.26	2.06	<0.5	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS(Mf)9	Middle		2	1	11:56							2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS(Mf)9	Middle		2	2	11:56							2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS(Mf)9	Bottom	4.6	3	1	11:56	28.2	7.75	18.80	6.16	2.12	<0.5	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	IS(Mf)9	Bottom	4.6	3	2	11:56	28.1	7.77	18.70	6.14	2.16	0.7	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	CS(Mf)3	Surface	1	1	1	12:24	28.5	7.65	18.10	6.16	1.94	0.6	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	CS(Mf)3	Surface	1	1	2	12:24	28.4	7.67	18.20	6.20	1.98	<0.5	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	CS(Mf)3	Middle	6.2	2	1	12:24	28.3	7.64	18.40	6.14	2.07	<0.5	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	CS(Mf)3	Middle	6.2	2	2	12:24	28.2	7.63	18.50	6.13	2.03	0.6	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	CS(Mf)3	Bottom	11.4	3	1	12:24	28	7.63	18.90	5.92	2.11	1.2	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Flood	Fine	CS(Mf)3	Bottom	11.4	3	2	12:24	28.1	7.62	18.90	5.86	2.14	1.3	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	CS(Mf)3	Surface	1	1	1	16:08	28.6	7.69	18.20	6.06	1.96	1.1	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	CS(Mf)3	Surface	1	1	2	16:08	28.5	7.71	18.20	6.09	1.98	1.2	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	CS(Mf)3	Middle	6.1	2	1	16:08	28.4	7.66	18.50	6.01	2.19	0.9	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	CS(Mf)3	Middle	6.1	2	2	16:08	28.3	7.68	18.60	6.00	2.17	1.1	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	CS(Mf)3	Bottom	11.2	3	1	16:08	28.1	7.61	18.90	5.86	2.29	1.1	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	CS(Mf)3	Bottom	11.2	3	2	16:08	28.1	7.59	19.00	5.83	2.28	1.1	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	SR4a	Surface	1	1	1	18:38	28.5	7.74	18.30	6.21	2.07	0.7	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	SR4a	Surface	1	1	2	18:38	28.5	7.73	18.20	6.22	2.11	1.4	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	SR4a	Middle		2	1	18:38							2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	SR4a	Middle		2	2	18:38							2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	SR4a	Bottom	4	3	1	18:38	28	7.76	18.90	6.20	2.33	1.0	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	SR4a	Bottom	4	3	2	18:38	28.1	7.74	18.80	6.18	2.38	1.2	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	SR4	Surface	1	1	1	18:09	28.4	7.76	18.20	6.19	1.99	<0.5	2014-06-16

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	SR4	Surface	1	1	2	18:09	28.5	7.77	18.20	6.20	2.04	1.1	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	SR4	Middle		2	1	18:09							2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	SR4	Middle		2	2	18:09							2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	SR4	Bottom	4	3	1	18:09	28.2	7.81	18.90	6.17	2.20	1.2	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	SR4	Bottom	4	3	2	18:09	28.3	7.83	19.00	6.16	2.22	0.9	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS8	Surface	1	1	1	17:28	28.3	7.69	18.40	6.34	2.08	0.5	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS8	Surface	1	1	2	17:28	28.3	7.71	18.70	6.33	2.09	1.0	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS8	Middle		2	1	17:28							2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS8	Middle		2	2	17:28							2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS8	Bottom	3.5	3	1	17:28	28.2	7.74	18.90	6.17	2.24	0.8	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS8	Bottom	3.5	3	2	17:28	28.1	7.76	19.20	6.19	2.22	0.6	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS(Mf)16	Surface	1	1	1	16:59	28.5	7.74	18.20	6.10	2.06	1.2	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS(Mf)16	Surface	1	1	2	16:59	28.6	7.76	18.30	6.07	2.09	1.4	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS(Mf)16	Middle	4.1	2	1	16:59	28.3	7.79	18.40	6.01	2.19	1.3	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS(Mf)16	Middle	4.1	2	2	16:59	28.3	7.78	18.40	5.98	2.17	1.1	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS(Mf)16	Bottom	7.1	3	1	16:59	28.2	7.80	18.80	5.81	2.31	2.8	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS(Mf)16	Bottom	7.1	3	2	16:59	28.2	7.82	18.90	5.82	2.29	2.4	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS(Mf)9	Surface	1	1	1	16:30	28.5	7.81	18.10	6.23	2.19	1.7	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS(Mf)9	Surface	1	1	2	16:30	28.5	7.80	18.30	6.20	2.21	2.2	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS(Mf)9	Middle		2	1	16:30							2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS(Mf)9	Middle		2	2	16:30							2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS(Mf)9	Bottom	4.3	3	1	16:30	28.3	7.86	18.90	6.02	2.19	2.7	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	IS(Mf)9	Bottom	4.3	3	2	16:30	28.2	7.88	19.10	6.04	2.22	2.9	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	CS(Mf)5	Surface	1	1	1	19:13	28.7	7.76	18.10	6.15	2.10	<0.5	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	CS(Mf)5	Surface	1	1	2	19:13	28.7	7.75	18.10	6.16	2.14	<0.5	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	CS(Mf)5	Middle	5.2	2	1	19:13	28.6	7.81	18.40	6.55	2.20	<0.5	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	CS(Mf)5	Middle	5.2	2	2	19:13	28.5	7.83	18.60	6.54	2.24	<0.5	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	CS(Mf)5	Bottom	9.4	3	1	19:13	28.4	7.82	18.90	6.07	2.39	1.3	2014-06-16
TMCLKL	HY/2012/07	2014-06-05	Mid-Ebb	Fine	CS(Mf)5	Bottom	9.4	3	2	19:13	28.4	7.84	19.10	6.04	2.40	0.6	2014-06-16

## Appendix J Water Quality Monitoring Results

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	CS(Mf)5	Surface	1	1	1	12:21	28.2	7.68	12.60	6.19	2.43	1.7	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	CS(Mf)5	Surface	1	1	2	12:21	28.2	7.68	12.50	6.21	2.40	1.9	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	CS(Mf)5	Middle	5.2	2	1	12:21	28.3	7.74	12.80	6.05	2.58	2.8	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	CS(Mf)5	Middle	5.2	2	2	12:21	28.4	7.72	12.80	6.08	2.55	2.3	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	CS(Mf)5	Bottom	9.6	3	1	12:21	28.4	7.72	13.00	6.01	2.64	3.2	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	CS(Mf)5	Bottom	9.6	3	2	12:21	28.4	7.73	13.10	5.97	2.68	3.4	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	SR4a	Surface	1	1	1	12:54	28.3	7.71	12.70	6.05	2.52	1.7	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	SR4a	Surface	1	1	2	12:54	28.2	7.72	12.70	6.08	2.53	2.0	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	SR4a	Middle		2	1	12:54							2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	SR4a	Middle		2	2	12:54							2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	SR4a	Bottom	4.8	3	1	12:54	28.3	7.67	12.90	5.93	2.68	2.8	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	SR4a	Bottom	4.8	3	2	12:54	28.4	7.68	12.80	5.96	2.71	2.5	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	SR4	Surface	1	1	1	13:29	28.3	7.72	12.50	6.18	2.31	1.5	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	SR4	Surface	1	1	2	13:29	28.3	7.71	12.40	6.22	2.34	1.5	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	SR4	Middle		2	1	13:29							2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	SR4	Middle		2	2	13:29							2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	SR4	Bottom	4.4	3	1	13:29	28.4	7.70	12.60	6.09	2.46	2.0	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	SR4	Bottom	4.4	3	2	13:29	28.3	7.68	12.60	6.10	2.43	1.7	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS8	Surface	1	1	1	14:00	28.2	7.74	12.60	6.15	2.33	1.8	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS8	Surface	1	1	2	14:00	28.1	7.73	12.60	6.12	2.30	1.5	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS8	Middle		2	1	14:00							2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS8	Middle		2	2	14:00							2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS8	Bottom	3.8	3	1	14:00	28.3	7.72	12.80	6.02	2.39	2.3	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS8	Bottom	3.8	3	2	14:00	28.2	7.72	12.80	6.01	2.43	2.5	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS(Mf)16	Surface	1	1	1	14:30	28.2	7.76	12.50	6.05	2.52	2.2	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS(Mf)16	Surface	1	1	2	14:30	28.3	7.79	12.60	6.01	2.51	2.4	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS(Mf)16	Middle	4.2	2	1	14:30	28.3	7.73	12.70	5.93	2.56	2.2	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS(Mf)16	Middle	4.2	2	2	14:30	28.3	7.72	12.70	5.94	2.52	2.1	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS(Mf)16	Bottom	7.3	3	1	14:30	28.4	7.69	12.80	5.87	2.64	2.8	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS(Mf)16	Bottom	7.3	3	2	14:30	28.4	7.67	12.70	5.84	2.67	2.6	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS(Mf)9	Surface	1	1	1	15:01	28.2	7.73	12.50	6.11	2.43	1.8	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS(Mf)9	Surface	1	1	2	15:01	28.1	7.70	12.60	6.14	2.39	2.0	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS(Mf)9	Middle		2	1	15:01							2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS(Mf)9	Middle		2	2	15:01							2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS(Mf)9	Bottom	4.6	3	1	15:01	28.3	7.68	12.70	6.02	2.46	2.4	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	IS(Mf)9	Bottom	4.6	3	2	15:01	28.3	7.67	12.60	6.01	2.48	2.2	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	CS(Mf)3	Surface	1	1	1	15:31	28.3	7.75	12.60	6.21	2.35	2.2	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	CS(Mf)3	Surface	1	1	2	15:31	28.2	7.74	12.70	6.18	2.38	2.0	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	CS(Mf)3	Middle	6.2	2	1	15:31	28.3	7.73	12.70	6.08	2.42	2.3	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	CS(Mf)3	Middle	6.2	2	2	15:31	28.4	7.73	12.80	6.10	2.41	2.0	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	CS(Mf)3	Bottom	11.3	3	1	15:31	28.4	7.71	12.80	6.01	2.56	2.3	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Flood	Cloudy	CS(Mf)3	Bottom	11.3	3	2	15:31	28.4	7.72	12.80	5.97	2.53	2.4	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	CS(Mf)3	Surface	1	1	1	07:47	28.2	7.69	12.50	6.12	2.41	1.6	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	CS(Mf)3	Surface	1	1	2	07:47	28.1	7.68	12.60	6.09	2.44	1.6	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	CS(Mf)3	Middle	5.8	2	1	07:47	28.3	7.67	12.70	5.99	2.48	1.8	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	CS(Mf)3	Middle	5.8	2	2	07:47	28.2	7.66	12.60	6.01	2.47	2.4	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	CS(Mf)3	Bottom	10.6	3	1	07:47	28.3	7.65	12.80	5.92	2.62	2.0	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	CS(Mf)3	Bottom	10.6	3	2	07:47	28.4	7.66	12.70	5.88	2.59	1.6	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	SR4a	Surface	1	1	1	09:32	28.1	7.65	12.50	5.96	2.58	2.0	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	SR4a	Surface	1	1	2	09:32	28.2	7.66	12.60	5.99	2.59	1.8	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	SR4a	Middle		2	1	09:32							2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	SR4a	Middle		2	2	09:32							2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	SR4a	Bottom	4.4	3	1	09:32	28.4	7.61	12.70	5.84	2.74	2.8	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	SR4a	Bottom	4.4	3	2	09:32	28.3	7.62	12.80	5.87	2.77	3.2	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	SR4	Surface	1	1	1	09:11	28.2	7.66	12.30	6.09	2.37	2.7	2014-06-17

Appendix J Water Quality Monitoring Results

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	SR4	Surface	1	1	2	09:11	28.1	7.65	12.40	6.13	2.40	3.0	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	SR4	Middle		2	1	09:11							2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	SR4	Middle		2	2	09:11							2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	SR4	Bottom	4.2	3	1	09:11	28.3	7.64	12.40	6.00	2.52	3.6	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	SR4	Bottom	4.2	3	2	09:11	28.4	7.62	12.50	6.01	2.49	3.4	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS8	Surface	1	1	1	08:50	28.1	7.68	12.50	6.06	2.39	2.2	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS8	Surface	1	1	2	08:50	28.1	7.67	12.40	6.03	2.36	2.3	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS8	Middle		2	1	08:50							2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS8	Middle		2	2	08:50							2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS8	Bottom	3.4	3	1	08:50	28.2	7.66	12.60	5.93	2.45	2.4	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS8	Bottom	3.4	3	2	08:50	28.3	7.67	12.70	5.92	2.49	2.5	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS(Mf)16	Surface	1	1	1	08:29	28.1	7.70	12.40	5.96	2.58	1.1	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS(Mf)16	Surface	1	1	2	08:29	28.2	7.73	12.50	5.92	2.57	1.5	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS(Mf)16	Middle	4	2	1	08:29	28.2	7.67	12.50	5.84	2.62	1.8	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS(Mf)16	Middle	4	2	2	08:29	28.3	7.66	12.60	5.85	2.58	1.6	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS(Mf)16	Bottom	7	3	1	08:29	28	7.63	12.70	5.78	2.70	2.7	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS(Mf)16	Bottom	7	3	2	08:29	28.2	7.61	12.60	5.75	2.73	2.3	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS(Mf)9	Surface	1	1	1	08:08	28.1	7.67	12.30	6.02	2.49	1.1	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS(Mf)9	Surface	1	1	2	08:08	28	7.64	12.40	6.05	2.45	1.0	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS(Mf)9	Middle		2	1	08:08							2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS(Mf)9	Middle		2	2	08:08							2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS(Mf)9	Bottom	4.2	3	1	08:08	28.3	7.62	12.50	5.93	2.52	1.2	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	IS(Mf)9	Bottom	4.2	3	2	08:08	28.2	7.61	12.60	5.92	2.54	1.2	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	CS(Mf)5	Surface	1	1	1	10:00	28.1	7.62	12.50	6.10	2.49	2.4	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	CS(Mf)5	Surface	1	1	2	10:00	28	7.61	12.40	6.12	2.46	1.9	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	CS(Mf)5	Middle	5.1	2	1	10:00	28.2	7.68	12.60	5.96	2.64	2.3	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	CS(Mf)5	Middle	5.1	2	2	10:00	28.3	7.66	12.70	5.99	2.61	2.2	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	CS(Mf)5	Bottom	9.2	3	1	10:00	28.5	7.66	13.10	5.92	2.70	1.9	2014-06-17
TMCLKL	HY/2012/07	2014-06-07	Mid-Ebb	Cloudy	CS(Mf)5	Bottom	9.2	3	2	10:00	28.4	7.67	13.20	5.88	2.74	2.3	2014-06-17



## Appendix J Water Quality Monitoring Results

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	CS(Mf)5	Surface	1	1	1	15:55	27.5	7.88	17.80	6.98	3.61	2.3	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	CS(Mf)5	Surface	1	1	2	15:55	27.6	7.90	17.90	6.92	3.64	2.4	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	CS(Mf)5	Middle	5.4	2	1	15:55	27.5	7.78	18.30	6.57	3.69	4.2	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	CS(Mf)5	Middle	5.4	2	2	15:55	27.5	7.80	18.30	6.53	3.71	3.4	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	CS(Mf)5	Bottom	9.8	3	1	15:55	27.4	7.88	18.40	6.43	3.80	4.5	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	CS(Mf)5	Bottom	9.8	3	2	15:55	27.4	7.89	18.40	6.42	3.84	4.1	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	SR4a	Surface	1	1	1	16:20	27.6	7.93	17.90	6.77	3.60	2.2	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	SR4a	Surface	1	1	2	16:20	27.6	7.90	17.90	6.72	3.69	3.1	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	SR4a	Middle		2	1	16:20							2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	SR4a	Middle		2	2	16:20							2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	SR4a	Bottom	4	3	1	16:20	27.5	7.96	18.00	6.47	4.12	2.8	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	SR4a	Bottom	4	3	2	16:20	27.4	7.97	18.00	6.49	4.18	3.0	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	SR4	Surface	1	1	1	16:45	27.6	7.89	17.90	6.73	3.44	2.3	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	SR4	Surface	1	1	2	16:45	27.6	7.91	17.90	6.77	3.46	2.7	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	SR4	Middle		2	1	16:45							2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	SR4	Middle		2	2	16:45							2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	SR4	Bottom	4.2	3	1	16:45	27.3	7.90	18.40	6.86	3.93	2.2	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	SR4	Bottom	4.2	3	2	16:45	27.4	7.91	18.40	6.90	3.97	3.8	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS8	Surface	1	1	1	17:10	27.5	7.92	17.80	7.98	3.63	2.6	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS8	Surface	1	1	2	17:10	27.6	7.93	17.90	7.91	3.67	2.1	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS8	Middle		2	1	17:10							2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS8	Middle		2	2	17:10							2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS8	Bottom	3.8	3	1	17:10	27.4	7.96	18.00	6.99	3.71	2.5	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS8	Bottom	3.8	3	2	17:10	27.4	7.97	18.00	6.91	3.72	3.3	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS(Mf)16	Surface	1	1	1	17:35	27.6	7.87	17.90	7.06	3.49	2.2	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS(Mf)16	Surface	1	1	2	17:35	27.6	7.86	17.90	7.08	3.51	2.8	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS(Mf)16	Middle	4.1	2	1	17:35	27.5	7.95	18.10	7.07	3.74	2.5	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS(Mf)16	Middle	4.1	2	2	17:35	27.6	7.96	18.00	7.09	3.71	2.2	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS(Mf)16	Bottom	7.2	3	1	17:35	27.4	7.80	18.30	6.57	3.90	2.3	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS(Mf)16	Bottom	7.2	3	2	17:35	27.4	7.82	18.30	6.60	3.87	3.0	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS(Mf)9	Surface	1	1	1	18:00	27.5	7.82	17.90	7.07	3.66	2.6	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS(Mf)9	Surface	1	1	2	18:00	27.4	7.83	17.80	7.10	3.69	2.1	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS(Mf)9	Middle		2	1	18:00							2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS(Mf)9	Middle		2	2	18:00							2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS(Mf)9	Bottom	4.4	3	1	18:00	27.3	7.94	18.30	6.71	4.23	3.6	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	IS(Mf)9	Bottom	4.4	3	2	18:00	27.3	7.93	18.40	6.76	4.27	2.4	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	CS(Mf)3	Surface	1	1	1	18:40	27.4	7.90	17.90	6.93	3.94	3.2	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	CS(Mf)3	Surface	1	1	2	18:40	27.4	7.91	17.90	6.95	3.97	2.9	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	CS(Mf)3	Middle	6	2	1	18:40	27.3	7.93	18.00	6.56	4.00	2.7	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	CS(Mf)3	Middle	6	2	2	18:40	27.3	7.94	18.00	6.59	4.09	3.6	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	CS(Mf)3	Bottom	11	3	1	18:40	27.4	7.96	18.40	6.28	4.01	3.3	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Flood	Cloudy	CS(Mf)3	Bottom	11	3	2	18:40	27.3	7.97	18.40	6.30	4.06	4.1	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	CS(Mf)3	Surface	1	1	1	09:14	27.4	7.93	17.80	6.84	3.74	2.9	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	CS(Mf)3	Surface	1	1	2	09:14	27.3	7.94	17.90	6.87	3.80	2.3	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	CS(Mf)3	Middle	5.9	2	1	09:14	27.3	7.90	18.00	6.43	3.69	2.8	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	CS(Mf)3	Middle	5.9	2	2	09:14	27.3	7.91	18.10	6.47	3.72	2.3	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	CS(Mf)3	Bottom	10.8	3	1	09:14	27.3	7.90	18.30	6.39	4.31	2.8	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	CS(Mf)3	Bottom	10.8	3	2	09:14	27.3	7.94	18.40	6.41	4.39	2.7	2014-06-20

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	SR4a	Surface	1	1	1	11:44	27.5	7.96	17.90	6.65	3.54	2.7	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	SR4a	Surface	1	1	2	11:44	27.5	7.95	17.80	6.60	3.56	2.5	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	SR4a	Middle		2	1	11:44							2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	SR4a	Middle		2	2	11:44							2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	SR4a	Bottom	3.8	3	1	11:44	27.5	7.90	18.10	6.37	4.01	2.7	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	SR4a	Bottom	3.8	3	2	11:44	27.4	7.94	18.00	6.30	4.06	2.6	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	SR4	Surface	1	1	1	11:14	27.5	7.90	17.90	7.26	3.98	2.3	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	SR4	Surface	1	1	2	11:14	27.5	7.91	17.90	7.25	3.92	2.2	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	SR4	Middle		2	1	11:14							2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	SR4	Middle		2	2	11:14							2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	SR4	Bottom	3.6	3	1	11:14	27.4	7.93	18.40	6.78	4.17	3.0	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	SR4	Bottom	3.6	3	2	11:14	27.4	7.91	18.30	6.79	4.20	3.1	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS8	Surface	1	1	1	10:44	27.9	7.99	17.40	8.73	3.46	3.4	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS8	Surface	1	1	2	10:44	27.8	7.97	17.60	8.74	3.42	4.2	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS8	Middle		2	1	10:44							2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS8	Middle		2	2	10:44							2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS8	Bottom	3	3	1	10:44	27.5	7.96	17.90	7.27	3.60	2.8	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS8	Bottom	3	3	2	10:44	27.5	7.97	17.90	7.29	3.68	3.1	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS(Mf)16	Surface	1	1	1	10:14	27.5	7.93	17.80	7.30	3.88	4.0	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS(Mf)16	Surface	1	1	2	10:14	27.5	7.91	17.80	7.32	3.90	2.7	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS(Mf)16	Middle	3.8	2	1	10:14	27.6	7.96	18.00	7.03	3.72	2.7	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS(Mf)16	Middle	3.8	2	2	10:14	27.6	7.97	18.00	7.06	3.78	3.0	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS(Mf)16	Bottom	6.6	3	1	10:14	27.4	7.90	18.30	6.81	4.01	3.4	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS(Mf)16	Bottom	6.6	3	2	10:14	27.4	7.94	18.40	6.83	4.08	3.2	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS(Mf)9	Surface	1	1	1	09:44	27.4	7.83	17.80	6.90	3.72	3.2	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS(Mf)9	Surface	1	1	2	09:44	27.4	7.80	17.80	6.94	3.78	3.7	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS(Mf)9	Middle		2	1	09:44							2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS(Mf)9	Middle		2	2	09:44							2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS(Mf)9	Bottom	3.4	3	1	09:44	27.3	7.89	18.40	6.88	3.98	3.0	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	IS(Mf)9	Bottom	3.4	3	2	09:44	27.3	7.91	18.40	6.81	3.92	3.0	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	CS(Mf)5	Surface	1	1	1	12:20	27.5	7.81	17.80	6.80	3.40	2.8	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	CS(Mf)5	Surface	1	1	2	12:20	27.5	7.83	17.80	6.79	3.47	2.8	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	CS(Mf)5	Middle	5	2	1	12:20	27.5	7.80	18.40	6.44	3.87	3.5	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	CS(Mf)5	Middle	5	2	2	12:20	27.4	7.82	18.40	6.47	3.90	3.6	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	CS(Mf)5	Bottom	9	3	1	12:20	27.4	7.90	18.30	6.36	3.47	2.1	2014-06-20
TMCLKL	HY/2012/07	2014-06-10	Mid-Ebb	Cloudy	CS(Mf)5	Bottom	9	3	2	12:20	27.4	7.94	18.40	6.33	3.49	3.6	2014-06-20

## Appendix J Water Quality Monitoring Results

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	CS(Mf)5	Surface	1	1	1	17:37	28.1	7.70	12.30	6.22	2.31	2.6	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	CS(Mf)5	Surface	1	1	2	17:37	28.1	7.71	12.20	6.25	2.33	3.2	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	CS(Mf)5	Middle	5.2	2	1	17:37	28	7.73	12.50	6.16	2.45	3.0	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	CS(Mf)5	Middle	5.2	2	2	17:37	28.1	7.75	12.60	6.12	2.47	3.2	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	CS(Mf)5	Bottom	9.4	3	1	17:37	28	7.69	13.00	6.10	2.53	2.6	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	CS(Mf)5	Bottom	9.4	3	2	17:37	28	7.70	12.90	6.09	2.57	3.1	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	SR4a	Surface	1	1	1	18:08	28.1	7.71	12.30	6.15	2.39	3.5	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	SR4a	Surface	1	1	2	18:08	28.1	7.72	12.30	6.17	2.40	3.2	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	SR4a	Middle		2	1	18:08							2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	SR4a	Middle		2	2	18:08							2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	SR4a	Bottom	4.5	3	1	18:08	28.1	7.74	12.60	6.07	2.51	2.6	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	SR4a	Bottom	4.5	3	2	18:08	28	7.73	12.50	6.08	2.50	3.0	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	SR4	Surface	1	1	1	18:39	28.1	7.72	12.30	6.21	2.17	4.3	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	SR4	Surface	1	1	2	18:39	28.1	7.73	12.20	6.24	2.19	3.1	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	SR4	Middle		2	1	18:39							2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	SR4	Middle		2	2	18:39							2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	SR4	Bottom	4.4	3	1	18:39	28	7.73	12.60	6.12	2.36	4.3	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	SR4	Bottom	4.4	3	2	18:39	28	7.74	12.60	6.15	2.40	4.9	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS8	Surface	1	1	1	19:10	28	7.72	12.30	6.23	2.23	3.4	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS8	Surface	1	1	2	19:10	28.1	7.71	12.20	6.20	2.24	3.3	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS8	Middle		2	1	19:10							2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS8	Middle		2	2	19:10							2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS8	Bottom	3.7	3	1	19:10	28	7.72	12.60	6.07	2.31	3.9	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS8	Bottom	3.7	3	2	19:10	28.1	7.73	12.50	6.10	2.34	2.6	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS(Mf)16	Surface	1	1	1	19:41	28.1	7.71	12.20	6.10	2.38	4.1	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS(Mf)16	Surface	1	1	2	19:41	28.1	7.72	12.20	6.12	2.35	4.0	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS(Mf)16	Middle	4.1	2	1	19:41	28.1	7.74	12.50	6.04	2.44	3.7	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS(Mf)16	Middle	4.1	2	2	19:41	28	7.75	12.60	6.05	2.46	3.5	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS(Mf)16	Bottom	7.2	3	1	19:41	28	7.74	13.00	5.70	2.53	3.6	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS(Mf)16	Bottom	7.2	3	2	19:41	28	7.73	12.90	5.77	2.55	5.0	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS(Mf)9	Surface	1	1	1	20:12	28.1	7.71	12.20	6.16	2.30	5.3	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS(Mf)9	Surface	1	1	2	20:12	28.1	7.70	12.20	6.19	2.32	6.6	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS(Mf)9	Middle		2	1	20:12							2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS(Mf)9	Middle		2	2	20:12							2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS(Mf)9	Bottom	4.4	3	1	20:12	28	7.73	12.70	6.16	2.35	6.6	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	IS(Mf)9	Bottom	4.4	3	2	20:12	28.1	7.72	12.60	6.12	2.37	5.8	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	CS(Mf)3	Surface	1	1	1	20:43	28.1	7.73	12.30	6.25	2.25	2.7	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	CS(Mf)3	Surface	1	1	2	20:43	28	7.74	12.20	6.27	2.27	2.8	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	CS(Mf)3	Middle	5.9	2	1	20:43	28	7.73	12.60	6.10	2.31	2.0	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	CS(Mf)3	Middle	5.9	2	2	20:43	28	7.72	12.60	6.09	2.33	3.2	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	CS(Mf)3	Bottom	10.8	3	1	20:43	28	7.71	12.90	6.07	2.45	2.1	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Flood	Cloudy	CS(Mf)3	Bottom	10.8	3	2	20:43	27.9	7.72	13.00	6.04	2.47	2.0	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	CS(Mf)3	Surface	1	1	1	10:35	28	7.72	12.30	6.17	2.34	3.3	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	CS(Mf)3	Surface	1	1	2	10:35	28.1	7.74	12.20	6.19	2.37	3.2	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	CS(Mf)3	Middle	5.8	2	1	10:35	28	7.72	12.50	6.03	2.39	2.6	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	CS(Mf)3	Middle	5.8	2	2	10:35	28	7.71	12.60	6.01	2.41	2.1	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	CS(Mf)3	Bottom	10.6	3	1	10:35	27.9	7.70	13.00	5.99	2.53	4.1	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	CS(Mf)3	Bottom	10.6	3	2	10:35	28	7.71	12.90	5.96	2.55	4.9	2014-06-23

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	SR4a	Surface	1	1	1	13:10	28	7.70	12.20	6.07	2.46	2.4	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	SR4a	Surface	1	1	2	13:10	28.1	7.71	12.30	6.10	2.48	3.1	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	SR4a	Middle		2	1	13:10							2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	SR4a	Middle		2	2	13:10							2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	SR4a	Bottom	4.3	3	1	13:10	28	7.72	12.50	5.99	2.58	3.4	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	SR4a	Bottom	4.3	3	2	13:10	28	7.73	12.60	6.01	2.56	4.0	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	SR4	Surface	1	1	1	12:39	28.1	7.71	12.30	6.14	2.25	2.4	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	SR4	Surface	1	1	2	12:39	28.1	7.73	12.20	6.18	2.27	2.6	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	SR4	Middle		2	1	12:39							2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	SR4	Middle		2	2	12:39							2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	SR4	Bottom	4.2	3	1	12:39	28	7.74	12.60	6.05	2.43	2.9	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	SR4	Bottom	4.2	3	2	12:39	27.9	7.75	12.50	6.09	2.47	2.3	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS8	Surface	1	1	1	12:08	28	7.73	12.20	6.14	2.30	2.6	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS8	Surface	1	1	2	12:08	28.1	7.72	12.20	6.11	2.31	3.2	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS8	Middle		2	1	12:08							2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS8	Middle		2	2	12:08							2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS8	Bottom	3.5	3	1	12:08	28	7.73	12.50	5.99	2.39	2.6	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS8	Bottom	3.5	3	2	12:08	28	7.74	12.60	6.02	2.41	2.6	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS(Mf)16	Surface	1	1	1	11:37	28.1	7.72	12.30	6.02	2.45	3.7	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS(Mf)16	Surface	1	1	2	11:37	28.1	7.71	12.20	6.05	2.41	3.7	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS(Mf)16	Middle	4	2	1	11:37	28	7.73	12.60	5.96	2.52	2.5	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS(Mf)16	Middle	4	2	2	11:37	28.1	7.74	12.60	5.97	2.54	2.3	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS(Mf)16	Bottom	7	3	1	11:37	28	7.75	12.90	5.62	2.61	2.6	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS(Mf)16	Bottom	7	3	2	11:37	27.9	7.74	13.00	5.64	2.63	2.3	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS(Mf)9	Surface	1	1	1	11:06	28.1	7.72	12.30	6.09	2.37	4.1	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS(Mf)9	Surface	1	1	2	11:06	28.1	7.71	12.30	6.13	2.39	3.0	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS(Mf)9	Middle		2	1	11:06							2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS(Mf)9	Middle		2	2	11:06							2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS(Mf)9	Bottom	4.1	3	1	11:06	28	7.74	12.60	6.07	2.43	3.0	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	IS(Mf)9	Bottom	4.1	3	2	11:06	28	7.73	12.70	6.04	2.45	3.1	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	CS(Mf)5	Surface	1	1	1	13:41	28.1	7.71	12.30	6.15	2.38	2.4	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	CS(Mf)5	Surface	1	1	2	13:41	28	7.72	12.30	6.17	2.40	3.1	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	CS(Mf)5	Middle	5.1	2	1	13:41	28	7.72	12.60	6.08	2.52	2.9	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	CS(Mf)5	Middle	5.1	2	2	13:41	28	7.73	12.50	6.03	2.54	2.8	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	CS(Mf)5	Bottom	9.1	3	1	13:41	28.1	7.70	12.90	6.03	2.61	4.2	2014-06-23
TMCLKL	HY/2012/07	2014-06-12	Mid-Ebb	Cloudy	CS(Mf)5	Bottom	9.1	3	2	13:41	28	7.72	13.00	6.01	2.65	3.3	2014-06-23

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	CS(Mf)5	Surface	1	1	1	19:15	28.1	7.70	14.10	6.69	2.21	3.1	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	CS(Mf)5	Surface	1	1	2	19:15	28.2	7.72	14.10	6.70	2.20	3.8	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	CS(Mf)5	Middle	5.3	2	1	19:15	28	7.73	14.20	6.79	2.36	3.3	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	CS(Mf)5	Middle	5.3	2	2	19:15	28	7.72	14.30	6.81	2.38	2.4	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	CS(Mf)5	Bottom	9.6	3	1	19:15	27.9	7.81	14.40	6.94	2.57	3.7	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	CS(Mf)5	Bottom	9.6	3	2	19:15	27.9	7.80	14.50	6.95	2.60	3.3	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	SR4a	Surface	1	1	1	19:45	28.1	7.72	14.10	6.90	2.45	2.3	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	SR4a	Surface	1	1	2	19:45	28.1	7.74	14.00	6.88	2.46	2.6	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	SR4a	Middle		2	1	19:45							2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	SR4a	Middle		2	2	19:45							2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	SR4a	Bottom	3.2	3	1	19:45	27.9	7.76	14.50	6.91	2.26	2.7	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	SR4a	Bottom	3.2	3	2	19:45	27.8	7.78	14.50	6.92	2.25	3.1	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	SR4	Surface	1	1	1	20:07	28	7.75	14.10	7.19	2.45	3.5	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	SR4	Surface	1	1	2	20:07	28.1	7.74	14.10	7.20	2.44	3.6	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	SR4	Middle		2	1	20:07							2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	SR4	Middle		2	2	20:07							2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	SR4	Bottom	3.8	3	1	20:07	27.9	7.81	14.30	7.20	2.65	3.0	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	SR4	Bottom	3.8	3	2	20:07	27.8	7.79	14.30	7.21	2.66	3.8	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS8	Surface	1	1	1	20:39	28.1	7.77	14.20	6.99	2.54	2.6	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS8	Surface	1	1	2	20:39	28	7.73	14.20	7.01	2.51	2.8	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS8	Middle		2	1	20:39							2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS8	Middle		2	2	20:39							2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS8	Bottom	3.5	3	1	20:39	27.9	7.71	14.40	6.89	2.70	2.9	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS8	Bottom	3.5	3	2	20:39	27.9	7.72	14.30	6.88	2.67	3.8	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS(Mf)16	Surface	1	1	1	21:12	27.9	7.75	14.10	6.81	2.88	3.0	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS(Mf)16	Surface	1	1	2	21:12	28	7.76	14.00	6.83	2.86	4.0	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS(Mf)16	Middle	3.6	2	1	21:12	27.9	7.73	14.20	6.81	2.54	2.4	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS(Mf)16	Middle	3.6	2	2	21:12	27.9	7.75	14.10	6.84	2.56	3.2	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS(Mf)16	Bottom	6.2	3	1	21:12	27.8	7.81	14.30	6.91	2.81	2.5	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS(Mf)16	Bottom	6.2	3	2	21:12	27.7	7.79	14.40	6.93	2.76	2.3	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS(Mf)9	Surface	1	1	1	22:00	28	7.71	14.10	6.79	2.41	2.8	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS(Mf)9	Surface	1	1	2	22:00	28.1	7.73	14.20	6.80	2.40	2.1	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS(Mf)9	Middle		2	1	22:00							2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS(Mf)9	Middle		2	2	22:00							2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS(Mf)9	Bottom	4.2	3	1	22:00	27.9	7.81	14.30	6.83	2.13	2.9	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	IS(Mf)9	Bottom	4.2	3	2	22:00	27.9	7.83	14.40	6.86	2.10	3.5	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	CS(Mf)3	Surface	1	1	1	22:24	28	7.71	14.10	6.96	2.71	2.6	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	CS(Mf)3	Surface	1	1	2	22:24	28.1	7.73	14.10	6.99	2.70	2.6	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	CS(Mf)3	Middle	6.2	2	1	22:24	28	7.75	14.20	6.91	2.91	3.4	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	CS(Mf)3	Middle	6.2	2	2	22:24	28	7.72	14.30	6.93	2.92	2.6	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	CS(Mf)3	Bottom	11.4	3	1	22:24	27.9	7.81	14.40	6.89	2.97	3.6	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Flood	Fine	CS(Mf)3	Bottom	11.4	3	2	22:24	27.8	7.78	14.50	6.90	2.99	3.0	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	CS(Mf)3	Surface	1	1	1	12:02	28.1	7.73	14.20	6.82	2.79	3.8	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	CS(Mf)3	Surface	1	1	2	12:02	28.1	7.71	14.20	6.85	2.77	4.3	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	CS(Mf)3	Middle	6.1	2	1	12:02	28	7.74	14.40	6.90	2.95	3.9	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	CS(Mf)3	Middle	6.1	2	2	12:02	28.1	7.73	14.40	6.93	2.93	3.2	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	CS(Mf)3	Bottom	11.2	3	1	12:02	27.9	7.75	14.60	6.87	2.98	5.5	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	CS(Mf)3	Bottom	11.2	3	2	12:02	28	7.76	14.50	6.89	2.96	4.8	2014-06-24



Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	SR4a	Surface	1	1	1	14:32	28.2	7.72	14.20	6.81	2.43	3.7	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	SR4a	Surface	1	1	2	14:32	28.2	7.73	14.10	6.84	2.47	3.6	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	SR4a	Middle		2	1	14:32							2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	SR4a	Middle		2	2	14:32							2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	SR4a	Bottom	3.1	3	1	14:32	28	7.75	14.40	6.89	2.24	2.7	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	SR4a	Bottom	3.1	3	2	14:32	28.1	7.74	14.40	6.93	2.25	3.7	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	SR4	Surface	1	1	1	14:02	28.1	7.73	14.10	7.12	2.49	3.5	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	SR4	Surface	1	1	2	14:02	28	7.72	14.20	7.14	2.51	3.6	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	SR4	Middle		2	1	14:02							2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	SR4	Middle		2	2	14:02							2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	SR4	Bottom	3.7	3	1	14:02	28	7.76	14.40	7.15	2.67	4.7	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	SR4	Bottom	3.7	3	2	14:02	28	7.75	14.40	7.18	2.63	4.2	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS8	Surface	1	1	1	13:32	28.1	7.71	14.20	6.98	2.59	3.7	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS8	Surface	1	1	2	13:32	28.1	7.72	14.10	6.97	2.57	2.7	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS8	Middle		2	1	13:32							2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS8	Middle		2	2	13:32							2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS8	Bottom	3.3	3	1	13:32	28	7.73	14.50	6.87	2.73	3.7	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS8	Bottom	3.3	3	2	13:32	28	7.72	14.40	6.85	2.76	4.2	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS(Mf)16	Surface	1	1	1	13:02	28	7.72	14.10	6.79	2.90	3.0	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS(Mf)16	Surface	1	1	2	13:02	28.1	7.71	14.10	6.81	2.92	3.3	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS(Mf)16	Middle	3.5	2	1	13:02	28	7.74	14.30	6.87	2.56	2.6	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS(Mf)16	Middle	3.5	2	2	13:02	28	7.72	14.40	6.83	2.58	4.2	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS(Mf)16	Bottom	6	3	1	13:02	27.9	7.73	14.50	6.90	2.79	2.8	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS(Mf)16	Bottom	6	3	2	13:02	28	7.74	14.60	6.93	2.78	3.3	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS(Mf)9	Surface	1	1	1	12:32	28.1	7.72	14.20	6.73	2.44	2.8	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS(Mf)9	Surface	1	1	2	12:32	28	7.73	14.10	6.75	2.46	2.4	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS(Mf)9	Middle		2	1	12:32							2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS(Mf)9	Middle		2	2	12:32							2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS(Mf)9	Bottom	4	3	1	12:32	28	7.75	14.50	6.82	2.12	3.1	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	IS(Mf)9	Bottom	4	3	2	12:32	28	7.76	14.40	6.85	2.14	2.3	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	CS(Mf)5	Surface	1	1	1	15:02	28.2	7.71	14.20	6.67	2.23	3.1	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	CS(Mf)5	Surface	1	1	2	15:02	28.1	7.72	14.20	6.64	2.25	3.6	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	CS(Mf)5	Middle	5.2	2	1	15:02	28.1	7.74	14.40	6.77	2.49	2.5	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	CS(Mf)5	Middle	5.2	2	2	15:02	28	7.75	14.50	6.79	2.45	3.4	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	CS(Mf)5	Bottom	9.4	3	1	15:02	28	7.76	14.60	6.91	2.61	2.5	2014-06-24
TMCLKL	HY/2012/07	2014-06-14	Mid-Ebb	Fine	CS(Mf)5	Bottom	9.4	3	2	15:02	28	7.75	14.50	6.92	2.65	3.8	2014-06-24

## Appendix J Water Quality Monitoring Results

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	CS(Mf)5	Surface	1	1	1	08:23	28.4	7.66	14.10	5.16	3.46	4.2	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	CS(Mf)5	Surface	1	1	2	08:23	28.3	7.65	14.00	5.14	3.48	3.8	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	CS(Mf)5	Middle	5.4	2	1	08:23	28.2	7.67	14.40	5.20	3.59	5.0	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	CS(Mf)5	Middle	5.4	2	2	08:23	28.1	7.68	14.50	5.22	3.61	4.6	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	CS(Mf)5	Bottom	9.8	3	1	08:23	28	7.70	14.90	5.31	3.65	4.3	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	CS(Mf)5	Bottom	9.8	3	2	08:23	28.1	7.69	15.00	5.34	3.67	4.6	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	SR4a	Surface	1	1	1	08:49	28.4	7.66	14.00	5.27	3.58	4.3	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	SR4a	Surface	1	1	2	08:49	28.4	7.65	14.10	5.30	3.56	2.7	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	SR4a	Middle		2	1	08:49							2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	SR4a	Middle		2	2	08:49							2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	SR4a	Bottom	3.6	3	1	08:49	28.3	7.67	14.40	5.34	3.48	4.3	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	SR4a	Bottom	3.6	3	2	08:49	28.2	7.69	14.50	5.37	3.46	5.5	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	SR4	Surface	1	1	1	09:15	28.3	7.64	14.10	5.38	3.42	3.0	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	SR4	Surface	1	1	2	09:15	28.4	7.66	14.10	5.34	3.44	4.3	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	SR4	Middle		2	1	09:15							2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	SR4	Middle		2	2	09:15							2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	SR4	Bottom	4.4	3	1	09:15	28.2	7.68	14.40	5.43	3.61	3.6	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	SR4	Bottom	4.4	3	2	09:15	28.2	7.67	14.50	5.40	3.59	3.4	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS8	Surface	1	1	1	09:41	28.3	7.65	14.00	5.27	3.50	2.8	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS8	Surface	1	1	2	09:41	28.2	7.66	14.10	5.30	3.48	2.2	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS8	Middle		2	1	09:41							2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS8	Middle		2	2	09:41							2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS8	Bottom	3.8	3	1	09:41	28.2	7.67	14.50	5.19	3.64	2.6	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS8	Bottom	3.8	3	2	09:41	28.1	7.69	14.40	5.22	3.67	3.3	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS(Mf)16	Surface	1	1	1	10:07	28.4	7.66	14.10	5.25	3.74	3.2	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS(Mf)16	Surface	1	1	2	10:07	28.3	7.67	14.00	5.28	3.72	2.1	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS(Mf)16	Middle	3.8	2	1	10:07	28.1	7.69	14.50	5.29	3.60	3.0	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS(Mf)16	Middle	3.8	2	2	10:07	28.2	7.68	14.40	5.31	3.56	2.6	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS(Mf)16	Bottom	6.6	3	1	10:07	28.1	7.71	14.90	5.33	3.64	2.2	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS(Mf)16	Bottom	6.6	3	2	10:07	28	7.70	15.00	5.36	3.66	3.6	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS(Mf)9	Surface	1	1	1	10:30	28.3	7.65	14.00	5.09	3.58	2.6	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS(Mf)9	Surface	1	1	2	10:30	28.4	7.64	14.10	5.07	3.56	2.7	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS(Mf)9	Middle		2	1	10:30							2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS(Mf)9	Middle		2	2	10:30							2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS(Mf)9	Bottom	4.8	3	1	10:30	28.1	7.66	14.50	5.01	3.38	2.9	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	IS(Mf)9	Bottom	4.8	3	2	10:30	28.2	7.67	14.40	5.03	3.40	3.5	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	CS(Mf)3	Surface	1	1	1	10:50	28.4	7.64	14.10	5.11	3.44	4.1	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	CS(Mf)3	Surface	1	1	2	10:50	28.3	7.65	14.00	5.15	3.48	5.3	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	CS(Mf)3	Middle	6.3	2	1	10:50	28.1	7.67	14.50	4.97	3.60	4.3	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	CS(Mf)3	Middle	6.3	2	2	10:50	28	7.66	14.40	5.00	3.58	4.8	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	CS(Mf)3	Bottom	11.6	3	1	10:50	27.9	7.69	14.90	4.80	3.62	5.7	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Flood	Cloudy	CS(Mf)3	Bottom	11.6	3	2	10:50	27.8	7.68	15.00	4.78	3.64	4.5	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	CS(Mf)3	Surface	1	1	1	14:25	28.4	7.69	14.20	5.05	3.53	3.3	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	CS(Mf)3	Surface	1	1	2	14:25	28.5	7.70	14.10	5.09	3.57	3.5	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	CS(Mf)3	Middle	6.2	2	1	14:25	28.2	7.72	14.60	4.91	3.69	2.0	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	CS(Mf)3	Middle	6.2	2	2	14:25	28.2	7.71	14.50	4.94	3.67	3.0	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	CS(Mf)3	Bottom	11.3	3	1	14:25	28	7.74	15.10	4.74	3.71	2.8	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	CS(Mf)3	Bottom	11.3	3	2	14:25	27.9	7.73	15.00	4.72	3.73	2.0	2014-06-26

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	SR4a	Surface	1	1	1	16:55	28.5	7.71	14.20	5.21	3.67	2.1	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	SR4a	Surface	1	1	2	16:55	28.5	7.70	14.20	5.24	3.65	2.2	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	SR4a	Middle		2	1	16:55							2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	SR4a	Middle		2	2	16:55							2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	SR4a	Bottom	3.2	3	1	16:55	28.3	7.72	14.50	5.28	3.57	2.1	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	SR4a	Bottom	3.2	3	2	16:55	28.4	7.74	14.60	5.31	3.55	3.3	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	SR4	Surface	1	1	1	16:25	28.5	7.69	14.20	5.32	3.51	2.6	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	SR4	Surface	1	1	2	16:25	28.4	7.71	14.20	5.28	3.53	2.2	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	SR4	Middle		2	1	16:25							2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	SR4	Middle		2	2	16:25							2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	SR4	Bottom	4.1	3	1	16:25	28.3	7.73	14.50	5.37	3.70	2.7	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	SR4	Bottom	4.1	3	2	16:25	28.3	7.72	14.60	5.34	3.68	2.8	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS8	Surface	1	1	1	15:55	28.4	7.70	14.10	5.21	3.59	3.6	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS8	Surface	1	1	2	15:55	28.4	7.71	14.20	5.24	3.57	3.3	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS8	Middle		2	1	15:55							2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS8	Middle		2	2	15:55							2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS8	Bottom	3.6	3	1	15:55	28.2	7.72	14.60	5.13	3.73	3.4	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS8	Bottom	3.6	3	2	15:55	28.3	7.74	14.50	5.16	3.76	2.1	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS(Mf)16	Surface	1	1	1	15:25	28.5	7.71	14.30	5.19	3.83	4.4	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS(Mf)16	Surface	1	1	2	15:25	28.4	7.72	14.20	5.22	3.81	4.0	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS(Mf)16	Middle	3.6	2	1	15:25	28.3	7.74	14.60	5.23	3.69	4.0	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS(Mf)16	Middle	3.6	2	2	15:25	28.2	7.73	14.50	5.25	3.65	2.8	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS(Mf)16	Bottom	6.2	3	1	15:25	28.2	7.76	15.00	5.27	3.73	4.0	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS(Mf)16	Bottom	6.2	3	2	15:25	28.2	7.75	15.10	5.30	3.75	3.8	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS(Mf)9	Surface	1	1	1	14:55	28.5	7.70	14.30	5.03	3.67	4.8	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS(Mf)9	Surface	1	1	2	14:55	28.4	7.69	14.20	5.01	3.65	4.6	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS(Mf)9	Middle		2	1	14:55							2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS(Mf)9	Middle		2	2	14:55							2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS(Mf)9	Bottom	4.3	3	1	14:55	28.3	7.71	14.60	4.95	3.47	4.8	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	IS(Mf)9	Bottom	4.3	3	2	14:55	28.2	7.72	14.60	4.97	3.49	4.5	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	CS(Mf)5	Surface	1	1	1	17:25	28.4	7.71	14.20	5.07	3.52	3.1	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	CS(Mf)5	Surface	1	1	2	17:25	28.5	7.70	14.10	5.05	3.54	3.4	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	CS(Mf)5	Middle	5.3	2	1	17:25	28.3	7.72	14.60	5.11	3.65	3.8	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	CS(Mf)5	Middle	5.3	2	2	17:25	28.3	7.73	14.50	5.13	3.67	2.8	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	CS(Mf)5	Bottom	9.5	3	1	17:25	28.1	7.75	15.00	5.22	3.71	4.1	2014-06-26
TMCLKL	HY/2012/07	2014-06-17	Mid-Ebb	Cloudy	CS(Mf)5	Bottom	9.5	3	2	17:25	28.2	7.74	15.10	5.25	3.73	2.7	2014-06-26

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	CS(Mf)5	Surface	1	1	1	09:48	29.6	7.79	14.80	4.85	4.12	2.1	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	CS(Mf)5	Surface	1	1	2	09:48	29.6	7.78	14.80	4.90	4.14	3.2	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	CS(Mf)5	Middle	5.4	2	1	09:48	29.5	7.73	15.00	4.96	4.40	2.6	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	CS(Mf)5	Middle	5.4	2	2	09:48	29.5	7.72	15.00	4.98	4.48	2.1	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	CS(Mf)5	Bottom	9.8	3	1	09:48	29.5	7.76	15.10	4.91	4.62	3.4	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	CS(Mf)5	Bottom	9.8	3	2	09:48	29.5	7.77	15.10	4.93	4.63	2.3	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	SR4a	Surface	1	1	1	10:18	29.6	7.79	14.80	5.06	4.00	2.7	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	SR4a	Surface	1	1	2	10:18	29.7	7.78	14.90	5.04	4.01	2.3	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	SR4a	Middle		2	1	10:18							2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	SR4a	Middle		2	2	10:18							2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	SR4a	Bottom	4.2	3	1	10:18	29.5	7.80	15.00	5.01	4.23	2.7	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	SR4a	Bottom	4.2	3	2	10:18	29.5	7.81	15.00	5.04	4.20	2.8	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	SR4	Surface	1	1	1	10:48	29.6	7.79	14.80	5.90	4.12	3.3	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	SR4	Surface	1	1	2	10:48	29.6	7.78	14.90	5.88	4.13	2.5	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	SR4	Middle		2	1	10:48							2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	SR4	Middle		2	2	10:48							2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	SR4	Bottom	4.4	3	1	10:48	29.5	7.78	15.00	5.76	4.32	3.7	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	SR4	Bottom	4.4	3	2	10:48	29.5	7.77	15.00	5.75	4.39	3.0	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS8	Surface	1	1	1	11:18	29.6	7.75	14.90	5.30	4.43	3.0	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS8	Surface	1	1	2	11:18	29.6	7.76	14.90	5.32	4.46	2.6	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS8	Middle		2	1	11:18							2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS8	Middle		2	2	11:18							2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS8	Bottom	4.6	3	1	11:18	29.5	7.80	15.00	5.08	4.67	2.6	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS8	Bottom	4.6	3	2	11:18	29.5	7.79	15.10	5.09	4.60	3.4	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS(Mf)16	Surface	1	1	1	11:46	29.6	7.70	14.80	5.43	4.01	2.8	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS(Mf)16	Surface	1	1	2	11:46	29.5	7.71	14.90	5.47	4.02	2.6	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS(Mf)16	Middle	4.1	2	1	11:46	29.5	7.74	15.00	5.66	4.90	2.4	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS(Mf)16	Middle	4.1	2	2	11:46	29.5	7.75	15.00	5.64	4.98	2.6	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS(Mf)16	Bottom	7.2	3	1	11:46	29.5	7.81	15.20	5.14	4.51	2.2	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS(Mf)16	Bottom	7.2	3	2	11:46	29.5	7.82	15.10	5.16	4.50	2.8	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS(Mf)9	Surface	1	1	1	12:16	29.6	7.69	14.80	5.63	4.11	3.5	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS(Mf)9	Surface	1	1	2	12:16	29.6	7.70	14.80	5.62	4.12	2.8	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS(Mf)9	Middle		2	1	12:16							2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS(Mf)9	Middle		2	2	12:16							2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS(Mf)9	Bottom	4	3	1	12:16	29.5	7.74	15.00	5.44	4.33	2.2	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	IS(Mf)9	Bottom	4	3	2	12:16	29.5	7.76	15.00	5.43	4.32	2.9	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	CS(Mf)3	Surface	1	1	1	12:55	29.6	7.74	14.90	5.05	4.07	2.6	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	CS(Mf)3	Surface	1	1	2	12:55	29.6	7.76	14.90	5.07	4.08	2.5	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	CS(Mf)3	Middle	6	2	1	12:55	29.5	7.76	15.00	5.30	4.20	3.1	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	CS(Mf)3	Middle	6	2	2	12:55	29.5	7.78	15.00	5.31	4.19	2.1	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	CS(Mf)3	Bottom	11	3	1	12:55	29.5	7.70	15.10	5.46	4.34	2.9	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Flood	Fine	CS(Mf)3	Bottom	11	3	2	12:55	29.5	7.74	15.10	5.47	4.30	2.3	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	CS(Mf)3	Surface	1	1	1	16:15	29.6	7.70	14.90	5.60	4.64	3.1	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	CS(Mf)3	Surface	1	1	2	16:15	29.6	7.74	14.80	5.64	4.60	3.0	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	CS(Mf)3	Middle	5.6	2	1	16:15	29.5	7.74	15.00	5.46	4.20	2.8	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	CS(Mf)3	Middle	5.6	2	2	16:15	29.5	7.75	15.00	5.49	4.22	2.3	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	CS(Mf)3	Bottom	10.2	3	1	16:15	29.5	7.80	15.10	5.10	4.46	2.8	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	CS(Mf)3	Bottom	10.2	3	2	16:15	29.5	7.82	15.10	5.14	4.47	3.0	2014-06-30

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	SR4a	Surface	1	1	1	18:31	29.6	7.81	14.70	5.21	4.39	2.1	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	SR4a	Surface	1	1	2	18:31	29.6	7.82	14.80	5.23	4.38	2.9	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	SR4a	Middle		2	1	18:31							2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	SR4a	Middle		2	2	18:31							2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	SR4a	Bottom	3.6	3	1	18:31	29.5	7.84	15.00	5.12	4.70	2.7	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	SR4a	Bottom	3.6	3	2	18:31	29.5	7.86	15.00	5.14	4.74	2.3	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	SR4	Surface	1	1	1	18:06	29.6	7.69	14.90	5.19	4.12	3.3	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	SR4	Surface	1	1	2	18:06	29.6	7.68	14.80	5.18	4.13	3.1	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	SR4	Middle		2	1	18:06							2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	SR4	Middle		2	2	18:06							2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	SR4	Bottom	3.4	3	1	18:06	29.5	7.72	15.00	5.40	4.00	2.9	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	SR4	Bottom	3.4	3	2	18:06	29.5	7.74	15.00	5.44	4.04	2.1	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS8	Surface	1	1	1	17:40	29.6	7.72	14.80	5.26	4.65	3.0	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS8	Surface	1	1	2	17:40	29.7	7.70	14.70	5.20	4.66	3.9	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS8	Middle		2	1	17:40							2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS8	Middle		2	2	17:40							2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS8	Bottom	3.8	3	1	17:40	29.5	7.76	15.10	5.74	4.73	3.5	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS8	Bottom	3.8	3	2	17:40	29.5	7.74	15.00	5.70	4.74	3.2	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS(Mf)16	Surface	1	1	1	17:05	29.6	7.75	14.70	5.28	4.50	2.6	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS(Mf)16	Surface	1	1	2	17:05	29.6	7.76	14.80	5.27	4.52	3.0	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS(Mf)16	Middle	3.8	2	1	17:05	29.5	7.80	15.00	5.71	4.04	3.3	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS(Mf)16	Middle	3.8	2	2	17:05	29.5	7.82	15.00	5.73	4.05	3.3	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS(Mf)16	Bottom	6.6	3	1	17:05	29.5	7.88	15.10	5.22	4.33	3.5	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS(Mf)16	Bottom	6.6	3	2	17:05	29.5	7.87	15.10	5.28	4.37	3.2	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS(Mf)9	Surface	1	1	1	16:40	29.6	7.81	14.90	5.36	4.01	4.3	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS(Mf)9	Surface	1	1	2	16:40	29.6	7.83	14.90	5.30	4.03	3.2	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS(Mf)9	Middle		2	1	16:40							2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS(Mf)9	Middle		2	2	16:40							2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS(Mf)9	Bottom	3.8	3	1	16:40	29.5	7.84	15.00	5.04	4.26	2.5	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	IS(Mf)9	Bottom	3.8	3	2	16:40	29.5	7.86	15.00	5.01	4.27	2.7	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	CS(Mf)5	Surface	1	1	1	18:55	29.6	7.76	14.80	5.06	4.22	4.0	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	CS(Mf)5	Surface	1	1	2	18:55	29.6	7.77	14.80	5.00	4.24	2.3	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	CS(Mf)5	Middle	5	2	1	18:55	29.5	7.74	15.00	5.14	4.60	4.1	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	CS(Mf)5	Middle	5	2	2	18:55	29.5	7.73	15.00	5.15	4.68	2.9	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	CS(Mf)5	Bottom	9	3	1	18:55	29.5	7.78	15.10	4.90	4.61	2.6	2014-06-30
TMCLKL	HY/2012/07	2014-06-19	Mid-Ebb	Fine	CS(Mf)5	Bottom	9	3	2	18:55	29.4	7.77	15.10	4.99	4.63	3.6	2014-06-30



Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	CS(Mf)5	Surface	1	1	1	12:37	29.6	7.58	14.10	5.79	3.83	0.7	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	CS(Mf)5	Surface	1	1	2	12:37	29.5	7.61	14.40	5.83	3.80	1.1	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	CS(Mf)5	Middle	5.3	2	1	12:37	29.6	7.52	18.10	5.52	3.96	3.4	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	CS(Mf)5	Middle	5.3	2	2	12:37	29.6	7.50	18.00	5.55	3.99	3.4	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	CS(Mf)5	Bottom	9.6	3	1	12:37	29.6	7.48	18.60	5.36	4.08	3.2	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	CS(Mf)5	Bottom	9.6	3	2	12:37	29.7	7.45	18.50	5.39	4.11	3.3	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	SR4a	Surface	1	1	1	13:03	29.5	7.56	13.90	5.81	3.95	1.9	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	SR4a	Surface	1	1	2	13:03	29.5	7.59	14.20	5.85	3.96	2.0	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	SR4a	Middle		2	1	13:03							2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	SR4a	Middle		2	2	13:03							2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	SR4a	Bottom	4.8	3	1	13:03	29.7	7.43	17.60	5.52	4.22	5.2	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	SR4a	Bottom	4.8	3	2	13:03	29.8	7.46	17.60	5.49	4.18	4.8	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	SR4	Surface	1	1	1	13:32	29.4	7.62	14.10	5.48	3.62	1.9	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	SR4	Surface	1	1	2	13:32	29.5	7.65	13.70	5.45	3.64	2.4	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	SR4	Middle		2	1	13:32							2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	SR4	Middle		2	2	13:32							2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	SR4	Bottom	3.9	3	1	13:32	29.6	7.59	17.50	5.23	3.87	3.0	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	SR4	Bottom	3.9	3	2	13:32	29.5	7.58	17.70	5.26	3.90	2.6	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS8	Surface	1	1	1	13:55	29.6	7.52	14.30	5.77	3.51	2.3	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS8	Surface	1	1	2	13:55	29.6	7.53	14.00	5.75	3.56	2.5	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS8	Middle		2	1	13:55							2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS8	Middle		2	2	13:55							2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS8	Bottom	4.8	3	1	13:55	29.7	7.46	17.40	5.26	3.27	3.8	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS8	Bottom	4.8	3	2	13:55	29.7	7.49	17.50	5.22	3.24	3.9	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS(Mf)16	Surface	1	1	1	14:16	29.5	7.61	14.10	5.60	3.69	2.8	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS(Mf)16	Surface	1	1	2	14:16	29.6	7.58	14.40	5.63	3.73	2.7	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS(Mf)16	Middle	4	2	1	14:16	29.7	7.51	17.30	5.49	3.95	3.0	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS(Mf)16	Middle	4	2	2	14:16	29.7	7.52	17.10	5.52	3.98	2.9	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS(Mf)16	Bottom	6.9	3	1	14:16	29.7	7.46	17.70	5.36	4.02	2.5	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS(Mf)16	Bottom	6.9	3	2	14:16	29.8	7.48	17.60	5.32	4.01	3.0	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS(Mf)9	Surface	1	1	1	14:42	29.3	7.66	14.10	5.65	3.58	1.9	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS(Mf)9	Surface	1	1	2	14:42	29.4	7.70	13.90	5.66	3.54	1.8	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS(Mf)9	Middle		2	1	14:42							2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS(Mf)9	Middle		2	2	14:42							2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS(Mf)9	Bottom	3.9	3	1	14:42	29.6	7.59	17.80	5.42	3.87	2.6	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	IS(Mf)9	Bottom	3.9	3	2	14:42	29.5	7.62	17.50	5.36	3.88	2.6	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	CS(Mf)3	Surface	1	1	1	15:03	29.5	7.58	14.30	5.70	3.46	2.2	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	CS(Mf)3	Surface	1	1	2	15:03	29.5	7.52	14.50	5.68	3.48	1.8	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	CS(Mf)3	Middle	6.3	2	1	15:03	29.6	7.47	17.50	5.43	3.63	2.7	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	CS(Mf)3	Middle	6.3	2	2	15:03	29.7	7.43	17.80	5.46	3.63	3.0	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	CS(Mf)3	Bottom	11.6	3	1	15:03	29.7	7.40	18.10	5.29	3.78	2.5	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Flood	Cloudy	CS(Mf)3	Bottom	11.6	3	2	15:03	29.7	7.41	17.90	5.34	3.74	3.4	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	CS(Mf)3	Surface	1	1	1	08:05	29.3	7.60	13.30	5.67	3.94	2.0	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	CS(Mf)3	Surface	1	1	2	08:05	29.2	7.60	13.30	5.63	3.90	1.9	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	CS(Mf)3	Middle	5.9	2	1	08:05	29.5	7.58	18.80	5.21	4.21	2.3	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	CS(Mf)3	Middle	5.9	2	2	08:05	29.4	7.58	18.70	5.18	4.25	2.3	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	CS(Mf)3	Bottom	10.8	3	1	08:05	29.5	7.57	18.90	4.99	4.08	1.9	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	CS(Mf)3	Bottom	10.8	3	2	08:05	29.4	7.56	18.90	4.95	4.04	1.9	2014-07-04

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	SR4a	Surface	1	1	1	09:40	29.4	7.65	13.50	5.61	4.01	2.0	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	SR4a	Surface	1	1	2	09:40	29.3	7.65	13.50	5.64	4.07	2.3	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	SR4a	Middle		2	1	09:40							2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	SR4a	Middle		2	2	09:40							2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	SR4a	Bottom	4.2	3	1	09:40	29.5	7.61	18.80	5.03	4.18	3.6	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	SR4a	Bottom	4.2	3	2	09:40	29.5	7.64	18.80	5.07	4.15	3.6	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	SR4	Surface	1	1	1	09:22	29.3	7.57	13.20	5.57	3.54	2.1	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	SR4	Surface	1	1	2	09:22	29.3	7.58	13.20	5.54	3.50	2.2	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	SR4	Middle		2	1	09:22							2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	SR4	Middle		2	2	09:22							2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	SR4	Bottom	3.2	3	1	09:22	29.5	7.62	18.80	4.94	4.11	4.7	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	SR4	Bottom	3.2	3	2	09:22	29.4	7.63	18.80	4.90	4.17	4.5	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS8	Surface	1	1	1	09:03	29.4	7.48	13.30	5.62	3.74	0.6	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS8	Surface	1	1	2	09:03	29.4	7.48	13.30	5.59	3.70	<0.5	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS8	Middle		2	1	09:03							2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS8	Middle		2	2	09:03							2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS8	Bottom	3.8	3	1	09:03	29.5	7.47	18.70	5.02	3.95	1.4	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS8	Bottom	3.8	3	2	09:03	29.5	7.47	18.80	5.05	3.91	1.9	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS(Mf)16	Surface	1	1	1	08:45	29.4	7.59	13.40	5.77	3.82	2.3	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS(Mf)16	Surface	1	1	2	08:45	29.4	7.58	13.40	5.74	3.85	1.9	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS(Mf)16	Middle	3.4	2	1	08:45	29.5	7.63	18.60	5.11	4.06	2.1	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS(Mf)16	Middle	3.4	2	2	08:45	29.5	7.63	18.60	5.08	4.10	2.1	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS(Mf)16	Bottom	5.8	3	1	08:45	29.6	7.60	18.80	4.88	4.14	3.0	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS(Mf)16	Bottom	5.8	3	2	08:45	29.6	7.62	18.70	4.85	4.18	2.9	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS(Mf)9	Surface	1	1	1	08:27	29.3	7.52	13.20	5.45	3.74	3.1	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS(Mf)9	Surface	1	1	2	08:27	29.3	7.54	13.20	5.48	3.70	3.3	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS(Mf)9	Middle		2	1	08:27							2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS(Mf)9	Middle		2	2	08:27							2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS(Mf)9	Bottom	3.4	3	1	08:27	29.6	7.49	18.70	4.98	4.12	3.6	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	IS(Mf)9	Bottom	3.4	3	2	08:27	29.6	7.48	18.60	4.94	4.05	4.4	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	CS(Mf)5	Surface	1	1	1	10:00	29.4	7.63	13.40	5.77	3.96	1.1	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	CS(Mf)5	Surface	1	1	2	10:00	29.4	7.63	13.40	5.79	3.92	0.7	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	CS(Mf)5	Middle	4.8	2	1	10:00	29.5	7.60	18.60	5.22	4.24	0.8	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	CS(Mf)5	Middle	4.8	2	2	10:00	29.4	7.61	18.60	5.25	4.29	0.7	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	CS(Mf)5	Bottom	8.6	3	1	10:00	29.5	7.67	18.80	4.95	4.17	2.7	2014-07-04
TMCLKL	HY/2012/07	2014-06-21	Mid-Ebb	Drizzle	CS(Mf)5	Bottom	8.6	3	2	10:00	29.6	7.64	18.80	4.98	4.12	2.6	2014-07-04

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	CS(Mf)5	Surface	1	1	1	16:18	28.8	7.80	19.00	5.67	3.99	2.7	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	CS(Mf)5	Surface	1	1	2	16:18	28.7	7.78	18.90	5.68	4.01	2.7	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	CS(Mf)5	Middle	4.8	2	1	16:18	28.6	7.84	26.50	5.54	3.85	3.0	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	CS(Mf)5	Middle	4.8	2	2	16:18	28.5	7.82	26.60	5.56	3.81	2.7	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	CS(Mf)5	Bottom	8.6	3	1	16:18	28.3	7.75	26.70	5.29	3.59	3.8	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	CS(Mf)5	Bottom	8.6	3	2	16:18	28.4	7.76	26.60	5.26	3.55	3.9	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	SR4a	Surface	1	1	1	16:42	28.7	7.81	18.90	5.64	3.93	4.0	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	SR4a	Surface	1	1	2	16:42	28.8	7.82	19.00	5.66	3.95	3.1	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	SR4a	Middle		2	1	16:42							2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	SR4a	Middle		2	2	16:42							2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	SR4a	Bottom	4.2	3	1	16:42	28.3	7.74	26.60	5.16	3.78	5.3	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	SR4a	Bottom	4.2	3	2	16:42	28.2	7.75	26.70	5.13	3.80	6.3	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	SR4	Surface	1	1	1	17:06	28.8	7.84	19.00	5.68	3.93	3.1	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	SR4	Surface	1	1	2	17:06	28.7	7.82	18.90	5.70	3.96	2.4	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	SR4	Middle		2	1	17:06							2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	SR4	Middle		2	2	17:06							2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	SR4	Bottom	3.6	3	1	17:06	28.3	7.79	26.60	5.23	3.77	3.3	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	SR4	Bottom	3.6	3	2	17:06	28.2	7.76	26.60	5.21	3.75	2.3	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS8	Surface	1	1	1	17:30	28.7	7.85	18.80	5.76	4.01	2.8	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS8	Surface	1	1	2	17:30	28.6	7.81	18.90	5.78	4.05	2.9	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS8	Middle		2	1	17:30							2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS8	Middle		2	2	17:30							2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS8	Bottom	4.8	3	1	17:30	28.3	7.78	26.50	5.14	3.69	3.4	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS8	Bottom	4.8	3	2	17:30	28.4	7.77	26.40	5.12	3.71	2.8	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS(Mf)16	Surface	1	1	1	17:54	28.7	7.79	18.90	5.80	3.89	3.1	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS(Mf)16	Surface	1	1	2	17:54	28.8	7.80	19.00	5.77	3.85	3.9	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS(Mf)16	Middle	3.9	2	1	17:54	28.6	7.82	26.50	5.64	3.93	5.1	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS(Mf)16	Middle	3.9	2	2	17:54	28.5	7.83	26.60	5.66	3.96	5.9	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS(Mf)16	Bottom	6.8	3	1	17:54	28.4	7.75	26.70	5.18	3.85	7.6	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS(Mf)16	Bottom	6.8	3	2	17:54	28.3	7.74	26.60	5.16	3.87	6.8	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS(Mf)9	Surface	1	1	1	18:18	28.6	7.77	18.90	5.70	3.98	2.4	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS(Mf)9	Surface	1	1	2	18:18	28.7	7.76	19.00	5.66	4.00	2.8	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS(Mf)9	Middle		2	1	18:18							2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS(Mf)9	Middle		2	2	18:18							2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS(Mf)9	Bottom	3.8	3	1	18:18	28.4	7.75	26.60	5.16	3.77	4.2	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	IS(Mf)9	Bottom	3.8	3	2	18:18	28.3	7.74	26.70	5.20	3.75	3.7	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	CS(Mf)3	Surface	1	1	1	18:44	28.7	7.79	19.00	5.64	4.03	1.5	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	CS(Mf)3	Surface	1	1	2	18:44	28.8	7.80	18.90	5.67	4.04	1.4	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	CS(Mf)3	Middle	6.4	2	1	18:44	28.5	7.76	26.40	5.38	3.97	2.4	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	CS(Mf)3	Middle	6.4	2	2	18:44	28.4	7.75	26.50	5.40	4.00	1.9	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	CS(Mf)3	Bottom	11.8	3	1	18:44	28.3	7.77	26.70	5.23	3.86	4.0	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Flood	Cloudy	CS(Mf)3	Bottom	11.8	3	2	18:44	28.3	7.78	26.60	5.21	3.84	3.6	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	CS(Mf)3	Surface	1	1	1	09:29	28.7	7.73	18.80	5.58	4.12	<0.5	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	CS(Mf)3	Surface	1	1	2	09:29	28.6	7.74	18.90	5.61	4.13	<0.5	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	CS(Mf)3	Middle	6.2	2	1	09:29	28.4	7.70	26.40	5.32	4.06	1.3	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	CS(Mf)3	Middle	6.2	2	2	09:29	28.4	7.69	26.40	5.34	4.09	1.0	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	CS(Mf)3	Bottom	11.3	3	1	09:29	28.3	7.71	26.50	5.17	3.95	2.3	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	CS(Mf)3	Bottom	11.3	3	2	09:29	28.2	7.72	26.60	5.15	3.93	2.2	2014-07-03

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	SR4a	Surface	1	1	1	12:05	28.6	7.75	18.80	5.58	4.02	2.3	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	SR4a	Surface	1	1	2	12:05	28.7	7.76	18.90	5.60	4.04	1.9	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	SR4a	Middle		2	1	12:05							2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	SR4a	Middle		2	2	12:05							2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	SR4a	Bottom	3.8	3	1	12:05	28.2	7.68	26.60	5.10	3.87	4.4	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	SR4a	Bottom	3.8	3	2	12:05	28.2	7.69	26.60	5.07	3.89	4.5	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	SR4	Surface	1	1	1	11:35	28.7	7.78	18.80	5.62	4.02	4.4	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	SR4	Surface	1	1	2	11:35	28.6	7.76	18.90	5.64	4.05	4.7	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	SR4	Middle		2	1	11:35							2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	SR4	Middle		2	2	11:35							2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	SR4	Bottom	3.4	3	1	11:35	28.2	7.73	26.50	5.17	3.86	6.4	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	SR4	Bottom	3.4	3	2	11:35	28.2	7.70	26.50	5.15	3.84	5.5	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS8	Surface	1	1	1	11:05	28.6	7.79	18.80	5.70	4.10	3.6	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS8	Surface	1	1	2	11:05	28.6	7.75	18.80	5.72	4.14	3.5	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS8	Middle		2	1	11:05							2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS8	Middle		2	2	11:05							2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS8	Bottom	4.5	3	1	11:05	28.2	7.72	26.50	5.08	3.78	4.2	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS8	Bottom	4.5	3	2	11:05	28.3	7.71	26.50	5.06	3.80	4.3	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS(Mf)16	Surface	1	1	1	10:34	28.7	7.73	18.80	5.74	3.98	2.0	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS(Mf)16	Surface	1	1	2	10:34	28.7	7.74	18.90	5.71	3.94	2.0	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS(Mf)16	Middle	3.7	2	1	10:34	28.5	7.76	26.40	5.58	4.02	3.0	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS(Mf)16	Middle	3.7	2	2	10:34	28.4	7.77	26.50	5.60	4.05	3.2	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS(Mf)16	Bottom	6.4	3	1	10:34	28.3	7.69	26.60	5.12	3.94	4.6	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS(Mf)16	Bottom	6.4	3	2	10:34	28.3	7.68	26.60	5.10	3.96	4.8	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS(Mf)9	Surface	1	1	1	10:04	28.6	7.71	18.80	5.64	4.07	2.8	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS(Mf)9	Surface	1	1	2	10:04	28.6	7.70	18.90	5.60	4.09	3.4	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS(Mf)9	Middle		2	1	10:04							2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS(Mf)9	Middle		2	2	10:04							2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS(Mf)9	Bottom	3.5	3	1	10:04	28.3	7.69	26.60	5.10	3.86	2.9	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	IS(Mf)9	Bottom	3.5	3	2	10:04	28.3	7.68	26.60	5.14	3.84	3.4	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	CS(Mf)5	Surface	1	1	1	12:40	28.7	7.74	18.80	5.61	4.08	<0.5	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	CS(Mf)5	Surface	1	1	2	12:40	28.7	7.72	18.90	5.62	4.10	0.7	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	CS(Mf)5	Middle	4.6	2	1	12:40	28.5	7.78	26.40	5.48	3.94	0.8	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	CS(Mf)5	Middle	4.6	2	2	12:40	28.4	7.76	26.50	5.50	3.90	<0.5	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	CS(Mf)5	Bottom	8.2	3	1	12:40	28.3	7.69	26.60	5.23	3.68	0.5	2014-07-03
TMCLKL	HY/2012/07	2014-06-24	Mid-Ebb	Cloudy	CS(Mf)5	Bottom	8.2	3	2	12:40	28.2	7.69	26.50	5.20	3.64	0.8	2014-07-03

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	CS(Mf)5	Surface	1	1	1	17:48	28.9	7.78	19.10	5.65	4.31	2.8	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	CS(Mf)5	Surface	1	1	2	17:48	28.9	7.76	19.20	5.66	4.36	2.3	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	CS(Mf)5	Middle	4.6	2	1	17:48	28.7	7.82	26.40	5.52	4.49	3.8	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	CS(Mf)5	Middle	4.6	2	2	17:48	28.6	7.80	26.30	5.54	4.46	2.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	CS(Mf)5	Bottom	8.2	3	1	17:48	28.5	7.73	26.50	5.27	4.60	2.7	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	CS(Mf)5	Bottom	8.2	3	2	17:48	28.4	7.72	26.60	5.24	4.63	2.4	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	SR4a	Surface	1	1	1	18:12	28.9	7.79	19.10	5.62	4.29	2.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	SR4a	Surface	1	1	2	18:12	28.8	7.80	19.10	5.64	4.32	2.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	SR4a	Middle		2	1	18:12							2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	SR4a	Middle		2	2	18:12							2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	SR4a	Bottom	4.4	3	1	18:12	28.4	7.72	26.50	5.14	4.50	3.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	SR4a	Bottom	4.4	3	2	18:12	28.4	7.73	26.60	5.11	4.54	3.2	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	SR4	Surface	1	1	1	18:36	28.9	7.82	19.10	5.66	4.31	3.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	SR4	Surface	1	1	2	18:36	28.9	7.80	19.00	5.68	4.35	4.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	SR4	Middle		2	1	18:36							2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	SR4	Middle		2	2	18:36							2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	SR4	Bottom	4.2	3	1	18:36	28.4	7.77	26.40	5.21	4.56	3.7	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	SR4	Bottom	4.2	3	2	18:36	28.3	7.74	26.50	5.19	4.60	4.3	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS8	Surface	1	1	1	19:00	28.6	7.83	19.00	5.74	4.39	4.2	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS8	Surface	1	1	2	19:00	28.7	7.79	19.10	5.76	4.34	4.0	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS8	Middle		2	1	19:00							2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS8	Middle		2	2	19:00							2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS8	Bottom	4.8	3	1	19:00	28.5	7.76	26.40	5.12	4.62	3.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS8	Bottom	4.8	3	2	19:00	28.4	7.75	26.30	5.10	4.65	3.4	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS(Mf)16	Surface	1	1	1	19:24	28.8	7.77	19.20	5.78	4.46	3.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS(Mf)16	Surface	1	1	2	19:24	28.9	7.79	19.10	5.75	4.40	2.4	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS(Mf)16	Middle	3.7	2	1	19:24	28.7	7.80	26.40	5.62	4.51	4.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS(Mf)16	Middle	3.7	2	2	19:24	28.6	7.81	26.30	5.64	4.53	2.3	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS(Mf)16	Bottom	6.4	3	1	19:24	28.4	7.73	26.50	5.16	4.60	4.5	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS(Mf)16	Bottom	6.4	3	2	19:24	28.4	7.72	26.60	5.14	4.64	4.3	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS(Mf)9	Surface	1	1	1	19:48	28.7	7.75	19.10	5.68	4.53	3.5	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS(Mf)9	Surface	1	1	2	19:48	28.8	7.74	19.00	5.64	4.55	3.8	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS(Mf)9	Middle		2	1	19:48							2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS(Mf)9	Middle		2	2	19:48							2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS(Mf)9	Bottom	4.2	3	1	19:48	28.2	7.73	26.50	5.14	4.70	4.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	IS(Mf)9	Bottom	4.2	3	2	19:48	28.3	7.72	26.40	5.18	4.72	3.8	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	CS(Mf)3	Surface	1	1	1	20:14	28.9	7.77	19.10	5.62	4.67	4.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	CS(Mf)3	Surface	1	1	2	20:14	28.8	7.78	19.20	5.65	4.69	2.5	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	CS(Mf)3	Middle	6.1	2	1	20:14	28.6	7.74	26.30	5.36	4.79	2.8	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	CS(Mf)3	Middle	6.1	2	2	20:14	28.5	7.73	26.40	5.38	4.81	2.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	CS(Mf)3	Bottom	11.2	3	1	20:14	28.4	7.75	26.60	5.21	4.90	2.4	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Flood	Cloudy	CS(Mf)3	Bottom	11.2	3	2	20:14	28.3	7.76	26.50	5.19	4.95	2.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	CS(Mf)3	Surface	1	1	1	10:48	28.8	7.68	19.00	5.53	4.76	2.7	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	CS(Mf)3	Surface	1	1	2	10:48	28.7	7.69	19.10	5.56	4.78	3.3	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	CS(Mf)3	Middle	5.9	2	1	10:48	28.5	7.65	26.20	5.27	4.88	4.2	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	CS(Mf)3	Middle	5.9	2	2	10:48	28.4	7.64	26.30	5.29	4.90	3.3	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	CS(Mf)3	Bottom	10.8	3	1	10:48	28.3	7.66	26.40	5.12	4.99	3.5	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	CS(Mf)3	Bottom	10.8	3	2	10:48	28.3	7.67	26.50	5.10	5.04	2.4	2014-07-10



Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	SR4a	Surface	1	1	1	13:23	28.7	7.70	19.00	5.53	4.38	3.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	SR4a	Surface	1	1	2	13:23	28.8	7.71	18.90	5.55	4.41	3.3	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	SR4a	Middle		2	1	13:23							2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	SR4a	Middle		2	2	13:23							2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	SR4a	Bottom	4	3	1	13:23	28.3	7.63	26.40	5.05	4.59	3.0	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	SR4a	Bottom	4	3	2	13:23	28.2	7.64	26.50	5.02	4.63	2.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	SR4	Surface	1	1	1	12:53	28.8	7.73	19.00	5.57	4.40	3.0	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	SR4	Surface	1	1	2	12:53	28.7	7.71	19.80	5.59	4.44	2.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	SR4	Middle		2	1	12:53							2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	SR4	Middle		2	2	12:53							2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	SR4	Bottom	3.6	3	1	12:53	28.3	7.68	26.40	5.12	4.65	2.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	SR4	Bottom	3.6	3	2	12:53	28.2	7.65	26.30	5.10	4.69	2.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS8	Surface	1	1	1	12:23	28.7	7.74	18.90	5.65	4.48	3.5	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS8	Surface	1	1	2	12:23	28.6	7.70	19.00	5.67	4.43	2.5	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS8	Middle		2	1	12:23							2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS8	Middle		2	2	12:23							2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS8	Bottom	3.4	3	1	12:23	28.4	7.67	26.30	5.03	4.71	2.7	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS8	Bottom	3.4	3	2	12:23	28.3	7.66	26.40	5.01	4.74	3.3	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS(Mf)16	Surface	1	1	1	11:53	28.7	7.68	19.00	5.69	4.55	2.7	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS(Mf)16	Surface	1	1	2	11:53	28.8	7.69	19.10	5.66	4.49	4.0	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS(Mf)16	Middle	3.6	2	1	11:53	28.5	7.71	26.30	5.53	4.60	2.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS(Mf)16	Middle	3.6	2	2	11:53	28.6	7.72	26.40	5.55	4.62	2.3	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS(Mf)16	Bottom	6.2	3	1	11:53	28.4	7.64	26.40	5.07	4.69	2.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS(Mf)16	Bottom	6.2	3	2	11:53	28.3	7.63	26.50	5.05	4.73	2.7	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS(Mf)9	Surface	1	1	1	11:23	28.6	7.66	18.90	5.59	4.62	2.4	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS(Mf)9	Surface	1	1	2	11:23	28.7	7.65	19.00	5.55	4.64	2.7	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS(Mf)9	Middle		2	1	11:23							2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS(Mf)9	Middle		2	2	11:23							2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS(Mf)9	Bottom	3.8	3	1	11:23	28.2	7.64	26.40	5.05	4.79	2.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	IS(Mf)9	Bottom	3.8	3	2	11:23	28.1	7.63	26.50	5.09	4.81	2.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	CS(Mf)5	Surface	1	1	1	13:58	28.8	7.69	19.00	5.56	4.40	3.0	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	CS(Mf)5	Surface	1	1	2	13:58	28.7	7.67	19.10	5.57	4.45	2.8	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	CS(Mf)5	Middle	4.4	2	1	13:58	28.6	7.73	26.30	5.43	4.58	2.4	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	CS(Mf)5	Middle	4.4	2	2	13:58	28.5	7.71	26.40	5.45	4.55	2.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	CS(Mf)5	Bottom	7.8	3	1	13:58	28.4	7.64	26.40	5.18	4.69	3.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-26	Mid-Ebb	Cloudy	CS(Mf)5	Bottom	7.8	3	2	13:58	28.3	7.63	26.50	5.15	4.72	2.9	2014-07-10

## Appendix J Water Quality Monitoring Results

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	CS(Mf)5	Surface	1	1	1	19:03	28.9	7.80	19.10	5.58	4.41	3.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	CS(Mf)5	Surface	1	1	2	19:03	28.9	7.78	19.10	5.60	4.45	2.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	CS(Mf)5	Middle	4.7	2	1	19:03	28.7	7.80	26.40	5.65	4.55	2.7	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	CS(Mf)5	Middle	4.7	2	2	19:03	28.6	7.79	26.40	5.67	4.53	2.7	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	CS(Mf)5	Bottom	8.4	3	1	19:03	28.4	7.72	26.60	5.32	4.70	3.4	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	CS(Mf)5	Bottom	8.4	3	2	19:03	28.5	7.71	26.50	5.29	4.72	3.5	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	SR4a	Surface	1	1	1	19:24	28.8	7.75	19.00	5.55	4.40	3.2	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	SR4a	Surface	1	1	2	19:24	28.9	7.76	19.10	5.57	4.42	2.7	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	SR4a	Middle		2	1	19:24							2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	SR4a	Middle		2	2	19:24							2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	SR4a	Bottom	4.4	3	1	19:24	28.6	7.70	26.50	5.22	4.61	3.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	SR4a	Bottom	4.4	3	2	19:24	28.7	7.71	26.50	5.19	4.63	3.2	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	SR4	Surface	1	1	1	19:45	28.8	7.80	19.20	5.59	4.40	2.3	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	SR4	Surface	1	1	2	19:45	28.8	7.78	19.10	5.61	4.42	2.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	SR4	Middle		2	1	19:45							2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	SR4	Middle		2	2	19:45							2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	SR4	Bottom	3.6	3	1	19:45	28.6	7.73	26.60	5.26	4.66	3.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	SR4	Bottom	3.6	3	2	19:45	28.5	7.72	26.50	5.23	4.70	2.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS8	Surface	1	1	1	20:06	28.7	7.79	19.10	5.66	4.49	2.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS8	Surface	1	1	2	20:06	28.8	7.77	19.10	5.69	4.45	2.2	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS8	Middle		2	1	20:06							2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS8	Middle		2	2	20:06							2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS8	Bottom	4.5	3	1	20:06	28.5	7.74	26.50	5.18	4.72	2.5	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS8	Bottom	4.5	3	2	20:06	28.5	7.73	26.60	5.15	4.74	3.5	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS(Mf)16	Surface	1	1	1	20:27	28.8	7.73	19.20	5.70	4.52	2.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS(Mf)16	Surface	1	1	2	20:27	28.8	7.74	19.10	5.68	4.50	2.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS(Mf)16	Middle	3.8	2	1	20:27	28.6	7.78	26.30	5.55	4.61	2.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS(Mf)16	Middle	3.8	2	2	20:27	28.5	7.79	26.40	5.58	4.63	3.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS(Mf)16	Bottom	6.6	3	1	20:27	28.2	7.69	26.60	5.21	4.71	3.8	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS(Mf)16	Bottom	6.6	3	2	20:27	28.3	7.70	26.60	5.19	4.73	4.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS(Mf)9	Surface	1	1	1	20:48	28.7	7.71	19.00	5.60	4.64	2.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS(Mf)9	Surface	1	1	2	20:48	28.7	7.72	19.10	5.58	4.66	3.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS(Mf)9	Middle		2	1	20:48							2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS(Mf)9	Middle		2	2	20:48							2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS(Mf)9	Bottom	4.4	3	1	20:48	28.4	7.71	26.50	5.22	4.80	2.4	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	IS(Mf)9	Bottom	4.4	3	2	20:48	28.5	7.70	26.50	5.25	4.82	3.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	CS(Mf)3	Surface	1	1	1	21:09	28.8	7.73	19.10	5.55	4.77	3.3	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	CS(Mf)3	Surface	1	1	2	21:09	28.7	7.74	19.20	5.58	4.79	2.8	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	CS(Mf)3	Middle	5.9	2	1	21:09	28.5	7.72	26.40	5.29	4.78	2.8	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	CS(Mf)3	Middle	5.9	2	2	21:09	28.6	7.71	26.30	5.31	4.86	2.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	CS(Mf)3	Bottom	10.8	3	1	21:09	28.2	7.72	26.60	5.14	5.00	2.8	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Flood	Cloudy	CS(Mf)3	Bottom	10.8	3	2	21:09	28.3	7.73	26.50	5.12	5.04	2.8	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	CS(Mf)3	Surface	1	1	1	12:02	28.9	7.74	19.20	5.47	4.85	2.8	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	CS(Mf)3	Surface	1	1	2	12:02	28.8	7.75	19.10	5.50	4.87	2.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	CS(Mf)3	Middle	5.8	2	1	12:02	28.6	7.71	26.30	5.21	4.97	2.4	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	CS(Mf)3	Middle	5.8	2	2	12:02	28.5	7.70	26.40	5.23	4.99	2.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	CS(Mf)3	Bottom	10.6	3	1	12:02	28.3	7.72	26.40	5.06	5.08	2.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	CS(Mf)3	Bottom	10.6	3	2	12:02	28.2	7.73	26.50	5.04	5.13	3.2	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	SR4a	Surface	1	1	1	14:37	28.8	7.76	19.00	5.47	4.47	2.8	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	SR4a	Surface	1	1	2	14:37	28.9	7.77	19.10	5.49	4.50	2.5	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	SR4a	Middle		2	1	14:37							2014-07-10

Project	Works	Date (yyyy-mm)	Tide	Weather	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity (ppt)	DO(mg/L)	Turbidity (NTU)	SS (mg/L)	Received Date (SS)
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	SR4a	Middle		2	2	14:37							2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	SR4a	Bottom	4.2	3	1	14:37	28.4	7.69	26.50	5.14	4.68	3.5	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	SR4a	Bottom	4.2	3	2	14:37	28.5	7.70	26.40	5.11	4.72	3.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	SR4	Surface	1	1	1	14:07	28.9	7.79	19.10	5.51	4.49	2.2	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	SR4	Surface	1	1	2	14:07	28.8	7.77	19.20	5.53	4.53	3.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	SR4	Middle		2	1	14:07							2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	SR4	Middle		2	2	14:07							2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	SR4	Bottom	3.4	3	1	14:07	28.5	7.74	26.50	5.18	4.74	3.7	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	SR4	Bottom	3.4	3	2	14:07	28.4	7.71	26.60	5.16	4.78	3.3	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS8	Surface	1	1	1	13:37	28.8	7.80	19.00	5.59	4.57	2.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS8	Surface	1	1	2	13:37	28.8	7.76	19.10	5.61	4.52	2.8	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS8	Middle		2	1	13:37							2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS8	Middle		2	2	13:37							2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS8	Bottom	4.2	3	1	13:37	28.4	7.73	26.50	5.09	4.80	2.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS8	Bottom	4.2	3	2	13:37	28.5	7.72	26.40	5.07	4.83	3.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS(Mf)16	Surface	1	1	1	13:07	28.8	7.74	19.10	5.63	4.64	2.4	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS(Mf)16	Surface	1	1	2	13:07	28.9	7.75	19.20	5.60	4.58	2.0	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS(Mf)16	Middle	3.7	2	1	13:07	28.7	7.77	26.40	5.47	4.69	2.6	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS(Mf)16	Middle	3.7	2	2	13:07	28.6	7.78	26.50	5.49	4.71	2.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS(Mf)16	Bottom	6.4	3	1	13:07	28.4	7.70	26.60	5.13	4.78	2.8	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS(Mf)16	Bottom	6.4	3	2	13:07	28.3	7.69	26.50	5.11	4.82	3.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS(Mf)9	Surface	1	1	1	12:37	28.8	7.72	19.10	5.53	4.71	2.2	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS(Mf)9	Surface	1	1	2	12:37	28.7	7.71	19.00	5.49	4.73	2.7	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS(Mf)9	Middle		2	1	12:37							2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS(Mf)9	Middle		2	2	12:37							2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS(Mf)9	Bottom	4.2	3	1	12:37	28.3	7.70	26.50	5.14	4.88	2.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	IS(Mf)9	Bottom	4.2	3	2	12:37	28.4	7.69	26.60	5.18	4.90	2.3	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	CS(Mf)5	Surface	1	1	1	15:12	28.9	7.75	19.10	5.50	4.49	2.7	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	CS(Mf)5	Surface	1	1	2	15:12	28.8	7.73	19.20	5.51	4.54	2.8	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	CS(Mf)5	Middle	4.6	2	1	15:12	28.6	7.79	26.50	5.37	4.67	4.1	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	CS(Mf)5	Middle	4.6	2	2	15:12	28.7	7.77	26.40	5.39	4.64	2.2	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	CS(Mf)5	Bottom	8.2	3	1	15:12	28.4	7.70	26.50	5.24	4.78	3.9	2014-07-10
TMCLKL	HY/2012/07	2014-06-28	Mid-Ebb	Cloudy	CS(Mf)5	Bottom	8.2	3	2	15:12	28.4	7.69	26.60	5.21	4.81	3.7	2014-07-10

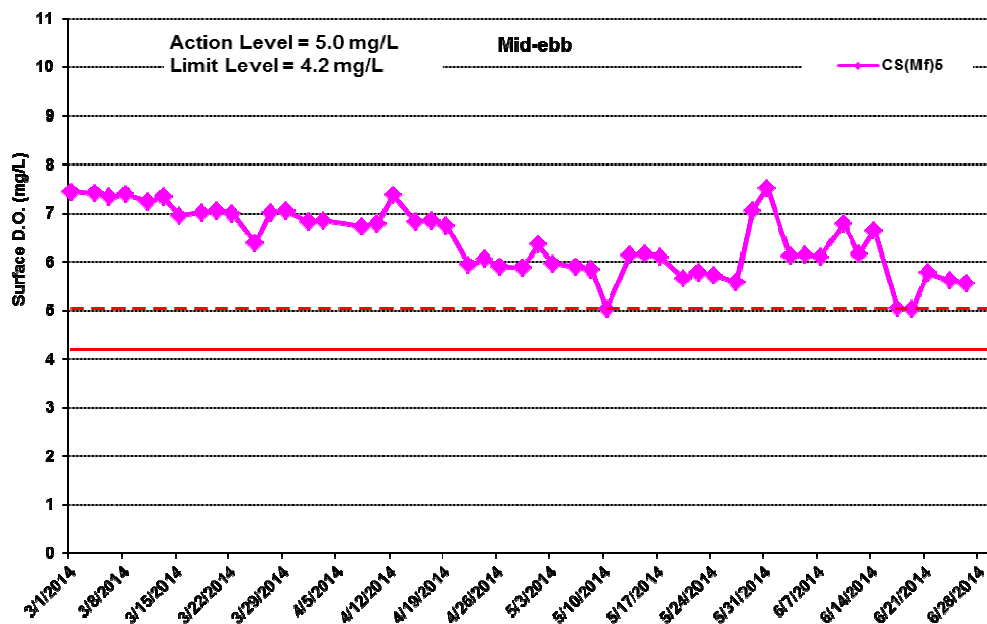
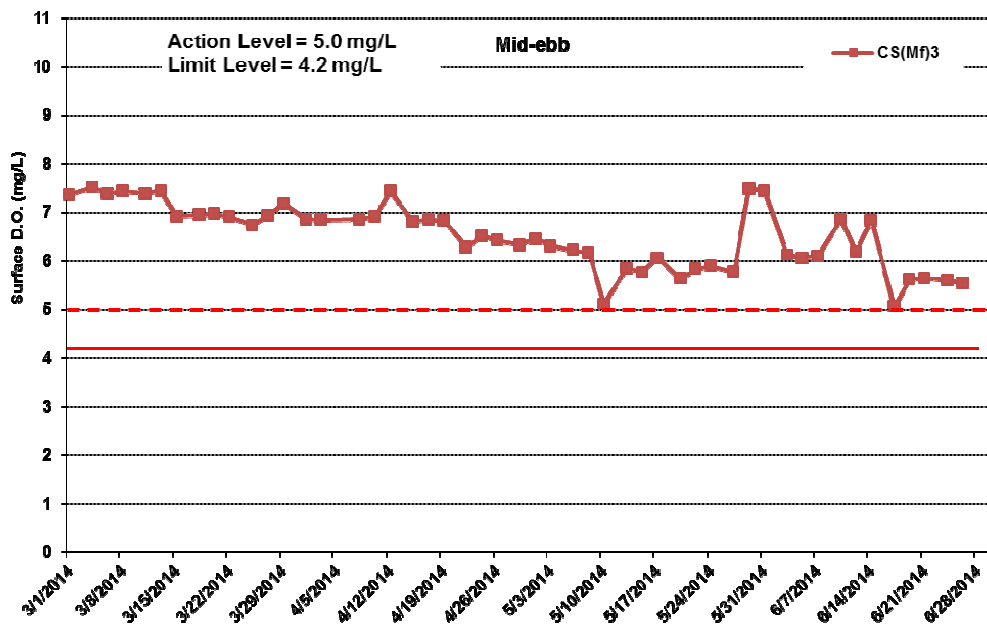
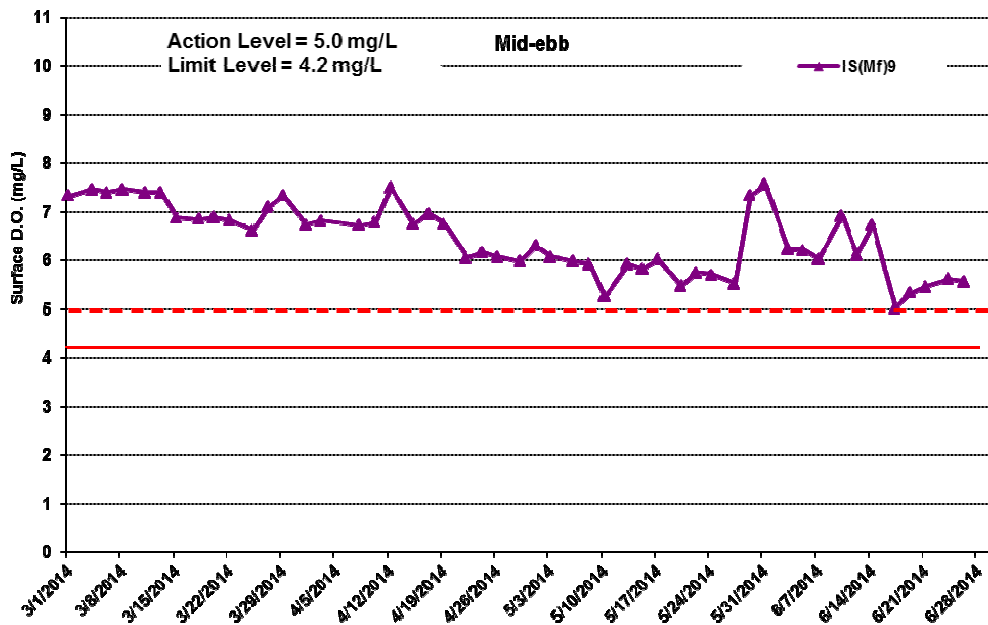
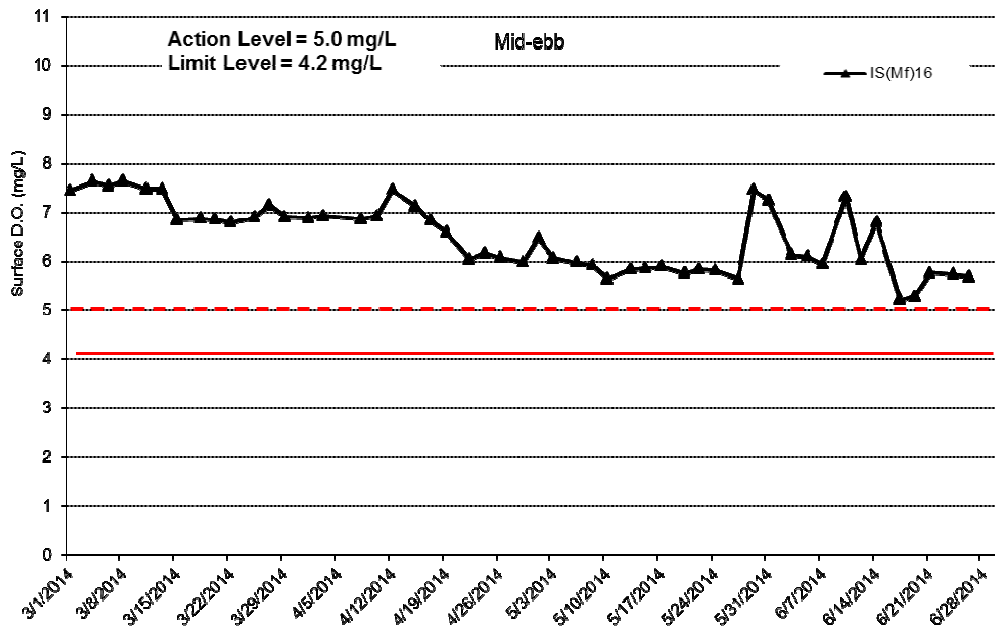


Figure J1 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 March and 30 June 2014 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)

Environmental  
Resources  
Management





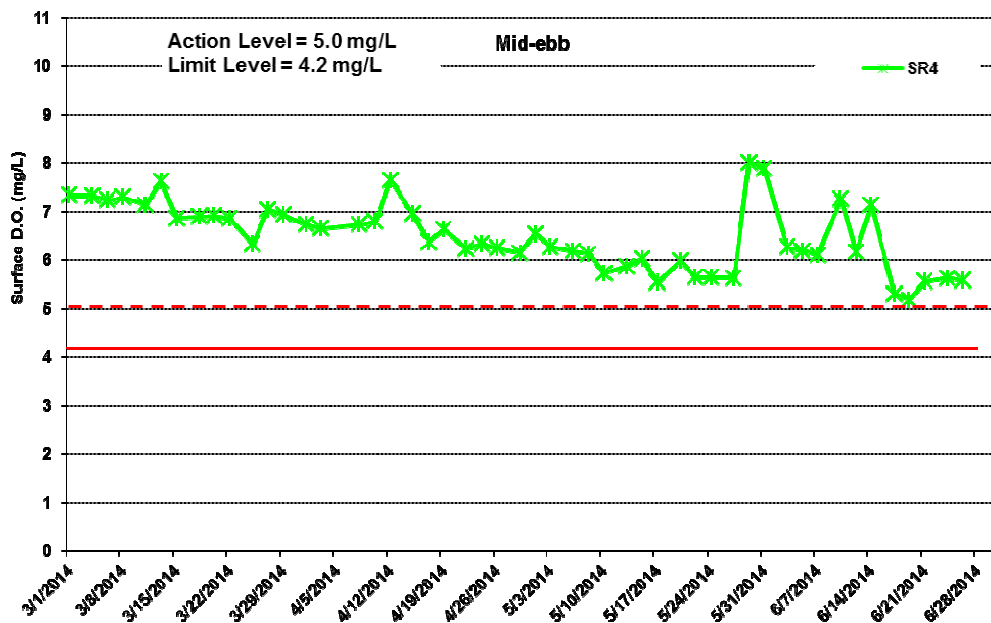
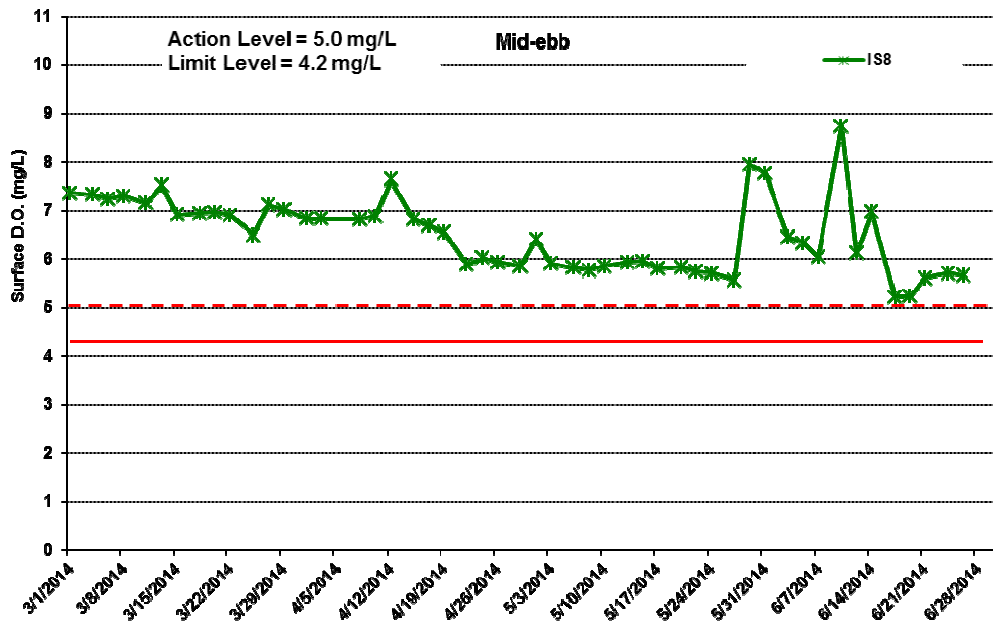
**Figure J2 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 March and 30 June 2014 at IS(Mf)16 and IS(Mf)9.**

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

**Environmental  
Resources  
Management**





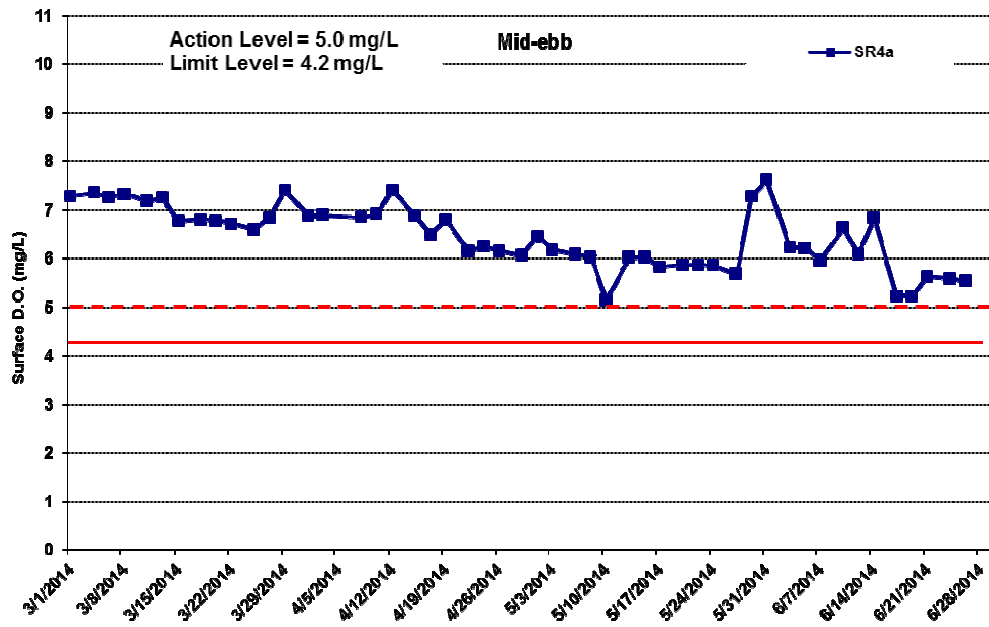


**Figure J3 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 March and 30 June 2014 at IS8 and SR4.**

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

**Environmental  
Resources  
Management**





**Figure J4 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 March and 30 June 2014 at SR4a.**

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

**Environmental  
Resources  
Management**



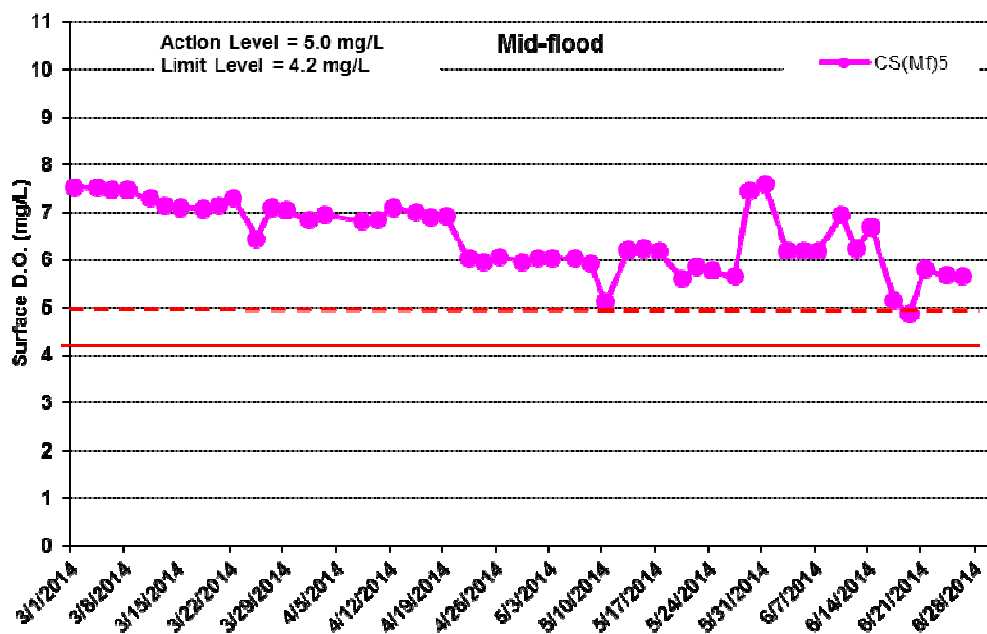
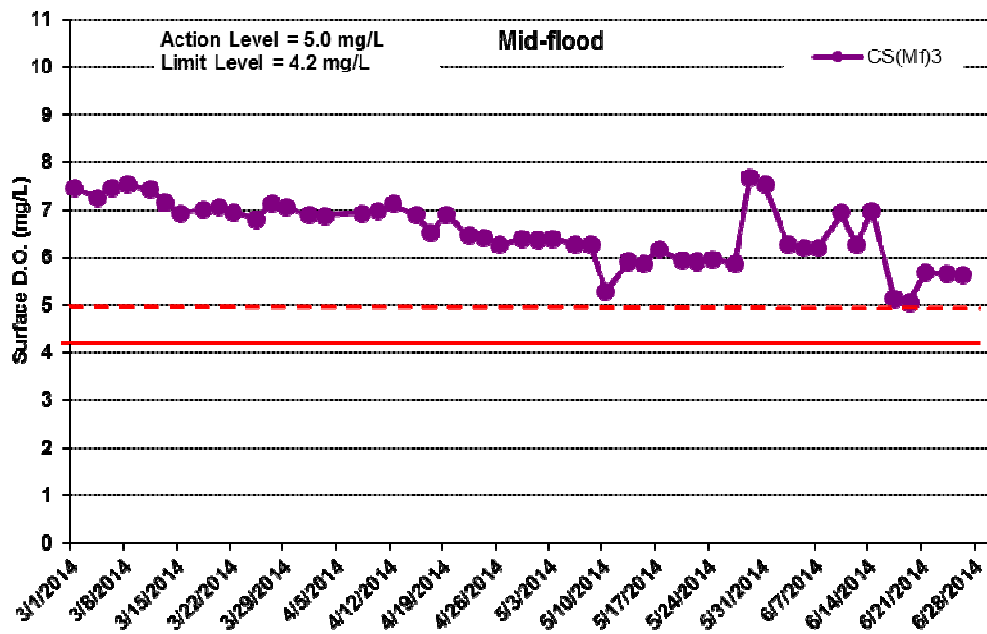


Figure J5 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 March and 30 June 2014 at CS(Mf)3 and CS(Mf)5.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management



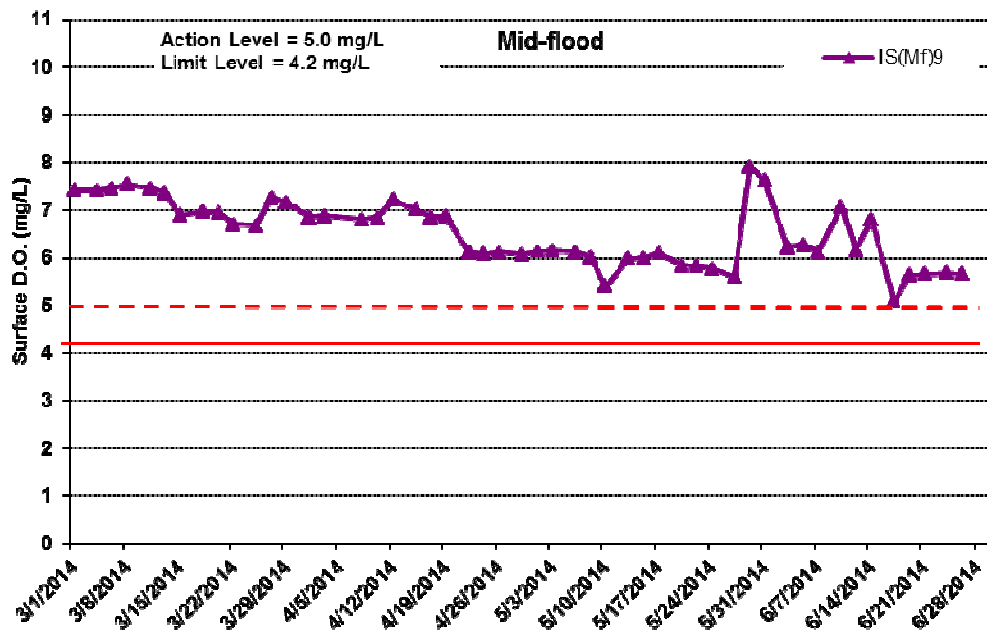
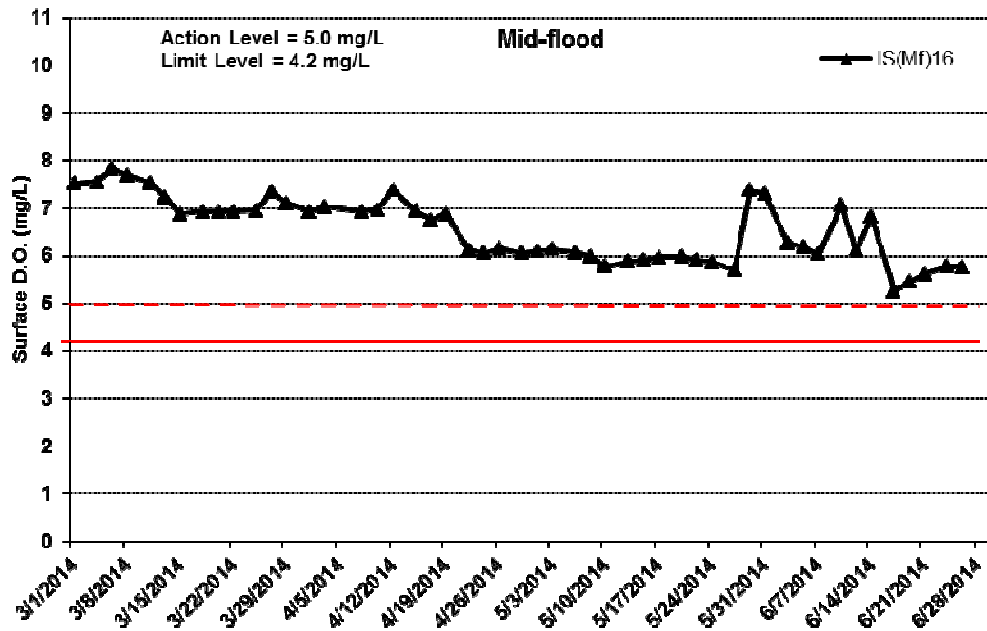


Figure J6 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 March and 30 June 2014 at IS(Mf)16 and IS(Mf)9.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management



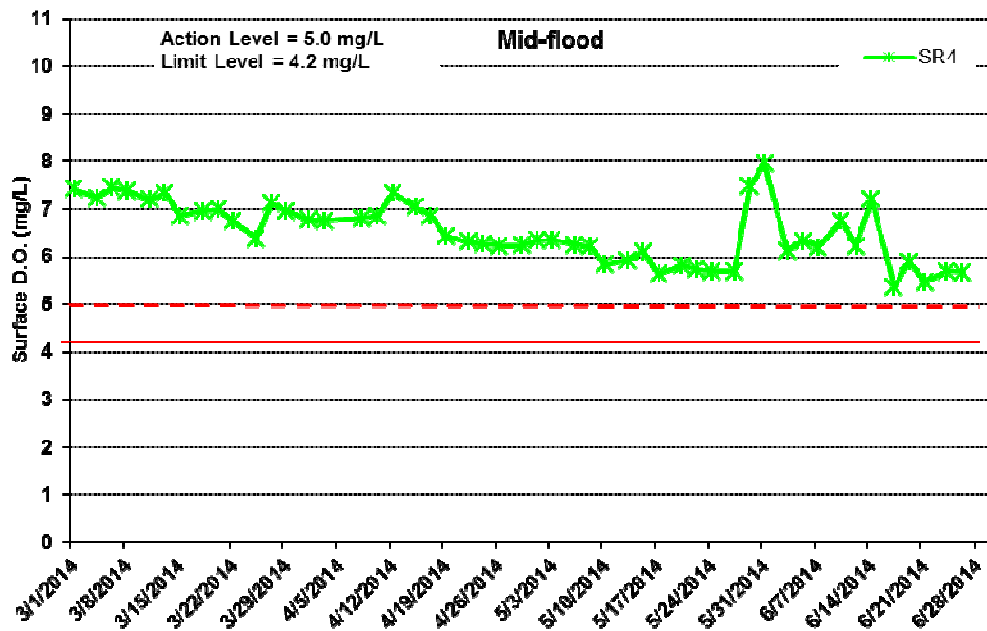
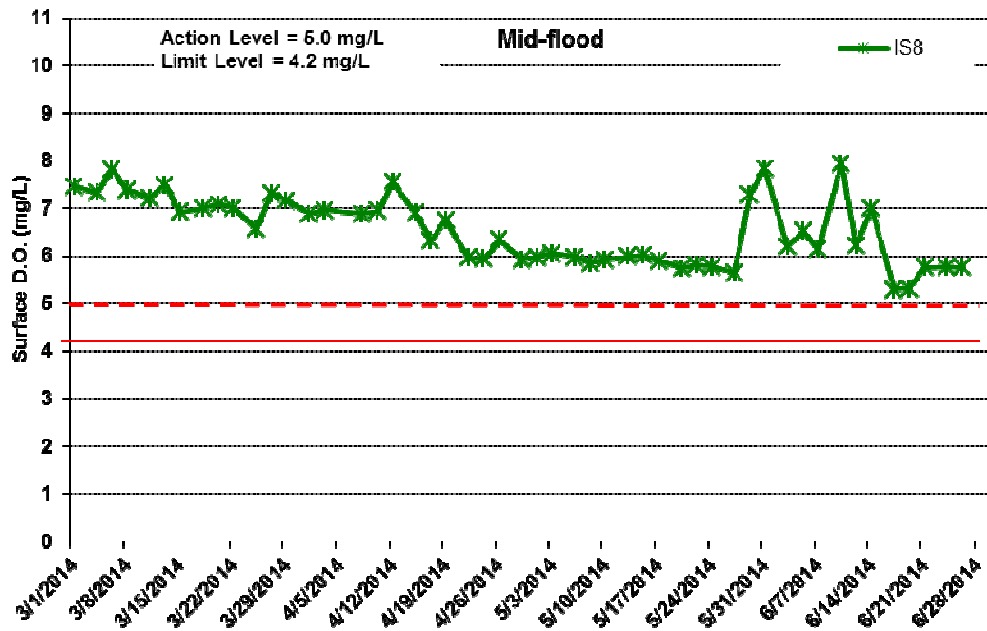
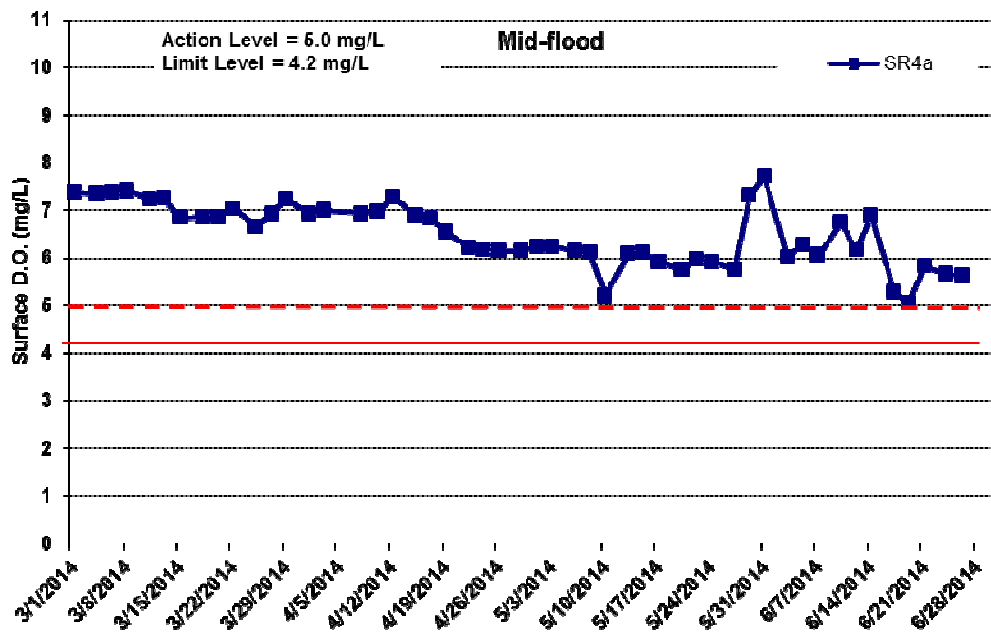


Figure J7 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 March and 30 June 2014 at IS8 and SR4.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management





**Figure J8 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 March and 30 June 2014 at SR4a.**

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

**Environmental  
Resources  
Management**





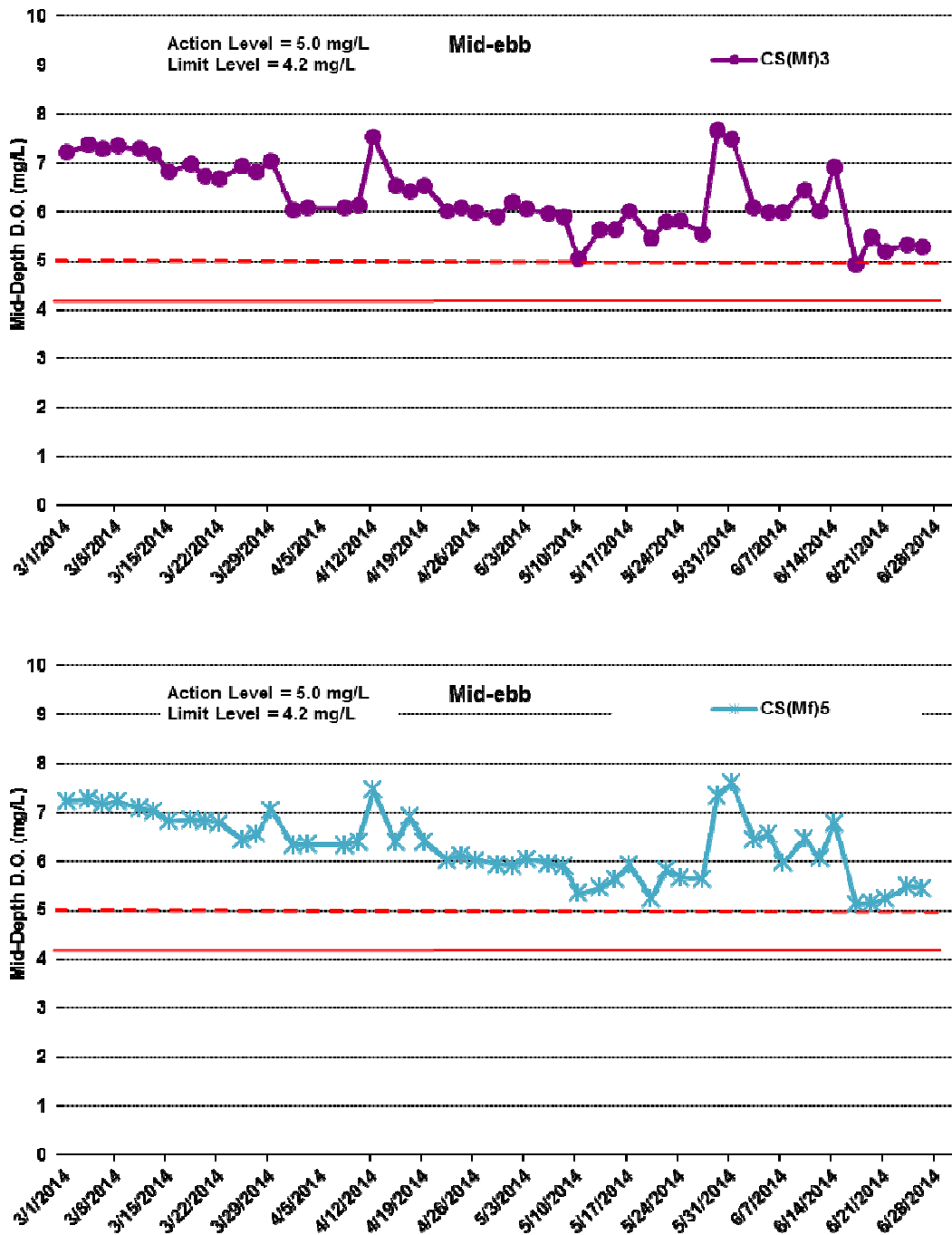
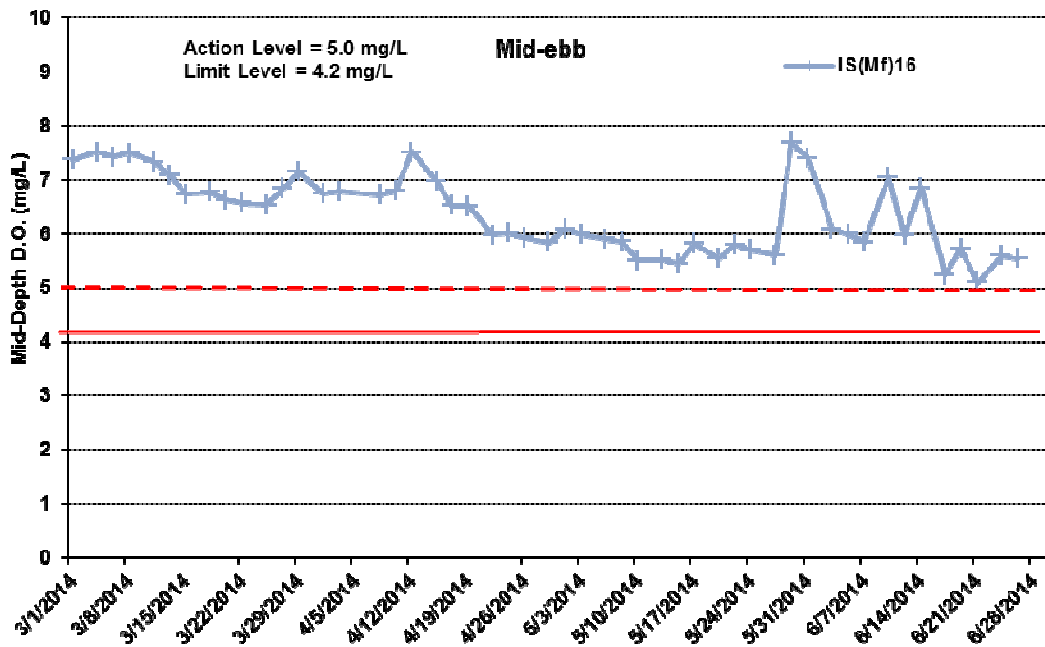


Figure J9 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 1 March and 30 June 2014 at CS(Mf)3 and CS(Mf)5.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management





**Figure J10 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 1 March and 30 June 2014 at IS(Mf)16.**

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

**Environmental  
Resources  
Management**



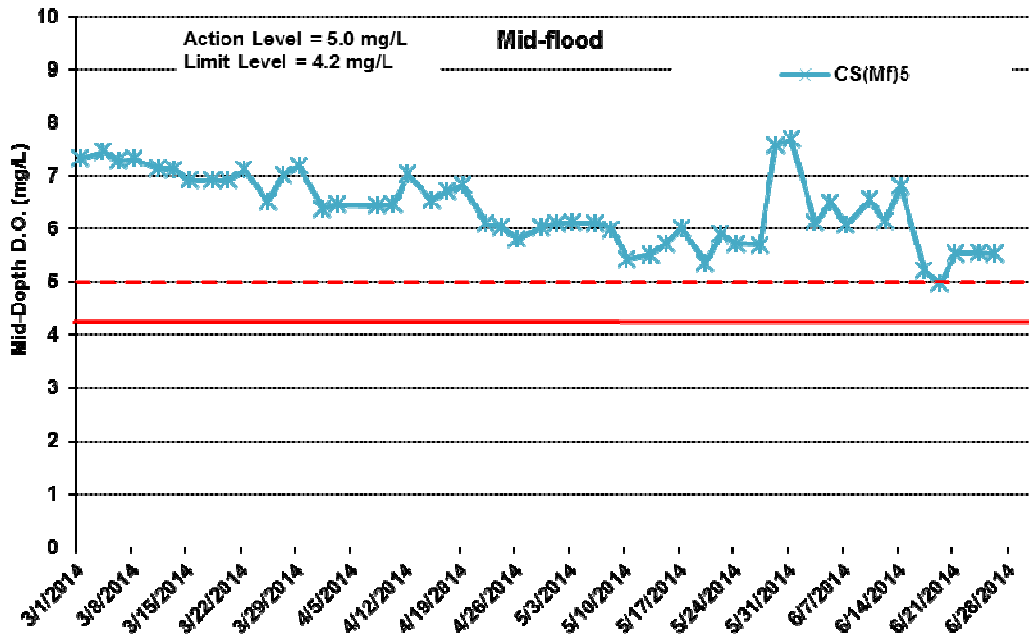
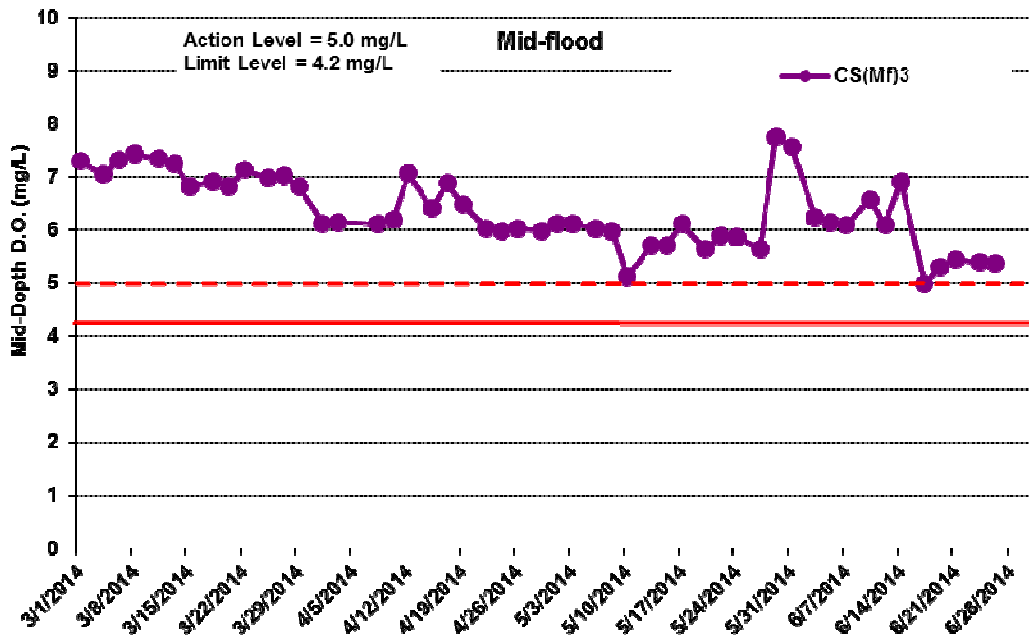
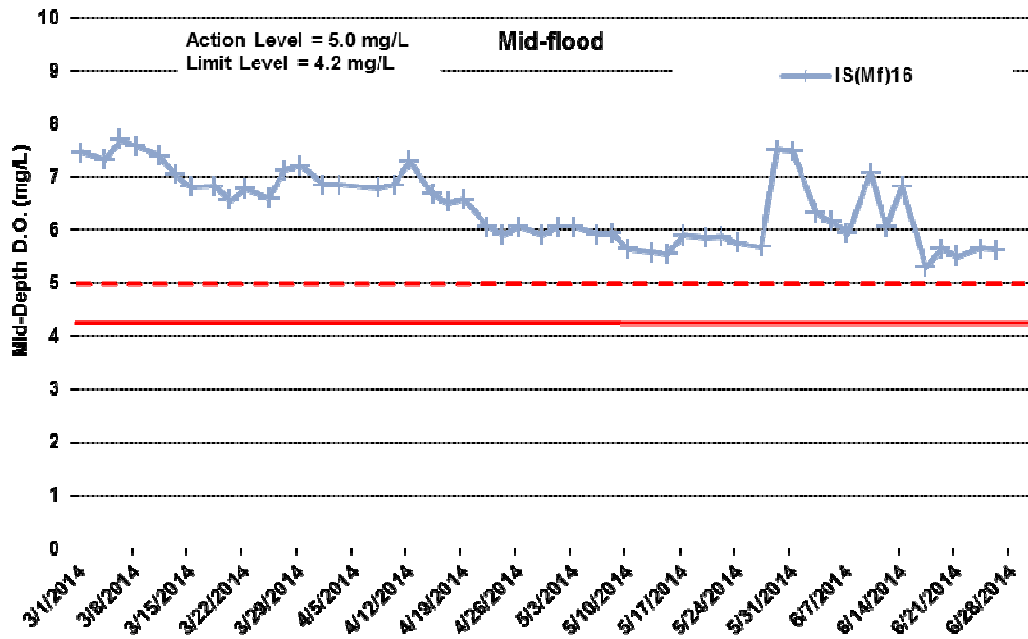


Figure J11 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 1 March and 30 June 2014 at CS(Mf)3 and CS(Mf)5.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*



**Figure J12 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 1 March and 30 June 2014 at IS(Mf)16.**

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

**Environmental  
Resources  
Management**



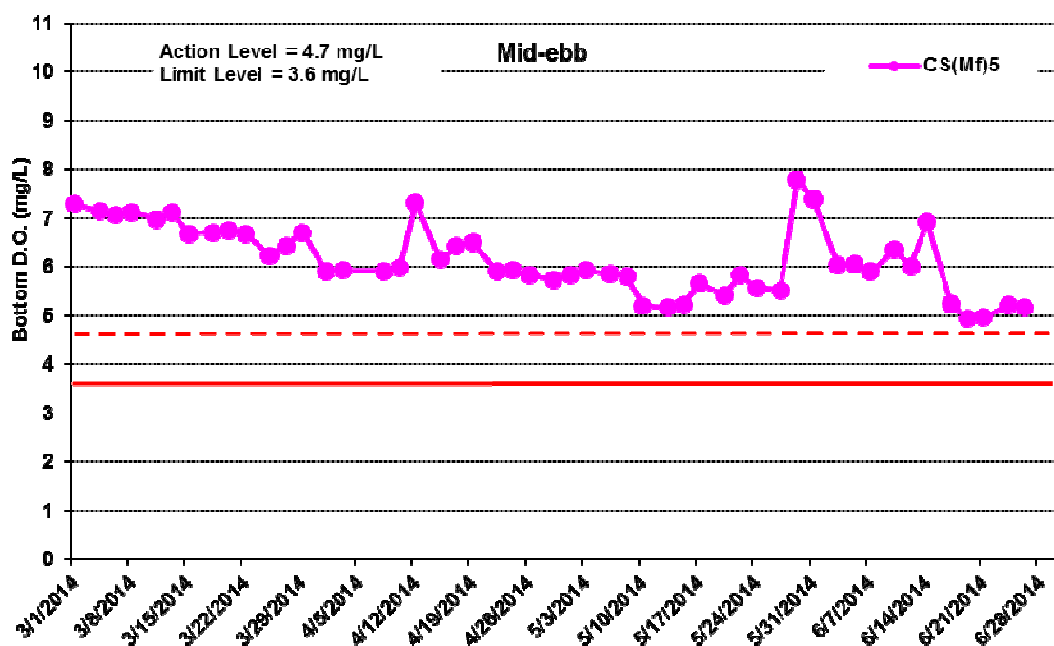
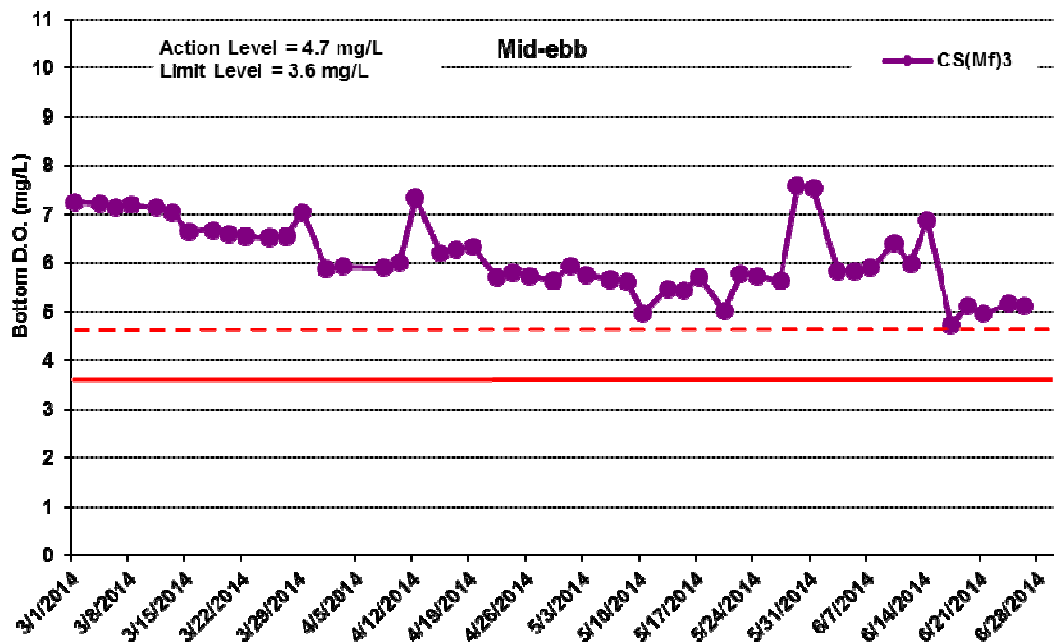


Figure J13 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 March and 30 June 2014 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)

Environmental  
Resources  
Management



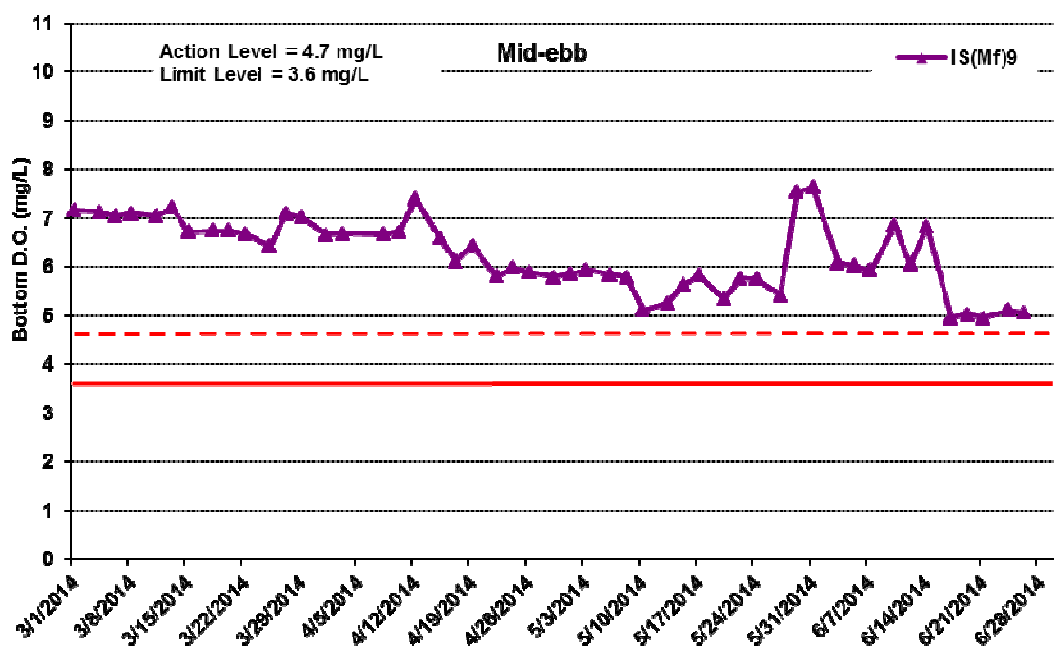
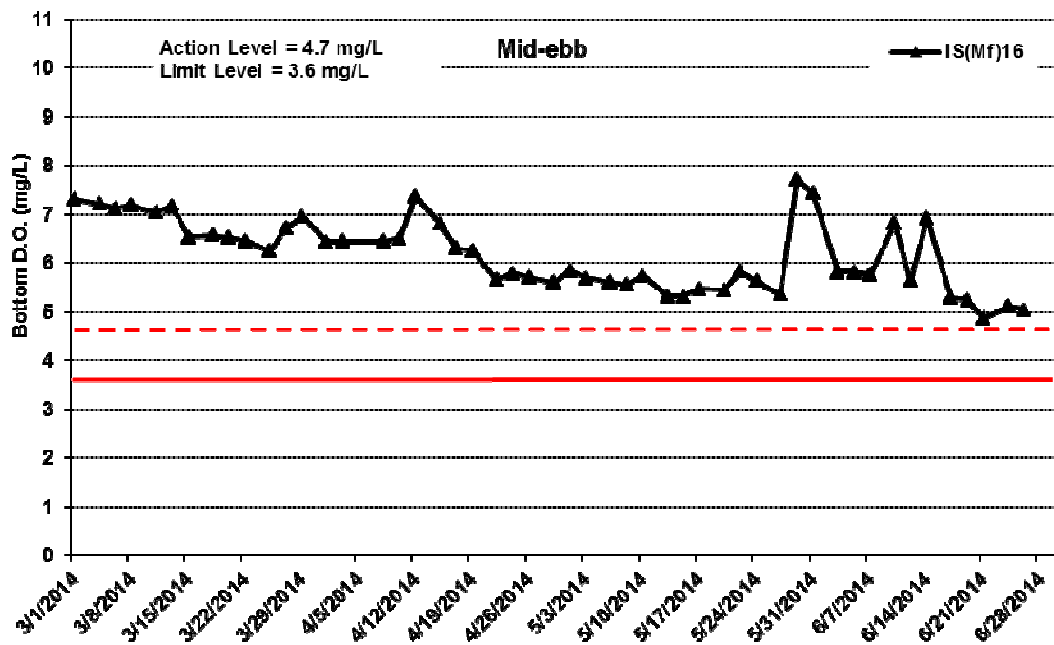


Figure J14 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 March and 30 June 2014 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)

Environmental  
Resources  
Management





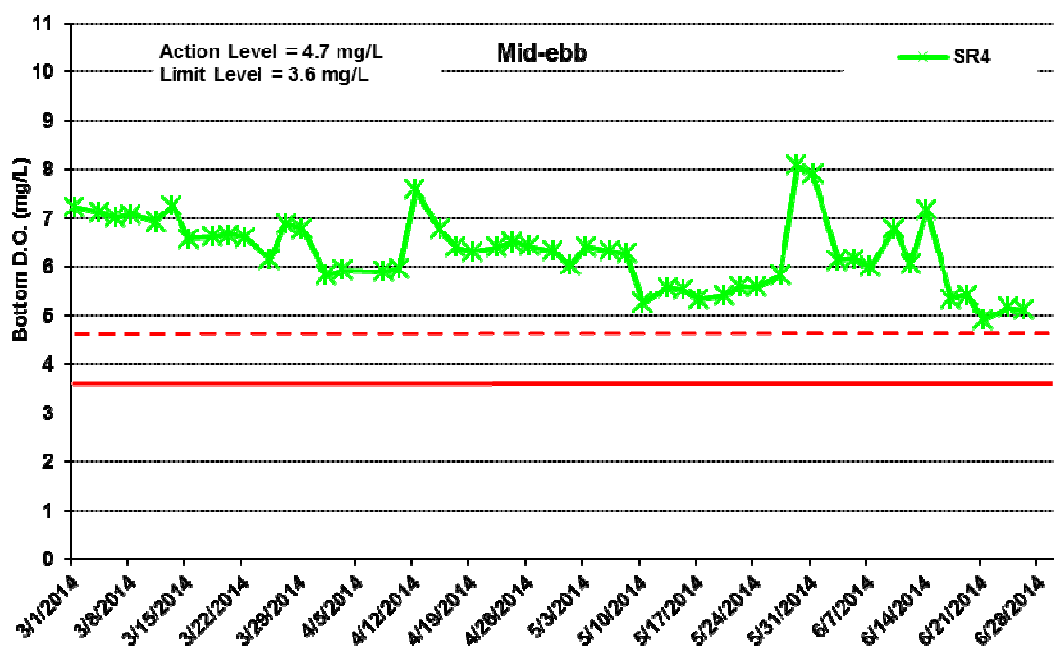
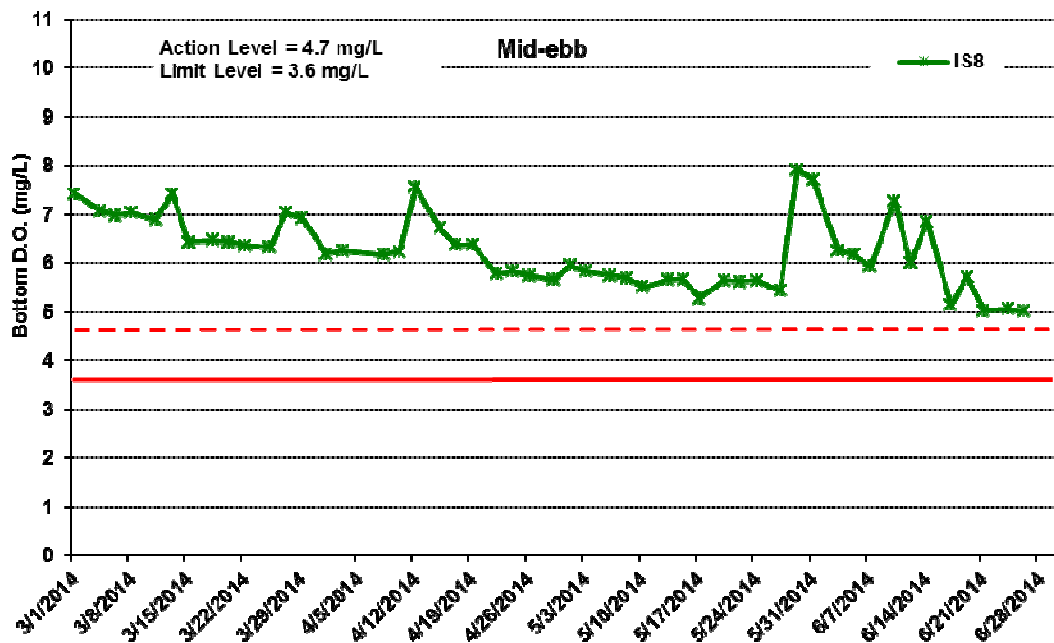
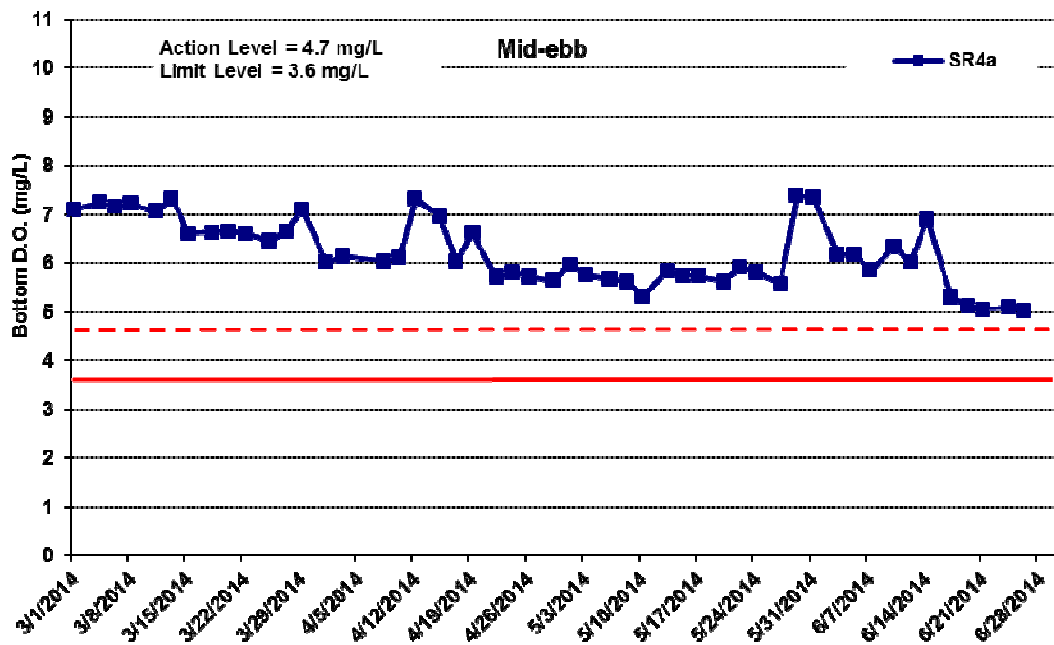


Figure J15 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 March and 30 June 2014 at IS8 and SR4.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management





**Figure J16 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 March and 30 June 2014 at SR4a.**

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

**Environmental  
Resources  
Management**



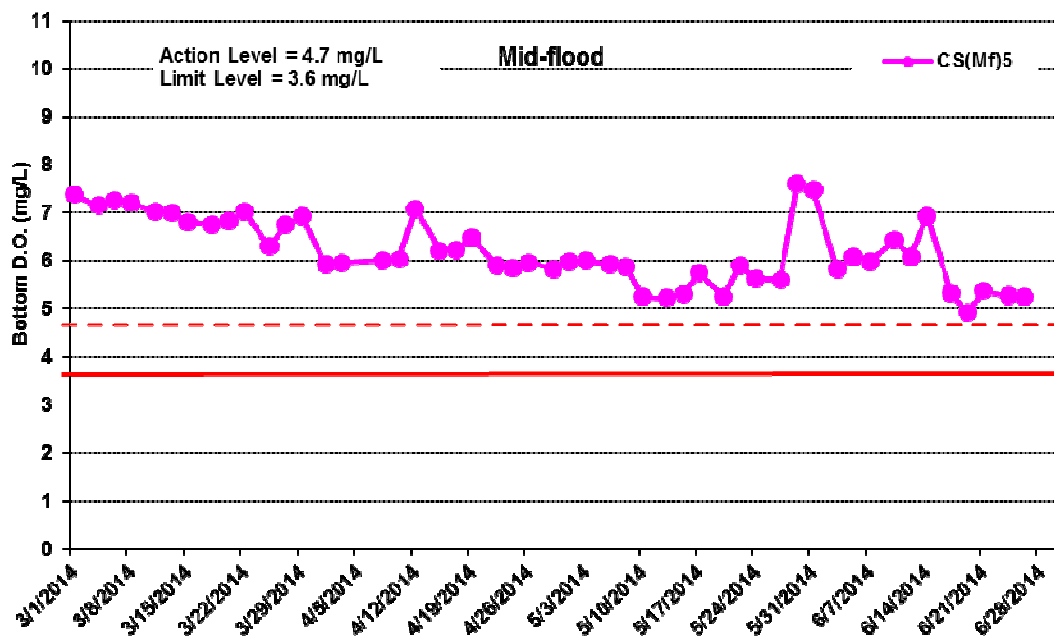
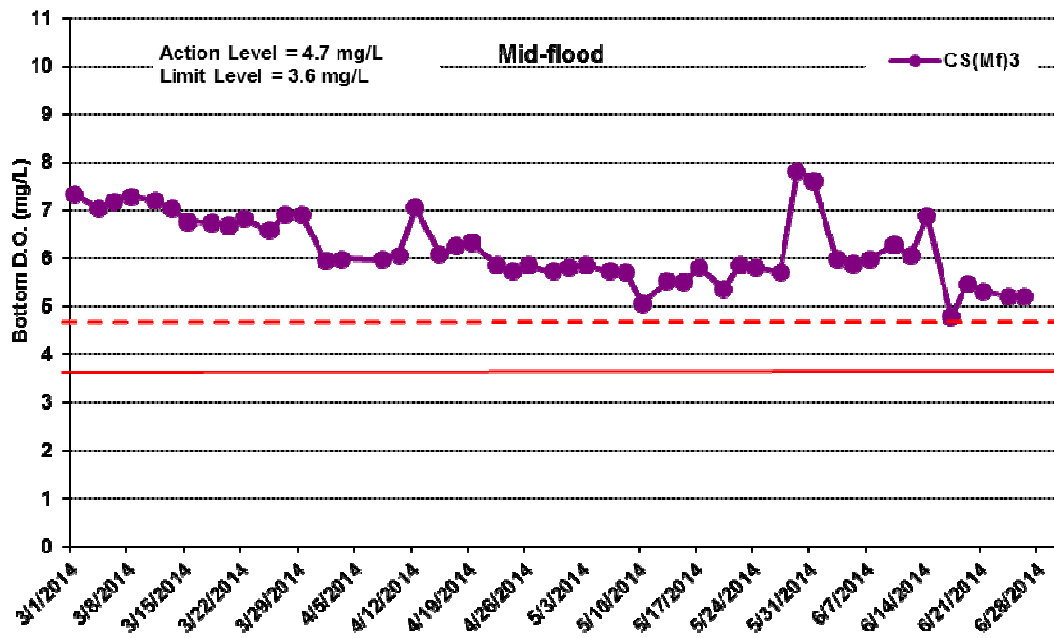


Figure J17 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 March and 30 June 2014 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)

Environmental  
Resources  
Management



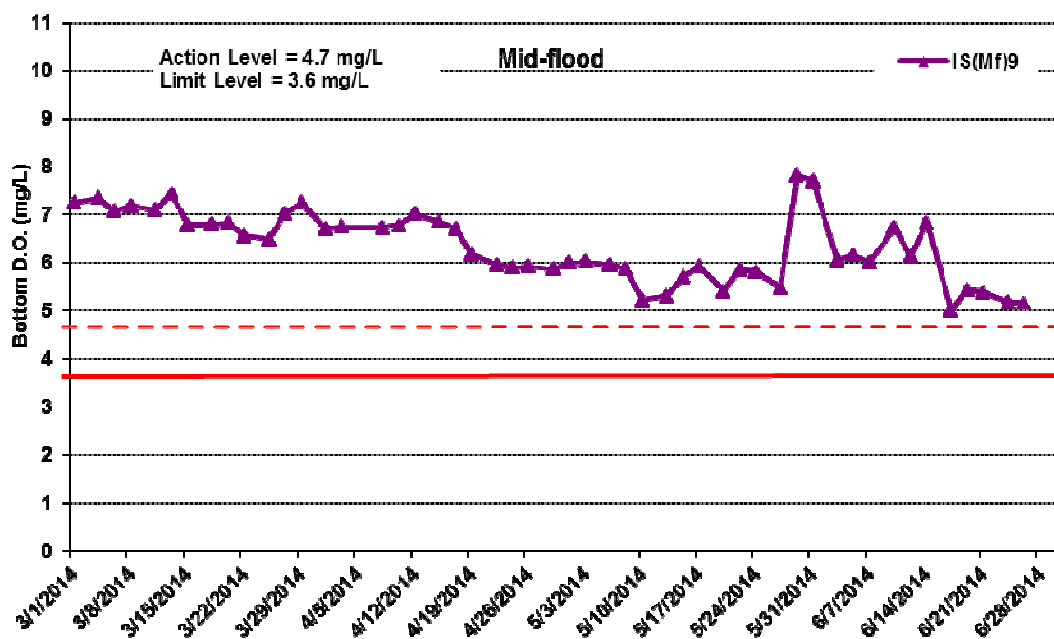
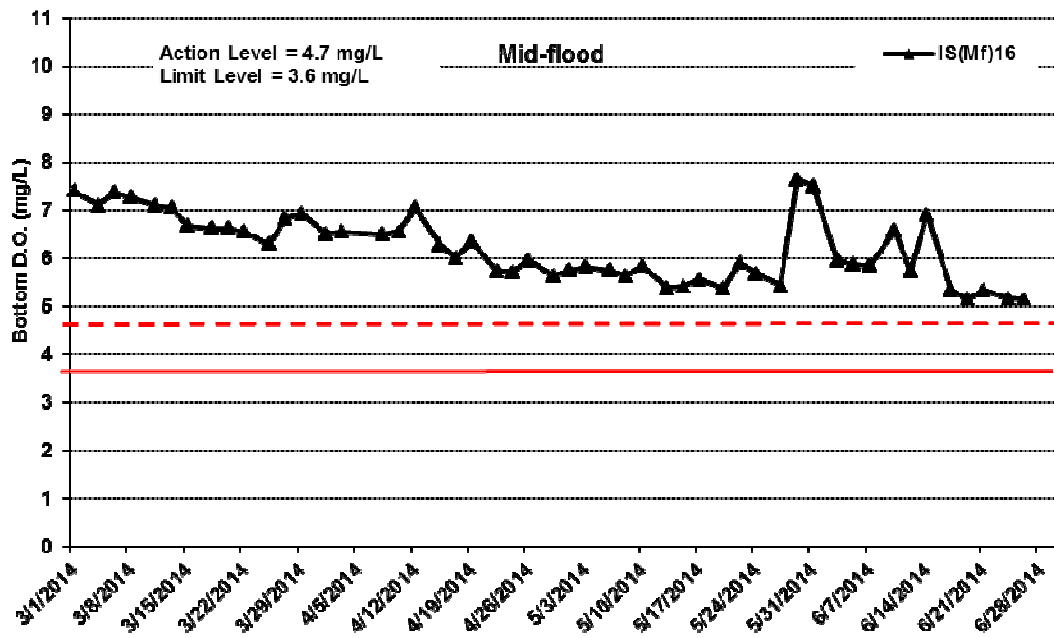


Figure J18 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 March and 30 June 2014 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)

Environmental  
Resources  
Management



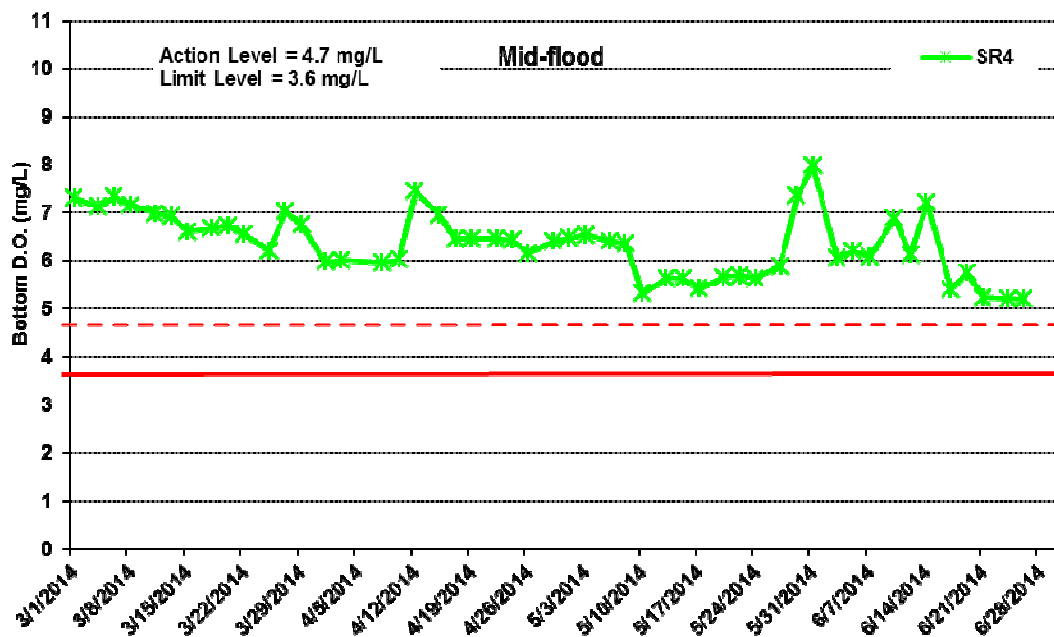
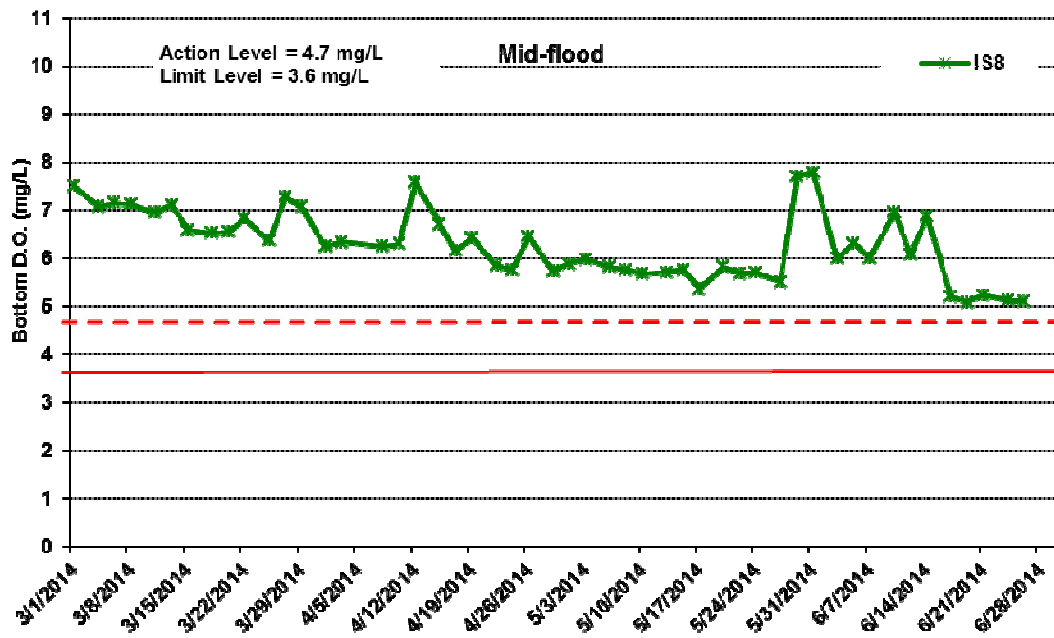
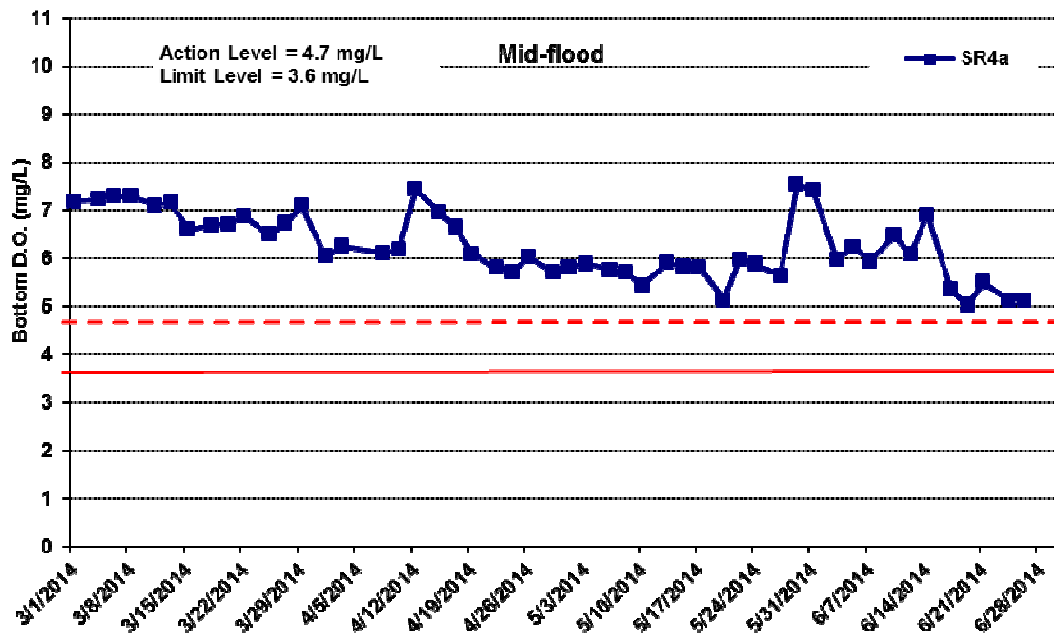


Figure J19 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 March and 30 June 2014 at IS8 and SR4.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management





**Figure J20 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 March and 30 June 2014 at SR4a.**

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

**Environmental  
Resources  
Management**





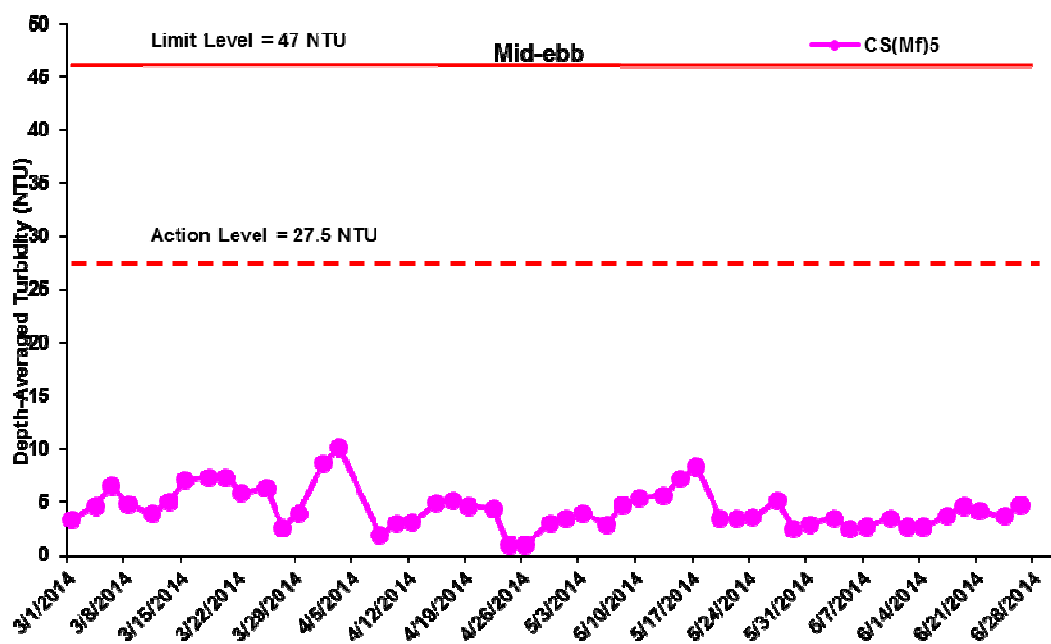
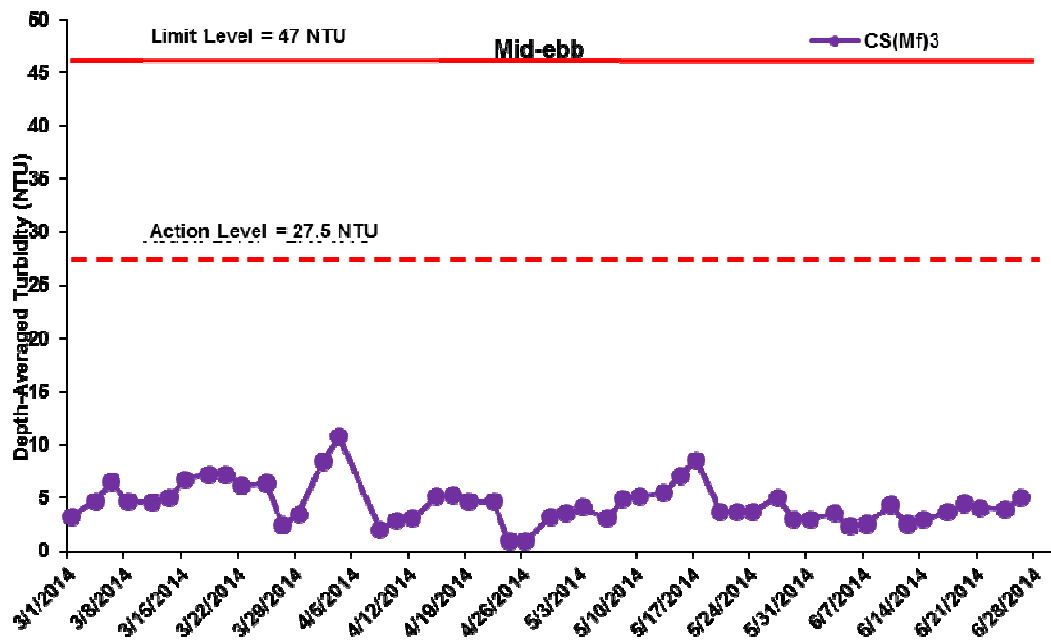


Figure J21 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 March and 30 June 2014 at CS(Mf)3 and CS(Mf)5.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management



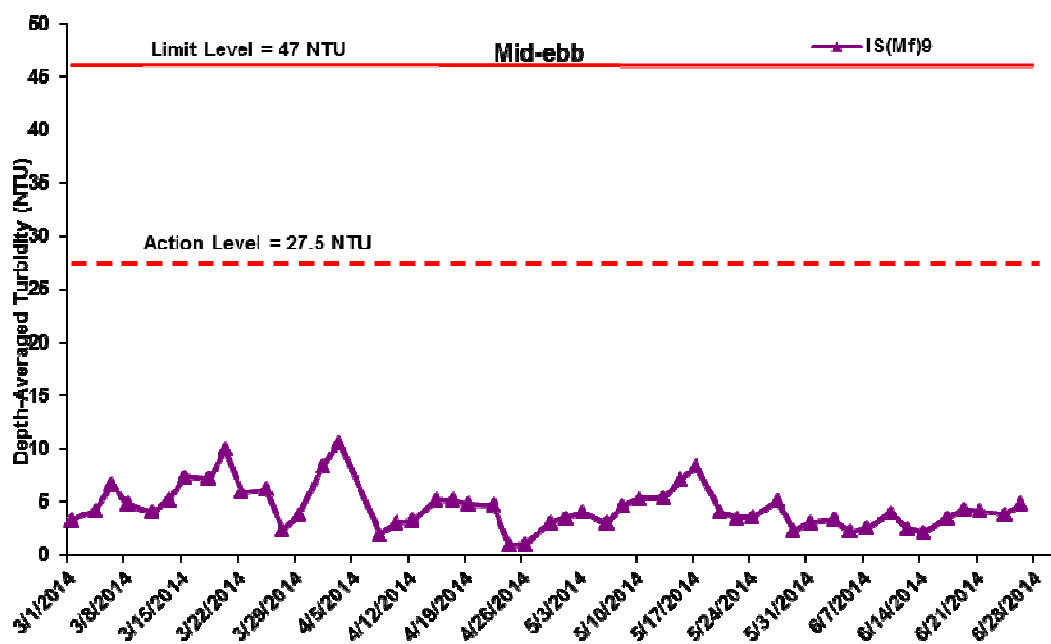
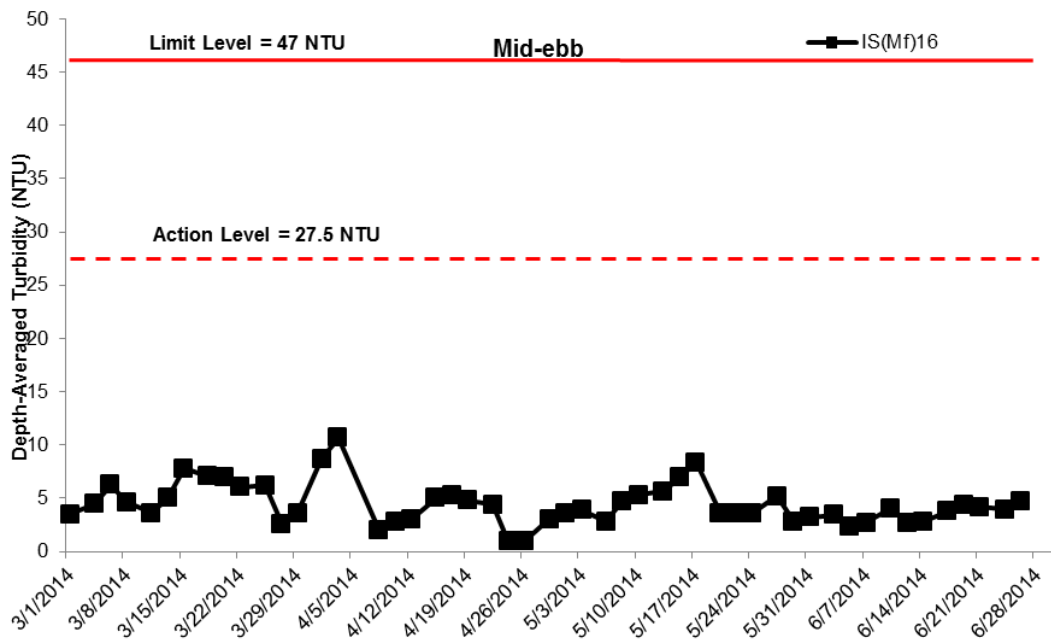


Figure J22 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 March and 30 June 2014 at IS(Mf)16 and IS(Mf)9.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management



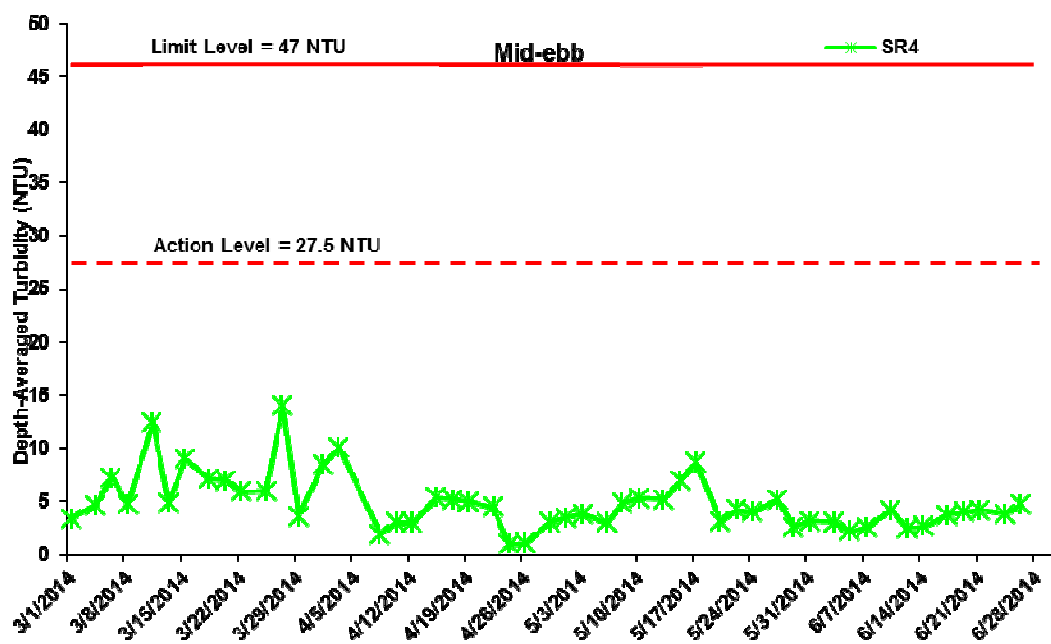
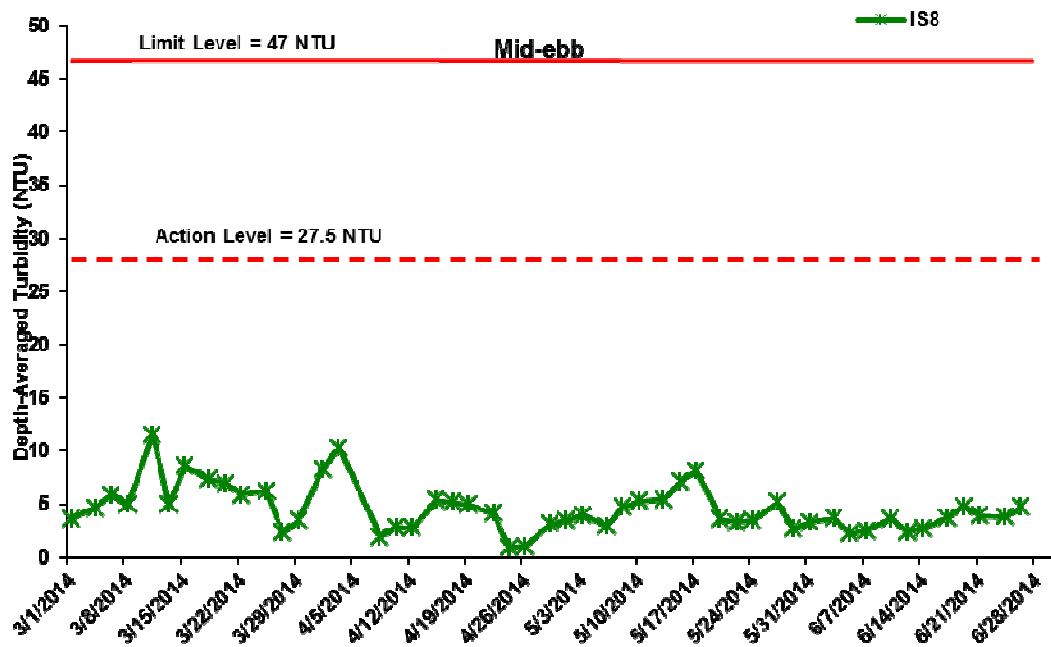
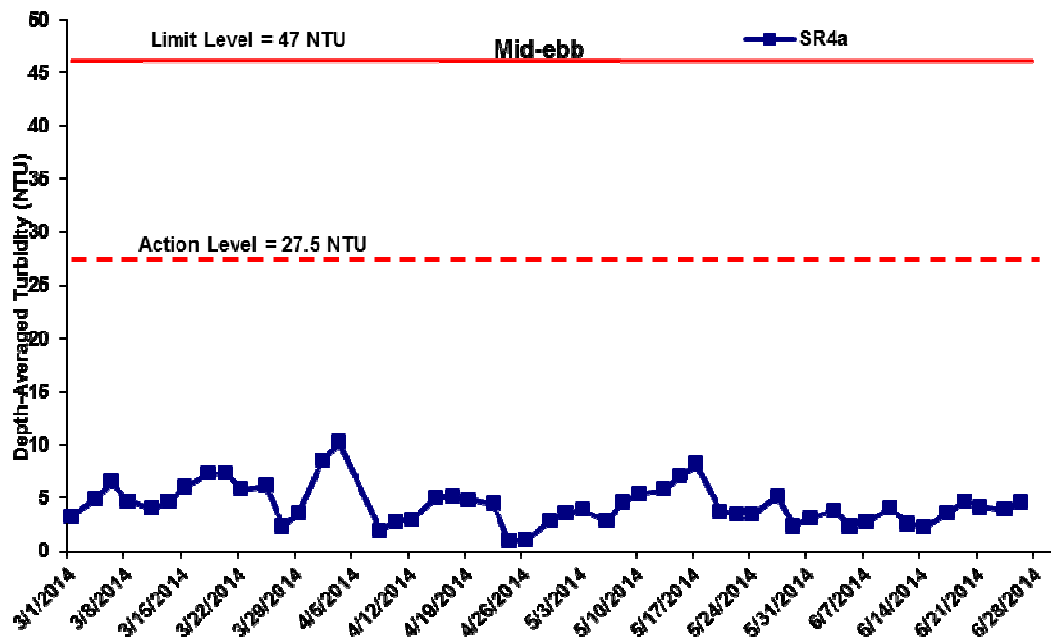


Figure J23 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 March and 30 June 2014 at IS8 and SR4.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management





**Figure J24 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 March and 30 June 2014 at SR4a.**

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

**Environmental  
Resources  
Management**



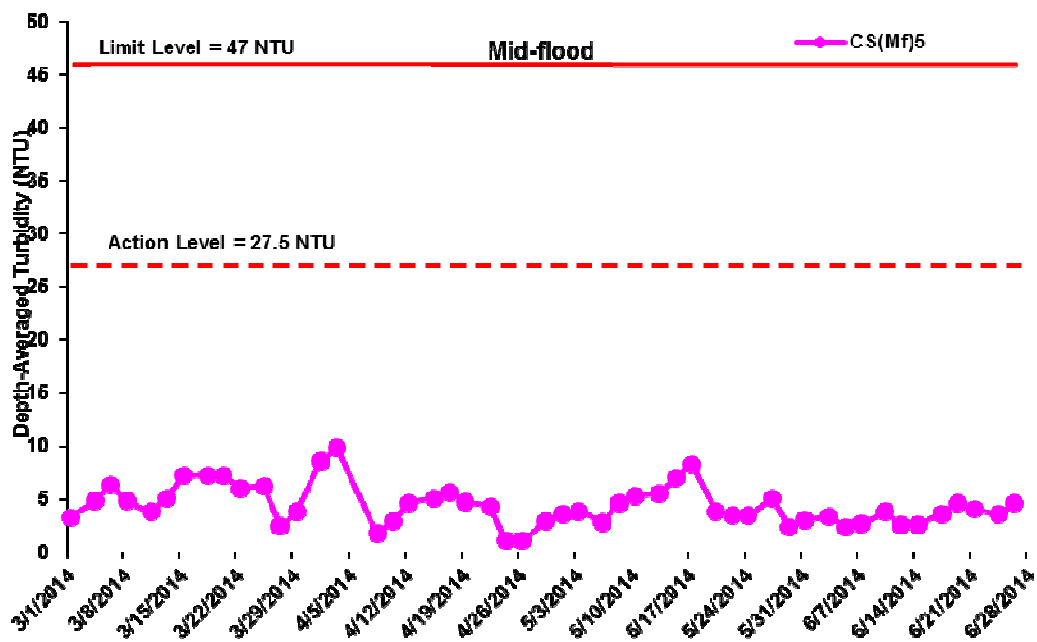
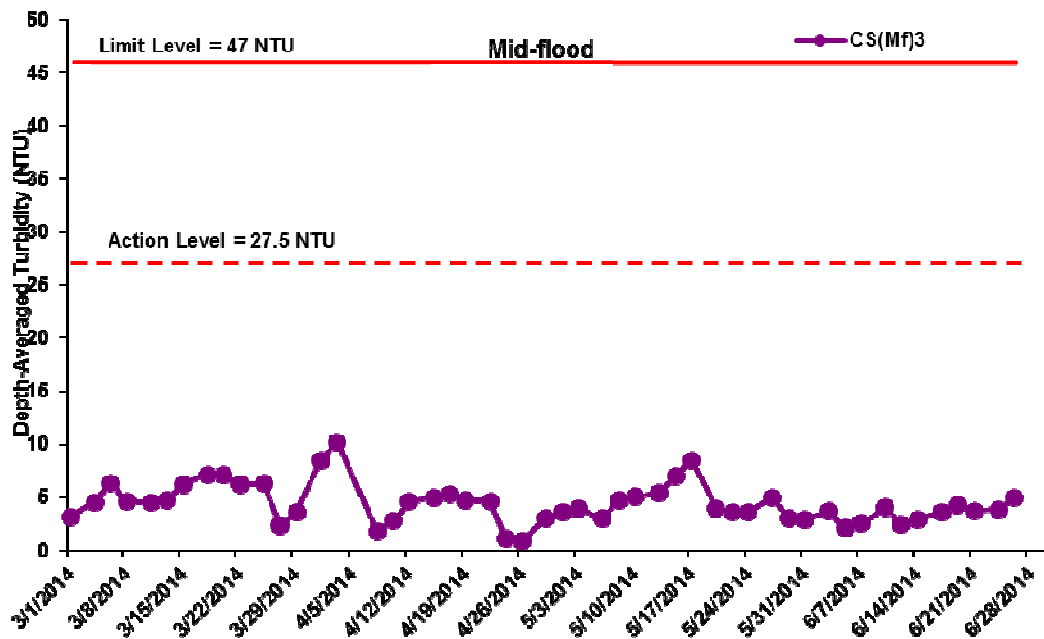


Figure J25 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 March and 30 June 2014 at CS(Mf)3 and CS(Mf)5.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management



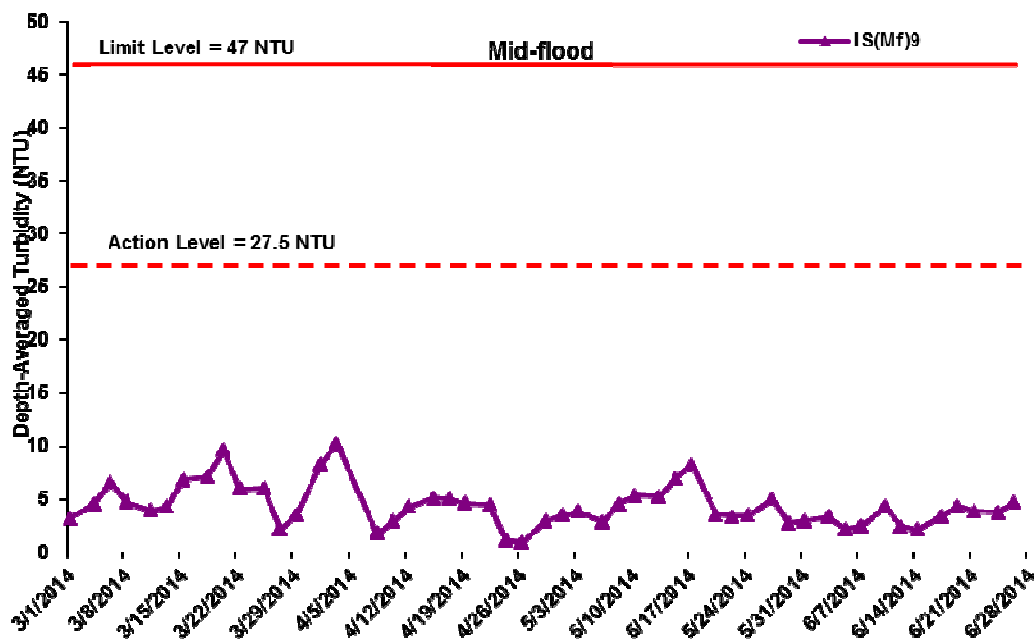
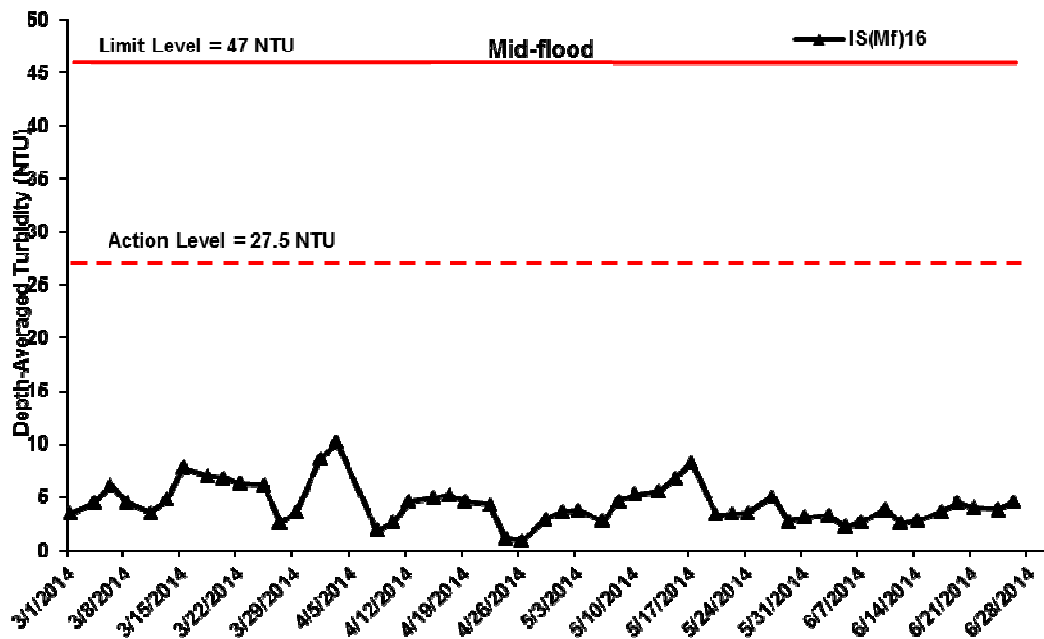


Figure J26 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 March and 30 June 2014 at IS(Mf)16 and IS(Mf)9.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management





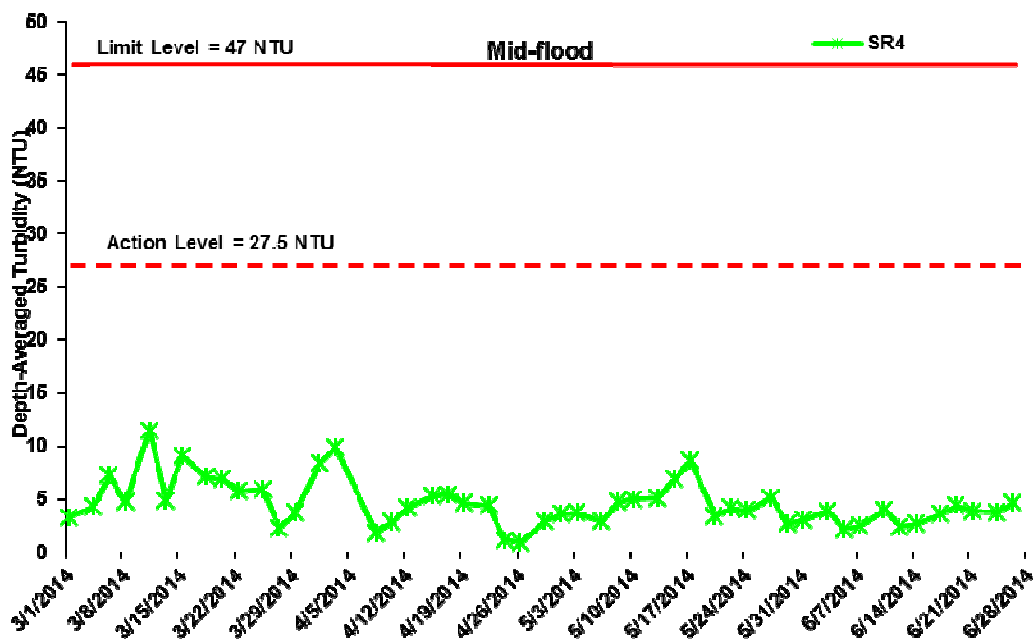
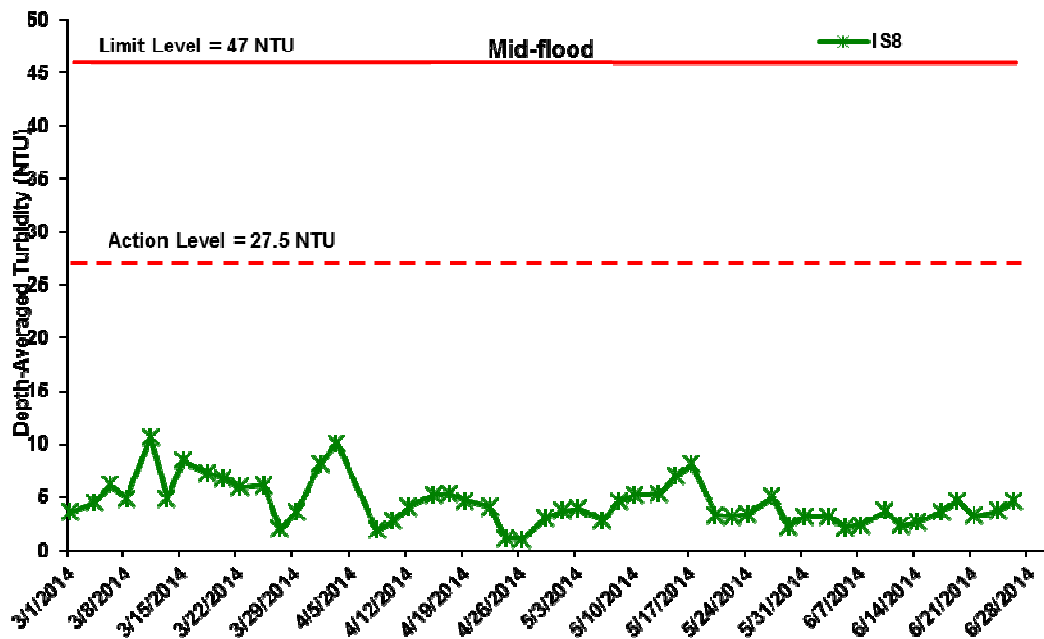
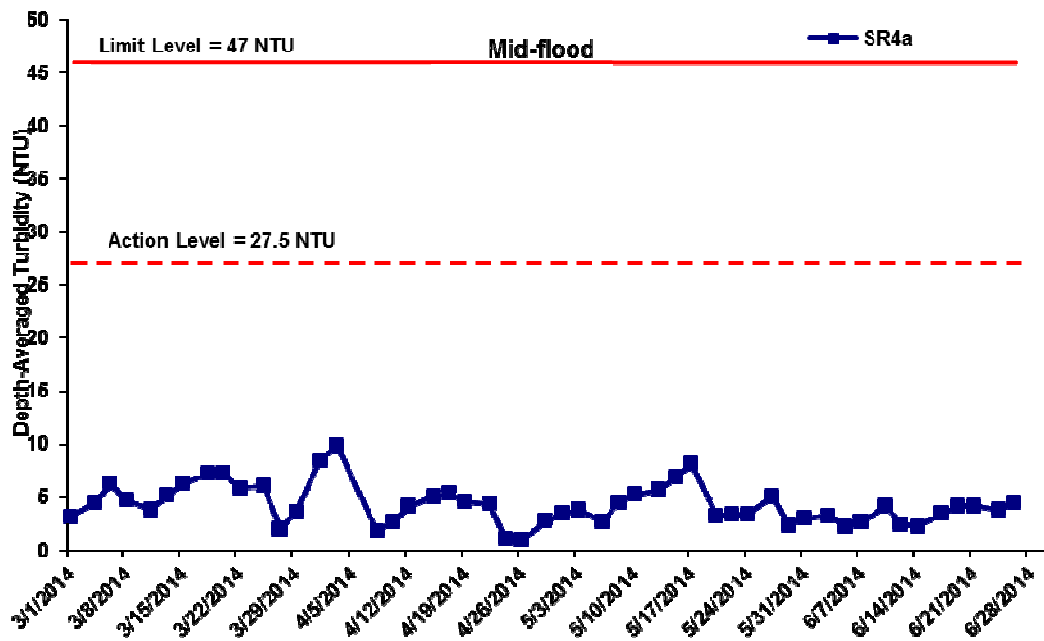


Figure J27 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 March and 30 June 2014 at IS8 and SR4.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management





**Figure J28 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 March and 30 June 2014 at SR4a.**

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

**Environmental  
Resources  
Management**



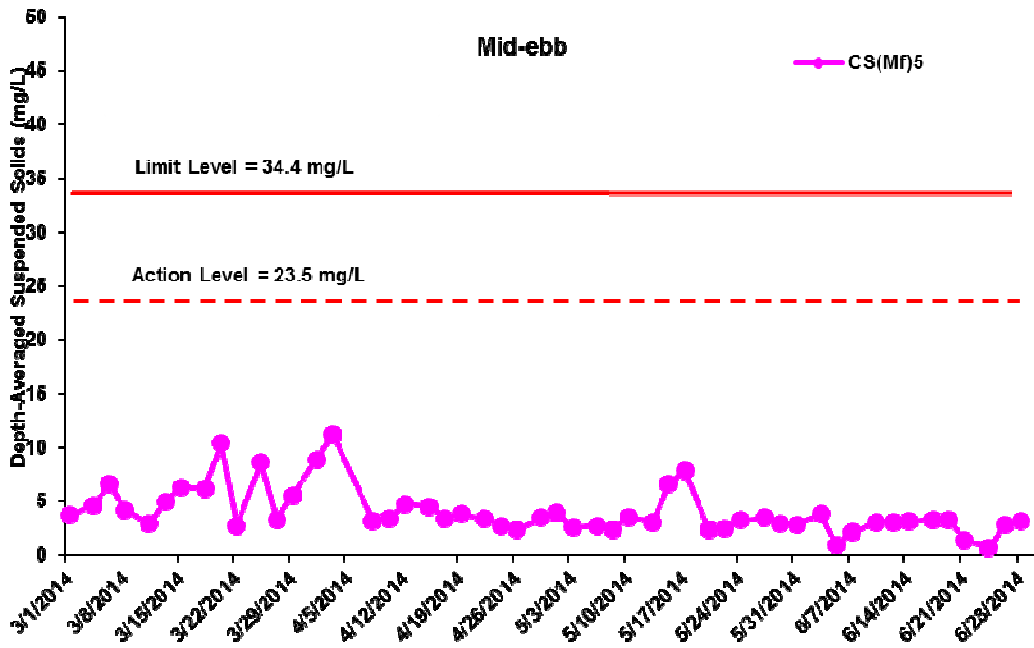
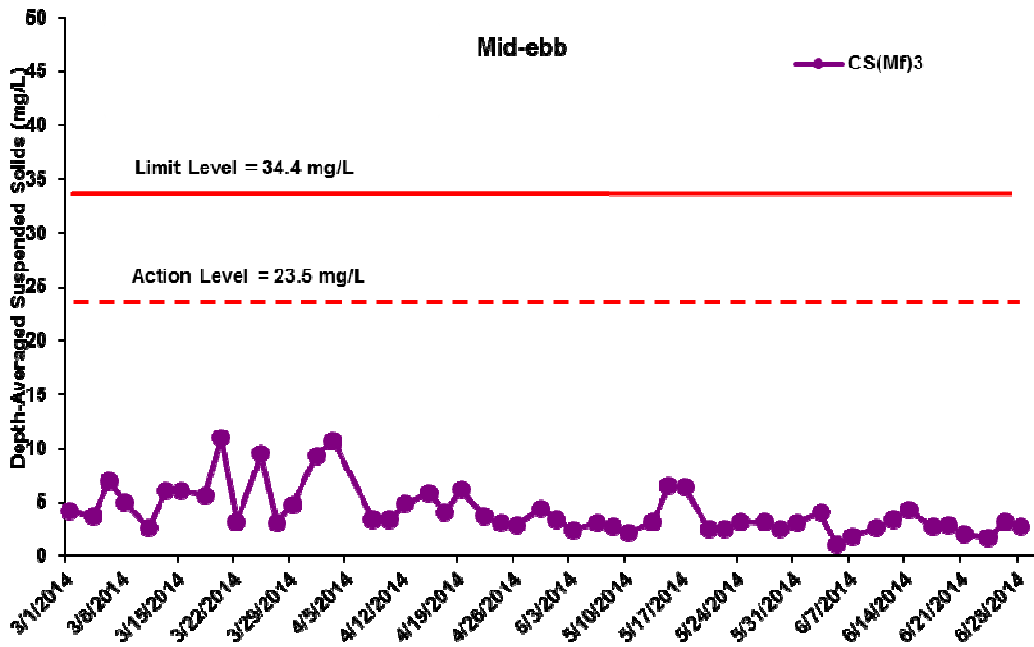


Figure J29 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 March and 30 June 2014 at CS(Mf)3 and CS(Mf)5.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management



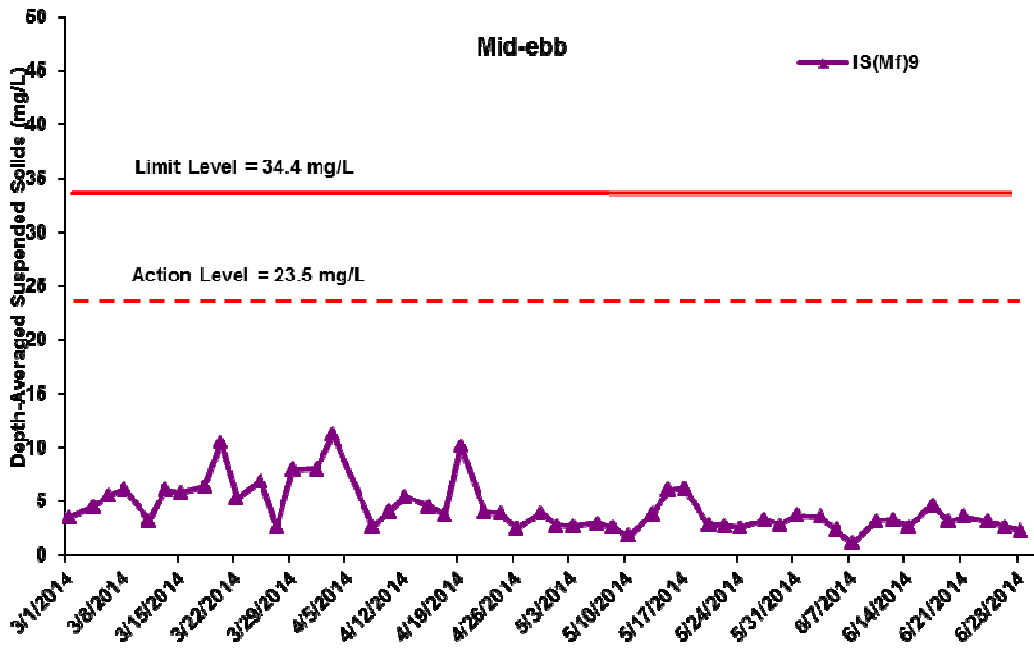
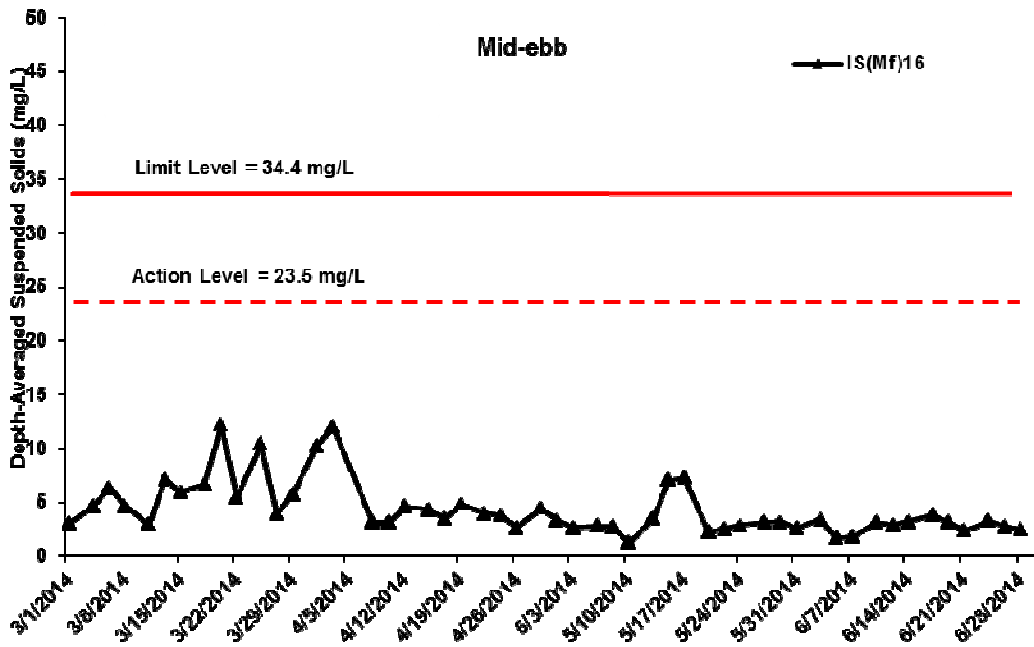


Figure J30 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 March and 30 June 2014 at IS(Mf)16 and IS(Mf)9.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management



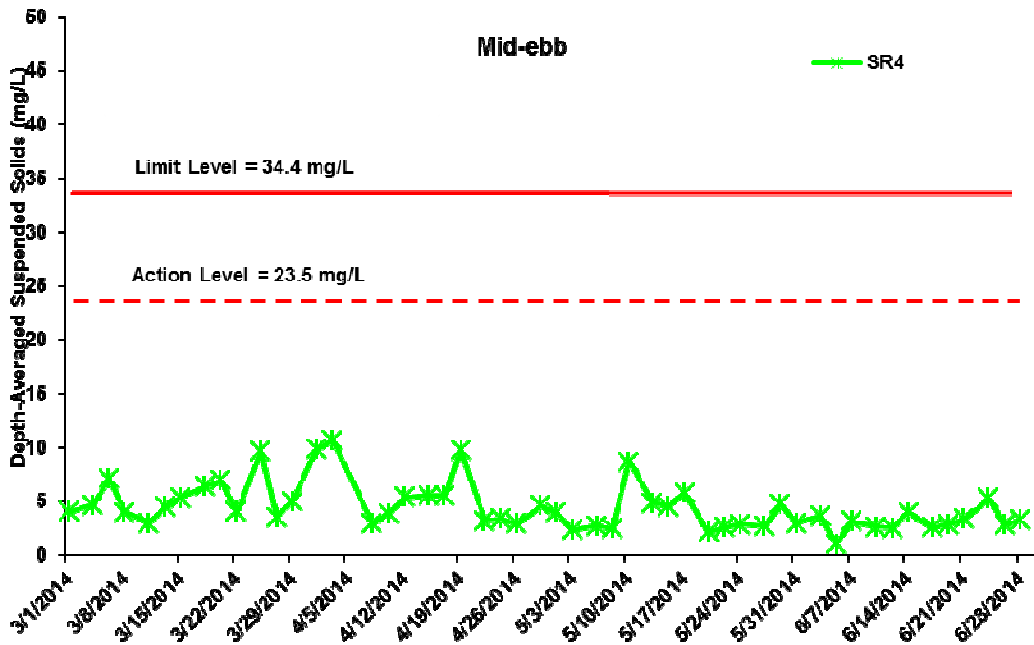
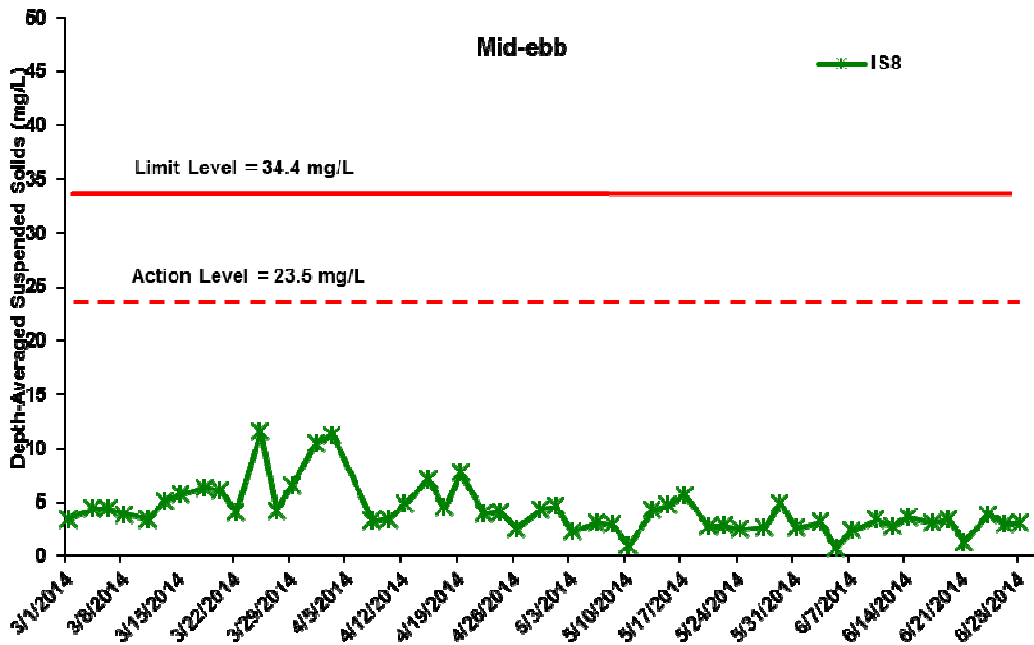
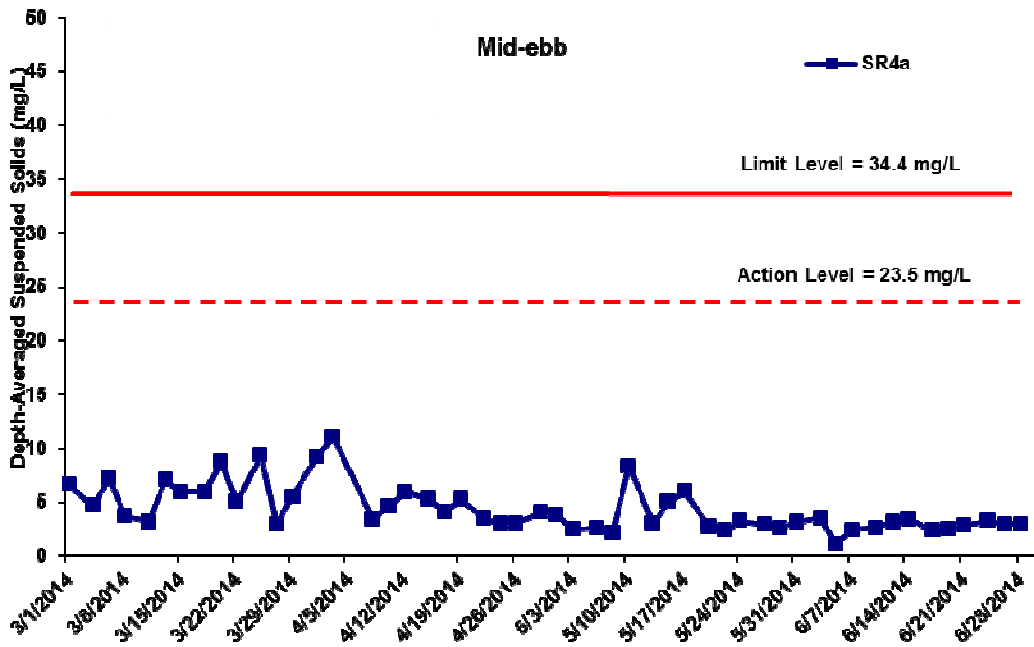


Figure J31 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 March and 30 June 2014 at IS8 and SR4.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management





**Figure J32 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 March and 30 June 2014 at SR4a.**

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

**Environmental  
Resources  
Management**





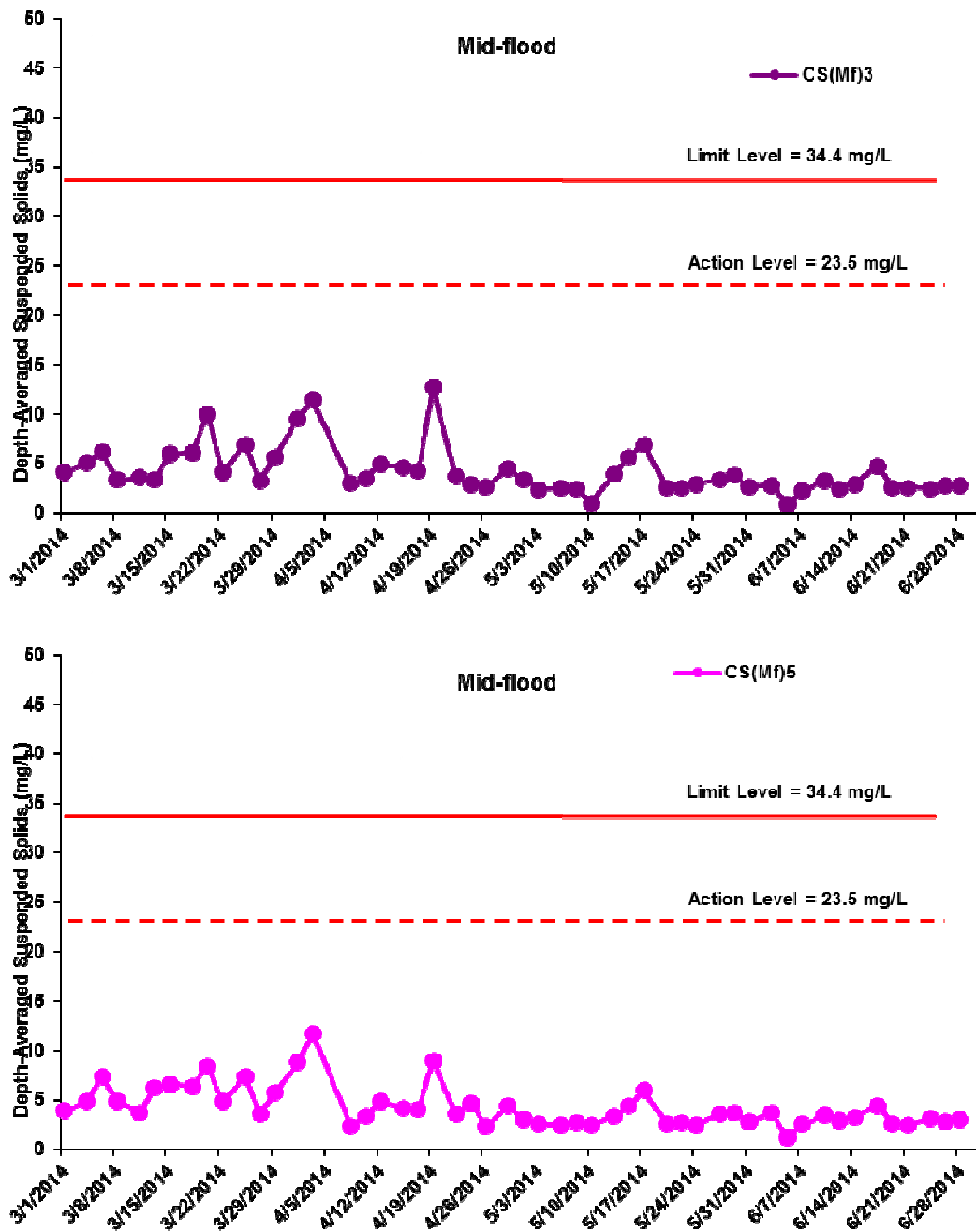


Figure J33 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 March and 30 June 2014 at CS(Mf)3 and CS(Mf)5.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management



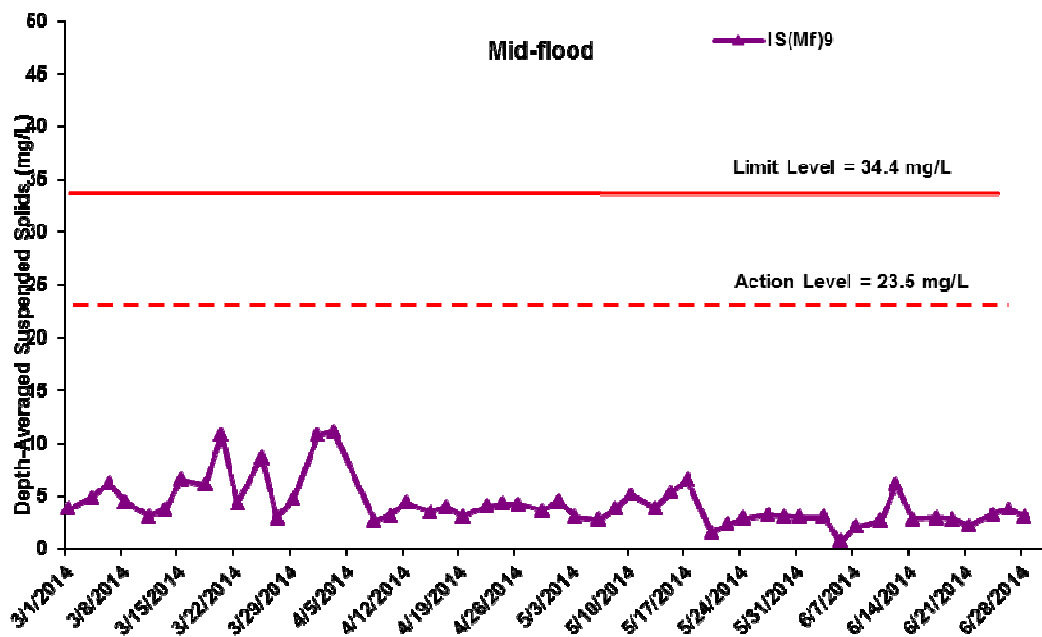
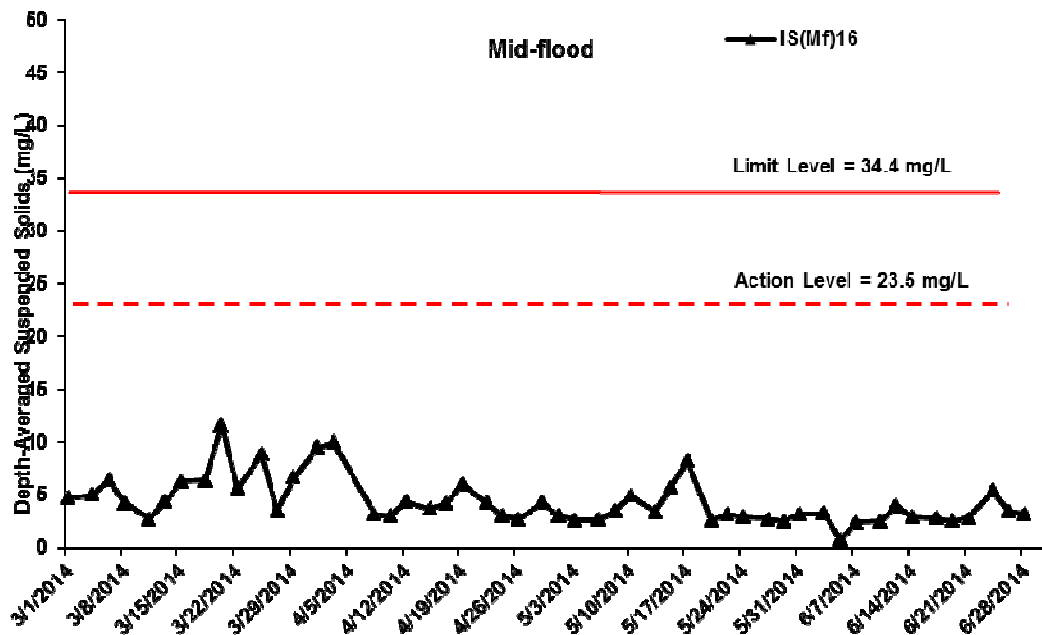


Figure J34 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 March and 30 June 2014 at IS(Mf)16 and IS(Mf)9.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management



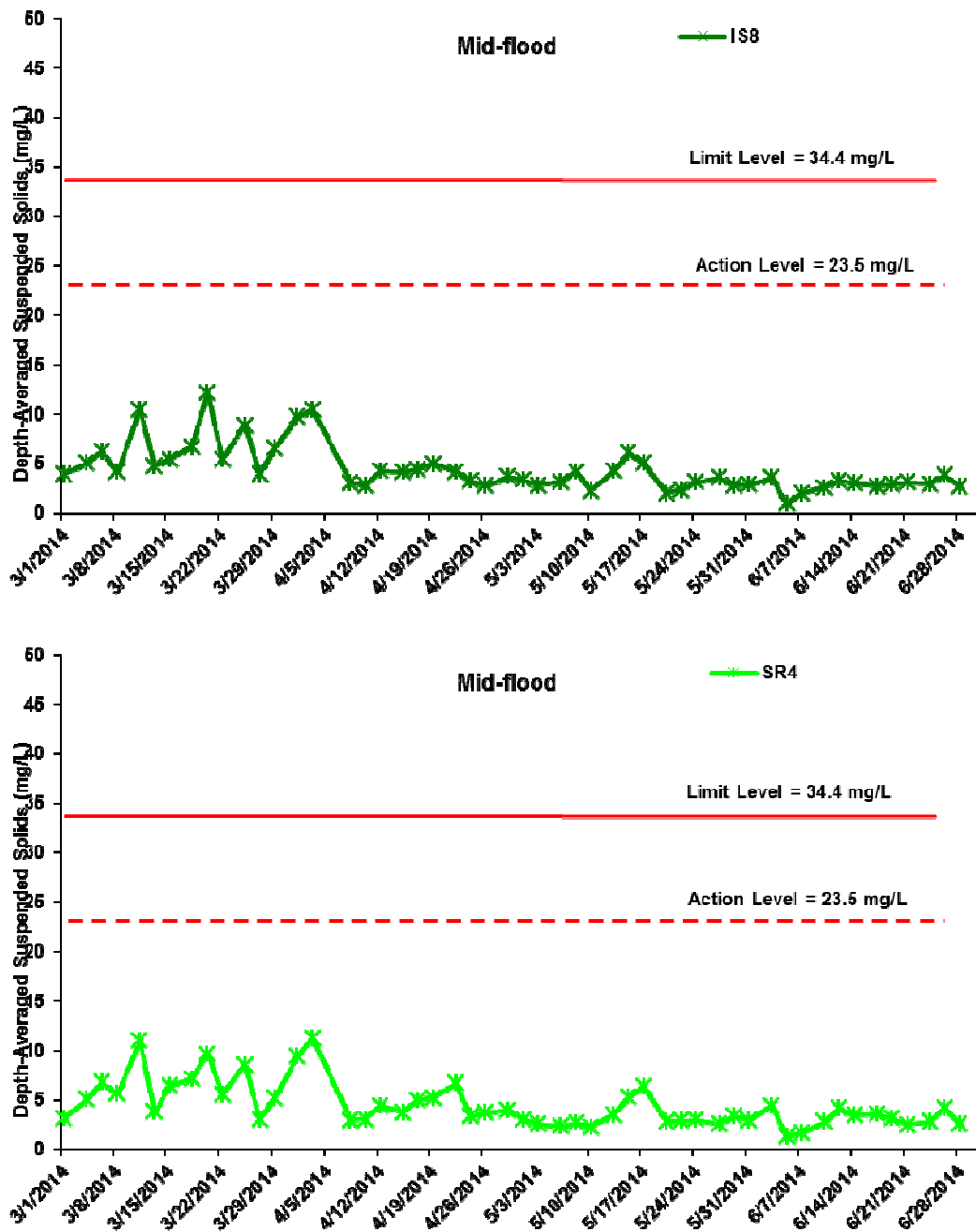
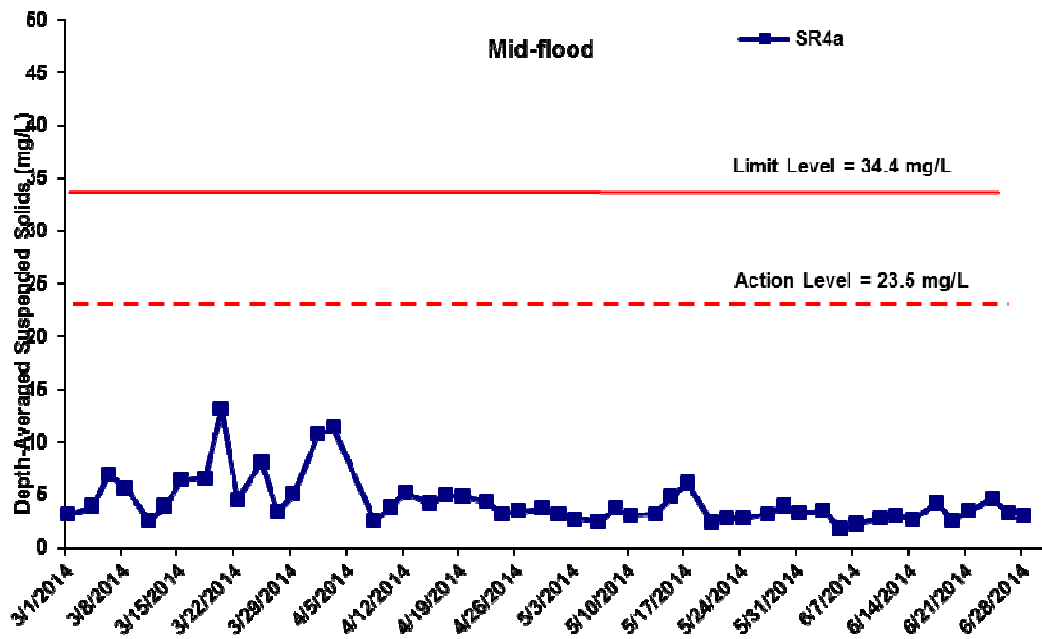


Figure J35 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 March and 30 June 2014 at IS8 and SR4.

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

Environmental  
Resources  
Management





**Figure J36 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 March and 30 June 2014 at SR4a.**

*(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include rockfill platform construction, marine piling platform installation and marine piling.)*

**Environmental Resources Management**



Appendix K

## Impact Dolphin Monitoring Survey Results





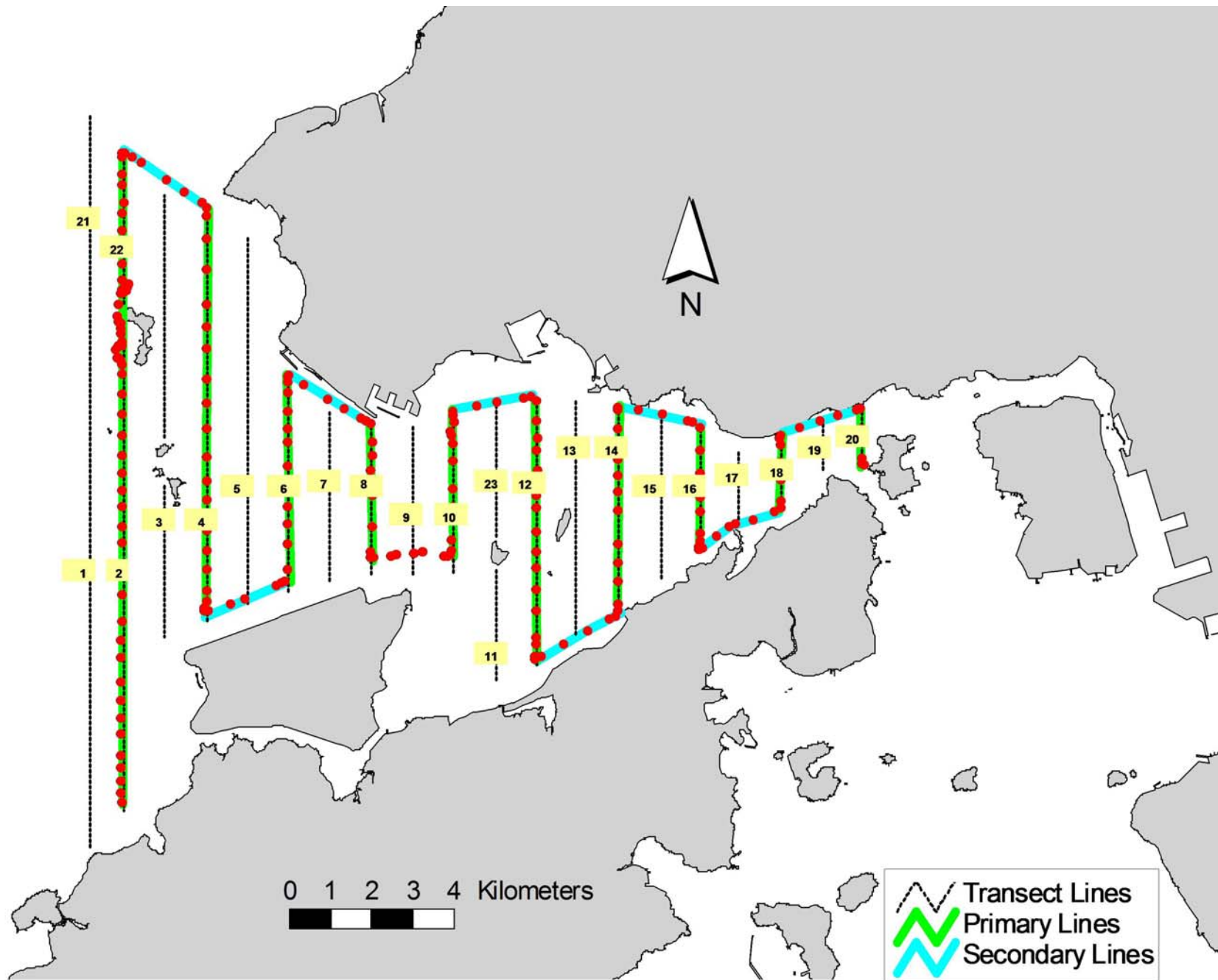


Figure 3. Survey Route on June 5<sup>th</sup>, 2014 (from HKLR03 project)

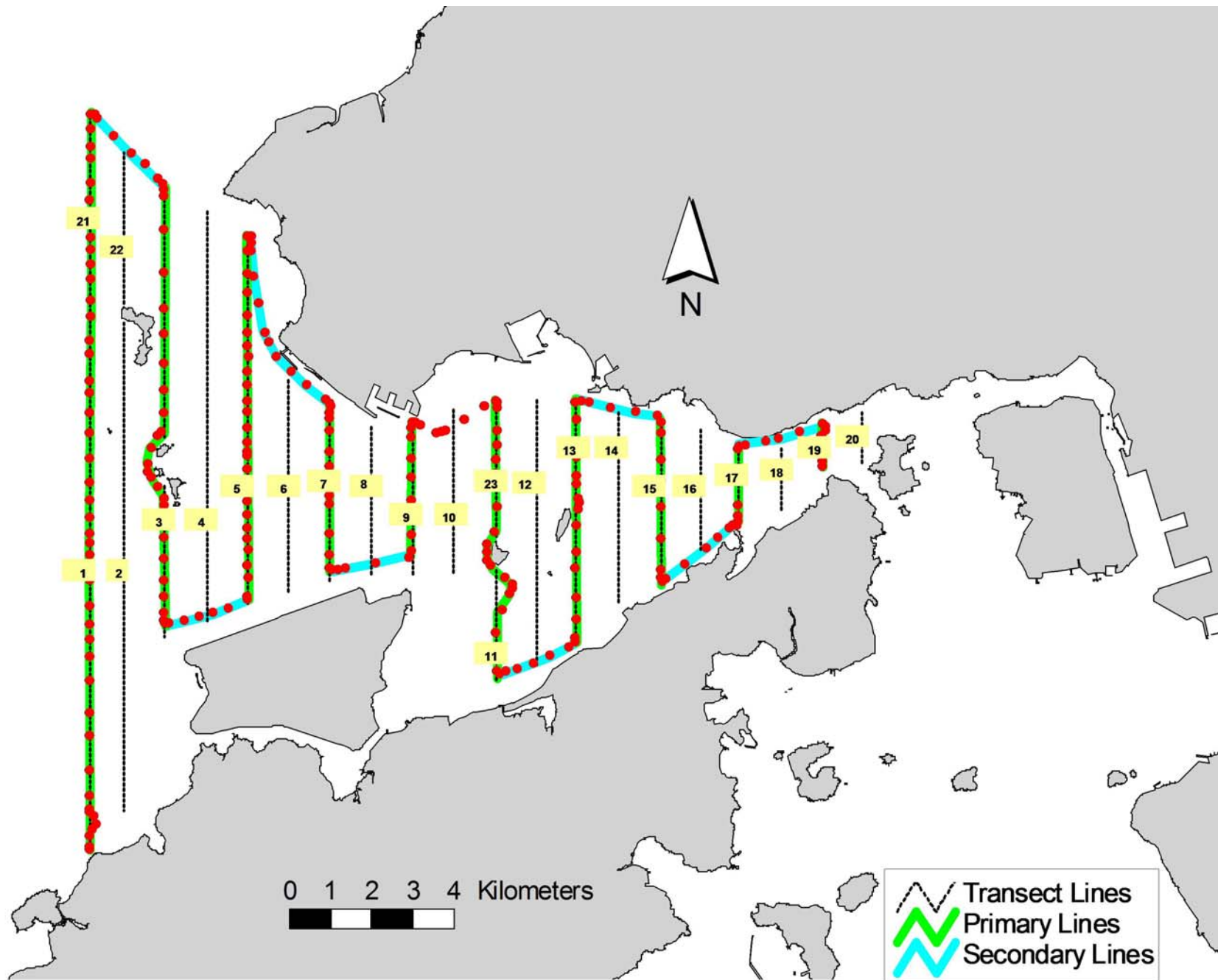


Figure 4. Survey Route on June 10<sup>th</sup>, 2014 (from HKLR03 project)

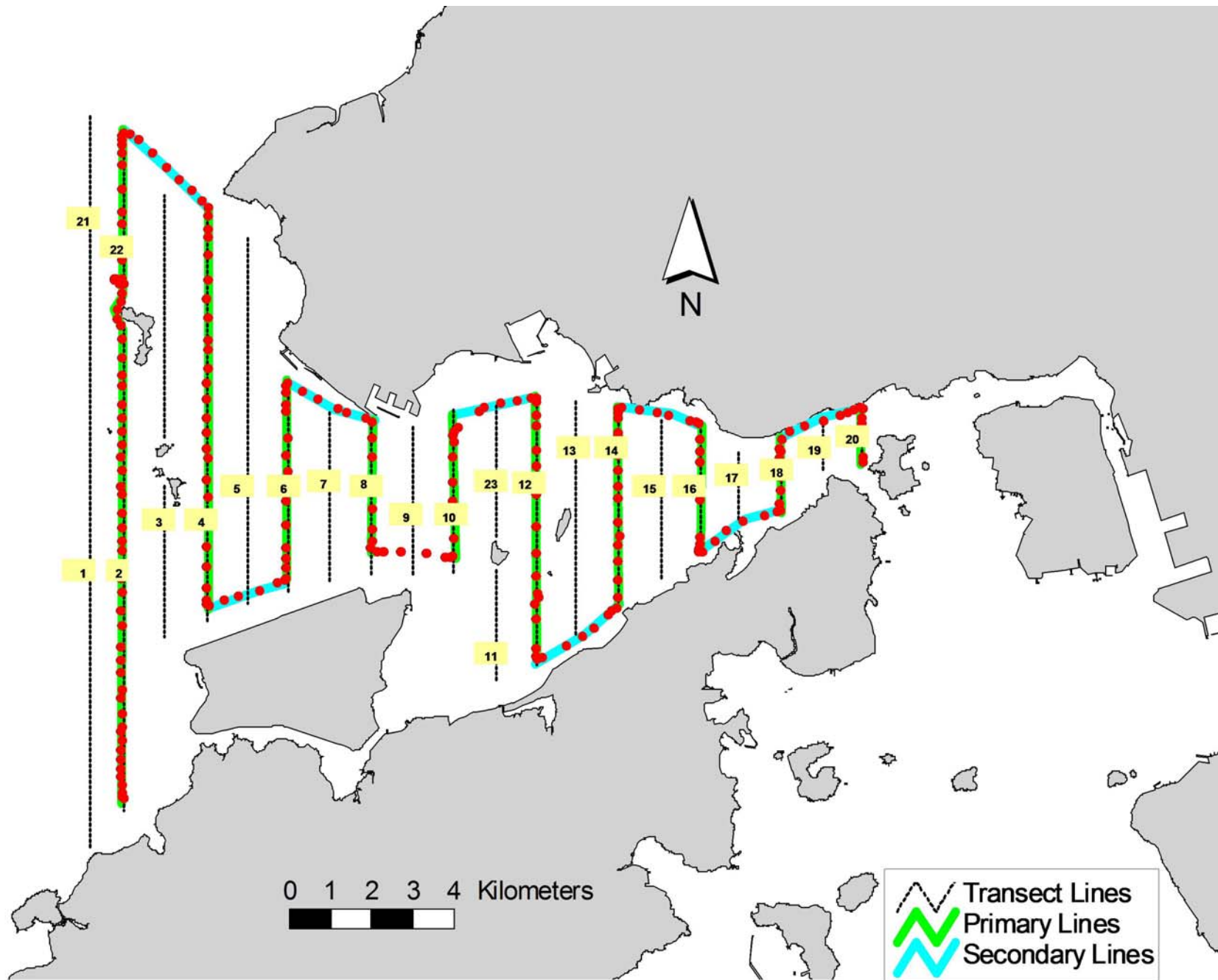


Figure 5. Survey Route on June 16<sup>th</sup>, 2014 (from HKLR03 project)

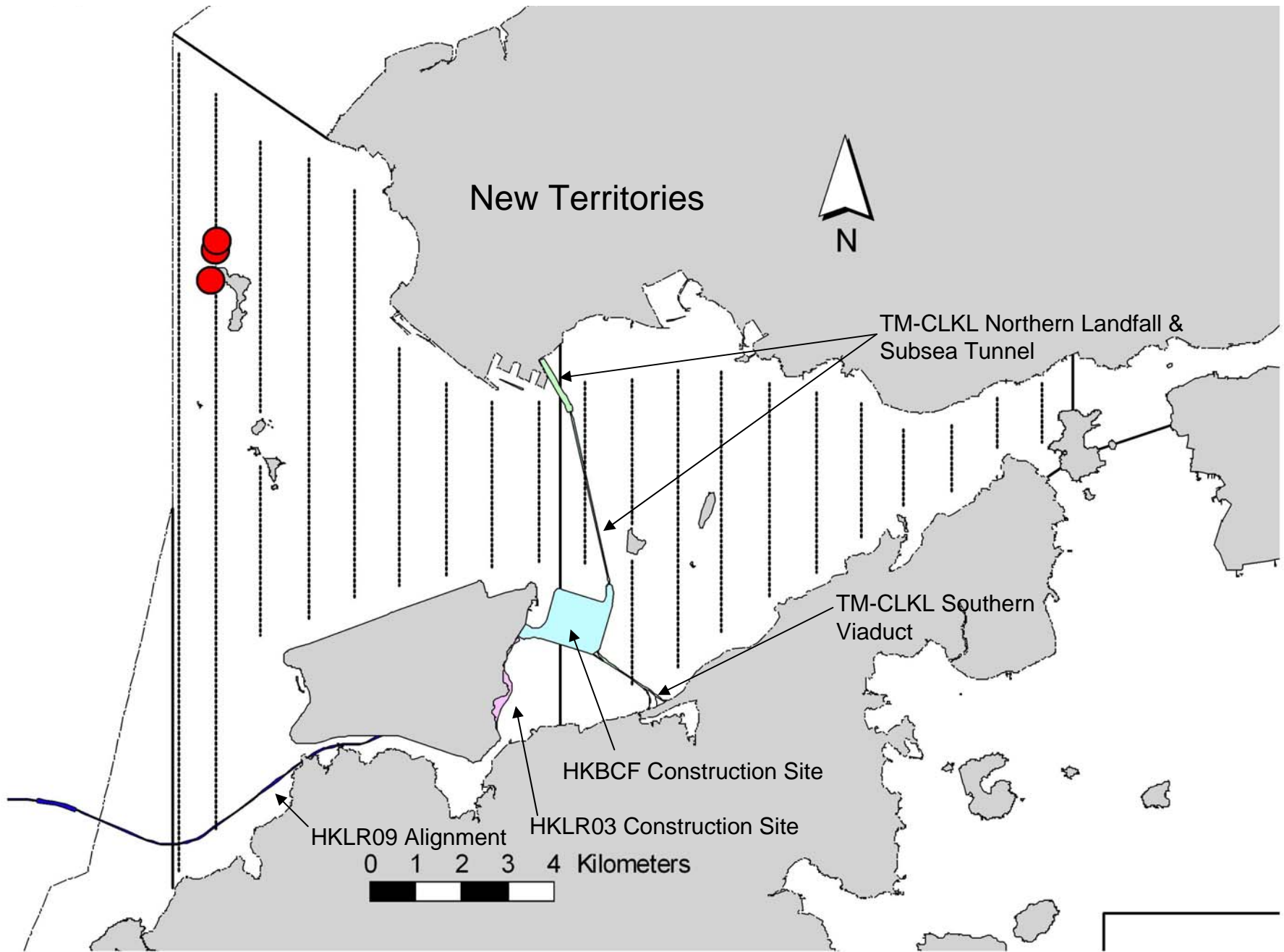


Figure 6. Distribution of Chinese White Dolphin Sightings During June 2014 HKLR03 Monitoring Surveys

## Appendix I. HKLR03 Survey Effort Database (June 2014)

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

DATE	AREA	BEAU	EFFORT	SEASON	VESSEL	TYPE	P/S
3-Jun-14	NE LANTAU	2	14.31	SUMMER	STANDARD31516	HKLR	P
3-Jun-14	NE LANTAU	3	2.60	SUMMER	STANDARD31516	HKLR	P
3-Jun-14	NE LANTAU	2	10.89	SUMMER	STANDARD31516	HKLR	S
3-Jun-14	NW LANTAU	2	6.52	SUMMER	STANDARD31516	HKLR	P
3-Jun-14	NW LANTAU	3	23.00	SUMMER	STANDARD31516	HKLR	P
3-Jun-14	NW LANTAU	4	10.70	SUMMER	STANDARD31516	HKLR	P
3-Jun-14	NW LANTAU	2	3.78	SUMMER	STANDARD31516	HKLR	S
3-Jun-14	NW LANTAU	3	9.70	SUMMER	STANDARD31516	HKLR	S
5-Jun-14	NE LANTAU	1	5.65	SUMMER	STANDARD31516	HKLR	P
5-Jun-14	NE LANTAU	2	10.52	SUMMER	STANDARD31516	HKLR	P
5-Jun-14	NE LANTAU	3	4.20	SUMMER	STANDARD31516	HKLR	P
5-Jun-14	NE LANTAU	1	2.20	SUMMER	STANDARD31516	HKLR	S
5-Jun-14	NE LANTAU	2	6.23	SUMMER	STANDARD31516	HKLR	S
5-Jun-14	NE LANTAU	3	2.10	SUMMER	STANDARD31516	HKLR	S
5-Jun-14	NW LANTAU	2	13.90	SUMMER	STANDARD31516	HKLR	P
5-Jun-14	NW LANTAU	3	16.56	SUMMER	STANDARD31516	HKLR	P
5-Jun-14	NW LANTAU	2	3.70	SUMMER	STANDARD31516	HKLR	S
5-Jun-14	NW LANTAU	3	3.61	SUMMER	STANDARD31516	HKLR	S
10-Jun-14	NW LANTAU	2	6.21	SUMMER	STANDARD31516	HKLR	P
10-Jun-14	NW LANTAU	3	31.70	SUMMER	STANDARD31516	HKLR	P
10-Jun-14	NW LANTAU	4	2.50	SUMMER	STANDARD31516	HKLR	P
10-Jun-14	NW LANTAU	2	9.29	SUMMER	STANDARD31516	HKLR	S
10-Jun-14	NW LANTAU	3	4.10	SUMMER	STANDARD31516	HKLR	S
10-Jun-14	NE LANTAU	2	12.34	SUMMER	STANDARD31516	HKLR	P
10-Jun-14	NE LANTAU	3	3.50	SUMMER	STANDARD31516	HKLR	P
10-Jun-14	NE LANTAU	2	10.53	SUMMER	STANDARD31516	HKLR	S
10-Jun-14	NE LANTAU	3	0.73	SUMMER	STANDARD31516	HKLR	S
16-Jun-14	NW LANTAU	2	3.11	SUMMER	STANDARD31516	HKLR	P
16-Jun-14	NW LANTAU	3	13.98	SUMMER	STANDARD31516	HKLR	P
16-Jun-14	NW LANTAU	4	14.31	SUMMER	STANDARD31516	HKLR	P
16-Jun-14	NW LANTAU	3	4.28	SUMMER	STANDARD31516	HKLR	S
16-Jun-14	NW LANTAU	4	3.43	SUMMER	STANDARD31516	HKLR	S
16-Jun-14	NE LANTAU	1	1.40	SUMMER	STANDARD31516	HKLR	P
16-Jun-14	NE LANTAU	2	18.35	SUMMER	STANDARD31516	HKLR	P
16-Jun-14	NE LANTAU	1	0.30	SUMMER	STANDARD31516	HKLR	S
16-Jun-14	NE LANTAU	2	10.55	SUMMER	STANDARD31516	HKLR	S

## Appendix II. HKLR03 Chinese White Dolphin Sighting Database (June 2014)

(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
05-Jun-14	1	1400	3	NW LANTAU	3	184	ON	HKLR	827350	805448	SUMMER	NONE	P
05-Jun-14	2	1413	3	NW LANTAU	3	20	ON	HKLR	826719	805344	SUMMER	NONE	S
16-Jun-14	1	1408	1	NW LANTAU	3	ND	OFF	HKLR	827538	805459	SUMMER	NONE	



**Appendix III. Individual dolphins identified during HKLR03 monitoring surveys in June 2014**

<b>ID#</b>	<b>DATE</b>	<b>STG#</b>	<b>AREA</b>
NL272	05/06/14	1	NW LANTAU
NL136	05/06/14	2	NW LANTAU
NL272	05/06/14	2	NW LANTAU

NL136\_20140605\_2



NL272\_20140605\_1



NL272\_20140605\_2



Appendix L

## Event Action Plan

**Appendix L1**     *Event/ Action Plan for Air Quality*

EVENT	ACTION			
	ET <sup>(1)</sup>	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>

*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	Repeat in situ measurement on next day of exceedance to confirm findings;  Identify source(s) of impact;  Inform IEC, contractor and SOR;  Check monitoring data, all plant, equipment and Contractor's working methods.	Check monitoring data submitted by ET and Contractor's working methods.	Confirm receipt of notification of non-compliance in writing;  Notify Contractor.	Inform the SOR and confirm notification of the non-compliance in writing;  Rectify unacceptable practice;  Amend working methods if appropriate.
Action level being exceeded by two or more consecutive sampling days	Repeat measurement on next day of exceedance to confirm findings;  Identify source(s) of impact;  Inform IEC, contractor, SOR and EPD;  Check monitoring data, all plant, equipment and Contractor's working methods;  Discuss mitigation measures with IEC, SOR and Contractor;  Ensure mitigation measures are implemented;  Increase the monitoring frequency to daily until no exceedance of Action level;	Check monitoring data submitted by ET and Contractor's working method;  Discuss with ET and Contractor on possible remedial actions;  Review the proposed mitigation measures submitted by Contractor and advise the SOR accordingly;  Supervise the implementation of mitigation measures.	Discuss with IEC on the proposed mitigation measures;  Ensure mitigation measures are properly implemented;  Assess the effectiveness of the implemented mitigation measures.	Inform the Supervising Officer and confirm notification of the non-compliance in writing;  Rectify unacceptable practice;  Check all plant and equipment and consider changes of working methods;  Submit proposal of additional mitigation measures to SOR within 3 working days of notification and discuss with ET, IEC and SOR;  Implement the agreed mitigation measures.
Limit level being exceeded by one sampling day	Repeat measurement on next day of exceedance to confirm findings;  Identify source(s) of impact;  Inform IEC, contractor, SOR and EPD;	Check monitoring data submitted by ET and Contractor's working method;  Discuss with ET and Contractor on possible remedial actions;	Confirm receipt of notification of failure in writing;  Discuss with IEC, ET and Contractor on the proposed mitigation measures;	Inform the SOR and confirm notification of the non-compliance in writing;  Rectify unacceptable practice;  Check all plant and equipment



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

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

<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>

Event	ET Leader	IEC	SOR	Contractor
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</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</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, 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), 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

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 2014 (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	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> )	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)
Jan	0.138	0.011	0.108	-	0.030	-	-	-	-	22.380	-	10.240	-	-	-
Feb	4.809	0.010	0.124	-	0.010	4.674	-	-	-	10.670	-	0.780	-	-	-
Mar	3.279	0.009	0.960	-	0.221	2.098	-	-	0.275	12.390	-	46.050	-	-	-
Apr	1.111	0.000	0.080	-	0.118	0.914	-	-	-	87.650	-	15.760	-	-	-
May	2.038	-	0.040	-	1.546	0.451	0.386	-	-	98.030	-	8.460	0.126	-	-
Jun	3.050	0.025	0.120	2.473	0.357	0.099	0.338	0.267	0.055	77.290	-	20.980	0.140	-	-
<b>SUB-TOTAL</b>	<b>14.426</b>	<b>0.055</b>	<b>1.432</b>	<b>2.473</b>	<b>2.283</b>	<b>8.237</b>	<b>0.724</b>	<b>0.267</b>	<b>0.055</b>	<b>308.410</b>	<b>-</b>	<b>102.270</b>	<b>0.266</b>	<b>-</b>	<b>-</b>
Jul															
Aug															
Sep															
Oct															
Nov															
Dec															
<b>TOTAL</b>	<b>14.426</b>	<b>0.055</b>	<b>1.432</b>	<b>2.473</b>	<b>2.283</b>	<b>8.237</b>	<b>0.724</b>	<b>0.267</b>	<b>0.055</b>	<b>308.410</b>	<b>-</b>	<b>102.270</b>	<b>0.266</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.

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	1
	Limit	0	0
Impact Dolphin Monitoring	Action	0	3
	Limit	0	0

*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 (June 2014)	1	0	0
Total No. received since project commencement	2	0	0