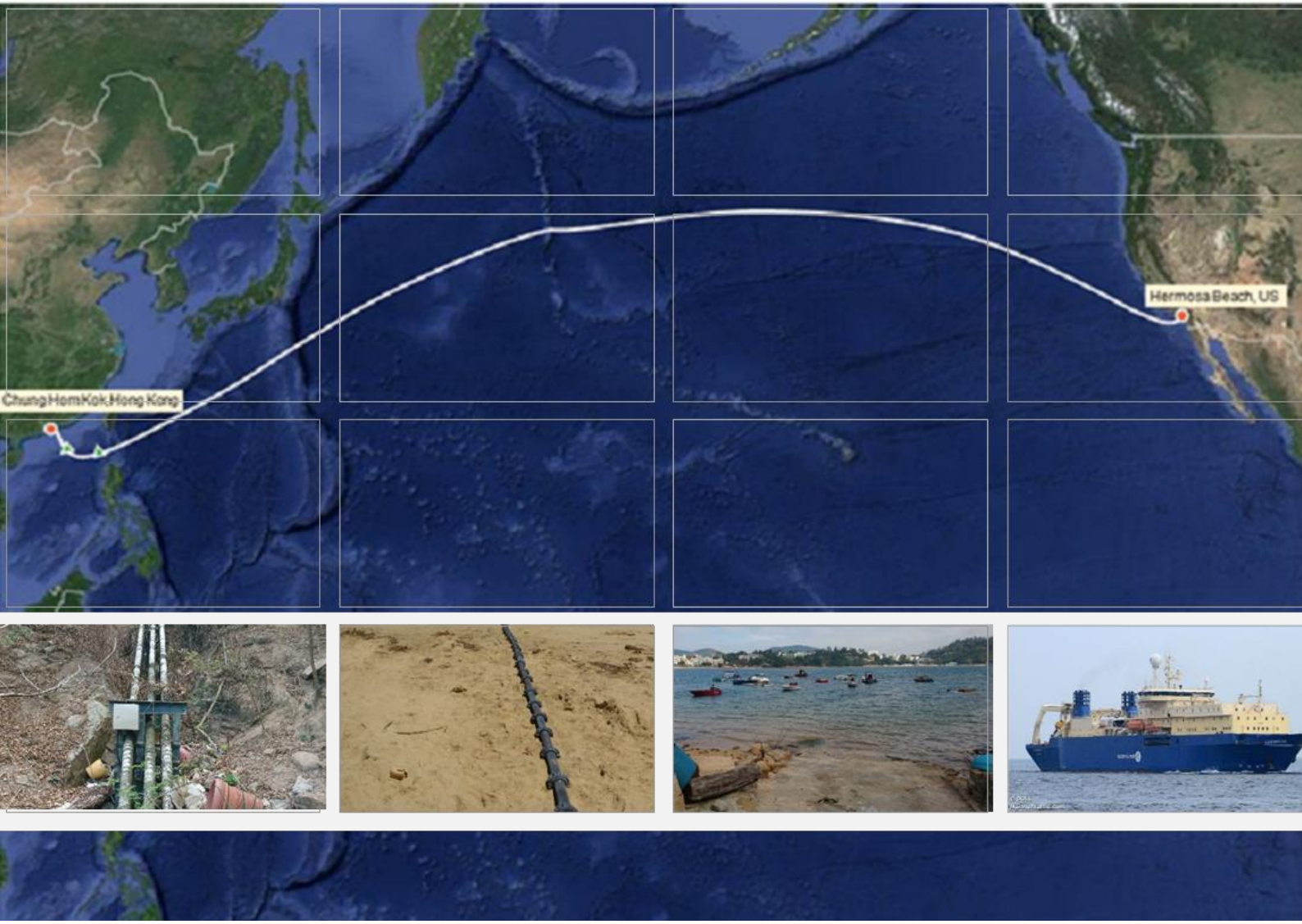

HKA Submarine Cable – Chung Hom Kok

2nd Weekly Impact Water Quality Monitoring Report (Zone B)

28 May 2021

Project No.: 0585919

The business of sustainability

Document details	
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Signature Page

28 May 2021

HKA Submarine Cable – Chung Hom Kok

2nd Weekly Impact Water Quality Monitoring Report (Zone B)

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Environmental Permit No. EP- 567/2019
HKA Submarine Cable – Chung Hom Kok

Environmental Team Leader Certification & Independent Environmental Checker Verification

Reference Document/Plan

Document/~~Plan~~:	2nd Weekly Water Quality Monitoring Report
Date of Report:	28 May 2021
Certified by ET:	ERM-Hong Kong Ltd
Verified by IEC:	Ecosystems Ltd.

Reference EP Requirement

EP Condition: Conditions No. 3.2 – 3.3

Content: *Water Quality Monitoring*

3.2 Samples, measurements and necessary remedial actions shall be taken in accordance with the EM&A requirements described in the Project Profile (Register No.: PP-573/2018) by:

(a) conducting baseline environmental monitoring;

(b) conducting impact monitoring;

(c) conducting post project monitoring; and

(d) carrying out remedial actions in accordance to the EM&A requirements as described in the Project Profile (Register No.: PP-573/2018), or as agreed by the Director, in case where specified criteria in the EM&A requirements are exceeded.

3.3 Submit to the Director three hard copies and one electronic copy of the following, as defined in the EM&A requirements described in the Project Profile (Register No.: PP-573/2018):

(a) Baseline Monitoring Report on water quality no later than 2 week before the commencement of cable installation/ repair operation works;

(b) Weekly EM&A Report no later than 5 days after the relevant monitoring data are collected or become available during the cable installation/ repair operation works; and

(c) Post Project Monitoring Report within one month after completion of the marine works.

ETL Certification

I hereby certify that the above referenced document/~~plan~~ complies with the above referenced condition of EP-567/2019.

Mandy To

Mandy To, Environmental Team Leader

Date: 26 May 2021

中国电信
CHINA TELECOM

IEC Verification

I hereby verify that the above referenced document/~~plan~~ complies with the above referenced condition of EP-567/2019.

Dr Vincent Lai, Independent Environmental Checker

Date: 27 May 2021

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EXECUTIVE SUMMARY

The cable installation works for the **HKA Submarine Cable – Chung Hom Kok** (the 'Project') have been scheduled to be carried out one (1) continuous phase, as follows:

- **Land & Shore-End Cable Installation and Submarine Cable Installation up to Zone A** – tentatively scheduled from 28 May 2021; and
- **Marine Installation of Submarine Cable** – From 10 to 31 May 2021; if required, to return and complete marine installation works in September 2021, according to *Condition 2.5(a)* of the Environmental Permit (EP-567/2019), stating, *"no marine works shall be carried out within the area of Stanley Bay from 1 June to 31 August inclusive".*

The Project commenced nearshore marine diver jetting works on 10 May 2021, and offshore marine diver jetting works on 13 May 2021. Offshore marine installation works were completed on 19 May 2021. The land works at Sha Shek Tan (SST), Chung Hom Kok (CHK) are tentatively scheduled from 28 May 2021 (note: no jetting work and no water quality [WQ] impact monitoring requirements).

This is the *2nd Weekly Impact Water Quality Monitoring Report,* presenting the water quality impact monitoring conducted during the period between 14 and 17 May 2021 in Zone B, in accordance with the EM&A Manual.

Summary of Construction Works undertaken during the Reporting Period

During the reporting week, diver hand jetting operations (i.e. simultaneous jetting and burial of cable) were carried out between 14 and 17 May 2021 inclusive. Marine installation works were conducted within Zone B during the reporting period.

Water Quality

Monitoring events were conducted for the installation period between 14 and 17 May 2021 in Zone B. The monitoring was carried out for two (2) days over the period of four (4) work days within this period, at mid-flood and mid-ebb tides, at three (3) depths (surface, middle and bottom). The intervals between two (2) sets of monitoring were not less than 36 hours. All monitoring events at the nine (9) designated monitoring stations in Zone B (including five [5] Sensitive Receiver Stations, two [2] Gradient Stations, and two [2] Control Stations) were performed on schedule, i.e. on 14 and 17 May 2021.

Recorded levels of dissolved oxygen, albeit frequently recorded as being below the corresponding Action and Limit Levels, were deemed to be due to natural fluctuations and stratification, as indicated by the notable water temperature and salinity differences at the surface and bottom layer. The depth-averaged dissolved oxygen level were quite high and stable, with dissolved oxygen saturation levels of >95% throughout the period, while those of bottom level were still above 84%. Fluctuation in turbidity and suspended solids levels were observed during the two (2) monitoring days, again deemed to be due to natural seasonal variation.

Environmental Non-conformance

No non-conformance was recorded; results of detailed investigations indicated none of the exceedances recorded were attributed to the Project construction works:

- Two (2) Notification of Exceedances (NOEs) with detailed investigation reports were issued to EPD during the reporting period for recording daily exceedances of Action and Limit Levels for dissolved oxygen, both bottom layer (on all monitoring days) as well as surface and middle (also on all monitoring days). Also, there were exceedances of turbidity and suspended solids.

- The Contractors have been requested by the Environmental Team (ET) to be aware that exceedances have recently occurred and take care to ensure all necessary procedures are followed to avoid the Project impacting the water environment.

Future Key Issues

There are no key issues identified.

Diver jetting works offshore were completed on Wednesday 19 May 2021, no further impact monitoring works are required for Zone B.

Over the next monitoring period (i.e. on 28 to 31 May 2021), *Land & Shore-End Cable Installation and Submarine Cable Installation up to Zone A* and diver hand jetting works for marine installation in Zone A are due to occur, as well as the quality impact monitoring work during all installation work-days, accordingly. If required, these works are tentatively due to return in September 2021, according to *Condition 2.5(a)* of the EP, stating, *"no marine works shall be carried out within the area of Stanley Bay from 1 June to 31 August inclusive".*

1. INTRODUCTION

1.1 Background

The proposed submarine cable is a section of the 'Hong Kong-America (HKA)' submarine cable network (hereafter known as 'HKA' and / or the Project), which will span more than 13,000 kilometers in total. The system will further boost the external telecommunications capacity of Hong Kong, reinforcing Hong Kong as a key communication hub in the Asia-Pacific region.

The cable will connect to Chung Hom Kok (CHK) within the HKSAR. **China Telecom Global Limited (CTG)** is providing the cable landing point and the associated cable landing services in Hong Kong.

The route of the proposed HKA submarine cable system within Hong Kong SAR is depicted in ***Figure 1.1***. The proposed cable would land at an existing Beach Manhole (BMH) location at Sha Shek Tan (SST), CHK, and connect to an existing Cable Landing Station (CLS).

It should be noted that CHK is currently the landing site for a number of submarine cables (i.e. New T&T domestic cable route, C2C Cable network; and SJC). The existing BMH is connected to the CLS on the hill above the landing beach and existing conduits connect the BMH and CLS.

The cable will travel from SST of CHK southward, exiting Stanley Bay, turning east near the Stanley Peninsular and past Cape d'Aguilar, continuing eastward, north of Beaufort and Sung Kong Islands, to the eastern boundary of HKSAR waters, where it will enter the South China Sea.

The Project Profile (PP- 573/2018) which includes an assessment of the potential environmental impacts associated with the installation of the submarine telecommunications cable system within HKSAR (including connection to land at CHK) 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 2 January 2019, EPD issued a letter to CTG permitting direct application for an environmental permit and following an application, EPD subsequently issued an Environmental Permit (EP-567/2019) on 20 February 2019.

Pursuant to *Condition 3.1* of the EP, an Environmental Monitoring and Audit (EM&A) programme, as set out in the Project Profile (PP) is required for this Project, with baseline water quality monitoring data collected prior to the start of cable installation works, and Action and Limit Levels derived from these data.

The HKA cable installation is scheduled to be carried out in one (1) continuous phase. The specific Zones for cable installation works for Zone A and Zone B are shown in ***Figure 1.2*** to ***Figure 1.4***, and the current schedule and works carried out to date for each Phase is as follows:

1) **Land & Shore-End Cable Installation and Submarine Cable Installation up to Zone A:** Land trenching and nearshore marine diver jetting works up to Zone A (i.e. HK Grid coordinate 839544.426E 806852.911N, at 2.088 km from the landing point in SST, CHK) – tentatively scheduled week commencing ; and

2) **Marine Installation of Submarine Cable:** Installation of the HKA submarine cable from Zone A to HKSAR marine eastern boundary, using injector burial tools/ sledge tools for simultaneous lay and burial operations, and potential diver jetting in specific areas (e.g. HK Electric Pipeline crossing).

    a. Baseline data for Zone A and Zone B was collected prior to the start of marine installation works (i.e. between 12 March and 6 April 2021) and Action and Limit Levels derived from these data, as presented in the final *Baseline Water Quality Monitoring Report*.

    b. Nearshore marine diver jetting works in Zone A commenced on 10 May 2021, and was partially completed on the same day.

c. Remaining marine installation works from end of Zone A to the HKSAR marine eastern boundary using jetting technique commenced on 13 May 2021, and was completed on 19 May 2021.

d. Land trenching tentatively scheduled to start from 28 May 2021. Following issue of Marine Department Notice on 29 January 2021.

e. If required, land trenching and some marine works in Zone A are tentatively due to re-commence in September 2021, according to *Condition 2.5(a)* of the EP, stating, *"no marine works shall be carried out within the area of Stanley Bay from 1 June to 31 August inclusive".*

This report covers the data collected from monitoring stations as shown in ***Figure 1.4***, and refers to the *Baseline Water Quality Monitoring Report* for Action and Limit Levels.

1.2 Purpose of this Report

This is the 2nd Weekly Water Quality Impact Monitoring Report for monitoring works in Zone B, summarising the water quality impact monitoring results during the reporting period from 14 to 17 May 2021.

Under the requirement of *Condition 3.3(b)* of the EP, weekly impact monitoring reports on water quality shall be prepared and submitted to the EPD no later than five (5) days after the relevant monitoring data are collected or become available during the cable installation works.

1.3 Structure of this Report

The remainder of the report is structured as follows:

Section 1: Introduction
Provide details of the background, purpose and structure of the report, and scope of the Project.

Section 2: Project Information
Summarises the construction works undertaken and the status of Environmental Permits/Licenses during the reporting period.

Section 3: Water Quality Monitoring Requirements
Summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, and Event / Action Plans.

Section 4: Monitoring Results
Summarises the monitoring results obtained in the reporting period.

Section 5: Environmental Non-conformance
Summarises any monitoring exceedance, environmental complaints and environmental summons within the reporting period.

Section 6: Future Key Issues
Summarises the monitoring schedule for the next week.

Section 7: Conclusions
Presents the key findings of the impact monitoring results.

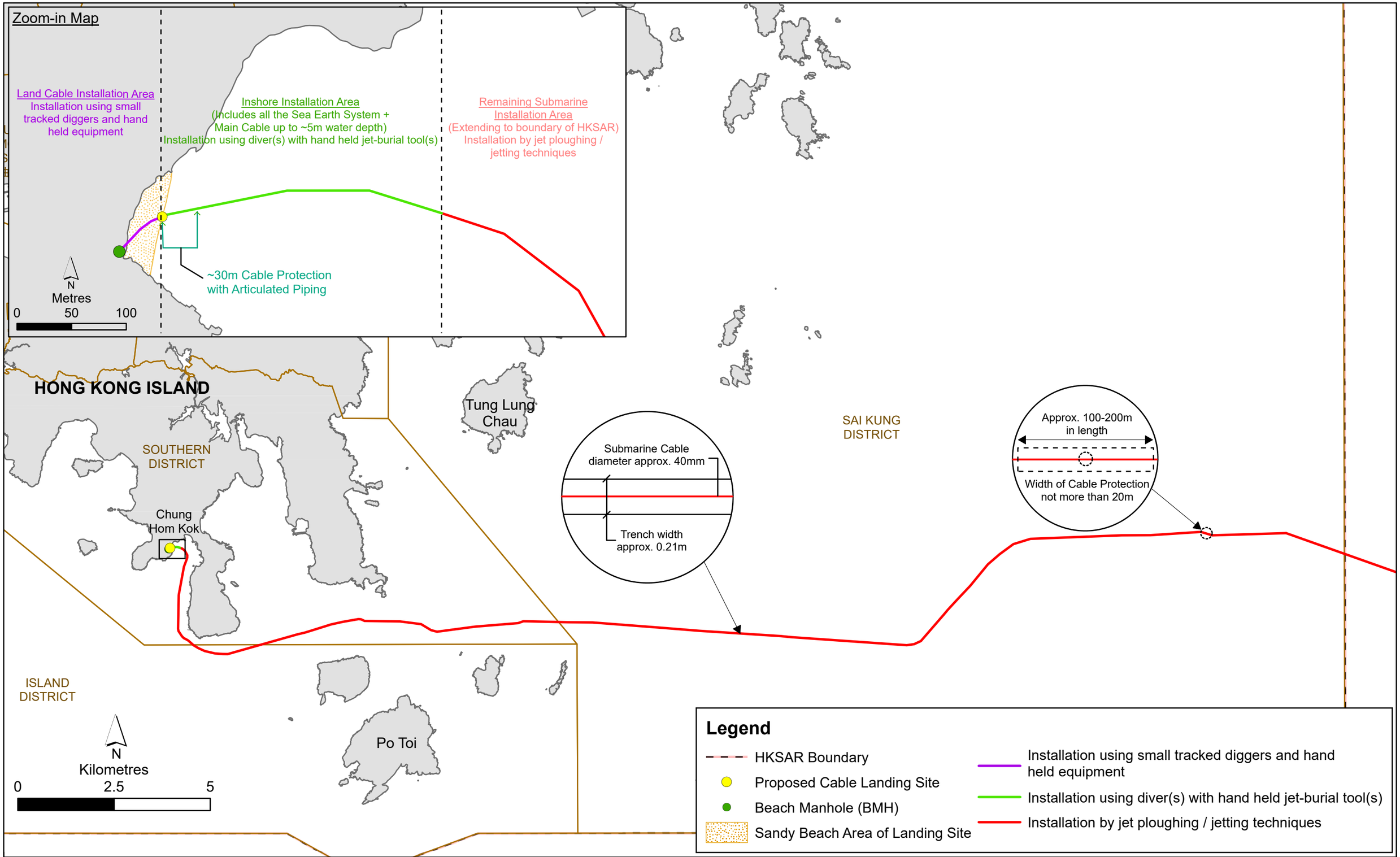

Figure 1.1

Proposed HKA Cable System

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Environmental Resources Management

ERM

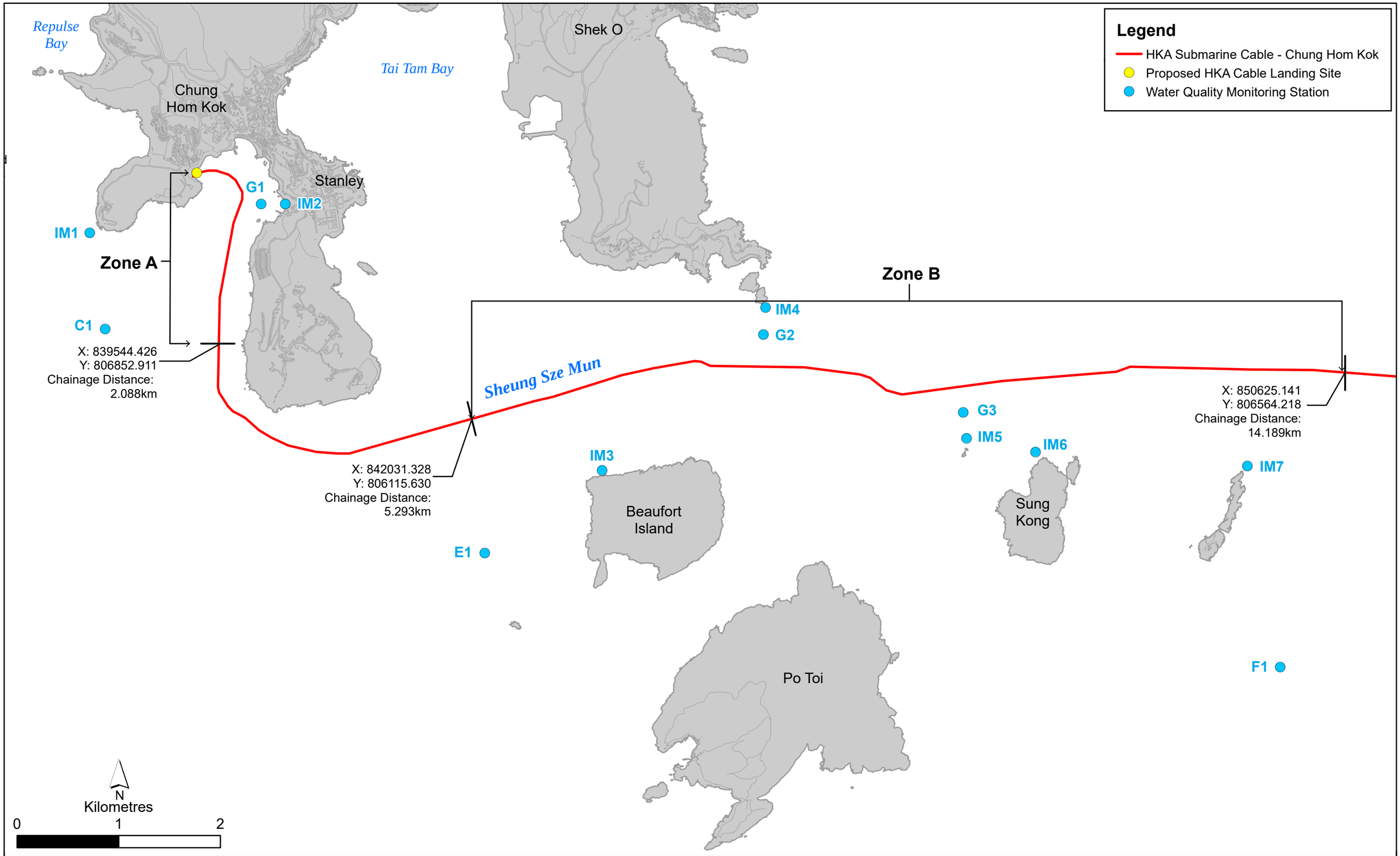

Figure 1.2

Water Quality Monitoring Stations

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Date: 22/4/2021

Environmental Resources Management

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Legend

HKA Submarine Cable - Chung Hom Kok

Proposed HKA Cable Landing Site

Water Quality Monitoring Station

Chung Hom Kok

Stanley

IM1

G1

IM2

C1

N

Meters

0 250 500

Figure 1.3

Water Quality Monitoring Stations - Zone A

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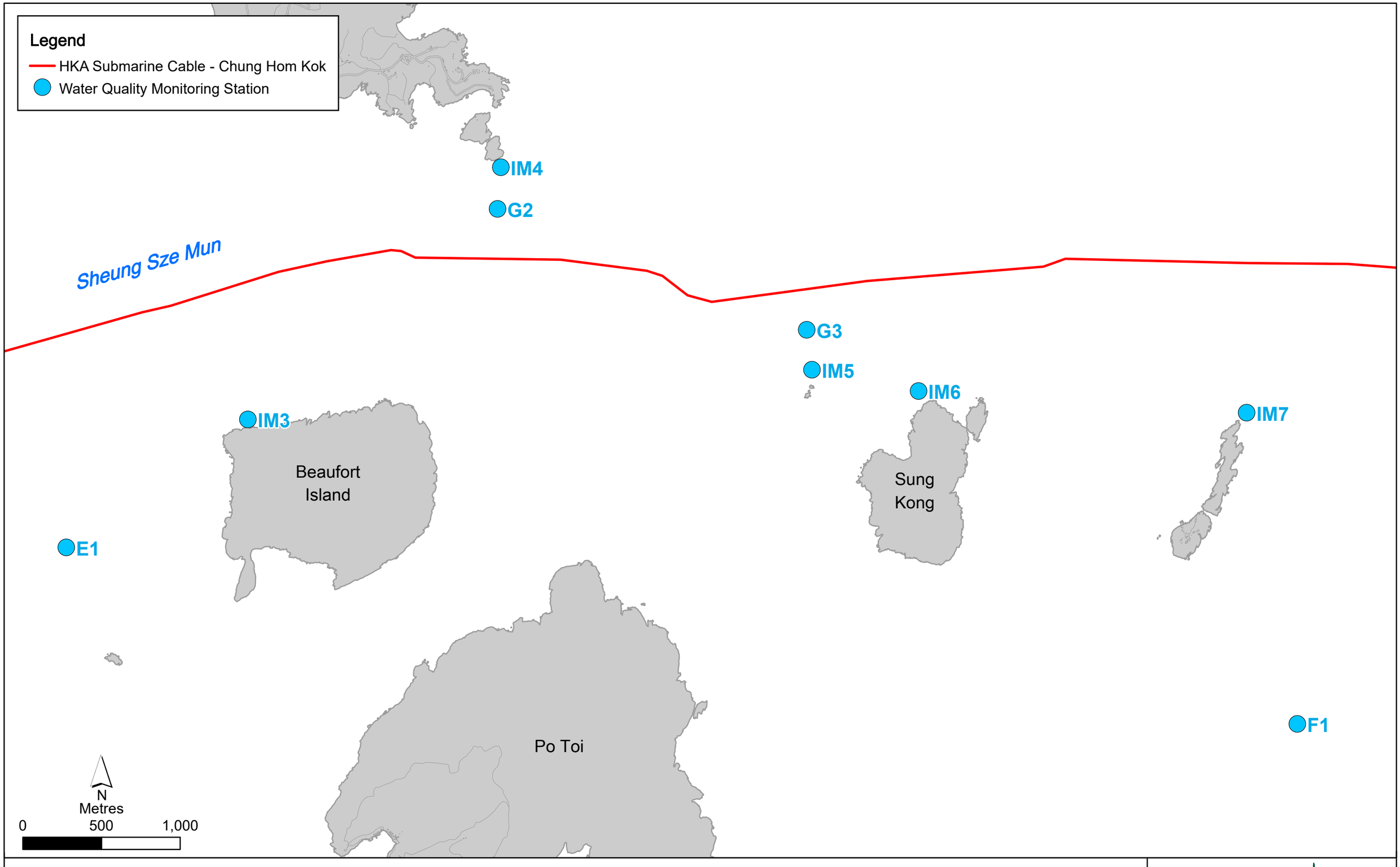

Figure 1.4

Water Quality Monitoring Stations - Zone B

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Environmental Resources Management

ERM

2. PROJECT INFORMATION

2.1 Marine Construction Works Undertaken during Reporting Week

A summary of the key works undertaken during the reporting week is shown in ***Table 2.1***:

Table 2.1 Summary of Marine Works Undertaken During the Reporting Week

Date	Works Area	Activity
Fri 14 May 2021	Zone B	Diver hand jetting and burial of cable simultaneously.
Sat 15 May 2021	Zone B	Diver hand jetting and burial of cable simultaneously.
Sun 16 May 2021	Zone B	Diver hand jetting and burial of cable simultaneously.
Mon 17 May 2021	End of Zone B to eastern boundary of HKSAR waters	Diver hand jetting and burial of cable simultaneously; completion of installation works in Zone B.

2.2 Status of Environmental Approval Documents

A summary of the relevant permits, licences, notifications and/or reports on environmental protection for this Project is presented in ***Table 2.2***:

Table 2.2 Summary of Environmental Licensing, Notification, Permit and Reporting Status

Permit / Licence / Notification / Report	Reference	Validity Period	Remarks
Environmental Permit	(EP-567/2019) Available at https://www.epd.gov.hk/eia/register/permit/latest/ep5672019.htm	Throughout construction & operation period	Granted on 20 February 2019
EM&A Manual	(PP-573/2018) As part of the Project Profile; available at: https://www.epd.gov.hk/eia/register/profile/latest/dir265/dir265.pdf	Throughout construction & operation period	Approved by EPD on 2 January 2019
Marine Department Notice	(No. 28/2021) Available at: https://www.mardep.gov.hk/en/notices/pdf/mdn21028.pdf	Throughout construction & operation period	Issued by the Marine De partment on 29 January 2021
Baseline Water Quality Monitoring Report	Currently unavailable online, at the time of this report	Throughout construction period & operation period	Approval by EPD still ongoing at the time of report writing
1st Weekly Impact Water Quality Monitoring Report	Currently unavailable online, at the time of report writing	Throughout construction period & operation period	Approval by EPD still ongoing at the time of report writing

3. WATER QUALITY MONITORING

3.1 Monitoring Location

In accordance with the *Appendix F* of approved PP, during the installation of the HKA Project in Zone B, water quality sampling was undertaken at stations situated around the cable laying works at CHK. The locations of the sampling stations are listed in ***Table 3.1*** and shown in ***Figure 1.2*** and ***Figure 1.4.***

Table 3.1 Water Quality Monitoring Stations

Stations	Nature	Approx. Geodesic Distance (1) to Proposed Cable Alignment (m)	Easting	Northing
Zone **B**: The waters from Beaufort Island to Waglan Island where a number of sensitive receivers are located close to the cable alignment. Covers the cable alignment between Chainage 5.293 km and 14.189 km.				
IM3*	Coral site along the coast of north Beaufort Island	840	843316	805606
IM4*	Coral sites along the coast of Cape d'Aguil ar at Kau Pei Chau	580	844923	807208
IM5*	Coral sites along the coast of Sung Kong Is let	510	846901	805922
IM6*	Coral sites along the coast of Sung Kong	720	847579	805787
IM7*	Coral sites along the coast of Waglan Islan d	950	849664	805649
G2*	Gradient Stations (Between Coral sites alo ng the coast of Cape d'Aguilar at Kau Pei Chau and cable alignment)	440	844962	807066
G3*	Gradient Stations (Between Coral sites alo ng the coast of Sung Kong Islet)	260	846868	806175
E1*	Control Station for Zone B in Ebb Tide	1310	842161	804794
F1*	Control Station for Zone B in Flood Tide	2920	849986	803673

Note:
(1) Geodesic distance refers to the shortest straight line distance between two locations, without regard on the physical obstacles in between.

3.2 Sampling and Testing Methodology

The impact water quality monitoring was conducted in accordance with the requirements stated in the *Appendix F* of approved PP. These are presented below.

3.2.1 Parameters Measured

The parameters measured *in situ* were:

- dissolved oxygen (DO) (% saturation and mgL^{-1})
- temperature (°C)
- turbidity (NTU)
- salinity (‰ or ppt)

The only parameter to be measured in the laboratory was:

- suspended solids (SS) (mgL^{-1})

In addition to the water quality parameters, other relevant data had also been measured and recorded in field logs, including the location of the sampling stations and cable vessel/ burial machine at the time of sampling, water depth, time, weather conditions, sea conditions, tidal state, current direction

and speed, special phenomena and work activities undertaken around the monitoring and works area that may influence the monitoring results.

3.2.2 Equipment

Table 3.2 summaries the equipment used for the impact water quality monitoring.

Table 3.2 Equipment used during Impact Water Quality Monitoring

Equipment	Model
Global Positioning Device	Garmin etrex 20x
Water Depth Gauge	Sontek Riversurveyor
Water Sampling Equipment	Aquatic Research Instruments horizontal / vertical types 2.2L
Salinity, DO, Temperature Measuring Meter	YSI ProDSS (Multi-Parameter)
Current Velocity and Direction	Sontek Riversurveyor
Turbidity Meter	YSI ProDSS (Multi-Parameter)

3.2.3 Monitoring Frequency and Timing

Impact Monitoring at all monitoring stations within Zone B (i.e. IM3, IM4, IM5, IM6, IM7, G2, G3, E1 and F1) took place when the cable installation works were undertaken, as shown in ***Figure 1.4***. The sampling works ceased when no cable installation works were conducted inside Zone B.

All construction works were undertaken during the designated working hours (i.e. 00:00 - 24:00; including Sundays and public holidays). A total of four (4) monitoring rounds were conducted during the 24-hour work period on each work-day from 00:00 - 24:00. The interval between two (2) sets of impact monitoring (i.e. including the collection of *In-situ* and SS data) during the cable installation works was no less than 36 hours and samples were taken twice during a 4 hour window of 2 hours before and 2 hours after a mid-flood and mid-ebb tidal state on each sampling occasion.

Reference was made to the predicted tides at Waglan Island, 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 Waglan Island, the impact water quality monitoring was, and will be conducted between 10 May and 31 May 2021, following the schedule presented in **Appendix A**.

3.2.4 Sampling / Testing Protocols

All *in situ* monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS (Quality Pro Test-Consult Limited) before use (see calibration reports in **Appendix B**), and will subsequently 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* were observed. Sufficient stocks of spare parts shall be maintained for replacements when necessary. Backup monitoring equipment were made available so that monitoring could proceed uninterrupted even when equipment is under maintenance, calibration etc.

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.

(1) Hong Kong Observatory (2021) http://www.hko.gov.hk/tide/predtide.htm?s=WAG [Accessed in May 2021]

At least two (2) replicate samples were collected from each of the monitoring events for *in situ* measurement and lab analysis.

3.2.5 Laboratory Analysis

All laboratory work was carried out in a HOKLAS accredited laboratory (ALS Technichem (HK) Pty Ltd). Water samples of about 1,000 mL were collected at the monitoring, gradient and control stations for carrying out the laboratory determinations. The determination work shall start within the next working day after collection of the water samples. The SS laboratory measurements were provided within five (5) days of the sampling event. 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 submitted information included pre-treatment procedures, instrument use, Quality Assurance/Quality Control (QA/QC) details (such as blank, spike recovery, number of duplicate samples per-batch etc.), detection limits and accuracy. The QA/QC details were in accordance with requirements of HOKLAS or another internationally accredited scheme (**Appendix C**).

3.2.6 Sampling Depths

At each station, measurements and water samples were taken at three (3) depths, namely 1 m below water surface, mid-depth and 1 m above seabed. For stations that are less than 3 m in depth, only the mid-depth sample was taken. For stations that are less than 6 m in depth, only the surface and seabed sample was taken.

3.2.7 Action and Limit Levels

The Action and Limit levels, which were established based on the results of *Baseline Water Quality Monitoring Report*, are presented in ***Table 3.3***.

Table 3.3 Action and Limit Level for Water Quality

Parameter	Action Level	Limit Level
SS in mgL^{-1} (Depth-averaged)	95%-ile of baseline data (3.9 mg L^{-1}), or 20% exceedance of value at any impact station compared with corresponding data from control station, whichever monitoring result is higher	99%-ile of baseline data (4.6 mg L^{-1}), or 30% exceedance of value at any impact station compared with corresponding data from control station, whichever monitoring result is higher
DO in mgL^{-1}	Surface and Middle 5%-ile of baseline data for surface or middle layer (6.84 mg L^{-1}) Bottom 5%-ile of baseline data for bottom layers (6.69 mg L^{-1})	Surface and Middle 4mg/L or 1%-ile of baseline for surface and middle layer, whichever is lower (4 mg L^{-1}) Bottom 2mg/L or 1%-ile of baseline data for bottom layer whichever is lower (2 mg L^{-1})
Turbidity in NTU (Depth-averaged)	95%-ile of baseline data (2.7 NTU), or 20% exceedance of value at any impact station compared with corresponding data from control station, whichever monitoring result is higher	99%-ile of baseline data (3.7 NTU), or 30% exceedance of value at any impact station compared with corresponding data from control station, whichever monitoring result is higher

Parameter	Action Level	Limit Level

Notes:

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

4. IMPACT MONITORING RESULTS

A total of four (4) monitoring events were carried out between 14 and 17 May 2021 at Zone B, for two (2) days over the period of four (4) work days of the 2nd week of impact monitoring reporting. All monitoring events at all designated monitoring stations within Zone B only were performed on schedule, i.e. on 14 and 17 May 2021.

No major Project activities that influenced the water quality within Zone B were identified between 14 and 17 May 2021.

4.1 Data Collected

The impact monitoring data taken for this 2nd weekly impact monitoring report within Zone B are presented in **Appendix D**. In general, the water quality parameters were stable throughout each sampling day (i.e. on 14 and 17 May 2021). Recorded levels of dissolved oxygen, albeit frequently recorded as being below the corresponding Action and Limit Levels, were deemed to be due to natural fluctuations and stratification, as indicated by the notable water temperature and salinity differences at the surface and bottom layer. The depth-averaged dissolved oxygen level were quite high and stable, with dissolved oxygen saturation levels of >95% throughout the period, while those of bottom level were still above 84%.

Fluctuation in turbidity were observed on both monitoring days (i.e. 14 and 17 May 2021), and suspended solids levels on 17 May 2021, again deemed to be due to natural seasonal variation.

5. ENVIRONMENTAL NON-CONFORMANCES

5.1 Summary of Environmental Exceedance

Exceedances were recorded during the monitoring period (i.e. on 14 and 17 May 2021) for dissolved oxygen, turbidity and suspended solids at the monitoring stations in Zone B. None of the exceedances recorded were attributed to the Project construction works as detailed below.

Two (2) Notification of Exceedances (NOEs) with detailed investigation reports were issued to EPD during the reporting period for recording exceedances of Action and Limit Levels for dissolved oxygen, both bottom layer (on both monitoring days) as well as surface and middle (on 14 May 2021), for turbidity (on both monitoring days), and suspended solids (on 17 May 2021).

The exceedances were examined against the Project works in the NOEs. Exceedance of dissolved oxygen, turbidity and suspended solids were recorded during long stand by period when no cable installation was conducted (17 May 2021 flood tide) or when there was significant stratification which inhibits reaeration (14 and 17 May 2021). Also depth-averaged dissolved oxygen saturation level remained high (95% or above). The recorded exceedances were therefore deemed to be due to natural fluctuations or other sources.

The Contractors have been requested by the ET to be aware that exceedances have recently occurred and take care to ensure all necessary procedures are followed to avoid the Project impacting the water environment.

5.2 Summary of Environmental Non-compliance

No non-compliance events were recorded during the reporting period due to the Project.

5.3 Summary of Environmental Complaint

No environmental complaints were received during the reporting period.

5.4 Summary of Environmental Summons and Prosecution

No summons or prosecution on environmental matters were received during the reporting period.

6. FUTURE KEY ISSUES

6.1 Key Issues for the Coming Week

There is no key issue identified.

Diver jetting works offshore and cable burial operations were completed on Wednesday 19 May 2021, no further impact monitoring works are required for Zone B.

6.2 Monitoring Schedule for the Coming Weeks

Over the next monitoring period (i.e. on 28 to 31 May 2021), *Land & Shore-End Cable Installation and Submarine Cable Installation up to Zone A* and diver hand jetting works for marine installation in Zone A are due to occur, as well as the water quality impact monitoring work during all installation work-days, accordingly. If required, these works are tentatively due to return in September 2021, according to *Condition 2.5(a)* of the EP, stating, *"no marine works shall be carried out within the area of Stanley Bay from 1 June to 31 August inclusive".*

7. CONCLUSION

This 2nd Weekly Impact Monitoring Report presents the EM&A work undertaken during the period from 14 to 17 May 2021 in accordance with the *Appendix F* of the approved Project Profile (PP) and the requirements under EP-567/2019.

No non-compliance events were recorded during the reporting week due to the Project.

There were exceedances of Action and Limit Levels for dissolved oxygen, both bottom layer on both monitoring days (i.e. on 14 and 17 May 2021) as well as surface and middle layer on 14 May 2021, for turbidity on all monitoring days (i.e. on 14 and 17 May 2021) and suspended solids on 17 May 2021.

The exceedances were examined against the Project works in the NOEs. Exceedance of dissolved oxygen, turbidity and suspended solids were recorded during a long standby period when no cable installation was conducted (17 May 2021 flood tide) or when there was significant stratification which inhibits reaeration (14 and 17 May 2021). Also depth-averaged dissolved oxygen saturation level remained high (95% or above). The recorded exceedances were therefore deemed to be due to natural fluctuations or other sources.

The Contractors have been requested by the Environmental Team (ET) to be aware that exceedances have recently occurred and take care to ensure all necessary procedures are followed to avoid the Project impacting the water environment.

The ET will keep track of the EM&A programme to verify compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

APPENDIX A IMPACT WATER QUALITY MONITORING SCHEDULE (ZONE A & B)

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
ebb tide 9:46 - 13:46 flood tide 15:59 - 19:59 ***Zone A impact*** 10-May	11-May	12-May	13-May	ebb tide 11:43 - 15:43 flood tide 18:38 - 22:38 ***Zone B impact*** 14-May	15-May	16-May
ebb tide 13:04 - 17:04 flood tide 5:08 - 9:08 ***Zone B impact*** 17-May	18-May	19-May	20-May	21-May	22-May	23-May
24-May	25-May	26-May	27-May	ebb tide 11:35 - 15:35 flood tide 4:38 - 8:38 ***Zone A impact*** 28-May	29-May	30-May
ebb tide 14:18 - 18:18 flood tide 6:34 - 10:34 ***Zone A impact*** 31-May	1-Jun	2-Jun	3-Jun	4-Jun	5-Jun	6-Jun
					Appendix A **HKA Impact Monitoring Schedule (Zone A & Zone B)**	

APPENDIX B CERTIFICATES OF CALIBRATION FOR *IN SITU* MONITORING INSTRUMENTS

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

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : BA040092
Date of Issue : 22 April 2021

PART A – CUSTOMER INFORMATION

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

PART B – DESCRIPTION

Name of Equipment	:	YSI ProDSS (Multi-Parameters)
Manufacturer	:	YSI (a xylem brand)
Serial Number	:	16H104234
Date of Received	:	Apr 22, 2021
Date of Calibration	:	Apr 22, 2021
Date of Next Calibration[a]	:	Jul 21, 2021

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

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

PART D – CALIBRATION RESULTS[b,c]

(1) pH at 25°C

Target (pH unit)	Displayed Reading[d] (pH Unit)	Tolerance[e](pH Unit)	Results
4.00	3.98	-0.02	Satisfactory
7.42	7.40	-0.02	Satisfactory
10.01	9.92	-0.09	Satisfactory

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

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
10	10.02	0.02	Satisfactory
25	24.00	-1.00	Satisfactory
40	40.00	0.00	Satisfactory

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

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

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

LEE Chun-ning, Desmond
Senior Chemist

專業化驗有限公司
QUALITY PRO TEST-CONSULT LIMITED
Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong
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PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.15	0.27	0.12	Satisfactory
1.88	1.92	0.04	Satisfactory
5.79	5.79	0.00	Satisfactory
8.49	8.42	-0.07	Satisfactory

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

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)	Results
0.001	146.9	145.3	-1.09	Satisfactory
0.01	1412	1331	-5.74	Satisfactory
0.1	12890	12364	-4.08	Satisfactory
0.5	58670	56724	-3.32	Satisfactory
1.0	111900	109210	-2.40	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.18	1.80	Satisfactory
20	20.25	1.25	Satisfactory
30	30.04	0.13	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading[f] (NTU)	Tolerance[g] (%)	Results
0	0.00	--	Satisfactory
10	10.10	1.0	Satisfactory
20	20.14	0.7	Satisfactory
100	107.6	7.6	Satisfactory
800	790	-1.3	Satisfactory

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

~ END OF REPORT ~

Remark(s): -

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

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

APPENDIX C QA/ QC RESULTS FOR SUSPENDED SOLIDS TESTING

QA/QC Results of Laboratory Analysis of Total Suspended Solids				
Sampling Date	Sample Duplicate		Method Blank *	Laboratory Control Spike
	Sample ID	% Error	(mg/L)	% Recovery **
14-May-21	E1-ME-S-1	14.3	<0.5	97.0
	F1-ME-B-1	25.0		
	IM4-ME-M-1	16.7	<0.5	100.0
	IM6-ME-S-1	4.8		
	IM7-ME-B-1	8.3	<0.5	98.0
	G3-ME-M-1	20.8		
	F1-MF-S-1	11.8	<0.5	110.0
	IM3-MF-B-1	16.7		
	IM5-MF-M-1	13.6	<0.5	99.0
	IM7-MF-S-1	8.0		
	G2-MF-B-1	10.5	<0.5	96.0
17-May-21	E1-ME-S-1	5.6	<0.5	96.0
	F1-ME-B-1	6.5		
	IM4-ME-M-1	7.1	<0.5	108.0
	IM6-ME-S-1	2.2		
	IM7-ME-B-1	9.5	<0.5	94.0
	G3-ME-M-1	2.7		
	F1-MF-S-2	4.3	<0.5	98.0
	IM3-MF-B-1	8.8		
	IM5-MF-M-1	7.1	<0.5	110.0
	IM7-MF-S-1	11.8		
	G2-MF-B-1	8.9	<0.5	109.0

Note: (*) Reporting limit of SS is 0.5 mg/L.

(**) % Recovery of laboratory control spike should be between 85% to 115%.

CERTIFICATE OF ANALYSIS

Client	:	ENOVATIVE ENVIRONMENTAL SERVICE LTD	*Laboratory*	:	ALS Technichem (HK) Pty Ltd	*Page*	: 1 of 8
Contact	:	MR THOMAS WONG	*Contact*	:	Richard Fung	*Work Order*	: **HK2119331**
Address	:	FLAT 2207, YU FUN HSE, YU CHUI COURT, SHATIN, N.T. HONG KONG	*Address*	:	11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	:	thomas.wong@eno.com.hk	*E-mail*	:	richard.fung@alsglobal.com		
Telephone	:	----	*Telephone*	:	+852 2610 1044		
Facsimile	:	----	*Facsimile*	:	+852 2610 2021		
Project	:	HKA SUBMARINE CABLE – CHUNG HOM KOK				*Date received*	: 14-May-2021
Order number	:	—	*Quote number*	:	HKE/1236/2021	*Date of issue*	: 20-May-2021
C-O-C number	:	—				*No. of samples*	- *Received* : 108
Site	:	—					- *Analysed* : 108

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatory	*Position*	*Authorised results for:*
		
Fung Lim Chee, Richard	**Managing Director**	**Inorganics**

General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 14-May-2021 to 20-May-2021.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order HK2119331 :

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Analytical Results

Sub-Matrix: WATER			Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
Sample ID	Sampling date / time	Laboratory sample ID		EA/ED: Physical and Aggregate Properties	----	----	----	----
E1-ME-S-1	14-May-2021	HK2119331-001		2.1	----	----	----	----
E1-ME-S-2	14-May-2021	HK2119331-002		2.6	----	----	----	----
E1-ME-M-1	14-May-2021	HK2119331-003		2.1	----	----	----	----
E1-ME-M-2	14-May-2021	HK2119331-004		2.2	----	----	----	----
E1-ME-B-1	14-May-2021	HK2119331-005		2.2	----	----	----	----
E1-ME-B-2	14-May-2021	HK2119331-006		2.1	----	----	----	----
F1-ME-S-1	14-May-2021	HK2119331-007		2.2	----	----	----	----
F1-ME-S-2	14-May-2021	HK2119331-008		1.8	----	----	----	----
F1-ME-M-1	14-May-2021	HK2119331-009		1.0	----	----	----	----
F1-ME-M-2	14-May-2021	HK2119331-010		1.2	----	----	----	----
F1-ME-B-1	14-May-2021	HK2119331-011		0.8	----	----	----	----
F1-ME-B-2	14-May-2021	HK2119331-012		0.6	----	----	----	----
IM3-ME-S-1	14-May-2021	HK2119331-013		2.1	----	----	----	----
IM3-ME-S-2	14-May-2021	HK2119331-014		1.6	----	----	----	----
IM3-ME-M-1	14-May-2021	HK2119331-015		3.0	----	----	----	----
IM3-ME-M-2	14-May-2021	HK2119331-016		2.1	----	----	----	----
IM3-ME-B-1	14-May-2021	HK2119331-017		3.2	----	----	----	----
IM3-ME-B-2	14-May-2021	HK2119331-018		2.1	----	----	----	----
IM4-ME-S-1	14-May-2021	HK2119331-019		1.9	----	----	----	----
IM4-ME-S-2	14-May-2021	HK2119331-020		1.6	----	----	----	----
IM4-ME-M-1	14-May-2021	HK2119331-021		1.2	----	----	----	----
IM4-ME-M-2	14-May-2021	HK2119331-022		1.7	----	----	----	----
IM4-ME-B-1	14-May-2021	HK2119331-023		2.4	----	----	----	----
IM4-ME-B-2	14-May-2021	HK2119331-024		2.1	----	----	----	----
IM5-ME-S-1	14-May-2021	HK2119331-025		2.1	----	----	----	----
IM5-ME-S-2	14-May-2021	HK2119331-026		2.1	----	----	----	----
IM5-ME-M-1	14-May-2021	HK2119331-027		1.4	----	----	----	----
IM5-ME-M-2	14-May-2021	HK2119331-028		1.6	----	----	----	----
IM5-ME-B-1	14-May-2021	HK2119331-029		1.5	----	----	----	----
IM5-ME-B-2	14-May-2021	HK2119331-030		1.7	----	----	----	----
IM6-ME-S-1	14-May-2021	HK2119331-031		2.1	----	----	----	----

Sub-Matrix: **WATER**

Sample ID	Sampling date / time	Laboratory sample ID	Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
				EA/ED: Physical and Aggregate Properties	----	----	----	----
IM6-ME-S-2	14-May-2021	HK2119331-032		2.4	----	----	----	----
IM6-ME-M-1	14-May-2021	HK2119331-033		2.3	----	----	----	----
IM6-ME-M-2	14-May-2021	HK2119331-034		1.8	----	----	----	----
IM6-ME-B-1	14-May-2021	HK2119331-035		1.4	----	----	----	----
IM6-ME-B-2	14-May-2021	HK2119331-036		1.6	----	----	----	----
IM7-ME-S-1	14-May-2021	HK2119331-037		2.0	----	----	----	----
IM7-ME-S-2	14-May-2021	HK2119331-038		2.1	----	----	----	----
IM7-ME-M-1	14-May-2021	HK2119331-039		1.1	----	----	----	----
IM7-ME-M-2	14-May-2021	HK2119331-040		1.5	----	----	----	----
IM7-ME-B-1	14-May-2021	HK2119331-041		1.2	----	----	----	----
IM7-ME-B-2	14-May-2021	HK2119331-042		1.6	----	----	----	----
G2-ME-S-1	14-May-2021	HK2119331-043		2.2	----	----	----	----
G2-ME-S-2	14-May-2021	HK2119331-044		2.8	----	----	----	----
G2-ME-M-1	14-May-2021	HK2119331-045		2.1	----	----	----	----
G2-ME-M-2	14-May-2021	HK2119331-046		1.2	----	----	----	----
G2-ME-B-1	14-May-2021	HK2119331-047		1.2	----	----	----	----
G2-ME-B-2	14-May-2021	HK2119331-048		1.8	----	----	----	----
G3-ME-S-1	14-May-2021	HK2119331-049		3.1	----	----	----	----
G3-ME-S-2	14-May-2021	HK2119331-050		2.0	----	----	----	----
G3-ME-M-1	14-May-2021	HK2119331-051		2.4	----	----	----	----
G3-ME-M-2	14-May-2021	HK2119331-052		1.4	----	----	----	----
G3-ME-B-1	14-May-2021	HK2119331-053		1.3	----	----	----	----
G3-ME-B-2	14-May-2021	HK2119331-054		1.8	----	----	----	----
E1-MF-S-1	14-May-2021	HK2119331-055		2.4	----	----	----	----
E1-MF-S-2	14-May-2021	HK2119331-056		2.6	----	----	----	----
E1-MF-M-1	14-May-2021	HK2119331-057		2.0	----	----	----	----
E1-MF-M-2	14-May-2021	HK2119331-058		2.2	----	----	----	----
E1-MF-B-1	14-May-2021	HK2119331-059		2.1	----	----	----	----
E1-MF-B-2	14-May-2021	HK2119331-060		2.2	----	----	----	----
F1-MF-S-1	14-May-2021	HK2119331-061		1.7	----	----	----	----
F1-MF-S-2	14-May-2021	HK2119331-062		2.0	----	----	----	----
F1-MF-M-1	14-May-2021	HK2119331-063		2.0	----	----	----	----
F1-MF-M-2	14-May-2021	HK2119331-064		2.4	----	----	----	----

Sub-Matrix: **WATER**

Sample ID	Sampling date / time	Laboratory sample ID	Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
				EA/ED: Physical and Aggregate Properties	----	----	----	----
F1-MF-B-1	14-May-2021	HK2119331-065		3.4	----	----	----	----
F1-MF-B-2	14-May-2021	HK2119331-066		3.0	----	----	----	----
IM3-MF-S-1	14-May-2021	HK2119331-067		2.5	----	----	----	----
IM3-MF-S-2	14-May-2021	HK2119331-068		2.3	----	----	----	----
IM3-MF-M-1	14-May-2021	HK2119331-069		2.6	----	----	----	----
IM3-MF-M-2	14-May-2021	HK2119331-070		2.6	----	----	----	----
IM3-MF-B-1	14-May-2021	HK2119331-071		2.4	----	----	----	----
IM3-MF-B-2	14-May-2021	HK2119331-072		2.0	----	----	----	----
IM4-MF-S-1	14-May-2021	HK2119331-073		2.1	----	----	----	----
IM4-MF-S-2	14-May-2021	HK2119331-074		1.9	----	----	----	----
IM4-MF-M-1	14-May-2021	HK2119331-075		2.9	----	----	----	----
IM4-MF-M-2	14-May-2021	HK2119331-076		3.0	----	----	----	----
IM4-MF-B-1	14-May-2021	HK2119331-077		3.1	----	----	----	----
IM4-MF-B-2	14-May-2021	HK2119331-078		2.4	----	----	----	----
IM5-MF-S-1	14-May-2021	HK2119331-079		2.7	----	----	----	----
IM5-MF-S-2	14-May-2021	HK2119331-080		2.1	----	----	----	----
IM5-MF-M-1	14-May-2021	HK2119331-081		2.2	----	----	----	----
IM5-MF-M-2	14-May-2021	HK2119331-082		2.6	----	----	----	----
IM5-MF-B-1	14-May-2021	HK2119331-083		2.0	----	----	----	----
IM5-MF-B-2	14-May-2021	HK2119331-084		2.3	----	----	----	----
IM6-MF-S-1	14-May-2021	HK2119331-085		1.6	----	----	----	----
IM6-MF-S-2	14-May-2021	HK2119331-086		2.3	----	----	----	----
IM6-MF-M-1	14-May-2021	HK2119331-087		2.4	----	----	----	----
IM6-MF-M-2	14-May-2021	HK2119331-088		1.8	----	----	----	----
IM6-MF-B-1	14-May-2021	HK2119331-089		2.8	----	----	----	----
IM6-MF-B-2	14-May-2021	HK2119331-090		2.4	----	----	----	----
IM7-MF-S-1	14-May-2021	HK2119331-091		2.5	----	----	----	----
IM7-MF-S-2	14-May-2021	HK2119331-092		2.3	----	----	----	----
IM7-MF-M-1	14-May-2021	HK2119331-093		2.4	----	----	----	----
IM7-MF-M-2	14-May-2021	HK2119331-094		2.4	----	----	----	----
IM7-MF-B-1	14-May-2021	HK2119331-095		2.2	----	----	----	----
IM7-MF-B-2	14-May-2021	HK2119331-096		3.0	----	----	----	----
G2-MF-S-1	14-May-2021	HK2119331-097		2.6	----	----	----	----

Sub-Matrix: **WATER**

	Compound	**EA025: Suspended Solids (SS)**	**----**	**----**	**----**	**----**
	LOR Unit	0.5 mg/L	----	----	----	----
Sample ID	*Sampling date / time*	*Laboratory sample ID*	EA/ED: Physical and Aggregate Properties	----	----	----	----
G2-MF-S-2	14-May-2021	HK2119331-098	**2.9**	**----**	**----**	**----**	**----**
G2-MF-M-1	14-May-2021	HK2119331-099	**2.6**	**----**	**----**	**----**	**----**
G2-MF-M-2	14-May-2021	HK2119331-100	**2.6**	**----**	**----**	**----**	**----**
G2-MF-B-1	14-May-2021	HK2119331-101	**1.9**	**----**	**----**	**----**	**----**
G2-MF-B-2	14-May-2021	HK2119331-102	**2.2**	**----**	**----**	**----**	**----**
G3-MF-S-1	14-May-2021	HK2119331-103	**2.6**	**----**	**----**	**----**	**----**
G3-MF-S-2	14-May-2021	HK2119331-104	**2.3**	**----**	**----**	**----**	**----**
G3-MF-M-1	14-May-2021	HK2119331-105	**2.2**	**----**	**----**	**----**	**----**
G3-MF-M-2	14-May-2021	HK2119331-106	**2.1**	**----**	**----**	**----**	**----**
G3-MF-B-1	14-May-2021	HK2119331-107	**1.9**	**----**	**----**	**----**	**----**
G3-MF-B-2	14-May-2021	HK2119331-108	**2.0**	**----**	**----**	**----**	**----**

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 3681165)								
HK2119331-001	E1-ME-S-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.1	2.4	10.1
HK2119331-011	F1-ME-B-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	0.8	1.0	14.1
EA/ED: Physical and Aggregate Properties (QC Lot: 3681166)								
HK2119331-021	IM4-ME-M-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	1.2	1.4	15.4
HK2119331-031	IM6-ME-S-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.1	2.2	4.7
EA/ED: Physical and Aggregate Properties (QC Lot: 3681167)								
HK2119331-041	IM7-ME-B-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	1.2	1.3	0.0
HK2119331-051	G3-ME-M-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.4	2.9	19.0
EA/ED: Physical and Aggregate Properties (QC Lot: 3681168)								
HK2119331-061	F1-MF-S-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	1.7	1.9	13.9
HK2119331-071	IM3-MF-B-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.4	2.8	17.1
EA/ED: Physical and Aggregate Properties (QC Lot: 3681169)								
HK2119331-081	IM5-MF-M-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.2	2.5	13.9
HK2119331-091	IM7-MF-S-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.5	2.3	9.4
EA/ED: Physical and Aggregate Properties (QC Lot: 3681170)								
HK2119331-101	G2-MF-B-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	1.9	2.1	9.9

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 3681165)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	97.0	----	85.9	117	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3681166)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	100	----	85.9	117	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3681167)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.0	----	85.9	117	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3681168)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	110	----	85.9	117	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3681169)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.0	----	85.9	117	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3681170)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	96.0	----	85.9	117	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

CERTIFICATE OF ANALYSIS

Client	:	ENOVATIVE ENVIRONMENTAL SERVICE LTD	*Laboratory*	:	ALS Technichem (HK) Pty Ltd	*Page*	: 1 of 8
Contact	:	MR THOMAS WONG	*Contact*	:	Richard Fung	*Work Order*	: **HK2120062**
Address	:	FLAT 2207, YU FUN HSE, YU CHUI COURT, SHATIN, N.T. HONG KONG	*Address*	:	11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	:	thomas.wong@eno.com.hk	*E-mail*	:	richard.fung@alsglobal.com		
Telephone	:	----	*Telephone*	:	+852 2610 1044		
Facsimile	:	----	*Facsimile*	:	+852 2610 2021		
Project	:	HKA SUBMARINE CABLE – CHUNG HOM KOK				*Date received*	: 17-May-2021
Order number	:	—	*Quote number*	:	HKE/1236/2021	*Date of issue*	: 21-May-2021
C-O-C number	:	—				*No. of samples*	- *Received* : 108
Site	:	—					- *Analysed* : 108

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatory	*Position*	*Authorised results for:*
Fung Lim Chee, Richard	**Managing Director**	**Inorganics**

General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 17-May-2021 to 21-May-2021.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order HK2120062 :

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Analytical Results

Sub-Matrix: WATER			Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
Sample ID	Sampling date / time	Laboratory sample ID		EA/ED: Physical and Aggregate Properties	----	----	----	----
E1-ME-S-1	17-May-2021	HK2120062-001		3.6	----	----	----	----
E1-ME-S-2	17-May-2021	HK2120062-002		3.2	----	----	----	----
E1-ME-M-1	17-May-2021	HK2120062-003		3.5	----	----	----	----
E1-ME-M-2	17-May-2021	HK2120062-004		4.0	----	----	----	----
E1-ME-B-1	17-May-2021	HK2120062-005		4.6	----	----	----	----
E1-ME-B-2	17-May-2021	HK2120062-006		4.3	----	----	----	----
F1-ME-S-1	17-May-2021	HK2120062-007		3.4	----	----	----	----
F1-ME-S-2	17-May-2021	HK2120062-008		3.6	----	----	----	----
F1-ME-M-1	17-May-2021	HK2120062-009		3.2	----	----	----	----
F1-ME-M-2	17-May-2021	HK2120062-010		3.1	----	----	----	----
F1-ME-B-1	17-May-2021	HK2120062-011		4.6	----	----	----	----
F1-ME-B-2	17-May-2021	HK2120062-012		4.1	----	----	----	----
IM3-ME-S-1	17-May-2021	HK2120062-013		4.7	----	----	----	----
IM3-ME-S-2	17-May-2021	HK2120062-014		4.3	----	----	----	----
IM3-ME-M-1	17-May-2021	HK2120062-015		3.8	----	----	----	----
IM3-ME-M-2	17-May-2021	HK2120062-016		3.4	----	----	----	----
IM3-ME-B-1	17-May-2021	HK2120062-017		2.9	----	----	----	----
IM3-ME-B-2	17-May-2021	HK2120062-018		3.5	----	----	----	----
IM4-ME-S-1	17-May-2021	HK2120062-019		4.6	----	----	----	----
IM4-ME-S-2	17-May-2021	HK2120062-020		3.9	----	----	----	----
IM4-ME-M-1	17-May-2021	HK2120062-021		4.2	----	----	----	----
IM4-ME-M-2	17-May-2021	HK2120062-022		4.6	----	----	----	----
IM4-ME-B-1	17-May-2021	HK2120062-023		3.5	----	----	----	----
IM4-ME-B-2	17-May-2021	HK2120062-024		3.6	----	----	----	----
IM5-ME-S-1	17-May-2021	HK2120062-025		4.2	----	----	----	----
IM5-ME-S-2	17-May-2021	HK2120062-026		3.4	----	----	----	----
IM5-ME-M-1	17-May-2021	HK2120062-027		3.7	----	----	----	----
IM5-ME-M-2	17-May-2021	HK2120062-028		4.7	----	----	----	----
IM5-ME-B-1	17-May-2021	HK2120062-029		5.2	----	----	----	----
IM5-ME-B-2	17-May-2021	HK2120062-030		4.3	----	----	----	----
IM6-ME-S-1	17-May-2021	HK2120062-031		4.6	----	----	----	----

Sub-Matrix: **WATER**

Sample ID	Sampling date / time	Laboratory sample ID	Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
				EA/ED: Physical and Aggregate Properties	----	----	----	----
IM6-ME-S-2	17-May-2021	HK2120062-032		4.3	----	----	----	----
IM6-ME-M-1	17-May-2021	HK2120062-033		3.4	----	----	----	----
IM6-ME-M-2	17-May-2021	HK2120062-034		4.2	----	----	----	----
IM6-ME-B-1	17-May-2021	HK2120062-035		3.7	----	----	----	----
IM6-ME-B-2	17-May-2021	HK2120062-036		2.7	----	----	----	----
IM7-ME-S-1	17-May-2021	HK2120062-037		2.6	----	----	----	----
IM7-ME-S-2	17-May-2021	HK2120062-038		3.0	----	----	----	----
IM7-ME-M-1	17-May-2021	HK2120062-039		2.6	----	----	----	----
IM7-ME-M-2	17-May-2021	HK2120062-040		3.2	----	----	----	----
IM7-ME-B-1	17-May-2021	HK2120062-041		4.2	----	----	----	----
IM7-ME-B-2	17-May-2021	HK2120062-042		3.2	----	----	----	----
G2-ME-S-1	17-May-2021	HK2120062-043		3.6	----	----	----	----
G2-ME-S-2	17-May-2021	HK2120062-044		3.4	----	----	----	----
G2-ME-M-1	17-May-2021	HK2120062-045		4.6	----	----	----	----
G2-ME-M-2	17-May-2021	HK2120062-046		4.7	----	----	----	----
G2-ME-B-1	17-May-2021	HK2120062-047		4.2	----	----	----	----
G2-ME-B-2	17-May-2021	HK2120062-048		5.0	----	----	----	----
G3-ME-S-1	17-May-2021	HK2120062-049		4.0	----	----	----	----
G3-ME-S-2	17-May-2021	HK2120062-050		4.2	----	----	----	----
G3-ME-M-1	17-May-2021	HK2120062-051		3.7	----	----	----	----
G3-ME-M-2	17-May-2021	HK2120062-052		4.0	----	----	----	----
G3-ME-B-1	17-May-2021	HK2120062-053		3.6	----	----	----	----
G3-ME-B-2	17-May-2021	HK2120062-054		3.5	----	----	----	----
E1-MF-S-1	17-May-2021	HK2120062-055		3.2	----	----	----	----
E1-MF-S-2	17-May-2021	HK2120062-056		3.8	----	----	----	----
E1-MF-M-1	17-May-2021	HK2120062-057		3.2	----	----	----	----
E1-MF-M-2	17-May-2021	HK2120062-058		3.6	----	----	----	----
E1-MF-B-1	17-May-2021	HK2120062-059		3.0	----	----	----	----
E1-MF-B-2	17-May-2021	HK2120062-060		4.1	----	----	----	----
F1-MF-S-1	17-May-2021	HK2120062-061		2.6	----	----	----	----
F1-MF-S-2	17-May-2021	HK2120062-062		2.3	----	----	----	----
F1-MF-M-1	17-May-2021	HK2120062-063		2.8	----	----	----	----
F1-MF-M-2	17-May-2021	HK2120062-064		2.1	----	----	----	----

Sub-Matrix: **WATER**

Sample ID	Sampling date / time	Laboratory sample ID	Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
				EA/ED: Physical and Aggregate Properties	----	----	----	----
F1-MF-B-1	17-May-2021	HK2120062-065		2.4	----	----	----	----
F1-MF-B-2	17-May-2021	HK2120062-066		3.0	----	----	----	----
IM3-MF-S-1	17-May-2021	HK2120062-067		4.5	----	----	----	----
IM3-MF-S-2	17-May-2021	HK2120062-068		4.0	----	----	----	----
IM3-MF-M-1	17-May-2021	HK2120062-069		3.6	----	----	----	----
IM3-MF-M-2	17-May-2021	HK2120062-070		3.2	----	----	----	----
IM3-MF-B-1	17-May-2021	HK2120062-071		3.4	----	----	----	----
IM3-MF-B-2	17-May-2021	HK2120062-072		3.2	----	----	----	----
IM4-MF-S-1	17-May-2021	HK2120062-073		3.4	----	----	----	----
IM4-MF-S-2	17-May-2021	HK2120062-074		3.3	----	----	----	----
IM4-MF-M-1	17-May-2021	HK2120062-075		3.8	----	----	----	----
IM4-MF-M-2	17-May-2021	HK2120062-076		3.6	----	----	----	----
IM4-MF-B-1	17-May-2021	HK2120062-077		4.4	----	----	----	----
IM4-MF-B-2	17-May-2021	HK2120062-078		5.1	----	----	----	----
IM5-MF-S-1	17-May-2021	HK2120062-079		4.2	----	----	----	----
IM5-MF-S-2	17-May-2021	HK2120062-080		4.0	----	----	----	----
IM5-MF-M-1	17-May-2021	HK2120062-081		4.2	----	----	----	----
IM5-MF-M-2	17-May-2021	HK2120062-082		4.2	----	----	----	----
IM5-MF-B-1	17-May-2021	HK2120062-083		5.0	----	----	----	----
IM5-MF-B-2	17-May-2021	HK2120062-084		4.5	----	----	----	----
IM6-MF-S-1	17-May-2021	HK2120062-085		5.8	----	----	----	----
IM6-MF-S-2	17-May-2021	HK2120062-086		5.2	----	----	----	----
IM6-MF-M-1	17-May-2021	HK2120062-087		4.9	----	----	----	----
IM6-MF-M-2	17-May-2021	HK2120062-088		4.5	----	----	----	----
IM6-MF-B-1	17-May-2021	HK2120062-089		4.6	----	----	----	----
IM6-MF-B-2	17-May-2021	HK2120062-090		4.4	----	----	----	----
IM7-MF-S-1	17-May-2021	HK2120062-091		3.4	----	----	----	----
IM7-MF-S-2	17-May-2021	HK2120062-092		3.7	----	----	----	----
IM7-MF-M-1	17-May-2021	HK2120062-093		3.3	----	----	----	----
IM7-MF-M-2	17-May-2021	HK2120062-094		4.0	----	----	----	----
IM7-MF-B-1	17-May-2021	HK2120062-095		3.4	----	----	----	----
IM7-MF-B-2	17-May-2021	HK2120062-096		4.2	----	----	----	----
G2-MF-S-1	17-May-2021	HK2120062-097		2.9	----	----	----	----

Sub-Matrix: **WATER**

			Compound	**EA025: Suspended Solids (SS)**	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
Sample ID	*Sampling date / time*	*Laboratory sample ID*		EA/ED: Physical and Aggregate Properties	----	----	----	----
G2-MF-S-2	17-May-2021	HK2120062-098		**3.0**	----	----	----	----
G2-MF-M-1	17-May-2021	HK2120062-099		**3.2**	----	----	----	----
G2-MF-M-2	17-May-2021	HK2120062-100		**4.3**	----	----	----	----
G2-MF-B-1	17-May-2021	HK2120062-101		**4.5**	----	----	----	----
G2-MF-B-2	17-May-2021	HK2120062-102		**3.9**	----	----	----	----
G3-MF-S-1	17-May-2021	HK2120062-103		**2.7**	----	----	----	----
G3-MF-S-2	17-May-2021	HK2120062-104		**2.9**	----	----	----	----
G3-MF-M-1	17-May-2021	HK2120062-105		**3.6**	----	----	----	----
G3-MF-M-2	17-May-2021	HK2120062-106		**3.6**	----	----	----	----
G3-MF-B-1	17-May-2021	HK2120062-107		**3.8**	----	----	----	----
G3-MF-B-2	17-May-2021	HK2120062-108		**3.4**	----	----	----	----

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 3683777)								
HK2120062-001	E1-ME-S-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.6	3.4	5.8
HK2120062-011	F1-ME-B-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.6	4.3	6.2
EA/ED: Physical and Aggregate Properties (QC Lot: 3683778)								
HK2120062-021	IM4-ME-M-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	3.9	6.2
HK2120062-031	IM6-ME-S-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.6	4.7	3.8
EA/ED: Physical and Aggregate Properties (QC Lot: 3683779)								
HK2120062-041	IM7-ME-B-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	3.8	10.7
HK2120062-051	G3-ME-M-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.7	3.8	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 3683780)								
HK2120062-062	F1-MF-S-2	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.3	2.4	5.3
HK2120062-071	IM3-MF-B-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.4	3.7	9.1
EA/ED: Physical and Aggregate Properties (QC Lot: 3683781)								
HK2120062-081	IM5-MF-M-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	4.5	7.5
HK2120062-091	IM7-MF-S-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.4	3.8	11.2
EA/ED: Physical and Aggregate Properties (QC Lot: 3683782)								
HK2120062-101	G2-MF-B-1	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.5	4.9	8.5

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 3683777)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	96.0	----	85.9	117	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3683778)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	108	----	85.9	117	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3683779)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	94.0	----	85.9	117	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3683780)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.0	----	85.9	117	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3683781)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	110	----	85.9	117	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3683782)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	109	----	85.9	117	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

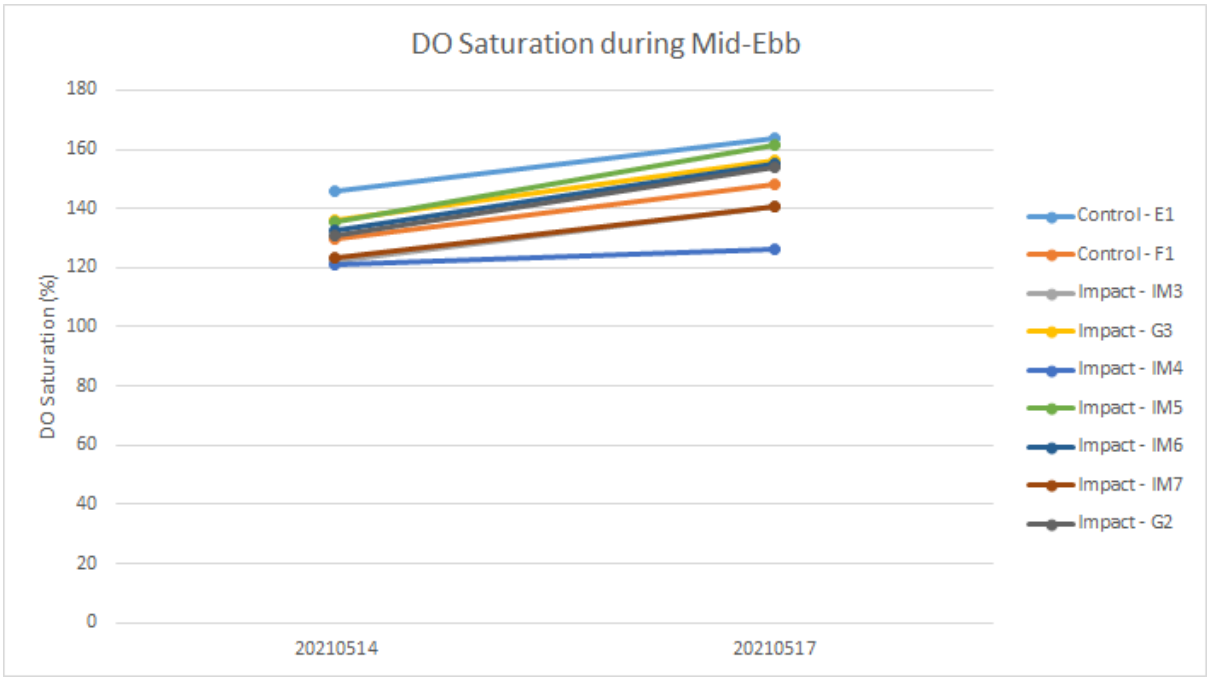
- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

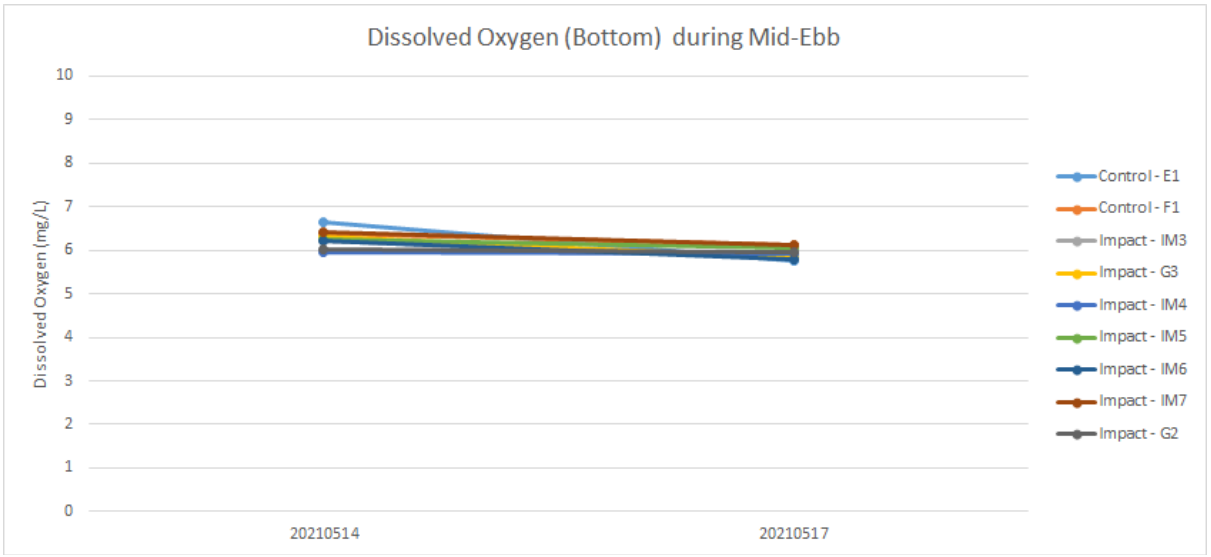
APPENDIX D IMPACT WATER QUALITY MONITORING RESULTS (ZONE B)

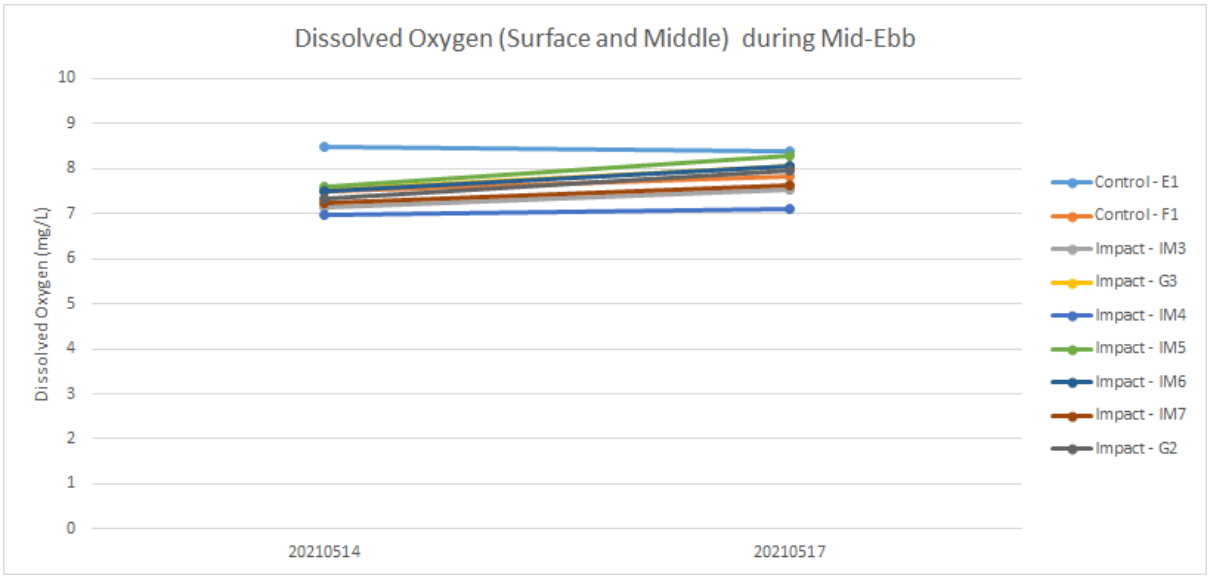
Graphical presentation of the Impact monitoring result for

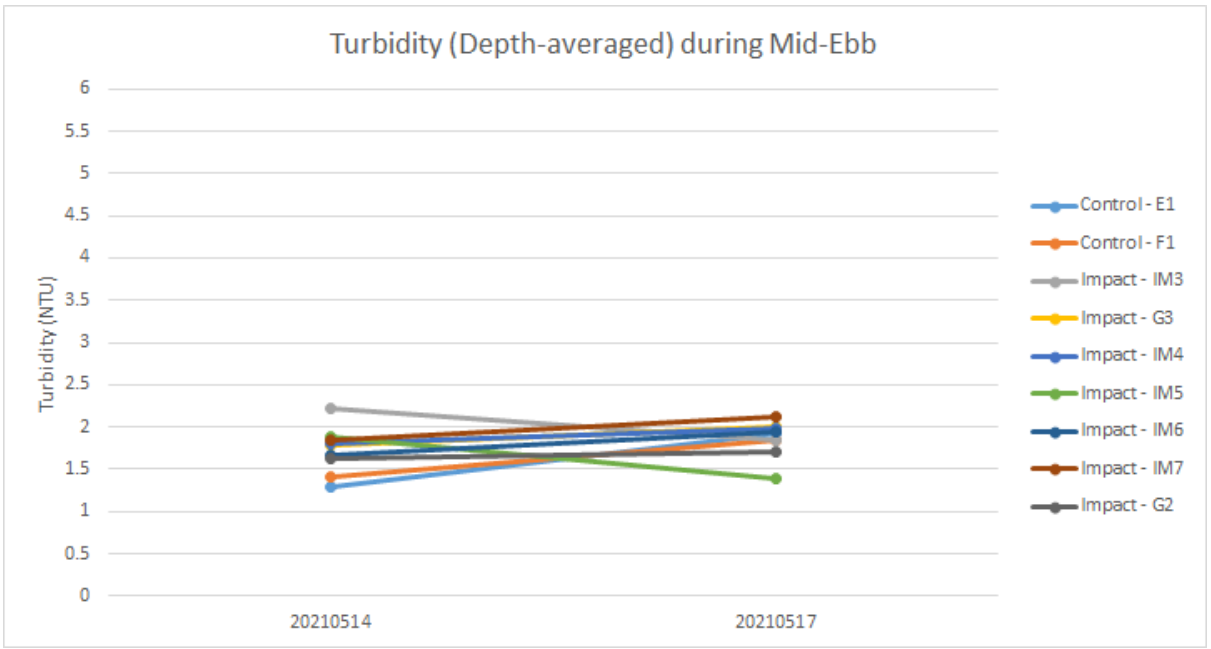
Zone B

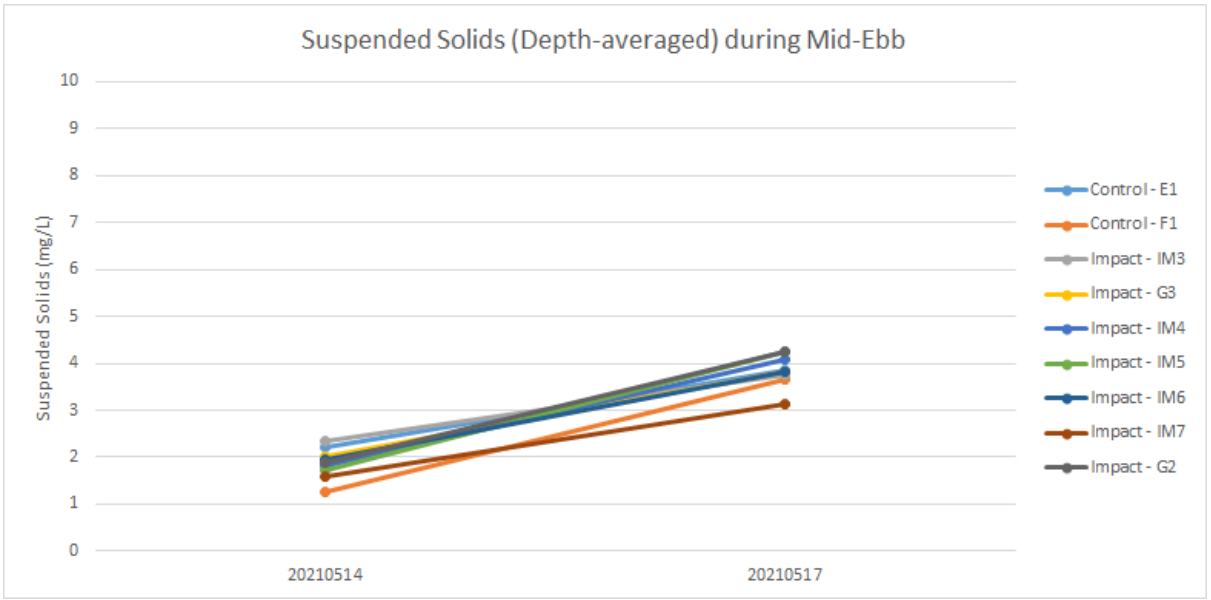
During Mid-Ebb



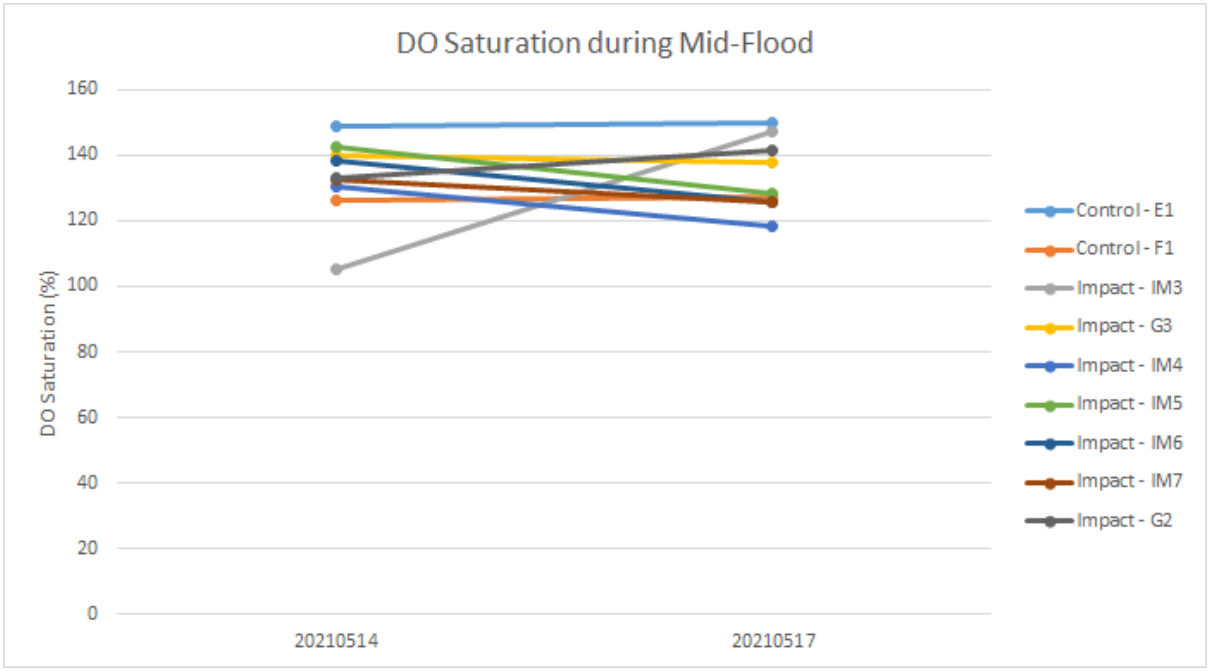


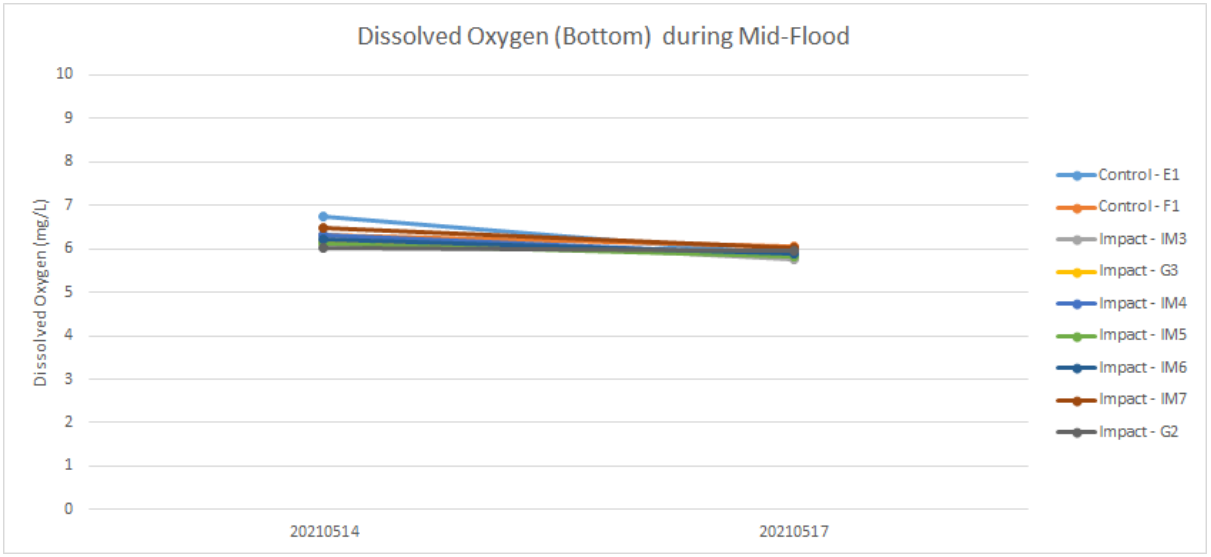

Dissolved Oxygen (Surface and Middle) during Mid-Ebb
Dissolved Oxygen (mg/L)
10
9
8
7
6
5
4
3
2
1
0
20210514
20210517
Control - E1
Control - F1
Impact - IM3
Impact - G3
Impact - IM4
Impact - IM5
Impact - IM6
Impact - IM7
Impact - G2

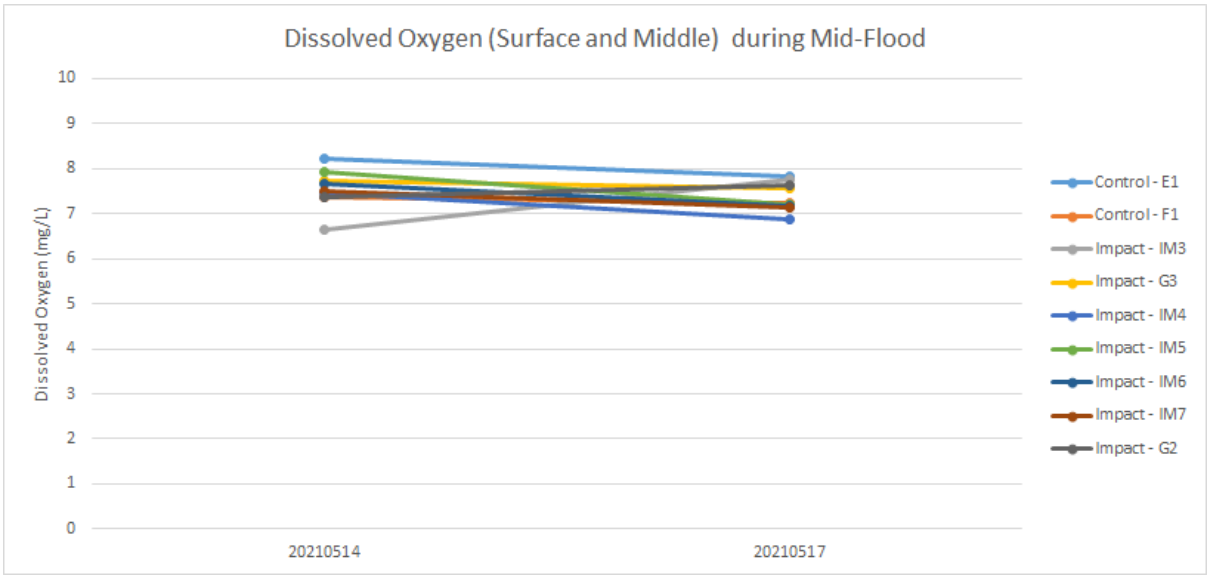

Turbidity (Depth-averaged) during Mid-Ebb
Turbidity (NTU)
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
20210514
20210517
Control - E1
Control - F1
Impact - IM3
Impact - G3
Impact - IM4
Impact - IM5
Impact - IM6
Impact - IM7
Impact - G2

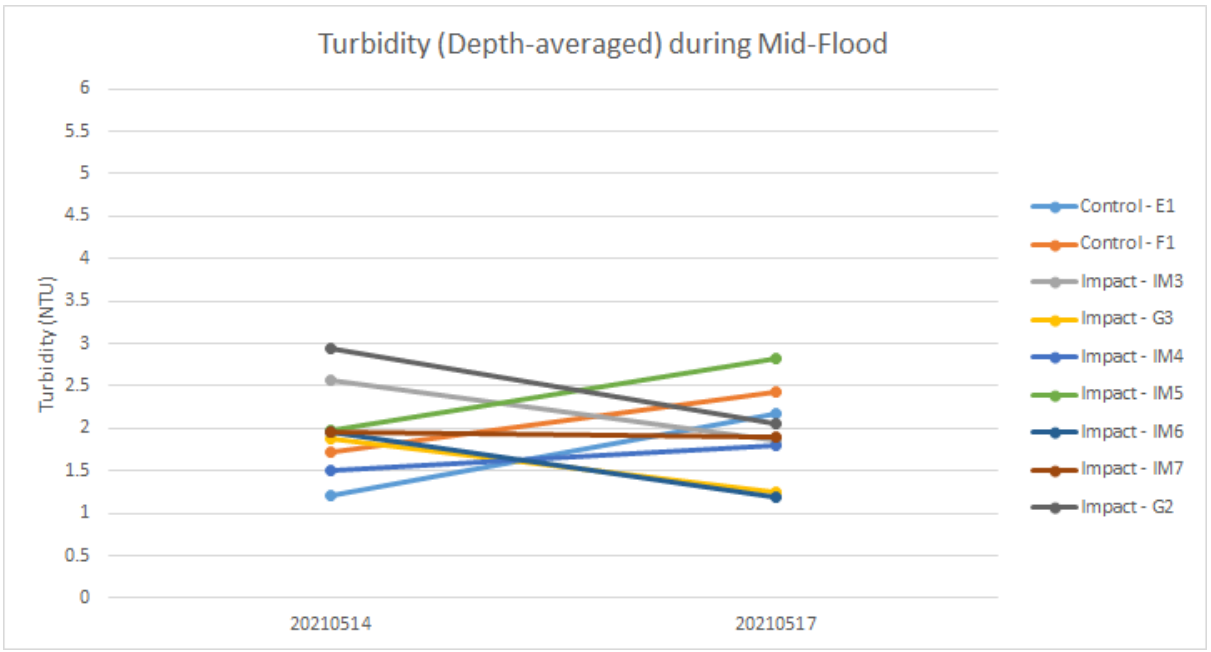

Suspended Solids (Depth-averaged) during Mid-Ebb
Suspended Solids (mg/L)
10
9
8
7
6
5
4
3
2
1
0
20210514
20210517
Control - E1
Control - F1
Impact - IM3
Impact - G3
Impact - IM4
Impact - IM5
Impact - IM6
Impact - IM7
Impact - G2

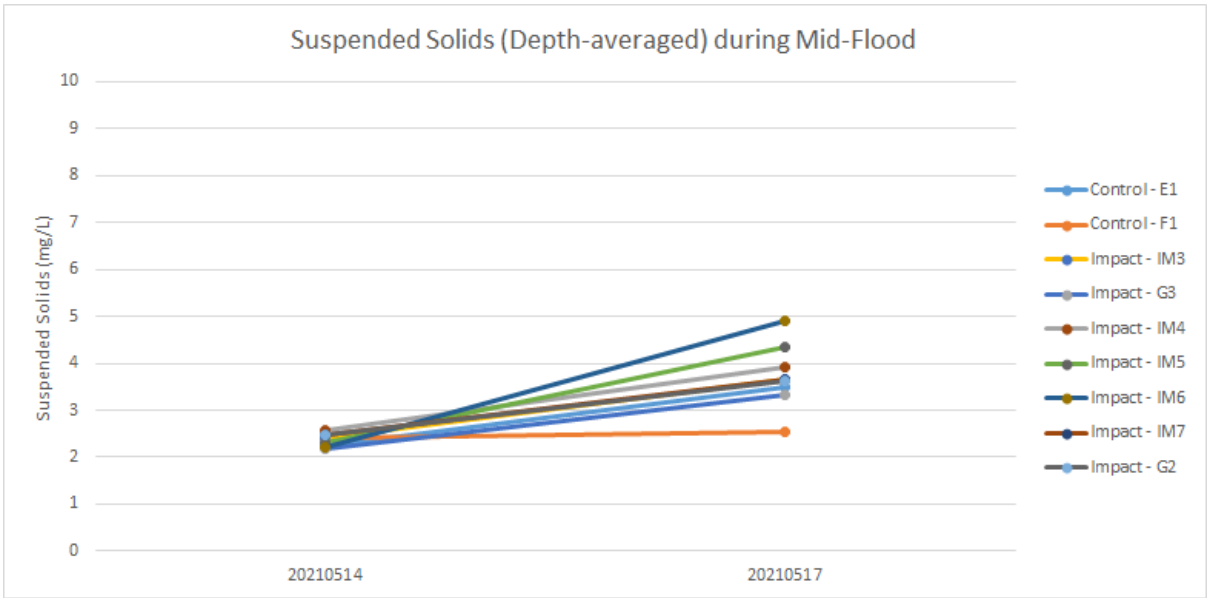
During Mid-Flood






Dissolved Oxygen (Surface and Middle) during Mid-Flood
Dissolved Oxygen (mg/L)
10
9
8
7
6
5
4
3
2
1
0
20210514
20210517
Control - E1
Control - F1
Impact - IM3
Impact - G3
Impact - IM4
Impact - IM5
Impact - IM6
Impact - IM7
Impact - G2


Turbidity (Depth-averaged) during Mid-Flood
Turbidity (NTU)
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
20210514
20210517
Control - E1
Control - F1
Impact - IM3
Impact - G3
Impact - IM4
Impact - IM5
Impact - IM6
Impact - IM7
Impact - G2


Suspended Solids (Depth-averaged) during Mid-Flood
Suspended Solids (mg/L)
10
9
8
7
6
5
4
3
2
1
0
20210514
20210517
Control - E1
Control - F1
Impact - IM3
Impact - G3
Impact - IM4
Impact - IM5
Impact - IM6
Impact - IM7
Impact - G2

Water Quality Monitoring Data Log Sheet **14-May-2021** **Tide: Mid-Ebb**

Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	CurrentDirection	Temperature (°C)		Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
								Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
E1	Fine	Rough	13:28	22.3	S	0.28	48	28.6	28.6	28.89	28.90	8.70	8.70	146.2	146.0	9.65	9.64	8.49	1.37	1.35	1.30	2.1	2.4	2.2
						0.28	51	28.6		28.90		8.70		145.8		9.63			1.33			2.6		
					M	0.15	43	26.3	26.3	32.60	32.57	9.03	9.04	108.9	109.1	7.32	7.33		0.90	0.91		2.1	2.2	
						0.16	43	26.3		32.54		9.04		109.2		7.34			0.92			2.2		
					B	0.29	94	25.6	25.6	33.85	33.85	9.29	9.30	98.4	98.4	6.64	6.64		1.64	1.63		2.2	2.2	
						0.31	94	25.6		33.84		9.30		98.4		6.64			1.62			2.1		
F1	Fine	Rough	11:46	36.3	S	0.75	54	28.4	28.4	29.12	29.15	9.29	9.29	129.8	129.8	8.58	8.58	7.50	1.09	1.09	1.41	2.2	2.0	1.3
						0.77	58	28.4		29.18		9.29		129.8		8.58			1.09			1.8		
					M	0.32	75	25.0	25.0	34.96	34.96	9.30	9.33	94.6	94.6	6.41	6.41		1.27	1.27		1.0	1.1	
						0.32	78	25.0		34.96		9.35		94.6		6.41			1.27			1.2		
					B	0.28	53	24.5	24.5	35.03	35.03	9.74	9.79	93.6	93.7	6.39	6.39		1.87	1.86		0.8	0.7	
						0.29	57	24.5		35.02		9.84		93.7		6.39			1.84			0.6		
IM3	Fine	Rough	13:15	17	S	0.17	35	27.5	27.5	30.95	30.95	8.98	8.98	122.1	122.0	8.11	8.10	7.13	1.37	1.38	2.23	2.1	1.9	2.4
						0.18	37	27.5		30.95		8.98		121.9		8.09			1.38			1.6		
					M	0.32	63	25.1	25.1	34.60	34.61	9.15	9.16	90.9	90.9	6.16	6.16		2.00	2.05		3.0	2.6	
						0.35	66	25.1		34.61		9.16		90.9		6.15			2.10			2.1		
					B	0.26	74	25.1	25.1	34.71	34.71	9.76	9.75	91.7	91.9	6.21	6.23		3.30	3.25		3.2	2.7	
						0.28	74	25.1		34.70		9.73		92.1		6.24			3.20			2.1		
IM4	Fine	Rough	12:56	19.7	S	0.75	43	27.6	27.7	30.46	30.39	8.80	8.80	121.2	121.0	8.06	8.05	6.98	1.40	1.41	1.82	1.9	1.8	1.8
						0.81	43	27.7		30.32		8.80		120.8		8.03			1.42			1.6		
					M	0.16	24	25.0	25.0	34.79	34.80	9.00	9.01	87.1	87.2	5.90	5.91		2.37	2.37		1.2	1.5	
						0.17	26	25.0		34.80		9.01		87.2		5.91			2.36			1.7		
					B	0.10	178	25.0	25.0	34.89	34.89	9.08	9.08	87.9	87.9	5.96	5.96		1.66	1.67		2.4	2.3	
						0.10	181	25.0		34.89		9.08		87.8		5.95			1.68			2.1		
IM5	Fine	Rough	12:33	25	S	0.57	77	28.4	28.4	29.07	29.08	9.01	9.01	135.7	135.5	8.97	8.96	7.59	3.09	3.09	1.88	2.1	2.1	1.7
						0.62	80	28.4		29.09		9.01		135.3		8.95			3.09			2.1		
					M	0.39	82	25.2	25.2	34.55	34.55	8.76	8.76	91.8	91.8	6.21	6.21		1.17	1.18		1.4	1.5	
						0.40	83	25.2		34.55		8.76		91.8		6.21			1.18			1.6		
					B	0.36	96	25.0	25.0	34.79	34.79	9.19	9.19	91.9	92.0	6.23	6.24		1.39	1.39		1.5	1.6	
						0.39	98	25.0		34.79		9.19		92.0		6.24			1.38			1.7		
IM6	Fine	Rough	12:18	20.2	S	0.78	71	28.2	28.2	29.47	29.49	9.00	9.00	133.2	132.8	8.82	8.80	7.50	1.28	1.28	1.66	2.1	2.3	1.9
						0.82	75	28.2		29.50		9.00		132.4		8.77			1.27			2.4		
					M	0.18	68	25.1	25.1	34.61	34.62	9.12	9.13	91.8	91.8	6.21	6.21		1.49	1.51		2.3	2.1	
						0.19	73	25.1		34.62		9.13		91.7		6.21			1.52			1.8		
					B	0.02	58	25.0	25.0	34.85	34.85	9.44	9.44	91.7	91.8	6.22	6.23		2.21	2.21		1.4	1.5	
						0.02	59	25.0		34.85		9.44		91.8		6.23			2.21			1.6		
IM7	Fine	Rough	12:01	26.1	S	0.49	91	27.5	27.5	31.51	31.61	9.07	9.07	123.9	123.4	8.21	8.17	7.25	1.16	1.18	1.85	2.0	2.1	1.6
						0.50	92	27.5		31.70		9.07		122.8		8.13			1.20			2.1		
					M	0.04	34	25.0	25.0	34.93	34.93	9.15	9.15	93.2	93.2	6.32	6.32		1.77	1.77		1.1	1.3	
						0.04	37	25.0		34.93		9.15		93.2		6.32			1.76			1.5		
					B	0.11	48	24.9	24.9	34.96	34.96	9.12	9.13	94.3	94.4	6.39	6.40		2.50	2.61		1.2	1.4	
						0.11	49	24.9		34.96		9.14		94.5		6.41			2.72			1.6		
G2	Fine	Rough	12:50	30.2	S	0.54	106	28.5	28.5	28.59	28.60	9.00	9.01	131.6	130.6	8.71	8.65	7.32	1.28	1.28	1.63	2.2	2.5	1.9
						0.59	110	28.5		28.60		9.01		129.6		8.58			1.27			2.8		
					M	0.44	93	25.2	25.2	34.56	34.56	9.13	9.13	88.7	88.7	6.00	6.00		1.25	1.25		2.1	1.7	
						0.47	99	25.2		34.56		9.13		88.7		6.00			1.24			1.2		
					B	0.30	82	25.0	25.0	34.81	34.81	9.39	9.40	88.6	88.8	6.01	6.02		2.37	2.36		1.2	1.5	
						0.32	85	25.0		34.81		9.40		89.0		6.03			2.34			1.8		
G3	Fine	Rough	12:26	30	S	0.55	63	28.5	28.5	28.69	28.69	9.13	9.13	136.4	136.1	9.03	9.02	7.53	1.34	1.35	1.78	3.1	2.6	2.0
						0.60	63	28.4		28.69		9.13		135.8		9.00			1.35			2.0		
					M	0.31	79	25.0	25.0	34.78	34.78	9.20	9.20	89.3	89.3	6.05	6.05		1.33	1.32		2.4	1.9	
						0.32	82	25.0		34.78		9.20		89.3		6.05			1.31			1.4		
					B	0.36	86	24.9	24.9	34.89	34.89	9.62	9.62	92.9	93.0	6.30	6.31		2.75	2.69		1.3	1.6	
						0.37	91	24.9		34.89		9.62		93.0		6.31			2.62			1.8		

Remark: * DA: Depth-Averaged
***** S: 1 m below the sea surface; M: mid-depth; S: 1 m above the seabed**
Note: Exceedance of 95th / 99th-percentile of baseline data or 120% / 130% of control station results are underlined. Exceedance of 95th / 99th-percentile of baseline data at control station is not considered.

Water Quality Monitoring Data Log Sheet **14-May-2021** **Tide: Mid-Flood**

Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	CurrentDirection	Temperature (°C)		Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
								Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
E1	Fine	Rough	18:51	20.5	S	0.32	267	28.9	28.9	28.41	28.43	8.76	8.76	149.0	148.6	9.82	9.80	8.22	1.32	1.31	1.21	2.4	2.5	2.3
						0.34	273	28.8		28.44		8.75		148.2		9.77			1.30			2.6		
					M	0.30	201	25.8	25.8	33.47	33.48	8.78	8.79	98.5	98.5	6.64	6.64		1.14	1.12		2.0	2.1	
						0.32	206	25.8		33.48		8.79		98.5		6.64			1.10			2.2		
					B	0.23	244	25.6	25.7	33.80	33.78	8.91	8.91	99.6	99.7	6.72	6.73		1.24	1.20		2.1	2.2	
						0.23	245	25.7		33.75		8.91		99.8		6.73			1.16			2.2		
F1	Fine	Rough	20:02	35	S	0.47	258	27.2	27.2	31.53	31.61	8.53	8.53	126.4	126.2	8.41	8.39	7.35	1.47	1.47	1.73	1.7	1.9	2.4
						0.49	263	27.2		31.68		8.53		125.9		8.36			1.47			2.0		
					M	0.32	262	24.9	24.9	34.90	34.90	8.47	8.47	92.9	92.9	6.31	6.31		1.39	1.41		2.0	2.2	
						0.33	264	24.9		34.90		8.47		92.9		6.31			1.42			2.4		
					B	0.28	244	24.6	24.6	34.99	34.99	8.38	8.39	92.7	92.8	6.32	6.33		2.30	2.31		3.4	3.2	
						0.30	245	24.6		34.99		8.40		92.8		6.33			2.31			3.0		
IM3	Fine	Rough	19:01	20	S	0.11	151	26.1	26.1	33.04	33.10	8.63	8.64	105.6	105.4	7.10	7.09	6.64	2.31	2.38	2.56	2.5	2.4	2.4
						0.11	157	26.0		33.16		8.64		105.2		7.08			2.45			2.3		
					M	0.45	166	25.1	25.1	34.63	34.63	8.70	8.71	91.4	91.4	6.19	6.19		2.00	2.05		2.6	2.6	
						0.49	168	25.1		34.63		8.71		91.4		6.19			2.10			2.6		
					B	0.39	169	25.0	25.0	34.79	34.79	8.77	8.77	93.0	93.2	6.30	6.32		3.30	3.25		2.4	2.2	
						0.43	181	25.0		34.78		8.77		93.4		6.33			3.20			2.0		
IM4	Fine	Rough	19:13	19.1	S	0.65	218	28.2	28.2	29.50	29.51	8.71	8.71	131.7	130.6	8.71	8.64	7.45	1.35	1.34	1.51	2.1	2.0	2.6
						0.66	213	28.2		29.51		8.71		129.4		8.56			1.32			1.9		
					M	0.38	205	25.4	25.4	34.20	34.20	8.65	8.66	92.6	92.6	6.26	6.26		1.36	1.39		2.9	3.0	
						0.40	206	25.4		34.20		8.66		92.6		6.25			1.41			3.0		
					B	0.20	231	25.3	25.3	34.46	34.44	8.71	8.71	92.9	93.2	6.29	6.31		1.86	1.82		3.1	2.8	
						0.22	228	25.3		34.41		8.71		93.4		6.32			1.78			2.4		
IM5	Fine	Rough	19:31	24	S	0.78	249	28.3	28.4	29.27	29.24	8.63	8.63	142.8	142.3	9.44	9.41	7.93	1.29	1.29	1.98	2.7	2.4	2.3
						0.83	243	28.4		29.21		8.63		141.7		9.37			1.28			2.1		
					M	0.67	273	25.3	25.3	34.29	34.35	8.49	8.49	95.7	95.4	6.48	6.46		2.00	2.05		2.2	2.4	
						0.73	279	25.2		34.40		8.49		95.1		6.44			2.10			2.6		
					B	0.34	225	25.0	25.0	34.83	34.83	8.53	8.53	90.0	90.1	6.10	6.11		2.59	2.60		2.0	2.2	
						0.35	229	25.0		34.83		8.53		90.2		6.12			2.60			2.3		
IM6	Fine	Rough	19:37	18	S	0.59	222	27.5	27.5	30.62	30.68	8.60	8.60	138.4	138.2	9.21	9.19	7.67	1.40	1.41	1.96	1.6	2.0	2.2
						0.63	224	27.5		30.74		8.60		137.9		9.17			1.41			2.3		
					M	0.23	231	25.1	25.1	34.64	34.65	8.47	8.47	90.8	90.8	6.15	6.15		1.98	1.99		2.4	2.1	
						0.24	227	25.1		34.65		8.47		90.7		6.15			2.00			1.8		
					B	0.04	206	25.0	25.0	34.77	34.77	8.51	8.51	91.4	91.5	6.20	6.21		2.49	2.48		2.8	2.6	
						0.04	211	25.0		34.76		8.51		91.6		6.21			2.46			2.4		
IM7	Fine	Rough	19:48	30.1	S	0.15	221	28.2	28.2	31.41	31.47	8.50	8.50	132.8	132.3	8.70	8.66	7.50	1.12	1.12	1.96	2.5	2.4	2.5
						0.16	231	28.2		31.52		8.49		131.7		8.62			1.12			2.3		
					M	0.25	227	24.8	24.8	34.96	34.96	8.48	8.48	93.2	93.2	6.33	6.33		2.27	2.27		2.4	2.4	
						0.26	230	24.8		34.96		8.48		93.2		6.33			2.27			2.4		
					B	0.13	232	24.8	24.8	34.97	34.97	8.54	8.54	95.1	95.3	6.46	6.48		2.50	2.49		2.2	2.6	
						0.14	234	24.8		34.97		8.54		95.5		6.49			2.47			3.0		
G2	Fine	Rough	19:17	38.2	S	0.73	196	28.6	28.6	29.30	29.30	8.63	8.63	134.0	133.1	8.83	8.77	7.35	1.40	1.43	2.94	2.6	2.8	2.5
						0.79	201	28.6		29.30		8.63		132.1		8.70			1.45			2.9		
					M	0.32	284	25.1	25.1	34.70	34.71	8.50	8.50	87.4	87.4	5.93	5.93		3.29	3.29		2.6	2.6	
						0.34	288	25.1		34.71		8.50		87.4		5.93			3.29			2.6		
					B	0.27	245	24.9	24.9	34.84	34.84	8.58	8.58	88.6	88.8	6.02	6.03		4.07	4.11		1.9	2.1	
						0.29	248	24.9		34.84		8.58		89.0		6.04			4.15			2.2		
G3	Fine	Rough	19:27	28.4	S	0.69	271	27.8	27.8	29.87	29.91	8.64	8.64	142.6	139.8	9.48	9.30	7.74	1.37	1.36	1.88	2.6	2.5	2.2
						0.70	274	27.8		29.95		8.64		136.9		9.11			1.34			2.3		
					M	0.57	262	25.2	25.2	34.41	34.42	8.54	8.54	91.5	91.4	6.19	6.19		1.62	1.63		2.2	2.2	
						0.58	263	25.2		34.43		8.54		91.3		6.18			1.63			2.1		
					B	0.39	284	25.0	25.0	34.86	34.86	8.59	8.59	90.6	90.7	6.15	6.16		2.60	2.65		1.9	2.0	
						0.41	288	25.0		34.86		8.59		90.8		6.16			2.69			2.0		

Remark: * DA: Depth-Averaged
***** S: 1 m below the sea surface; M: mid-depth; S: 1 m above the seabed**
Note: Exceedance of 95th / 99th-percentile of baseline data or 120% / 130% of control station results are underlined. Exceedance of 95th / 99th-percentile of baseline data at control station is not considered.

Water Quality Monitoring Data Log Sheet **17-May-2021** **Tide: Mid-Ebb**

Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	CurrentDirection	Temperature (°C)		Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
								Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
E1	Fine	Moderate	13:05	23.1	S	0.41	73	29.1	29.1	27.10	27.11	8.01	8.02	163.6	163.5	10.81	10.81	8.38	1.37	1.37	1.93	3.6	3.4	3.9
						0.44	73	29.1		27.11		8.02		163.4		10.80			1.37			3.2		
					M	0.46	73	25.4	25.4	34.08	34.07	8.12	8.13	88.0	88.1	5.96	5.96		0.86	0.87		3.5	3.8	
						0.47	79	25.4		34.05		8.13		88.1		5.96			0.87			4.0		
					B	0.44	71	24.8	24.8	34.85	34.85	8.25	8.25	84.4	84.5	5.74	5.75		3.47	3.54		4.6	4.5	
						0.46	75	24.8		34.85		8.25		84.6		5.75			3.61			4.3		
F1	Cloudy	Rough	14:27	35.4	S	0.56	65	28.8	28.8	29.42	29.42	8.11	8.12	148.5	148.1	9.73	9.71	7.82	1.12	1.13	1.85	3.4	3.5	3.7
						0.59	67	28.8		29.41		8.13		147.6		9.68			1.14			3.6		
					M	0.21	88	24.7	24.7	34.90	34.90	8.28	8.28	86.8	87.1	5.91	5.93		1.42	1.43		3.2	3.2	
						0.21	94	24.7		34.90		8.28		87.3		5.94			1.44			3.1		
					B	0.25	86	23.9	24.0	34.97	34.96	8.30	8.30	88.9	88.9	6.14	6.13		3.02	2.99		4.6	4.4	
						0.26	93	24.0		34.95		8.30		88.9		6.12			2.96			4.1		
IM3	Fine	Moderate	13:12	27.2	S	0.52	299	28.5	28.5	28.75	28.76	8.04	8.04	140.6	140.6	9.31	9.31	7.54	1.23	1.25	1.85	4.7	4.5	3.8
						0.54	303	28.5		28.77		8.04		140.5		9.30			1.26			4.3		
					M	1.06	278	24.8	24.8	34.83	34.83	8.30	8.31	84.7	84.7	5.77	5.77		1.78	1.80		3.8	3.6	
						1.12	297	24.8		34.83		8.31		84.7		5.77			1.82			3.4		
					B	1.09	288	24.7	24.7	34.87	34.87	8.39	8.39	85.3	85.4	5.81	5.82		2.52	2.51		2.9	3.2	
						1.06	294	24.7		34.87		8.39		85.4		5.82			2.50			3.5		
IM6	Cloudy	Moderate	14:00	19.6	S	0.92	54	28.9	28.9	28.29	28.29	7.99	7.99	155.6	155.4	10.25	10.24	8.06	1.14	1.15	1.94	4.6	4.5	3.8
						0.98	56	28.9		28.29		7.99		155.2		10.22			1.16			4.3		
					M	0.85	74	25.0	25.0	34.60	34.61	8.15	8.16	86.5	86.5	5.88	5.88		1.59	1.59		3.4	3.8	
						0.86	74	25.0		34.61		8.16		86.4		5.87			1.58			4.2		
					B	0.98	71	24.7	24.7	34.87	34.87	8.29	8.30	84.8	84.9	5.78	5.78		3.08	3.08		3.7	3.2	
						1.07	73	24.7		34.86		8.30		84.9		5.78			3.08			2.7		
IM7	Cloudy	Moderate	14:10	27.2	S	0.23	80	28.1	28.1	30.60	30.60	8.07	8.08	141.1	141.0	9.30	9.29	7.61	0.99	1.00	2.12	2.6	2.8	3.1
						0.24	83	28.1		30.60		8.08		140.8		9.28			1.01			3.0		
					M	0.28	78	24.7	24.7	34.88	34.89	8.27	8.28	86.9	87.0	5.92	5.93		1.85	2.04		2.6	2.9	
						0.28	81	24.7		34.90		8.28		87.1		5.94			2.23			3.2		
					B	0.33	78	24.2	24.2	34.97	34.97	8.29	8.29	88.9	89.0	6.10	6.11		3.32	3.33		4.2	3.7	
						0.34	79	24.2		34.96		8.29		89.0		6.11			3.34			3.2		
G2	Fine	Moderate	13:33	35	S	1.23	108	29.0	29.0	28.40	28.40	7.98	7.98	154.3	154.2	10.14	10.13	7.96	1.16	1.17	1.71	3.6	3.5	4.3
						1.24	116	29.0		28.40		7.98		154.0		10.12			1.17			3.4		
					M	0.69	104	24.8	24.8	34.84	34.84	8.24	8.24	85.0	85.1	5.79	5.79		1.72	1.72		4.6	4.7	
						0.65	107	24.8		34.84		8.24		85.1		5.79			1.72			4.7		
					B	0.79	114	24.8	24.8	34.85	34.85	8.30	8.30	87.1	87.2	5.93	5.94		2.26	2.25		4.2	4.6	
						0.88	116	24.8		34.85		8.30		87.3		5.95			2.23			5.0		
G3	Fine	Moderate	13:45	29.3	S	0.93	55	29.1	29.1	28.34	28.34	8.00	8.01	156.6	156.5	10.28	10.27	8.07	1.03	1.03	2.00	4.0	4.1	3.8
						1.01	58	29.1		28.34		8.01		156.4		10.26			1.03			4.2		
					M	1.14	74	24.9	24.9	34.67	34.67	8.29	8.29	86.2	86.2	5.86	5.86		1.21	1.22		3.7	3.9	
						1.17	77	24.9		34.67		8.29		86.2		5.86			1.22			4.0		
					B	1.12	86	24.6	24.6	34.91	34.92	8.31	8.31	85.2	85.3	5.82	5.83		3.77	3.77		3.6	3.6	
						1.12	92	24.6		34.92		8.31		85.4		5.83			3.76			3.5		

Remark: * DA: Depth-Averaged

***** S: 1 m below the sea surface; M: mid-depth; S: 1 m above the seabed**

Water Quality Monitoring Data Log Sheet **17-May-2021** **Tide: Mid-Flood**

Monitoring Station	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Depth Level ***	Current Velocity (m/s)	CurrentDirection	Temperature (^{o}C)		Salinity (ppt)		pH		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
								Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
E1	Cloudy	Moderate	07:32	23.3	S	0.69	233	28.8	28.8	28.30	28.31	8.20	8.21	149.7	149.6	9.88	9.87	7.82	1.12	1.13	2.18	3.2	3.5	3.5
						0.68	243	28.8		28.31		8.21		149.5		9.86			1.14			3.8		
					M	0.76	253	24.8	24.8	34.82	34.82	8.30	8.30	84.9	84.9	5.77	5.78		1.64	1.64		3.2	3.4	
						0.78	260	24.8		34.82		8.30		84.9		5.78			1.64			3.6		
					B	0.61	260	24.8	24.8	34.86	34.86	8.32	8.32	86.1	86.3	5.86	5.87		3.63	3.78		3.0	3.6	
						0.62	275	24.8		34.86		8.32		86.4		5.88			3.92			4.1		
F1	Fine	Moderate	05:55	35.6	S	0.40	232	27.4	27.4	30.16	30.16	8.00	8.00	127.3	127.3	8.51	8.51	7.23	1.16	1.16	2.44	2.6	2.5	2.5
						0.43	233	27.4		30.16		8.00		127.2		8.50			1.16			2.3		
					M	0.42	232	24.8	24.8	34.88	34.88	8.06	8.07	87.3	87.4	5.94	5.95		1.55	1.56		2.8	2.5	
						0.43	233	24.8		34.88		8.07		87.4		5.95			1.57			2.1		
					B	0.42	231	23.9	23.9	34.96	34.96	8.19	8.20	87.6	87.6	6.05	6.05		4.47	4.59		2.4	2.7	
						0.44	233	23.9		34.96		8.20		87.6		6.05			4.70			3.0		
IM3	Fine	Moderate	07:20	27.9	S	0.42	203	28.5	28.5	28.34	28.35	8.14	8.14	147.1	147.0	9.75	9.74	7.75	1.07	1.08	1.86	4.5	4.3	3.7
						0.44	191	28.5		28.35		8.14		146.8		9.73			1.08			4.0		
					M	0.85	206	24.8	24.8	34.78	34.78	8.21	8.22	84.7	84.7	5.76	5.76		1.72	1.77		3.6	3.4	
						0.82	214	24.8		34.78		8.22		84.6		5.76			1.81			3.2		
					B	0.66	206	24.7	24.7	34.84	34.84	8.27	8.28	84.2	84.3	5.74	5.74		2.76	2.75		3.4	3.3	
						0.67	213	24.7		34.84		8.28		84.3		5.74			2.73			3.2		
IM6	Fine	Moderate	06:25	18.1	S	0.65	238	27.6	27.6	30.00	29.99	8.15	8.15	125.7	125.8	8.39	8.40	7.18	0.97	0.97	1.18	5.8	5.5	4.9
						0.69	239	27.6		29.98		8.15		125.8		8.40			0.96			5.2		
					M	0.59	228	25.1	25.1	34.50	34.50	8.23	8.23	87.8	87.8	5.96	5.96		1.26	1.26		4.9	4.7	
						0.59	241	25.1		34.50		8.23		87.8		5.96			1.26			4.5		
					B	0.55	236	24.9	24.9	34.69	34.69	8.33	8.34	86.5	86.6	5.88	5.89		1.32	1.32		4.6	4.5	
						0.56	238	24.9		34.69		8.34		86.7		5.89			1.31			4.4		
IM7	Fine	Rough	06:12	26.6	S	1.22	248	27.3	27.3	30.59	30.54	7.96	7.96	125.5	125.8	8.39	8.40	7.12	1.07	1.07	1.90	3.4	3.6	3.7
						1.33	265	27.3		30.49		7.96		126.0		8.41			1.07			3.7		
					M	0.29	239	24.8	24.8	34.87	34.87	8.00	8.00	85.9	85.9	5.84	5.84		1.58	1.59		3.3	3.7	
						0.29	262	24.8		34.87		8.00		85.9		5.84			1.59			4.0		
					B	0.08	102	24.2	24.2	34.94	34.94	8.19	8.20	87.8	87.8	6.03	6.03		3.04	3.05		3.4	3.8	
						0.08	107	24.2		34.94		8.20		87.8		6.03			3.05			4.2		
G2	Fine	Moderate	06:55	34.3	S	0.55	198	28.3	28.3	28.47	28.47	8.14	8.15	141.6	141.6	9.42	9.42	7.62	1.14	1.14	2.06	2.9	3.0	3.6
						0.57	200	28.3		28.46		8.15		141.5		9.41			1.13			3.0		
					M	0.96	219	24.8	24.8	34.81	34.81	8.22	8.22	85.7	85.7	5.83	5.83		1.45	1.45		3.2	3.8	
						1.04	217	24.8		34.81		8.22		85.7		5.83			1.44			4.3		
					B	0.89	209	24.5	24.5	34.93	34.93	8.39	8.39	86.8	86.9	5.94	5.94		3.59	3.61		4.5	4.2	
						0.84	204	24.5		34.93		8.39		86.9		5.94			3.63			3.9		
G3	Fine	Moderate	06:38	30.5	S	0.56	218	28.2	28.2	28.47	28.47	8.21	8.21	138.0	138.0	9.19	9.19	7.56	1.26	1.26	1.24	2.7	2.8	3.3
						0.57	219	28.2		28.47		8.21		137.9		9.18			1.25			2.9		
					M	0.82	254	25.1	25.1	34.44	34.44	8.21	8.21	87.5	87.5	5.94	5.94		1.23	1.23		3.6	3.6	
						0.86	254	25.1		34.44		8.21		87.5		5.94			1.22			3.6		
					B	0.77	250	24.9	24.9	34.71	34.71	8.28	8.28	86.5	86.6	5.88	5.89		1.25	1.25		3.8	3.6	
						0.83	247	24.9		34.71		8.28		86.7		5.89			1.25			3.4		

Remark: * DA: Depth-Averaged

***** S: 1 m below the sea surface; M: mid-depth; S: 1 m above the seabed**

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