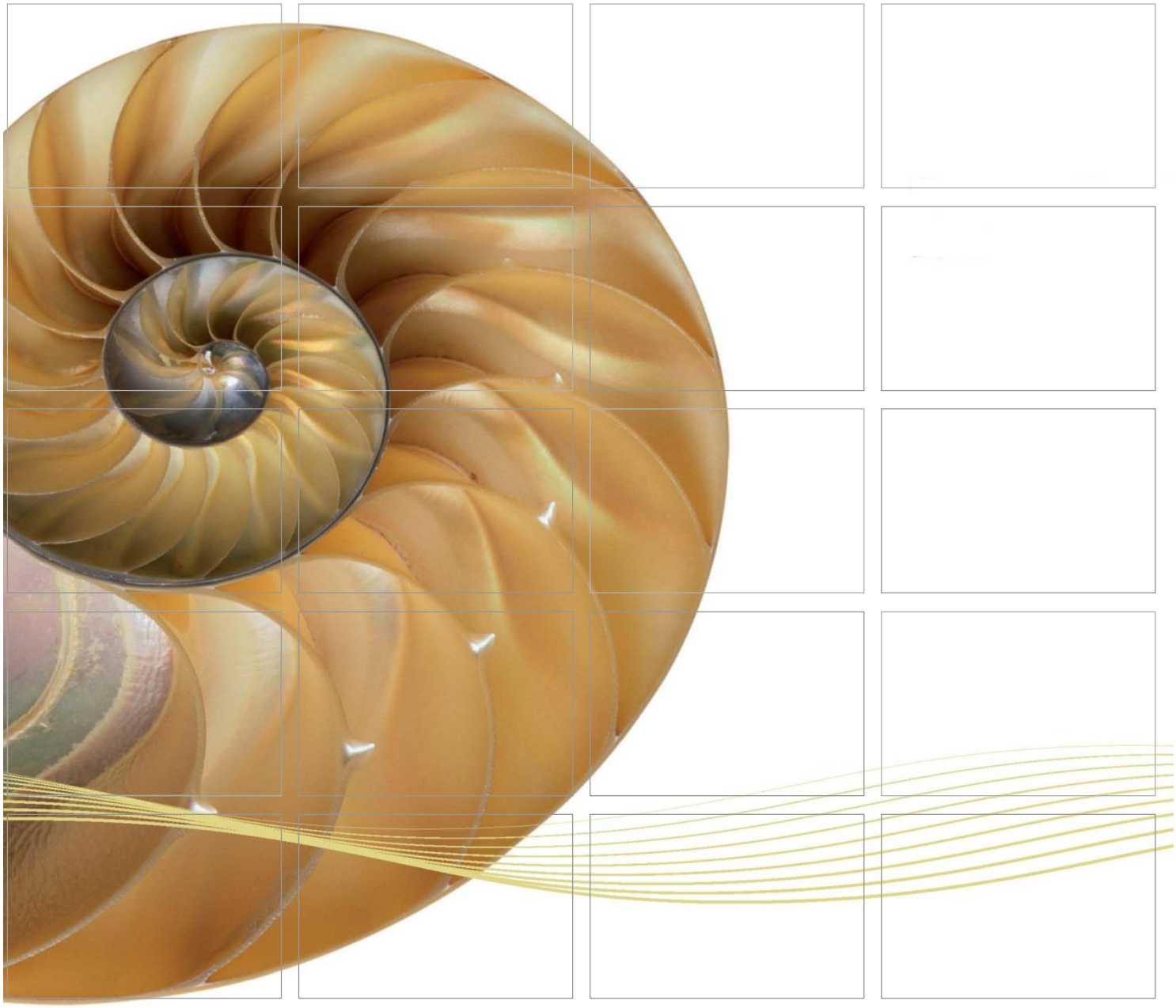
REPORT



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

Seventy Fourth Monthly EM&A Report

15 January 2020

Environmental Resources Management
2507, 25/F One Harbourfront
18 Tak Fung Street
Hunghom, Kowloon
Hong Kong
Telephone 2271 3000
Facsimile 2723 5660

www.erm.com

ERM

The business of sustainability

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

Seventy-Fourth Monthly EM&A Report

Environmental Resources Management

2507, 25/F One Harbourfront
18 Tak Fung Street
Hunghom, Kowloon
Hong Kong
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E-mail: post.hk@erm.com
http://www.erm.com

Document Code: 0215660_74th Monthly EM&A_20200115.doc

Client: Gammon	Project No: 0215660
Summary: This document presents the Seventy-fourth Monthly EM&A Report for Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section.	Date: 15 January 2020 Approved by: *Mr Craig Reid* *Partner* Certified by: *Dr Jasmine Ng* *ET Leader*

Revision	Description	By	Checked	Approved	Date
	Seventy Fourth Monthly EM&A Report	CW	JN	CAR	15/1/20

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☐ Confidential

RAMBOLL

Ref.: HYDHZMBEEM00_0_7827L.20.doc

14 January 2020

By Fax (3691 2899) and By Post

AECOM Asia Company Limited
Supervising Officer's Representative Office
780 Cheung Tung Road Lantau, Hong Kong

Attention: Mr. Daniel Ip

Dear Mr. Ip,

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

Contract No. HY/2012/07
TM-CLKL – Southern Connection Viaduct Section
74th Monthly EM&A Report for December 2019

Reference is made to the Environmental Team's submission of the monthly EM&A report for December 2019 (ET's ref.: "*0215660_74th Monthly EM&A_20200115.doc*" dated 15 January 2020) certified by the ET Leader and provided to us via e-mail on 14 January 2020.

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

Thank you for very much your attention. Please feel free to contact the undersigned or the ENPO Leader, Mr. Y H Hui, should you require further information.

Yours sincerely,
For and on behalf of
Ramboll Hong Kong Limited

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

c.c.

HyD	Mr. Patrick Ng	(By Fax: 3188 6614)
HyD	Mr. Cheng Pan	(By Fax: 3188 6614)
AECOM	Mr. Conrad Ng	(By Fax: 3922 9797)
ERM	Dr. Jasmine Ng	(By Fax: 2723 5660)
Gammon	Mr. Roy Leung	(By Fax: 3520 0486)

Internal: DY, YH, RY, HW, ENPO Site
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Ramboll Hong Kong Limited 英環香港有限公司
21/F, BEA Harbour View Centre, 56 Gloucester Road, Wan Chai, Hong Kong Tel: 852.3465 2888 Fax: 852.3465 2899
www.ramboll.com

TABLE OF CONTENTS

List of Appendices

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

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

The construction phase of the Contract commenced on 31 October 2013. 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 seventy-fourth Monthly EM&A report presenting the EM&A works carried out during the period from 1 to 31 December 2019 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, there are no major works to be undertaken in the monitoring period of December 2019.

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

Post-Construction Water Quality Monitoring	10 sessions
Impact Dolphin Monitoring	2 sessions
Joint Environmental Site Inspection	5 sessions

Breaches of Action and Limit Levels for Air Quality

No air quality monitoring was scheduled for the reporting month as construction works was substantially completed on 31 July 2019. Notification of temporary suspension of air quality monitoring has been approved by EPD on 28 August 2019. Air quality monitoring will be resumed when slope modification commences.

Breaches of Action and Limit Levels for Noise

No noise monitoring was scheduled for the reporting month as construction works was substantially completed on 31 July 2019. Notification of temporary suspension of noise monitoring has been approved by EPD on 28 August 2019. Noise monitoring will be resumed when slope modification commences.

Impact Dolphin Monitoring

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

No marine works were undertaken during the reporting period, therefore, daily 250 m marine mammal exclusion zone monitoring was not undertaken during the reporting period.

Environmental Complaints, Non-compliance & Summons

No environmental complaints, notification of summons or successful prosecution recorded in the reporting period.

Reporting Change

There was no reporting change in the reporting period.

Upcoming Works for the Next Reporting Period

There are no major works to be undertaken in the next monitoring period of January 2020.

Future Key Issues

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of January 2020 is mainly associated with waste management issues.

1 NTRODUCTION

1.1 BACKGROUND

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

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

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

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

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

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

SCOPE OF REPORT

1.2

This is the seventy-fourth 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 December 2019.

ORGANIZATION STRUCTURE

1.3

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.

大小磨刀
THE BROTHERS

鹿頸灣
LUK KENG BAY

鹿頸村
Luk Keng Tsuen

陰仔灣
YAM TSAI WAN

欣澳灣
YAN O WAN

陰仔
Yam Tsai

打棚埔
Ta Pang Po

欣澳篤
YAN O TUK

Site Office WA5

匙羹洲
TSZ KAN CHAU

東葉坑
Tung Yip Hang

深水角
Sham Shui Kok

四白坳
SZE PAK AU

犁壁山
LAI PIK SHAN

三白坳
SAM PAK AU

大輋峒
TAI CHE TUNG

濾水廠
Water Treatment Works

污水處理廠
Sewage Treatment Works

小蠔灣
SIU HO WAN

三白
Sam Pak

三白灣
SAM PAK WAN

牛頭灣
NGAU TAU WAN

鐵路車廠
Railway Depot

二白坳
YI PAK AU

時峰
Neo Horizon

尚堤
Chianti

津堤
Amalfi

海澄湖畔
Siena

頤峰

大白灣
DISCOVERY BAY
(TAI PAK WAN)

榴花峒
LAU FA TUNG

二白灣
YI PAK WAN

Greenvale Village

明翠台
Parkridge Village

蟹鉗咀
Hai Kam Tsui

蔚陽
Headland Village

愉景灣
Discovery Bay

老虎頭
LO FU TAU

碧濤

畔峰
Midvale Village

Beach Village

大白咀
Tai Pak Tsui

菜園灣
TSOI YUEN WAN

海堤居
La Costa

寶峰
Parkvale Village

大蠔灣
TAI HO WAN

白芒
Pak Mong

大蠔

海蝶居
La Vista

Hillgrove Village

海鬆居
La Serene

N

Kilometers

0 0.5 1

Key

Site Boundary

Figure 1.1

General Layout Plan of the Project

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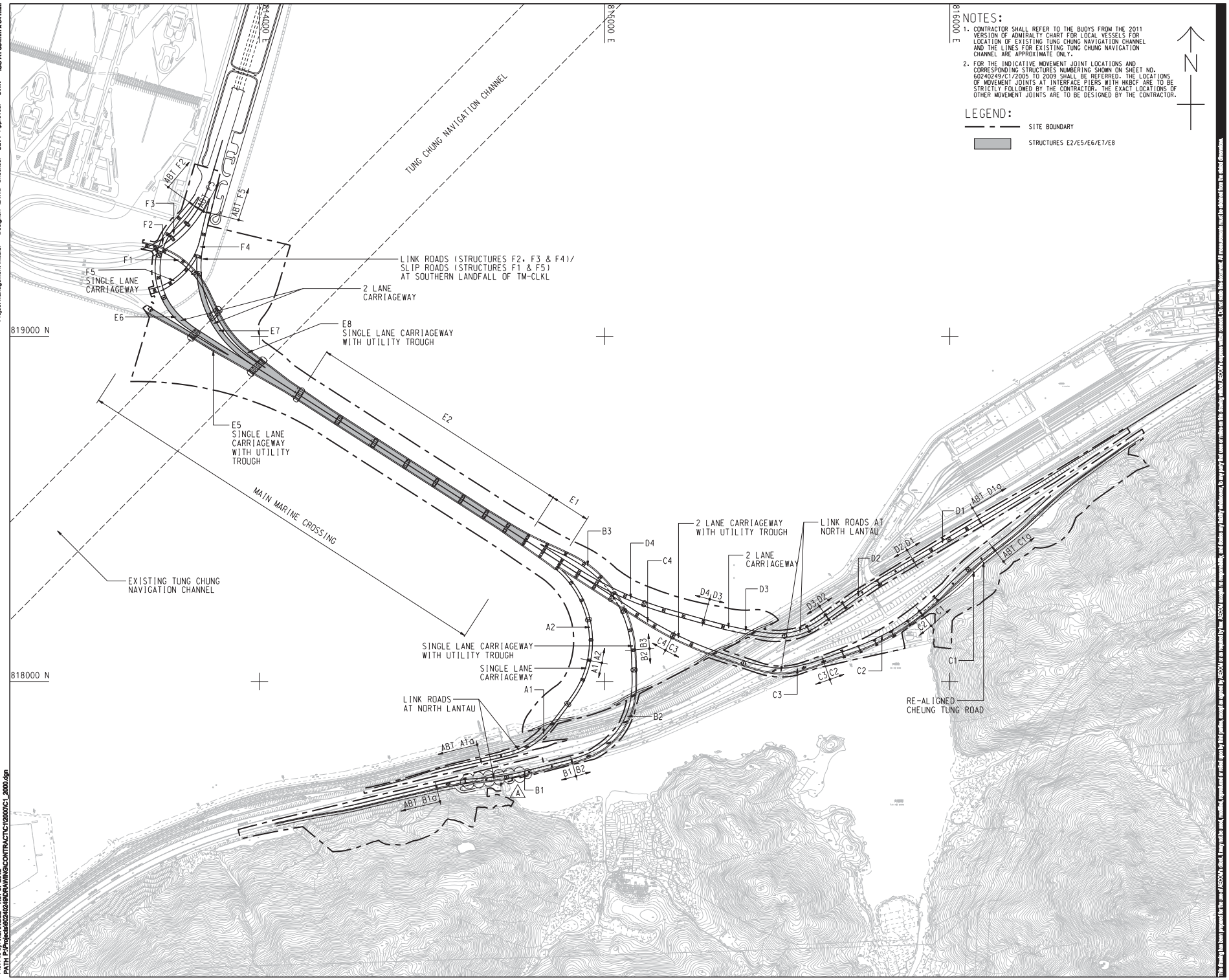
Environmental Resources Management

ERM



AECOM

PROJECT
TUEN MUN - CHEK LAP KOK LINK

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

CLIENT
路政署 HIGHWAYS DEPARTMENT
港珠澳大橋香港工程管理處 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

Figure 1.2a

ISSUE/REVISION

IR	DATE	DESCRIPTION	CHK.
A	NOV. 12	TENDER ADDENDUM NO. 1	CWN
-	OCT. 12	TENDER DRAWING	CWN

STATUS

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KEY PLAN

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CONTRACT NO.: HY/2012/07

SHEET TITLE
SOUTHERN CONNECTION GENERAL LAYOUT PLAN

SHEET NUMBER
60240249/C1/2000A

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

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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

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

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C	SUBMISSION	RC	09/13				

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Checked: DS — Approved: DOP
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Client: 路政署 HIGHWAYS DEPARTMENT, Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

Supervising Officer: AECOM

Contractor: Gammon

Originator: ARUP

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

Drawing title: **Figure 1.2b**

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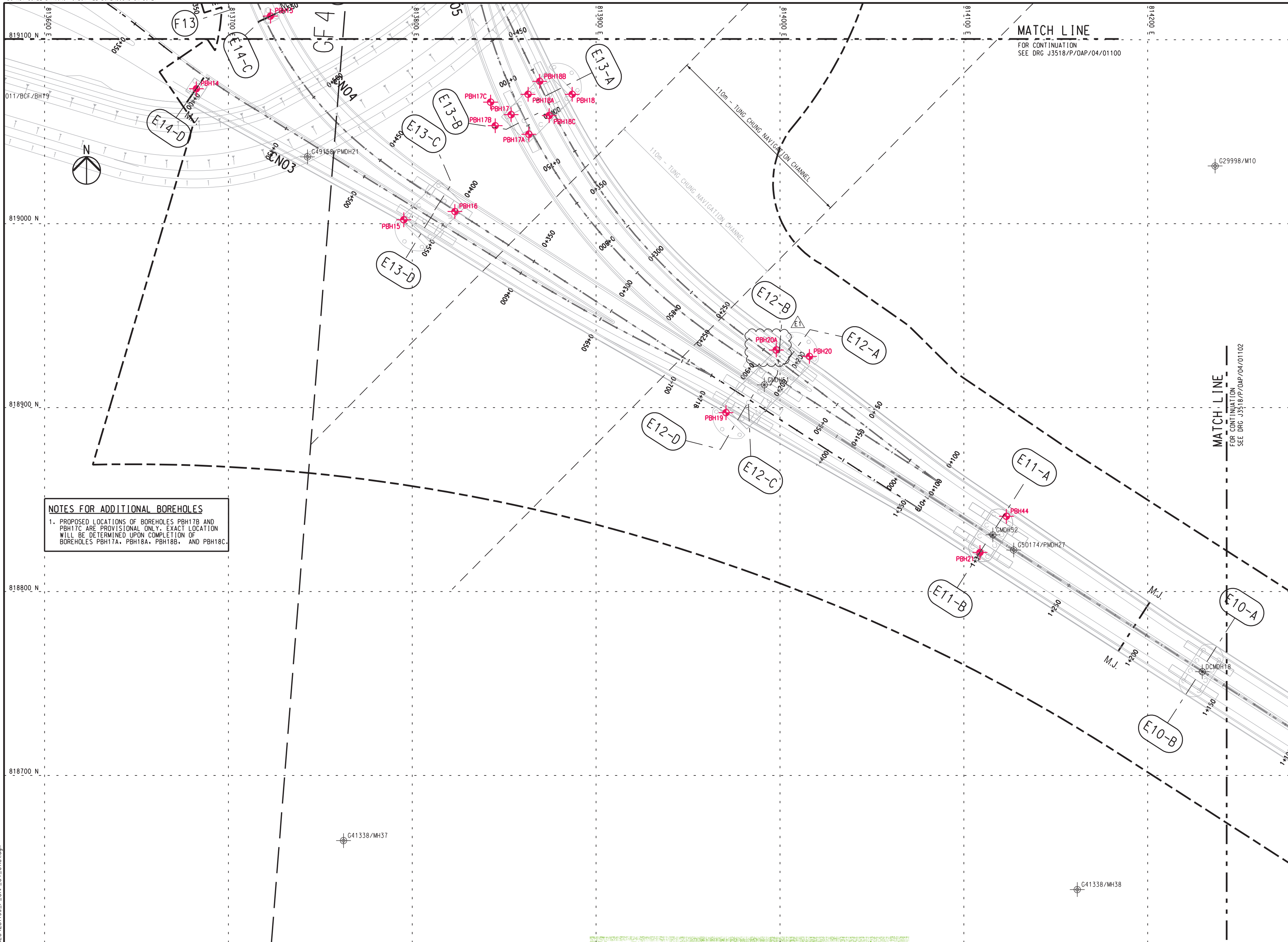

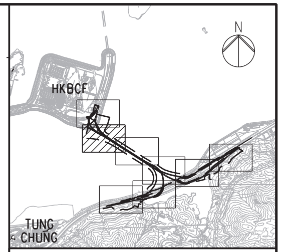

KEY PLAN

NOTES

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LEGEND

- SITE BOUNDARY
- GF1 · FAULT

EXISTING G.I. STATIONS :

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

PROPOSED G.I. STATIONS :

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

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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E1	FOR INTERNAL REVIEW	RC	11/13				

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Supervising Officer: AECOM

Contractor: Gammon

Originator: ARUP

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

Drawing title:

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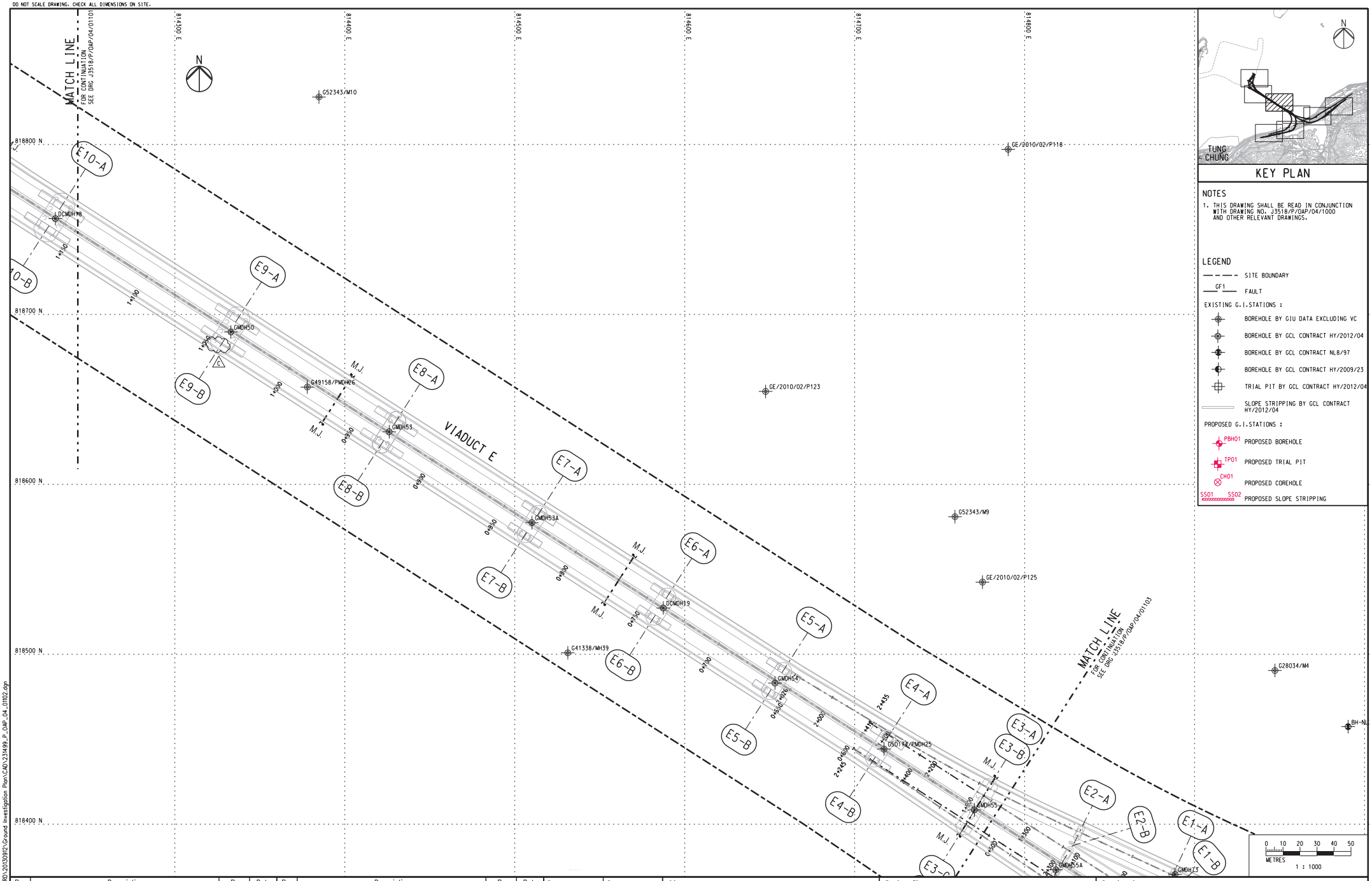

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Project Title: Contract No. HY/2012/07
Tuen Mun - Chek Lap Kok Link
Southern Connection Viaduct Section

Supervising Officer: AECOM
Contractor: Gammon
Originator: ARUP

Drawing title: **Figure 1.2d**

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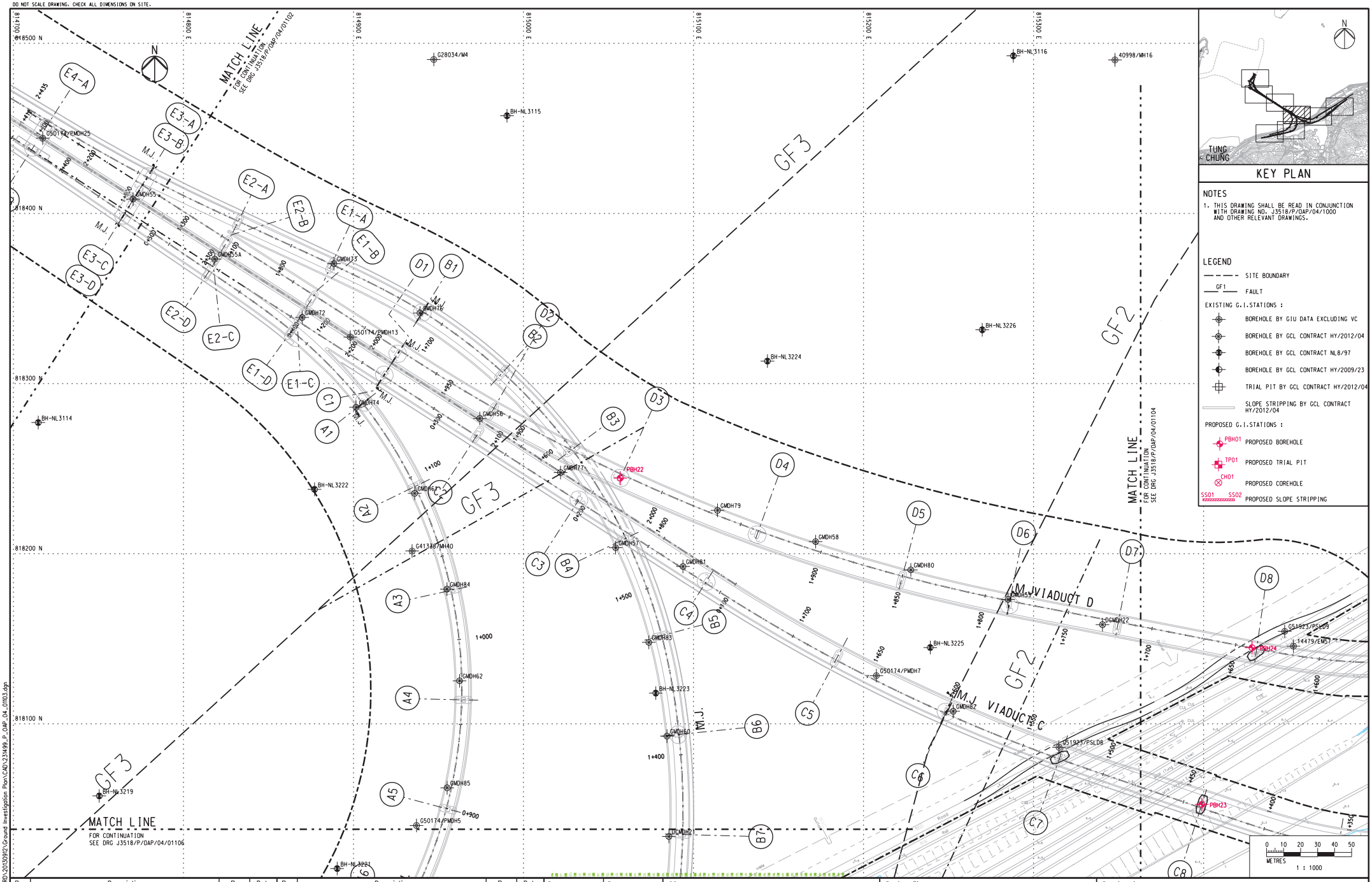

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Project Title: Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section

Supervising Officer: AECOM
Contractor: Gammon
Originator: ARUP

Drawing title: **Figure 1.2e**

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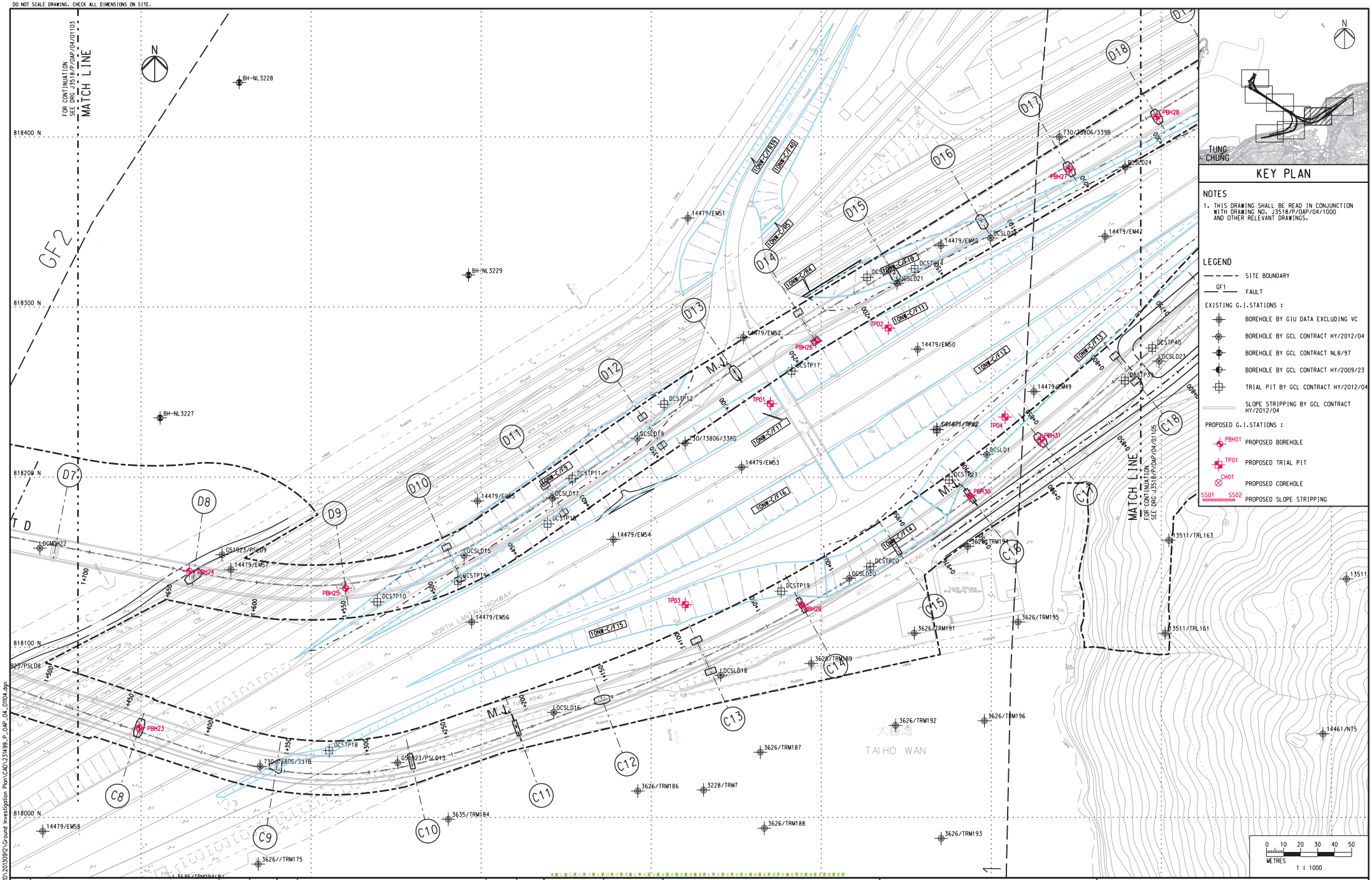

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Project Title: Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section

Supervising Officer: AECOM

Contractor: Gammon

Originator: ARUP

Drawing title: **Figure 1.2f**

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

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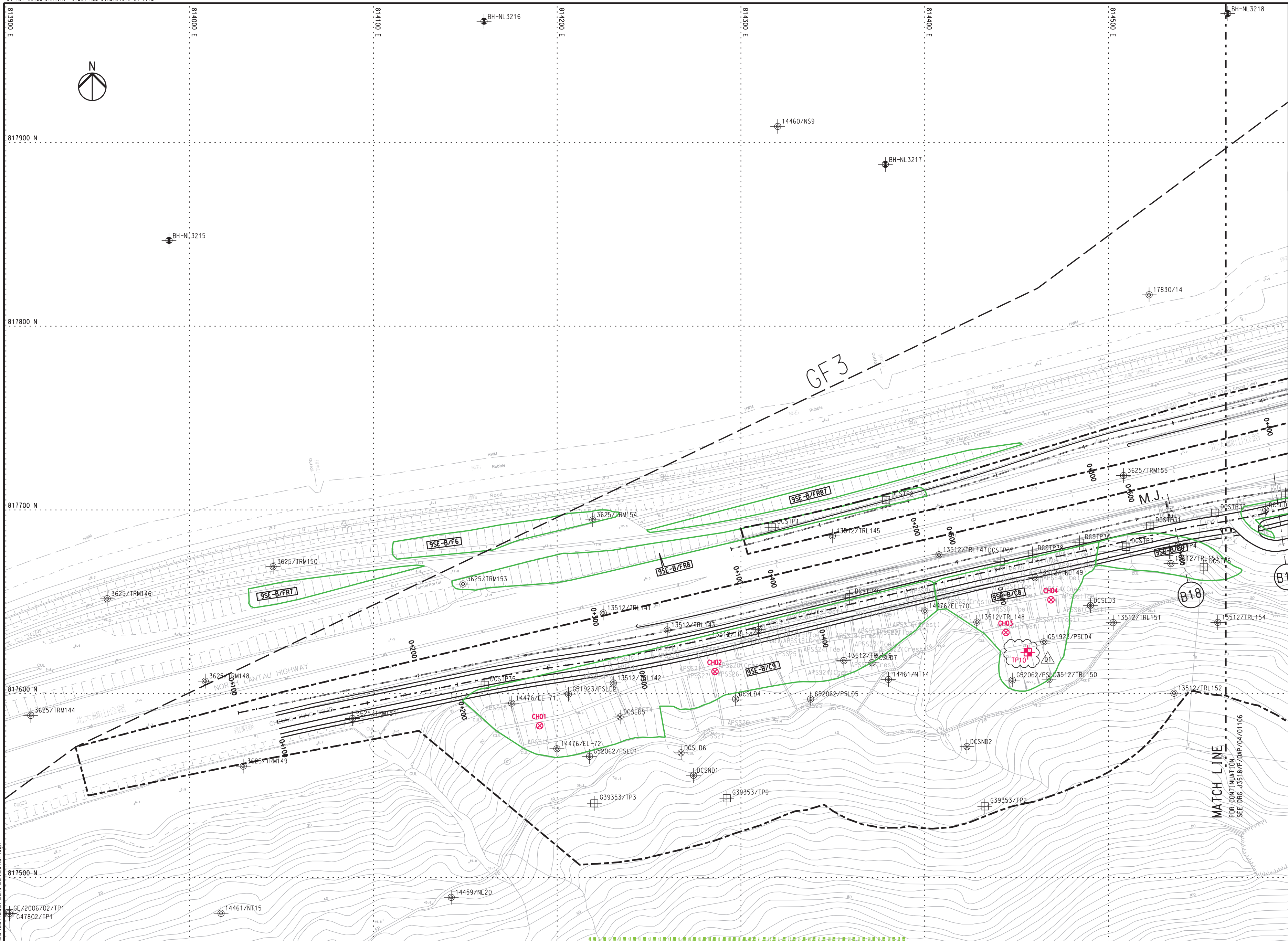

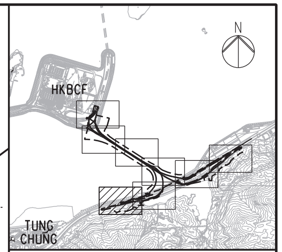

KEY PLAN

NOTES

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

LEGEND

SITE BOUNDARY

GF1 FAULT

EXISTING G.I.STATIONS :

BOREHOLE BY GIU DATA EXCLUDING VC

BOREHOLE BY GCL CONTRACT HY/2012/04

BOREHOLE BY GCL CONTRACT 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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C	SUBMISSION	RC	09/13				
D1	FOR INTERNAL REVIEW	RC	11/13				

Drawn: RL
Date: 07/13
Checked: DS
Approved: DOP
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Client: 路政署 HIGHWAYS DEPARTMENT
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

Supervising Officer: AECOM
Contractor: Gammon
Originator: ARUP

Drawing title
Figure 1.2g

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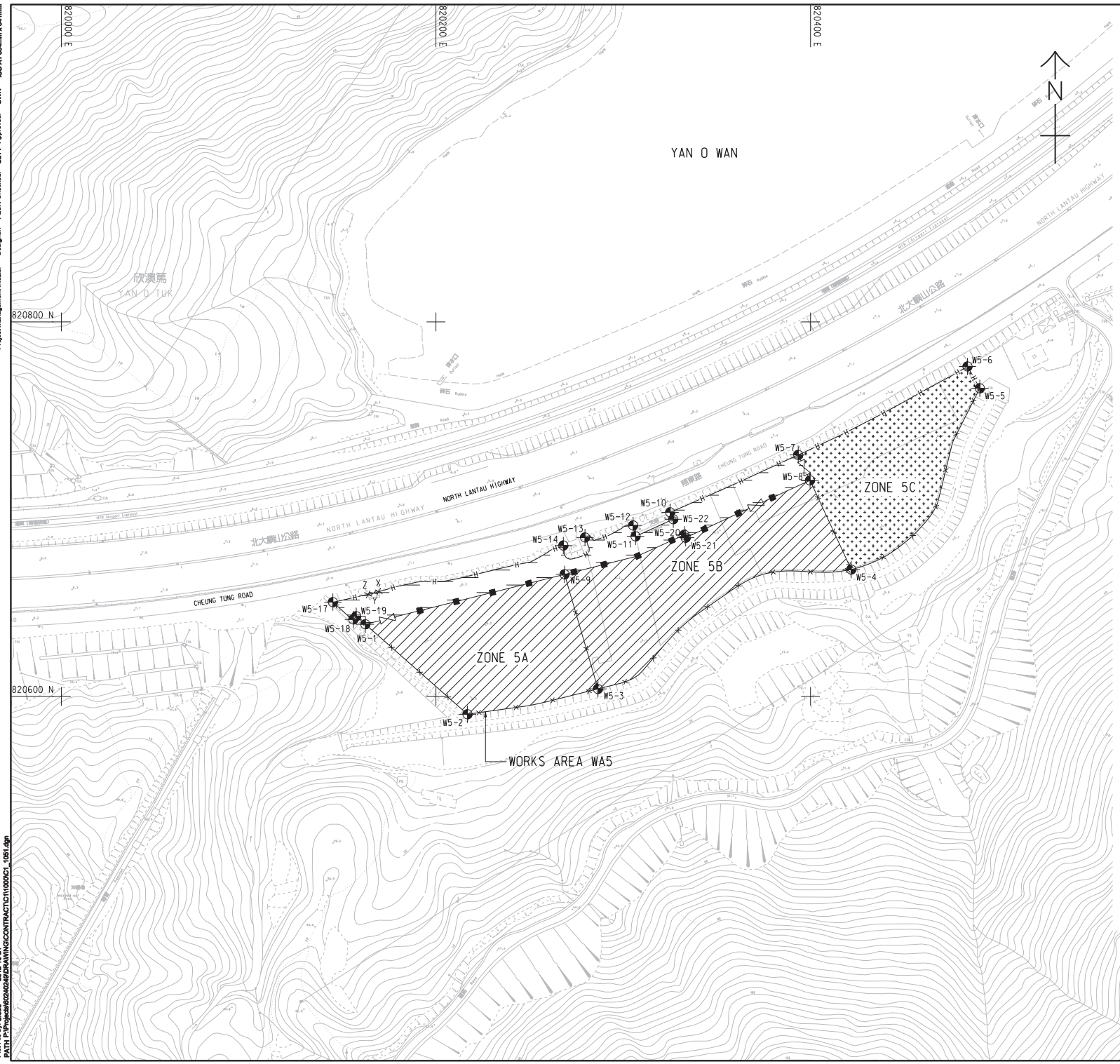


NOTES:

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. TIS 619. 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. H6110 AND H6111 FOR DETAILS OF HOARDING.
5. REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NOS. H6121 AND H6122 FOR DETAILS OF CHAIN LINK FENCE.
6. REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NO. H6121 FOR DETAILS OF GATE.
7. 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.
8. THE LOCATION AND WIDTH OF GATE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISING OFFICER.
9. 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.
10. THE TENTATIVE OCCUPATION PERIOD SHALL BE REFERRED TO EMPLOYER'S REQUIREMENTS PART 2 AND PART 14 SECTION 1 CLAUSE 1.45A.
11. 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.
12. THE COMMON AREA SHALL BE CONCRETE PAVED BY THE CONTRACTOR.

LEGEND:

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

SETTING OUT COORDINATES OF WORKS AREA WA5

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

AECOM

PROJECT
TUEN MUN - CHEK LAP KOK LINK

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

CLIENT
HIGHWAYS DEPARTMENT
路政署
Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

VR	DATE	DESCRIPTION	CHK.
-	OCT. 12	TENDER DRAWING	CWN

STATUS

SCALE: A1 1 : 1000
DIMENSION UNIT: METRES

KEY PLAN

Figure 1.2h

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

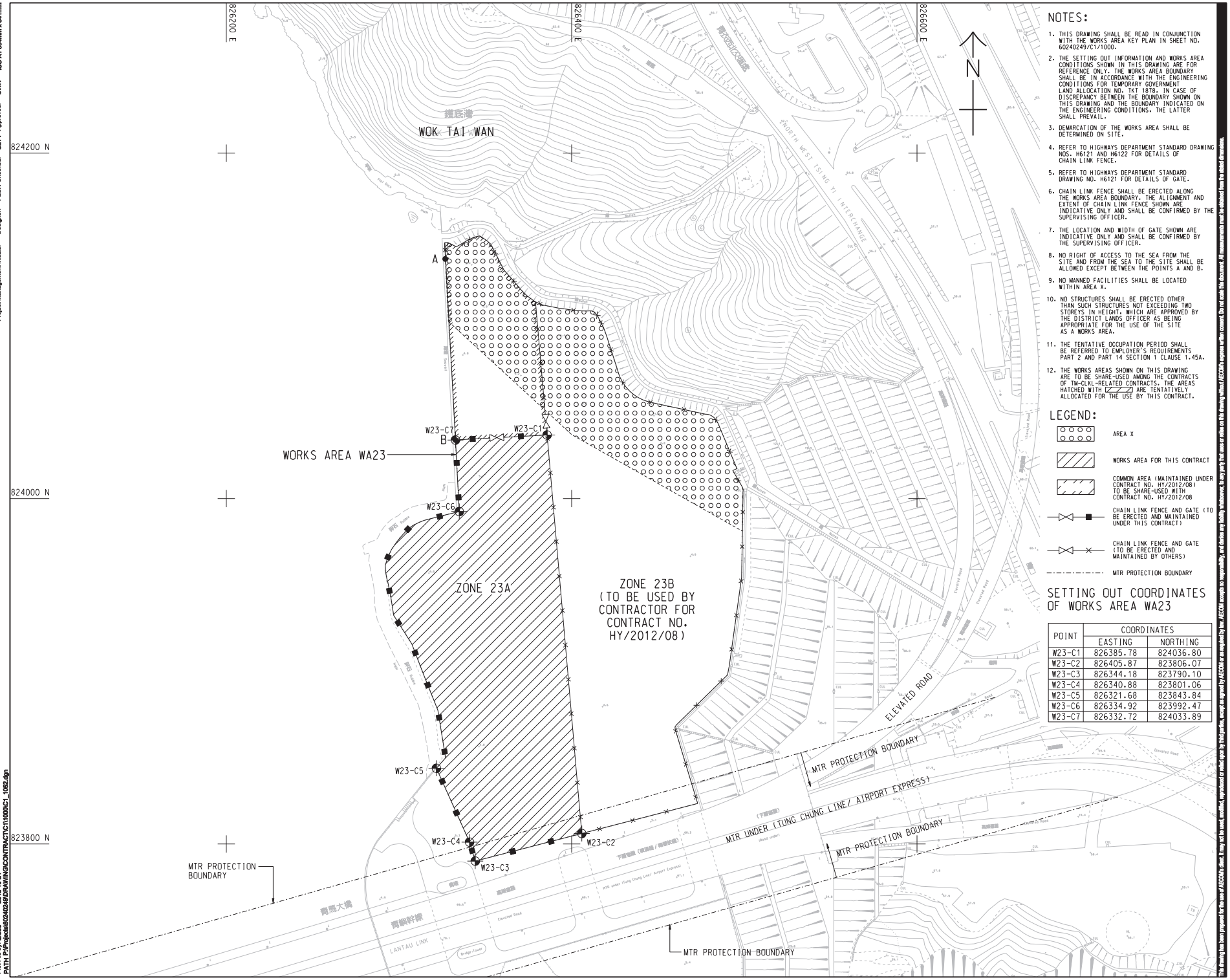
SHEET TITLE
WORKS AREA AND HOARDING PLAN

SHEET 1 OF 2

SHEET NUMBER
60240249/C1/1051

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

Plot File by: LIUJ3 2012-10-24
PATH P:\Projects\60240249\DRAWING\CONTRACT\C1\1000\C1_1051.dgn



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 WORKS AREA WA23

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

AECOM

PROJECT
TUEN MUN - CHEK LAP KOK LINK

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

CLIENT
HIGHWAYS DEPARTMENT
Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

VR	DATE	DESCRIPTION	CHK.
-	OCT. 12	TENDER DRAWING	CWN

STATUS

SCALE: A1 1 : 1000
DIMENSION UNIT: METRES

KEY PLAN

Figure 1.2i

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

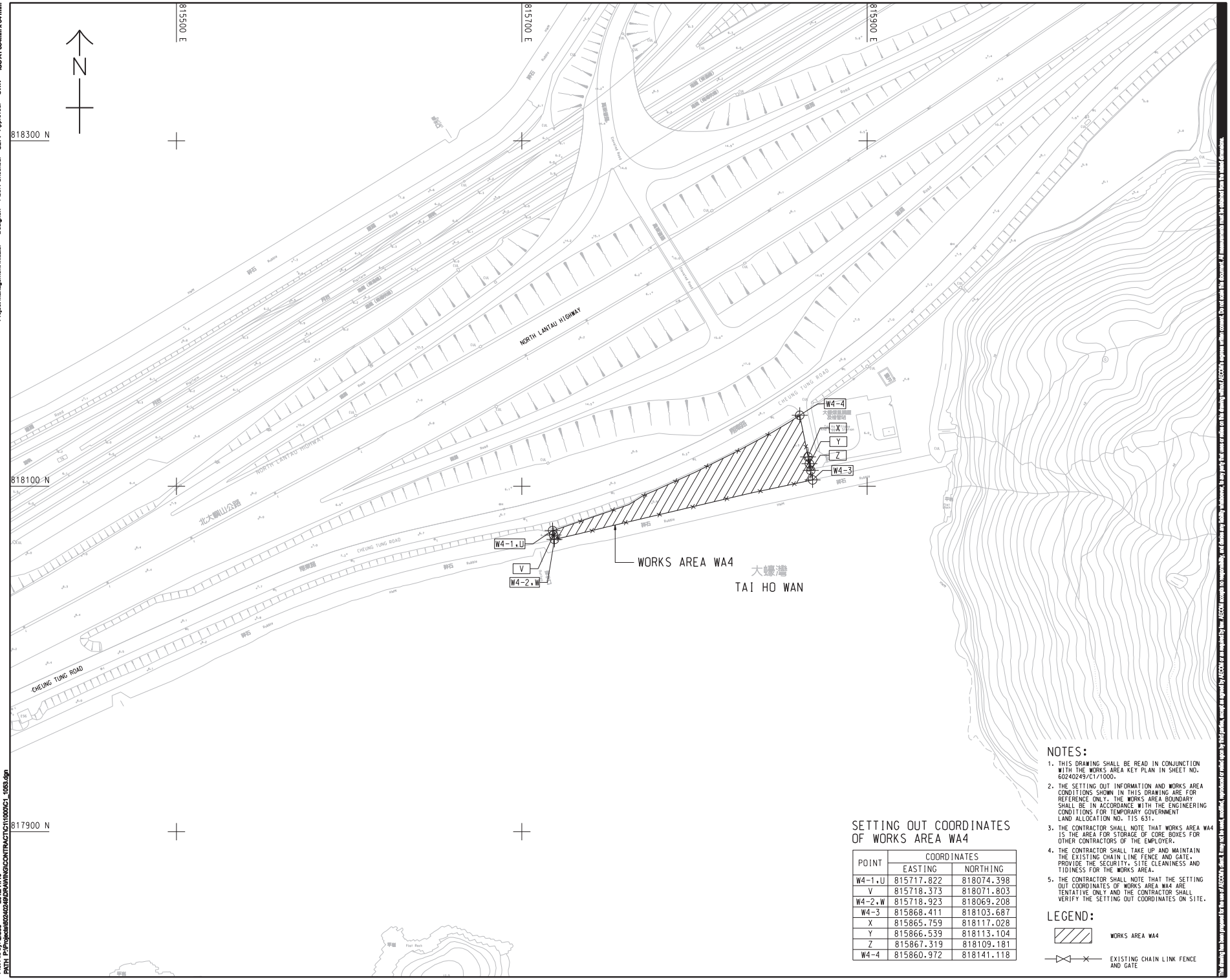
SHEET TITLE
WORKS AREA AND HOARDING PLAN

SHEET 2 OF 2

SHEET NUMBER
60240249/C1/1052

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

Plot File by: LIUJ3 2012-10-24
PATH: P:\Projects\60240249\DRAWING\CONTRACT\C1\1000\C1_1052.dgn



SETTING OUT COORDINATES OF WORKS AREA WA4

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

NOTES:

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. TIS 631.
3. THE CONTRACTOR SHALL NOTE THAT WORKS AREA WA4 IS THE AREA FOR STORAGE OF CORE BOXES FOR OTHER CONTRACTORS OF THE EMPLOYER.
4. THE CONTRACTOR SHALL TAKE UP AND MAINTAIN THE EXISTING CHAIN LINE FENCE AND GATE. PROVIDE THE SECURITY, SITE CLEANINESS AND TIDINESS FOR THE WORKS AREA.
5. THE CONTRACTOR SHALL NOTE THAT THE SETTING OUT COORDINATES OF WORKS AREA WA4 ARE TENTATIVE ONLY AND THE CONTRACTOR SHALL VERIFY THE SETTING OUT COORDINATES ON SITE.

LEGEND:

WORKS AREA WA4

EXISTING CHAIN LINK FENCE AND GATE

AECOM

PROJECT
TUEN MUN - CHEK LAP KOK LINK

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

CLIENT
HIGHWAYS DEPARTMENT
Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

CONSULTANT
AECOM Asia Company Ltd.
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SUB-CONSULTANTS

Figure 1.2j

ISSUE/REVISION

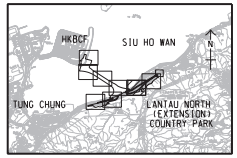
VR	DATE	DESCRIPTION	CHK.
-	NOV. 12	TENDER ADDENDUM NO. 1	CWN

STATUS

SCALE: A1 1 : 1000

DIMENSION UNIT: METRES

KEY PLAN



PROJECT NO.: 60240249

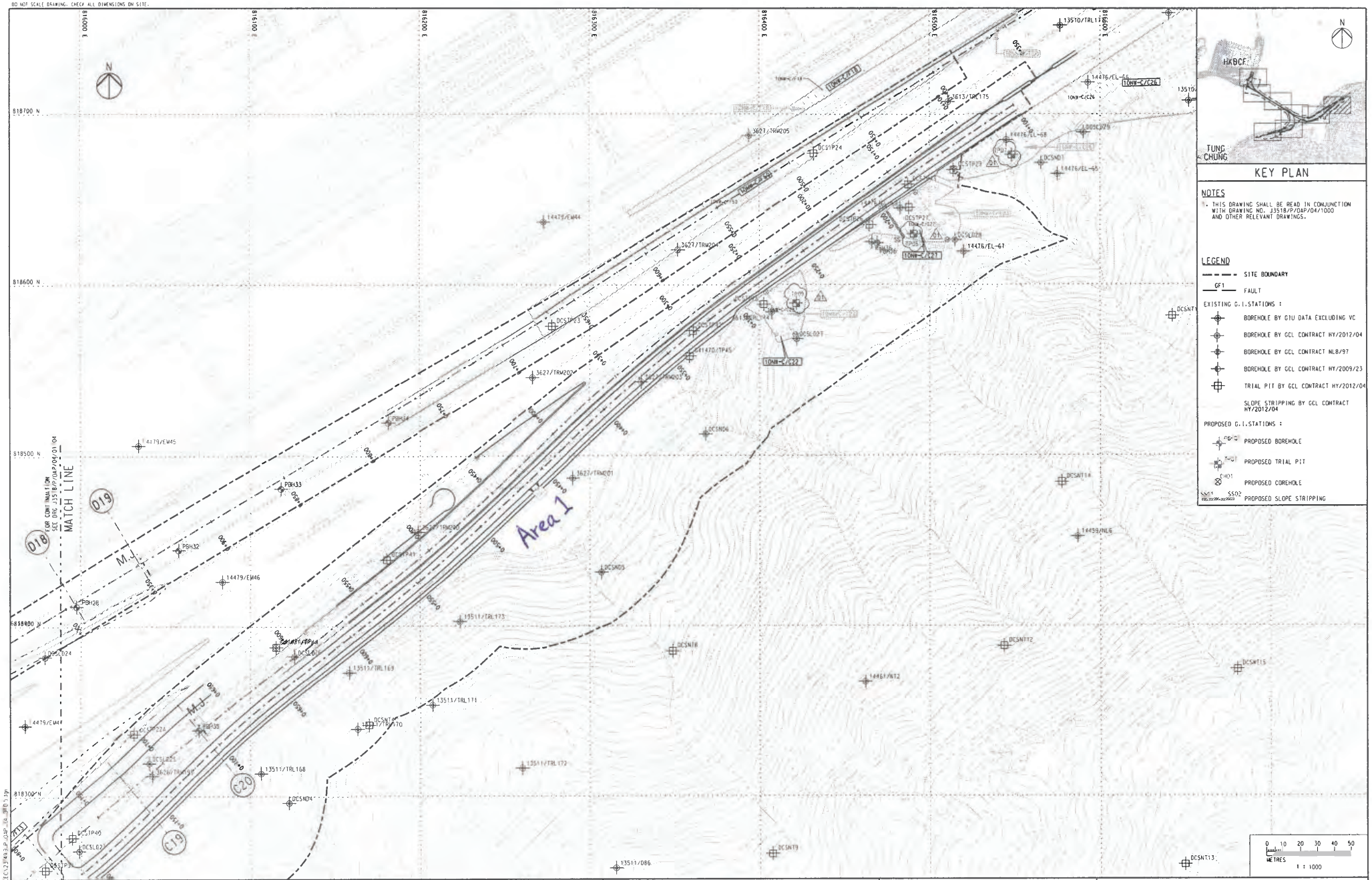
CONTRACT NO.: HY/2012/07

SHEET TITLE
WORKS AREA WA4

SHEET NUMBER
60240249/C1/1053

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

Plot File by: LIUJ3 2012/11/16
PATH: P:\Projects\60240249\DRAWING\CONTRACT\C1\1000\C1_1053.dgn



Rev.	Description	By	Date	Rev.	Description	By	Date
A	[illegible]	RL	07/13				
B	[illegible]	RL	07/13				
C	[illegible]	RL	09/13				
D1	ETA INTERNAL REVIEW	RL	10/13				

Drawn: RL	Date: 07/13
Checked: DS	Approved: DOP
Scale: 1:1000 @ A1 / 1:2000 @ A3	

Client: 路政署 HIGHWAYS DEPARTMENT 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

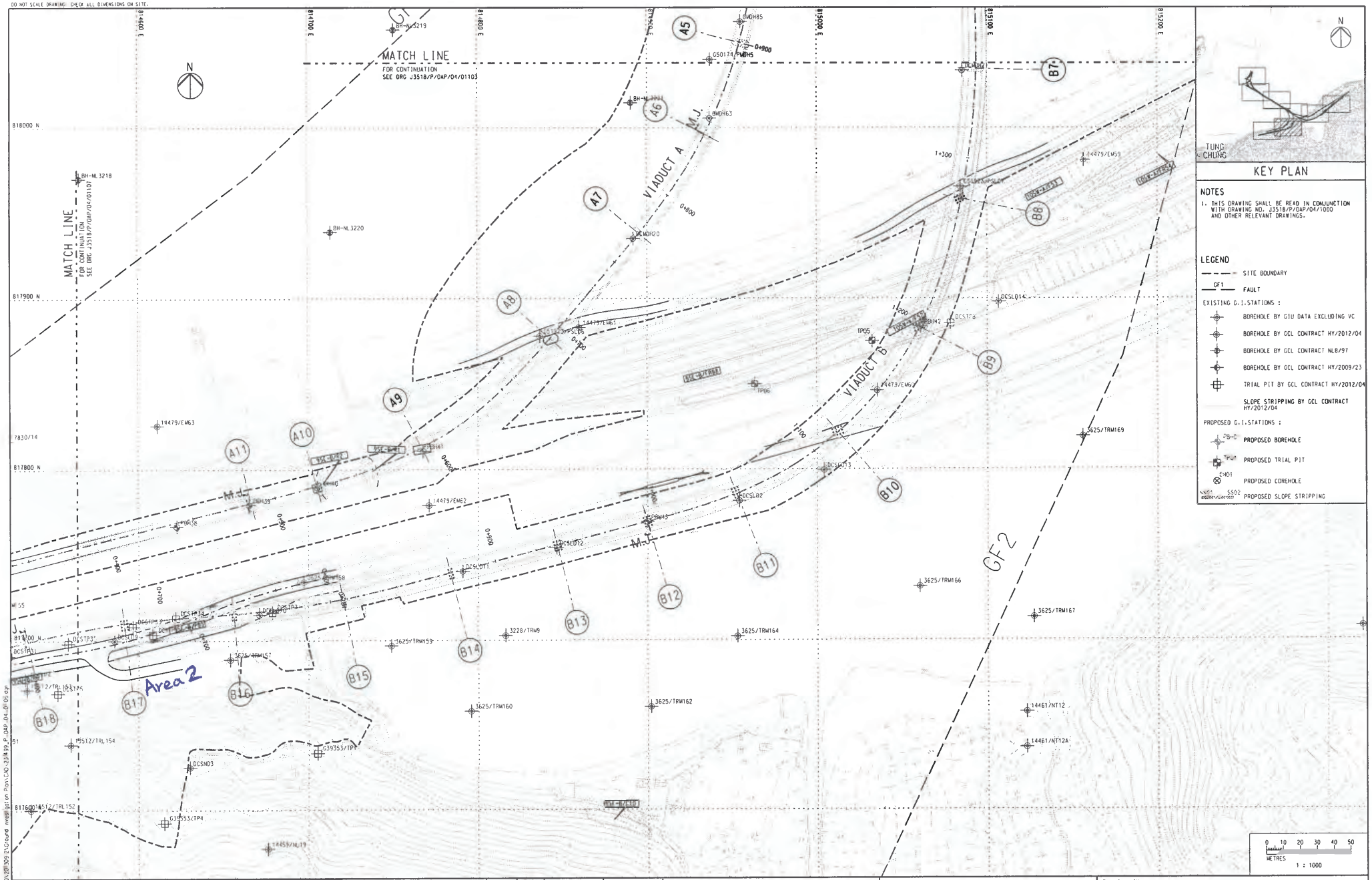
Supervising Officer: AECOM

Contractor: Gammon

Originator: ARUP

Drawing title: **Figure 1.2k**

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



Rev	Description	By	Date
A	[illegible]	RC	07/13
B	[illegible]	RC	07/13
C	[illegible]	RC	09/13

Drawn	RL
Date	07/13
Checked	DS
Approved	DOP
Scale	1:1000 @ A1 / 1:2000 @ A3

Client: 路政署 HIGHWAYS DEPARTMENT 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

Supervising Officer: AECOM

Contractor: Gammon

Originator: ARUP

Drawing title: **Figure 1.2I**

Drawing no. J3518/P/OAP/04/01106 Rev C

Plotted by [illegible] on 19/07/2013
J:\3518\P\OAP\04\01106 21\Ground investigation Plan\CAD\3518P_OAP_04_01106.dgn

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	Chan Wah Fu	2293 6434	3691 2899
ENPO / IEC (Ramboll Hong Kong Ltd.)	ENPO Leader	Y.H. Hui	3465 2850	3465 2899
	IEC	Dr. F.C. Tsang	3465 2851	3465 2899
Contractor (Gammon Construction Limited)	Environmental Officer	Roy Leung	3520 0387	3520 0486
	24-hour Complaint Hotline		9738 4332	
ET (ERM-HK)	ET Leader	Dr. Jasmine Ng	2271 3311	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. The jetty removal works and reinstatement was hand over to *Contract No.: HY/2012/08 TMCLKL Northern Connection Sub-Sea Tunnel Section.*

As informed by the Contractor, no major works were carried out in the reporting month.

The Environmental Sensitive Receivers in the vicinity of the Project are shown in *Figure 1.3*.

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

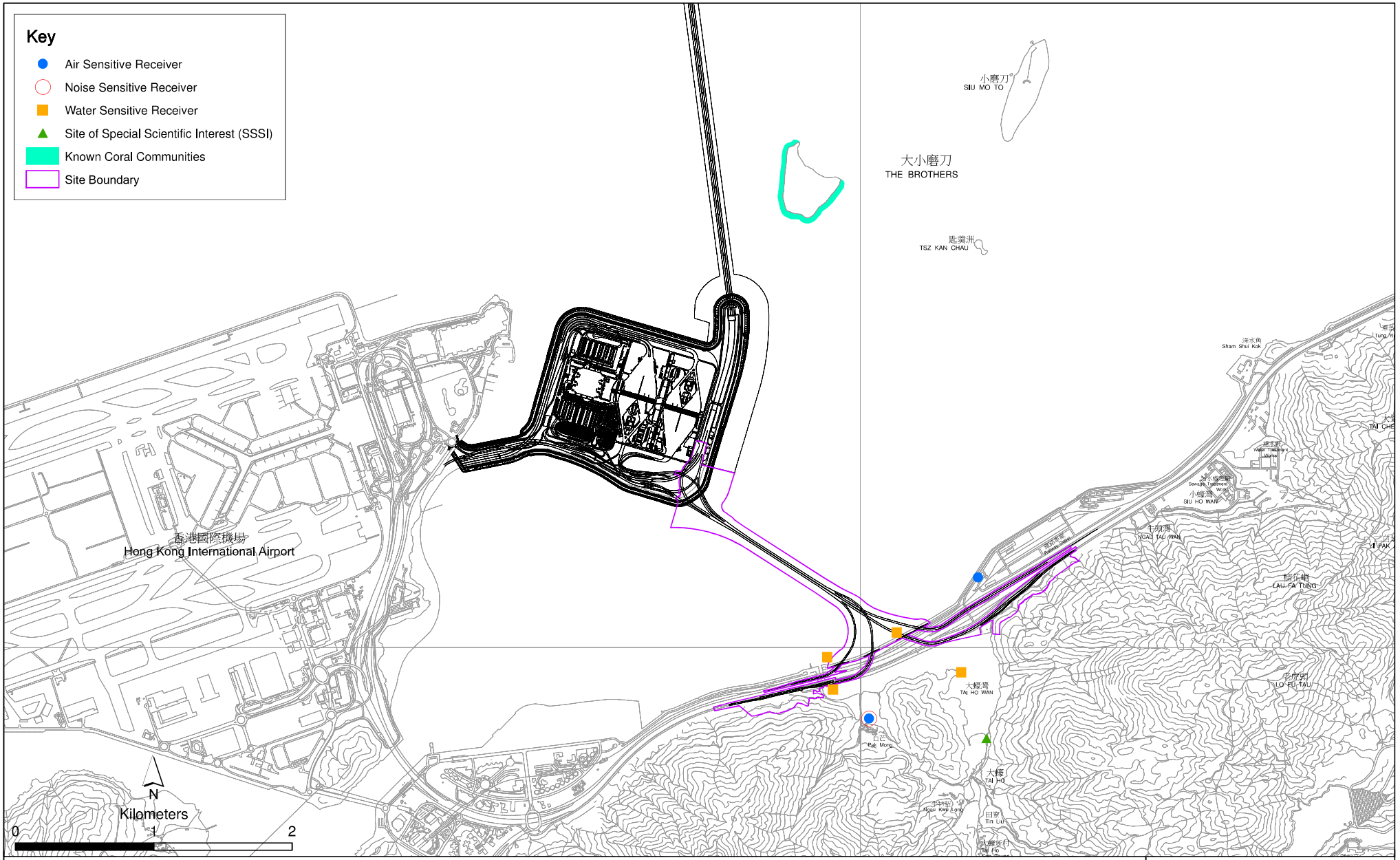


Figure 1.3

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

File: T:\GIS\CONTRACT\0215660\Mxd\0215660_Environmental_Sensitive_Receiver.mxd
Date: 18/5/2015

Environmental Resources Management

ERM

2 EM&A RESULTS

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

No air quality monitoring was scheduled for the reporting month as construction works was substantially completed on 31 July 2019. Notification of temporary suspension of air quality monitoring has been approved by EPD on 28 August 2019. Air quality monitoring will be resumed when slope modification commences.

2.2 NOISE MONITORING

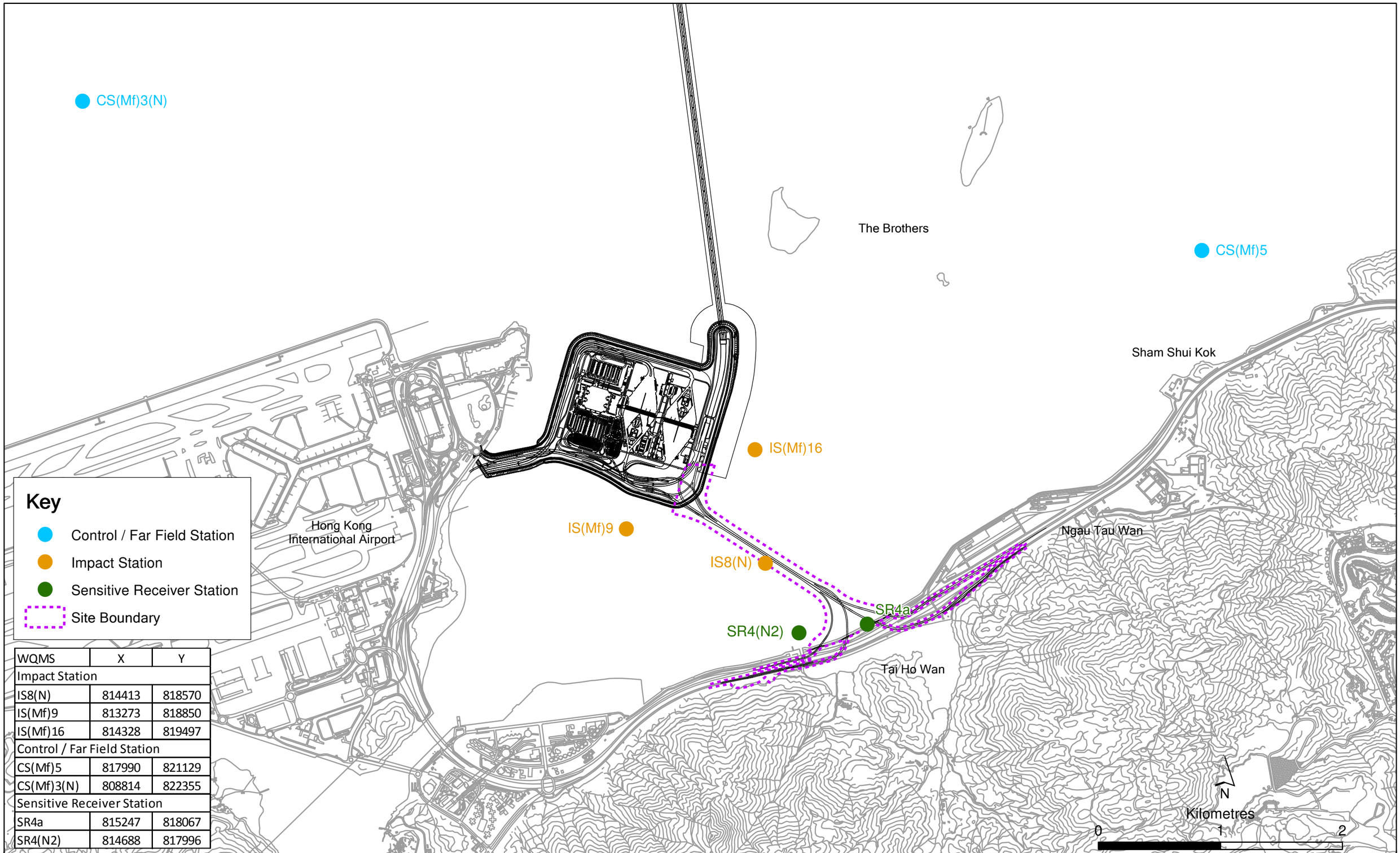
No noise monitoring was scheduled for the reporting month as construction works was substantially completed on 31 July 2019. Notification of temporary suspension of noise monitoring has been approved by EPD on 28 August 2019. Noise monitoring will be resumed when slope modification commences.

2.3 WATER QUALITY MONITORING

2.3.1 *Monitoring Requirements and Equipment*

According to the Updated EM&A Manual, a post-construction water quality monitoring shall be carried out upon completion of all marine-based construction activities. Post-construction water quality monitoring was undertaken three days per week for at least 4 weeks in accordance with the Updated EM&A Manual. The proposal for post-construction water quality monitoring was approved by EPD on 19 November 2019. The post construction water quality monitoring commenced on 27 November 2019 and completed on 23 December 2019.

The locations of the monitoring stations under the Contract are shown in *Figure 2.1* and *Table 2.1.*



WQMS	X	Y
Impact Station		
IS8(N)	814413	818570
IS(Mf)9	813273	818850
IS(Mf)16	814328	819497
Control / Far Field Station		
CS(Mf)5	817990	821129
CS(Mf)3(N)	808814	822355
Sensitive Receiver Station		
SR4a	815247	818067
SR4(N2)	814688	817996

Figure 2.1

Locations of Water Quality Monitoring Stations

File: T:\GIS\CONTRACT\0215660\Mxd\0215660_WQMS_20190813.mxd
Date: 13/8/2019

Environmental Resources Management

ERM

Table 2.1 Locations of Impact Water Quality Monitoring Stations and its Corresponding Monitoring Requirements

Station ID	Type	Coordinates		*Parameters, unit	Frequency	Depth
		Easting	Northing			
IS(Mf)9	Impact Station (Close to HKBCF construction site)	813273	818850	• Temperature(°C) • pH (pH unit) • Turbidity (NTU) • Water depth (m) • Salinity (ppt) • Dissolved Oxygen (DO) (mg/L and % of saturation) • Suspended Solid (SS) (mg/L)	Post-construction monitoring: 3 days per week, at mid-flood and mid-ebb tides for at least 4 weeks	3 water depths: 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted
IS(Mf)16	Impact Station (Close to HKBCF construction site)	814328	819497			
IS8 (N)	Impact Station (Close to HKBCF construction site)	814413	818570			
SR4(N2)	Sensitive receiver (Tai Ho Inlet)	814688	817996			
SR4a	Sensitive receiver	815247	818067			
CS(Mf)3(N)	Control Station	808814	822355			
CS(Mf)5	Control Station	817990	821129			

*Notes:

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

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

Water Quality Monitoring Station SR4 was relocated to SR4(N) since 2 March 2018.

Water Quality Monitoring Station SR4(N) was relocated to SR4(N2) since 12 June 2019

Water Quality Monitoring Station IS8 was relocated to IS8(N) since 12 June 2019.

Table 2.2 summarises the equipment used in the impact water quality monitoring programme. Copies of the calibration certificates are attached in *Appendix E*.

Table 2.2 Water Quality Monitoring Equipment

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

2.3.2 Monitoring Schedule for the Reporting Month

The schedule for post-construction water quality monitoring in December 2019 is provided in *Appendix F*.

2.3.3 Results and Observations

In total of 10 monitoring events for post-construction water quality monitoring were conducted at all designated monitoring stations in the

reporting month. Post-construction water quality monitoring results and graphical presentations are provided in Appendix G.

2.4 DOLPHIN MONITORING

2.4.1 Monitoring Requirements

Impact dolphin monitoring is required to be conducted by a qualified dolphin specialist team to evaluate whether there have been any effects on the Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) from the Contract. In order to fulfil the EM&A requirements and make good use of available resources, the on-going impact line transect dolphin monitoring data collected by HyD's *Contract No. HY/2012/08 TMCLKL Northern Connection Sub-Sea Tunnel Section* on the monthly basis is adopted to avoid duplicates of survey effort.

2.4.2 Monitoring Equipment

Table 2.3 summarizes the equipment used for the impact dolphin monitoring.

Table 2.3 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 2.2*. The co-ordinates of all transect lines are shown in *Table 2.4* below [(1)].

(1) Proposal on the changes of transect lines for dolphin monitoring was approved by EPD on

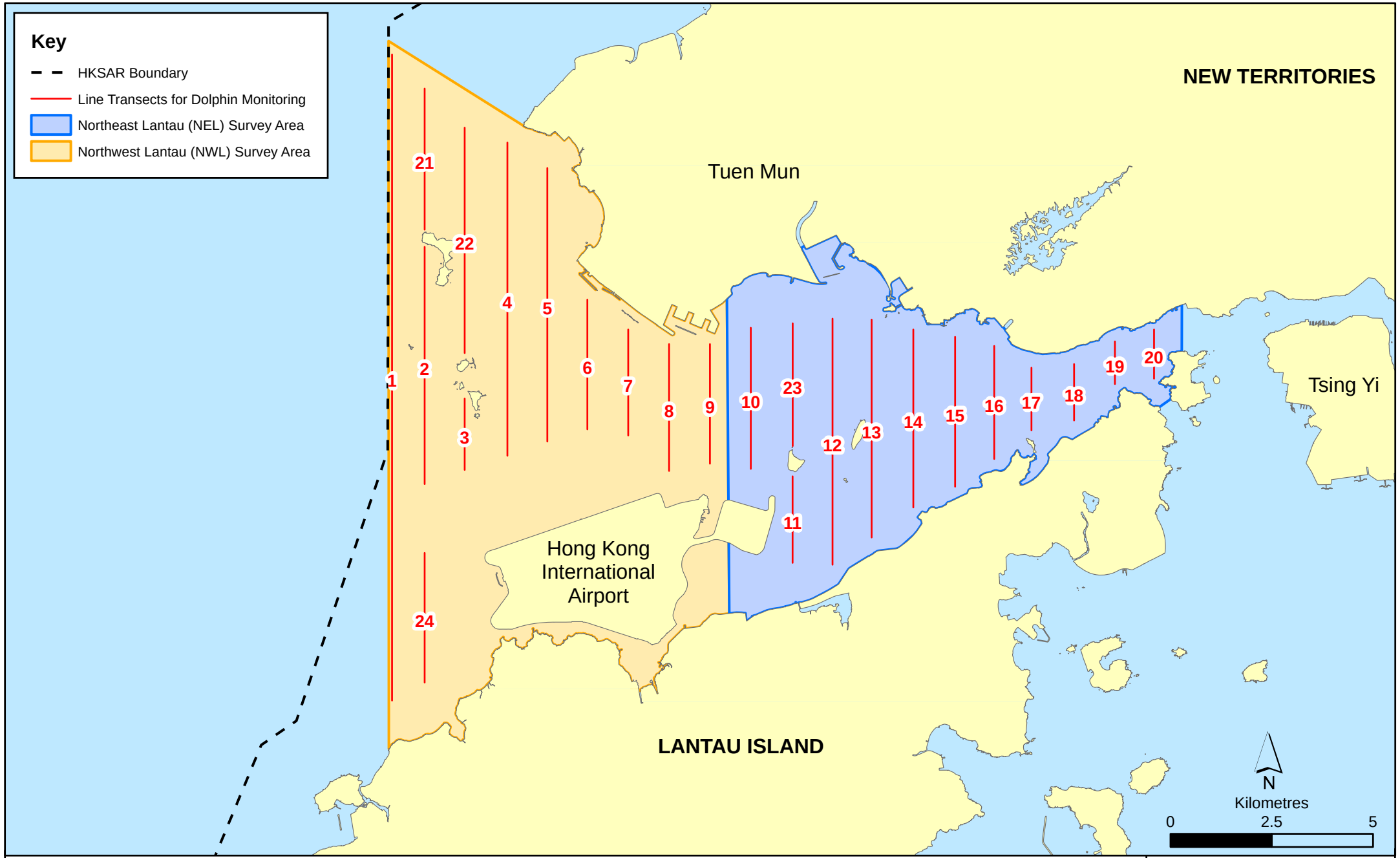


Figure 2.2

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

File: T:\GIS\CONTRACT\0212330\Mxd\0212330_Transect_of_Dolphin_Monitoring.mxd
Date: 21/9/2017

Environmental Resources Management

ERM

Table 2.4 Impact Dolphin Monitoring Line Transect Co-ordinates

Line No.		Easting	Northing	Line No.		Easting	Northing
1	Start Point	804671	815456	13	Start Point	816506	819480
1	End Point	804671	831404	13	End Point	816506	824859
2	Start Point	805476	820800	14	Start Point	817537	820220
2	End Point	805476	826654	14	End Point	817537	824613
3	Start Point	806464	821150	15	Start Point	818568	820735
3	End Point	806464	822911	15	End Point	818568	824433
4	Start Point	807518	821500	16	Start Point	819532	821420
4	End Point	807518	829230	16	End Point	819532	824209
5	Start Point	808504	821850	17	Start Point	820451	822125
5	End Point	808504	828602	17	End Point	820451	823671
6	Start Point	809490	822150	18	Start Point	821504	822371
6	End Point	809490	825352	18	End Point	821504	823761
7	Start Point	810499	822000*	19	Start Point	822513	823268
7	End Point	810499	824613	19	End Point	822513	824321
8	Start Point	811508	821123	20	Start Point	823477	823402
8	End Point	811508	824254	20	End Point	823477	824613
9	Start Point	812516	821303	21	Start Point	805476	827081
9	End Point	812516	824254	21	End Point	805476	830562
10	Start Point	813525	821176	22	Start Point	806464	824033
10	End Point	813525	824657	22	End Point	806464	829598
11	Start Point	814556	818853	23	Start Point	814559	821739
11	End Point	814556	820992	23	End Point	814559	824768
12	Start Point	815542	818807	24	Start Point	805476	815900
12	End Point	815542	824882	24	End Point	805476	819100

2.4.5 Action & Limit Levels

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

28 July 2017 (Reference number: (19) in EP2/G/A/129 Pt. 8).

2.4.6 *Monitoring Schedule for the Reporting Month*

Dolphin monitoring was carried out on 3, 10, 12 and 16 December 2019 (*Appendix F*).

2.4.7 *Results and Observations*

A total of 262.02 km of survey effort was collected, with 100.0% of the total survey effort being conducted under favourable weather conditions (i.e. Beaufort Sea State 3 or below with good visibility) during the surveys in December 2019. Among the two areas, 95.80 km and 166.22 km of survey effort were collected from NEL and NWL survey areas, respectively. The total survey effort conducted on primary and secondary lines were 189.40 km and 72.62 km, respectively. The survey efforts are summarized in *Appendix H*.

Three (3) groups of thirteen (13) Chinese White Dolphins were sighted during the two sets of monitoring surveys in December 2019. The dolphin sighting was made in NWL. During the surveys in December 2019, all dolphin sightings were made during on-effort search and were sighted on the primary line. The dolphin was not associated with operating fishing vessel and was not sighted in the proximity of the Project's alignment. The distribution of dolphin sighting during the reporting month is shown in *Figure 2.3*.

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 December 2019 are shown in *Tables 2.5 & 2.6*.

Table 2.5 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: December 3rd / 10th	0.0	0.0
	Set 2: December 12th /16th	0.0	0.0
NWL	Set 1: December 3rd / 10th	0.0	0.0
	Set 2: December 12th /16th	5.0	21.8

Note: Dolphin Encounter Rates are deduced from the two sets of surveys (two surveys in each set) in December 2019 in Northeast (NEL) and Northwest Lantau (NWL)

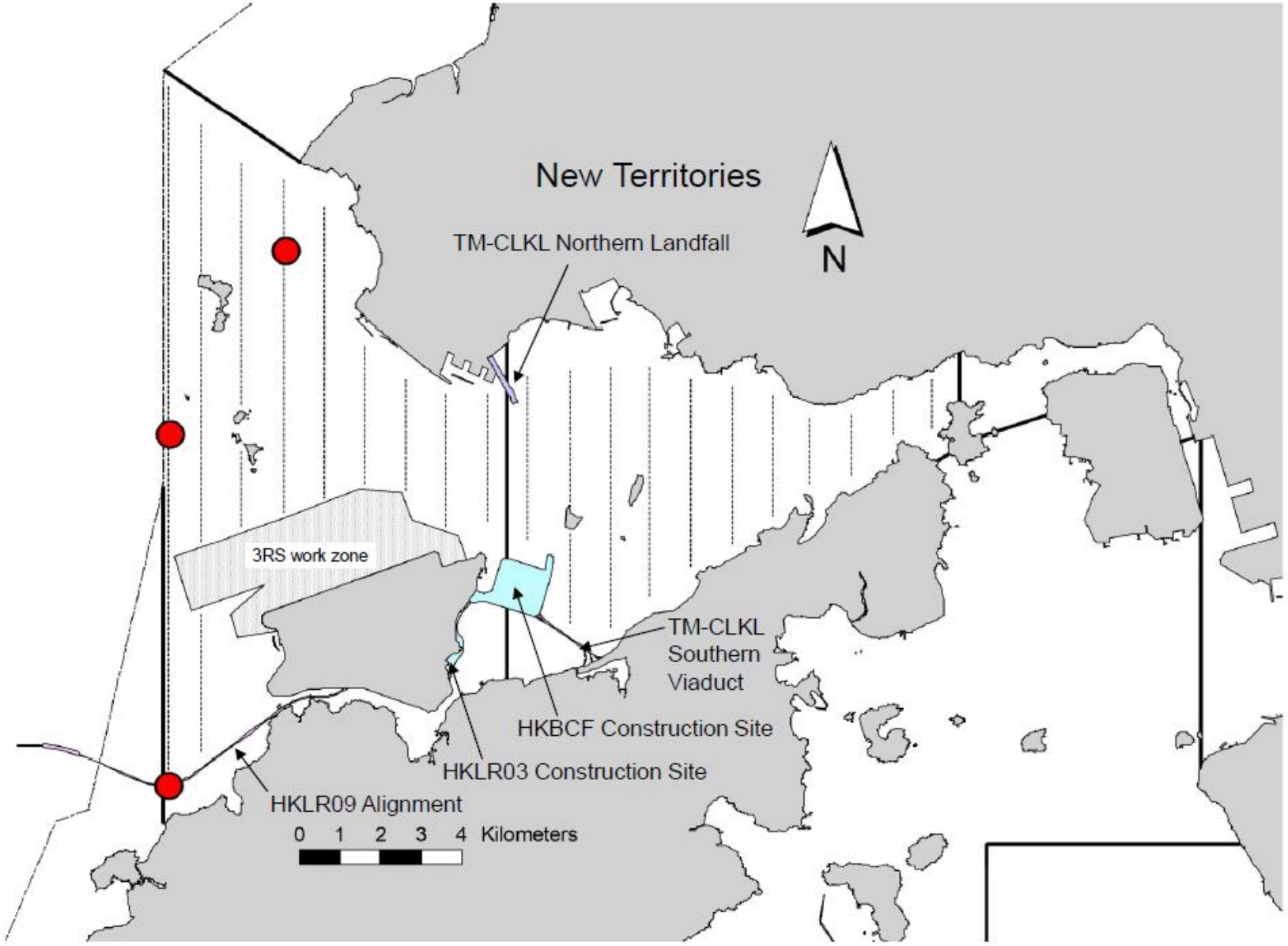


Figure 2.3

Date 18/12/2019

HY/2012/07 TM-CLKL Southern Connection Viaduct Section
The distribution of dolphin sightings during the reporting period
(Source: Adopted from Contract No. HY/2012/08 Monitoring Survey in December 2019)

Environmental Resources Management

Table 2.6 Monthly Average Encounter Rates

	Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)		Encounter rate (ANI) (no. of dolphins from all on-effort sightings per 100 km of survey effort)	
	Primary Lines Only	**Both Primary and Secondary Lines**	**Primary Lines Only**	**Both Primary and Secondary Lines**
Northeast Lantau	0.0	0.0	0.0	0.0
Northwest Lantau	2.5	1.8	10.9	7.8

Note: Overall dolphin encounter rates (sightings per 100 km of survey effort) from all four surveys are conducted in December 2019 on primary lines only as well as both primary lines and secondary lines in Northeast and Northwest Lantau

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

2.4.8 Marine Mammal Exclusion Zone Monitoring

No marine works were undertaken during the reporting period, therefore, daily 250 m marine mammal exclusion zone monitoring was not undertaken during the reporting period.

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

2.5 EM&A SITE INSPECTION

Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting month, five (5) site inspections were carried out on 2, 9, 16, 23 and 30 December 2019.

Key observations during the site inspections are summarized in *Table 2.7*.

Table 2.7 Specific Observations Identified during the Weekly Site Inspections in this Reporting Month

Inspection Date	Environmental Observations	Recommendations/ Remarks
2 December 2019	Pak Mong • Nil.	Pak Mong • Nil.
9 December 2019	Viaduct D • Nil.	Viaduct D • Nil.
16 December 2019	Pak Mong • Nil.	Pak Mong • Nil.
23 December 2019	Viaduct E • Nil.	Viaduct E • Nil.
30 December 2019	Viaduct E • Nil.	Viaduct E • Nil.

No particular observations were identified during environmental site inspections in the reporting month.

2.6 WASTE MANAGEMENT STATUS

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

Wastes generated during this reporting period include mainly construction wastes (inert and non-inert) and recyclable materials. Reference has been made to the waste flow table prepared by the Contractor (*Appendix J*). The quantities of different types of wastes are summarized in *Table 2.8*.

Table 2.8 Quantities of Different Waste Generated in the Reporting Period

Month/ Year	Inert C&D Materials [(a)] (m^3)	Imported Fill (m^3)	Inert Construction Waste Re-used (m^3)	Non-inert Construction Waste [(b)] (kg)	Recyclable Materials [(c)] (kg)	Chemical Wastes (kg)	Marine Sediment (m^3)		
							Category L	Category M (M_p & M_f)	Category H
December 2019	0	0	0	0	0	0	0	0	0

Notes:

(a) Inert construction wastes include hard rock and large broken concrete, and materials disposed as public fill.

(b) Non-inert construction wastes include general refuse disposed at landfill.

(c) Recyclable materials include metals, paper, cardboard, plastics, timber, felled trees and others.

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

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

2.7 ENVIRONMENTAL LICENSES AND PERMITS

The status of environmental licensing and permit is summarized in *Table 2.9* below.

Table 2.9 Summary of Environmental Licensing and Permit Status

License/ Permit	License or Permit No.	Date of Issue	Date of Expiry	License/ Permit Holder	Remarks
Environmental Permit	EP-354/2009/D	13 Mar 2015	N/A	HyD	Tuen Mun- Chek Lap Kok Link
Environmental Permit	EP-353/2009/K	11 Apr 2016	N/A	HyD	Hong Kong Boundary Crossing Facilities
Construction Dust Notification	361571	5 Jul 2013	N/A	GCL	
Construction Dust Notification	362093	17 Jul 2013	N/A	GCL	For Area 23
Chemical Waste Registration	5213-961-G2380-13	10 Oct 2013	N/A	GCL	Chemical waste produced in Contract No. HY/2012/07 (Area 1 adjacent to Cheng Tung Road, Siu Ho Wan)
Chemical Waste Registration	5213-961-G2380-14	10 Oct 2013	N/A	GCL	Chemical waste produced in Contract No. HY/2012/07 (Area 2 adjacent to Cheung Tung Road, Pak Mong Village)
Chemical Waste Registration	5213-974-G2588-03	4 Nov 2013	N/A	GCL	Chemical waste produced in Contract No. HY/2012/07 (WA5 adjacent to Cheung Tung Road, Yam O)
Chemical Waste Registration	5213-951-G2380-17	12 Jun 2014	N/A	GCL	Viaducts A, B, C, D & E
Construction Waste Disposal Account	7017735	10 Jul 2013	N/A	GCL	-
Construction Waste Disposal Account	7019470	3 Mar 2014	N/A	GCL	Vessel CHIT Account
Construction Noise Permit for night works and works in general holidays	GW-RS0507-19	13 June 2019	11 December 2019	GCL	Broad Permit for Whole Site Areas
Construction Noise Permit for night works and works in general holidays	GW-RS1108-19	12 December 2019	11 June 2020	GCL	Broad Permit for Whole Site Areas
Construction Noise Permit for night works and works in general holidays	GW-RW0266-19	21 June 2019	13 December 2019	GCL	General works at WA5
Construction Noise Permit for night works and works in general holidays	GW-RS0977-19	7 November 2019	16 December 2019	GCL	Defect Repairing at under-bridge of Viaduct A, B, C and D
Construction Noise Permit for night works and works in general holidays	GW-RS1067-19	2 December 2019	31 December 2019	GCL	Resurfacing Works at Pak Mong

2.8 IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

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

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

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

2.9 SUMMARY OF EXCEEDANCES OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMIT

Post-construction water quality monitoring was conducted in the reporting month.

No air quality and noise impact monitoring was conducted in the reporting period.

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

2.10 SUMMARY OF COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

The Environmental Complaint Handling Procedure is provided in *Figure 2.4*.

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

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

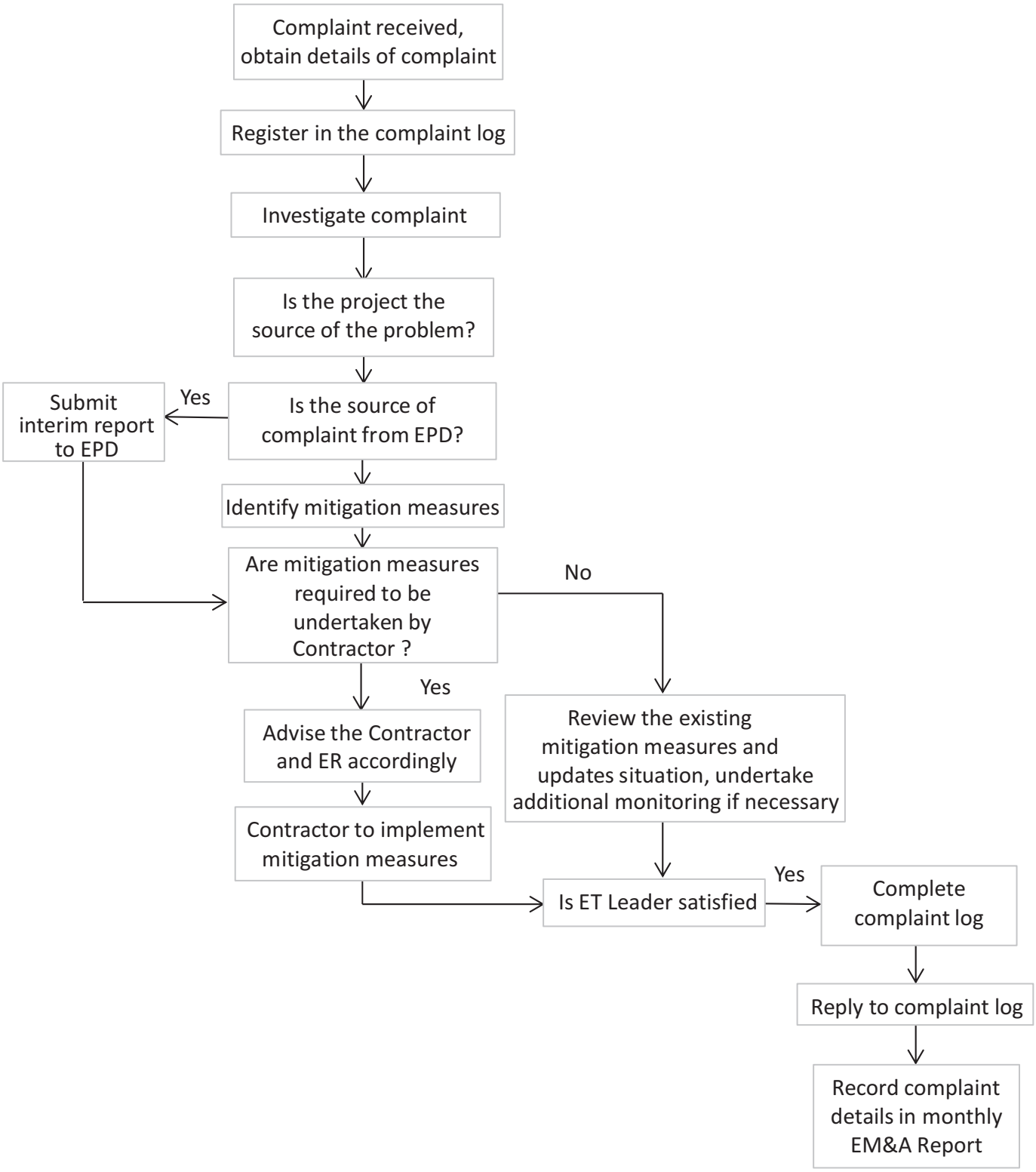


Figure 2.4 Environmental Complaint Handling Procedure

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DATE: 06/12/2013

Environmental Resources Management

ERM

3 FUTURE KEY ISSUES

3.1 CONSTRUCTION PROGRAMME FOR THE COMING MONTH

As informed by the Contractor, there are no major works to be undertaken in the next monitoring period of January 2020.

3.2 KEY ISSUES FOR THE COMING MONTH

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of January 2020 is mainly associated with waste management issues.

3.3 MONITORING SCHEDULE FOR THE COMING MONTH

The tentative schedules for environmental monitoring in January 2020 are provided in *Appendix F*.

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 CONCLUSIONS

This Seventy-fourth Monthly EM&A Report presents the findings of the EM&A activities undertaken during the period from 1 to 31 December 2019 in accordance with the Updated EM&A Manual and the requirements of the Environmental Permits (*EP-354/2009/D* and *EP-353/2009/K*).

No Air quality (1-hour TSP and 24-hour TSP) and noise monitoring were carried out in the reporting month. Post-construction water quality monitoring (DO, turbidity and SS) and dolphin monitoring were carried out in the reporting month.

Three (3) groups of thirteen (13) Chinese White Dolphins were sighted during the two sets of monitoring surveys in December 2019. During this month of dolphin monitoring, no unacceptable impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) was noticeable from general observations.

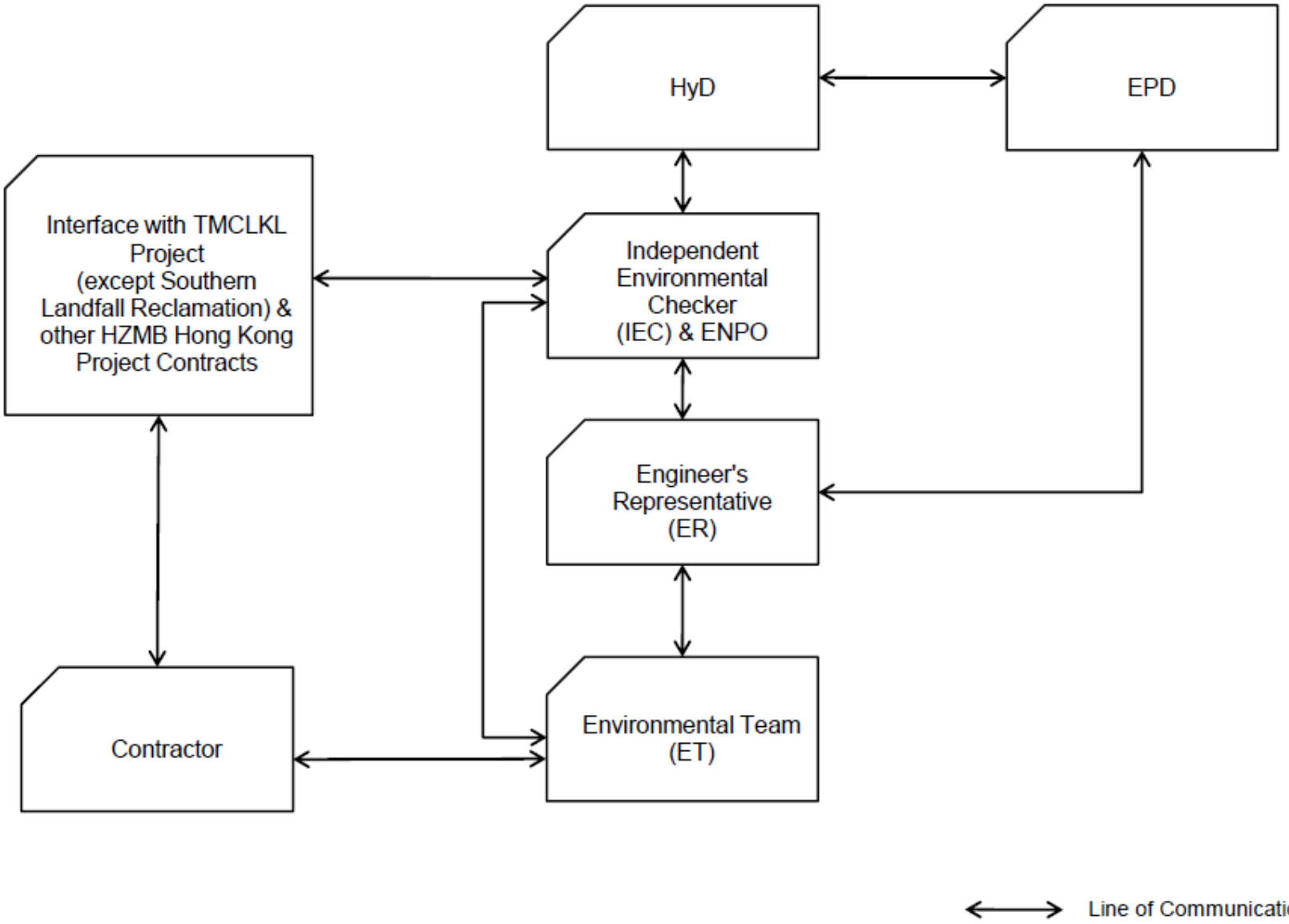
Environmental site inspection was carried out five (5) times in December 2019. Recommendations on remedial actions were given to the Contractor for the deficiencies identified during the site audits.

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

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

Appendix A

Project Organization for Environmental Works



Appendix A1

Contract No. HY/2012/07 Southern Connection Viaduct Section
Project Organization

DATE: 06/03/2013

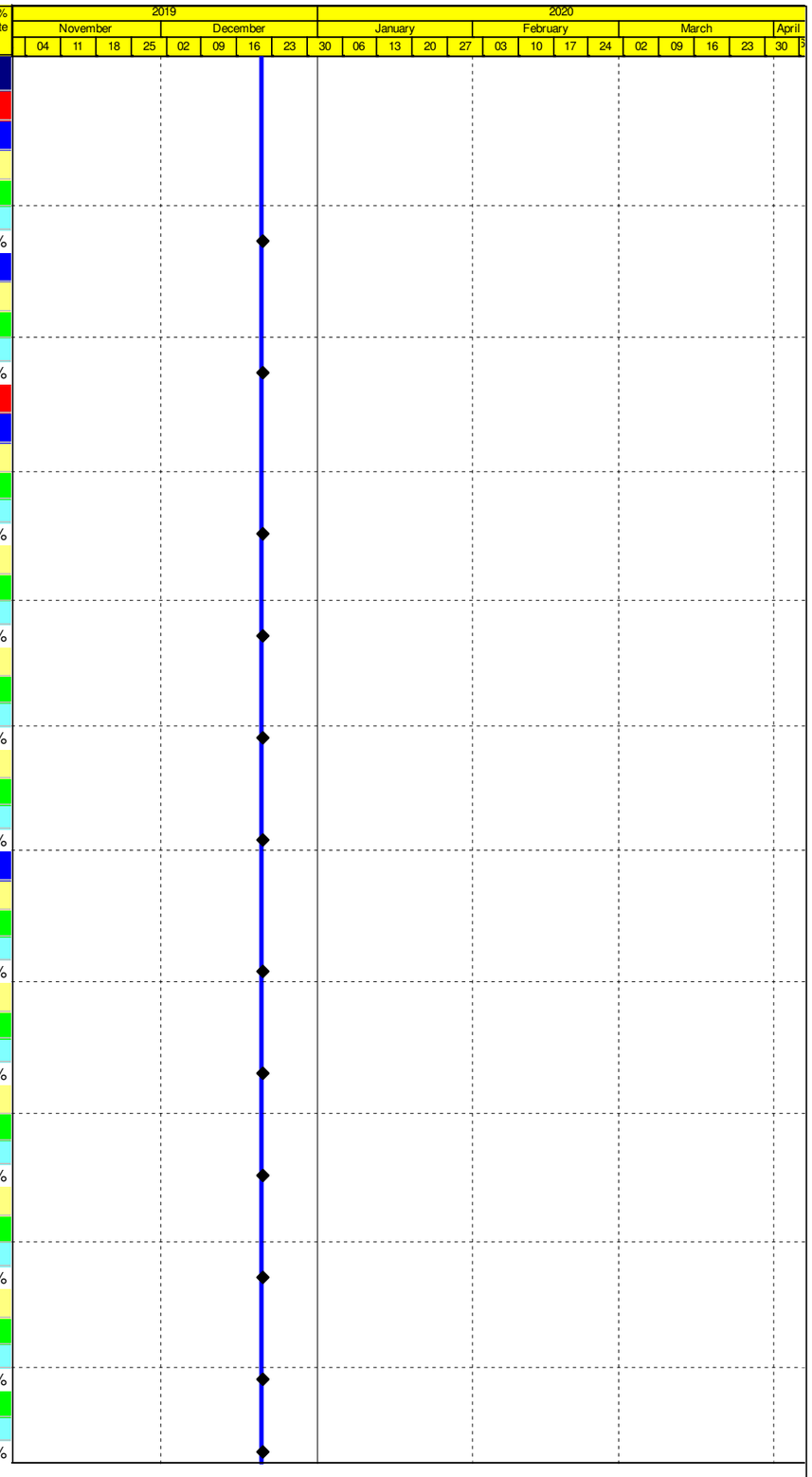
Environmental Resources Management

ERM

Appendix B

Three-Month Rolling Construction Programme

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete
HY/2012/07 Tuen Mun-Chek Lap Kok Link - Southern Connection									
Contract Milestones									
Key Dates for Completion									
Section of the Works									
Completion Date									
General									
KD20	KD20 - Section 14: Preserve & Protect Existing Trees (EoT 7-Apr-17)	0		0	21-Dec-19*		07-Apr-17	-987	0%
Portion Handover Dates									
Vacate Works Area									
Vacate Dates									
General									
VAC05	Vacate Works Area WA5 (Zone 5C) (Extension Requested)	0		0	21-Dec-19*		18-Mar-19	-277	0%
Construction									
Foundation & Substructure Works									
Ramp A									
Abutment & Approach Ramp A									
Ramp Finishes, E&M & Roadworks									
ARA-C7850	Ramp A - maintenance period completion	0		0	21-Dec-19*		21-Jun-19	-182	0%
Ramp B									
Abutment & Approach Ramp B									
Ramp Finishes, E&M & Roadworks									
ARB-C7850	Ramp B - maintenance period completion	0		0	21-Dec-19*		21-Jun-19	-182	0%
Ramp C									
Abutment & Approach Ramp C									
Ramp Finishes, E&M & Roadworks									
ARC-C7850	Ramp C- maintenance period completion	0		0	21-Dec-19*		09-Feb-19	-314	0%
Ramp D									
Abutment & Approach Ramp D									
Ramp Finishes, E&M & Roadworks									
ARD-C7850	Ramp D - maintenance period completion	0		0	21-Dec-19*		26-Apr-19	-238	0%
Superstructure & Associated Works									
Viaduct A									
Bridge A2									
Deck Fnishes, E&M and Roadworks									
VA2-C7850	Viaduct A - maintenance period completion	0		0	21-Dec-19*		21-Jun-19	-182	0%
Viaduct B									
Bridge B3									
Deck Fnishes, E&M and Roadworks									
VB3-C7850	Viaduct B - maintenance period completion	0		0	21-Dec-19*		20-Jun-19	-183	0%
Viaduct C									
Bridge C4									
Deck Fnishes, E&M and Roadworks									
VC4-C7850	Viaduct C - maintenance period completion	0		0	21-Dec-19*		09-Feb-19	-314	0%
Viaduct D									
Bridge D3									
Deck Fnishes, E&M and Roadworks									
VD3-C7850	Viaduct D - maintenance period completion	0		0	21-Dec-19*		26-Apr-19	-238	0%
Viaduct E									
Bridge E1									
Deck Fnishes, E&M and Roadworks									
VE1CD-C7850	Viaduct E1 - maintenance period completion	0		0	21-Dec-19*		21-Jun-19	-182	0%
Bridge E2									
Deck Fnishes, E&M and Roadworks									
VE23-C7850	Viaduct E2 - maintenance period completion	0		0	21-Dec-19*		18-Jun-19	-185	0%



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: TMCLK-DWPM-M79
Layout: J3518-DWP-3MRP Submission - M79
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

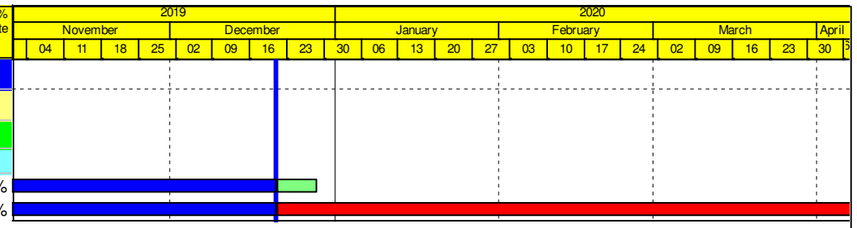
Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 1 of 2 Pages)
(Progress as of 21-Dec-19)

Date	Revision	Check...	Approved
21-Dec-...		Drago...	Brian Ho

DWG. No.:

J3518/GCL/PGM/3MRP-M79

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete
At-Grade Works & Miscellaneous Works									
Landscaping Works & Establishment Works									
Lanscape Softworks									
General									
LW00022	Testing & commissioning of Irrigation System	20	21-May-19 A	5	28-Dec-19	19-Jun-20	24-Jun-20	143	0%
LW00040	Establishment Works for Landscape Softworks	365	28-May-19 A	159	27-May-20	26-Jun-19	01-Dec-19	-178	100%



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: TMCLK-DWPM-M79
Layout: J3518-DWP-3MRP Submission - M79
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 2 of 2 Pages)
(Progress as of 21-Dec-19)

Date	Revision	Check...	Approved
21-Dec-...		Drago...	Brian Ho

DWG. No.:

J3518/GCL/PGM/3MRP-M79

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

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
AIR QUALITY									
4.8.1	3.8	An effective watering programme of eight daily watering with complete coverage, is estimated to reduce by 50%. This is recommended for all areas in order to reduce dust levels to a minimum;	All areas / throughout construction period	Contractor	TMEIA Avoid smoke impacts and disturbance		Y		n/a
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		n/a
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		n/a
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		n/a
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		n/a
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		n/a
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		n/a

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
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		n/a
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		n/a
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		n/a
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		n/a
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		n/a
NOISE									
5.11	Section 4	Noise monitoring	All existing representative sensitive receivers / during North Lantau Viaduct construction	Contractor	EM&A Manual		Y		n/a
WATER QUALITY									
General Marine Works									
6.10	-	Bored piling to be undertaken within a metal casing.	Marine viaducts of TM-CLKL and HKLR/ bored piling	Contractor	TM-EIAO		Y		Marine works under this Contract were completed.
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		Marine works under this Contract were completed.
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		
Temporary Staging work									
	5.2	Regular inspection for the accumulation of floating refuse and collection of floating refuse if required	During temporary staging works	Contractor			Y		Marine works under this Contract were completed.
	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		

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
	5.2	One additional water quality monitoring station is 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,	During temporary staging works	Contractor			Y		Marine works under this Contract were completed.
Land Works									
6.10	-	Wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Sewage effluent and discharges from on- site kitchen facilities shall be directed to Government sewer in accordance with the requirements of the WPCO or collected for disposal offsite. The use of soakaways shall be avoided.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Storm drainage shall be directed to storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels, earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Silt removal facilities, channels and manholes shall be maintained and any deposited silt and grit shall be removed regularly, including specifically at the onset of and after each rainstorm.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Temporary access roads should be surfaced with crushed stone or gravel.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
6.10	-	Open stockpiles of construction materials (e.g. aggregates and sand) on site should be covered with tarpaulin or similar fabric during rainstorms.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	5.8	Manholes (including any newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	All vehicles and plant should be cleaned before they leave the construction site to ensure that no earth, mud or debris is deposited by them on roads. A wheel washing bay should be provided at every site exit.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Wheel wash overflow shall be directed to silt removal facilities before being discharged to the storm drain.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Section of construction road between the wheel washing bay and the public road should be surfaced with crushed stone or coarse gravel.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Wastewater generated from concreting, plastering, internal decoration, cleaning work and other similar activities, shall be screened to remove large objects.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Vehicle and plant servicing areas, vehicle wash bays and lubrication facilities shall be located under roofed areas. The drainage in these covered areas shall be connected to foul sewers via a petrol interceptor in accordance with the requirements of the WPCO or collected for offsite disposal.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	The Contractor shall prepare an oil / chemical cleanup plan and ensure that leakages or spillages are contained and cleaned up immediately.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance.	All areas/ throughout construction period	Contractor	TM-EIAO Waste Disposal Ordinance		Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
6.10	-	All fuel tanks and chemical storage areas should be provided with locks and be sited on sealed areas. The storage areas should be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Roadside gullies to trap silt and grit shall be provided prior to discharging the stormwater into the marine environment. The sumps will be maintained and cleaned at regular intervals.	Roadside/design and operation	Design Consultant/ Contractor	TM-EIAO	Y		Y	✓
6.10	Section 5	All construction works shall be subject to routine audit to ensure implementation of all EIA recommendations and good working practice.	All areas/ throughout construction period	Contractor	EM&A Manual		Y		✓
Water Quality Monitoring									
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	Post construction period for water quality monitoring was completed on 23 December 2019.
ECOLOGY									
8.14	6.3	Specification for and implement pre, during and post construction dolphin abundance monitoring.	All Areas/Detailed Design/ during construction works/post construction	Design Consultant/ Contractor	TMEIA	Y	Y	Y	✓
8.14	6.3	Specification for bored piling monitoring	Detailed Design	Design Consultant	TMEIA	Y			n/a
8.14	6.3	Implement any recommendations of the bored piling	Southern marine	Contractor	TMEIA		Y		n/a

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		monitoring	viaduct/Throughout 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		n/a
8.15	6.3, 6.5	Specification and deployment of an artificial reef of an area of 3,600 m^2 in an area where fishing activities are prohibited.	Area of prohibited fishing activities/Detailed Design/towards end of construction period	TM-CLKL/ HKBCF Design Consultant/ TM-CLKL/ HKBCF Contractor	TMEIA	Y		Y	n/a To be enforced by AFCD.
8.14	6.3, 6.5	Specification and implementation of marine vessel control specifications	All areas/Detailed Design/during construction works	Design Consultant/ Contractor	TMEIA	Y	Y		✓
8.14	6.3, 6.5	Design and implementation of acoustic decoupling methods for marine bored piling and the whole lifespan of temporary staging works.	All areas/ Detailed Design/during marine bored piling and temporary staging works	Design Consultant/ Contractor	TMEIA	Y	Y		n/a
8.15	6.3, 6.4	Pre-construction phase survey and coral translocation	Tai Ho Wan (donar site) and Yam Tsui Wan (receptor site) /Detailed Design/Prior to construction	Design Consultant/ Contractor	TMEIA	Y	Y		n/a
8.15	6.5	Audit coral translocation success	Yam Tsui Wan (receptor site)/Post translocation	Contractor	TMEIA		Y		Completed in October 2014
7.13	6.5	Undertaken gabion wall works in	North Lantau slope	Contractor	TMEIA		Y		n/a

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		Stream NL1 in the dry season	works/dry season/construction phase						
7.13	6.5	The loss of habitat shall be supplemented by enhancement planting in accordance with the landscape mitigation schedule.	All areas / As soon as accessible	Contractor	TMEIA		Y		n/a. To be approved by AFCD/LCSD
7.13	6.5	Spoil heaps shall be covered at all times.	All areas / Throughout construction period	Contractor	TMEIA		Y		✓
7.13	6.5	Avoid damage and disturbance to the remaining and surrounding natural habitat	All areas / Throughout construction period	Contractor	TMEIA		Y		✓
7.13	6.5	Placement of equipment in designated areas within the existing disturbed land	All areas / Throughout construction period	Contractor	TMEIA		Y		✓
7.13	6.5	Disturbed areas to be reinstated immediately after completion of the works.	All areas / Throughout construction period	Contractor	TMEIA		Y		✓
7.13	6.5	Construction activities should be restricted to the proposed works boundary	All areas / Throughout construction period	Contractor	TMEIA		Y		✓
LANDSCAPE AND VISUAL									
10.9	7.6	Round angle, patterned finishes, and oval shaped pier were considered in the viaduct design, and further details will be developed under ACABAS submission (DM3)	All areas/detailed design	Design Consultant	TMEIA	Y			n/a
10.9	7.6	Details of the street furniture will be developed in the detailed design stage (DM4)	All areas/detailed design	Design Consultant	TMEIA	Y			n/a
10.9	7.6	Aesthetic design of the viaduct, retaining wall and other structures will be developed under ACABAS submission (DM5)	All areas/detailed design	Design Consultant	TMEIA	Y			n/a
10.9	7.6	Existing trees on boundary of the Project Area shall be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		n/a

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		working method statement for the protection of trees 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		n/a
10.9	7.6	Hillside and roadside screen planting to proposed roads, associated structures and slope works (CM3).	All areas/detailed design/ during construction/post construction	Design Consultant/	TMEIA	Y	Y		✓
10.9	7.6	Hydroseeding or sheeting of soil stockpiles with visually unobtrusive material (in earth tone) (CM4)	All areas/detailed design/ during construction/post construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Screening of construction works by hoardings around works area in visually unobtrusive colours, to screen works (CM5)	All areas/detailed design/ during construction/post construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Control night-time lighting and glare by hooding all lights (CM6)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Ensure no run-off into water body adjacent to the Project Area (CM7)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Avoidance of excessive height and bulk of buildings and structures (CM8)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
10.9	7.6	Recycle/Reuse all felled trees and vegetation, e.g. mulching (CM9)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		n/a No felled trees or vegetation suitable for recycle
10.9	7.6	Compensatory tree planting shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Felling Application process under ETWBTC 3/2006 (CM10).	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Re-vegetation of affected woodland/shrubland with native species (OM1)	All areas/detailed design/ during construction/ during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a. To be implemented by AFCD/HyD/ L CSD
10.9	7.6	Tall buffer screen tree / shrub / climber planting should be incorporated to soften hard engineering structures and facilities (OM2)	All areas/detailed design/ during construction/ during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a To be implemented by HyD/LCSD
10.9	7.6	Streetscape elements (e.g. paving, signage, street furniture, lighting etc.) shall be sensitively designed in a manner that responds to the local context, and minimises potential negative landscape and visual impacts. Lighting units should be directional and minimise unnecessary light spill (OM3)	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a. To be implemented by HyD/LCSD
10.9	7.6	Structure, ornamental tree / shrub / climber planting should be provided along roadside amenity strips, central dividers and newly formed slopes to enhance the townscape quality and further greenery enhancement	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a. To be implemented by

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

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

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		materials should avoid over-ordering and wastage.							
12.6	8.1	The Contractor should recycle as many C&D materials (this is a waste section) as possible on-site. The public fill and C&D waste should be segregated and stored in separate containers or skips to facilitate the reuse or recycling of materials and proper disposal. Where practicable, the concrete and masonry should be crushed and used as fill materials. Steel reinforcement bar should be collected for use by scrap steel mills. Different areas of the sites should be considered for segregation and storage activities.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	All falsework will be steel instead of wood.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Chemical waste producers should register with the EPD. Chemical waste should be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes as follows: - suitable for the substance to be held, resistant to corrosion, maintained in good conditions and securely closed; - Having a capacity of <450L unless the specifications have been approved by the EPD; and - Displaying a label in English and Chinese according to the instructions prescribed in Schedule 2 of the Regulations. Clearly labelled and used solely for the storage of chemical wastes; - Enclosed with at least 3 sides; - Impermeable floor and bund with capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in the area, whichever is greatest;	All areas / throughout construction period	Contractor	TMEIA		Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		- Adequate ventilation; - Sufficiently covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary); and - Incompatible materials are adequately separated.							
12.6	8.1	Waste oils, chemicals or solvents shall not be disposed of to drain,	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Adequate numbers of portable toilets should be provided for on-site workers. Portable toilets should be maintained in reasonable states, which will not deter the workers from utilising them.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Night soil should be regularly collected by licensed collectors.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	General refuse arising on-site should be stored in enclosed bins or compaction units separately from C&D and chemical wastes. Sufficient dustbins shall be provided for storage of waste as required under the Public Cleansing and Prevention of Nuisances By-laws. In addition, general refuse shall be cleared daily and shall be disposed of to the nearest licensed landfill or refuse transfer station. Burning of refuse on construction sites is prohibited.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	All waste containers shall be in a secure area on hard standing;	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedure, including waste reduction, reuse and recycling.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Office wastes can be reduced by recycling of	Site Offices/	Contractor	TMEIA		Y		✓

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

Notes:

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

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

Status:

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

Appendix D

Summary of Action and Limit Levels

Table D1 Action and Limit Levels for Impact Dolphin Monitoring

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

Notes:

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

Table D2 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

專業化驗有限公司
QUALITY PRO TEST-CONSULT LIMITED
Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong
Email: info@qualityprotest.com; Website: www.qualityprotest.com
Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI090154
Date of Issue : 02 October 2019

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Flat 2207, Yu Fun House,
Yu Chui Court, Shatin
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment	:	YSI ProDSS (Multi-Parameters)
Manufacturer	:	YSI (a xylem brand)
Serial Number	:	16H104233
Date of Received	:	Sep 27, 2019
Date of Calibration	:	Sep 27, 2019
Date of Next Calibration[a]	:	Dec 26, 2019

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

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

PART D – CALIBRATION RESULTS[b,c]

(1) pH at 25°C

Target (pH unit)	Displayed Reading[d] (pH Unit)	Tolerance[e](pH Unit)	Results
4.00	4.03	0.03	Satisfactory
7.42	7.44	0.02	Satisfactory
10.01	10.06	0.05	Satisfactory

Tolerance of pH should be less than ±0.20 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
10.0	10.0	0.0	Satisfactory
22.0	22.1	0.1	Satisfactory
42.0	42.2	0.2	Satisfactory

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

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

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

LEE Chun-ning, Desmond
Senior Chemist

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

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PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.78	0.75	-0.03	Satisfactory
3.69	3.98	0.29	Satisfactory
5.77	5.4	-0.37	Satisfactory
7.68	7.82	0.14	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.50 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)	Results
0.001	146.9	138.9	-5.45	Satisfactory
0.01	1412	1380	-2.27	Satisfactory
0.1	12890	12834	-0.43	Satisfactory
0.5	58670	57663	-1.72	Satisfactory
1.0	111900	109858	-1.82	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.16	1.60	Satisfactory
20	20.38	1.90	Satisfactory
30	30.47	1.57	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading[(f)] (NTU)	Tolerance[(g)] (%)	Results
0	0.11	--	Satisfactory
10	9.89	-1.1	Satisfactory
20	19.82	-0.9	Satisfactory
100	97.25	-2.8	Satisfactory
800	780.16	-2.5	Satisfactory

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

~ END OF REPORT ~

Remark(s): -

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

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

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI090155
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PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Flat 2207, Yu Fun House,
Yu Chui Court, Shatin
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment	:	YSI ProDSS (Multi-Parameters)
Manufacturer	:	YSI (a xylem brand)
Serial Number	:	17H105557
Date of Received	:	Sep 27, 2019
Date of Calibration	:	Sep 27, 2019
Date of Next Calibration[a]	:	Dec 26, 2019

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

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

PART D – CALIBRATION RESULTS[b,c]

(1) pH at 25°C

Target (pH unit)	Displayed Reading[d] (pH Unit)	Tolerance[e](pH Unit)	Results
4.00	4.05	0.05	Satisfactory
7.42	7.41	-0.01	Satisfactory
10.01	10.11	0.10	Satisfactory

Tolerance of pH should be less than ±0.20 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
10.0	10.0	0.0	Satisfactory
22.0	22.1	0.1	Satisfactory
42.0	42.1	0.1	Satisfactory

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

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Remark(s): -

[a] *The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.*
[b] *The results relate only to the calibrated equipment as received*
[c] *The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.*
[d] *"Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.*
[e] *The "Tolerance Limit" mentioned is referenced to YSI product specifications.*

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI090155
Date of Issue : 02 October 2019

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.78	0.72	-0.06	Satisfactory
3.69	4.01	0.32	Satisfactory
5.77	5.38	-0.39	Satisfactory
7.68	7.80	0.12	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.50 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)	Results
0.001	146.9	138.2	-5.92	Satisfactory
0.01	1412	1394	-1.27	Satisfactory
0.1	12890	12855	-0.27	Satisfactory
0.5	58670	57582	-1.85	Satisfactory
1.0	111900	109780	-1.89	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.08	0.80	Satisfactory
20	20.41	2.05	Satisfactory
30	30.52	1.73	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading[f] (NTU)	Tolerance[g] (%)	Results
0	0.10	--	Satisfactory
10	9.94	-0.6	Satisfactory
20	19.86	-0.7	Satisfactory
100	97.43	-2.6	Satisfactory
800	779.37	-2.6	Satisfactory

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

~ END OF REPORT ~

Remark(s): -

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

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

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI100183
Date of Issue : 30 October 2019

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Flat 2207, Yu Fun House,
Yu Chui Court, Shatin
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment	:	YSI 6920V2 (Multi-Parameters)
Manufacturer	:	YSI (a xylem brand)
Serial Number	:	00019CB2
Date of Received	:	Oct 28, 2019
Date of Calibration	:	Oct 28, 2019
Date of Next Calibration[a]	:	Jan 27, 2020

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

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

PART D – CALIBRATION RESULTS[b,c]

(1) pH at 25°C

Target (pH unit)	Displayed Reading[d] (pH Unit)	Tolerance[e](pH Unit)	Results
4.00	3.95	-0.05	Satisfactory
7.42	7.36	-0.06	Satisfactory
10.01	9.93	-0.08	Satisfactory

Tolerance of pH should be less than ±0.20 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
15.0	15.1	0.1	Satisfactory
25.0	24.9	-0.1	Satisfactory
35.0	34.9	-0.1	Satisfactory

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

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Remark(s): -

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

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI100183
Date of Issue : 30 October 2019

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
1.04	0.80	-0.24	Satisfactory
4.10	4.34	0.24	Satisfactory
5.92	5.94	0.02	Satisfactory
7.81	8.07	0.26	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.50 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)	Results
0.001	146.9	140.0	-4.70	Satisfactory
0.01	1412	1394	-1.27	Satisfactory
0.1	12890	12780	-0.85	Satisfactory
0.5	58670	57927	-1.27	Satisfactory
1.0	111900	110880	-0.91	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.90	-1.00	Satisfactory
20	19.88	-0.60	Satisfactory
30	29.89	-0.37	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading[f] (NTU)	Tolerance[g] (%)	Results
0	0.20	--	Satisfactory
10	9.98	-0.2	Satisfactory
20	19.88	-0.6	Satisfactory
100	100.20	0.2	Satisfactory
800	798.82	-0.1	Satisfactory

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

~ END OF REPORT ~

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

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI100182
Date of Issue : 30 October 2019

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Flat 2207, Yu Fun House,
Yu Chui Court, Shatin
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment	:	YSI 6920V2 (Multi-Parameters)
Manufacturer	:	YSI (a xylem brand)
Serial Number	:	0001C6A7
Date of Received	:	Oct 28, 2019
Date of Calibration	:	Oct 28, 2019
Date of Next Calibration[a]	:	Jan 27, 2020

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

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

PART D – CALIBRATION RESULTS[b,c]

(1) pH at 25°C

Target (pH unit)	Displayed Reading[d] (pH Unit)	Tolerance[e](pH Unit)	Results
4.00	4.07	0.07	Satisfactory
7.42	7.49	0.07	Satisfactory
10.01	10.05	0.04	Satisfactory

Tolerance of pH should be less than ±0.20 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
15.0	15.1	0.1	Satisfactory
25.0	25.0	0.0	Satisfactory
35.0	35.0	0.0	Satisfactory

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

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Remark(s): -

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(b) *The results relate only to the calibrated equipment as received*
(c) *The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.*
(d) *"Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.*
(e) *The "Tolerance Limit" mentioned is referenced to YSI product specifications.*

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AI100182
Date of Issue : 30 October 2019

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
1.04	0.90	-0.14	Satisfactory
4.10	4.40	0.3	Satisfactory
5.92	6.00	0.08	Satisfactory
7.81	8.10	0.29	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.50 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)	Results
0.001	146.9	156	6.19	Satisfactory
0.01	1412	1384	-1.98	Satisfactory
0.1	12890	12810	-0.62	Satisfactory
0.5	58670	57991	-1.16	Satisfactory
1.0	111900	110844	-0.94	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.08	0.80	Satisfactory
20	20.07	0.35	Satisfactory
30	30.1	0.33	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading[f] (NTU)	Tolerance[g] (%)	Results
0	0.50	--	Satisfactory
10	10.02	0.2	Satisfactory
20	20.47	2.3	Satisfactory
100	100.16	0.2	Satisfactory
800	798.93	-0.1	Satisfactory

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

~ END OF REPORT ~

Remark(s): -

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

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

Appendix F

EM&A Monitoring Schedules

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Dolphin Monitoring Survey Schedule (1 to 31 December 2019)

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

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Dolphin Monitoring Survey Schedule (1 to 31 January 2020)

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

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

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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-Dec	2-Dec	3-Dec	4-Dec	5-Dec	6-Dec	7-Dec
	ebb tide 2:35 - 6:05 flood tide 14:54 - 17:23		ebb tide 5:23 - 7:36 flood tide 12:59 - 16:29		ebb tide 6:16 - 9:46 flood tide 13:57 - 17:27	
8-Dec	9-Dec	10-Dec	11-Dec	12-Dec	13-Dec	14-Dec
	ebb tide 9:09 - 12:39 flood tide 15:09 - 18:39		ebb tide 10:33 - 14:03 flood tide 16:01 - 19:15		ebb tide 11:57 - 15:27 flood tide 7:15 - 10:11	
15-Dec	16-Dec	17-Dec	18-Dec	19-Dec	20-Dec	21-Dec
	ebb tide 14:15 - 17:45 flood tide 9:07 - 12:37		ebb tide 16:20 - 18:35 flood tide 10:59 - 14:29		ebb tide 6:35 - 8:51 flood tide 12:50 - 16:20	
22-Dec	23-Dec	24-Dec	25-Dec	26-Dec	27-Dec	28-Dec
	ebb tide 9:08 - 12:38 flood tide 14:48 - 18:18					
29-Dec	30-Dec	31-Dec				

Appendix G

Impact Water Quality Monitoring Results and Graphical Presentation

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	CS(Mf)3(N)	3:54	Surface	1	1	22.6	8.2	30.9	6.9	6.9	6.0	7.7	11.5	11.5
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	CS(Mf)3(N)	3:54	Surface	1	2	22.6	8.2	30.9	6.9		6.0		11.1	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	CS(Mf)3(N)	3:54	Middle	2	1	22.7	8.2	31.1	6.9		7.5		12.4	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	CS(Mf)3(N)	3:54	Middle	2	2	22.7	8.2	31.0	6.9		7.0		11.7	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	CS(Mf)3(N)	3:54	Bottom	3	1	22.8	8.2	31.4	6.9	6.9	9.5		11.6	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	CS(Mf)3(N)	3:54	Bottom	3	2	22.8	8.2	31.4	6.9		9.9		10.4	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	CS(Mf)3(N)	16:16	Surface	1	1	22.7	8.0	32.4	6.9	6.9	10.1	11.3	7.9	8.0
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	CS(Mf)3(N)	16:16	Surface	1	2	22.7	8.2	31.5	7.0		11.0		7.5	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	CS(Mf)3(N)	16:16	Middle	2	1	22.8	8.0	32.4	6.9		11.3		7.8	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	CS(Mf)3(N)	16:16	Middle	2	2	22.7	8.2	31.5	6.9		11.8		8.0	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	CS(Mf)3(N)	16:16	Bottom	3	1	22.8	8.0	32.4	6.9	6.9	11.4		8.6	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	CS(Mf)3(N)	16:16	Bottom	3	2	22.7	8.2	31.5	6.9		12.4		8.3	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	CS(Mf)5	2:50	Surface	1	1	23.4	8.1	32.5	6.1	6.1	3.6	4.1	8.5	7.9
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	CS(Mf)5	2:50	Surface	1	2	23.4	8.1	32.4	6.1		3.5		9.4	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	CS(Mf)5	2:50	Middle	2	1	23.6	8.1	32.7	6.0		4.5		7.7	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	CS(Mf)5	2:50	Middle	2	2	23.5	8.1	32.6	6.0		4.2		7.4	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	CS(Mf)5	2:50	Bottom	3	1	23.5	8.1	32.7	6.1	6.1	4.3		7.0	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	CS(Mf)5	2:50	Bottom	3	2	23.6	8.1	32.7	6.1		4.6		7.5	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	CS(Mf)5	17:13	Surface	1	1	23.4	8.0	33.8	6.2	6.2	2.6	3.9	10.3	8.1
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	CS(Mf)5	17:13	Surface	1	2	23.3	8.2	32.9	6.2		2.6		9.6	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	CS(Mf)5	17:13	Middle	2	1	23.4	8.0	33.8	6.2		2.9		7.9	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	CS(Mf)5	17:13	Middle	2	2	23.3	8.2	32.9	6.2		2.8		6.9	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	CS(Mf)5	17:13	Bottom	3	1	23.5	8.0	33.9	6.1	6.1	6.2		6.5	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	CS(Mf)5	17:13	Bottom	3	2	23.4	8.2	33.0	6.1		6.4		7.1	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS(Mf)16	4:38	Surface	1	1	22.7	8.3	31.9	6.7	6.7	6.1	6.2	8.3	8.7
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS(Mf)16	4:38	Surface	1	2	22.7	8.3	31.9	6.7		5.9		8.6	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS(Mf)16	4:38	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS(Mf)16	4:38	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS(Mf)16	4:38	Bottom	3	1	22.8	8.3	31.9	6.7	6.7	6.2		8.5	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS(Mf)16	4:38	Bottom	3	2	22.8	8.3	31.9	6.7		6.5		9.4	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS(Mf)16	15:29	Surface	1	1	22.8	8.0	32.5	6.9	7.0	8.8	11.6	9.1	9.2
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS(Mf)16	15:29	Surface	1	2	22.7	8.2	31.6	7.0		9.3		8.9	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS(Mf)16	15:29	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS(Mf)16	15:29	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS(Mf)16	15:29	Bottom	3	1	22.8	8.0	32.6	6.8	6.8	13.9		9.8	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS(Mf)16	15:29	Bottom	3	2	22.7	8.2	31.7	6.8		14.5		8.8	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS(Mf)9	5:19	Surface	1	1	22.5	8.3	32.0	6.8	6.8	5.1	5.1	12.4	13.7
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS(Mf)9	5:19	Surface	1	2	22.5	8.3	32.0	6.8		5.2		13.6	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS(Mf)9	5:19	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS(Mf)9	5:19	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS(Mf)9	5:19	Bottom	3	1	22.5	8.3	32.0	6.9	6.9	5.0		13.8	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS(Mf)9	5:19	Bottom	3	2	22.5	8.3	32.0	6.8		5.0		15.0	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS(Mf)9	14:56	Surface	1	1	22.8	8.0	32.7	6.9	7.0	9.3	9.8	13.9	13.2
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS(Mf)9	14:56	Surface	1	2	22.8	8.2	31.7	7.0		9.8		15.0	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS(Mf)9	14:56	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS(Mf)9	14:56	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS(Mf)9	14:56	Bottom	3	1	22.8	8.0	32.7	6.9	7.0	9.8		12.7	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS(Mf)9	14:56	Bottom	3	2	22.7	8.2	31.8	7.0		10.2		11.3	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS8(N)	5:11	Surface	1	1	22.9	8.3	31.9	6.7	6.7	7.4	7.4	13.1	11.0
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS8(N)	5:11	Surface	1	2	22.9	8.3	31.9	6.7		7.4		12.2	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS8(N)	5:11	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS8(N)	5:11	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS8(N)	5:11	Bottom	3	1	22.9	8.3	31.9	6.7	6.7	7.3		9.5	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	IS8(N)	5:11	Bottom	3	2	22.9	8.3	31.9	6.7		7.3		9.2	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS8(N)	15:03	Surface	1	1	22.9	8.0	32.6	7.1	7.1	6.5	6.7	13.8	13.7
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS8(N)	15:03	Surface	1	2	22.8	8.2	31.7	7.1		6.9		12.7	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS8(N)	15:03	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS8(N)	15:03	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS8(N)	15:03	Bottom	3	1	22.9	8.0	32.7	7.1	7.1	6.3		14.0	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	IS8(N)	15:03	Bottom	3	2	22.8	8.2	31.8	7.1		6.9		14.2	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	SR4(N2)	5:05	Surface	1	1	22.9	8.3	31.9	6.6	6.6	6.8	6.8	7.5	9.4
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	SR4(N2)	5:05	Surface	1	2	22.9	8.3	31.9	6.6		6.8		8.2	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	SR4(N2)	5:05	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	SR4(N2)	5:05	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	SR4(N2)	5:05	Bottom	3	1	22.9	8.3	31.9	6.7	6.7	6.8		10.7	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	SR4(N2)	5:05	Bottom	3	2	22.9	8.3	31.9	6.6		6.8		11.2	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	SR4(N2)	15:09	Surface	1	1	22.8	8.0	32.8	7.2	7.2	6.7	7.2	13.5	13.6
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	SR4(N2)	15:09	Surface	1	2	22.8	8.2	31.8	7.2		7.0		13.9	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	SR4(N2)	15:09	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	SR4(N2)	15:09	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	SR4(N2)	15:09	Bottom	3	1	22.8	8.0	32.8	7.1	7.2	7.5		14.0	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	SR4(N2)	15:09	Bottom	3	2	22.8	8.2	31.9	7.2		7.4		13.0	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	SR4a	4:58	Surface	1	1	22.9	8.3	32.0	6.9	6.9	8.8	8.9	9.1	10.9
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	SR4a	4:58	Surface	1	2	22.9	8.3	31.9	6.8		8.8		10.0	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	SR4a	4:58	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	SR4a	4:58	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	SR4a	4:58	Bottom	3	1	22.8	8.3	31.9	7.0	7.0	8.9		11.5	
TMCLKL	HY/2012/07	2019-12-02	Mid-Ebb	SR4a	4:58	Bottom	3	2	22.8	8.3	31.9	7.0		8.9		12.9	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	SR4a	15:16	Surface	1	1	22.7	8.0	32.8	7.1	7.1	7.0	7.2	13.1	11.7
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	SR4a	15:16	Surface	1	2	22.6	8.2	31.8	7.1		7.5		12.2	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	SR4a	15:16	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	SR4a	15:16	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	SR4a	15:16	Bottom	3	1	22.7	8.0	32.8	7.1	7.1	6.8		10.2	
TMCLKL	HY/2012/07	2019-12-02	Mid-Flood	SR4a	15:16	Bottom	3	2	22.6	8.2	31.8	7.1		7.4		11.2	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	CS(Mf)3(N)	6:21	Surface	1	1	20.9	8.0	33.1	7.1		3.7		9.1	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	CS(Mf)3(N)	6:21	Surface	1	2	20.9	8.1	31.9	7.1	7.1	3.9		10.4	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	CS(Mf)3(N)	6:21	Middle	2	1	20.9	8.0	33.2	7.1		4.2	4.7	10.6	11.0
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	CS(Mf)3(N)	6:21	Middle	2	2	20.9	8.1	32.3	7.1		4.6		11.8	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	CS(Mf)3(N)	6:21	Bottom	3	1	20.9	8.0	33.4	7.0	7.1	5.8		11.6	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	CS(Mf)3(N)	6:21	Bottom	3	2	20.9	8.1	32.4	7.1		5.8		12.6	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	CS(Mf)3(N)	14:13	Surface	1	1	20.8	8.1	32.3	7.3		6.9		9.2	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	CS(Mf)3(N)	14:13	Surface	1	2	20.9	8.0	33.2	7.3	7.3	6.2		10.7	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	CS(Mf)3(N)	14:13	Middle	2	1	20.8	8.1	32.3	7.3		7.5	7.4	9.3	10.8
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	CS(Mf)3(N)	14:13	Middle	2	2	20.9	8.0	33.2	7.2		7.1		10.8	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	CS(Mf)3(N)	14:13	Bottom	3	1	20.8	8.1	32.3	7.3	7.3	8.5		12.7	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	CS(Mf)3(N)	14:13	Bottom	3	2	20.9	8.0	33.2	7.2		8.3		11.8	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	CS(Mf)5	5:23	Surface	1	1	15.9	8.0	34.8	7.6		4.0		11.4	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	CS(Mf)5	5:23	Surface	1	2	15.9	8.1	33.7	7.6	7.5	4.6		10.7	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	CS(Mf)5	5:23	Middle	2	1	18.0	8.0	33.9	7.4		3.7	3.8	13.7	11.6
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	CS(Mf)5	5:23	Middle	2	2	18.0	8.1	32.9	7.4		3.8		12.2	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	CS(Mf)5	5:23	Bottom	3	1	18.0	8.0	33.7	7.4	7.4	3.2		11.5	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	CS(Mf)5	5:23	Bottom	3	2	18.0	8.1	32.8	7.4		3.4		10.0	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	CS(Mf)5	15:13	Surface	1	1	22.5	8.1	33.5	6.6		3.6		15.5	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	CS(Mf)5	15:13	Surface	1	2	22.6	8.0	34.5	6.6	6.6	3.4		13.8	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	CS(Mf)5	15:13	Middle	2	1	22.5	8.1	33.5	6.6		4.6	5.2	11.9	12.3
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	CS(Mf)5	15:13	Middle	2	2	22.6	8.0	34.5	6.6		4.3		10.3	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	CS(Mf)5	15:13	Bottom	3	1	22.5	8.1	33.5	6.6	6.6	7.9		10.6	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	CS(Mf)5	15:13	Bottom	3	2	22.6	8.0	34.5	6.5		7.2		11.6	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS(Mf)16	7:01	Surface	1	1	20.3	8.0	33.4	7.2		6.6		11.7	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS(Mf)16	7:01	Surface	1	2	20.2	8.1	32.4	7.2	7.2	6.9		10.5	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS(Mf)16	7:01	Middle	2	1							6.8		9.1
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS(Mf)16	7:01	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS(Mf)16	7:01	Bottom	3	1	20.2	8.0	33.2	7.2	7.3	7.1		7.5	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS(Mf)16	7:01	Bottom	3	2	20.1	8.1	32.2	7.3		6.7		6.6	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS(Mf)16	13:32	Surface	1	1	21.8	8.1	32.7	6.8		8.6		16.5	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS(Mf)16	13:32	Surface	1	2	21.9	8.0	33.7	6.8	6.8	7.9		15.2	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS(Mf)16	13:32	Middle	2	1							8.2		14.3
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS(Mf)16	13:32	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS(Mf)16	13:32	Bottom	3	1	21.8	8.1	32.8	6.9	6.9	8.2		13.5	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS(Mf)16	13:32	Bottom	3	2	21.9	8.0	33.7	6.8		8.1		11.9	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS(Mf)9	7:23	Surface	1	1									
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS(Mf)9	7:23	Surface	1	2					7.1				
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS(Mf)9	7:23	Middle	2	1	19.8	8.0	32.9	7.0		5.9	5.9	11.8	11.0
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS(Mf)9	7:23	Middle	2	2	19.8	8.1	31.9	7.1		5.8		10.2	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS(Mf)9	7:23	Bottom	3	1									
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS(Mf)9	7:23	Bottom	3	2					#DIV/0!				

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS(Mf)9	12:59	Surface	1	1									
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS(Mf)9	12:59	Surface	1	2					6.9				
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS(Mf)9	12:59	Middle	2	1	21.8	8.0	32.7	6.9		7.4	7.1	8.0	8.5
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS(Mf)9	12:59	Middle	2	2	21.8	7.9	33.7	6.9		6.7		9.0	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS(Mf)9	12:59	Bottom	3	1					#DIV/0!				
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS(Mf)9	12:59	Bottom	3	2									
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS8(N)	7:16	Surface	1	1	20.3	8.0	33.1	7.1		5.8		14.1	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS8(N)	7:16	Surface	1	2	20.3	8.1	32.2	7.1	7.1	6.0		14.3	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS8(N)	7:16	Middle	2	1							5.7		13.2
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS8(N)	7:16	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS8(N)	7:16	Bottom	3	1	19.4	8.0	33.7	7.3	7.4	5.5		12.6	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	IS8(N)	7:16	Bottom	3	2	19.3	8.1	32.8	7.4		5.3		11.9	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS8(N)	13:08	Surface	1	1	21.5	8.1	32.5	6.9		7.1		11.2	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS8(N)	13:08	Surface	1	2	21.5	8.0	33.5	6.8	6.9	6.6		11.5	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS8(N)	13:08	Middle	2	1							7.1		10.4
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS8(N)	13:08	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS8(N)	13:08	Bottom	3	1	21.5	8.1	32.6	6.9	6.9	7.7		9.2	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	IS8(N)	13:08	Bottom	3	2	21.6	8.0	33.5	6.9		7.1		9.5	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	SR4(N2)	7:11	Surface	1	1	20.2	8.0	33.3	7.1		5.5		13.8	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	SR4(N2)	7:11	Surface	1	2	20.1	8.1	32.4	7.1	7.1	5.4		14.7	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	SR4(N2)	7:11	Middle	2	1							5.5		15.3
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	SR4(N2)	7:11	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	SR4(N2)	7:11	Bottom	3	1	20.2	8.0	33.2	7.0	7.1	5.6		17.2	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	SR4(N2)	7:11	Bottom	3	2	20.2	8.1	32.2	7.1		5.4		15.4	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	SR4(N2)	13:15	Surface	1	1	21.2	8.1	32.2	7.0		6.6		11.5	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	SR4(N2)	13:15	Surface	1	2	21.3	8.0	33.2	6.9	7.0	6.1		11.0	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	SR4(N2)	13:15	Middle	2	1							6.5		11.1
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	SR4(N2)	13:15	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	SR4(N2)	13:15	Bottom	3	1	21.2	8.1	32.2	7.0	7.0	7.1		10.2	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	SR4(N2)	13:15	Bottom	3	2	21.3	8.0	33.2	6.9		6.3		11.8	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	SR4a	7:08	Surface	1	1	20.5	8.0	33.2	7.1		5.3		11.1	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	SR4a	7:08	Surface	1	2	20.4	8.1	32.2	7.2	7.2	6.1		10.1	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	SR4a	7:08	Middle	2	1							6.2		11.9
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	SR4a	7:08	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	SR4a	7:08	Bottom	3	1	18.9	8.0	33.3	7.2	7.3	6.8		12.3	
TMCLKL	HY/2012/07	2019-12-04	Mid-Ebb	SR4a	7:08	Bottom	3	2	18.8	8.1	32.3	7.3		6.6		14.0	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	SR4a	13:20	Surface	1	1	21.5	8.1	32.4	6.9		6.6		12.1	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	SR4a	13:20	Surface	1	2	21.6	8.0	33.4	6.8	6.9	6.4		10.8	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	SR4a	13:20	Middle	2	1							7.7		11.3
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	SR4a	13:20	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	SR4a	13:20	Bottom	3	1	21.6	8.1	32.6	6.8	6.8	9.0		10.5	
TMCLKL	HY/2012/07	2019-12-04	Mid-Flood	SR4a	13:20	Bottom	3	2	21.7	8.0	33.6	6.8		8.8		11.9	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	CS(Mf)3(N)	7:52	Surface	1	1	20.1	8.1	34.1	7.0	7.1	5.2	5.7	10.1	7.8
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	CS(Mf)3(N)	7:52	Surface	1	2	20.0	8.1	33.1	7.1		5.7		9.6	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	CS(Mf)3(N)	7:52	Middle	2	1	20.1	8.1	34.1	7.0		5.1		7.3	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	CS(Mf)3(N)	7:52	Middle	2	2	20.0	8.1	33.1	7.1		5.8		7.1	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	CS(Mf)3(N)	7:52	Bottom	3	1	19.9	8.1	34.1	7.1	7.1	5.8		6.1	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	CS(Mf)3(N)	7:52	Bottom	3	2	19.9	8.2	33.1	7.1		6.3		6.3	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	CS(Mf)3(N)	15:19	Surface	1	1	20.2	8.1	33.2	7.3	7.3	7.2	7.1	12.1	12.8
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	CS(Mf)3(N)	15:19	Surface	1	2	20.2	8.0	34.2	7.2		6.7		12.8	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	CS(Mf)3(N)	15:19	Middle	2	1	20.2	8.1	33.2	7.3		7.3		12.9	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	CS(Mf)3(N)	15:19	Middle	2	2	20.2	8.0	34.2	7.2		6.8		12.4	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	CS(Mf)3(N)	15:19	Bottom	3	1	20.1	8.1	33.2	7.3	7.3	7.6		13.6	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	CS(Mf)3(N)	15:19	Bottom	3	2	20.2	8.1	34.1	7.2		7.0		13.0	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	CS(Mf)5	6:56	Surface	1	1	21.8	8.1	33.6	6.6	6.6	2.4	2.4	7.8	0.8
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	CS(Mf)5	6:56	Surface	1	2	21.8	8.0	34.6	6.6		2.4		8.0	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	CS(Mf)5	6:56	Middle	2	1	21.8	8.1	33.6	6.6		2.4		7.1	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	CS(Mf)5	6:56	Middle	2	2	21.8	8.0	34.6	6.6		2.4		7.5	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	CS(Mf)5	6:56	Bottom	3	1	21.8	8.1	33.6	6.6	6.6	2.5		5.3	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	CS(Mf)5	6:56	Bottom	3	2	21.8	8.0	34.6	6.6		2.3		5.8	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	CS(Mf)5	16:18	Surface	1	1	21.7	8.1	33.6	6.6	6.6	7.1	8.7	11.1	0.4
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	CS(Mf)5	16:18	Surface	1	2	21.8	8.0	34.5	6.5		7.0		10.6	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	CS(Mf)5	16:18	Middle	2	1	21.7	8.1	33.6	6.6		9.0		9.8	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	CS(Mf)5	16:18	Middle	2	2	21.8	8.0	34.5	6.5		8.3		9.5	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	CS(Mf)5	16:18	Bottom	3	1	21.7	8.1	33.6	6.5	6.5	10.8		8.5	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	CS(Mf)5	16:18	Bottom	3	2	21.8	8.0	34.5	6.5		9.8		7.8	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS(Mf)16	8:40	Surface	1	1	20.1	8.1	33.1	6.9	6.9	6.1	7.2	12.2	11.4
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS(Mf)16	8:40	Surface	1	2	20.1	8.0	34.1	6.9		5.5		12.5	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS(Mf)16	8:40	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS(Mf)16	8:40	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS(Mf)16	8:40	Bottom	3	1	20.1	8.1	33.1	6.9	6.9	8.7		10.2	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS(Mf)16	8:40	Bottom	3	2	20.2	8.0	34.1	6.9		8.4		10.6	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS(Mf)16	14:35	Surface	1	1	20.9	8.1	33.4	7.0	7.0	5.8	6.9	9.5	12.1
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS(Mf)16	14:35	Surface	1	2	21.0	8.0	34.4	7.0		5.6		10.0	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS(Mf)16	14:35	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS(Mf)16	14:35	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS(Mf)16	14:35	Bottom	3	1	20.9	8.1	33.4	7.0	7.0	8.4		13.9	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS(Mf)16	14:35	Bottom	3	2	21.0	8.0	34.4	6.9		7.7		15.0	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS(Mf)9	9:18	Surface	1	1	19.5	8.1	32.5	7.1	7.1	7.2	7.5	14.6	13.3
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS(Mf)9	9:18	Surface	1	2	19.5	8.1	33.5	7.1		6.9		15.1	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS(Mf)9	9:18	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS(Mf)9	9:18	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS(Mf)9	9:18	Bottom	3	1	19.5	8.2	32.5	7.1	7.1	8.3		11.7	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS(Mf)9	9:18	Bottom	3	2	19.6	8.1	33.5	7.1		7.5		11.9	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS(Mf)9	13:59	Surface	1	1	20.0	8.1	32.9	7.1		9.8		16.7	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS(Mf)9	13:59	Surface	1	2	20.0	8.0	33.8	7.1	7.1	8.9		16.7	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS(Mf)9	13:59	Middle	2	1							9.8		1.0
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS(Mf)9	13:59	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS(Mf)9	13:59	Bottom	3	1	19.9	8.1	32.9	7.1	7.1	10.5		13.3	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS(Mf)9	13:59	Bottom	3	2	20.0	8.0	33.8	7.1		9.8		13.9	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS8(N)	9:08	Surface	1	1	19.3	8.2	32.5	7.1		9.2		11.6	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS8(N)	9:08	Surface	1	2	19.3	8.1	33.5	7.1	7.1	8.4		11.7	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS8(N)	9:08	Middle	2	1							8.6		10.7
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS8(N)	9:08	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS8(N)	9:08	Bottom	3	1	19.4	8.2	32.5	7.1	7.1	8.5		9.8	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	IS8(N)	9:08	Bottom	3	2	19.4	8.1	33.5	7.0		8.4		9.6	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS8(N)	14:08	Surface	1	1	20.0	8.1	32.8	7.2		5.4		10.6	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS8(N)	14:08	Surface	1	2	20.0	8.0	33.8	7.2	7.2	5.1		10.6	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS8(N)	14:08	Middle	2	1							6.2		9.6
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS8(N)	14:08	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS8(N)	14:08	Bottom	3	1	20.1	8.1	33.0	7.2	7.2	7.3		8.5	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	IS8(N)	14:08	Bottom	3	2	20.2	8.0	34.0	7.1		6.8		8.8	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	SR4(N2)	8:58	Surface	1	1	19.4	8.1	32.4	6.7		5.6		13.9	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	SR4(N2)	8:58	Surface	1	2	19.5	8.0	33.4	6.7	6.7	5.4		13.4	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	SR4(N2)	8:58	Middle	2	1							5.3		12.4
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	SR4(N2)	8:58	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	SR4(N2)	8:58	Bottom	3	1	19.6	8.1	32.6	6.7	6.7	5.3		11.1	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	SR4(N2)	8:58	Bottom	3	2	19.7	8.0	33.5	6.7		5.0		11.0	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	SR4(N2)	14:16	Surface	1	1	19.9	8.1	32.5	7.1		5.2		7.4	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	SR4(N2)	14:16	Surface	1	2	19.9	8.0	33.5	7.0	7.1	4.8		7.0	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	SR4(N2)	14:16	Middle	2	1							6.3		8.9
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	SR4(N2)	14:16	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	SR4(N2)	14:16	Bottom	3	1	20.0	8.1	33.0	7.0	7.0	7.7		11.1	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	SR4(N2)	14:16	Bottom	3	2	20.0	8.0	34.0	7.0		7.4		10.1	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	SR4a	8:52	Surface	1	1	19.8	8.1	32.9	6.8		4.8		13.1	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	SR4a	8:52	Surface	1	2	19.9	8.0	33.9	6.8	6.8	4.6		12.5	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	SR4a	8:52	Middle	2	1							5.2		12.2
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	SR4a	8:52	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	SR4a	8:52	Bottom	3	1	19.9	8.1	32.9	6.8	6.8	5.8		11.3	
TMCLKL	HY/2012/07	2019-12-06	Mid-Ebb	SR4a	8:52	Bottom	3	2	20.0	8.0	33.9	6.8		5.6		11.9	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	SR4a	14:23	Surface	1	1	20.1	8.1	32.9	7.2		9.1		13.2	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	SR4a	14:23	Surface	1	2	20.1	8.0	33.8	7.1	7.2	8.6		13.0	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	SR4a	14:23	Middle	2	1							8.3		11.9
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	SR4a	14:23	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	SR4a	14:23	Bottom	3	1	20.1	8.1	33.1	7.0	7.0	8.2		10.3	
TMCLKL	HY/2012/07	2019-12-06	Mid-Flood	SR4a	14:23	Bottom	3	2	20.1	8.0	34.0	7.0		7.4		10.9	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	CS(Mf)3(N)	10:33	Surface	1	1	19.3	8.0	34.6	7.4		5.2		6.2	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	CS(Mf)3(N)	10:33	Surface	1	2	19.2	8.2	33.6	7.4	7.4	5.7		6.8	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	CS(Mf)3(N)	10:33	Middle	2	1	19.2	8.0	34.6	7.3		5.9	6.1	6.9	6.4
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	CS(Mf)3(N)	10:33	Middle	2	2	19.2	8.2	33.6	7.3		6.2		6.1	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	CS(Mf)3(N)	10:33	Bottom	3	1	19.2	8.0	34.6	7.3	7.3	6.1		5.7	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	CS(Mf)3(N)	10:33	Bottom	3	2	19.1	8.2	33.6	7.3		7.2		6.6	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	CS(Mf)3(N)	16:13	Surface	1	1	19.6	8.2	33.5	7.6		6.0		9.1	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	CS(Mf)3(N)	16:13	Surface	1	2	19.7	8.0	34.5	7.6	7.6	5.2		8.1	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	CS(Mf)3(N)	16:13	Middle	2	1	19.6	8.2	33.5	7.6		6.0	5.5	10.0	10.4
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	CS(Mf)3(N)	16:13	Middle	2	2	19.7	8.0	34.5	7.5		5.2		9.0	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	CS(Mf)3(N)	16:13	Bottom	3	1	19.6	8.2	33.5	7.6	7.6	5.5		12.7	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	CS(Mf)3(N)	16:13	Bottom	3	2	19.7	8.0	34.6	7.5		4.9		13.7	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	CS(Mf)5	9:40	Surface	1	1	20.7	8.2	33.6	6.7		3.0		4.4	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	CS(Mf)5	9:40	Surface	1	2	20.7	8.0	34.6	6.6	6.7	2.8		4.4	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	CS(Mf)5	9:40	Middle	2	1	20.6	8.2	33.6	6.7		3.2	3.0	5.4	4.9
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	CS(Mf)5	9:40	Middle	2	2	20.7	8.0	34.6	6.6		3.0		4.5	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	CS(Mf)5	9:40	Bottom	3	1	20.6	8.2	33.6	6.7	6.7	3.3		4.8	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	CS(Mf)5	9:40	Bottom	3	2	20.7	8.0	34.6	6.6		2.8		5.8	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	CS(Mf)5	17:10	Surface	1	1	20.8	8.0	34.5	6.7		5.3		6.8	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	CS(Mf)5	17:10	Surface	1	2	20.7	8.2	33.6	6.7	6.7	5.1		5.8	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	CS(Mf)5	17:10	Middle	2	1	20.7	8.0	34.6	6.6		5.2	5.8	7.7	1.6
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	CS(Mf)5	17:10	Middle	2	2	20.7	8.2	33.6	6.7		6.0		8.1	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	CS(Mf)5	17:10	Bottom	3	1	20.7	8.0	34.6	6.7	6.7	6.1		8.2	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	CS(Mf)5	17:10	Bottom	3	2	20.7	8.2	33.6	6.7		6.9		7.8	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS(Mf)16	11:12	Surface	1	1	19.7	8.2	33.4	7.1		8.4		3.5	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS(Mf)16	11:12	Surface	1	2	19.8	8.0	34.4	7.1	7.1	8.9		4.5	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS(Mf)16	11:12	Middle	2	1							9.5		4.7
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS(Mf)16	11:12	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS(Mf)16	11:12	Bottom	3	1	19.7	8.2	33.4	7.2	7.2	10.1		5.5	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS(Mf)16	11:12	Bottom	3	2	19.8	8.0	34.4	7.2		10.6		5.2	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS(Mf)16	15:37	Surface	1	1	20.5	8.0	34.5	7.0		6.0		5.1	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS(Mf)16	15:37	Surface	1	2	20.4	8.2	33.5	7.0	7.0	6.5		5.1	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS(Mf)16	15:37	Middle	2	1							7.1		5.1
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS(Mf)16	15:37	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS(Mf)16	15:37	Bottom	3	1	20.4	8.0	34.6	7.0	7.0	7.7		5.2	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS(Mf)16	15:37	Bottom	3	2	20.4	8.2	33.5	7.0		8.3		4.8	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS(Mf)9	11:42	Surface	1	1	19.7	8.2	33.4	7.1		4.9		5.4	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS(Mf)9	11:42	Surface	1	2	19.8	8.0	34.4	7.1	7.1	4.4		4.4	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS(Mf)9	11:42	Middle	2	1							4.7		4.9
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS(Mf)9	11:42	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS(Mf)9	11:42	Bottom	3	1	19.5	8.2	33.3	7.3	7.3	5.1		4.8	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS(Mf)9	11:42	Bottom	3	2	19.6	8.0	34.4	7.2		4.5		5.1	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS(Mf)9	15:10	Surface	1	1	19.8	8.0	34.3	7.3	7.4	6.0	6.5	6.6	0.7
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS(Mf)9	15:10	Surface	1	2	19.7	8.2	33.3	7.4		6.6		5.7	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS(Mf)9	15:10	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS(Mf)9	15:10	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS(Mf)9	15:10	Bottom	3	1	19.8	8.0	34.3	7.3	7.4	6.2		6.5	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS(Mf)9	15:10	Bottom	3	2	19.7	8.2	33.3	7.4		7.0		6.8	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS8(N)	11:34	Surface	1	1	19.8	8.2	33.5	7.2	7.2	5.6	5.7	4.4	3.7
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS8(N)	11:34	Surface	1	2	19.9	8.0	34.5	7.1		5.1		3.4	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS8(N)	11:34	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS8(N)	11:34	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS8(N)	11:34	Bottom	3	1	19.7	8.2	33.4	7.2	7.2	6.4		3.9	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	IS8(N)	11:34	Bottom	3	2	19.8	8.0	34.4	7.1		5.7		2.9	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS8(N)	15:16	Surface	1	1	20.3	8.0	34.5	7.0	7.0	10.0	10.2	4.7	5.0
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS8(N)	15:16	Surface	1	2	20.2	8.2	33.5	7.0		11.0		5.3	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS8(N)	15:16	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS8(N)	15:16	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS8(N)	15:16	Bottom	3	1	20.3	8.0	34.5	7.1	7.1	9.5		4.4	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	IS8(N)	15:16	Bottom	3	2	20.2	8.2	33.5	7.1		10.3		5.4	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	SR4(N2)	11:28	Surface	1	1	19.6	8.2	33.2	7.1	7.1	5.1	4.5	5.2	7.9
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	SR4(N2)	11:28	Surface	1	2	19.6	8.0	34.2	7.1		4.7		11.2	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	SR4(N2)	11:28	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	SR4(N2)	11:28	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	SR4(N2)	11:28	Bottom	3	1	19.7	8.2	33.3	7.2	7.2	4.3		5.2	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	SR4(N2)	11:28	Bottom	3	2	19.7	8.0	34.3	7.1		4.0		10.1	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	SR4(N2)	15:22	Surface	1	1	20.2	8.0	34.4	7.3	7.3	3.4	3.4	6.2	5.2
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	SR4(N2)	15:22	Surface	1	2	20.1	8.2	33.4	7.3		3.5		5.2	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	SR4(N2)	15:22	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	SR4(N2)	15:22	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	SR4(N2)	15:22	Bottom	3	1	20.2	8.0	34.5	7.4	7.4	3.3		4.5	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	SR4(N2)	15:22	Bottom	3	2	20.1	8.2	33.5	7.4		3.4		4.8	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	SR4a	11:22	Surface	1	1	20.1	8.2	33.5	7.1	7.1	3.6	3.6	5.4	5.1
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	SR4a	11:22	Surface	1	2	20.1	8.0	34.5	7.1		3.3		5.4	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	SR4a	11:22	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	SR4a	11:22	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	SR4a	11:22	Bottom	3	1	19.9	8.2	33.4	7.2	7.2	4.0		4.8	
TMCLKL	HY/2012/07	2019-12-09	Mid-Ebb	SR4a	11:22	Bottom	3	2	19.9	8.0	34.5	7.2		3.6		4.8	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	SR4a	15:26	Surface	1	1	20.6	8.0	34.4	7.2	7.3	2.9	3.3	4.2	4.0
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	SR4a	15:26	Surface	1	2	20.6	8.2	33.4	7.3		3.0		3.2	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	SR4a	15:26	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	SR4a	15:26	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	SR4a	15:26	Bottom	3	1	20.2	8.0	34.5	7.3	7.3	3.5		4.6	
TMCLKL	HY/2012/07	2019-12-09	Mid-Flood	SR4a	15:26	Bottom	3	2	20.2	8.2	33.4	7.3		3.6		4.0	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	CS(Mf)3(N)	11:52	Surface	1	1	19.8	8.2	33.1	7.4		5.3		7.4	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	CS(Mf)3(N)	11:52	Surface	1	2	19.8	8.0	34.1	7.4	7.4	5.3		8.1	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	CS(Mf)3(N)	11:52	Middle	2	1	19.5	8.2	33.4	7.3		8.9	9.0	5.8	6.6
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	CS(Mf)3(N)	11:52	Middle	2	2	19.6	8.0	34.3	7.3		8.8		6.7	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	CS(Mf)3(N)	11:52	Bottom	3	1	19.5	8.2	33.5	7.3	7.3	12.9		6.4	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	CS(Mf)3(N)	11:52	Bottom	3	2	19.5	8.0	34.5	7.3		12.9		5.0	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	CS(Mf)3(N)	17:17	Surface	1	1	19.8	8.2	33.1	7.6		4.5		6.1	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	CS(Mf)3(N)	17:17	Surface	1	2	19.9	8.0	34.1	7.5	7.5	4.6		5.1	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	CS(Mf)3(N)	17:17	Middle	2	1	19.8	8.2	33.2	7.5		5.2	5.1	7.2	6.8
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	CS(Mf)3(N)	17:17	Middle	2	2	19.9	8.0	34.1	7.5		5.3		7.5	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	CS(Mf)3(N)	17:17	Bottom	3	1	19.8	8.2	33.2	7.5	7.5	5.5		7.8	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	CS(Mf)3(N)	17:17	Bottom	3	2	19.8	8.0	34.1	7.5		5.4		7.0	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	CS(Mf)5	10:56	Surface	1	1	20.4	8.2	33.6	6.6		3.5		3.5	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	CS(Mf)5	10:56	Surface	1	2	20.5	8.0	34.6	6.6	6.6	3.4		3.8	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	CS(Mf)5	10:56	Middle	2	1	20.4	8.2	33.5	6.6		4.1	4.1	3.0	3.6
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	CS(Mf)5	10:56	Middle	2	2	20.4	8.1	34.6	6.6		3.9		4.0	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	CS(Mf)5	10:56	Bottom	3	1	20.3	8.2	33.5	6.6	6.6	4.8		3.3	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	CS(Mf)5	10:56	Bottom	3	2	20.4	8.0	34.6	6.6		4.8		4.2	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	CS(Mf)5	18:15	Surface	1	1	20.6	8.2	33.5	6.8		2.1		6.0	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	CS(Mf)5	18:15	Surface	1	2	20.7	8.1	34.5	6.7	6.7	2.1		6.0	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	CS(Mf)5	18:15	Middle	2	1	20.4	8.2	33.5	6.6		4.0	3.4	6.4	5.9
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	CS(Mf)5	18:15	Middle	2	2	20.5	8.0	34.5	6.6		3.9		6.0	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	CS(Mf)5	18:15	Bottom	3	1	20.4	8.2	33.5	6.6	6.6	4.1		5.5	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	CS(Mf)5	18:15	Bottom	3	2	20.4	8.1	34.5	6.6		4.1		5.5	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS(Mf)16	12:31	Surface	1	1	20.0	8.2	33.5	7.1		9.9		5.0	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS(Mf)16	12:31	Surface	1	2	20.0	8.0	34.5	7.1	7.1	9.8		5.1	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS(Mf)16	12:31	Middle	2	1							10.5		5.2
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS(Mf)16	12:31	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS(Mf)16	12:31	Bottom	3	1	20.0	8.2	33.5	7.1	7.1	11.2		5.4	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS(Mf)16	12:31	Bottom	3	2	20.0	8.0	34.5	7.1		11.1		5.2	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS(Mf)16	16:37	Surface	1	1	20.1	8.2	33.5	7.3		5.9		6.5	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS(Mf)16	16:37	Surface	1	2	20.2	8.0	34.5	7.2	7.3	5.8		5.6	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS(Mf)16	16:37	Middle	2	1							8.8		5.5
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS(Mf)16	16:37	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS(Mf)16	16:37	Bottom	3	1	20.1	8.2	33.5	7.3	7.3	11.7		5.2	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS(Mf)16	16:37	Bottom	3	2	20.2	8.0	34.5	7.2		11.8		4.7	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS(Mf)9	13:04	Surface	1	1	20.0	8.2	33.4	7.4		5.7		6.9	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS(Mf)9	13:04	Surface	1	2	20.1	8.0	34.4	7.3	7.4	5.7		6.2	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS(Mf)9	13:04	Middle	2	1							8.6		6.2
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS(Mf)9	13:04	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS(Mf)9	13:04	Bottom	3	1	19.7	8.2	33.5	7.3	N/A	11.5		5.3	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS(Mf)9	13:04	Bottom	3	2	19.7	8.0	34.4	7.3		11.5		6.3	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS(Mf)9	16:05	Surface	1	1	20.3	8.2	33.4	7.5	7.5	6.0	10.1	5.9	5.6
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS(Mf)9	16:05	Surface	1	2	20.3	8.0	34.4	7.5		6.1		5.0	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS(Mf)9	16:05	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS(Mf)9	16:05	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS(Mf)9	16:05	Bottom	3	1	19.8	8.2	33.4	7.4	7.4	14.0		6.3	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS(Mf)9	16:05	Bottom	3	2	19.8	8.0	34.4	7.3		14.1		5.3	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS8(N)	12:55	Surface	1	1	20.0	8.2	33.4	7.2	7.2	10.8	9.3	6.2	6.0
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS8(N)	12:55	Surface	1	2	20.1	8.1	34.4	7.2		10.7		5.3	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS8(N)	12:55	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS8(N)	12:55	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS8(N)	12:55	Bottom	3	1	20.0	8.2	33.5	7.2	7.2	7.9		5.7	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	IS8(N)	12:55	Bottom	3	2	20.0	8.1	34.5	7.2		7.9		6.6	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS8(N)	16:13	Surface	1	1	20.2	8.2	33.5	7.4	7.4	6.7	6.4	3.7	4.8
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS8(N)	16:13	Surface	1	2	20.3	8.1	34.5	7.4		6.5		4.7	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS8(N)	16:13	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS8(N)	16:13	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS8(N)	16:13	Bottom	3	1	20.2	8.2	33.5	7.4	7.4	6.2		5.3	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	IS8(N)	16:13	Bottom	3	2	20.3	8.1	34.5	7.4		6.1		5.5	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	SR4(N2)	12:48	Surface	1	1	20.0	8.2	33.5	7.1	7.1	6.3	6.4	6.2	5.4
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	SR4(N2)	12:48	Surface	1	2	20.1	8.0	34.4	7.1		6.3		5.2	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	SR4(N2)	12:48	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	SR4(N2)	12:48	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	SR4(N2)	12:48	Bottom	3	1	19.9	8.2	33.5	7.1	7.1	6.5		5.2	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	SR4(N2)	12:48	Bottom	3	2	20.0	8.0	34.5	7.0		6.5		5.0	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	SR4(N2)	16:21	Surface	1	1	20.3	8.2	33.4	7.3	7.3	5.4	8.4	8.9	9.9
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	SR4(N2)	16:21	Surface	1	2	20.3	8.0	34.4	7.2		5.4		9.9	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	SR4(N2)	16:21	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	SR4(N2)	16:21	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	SR4(N2)	16:21	Bottom	3	1	20.0	8.2	33.5	7.2	7.2	11.4		10.6	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	SR4(N2)	16:21	Bottom	3	2	20.1	8.0	34.5	7.1		11.5		10.2	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	SR4a	12:42	Surface	1	1	20.6	8.2	33.5	7.3	7.3	3.3	4.7	4.6	4.9
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	SR4a	12:42	Surface	1	2	20.6	8.0	34.5	7.2		3.1		5.1	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	SR4a	12:42	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	SR4a	12:42	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	SR4a	12:42	Bottom	3	1	20.0	8.2	33.5	7.0	N/A	6.2		5.4	
TMCLKL	HY/2012/07	2019-12-11	Mid-Ebb	SR4a	12:42	Bottom	3	2	20.0	8.0	34.5	7.0		6.1		4.4	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	SR4a	16:27	Surface	1	1	20.6	8.2	33.5	7.6	7.6	3.4	5.4	4.4	4.8
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	SR4a	16:27	Surface	1	2	20.6	8.0	34.5	7.5		3.4		4.2	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	SR4a	16:27	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	SR4a	16:27	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	SR4a	16:27	Bottom	3	1	20.1	8.2	33.5	7.3	N/A	7.3		4.8	
TMCLKL	HY/2012/07	2019-12-11	Mid-Flood	SR4a	16:27	Bottom	3	2	20.1	8.0	34.5	7.3		7.3		5.8	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	CS(Mf)3(N)	13:10	Surface	1	1	19.8	8.0	33.9	7.3	7.3	9.6	10.1	9.6	8.1
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	CS(Mf)3(N)	13:10	Surface	1	2	19.7	8.2	32.9	7.3		9.6		9.9	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	CS(Mf)3(N)	13:10	Middle	2	1	19.7	8.0	33.9	7.3		10.9		8.2	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	CS(Mf)3(N)	13:10	Middle	2	2	19.6	8.2	32.9	7.3		10.2		8.1	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	CS(Mf)3(N)	13:10	Bottom	3	1	19.6	8.0	33.9	7.3	7.3	10.1		6.7	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	CS(Mf)3(N)	13:10	Bottom	3	2	19.6	8.2	32.9	7.3		10.4		6.1	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	CS(Mf)3(N)	8:58	Surface	1	1	19.4	8.2	33.3	7.1	7.1	6.8	6.7	9.3	8.8
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	CS(Mf)3(N)	8:58	Surface	1	2	19.5	8.0	34.3	7.1		6.1		9.8	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	CS(Mf)3(N)	8:58	Middle	2	1	19.4	8.2	33.3	7.1		6.9		8.6	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	CS(Mf)3(N)	8:58	Middle	2	2	19.4	8.0	34.3	7.1		6.4		9.6	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	CS(Mf)3(N)	8:58	Bottom	3	1	19.4	8.2	33.3	7.1	7.1	7.3		7.9	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	CS(Mf)3(N)	8:58	Bottom	3	2	19.4	8.0	34.3	7.1		6.6		7.8	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	CS(Mf)5	13:53	Surface	1	1	20.3	8.0	34.3	6.9	6.9	4.2	4.7	5.8	5.4
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	CS(Mf)5	13:53	Surface	1	2	20.2	8.2	33.3	6.9		4.3		6.0	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	CS(Mf)5	13:53	Middle	2	1	20.2	8.0	34.3	6.8		4.8		5.0	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	CS(Mf)5	13:53	Middle	2	2	20.2	8.2	33.4	6.8		4.9		5.9	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	CS(Mf)5	13:53	Bottom	3	1	20.2	8.0	34.3	6.9	6.9	4.7		4.8	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	CS(Mf)5	13:53	Bottom	3	2	20.2	8.2	33.4	6.9		5.1		5.0	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	CS(Mf)5	8:13	Surface	1	1	19.8	8.2	33.2	7.0	7.0	9.0	11.2	11.6	10.1
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	CS(Mf)5	8:13	Surface	1	2	19.9	8.0	34.2	7.0		8.3		10.2	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	CS(Mf)5	8:13	Middle	2	1	19.8	8.2	33.3	7.0		12.8		10.4	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	CS(Mf)5	8:13	Middle	2	2	19.9	8.0	34.2	7.0		13.6		9.3	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	CS(Mf)5	8:13	Bottom	3	1	19.8	8.2	33.3	7.0	7.0	12.1		9.1	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	CS(Mf)5	8:13	Bottom	3	2	19.9	8.0	34.2	7.0		11.5		9.9	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS(Mf)16	12:30	Surface	1	1	19.8	8.0	34.1	7.2	7.2	8.8	9.0	4.2	4.0
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS(Mf)16	12:30	Surface	1	2	19.7	8.2	33.2	7.2		9.2		3.2	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS(Mf)16	12:30	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS(Mf)16	12:30	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS(Mf)16	12:30	Bottom	3	1	19.8	8.0	34.1	7.2	7.2	8.6		3.8	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS(Mf)16	12:30	Bottom	3	2	19.7	8.2	33.2	7.2		9.3		4.7	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS(Mf)16	9:33	Surface	1	1	19.4	8.2	33.3	7.2	7.2	6.5	6.6	5.9	7.0
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS(Mf)16	9:33	Surface	1	2	19.5	8.0	34.3	7.1		6.3		6.9	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS(Mf)16	9:33	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS(Mf)16	9:33	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS(Mf)16	9:33	Bottom	3	1	19.4	8.2	33.3	7.2	7.2	7.1		7.2	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS(Mf)16	9:33	Bottom	3	2	19.5	8.0	34.3	7.1		6.5		8.1	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS(Mf)9	12:02	Surface	1	1	19.7	8.1	34.4	7.2	7.2	10.5	10.6	14.4	15.4
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS(Mf)9	12:02	Surface	1	2	19.7	8.2	33.4	7.2		11.5		15.8	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS(Mf)9	12:02	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS(Mf)9	12:02	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS(Mf)9	12:02	Bottom	3	1	19.8	8.2	34.3	7.1	7.2	9.7		15.3	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS(Mf)9	12:02	Bottom	3	2	19.7	8.2	33.4	7.2		10.7		16.1	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS(Mf)9	9:58	Surface	1	1	19.4	8.2	33.3	7.2		6.7		12.4	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS(Mf)9	9:58	Surface	1	2	19.5	8.2	34.3	7.1	7.2	6.4		11.0	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS(Mf)9	9:58	Middle	2	1							6.6		12.7
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS(Mf)9	9:58	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS(Mf)9	9:58	Bottom	3	1	19.4	8.2	33.3	7.2	7.2	6.9		13.4	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS(Mf)9	9:58	Bottom	3	2	19.5	8.2	34.3	7.1		6.3		13.8	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS8(N)	12:13	Surface	1	1	19.8	8.0	34.3	7.1		11.1		12.9	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS8(N)	12:13	Surface	1	2	19.7	8.2	33.3	7.2	7.2	12.1		13.9	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS8(N)	12:13	Middle	2	1							11.7		14.4
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS8(N)	12:13	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS8(N)	12:13	Bottom	3	1	19.8	8.0	34.3	7.1	7.1	11.3		15.0	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	IS8(N)	12:13	Bottom	3	2	19.7	8.2	33.3	7.1		12.1		15.6	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS8(N)	9:53	Surface	1	1	19.4	8.2	33.3	7.2		7.0		11.7	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS8(N)	9:53	Surface	1	2	19.5	8.0	34.3	7.1	7.2	6.5		10.7	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS8(N)	9:53	Middle	2	1							6.7		12.3
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS8(N)	9:53	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS8(N)	9:53	Bottom	3	1	19.4	8.2	33.3	7.2	7.2	7.0		12.5	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	IS8(N)	9:53	Bottom	3	2	19.5	8.0	34.3	7.1		6.4		14.2	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	SR4(N2)	12:16	Surface	1	1	19.9	8.0	34.3	7.1		5.2		5.1	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	SR4(N2)	12:16	Surface	1	2	19.8	8.2	33.3	7.1	7.1	5.6		5.7	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	SR4(N2)	12:16	Middle	2	1							5.4		6.3
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	SR4(N2)	12:16	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	SR4(N2)	12:16	Bottom	3	1	19.9	8.0	34.3	7.1	7.1	5.2		7.4	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	SR4(N2)	12:16	Bottom	3	2	19.8	8.2	33.3	7.1		5.7		6.9	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	SR4(N2)	9:47	Surface	1	1	19.4	8.2	33.3	7.2		7.0		8.6	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	SR4(N2)	9:47	Surface	1	2	19.5	8.0	34.3	7.1	7.2	6.4		9.7	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	SR4(N2)	9:47	Middle	2	1							6.7		10.0
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	SR4(N2)	9:47	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	SR4(N2)	9:47	Bottom	3	1	19.4	8.2	33.3	7.2	7.2	7.0		10.6	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	SR4(N2)	9:47	Bottom	3	2	19.5	8.0	34.3	7.1		6.5		11.1	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	SR4a	12:20	Surface	1	1	20.0	8.0	34.3	7.1		4.7		5.6	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	SR4a	12:20	Surface	1	2	19.9	8.2	33.3	7.2	7.2	4.9		4.7	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	SR4a	12:20	Middle	2	1							5.1		5.2
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	SR4a	12:20	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	SR4a	12:20	Bottom	3	1	19.9	8.0	34.3	7.0	7.1	5.2		5.5	
TMCLKL	HY/2012/07	2019-12-13	Mid-Ebb	SR4a	12:20	Bottom	3	2	19.9	8.2	33.3	7.1		5.7		4.8	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	SR4a	9:43	Surface	1	1	19.4	8.2	33.3	7.2		6.4		9.8	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	SR4a	9:43	Surface	1	2	19.5	8.0	34.3	7.1	7.2	6.0		10.0	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	SR4a	9:43	Middle	2	1							6.3		9.9
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	SR4a	9:43	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	SR4a	9:43	Bottom	3	1	19.4	8.2	33.3	7.2	7.2	6.6		9.4	
TMCLKL	HY/2012/07	2019-12-13	Mid-Flood	SR4a	9:43	Bottom	3	2	19.5	8.0	34.3	7.1		6.1		10.3	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	CS(Mf)3(N)	15:43	Surface	1	1	20.1	8.0	32.5	7.1		6.5		10.1	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	CS(Mf)3(N)	15:43	Surface	1	2	20.1	8.2	31.6	7.1	7.1	6.8		9.1	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	CS(Mf)3(N)	15:43	Middle	2	1	20.1	8.0	32.8	7.0		7.3	9.1	8.4	8.9
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	CS(Mf)3(N)	15:43	Middle	2	2	20.0	8.2	31.8	7.1		7.7		9.3	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	CS(Mf)3(N)	15:43	Bottom	3	1	20.0	8.0	33.1	7.0	7.0	13.7		8.6	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	CS(Mf)3(N)	15:43	Bottom	3	2	19.9	8.2	32.1	7.0		12.4		7.7	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	CS(Mf)3(N)	10:20	Surface	1	1	20.1	8.0	32.2	6.9		9.0		12.4	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	CS(Mf)3(N)	10:20	Surface	1	2	20.0	8.2	31.2	7.0	7.0	9.7		12.3	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	CS(Mf)3(N)	10:20	Middle	2	1	20.1	8.0	32.2	6.9		8.6	9.5	13.2	11.1
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	CS(Mf)3(N)	10:20	Middle	2	2	20.0	8.2	31.3	7.0		9.3		12.8	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	CS(Mf)3(N)	10:20	Bottom	3	1	20.1	8.0	32.2	6.9	7.0	9.4		7.4	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	CS(Mf)3(N)	10:20	Bottom	3	2	20.0	8.2	31.3	7.0		10.8		8.3	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	CS(Mf)5	16:25	Surface	1	1	20.2	8.0	33.4	6.8		4.1		7.6	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	CS(Mf)5	16:25	Surface	1	2	20.1	8.2	32.4	6.8	6.8	4.4		7.2	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	CS(Mf)5	16:25	Middle	2	1	20.1	8.0	33.6	6.7		4.8	6.5	6.5	6.4
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	CS(Mf)5	16:25	Middle	2	2	20.0	8.2	32.6	6.7		5.2		5.5	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	CS(Mf)5	16:25	Bottom	3	1	20.1	8.0	33.8	6.6	6.6	9.5		5.9	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	CS(Mf)5	16:25	Bottom	3	2	20.1	8.2	32.9	6.6		10.7		5.4	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	CS(Mf)5	9:32	Surface	1	1	20.0	8.1	33.1	7.0		5.1		7.5	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	CS(Mf)5	9:32	Surface	1	2	20.0	8.2	32.1	7.0	7.0	5.7		6.5	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	CS(Mf)5	9:32	Middle	2	1	20.0	8.1	33.1	7.0		7.5	11.3	7.6	7.0
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	CS(Mf)5	9:32	Middle	2	2	19.9	8.2	32.1	7.0		7.4		7.2	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	CS(Mf)5	9:32	Bottom	3	1	19.9	8.0	33.3	6.9	7.0	21.8		7.0	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	CS(Mf)5	9:32	Bottom	3	2	19.9	8.2	32.3	7.0		20.5		6.3	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS(Mf)16	14:44	Surface	1	1	20.1	8.0	33.1	7.0		21.0		16.4	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS(Mf)16	14:44	Surface	1	2	20.1	8.2	32.2	7.1	7.1	22.5		15.0	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS(Mf)16	14:44	Middle	2	1							26.5		22.2
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS(Mf)16	14:44	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS(Mf)16	14:44	Bottom	3	1	20.1	8.0	33.1	7.0	7.1	29.3		28.8	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS(Mf)16	14:44	Bottom	3	2	20.0	8.2	32.2	7.1		33.0		28.6	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS(Mf)16	11:06	Surface	1	1	19.9	8.0	33.2	7.0		13.5		13.3	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS(Mf)16	11:06	Surface	1	2	19.9	8.2	32.2	7.1	7.1	12.1		14.8	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS(Mf)16	11:06	Middle	2	1							15.8		13.6
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS(Mf)16	11:06	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS(Mf)16	11:06	Bottom	3	1	19.9	8.0	33.3	7.0	7.0	18.0		12.6	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS(Mf)16	11:06	Bottom	3	2	19.9	8.2	32.3	7.0		19.6		13.6	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS(Mf)9	14:17	Surface	1	1									
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS(Mf)9	14:17	Surface	1	2					7.1				
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS(Mf)9	14:17	Middle	2	1	20.2	8.0	33.4	7.1		9.2	9.7	13.8	13.8
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS(Mf)9	14:17	Middle	2	2	20.1	8.2	32.4	7.1		10.2		13.8	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS(Mf)9	14:17	Bottom	3	1					#DIV/0!				
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS(Mf)9	14:17	Bottom	3	2									

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS(Mf)9	11:35	Surface	1	1									
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS(Mf)9	11:35	Surface	1	2					7.0				
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS(Mf)9	11:35	Middle	2	1	19.9	8.0	33.3	7.0		25.3	23.8	19.7	19.4
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS(Mf)9	11:35	Middle	2	2	19.9	8.2	32.3	7.0		22.3		19.1	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS(Mf)9	11:35	Bottom	3	1					#DIV/0!				
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS(Mf)9	11:35	Bottom	3	2									
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS8(N)	14:22	Surface	1	1	20.2	8.0	33.2	7.2		5.4		7.1	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS8(N)	14:22	Surface	1	2	20.2	8.2	32.3	7.2	7.2	5.8		7.6	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS8(N)	14:22	Middle	2	1							6.1		7.9
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS8(N)	14:22	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS8(N)	14:22	Bottom	3	1	20.2	8.0	33.4	7.2	7.2	6.2		7.9	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	IS8(N)	14:22	Bottom	3	2	20.2	8.2	32.4	7.2		6.8		8.8	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS8(N)	11:30	Surface	1	1	20.0	8.0	33.2	7.0		7.2		9.2	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS8(N)	11:30	Surface	1	2	19.9	8.2	32.3	7.1	7.1	8.2		9.9	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS8(N)	11:30	Middle	2	1							7.9		10.3
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS8(N)	11:30	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS8(N)	11:30	Bottom	3	1	20.0	8.0	33.2	7.0	7.1	7.6		11.9	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	IS8(N)	11:30	Bottom	3	2	19.9	8.2	32.3	7.1		8.5		10.1	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	SR4(N2)	14:30	Surface	1	1	20.2	8.0	33.3	7.1		5.7		8.4	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	SR4(N2)	14:30	Surface	1	2	20.1	8.2	32.3	7.2	7.2	6.2		7.7	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	SR4(N2)	14:30	Middle	2	1							6.2		8.0
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	SR4(N2)	14:30	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	SR4(N2)	14:30	Bottom	3	1	20.2	8.0	33.3	7.1	7.2	6.1		7.9	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	SR4(N2)	14:30	Bottom	3	2	20.1	8.2	32.4	7.2		6.6		8.0	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	SR4(N2)	11:23	Surface	1	1	20.0	8.0	33.5	7.0		7.1		10.3	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	SR4(N2)	11:23	Surface	1	2	19.9	8.2	32.6	7.0	7.0	7.8		11.9	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	SR4(N2)	11:23	Middle	2	1							8.0		9.4
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	SR4(N2)	11:23	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	SR4(N2)	11:23	Bottom	3	1	20.0	8.0	33.5	6.9	7.0	8.3		7.8	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	SR4(N2)	11:23	Bottom	3	2	19.9	8.2	32.6	7.0		8.8		7.5	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	SR4a	14:34	Surface	1	1	20.2	8.0	33.3	7.1		5.2		6.3	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	SR4a	14:34	Surface	1	2	20.1	8.2	32.4	7.2	7.2	5.5		5.3	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	SR4a	14:34	Middle	2	1							5.7		5.8
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	SR4a	14:34	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	SR4a	14:34	Bottom	3	1	20.1	8.0	33.3	7.1	7.1	5.9		6.2	
TMCLKL	HY/2012/07	2019-12-16	Mid-Ebb	SR4a	14:34	Bottom	3	2	20.1	8.2	32.4	7.1		6.2		5.4	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	SR4a	11:19	Surface	1	1	20.0	8.0	33.5	6.9		7.8		11.2	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	SR4a	11:19	Surface	1	2	19.9	8.2	32.6	6.9	6.9	8.5		12.6	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	SR4a	11:19	Middle	2	1							8.0		11.4
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	SR4a	11:19	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	SR4a	11:19	Bottom	3	1	20.0	8.0	33.5	6.9	6.9	7.3		10.2	
TMCLKL	HY/2012/07	2019-12-16	Mid-Flood	SR4a	11:19	Bottom	3	2	19.9	8.2	32.6	6.9		8.4		11.5	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	CS(Mf)3(N)	17:41	Surface	1	1	20.7	8.1	30.4	7.0	7.0	8.6	10.3	6.3	5.9
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	CS(Mf)3(N)	17:41	Surface	1	2	20.7	8.0	31.2	7.0		8.0		6.5	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	CS(Mf)3(N)	17:41	Middle	2	1	20.5	8.2	30.8	6.9		12.2		6.0	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	CS(Mf)3(N)	17:41	Middle	2	2	20.5	8.0	31.7	6.9		11.3		6.1	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	CS(Mf)3(N)	17:41	Bottom	3	1	20.6	8.1	30.7	6.9	6.9	11.4		5.3	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	CS(Mf)3(N)	17:41	Bottom	3	2	20.6	8.0	31.7	6.9		10.5		5.2	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	CS(Mf)3(N)	12:03	Surface	1	1	20.4	8.1	29.7	6.9	6.9	8.9	9.1	4.6	8.0
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	CS(Mf)3(N)	12:03	Surface	1	2	20.4	8.0	30.7	6.8		8.8		4.9	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	CS(Mf)3(N)	12:03	Middle	2	1	20.4	8.1	29.8	6.9		9.2		8.4	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	CS(Mf)3(N)	12:03	Middle	2	2	20.4	8.0	30.8	6.8		9.1		8.7	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	CS(Mf)3(N)	12:03	Bottom	3	1	20.4	8.1	30.0	6.8	6.8	9.3		10.8	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	CS(Mf)3(N)	12:03	Bottom	3	2	20.4	8.0	30.9	6.8		9.4		10.5	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	CS(Mf)5	18:30	Surface	1	1	20.4	8.1	31.7	6.6	6.6	4.9	5.7	8.2	7.1
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	CS(Mf)5	18:30	Surface	1	2	20.4	7.9	32.6	6.6		4.8		8.1	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	CS(Mf)5	18:30	Middle	2	1	20.3	8.1	32.1	6.5		5.3		6.5	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	CS(Mf)5	18:30	Middle	2	2	20.3	7.9	33.1	6.5		5.1		6.7	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	CS(Mf)5	18:30	Bottom	3	1	20.3	8.1	32.3	6.5	6.5	7.2		6.4	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	CS(Mf)5	18:30	Bottom	3	2	20.3	7.9	33.3	6.5		6.6		6.5	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	CS(Mf)5	11:13	Surface	1	1	20.3	8.1	31.3	6.8	6.8	5.5	7.7	6.2	5.3
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	CS(Mf)5	11:13	Surface	1	2	20.4	7.9	32.2	6.8		5.1		6.7	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	CS(Mf)5	11:13	Middle	2	1	20.3	8.1	31.5	6.7		9.2		5.1	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	CS(Mf)5	11:13	Middle	2	2	20.3	7.9	32.4	6.7		8.1		4.8	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	CS(Mf)5	11:13	Bottom	3	1	20.3	7.9	32.5	6.7	6.7	9.2		4.7	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	CS(Mf)5	11:13	Bottom	3	2	20.3	7.9	32.5	6.7		9.2		4.5	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS(Mf)16	16:55	Surface	1	1	20.8	8.2	31.1	7.0	7.0	7.1	7.6	7.4	7.5
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS(Mf)16	16:55	Surface	1	2	20.8	8.0	32.0	6.9		7.7		6.6	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS(Mf)16	16:55	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS(Mf)16	16:55	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS(Mf)16	16:55	Bottom	3	1	20.7	8.2	31.3	6.9	6.9	8.0		7.7	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS(Mf)16	16:55	Bottom	3	2	20.7	8.0	32.2	6.9		7.5		8.2	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS(Mf)16	12:51	Surface	1	1	20.5	8.2	31.3	6.9	6.9	12.5	11.8	7.3	9.0
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS(Mf)16	12:51	Surface	1	2	20.5	8.0	32.3	6.9		11.6		7.2	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS(Mf)16	12:51	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS(Mf)16	12:51	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS(Mf)16	12:51	Bottom	3	1	20.5	8.2	31.3	6.9	6.9	11.8		10.5	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS(Mf)16	12:51	Bottom	3	2	20.5	8.0	32.3	6.9		11.1		11.1	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS(Mf)9	16:22	Surface	1	1	20.7	8.2	31.8	6.7	6.7	9.3	10.1	5.1	6.8
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS(Mf)9	16:22	Surface	1	2	20.7	8.0	32.7	6.7		9.3		5.6	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS(Mf)9	16:22	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS(Mf)9	16:22	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS(Mf)9	16:22	Bottom	3	1	20.6	8.2	31.8	6.7	6.7	11.2		8.1	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS(Mf)9	16:22	Bottom	3	2	20.6	8.0	32.8	6.7		10.7		8.4	

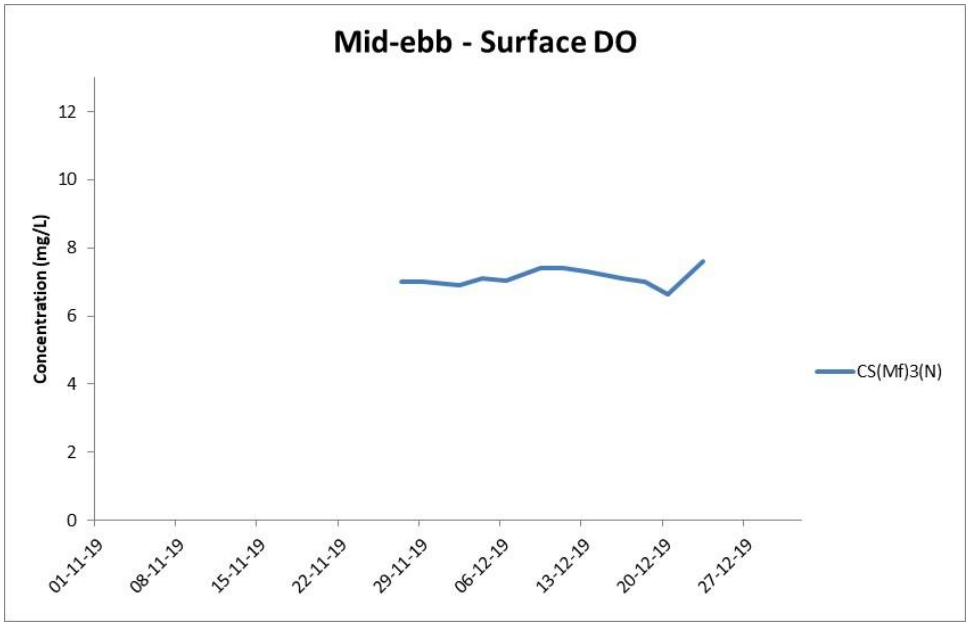
Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS(Mf)9	13:23	Surface	1	1	20.5	8.2	31.6	6.8	7.3	12.5	12.1	7.8	6.9
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS(Mf)9	13:23	Surface	1	2	20.5	8.0	32.5	6.8		11.5		7.8	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS(Mf)9	13:23	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS(Mf)9	13:23	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS(Mf)9	13:23	Bottom	3	1	20.5	8.2	31.6	6.8	7.3	12.6		6.3	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS(Mf)9	13:23	Bottom	3	2	20.5	8.0	32.5	6.8		11.7		5.7	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS8(N)	16:28	Surface	1	1	21.1	8.2	31.1	7.1	7.4	6.1	6.0	8.0	7.2
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS8(N)	16:28	Surface	1	2	21.2	8.0	32.0	7.1		5.8		8.2	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS8(N)	16:28	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS8(N)	16:28	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS8(N)	16:28	Bottom	3	1	21.1	8.2	31.1	7.1	7.3	6.1		6.4	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	IS8(N)	16:28	Bottom	3	2	21.1	8.0	32.0	7.1		5.8		6.0	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS8(N)	13:15	Surface	1	1	20.7	8.2	31.0	7.0	7.5	5.5	5.4	6.1	6.8
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS8(N)	13:15	Surface	1	2	20.7	8.0	32.0	7.0		5.3		6.5	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS8(N)	13:15	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS8(N)	13:15	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS8(N)	13:15	Bottom	3	1	20.7	8.2	31.0	7.0	7.5	5.4		7.1	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	IS8(N)	13:15	Bottom	3	2	20.7	8.0	32.0	7.0		5.3		7.3	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	SR4(N2)	16:36	Surface	1	1	21.2	8.2	31.1	7.1	6.6	4.3	4.3	7.9	6.2
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	SR4(N2)	16:36	Surface	1	2	21.2	8.0	32.1	7.1		4.2		7.0	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	SR4(N2)	16:36	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	SR4(N2)	16:36	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	SR4(N2)	16:36	Bottom	3	1	21.2	8.2	31.2	7.1	6.6	4.5		4.8	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	SR4(N2)	16:36	Bottom	3	2	21.2	8.0	32.1	7.1		4.3		5.0	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	SR4(N2)	13:08	Surface	1	1	20.8	8.2	31.5	6.9	6.7	6.6	6.5	8.9	8.5
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	SR4(N2)	13:08	Surface	1	2	20.8	8.0	32.4	6.9		6.2		8.8	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	SR4(N2)	13:08	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	SR4(N2)	13:08	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	SR4(N2)	13:08	Bottom	3	1	20.8	8.2	31.5	6.9	6.6	6.8		8.3	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	SR4(N2)	13:08	Bottom	3	2	20.8	8.0	32.5	6.9		6.4		8.1	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	SR4a	16:43	Surface	1	1	20.9	8.2	31.3	6.9	7.1	5.5	5.6	6.3	5.2
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	SR4a	16:43	Surface	1	2	20.9	8.0	32.3	6.9		5.3		5.7	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	SR4a	16:43	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	SR4a	16:43	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	SR4a	16:43	Bottom	3	1	20.9	8.2	31.4	7.0	7.1	5.8		4.0	
TMCLKL	HY/2012/07	2019-12-18	Mid-Ebb	SR4a	16:43	Bottom	3	2	20.9	8.0	32.4	6.9		5.8		4.8	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	SR4a	13:02	Surface	1	1	20.7	8.2	31.6	6.8	7.3	7.1	7.6	7.7	7.1
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	SR4a	13:02	Surface	1	2	20.7	8.0	32.5	6.8		6.9		7.0	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	SR4a	13:02	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	SR4a	13:02	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	SR4a	13:02	Bottom	3	1	20.6	8.2	31.6	6.8	6.8	8.3		6.7	
TMCLKL	HY/2012/07	2019-12-18	Mid-Flood	SR4a	13:02	Bottom	3	2	20.6	8.0	32.6	6.8		8.1		6.9	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	CS(Mf)3(N)	7:28	Surface	1	1	20.1	8.0	32.3	6.6		3.1		5.0	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	CS(Mf)3(N)	7:28	Surface	1	2	20.0	8.1	31.4	6.7	7.4	3.3		5.4	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	CS(Mf)3(N)	7:28	Middle	2	1	20.2	8.0	33.1	6.5		4.3	4.2	7.9	6.9
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	CS(Mf)3(N)	7:28	Middle	2	2	20.2	8.1	32.2	6.5		4.3		7.6	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	CS(Mf)3(N)	7:28	Bottom	3	1	20.4	8.0	33.4	6.3	6.3	5.0		7.9	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	CS(Mf)3(N)	7:28	Bottom	3	2	20.4	8.1	32.5	6.3		4.9		7.7	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	CS(Mf)3(N)	14:14	Surface	1	1	20.4	8.0	31.2	7.1		5.2		8.0	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	CS(Mf)3(N)	14:14	Surface	1	2	20.4	8.1	30.3	7.1	7.5	5.3		8.3	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	CS(Mf)3(N)	14:14	Middle	2	1	20.4	8.0	31.2	7.0		5.3	5.6	9.0	8.7
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	CS(Mf)3(N)	14:14	Middle	2	2	20.3	8.1	30.3	7.1		5.5		8.6	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	CS(Mf)3(N)	14:14	Bottom	3	1	20.3	8.0	31.2	7.0	7.4	6.0		9.4	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	CS(Mf)3(N)	14:14	Bottom	3	2	20.3	8.1	30.3	7.0		6.5		9.1	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	CS(Mf)5	6:37	Surface	1	1	20.0	8.0	32.3	6.7		3.1		7.4	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	CS(Mf)5	6:37	Surface	1	2	20.0	8.1	31.4	6.8	7.2	3.6		7.7	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	CS(Mf)5	6:37	Middle	2	1	20.4	8.0	33.4	6.3		4.0	3.9	7.1	6.9
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	CS(Mf)5	6:37	Middle	2	2	20.3	8.1	32.5	6.3		4.0		6.7	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	CS(Mf)5	6:37	Bottom	3	1	20.4	8.0	33.5	6.2	7.2	4.4		6.2	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	CS(Mf)5	6:37	Bottom	3	2	20.4	8.0	32.5	6.3		4.4		6.0	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	CS(Mf)5	15:09	Surface	1	1	20.5	8.0	32.6	6.7		2.4		6.2	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	CS(Mf)5	15:09	Surface	1	2	20.5	8.1	31.7	6.8	7.4	2.4		5.9	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	CS(Mf)5	15:09	Middle	2	1	20.4	8.0	33.4	6.3		5.6	6.5	7.0	7.1
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	CS(Mf)5	15:09	Middle	2	2	20.3	8.1	32.5	6.3		6.1		7.4	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	CS(Mf)5	15:09	Bottom	3	1	20.4	8.0	33.5	6.3	7.4	10.5		8.2	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	CS(Mf)5	15:09	Bottom	3	2	20.3	8.1	32.5	6.3		11.7		7.8	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS(Mf)16	8:04	Surface	1	1	20.5	8.0	32.2	6.7		4.6		15.0	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS(Mf)16	8:04	Surface	1	2	20.5	8.1	31.3	6.8	7.1	4.3		14.7	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS(Mf)16	8:04	Middle	2	1							5.2		14.7
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS(Mf)16	8:04	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS(Mf)16	8:04	Bottom	3	1	20.5	8.0	32.3	6.7	7.1	6.0		14.5	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS(Mf)16	8:04	Bottom	3	2	20.5	8.1	31.4	6.7		5.8		14.4	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS(Mf)16	13:28	Surface	1	1	20.6	8.0	32.3	6.7		5.9		6.0	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS(Mf)16	13:28	Surface	1	2	20.6	8.1	31.4	6.7	7.3	6.1		6.3	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS(Mf)16	13:28	Middle	2	1							6.6		7.6
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS(Mf)16	13:28	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS(Mf)16	13:28	Bottom	3	1	20.6	8.0	32.3	6.7	7.2	6.9		9.1	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS(Mf)16	13:28	Bottom	3	2	20.5	8.1	31.4	6.7		7.3		8.8	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS(Mf)9	8:39	Surface	1	1	20.4	8.0	32.1	6.7		5.0		6.8	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS(Mf)9	8:39	Surface	1	2	20.3	8.1	31.2	6.8	7.3	5.3		6.5	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS(Mf)9	8:39	Middle	2	1							5.7		8.0
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS(Mf)9	8:39	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS(Mf)9	8:39	Bottom	3	1	20.4	8.0	32.2	6.7	N/A	5.8		9.2	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS(Mf)9	8:39	Bottom	3	2	20.3	8.1	31.3	6.8		6.5		9.6	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS(Mf)9	12:52	Surface	1	1	20.6	8.0	32.2	6.7	7.6	7.2	8.3	8.0	8.9
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS(Mf)9	12:52	Surface	1	2	20.6	8.2	31.3	6.8		8.0		8.3	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS(Mf)9	12:52	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS(Mf)9	12:52	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS(Mf)9	12:52	Bottom	3	1	20.6	8.1	32.2	6.7	6.8	8.6		9.7	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS(Mf)9	12:52	Bottom	3	2	20.5	8.2	31.3	6.8		9.3		9.5	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS8(N)	8:30	Surface	1	1	20.3	8.0	31.9	6.7	6.8	5.3	6.5	11.2	11.7
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS8(N)	8:30	Surface	1	2	20.2	8.1	31.0	6.8		5.6		11.7	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS8(N)	8:30	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS8(N)	8:30	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS8(N)	8:30	Bottom	3	1	20.4	8.0	32.2	6.7	6.7	7.3		11.8	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	IS8(N)	8:30	Bottom	3	2	20.4	8.2	31.2	6.7		7.7		12.1	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS8(N)	12:59	Surface	1	1	20.6	8.0	32.1	6.8	6.8	7.2	8.2	9.4	9.3
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS8(N)	12:59	Surface	1	2	20.5	8.1	31.2	6.8		7.9		9.1	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS8(N)	12:59	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS8(N)	12:59	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS8(N)	12:59	Bottom	3	1	20.5	8.0	32.1	6.8	6.8	8.5		10.9	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	IS8(N)	12:59	Bottom	3	2	20.5	8.1	31.2	6.8		9.3		11.1	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	SR4(N2)	8:23	Surface	1	1	20.4	8.0	32.1	6.5	6.5	5.9	7.8	9.9	8.8
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	SR4(N2)	8:23	Surface	1	2	20.3	8.1	31.2	6.5		6.2		10.2	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	SR4(N2)	8:23	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	SR4(N2)	8:23	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	SR4(N2)	8:23	Bottom	3	1	20.4	8.0	32.2	6.4	6.5	9.2		8.0	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	SR4(N2)	8:23	Bottom	3	2	20.4	8.1	31.2	6.5		9.7		8.2	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	SR4(N2)	13:08	Surface	1	1	20.7	8.0	32.0	6.8	6.9	4.5	6.0	8.8	8.8
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	SR4(N2)	13:08	Surface	1	2	20.7	8.1	31.1	6.9		4.9		8.9	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	SR4(N2)	13:08	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	SR4(N2)	13:08	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	SR4(N2)	13:08	Bottom	3	1	20.5	8.0	32.1	6.7	6.7	6.9		8.9	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	SR4(N2)	13:08	Bottom	3	2	20.5	8.1	31.2	6.7		7.5		8.6	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	SR4a	8:17	Surface	1	1	20.2	8.0	32.0	6.7	6.8	3.7	3.7	8.4	8.9
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	SR4a	8:17	Surface	1	2	20.2	8.1	31.1	6.8		3.7		8.3	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	SR4a	8:17	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	SR4a	8:17	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	SR4a	8:17	Bottom	3	1	20.2	8.0	32.0	6.7	6.8	3.7		9.6	
TMCLKL	HY/2012/07	2019-12-20	Mid-Ebb	SR4a	8:17	Bottom	3	2	20.2	8.1	31.1	6.8		3.8		9.3	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	SR4a	13:14	Surface	1	1	20.8	8.0	32.0	6.9	6.9	3.6	7.2	8.1	7.3
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	SR4a	13:14	Surface	1	2	20.8	8.1	31.1	6.9		4.0		7.6	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	SR4a	13:14	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	SR4a	13:14	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	SR4a	13:14	Bottom	3	1	20.4	8.0	32.1	6.7	N/A	10.0		6.6	
TMCLKL	HY/2012/07	2019-12-20	Mid-Flood	SR4a	13:14	Bottom	3	2	20.4	8.1	31.2	6.7		11.0		7.0	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	CS(Mf)3(N)	10:22	Surface	1	1	19.2	8.2	32.2	7.6	7.6	4.6	5.6	7.1	8.7
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	CS(Mf)3(N)	10:22	Surface	1	2	19.2	8.0	32.1	7.6		4.8		6.7	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	CS(Mf)3(N)	10:22	Middle	2	1	19.2	8.2	32.4	7.6		5.6		7.5	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	CS(Mf)3(N)	10:22	Middle	2	2	19.2	8.0	32.4	7.6		5.7		7.2	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	CS(Mf)3(N)	10:22	Bottom	3	1	19.2	8.2	32.4	7.6	7.6	6.3		11.6	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	CS(Mf)3(N)	10:22	Bottom	3	2	19.2	8.0	32.4	7.6		6.4		12.2	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	CS(Mf)3(N)	16:17	Surface	1	1	19.5	8.0	32.6	7.7	7.7	8.0	8.9	11.3	12.2
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	CS(Mf)3(N)	16:17	Surface	1	2	19.5	8.2	32.6	7.7		8.1		11.8	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	CS(Mf)3(N)	16:17	Middle	2	1	19.5	8.0	32.6	7.6		8.7		11.9	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	CS(Mf)3(N)	16:17	Middle	2	2	19.5	8.2	32.6	7.6		8.9		12.4	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	CS(Mf)3(N)	16:17	Bottom	3	1	19.5	8.0	32.6	7.6	7.6	9.8		13.1	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	CS(Mf)3(N)	16:17	Bottom	3	2	19.5	8.2	32.6	7.6		9.9		12.7	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	CS(Mf)5	9:30	Surface	1	1	19.2	8.2	33.5	7.2	7.2	4.5	4.3	7.4	7.6
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	CS(Mf)5	9:30	Surface	1	2	19.2	8.0	33.5	7.2		4.7		6.8	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	CS(Mf)5	9:30	Middle	2	1	19.2	8.2	33.5	7.2		4.4		8.1	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	CS(Mf)5	9:30	Middle	2	2	19.2	8.0	33.5	7.2		4.5		7.8	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	CS(Mf)5	9:30	Bottom	3	1	19.3	8.2	33.5	7.2	7.2	3.7		7.9	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	CS(Mf)5	9:30	Bottom	3	2	19.3	8.0	33.5	7.2		3.7		7.7	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	CS(Mf)5	17:18	Surface	1	1	19.3	8.0	33.9	7.0	7.0	8.9	11.2	11.8	14.2
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	CS(Mf)5	17:18	Surface	1	2	19.3	8.2	33.9	7.0		8.9		11.6	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	CS(Mf)5	17:18	Middle	2	1	19.3	8.0	33.9	7.0		11.9		14.5	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	CS(Mf)5	17:18	Middle	2	2	19.3	8.2	33.9	7.0		11.4		14.0	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	CS(Mf)5	17:18	Bottom	3	1	19.3	8.0	33.9	7.0	7.0	13.0		16.6	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	CS(Mf)5	17:18	Bottom	3	2	19.3	8.2	33.9	7.0		13.0		16.9	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS(Mf)16	11:09	Surface	1	1	19.3	8.2	33.2	7.3	7.3	9.3	9.8	12.4	12.7
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS(Mf)16	11:09	Surface	1	2	19.3	8.0	33.2	7.3		9.4		12.5	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS(Mf)16	11:09	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS(Mf)16	11:09	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS(Mf)16	11:09	Bottom	3	1	19.3	8.2	33.2	7.3	7.3	10.3		12.8	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS(Mf)16	11:09	Bottom	3	2	19.3	8.0	33.2	7.3		10.3		13.2	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS(Mf)16	15:33	Surface	1	1	19.4	8.0	33.2	7.4	7.4	8.7	9.3	12.0	12.3
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS(Mf)16	15:33	Surface	1	2	19.4	8.2	33.2	7.4		8.7		11.8	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS(Mf)16	15:33	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS(Mf)16	15:33	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS(Mf)16	15:33	Bottom	3	1	19.4	8.0	33.2	7.3	7.3	10.0		12.9	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS(Mf)16	15:33	Bottom	3	2	19.4	8.2	33.2	7.3		9.7		12.5	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS(Mf)9	11:48	Surface	1	1	19.5	8.2	33.1	7.4	7.4	4.1	4.9	5.1	6.4
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS(Mf)9	11:48	Surface	1	2	19.5	8.2	33.1	7.4		4.1		5.5	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS(Mf)9	11:48	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS(Mf)9	11:48	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS(Mf)9	11:48	Bottom	3	1	19.5	8.2	33.1	7.4	7.4	5.7		7.8	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS(Mf)9	11:48	Bottom	3	2	19.5	8.2	33.1	7.4		5.7		7.2	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS(Mf)9	14:51	Surface	1	1	19.6	8.1	33.1	7.1	7.1	7.5	7.5	8.4	8.2
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS(Mf)9	14:51	Surface	1	2	19.6	8.2	33.1	7.1		7.1		8.5	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS(Mf)9	14:51	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS(Mf)9	14:51	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS(Mf)9	14:51	Bottom	3	1	19.6	8.2	33.1	7.1	7.1	7.7		7.8	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS(Mf)9	14:51	Bottom	3	2	19.6	8.2	33.1	7.1		7.6		8.2	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS8(N)	11:38	Surface	1	1	19.5	8.2	33.1	7.4	7.4	6.1	6.4	10.5	10.2
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS8(N)	11:38	Surface	1	2	19.5	8.0	33.1	7.4		6.1		10.7	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS8(N)	11:38	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS8(N)	11:38	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS8(N)	11:38	Bottom	3	1	19.5	8.2	33.1	7.3	7.3	6.6		9.9	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	IS8(N)	11:38	Bottom	3	2	19.5	8.0	33.1	7.3		6.6		9.7	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS8(N)	15:04	Surface	1	1	19.7	8.0	33.2	7.4	7.4	7.0	7.0	9.6	9.9
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS8(N)	15:04	Surface	1	2	19.7	8.2	33.2	7.4		7.0		9.1	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS8(N)	15:04	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS8(N)	15:04	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS8(N)	15:04	Bottom	3	1	19.7	8.0	33.2	7.4	7.4	6.9		10.5	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	IS8(N)	15:04	Bottom	3	2	19.7	8.2	33.2	7.4		7.0		10.2	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	SR4(N2)	11:31	Surface	1	1	19.5	8.2	33.0	7.2	7.2	5.4	6.3	7.8	9.0
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	SR4(N2)	11:31	Surface	1	2	19.5	8.0	33.0	7.2		5.5		7.6	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	SR4(N2)	11:31	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	SR4(N2)	11:31	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	SR4(N2)	11:31	Bottom	3	1	19.6	8.2	33.0	7.2	7.2	7.1		10.0	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	SR4(N2)	11:31	Bottom	3	2	19.6	8.0	33.0	7.2		7.1		10.5	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	SR4(N2)	15:15	Surface	1	1	19.8	8.0	33.1	7.4	7.4	4.7	5.1	8.2	8.6
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	SR4(N2)	15:15	Surface	1	2	19.8	8.2	33.1	7.4		4.7		8.1	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	SR4(N2)	15:15	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	SR4(N2)	15:15	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	SR4(N2)	15:15	Bottom	3	1	19.7	8.0	33.1	7.4	7.4	5.6		8.8	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	SR4(N2)	15:15	Bottom	3	2	19.7	8.2	33.1	7.4		5.5		9.2	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	SR4a	11:23	Surface	1	1	19.5	8.2	33.2	7.3	7.3	5.1	7.3	9.3	10.6
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	SR4a	11:23	Surface	1	2	19.5	8.0	33.2	7.3		5.1		9.0	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	SR4a	11:23	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	SR4a	11:23	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	SR4a	11:23	Bottom	3	1	19.4	8.2	33.2	7.2	7.2	9.3		12.0	
TMCLKL	HY/2012/07	2019-12-23	Mid-Ebb	SR4a	11:23	Bottom	3	2	19.4	8.0	33.2	7.2		9.5		11.9	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	SR4a	15:22	Surface	1	1	19.6	8.0	33.2	7.3	7.3	5.1	6.7	7.7	8.2
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	SR4a	15:22	Surface	1	2	19.6	8.2	33.2	7.3		5.2		8.1	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	SR4a	15:22	Middle	2	1									
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	SR4a	15:22	Middle	2	2									
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	SR4a	15:22	Bottom	3	1	19.5	8.0	33.2	7.2	7.2	8.2		8.2	
TMCLKL	HY/2012/07	2019-12-23	Mid-Flood	SR4a	15:22	Bottom	3	2	19.5	8.2	33.2	7.2		8.1		8.7	



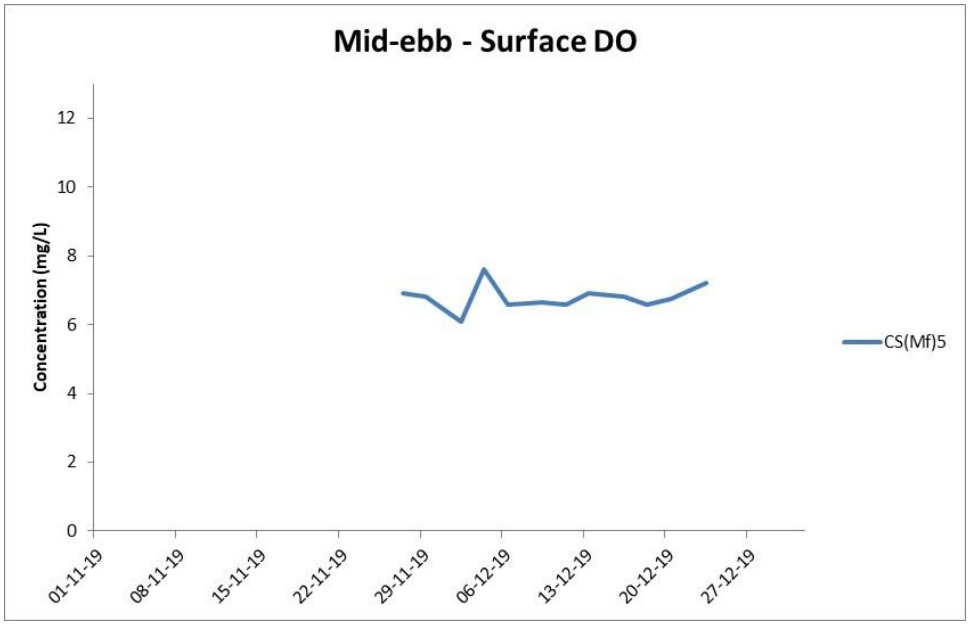


Figure G1 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 27 November 2019 and 23 December 2019 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.)
In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

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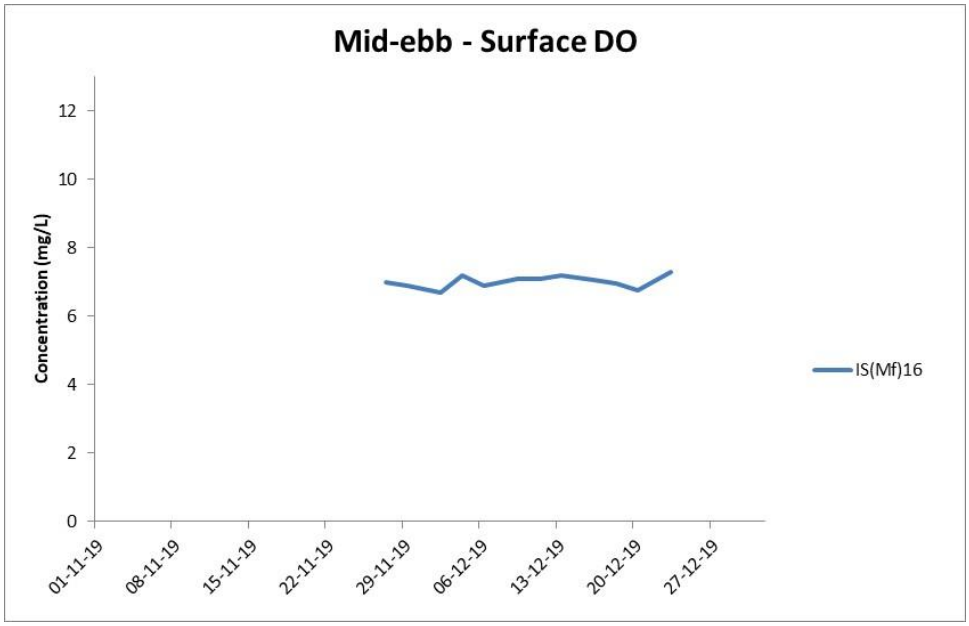


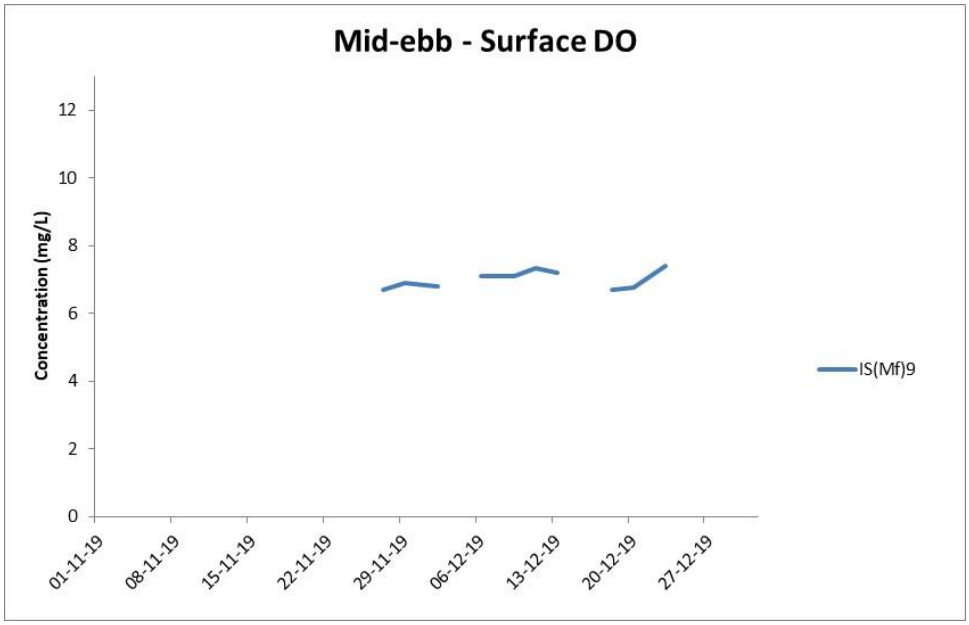


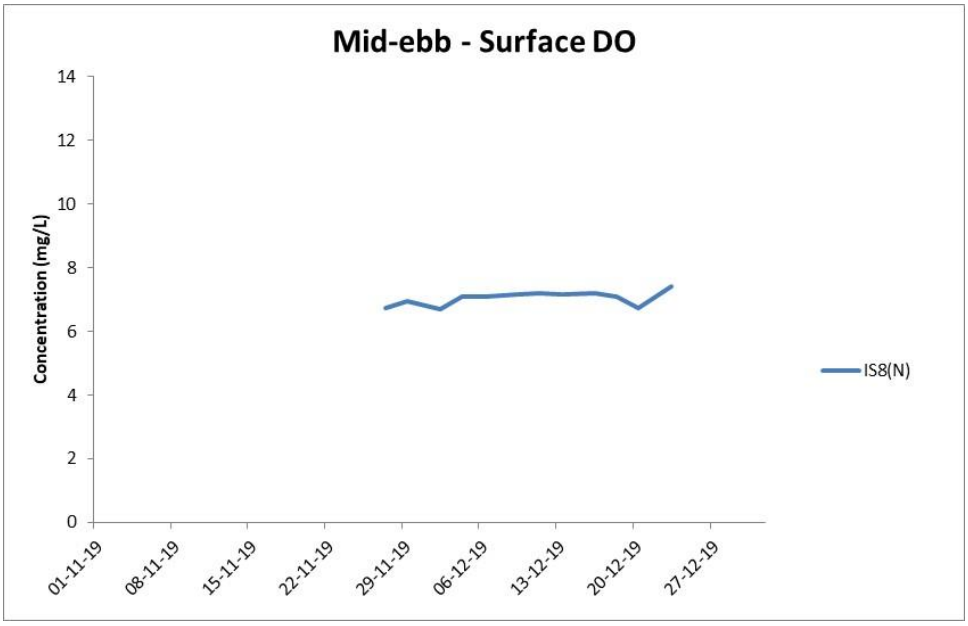
Figure G2 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 27 November 2019 and 23 December 2019 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

ERM



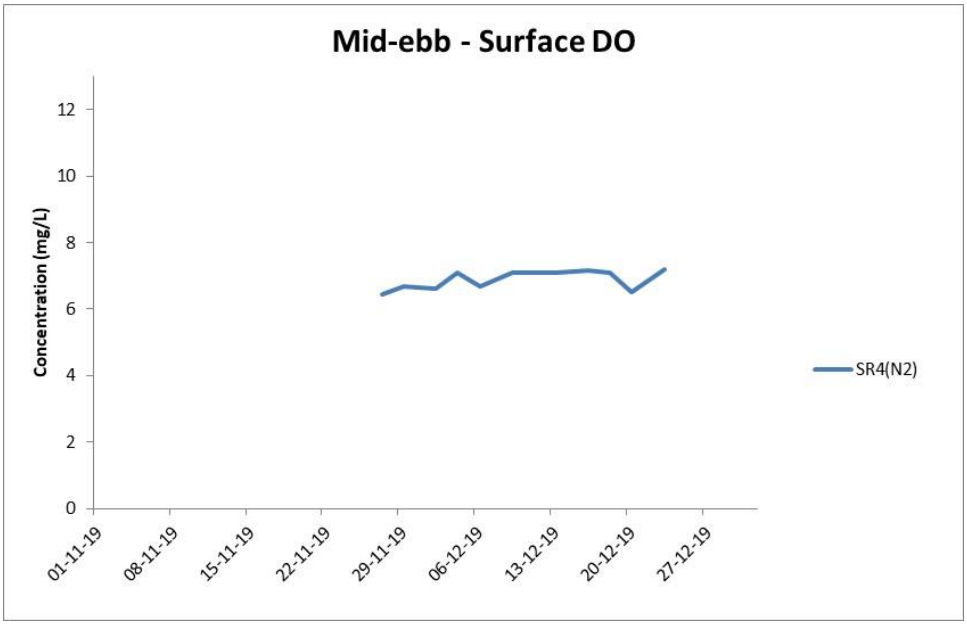


Figure G3 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 27 November 2019 and 23 December 2019 at IS8(N) and SR4(N2).

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

ERM

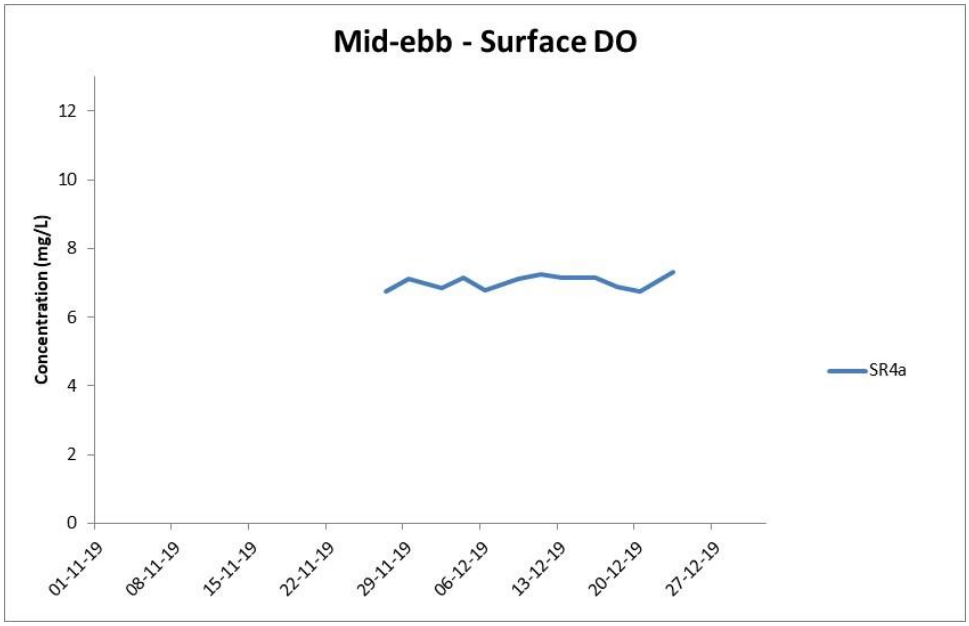


Figure G4 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 27 November 2019 and 23 December 2019 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

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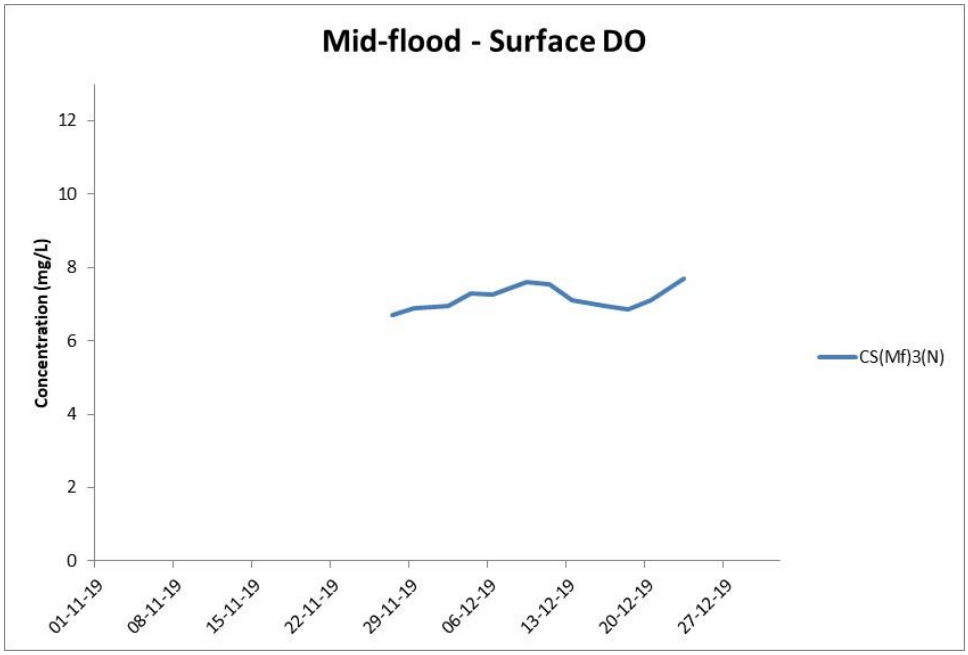

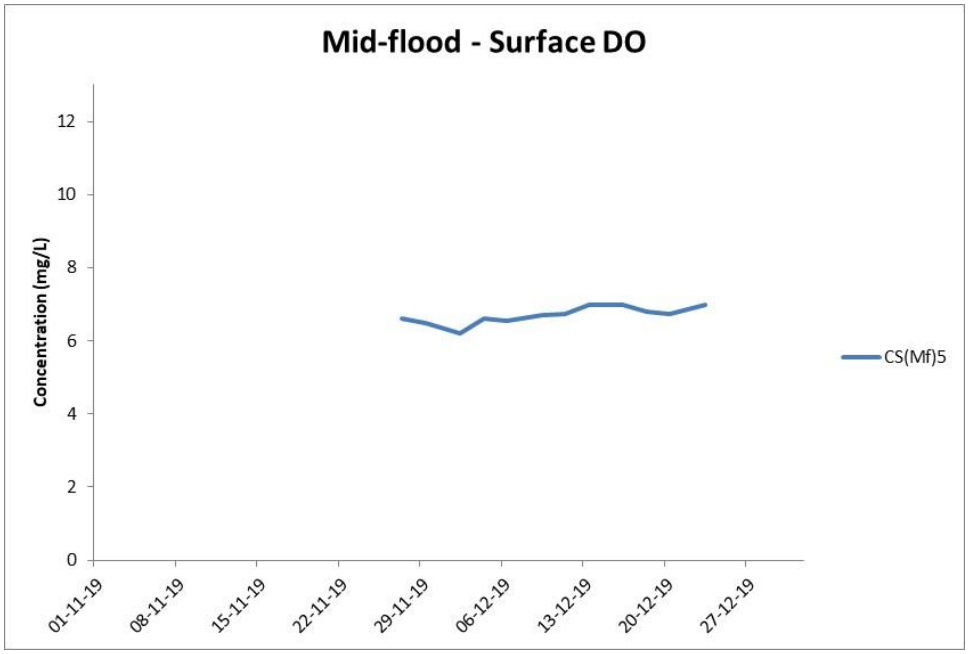

Figure G5 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 27 November 2019 and 23 December 2019 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

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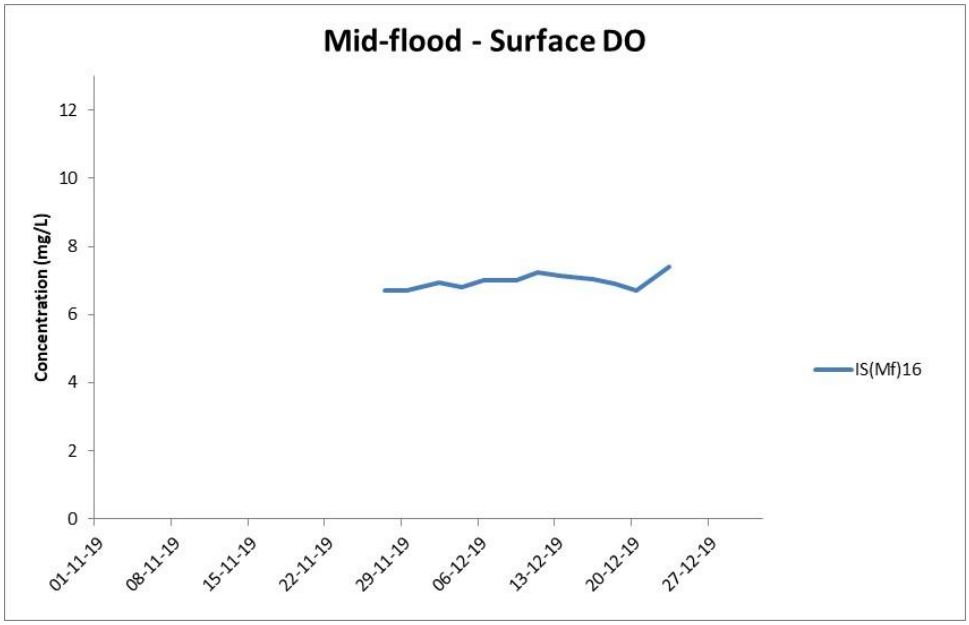

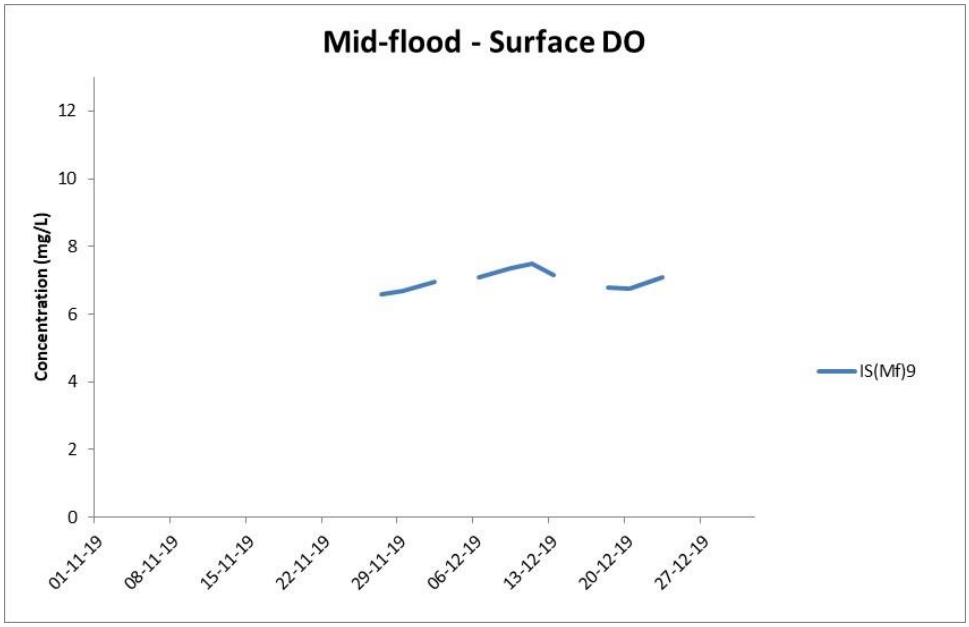

Figure G6 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 27 November 2019 and 23 December 2019 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

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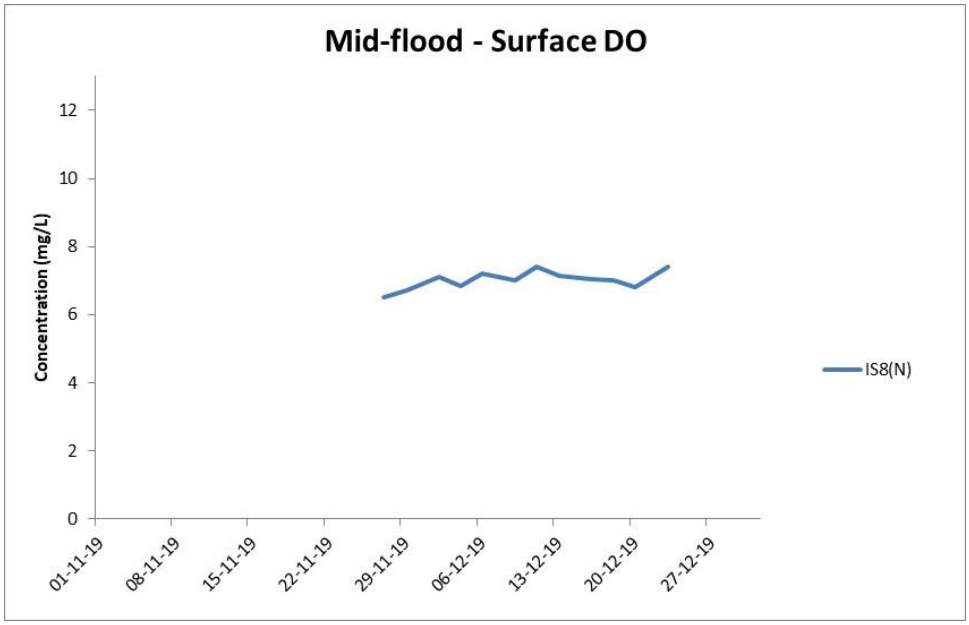

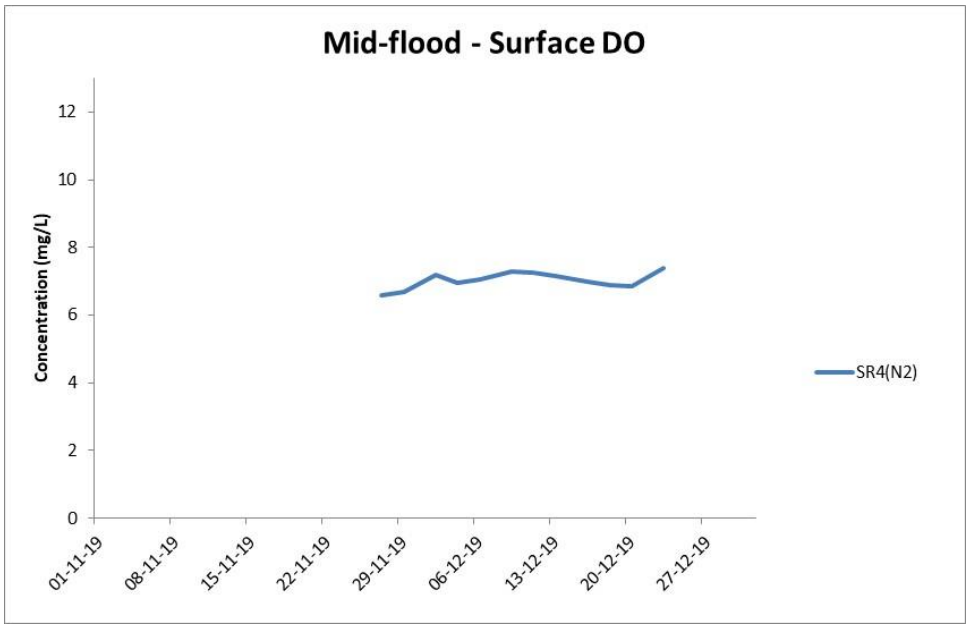

Figure G7 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 27 November 2019 and 23 December 2019 at IS8(N) and SR4(N2).

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

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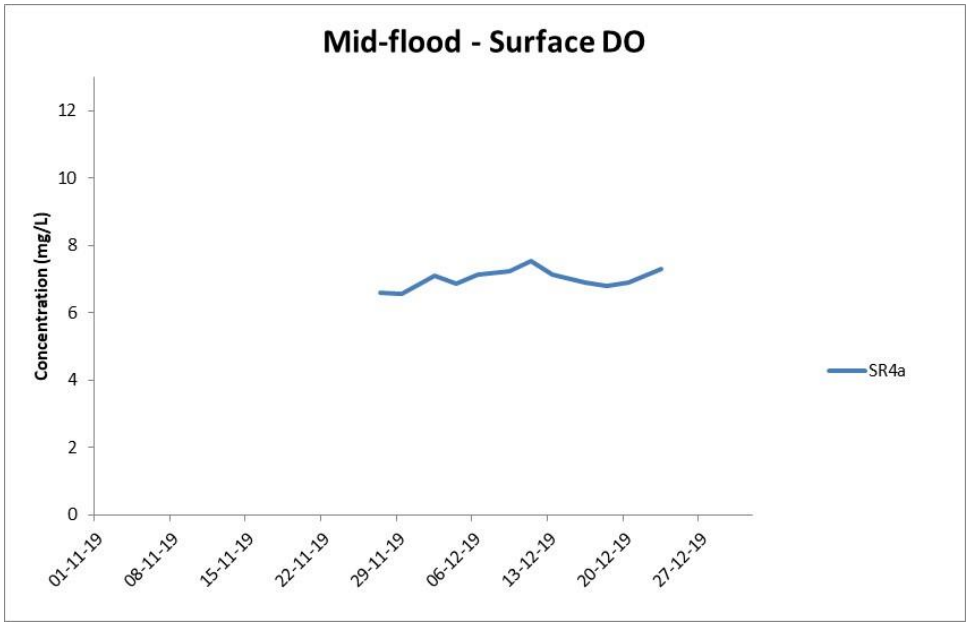

Figure G8 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 27 November 2019 and 23 December 2019 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

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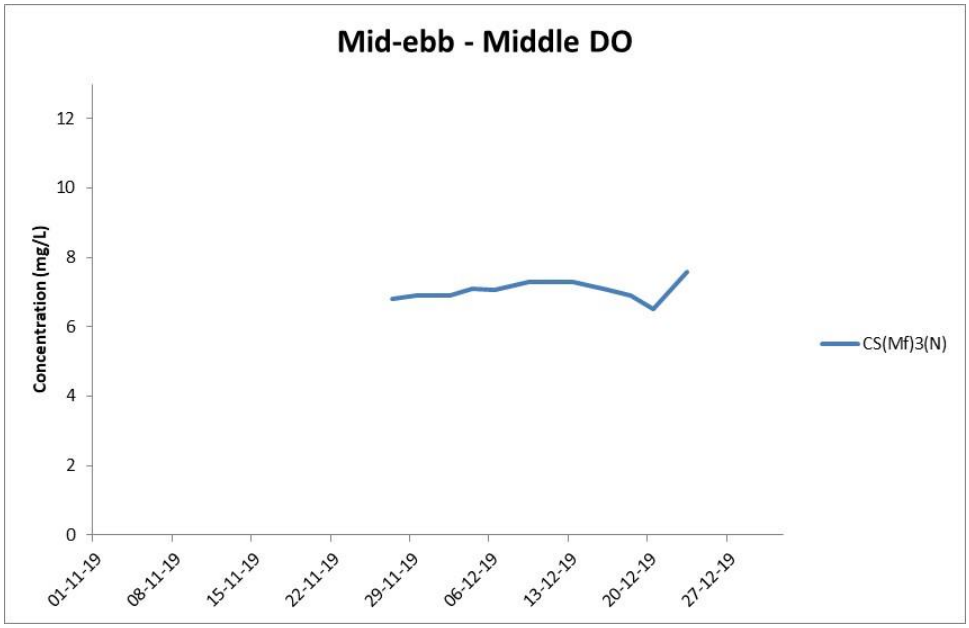

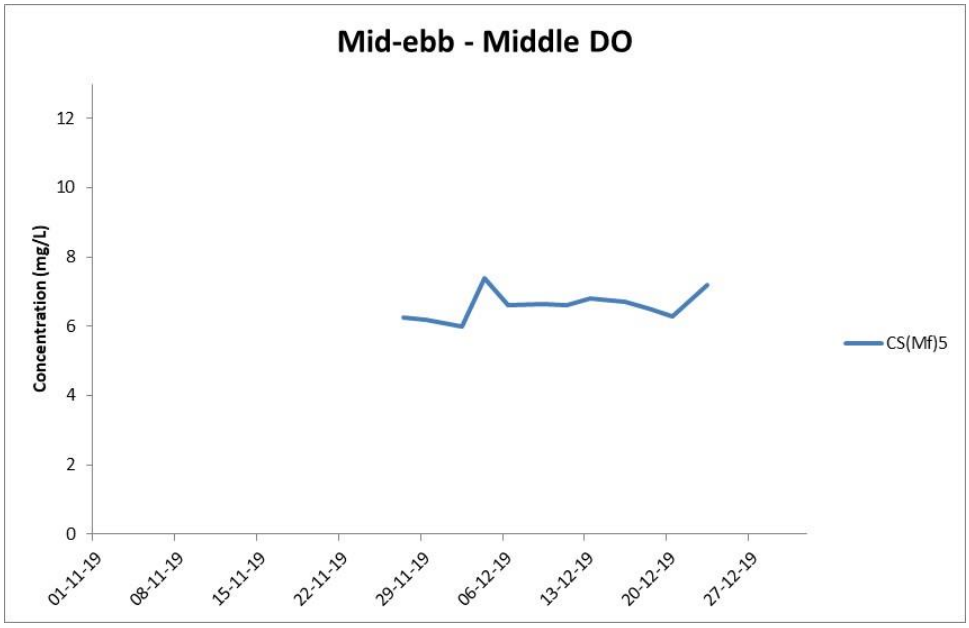

Figure G9 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 27 November 2019 and 23 December 2019 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

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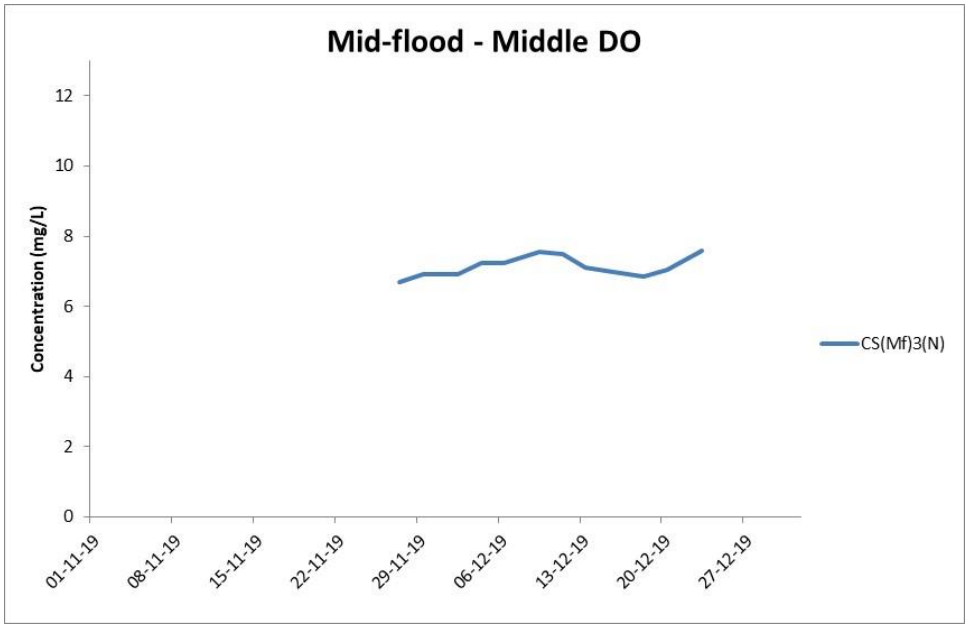


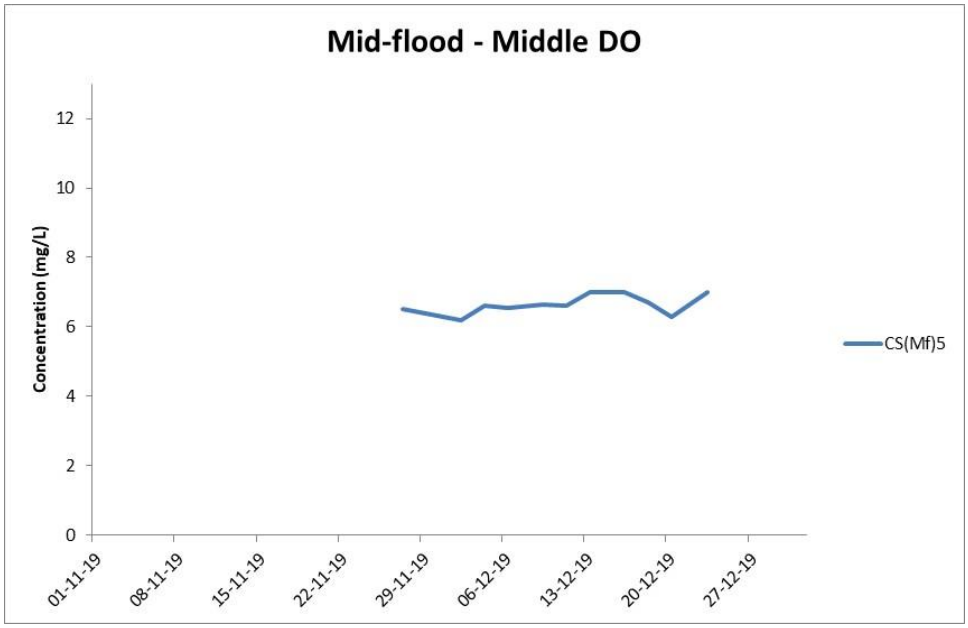
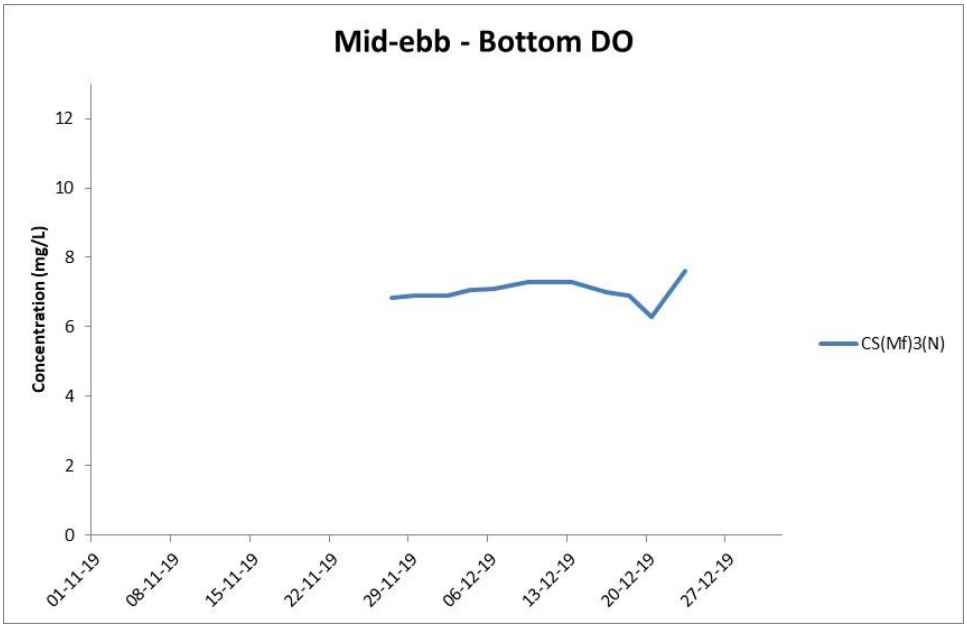


Figure G10 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 27 November 2019 and 23 December 2019 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.



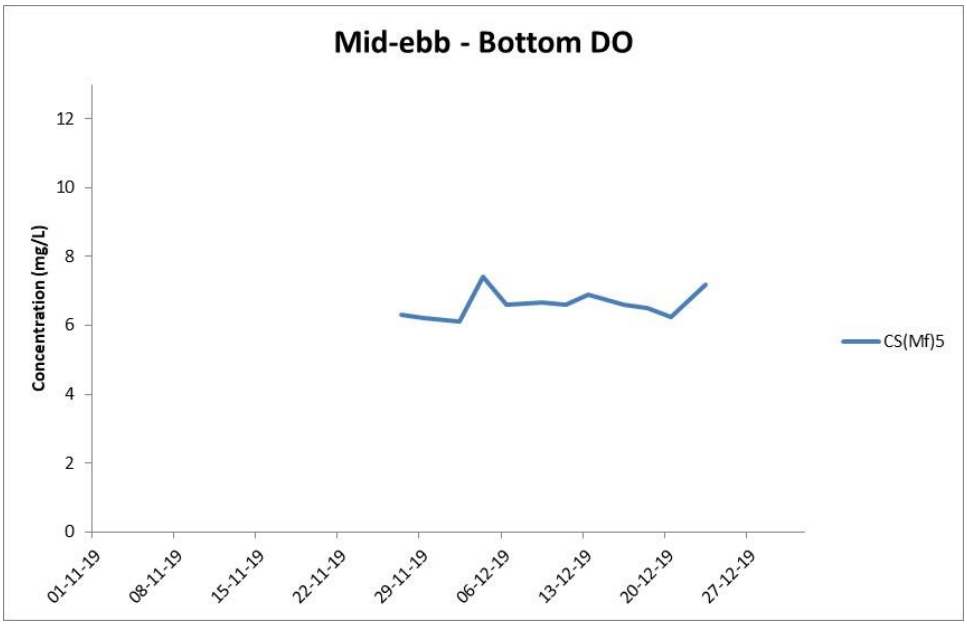


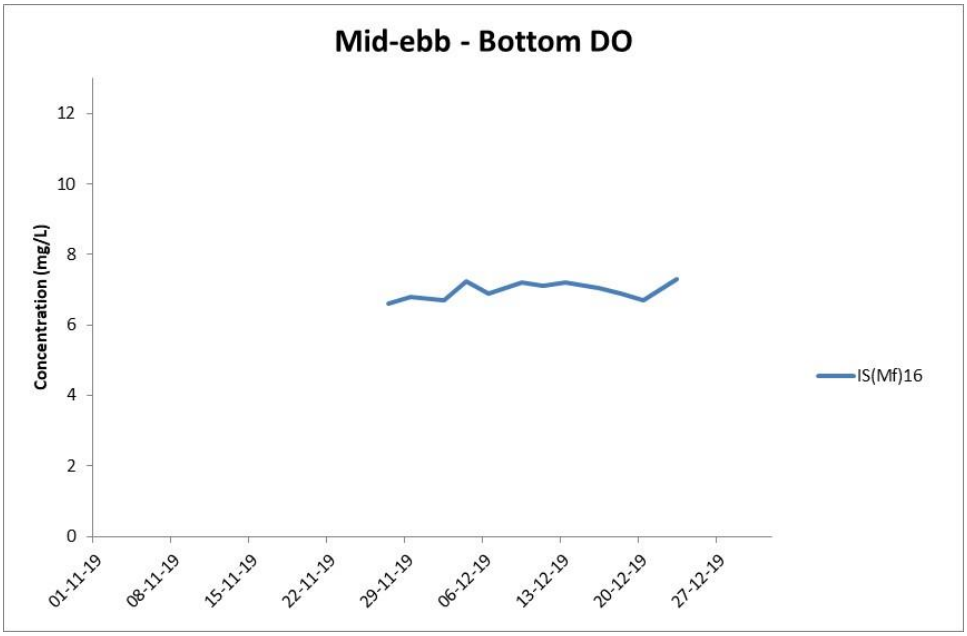
Figure G11 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 27 November 2019 and 23 December 2019 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

ERM



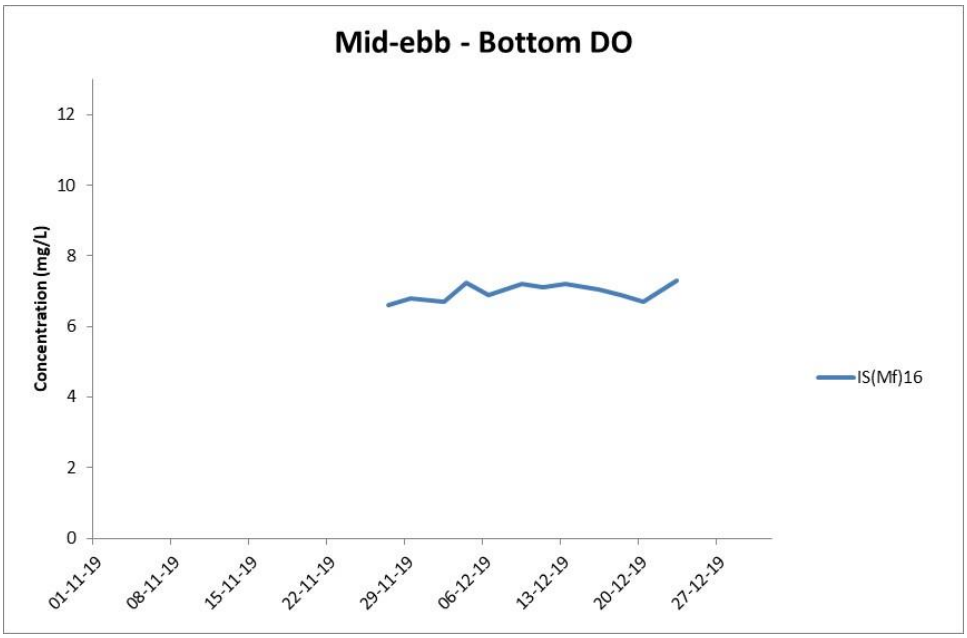


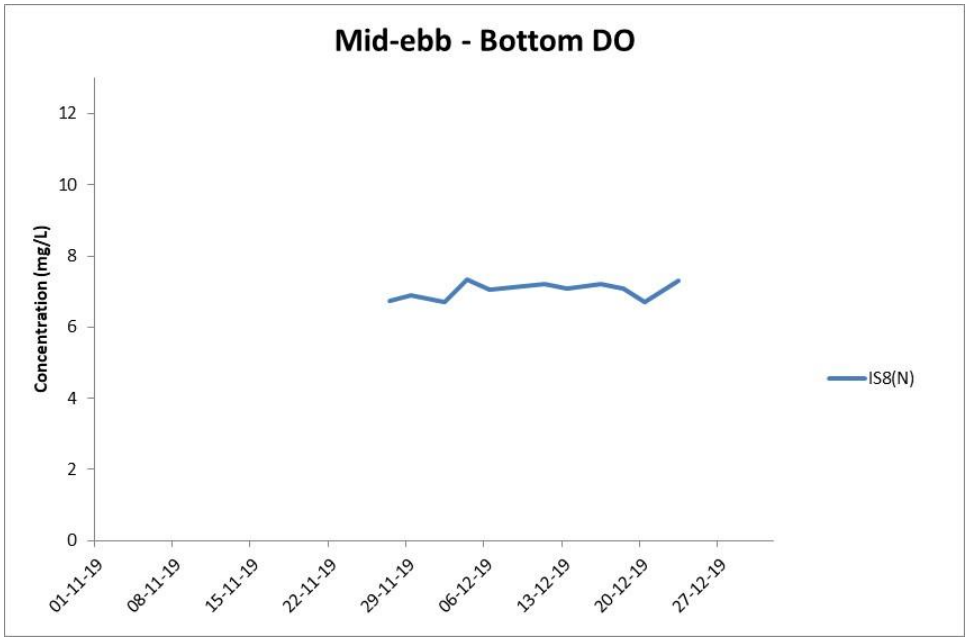
Figure G12 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 27 November 2019 and 23 December 2019 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

ERM



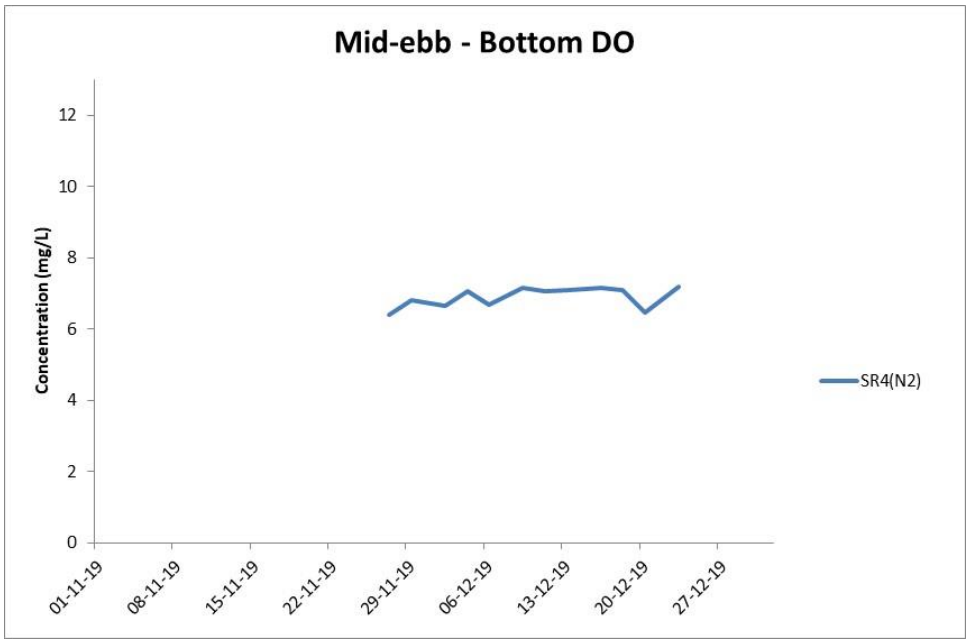


Figure G13 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 27 November 2019 and 23 December 2019 at IS8(N) and SR4(N2).

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

ERM

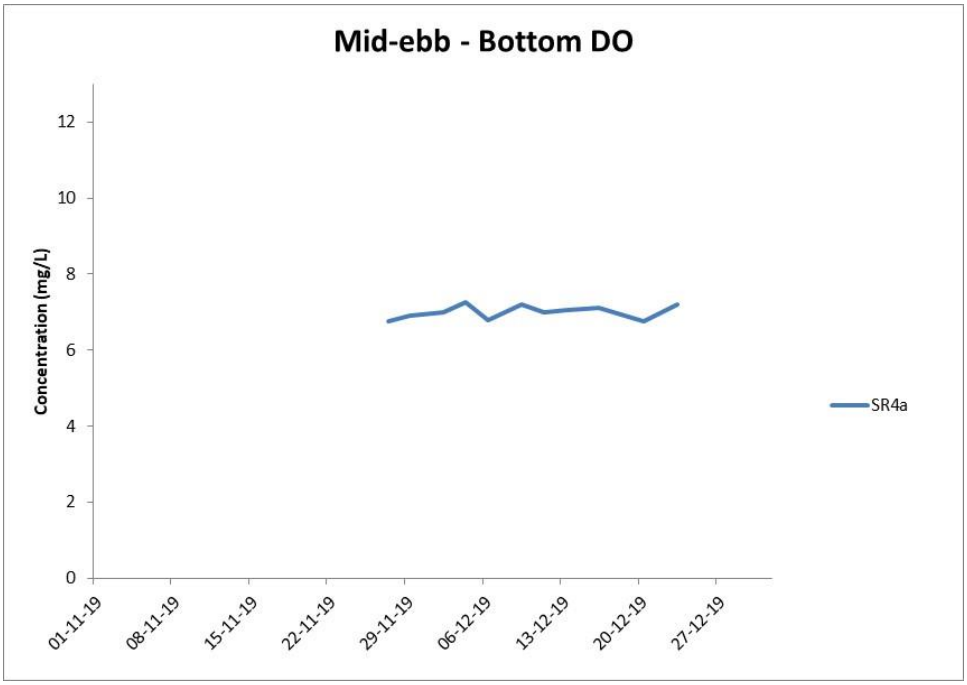
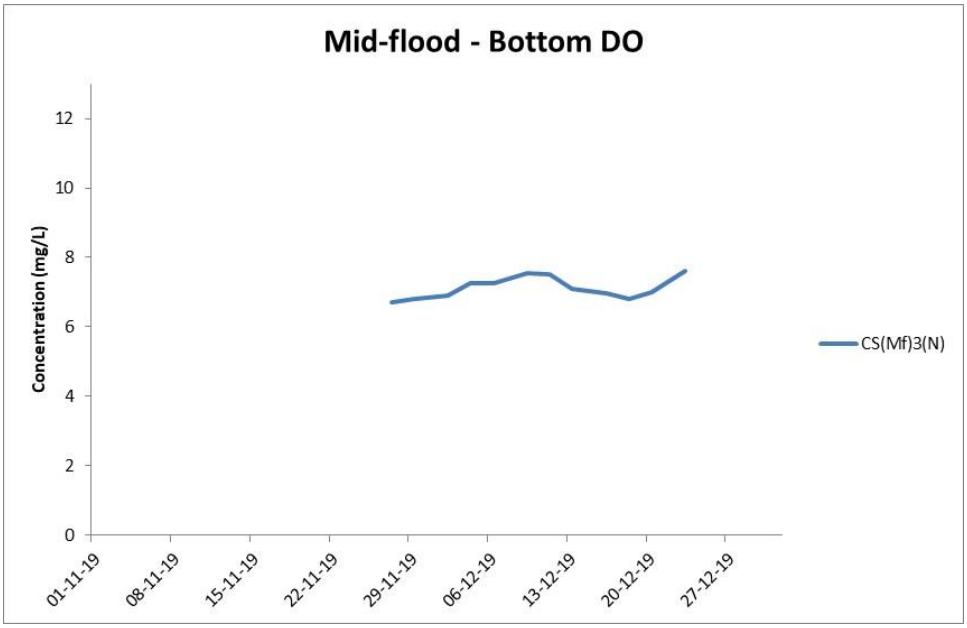


Figure G14 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 27 November 2019 and 23 December 2019 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.



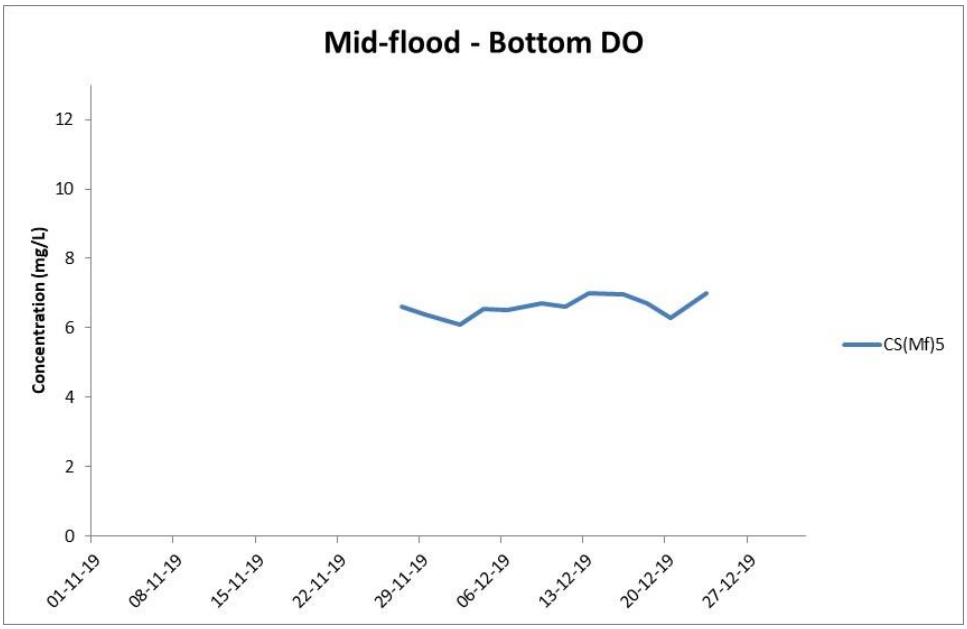


Figure G15 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 27 November 2019 and 23 December 2019 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

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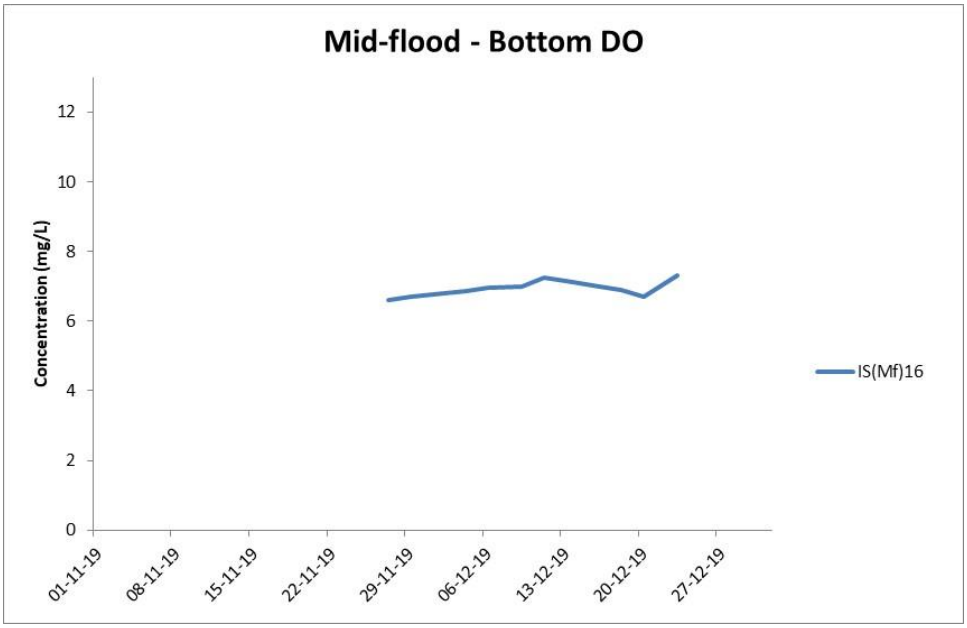

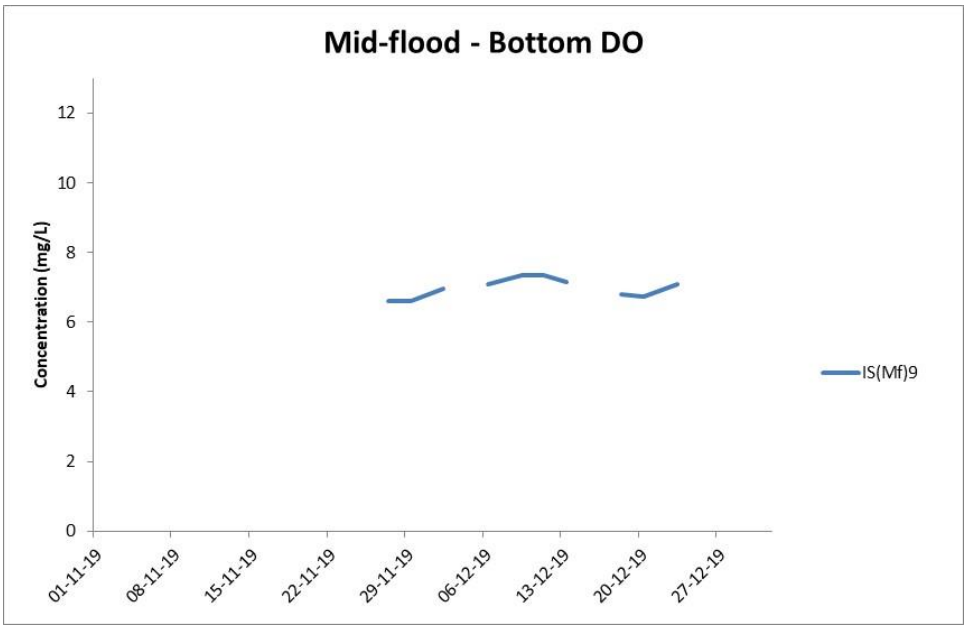

Figure G16 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 27 November 2019 and 23 December 2019 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

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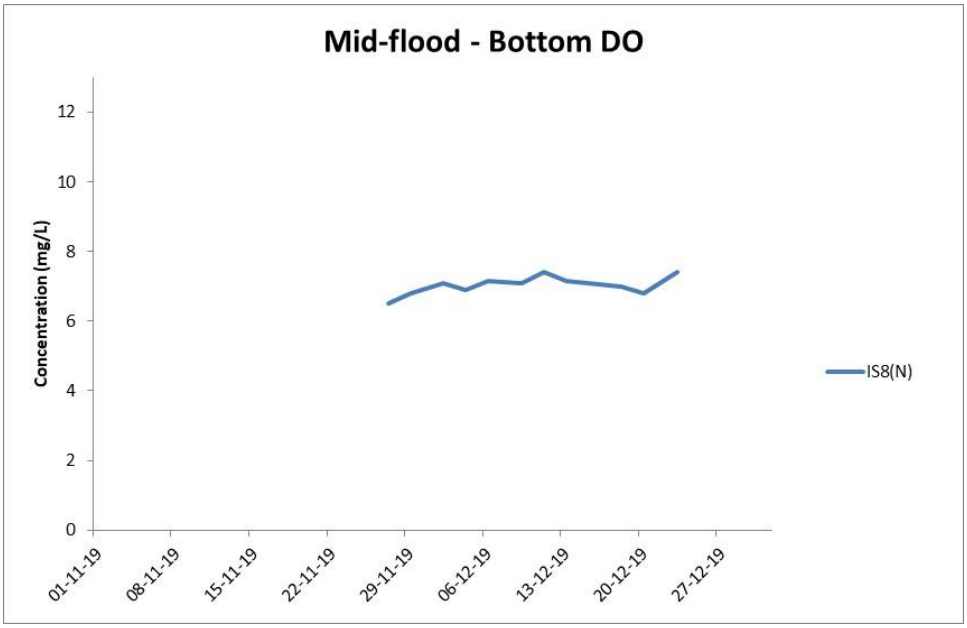

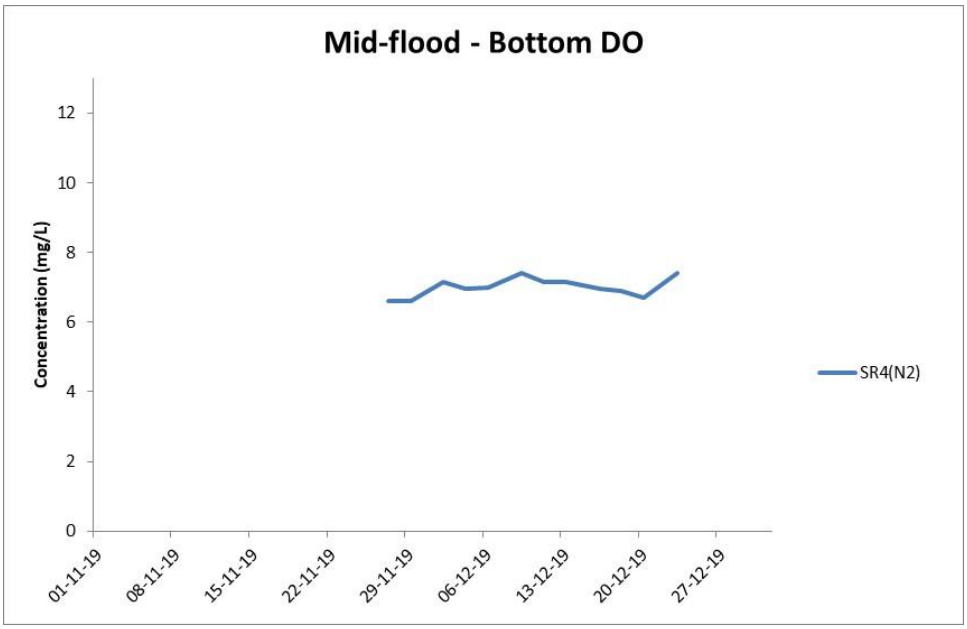

Figure G17 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 27 November 2019 and 23 December 2019 at IS8(N) and SR4(N2).

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

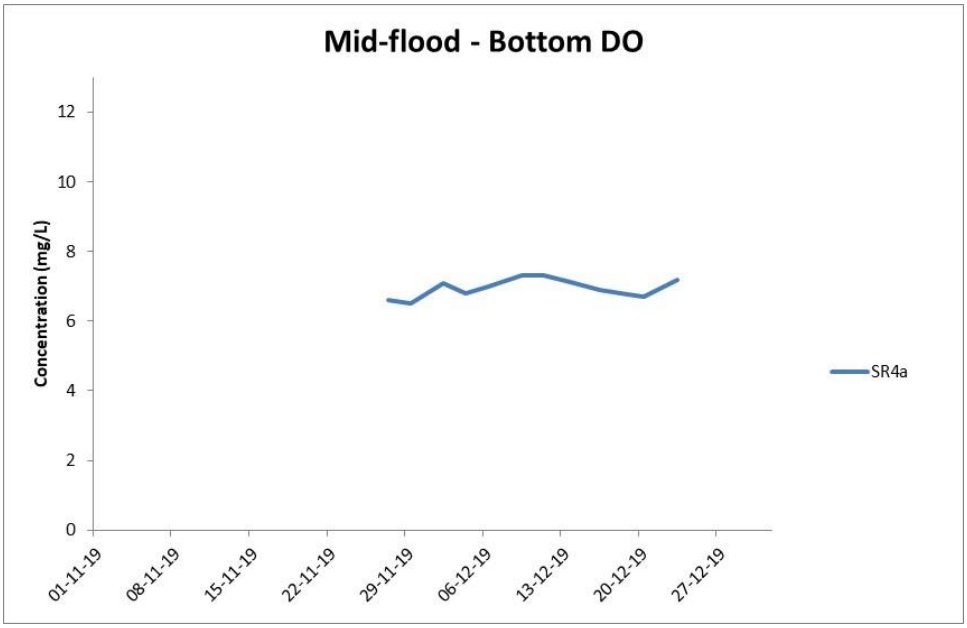

Figure G18 Post-Construction Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 27 November 2019 and 23 December 2019 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

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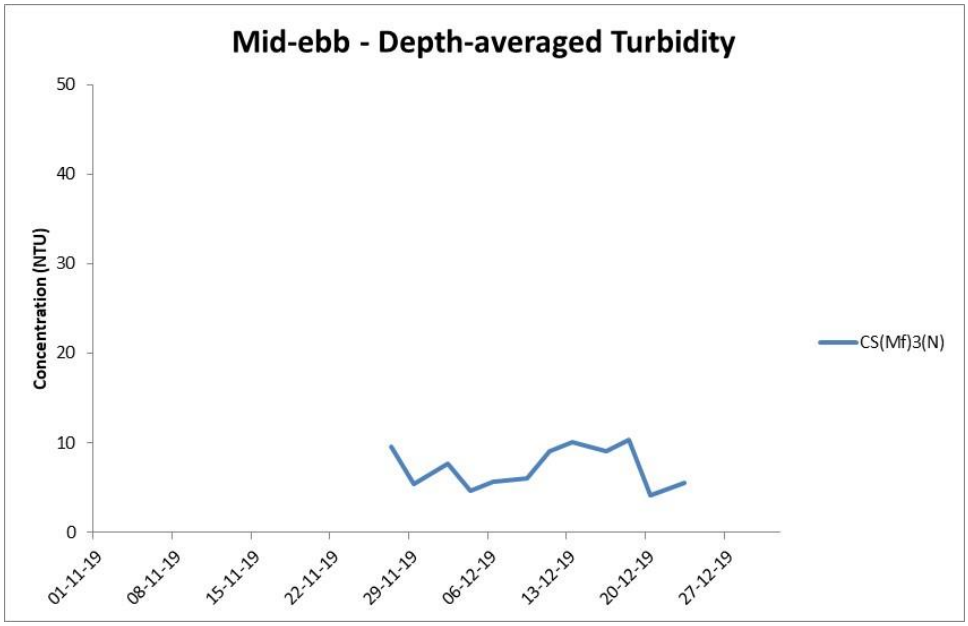


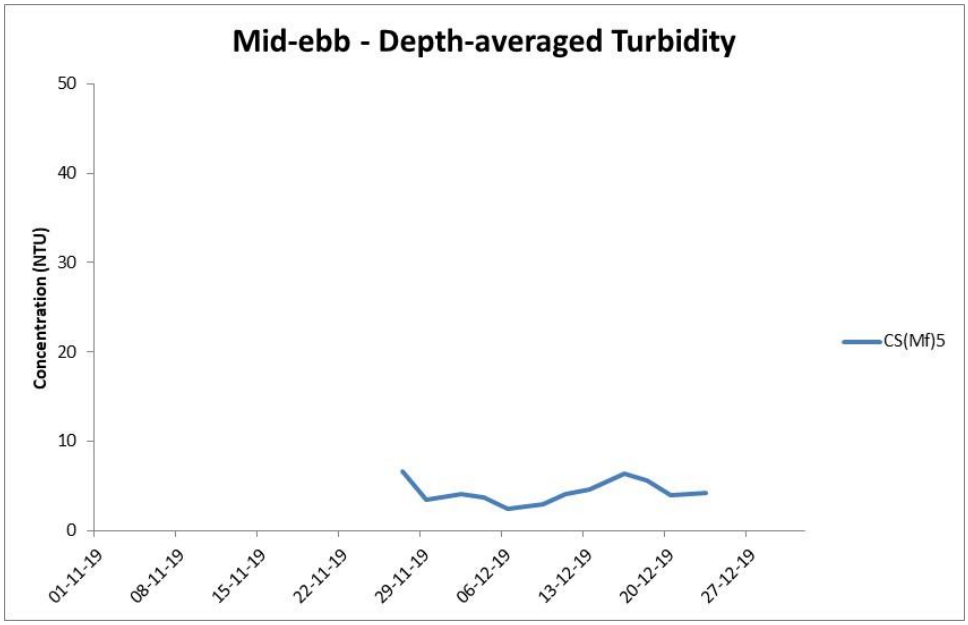
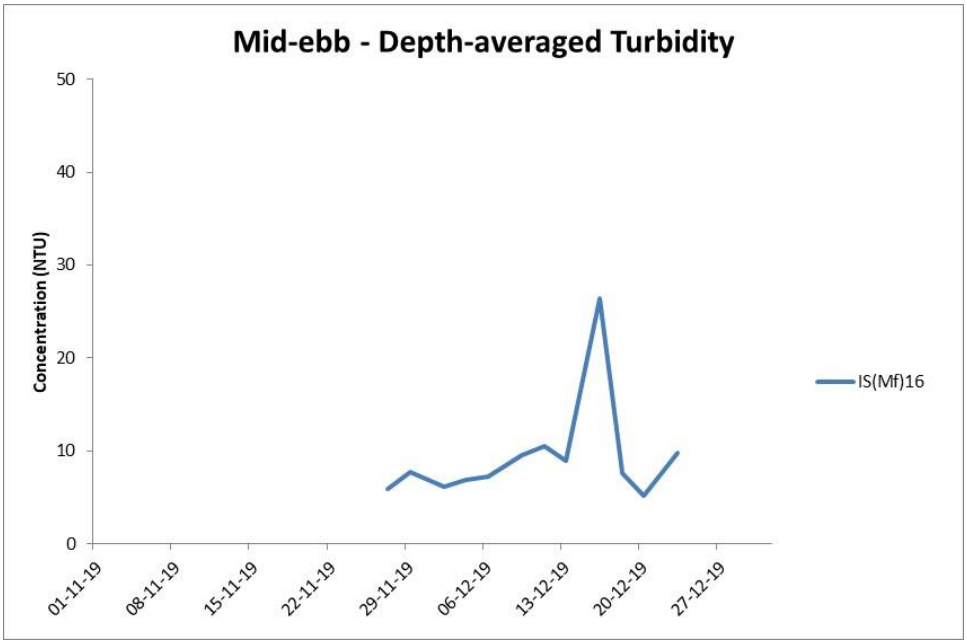


Figure G19 Post-Construction Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 27 November 2019 and 23 December 2019 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.



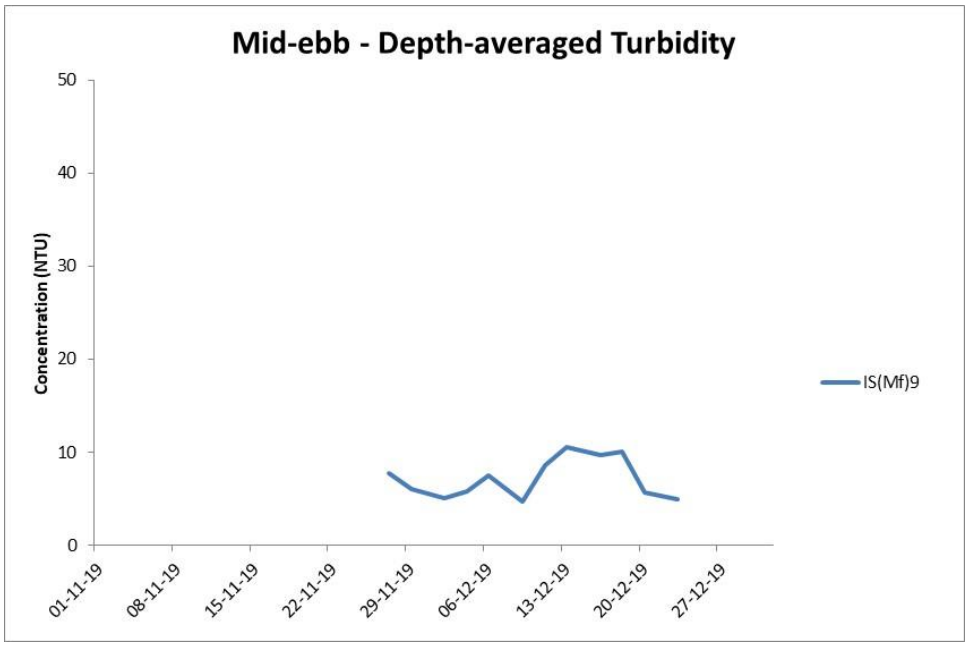


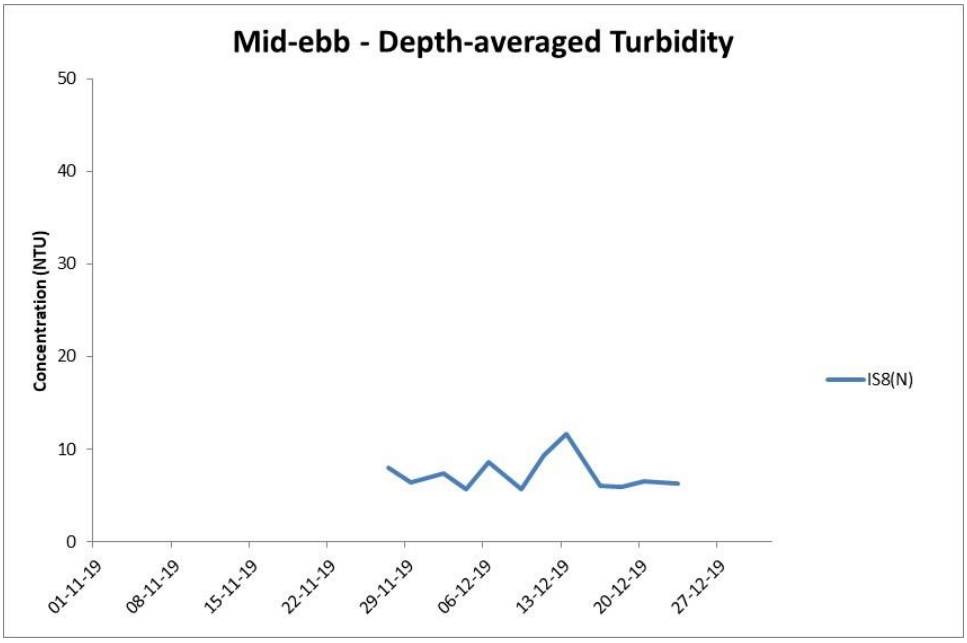
Figure G20 Post-Construction Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 27 November 2019 and 23 December 2019 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

ERM



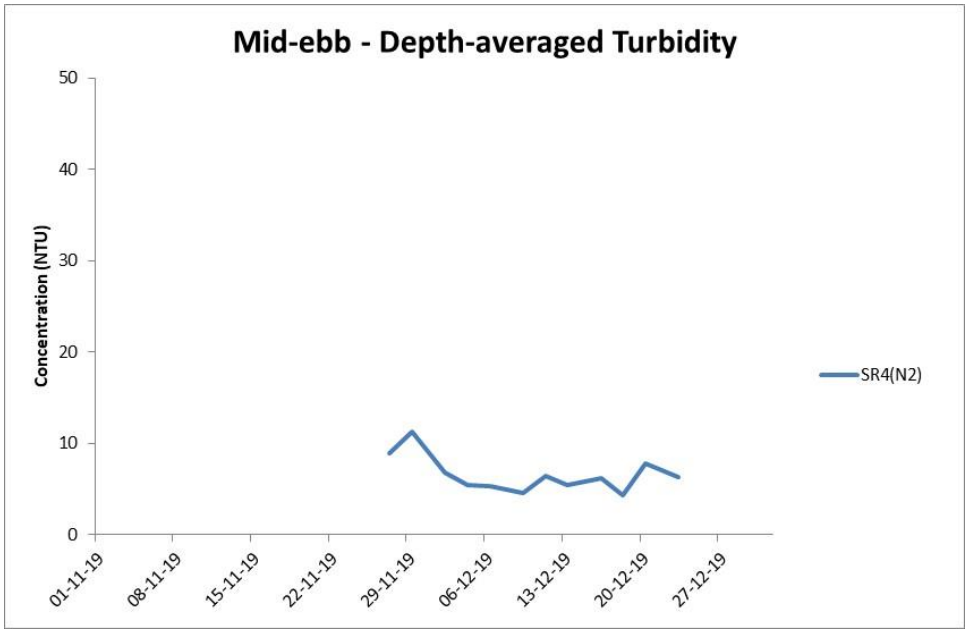


Figure G21 Post-Construction Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 27 November 2019 and 23 December 2019 at IS8(N) and SR4(N2).

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

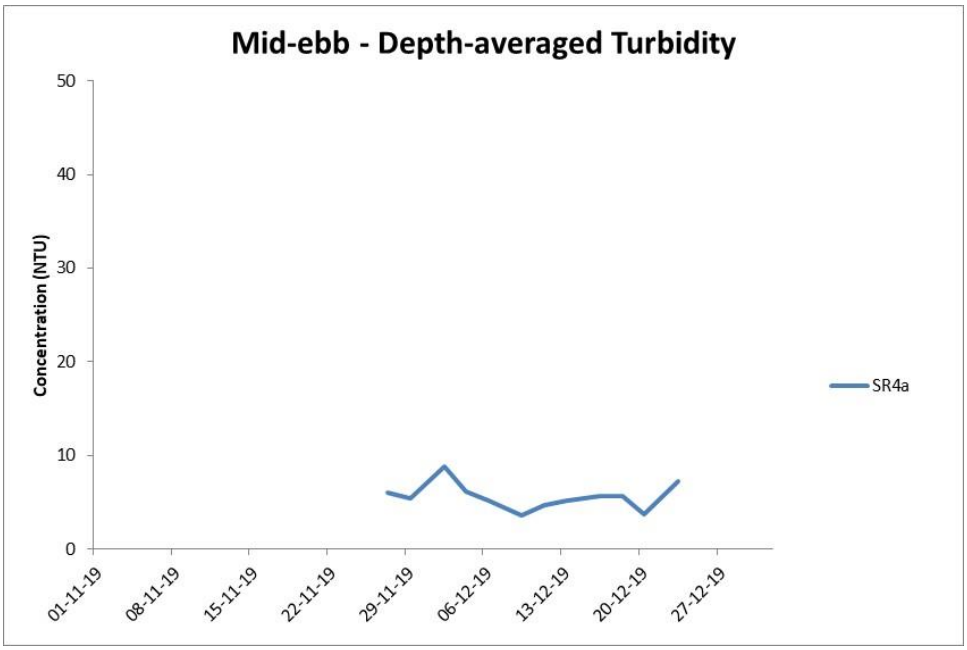
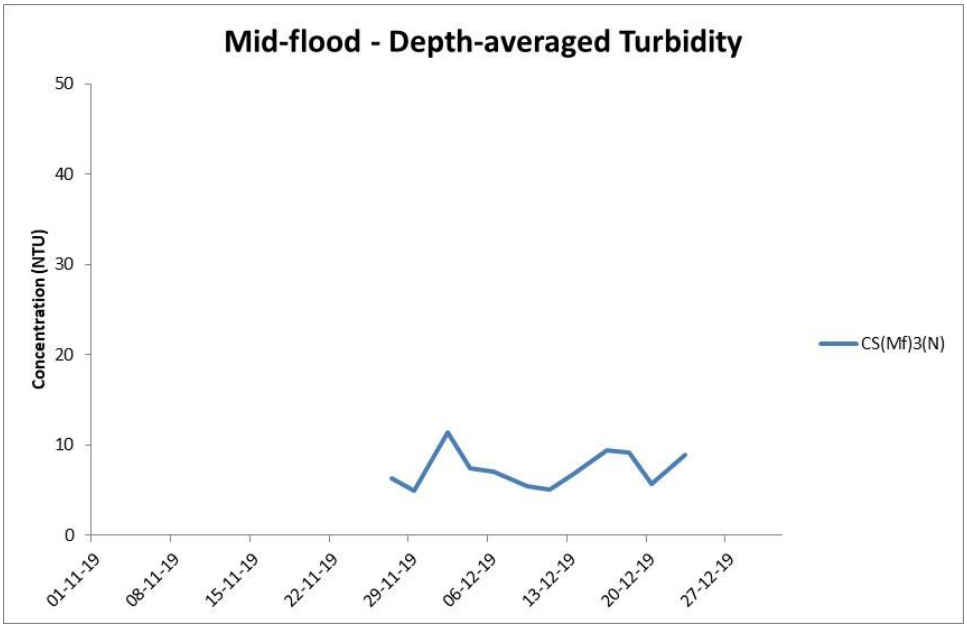


Figure G22 Post-Construction Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 27 November 2019 and 23 December 2019 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.



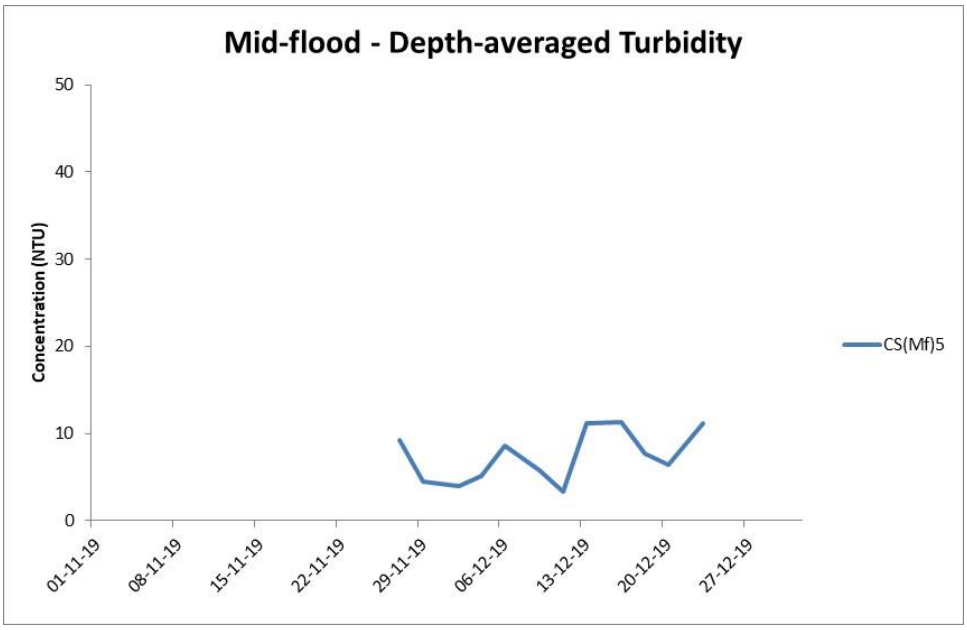
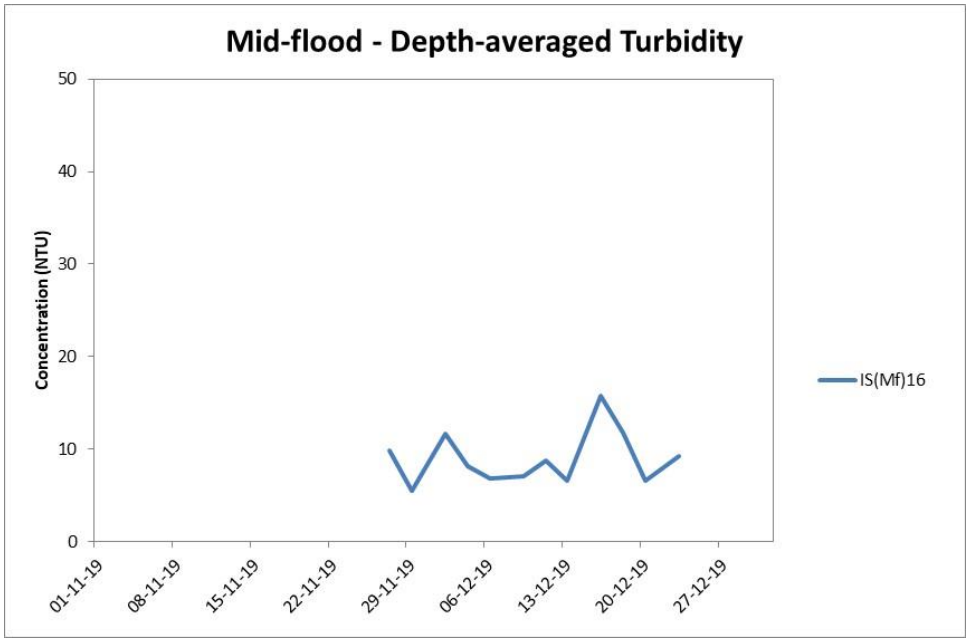


Figure G23 Post-Construction Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 27 November 2019 and 23 December 2019 at CS(Mf)3(N) and CS(MF)5.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.



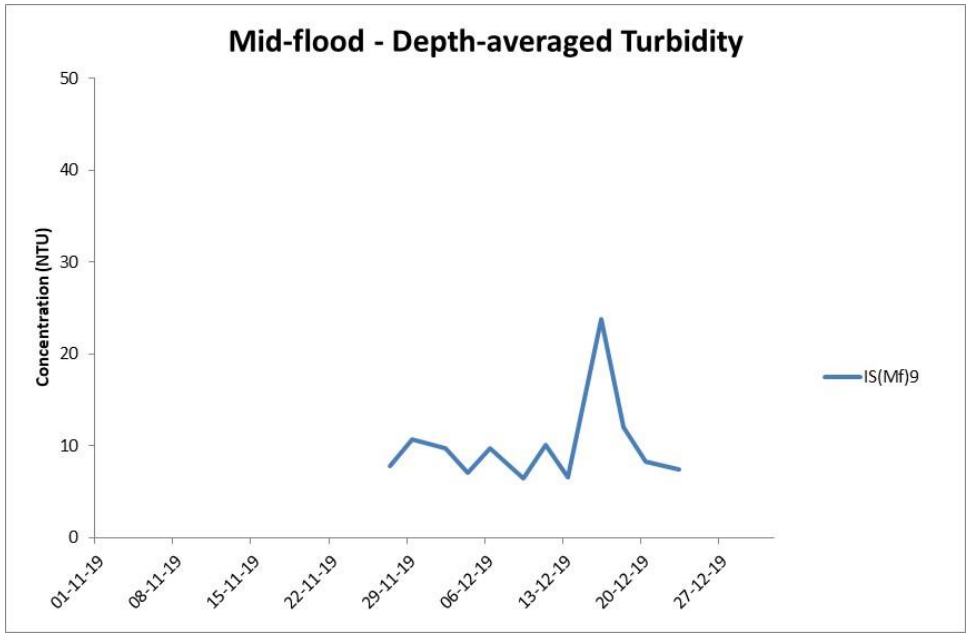
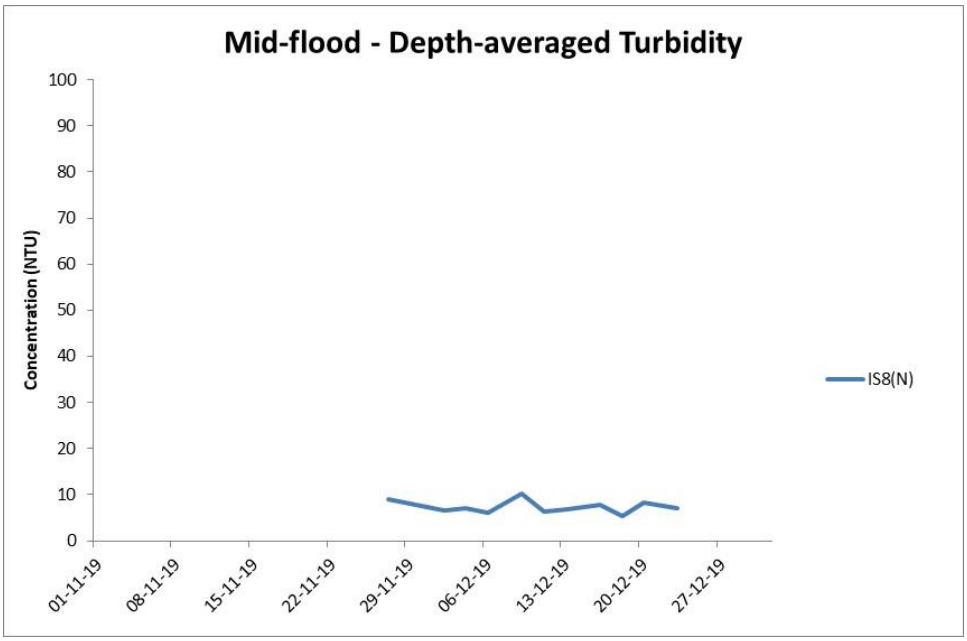
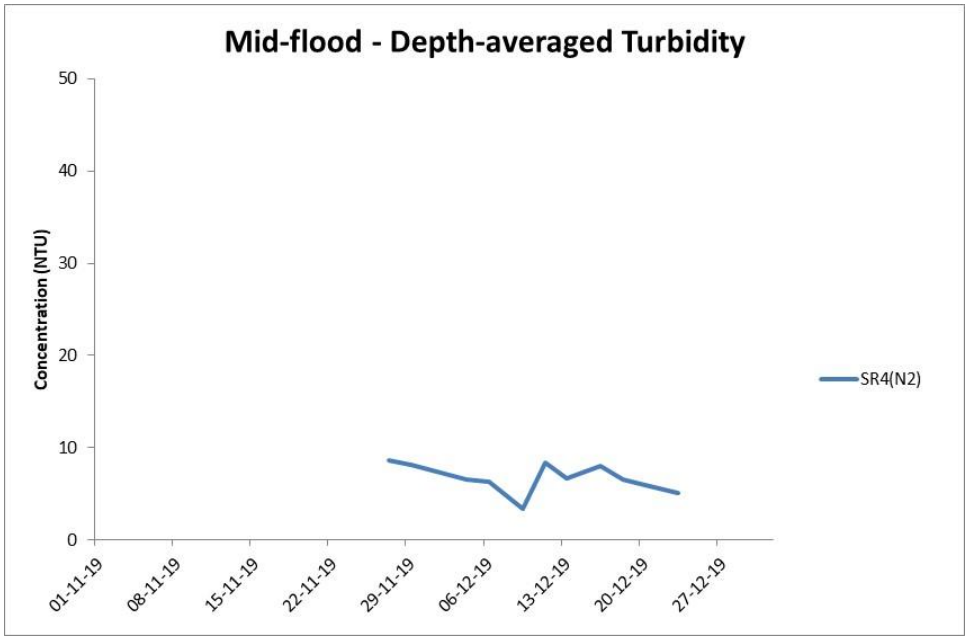


Figure G24 Post-Construction Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 27 November 2019 and 23 December 2019 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.





`Figure G25 Post-Construction Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 27 November 2019 and 23 December 2019 at IS8(N) and SR4(N2).

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

ERM

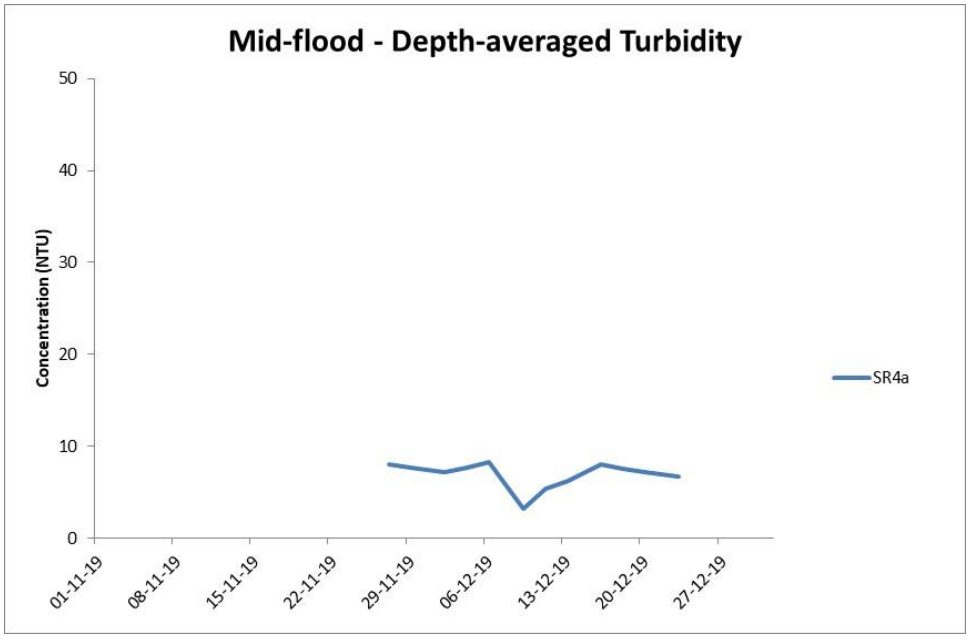


Figure G26 Post-Construction Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 27 November 2019 and 23 December 2019 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

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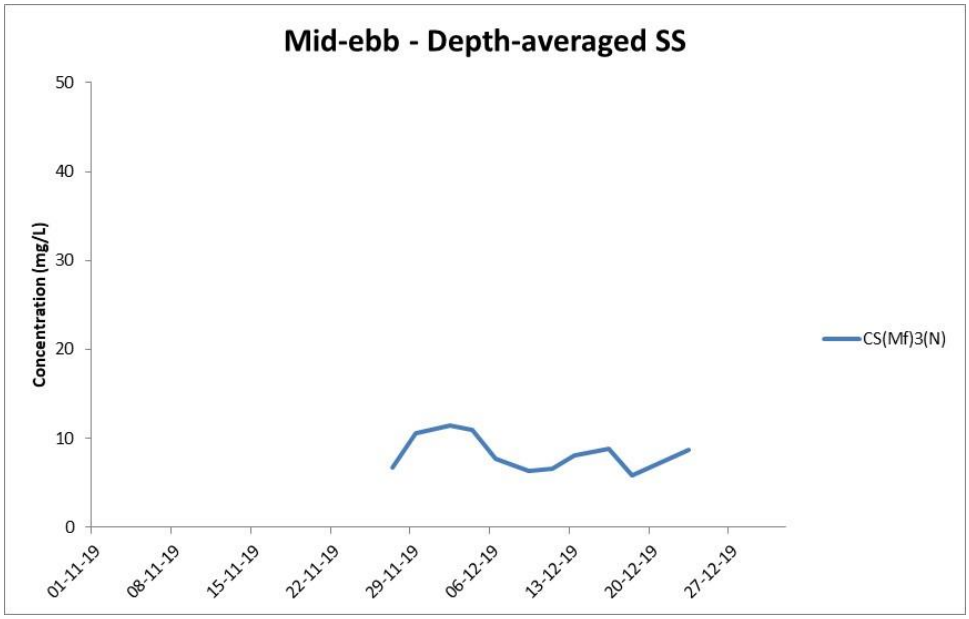

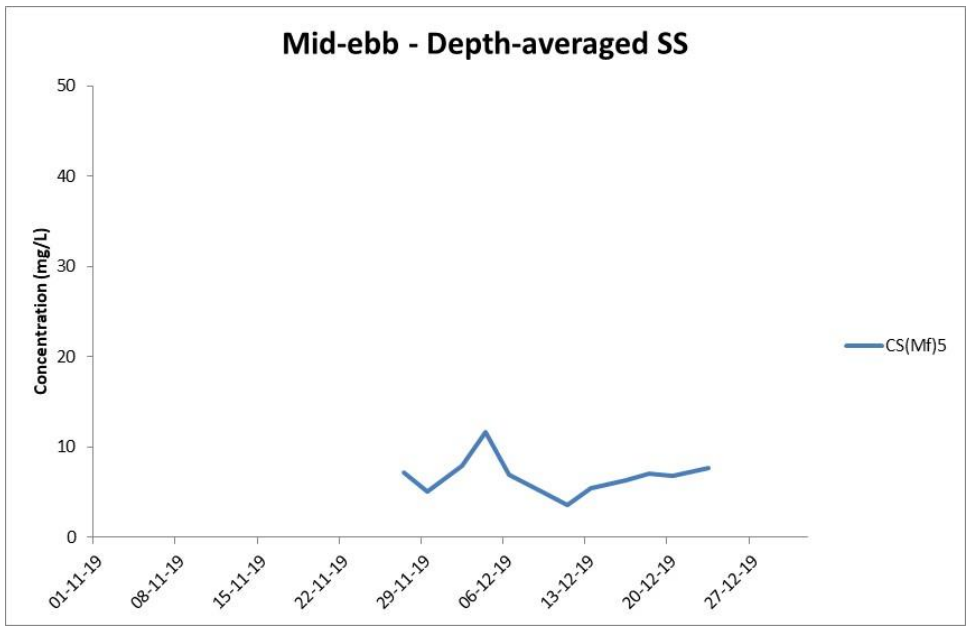

Figure G27 Post-Construction Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 27 November 2019 and 23 December 2019 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

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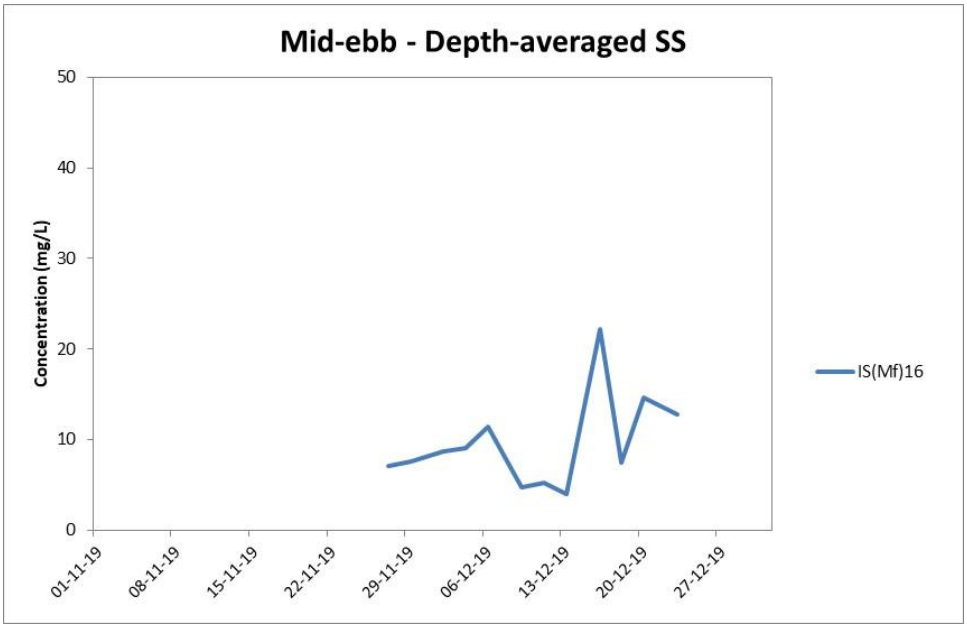

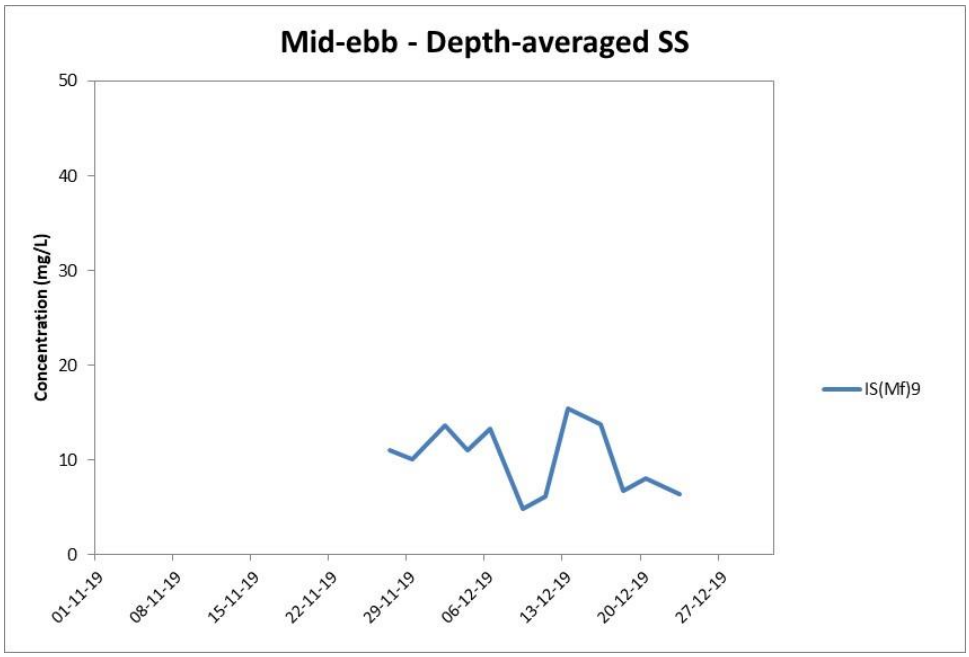

Figure G28 Post-Construction Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 27 November 2019 and 23 December 2019 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

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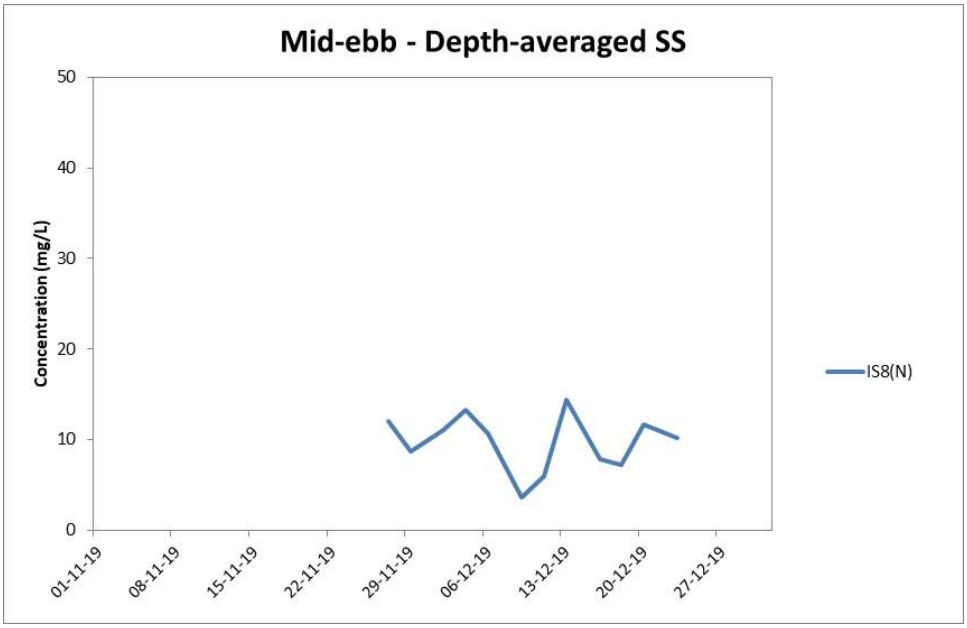

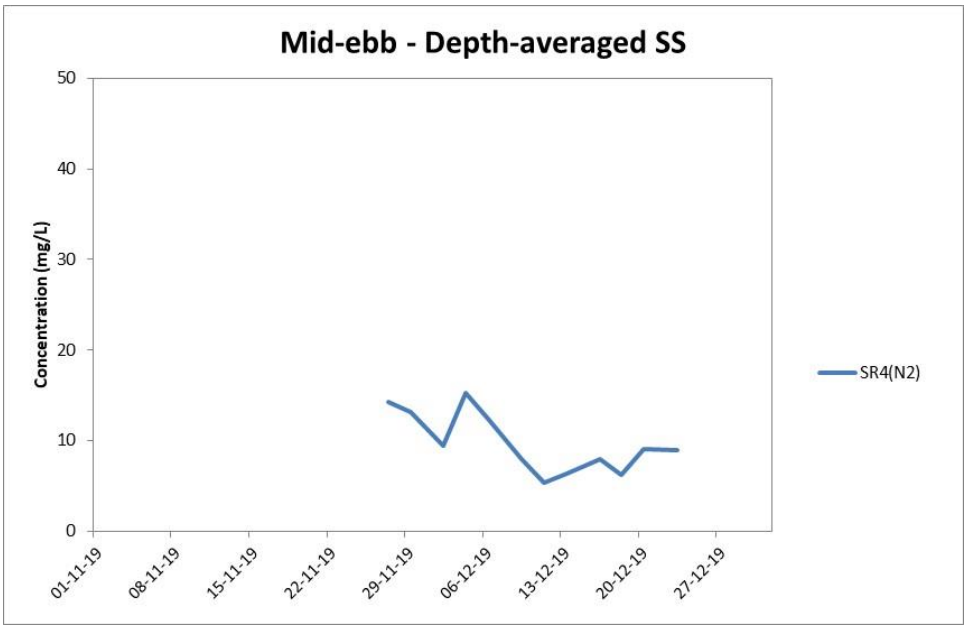

Figure G29 Post-Construction Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 27 November 2019 and 23 December 2019 at IS8(N) and SR4(N2).

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

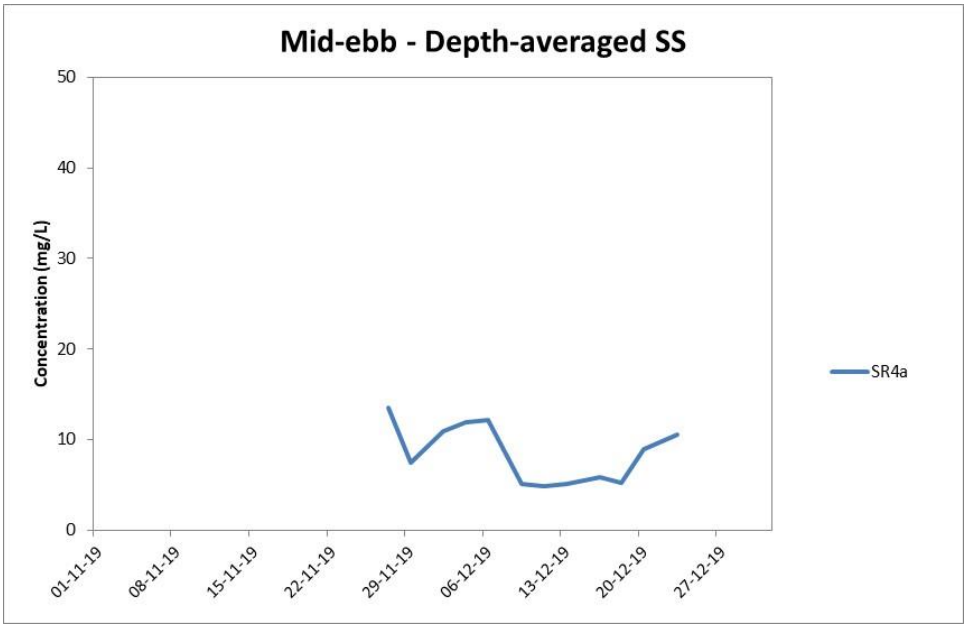

Figure G30 Post-Construction Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 27 November 2019 and 23 December 2019 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

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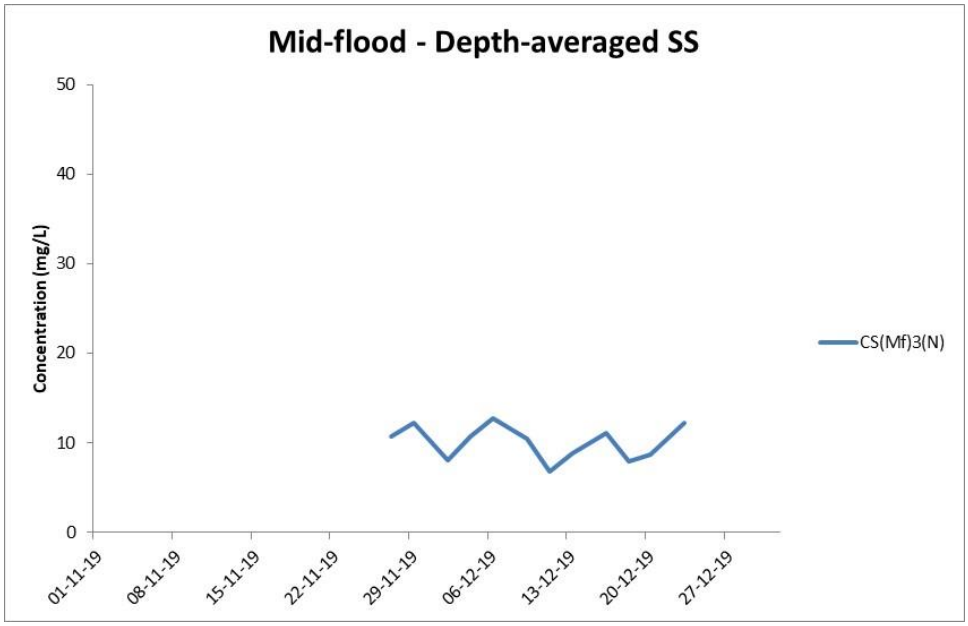


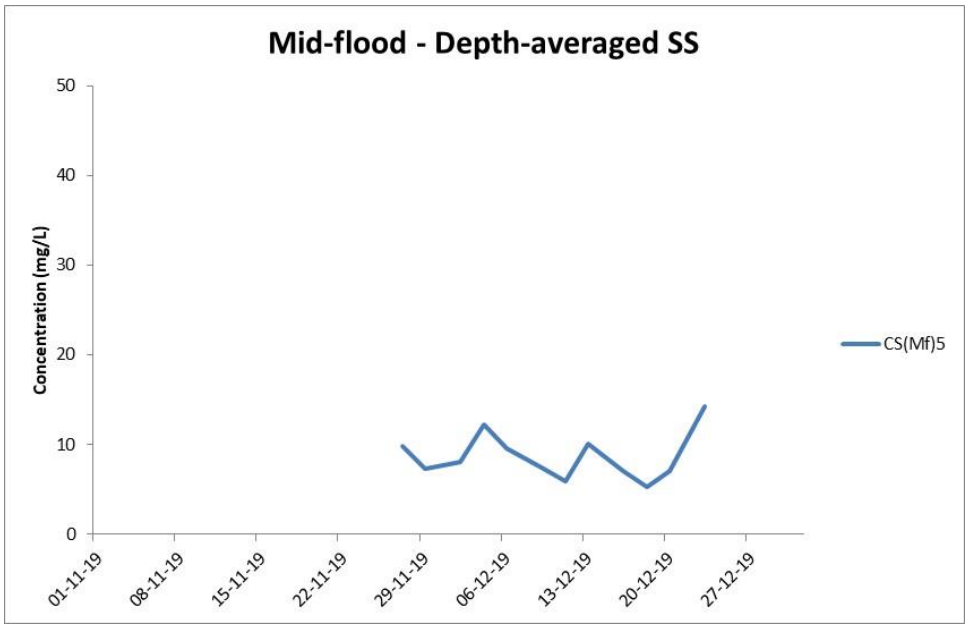
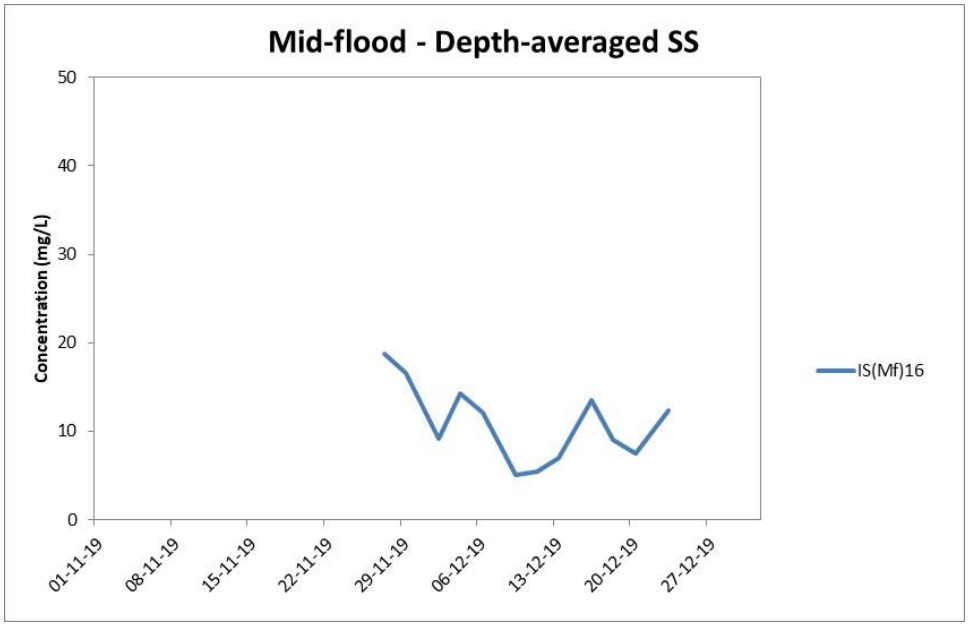


Figure G31 Post-Construction Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 27 November 2019 and 23 December 2019 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.



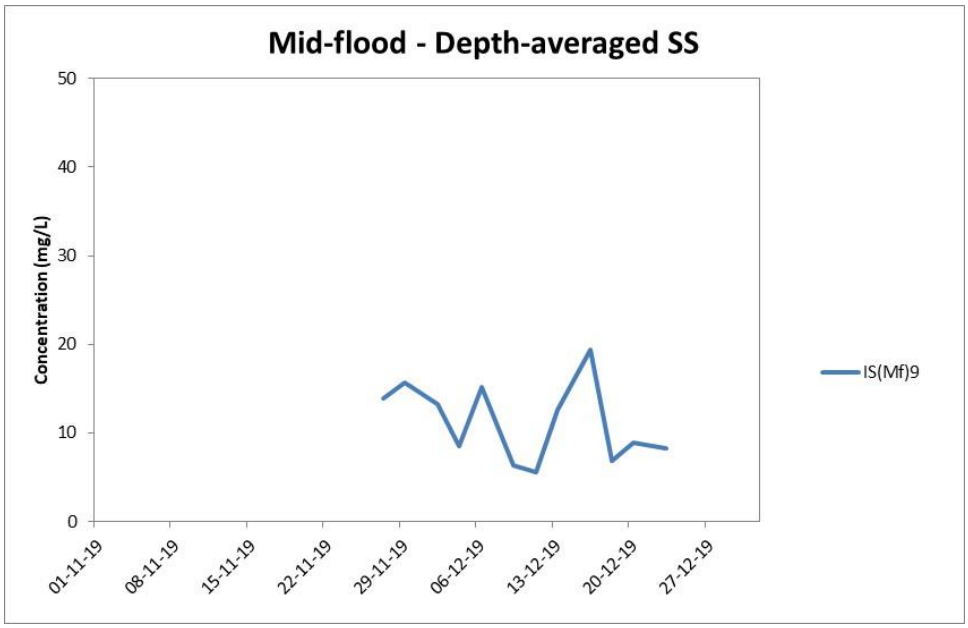


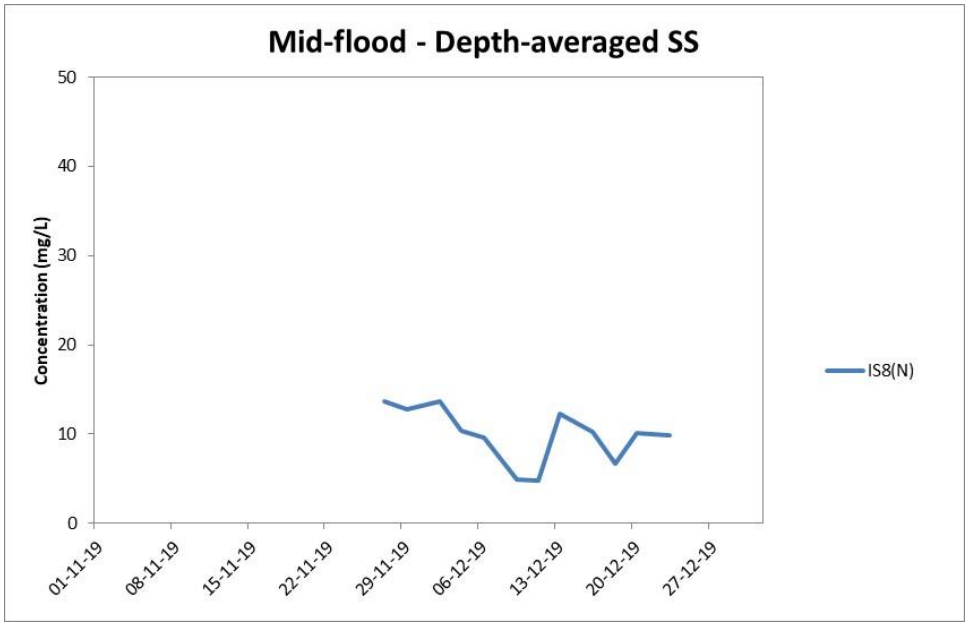
Figure G32 Post-Construction Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 27 November 2019 and 23 December 2019 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

ERM



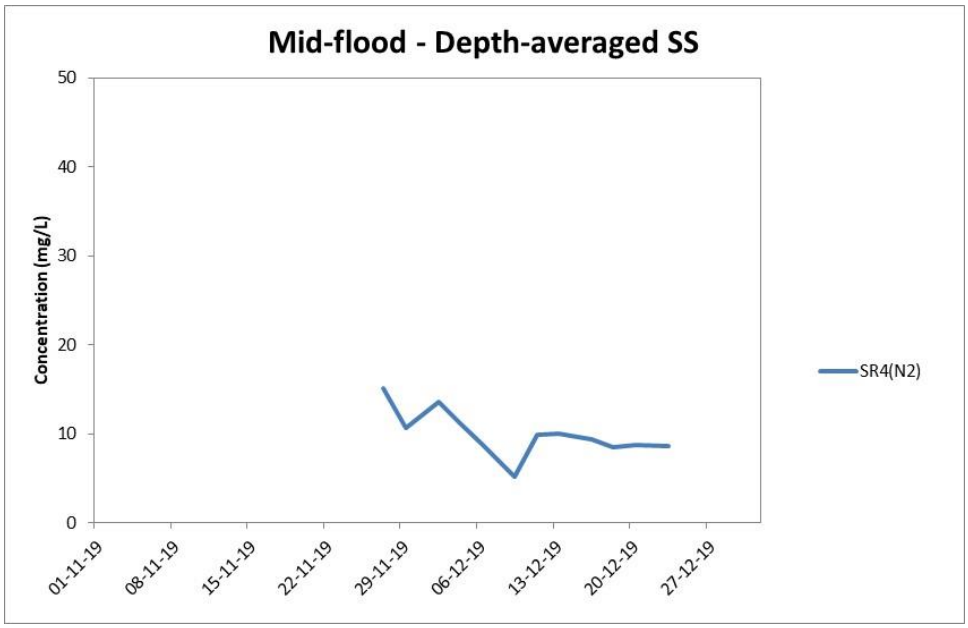


Figure G33 Post-Construction Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 27 November 2019 and 23 December 2019 at IS8(N) and SR4(N2).

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Environmental Resources Management

ERM

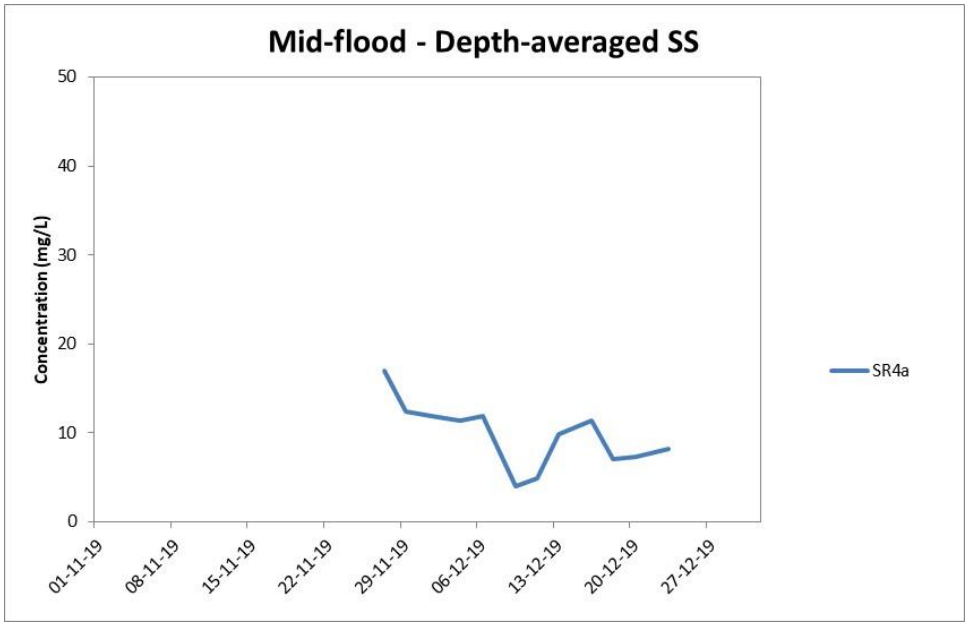


Figure G34 Post-Construction Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 27 November 2019 and 23 December 2019 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

No marine works was carried out in the reporting period.

Appendix H

Impact Dolphin Monitoring Survey Results

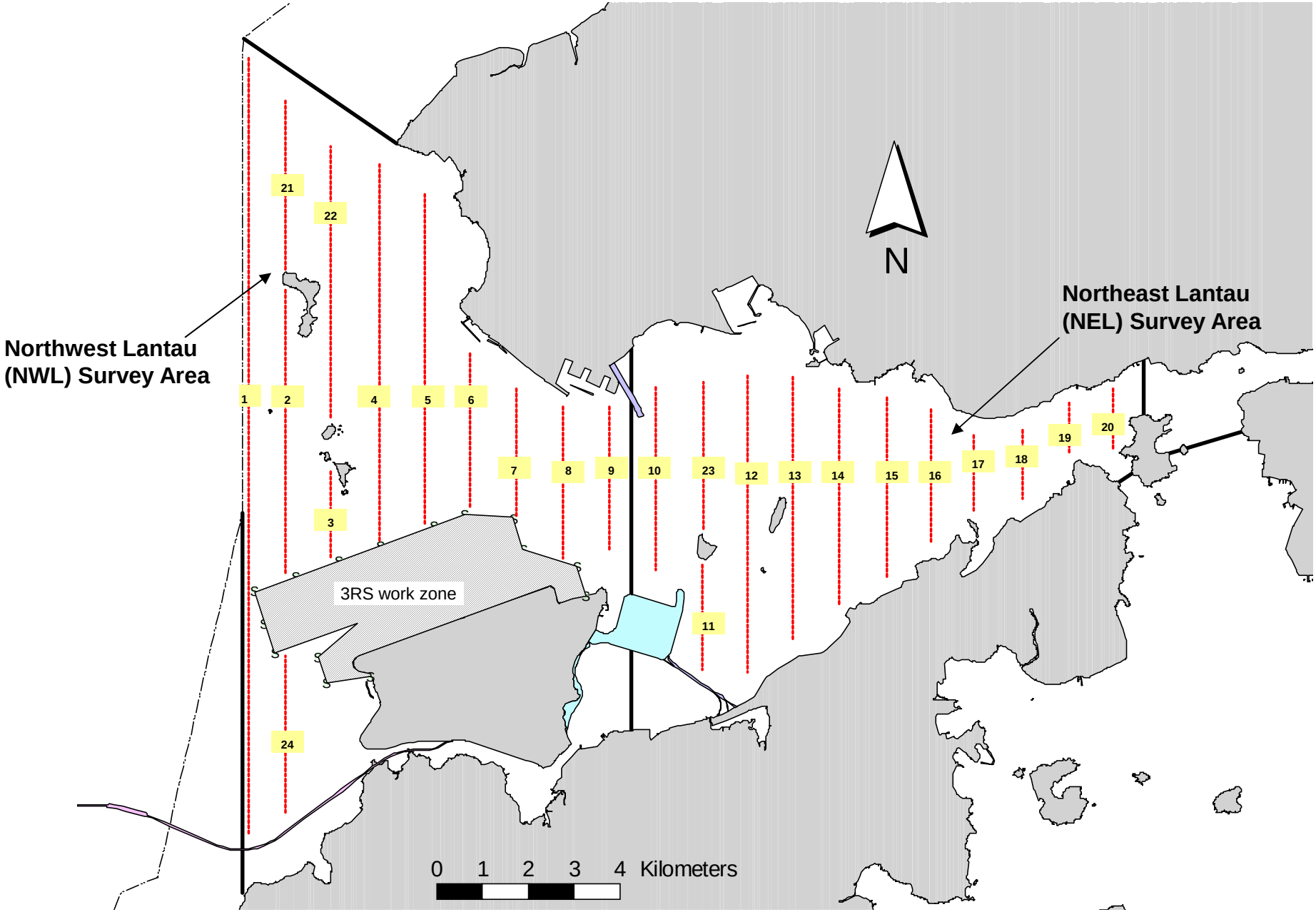


Figure 1. Transect Line Layout in Northwest and Northeast Lantau Survey Areas

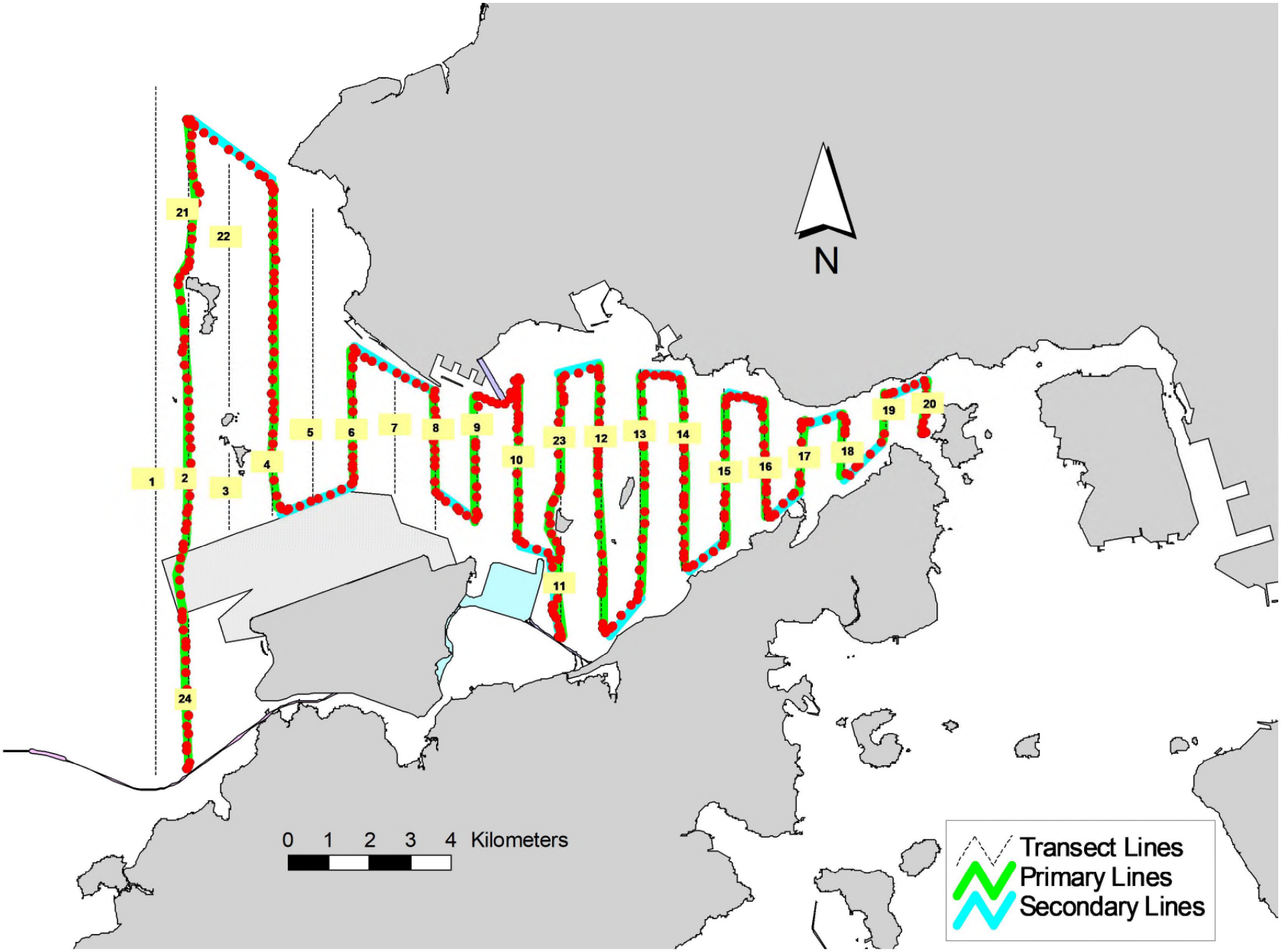


Figure 2. Survey Route on December 3rd, 2019 (from TMCLKL08 surveys)

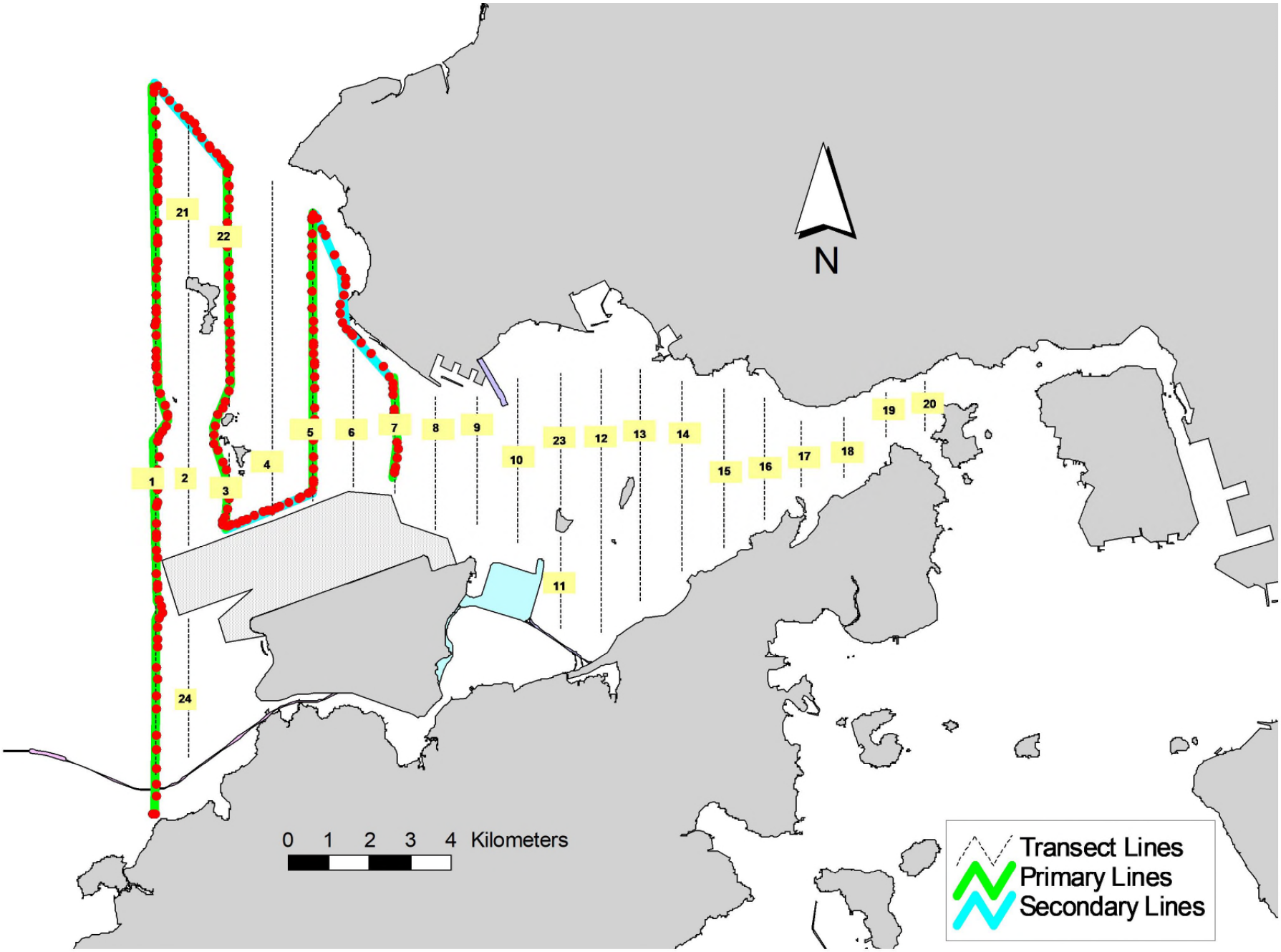


Figure 3. Survey Route on December 10th, 2019 (from TMCLKL08 surveys)

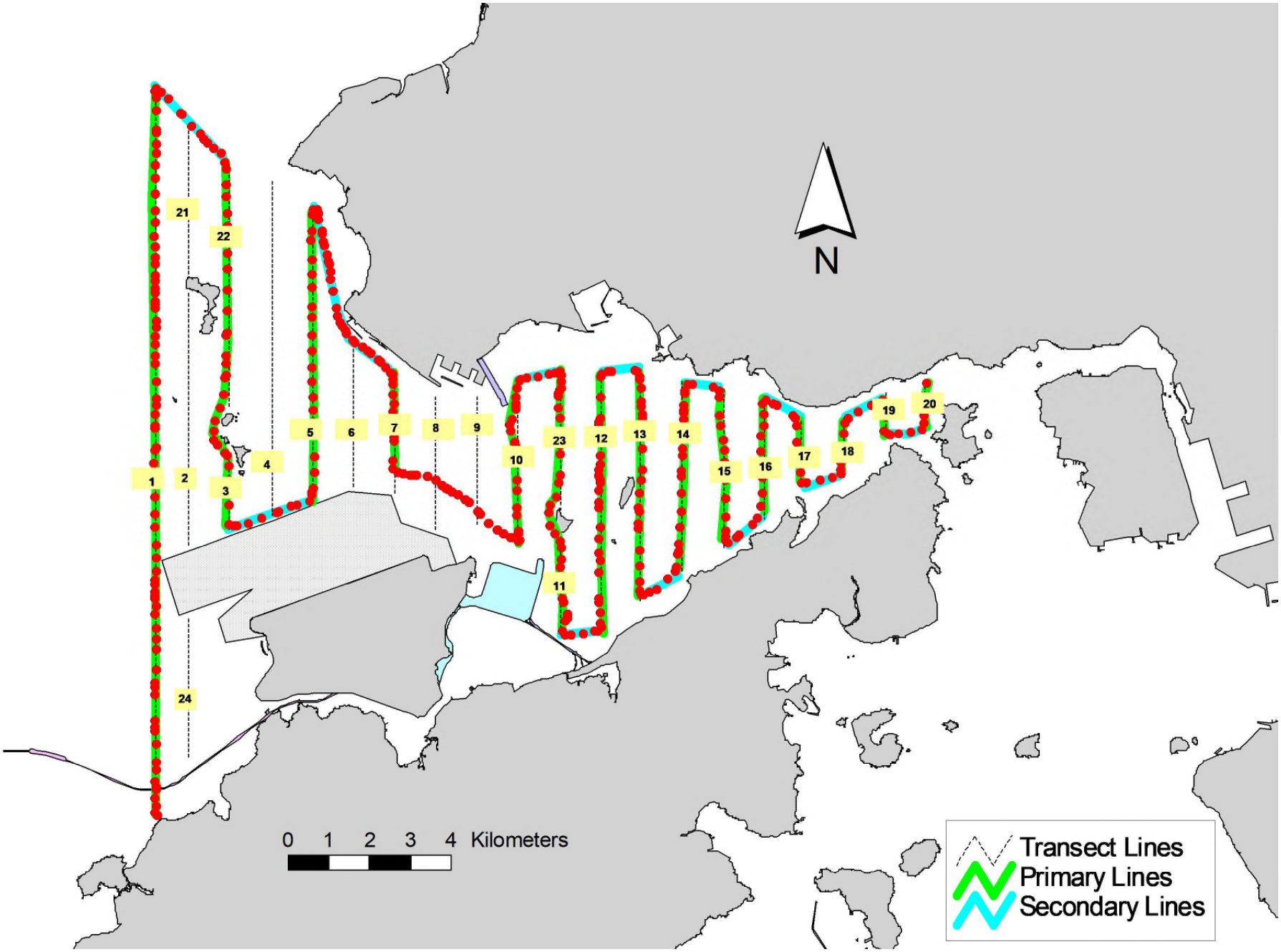


Figure 4. Survey Route on December 12th, 2019 (from TMCLKL08 surveys)

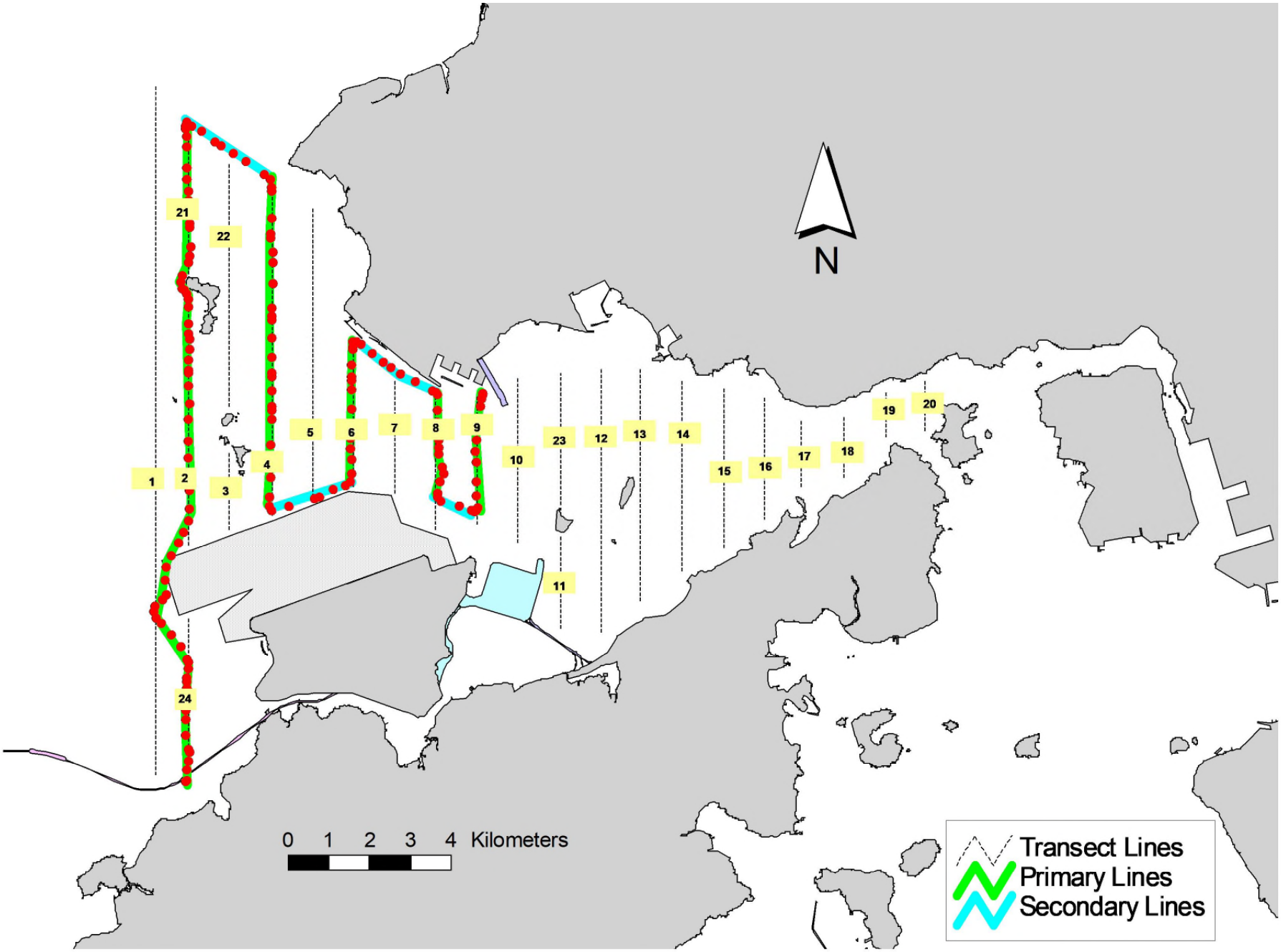


Figure 5. Survey Route on December 16th, 2019 (from TMCLKL08 surveys)

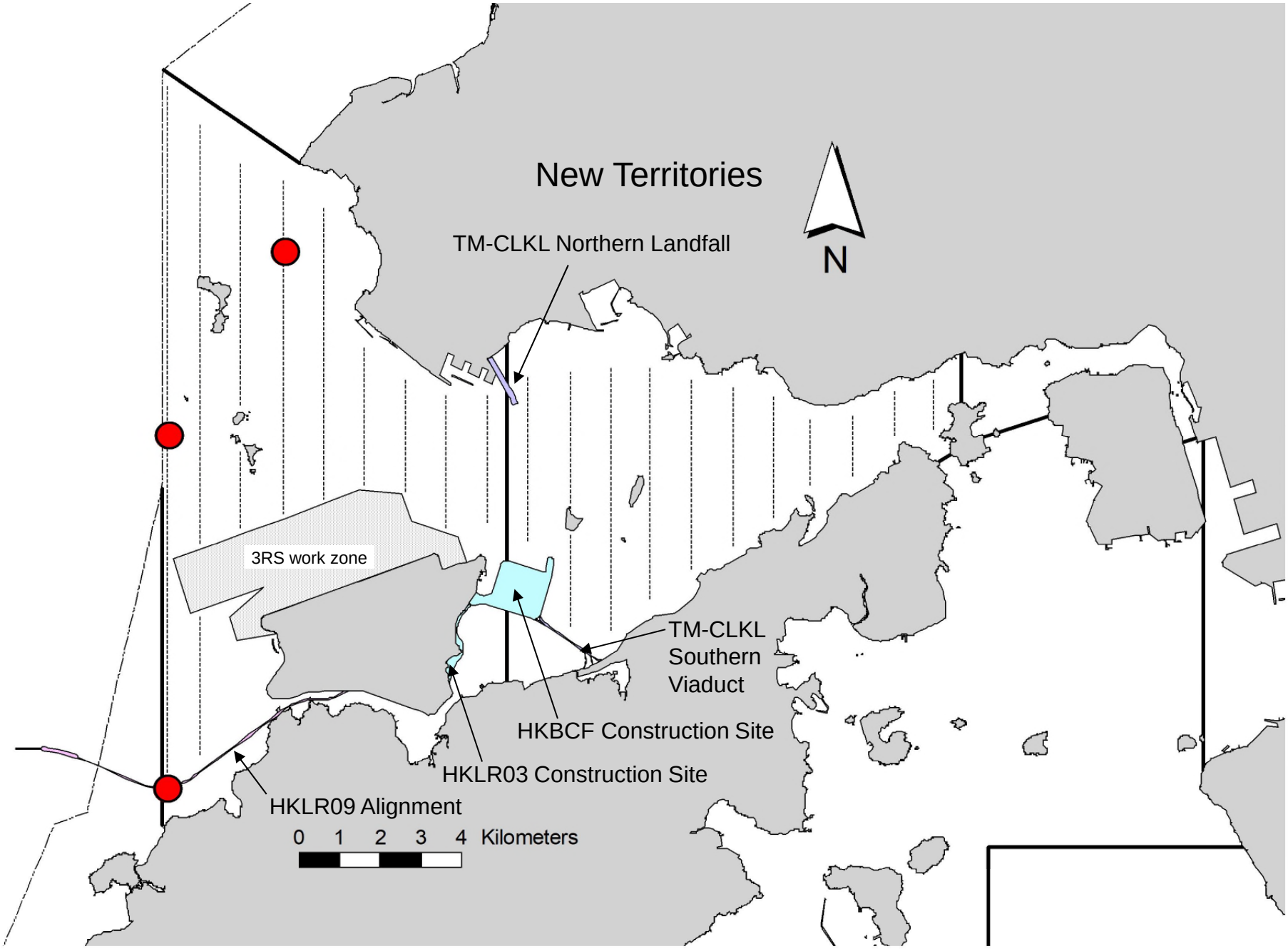


Figure 6. Distribution of Chinese White Dolphin Sightings during December 2019 TMCLKL08 Monitoring Surveys

Appendix I. TMCLKL Survey Effort Database (December 2019)

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

DATE	AREA	BEAU	EFFORT	SEASON	VESSEL	TYPE	P/S
3-Dec-19	NW LANTAU	2	12.20	WINTER	STANDARD36826	TMCLKL	P
3-Dec-19	NW LANTAU	3	14.35	WINTER	STANDARD36826	TMCLKL	P
3-Dec-19	NW LANTAU	2	2.10	WINTER	STANDARD36826	TMCLKL	S
3-Dec-19	NW LANTAU	3	10.85	WINTER	STANDARD36826	TMCLKL	S
3-Dec-19	NE LANTAU	2	35.34	WINTER	STANDARD36826	TMCLKL	P
3-Dec-19	NE LANTAU	2	13.06	WINTER	STANDARD36826	TMCLKL	S
3-Dec-19	NE LANTAU	3	1.20	WINTER	STANDARD36826	TMCLKL	S
10-Dec-19	NW LANTAU	1	2.21	WINTER	STANDARD36826	TMCLKL	P
10-Dec-19	NW LANTAU	2	30.56	WINTER	STANDARD36826	TMCLKL	P
10-Dec-19	NW LANTAU	1	1.72	WINTER	STANDARD36826	TMCLKL	S
10-Dec-19	NW LANTAU	2	9.41	WINTER	STANDARD36826	TMCLKL	S
12-Dec-19	NW LANTAU	1	1.88	WINTER	STANDARD36826	TMCLKL	P
12-Dec-19	NW LANTAU	2	20.64	WINTER	STANDARD36826	TMCLKL	P
12-Dec-19	NW LANTAU	3	9.32	WINTER	STANDARD36826	TMCLKL	P
12-Dec-19	NW LANTAU	2	9.59	WINTER	STANDARD36826	TMCLKL	S
12-Dec-19	NW LANTAU	3	1.29	WINTER	STANDARD36826	TMCLKL	S
12-Dec-19	NE LANTAU	2	35.13	WINTER	STANDARD36826	TMCLKL	P
12-Dec-19	NE LANTAU	2	11.07	WINTER	STANDARD36826	TMCLKL	S
16-Dec-19	NW LANTAU	0	1.25	WINTER	STANDARD36826	TMCLKL	P
16-Dec-19	NW LANTAU	1	7.14	WINTER	STANDARD36826	TMCLKL	P
16-Dec-19	NW LANTAU	2	19.38	WINTER	STANDARD36826	TMCLKL	P
16-Dec-19	NW LANTAU	1	1.60	WINTER	STANDARD36826	TMCLKL	S
16-Dec-19	NW LANTAU	2	10.73	WINTER	STANDARD36826	TMCLKL	S

Appendix II. TMCLKL Chinese White Dolphin Sighting Database (December 2019)

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

DATE	STG #	TIME	HRD SZ	AREA	BEAU	PSD	EFFORT	TYPE	NORTHING	EASTING	SEASON	BOAT ASSOC.	P/S
12-Dec-19	1	1016	11	NW LANTAU	2	55	ON	TMCLKL	815115	804650	WINTER	NONE	P
12-Dec-19	2	1112	1	NW LANTAU	3	36	ON	TMCLKL	823299	804678	WINTER	NONE	P
16-Dec-19	1	1126	1	NW LANTAU	2	674	ON	TMCLKL	827556	807529	WINTER	NONE	P

Appendix III. Individual dolphins identified during TMCLKL monitoring surveys in (December 2019)

ID#	DATE	STG#	AREA
CH108	12/12/19	1	NW LANTAU
NL33	12/12/19	1	NW LANTAU
NL120	12/12/19	1	NW LANTAU
NL123	16/12/19	1	NW LANTAU
WL100	12/12/19	1	NW LANTAU
WL145	12/12/19	1	NW LANTAU
WL214	12/12/19	1	NW LANTAU
WL268	12/12/19	2	NW LANTAU
WL284	12/12/19	1	NW LANTAU

Appendix IV. Photographs of Identified Individual Dolphins in December 2019 (TMCLKL)

Appendix I

Event Action Plan

Appendix I1 Implementation of Event-Action Plan for Dolphin Monitoring

Event	ET Leader	IEC	SOR	Contractor
Action Level	1. Repeat statistical data analysis to confirm findings; 2. Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences; 3. Identify source(s) of impact; 4. Inform the IEC, SOR and Contractor; 5. Check monitoring data. 6. Review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary.	1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring results and findings with the ET and the Contractor.	1. Discuss monitoring with the IEC and any other measures proposed by the ET; 2. If SOR is satisfied with the proposal of any other measures, SOR to signify the agreement in writing on the measures to be implemented.	1. Inform the SOR and confirm notification of the non-compliance in writing; 2. Discuss with the ET and the IEC and propose measures to the IEC and the SOR; 3. Implement the agreed measures.

Event	ET Leader	IEC	SOR	Contractor
Limit Level	1. Repeat statistical data analysis to confirm findings; 2. Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences; 3. Identify source(s) of impact; 4. Inform the IEC, ER/SOR and Contractor of findings; 5. Check monitoring data; 6. Repeat review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary; 7. If ET proves that the source of impact is caused by any of the construction activity by the works contract, ET to arrange a meeting to discuss with IEC, ER/SOR and Contractor the necessity of additional dolphin monitoring and/or any other potential mitigation measures (e.g., consider to modify the perimeter silt curtain or consider to control/temporarily stop relevant construction activity etc.) and submit to IEC a proposal of additional dolphin monitoring and/or mitigation measures where necessary.	1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring results and findings with the ET and the Contractor; 3. Attend the meeting to discuss with ET, ER/SOR and Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures; 4. Review proposals for additional monitoring and any other mitigation measures submitted by ET and Contractor and advise ER/SOR of the results and findings accordingly; 5. Supervise / Audit the implementation of additional monitoring and/or any other mitigation measures and advise ER/SOR the results and findings accordingly.	1. Attend the meeting to discuss with ET, IEC and Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures; 2. If ER/SOR is satisfied with the proposals for additional dolphin monitoring and/or any other mitigation measures submitted by ET and Contractor and verified by IEC, ER/SOR to signify the agreement in writing on such proposals and any other mitigation measures; 3. Supervise the implementation of additional monitoring and/or any other mitigation measures.	1. Inform the ER/SOR and confirm notification of the non- compliance in writing; 2. Attend the meeting to discuss with ET, IEC and ER/SOR the necessity of additional dolphin monitoring and any other potential mitigation measures; 3. Jointly submit with ET to IEC a proposal of additional dolphin monitoring and/or any other mitigation measures when necessary; 4. Implement the agreed additional dolphin monitoring and/or any other mitigation measures.

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

Appendix J

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 2019 (Year)

Month\Material	Actual Quantities of Inert C&D Materials Generation						Actual Quantities of C&D wastes Generation						Actual Quantities of Recyclables Generation			
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fills	Imported Fill	Marine Sediment, Cat. L	Marine Sediment, Cat. Mp	Marine Sediment, Cat. Mf	Marine Sediment, Cat. H	Chemical Waste	General Refuse	Metals	Felled trees	Paper/ cardboard packaging	Plastics
Unit	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)
Jan	3.687	0.861	-	-	3.687	-	-	-	-	-	0.800	251.110	-	-	-	-
Feb	1.254	0.046	-	0.637	0.617	-	-	-	-	-	-	84.990	-	-	-	-
Mar	4.491	0.000	-	3.627	0.864	-	-	-	-	-	-	71.750	-	-	-	-
Apr	9.363	0.153	-	8.979	0.384	-	-	-	-	-	-	56.470	-	9.520	0.084	-
May	5.334	0.000	-	5.258	0.077	-	-	-	-	-	-	76.380	-	-	-	-
Jun	0.356	0.000	-	0.315	0.041	-	-	-	-	-		39.960	-	-	-	-
SUB-TOTAL	**24.484**	**1.060**	**0.000**	**18.815**	**5.669**	**0.000**	**-**	**-**	**-**	**-**	**0.800**	**580.660**	**-**	**9.520**	**0.084**	**-**
Jul	-	0.000	-	-	-	-	-	-	-	-	-	17.100	-	-	-	-
Aug	-	0.000	-	-	-	-	-	-	-	-	-	31.050	-	-	-	-
Sep	-	0.000	-	-	-	-	-	-	-	-	-	17.720	-	-	-	-
Oct	-	0.000	-	-	-	-	-	-	-	-	-	8.490	-	-	-	-
Nov	-	0.000	-	-	-	-	-	-	-	-	-	19.670	-	-	-	-
Dec	-	0.000	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-
TOTAL	**24.484**	**1.060**	**-**	**18.815**	**5.669**	**-**	**-**	**-**	**-**	**-**	**0.800**	**674.690**	**-**	**9.520**	**0.084**	**-**

Notes :

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

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

3 - Broken concrete for recycling into aggregates.

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

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

Appendix K

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

Appendix K1 Cumulative Statistics on Exceedances

		Total No. recorded in this reporting month	**Total No. recorded since contract commencement**
1-Hr TSP	Action	0	0
	Limit	0	1
24-Hr TSP	Action	0	2
	Limit	0	0
Noise	Action	0	0
	Limit	0	0
Water Quality	Action	0	272
	Limit	0	27
Impact Dolphin Monitoring	Action	0	11
	Limit	0	18

Appendix K2 Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

Reporting Period	**Cumulative Statistics**		
	Complaints	Notifications of Summons	Successful Prosecutions
This Reporting Month (December 2019)	0	0	0
Total No. received since contract commencement	14	0	0