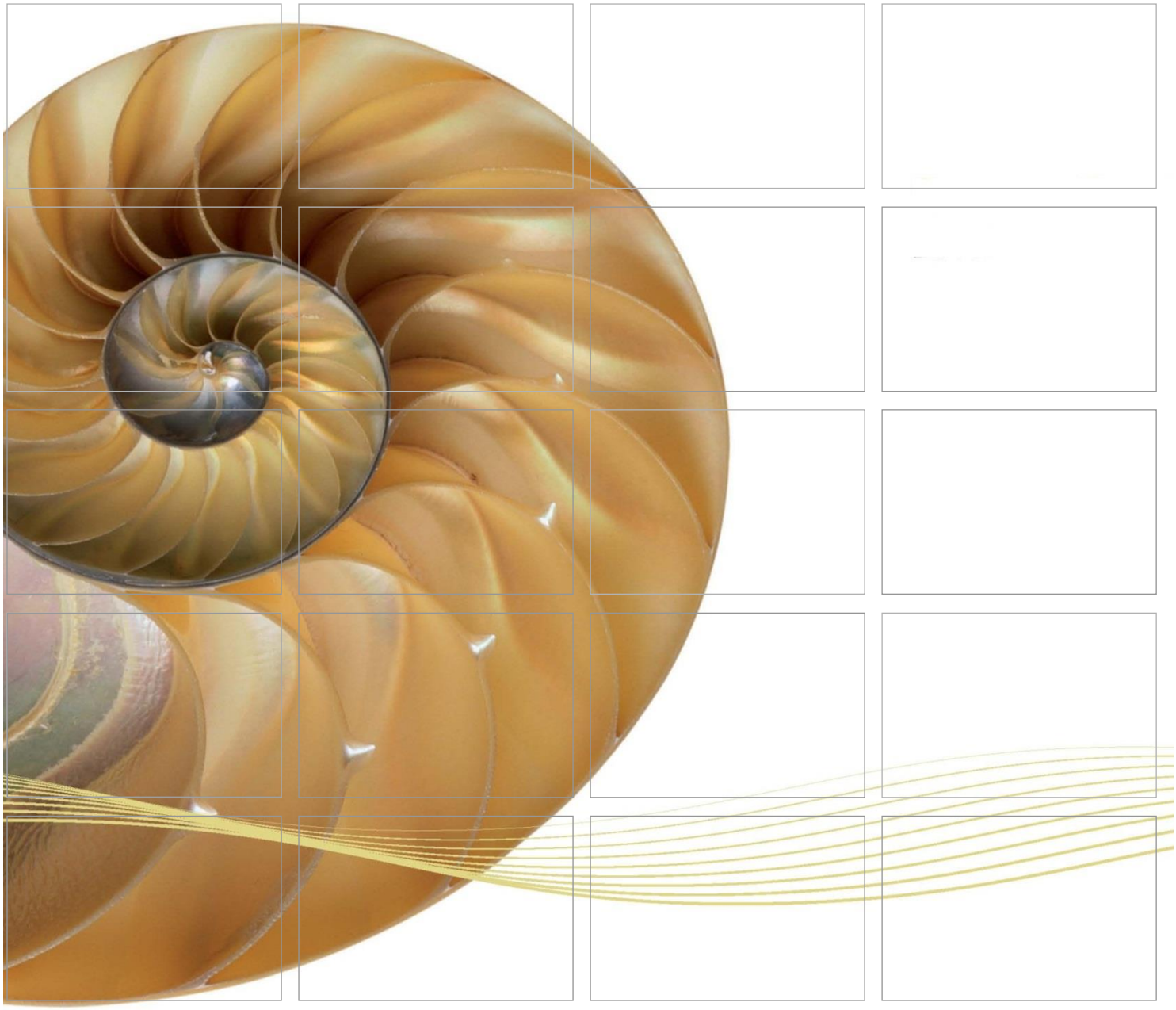
Report



Contract No. HY/2012/08
Tuen Mun – Chek Lap Kok Link – Northern Connection Sub-sea Tunnel Section

Thirty-ninth Monthly Environmental Monitoring & Audit (EM&A) Report

13 February 2017

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

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The business of sustainability

RAMBOLL ENVIRON

Ref.: HYDHZMBEEM00_0_5050L.17 14 February 2017

AECOM By Fax (2293 6300) and By Post
Supervising Officer Representative's Office
No.8 Mong Fat Street, Tuen Mun,
New Territories, Hong Kong

Attention: Messrs. Roger Man / Andy Westmoreland

Dear Sirs,

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/2012/08 TM-CLKL Northern Connection Sub-sea Tunnel Section
39th Monthly EM&A Report for January 2017 (EP-354/2009/D)

Reference is made to the Monthly Environmental Monitoring and Audit (EM&A) Report (Jan. 2017) (ET's ref.: "0212330_39th Monthly EM&A_20170213.doc" dated 13 Feb. 2017) certified by the ET Leader and provided to us via e-mail on 14 Feb. 2017.

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

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

Yours sincerely,

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

c.c. HyD – Mr. Stephen Chan (By Fax: 3188 6614)
HyD – Mr. Vico Cheung (By Fax: 3188 6614)
AECOM – Mr. Conrad Ng (By Fax: 3922 9797)
ERM – Mr. Jovy Tam (By Fax: 2723 5660)
Dragages – Bouygues JV - Mr. C. F. Kwong (By Fax: 2293 7499)

Internal: DY, YH, ENPO Site

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Ramboll Environ Hong Kong Limited 英環香港有限公司
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Contract No. HY/2012/08
Tuen Mun – Chek Lap Kok Link – Northern Connection Sub-sea Tunnel Section

Thirty-ninth Monthly Environmental Monitoring & Audit (EM&A) Report

Document Code: 0212330_39th Monthly EM&A_20170213.doc

Environmental Resources Management

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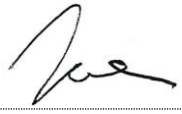
Client: DBJV	Project No: 0212330
Summary: This document presents the thirty-ninth Monthly EM&A Report for Tuen Mun – Chek Lap Kok Link Northern Connection Sub-sea Tunnel Section.	Date: 13 February 2017 Approved by:  *Mr Craig Reid* *Partner* Certified by:  *Mr Jovy Tam* *ET Leader*

Revision	Description	By	Checked	Approved	Date
	39th Monthly EM&A Report	VAR	JT	CAR	13/02/17

Distribution

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EXECUTIVE SUMMARY

Under *Contract No. HY/2012/08*, Dragages – Bouygues Joint Venture (DBJV) is commissioned by the Highways Department (HyD) to undertake the design and construction of the Northern Connection Sub-sea Tunnel 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) in accordance with *Environmental Permit No. EP-354/2009/A*. Ramboll Environ Hong Kong Ltd. was employed by HyD as the Independent Environmental Checker (IEC) and Environmental Project Office (ENPO). Subsequent applications for variation of environmental permits (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 construction phase of the Project commenced on 1 November 2013 and will tentatively be completed by the end of 2018. The impact monitoring of the EM&A programme, including air quality, water quality, marine ecological monitoring and environmental site inspections, were commenced on 1 November 2013.

This is the Thirty-ninth Monthly EM&A report presenting the EM&A works carried out during the period from 1 to 31 January 2017 for the *Contract No. HY/2012/08 Northern Connection Sub-sea Tunnel Section* (the "Project") in accordance with the Updated EM&A Manual of the TM-CLK Link Project. As informed by the Contractor, major activities in the reporting period included:

Land-based Works

- Box Culvert Extension at Works Area – Portion N-A;
- Shaft Structure and Backfilling – Portion N-C;
- Construction of Cross Passage Tympanum – TBM tunnel;
- Cross Passage Lining Installation – TBM Tunnel;
- Corbel Construction – TBM Tunnel;
- Excavation of Sub-sea Tunnel – TBM tunnel;
- Sub-sea Tunnel Gallery Installation – TBM tunnel;
- Jet Grouting, CSM Ground Treatment and Diaphragm Wall Construction – Portion S-A.

Marine-based Works

- Dredging – Portion N-A;
- Construction of Vertical Seawall at Portion N-A; and
- Band drain installation at Portion N-A

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

24-hour TSP Monitoring	10 sessions
1-hour TSP Monitoring	10 sessions
Water Quality Monitoring	12 sessions
Impact Dolphin Monitoring	2 sessions
Joint Environmental Site Inspection	4 sessions

Implementation of Marine Mammal Exclusion Zone

Daily marine mammal exclusion zone was in effect during the period of dredging, reclamation or marine sheet piling works in open waters under this Contract. Passive Acoustic Monitoring (PAM) was also implemented for the detection of marine mammal when dredging, reclamation or marine sheet piling works were carried out outside the daylight hours under this Contract. No sighting of the Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) was recorded in January 2017 during the exclusion zone monitoring.

Summary of Breaches of Action/Limit Levels

Breaches of Action and Limit Levels for Air Quality

No Action Level or Limit Level of air quality exceedances were recorded in the air quality monitoring of this reporting month.

Breaches of Action and Limit Levels for Water Quality

No Action Level or Limit Level of water quality exceedances were recorded in the water quality monitoring of this reporting month.

Environmental Complaints, Non-compliance & Summons

No non-compliance with EIA recommendations, EP conditions and other requirements associated with the construction of this Contract was recorded in this reporting period.

One (1) environmental complaint case regarding sewage discharge at the east of the artificial island of the Hong Kong – Zhuhai–Macao Bridge was referred by IEC on 16 January 2017. One (1) environmental complaint case regarding trespassing of construction vessels in Brothers Marine Park was referred by IEC on 17 January 2017. After investigation, the environmental complaint case on 17 January 2017 is considered to be not related to this Contract. The environmental complaint case on 16 January 2017 is under investigation. The complete investigation findings will be provided in the *Fortieth Monthly EM&A Report*.

No environmental summons was received in this reporting period.

Reporting Change

There was no reporting change required in the reporting period.

Upcoming Works for the Next Reporting Month

Works to be undertaken in the next monitoring period of February 2017 include the following:

Marine-based Works

- Construction of Vertical Seawall at Portion N-A;
- Band drain installation at Portion N-A; and
- Filling works at Portion N-A.

Land-based Works

- Box Culvert Extension at Works Area – Portion N-A;
- Shaft Structure and Backfilling – Portion N-C;
- Construction of Cross Passage Tympanum – TBM tunnel;
- Cross Passage Lining Installation – TBM Tunnel;
- Corbel Construction – TBM Tunnel;
- Excavation of Sub-sea Tunnel – TBM tunnel;
- Sub-sea Tunnel Gallery Installation – TBM tunnel;
- Jet Grouting, CSM Ground Treatment and Diaphragm Wall Construction – Portion S-A.

Future Key Issues

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

1 INTRODUCTION

1.1 BACKGROUND

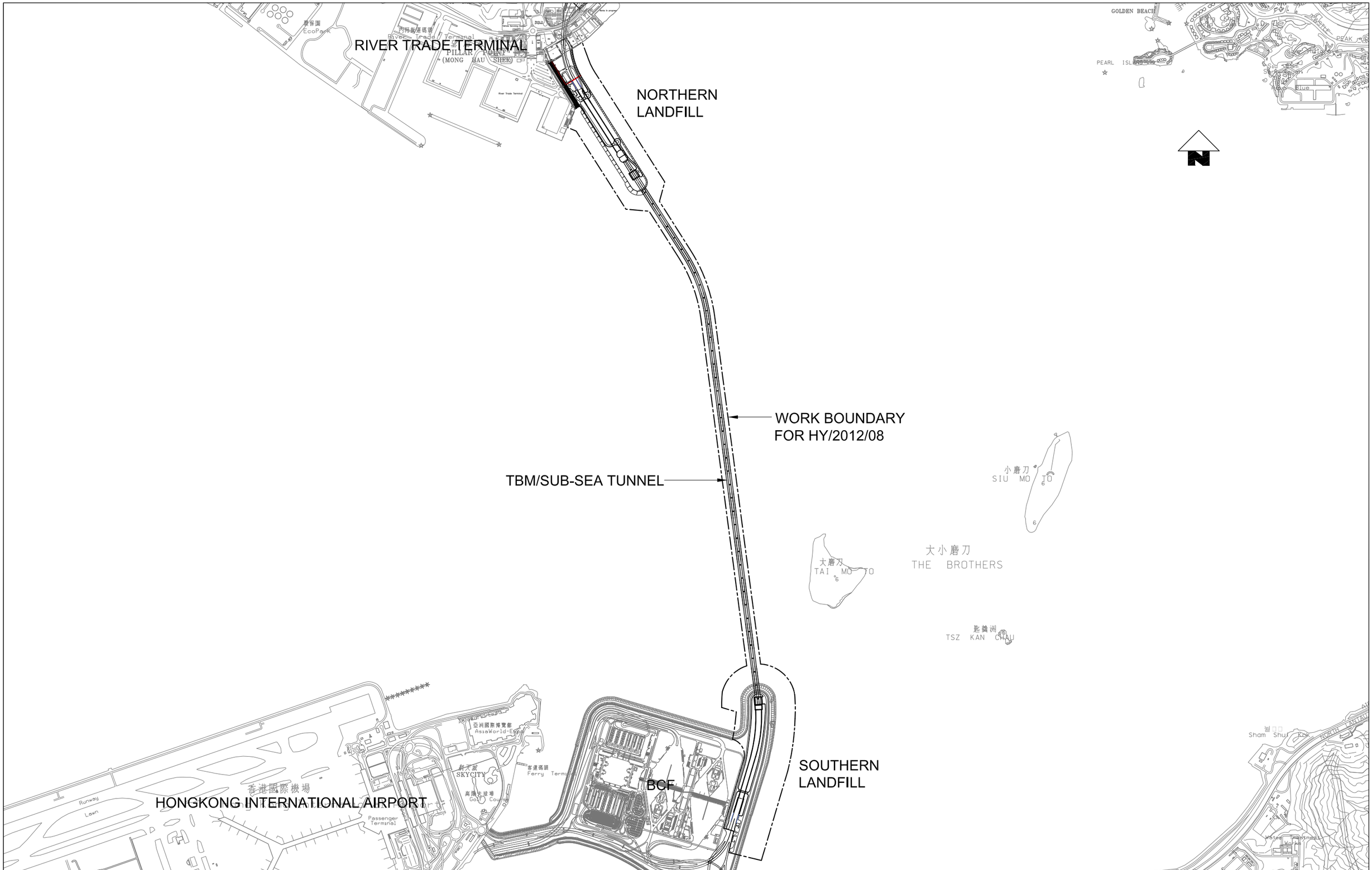
According to the findings of the Northwest New Territories (NWNT) Traffic and Infrastructure Review conducted by the Transport Department, Tuen Mun Road, Ting Kau Bridge, Lantau Link and North Lantau Highway would be operating beyond capacity after 2016. This forecast has been based on the estimated 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 (VEP) (EP-354/2009/A) was issued on 8 December 2010. Subsequent applications for variation of environmental permits (VEPs), *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.

Under *Contract No. HY/2012/08*, Dragages – Bouygues Joint Venture (DBJV) is commissioned by the Highways Department (HyD) to undertake the design and construction of the Northern Connection Sub-sea Tunnel Section of TM-CLKL while AECOM Asia Company Limited was appointed by HyD as the Supervising Officer. For implementation of the environmental monitoring and audit (EM&A) programme under the Contract, ERM-Hong Kong, Limited (ERM) has been appointed as the Environmental Team (ET). Ramboll Environ Hong Kong Ltd. was employed by HyD as the Independent Environmental Checker (IEC) and Environmental Project Office (ENPO).

Layout of the Contract components is presented in *Figure 1.1*.

The construction phase of the Contract commenced on 1 November 2013 and will tentatively be completed by 2018. The impact monitoring phase of the EM&A programme, including air quality, water quality, marine ecological monitoring and environmental site inspections, were commenced on 1 November 2013.



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Rev.	Description	Date	Checked			Revision	A

Main Contractor: Dragages - Bouygues Joint Venture 實嘉 - 布依格聯營 (A member of the Bouygues Construction group)

Client: 路政署 HIGHWAYS DEPARTMENT

Contractor's Designer: ARUP Ove Arup & Partners Hong Kong Limited

Project: Contract No. HY/2012/08
Tuen Mun - Chek Lap Kok Link -
Northern Connection Sub-Sea Tunnel Section

Drawing Title: **Figure 1.1**

1.2 SCOPE OF REPORT

This is the Thirty-ninth Monthly EM&A Report under the *Contract No. HY/2012/08 Tuen Mun – Chek Lap Kok Link – Northern Connection Sub-sea Tunnel Section*. This report presents a summary of the environmental monitoring and audit works in January 2017.

1.3 ORGANIZATION STRUCTURE

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

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone	Fax
Highways Department	Engr 16/HZMB	Kenneth Lee	2762 4996	3188 6614
SOR (AECOM Asia Company Limited)	Chief Resident Engineer	Edwin Ching	2293 6388	2293 6300
		Andrew Westmoreland	2293 6360	2293 6300
ENPO / IEC (Ramboll Environ Hong Kong Ltd.)	ENPO Leader	Y.H. Hui	3465 2850	3465 2899
	IEC	Dr. F.C. Tsang	3465 2851	3465 2899
Contractor (Dragages – Bouygues Joint Venture)	Environmental Manager	C.F. Kwong	2293 7322	2293 7499
	Environmental Officer	Bryan Lee	2293 7323	2293 7499
	Environmental Officer	David Ho	6628 8684	2293 7499
	24-hour complaint hotline	Rachel Lam	2293 7330	
ET (ERM-HK)	ET Leader	Jovy Tam	2271 3113	2723 5660

1.4 SUMMARY OF CONSTRUCTION WORKS

The construction phase of this Contract was commenced on 1 November 2013. The construction programme is shown in *Appendix B*.

As per DBJV's information, details of major construction works carried out in this reporting period are summarized in *Table 1.2*.

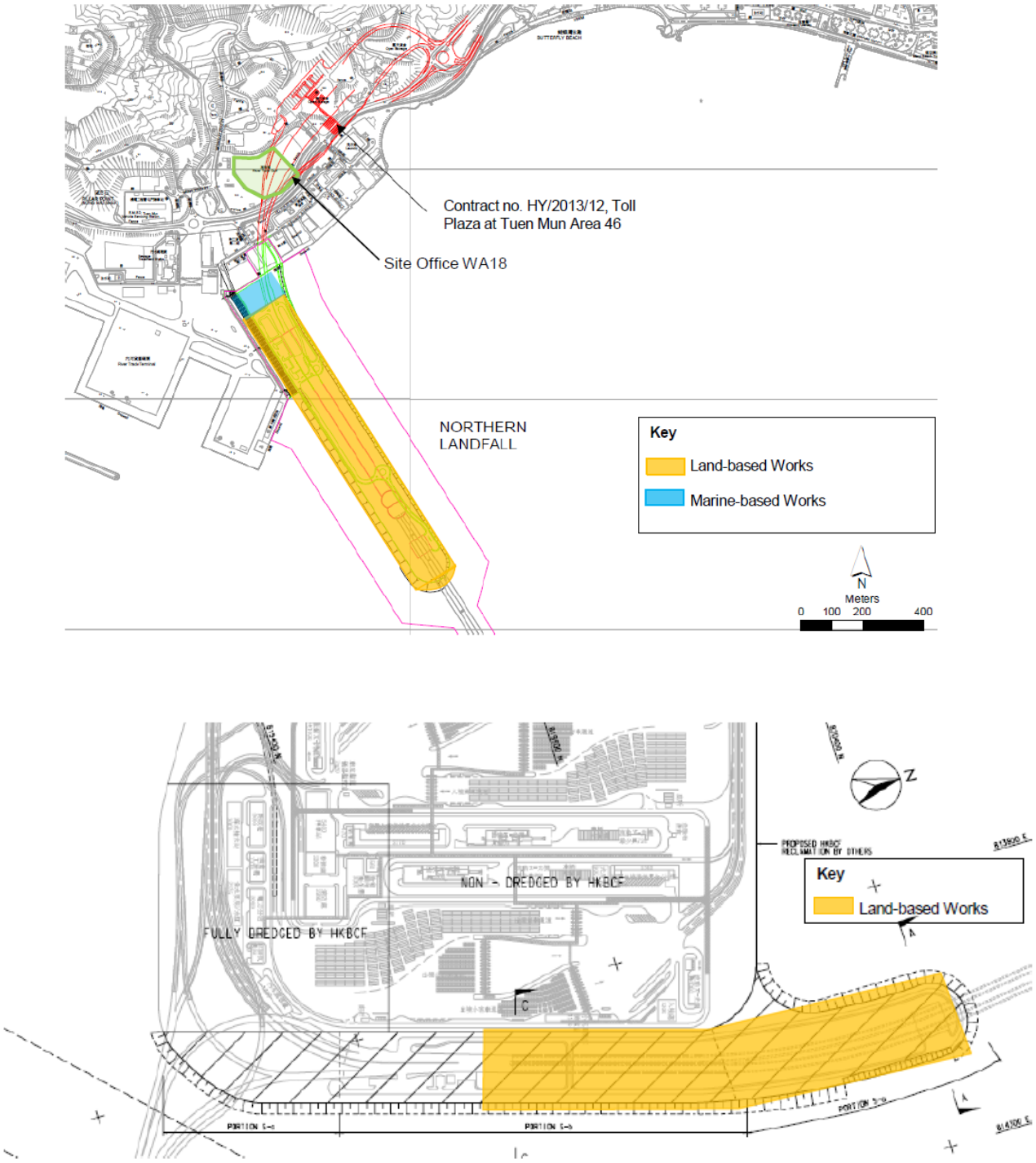
The general layout plan of the site showing the detailed works areas is shown in *Figure 1.2*. The Environmental Sensitive Receivers in the vicinity of the Project are shown in *Figure 1.3*.

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

Table 1.2 Summary of Construction Activities Undertaken during the Reporting Period

Construction Activities Undertaken
Land-based Works
• Box Culvert Extension at Works Area – Portion N-A; • Shaft Structure and Backfilling – Portion N-C; • Construction of Cross Passage Tympanum – TBM tunnel; • Cross Passage Lining Installation – TBM Tunnel; • Corbel Construction – TBM Tunnel; • Excavation of Sub-sea Tunnel – TBM tunnel; • Sub-sea Tunnel Gallery Installation – TBM tunnel; and • Jet Grouting, CSM Ground Treatment and Diaphragm Wall Construction – Portion S-A.
Marine-based Works
• Dredging – Portion N-A • Construction of Vertical Seawall at Portion N-A; and • Band drain installation at Portion N-A;

Figure 1.2 Locations of Construction Activities – January 2017



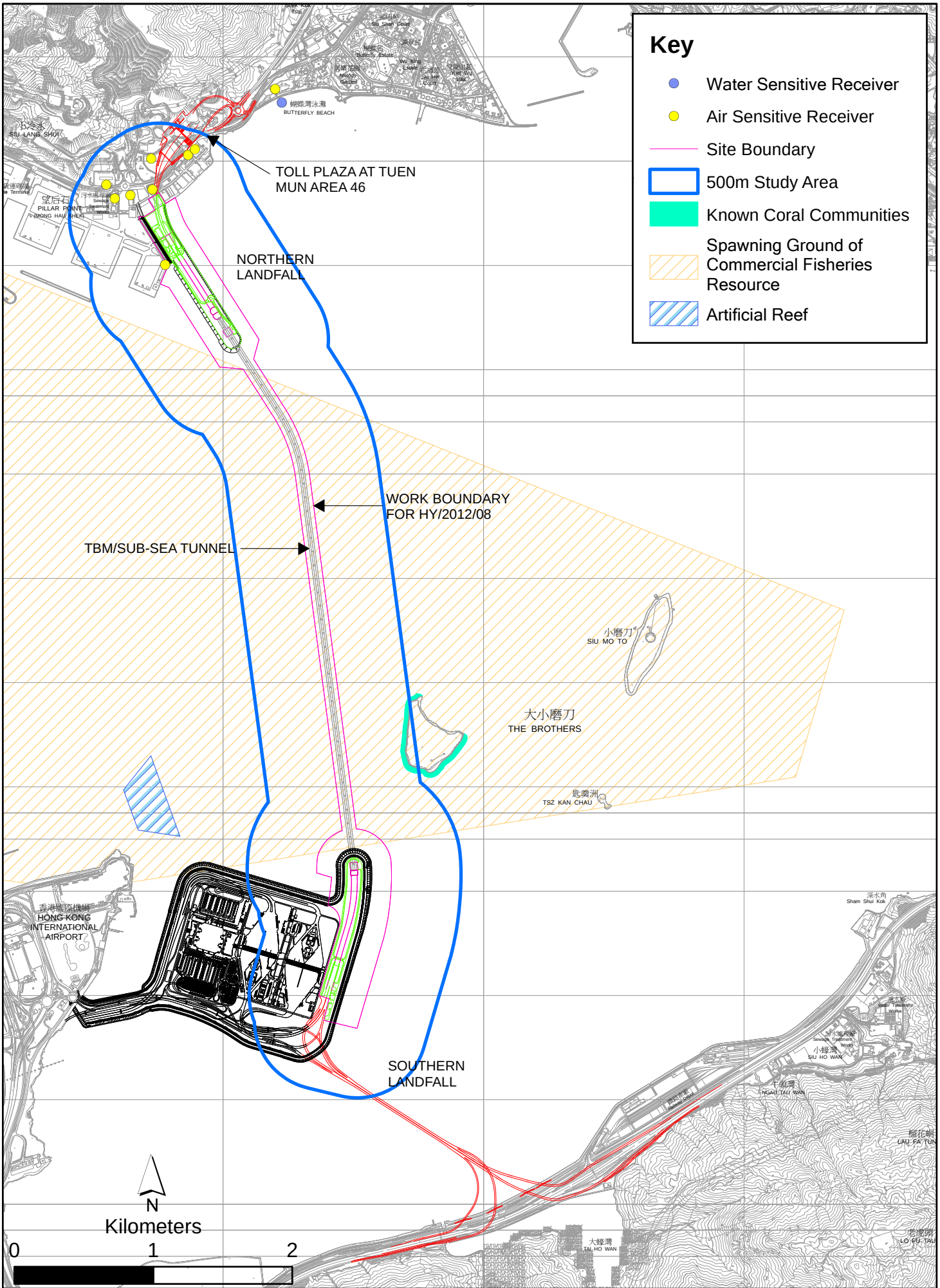


Figure 1.3 Environmental Sensitive Receivers in the vicinity of Contract No. HY/2012/08 Tuen Mun - Chek Lap Kok Link - Northern Connection Sub-Sea Tunnel Section

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Date: 15/4/2014

Environmental Resources Management

2 EM&A RESULTS

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

2.1 AIR QUALITY

2.1.1 Monitoring Requirements and Equipment

In accordance with the Updated EM&A Manual and the Enhanced TSP Monitoring Plan, impact 1-hour TSP monitoring was conducted three (3) times every six (6) days and impact 24-hour TSP monitoring was carried out once every six (6) days when the highest dust impact was expected. 1-hr and 24-hr TSP monitoring frequency was increased to three times per day every three days and daily every three days, respectively, as excavation works for launching shaft commenced on 24 October 2014.

High volume samplers (HVSs) were used to carry out the 1-hour and 24-hour TSP monitoring on 3, 6, 9, 12, 15, 18, 21, 24, 27 and 30 January 2017 at the five (5) air quality monitoring stations in accordance with the requirements stipulated in the Updated EM&A Manual (*Figure 2.1*; *Table 2.1*). Wind meter was installed at the rooftop of ASR5 for logging wind speed and wind direction. Details of the equipment deployed are provided in *Table 2.2*. Copies of the calibration certificates for the equipment are presented in *Appendix E*.

Table 2.1 Locations of Impact Air Quality Monitoring Stations and Monitoring Dates in this Reporting Period

Monitoring Station	Monitoring Dates	Location	Description	Parameters & Frequency
ASR1	3, 6, 9, 12, 15, 18, 21, 24, 27 and 30 January 2017	Tuen Mun Fireboat Station	Office	TSP monitoring • 1-hour Total Suspended Particulates (1-hour TSP, µg/m³), 3 times in every 6 days • 24-hour Total Suspended Particulates (24-hour TSP, µg/m³), daily for 24-hour in every 6 days Enhanced TSP monitoring (commenced on 24 October 2014) • 1-hour Total Suspended Particulates (1-hour TSP, µg/m³), 3 times in every 3 days • 24-hour Total Suspended Particulates (24-hour TSP, µg/m³), daily for 24-hour in every 3 days
ASR5		Pillar Point Fire Station	Office	
AQMS1		Previous River Trade Golf	Bare ground	
ASR6		Butterfly Beach Laundry	Office	
ASR10		Butterfly Beach Park	Recreational uses	

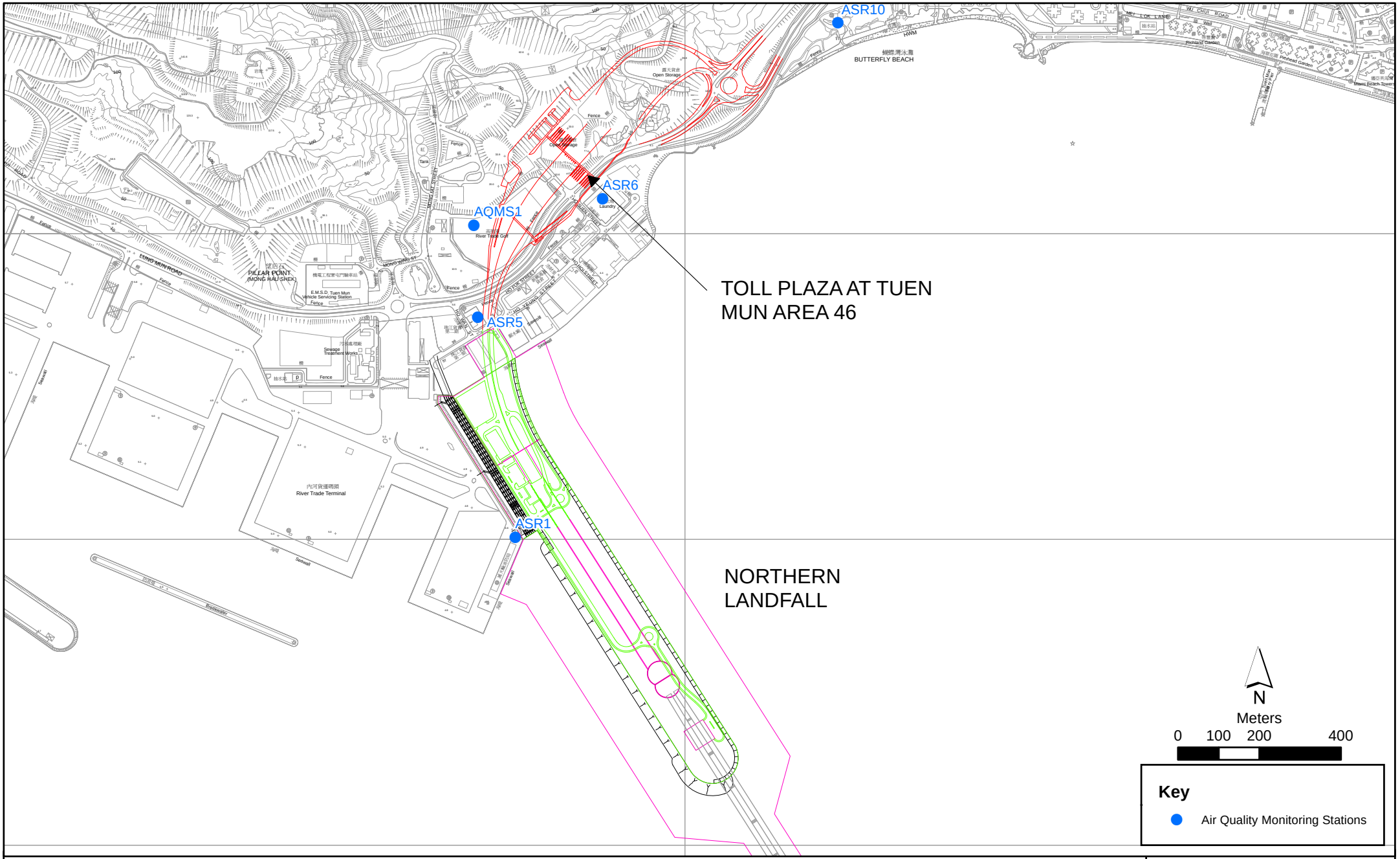

Figure 2.1

Air Quality Monitoring Stations for the Enhanced TSP Monitoring

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Date: 21/2/2014

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

Equipment	Brand and Model
High Volume Sampler (1-hour TSP and 24-hour TSP)	Tisch Environmental Mass Flow Controlled Total Suspended Particulate (TSP) High Volume Sampler (Model No. TE-5170)
Wind Meter	Davis (Model: Vantage Pro 2 (S/N: AS160104014)
Wind Anemometer for calibration	Lutron (Model No. AM-4201)

2.1.2 Action & Limit Levels

The Action and Limit Levels of the air quality monitoring is provided in *Appendix D*. The Event and Action plan is presented in *Appendix K.*

2.1.3 Monitoring Schedule for the Reporting Month

The schedule for air quality monitoring in January 2017 is provided in *Appendix F.*

2.1.4 Results and Observations

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

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

Station	Average (µg/m³)	Range (µg/m³)	Action Level (µg/m³)	Limit Level (µg/m³)
ASR1	130	50 - 263	331	500
ASR5	177	86 - 294	340	500
AQMS1	113	47 - 196	335	500
ASR6	159	60 - 282	338	500
ASR10	88	48 - 163	337	500

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

Station	Average (µg/m³)	Range (µg/m³)	Action Level (µg/m³)	Limit Level (µg/m³)
ASR1	74	63 - 106	213	260
ASR5	88	62 - 106	238	260
AQMS1	68	49 - 90	213	260
ASR6	82	62 - 110	238	260
ASR10	67	54 - 85	214	260

The weather condition during the monitoring period varied from sunny to cloudy. The major dust sources in the reporting period included construction activities under the Contract as well as nearby traffic emissions.

A total of 10 monitoring events were undertaken in which no Action or Limit Level exceedances of 1-hr TSP were recorded in this reporting month. No Action or Limit Level exceedances for 24-hr TSP were record.

Meteorological information collected at the ASR5, including wind speed and wind direction, is provided in *Appendix H*.

2.2 WATER QUALITY MONITORING

2.2.1 Monitoring Requirements & Equipment

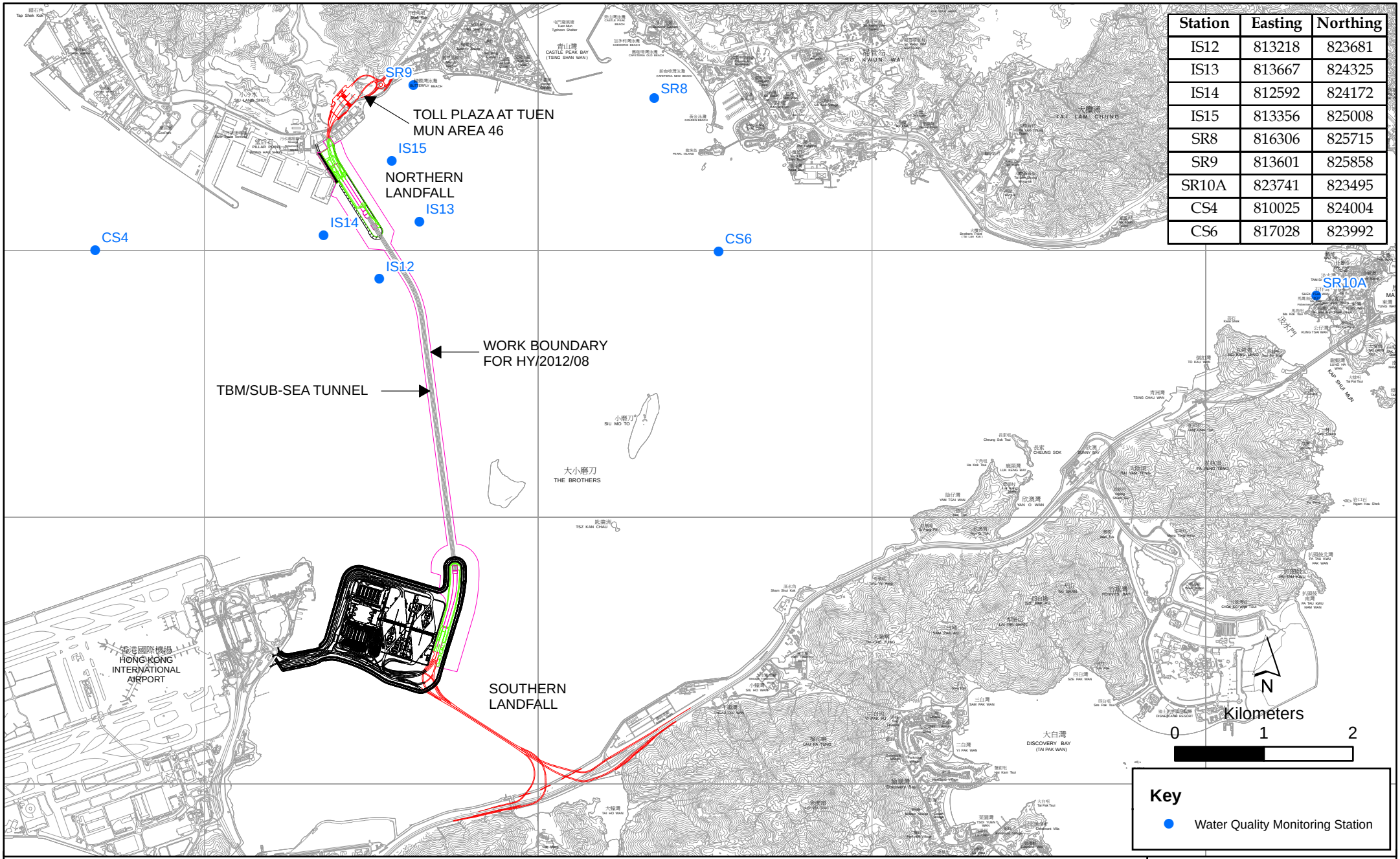
In accordance with the Updated EM&A Manual, impact water quality monitoring was carried out three days per week during the construction period at nine (9) water quality monitoring stations (*Figure 2.2*; *Table 2.5*).

Table 2.5 Locations of Water Quality Monitoring Stations and the Corresponding Monitoring Requirements

Station ID	Type	Coordinates		*Parameters, unit	Depth	Frequency
		Easting	Northing			
IS12	Impact Station	813218	823681	• Temperature(°C)	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.	Impact monitoring: 3 days per week, at mid-flood and mid-ebb tides during the construction period of the Contract.
IS13	Impact Station	813667	824325	• pH(pH unit)		
IS14	Impact Station	812592	824172	• Turbidity (NTU)		
IS15	Impact Station	813356	825008	• Water depth (m)		
CS4	Control / Far Field Station	810025	824004	• Salinity (ppt)		
CS6	Control / Far Field Station	817028	823992	• DO (mg/L and % of saturation)		
SR8	Sensitive receiver (Gazettal beaches in Tuen Mun)	816306	825715	• SS (mg/L)		
SR9	Sensitive receiver (Butterfly Beach)	813601	825858			
SR10A	Sensitive receiver (Ma Wan FCZ)	823741	823495			

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

Table 2.6 summarizes the equipment used in the impact water quality monitoring programme. Copies of the calibration certificates are attached in *Appendix E*.



Station	Easting	Northing
IS12	813218	823681
IS13	813667	824325
IS14	812592	824172
IS15	813356	825008
SR8	816306	825715
SR9	813601	825858
SR10A	823741	823495
CS4	810025	824004
CS6	817028	823992

Figure 2.2

Water Quality Monitoring Station

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Date: 15/11/2013

Environmental Resources Management

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Table 2.6 ***Water Quality Monitoring Equipment***

Equipment	Model
Water Sampler	Kahlsico Water-Bottle Model 135DW 150
Dissolved Oxygen Meter	YSI Pro 2030
pH Meter	HANNA HI 9125
Turbidity Meter	HACH 2100Q
Monitoring Position Equipment	"Magellan" Handheld GPS Model explorist GC DGPS Koden KGP913MK2 (1)

2.2.2 Action & Limit Levels

The Action and Limit levels of water quality impact monitoring are shown in *Appendix D*. The Event and Action plan is presented in *Appendix K*.

2.2.3 Monitoring Schedule for the Reporting Month

The schedule for water quality monitoring in January 2017 is provided in *Appendix F.* Water Quality Monitoring on 28 January 2017 was cancelled since there was no marine works in the period from 28 to 30 January 2017.

2.2.4 Results and Observations

Impact water quality monitoring was conducted at all designated monitoring stations in the reporting month. Results and graphical presentations of impact water quality monitoring are presented in *Appendix I*.

Since marine works for Phase 2 reclamation commenced on 27 December 2016, impact water quality monitoring resumed on 27 December 2016. In this reporting period, a total of twelve (12) monitoring events were undertaken in which no Action Level or Limit Levels of exceedances for impact water quality monitoring was recorded.

2.3 DOLPHIN MONITORING

2.3.1 Monitoring Requirements

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

2.3.2 Monitoring Equipment

Table 2.7 summarises the equipment used for the impact dolphin monitoring.

Table 2.7 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 Binocular	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

2.3.3 Monitoring Parameter, Frequencies & 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.

2.3.4 Monitoring Location

The impact dolphin monitoring was carried out in the NEL and NWL along the line transect as depicted in *Figure 2.3*. The co-ordinates of all transect lines are shown in *Table 2.8* below.

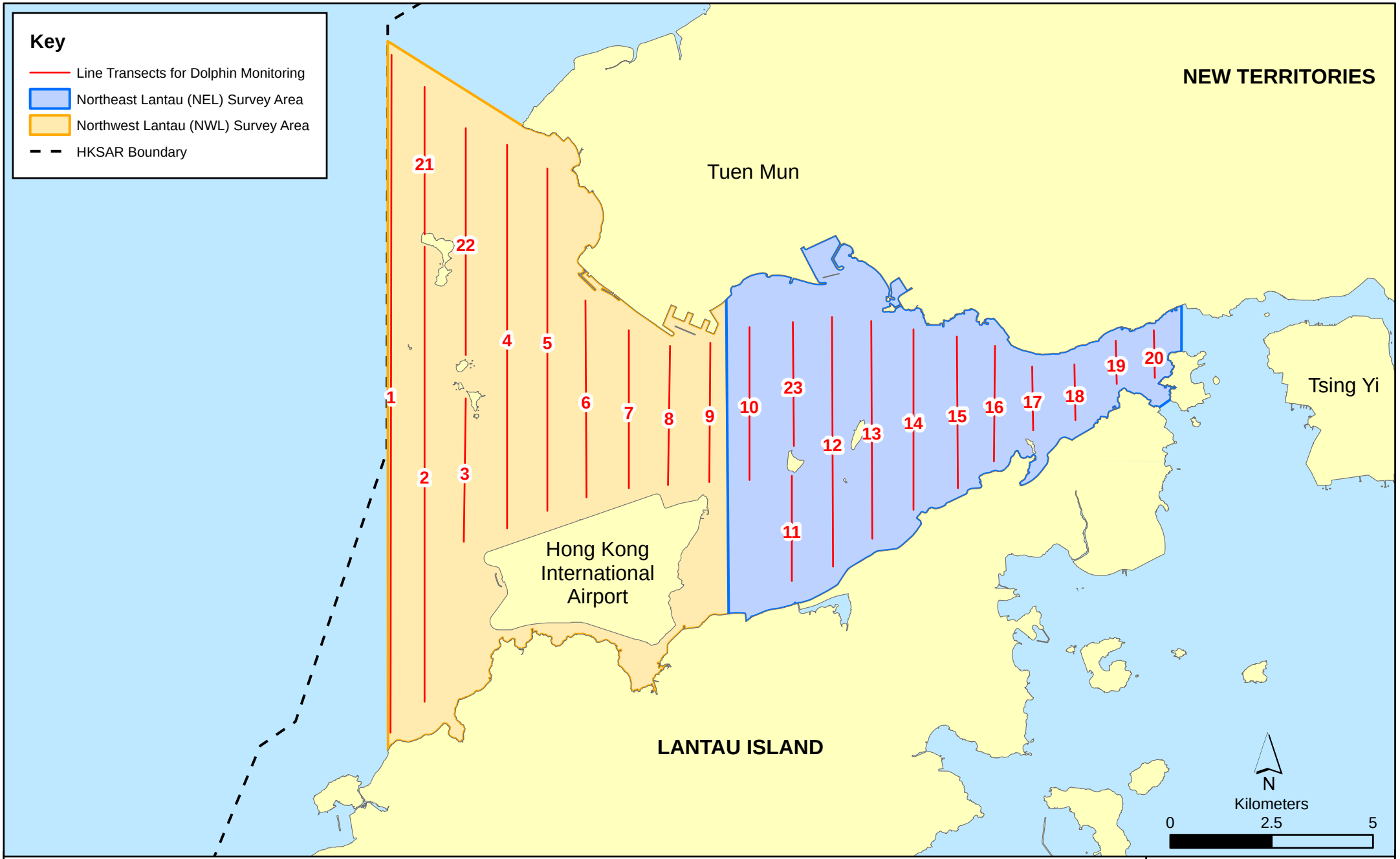

Figure 2.3

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

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Date: 29/11/2013

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Table 2.8 Impact Dolphin Monitoring Line Transect Co-ordinates

Line No.		Easting	Northing	Line No.		Easting	Northing
1	Start Point	804671	815456	13	Start Point	816506	819480
1	End Point	804671	831404	13	End Point	816506	824859
2	Start Point	805475	815913	14	Start Point	817537	820220
2	End Point	805477	826654	14	End Point	817537	824613
3	Start Point	806464	819435	15	Start Point	818568	820735
3	End Point	806464	822911	15	End Point	818568	824433
4	Start Point	807518	819771	16	Start Point	819532	821420
4	End Point	807518	829230	16	End Point	819532	824209
5	Start Point	808504	820220	17	Start Point	820451	822125
5	End Point	808504	828602	17	End Point	820451	823671
6	Start Point	809490	820466	18	Start Point	821504	822371
6	End Point	809490	825352	18	End Point	821504	823761
7	Start Point	810499	820880	19	Start Point	822513	823268
7	End Point	810499	824613	19	End Point	822513	824321
8	Start Point	811508	821123	20	Start Point	823477	823402
8	End Point	811508	824254	20	End Point	823477	824613
9	Start Point	812516	821303	21	Start Point	805476	827081
9	End Point	812516	824254	21	End Point	805476	830562
10	Start Point	813525	820872	22	Start Point	806464	824033
10	End Point	813525	824657	22	End Point	806464	829598
11	Start Point	814556	818853	23	Start Point	814559	821739
11	End Point	814556	820992	23	End Point	814559	824768
12	Start Point	815542	818807				
12	End Point	815542	824882				

2.3.5 Action & Limit Levels

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

2.3.6 Monitoring Schedule for the Reporting Month

Dolphin monitoring was carried out on 10, 12, 16 and 20 of January 2017. The dolphin monitoring schedule for the reporting month is shown in *Appendix F*.

2.3.7 Results & Observations

A total of 294.60 km of survey effort was collected, with 97.7% of the total survey effort being conducted under favourable weather conditions (i.e. Beaufort Sea State 3 or below with good visibility) in January 2017. Among the two areas, 112.49 km and 182.11 km of survey effort were collected from NEL and NWL survey areas, respectively. The total survey effort conducted on primary and secondary lines were 211.72 km and 82.88 km respectively. The survey efforts are summarized in *Appendix J*.

A total of four groups of 13 Chinese White Dolphins sightings were recorded on one survey in January 2017. All four dolphin sightings were made in NWL, while none was sighted in NEL. All four dolphin sightings were made on primary lines during on-effort search, and none of these dolphin groups was associated with any operating fishing vessel.

None of the dolphin sightings was made in the proximity of the TM-CLKL alignment. The distribution of dolphin sightings during the reporting month is shown in *Figure 2.4*.

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 January 2017 with the results present in *Tables 2.9* and *2.10*.

Table 2.9 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: January 10th / 12th	0.0	0.0
	Set 2: January 16th / 20th	0.0	0.0
NWL	Set 1: January 10th / 12th	0.0	0.0
	Set 2: January 16th / 20th	6.3	20.4

Note: Dolphin Encounter Rates are deduced from the Two Sets of Surveys (Two Surveys in Each Set) in January 2017 in Northeast (NEL) and Northwest Lantau (NWL)

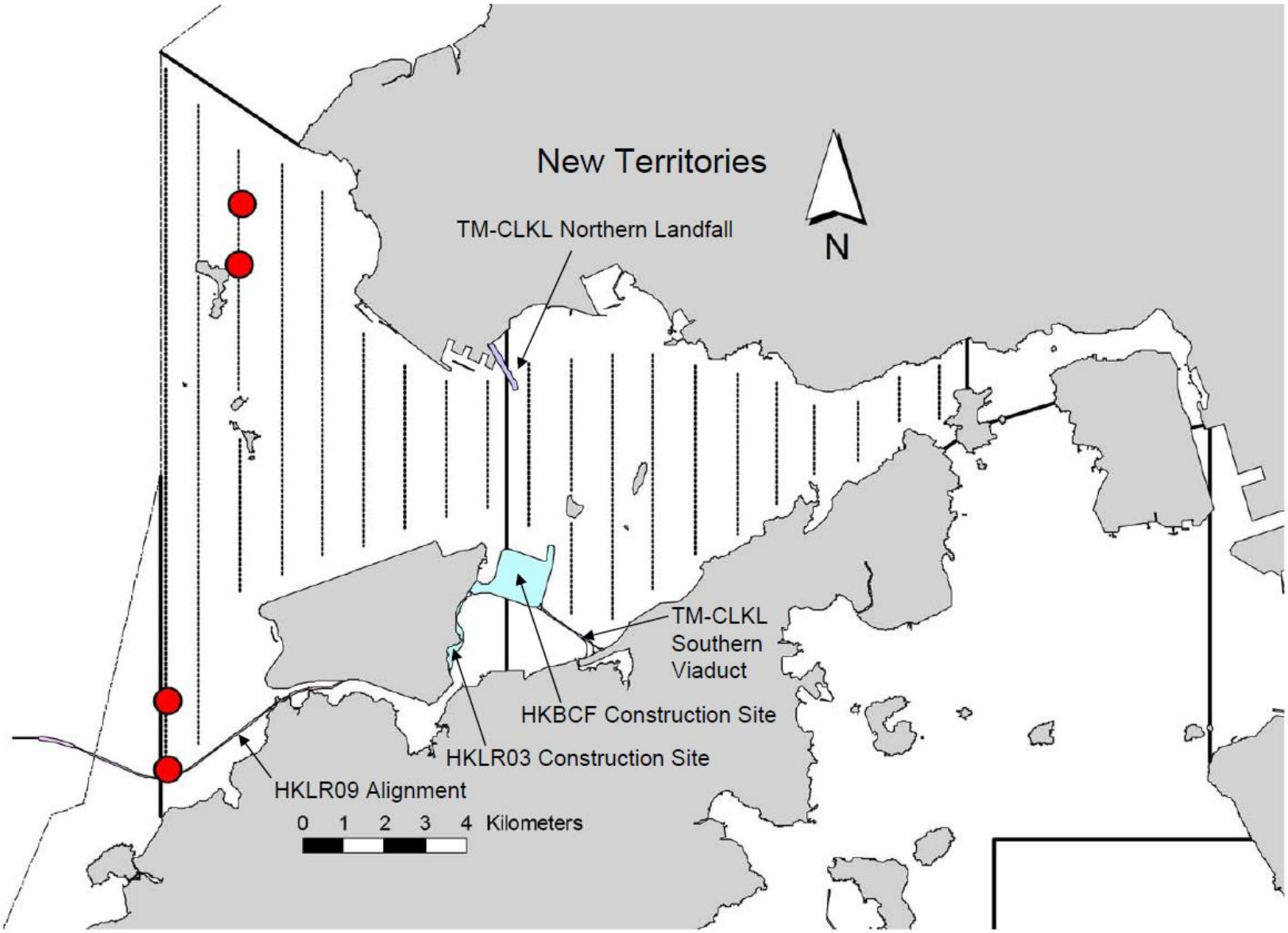

Figure 2.4

HY/2012/08 TM-CLKL Northern Connection Sub-sea Tunnel Section
The distribution of dolphin sightings during the reporting period
(Source: Adopted from HKLR03 Monitoring Survey in January 2017)

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Table 2.10 Monthly Average Encounter Rates

	Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)		Encounter rate (ANI) (no. of dolphins from all on-effort sightings per 100 km of survey effort)	
	Primary Lines Only	Both Primary and Secondary Lines	Primary Lines Only	Both Primary and Secondary Lines
Northeast Lantau	0.0	0.0	0.0	0.0
Northwest Lantau	3.0	2.3	9.7	7.4

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

Due to monthly variation in dolphin occurrence within the survey area, it would be more appropriate to draw conclusion on whether any unacceptable impacts on dolphins have been detected in relation to the construction activities of this Project in the quarterly EM&A reports, where comparison on distribution, group size and encounter rates of dolphins between the quarterly impact monitoring period and baseline monitoring period will be made.

2.3.8 Implementation of Marine Mammal Exclusion Zone

Daily marine mammal exclusion zone was in effect during the period of dredging, reclamation or marine sheet piling works in open waters under this Contract. Passive Acoustic Monitoring (PAM) was also implemented for the detection of marine mammal when dredging, reclamation or marine sheet piling works were carried out outside the daylight hours under this Contract. No sighting of the Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) was recorded in January 2017 during the exclusion zone monitoring

2.4 EM&A SITE INSPECTION

Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting month, four (4) site inspections were carried out on 4, 11, 18 and 25 January 2017.

Key observations and recommendations during the site inspections in this reporting period are summarized in *Table 2.11*.

Table 2.11 Specific Observations and Recommendations during the Weekly Site Inspection in this Reporting Month

Inspection Date	Observations	Recommendations/ Remarks
4 January 2017	Works Area - Portion N-A • Chemical labels should be provided to the chemical drums. Works Area - Portion N-B • Drip tray and chemical labels should be provided to the chemical drums. Works Area - Portion S-C • Concrete sand should be covered by tarpaulin sheet. • Water spraying should be applied during dry conditions.	Works Area - Portion N-A • The Contractor was reminded to provide chemical labels to the chemical drums. Works Area - Portion N-B • The Contractor was reminded to provide drip tray and chemical labels to the chemical drums. Works Area - Portion S-C • The Contractor was reminded to covere the concrete sand by tarpaulin sheet. • The Contractor was reminded to apply water spraying during dry conditions.
11 January 2017	Works Area - Portion N-C • Accumulated waste in the skip should be removed. Works Area - Portion S-B • Drip tray should be provided to the chemical drums.	Works Area - Portion N-C • The Contractor was reminded to remove the accumulated waste in the skip. Works Area - Portion S-B • The Contractor was reminded to provide drip tray to the chemical drums.
18 January 2017	Works Area – Portion N-A • Earth bund or sand bag barrier should be provided to prevent leakage of muddy substances to the sea. • Chemical substances should be removed from the site. Works Area – Portion S-C • Drip tray should be provided to the chemicals. • Accumulated rubbish bags should be removed.	Works Area – Portion N-A • The Contractor was reminded to provide earth bund or sand bag barrier to prevent leakage of muddy substances to the sea. • The Contractor was reminded to remove chemical substances from the site. Works Area – Portion S-C • The Contractor was reminded to provide drip tray to the chemicals. • The Contractor was reminded to remove accumulated rubbish bags.

Inspection Date	Observations	Recommendations/ Remarks
25 January 2017	Works Area - Portion N-A • Floating rubbish should be cleared. Works Area - Portion N-C • Drip trays should be provided for the chemical containers. Works Area - Portion S-C • Water spraying should be applied more often during dry conditions. • Accumulated general refuse should be cleared.	Works Area - Portion N-A • The Contractor was reminded to clear the floating rubbish. Works Area - Portion N-C • The Contractor was reminded to provide drip trays for the chemical containers. Works Area - Portion S-C • The Contractor was reminded to apply water spraying more often during dry conditions. • The Contractor was reminded to clear the accumulated general refuse.

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

2.5 *WASTE MANAGEMENT STATUS*

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

Wastes generated during this reporting period included mainly construction wastes (inert and non-inert) and chemical waste. Reference has been made to the waste flow table prepared by the Contractor (*Appendix M*). The quantities of different types of wastes are summarized in *Table 2.12*.

Table 2.12 Quantities of Different Waste Generated in the Reporting Month

Month/Year	Inert Construction Waste [a] (tonnes)	Imported Fill (tonnes)	Inert Construction Waste Re-used (tonnes)	Non-inert Construction Waste [b] (tonnes)	Recyclable Materials [c] (kg)	Chemical Wastes (kg)	Marine Sediment (m^3)	
							Category L	Category M (M_p & M_f)
January 2017	60,781	0	0	673	0	3,400	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 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.

2.6 *ENVIRONMENTAL LICENSES AND PERMITS*

The status of environmental licensing and permit is summarized in *Table 2.13* below.

Table 2.13 Summary of Environmental Licensing and Permit Status

License/ Permit	License or Permit No.	Date of Issue	Date of Expiry	License/ Permit Holder	Remarks
Environmental Permit	EP-354/2009/D	13 March 2015	Throughout the Contract	HyD	Application for VEP on 3 March 2015 to supersede EP-354/2009/C
Construction Dust Notification	363510	19 August 2013	Throughout the Contract	DBJV	Northern Landfall
Construction Dust Notification	403620	10 June 2016	Throughout the Contract	DBJV	Southern Landfall
Chemical Waste Registration	5213-422-D2516-01	10 September 2013	Throughout the Contract	DBJV	Northern Landfall
Chemical Waste Registration	5213-422-D2516-02	18 January 2017	Throughout the Contract	DBJV	Northern Landfall
Chemical Waste Registration	5213-951-D2591-01	25 May 2016	Throughout the Contract	DBJV	Southern Landfall
Construction Waste Disposal Account	7018108	28 August 2013	Throughout the Contract	DBJV	Waste disposal in Contract No. HY/2012/08
Construction Waste Disposal Account	7021715	12 January 2017	12 April 2017	DBJV	Vessel disposal
Waste Water Discharge License	WT00017707-2013	18 November 2013	30 November 2018	DBJV	For site WA18
Waste Water Discharge License	WT00019248-2014	5 June 2014	30 June 2019	DBJV	For site Portion N6 and Reclamation Area E
Waste Water Discharge License	WT00025944-2016	15 December 2016	31 December 2021	DBJV	Southern Landfall
Marine Dumping Permit	EP/MD/17-103	16 December 2016	13 June 2017	DBJV	Northern Landfall
Marine Dumping Permit	EP/MD/17-164	16 January 2017	15 February 2017	DBJV	Northern Landfall
Marine Dumping Permit	EP/MD/17-121	16 December 2016	15 January 2017	DBJV	Northern Landfall
Construction Noise Permit	GW-RW0644-16	30 November 2016	29 May 2017	DBJV	For Urmston Road in front of Pillar Point

License/ Permit	License or Permit No.	Date of Issue	Date of Expiry	License/ Permit Holder	Remarks
Construction Noise Permit	GW-RW0666-16	13 December 2016	12 June 2017	DBJV	For site WA23A+B
Construction Noise Permit	GW-RW0533-16	29 September 2016	28 March 2017	DBJV	For Portion N6
Construction Noise Permit	GW-RS0860-16	25 August 2016	24 February 2017	DBJV	For Southern Landfall

Notes:
HyD = Highways Department
DBJV = Dragages – Bouygues Joint Venture
VEP = Variation of Environmental Permit

2.7 IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

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

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

2.8 SUMMARY OF EXCEEDANCES OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMIT

No Action Level or Limit Level exceedances were recorded in the air quality monitoring of this reporting month.

Cumulative statistics are provided in *Appendix L*.

2.9 SUMMARY OF COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

The Environmental Complaint Handling Procedure is provided in *Figure 2.5*.

One (1) environmental complaint case regarding sewage discharge at the east of the artificial island of the Hong Kong – Zhuhai–Macao Bridge was referred by IEC on 16 January 2017. One (1) environmental complaint case regarding trespassing of construction vessels in Brothers Marine Park was referred by IEC on 17 January 2017. After investigation, the environmental complaint case on 17 January 2017 is considered to be not related to this Contract. The environmental complaint case on 16 January 2017 is under investigation. The complete investigation findings will be provided in the *Fortieth Monthly EM&A Report*.

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

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

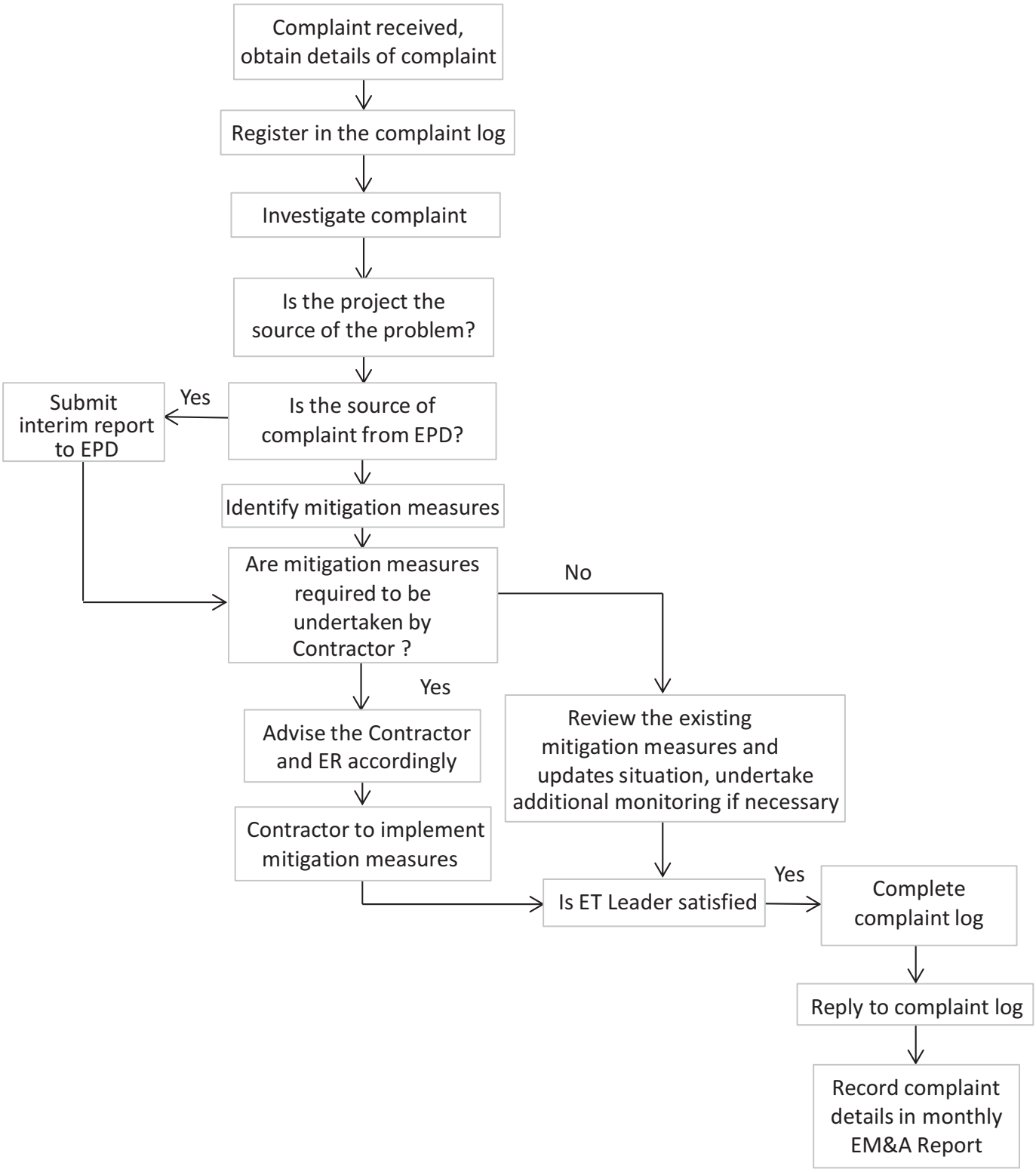

Figure 2.5 Environmental Complaint Handling Procedure

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3 FUTURE KEY ISSUES

3.1 CONSTRUCTION ACTIVITIES FOR THE COMING MONTH

As informed by the Contractor, the major works for the Project in February 2017 are summarized in *Table 3.1*.

Table 3.1 Construction Works to Be Undertaken in the Coming Month

Works to be undertaken
Marine-based Works • Construction of Vertical Seawall at Portion N-A; • Band drain installation at Portion N-A; and • Filling works at Portion N-A. *Land-based Works* • Box Culvert Extension at Works Area – Portion N-A; • Shaft Structure and Backfilling – Portion N-C; • Construction of Cross Passage Tympanum – TBM tunnel; • Cross Passage Lining Installation – TBM Tunnel; • Corbel Construction – TBM Tunnel; • Excavation of Sub-sea Tunnel – TBM tunnel; • Sub-sea Tunnel Gallery Installation – TBM tunnel; • Jet Grouting, CSM Ground Treatment and Diaphragm Wall Construction – Portion S-A.

3.2 KEY ISSUES FOR THE COMING MONTH

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

3.3 MONITORING SCHEDULE FOR THE COMING MONTH

The tentative schedule for environmental monitoring in February 2017 is provided in *Appendix F*.

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 CONCLUSIONS

This Thirty-ninth Monthly EM&A Report presents the findings of the EM&A activities undertaken during the period from 1 to 31 January 2017, in accordance with the Updated EM&A Manual and the requirements of EP-354/2009/D.

Air quality (including 1-hour TSP and 24-hour TSP), marine water quality and dolphin monitoring were carried out in this reporting month. No Action Level or Limit Level exceedances were recorded in the air quality monitoring of this reporting month.

No Action Level or Limit Level exceedances were recorded in the water quality monitoring of this reporting month.

A total of four groups of 13 Chinese White Dolphins sightings were recorded on one survey in January 2017. All four dolphin sightings were made in NWL, while none was sighted in NEL. All four dolphin sightings were made on primary lines during on-effort search, and none of these dolphin groups was associated with any operating fishing vessel.

Environmental site inspection was carried out four (4) times in January 2017. Remedial actions recommended for the deficiencies identified during the site audits were properly implemented by the Contractor.

No non-compliance event was recorded during the reporting period.

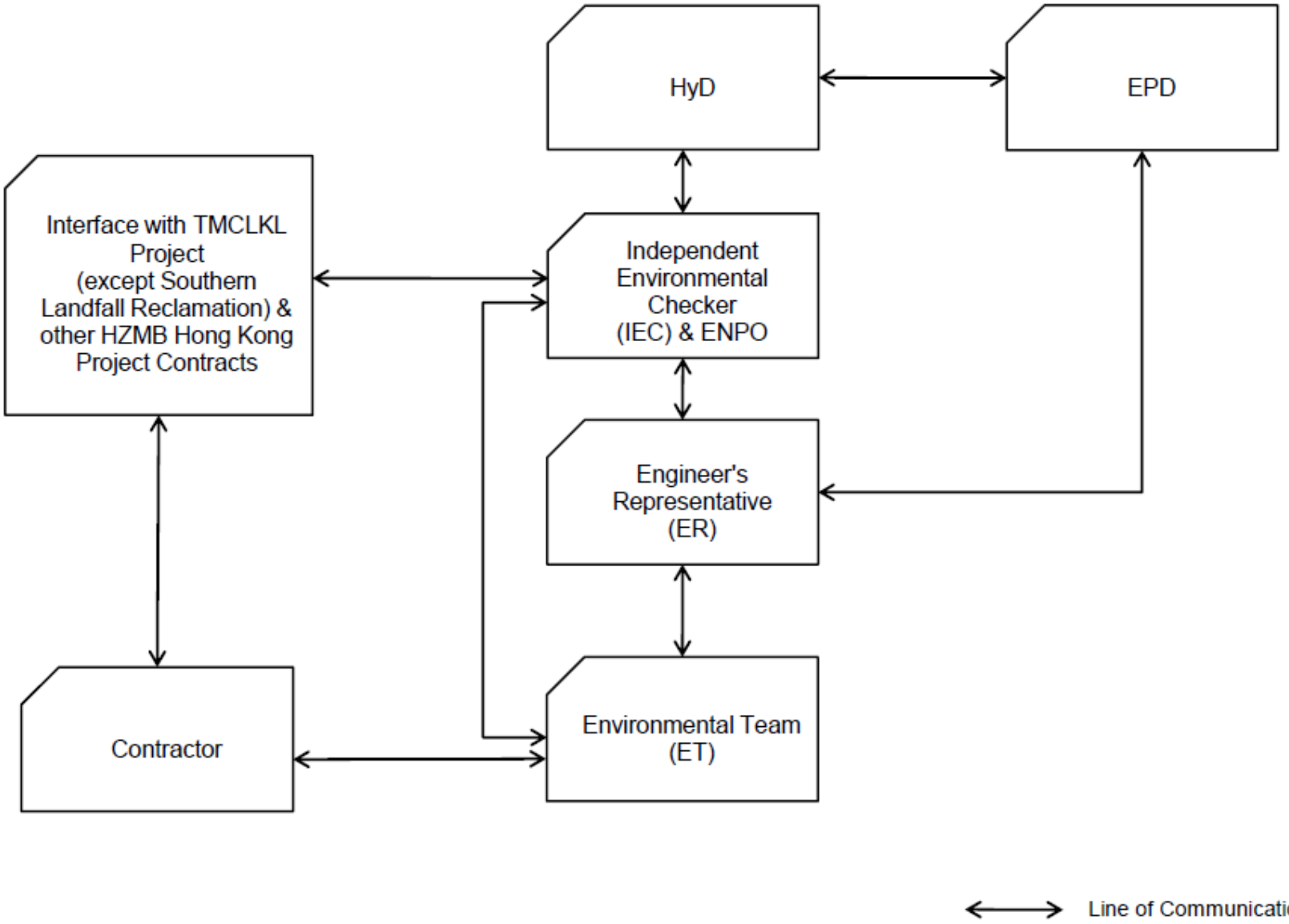
One (1) environmental complaint case regarding sewage discharge at the east of the artificial island of the Hong Kong – Zhuhai–Macao Bridge was referred by IEC on 16 January 2017. One (1) environmental complaint case regarding trespassing of construction vessels in Brothers Marine Park was referred by IEC on 17 January 2017. After investigation, the environmental complaint case on 17 January 2017 is considered to be not related to this Contract. The environmental complaint case on 16 January 2017 is under investigation. The complete investigation findings will be provided in the *Fortieth Monthly EM&A Report*.

No summons/ prosecution was received during 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/2012/08 Northern Connection Sub-sea Tunnel Section
Project Organization

DATE: 06/03/2013

Environmental Resources Management

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Appendix B

Construction Programme

Activity Name
TMCLK - Northern Connection Sub-Sea Tunnel Section
Contract Dates
Commencement and Completion Dates
KD01 - Achievement of Stage 1 - Nth TBM & C&C for E&MS/TCSS
Site Possession Date
Portions: X1,(N10,11,13 & 14) - Sth Landfall
Portions: N1 to N4 & N12
General Submissions
Environmental
Environmental Permit Submissions
Supplementary WMP of C&C Tunnel at Sth.Landfall
Supplementary WMP of C&C Tunnel at Sth.Landfall
Sediment Quality Report/Dumping Permit
Southern Landfall
Southern landfall - Commencement of Shaft & C&C Tunnel Dwall
Southern Landfall - Commencement of Retrieval Shaft Excavation
Sediment Sampling & Testing Plan (SSTP) - if required
Complete SSTP and Obtain EPD's approval
Sediment Quality Report (SQR) - if required
Advance Ground Investigation works for Sediment sampling
Sediment Sample Testing & Report preparation
Dumping Permit for Load Dumping (Loading Permit) - if required
Finalize the applivation document and submit to EPD - for Dwall
Notify the results and issue Loading Permit for Local & Cross Boundary Crossing - for Dwall
PAYMENT MILESTONE
Design and Design Checking of the Works
MS 2.5 Submit AIP for seawall modification works at Southern Landfall
MS 2.44 Approve DDA for South Ventilation Building by the Supervising Officer
MS 2.48 Approve DDA for North Ventilation Building by the Supervising Officer
MS 2.52 Approve DDA for Facilities Provision for TCSS by the Supervising Officer
MS 2.56 Approve DDA for Drainage, Sewerage, Waterworks and Utilities at Southern Landfall by the Supervi
MS 2.60 Approve DDA for Drainage, Sewerage, Waterworks and Utilities at Northern Landfall by the Supervis
MS 2.69 Submit draft Operation and Maintenance Manual for all Tunnels and Cross Passgaes
MS 2.70 Accept Operation and Maintenance Manual for all Tunnels and Cross Passgaes by the Supervising
MS 2.71 Submit draft Operation and Maintenance Manual for all works except Tunnels and Cross Passgaes
MS 2.72 Accept Operation and Maintenance Manual for all works except Tunnels and Cross Passgaes by the
Tunnel Boring Machine (TBM) and Back-up Equipment for TBM Tunnel
MS 3.1.6 Removal of TBM for Southbound Tunnel from Site after the completion of TBM Tunnel
MS 3.1.12 Removal of TBM for Northbound Tunnel from Site after the completion of TBM Tunnel
MS 3.1.25 Demolition of Slurry Treatment Plant on completion
MS 3.1.26 Complete the whole of the activities under this Cost Centre Part to the satisfaction of the Supervisin
TBM Tunnel
MS 3.3.4 Complete walls of retrieval shaft
MS 3.3.5 Complete excavation to formation level for retrieval shaft and complete casting of base slab
MS 3.3.6 Complete all necessary works of retrieval shaft to facilitate retrieval of TBM
MS 3.3.36 Completion of excavation, support and permanent lining for 37.5% of the total length (measured o
MS 3.3.6 Complete all necessary works of retrieval shaft to facilitate retrieval of TBM
MS 3.3.36 Completion of excavation, support and permanent lining for 37.5% of the total length (measured o
MS 3.3.37 Completion of excavation, support and permanent lining for 40% of the total length (measured on
MS 3.3.38 Completion of excavation, support and permanent lining for 42.5% of the total length (measured o
MS 3.3.39 Completion of excavation, support and permanent lining for 45% of the total length (measured on
MS 3.3.40 Completion of excavation, support and permanent lining for 47.5% of the total length (measured o
MS 3.3.41 Completion of excavation, support and permanent lining for 50% of the total length (measured on
MS 3.3.42 Completion of excavation, support and permanent lining for 52.5% of the total length (measured o
MS 3.3.43 Completion of excavation, support and permanent lining for 55% of the total length (measured on
MS 3.3.44 Completion of excavation, support and permanent lining for 57.5% of the total length (measured o
MS 3.3.45 Completion of excavation, support and permanent lining for 60% of the total length (measured on
MS 3.3.46 Completion of excavation, support and permanent lining for 62.5% of the total length (measured o
MS 3.3.47 Completion of excavation, support and permanent lining for 65% of the total length (measured on
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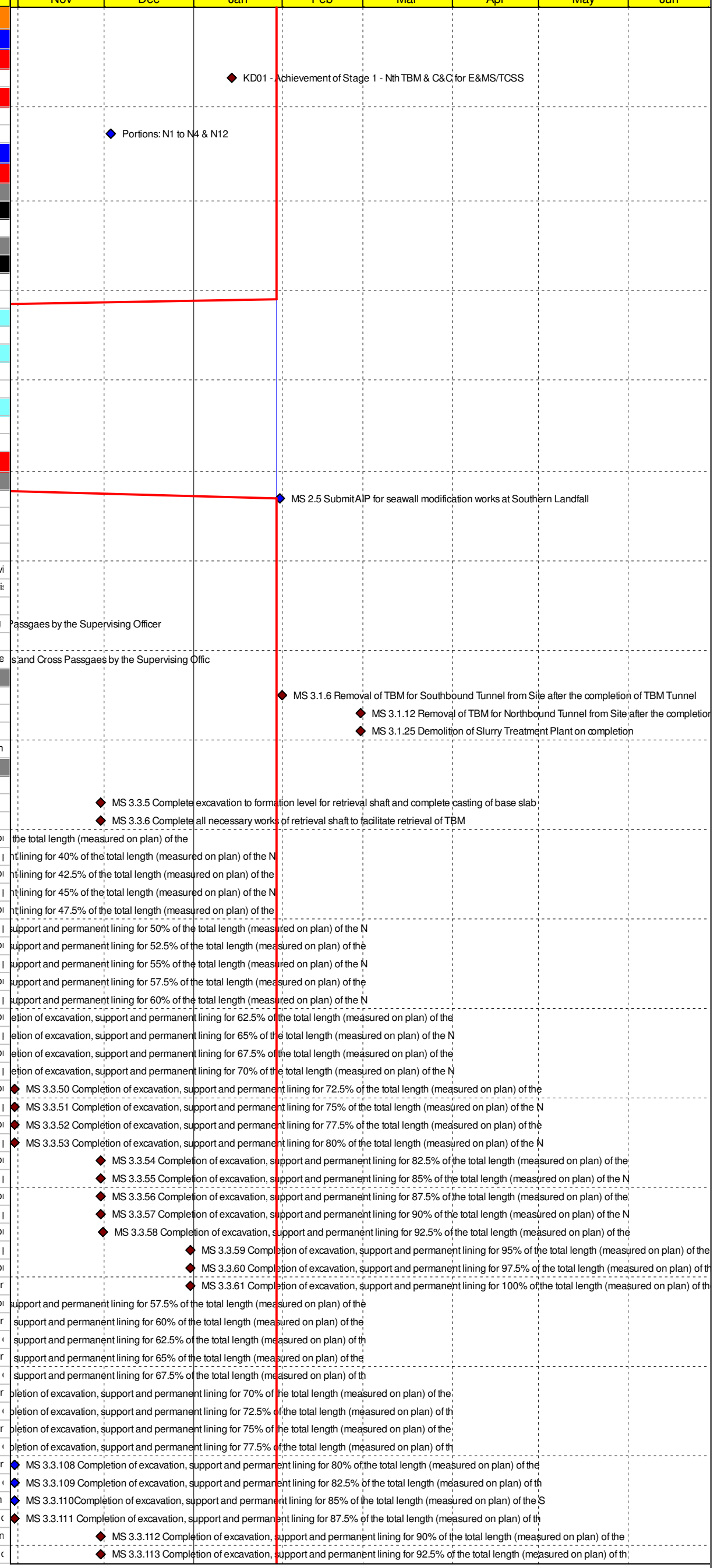
MS 3.3.49 Completion of excavation, support and permanent lining for 70% of the total length (measured on
MS 3.3.50 Completion of excavation, support and permanent lining for 72.5% of the total length (measured o
MS 3.3.51 Completion of excavation, support and permanent lining for 75% of the total length (measured on
MS 3.3.52 Completion of excavation, support and permanent lining for 77.5% of the total length (measured o
MS 3.3.53 Completion of excavation, support and permanent lining for 80% of the total length (measured on
MS 3.3.54 Completion of excavation, support and permanent lining for 82.5% of the total length (measured o
MS 3.3.55 Completion of excavation, support and permanent lining for 85% of the total length (measured on
MS 3.3.56 Completion of excavation, support and permanent lining for 87.5% of the total length (measured o
MS 3.3.57 Completion of excavation, support and permanent lining for 90% of the total length (measured on
MS 3.3.58 Completion of excavation, support and permanent lining for 92.5% of the total length (measured o
MS 3.3.59 Completion of excavation, support and permanent lining for 95% of the total length (measured on
MS 3.3.60 Completion of excavation, support and permanent lining for 97.5% of the total length (measured o
MS 3.3.61 Completion of excavation, support and permanent lining for 100% of the total length (measured or
MS 3.3.99 Completion of excavation, support and permanent lining for 57.5% of the total length (measured o
MS 3.3.100 Completion of excavation, support and permanent lining for 60% of the total length (measured or
MS 3.3.101 Completion of excavation, support and permanent lining for 62.5% of the total length (measured
MS 3.3.102 Completion of excavation, support and permanent lining for 65% of the total length (measured or
MS 3.3.103 Completion of excavation, support and permanent lining for 67.5% of the total length (measured
MS 3.3.104 Completion of excavation, support and permanent lining for 70% of the total length (measured or
MS 3.3.105 Completion of excavation, support and permanent lining for 72.5% of the total length (measured
MS 3.3.106 Completion of excavation, support and permanent lining for 75% of the total length (measured or
MS 3.3.107 Completion of excavation, support and permanent lining for 77.5% of the total length (measured
MS 3.3.108 Completion of excavation, support and permanent lining for 80% of the total length (measured or
MS 3.3.109 Completion of excavation, support and permanent lining for 82.5% of the total length (measured
MS 3.3.110Completion of excavation, support and permanent lining for 85% of the total length (measured on
MS 3.3.111 Completion of excavation, support and permanent lining for 87.5% of the total length (measured
MS 3.3.112 Completion of excavation, support and permanent lining for 90% of the total length (measured on
MS 3.3.113 Completion of excavation, support and permanent lining for 92.5% of the total length (measured



Project ID: TMCLK DWPF 17W04

Data Date: 29-Jan-17

Planned Bar
Planned Bar - Critical
Planned Milestone
Progress bar
Progress Milestone

TMCLK - Northern Connection Sub-Sea Tunnel Section

Detailed Works Programme (Rev. F)

Three Months Rolling Programme

Progress as of 29-Jan-17

Dragages Hong Kong
A member of the Bouygues Construction group
Dragages - Bouygues Joint Venture 寶嘉 - 布依格聯營

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12-Feb-14	TMCLK/DBJGEN/PRG/98507	WYu	SPo
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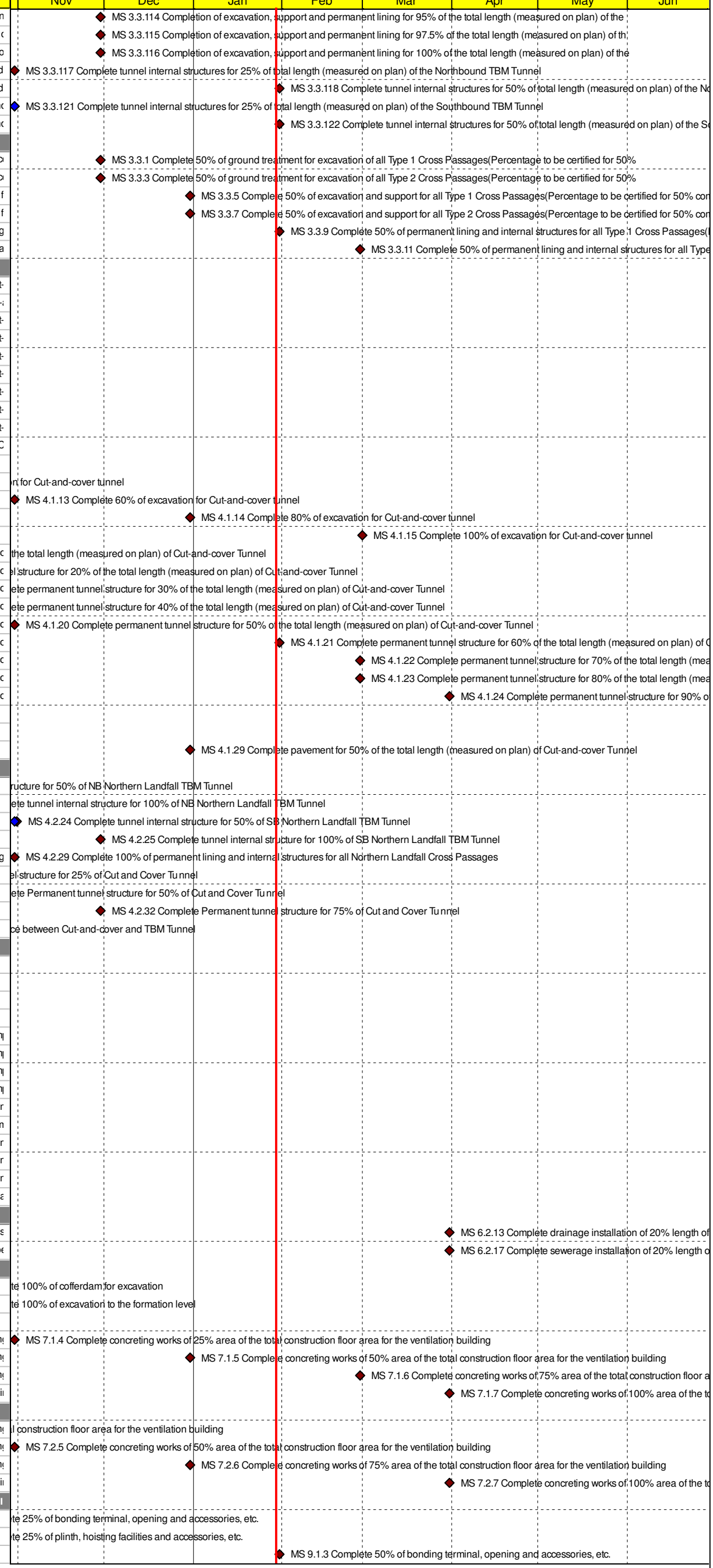
28-Aug-14	TMCLK/DBJGEN/PRG/98507 Rev.C	CLa	WYu
30-Oct-15	TMCLK/DBJGEN/PRG/98507 Rev.F	WYu	

Activity Name
MS 3.3.114 Completion of excavation, support and permanent lining for 95% of the total length (measured on
MS 3.3.115 Completion of excavation, support and permanent lining for 97.5% of the total length (measured
MS 3.3.116 Completion of excavation, support and permanent lining for 100% of the total length (measured o
MS 3.3.117 Complete tunnel internal structures for 25% of total length (measured on plan) of the Northbound
MS 3.3.118 Complete tunnel internal structures for 50% of total length (measured on plan) of the Northbound
MS 3.3.121 Complete tunnel internal structures for 25% of total length (measured on plan) of the Southbound
MS 3.3.122 Complete tunnel internal structures for 50% of total length (measured on plan) of the Southbound
Cross Passages for TBM Tunnel
MS 3.3.1 Complete 50% of ground treatment for excavation of all Type 1 Cross Passages(Percentage to be c
MS 3.3.3 Complete 50% of ground treatment for excavation of all Type 2 Cross Passages(Percentage to be c
MS 3.3.5 Complete 50% of excavation and support for all Type 1 Cross Passages(Percentage to be certified f
MS 3.3.7 Complete 50% of excavation and support for all Type 2 Cross Passages(Percentage to be certified f
MS 3.3.9 Complete 50% of permanent lining and internal structures for all Type 1 Cross Passages(Percentag
MS 3.3.11 Complete 50% of permanent lining and internal structures for all Type 2 Cross Passages(Percenta
Cut-and-cover Tunnels at Southern Landfalls
MS 4.1.1 Complete 10% of total length (measured on plan) of temporary retaining walls for excavation of Cut-
MS 4.1.2 Complete 20% of total length (measured on plan)of temporary retaining walls for excavation of Cut-
MS 4.1.3 Complete 30% of total length (measured on plan) of temporary retaining walls for excavation of Cut-
MS 4.1.4 Complete 40% of total length (measured on plan) of temporary retaining walls for excavation of Cut-
MS 4.1.5 Complete 50% of total length (measured on plan) of temporary retaining walls for excavation of Cut-
MS 4.1.6 Complete 60% of total length (measured on plan) of temporary retaining walls for excavation of Cut-
MS 4.1.7 Complete 70% of total length (measured on plan) of temporary retaining walls for excavation of Cut-
MS 4.1.8 Complete 80% of total length (measured on plan) of temporary retaining walls for excavation of Cut-
MS 4.1.9 Complete 90% of total length (measured on plan) of temporary retaining walls for excavation of Cut-
MS 4.1.10 Complete 100% of total length (measured on plan) of temporary retaining walls for excavation of C
MS 4.1.11
MS 4.1.12 Complete 40% of excavation for Cut-and-cover tunnel
MS 4.1.13 Complete 60% of excavation for Cut-and-cover tunnel
MS 4.1.14 Complete 80% of excavation for Cut-and-cover tunnel
MS 4.1.15 Complete 100% of excavation for Cut-and-cover tunnel
MS 4.1.16 Complete permanent tunnel structure for 10% of the total length (measured on plan) of Cut-and-cc
MS 4.1.17 Complete permanent tunnel structure for 20% of the total length (measured on plan) of Cut-and-cc
MS 4.1.18 Complete permanent tunnel structure for 30% of the total length (measured on plan) of Cut-and-cc
MS 4.1.19 Complete permanent tunnel structure for 40% of the total length (measured on plan) of Cut-and-cc
MS 4.1.20 Complete permanent tunnel structure for 50% of the total length (measured on plan) of Cut-and-cc
MS 4.1.21 Complete permanent tunnel structure for 60% of the total length (measured on plan) of Cut-and-cc
MS 4.1.22 Complete permanent tunnel structure for 70% of the total length (measured on plan) of Cut-and-cc
MS 4.1.23 Complete permanent tunnel structure for 80% of the total length (measured on plan) of Cut-and-cc
MS 4.1.24 Complete permanent tunnel structure for 90% of the total length (measured on plan) of Cut-and-cc
MS 4.1.26 Complete excavation for 50% of total length (measured on plan) of all Cross Passages
MS 4.1.27 Complete excavation for 100% of total length (measured on plan) of all Cross Passages
MS 4.1.29 Complete pavement for 50% of the total length (measured on plan) of Cut-and-cover Tunnel
Cut-and-cover Tunnel at Northern Landfall
MS 4.2.22 Complete tunnel internal structure for 50% of NB Northern Landfall TBM Tunnel
MS 4.2.23 Complete tunnel internal structure for 100% of NB Northern Landfall TBM Tunnel
MS 4.2.24 Complete tunnel internal structure for 50% of SB Northern Landfall TBM Tunnel
MS 4.2.25 Complete tunnel internal structure for 100% of SB Northern Landfall TBM Tunnel
MS 4.2.29 Complete 100% of permanent lining and internal structures for all Northern Landfall Cross Passag
MS 4.2.30 Complete Permanent tunnel structure for 25% of Cut and Cover Tunnel
MS 4.2.31 Complete Permanent tunnel structure for 50% of Cut and Cover Tunnel
MS 4.2.32 Complete Permanent tunnel structure for 75% of Cut and Cover Tunnel
MS 4.2.34 Complete Permanent junction structure at interface between Cut-and-cover and TBM Tunnel
Approach Ramp Structures to Cut-and-cover Tunnel at Southern Landfall
MS 5.1.2 Complete 40% of excavation for approach ramp structures
MS 5.1.3 Complete 60% of excavation for approach ramp structures
MS 5.1.4 Complete 80% of excavation for approach ramp structures
MS 5.1.5 Complete 100% of excavation for approach ramp structures
MS 5.1.6 Complete retaining wall foundation for 10% of the total length (measured on plan) of approach ramp
MS 5.1.7 Complete retaining wall foundation for 20% of the total length (measured on plan) of approach ramp
MS 5.1.8 Complete retaining wall foundation for 30% of the total length (measured on plan) of approach ramp
MS 5.1.9 Complete retaining wall foundation for 40% of the total length (measured on plan) of approach ramp
MS 5.1.10 Complete retaining wall foundation for 50% of the total length (measured on plan) of approach rar
MS 5.1.11 Complete retaining wall foundation for 60% of the total length (measured on plan) of approach ran
MS 5.1.12 Complete retaining wall foundation for 70% of the total length (measured on plan) of approach rar
MS 5.1.13 Complete retaining wall foundation for 80% of the total length (measured on plan) of approach rar
MS 5.1.14 Complete retaining wall foundation for 90% of the total length (measured on plan) of approach rar
MS 5.1.15 Complete retaining wall foundation for 100% of the total length (measured on plan) of approach ra
At grade Roads at Northern Landfall
MS 6.2.13 Complete drainage installation of 20% length of total length (measured on plan) of drainage pipes
MS 6.2.17 Complete sewerage installation of 20% length of total length (measured on plan) of sewerage pipe
South Ventilation Buildings
MS 7.1.1 Complete 100% of cofferdam for excavation
MS 7.1.2 Complete 100% of excavation to the formation level
MS 7.1.3 Complete 100% of foundation for the ventilation building
MS 7.1.4 Complete concreting works of 25% area of the total construction floor area for the ventilation building
MS 7.1.5 Complete concreting works of 50% area of the total construction floor area for the ventilation building
MS 7.1.6 Complete concreting works of 75% area of the total construction floor area for the ventilation building
MS 7.1.7 Complete concreting works of 100% area of the total construction floor area for the ventilation buildi
North Ventilation Buildings
MS 7.2.4 Complete concreting works of 25% area of the total construction floor area for the ventilation building
MS 7.2.5 Complete concreting works of 50% area of the total construction floor area for the ventilation building
MS 7.2.6 Complete concreting works of 75% area of the total construction floor area for the ventilation building
MS 7.2.7 Complete concreting works of 100% area of the total construction floor area for the ventilation buildi
Facilities Provision for E&M Works for TBM Tunnel, Cut & Cover Tunnels and Cı
MS 9.1.1 Complete 25% of bonding terminal, opening and accessories, etc.
MS 9.1.2 Complete 25% of plinth, hoisting facilities and accessories, etc.
MS 9.1.3 Complete 50% of bonding terminal, opening and accessories, etc.



Project ID: TMCLK DWPF 17W04

Data Date: 29-Jan-17

Planned Bar
Planned Bar - Critical
Planned Milestone
Progress bar
Progress Milestone

TMCLK - Northern Connection Sub-Sea Tunnel Section

Detailed Works Programme (Rev. F)

Three Months Rolling Programme

Progress as of 29-Jan-17

Dragages HongKong 香港寶嘉
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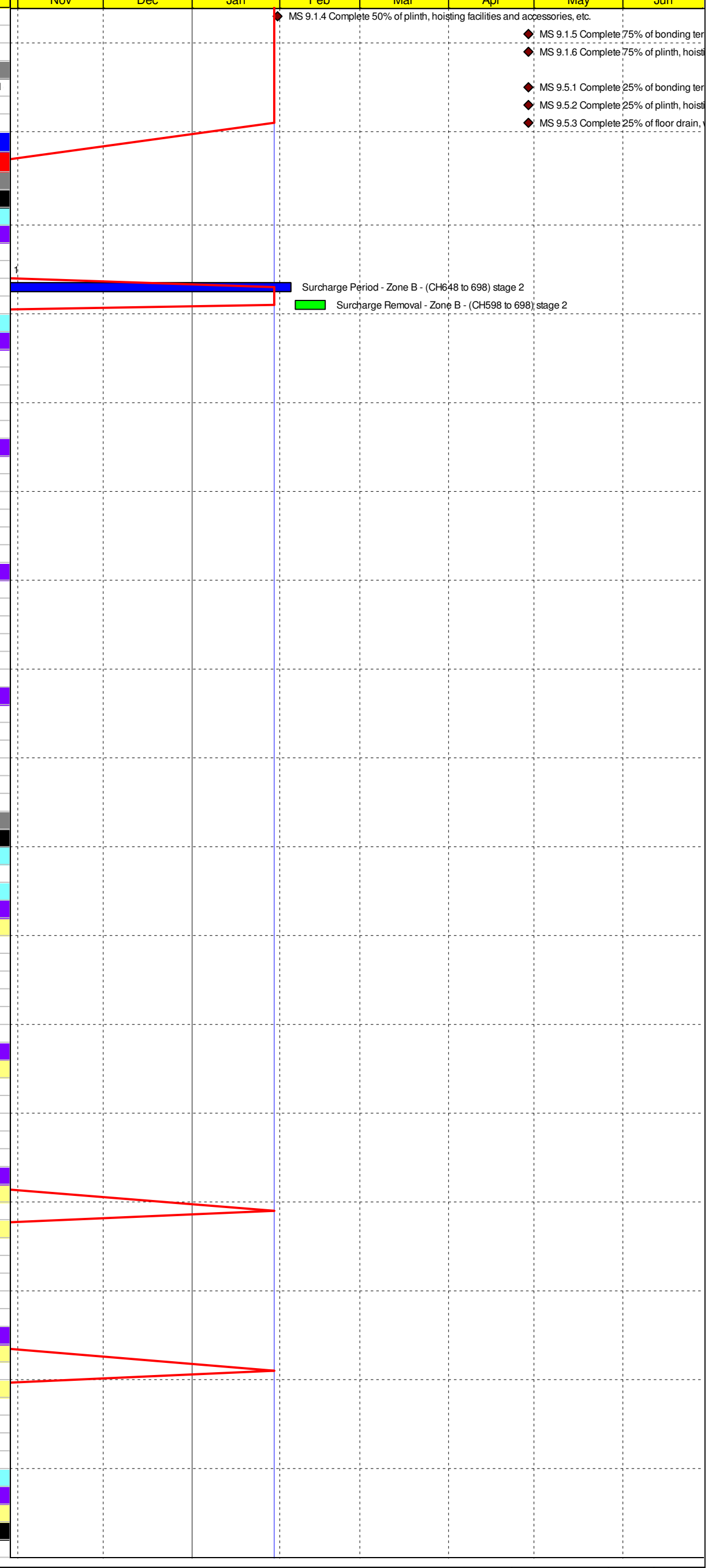
Activity Name
MS 9.1.4 Complete 50% of plinth, hoisting facilities and accessories, etc.
MS 9.1.5 Complete 75% of bonding terminal, opening and accessories, etc.
MS 9.1.6 Complete 75% of plinth, hoisting facilities and accessories, etc.
Facilities Provision for E&M Works for North Ventilation Building
MS 9.5.1 Complete 25% of bonding terminal, main earth mat, clean earth mat, earth pit, lightning pit, conceal
MS 9.5.2 Complete 25% of plinth, hoisting facilities, louver, wire mesh and accessories, etc.
MS 9.5.3 Complete 25% of floor drain, water tank and accessories, etc.
Construction
Northern Landfall
North Reclamation (Phase 1)
Construction
Zone B
Reclamation
Surcharge Removal - Zone B - (CH598 to 648)
Surcharge Removal - Zone B - (CH598 to 698) stage 1
Surcharge Period - Zone B - (CH648 to 698) stage 2
Surcharge Removal - Zone B - (CH598 to 698) stage 2
Zone F
CH184 to CH231
F - Anchor wall Installation - CH184 to CH231
F - Backfilling up to 0.0mPD & G2 Installation to Anchor Wall- CH184 to CH231
F - Backfilling up to +3.0mPD & G1 Installation to Anchor Wall- CH184 to CH231
F - Backfilling up to +6.0mPD to Anchor Wall - CH184 to CH231
F - Backfilling to +6.0mPD to Existing Seawall - CH184 to CH231
CH231 to CH278
F - Backfilling up to +6.0mPD - CH231 to CH278
F - Anchor wall Installation - CH231 to CH278
F - Backfilling up to 0.0mPD & G2 Installation to Anchor Wall- CH231 to CH278
F - Backfilling up to +3.0mPD & G1 Installation to Anchor Wall - CH231 to CH278
F - Backfilling up to +6.0mPD to Anchor Wall - CH231 to CH278
F - Backfilling to +6.0mPD to Existing Seawall - CH231 to CH278
CH278 to CH327
F - Backfilling up to +6.0mPD - CH278 to CH327
F - Anchor wall Installation - CH278 to CH327
F - Backfilling up to 0.0mPD & G2 Installation to Anchor Wall - CH278 to CH327
F - Backfilling up to +3.0mPD & G1 Installation to Anchor Wall - CH278 to CH327
F - Backfilling up to +6.0mPD to Anchor Wall - CH278 to CH327
F - Backfilling to +6.0mPD to Existing Seawall - CH278 to CH327
CH327 to CH381
F - Backfilling up to +6.0mPD - CH327 to CH381
F - Anchor wall Installation - CH327 to CH381
F - Backfilling up to 0.0mPD & G2 Installation to Anchor Wall - CH327 to CH381
F - Backfilling up to +3.0mPD & G1 Installation to Anchor Wall - CH327 to CH381
F - Backfilling up to +6.0mPD to Anchor Wall - CH327 to CH381
F - Backfilling to +6.0mPD to Existing Seawall - CH327 to CH381
Box Culvert Extension
Construction
Ch000-010 Culvert Outfall
Removal of temporary bulk head
CH100-150 Land Section
Pile A41/A39 CJ to Pile A39/A37 CJ
Box Culvert Structure
Pile cap construction
Base slab construction including kicker
Removal of strut S1
Sliding formworks 1st assembly
Walls & top slab construction
Removal of strut S2 & Backfilling up to required level
Pile A39/A37 CJ to Pile A37/A35 CJ
Box Culvert Structure
Pile cap construction
Base slab construction including kicker
Removal of strut S1
Walls & top slab construction
Removal of strut S2 & Backfilling up to required level
Pile A37/A35 CJ to Pile A35/A33 CJ
ELS
Excavation to FEL
Box Culvert Structure
Pile cap construction
Base slab construction including kicker
Removal of strut S1
Walls & top slab construction
Removal of strut S2 & Backfilling up to required level
Pile A35/A33 CJ to Pile A33/P117 CJ
ELS
Excavation to FEL
Box Culvert Structure
Pile cap construction
Base slab construction including kicker
Removal of strut S1
Walls & top slab construction
Ch150-250 Marine Section
ELS & Structure
Pile A33/P117 CJ to Pile P113/P109 CJ
Box Culvert Structure
Base slab construction including kicker



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Planned Bar
Planned Bar - Critical
Planned Milestone
Progress bar
Progress Milestone

TMCLK - Northern Connection Sub-Sea Tunnel Section

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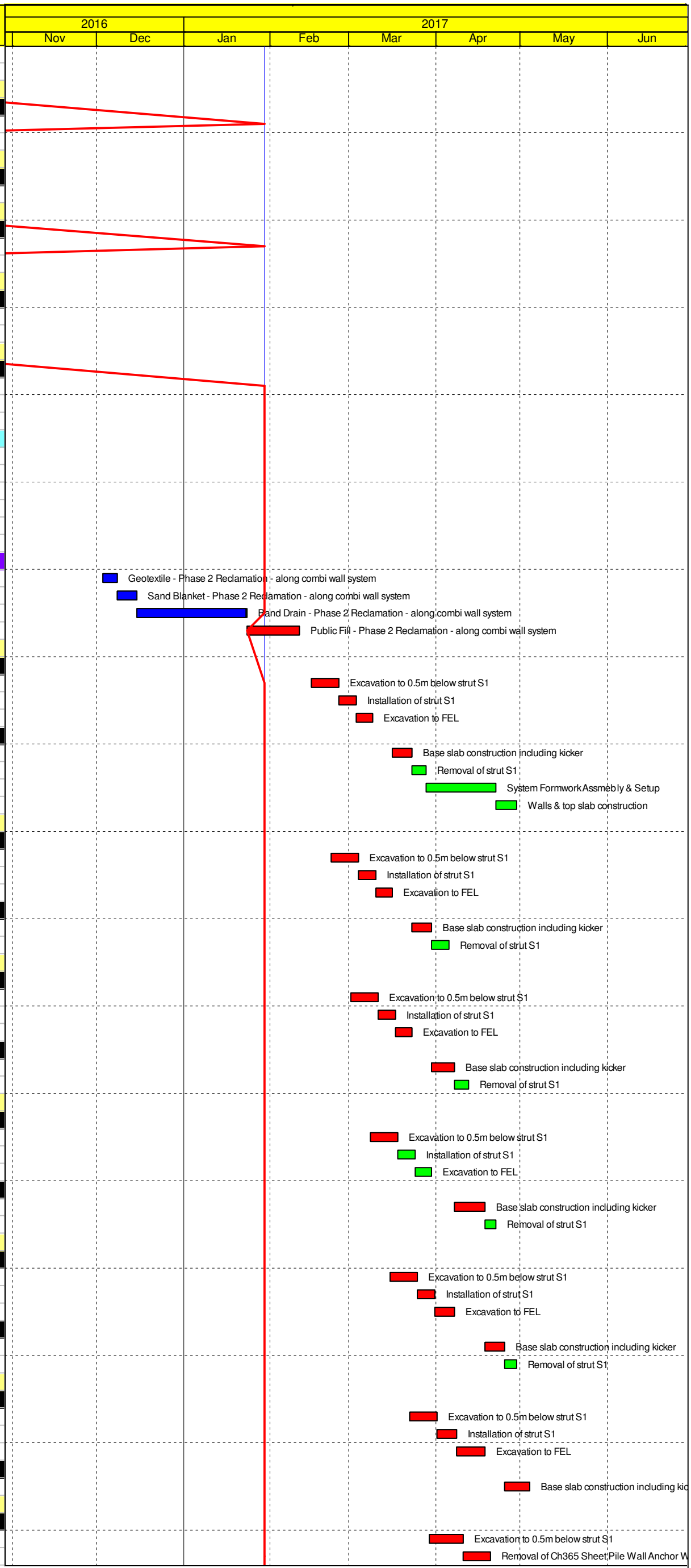
Activity Name
Removal of strut S1
Walls & top slab construction
Pile P113/P109 CJ to Pile P105/P101 CJ
Box Culvert Structure
Base slab construction including kicker
Removal of strut S1
Pile P105/P101 CJ to Pile P97/P93 CJ
Box Culvert Structure
Removal of strut S1
Pile P97/P93 CJ to Pile P89/P85 CJ
Box Culvert Structure
Base slab construction including kicker
Removal of strut S1
Pile P89/P85 CJ to Pile P81/P77 CJ
Box Culvert Structure
Base slab construction including kicker
Removal of strut S1
Pile P81/P77 CJ to Pile P73/P69 CJ
Box Culvert Structure
Base slab construction including kicker
Removal of strut S1
Walls & top slab construction
Ch250-380 Marine Section
Installation of Dewatering & Observation Well Ch 250-380
1st Pumping Test & Analysis
Toe Grouting
2nd Pumping test & Analysis
Remaining toe grouting Ch250-380
NewActivity
ELS & Structure
Geotextile - Phase 2 Reclamation - along combi wall system
Sand Blanket - Phase 2 Reclamation - along combi wall system
Band Drain - Phase 2 Reclamation - along combi wall system
Public Fill - Phase 2 Reclamation - along combi wall system
Pile P73/P69 CJ to Pile P65/P61 CJ
ELS
Excavation to 0.5m below strut S1
Installation of strut S1
Excavation to FEL
Box Culvert Structure
Base slab construction including kicker
Removal of strut S1
System FormworkAssmebly & Setup
Walls & top slab construction
Pile P65/P61 CJ to Pile P57/P53 CJ
ELS
Excavation to 0.5m below strut S1
Installation of strut S1
Excavation to FEL
Box Culvert Structure
Base slab construction including kicker
Removal of strut S1
Pile P57/P53 CJ to Pile P49/P45 CJ
ELS
Excavation to 0.5m below strut S1
Installation of strut S1
Excavation to FEL
Box Culvert Structure
Base slab construction including kicker
Removal of strut S1
Pile P49/P45 CJ to Pile P41/P37 CJ
ELS
Excavation to 0.5m below strut S1
Installation of strut S1
Excavation to FEL
Box Culvert Structure
Base slab construction including kicker
Removal of strut S1
Pile P41/P37 CJ to Pile P33/P29 CJ
ELS
Excavation to 0.5m below strut S1
Installation of strut S1
Excavation to FEL
Box Culvert Structure
Base slab construction including kicker
Removal of strut S1
Pile P33/P29 CJ to Pile P25/P21 CJ
ELS
Excavation to 0.5m below strut S1
Installation of strut S1
Excavation to FEL
Box Culvert Structure
Base slab construction including kicker
Pile P25/P21 CJ to Pile P17/P13 CJ
ELS
Excavation to 0.5m below strut S1
Removal of Ch365 Sheet Pile Wall Anchor Wall (Stage 1)



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Planned Bar
Planned Bar - Critical
Planned Milestone
Progress bar
Progress Milestone

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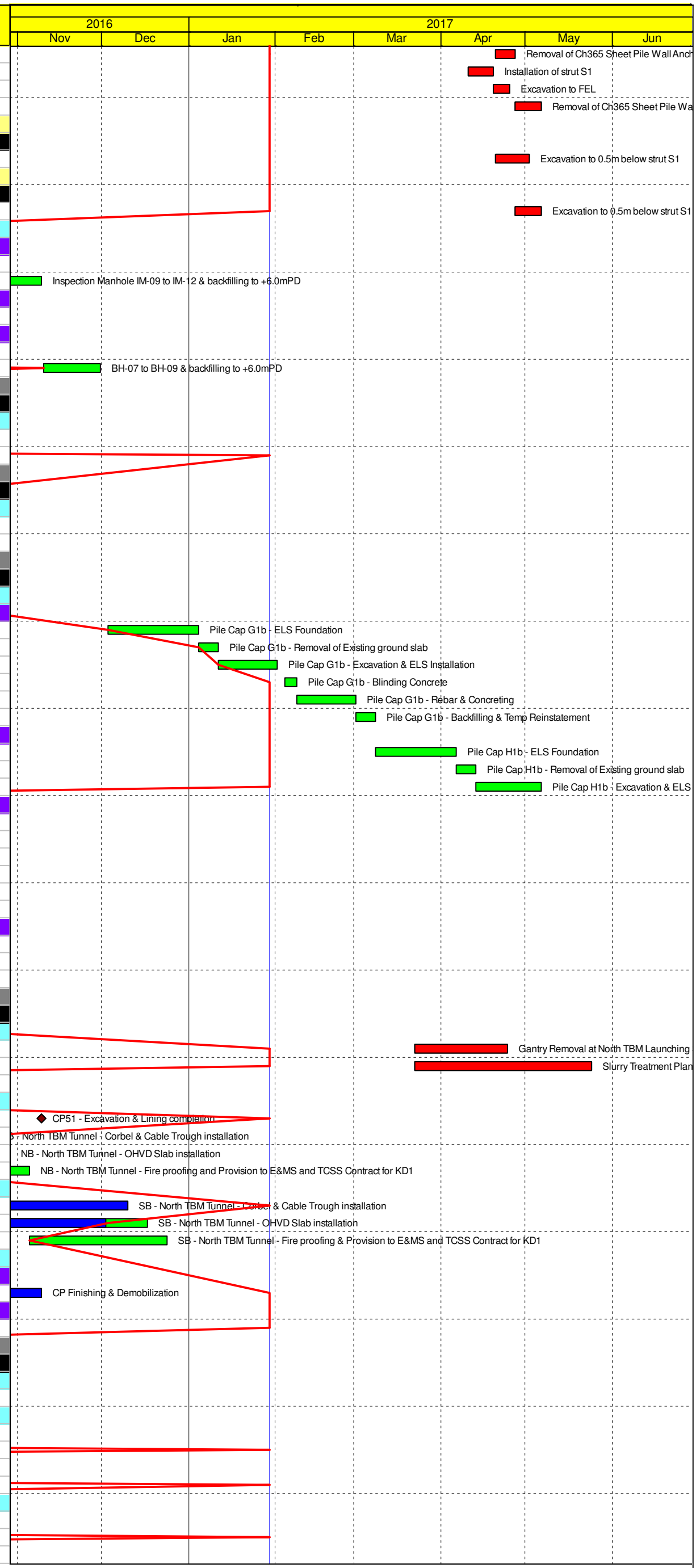
Activity Name
Removal of Ch365 Sheet Pile Wall Anchor Wall (Stage 2)
Installation of strut S1
Excavation to FEL
Removal of Ch365 Sheet Pile Wall Anchor Wall (Stage 3)
Pile P17/P13 CJ to Pile P09/P05 CJ
ELS
Excavation to 0.5m below strut S1
Pile P09/P05 CJ to End Wall CJ
ELS
Excavation to 0.5m below strut S1
Miscellaneous works
Inspection Manhole (IM)
Inspection Manhole IM-01 to IM-04 & backfilling to +6.0mPD
Inspection Manhole IM-09 to IM-12 & backfilling to +6.0mPD
Stop Log Opening (SLO)
SLO-01 to SLO-05 & backfilling to +6.0mPD
Balance Hole (BH)
BH-01 to BH-03 & backfilling to +6.0mPD
BH-07 to BH-09 & backfilling to +6.0mPD
North Launching Shaft
Design Submission
(C1) DDA for North C&C Tunnel Permanent Structure
SO's Review
SO Approval with Condition Received
North Ventilation Shaft
Construction
North Ventilation Shaft Structure
NVS - ML03 Tunnel Structure
NVS - ML02 Tunnel Structure
TMCLK VO-008 - Construction of Viaduct Foundations at Portion N6A
Viaduct Pile Cap
Construction
Pier G1b
Pile Cap G1b - ELS Foundation
Pile Cap G1b - Removal of Existing ground slab
Pile Cap G1b - Excavation & ELS Installation
Pile Cap G1b - Blinding Concrete
Pile Cap G1b - Rebar & Concreting
Pile Cap G1b - Backfilling & Temp Reinstatement
Pier H1b
Pile Cap H1b - ELS Foundation
Pile Cap H1b - Removal of Existing ground slab
Pile Cap H1b - Excavation & ELS Installation
Pier G1c
Pile Cap G1c - Preparation for ELS
Pile Cap G1c - Removal of Existing ground slab
Pile Cap G1c - Excavation & ELS Installation
Pile Cap G1c - Blinding Concrete
Pile Cap G1c - Rebar & Concreting
Pile Cap G1c - Backfilling & Temp Reinstatement
Pier H1c
Pile Cap H1c - Preparation for ELS
Pile Cap H1c - Removal of Existing ground slab
Pile Cap H1c - Excavation & ELS Installation
North Approach TBM Tunnelling & Cross Passage
Construction
Northern Landfall Surface Setup for TBM operation
Gantry Removal at North TBM Launching Shaft
Slurry Treatment Plant Decommissioning & Removal
Gantry Removal at North Ventilation Shaft
North Approach Tunnel Internal Structure - NB
CP51 - Excavation & Lining completion
NB - North TBM Tunnel - Corbel & Cable Trough installation
NB - North TBM Tunnel - OHVD Slab installation
NB - North TBM Tunnel - Fire proofing and Provision to E&MS and TCSS Contract for KD1
North Approach Tunnel Internal Structure - SB
SB - North TBM Tunnel - Corbel & Cable Trough installation
SB - North TBM Tunnel - OHVD Slab installation
SB - North TBM Tunnel - Fire proofing & Provision to E&MS and TCSS Contract for KD1
North Approach Cross Passage
CP51 - Traditional Method
CP Finishing & Demobilization
CP50 - Pipe Jacking Method
CP Finishing & Demobilization
North Ventilation Building
Design Submission
(A11) Submissons to Design Advisory Panel of ArchSD
ArchSD's comment
(I1) DDA for North Vent.Bldgs. GBP & Arch.Submission
IPs Review
IP's No Objection Received
SO's Review
SO Approval with Condition Received
(I1) DDA for North & South Vent.Bldg. ABWF works
Designer to Reply RtC + Update Submission
Submit Updated DDA to SO/ ICE/ IPs
ICE Approval & Issue Check Cert



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Planned Bar
Planned Bar - Critical
Planned Milestone
Progress bar
Progress Milestone

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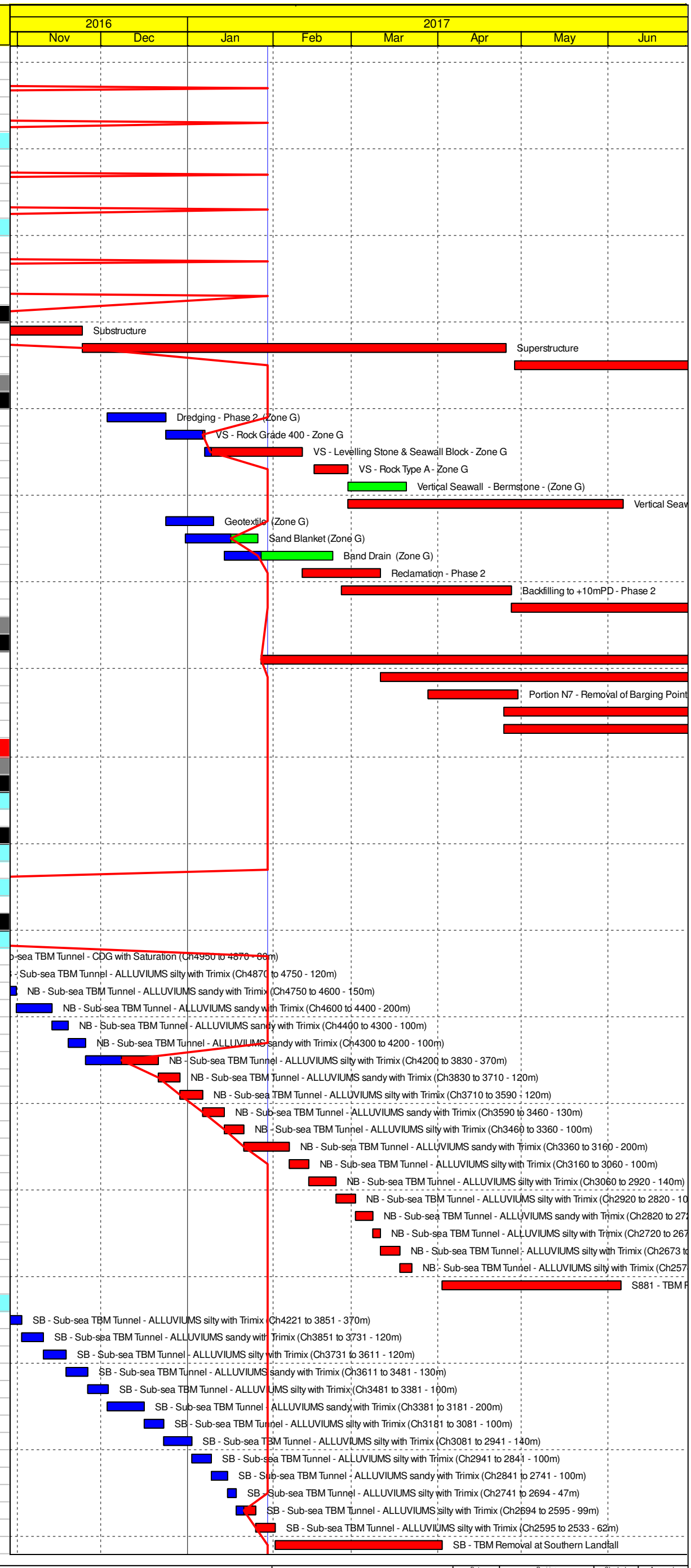
Activity Name
Submit ICE Check Cert to SO
IPs Review
IP's No Objection Received
SO's Review
SO Approval with Condition Received
(I2) DDA for North Vent.Bldgs.Structural Design incl.Vent.Connections
IPs Review
IP's No Objection Received
SO's Review
SO Approval with Condition Received
(I3) DDA for North & South Vent.Bldgs. Service and E&M Provision
IPs Review
IP's No Objection Received
SO's Review
SO Approval with Condition Received
Construction
Substructure
Superstructure
Finishing Works
North Reclamation (Phase 2)
Construction
Dredging - Phase 2 (Zone G)
VS - Rock Grade 400 - Zone G
VS - Levelling Stone & Seawall Block - Zone G
VS - Rock Type A - Zone G
Vertical Seawall - Bermstone - (Zone G)
Vertical Seawall - Seawall Coping - (Zone G)
Geotextile (Zone G)
Sand Blanket (Zone G)
Band Drain (Zone G)
Reclamation - Phase 2
Backfilling to +10mPD - Phase 2
Surcharge - Phase 2
North Surface Roadworks, Utility & Drainage works
Construction
North Landfall - Underground Sewerage & Drainage - Summary
North Landfall - Underground Sewerage & Drainage - Portion N5
Portion N7 - Removal of Barging Point & Surcharge Removal to +6mPD
North Landfall - Watermain & Undergournd Utilities - Summary
North Landfall - Watermain & Undergournd Utilities - Zone E
Sub-sea Tunnel
Sub-sea TBM Tunnelling
Major Procurement
Precast Semgnet ID12.40 - Production for Sub-sea TBM Tunnel
ID12.40 TBM Segment Ring Fabrication - 12 rings per day
Design Submission
(G1) DDA for TBM Tunnel Lining Structural Design - Sub-sea tunnel
Sub-sea TBM Tunnel Segment - Fabrication
(G3) DDA for TBM Tunnel Internal Structures (Sub-sea)
Sub-sea Tunnel - Precast Gallery Fabrication
Construction
Sub-sea TBM Tunnel - NB ID12.2m - S881
NB - Sub-sea TBM Tunnel - CDG with Saturation (Ch4950 to 4870 - 80m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch4870 to 4750 - 120m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS sandy with Trimix (Ch4750 to 4600 - 150m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS sandy with Trimix (Ch4600 to 4400 - 200m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS sandy with Trimix (Ch4400 to 4300 - 100m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS sandy with Trimix (Ch4300 to 4200 - 100m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch4200 to 3830 - 370m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS sandy with Trimix (Ch3830 to 3710 - 120m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch3710 to 3590 - 120m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS sandy with Trimix (Ch3590 to 3460 - 130m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch3460 to 3360 - 100m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS sandy with Trimix (Ch3360 to 3160 - 200m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch3160 to 3060 - 100m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch3060 to 2920 - 140m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch2920 to 2820 - 100m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS sandy with Trimix (Ch2820 to 2720 - 100m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch2720 to 2673 - 47m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch2673 to 2574 - 99m)
NB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch2574 to 2512 - 62m)
S881 - TBM Removal at Southern Landfall
Sub-sea TBM Tunnel - SB ID12.2m - S882
SB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch4221 to 3851 - 370m)
SB - Sub-sea TBM Tunnel - ALLUVIUMS sandy with Trimix (Ch3851 to 3731 - 120m)
SB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch3731 to 3611 - 120m)
SB - Sub-sea TBM Tunnel - ALLUVIUMS sandy with Trimix (Ch3611 to 3481 - 130m)
SB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch3481 to 3381 - 100m)
SB - Sub-sea TBM Tunnel - ALLUVIUMS sandy with Trimix (Ch3381 to 3181 - 200m)
SB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch3181 to 3081 - 100m)
SB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch3081 to 2941 - 140m)
SB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch2941 to 2841 - 100m)
SB - Sub-sea TBM Tunnel - ALLUVIUMS sandy with Trimix (Ch2841 to 2741 - 100m)
SB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch2741 to 2694 - 47m)
SB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch2694 to 2595 - 99m)
SB - Sub-sea TBM Tunnel - ALLUVIUMS silty with Trimix (Ch2595 to 2533 - 62m)
SB - TBM Removal at Southern Landfall



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Planned Bar
Planned Bar - Critical
Planned Milestone
Progress bar
Progress Milestone

TMCLK - Northern Connection Sub-Sea Tunnel Section

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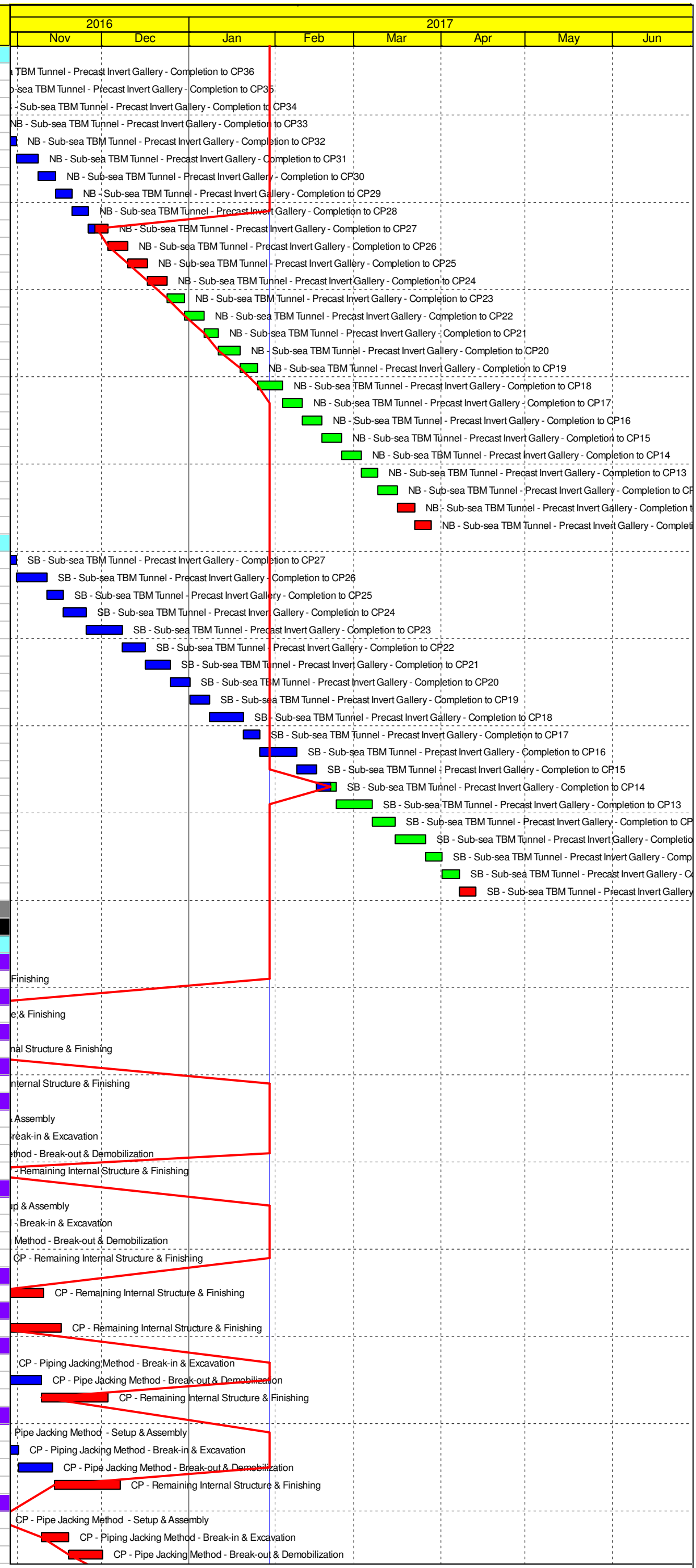
Activity Name
Sub-sea TBM Tunnel - NB - Precast Invert Gallery
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP36
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP35
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP34
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP33
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP32
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP31
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP30
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP29
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP28
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP27
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP26
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP25
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP24
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP23
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP22
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP21
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP20
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP19
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP18
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP17
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP16
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP15
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP14
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP13
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP12
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP11
NB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP10
Sub-sea TBM Tunnel - SB - Precast Invert Gallery
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP27
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP26
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP25
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP24
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP23
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP22
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP21
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP20
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP19
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP18
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP17
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP16
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP15
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP14
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP13
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP12
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP11
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP10
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP09
SB - Sub-sea TBM Tunnel - Precast Invert Gallery - Completion to CP08
Sub-sea Tunnel Cross Passage & Internal Structure
Construction
Sub-sea Tunnel Cross Passage
CP48 - ML03 - Ch6489
CP - Remaining Internal Structure & Finishing
CP47 - ML03 - Ch6390
CP - Remaining Internal Structure & Finishing
CP46 - ML03 - Ch6292
CP - Remaining Internal Structure & Finishing
CP45 - ML03 - Ch6193
CP - Remaining Internal Structure & Finishing
CP44 - ML03 - Ch6095
CP - Pipe Jacking Method - Setup & Assembly
CP - Pipe Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP43 - ML03 - Ch5996
CP - Pipe Jacking Method - Setup & Assembly
CP - Pipe Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP42 - ML03 - Ch5898
CP - Remaining Internal Structure & Finishing
CP41 - ML03 - Ch5800
CP - Remaining Internal Structure & Finishing
CP40 - ML03 - Ch5703
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP39 - ML03 - Ch5607
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP38 - ML03 - Ch5510
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization



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Planned Bar - Critical
Planned Milestone
Progress bar
Progress Milestone

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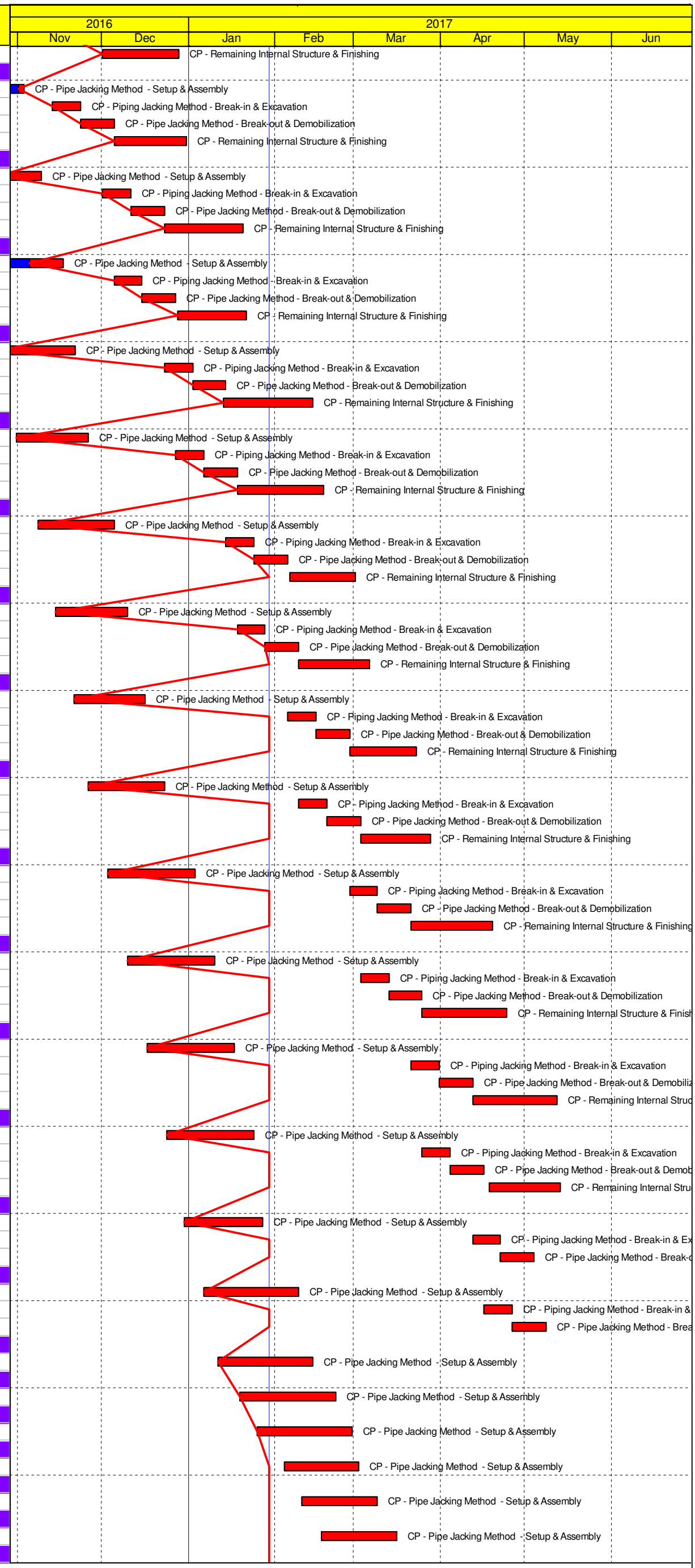
Activity Name
CP - Remaining Internal Structure & Finishing
CP37 - ML03 - Ch5413
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP36 - ML03 - Ch5315
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP35 - ML03 - Ch5217
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP34 - ML03 - Ch5118
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP33 - ML03 - Ch5020
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP32 - ML03 - Ch4921
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP31 - ML03 - Ch4823
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP30 - ML03 - Ch4724
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP29 - ML03 - Ch4626
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP28 - ML03 - Ch4527
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP27 - ML03 - Ch4429
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP26 - ML03 - Ch4330
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP25 - ML03 - Ch4232
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP - Remaining Internal Structure & Finishing
CP24 - ML03 - Ch4133
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP23 - ML03 - Ch4035
CP - Pipe Jacking Method - Setup & Assembly
CP - Piping Jacking Method - Break-in & Excavation
CP - Pipe Jacking Method - Break-out & Demobilization
CP22 - ML03 - Ch3936
CP - Pipe Jacking Method - Setup & Assembly
CP21 - ML03 - Ch3838
CP - Pipe Jacking Method - Setup & Assembly
CP20 - ML03 - Ch3739
CP - Pipe Jacking Method - Setup & Assembly
CP19 - ML03 - Ch3641
CP - Pipe Jacking Method - Setup & Assembly
CP18 - ML03 - Ch3542
CP - Pipe Jacking Method - Setup & Assembly
CP17 - ML03 - Ch3444
CP - Pipe Jacking Method - Setup & Assembly
CP16 - ML03 - Ch3345



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Planned Bar
Planned Bar - Critical
Planned Milestone
Progress bar
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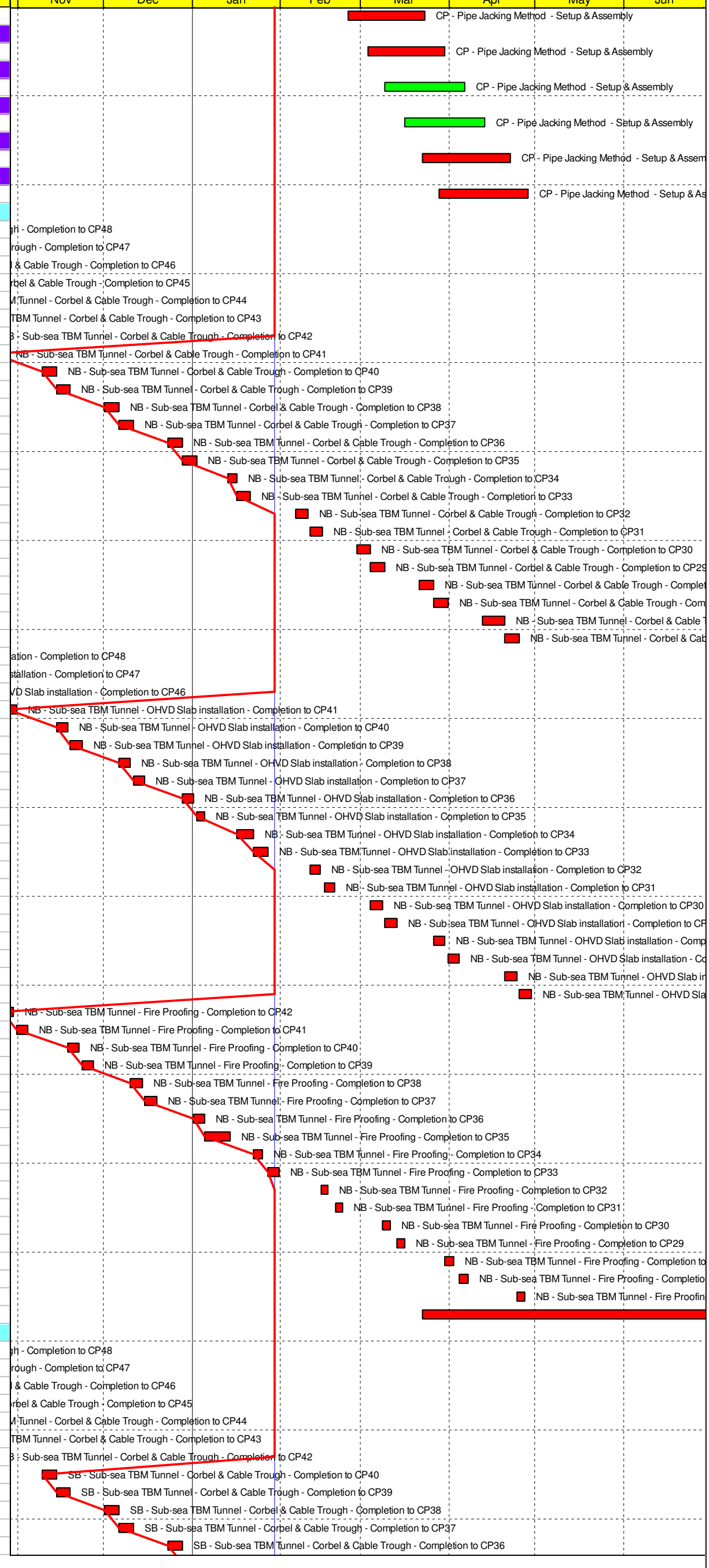
Activity Name
CP - Pipe Jacking Method - Setup & Assembly
CP15 - ML03 - Ch3247
CP - Pipe Jacking Method - Setup & Assembly
CP14 - ML03 - Ch3148
CP - Pipe Jacking Method - Setup & Assembly
CP13 - ML03 - Ch3050
CP - Pipe Jacking Method - Setup & Assembly
CP12 - ML03 - Ch2951
CP - Pipe Jacking Method - Setup & Assembly
CP11 - ML03 - Ch2853
CP - Pipe Jacking Method - Setup & Assembly
Sub-sea TBM Tunnel - NB - Remaining Internal Structure
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP48
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP47
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP46
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP45
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP44
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP43
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP42
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP41
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP40
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP39
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP38
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP37
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP36
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP35
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP34
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP33
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP32
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP31
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP30
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP29
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP28
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP27
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP26
NB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP25
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP48
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP47
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP46
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP41
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP40
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP39
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP38
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP37
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP36
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP35
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP34
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP33
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP32
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP31
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP30
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP29
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP28
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP27
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP26
NB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP25
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP42
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP41
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP40
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP39
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP38
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP37
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP36
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP35
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP34
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP33
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP32
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP31
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP30
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP29
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP28
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP27
NB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP26
NB - Sub-sea TBM Tunnel - Road Level Fire Proofing
Sub-sea TBM Tunnel - SB - Remaining Internal Structure
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP48
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP47
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP46
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP45
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP44
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP43
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP42
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP40
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP39
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP38
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP37
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP36



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Activity Name
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP35
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP34
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP33
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP32
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP31
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SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP28
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP27
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP26
SB - Sub-sea TBM Tunnel - Corbel & Cable Trough - Completion to CP25
SB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP41
SB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP40
SB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP39
SB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP38
SB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP37
SB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP36
SB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP35
SB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP34
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SB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP31
SB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP30
SB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP29
SB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP28
SB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP27
SB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP26
SB - Sub-sea TBM Tunnel - OHVD Slab installation - Completion to CP25
SB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP42
SB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP41
SB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP40
SB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP39
SB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP38
SB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP37
SB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP36
SB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP35
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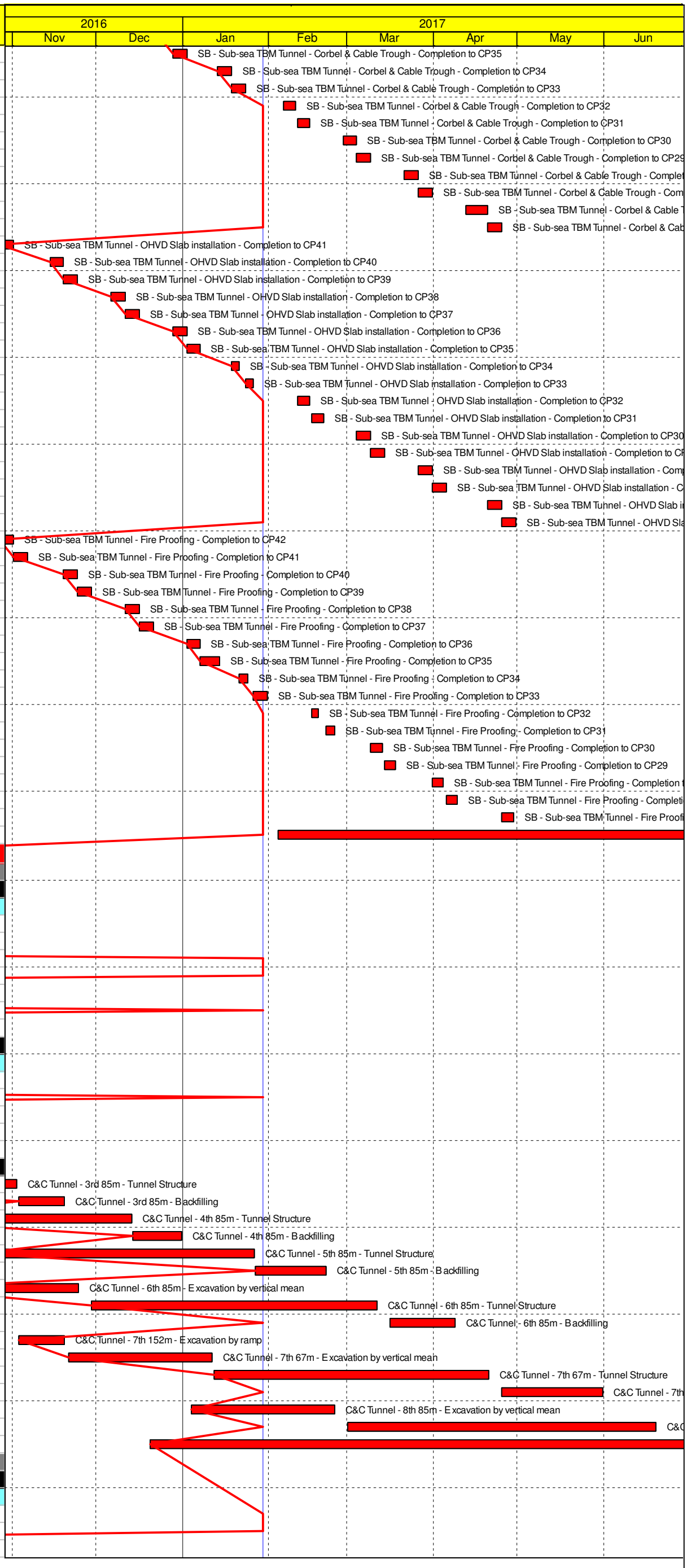
SB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP33
SB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP32
SB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP31
SB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP30
SB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP29
SB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP28
SB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP27
SB - Sub-sea TBM Tunnel - Fire Proofing - Completion to CP26
SB - Remaining Fire Proofing in Tunnel
Southern Landfall
South Cut & Cover Tunnel
Design Submission
(E2) DDA for South C&C Box & Approach Ramp
Review & Comment by JV
Designer prepare DDA
Formal Submission of DDA to ICE/ IPs
Advanced Submission to SO
IPs/ SO's Advance Comments/ ICE Comments
Comments Received
Designer to Reply RtC + Update Submission
Method Statement Submission
Method Statement of Construction Methodology of C&C Tunnels
Preparation Method Statement for C&C Tunnels
Submit Method Statement to SO
SO Reviews & Comments
Re-submission
SO's Review
Construction
C&C Tunnel - 3rd 85m - Tunnel Structure
C&C Tunnel - 3rd 85m - Backfilling
C&C Tunnel - 4th 85m - Tunnel Structure
C&C Tunnel - 4th 85m - Backfilling
C&C Tunnel - 5th 85m - Tunnel Structure
C&C Tunnel - 5th 85m - Backfilling
C&C Tunnel - 6th 85m - Excavation by vertical mean
C&C Tunnel - 6th 85m - Tunnel Structure
C&C Tunnel - 6th 85m - Backfilling
C&C Tunnel - 7th 152m - Excavation by ramp
C&C Tunnel - 7th 67m - Excavation by vertical mean
C&C Tunnel - 7th 67m - Tunnel Structure
C&C Tunnel - 7th 67m - Backfilling
C&C Tunnel - 8th 85m - Excavation by vertical mean
C&C Tunnel - 8th 85m - Tunnel Structure
Intermediate Slab
South Retrieval Shaft
Design Submission
(F4) Gantry Crane Support/Foundations in Southern Landfall
IPs/ SO's Advance Comments/ ICE Comments
Comments Received
Designer to Reply RtC + Update Submission



Project ID: TMCLK DWPF 17W04

Data Date: 29-Jan-17

Planned Bar
Planned Bar - Critical
Planned Milestone
Progress bar
Progress Milestone

TMCLK - Northern Connection Sub-Sea Tunnel Section

Detailed Works Programme (Rev. F)

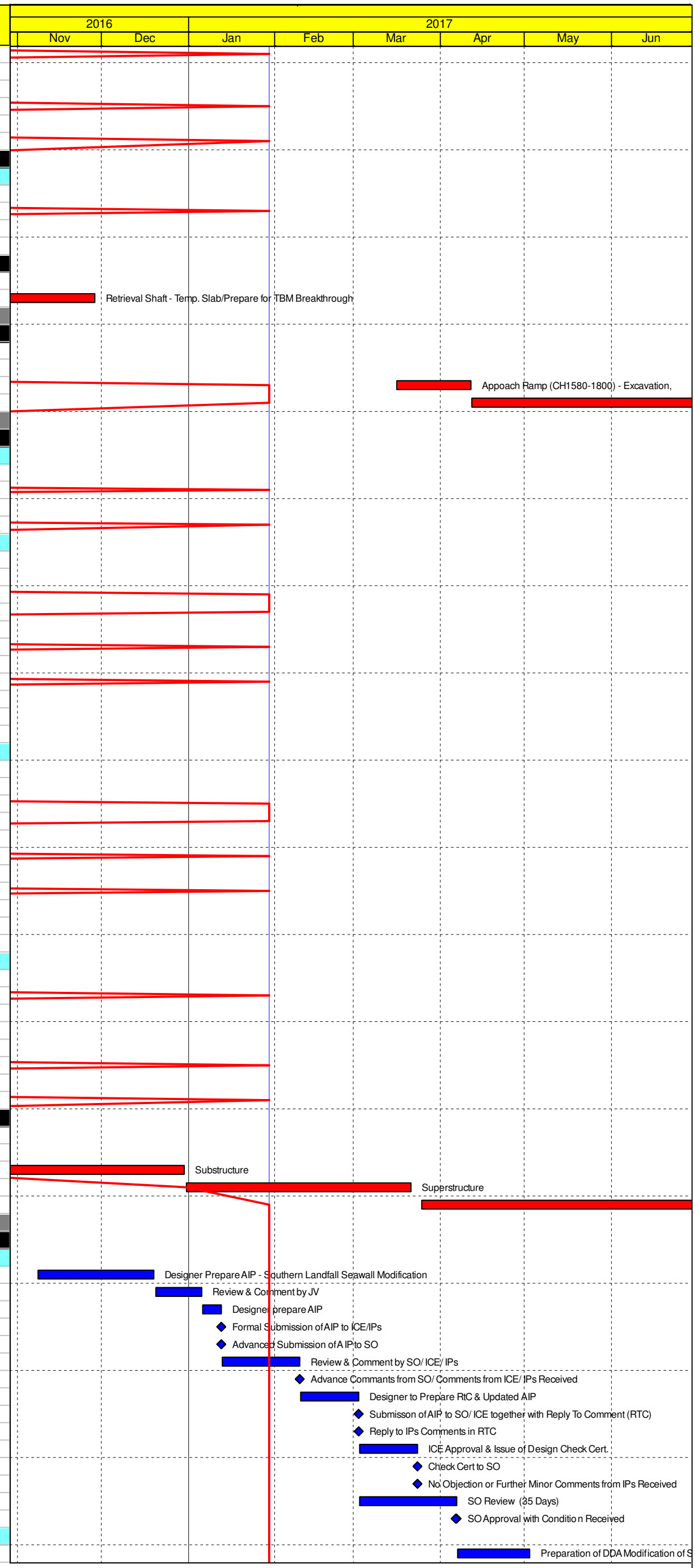
Three Months Rolling Programme

Progress as of 29-Jan-17

Dragages HongKong
A member of the Bouygues Construction group
Dragages - Bouygues Joint Venture 寶嘉 - 布依格聯營

Date	Revision	Checked	Approved
12-Feb-14	TMCLK/DBJGEN/PRG/98507	WYu	SPo
08-Apr-14	TMCLK/DBJGEN/PRG/98507 Rev.B	SPa	WYu
28-Aug-14	TMCLK/DBJGEN/PRG/98507 Rev.C	CLa	WYu
30-Oct-15	TMCLK/DBJGEN/PRG/98507 Rev.F	WYu	

Activity Name
Submit Updated IFA to SO/ ICE/ IPs
ICE Approval & Issue Check Cert
IPs Review
IP's No Objection Received
SO's Review
SO Approval with Condition Received
Method Statement Submission
Method Statement of Construction Methodology of Retrieval Shaft
Preparation Method Statement for Retrieval Shaft
Submit Method Statement to SO
SO Reviews & Comments
Re-submission
Construction
South Retrieval Shaft - Diaphragm Wall
Retrieval Shaft - Temp. Slab/Prepare for TBM Breakthrough
South Approach Ramp
Construction
Appoach Ramp (CH1580-1850) - Pipe Pile/Sheet Piles Wall
Appoach Ramp (CH1580-1850) - Tension Piles
Appoach Ramp (CH1580-1800) - Excavation,
Remaining Approach Tunnel Structure
South Ventilation Building
Design Submission
(I1) DDA for South Vent.Bldg. GBP & Arch.Submission
IPs Review
IP's No Objection Received
SO's Review
SO Approval with Condition Received
(I2) DDA for South Vent.Bldg. Foundation Design
Review & Comment by JV
Designer prepare DDA
Formal Submission of DDA to ICE/ IPs
Advanced Submission to SO
IPs/ SO's Advance Comments/ ICE Comments
Comments Received
Designer to Reply RtC + Update Submission
Submit Updated DDA to SO/ ICE/ IPs
ICE Approval & Issue Check Cert
IPs Review
SO's Review
(I2) DDA for South Vent.Bldg.Structural Design incl.Vent.Connections
Review & Comment by JV
Designer prepare DDA
Formal Submission of DDA to ICE/ IPs
Advanced Submission to SO
IPs/ SO's Advance Comments/ ICE Comments
Comments Received
Designer to Reply RtC + Update Submission
Submit Updated DDA to SO/ ICE/ IPs
ICE Approval & Issue Check Cert
IPs Review
SO's Review
(J1) DDA Temp.works for Construction of Sth.Vent.Bldg.
Designer to Reply RtC + Update Submission
Submit Updated DDA to SO/ ICE/ IPs
ICE Approval & Issue Check Cert
Submit ICE Check Cert to SO
IPs Review
IP's No Objection Received
SO's Review
SO Approval with Condition Received
Construction
Mobilization & Setting Up Piling Rigs
S -Sheet Piling
Substructure
Superstructure
Finishing Works
South Surface Roadworks, Utility & Drainage works
Design Submission
(E1) AIP - Southern Landfall Seawall Modification
Designer Prepare AIP - Southern Landfall Seawall Modification
Review & Comment by JV
Designer prepare AIP
Formal Submission of AIP to ICE/IPs
Advanced Submission of A IP to SO
Review & Comment by SO/ ICE/ IPs
Advance Commants from SO/ Comments from ICE/ IPs Received
Designer to Prepare RtC & Updated AIP
Submisson of AIP to SO/ ICE together with Reply To Comment (RTC)
Reply to IPs Comments in RTC
ICE Approval & Issue of Design Check Cert.
Check Cert to SO
No Objection or Further Minor Comments from IPs Received
SO Review (35 Days)
SO Approval with Condition Received
(E1) DDA - Southern Landfall Seawall Modification
Preparation of DDA Modification of Seawall at Sth Landfall



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Planned Milestone
Progress bar
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TMCLK - Northern Connection Sub-Sea Tunnel Section

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Dragages HongKong 香港寶嘉
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BOUYGUES TRAVAUX PUBLICS

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30-Oct-15	TMCLK/DBJGEN/PRG/98507 Rev.F	WYu	

Activity Name	2016 Nov	2016 Dec	2017 Jan	2017 Feb	2017 Mar	2017 Apr	2017 May	2017 Jun
Designer to Reply RtC + Update Submission								
Submit Updated DDA to SO/ ICE/ IPs								
IPs Review								
IP's No Objection Received								
SO's Review								
SO Approval with Condition Received								
(E3) DDA for Sewerage, Drainage, Waterworks & Utility works for South Landf								
IPs Review								
IP's No Objection Received								
SO's Review								
SO Approval with Condition Received								
Method Statement Submission								
Method Statement of Ground Treatment for TBMs Passing under Southern La								
Preparation Method Statement for Ground Improvement in South Landfall								
Submit Method Statement to SO								
SO Reviews & Comments								
Re-submission								
SO's Review								
SO's Approval								
Construction								
Temporary Platform for Ground Treatment for TBM passing under Southern Seawall								
Grouting Treatment for TBM passing under Southern Seawall		Grouting Treatment for TBM passing under Southern Seawall						
Testing & Commissioning/Inspection & Handover								
Final Inspection & Handover								
Design Submission								
(A12) Maintenance Matrix								
Preparation of Maintenance Matrix								
Prepare Re-submission								
2nd Submission								
SO's Condition Approval								
(A13) Operation & Maintenance Manual								
Preparation of Operation and Maintenance Manual								
1st Submission								
SO's Comments for 1st Submission								
Prepare Re-submission								
(A14) As-built & As-fabricated Drawings								
Preparation of As-built and As-fabricated Drawings								
1st Submission								
SO's Comments for 1st Submission								
(A15) Health & Safety File incl.As-built Dwgs & Records,Maintenance Schedul								
Preparation of Health and Safety File including as-built drawings and records, maintenance schedules, op								
1st Submission								
SO's Comments for 1st Submission								

Project ID: TMCLK DWPF 17W04

Data Date: 29-Jan-17

Planned Bar
Planned Bar - Critical
Planned Milestone
Progress bar
Progress Milestone

TMCLK - Northern Connection Sub-Sea Tunnel Section

Detailed Works Programme (Rev. F)

Three Months Rolling Programme

Progress as of 29-Jan-17

香寶嘉 Dragages HongKong
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30-Oct-15	TMCLK/DBJGEN/PRG/98507 Rev.F	WYu	

Appendix C

Environmental Mitigation and Enhancement Measure Implementation Schedules

Contract No. HY/2012/08
Tuen Mun – Chek Lap Kok Link
Northern Connection Sub-sea Tunnel Section
Environmental Mitigation and Enhancement Measure Implementation Schedule

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
Air Quality									
4.8.1	3.8	An effective watering programme of twice daily watering with complete coverage, is estimated to reduce by 50%. This is recommended for all areas in order to reduce dust levels to a minimum;	All areas / throughout construction period	Contractor	TMEIA Avoid smoke impacts and disturbance		Y		✓
4.8.1	3.8	Watering of the construction sites in Lantau for 8 times/day and in Tuen Mun for 12 times/day to reduce dust emissions by 87.5% and 91.7% respectively and shall be undertaken.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		✓
4.8.1	3.8	The Contractor shall, to the satisfaction of the Engineer, install effective dust suppression measures and take such other measures as may be necessary to ensure that at the Site boundary and any nearby sensitive receiver, dust levels are kept to acceptable levels.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		✓
4.8.1	3.8	The Contractor shall not burn debris or other materials on the works areas.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		✓
4.8. 1	3.8	In hot, dry or windy weather, the watering programme shall maintain all exposed road surfaces and dust sources wet.	All unpaved haul roads / throughout construction period in hot, dry or windy weather	Contractor	TMEIA Avoid smoke impacts and disturbance		Y		✓
4.8.1	3.8	Where breaking of oversize rock/concrete is required, watering shall be implemented to control dust. Water spray shall be used during the handling of fill material at the site and at active cuts, excavation and fill sites where dust is likely to be created.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		<>
4.8. 1	3.8	Open dropping heights for excavated materials shall be controlled to a maximum height of 2m to minimise the fugitive dust arising from unloading.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		✓
4.8.1	3.8	During transportation by truck, materials shall not be loaded to a level higher than the side and tail boards, and shall be dampened or covered before transport.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		✓

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

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
4.8.1	3.8	Materials having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin. The tarpaulin shall be properly secured and shall extend at least 300mm over the edges of the side and tail boards.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		✓
4.8.1	3.8	No earth, mud, debris, dust and the like shall be deposited on public roads. Wheel washing facility shall be usable prior to any earthworks excavation activity on the site.	All site exits / throughout construction period	Contractor	TMEIA Avoid dust		Y		✓
4.8.1	3.8	Areas of exposed soil shall be minimised to areas in which works have been completed shall be restored as soon as is practicable.	All exposed surfaces / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		✓
4.8.1	3.8	All stockpiles of aggregate or spoil shall be enclosed or covered and water applied in dry or windy condition.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		<>
4.11	Section 3	EM&A in the form of 1 hour and 24 hour dust monitoring and site audit.	All representative existing ASRs / throughout construction period	Contractor	EM&A Manual		Y		✓
WATER QUALITY									
Marine Works (Sequence A)									
6.1 Figure 6.2a Appendix D6a	Annex A	Construction of seawalls to be advanced by at least 200m before the main reclamation dredging and filling can commence. The protection by advanced seawall is a dynamic process depending on the progress of the construction activities and the stage when such protection could be realised is illustrated in Figure 6.2a and detailed in Appendix D6a. The part of the works where such measures can be undertaken for the majority of the time includes the following locations: - TM-CLKL northern reclamation;	All areas/ prior to dredging and backfilling works	Contractor	TM-EIAO		Y		✓
6.1	-	a maximum of 50% public fill to be used for all seawall filling below +2.5mPD for TM-CLKL southern and northern landfalls.	TM-CLKL seawall filling	Contractor	TM-EIAO		Y		✓

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EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
6.1	-	a maximum of 30% public fill to be used for reclamation filling below +2.5mPD for TM-CLKL southern landfall	TM-CLKL southern landfall reclamation filling	Contractor	TM-EIAO		Y		N/A
6.1	-	a maximum of 100% public fill to be used for reclamation filling below +2.5mPD for TM-CLKL northern landfall	TM-CLKL northern landfall reclamation filling	Contractor	TM-EIAO		Y		✓
6.1	-	Use of cage type silt curtains round allgrab dredgers during the HKBCF, HKLR and TM-CLKL southern reclamation works.	All areas dredging works	Contractor	TM-EIAO		Y		✓
	Figure 1.1 of Annex C	A layer of floating type silt curtain will be applied when dredging and reclamation works are being undertaken at Portion N-a as shown in Figure 1.1 of Annex C of the EM&A Manual.	All areas/ through out marine works	Contractor	TM-EIAO		Y		✓
6.1	-	Trailer suction hopper dredgers shall not allow mud to overflow.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		✓
6.1	-	The use of Lean Material Overboard (LMOB) systems shall be prohibited.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		✓

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

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EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
6.1 Figure 6.2b Appendix D6b	Annex A	For other parts of the reclamation works construction of seawalls to be advanced by at least 200m before the main reclamation dredging and filling can commence. It should be noted that the protection by advanced seawall is a dynamic process depending on the progress of the construction activities and the stage when such protection could be realised is illustrated in Figure 6.2b and detailed in Appendices D6b. The part of the works where such measures can be undertaken for the majority of the time includes the following locations: - TM-CLKL northern reclamation; - Reclamation filling for Portion D of HKBCF; Reclamation filling for FSD berth of HKBCF; and - Reclamation dredging and filling for Portion 1 of HKLR;	TM-CLKL northern landfall, Portion D of HKBCF and HKLR	Contractor	TM-EIAO		Y		✓
6.1	-	The filling material for the other parts of the works are the same as Sequence A;	All other areas/backfilling works	Contractor	TM-EIAO		Y		N/A
6.1	5.7	Cage type silt curtain (with steel enclosure) shall be used for grab dredgers working in the site of HKBCF and TM- CLKL southern reclamation. Cage type silt curtains will be applied round all grab dredgers at other works area.	HKBCF, HKLR and TM-CLKL grab dredging	Contractor	TM-EIAO		Y		✓
6.1	Annex A	A layer of floating type silt curtain will be applied around all works as defined in Appendix D6b.	All areas/ through out marine works	Contractor	TM-EIAO		Y		✓
6.1	-	TM-CLKL northern landfall: - Reclamation filling shall not proceed until at least 200m section of leading seawall at both the east and west sides of the reclamation are formed above +2.5 mPD, except for 100m gaps for marine access;	All areas/ through out marine works	Contractor	TM-EIAO		Y		✓

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EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
General Marine Works									
6.1	-	Use of TBM for the construction of the submarine tunnel.	Tunnel works / Construction phase	Contractor	TM-EIAO		Y		N/A
6.1	-	Export dredged spoils from NWWCZ.	All areas as much as possible / dredging activities	Contractor	DASO Permit conditions		Y		✓
6.1	-	Where public fill is proposed for filling below +2.5mPD, the fine content in the public fill will be controlled to 25%	All areas/ backfilling works	Contractor	TM-EIAO		Y		N/A
6.1	-	Where sand fill is proposed for filling below +2.5mPD, the fine content in the sand fill will be controlled to 5%.	All areas/ backfilling works	Contractor	TM-EIAO		Y		N/A
6.1	-	Mechanical grabs shall be designed and maintained to avoid spillage and should seal tightly while being lifted.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		✓
6.1	-	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		✓
6.1	-	Any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		✓
6.1	-	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		✓

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EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
6.1	-	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		✓
6.1	-	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		N/A
6.1	-	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		N/A
6.1	-	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		<>
6.1	5.2	Silt curtain shall have proved effectiveness from the producer and shall be fully maintained throughout the works by the contractor.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.1	-	The daily maximum production rates shall not exceed those assumed in the water quality assessment.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.1	-	The dredging and filling works shall be scheduled to spread the works evenly over a working day.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓

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EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
Land Works									
6.1	-	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		✓
6.1	-	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		✓
6.1	-	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		<>
6.1	-	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		✓
6.1	-	Temporary access roads should be surfaced with crushed stone or gravel.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.1	-	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		✓
6.1	-	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		✓
6.1	-	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		✓

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EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
6.1	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		✓
6.1	-	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		✓
6.1	-	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		✓
6.1	-	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		✓
6.1	-	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		✓
6.1	-	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		✓
6.1	-	Vehicle and plant servicing areas, vehicle wash bays and lubrication facilities shall be located under roofed areas. The drainage in these covered areas shall be connected to foul sewers via a petrol interceptor in accordance with the requirements of the WPCO or collected for off site disposal.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		N/A
6.1	-	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		✓
6.1	-	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		✓

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						D	C	O	
6.1	-	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		✓
6.1	-	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		✓

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EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
6.1	-	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	✓
6.1	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									
6.1	Section 5	Water quality monitoring shall be undertaken for suspended solids, turbidity, and dissolved oxygen. Nutrients and metal parameters shall also be measured for Mf sediment operations (only HKBCF and HKLR required handling of Mf sediment) during baseline, backfilling and post construction period. One year operation phase water quality monitoring at designated stations.	Designated monitoring stations as defined in EM&A Manual, Section 5/ Before, through-out marine construction period, post construction and monthly operational phase water quality monitoring for a year.	Contractor	EM&A Manual		Y	Y	✓
ECOLOGY									
8.14	6.3	Specification for and implement pre, during and post construction dolphin abundance monitoring.	All Areas/Detailed Design/ during construction works/post construction	Design Consultant/ Contractor	TMEIA	Y	Y	Y	✓
8.14	6.3,6.5	Specification and implementation of 250m dolphin exclusion zone.	All dredging and reclamation areas/Detailed Design/during all reclamation and dredging works	Design Consultant/ Contractor	TMEIA	Y	Y		✓
8.15	6.3, 6.5	Specification and deployment of an artificial reef of an area of 3,600m2 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 implemented 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		✓

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

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
8.14	6.3, 6.5	Design and implementation of acoustic decoupling methods for dredging and reclamation works	All areas/ Detailed Design/during dredging and reclamation works	Design Consultant/ Contractor	TMEIA	Y	Y		✓
8.15	6.3, 6.4	Pre-construction phase survey and coral translocation	Detailed Design/Prior to construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
8.15	6.5	Audit coral translocation success	Post translocation	Contractor	TMEIA		Y		✓
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
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	The colour and shape of the toll control buildings, ventilation building and administration building shall adopt a design which could blend it into the vicinity elements, and the details will be developed in detailed design stage (DM2)	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	Screening of construction works by hoardings around works area in visually unobtrusive colours, to screen works (CM5)	All areas/detailed design/ during construction/post construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Control night-time lighting and glare by hooding all lights (CM6)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A

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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	Ensure no run-off into water body adjacent to the Project Area (CM7)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Avoidance of excessive height and bulk of buildings and structures (CM8)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Aesthetically pleasing design (visually unobtrusive and non-reflective) as regard to the form, material and finishes shall be incorporated to all buildings, engineering structures and associated infrastructure facilities (OM5)	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	N/A
10.9	7.6	Avoidance of excessive height and bulk of buildings and structures (OM6)	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	N/A
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		✓

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

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
12.6		The Contractor shall apply for and obtain the appropriate licenses for the disposal of public fill, chemical waste and effluent discharges.	Contract mobilisation	Contractor	TMEIA, Land (Miscellaneous Provisions) Ordinance (Cap 28); Waste Disposal Ordinance (Cap 354); Dumping at Sea Ordinance (Cap 466); Water Pollution Control Ordinance.		Y		✓
12.6	8.1	Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedures including waste reduction, reuse and recycling.	Contract Mobilisation	Contractor	TMEIA		Y		✓
12.6	8.1	The extent of cutting operation should be optimised where possible. Earth retaining structures and bored pile walls should be proposed to minimise the extent of cutting.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	The surplus surcharge should be transferred to a fill bank	Reclamation areas / after surcharge works	Contractor	TMEIA		Y		N/A
12.6	8.1	Rock armour from the existing seawall should be reused on the new sloping seawall as far as possible	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	The site and surroundings shall be kept tidy and litter free.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	No waste shall be burnt on site.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Provisions to be made in contract documents to allow and promote the use of recycled aggregates where appropriate.	Detailed Design	Design Consultant	TMEIA	Y			✓
12.6	8.1	The Contractor shall be prohibited from disposing of C&D materials at any sensitive locations. The Contractor should propose the final disposal sites in the EMP and WMP for approval before implementation.	All areas / throughout construction period	Contractor	TMEIA		Y		✓

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

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
12.6	8.1	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	Dredged marine mud shall be disposed of in a gazetted marine disposal ground under the requirements of the Dumping at Seas Ordinance.	Reclamation areas / throughout dredging works	Contractor	TMEIA		Y		✓
12.6	8.1	Standard formwork or pre-fabrication should be used as far as practicable so as to minimise the C&D materials arising. The use of more durable formwork/plastic facing for construction works should be considered. The use of wooden hoardings should be avoided and metal hoarding should be used to facilitate recycling. Purchasing of construction materials should avoid over-ordering and wastage.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	The Contractor should recycle as many C&D 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		✓

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

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
12.6	8.1	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: *f* suitable for the substance to be held, resistant to corrosion, maintained in good conditions and securely closed; *f* Having a capacity of <450L unless the specifications have been approved by the EPD; and w Chinese according to the instructions prescribed in Schedule 2 of the Regulations. *f* Clearly labelled and used solely for the storage of chemical wastes; *f* Enclosed with at least 3 sides; *f* 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; *f* Adequate ventilation; *f* Sufficiently covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary); and *f* Incompatible materials are adequately separated.	All areas / throughout construction period	Contractor	TMEIA		Y		<>
12.6	8.1	Waste oils, chemicals or solvents shall not be disposed of to drain,	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Adequate numbers of portable toilets should be provided for on-site workers. Portable toilets should be maintained in reasonable states, which will not deter the workers from utilising them.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Night soil should be regularly collected by licensed collectors.	All areas / throughout construction period	Contractor	TMEIA		Y		N/A

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

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
12.6	8.1	General refuse arising on-site should be stored in enclosed bins or compaction units separately from C&D and chemical wastes. Sufficient dustbins shall be provided for storage of waste as required under the Public Cleansing and Prevention of Nuisances By-laws. In addition, general refuse shall be cleared daily and shall be disposed of to the nearest licensed landfill or refuse transfer station. Burning of refuse on construction sites is prohibited.	All areas / throughout construction period	Contractor	TMEIA		Y		<>
12.6	8.1	All waste containers shall be in a secure area on hardstanding;	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedure, including waste reduction, reuse and recycling.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Office wastes can be reduced by recycling of paper if such volume is sufficiently large to warrant collection. Participation in a local collection scheme by the Contractor should be advocated. Waste separation facilities for paper, aluminium cans, plastic bottles, etc should be provided on-site.	Site Offices/ throughout construction period	Contractor	TMEIA		Y		✓
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

*** Remarks:**

✓	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

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

Appendix D

Summary of Action and Limit Levels

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

Parameters	Action	Limit
24 Hour TSP Level in μg/m³	ASR1 = 213 ASR5 = 238 AQMS1 = 213 ASR6 = 238 ASR10 = 214	260
1 Hour TSP Level in μg /m³	ASR1 = 331 ASR5 = 340 AQMS1 = 335 ASR6 = 338 ASR10 = 337	500

Table D2 Action and Limit Levels for Water Quality

Parameter	Action Level#	Limit Level#
DO in mg/L [(a)]	Surface and Middle **5.0 mg/L** Bottom **4.7 mg/L**	Surface and Middle **4.2 mg/L** Bottom **3.6 mg/L**
Turbidity in NTU (Depth-averaged [(b), (c)])	120% of upstream control station at the same tide of the same day and 95%-ile of baseline data, i.e., **27.5 NTU**	130% of upstream control station at the same tide of the same day and 99%-ile of baseline data, i.e., **47.0 NTU**
SS in mg/L (Depth-averaged [(b), (c)])	120% of upstream control station at the same tide of the same day and 95%-ile of baseline data, i.e., **23.5 mg/L**	130% of upstream control station at the same tide of the same day and 10mg/L for WSD Seawater Intakes at Tuen Mun and 99%-ile of baseline data, i.e., **34.4 mg/L**

Notes:

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

(a) For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.

(b) "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths

(c) For turbidity and SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

(d) All figures given in the table are used for reference only, and EPD may amend the figures whenever it is considered as necessary

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

Table D3 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 D4 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	NEL = [STG < 2.4 & ANI <8.9] and NWL = [STG < 3.9 & ANI <17.9]	

Appendix E

Copies of Calibration Certificates for Air Quality Monitoring

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR 5
Calibrated by	:	P.F.Yeung
Date	:	11/12/2016

Sampler

Model	:	TE-5170
Serial Number	:	S/N 0816

Calibration Orfice and Standard Calibration Relationship

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

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1016
Ta(K)	:	295

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.5	3.413	1.655	55	55.36
2	13 holes	9.4	3.086	1.499	49	49.32
3	10 holes	6.6	2.586	1.261	42	42.28
4	7 holes	4.2	2.063	1.013	34	34.22
5	5 holes	2.6	1.623	0.804	26	26.17

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

Sampler Calibration Relationship (Linear Regression)

Slope(m):33.508 Intercept(b):-0.289 Correlation Coefficient(r): 0.9989

Checked by: Magnum Fan Date: 15/12/2016

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR10
Calibrated by	:	P.F.Yeung
Date	:	11/12/2016

Sampler

Model	:	TE-5170
Serial Number	:	S/N 8162

Calibration Orfice and Standard Calibration Relationship

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

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1016
Ta(K)	:	295

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.8	3.458	1.676	59	59.39
2	13 holes	9.5	3.102	1.507	52	52.34
3	10 holes	6.8	2.625	1.280	45	45.30
4	7 holes	4.4	2.111	1.036	36	36.24
5	5 holes	2.7	1.654	0.818	28	28.18

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

Sampler Calibration Relationship (Linear Regression)

Slope(m):35.873 Intercept(b): -1.029 Correlation Coefficient(r): 0.9994

Checked by: Magnum Fan Date: 15/12/16

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	AQMS1
Calibrated by	:	P.F.Yeung
Date	:	11/12/2016

Sampler

Model	:	TE-5170
Serial Number	:	S/N 1253

Calibration Orfice and Standard Calibration Relationship

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

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1016
Ta(K)	:	295

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	12.4	3.544	1.717	60	60.39
2	13 holes	9.8	3.151	1.530	53	53.35
3	10 holes	7.2	2.701	1.316	45	45.30
4	7 holes	4.6	2.159	1.058	37	37.24
5	5 holes	2.9	1.714	0.847	28	28.18

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

Sampler Calibration Relationship (Linear Regression)

Slope(m):36.351 Intercept(b):-2.131 Correlation Coefficient(r): 0.9990

Checked by: Magnum Fan Date: 15/12/2016

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR 1
Calibrated by	:	P.F.Yeung
Date	:	11/12/2016

Sampler

Model	:	TE-5170
Serial Number	:	S/N 0146

Calibration Orfice and Standard Calibration Relationship

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

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1016
Ta(K)	:	295

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.6	3.428	1.662	54	54.35
2	13 holes	9.1	3.036	1.476	47	47.31
3	10 holes	6.5	2.566	1.252	40	40.27
4	7 holes	4.6	2.159	1.058	34	34.22
5	5 holes	2.4	1.559	0.773	23	23.15

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

Sampler Calibration Relationship (Linear Regression)

Slope(m):34.473 Intercept(b): -3.030 correlation Coefficient(r): 0.9993

Checked by: Magnum Fan Date: 15/12/2016

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR 6
Calibrated by	:	P.F.Yeung
Date	:	11/12/2016

Sampler

Model	:	TE-5170
Serial Number	:	S/N 3957

Calibration Orfice and Standard Calibration Relationship

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

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1016
Ta(K)	:	295

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	12.0	3.487	1.690	53	53.35
2	13 holes	9.7	3.135	1.522	48	48.31
3	10 holes	7.0	2.663	1.298	42	42.28
4	7 holes	4.5	2.135	1.047	35	35.23
5	5 holes	2.8	1.684	0.833	28	28.18

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

Sampler Calibration Relationship (Linear Regression)

Slope(m):28.959 Intercept(b): 4.462 Correlation Coefficient(r): 0.9993

Checked by: Magnum Fan Date: 15/12/2016

ENVIROTECH SERVICES CO.

Calibration Report of Wind Meter

Date of Calibration : 1 November 2016

Brand of Test Meter: Davis

Model: Vantage Pro 2 (s/n: AS160104014)

Location : ASR5

Procedures :

1. Wind Still Test: The wind speed sensor was hold by hand until it keep still

2.Wind Speed Test: The wind meter was on-site calibrated against the Anemometer

3.Wind Direction Test : The wind meter was on-site calibrated against the marine compass at four directions

Results:

Wind Still Test

Wind Speed (m/s)
0.00

Wind Speed Test

Davis (m/s)	Anemomete (m/s)
1.2	1.3
2.5	2.8
3.3	3.6

Wind Direction Test

Davis (o)	Marine Compass (o)
271	270
1	0
91	90
179	180

Calibrated by: Fai

Yeung Ping Fai
(Technical Officer)

Checked by : Fat

Ho Kam Fat
(Senior Technical Officer)

TISCH Environmental

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

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

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

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

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)
0.9866	0.7037	1.4078
0.9824	0.9765	1.9909
0.9803	1.0880	2.2259
0.9792	1.1399	2.3345
0.9738	1.3735	2.8155

Qstd slope (m) = 2.10326
intercept (b) = -0.06696
coefficient (r) = 0.99989

y axis = SQRT[H2O(Pa/760)(298/Ta)]

Va	(x axis) Qa	(y axis)
0.9957	0.7102	0.8896
0.9914	0.9855	1.2581
0.9893	1.0980	1.4066
0.9882	1.1504	1.4753
0.9828	1.3862	1.7792

Qa slope (m) = 1.31703
intercept (b) = -0.04232
coefficient (r) = 0.99989

y axis = SQRT[H2O(Ta/Pa)]

CALCULATIONS

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

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

For subsequent flow rate calculations:

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

輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C165934
證書編號

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

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

TEST CONDITIONS / 測試條件

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

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 27 October 2016

TEST RESULTS / 測試結果

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

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

Tested By / 測試 : T L Shek
Assistant Engineer

Certified By / 核證 : H C Chan
Engineer

Date of Issue / 簽發日期 : 28 October 2016

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C165934
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

2. The results presented are the mean of 10 measurements at each calibration point.

3. Test equipment :

Equipment ID	Description	Certificate No.
CL386	Multi-function Measuring Instrument	S12109

4. Test procedure : MA130N.

5. Results :

Air Velocity

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

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

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

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

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

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Internal Calibration & Performance Check of pH Meter

Equipment Ref. No.	:	ET/EW007/008	Manufacturer	:	HANNA
Model No.	:	HI9125	Serial No.	:	H0040409
Date of Calibration	:	31/12/2016	Calibration Due Date	:	30/01/2017

Liquid Junction Error

003/5.2/002/07 (20℃)

Primary Standard Solution Used : Phosphate Ref No. of Primary Solution: 003/5.2/002/08 (25℃)

Temperature of Solution : 25.0 / 20.0 $\Delta pH_{½}$ = 0.080 / 0.080

pH value of diluted buffer : 6.98 / 6.99 pH (S) = 6.865 / 6.881

ΔpH = pH(S) - pH of diluted buffer = 0.115 / 0.109 (Observed Deviation)

Liquid Junction Error (ΔpH_j) = ΔpH - $\Delta pH_{½}$ = 0.04 / 0.03

Shift on Stirring

pH of buffer solution (with stirring), pH_s = 6.91 / 6.92

Shift on stirring, ΔpH_s= pH_s - pH(S) - ΔpH_j = 0.01 / 0.01

Noise

Noise, ΔpH_n = difference between max and min reading : 0.01 / 0.01

Verification of ATC

Ref. No. of reference thermometer used: ET/0521/018 / ET/0521/019

Temperature record from the reference thermometer (T_R): 25.0 / 20.0 °C

Temperature record from the ATC (T_{ATC}): 24.9 / 19.9 °C

Temperature Difference, $|T_R - T_{ATC}|$ 0.1 / 0.1 °C

Correction +0.1 / +0.1 °C

Acceptance Criteria

Performance Characteristic		Acceptable Range
Liquid Junction Error	ΔpHj	≤0.05
Shift on Stirring	ΔpHs	≤0.02
Noise	ΔpHn	≤0.02
Verifcation of ATC	Temperature Difference	≤0.5°C

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

* Delete as appropriate

Calibrated by: Bianco Checked by :

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Internal Calibration & Performance Check of pH Meter

Equipment Ref. No.	:	ET/EW007/008	Manufacturer	:	HANNA
Model No.	:	HI9125	Serial No.	:	H0040409
Date of Calibration	:	27/01/2017	Calibration Due Date	:	26/02/2017

Liquid Junction Error

003/5.2/002/07 (20℃)

Primary Standard Solution Used : Phosphate Ref No. of Primary Solution: 003/5.2/002/08 (25℃)

Temperature of Solution : 25.0 / 20.0 $\Delta pH_{½}$ = 0.080 / 0.080

pH value of diluted buffer : 6.98 / 6.98 pH (S) = 6.865 / 6.881

ΔpH = pH(S) - pH of diluted buffer = 0.115 / 0.099 (Observed Deviation)

Liquid Junction Error (ΔpH_j) = $\Delta pH - \Delta pH_{½}$ = 0.04 / 0.02

Shift on Stirring

pH of buffer solution (with stirring), pH_s = 6.91 / 6.91

Shift on stirring, $\Delta pH_s = pH_s - pH(S) - \Delta pH_j$ = 0.01 / 0.01

Noise

Noise, ΔpH_n = difference between max and min reading : 0.01 / 0.01

Verification of ATC

Ref. No. of reference thermometer used: ET/0521/018 / ET/0521/019

Temperature record from the reference thermometer (T_R): 25.0 / 20.0 °C

Temperature record from the ATC (T_{ATC}): 24.9 / 19.9 °C

Temperature Difference, $|T_R - T_{ATC}|$ 0.1 / 0.1 °C

Correction +0.1 / +0.1 °C

Acceptance Criteria

Performance Characteristic		Acceptable Range
Liquid Junction Error	ΔpHj	≤0.05
Shift on Stirring	ΔpHs	≤0.02
Noise	ΔpHn	≤0.02
Verifcation of ATC	Temperature Difference	≤0.5°C

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

* Delete as appropriate

Calibrated by: _____ Checked by : _____

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Performance Check of Turbidity Meter

Equipment Ref. No. : ET/0505/014 Manufacturer : HACH

Model No. : 2100Q Serial No. : 13110C029448

Date of Calibration : 25/11/2016 Due Date : 24/02/2017

Theoretical Value of Turbidity Standard (NTU)	Measured Value (NTU)	Difference % *
20	20.7	3.5
100	98.0	-2.0
800	780	-2.5

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

Acceptance Criteria

Difference : -5 % to 5 %

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

Prepared by : _____ Checked by : _____

Internal Calibration Report of Dissolved Oxygen Meter

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

Temperature Verification

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

Ref. No. of Water Bath : ---

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

Standardization of sodium thiosulphate ($Na_2S_2O_3$) solution

Reagent No. of $Na_2S_2O_3$ titrant	CPE/012/4.5/001/14	Reagent No. of 0.025N $K_2Cr_2O_7$	CPE/012/4.4/002/14

	Trial 1	Trial 2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	10.35
Final Vol. of $Na_2S_2O_3$ (ml)	10.35	20.75
Vol. of $Na_2S_2O_3$ used (ml)	10.35	10.40
Normality of $Na_2S_2O_3$ solution (N)	0.02415	0.02404
Average Normality (**N**) of $Na_2S_2O_3$ solution (N)	0.02410	
Acceptance criteria, Deviation	Less than ± 0.001N	

Calculation: Normality of $Na_2S_2O_3$, **N** = 0.25 / ml $Na_2S_2O_3$ used

Lineality Checking

Determination of dissolved oxygen content by Winkler Titration *

Purging Time (min)	2		5		10	
Trial	1	2	1	2	1	2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	11.70	23.40	0.00	6.50	10.50
Final Vol. of $Na_2S_2O_3$ (ml)	11.70	23.40	30.00	6.50	10.50	14.60
Vol. (**V**) of $Na_2S_2O_3$ used (ml)	11.70	11.70	6.60	6.50	4.00	4.10
Dissolved Oxygen (**DO**), mg/L	7.57	7.57	4.27	4.21	2.59	2.65
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L		Less than + 0.3mg/L	

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

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

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Internal Calibration Report of Dissolved Oxygen Meter

Zero Point Checking

DO meter reading, mg/L	0.00

Salinity Checking

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

Determination of dissolved oxygen content by Winkler Titration **

Salinity (ppt)	10		30	
Trial	1	2	1	2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	10.90	21.90	31.30
Final Vol. of $Na_2S_2O_3$ (ml)	10.90	21.90	31.30	40.80
Vol. (**V**) of $Na_2S_2O_3$ used (ml)	10.90	11.00	9.40	9.50
Dissolved Oxygen (**DO**), mg/L	7.05	7.12	6.08	6.15
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L	

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

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

Acceptance Criteria

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

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

Delete as appropriate

Calibrated by : _____ Approved by : _____

Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No.	:	ET/EW/008/008	Manufacturer	:	YSI
Model No.	:	Pro 2030	Serial No.	:	14M101489
Date of Calibration	:	19/01/2017	Calibration Due Date	:	18/04/2017

Temperature Verification

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

Ref. No. of Water Bath : ---

	Temperature (°C)			
Reference Thermometer reading	Measured	20.3	Corrected	19.8
DO Meter reading	Measured	19.8	Difference	0.0

Standardization of sodium thiosulphate ($Na_2S_2O_3$) solution

Reagent No. of $Na_2S_2O_3$ titrant	CPE/012/4.5/001/15	Reagent No. of 0.025N $K_2Cr_2O_7$	CPE/012/4.4/002/16

	Trial 1	Trial 2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	10.35
Final Vol. of $Na_2S_2O_3$ (ml)	10.35	20.70
Vol. of $Na_2S_2O_3$ used (ml)	10.35	10.35
Normality of $Na_2S_2O_3$ solution (N)	0.02415	0.02415
Average Normality (N) of $Na_2S_2O_3$ solution (N)	0.02415	
Acceptance criteria, Deviation	Less than ± 0.001N	

Calculation: Normality of $Na_2S_2O_3$, N = 0.25 / ml $Na_2S_2O_3$ used

Lineality Checking

Determination of dissolved oxygen content by Winkler Titration *

Purging Time (min)	2		5		10	
Trial	1	2	1	2	1	2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	11.40	23.00	0.00	6.10	9.90
Final Vol. of $Na_2S_2O_3$ (ml)	11.40	23.00	29.60	6.10	9.90	13.80
Vol. (V) of $Na_2S_2O_3$ used (ml)	11.40	11.60	6.60	6.10	3.80	3.90
Dissolved Oxygen (**DO**), mg/L	7.39	7.52	4.28	3.95	2.46	2.53
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L		Less than + 0.3mg/L	

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

Purging time, min	DO meter reading, mg/L			Winkler Titration result *, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
2	7.39	7.48	7.44	7.39	7.52	7.46	0.27
5	4.19	4.14	4.17	4.28	3.95	4.12	1.21
10	2.39	2.42	2.41	2.46	2.53	2.50	3.67
Linear regression coefficient				0.9993			

Internal Calibration Report of Dissolved Oxygen Meter

Zero Point Checking

DO meter reading, mg/L	0.00

Salinity Checking

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

Determination of dissolved oxygen content by Winkler Titration **

Salinity (ppt)	10		30	
Trial	1	2	1	2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	10.90	21.80	31.20
Final Vol. of $Na_2S_2O_3$ (ml)	10.90	21.80	31.20	40.60
Vol. (V) of $Na_2S_2O_3$ used (ml)	10.90	10.90	9.40	9.40
Dissolved Oxygen (**DO**), mg/L	7.07	7.07	6.09	6.09
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L	

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

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result**, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	7.12	7.07	7.1	7.07	7.07	7.07	0.42
30	6.14	6.17	6.16	6.09	6.09	6.09	1.14

Acceptance Criteria

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

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

Delete as appropriate

Calibrated by : Brian

Approved by :

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Performance Check of Salinity Meter

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

Ref. No. of Salinity Standard used (30ppt)	S/001/5

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

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

Acceptance Criteria

Difference : -10 % to 10 %

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

Checked by : _____ Approved by : _____

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Performance Check of Salinity Meter

Equipment Ref. No. :	ET/EW/008/008	Manufacturer :	YSI
Model No. :	Pro 2030	Serial No. :	14M101489
Date of Calibration :	19/01/2017	Due Date :	18/04/2017

Ref. No. of Salinity Standard used (30ppt)	S/001/9

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

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

Acceptance Criteria

Difference : -10 % to 10 %

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

Checked by : Brian W

Approved by : I Z L

Appendix F

EM&A Monitoring Schedules

HY/2012/08 - Tuen Mun - Chek Lap Kok Link
Northern Connection Sub-sea Tunnel Section
Air Quality Impact Monitoring Schedule - January 2017

Air quality monitoring stations: ASR1, ASR5, ASR6, ASR10, AQMS1

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

HY/2012/08 - Tuen Mun - Chek Lap Kok Link
Northern Connection Sub-sea Tunnel Section
Tentative Air Quality Impact Monitoring Schedule - February 2017

Air quality monitoring stations: ASR1, ASR5, ASR6, ASR10, AQMS1

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1-Feb	2-Feb	3-Feb	4-Feb
				1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM		
5-Feb	6-Feb	7-Feb	8-Feb	9-Feb	10-Feb	11-Feb
1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM			1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM			1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM
12-Feb	13-Feb	14-Feb	15-Feb	16-Feb	17-Feb	18-Feb
		1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM			1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM	
19-Feb	20-Feb	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb
	1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM			1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM		
26-Feb	27-Feb	28-Feb				
1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM						

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/2012/08 - Tuen Mun - Chek Lap Kok Link - Northern Connection Sub-sea Tunnel Section
Impact Marine Water Quality Monitoring (WQM) Schedule (January 2017)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Jan	02-Jan	03-Jan	04-Jan	05-Jan	06-Jan	07-Jan
		WQM Mid-Flood 10:55 (09:10 - 12:40) Mid-Ebb 16:31 (14:46 - 18:16)		**WQM** Mid-Flood 12:27 (10:42 - 14:12) Mid-Ebb 18:38 (16:53 - 20:23)		**WQM** Mid-Ebb 7:22 (05:37 - 09:07) Mid-Flood 14:09 (12:24 - 15:54)
08-Jan	09-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan
		WQM Mid-Ebb 11:07 (09:22 - 12:52) Mid-Flood 16:38 (14:53 - 18:23)		**WQM** Mid-Ebb 12:54 (11:09 - 14:39) Mid-Flood 18:12 (16:27 - 19:57)		**WQM** Mid-Flood 9:03 (07:18 - 10:48) Mid-Ebb 14:22 (12:37 - 16:07)
15-Jan	16-Jan	17-Jan	18-Jan	19-Jan	20-Jan	21-Jan
		WQM Mid-Flood 10:56 (09:11 - 12:41) Mid-Ebb 16:27 (14:42 - 18:12)		**WQM** Mid-Flood 12:09 (10:24 - 13:54) Mid-Ebb 18:15 (16:30 - 20:00)		**WQM** Mid-Ebb 6:43 (04:58 - 08:28) Mid-Flood 13:33 (11:48 - 15:18)
22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan
		WQM Mid-Ebb 10:51 (09:15 - 12:30) Mid-Flood 15:56 (14:11 - 17:41)		**WQM** Mid-Ebb 12:16 (10:31 - 14:01) Mid-Flood 17:26 (15:41 - 19:11)		
29-Jan	30-Jan	31-Jan				
		WQM Mid-Flood 9:32 (07:47 - 11:17) Mid-Ebb 15:15 (13:30 - 17:00)				

Water quality monitoring on 28 Jan 2017 was cancelled due to suspension of marine works during 28 - 30 Jan 2017.

HY/2012/08 - Tuen Mun - Chek Lap Kok Link - Northern Connection Sub-sea Tunnel Section
Tentative Impact Marine Water Quality Monitoring (WQM) Schedule (February 2017)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			01-Feb	02-Feb	03-Feb	04-Feb
				WQM Mid-Flood 10:42 (08:57 - 12:27) Mid-Ebb 16:46 (15:01 - 18:31)		**WQM** Mid-Flood 12:15 (10:30 - 14:00) Mid-Ebb 19:08 (17:23 - 20:53)
05-Feb	06-Feb	07-Feb	08-Feb	09-Feb	10-Feb	11-Feb
		WQM Mid-Ebb 10:00 (08:15 - 11:45) Mid-Flood 15:21 (13:36 - 17:06)		**WQM** Mid-Ebb 12:00 (10:15 - 13:45) Mid-Flood 17:19 (15:34 - 19:04)		**WQM** Mid-Flood 7:58 (06:13 - 09:43) Mid-Ebb 13:25 (11:40 - 15:10)
12-Feb	13-Feb	14-Feb	15-Feb	16-Feb	17-Feb	18-Feb
		WQM Mid-Flood 9:27 (07:42 - 11:12) Mid-Ebb 15:05 (13:20 - 16:50)		**WQM** Mid-Flood 10:17 (08:32 - 12:02) Mid-Ebb 16:17 (14:32 - 18:02)		**WQM** Mid-Flood 11:21 (09:36 - 13:06) Mid-Ebb 18:04 (16:19 - 19:49)
19-Feb	20-Feb	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb
		WQM Mid-Ebb 9:37 (08:50 - 10:20) Mid-Flood 14:02 (12:17 - 15:47)		**WQM** Mid-Ebb 11:19 (09:34 - 13:04) Mid-Flood 16:21 (14:36 - 18:06)		**WQM** Mid-Ebb 12:34 (10:49 - 14:19) Mid-Flood 17:57 (16:12 - 19:42)
26-Feb	27-Feb	28-Feb				
		WQM Mid-Flood 8:22 (06:37 - 10:07) Mid-Ebb 14:13 (12:28 - 15:58)				

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/2012/08 - Tuen Mun - Chek Lap Kok Link
Northern Connection Sub-sea Tunnel Section
Impact Dolphin Monitoring Survey Monitoring Schedule - January 2017

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

HY/2012/08 - Tuen Mun - Chek Lap Kok Link
Northern Connection Sub-sea Tunnel Section
Tentative Impact Dolphin Monitoring Survey Monitoring Schedule - February 2017

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

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

Appendix G

Impact Air Quality Monitoring Results

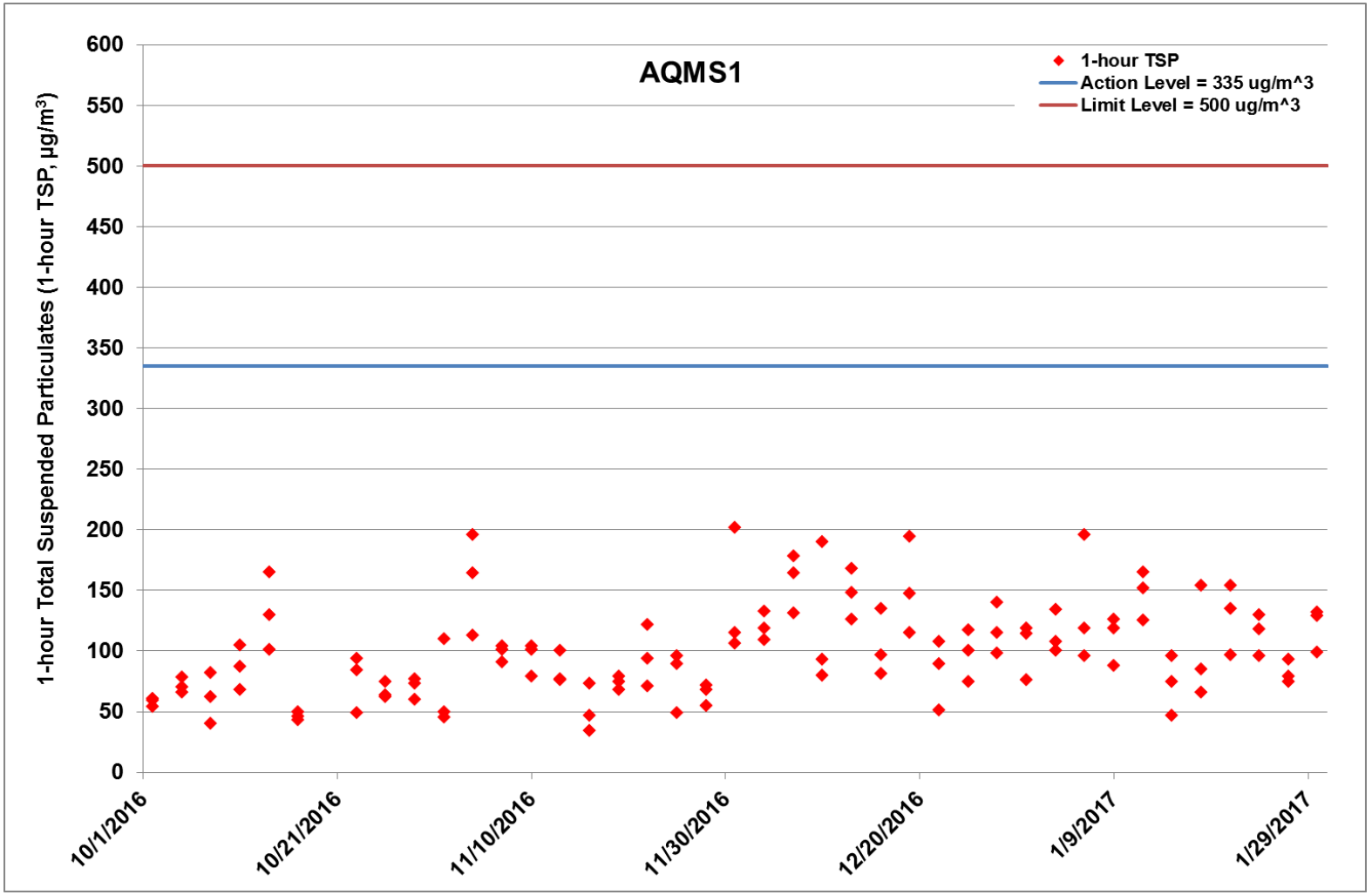


Figure G.1 Impact Monitoring – 1-hour Total Suspended Particulates (µg/m³) at AQMS1 between 1 October 2016 and 31 January 2017 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Jet Grouting, CSM Ground Treatment and Diaphragm Wall Construction (1/10/2016 – 31/1/2017) and Box Culvert Extension (1/10/2016 – 31/1/2017). *Ref: 0212330_Impact AQM graphs_ January 2017_REV a.xlsx*

ERM

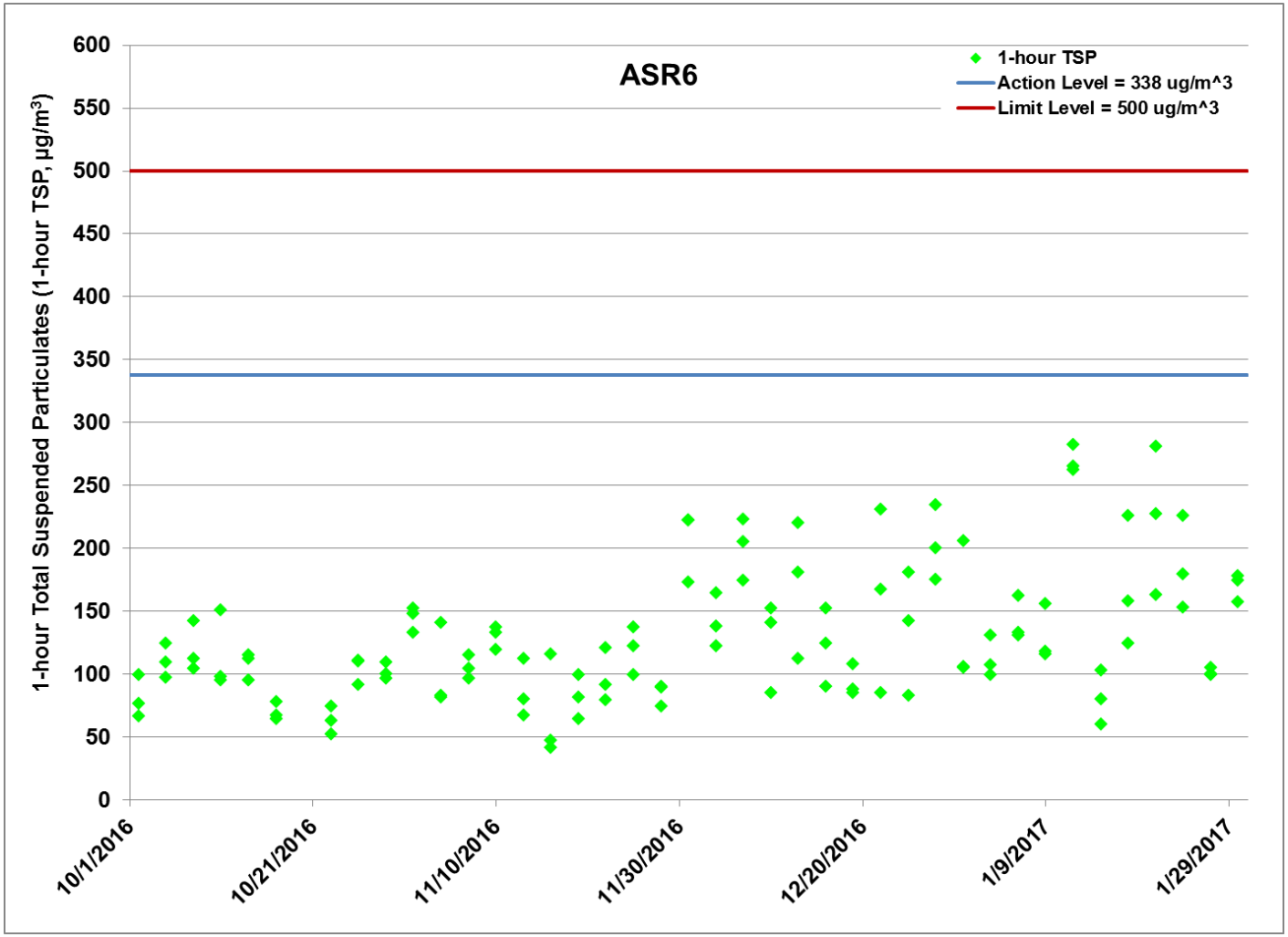


Figure G.2 Impact Monitoring – 1-hour Total Suspended Particulates (µg/m³) at ASR6 between 1 October 2016 and 31 January 2017 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Jet Grouting, CSM Ground Treatment and Diaphragm Wall Construction (1/10/2016 – 31/1/2017) and Box Culvert Extension (1/10/2016 – 31/1/2017). *Ref: 0212330_Impact AQM graphs_ January 2017_REV a.xlsx*

ERM

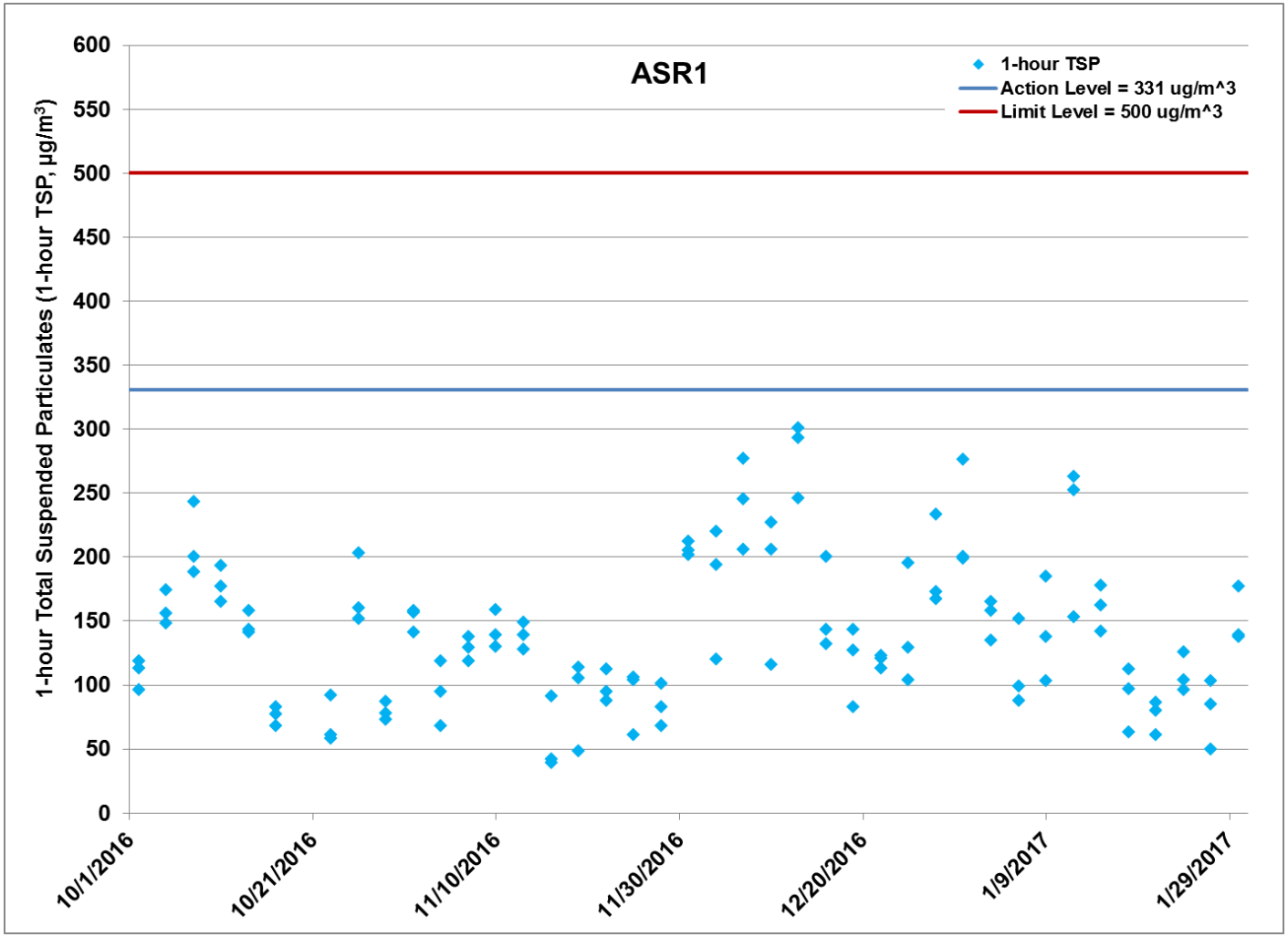


Figure G.3 Impact Monitoring – 1-hour Total Suspended Particulates (µg/m³) at ASR1 between 1 October 2016 and 31 January 2017 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Jet Grouting, CSM Ground Treatment and Diaphragm Wall Construction (1/10/2016 – 31/1/2017) and Box Culvert Extension (1/10/2016 – 31/1/2017). *Ref: 0212330_Impact AQM graphs_ January 2017_REV a.xlsx*

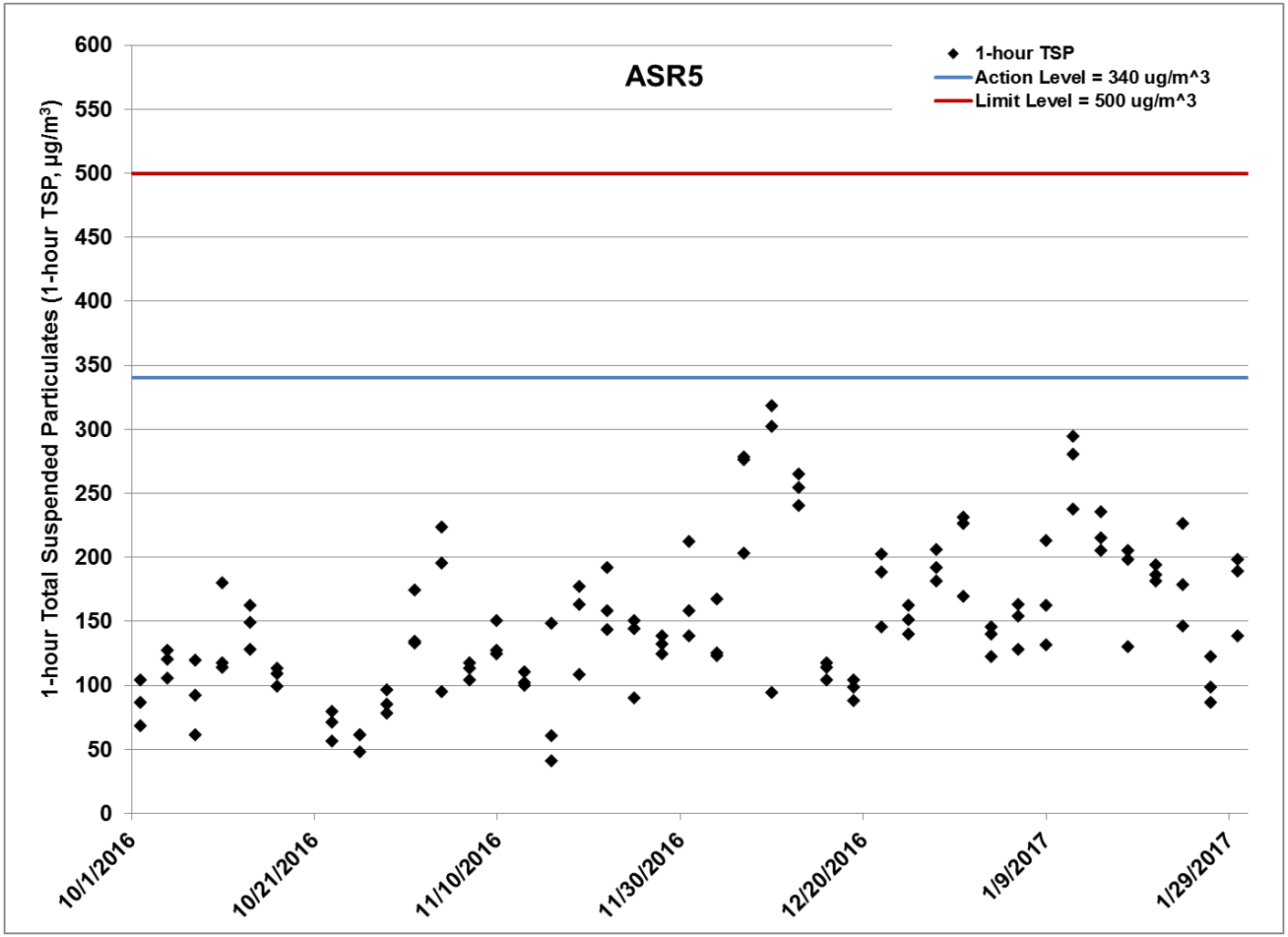


Figure G.4 Impact Monitoring – 1-hour Total Suspended Particulates (µg/m³) at ASR5 between 1 October 2016 and 31 January 2017 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Jet Grouting, CSM Ground Treatment and Diaphragm Wall Construction (1/10/2016 – 31/1/2017) and Box Culvert Extension (1/10/2016 – 31/1/2017). *Ref: 0212330_Impact AQM graphs_ January 2017_REV a.xlsx*

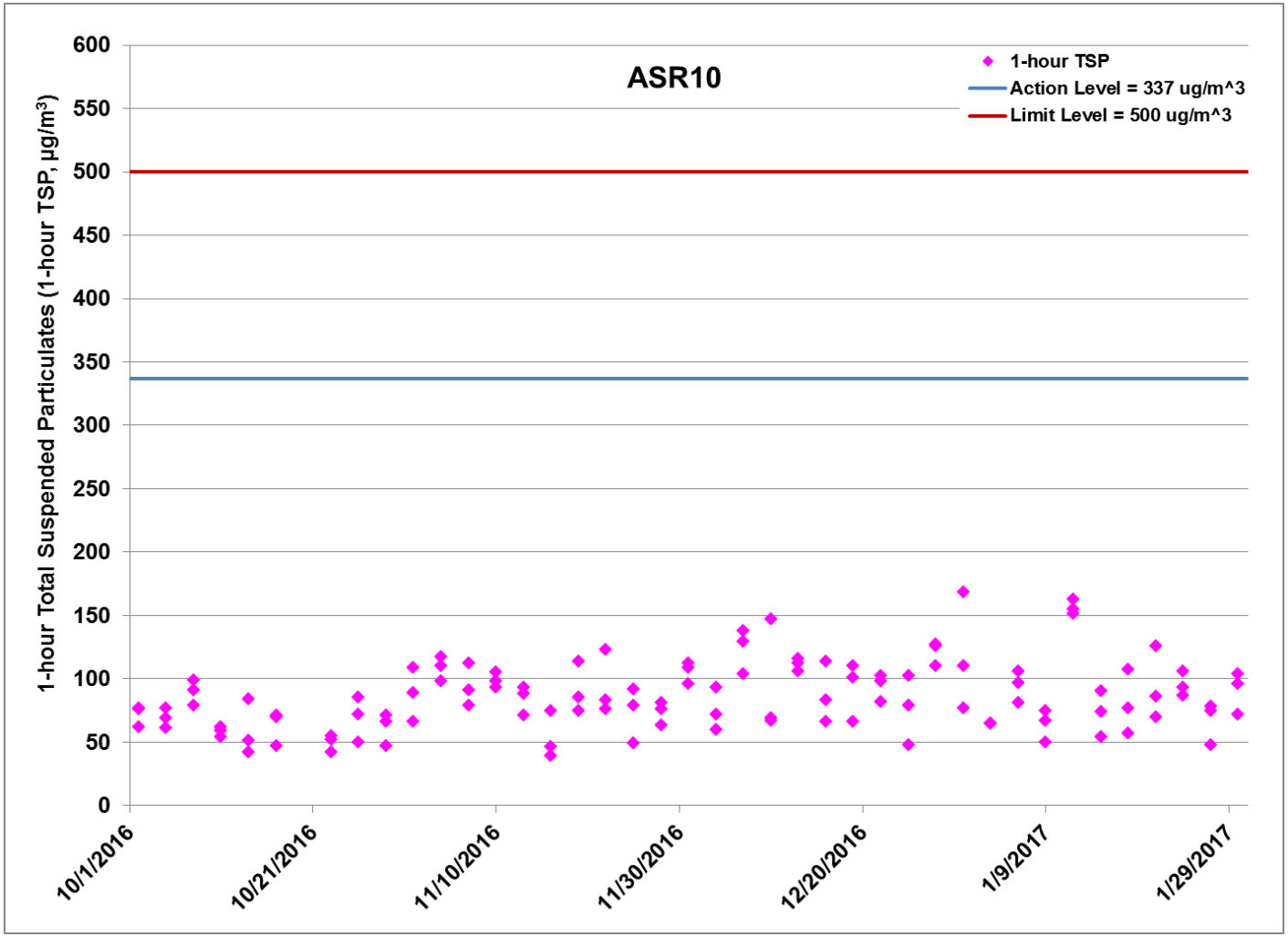


Figure G.5 Impact Monitoring – 1-hour Total Suspended Particulates (µg/m³) at ASR10 between 1 October 2016 and 31 January 2017 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Jet Grouting, CSM Ground Treatment and Diaphragm Wall Construction (1/10/2016 – 31/1/2017) and Box Culvert Extension (1/10/2016 – 31/1/2017). *Ref: 0212330_Impact AQM graphs_ January 2017_REV a.xlsx*

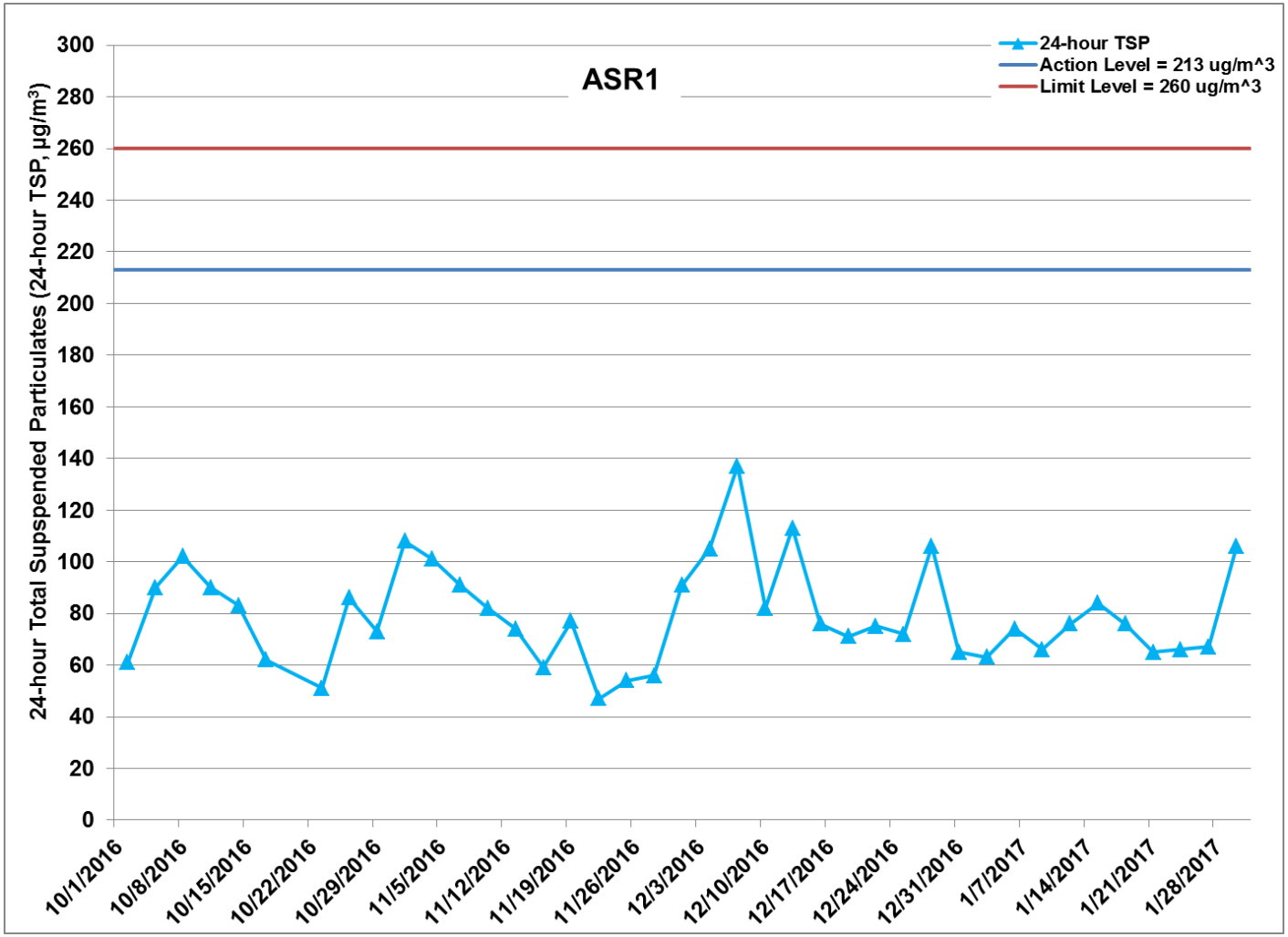


Figure G.6 Impact Monitoring – 24-hour Total Suspended Particulates (µg/m³) at ASR1 between 1 October 2016 and 31 January 2017 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Jet Grouting, CSM Ground Treatment and Diaphragm Wall Construction (1/10/2016 – 31/1/2017) and Box Culvert Extension (1/10/2016 – 31/1/2017). *Ref: 0212330_Impact AQM graphs_ January 2017_REV a.xlsx*

ERM

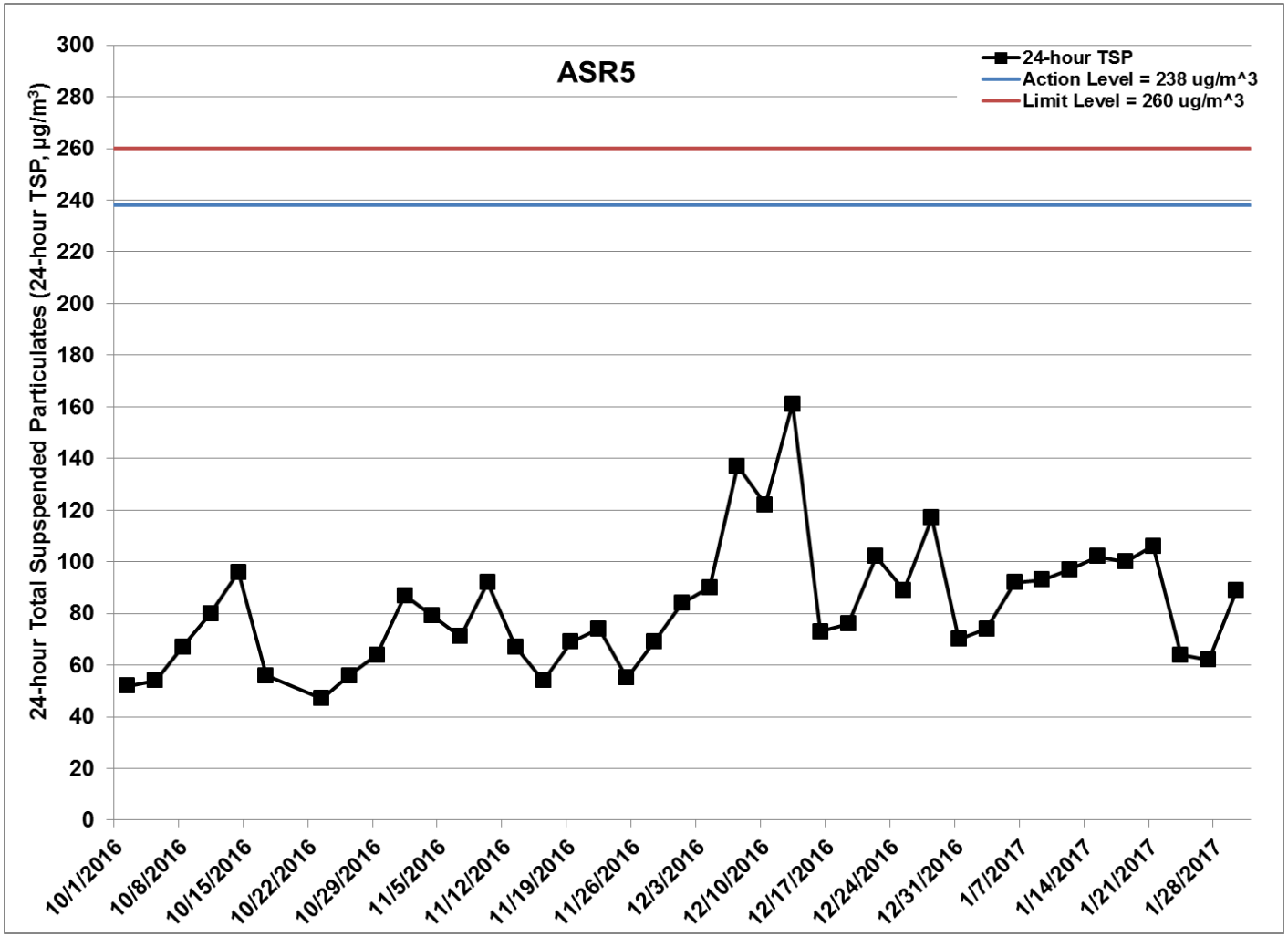


Figure G.7 Impact Monitoring – 24-hour Total Suspended Particulates (µg/m³) at ASR5 between 1 October 2016 and 31 January 2017 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Jet Grouting, CSM Ground Treatment and Diaphragm Wall Construction (1/10/2016 – 31/1/2017) and Box Culvert Extension (1/10/2016 – 31/1/2017). *Ref: 0212330_Impact AQM graphs_ January 2017_REV a.xlsx*

ERM

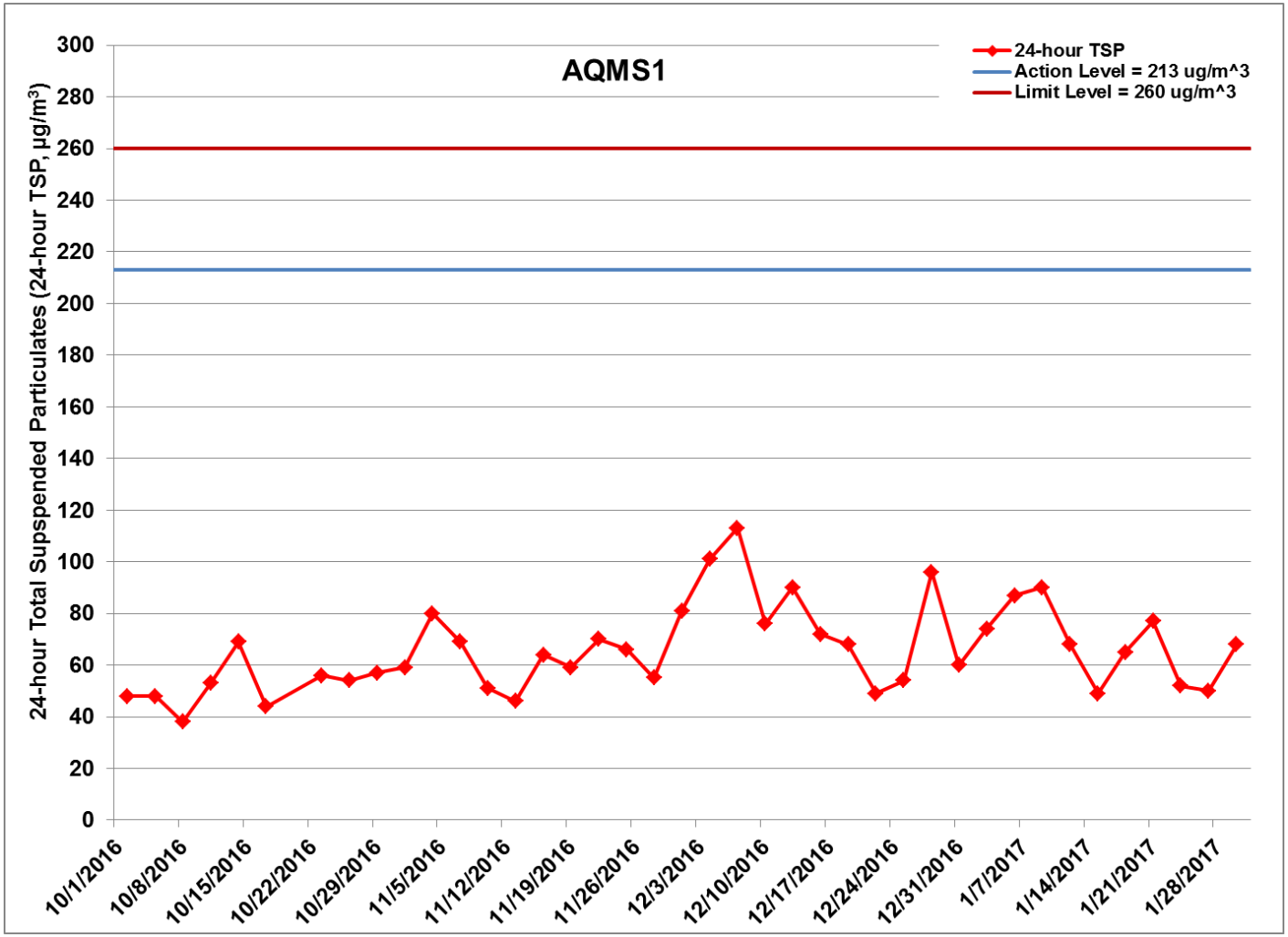


Figure G.8 Impact Monitoring – 24-hour Total Suspended Particulates (µg/m³) at AQMS1 between 1 October 2016 and 31 January 2017 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Jet Grouting, CSM Ground Treatment and Diaphragm Wall Construction (1/10/2016 – 31/1/2017) and Box Culvert Extension (1/10/2016 – 31/1/2017). *Ref: 0212330_Impact AQM graphs_ January 2017_REV a.xlsx*

ERM

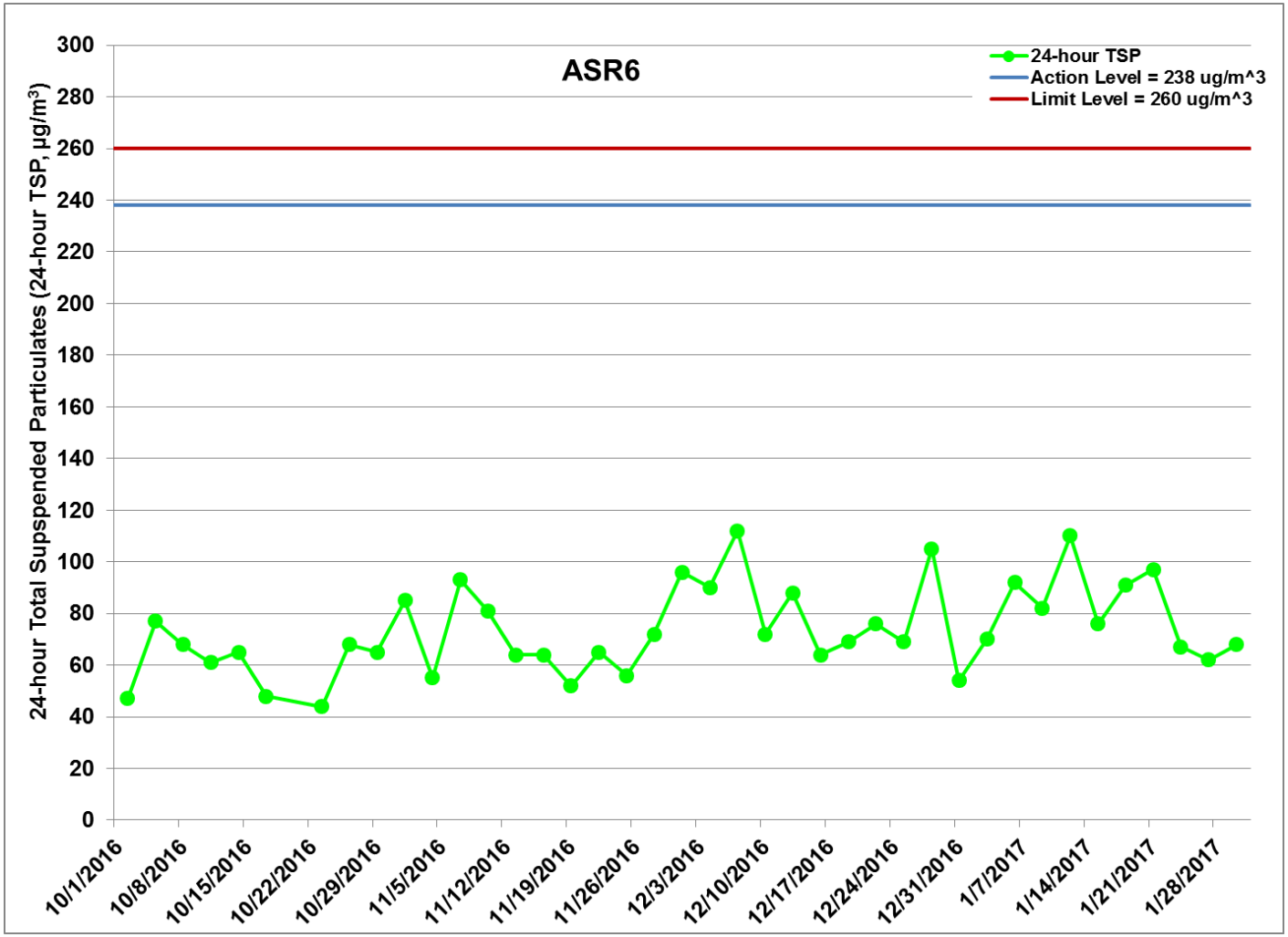


Figure G.9 Impact Monitoring – 24-hour Total Suspended Particulates (µg/m³) at ASR6 between 1 October 2016 and 31 January 2017 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Jet Grouting, CSM Ground Treatment and Diaphragm Wall Construction (1/10/2016 – 31/1/2017) and Box Culvert Extension (1/10/2016 – 31/1/2017). *Ref: 0212330_Impact AQM graphs_ January 2017_REV a.xlsx*

ERM

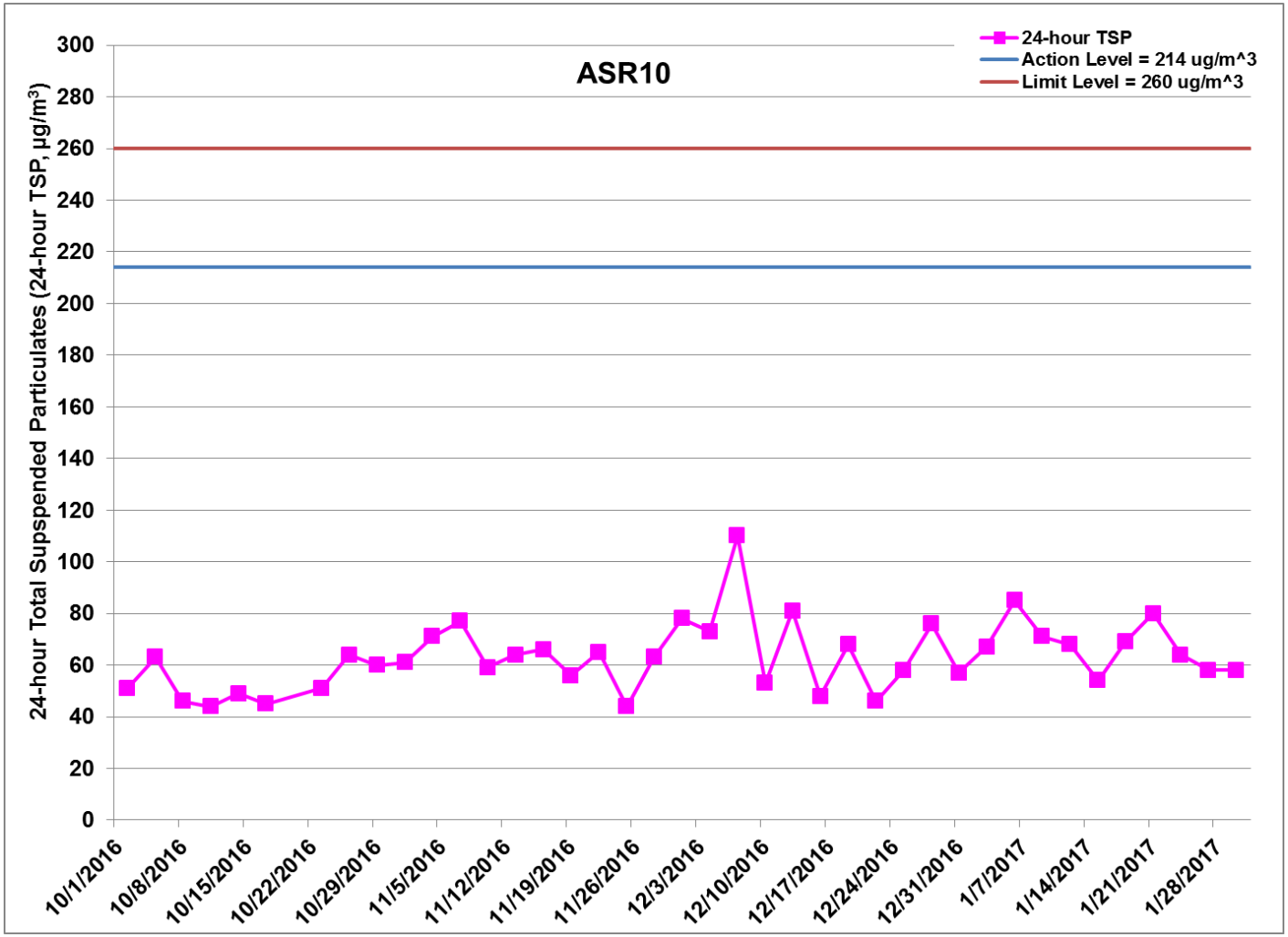


Figure G.10 Impact Monitoring – 24-hour Total Suspended Particulates (µg/m³) at ASR10 between 1 October 2016 and 31 January 2017 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Jet Grouting, CSM Ground Treatment and Diaphragm Wall Construction (1/10/2016 – 31/1/2017) and Box Culvert Extension (1/10/2016 – 31/1/2017). *Ref: 0212330_Impact AQM graphs_ January 2017_REV a.xlsx*

ERM

Project	Works	Date	Station	Weather	Start time	Parameters	Results	units
TMCLKL	HY/2012/08	2017-01-03	AQMS1	Sunny	13:17	1-hour TSP	134	ug/m3
TMCLKL	HY/2012/08	2017-01-03	AQMS1	Sunny	14:19	1-hour TSP	108	ug/m3
TMCLKL	HY/2012/08	2017-01-03	AQMS1	Sunny	15:21	1-hour TSP	100	ug/m3
TMCLKL	HY/2012/08	2017-01-03	ASR1	Sunny	13:06	1-hour TSP	135	ug/m3
TMCLKL	HY/2012/08	2017-01-03	ASR1	Sunny	14:08	1-hour TSP	165	ug/m3
TMCLKL	HY/2012/08	2017-01-03	ASR1	Sunny	15:10	1-hour TSP	158	ug/m3
TMCLKL	HY/2012/08	2017-01-03	ASR10	Sunny	12:33	1-hour TSP	65	ug/m3
TMCLKL	HY/2012/08	2017-01-03	ASR10	Sunny	13:35	1-hour TSP	65	ug/m3
TMCLKL	HY/2012/08	2017-01-03	ASR10	Sunny	14:37	1-hour TSP	65	ug/m3
TMCLKL	HY/2012/08	2017-01-03	ASR5	Sunny	12:55	1-hour TSP	145	ug/m3
TMCLKL	HY/2012/08	2017-01-03	ASR5	Sunny	13:57	1-hour TSP	122	ug/m3
TMCLKL	HY/2012/08	2017-01-03	ASR5	Sunny	14:59	1-hour TSP	140	ug/m3
TMCLKL	HY/2012/08	2017-01-03	ASR6	Sunny	12:44	1-hour TSP	131	ug/m3
TMCLKL	HY/2012/08	2017-01-03	ASR6	Sunny	13:46	1-hour TSP	99	ug/m3
TMCLKL	HY/2012/08	2017-01-03	ASR6	Sunny	14:48	1-hour TSP	107	ug/m3
TMCLKL	HY/2012/08	2017-01-06	AQMS1	Sunny	09:55	1-hour TSP	96	ug/m3
TMCLKL	HY/2012/08	2017-01-06	AQMS1	Sunny	10:57	1-hour TSP	119	ug/m3
TMCLKL	HY/2012/08	2017-01-06	AQMS1	Sunny	11:59	1-hour TSP	196	ug/m3
TMCLKL	HY/2012/08	2017-01-06	ASR1	Sunny	09:44	1-hour TSP	99	ug/m3
TMCLKL	HY/2012/08	2017-01-06	ASR1	Sunny	10:46	1-hour TSP	88	ug/m3
TMCLKL	HY/2012/08	2017-01-06	ASR1	Sunny	11:48	1-hour TSP	152	ug/m3
TMCLKL	HY/2012/08	2017-01-06	ASR10	Sunny	09:12	1-hour TSP	106	ug/m3
TMCLKL	HY/2012/08	2017-01-06	ASR10	Sunny	10:14	1-hour TSP	97	ug/m3
TMCLKL	HY/2012/08	2017-01-06	ASR10	Sunny	11:16	1-hour TSP	81	ug/m3
TMCLKL	HY/2012/08	2017-01-06	ASR5	Sunny	09:33	1-hour TSP	154	ug/m3
TMCLKL	HY/2012/08	2017-01-06	ASR5	Sunny	10:35	1-hour TSP	163	ug/m3
TMCLKL	HY/2012/08	2017-01-06	ASR5	Sunny	11:37	1-hour TSP	128	ug/m3
TMCLKL	HY/2012/08	2017-01-06	ASR6	Sunny	09:22	1-hour TSP	133	ug/m3
TMCLKL	HY/2012/08	2017-01-06	ASR6	Sunny	10:24	1-hour TSP	131	ug/m3
TMCLKL	HY/2012/08	2017-01-06	ASR6	Sunny	11:26	1-hour TSP	162	ug/m3

Project	Works	Date	Station	Weather	Start time	Parameters	Results	units
TMCLKL	HY/2012/08	2017-01-09	AQMS1	Sunny	13:04	1-hour TSP	88	ug/m3
TMCLKL	HY/2012/08	2017-01-09	AQMS1	Sunny	14:06	1-hour TSP	126	ug/m3
TMCLKL	HY/2012/08	2017-01-09	AQMS1	Sunny	15:08	1-hour TSP	119	ug/m3
TMCLKL	HY/2012/08	2017-01-09	ASR1	Sunny	12:53	1-hour TSP	185	ug/m3
TMCLKL	HY/2012/08	2017-01-09	ASR1	Sunny	13:55	1-hour TSP	138	ug/m3
TMCLKL	HY/2012/08	2017-01-09	ASR1	Sunny	14:57	1-hour TSP	103	ug/m3
TMCLKL	HY/2012/08	2017-01-09	ASR10	Sunny	12:22	1-hour TSP	75	ug/m3
TMCLKL	HY/2012/08	2017-01-09	ASR10	Sunny	13:24	1-hour TSP	67	ug/m3
TMCLKL	HY/2012/08	2017-01-09	ASR10	Sunny	14:26	1-hour TSP	50	ug/m3
TMCLKL	HY/2012/08	2017-01-09	ASR5	Sunny	12:43	1-hour TSP	213	ug/m3
TMCLKL	HY/2012/08	2017-01-09	ASR5	Sunny	13:45	1-hour TSP	131	ug/m3
TMCLKL	HY/2012/08	2017-01-09	ASR5	Sunny	14:47	1-hour TSP	162	ug/m3
TMCLKL	HY/2012/08	2017-01-09	ASR6	Sunny	12:32	1-hour TSP	156	ug/m3
TMCLKL	HY/2012/08	2017-01-09	ASR6	Sunny	13:34	1-hour TSP	118	ug/m3
TMCLKL	HY/2012/08	2017-01-09	ASR6	Sunny	14:36	1-hour TSP	116	ug/m3
TMCLKL	HY/2012/08	2017-01-12	AQMS1	Cloudy	13:30	1-hour TSP	165	ug/m3
TMCLKL	HY/2012/08	2017-01-12	AQMS1	Cloudy	14:32	1-hour TSP	125	ug/m3
TMCLKL	HY/2012/08	2017-01-12	AQMS1	Cloudy	15:34	1-hour TSP	152	ug/m3
TMCLKL	HY/2012/08	2017-01-12	ASR1	Cloudy	13:19	1-hour TSP	263	ug/m3
TMCLKL	HY/2012/08	2017-01-12	ASR1	Cloudy	14:21	1-hour TSP	252	ug/m3
TMCLKL	HY/2012/08	2017-01-12	ASR1	Cloudy	15:23	1-hour TSP	153	ug/m3
TMCLKL	HY/2012/08	2017-01-12	ASR10	Cloudy	12:47	1-hour TSP	155	ug/m3
TMCLKL	HY/2012/08	2017-01-12	ASR10	Cloudy	13:49	1-hour TSP	151	ug/m3
TMCLKL	HY/2012/08	2017-01-12	ASR10	Cloudy	14:51	1-hour TSP	163	ug/m3
TMCLKL	HY/2012/08	2017-01-12	ASR5	Cloudy	13:08	1-hour TSP	294	ug/m3
TMCLKL	HY/2012/08	2017-01-12	ASR5	Cloudy	14:10	1-hour TSP	280	ug/m3
TMCLKL	HY/2012/08	2017-01-12	ASR5	Cloudy	15:12	1-hour TSP	237	ug/m3
TMCLKL	HY/2012/08	2017-01-12	ASR6	Cloudy	12:58	1-hour TSP	282	ug/m3
TMCLKL	HY/2012/08	2017-01-12	ASR6	Cloudy	14:00	1-hour TSP	262	ug/m3
TMCLKL	HY/2012/08	2017-01-12	ASR6	Cloudy	15:02	1-hour TSP	265	ug/m3

Project	Works	Date	Station	Weather	Start time	Parameters	Results	units
TMCLKL	HY/2012/08	2017-01-15	AQMS1	Cloudy	09:53	1-hour TSP	47	ug/m3
TMCLKL	HY/2012/08	2017-01-15	AQMS1	Cloudy	10:55	1-hour TSP	75	ug/m3
TMCLKL	HY/2012/08	2017-01-15	AQMS1	Cloudy	11:57	1-hour TSP	96	ug/m3
TMCLKL	HY/2012/08	2017-01-15	ASR1	Cloudy	09:42	1-hour TSP	162	ug/m3
TMCLKL	HY/2012/08	2017-01-15	ASR1	Cloudy	10:44	1-hour TSP	178	ug/m3
TMCLKL	HY/2012/08	2017-01-15	ASR1	Cloudy	11:46	1-hour TSP	142	ug/m3
TMCLKL	HY/2012/08	2017-01-15	ASR10	Cloudy	09:10	1-hour TSP	54	ug/m3
TMCLKL	HY/2012/08	2017-01-15	ASR10	Cloudy	10:12	1-hour TSP	90	ug/m3
TMCLKL	HY/2012/08	2017-01-15	ASR10	Cloudy	11:14	1-hour TSP	74	ug/m3
TMCLKL	HY/2012/08	2017-01-15	ASR5	Cloudy	09:31	1-hour TSP	235	ug/m3
TMCLKL	HY/2012/08	2017-01-15	ASR5	Cloudy	10:33	1-hour TSP	215	ug/m3
TMCLKL	HY/2012/08	2017-01-15	ASR5	Cloudy	11:35	1-hour TSP	205	ug/m3
TMCLKL	HY/2012/08	2017-01-15	ASR6	Cloudy	09:20	1-hour TSP	80	ug/m3
TMCLKL	HY/2012/08	2017-01-15	ASR6	Cloudy	10:22	1-hour TSP	60	ug/m3
TMCLKL	HY/2012/08	2017-01-15	ASR6	Cloudy	11:24	1-hour TSP	103	ug/m3
TMCLKL	HY/2012/08	2017-01-18	AQMS1	Cloudy	13:35	1-hour TSP	66	ug/m3
TMCLKL	HY/2012/08	2017-01-18	AQMS1	Cloudy	14:37	1-hour TSP	85	ug/m3
TMCLKL	HY/2012/08	2017-01-18	AQMS1	Cloudy	15:39	1-hour TSP	154	ug/m3
TMCLKL	HY/2012/08	2017-01-18	ASR1	Cloudy	13:25	1-hour TSP	63	ug/m3
TMCLKL	HY/2012/08	2017-01-18	ASR1	Cloudy	14:27	1-hour TSP	112	ug/m3
TMCLKL	HY/2012/08	2017-01-18	ASR1	Cloudy	15:29	1-hour TSP	97	ug/m3
TMCLKL	HY/2012/08	2017-01-18	ASR10	Cloudy	13:03	1-hour TSP	57	ug/m3
TMCLKL	HY/2012/08	2017-01-18	ASR10	Cloudy	14:05	1-hour TSP	107	ug/m3
TMCLKL	HY/2012/08	2017-01-18	ASR10	Cloudy	15:07	1-hour TSP	77	ug/m3
TMCLKL	HY/2012/08	2017-01-18	ASR5	Cloudy	13:24	1-hour TSP	205	ug/m3
TMCLKL	HY/2012/08	2017-01-18	ASR5	Cloudy	14:26	1-hour TSP	198	ug/m3
TMCLKL	HY/2012/08	2017-01-18	ASR5	Cloudy	15:28	1-hour TSP	130	ug/m3
TMCLKL	HY/2012/08	2017-01-18	ASR6	Cloudy	13:14	1-hour TSP	124	ug/m3
TMCLKL	HY/2012/08	2017-01-18	ASR6	Cloudy	14:16	1-hour TSP	226	ug/m3
TMCLKL	HY/2012/08	2017-01-18	ASR6	Cloudy	15:18	1-hour TSP	158	ug/m3

Project	Works	Date	Station	Weather	Start time	Parameters	Results	units
TMCLKL	HY/2012/08	2017-01-21	AQMS1	Sunny	09:37	1-hour TSP	154	ug/m3
TMCLKL	HY/2012/08	2017-01-21	AQMS1	Sunny	10:39	1-hour TSP	135	ug/m3
TMCLKL	HY/2012/08	2017-01-21	AQMS1	Sunny	11:41	1-hour TSP	97	ug/m3
TMCLKL	HY/2012/08	2017-01-21	ASR1	Sunny	09:27	1-hour TSP	61	ug/m3
TMCLKL	HY/2012/08	2017-01-21	ASR1	Sunny	10:29	1-hour TSP	80	ug/m3
TMCLKL	HY/2012/08	2017-01-21	ASR1	Sunny	11:31	1-hour TSP	86	ug/m3
TMCLKL	HY/2012/08	2017-01-21	ASR10	Sunny	08:55	1-hour TSP	86	ug/m3
TMCLKL	HY/2012/08	2017-01-21	ASR10	Sunny	09:57	1-hour TSP	126	ug/m3
TMCLKL	HY/2012/08	2017-01-21	ASR10	Sunny	10:59	1-hour TSP	70	ug/m3
TMCLKL	HY/2012/08	2017-01-21	ASR5	Sunny	09:16	1-hour TSP	186	ug/m3
TMCLKL	HY/2012/08	2017-01-21	ASR5	Sunny	10:18	1-hour TSP	181	ug/m3
TMCLKL	HY/2012/08	2017-01-21	ASR5	Sunny	11:20	1-hour TSP	194	ug/m3
TMCLKL	HY/2012/08	2017-01-21	ASR6	Sunny	09:05	1-hour TSP	227	ug/m3
TMCLKL	HY/2012/08	2017-01-21	ASR6	Sunny	10:07	1-hour TSP	281	ug/m3
TMCLKL	HY/2012/08	2017-01-21	ASR6	Sunny	11:09	1-hour TSP	163	ug/m3
TMCLKL	HY/2012/08	2017-01-24	AQMS1	Sunny	14:15	1-hour TSP	96	ug/m3
TMCLKL	HY/2012/08	2017-01-24	AQMS1	Sunny	15:17	1-hour TSP	130	ug/m3
TMCLKL	HY/2012/08	2017-01-24	AQMS1	Sunny	16:19	1-hour TSP	118	ug/m3
TMCLKL	HY/2012/08	2017-01-24	ASR1	Sunny	14:05	1-hour TSP	104	ug/m3
TMCLKL	HY/2012/08	2017-01-24	ASR1	Sunny	15:07	1-hour TSP	126	ug/m3
TMCLKL	HY/2012/08	2017-01-24	ASR1	Sunny	16:09	1-hour TSP	96	ug/m3
TMCLKL	HY/2012/08	2017-01-24	ASR10	Sunny	13:32	1-hour TSP	87	ug/m3
TMCLKL	HY/2012/08	2017-01-24	ASR10	Sunny	14:34	1-hour TSP	93	ug/m3
TMCLKL	HY/2012/08	2017-01-24	ASR10	Sunny	15:36	1-hour TSP	106	ug/m3
TMCLKL	HY/2012/08	2017-01-24	ASR5	Sunny	13:54	1-hour TSP	146	ug/m3
TMCLKL	HY/2012/08	2017-01-24	ASR5	Sunny	14:56	1-hour TSP	178	ug/m3
TMCLKL	HY/2012/08	2017-01-24	ASR5	Sunny	15:58	1-hour TSP	226	ug/m3
TMCLKL	HY/2012/08	2017-01-24	ASR6	Sunny	13:43	1-hour TSP	226	ug/m3
TMCLKL	HY/2012/08	2017-01-24	ASR6	Sunny	14:45	1-hour TSP	179	ug/m3
TMCLKL	HY/2012/08	2017-01-24	ASR6	Sunny	15:47	1-hour TSP	153	ug/m3

Project	Works	Date	Station	Weather	Start time	Parameters	Results	units
TMCLKL	HY/2012/08	2017-01-27	AQMS1	Sunny	14:14	1-hour TSP	93	ug/m3
TMCLKL	HY/2012/08	2017-01-27	AQMS1	Sunny	15:16	1-hour TSP	79	ug/m3
TMCLKL	HY/2012/08	2017-01-27	AQMS1	Sunny	16:18	1-hour TSP	75	ug/m3
TMCLKL	HY/2012/08	2017-01-27	ASR1	Sunny	14:03	1-hour TSP	50	ug/m3
TMCLKL	HY/2012/08	2017-01-27	ASR1	Sunny	15:05	1-hour TSP	85	ug/m3
TMCLKL	HY/2012/08	2017-01-27	ASR1	Sunny	16:07	1-hour TSP	103	ug/m3
TMCLKL	HY/2012/08	2017-01-27	ASR10	Sunny	13:30	1-hour TSP	78	ug/m3
TMCLKL	HY/2012/08	2017-01-27	ASR10	Sunny	14:32	1-hour TSP	48	ug/m3
TMCLKL	HY/2012/08	2017-01-27	ASR10	Sunny	15:34	1-hour TSP	75	ug/m3
TMCLKL	HY/2012/08	2017-01-27	ASR5	Sunny	13:52	1-hour TSP	122	ug/m3
TMCLKL	HY/2012/08	2017-01-27	ASR5	Sunny	14:54	1-hour TSP	98	ug/m3
TMCLKL	HY/2012/08	2017-01-27	ASR5	Sunny	15:56	1-hour TSP	86	ug/m3
TMCLKL	HY/2012/08	2017-01-27	ASR6	Sunny	13:40	1-hour TSP	105	ug/m3
TMCLKL	HY/2012/08	2017-01-27	ASR6	Sunny	14:42	1-hour TSP	100	ug/m3
TMCLKL	HY/2012/08	2017-01-27	ASR6	Sunny	15:44	1-hour TSP	99	ug/m3
TMCLKL	HY/2012/08	2017-01-30	AQMS1	Cloudy	09:33	1-hour TSP	99	ug/m3
TMCLKL	HY/2012/08	2017-01-30	AQMS1	Cloudy	10:35	1-hour TSP	132	ug/m3
TMCLKL	HY/2012/08	2017-01-30	AQMS1	Cloudy	11:37	1-hour TSP	129	ug/m3
TMCLKL	HY/2012/08	2017-01-30	ASR1	Cloudy	09:22	1-hour TSP	139	ug/m3
TMCLKL	HY/2012/08	2017-01-30	ASR1	Cloudy	10:24	1-hour TSP	177	ug/m3
TMCLKL	HY/2012/08	2017-01-30	ASR1	Cloudy	11:26	1-hour TSP	138	ug/m3
TMCLKL	HY/2012/08	2017-01-30	ASR10	Cloudy	08:50	1-hour TSP	104	ug/m3
TMCLKL	HY/2012/08	2017-01-30	ASR10	Cloudy	09:52	1-hour TSP	72	ug/m3
TMCLKL	HY/2012/08	2017-01-30	ASR10	Cloudy	10:54	1-hour TSP	96	ug/m3
TMCLKL	HY/2012/08	2017-01-30	ASR5	Cloudy	09:10	1-hour TSP	198	ug/m3
TMCLKL	HY/2012/08	2017-01-30	ASR5	Cloudy	10:12	1-hour TSP	189	ug/m3
TMCLKL	HY/2012/08	2017-01-30	ASR5	Cloudy	11:14	1-hour TSP	138	ug/m3
TMCLKL	HY/2012/08	2017-01-30	ASR6	Cloudy	09:00	1-hour TSP	174	ug/m3
TMCLKL	HY/2012/08	2017-01-30	ASR6	Cloudy	10:02	1-hour TSP	157	ug/m3
TMCLKL	HY/2012/08	2017-01-30	ASR6	Cloudy	11:04	1-hour TSP	178	ug/m3

Project	Works	Date	Station	Weather	Start time	Parameters	Results	units
TMCLKL	HY/2012/08	2017-01-03	AQMS1	Sunny	16:23	24-hour TSP	74	ug/m3
TMCLKL	HY/2012/08	2017-01-03	ASR1	Sunny	16:12	24-hour TSP	63	ug/m3
TMCLKL	HY/2012/08	2017-01-03	ASR10	Sunny	15:39	24-hour TSP	67	ug/m3
TMCLKL	HY/2012/08	2017-01-03	ASR5	Sunny	16:01	24-hour TSP	74	ug/m3
TMCLKL	HY/2012/08	2017-01-03	ASR6	Sunny	15:50	24-hour TSP	70	ug/m3
TMCLKL	HY/2012/08	2017-01-06	AQMS1	Sunny	13:01	24-hour TSP	87	ug/m3
TMCLKL	HY/2012/08	2017-01-06	ASR1	Sunny	12:50	24-hour TSP	74	ug/m3
TMCLKL	HY/2012/08	2017-01-06	ASR10	Sunny	12:18	24-hour TSP	85	ug/m3
TMCLKL	HY/2012/08	2017-01-06	ASR5	Sunny	12:39	24-hour TSP	92	ug/m3
TMCLKL	HY/2012/08	2017-01-06	ASR6	Sunny	12:28	24-hour TSP	92	ug/m3
TMCLKL	HY/2012/08	2017-01-09	AQMS1	Sunny	16:10	24-hour TSP	90	ug/m3
TMCLKL	HY/2012/08	2017-01-09	ASR1	Sunny	15:59	24-hour TSP	66	ug/m3
TMCLKL	HY/2012/08	2017-01-09	ASR10	Sunny	15:28	24-hour TSP	71	ug/m3
TMCLKL	HY/2012/08	2017-01-09	ASR5	Sunny	15:49	24-hour TSP	93	ug/m3
TMCLKL	HY/2012/08	2017-01-09	ASR6	Sunny	15:38	24-hour TSP	82	ug/m3
TMCLKL	HY/2012/08	2017-01-12	AQMS1	Cloudy	16:36	24-hour TSP	68	ug/m3
TMCLKL	HY/2012/08	2017-01-12	ASR1	Cloudy	16:25	24-hour TSP	76	ug/m3
TMCLKL	HY/2012/08	2017-01-12	ASR10	Cloudy	15:53	24-hour TSP	68	ug/m3
TMCLKL	HY/2012/08	2017-01-12	ASR5	Cloudy	16:14	24-hour TSP	97	ug/m3
TMCLKL	HY/2012/08	2017-01-12	ASR6	Cloudy	16:04	24-hour TSP	110	ug/m3
TMCLKL	HY/2012/08	2017-01-15	AQMS1	Cloudy	12:59	24-hour TSP	49	ug/m3
TMCLKL	HY/2012/08	2017-01-15	ASR1	Cloudy	12:48	24-hour TSP	84	ug/m3
TMCLKL	HY/2012/08	2017-01-15	ASR10	Cloudy	12:16	24-hour TSP	54	ug/m3
TMCLKL	HY/2012/08	2017-01-15	ASR5	Cloudy	12:37	24-hour TSP	102	ug/m3
TMCLKL	HY/2012/08	2017-01-15	ASR6	Cloudy	12:26	24-hour TSP	76	ug/m3
TMCLKL	HY/2012/08	2017-01-18	AQMS1	Cloudy	16:41	24-hour TSP	65	ug/m3
TMCLKL	HY/2012/08	2017-01-18	ASR1	Cloudy	16:31	24-hour TSP	76	ug/m3
TMCLKL	HY/2012/08	2017-01-18	ASR10	Cloudy	16:09	24-hour TSP	69	ug/m3
TMCLKL	HY/2012/08	2017-01-18	ASR5	Cloudy	16:30	24-hour TSP	100	ug/m3
TMCLKL	HY/2012/08	2017-01-18	ASR6	Cloudy	16:20	24-hour TSP	91	ug/m3

Project	Works	Date	Station	Weather	Start time	Parameters	Results	units
TMCLKL	HY/2012/08	2017-01-21	AQMS1	Sunny	12:43	24-hour TSP	77	ug/m3
TMCLKL	HY/2012/08	2017-01-21	ASR1	Sunny	12:33	24-hour TSP	65	ug/m3
TMCLKL	HY/2012/08	2017-01-21	ASR10	Sunny	12:01	24-hour TSP	80	ug/m3
TMCLKL	HY/2012/08	2017-01-21	ASR5	Sunny	12:22	24-hour TSP	106	ug/m3
TMCLKL	HY/2012/08	2017-01-21	ASR6	Sunny	12:11	24-hour TSP	97	ug/m3
TMCLKL	HY/2012/08	2017-01-24	AQMS1	Sunny	17:21	24-hour TSP	52	ug/m3
TMCLKL	HY/2012/08	2017-01-24	ASR1	Sunny	17:11	24-hour TSP	66	ug/m3
TMCLKL	HY/2012/08	2017-01-24	ASR10	Sunny	16:38	24-hour TSP	64	ug/m3
TMCLKL	HY/2012/08	2017-01-24	ASR5	Sunny	17:00	24-hour TSP	64	ug/m3
TMCLKL	HY/2012/08	2017-01-24	ASR6	Sunny	16:49	24-hour TSP	67	ug/m3
TMCLKL	HY/2012/08	2017-01-27	AQMS1	Sunny	17:20	24-hour TSP	50	ug/m3
TMCLKL	HY/2012/08	2017-01-27	ASR1	Sunny	17:09	24-hour TSP	67	ug/m3
TMCLKL	HY/2012/08	2017-01-27	ASR10	Sunny	16:36	24-hour TSP	58	ug/m3
TMCLKL	HY/2012/08	2017-01-27	ASR5	Sunny	16:58	24-hour TSP	62	ug/m3
TMCLKL	HY/2012/08	2017-01-27	ASR6	Sunny	16:46	24-hour TSP	62	ug/m3
TMCLKL	HY/2012/08	2017-01-30	AQMS1	Cloudy	12:39	24-hour TSP	68	ug/m3
TMCLKL	HY/2012/08	2017-01-30	ASR1	Cloudy	12:28	24-hour TSP	106	ug/m3
TMCLKL	HY/2012/08	2017-01-30	ASR10	Cloudy	11:56	24-hour TSP	58	ug/m3
TMCLKL	HY/2012/08	2017-01-30	ASR5	Cloudy	12:16	24-hour TSP	89	ug/m3
TMCLKL	HY/2012/08	2017-01-30	ASR6	Cloudy	12:06	24-hour TSP	68	ug/m3

Appendix H

Meteorological Data

Meteorological Data for Impact Monitoring in the reporting period			
Date (yy-mm-dd)	**Time (24hrs)**	**Average of Wind Speed (m/s)**	**Average of Wind Direction(degree)**
17/01/03	0:00	0.4	341
17/01/03	1:00	0.3	330
17/01/03	2:00	0.2	320
17/01/03	3:00	0.5	351
17/01/03	4:00	0.5	336
17/01/03	5:00	0.6	320
17/01/03	6:00	0.4	315
17/01/03	7:00	0.5	156
17/01/03	8:00	1.3	75
17/01/03	9:00	1.8	69
17/01/03	10:00	3.1	71
17/01/03	11:00	3.6	66
17/01/03	12:00	4	115
17/01/03	13:00	3.6	131
17/01/03	14:00	2.2	126
17/01/03	15:00	2.7	13
17/01/03	16:00	1.3	140
17/01/03	17:00	1.8	98
17/01/03	18:00	2.7	111
17/01/03	19:00	2.7	105
17/01/03	20:00	2.7	96
17/01/03	21:00	3.1	87
17/01/03	22:00	3.1	82
17/01/03	23:00	3.1	93
17/01/04	0:00	3.1	91
17/01/04	1:00	3.1	99
17/01/04	2:00	3.6	100
17/01/04	3:00	3.6	85
17/01/04	4:00	2.7	96
17/01/04	5:00	2.2	104
17/01/04	6:00	2.7	83
17/01/04	7:00	2.2	94
17/01/04	8:00	3.1	100
17/01/04	9:00	4	102
17/01/04	10:00	4.5	119
17/01/04	11:00	3.6	123
17/01/04	12:00	2.7	138
17/01/04	13:00	3.1	141
17/01/04	14:00	2.7	140
17/01/04	15:00	3.1	152
17/01/04	16:00	1.3	97
17/01/04	17:00	0.9	113
17/01/04	18:00	0.9	88
17/01/04	19:00	0.9	104
17/01/04	20:00	0.4	5
17/01/04	21:00	0	-
17/01/04	22:00	0.4	3
17/01/04	23:00	0.4	6
17/01/06	0:00	0	-
17/01/06	1:00	0.4	69
17/01/06	2:00	0.4	80
17/01/06	3:00	0.4	65
17/01/06	4:00	0.4	46
17/01/06	5:00	0.4	310
17/01/06	6:00	0.9	355

Meteorological Data for Impact Monitoring in the reporting period			
Date (yy-mm-dd)	**Time (24hrs)**	**Average of Wind Speed (m/s)**	**Average of Wind Direction(degree)**
17/01/06	7:00	0.4	351
17/01/06	8:00	0	-
17/01/06	9:00	0.4	142
17/01/06	10:00	0.4	171
17/01/06	11:00	0.9	223
17/01/06	12:00	1.3	254
17/01/06	13:00	0.9	204
17/01/06	14:00	0.9	215
17/01/06	15:00	1.3	212
17/01/06	16:00	0.4	207
17/01/06	17:00	0.9	174
17/01/06	18:00	1.3	96
17/01/06	19:00	1.8	85
17/01/06	20:00	1.8	94
17/01/06	21:00	3.1	89
17/01/06	22:00	1.8	82
17/01/06	23:00	2.2	93
17/01/07	0:00	3.1	104
17/01/07	1:00	3.1	99
17/01/07	2:00	3.6	103
17/01/07	3:00	3.6	115
17/01/07	4:00	3.6	107
17/01/07	5:00	3.6	98
17/01/07	6:00	2.7	112
17/01/07	7:00	2.7	84
17/01/07	8:00	2.2	93
17/01/07	9:00	2.7	106
17/01/07	10:00	2.7	115
17/01/07	11:00	2.2	124
17/01/07	12:00	2.2	117
17/01/07	13:00	2.2	94
17/01/07	14:00	1.3	105
17/01/07	15:00	2.2	223
17/01/07	16:00	0.9	215
17/01/07	17:00	0.4	176
17/01/07	18:00	0.4	165
17/01/07	19:00	0	-
17/01/07	20:00	0.4	93
17/01/07	21:00	0.4	71
17/01/07	22:00	0.4	19
17/01/07	23:00	0	-
17/01/09	0:00	1.3	13
17/01/09	1:00	1.8	51
17/01/09	2:00	1.3	42
17/01/09	3:00	0.9	349
17/01/09	4:00	0	-
17/01/09	5:00	1.8	49
17/01/09	6:00	3.1	51
17/01/09	7:00	3.1	44
17/01/09	8:00	2.2	43
17/01/09	9:00	1.3	50
17/01/09	10:00	0.9	94
17/01/09	11:00	2.7	123
17/01/09	12:00	1.3	115
17/01/09	13:00	1.3	103

Meteorological Data for Impact Monitoring in the reporting period			
Date (yy-mm-dd)	**Time (24hrs)**	**Average of Wind Speed (m/s)**	**Average of Wind Direction(degree)**
17/01/09	14:00	1.8	114
17/01/09	15:00	1.3	128
17/01/09	16:00	0.9	223
17/01/09	17:00	0.9	214
17/01/09	18:00	0.9	231
17/01/09	19:00	1.3	209
17/01/09	20:00	1.8	85
17/01/09	21:00	1.8	93
17/01/09	22:00	1.8	100
17/01/09	23:00	2.2	115
17/01/10	0:00	2.2	107
17/01/10	1:00	2.2	92
17/01/10	2:00	1.8	84
17/01/10	3:00	1.8	83
17/01/10	4:00	3.6	91
17/01/10	5:00	2.2	105
17/01/10	6:00	2.2	102
17/01/10	7:00	4	87
17/01/10	8:00	2.7	95
17/01/10	9:00	3.1	93
17/01/10	10:00	4	105
17/01/10	11:00	4.5	112
17/01/10	12:00	4	107
17/01/10	13:00	3.6	109
17/01/10	14:00	3.6	117
17/01/10	15:00	3.6	104
17/01/10	16:00	3.1	113
17/01/10	17:00	3.6	116
17/01/10	18:00	3.1	112
17/01/10	19:00	3.1	115
17/01/10	20:00	2.7	103
17/01/10	21:00	2.2	100
17/01/10	22:00	1.8	84
17/01/10	23:00	2.2	83
17/01/12	0:00	0.9	96
17/01/12	1:00	0.9	103
17/01/12	2:00	0.4	21
17/01/12	3:00	1.3	46
17/01/12	4:00	0.4	51
17/01/12	5:00	1.3	49
17/01/12	6:00	1.8	52
17/01/12	7:00	0.9	11
17/01/12	8:00	1.3	93
17/01/12	9:00	0.9	100
17/01/12	10:00	1.3	349
17/01/12	11:00	1.3	55
17/01/12	12:00	1.3	16
17/01/12	13:00	1.8	344
17/01/12	14:00	1.8	358
17/01/12	15:00	1.8	344
17/01/12	16:00	2.2	351
17/01/12	17:00	2.7	346
17/01/12	18:00	2.2	339
17/01/12	19:00	2.7	357
17/01/12	20:00	1.3	302

Meteorological Data for Impact Monitoring in the reporting period			
Date (yy-mm-dd)	**Time (24hrs)**	**Average of Wind Speed (m/s)**	**Average of Wind Direction(degree)**
17/01/12	21:00	1.3	352
17/01/12	22:00	2.7	16
17/01/12	23:00	1.8	49
17/01/13	0:00	0.4	225
17/01/13	1:00	1.3	52
17/01/13	2:00	0.9	44
17/01/13	3:00	0.9	351
17/01/13	4:00	1.3	301
17/01/13	5:00	1.3	294
17/01/13	6:00	1.3	6
17/01/13	7:00	1.3	12
17/01/13	8:00	1.8	50
17/01/13	9:00	1.8	44
17/01/13	10:00	1.8	46
17/01/13	11:00	0.9	352
17/01/13	12:00	0.9	12
17/01/13	13:00	1.3	49
17/01/13	14:00	0.9	96
17/01/13	15:00	0.9	350
17/01/13	16:00	0.4	2
17/01/13	17:00	0.9	42
17/01/13	18:00	0.9	352
17/01/13	19:00	1.3	53
17/01/13	20:00	1.3	12
17/01/13	21:00	1.3	11
17/01/13	22:00	1.8	44
17/01/13	23:00	1.8	52
17/01/15	0:00	1.3	41
17/01/15	1:00	0.9	43
17/01/15	2:00	1.8	50
17/01/15	3:00	2.2	48
17/01/15	4:00	2.2	60
17/01/15	5:00	1.8	12
17/01/15	6:00	1.3	14
17/01/15	7:00	0.9	10
17/01/15	8:00	1.8	62
17/01/15	9:00	1.8	55
17/01/15	10:00	1.8	41
17/01/15	11:00	1.8	44
17/01/15	12:00	2.2	352
17/01/15	13:00	2.2	16
17/01/15	14:00	1.8	55
17/01/15	15:00	2.2	22
17/01/15	16:00	2.7	351
17/01/15	17:00	1.8	10
17/01/15	18:00	0.9	9
17/01/15	19:00	1.3	55
17/01/15	20:00	0.9	13
17/01/15	21:00	1.3	55
17/01/15	22:00	1.8	50
17/01/15	23:00	2.2	41
17/01/16	0:00	2.2	38
17/01/16	1:00	2.7	57
17/01/16	2:00	1.8	23
17/01/16	3:00	2.7	52

Meteorological Data for Impact Monitoring in the reporting period			
Date (yy-mm-dd)	**Time (24hrs)**	**Average of Wind Speed (m/s)**	**Average of Wind Direction(degree)**
17/01/16	4:00	3.1	50
17/01/16	5:00	2.2	43
17/01/16	6:00	1.8	55
17/01/16	7:00	0.4	12
17/01/16	8:00	1.3	61
17/01/16	9:00	2.2	44
17/01/16	10:00	1.8	40
17/01/16	11:00	1.3	38
17/01/16	12:00	1.3	51
17/01/16	13:00	1.3	20
17/01/16	14:00	1.8	55
17/01/16	15:00	1.3	98
17/01/16	16:00	1.3	357
17/01/16	17:00	1.3	62
17/01/16	18:00	2.2	94
17/01/16	19:00	2.7	72
17/01/16	20:00	2.2	100
17/01/16	21:00	1.8	85
17/01/16	22:00	2.7	93
17/01/16	23:00	3.1	85
17/01/18	0:00	1.3	101
17/01/18	1:00	2.2	85
17/01/18	2:00	1.8	88
17/01/18	3:00	0	-
17/01/18	4:00	0.9	53
17/01/18	5:00	0.9	93
17/01/18	6:00	0	-
17/01/18	7:00	0.4	49
17/01/18	8:00	0.4	100
17/01/18	9:00	0.9	102
17/01/18	10:00	0.9	105
17/01/18	11:00	1.3	107
17/01/18	12:00	1.3	62
17/01/18	13:00	0.9	54
17/01/18	14:00	0.9	352
17/01/18	15:00	0.4	181
17/01/18	16:00	0.4	179
17/01/18	17:00	0	-
17/01/18	18:00	0.4	169
17/01/18	19:00	0.9	93
17/01/18	20:00	0	-
17/01/18	21:00	0.4	56
17/01/18	22:00	0.9	62
17/01/18	23:00	0.4	5
17/01/19	0:00	0	-
17/01/19	1:00	0.4	13
17/01/19	2:00	0.4	15
17/01/19	3:00	0	-
17/01/19	4:00	0.4	20
17/01/19	5:00	0	-
17/01/19	6:00	0	-
17/01/19	7:00	0	-
17/01/19	8:00	0.4	99
17/01/19	9:00	0.4	221
17/01/19	10:00	0.9	132
17/01/19	11:00	0.9	138

Meteorological Data for Impact Monitoring in the reporting period			
Date (yy-mm-dd)	**Time (24hrs)**	**Average of Wind Speed (m/s)**	**Average of Wind Direction(degree)**
17/01/19	12:00	0.9	225
17/01/19	13:00	0.9	231
17/01/19	14:00	0.9	258
17/01/19	15:00	1.3	304
17/01/19	16:00	1.3	312
17/01/19	17:00	1.3	309
17/01/19	18:00	1.8	311
17/01/19	19:00	2.2	321
17/01/19	20:00	2.2	294
17/01/19	21:00	2.2	289
17/01/19	22:00	1.8	295
17/01/19	23:00	1.3	288
17/01/21	0:00	3.6	47
17/01/21	1:00	3.6	52
17/01/21	2:00	4	14
17/01/21	3:00	2.7	52
17/01/21	4:00	2.2	13
17/01/21	5:00	3.1	63
17/01/21	6:00	2.7	11
17/01/21	7:00	2.7	19
17/01/21	8:00	2.2	21
17/01/21	9:00	1.8	50
17/01/21	10:00	1.8	47
17/01/21	11:00	1.3	223
17/01/21	12:00	2.7	287
17/01/21	13:00	2.2	274
17/01/21	14:00	1.8	293
17/01/21	15:00	2.2	288
17/01/21	16:00	2.2	304
17/01/21	17:00	1.8	316
17/01/21	18:00	1.3	348
17/01/21	19:00	1.3	305
17/01/21	20:00	1.3	348
17/01/21	21:00	0.4	326
17/01/21	22:00	0.9	315
17/01/21	23:00	0.4	349
17/01/22	0:00	0.9	12
17/01/22	1:00	1.3	55
17/01/22	2:00	3.1	10
17/01/22	3:00	2.7	26
17/01/22	4:00	1.8	24
17/01/22	5:00	2.7	13
17/01/22	6:00	3.1	63
17/01/22	7:00	2.7	52
17/01/22	8:00	2.7	17
17/01/22	9:00	2.2	50
17/01/22	10:00	2.2	13
17/01/22	11:00	1.8	95
17/01/22	12:00	1.3	223
17/01/22	13:00	1.8	229
17/01/22	14:00	1.3	231
17/01/22	15:00	2.2	239
17/01/22	16:00	1.8	228
17/01/22	17:00	1.3	284
17/01/22	18:00	0.9	292
17/01/22	19:00	1.3	350
17/01/22	20:00	0.9	347

Meteorological Data for Impact Monitoring in the reporting period			
Date (yy-mm-dd)	**Time (24hrs)**	**Average of Wind Speed (m/s)**	**Average of Wind Direction(degree)**
17/01/22	21:00	0.9	11
17/01/22	22:00	0.9	47
17/01/22	23:00	0.4	5
17/01/24	0:00	3.6	100
17/01/24	1:00	3.1	102
17/01/24	2:00	3.1	104
17/01/24	3:00	2.2	107
17/01/24	4:00	1.3	74
17/01/24	5:00	0.9	78
17/01/24	6:00	0.9	66
17/01/24	7:00	1.3	82
17/01/24	8:00	2.2	84
17/01/24	9:00	2.2	93
17/01/24	10:00	2.2	124
17/01/24	11:00	1.3	115
17/01/24	12:00	0.9	231
17/01/24	13:00	1.8	120
17/01/24	14:00	2.7	109
17/01/24	15:00	3.1	111
17/01/24	16:00	2.7	105
17/01/24	17:00	3.1	122
17/01/24	18:00	3.1	115
17/01/24	19:00	4	94
17/01/24	20:00	3.6	99
17/01/24	21:00	4	102
17/01/24	22:00	3.6	93
17/01/24	23:00	4.9	87
17/01/25	0:00	2.7	91
17/01/25	1:00	1.3	88
17/01/25	2:00	1.3	113
17/01/25	3:00	1.8	94
17/01/25	4:00	1.3	95
17/01/25	5:00	1.8	104
17/01/25	6:00	0.9	109
17/01/25	7:00	0	-
17/01/25	8:00	0.4	202
17/01/25	9:00	1.3	224
17/01/25	10:00	1.3	225
17/01/25	11:00	1.8	204
17/01/25	12:00	1.8	87
17/01/25	13:00	1.3	215
17/01/25	14:00	2.7	211
17/01/25	15:00	1.8	226
17/01/25	16:00	1.8	229
17/01/25	17:00	2.2	105
17/01/25	18:00	3.1	84
17/01/25	19:00	3.6	92
17/01/25	20:00	3.6	100
17/01/25	21:00	2.7	107
17/01/25	22:00	2.2	75
17/01/25	23:00	2.2	91
17/01/27	0:00	2.2	74
17/01/27	1:00	1.3	69
17/01/27	2:00	1.3	72
17/01/27	3:00	1.3	82
17/01/27	4:00	1.3	55
17/01/27	5:00	0.4	41

Meteorological Data for Impact Monitoring in the reporting period			
Date (yy-mm-dd)	**Time (24hrs)**	**Average of Wind Speed (m/s)**	**Average of Wind Direction(degree)**
17/01/27	6:00	0.4	349
17/01/27	7:00	1.3	351
17/01/27	8:00	1.3	20
17/01/27	9:00	1.8	122
17/01/27	10:00	2.2	16
17/01/27	11:00	1.8	223
17/01/27	12:00	1.3	241
17/01/27	13:00	1.3	268
17/01/27	14:00	1.3	254
17/01/27	15:00	1.3	261
17/01/27	16:00	1.3	231
17/01/27	17:00	0.4	239
17/01/27	18:00	1.8	82
17/01/27	19:00	0.4	82
17/01/27	20:00	0.9	74
17/01/27	21:00	1.3	53
17/01/27	22:00	1.3	66
17/01/27	23:00	0.9	58
17/01/28	0:00	0.9	61
17/01/28	1:00	1.3	92
17/01/28	2:00	1.8	101
17/01/28	3:00	1.8	96
17/01/28	4:00	1.8	88
17/01/28	5:00	3.1	99
17/01/28	6:00	4	100
17/01/28	7:00	2.7	106
17/01/28	8:00	2.7	93
17/01/28	9:00	3.1	103
17/01/28	10:00	2.7	115
17/01/28	11:00	2.2	108
17/01/28	12:00	2.2	124
17/01/28	13:00	2.2	93
17/01/28	14:00	3.1	113
17/01/28	15:00	2.7	108
17/01/28	16:00	1.8	102
17/01/28	17:00	1.3	85
17/01/28	18:00	0.9	96
17/01/28	19:00	0.4	68
17/01/28	20:00	1.3	93
17/01/28	21:00	1.3	104
17/01/28	22:00	0.9	95
17/01/28	23:00	2.2	87

Appendix I

Impact Water Quality Monitoring Results

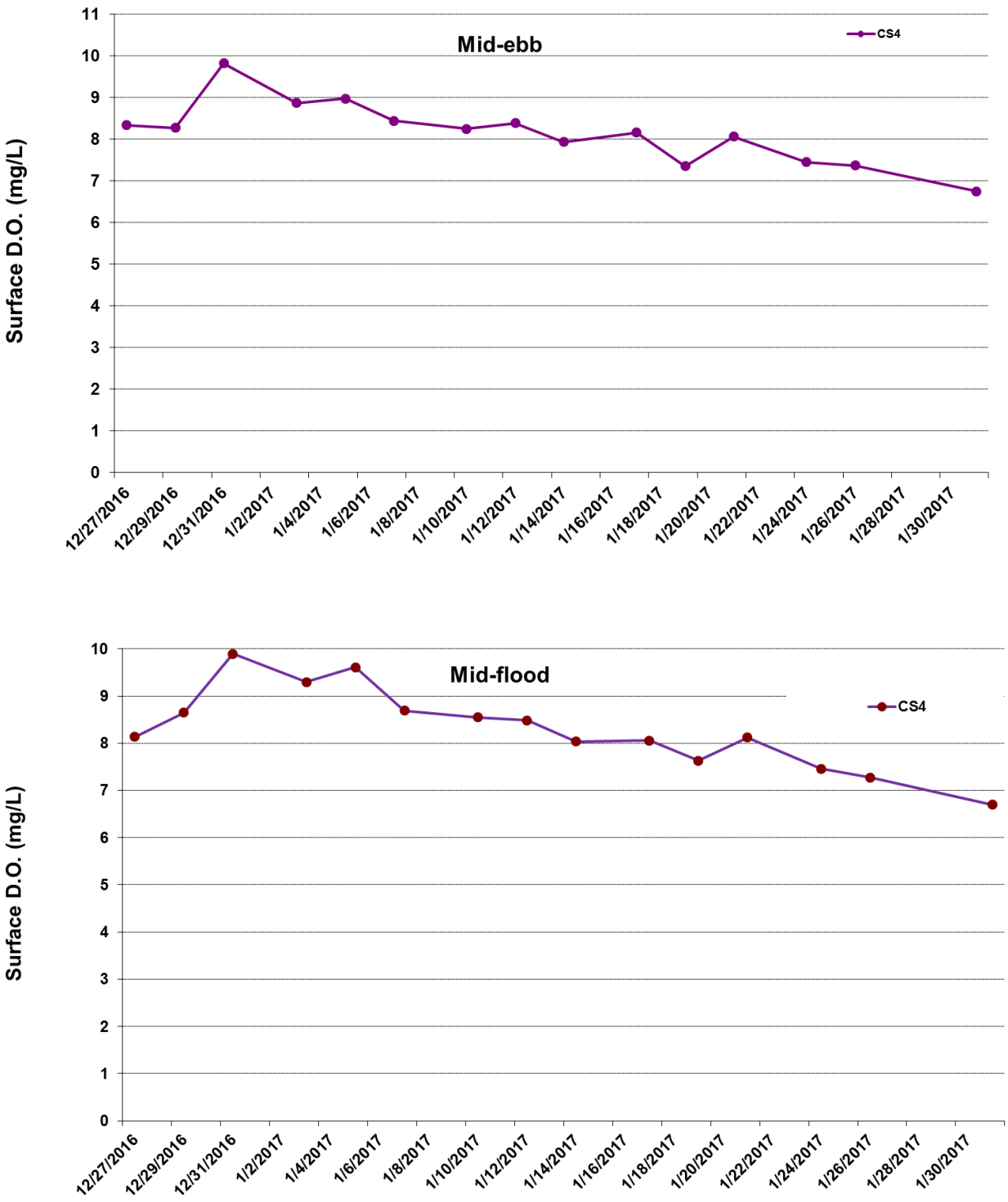


Figure I1 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters between 27 December 2016 and 31 January 2017 at CS4. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls

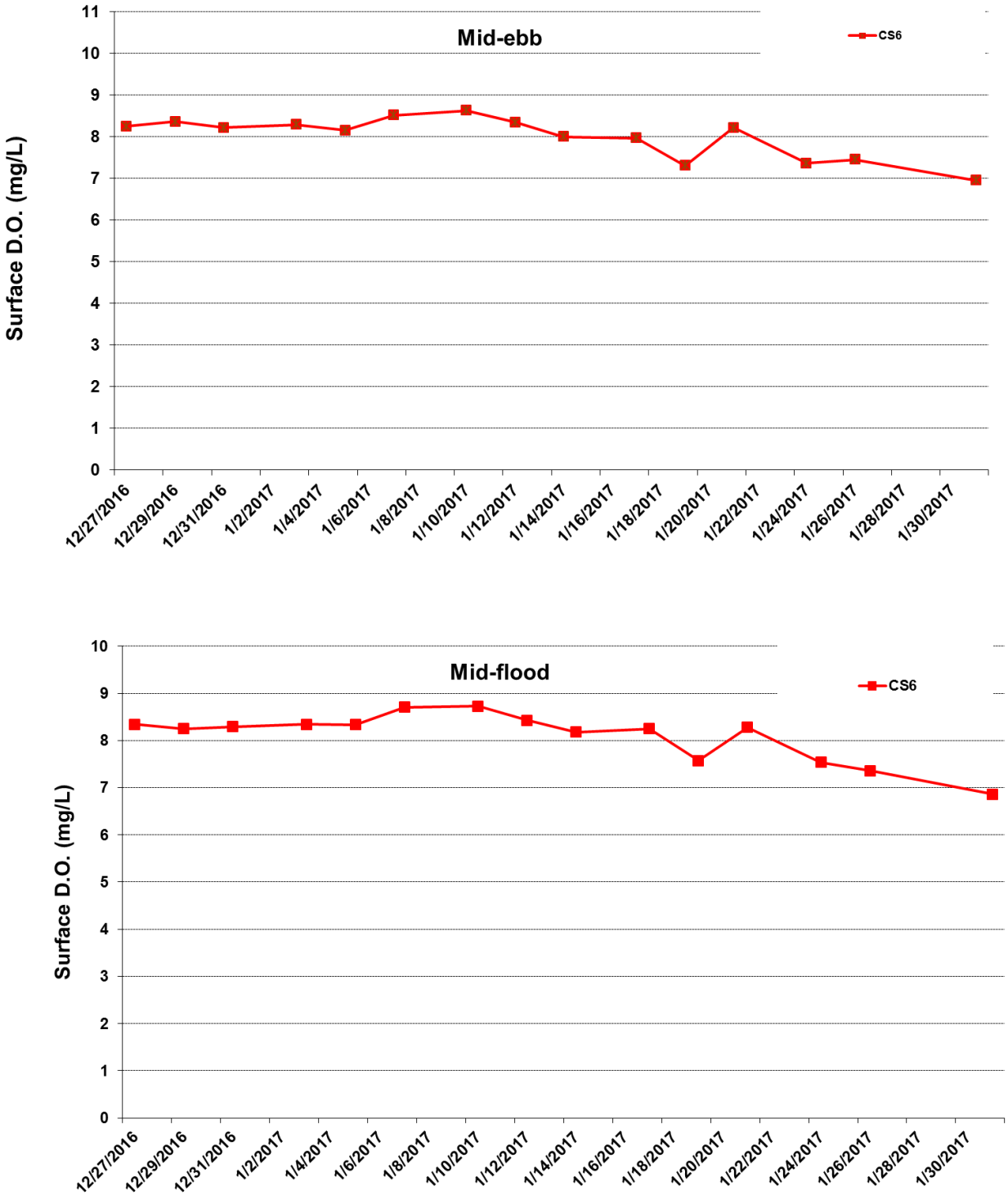


Figure I2 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters between 27 December 2016 and 31 January 2017 at CS6. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls

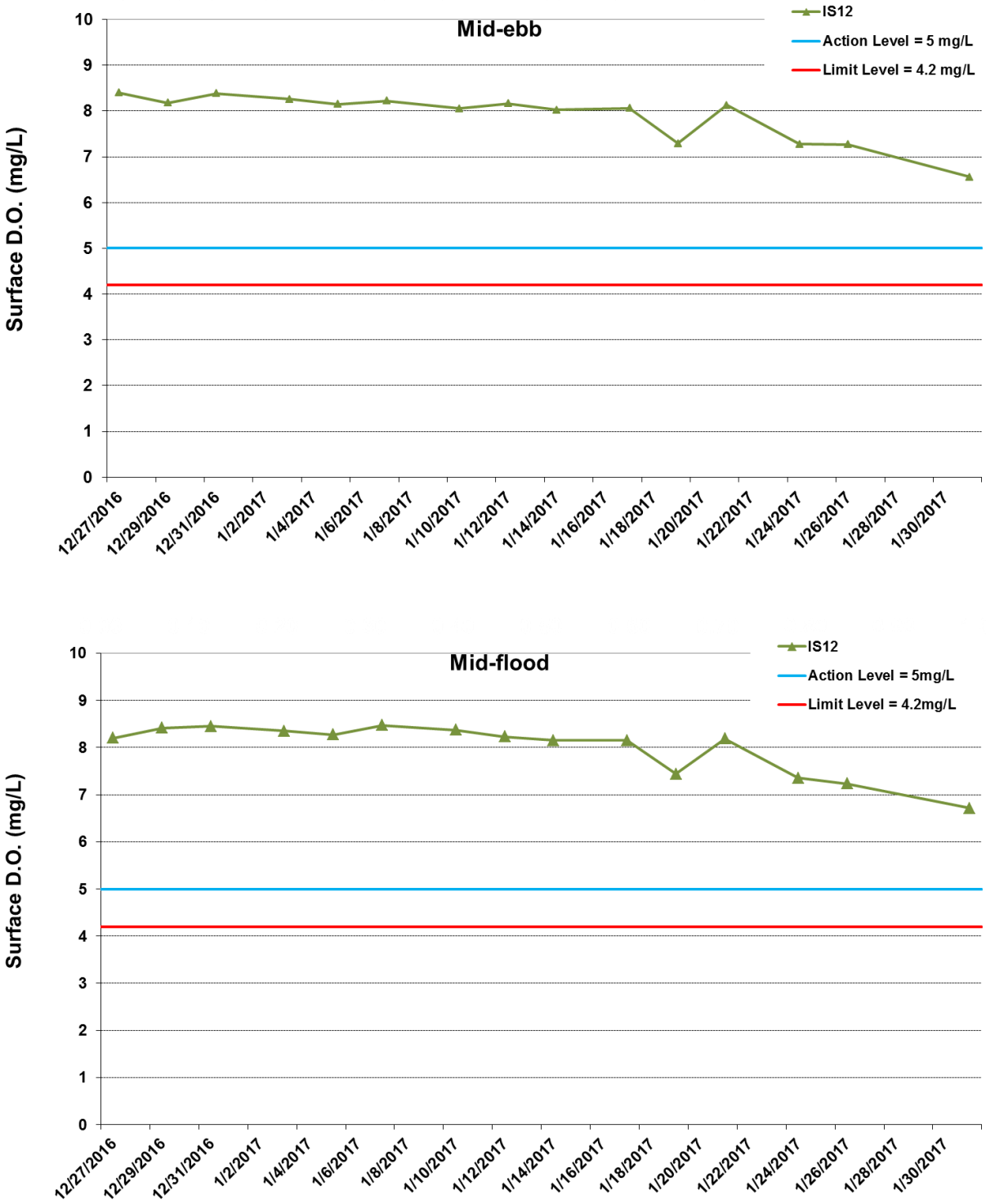
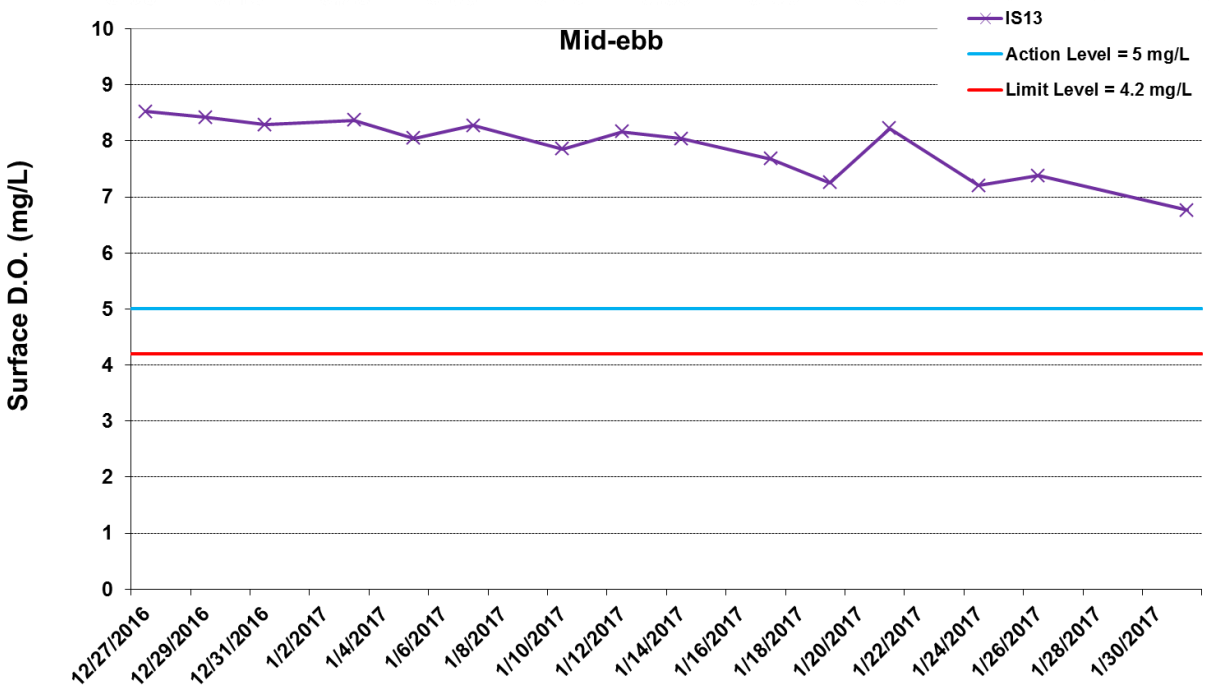


Figure I3 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters between 27 December 2016 and 31 January 2017 at IS12. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



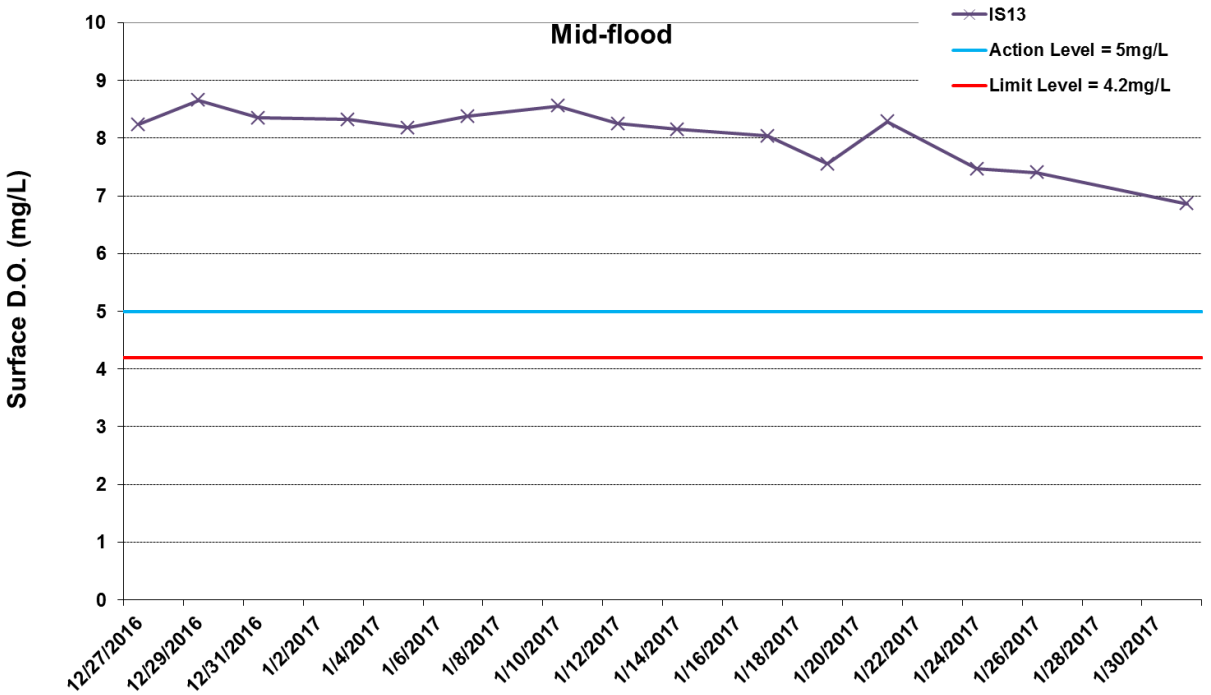


Figure I4 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters between 27 December 2016 and 31 January 2017 at IS13. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls

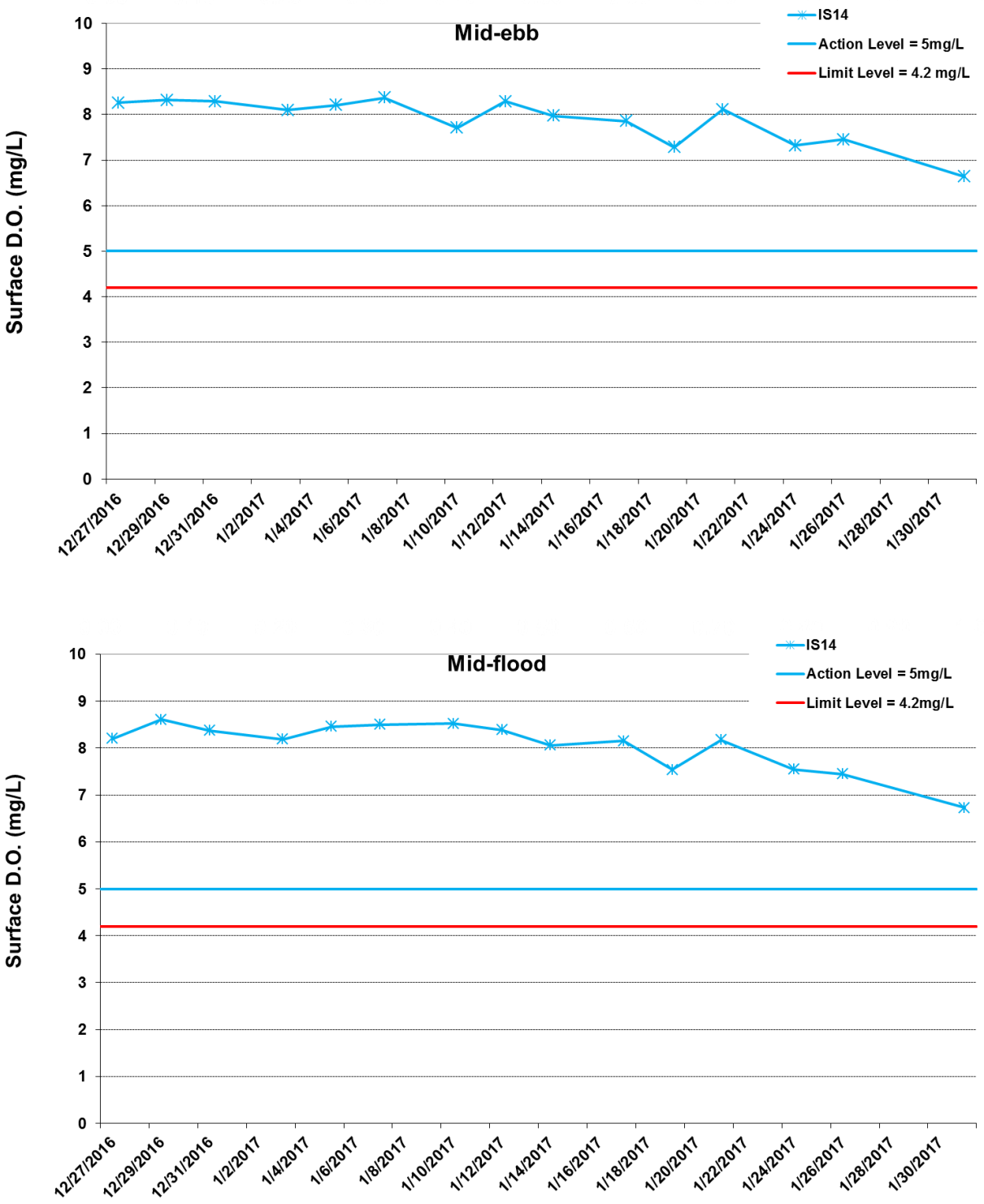


Figure I5 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters between 27 December 2016 and 31 January 2017 at IS14. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls

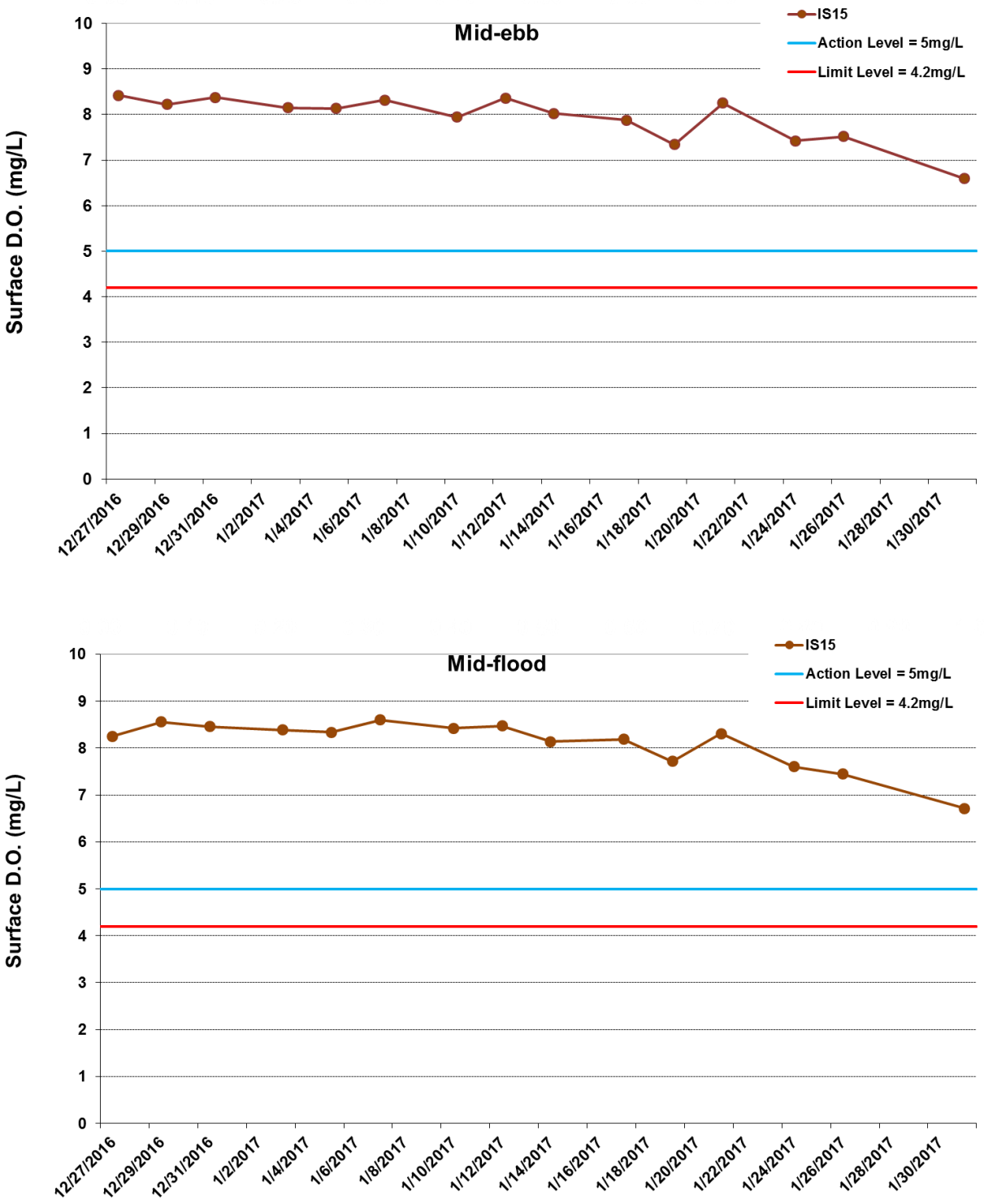
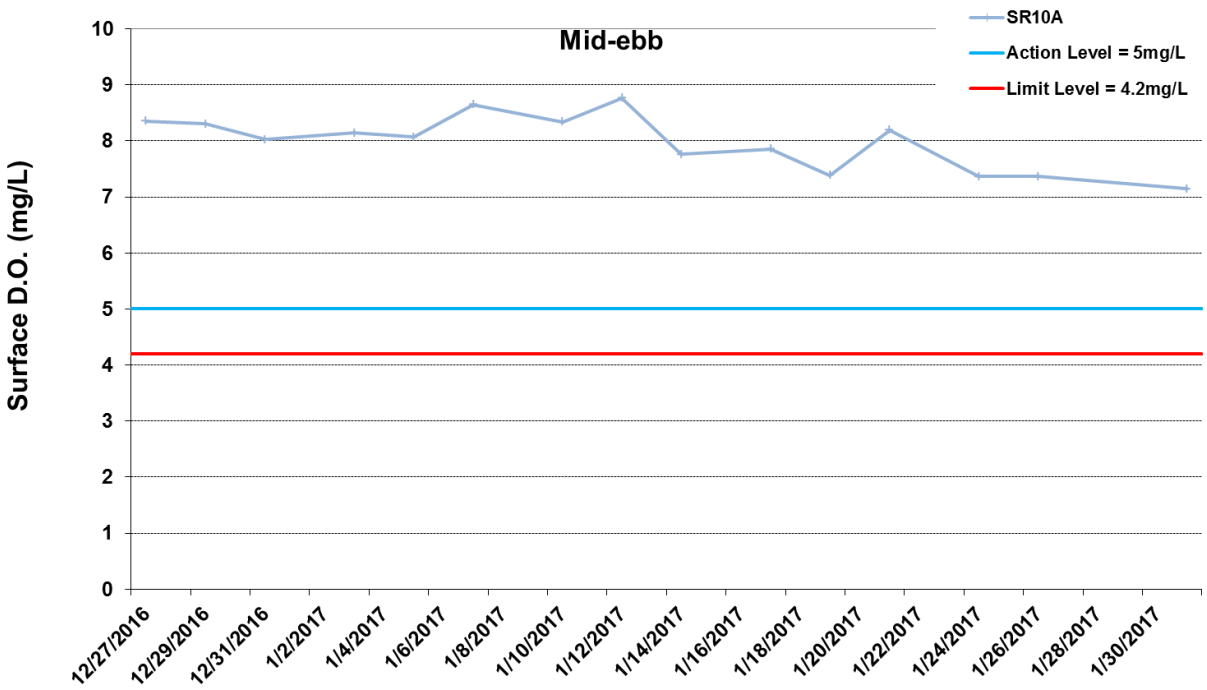


Figure I6 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters between 27 December 2016 and 31 January 2017 at IS15. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



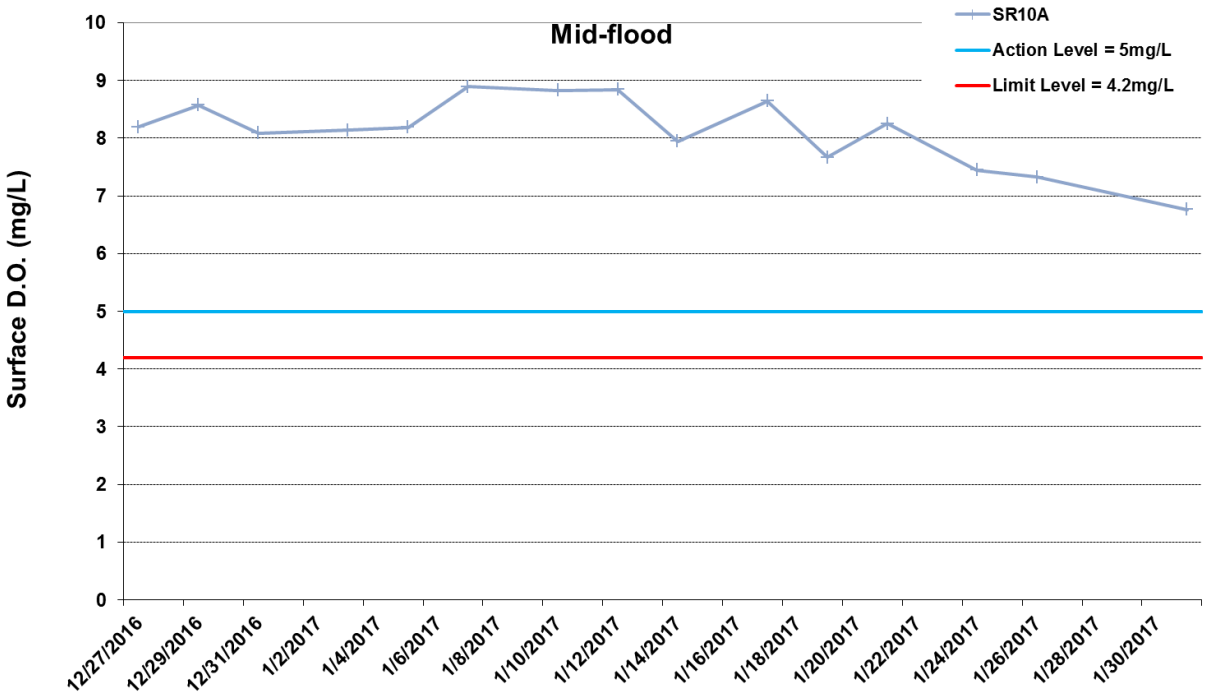


Figure I7 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters between 27 December 2016 and 31 January 2017 at SR10A. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls

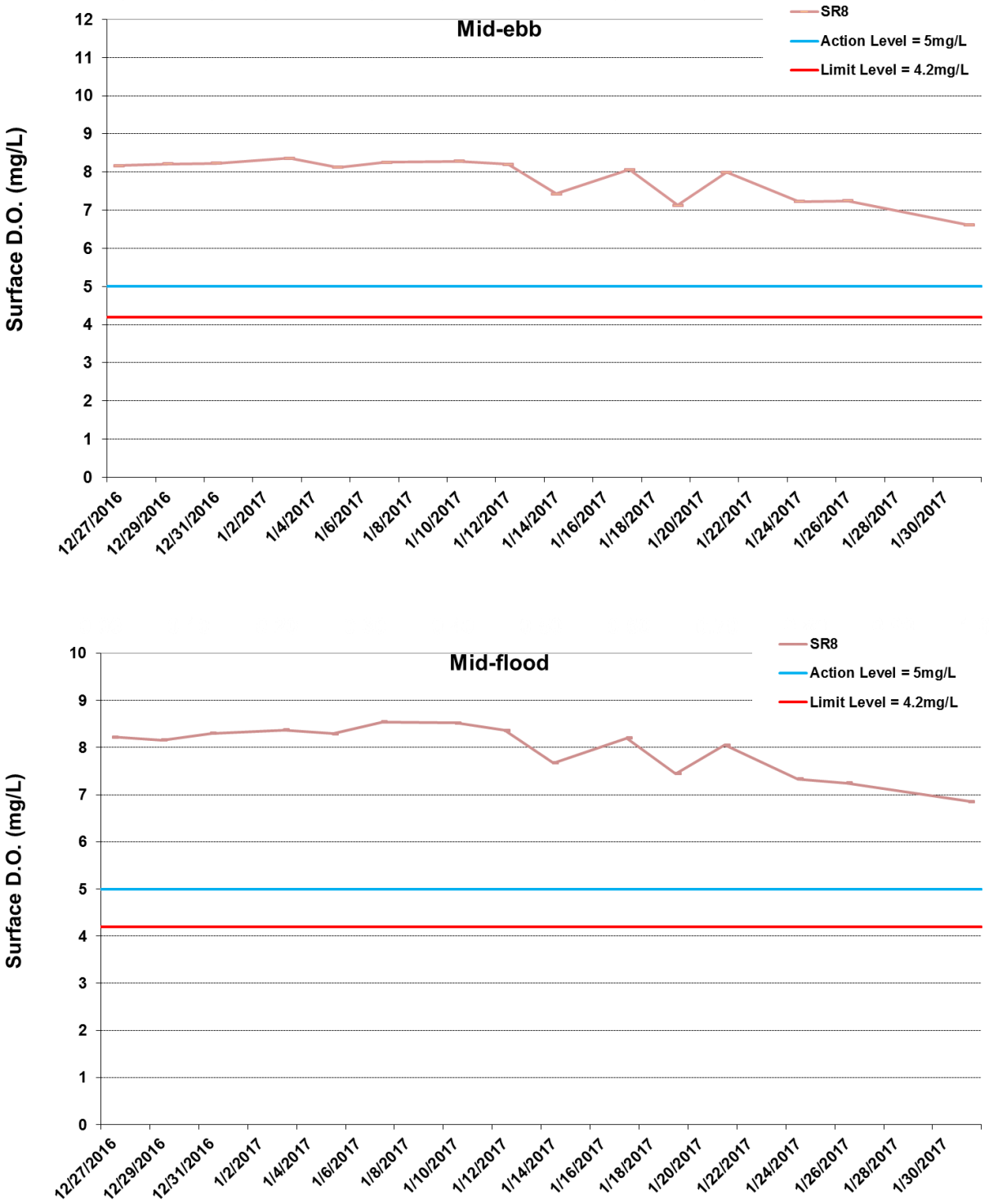
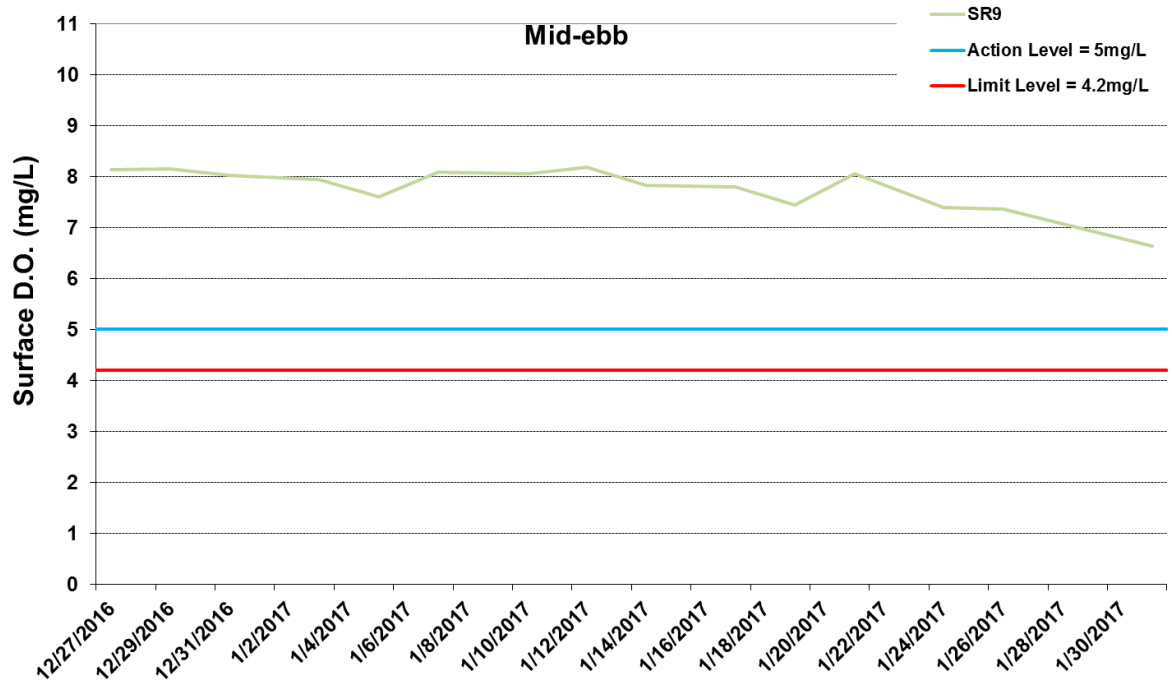


Figure I8 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters between 27 December 2016 and 31 January 2017 at SR8. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



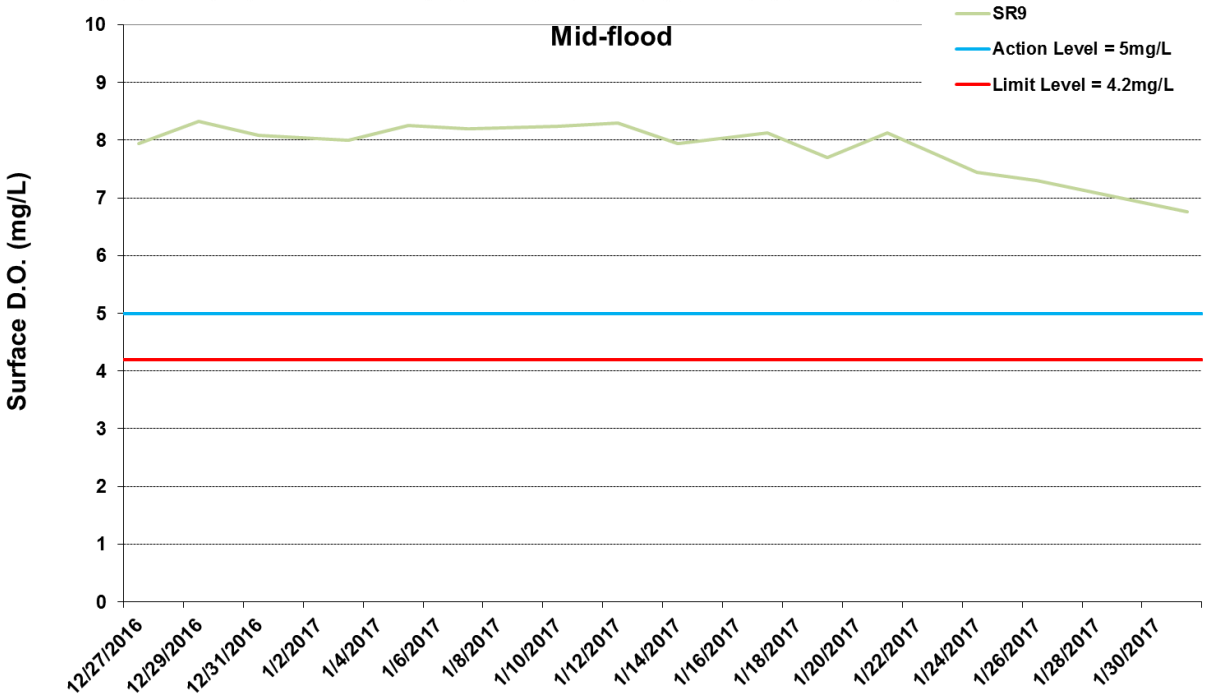
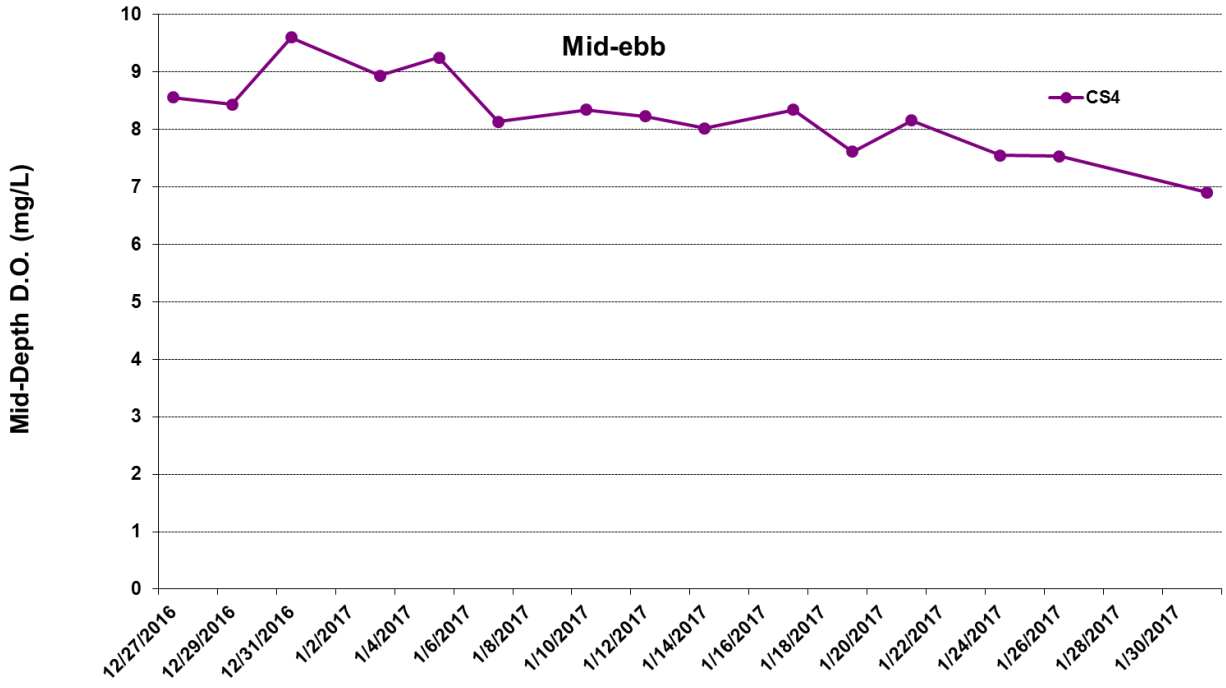
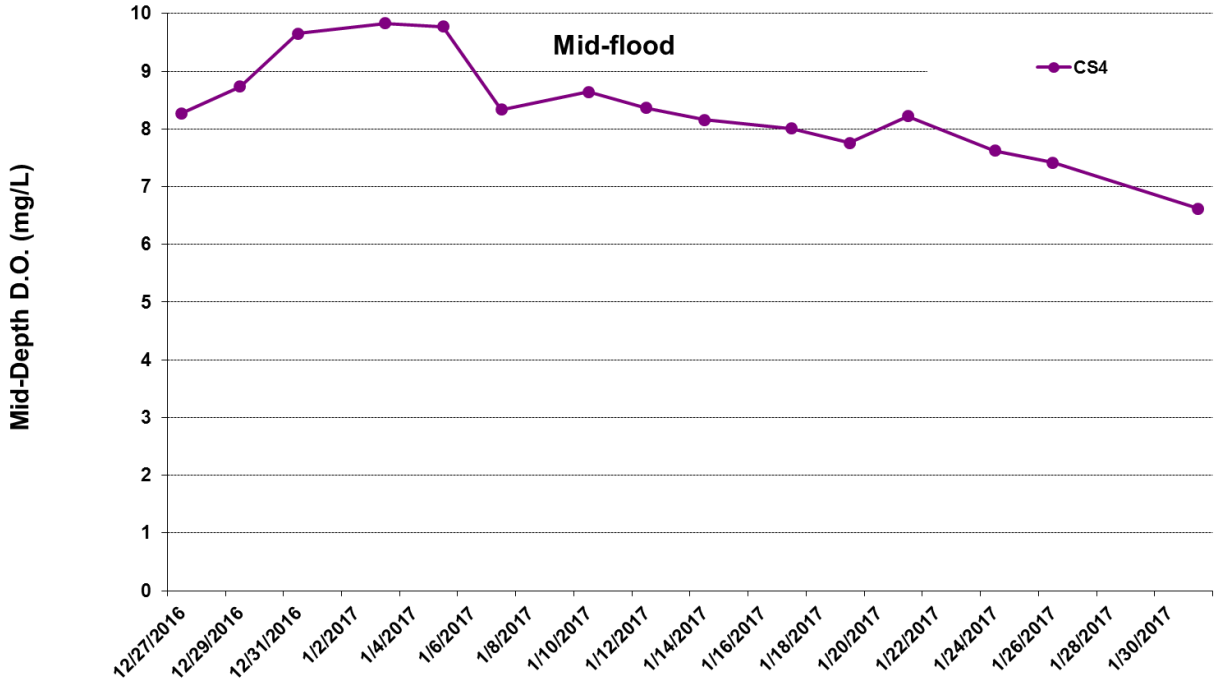


Figure I9 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters between 27 December 2016 and 31 January 2017 at SR9. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls

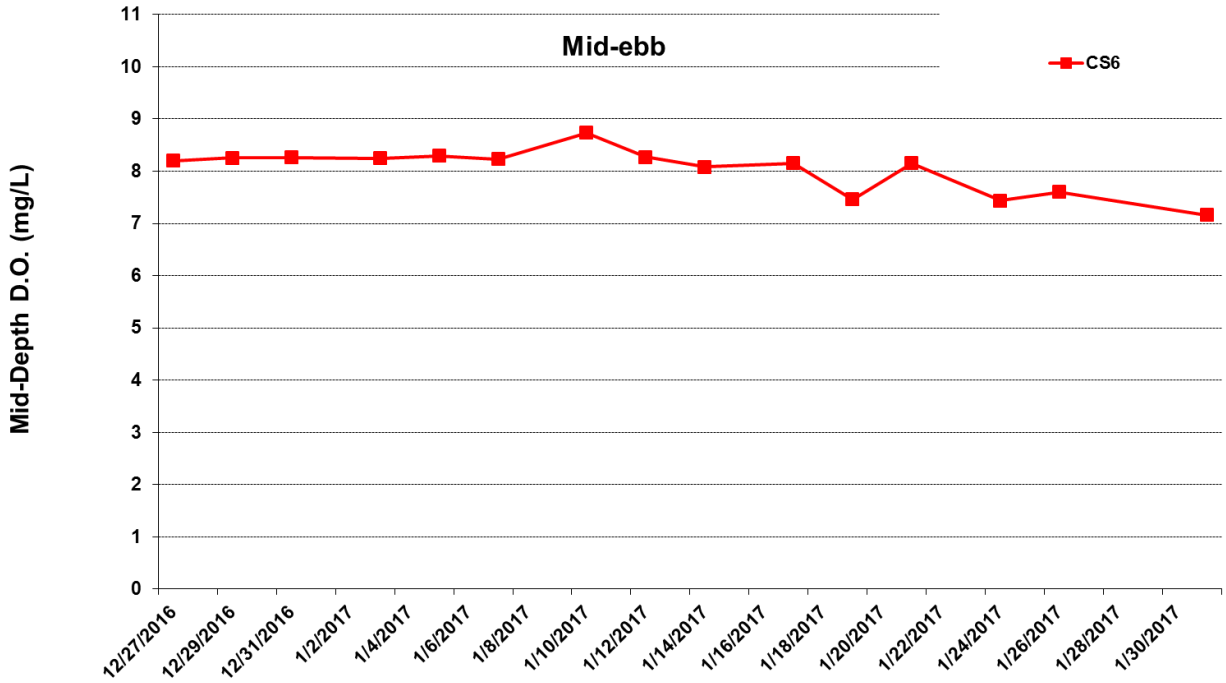


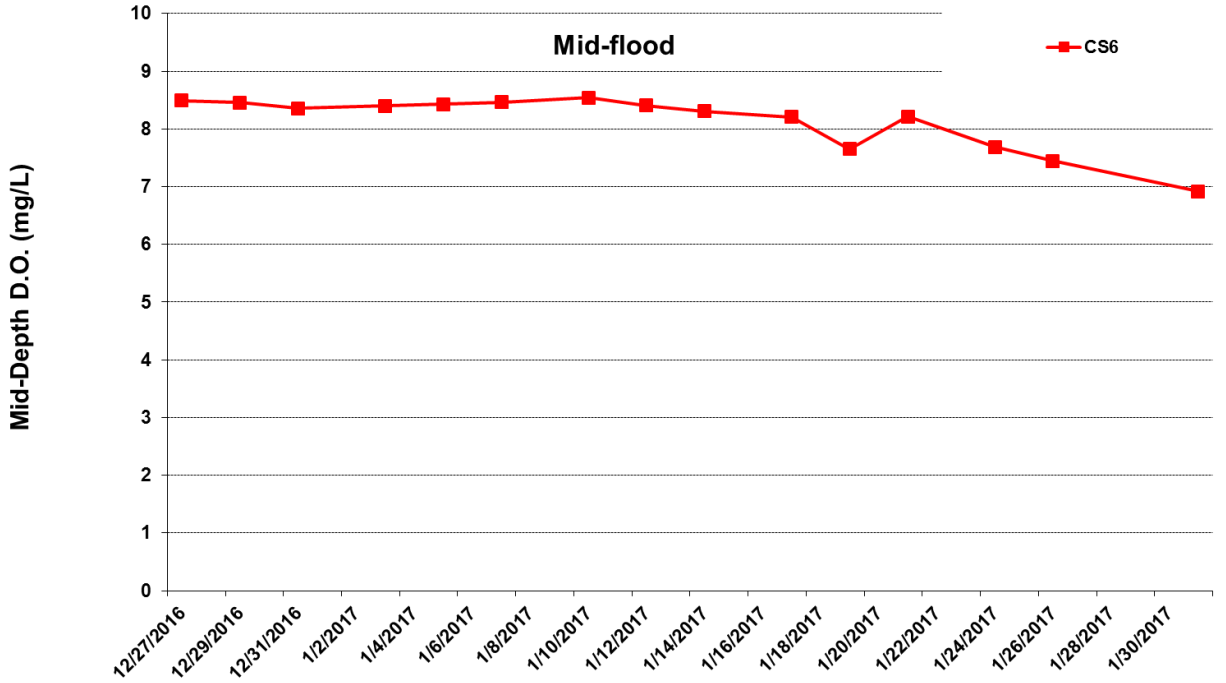


*No data for Stations SR8 and SR9 due to shallow water depth (< 6m).

Figure I10 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters between 27 December 2016 and 31 January 2017 at CS4. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls

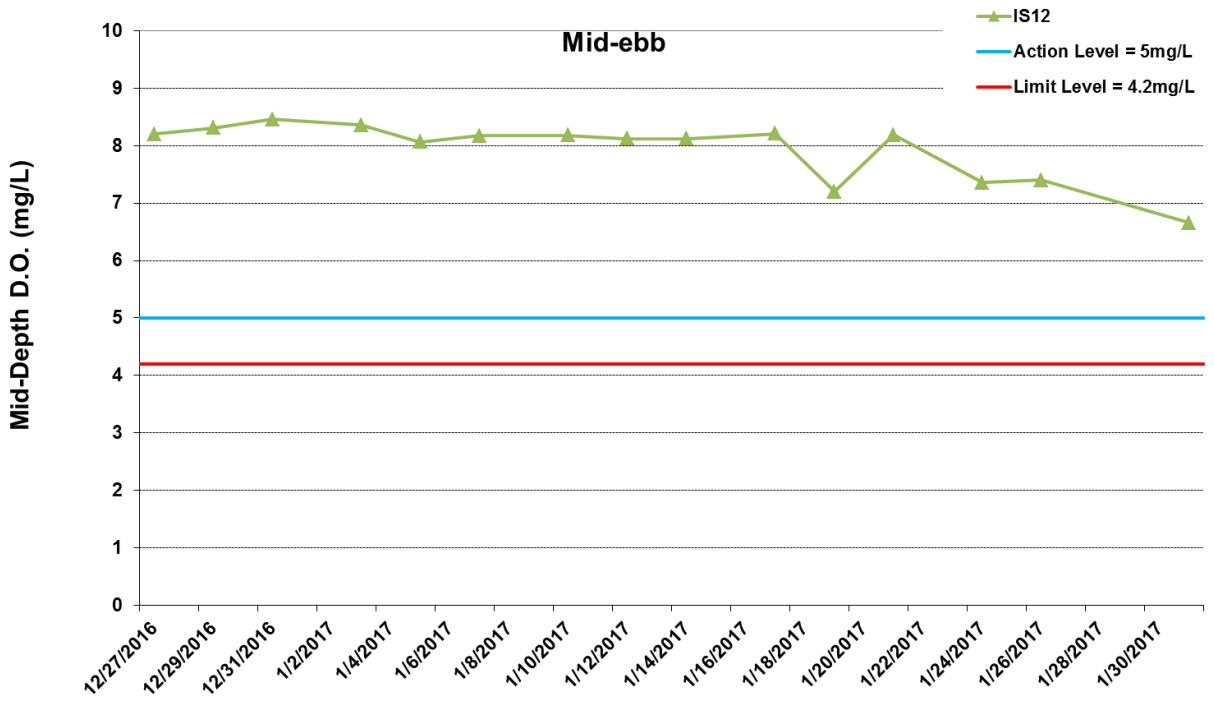


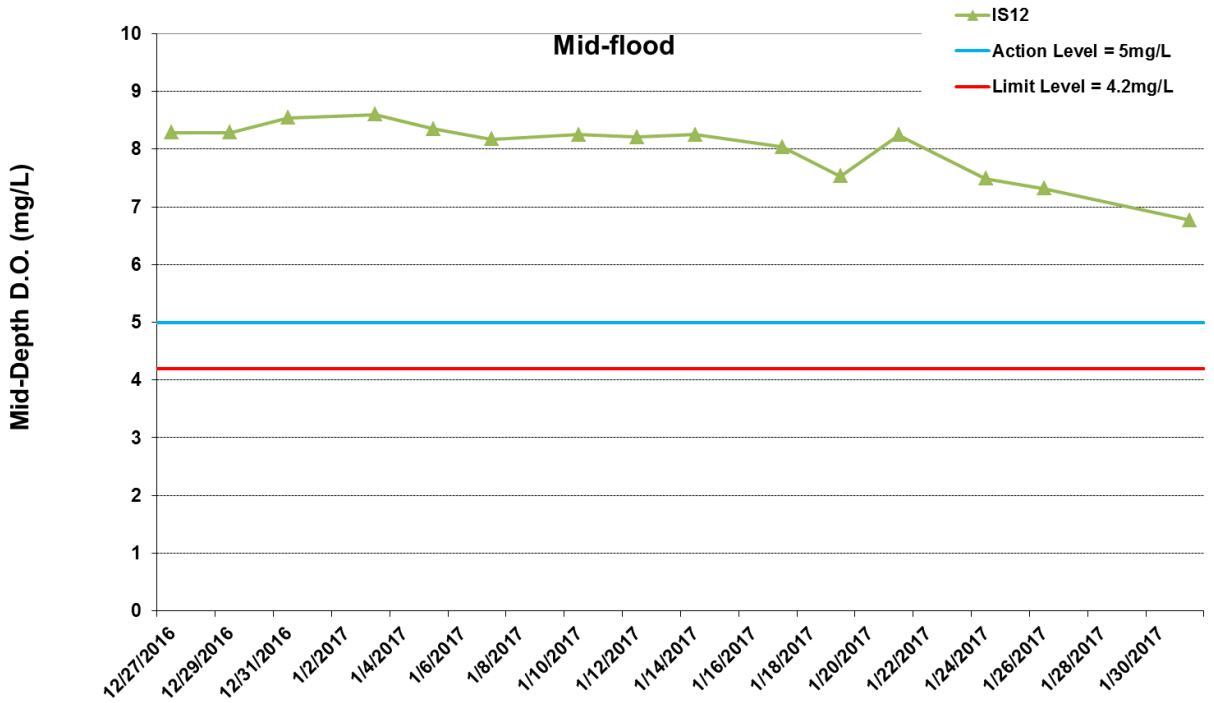


*No data for Stations SR8 and SR9 due to shallow water depth (< 6m).

Figure I11 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters between 27 December 2016 and 31 January 2017 at CS6. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls

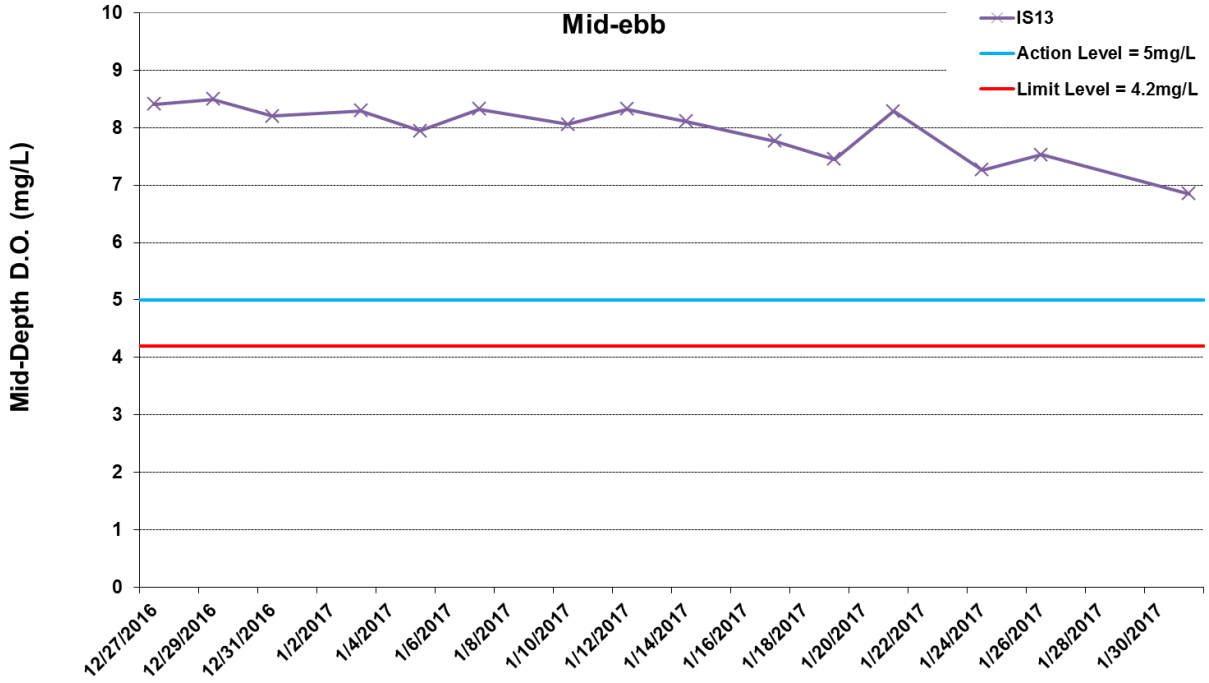


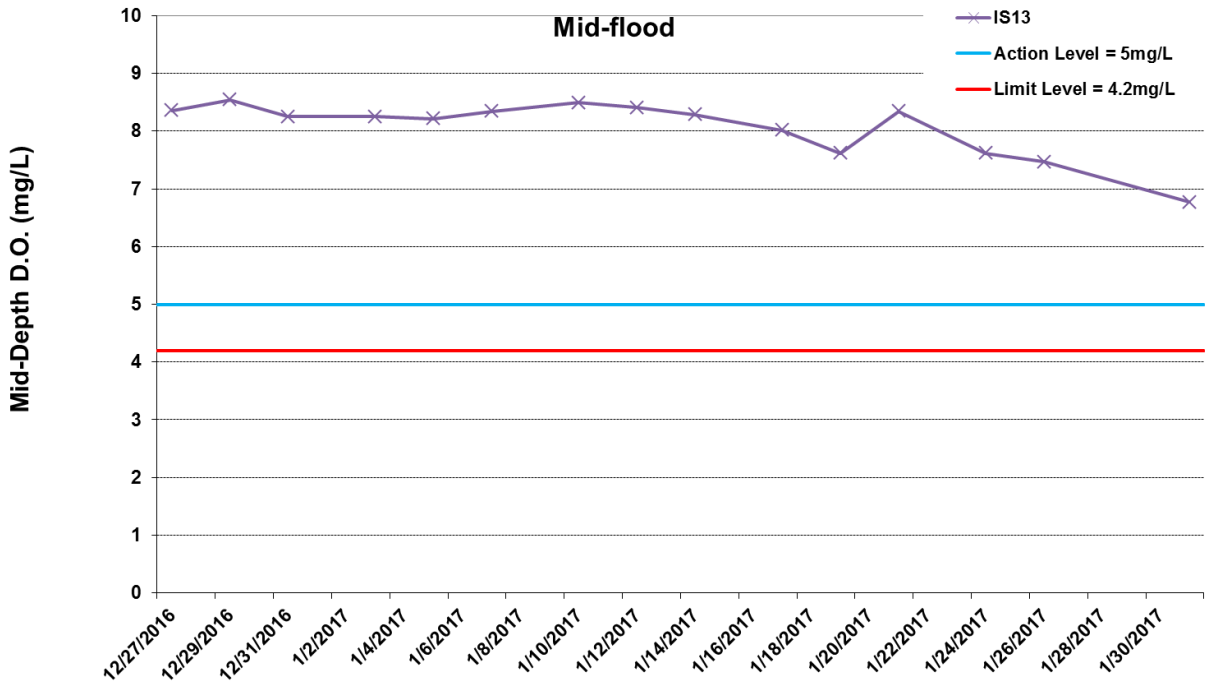


*No data for Stations SR8 and SR9 due to shallow water depth (< 6m).

Figure I12 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters between 27 December 2016 and 31 January 2017 at IS12. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls

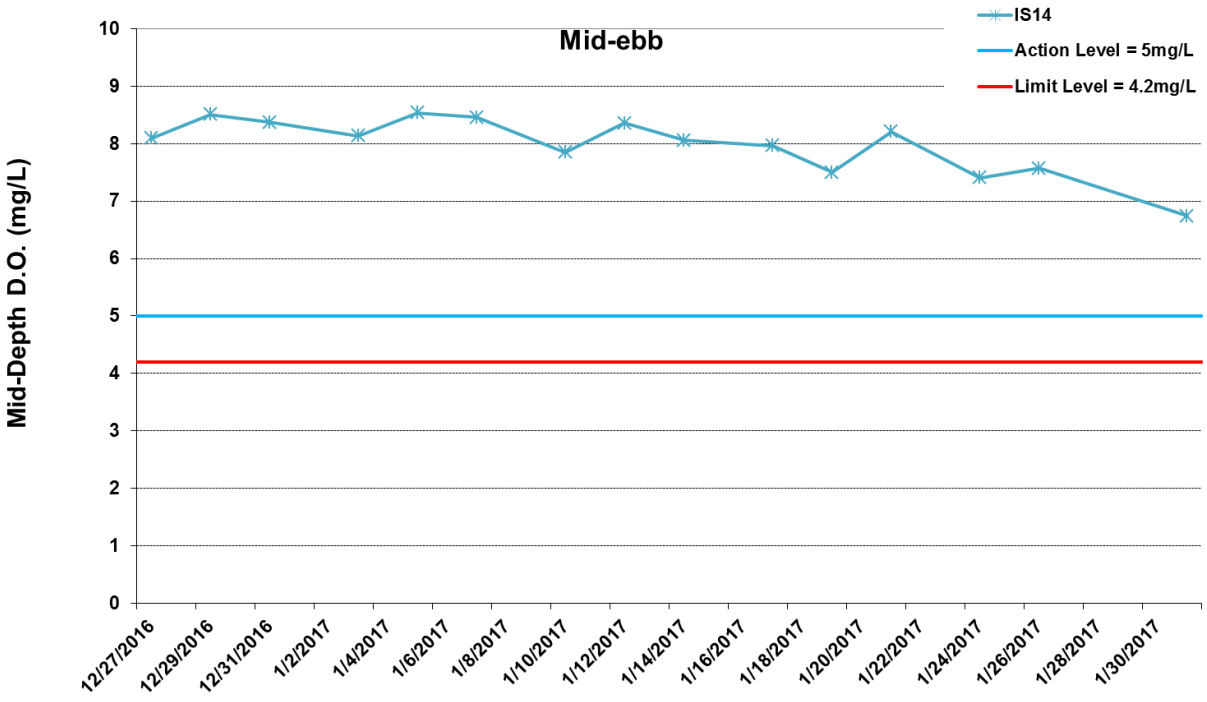


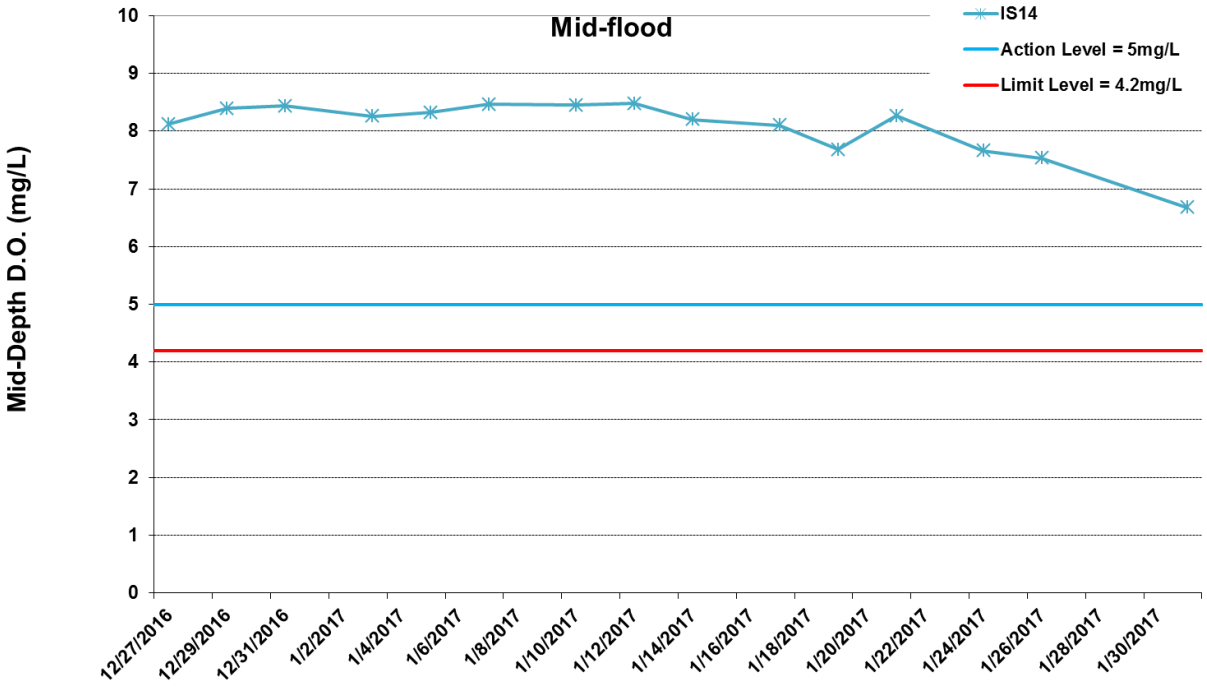


*No data for Stations SR8 and SR9 due to shallow water depth (< 6m).

Figure I13 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters between 27 December 2016 and 31 January 2017 at IS13. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls

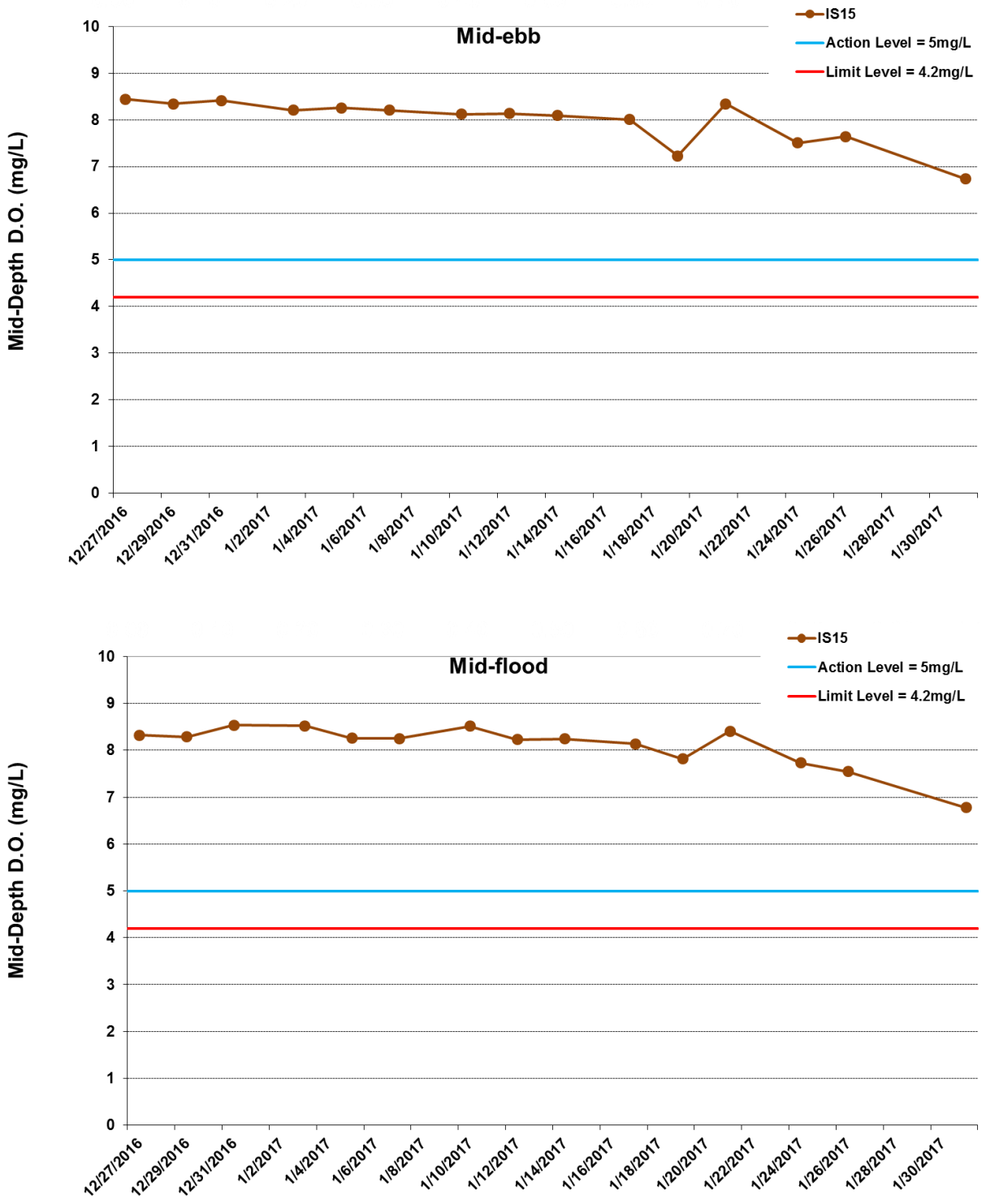




*No data for Stations SR8 and SR9 due to shallow water depth (< 6m).

Figure I14 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters between 27 December 2016 and 31 January 2017 at IS14. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

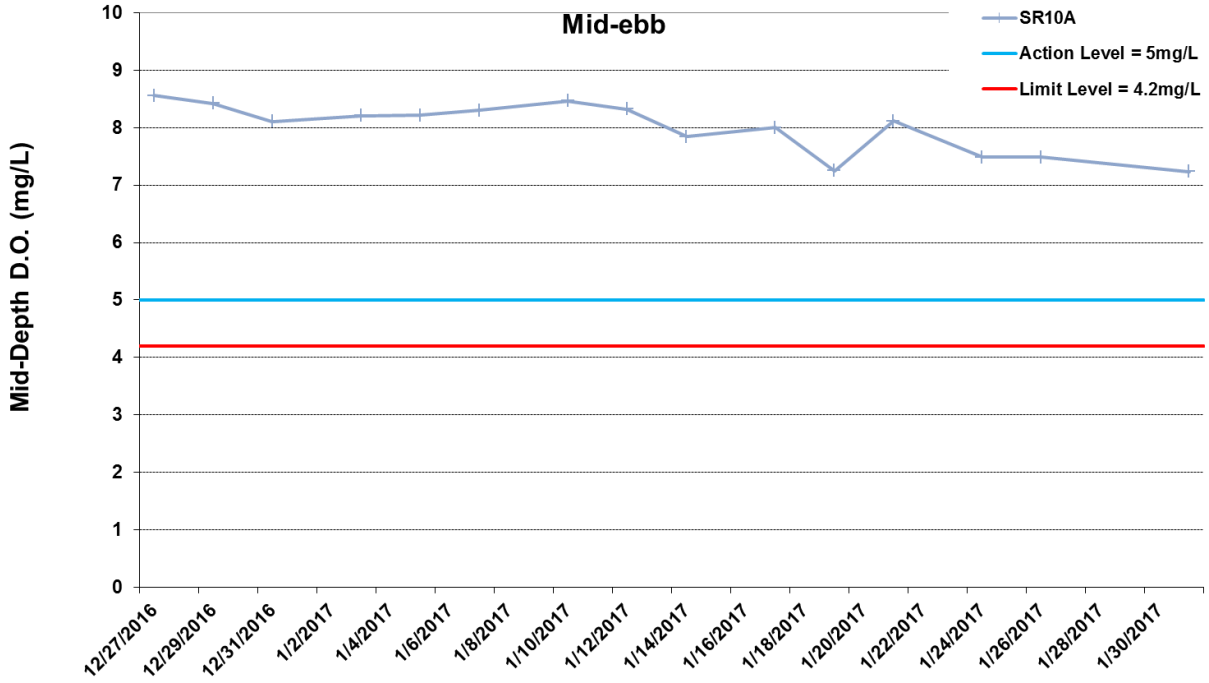
Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls

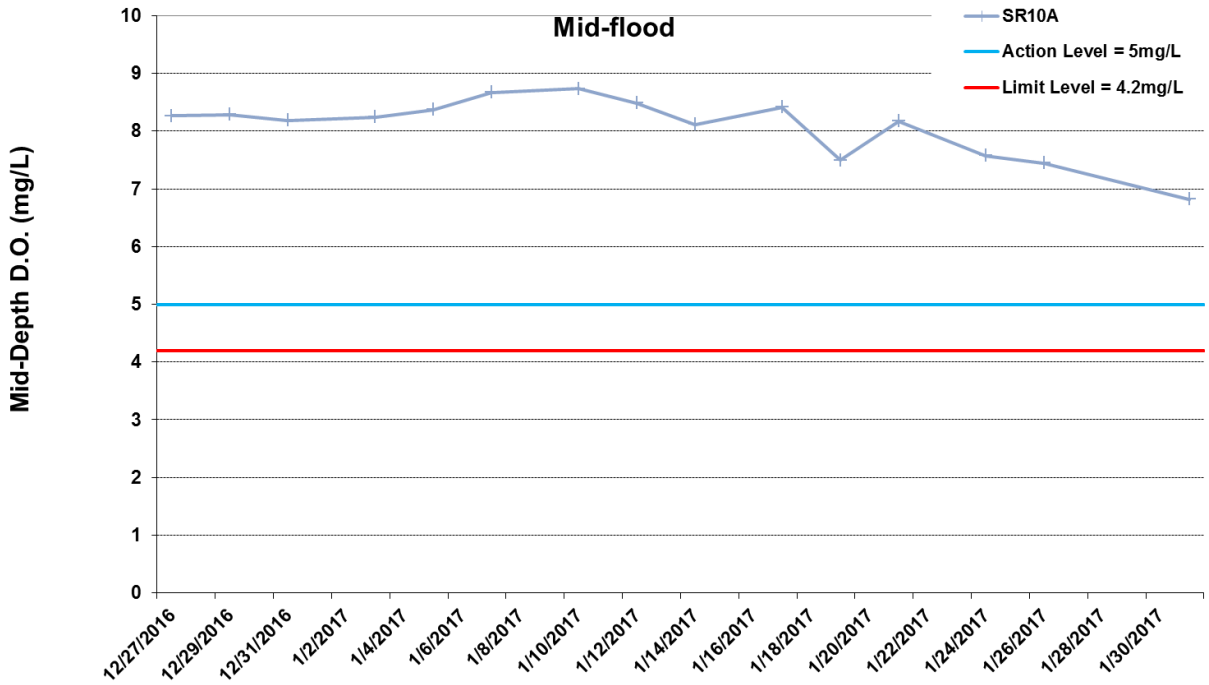


*No data for Stations SR8 and SR9 due to shallow water depth (< 6m).

Figure I15 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters between 27 December 2016 and 31 January 2017 at IS15. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls

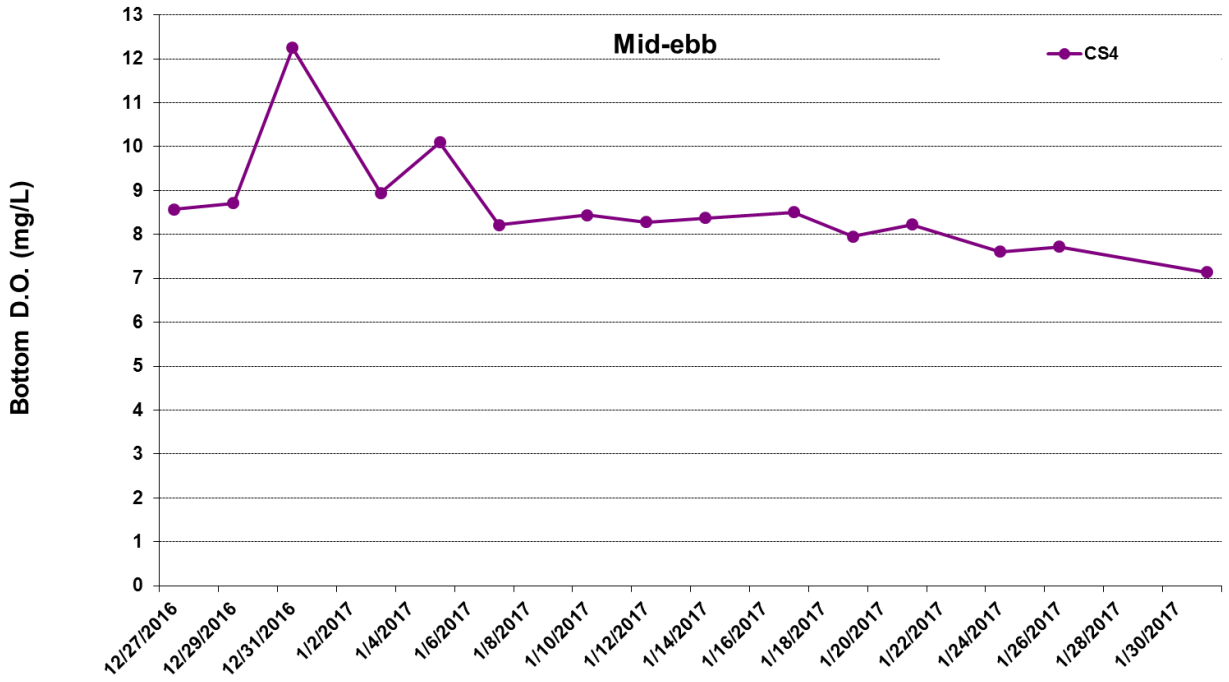




*No data for Stations SR8 and SR9 due to shallow water depth (< 6m).

Figure I16 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters between 27 December 2016 and 31 January 2017 at SR10A. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



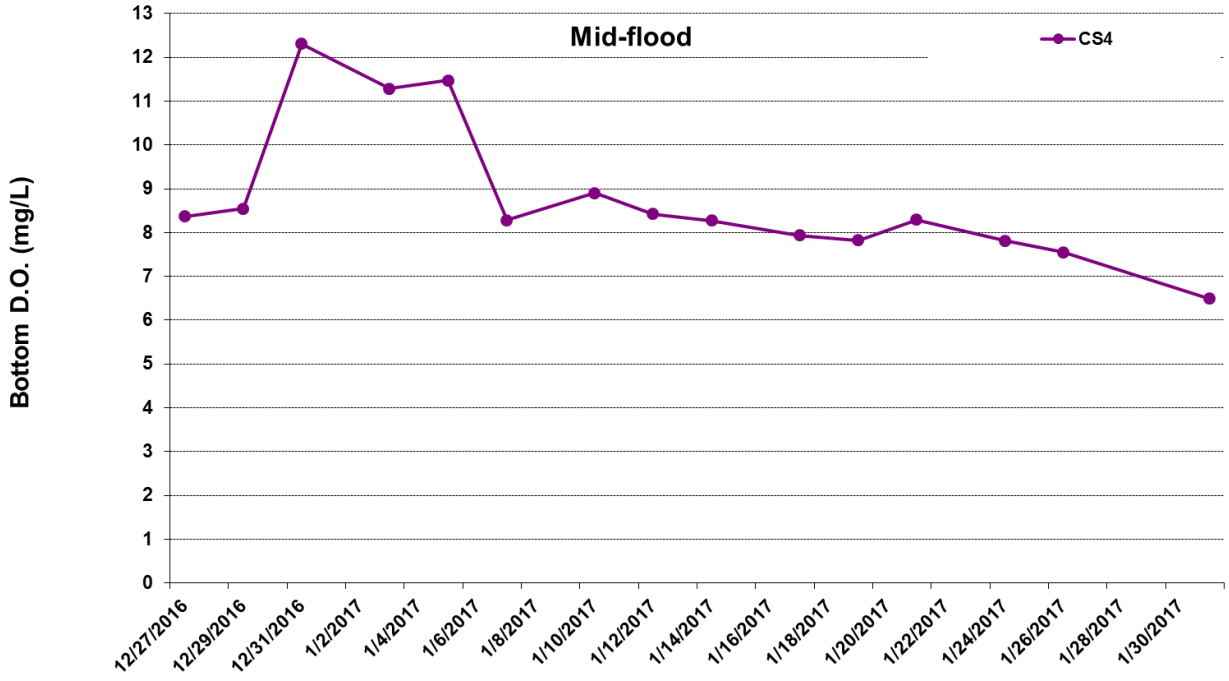
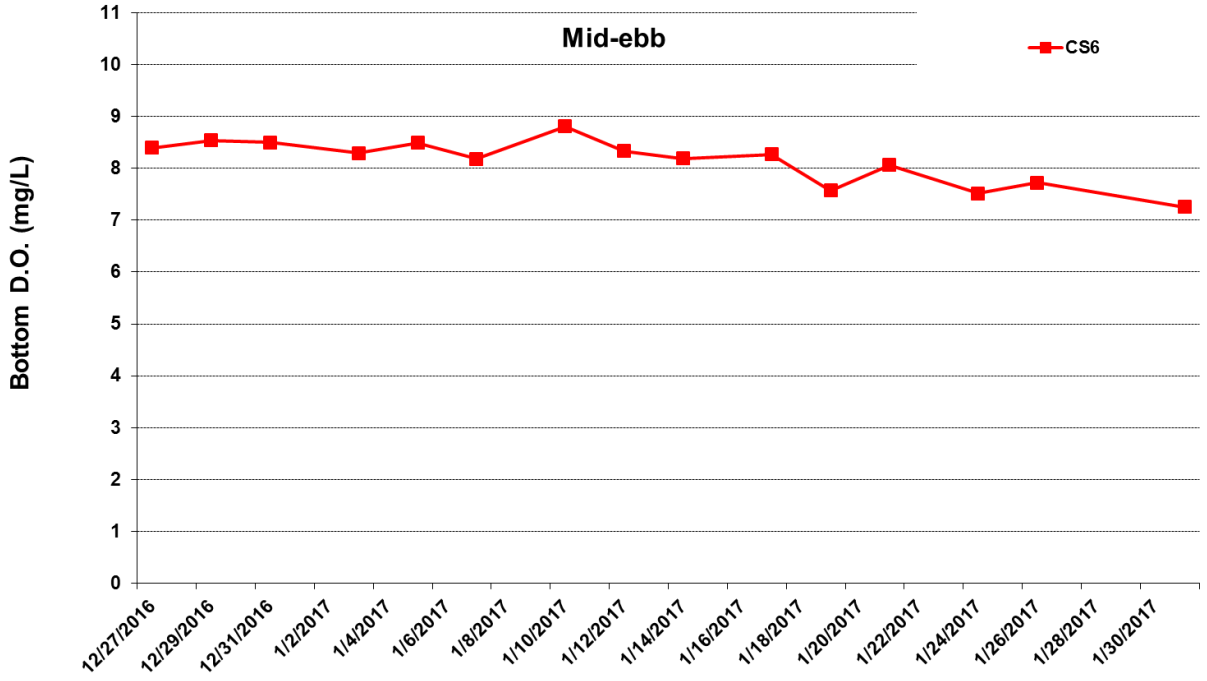


Figure I17 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom water between 27 December 2016 and 31 January 2017 at CS4. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



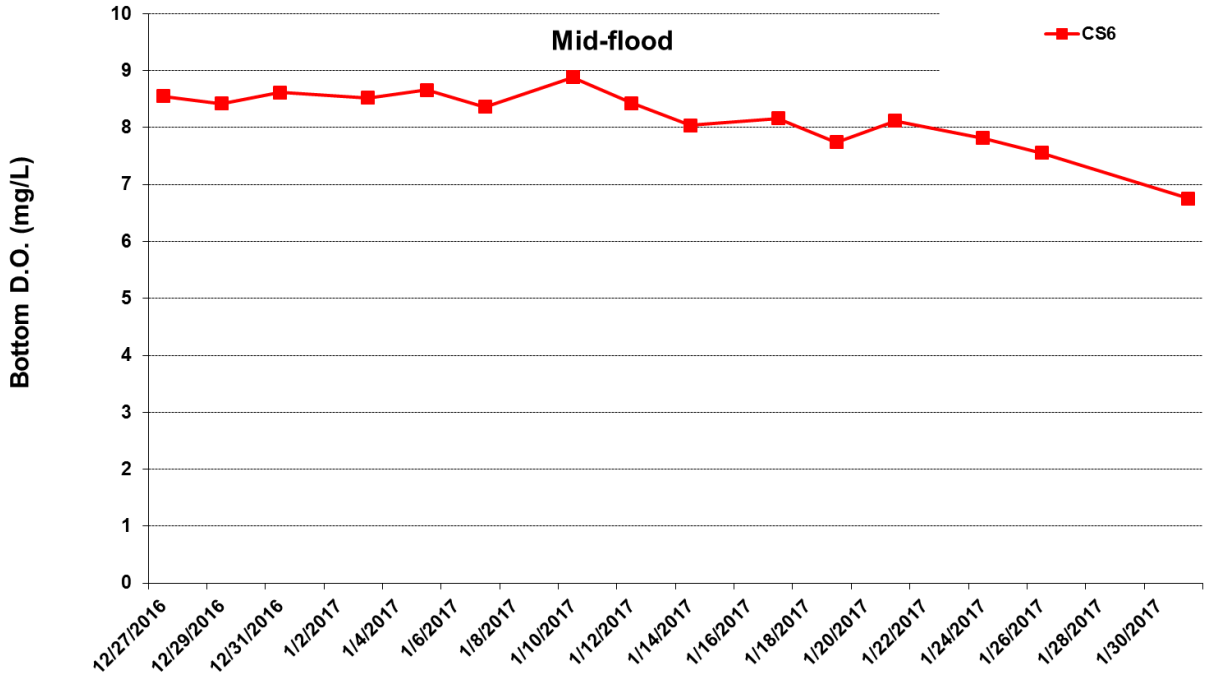


Figure I18 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom water between 27 December 2016 and 31 January 2017 at CS6. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls

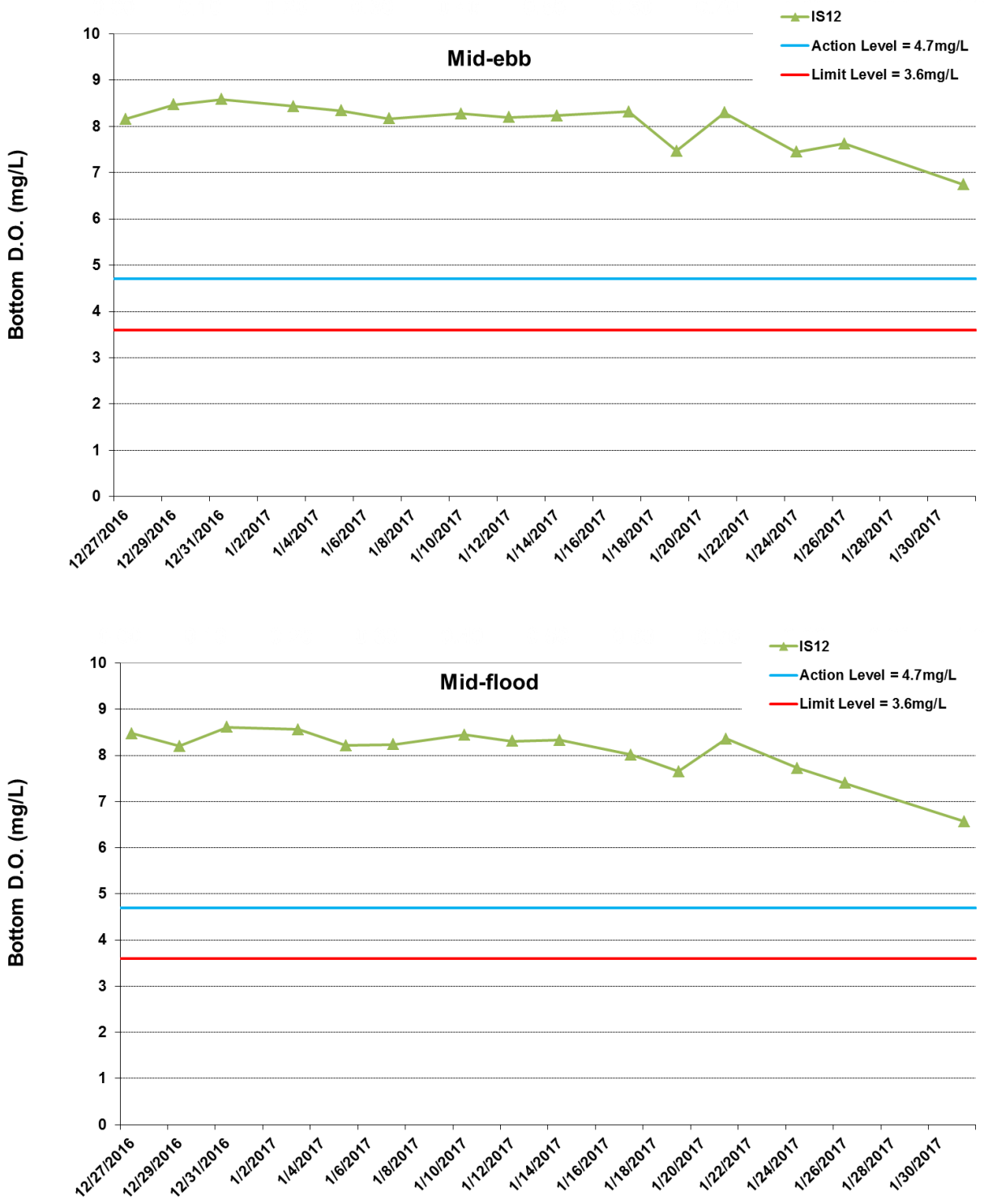


Figure I19 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom water between 27 December 2016 and 31 January 2017 at IS12. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls

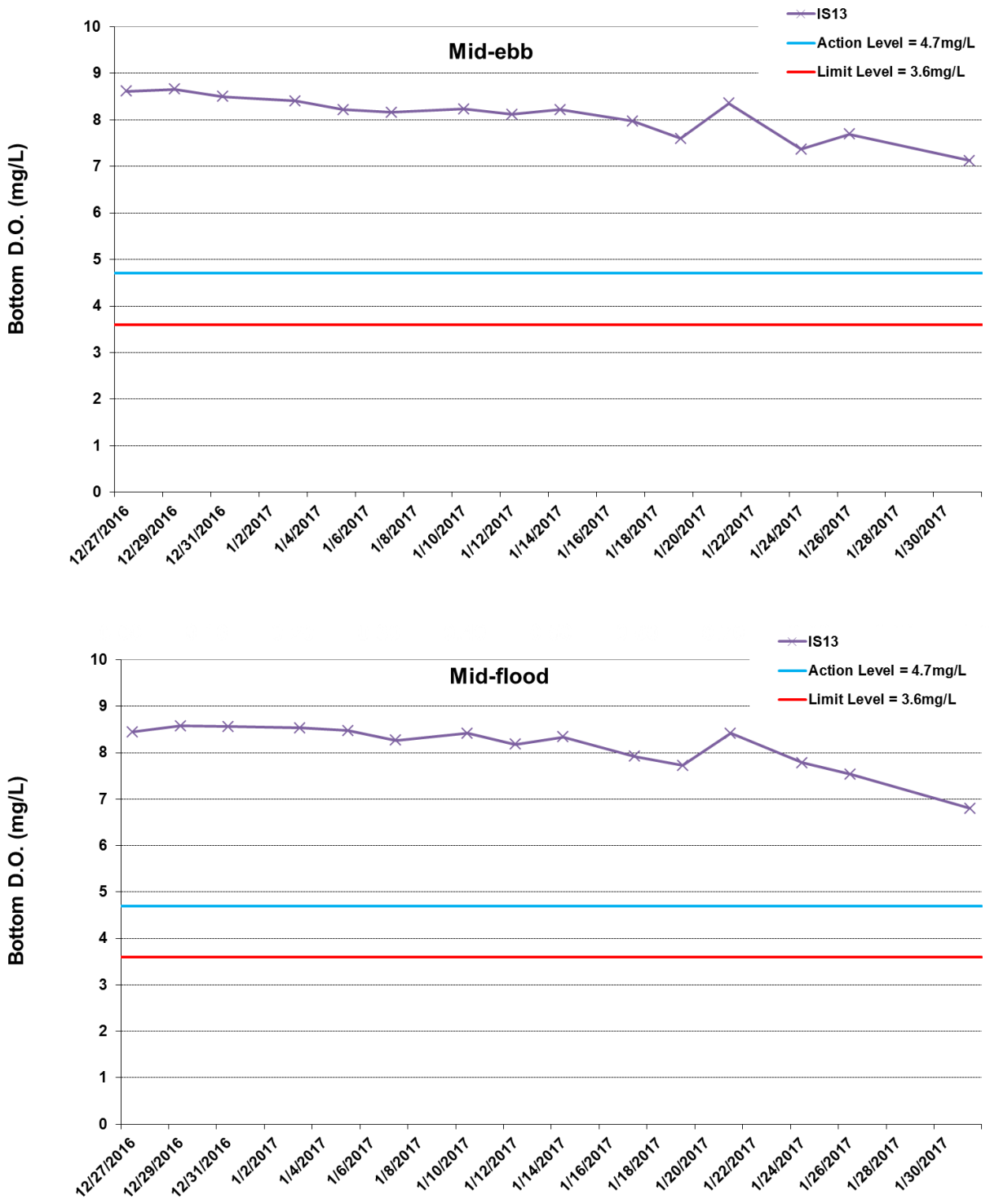
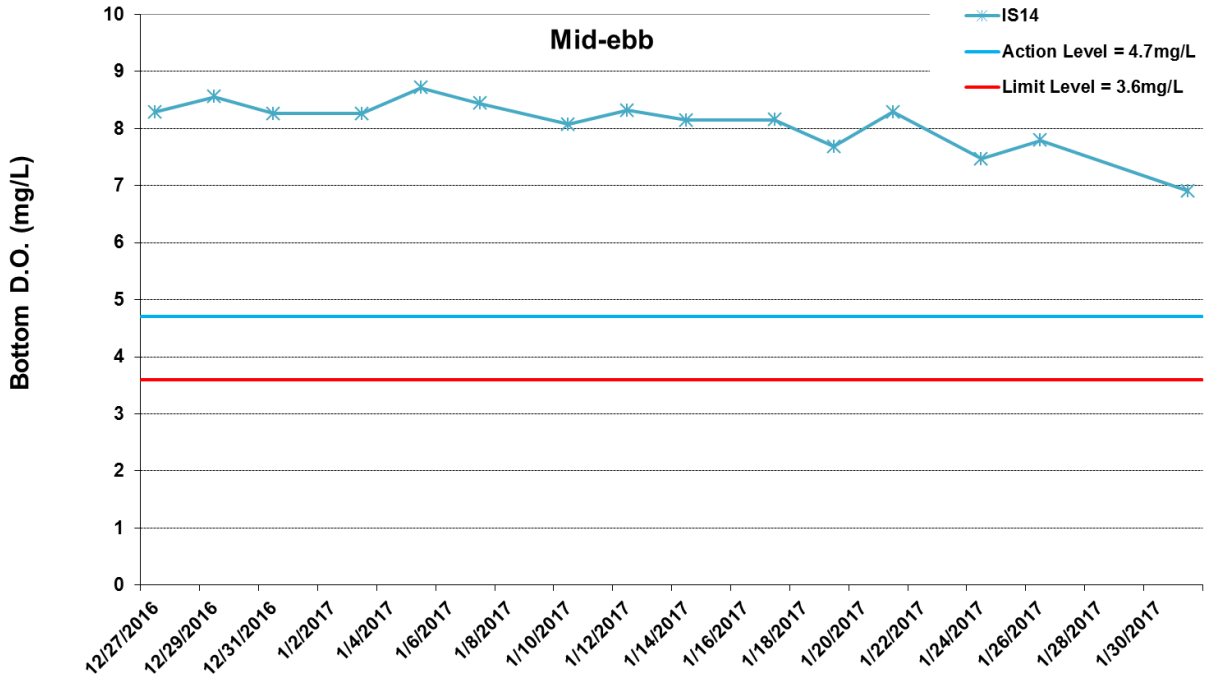


Figure I20 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom water between 27 December 2016 and 31 January 2017 at IS13. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



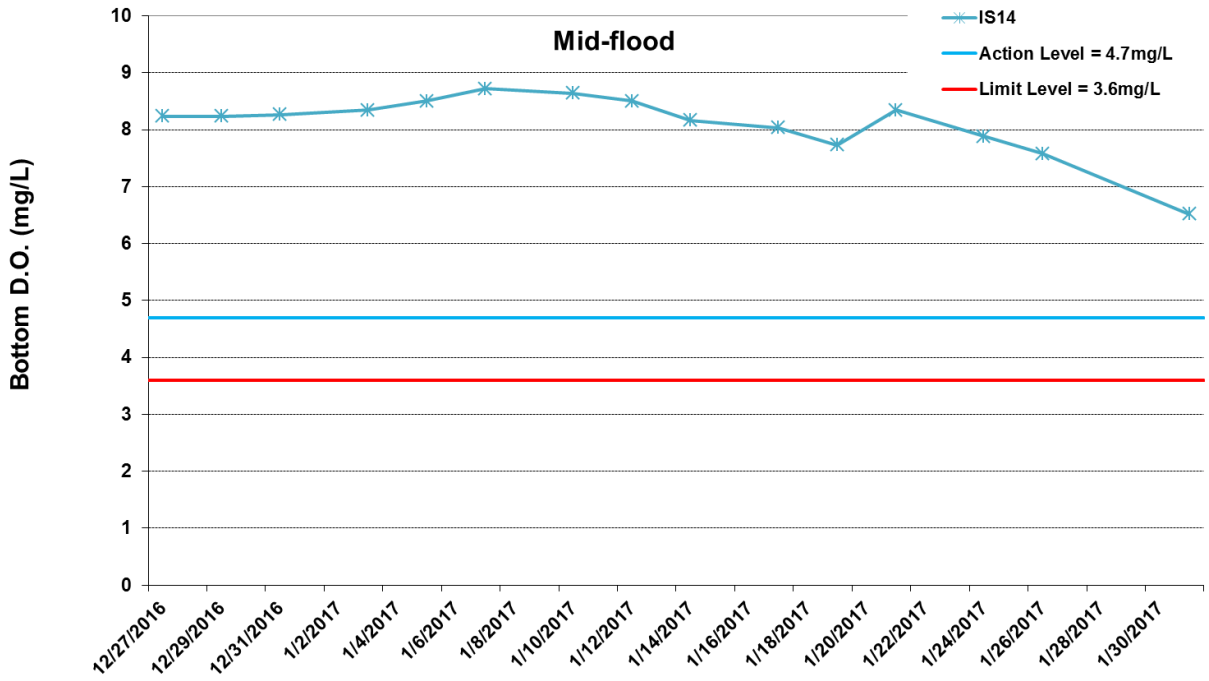
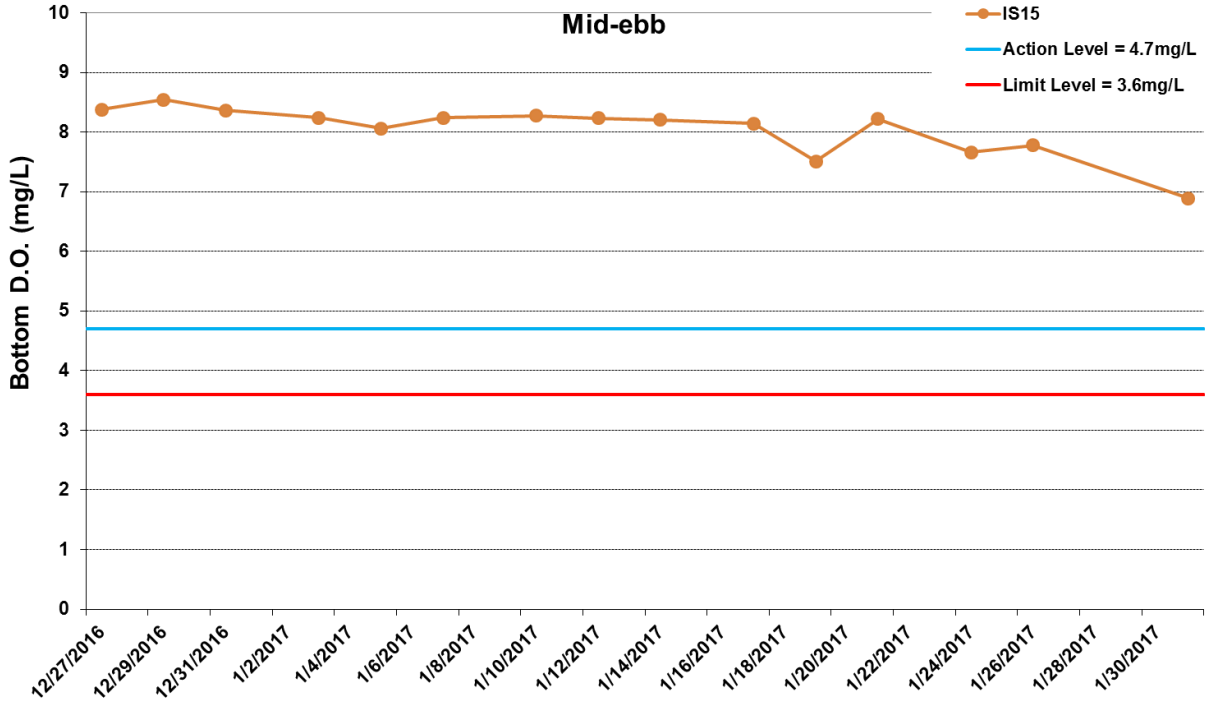


Figure I21 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom water between 27 December 2016 and 31 January 2017 at IS14. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



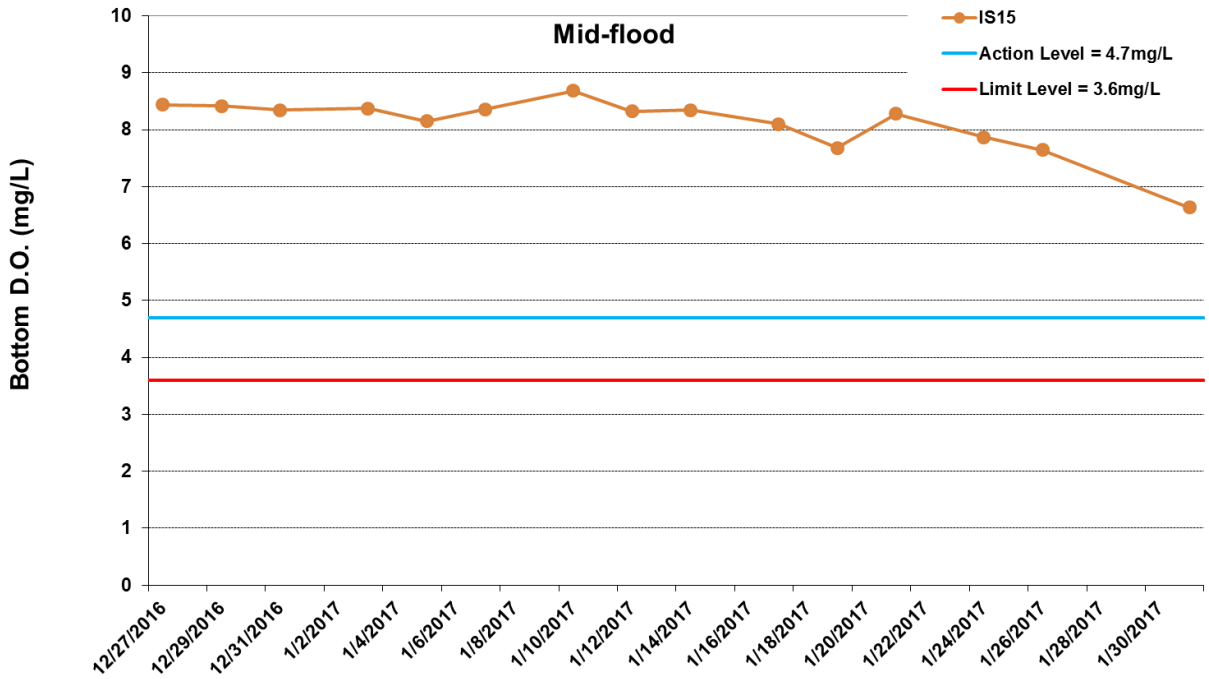


Figure I22 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom water between 27 December 2016 and 31 January 2017 at IS15. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls

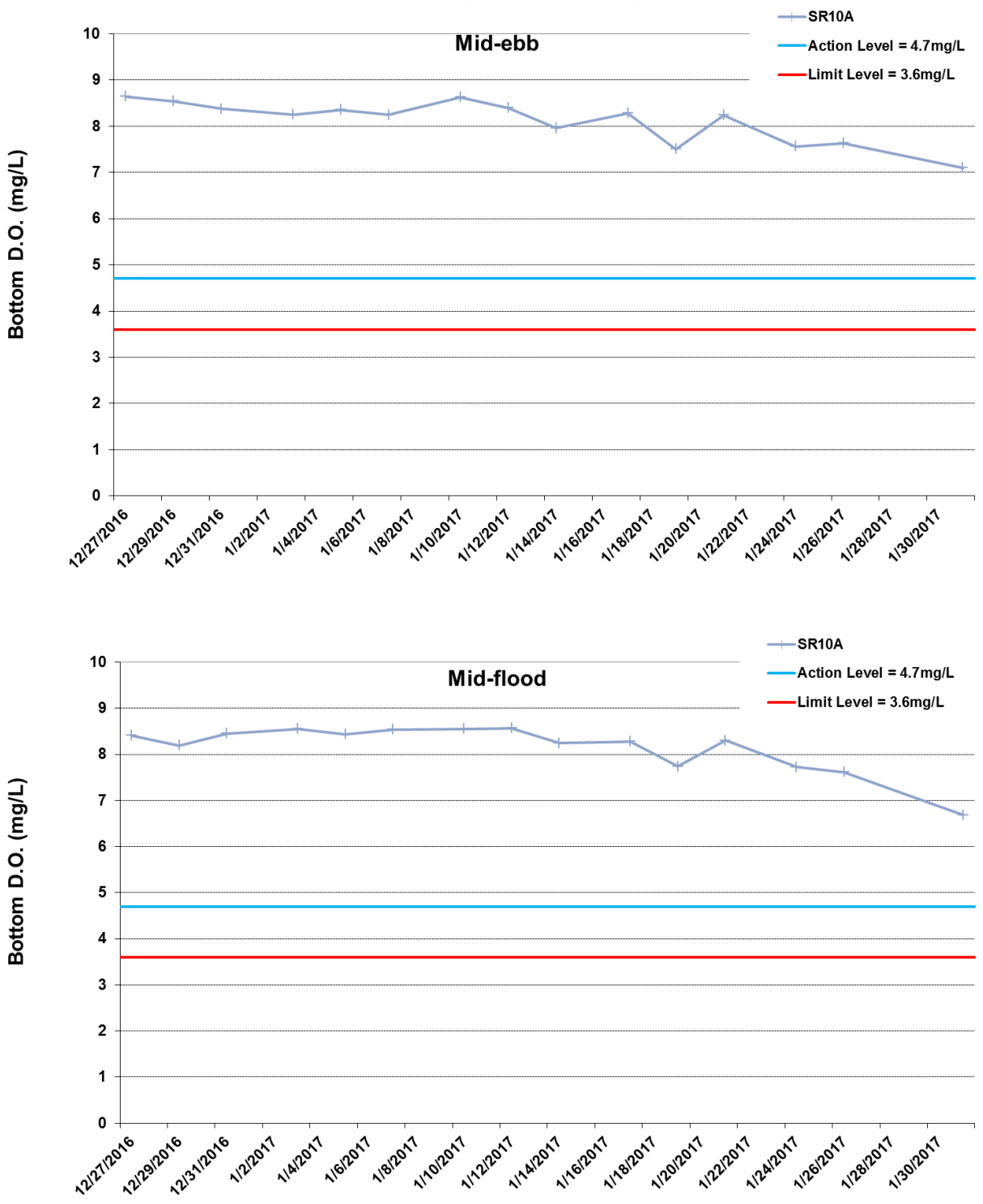
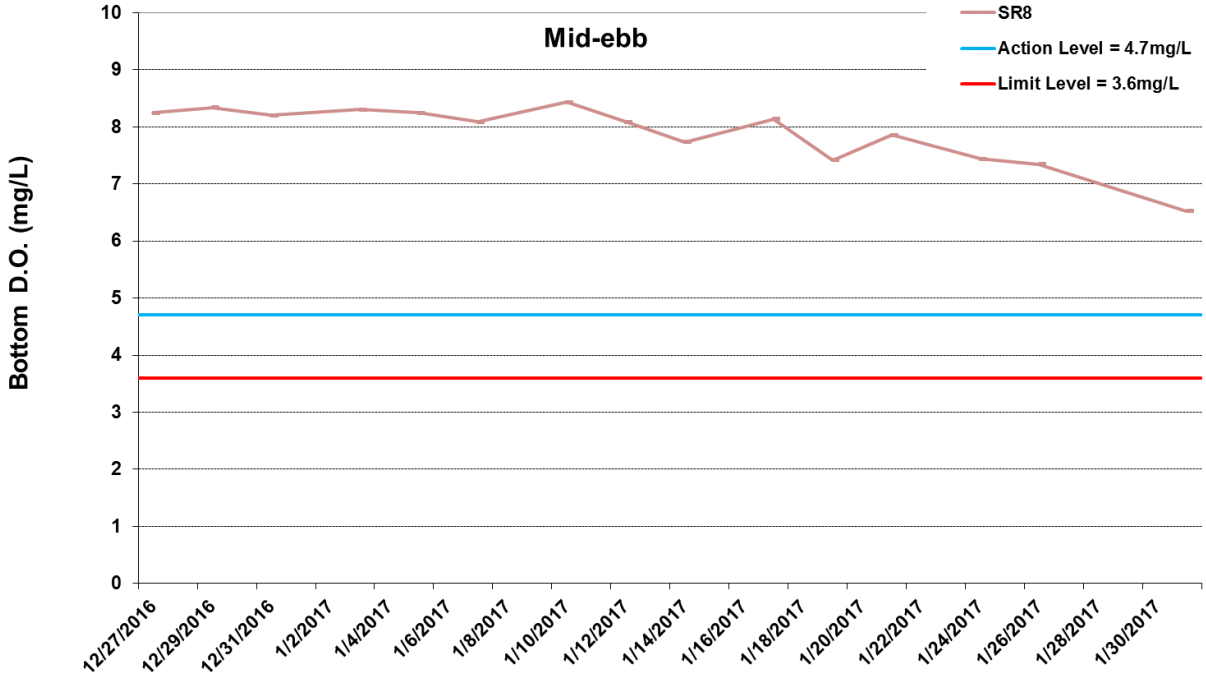


Figure I23 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom water between 27 December 2016 and 31 January 2017 at SR10A. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



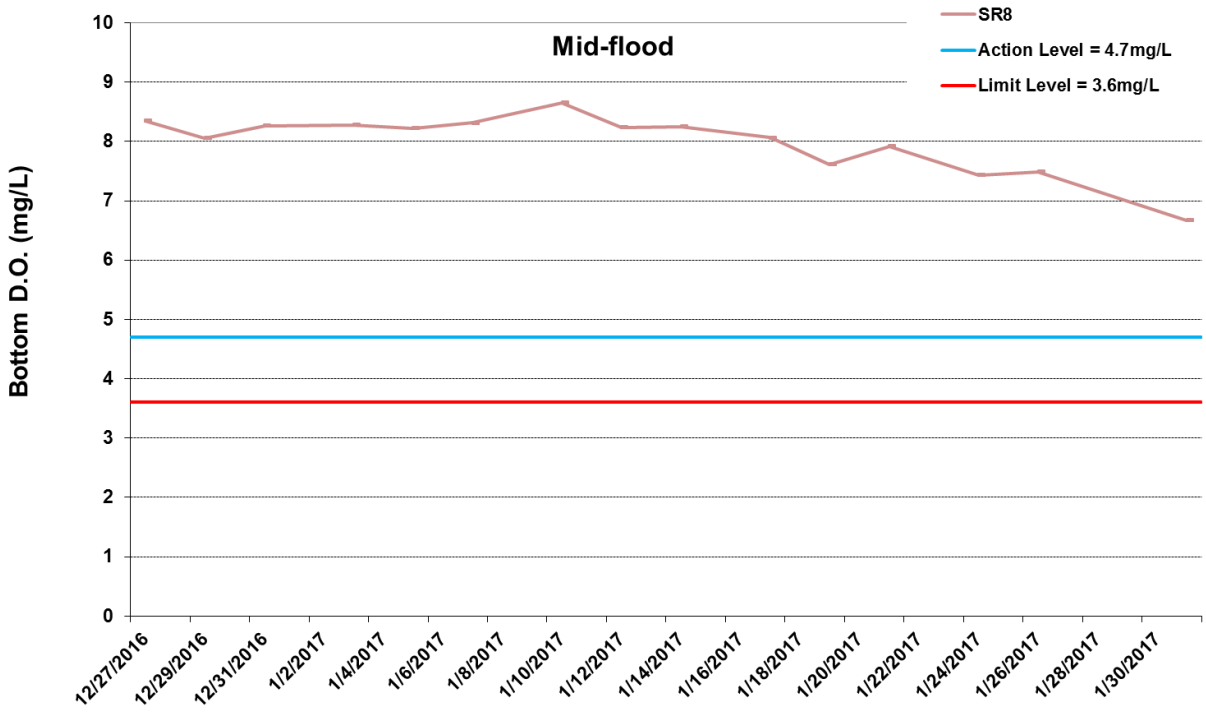
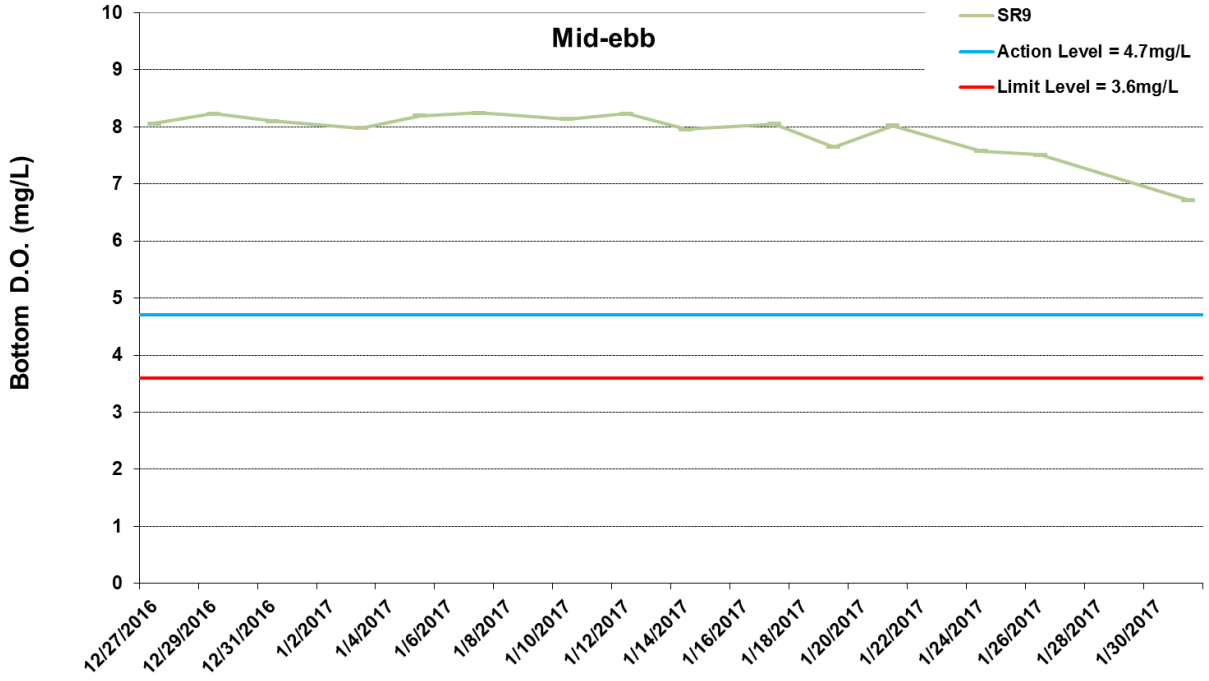


Figure I24 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom water between 27 December 2016 and 31 January 2017 at SR8. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



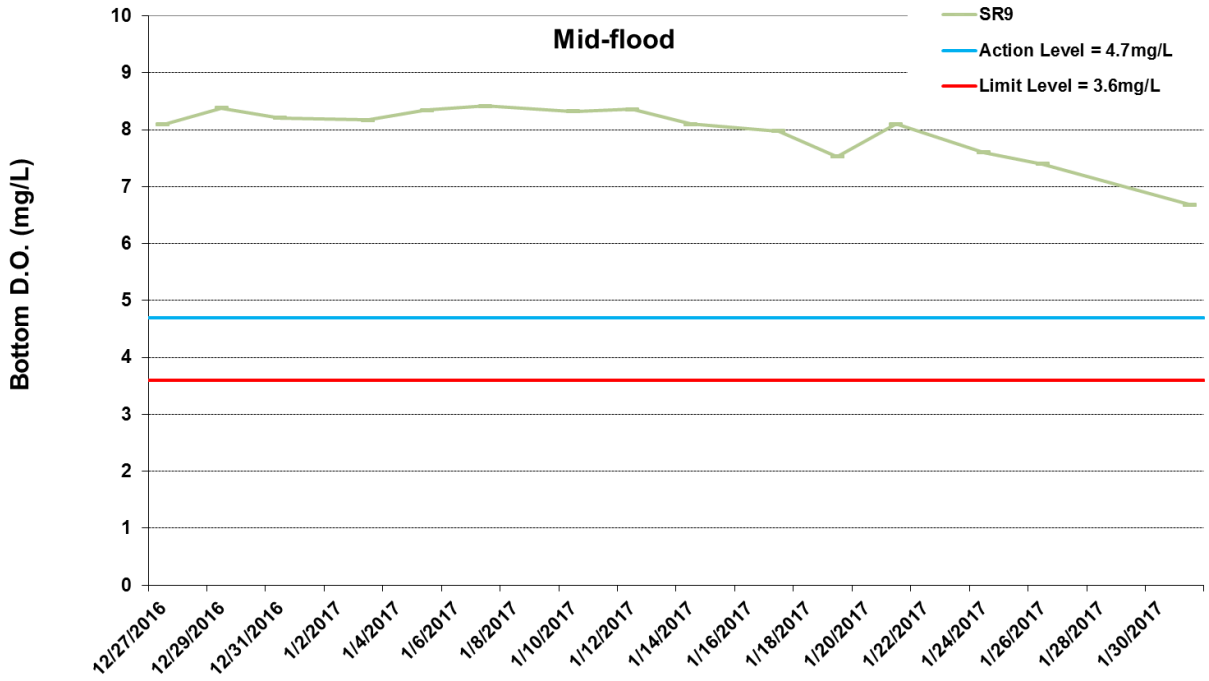
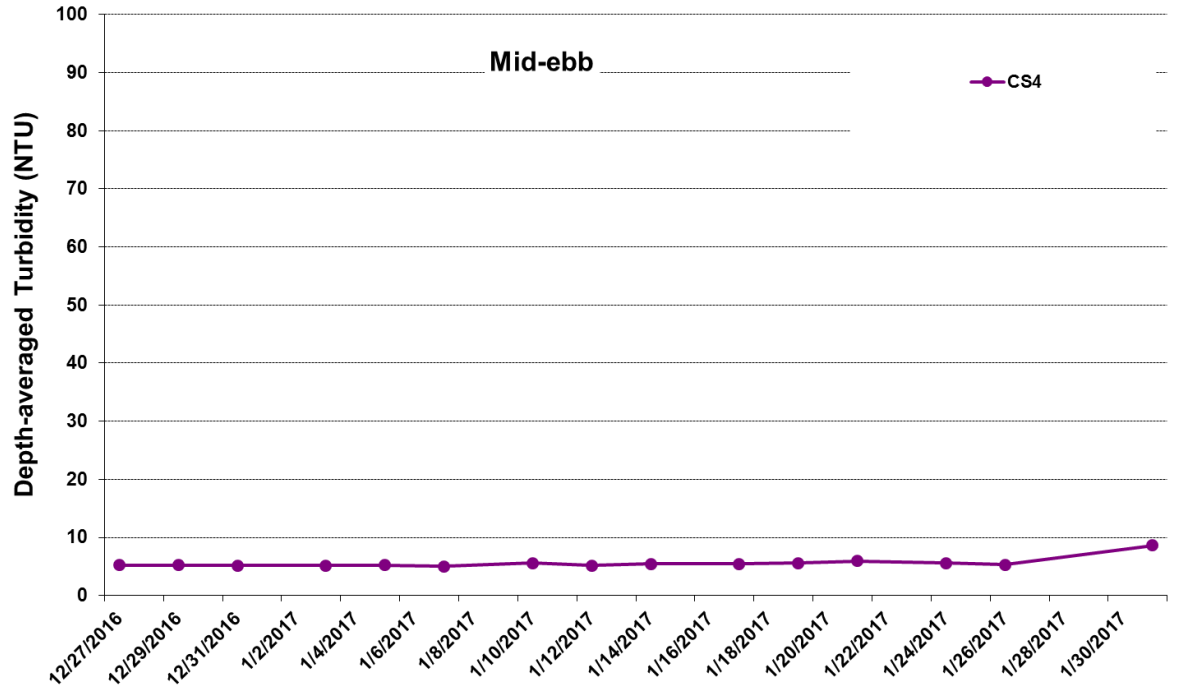


Figure I25 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom water between 27 December 2016 and 31 January 2017 at SR9. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



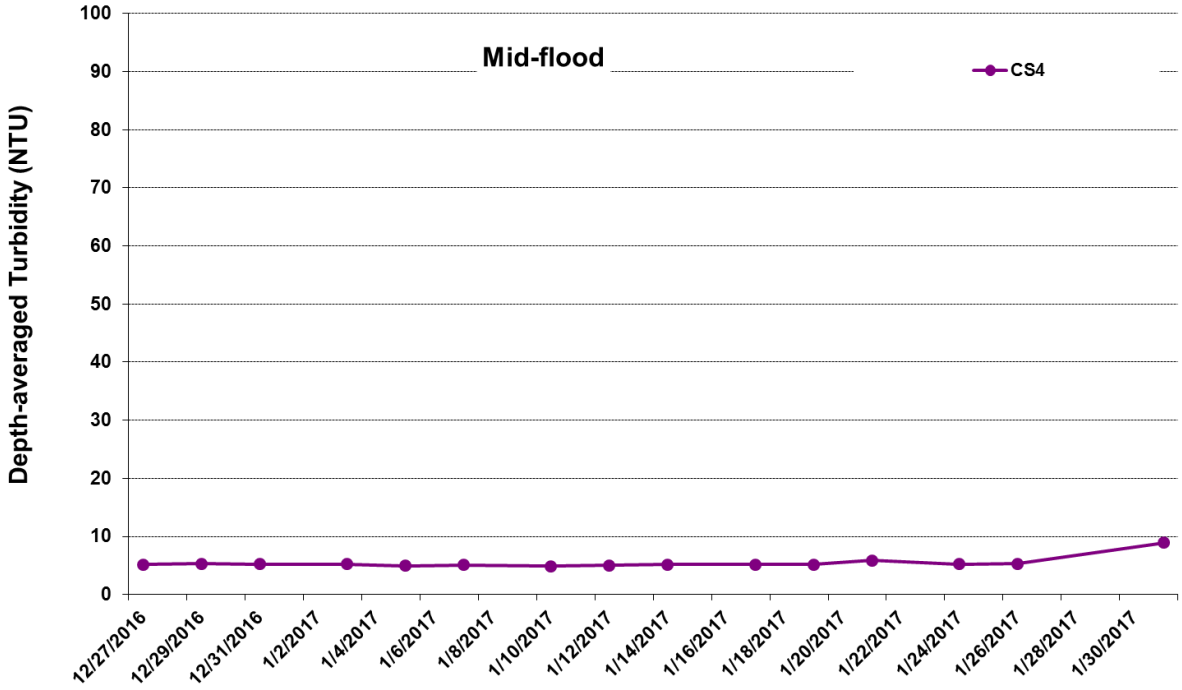
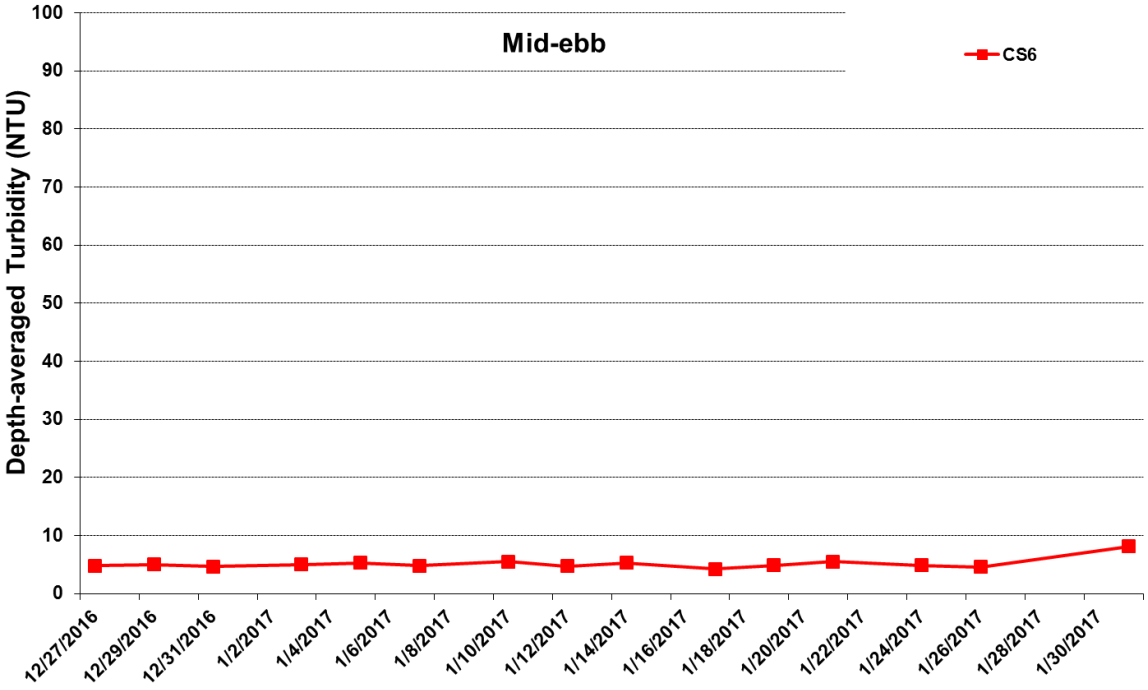


Figure I26 Impact Monitoring – Mean Depth-averaged Level of Turbidity (NTU) between 27 December 2016 and 31 January 2017 at CS4. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



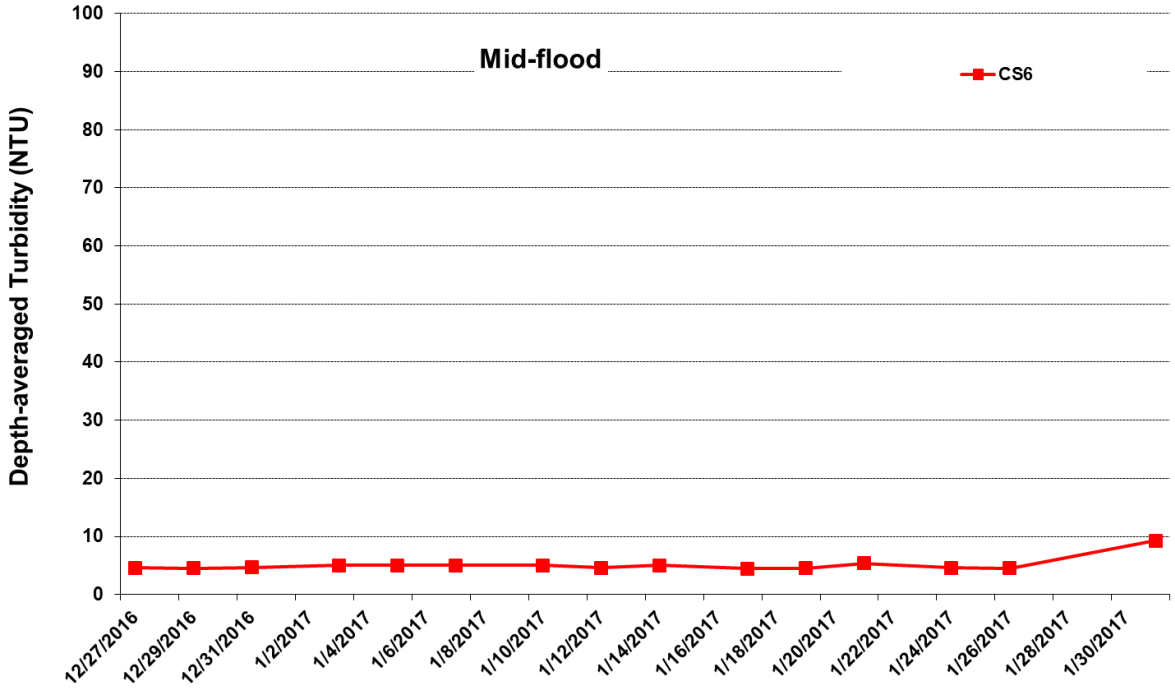
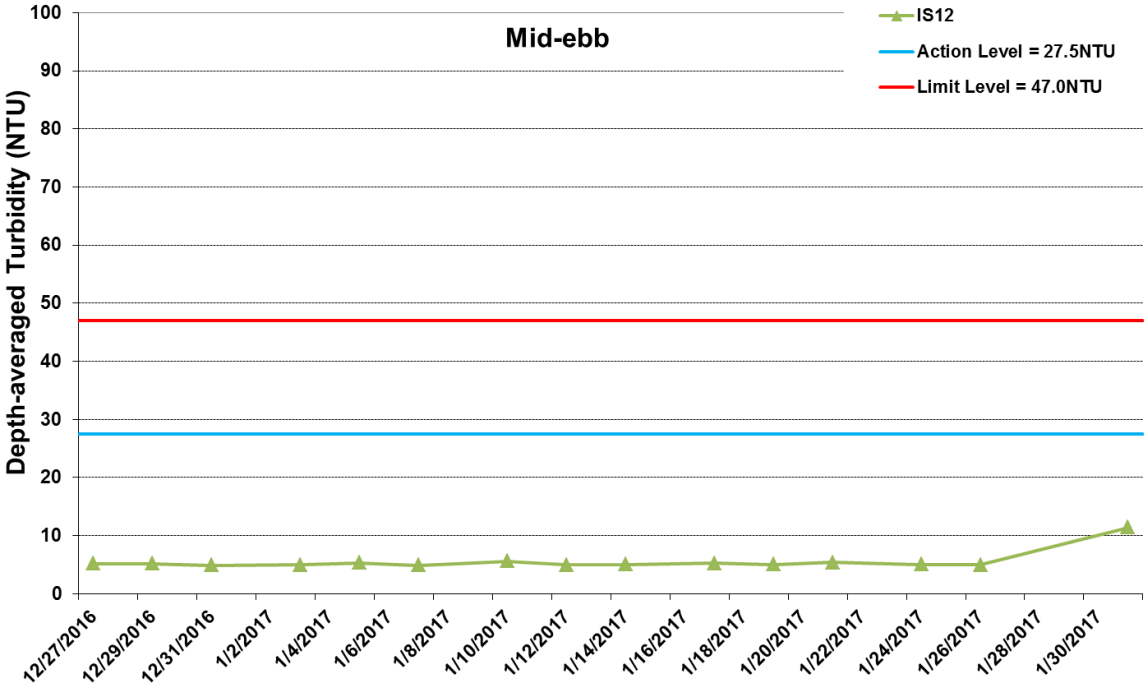


Figure I27 Impact Monitoring – Mean Depth-averaged Level of Turbidity (NTU) between 27 December 2016 and 31 January 2017 at CS6. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



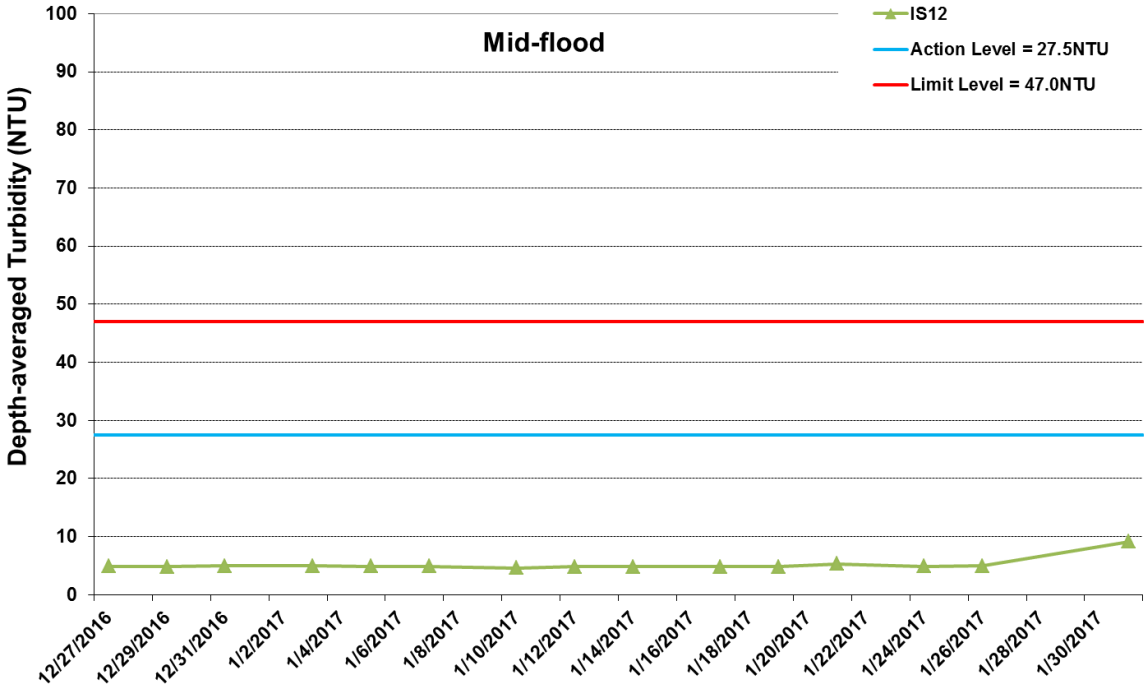
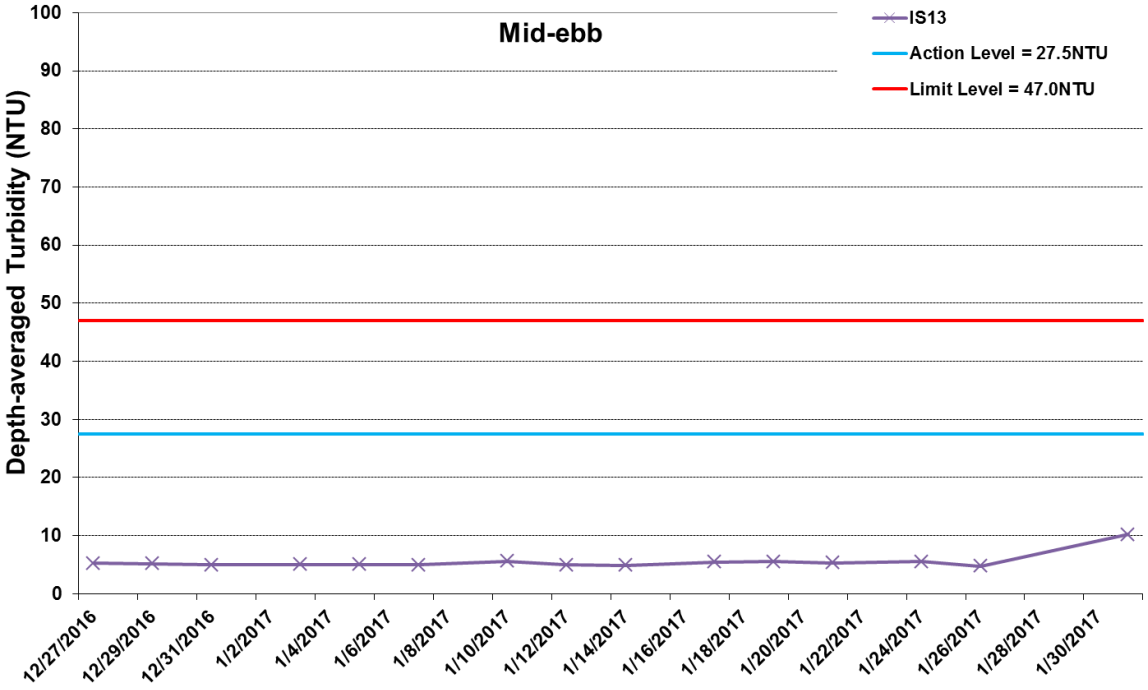


Figure I28 Impact Monitoring – Mean Depth-averaged Level of Turbidity (NTU) between 27 December 2016 and 31 January 2017 at IS12. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



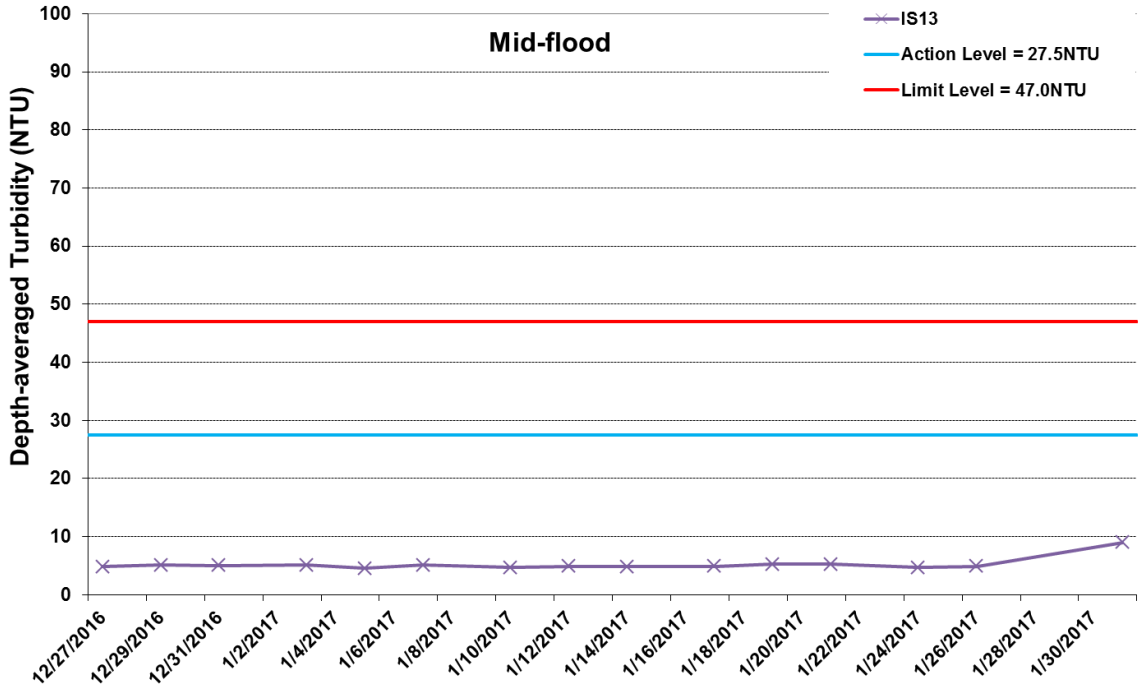
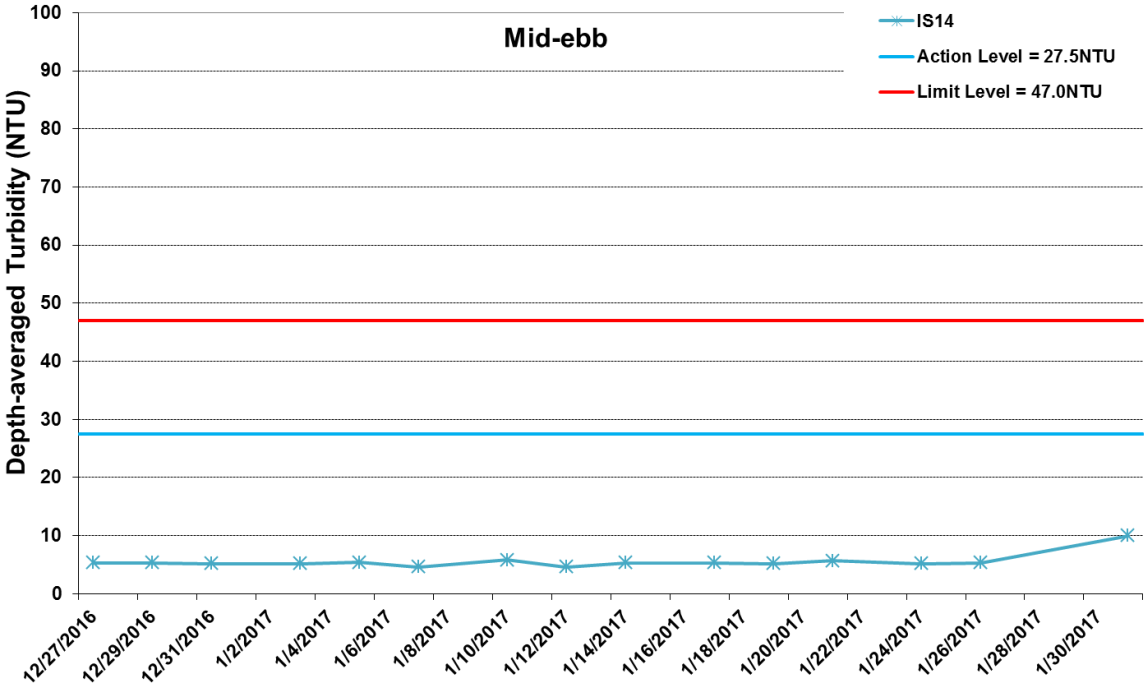


Figure I29 Impact Monitoring – Mean Depth-averaged Level of Turbidity (NTU) between 27 December 2016 and 31 January 2017 at IS13. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



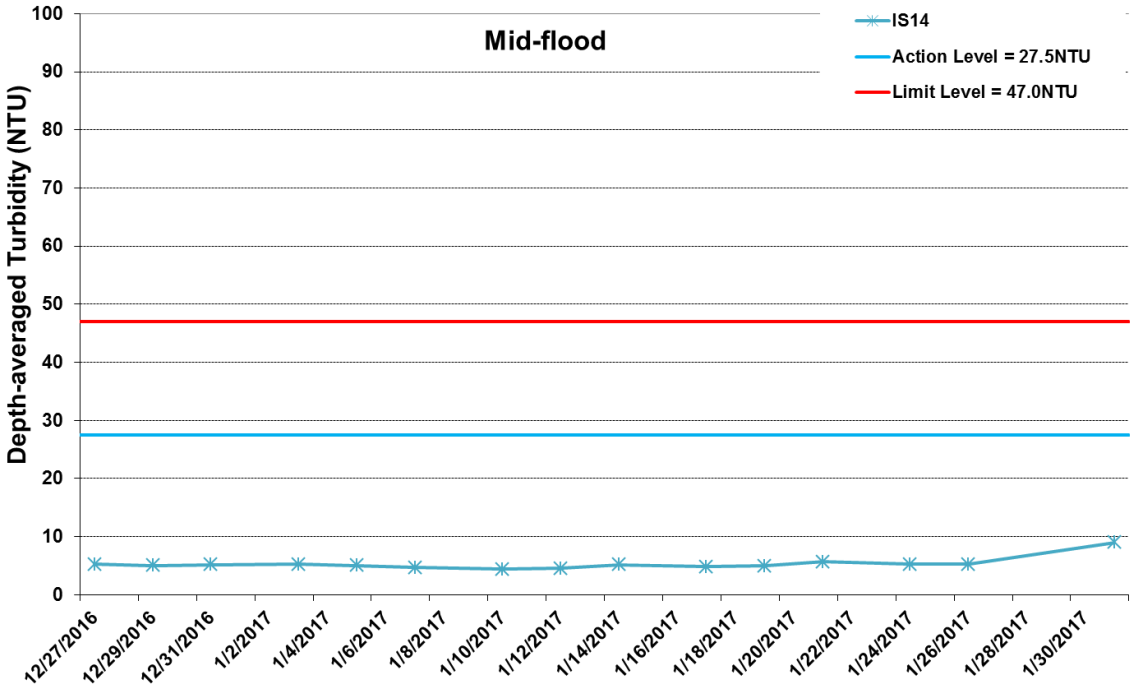
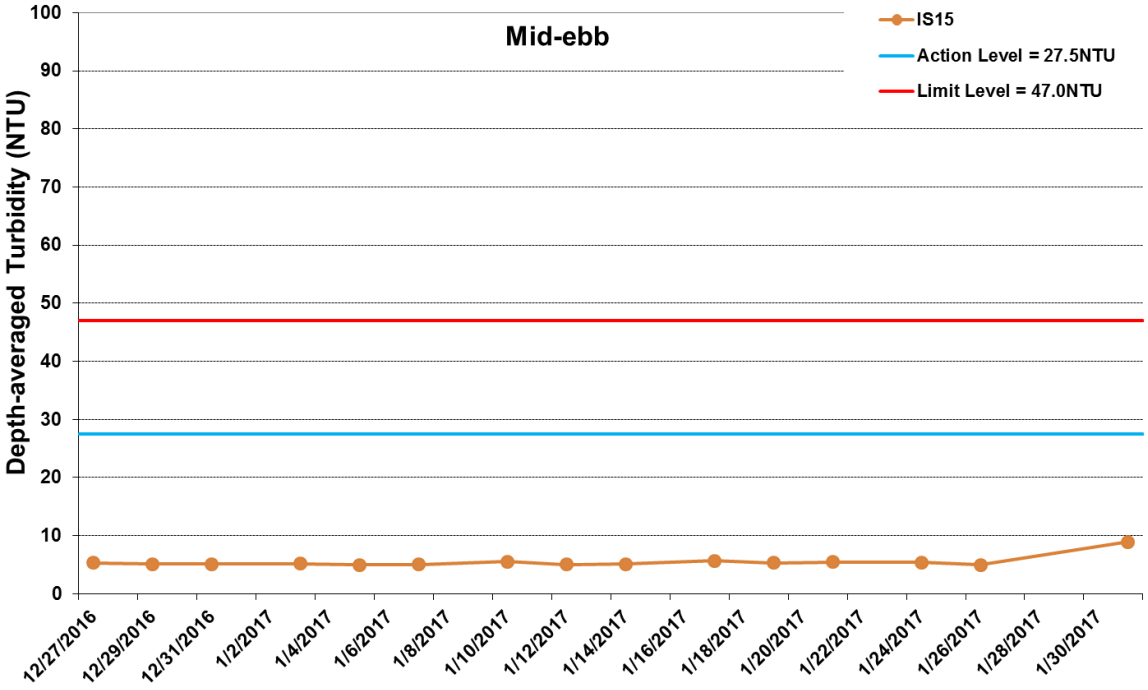


Figure I30 Impact Monitoring – Mean Depth-averaged Level of Turbidity (NTU) between 27 December 2016 and 31 January 2017 at IS14. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



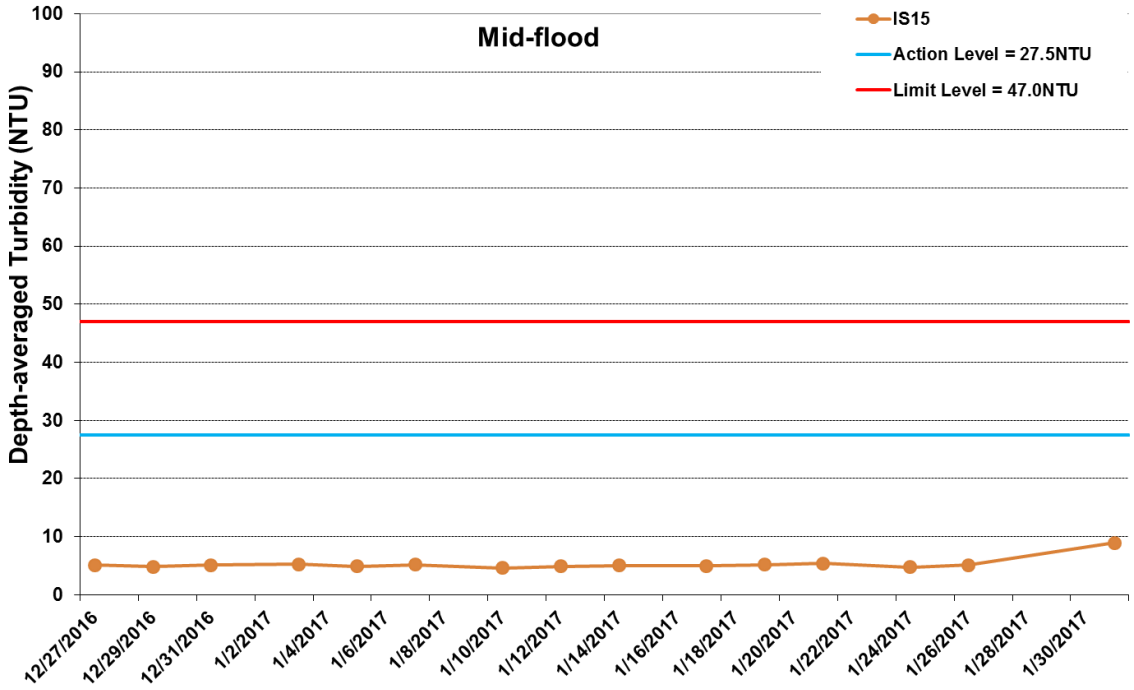
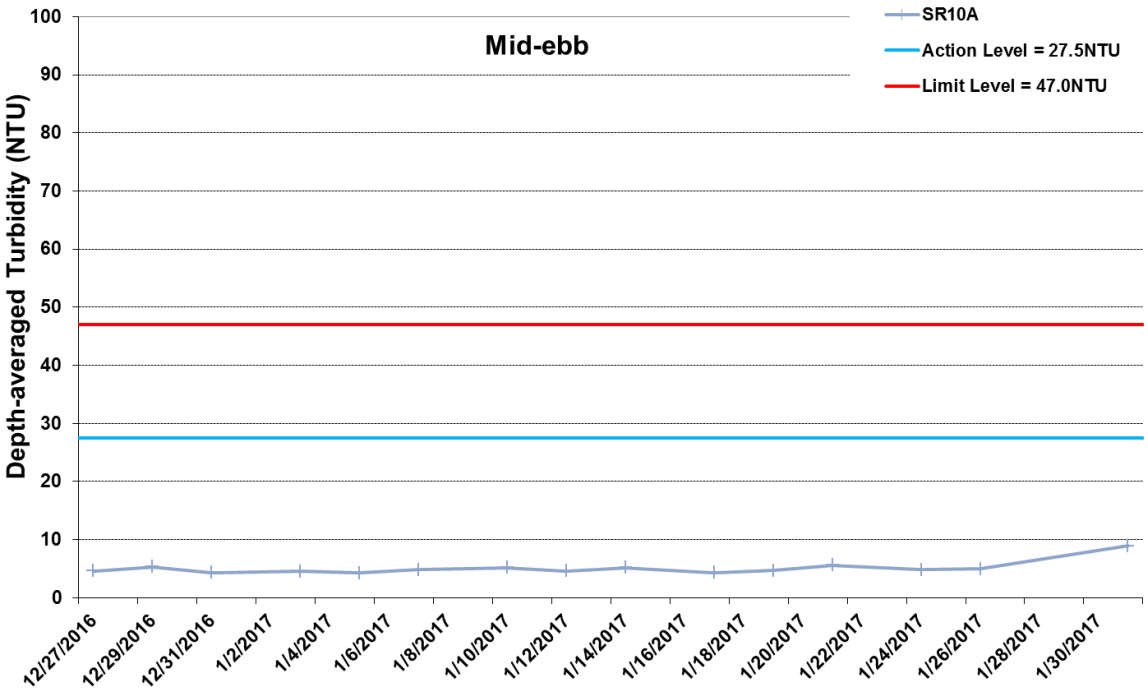


Figure I31 Impact Monitoring – Mean Depth-averaged Level of Turbidity (NTU) between 27 December 2016 and 31 January 2017 at IS15. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



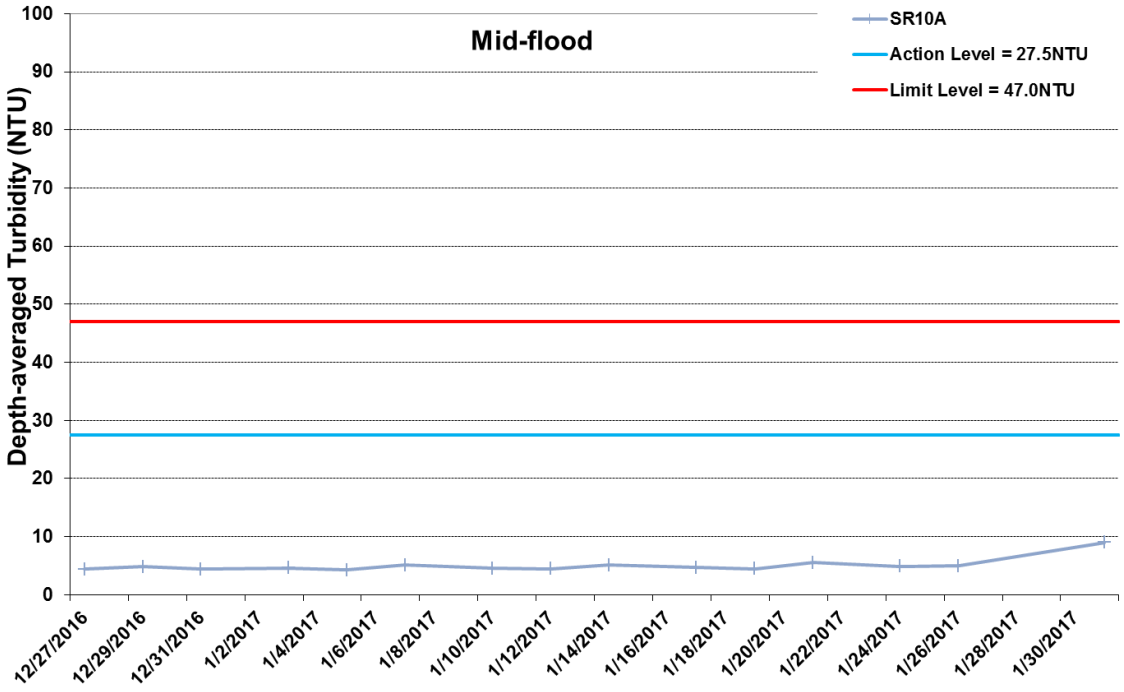
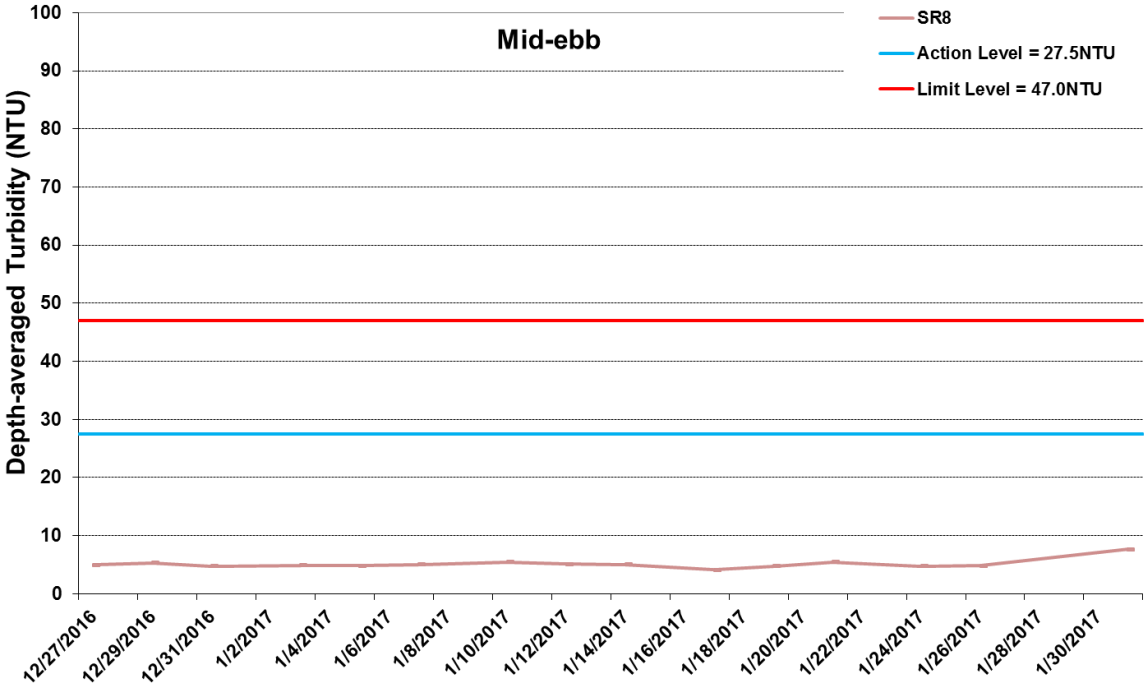


Figure I32 Impact Monitoring – Mean Depth-averaged Level of Turbidity (NTU) between 27 December 2016 and 31 January 2017 at SR10A. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



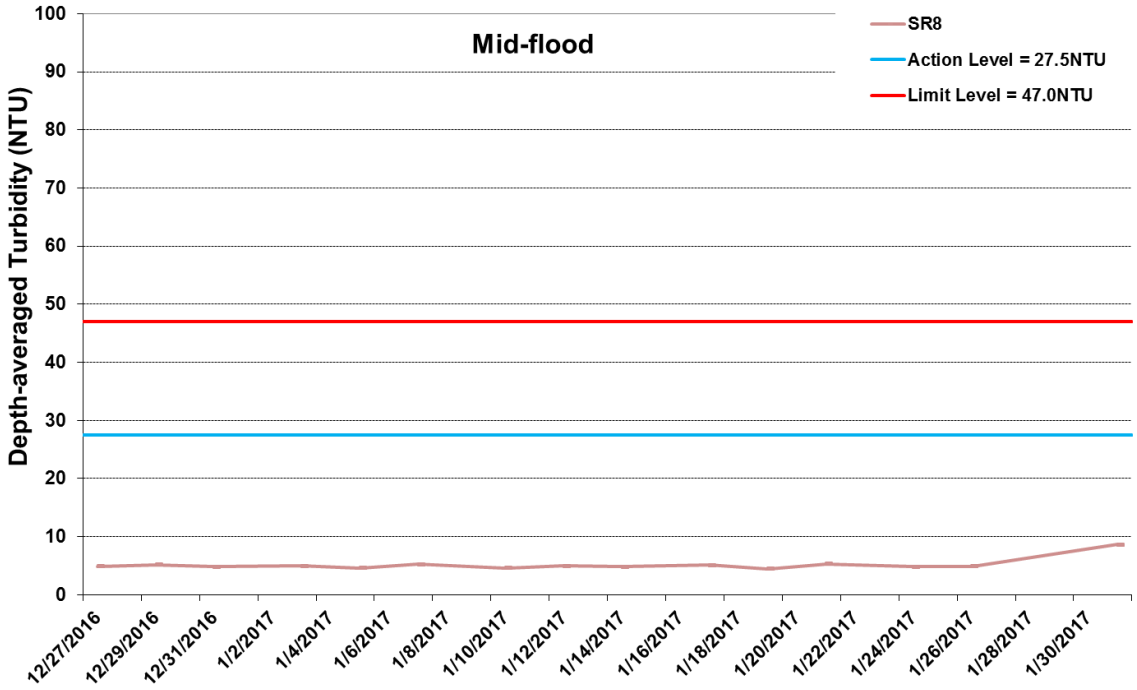
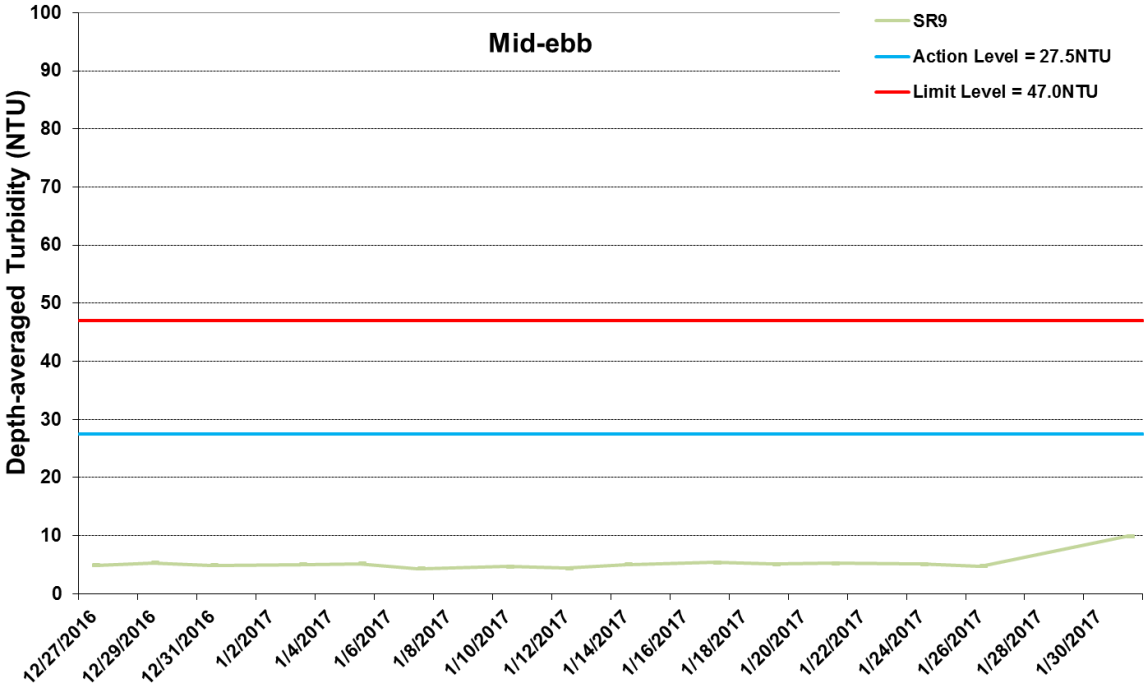


Figure I33 Impact Monitoring – Mean Depth-averaged Level of Turbidity (NTU) between 27 December 2016 and 31 January 2017 at SR8. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



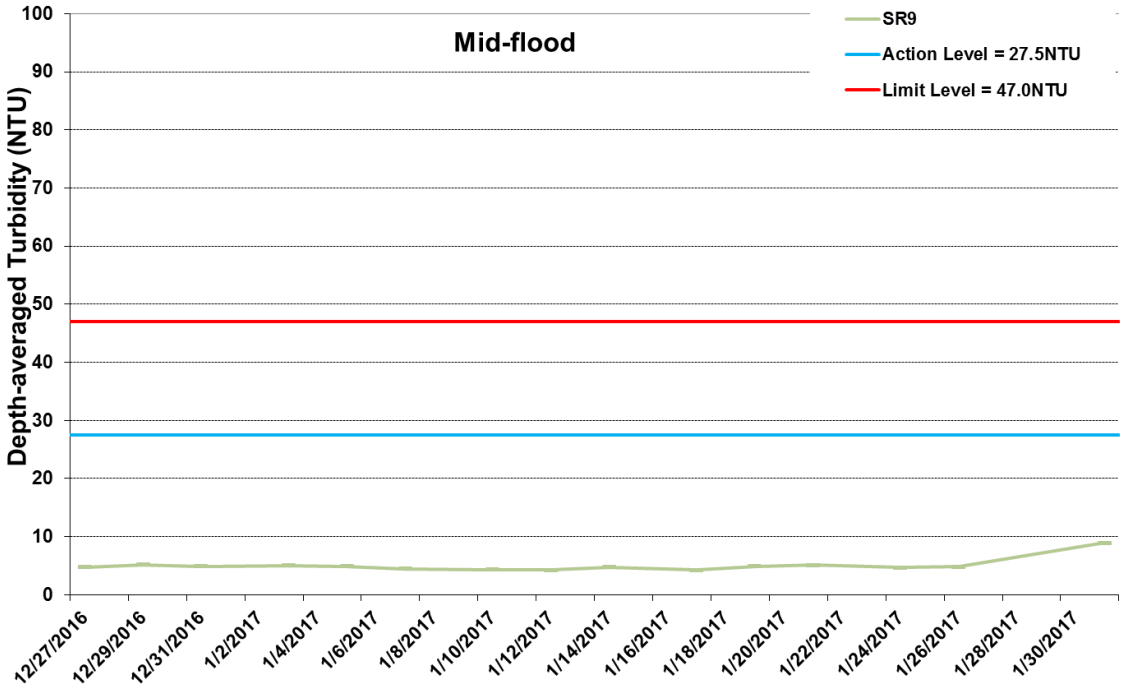
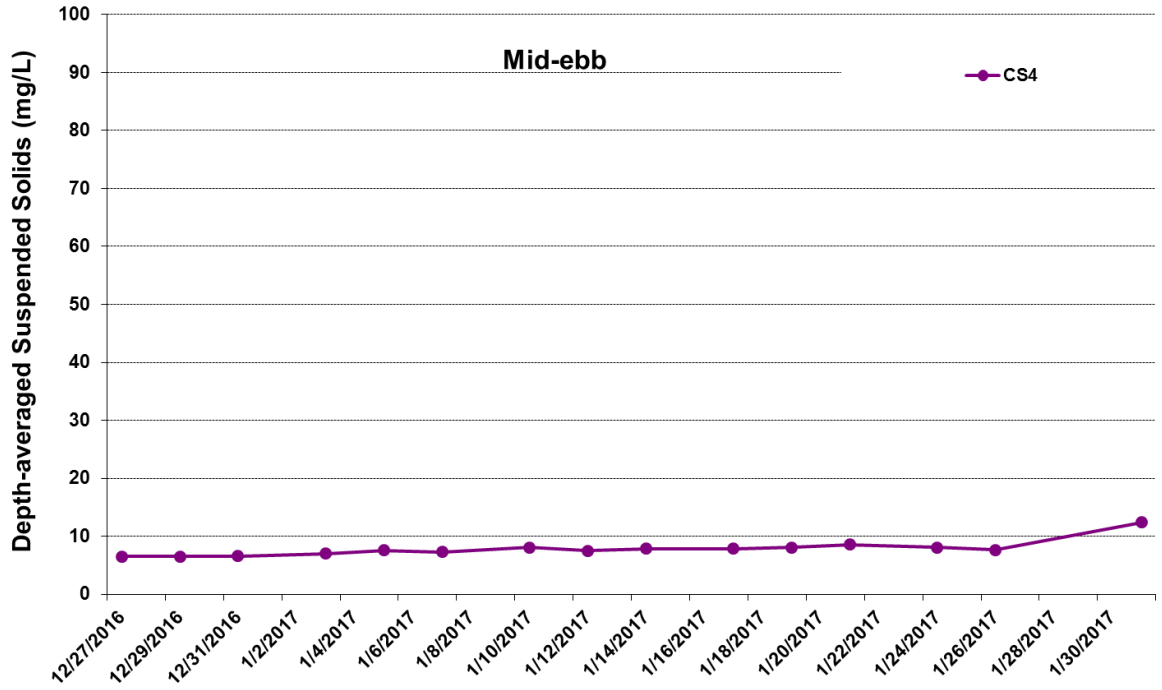


Figure I34 Impact Monitoring – Mean Depth-averaged Level of Turbidity (NTU) between 27 December 2016 and 31 January 2017 at SR9. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



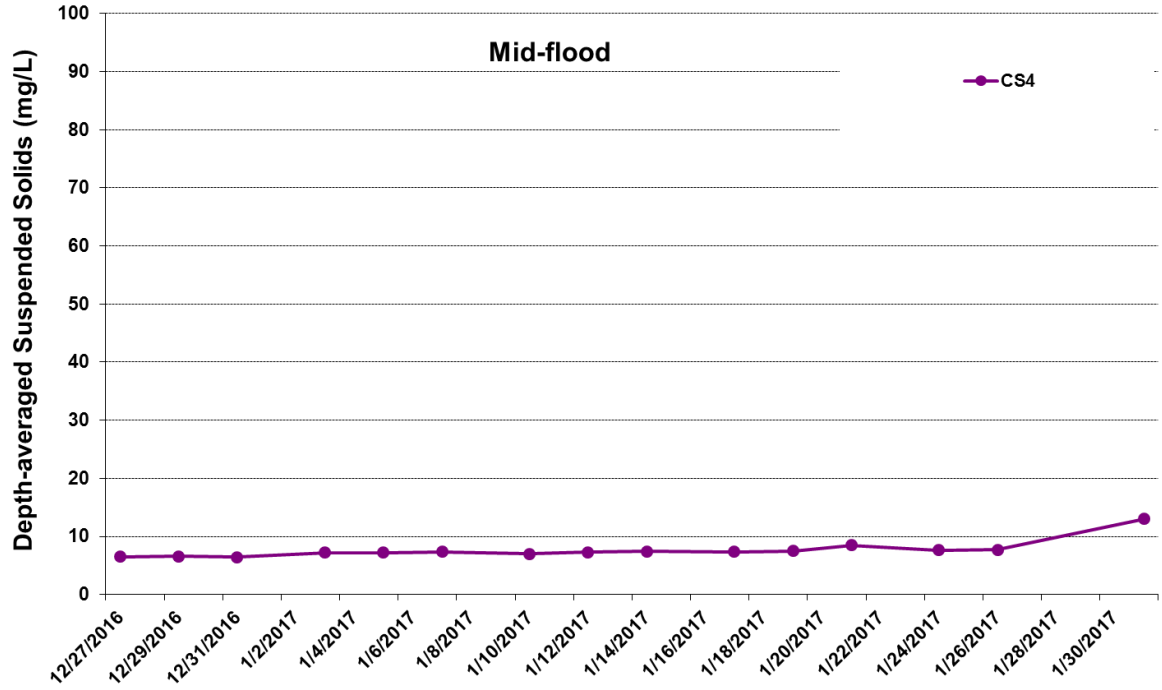
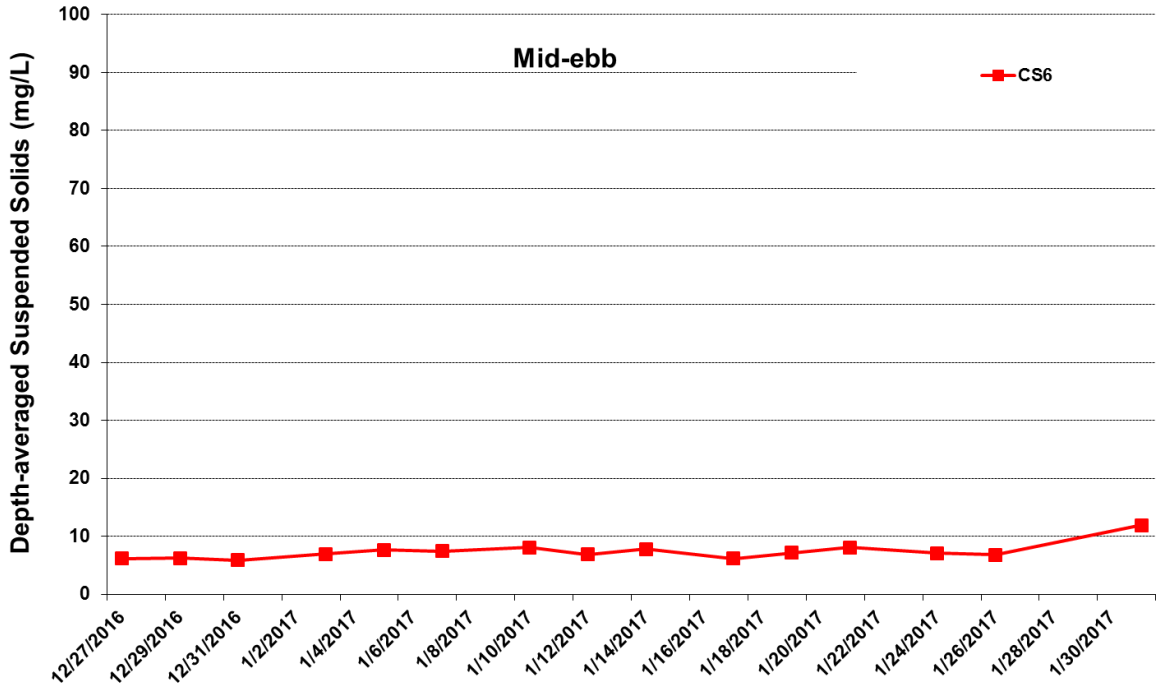


Figure I35 Impact Monitoring – Mean Depth-averaged Level of Suspended Solids (mg/L) between 27 December 2016 and 31 January 2017 at CS4. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



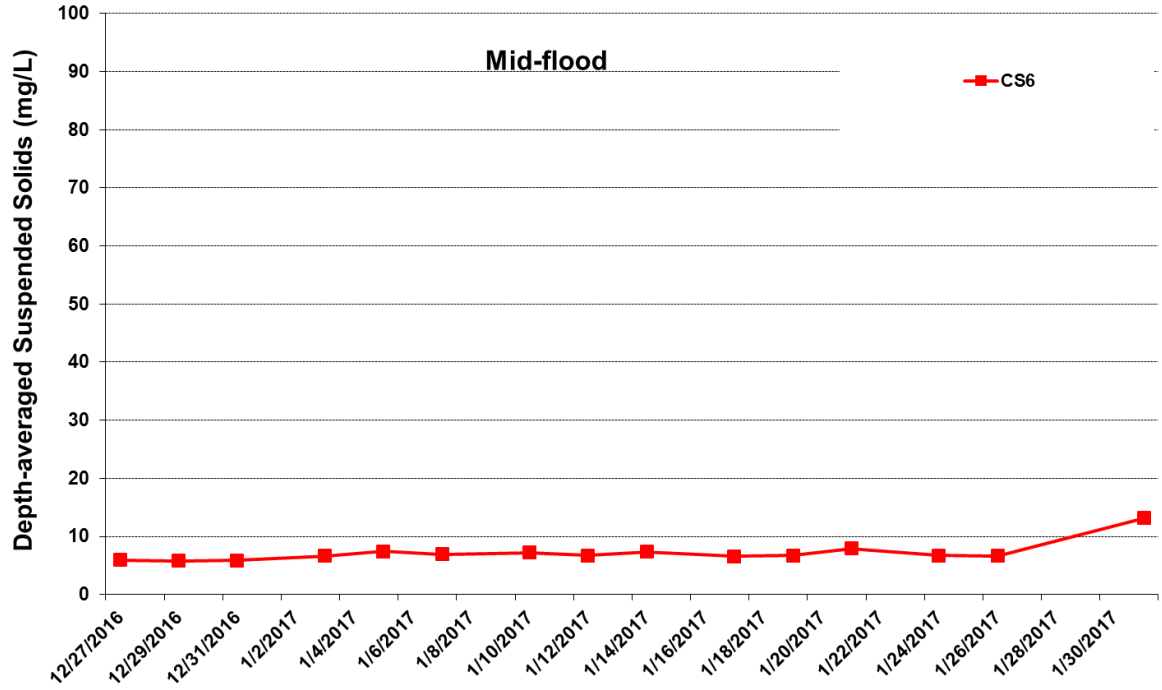
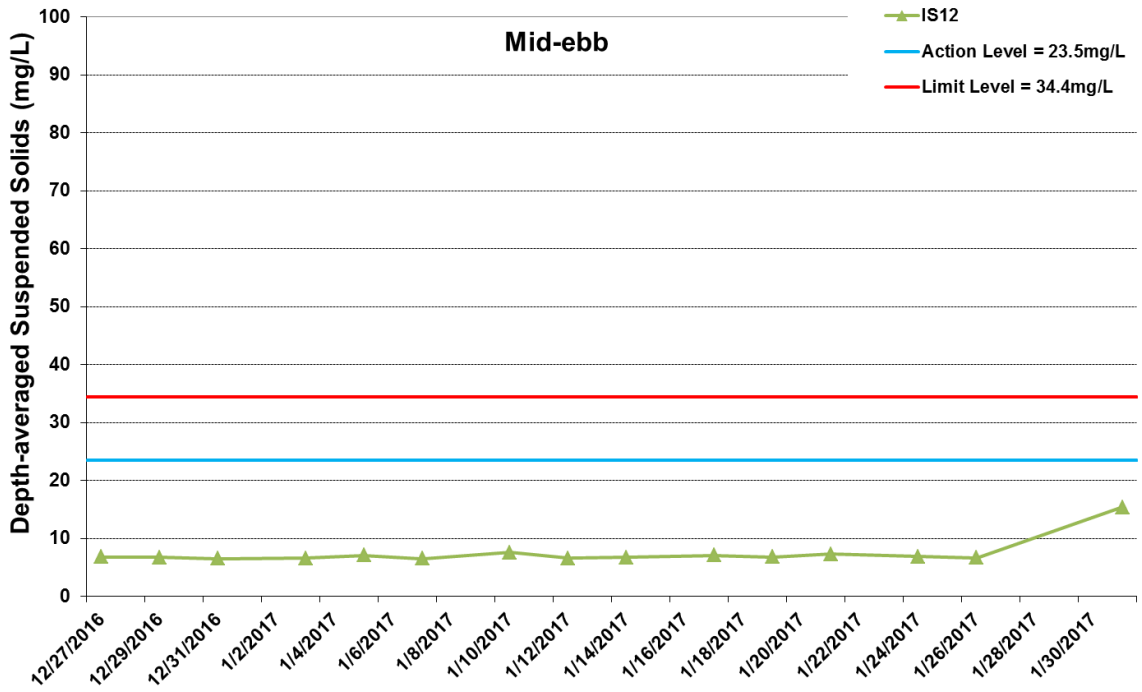


Figure I36 Impact Monitoring – Mean Depth-averaged Level of Suspended Solids (mg/L) between 27 December 2016 and 31 January 2017 at CS6. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



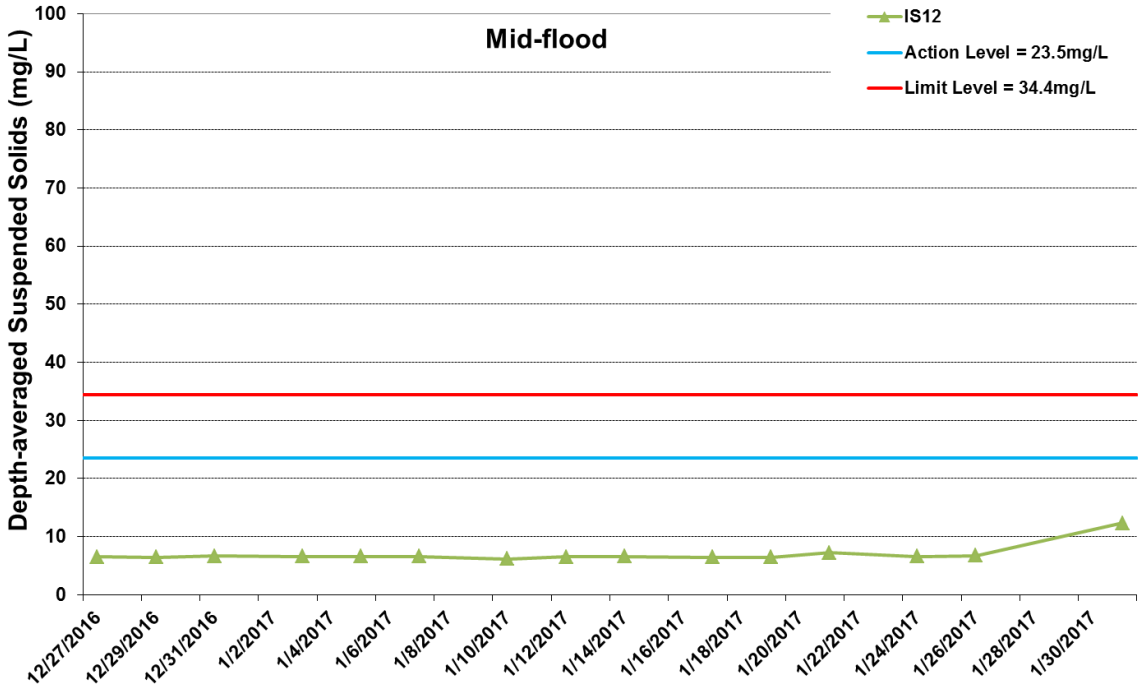
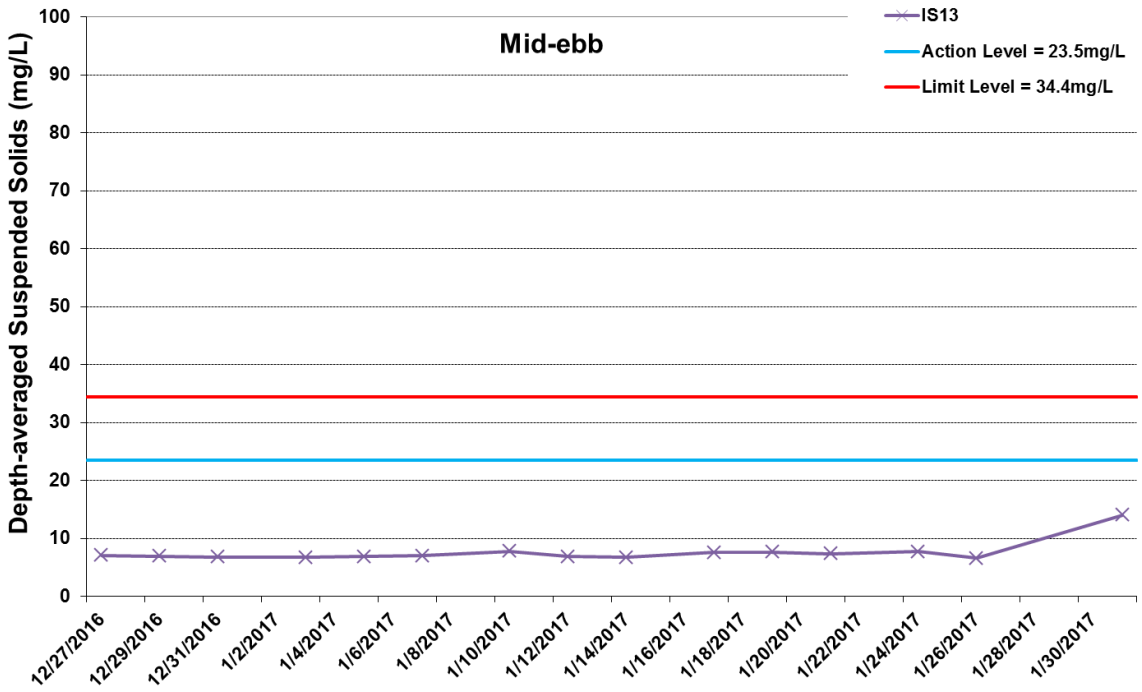


Figure I37 Impact Monitoring – Mean Depth-averaged Level of Suspended Solids (mg/L) between 27 December 2016 and 31 January 2017 at IS12. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



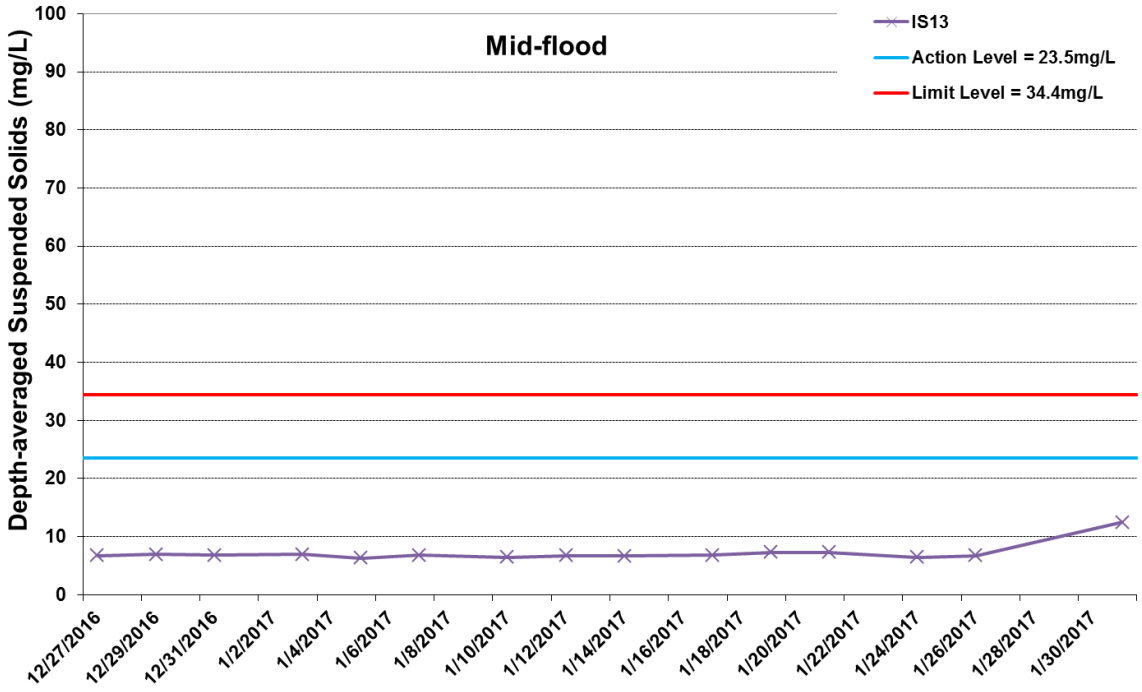
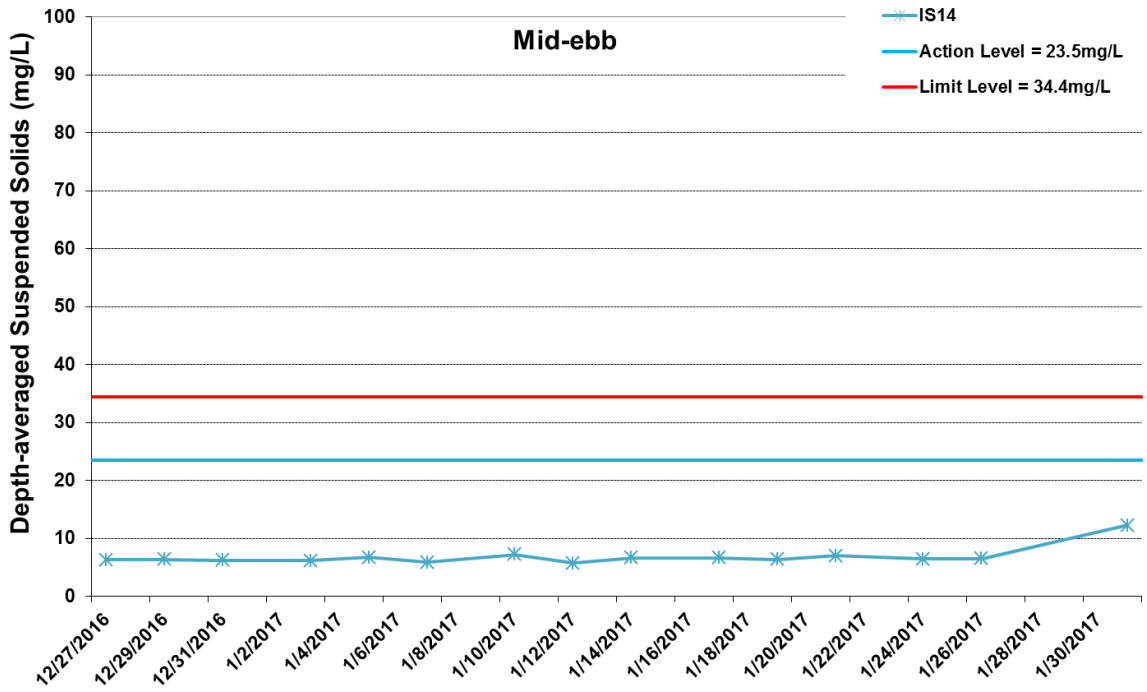


Figure I38 Impact Monitoring – Mean Depth-averaged Level of Suspended Solids (mg/L) between 27 December 2016 and 31 January 2017 at IS13. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



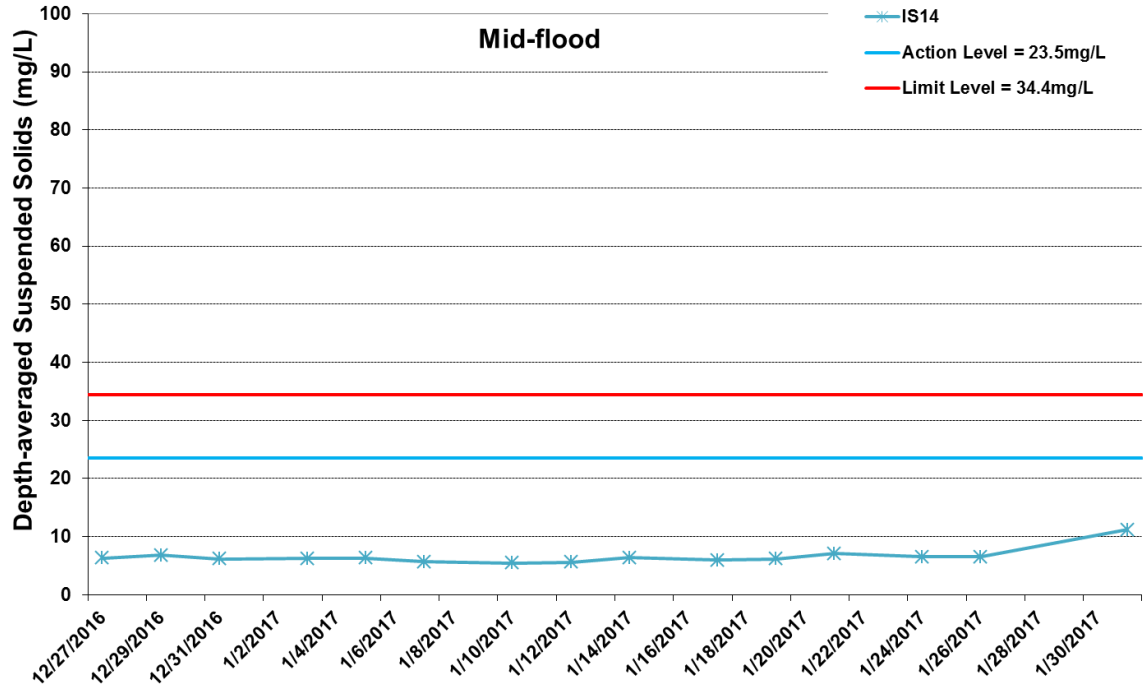
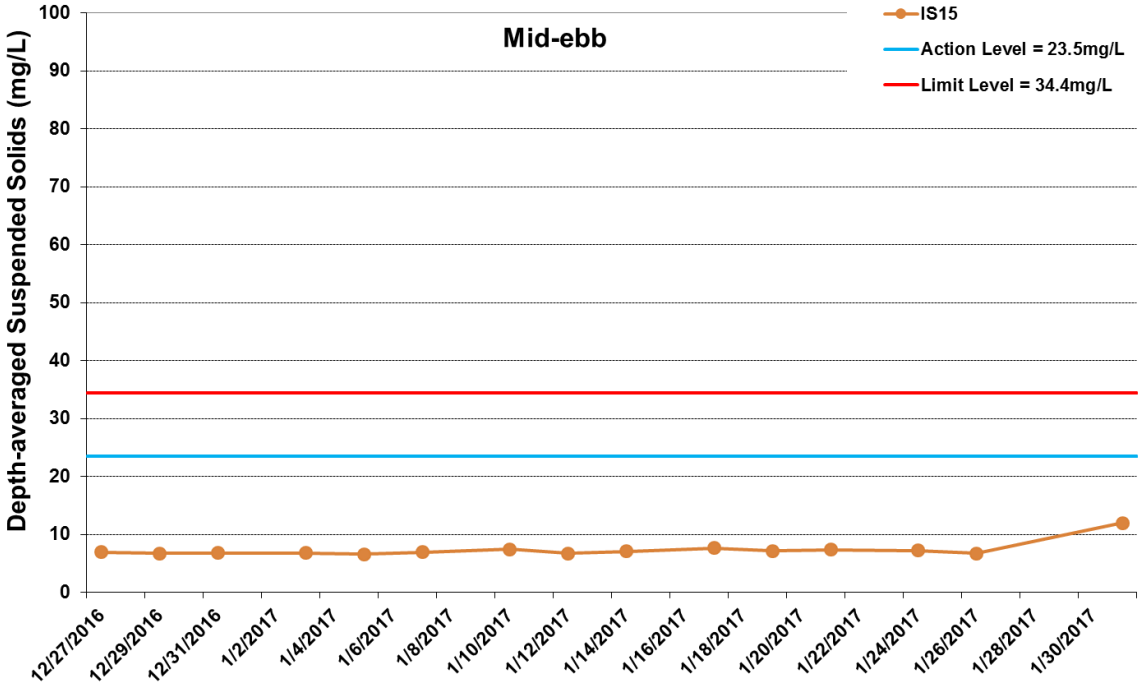


Figure I39 Impact Monitoring – Mean Depth-averaged Level of Suspended Solids (mg/L) between 27 December 2016 and 31 January 2017 at IS14. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



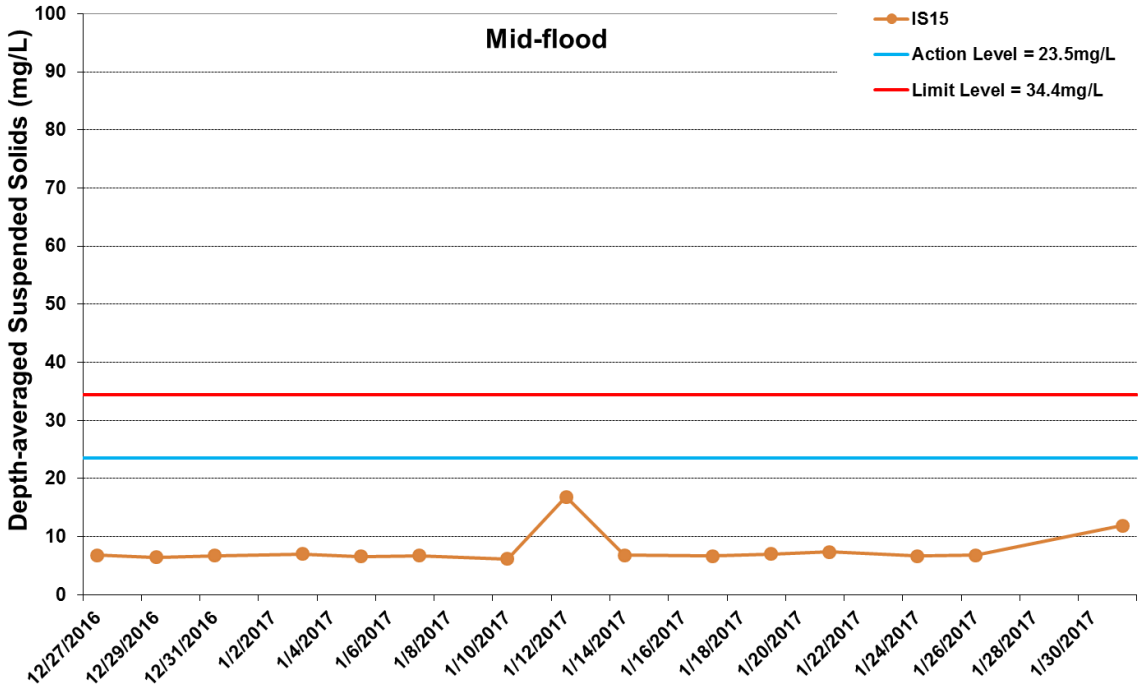
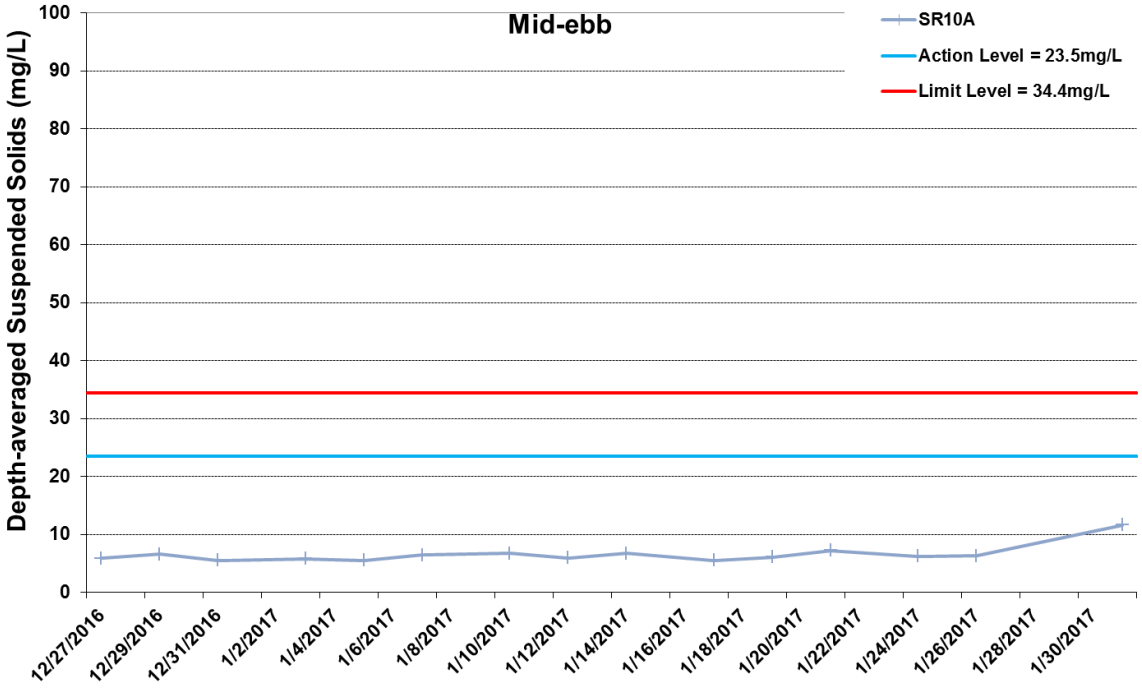


Figure I40 Impact Monitoring – Mean Depth-averaged Level of Suspended Solids (mg/L) between 27 December 2016 and 31 January 2017 at IS15. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



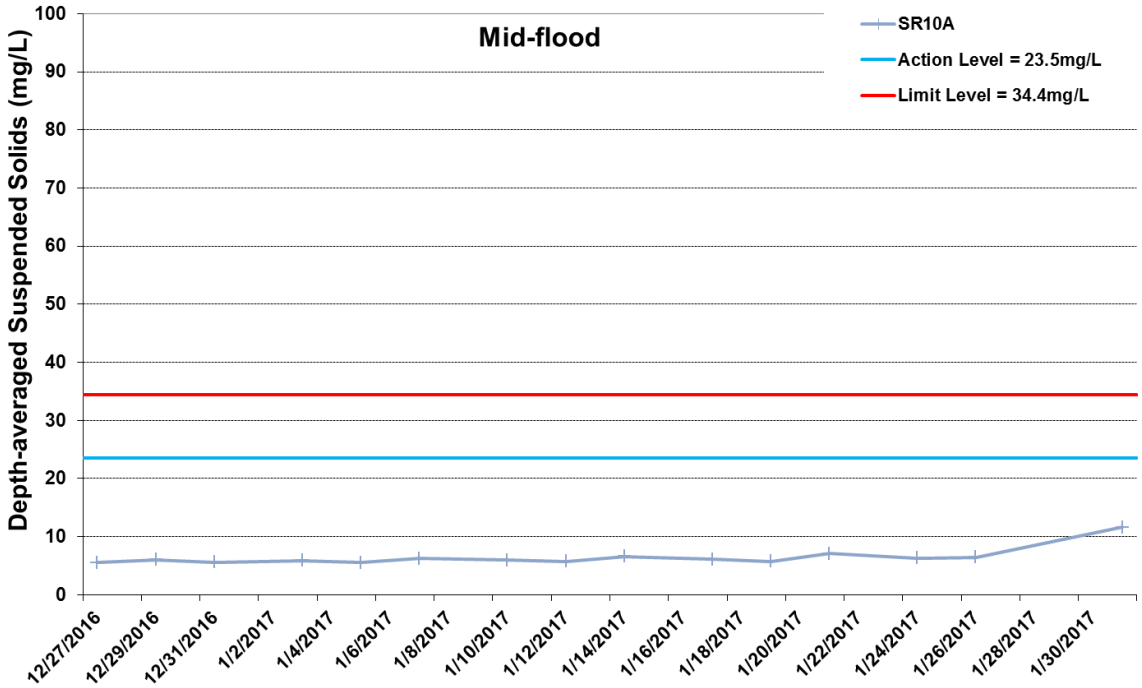
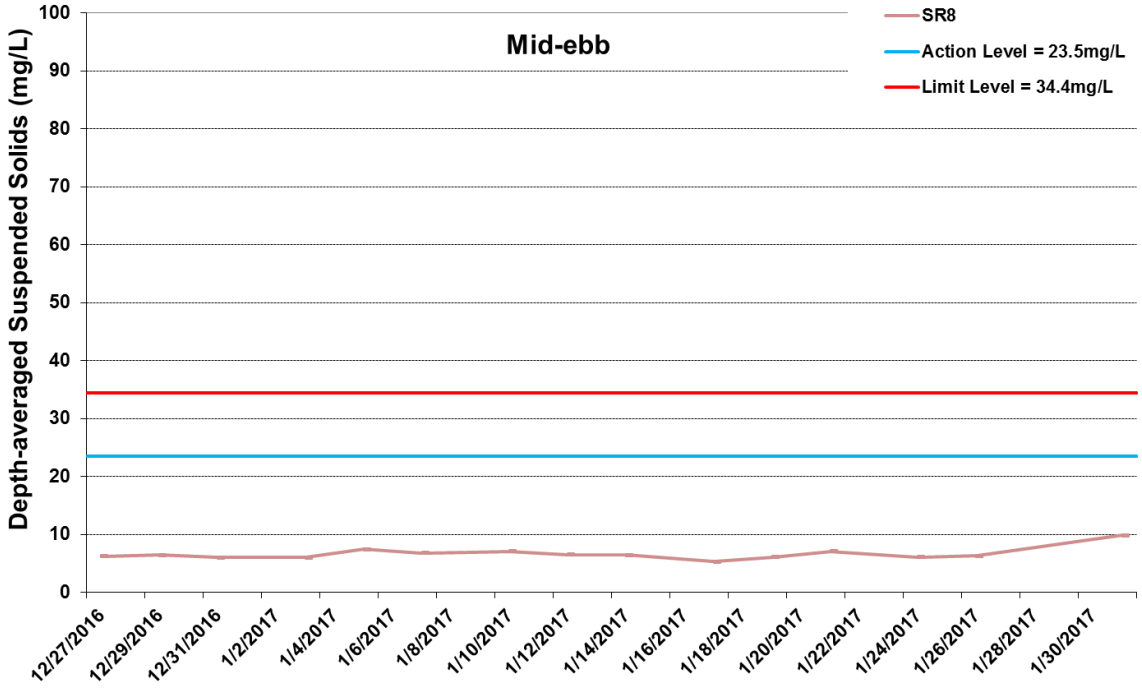


Figure I41 Impact Monitoring – Mean Depth-averaged Level of Suspended Solids (mg/L) between 27 December 2016 and 31 January 2017 at SR10A. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



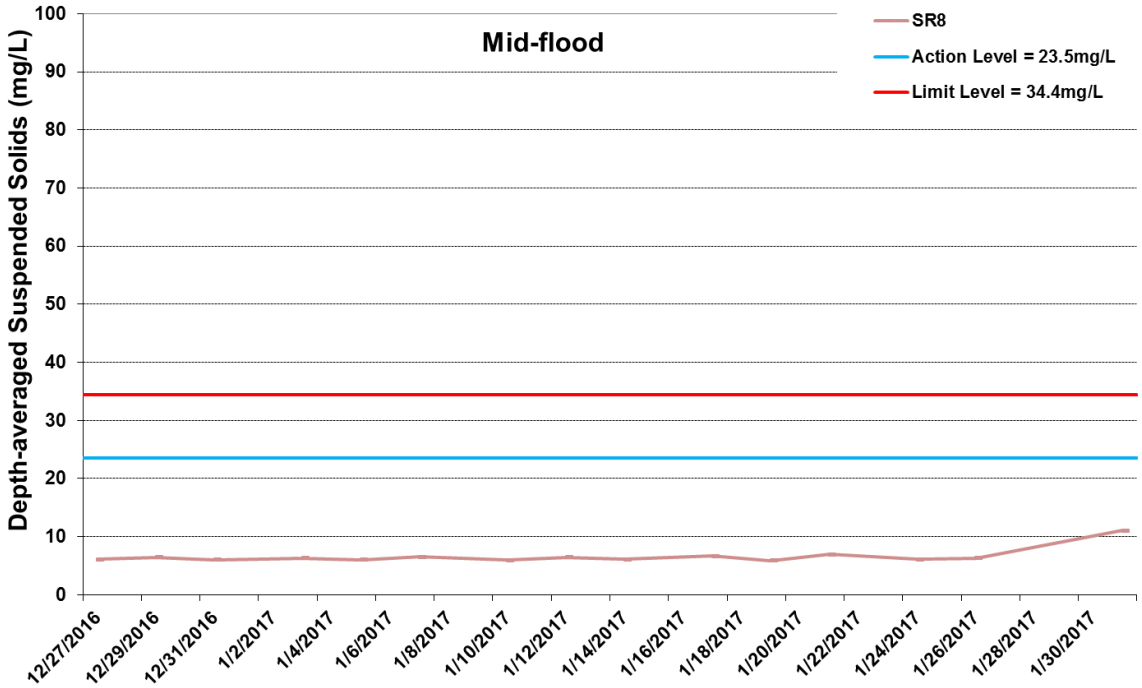
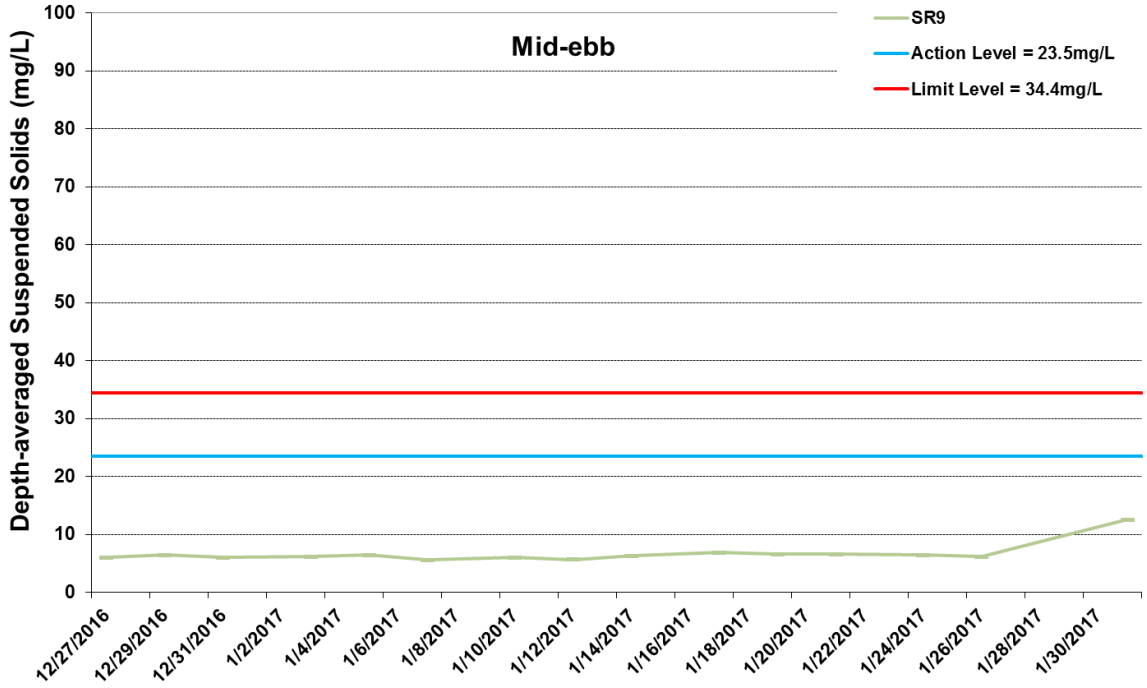


Figure I42 Impact Monitoring – Mean Depth-averaged Level of Suspended Solids (mg/L) between 27 December 2016 and 31 January 2017 at SR8. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls



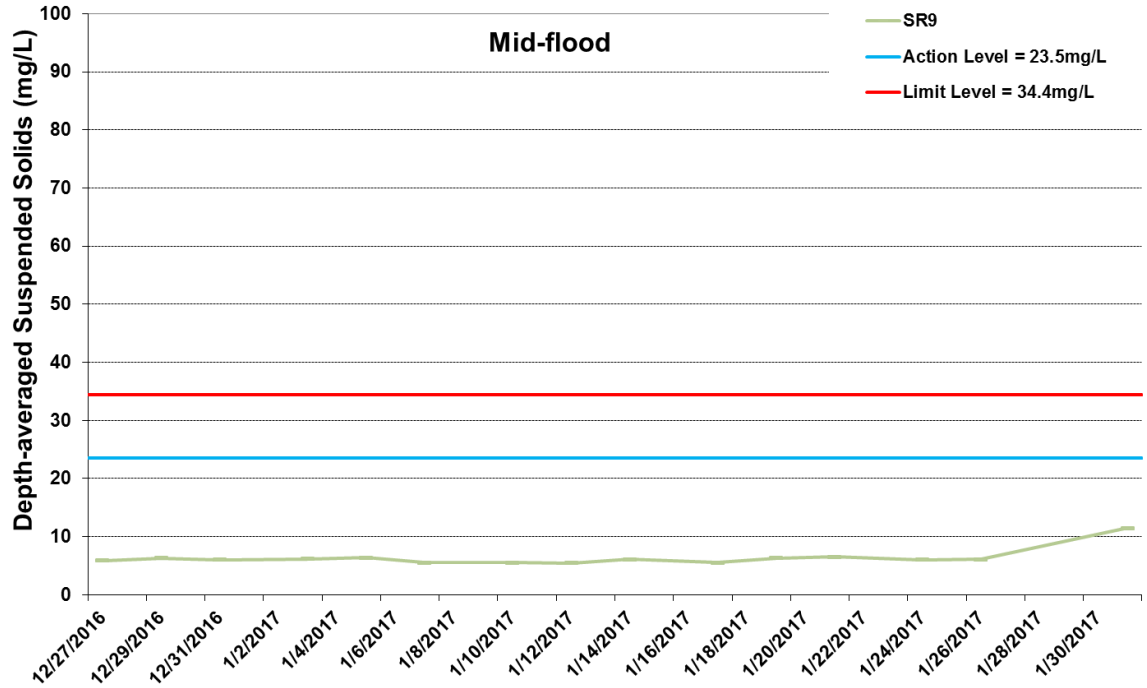


Figure I43 Impact Monitoring – Mean Depth-averaged Level of Suspended Solids (mg/L) between 27 December 2016 and 31 January 2017 at SR9. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine works included: Dredging at Portion N-A (27/12/2016 – 14/1/2017). WQM was resumed on 27/12/2016.

Ref: 0212330_Impact-WQM_January2017_graphs_Rev a.xls

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	CS4	Surface	1	1	1	12:23	20.9	8.14	28.1	9.28	5.04	6.8
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	CS4	Surface	1	1	2	12:23	20.9	8.1	28.2	9.32	5.06	7.2
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	CS4	Middle	9.3	2	1	12:23	21	8.23	28.2	9.82	5.22	7.1
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	CS4	Middle	9.3	2	2	12:23	21	8.27	28.2	9.84	5.24	7.3
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	CS4	Bottom	17.6	3	1	12:23	21.1	8.12	28.4	11.32	5.33	7.3
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	CS4	Bottom	17.6	3	2	12:23	21.1	8.14	28.4	11.26	5.36	7.5
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	CS6	Surface	1	1	1	10:10	21.2	7.99	28	8.34	5.04	6.6
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	CS6	Surface	1	1	2	10:10	21.2	8.01	28.1	8.35	4.98	6.8
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	CS6	Middle	6.8	2	1	10:10	21.2	7.94	28.2	8.38	4.88	6.4
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	CS6	Middle	6.8	2	2	10:10	21.2	7.96	28.2	8.42	4.92	6.6
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	CS6	Bottom	12.5	3	1	10:10	21.2	7.89	28.3	8.54	5.14	6.7
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	CS6	Bottom	12.5	3	2	10:10	21	7.9	28.3	8.5	5.22	6.7
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS12	Surface	1	1	1	11:49	21	7.94	28.1	8.34	4.74	6.4
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS12	Surface	1	1	2	11:49	21.1	7.96	28.2	8.36	4.78	6.4
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS12	Middle	6.9	2	1	11:49	21.1	7.85	28.2	8.58	4.87	6.4
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS12	Middle	6.9	2	2	11:49	21.1	7.86	28.1	8.62	4.84	6.6
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS12	Bottom	12.8	3	1	11:49	21.2	8.12	28.3	8.54	5.22	6.9
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS12	Bottom	12.8	3	2	11:49	21.2	8.14	28.2	8.58	5.18	6.7
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS13	Surface	1	1	1	11:30	21	7.94	28.2	8.34	4.94	6.7
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS13	Surface	1	1	2	11:30	21.1	7.97	28.1	8.3	5	6.9
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS13	Middle	5.7	2	1	11:30	21.1	8.08	28.2	8.26	5.08	6.8
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS13	Middle	5.7	2	2	11:30	21	8.1	28.2	8.24	5.04	7
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS13	Bottom	10.4	3	1	11:30	21	7.89	28.3	8.5	5.23	7.1
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS13	Bottom	10.4	3	2	11:30	21	7.93	28.2	8.56	5.28	7.1
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS14	Surface	1	1	1	12:06	20.9	7.94	28.1	8.18	5.14	6.1
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS14	Surface	1	1	2	12:06	20.9	7.9	28.2	8.2	5.18	6.3
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS14	Middle	6	2	1	12:06	21	7.83	28.2	8.24	5.27	6.3
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS14	Middle	6	2	2	12:06	20.9	7.87	28.2	8.28	5.32	6.3
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS14	Bottom	11	3	1	12:06	21.1	8	28.4	8.33	5.2	6
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS14	Bottom	11	3	2	12:06	21.1	8.04	28.4	8.36	5.22	6.4
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS15	Surface	1	1	1	11:14	21.1	7.99	28.2	8.38	5.06	6.8
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS15	Surface	1	1	2	11:14	21.1	8.02	28.1	8.4	5.04	6.8
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS15	Middle	5.3	2	1	11:14	21	8.14	28.1	8.54	5.28	7.1
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS15	Middle	5.3	2	2	11:14	21.1	8.17	28.1	8.51	5.24	6.9
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS15	Bottom	9.6	3	1	11:14	21.2	8.28	28.2	8.39	5.34	7.2
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	IS15	Bottom	9.6	3	2	11:14	21.1	8.25	28.1	8.36	5.3	7.2
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR8	Surface	1	1	1	10:46	21.1	7.86	28.1	8.38	4.92	6.1
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR8	Surface	1	1	2	10:46	21	7.88	28.1	8.36	4.99	6.5
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR8	Middle		2	1	10:46						
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR8	Middle		2	2	10:46						
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR8	Bottom	4.6	3	1	10:46	21	7.79	28.2	8.3	4.97	6.3
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR8	Bottom	4.6	3	2	10:46	20.9	7.76	28.2	8.26	5.02	6.3
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR9	Surface	1	1	1	11:00	21.2	8.03	28.1	7.99	4.94	6.2
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR9	Surface	1	1	2	11:00	21.2	8.06	28.1	8.01	4.98	5.8
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR9	Middle		2	1	11:00						
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR9	Middle		2	2	11:00						
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR9	Bottom	3.8	3	1	11:00	21.1	8.12	28.2	8.18	5.14	6.1
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR9	Bottom	3.8	3	2	11:00	21.1	8.14	28.2	8.16	5.1	6.5
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR10A	Surface	1	1	1	10:23	21.1	7.89	28.1	8.13	4.34	5.5
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR10A	Surface	1	1	2	10:23	21.2	7.91	28	8.14	4.36	5.9
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR10A	Middle	7.5	2	1	10:23	21.2	7.82	28	8.23	4.64	5.9
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR10A	Middle	7.5	2	2	10:23	21.1	7.84	28	8.26	4.68	5.9
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR10A	Bottom	14	3	1	10:23	21.1	7.94	28.1	8.56	4.74	6.3
TMCLKL	HY/2012/08	2017-01-03	Mid-Flood	Sunny	Small wave	SR10A	Bottom	14	3	2	10:23	21	7.9	28.2	8.54	4.79	5.9
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	CS4	Surface	1	1	1	14:46	21.4	7.92	28.4	8.86	5.08	6.8
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	CS4	Surface	1	1	2	14:46	21.4	7.93	28.5	8.89	5.11	7.2

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	CS4	Middle	9.1	2	1	14:46	21.4	7.93	28.5	8.92	5.16	7
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	CS4	Middle	9.1	2	2	14:46	21.3	7.93	28.5	8.95	5.19	7
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	CS4	Bottom	17.2	3	1	14:46	21.4	7.94	28.6	8.98	5.26	7
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	CS4	Bottom	17.2	3	2	14:46	21.4	7.95	28.6	8.92	5.19	7.2
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	CS6	Surface	1	1	1	16:54	21.4	7.92	28.6	8.27	5.08	6.8
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	CS6	Surface	1	1	2	16:54	21.5	7.95	28.7	8.32	5.14	7.2
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	CS6	Middle	6.5	2	1	16:54	21.4	7.93	28.7	8.26	4.94	6.8
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	CS6	Middle	6.5	2	2	16:54	21.4	7.95	28.7	8.24	4.9	7
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	CS6	Bottom	12	3	1	16:54	21.4	7.92	28.7	8.28	5.06	7
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	CS6	Bottom	12	3	2	16:54	21.2	7.95	28.7	8.3	5	7
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS12	Surface	1	1	1	15:19	21.4	7.93	28.5	8.29	4.87	6.3
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS12	Surface	1	1	2	15:19	21.4	7.95	28.5	8.22	4.82	6.7
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS12	Middle	6.6	2	1	15:19	21.3	7.92	28.5	8.34	4.86	6.5
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS12	Middle	6.6	2	2	15:19	21.3	7.93	28.5	8.38	4.85	6.5
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS12	Bottom	12.2	3	1	15:19	21.2	7.92	28.5	8.42	5.11	6.7
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS12	Bottom	12.2	3	2	15:19	21.3	7.93	28.5	8.45	5.14	6.9
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS13	Surface	1	1	1	15:36	21.5	7.96	28.6	8.39	4.86	6.3
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS13	Surface	1	1	2	15:36	21.4	7.92	28.6	8.34	4.9	6.7
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS13	Middle	5.5	2	1	15:36	21.5	7.95	28.6	8.32	5.09	7
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS13	Middle	5.5	2	2	15:36	21.5	7.92	28.6	8.27	5.02	6.8
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS13	Bottom	10	3	1	15:36	21.5	7.9	28.6	8.39	5.11	6.9
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS13	Bottom	10	3	2	15:36	21.4	7.93	28.6	8.42	5.1	6.9
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS14	Surface	1	1	1	15:03	21.4	7.92	28.5	8.07	5.12	5.8
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS14	Surface	1	1	2	15:03	21.4	7.94	28.5	8.12	5.16	6.2
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS14	Middle	5.7	2	1	15:03	21.4	7.92	28.5	8.15	5.19	6.3
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS14	Middle	5.7	2	2	15:03	21.4	7.93	28.5	8.12	5.14	6.1
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS14	Bottom	10.4	3	1	15:03	21.4	7.93	28.5	8.24	5.2	6.3
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS14	Bottom	10.4	3	2	15:03	21.3	7.92	28.5	8.28	5.15	6.3
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS15	Surface	1	1	1	15:53	21.5	7.95	28.6	8.12	5.11	6.3
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS15	Surface	1	1	2	15:53	21.6	7.92	28.6	8.17	5.09	6.9
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS15	Middle	5.1	2	1	15:53	21.5	7.9	28.6	8.19	5.19	6.8
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS15	Middle	5.1	2	2	15:53	21.4	7.92	28.6	8.22	5.22	7
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS15	Bottom	9.2	3	1	15:53	21.5	7.93	28.6	8.26	5.27	6.9
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	IS15	Bottom	9.2	3	2	15:53	21.4	7.94	28.6	8.22	5.22	6.9
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR8	Surface	1	1	1	16:23	21.4	7.97	28.7	8.34	4.86	6
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR8	Surface	1	1	2	16:23	21.4	7.92	28.7	8.38	4.82	6
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR8	Middle		2	1	16:23						
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR8	Middle		2	2	16:23						
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR8	Bottom	4.2	3	1	16:23	21.2	7.82	28.7	8.29	4.86	6
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR8	Bottom	4.2	3	2	16:23	21.2	7.86	28.7	8.32	4.9	6.2
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR9	Surface	1	1	1	16:10	21.5	7.97	28.5	7.96	4.86	5.9
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR9	Surface	1	1	2	16:10	21.4	7.94	28.5	7.92	4.92	6.3
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR9	Middle		2	1	16:10						
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR9	Middle		2	2	16:10						
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR9	Bottom	3.6	3	1	16:10	21.5	7.92	28.5	7.97	5.19	6.4
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR9	Bottom	3.6	3	2	16:10	21.5	7.95	28.5	7.99	5.12	6.2
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR10A	Surface	1	1	1	16:36	21.3	7.91	28.7	8.16	4.44	5.6
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR10A	Surface	1	1	2	16:36	21.4	7.9	28.7	8.12	4.48	6
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR10A	Middle	7.3	2	1	16:36	21.4	7.86	28.7	8.19	4.59	5.7
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR10A	Middle	7.3	2	2	16:36	21.3	7.9	28.7	8.22	4.52	5.9
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR10A	Bottom	13.5	3	1	16:36	21.2	7.92	28.7	8.26	4.67	5.9
TMCLKL	HY/2012/08	2017-01-03	Mid-Ebb	Fine	Small wave	SR10A	Bottom	13.5	3	2	16:36	21.2	7.94	28.7	8.25	4.62	5.9
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	CS4	Surface	1	1	1	13:59	20.1	8.08	28.1	9.59	4.76	7
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	CS4	Surface	1	1	2	13:59	20.2	8.12	28	9.63	4.69	6.8
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	CS4	Middle	9.3	2	1	13:59	20.3	8.14	28.3	9.78	5.06	7.2
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	CS4	Middle	9.3	2	2	13:59	20.2	8.15	28.3	9.77	5.01	7.2

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	CS4	Bottom	17.5	3	1	13:59	20.3	7.98	28.4	11.48	5.12	7.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	CS4	Bottom	17.5	3	2	13:59	20.4	8.01	28.5	11.46	5.16	7.4
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	CS6	Surface	1	1	1	11:42	20.2	7.86	27.9	8.35	4.89	7.2
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	CS6	Surface	1	1	2	11:42	20.1	7.85	28	8.32	4.81	7
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	CS6	Middle	6.9	2	1	11:42	20.2	7.92	28.1	8.42	5.04	7.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	CS6	Middle	6.9	2	2	11:42	20.3	7.94	28.2	8.44	5.12	7.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	CS6	Bottom	12.8	3	1	11:42	20.4	7.8	28.4	8.67	5.23	7.8
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	CS6	Bottom	12.8	3	2	11:42	20.4	7.83	28.3	8.65	5.19	7.6
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS12	Surface	1	1	1	13:36	20	7.78	28.1	8.29	4.81	6.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS12	Surface	1	1	2	13:36	20.1	7.79	28.1	8.26	4.85	6.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS12	Middle	6.7	2	1	13:36	20.2	7.82	28.3	8.34	5.06	7
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS12	Middle	6.7	2	2	13:36	20.2	7.84	28.2	8.36	5.11	7
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS12	Bottom	12.4	3	1	13:36	20.2	7.89	28.5	8.23	4.72	6.3
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS12	Bottom	12.4	3	2	13:36	20.3	7.93	28.4	8.2	4.66	6.4
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS13	Surface	1	1	1	13:20	20.1	7.95	28	8.17	4.55	6.1
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS13	Surface	1	1	2	13:20	20.2	7.99	28.1	8.19	4.61	6.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS13	Middle	5.7	2	1	13:20	20	8.02	28.2	8.23	4.32	6
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS13	Middle	5.7	2	2	13:20	20.1	8.03	28.1	8.2	4.38	6.1
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS13	Bottom	10.4	3	1	13:20	20.3	7.92	28.2	8.48	4.78	6.8
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS13	Bottom	10.4	3	2	13:20	20.2	7.91	28.3	8.47	4.73	6.4
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS14	Surface	1	1	1	13:50	20.2	7.84	28.1	8.45	5.12	6.2
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS14	Surface	1	1	2	13:50	20.1	7.86	28.2	8.46	5.19	6.6
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS14	Middle	6.2	2	1	13:50	20.2	7.89	28.3	8.31	5.07	6.4
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS14	Middle	6.2	2	2	13:50	20.2	7.88	28.2	8.34	5.01	6.4
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS14	Bottom	11.3	3	1	13:50	20.4	7.96	28.4	8.49	4.93	6
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS14	Bottom	11.3	3	2	13:50	20.3	7.91	28.3	8.52	5.02	6.3
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS15	Surface	1	1	1	13:04	20.1	7.93	28.1	8.36	4.71	6.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS15	Surface	1	1	2	13:04	20	7.9	28.2	8.32	4.79	6.4
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS15	Middle	5.2	2	1	13:04	20.2	7.96	28.3	8.25	5.03	6.7
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS15	Middle	5.2	2	2	13:04	20.1	7.97	28.2	8.27	5.09	6.8
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS15	Bottom	9.4	3	1	13:04	20.4	7.89	28.4	8.16	4.88	6.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	IS15	Bottom	9.4	3	2	13:04	20.3	7.87	28.3	8.13	4.84	6.7
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR8	Surface	1	1	1	12:41	20	7.88	28.1	8.31	4.68	6.2
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR8	Surface	1	1	2	12:41	20.1	7.86	28	8.28	4.75	5.9
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR8	Middle		2	1	12:41						
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR8	Middle		2	2	12:41						
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR8	Bottom	4.9	3	1	12:41	20.2	7.82	28.2	8.23	4.51	6
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR8	Bottom	4.9	3	2	12:41	20.3	7.81	28.1	8.21	4.56	6.1
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR9	Surface	1	1	1	12:54	20.1	7.89	28.1	8.25	4.87	6.2
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR9	Surface	1	1	2	12:54	20.2	7.91	28	8.27	4.82	6.3
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR9	Middle		2	1	12:54						
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR9	Middle		2	2	12:54						
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR9	Bottom	3.7	3	1	12:54	20.2	7.82	28.1	8.34	4.96	6.3
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR9	Bottom	3.7	3	2	12:54	20.2	7.84	28.1	8.35	5.02	6.6
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR10A	Surface	1	1	1	12:12	20.1	7.78	28	8.18	3.96	5.2
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR10A	Surface	1	1	2	12:12	20.2	7.75	28.1	8.19	3.89	5
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR10A	Middle	7.5	2	1	12:12	20.3	7.74	28.2	8.38	4.38	5.6
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR10A	Middle	7.5	2	2	12:12	20.4	7.73	28.3	8.36	4.31	5.7
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR10A	Bottom	13.9	3	1	12:12	20.5	7.82	28.3	8.45	4.52	5.8
TMCLKL	HY/2012/08	2017-01-05	Mid-Flood	Cloudy	Small wave	SR10A	Bottom	13.9	3	2	12:12	20.4	7.86	28.4	8.43	4.47	5.7
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	CS4	Surface	1	1	1	16:53	20	7.92	27.8	8.96	5.18	7.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	CS4	Surface	1	1	2	16:53	20	7.92	27.8	8.99	5.24	7.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	CS4	Middle	9.1	2	1	16:53	20.1	7.86	28	9.23	5.11	7.4
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	CS4	Middle	9.1	2	2	16:53	20.2	7.84	28.1	9.27	5.08	7.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	CS4	Bottom	17.2	3	1	16:53	20.2	8.02	28.1	10.07	5.33	7.8
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	CS4	Bottom	17.2	3	2	16:53	20.2	8.04	28.2	10.12	5.36	7.7

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	CS6	Surface	1	1	1	19:16	19.7	7.97	27.8	8.13	5.15	7.3
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	CS6	Surface	1	1	2	19:16	19.7	7.95	27.9	8.18	5.19	7.4
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	CS6	Middle	6.8	2	1	19:16	19.9	7.84	28	8.32	5.32	7.9
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	CS6	Middle	6.8	2	2	19:16	20	7.87	27.9	8.27	5.38	7.7
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	CS6	Bottom	12.5	3	1	19:16	20.1	7.91	28.1	8.46	5.44	7.8
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	CS6	Bottom	12.5	3	2	19:16	20.1	7.94	28.1	8.52	5.47	7.8
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS12	Surface	1	1	1	17:22	20	7.86	28	8.12	5.24	7
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS12	Surface	1	1	2	17:22	19.9	7.88	28	8.17	5.28	7
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS12	Middle	6.6	2	1	17:22	20.1	7.92	28.1	8.04	5.39	7.4
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS12	Middle	6.6	2	2	17:22	20.1	7.93	28.2	8.09	5.3	7
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS12	Bottom	12.2	3	1	17:22	20.2	7.84	28.3	8.37	5.46	7.2
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS12	Bottom	12.2	3	2	17:22	20.1	7.86	28.3	8.31	5.37	7.1
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS13	Surface	1	1	1	17:37	19.9	7.92	27.9	8.02	4.83	6.7
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS13	Surface	1	1	2	17:37	19.8	7.9	28	8.07	4.87	6.6
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS13	Middle	5.7	2	1	17:37	20	8.03	28.1	7.97	4.98	6.9
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS13	Middle	5.7	2	2	17:37	20	8.05	28	7.92	5.03	6.9
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS13	Bottom	10.3	3	1	17:37	20.1	7.93	28.1	8.25	5.14	7.2
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS13	Bottom	10.3	3	2	17:37	20.2	7.91	28.1	8.19	5.17	7
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS14	Surface	1	1	1	17:07	20	7.94	27.9	8.23	5.35	6.7
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS14	Surface	1	1	2	17:07	20.1	7.96	28	8.18	5.3	6.6
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS14	Middle	6	2	1	17:07	20.1	8.01	28.1	8.51	5.47	7
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS14	Middle	6	2	2	17:07	20.1	8.03	28.1	8.57	5.52	6.7
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS14	Bottom	11	3	1	17:07	20.1	7.98	28.2	8.69	5.29	6.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS14	Bottom	11	3	2	17:07	20.2	7.96	28.3	8.74	5.34	6.7
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS15	Surface	1	1	1	17:53	19.8	8.07	27.9	8.11	4.92	6.6
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS15	Surface	1	1	2	17:53	19.8	8.05	27.9	8.16	4.97	6.7
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS15	Middle	5.1	2	1	17:53	19.9	7.89	28.1	8.29	4.78	6.3
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS15	Middle	5.1	2	2	17:53	20	7.91	28	8.22	4.73	6.3
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS15	Bottom	9.2	3	1	17:53	20.1	7.94	28.2	8.09	5.09	6.8
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	IS15	Bottom	9.2	3	2	17:53	20.1	7.95	28.1	8.03	5.14	6.8
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR8	Surface	1	1	1	18:21	19.7	7.96	27.9	8.15	4.86	7.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR8	Surface	1	1	2	18:21	19.8	7.97	27.8	8.1	4.81	7.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR8	Middle		2	1	18:21						
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR8	Middle		2	2	18:21						
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR8	Bottom	4.5	3	1	18:21	20	7.88	27.9	8.22	4.74	7.4
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR8	Bottom	4.5	3	2	18:21	20	7.86	28	8.27	4.77	7.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR9	Surface	1	1	1	18:09	19.8	7.95	27.9	7.07	5.08	6.3
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR9	Surface	1	1	2	18:09	19.7	7.97	27.9	8.13	5.14	6.4
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR9	Middle		2	1	18:09						
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR9	Middle		2	2	18:09						
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR9	Bottom	3.2	3	1	18:09	19.9	7.88	28	8.23	5.23	6.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR9	Bottom	3.2	3	2	18:09	20	7.9	28.1	8.16	5.29	6.7
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR10A	Surface	1	1	1	18:48	19.7	7.83	27.9	8.04	4.21	5.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR10A	Surface	1	1	2	18:48	19.7	7.84	27.9	8.09	4.27	5.6
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR10A	Middle	7.3	2	1	18:48	19.9	7.91	28.1	8.25	4.33	5.6
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR10A	Middle	7.3	2	2	18:48	19.8	7.94	28	8.18	4.39	5.5
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR10A	Bottom	13.6	3	1	18:48	20	7.86	28.1	8.34	4.29	5.4
TMCLKL	HY/2012/08	2017-01-05	Mid-Ebb	Cloudy	Small wave	SR10A	Bottom	13.6	3	2	18:48	20.1	7.89	28.2	8.37	4.23	5.5
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	CS4	Surface	1	1	1	14:40	21.1	8	28.2	8.61	5.01	7.2
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	CS4	Surface	1	1	2	14:40	21.2	8.06	28.1	8.77	5.04	7.2
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	CS4	Middle	10.5	2	1	14:40	21	7.96	28.1	8.24	5.13	7.3
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	CS4	Middle	10.5	2	2	14:40	21.1	8.04	28.1	8.43	5.16	7.3
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	CS4	Bottom	19.9	3	1	14:40	21.1	7.94	28	8.23	5.2	7.6
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	CS4	Bottom	19.9	3	2	14:40	21.1	7.97	28.1	8.34	5.18	7.5
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	CS6	Surface	1	1	1	12:24	21.1	7.82	28.1	8.78	5	6.2
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	CS6	Surface	1	1	2	12:24	21.2	7.83	28.2	8.63	4.96	6.3

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	CS6	Middle	6.7	2	1	12:24	21.2	7.93	28.2	8.51	5.13	7.4
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	CS6	Middle	6.7	2	2	12:24	21.2	7.94	28.1	8.42	5.15	7.5
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	CS6	Bottom	12.4	3	1	12:24	21.1	7.99	28.2	8.33	5.03	7.3
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	CS6	Bottom	12.4	3	2	12:24	21.1	7.97	28.2	8.4	5.04	7
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS12	Surface	1	1	1	14:10	21	8.03	28	8.51	4.96	6.7
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS12	Surface	1	1	2	14:10	21.1	7.99	28.1	8.43	4.87	6.3
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS12	Middle	6.8	2	1	14:10	21.1	8.05	28.1	8.2	4.91	6.7
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS12	Middle	6.8	2	2	14:10	21.1	8.08	28	8.15	4.95	6.9
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS12	Bottom	12.5	3	1	14:10	21.1	8.1	28	8.27	4.78	6.6
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS12	Bottom	12.5	3	2	14:10	21.2	8.12	28.1	8.2	4.81	6.3
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS13	Surface	1	1	1	13:56	21.2	8.1	28.1	8.44	4.91	6.5
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS13	Surface	1	1	2	13:56	21.1	8.08	28.2	8.32	4.96	6.4
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS13	Middle	6	2	1	13:56	21.1	8.01	28.2	8.41	5.07	6.8
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS13	Middle	6	2	2	13:56	21	8.03	28.2	8.28	5.09	7.1
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS13	Bottom	11	3	1	13:56	21.1	8.1	28.2	8.2	5.23	6.9
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS13	Bottom	11	3	2	13:56	21.1	8.08	28.1	8.33	5.19	7.3
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS14	Surface	1	1	1	14:24	21	8.06	28.1	8.47	4.7	5.6
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS14	Surface	1	1	2	14:24	21.1	8.09	28.2	8.53	4.76	5.8
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS14	Middle	6.3	2	1	14:24	21.2	7.99	28.2	8.42	4.45	5.4
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS14	Middle	6.3	2	2	14:24	21.1	8.03	28.2	8.51	4.49	5.4
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS14	Bottom	11.6	3	1	14:24	21.1	7.98	28.2	8.66	4.88	5.8
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS14	Bottom	11.6	3	2	14:24	21	8.04	28.1	8.78	4.93	5.8
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS15	Surface	1	1	1	13:42	21.1	8.01	28.2	8.56	5.03	6.6
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS15	Surface	1	1	2	13:42	21	8.02	28.1	8.64	5.09	6.7
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS15	Middle	5.7	2	1	13:42	21.2	8	28.2	8.23	5.33	6.9
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS15	Middle	5.7	2	2	13:42	21.2	8.03	28.1	8.27	5.4	6.9
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS15	Bottom	10.3	3	1	13:42	21.1	8.09	28.2	8.33	5.01	6.6
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	IS15	Bottom	10.3	3	2	13:42	21.1	8.1	28.2	8.39	4.97	6.7
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR8	Surface	1	1	1	13:20	21.1	8.07	28.2	8.44	5.13	6.6
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR8	Surface	1	1	2	13:20	21.2	8.09	28.2	8.65	5.16	6.4
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR8	Middle		2	1	13:20						
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR8	Middle		2	2	13:20						
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR8	Bottom	4.5	3	1	13:20	21	8.03	28.1	8.23	5.25	6.5
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR8	Bottom	4.5	3	2	13:20	21	8.06	28.2	8.39	5.29	6.7
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR9	Surface	1	1	1	13:32	21	8.05	28	8.23	4.55	5.6
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR9	Surface	1	1	2	13:32	21	8.07	28	8.17	4.57	5.6
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR9	Middle		2	1	13:32						
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR9	Middle		2	2	13:32						
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR9	Bottom	3.7	3	1	13:32	21.1	8.15	27.9	8.35	4.31	5.5
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR9	Bottom	3.7	3	2	13:32	21.1	8.14	28	8.48	4.29	5.5
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR10A	Surface	1	1	1	12:51	21.2	8.09	28.1	8.83	4.83	6.1
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR10A	Surface	1	1	2	12:51	21.2	8.07	28.1	8.96	4.86	6
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR10A	Middle	7	2	1	12:51	21.1	8.15	28.2	8.56	5.07	6.5
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR10A	Middle	7	2	2	12:51	21.1	8.16	28.2	8.78	5.11	6.2
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR10A	Bottom	12.9	3	1	12:51	21.1	8.17	28.1	8.45	5.26	6.2
TMCLKL	HY/2012/08	2017-01-07	Mid-Flood	Fine	Small wave	SR10A	Bottom	12.9	3	2	12:51	21.2	8.2	28.2	8.63	5.29	6.3
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	CS4	Surface	1	1	1	07:07	20.8	7.9	27.6	8.43	4.94	7.1
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	CS4	Surface	1	1	2	07:07	20.8	7.92	27.7	8.46	4.9	7.2
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	CS4	Middle	10.3	2	1	07:07	20.9	7.94	27.9	8.12	5.07	7.2
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	CS4	Middle	10.3	2	2	07:07	20.8	7.95	28	8.15	5.01	7.5
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	CS4	Bottom	19.6	3	1	07:07	21	7.95	28	8.2	5.13	7.5
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	CS4	Bottom	19.6	3	2	07:07	21	7.95	28.1	8.23	5.16	7.3
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	CS6	Surface	1	1	1	08:35	20.9	7.94	27.9	8.53	4.34	7.4
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	CS6	Surface	1	1	2	08:35	20.9	7.95	27.8	8.5	4.38	7.3
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	CS6	Middle	6.6	2	1	08:35	20.9	7.98	28	8.25	5.02	7.6
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	CS6	Middle	6.6	2	2	08:35	21	7.97	28	8.21	5.06	7.4

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	CS6	Bottom	12.2	3	1	08:35	21	8.01	28.1	8.2	4.96	7.4
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	CS6	Bottom	12.2	3	2	08:35	21	8.01	28.1	8.17	4.92	7.3
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS12	Surface	1	1	1	07:38	20.8	7.95	27.8	8.24	4.82	6.6
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS12	Surface	1	1	2	07:38	20.9	7.96	27.8	8.2	4.78	6.4
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS12	Middle	6.6	2	1	07:38	20.8	7.97	27.9	8.15	4.94	6.6
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS12	Middle	6.6	2	2	07:38	20.9	7.98	28	8.19	4.98	6.6
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS12	Bottom	12.2	3	1	07:38	20.9	7.98	28.1	8.19	4.88	6.4
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS12	Bottom	12.2	3	2	07:38	21	7.98	28.1	8.15	4.8	6.4
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS13	Surface	1	1	1	07:52	20.9	7.95	27.8	8.25	4.72	6.7
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS13	Surface	1	1	2	07:52	20.8	7.96	27.8	8.29	4.76	7
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS13	Middle	5.9	2	1	07:52	21	7.98	28	8.3	4.94	6.8
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS13	Middle	5.9	2	2	07:52	21	7.97	28.1	8.34	4.98	7
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS13	Bottom	10.8	3	1	07:52	20.9	7.97	28.1	8.18	5.11	7.3
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS13	Bottom	10.8	3	2	07:52	21	7.97	28.1	8.14	5.15	7.3
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS14	Surface	1	1	1	07:24	20.8	7.97	27.7	8.38	4.64	5.9
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS14	Surface	1	1	2	07:24	20.7	7.98	27.8	8.35	4.67	6
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS14	Middle	6.2	2	1	07:24	20.9	7.99	28	8.44	4.39	5.7
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS14	Middle	6.2	2	2	07:24	20.8	7.98	28	8.48	4.35	5.5
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS14	Bottom	11.4	3	1	07:24	20.9	7.95	28	8.46	4.78	6.1
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS14	Bottom	11.4	3	2	07:24	20.9	7.96	28.1	8.42	4.74	6.2
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS15	Surface	1	1	1	08:05	20.7	7.95	27.9	8.3	4.84	6.8
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS15	Surface	1	1	2	08:05	20.8	7.96	27.8	8.33	4.8	6.9
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS15	Middle	5.6	2	1	08:05	20.9	7.9	28	8.19	5.21	7.2
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS15	Middle	5.6	2	2	08:05	20.8	7.91	28	8.23	5.16	7.4
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS15	Bottom	10.2	3	1	08:05	20.9	7.95	28.2	8.26	5.03	6.6
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	IS15	Bottom	10.2	3	2	08:05	21	7.95	28.1	8.22	5.07	6.9
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR8	Surface	1	1	1	08:26	20.9	7.98	28	8.24	4.97	6.8
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR8	Surface	1	1	2	08:26	20.9	7.97	28	8.27	4.93	6.8
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR8	Middle		2	1	08:26						
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR8	Middle		2	2	08:26						
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR8	Bottom	4.2	3	1	08:26	20.8	7.96	28	8.11	5.18	6.8
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR8	Bottom	4.2	3	2	08:26	20.9	7.95	28.1	8.07	5.12	6.9
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR9	Surface	1	1	1	08:17	20.8	7.97	27.7	8.07	4.37	5.7
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR9	Surface	1	1	2	08:17	20.8	7.98	27.8	8.09	4.31	5.8
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR9	Middle		2	1	08:17						
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR9	Middle		2	2	08:17						
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR9	Bottom	3.4	3	1	08:17	20.9	7.95	27.9	8.23	4.29	5.3
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR9	Bottom	3.4	3	2	08:17	20.9	7.96	27.9	8.26	4.21	5.6
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR10A	Surface	1	1	1	08:57	20.9	7.98	28	8.67	4.62	6.3
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR10A	Surface	1	1	2	08:57	20.8	7.99	27.9	8.62	4.7	6.4
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR10A	Middle	6.7	2	1	08:57	20.8	8.01	28.2	8.32	4.94	6.4
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR10A	Middle	6.7	2	2	08:57	20.9	8.02	28.1	8.28	4.9	6.5
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR10A	Bottom	12.8	3	1	08:57	20.9	8.02	28.2	8.26	4.89	6.6
TMCLKL	HY/2012/08	2017-01-07	Mid-Ebb	Fine	Small wave	SR10A	Bottom	12.8	3	2	08:57	21	8.02	28.2	8.23	4.93	6.7
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	CS4	Surface	1	1	1	17:04	20.5	7.78	28.1	8.54	4.73	6.8
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	CS4	Surface	1	1	2	17:04	20.4	7.81	28	8.56	4.79	7.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	CS4	Middle	10.6	2	1	17:04	20.6	7.92	28.4	8.62	4.96	7
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	CS4	Middle	10.6	2	2	17:04	20.7	7.9	28.5	8.66	5.02	7.2
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	CS4	Bottom	20.2	3	1	17:04	20.8	7.83	28.8	8.89	4.87	6.9
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	CS4	Bottom	20.2	3	2	17:04	20.7	7.86	28.9	8.92	4.94	7
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	CS6	Surface	1	1	1	14:53	20.4	7.91	28.2	8.71	4.85	7
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	CS6	Surface	1	1	2	14:53	20.5	7.9	28.1	8.74	4.89	7.2
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	CS6	Middle	6.9	2	1	14:53	20.6	7.86	28.3	8.54	5.11	7.4
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	CS6	Middle	6.9	2	2	14:53	20.5	7.88	28.3	8.55	5.18	7.5
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	CS6	Bottom	12.8	3	1	14:53	20.6	7.8	28.5	8.89	5.06	7.2
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	CS6	Bottom	12.8	3	2	14:53	20.7	7.82	28.4	8.87	4.97	7.1

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS12	Surface	1	1	1	16:32	20.4	7.96	28	8.39	4.56	6.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS12	Surface	1	1	2	16:32	20.5	7.92	28.1	8.36	4.49	5.9
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS12	Middle	6.9	2	1	16:32	20.6	8.05	28.3	8.24	4.62	6.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS12	Middle	6.9	2	2	16:32	20.5	8.01	28.2	8.27	4.67	6.2
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS12	Bottom	12.8	3	1	16:32	20.7	8.09	28.5	8.45	4.75	6.4
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS12	Bottom	12.8	3	2	16:32	20.6	8.08	28.6	8.44	4.68	6.3
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS13	Surface	1	1	1	16:16	20.6	7.98	28.1	8.57	4.47	6.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS13	Surface	1	1	2	16:16	20.5	7.95	28.1	8.54	4.58	6.4
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS13	Middle	6.2	2	1	16:16	20.6	8.03	28.2	8.51	4.62	6.3
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS13	Middle	6.2	2	2	16:16	20.6	8.06	28.2	8.48	4.71	6.4
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS13	Bottom	11.3	3	1	16:16	20.7	7.93	28.4	8.42	4.86	6.8
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS13	Bottom	11.3	3	2	16:16	20.6	7.9	28.3	8.41	4.8	6.8
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS14	Surface	1	1	1	16:46	20.5	7.83	28.2	8.51	4.22	5.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS14	Surface	1	1	2	16:46	20.6	7.87	28.1	8.53	4.28	5.2
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS14	Middle	6.5	2	1	16:46	20.7	7.81	28.4	8.46	4.41	5.4
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS14	Middle	6.5	2	2	16:46	20.6	7.8	28.3	8.44	4.33	5.5
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS14	Bottom	11.9	3	1	16:46	20.7	7.74	28.6	8.63	4.67	5.9
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS14	Bottom	11.9	3	2	16:46	20.8	7.77	28.5	8.65	4.6	5.8
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS15	Surface	1	1	1	15:59	20.5	7.86	28.2	8.41	4.53	6
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS15	Surface	1	1	2	15:59	20.5	7.89	28.1	8.44	4.61	6.2
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS15	Middle	5.9	2	1	15:59	20.6	7.92	28.2	8.51	4.47	6.2
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS15	Middle	5.9	2	2	15:59	20.5	7.94	28.3	8.52	4.4	5.9
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS15	Bottom	10.7	3	1	15:59	20.7	7.98	28.5	8.67	4.78	6.3
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	IS15	Bottom	10.7	3	2	15:59	20.6	7.97	28.4	8.69	4.83	6.5
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR8	Surface	1	1	1	15:32	20.6	7.92	28.2	8.51	4.69	6.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR8	Surface	1	1	2	15:32	20.6	7.94	28.1	8.53	4.62	5.8
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR8	Middle		2	1	15:32						
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR8	Middle		2	2	15:32						
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR8	Bottom	4.6	3	1	15:32	20.5	7.87	28.2	8.64	4.54	5.9
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR8	Bottom	4.6	3	2	15:32	20.4	7.85	28.3	8.67	4.65	6.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR9	Surface	1	1	1	15:45	20.5	7.92	28	8.23	4.18	5.3
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR9	Surface	1	1	2	15:45	20.6	7.95	28.1	8.26	4.25	5.7
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR9	Middle		2	1	15:45						
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR9	Middle		2	2	15:45						
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR9	Bottom	3.9	3	1	15:45	20.7	7.98	28.2	8.31	4.36	5.6
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR9	Bottom	3.9	3	2	15:45	20.6	8.04	28.1	8.33	4.41	5.5
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR10A	Surface	1	1	1	15:17	20.5	7.84	28.1	8.85	4.41	5.9
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR10A	Surface	1	1	2	15:17	20.6	7.86	28	8.81	4.48	5.9
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR10A	Middle	7.2	2	1	15:17	20.4	7.93	28.3	8.73	4.53	5.8
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR10A	Middle	7.2	2	2	15:17	20.5	7.97	28.2	8.74	4.59	5.9
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR10A	Bottom	13.4	3	1	15:17	20.6	7.99	28.6	8.54	4.71	6
TMCLKL	HY/2012/08	2017-01-10	Mid-Flood	Cloudy	Small wave	SR10A	Bottom	13.4	3	2	15:17	20.5	8.02	28.5	8.57	4.66	6
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	CS4	Surface	1	1	1	10:22	20.5	8.25	27.9	8.24	5.39	7.9
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	CS4	Surface	1	1	2	10:22	20.4	8.23	27.9	8.26	5.41	7.7
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	CS4	Middle	10.5	2	1	10:22	20.6	7.94	28	8.33	5.58	8.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	CS4	Middle	10.5	2	2	10:22	20.6	7.97	28.1	8.35	5.61	8.2
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	CS4	Bottom	19.9	3	1	10:22	20.7	8	28.2	8.46	5.77	8.2
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	CS4	Bottom	19.9	3	2	10:22	20.6	8.02	28.3	8.43	5.79	8.3
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	CS6	Surface	1	1	1	12:41	20.3	7.86	27.9	8.62	5.29	7.6
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	CS6	Surface	1	1	2	12:41	20.3	7.88	28	8.64	5.31	7.7
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	CS6	Middle	6.8	2	1	12:41	20.4	8.15	28.1	8.73	5.48	8.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	CS6	Middle	6.8	2	2	12:41	20.5	8.17	28.2	8.75	5.51	8.2
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	CS6	Bottom	12.5	3	1	12:41	20.6	8.02	28.3	8.8	5.68	8.5
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	CS6	Bottom	12.5	3	2	12:41	20.6	8.04	28.4	8.82	5.7	8.5
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS12	Surface	1	1	1	11:02	20.4	7.83	27.9	8.04	5.4	7.3
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS12	Surface	1	1	2	10:42	20.3	7.8	28	8.07	5.43	7.2

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS12	Middle	6.7	2	1	10:42	20.5	8.06	28.1	8.17	5.66	7.9
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS12	Middle	6.7	2	2	10:42	20.5	8.09	28.2	8.19	5.64	7.7
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS12	Bottom	12.4	3	1	10:42	20.6	8.13	28.3	8.26	5.77	7.6
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS12	Bottom	12.4	3	2	10:42	20.5	8.15	28.4	8.29	5.79	7.9
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS13	Surface	1	1	1	11:23	20.3	7.68	27.9	7.84	5.4	7.4
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS13	Surface	1	1	2	11:23	20.4	7.71	28	7.87	5.43	7.3
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS13	Middle	6	2	1	11:23	20.5	7.84	28.1	8.05	5.68	7.8
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS13	Middle	6	2	2	11:23	20.4	7.82	28.2	8.07	5.7	8.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS13	Bottom	11	3	1	11:23	20.6	8.06	28.3	8.24	5.73	8.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS13	Bottom	11	3	2	11:23	20.6	8.09	28.3	8.22	5.76	8
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS14	Surface	1	1	1	10:42	20.4	8.13	28.1	7.69	5.63	6.9
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS14	Surface	1	1	2	10:42	20.5	8.15	28.1	7.72	5.66	7.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS14	Middle	6.3	2	1	10:42	20.6	8.06	28.2	7.84	5.84	7.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS14	Middle	6.3	2	2	10:42	20.6	8.08	28.3	7.86	5.86	7.4
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS14	Bottom	11.5	3	1	10:42	20.6	8.14	28.4	8.08	5.99	7.6
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS14	Bottom	11.5	3	2	10:42	20.7	8.17	28.4	8.06	6.01	7.4
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS15	Surface	1	1	1	11:45	20.4	7.93	28.1	7.93	5.28	7.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS15	Surface	1	1	2	11:45	20.5	7.91	28	7.96	5.3	7.3
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS15	Middle	5.7	2	1	11:45	20.6	8.14	28.2	8.14	5.47	7.2
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS15	Middle	5.7	2	2	11:45	20.7	8.16	28.2	8.11	5.49	7.4
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS15	Bottom	10.4	3	1	11:45	20.8	8.04	28.3	8.26	5.73	7.9
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	IS15	Bottom	10.4	3	2	11:45	20.7	8.07	28.3	8.29	5.71	7.7
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR8	Surface	1	1	1	12:16	20.4	7.84	28	8.27	5.36	7.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR8	Surface	1	1	2	12:16	20.5	7.87	27.9	8.3	5.39	6.8
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR8	Middle		2	1	12:16						
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR8	Middle		2	2	12:16						
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR8	Bottom	4.3	3	1	12:16	20.7	8.11	28.3	8.44	5.56	7.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR8	Bottom	4.3	3	2	12:16	20.8	8.09	28.4	8.42	5.59	7.4
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR9	Surface	1	1	1	12:04	20.5	8.14	27.9	8.07	4.63	6.1
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR9	Surface	1	1	2	12:04	20.5	8.1	28	8.05	4.65	5.9
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR9	Middle		2	1	12:04						
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR9	Middle		2	2	12:04						
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR9	Bottom	3.6	3	1	12:04	20.6	7.92	28.2	8.13	4.77	6
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR9	Bottom	3.6	3	2	12:04	20.5	7.94	28.3	8.15	4.79	6
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR10A	Surface	1	1	1	12:28	20.4	8.2	27.9	8.35	4.97	6.4
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR10A	Surface	1	1	2	12:28	20.5	8.23	27.9	8.33	4.99	6.6
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR10A	Middle	7.1	2	1	12:28	20.6	7.86	28	8.45	5.16	6.8
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR10A	Middle	7.1	2	2	12:28	20.5	7.89	28.1	8.48	5.18	6.7
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR10A	Bottom	13.1	3	1	12:28	20.7	8.04	28.2	8.62	5.34	6.9
TMCLKL	HY/2012/08	2017-01-10	Mid-Ebb	Fine	Small wave	SR10A	Bottom	13.1	3	2	12:28	20.7	8.07	28.3	8.64	5.36	7
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	CS4	Surface	1	1	1	18:43	20.2	8.05	27.5	8.47	5.01	7.4
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	CS4	Surface	1	1	2	18:43	20.2	8.09	27.4	8.5	5.04	7.4
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	CS4	Middle	10.4	2	1	18:43	20.1	7.97	27.5	8.34	4.91	7.1
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	CS4	Middle	10.4	2	2	18:43	20.3	7.8	27.5	8.39	4.92	7
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	CS4	Bottom	19.8	3	1	18:43	20.2	8.02	27.7	8.4	5.17	7.4
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	CS4	Bottom	19.8	3	2	18:43	20.3	8.04	27.6	8.44	5.19	7.4
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	CS6	Surface	1	1	1	16:27	20.3	7.9	27.4	8.45	4.11	6
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	CS6	Surface	1	1	2	16:27	20.4	7.88	27.4	8.41	4.09	5.9
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	CS6	Middle	6.7	2	1	16:27	20.4	7.95	27.4	8.43	4.88	7.2
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	CS6	Middle	6.7	2	2	16:27	20.4	7.99	27.5	8.38	4.91	7.1
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	CS6	Bottom	12.4	3	1	16:27	20.4	8.02	27.5	8.41	4.84	7
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	CS6	Bottom	12.4	3	2	16:27	20.4	7.99	27.5	8.44	4.89	7
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS12	Surface	1	1	1	18:13	20.1	7.95	27.5	8.21	4.66	6.1
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS12	Surface	1	1	2	12:40	20.2	7.97	27.6	8.25	4.69	6.5
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS12	Middle	6.8	2	1	12:40	20.2	7.89	27.6	8.19	4.87	6.6
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS12	Middle	6.8	2	2	12:40	20.2	7.92	27.6	8.23	4.91	6.4

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS12	Bottom	12.5	3	1	12:40	20.2	7.99	27.5	8.29	4.96	6.9
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS12	Bottom	12.5	3	2	12:40	20.3	7.97	27.6	8.32	4.94	6.7
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS13	Surface	1	1	1	17:59	20.2	7.86	27.4	8.24	4.71	6.4
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS13	Surface	1	1	2	13:05	20.2	7.84	27.3	8.27	4.73	6.4
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS13	Middle	6	2	1	13:05	20.3	7.99	27.4	8.39	4.89	6.8
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS13	Middle	6	2	2	13:05	20.3	7.98	27.4	8.43	4.94	6.8
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS13	Bottom	11	3	1	13:05	20.3	7.97	27.5	8.15	5.01	6.9
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS13	Bottom	11	3	2	13:05	20.4	7.98	27.4	8.2	5.02	7
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS14	Surface	1	1	1	18:27	20.2	7.92	27.6	8.38	4.62	5.7
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS14	Surface	1	1	2	12:26	20.1	7.94	27.5	8.4	4.65	5.9
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS14	Middle	6.5	2	1	12:26	20.2	8.01	27.6	8.46	4.35	5.4
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS14	Middle	6.5	2	2	12:26	20.2	7.98	27.6	8.5	4.33	5.2
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS14	Bottom	11.9	3	1	12:26	20.3	7.96	27.6	8.49	4.55	5.8
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS14	Bottom	11.9	3	2	12:26	20.2	7.94	27.5	8.52	4.59	5.7
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS15	Surface	1	1	1	17:45	20.2	7.98	27.4	8.46	4.61	6.1
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS15	Surface	1	1	2	17:45	20.1	8.02	27.4	8.49	4.6	6.4
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS15	Middle	5.8	2	1	17:45	20.2	7.92	27.4	8.21	5.01	6.7
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS15	Middle	5.8	2	2	17:45	20.3	7.94	27.5	8.25	5.04	68
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS15	Bottom	10.5	3	1	17:45	20.3	7.97	27.5	8.3	5.1	6.9
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	IS15	Bottom	10.5	3	2	17:45	20.4	7.99	27.4	8.34	5.14	7.1
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR8	Surface	1	1	1	17:23	20.4	8.05	27.4	8.38	4.9	6.4
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR8	Surface	1	1	2	17:23	20.3	8.07	27.4	8.35	4.93	6.3
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR8	Middle		2	1	17:23						
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR8	Middle		2	2	17:23						
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR8	Bottom	4.4	3	1	17:23	20.4	8.02	27.4	8.22	5.02	6.6
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR8	Bottom	4.4	3	2	17:23	20.4	8.04	27.5	8.25	5.05	6.5
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR9	Surface	1	1	1	17:35	20.3	8.01	27.5	8.29	4.34	5.4
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR9	Surface	1	1	2	17:35	20.2	7.97	27.5	8.31	4.31	5.5
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR9	Middle		2	1	17:35						
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR9	Middle		2	2	17:35						
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR9	Bottom	3.6	3	1	17:35	20.3	7.9	27.5	8.34	4.24	5.5
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR9	Bottom	3.6	3	2	17:35	20.3	7.89	27.4	8.37	4.25	5.3
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR10A	Surface	1	1	1	16:54	20.4	7.84	27.4	8.83	4.63	5.9
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR10A	Surface	1	1	2	16:54	20.3	7.86	27.4	8.85	4.66	5.9
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR10A	Middle	7.1	2	1	16:54	20.4	8.02	27.4	8.51	4.24	5.6
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR10A	Middle	7.1	2	2	16:54	20.4	8.06	27.5	8.47	4.29	5.4
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR10A	Bottom	13.1	3	1	16:54	20.5	8.01	27.5	8.55	4.54	6
TMCLKL	HY/2012/08	2017-01-12	Mid-Flood	Cloudy	Small wave	SR10A	Bottom	13.1	3	2	16:54	20.5	8.02	27.5	8.58	4.56	5.8
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	CS4	Surface	1	1	1	12:09	20.2	8.01	27.4	8.32	5.1	7.5
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	CS4	Surface	1	1	2	12:09	20.1	8.03	27.5	8.45	5.12	7.5
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	CS4	Middle	10.3	2	1	12:09	20.2	7.92	27.5	8.29	5.03	7.3
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	CS4	Middle	10.3	2	2	12:09	20.2	7.94	27.4	8.17	5.06	7.5
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	CS4	Bottom	19.5	3	1	12:09	20.3	7.96	27.9	8.26	5.23	7.5
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	CS4	Bottom	19.5	3	2	12:09	20.2	7.99	27.9	8.31	5.25	7.7
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	CS6	Surface	1	1	1	13:48	20.2	7.88	27.4	8.3	4.21	6.2
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	CS6	Surface	1	1	2	13:48	20.2	7.89	27.5	8.4	4.22	6.3
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	CS6	Middle	6.6	2	1	13:48	20.1	7.93	27.5	8.23	5	7.1
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	CS6	Middle	6.6	2	2	13:48	20.2	7.96	27.5	8.31	4.99	7.2
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	CS6	Bottom	12.2	3	1	13:48	20.2	7.99	27.5	8.29	4.96	7.2
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	CS6	Bottom	12.2	3	2	13:48	20.3	7.98	27.5	8.38	4.95	7.2
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS12	Surface	1	1	1	12:40	20.1	7.89	27.6	8.13	4.8	6.6
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS12	Surface	1	1	2	12:40	20.1	7.88	27.7	8.2	4.81	6.3
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS12	Middle	6.6	2	1	12:40	20.2	7.86	27.6	8.08	4.98	6.6
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS12	Middle	6.6	2	2	12:40	20.3	7.87	27.5	8.17	5.01	6.8
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS12	Bottom	12.2	3	1	12:40	20.2	7.95	27.5	8.17	5.03	6.6
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS12	Bottom	12.2	3	2	12:40	20.3	7.95	27.5	8.22	5.05	6.7

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS13	Surface	1	1	1	13:05	20.1	7.83	27.4	8.13	4.83	6.5
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS13	Surface	1	1	2	13:05	20.2	7.84	27.5	8.2	4.84	6.5
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS13	Middle	5.9	2	1	13:05	20.2	7.97	27.5	8.28	5	7.1
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS13	Middle	5.9	2	2	13:05	20.3	7.96	27.6	8.36	4.98	6.8
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS13	Bottom	10.7	3	1	13:05	20.2	7.96	27.6	8.09	5.13	7.2
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS13	Bottom	10.7	3	2	13:05	20.3	7.95	27.6	8.14	5.12	7.1
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS14	Surface	1	1	1	12:26	20.1	7.88	27.5	8.26	4.75	5.9
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS14	Surface	1	1	2	12:26	20.2	7.86	27.5	8.32	4.77	5.9
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS14	Middle	6.3	2	1	12:26	20.2	7.97	27.4	8.31	4.48	5.7
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS14	Middle	6.3	2	2	12:26	20.2	7.98	27.5	8.41	4.46	5.4
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS14	Bottom	11.5	3	1	12:26	20.3	7.92	27.5	8.36	4.67	5.7
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS14	Bottom	11.5	3	2	12:26	20.3	7.94	27.6	8.28	4.7	5.8
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS15	Surface	1	1	1	13:18	20.1	7.95	27.5	8.33	4.73	6.4
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS15	Surface	1	1	2	13:18	20.1	7.98	27.5	8.39	4.75	6.3
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS15	Middle	5.6	2	1	13:18	20.2	7.89	27.5	8.1	5.13	6.8
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS15	Middle	5.6	2	2	13:18	20.2	7.89	27.6	8.17	5.15	6.9
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS15	Bottom	10.2	3	1	13:18	20.2	7.91	27.5	8.19	5.2	7
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	IS15	Bottom	10.2	3	2	13:18	20.3	7.93	27.5	8.28	5.21	6.9
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR8	Surface	1	1	1	13:39	20.2	8.01	27.5	8.16	5.02	6.3
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR8	Surface	1	1	2	13:39	20.2	8.03	27.5	8.25	5.03	6.5
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR8	Middle		2	1	13:39						
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR8	Middle		2	2	13:39						
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR8	Bottom	4.2	3	1	13:39	20.3	7.99	27.6	8.06	5.15	6.8
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR8	Bottom	4.2	3	2	13:39	20.3	7.98	27.5	8.12	5.16	6.6
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR9	Surface	1	1	1	13:30	20.2	7.99	27.4	8.16	4.45	5.7
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR9	Surface	1	1	2	13:30	20.1	7.98	27.5	8.2	4.46	5.7
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR9	Middle		2	1	13:30						
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR9	Middle		2	2	13:30						
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR9	Bottom	3.2	3	1	13:30	20.2	7.87	27.4	8.21	4.35	5.5
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR9	Bottom	3.2	3	2	13:30	20.2	7.86	27.4	8.26	4.36	5.7
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR10A	Surface	1	1	1	14:10	20.2	7.83	27.5	8.72	4.75	6.2
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR10A	Surface	1	1	2	14:10	20.2	7.84	27.4	8.81	4.76	6.2
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR10A	Middle	6.9	2	1	14:10	20.2	8.01	27.5	8.26	4.36	5.6
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR10A	Middle	6.9	2	2	14:10	20.1	8	27.5	8.38	4.35	5.6
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR10A	Bottom	12.7	3	1	14:10	20.1	7.98	27.4	8.43	4.66	6
TMCLKL	HY/2012/08	2017-01-12	Mid-Ebb	Cloudy	Small wave	SR10A	Bottom	12.7	3	2	14:10	20.1	7.97	27.4	8.37	4.67	6
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	CS4	Surface	1	1	1	10:33	20.4	7.62	28	8.01	4.96	7.1
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	CS4	Surface	1	1	2	10:33	20.5	7.69	27.9	8.06	5.03	7.5
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	CS4	Middle	9	2	1	10:33	20.5	7.51	27.8	8.14	5.17	7.6
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	CS4	Middle	9	2	2	10:33	20.6	7.54	27.9	8.18	5.23	7.5
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	CS4	Bottom	16.9	3	1	10:33	20.5	7.88	28	8.25	5.19	7.3
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	CS4	Bottom	16.9	3	2	10:33	20.7	7.95	28.1	8.29	5.26	7.6
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	CS6	Surface	1	1	1	08:18	20.2	7.86	27.9	8.16	4.88	7.1
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	CS6	Surface	1	1	2	08:18	20.3	7.81	27.9	8.2	4.82	7.1
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	CS6	Middle	6.8	2	1	08:18	20.3	7.56	28	8.29	5.11	7.6
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	CS6	Middle	6.8	2	2	08:18	20.3	7.59	27.9	8.33	5.15	7.3
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	CS6	Bottom	12.6	3	1	08:18	20.4	7.92	28	8.01	5.06	7.3
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	CS6	Bottom	12.6	3	2	08:18	20.4	7.97	28.1	8.07	5.09	7.5
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS12	Surface	1	1	1	10:10	20.3	7.79	27.9	8.12	4.59	6.3
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS12	Surface	1	1	2	10:10	20.4	7.85	28	8.18	4.64	6.3
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS12	Middle	6.5	2	1	10:10	20.3	7.63	28	8.23	4.71	6.4
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS12	Middle	6.5	2	2	10:10	20.3	7.66	28.1	8.28	4.77	6.6
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS12	Bottom	11.9	3	1	10:10	20.4	7.45	28.1	8.3	5.05	7
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS12	Bottom	11.9	3	2	10:10	20.4	7.4	28.2	8.36	5.09	6.9
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS13	Surface	1	1	1	09:53	20.2	7.78	28	8.16	4.56	6.2
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS13	Surface	1	1	2	09:53	20.3	7.71	27.9	8.14	4.61	6.5

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS13	Middle		2	1	09:53	20.3	7.83	27.9	8.26	4.72	6.5
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS13	Middle		2	2	09:53	20.4	7.89	28	8.31	4.77	6.6
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS13	Bottom	10.1	3	1	09:53	20.5	7.57	28.1	8.32	5.06	6.8
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS13	Bottom	10.1	3	2	09:53	20.6	7.62	28	8.35	5.09	7.2
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS14	Surface	1	1	1	10:22	20.3	7.78	27.8	8.04	5.06	6.1
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS14	Surface	1	1	2	10:22	20.4	7.85	27.8	8.08	5.11	6.5
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS14	Middle	5.8	2	1	10:22	20.4	7.74	27.9	8.17	5.14	6.3
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS14	Middle	5.8	2	2	10:22	20.5	7.79	28	8.24	5.17	6.4
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS14	Bottom	10.6	3	1	10:22	20.5	7.51	27.8	8.14	5.21	6.3
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS14	Bottom	10.6	3	2	10:22	20.6	7.55	27.9	8.19	5.26	6.5
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS15	Surface	1	1	1		20.3	7.8	28	8.11	4.89	6.8
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS15	Surface	1	1	2	00:00	20.2	7.86	27.9	8.17	4.94	6.5
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS15	Middle		2	1	00:00	20.3	7.96	27.9	8.22	5.01	6.7
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS15	Middle		2	2	00:00	20.4	7.91	28	8.27	5.04	6.8
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS15	Bottom	9	3	1	00:00	20.3	7.74	28.1	8.31	5.09	7
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	IS15	Bottom	9	3	2	00:00	20.3	7.76	28.2	8.37	5.16	7
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR8	Surface	1	1	1	09:15	20.2	7.71	27.9	7.66	4.76	6
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR8	Surface	1	1	2	09:15	20.3	7.75	27.8	7.69	4.73	6
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR8	Middle		2	1	09:15						
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR8	Middle		2	2	09:15						
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR8	Bottom	4.9	3	1	09:15	20.3	7.92	27.9	8.23	4.83	6.2
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR8	Bottom	4.9	3	2	09:15	20.4	7.97	28	8.27	4.88	6.1
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR9	Surface	1	1	1	09:27	20.3	7.84	27.9	7.91	4.71	6.1
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR9	Surface	1	1	2	09:27	20.4	7.88	28	7.96	4.77	6.2
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR9	Middle		2	1	09:27						
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR9	Middle		2	2	09:27						
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR9	Bottom	3.3	3	1	09:27	20.4	7.65	28.1	8.07	4.76	6
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR9	Bottom	3.3	3	2	09:27	20.5	7.69	28.2	8.12	4.8	6
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR10A	Surface	1	1	1	08:44	20.2	7.69	27.8	7.97	4.88	6.4
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR10A	Surface	1	1	2	08:44	20.2	7.77	27.9	7.92	4.95	6.2
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR10A	Middle	6.9	2	1	08:44	20.3	7.42	27.9	8.09	5.16	6.8
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR10A	Middle	6.9	2	2	08:44	20.2	7.48	28	8.14	5.19	6.7
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR10A	Bottom	12.8	3	1	08:44	20.3	7.53	28.1	8.26	5.23	6.6
TMCLKL	HY/2012/08	2017-01-14	Mid-Flood	Cloudy	Small wave	SR10A	Bottom	12.8	3	2	08:44	20.4	7.57	28.1	8.22	5.27	7
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	CS4	Surface	1	1	1	12:37	20.2	7.48	27.3	7.95	5.24	7.7
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	CS4	Surface	1	1	2	12:37	20.2	7.51	27.3	7.92	5.33	7.5
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	CS4	Middle	8.8	2	1	12:37	20.2	7.43	27.5	8.03	5.6	8.2
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	CS4	Middle	8.8	2	2	12:37	20.3	7.47	27.6	8.01	5.69	8.2
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	CS4	Bottom	16.6	3	1	12:37	20.5	7.58	27.8	8.4	5.43	7.8
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	CS4	Bottom	16.6	3	2	12:37	20.5	7.62	27.8	8.36	5.5	7.9
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	CS6	Surface	1	1	1	14:28	20.2	7.63	27.4	7.98	5.07	7.6
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	CS6	Surface	1	1	2	14:28	20.1	7.66	27.5	8.02	5.16	7.7
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	CS6	Middle	6.7	2	1	14:28	20.2	7.64	27.7	8.07	5.23	7.6
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	CS6	Middle	6.7	2	2	14:28	20.2	7.59	27.7	8.1	5.34	7.9
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	CS6	Bottom	12.2	3	1	14:28	20.3	7.74	27.9	8.21	5.48	8
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	CS6	Bottom	12.2	3	2	14:28	20.4	7.8	28	8.17	5.4	8
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS12	Surface	1	1	1	13:10	20.2	7.56	27.5	8.04	4.89	6.6
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS12	Surface	1	1	2	13:10	20.2	7.51	27.4	8.01	4.94	6.8
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS12	Middle	6.3	2	1	13:10	20.2	7.53	27.5	8.1	5.01	6.6
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS12	Middle	6.3	2	2	13:10	20.3	7.55	27.5	8.14	5.08	6.7
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS12	Bottom	11.6	3	1	13:10	20.5	7.58	27.7	8.22	5.23	6.9
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS12	Bottom	11.6	3	2	13:10	20.5	7.62	27.8	8.25	5.16	6.7
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS13	Surface	1	1	1	13:27	20.2	7.63	27.4	8.06	4.83	6.8
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS13	Surface	1	1	2	13:27	20.1	7.6	27.4	8.02	4.74	6.6
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS13	Middle	5.4	2	1	13:27	20.2	7.66	27.4	8.09	4.98	6.8
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS13	Middle	5.4	2	2	13:27	20.2	7.62	27.5	8.12	4.89	6.7

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS13	Bottom	9.8	3	1	13:27	20.4	7.53	27.8	8.2	5.01	6.8
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS13	Bottom	9.8	3	2	13:27	20.5	7.58	27.9	8.24	5.09	6.9
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS14	Surface	1	1	1	12:54	20.2	7.55	27.3	7.98	5.18	6.6
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS14	Surface	1	1	2	12:54	20.1	7.53	27.4	7.96	5.24	6.5
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS14	Middle	5.6	2	1	12:54	20.2	7.62	27.5	8.08	5.4	6.9
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS14	Middle	5.6	2	2	12:54	20.1	7.59	27.6	8.04	5.48	6.7
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS14	Bottom	10.2	3	1	12:54	20.4	7.5	27.7	8.16	5.34	6.6
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS14	Bottom	10.2	3	2	12:54	20.5	7.54	27.7	8.13	5.29	6.6
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS15	Surface	1	1	1	13:44	20.2	7.67	27.4	8.04	4.93	6.6
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS15	Surface	1	1	2	13:44	20.2	7.64	27.5	8	4.99	6.7
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS15	Middle	4.7	2	1	13:44	20.2	7.68	27.6	8.08	5.06	7.7
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS15	Middle	4.7	2	2	13:44	20.2	7.72	27.5	8.11	5.12	6.9
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS15	Bottom	8.4	3	1	13:44	20.2	7.66	27.8	8.23	5.34	7.3
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	IS15	Bottom	8.4	3	2	13:44	20.3	7.7	27.8	8.18	5.26	7.2
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR8	Surface	1	1	1	14:14	20.2	7.64	27.7	7.45	4.9	6.4
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR8	Surface	1	1	2	14:14	20.2	7.57	27.6	7.41	4.96	6.4
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR8	Middle		2	1	14:14						
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR8	Middle		2	2	14:14						
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR8	Bottom	4.4	3	1	14:14	20.2	7.72	27.7	7.78	5.06	6.4
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR8	Bottom	4.4	3	2	14:14	20.2	7.76	27.8	7.69	5.12	6.6
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR9	Surface	1	1	1	14:00	20.2	7.64	27.5	7.85	4.83	6
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR9	Surface	1	1	2	14:00	20.3	7.67	27.5	7.82	4.9	6.3
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR9	Middle		2	1	14:00						
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR9	Middle		2	2	14:00						
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR9	Bottom	3	3	1	14:00	20.3	7.58	27.6	7.94	5.1	6.4
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR9	Bottom	3	3	2	14:00	20.2	7.63	27.7	7.98	5.17	6.5
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR10A	Surface	1	1	1	14:53	20.2	7.53	27.5	7.78	4.97	6.3
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR10A	Surface	1	1	2	14:53	20.2	7.56	27.6	7.74	5.02	6.4
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR10A	Middle	6.8	2	1	14:53	20.2	7.58	27.6	7.83	5.09	6.8
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR10A	Middle	6.8	2	2	14:53	20.2	7.55	27.7	7.86	5.15	6.5
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR10A	Bottom	12.5	3	1	14:53	20.3	7.57	27.9	7.93	5.43	7.1
TMCLKL	HY/2012/08	2017-01-14	Mid-Ebb	Cloudy	Small wave	SR10A	Bottom	12.5	3	2	14:53	20.4	7.61	27.9	7.98	5.49	7.1
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	CS4	Surface	1	1	1	12:20	20.6	7.84	26.7	8.04	5.09	7.2
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	CS4	Surface	1	1	2	12:20	20.6	7.88	26.7	8.08	5.11	7.2
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	CS4	Middle	10.6	2	1	12:20	20.5	7.89	26.7	8.02	5.12	7.3
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	CS4	Middle	10.6	2	2	12:20	20.5	7.87	26.7	8	5.18	7.5
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	CS4	Bottom	20.2	3	1	12:20	20.5	7.86	26.7	7.96	5.19	7.7
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	CS4	Bottom	20.2	3	2	12:20	20.5	7.84	26.7	7.92	5.22	7.4
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	CS6	Surface	1	1	1	10:17	20.5	7.82	26.8	8.26	4.21	6.1
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	CS6	Surface	1	1	2	10:17	20.6	7.84	26.8	8.24	4.26	6.3
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	CS6	Middle	6.8	2	1	10:17	20.5	7.82	26.8	8.19	4.48	6.6
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	CS6	Middle	6.8	2	2	10:17	20.5	7.83	26.8	8.22	4.52	6.7
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	CS6	Bottom	12.6	3	1	10:17	20.4	7.84	26.8	8.14	4.71	6.7
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	CS6	Bottom	12.6	3	2	10:17	20.4	7.84	26.8	8.18	4.65	6.9
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS12	Surface	1	1	1	11:47	20.5	7.86	26.8	8.15	4.77	6.4
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS12	Surface	1	1	2	11:47	20.6	7.82	26.7	8.16	4.72	6.2
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS12	Middle	6.9	2	1	11:47	20.6	7.89	26.7	8.05	4.86	6.4
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS12	Middle	6.9	2	2	11:47	20.5	7.86	26.7	8.02	4.83	6.5
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS12	Bottom	12.8	3	1	11:47	20.5	7.83	26.7	8	4.8	6.4
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS12	Bottom	12.8	3	2	11:47	20.5	7.86	26.7	8.03	4.82	6.6
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS13	Surface	1	1	1	11:32	20.5	7.89	26.5	8.06	4.76	6.4
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS13	Surface	1	1	2	11:32	20.5	7.86	26.5	8.02	4.8	6.8
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS13	Middle	6	2	1	11:32	20.5	7.85	26.4	8.01	4.87	6.8
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS13	Middle	6	2	2	11:32	20.5	7.87	26.5	8.03	4.92	6.7
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS13	Bottom	11	3	1	11:32	20.4	7.84	26.5	7.94	5.06	7.1
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS13	Bottom	11	3	2	11:32	20.4	7.8	26.4	7.9	5	6.9

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS14	Surface	1	1	1	12:04	20.5	7.84	26.7	8.16	4.77	6
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS14	Surface	1	1	2	12:04	20.5	7.85	26.7	8.14	4.81	6.1
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS14	Middle	6.5	2	1	12:04	20.5	7.86	26.7	8.09	4.86	6.1
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS14	Middle	6.5	2	2	12:04	20.5	7.89	26.7	8.11	4.83	5.9
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS14	Bottom	11.9	3	1	12:04	20.5	7.86	26.7	8.05	4.82	5.8
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS14	Bottom	11.9	3	2	12:04	20.5	7.88	26.7	8.02	4.84	5.9
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS15	Surface	1	1	1	11:15	20.5	7.89	26.5	8.21	4.65	6.5
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS15	Surface	1	1	2	11:15	20.5	7.87	26.5	8.16	4.68	6.4
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS15	Middle	5.8	2	1	11:15	20.5	7.86	26.5	8.13	5.09	6.7
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS15	Middle	5.8	2	2	11:15	20.5	7.85	26.5	8.15	5.06	6.9
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS15	Bottom	10.6	3	1	11:15	20.4	7.82	26.5	8.08	5.11	6.8
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	IS15	Bottom	10.6	3	2	11:15	20.4	7.86	26.5	8.11	5.14	6.8
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR8	Surface	1	1	1	10:48	20.5	7.96	26.8	8.22	5.11	6.8
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR8	Surface	1	1	2	10:48	20.5	7.92	26.7	8.19	5.09	6.6
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR8	Middle		2	1	10:48						
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR8	Middle		2	2	10:48						
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR8	Bottom	4.6	3	1	10:48	20.5	7.93	26.7	8.05	5.04	6.4
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR8	Bottom	4.6	3	2	10:48	20.5	7.94	26.7	8.08	5.08	6.7
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR9	Surface	1	1	1	11:01	20.5	7.85	26.4	8.12	4.27	5.6
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR9	Surface	1	1	2	11:01	20.6	7.82	26.5	8.14	4.3	5.6
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR9	Middle		2	1	11:01						
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR9	Middle		2	2	11:01						
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR9	Bottom	3.6	3	1	11:01	20.3	7.83	26.4	8	4.16	5.4
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR9	Bottom	3.6	3	2	11:01	20.4	7.84	26.4	7.95	4.19	5.5
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR10A	Surface	1	1	1	10:33	20.6	7.79	26.7	8.65	4.81	6.4
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR10A	Surface	1	1	2	10:33	20.6	7.82	26.7	8.64	4.74	6.1
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR10A	Middle	7.1	2	1	10:33	20.6	7.82	26.7	8.39	4.64	6.1
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR10A	Middle	7.1	2	2	10:33	20.5	7.83	26.7	8.44	4.69	6
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR10A	Bottom	13.2	3	1	10:33	20.5	7.82	26.7	8.26	4.59	5.9
TMCLKL	HY/2012/08	2017-01-17	Mid-Flood	Fine	Small wave	SR10A	Bottom	13.2	3	2	10:33	20.5	7.83	26.7	8.29	4.62	6
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	CS4	Surface	1	1	1	14:42	20	7.86	26.9	8.15	5.28	7.6
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	CS4	Surface	1	1	2	14:42	20.1	7.89	27	8.17	5.31	7.6
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	CS4	Middle	10.5	2	1	14:42	20.2	7.92	27.1	8.33	5.44	8
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	CS4	Middle	10.5	2	2	14:42	20.3	7.9	27.2	8.35	5.47	7.8
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	CS4	Bottom	19.9	3	1	14:42	20.4	8.04	27.3	8.49	5.55	8.1
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	CS4	Bottom	19.9	3	2	14:42	20.5	8.07	27.4	8.52	5.58	7.9
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	CS6	Surface	1	1	1	17:00	20.1	8.12	27	7.96	4.09	6
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	CS6	Surface	1	1	2	17:00	20.2	8.14	26.9	7.98	4.11	6
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	CS6	Middle	6.7	2	1	17:00	20.3	8.2	27.1	8.14	4.25	6.3
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	CS6	Middle	6.7	2	2	17:00	20.3	8.23	27.2	8.17	4.28	6.2
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	CS6	Bottom	12.3	3	1	17:00	20.4	7.96	27.3	8.25	4.36	6.3
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	CS6	Bottom	12.3	3	2	17:00	20.4	7.93	27.2	8.28	4.39	6.3
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS12	Surface	1	1	1	15:25	20	7.96	26.9	8.05	5.09	6.9
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS12	Surface	1	1	2	15:25	19.9	7.98	27	8.07	5.11	6.9
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS12	Middle	6.8	2	1	15:25	20.1	8	27.1	8.19	5.27	7.2
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS12	Middle	6.8	2	2	15:25	20.2	8.02	27.2	8.22	5.29	7.2
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS12	Bottom	12.5	3	1	15:25	20.3	7.86	27.3	8.34	5.34	7.3
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS12	Bottom	12.5	3	2	15:25	20.4	7.84	27.4	8.3	5.37	7.2
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS13	Surface	1	1	1	15:47	20.1	7.94	26.9	7.67	5.34	7.5
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS13	Surface	1	1	2	15:47	20	7.96	27	7.69	5.32	7.4
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS13	Middle	5.9	2	1	15:47	20.2	8	27.1	7.75	5.4	7.6
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS13	Middle	5.9	2	2	15:47	20.2	8.04	27.2	7.78	5.42	7.7
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS13	Bottom	10.8	3	1	15:47	20.3	7.84	27.3	7.96	5.55	7.5
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS13	Bottom	10.8	3	2	15:47	20.4	7.82	27.4	7.98	5.52	7.9
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS14	Surface	1	1	1	15:03	20.1	8.06	27	7.84	5.19	6.6
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS14	Surface	1	1	2	15:03	20.2	8.08	27.1	7.87	5.21	6.5

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS14	Middle	6.3	2	1	15:03	20.2	8.15	27.2	7.95	5.33	6.7
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS14	Middle	6.3	2	2	15:03	20.3	8.13	27.2	7.98	5.36	6.8
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS14	Bottom	11.6	3	1	15:03	20.4	8	27.3	8.14	5.4	6.8
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS14	Bottom	11.6	3	2	15:03	20.3	7.98	27.4	8.17	5.42	6.6
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS15	Surface	1	1	1	16:09	20.3	8.12	27.1	7.86	5.48	7.6
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS15	Surface	1	1	2	16:09	20.3	8.1	27.1	7.89	5.51	7.5
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS15	Middle	5.6	2	1	16:09	20.4	7.96	27.2	8	5.66	7.5
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS15	Middle	5.6	2	2	16:09	20.4	7.93	27.3	8.02	5.64	7.7
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS15	Bottom	10.2	3	1	16:09	20.5	8.05	27.4	8.15	5.77	7.7
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	IS15	Bottom	10.2	3	2	16:09	20.5	8.07	27.3	8.13	5.75	8
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR8	Surface	1	1	1	16:34	20.2	7.84	27	8.05	3.99	5
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR8	Surface	1	1	2	16:34	20.2	7.87	26.9	8.07	4.01	5.1
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR8	Middle		2	1	16:34						
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR8	Middle		2	2	16:34						
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR8	Bottom	4.2	3	1	16:34	20.3	8.15	27.2	8.12	4.28	5.5
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR8	Bottom	4.2	3	2	16:34	20.4	8.17	27.3	8.15	4.3	5.7
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR9	Surface	1	1	1	16:22	20.2	7.74	26.9	7.78	5.24	6.6
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR9	Surface	1	1	2	16:22	20.3	7.77	27	7.81	5.27	6.7
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR9	Middle		2	1	16:22						
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR9	Middle		2	2	16:22						
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR9	Bottom	3.3	3	1	16:22	20.4	7.84	27.1	8.07	5.56	7.2
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR9	Bottom	3.3	3	2	16:22	20.3	7.87	27.2	8.04	5.55	7
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR10A	Surface	1	1	1	16:46	20.2	7.96	26.8	7.84	4.18	5.4
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR10A	Surface	1	1	2	16:46	20.3	7.98	26.9	7.87	4.2	5.4
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR10A	Middle	7	2	1	16:46	20.3	8.14	27	7.99	4.39	5.6
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR10A	Middle	7	2	2	16:46	20.3	8.17	27.1	8.01	4.41	5.6
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR10A	Bottom	12.9	3	1	16:46	20.4	7.84	27.2	8.27	4.3	5.6
TMCLKL	HY/2012/08	2017-01-17	Mid-Ebb	Fine	Small wave	SR10A	Bottom	12.9	3	2	16:46	20.3	7.87	27.3	8.29	4.32	5.7
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	CS4	Surface	1	1	1	13:03	19.2	7.73	26.4	7.62	5	7.3
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	CS4	Surface	1	1	2	13:03	19.2	7.75	26.4	7.64	5.02	7.4
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	CS4	Middle	10.7	2	1	13:03	19.3	7.82	26.5	7.75	5.14	7.4
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	CS4	Middle	10.7	2	2	13:03	19.4	7.8	26.6	7.77	5.17	7.7
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	CS4	Bottom	20.3	3	1	13:03	19.5	7.99	26.7	7.84	5.28	7.4
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	CS4	Bottom	20.3	3	2	13:03	19.6	8.01	26.8	7.81	5.3	7.8
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	CS6	Surface	1	1	1	11:24	19.2	7.86	26.4	7.56	4.46	6.7
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	CS6	Surface	1	1	2	11:24	19.3	7.89	26.5	7.59	4.43	6.4
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	CS6	Middle	6.8	2	1	11:24	19.3	8.14	26.6	7.66	4.64	6.8
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	CS6	Middle	6.8	2	2	11:24	19.4	8.1	26.7	7.64	4.61	6.9
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	CS6	Bottom	12.6	3	1	11:24	19.5	7.69	26.8	7.73	4.56	6.8
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	CS6	Bottom	12.6	3	2	11:24	19.4	7.71	26.7	7.76	4.58	6.9
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS12	Surface	1	1	1	13:03	19.2	7.67	26.4	7.43	4.64	6.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS12	Surface	1	1	2	13:03	19.3	7.69	26.5	7.45	4.67	6.4
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS12	Middle	6.9	2	1	13:03	19.4	8.13	26.6	7.52	4.59	6.3
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS12	Middle	6.9	2	2	13:03	19.3	8.1	26.7	7.55	4.56	6.2
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS12	Bottom	12.8	3	1	13:03	19.5	7.84	26.8	7.64	5.13	6.8
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS12	Bottom	12.8	3	2	13:03	19.4	7.87	26.7	7.66	5.17	7
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS13	Surface	1	1	1	12:55	19.2	8.12	26.4	7.54	5.14	7
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS13	Surface	1	1	2	12:55	19.2	8.1	26.5	7.57	5.11	6.9
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS13	Middle	6.1	2	1	12:55	19.3	7.95	26.7	7.6	5.26	7.3
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS13	Middle	6.1	2	2	12:55	19.3	7.98	26.7	7.63	5.29	7.3
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS13	Bottom	11.1	3	1	12:55	19.4	8.04	26.8	7.71	5.34	7.5
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS13	Bottom	11.1	3	2	12:55	19.5	8.07	26.7	7.74	5.37	7.6
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS14	Surface	1	1	1	13:21	19.1	8.06	26.3	7.55	4.8	6
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS14	Surface	1	1	2	13:21	19.2	8.08	26.4	7.53	4.83	6.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS14	Middle	6.5	2	1	13:21	19.3	8.14	26.5	7.67	4.97	6.3
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS14	Middle	6.5	2	2	13:21	19.2	8.12	26.6	7.69	4.99	6.1

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS14	Bottom	11.9	3	1	13:21	19.4	7.92	26.7	7.74	5.01	6.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS14	Bottom	11.9	3	2	13:21	19.4	7.95	26.7	7.72	5.04	6.2
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS15	Surface	1	1	1	12:35	19.2	7.95	26.4	7.7	5.04	6.7
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS15	Surface	1	1	2	12:35	19.3	7.98	26.4	7.73	5.07	6.8
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS15	Middle	5.9	2	1	12:35	19.4	8	26.5	7.81	5.14	7.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS15	Middle	5.9	2	2	12:35	19.4	8.02	26.6	7.83	5.17	7.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS15	Bottom	10.4	3	1	12:35	19.5	7.68	26.7	7.67	5.38	7.3
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	IS15	Bottom	10.4	3	2	12:35	19.6	7.71	26.8	7.69	5.41	7.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR8	Surface	1	1	1	12:07	19.2	7.74	26.2	7.43	4.39	5.7
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR8	Surface	1	1	2	12:07	19.1	7.77	26.3	7.46	4.42	5.6
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR8	Middle		2	1	12:07						
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR8	Middle		2	2	12:07						
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR8	Bottom	4.4	3	1	12:07	19.3	7.85	26.4	7.6	4.56	6
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR8	Bottom	4.4	3	2	12:07	19.4	7.89	26.5	7.63	4.59	6.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR9	Surface	1	1	1	12:20	19.2	7.84	26.5	7.69	4.82	6.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR9	Surface	1	1	2	12:20	19.3	7.87	26.5	7.71	4.85	6.2
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR9	Middle		2	1	12:20						
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR9	Middle		2	2	12:20						
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR9	Bottom	3.6	3	1	12:20	19.4	7.99	26.6	7.54	4.99	6.5
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR9	Bottom	3.6	3	2	12:20	19.4	8.02	26.7	7.52	5.01	6.3
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR10A	Surface	1	1	1	11:46	19.1	8.06	26.3	7.65	4.29	5.5
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR10A	Surface	1	1	2	11:46	19.2	8.09	26.4	7.68	4.32	5.7
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR10A	Middle	7.1	2	1	11:46	19.3	8.15	26.5	7.51	4.48	5.9
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR10A	Middle	7.1	2	2	11:46	19.3	8.13	26.5	7.49	4.5	5.7
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR10A	Bottom	13.2	3	1	11:46	19.4	7.92	26.7	7.73	4.55	5.8
TMCLKL	HY/2012/08	2017-01-19	Mid-Flood	Fine	Small wave	SR10A	Bottom	13.2	3	2	11:46	19.4	7.9	26.6	7.75	4.57	6
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	CS4	Surface	1	1	1	16:30	19.5	7.85	26.7	7.39	5.43	7.9
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	CS4	Surface	1	1	2	16:30	19.6	7.88	26.7	7.32	5.37	7.8
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	CS4	Middle	11.5	2	1	16:30	19.7	7.98	26.8	7.58	5.56	8
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	CS4	Middle	11.5	2	2	16:30	19.7	7.96	26.7	7.64	5.49	8
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	CS4	Bottom	21.9	3	1	16:30	19.8	7.92	27	7.92	5.72	8.5
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	CS4	Bottom	21.9	3	2	16:30	19.7	7.9	27	7.98	5.76	8.4
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	CS6	Surface	1	1	1	18:50	19.4	7.72	26.7	7.28	4.71	6.7
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	CS6	Surface	1	1	2	16:30	19.5	7.74	26.8	7.33	4.76	6.8
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	CS6	Middle	6.5	2	1	16:30	19.5	7.86	26.9	7.44	4.86	7.2
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	CS6	Middle	6.5	2	2	16:30	19.5	7.89	26.9	7.49	4.93	7.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	CS6	Bottom	11.9	3	1	16:30	19.6	7.82	27	7.6	5.04	7.5
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	CS6	Bottom	11.9	3	2	16:30	19.6	7.8	26.9	7.54	5.11	7.6
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS12	Surface	1	1	1	17:03	19.6	7.86	26.8	7.31	4.82	6.5
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS12	Surface	1	1	2	17:03	19.5	7.83	26.8	7.27	4.86	6.5
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS12	Middle	6.8	2	1	17:03	19.7	7.69	26.8	7.17	4.98	6.8
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS12	Middle	6.8	2	2	17:03	19.7	7.72	26.7	7.23	5.04	6.7
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS12	Bottom	12.5	3	1	17:03	19.7	7.9	26.9	7.44	5.16	7.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS12	Bottom	12.5	3	2	17:03	19.8	7.87	26.9	7.49	5.21	7.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS13	Surface	1	1	1	17:19	19.4	7.79	26.8	7.23	5.4	7.6
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS13	Surface	1	1	2	17:19	19.4	7.76	26.7	7.28	5.44	7.4
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS13	Middle	5.9	2	1	17:19	19.6	7.84	26.9	7.49	5.57	7.6
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS13	Middle	5.9	2	2	17:19	19.5	7.87	26.8	7.41	5.52	7.6
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS13	Bottom	10.8	3	1	17:19	19.6	7.91	26.9	7.62	5.65	7.8
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS13	Bottom	10.8	3	2	17:19	19.6	7.88	26.9	7.57	5.61	7.9
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS14	Surface	1	1	1	16:47	19.6	7.74	26.7	7.31	5.05	6.2
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS14	Surface	1	1	2	16:47	19.6	7.71	26.8	7.26	5.11	6.3
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS14	Middle	6.3	2	1	16:47	19.7	7.86	26.9	7.47	5.14	6.2
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS14	Middle	6.3	2	2	16:47	19.6	7.89	26.8	7.53	5.09	6.5
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS14	Bottom	11.6	3	1	16:47	19.8	7.82	26.9	7.66	5.23	6.3
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS14	Bottom	11.6	3	2	16:47	19.8	7.85	26.9	7.71	5.27	6.6

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS15	Surface	1	1	1	17:35	19.4	7.68	26.7	7.36	5.29	7
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS15	Surface	1	1	2	17:35	19.5	7.7	26.8	7.32	5.33	7.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS15	Middle	5.6	2	1	17:35	19.5	7.83	26.8	7.2	5.17	6.8
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS15	Middle	5.6	2	2	17:35	19.6	7.85	26.8	7.25	5.12	7.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS15	Bottom	10.1	3	1	17:35	19.7	7.94	26.9	7.49	5.45	7.5
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	IS15	Bottom	10.1	3	2	17:35	19.7	7.91	27	7.53	5.48	7.3
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR8	Surface	1	1	1	18:06	19.4	7.96	26.7	7.14	4.64	5.9
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR8	Surface	1	1	2	18:06	19.5	7.93	26.7	7.11	4.7	6.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR8	Middle		2	1	18:06						
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR8	Middle		2	2	18:06						
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR8	Bottom	4.1	3	1	18:06	19.6	7.78	26.8	7.39	4.8	6.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR8	Bottom	4.1	3	2	18:06	19.6	7.81	26.8	7.45	4.86	6.2
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR9	Surface	1	1	1	17:52	19.5	7.73	26.8	7.41	5.05	6.4
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR9	Surface	1	1	2	17:52	19.5	7.76	26.8	7.48	5.09	6.6
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR9	Middle		2	1	17:52						
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR9	Middle		2	2	17:52						
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR9	Bottom	3.4	3	1	17:52	19.5	7.7	26.8	7.63	5.18	6.7
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR9	Bottom	3.4	3	2	17:52	19.6	7.68	26.9	7.67	5.13	6.7
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR10A	Surface	1	1	1	18:31	19.5	7.83	26.8	7.36	4.64	5.9
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR10A	Surface	1	1	2	18:50	19.5	7.8	26.8	7.41	4.71	6.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR10A	Middle	6.9	2	1	18:50	19.6	7.97	26.8	7.28	4.52	5.8
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR10A	Middle	6.9	2	2	18:50	19.5	7.95	26.9	7.22	4.58	6.1
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR10A	Bottom	12.8	3	1	18:50	19.7	8.01	27	7.48	4.82	6.3
TMCLKL	HY/2012/08	2017-01-19	Mid-Ebb	Cloudy	Small wave	SR10A	Bottom	12.8	3	2	18:50	19.7	7.97	27	7.53	4.89	6.2
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	CS4	Surface	1	1	1	13:40	19.3	7.59	26.7	8.14	5.69	8.4
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	CS4	Surface	1	1	2	13:40	19.4	7.62	26.8	8.11	5.75	8.4
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	CS4	Middle	8.9	2	1	13:40	19.4	7.54	26.9	8.2	5.95	8.5
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	CS4	Middle	8.9	2	2	13:40	19.5	7.58	27	8.24	5.98	8.6
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	CS4	Bottom	16.8	3	1	13:40	19.6	7.66	27.1	8.31	5.84	8.3
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	CS4	Bottom	16.8	3	2	13:40	19.7	7.71	27	8.27	5.89	8.7
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	CS6	Surface	1	1	1	11:48	19.5	7.47	26.6	8.3	5.18	7.8
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	CS6	Surface	1	1	2	11:48	19.6	7.5	26.7	8.26	5.26	7.7
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	CS6	Middle	6.7	2	1	11:48	19.7	7.49	26.8	8.23	5.37	7.8
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	CS6	Middle	6.7	2	2	11:48	19.6	7.54	26.7	8.2	5.31	7.8
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	CS6	Bottom	12.4	3	1	11:48	19.7	7.58	26.9	8.14	5.57	8.2
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	CS6	Bottom	12.4	3	2	11:48	19.8	7.55	27	8.1	5.64	8
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS12	Surface	1	1	1	13:22	19.4	7.49	26.6	8.17	5.08	7
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS12	Surface	1	1	2	13:22	19.5	7.53	26.7	8.2	5.15	6.8
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS12	Middle	6.4	2	1	13:22	19.6	7.56	26.7	8.23	5.23	7.2
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS12	Middle	6.4	2	2	13:22	19.7	7.54	26.8	8.26	5.35	7.3
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS12	Bottom	11.8	3	1	13:22	19.7	7.63	26.9	8.34	5.51	7.4
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS12	Bottom	11.8	3	2	13:22	19.6	7.67	27	8.38	5.62	7.6
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS13	Surface	1	1	1	13:05	19.6	7.52	26.7	8.3	4.99	7
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS13	Surface	1	1	2	13:05	19.5	7.56	26.6	8.27	5.07	7.2
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS13	Middle	5.5	2	1	13:05	19.6	7.54	26.8	8.33	5.15	7.2
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS13	Middle	5.5	2	2	13:05	19.6	7.57	26.9	8.36	5.23	7.2
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS13	Bottom	10	3	1	13:05	19.7	7.56	26.9	8.39	5.4	7.7
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS13	Bottom	10	3	2	13:05	19.8	7.6	27	8.44	5.47	7.4
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS14	Surface	1	1	1	14:03	19.5	7.5	26.7	8.19	5.57	7
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS14	Surface	1	1	2	14:03	19.6	7.54	26.6	8.15	5.84	7.5
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS14	Middle	5.8	2	1	14:03	19.7	7.52	26.7	8.28	5.4	6.9
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS14	Middle	5.8	2	2	14:03	19.6	7.56	26.8	8.25	5.46	6.9
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS14	Bottom	10.6	3	1	14:03	19.7	7.64	26.8	8.33	5.77	7
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS14	Bottom	10.6	3	2	14:03	19.8	7.61	26.9	8.36	5.8	7.1
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS15	Surface	1	1	1	12:48	19.4	7.49	26.7	8.33	5.07	7
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS15	Surface	1	1	2	12:48	19.5	7.53	26.8	8.29	5.15	7

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS15	Middle	5.4	2	1	12:48	19.6	7.54	26.7	8.42	5.37	7.4
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS15	Middle	5.4	2	2	12:48	19.7	7.51	26.8	8.39	5.29	7
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS15	Bottom	8.8	3	1	12:48	19.7	7.56	26.9	8.25	5.61	7.8
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	IS15	Bottom	8.8	3	2	12:48	19.6	7.59	26.8	8.3	5.68	7.9
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR8	Surface	1	1	1	12:22	19.5	7.46	26.6	8.04	5.15	6.8
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR8	Surface	1	1	2	12:22	19.4	7.5	26.7	8.07	5.24	6.9
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR8	Middle		2	1	12:22						
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR8	Middle		2	2	12:22						
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR8	Bottom	4.8	3	1	12:22	19.5	7.43	26.7	7.93	5.51	7
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR8	Bottom	4.8	3	2	12:22	19.6	7.46	26.8	7.9	5.45	7.1
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR9	Surface	1	1	1	12:35	19.4	7.44	26.6	8.14	4.95	6.2
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR9	Surface	1	1	2	12:35	19.3	7.48	26.5	8.1	4.88	6.4
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR9	Middle		2	1	12:35						
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR9	Middle		2	2	12:35						
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR9	Bottom	3.4	3	1	12:35	19.4	7.54	26.6	8.07	5.29	6.6
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR9	Bottom	3.4	3	2	12:35	19.5	7.5	26.7	8.12	5.36	6.8
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR10A	Surface	1	1	1	12:05	19.4	7.45	26.6	8.24	5.35	6.9
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR10A	Surface	1	1	2	12:05	19.5	7.48	26.5	8.27	5.29	6.8
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR10A	Middle	6.8	2	1	12:05	19.5	7.47	26.7	8.19	5.45	7
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR10A	Middle	6.8	2	2	12:05	19.6	7.5	26.6	8.16	5.52	7.1
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR10A	Bottom	12.6	3	1	12:05	19.6	7.54	26.8	8.32	5.71	7.5
TMCLKL	HY/2012/08	2017-01-21	Mid-Flood	Cloudy	Calm	SR10A	Bottom	12.6	3	2	12:05	19.7	7.57	26.9	8.28	5.79	7.3
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	CS4	Surface	1	1	1	06:28	19.4	7.53	26.7	8.08	5.78	8.4
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	CS4	Surface	1	1	2	06:28	19.4	7.56	26.6	8.05	5.84	8.4
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	CS4	Middle	8.7	2	1	06:28	19.6	7.48	26.7	8.14	6.04	8.8
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	CS4	Middle	8.7	2	2	06:28	19.5	7.52	26.8	8.18	6.07	8.6
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	CS4	Bottom	16.4	3	1	06:28	19.8	7.6	26.9	8.25	5.93	8.5
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	CS4	Bottom	16.4	3	2	06:28	19.7	7.65	27	8.21	5.98	8.8
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	CS6	Surface	1	1	1	07:54	19.4	7.41	26.5	8.24	5.27	7.9
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	CS6	Surface	1	1	2	07:54	19.4	7.44	26.6	8.2	5.35	8
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	CS6	Middle	6.6	2	1	07:54	19.4	7.43	26.7	8.17	5.46	8
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	CS6	Middle	6.6	2	2	07:54	19.3	7.48	26.7	8.14	5.4	7.9
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	CS6	Bottom	12.2	3	1	07:54	19.5	7.52	26.8	8.08	5.66	8.1
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	CS6	Bottom	12.2	3	2	07:54	19.5	7.49	26.9	8.04	5.73	8.5
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS12	Surface	1	1	1	06:53	19.4	7.43	26.5	8.11	5.17	6.9
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS12	Surface	1	1	2	06:53	19.4	7.47	26.6	8.14	5.24	7.2
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS12	Middle	6.2	2	1	06:53	19.4	7.5	26.7	8.17	5.32	7.1
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS12	Middle	6.2	2	2	06:53	19.5	7.48	26.7	8.2	5.44	7.4
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS12	Bottom	11.4	3	1	06:53	19.6	7.57	26.9	8.28	5.6	7.4
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS12	Bottom	11.4	3	2	06:53	19.6	7.61	26.9	8.32	5.71	7.8
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS13	Surface	1	1	1	07:06	19.4	7.46	26.6	8.24	5.08	7
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS13	Surface	1	1	2	07:06	19.5	7.5	26.6	8.21	5.16	6.9
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS13	Middle	5.3	2	1	07:06	19.5	7.48	26.6	8.27	5.24	7.4
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS13	Middle	5.3	2	2	07:06	19.5	7.51	26.7	8.3	5.32	7.4
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS13	Bottom	9.6	3	1	07:06	19.5	7.5	26.8	8.33	5.49	7.5
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS13	Bottom	9.6	3	2	07:06	19.6	7.54	26.8	8.38	5.56	7.9
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS14	Surface	1	1	1	16:40	19.4	7.44	26.6	8.13	5.66	7
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS14	Surface	1	1	2	16:40	19.5	7.48	26.6	8.09	5.73	7.2
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS14	Middle	5.7	2	1	16:40	19.5	7.46	26.6	8.22	5.49	6.8
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS14	Middle	5.7	2	2	16:40	19.5	7.5	26.7	8.19	5.55	7
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS14	Bottom	10.3	3	1	16:40	19.6	7.58	26.8	8.27	5.86	7.1
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS14	Bottom	10.3	3	2	16:40	19.6	7.55	26.9	8.3	5.89	7.2
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS15	Surface	1	1	1	07:19	19.4	7.43	26.6	8.27	5.16	6.8
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS15	Surface	1	1	2	07:19	19.4	7.47	26.6	8.23	5.24	7.1
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS15	Middle	4.8	2	1	07:19	19.4	7.48	26.6	8.36	5.46	7.5
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS15	Middle	4.8	2	2	07:19	19.5	7.45	26.7	8.33	5.38	7.3

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS15	Bottom	8.5	3	1	07:19	19.5	7.5	26.8	8.19	5.7	7.5
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	IS15	Bottom	8.5	3	2	07:19	19.5	7.53	26.9	8.24	5.77	8
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR8	Surface	1	1	1	07:41	19.4	7.4	26.5	7.98	5.24	6.9
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR8	Surface	1	1	2	07:41	19.4	7.44	26.6	8.01	5.33	7.1
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR8	Middle		2	1	07:41						
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR8	Middle		2	2	07:41						
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR8	Bottom	4.5	3	1	07:41	19.4	7.37	26.6	7.87	5.6	7.1
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR8	Bottom	4.5	3	2	07:41	19.4	7.4	26.6	7.84	5.54	7.2
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR9	Surface	1	1	1	07:32	19.4	7.38	26.5	8.08	5.04	6.3
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR9	Surface	1	1	2	07:32	19.5	7.42	26.5	8.04	4.97	6.4
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR9	Middle		2	1	07:32						
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR9	Middle		2	2	07:32						
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR9	Bottom	3.2	3	1	07:32	19.4	7.48	26.5	8.01	5.38	6.8
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR9	Bottom	3.2	3	2	07:32	19.4	7.44	26.6	8.04	5.45	7
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR10A	Surface	1	1	1	18:16	19.3	7.39	26.4	8.18	5.44	7
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR10A	Surface	1	1	2	18:16	19.4	7.42	26.5	8.21	5.38	6.9
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR10A	Middle	6.7	2	1	18:16	19.4	7.41	26.5	8.13	5.54	7
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR10A	Middle	6.7	2	2	18:16	19.4	7.44	26.5	8.1	5.61	7.4
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR10A	Bottom	12.4	3	1	18:16	19.4	7.48	26.6	8.26	5.8	7.5
TMCLKL	HY/2012/08	2017-01-21	Mid-Ebb	Cloudy	Calm	SR10A	Bottom	12.4	3	2	18:16	19.5	7.51	26.7	8.22	5.88	7.5
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	CS4	Surface	1	1	1	16:01	19.9	7.68	26.4	7.43	5.24	7.4
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	CS4	Surface	1	1	2	16:01	19.9	7.72	26.4	7.49	5.31	7.6
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	CS4	Middle	10.8	2	1	16:01	20	7.83	26.6	7.59	5.05	7.3
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	CS4	Middle	10.8	2	2	16:01	20	7.79	26.7	7.66	5.11	7.6
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	CS4	Bottom	20.6	3	1	16:01	20	7.75	26.7	7.85	5.37	7.9
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	CS4	Bottom	20.6	3	2	16:01	20.1	7.79	26.8	7.78	5.44	7.8
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	CS6	Surface	1	1	1	14:11	19.8	7.84	26.6	7.5	4.53	6.7
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	CS6	Surface	1	1	2	14:11	19.8	7.88	26.6	7.58	4.56	6.8
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	CS6	Middle	6.8	2	1	14:11	19.8	7.92	26.7	7.66	4.41	6.6
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	CS6	Middle	6.8	2	2	14:11	19.9	7.89	26.7	7.72	4.47	6.6
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	CS6	Bottom	12.6	3	1	14:11	19.8	7.79	26.9	7.78	4.72	6.7
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	CS6	Bottom	12.6	3	2	14:11	19.9	7.82	26.8	7.85	4.67	6.8
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS12	Surface	1	1	1	15:43	20	7.73	26.4	7.33	4.83	6.5
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS12	Surface	1	1	2	15:43	20	7.7	26.5	7.38	4.88	6.7
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS12	Middle	7	2	1	15:43	20.1	7.81	26.5	7.51	4.74	6.2
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS12	Middle	7	2	2	15:43	20	7.78	26.6	7.47	4.69	6.3
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS12	Bottom	12.9	3	1	15:43	20.1	7.84	26.7	7.69	4.99	6.9
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS12	Bottom	12.9	3	2	15:43	20.1	7.87	26.7	7.75	5.07	6.8
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS13	Surface	1	1	1	15:26	20.1	7.81	26.4	7.45	4.67	6.5
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS13	Surface	1	1	2	15:26	20	7.84	26.4	7.49	4.71	6.5
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS13	Middle	6	2	1	15:26	20.1	7.92	26.6	7.58	4.55	6.1
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS13	Middle	6	2	2	15:26	20.1	7.88	26.5	7.65	4.6	6.4
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS13	Bottom	10.9	3	1	15:26	19.9	7.83	26.6	7.74	4.81	6.5
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS13	Bottom	10.9	3	2	15:26	20	7.86	26.6	7.82	4.9	6.7
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS14	Surface	1	1	1	16:25	20	7.69	26.4	7.51	5.12	6.3
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS14	Surface	1	1	2	16:25	19.9	7.73	26.4	7.58	5.07	6.3
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS14	Middle	6.5	2	1	16:25	20.1	7.85	26.5	7.63	5.25	6.3
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS14	Middle	6.5	2	2	16:25	20.1	7.81	26.6	7.69	5.2	6.5
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS14	Bottom	12	3	1	16:25	20	7.75	26.7	7.91	5.41	6.9
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS14	Bottom	12	3	2	16:25	20.1	7.78	26.6	7.86	5.47	6.8
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS15	Surface	1	1	1	15:09	19.9	7.74	26.4	7.58	4	6.4
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS15	Surface	1	1	2	15:09	19.9	7.7	26.5	7.63	4.84	6.6
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS15	Middle	5.9	2	1	15:09	20	7.83	26.5	7.7	4.68	6.4
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS15	Middle	5.9	2	2	15:09	20	7.87	26.6	7.77	4.73	6.6
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS15	Bottom	10.8	3	1	15:09	20	7.78	26.7	7.83	5.05	7
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	IS15	Bottom	10.8	3	2	15:09	19.9	7.8	26.7	7.9	5.11	6.9

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR8	Surface	1	1	1	14:45	20	7.73	26.5	7.3	4.64	5.8
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR8	Surface	1	1	2	14:45	19.9	7.77	26.5	7.36	4.59	5.9
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR8	Middle		2	1	14:45						
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR8	Middle		2	2	14:45						
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR8	Bottom	4.7	3	1	14:45	19.9	7.84	26.7	7.46	4.93	6.4
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR8	Bottom	4.7	3	2	14:45	19.9	7.8	26.6	7.41	4.98	6.3
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR9	Surface	1	1	1	14:57	20	7.82	26.5	7.42	4.52	5.9
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR9	Surface	1	1	2	14:57	20	7.8	26.5	7.48	4.59	5.7
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR9	Middle		2	1	14:57						
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR9	Middle		2	2	14:57						
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR9	Bottom	3.8	3	1	14:57	19.9	7.93	26.7	7.57	4.77	6.2
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR9	Bottom	3.8	3	2	14:57	19.9	7.96	26.6	7.63	4.84	6.4
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR10A	Surface	1	1	1	14:28	19.9	7.83	26.6	7.42	4.76	6
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR10A	Surface	1	1	2	14:28	19.8	7.86	26.5	7.48	4.8	6.3
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR10A	Middle	6.9	2	1	14:28	20	7.74	26.7	7.55	4.89	6.3
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR10A	Middle	6.9	2	2	14:28	19.9	7.71	26.6	7.6	4.83	6.1
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR10A	Bottom	12.8	3	1	14:28	20	7.87	26.8	7.69	5.04	6.5
TMCLKL	HY/2012/08	2017-01-24	Mid-Flood	Cloudy	Small wave	SR10A	Bottom	12.8	3	2	14:28	19.9	7.9	26.8	7.76	4.97	6.5
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	CS4	Surface	1	1	1	10:15	19.8	7.82	26.8	7.42	5.46	7.9
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	CS4	Surface	1	1	2	10:15	19.6	7.8	26.8	7.49	5.49	7.9
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	CS4	Middle	10.6	2	1	10:15	19.8	7.84	26.9	7.57	5.57	8.1
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	CS4	Middle	10.6	2	2	10:15	19.6	7.86	26.9	7.52	5.63	8.1
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	CS4	Bottom	20.2	3	1	10:15	19.7	7.83	26.9	7.62	5.76	8.5
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	CS4	Bottom	20.2	3	2	10:15	19.6	7.86	26.9	7.6	5.72	8.1
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	CS6	Surface	1	1	1	12:21	19.7	7.78	26.9	7.34	4.74	7
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	CS6	Surface	1	1	2	12:21	19.8	7.79	27	7.39	4.79	6.9
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	CS6	Middle	6.5	2	1	12:21	19.7	7.8	27	7.42	4.89	7
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	CS6	Middle	6.5	2	2	12:21	19.7	7.82	27.1	7.46	4.84	7.2
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	CS6	Bottom	12	3	1	12:21	19.7	7.81	27.1	7.53	4.93	7.2
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	CS6	Bottom	12	3	2	12:21	19.7	7.82	27.1	7.51	5.04	7.3
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS12	Surface	1	1	1	10:44	19.7	7.84	26.9	7.26	4.89	6.5
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS12	Surface	1	1	2	10:44	19.8	7.87	26.9	7.29	4.93	6.8
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS12	Middle	6.8	2	1	10:44	19.8	7.82	26.8	7.34	4.98	6.9
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS12	Middle	6.8	2	2	10:44	19.8	7.85	26.9	7.38	5.06	7
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS12	Bottom	12.6	3	1	10:44	19.7	7.86	26.9	7.43	5.17	6.8
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS12	Bottom	12.6	3	2	10:44	19.6	7.84	26.9	7.47	5.23	7.2
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS13	Surface	1	1	1	11:00	19.8	7.83	26.9	7.19	5.34	7.6
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS13	Surface	1	1	2	11:00	19.6	7.82	27	7.22	5.39	7.6
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS13	Middle	5.8	2	1	11:00	19.7	7.82	26.9	7.25	5.52	7.4
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS13	Middle	5.8	2	2	11:00	19.8	7.8	26.9	7.28	5.56	7.7
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS13	Bottom	10.6	3	1	11:00	19.7	7.86	26.9	7.34	5.77	7.9
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS13	Bottom	10.6	3	2	11:00	19.6	7.84	26.9	7.39	5.7	8.1
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS14	Surface	1	1	1	10:30	19.7	7.82	26.9	7.34	5.02	6.3
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS14	Surface	1	1	2	10:30	19.7	7.85	26.9	7.3	5.06	6.4
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS14	Middle	6.4	2	1	10:30	19.7	7.83	26.9	7.39	5.16	6.3
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS14	Middle	6.4	2	2	10:30	19.6	7.86	26.8	7.43	5.19	6.5
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS14	Bottom	11.8	3	1	10:30	19.7	7.86	26.9	7.48	5.26	6.5
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS14	Bottom	11.8	3	2	10:30	19.6	7.82	26.9	7.46	5.28	6.5
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS15	Surface	1	1	1	11:18	19.7	7.82	26.9	7.43	5.19	6.9
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS15	Surface	1	1	2	11:18	19.7	7.85	26.9	7.42	5.26	7
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS15	Middle	5.7	2	1	11:18	19.7	7.82	26.9	7.52	5.37	7.2
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS15	Middle	5.7	2	2	11:18	19.6	7.83	26.9	7.49	5.48	7.4
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS15	Bottom	10.4	3	1	11:18	19.7	7.85	26.9	7.64	5.65	7.5
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	IS15	Bottom	10.4	3	2	11:18	19.8	7.86	26.9	7.68	5.51	7.4
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR8	Surface	1	1	1	11:52	19.6	7.84	27.1	7.21	4.59	6
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR8	Surface	1	1	2	11:52	19.6	7.84	27	7.24	4.62	5.8

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR8	Middle		2	1	11:52						
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR8	Middle		2	2	11:52						
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR8	Bottom	4.4	3	1	11:52	19.6	7.82	27.1	7.46	4.89	6.2
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR8	Bottom	4.4	3	2	11:52	19.6	7.81	27.1	7.42	4.84	6.4
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR9	Surface	1	1	1	11:35	19.6	7.79	26.9	7.38	4.92	6.2
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR9	Surface	1	1	2	11:35	19.7	7.78	26.8	7.42	4.99	6.3
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR9	Middle		2	1	11:35						
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR9	Middle		2	2	11:35						
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR9	Bottom	3.5	3	1	11:35	19.8	7.82	26.8	7.56	5.17	6.5
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR9	Bottom	3.5	3	2	11:35	19.7	7.85	26.9	7.59	5.23	6.8
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR10A	Surface	1	1	1	12:07	19.7	7.84	27.1	7.34	4.77	6.2
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR10A	Surface	1	1	2	12:07	19.7	7.8	27	7.39	4.7	6.2
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR10A	Middle	6.8	2	1	12:07	19.6	7.83	27	7.46	4.81	6.3
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR10A	Middle	6.8	2	2	12:07	19.6	7.82	27	7.51	4.85	6.2
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR10A	Bottom	12.6	3	1	12:07	19.6	7.83	27	7.54	4.95	6.2
TMCLKL	HY/2012/08	2017-01-24	Mid-Ebb	Fine	Small wave	SR10A	Bottom	12.6	3	2	12:07	19.6	7.84	27	7.58	4.92	6.3
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	CS4	Surface	1	1	1	17:53	19.6	7.76	26	7.26	5.26	7.8
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	CS4	Surface	1	1	2	17:53	19.6	7.76	26	7.29	5.32	7.7
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	CS4	Middle	10.9	2	1	17:53	19.5	7.78	25.9	7.44	5.23	7.5
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	CS4	Middle	10.9	2	2	17:53	19.5	7.8	25.9	7.4	5.17	7.4
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	CS4	Bottom	20.8	3	1	17:53	19.5	7.8	25.9	7.53	5.37	7.9
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	CS4	Bottom	20.8	3	2	17:53	19.5	7.81	25.9	7.57	5.4	7.9
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	CS6	Surface	1	1	1	15:41	19.6	7.82	26.4	7.38	4.48	6.4
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	CS6	Surface	1	1	2	15:41	19.7	7.84	26.3	7.34	4.57	6.8
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	CS6	Middle	6.9	2	1	15:41	19.7	7.82	26.3	7.42	4.39	6.6
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	CS6	Middle	6.9	2	2	15:41	19.7	7.82	26.3	7.47	4.44	6.5
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	CS6	Bottom	12.8	3	1	15:41	19.6	7.83	26.3	7.53	4.6	6.7
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	CS6	Bottom	12.8	3	2	15:41	19.6	7.83	26.3	7.58	4.66	6.8
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS12	Surface	1	1	1	17:18	19.5	7.82	26	7.21	4.92	6.7
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS12	Surface	1	1	2	17:18	19.6	7.8	26	7.26	4.98	6.9
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS12	Middle	7.1	2	1	17:18	19.6	7.83	25.9	7.3	4.87	6.5
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS12	Middle	7.1	2	2	17:18	19.5	7.82	25.9	7.34	4.91	6.7
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS12	Bottom	13.2	3	1	17:18	19.5	7.82	25.9	7.41	4.94	6.8
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS12	Bottom	13.2	3	2	17:18	19.5	7.8	25.9	7.39	4.96	6.9
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS13	Surface	1	1	1	17:00	19.6	7.81	25.9	7.42	4.65	6.5
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS13	Surface	1	1	2	17:00	19.6	7.82	26	7.39	4.69	6.4
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS13	Middle	6.2	2	1	17:00	19.6	7.81	25.9	7.46	4.82	6.5
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS13	Middle	6.2	2	2	17:00	19.6	7.81	25.9	7.48	4.9	6.9
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS13	Bottom	11.4	3	1	17:00	19.6	7.82	25.9	7.52	4.98	7.1
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS13	Bottom	11.4	3	2	17:00	19.6	7.81	25.9	7.55	5.1	7.1
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS14	Surface	1	1	1	17:36	19.6	7.79	26	7.42	5.04	6.1
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS14	Surface	1	1	2	17:36	19.6	7.78	25.9	7.48	5.1	6.5
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS14	Middle	6.5	2	1	17:36	19.5	7.78	25.9	7.51	5.29	6.8
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS14	Middle	6.5	2	2	17:36	19.5	7.76	25.9	7.56	5.24	6.7
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS14	Bottom	12.4	3	1	17:36	19.5	7.79	25.9	7.6	5.37	6.6
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS14	Bottom	12.4	3	2	17:36	19.5	7.78	25.9	7.56	5.39	6.6
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS15	Surface	1	1	1	16:44	19.6	7.81	25.9	7.42	4.89	6.8
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS15	Surface	1	1	2	16:44	19.6	7.82	25.9	7.48	4.94	6.7
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS15	Middle	5.9	2	1	16:44	19.6	7.85	25.9	7.53	5.06	6.9
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS15	Middle	5.9	2	2	16:44	19.6	7.87	25.9	7.56	5.14	6.8
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS15	Bottom	10.8	3	1	16:44	19.5	7.89	25.9	7.62	5.22	6.9
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	IS15	Bottom	10.8	3	2	16:44	19.5	7.86	25.9	7.66	5.17	6.9
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR8	Surface	1	1	1	16:16	19.6	7.74	26.1	7.22	4.86	6.5
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR8	Surface	1	1	2	16:16	19.6	7.77	26.1	7.27	4.82	6.2
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR8	Middle		2	1	16:16						
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR8	Middle		2	2	16:16						

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR8	Bottom	4.8	3	1	16:16	19.6	7.78	26.1	7.48	4.89	6.1
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR8	Bottom	4.8	3	2	16:16	19.6	7.74	26.1	7.5	4.93	6.5
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR9	Surface	1	1	1	16:30	19.7	7.84	25.8	7.27	4.63	5.9
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR9	Surface	1	1	2	16:30	19.6	7.82	26	7.32	4.67	6
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR9	Middle		2	1	16:30						
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR9	Middle		2	2	16:30						
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR9	Bottom	3.8	3	1	16:30	19.5	7.84	25.9	7.36	4.92	6.1
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR9	Bottom	3.8	3	2	16:30	19.5	7.88	25.9	7.43	4.98	6.5
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR10A	Surface	1	1	1	15:59	19.6	7.86	26.2	7.31	4.79	6.2
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR10A	Surface	1	1	2	15:59	19.7	7.86	26.1	7.34	4.83	6.3
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR10A	Middle	7.1	2	1	15:59	19.6	7.89	26.2	7.42	4.94	6.4
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR10A	Middle	7.1	2	2	15:59	19.6	7.89	26.2	7.48	5.03	6.3
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR10A	Bottom	13.2	3	1	15:59	19.6	7.89	26.2	7.59	5.12	6.6
TMCLKL	HY/2012/08	2017-01-26	Mid-Flood	Fine	Small wave	SR10A	Bottom	13.2	3	2	15:59	19.6	7.88	26.2	7.64	5.17	6.8
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	CS4	Surface	1	1	1	11:31	19.1	7.74	26.5	7.34	5.3	7.5
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	CS4	Surface	1	1	2	11:31	19.2	7.78	26.6	7.4	5.37	7.8
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	CS4	Middle	10.6	2	1	11:31	19.3	7.89	26.7	7.5	5.11	7.3
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	CS4	Middle	10.6	2	2	11:31	19.2	7.85	26.8	7.57	5.17	7.5
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	CS4	Bottom	20.2	3	1	11:31	19.3	7.81	26.9	7.76	5.43	7.8
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	CS4	Bottom	20.2	3	2	11:31	19.4	7.85	26.8	7.69	5.5	7.8
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	CS6	Surface	1	1	1	13:48	19.7	7.9	27	7.41	4.59	6.8
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	CS6	Surface	1	1	2	13:48	19.8	7.94	26.9	7.49	4.62	6.8
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	CS6	Middle	6.6	2	1	13:48	19.9	7.98	27	7.57	4.47	6.5
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	CS6	Middle	6.6	2	2	13:48	20	7.95	27.1	7.63	4.53	6.7
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	CS6	Bottom	12.2	3	1	13:48	20	7.85	27.2	7.69	4.78	7
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	CS6	Bottom	12.2	3	2	13:48	19.9	7.88	27.3	7.76	4.73	6.9
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS12	Surface	1	1	1	12:05	19.2	7.79	26.7	7.24	4.89	6.5
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS12	Surface	1	1	2	12:05	19.3	7.76	26.8	7.29	4.94	6.7
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS12	Middle	6.8	2	1	12:05	19.4	7.87	26.8	7.42	4.8	6.6
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS12	Middle	6.8	2	2	12:05	19.3	7.84	26.9	7.38	4.75	6.6
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS12	Bottom	12.6	3	1	12:05	19.5	7.9	27	7.6	5.05	6.7
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS12	Bottom	12.6	3	2	12:05	19.6	7.93	27.1	7.66	5.13	6.7
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS13	Surface	1	1	1	12:22	19.3	7.87	26.6	7.36	4.73	6.6
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS13	Surface	1	1	2	12:22	19.4	7.9	26.7	7.4	4.77	6.4
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS13	Middle	5.9	2	1	12:22	19.5	7.98	26.8	7.49	4.61	6.3
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS13	Middle	5.9	2	2	12:22	19.6	7.94	26.7	7.56	4.66	6.5
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS13	Bottom	10.8	3	1	12:22	19.7	7.89	26.8	7.65	4.87	6.8
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS13	Bottom	10.8	3	2	12:22	19.6	7.92	26.9	7.73	4.96	6.9
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS14	Surface	1	1	1	11:48	19.3	7.75	26.7	7.42	5.18	6.4
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS14	Surface	1	1	2	11:48	19.4	7.79	26.6	7.49	5.13	6.3
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS14	Middle	6.3	2	1	11:48	19.4	7.91	26.7	7.54	5.31	6.6
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS14	Middle	6.3	2	2	11:48	19.5	7.87	26.8	7.6	5.26	6.3
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS14	Bottom	11.6	3	1	11:48	19.6	7.81	26.9	7.82	5.47	6.8
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS14	Bottom	11.6	3	2	11:48	19.7	7.84	27	7.77	5.53	6.9
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS15	Surface	1	1	1	12:39	19.5	7.8	26.5	7.49	4.86	6.6
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS15	Surface	1	1	2	12:39	19.4	7.76	26.6	7.54	4.9	6.5
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS15	Middle	5.6	2	1	12:39	19.6	7.89	26.7	7.61	4.74	6.4
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS15	Middle	5.6	2	2	12:39	19.7	7.93	26.6	7.68	4.79	6.6
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS15	Bottom	10.2	3	1	12:39	19.7	7.84	26.7	7.74	5.11	7
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	IS15	Bottom	10.2	3	2	12:39	19.8	7.86	26.8	7.81	5.17	7.1
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR8	Surface	1	1	1	13:13	19.6	7.79	26.7	7.21	4.7	6.1
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR8	Surface	1	1	2	13:13	19.7	7.83	26.8	7.27	4.65	6.2
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR8	Middle		2	1	13:13						
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR8	Middle		2	2	13:13						
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR8	Bottom	4.6	3	1	13:13	19.7	7.9	27	7.37	4.99	6.4
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR8	Bottom	4.6	3	2	13:13	19.8	7.86	26.9	7.32	5.04	6.6

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR9	Surface	1	1	1	12:56	19.6	7.88	26.7	7.33	4.58	5.9
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR9	Surface	1	1	2	12:56	19.5	7.86	26.8	7.39	4.65	6
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR9	Middle		2	1	12:56						
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR9	Middle		2	2	12:56						
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR9	Bottom	3.4	3	1	12:56	19.7	7.99	26.8	7.48	4.83	6.4
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR9	Bottom	3.4	3	2	12:56	19.7	8.02	26.9	7.54	4.9	6.4
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR10A	Surface	1	1	1	13:30	19.6	7.89	26.8	7.33	4.82	6.4
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR10A	Surface	1	1	2	13:30	19.5	7.92	26.9	7.39	4.86	6.1
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR10A	Middle	6.7	2	1	13:30	19.8	7.8	27	7.46	4.95	6.3
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR10A	Middle	6.7	2	2	13:30	19.8	7.77	26.9	7.51	4.89	6.2
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR10A	Bottom	12.4	3	1	13:30	19.9	7.93	27.1	7.6	5.1	6.4
TMCLKL	HY/2012/08	2017-01-26	Mid-Ebb	Fine	Small wave	SR10A	Bottom	12.4	3	2	13:30	20	7.96	27.2	7.67	5.03	6.3
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	CS4	Surface	1	1	1	11:03	18.9	7.73	26.7	6.68	8.85	12.5
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	CS4	Surface	1	1	2	11:03	19	7.77	26.8	6.72	8.92	12.9
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	CS4	Middle	8.9	2	1	11:03	19	7.68	26.9	6.64	8.67	12.8
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	CS4	Middle	8.9	2	2	11:03	19	7.74	27	6.6	8.74	12.9
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	CS4	Bottom	16.8	3	1	11:03	19	7.77	27.1	6.48	9.09	13.2
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	CS4	Bottom	16.8	3	2	11:03	19.1	7.7	27.2	6.5	9.16	13.6
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	CS6	Surface	1	1	1	08:47	18.8	7.73	27.2	6.84	8.94	12.6
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	CS6	Surface	1	1	2	08:47	18.7	7.77	27.1	6.88	8.89	12.5
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	CS6	Middle	6.8	2	1	08:47	18.8	7.69	27.2	6.93	9.16	13
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	CS6	Middle	6.8	2	2	08:47	18.8	7.74	27.2	6.9	9.23	13.4
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	CS6	Bottom	12.6	3	1	08:47	18.9	7.7	27.4	6.77	9.54	13.8
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	CS6	Bottom	12.6	3	2	08:47	18.9	7.75	27.4	6.74	9.66	13.7
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS12	Surface	1	1	1	10:27	18.9	7.64	26.8	6.73	9.13	12.3
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS12	Surface	1	1	2	10:27	18.9	7.67	27	6.7	9.07	12.3
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS12	Middle	6.5	2	1	10:27	18.9	7.68	26.9	6.75	8.99	12.1
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS12	Middle	6.5	2	2	10:27	18.8	7.64	27	6.79	9.03	12.3
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS12	Bottom	11.9	3	1	10:27	18.9	7.67	27.1	6.58	9.34	12.4
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS12	Bottom	11.9	3	2	10:27	19	7.7	27.1	6.55	9.4	12.7
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS13	Surface	1	1	1	10:10	18.9	7.68	26.8	6.88	9.04	12.8
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS13	Surface	1	1	2	10:10	18.9	7.73	26.9	6.84	8.95	12.4
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS13	Middle	5.6	2	1	10:10	18.8	7.7	26.9	6.79	8.75	11.8
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS13	Middle	5.6	2	2	10:10	18.9	7.74	26.9	6.75	8.81	12.5
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS13	Bottom	10.2	3	1	10:10	19	7.66	27.1	6.79	9.25	12.4
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS13	Bottom	10.2	3	2	10:10	18.9	7.7	27	6.81	9.31	12.9
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS14	Surface	1	1	1	10:44	18.9	7.68	26.9	6.74	9.03	11.2
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS14	Surface	1	1	2	10:44	18.9	7.64	26.9	6.71	8.95	11.3
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS14	Middle	5.7	2	1	10:44	18.9	7.67	26.9	6.69	8.7	10.5
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS14	Middle	5.7	2	2	10:44	19	7.72	27	6.66	8.76	11.1
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS14	Bottom	10.4	3	1	10:44	19	7.7	27.1	6.53	9.13	11.3
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS14	Bottom	10.4	3	2	10:44	19	7.67	27.1	6.51	9.21	11.7
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS15	Surface	1	1	1	09:52	18.8	7.6	26.9	6.73	8.94	11.8
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS15	Surface	1	1	2	09:52	18.9	7.63	26.9	6.7	8.87	11.6
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS15	Middle	4.9	2	1	09:52	18.8	7.58	26.9	6.76	8.64	11.4
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS15	Middle	4.9	2	2	09:52	18.8	7.64	27	6.79	8.7	12
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS15	Bottom	8.8	3	1	09:52	18.9	7.66	27.2	6.65	9.12	12.5
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	IS15	Bottom	8.8	3	2	09:52	18.9	7.69	27.1	6.61	9.23	12.2
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR8	Surface	1	1	1	09:25	18.7	7.58	26.9	6.87	8.49	11.1
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR8	Surface	1	1	2	09:25	18.7	7.63	27	6.84	8.55	10.8
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR8	Middle		2	1	09:25						
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR8	Middle		2	2	09:25						
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR8	Bottom	4.6	3	1	09:25	18.7	7.66	27	6.66	8.76	11
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR8	Bottom	4.6	3	2	09:25	18.7	7.61	27	6.69	8.84	11.3
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR9	Surface	1	1	1	09:38	18.8	7.54	26.8	6.77	8.74	11.4
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR9	Surface	1	1	2	09:38	18.8	7.6	26.9	6.74	8.85	11.1

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR9	Middle		2	1	09:38						
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR9	Middle		2	2	09:38						
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR9	Bottom	3.3	3	1	09:38	18.8	7.63	26.9	6.66	9.04	11.5
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR9	Bottom	3.3	3	2	09:38	18.8	7.58	27	6.7	9.12	11.8
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR10A	Surface	1	1	1	09:08	18.8	7.69	27	6.75	8.68	11
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR10A	Surface	1	1	2	09:08	18.8	7.72	27.1	6.78	8.74	11.3
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR10A	Middle	6.9	2	1	09:08	18.7	7.7	27.1	6.81	8.92	11.9
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR10A	Middle	6.9	2	2	09:08	18.8	7.74	27.2	6.83	8.99	11.4
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR10A	Bottom	12.8	3	1	09:08	18.9	7.73	27.4	6.7	9.24	11.7
TMCLKL	HY/2012/08	2017-01-31	Mid-Flood	Cloudy	Small wave	SR10A	Bottom	12.8	3	2	09:08	18.9	7.69	27.4	6.67	9.31	12.2
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	CS4	Surface	1	1	1	13:30	18.7	7.94	26.8	6.74	8.44	12
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	CS4	Surface	1	1	2	13:30	18.8	7.97	26.9	6.77	8.47	12.6
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	CS4	Middle	8.8	2	1	13:30	18.9	8.05	27	6.89	8.59	12.3
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	CS4	Middle	8.8	2	2	13:30	19	8.07	27.1	6.92	8.61	12.2
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	CS4	Bottom	16.5	3	1	13:30	19	8.13	27.2	7.13	8.74	12.7
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	CS4	Bottom	16.5	3	2	13:30	19.1	8.16	27.3	7.15	8.77	12.7
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	CS6	Surface	1	1	1	15:45	18.7	8.12	26.7	6.94	7.94	11.5
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	CS6	Surface	1	1	2	15:45	18.8	8.1	26.8	6.97	7.97	11.7
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	CS6	Middle	6.7	2	1	15:45	18.9	7.92	26.9	7.15	8.15	11.73
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	CS6	Middle	6.7	2	2	15:45	18.9	7.96	26.9	7.17	8.17	12
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	CS6	Bottom	12.3	3	1	15:45	19	8.07	27	7.24	8.34	12.1
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	CS6	Bottom	12.3	3	2	15:45	19.1	8.05	27.1	7.27	8.37	12.4
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS12	Surface	1	1	1	14:10	18.8	7.89	26.8	6.57	10.5	14
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS12	Surface	1	1	2	14:10	18.9	7.91	26.7	6.55	10.7	14.2
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS12	Middle	6.3	2	1	14:10	19	8.14	26.9	6.64	11.4	15.3
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS12	Middle	6.3	2	2	14:10	19.1	8.16	26.9	6.67	11.7	15.8
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS12	Bottom	11.6	3	1	14:10	19.1	8.03	27	6.73	12	16.5
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS12	Bottom	11.6	3	2	14:10	19.2	8.07	27.1	6.75	12	16.6
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS13	Surface	1	1	1	14:30	18.7	7.82	26.8	6.77	9.18	13
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS13	Surface	1	1	2	14:30	18.7	7.85	26.9	6.75	9.21	12.8
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS13	Middle	5.5	2	1	14:30	18.8	8.12	27	6.84	10.4	14.1
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS13	Middle	5.5	2	2	14:30	18.9	8.1	27.1	6.86	10.2	13.7
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS13	Bottom	9.9	3	1	14:30	19	7.92	27.2	7.13	11	15.6
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS13	Bottom	9.9	3	2	14:30	19.1	7.9	27.3	7.11	11.2	15
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS14	Surface	1	1	1	13:50	18.8	8.25	26.8	6.62	9.73	11.7
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS14	Surface	1	1	2	13:50	18.9	8.27	26.9	6.65	9.76	11.7
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS14	Middle	5.6	2	1	13:50	19	8.08	27	6.73	9.88	11.9
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS14	Middle	5.6	2	2	13:50	19	8.11	27.1	6.75	9.91	12.2
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS14	Bottom	10.1	3	1	13:50	19	8	27.2	6.89	10.2	12.8
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS14	Bottom	10.1	3	2	13:50	19.1	8.08	27.3	6.92	10.5	13.2
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS15	Surface	1	1	1	14:50	18.7	8.14	26.7	6.58	8.68	11.7
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS15	Surface	1	1	2	14:50	18.8	8.16	26.8	6.6	8.7	11.8
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS15	Middle	4.7	2	1	14:50	18.9	8.07	26.9	6.72	8.84	11.7
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS15	Middle	4.7	2	2	14:50	19	8.09	27	6.75	8.87	11.8
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS15	Bottom	8.4	3	1	14:50	19.1	7.93	27.1	6.88	9.15	12.5
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	IS15	Bottom	8.4	3	2	14:50	19.2	7.95	27.2	6.9	9.17	12.5
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR8	Surface	1	1	1	15:18	18.7	8.12	26.9	6.62	7.45	9.3
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR8	Surface	1	1	2	15:18	18.7	8.1	26.9	6.6	7.47	9.6
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR8	Middle		2	1	15:18						
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR8	Middle		2	2	15:18						
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR8	Bottom	4.2	3	1	15:18	18.9	7.95	27	6.54	7.88	10.1
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR8	Bottom	4.2	3	2	15:18	19	7.93	27.1	6.51	7.91	10.4
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR9	Surface	1	1	1	15:07	18.8	7.82	26.8	6.62	9.17	11.5
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR9	Surface	1	1	2	15:07	18.8	7.85	26.8	6.65	9.19	11.5
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR9	Middle		2	1	15:07						
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR9	Middle		2	2	15:07						

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR9	Bottom	3.1	3	1	15:07	18.9	8	26.9	6.71	10.5	13.5
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR9	Bottom	3.1	3	2	15:07	19	8.02	27	6.73	10.7	13.6
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR10A	Surface	1	1	1	15:30	18.8	7.94	26.8	7.15	8.64	11.3
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR10A	Surface	1	1	2	15:30	18.9	7.92	26.9	7.13	8.66	11.2
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR10A	Middle	6.8	2	1	15:30	19	7.68	27	7.22	8.87	11.8
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR10A	Middle	6.8	2	2	15:30	19.1	7.7	27.1	7.25	8.89	11.8
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR10A	Bottom	12.5	3	1	15:30	19.2	7.99	27.1	7.09	9.14	12.1
TMCLKL	HY/2012/08	2017-01-31	Mid-Ebb	Cloudy	Small wave	SR10A	Bottom	12.5	3	2	15:30	19.1	8.01	27.2	7.11	9.16	11.7

Appendix J

Impact Dolphin Monitoring Survey

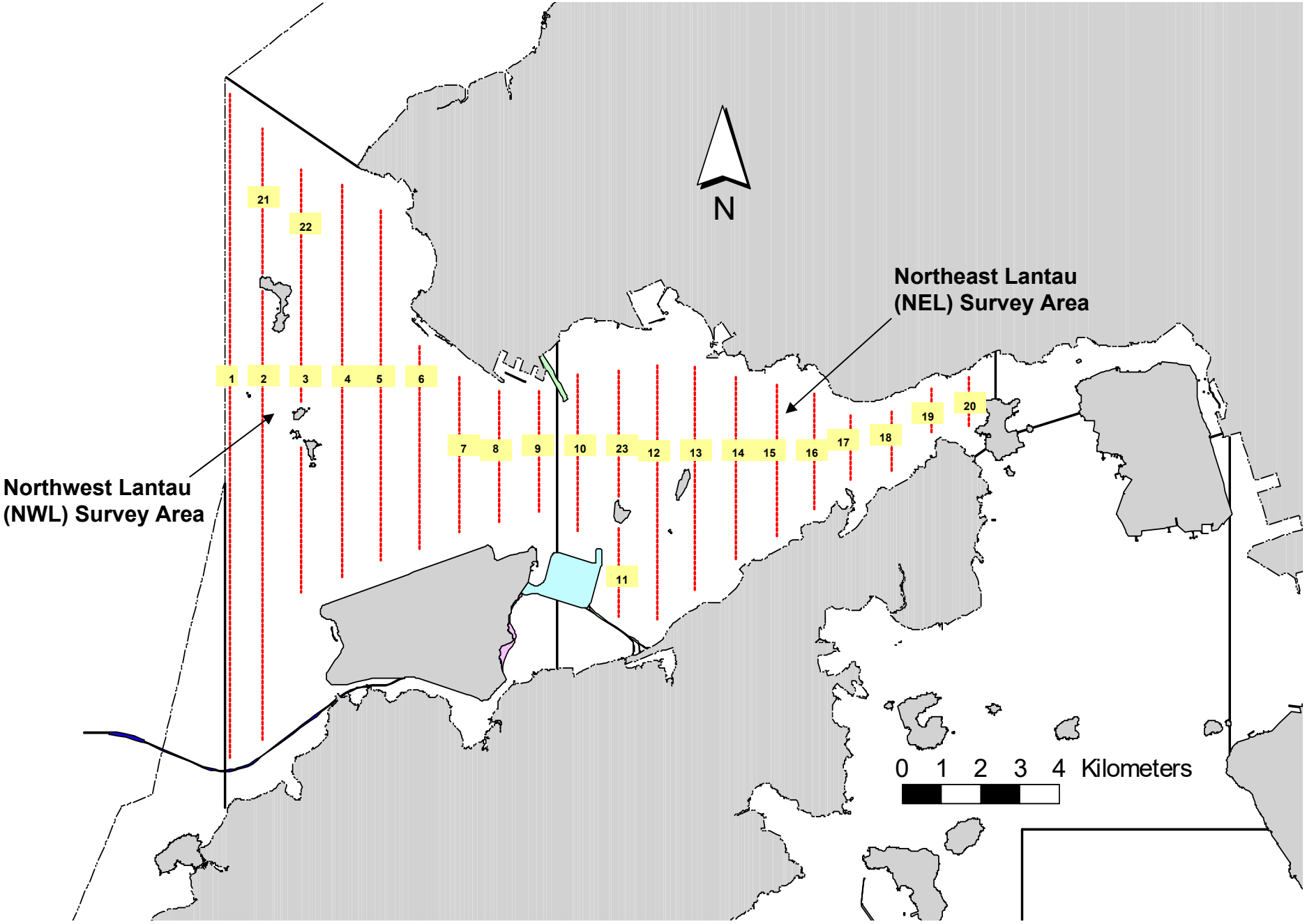


Figure 1. Transect Line Layout in Northwest and Northeast Lantau Survey Areas

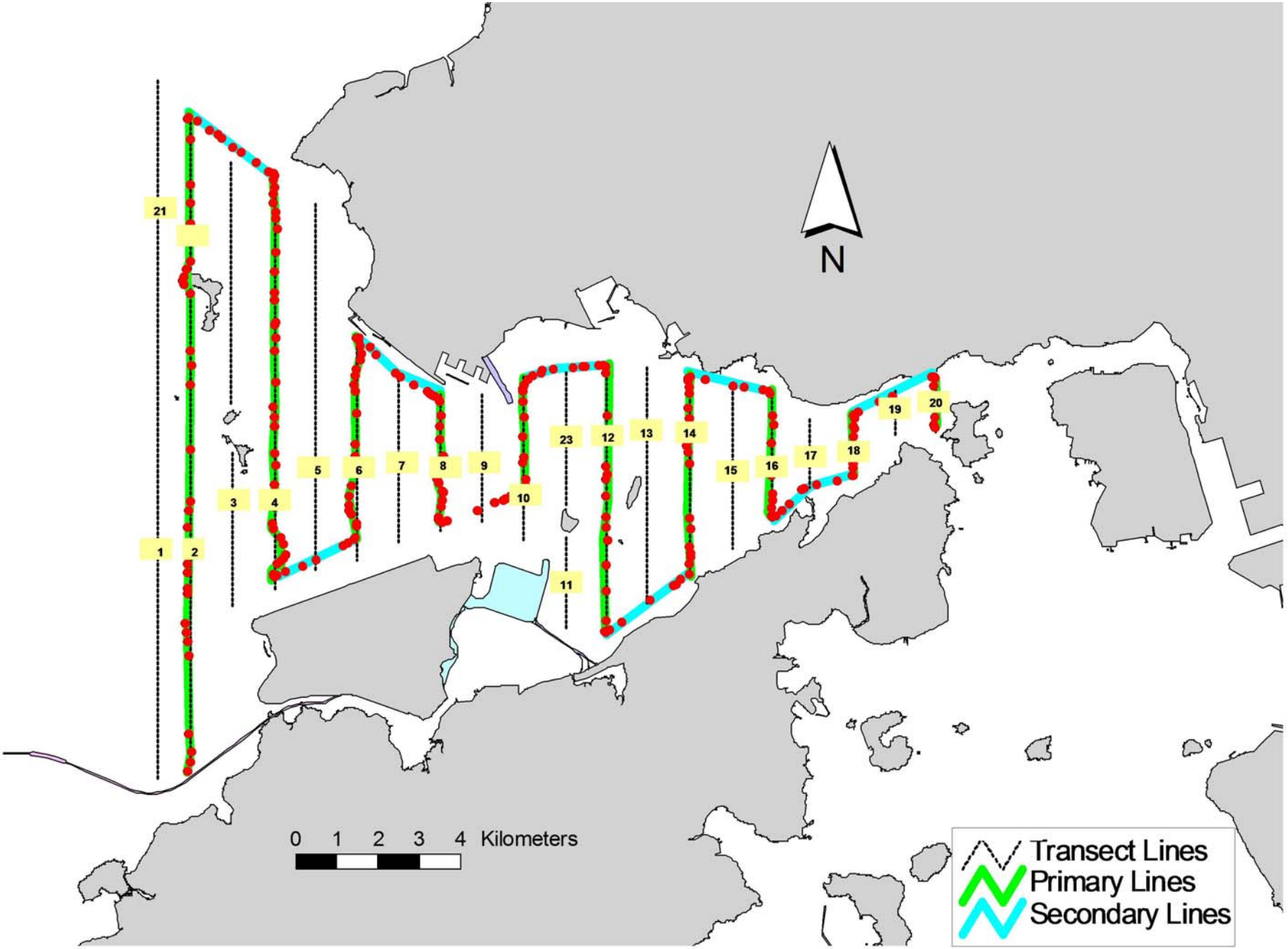


Figure 2. Survey Route on January 10th, 2017 (from HKLR03 project)

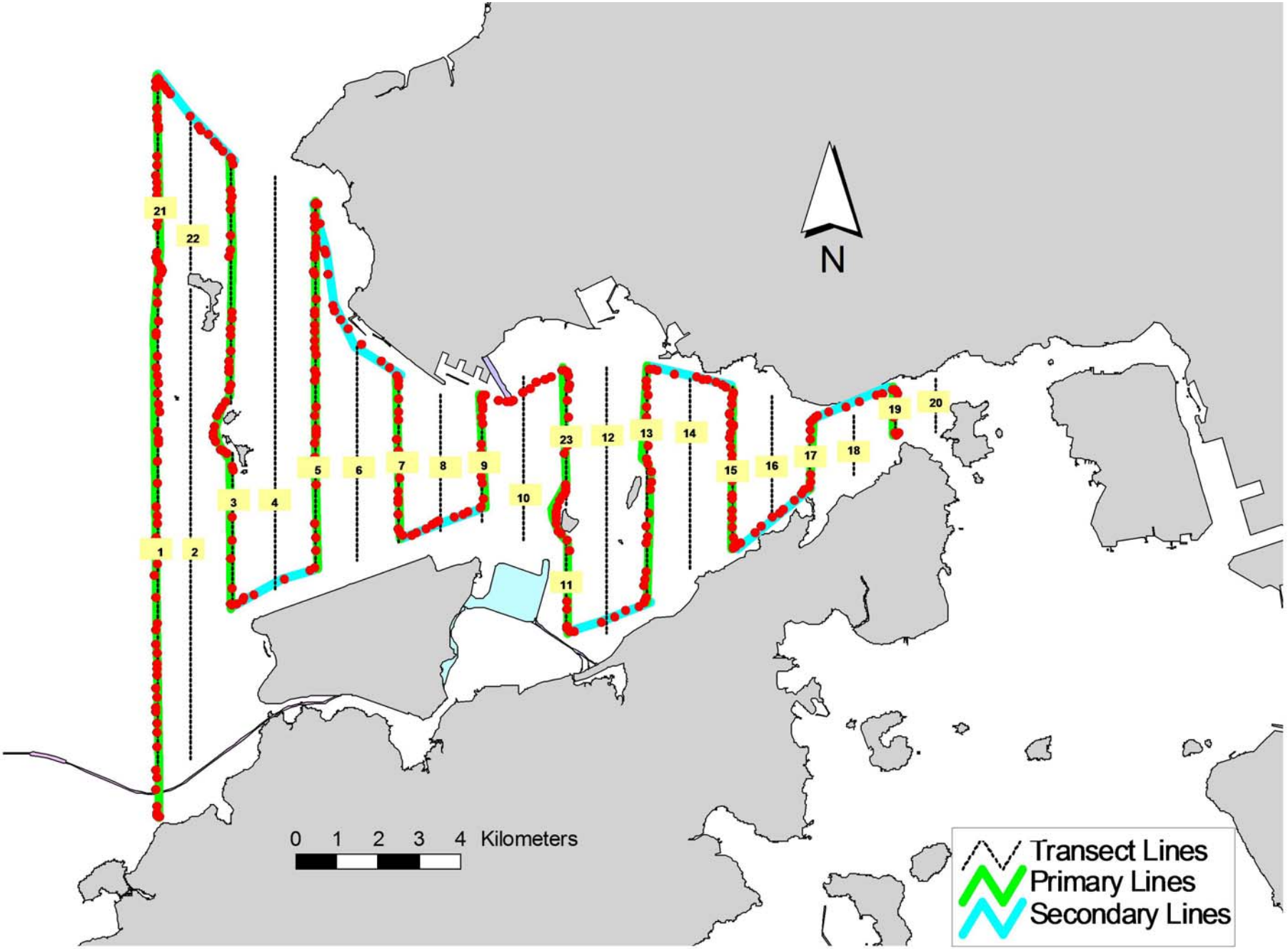


Figure 3. Survey Route on January 12th, 2017 (from HKLR03 project)

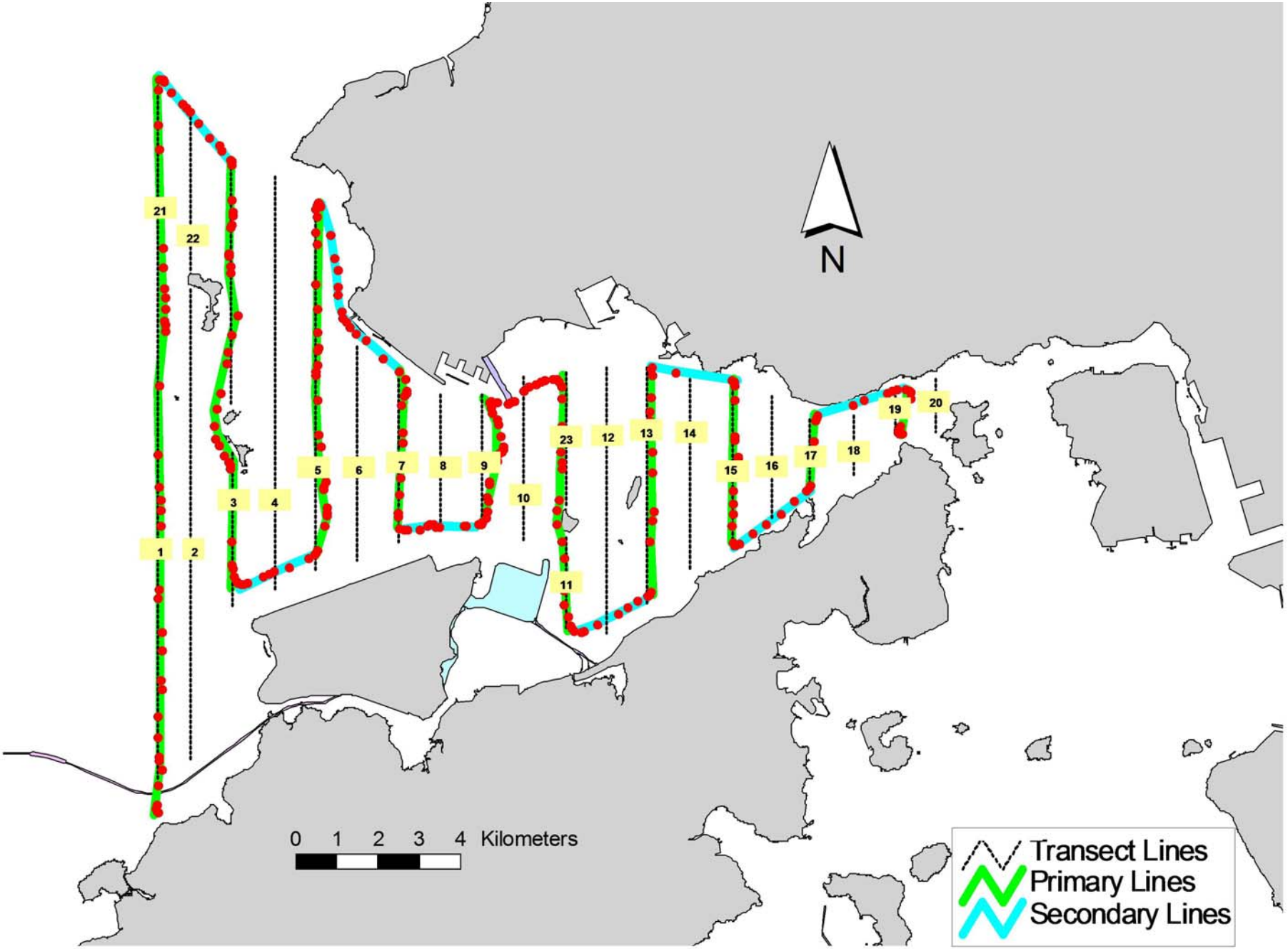


Figure 4. Survey Route on January 16th, 2017 (from HKLR03 project)

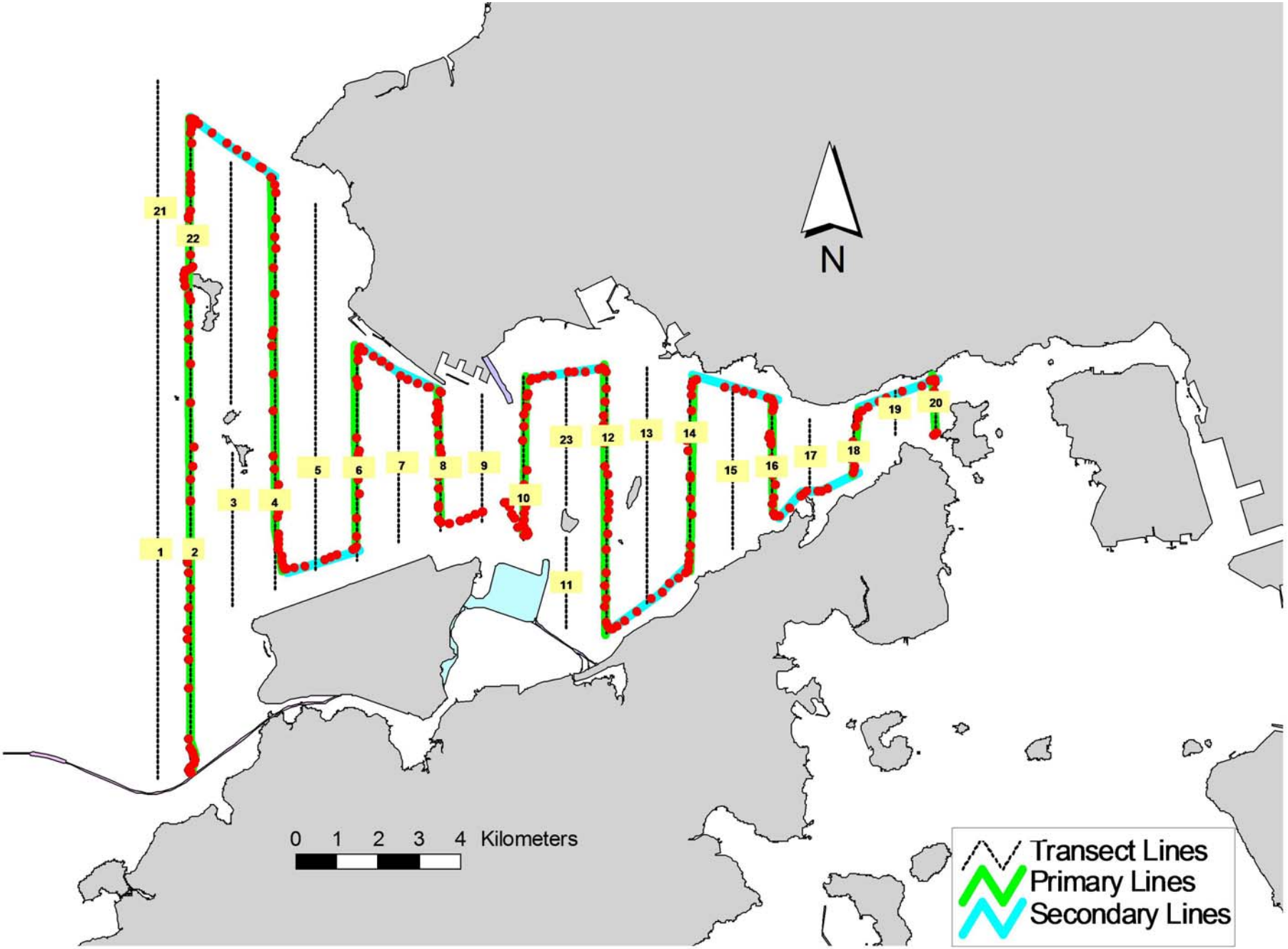


Figure 5. Survey Route on January 20th, 2017 (from HKLR03 project)

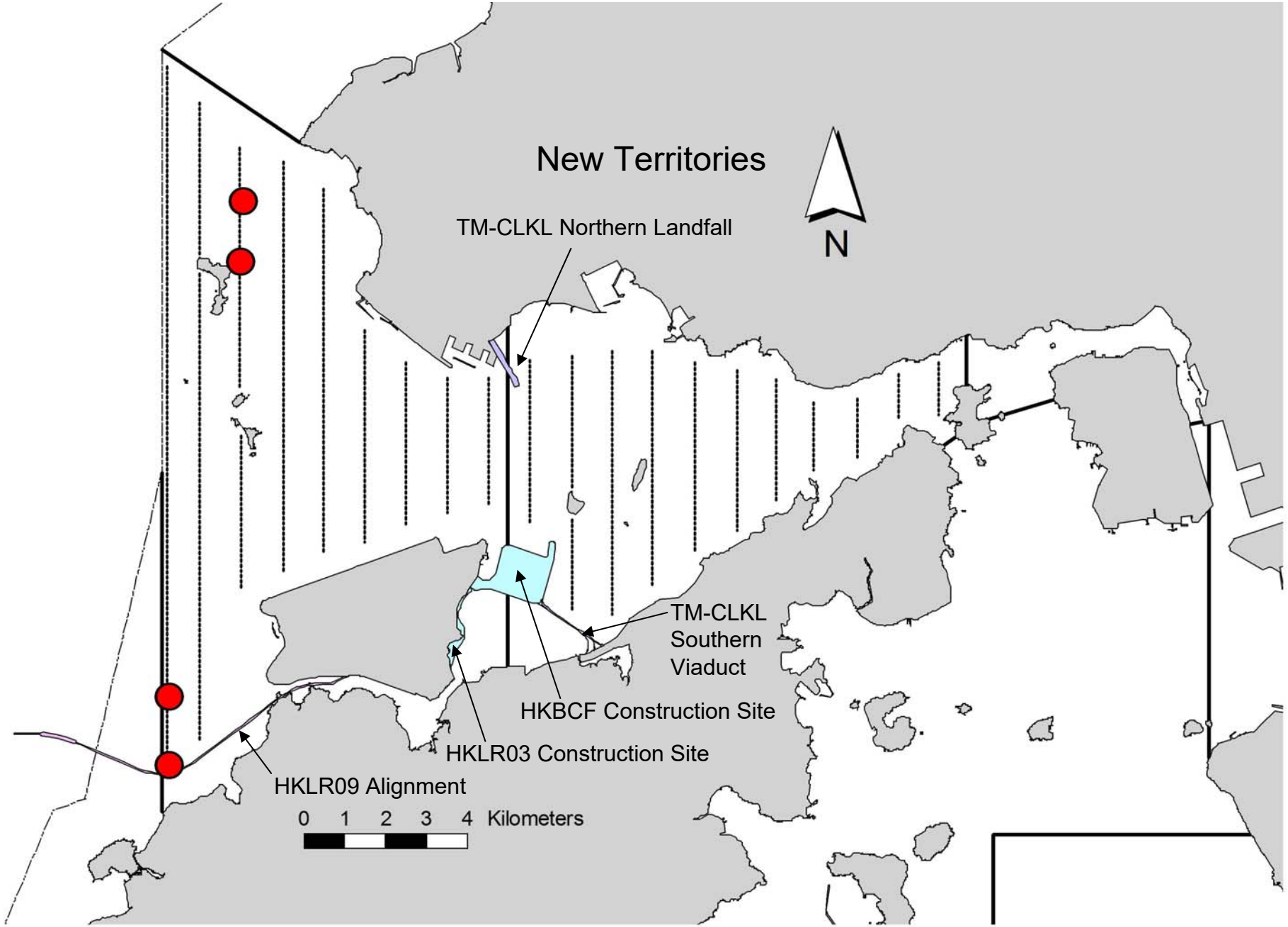


Figure 6. Distribution of Chinese White Dolphin Sightings during January 2017 HKLR03 Monitoring Surveys

Appendix I. HKLR03 Survey Effort Database (January 2017)

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

DATE	AREA	BEAU	EFFORT	SEASON	VESSEL	TYPE	P/S
10-Jan-17	NE LANTAU	2	4.00	WINTER	STANDARD36826	HKLR	P
10-Jan-17	NE LANTAU	3	14.60	WINTER	STANDARD36826	HKLR	P
10-Jan-17	NE LANTAU	2	8.90	WINTER	STANDARD36826	HKLR	S
10-Jan-17	NE LANTAU	3	2.10	WINTER	STANDARD36826	HKLR	S
10-Jan-17	NW LANTAU	2	0.70	WINTER	STANDARD36826	HKLR	P
10-Jan-17	NW LANTAU	3	28.52	WINTER	STANDARD36826	HKLR	P
10-Jan-17	NW LANTAU	4	2.10	WINTER	STANDARD36826	HKLR	P
10-Jan-17	NW LANTAU	2	2.10	WINTER	STANDARD36826	HKLR	S
10-Jan-17	NW LANTAU	3	5.88	WINTER	STANDARD36826	HKLR	S
12-Jan-17	NW LANTAU	2	11.90	WINTER	STANDARD31516	HKLR	P
12-Jan-17	NW LANTAU	3	28.60	WINTER	STANDARD31516	HKLR	P
12-Jan-17	NW LANTAU	2	11.00	WINTER	STANDARD31516	HKLR	S
12-Jan-17	NW LANTAU	3	2.30	WINTER	STANDARD31516	HKLR	S
12-Jan-17	NE LANTAU	2	16.82	WINTER	STANDARD31516	HKLR	P
12-Jan-17	NE LANTAU	2	8.97	WINTER	STANDARD31516	HKLR	S
12-Jan-17	NE LANTAU	3	1.00	WINTER	STANDARD31516	HKLR	S
16-Jan-17	NW LANTAU	2	17.83	WINTER	STANDARD36826	HKLR	P
16-Jan-17	NW LANTAU	3	19.51	WINTER	STANDARD36826	HKLR	P
16-Jan-17	NW LANTAU	2	10.47	WINTER	STANDARD36826	HKLR	S
16-Jan-17	NW LANTAU	3	2.70	WINTER	STANDARD36826	HKLR	S
16-Jan-17	NE LANTAU	2	10.30	WINTER	STANDARD36826	HKLR	P
16-Jan-17	NE LANTAU	3	6.40	WINTER	STANDARD36826	HKLR	P
16-Jan-17	NE LANTAU	2	9.60	WINTER	STANDARD36826	HKLR	S
20-Jan-17	NW LANTAU	2	0.70	WINTER	STANDARD31516	HKLR	P
20-Jan-17	NW LANTAU	3	25.76	WINTER	STANDARD31516	HKLR	P
20-Jan-17	NW LANTAU	4	4.64	WINTER	STANDARD31516	HKLR	P
20-Jan-17	NW LANTAU	2	1.20	WINTER	STANDARD31516	HKLR	S
20-Jan-17	NW LANTAU	3	6.20	WINTER	STANDARD31516	HKLR	S
20-Jan-17	NE LANTAU	2	13.65	WINTER	STANDARD31516	HKLR	P
20-Jan-17	NE LANTAU	3	5.69	WINTER	STANDARD31516	HKLR	P
20-Jan-17	NE LANTAU	2	10.46	WINTER	STANDARD31516	HKLR	S

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

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

DATE	STG #	TIME	HRD SZ	AREA	BEAU	PSD	EFFORT	TYPE	NORTHING	EASTING	SEASON	BOAT ASSOC.	P/S
16-Jan-17	1	1027	1	NW LANTAU	2	84	ON	HKLR	815336	804713	WINTER	NONE	P
16-Jan-17	2	1041	5	NW LANTAU	3	22	ON	HKLR	816920	804716	WINTER	NONE	P
16-Jan-17	3	1211	3	NW LANTAU	3	121	ON	HKLR	828289	806500	WINTER	NONE	P
16-Jan-17	4	1226	4	NW LANTAU	2	200	ON	HKLR	826916	806446	WINTER	NONE	P

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

ID#	DATE	STG#	AREA
NL46	16/01/17	3	NW LANTAU
NL136	16/01/17	3	NW LANTAU
NL202	16/01/17	4	NW LANTAU
NL210	16/01/17	4	NW LANTAU
NL269	16/01/17	2	NW LANTAU
NL286	16/01/17	4	NW LANTAU
WL28	16/01/17	2	NW LANTAU
WL145	16/01/17	2	NW LANTAU
WL234	16/01/17	3	NW LANTAU

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

Appendix K

Event and Action Plan

Event and Action Plan for Impact Air Monitoring

	Action			
	ET [(a)]	**IEC [(a)]**	**SOR [(a)]**	**Contractor(s)**
Action Level Exceedance				
	1. Identify the source. 2. Repeat measurement to confirm finding. If two consecutive measurements exceed Action Level, the exceedance is then confirmed. 3. Inform the IEC and the SOR. 4. Investigate the cause of exceedance and check Contractor's working procedures to determine possible mitigation to be implemented. 5. If the exceedance is confirmed to be Project related after investigation, increase monitoring frequency to daily. 6. Discuss with the IEC and the Contractor on remedial actions required. 7. If exceedance continues, arrange meeting with the IEC and the SOR. 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by the ET. 2. Check the Contractor's working method. 3. If the exceedance is confirmed to be Project related after investigation, discuss with the ET and the Contractor on possible remedial measures. 4. Advise the SOR on the effectiveness of the proposed remedial measures. 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Ensure remedial measures properly implemented.	1. Rectify any unacceptable practice 2. Amend working methods if appropriate 3. If the exceedance is confirmed to be Project related, submit proposals for remedial actions to IEC within 3 working days of notification 4. Implement the agreed proposals 5. Amend proposal if appropriate

	Action			
	ET [(a)]	**IEC [(a)]**	**SOR [(a)]**	**Contractor(s)**
Limit Level Exceedance				
	1. Identify the source. 2. Repeat measurement to confirm finding. If two consecutive measurements exceed Limit Level, the exceedance is then confirmed. 3. Inform the IEC, the SOR, the DEP and the Contractor. 4. Investigate the cause of exceedance and check Contractor's working procedures to determine possible mitigation to be implemented. 5. If the exceedance is confirmed to be Project related after investigation, increase monitoring frequency to daily. 6. Carry out analysis of the Contractor's working procedures to determine possible mitigation to be implemented. 7. Arrange meeting with the IEC and the SOR to discuss the remedial actions to be taken. 8. Assess effectiveness of the Contractor's remedial actions and keep the IEC, the DEP and the SOR informed of the results. 9. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by the ET. 2. Check Contractor's working method. 3. If the exceedance is confirmed to be Project related after investigation, discuss with the ET and the Contractor on possible remedial measures. 4. Advise the SOR on the effectiveness of the proposed remedial measures. 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. If the exceedance is confirmed to be Project related after investigation, in consultation with the IEC, agree with the Contractor on the remedial measures to be implemented. 4. Ensure remedial measures are properly implemented. 5. If exceedance continues, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedance is abated.	1. Take immediate action to avoid further exceedance. 2. If the exceedance is confirmed to be Project related after investigation, submit proposals for remedial actions to IEC within 3 working days of notification. 3. Implement the agreed proposals. 4. Amend proposal if appropriate. 5. Stop the relevant activity of works as determined by the SOR until the exceedance is abated.

Note: (a) ET – Environmental Team; IEC – Independent Environmental Checker; SOR – Supervising Officer's Representative

Event & Action Plan for Impact Water Quality Monitoring

Event	ET Leader	IEC	SOR	Contractor
Action level being exceeded by one sampling day	1. Repeat *in situ* measurement on next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor and SOR; 4. Check monitoring data, all plant, equipment and Contractor's working methods.	1. Check monitoring data submitted by ET and Contractor's working methods.	1. Confirm receipt of notification of non-compliance in writing; 2. Notify Contractor.	1. Inform the SOR and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Amend working methods if appropriate.
Action level being exceeded by two or more consecutive sampling days	1. Repeat measurement on next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, Contractor, SOR and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, SOR and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Action level;	1. Check monitoring data submitted by ET and Contractor's working method; 2. Discuss with ET and Contractor on possible remedial actions; 3. Review the proposed mitigation measures submitted by Contractor and advise the SOR accordingly; 4. Supervise the implementation of mitigation measures.	1. Discuss with IEC on the proposed mitigation measures; 2. Ensure mitigation measures are properly implemented; 3. Assess the effectiveness of the implemented mitigation measures.	1. Inform the Supervising Officer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; 4. Submit proposal of additional mitigation measures to SOR within 3 working days of notification and discuss with ET, IEC and SOR; 5. Implement the agreed mitigation measures.
Limit level being exceeded by one sampling day	1. Repeat measurement on next day of exceedance to confirm findings;	1. Check monitoring data submitted by ET and	1. Confirm receipt of notification of failure in	1. Inform the SOR and confirm notification of the

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

Note: ET – Environmental Team, IEC – Independent Environmental Checker, SOR – Supervising Officer's Representative

Event / Action Plan for Impact Dolphin Monitoring

EVENT	ACTION			
	ET	**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 finding 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.
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;	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, SOR and	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 SOR is satisfied with the	1. Inform the SOR and confirm notification of the non-compliance in writing; 2. Attend the meeting to discuss with ET, IEC and SOR the necessity of additional dolphin monitoring and any other

EVENT	ACTION			
	ET	IEC	SOR	Contractor
	3. Identify source(s) of impact; 4. Inform the IEC, 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, 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.	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 SOR of the results and findings accordingly. 5. Supervise / Audit the implementation of additional monitoring and/or any other mitigation measures and advise SOR the results and findings accordingly.	proposals for additional dolphin monitoring and/or any other mitigation measures submitted by ET and Contractor and verified by IEC, 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.	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.

Note: ET – Environmental Team, IEC – Independent Environmental Checker, SOR – Supervising Officer's Representative

Appendix L

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

Table L1 Cumulative Statistics on Exceedances

Parameters	Level of Exceedance	Total No. recorded in this reporting month	Total No. recorded since project commencement
1-hr TSP	Action	0	30
	Limit	0	2
24-hr TSP	Action	0	5
	Limit	0	1
Water Quality	Action	0	6
	Limit	0	1
Impact Dolphin Monitoring	Action	0	9
	Limit	0	7

Table L2 Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Successful Prosecutions
This Reporting Month (January 2017)	2	0	0
Total No. received since project commencement	12	0	0

Contract No. HY/2012/08
Tuen Mun – Chek Lap Kok Link –
Northern Connection Sub-sea Tunnel Section

ENVIRONMENTAL COMPLAINT/ENQUIRY INVESTIGATION REPORT

Our Reference: 0212330_Complaint LOG_20170117_11

Basic Information of Complaint/Enquiry

Reference Number:	Not disclosed
Date of Complaint/Enquiry Received	13 January 2017
Location of Complaint/Enquiry	Brothers Marine Park
Nature of Complaint/Enquiry	Trespassing of construction vessels
Complaint/Enquiry Received by	Agriculture, Fisheries and Conservation Department (AFCD)
Via	Email
Complainant/Enquirer	Not disclosed

Details of Complaint/Enquiry

On 13 January 2017, AFCD was informed by project team of BCF that the Northeaster section of HKBCF perimeter silt curtain was found within the BMP while construction vessels were anchored within the BMP during the inspection on 4 and 5 January 2017(see *Figure 1*). The Contractor, the Environmental Team (ET) and SOR received the enquiry from IEC on 17 January 2017.

Investigation Report

Upon receiving the case notification from IEC on 17 January 2016, the Contractor had promptly checked the construction programme and the vessel operation record of January 2017.

According to the vessel operation record provided by the Contractor, there were no DBJV construction vessels operating within the BMP during the above period. None of the construction vessels in the list provided by AFCD were employed under this Contract. According to the construction programme, major marine works in this month were mainly dredging and construction of vertical seawall at Portion N-A. All Contract-related construction vessels were found working inside the project site boundary. Location map of site area and travel route of marine vessels and barges are provided (see *Figure 2 and Figure 3*).

In addition, silt curtain enclosing the HKBCF was not deployed under this Contract. Therefore, the observation on silt curtain found inside the BMP or in close vicinity of the boundary of BMP was considered not related to this Contract.

Based on the above, the case is considered to be not related to this Contract.

Mitigation Measures and Follow-Up Actions Recommended to/ Undertaken by Contractor

The case is considered to be not related to this Contract and thus no further action is required. The ET will keep checking the operation of construction vessels.

Date of File Closed : 8 February 2017

Approved and Filed by:

(Jovy Tam, ET Leader)
Date: 8 February 2017

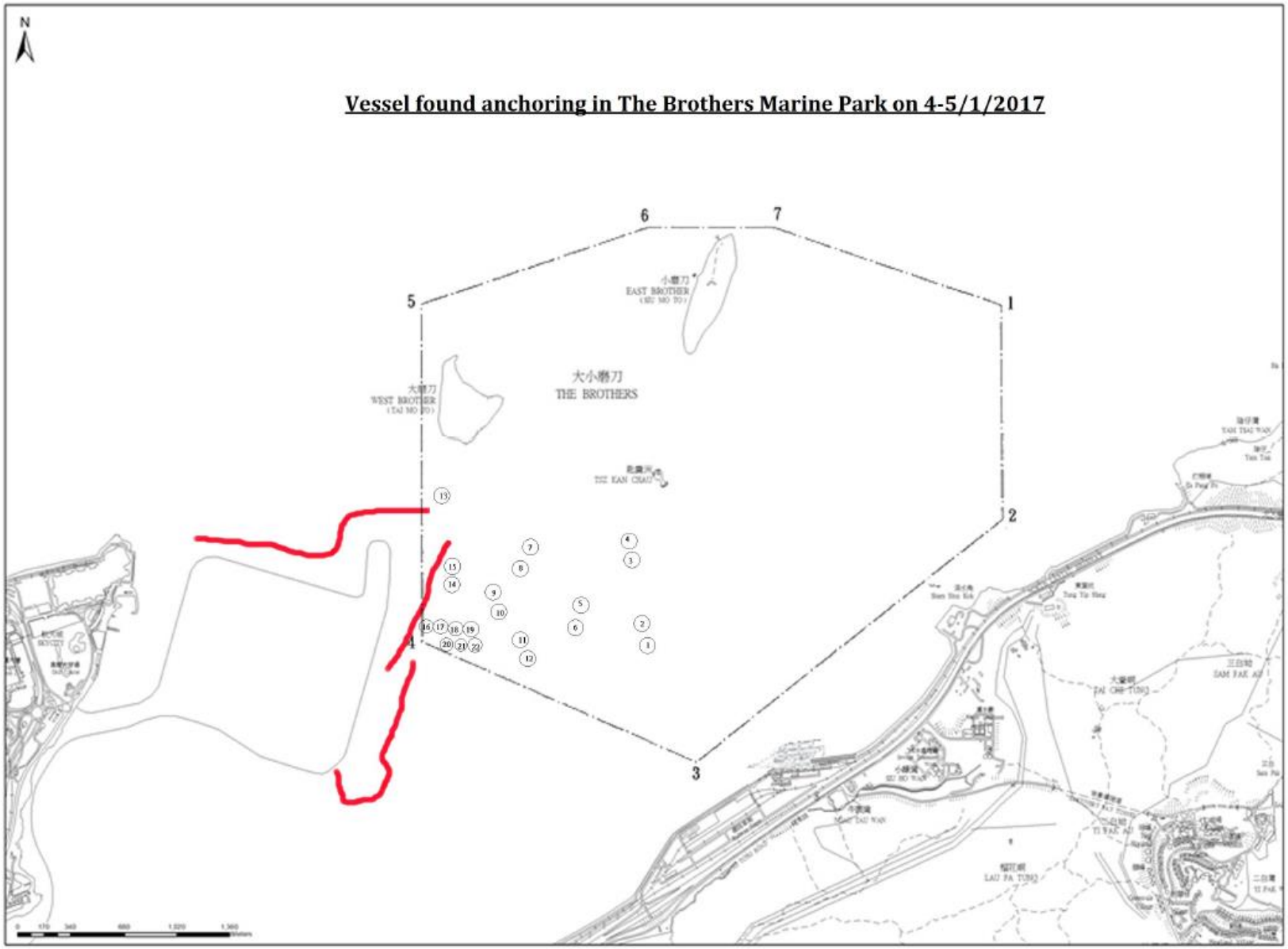
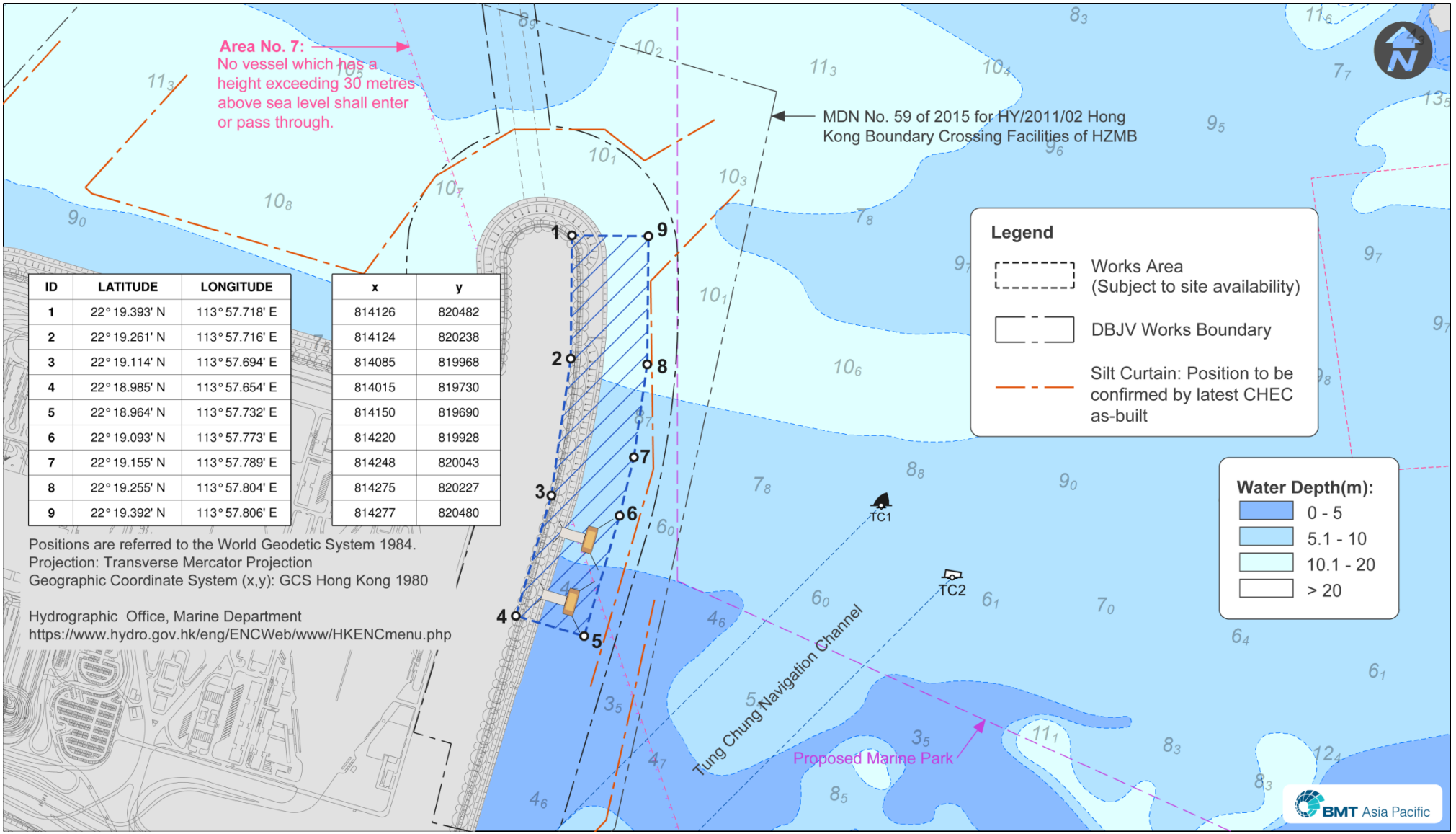


Figure 1

Environmental Resources Management

ERM



ID	LATITUDE	LONGITUDE
1	22° 19.393' N	113° 57.718' E
2	22° 19.261' N	113° 57.716' E
3	22° 19.114' N	113° 57.694' E
4	22° 18.985' N	113° 57.654' E
5	22° 18.964' N	113° 57.732' E
6	22° 19.093' N	113° 57.773' E
7	22° 19.155' N	113° 57.789' E
8	22° 19.255' N	113° 57.804' E
9	22° 19.392' N	113° 57.806' E

x	y
814126	820482
814124	820238
814085	819968
814015	819730
814150	819690
814220	819928
814248	820043
814275	820227
814277	820480

Figure 2
Location Map of site area

Environmental Resources Management
ERM

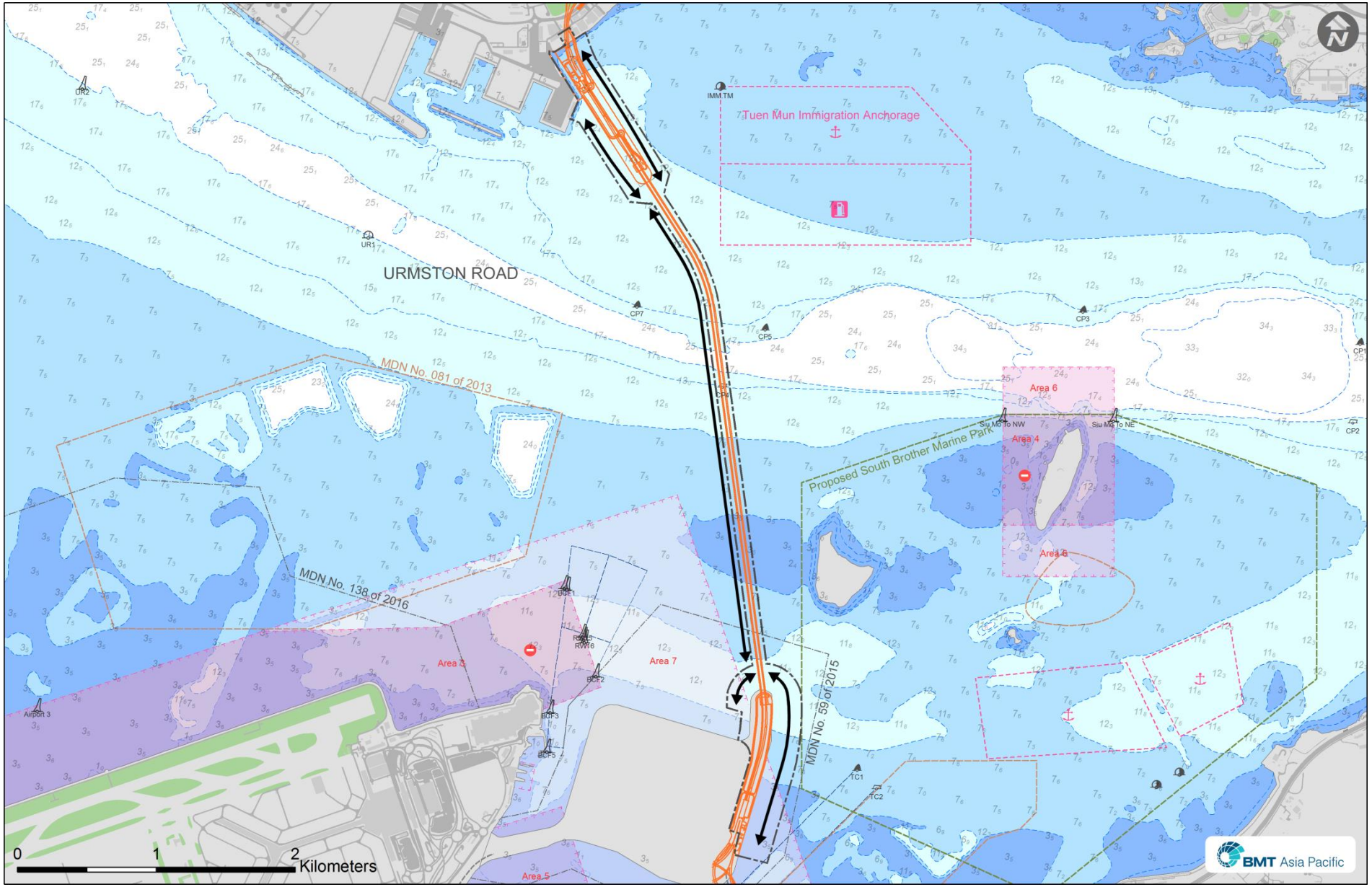


Figure 3(a)
Travel Route of marine vessels and barges

Environmental Resources Management

ERM

Plant Type	Vessel Name	船隻名稱	License No.
Dumb Lighter	TB201	--	B21598V
Dumb Lighter	TB212	--	B141450
Dumb Lighter	TB223	--	B21576V
Dumb Lighter	TB225		B21667V
Dumb Lighter	TB233	--	B21683V
Dumb Lighter	TB236	--	B21725V
Dumb Lighter	Tuen Mun 2	屯門2	B141646
Dumb Lighter	Gold Sea 26	--	B21682V
Special Purpose Vessel	Kong Yeung 8	港洋8	BM21463Y
Tug Boat	TB10	--	B2394

Figure 3(b)
Name of vessels and barges

Environmental Resources Management

ERM

Appendix M

Waste Flow Table

Monthly Summary Waste Flow Table

Name of Department: HyD **Contract No. / Works Order No.: HY/2012/08**

Monthly Summary Waste Flow Table for January 2017 [to be submitted not later than the 15th day of each month following reporting month] (All quantities shall be rounded off to 3 decimal places.)

Month	Monthly Break-down of Inert Construction & Demolition Materials (i.e. Public Fill Materials)				
	(a)=(b)+(c)+(d)+(e) Total Quantity Generated	(b) Hard Rock and Large Broken Concrete	(c) Reused in the Contract	(d) Reused in other Projects	(e) Disposed of as Public Fill
	(in '000 ton)	(in '000 ton)	(in '000 ton)	(in '000 ton)	(in '000 ton)
Sub-total	1097.465	0.000	0.000	0.000	1097.465
Jan-2017	60.781	0.000	0.000	0.000	60.781
Feb-2017					
Mar-2017					
Apr-2017					
May-2017					
Jun-2017					
Half Year Sub-total					
Jul-2017					
Aug-2017					
Sep-2017					
Oct-2017					
Nov-2017					
Dec-2017					
Project Total Quantities	1158.246	0.000	0.000	0.000	1158.246

Month	**Actual Quantities of <u>Non-inert</u> Construction Waste Generated Monthly**								
	Metals		Paper/ cardboard packaging		Plastics (see Note 3)		Chemical Waste		Others, e.g. General Refuse disposed at Landfill
	(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000ton)
	generated	recycled	generated	recycled	generated	recycled	generated	Disposed	generated
Sub-total	1.850	1.850	3.150	3.150	6.870	6.870	9.450	9.450	4.935
Jan-2017	0.000	0.000	0.000	0.000	0.000	0.000	3.400	3.400	0.673
Feb-2017									
Mar-2017									
Apr-2017									
May-2017									
Jun-2017									
Half Year Sub-total									
Jul-2017									
Aug-2017									
Sep-2017									
Oct-2017									
Nov-2017									
Dec-2017									
Project Total Quantities	1.850	1.850	3.150	3.150	6.870	6.870	12.850	12.850	5.608

Forecast of Total Quantities of Construction and Demolition Materials to be Generated from the Contract*				
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed of as Public Fill
(in '000 ton)	(in '000 ton)	(in '000 ton)	(in '000 ton)	(in '000 ton)
20.000	0.000	0.000	0.000	20.000

Forecast of Total Quantities of Construction and Demolition Materials to be Generated from the Contract*				
Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	General Refuse disposed of at Landfill
(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 ton)
0.000	0.000	0.000	0.000	0.100

Notes:
(1) The performance targets are given in the **ER Appendix 8J Clause 14** and the EM & A Manual(s).
(2) The waste flow table shall also include C&D materials to be imported for use at the Site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
(4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m^3. (**ER Part 8 Clause 8.8.5 (d) (ii)** refers).