Asia Pacific Gateway (APG) – Tseung Kwan O

Baseline Water Quality Monitoring Report

9 May 2016

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Client:	Project No:
China Mobile International Limited (CMI Ltd)	0324228
Summary: This document presents the monitoring requirements, methodologies and results of the baseline marine water quality measurements at the monitoring locations near the proposed submarine cable installation works	Date: 9 May 2016 Approved by:  *Terence Fong* *Partner*

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Asia Pacific Gateway (APG) – Tseung Kwan O
Environmental Certification Sheet
EP-485/2014

Reference Document/Plan

Document/~~Plan~~ to be ~~Certified~~/ Verified:	Baseline Water Quality Monitoring Report
Date of Report:	9 May 2016
Date prepared by ET:	9 May 2016
Date received by IEC:	9 May 2016

Reference EM&A Manual

EM&A Manual: Section 2

Content: Reporting on Baseline Water Quality Monitoring

2.5 "A Baseline Monitoring Report shall be provided no later than two weeks before the start of Project marine installation work and should be submitted to EPD for agreement on the Action/Limit Levels… "

"A Baseline Monitoring Report shall include the following details: brief project background information; drawings showing locations of the baseline monitoring station; an updated Project marine installation works programme with milestones of environmental protection/mitigation activities annotated; monitoring results together with the information including monitoring methodology, parameters monitored, monitoring locations (and depth), monitoring date, time, frequency and duration; details on influencing factors, including major activities, if any, being carried out on the Site during the period, weather conditions during the period and other factors which might affect the results; determination of the Action and Limit Levels (AL levels) for each monitoring parameter and statistical analysis of the baseline data, the analysis shall conclude if there is any significant difference between control and impact stations for the parameters monitored; and comments and conclusions."

EP Condition: Condition 2

Content: Baseline Monitoring Report on Water Quality

2.5 "(ii)(a): To monitor the environmental impacts and timely implementation of the recommended mitigation measures, the Permit Holder shall submit to the director four hard copies and one electronic copy of baseline monitoring report on water quality no later than two weeks before the commencement of construction works, as defined in the approved EM&A Manual."

"All environmental monitoring and audit results submitted under this Permit shall be true, valid and correct. Before submission to the Director, the reports as required in Condition 2.4 and 2.5 (ii) shall be certified by the independent checker that all mitigation measures recommended in the Project Profile (Register No.:PP-496/2013) have been fully implemented."

ET Certification

I hereby certify that the above referenced document/~~plan~~ complies with the above referenced condition of EP-485/2014.

Terence Fong, Environmental Team Leader: Date: 9 May 2016

IEC Verification

I hereby verify that the above referenced document/~~plan~~ complies with the above referenced condition of EP-485/2014.

Vincent Lai, Independent Environmental Checker:

Date: 9 May 2016

CONTENTS

ANNEXES

EXECUTIVE SUMMARY

Baseline Water Quality Monitoring

Baseline water quality monitoring was conducted between 27 April and 5 May 2016 at 26 designated monitoring stations (16 Impact Stations, 7 Gradient Stations and 3 Control Stations) established for the Asia Pacific Gateway–Tseung Kwan O Project. *In situ* water quality measurements and water samples were taken at the monitoring stations on three occasions at each location, with the interval between two sets of monitoring being no less than 36 hours (total six days, 27-29 April and 3-5 May 2016). Samples were taken at three depths (surface, middle and bottom) where practical and the water quality sampling was undertaken within a 4-hour window of 2 hours before and 2 hours after mid flood and mid-ebb tides. The tidal range selected for the baseline monitoring was at least 0.5 m for both flood and ebb tides as far as practicable.

No major activities influencing water quality were observed in the vicinity of the Project's cable installation works area during the baseline monitoring. Water quality monitoring results are therefore considered to be representative of the baseline water quality conditions of the areas where Project cable installation works will be undertaken.

In accordance with the *Environmental Monitoring & Audit Manual*, the baseline monitoring results were used to determine the Action and Limit Levels for Dissolved Oxygen (DO), Suspended Solids (SS) and Turbidity for the impact water quality monitoring which will be conducted during Project cable installation works. The Action and Limit Levels are summarized in *Table 1* to *Table 3* below.

Table 1 ***Action and Limit Levels for Water Quality in Zone A***

Parameter	Action Level	Limit Level
SS in mg/L (Depth-averaged) [a] [c]	95%-ile of baseline data (3.37 mg/L), or	99%-ile of baseline data (3.49 mg/L), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day
DO in mg/L [b]	Surface and Middle 5%-ile of baseline data for surface and middle layer (7.00 mg/L)	Surface and Middle 5 mg/L [d] or 1%-ile of baseline for surface and middle layer (6.71 mg/L)
	Bottom 5%-ile of baseline data for bottom layers (6.99 mg/L)	Bottom 2 mg/L [d] or 1%-ile of baseline data for bottom layer (6.91 mg/L)
Turbidity in NTU (Depth-averaged) [c]	95%-ile of baseline data (2.86 NTU), or	99%-ile of baseline data (3.06 NTU), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day

Parameter	Action Level	Limit Level

Notes:

a. "Depth-averaged" is calculated by taking the arithmetic means of readings from all sampled depths.

b. For DO, non-compliance of the water quality limits occurs when the monitoring result is lower than the limits. These levels are for both FCZ and non-FCZ.

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

d. Set Limit Level for DO was derived from the Water Quality Objectives (WQO) for Junk Bay, Eastern Buffer, and Mirs Bay Water Control Zones under the Water Pollution Control Ordinance (WPCO) Chapters 358L, 358Y, and 358I respectively.

Table 1 Action and Limit Levels for Water Quality in Zone B

Parameter	Action Level	Limit Level
SS in mg/L (Depth-averaged) [a] [c]	95%-ile of baseline data (3.33 mg/L), or	99%-ile of baseline data (3.39 mg/L), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day
DO in mg/L [b]	Surface and Middle	Surface and Middle
	5%-ile of baseline data for surface and middle layer (7.49 mg/L)	5 mg/L [d] or 1%-ile of baseline for surface and middle layer (7.41 mg/L)
	Bottom	Bottom
	5%-ile of baseline data for bottom layers (7.26 mg/L)	2 mg/L [d] or 1%-ile of baseline data for bottom layer (7.01 mg/L)
Turbidity in NTU (Depth-averaged) [c]	95%-ile of baseline data (2.67 NTU), or	99%-ile of baseline data (2.79 NTU), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day

Notes:

a. "Depth-averaged" is calculated by taking the arithmetic means of reading from all sampled depths.

b. For DO, non-compliance of the water quality limits occurs when the monitoring result is lower than the limits. These levels are for both FCZ and non-FCZ.

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

d. Set Limit Level for DO was derived from the Water Quality Objectives (WQO) for Junk Bay, Eastern Buffer, and Mirs Bay Water Control Zones under the Water Pollution Control Ordinance (WPCO) Chapters 358L, 358Y, and 358I respectively.

Table 1 Action and Limit Levels for Water Quality in Zone C

Parameter	Action Level	Limit Level
SS in mg/L (Depth-averaged) [a] [c]	95%-ile of baseline data (3.37 mg/L), or	99%-ile of baseline data (3.87 mg/L), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day

Parameter	Action Level	Limit Level
DO in mg/L [b]	Surface and Middle	Surface and Middle
	5%-ile of baseline data for surface and middle layer (8.33 mg/L)	5 mg/L [d] or 1%-ile of baseline for surface and middle layer (8.22 mg/L)
	Bottom	Bottom
	5%-ile of baseline data for bottom layers (8.23 mg/L)	2 mg/L [d] or 1%-ile of baseline data for bottom layer (8.15 mg/L)
Turbidity in NTU (Depth-averaged) [c]	95%-ile of baseline data (2.75 NTU), or	99%-ile of baseline data (3.20 NTU), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day

Notes:

a. "Depth-averaged" is calculated by taking the arithmetic means of readings from all sampled depths.

b. For DO, non-compliance of the water quality limits occurs when the monitoring result is lower than the limits. These levels are for both FCZ and non-FCZ.

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

d. Set Limit Level for DO was derived from the Water Quality Objectives (WQO) for Junk Bay, Eastern Buffer, and Mirs Bay Water Control Zones under the Water Pollution Control Ordinance (WPCO) Chapters 358L, 358Y, and 358I respectively.

1 INTRODUCTION

1.1 BACKGROUND

In order to help meet the tremendous telecommunication services requirements for intra-Asia connectivity between South East Asia and North Asia, the **Asia Pacific Gateway (APG) Consortium** has decided to build a submarine telecommunication cable system, which will be approximately 10,400 km in length, connecting the major business hubs across the regions in Asia Pacific. The cable will link up with several countries, including Malaysia, Singapore, Vietnam, Taiwan, Mainland China, Japan, Korea and the Hong Kong Special Administrative Region (HKSAR).

As one of the members of the APG Consortium, **China Mobile International Limited (CMI)** proposes to install the APG–Tseung Kwan O (TKO) section of the cable (the "Project"). *Figure 1.1* depicts the proposed APG-TKO submarine cable route within HKSAR. The proposed submarine cable will travel west and southward from TKO as it approaches the Tathong Channel. After crossing the Tathong Channel and near to Cape Collinson, the cable then runs approximately parallel to the Tathong Channel until north of Sung Kong Island where it then turns eastward to the boundary of HKSAR waters where it enters the South China Sea.

The APG-TKO landing site is situated within the TKO Industrial Estate, behind a rubble mound sea wall, on the reclaimed land (See *Figure 1.2*). The proposed cable would land via an existing Beach Manhole (BMH) and ultimately connect with a newly constructed Cable Landing Station in the TKO Industrial Estate. The shore end of the APG cable segment will connect to the existing BMH via the existing conduit laid under the seawall. In order to complete the link between the BMH and the Cable Landing Station, the land cable will be installed in a conduit along the terrestrial route and ultimately connect to the Cable Landing Station via underground cable conduit.

The *Project Profile (PP-496/2013)* (which includes an assessment of the potential environmental impacts associated with the installation of the submarine telecommunications cable system within HKSAR, including the connection to land at TKO), was prepared and submitted to the Environmental Protection Department (EPD) under *Section 5(1)(b) and 5(11)* of the *Environmental Impact Assessment Ordinance (EIAO)* for the application for Permission to apply directly for Environmental Permit (EP) on 9th October 2013. On 15th November 2013, EPD issued a letter to CMI stating the *Conditions Imposed under Section 5(12) of the Ordinance for Permission to Apply Directly for Environmental Permi*t in which Condition (2) stated the necessity to submit a detailed Environmental Monitoring and Audit (EM&A) programme to the Director of EPD and arrange for the employment of an independent environmental checker (IEC). *EM&A Manual* was subsequently submitted to EPD and approved on 17th January 2014.

WLCP	Easting	Northing	WLCP	Easting	Northing	WLCP	Easting	Northing	WLCP	Easting	Northing
1	845588.70	815897.93	17	844646.40	813703.38	33	845447.61	809899.21	49	849680.77	807095.91
2	845556.09	815866.54	18	844669.62	813648.58	34	845604.56	809780.81	50	850966.87	807010.88
3	845305.98	815905.89	19	844685.62	813611.68	35	846278.13	808981.74	51	857127.50	807037.45
4	845181.61	815925.38	20	844750.18	813348.72	36	846541.71	808745.68	52	857294.09	807122.57
5	845110.68	815898.08	21	844747.87	813179.67	37	846587.45	808705.84	53	858187.64	807575.78
6	844850.18	815797.85	22	844735.29	812289.73	38	846688.11	808502.90	54	859209.68	808734.05
7	844836.11	815782.70	23	844720.57	812188.95	39	847135.01	807602.02	55	859922.46	809541.99
8	844683.67	815618.73	24	844708.59	812107.37	40	847200.72	807516.98	56	860046.48	809682.63
9	844534.05	815321.70	25	844641.15	811648.90	41	847336.27	807341.75	57	860205.34	809737.32
10	844305.49	814867.76	26	844649.37	811049.83	42	847375.49	807290.84	58	861589.52	810214.74
11	844264.01	814687.79	27	844919.25	810509.60	43	847399.22	807260.22	59	866499.41	810855.95
12	844225.62	814520.38	28	845018.29	810386.56	44	847457.54	807184.60	60	866961.11	810673.40
13	844232.34	814484.58	29	845037.20	810363.13	45	847766.64	807050.09	61	867438.99	810476.69
14	844260.07	814335.84	30	845222.90	810132.35	46	847855.31	807058.83	62	869831.85	810619.15
15	844378.68	814186.41	31	845243.02	810107.27	47	848656.46	807137.33			
16	844469.78	814081.26	32	845352.72	809970.94	48	849142.30	807131.45			

KOWLOON CITY DISTRICT
九龍城區

KWUN TONG DISTRICT
觀塘區

WAN CHAI DISTRICT
灣仔區

EASTERN DISTRICT
東區

SOUTHERN DISTRICT
南區

ISLANDS DISTRICT
離島區

SAI KUNG DISTRICT
西貢區

Hong Kong SAR Boundary
香港特別行政區界線

N
北

Kilometers 公里
0 2.5 5

Legend 圖例

- Work Limit Control Point (WLCP) 座標點
- Proposed APG Submarine Cable System 擬建之APG海底光纖系統
- District Boundary 分區邊界

Figure 1.1
圖 1.1

Proposed APG Submarine Cable System
擬建之APG海底光纖系統

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Figure 1.2
圖 1.2

Location of APG Landing Site and Terrestrial Cable Route
APG海底光纖系統登岸地點及陸上路由

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The *Application for Environmental Permit* (*Application No. AEP-485/2014*) was submitted on 24th January 2014 for construction and operation of the Project. Subsequently on 18th February 2014, an *Environmental Permit* (*EP-485/2014*) was granted.

Pursuant to *Condition 2.5* of the EP, EM&A programme, in accordance with the procedures and requirements set out in *EM&A Manual,* is required for this Project. Water Quality Monitoring shall be conducted prior to and throughout the cable installation works, and after its completion, as set out in the *EM&A Manual*.

The baseline water quality monitoring was conducted from end of April 2016 to early May 2016. The baseline water quality monitoring is used to reflect the current baseline water quality conditions prior to the cable installation works. This *Baseline Water Quality Monitoring Report* (the "Report") was prepared by **ERM-Hong Kong, Limited (ERM)** on behalf of CMI to present the methodology and findings of the baseline water quality monitoring for the Project.

1.2 PURPOSE OF THIS REPORT

The purpose of this Report is to determine the current baseline marine water quality conditions and Action and Limit Levels at the designated monitoring locations around the Project works area prior to the commencement of the Project submarine cable installation works. The current baseline conditions and Action and Limit Levels agreed by EPD will be used as the basis for assessing water quality impacts, if any, and for compliance monitoring during the Project submarine cable installation works.

Pursuant to *Condition 2.5* of the EP, and as as set out in the approved *EM&A Manual,* the Report is prepared and submitted to the EPD no later than two weeks before the commencement of construction works.

1.3 STRUCTURE OF THE REPORT

This *Section 1* provides details of the background, purpose and structure of the report. The remainder of the report is structured as follows:

Section 2: Baseline Water Quality Monitoring

Summarizes the water quality monitoring locations, frequency, monitoring methodology and baseline monitoring results, and establishes the Action and Limit Levels in accordance with the *EM&A Requirement*.

Section 3: Conclusion

Summarises the key points of the Report and reports on the representativeness of the baseline monitoring results and observations for the Project.

2 BASELINE WATER QUALITY MONITORING

2.1 MONITORING LOCATION

Prior to the Project marine installation works, baseline water quality monitoring has been undertaken at stations situated around the upcoming cable laying works in Junk Bay and near to Tung Lung Chau and Tai Long Pai. These stations are listed below and the locations are shown in *Figure 2.1*.

- B1 is an Impact Station to monitor the impacts of cable installation works on the Big Wave Bay Beach;
- B2 is an Impact Station to monitor the impacts of cable installation works on the Rocky Bay Beach;
- B3 is an Impact Station to monitor the impacts of cable installation works on the Shek O Beach;
- E1 is an Impact Station to monitor impacts of cable installation works on Cape d'Aguilar Marine Reserve;
- E2 is an Impact Station to monitor the impacts of cable installation works on the coral communities at Tung Lung Chau;

  (There is no Impact Station E3 as E3 represents coral communities along the coast of Ninepins, over 5 km from the cable installation works, and will not be affected by the Project due to the distance)
- E4 is the Impact Station to monitor the impacts of cable installation works on the coral communities at the coast of Sung Kong;
- E5 is the Impact Station to monitor the impacts of cable installation works on the coral communities at the coast of Waglan Island;
- E6 is an Impact Station to monitor the impacts of cable installation works on the coral communities at Tai Long Pai (the Gradient Station is not set due to the insufficient distance between this Impact Station and the nearby proposed cable works which may affect the cable laying works);
- E7 is an Impact Station to monitor the impacts of cable installation works on the coral communities along Junk Bay – South West;
- E8 is an Impact Station to monitor the impacts of cable installation works on the coral communities at Cape Collinson (the Gradient Station is not set due to the insufficient distance between this Impact Station to nearby proposed cable works which may affect the cable laying works);
- E9 is an Impact Station to monitor the impacts of cable installation works on the coral communities at Fat Tong Chau (the Gradient Station is not set due to the insufficient distance between this Impact Station to nearby proposed cable works which may affect the cable laying works);
- F1 is an Impact Station to monitor the impacts of cable installation works on the Tung Lung Chau Fish Culture Zone;

- I1 is an Impact Station to monitor the impacts of cable installation works on the Shek O Headland SSSI;
- S1 is an Impact Station situated at the WSD Seawater Intake Point in Junk Bay. It is located within 500 m north of the cable alignment at Junk Bay and set up to monitor the effect of cable laying works in the area;
- S2 is an Impact Station to monitor the impacts of cable installation works on the WSD Seawater Intake at Siu Sai Wan;
- S3 is an Impact Station to monitor the impacts of cable installation works on the Pamela Youde Nethersole Eastern Hospital Cooling Water Intake at Heng Fa Chuen;
- G1 is a Gradient Station between S1 and the cable alignment;
- G2 is a Gradient Station between S2 and the cable alignment;
- G3 is a Gradient Station between F1 and the cable alignment;
- G4 is a Gradient Station between E2 and the cable alignment;
- G5 is the Gradient Station between E4 and the alignment;
- G6 is the Gradient Station between E5 and the alignment;
- G7 is a Gradient Station between E1 and the cable alignment;
- C1 is a Control Station (approximately 3 km from the proposed cable alignment) for Zone A. It is not supposed to be influenced by the cable laying works due to its remoteness to the construction works;
- C2 is a Control Station (approximately 4 km from the proposed cable alignment) for Zone B. It is not supposed to be influenced by the cable laying works due to its remoteness to the construction works; and
- C3 is a Control Station (approximately 3 km from the proposed cable alignment) for Zone C. It is not supposed to be influenced by the cable laying works due to its remoteness to the construction works.

During Impact Monitoring, the monitoring works will be carried out at C1, E7, E8, E9, F1, G1, G2, G3, S1, S2, and S3 (i.e. elven (11) stations) when the cable laying vessel moves inside Zone A (*Figure 2.2*). Similarly, the impact monitoring works will be carried out at B1, B2, B3, C2, E1, E2, E6, E8, F1, G3, G4, G7 and I1 (i.e. thirteen (13) stations) when the vessel moves inside Zone B (*Figure 2.3*). Monitoring works will start at C3, E4, E5, G5 and G6 (i.e. five (5) stations), when the vessel enters Zone C (*Figure 2.4*). The above monitoring stations shall be sampled as well during Post Project Monitoring.

The co-ordinates of these monitoring stations are listed in *Table 2.1*

Table 2.1 Co-ordinates of Sampling Stations (HK Grid)

Station	Nature	Easting	Northing
B1	Impact Station (Beach)	843556.84	811853.46
B2	Impact Station (Beach)	844062.02	810369.19
B3	Impact Station (Beach)	843988.33	809902.13
E1	Impact Station (Marine Reserve)	842021.64	816547.02

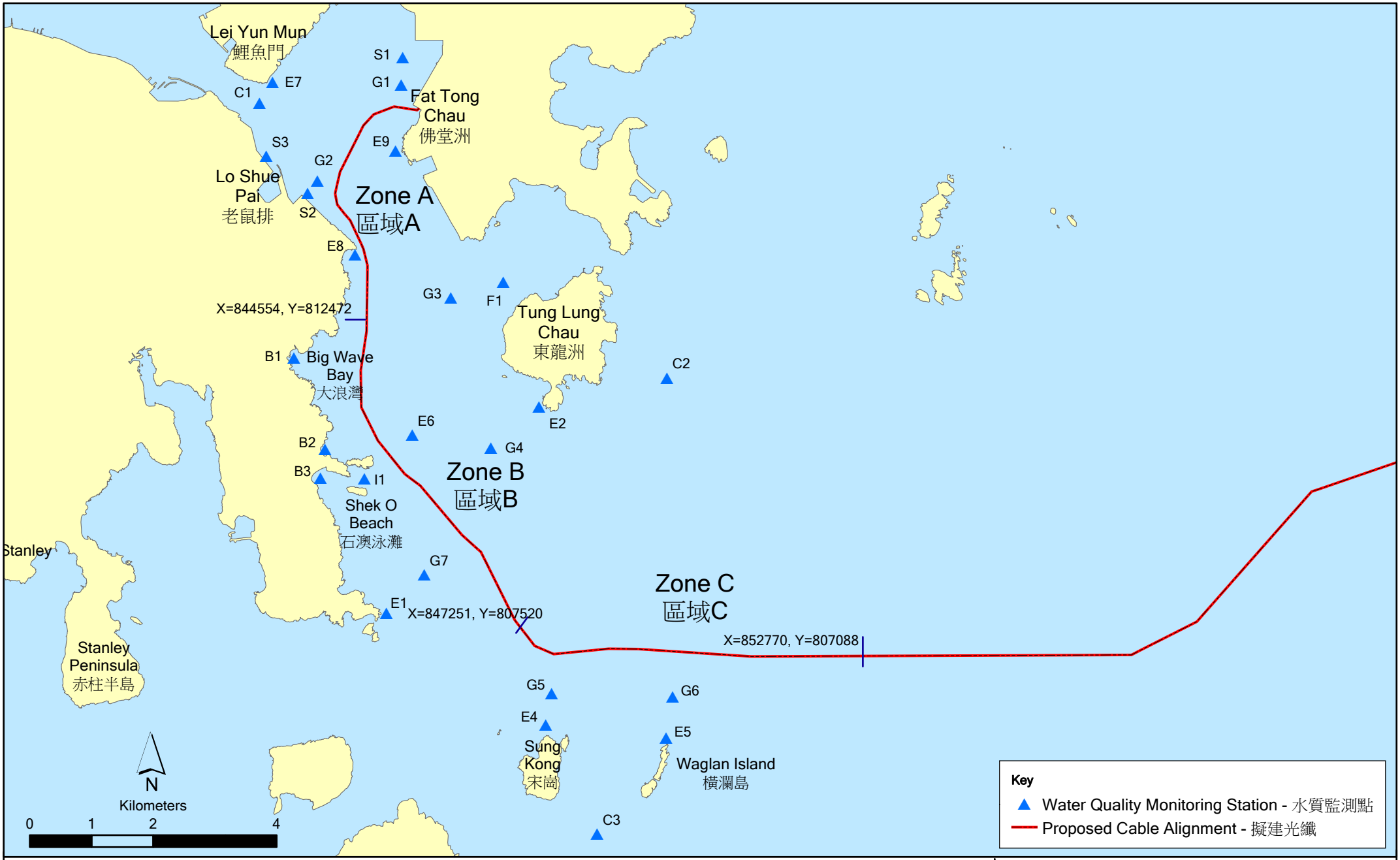

Figure 2.1
圖 2.1

Water Quality Monitoring Station
水 質 監 測 點

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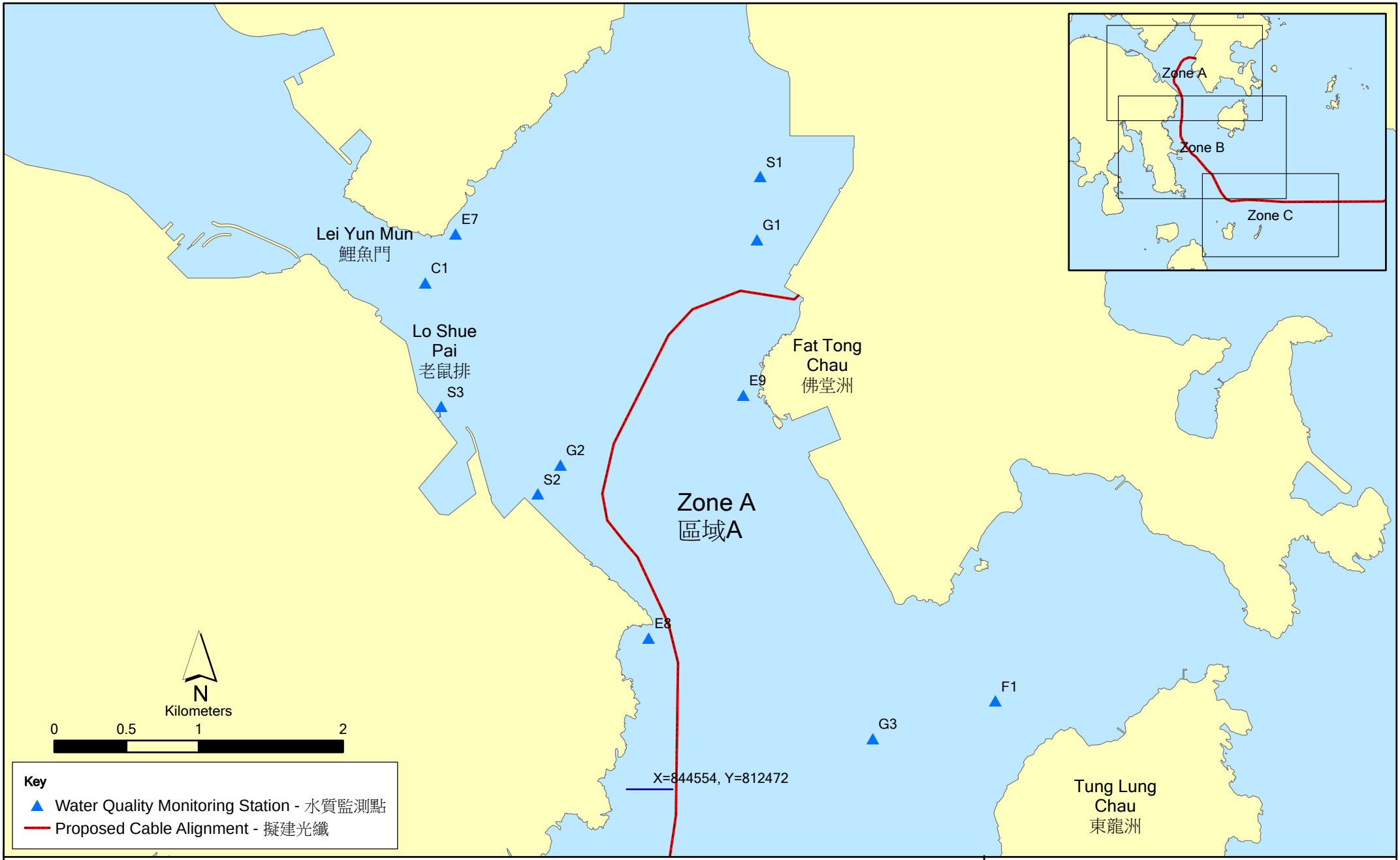

Figure 2.2
圖 2.2

Water Quality Monitoring Station (Zone A)
區域A內的水質監測點

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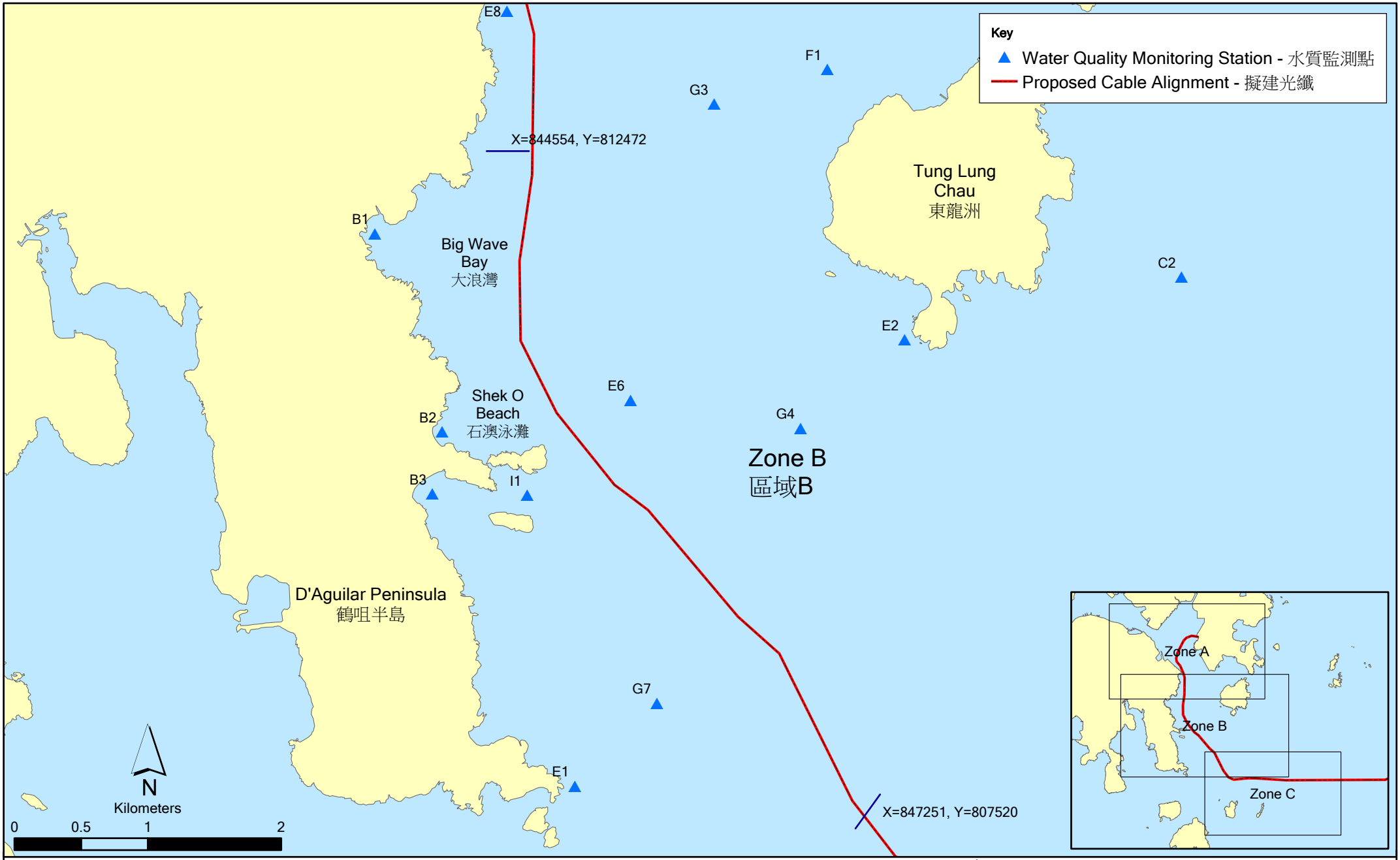

Figure 2.3
圖 2.3

Water Quality Monitoring Station (Zone B)
區域B內的水質監測點

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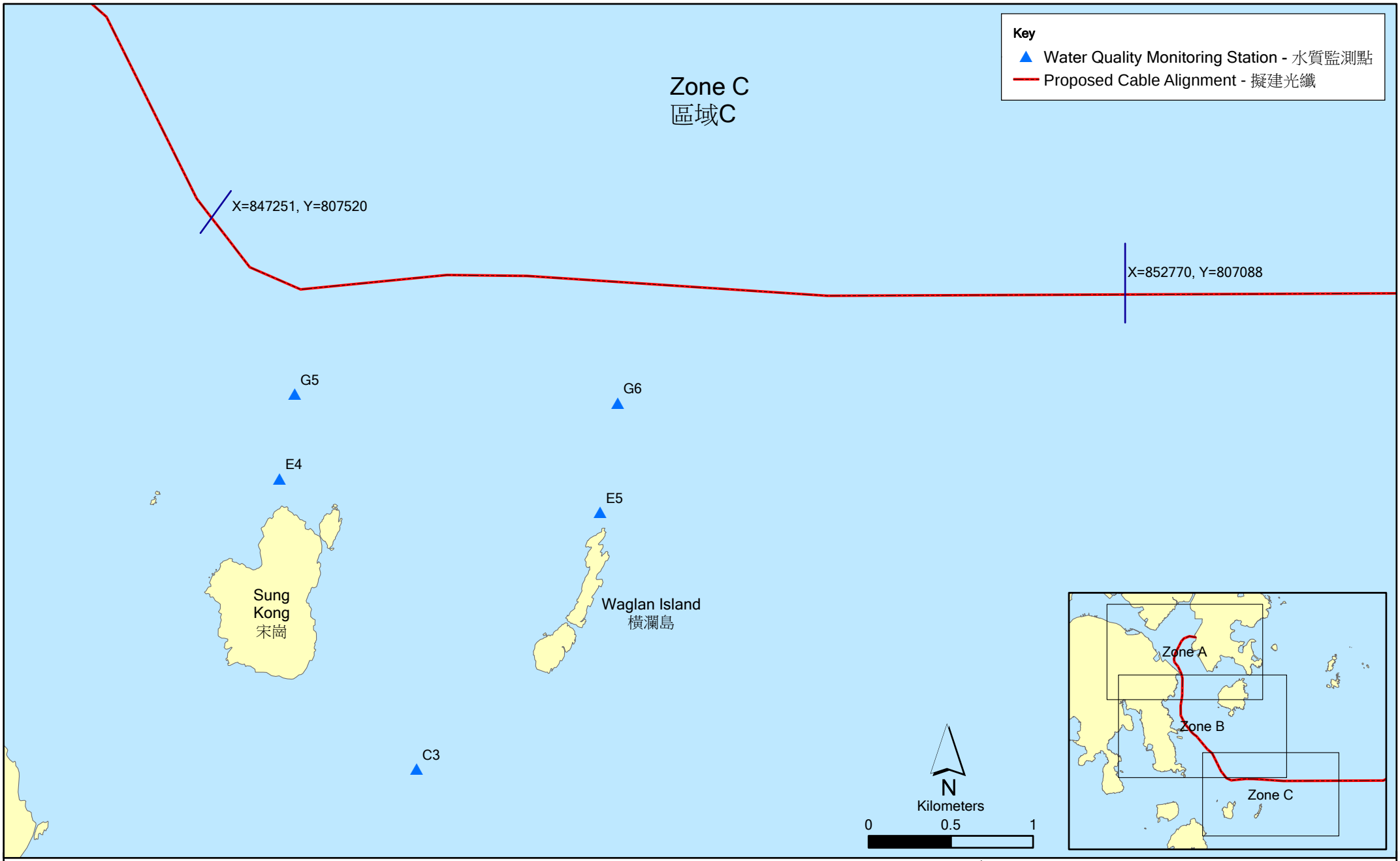

Figure 2.4
圖 2.4

Water Quality Monitoring Station (Zone C)
區域C內的水質監測點

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Station	Nature	Easting	Northing
E2	Impact Station (Coral Communities)	847527.33	811059.83
E4	Impact Station (Coral Communities)	848471.60	804135.73
E5	Impact Station (Coral Communities)	845056.10	807712.89
E6	Impact Station (Coral Communities)	848503.03	811247.01
E7	Impact Station (Coral Communities)	849586.94	805696.09
E8	Impact Station (Coral Communities)	844547.04	813522.78
E9	Impact Station (Coral Communities)	845202.76	815205.38
F1	Impact Station (Fish Culture Zone)	846948.57	813085.03
I1	Impact Station (Site of Special Scientific Interest)	844698.75	809894.80
S1	Impact Station (Seawater Intakes)	845297.24	816281.54
S2	Impact Station (Seawater Intakes)	844070.53	814783.54
S3	Impact Station (Seawater Intakes)	846099.31	812825.53
G1	Gradient Station	847365.06	810245.78
G2	Gradient Station	843936.91	814720.04
G3	Gradient Station	849692.91	806360.59
G4	Gradient Station	846748.01	810394.92
G5	Gradient Station	845320.83	816717.97
G6	Gradient Station	843779.38	814520.41
G7	Gradient Station	843110.53	815125.70
C1	Control Station	842999.91	815984.25
C2	Control Station	845297.24	816281.54
C3	Control Station	844070.53	814783.54

2.2 *SAMPLING AND TESTING METHODOLOGY*

2.2.1 *Monitoring Parameters*

The parameters measured *in situ* were:

- Dissolved Oxygen (DO) (% saturation and mg/L)
- Water temperature (°C)
- Turbidity (Nephelometric Turbidity Units [NTU])
- Salinity (parts per thousand [ppt])

The only parameter to be measured in the laboratory was:

- Suspended solids (SS) (mg/L)

In addition to the water quality parameters, other relevant data were also measured and recorded in field logs, including the location of the sampling stations, water depth, sampling depth, current velocity and direction, time, weather conditions, sea conditions (where appropriate), tidal state (where appropriate), special phenomena and work activities undertaken around the monitoring and works area that may influence the monitoring results.

These parameters were monitored at all designated marine water quality monitoring stations during the whole baseline monitoring phase.

2.2.2 *Monitoring Equipment*

Table 2.2 summaries the equipment used for the baseline water quality monitoring.

Table 2.2 Equipment used during Baseline Water Quality Monitoring

Equipment	Model
Global Positioning Device	GARMIN eTrex 10
Water Depth Gauge	Speedtech Instruments SM-5
Water Sampling Equipment	Wildlife Supply Co Kemmerer 1520
Salinity, DO, Temperature Measuring Meter	DO and Salinity Meter (Pro 2030)
Current Velocity and Direction	Global Water FP111
Turbidity Meter	HACH 2100Q

2.2.3 *Monitoring Frequency and Timing*

Baseline monitoring was carried out on three occasions (six days). Each occasion/round of monitoring was completed in two days, day one at stations B2, B3, C3, E1, E4, E5, G4, G5, G6, G7, I1 (i.e. 11 stations) and day two at stations B1, C1, C2, S1, S2, S3, E2, E6, E7, E8, E9, F1, G1, G2, G3 (i.e. 15 stations). The interval between two sets of monitoring at any given station was no less than 36 hours.

The water quality measurement and sampling were undertaken within a 4-hour window, 2 hours before and 2 hours after mid flood and mid-ebb tides. The tidal range selected for the baseline monitoring was at least 0.5 m for both flood and ebb tides as far as practicable.

Reference was made to the predicted tides at Tai Miu Wan, which is the tidal station nearest to the Project Site, published on the website of the Hong Kong Observatory [1]. Based on the predicted tidal levels at Tai Miu Wan tidal station, the baseline water quality monitoring was conducted between 27 April and 5 May 2016, following the schedule presented in *Annex A*.

2.2.4 *Sampling/Testing Protocol*

All *in situ* monitoring instruments were checked, calibrated and certified by a laboratory accredited under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) or any other international accreditation scheme before use (see calibration reports in *Annex B*), and subsequently will be re-calibrated at-monthly intervals throughout all stages of the water quality monitoring. Responses of sensors and electrodes were checked with certified standard solutions before each use.

For the on-site calibration of field equipment, the *BS 1427: 1993, Guide to Field and On-Site Test Methods for the Analysis of Waters* was observed. Sufficient stocks of spare parts were maintained for replacements when necessary. Backup monitoring equipment was made available.

[1] Hong Kong Observatory (2016) http://www.hko.gov.hk/tide/predtide.htm?s=TMW [Accessed in April 2016]

Water samples for SS measurements were collected in high density polythene bottles, packed in ice (cooled to 4° C without being frozen), and delivered to a HOKLAS laboratory as soon as possible after collection.

At each measurement / sampling depth, two (2) consecutive *in-situ* measurements (DO concentration and saturation, temperature, turbidity, and salinity) and two water samples for SS were taken for lab analysis.

2.2.5 Laboratory Analysis

All laboratory work was carried out in a HOKLAS accredited laboratory. Water samples of about 1,000 mL were collected at the monitoring and control stations for carrying out the laboratory determinations. The determination work started within the next working day after collection of the water samples. The SS laboratory measurements were provided within two (2) days of the sampling event (48 hours). The analyses followed the standard methods as described in APHA Standard Methods for the *Examination of Water and Wastewater*, 19th Edition, unless otherwise specified (APHA 2540D for SS).

The QA/QC details were in accordance with requirements of HOKLAS or another internationally accredited scheme (*Annex C*)

2.2.6 Sampling Depths & Replication

Each station was sampled and measurements/ water samples were taken at three depths, namely, 1 m below water surface, mid-depth and 1 m above sea bed, except where the water depth was less than 6 m, in which case the mid-depth station was omitted. For stations where the water is less than 3 m deep, only the mid-depth sample was taken.

For *in situ* measurements, duplicate readings were made at each water depth at each station. Duplicate water samples were collected at each water depth at each station.

2.3 BASELINE MONITORING RESULTS

The results of baseline water quality monitoring are provided in *Annex D*. The graphical presentations of baseline water quality monitoring data are presented by zones (Zone A, Zone B and Zone C) and shown from *Figure D1* to *Figure D15* in *Annex D*. No marine construction activities were observed in the vicinity of the monitoring stations during the baseline monitoring. No other major activities influencing water quality were identified during the monitoring period, and weather conditions were generally calm during the baseline monitoring period.

For all monitoring stations, water quality was variable throughout the baseline monitoring period and this represented natural fluctuation in water quality.

DO levels at all depths in all zones were generally high; DO levels smaller than 4 mg/L were not recorded. Differences in DO levels among the stations were recorded at all depths and in all zones. In Zone A, DO levels across all

the monitoring stations showed a tendency to move towards a similar level at all depths on the last day of monitoring. In Zone B and Zone C, DO level at most stations stayed at a similar level throughout the baseline monitoring period. In general, differences in DO levels among the stations in all zones remained on the last day of monitoring.

Depth-averaged levels of Turbidity in all zones were generally low, below 3.21 NTU. In Zone A the overall Turbidity levels were similar among the stations and over the baseline monitoring period, although Turbidity levels showed minor increase at mid-flood tidal stage of the last day monitoring. In Zone B, differences in depth-averaged levels of Turbidity among the stations were measured throughout the baseline monitoring period and the overall levels of Turbidity showed minor increasing trend over the monitoring period. In Zone C, Turbidity levels were generally similar among the stations and throughout the baseline monitoring period. At the mid-ebb tidal stage of the last monitoring day, differences in Turbidity levels among the stations became larger in Zone C.

Similar to Turbidity, depth-averaged levels of SS in all zones were also generally low, below 3.93 mg/L. In Zone A, the overall depth-averaged levels were similar among the stations and throughout the monitoring period. In Zone B, differences in SS levels among the stations were observed throughout the monitoring period and minor variations at some stations (e.g. G4, I1) were recorded over time. In Zone C, SS levels were similar among the stations on the first two monitoring occasions. On the last occasion of monitoring, differences in SS levels among the stations at the mid-ebb tidal stage became larger.

The above variation of water quality with sporadic incidences of relatively high levels of Turbidity and SS or the sporadic incidences of relatively low levels of DO is considered to be a natural characteristic of water quality in this area of Hong Kong.

2.4 ACTION AND LIMIT LEVELS

The Action and Limit Levels have been calculated as percentiles of baseline data or set as values according to the *EM&A Manual* (see *Table 2.3)*.

Table 2.3 ***Determination of Action and Limit Levels for Water Quality* (Table taken from approved *EM&A Manual*)**

Parameter	Action Level	Limit Level
SS in mg/L (Depth-averaged) [a] [c]	95%-ile of baseline data, or	99%-ile of baseline data, and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day
DO in mg/L [b]	Surface and Middle	Surface and Middle
	5%-ile of baseline data for surface and middle layer	5 mg/L [d] or 1%-ile of baseline for surface and middle layer
	Bottom	Bottom
	5%-ile of baseline data for bottom layers	2 mg/L [d] or 1%-ile of baseline data for bottom layer
Turbidity in NTU (Depth-averaged) [c]	95%-ile of baseline data, or	99%-ile of baseline data, and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day

Notes:

a. "Depth-averaged" is calculated by taking the arithmetic means of reading of all sampled depths.
b. For DO, non-compliance of the water quality limits occurs when the monitoring result is lower than the limits. These levels are for both FCZ and non-FCZ.
c. For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
d. Set Limit Level for DO was derived from the *Water Quality Objectives* (WQO) *for Junk Bay, Eastern Buffer, and Mirs Bay Water Control Zones* under the *Water Pollution Control Ordinance* (WPCO) Chapters 358L, 358Y, and 358I respectively.

Given that baseline water quality conditions were different among zones as discussed in *Section 2.3*, Action and Limit Levels were individually derived for each zone. The proposed Action and Limit Levels for Zone A, Zone B and Zone C, are shown in ***Error! Not a valid bookmark self-reference.*** to *Table* 2.6 respectively.

Table 2.4 ***Action and Limit Levels for Water Quality in Zone A***

Parameter	Action Level	Limit Level
SS in mg/L (Depth-averaged) [a] [c]	95%-ile of baseline data (3.37 mg/L), or	99%-ile of baseline data (3.49 mg/L), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day
DO in mg/L [b]	Surface and Middle	Surface and Middle
	5%-ile of baseline data for surface and middle layer (7.00 mg/L)	5 mg/L [d] or 1%-ile of baseline for surface and middle layer (6.71 mg/L)
	Bottom	Bottom
	5%-ile of baseline data for bottom layers (6.99 mg/L)	2 mg/L [d] or 1%-ile of baseline data for bottom layer (6.91 mg/L)

Parameter	Action Level	Limit Level
Turbidity in NTU (Depth-averaged) (c)	95%-ile of baseline data (2.86 NTU), or	99%-ile of baseline data (3.06 NTU), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day

Notes:

a. "Depth-averaged" is calculated by taking the arithmetic means of reading of all sampled depths.
b. For DO, non-compliance of the water quality limits occurs when the monitoring result is lower than the limits. These levels are for both FCZ and non-FCZ.
c. For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
d. Set Limit Level for DO was derived from the Water Quality Objectives (WQO) for Junk Bay, Eastern Buffer, and Mirs Bay Water Control Zones under the Water Pollution Control Ordinance (WPCO) Chapters 358L, 358Y, and 358I respectively.

Table 2.5 Action and Limit Levels for Water Quality in Zone B

Parameter	Action Level	Limit Level
SS in mg/L (Depth-averaged) (a) (c)	95%-ile of baseline data (3.33 mg/L), or	99%-ile of baseline data (3.39 mg/L), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day
DO in mg/L (b)	Surface and Middle	Surface and Middle
	5%-ile of baseline data for surface and middle layer (7.49 mg/L)	5 mg/L (d) or 1%-ile of baseline for surface and middle layer (7.41 mg/L)
	Bottom	Bottom
	5%-ile of baseline data for bottom layers (7.26 mg/L)	2 mg/L (d) or 1%-ile of baseline data for bottom layer (7.01 mg/L)
Turbidity in NTU (Depth-averaged) (c)	95%-ile of baseline data (2.67 NTU), or	99%-ile of baseline data (2.79 NTU), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day

Notes:

a. "Depth-averaged" is calculated by taking the arithmetic means of reading of all sampled depths.
b. For DO, non-compliance of the water quality limits occurs when the monitoring result is lower than the limits. These levels are for both FCZ and non-FCZ.
c. For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
d. Set Limit Level for DO was derived from the *Water Quality Objectives* (WQO) *for Junk Bay, Eastern Buffer, and Mirs Bay Water Control Zones* under the *Water Pollution Control Ordinance* (WPCO) Chapters 358L, 358Y, and 358I respectively.

Table 2.6 Action and Limit Levels for Water Quality in Zone C

Parameter	Action Level	Limit Level
SS in mg/L	95%-ile of baseline data (3.37 mg/L), or	99%-ile of baseline data (3.87 mg/L), and

Parameter	Action Level	Limit Level
(Depth-averaged) [a] [c]	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day
DO in mg/L [b]	Surface and Middle 5%-ile of baseline data for surface and middle layer (8.33 mg/L)	Surface and Middle 5 mg/L [d] or 1%-ile of baseline for surface and middle layer (8.22 mg/L)
	Bottom 5%-ile of baseline data for bottom layers (8.23 mg/L)	Bottom 2 mg/L [d] or 1%-ile of baseline data for bottom layer (8.15 mg/L)
Turbidity in NTU (Depth-averaged) [c]	95%-ile of baseline data (2.75 NTU), or	99%-ile of baseline data (3.20 NTU), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day

Notes:

a. "Depth-averaged" is calculated by taking the arithmetic means of reading of all sampled depths.

b. For DO, non-compliance of the water quality limits occurs when the monitoring result is lower than the limits. These levels are for both FCZ and non-FCZ.

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

d. Set Limit Level for DO was derived from the *Water Quality Objectives* (WQO) *for Junk Bay, Eastern Buffer, and Mirs Bay Water Control Zones* under the *Water Pollution Control Ordinance* (WPCO) Chapters 358L, 358Y, and 358I respectively.

3 CONCLUSION

Baseline water quality monitoring was conducted between 27 April and 5 May 2016 at 26 designated monitoring stations (including 16 Impact Stations, 7 Gradient Stations and 3 Control Stations).

Baseline monitoring was carried out on three occasions at each location, with the interval between two occasions at any one station being no less than 36 hours (total over six days, 27-29 April and 3-5 May 2016). Samples were taken at mid-flood and mid-ebb tides, at three depths (surface, middle and bottom) where practical. On each occasion, monitoring was completed in two days, day one at stations B2, B3, C3, E1, E4, E5, G4, G5, G6, G7, I1 (i.e. 11 Stations) and day two at stations B1, C1, C2, S1, S2, S3, E2, E6, E7, E8, E9, F1, G1, G2, G3 (i.e. 15 Stations).

During the monitoring period, no major activities influencing water quality were observed in the vicinity of the Project's marine works area. Water quality monitoring results are therefore considered to be representative of the current baseline conditions of the areas where submarine cable installation works will be undertaken for the Project.

The baseline monitoring results were used to determine the Action and Limit Levels of DO, SS and Turbidity parameters for the impact monitoring to be conducted throughout the Project cable installation works.

Annex A

Baseline Water Quality Monitoring Schedule

Asia Pacific Gateway (APG) - Tseung Kwan O
Baseline Marine Water Quality Monitoring (WQM) Schedule

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
24-Apr	25-Apr	26-Apr	27-Apr	28-Apr	29-Apr	30-Apr
			WQM (Portion 1) Mid-Flood 8:11 (06:11 - 10:11) Mid-Ebb 15:04 (13:04 - 17:04)	**WQM (Portion 2)** Mid-Flood 8:40 (06:40 - 10:40) Mid-Ebb 15:51 (13:51 - 17:51)	**WQM (Portion 1)** Mid-Flood 9:29 (07:29 - 11:29) Mid-Ebb 16:57 (14:57 - 18:57)	
01-May	02-May	03-May	04-May	05-May	06-May	07-May
		WQM (Portion 2) Mid-Ebb 9:43 (07:43 - 11:43) Mid-Flood 15:19 (17:19 - 16:01)	**WQM (Portion 1)** Mid-Ebb 10:28 (08:28 - 12:28) Mid-Flood 16:24 (14:24 - 18:24)	**WQM (Portion 2)** Mid-Ebb 11:11 (09:11 - 13:11) Mid-Flood 17:22 (15:22 - 19:22)		

Portion 1 : B2, B3, C3, E1, E4, E5, G4, G5, G6, G7, I1 (11 Stations)
Portion 2 : B1, C1, C2, S1, S2, S3, E2, E6, E7, E8, E9, F1, G1, G2, G3 (15 Stations)

Annex B

Calibration Reports of Multi-parameter Sensor

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 : 26/04/2015 Due Date : 25/05/2016

Theoretical Value of Turbidity Standard (NTU)	Measured Value (NTU)	Difference % *
20	20.4	2.00
100	98.5	-1.50
800	780	-2.50

(*) 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 : _____

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No.	:	ET/EW/008/004	Manufacturer	:	YSI
Model No.	:	Pro 2030	Serial No.	:	10F 101978
Date of Calibration	:	26/04/2016	Calibration Due Date	:	25/05/2016

Temperature Verification

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

Ref. No. of Water Bath : ---

	Temperature (°C)			
Reference Thermometer reading	Measured	19.9	Corrected	19.8
DO Meter reading	Measured	20.0	Difference	-0.2

Standardization of sodium thiosulphate ($Na_2S_2O_3$) solution

Reagent No. of $Na_2S_2O_3$ titrant	CPE/012/4.5/001/13	Reagent No. of 0.025N $K_2Cr_2O_7$	CPE/012/4.4/002/09

	Trial 1	Trial 2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	10.20
Final Vol. of $Na_2S_2O_3$ (ml)	10.20	20.40
Vol. of $Na_2S_2O_3$ used (ml)	10.20	10.20
Normality of $Na_2S_2O_3$ solution (N)	0.02451	0.02451
Average Normality (N) of $Na_2S_2O_3$ solution (N)	0.02451	
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	10.90	21.90	0.00	6.80	10.50
Final Vol. of $Na_2S_2O_3$ (ml)	10.90	21.90	28.50	6.80	10.50	14.10
Vol. (V) of $Na_2S_2O_3$ used (ml)	10.90	11.00	6.60	6.80	3.70	3.60
Dissolved Oxygen (DO), mg/L	7.17	7.24	4.34	4.47	2.43	2.37
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	7.42	7.34	7.38	7.17	7.24	7.21	2.33
5	4.56	4.59	4.58	4.34	4.47	4.41	3.78
10	2.35	2.22	2.29	2.43	2.37	2.40	4.69
Linear regression coefficient				0.9986			

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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/012/4.7/003/14	Reagent No. of NaCl (30ppt)	CPE/012/4.8/003/14

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	11.30	22.70	32.30
Final Vol. of $Na_2S_2O_3$ (ml)	11.30	22.70	32.30	41.90
Vol. (V) of $Na_2S_2O_3$ used (ml)	11.30	11.40	9.60	9.60
Dissolved Oxygen (**DO**), mg/L	7.44	7.50	6.32	6.32
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	7.18	7.25	7.22	7.44	7.50	7.47	3.40
30	6.58	6.54	6.56	6.32	6.32	6.32	3.73

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 : _____

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/008/004 Manufacturer : YSI

Model No. : Pro 2030 Serial No. : 10F 101978

Date of Calibration : 26/04/2016 Due Date : 25/05/2016

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

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference * (%)
30.0	29.4	-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 : _____

Annex C

QA/QC Results for Suspended Solids Testing

QA/QC Results of Laboratory Analysis of Total Suspended Solids

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
4/27/2016	98.4	FB2-S 1	4.44	FE1-S 2	104
	105.5	FE1-M 1	5.13	FG4-M 2	102.9
	93.7	FG4-B 1	2.82	FG7-B 2	98
	101.6	FI1-S 1	4.44	FI1 B 2	99
	106.4	EB2-S 1	8.33	EE1-S 2	93.5
	93.2	EE1-M 1	8.7	EG4-M 2	105.6
	106.7	EG4-B 1	0	EG7-B 2	107.4
	100.3	EI1-S 1	0	EI1 B 2	96

Note: (*) % Recovery of QC sample should be between 85.5% to 113.5%.

(#) % Error of Sample Duplicate should be between 0% to 10%.

(@) % Recovery of Sample Spike should be between 80% to 120%.

(**) % Error of Sample Duplicate >10% but invalid due to sample results less than MDL.

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
4/28/2016	106.1	FC1 S-1	3.51	FG1 S-2	97
	99.2	FG1 M-1	0	FF1 M-2	100.8
	104.2	FF1 B-1	3.92	FE6 B-2	95.1
	101.9	FB1 S-1	4.26	FG2 S-2	103
	98.8	FG2 M-1	3.08	F S3 B-2	98.5
	96	EC1 S-1	3.28	EG1 S-2	94
	101.7	EG1 M-1	7.69	EF1 M-2	100.5
	101	EF1 B-1	4.08	EE6 B-2	105.4
	97.9	EB1 S-1	8.7	EG2 S-2	108
	94.6	EG2 M-1	2.9	ES3 B-2	96

Note: (*) % Recovery of QC sample should be between 85.5% to 113.5%.

(#) % Error of Sample Duplicate should be between 0% to 10%.

(@) % Recovery of Sample Spike should be between 80% to 120%.

(**) % Error of Sample Duplicate >10% but invalid due to sample results less than MDL.

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
4/29/2016	98.9	FB2-S 1	5.41	FE1-S 2	96.3
	92.6	FE1-M 1	0.00	FG4-M 2	96.0
	101.9	FG4-B 1	3.28	FG7-B 2	96.7
	101.8	FI1-S 1	0.00	FI1 B 2	104.1
	94.7	EB2-S 1	5.41	EE1-S 2	94.7
	100.2	EE1-M 1	5.13	EG4-M 2	106.9
	95.9	EG4-B 1	0.00	EG7-B 2	91.9
	97.8	EI1-S 1	5.13	EI1 B 2	101.8

Note: (*) % Recovery of QC sample should be between 85.5% to 113.5%.

(#) % Error of Sample Duplicate should be between 0% to 10%.

(@) % Recovery of Sample Spike should be between 80% to 120%.

(**) % Error of Sample Duplicate >10% but invalid due to sample results less than MDL.

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
5/3/2016	104.3	FC1 S-1	3.17	FG1 S-2	93.5
	104.8	FG1 M-1	7.69	FF1 M-2	95.2
	94.1	FF1 B-1	0	FE6 B-2	105.9
	99	FB1 S-1	4.26	FG2 S-2	97
	93.6	FG2 M-1	6.45	F S3 B-2	106
	103.3	EC1 S-1	7.69	EG1 S-2	94.1
	92.8	EG1 M-1	0	EF1 M-2	95.3
	95.5	EF1 B-1	8	EE6 B-2	96
	106.5	EB1 S-1	8.33	EG2 S-2	95
	106.5	EG2 M-1	3.17	ES3 B-2	94.5

Note: (*) % Recovery of QC sample should be between 85.5% to 113.5%.

(#) % Error of Sample Duplicate should be between 0% to 10%.

(@) % Recovery of Sample Spike should be between 80% to 120%.

(**) % Error of Sample Duplicate >10% but invalid due to sample results less than MDL.

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
5/4/2016	92.4	FG6-S 1	3.17	FE4-S 2	104.0
	95.6	FE4-M 1	3.92	FG7-M 2	106.0
	92.2	FG7-B 1	3.64	FB2-B 2	105.9
	100	FG4-S 1	3.77	FG4 B 2	96.5
	93.1	EG6-S 1	0.00	EE4-S 2	97.5
	94.1	EE4-M 1	6.67	EG7-M 2	99.6
	100.1	EG7-B 1	5.13	EB2-B 2	105.9
	107.9	EG4-S 1	3.17	EG4 B 2	97.0

Note: (*) % Recovery of QC sample should be between 85.5% to 113.5%.

(#) % Error of Sample Duplicate should be between 0% to 10%.

(@) % Recovery of Sample Spike should be between 80% to 120%.

(**) % Error of Sample Duplicate >10% but invalid due to sample results less than MDL.

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
5/5/2016	105.7	FC1 S-1	0.00	FG1 S-2	104.4
	94.0	FG1 M-1	3.17	FF1 M-2	96.5
	101.7	FF1 B-1	8.70	FE6 B-2	104.6
	105.6	FB1 S-1	3.17	FG2 S-2	92.4
	97.9	FG2 M-1	0.00	F S3 B-2	103.4
	104.8	EC1 S-1	3.92	EG1 S-2	101.6
	103.0	EG1 M-1	3.28	EF1 M-2	98.4
	106.2	EF1 B-1	8.70	EE6 B-2	102.2
	92.7	EB1 S-1	0.00	EG2 S-2	106.7
	103.9	EG2 M-1	0.00	ES3 B-2	94.7

Note: (*) % Recovery of QC sample should be between 85.5% to 113.5%.

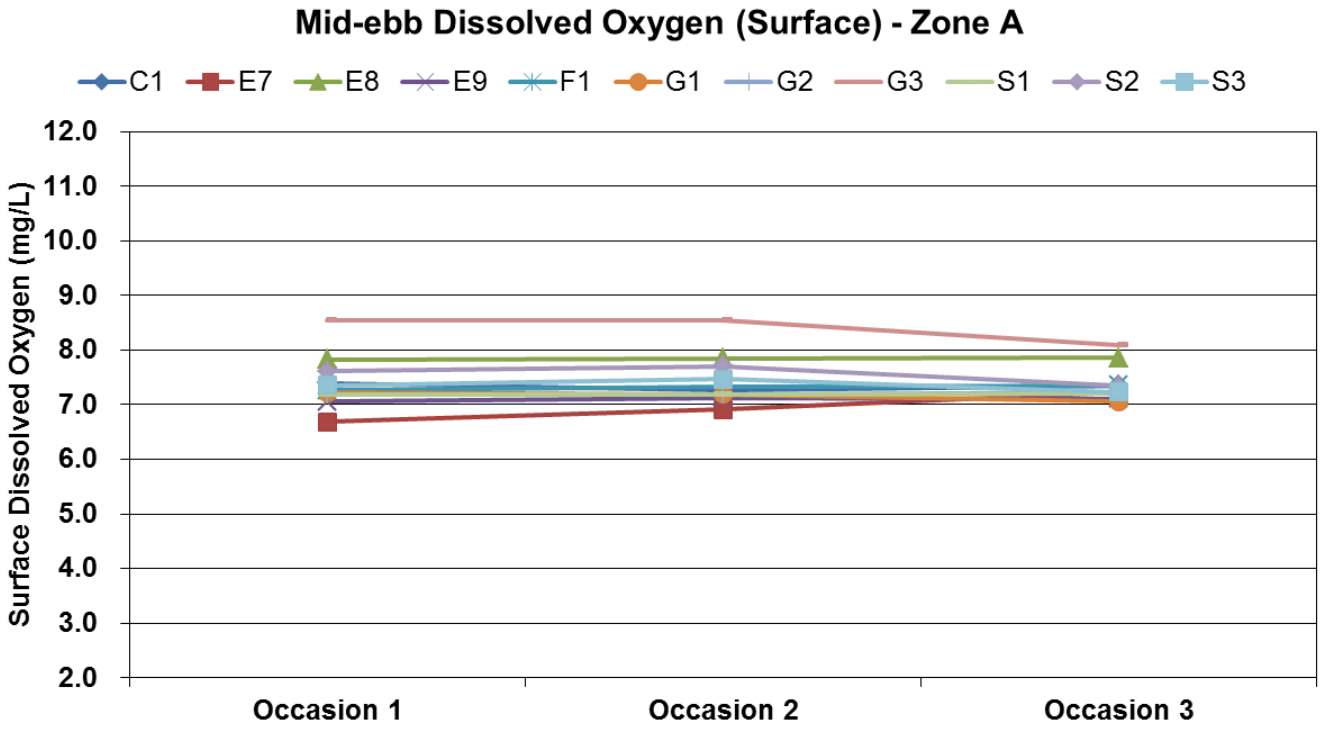
(#) % Error of Sample Duplicate should be between 0% to 10%.

(@) % Recovery of Sample Spike should be between 80% to 120%.

(**) % Error of Sample Duplicate >10% but invalid due to sample results less than MDL.

Annex D

Baseline Water Quality Monitoring Results



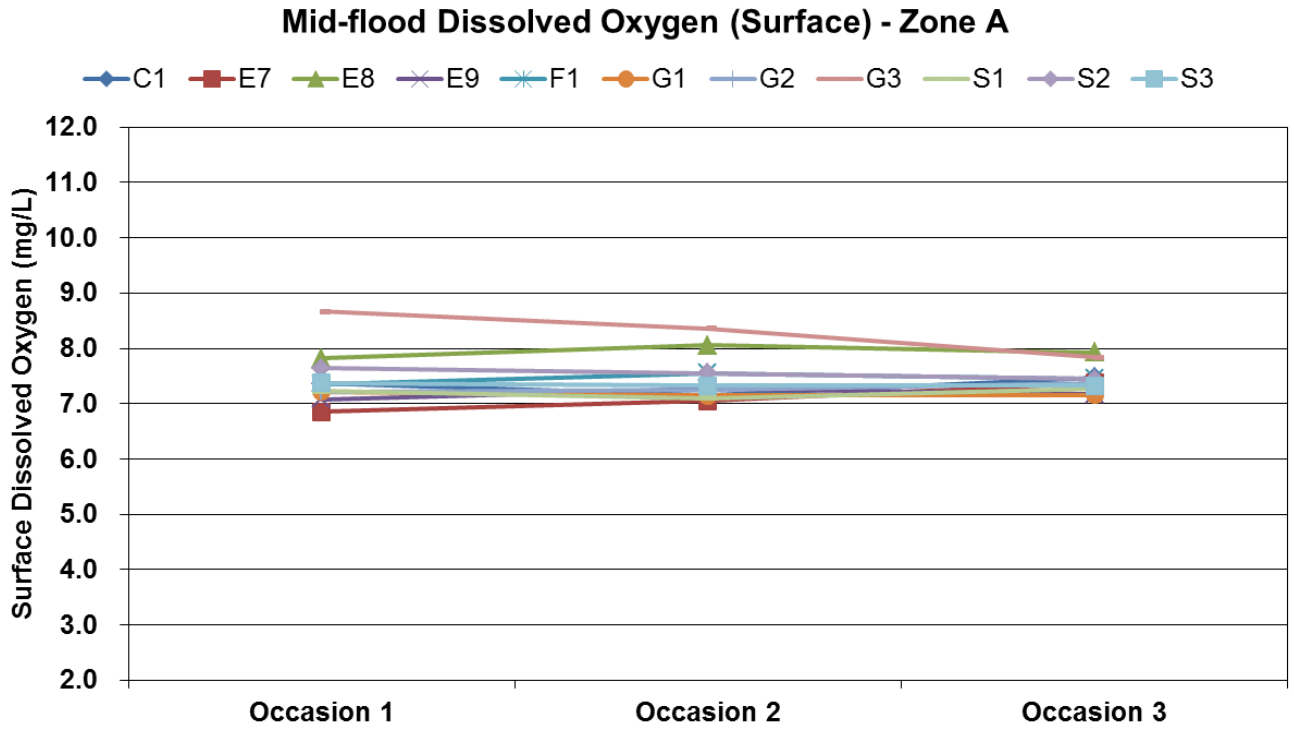
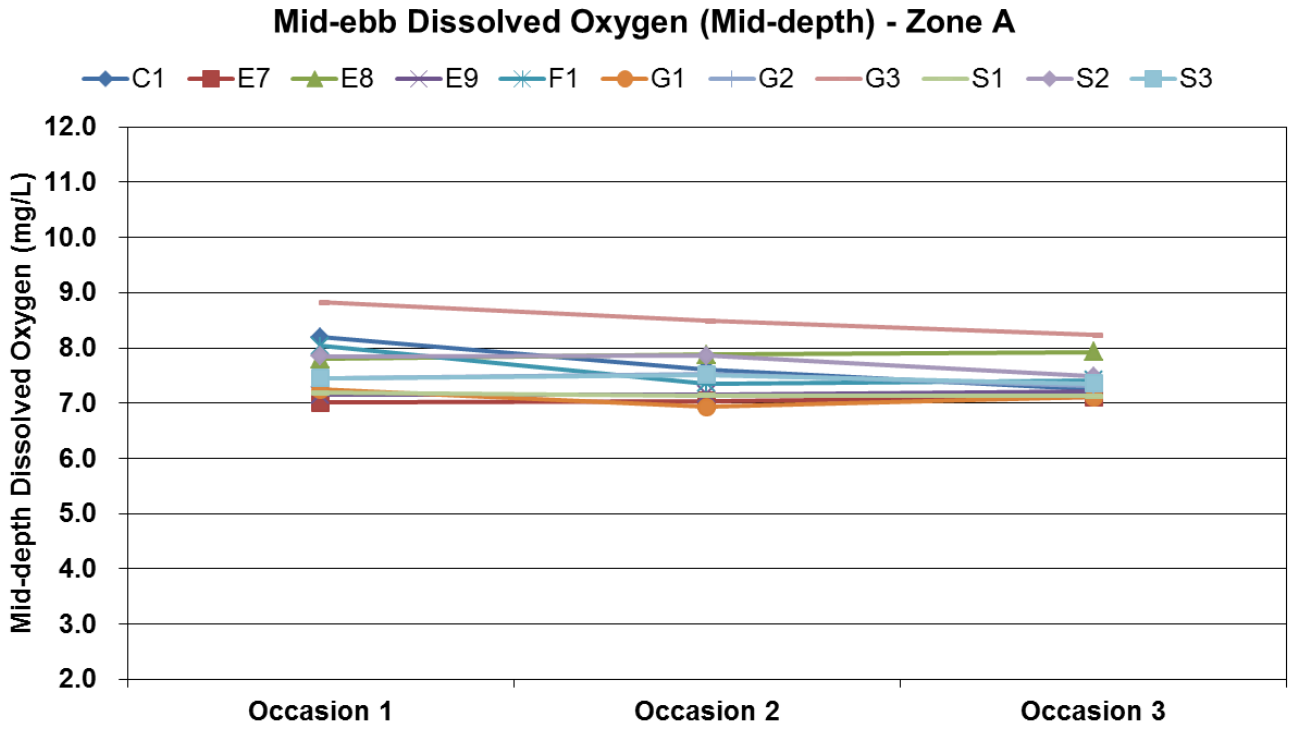


Figure D1 Dissolved oxygen (mg/L) at surface of water column measured during the baseline monitoring period from 27 April to 5 May 2016 (Zone A) (Monitoring in Zone A was conducted on 28 April, 3 May and 5 May 2016 respectively)



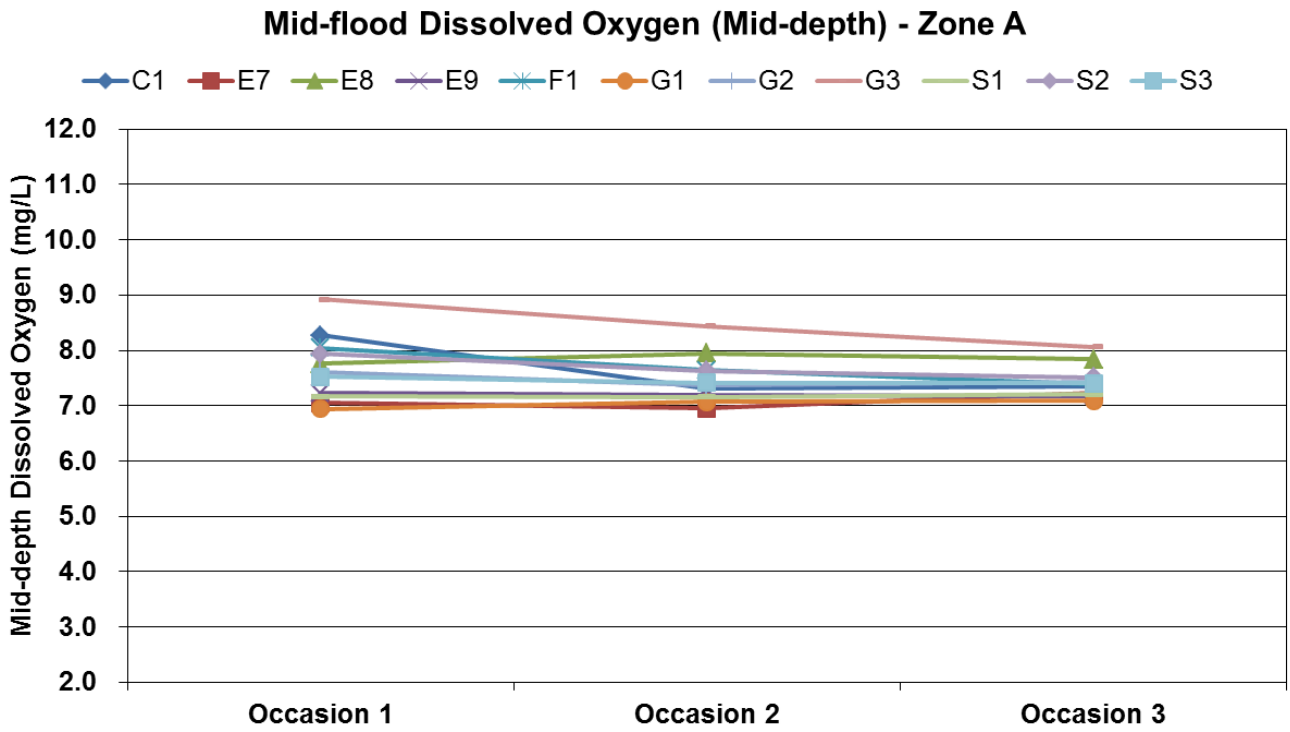
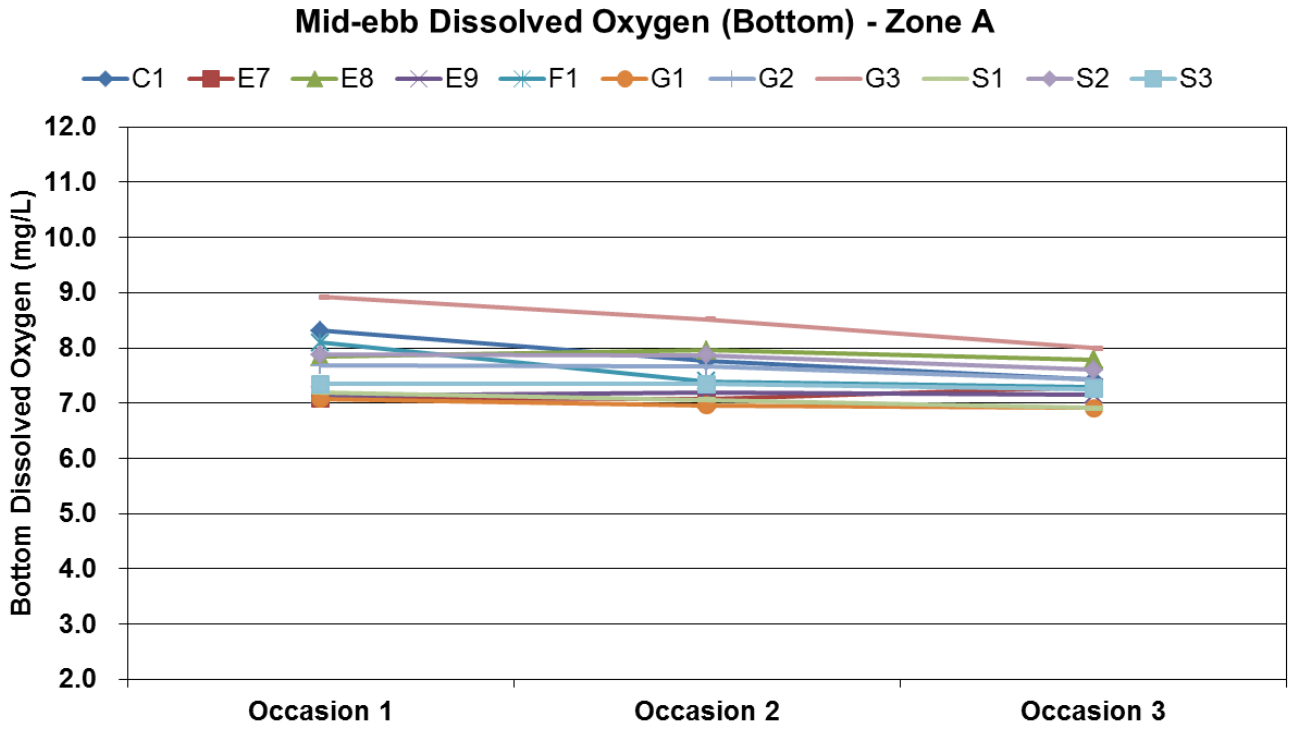


Figure D2 Dissolved oxygen (mg/L) at mid-depth of water column measured during the baseline monitoring period from 27 April to 5 May 2016 (Zone A) (Monitoring in Zone A was conducted on 28 April, 3 May and 5 May 2016 respectively)



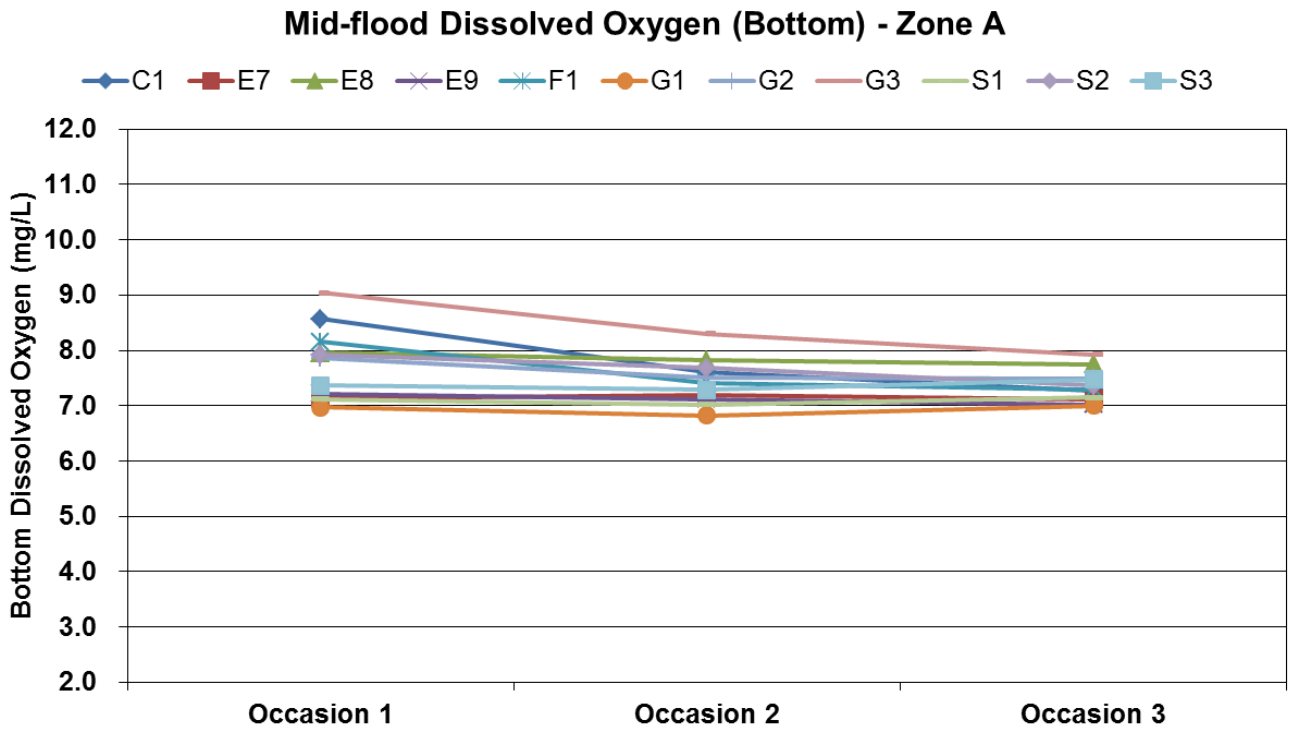
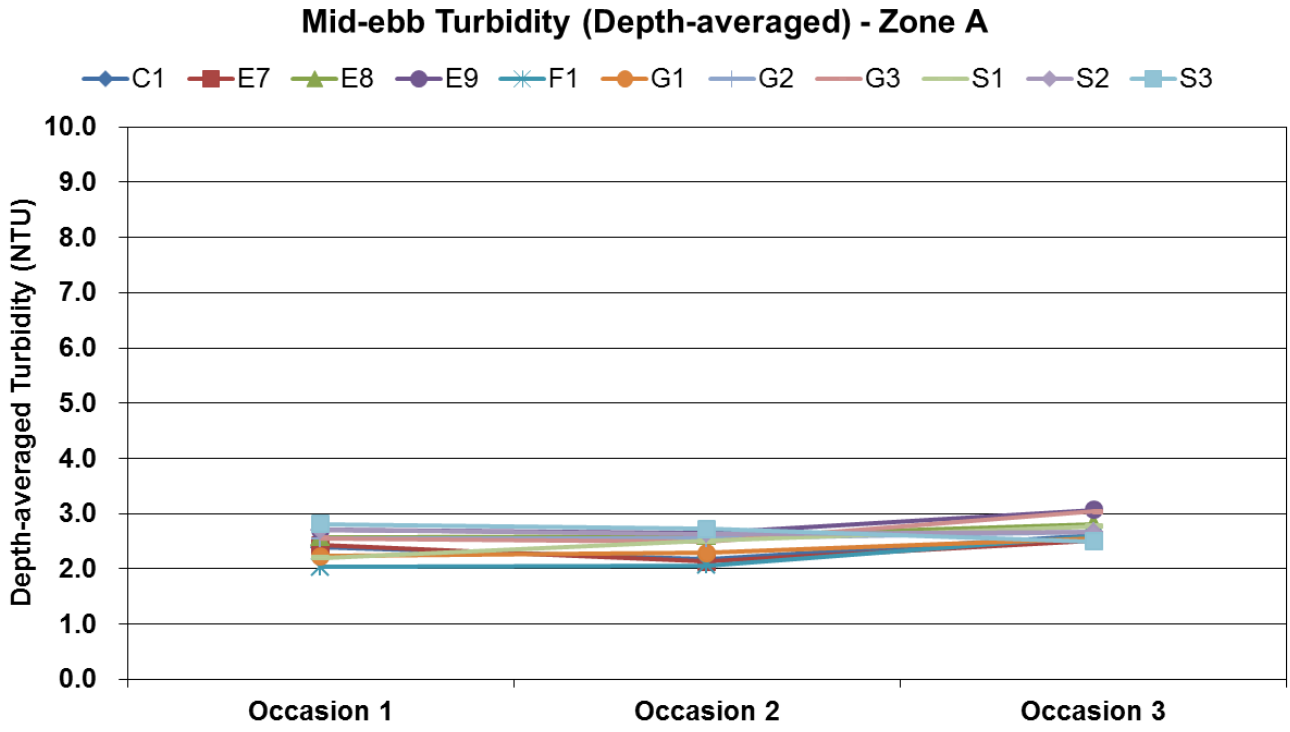


Figure D3 Dissolved oxygen (mg/L) at bottom of water column measured during the baseline monitoring period from 27 April to 5 May 2016 (Zone A) (Monitoring in Zone A was conducted on 28 April, 3 May and 5 May 2016 respectively)



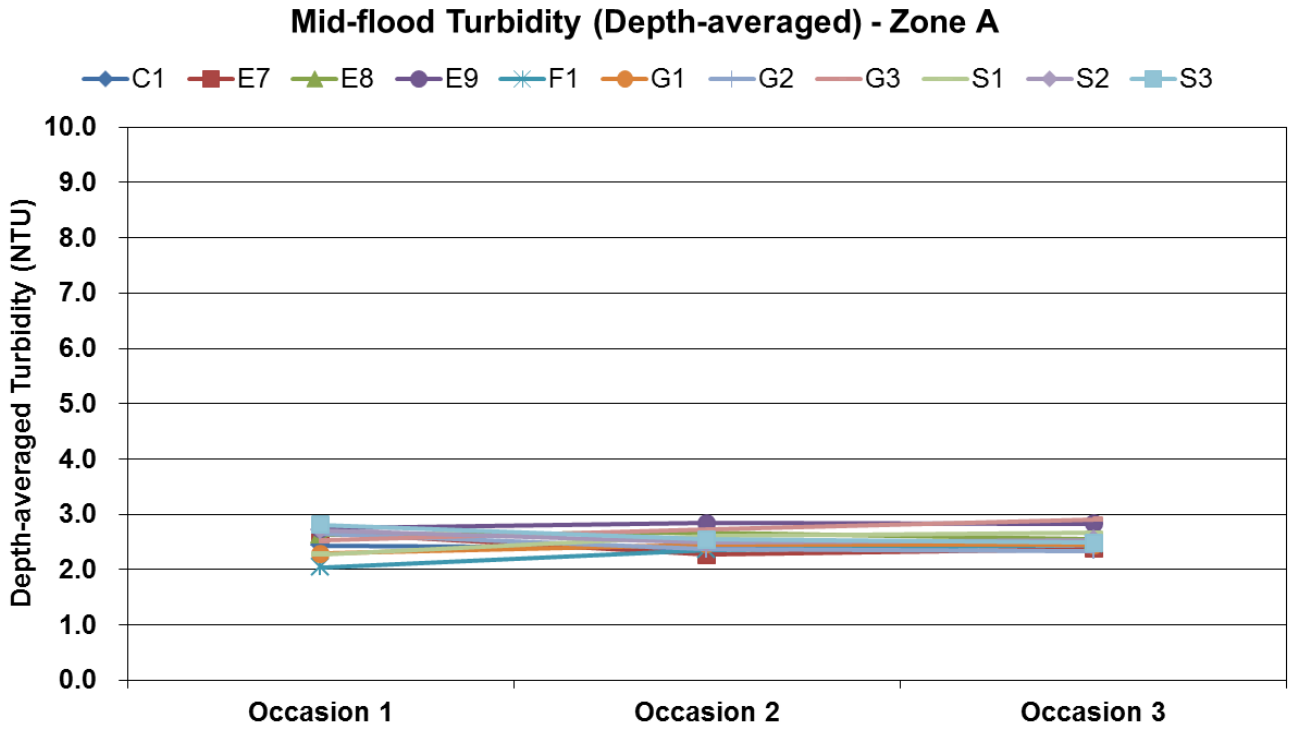
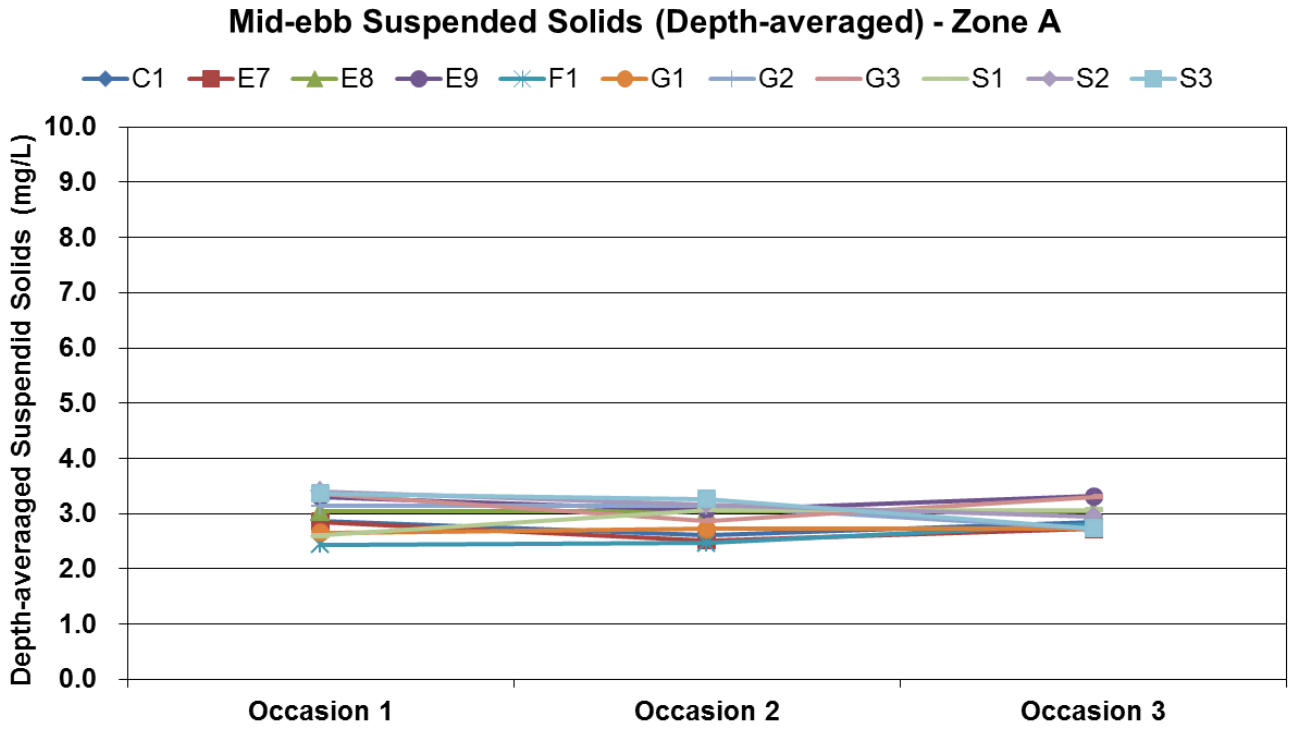


Figure D4 Depth-averaged turbidity (NTU) of water column measured during the baseline monitoring period from 27 April to 5 May 2016 (Zone A) (Monitoring in Zone A was conducted on 28 April, 3 May and 5 May 2016 respectively)



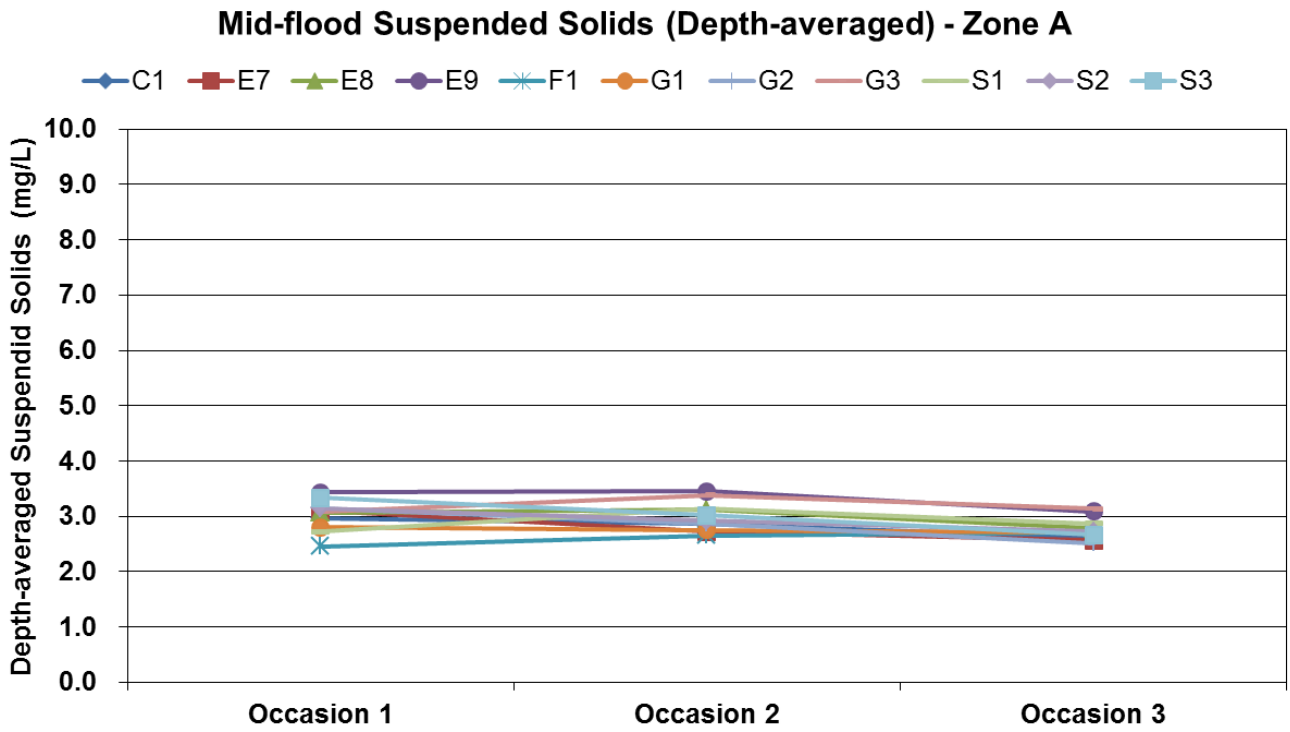
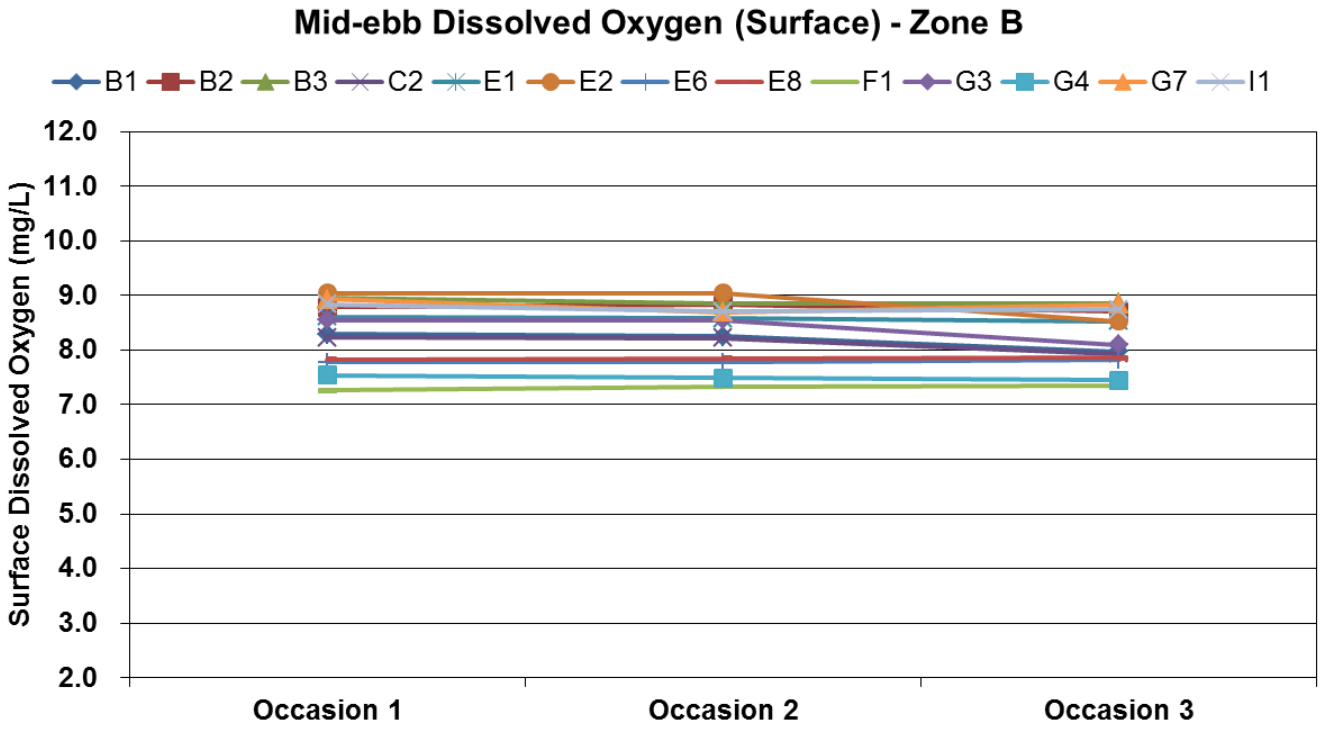


Figure D5 Depth-averaged suspended solid (mg/L) of water column measured during the baseline monitoring period from 27 April to 5 May 2016 (Zone A) (Monitoring in Zone A was conducted on 28 April, 3 May and 5 May 2016 respectively)



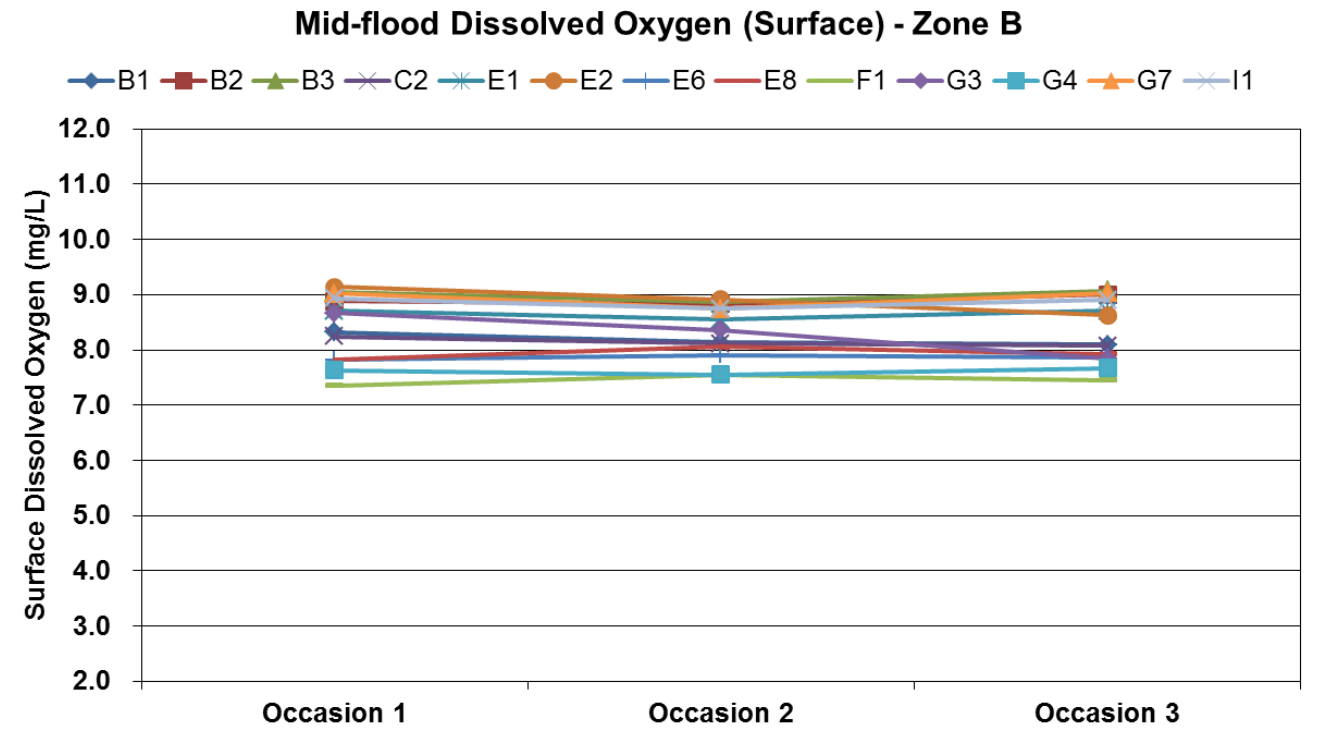
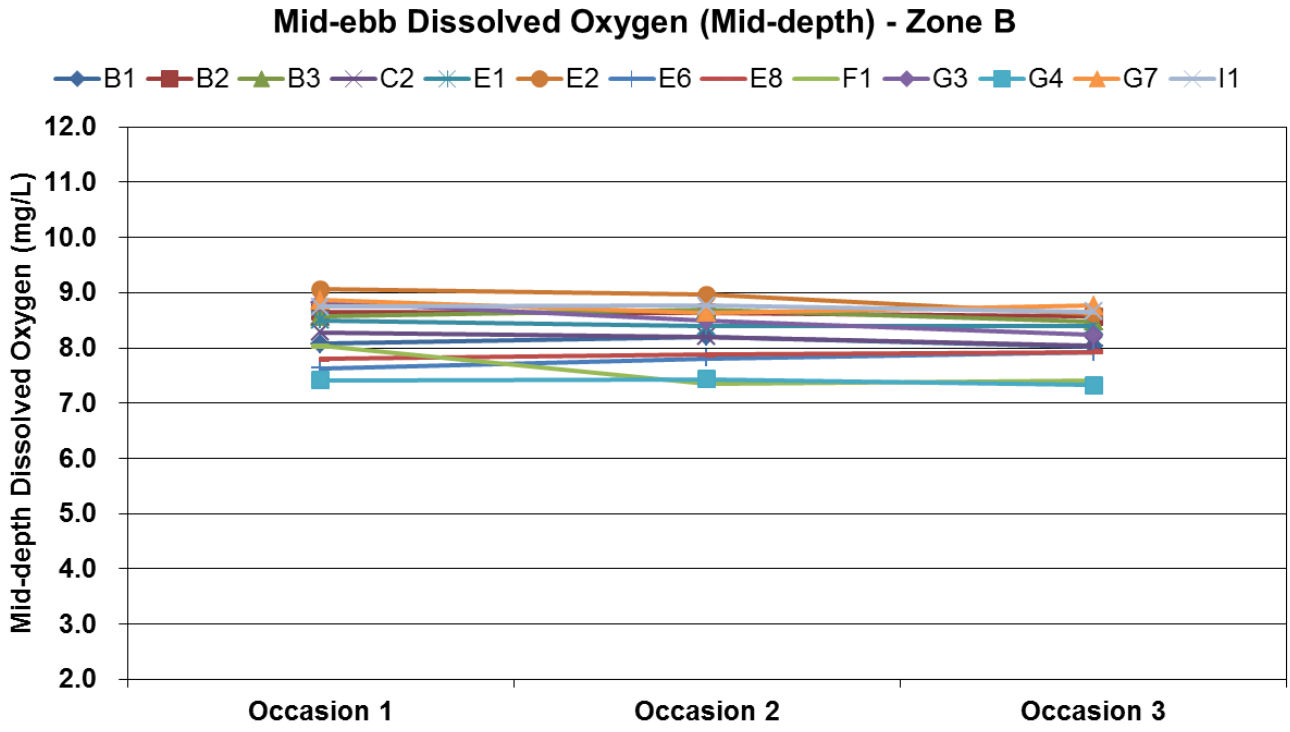


Figure D6 Dissolved oxygen (mg/L) at surface of water column measured during the baseline monitoring period from 27 April to 5 May 2016 (Zone B)
(In Zone B, baseline monitoring was conducted at stations B2, B3, E1, G4, G7 and I1 conducted on 27 April, 29 April and 4 May 2016 respectively, and at stations B1, C2, E2, E6, E8, F1 and G3 on 28 April, 3 May and 5 May 2016 respectively)



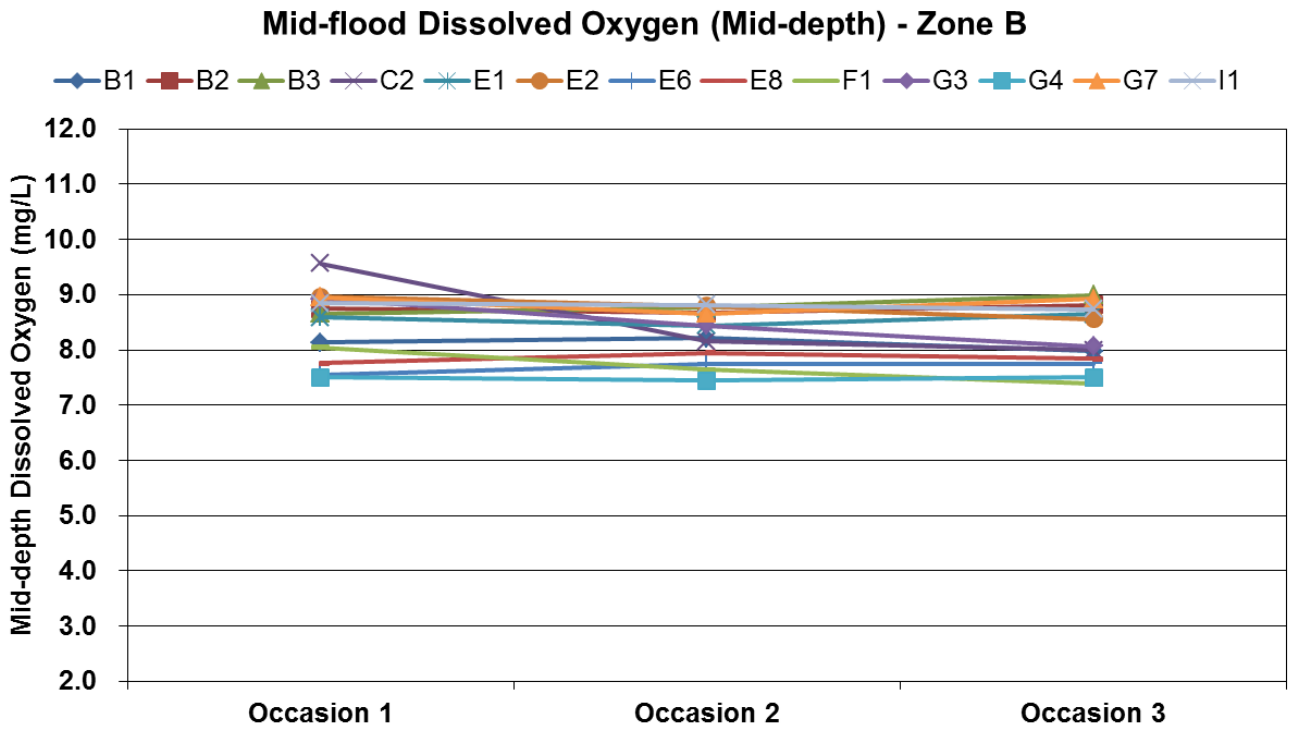
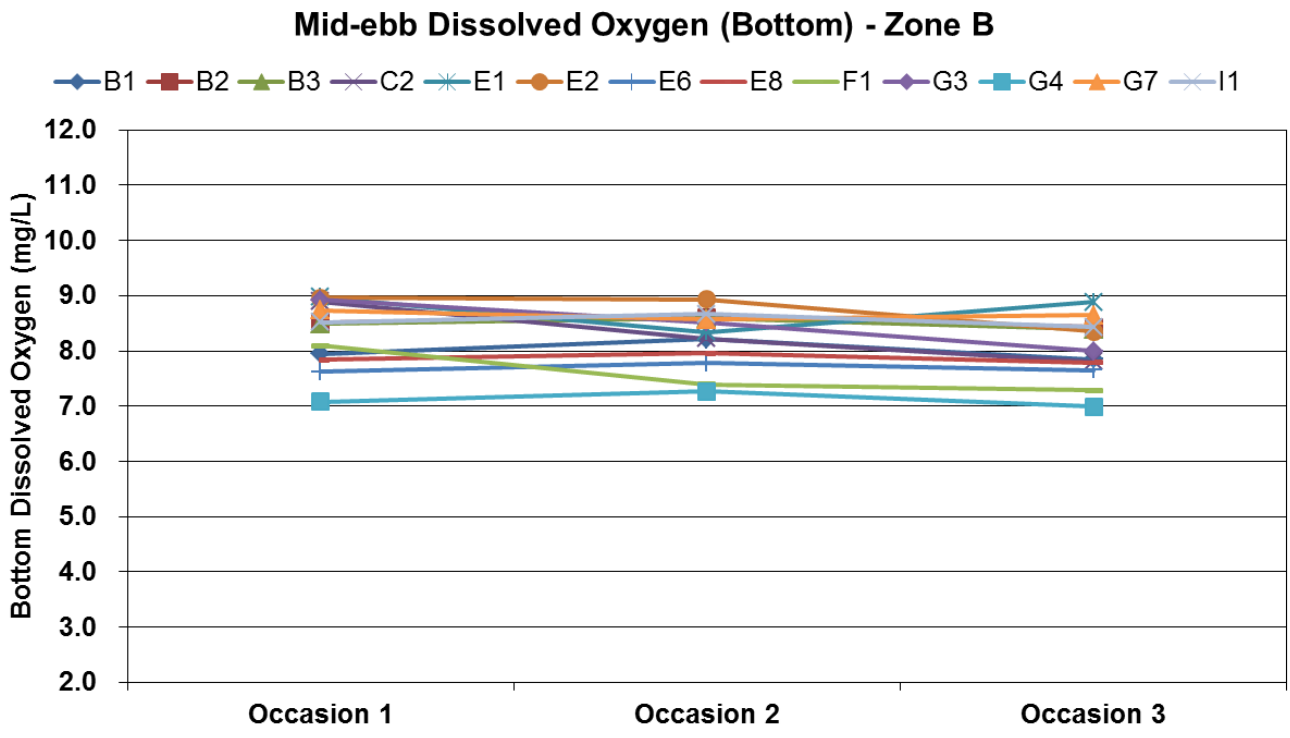


Figure D7 Dissolved oxygen (mg/L) at mid-depth of water column measured during the baseline monitoring period from 27 April to 5 May 2016 (Zone B)
(In Zone B, baseline monitoring was conducted at stations B2, B3, E1, G4, G7 and I1 conducted on 27 April, 29 April and 4 May 2016 respectively, and at stations B1, C2, E2, E6, E8, F1 and G3 on 28 April, 3 May and 5 May 2016 respectively)



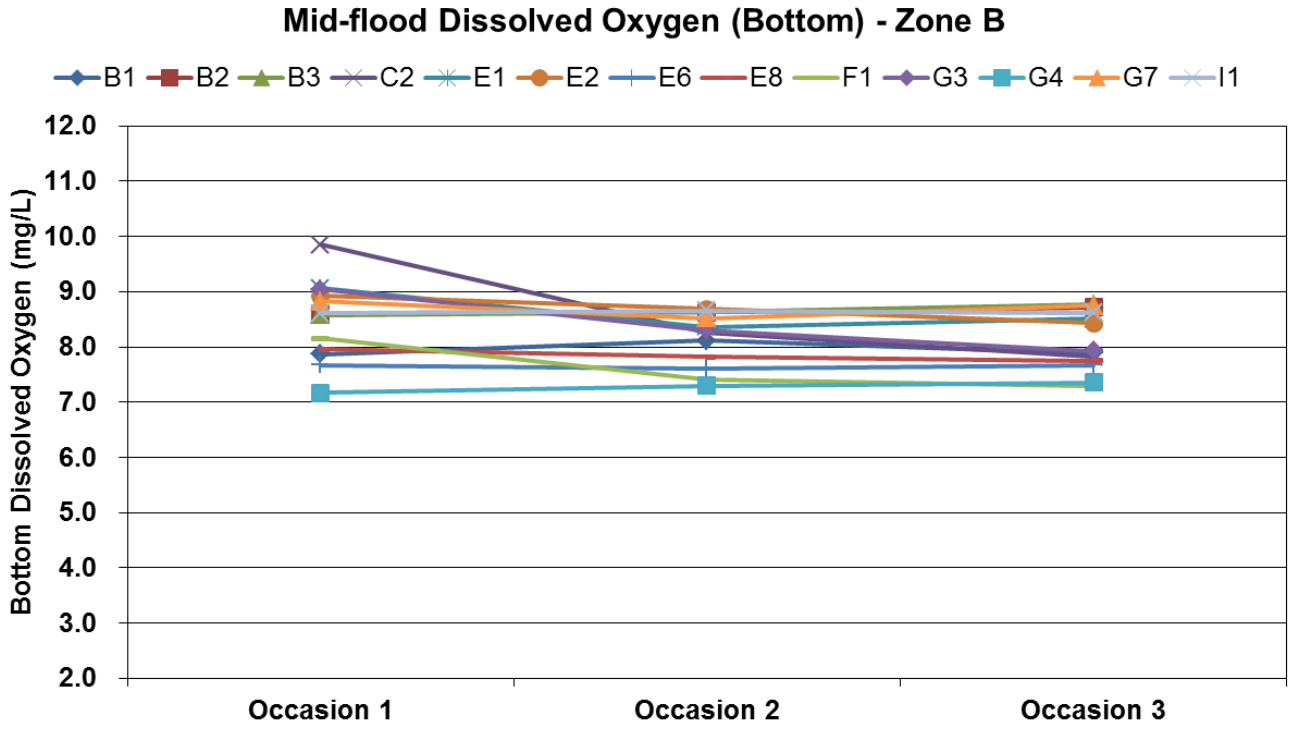
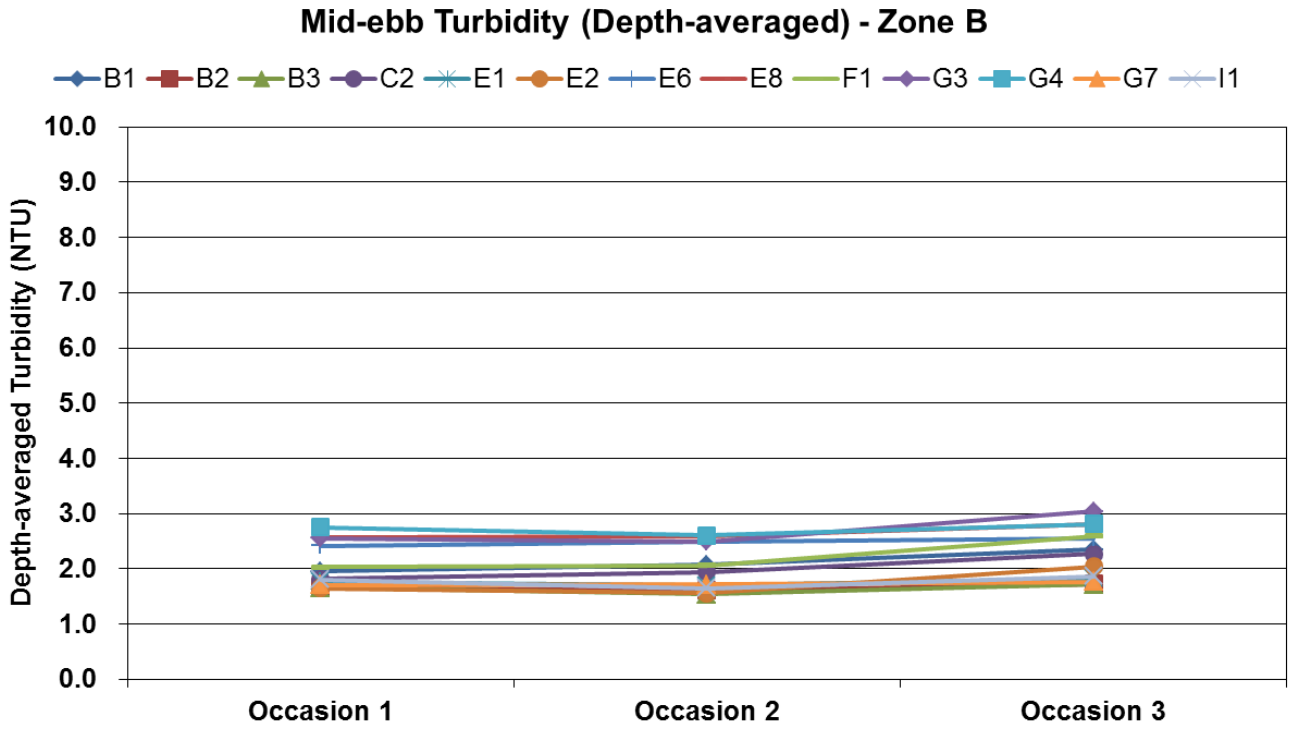


Figure D8 Dissolved oxygen (mg/L) at bottom of water column measured during the baseline monitoring period from 27 April to 5 May 2016 (Zone B)
(In Zone B, baseline monitoring was conducted at stations B2, B3, E1, G4, G7 and I1 conducted on 27 April, 29 April and 4 May 2016 respectively, and at stations B1, C2, E2, E6, E8, F1 and G3 on 28 April, 3 May and 5 May 2016 respectively)



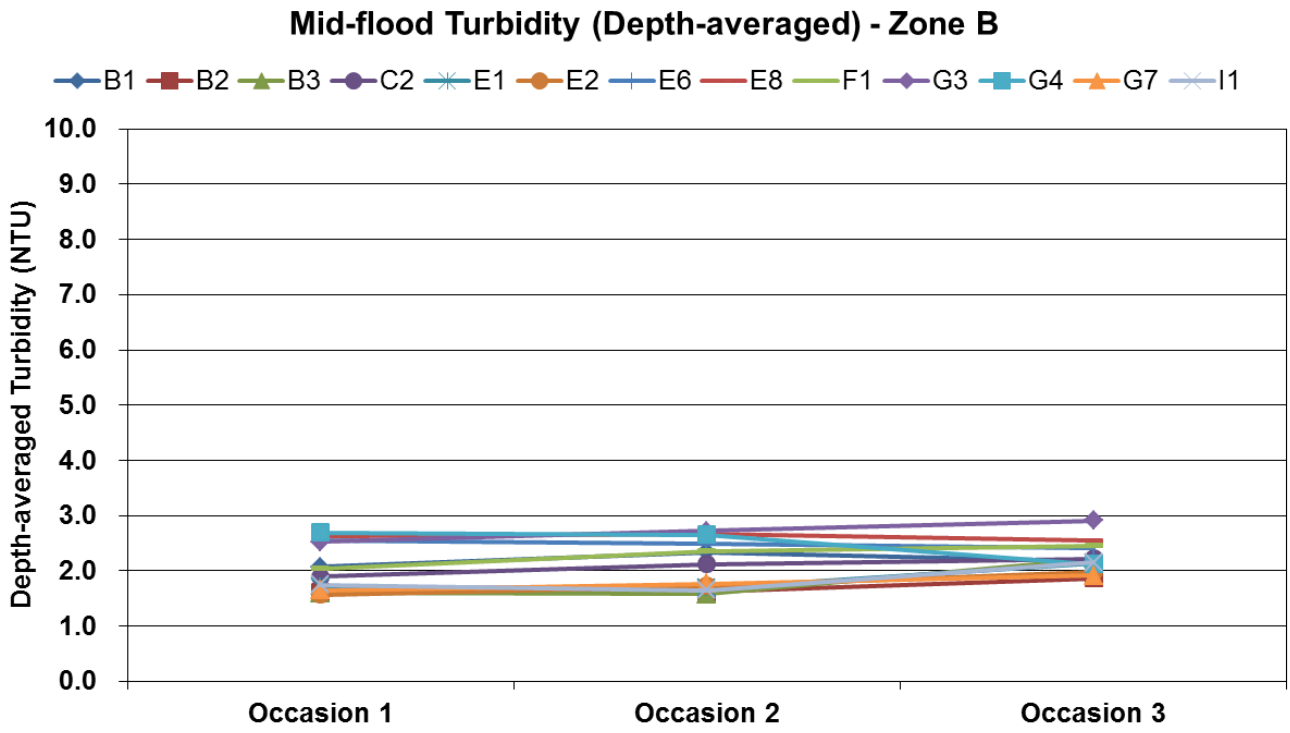
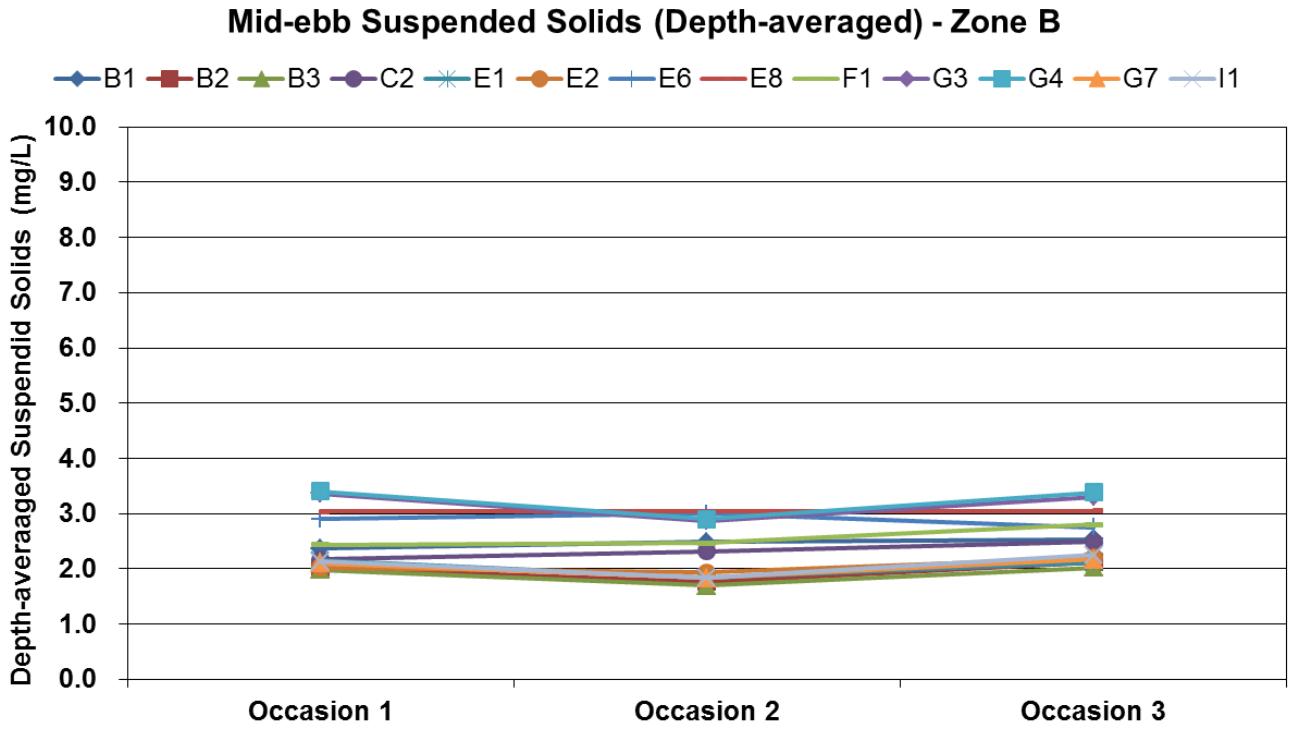


Figure D9 Depth-averaged turbidity (NTU) of water column measured during the baseline monitoring period from 27 April to 5 May 2016 (Zone B)
(In Zone B, baseline monitoring was conducted at stations B2, B3, E1, G4, G7 and I1 conducted on 27 April, 29 April and 4 May 2016 respectively, and at stations B1, C2, E2, E6, E8, F1 and G3 on 28 April, 3 May and 5 May 2016 respectively)



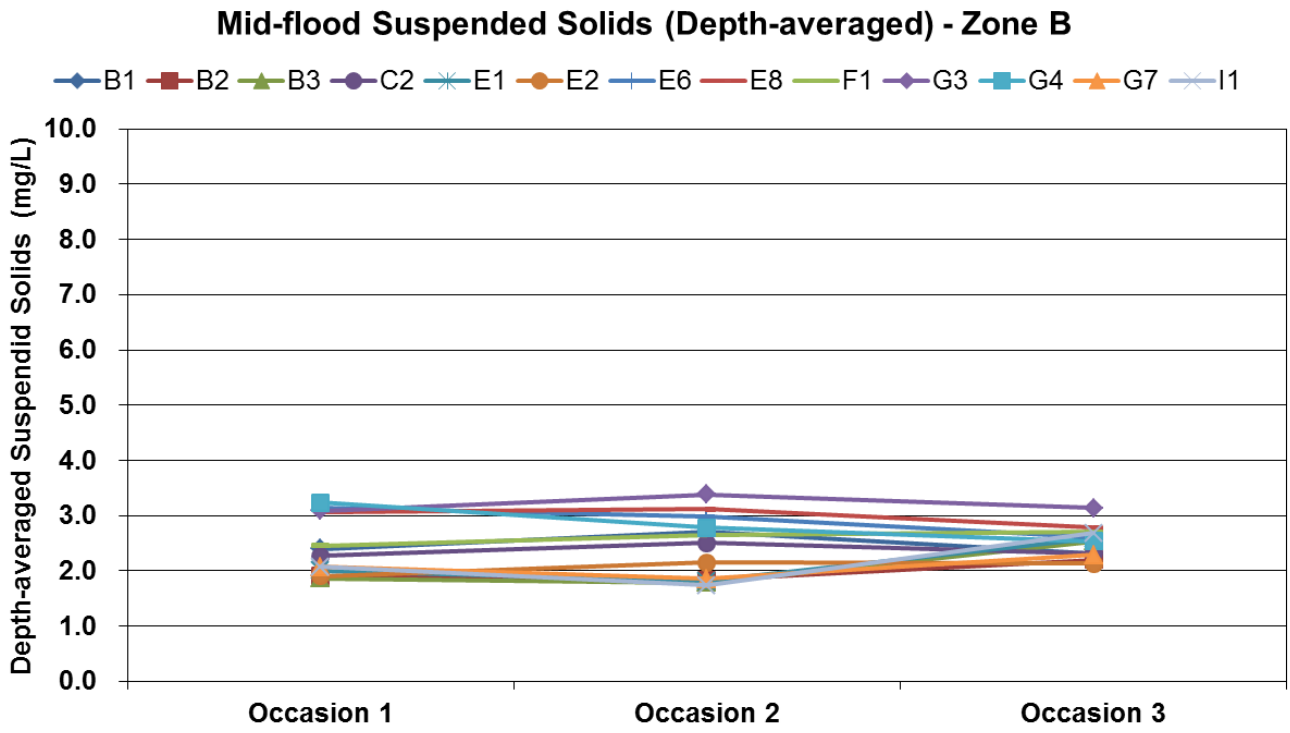
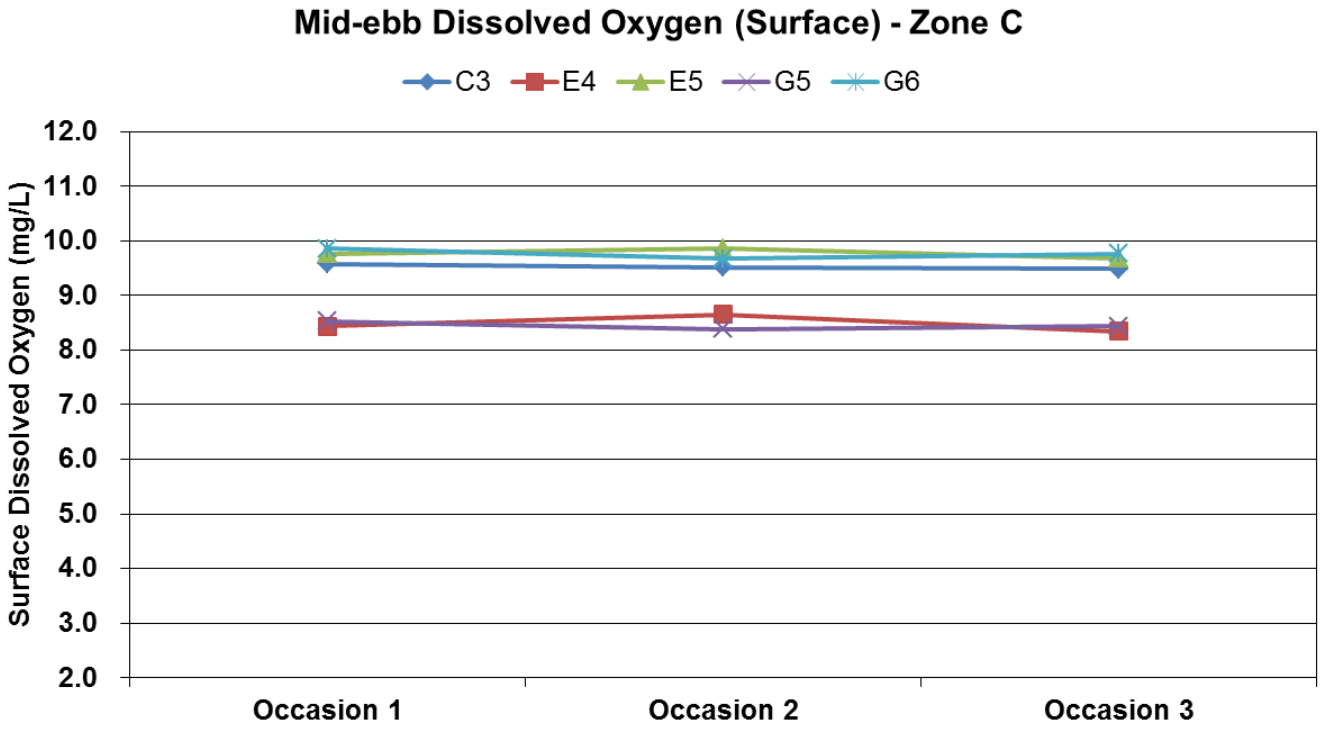


Figure D10 Depth-averaged suspended solid (mg/L) of water column measured during the baseline monitoring period from 27 April to 5 May 2016 (Zone B)
(In Zone B, baseline monitoring was conducted at stations B2, B3, E1, G4, G7 and I1 conducted on 27 April, 29 April and 4 May 2016 respectively, and at stations B1, C2, E2, E6, E8, F1 and G3 on 28 April, 3 May and 5 May 2016 respectively)



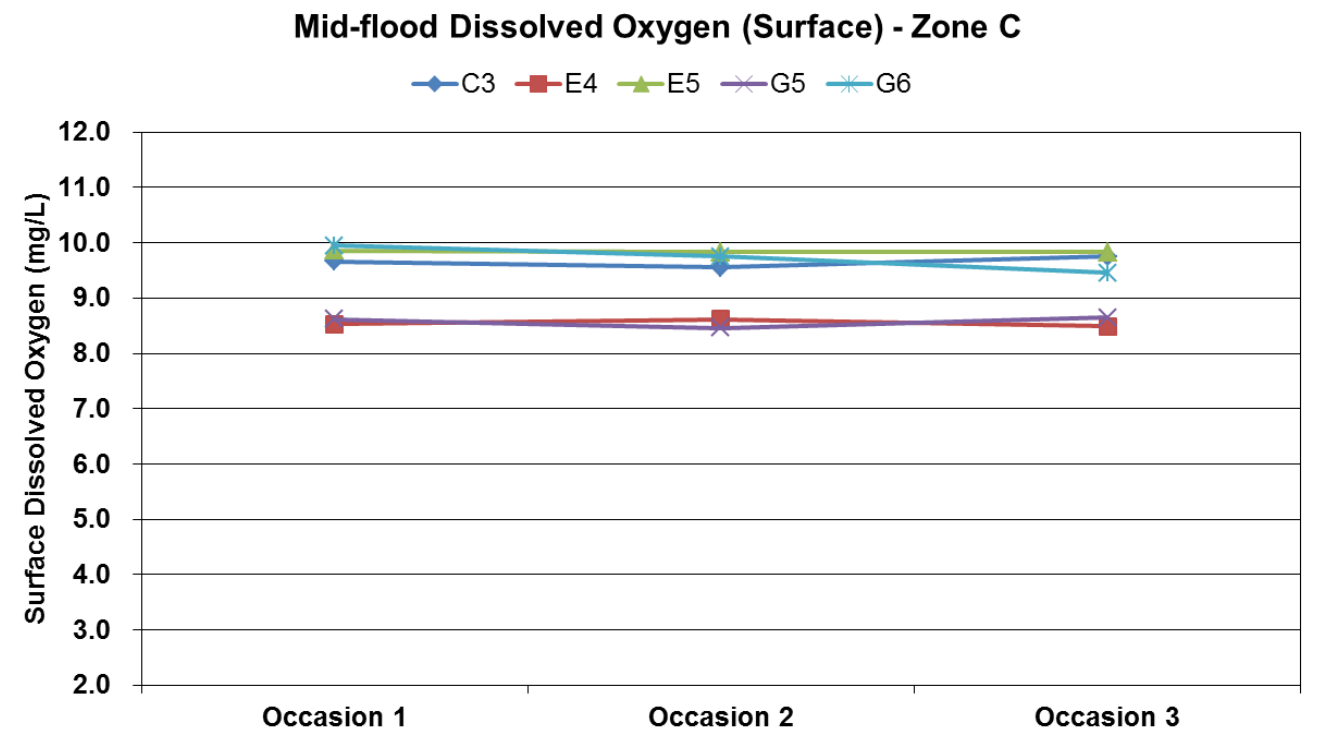
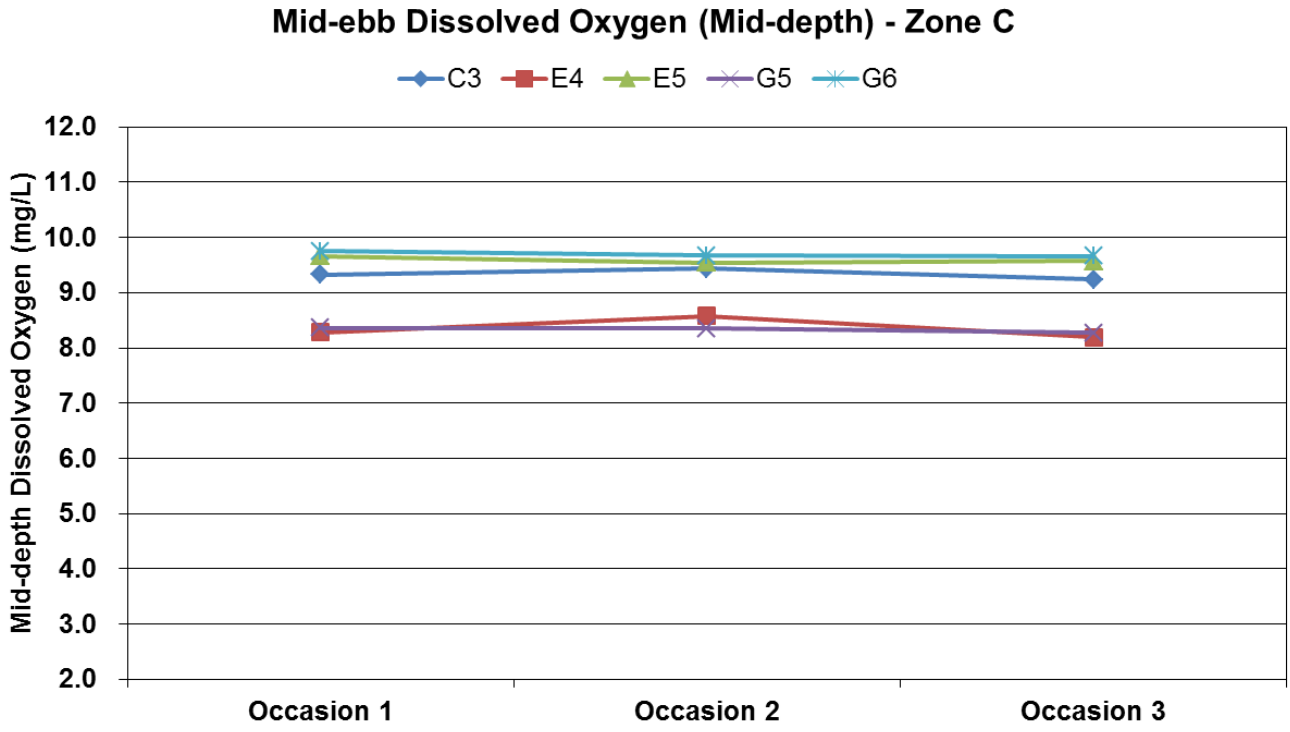


Figure D11 Dissolved oxygen (mg/L) at surface of water column measured during the baseline monitoring period from 27 April to 5 May 2016 (Zone C) (Baseline monitoring in Zone C was conducted on 27 April, 29 April and 4 May 2016 respectively)



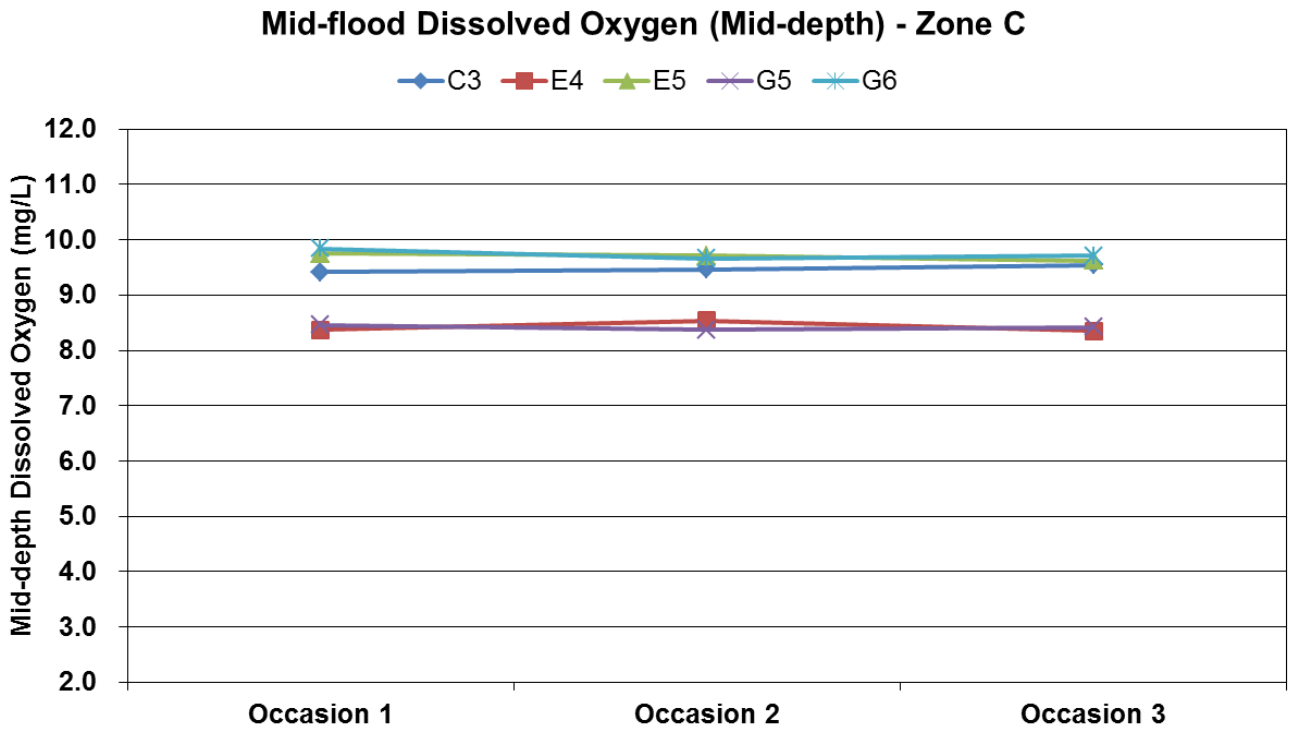
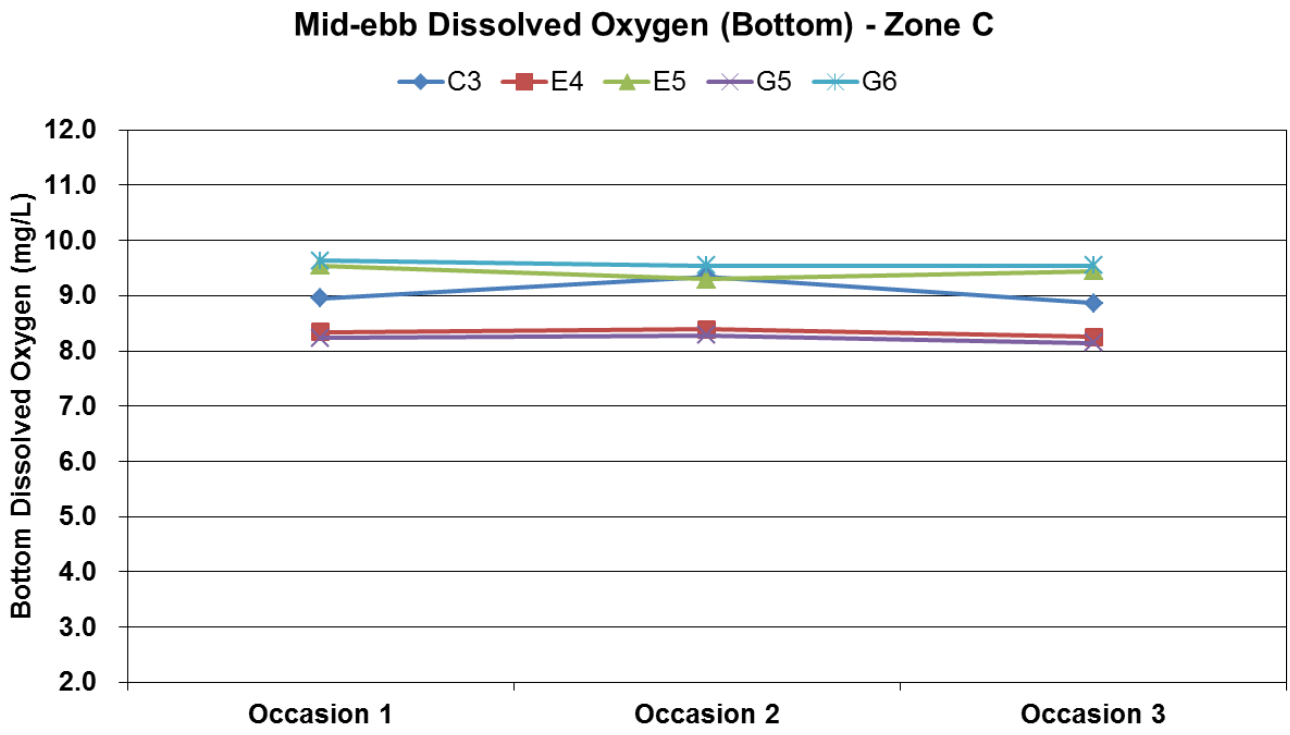


Figure D12 Dissolved oxygen (mg/L) at mid-depth of water column measured during the baseline monitoring period from 27 April to 5 May 2016 (Zone C) (Baseline monitoring in Zone C was conducted on 27 April, 29 April and 4 May 2016 respectively)



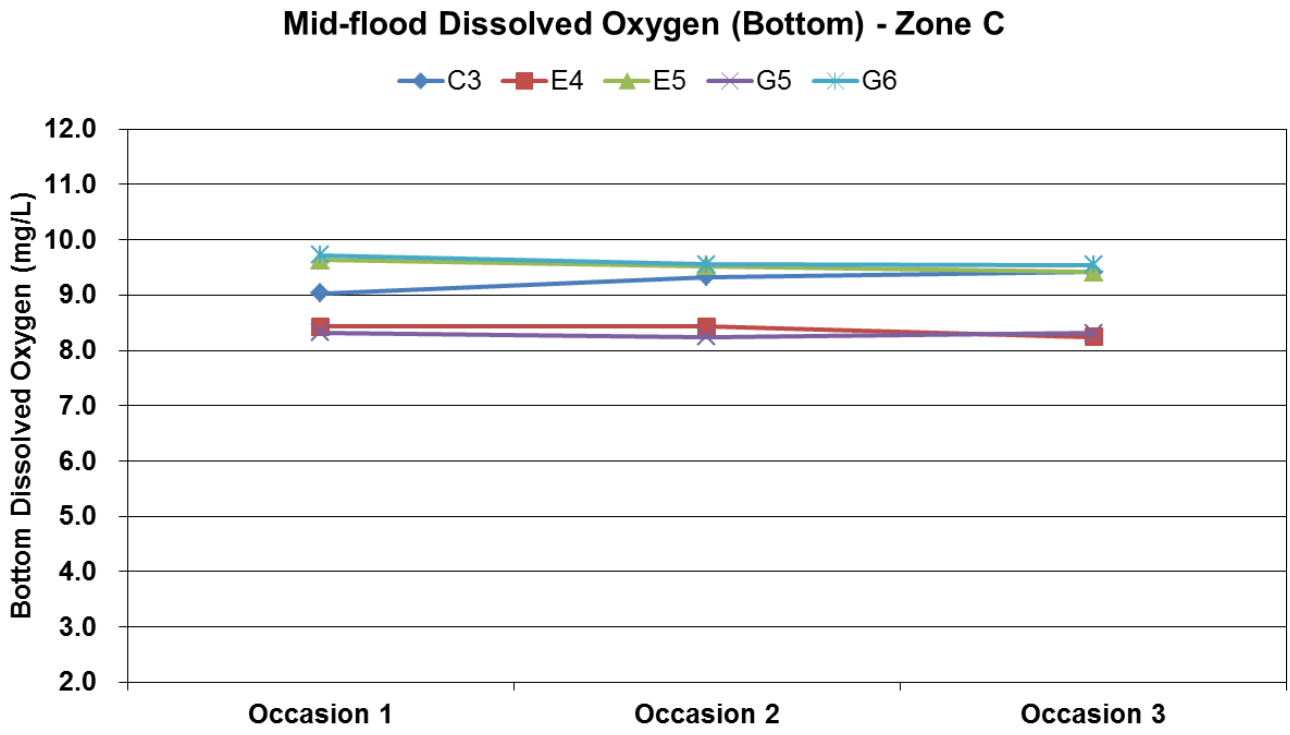
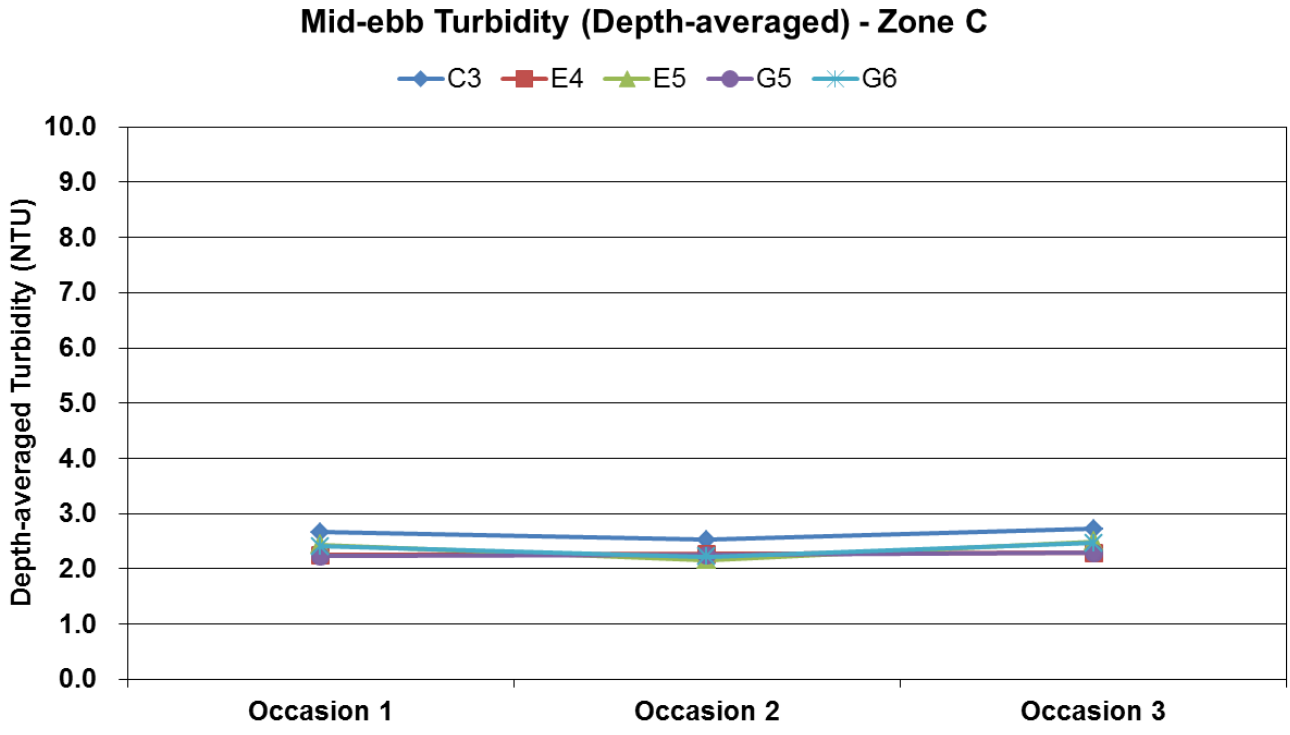


Figure D13 Dissolved oxygen (mg/L) at bottom of water column measured during the baseline monitoring period from 27 April to 5 May 2016 (Zone C) (Baseline monitoring in Zone C was conducted on 27 April, 29 April and 4 May 2016 respectively)



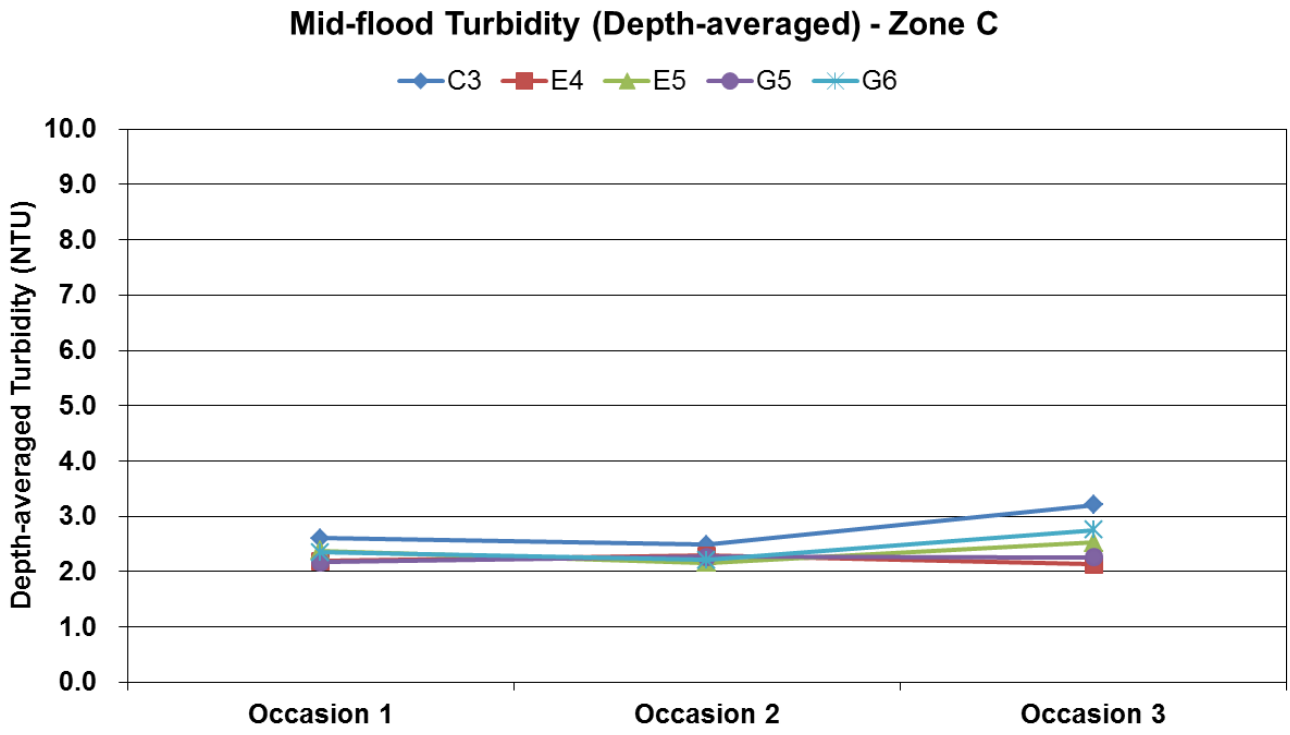
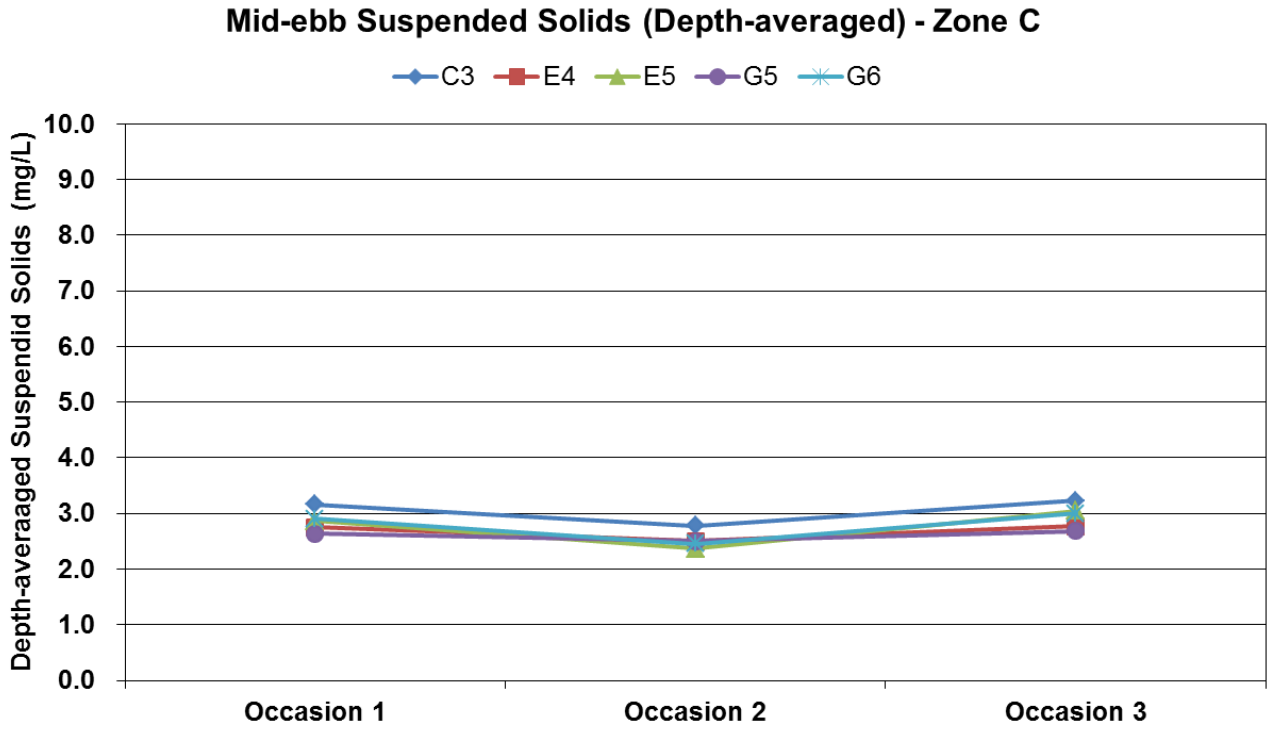


Figure D14 Depth-averaged turbidity (NTU) of water column measured during the baseline monitoring period from 27 April to 5 May 2016 (Zone C)
(Baseline monitoring in Zone C was conducted on 27 April, 29 April and 4 May 2016 respectively)



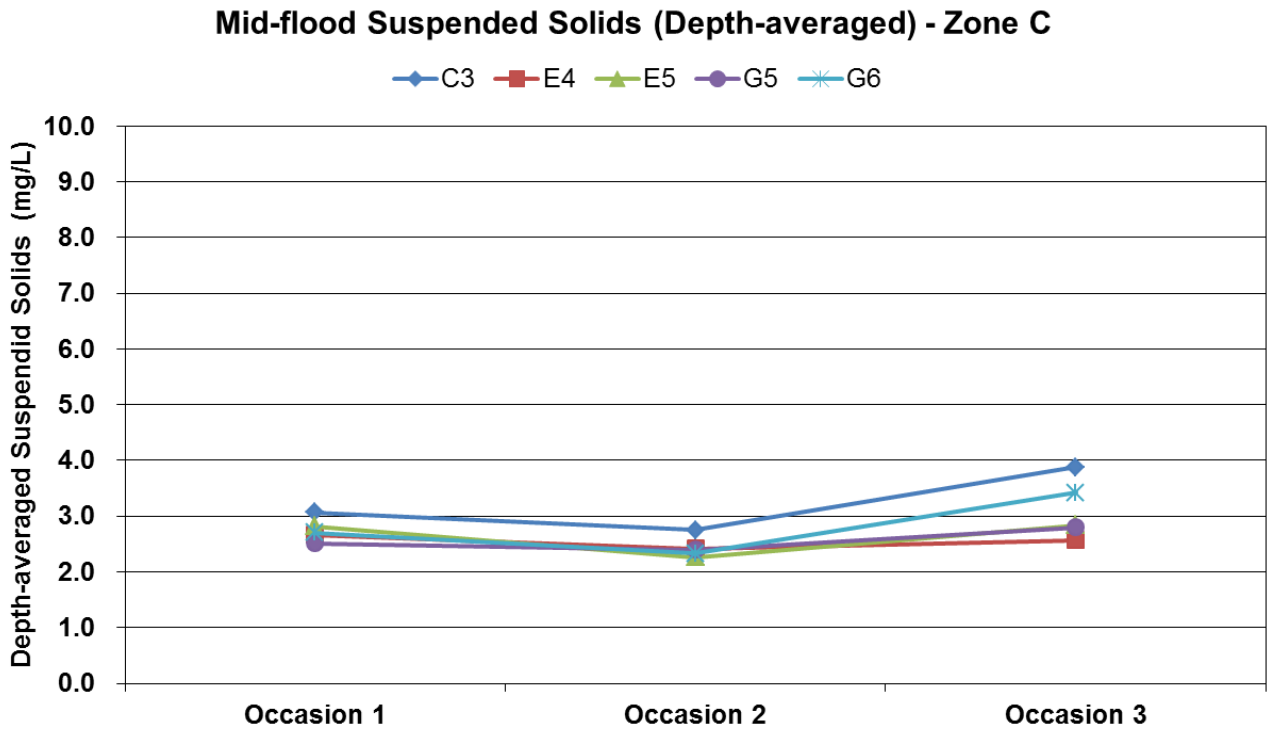


Figure D15 Depth-averaged suspended solid (mg/L) of water column measured during the baseline monitoring period from 27 April to 5 May 2016 (Zone C) (Baseline monitoring in Zone C was conducted on 27 April, 29 April and 4 May 2016 respectively)

Date:	27-Apr-16
Tide:	Mid-Flood
Weather:	Fine
Sea Conditions:	Small Wave
Zone B to C	

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temperrature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
B2	0933-0943	12.5	E	0.1	*Surface*	22.7	22.6	22.7	28.8	28.9	28.9	8.9	8.9	8.9	121.9	121.6	121.8	1.9	1.8	1.8		2.2	2.3	2.3	
					Middle	22.5	22.6	22.6	29.0	29.1	29.1	8.7	8.8	8.7	119.5	119.7	119.6	1.5	1.6	1.6	1.6	1.7	1.9	1.8	1.9
					Bottom	22.3	22.4	22.4	29.3	29.2	29.3	8.6	8.6	8.6	117.7	118.0	117.9	1.4	1.4	1.4		1.6	1.7	1.7	
B3	0907-0918	12.8	E	0.1	*Surface*	22.8	22.7	22.8	28.8	28.7	28.8	9.0	9.1	9.0	123.6	123.8	123.7	1.8	1.8	1.8		2.2	2.1	2.2	
					Middle	22.6	22.5	22.6	29.1	29.0	29.1	8.7	8.7	8.7	118.5	118.8	118.7	1.5	1.6	1.6	1.6	1.7	1.9	1.8	1.9
					Bottom	22.3	22.4	22.4	29.3	29.2	29.3	8.6	8.6	8.6	117.2	116.9	117.1	1.5	1.4	1.4		1.8	1.5	1.7	
C3	0806-0816	30.3	E	0.3	*Surface*	22.9	22.8	22.9	28.4	28.5	28.5	9.7	9.7	9.7	132.3	132.1	132.2	2.9	2.9	2.9		3.2	3.7	3.5	
					Middle	22.6	22.5	22.6	28.7	28.8	28.8	9.4	9.4	9.4	128.4	128.1	128.3	2.7	2.6	2.6	2.6	2.9	2.9	2.9	3.1
					Bottom	22.1	22.2	22.2	29.1	29.0	29.1	9.0	9.0	9.0	122.3	122.4	122.4	2.3	2.3	2.3		2.8	2.9	2.9	
E1	0843-0853	23.7	E	0.1	*Surface*	22.3	22.2	22.3	29.5	29.4	29.5	8.7	8.7	8.7	118.7	119.2	119.0	1.9	1.9	1.9		2.1	2.5	2.3	
					Middle	22.1	22.0	22.1	29.6	29.5	29.6	8.6	8.6	8.6	116.7	116.8	116.8	1.7	1.7	1.7	1.7	1.9	1.8	1.9	2.0
					Bottom	21.7	21.6	21.7	29.7	29.8	29.8	9.1	9.1	9.1	122.2	122.6	122.4	1.5	1.5	1.5		1.8	1.9	1.9	
E4	0818-0828	22.6	E	0.2	*Surface*	22.1	22.2	22.2	28.7	28.6	28.7	8.5	8.5	8.5	115.8	115.4	115.6	2.1	2.2	2.2		2.5	2.6	2.6	
					Middle	22.1	22.0	22.1	28.9	28.8	28.9	8.4	8.4	8.4	113.6	113.2	113.4	2.4	2.3	2.4	2.2	2.9	3.0	3.0	2.7
					Bottom	21.9	21.8	21.9	29.2	29.3	29.3	8.4	8.4	8.4	114.2	114.5	114.4	2.1	2.0	2.1		2.7	2.3	2.5	
E5	0753-0804	18.6	E	0.2	*Surface*	23.2	23.1	23.2	**28.5**	28.6	28.6	9.9	9.8	9.9	136.2	135.2	135.7	2.4	2.3	2.3		2.6	2.5	2.6	
					Middle	22.8	22.7	22.8	28.7	28.6	28.7	9.8	9.7	9.8	133.2	132.9	133.1	2.6	2.6	2.6	2.4	3.1	3.2	3.2	2.8
					Bottom	22.5	22.4	22.5	28.8	28.8	28.8	9.6	9.6	9.6	131.1	131.4	131.3	2.2	2.1	2.2		2.7	2.8	2.8	
G4	0947-1003	25.3	E	0.3	*Surface*	22.2	22.3	22.3	28.9	28.9	28.9	7.6	7.6	7.6	103.6	103.3	103.5	2.7	2.7	2.7		3.2	3.2	3.2	
					Middle	21.8	21.9	21.9	29.1	29.0	29.1	7.5	7.5	7.5	101.6	101.1	101.4	2.5	2.4	2.4	2.7	2.7	3.2	3.0	3.2
					Bottom	21.5	21.4	21.5	29.3	29.2	29.3	7.2	7.2	7.2	96.4	96.1	96.3	2.9	3.0	3.0		3.5	3.6	3.6	
G5	0829-0840	22.3	E	0.2	*Surface*	22.1	22.2	22.2	28.8	28.7	28.8	8.6	8.6	8.6	117.3	117.0	117.2	2.2	2.3	2.3		2.7	2.8	2.8	
					Middle	21.9	22.0	22.0	28.9	28.8	28.9	8.5	8.4	8.5	114.4	114.0	114.2	2.2	2.1	2.2	2.2	2.4	2.4	2.4	2.5
					Bottom	21.7	21.6	21.7	29.3	29.2	29.3	8.3	8.3	8.3	112.2	112.3	112.3	2.1	2.1	2.1		2.5	2.3	2.4	
G6	0740-0752	18.2	E	0.2	*Surface*	23.1	23.1	23.1	28.6	28.7	28.7	10.0	9.9	10.0	137.1	136.8	137.0	2.6	2.5	2.6		2.8	3.1	3.0	
					Middle	22.8	22.9	22.9	28.8	28.7	28.8	9.9	9.8	9.8	134.0	133.8	133.9	2.3	2.4	2.4	2.3	2.6	2.6	2.6	2.7
					Bottom	22.5	22.6	22.6	28.9	28.8	28.9	9.7	9.7	9.7	132.3	132.1	132.2	2.2	2.1	2.1		2.4	2.7	2.6	
G7	0854-0905	24.2	E	0.1	*Surface*	22.1	22.2	22.2	29.1	29.2	29.2	9.0	9.0	9.0	122.6	122.9	122.8	1.9	1.8	1.9		2.5	2.2	2.4	
					Middle	21.8	21.9	21.9	29.4	29.5	29.5	9.0	8.9	9.0	121.7	121.5	121.6	1.6	1.7	1.6	1.6	1.9	2.2	2.1	2.1
					Bottom	21.5	21.6	21.6	29.6	29.5	29.6	8.8	8.8	8.8	119.5	119.1	119.3	1.4	1.5	1.5		1.7	1.9	1.8	
I1	0919-1931	17.2	E	0.1	*Surface*	22.9	22.8	22.9	29.0	29.1	29.1	8.9	8.9	8.9	122.7	122.9	122.8	2.0	2.0	2.0		2.2	2.6	2.4	
					Middle	22.8	22.7	22.8	29.2	29.3	29.3	8.9	8.8	8.8	121.4	121.1	121.3	1.7	1.6	1.7	1.7	1.9	2.0	2.0	2.1
					Bottom	22.7	22.6	22.7	29.4	29.3	29.4	8.6	8.6	8.6	118.1	117.7	117.9	1.5	1.6	1.6		1.8	1.9	1.9	

Remark or Obsevation:

Note: * Average

** Depth Average

Date:	27-Apr-16
Tide:	Mid-Ebb
Weather:	Fine
Sea Conditions:	Small Wave
Zone B to C	

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temperrature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
B2	1557-1613	12.2	W	0.3	*Surface*	22.8	22.7	22.8	28.9	29.0	29.0	8.8	8.8	8.8	120.7	120.5	120.6	1.9	1.9	1.9		2.3	2.4	2.4	
					Middle	22.6	22.7	22.7	29.1	29.2	29.2	8.6	8.7	8.7	118.4	118.7	118.6	1.6	1.7	1.6	1.7	1.9	2.0	2.0	2.0
					Bottom	22.5	22.4	22.5	29.4	29.3	29.4	8.5	8.5	8.5	116.5	116.9	116.7	1.4	1.5	1.5		1.7	1.8	1.8	
B3	1519-1535	12.4	W	0.2	*Surface*	22.9	22.8	22.9	28.8	28.9	28.9	8.9	9.0	9.0	122.5	122.7	122.6	1.9	1.8	1.9		2.3	2.0	2.2	
					Middle	22.7	22.6	22.7	29.1	29.2	29.2	8.6	8.6	8.6	117.4	117.6	117.5	1.6	1.6	1.6	1.7	1.8	2.1	2.0	2.0
					Bottom	22.5	22.4	22.5	29.4	29.3	29.4	8.5	8.5	8.5	116.0	115.5	115.8	1.5	1.5	1.5		1.8	1.9	1.9	
C3	1343-1358	29.8	W	0.2	*Surface*	23.0	22.9	23.0	28.5	28.6	28.6	9.6	9.6	9.6	131.2	131.0	131.1	3.0	2.9	3.0		3.9	3.2	3.6	
					Middle	22.7	22.6	22.7	28.8	28.9	28.9	9.3	9.3	9.3	127.3	127.0	127.2	2.7	2.7	2.7	2.7	3.3	2.9	3.1	3.2
					Bottom	22.3	22.2	22.3	29.2	29.1	29.2	8.9	9.0	9.0	121.1	121.4	121.3	2.4	2.3	2.4		2.9	2.8	2.9	
E1	1442-1457	23.4	W	0.3	*Surface*	22.4	22.3	22.4	29.6	29.5	29.6	8.6	8.6	8.6	117.6	118.1	117.9	2.0	2.0	2.0		2.6	2.3	2.5	
					Middle	22.1	22.2	22.2	29.6	29.7	29.7	8.5	8.5	8.5	115.5	115.7	115.6	1.8	1.7	1.8	1.8	2.2	2.2	2.2	2.2
					Bottom	21.8	21.7	21.8	29.9	29.8	29.9	9.0	9.0	9.0	121.0	121.5	121.3	1.5	1.6	1.6		1.8	1.8	1.8	
E4	14011416	22.2	W	0.2	*Surface*	22.2	22.3	22.3	28.7	28.8	28.8	8.5	8.4	8.4	114.7	114.3	114.5	2.2	2.3	2.2		2.8	2.7	2.8	
					Middle	22.2	22.1	22.2	29.0	28.9	29.0	8.3	8.3	8.3	112.5	112.1	112.3	2.5	2.4	2.4	2.3	3.0	3.1	3.1	2.8
					Bottom	21.9	22.0	22.0	29.3	29.4	29.4	8.3	8.4	8.3	113.0	113.2	113.1	2.1	2.1	2.1		2.4	2.5	2.5	
E5	1322-1337	18.2	W	0.3	*Surface*	23.3	23.2	23.3	28.7	28.6	28.7	9.8	9.8	9.8	135.1	134.6	134.9	2.4	2.4	2.4		3.0	2.6	2.8	
					Middle	22.8	22.9	22.9	28.7	28.8	28.8	9.7	9.7	9.7	132.1	131.7	131.9	2.6	2.7	2.7	2.4	2.9	3.3	3.1	2.9
					Bottom	22.6	22.6	22.6	28.8	28.9	28.9	9.5	9.6	9.5	130.0	130.3	130.2	2.3	2.2	2.2		2.8	2.6	2.7	
G4	1618-1634	24.8	W	0.4	*Surface*	22.4	22.3	22.4	29.0	29.1	29.1	7.6	7.5	7.5	102.5	102.3	102.4	2.7	2.8	2.7		3.3	3.1	3.2	
					Middle	21.9	21.9	21.9	29.3	29.2	29.3	7.4	7.4	7.4	100.5	100.0	100.3	2.5	2.4	2.5	2.7	2.7	3.3	3.0	3.4
					Bottom	21.5	21.6	21.6	29.3	29.4	29.4	7.1	7.1	7.1	95.3	95.0	95.2	3.0	3.1	3.0		4.0	4.0	4.0	
G5	1419-1434	21.9	W	0.2	*Surface*	22.3	22.2	22.3	28.9	28.8	28.9	8.5	8.5	8.5	116.1	115.9	116.0	2.3	2.4	2.3		3.0	2.6	2.8	
					Middle	22.1	22.0	22.1	28.9	29.0	29.0	8.4	8.4	8.4	113.3	112.9	113.1	2.3	2.2	2.2	2.2	2.7	2.4	2.6	2.6
					Bottom	21.7	21.8	21.8	29.4	29.3	29.4	8.2	8.2	8.2	111.1	111.2	111.2	2.2	2.1	2.1		2.6	2.5	2.6	
G6	1304-1319	17.8	W	0.2	*Surface*	23.2	23.1	23.2	28.7	28.8	28.8	9.9	9.9	9.9	136.0	138.6	137.3	2.6	2.6	2.6		3.2	3.3	3.3	
					Middle	22.9	23.0	23.0	28.8	28.9	28.9	9.8	9.7	9.8	132.8	132.6	132.7	2.4	2.5	2.4	2.4	2.8	3.0	2.9	2.9
					Bottom	22.6	22.7	22.7	29.0	28.9	29.0	9.7	9.6	9.6	131.1	130.9	131.0	2.2	2.2	2.2		2.5	2.6	2.6	
G7	1500-1515	23.8	W	0.2	*Surface*	22.3	22.2	22.3	29.2	29.3	29.3	8.9	8.9	8.9	121.5	121.8	121.7	2.0	1.9	1.9		2.6	2.0	2.3	
					Middle	21.9	22.0	22.0	29.6	29.5	29.6	8.9	8.9	8.9	120.5	120.3	120.4	1.6	1.7	1.7	1.7	2.2	2.0	2.1	2.1
					Bottom	21.6	21.7	21.7	29.7	29.8	29.8	8.8	8.7	8.7	118.4	118.0	118.2	1.5	1.6	1.5		1.9	1.9	1.9	
I1	1538-1553	16.8	W	0.3	*Surface*	23.0	23.0	23.0	29.1	29.2	29.2	8.8	8.9	8.8	121.6	121.8	121.7	2.1	2.1	2.1		2.3	2.5	2.4	
					Middle	22.9	22.8	22.9	29.4	29.3	29.4	8.8	8.7	8.8	120.3	119.9	120.1	1.8	1.7	1.7	1.8	2.1	2.2	2.2	2.1
					Bottom	22.8	22.7	22.8	29.4	29.5	29.5	8.5	8.5	8.5	116.9	116.6	116.8	1.6	1.6	1.6		1.9	1.8	1.9	

Remark or Obsevation:

Note: * Average

** Depth Average

Date: 28-Apr-16
Tide: Mid-Flood
Weather: Cloudy
Sea Conditions: Small Wave
Zone A to B

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temperrature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
B1	0940-0948	7.8	W	0.1	*Surface*	21.8	21.8	21.8	29.1	29.1	29.1	8.3	8.3	8.3	112.5	112.0	112.3	1.9	2.0	2.0		2.3	2.4	2.4	
					Middle	21.8	21.8	21.8	29.1	29.1	29.1	8.1	8.2	8.1	109.4	109.9	109.7	2.1	2.1	2.1	2.1	2.5	2.0	2.3	2.4
					Bottom	21.7	21.7	21.7	29.2	29.2	29.2	7.9	7.9	7.9	106.3	105.8	106.1	2.2	2.1	2.2		2.4	2.8	2.6	
C1	0730-0733	21.8	W	0.3	*Surface*	22.0	22.0	22.0	28.2	28.1	28.2	7.4	7.3	7.4	99.5	99.0	99.3	2.6	2.5	2.5		2.8	3.3	3.1	
					Middle	21.8	21.8	21.8	28.6	28.6	28.6	8.3	8.3	8.3	111.0	111.4	111.2	2.4	2.5	2.5	2.4	2.9	3.0	3.0	3.0
					Bottom	21.4	21.3	21.4	29.4	29.4	29.4	8.6	8.6	8.6	114.5	114.0	114.3	2.3	2.4	2.3		3.0	2.8	2.9	
C2	0900-0914	30.9	W	0.3	*Surface*	23.9	23.9	23.9	28.2	28.2	28.2	8.3	8.2	8.2	114.9	114.4	114.7	1.9	1.8	1.8		2.2	2.2	2.2	
					Middle	22.4	22.4	22.4	29.1	29.1	29.1	9.6	9.6	9.6	130.3	130.7	130.5	1.8	1.8	1.8	1.9	2.2	2.0	2.1	2.3
					Bottom	22.2	22.2	22.2	29.2	29.1	29.2	9.9	9.8	9.9	133.6	133.2	133.4	2.1	2.0	2.1		2.5	2.5	2.5	
S1	0749-0759	9.4	W	0.1	*Surface*	21.9	21.9	21.9	28.8	28.8	28.8	7.2	7.2	7.2	97.5	97.2	97.4	2.3	2.4	2.4		2.8	2.6	2.7	
					Middle	21.7	21.7	21.7	28.9	28.9	28.9	7.2	7.2	7.2	96.6	96.2	96.4	2.3	2.3	2.3	2.3	2.5	3.0	2.8	2.7
					Bottom	21.6	21.7	21.7	29.1	29.2	29.2	7.1	7.1	7.1	95.4	95.9	95.7	2.2	2.2	2.2		2.6	2.8	2.7	
S2	1003-1013	12.5	W	0.2	*Surface*	22.3	22.3	22.3	28.9	28.8	28.9	7.7	7.6	7.6	104.2	103.7	104.0	2.5	2.6	2.6		3.0	3.1	3.1	
					Middle	22.0	22.1	22.1	28.9	28.9	28.9	7.9	8.0	7.9	106.9	107.3	107.1	2.8	2.8	2.8	2.7	3.4	3.1	3.3	3.2
					Bottom	21.9	21.9	21.9	29.0	29.1	29.1	7.9	7.9	7.9	107.3	106.8	107.1	2.8	2.8	2.8		3.3	3.0	3.2	
S3	1029-1040	9.4	W	0.2	*Surface*	21.9	21.9	21.9	28.9	28.9	28.9	7.4	7.4	7.4	99.3	99.8	99.6	2.8	2.9	2.8		3.7	3.4	3.6	
					Middle	21.8	21.7	21.8	28.9	28.9	28.9	7.5	7.5	7.5	100.8	101.3	101.1	2.7	2.8	2.7	2.8	3.0	3.0	3.0	3.3
					Bottom	21.7	21.8	21.8	28.9	29.0	29.0	7.4	7.3	7.4	99.2	98.7	99.0	2.9	2.8	2.9		3.5	3.4	3.5	
E2	0916-0924	7.7	W	0.2	*Surface*	22.2	22.2	22.2	29.3	29.3	29.3	9.1	9.2	9.1	124.2	124.8	124.5	1.7	1.7	1.7		2.0	2.0	2.0	
					Middle	22.2	22.2	22.2	29.3	29.3	29.3	9.0	8.9	9.0	122.1	121.6	121.9	1.4	1.5	1.5	1.6	1.6	1.8	1.7	1.9
					Bottom	22.1	22.1	22.1	29.3	29.3	29.3	8.9	8.9	8.9	120.9	121.5	121.2	1.6	1.5	1.6		2.1	1.9	2.0	
E6	0926-0938	26.8	W	0.4	*Surface*	21.8	21.8	21.8	29.5	29.5	29.5	7.8	7.8	7.8	105.2	105.6	105.4	2.4	2.4	2.4		2.7	3.2	3.0	
					Middle	21.3	21.3	21.3	30.0	30.0	30.0	7.5	7.6	7.6	100.9	101.4	101.2	2.6	2.5	2.5	2.5	3.1	3.3	3.2	3.1
					Bottom	21.2	21.2	21.2	30.0	30.0	30.0	7.7	7.7	7.7	102.9	102.3	102.6	2.6	2.7	2.7		2.9	3.6	3.3	
E7	0735-0747	20.8	W	0.2	*Surface*	21.4	21.4	21.4	29.4	29.4	29.4	6.8	6.9	6.9	91.8	92.3	92.1	2.6	2.7	2.6		3.4	3.2	3.3	
					Middle	21.4	21.4	21.4	29.5	29.5	29.5	7.0	7.1	7.0	94.3	94.7	94.5	2.8	2.8	2.8	2.7	3.4	3.0	3.2	3.1
					Bottom	21.3	21.2	21.3	29.6	29.6	29.6	7.2	7.1	7.1	95.8	95.2	95.5	2.6	2.5	2.5		2.8	2.8	2.8	
E8	0950-1001	18.8	W	0.4	*Surface*	22.0	22.0	22.0	28.9	28.9	28.9	7.8	7.8	7.8	105.5	101.0	103.3	2.4	2.5	2.5		2.7	3.0	2.9	
					Middle	22.0	22.0	22.0	28.9	28.8	28.9	7.7	7.8	7.8	104.5	104.9	104.7	2.8	2.8	2.8	2.6	3.6	3.0	3.3	3.1
					Bottom	21.9	21.8	21.9	29.0	29.1	29.1	7.9	8.0	8.0	107.3	107.8	107.6	2.7	2.6	2.7		3.2	2.9	3.1	
E9	0814-0826	16.0	W	0.2	*Surface*	22.0	22.0	22.0	28.9	28.8	28.9	7.1	7.1	7.1	95.7	95.3	95.5	2.7	2.7	2.7		3.5	3.5	3.5	
					Middle	21.6	21.6	21.6	29.2	29.2	29.2	7.3	7.2	7.2	97.4	96.9	97.2	2.6	2.7	2.6	2.7	3.4	3.2	3.3	3.4
					Bottom	21.5	21.5	21.5	29.3	29.3	29.3	7.2	7.2	7.2	96.8	97.3	97.1	2.8	2.9	2.8		3.6	3.4	3.5	
F1	0844-0855	13.4	W	0.2	*Surface*	22.2	22.2	22.2	28.8	28.9	28.9	7.4	7.3	7.4	99.2	98.9	99.1	2.1	2.0	2.0		2.5	2.6	2.6	
					Middle	21.8	21.8	21.8	29.0	29.0	29.0	8.0	8.1	8.0	108.6	109.0	108.8	2.0	2.0	2.0	2.0	2.4	2.3	2.4	2.5
					Bottom	21.8	21.8	21.8	29.4	29.4	29.4	8.1	8.2	8.2	109.9	110.3	110.1	2.1	2.1	2.1		2.5	2.4	2.5	
G1	0801-0812	11.8	W	0.1	*Surface*	22.0	22.0	22.0	28.8	28.8	28.8	7.2	7.2	7.2	97.1	97.6	97.4	2.2	2.2	2.2		2.7	2.6	2.7	
					Middle	21.6	21.6	21.6	29.1	29.1	29.1	6.9	7.0	6.9	93.1	93.5	93.3	2.2	2.2	2.2	2.3	2.7	2.9	2.8	2.8
					Bottom	21.4	21.4	21.4	29.4	29.4	29.4	7.0	7.0	7.0	93.7	93.2	93.5	2.4	2.5	2.5		2.9	3.0	3.0	
G2	1015-1027	15.4	w	0.3	*Surface*	22.0	22.1	22.1	28.9	28.9	28.9	7.2	7.2	7.2	97.6	98.2	97.9	2.4	2.4	2.4		2.7	2.9	2.8	
					Middle	21.9	22.0	22.0	29.0	29.0	29.0	7.6	7.6	7.6	103.0	102.6	102.8	2.7	2.8	2.7	2.7	3.2	3.1	3.2	3.2
					Bottom	21.8	21.7	21.8	29.0	29.0	29.0	7.8	7.9	7.9	105.8	106.2	106.0	2.8	2.8	2.8		3.3	3.7	3.5	
G3	0829-0842	17.4	W	0.2	*Surface*	22.6	22.6	22.6	29.0	29.0	29.0	8.7	8.7	8.7	118.8	118.4	118.6	2.6	2.5	2.5		3.3	2.7	3.0	
					Middle	22.5	22.4	22.5	29.2	29.2	29.2	8.9	8.9	8.9	121.5	121.1	121.3	2.4	2.4	2.4	2.5	2.9	3.2	3.1	3.1
					Bottom	21.9	21.8	21.9	29.3	29.3	29.3	9.0	9.1	9.0	122.3	122.7	122.5	2.6	2.7	2.7		3.2	3.2	3.2	

Remark or Obsevation:

Note: * Average
** Depth Average

Date: 28-Apr-16
Tide: Mid-Ebb
Weather: Fine
Sea Conditions: Small Wave
Zone A to B

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temperrature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
B1	1619-1633	7.6	E	0.2	*Surface*	22.2	22.1	22.2	29.2	29.1	29.2	8.3	8.3	8.3	111.6	112.3	112.0	1.9	1.9	1.9		2.2	2.3	2.3	
					Middle	22.0	22.1	22.1	29.1	29.2	29.2	8.1	8.1	8.1	109.2	108.8	109.0	1.9	2.0	1.9	2.0	2.3	2.3	2.3	2.4
					Bottom	22.1	22.0	22.1	29.2	29.2	29.2	7.9	8.0	8.0	107.1	107.6	107.4	2.0	2.1	2.0		2.4	2.7	2.6	
C1	1351-1405	20.8	E	0.2	*Surface*	22.5	22.8	22.7	28.3	28.4	28.4	7.4	7.4	7.4	100.0	99.8	99.9	2.5	2.5	2.5		3.0	3.0	3.0	
					Middle	22.6	22.4	22.5	28.3	28.3	28.3	8.2	8.2	8.2	110.8	110.3	110.6	2.5	2.5	2.5	2.4	3.2	3.0	3.1	2.9
					Bottom	22.3	22.4	22.4	28.3	28.3	28.3	8.3	8.3	8.3	112.6	111.9	112.3	2.2	2.2	2.2		2.4	2.6	2.5	
C2	1532-1546	29.9	E	0.2	*Surface*	22.5	22.3	22.4	28.5	28.7	28.6	8.2	8.3	8.2	110.8	111.4	111.1	1.7	1.7	1.7		2.0	2.3	2.2	
					Middle	22.4	22.6	22.5	28.9	29.0	29.0	8.3	8.3	8.3	111.5	112.1	111.8	1.7	1.7	1.7	1.8	2.0	2.1	2.1	2.2
					Bottom	22.5	22.7	22.6	29.1	29.0	29.1	8.9	8.9	8.9	120.4	119.7	120.1	2.0	2.1	2.0		2.4	2.2	2.3	
S1	1423-1436	9.0	E	0.3	*Surface*	22.5	22.4	22.5	28.6	28.7	28.7	7.2	7.2	7.2	97.3	96.8	97.1	2.3	2.3	2.3		2.8	2.7	2.8	
					Middle	22.5	22.4	22.5	28.4	28.5	28.5	7.2	7.2	7.2	97.0	96.9	97.0	2.2	2.2	2.2	2.2	2.7	2.4	2.6	2.6
					Bottom	22.5	22.4	22.5	28.6	28.4	28.5	7.2	7.2	7.2	97.2	97.1	97.2	2.1	2.1	2.1		2.5	2.5	2.5	
S2	1648-1700	12.2	E	0.2	*Surface*	22.4	22.2	22.3	28.7	28.8	28.8	7.6	7.6	7.6	103.0	102.2	102.6	2.6	2.6	2.6		2.9	3.4	3.2	
					Middle	22.3	22.2	22.3	29.0	28.9	29.0	7.9	7.8	7.8	106.2	105.6	105.9	2.7	2.8	2.7	2.7	3.5	3.6	3.6	3.4
					Bottom	22.1	22.2	22.2	29.0	29.0	29.0	7.9	7.9	7.9	106.7	106.1	106.4	2.7	2.8	2.8		3.6	3.4	3.5	
S3	1716-1728	9.2	E	0.2	*Surface*	22.2	22.3	22.3	28.8	29.0	28.9	7.4	7.4	7.4	99.5	99.2	99.4	2.8	2.8	2.8		3.0	3.3	3.2	
					Middle	22.4	22.3	22.4	29.1	29.0	29.1	7.5	7.4	7.5	100.7	100.4	100.6	2.8	2.8	2.8	2.8	3.4	3.3	3.4	3.4
					Bottom	22.3	22.4	22.4	28.7	28.9	28.8	7.3	7.4	7.3	98.8	99.5	99.2	2.9	2.9	2.9		3.7	3.5	3.6	
E2	1548-1601	7.4	E	0.3	*Surface*	22.6	22.5	22.6	29.4	29.4	29.4	9.1	9.0	9.0	122.4	121.8	122.1	1.9	1.9	1.9		2.1	2.3	2.2	
					Middle	22.4	22.5	22.5	29.3	29.4	29.4	9.1	9.1	9.1	122.3	122.4	122.4	1.4	1.4	1.4	1.6	1.8	1.8	1.8	2.0
					Bottom	22.6	22.5	22.6	29.2	29.3	29.3	9.0	8.9	9.0	121.2	120.7	121.0	1.6	1.7	1.7		2.0	2.1	2.1	
E6	1603-1618	26.2	E	0.3	*Surface*	22.3	22.5	22.4	29.3	29.4	29.4	7.8	7.8	7.8	105.3	104.8	105.1	2.3	2.3	2.3		2.7	2.7	2.7	
					Middle	22.4	22.4	22.4	29.4	29.2	29.3	7.6	7.7	7.6	102.9	103.3	103.1	2.5	2.4	2.5	2.4	3.0	3.2	3.1	2.9
					Bottom	22.3	22.3	22.3	29.1	29.2	29.2	7.6	7.6	7.6	102.7	103.0	102.9	2.5	2.5	2.5		2.7	3.1	2.9	
E7	1407-1422	20.4	E	0.2	*Surface*	22.5	22.5	22.5	29.2	29.3	29.3	6.7	6.7	6.7	90.6	89.9	90.3	2.6	2.6	2.6		2.9	3.3	3.1	
					Middle	22.7	22.5	22.6	29.1	29.2	29.2	7.0	7.0	7.0	94.5	94.8	94.7	2.5	2.4	2.5	2.4	3.0	2.8	2.9	2.9
					Bottom	22.4	22.5	22.5	22.4	29.4	25.9	7.1	7.1	7.1	95.4	95.9	95.7	2.3	2.2	2.2		2.7	2.4	2.6	
E8	1635-1647	18.4	E	0.2	*Surface*	22.1	22.3	22.2	29.0	29.1	29.1	7.8	7.8	7.8	105.6	105.8	105.7	2.4	2.3	2.4		2.8	2.8	2.8	
					Middle	22.4	22.2	22.3	29.1	29.1	29.1	7.8	7.8	7.8	105.2	105.4	105.3	2.6	2.7	2.7	2.6	3.2	2.9	3.1	3.0
					Bottom	22.1	22.0	22.1	29.2	29.0	29.1	7.9	7.8	7.8	106.1	105.6	105.9	2.7	2.7	2.7		3.2	3.3	3.3	
E9	1451-1504	15.4	E	0.2	*Surface*	22.5	22.6	22.6	28.7	29.0	28.9	7.1	7.0	7.1	95.6	95.0	95.3	2.8	2.8	2.8		3.1	3.4	3.3	
					Middle	22.4	22.4	22.4	28.9	29.1	29.0	7.2	7.1	7.1	96.8	96.1	96.5	2.6	2.6	2.6	2.7	3.3	3.2	3.3	3.3
					Bottom	22.3	22.2	22.3	29.0	29.1	29.1	7.2	7.1	7.1	96.5	96.3	96.4	2.7	2.8	2.7		3.5	3.3	3.4	
F1	1519-1531	13.0	E	0.2	*Surface*	22.5	22.3	22.4	28.9	29.0	29.0	7.3	7.2	7.3	98.3	97.7	98.0	2.1	2.1	2.1		2.7	2.5	2.6	
					Middle	22.4	22.6	22.5	29.0	29.0	29.0	8.1	8.0	8.0	108.8	108.3	108.6	1.9	2.0	1.9	2.0	2.3	2.4	2.4	2.4
					Bottom	22.5	22.6	22.6	29.0	29.0	29.0	8.1	8.1	8.1	109.5	108.9	109.2	2.1	2.1	2.1		2.4	2.3	2.4	
G1	1438-1450	11.6	E	0.2	*Surface*	22.4	22.5	22.5	28.4	28.5	28.5	7.2	7.2	7.2	97.3	97.6	97.5	2.2	2.2	2.2		2.5	2.4	2.5	
					Middle	22.5	22.4	22.5	28.5	28.4	28.5	7.3	7.2	7.3	98.0	97.7	97.9	2.1	2.1	2.1	2.2	2.5	2.8	2.7	2.7
					Bottom	22.3	22.4	22.4	28.3	28.4	28.4	7.1	7.1	7.1	95.9	95.3	95.6	2.4	2.4	2.4		2.9	2.8	2.9	
G2	1701-1714	15.0	E	0.2	*Surface*	22.3	22.4	22.4	28.9	29.1	29.0	7.2	7.2	7.2	96.8	97.1	97.0	2.4	2.4	2.4		2.8	2.9	2.9	
					Middle	22.5	22.4	22.5	29.1	29.0	29.1	7.5	7.4	7.5	101.0	100.2	100.6	2.6	2.7	2.6	2.5	3.4	3.2	3.3	3.1
					Bottom	22.3	22.4	22.4	29.1	29.0	29.1	7.7	7.7	7.7	103.5	103.8	103.7	2.6	2.6	2.6		3.1	3.4	3.3	
G3	1505-1518	17.2	E	0.2	*Surface*	22.6	22.7	22.7	29.2	29.4	29.3	8.5	8.6	8.5	115.2	115.6	115.4	2.6	2.5	2.5		3.0	3.3	3.2	
					Middle	22.4	22.6	22.5	29.3	29.3	29.3	8.9	8.8	8.8	119.9	118.3	119.1	2.5	2.5	2.5	2.6	3.4	3.3	3.4	3.4
					Bottom	22.5	22.6	22.6	29.3.	29.3	29.3	8.9	8.9	8.9	120.1	120.7	120.4	2.6	2.6	2.6		3.7	3.5	3.6	

Remark or Obsevation:

Note: * Average
** Depth Average

Date: 29-Apr-16
Tide: Mid-Flood
Weather: Fine
Sea Conditions: Great Wave
Zone B to C

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temperrature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
B2	1051-1104	12.3	E	0.2	*Surface*	22.9	23.0	23.0	29.0	28.9	29.0	8.8	8.8	8.8	120.9	121.1	121.0	1.6	1.6	1.6		1.8	1.8	1.8	
					Middle	22.8	22.8	22.8	29.1	29.0	29.1	8.7	8.7	8.7	117.9	117.5	117.7	1.7	1.9	1.8	1.6	2.0	2.1	2.1	1.8
					Bottom	22.7	22.6	22.7	29.1	29.2	29.2	8.6	8.6	8.6	117.3	117.1	117.2	1.4	1.5	1.5		1.7	1.6	1.7	
B3	1023-1034	12.4	E	0.1	*Surface*	23.1	23.0	23.1	29.1	29.0	29.1	8.9	8.9	8.9	121.9	121.6	121.8	1.7	1.8	1.8		1.9	2.0	2.0	
					Middle	22.9	22.8	22.9	29.1	29.1	29.1	8.8	8.8	8.8	120.2	119.7	120.0	1.7	1.6	1.6	1.6	1.9	1.8	1.9	1.8
					Bottom	22.6	22.7	22.7	29.3	29.2	29.3	8.6	8.6	8.6	116.9	117.0	117.0	1.3	1.4	1.4		1.5	1.6	1.6	
C3	0902-0916	30.1	E	0.4	*Surface*	22.9	22.8	22.9	28.8	28.7	28.8	9.5	9.6	9.6	130.8	131.1	131.0	2.7	2.7	2.7		3.0	3.0	3.0	
					Middle	22.7	22.8	22.8	28.9	28.8	28.9	9.5	9.5	9.5	129.3	129.1	129.2	2.6	2.5	2.5	2.5	2.8	2.8	2.8	2.8
					Bottom	22.3	22.4	22.4	29.4	29.5	29.5	9.3	9.3	9.3	126.5	126.8	126.7	2.2	2.2	2.2		2.5	2.4	2.5	
E1	0952-1004	23.5	E	0.2	*Surface*	22.6	22.5	22.6	29.0	28.9	29.0	8.5	8.6	8.6	117.1	117.3	117.2	1.9	2.0	1.9		2.0	2.2	2.1	
					Middle	22.4	22.3	22.4	29.3	29.2	29.3	8.4	8.5	8.4	114.8	114.4	114.6	1.8	1.7	1.7	1.7	1.9	1.9	1.9	1.8
					Bottom	22.1	22.2	22.2	29.7	29.6	29.7	8.4	8.4	8.4	112.8	113.1	113.0	1.4	1.4	1.4		1.4	1.5	1.5	
E4	0918-0922	22.3	E	0.3	*Surface*	22.6	22.5	22.6	29.0	28.9	29.0	8.6	8.6	8.6	118.4	118.0	118.2	2.3	2.3	2.3		2.5	2.3	2.4	
					Middle	22.5	22.4	22.5	29.2	29.3	29.3	8.5	8.5	8.5	116.9	116.8	116.9	2.5	2.4	2.5	2.3	2.6	2.6	2.6	2.4
					Bottom	22.1	22.2	22.2	29.6	29.7	29.7	8.4	8.5	8.4	114.2	114.6	114.4	2.1	2.2	2.1		2.2	2.3	2.3	
E5	0845-0859	18.3	E	0.4	*Surface*	23.1	23.1	23.1	28.8	28.9	28.9	9.8	9.8	9.8	134.5	134.8	134.7	2.3	2.3	2.3		2.4	2.4	2.4	
					Middle	22.8	22.9	22.9	29.1	29.0	29.1	9.7	9.7	9.7	132.5	132.9	132.7	2.2	2.1	2.1	2.2	2.3	2.2	2.3	2.3
					Bottom	22.5	22.6	22.6	29.2	29.3	29.3	9.5	9.5	9.5	129.3	129.4	129.4	2.1	2.0	2.1		2.2	2.1	2.2	
G4	1108-1124	25.1	E	0.4	*Surface*	22.7	22.6	22.7	29.2	29.1	29.2	7.5	7.6	7.6	103.3	103.6	103.5	2.5	2.4	2.4		2.6	2.5	2.6	
					Middle	22.5	22.4	22.5	29.3	29.2	29.3	7.4	7.5	7.4	101.2	101.4	101.3	2.7	2.7	2.7	2.7	2.8	2.9	2.9	2.8
					Bottom	22.3	22.2	22.3	29.4	29.4	29.4	7.3	7.3	7.3	98.7	98.9	98.8	2.9	2.8	2.8		3.0	2.9	3.0	
G5	0934-0948	22.2	E	0.3	*Surface*	22.7	22.6	22.7	28.9	28.8	28.9	8.5	8.4	8.5	116.3	116.1	116.2	2.3	2.2	2.2		2.3	2.2	2.3	
					Middle	22.5	22.6	22.6	29.2	29.1	29.2	8.4	8.4	8.4	114.4	114.8	114.6	2.5	2.4	2.4	2.3	2.6	2.6	2.6	2.4
					Bottom	22.3	22.2	22.3	29.5	29.6	29.6	8.2	8.3	8.2	111.8	112.1	112.0	2.2	2.1	2.2		2.4	2.3	2.4	
G6	0829-0843	18.4	E	0.4	*Surface*	23.0	23.1	23.1	29.1	29.0	29.1	9.7	9.8	9.8	133.8	133.4	133.6	2.4	2.4	2.4		2.5	2.6	2.6	
					Middle	22.9	22.8	22.9	29.2	29.1	29.2	9.6	9.7	9.7	131.7	132.1	131.9	2.2	2.1	2.2	2.2	2.3	2.3	2.3	2.3
					Bottom	22.6	22.7	22.7	29.3	29.2	29.3	9.6	9.5	9.6	129.9	129.6	129.8	2.1	2.0	2.1		2.2	2.1	2.2	
G7	1006-1021	24.0	E	0.3	*Surface*	22.3	22.4	22.4	29.1	29.0	29.1	8.7	8.8	8.8	119.7	120.1	119.9	2.0	2.0	2.0		2.0	2.1	2.1	
					Middle	22.2	22.1	22.2	29.2	29.1	29.2	8.7	8.6	8.7	118.6	118.4	118.5	1.7	1.8	1.8	1.8	1.8	1.9	1.9	1.9
					Bottom	22.0	21.9	22.0	29.4	29.3	29.4	8.5	8.5	8.5	115.5	115.3	115.4	1.6	1.5	1.5		1.7	1.6	1.7	
I1	1036-1049	17.4	E	0.2	*Surface*	23.2	23.1	23.2	29.1	29.0	29.1	8.7	8.8	8.7	119.8	120.2	120.0	1.7	1.8	1.8		1.8	1.9	1.9	
					Middle	22.9	22.8	22.9	29.2	29.1	29.2	8.8	8.8	8.8	120.5	120.3	120.4	1.7	1.6	1.7	1.6	1.8	1.7	1.8	1.7
					Bottom	22.6	22.5	22.6	29.3	29.4	29.4	8.7	8.6	8.7	117.5	117.1	117.3	1.5	1.5	1.5		1.6	1.6	1.6	

Remark or Obsevation:

Note: * Average

** Depth Average

Date:	29-Apr-16
Tide:	Mid-Ebb
Weather:	Fine
Sea Conditions:	Small Wave
Zone B to C	

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temperrature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
B2	1704-1716	12.0	W	0.3	*Surface*	22.8	22.9	22.9	29.1	29.1	29.1	8.8	8.8	8.8	120.7	121.1	120.9	1.6	1.6	1.6		1.8	1.8	1.8	
					Middle	22.8	22.8	22.8	29.1	29.1	29.1	8.6	8.7	8.6	118.1	118.6	118.4	1.7	1.8	1.7	1.6	1.9	1.9	1.9	1.8
					Bottom	22.8	22.8	22.8	29.0	29.0	29.0	8.6	8.6	8.6	117.8	118.1	118.0	1.4	1.5	1.5		1.6	1.6	1.6	
B3	1638-1650	12.2	W	0.4	*Surface*	22.9	22.8	22.9	29.1	29.2	29.2	8.9	8.8	8.8	121.4	121.0	121.2	1.7	1.7	1.7		1.9	1.9	1.9	
					Middle	22.8	22.8	22.8	29.0	29.1	29.1	8.7	8.7	8.7	119.5	118.9	119.2	1.6	1.7	1.6	1.5	1.8	1.8	1.8	1.7
					Bottom	22.7	22.8	22.8	29.2	29.0	29.1	8.6	8.6	8.6	117.9	117.4	117.7	1.3	1.2	1.3		1.4	1.4	1.4	
C3	1526-1539	29.8	W	0.4	*Surface*	23.0	23.1	23.1	28.9	29.0	29.0	9.5	9.5	9.5	130.2	130.6	130.4	2.7	2.8	2.8		3.0	3.1	3.1	
					Middle	23.1	23.1	23.1	29.0	28.9	29.0	9.4	9.5	9.4	129.1	129.6	129.4	2.6	2.6	2.6	2.5	2.9	2.8	2.9	2.8
					Bottom	23.1	23.0	23.1	28.9	28.9	28.9	9.3	9.4	9.4	128.0	128.2	128.1	2.2	2.2	2.2		2.4	2.5	2.5	
E1	1609-1622	23.0	W	0.2	*Surface*	22.7	22.8	22.8	29.2	29.3	29.3	8.6	8.6	8.6	117.4	117.8	117.6	1.9	1.8	1.9		2.1	2.0	2.1	
					Middle	22.9	22.8	22.9	29.1	29.2	29.2	8.4	8.4	8.4	114.7	115.2	115.0	1.8	1.8	1.8	1.7	1.9	2.0	2.0	1.8
					Bottom	22.4	22.3	22.4	29.3	29.4	29.4	8.3	8.4	8.3	113.9	114.5	114.2	1.3	1.6	1.5		1.5	1.5	1.5	
E4	1541-1553	22.0	W	0.4	*Surface*	23.0	23.0	23.0	28.9	29.0	29.0	8.7	8.6	8.7	118.9	118.1	118.5	2.3	2.3	2.3		2.6	2.6	2.6	
					Middle	23.1	23.0	23.1	28.9	28.9	28.9	8.6	8.6	8.6	117.4	117.3	117.4	2.4	2.4	2.4	2.3	2.6	2.6	2.6	2.5
					Bottom	23.0	23.0	23.0	28.9	28.9	28.9	8.4	8.4	8.4	114.7	115.2	115.0	2.1	2.1	2.1		2.3	2.3	2.3	
E5	1512-1525	18.0	W	0.3	*Surface*	23.2	23.1	23.2	29.0	29.0	29.0	9.9	9.8	9.9	135.2	134.8	135.0	2.2	2.2	2.2		2.5	2.4	2.5	
					Middle	23.0	23.1	23.1	29.1	29.1	29.1	9.5	9.6	9.5	130.4	131.0	130.7	2.2	2.1	2.1	2.2	2.4	2.3	2.4	2.4
					Bottom	23.1	23.0	23.1	29.0	29.0	29.0	9.3	9.3	9.3	127.1	127.7	127.4	2.1	2.1	2.1		2.3	2.3	2.3	
G4	1718-1732	24.8	W	0.3	*Surface*	22.8	22.9	22.9	29.1	29.2	29.2	7.5	7.5	7.5	102.8	102.5	102.7	2.4	2.4	2.4		2.7	2.7	2.7	
					Middle	22.7	22.9	22.8	29.1	29.1	29.1	7.4	7.4	7.4	101.7	101.9	101.8	2.6	2.6	2.6	2.6	2.8	2.8	2.8	2.9
					Bottom	22.8	22.8	22.8	29.1	29.2	29.2	7.3	7.3	7.3	99.5	99.7	99.6	2.8	2.8	2.8		3.2	3.2	3.2	
G5	1554-1608	21.8	W	0.3	*Surface*	23.0	22.8	22.9	29.1	29.1	29.1	8.4	8.4	8.4	114.9	114.8	114.9	2.2	2.2	2.2		2.4	2.5	2.5	
					Middle	22.9	22.8	22.9	29.0	29.1	29.1	8.3	8.4	8.4	114.3	114.7	114.5	2.4	2.3	2.4	2.2	2.7	2.6	2.7	2.5
					Bottom	22.9	22.8	22.9	29.1	29.1	29.1	8.3	8.3	8.3	113.3	113.7	113.5	2.2	2.2	2.2		2.4	2.4	2.4	
G6	1457-1510	18.0	W	0.3	*Surface*	23.2	23.1	23.2	29.2	29.2	29.2	9.7	9.7	9.7	132.5	132.6	132.6	2.4	2.3	2.4		2.7	2.6	2.7	
					Middle	23.1	23.0	23.1	29.1	29.2	29.2	9.7	9.7	9.7	132.8	132.3	132.6	2.3	2.2	2.3	2.2	2.5	2.4	2.5	2.5
					Bottom	23.0	23.1	23.1	29.2	29.0	29.1	9.5	9.6	9.5	130.4	130.2	130.3	2.0	2.1	2.0		2.2	2.3	2.3	
G7	1624-1637	23.6	W	0.3	*Surface*	22.4	22.6	22.5	29.1	29.2	29.2	8.7	8.7	8.7	119.3	118.9	119.1	1.9	1.9	1.9		2.1	2.0	2.1	
					Middle	22.5	22.4	22.5	29.3	29.2	29.3	8.6	8.7	8.6	118.1	118.5	118.3	1.7	1.6	1.7	1.7	1.8	1.7	1.8	1.8
					Bottom	22.1	22.2	22.2	29.2	29.1	29.2	8.6	8.6	8.6	116.5	117.5	117.0	1.6	1.6	1.6		1.7	1.7	1.7	
I1	1651-1703	17.0	W	0.3	*Surface*	23.4	23.3	23.4	29.2	29.3	29.3	8.7	8.7	8.7	119.1	119.5	119.3	1.8	1.8	1.8		1.9	2.0	2.0	
					Middle	23.2	23.1	23.2	29.1	29.2	29.2	8.8	8.7	8.8	120.4	119.7	120.1	1.7	1.6	1.7	1.6	1.9	1.8	1.9	1.8
					Bottom	23.0	23.1	23.1	29.1	29.2	29.2	8.7	8.7	8.7	118.5	118.9	118.7	1.5	1.5	1.5		1.7	1.7	1.7	

Remark or Obsevation:

Note: * Average

** Depth Average

Date:	3-May-16
Tide:	Mid-Flood
Weather:	Cloudy
Sea Conditions:	Small Wave
Zone A to B	

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temperrature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
B1	1525-1534	7.9	W	0.3	*Surface*	23.7	23.7	23.7	29.5	29.5	29.5	8.2	8.1	8.1	114.0	113.3	113.7	2.1	2.1	2.1		2.3	2.6	2.5	
					Middle	23.7	23.7	23.7	29.5	29.4	29.5	8.2	8.2	8.2	114.5	114.0	114.3	2.2	2.3	2.3	2.3	2.5	2.8	2.7	2.7
					Bottom	23.5	23.6	23.6	29.4	29.4	29.4	8.1	8.1	8.1	112.1	112.6	112.4	2.6	2.6	2.6		3.1	2.9	3.0	
C1	1319-1330	22.3	W	0.2	*Surface*	23.7	23.8	23.8	29.4	29.3	29.4	7.2	7.1	7.1	99.8	99.4	99.6	2.6	2.6	2.6		3.1	3.4	3.3	
					Middle	23.5	23.5	23.5	29.3	29.3	29.3	7.3	7.3	7.3	102.1	101.6	101.9	2.4	2.3	2.4	2.4	2.6	2.8	2.7	2.9
					Bottom	23.3	23.3	23.3	29.2	29.4	29.3	7.6	7.6	7.6	105.1	105.6	105.4	2.2	2.2	2.2		2.7	2.6	2.7	
C2	1449-1457	30.9	W	0.3	*Surface*	23.7	23.7	23.7	29.4	29.3	29.4	8.1	8.1	8.1	112.8	113.4	113.1	2.1	2.1	2.1		2.3	2.4	2.4	
					Middle	23.5	23.5	23.5	29.5	29.5	29.5	8.2	8.1	8.2	113.7	113.3	113.5	1.9	2.0	2.0	2.1	2.5	2.3	2.4	2.5
					Bottom	23.3	23.3	23.3	29.4	29.6	29.5	8.3	8.2	8.3	114.5	114.1	114.3	2.3	2.3	2.3		3.0	2.5	2.8	
S1	1345-1355	9.5	W	0.2	*Surface*	23.7	23.6	23.7	29.4	29.3	29.4	7.1	7.1	7.1	98.9	99.3	99.1	2.8	2.9	2.8		3.8	3.1	3.5	
					Middle	23.6	23.6	23.6	29.4	29.4	29.4	7.2	7.1	7.2	100.1	99.6	99.9	2.6	2.7	2.6	2.6	3.1	2.9	3.0	3.1
					Bottom	23.6	23.5	23.6	29.4	29.4	29.4	7.0	7.0	7.0	97.3	96.9	97.1	2.3	2.4	2.4		2.8	3.1	3.0	
S2	1549-1559	12.5	W	0.3	*Surface*	23.7	23.6	23.7	29.4	29.3	29.4	7.6	7.5	7.6	105.8	105.1	105.5	2.3	2.2	2.2		2.5	2.7	2.6	
					Middle	23.6	23.5	23.6	29.4	29.4	29.4	7.7	7.6	7.6	106.7	106.1	106.4	2.5	2.4	2.5	2.5	3.3	2.9	3.1	2.9
					Bottom	23.4	23.4	23.4	29.4	29.3	29.4	7.7	7.7	7.7	106.7	106.3	106.5	2.8	2.7	2.7		3.1	3.0	3.1	
S3	1610-1619	9.4	W	0.4	*Surface*	23.7	23.6	23.7	29.2	29.3	29.3	7.4	7.3	7.3	102.6	102.1	102.4	2.7	2.6	2.6		3.0	3.1	3.1	
					Middle	23.6	23.6	23.6	29.2	29.1	29.2	7.4	7.4	7.4	103.5	103.1	103.3	2.5	2.4	2.4	2.5	3.2	3.1	3.2	3.0
					Bottom	23.5	23.4	23.5	29.2	29.3	29.3	7.3	7.3	7.3	100.8	101.1	101.0	2.6	2.5	2.6		2.9	2.8	2.9	
E2	1458-1509	8.2	W	0.2	*Surface*	23.7	23.7	23.7	29.4	29.5	29.5	8.9	8.9	8.9	124.1	124.7	124.4	2.0	1.9	1.9		2.4	2.3	2.4	
					Middle	23.7	23.6	23.7	29.5	29.5	29.5	8.8	8.8	8.8	122.7	123.4	123.1	1.4	1.6	1.5	1.7	1.8	1.9	1.9	2.2
					Bottom	23.4	23.3	23.4	29.4	29.4	29.4	8.7	8.7	8.7	120.1	120.7	120.4	1.8	1.7	1.8		2.3	2.2	2.3	
E6	1512-1522	26.6	W	0.3	*Surface*	23.7	23.6	23.7	29.4	29.4	29.4	7.9	7.9	7.9	110.7	110.0	110.4	2.4	2.2	2.3		2.7	2.8	2.8	
					Middle	23.5	23.4	23.5	29.6	29.5	29.6	7.8	7.7	7.8	108.1	107.6	107.9	2.4	2.5	2.4	2.5	2.9	2.7	2.8	3.0
					Bottom	23.3	23.2	23.3	29.6	29.6	29.6	7.6	7.6	7.6	105.1	105.7	105.4	2.8	2.7	2.8		3.6	3.2	3.4	
E7	1332-1344	24.1	WN	0.1	*Surface*	23.7	23.7	23.7	29.3	29.3	29.3	7.1	7.0	7.1	98.7	98.2	98.5	2.3	2.3	2.3		2.8	2.7	2.8	
					Middle	23.5	23.4	23.5	29.4	29.5	29.5	6.9	7.0	7.0	96.7	97.1	96.9	2.1	2.2	2.1	2.3	2.7	2.6	2.7	2.7
					Bottom	23.2	23.2	23.2	29.6	29.5	29.6	7.2	7.2	7.2	99.8	99.1	99.5	2.4	2.4	2.4		2.7	2.8	2.8	
E8	1537-1546	18.8	W	0.3	*Surface*	23.7	23.7	23.7	29.4	29.4	29.4	8.1	8.0	8.1	112.8	112.2	112.5	2.3	2.3	2.3		2.8	2.7	2.8	
					Middle	23.6	23.5	23.6	29.6	29.5	29.6	8.0	7.9	8.0	110.9	110.3	110.6	2.7	2.9	2.8	2.7	3.3	3.1	3.2	3.1
					Bottom	23.3	23.4	23.4	29.6	29.6	29.6	7.8	7.8	7.8	108.6	108.1	108.4	3.0	2.9	2.9		3.3	3.5	3.4	
E9	1409-1420	16.0	W	0.3	*Surface*	23.6	23.7	23.7	29.4	29.2	29.3	7.3	7.3	7.3	101.2	101.6	101.4	2.8	2.9	2.9		3.1	3.2	3.2	
					Middle	23.4	23.4	23.4	29.4	29.5	29.5	7.2	7.2	7.2	100.2	99.8	100.0	2.7	2.7	2.7	2.8	3.5	3.6	3.6	3.5
					Bottom	23.3	23.3	23.3	29.4	29.3	29.4	7.1	7.1	7.1	98.4	98.7	98.6	2.9	3.0	2.9		3.4	3.9	3.7	
F1	1435-1445	13.4	WN	0.2	*Surface*	23.7	23.6	23.7	29.3	29.3	29.3	7.6	7.5	7.6	105.6	105.1	105.4	2.4	2.5	2.4		2.8	2.9	2.9	
					Middle	23.6	23.3	23.5	29.3	29.4	29.4	7.7	7.6	7.6	106.6	106.2	106.4	2.1	2.2	2.1	2.4	2.3	2.3	2.3	2.7
					Bottom	23.6	23.5	23.6	29.4	29.3	29.4	7.4	7.4	7.4	102.9	102.4	102.7	2.6	2.5	2.5		2.9	2.7	2.8	
G1	1357-1408	11.6	W	0.3	*Surface*	23.7	23.7	23.7	29.4	29.5	29.5	7.2	7.1	7.1	100.1	99.6	99.9	3.2	2.2	2.7		2.6	2.7	2.7	
					Middle	23.7	23.6	23.7	29.4	29.4	29.4	7.1	7.0	7.1	98.9	98.2	98.6	2.4	2.4	2.4	2.5	2.5	3.0	2.8	2.8
					Bottom	23.4	23.3	23.4	29.4	29.3	29.4	6.8	6.8	6.8	94.7	94.3	94.5	2.2	2.3	2.3		2.9	2.8	2.9	
G2	1600-1608	15.8	W	0.4	*Surface*	23.7	23.7	23.7	29.3	29.3	29.3	7.3	7.2	7.3	101.7	101.1	101.4	2.1	2.2	2.1		2.5	2.8	2.7	
					Middle	23.6	23.6	23.6	29.5	29.4	29.5	7.4	7.4	7.4	102.8	102.4	102.6	2.3	2.4	2.4	2.4	3.0	2.9	3.0	2.9
					Bottom	23.4	24.3	23.9	29.3	29.3	29.3	7.5	7.5	7.5	104.3	103.6	104.0	2.7	2.6	2.6		2.9	3.1	3.0	
G3	1424-1433	17.3	W	0.4	*Surface*	23.7	23.7	23.7	29.4	29.4	29.4	8.4	8.3	8.4	116.9	116.3	116.6	2.7	2.8	2.8		3.3	3.7	3.5	
					Middle	23.6	23.5	23.6	29.4	29.3	29.4	8.5	8.4	8.4	117.7	117.1	117.4	2.6	2.6	2.6	2.7	3.3	3.1	3.2	3.4
					Bottom	23.4	23.3	23.4	29.3	29.3	29.3	8.3	8.3	8.3	115.3	114.5	114.9	2.8	2.8	2.8		3.5	3.4	3.5	

Remark or Obsevation:

Note: * Average

** Depth Average

Date: 3-May-16

Tide: Mid-Ebb

Weather: Fine

Sea Conditions: Small Wave

Zone A to B

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temperrature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
B1	1043-1054	7.6	W	0.4	*Surface*	23.4	23.4	23.4	29.4	29.2	29.3	8.3	8.2	8.3	111.6	111.1	111.4	1.9	2.0	1.9		2.3	2.6	2.5	
					Middle	23.3	23.4	23.4	29.4	29.4	29.4	8.2	8.2	8.2	110.6	111.0	110.8	2.1	2.1	2.1	2.1	2.7	2.6	2.7	2.5
					Bottom	23.2	23.3	23.3	29.4	29.3	29.4	8.2	8.2	8.2	111.1	110.7	110.9	2.1	2.2	2.2		2.3	2.4	2.4	
C1	0843-0854	22.0	W	0.2	*Surface*	23.5	23.7	23.6	29.2	29.3	29.3	7.3	7.3	7.3	98.4	98.0	98.2	2.3	2.3	2.3		2.5	2.8	2.7	
					Middle	23.4	23.4	23.4	29.2	29.2	29.2	7.6	7.6	7.6	102.5	103.1	102.8	2.2	2.1	2.1	2.2	2.8	2.8	2.8	2.6
					Bottom	23.1	23.2	23.2	29.2	29.3	29.3	7.8	7.7	7.8	104.9	104.5	104.7	2.1	2.1	2.1		2.5	2.3	2.4	
C2	1007-1018	30.6	W	0.2	*Surface*	23.4	23.5	23.5	29.3	29.2	29.3	8.2	8.2	8.2	110.8	111.2	111.0	1.9	1.9	1.9		2.3	2.2	2.3	
					Middle	23.3	23.2	23.3	29.3	29.2	29.3	8.2	8.2	8.2	110.6	110.8	110.7	1.8	1.9	1.8	1.9	2.2	2.0	2.1	2.3
					Bottom	23.2	23.1	23.2	29.3	29.2	29.3	8.2	8.2	8.2	111.2	110.7	111.0	2.1	2.1	2.1		2.5	2.7	2.6	
S1	0907-0918	9.2	W	0.3	*Surface*	23.5	23.4	23.5	29.4	29.4	29.4	7.2	7.2	7.2	97.3	96.8	97.1	2.7	2.8	2.8		3.3	3.6	3.5	
					Middle	23.2	23.2	23.2	29.3	29.3	29.3	7.1	7.2	7.1	96.1	96.5	96.3	2.5	2.4	2.5	2.5	2.7	3.2	3.0	3.1
					Bottom	23.1	23.1	23.1	29.3	29.3	29.3	7.1	7.0	7.1	95.6	95.0	95.3	2.3	2.3	2.3		2.8	2.8	2.8	
S2	1107-0018	12.2	W	0.4	*Surface*	23.4	23.5	23.5	29.3	29.2	29.3	7.7	7.7	7.7	103.8	104.2	104.0	2.5	2.5	2.5		3.0	3.0	3.0	
					Middle	23.4	23.3	23.4	29.4	29.3	29.4	7.9	7.8	7.9	106.2	105.8	106.0	2.8	2.7	2.7	2.6	3.6	3.0	3.3	3.2
					Bottom	23.3	23.4	23.4	29.3	29.2	29.3	7.9	7.9	7.9	106.2	106.1	106.2	2.7	2.6	2.7		3.2	3.2	3.2	
S3	1131-1142	9.1	W	0.4	*Surface*	23.3	23.4	23.4	29.3	29.2	29.3	7.4	7.5	7.5	100.4	101.1	100.8	2.8	2.8	2.8		3.3	3.3	3.3	
					Middle	23.4	23.4	23.4	29.2	29.3	29.3	7.5	7.5	7.5	101.5	101.3	101.4	2.7	2.6	2.7	2.7	3.0	3.4	3.2	3.3
					Bottom	23.3	23.7	23.5	29.3	29.3	29.3	7.3	7.4	7.3	99.8	99.5	99.7	2.7	2.8	2.7		3.3	3.3	3.3	
E2	1019-1030	7.9	W	0.2	*Surface*	23.5	23.4	23.5	29.4	29.2	29.3	9.1	9.0	9.0	122.3	121.9	122.1	1.8	1.7	1.8		2.3	2.2	2.3	
					Middle	23.3	23.4	23.4	29.3	29.2	29.3	9.0	9.0	9.0	121.1	121.0	121.1	1.4	1.4	1.4	1.6	1.8	1.7	1.8	1.9
					Bottom	23.2	23.3	23.3	29.3	29.3	29.3	8.9	8.9	8.9	120.4	120.7	120.6	1.5	1.5	1.5		1.8	1.8	1.8	
E6	1031-1042	26.4	W	0.3	*Surface*	23.3	23.5	23.4	29.3	29.4	29.4	7.8	7.8	7.8	104.9	105.2	105.1	2.4	2.3	2.3		3.1	3.0	3.1	
					Middle	23.4	23.4	23.4	29.2	29.3	29.3	7.8	7.8	7.8	105.6	105.3	105.5	2.5	2.4	2.5	2.5	3.0	3.2	3.1	3.0
					Bottom	23.2	23.4	23.3	29.4	29.3	29.4	7.8	7.8	7.8	105.2	104.9	105.1	2.6	2.7	2.6		2.8	2.9	2.9	
E7	0855-0906	20.9	W	0.2	*Surface*	23.4	23.3	23.4	29.2	29.3	29.3	6.9	6.9	6.9	93.4	93.2	93.3	2.1	2.1	2.1		2.3	2.5	2.4	
					Middle	23.2	23.3	23.3	29.3	29.3	29.3	7.1	7.0	7.0	95.3	94.8	95.1	2.2	2.2	2.2	2.1	2.6	2.7	2.7	2.5
					Bottom	23.1	23.2	23.2	29.3	29.3	29.3	7.1	7.0	7.1	95.7	95.0	95.4	2.1	2.0	2.1		2.3	2.7	2.5	
E8	1055-1106	18.6	W	0.3	*Surface*	23.5	23.4	23.5	29.2	29.3	29.3	7.8	7.9	7.9	105.7	106.2	106.0	2.4	2.5	2.4		2.9	2.9	2.9	
					Middle	23.4	23.4	23.4	29.3	29.4	29.4	7.9	7.9	7.9	106.5	106.1	106.3	2.7	2.7	2.7	2.6	3.0	3.5	3.3	3.0
					Bottom	23.3	23.2	23.3	29.4	29.4	29.4	8.0	7.9	8.0	107.7	107.2	107.5	2.6	2.7	2.7		2.9	3.0	3.0	
E9	0931-0941	15.8	W	0.2	*Surface*	23.0	23.0	23.0	29.2	29.3	29.3	7.1	7.1	7.1	96.1	96.4	96.3	2.7	2.6	2.7		3.0	3.1	3.1	
					Middle	23.2	23.3	23.3	29.2	29.2	29.2	7.2	7.1	7.2	96.8	96.4	96.6	2.5	2.6	2.6	2.7	2.8	2.9	2.9	3.1
					Bottom	23.2	23.3	23.3	29.3	29.1	29.2	7.2	7.2	7.2	97.3	96.9	97.1	2.7	2.8	2.7		3.0	3.6	3.3	
F1	0955-1006	13.2	W	0.2	*Surface*	23.3	23.5	23.4	29.2	29.3	29.3	7.3	7.3	7.3	98.8	99.1	99.0	2.1	2.1	2.1		2.7	2.3	2.5	
					Middle	23.4	23.2	23.3	29.2	29.2	29.2	7.4	7.3	7.4	99.5	99.1	99.3	2.0	1.9	1.9	2.1	2.6	2.5	2.6	2.5
					Bottom	23.1	23.1	23.1	29.2	29.3	29.3	7.4	7.4	7.4	99.9	99.6	99.8	2.2	2.1	2.1		2.4	2.3	2.4	
G1	0919-0930	11.4	W	0.3	*Surface*	23.3	23.3	23.3	29.4	29.4	29.4	7.2	7.2	7.2	97.3	96.8	97.1	2.4	2.4	2.4		3.1	2.6	2.9	
					Middle	23.2	23.2	23.2	29.4	29.4	29.4	6.9	7.0	6.9	93.4	93.8	93.6	2.4	2.5	2.4	2.3	2.8	3.0	2.9	2.7
					Bottom	23.2	23.2	23.2	29.3	29.4	29.4	7.0	6.9	7.0	94.2	93.7	94.0	2.1	2.0	2.1		2.5	2.3	2.4	
G2	1119-1130	15.6	W	0.3	*Surface*	23.4	23.4	23.4	29.4	29.2	29.3	7.2	7.2	7.2	97.1	96.7	96.9	2.3	2.3	2.3		2.9	2.5	2.7	
					Middle	23.3	23.3	23.3	29.3	29.4	29.4	7.5	7.5	7.5	101.8	101.4	101.6	2.6	2.7	2.6	2.5	3.1	3.4	3.3	3.1
					Bottom	23.4	23.3	23.4	29.2	29.3	29.3	7.7	7.6	7.7	103.7	103.1	103.4	2.7	2.7	2.7		3.3	3.6	3.5	
G3	0943-0954	17.0	W	0.3	*Surface*	23.4	23.5	23.5	29.3	29.2	29.3	8.6	8.5	8.5	115.7	115.0	115.4	2.6	2.6	2.6		2.8	3.4	3.1	
					Middle	23.3	23.2	23.3	29.3	29.2	29.3	8.5	8.5	8.5	114.9	114.3	114.6	2.3	2.3	2.3	2.5	2.5	2.6	2.6	2.9
					Bottom	23.3	23.3	23.3	29.2	29.2	29.2	8.5	8.5	8.5	114.8	115.2	115.0	2.6	2.6	2.6		2.9	3.0	3.0	

Remark or Obsevation:

Note: * Average

** Depth Average

Date:	4-May-16
Tide:	Mid-Flood
Weather:	Cloudy
Sea Conditions:	Small Wave
Zone B to C	

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temperrature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
B2	1654-1609	12.1	W	0.2	*Surface*	23.1	23.0	23.1	29.0	29.0	29.0	9.0	9.0	9.0	123.7	123.9	123.8	1.8	1.8	1.8		2.1	2.1	2.1	
					Middle	22.9	22.8	22.9	29.1	29.2	29.2	8.8	8.8	8.8	120.5	120.7	120.6	1.8	1.8	1.8	1.9	2.0	2.0	2.0	2.2
					Bottom	22.6	22.7	22.7	29.3	29.4	29.4	8.7	8.7	8.7	119.2	119.0	119.1	2.0	2.0	2.0		2.6	2.4	2.5	
B3	1624-1638	12.6	W	0.2	*Surface*	22.8	22.9	22.9	28.8	28.9	28.9	9.1	9.1	9.1	124.7	124.9	124.8	2.1	2.1	2.1		2.3	2.5	2.4	
					Middle	22.7	22.7	22.7	29.1	29.2	29.2	9.0	9.0	9.0	123.3	123.1	123.2	2.2	2.2	2.2	2.2	2.4	2.7	2.6	2.5
					Bottom	22.6	22.5	22.6	29.3	29.3	29.3	8.8	8.8	8.8	119.5	119.7	119.6	2.3	2.3	2.3		2.8	2.5	2.7	
C3	1459-1515	29.6	W	0.2	*Surface*	22.9	22.9	22.9	28.8	28.9	28.9	9.8	9.7	9.8	134.3	134.1	134.2	3.0	3.0	3.0		3.9	3.6	3.8	
					Middle	22.6	22.7	22.7	29.1	29.2	29.2	9.6	9.5	9.5	130.8	130.6	130.7	3.2	3.3	3.3	3.2	3.9	4.2	4.1	3.9
					Bottom	22.5	22.5	22.5	29.3	29.4	29.4	9.4	9.4	9.4	128.3	188.5	158.4	3.3	3.4	3.3		4.0	3.7	3.9	
E1	1550-1604	23.1	W	0.2	*Surface*	22.9	22.8	22.9	28.9	29.0	29.0	8.7	8.7	8.7	119.7	119.9	119.8	2.0	2.1	2.0		2.7	2.7	2.7	
					Middle	22.7	22.7	22.7	29.1	29.2	29.2	8.7	8.6	8.7	118.6	118.4	118.5	2.1	2.1	2.1	2.1	2.5	2.4	2.5	2.6
					Bottom	22.5	22.5	22.5	29.3	29.4	29.4	8.5	8.5	8.5	116.2	116.0	116.1	2.2	2.3	2.2		2.4	2.8	2.6	
E4	1517-1531	22.1	W	0.3	*Surface*	22.8	22.7	22.8	29.1	29.1	29.1	8.5	8.5	8.5	116.9	117.1	117.0	2.1	2.1	2.1		2.3	2.5	2.4	
					Middle	22.7	22.6	22.7	29.2	29.3	29.3	8.4	8.3	8.4	114.5	114.3	114.4	2.1	2.1	2.1	2.1	2.5	2.8	2.7	2.6
					Bottom	22.5	22.5	22.5	29.4	29.4	29.4	8.3	8.2	8.2	112.6	112.4	112.5	2.2	2.2	2.2		2.4	2.9	2.7	
E5	1443-1456	18.1	W	0.3	*Surface*	23.1	23.0	23.1	29.1	29.2	29.2	9.8	9.8	9.8	135.2	135.4	135.3	2.4	2.5	2.5		2.7	2.7	2.7	
					Middle	22.9	22.8	22.9	29.3	29.3	29.3	9.6	9.6	9.6	131.6	131.8	131.7	2.4	2.4	2.4	2.5	2.6	2.7	2.7	2.8
					Bottom	22.6	22.5	22.6	29.4	29.5	29.5	9.4	9.4	9.4	128.4	128.6	128.5	2.7	2.7	2.7		3.3	3.0	3.2	
G4	1610-1624	24.7	w	0.2	*Surface*	22.8	22.9	22.9	28.7	28.8	28.8	7.7	7.7	7.7	105.4	105.6	105.5	2.0	2.0	2.0		2.6	2.6	2.6	
					Middle	22.7	22.6	22.7	28.9	29.0	29.0	7.5	7.5	7.5	102.8	102.6	102.7	2.1	2.1	2.1	2.1	2.5	2.3	2.4	2.5
					Bottom	22.5	22.4	22.5	29.1	29.2	29.2	7.4	7.4	7.4	100.4	100.2	100.3	2.2	2.2	2.2		2.5	2.7	2.6	
G5	1533-1547	21.8	W	0.2	*Surface*	22.9	23.0	23.0	29.1	29.2	29.2	8.7	8.6	8.7	119.2	119.0	119.1	2.2	2.2	2.2		2.9	2.9	2.9	
					Middle	22.7	22.8	22.8	29.3	29.3	29.3	8.4	8.4	8.4	115.5	115.3	115.4	2.2	2.3	2.3	2.3	2.7	2.7	2.7	2.8
					Bottom	22.6	22.6	22.6	29.4	29.4	29.4	8.3	8.3	8.3	113.3	113.5	113.4	2.3	2.4	2.3		2.6	3.0	2.8	
G6	1424-1440	17.7	W	0.2	*Surface*	23.0	22.9	23.0	29.0	29.1	29.1	9.9	9.0	9.5	136.5	136.3	136.4	2.6	2.6	2.6		3.1	3.1	3.1	
					Middle	22.7	22.6	22.7	29.2	29.3	29.3	9.7	9.7	9.7	133.2	133.0	133.1	2.8	2.8	2.8	2.7	3.6	3.6	3.6	3.4
					Bottom	22.4	22.4	22.4	29.4	29.4	29.4	9.6	9.5	9.5	130.3	130.1	130.2	2.8	2.9	2.9		3.4	3.7	3.6	
G7	1607-1621	23.4	W	0.2	*Surface*	23.1	23.1	23.1	29.1	29.2	29.2	9.0	9.0	9.0	124.2	124.2	124.2	1.8	1.8	1.8		2.1	2.1	2.1	
					Middle	23.0	22.9	23.0	29.3	29.3	29.3	8.9	8.9	8.9	122.3	122.1	122.2	1.8	1.9	1.8	1.9	2.0	2.3	2.2	2.3
					Bottom	22.7	22.6	22.7	29.4	29.5	29.5	8.8	8.7	8.8	119.5	119.3	119.4	2.1	2.1	2.1		2.7	2.5	2.6	
I1	1639-1652	16.8	W	0.3	*Surface*	23.0	23.0	23.0	28.9	28.8	28.9	8.9	8.9	8.9	122.4	122.0	122.2	2.1	2.0	2.1		2.6	2.5	2.6	
					Middle	22.7	22.8	22.8	29.0	29.0	29.0	8.7	8.8	8.7	119.6	119.8	119.7	2.1	2.2	2.1	2.2	2.6	2.5	2.6	2.7
					Bottom	22.6	22.6	22.6	29.1	29.2	29.2	8.6	8.6	8.6	117.5	117.7	117.6	2.2	2.3	2.3		3.0	2.9	3.0	

Remark or Obsevation:

Note: * Average

** Depth Average

Date:	4-May-16
Tide:	Mid-Ebb
Weather:	Cloudy
Sea Conditions:	Small Wave
Zone B to C	

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temperrature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
B2	1159-1212	11.8	W	0.3	*Surface*	22.9	22.8	22.9	29.0	29.1	29.1	8.7	8.7	8.7	119.6	119.3	119.5	2.0	1.9	2.0		2.5	2.5	2.5	
					Middle	22.7	22.8	22.8	29.3	29.3	29.3	8.6	8.6	8.6	117.2	117.5	117.4	1.7	1.7	1.7	1.7	2.1	1.9	2.0	2.1
					Bottom	22.6	22.5	22.6	29.4	29.5	29.5	8.4	8.4	8.4	115.4	115.7	115.6	1.5	1.6	1.5		1.8	1.9	1.9	
B3	1124-1138	12.2	W	0.3	*Surface*	22.9	23.0	23.0	29.0	28.9	29.0	8.9	8.9	8.9	121.3	121.5	121.4	2.0	1.9	1.9		2.2	2.3	2.3	
					Middle	22.8	22.7	22.8	29.2	29.3	29.3	8.5	8.5	8.5	116.2	116.5	116.4	1.7	1.7	1.7	1.7	2.2	2.0	2.1	2.0
					Bottom	27.5	27.6	27.6	29.4	29.5	29.5	8.4	8.4	8.4	114.9	114.4	114.7	1.6	1.5	1.5		1.7	1.7	1.7	
C3	1003-1013	29.4	W	0.2	*Surface*	22.9	22.8	22.9	28.7	28.6	28.7	9.5	9.5	9.5	130.1	129.8	130.0	3.0	3.0	3.0		3.7	3.6	3.7	
					Middle	22.5	22.6	22.6	29.0	29.0	29.0	9.3	9.2	9.2	126.2	125.9	126.1	2.8	2.7	2.8	2.7	3.0	3.3	3.2	3.2
					Bottom	22.2	22.1	22.2	29.1	29.2	29.2	8.9	8.9	8.9	120.0	120.2	120.1	2.4	2.4	2.4		2.9	2.9	2.9	
E1	1050-1104	22.9	W	0.2	*Surface*	22.5	22.4	22.5	29.6	29.7	29.7	8.5	8.5	8.5	116.4	116.9	116.7	2.1	2.0	2.0		2.2	2.6	2.4	
					Middle	22.2	22.3	22.3	29.8	29.7	29.8	8.4	8.4	8.4	114.3	114.5	114.4	1.9	1.8	1.8	1.8	2.0	2.1	2.1	2.1
					Bottom	21.9	21.9	21.9	29.9	30.0	30.0	8.9	8.9	8.9	119.8	120.4	120.1	1.6	1.7	1.6		1.9	1.9	1.9	
E4	1016-1030	21.8	W	0.3	*Surface*	22.2	22.1	22.2	28.8	28.9	28.9	8.4	8.3	8.3	113.5	113.1	113.3	2.3	2.3	2.3		2.5	2.8	2.7	
					Middle	22.0	22.1	22.1	29.0	29.4	29.2	8.2	8.2	8.2	111.3	111.0	111.2	2.4	2.4	2.4	2.3	2.9	2.9	2.9	2.8
					Bottom	21.9	21.8	21.9	29.4	29.3	29.4	8.2	8.3	8.3	111.9	112.1	112.0	2.2	2.2	2.2		2.7	2.8	2.8	
E5	0945-0959	17.8	W	0.3	*Surface*	23.2	23.1	23.2	28.7	28.8	28.8	9.7	9.7	9.7	134.0	133.5	133.8	2.5	2.4	2.5		2.7	3.1	2.9	
					Middle	22.8	22.8	22.8	28.8	28.9	28.9	9.6	9.6	9.6	131.0	130.6	130.8	2.7	2.8	2.7	2.5	3.5	3.3	3.4	3.1
					Bottom	22.5	22.4	22.5	29.0	28.9	29.0	9.4	9.5	9.5	128.9	129.1	129.0	2.4	2.3	2.3		2.8	2.9	2.9	
G4	1214-1228	24.4	W	0.3	*Surface*	22.5	22.4	22.5	29.1	29.2	29.2	7.5	7.4	7.5	101.4	101.2	101.3	2.8	2.8	2.8		3.1	3.1	3.1	
					Middle	22.0	21.9	22.0	29.4	29.5	29.5	7.3	7.3	7.3	99.4	98.8	99.1	2.6	2.5	2.5	2.8	3.1	3.0	3.1	3.4
					Bottom	21.7	21.6	21.7	29.5	29.6	29.6	7.0	7.0	7.0	94.2	93.9	94.1	3.1	3.1	3.1		4.0	4.0	4.0	
G5	1034-1047	21.6	W	0.3	*Surface*	22.4	22.3	22.4	28.9	29.0	29.0	8.5	8.4	8.4	114.9	114.7	114.8	2.3	2.4	2.4		2.6	2.9	2.8	
					Middle	22.2	22.1	22.2	29.0	29.1	29.1	8.3	8.3	8.3	112.2	111.8	112.0	2.3	2.3	2.3	2.3	2.7	2.7	2.7	2.7
					Bottom	21.8	21.9	21.9	29.5	29.4	29.5	8.1	8.2	8.1	110.0	110.1	110.1	2.2	2.2	2.2		2.7	2.5	2.6	
G6	0928-0942	17.4	W	0.3	*Surface*	23.1	23.0	23.1	28.8	28.9	28.9	9.8	9.8	9.8	134.9	134.5	134.7	2.7	2.6	2.7		3.5	3.4	3.5	
					Middle	22.9	22.8	22.9	28.9	29.0	29.0	9.7	9.7	9.7	131.7	131.4	131.6	2.4	2.5	2.5	2.5	2.9	2.8	2.9	3.0
					Bottom	22.5	22.6	22.6	29.1	29.0	29.1	9.6	9.5	9.5	130.0	129.8	129.9	2.3	2.2	2.3		2.5	2.9	2.7	
G7	1107-1121	23.2	W	0.3	*Surface*	22.4	22.3	22.4	29.3	29.4	29.4	8.8	8.9	8.8	120.4	120.6	120.5	2.0	1.9	2.0		2.7	2.2	2.5	
					Middle	22.1	22.0	22.1	29.6	29.7	29.7	8.8	8.8	8.8	119.4	119.2	119.3	1.8	1.7	1.7	1.8	2.2	2.0	2.1	2.2
					Bottom	21.8	21.7	21.8	29.9	29.9	29.9	8.7	8.6	8.6	117.3	116.9	117.1	1.5	1.6	1.6		1.9	2.0	2.0	
I1	1141-1155	16.4	W	0.2	*Surface*	23.1	23.0	23.1	29.2	29.3	29.3	8.7	8.8	8.8	120.4	120.6	120.5	2.1	2.2	2.1		2.6	2.6	2.6	
					Middle	22.9	23.0	23.0	29.5	29.4	29.5	8.7	8.7	8.7	119.1	118.8	119.0	1.8	1.8	1.8	1.9	2.2	2.1	2.2	2.3
					Bottom	22.9	22.8	22.9	29.5	29.6	29.6	8.4	8.4	8.4	115.7	115.4	115.6	1.7	1.7	1.7		2.0	2.0	2.0	

Remark or Obsevation:

Note: * Average

** Depth Average

Date:	5-May-16
Tide:	Mid-Flood
Weather:	Fine
Sea Conditions:	Small Wave
Zone A to B	

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temperrature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
B1	1725-1734	7.7	W	0.2	*Surface*	23.7	23.6	23.7	29.6	29.7	29.7	8.1	8.1	8.1	113.7	113.4	113.6	2.2	2.1	2.2		2.4	2.3	2.4	
					Middle	23.6	23.5	23.6	29.7	29.7	29.7	8.0	8.0	8.0	111.7	112.0	111.9	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3
					Bottom	23.4	23.5	23.5	29.8	29.7	29.8	7.9	7.9	7.9	110.6	110.9	110.8	2.3	2.3	2.3		2.4	2.4	2.4	
C1	1522-1532	22.3	W	0.3	*Surface*	23.6	23.5	23.6	29.9	29.8	29.9	7.5	7.5	7.5	104.7	105.1	104.9	2.7	2.6	2.6		2.8	2.7	2.8	
					Middle	23.4	23.3	23.4	29.8	29.7	29.8	7.4	7.3	7.4	103.4	103.1	103.3	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6
					Bottom	23.2	23.1	23.2	29.9	30.0	30.0	7.3	7.3	7.3	101.8	102.1	102.0	2.2	2.3	2.3		2.4	2.5	2.5	
C2	1647-1658	30.8	W	0.2	*Surface*	23.6	23.5	23.6	29.7	29.6	29.7	8.1	8.1	8.1	113.1	113.7	113.4	2.1	2.0	2.1		2.2	2.1	2.2	
					Middle	23.3	23.4	23.4	29.8	29.7	29.8	8.0	8.0	8.0	112.4	112.1	112.3	2.3	2.4	2.4	2.2	2.4	2.5	2.5	2.3
					Bottom	23.1	23.2	23.2	29.9	30.0	30.0	7.8	7.8	7.8	109.7	109.6	109.7	2.3	2.2	2.2		2.4	2.3	2.4	
S1	1544-1553	9.7	W	0.2	*Surface*	23.6	23.5	23.6	29.7	29.6	29.7	7.3	7.3	7.3	101.8	102.2	102.0	2.7	2.8	2.7		2.9	2.9	2.9	
					Middle	23.4	23.5	23.5	29.8	29.7	29.8	7.2	7.2	7.2	101.3	101.1	101.2	2.8	2.9	2.9	2.7	3.1	3.1	3.1	2.9
					Bottom	23.4	23.4	23.4	29.9	29.8	29.9	7.1	7.2	7.1	100.0	100.4	100.2	2.4	2.3	2.4		2.6	2.6	2.6	
S2	1751-1801	12.5	W	0.3	*Surface*	23.7	23.6	23.7	29.8	29.7	29.8	7.4	7.5	7.4	104.5	104.7	104.6	2.4	2.3	2.3		2.5	2.4	2.5	
					Middle	23.5	23.6	23.6	29.8	29.8	29.8	7.5	7.5	7.5	105.6	105.5	105.6	2.5	2.6	2.5	2.5	2.7	2.8	2.8	2.7
					Bottom	23.5	23.5	23.5	29.9	29.8	29.9	7.4	7.4	7.4	103.5	103.2	103.4	2.8	2.7	2.8		3.0	2.9	3.0	
S3	1814-1822	9.6	W	0.3	*Surface*	23.6	23.7	23.7	29.6	29.5	29.6	7.3	7.3	7.3	102.8	103.0	102.9	2.3	2.5	2.4		2.5	2.7	2.6	
					Middle	23.6	23.7	23.7	29.7	29.6	29.7	7.4	7.4	7.4	103.8	104.1	104.0	2.5	2.4	2.5	2.5	2.7	2.6	2.7	2.7
					Bottom	23.5	23.4	23.5	29.7	29.8	29.8	7.5	7.5	7.5	104.9	104.8	104.9	2.6	2.6	2.6		2.8	2.7	2.8	
E2	1700-1709	8.3	W	0.3	*Surface*	23.6	23.5	23.6	29.7	29.8	29.8	8.6	8.6	8.6	121.2	121.1	121.2	2.0	2.0	2.0		2.2	2.1	2.2	
					Middle	23.4	23.5	23.5	29.7	29.8	29.8	8.6	8.6	8.6	120.3	120.1	120.2	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.1
					Bottom	23.3	23.2	23.3	29.9	29.8	29.9	8.4	8.4	8.4	118.1	118.3	118.2	2.1	2.0	2.1		2.2	2.2	2.2	
E6	1712-1722	26.7	W	0.3	*Surface*	23.5	23.6	23.6	29.6	29.7	29.7	7.8	7.9	7.9	110.2	110.5	110.4	2.2	2.3	2.3		2.4	2.5	2.5	
					Middle	23.4	23.3	23.4	29.8	29.7	29.8	7.7	7.8	7.7	108.5	108.7	108.6	2.4	2.5	2.4	2.4	2.6	2.6	2.6	2.6
					Bottom	23.2	23.1	23.2	29.9	30.0	30.0	7.7	7.7	7.7	107.5	107.8	107.7	2.5	2.6	2.6		2.8	2.8	2.8	
E7	1533-1542	24.1	W	0.2	*Surface*	23.7	26.6	25.2	29.8	29.7	29.8	7.4	7.4	7.4	103.6	103.3	103.5	2.4	2.4	2.4		2.6	2.5	2.6	
					Middle	23.5	23.4	23.5	29.8	29.9	29.9	7.2	7.2	7.2	101.6	101.5	101.6	2.4	2.5	2.4	2.4	2.6	2.7	2.7	2.6
					Bottom	23.3	23.2	23.3	30.0	29.9	30.0	7.1	7.1	7.1	100.1	99.9	100.0	2.3	2.3	2.3		2.5	2.5	2.5	
E8	1737-1749	18.8	W	0.2	*Surface*	23.6	23.5	23.6	29.7	29.6	29.7	7.9	7.9	7.9	111.5	111.2	111.4	2.3	2.4	2.4		2.5	2.6	2.6	
					Middle	23.4	23.3	23.4	29.8	29.9	29.9	7.9	7.8	7.8	110.3	110.0	110.2	2.5	2.5	2.5	2.5	2.7	2.8	2.8	2.8
					Bottom	23.1	23.2	23.2	29.9	30.0	30.0	7.7	7.8	7.8	108.5	108.7	108.6	2.8	2.7	2.8		3.1	3.0	3.1	
E9	1607-1618	16.1	W	0.2	*Surface*	23.6	23.5	23.6	29.8	29.7	29.8	7.2	7.2	7.2	100.6	100.4	100.5	2.9	2.8	2.8		3.1	3.0	3.1	
					Middle	23.4	23.5	23.5	29.9	30.0	30.0	7.1	7.2	7.2	100.0	99.9	100.0	2.9	2.9	2.9	2.8	3.2	3.1	3.2	3.1
					Bottom	23.3	23.2	23.3	30.1	30.0	30.1	7.0	7.0	7.0	98.0	98.4	98.2	2.8	2.7	2.8		3.1	3.0	3.1	
F1	1634-1644	13.5	W	0.2	*Surface*	23.7	23.7	23.7	29.6	29.7	29.7	7.4	7.5	7.5	104.5	104.8	104.7	2.5	2.6	2.5		2.8	2.8	2.8	
					Middle	23.6	23.7	23.7	29.8	29.7	29.8	7.4	7.4	7.4	103.8	103.6	103.7	2.5	2.4	2.5	2.5	2.7	2.7	2.7	2.7
					Bottom	23.5	23.4	23.5	29.8	29.9	29.9	7.3	7.3	7.3	102.5	102.2	102.4	2.3	2.4	2.4		2.6	2.6	2.6	
G1	1555-1605	11.6	W	0.1	*Surface*	23.7	23.7	23.7	29.6	29.7	29.7	7.2	7.1	7.2	100.7	100.3	100.5	2.3	2.3	2.3		2.5	2.6	2.6	
					Middle	23.6	23.7	23.7	29.8	29.7	29.8	7.1	7.1	7.1	99.6	99.3	99.5	2.5	2.4	2.4	2.4	2.7	2.7	2.7	2.7
					Bottom	23.5	23.4	23.5	29.9	29.8	29.9	7.0	7.0	7.0	98.5	98.1	98.3	2.6	2.6	2.6		2.8	2.9	2.9	
G2	1802-1813	15.5	W	0.2	*Surface*	23.6	23.7	23.7	29.7	29.6	29.7	7.4	7.3	7.4	103.8	103.4	103.6	2.2	2.1	2.1		2.3	2.3	2.3	
					Middle	23.6	23.5	23.6	29.8	29.7	29.8	7.4	7.4	7.4	104.4	104.1	104.3	2.3	2.4	2.4	2.3	2.5	2.6	2.6	2.5
					Bottom	23.4	23.5	23.5	29.9	29.9	29.9	7.5	7.5	7.5	104.9	105.4	105.2	2.5	2.5	2.5		2.7	2.7	2.7	
G3	1620-1632	17.4	W	0.3	*Surface*	23.7	23.6	23.7	29.8	29.7	29.8	7.9	7.8	7.8	110.4	110.1	110.3	2.6	2.7	2.7		2.8	2.9	2.9	
					Middle	23.5	23.6	23.6	29.9	29.8	29.9	8.0	8.1	8.1	112.7	112.5	112.6	3.0	2.9	3.0	2.9	3.2	3.2	3.2	3.1
					Bottom	23.4	23.6	23.5	29.5	29.9	29.7	8.0	7.9	7.9	111.5	111.2	111.4	3.1	3.1	3.1		3.4	3.3	3.4	

Remark or Obsevation:

Note: * Average

** Depth Average

Date: 5-May-16
Tide: Mid-Ebb
Weather: Cloudy
Sea Conditions: Small Wave
Zone A to B

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temperrature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
B1	1210-1220	7.4	E	0.2	*Surface*	23.8	23.9	23.9	29.6	29.6	29.6	8.0	8.0	8.0	111.5	112.0	111.8	2.3	2.4	2.3		2.5	2.5	2.5	
					Middle	23.8	23.8	23.8	29.6	29.6	29.6	8.0	8.0	8.0	112.8	112.3	112.6	2.5	2.4	2.4	2.3	2.7	2.6	2.7	2.5
					Bottom	23.8	23.7	23.8	29.7	29.6	29.7	7.8	7.9	7.8	109.8	110.2	110.0	2.3	2.3	2.3		2.4	2.5	2.5	
C1	1011-1020	21.9	E	0.1	*Surface*	23.8	23.9	23.9	29.6	29.5	29.6	7.3	7.4	7.4	102.9	103.1	103.0	2.8	2.8	2.8		3.1	3.0	3.1	
					Middle	23.6	23.5	23.6	29.5	29.4	29.5	7.3	7.2	7.3	102.0	101.6	101.8	2.6	2.7	2.6	2.6	2.8	2.9	2.9	2.9
					Bottom	23.3	23.2	23.3	29.3	29.2	29.3	7.4	7.4	7.4	103.8	104.3	104.1	2.5	2.4	2.4		2.7	2.6	2.7	
C2	1134-1144	30.4	E	0.2	*Surface*	23.8	23.7	23.8	29.6	29.5	29.6	8.0	7.9	7.9	111.5	110.7	111.1	2.3	2.4	2.3		2.5	2.6	2.6	
					Middle	23.7	23.7	23.7	29.7	29.7	29.7	8.1	8.0	8.0	113.2	112.3	112.8	2.1	2.0	2.0	2.3	2.3	2.2	2.3	2.5
					Bottom	23.6	23.5	23.6	29.8	29.9	29.9	7.8	7.8	7.8	109.1	109.8	109.5	2.5	2.4	2.4		2.7	2.6	2.7	
S1	1032-1042	9.2	E	0.2	*Surface*	23.8	23.7	23.8	29.6	29.5	29.6	7.2	7.2	7.2	100.8	101.2	101.0	2.9	3.0	3.0		3.2	3.3	3.3	
					Middle	23.8	23.8	23.8	29.5	29.5	29.5	7.2	7.1	7.1	100.5	99.6	100.1	2.7	2.8	2.7	2.8	3.0	3.1	3.1	3.1
					Bottom	23.7	23.6	23.7	29.5	29.6	29.6	6.9	6.9	6.9	97.2	96.8	97.0	2.5	2.7	2.6		2.8	3.0	2.9	
S2	1237-1247	12.2	E	0.2	*Surface*	23.8	23.8	23.8	29.6	29.6	29.6	7.3	7.4	7.3	102.7	103.2	103.0	2.4	2.4	2.4		2.6	2.6	2.6	
					Middle	23.8	23.8	23.8	29.6	29.7	29.7	7.5	7.5	7.5	105.2	104.6	104.9	2.7	2.7	2.7	2.7	3.0	3.0	3.0	3.0
					Bottom	23.6	23.7	23.7	29.7	29.7	29.7	7.6	7.6	7.6	107.0	106.3	106.7	3.0	2.8	2.9		3.3	3.2	3.3	
S3	1301-1311	1301-1311	E	0.2	*Surface*	23.8	23.7	23.8	29.5	29.5	29.5	7.2	7.3	7.2	101.0	101.6	101.3	2.6	2.6	2.6		2.8	2.9	2.9	
					Middle	23.7	23.7	23.7	29.5	29.6	29.6	7.3	7.4	7.4	102.9	103.2	103.1	2.3	2.3	2.3	2.5	2.5	2.5	2.5	2.7
					Bottom	23.6	23.6	23.6	29.7	29.8	29.8	7.3	7.2	7.3	102.1	101.5	101.8	2.6	2.7	2.6		2.8	2.9	2.9	
E2	1145-1155	8.0	EN	0.2	*Surface*	23.8	23.8	23.8	29.6	29.6	29.6	8.6	8.5	8.5	120.0	119.0	119.5	2.1	2.1	2.1		2.3	2.3	2.3	
					Middle	23.8	23.8	23.8	29.6	29.7	29.7	8.6	8.6	8.6	120.6	121.0	120.8	1.8	1.9	1.8	2.0	2.0	2.0	2.0	2.2
					Bottom	23.7	23.6	23.7	29.5	29.6	29.6	8.4	8.3	8.4	117.4	116.8	117.1	2.2	2.2	2.2		2.2	2.4	2.3	
E6	1158-1207	26.2	E	0.2	*Surface*	23.8	23.9	23.9	29.6	29.7	29.7	7.8	7.9	7.8	109.0	110.1	109.6	2.5	2.4	2.4		2.6	2.6	2.6	
					Middle	23.8	23.7	23.8	29.9	29.8	29.9	7.9	7.9	7.9	111.3	110.8	111.1	2.6	2.5	2.6	2.6	2.8	2.7	2.8	2.8
					Bottom	23.6	23.5	23.6	29.9	30.0	30.0	7.7	7.6	7.7	107.6	107.0	107.3	2.7	2.7	2.7		3.0	2.8	2.9	
E7	1021-1030	23.8	E	0.1	*Surface*	23.8	23.8	23.8	21.4	29.5	25.5	7.2	7.2	7.2	101.5	101.0	101.3	2.7	2.7	2.7		2.8	3.0	2.9	
					Middle	23.6	23.5	23.6	29.6	29.5	29.6	7.1	7.1	7.1	99.4	100.1	99.8	2.5	2.5	2.5	2.5	2.7	2.7	2.7	2.7
					Bottom	23.4	23.3	23.4	29.6	29.6	29.6	7.3	7.3	7.3	102.1	102.4	102.3	2.4	2.3	2.3		2.6	2.5	2.6	
E8	1223-1234	18.4	E	0.2	*Surface*	23.8	23.8	23.8	29.6	29.7	29.7	7.8	7.9	7.9	109.7	110.4	110.1	2.6	2.4	2.5		2.8	2.7	2.8	
					Middle	23.8	23.7	23.8	29.9	29.8	29.9	7.9	7.9	7.9	111.3	110.9	111.1	2.9	2.9	2.9	2.8	3.1	3.2	3.2	3.1
					Bottom	23.5	23.4	23.5	30.0	29.9	30.0	7.8	7.8	7.8	109.4	109.0	109.2	3.1	3.0	3.0		3.3	3.2	3.3	
E9	1054-1105	15.7	E	0.1	*Surface*	23.8	23.8	23.8	29.6	29.7	29.7	7.1	7.1	7.1	99.2	99.9	99.6	3.1	2.9	3.0		3.3	3.2	3.3	
					Middle	23.8	23.7	23.8	29.6	29.5	29.6	7.2	7.2	7.2	101.5	101.0	101.3	3.1	3.2	3.2	3.1	3.4	3.5	3.5	3.3
					Bottom	23.5	23.5	23.5	29.5	29.5	29.5	7.2	7.1	7.2	100.5	100.3	100.4	3.0	3.0	3.0		3.2	3.3	3.3	
F1	1120-1130	13.2	EN	0.2	*Surface*	23.8	23.8	23.8	29.5	29.4	29.5	7.4	7.3	7.4	103.4	102.7	103.1	2.6	2.7	2.6		2.8	2.9	2.9	
					Middle	23.8	23.8	23.8	29.5	29.5	29.5	7.4	7.4	7.4	104.1	103.7	103.9	2.3	2.3	2.3	2.6	2.5	2.5	2.5	2.8
					Bottom	23.7	23.7	23.7	29.6	29.5	29.6	7.3	7.3	7.3	101.9	102.4	102.2	2.8	2.9	2.8		3.0	3.1	3.1	
G1	1044-1053	11.3	E	0.2	*Surface*	23.8	23.8	23.8	29.5	29.5	29.5	7.0	7.1	7.1	98.5	99.2	98.9	2.5	2.5	2.5		2.7	2.7	2.7	
					Middle	23.8	23.7	23.8	29.5	29.6	29.6	7.1	7.1	7.1	100.1	99.5	99.8	2.8	2.7	2.7	2.5	3.0	2.9	3.0	2.7
					Bottom	23.7	23.7	23.7	29.4	29.4	29.4	6.9	6.9	6.9	96.6	97.2	96.9	2.4	2.4	2.4		2.6	2.5	2.6	
G2	1248-1258	15.3	E	0.2	*Surface*	23.7	23.8	23.8	29.6	29.7	29.7	7.2	7.2	7.2	101.5	101.0	101.3	2.2	2.3	2.3		2.4	2.5	2.5	
					Middle	23.8	23.8	23.8	29.9	29.8	29.9	7.3	7.3	7.3	102.2	102.6	102.4	2.6	3.5	3.0	2.7	2.8	2.7	2.8	2.7
					Bottom	23.7	23.7	23.7	29.8	29.9	29.9	7.4	7.4	7.4	104.4	103.8	104.1	2.7	2.7	2.7		2.9	3.0	3.0	
G3	1108-1118	17.0	EN	0.2	*Surface*	23.8	23.7	23.8	29.6	29.6	29.6	8.1	8.1	8.1	113.1	113.9	113.5	2.9	2.9	2.9		3.1	3.2	3.2	
					Middle	23.7	23.7	23.7	29.6	29.7	29.7	8.3	8.2	8.2	115.8	114.9	115.4	3.0	3.1	3.0	3.0	3.3	3.3	3.3	3.3
					Bottom	23.6	23.5	23.6	29.6	29.6	29.6	8.0	8.0	8.0	112.5	111.9	112.2	3.2	3.1	3.2		3.5	3.4	3.5	

Remark or Obsevation:

Note: * Average
** Depth Average