

# **Airport City Link**

Monthly EM&A Report for November 2023

December 2023

Airport Authority Hong Kong

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Airport Authority Hong Kong

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Monthly EM&A Report for November 2023

December 2023

# This Submission of Construction Phase Monthly Environmental Monitoring and Audit (EM&A) Report for November 2023

has been reviewed and certified by

the Environmental Team Leader (ETL) in accordance with

Condition 3.5 of Environmental Permit No. EP-581/2020 and

Section 11.2 of the EM&A Manual of the Project.

Certified by:

Ir Thomas Chan

Environmental Team Leader (ETL) Mott MacDonald Hong Kong Limited

Mum Clin

Date 13 December 2023



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Our Ref: 60664934/C/FYW2312131

# By Email

Capital Works Management Department Level 6, HKIA Tower 2, 15 Cheong Tat Road, Hong Kong International Airport, Lantau, Hong Kong

Attn: Collin Chan (Manager, Civil)

13 December 2023

Dear Sir,

Contract C21C02 - Independent Environmental Checker Consultancy Services for Airport City

# Monthly Environmental and Audit (EM&A) Report for November 2023

Reference is made to the Environmental Team's submission of Monthly EM&A Report for November 2023 in accordance with Condition 3.5 of the Environmental Permit (No: EP-581/2020) and Section 11.2 of the EM&A Manual of the Project certified by the ET Leader on 13 December 2023.

We would like to inform you that we have verified on the captioned submission in accordance with the requirement stipulated in Condition 1.9 of EP-581/2020.

Should you have any queries, please feel free to contact the undersigned at 3922 9366.

Yours faithfully, AECOM Asia Co. Ltd.

Y W Fung

Independent Environmental Checker

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# **Executive summary**

In July 2020, a Project Profile (PP) (Register No.: PP-606/2020) of the Airport City Link (ACL) (hereinafter as "the Project") was submitted for the application for permission to apply directly for an Environmental Permit (EP), which was approved by Environmental Protection Department (EPD) in August 2020. The EP of the Project (EP No.: EP-581/2020) was obtained in October 2020.

On 10 June 2021, Mott MacDonald Hong Kong Limited (MMHK) was commissioned by Airport Authority Hong Kong (AAHK) to provide Environmental Team (ET) consultancy services for the implementation of an Environmental Monitoring and Audit (EM&A) programme of the Project in accordance with the EP requirements throughout the Pre-construction, Construction and Post-construction phases.

The construction phase EM&A programme of the Project started on 26 July 2022. The construction of marine section was commenced on 26 July 2022, while the construction of the land section was commenced on 20 February 2023.

This is the 16<sup>th</sup> Monthly EM&A Report for the construction phase of the Project which summaries findings of the EM&A programme during the reporting period from 1 to 30 November 2023.

# **Key Construction Works in the Reporting Period**

A summary of construction activities undertaken during the reporting period is presented below:

### **Marine Section**

- Plant mobilization and material delivery for works
- Marine substructure works
- Marine pier construction works
- Segment construction works

### **Land Section**

- GI works
- Underground utilities diversion work
- Bored pile work
- Socketed H-Pile
- Pile cap
- ELS
- · Water mains installation

# **Environmental Monitoring and Audit Progress**

The monthly EM&A programme was undertaken by ET in accordance with the approved EM&A Manual. A summary of the monitoring activities during the reporting period is presented below:

# Table I: Summary Table for EM&A Activities in the Reporting Period

EM&A Activities	Number of Sessions
Water quality monitoring	13
Weekly environmental site inspections (Marine Section)	4
Weekly environmental site inspections (Land Section)	4

### **Breaches of Action and Limit Levels**

# Water Quality

The water quality monitoring results for dissolved oxygen (DO), turbidity and suspended solids (SS) obtained during the reporting period were within the corresponding Action and Limit Levels.

# **Complaint Log**

There was no complaint in relation to the environmental impact received during the reporting period.

#### **Notifications of Summons and Successful Prosecutions**

There was no notifications of summons or successful prosecutions received during this reporting period.

# **Reporting Changes**

There was no reporting change during the reporting period.

### **Future Key Issues**

The future key issues to be undertaken in the upcoming month are:

#### Marine Section

- Plant mobilization and material delivery
- Marine substructure works
- Marine pier construction works
- Segment construction works

# Land Section

- GI works
- Underground utilities diversion work
- Bored pile work
- Socketed H-Pile
- Pile cap
- ELS
- Water mains installation

# 1 Introduction

# 1.1 Background

In July 2020, a Project Profile (PP) (Register No.: PP-606/2020) of the Airport City Link (ACL) (hereinafter as "the Project") was submitted for the application for permission to apply directly for an Environmental Permit (EP), which was approved by Environmental Protection Department (EPD) in August 2020. The EP of the Project (EP No.: EP-581/2020) was obtained in October 2020.

The Project is situated between the Airport Island and Hong Kong Port (HKP) Island, at the south of existing SkyPier on the Airport Island. To enhance vehicular mobility and walkability between HKP Island and the SKYCITY, the Project serves as a connection bridge providing shuttle services and pedestrian pathway.

The construction for the Project consists of a marine section in a marine area between the Airport Island and HKP Island, and a land section on the Airport Island and HKP Island. The connection bridge comprises of approximately 400m long marine section and 450m long land section. The construction works of marine section will be carried out by marine works Contractor, while the construction works of land section will be carried out by land works Contractor.

On 10 June 2021, Mott MacDonald Hong Kong Limited (MMHK) was commissioned by Airport Authority Hong Kong (AAHK) to provide Environmental Team (ET) consultancy services for the implementation of an Environmental Monitoring and Audit (EM&A) programme in accordance with the EP requirements throughout the Pre-construction, Construction and Post-construction phases.

The construction phase EM&A programme of the Project started on 26 July 2022. The construction of marine section was commenced on 26 July 2022, while the construction of the land section was commenced on 20 February 2023.

This is the 16<sup>th</sup> Monthly EM&A report summarising the key findings of the construction phase EM&A programme from 1 to 30 November 2023 (the reporting period) and is submitted to fulfil requirements in Condition 3.5 of EP and Section 11.2 of EM&A Manual of the Project.

# 1.2 Project Organisation

The organisation chart and lines of communication with respect to the on-site environmental management structure of the key personnel are shown in **Appendix A**. The key personnel contact names and numbers are summarized in **Table 1.1.** 

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

Party	Position	Name	Telephone
Project Manager's Representative (Airport Authority Hong Kong)	Senior Project Engineer, Environment	Becky Yan	2183 2773
Environmental Team (ET)	Environmental Team Leader	Thomas Chan	2828 5967
(Mott MacDonald Hong Kong Limited)	Deputy Environmental Team Leader	Gary Chow	2828 5874

Party	Position	Name	Telephone
Independent Environmental Checker (IEC)	Independent Environmental Checker	Y W Fung	3922 9366
(AECOM Asia Company Limited)	Deputy Independent Environmental Checker	Lemon Lam	3922 9381
Main Contractor - Marine Section	Senior Project Manager	Brian Ho	9041 7535
(Gammon Engineering & Construction Company Limited)	Environmental Officer	Elena Lai	6841 3324
Main Contractor – Land Section	Project Manager	Kingsley Chiang	9424 8437
(China State Construction Engineering (HK) Ltd.)	Senior Environmental Officer	William Chan	5408 3045

# 1.3 Construction Works Programme and Construction Works Area

The construction phase EM&A programme of the Project started on 26 July 2022. The construction of marine section was commenced on 26 July 2022, while the construction of the land section was commenced on 20 February 2023.

The construction works programme and the construction works area of the Project are shown in **Appendix B** and **Appendix C** respectively.

# 1.4 Construction Works undertaken during the Reporting Period

A summary of construction activities undertaken during this reporting period is presented below:

# **Marine Section**

- Plant mobilization and material delivery for works
- Marine substructure works
- Marine pier construction works
- Segment construction works

# **Land Section**

- GI works
- Underground utilities diversion work
- Bored pile work
- Socketed H-Pile
- Pile cap
- ELS
- Water mains installation

# 2 Water Quality

# 2.1 Baseline Water Quality Monitoring

As stipulated in the EM&A Manual, the construction activities under sea water level for the Project will commence in a month after completion of that of Intermodal Transfer Terminal Bonded Vehicular Bridge (ITT-BVB). Therefore, it is likely that the period for baseline monitoring would overlap with the construction activities under sea water level of ITT-BVB, which may influence the baseline water quality for the Project.

Since the baseline monitoring of ITT-BVB project has been carried out at the same proposed baseline monitoring locations of the Project during 15 August 2019 – 10 September 2019, and 28 November 2019 – 24 December 2019 covering both dry and wet seasons, which was carried out before any marine construction activities in the vicinity of the Project. Hence, the baseline monitoring data from ITT-BVB would be the most recent and representative to the baseline condition of the water quality in the vicinity of the Project without any interference. Thus, the baseline monitoring data from ITT-BVB would be adopted for the Project.

ET submitted the baseline monitoring report of the Project on 12 November 2021 and EPD expressed no comment on 24 November 2021.

# 2.2 Impact Water Quality Monitoring

# 2.2.1 Monitoring Requirement

The impact water quality monitoring was conducted three days per week at mid-flood and midebb tides, at 5 water quality monitoring stations. Samples were taken at three depths, namely, 1m below water surface, mid-depth and 1m above sea bed, except where the water depth less than 6m, the mid-depth station was omitted. For locations with water depth less than 3m, only the mid-depth station was monitored. Duplicate in-situ measurements and water samples were collected from each independent monitoring event for all parameters to ensure a robust statistically interpretable dataset.

# 2.2.2 Monitoring Locations

The water quality monitoring was conducted at three locations in the sea channel between the HKIA and the HKBCF (M1, M2 and M3) and two control stations (C1 and C2), locations are shown in **Figure 2.1** and summarized in **Table 2.1**.

**Table 2.1: Locations of Marine Water Quality Monitoring Stations** 

ID	<b>Monitoring Station</b>	Easting	Northing
M1	Impact Station	812423	819635
M2 <sup>(1)</sup>	Impact Station	812629	819845
M3 <sup>(2)</sup>	Impact Station	812586	820069
C1	Control Station - West	812419	820670
C2	Control Station - East	813072	820595

Notes:

<sup>1.</sup> As updated in the baseline monitoring report, the water quality monitoring at M2 station was shifted to bring it closer to the Project site and away from the SkyPier ferry movements for better representation.

 As updated in the baseline monitoring report, the water quality monitoring at M3 station was shifted to the location near the seawater intake of HKBCF to better represent the potential water quality impacts at the nearby sensitive receiver

# 2.2.3 Monitoring Parameters

For the 3 impact stations (M1 to M3) and 2 control stations (C1 and C2), monitoring of DO, DO%, pH, temperature, turbidity, salinity, SS and water depth were undertaken.

Other relevant data were also recorded, including monitoring location, time, tidal stages, weather conditions and any special phenomena or work during the monitoring.

# 2.2.4 Monitoring Schedule for the Reporting Period

Construction impact monitoring for water quality was undertaken in compliance with the EM&A Manual during the reporting period.

The schedule for water quality monitoring of the reporting period is presented in **Appendix D**.

# 2.2.5 Monitoring Equipment

Water samples for all monitoring parameters were collected, stored, preserved and analysed according to the Standard Methods, APHA 21<sup>st</sup> ed. and/or other methods as agreed by the EPD. In-situ measurements at monitoring locations including dissolved oxygen (DO), dissolved oxygen saturation (DO%), pH, temperature, turbidity, salinity and water depth were collected using the equipment listed in **Table 2.2**.

Water samples for suspended solids (SS) analysis were stored in suitable containers provided by the HOKLAS laboratory with no preservative added, packed in ice (cooled to 4°C without being frozen) and delivered to the HOKLAS laboratory as soon as possible after collection.

**Table 2.2: Impact Water Quality Monitoring Equipment** 

Equipment	Brand and Model	Quantity
Water Sampler	Van Dorn Water Sampler	2
Monitoring Position Equipment (measurement of DGPS)	Garmin eTrex 20x	1
Water Depth Detector (measurement of water depth)	Garmin STRIKER™ Series	1
Multifunctional Meter (measurement of DO, DO%, temperature, turbidity, salinity and pH)	YSI ProDSS (Multiparameter Sampling Instrument)	1

### 2.2.6 Maintenance and Calibration of In-situ Instruments

In-situ monitoring instruments for water quality parameters were checked, calibrated and certified by a laboratory accredited under HOKLAS before use. Responses of sensors and electrodes were checked with certified standard solutions before each use.

Wet bulb calibration for DO measurement was carried out before commencement of monitoring and after completion of all measurements each day. The turbidity meter was calibrated in order to establish the relationship between NTU units and the levels of suspended solids. A zero check in distilled water was performed with the turbidity probe at least once per monitoring day. The probe was then calibrated with a solution of known NTU. Standard buffer solutions of at least pH 7 and pH 10 was used for calibration of the pH instrument before and after use on each monitoring day.

Calibration certificates of the monitoring equipment used in the monitoring for water quality parameters are provided in **Appendix E**.

# 2.2.7 Laboratory Measurement / Analysis

Analysis of SS was out in a HOKLAS accredited laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066). Sufficient water samples were collected at each of the control stations and impact stations for carrying out the laboratory SS determination.

The SS determination works started within 24 hours after collection of the water samples. The analysis followed the APHA 2540D analytical method with a detection limit of 1 mg/L.

#### 2.3 Event and Action Plan

#### 2.3.1 Action and Limit Levels

The Action and Limit Levels for the impact monitoring stations were extracted from Table 2.8 of the Baseline Monitoring Report of ITT-BVB. The derived Action and Limit Levels are summarized in **Table 2.3**.

Table 2.3: Derived Action and Limit Levels

Parameters	Action Level	Limit Level
Impact Stations M1 and M2		
DO in mg/L		
Surface & Middle	4.3	4.0
Bottom	3.8	3.0
SS in mg/L	14.2	17.4
	AND	AND
	120% of upstream control station at the same tide of the same day	130% of upstream control station at the same tide of the same day
Turbidity in NTU	11.0	16.3
	AND	AND
	120% of upstream control station at the same tide of the same day	130% of upstream control station at the same tide of the same day
Impact Station M3		
SS in mg/L	33	42

#### Notes:

- 1. For DO measurement, non-compliance occurs when the monitoring result is lower than the limits.
- 2. For parameters other than DO, non-compliance of water quality occurs when the monitoring result is higher than the limits.
- 3. Depth-averaged results are used unless specified otherwise.
- 4. Impact station M3 is represents the impact station SR1A of "Expansion of Hong Kong International Airport into a Three-Runway System". The AL levels for M3 in Table 2.3 is referencing the agreed and adopted AL levels of SR1A from the Updated EM&A Manual for Expansion of Hong Kong International Airport into a Three-Runway System.

#### 2.3.2 Event and Action Plan

In the event of water quality monitoring results at impact stations exceeding the Action and/or Limit levels for water quality as defined in **Table 2.3**, the actions in accordance with the Event and Action Plan presented in **Appendix F** shall be carried out.

# 2.4 Water Quality Monitoring Results

### 2.4.1 Impact Water Quality Monitoring

The water quality monitoring results for dissolved oxygen (DO), turbidity and suspended solids (SS) obtained during the reporting period were within the corresponding Action and Limit Levels.

**Table 2.4** presents the summary of exceedances during the reporting period. Detailed impact monitoring results and relevant graphical plots are presented in **Appendix G**.

**Table 2.4: Summary of Exceedances** 

Date	Parameter(s)	Affected Station(s)	Tide	Exceedance Type
N/A	N/A	N/A	N/A	N/A

### 2.5 Conclusion

The water quality monitoring results for dissolved oxygen (DO), turbidity and suspended solids (SS) obtained during the reporting period were within the corresponding Action and Limit Levels.

In the meantime, the Contractor was reminded to implement and maintain all mitigation measures during weekly site inspection and regular environmental management meetings. These include maintaining mitigation measures properly as recommended in the EM&A Manual.

# 3 Environmental Site Inspection and Audit

# 3.1 Environmental Site Inspection

Site inspections for marine and land section were carried out by ET on a weekly basis to monitor the implementation of proper environmental pollution control mitigation measures for the Project. Key observations were recorded in the site inspection checklist and passed to the Contractors together with the appropriate recommended mitigation measures where necessary.

### Marine Section

During the reporting period, site inspections were carried out on 7, 14, 21 and 28 November 2023 for marine section. Joint IEC site inspection for marine section was carried out on 14 November 2023. Monthly landscape and visual site audit was carried out on 14 November 2023.

### Land Section

During the reporting period, site inspections were carried out on 6, 13, 20 and 27 November 2023 for land section. Joint IEC site inspection for land section was carried out 13 November 2023. Monthly landscape and visual site audit was carried out on 13 November 2023.

Key observations and reminders during the site inspections and landscape and visual site audit are described in **Table 3.1**.

Table 3.1: Summary of Site Inspections and Recommendations

Marine Section					
Inspection Date	Key Observations / Reminders	Recommendations / Actions	Close-Out Date		
31 Oct 2023	Construction debris were observed on the deck of barge No. 268.	The Contractor should keep the deck clear of debris to prevent any materials from washing into the sea.	7 Nov 2023		
7 Nov 2023	Some loose construction materials were observed on the pile cap of Pier 6. (Reminder)	The Contractor was reminded to conduct regular cleaning on the pile cap of Pier 6 to prevent any materials from falling into the sea to minimise potential floating refuse.	7 Nov 2023		
14 Nov 2023	Construction debris were observed at Pier 6.	The Contractor should clear the materials and prevent any materials from falling into the sea to minimise potential floating refuse.	21 Nov 2023		
14 Nov 2023	Chemical container was observed without drip tray at Pier 6.	The Contractor should provide a drip tray or a chemical storage cabinet for the chemical container to prevent any potential spillage.	21 Nov 2023		
14 Nov 2023	NRMM label displayed on the generator at Pier 6 had faded. (Reminder)	The Contractor was reminded to replace the faded NRMM label displayed on the generator at Pier 6.	14 Nov 2023		

28 Nov 2023	Construction debris were observed on the pile cap of Pier 5.	The Contractor should clear the materials and prevent any materials from falling into the sea to minimise potential floating refuse.	Ongoing
Land Section			
Inspection Date	Key Observations / Reminders	Recommendations / Actions	Close-Out Date
5 Oct 2023 (Updated on 25 Oct 2023)	Tarpaulin was provided underneath the stockpiling area for untreated marine sediment and the mitigation measures was observed inadequate.	The stockpiling area for untreated marine should be completely paved to avoid potential contamination to underlying soil or groundwater.	13 Nov 2023
5 Oct 2023 (Updated on 25 Oct 2023)	No proper anchor was provided to secure the tarpaulin for covering the stockpile of untreated marine sediment.	The Contractor should ensure proper covering for the stockpile of untreated marine sediment to prevent generation of leachates.	13 Nov 2023
30 Oct 2023	No protection measure was provided from the gully.	The Contractor should intercept the gully to prevent any construction debris and soil from entering the public drainage system.	6 Nov 2023
6 Nov 2023	Silt was deposited at the public drain.	The Contractor should provide regular cleaning for the drain and enhance the protection measures to prevent any silt from entering the public drainage system.	13 Nov 2023
6 Nov 2023	No protection measure was provided for the gully.	The Contractor should cover the gully to prevent any construction debris and wastewater from entering the public drainage system.	13 Nov 2023
6 Nov 2023	No protection measure was provided for the road drain.	The Contractor should cover the road drain to prevent any construction debris and soil from entering the public drainage system.	13 Nov 2023
13 Nov 2023	NRMM label on the excavator was missing.	The Contractor should display valid NRMM label on the machinery.	20 Nov 2023
13 Nov 2023	Oil stain was observed underneath the air compressor and no drip tray was provided for the air compressor.	The Contractor should remove the oil stain, and also provide a drip tray and maintenance for the air compressor to prevent any oil spillage.	20 Nov 2023
13 Nov 2023	Debris was observed scattered on the ground.	The Contractor should arrange cleaning and disposal of the debris to maintain good housekeeping onsite.	20 Nov 2023
13 Nov 2023	Dusty access road was observed at the site exit. (Reminder)	The Contractor was reminded to review the wheel washing operation and site drainage system at the site exit to ensure the public road clear of dust and wastewater from wheel washing properly	13 Nov 2023

<b>Land Section</b>			
20 Nov 2023	The lock for chemical waste storage cabinet was found missing.	The Contractor should provide a lock for the chemical waste storage cabinet to prevent unauthorized access.	27 Nov 2023
20 Nov 2023	Loose construction materials were observed at a breaking activity site next to the public road. (Reminder)	The Contractor was reminded to provide mitigation measures to prevent washout of construction materials to the public road from breaking activity.	20 Nov 2023
20 Nov 2023	The maintenance record of the wastewater treatment facility was not updated. (Reminder)	The Contractor was reminded to duly complete the maintenance record of the wastewater treatment facility.	20 Nov 2023
27 Nov 2023	Silt was deposited at the public drain.	The Contractor should provide cleaning for the drain and intercept the public drain to prevent any site runoff from entering the public drainage system.	Ongoing
27 Nov 2023	General refuse was found in the skip for storage of excavated materials.	The Contractor should provide waste sorting and avoid mixing general refuse with the inert materials.	Ongoing
27 Nov 2023	A new site wheel washing area and drainage system was pending set-up and operation. (Reminder)	The Contractor was reminded to set up wheel washing area and drainage system for to ensure proper wheel washing operation and collection of wastewater from wheel washing.	27 Nov 2023

# 3.2 Advice on the Solid and Liquid Waste Management Status

The Contractors were registered as chemical waste producers for the Project. Construction and demolition (C&D) material sorting was carried out on site. Sufficient numbers of receptacles were provided for general refuse collection and sorting. Excavated inert C&D materials were reused to minimise the disposal of C&D waste to public fill. The Contractors were reminded to maintain on site waste sorting and recording system and maximize reuse / recycling of C&D wastes, whenever these are generated.

The monthly summary of waste flow table for marine and land section are detailed in **Appendix H.** 

The valid environmental licenses and permits for the Project during the reporting period are summarized in **Appendix I**.

# 3.3 Implementation Status of Environmental Mitigation Measures

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

A summary of the environmental mitigation measures implementation status is presented in **Appendix J**. Necessary mitigation measures were implemented properly, observations and reminders were issued to the Contractors where actions were taken by the Contractors to rectify the identified issues.

# 3.4 Summary of Exceedance of the Environmental Quality Performance Limit

# **Water Quality**

The water quality monitoring results for dissolved oxygen (DO), turbidity and suspended solids (SS) obtained during the reporting period were within the corresponding Action and Limit Levels.

Detailed impact monitoring results and relevant graphical plots are presented in Appendix G.

# 3.5 Summary of Complaints, Notifications of Summons and Successful Prosecutions

# **Complaint Log**

There was no complaint received in relation to the environmental impact during the reporting period.

### **Notifications of Summons or Status of Prosecution**

There was no notification of summons or prosecutions received during the reporting period.

### **Cumulative Statistics**

Statistics on complaints, notifications of summons and successful prosecutions are summarized in **Table 3.2**.

Table 3.2: Statistics on Environmental Complaints, Notifications of Summons and Successful Prosecutions

Reporting Period	Environmental Complaints	Notifications of Summons	Successful Prosecutions
This reporting period (Nov 2023)	0	0	0
From commencement date of construction to end of reporting period	0	0	0

# 4 Future Key Issues

# 4.1 Construction Programme for the Coming Month

As informed by the Contractors, the major construction activities for the next reporting period (December 2023) are summarized in **Table 4.1.** 

Table 4.1: Construction Activities for the Next Reporting Period

Marine Section	ine Section			
Period	Description of Activities			
Dec 2023	<ul> <li>Plant mobilization and material delivery</li> <li>Marine substructure works</li> <li>Marine pier construction works</li> <li>Segment construction works</li> </ul>			
Land Section				
Period	Description of Activities			
Dec 2023	<ul> <li>GI works</li> <li>Underground utilities diversion work</li> <li>Bored pile work</li> <li>Socketed H-Pile</li> <li>Pile cap</li> <li>ELS</li> <li>Water mains installation</li> </ul>			

# 4.2 Environmental Site Inspection and Monitoring Schedule for the Next Reporting Period

The tentative schedule for weekly site inspection and water quality monitoring for the next reporting period is provided in **Appendix D**.

# 5 Conclusions

#### General

The construction works for the Project commenced on 26 July 2022. The ET of the Project has undertaken environmental site inspections and water quality monitoring under the construction phase EM&A programme during the reporting period.

# **Water Quality Monitoring**

The water quality monitoring results for dissolved oxygen (DO), turbidity and suspended solids (SS) obtained during the reporting period were within the corresponding Action and Limit Levels.

# **Environmental Site Inspections**

Environmental site inspections were carried out 4 times for marine section and 4 times for land section during the reporting period. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site inspections.

# **Complaint Log**

There was no complaint received in relation to the environmental impact during the reporting period.

# **Reporting Changes**

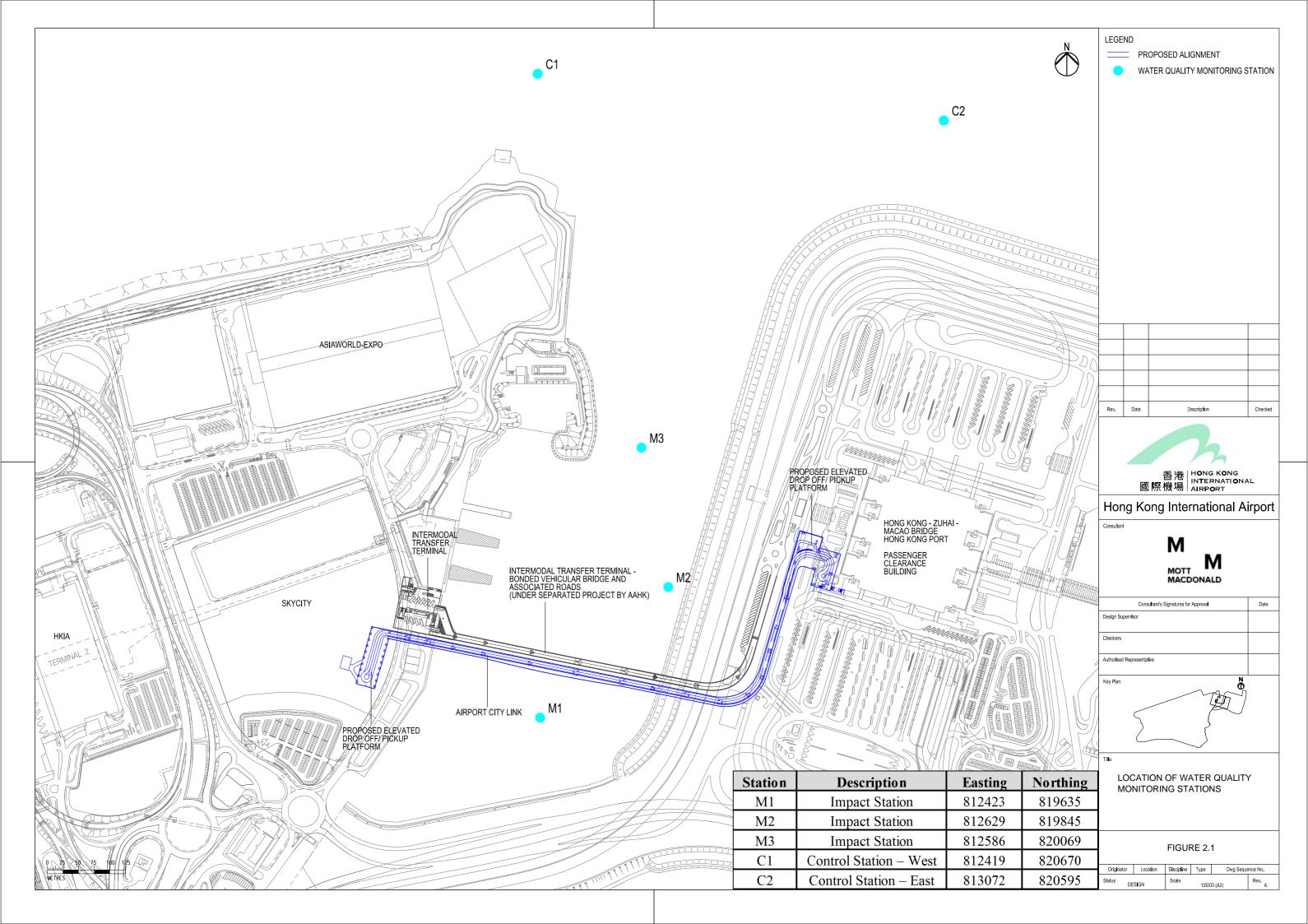
There was no reporting change during the reporting period.

# **Notifications of Summons and Successful Prosecutions**

There was no notification of summons or successful prosecutions received during the reporting period.

# **Figure**

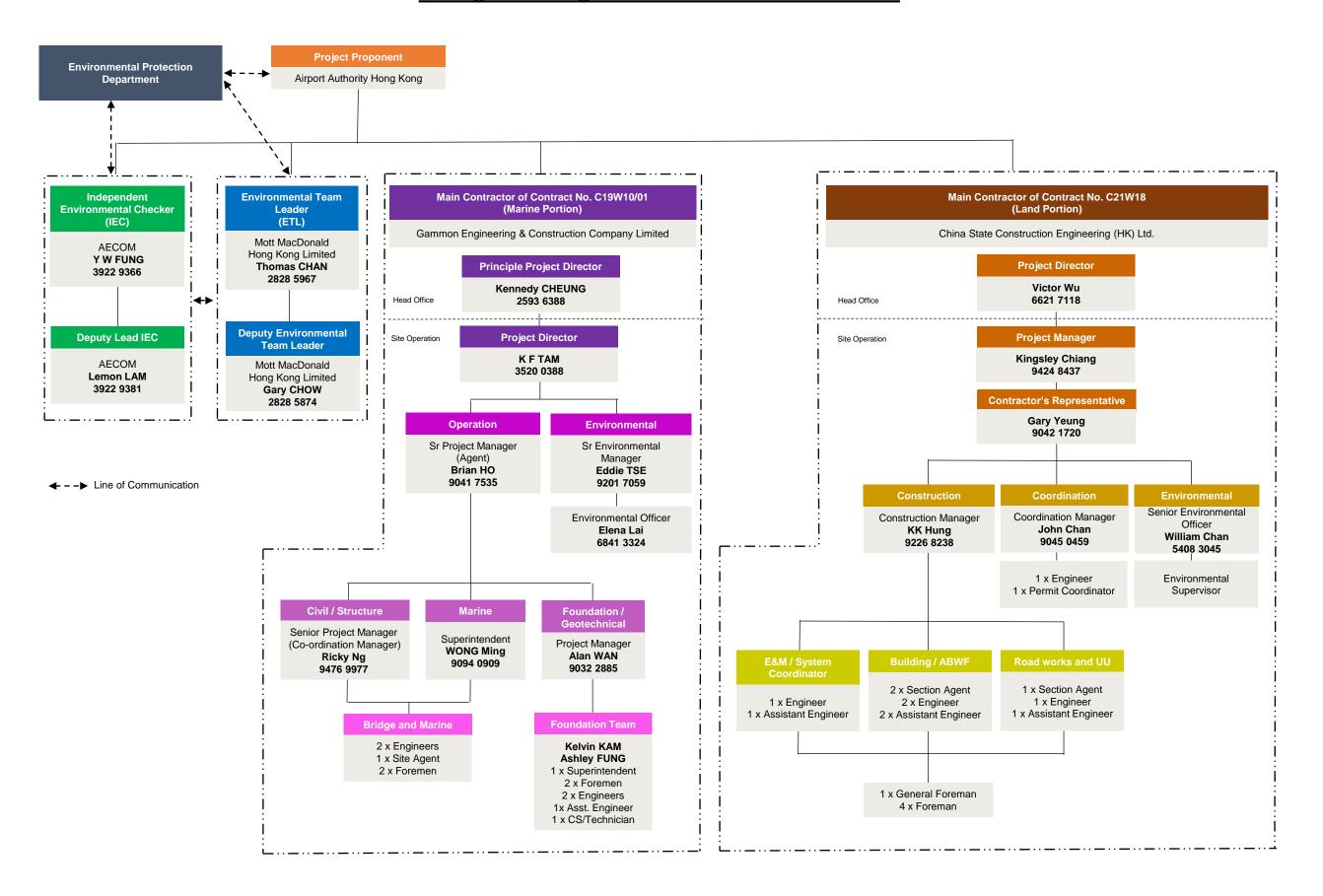
# **Figure 2.1 Water Quality Monitoring Locations**



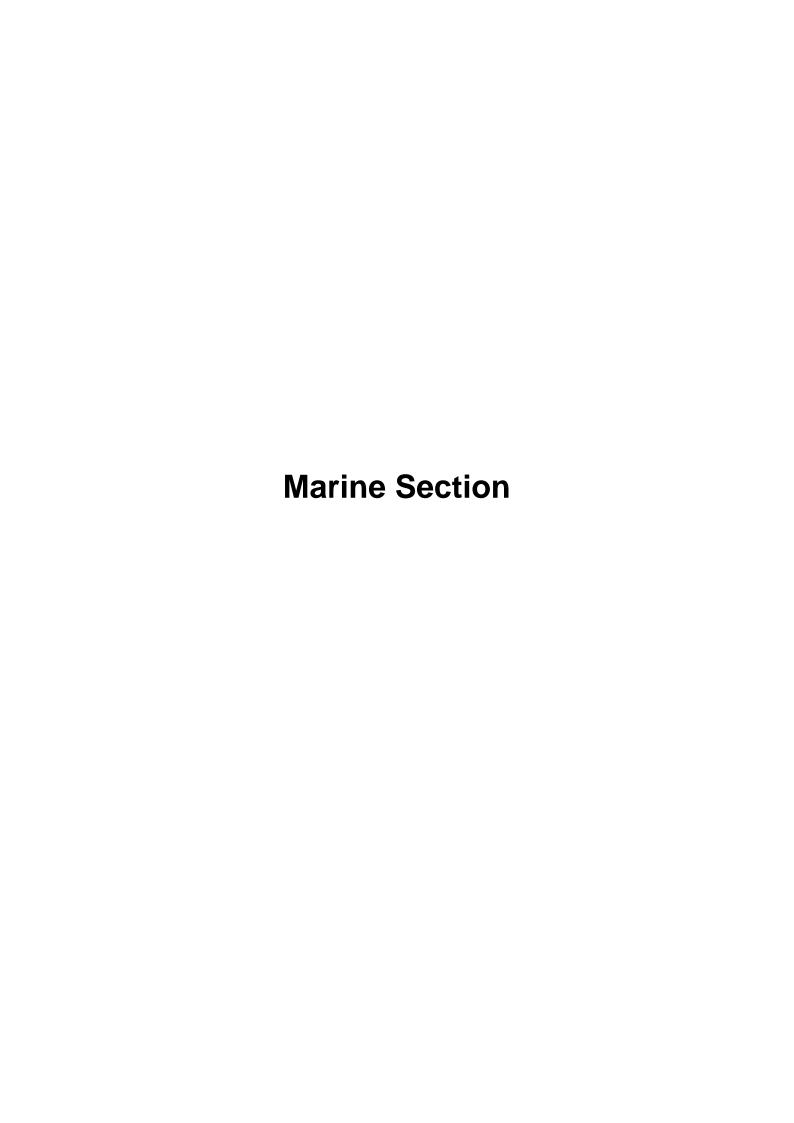
# **Appendices**

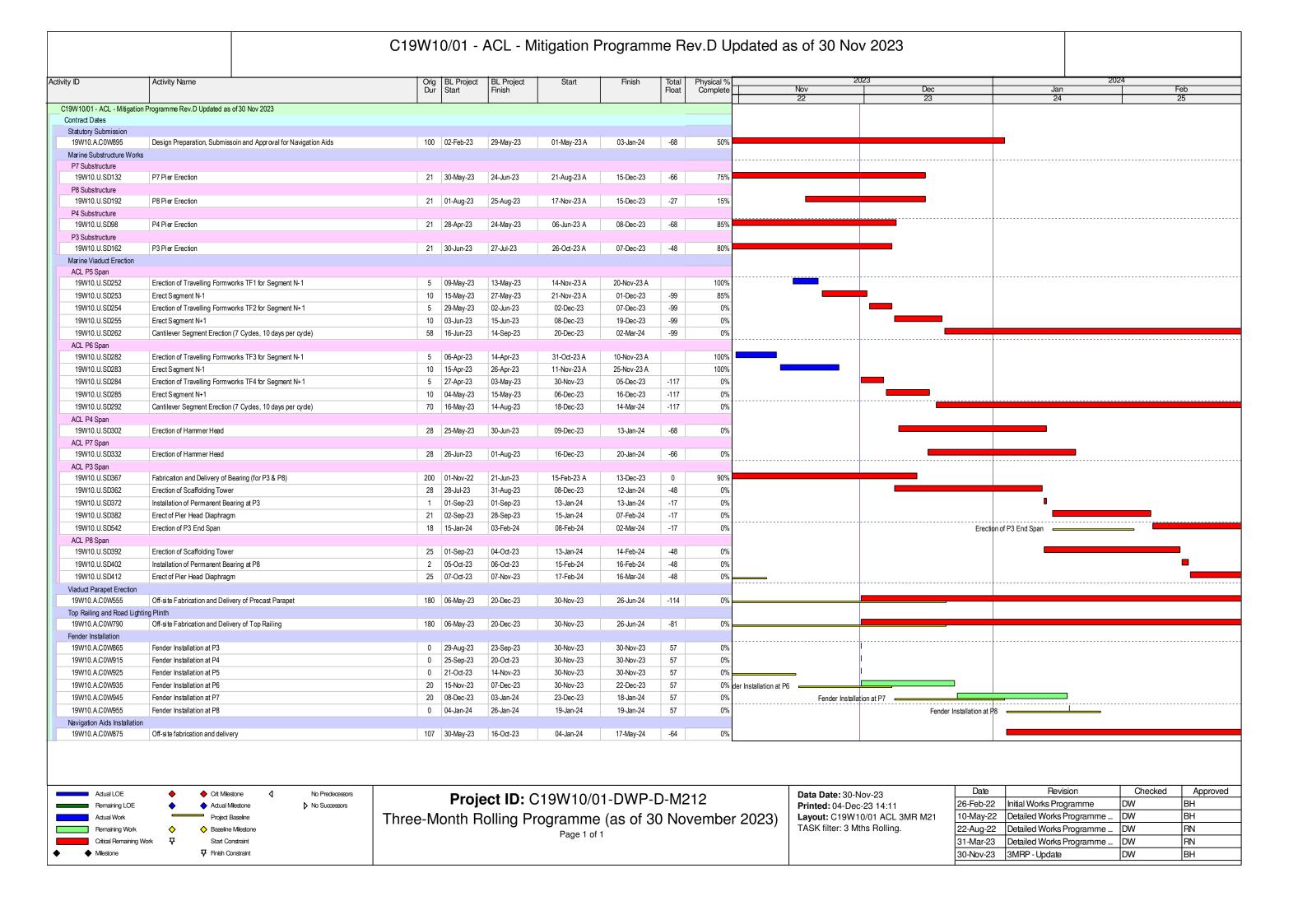
# **Appendix A. Project Organisation**

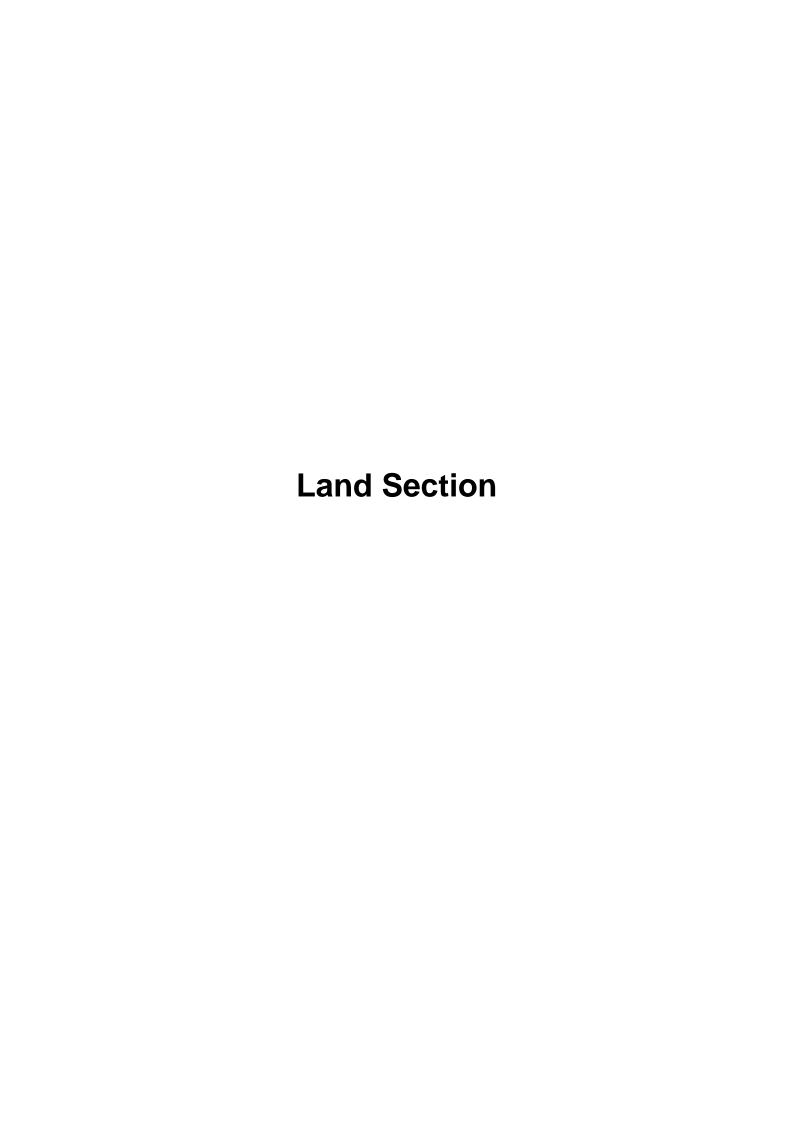
# **Management Organizations for EP Condition 2.3**



# **Appendix B. Construction Works Programme**





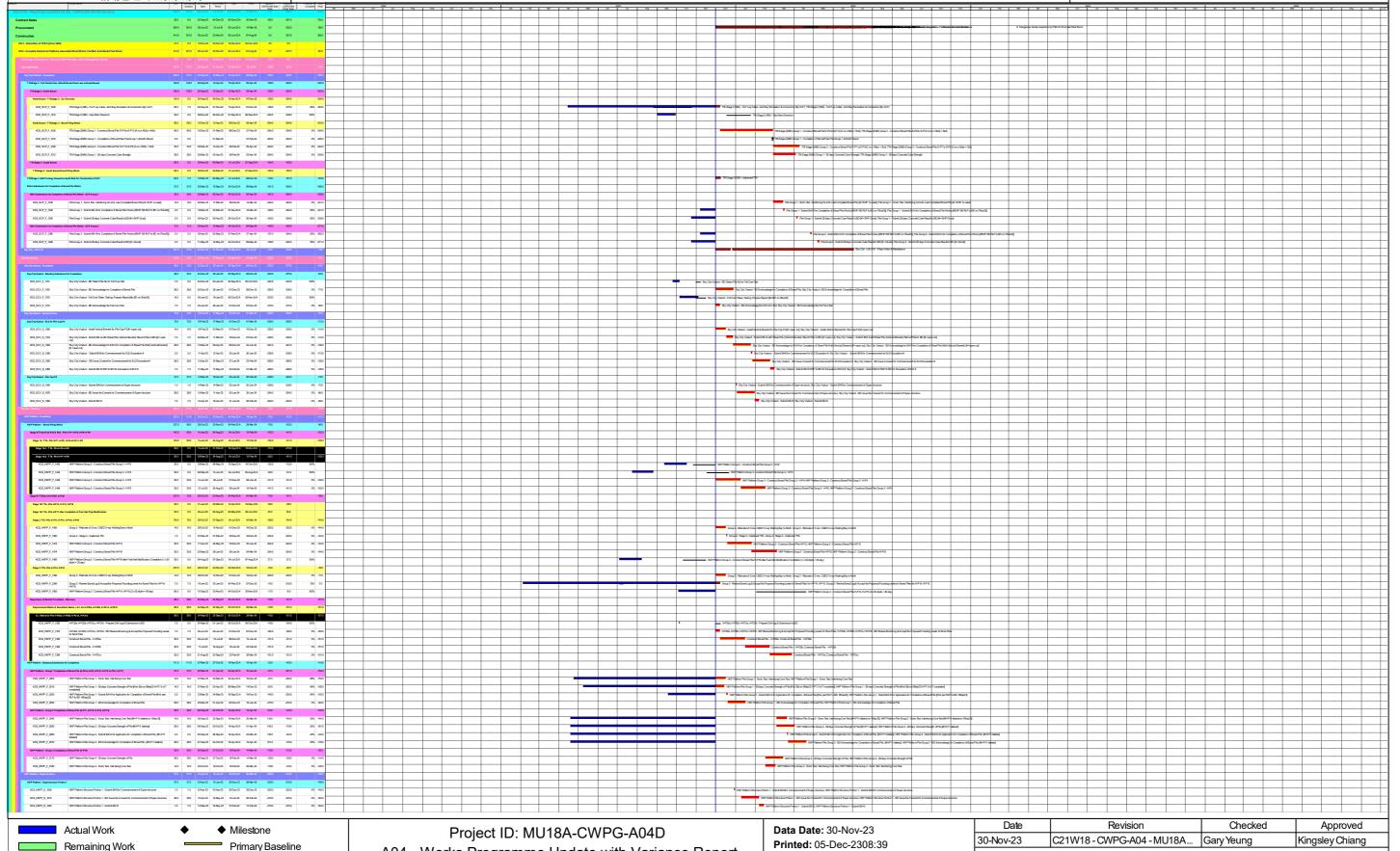




Baseline Milestone

■ Critical Remaining Work ♦

# Contract C21W18 - Airportcity Link - Land Viaducts at Hong Kong Port and Airport Island MU18A - Works Programme Update (CWPG-A04) DD 30-Nov-23



Layout: C21W18-WPU Layout\_MU18A

advance Env

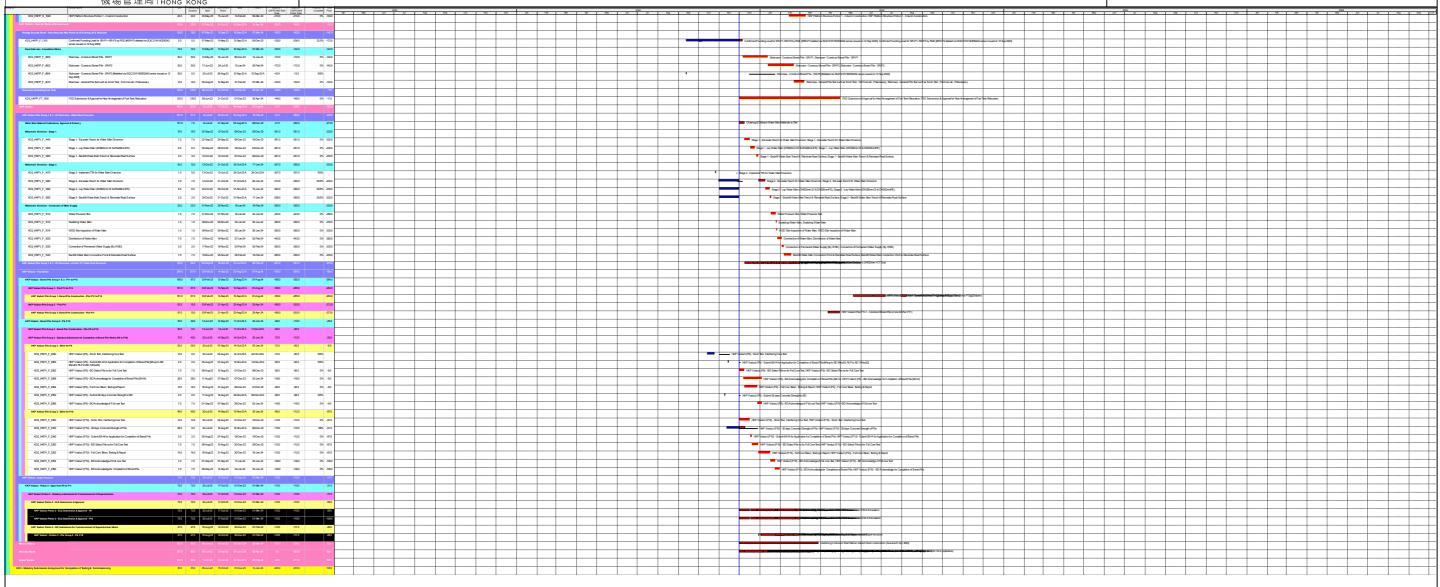
A04 - Works Programme Update with Variance Report

Page 1 of 2



# Contract C21W18 - Airportcity Link - Land Viaducts at Hong Kong Port and Airport Island MU18A - Works Programme Update (CWPG-A04) DD 30-Nov-23





Actual Work	•	◆ Milestone	
Remaining Work		Primary Baseline	
Critical Remaining Work	$\Diamond$	Baseline Milestone	

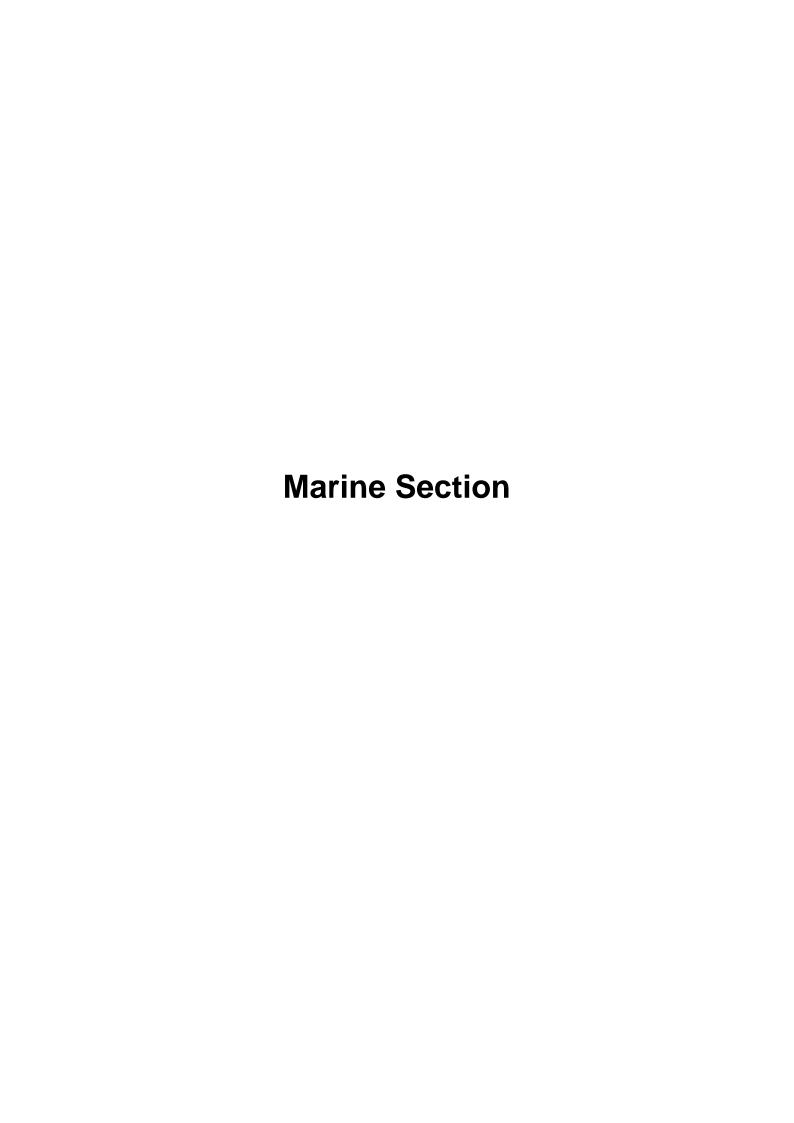
Project ID: MU18A-CWPG-A04D A04 - Works Programme Update with Variance Report Page 2 of 2 **Data Date:** 30-Nov-23 **Printed:** 05-Dec-2308:39

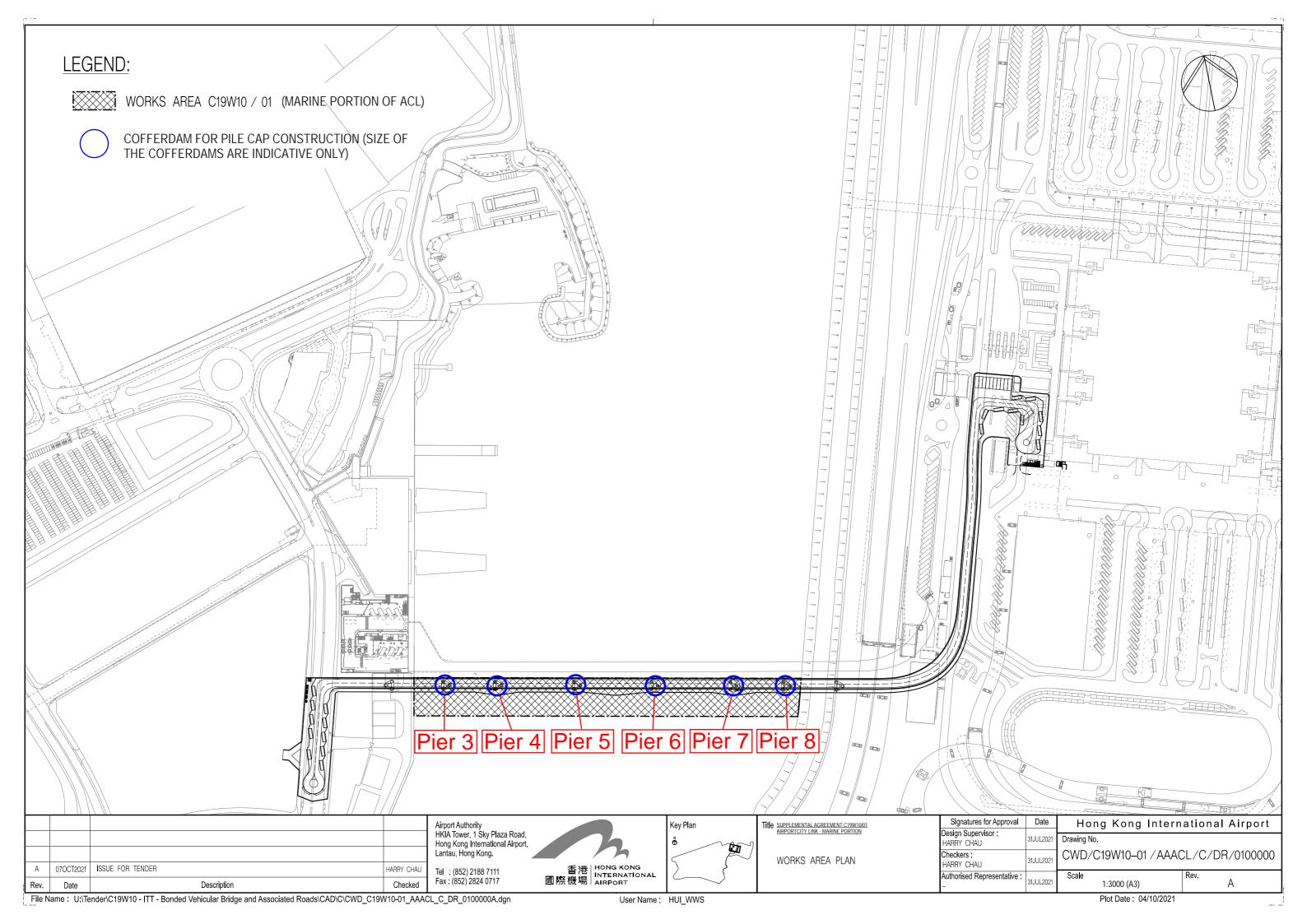
Layout: C21W18-WPU Layout\_MU18A

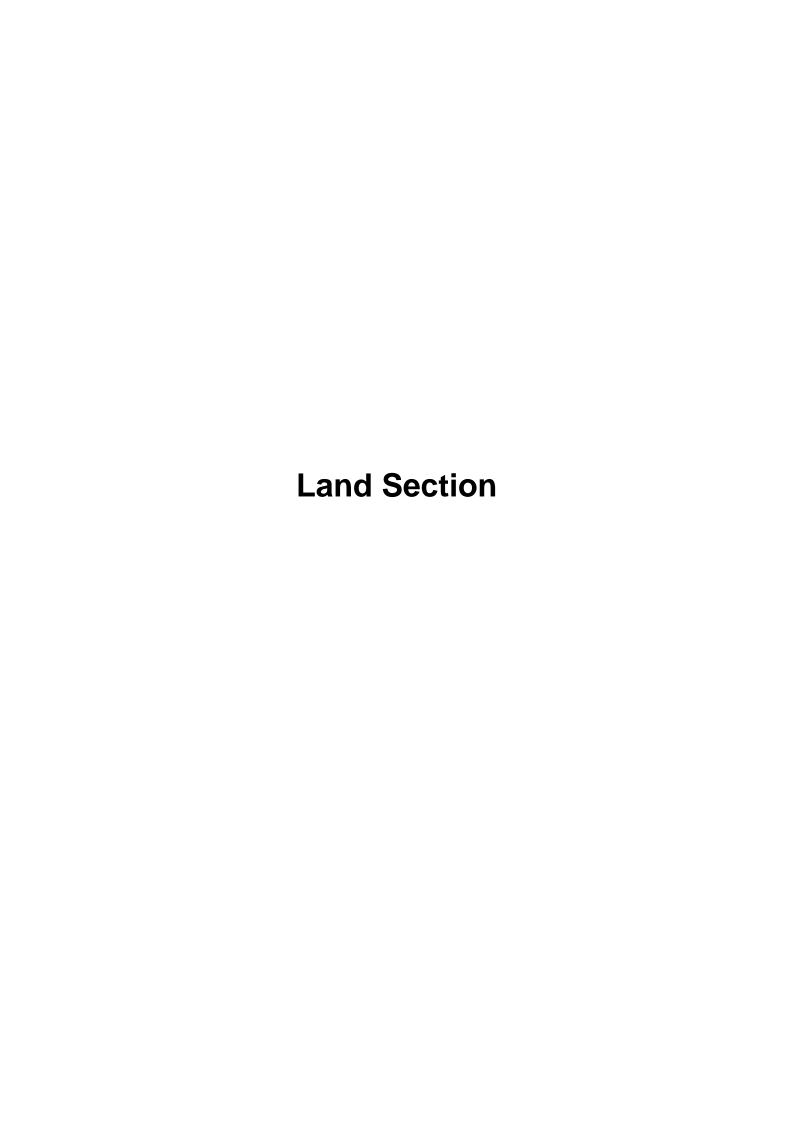
advance Env

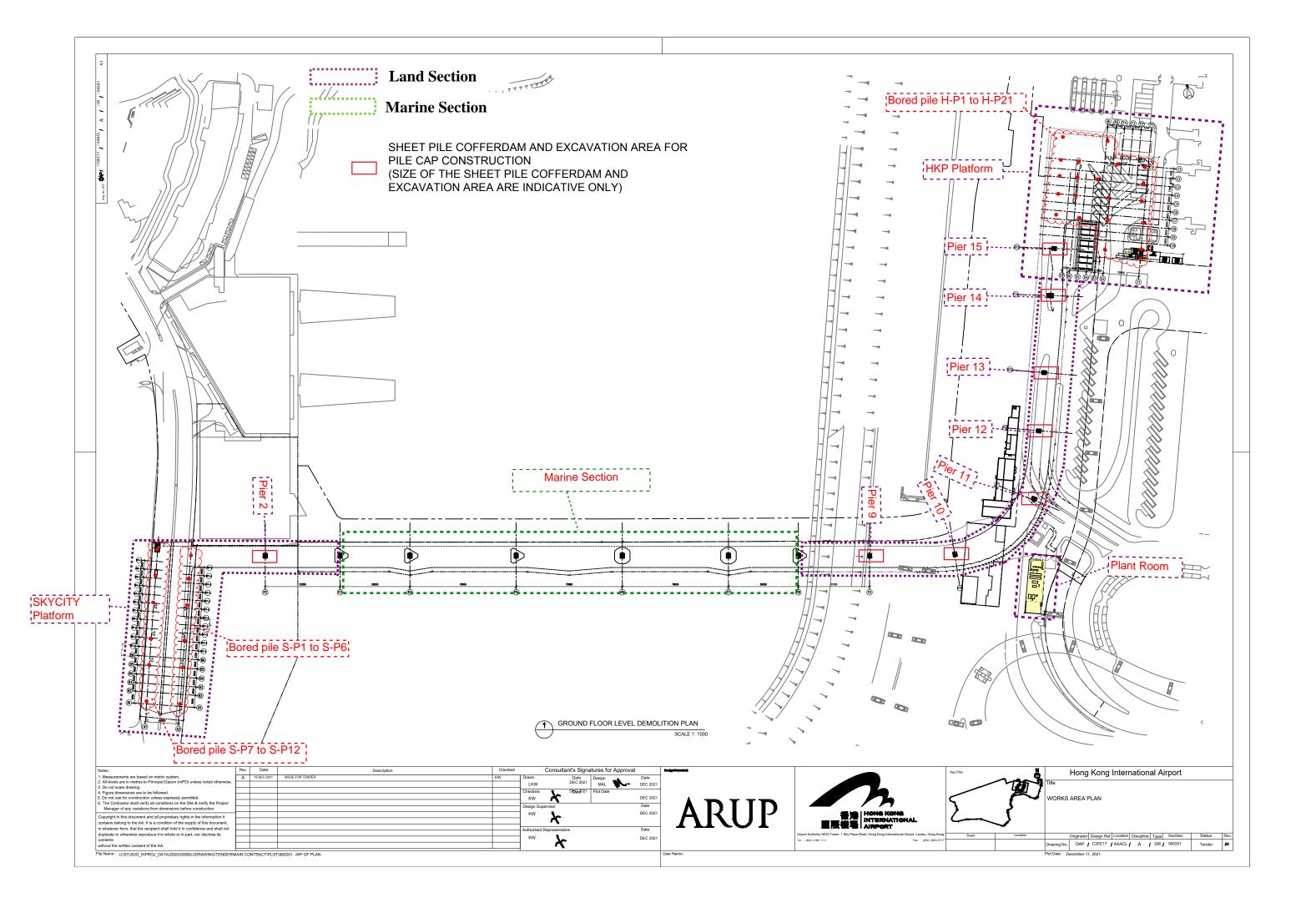
Date	Revision	Checked	Approved
30-Nov-23	C21W18 - CWPG-A04 - MU18A	Gary Yeung	Kingsley Chiang

# **Appendix C. Construction Works Area**









# **Appendix D. Environmental Site Inspection and Monitoring Schedule**

#### ACL Environmental Monitoring and Site Inspection Schedule for Nov 2023

# Nov-23

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
			1	2	3	4	
				Water Quality Monitoring		Water Quality Monitoring	
				mid- ebb: 15:39		mid- ebb: 04:	:51
				mid- flood: 10:50		mid- flood: 17:	.10
5	6	7	8	9	10	11	
	ACL (Land) Environmental Site Inspection	ACL (Marine) Environmental Site Inspection					
		Water Quality Monitoring		Water Quality Monitoring		Water Quality Monitoring	
		mid- ebb: 08:21		mid- ebb: 10:26		mid- ebb: 11:	
		mid- flood: 16:30		mid- flood: 17:01		mid- flood: 17:	.39
12	13	14	15	16	17	18	
	ACL (Land) Environmental Site Inspection	ACL (Marine) Environmental Site Inspection					
		Water Quality Monitoring		Water Quality Monitoring		Water Quality Monitoring	
		mid- ebb: 13:38		mid- ebb: 14:59			:49
		mid- flood: 08:06		mid- flood: 09:44		mid- flood: 16:	.12
19	20	21	22	23	24	25	
	ACL (Land) Environmental Site Inspection	ACL (Marine) Environmental Site Inspection					
		Water Quality Monitoring		Water Quality Monitoring		Water Quality Monitoring	
		mid- ebb: 06:53		mid- ebb: 09:27		mid- ebb: 11:	:17
		mid- flood: 15:09		mid- flood: 16:21		mid- flood: 17:	.15
26	27	28	29	30			
	ACL (Land) Environmental Site Inspection	ACL (Marine) Environmental Site Inspection					
		Water Quality Monitoring		Water Quality Monitoring			
		mid- ebb: 13:33		mid- ebb: 14:43			
		mid- flood: 08:18		mid- flood: 09:52			
		Notes:					

#### ACL Environmental Monitoring and Site Inspection Schedule for Dec 2023

# Dec-23

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
					1	2	
						Water Quality Mo	onitoring
						mid- ebb:	03:44
						mid- flood:	16:01
3	4	5	6	7	8	9	
	ACL (Land) Environmental Site Inspection	ACL (Marine) Environmental Site Inspection					
		Water Quality Monitoring		Water Quality Monitoring		Water Quality Mo	•
		mid- ebb: 05:49		mid- ebb: 08:06		mid- ebb:	10:22
		mid- flood: 18:21		mid- flood: 15:27		mid- flood:	16:14
10	11	12	13	14	15	16	
	ACL (Land) Environmental Site Inspection	ACL (Marine) Environmental Site Inspection					
		Water Quality Monitoring		Water Quality Monitoring		Water Quality Mo	_
		mid- ebb: 12:41		mid- ebb: 14:06		mid- ebb:	15:39
		mid- flood: 07:24		mid- flood: 08:58		mid- flood:	10:36
17	18	19	20	21	22	23	
	ACL (Land) Environmental Site Inspection	ACL (Marine) Environmental Site Inspection					
		Water Quality Monitoring		Water Quality Monitoring		Water Quality Mo	nitoring
		mid- ebb: 19:06		mid- ebb: 07:40		mid- ebb:	10:03
		mid- flood: 13:21		mid- flood: 14:48		mid- flood:	15:58
24	25	26	27	28	29	30	
	ACL (Land) Environmental Site Inspection	ACL (Marine) Environmental Site Inspection					
		Water Quality Monitoring		Water Quality Monitoring		Water Quality Mo	nitoring
		mid- ebb: 12:43		mid- ebb: 13:54		mid- ebb:	15:04
		mid- flood: 07:40		mid- flood: 09:01		mid- flood:	10:13
31		Notes:					

# **Appendix E. Calibration Certificates**



# 專業化驗有限公司 OUALITY PRO TEST-CONSULT LIMITED

Unit 10, 5/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

Test Report No.

: R-BC090045

Date of Issue

: 15 September 2023

Page No.

: 1 of 2

#### PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd.

Flat 2207, Yu Fun House Yu Chui Court, Shatin

New Territories (HK) Hong Kong

**PART B - SAMPLE INFORMATION** 

Name of Equipment:

YSI ProDSS (Multi-Parameters)

Manufacturer:

YSI (a xylem brand)

Serial Number:

21K101468

Date of Received:

15 September 2023

Date of Calibration :

15 September 2023

Date of Next Calibration :

14 December 2023

Request No.:

D-BC090045

#### PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter

Reference Method

pH value

APHA 21e 4500-H+ B

Temperature

Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March

2008: Working Thermometer Calibration Procedure

Salinity

APHA 21e 2520 B

Dissolved oxygen

APHA 23e 4500-O G (Membrane Electrode Method)

Turbidity

APHA 21e 2130 B (Nephelometric Method)

Conductivity

APHA 21e 2510 B

#### PART D - CALIBRATION RESULT

#### (1) pH value

Target ( pH unit )	Display Reading (pH unit)	Tolerance	Result
4.00	4.04	0.04	Satisfactory
7.42	7.50	0.08	Satisfactory
10.01	10.07	0.06	Satisfactory

Tolerance of pH value should be less than  $\pm 0.2$  (pH unit)

#### (2) Temperature

Reading of Ref. thermometer ( °C )	Display Reading (°C)	Tolerance	Result
12	12.0	0.0	Satisfactory
26	26.1	0.1	Satisfactory
39	38.9	-0.1	Satisfactory

Tolerance of Temperature should be less than  $\pm 2.0$  ( °C )

#### (3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.94	-0.60	Satisfactory
20	20.09	0.45	Satisfactory
30	30.16	0.53	Satisfactory

Tolerance of Salinity should be less than  $\pm$  10.0 ( % )

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED SIGNATORY:

LEE Chun-ning Assistant Manager

# REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BC090045

**Date of Issue** 

: 15 September 2023

Page No.

: 2 of 2

#### (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
7.97	8.27	0.30	Satisfactory
6.81	6.47	-0.34	Satisfactory
4.65	4.60	-0.05	Satisfactory
0.17	0.40	0.23	Satisfactory

Tolerance of Dissolved oxygen should be less than  $\pm 0.5$  ( mg/L )

#### (5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.10		Satisfactory
10	10.09	0.90	Satisfactory
20	18.88	-5.60	Satisfactory
100	96.8	-3.20	Satisfactory
800	820.31	2.50	Satisfactory

Tolerance of Turbidity should be less than  $\pm$  10.0 (%)

#### (6) Conductivity

Expected Reading ( μS/cm at 25°C )	Display Reading	Tolerance (%)	Result
146.9	151	2.79	Satisfactory
1412	1278	-9.49	Satisfactory
12890	12906	0.12	Satisfactory
58670	59334	1.13	Satisfactory
111900	112867	0.86	Satisfactory

Tolerance of Conductivity should be less than  $\pm$  10.0 (%)

#### Remark(s)

- 'The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.
- ·The results relate only to the calibrated equipment as received
- The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
- "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
- '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.

--- END OF REPORT ---

# **Appendix F. Event and Action Plan**

Table F.1: Event and Action Plan for Marine Water Quality

		Ac	_			
Event	ET	IEC	AAHK/PM	Contractor		
Action level being exceeded by one sampling day	1. Repeat in-situ measurement to confirm findings; 2. Identify reasons for non-compliance and source(s) of impact; 3. Inform IEC and Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC and Contractor; 6. Repeat measurement on next day of exceedance.	mitigation measures submitted by Contractor and advise AAHK / PM accordingly;  3. Assess the effectiveness of the implemented	the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures.	PM and confirm notification of the non-compliance in writing;  2. Rectify unacceptable practice;  3. Check all plant and equipment;  4. Consider changes of		
Action level being exceeded by two or more consecutive sampling days	1. Repeat in-situ measurement to confirm findings; 2. Identify reasons for non-compliance and source(s) of impact; 3. Inform IEC and Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC and Contractor; 6. Ensure mitigation measures are implemented; 7. Prepare to increase the monitoring frequency to daily; 8. Repeat measurement on next day of exceedance.	Contractor on the mitigation measures  2. Review proposals or mitigation measures submitted by Contractor and advise the AAHK / PM accordingly;  3. Assess the effectiveness of the implemented	<ol> <li>Make agreement on the mitigation measures to be implemented;</li> <li>Assess the effectiveness of the implemented mitigation measures.</li> </ol>	PM and confirm notification of the non-compliance in writing;  2. Rectify unacceptable practice;  3. Check all plant and equipment  4. Consider changes of		
Limit level being exceeded by one sampling day	<ol> <li>Repeat in-situ measurement to confirm findings;</li> <li>Identify reasons for non-compliance and source(s) of impact;</li> <li>Inform IEC, Contractor and EPD</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>Discuss mitigation measures with IEC, AAHK / PM and</li> </ol>	submitted by Contractor and advise the AAHK / PM accordingly; 3. Assess the effectiveness of the	and Contractor on the proposed mitigation measures:  2. Request Contractor to critically review the working methods;  3. Make agreement on the mitigation measures to be implemented;  4. Assess the	PM and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET, IEC and AAHK / PM and propose mitigation		

		150	A A LUI / DAA	
Event	ET	IEC	AAHK/PM	Contractor
	Contractor;			three working days;
	<ol> <li>Ensure mitigation measures are implemented;</li> </ol>			<ol><li>Implement the agreed mitigation measures.</li></ol>
	<ol> <li>Increase the monitoring frequence to daily until no exceedance of limit level.</li> </ol>	,		
Limit level being exceeded by two or more consecutive	Repeat <i>in-situ</i> measurement to     confirm findings;	Discuss with ET and Contractor on the mitigation measures		and confirm notification of non-
sampling days	Identify reasons for non-compliance and accuracy (a) of impact.	d mitigation measures	s 2. Request Contractor	<ul> <li>compliance in writing;</li> <li>e 2. Rectify unacceptable</li> </ul>
	source(s) of impact 3. Inform IEC,	Contractor and	working methods;	practices;
	Contractor and EPI	o; advise the AAHK / PM accordingly;	Make agreement on the mitigation	<ol><li>Check all plant and equipment;</li></ol>
	Check monitoring data, all plant, equipment and	Assess the effectiveness of	measures to be implemented;	Consider changes of working method;
	Contractor's workin methods;	g implemented mitigation measure:	4. Assess the effectiveness of the	5. Discuss with ET, IEC
	<ol> <li>Discuss mitigation measures with IEC, AAHK / PM and</li> </ol>	,	implemented mitigation measures  5. Consider and	propose mitigation measures to IEC and AAHK / PM within 3
	Contractor;		instruct, if necessary the Contractor to	
	<ol><li>Ensure mitigation measures are implemented;</li></ol>		slow down or to stop all or part of the	measures:
	7. Increase the monitoring frequence to daily until no exceedance of Limi level for two consecutive days.	,	construction activitie until no exceedance of Limit level.	7. As directed by the AAHK / PM, to slow down or to stop all or part of the construction activities.

# **Appendix G. Monitoring Data and Graphical Plots**

Water Quality Monitoring Results on 02 November 23 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	th (m)	Water Te	emperature (°C)		рН	Salin	ity (ppt)	DO Satur	ration (%)	Dissolv Oxygen (		Turbidity	NTU)	Suspende (mg/		
Station	Condition		Time	(m)		, ,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	
					Surface	1.0	26.0	26.0	8.1	8.1	27.9	28.0	85.3	85.0	5.9		2.0		3.8		
					Juliace	1.0	26.0	20.0	8.1	0.1	28.0	20.0	84.6	00.0	5.9	5.9	2.1		3.9		
C1	Cloudy	Moderate	14:10	10.6	Middle	5.3	25.9	25.9	8.1	8.1	28.0	28.0	84.1	83.9	5.8	0.0	2.9	3.1	5.2	4.8	
	0.000,	moderate				5.3	25.9	20.0	8.1		28.0	20.0	83.6	00.0	5.8		2.9	0	5.4		
				Bottom	9.6	25.9	25.9	8.0	8.1	28.1	28.1	84.0	84.1	5.8	5.8	4.4		5.1			
			20110111	9.6	25.9	20.0	8.1		28.0	2011	84.1	•	5.8	0.0	4.4		5.4				
					Surface	1.0	26.0	26.0	8.1	8.1	28.0	28.0	83.3	83.1	5.8		2.6		5.4		
						1.0	26.0		8.1		28.0		82.8		5.7	5.7	2.6		5.3		
C2	Cloudy	Moderate	14:32	10.2	Middle	5.1	25.9	25.9	8.1	8.1	28.1	28.1	82.5	82.6	5.7		3.0	2.9	3.1	3.9	
	-					5.1	25.9		8.1		28.1		82.6		5.7		3.4		4.1		
			Bottom		25.9 26.0	26.0	8.1 8.1	8.1	28.2 28.0	28.1	82.7 83.4	83.1	5.7	5.8	3.0 2.9		2.6 2.8				
				<u> </u>		1.0	26.0		8.1		28.4		83.4		5.8		3.3		3.1		
						Surface	1.0	26.1	26.1	8.1	8.1	28.4	28.4	83.2	83.3	5.7		3.3		2.8	
						-		-	-		20.4		- 00.2		3.7	5.8	-		-		
M1	Cloudy	Moderate	14:23	5.8	Middle	_	_	-	_	-	_	-	_	-	_		_	3.8	_	3.3	
					Bottom	4.8	26.1		8.0	8.0	28.4		84.2		5.8		4.4		3.8		
						4.8	26.1	26.1	8.1	8.1	28.4		83.2	83.7	5.7	5.8	4.1		3.4		
					O. orfer and	1.0	26.2	00.0	8.1	8.1	28.3	20.2	85.2	05.0	5.9		3.7		3.7		
					Surface	1.0	26.2	26.2	8.1	8.1	28.3	28.3	85.4	85.3	5.9	5.9	3.9		4.5		
M2	Cloudy	Moderate	14:27	5.7	Middle		-	_	-		-	_	-		-	5.9	-	3.7	-	3.9	
IVIZ	Cloudy	Moderate	14:27	5.7	ivildale		-	-	-	-	-	-	-	1 -	-		-	3.1	-	3.9	
					Bottom	4.7	26.2	26.2	8.1	8.1	28.3	28.4	85.6	85.2	5.9	5.9	3.6		4.3		
					Dottom	4.7	26.1	20.2	8.0	0.1	28.5	20.4	84.8	00.2	5.9	5.5	3.7		3.1		
					Surface	1.0	26.1	26.1	8.1	8.1	27.9	27.9	86.2	86.6	6.0		2.1		4		
					Curiaco	1.0	26.1	20.1	8.1	0.1	27.9	27.0	87.0	00.0	6.0	5.9	2.2		4		
M3	Cloudy	Moderate	14:18	6.6	Middle	3.3	26.1	26.1	8.1	8.1	28.1	28.1	83.6	84.4	5.8		3.6	3.4	4	4	
	,	Moderate		6.6	Middle	3.3	26.1		8.1	1	28.0	85.1		5.9		3.1	3	_			
				Bottom	5.6	26.0	26 D			28.4	28.4	83.3 83.4	83.4	5.8	5.8 4.9 4.7		3				
DA Davil						5.6	26.0		8.0		28.4		83.5		5.8		4./		4		

DA: Depth-averaged

Water Quality Monitoring Results on 02 November 23 during Mid-Flood Tide

Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	_		emperature (°C)		рН	Salin	ity (ppt)	DO Satu	ration (%)	Dissolv Oxygen (		Turbidity	(NTU)	Suspende (mg/	
Station	Condition		Time	(m)		,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	26.0	26.0	8.1	8.1	27.9	28.0	84.4	84.2	5.9		3.3		5.5	
					Surface	1.0	26.0	20.0	8.1	0.1	28.0	20.0	83.9	04.2	5.8	5.8	3.2		6.0	1
C1	Cloudy	Moderate	11:08	10.8	Middle	5.4	25.9	25.9	8.1	8.1	28.0	28.0	83.6	83.6	5.8	3.0	3.2	3.8	6.6	6.3
01	Oloudy	Woderate	11.00	10.0	Wildale	5.4	25.9	25.5	8.1	0.1	28.0	20.0	83.5	05.0	5.8		3.9	0.0	6.7	0.0
				Bottom	9.8	25.9	25.9	8.1	8.1	28.0	28.0	83.6	83.8	5.8	5.8	4.7		6.2	ı	
			Dottom	9.8	25.9	25.5	8.1	0.1	28.0	20.0	83.9	00.0	5.8	5.0	4.3		6.8	ı		
					Surface	1.0	26.0	26.0	8.0	8.1	27.9	27.9	85.0	84.9	5.9		1.9		6.1	ı
						1.0	26.0		8.1		27.9		84.8		5.9	5.9	1.9		6.4	,
C2	Cloudy	Moderate	10:46	5 10.1	Middle	5.1	25.9	25.9	8.0	8.0	28.0	28.1	83.9	83.7	5.8		3.9	3.0	4.6	4.2
	,					5.1	25.9		8.0		28.1		83.5		5.8		3.3		3.6	,
					Bottom	9.1 9.1	25.9	25.9	8.0	8.0	28.1	28.1	84.0 83.3	83.7	5.8 5.8	5.8	3.7 3.5		2.2	r
				<u> </u>		1.0	25.9 26.0						83.3		5.8		3.5		2.4	
					Surface	1.0 26.0	26.0	8.0	8.0	28.4	28.4	82.1	82.0	5.7		3.8		2.4	i	
						-	-		-		20.4		-		3.7	5.7	3.0		-	i
M1	Cloudy	Moderate	10:57	5.5	Middle	_	_	-		-	_	-	_	-			_	3.7	_	2.6
					Bottom	4.5	26.0	22.2	8.0		28.4		82.3		5.7		3.8		3.0	ı
						4.5	26.0	26.0	8.0	8.0	28.4	28.4	82.0	82.2	5.7	5.7	3.8	•	2.2	ı
					0. (	1.0	26.0	00.0	8.0	0.0	28.3	00.0	82.2	00.4	5.7		3.9		3.8	
					Surface	1.0	26.0	26.0	8.0	8.0	28.3	28.3	82.6	82.4	5.7	1	4.1	•	2.9	ı
	01 1		40.50		NA* 1 U .		-		-		-		-		-	5.7	-		-	
M2	Cloudy	Moderate	10:53	5.6	Middle		-	-	-	-	-	-	-	-	-		-	4.1	-	3.0
					Da#+===	4.6	26.0	00.0	8.0	0.0	28.4	00.4	81.5	04.7	5.6	5.7	3.8		2.9	1
					Bottom	4.6	26.0	26.0	8.0	8.0	28.4	28.4	81.8	81.7	5.7	5.7	4.7		2.5	1
					Surface	1.0	26.1	26.1	8.1	8.1	27.7	27.8	85.9	86.0	5.9		2.1		4	
					Surface	1.0	26.1	20.1	8.1	0.1	27.8	21.0	86.0	00.0	6.0	5.9	2.0		3	ı
МЗ	Cloudy	y Moderate	11:03	6.3	Middle	3.2	26.0	26.0	8.1	8.1	28.0	28.1	83.4	83.7	5.8	3.9	4.2	4.5	5	4
IVIO	Cloudy		11.03	0.5	Middle	3.2	26.0	26.0	8.1	0.1	28.2	20.1	84.0	00.7	5.8		3.8	4.5	5	4
					Bottom	5.3	26.0	26.0	8.1	8.1	28.3	28.4	81.8	81.8	5.7	5.7	7.6		4	, l
					Bottom	5.3	25.9	20.0	8.0	0.1	28.4	20.1	81.7	01.0	5.7	0.,	7.3		4	

DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 04 November 23 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	th (m)		emperature (°C)	l	рН	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved (mg/l		Turbidity(	(NTU)	Suspende (mg/	
Station	Condition		Time	(m)		,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	26.4	26.4	8.1	8.1	24.8	24.8	88.8	88.4	6.2		2.2		1.5	
					Sullace	1.0	26.3	20.4	8.1	0.1	24.8	24.0	88.0	00.4	6.2	6.1	2.5		1.7	1
C1	Cloudy	Moderate	06:10	10.3	Middle	5.2	26.0	26.0	8.1	8.1	26.0	25.9	85.7	85.8	6.0	0.1	3.1	2.9	1.9	1.9
C1	Cloudy	Moderate	00.10	10.5	Wildale	5.2	26.0	20.0	8.1	0.1	25.8	20.0	85.8	00.0	6.0		3.1	2.3	1.8	1.3
					Bottom	9.3	26.0	26.0	8.1	8.1	26.1	26.1	86.3	86.3	6.0	6.0	3.2		2.4	1
					Bottom	9.3	26.0	20.0	8.1	0.1	26.1	20.1	86.3	00.0	6.0	0.0	3.2		2.1	
					Surface	1.0	26.3	26.3	8.0	8.0	25.2	25.2	88.8	88.8	6.2		0.3		1.6	1
						1.0	26.2	20.0	8.0	0.0	25.2	20.2	88.7	00.0	6.2	6.1	0.3		1.6	1
C2	Cloudy	Moderate	05:47	10.4	Middle	5.2	26.0	26.0	8.0	8.0	26.0	26.0	85.8	85.9	6.0		1.6	2.3	1.9	1.9
	,					5.2	26.0		8.0		26.0		86.0		6.0		1.7		1.7	
					Bottom	9.4	26.1	26.1	8.0	8.0	26.2	26.2	84.7	84.9	5.9	6.0	4.8		2.3	1
						9.4	26.1		8.0		26.2		85.1		6.0		4.8		2.1	
					Surface	1.0	26.1	26.1	8.1	8.1	26.9	27.0	86.3	86.0	6.0	ł	4.6		12.5	1
						1.0	26.1		8.1		27.0		85.6		6.0	6.0	3.9		12.4	1
M1	Cloudy	Moderate	05:59	4.9	Middle	-	-	-	-	-	-	-	-	-	-	ł	-	4.0	-	10.8
						-	- 00.4		-		- 07.0		- 07.0		- 0.4		-		-	1
					Bottom	3.9	26.1 26.1	26.1	8.1 8.1	8.1	27.0 27.1	27.1	87.3 85.6	86.5	6.1 6.0	6.1	3.7		9.0 9.2	1
						1.0	26.1		8.1		26.0		86.3		6.0	<u> </u>	11.5		10.4	
					Surface	1.0	26.1	26.1	8.1	8.1	26.1	26.1	86.1	86.2	6.0		11.6		10.4	1
						1.0	20.1		-		-		-		-	6.0	-		-	1
M2	Cloudy	Moderate	05:55	4.9	Middle		_	-	_	-	_	-	_	-	-		_	11.0	_	7.5
						3.9	26.1		8.1		26.6		85.2		5.9		10.9		3.9	1
					Bottom	3.9	26.1	26.1	8.0	8.1	26.6	26.6	85.1	85.2	5.9	5.9	10.1		4.9	1
						1.0	26.2		8.1		25.2		89.1		6.3		3.5		10	
					Surface	1.0	26.2	26.2	8.1	8.1	25.2	25.2	88.7	88.9	6.2		3.2		10	1
140	Olevidi	Madant	00:04	0.5	MC-I-U-	3.3	26.0	00.0	8.1	0.4	25.9	00.0	87.0	00.0	6.1	6.2	6.2	<b>5</b> 0	9	_
М3	Cloudy	Moderate	06:04	6.5	Middle	3.3	26.0	26.0	8.1	8.1	26.1	26.0	86.6	86.8	6.1	1	6.2	5.9	9	7
					D-#	5.5	26.0	00.0	8.0	0.4	26.5	00.5	86.2	00.5	6.0	0.4	8.5		2	i
					Bottom	5.5	26.0	26.0	8.1	8.1	26.5	26.5	86.7	86.5	6.1	6.1	7.7		2	<u> </u>

DA: Depth-averaged

Water Quality Monitoring Results on 04 November 23 during Mid-Flood Tide

Monitoring	Weather	Sea Condition	Sampling	Water Depth	Sampling Dep	oth (m)	Water Te	emperature (°C)	рН	Н	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved (mg/l		Turbidity	(NTU)	Suspende (mg	
Station	Condition		Time	(m)	3 4	,	Value	Average	Value A	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	26.4	26.4	8.1	8.1	25.2	25.2	89.7	89.5	6.3		2.3		<1.0	
					Surface	1.0	26.4	20.4	8.1	0.1	25.1	25.2	89.2	09.5	6.2	6.1	2.3		<1.0	
C1	Sunny	Moderate	15:35	10.6	Middle	5.3	26.1	26.2	8.1	8.1	26.5	26.4	86.0	86.2	6.0	0.1	2.2	2.2	1.6	1.4
01	Curry	Wiodorato	10.00	10.0	Wildaic	5.3	26.2	20.2	8.1	0.1	26.2	20.4	86.4	00.2	6.0		2.4		1.4	] '''
					Bottom	9.6	26.1	26.1	8.1	8.1	26.7	26.7	85.6	85.8	6.0	6.0	2.2		1.8	
	<u> </u>				Bottom	9.6	26.1	20.1	8.1	0.1	26.7	20.7	85.9	00.0	6.0	0.0	1.8		1.6	
					Surface	1.0	26.2	26.3	8.1	8.1	26.3	26.2	87.9	88.2	6.1		0.6		2.0	_
						1.0	26.3		8.1	•	26.0		88.5		6.2	6.1	0.5		2.3	_
C2	Sunny	Moderate	15:56	10.0	Middle	5.0	26.1	26.1	8.1	8.1	27.0	27.0	87.1	87.0	6.1		4.8	3.1	2.4	2.5
						5.0	26.1		8.1		27.0		86.9		6.0		4.9		2.7	_
					Bottom	9.0	26.1	26.1	8.1	8.1	27.1	27.1	87.2	87.3	6.1	6.1	4.0 3.7		2.7	-
						9.0	26.1		8.1		27.0		87.3		6.1				3.0	
					Surface	1.0	26.3 26.3	26.3	8.1 8.1	8.1	26.9 26.9	26.9	87.0 87.0	87.0	6.0		3.0 2.7		2.4	-
						1.0	- 20.3		-		20.9		- 67.0		-	6.0	-		-	-
M1	Sunny	Moderate	15:45	5.5	Middle	-	+ -	-		-		-		-				3.3		2.2
						4.5	26.2		8.1		27.4		87.0		6.0		4.0		1.7	-
					Bottom	4.5	26.3	26.3	8.1	8.1	27.2	27.3	86.9	87.0	6.0	6.0	3.3		1.9	•
					0 (	1.0	26.5	00.5	8.1	0.4	25.4	05.4	89.8	00.7	6.3		1.8		3.4	
					Surface	1.0	26.4	26.5	8.1	8.1	25.3	25.4	89.5	89.7	6.3	6.3	1.6		3.6	
M2	Sunny	Moderate	15:48	5.8	Middle		-		-	_	-	_	-	_	-	0.3	-	3.4	-	3.2
IVIZ	Suring	Woderate	15.46	5.6	ivildale		-	-	-	-	-	-	-	-	-		-	3.4	-	3.2
					Bottom	4.8	26.2	26.2	8.1	8.1	27.3	27.3	87.5	87.1	6.1	6.1	5.3		2.6	
					Dollom	4.8	26.2	20.2	8.1	0.1	27.3	27.3	86.7	07.1	6.0	0.1	4.9		3.0	
					Surface	1.0	26.3	26.3	8.1	8.1	25.6	25.4	87.7	88.2	6.1		2.0		2	
					Surface	1.0	26.3	20.5	8.1	0.1	25.2	20.4	88.7	00.2	6.2	6.1	1.8		2	
M3	Sunny	Moderate	15:40	6.2	Middle	3.1	26.1	26.1	8.1	8.1	26.7	26.8	86.1	86.2	6.0	0.1	4.1	6.4	2	2
1110	Janny	Modorato	10.10	0.2	Wildio	3.1	26.1	20.1	8.1	5.1	26.8	20.0	86.2	00.2	6.0		4.7	0.1	2	
					Bottom	5.2	26.1	26.1	8.1	8.1	27.1	27.1	86.0	86.2	6.0	6.0	13.0		2	_
DΔ: Denth-aver	<u> </u>					5.2	26.1	-	8.1	-	27.1		86.3		6.0		12.9		3	

DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 07 November 23 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	th (m)		emperature (°C)		рН	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved (mg/l		Turbidity(	(NTU)	Suspende (mg/	
Station	Condition		Time	(m)		,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	26.8	26.8	8.1	8.1	29.4	29.0	101.1	101.1	6.9		1.7		1.5	
					Sullace	1.0	26.7	20.0	8.1	0.1	28.6	29.0	101.1	101.1	6.9	6.6	1.8		1.8	į l
C1	Fine	Calm	09:56	7.8	Middle	3.9	26.8	26.8	8.1	8.1	29.8	29.4	93.7	93.8	6.3	0.0	2.4	2.4	2.2	2.1
01	1 1110	Odilli	03.50	7.0	Wildaic	3.9	26.8	20.0	8.1	0.1	28.9	20.4	93.8	30.0	6.4		2.4	2.7	2.0	
					Bottom	6.8	26.8	26.8	8.1	8.1	29.9	29.5	94.6	94.6	6.4	6.5	3.0		2.4	ı l
					Bottom	6.8	26.8	20.0	8.1	0.1	29.0	20.0	94.5	01.0	6.5	0.0	3.0		2.5	
					Surface	1.0	26.8	26.8	8.1	8.1	28.3	28.6	103.2	103.2	7.0		0.9		2.2	i l
						1.0	26.8	20.0	8.1	0	28.9	20.0	103.1		7.1	6.9	0.9		2.1	
C2	Fine	Calm	09:37	9.4	Middle	4.7	26.9	26.9	8.0	8.1	29.2	28.9	97.7	97.4	6.6	1	1.1	1.4	1.7	1.8
				-		4.7	26.8		8.1	_	28.6		97.1	-	6.7		1.0		1.9	
					Bottom	8.4	26.8	26.8	8.0	8.1	31.0	29.6	88.5	88.4	6.0	6.1	2.3		1.4	i !
						8.4	26.7		8.1		28.2		88.2		6.1		2.3		1.6	
					Surface	1.0	26.8	26.8	8.1	8.1	28.4	28.2	102.6	102.9	7.0		2.7		2.4	1
						1.0	26.8		8.1		28.0		103.2		7.1	7.1	2.7		2.1	į !
M1	Fine	Calm	09:51	5.0	Middle	-	-	-	-	-	-	-	-	-	-		-	3.0	-	2.6
						-	-		-		-		-		-		-			į !
					Bottom	4.0	26.8 26.8	26.8	8.1 8.1	8.1	28.8 28.2	28.5	102.5 102.7	102.6	7.0 7.0	7.0	3.2		2.7 3.1	į !
				<u> </u>		1.0	26.8		8.1		29.3		96.0		6.5		1.5		2.6	
					Surface	1.0	26.8	26.8	8.1	8.1	28.7	29.0	96.4	96.2	6.6	-	1.5		2.2	į !
						1.0	-		-		-		-		- 0.0	6.6	- 1.5		-	į !
M2	Fine	Calm	09:47	4.8	Middle		_	-	_	-	_	-	_	-	_		_	1.9	_	3.0
					_	3.8	26.7		8.1		29.6		97.7		6.6		2.3		3.4	1
					Bottom	3.8	26.8	26.8	8.1	8.1	29.0	29.3	96.2	97.0	6.5	6.6	2.3		3.7	
					0 (	1.0	26.8	00.0	8.1	0.4	27.7	07.0	100.4	400.6	6.9		1.1		2	
					Surface	1.0	26.8	26.8	8.1	8.1	27.8	27.8	100.1	100.3	7.0	1	1.1		2	i l
Ma	Fine	Calm	00:44	6.4	Middle	3.2	26.8	26.0	8.0	0.4	28.4	28.9	97.5	97.4	6.7	6.8	2.3	2.1	2	ا م
M3	Fine	Calm	09:44	6.4	Middle	3.2	26.9	26.9	8.1	8.1	29.3	28.9	97.2	97.4	6.6	1	2.3	2.1	2	2
					Bottom	5.4	26.8	26.8	8.0	8.1	30.1	30.4	94.0	94.0	6.4	6.4	3.0		3	i
					DOLLOTTI	5.4	26.8	20.8	8.1	0.1	30.7	30.4	94.0	94.0	6.4	0.4	3.0		3	

DA: Depth-averaged

Water Quality Monitoring Results on 07 November 23 during Mid-Flood Tide

Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	th (m)	Water Te	emperature (°C)	þ	Ή	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved ( (mg/L		Turbidity(	(NTU)	Suspende (mg.	
Station	Condition		Time	(m)		,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	26.8	26.8	8.1	8.1	27.9	28.1	103.6	103.4	7.1		0.9		1.5	
					Juliace	1.0	26.7	20.0	8.1	0.1	28.3	20.1	103.2	100.4	7.1	6.8	0.9		1.3	
C1	Fine	Calm	15:03	7.2	Middle	3.6	26.9	26.9	8.1	8.1	29.6	29.3	95.1	95.1	6.4	0.0	1.1	1.2	1.6	1.8
	1 1110	Cairi	10.00	7.2	Middle	3.6	26.8	20.9	8.1	0.1	29.0	29.5	95.1	33.1	6.6		1.1	1.2	1.8	1.0
					Bottom	6.2	26.9	26.8	8.1	8.1	29.7	29.2	95.4	95.3	6.4	6.5	1.6		2.1	
					Bottom	6.2	26.7	20.0	8.1	0.1	28.6	29.2	95.1	95.5	6.6	0.5	1.6		2.4	
					Surface	1.0	26.8	26.8	8.1	8.1	29.2	29.1	104.1	103.7	7.1		1.0		1.5	
					Gunace	1.0	26.8	20.0	8.1	0.1	28.9	20.1	103.2	100.7	7.0	7.0	1.0		1.2	
C2	Fine	Calm	15:21	9.0	Middle	4.5	26.8	26.8	8.1	8.1	29.4	29.2	100.7	101.9	6.8	7.0	1.3	1.2	1.7	1.8
02	1 1110	Cami	10.21	0.0	Middle	4.5	26.8	20.0	8.1	0.1	29.0	20.2	103.0	101.0	7.0		1.2	1.2	1.9	1.0
					Bottom	8.0	26.8	26.8	8.1	8.1	29.4	29.2	101.2	103.0	6.9	7.0	1.3		2.4	]
						8.0	26.8	20.0	8.1		29.0	20.2	104.8	100.0	7.1		1.3		2.3	
					Surface	1.0	26.6	26.6	8.1	8.1	28.3	28.2	106.3	106.4	7.3		0.4		1.6	]
						1.0	26.6		8.1		28.1	_	106.4		7.3	7.3	0.4		1.8	]
M1	Fine	Calm	15:13	4.8	Middle	-	-	-	-	-	-	-	-	_	-		-	0.6	-	2.0
						-	-		-		-		-		-		-		-	
					Bottom	3.8	26.5	26.6	8.1	8.1	28.4	28.3	105.9	106.1	7.3	7.3	0.8		2.2	
						3.8	26.6		8.1		28.2		106.3		7.3		0.7		2.3	
					Surface	1.0	26.7	26.7	8.1	8.1	28.6	28.5	104.8	105.6	7.1		0.7		2.6	
						1.0	26.7		8.1		28.4		106.3		7.3	7.2	0.8		2.2	
M2	Fine	Calm	15:17	4.8	Middle		-	-	-	-	-	-	-	-	-		-	0.9	-	2.0
							-		-		-		-		-		-		-	]
					Bottom	3.8	26.8	26.8	8.1	8.1	29.0	28.7	104.2	105.1	7.1	7.2	1.0		1.7	]
						3.8	26.7		8.1		28.4		106.0		7.2		1.0		1.4	
					Surface	1.0	26.9	26.9	8.1	8.1	29.3	29.1	97.9	98.5	6.6		1.0		1	]
						1.0	26.9		8.1		28.8	_	99.0		6.7	6.7	1.0		2	]
M3	Fine	Calm	15:09	6.4	Middle	3.2	26.9	26.9	8.1	8.1	29.6	29.4	96.8	97.6	6.6		1.7	1.7	2	2
						3.2	26.9		8.1		29.1		98.4		6.7		1.7		2	4
					Bottom	5.4 5.4	26.8 26.9	26.9	8.1 8.1	8.1	29.6 29.2	29.4	100.3 99.2	99.8	6.8 6.7	6.8	2.3		3	

DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 09 November 23 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Dept	th (m)		emperature (°C)	ı	рН	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved (mg/l		Turbidity(	(NTU)	Suspende (mg/	
Station	Condition		Time	(m)		,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	26.3	26.3	8.1	8.1	30.6	30.6	97.1	97.0	6.6		2.0		1.7	ĺ
					Surface	1.0	26.3	20.5	8.1	0.1	30.6	30.0	96.8	97.0	6.6	6.6	2.1		1.9	j
C1	Cloudy	Rough	11:01	10.8	Middle	5.4	26.3	26.3	8.1	8.1	30.6	30.6	96.8	96.7	6.6	0.0	2.5	2.3	2.3	2.2
01	Oloudy	rtougn	11.01	10.0	Wildaic	5.4	26.3	20.0	8.1	0.1	30.6	50.0	96.5	30.7	6.6		2.2	2.0	2.1	
					Bottom	9.8	26.2	26.3	8.1	8.1	30.6	30.6	97.4	97.1	6.6	6.6	2.6		2.6	1
						9.8	26.3	20.0	8.1	0.1	30.6	00.0	96.8	07.1	6.6	0.0	2.2		2.4	
					Surface	1.0	26.3	26.3	8.1	8.1	30.4	30.4	101.3	101.3	6.9		1.2		2.5	ı '
						1.0	26.3	20.0	8.1	0	30.4	0011	101.2		6.9	6.9	1.3		2.2	
C2	Cloudy	Rough	10:38	11.0	Middle	5.5	26.3	26.3	8.0	8.1	30.5	30.5	99.8	99.8	6.8	1	1.6	1.5	2.8	3.0
	,	- 3				5.5	26.3		8.1		30.5		99.7		6.8		1.6		3.0	
					Bottom	10.0	26.3	26.3	8.0	8.1	30.7	30.7	97.8	99.0	6.6	6.7	1.6		3.8	į !
						10.0	26.3		8.1		30.6		100.1		6.8		1.5		3.4	
					Surface	1.0	26.2	26.2	8.1	8.1	30.8	30.8	96.2	96.1	6.5		6.9		3.4	1
						1.0	26.2		8.1		30.8		96.0		6.5	6.5	6.4		3.1	
M1	Cloudy	Moderate	10:50	5.5	Middle	-	-	-	-	-	-	-	-	-	-	4	-	6.8	-	3.0
						- 4.5	- 00.0		-		-		- 00.0		-		- 7.0		- 0.7	
					Bottom	4.5 4.5	26.2 26.2	26.2	8.1 8.1	8.1	30.9	30.9	96.8 96.0	96.4	6.6 6.5	6.6	7.0 6.7		2.7	
				<u> </u>		1.0	26.2		8.1		30.8		96.5		6.6		5.5		2.9	$\overline{}$
					Surface	1.0	26.2	26.2	8.1	8.1	30.8	30.8	96.3	96.4	6.6	-	5.5		2.4	
						1.0	-		-		-		-		- 0.0	6.6	-		-	
M2	Cloudy	Moderate	10:48	5.6	Middle		_	-	_	-		-	-	-		1	_	5.7	_	3.0
						4.6	26.2		8.1		30.8		96.7		6.6		6.0		3.5	1
					Bottom	4.6	26.2	26.2	8.1	8.1	30.9	30.9	95.6	96.2	6.5	6.6	5.7		3.2	
						1.0	26.2		8.1		30.6		100.5	100 (	6.8		1.2		4	$\overline{}$
					Surface	1.0	26.2	26.2	8.1	8.1	30.6	30.6	100.2	100.4	6.8	1	1.2		4	
N/O	Oleveste	Darrah	40.55	7.0	NAC-L-U-	3.5	26.3	00.0	8.1	0.4	30.9	20.0	97.6	07.0	6.6	6.7	1.3	4.0	4	,
М3	Cloudy	Rough	10:55	7.0	Middle	3.5	26.2	26.3	8.1	8.1	30.9	30.9	97.6	97.6	6.6	1	1.5	1.9	4	4
					D-#	6.0	26.2	00.0	8.1	0.4	30.9	24.0	98.9	00.4	6.7	0.7	3.0		4	
					Bottom	6.0	26.2	26.2	8.1	8.1	31.0	31.0	97.3	98.1	6.6	6.7	3.0		3	

DA: Depth-averaged

Water Quality Monitoring Results on 09 November 23 during Mid-Flood Tide

Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	th (m)	Water Te	emperature (°C)	ŗ	ЭΗ	Salin	ity (ppt)	DO Satur	ration (%)	Dissolved (mg/L		Turbidity(	(NTU)	Suspende (mg.	
Station	Condition		Time	(m)		,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	26.3	26.3	8.1	8.1	30.6	30.6	96.9	97.1	6.6		2.4		3.4	
					Juliace	1.0	26.3	20.5	8.1	0.1	30.6	30.0	97.2	37.1	6.6	6.6	2.6		3.2	
C1	Cloudy	Rough	15:23	10.5	Middle	5.3	26.3	26.3	8.1	8.1	30.7	30.7	96.5	97.0	6.6	0.0	3.1	3.0	2.4	2.7
	0.000,	oug	10.20		Wildalo	5.3	26.3	20.0	8.1	0.1	30.6	00.7	97.5	01.0	6.6		3.1	0.0	2.8	
					Bottom	9.5	26.3	26.3	8.1	8.1	30.8	30.7	97.3	97.4	6.6	6.6	3.5		2.1	
					Bottom	9.5	26.3	20.0	8.1	0.1	30.6	50.7	97.5	37.4	6.6	0.0	3.4		2.4	
					Surface	1.0	26.3	26.3	8.1	8.1	30.5	30.6	97.9	97.7	6.7		7.2		1.9	
						1.0	26.3		8.1		30.6		97.4		6.6	6.6	7.8		1.7	
C2	Cloudy	Rough	15:43	11.0	Middle	5.5	26.3	26.3	8.1	8.1	30.7	30.7	97.7	97.6	6.6		8.2	6.5	2.2	2.3
		, and the second				5.5	26.3		8.1		30.7		97.4		6.6		8.2		2.5	
					Bottom	10.0	26.3	26.3	8.1	8.1	30.8	30.7	98.3	98.2	6.7	6.7	3.5		2.9	
						10.0	26.3		8.1		30.6		98.0		6.7		3.8		2.7	
					Surface	1.0	26.2 26.2	26.2	8.1 8.1	8.1	30.8	30.8	97.2 97.2	97.2	6.6 6.6		4.1 4.5		2.6	
						1.0	- 20.2		0.1		30.6		91.2		0.0	6.6	4.5		-	
M1	Cloudy	Moderate	15:34	5.6	Middle	-	-	-		-		-	-	-			-	4.6	_	3.8
						4.6	26.2		8.1		30.9		97.4		6.6		4.8		5.3	
					Bottom	4.6	26.2	26.2	8.1	8.1	30.8	30.9	97.3	97.4	6.6	6.6	4.8		5.0	
					0 (	1.0	26.2	20.0	8.1	0.4	30.8	00.0	99.2	00.0	6.7		4.8		3.9	
					Surface	1.0	26.2	26.2	8.1	8.1	30.7	30.8	98.6	98.9	6.7		4.8		4.0	
140	0		45.07	5.0	<b>5.4</b> ° 1.00		-		-		-		-		-	6.7	-	7.0	-	
M2	Cloudy	Moderate	15:37	5.8	Middle		-	-	-	-	-	-	-	-	-		-	7.2	-	3.6
					D-#	4.8	26.2	00.0	8.1	0.4	30.7	20.0	99.6	00.0	6.8	0.0	9.7		3.1	
					Bottom	4.8	26.2	26.2	8.1	8.1	30.9	30.8	98.3	99.0	6.7	6.8	9.4		3.2	
					Surface	1.0	26.3	26.3	8.1	8.1	30.7	30.7	100.2	100.2	6.8		2.5		3	
					Surface	1.0	26.2	20.3	8.1	0.1	30.7	30.7	100.2	100.2	6.8	6.7	2.5		3	
M3	Cloudy	Rough	15:30	7.1	Middle	3.6	26.3	26.3	8.1	8.1	31.0	31.0	95.5	95.4	6.5	0.7	3.1	5.0	3	3
IVIO	Cloudy	rtougii	10.00	/	Middle	3.6	26.3	20.0	8.1	0.1	30.9	51.0	95.2	55.7	6.5		3.1	0.0	3	
					Bottom	6.1	26.3	26.3	8.1	8.1	31.0	31.1	95.1	94.8	6.5	6.5	9.3		2	
DA: Donth sugar					Dottom	6.1	26.3	20.0	8.1	0.1	31.1	01.1	94.5	00	6.4	0.0	9.2		2	

DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 11 November 23 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Dept	th (m)		emperature (°C)	ı	рН	Salin	ity (ppt)	DO Satur	ration (%)	Dissolved (mg/l		Turbidity(	NTU)	Suspende (mg/	
Station	Condition		Time	(m)		,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	26.3	26.3	8.0	8.0	29.2	29.2	95.1	94.1	6.5		1.1		3.6	
					Sulface	1.0	26.3	20.5	8.0	0.0	29.2	25.2	93.0	34.1	6.4	6.5	1.0		4.0	
C1	Misty	Calm	10:20	7.8	Middle	3.9	26.3	26.3	8.0	8.0	29.2	29.2	96.0	94.7	6.6	0.5	1.1	1.2	3.2	3.3
C1	iviioty	Callii	10.20	7.0	Wildale	3.9	26.3	20.5	8.0	0.0	29.2	23.2	93.4	34.1	6.4		1.1	1.2	3.4	5.5
					Bottom	6.8	26.3	26.3	8.0	8.0	29.2	29.2	96.6	95.3	6.6	6.5	1.4		2.8	
						6.8	26.3	20.0	8.0	0.0	29.2	20.2	93.9	00.0	6.4	0.0	1.3		3.0	
					Surface	1.0	26.3	26.4	8.0	8.0	29.2	29.2	91.9	92.4	6.3		0.5		2.9	
						1.0	26.4	20	8.0	0.0	29.2	20.2	92.9	02	6.4	6.3	0.5		2.5	
C2	Misty	Calm	10:01	8.2	Middle	4.1	26.3	26.4	8.0	8.0	29.3	29.3	91.9	92.3	6.3	1	0.8	0.7	3.2	3.4
	- 7					4.1	26.4		8.0		29.2		92.6		6.3		0.7		3.5	
					Bottom	7.2	26.3	26.4	8.0	8.0	29.3	29.3	92.3	92.3	6.3	6.3	0.9		4.4	
						7.2	26.4		8.0		29.2		92.3		6.3		0.9		4.0	
					Surface	1.0	26.3	26.3	8.0	8.0	29.1	29.1	94.9	94.3	6.5		2.3		3.6	
						1.0	26.3		8.0		29.1		93.7		6.4	6.5	2.4		3.3	
M1	Misty	Calm	10:16	5.0	Middle	-	-	-	-	-	-	-	-	-	-	4	-	2.7	-	4.0
						-	-		-		- 00.4		- 05.0		-		-		-	
					Bottom	4.0	26.3 26.3	26.3	8.0	8.0	29.1 29.1	29.1	95.8 94.5	95.2	6.6 6.5	6.6	3.1 3.1		4.8	
				<u> </u>		1.0	26.3		8.0		29.1		94.5		6.5		2.4		3.9	
					Surface	1.0	26.3	26.3	8.0	8.0	29.1	29.1	93.7	94.3	6.4	-	2.4		4.1	
						1.0	-		- 0.0		-		-			6.5	-			
M2	Misty	Calm	10:11	5.0	Middle		_	-	_	-	_	-	-	-			_	2.7	_	3.7
						4.0	26.3		8.0		29.1		95.8		6.6		3.0		3.5	
					Bottom	4.0	26.3	26.3	8.0	8.0	29.1	29.1	94.5	95.2	6.5	6.6	3.0		3.1	
					0 (	1.0	26.3	00.0	8.0	0.0	29.1	00.0	93.1	00.5	6.4		0.7		3	
					Surface	1.0	26.3	26.3	8.0	8.0	29.2	29.2	91.8	92.5	6.3	0.4	0.8		3	I
Ma	Michi	Calm	10.00	6.4	Middle	3.2	26.3	26.3	8.0	0.0	29.2	29.2	95.0	93.5	6.5	6.4	0.9	1.0	4	
М3	Misty	Calm	10:08	6.4	Middle	3.2	26.3	∠6.3	8.0	8.0	29.2	29.2	91.9	93.5	6.3		1.0	1.0	4	4
					Pottom	5.4	26.3	26.3	8.0	8.0	29.2	29.2	96.0	94.0	6.6	6.5	1.3		4	I
					Bottom	5.4	26.3	20.3	8.0	8.0	29.2	29.2	92.0	94.0	6.3	0.5	1.3		4	<u> </u>

DA: Depth-averaged

Water Quality Monitoring Results on 11 November 23 during Mid-Flood Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	th (m)		emperature (°C)		рН	Salin	ity (ppt)	DO Satur	ration (%)	Dissolved ( (mg/l		Turbidity(	NTU)	Suspende (mg/	
Station	Condition		Time	(m)		,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	26.3	26.3	8.0	8.0	29.2	29.2	92.7	92.6	6.3		1.1		3.0	
					Sullace	1.0	26.3	20.5	8.0	0.0	29.2	25.2	92.4	92.0	6.3	6.3	1.1		2.6	I
C1	Misty	Calm	15:56	7.6	Middle	3.8	26.3	26.3	8.0	8.0	29.2	29.2	92.7	92.6	6.4	0.3	1.3	1.6	3.3	3.5
C1	iviioty	Callii	13.30	7.0	ivildule	3.8	26.3	20.5	8.0	0.0	29.2	25.2	92.5	92.0	6.3		1.2	1.0	3.7	J.J
					Bottom	6.6	26.3	26.3	8.0	8.0	29.2	29.2	92.9	92.8	6.4	6.4	2.3		4.2	I
					DOLLOITI	6.6	26.3	20.3	8.0	0.0	29.2	29.2	92.6	92.0	6.3	0.4	2.3		3.9	
					Surface	1.0	26.3	26.3	7.9	8.0	29.0	29.1	94.5	93.8	6.5		3.4		3.1	
					Sullace	1.0	26.3	20.5	8.0	0.0	29.1	23.1	93.0	93.0	6.4	6.5	3.4		3.3	I
C2	Misty	Calm	16:11	9.0	Middle	4.5	26.3	26.3	7.9	8.0	28.9	29.0	94.9	94.1	6.5	0.5	3.8	3.8	2.5	2.7
02	iviioty	Callii	10.11	9.0	Wildale	4.5	26.3	20.5	8.0	0.0	29.1	23.0	93.3	34.1	6.4		3.9	5.0	2.8	2.1
					Bottom	8.0	26.3	26.3	7.9	8.0	28.1	28.6	96.1	95.0	6.6	6.5	4.0		2.1	I
					Dottom	8.0	26.3	20.0	8.0	0.0	29.1	20.0	93.8	30.0	6.4	0.0	4.1		2.2	
					Surface	1.0	26.3	26.3	8.0	8.0	29.2	29.2	96.8	96.1	6.6		1.1		3.0	I
						1.0	26.3	20.0	8.0	0.0	29.2	20.2	95.3	00	6.5	6.6	1.1		2.6	I
M1	Misty	Calm	16:05	4.6	Middle	-	-	-	-	-	-	-	-	_	-	0.0	-	1.6	-	3.9
						-	-		-		-		-		-		-		-	1
					Bottom	3.6	26.3	26.3	8.0	8.0	29.2	29.2	97.6	97.0	6.7	6.7	2.0		4.8	I
						3.6	26.3		8.0		29.2		96.3		6.6		2.0		5.1	
					Surface	1.0	26.3	26.3	8.0	8.0	29.1	29.1	95.1	94.6	6.5		2.3		3.3	I
						1.0	26.3		8.0		29.1		94.1		6.5	6.5	2.3		3.6	I
M2	Misty	Calm	16:09	4.8	Middle		-	-	-	-	-	-	-	_	-		-	2.9	-	4.4
							-		-		-		-		-		-		-	1
					Bottom	3.8	26.3	26.3	8.0	8.0	29.1	29.1	95.9	96.4	6.6	6.6	3.4		5.1	I
						3.8	26.3		8.0		29.1		96.8		6.6		3.5		5.6	
					Surface	1.0	26.4	26.5	8.0	8.0	28.9	28.9	96.8	96.5	6.6		0.9		4	I
					22.1000	1.0	26.5		8.0	2.0	28.8	_3.0	96.1	23.0	6.6	6.6	0.8		5	İ
M3	Misty	Calm	16:01	7.2	Middle	3.6	26.4	26.4	8.0	8.0	29.1	29.0	97.1	96.7	6.6		1.0	1.0	4	4
						3.6	26.4	-	8.0		28.9		96.3		6.6		1.0		4	l
					Bottom	6.2	26.4	26.4	8.0	8.0	29.1	29.0	97.7	97.2	6.7	6.7	1.0		3	l
DA: Donth sugar						6.2	26.4	-	8.0		28.9		96.6		6.6		1.0		3	<u> </u>

DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 14 November 23 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	th (m)		emperature (°C)	ı	рН	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved (mg/l		Turbidity(	NTU)	Suspende (mg/	
Station	Condition		Time	(m)		,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	25.6	25.6	8.0	8.0	30.7	30.7	89.2	89.1	6.2		4.2		3.3	. <del></del>
					Sullace	1.0	25.6	23.0	8.0	0.0	30.7	30.7	88.9	09.1	6.2	6.2	4.3		3.5	
C1	Fine	Calm	12:55	7.8	Middle	3.9	25.6	25.6	8.0	8.0	30.7	30.7	89.2	89.1	6.2	0.2	4.4	4.7	3.4	3.5
01	1 1110	Odim	12.00	7.0	Wildaic	3.9	25.6	20.0	8.0	0.0	30.7	50.7	89.0	00.1	6.2		4.3	7.7	4.0	0.0
					Bottom	6.8	25.6	25.6	8.0	8.0	30.7	30.7	89.4	89.3	6.2	6.2	5.4		3.4	
					Bottom	6.8	25.6	20.0	8.0	0.0	30.7	00.7	89.1	00.0	6.2	0.2	5.5		3.4	
					Surface	1.0	25.6	25.6	8.0	8.0	30.5	30.6	91.0	90.3	6.4		6.5		2.9	
						1.0	25.6	20.0	8.0	0.0	30.6	00.0	89.5	00.0	6.2	6.3	6.6		2.9	
C2	Fine	Calm	13:10	9.0	Middle	4.5	25.6	25.6	7.9	8.0	30.4	30.5	91.4	90.6	6.4	1	6.9	6.9	3.3	3.3
						4.5	25.6		8.0		30.6		89.8		6.3		7.0		3.4	
					Bottom	8.0	25.6	25.6	7.9	8.0	29.6	30.1	92.6	91.5	6.5	6.4	7.1		3.7	
						8.0	25.6		8.0		30.5		90.3		6.3		7.2		3.3	
					Surface	1.0	25.6	25.6	8.0	8.0	30.7	30.7	93.3	92.6	6.5	_	4.2		3.5	I
						1.0	25.6		8.0		30.7		91.8		6.4	6.5	4.2		4.2	
M1	Fine	Calm	13:04	4.8	Middle	-	-	-	-	-	-	-	-	-	-		-	4.7	-	3.4
						-	-		-		-		-		-		-		-	
					Bottom	3.8	25.6 25.6	25.6	8.0	8.0	30.7	30.7	94.1 92.8	93.5	6.6 6.5	6.6	5.1		3.0 2.7	
						1.0	25.6		8.0				92.8		6.4	1	5.1 5.5		3.6	
					Surface	1.0	25.6	25.6	8.0	8.0	30.6	30.6	90.6	91.1	6.3		5.4		4.3	
						-	-		0.0		-		-		0.5	6.4	-		-	
M2	Fine	Calm	13:08	5.0	Middle	-	-	-		-		-	-	-		1		6.0	-	3.8
						4.0	25.6		8.0		30.6		92.4		6.4		6.6		3.6	
					Bottom	4.0	25.6	25.6	8.0	8.0	30.6	30.6	93.3	92.9	6.5	6.5	6.6		3.7	
						1.0	25.7		8.0		30.4		93.3		6.5		4.0		4	
					Surface	1.0	25.8	25.8	8.0	8.0	30.3	30.4	92.6	93.0	6.5	1	3.9		5	I
	<u>-</u> .	0.1	40.50	7.0	A.C. I. II	3.6	25.7	05.7	8.0	0.0	30.5	00.4	93.6	00.0	6.5	6.5	4.1		4	
M3	Fine	Calm	12:59	7.2	Middle	3.6	25.7	25.7	8.0	8.0	30.3	30.4	92.8	93.2	6.5	1	4.1	4.1	3	4
					D #	6.2	25.7	05.7	8.0		30.6	00.5	94.2	00.7	6.6		4.2		3	I
					Bottom	6.2	25.7	25.7	8.0	8.0	30.3	30.5	93.1	93.7	6.5	6.6	4.1		4	I

DA: Depth-averaged

Water Quality Monitoring Results on 14 November 23 during Mid-Flood Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	th (m)	Water Te	emperature (°C)		рН	Salin	ity (ppt)	DO Satur	ration (%)	Dissolved (mg/l		Turbidity(	(NTU)	Suspende (mg/	
Station	Condition		Time	(m)	3 1		Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	25.6	25.6	8.0	8.0	30.7	30.7	91.6	90.6	6.4		4.2		4.4	
					Surface	1.0	25.6	25.0	8.0	0.0	30.7	30.7	89.5	90.0	6.2	6.4	4.1		3.5	ĺ
C1	Fine	Calm	09:35	8.8	Middle	4.4	25.6	25.6	8.0	8.0	30.7	30.7	92.5	91.2	6.5	0.4	4.2	4.3	3.8	3.8
01	1 1116	Callii	03.55	0.0	ivildule	4.4	25.6	23.0	8.0	0.0	30.7	30.7	89.9	31.2	6.3		4.3	4.5	3.7	5.0
					Bottom	7.8	25.6	25.6	8.0	8.0	30.7	30.7	93.1	91.8	6.5	6.4	4.5		3.8	j
					DOMOIT	7.8	25.6	25.0	8.0	0.0	30.7	30.7	90.4	31.0	6.3	0.4	4.5		3.4	<u> </u>
					Surface	1.0	25.6	25.7	8.0	8.0	30.7	30.7	88.4	88.9	6.2		3.6		3.0	
					Canado	1.0	25.7	20.7	8.0	0.0	30.7	00.1	89.4	00.0	6.2	6.2	3.6		4.0	1
C2	Fine	Calm	09:16	8.2	Middle	4.1	25.6	25.7	8.0	8.0	30.7	30.7	88.4	88.8	6.2	0.2	3.9	3.8	3.4	3.7
02		•	00.10	0.2		4.1	25.7	20	8.0	0.0	30.7	00	89.1	00.0	6.2		3.8	0.0	3.7	0
					Bottom	7.2	25.6	25.7	8.0	8.0	30.7	30.7	88.8	88.8	6.2	6.2	4.0		3.8	1
						7.2	25.7		8.0		30.7		88.8		6.2		4.0		4.0	
					Surface	1.0	25.6	25.6	8.0	8.0	30.6	30.6	91.4	90.8	6.4		5.4		3.7	1
						1.0	25.6		8.0		30.6		90.2		6.3	6.4	5.5		4.6	ł
M1	Fine	Calm	09:30	5.0	Middle	-	-	-	-	-	-	-	-	_	-		-	5.9	-	4.5
						-	-		-		-		-		-		-		-	1
					Bottom	4.0	25.6 25.6	25.6	8.0	8.0	30.6 30.6	30.6	92.3 91.0	91.7	6.4 6.4	6.4	6.2		5.2 4.4	<b> </b>
						1.0	25.6				30.6		91.4		6.4		5.6		3.5	
					Surface	1.0	25.6	25.6	8.0	8.0	30.6	30.6	90.2	90.8	6.3		5.6		3.8	ĺ
						1.0	-		0.0						0.3	6.4	-			ĺ
M2	Fine	Calm	09:26	5.2	Middle			-	-	-	-	-		-	-		_	5.9	-	3.5
						4.2	25.6		8.0		30.6		92.3		6.4		6.1		3.7	ĺ
					Bottom	4.2	25.6	25.6	8.0	8.0	30.6	30.6	91.0	91.7	6.4	6.4	6.1		3.1	1
						1.0	25.6		8.0		30.6		89.6		6.3		3.9		3.1	<b>—</b>
					Surface	1.0	25.6	25.6	8.0	8.0	30.6	30.6	88.3	89.0	6.2		3.9		3	ĺ
						3.0	25.6		8.0		30.7		91.5		6.4	6.3	4.1		5	ĺ
M3	Fine	Calm	09:23	6.0	Middle	3.0	25.6	25.6	8.0	8.0	30.7	30.7	88.4	90.0	6.2		4.1	4.2	4	4
						5.0	25.6		8.0		30.7		92.5		6.5		4.1		4	ĺ
					Bottom	5.0	25.6	25.6	8.0	8.0	30.6	30.7	88.5	90.5	6.2	6.4	4.5		3	ĺ

DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 16 November 23 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	oth (m)	Water Te	emperature (°C)	р	Н	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved (mg/L		Turbidity(	NTU)	Suspende (mg/	
Station	Condition		Time	(m)			Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	24.9	24.9	8.0	8.0	30.0	30.0	94.1	94.0	6.6		4.7		6.1	
					Surface	1.0	24.9	24.9	8.0	0.0	30.0	30.0	93.8	34.0	6.6	6.6	4.7		5.9	i
C1	Fine	Moderate	13:55	7.6	Middle	3.8	24.9	24.9	8.0	8.0	30.0	30.0	94.1	94.0	6.6	0.0	4.8	5.1	5.7	5.7
01	1 1110	Woderate	10.00	7.0	Middle	3.8	24.9	24.0	8.0	0.0	30.0	50.0	93.9	34.0	6.6		4.8	0.1	5.2	5.7
					Bottom	6.6	24.9	24.9	8.0	8.0	30.0	30.0	94.3	94.2	6.6	6.6	5.9		5.8	i
					20110111	6.6	24.9	20	8.0	0.0	30.0	00.0	94.0	02	6.6	0.0	5.9		5.6	
					Surface	1.0	24.9	24.9	8.0	8.0	29.8	29.9	95.9	95.2	6.8		7.0		6.0	ł
						1.0	24.9		8.0		29.9		94.4		6.7	6.8	7.0		5.8	ł
C2	Fine	Moderate	14:10	8.8	Middle	4.4	24.9	24.9	8.0	8.0	29.7	29.8	96.3	95.5	6.8		7.4	7.3	5.8	6.0
						4.4	24.9		8.0		29.9		94.7		6.7		7.3		6.1	1
					Bottom	7.8	24.9	24.9	7.9	8.0	28.9	29.4	97.5	96.4	6.9	6.8	7.6		5.8	ł
						7.8	24.9		8.0		29.9		95.2		6.7		7.6		6.4	
					Surface	1.0	24.9 24.9	24.9	8.0	8.0	30.0	30.0	98.2 96.7	97.5	6.9		4.6 4.7		5.0	i
						1.0			8.0						6.8	6.9			5.3	ł
M1	Fine	Moderate	14:04	4.4	Middle	-	-	-	-	-	-	-	-	-	-		-	5.1	-	5.2
						3.4	24.9		8.0		30.0		99.0		7.0		5.6		5.0	1
					Bottom	3.4	24.9	24.9	8.0	8.0	30.0	30.0	97.7	98.4	6.9	7.0	5.6		5.3	1
						1.0	24.9		8.0		29.9		96.5		6.8		5.9		6.0	
					Surface	1.0	24.9	24.9	8.0	8.0	29.9	29.9	95.5	96.0	6.7		5.6		5.2	i
140	<u>-</u> .		4400	4.0	A 47 1 11		-		-		-		-		-	6.8	-	0.4	-	
M2	Fine	Moderate	14:08	4.8	Middle		-	-	-	-	-	-	-	-	-		-	6.4	-	5.3
					Bottom	3.8	24.9	24.9	8.0	8.0	29.9	29.9	97.3	97.8	6.9	6.9	7.0		4.8	ł
					DOLLOITI	3.8	24.9	24.9	8.0	0.0	29.9	29.9	98.2	97.0	6.9	0.9	7.0		5.2	i
					Surface	1.0	25.0	25.1	8.0	8.0	29.7	29.7	98.2	97.9	6.9		4.3		5	1
					Sunace	1.0	25.1	20.1	8.0	0.0	29.6	23.1	97.5	31.3	6.9	6.9	4.4		6	i
M3	Fine	Moderate	14:00	7.2	Middle	3.6	25.0	25.0	8.0	8.0	29.9	29.8	98.5	98.1	6.9	0.5	4.6	4.5	5	5
0		caorato			ααιο	3.6	25.0	23.0	8.0	0.0	29.7		97.7	33.1	6.9		4.5	0	6	1
					Bottom	6.2	25.0	25.0	8.0	8.0	29.9	29.8	99.1	98.6	7.0	7.0	4.6		6	l
					20	6.2	25.0		8.0		29.7	20.0	98.0	00.0	6.9		4.6		6	1

DA: Depth-averaged

Water Quality Monitoring Results on 16 November 23 during Mid-Flood Tide

Monitoring	Weather	Sea Condition	Sampling	Water Depth	Sampling Dept	th (m)		emperature (°C)		рН	Salin	ity (ppt)	DO Satur	ration (%)	Dissolved (mg/L		Turbidity(	(NTU)	Suspende (mg/	
Station	Condition		Time	(m)		,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	24.9	24.9	8.0	8.0	30.0	30.0	96.5	95.5	6.8		4.4		6.1	
					Sullace	1.0	24.9	24.9	8.0	0.0	30.0	30.0	94.4	95.5	6.7	6.8	4.4		5.4	i
C1	Fine	Moderate	10:55	8.6	Middle	4.3	24.9	24.9	8.0	8.0	30.0	30.0	97.4	96.1	6.9	0.0	4.7	4.7	5.1	5.4
C1	1 1116	Moderate	10.55	0.0	ivildule	4.3	24.9	24.9	8.0	0.0	30.0	30.0	94.8	30.1	6.7		4.6	4.7	5.7	J. <del>4</del>
					Bottom	7.6	24.9	24.9	8.0	8.0	30.0	30.0	98.0	96.7	6.9	6.8	4.9		5.1	i
					DOLLOITI	7.6	24.9	24.9	8.0	0.0	30.0	30.0	95.3	90.7	6.7	0.0	4.9		5.2	ı
					Surface	1.0	24.9	25.0	8.0	8.0	30.0	30.0	93.3	93.8	6.6		4.1		5.2	i
					Juliace	1.0	25.0	25.0	8.0	0.0	30.0	30.0	94.3	90.0	6.6	6.6	4.1		5.8	i
C2	Fine	Moderate	10:36	8.0	Middle	4.0	24.9	25.0	8.0	8.0	30.1	30.1	93.3	93.7	6.6	0.0	4.4	4.3	5.7	5.9
02	1 1110	Woderate	10.50	0.0	Wildaic	4.0	25.0	20.0	8.0	0.0	30.0	50.1	94.0	30.7	6.6		4.3	4.0	6.1	0.0
					Bottom	7.0	24.9	25.0	8.0	8.0	30.1	30.1	93.7	93.7	6.6	6.6	4.4		6.1	i
						7.0	25.0	20.0	8.0	0.0	30.0	00.1	93.7	00.7	6.6	0.0	4.4		6.2	
					Surface	1.0	24.9	24.9	8.0	8.0	29.9	29.9	96.3	95.7	6.8		5.9		6.5	i
						1.0	24.9		8.0		29.9		95.1		6.7	6.8	5.9		6.6	i
M1	Fine	Moderate	10:51	4.4	Middle	-	-	-	-	-	-	-	-	-	-		-	6.3	-	6.2
						-	-		-		-		-		-		-		-	1
					Bottom	3.4	24.9	24.9	8.0	8.0	29.9	29.9	97.2	96.6	6.9	6.9	6.7		6.2	i
						3.4	24.9		8.0		29.9		95.9		6.8		6.6		5.6	
					Surface	1.0	24.9	24.9	8.0	8.0	29.9	29.9	96.3	95.7	6.8		6.0		5.7	i
						1.0	24.9		8.0		29.9		95.1		6.7	6.8	6.0		5.8	i
M2	Fine	Moderate	10:46	4.8	Middle		-	-	-	-	-	-	-	-	-		-	6.3	-	6.0
							-		-		-		-		-		-		-	1
					Bottom	3.8	24.9	24.9	8.0	8.0	29.9	29.9	97.2	96.6	6.9	6.9	6.6		6.1	i
						3.8	24.9		8.0		29.9		95.9		6.8		6.6		6.5	
					Surface	1.0	24.9	24.9	8.0	8.0	29.9	30.0	94.5	94.5	6.7		4.3		7	İ
						1.0	24.9	-	8.0		30.0		94.5		6.6	6.7	4.2		6	1
M3	Fine	Moderate	10:43	6.2	Middle	3.1	24.9	24.9	8.0	8.0	30.0	30.0	96.4	96.3	6.8		4.5	4.5	6	6
						3.1	24.9		8.0		30.0		96.2		6.7		4.4		6	1
					Bottom	5.2	24.9	24.9	8.0	8.0	30.0	30.0	97.4	97.3	6.9	6.9	4.9		7	1
DA: Danth avar						5.2	24.9		8.0		30.0		97.1		6.9		4.9		6	

DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 18 November 23 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Dept	th (m)		emperature (°C)	ı	рН	Salin	ity (ppt)	DO Satur	ration (%)	Dissolved (mg/l		Turbidity(	(NTU)	Suspende (mg/	
Station	Condition		Time	(m)		,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	22.9	23.0	8.0	8.0	30.7	30.7	91.1	90.3	6.6		4.6		6.2	
					Surface	1.0	23.0	23.0	8.0	0.0	30.7	30.7	89.4	90.3	6.4	6.6	5.1		5.8	1
C1	Cloudy	Moderate	03:47	10.6	Middle	5.3	22.9	22.9	8.0	8.0	30.7	30.7	92.5	91.1	6.7	0.0	4.8	4.7	5.6	5.5
01	Oloudy	Moderate	00.47	10.0	Wildaic	5.3	22.9	22.5	8.0	0.0	30.7	50.7	89.7	31.1	6.5		4.5	7.7	5.3	0.0
					Bottom	9.6	22.9	22.9	8.0	8.0	30.7	30.7	94.7	92.5	6.8	6.7	4.7		5.0	1
						9.6	22.9	22.0	8.0	0.0	30.7	00.1	90.2	02.0	6.5	0.7	4.5		4.8	
					Surface	1.0	23.1	23.1	8.0	8.0	30.7	30.7	89.0	88.6	6.4		6.2		5.6	1
						1.0	23.1	20	8.0	0.0	30.7		88.1	00.0	6.3	6.4	5.3		5.3	1
C2	Cloudy	Moderate	03:25	11.2	Middle	5.6	23.1	23.1	8.0	8.0	30.7	30.7	89.4	88.8	6.4	1	8.5	7.5	5.8	5.9
	,					5.6	23.1		8.0		30.7		88.1		6.3		7.1		6.0	1
					Bottom	10.2	23.1	23.1	8.0	8.0	30.7	30.7	90.1	89.2	6.5	6.4	9.4		6.2	4
						10.2	23.1		8.0		30.7		88.2		6.3		8.5		6.6	
					Surface	1.0	23.0	23.0	8.0	8.0	30.6	30.6	86.5	87.1	6.2		9.5		5.2	1
						1.0	23.0		8.0		30.6		87.6		6.3	6.3	9.6		5.6	1
M1	Cloudy	Moderate	03:36	5.6	Middle	-	-	-	-	-	-	-	-	_	-		-	9.4	-	5.6
	-					-	-		-		-		-		-		-		-	1
					Bottom	4.6	23.0	23.0	8.0	8.0	30.6	30.6	86.9 89.2	88.1	6.3	6.4	9.4 9.1		5.9 5.6	1
						4.6 1.0	23.0		8.0				89.5		6.5	1	7.7		5.3	
					Surface	1.0	22.8	22.8	8.0	8.0	30.5	30.5	87.4	88.5	6.3		7.7		5.0	1
						1.0	22.0		0.0		-		-		0.3	6.4	-		-	1
M2	Cloudy	Moderate	03:33	5.4	Middle		_	-	_	-	_	-	_	-	_			7.9	_	5.4
						4.4	22.7		8.0		30.5		90.2		6.5		8.0		5.8	1
					Bottom	4.4	22.8	22.8	8.0	8.0	30.5	30.5	88.1	89.2	6.4	6.5	7.9		5.5	1
						1.0	23.1		8.0		30.7		89.1	22.1	6.4		7.1		5	$\overline{}$
					Surface	1.0	23.1	23.1	8.0	8.0	30.7	30.7	89.7	89.4	6.4	1	8.4		5	1
N/O	Olevedi	Madant	00.40	0.0	NAC-L-U-	3.1	23.1	00.4	8.0	0.0	30.7	20.7	89.0	00.0	6.4	6.4	7.0	7.0	5	_
М3	Cloudy	Moderate	03:42	6.2	Middle	3.1	23.1	23.1	8.0	8.0	30.7	30.7	90.6	89.8	6.5	1	8.4	7.8	5	5
					D-#	5.2	23.1	00.4	8.0	0.0	30.7	20.7	89.1	00.5	6.4	0.5	7.3		6	1
					Bottom	5.2	23.1	23.1	8.0	8.0	30.7	30.7	91.9	90.5	6.6	6.5	8.3		5	<u> </u>

DA: Depth-averaged

Water Quality Monitoring Results on 18 November 23 during Mid-Flood Tide

Monitoring	Weather	Sea Condition	Sampling	Water Depth	Sampling Dept	th (m)		emperature (°C)		рН	Salin	ity (ppt)	DO Satur	ration (%)	Dissolved (mg/l		Turbidity(	(NTU)	Suspende (mg/	
Station	Condition		Time	(m)		. ,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	23.4	23.4	8.0	8.0	29.1	29.1	92.8	92.7	6.7		5.0		5.0	
					Sullace	1.0	23.4	23.4	8.0	0.0	29.1	23.1	92.5	32.1	6.7	6.7	5.0		5.2	i
C1	Cloudy	Rough	15:12	10.1	Middle	5.1	23.4	23.4	8.0	8.0	29.1	29.1	92.8	92.7	6.7	0.7	5.1	5.4	5.5	5.3
C1	Cloudy	Rough	13.12	10.1	ivildule	5.1	23.4	23.4	8.0	0.0	29.1	23.1	92.6	32.1	6.7		5.1	5.4	5.2	5.5
					Bottom	9.1	23.4	23.4	8.0	8.0	29.1	29.1	93.0	92.9	6.8	6.8	6.2		5.3	i
					DOLLOITI	9.1	23.4	23.4	8.0	6.0	29.1	29.1	92.7	92.9	6.7	0.0	6.2		5.7	
					Surface	1.0	23.4	23.4	8.0	8.0	28.9	29.0	94.6	93.9	6.9		7.2		4.9	
					Juliace	1.0	23.4	25.4	8.0	0.0	29.1	25.0	93.1	33.3	6.8	6.9	7.3		4.7	
C2	Cloudy	Rough	15:27	10.7	Middle	5.4	23.4	23.4	7.9	8.0	28.9	29.0	95.0	94.2	6.9	0.3	7.6	7.6	5.0	5.2
02	Oloudy	Rough	10.27	10.7	Wildaic	5.4	23.4	20.4	8.0	0.0	29.1	25.0	93.4	54.2	6.8		7.6	7.0	5.3	5.2
					Bottom	9.7	23.4	23.4	7.9	8.0	28.0	28.5	96.2	95.1	7.0	6.9	7.9		5.7	i
						9.7	23.4	20.1	8.0	0.0	29.0	20.0	93.9	00.1	6.8	0.0	7.9		5.4	
					Surface	1.0	23.4	23.4	8.0	8.0	29.0	29.0	95.2	94.7	6.9		6.2		5.3	
						1.0	23.4		8.0		29.0		94.2	•	6.9	6.9	5.8		5.0	
M1	Cloudy	Moderate	15:25	5.5	Middle	-	-	-	-	_	-	-	-	_	-		-	6.7	-	5.5
	,					-	-		-		-		-		-		-		-	
					Bottom	4.5	23.4	23.4	8.0	8.0	29.0	29.0	96.0	96.5	7.0	7.0	7.3		5.7	
						4.5	23.4		8.0		29.0		96.9		7.0		7.3		5.9	
					Surface	1.0	23.4	23.4	8.0	8.0	29.1	29.1	96.9	96.2	7.0		4.9		5.0	
						1.0	23.4		8.0		29.1		95.4		6.9	7.0	4.9		5.2	
M2	Cloudy	Moderate	15:21	5.6	Middle		-	-	-	-	-	-	-	_	-		-	5.4	-	5.4
	,						-		-		-		-		-		-		-	
					Bottom	4.6	23.4	23.4	8.0	8.0	29.1	29.1	97.7	97.1	7.1	7.1	5.9		5.4	
						4.6	23.4		8.0		29.1		96.4		7.0		5.9		5.8	
					Surface	1.0	23.5	23.6	8.0	8.0	28.9	28.8	96.9	96.6	7.0		4.6		6	
						1.0	23.6		8.0		28.7		96.2		7.0	7.0	4.6		6	1
M3	Cloudy	Rough	15:17	6.7	Middle	3.4	23.5	23.5	8.0	8.0	29.0	28.9	97.2	96.8	7.1		4.8	4.8	5	5
						3.4	23.5		8.0		28.8		96.4		7.0		4.8		5	i
					Bottom	5.7	23.5	23.5	8.0	8.0	29.0	28.9	97.8	97.3	7.1	7.1	4.9		5	1
DA: Danth avar						5.7	23.5		8.0		28.8		96.7		7.0		4.9		5	

DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 21 November 23 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	oth (m)	Water Te	emperature (°C)	р	Н	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved (mg/L		Turbidity(	(NTU)	Suspende (mg/	
Station	Condition		Time	(m)		,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	22.8	22.8	8.0	8.0	30.3	30.3	89.2	89.5	6.5		2.7		5.7	 I
					Sunace	1.0	22.8	22.0	8.0	0.0	30.2	30.3	89.8	09.5	6.5	6.5	2.8		5.3	i
C1	Cloudy	Moderate	07:07	10.1	Middle	5.1	22.8	22.8	8.0	8.0	30.4	30.4	89.1	89.2	6.4	0.0	2.5	2.6	5.0	4.8
	o.ouu,	moderate	01.01		madio	5.1	22.8		8.0	0.0	30.4	0011	89.3	00.2	6.5		2.7		4.8	 I
					Bottom	9.1	22.9	22.9	8.0	8.0	30.4	30.4	89.4	89.5	6.5	6.5	2.4		4.2	ł
						9.1	22.9		8.0		30.4		89.6		6.5		2.5		3.8	
					Surface	1.0	22.8	22.8	8.0	8.0	30.3	30.3	89.9	89.6	6.5		2.5		5.7	ł
						1.0	22.8		8.0		30.3		89.3		6.5	6.5	2.4		5.5	ł
C2	Cloudy	Moderate	06:41	10.4	Middle	5.2	22.8	22.8	8.0	8.0	30.4	30.4	89.3	89.3	6.5		2.5	2.3	6.0	6.2
	,					5.2	22.8		8.0		30.3		89.2		6.5		2.3		6.4	ł
					Bottom	9.4	22.9	22.9	8.0	8.0	30.5	30.5	89.9	89.6	6.5	6.5	2.0		6.7	ł
						9.4	22.9		8.0		30.5		89.2		6.4		1.9		7.1	
					Surface	1.0	23.1	23.1	8.0	8.0	30.6 30.6	30.6	89.3 88.7	89.0	6.4		2.2		4.3	ł
							_		8.0						6.4	6.4				ł
M1	Cloudy	Moderate	06:56	5.4	Middle	-	-	-	-	-	-	-	-	-			-	2.2	-	4.8
						4.4	23.1		8.0		30.6		89.8		6.5		2.0		5.5	ł
					Bottom	4.4	23.1	23.1	8.0	8.0	30.6	30.6	88.8	89.3	6.4	6.5	2.3		5.2	ł
				1		1.0	23.1		8.0		30.5		87.8		6.3	<u> </u>	4.1		5.4	
					Surface	1.0	23.1	23.1	8.0	8.0	30.5	30.5	88.0	87.9	6.3		4.9		5.0	ł
							-		-		-		-		-	6.3	-		-	i
M2	Cloudy	Moderate	06:52	5.2	Middle		-	-	-	-	-	-	-	-	-		-	4.5	-	5.5
					Dettem	4.2	23.1	22.4	8.0	8.0	30.5	20.6	87.9	88.1	6.3	6.3	4.2		5.7	ł
					Bottom	4.2	23.1	23.1	8.0	6.0	30.6	30.6	88.3	00.1	6.3	0.3	4.9		6.0	ł
					Surface	1.0	23.0	23.0	8.0	8.0	30.5	30.5	90.0	89.7	6.5		2.0		5	1
					Surface	1.0	23.0	23.0	8.0	0.0	30.5	30.3	89.3	09.7	6.4	6.5	1.8		5	ł
M3	Cloudy	Moderate	07:01	6.5	Middle	3.3	22.9	22.9	8.0	8.0	30.6	30.6	89.9	89.5	6.5	0.5	2.1	2.4	6	6
IVIO	Cloudy	Moderate	07.01	0.5	Midule	3.3	22.9	22.3	8.0	0.0	30.6	30.0	89.0	03.0	6.4		2.2	۷.٦	5	ı
					Bottom	5.5	22.9	22.9	8.0	8.0	30.6	30.6	90.6	89.9	6.5	6.5	3.5		6	i
					Dottom	5.5	22.9	22.0	8.0	0.0	30.6	50.0	89.2	00.0	6.4	0.0	2.9		6	ı

DA: Depth-averaged

Water Quality Monitoring Results on 21 November 23 during Mid-Flood Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Dept	th (m)		emperature (°C)	ı	рН	Salin	ity (ppt)	DO Satur	ration (%)	Dissolved (mg/L		Turbidity(	(NTU)	Suspende (mg/	
Station	Condition		Time	(m)			Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	23.2	23.2	8.0	8.0	30.7	30.7	89.9	89.8	6.4		2.3		3.2	
					Surface	1.0	23.2	25.2	8.0	0.0	30.7	30.7	89.7	09.0	6.4	6.4	2.5		3.6	
C1	Cloudy	Moderate	14:32	10.5	Middle	5.3	23.2	23.2	8.0	8.0	30.7	30.7	89.6	89.6	6.4	0.4	2.5	2.6	4.2	4.0
01	Cloudy	Woderate	14.02	10.5	Middle	5.3	23.2	25.2	8.0	0.0	30.7	50.7	89.6	03.0	6.4		2.9	2.0	4.0	4.0
					Bottom	9.5	23.2	23.2	8.0	8.0	30.7	30.7	89.4	89.7	6.4	6.4	2.8		4.5	
					DOLLOITI	9.5	23.2	23.2	8.0	0.0	30.7	30.7	89.9	09.1	6.4	0.4	2.8		4.7	
					Surface	1.0	23.3	23.3	8.0	8.0	30.6	30.6	90.9	91.0	6.5		2.3		4.4	
					Odridoc	1.0	23.3	20.0	8.0	0.0	30.6	50.0	91.1	31.0	6.5	6.5	2.4		4.7	
C2	Cloudy	Moderate	14:56	10.4	Middle	5.2	23.3	23.3	8.0	8.0	30.6	30.6	90.1	90.4	6.5	0.0	2.6	2.5	5.2	5.5
02	Cloudy	Moderate	11.00	10.1	Middle	5.2	23.3	20.0	8.0	0.0	30.6	00.0	90.7	00.1	6.5		2.5	2.0	5.6	0.0
					Bottom	9.4	23.2	23.3	8.0	8.0	30.7	30.7	89.9	90.4	6.4	6.5	2.7		6.3	i
	<u> </u>					9.4	23.3	20.0	8.0	0.0	30.6		90.9	00	6.5	0.0	2.7		6.5	
					Surface	1.0	23.6	23.6	7.9	7.9	30.8	30.8	89.1	89.1	6.3		4.6		7.2	
						1.0	23.6		7.9		30.8		89.0		6.3	6.3	4.3		6.8	i
M1	Cloudy	Moderate	14:43	5.4	Middle	-	-	-	-	-	-	-	-	-	-		-	4.5	-	7.6
						-	-		-		-		-		-		-		-	
					Bottom	4.4	23.6	23.6	7.9	7.9	30.8	30.8	89.0	89.0	6.3	6.3	4.4		7.9	i
						4.4	23.6		7.9		30.8		89.0		6.3		4.7		8.4	
					Surface	1.0	23.5	23.5	7.9	7.9	30.7	30.7	88.4	88.5	6.3		6.2		6.9	
						1.0	23.5		7.9		30.7		88.5		6.3	6.3	6.2		7.2	
M2	Cloudy	Moderate	14:47	5.9	Middle		-	-	-	-	-	-	-	-	-		-	7.4	-	6.5
	1						-		-		-		-		-		-		-	
					Bottom	4.9	23.5	23.5	7.9	7.9	30.7	30.7	88.5	88.5	6.3	6.3	8.2		6.0	
						4.9	23.5		7.9		30.7		88.5		6.3		8.8		5.7	
					Surface	1.0	23.4	23.4	8.0	8.0	30.5	30.5	90.4	90.5	6.5		4.7		6	i
						1.0	23.4		8.0		30.5		90.5		6.5	6.5	4.1		6	
M3	Cloudy	Moderate	14:39	7.2	Middle	3.6	23.4	23.4	8.0	8.0	30.6	30.6	90.1	89.8	6.4		8.4	7.2	7	7
						3.6	23.4		7.9		30.6		89.5		6.4		8.1		7	
					Bottom	6.2	23.4	23.4	8.0	8.0	30.6	30.6	90.6	90.2	6.5	6.5	9.0		7	
DA: Danth sugar	<u> </u>					6.2	23.4		7.9		30.6		89.8		6.4		8.9		8	

DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 23 November 23 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	th (m)		emperature (°C)		pН	Salin	ity (ppt)	DO Satur	ration (%)	Dissolved (mg/l		Turbidity(	NTU)	Suspende (mg/	
Station	Condition		Time	(m)	3 1		Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	23.6	23.6	8.0	8.0	28.7	28.8	92.8	93.0	6.7		0.9		3.0	
					Sullace	1.0	23.6	23.0	8.0	0.0	28.9	20.0	93.2	93.0	6.7	6.7	1.0		3.3	1
C1	Cloudy	Moderate	09:39	10.2	Middle	5.1	23.4	23.4	8.0	8.0	29.3	29.3	92.0	92.3	6.6	0.7	1.5	1.3	3.9	3.9
	Cloudy	Moderate	03.53	10.2	Wildale	5.1	23.4	25.4	8.0	0.0	29.3	23.5	92.5	32.3	6.7		1.3	1.0	4.2	5.5
					Bottom	9.2	23.4	23.4	8.0	8.0	29.2	29.3	92.6	92.9	6.7	6.7	1.4		4.9	1
					Bottom	9.2	23.4	20.1	8.0	0.0	29.3	20.0	93.1	02.0	6.7	0.7	1.5		4.2	
					Surface	1.0	23.4	23.4	8.0	8.0	29.3	29.3	90.7	90.5	6.5		1.1		2.9	1
						1.0	23.4	20	8.0	0.0	29.3	20.0	90.2	00.0	6.5	6.5	1.3		3.3	1
C2	Cloudy	Moderate	09:13	10.0	Middle	5.0	23.3	23.3	8.0	8.0	29.4	29.5	89.6	89.6	6.5		1.5	1.4	4.6	3.4
						5.0	23.3		8.0		29.5		89.6		6.4		1.4		3.8	
					Bottom	9.0	23.3	23.3	8.0	8.0	29.5	29.5	89.0	89.5	6.4	6.5	1.5		3.0	1
						9.0	23.3		8.0		29.5		90.0		6.5		1.3		2.8	
					Surface	1.0	23.5	23.5	8.0	8.0	30.1	30.1	89.0	89.1	6.4		2.2		2.4	1
						1.0	23.5		8.0		30.1		89.2		6.4	6.4	1.9		3.8	1
M1	Cloudy	Moderate	09:26	4.9	Middle	-	-	-	-	-	-	-	-	-	-		-	2.1	-	3.2
	,					-	-		-		-		-		-		-		-	1
					Bottom	3.9	23.5	23.5	8.0	8.0	30.2	30.2	89.1	89.1	6.4	6.4	2.4		3.0	1
						3.9	23.5		8.0	l	30.1		89.1		6.4		2.0		3.7	
					Surface	1.0	23.5 23.5	23.5	8.0	8.0	30.1	30.1	89.3 89.2	89.3	6.4 6.4		2.7		3.3	1
						1.0	23.3		0.0		- 30.1				0.4	6.4	- 2.0			1
M2	Cloudy	Moderate	09:23	5.0	Middle		-	-	-	-	-	-	-	-	-		-	2.4	-	2.8
						4.0	23.5		8.0		30.1		89.3		6.4		2.0		2.6	1
					Bottom	4.0	23.4	23.5	8.0	8.0	30.3	30.2	89.3	89.3	6.4	6.4	2.0		2.2	ı
						1.0	23.5		8.0		29.5		89.7		6.4		1.9		3	
					Surface	1.0	23.5	23.5	8.0	8.0	29.5	29.5	89.7	89.7	6.4		1.9		4	
						3.4	23.4		8.0		30.1		88.5		6.3	6.4	8.7		4	1
M3	Cloudy	Moderate	09:32	6.7	Middle	3.4	23.4	23.4	8.0	8.0	30.1	30.1	88.5	88.5	6.3	1	8.7	7.8	5	4
						5.7	23.5		8.0		30.3		88.7		6.3		12.8		5	
					Bottom	5.7	23.5	23.5	8.0	8.0	30.3	30.3	88.7	88.7	6.3	6.3	12.8		7	1

DA: Depth-averaged

Water Quality Monitoring Results on 23 November 23 during Mid-Flood Tide

Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	th (m)	Water Te	emperature (°C)	p	ЭΗ	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved ( (mg/L		Turbidity(	NTU)	Suspende (mg/	
Station	Condition		Time	(m)	32 7 3 37	,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	23.6	23.6	8.0	8.0	29.9	29.9	91.1	91.2	6.5		2.4		7.1	
					Sulface	1.0	23.6	23.0	8.0	0.0	29.8	25.5	91.2	31.2	6.5	6.5	2.4		6.2	1
C1	Cloudy	Moderate	16:13	10.7	Middle	5.4	23.5	23.5	8.0	8.0	30.0	30.0	91.1	90.8	6.5	0.5	4.6	3.8	5.5	6.5
	Cloudy	Woderate	10.10	10.7	Middle	5.4	23.5	25.5	8.0	0.0	29.9	30.0	90.4	30.0	6.5		4.2	0.0	6.8	0.5
					Bottom	9.7	23.6	23.6	8.0	8.0	29.9	30.0	91.5	91.0	6.5	6.5	4.1		6.2	1
					Dottom	9.7	23.5	25.0	8.0	0.0	30.0	30.0	90.4	31.0	6.5	0.5	5.1		7.4	
					Surface	1.0	23.7	23.7	8.0	8.0	29.8	29.8	91.8	92.1	6.6		2.4		8.3	1
						1.0	23.7	20	8.0	0.0	29.8	20.0	92.4	02	6.6	6.6	2.5		8.2	1
C2	Cloudy	Moderate	16:18	10.2	Middle	5.1	23.6	23.7	8.0	8.0	29.9	29.9	90.7	91.4	6.5		3.6	2.9	6.8	8.0
						5.1	23.7		8.0		29.9		92.1	_	6.6		3.7		8.3	1
					Bottom	9.2	23.6	23.7	8.0	8.0	29.9	29.9	90.4	91.3	6.5	6.6	2.5		8.7	
						9.2	23.7		8.0		29.9		92.2	l	6.6	<u> </u>	2.5		7.9	
					Surface	1.0	23.9 23.9	23.9	7.9 8.0	8.0	30.3	30.3	91.3 91.9	91.6	6.5 6.5		5.0 5.8		7.7 7.7	1
						1.0	23.9		8.0		30.3				0.0	6.5	5.6			1
M1	Cloudy	Moderate	16:02	5.3	Middle	-	-	-		-		-	-	-	-		-	5.9	-	7.5
						4.3	23.9		7.9		30.3		91.1		6.5		6.6		7.2	1
					Bottom	4.3	23.9	23.9	7.9	7.9	30.3	30.3	91.6	91.4	6.5	6.5	6.1		7.4	1
					2 /	1.0	23.9		8.0		29.9		92.5		6.6		4.6		6.8	
					Surface	1.0	23.9	23.9	8.0	8.0	30.0	30.0	92.0	92.3	6.5		4.6		6.7	1
							-		-		-		-		-	6.6	-		-	
M2	Cloudy	Moderate	16:06	5.0	Middle		-	-	-	-	-	-	-	-	-		-	4.0	-	6.1
					D. //	4.0	23.9	20.0	8.0	0.0	29.9	00.0	92.3	04.0	6.6	0.0	3.6		4.7	1
					Bottom	4.0	23.9	23.9	7.9	8.0	30.0	30.0	91.3	91.8	6.5	6.6	3.0		6.0	1
					Surface	1.0	23.9	23.9	8.0	8.0	29.9	29.9	91.1	91.7	6.5		8.7		4	
					Surface	1.0	23.8	23.9	8.0	6.0	29.9	29.9	92.2	91.7	6.6	6.5	8.9		4	1
M3	Cloudy	Moderate	16:08	7.0	Middle	3.5	23.9	23.9	7.9	8.0	30.2	30.2	90.7	91.7	6.4	0.0	6.8	8.0	6	5
IVIO	Cioudy	Moderate	10.00	7.0	Middle	3.5	23.9	20.0	8.0	0.0	30.1	30.2	92.7	31.1	6.6		6.7	0.0	5	
					Bottom	6.0	23.9	23.9	7.9	8.0	30.2	30.0	91.2	92.0	6.5	6.6	8.4		6	i
DA. Danth aver					Dottom	6.0	23.9	20.0	8.0	0.0	29.8	50.0	92.8	52.0	6.6	0.0	8.3		6	<u> </u>

DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 25 November 23 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Dept	th (m)		emperature (°C)		рН	Salin	ity (ppt)	DO Satur	ration (%)	Dissolved (mg/l		Turbidity(	NTU)	Suspende (mg/	
Station	Condition		Time	(m)		,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	22.8	22.8	8.2	8.2	30.2	30.2	85.9	85.7	6.2		1.0		2.3	
					Sullace	1.0	22.8	22.0	8.2	0.2	30.2	30.2	85.4	03.7	6.2	6.2	1.0		2.1	
C1	Cloudy	Moderate	10:57	10.4	Middle	5.2	22.8	22.8	8.2	8.2	30.3	30.3	86.1	85.7	6.2	0.2	1.2	1.2	2.5	2.7
01	Oloudy	Woderate	10.57	10.4	Wildaic	5.2	22.8	22.0	8.2	0.2	30.2	00.0	85.3	00.7	6.2		1.4	1.2	2.8	2.,
					Bottom	9.4	22.8	22.8	8.2	8.2	30.3	30.3	86.9	86.4	6.3	6.3	1.2		3.5	
					Bottom	9.4	22.8	22.0	8.2	0.2	30.2	00.0	85.9	00.1	6.2	0.0	1.4		3.1	
					Surface	1.0	23.0	23.0	8.2	8.2	30.1	30.2	87.3	87.2	6.3		0.7		1.9	
						1.0	22.9	20.0	8.2	0.2	30.2	00.2	87.0	07.12	6.3	6.3	0.7		1.7	
C2	Cloudy	Moderate	10:36	10.4	Middle	5.2	22.9	22.9	8.1	8.2	30.3	30.3	85.5	85.6	6.2		1.0	1.0	2.1	2.2
	,					5.2	22.9		8.2		30.2		85.6		6.2		1.0		2.3	
					Bottom	9.4	22.9	22.9	8.2	8.2	30.4	30.3	86.6	86.4	6.3	6.3	1.2		2.7	
						9.4	22.9		8.2		30.2		86.1		6.2		1.1		2.4	
					Surface	1.0	22.6	22.7	8.2	8.2	29.9	29.9	87.3	87.2	6.3		5.0		2.4	
						1.0	22.7		8.2		29.9		87.0		6.3	6.3	4.5		2.0	
M1	Cloudy	Moderate	10:47	5.2	Middle	-	-	-	-	-	-	-	-	-	-		-	4.7	-	2.6
	•					-	-		-		-		-		-				-	
					Bottom	4.2	22.6	22.7	8.2	8.2	29.9	30.0	87.7	87.5	6.4	6.4	4.7		3.0	
			l			4.2	22.7		8.2		30.0		87.2		6.3		4.5		2.8	
					Surface	1.0	22.7 22.7	22.7	8.2 8.2	8.2	29.9	29.9	86.9 87.0	87.0	6.3		1.8		2.5	
						1.0	22.1								0.3	6.3	1.8			
M2	Cloudy	Moderate	10:42	5.1	Middle		-	-	-	-	-	-	-	-	-		-	1.9	-	2.6
						4.1	22.7		8.2		29.9		86.9		6.3		2.1		3.0	
					Bottom	4.1	22.7	22.7	8.2	8.2	29.9	29.9	87.3	87.1	6.3	6.3	1.7		2.7	
						1.0	22.9		8.2		30.2		85.7		6.2		1.4		3	
					Surface	1.0	22.9	22.9	8.2	8.2	30.2	30.2	86.2	86.0	6.2		1.3		4	
						3.7	22.8		8.2		30.2		85.5		6.2	6.2	3.0		3	
M3	Cloudy	Moderate	10:52	7.4	Middle	3.7	22.8	22.8	8.2	8.2	30.2	30.2	86.0	85.8	6.2	1	2.9	2.0	3	3
					_	6.4	22.8		8.2		30.2		85.8		6.2		1.7		2	
					Bottom	6.4	22.8	22.8	8.2	8.2	30.2	30.2	86.3	86.1	6.2	6.2	1.8		2	

DA: Depth-averaged

Water Quality Monitoring Results on 25 November 23 during Mid-Flood Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	th (m)	Water Te	emperature (°C)	ı	рН	Salin	nity (ppt)	DO Satur	ration (%)	Dissolved (mg/l		Turbidity(	(NTU)	Suspende (mg/	
Station	Condition		Time	(m)	3 1	, ( )	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	22.9	22.9	8.2	8.2	30.0	30.0	88.2	88.2	6.4		1.2		3.0	
					Surface	1.0	22.9	22.9	8.2	0.2	30.0	30.0	88.1	00.2	6.4	6.4	1.4		2.7	
C1	Cloudy	Moderate	16:46	11.1	Middle	5.6	22.8	22.8	8.2	8.2	30.2	30.2	87.8	87.8	6.4	0.4	1.5	1.4	2.7	2.6
O1	Cloudy	Moderate	10.40	11.1	ivildule	5.6	22.8	22.0	8.2	0.2	30.2	30.2	87.8	07.0	6.4		1.6	17	2.6	2.0
					Bottom	10.1	22.9	22.9	8.2	8.2	30.1	30.2	88.4	88.3	6.4	6.4	1.3		2.2	
					DOMONI	10.1	22.9	22.9	8.2	0.2	30.3	30.2	88.2	00.3	6.4	0.4	1.2		2.3	
					Surface	1.0	22.8	22.8	8.2	8.2	29.8	29.9	87.6	87.4	6.4		1.3		2.7	
					Oditacc	1.0	22.8	22.0	8.2	0.2	29.9	20.0	87.2	07.4	6.3	6.3	1.3		2.6	
C2	Cloudy	Moderate	17:11	10.8	Middle	5.4	22.8	22.8	8.2	8.2	29.9	29.9	87.2	86.7	6.3	0.0	1.3	2.9	2.3	2.2
	o.ouu,	moderate		10.0		5.4	22.8		8.2	0.2	29.9	20.0	86.2	00	6.2		1.6		2.1	
					Bottom	9.8	22.8	22.8	8.2	8.2	29.9	29.9	88.1	87.1	6.4	6.3	6.0		1.7	
						9.8	22.8		8.2		29.8		86.0	<b>.</b>	6.2		5.8		1.8	
					Surface	1.0	22.9	23.0	8.2	8.2	30.1	30.1	88.2	88.1	6.4		0.9		2.2	
						1.0	23.0		8.2		30.0		88.0		6.4	6.4	0.9		2.5	
M1	Cloudy	Moderate	17:01	5.0	Middle	-	-	-	-	-	-	-	-	-	-		-	0.9	-	2.8
						-	-		-		-		-		-		-		-	
					Bottom	4.0	22.9	23.0	8.2 8.2	8.2	30.1	30.1	88.7	88.4	6.4	6.4	0.9		3.4	
						4.0	23.0				30.1		88.1		6.4		0.9		3.1 2.7	
					Surface	1.0	22.9 22.9	22.9	8.2	8.2	30.1	30.1	87.6 87.7	87.7	6.3	-	1.4		2.7	
						1.0	- 22.9		0.2						0.3	6.3	-			
M2	Cloudy	Moderate	16:57	5.4	Middle		+ -	-		-	-	-	-	-	-		_	1.4	-	2.9
						4.4	23.0		8.2		30.1		87.7		6.3		1.3		3.1	
					Bottom	4.4	22.9	23.0	8.2	8.2	30.1	30.1	88.0	87.9	6.4	6.4	1.5		3.6	
						1.0	22.9		8.2		30.1		87.8		6.4		1.3		3.0	
					Surface	1.0	23.0	23.0	8.2	8.2	30.1	30.1	88.4	88.1	6.4	1	1.3		3	
						3.5	22.9		8.2		30.1		87.8		6.3	6.4	1.3		3	
M3	Cloudy	Moderate	16:52	6.9	Middle	3.5	22.9	22.9	8.2	8.2	30.1	30.1	87.6	87.7	6.3	1	1.2	1.3	3	3
						5.9	22.9		8.2		30.0		88.2		6.4		1.2		3	
					Bottom	5.9	22.9	22.9	8.2	8.2	30.1	30.1	87.8	88.0	6.3	6.4	1.4		2	

DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 28 November 23 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Dept	h (m)		emperature (°C)		рН	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved (mg/l		Turbidity(	NTU)	Suspende (mg/	
Station	Condition		Time	(m)		,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	23.7	23.7	8.0	8.0	28.9	28.9	92.6	92.5	6.7		1.5		3.3	· <del></del>
					Sullace	1.0	23.7	23.7	8.0	0.0	28.9	20.5	92.3	92.5	6.7	6.7	1.6		2.6	ı
C1	Misty	Moderate	12:51	9.8	Middle	4.9	23.7	23.7	8.0	8.0	28.9	28.9	92.6	92.5	6.7	0.7	2.6	2.4	3.6	2.9
C1	iviioty	Moderate	12.51	9.0	Middle	4.9	23.7	25.7	8.0	0.0	28.9	20.9	92.4	92.0	6.7		2.6	2.4	3.6	2.3
					Bottom	8.8	23.7	23.7	8.0	8.0	28.9	28.9	92.8	92.7	6.7	6.7	3.1		2.6	ı
						8.8	23.7	20.7	8.0	0.0	28.9	20.0	92.5	02.7	6.7	0.7	3.2		1.9	
					Surface	1.0	23.7	23.7	7.9	7.9	28.7	28.8	94.4	93.7	6.8		1.1		2.0	ı
						1.0	23.7		7.9		28.8		92.9		6.7	6.8	1.1		1.8	ı
C2	Misty	Moderate	13:06	9.4	Middle	4.7	23.7	23.7	7.9	7.9	28.6	28.7	94.8	94.0	6.9		1.5	1.6	2.8	2.6
	- ,					4.7	23.7		7.9		28.8		93.2		6.8		1.4		2.8	
					Bottom	8.4	23.7	23.7	7.9	7.9	27.7	28.2	96.0	94.9	7.0	6.9	2.3		3.2	
						8.4	23.7		7.9		28.7		93.7		6.8		2.3		3.0	
					Surface	1.0	23.7	23.7	8.0	8.0	28.8	28.8	96.7	96.0	7.0	4	1.0		4.0	ı
						1.0	23.7		8.0		28.8		95.2		6.9	7.0	1.0		2.2	
M1	Misty	Moderate	13:00	5.2	Middle	-	-	-	-	-	-	-	-	-	-		-	1.8	-	3.0
						4.2	23.7		-		- 20.0		- 07.5		7.1		2.7		2.2	
					Bottom	4.2	23.7	23.7	8.0	8.0	28.8	28.8	97.5 96.2	96.9	7.1	7.1	2.6		3.5	
						1.0	23.7		8.0		28.8		95.0		6.9		1.8		2.1	
					Surface	1.0	23.7	23.7	8.0	8.0	28.8	28.8	94.0	94.5	6.8	1	1.9		2.8	ı
							-		-		-		-		-	6.9	-		-	
M2	Misty	Moderate	13:04	5.0	Middle		-	-	-	-	-	-	-	-	-	1	-	2.0	-	2.1
					5	4.0	23.7		8.0		28.8		95.8		6.9		2.0		1.4	ı
					Bottom	4.0	23.7	23.7	8.0	8.0	28.7	28.8	96.7	96.3	7.0	7.0	2.1		2.2	
					0	1.0	23.8	00.0	8.0	0.0	28.6	00.5	96.7	00.4	7.0		1.3		2	
					Surface	1.0	23.9	23.9	8.0	8.0	28.4	28.5	96.0	96.4	6.9	7.0	1.3		2	
М3	Misty	Moderate	13:10	7.2	Middle	3.6	23.8	23.8	8.0	8.0	28.7	28.6	97.0	96.6	7.0	7.0	2.6	2.4	2	2
IVIO	iviisty	Moderate	13.10	1.2	iviluale	3.6	23.8	23.0	8.0	0.0	28.5	20.0	96.2	90.0	7.0		2.6	2.4	3	
					Bottom	6.2	23.8	23.8	8.0	8.0	28.7	28.6	97.6	97.1	7.1	7.1	3.4		3	
					DOROIT	6.2	23.8	23.0	8.0	0.0	28.5	20.0	96.5	31.1	7.0	1.1	3.4		2	<u> </u>

DA: Depth-averaged

Water Quality Monitoring Results on 28 November 23 during Mid-Flood Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Dept	h (m)	Water Te	emperature (°C)		рН	Salin	nity (ppt)	DO Satur	ation (%)	Dissolved (mg/l		Turbidity	(NTU)	Suspende (mg.	
Station	Condition		Time	(m)	3 1	,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	23.7	23.7	8.0	8.0	28.9	28.9	95.0	94.0	6.9		1.1		2.7	
					Juliace	1.0	23.7	23.7	8.0	0.0	28.9	20.9	92.9	34.0	6.7	6.9	1.0		2.9	j
C1	Misty	Moderate	09:24	9.8	Middle	4.9	23.7	23.7	8.0	8.0	28.9	28.9	95.9	94.6	7.0	0.3	2.4	2.2	2.6	2.8
		moderate	00.2	0.0	Wildalo	4.9	23.7	20.1	8.0	0.0	28.9	20.0	93.3	01.0	6.8		2.5		3.8	
					Bottom	8.8	23.7	23.7	8.0	8.0	28.9	28.9	96.5	95.2	7.0	6.9	3.2		2.0	]
					Dottom	8.8	23.7	20.7	8.0	0.0	28.9	20.0	93.8	30.2	6.8	0.5	3.2		2.8	
					Surface	1.0	23.7	23.8	7.9	7.9	28.9	28.9	91.8	92.3	6.7		2.2		2.3	]
						1.0	23.8	20.0	7.9		28.9	20.0	92.8	02.0	6.7	6.7	2.2		3.5	]
C2	Misty	Moderate	09:05	9.2	Middle	4.6	23.7	23.8	7.9	7.9	28.9	28.9	91.8	92.2	6.7	1	3.1	2.8	2.8	2.6
						4.6	23.8		7.9		28.9		92.5	_	6.7		3.1		2.2	
					Bottom	8.2	23.7	23.8	7.9	7.9	28.9	28.9	92.2	92.2	6.7	6.7	3.2		2.6	
						8.2	23.8		7.9		28.9		92.2		6.7		3.2		2.4	
					Surface	1.0	23.7	23.7	7.9	8.0	28.7	28.7	94.8	94.2	6.9	4	1.1		2.6	. !
						1.0	23.7		8.0		28.7		93.6		6.8	6.9	1.2		2.6	4
M1	Misty	Moderate	09:20	4.4	Middle	-	-	-	-	-	-	-	-	-	-	-	-	1.8	-	2.4
						3.4	23.7		- 7.0		- 20.7		95.7		6.9		-		2.6	1
					Bottom	3.4	23.7	23.7	7.9 7.9	7.9	28.7 28.7	28.7	94.4	95.1	6.8	6.9	2.5 2.5		1.6	
						1.0	23.7		7.9		28.7		94.8		6.9		2.6		2.4	$\vdash$
					Surface	1.0	23.7	23.7	8.0	8.0	28.7	28.7	93.6	94.2	6.8	-	2.6		2.4	
						1.0	-		-		20.7		-		-	6.9	-		-	
M2	Misty	Moderate	09:15	5.0	Middle			-		-		-		-		1	_	2.9	_	2.6
						4.0	23.7		7.9		28.7		95.7		6.9		3.1		2.8	1
					Bottom	4.0	23.7	23.7	7.9	7.9	28.7	28.7	94.4	95.1	6.8	6.9	3.1		2.2	
						1.0	23.7		7.9		28.8		93.0		6.7		1.1		2	
					Surface	1.0	23.7	23.7	8.0	8.0	28.8	28.8	93.0	93.0	6.7	1	1.2		3	1
						3.1	23.7		7.9		28.8		94.9		6.9	6.8	2.5		2	_
M3	Misty	Moderate	09:12	6.2	Middle	3.1	23.7	23.7	7.9	7.9	28.9	28.9	94.7	94.8	6.9	1	2.5	2.4	3	3
						5.2	23.7		8.0		28.8		95.9		7.0		3.5		4	1
					Bottom	5.2	23.7	23.7	7.9	8.0	28.8	28.8	95.6	95.8	6.9	7.0	3.5		4	1

DA: Depth-averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 30 November 23 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition	Sampling	Water Depth	Sampling Dept	th (m)		emperature (°C)		рН	Salin	ity (ppt)	DO Satur	ration (%)	Dissolved (mg/l		Turbidity(	NTU)	Suspended (mg/	
Station	Condition		Time	(m)		,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	23.4	23.4	8.1	8.1	28.3	28.3	87.5	87.8	6.3		2.1		3.9	
					Surface	1.0	23.4	23.4	8.1	0.1	28.3	20.3	88.0	07.0	6.4	6.4	2.1		4.2	
C1	Misty	Moderate	13:46	9.8	Middle	4.9	23.4	23.4	8.1	8.1	28.3	28.3	87.7	87.9	6.4	0.4	3.3	3.2	4.6	4.5
Ci	IVIISTA	Woderate	13.40	9.0	ivildule	4.9	23.4	25.4	8.1	0.1	28.3	20.5	88.0	07.9	6.4		3.3	3.2	4.3	4.5
					Bottom	8.8	23.4	23.4	8.1	8.1	28.3	28.3	88.6	88.3	6.4	6.4	4.3		5.2	
					Dottom	8.8	23.4	25.4	8.1	0.1	28.3	20.5	87.9	00.5	6.4	0.4	4.3		4.8	
					Surface	1.0	23.4	23.4	8.1	8.1	28.2	28.2	88.3	88.3	6.4		3.3		3.2	
					Oditacc	1.0	23.4	20.4	8.1	0.1	28.2	20.2	88.3	00.0	6.4	6.4	3.3		3.0	
C2	Misty	Moderate	14:04	12.4	Middle	6.2	23.6	23.5	8.1	8.1	28.2	28.2	89.2	88.7	6.4	0.1	4.0	3.8	3.7	3.6
02		moderate			11110010	6.2	23.4	20.0	8.1	0	28.2	20.2	88.1	00	6.4		4.0	0.0	3.4	0.0
					Bottom	11.4	23.7	23.6	8.1	8.1	28.1	28.2	90.3	89.2	6.5	6.5	4.0		4.0	
					20110111	11.4	23.4	20.0	8.1	0	28.2	20.2	88.1	00.2	6.4	0.0	4.0		4.2	
					Surface	1.0	23.3	23.3	8.1	8.1	28.4	28.4	85.0	85.0	6.2		4.3		3.3	
						1.0	23.3		8.1		28.4		84.9		6.2	6.2	4.3		3.3	
M1	Misty	Moderate	13:56	5.0	Middle		-	-	-	-	-	-	-	-	-		-	4.4	-	3.5
							-		-		-		-		-		-		-	
					Bottom	4.0	23.3	23.3	8.1	8.1	28.4	28.4	85.0	85.0	6.2	6.2	4.5		3.6	
						4.0	23.3		8.1	• • • • • • • • • • • • • • • • • • • •	28.4		84.9	-	6.2		4.4		3.8	
					Surface	1.0	23.4	23.4	8.2	8.2	28.3	28.3	88.0	88.0	6.4	_	1.1		2.7	
						1.0	23.4		8.2		28.3		88.0		6.4	6.4	1.2		3.0	
M2	Misty	Moderate	14:00	4.6	Middle		-	-	-	-	-	-	-	-	-		-	1.6	-	3.3
									-		-		-		-		-		-	
					Bottom	3.6	23.4	23.4	8.2	8.2	28.3	28.3	87.9	88.0	6.4	6.4	2.0		3.6	
						3.6	23.4		8.2		28.3		88.0		6.4		2.1		4.0	
					Surface	1.0	23.3	23.4	8.1	8.1	28.4	28.4	85.8	85.9	6.2	4	2.0		4	
						1.0	23.4		8.1		28.3		85.9		6.2	6.2	2.0		3	
M3	Misty	Moderate	13:51	6.0	Middle	3.0	23.3	23.3	8.1	8.1	28.4	28.4	85.5	85.7	6.2	4	3.2	3.1	4	4
	-					3.0	23.3		8.1		28.3		85.9		6.2	1	3.2		4	
					Bottom	5.0	23.5	23.4	8.1	8.1	28.3	28.3	85.6	85.9	6.2	6.2	4.1		5	ļ
						5.0	23.3		8.1		28.3		86.1		6.2		4.0		4	

DA: Depth-averaged

#### Airport City Link Water Quality Monitoring

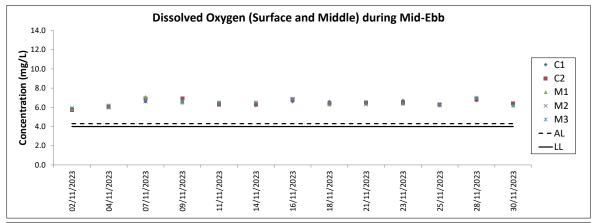
Water Quality Monitoring Results on 30 November 23 during Mid-Flood Tide

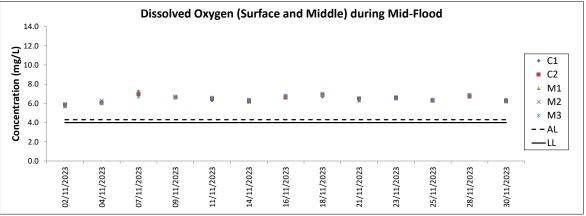
Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	th (m)		emperature (°C)		рН	Salin	ity (ppt)	DO Satur	ration (%)	Dissolved (mg/l		Turbidity(	NTU)	Suspende (mg/																		
Station	Condition		Time	(m)			Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA																	
					Surface	1.0	23.4	23.4	8.1	8.1	28.3	28.3	87.7	87.8	6.4		1.1		3.3																		
					Sulface	1.0	23.4	23.4	8.1	0.1	28.3	20.3	87.9	07.0	6.4	6.4	1.1		3.0	I																	
C1	Misty	Moderate	11:25	11.6	Middle	5.8	23.4	23.4	8.1	8.1	28.3	28.3	88.2	88.1	6.4	0.4	1.6	1.5	3.4	3.4																	
C1	iviioty	Moderate	11.20	11.20	11.25	ivildule	5.8	23.4	23.4	8.1	0.1	28.3	20.3	87.9	00.1	6.4		1.5	1.5	3.4	J. <del>4</del>																
					Bottom	10.6	23.4	23.4	8.1	8.1	28.3	28.3	89.9	88.9	6.5	6.5	1.7		3.7	I																	
					DOLLOITI	10.6	23.4	23.4	8.1	0.1	28.3	20.3	87.8	00.9	6.4	6.5	1.8		3.8	1																	
					Surface	1.0	23.4	23.4	8.1	8.1	28.3	28.3	86.6	86.6	6.3		1.2		3.3	1																	
								Sulface	1.0	23.4	23.4	8.1	0.1	28.3	20.3	86.6	00.0	6.3	6.3	1.2		3.6	I														
C2	Misty	Moderate	11:03	10.0	Middle	5.0	23.4	23.4	8.1	8.1	28.3	28.3	86.3	86.3	6.3	0.3	2.3	2.3	3.8	4.0																	
02	iviioty	Moderate	11.03	10.0	Wildale	5.0	23.4	25.4	8.1	0.1	28.3	20.5	86.3	00.5	6.3		2.3	2.5	4.2	4.0																	
					Bottom	9.0	23.4	23.4	8.1	8.1	28.3	28.3	86.1	86.1	6.3	6.3	3.5		4.7	I																	
					Dottom	9.0	23.4	20.4	8.1	0.1	28.3	20.0	86.1	00.1	6.2	0.0	3.5		4.3																		
					Surface	1.0	23.3	23.3	8.1	8.1	28.4	28.4	85.4	85.3	6.2		2.3		2.6	I																	
			11:18	11:18			1.0	23.3	20.0	8.1	0	28.4	20	85.1	00.0	6.2	6.2	2.4		2.8	I																
M1	Misty	Moderate			11:18	11:18	11:18	11:18	11:18	11:18	5.4	Middle		-	-	-	_	-	-	-	_	-	0.2	-	2.8	-	3.0										
			iviouerate	ivioderate	Moderate	iviouerate			0.1	0.1		0.4	0.4	5.4	3.4	5.4	0.4	5.4				- 		<b>5.</b> .	-			-		-		-		-		-	
									Bottom	4.4	23.4	23.4	8.1	8.1	28.5	28.5	86.2	85.8	6.2	6.2	3.3		3.4	I													
						4.4	23.3		8.1		28.4		85.3		6.2		3.3		3.1																		
					Surface	1.0	23.3	23.3	8.1	8.1	28.4	28.4	84.8	85.1	6.2		3.2		3.0	I																	
						1.0	23.3		8.1	_	28.4		85.3		6.2	6.2	3.2		2.9	I																	
M2	Misty	Moderate	11:14	4.8	Middle		-	-	-	_	-	-	-	_	-		-	3.8	-	3.1																	
							-		-		-		-		-		-		-	1																	
					Bottom	3.8	23.3	23.3	8.1	8.1	28.4	28.4	84.6	84.9	6.1	6.2	4.3		3.4	I																	
						3.8	23.3		8.1		28.4		85.1		6.2		4.4		3.2																		
					Surface	1.0	23.3	23.3	8.1	8.1	28.4	28.4	85.6	86.0	6.2		1.0		3	ı																	
						1.0	23.3		8.1		28.3		86.3		6.3	6.3	1.0		3	I																	
M3	Misty	Moderate	11:11	6.4	Middle	3.2	23.3	23.3	8.1	8.1	28.4		85.1	85.8	6.2		2.9	2.6		4																	
-				0.4		3.2	23.3	20.0	8.1		28.3	8.3	86.4		6.3		2.9	2.0	4																		
					Bottom	5.4	23.3	23.3	8.1	8.1	28.4	28.4	84.8	85.6	6.1	6.2	4.0		4	I																	
DA: Donth sugar						5.4	23.3		8.1	-	28.3	-	86.3		6.3		3.9		4	<u> </u>																	

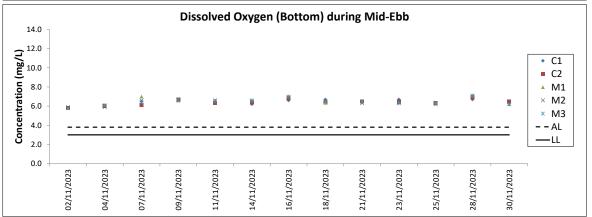
DA: Depth-averaged

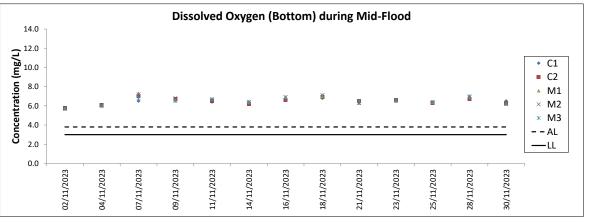
Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

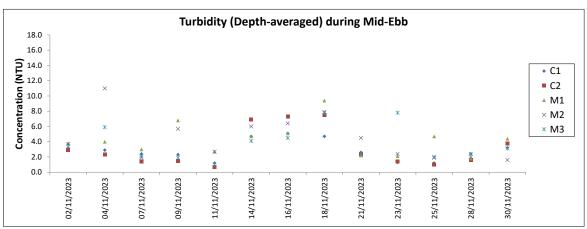
Value exceeding Action Level is underlined; Value exceeding Limit Level is bolded and underlined

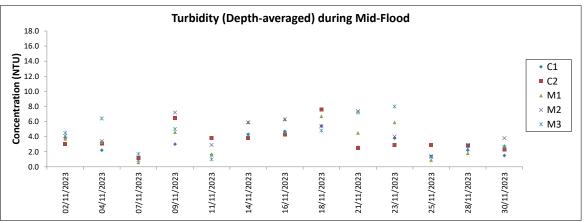












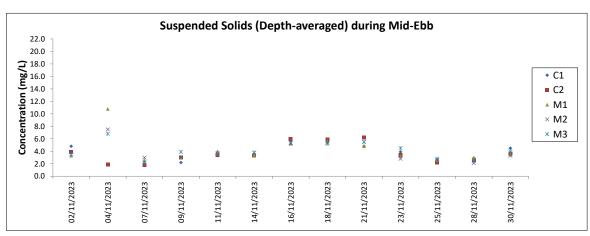
Note: The Action and Limit Level of turbidity can be referred to Table 2.3 of the monthly EM&A report.

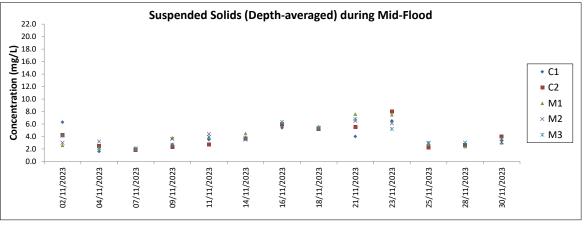
Major site activities carried out during the reporting period are summarized in Section 1.4 of the monthly EM&A report.

Weather conditions during monitoring are presented in the data tables above.

QA/ QC requirements as stipulated in the EM&A Manual were carried out during measurement.

Water quality monitoring on 7 Oct 2023 was cancelled due to Strong Wind Signal No.3 in force.





Note: The Action and Limit Level of suspended solids can be referred to Table 2.3 of the monthly EM&A report.

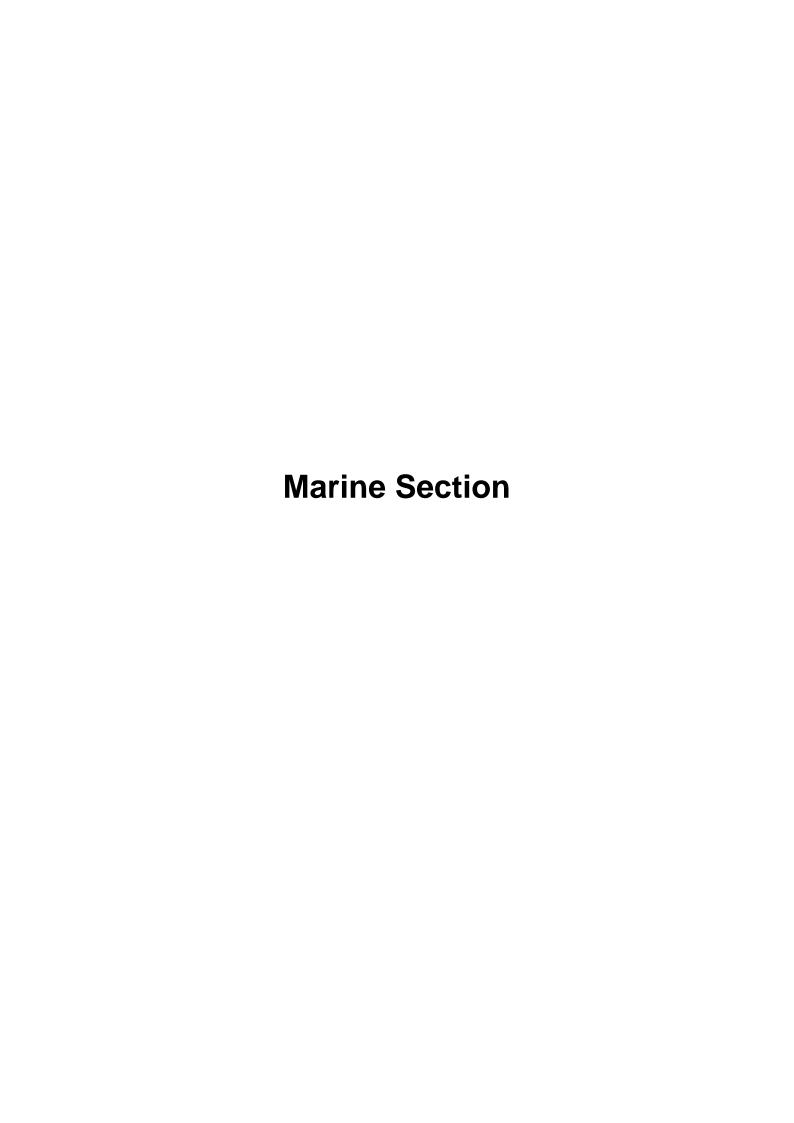
Major site activities carried out during the reporting period are summarized in Section 1.4 of the monthly EM&A report.

Weather conditions during monitoring are presented in the data tables above.

QA/ QC requirements as stipulated in the EM&A Manual were carried out during measurement.

Water quality monitoring on 7 Oct 2023 was cancelled due to Strong Wind Signal No.3 in force.

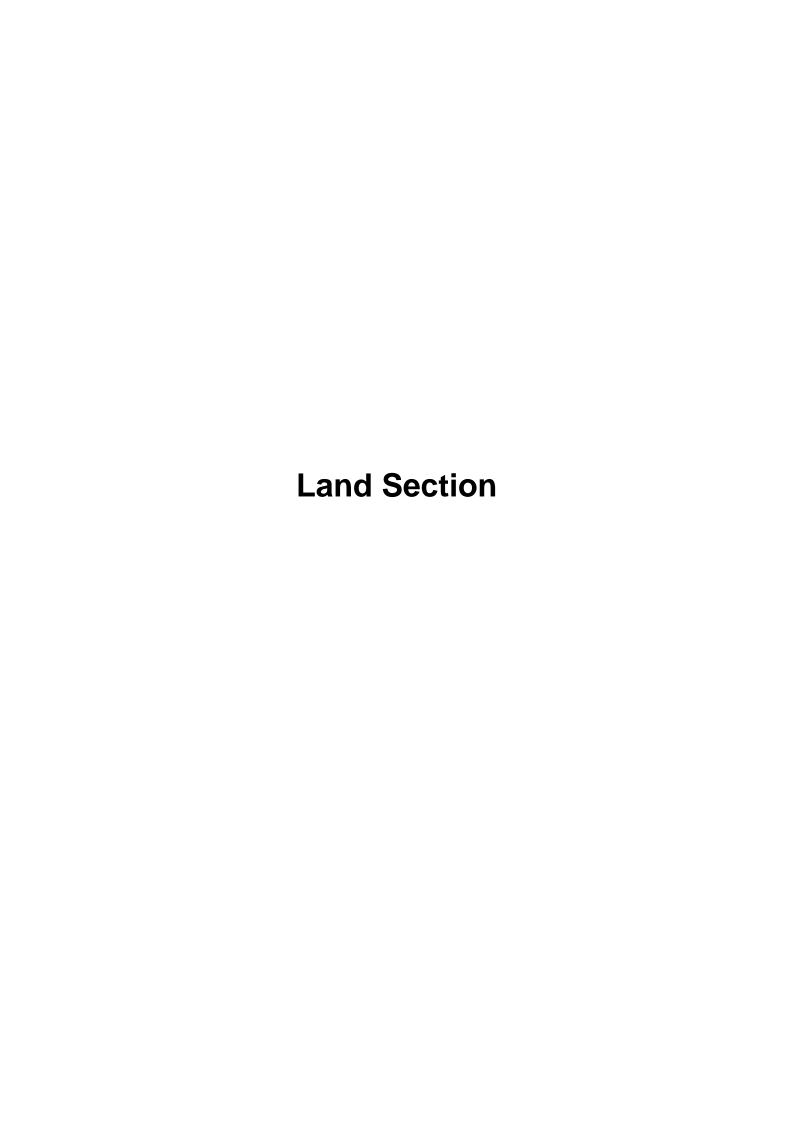
## **Appendix H. Waste Flow Table**



### AAHK Supplemental Contract No. C19W10/01 Airport City Link - Marine Portion Monthly Waste Flow Table

		Actual Quan		&D Materials (es) e.g. broken co	_	vated waste)	Act	tual Quantities	of Non-inert C&	&D Waste (tonn	es)		
Month	Excavated Waste (tonnes)	(a) Total inert C&D material generated (a) = (b) + (c) + (d) + (e)	(b) Reused in contract	(c) Reused in other projects	(d) Sent to recycling company	(e) Disposed to public fill	(f) Recycled scrap metal	(g) Reused / recycled timber	(h) Chemical waste	(i) Other waste disposed to landfill	(j) Total non- inert C&D material generated (j) = (f) + (g) + (h) + (i)	(k) Total recyclable waste (k) = (b) + (c) + (d) + (f) + (g)	(I) Total construction waste generated (I) = (a) + (j)
Apr-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jun-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aug-22	2591.67	2591.67	0.00	0.00	1584.00	1007.67	0.00	0.00	0.00	0.00	0.00	1584.00	2591.67
Sep-22	1340.00	1340.00	0.00	0.00	1340.00	0.00	0.00	0.00	0.36	0.00	0.36	1340.00	1340.36
Oct-22	1385.00	1385.00	0.00	0.00	1385.00	0.00	0.00	0.00	0.00	0.00	0.00	1385.00	1385.00
Nov-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jan-23	1814.47	1814.47	0.00	0.00	1814.47	0.00	0.00	0.00	0.36	0.00	0.36	1814.47	1814.83
Feb-23	761.45	761.45	0.00	0.00	0.00	761.45	0.00	0.00	0.00	0.00	0.00	0.00	761.45
Mar-23	939.46	939.46	0.00	0.00	939.46	0.00	0.00	0.00	0.25	0.00	0.25	939.46	939.71
Apr-23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May-23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jun-23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul-23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.99	2.99	0.00	2.99
Aug-23	16.16	16.16	0.00	0.00	0.00	16.16	0.00	0.00	0.00	16.83	16.83	0.00	32.99
Sep-23	95.49	95.49	0.00	0.00	0.00	95.49	0.00	0.00	0.00	4.25	4.25	0.00	99.74
Oct-23	69.96	69.96	0.00	0.00	0.00	69.96	0.00	0.00	0.00	15.83	15.83	0.00	85.79
Nov-23	29.24	29.24	0.00	0.00	0.00	29.24	0.00	0.00	0.00	10.57	10.57	0.00	39.81
Total	9042.90	9042.90	0.00	0.00	7062.93	1979.97	0.00	0.00	0.97	50.47	51.44	7062.93	9094.34

\*Chemical waste, Wasted oil density 0.9kg/L



### AAHK Supplemental Contract No. C21W18 Airport City Link - Land Portion Monthly Waste Flow Table

		~	ties of Inert Con Generated Month	struction Waste		Actual Quantities of Non-inert Construction Waste Generated Monthly							
	Month	(a)=(b)+(c)	(a)=(b)+(c) (b)		Recycled	Recycled	Recycled	Recycled		General Refuse			
		Total Quantity Generated	Reused in other Projects	Disposed of as Public Fill	Timber	Metals	Paper/ cardboard	Plastic	Chemical Waste	disposed of at Landfill			
Year		(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)			
	Jan	-	-	-	-	-	-	-	-	-			
	Feb	754.38	0	754.38	0	0.017	0.129	0.038	0	22.27			
	Mar	1464.86	0	1464.86	0	0.014	0.087	0.024	0	13.51			
	Apr	1005.98	0	1005.98	0	0.007	0.025	0.013	0	11.94			
	May	1723.58	0	1723.58	0	0.008	0.039	0.018	0	14.46			
	Jun	944.13	0	944.13	0	0.025	0.022	0.102	0	14.01			
2023	Sub-total	5892.93	0	5892.93	0	0.071	0.302	0.195	0	76.19			
2023	Jul	1174.60	0	1174.60	0	0.012	0.044	0.012	0	31.92			
	Aug	2287.72	0	2287.72	0	0.023	0.075	0.02	0	37.33			
	Sep	2404.54	0	2404.54	0	0.007	0.022	0.015	0	10.12			
	Oct	4354.08	0	4354.08	0	0.007	0.015	0.021	0	8.9			
	Nov	3550.04	0	3550.04	0	0.010	0.025	0.020	0	19.84			
	Dec												
	Sub-total	13770.98	0	13770.98	0	0.059	0.181	0.088	0	108.11			
Т	Cotal	19663.91	0.00	19663.91	0.00	0.130	0.483	0.283	0.00	184.30			

# **Appendix I. Status of Environmental Permits and Licences**

Table I.1: Summary of Environmental Licenses and Permits - Marine Section (November 2023)

Type of Licence / Permit	Reference No.	Valid From	Valid Until	Remark
Environmental Permit	EP-581/2020	5 Oct 2020	End of Project	N/A
Billing Account for Disposal of Construction Waste	7043487	18 Mar 2022	End of Project	N/A
Construction Dust Notification under APCO	477560	10 Mar 2022	N/A	N/A
Construction Noise Permit	GW-RS0644-23	15 Aug 2023	14 Feb 2024	N/A
Construction Noise Permit	GW-RS0895-23	20 Oct 2023	17 Apr 2024	N/A
Chemical Waste Producer	5213-951-G2961-01	19 Apr 2022	End of Project	N/A
Water Discharge License – Marine	WT00044182-2023	23 Aug 2023	31 Aug 2028	N/A

Table I.2: Summary of Environmental Licenses and Permits - Land Section (November 2023)

Type of Licence / Permit	Reference No.	Valid From	Valid Until	Remark
Environmental Permit	EP-581/2020	5 Oct 2020	End of Project	N/A
Billing Account for Disposal of Construction Waste	7044291	27 Jun 2022	End of Project	N/A
Construction Dust Notification under APCO	480843	10 Jun 2022	N/A	N/A
Construction Noise Permit	GW-RS0630-23	31 Jul 2023	30 Jan 2024	N/A
Chemical Waste Producer	5213-951-C1169-68	23 Jun 2022	End of Project	N/A
Water Discharge License	WT00042879-2022	17 Apr 2023	31 Jan 2028	Variation of discharge license WT00042879-2022 granted on 4 Jan 2023.
water Discharge License	WT00042680-2022	29 Aug 2023	31 Jan 2028	Variation of discharge license WT00042680-2022 granted on 9 Jan 2023.

# **Appendix J. Environmental Mitigation Measures Implementation Status**

### **Environmental Mitigation Measures Implementation Status (November 2023)**

Recommended Mitigation Measures for Air Quality Impact

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
		<ul> <li>Relevant control measures as required in the Air Pollution Control (Construction Dust) Regulation shall be implemented to minimise dust impact.</li> </ul>	N/A	Yes
		Skip hoist for material transport should be totally enclosed by impervious sheeting.	N/A	Yes
		<ul> <li>All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation to maintain the dusty materials wet.</li> </ul>	N/A	Yes
		<ul> <li>All stockpiles of aggregate or spoil should be covered and/or water applied.</li> </ul>	N/A	Yes
S6.1.1	S4.2.1	<ul> <li>The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading.</li> </ul>	N/A	Yes
		<ul> <li>Immediately before leaving a construction site, every vehicle shall be washed to remove any dusty materials from its body and wheels.</li> </ul>	N/A	Rem
		<ul> <li>The load of dusty materials carried by a vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle.</li> </ul>	N/A	Yes
		<ul> <li>All NRMMs operated on-site are approved or exempted (as the case may be) and affixed with the requisite approval/exemption labels under the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, or are in the process of application for such approval/exemption during the relevant grace period.</li> </ul>	Rem	Obs
Recomm	ended Miti	gation Measures for Noise Impact		
PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
		Only well-maintained plant should be operated on-site and plant should be serviced regularly.	Yes	Yes
S6.2.1	S5.2.1	Silencers or mufflers on construction plant should be utilised.	Yes	N/A
		Mobile plant should be sited as far away from sensitive uses as possible.	Yes	Yes

		Machines and plant that may be in intermittent use should be shut down between works periods or		
		should be throttled down to a minimum.	Yes	Yes
		• Plant known to emit noise strongly in one direction should, where possible, be orientated so that noise is directed away from the nearby sensitive uses.	Yes	Yes
		<ul> <li>Material stockpiles and other structures such as site hoarding should be effectively utilised to screen noise from on-site construction activities.</li> </ul>	N/A	Yes
		<ul> <li>Noisy construction activities such as road breaking, should be scheduled to less sensitive hours during the day, e.g. midday.</li> </ul>	Yes	Yes
ecomm	ended Miti	gation Measures for Water Quality Impact		
PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
S6.3.1	S6.2.1	<ul> <li>Steel pile casing and watertight cofferdam should be installed at the pier site and seawater trapped inside the casing and cofferdam should be pumped out to generate a dry working environment prior to carrying out sediment excavation.</li> </ul>	Yes	N/A
S6.3.1	S6.2.1	<ul> <li>During dewatering of the cofferdam, appropriate desilting or sedimentation device should be provided on site for treatment before discharge. The Contractor should ensure discharge water from the sedimentation tank meeting the WPCO / TM-DSS requirements before discharge.</li> </ul>	Yes	N/A
S6.3.1- S6.3.2	S6.2.1	• To minimise any adverse water quality impact during the excavation of sediment, a funnel should be placed at the top of pile casing during excavation and silt curtains should be deployed to completely enclose the cofferdam and steel pile casing. Silt curtains should be deployed prior to installation of temporary platform on barge, cofferdam and steel pile casing. Silt curtains should only be removed after completion of pile caps and piers. The Contractor should be responsible for the design, installation and maintenance of the silt curtain to minimise the impacts on water quality. The design and specification of the silt curtains should be submitted by the Contractor to the Project Manager or Project Manager's Representative of AAHK for approval. The marine bridge piers should not be constructed at the same time to avoid adverse hydrodynamic impact due to flow blockage increase during the interim construction stages. All vessels should be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash.	Yes	N/A
S6.3.1	S6.2.1	<ul> <li>For in-situ construction method, concrete would be delivered from existing concrete batching plants off-site to avoid on site concrete batching activity. During the in-situ bridge deck concreting, the concrete should be pumped or lifted inside an enclosed container for concreting the deck. Tarpaulin plastic sheet should be mounted at the bottom of the temporary working platform for concreting to prevent concrete from falling to the sea.</li> </ul>	Yes	N/A

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
S6.3.1	S6.2.1	<ul> <li>The marine works of the Project should be proactively planned and coordinated to avoid any concurrent marine works below seawater level with those of ITT-BVB to minimise cumulative water quality impact during construction phase.</li> </ul>	Yes	N/A
S6.3.1	S6.2.1	<ul> <li>Surface run-off from construction sites should be discharged into storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sedimentation basins. Channels or earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels at site boundaries should be provided on site boundaries where necessary to intercept storm run-off from outside the site so that it will not wash across the site. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.</li> </ul>	Yes	Obs
S6.3.1	S6.2.1	<ul> <li>Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to prevent local flooding. Before disposal at the public fill reception facilities, the deposited silt and grit should be solicited in such a way that it can be contained and delivered by dump truck instead of tanker truck. Any practical options for the diversion and re-alignment of drainage should comply with both engineering and environmental requirements in order to provide adequate hydraulic capacity of all drains.</li> </ul>	Yes	Yes
S6.3.1	S6.2.1	• Construction works should be programmed to minimise soil excavation works in rainy seasons (April to September). If excavation in soil cannot be avoided in these months or at any time of year when rainstorms are likely, for the purpose of preventing soil erosion, temporary exposed slope surfaces should be covered e.g. by tarpaulin, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided (e.g. along the crest / edge of excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements should always be in place in such a way that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm.	N/A	Rem
S6.3.1	S6.2.1	<ul> <li>Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary.</li> </ul>	N/A	Yes
S6.3.1	S6.2.1	<ul> <li>Measures should be taken to minimise the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.</li> </ul>	N/A	Yes
S6.3.1	S6.2.1	<ul> <li>Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and</li> </ul>	N/A	Obs

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
		to prevent storm run-off from getting into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.		
S6.3.1	S6.2.1	<ul> <li>Good site practices should be adopted to remove rubbish and litter from construction sites so as to prevent the rubbish and litter from spreading from the site area. It is recommended to clean the construction sites on a regular basis. Also, the following mitigation measures related to the transportation of the sediment should be implemented to minimise the potential water quality impact: <ul> <li>Loading of the excavated marine-based sediment to the barge shall be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water/ storm drains;</li> <li>The barge/ dump truck transporting the excavated marine-based sediment/ land-based sediment to the designated disposal sites shall be equipped with tight fitting seals to prevent leakage and shall not be filled to a level that would cause overflow of materials or laden water during loading or transportation; and</li> <li>Monitoring of the barge/ dump truck loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels/ dump truck shall be equipped with automatic self-monitoring devices as specified by the Director of Environmental Protection (DEP).</li> </ul> </li> </ul>	N/A	Yes
S6.3.1	S6.2.1	<ul> <li>Water used in ground boring and drilling for site investigation or rock/soil anchoring should as far as practicable be re-circulated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities.</li> </ul>	Yes	Yes
S6.3.1	\$6.2.1	<ul> <li>All vehicles and plant should be cleaned before they leave a construction site to minimise the deposition of earth, mud, debris on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road should be paved with backfall to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.</li> </ul>	N/A	Rem
S6.3.1	S6.2.1	• There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. All the runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. The beneficial uses of the treated effluent for other onsite activities such as dust suppression, wheel washing and general cleaning etc., can minimise water consumption and reduce the effluent discharge volume. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the relevant WPCO license.	Yes	Rem
S6.3.1	S6.2.1	<ul> <li>No discharge of sewage to the storm water system and marine water will be allowed. Sufficient chemical toilets should be provided in the works areas to handle the sewage generated from the</li> </ul>	Yes	Yes

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
		construction workforce. A licensed waste collector should be deployed to clean the chemical toilets on a regular basis.	<u> </u>	
S6.3.1	S6.2.1	<ul> <li>Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the surrounding environment. Regular environmental audit of the construction site will provide an effective control of any malpractices and can encourage continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the project would not cause water pollution problem after undertaking all required measures.</li> </ul>	Yes	Yes
S6.3.1	S6.2.1	<ul> <li>Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation, should be observed and complied with for control of chemical wastes.</li> </ul>	Yes	Yes
S6.3.1	S6.2.1	<ul> <li>Any service shop and maintenance facilities should be located on hard standings within a bonded area, and sumps should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.</li> </ul>	Yes	Obs
S6.3.1	S6.2.1	<ul> <li>Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.</li> </ul>	Obs	Obs
Recomm	ended Miti	gation Measures for Waste Management		
PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
S6.4.1-	07.04	<ul> <li>Good Site Practices:</li> <li>Nomination of approved personnel, such as a site manager, to be responsible for implementation of good site practices, arrangements for waste collection and effective disposal to an appropriate facility.</li> </ul>	Yes	Yes
S6.4.2	S7.2.1	Training of site personnel in site cleanliness, concepts of waste reduction, reuse and recycling, proper waste management and chemical waste handling procedures.		Yes
		Provision of sufficient waste reception/ disposal points, and regular collection of waste.	Obs	Obs

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
		<ul> <li>Adoption of appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers.</li> </ul>	Yes	Yes
		Provision of regular cleaning and maintenance programme for drainage systems and sumps.	Yes	Yes
		<ul> <li>Adoption of a recording system for the amount of wastes generated, recycled and disposed (including the disposal sites).</li> </ul>	Yes	Yes
		<ul> <li>Preparation of Waste Management Plan (WMP), as part of the Environmental Management Plan (EMP).</li> </ul>	Yes	Yes
	S7.2.1	<ul> <li>Waste Reduction Measures:</li> <li>Segregate and store different types of construction related waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.</li> </ul>	Yes	Yes
		<ul> <li>Provide separate labelled bins to segregate recyclable waste such as aluminium cans from other general refuse generated by the work force, and to encourage collection by individual collectors.</li> </ul>	N/A	N/A
		Recycle any unused chemicals or those with remaining functional capacity.	N/A	N/A
S6.4.1		Maximise the use of reusable steel formwork to reduce the amount of C&D materials.	Yes	N/A
		<ul> <li>Adopt proper storage and site practices to minimise the potential for damage to, or contamination of construction materials.</li> </ul>	Yes	Yes
		<ul> <li>Plan the delivery and stock of construction materials carefully to minimise the amount of waste generated.</li> </ul>	Yes	Yes
		<ul> <li>Minimise over ordering and wastage through careful planning during purchasing of construction materials.</li> </ul>	Yes	Yes
S6.4.1	S7.2.1	<ul> <li><u>C&amp;D materials:</u></li> <li>The C&amp;D materials generated should be sorted on-site into inert C&amp;D materials (that is, public fill) and non-inert (C&amp;D waste).</li> </ul>	Yes	Obs
S6.4.1	S7.2.1	<ul> <li>To minimise the impact resulting from collection and transportation of C&amp;D materials as far as practicable, C&amp;D waste, such as wood, plastic, steel and other metals should be reused or recycled and, as a last resort, disposed to landfill.</li> </ul>	N/A	N/A
S6.4.1	S7.2.1	<ul> <li>Proper handling and storage of waste such as soil by means of covers and/or water spraying system to minimise the potential environmental impact and to prevent materials from wind-blown or being washed away.</li> </ul>	Yes	Yes
20. 1. 1	0	Covering materials during heavy rainfall.	N/A	Yes
		Locating stockpiles to minimise potential visual impacts.	Yes	Yes

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
		Minimising land intake of stockpile areas as far as possible.	N/A	Yes
		<ul> <li>Adopting GPS or equivalent system for tracking and monitoring of all dump trucks engaged for the Project in recording their travel routings and parking locations to prohibit illegal dumping and landfilling of C&amp;D materials.</li> </ul>	N/A	N/A
		<ul> <li>Keeping record and analysis of data collected by GPS or equivalent system related to travel routings and parking locations of dump trucks engaged on site.</li> </ul>	Yes	N/A
		General Refuse:  • General refuse should be stored in covered bins or compaction units separately from C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the site regularly, separately from C&D materials. An enclosed and covered area is preferred to reduce the occurrence of "wind blown" light materials.	Yes	Yes
S6.4.1	S7.2.1	• The recyclable component of general refuse, such as aluminium cans, paper and cleansed plastic containers shall be separated from other waste. Provision and collection of recycling bins for different types of recyclable waste shall be set up by the Contractor. The Contractor shall also be responsible for arranging recycling companies to collect these materials.	N/A	N/A
		<ul> <li>The Contractor should carry out an education programme for workers in avoiding, reducing, reusing and recycling of materials generation. Posters and leaflets advising on the use of the bins should also be provided in the site as reminders.</li> </ul>	N/A	Yes
		Chemical Waste:  • If chemical wastes were to be produced, the Contractor would be required to register with the EPD as a Chemical Waste Producer, and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.	Yes	Obs
\$6.4.1- \$6.4.2	S7.2.1	<ul> <li>Appropriate containers with proper labels should be used for storage of chemical wastes. Chemical wastes should be collected and delivered to designated outlet by a licensed collector. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the CWTC, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.</li> </ul>	Yes	Yes
		<ul> <li>Any unused chemicals or those with remaining functional capacity should be collected for reuse as far as practicable.</li> </ul>	Yes	N/A
		• Trip ticket system shall be implemented to prevent illegal dumping in accordance with the "Trip Ticket System for Disposal of Construction and Demolition Materials'.	Yes	Yes

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
	S7.2.1	<ul> <li>Sediment:</li> <li>The sediment should be excavated, handled, treated, transported and/or disposed of in a manner that would minimise adverse environmental impacts.</li> </ul>	N/A	Yes
		<ul> <li>Relevant ordinances (such as Waste Disposal Ordinance, Air Pollution Ordinance (Construction Dust)</li> <li>Regulation and Water Pollution Control Ordinance) shall be complied with during the excavation and handling of the sediment.</li> </ul>	N/A	Yes
S6.4.1 & S6.4.3		• The temporary stockpiling area should be placed within earth bunds or sand bags to prevent leachate from entering the ground, nearby drains and surrounding water bodies. The temporary stockpiling area should be completely paved in order to avoid contamination to underlying soil or groundwater. Separate and clearly defined areas should be provided for stockpiling of contaminated and uncontaminated materials. Leachate, if any, should be collected, treated and discharged according to the Water Pollution Control Ordinance (WPCO). In order to minimise the exposure to contaminated materials, workers shall, if necessary, wear appropriate personal protective equipments (PPE) when handling contaminated sediments. Adequate washing and cleaning facilities shall also be provided on site.	N/A	Obs
S6.4.1	S7.2.1	<ul> <li>For off-site disposal, the basic requirements and procedures specified under PNAP No. 252 (ADV-21) shall be followed. Marine Fill Committee (MFC) of CEDD is managing the disposal facilities in Hong Kong for the excavated sediment, while EPD is the authority of issuing marine dumping permit under the Dumping at Sea Ordinance (DASO).</li> </ul>	N/A	N/A
\$6.4.1, 6.4.3	S7.2.1	<ul> <li>For the purpose of site allocation and application of marine dumping permit and if considered necessary by Dumping at Sea Ordinance (DASO) Team/EPD, separate submissions (e.g. SSTP/SQR) shall be submitted to DASO team/EPD for agreement under DASO. Additional SI works, based on the SSTP, shall then be carried out in order to confirm the disposal arrangements of the excavated sediment. A Sediment Quality Report (SQR), reporting the chemical and biological screening results and the estimated quantities of sediment under different disposal options, shall then be submitted to DASO team/EPD for agreement under DASO.</li> </ul>	N/A	N/A
		<ul> <li>To ensure disposal space is allocated for the Project, the Project Proponent should be responsible for obtaining agreement from MFC on the allocation of the disposal site. The contractor(s), on the other hand, should be responsible for the application of the marine dumping permit under DASO from EPD for the sediment disposal.</li> </ul>	N/A	N/A
S6.4.1	S7.2.1	<ul> <li>The excavated sediments is expected to be loaded onto the barge and transported to the designated disposal sites allocated by MFC. The excavated sediment would be disposed of according to its determined disposal options and PNAP No. 252 (ADV-21).</li> </ul>	N/A	N/A
		<ul> <li>Stockpiling of contaminated sediments should be avoided as far as possible. If temporary stockpiling of contaminated sediments is necessary, the excavated sediment should be covered and the area</li> </ul>	N/A	Obs

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
		should be placed within earth bunds or sand bags to prevent leachate from entering the ground, nearby drains and surrounding water bodies. The stockpiles area should be completely paved in order to avoid contamination to underlying soil or groundwater. Separate and clearly defined areas should be provided for stockpiling of contaminated and uncontaminated materials. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO).		
		<ul> <li>In order to minimise the potential odour / dust emissions during excavation and transportation of the sediment, the excavated sediments shall be wetted during excavation / material handling and shall be properly covered when placed on trucks or barges. Loading of the excavated sediment to the barge/ dump truck shall be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water/ storm drains.</li> </ul>	N/A	Yes
		<ul> <li>The barge/ dump truck transporting the sediments to the designated disposal sites shall be equipped with tight fitting seals to prevent leakage and shall not be filled to a level that would cause overflow of materials or laden water during loading or transportation. In addition, monitoring of the barge/ dump truck loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels/ dump truck shall be equipped with automatic self- monitoring devices as specified by the DEP.</li> </ul>	N/A	Yes
S6.4.1	S7.2.1	Potential Floating Refuse:  Proper management and education should be given to construction site workers such that accidental release or intentional disposal would be avoided. The refuse should be stored in enclosed bin to avoid adverse impacts to the surroundings including marine environment. Regular checking should also be carried out to ensure that the refuse is stored properly.	Obs / Rem	N/A
Recomm	ended Miti	gation Measures for Marine Ecological Impact		
PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
-	-	No underwater percussive piling shall be conducted in this Project	Yes	N/A
S6.5.1	S8.2.1	<ul> <li>Based upon a precautionary approach, a speed limit of 10 knots should be strictly enforced on all construction-related vessels.</li> </ul>	Yes	N/A
S6.5.1	S8.2.1	<ul> <li>Good site practices, guidelines and mitigation measures detailed in Water Quality Sections 6.3.1 of the Project Profile should be adopted to further alleviate water quality impacts.</li> </ul>	Yes	N/A

Recommended Mitigation Measures for Landscape and Visual Impact

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^	Mitigation Measures Implemented? ^
			(Marine Section)	(Land Section)
S6.6.1	S9.3.1	<ul> <li>All affected trees will be felled and compensated, no transplantation is required.</li> </ul>	N/A	Yes
S6.6.1	S9.3.1	<ul> <li>Optimising construction activities, e.g. minimising extent of temporary works area, installing site hoardings and minimising illumination on non-target areas.</li> </ul>	Yes	Yes
S6.6.1	S9.3.1	Minimise construction periods where possible.	Yes	Yes
S6.6.1	S9.3.1	Early establishment of planting areas as far as appropriate.	N/A	Yes
S6.6.1	S9.3.1	Erection of decorative mesh screen or construction hoardings.	N/A	Yes
S6.6.1	S9.3.1	Control of night-time lighting.	N/A	N/A
S6.6.1	S9.3.1	<ul> <li>Temporary vertical greening, screen / buffer at-grade planting to soften the engineering structure of construction works.</li> </ul>	N/A	N/A
S6.6.1	S9.3.1	<ul> <li>Tree preservation in accordance with Development Bureau Technical Circular (Works) No. 4/2020 (ref: DEVB(GLTM) 200/2/1/1).</li> </ul>	N/A	Yes
S6.6.1	S9.3.1	Proposed tree felling / tree compensation.	N/A	Yes
Others				
PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
-	-	<ul> <li>A copy of the valid Environmental Permit shall be displayed conspicuously on the Project site(s) at all vehicular site entrances/exits or at a convenient location for public's information at all times. The most updated information about the Permit, including any amended Permit, shall be displayed at such locations.</li> <li>If the Permit Holder surrenders a part or whole of the Permit, the notice he send to the Director shall also be displayed at the same locations as the original Permit. The suspended, varied or cancelled Permit shall be removed from display at the Project site(s).</li> </ul>	Yes	Yes
-	-	<ul> <li>The required licences should be obtained by the Contractor (including CNP (if any), WPCO licence, etc.</li> </ul>	Yes	Yes

#### Notes:

Yes = Implemented where applicable

Obs/Rem = Observations or reminders were issued, and items were rectified

N/A = Not applicable to the construction works implemented during the reporting period

^ = Checked by ET through site inspection and record provided by the Contractor