

Intermodal Transfer Terminal – Bonded Vehicular Bridge and Associated Roads

Monthly EM&A Report for October 2022

November 2022

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Airport Authority Hong Kong

Intermodal Transfer Terminal – Bonded Vehicular Bridge and Associated Roads

Monthly EM&A Report for October 2022

November 2022

This Submission of Construction Phase Monthly Environmental Monitoring and Audit (EM&A) Report for October 2022

has been reviewed and certified by

the Environmental Team Leader (ETL) in accordance with

Condition 3.4 of Environmental Permit No. EP-560/2018 and

Section 10.3 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 14 November 2022



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Our Ref: 60610093/C/FYW2211142

By Email

Your Ref:

Airport Authority Hong Kong HKIA Tower, 1 Sky Plaza Road, Hong Kong International Airport, Lantau, Hong Kong

Attn: Alan Chan (Manager, Civil)

14 November 2022

Dear Sir,

Contract C19C02 – Independent Environmental Checker Consultancy Services for Intermodal Transfer Terminal – Bonded Vehicular Bridge and Associated Roads Monthly Environmental and Audit (EM&A) Report for October 2022

Reference is made to the Environmental Team's submission of Monthly EM&A Report for October 2022 in accordance with Condition 3.4 of the Environmental Permit (No: EP-560/2018) and Section 10.3 of the EM&A Manual of the Project certified by the ET Leader on 14 November 2022.

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-560/2018.

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

On 23 August 2018, the Environment Impact Assessment (EIA) Report (Register No.: AEIAR-216/2018) for the Project was approved and an Environmental Permit (EP) (Permit No.: EP-560/2018) was issued for the construction and operation of the Project.

In June 2019, Mott MacDonald Hong Kong Limited (MMHK) was commissioned by Airport Authority Hong Kong (AAHK) to provide Environmental Team (ET) consultancy services for implementation of an Environmental Monitoring and Audit (EM&A) programme of the "Intermodal Transfer Terminal – Bonded Vehicular Bridge and Associated Roads" (hereinafter referred to as "the Project") in accordance with the Environmental Permit (EP) requirements throughout the Preconstruction, Construction and Post-construction phases.

The project construction was commenced on 5 October 2020 and the construction phase EM&A programme started on 5 October 2020.

This is the 25th 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 31 October 2022.

Key Construction Works in the Reporting Period

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

- Plant and material mobilization for marine works
- Plant and material mobilization for landside works
- Marine pier construction
- Bridge deck construction
- Ancillary buildings construction
- Abutment, upramp structure & superstructure
- Retaining wall construction
- Drainage works

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	12 (under ACL project)
Weekly environmental site inspections	4

Complaint Log

One 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:

- Plant and material mobilization for landside works
- Plant and material mobilization for marine works
- Marine pier construction
- Bridge deck construction
- Ancillary buildings construction
- Abutment, upramp structure & superstructure
- Retaining wall construction
- Drainage works

1 Introduction

1.1 Background

On 23 August 2018, the Environment Impact Assessment (EIA) Report (Register No.: AEIAR-216/2018) for the Project was approved and an Environmental Permit (EP) (Permit No.: EP-560/2018) was issued for the construction and operation of the Project.

The Project site is situated between the Hong Kong-Zhuhai-Macao Bridge Boundary Crossing Facilities (HKBCF) Island and the Hong Kong International Airport (HKIA), at the south of the existing SkyPier on the Airport Island. The Bonded Vehicular Bridge serves as a land connection between the HKBCF Island and Intermodal Transfer Terminal (ITT) building next to the SkyPier to be built by AAHK. Part of the bridge is located in the marine area (marine section) and part on the HKBCF Island (land section). The marine section of the site is situated in a marine area between HKIA and HKBCF Island.

The Bonded Vehicular Bridge serves as a dedicated direct vehicular access connecting the ITT of HKIA and HKBCF Island. The Project scale is anticipated to be small, the bridge's marine section is approximately 360 m in length, supported by bridge concrete piers. The Bridge's land section spans over the HKBCF Island with a total length of approximately 210 m.

In June 2019, Mott MacDonald Hong Kong Limited (MMHK) was commissioned by Airport Authority Hong Kong (AAHK) to provide Environmental Team (ET) consultancy services for 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 of the Project.

Baseline monitoring for the Project was carried out between August to October 2019, and the baseline monitoring report was submitted in April 2020 in accordance with the requirements set out in the EP and recommended in the EM&A Manual and received no further comment from the Environmental Protection Department (EPD).

For Construction phase of the Project, the construction has been commenced on 5 October 2020 and the construction phase EM&A programme was started on 5 October 2020.

This is the 25th monthly EM&A report summarising the key findings of the construction phase EM&A programme from 1 to 31 October 2022 (the reporting period) and is submitted to fulfil requirements in Condition 3.4 of EP and Section 10.3 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
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	Senior Project Manager	Brian Ho	9041 7535
(Gammon Construction Limited)	Environmental Officer	Elena Lai	6841 3324

1.3 Construction Works Programme and Construction Works Area

The construction works commenced on 5 October 2020. 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:

- Plant and material mobilization for marine works
- Plant and material mobilization for landside works
- Marine pier construction
- Bridge deck construction
- Ancillary buildings construction
- Abutment, upramp structure & superstructure
- Retaining wall construction
- Drainage works

2 Water Quality Monitoring

2.1 Impact Water Quality Monitoring

2.1.1 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.

2.1.2 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.

2.1.3 Monitoring Locations

With reference to the Baseline Monitoring Report, 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	Monitoring Station	Easting	Northing
M1	Impact Station	812423	819635
M2 ⁽¹⁾	Impact Station	812629	819845
M3 ⁽²⁾	Impact Station	812586	820069
C1	Control Station - West	812419	820670
C2	Control Station - East	813072	820595

Notes:

- 1. 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

2.1.4 Monitoring Results

As informed by AAHK, the marine works below sea water level of the Project were completed on 25 July 2022. Since the construction activities under sea water level and the impact water quality monitoring of Airport City Link (ACL) project were commenced (i.e. 26 July 2022) right after the completion of the construction activities under the sea water level of the ITT-BVB project, as the impact water quality monitoring programme (e.g. monitoring requirement and parameter) and monitoring locations under the EM&A Manual of EP (Permit no.: EP-581/2020) of ACL project are the same as that of ITT-BVB project. Hence, the water quality monitoring results of ACL project

are adopted and presented in this Monthly EM&A Report as agreed with AAHK, and such arrangement will be continued until the completion of all marine works of the Project.

The impact monitoring results and relevant graphical plots are presented in **Appendix D**.

2.1.5 Monitoring Schedule for the Reporting Period

The schedule for water quality monitoring under ACL project of the reporting period is presented in **Appendix E**.

2.2 Action and Limit Levels

The Action and Limit Levels for the impact monitoring stations and Event and Action Plan can refer to the Monthly EM&A Report of ACL project.

2.3 Post-Construction Water Quality Monitoring

The post-construction water quality monitoring of ITT-BVB will combine with the post-construction water quality monitoring of ACL project and will be conducted after completion of the construction activities under sea water level of ACL project.

The alternative arrangement for post-construction water quality monitoring was proposed to EPD on 7 July 2022 and EPD expressed no comment on 18 July 2022 on the alternative arrangement.

2.4 Conclusion

As informed by AAHK, the marine works below sea water level was completed on 25 July 2022. Refer to **Section 2.1.4**, the water quality monitoring results of ACL project are adopted and presented in this Monthly EM&A Report as agreed with AAHK, and such arrangement will be continued until the completion of all marine works of the Project.

In addition, the post-construction water quality monitoring of ITT-BVB will combine with the post-construction water quality monitoring of ACL project and will be conducted after completion of the construction activities under sea water level of ACL project.

3 Environmental Site Inspection and Audit

3.1 Environmental Site Inspection

Site inspections 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 Contractor together with the appropriate recommended mitigation measures where necessary. During the reporting period, site inspections were carried out on 5, 12, 19 and 26 October 2022. Joint IEC site inspection was carried out on 12 October 2022.

Monthly landscape and visual site audit was carried out on 12 October 2022.

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

Inspection Date	Key Observations / Reminders	Recommendations / Actions	Close-Out Date
28 Sep 2022	Chemical powder used in wastewater treatment facility was unwrapped and not properly stored.	The Contractor should properly store the chemical powder in a secure container to prevent chemical spillage.	5 Oct 2022
28 Sep 2022	Loading and unloading work was conducted and the site area was observed dry.	The Contractor should provide sufficient water spraying for the loading and unloading work to prevent fugitive dust emission.	5 Oct 2022
5 Oct 2022	Construction debris and general refuse were observed on the deck of Pier 7 and scaffolds of Pier 3 and 7.	The Contractor should regularly clear the debris and refuse to prevent them from falling into sea.	12 Oct 2022
12 Oct 2022	Fugitive dust emission was observed during vehicle movement.	The Contractor should provide sufficient water spraying to minimise dust emission and keep the road surface wet.	19 Oct 2022
12 Oct 2022	Torn sandbag was observed at sandbag barriers near the surface drain at the new vehicular entrance.	The Contractor should replace the torn sandbag to prevent sand from entering the public drainage system.	19 Oct 2022
12 Oct 2022	Chemical containers were found without drip tray.	The Contractor should provide a drip tray for the chemical containers to prevent any potential spillage.	19 Oct 2022
19 Oct 2022	Mitigation measures should be implemented properly to minimise dust impact (Reminder).	The Contractor was reminded to provide sufficient water spraying and covering with impervious sheet for the stockpile when not in operation.	19 Oct 2022
19 Oct 2022	No signage was observed at the vehicular exit at VG9 to reminder the drivers to wash vehicle wheels and bodies before leaving construction site (Reminder).	The Contractor was reminded to provide signage at the vehicular exit at VG9 area as a reminder to drivers to wash vehicle wheels and bodies before leaving construction site.	19 Oct 2022

Inspection Date	Key Observations / Reminders	Recommendations / Actions	Close-Out Date
26 Oct 2022	Over 20 bags of cement were observed without proper covering.	The Contractor should cover the cement bags entirely with impervious sheeting or place them in an area sheltered on the top and three sides to reduce potential dust emission.	On-going

3.2 Advice on the Solid and Liquid Waste Management Status

The Contractor was registered as a chemical waste producer 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 Contractor was 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 is detailed in **Appendix F.**

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

3.3 Implementation Status of Environmental Mitigation Measures

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

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

3.4 Summary of Complaints, Notifications of Summons and Successful Prosecutions

Complaint Log

One complaint received in relation to the environmental impact during the reporting period.

A complaint was received via email from EPD on 13 October 2022 regarding dust and stone chips on Shun Wan Road from the ITT-BVB site on 2 September 2022.

From the photos provided in EPD's email, ET recognized and identified the location as construction site area (VG9 area) for ITT-BVB at Shun Wan Road.

According to information provided by the Contractor, prefabrication works for manholes/ drainage items were conducted at VG9 area and water hose was available for wheel washing at VG9 area. For dust and stone chips found on Shun Wan Road on 2 September 2022, immediate cleanup for the concerned area was carried out by frontline workers.

After receiving the complaint, the Contractor reviewed their wheel washing operation and provided specific environmental training to frontline workers on 13 October 2022 regarding air pollution control and the captioned complaint. Reminders were given to area general foreman to ensure all construction vehicles must be cleaned thoroughly and free of dust before leaving the construction site to keep the public road clear of dust and mud deposits. Designated worker was assigned to maintain VG9 area vehicular exit & Shun Wan Road clean and free from muddy deposits. The mitigation measures will be closely monitored by environmental supervisory/ officer,

area managers and frontline supervisors.

In view of the above-mentioned, the Contractor would keep in review their control measure for wheel washing and continuously implement dust mitigation measures for public road, especially for the vehicular exit at Shun Wan Road near VG9 area.

The investigation report was submitted to EPD on 24 October 2022.

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 (Oct 2022)	1	0	0
From commencement date of construction to end of reporting period	1	0	0

4 Future Key Issues

4.1 Construction Programme for the Coming Month

As informed by the Contractor, the major construction activities for the next reporting period (November 2022) are summarized in **Table 4.1.**

Table 4.1: Construction Activities for the Next Reporting Period

Plant and material mobilization for landside works Plant and material mobilization for marine works Marine pier construction Bridge deck construction Ancillary buildings construction Abutment, upramp structure & superstructure Retaining wall construction Drainage works	Period	Description of Activities
	Nov 2022	 Plant and material mobilization for marine works Marine pier construction Bridge deck construction Ancillary buildings construction Abutment, upramp structure & superstructure Retaining wall construction

4.2 Environmental Site Inspection for the Next Reporting Period

The tentative schedule for weekly site inspection for the next reporting period is provided in **Appendix E**.

5 Conclusions

General

The construction works for the Project commenced on 5 October 2020. 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

As informed by AAHK, the marine works below sea water level was completed on 25 July 2022. Water quality monitoring results of ACL project are adopted and presented in this Monthly EM&A Report as agreed with AAHK, and such arrangement will be continued until the completion of all marine works of the Project.

Environmental Site Inspections

Environmental site inspections were carried out four (4) times during the reporting period. Recommendations on remedial actions were given to the Contractor for the deficiencies identified during the site inspections.

Complaint Log

One complaint received in relation to the environmental impact during the reporting period.

Reporting Changes

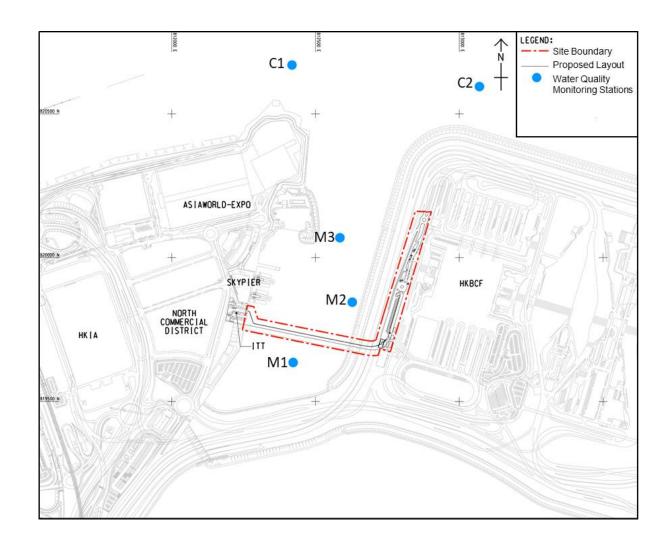
There was no reporting change during the reporting period.

Notifications of Summons and Successful Prosecutions

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

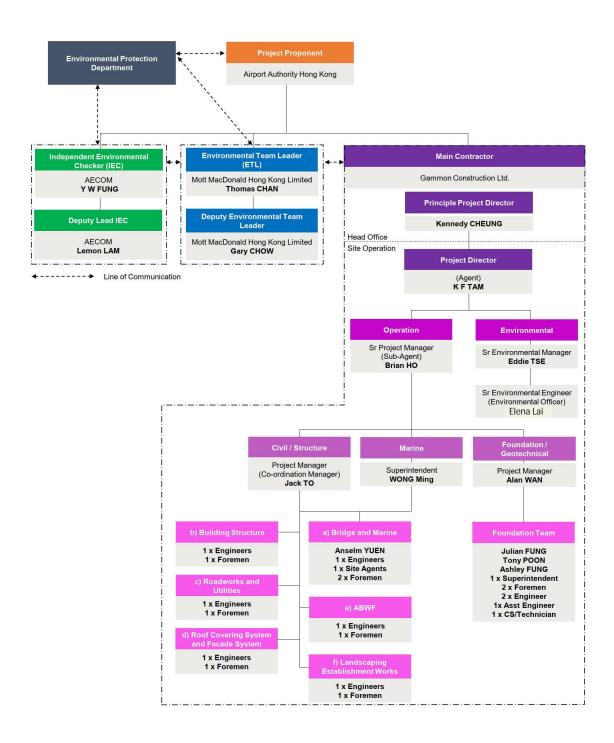
Figure

Figure 2.1 Water Quality Monitoring Locations

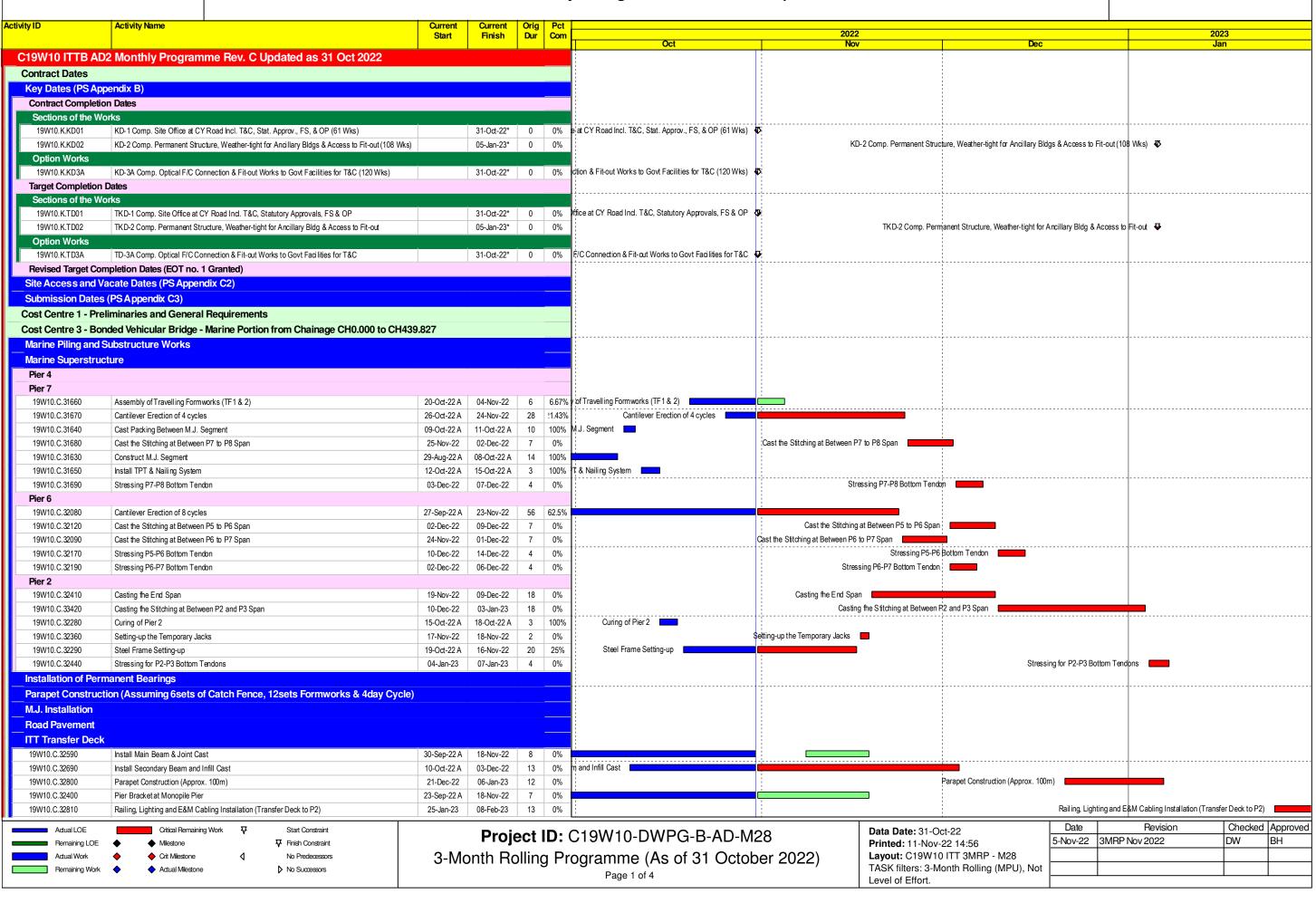


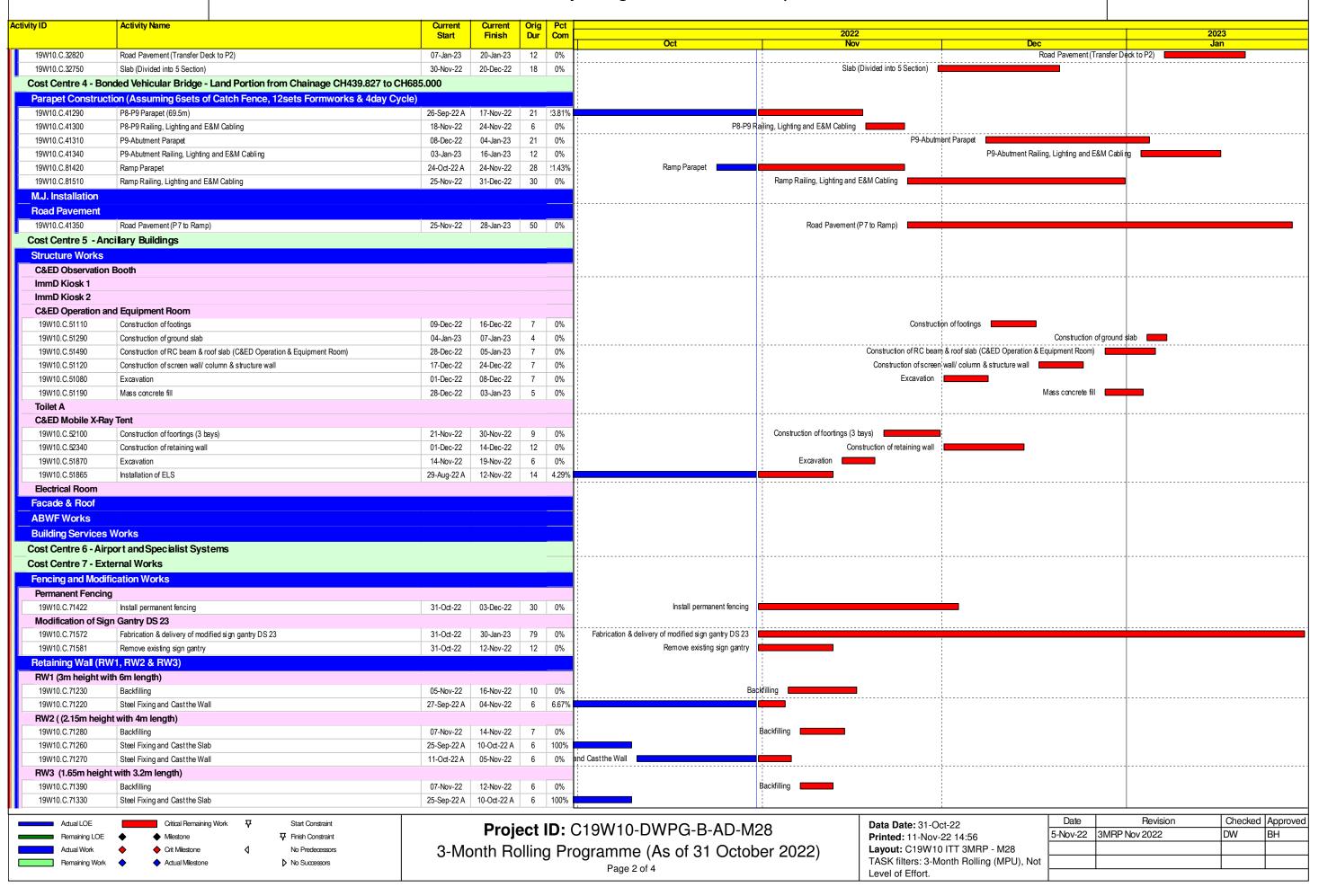
Appendices

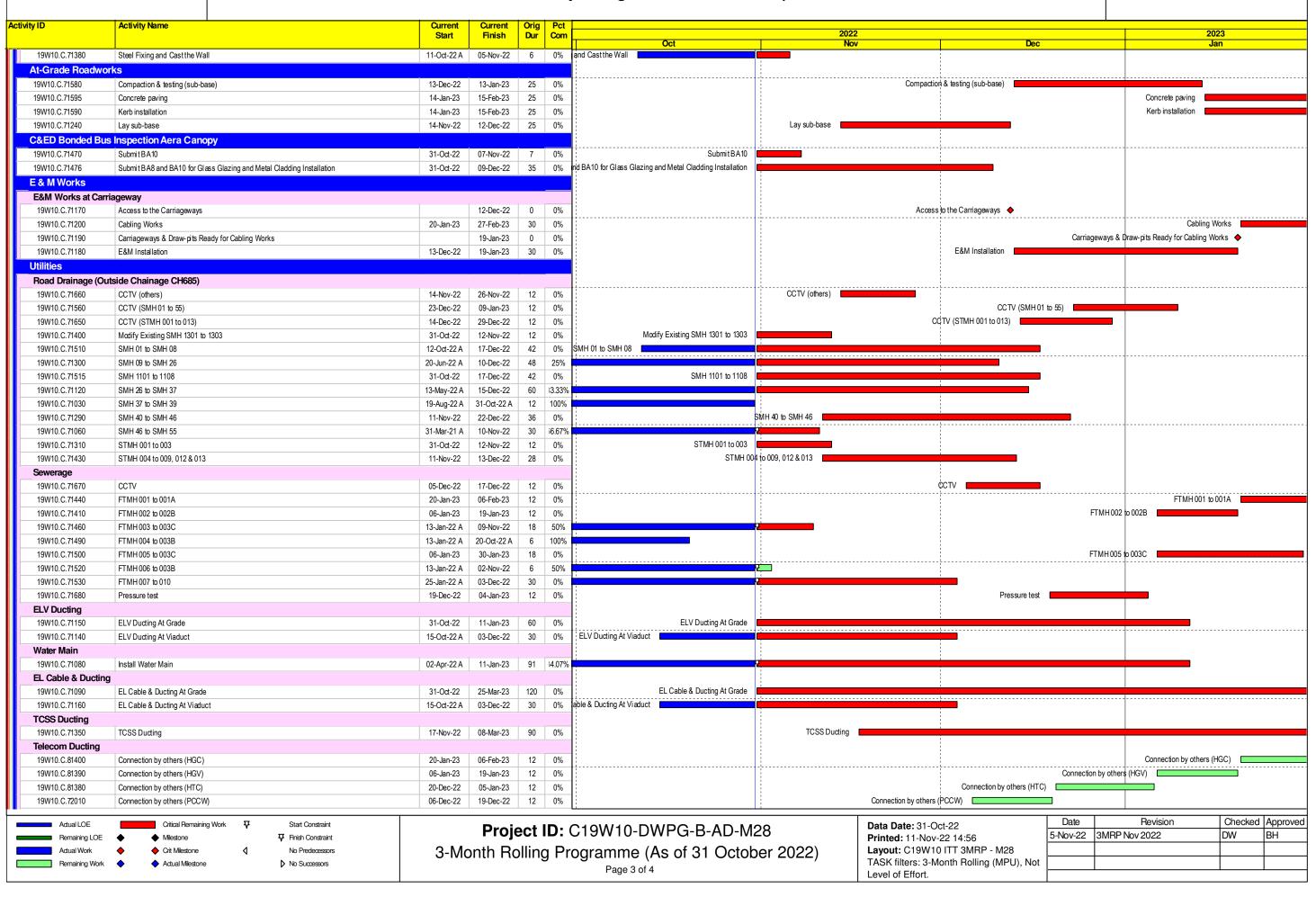
Appendix A. Project Organisation

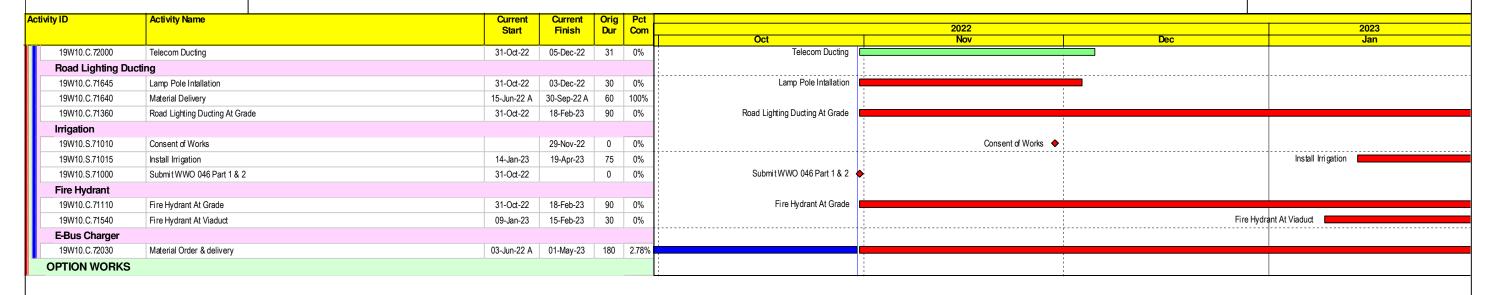


Appendix B. Construction Works Programme









Actual LOE Critical Remaining Work

Remaining LOE

Milestone

Mo Predecessors

Remaining Work

Actual Work

Actual Work

Actual Work

Actual Milestone

Actual Milestone

No Successors

No Successors

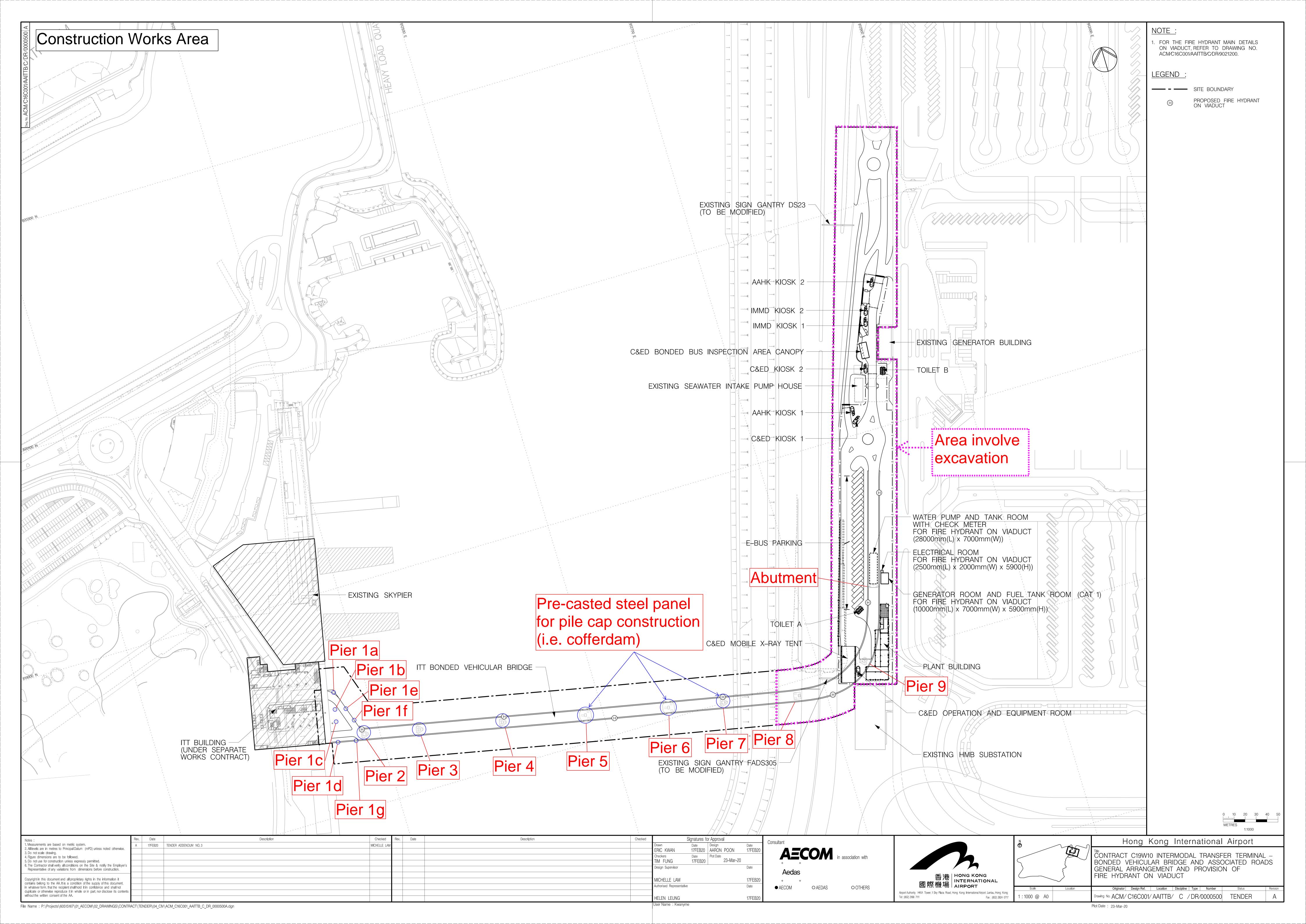
Project ID: C19W10-DWPG-B-AD-M28
3-Month Rolling Programme (As of 31 October 2022)

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Data Date: 31-Oct-22 Printed: 11-Nov-22 14:56 Layout: C19W10 ITT 3MRP - M28 TASK filters: 3-Month Rolling (MPU), Not Level of Effort.

Date	Revision	Checked	Approved
5-Nov-22	3MRP Nov 2022	DW	BH

Appendix C. Construction Works Area



Appendix D. Monitoring Data and Graphical Plots

Water Quality Monitoring Results on 01 October 22 during Mid-Ebb Tide

Monitoring	\/\oothor	Sea Condition	Sampling	Water Depth	Sampling Dep	oth (m)		emperature (°C)	-	рН	Salin	nity (ppt)	DO Satur	ation (%)	Dissolved (mg/l		Turbidity((NTU)	Suspende (mg.		
Station	Condition	Sea Condition	Time	(m)	Sampling Dep	our (III)	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	
					Surface	1.0	27.9	27.9	8.1	8.1	30.9	30.9	85.6	85.4	5.7		7.8		10.3		
					Sulface	1.0	27.9	21.9	8.1	0.1	30.8	30.9	85.1	05.4	5.6	5.8	7.7		10.7]	
C1	Misty	Moderate	15:00	9.2	Middle	4.6	27.9	27.9	8.1	8.1	30.9	30.9	89.4	89.2	5.9	0.0	8.4	8.5	11.2	11.4	
01	.viioty	Moderate	10.00	0.2	Middle	4.6	27.9	27.0	8.1	0.1	30.9	00.0	89.0	00.2	5.9		8.5	0.0	11.7		
					Bottom	8.2	27.9	27.9	8.1	8.1	30.9	30.9	92.6	92.5	6.1	6.1	9.2		12.0	1	
						8.2	27.9		8.1	• • •	30.9		92.4		6.1		9.2		12.4		
					Surface	1.0	27.9	27.9	8.1	8.1	30.9	30.9	84.3	84.3	5.6		7.2		12.0		
						1.0	27.9		8.1		30.9		84.3		5.5	5.6	7.1		11.7		
C2	Misty	Moderate	15:16	8.2	Middle	4.1	27.9	27.9	8.1	8.1	30.9	30.9	84.7	84.7	5.6		8.3	8.2	11.0	11.1	
						4.1	27.9		8.1		30.9		84.7		5.5		8.2		11.4	4	
					Bottom	7.2	27.9 27.9	27.9	8.1 8.1	8.1	30.9	30.9	85.2 85.2	85.2	5.6 5.5	5.6	9.1 9.1		10.4 10.1	ł	
				1		7.2 1.0	27.9						91.5		6.0		5.1		10.1		
					Surface	1.0	28.0	28.0	8.1 8.1	8.1	30.7	30.7	91.5	91.5	6.0		5.0		11.1	ł	
					Middle	-			0.1		30.7				0.0	6.0	-		-	1	
M1	Misty	Moderate	15:10	4.2			_			-		-	-	-			-	5.7	_	11.4	
						3.2	27.9		8.1		30.6		96.5		6.4		6.4		12.0	1	
					Bottom	3.2	28.0	28.0	8.1	8.1	30.7	30.7	96.5	96.5	6.3	6.4	6.4		11.6		
						1.0	27.9		8.1		30.7		82.7		5.5		6.4		9.0		
					Surface	1.0	27.9	27.9	8.1	8.1	30.8	30.8	82.7	82.7	5.4		6.3		8.6		
M2	N 41 - 4	Madanta	15:07	F 4	MC-L-II-	-	-		-		-		-		-	5.5	-	6.9	-	9.7	
IVI∠	Misty	Moderate	15:07	5.4	Middle	-	-	-	-	-	-	-	-	-	-		-	6.9	-	9.7	
					Bottom	4.4	27.9	27.9	8.1	8.1	30.6	30.7	88.1	88.1	5.8	5.9	7.5		10.4		
					Dollom	4.4	27.9	21.9	8.1	0.1	30.7	30.7	88.1	00.1	5.9	3.9	7.4		10.8		
					Surface	1.0	27.9	27.9	8.1	8.1	30.8	30.8	88.9	88.7	5.9		6.5		11		
					Odridoc	1.0	27.9	21.3	21.9	8.1	0.1	30.7	50.0	88.4	00.7	5.8	5.9	6.6		12]
M3	Misty	Moderate	15:04	7.2	Middle	3.6	27.8	27.9	8.1	8.1	30.9	30.9	90.4	90.3	6.0	0.0	7.5	7.5	10	10	
0			1			3.6	27.9 8.	8.1	· · ·	30.8	00.0	90.1	55.5	6.0		7.5			10		
					Bottom	6.2	27.8	27.9	8.1	8.1	30.9	30.8	93.6	93.6	6.2	6.2	8.5		9		
M. Donth aver						6.2	28.0		8.1	.	30.7		93.5		6.2		8.4		10		

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

Water Quality Monitoring Results on 01 October 22 during Mid-Flood Tide

Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	Sampling Depth (m)		emperature (°C)	þ	Ή	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved (mg/L		Turbidity((NTU)						
Station	Condition		Time	(m)				Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA				
					Surface	1.0	27.8	27.8	8.1	8.1	30.9	30.9	86.8	86.9	5.7		5.2		11.6					
					Juliace	1.0	27.8	27.0	8.1	0.1	30.9	30.9	86.9	00.9	5.8	5.8	5.2		11.4	j				
C1	Misty	Moderate	10:55	9.4	Middle	4.7	27.8	27.8	8.1	8.1	30.9	30.9	87.9	87.8	5.8	0.0	6.7	5.3	11.0	10.8				
0.	Iviloty	Wiodorato	10.00	0.1	Wildale	4.7	27.8	27.0	8.1	0.1	30.9	50.5	87.6	07.0	5.8		6.6	0.0	10.9	10.0				
					Bottom	8.4	27.8	27.8	8.1	8.1	30.9	30.9	89.7	89.4	5.9	5.9	4.0							
					Bottom	8.4	27.8	27.0	8.1	0.1	30.9	00.0	89.0	00.1	5.9	0.0	3.9	,						
					Surface	1.0	27.8	27.9	8.1	8.1	30.8	30.8	86.8	85.2	5.7		6.2]				
						1.0	27.9		8.1		30.8		83.5		5.5	5.7	6.1							
C2	Misty	Moderate	10:38	8.2	Middle	4.1	27.9	27.9	8.1	8.1	30.7	30.8	88.0	86.2	5.8		7.4	7.2	Total Nation (mg/L) DA Value DA 11.6 11.4 11.0 10.9 9.9 10.0 12.4 11.7 10.8 10.3 9.7 9.7 9.3 4.5 - 10.4 10.1 9.2 8.9 7.7 - 11.3 11.2 10 6.2 12 12 13	11.4				
						4.1	27.8		8.1		30.8		84.4		5.6		7.4]				
					Bottom	7.2	28.0	27.9	8.1	8.1	30.6	30.7	89.9	87.8	5.9	5.8	8.1	L						
						7.2	27.8		8.1		30.8		85.6		5.7		8.1 4.0							
					Surface	1.0	27.8 27.8	27.8	8.1 8.1	8.1	30.8	30.8	88.0 88.1	88.1	5.8 5.8		_	4.0						
						1.0	-		0.1		30.6		- 00.1		5.6	5.8	4.0			1				
M1	Misty	Moderate	10:44	10:44	10:44	10:44	10:44	4.4	Middle	-		-		-		-	_	-			-	4.5		9.9
						5	3.4	27.7		8.1		30.8		90.8		6.0		5.0			1			
					Bottom	3.4	27.8	27.8	8.1	8.1	30.8	30.8	90.2	90.5	6.0	6.0	5.0							
					04	1.0	27.7	07.7	8.1	0.4	30.8	20.0	85.9	85.7	5.7		7.2		9.2					
					Surface	1.0	27.7	27.7	8.1	8.1	30.8	30.8	85.4	85.7	5.7		7.3							
140	N 45 - 4	Madasta	40.47	5.0	N 41 - 1 - 11 -	-	-		-		-		-		-	5.7	-	77	-	40.0				
M2	Misty	Moderate	10:47	5.8	Middle	-	-	-	-	-	-	-	-	-	-		-	7.7	-	10.2				
					Dettern	4.8	27.7	27.7	8.1	8.1	30.7	30.8	88.3	88.3	5.9	5.9	8.1		11.3					
					Bottom	4.8	27.7	21.1	8.1	0.1	30.8	30.8	88.2	00.3	5.9	5.9	8.1		11.2					
					Surface	1.0	27.9	28.0	8.1	8.1	30.7	30.6	83.3	83.0	5.5		5.2		10					
					Surface	1.0	28.0	20.0	8.1	0.1	30.5	30.0	82.7	03.0	5.5	5.5	5.2		11					
M3	Misty	Moderate	10:51	6.4	Middle	3.2	27.8	27.0	27.9	8.1	8.1	30.8	30.7	83.3	83.0	5.5	5.5	6.2	6.2		12			
IVIO	iviloty	Moderate	10.01	0.4	Middle	3.2	28.0	21.0	8.1 30.6 30.7 82.6	00.0	5.5		6.2	0.2		'-								
					Bottom	5.4 5.4	27.8 28.0	27.9	8.1 8.1	8.1	30.8	30.7	84.2 83.1	83.7	5.6 5.5	5.6	7.1 7.0	$+$ \vdash	13 13					

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

Water Quality Monitoring Results on 04 October 22 during Mid-Ebb Tide

Water Quality Monitoring Results on					04 October 22 daring ima-Lbb Tide															
Monitoring	Weather	Sea Condition		Water Depth	Sampling Depth (m)		Water Te	emperature (°C)		рН		Salinity (ppt)		ration (%)	Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
Station	Condition		Time	(m)			Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	28.8	8.1	8.1	29.4	29.4	93.1	91.3	6.1		1.1		2.5		
					Surface	1.0	28.8	20.0	8.1	0.1	29.3	29.4	89.4	91.3	5.9	6.0	1.0		2.2	I
C1	Fine	Moderate	08:59	9.4	Middle	4.7	28.7	28.7 28.8	8.1	8.1	29.4	29.4	94.1	91.7	6.2	0.0	1.6	1.7	2.8	2.9
Ci	1 1116	Moderate	00.55	3.4	Middle	4.7			8.1	0.1	29.3	23.4	89.2	31.7	5.9		1.6	1.7	2.9	2.3
					Bottom	8.4	28.7	28.8	8.1	8.1	29.4	29.4	96.3	94.3	6.3	6.2	2.3		3.6	i
					DOMOIT	8.4	28.8	20.0	8.1	0.1	29.3	20.1	92.3	0 1.0	6.1	0.2	2.4		3.4	
					Surface	1.0	28.7	28.7	8.1	8.1	29.3	29.3	93.2	93.1	6.1	_	2.2		4.0	1
C2		Moderate				1.0	28.7	20.7	8.1	0	29.3	20.0	93.0	00	6.1	6.2	2.1	3.2	4.4	I
	Fine		08:43	8.2	Middle	4.1	28.6	28.7	8.1	8.1	29.3		94.3	94.3	6.2		3.1		3.9	3.7
						4.1	28.7	20.7	8.1	_	29.3		94.2				3.2		3.6	1
					Bottom	7.2	28.6	28.7	8.2	8.2	29.3	29.3	96.7	96.6	6.4	6.4	4.2		3.1	
						7.2	28.7		8.1		29.3		96.5		6.3		4.2		3.4	
					Surface	1.0	28.4	3.5 28.5 	8.1	8.1	29.8	29.8	88.0	88.2	5.8	_	4.1	-	3.2	I
				5.6	Middle Bottom	1.0	28.5		8.1		29.7		88.4		5.8	5.8	4.2		3.4	3.6 - 4.1 3.8 3.1
M1	Fine	Moderate	08:48			-	-		-	-	-	-	-	-	-	4	-	4.9		
						-	-		-		-		-		-		-	-		
						4.6	28.4 28.5	28.5	8.1 8.1	8.1	30.3	30.1	89.0 89.4	89.2	5.9	5.9	5.6 5.6			
						4.6 1.0	28.3		8.1		29.8		92.2		5.9 6.1		6.1	igwdown		
					Surface	1.0	28.7	28.5	8.1	8.1	29.9	29.8	88.4	90.3	5.8		6.0		3.3	
						1.0	20.7		-		29.1				3.0	6.0	- 0.0		- 3.3	I
M2	Fine	Moderate	08:51	5.6	Middle		-	-		-		-		-		1		6.6	_	3.5
						4.6	28.0		8.1		30.1		94.8		6.3		7.2		3.8	I
					Bottom	4.6	28.5	28.3	8.1	8.1	29.8	30.0	91.6	93.2	6.0	6.2	7.2		3.6	·
						1.0	28.5		8.0		29.7		88.3		5.8		4.7		3	
					Surface	1.0	28.6	28.6	8.0	8.0	29.7	29.7	88.3	88.3	5.8	1	4.8		3	I
					Middle Bottom	3.9	28.4		8.0		30.1		86.6		5.7	5.8	5.1		4	
M3	Fine	Moderate	08:54	7.7		3.9	28.6	28.5	8.0	8.0	29.8	30.0	86.5	86.6	5.7	1	5.2	5.5	4	4
						6.7	28.4	1	8.1	8.1	30.0	00.0	89.0	00.4	5.9		6.5		5	ı
						6.7	28.6	28.5	8.0		29.7	29.9	89.1	89.1	5.8	5.9	6.5	1 -	5	-
DA. Donth sugar				•	•	-		•												

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

Water Quality Monitoring Results on 04 October 22 during Mid-Flood Tide

Monitoring	Weather	Sea Condition	Sampling	Water Depth	Sampling Depth (m)		Water Te	emperature (°C)	рН		Salinity (ppt)		DO Saturation (%)			Dissolved Oxygen (mg/L)		(NTU)	Suspende (mg/	
Station	Condition		Time	(m)	337 3 31	Value	Average	Value Ave	erage	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	
					Surface	1.0	29.0 29.1	8.1	8.1	28.6	28.4	93.2	92.5	6.1		1.5		2.4		
					Sulface	1.0	29.2	29.1	8.1	0.1	28.2	20.4	91.7	92.5	6.0	6.1	1.4		2.6	1
C1	Fine	Moderate	18:39	9.2	Middle	4.6	28.8	290	8.1	8.1	29.2 28.4	28.8	94.0	93.0	6.2	0.1	2.1	2.2	3.5	3.5
	1 1110	Woderate	10.00	3.2	Wildale	4.6	29.2		8.1	0.1		20.0	92.0	33.0	6.0		2.2	2.2	3.1	0.0
					Bottom	8.2	28.6	28.9	8.1	8.1	29.4	28.9	95.3	93.9	6.3	6.2	3.0		5.0]
					Dottom	8.2	29.1	20.9	8.1	28	28.4	20.9	92.5	30.3	6.1	0.2	3.0		4.6	<u> </u>
					Surface	1.0	28.8	28.9	8.1	8.1	29.4	29.3	90.9	90.3	6.0		3.7		3.8	3.5 3.7 3.5
		Moderate		8.2		1.0	29.0	20.9	8.1		29.1	20.0	89.6	00.0	5.9	5.9	3.8	4.7	4.2	
C2	Fine		18:54		Middle	4.1	28.5	28.7	8.1	8.1	29.9	796	90.7	89.6	6.0		4.5		3.5	
						4.1	28.9		8.1		29.3		88.4		5.8		4.6		3.7	
					Bottom	7.2	28.5	28.7	8.1	8.1	29.9	29.6	93.7	92.3	6.2	6.1	5.9		3.2	1
						7.2	28.9		8.1		29.3		90.8	l	6.0		5.9		2.7	
					Surface	1.0	28.8 28.9	28.9	8.0	8.0	30.4	30.2	87.6 87.2	87.4	5.7 5.7		4.1 4.0		3.1 2.8	1
						1.0	28.9		8.0		30.0		- 87.2		5.7	5.7	4.0			1
M1	Fine	Moderate	18:47	4.2	Middle	-	-	-	-	- -	-	-		-	-		-	4.9	-	3.6
		i			Bottom	3.2	28.7	28.8	8.0		30.7		88.3		5.8		5.6		4.4	
						3.2	28.9		8.0	8.0	30.2	30.5	87.5	87.9	5.7	5.8	5.7	ŀ	3.9	
					Curtosa	1.0	28.4	20 F	0.1	8.1	29.9	29.8	93.2	92.1	6.1		2.5		4.1	
		Ì			Surface	1.0	28.6	28.5	8.1	0.1	29.7	29.8	90.9	92.1	6.0		2.4		3.6	l
M2	- :	Madasta	40.50	5.0	NAC-L-U-	-	-		-		-		-		-	6.1	-	0.0	-	0.5
IVI∠	Fine	Moderate	18:50	5.0	Middle	-	-	-	-	-		-	-	-	-		-	2.9	-	3.5
					Bottom	4.0	28.2	28.4	8.1	8.1	30.0	29.9	95.5	93.9	6.3	6.2	3.3		3.3	i
					BOILOITI	4.0	28.5	26.4	8.1	0.1	29.8	29.9	92.2	93.9	6.1	0.2	3.3		3.1	1
					Surface	1.0	28.4	29.6	8.1	8.1	29.9	20.9	90.8	90.3	6.0		4.2		3	
					Surface	1.0	28.7	8.7	8.1	0.1	29.6		89.7	90.3	5.9	6.0	4.2		3]
M3	Fine	Moderate	18:43	6.8	Middle Bottom	3.4	28.3	28.5	8.0	8.1	30.0	29.9	91.2	90.7	6.0	0.0	5.6	5.3	4	4
1410	1 1110	Moderate	10.10	6.6		3.4	28.6	.6	8.1	o. 1	29.7	9.7	90.2	00.7	5.9	<u> </u>	5.5		4	
						5.8	28.3	28.5	8.0	8.1	30.2	30.0	93.7	92.2	6.2	6.1	6.1		5	1
						5.8	28.6		8.1		29.7	55.0	90.6	J	6.0	J.,	6.0		5	

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

Water Quality Monitoring Results on 06 October 22 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Depth (m)		Water Te	emperature (°C)	ı	рН	Salin	ity (ppt)	DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Soli (mg/L)	
Station	Condition		Time	(m)			Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	28.6	28.6	8.0	8.0	30.3	30.3	84.1	84.1	5.6		4.8		3.5	
C1					Sullace	1.0	28.6	20.0	8.0	0.0	30.3	30.3	84.1	04.1	5.6	5.6	4.8		3.3	1
	Fine	Moderate	10:30	9.4	Middle	4.7	28.3		8.0	8.0	30.6	30.5	84.6	84.6	5.6	3.0	5.1	5.4	3.0	2.9
01	1 1110	Woderate	10.50	5.4	Wildaic	4.7	28.6		8.0	0.0	30.3	00.0	84.6	04.0	5.6		5.1	0.4	2.7	2.9
					Bottom	8.4	28.2	28.4	8.0	8.0	30.7	30.5	86.4	86.4	5.9	5.8	6.3		2.5	
						8.4	28.6	20.1	8.0	0.0	30.3	00.0	86.4	00.1	5.7	0.0	6.4		2.2	
					Surface	1.0	28.6	28.6	8.0	8.0	30.5	30.5	82.5	5.4		2.1		2.9		
C2 F		Moderate				1.0	28.6	20.0	8.0	0.0	30.4	00.0	82.3	02.0	5.4	5.4	2.0		3.2	1
	Fine		10:11	9.4	Middle	4.7	28.5	28.6	7.9	8.0	30.5	30.5	83.3		5.5		3.3	3.3	2.5	2.6
						4.7	28.6		8.0		30.4	82	82.4		5.4		3.3		2.7	1
					Bottom	8.4	28.4	28.5	7.9	8.0	30.5	30.5	84.6	83.6	5.7	5.7	4.4		2.1	.
						8.4	28.6		8.0		30.4		82.6		5.6		4.4		2.3	
					Surface	1.0	28.5	28.5	8.0	8.0	30.7	30.7	82.0	81.7	5.4 5.3		5.2		2.9	ı
						1.0			8.0		30.7		81.4		5.3	5.4	5.2		2.8	2.6
M1	Fine	Moderate	10:17	4.0	Middle	-	-	-	-	-	-	-	-	-	-		-	5.2	-	
					Bottom	3.0	28.5		-		20.7		- 00.0		-		- 5.0		2.3	
						3.0	28.5	28.5	8.0	8.0	30.7	30.7	82.8 81.6	82.2	5.5 5.3	5.4	5.3 5.2		2.5	
						1.0	28.5		8.0		31.2		78.6		5.3		4.0		1.8	
				5.2	Surface	1.0	28.5	28.5	8.0	8.0	31.2	31.2	79.1	78.9	5.2		4.0		1.9	
						-	-		-		-		-		-	5.3	-		-	1
M2	Fine	Moderate	10:22		Middle	_	-	-	_	-	_	-	-	-	_		-	4.7	_	2.2
					.	4.2	28.2		7.9		31.4		79.5		5.3		5.5		2.6	1
					Bottom	4.2	28.5	28.4	8.0	8.0	31.3	31.4	79.0	79.3	5.3	5.3	5.4		2.5	1
					0 (1.0	28.5	00.5	8.0	0.0	31.2	04.4	79.7	70.0	5.3		4.7		2	
					Surface	1.0	28.5	28.5	8.0	8.0	31.0	31.1	79.9	79.8	5.4	1	4.7		2	1
МЗ	Fine	Moderate	10:26	7.8	Middle Bottom	3.9	28.4	28.5	8.0	9.0	31.5	21.2	79.2	78.8	5.3	5.3	5.8	5.5	3	3
SIVI	FILLE	Moderate	10.20			3.9	28.5	20.0	8.0	8.0	31.0	31.3	78.3	10.0	5.3		5.7	ວ.ວ	3	ى ا
						6.8	28.2		7.9	8.0	31.8	31.5	81.5	80.8	5.4	5.4	6.1		3	1
				DOMOITI	6.8	28.5	20.4	8.0	0.0	31.1	31.5	80.0	00.0	5.3	5.4	6.1		4	ı	

DA: Depth-averaged

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

<u>Value exceeding Action Level is underlined</u>; <u>Value exceeding Limit Level is bolded and underlined</u>

Water Quality Monitoring Results on 06 October 22 during Mid-Flood Tide

Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	Water Te	emperature (°C)	ŗ	эΗ	Salin	ity (ppt)	DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Sol (mg/L)		
Station	Condition		Time	(m)		Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	
					Surface	1.0	29.2	29.2	8.0	8.0	29.8	29.8	90.3	90.1	5.9		1.1		2.2	1
					Gunace	1.0	29.2	29.2	8.0	0.0	29.8	29.0	89.8	30.1	5.8	5.9	1.0		2.5	ı
C1	Fine	Moderate	16:43	9.0	Middle	4.5	29.3	29.3	8.0	8.0	29.7	29.8	90.2	90.1	5.9	0.0	2.5	2.1	2.9	2.8
		ouorato	10110	0.0	Middle	4.5	29.2	8.0	8.0	29.8	20.0	89.9	00.1	5.9		2.5		2.7	0	
					Bottom	8.0	29.5	29.4	8.0	8.0	29.6	29.7	90.5	90.4	5.9	5.9	2.7		3.2	ı
					Bottom	8.0	29.2	25.4	8.0		29.8	20.7	90.2	30.4	5.9	0.0	2.6		3.2	
					Surface	1.0	29.1	29.1	8.0	8.0	29.9	29.9	90.4	89.9	5.9		1.9		2.5	ı
C2		Moderate				1.0	29.1		8.0		29.8		89.3		6.0	6.0	2.0	2.3	2.3	ı
	Fine		16:59	8.2	Middle	4.1	29.0	29.1	8.0	8.0	29.9	29.9	90.7	90.1	5.9		2.1		2.7	2.9
						4.1	29.1		8.0		29.9		89.5		6.0		2.1		3.1	
					Bottom	7.2	29.0	29.1	8.0	8.0	29.9	29.9	92.2	91.2	6.1	6.1	2.7		3.4	ı
						7.2	29.1		8.0		29.9		90.2		6.0		2.8		3.4	
					Surface	1.0	29.2	29.1	8.0	8.0	30.4	30.5	86.5	86.1	5.8	- '	5.0		2.7	ı
					Middle	1.0	29.0		8.0		30.5		85.7		5.7	5.8	4.9		3.0	ı
M1	Fine	Moderate	16:51	5.2			-	-	-	-	-	-	-	-	-		-	5.2	-	3.1
					Bottom	4.2	29.5	29.3	8.0		30.3		- 87.5		5.7		5.5		3.3	ı
						4.2	29.0		8.0	8.0	.0 30.5	30.4	86.1	86.8	5.7	5.7	5.4	-	3.5	-
				5.0		1.0	29.4		8.0		30.1		87.8		5.7		6.0		2.6	
					Surface	1.0	28.9		8.0	8.0	30.4	30.3	87.0	87.4	5.8		5.9		2.8	İ
						-	-		-		-		-		-	5.8	-		-	
M2	Fine	Moderate	16:54		Middle	-	-	-	-	-	_	-	-	-	-		-	6.4	-	3.0
					D. "	4.0	29.6	00.4	8.0	0.0	30.1	00.0	90.0	00.0	5.8		6.9		3.5	
					Bottom	4.0	29.2	29.4	8.0	8.0	30.3	30.2	87.8	88.9	5.8	5.8	6.8		3.2	
					Surface	1.0	29.2	29.1	8.0	8.0	30.1	30.2	88.6	88.5	5.8		4.8		2	
					Surface	1.0	29.0	29.1	8.0	6.0	30.2	30.2	88.3	66.5	5.9	5.9	4.8		3	
M3	Fine	Moderate	16:47	6.8	Middle Bottom	3.4	29.4	29.2	8.0	8.0	30.1	30.2	88.0	87.4	5.9	5.9	5.3	5.4	3	3
IVIS	1 1116	Moderate	10.47	0.0		3.4	28.9	23.2	8.0	0.0	30.3	30.2	86.8	07.4	5.8		5.3	5.4	3	
						5.8	29.6	6 29.3	8.0	8.0	30.1	30.2	88.8	88.8	5.7	5.8	6.1		3	
DA: Donth aver			Dottom	5.8	29.0	23.3	8.0	0.0	30.3	30.2	88.7	00.0	5.8	5.0	6.0		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

Water Quality Monitoring Results on 08 October 22 during Mid-Ebb Tide

	,	orning incou			00 October 22	during wild														
Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	oth (m)	Water Te	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	28.7	28.7	8.0	8.1	30.7	30.7	89.0	88.1	5.8		6.7		4.9	
					Surface	1.0	28.7	20.7	8.1	0.1	30.6	30.7	87.2	00.1	5.7	5.8	6.7		5.2	İ
C1	Fine	Moderate	12:37	9.2	Middle	4.6	28.7	28.7	8.0	8.1	30.7	30.7	89.8	88.7	5.9	3.0	7.2	7.3	5.5	5.7
Ci	1 1116	Woderate	12.37	9.2	Middle	4.6	28.7	20.7	8.1	0.1	30.7	30.7	87.6	00.7	5.7		7.2	1.5	5.9	3.7
					Bottom	8.2	28.7	28.7	8.0	8.1	30.7	30.7	91.3	89.8	6.0	5.9	8.1		6.6	İ
					Dottom	8.2	28.7	20.7	8.1	0.1	30.7	30.7	88.2	03.0	5.8	5.5	8.0		6.3	
					Surface	1.0	28.7	28.7	8.0	8.0	30.6	30.6	88.7	88.1	5.8		6.4		15.1	
					Surface	1.0	28.7	20.7	8.0	0.0	30.6	30.0	87.4	00.1	5.7	5.8	6.4		14.8	1
C2	Fine	Moderate	12:19	8.4	Middle	4.2	28.6	28.7	8.0	8.0	30.6	30.6	89.1	88.4	5.8	3.0	7.8	7.4	14.2	14.1
02	1 1110	Woderate	12.10	0.4	Wildaic	4.2	28.7	20.7	8.0	0.0	30.6	50.0	87.7	00.4	5.7		7.7	7.4	13.9	'
					Bottom	7.4	28.6	28.7	8.0	8.0	30.7	30.7	89.8	88.9	5.9	5.8	8.1		13.2	1
					Dottom	7.4	28.7	20.7	8.0	0.0	30.6	30.7	88.0	00.3	5.7	5.0	8.0		13.6	
					Surface	1.0	28.7	28.7	8.0	8.0	30.8	30.8	88.7	87.6	5.8		3.0		8.3	
					Odridoc	1.0	28.7	20.7	8.0	0.0	30.8	00.0	86.5	07.0	5.6	5.7	3.0		8.6	1
M1	Fine	Moderate	12:26	4.6	Middle	-	-	_	-	_	-	_	-	_	-	5.7	-	3.6	-	8.9
1411	1 1110	Woderate	12.20	4.0	Wildaic	-	-		-		-		-		-		-	0.0	-	0.5
					Bottom	3.6	28.7	28.7	7.9	8.0	29.9	30.4	91.4	89.6	6.0	5.9	4.1		9.4	1
					Bottom	3.6	28.7	20.1	8.0	0.0	30.8	JUT	87.8	05.0	5.7	0.0	4.2		9.3	1
					Surface	1.0	28.7	28.7	8.0	8.0	30.9	30.9	86.7	85.6	5.7		5.2		11.9	ĺ
					Curiaco	1.0	28.7	20.7	8.0	0.0	30.9	00.0	84.5	00.0	5.5	5.6	5.3		12.0	1
M2	Fine	Moderate	12:29	5.2	Middle	-	-	_	-	_	-	_	-	_	-	0.0	-	5.6	-	14.8
1112	1 1110	Moderate	12.20	0.2	Wildalo	-	-		-		-		-		-		-	0.0	-	1 1.0
					Bottom	4.2	28.7	28.7	7.9	8.0	30.9	31.0	90.1	88.0	5.9	5.8	6.0		17.8	1
					20110111	4.2	28.7	20	8.0	0.0	31.0	0.10	85.9	00.0	5.6	0.0	6.0		17.4	
					Surface	1.0	28.7	28.7	8.0	8.0	30.9	31.0	85.9	84.6	5.6	_	5.1		4	1
					Curiaco	1.0	28.7	20.7	8.0	0.0	31.0	01.0	83.2	0 1.0	5.4	5.5	5.2		4	1
M3	Fine	Moderate	12:32	7.6	Middle	3.8	28.7	28.7	8.0	8.0	31.0	31.0	86.4	84.6	5.6] "."	6.0	5.9	5	5
						3.8	28.7		8.0	0.0	31.0	00	82.7	00	5.4		6.0	0.0	5	Ĭ
					Bottom	6.6	28.8	28.8	8.0	8.0	31.0	31.0	88.2	84.9	5.7	5.5	6.6		6	1
					Bottom	6.6	28.7	20.0	8.0	0.0	30.9	01.0	81.5	0 1.0	5.3	0.0	6.6		5	<u> </u>

DA: Depth-averaged

Water Quality Monitoring Results on 08 October 22 during Mid-Flood Tide

Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	th (m)	Water Te	emperature (°C)	þ	ЭΗ	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved (mg/L		Turbidity((NTU)	Suspende (mg.	
Station	Condition		Time	(m)	33 7 3 37	,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	28.7	28.7	8.1	8.1	30.7	30.7	88.6	88.0	5.8		5.8		8.0	
					Juliace	1.0	28.7	20.7	8.1	0.1	30.7	30.7	87.4	00.0	5.7	5.8	5.8		8.4]
C1	Fine	Moderate	17:06	9.0	Middle	4.5	28.6	28.7	8.0	8.1	30.8	30.8	89.2	88.4	5.8	0.0	6.5	6.6	8.8	8.7
01	1 1110	Wiodorato	17.00	0.0	Wildale	4.5	28.7	20.7	8.1	0.1	30.7	50.0	87.6	00.4	5.7		6.4	0.0	8.5	0.,
					Bottom	8.0	28.7	28.7	8.0	8.1	30.7	30.7	90.0	89.0	5.9	5.8	7.3		9.1]
					Bottom	8.0	28.7	20.7	8.1	0.1	30.7	50.7	88.0	03.0	5.7	0.0	7.7		9.3	
					Surface	1.0	28.7	28.7	8.0	8.1	30.7	30.7	89.8	89.3	5.9		6.1		10.0	1
						1.0	28.7		8.1		30.7		88.7		5.8	5.9	6.0		9.9	
C2	Fine	Moderate	17:22	8.4	Middle	4.2	28.7	28.7	8.0	8.1	30.8	30.8	90.4	89.7	5.9		7.4	7.2	10.5	10.8
						4.2	28.7		8.1		30.7		89.0		5.8		7.5		11.0	1
					Bottom	7.4	28.7	28.7	8.0	8.0	30.8	30.8	91.9	90.6	6.0	5.9	8.1		11.8	4
						7.4	28.7						89.3		5.8		8.1		11.4	
					Surface	1.0	28.8 28.8	28.8	8.0	8.0	30.9	30.9	91.9 91.9	91.9	6.0 5.9		6.0		8.2 8.6	1
						1.0	20.0		6.0		30.9		91.9		5.9	6.0	0.0		-	1
M1	Fine	Moderate	17:13	4.2	Middle	-	_	-		-		-	_	-			-	6.0	-	7.4
						3.2	28.8		7.9		30.9		94.2		6.2		6.1		6.1	1
					Bottom	3.2	28.8	28.8	8.0	8.0	30.9	30.9	94.2	94.2	6.1	6.2	6.0		6.6	
					2 (1.0	28.8	00.0	8.0	0.0	30.7	00.0	88.6	07.5	5.8		5.9		15.1	
					Surface	1.0	28.7	28.8	8.0	8.0	30.8	30.8	86.4	87.5	5.6		5.9		14.7	
140	- .		47.40	5.0	B 4" 1 11	-	-		-		-		-		-	5.7	-	- 0	-	440
M2	Fine	Moderate	17:16	5.0	Middle	-	-	-	-	-	-	-	-	-	-		-	5.9	-	14.2
					Dettern	4.0	28.8	28.8	8.0	8.0	30.7	30.8	91.3	89.6	5.9	5.8	6.3		13.8	
					Bottom	4.0	28.7	20.0	8.0	8.0	30.8	30.8	87.8	69.6	5.7	5.6	5.3		13.3	
					Surface	1.0	28.8	28.8	8.0	8.0	30.8	30.8	87.7	87.2	5.7		5.3		5	
					Surface	1.0	28.8	20.0	8.0	6.0	30.8	30.6	86.7	01.2	5.7	5.7	5.4		5	
M3	Fine	Moderate	17:10	6.8	Middle	3.4	28.8	28.8	8.0	8.0	30.8	30.8	88.3	87.7	5.8	5.7	6.2	6.2	6	7
IVIO	1 1110	Moderate	17.10	0.0	Middle	3.4	28.8	20.0	8.0	0.0	30.8	50.0	87.0	01.1	5.7		6.2	0.2	6	1 '
					Bottom	5.8	28.8	28.8	8.0	8.0	30.8	30.8	89.6	88.5	5.8	5.8	7.1		10	
DA: Donth sugar						5.8	28.8	_3.0	8.0		30.8	23.0	87.4	25.0	5.7		7.0		9	

DA: Depth-averaged

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

Water Quality Monitoring Results on 11 October 22 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	27.4	27.4	8.1	8.1	32.5	32.5	92.2	92.3	6.1		3.8		14.0	1
					Sunace	1.0	27.4	27.4	8.1	0.1	32.5	32.3	92.4	32.3	6.1	6.1	3.9		15.6	l
C1	Fine	Moderate	12:30	9.0	Middle	4.5	27.3	27.4	8.1	8.1	32.5	32.5	93.0	93.0	6.1	0.1	4.3	4.4	10.5	13.6
01	1 1110	Wiodorato	12.00	0.0	Mildalo	4.5	27.4	27	8.1	0.1	32.5	02.0	93.0	00.0	6.1		4.2		12.0	10.0
					Bottom	8.0	27.3	27.4	8.1	8.1	32.5	32.5	99.5	99.5	6.6	6.6	5.2		15.1	1
						8.0	27.4		8.1		32.5		99.5		6.6		5.1		14.2	
					Surface	1.0	27.3	27.4	8.1	8.1	32.6	32.6	91.5	91.5	6.0		6.4		13.9	ł
						1.0	27.4		8.1		32.5		91.5		6.1	6.1	6.4		12.1	1
C2	Fine	Moderate	12:45	8.0	Middle	4.0	27.3 27.4	27.4	8.1	8.1	32.6	32.6	92.6	92.3	6.1	ł	7.5	7.5	12.9	13.1
						4.0			8.1		32.5		92.0		6.1		7.5		13.8	1
					Bottom	7.0	27.3 27.4	27.4	8.1 8.1	8.1	32.6 32.5	32.6	96.7 96.7	96.7	6.4	6.4	8.5 8.5		13.5 12.2	1
						1.0	26.8		8.1		31.8		94.2		6.3		4.1		12.2	
					Surface	1.0	26.8	26.8	8.1	8.1	31.8	31.8	94.2	94.2	6.4		4.0		12.1	1
						-	-		-		-		-		- 0.4	6.4	-		-	1
M1	Fine	Moderate	12:38	5.4	Middle	_	-	-	_	-	_	-	-	-	_		_	4.8	_	12.7
						4.4	26.8		8.2		31.8		97.2		6.5		5.4		12.6	1
					Bottom	4.4	26.8	26.8	8.1	8.2	31.8	31.8	97.4	97.3	6.5	6.5	5.5		13.0	ł
					Conferen	1.0	26.8	26.8	8.1	0.4	31.8	04.0	91.3	04.0	6.1		7.4		11.9	
					Surface	1.0	26.8	26.8	8.1	8.1	31.8	31.8	91.2	91.3	6.1	6.1	7.3		13.2	i
M2	Fine	Moderate	12:40	5.6	Middle	-	-		-		-		-	_	-	0.1	-	7.7	-	12.8
IVIZ	Tille	Woderate	12.40	3.0	Middle	-	-		-	-	-	-	-	-	-		-	1.1	-	12.0
					Bottom	4.6	26.8	26.8	8.2	8.2	31.6	31.7	98.8	98.6	6.6	6.6	8.0		13.6	i
					Dottom	4.6	26.8	20.0	8.1	0.2	31.8	01.7	98.4	30.0	6.6	0.0	8.0		12.5	
					Surface	1.0	26.9	26.9	8.1	8.1	31.9	31.9	89.9	89.5	6.0		6.8		13	l
					Guillago	1.0	26.9	20.0	8.1	• • • • • • • • • • • • • • • • • • • •	31.9	0.10	89.0	00.0	6.0	6.1	6.7		14	l
M3	Fine	Moderate	12:34	7.2	Middle	3.6	26.9	26.9	8.1	8.1	32.0	32.0	92.4	92.4	6.2		7.4	7.4	12	14
						3.6	26.9		8.1	-	31.9		92.3		6.2		7.4		14	l
					Bottom	6.2	26.9	26.9	8.2	8.2	32.0	32.0	97.8	97.8	6.5	6.6	8.0		15	l
						6.2	26.9		8.1		31.9		97.8		6.6		8.1		15	

DA: Depth-averaged

Water Quality Monitoring Results on 11 October 22 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	27.1	27.1	8.0	8.1	32.4	32.4	93.9	93.9	6.2		7.9		15.7	
					Surface	1.0	27.1	27.1	8.1	0.1	32.4	32.4	93.9	33.3	6.2	6.4	7.8		14.1	
C1	Fine	Moderate	09:09	9.0	Middle	4.5	27.1	27.1	8.0	8.1	32.4	32.4	98.1	98.1	6.5	0.4	8.2	8.2	13.2	13.7
C1	1 1116	Moderate	03.03	9.0	Middle	4.5	27.1	27.1	8.1	0.1	32.4	32.4	98.1	30.1	6.5		8.1	0.2	12.8	13.7
					Bottom	8.0	27.0	27.1	8.0	8.1	32.3	32.4	104.4	104.4	6.9	6.9	8.3		13.2	
					Bollom	8.0	27.1	27.1	8.1	0.1	32.4	32.4	104.4	104.4	6.9	0.9	9.0		13.2	
					Surface	1.0	27.1	27.2	8.0	8.0	32.5	32.5	90.0	89.0	6.0		6.1		13.4	
					Curiaco	1.0	27.2	27.2	8.0	0.0	32.5	02.0	87.9	00.0	5.8	5.9	6.2		14.1	
C2	Fine	Moderate	08:52	8.2	Middle	4.1	27.1	27.1	8.0	8.0	32.5	32.5	90.5	89.5	6.0	0.0	7.2	7.3	12.8	12.6
		moderate	00.02	0.2		4.1	27.1		8.0	0.0	32.5	02.0	88.4	00.0	5.9		7.1		11.0	
					Bottom	7.2	27.1	27.1	8.1	8.1	32.5	32.5	91.5	90.4	6.1	6.0	8.7		12.8	
						7.2	27.1		8.0	• • •	32.5		89.3		5.9		8.6		11.7	
					Surface	1.0	26.6	26.6	8.1	8.1	31.9	31.9	95.3	95.3	6.4		6.7		13.4	
						1.0	26.6		8.0		31.9		95.3		6.4	6.4	6.6		14.1	i
M1	Fine	Moderate	08:59	4.4	Middle	-	-	-	-	-	-	-	-		-		-	6.9	-	14.1
						-	-		-		-		-		-		-			i
					Bottom	3.4	26.6	26.6	8.1	8.1	31.9	31.9	98.9	98.9	6.6	6.6	7.1		15.0	i
						3.4	26.6		8.0		31.9		98.9		6.6		7.0		13.8	
					Surface	1.0	26.6	26.6	8.1	8.1	31.9	31.9	96.4	96.4	6.5	ł	7.5		15.7	
						1.0	26.6		8.0		31.9		96.4		6.5	6.5	7.5		15.8	
M2	Fine	Moderate	09:02	5.8	Middle	-	-	-	-	-	-	-	-	-	-		-	8.2	-	15.1
							-		-		-		-		-		-		-	
					Bottom	4.8	26.6	26.6	8.1	8.1	31.9	31.9	99.6	99.6	6.7	6.7	8.8		14.2	i
						4.8	26.6		8.0		31.9		99.6		6.7		8.9		14.8	
					Surface	1.0	26.7	26.7	8.0	8.0	31.9	31.9	93.1	93.1	6.2		6.8		13	i
						1.0	26.7		8.0		31.9		93.1		6.3	6.4	6.8		12	
М3	Fine	Moderate	09:06	7.6	Middle	3.8	26.7	26.7	8.1	8.1	31.9	31.9	96.3	96.3	6.5		7.1	7.3	13	14
						3.8	26.7		8.0		31.9		96.3		6.4		7.2		12	
					Bottom	6.6	26.7	26.7	8.1	8.1	31.8	31.9	99.6	99.6	6.8	6.8	8.1		15	
DA: Danth avan	<u> </u>					6.6	26.7		8.0		31.9		99.6		6.7		8.0		16	

DA: Depth-averaged

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

Water Quality Monitoring Results on 13 October 22 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	26.5	26.6	8.2	8.2	30.9	30.9	88.9	88.9	6.0		3.6		5.5	
					Sulface	1.0	26.7	20.0	8.2	0.2	30.9	30.8	88.9	00.9	6.0	6.0	3.7		4.6	j
C1	Fine	Moderate	13:19	9.0	Middle	4.5	26.4	26.6	8.2	8.2	30.9	30.9	88.7	88.9	6.0	0.0	4.0	4.0	4.5	4.5
01	1 1110	Woderate	10.10	3.0	Wildaic	4.5	26.7	20.0	8.2	0.2	30.9	00.0	89.1	00.0	6.0		3.9	4.0	3.0	7.5
					Bottom	8.0	26.3	26.5	8.2	8.2	30.9	30.9	88.6	88.9	6.0	6.0	4.3		4.5	j
						8.0	26.7	20.0	8.2	0.2	30.9	00.0	89.1	00.0	6.0	0.0	4.2		4.7	
					Surface	1.0	26.4	26.4	8.2	8.2	30.9	30.9	89.8	89.6	6.1		6.7		4.7	1
						1.0	26.4	20	8.2	0.2	30.9	00.0	89.4	00.0	6.0	6.1	6.6		3.4	
C2	Fine	Moderate	13:36	8.6	Middle	4.3	26.3	26.4	8.2	8.2	30.9	30.9	89.2	89.6	6.1	1	7.2	7.1	3.4	4.0
						4.3	26.4		8.2		30.9		90.0		6.0		7.2		4.2	
					Bottom	7.6	26.3	26.4	8.2	8.2	30.9	30.9	95.0	95.0	6.4	6.5	7.5		3.6	į !
						7.6	26.4		8.2		30.9		95.0		6.5		7.6		4.5	
					Surface	1.0	26.3	26.4	8.2	8.2	30.6	30.6	93.1	93.4	6.3		4.2		3.6	
						1.0	26.4		8.2		30.6		93.6		6.3	6.3	4.3		4.9	
M1	Fine	Moderate	13:28	5.6	Middle	-	-	-	-	-	-	-	-	-	-	4	-	4.5	-	4.0
						-	- 00.0		-		-		- 00.4		-		- 4.7		-	
					Bottom	4.6	26.3 26.3	26.3	8.2	8.2	30.6	30.6	96.1 96.0	96.1	6.5 6.5	6.5	4.7		3.8	
				<u> </u>		1.0	26.3		8.2		30.6		95.4		6.5		4.8		4.9	
					Surface	1.0	26.3	26.3	8.2	8.2	30.6	30.6	90.7	93.1	6.2	1	4.2		4.0	1
						-	-		-		-		-		- 0.2	6.4	-		-	1
M2	Fine	Moderate	13:30	4.8	Middle	-	-	-	_	-	_	-	_	-			_	4.5	_	4.0
						3.8	26.2		8.2		30.6		97.9		6.7		4.7		3.6	1
					Bottom	3.8	26.3	26.3	8.2	8.2	30.6	30.6	94.2	96.1	6.4	6.6	4.7		3.5	
						1.0	26.2		8.2		30.7		87.9		6.0		3.2		3	
					Surface	1.0	26.2	26.2	8.2	8.2	30.7	30.7	86.8	87.4	5.9	1	3.1		4	1
140	F:	Madada	40.04	0.0	N.C1-11-	3.4	26.2	00.0	8.2	0.0	30.7	20.7	88.5	07.0	6.0	6.0	4.4	4.0	5	1 .
М3	Fine	Moderate	13:24	6.8	Middle	3.4	26.2	26.2	8.2	8.2	30.7	30.7	87.0	87.8	5.9	1	4.5	4.3	4	4
					D-#	5.8	26.2	00.0	8.2	0.0	30.7	20.7	89.1	00.4	6.1	6.4	5.4		4	1
					Bottom	5.8	26.2	26.2	8.2	8.2	30.7	30.7	87.6	88.4	6.0	6.1	5.4		5	

DA: Depth-averaged

Water Quality Monitoring Results on 13 October 22 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	26.2	26.2	8.1	8.1	30.7	30.7	86.5	86.5	5.9		6.8		4.3	
					Sullace	1.0	26.2	20.2	8.1	0.1	30.7	30.7	86.5	00.5	5.9	5.9	6.8		3.8	I
C1	Fine	Moderate	09:24	9.0	Middle	4.5	26.2	26.2	8.1	8.1	30.7	30.7	86.5	86.5	5.9	3.9	7.2	7.3	4.3	4.3
01	1 1110	Woderate	03.24	3.0	Wildale	4.5	26.2	20.2	8.1	0.1	30.7	50.7	86.5	00.5	5.9		7.1	7.5	4.2	4.0 I
					Bottom	8.0	26.2	26.2	8.2	8.2	30.7	30.7	86.5	86.5	5.9	5.9	8.1		5.3	I
					Dottom	8.0	26.2	20.2	8.1	0.2	30.7	30.7	86.5	00.5	5.9	5.5	8.0		4.0	I
					Surface	1.0	26.2	26.2	8.1	8.1	30.7	30.7	88.0	88.2	6.0		6.2		5.2	1
					Curiaco	1.0	26.2	20.2	8.1	0.1	30.7	00.1	88.4	00.2	6.0	6.1	6.1		3.5	I
C2	Fine	Moderate	09:06	8.4	Middle	4.2	26.2	26.2	8.1	8.1	30.7	30.7	89.9	89.7	6.1	0.1	7.1	7.1	6.6	5.0
		moderate	00.00	0		4.2	26.2	20:2	8.1	0	30.7		89.4	00	6.1		7.2		5.7	1
					Bottom	7.4	26.2	26.2	8.1	8.1	30.7	30.7	91.9	91.5	6.3	6.3	8.1		4.7	I
						7.4	26.2		8.1		30.7		91.0	0.1.0	6.2		8.0		4.5	
					Surface	1.0	26.1	26.1	8.1	8.1	30.5	30.5	93.6	93.6	6.4		6.7		4.9	I
						1.0	26.1		8.1		30.5		93.6		6.4	6.4	6.6		6.1	I
M1	Fine	Moderate	09:13	4.8	Middle	-	-	-	-	-	-	-	-	-	-		-	7.3	-	5.0
						-	-		-		-				-		-		-	I
					Bottom	3.8	26.0	26.1	8.1	8.1	29.2	29.9	97.8	97.7	6.7	6.7	7.9		4.6	I
						3.8	26.1		8.1		30.5		97.5		6.7		7.8		4.5	
					Surface	1.0	26.0	26.0	8.1	8.1	30.6	30.6	91.4	91.4	6.2		4.8		4.8	I
						1.0	26.0		8.1		30.6		91.4		6.3	6.3	4.9		5.2	I
M2	Fine	Moderate	09:15	4.8	Middle	-	-	-	-	-	-	-	-	-	-		-	5.2	-	4.7
						-	-		-		-		-		-					I
					Bottom	3.8	26.0	26.0	8.1	8.1	30.6	30.6	94.6	94.4	6.5	6.5	5.5		4.5	I
						3.8	26.0		8.1		30.6		94.2		6.4		5.5		4.1	
					Surface	1.0	26.2	26.2	8.1	8.1	30.5	30.5	87.8	87.7	6.0		2.7		5	ı
						1.0	26.2		8.1		30.5		87.6		6.0	6.0	2.7		4	İ
M3	Fine	Moderate	09:19	7.4	Middle	3.7	26.2	26.2	8.1	8.1	30.5	30.5	88.7	88.4	6.0		3.1	3.5	5	5
						3.7	26.2		8.1		30.5		88.1		6.0		3.0		6	l
					Bottom	6.4	26.2	26.2	8.1	8.1	30.5	30.5	90.2	90.1	6.1	6.1	4.8		5	ı
DA: Danth avar						6.4	26.2		8.1		30.5		90.0		6.1		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 15 October 22 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	26.9	26.9	8.2	8.2	33.3	33.3	95.6	95.6	6.3		1.5		5.6	
					Surface	1.0	26.9	20.9	8.2	0.2	33.3	33.3	95.6	93.0	6.3	6.3	1.5		5.1	
C1	Sunny	Rough	14:47	9.4	Middle	4.7	26.9	26.9	8.2	8.2	33.3	33.3	94.7	94.7	6.3	0.5	1.6	1.8	4.7	4.6
01	Curry	Rough	14.47	5.4	Wildaic	4.7	26.9	20.5	8.2	0.2	33.3	00.0	94.7	54.7	6.3		1.6	1.0	4.4	4.0
					Bottom	8.4	26.9	26.9	8.2	8.2	33.3	33.3	94.1	94.1	6.2	6.2	2.1		3.7	i
						8.4	26.9	20.0	8.2	0.2	33.3	00.0	94.0	01.1	6.2	0.2	2.2		3.9	
					Surface	1.0	27.0	27.0	8.2	8.2	33.3	33.3	96.3	96.4	6.4		1.2		3.5	
						1.0	27.0	2	8.2	0.2	33.3	00.0	96.4	00	6.4	6.3	1.2		3.8	
C2	Sunny	Rough	15:10	10.8	Middle	5.4	26.9	26.9	8.2	8.2	33.3	33.3	93.3	93.3	6.2		2.5	4.4	4.6	4.4
	,	J				5.4	26.9		8.2		33.3		93.2		6.2		2.5		4.2	
					Bottom	9.8	26.8	26.8	8.2	8.2	33.3	33.3	91.7	91.7	6.1	6.1	9.6		5.1	
						9.8	26.8		8.2		33.3		91.6		6.1		9.5		5.0	
					Surface	1.0	27.2	27.3	8.2	8.2	33.5	33.5	102.1	102.2	6.7	4	1.3		5.5	
						1.0	27.3		8.2		33.5		102.2		6.7	6.7	1.3		5.0	
M1	Sunny	Moderate	14:57	5.5	Middle	-	-	-	-	-	-	-	-	-	-	-	-	1.4	-	4.3
						4.5	27.2		8.2		33.5		101.4		6.8		1.4		3.5	
					Bottom	4.5	27.2	27.2	8.2	8.2	33.5	33.5	101.4	101.4	6.8	6.8	1.5		3.2	
						1.0	27.1		8.2		33.4		100.8		6.7		1.9		3.9	
					Surface	1.0	27.1	27.1	8.2	8.2	33.4	33.4	100.8	100.8	6.7		1.9		4.1	
	_					-	-		-		-		-		-	6.7	-		-	!
M2	Sunny	Moderate	15:01	5.3	Middle	-	-	-	-	-	-	-	-	-	_		-	2.0	-	4.7
					D-#	4.3	27.1	07.4	8.2	0.0	33.5	20.5	99.3	00.0	6.6	0.0	2.1		5.1	
					Bottom	4.3	27.1	27.1	8.2	8.2	33.5	33.5	99.2	99.3	6.6	6.6	2.0		5.5	
					Curton	1.0	27.0	27.0	8.2	8.2	33.4	33.4	100.2	100.3	6.7		2.5		5	
					Surface	1.0	27.0	27.0	8.2	0.2	33.4	33.4	100.4	100.3	6.7	6.6	2.4		4	
МЗ	Sunny	Rough	14:52	7.2	Middle	3.6	26.9	27.0	8.2	8.2	33.4	33.4	97.3	97.5	6.5	0.6	4.6	4.4	4	4
IVIO	Julily	Rough	17.52	1.2	MINUTE	3.6	27.0	21.0	8.2	0.2	33.4	55.1	97.7	31.5	6.5		4.6	7.7	4	
					Bottom	6.2	26.9	26.9	8.2	8.2	33.5	33.5	90.0	90.0	6.0	6.0	6.2		4	
					DOMOIT	6.2	26.9	20.5	8.2	0.2	33.5	00.0	89.9	50.0	6.0	0.0	6.2		3	

DA: Depth-averaged

Water Quality Monitoring Results on 15 October 22 during Mid-Flood Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Dept	th (m)		emperature (°C)		рН	Salin	ity (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	26.7	26.7	8.2	8.2	33.0	33.0	94.8	94.8	6.5		2.8		2.4	·
					Surface	1.0	26.7	20.7	8.2	0.2	33.0	33.0	94.8	34.0	6.5	6.5	2.8		2.9	i
C1	Sunny	Moderate	11:22	8.9	Middle	4.5	26.8	26.8	8.2	8.2	33.2	33.2	94.3	94.3	6.4	0.5	2.3	3.8	4.0	3.7
01	Outliny	Moderate	11.22	0.9	Middle	4.5	26.8	20.0	8.2	0.2	33.2	33.2	94.3	34.3	6.4		2.3	5.0	3.7	5.7
					Bottom	7.9	26.7	26.7	8.2	8.2	33.2	33.2	93.6	93.6	6.4	6.4	6.3		4.6	
					DOLLOITI	7.9	26.7	20.7	8.2	0.2	33.2	33.2	93.5	93.0	6.4	0.4	6.2		4.4	
					Surface	1.0	26.9	26.9	8.2	8.2	33.3	33.3	93.8	93.8	6.4		2.0		5.5	
					Juliace	1.0	26.9	20.9	8.2	0.2	33.3	33.5	93.8	90.0	6.4	6.4	2.0		5.0	
C2	Sunny	Moderate	10:58	9.1	Middle	4.6	26.8	26.8	8.2	8.2	33.3	33.3	93.4	93.4	6.3	0.4	2.6	2.6	4.6	4.5
02	Curiny	Woderate	10.50	3.1	Wildaic	4.6	26.8	20.0	8.2	0.2	33.3	00.0	93.4	30.4	6.3		2.5	2.0	4.3	7.0
					Bottom	8.1	26.7	26.7	8.2	8.2	33.3	33.3	93.8	93.8	6.3	6.3	3.1		3.6	i
						8.1	26.7	20.7	8.2	0.2	33.3	00.0	93.8	00.0	6.3	0.0	3.2		4.1	
					Surface	1.0	27.0	27.0	8.2	8.2	33.6	33.6	95.3	95.3	6.5		3.3		3.9	
						1.0	27.0		8.2		33.6		95.3		6.5	6.5	3.3		4.2	
M1	Sunny	Calm	11:10	4.6	Middle	-	-	-	-	-	-	-	-	-	-		-	3.2	-	4.5
	,					-	-		-		-		-		-		-		-	
					Bottom	3.6	27.0	27.0	8.2	8.2	33.6	33.6	95.7	95.7	6.5	6.5	3.1		4.8	
						3.6	27.0		8.2		33.6		95.6		6.5		3.1		5.2	
					Surface	1.0	27.0	27.0	8.2	8.2	33.5	33.5	94.9	95.0	6.5		2.9		3.5	
						1.0	27.0		8.2		33.5		95.0		6.5	6.5	2.8		3.3	
M2	Sunny	Calm	11:07	4.7	Middle	-	-	-	-	-	-	-	-	-	-		-	3.0	-	3.8
						-	-		-		-		-		-		-		-	
					Bottom	3.7	27.0	27.0	8.2	8.2	33.5	33.5	95.1	95.1	6.5	6.5	3.1		4.4	
						3.7	27.0		8.2		33.5		95.1		6.5		3.0		4.1	
					Surface	1.0	26.8	26.8	8.2	8.2	33.2	33.2	97.7	97.8	6.7		2.1		4	ļ
						1.0	26.8		8.2		33.2		97.8		6.7	6.5	2.1		4	1
M3	Sunny	Calm	11:15	6.9	Middle	3.5	26.8	26.8	8.2	8.2	33.4	33.4	91.7	91.8	6.3		4.8	3.8	4	4
						3.5	26.8		8.2		33.4		91.9		6.3		4.8		4	i
					Bottom	5.9	26.9	26.9	8.2	8.2	33.6	33.6	92.8	92.8	6.3	6.3	4.6		5	i
DA: Danth avar						5.9	26.9		8.2		33.6		92.8		6.3		4.6		5	

DA: Depth-averaged

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

Water Quality Monitoring Results on 20 October 22 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	oth (m)		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	24.8	24.9	8.2	8.2	34.4	34.4	97.8	97.6	6.7		1.7		2.8	
					Sulface	1.0	24.9	24.9	8.2	0.2	34.4	34.4	97.4	97.0	6.7	6.7	1.6		2.4	l
C1	Fine	Moderate	08:41	8.8	Middle	4.4	24.8	24.9	8.2	8.2	34.4	34.4	98.5	98.6	6.7	0.7	2.8	2.8	2.5	2.8
01	1 1110	Woderate	00.41	0.0	Wildaic	4.4	24.9	24.0	8.2	0.2	34.4	04.4	98.6	30.0	6.8		2.7	2.0	3.0	2.0
					Bottom	7.8	24.8	24.9	8.2	8.2	34.4	34.4	100.7	100.4	6.9	6.9	4.0		3.3	i
					201.0111	7.8	24.9	20	8.2	0.2	34.4	•	100.0		6.8	0.0	3.9		2.8	
					Surface	1.0	25.2	25.2	8.2	8.2	34.7	34.7	92.3	92.3	6.3		3.3		2.5	i
						1.0	25.1		8.2		34.6		92.3		6.3	6.3	3.2		2.4	i
C2	Fine	Moderate	08:28	8.6	Middle	4.3	25.2	25.2	8.2	8.2	34.7	34.7	92.9	92.6	6.3		3.9	3.7	3.0	2.8
						4.3	25.1		8.2		34.6		92.3		6.3		3.8		3.0	i
					Bottom	7.6	25.2	25.2	8.2	8.2	34.7	34.7	94.8	93.5	6.4	6.3	4.1		2.4	i
						7.6	25.2		8.2		34.6		92.2		6.2		4.1		3.7	
					Surface	1.0	25.3	25.3	8.2	8.2	34.5	34.6	94.5	94.5	6.4		5.3		2.8	i
						1.0	25.3		8.2		34.6		94.5		6.4	6.4	5.3		2.7	i
M1	Fine	Moderate	08:35	5.0	Middle	-	-	-	-	-	-	-	-	-	-		-	5.7	-	2.9
						4.0	25.3		8.2		34.5		98.8		6.7		6.1		2.7	i
					Bottom	4.0	25.3	25.3	8.2	8.2	34.5	34.5	98.8	98.8	6.8	6.8	6.0		3.3	1
						1.0	25.2		8.2		34.5		95.6		6.5	l 	3.9		1.6	
					Surface	1.0	25.2	25.2	8.2	8.2	34.5	34.5	93.6	94.6	6.3		4.0		2.3	l
						-	-		-		-		-		-	6.4	-		-	1
M2	Fine	Moderate	08:37	4.6	Middle	-	-	-	-	-	-	-	-	-	_		-	4.3	-	2.3
					D-#	3.6	25.3	05.0	8.2	0.0	34.5	04.5	99.0	00.0	6.7	0.0	4.6		2.6	i
					Bottom	3.6	25.2	25.3	8.2	8.2	34.5	34.5	94.7	96.9	6.4	6.6	4.6		2.8	i
					Surface	1.0	25.2	25.2	8.2	8.2	34.6	34.6	94.8	93.7	6.4		3.1		3	
					Surface	1.0	25.2	25.2	8.2	0.2	34.6	34.0	92.5	93.7	6.3	6.4	3.1		2	i
МЗ	Fine	Moderate	08:39	7.4	Middle	3.7	25.2	25.2	8.2	8.2	34.6	34.6	95.8	94.5	6.5	0.4	4.3	4.2	3	3
IVIO	1 1116	Moderate	00.00	/	Mildule	3.7	25.2	20.2	8.2	0.2	34.6	54.0	93.1	34.0	6.3		4.4	7.4	3	J
					Bottom	6.4	25.2	25.2	8.2	8.2	34.5	34.6	97.1	95.6	6.6	6.5	5.2		3	i
					Dottom	6.4	25.2	20.2	8.2	0.2	34.6	07.0	94.0	55.5	6.4	0.0	5.2		3	<u> </u>

DA: Depth-averaged

Water Quality Monitoring Results on 20 October 22 during Mid-Flood 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	24.6	24.6	8.2	8.2	34.3	34.3	98.3	97.1	6.7		2.0		3.4	
					Sulface	1.0	24.6	24.0	8.2	0.2	34.3	34.3	95.8	37.1	6.6	6.7	1.9		2.2	İ
C1	Fine	Moderate	15:47	8.8	Middle	4.4	24.5	24.6	8.2	8.2	34.3	34.3	99.2	98.0	6.8	0.7	3.0	2.8	3.1	2.8
01	1 1116	Moderate	13.47	0.0	ivildule	4.4	24.6	24.0	8.2	0.2	34.3	34.3	96.7	90.0	6.6		3.0	2.0	2.4	2.0
					Bottom	7.8	24.5	24.6	8.2	8.2	34.3	34.3	99.5	98.5	6.9	6.8	3.1		2.9	İ
					DOLLOITI	7.8	24.6	24.0	8.2	0.2	34.3	34.3	97.5	96.5	6.7	0.0	3.5		2.6	
					Surface	1.0	24.8	24.8	8.2	8.2	34.3	34.3	94.7	94.1	6.5		1.1		2.9	
					Sulface	1.0	24.7	24.0	8.2	0.2	34.3	34.3	93.4	34.1	6.4	6.5	1.0		2.7	ĺ
C2	Fine	Moderate	16:07	8.2	Middle	4.1	24.8	24.8	8.2	8.2	34.3	34.3	95.1	94.4	6.5	0.5	1.7	1.7	2.2	2.5
02	1 1116	Moderate	10.07	0.2	Wildale	4.1	24.7	24.0	8.2	0.2	34.3	5	93.7	34.4	6.4		1.6	1.7	1.7	2.5
					Bottom	7.2	24.8	24.8	8.2	8.2	34.3	34.3	95.7	94.9	6.5	6.5	2.4		2.8	1
					Bottom	7.2	24.7	24.0	8.2	0.2	34.3	04.0	94.1	34.3	6.4	0.0	2.5		2.5	1
					Surface	1.0	25.3	25.3	8.2	8.2	34.5	34.5	97.9	97.1	6.6		1.4		2.4	
					Canado	1.0	25.3	20.0	8.2	0.2	34.5	01.0	96.2	07.1	6.5	6.6	1.4		2.3	1
M1	Fine	Moderate	15:53	5.0	Middle	-	-	-	-	_	-	_	-	_	-	0.0	-	2.0	-	2.3
		moderate	10.00	0.0	······································	-	-		-		-		-		-		-	2.0	-	0
					Bottom	4.0	25.3	25.3	8.2	8.2	34.4	34.4	99.8	98.4	6.8	6.7	2.6		2.0	1
						4.0	25.3		8.2		34.4		97.0		6.6		2.6		2.4	<u> </u>
					Surface	1.0	25.4	25.4	8.2	8.2	34.5	34.6	97.3	95.9	6.6		4.5		2.6	1
						1.0	25.4		8.2		34.6		94.4	00.0	6.4	6.5	4.6		2.5	1
M2	Fine	Moderate	15:56	5.2	Middle	-	-	_	-	_	-	_	-	_	-	0.0	-	5.0	-	2.6
1412	1 1110	Moderate	10.00	0.2	Wildulo	-	-		-		-		-		-		-	0.0	-	0
					Bottom	4.2	25.4	25.4	8.2	8.2	34.3	34.4	100.7	98.2	6.8	6.7	5.4		2.0	1
					Bottom	4.2	25.4	20.1	8.2	0.2	34.5	01.1	95.7	00.2	6.5	0.7	5.3		3.2	<u> </u>
					Surface	1.0	24.7	24.7	8.2	8.2	34.3	34.3	98.3	98.3	6.7		1.7		3	1
					Odridoc	1.0	24.7	27.7	8.2	0.2	34.3	04.0	98.3	30.0	6.7	6.7	1.7		3	1
M3	Fine	Moderate	16:02	6.8	Middle	3.4	24.7	24.7	8.2	8.2	34.3	34.3	99.1	98.2	6.8	0.,	2.6	2.4	3	3
				0.0		3.4	24.7		8.2	0.1	34.3	00	97.2	00.2	6.6		2.6		3	ĺ
					Bottom	5.8	24.6	24.7	8.2	8.2	34.3	34.3	100.4	99.0	6.9	6.8	2.9		3	1
DA: Donth sugar					Dottom	5.8	24.7	21.7	8.2	0.2	34.3	01.0	97.5	00.0	6.7	0.0	2.8		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 22 October 22 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	th (m)		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	25.0	25.0	8.2	8.2	34.5	34.5	94.0	93.8	6.4		2.4		7.5	.
					Sunace	1.0	25.0	25.0	8.2	0.2	34.5	34.3	93.6	33.0	6.4	6.4	2.6		7.1	I
C1	Fine	Moderate	10:21	11.3	Middle	5.7	24.9	24.9	8.2	8.2	34.5	34.5	93.4	93.6	6.4	0.1	5.4	5.3	6.8	6.6
0.	1 1110	Wiodorato	10.21	11.0	Mildalo	5.7	24.9	21.0	8.2	0.2	34.5	01.0	93.7	00.0	6.4		6.0	0.0	6.5	J.0
					Bottom	10.3	25.0	25.0	8.2	8.2	34.5	34.5	93.9	93.7	6.4	6.4	7.8		5.9	I
						10.3	25.0		8.2		34.5		93.5		6.4		7.4		5.6	
					Surface	1.0	25.1	25.2	8.2	8.2	34.5	34.6	94.9	95.4	6.4		1.3		5.2	I
						1.0	25.2		8.2		34.6		95.8		6.5	6.4	1.1		5.5	I
C2	Fine	Moderate	09:56	10.1	Middle	5.1	25.1	25.1	8.2	8.2	34.6	34.6	94.7	94.5	6.4		5.0	4.6	4.9	4.7
						5.1	25.0		8.2		34.5		94.3		6.4		5.2		4.5	I
					Bottom	9.1 9.1	25.0 25.0	25.0	8.2	8.2	34.5 34.5	34.5	94.9 94.9	94.9	6.5 6.5	6.5	7.6 7.6		4.1 3.9	I
	1	<u> </u>		1		1.0	25.0		8.1		34.5		94.9		6.3	 	5.7		3.9	
					Surface	1.0	25.1	25.1	8.1	8.1	34.4	34.4	92.3	92.3	6.3		5.7		4.2	I
						-	-		0.1		34.4		-		0.5	6.3	-			
M1	Fine	Moderate	10:11	5.8	Middle	_	_	-	_	-		-		-				5.5		3.4
						4.8	25.0		8.2		34.5		92.8		6.3		5.8		2.5	
					Bottom	4.8	25.1	25.1	8.1	8.2	34.4	34.5	92.3	92.6	6.3	6.3	5.4		2.9	
					0 (1.0	25.2	05.0	8.1	0.4	34.4	04.4	94.9	04.0	6.4		1.8		3.8	
					Surface	1.0	25.2	25.2	8.1	8.1	34.4	34.4	94.7	94.8	6.4	6.4	1.6		3.4	I
M2	Fine	Moderate	10:06	5.2	Middle	-	-		-		-		-	_	-	6.4	-	2.4	-	3.0
IVIZ	Fille	Woderate	10.06	5.2	Middle	-	-	-	-	-	-	-	-] -	-		-	2.4	-	3.0
					Bottom	4.2	25.1	25.2	8.1	8.1	34.5	34.5	95.0	94.8	6.4	6.4	3.0		2.6	
					Dottom	4.2	25.2	25.2	8.1	0.1	34.4	34.3	94.5	34.0	6.4	0.4	3.0		2.2	ı
					Surface	1.0	25.1	25.1	8.2	8.2	34.5	34.5	95.2	95.0	6.5		3.8		3	I
					Gundoo	1.0	25.1	20.1	8.2	0.2	34.5	01.0	94.8	00.0	6.4	6.5	4.5		3	I
M3	Fine	Moderate	10:15	6.7	Middle	3.4	25.1	25.1	8.2	8.2	34.5	34.5	94.6	94.9	6.4		5.1	4.7	3	3
						3.4	25.1	-	8.2	-	34.5		95.1		6.5		5.6		4	- I
					Bottom	5.7	25.1	25.1	8.2	8.2	34.5	34.5	95.3	95.1	6.5	6.5	4.9		4	ı
						5.7	25.1		8.2		34.5		94.8		6.4		4.4		4	

DA: Depth-averaged

Water Quality Monitoring Results on 22 October 22 during Mid-Flood Tide

Monitoring	Weather	Sea Condition	Sampling	Water Depth	Sampling Dep	oth (m)	Water Te	emperature (°C)	рН		Salin	ity (ppt)	DO Satur	ation (%)	Dissolved ((mg/L		Turbidity((NTU)	Suspende (mg.	
Station	Condition		Time	(m)	3 4 7 3 4		Value	Average	Value Av	verage	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	26.1	26.1	8.2	8.2	32.5	32.5	102.8	102.5	6.9		2.3		7.3	
					Surface	1.0	26.1	20.1	8.2	0.2	32.5	32.3	102.2	102.3	6.9	6.8	2.4		6.9	<u> </u>
C1	Fine	Moderate	16:33	11.1	Middle	5.6	25.8	25.8	8.2	8.2	32.8	32.8	98.5	99.2	6.7	0.0	6.3	5.1	6.5	6.1
01	1 1110	Wiodorato	10.00		Wildaic	5.6	25.8	20.0	8.2	0.2	32.8	02.0	99.8	33.2	6.8		6.5	0.1	6.2]
					Bottom	10.1	25.8	25.8	8.2	8.2	32.9	32.9	100.4	100.4	6.8	6.8	6.6		4.8	1
					Bottom	10.1	25.8	20.0	8.2	0.2	32.9	02.0	100.4	100.4	6.8	0.0	6.6		5.1	<u> </u>
					Surface	1.0	26.0	26.1	8.2	8.2	32.6	32.6	101.5	101.3	6.9		3.7		2.8	1
						1.0	26.1		8.2		32.5		101.0		6.8	6.8	3.9		3.2	
C2	Fine	Moderate	16:57	10.7	Middle	5.4	25.5	25.6	8.2	8.2	33.5	33.5	97.8	98.7	6.6		5.7	6.3	3.6	4.3
						5.4	25.6		8.2		33.4		99.5		6.7		6.5		3.9	1
					Bottom	9.7 9.7	25.2 25.5	25.4	8.2	8.2	34.1 33.6	33.9	93.6 90.9	92.3	6.3	6.3	9.1 8.7		6.4	1
				<u> </u>													_			
					Surface	1.0	26.0 25.8	25.9	8.2	8.2	33.0 33.0	33.0	98.5 97.1	97.8	6.6 6.6		6.5 6.9		5.6 6.1	1
						1.0	- 23.0		0.2		33.0		97.1		0.0	6.6	- 0.9		-	1
M1	Fine	Moderate	16:44	5.7	Middle		_	-		-		-		-			-	6.6	_	5.6
						4.7	25.7		8.2		33.1		95.4		6.5		6.7		5.5	1
					Bottom	4.7	25.9	25.8	8.2	8.2	33.0	33.1	98.3	96.9	6.6	6.6	6.2		5.3	1
					0	1.0	25.9	00.0	9.2	0.0	33.0	20.0	98.3	00.0	6.6		5.7		5.0	
					Surface	1.0	26.0	26.0	8.2	8.2	33.0	33.0	99.7	99.0	6.7		5.8		5.3	1
M2	Fine	Madass	16:47	5.3	NAC-L-U-	-	-		-		-		-		-	6.7	-	0.0	-	- A
IVIZ	Fine	Moderate	10.47	5.3	Middle	-	-	-	-	- [-	-	-	-	-		-	6.0	-	5.4
					Bottom	4.3	25.8	25.9	8.2	8.2	33.0	33.0	97.3	96.8	6.6	6.6	6.1		5.6	1
					BOILOITI	4.3	26.0	25.9	8.2	0.2	33.0	33.0	96.3	90.0	6.5	0.0	6.4		5.8	
					Surface	1.0	25.9	25.9	8.2	8.2	33.0	33.0	99.0	99.1	6.7		4.3		6	
					Surface	1.0	25.9	25.9	8.2	0.2	33.0	55.0	99.1	33.1	6.7	6.6	4.0		6	<u> </u>
M3	Fine	Moderate	16:39	7.1	Middle	3.6	25.7	25.7	8.2	8.2	33.0	33.0	95.9	96.2	6.5	0.0	3.4	3.5	5	5
·VIO	0	ccorato	. 5.00			3.6	25.6	23.7	8.2	J	33.0	55.0	96.5	55.2	6.5		3.0	0.0	5	
					Bottom	6.1	25.6	25.7	8.2	8.2	33.0	33.0	101.1	98.4	6.9	6.7	3.3		5	ı
					20	6.1	25.7	20	8.2		33.0	00.0	95.7		6.5	J	2.9		5	

DA: Depth-averaged

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

Water Quality Monitoring Results on 25 October 22 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	th (m)	Water Te	emperature (°C)	р	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	24.7	24.7	8.2	8.2	31.6	31.6	101.3	100.7	7.0		1.0		5.4	1
					Surface	1.0	24.7	24.7	8.2	0.2	31.6	31.0	100.0	100.7	6.9	7.0	1.0		5.7	i '
C1	Fine	Moderate	11:22	8.6	Middle	4.3	24.7	24.7	8.2	8.2	31.6	31.6	101.8	101.2	7.1	7.0	1.2	1.5	4.6	4.8
01	10	Wiodorato		0.0	Middle	4.3	24.7	21.7	8.2	0.2	31.6	01.0	100.6	101.2	7.0		1.1	1.0	5.0	ı
					Bottom	7.6	24.6	24.7	8.2	8.2	31.6	31.6	102.6	101.8	7.1	7.1	2.2		4.0	l '
						7.6	24.7		8.2		31.6		100.9		7.0		2.2		4.1	
					Surface	1.0	24.7	24.7	8.2	8.2	31.5	31.5	100.0	99.2	7.0		1.4		3.3	1
						1.0	24.7		8.2		31.5		98.4		6.8	6.9	1.4		3.6	1
C2	Fine	Moderate	11:41	8.2	Middle	4.1	24.7	24.7	8.2	8.2	31.5	31.5	100.4	99.5	7.0		2.5	2.5	4.0	4.1
						4.1	24.7		8.2		31.5		98.6		6.9		2.5		4.3	1
					Bottom	7.2	24.6	24.7	8.2 8.2	8.2	31.5	31.5	101.4	100.2	7.1	7.0	3.5		4.8	1
						7.2	24.7				31.5		98.9		6.9		3.6		4.6	
					Surface	1.0	24.4	24.5	8.2 8.2	8.2	31.7	31.7	97.5	97.7	6.8		2.3		3.8	1
						1.0	24.5		8.2		31.7		97.8		6.9	6.9	2.3		4.2	1
M1	Fine	Moderate	11:32	5.0	Middle	-	-	-	-	-	-	-	-	-	-		-	2.9	-	4.9
						4.0	24.4		8.2		31.7		102.1		7.1		3.5		5.9	1
					Bottom	4.0	24.4	24.4	8.2	8.2	31.7	31.7	102.1	102.1	7.1	7.1	3.5		5.6	1
						1.0	24.6		8.2		31.6		100.6		7.0	l 	5.1		3.8	
					Surface	1.0	24.6	24.6	8.2	8.2	31.6	31.6	98.9	99.8	6.9		5.1		3.6	ł
						-	-		-		-		-		-	7.0	-		-	1
M2	Fine	Moderate	11:35	4.6	Middle	-	-	-	-	-	-	-	-	-	-		-	5.8	-	4.0
					D. //	3.6	24.5	04.0	8.2	0.0	30.9	04.0	101.4	400.0	7.1	7.0	6.5		4.1	1
					Bottom	3.6	24.6	24.6	8.2	8.2	31.6	31.3	99.8	100.6	6.9	7.0	6.4		4.6	1
					Curfoso	1.0	24.6	24.6	8.2	8.2	31.6	31.6	97.8	97.5	6.8		2.6		4	i
					Surface	1.0	24.6	24.6	8.2	8.2	31.6	31.6	97.1	97.5	6.8	6.8	2.6		3	1
M3	Fine	Moderate	11:27	6.8	Middle	3.4	24.6	24.6	8.2	8.2	31.6	31.6	99.3	98.3	6.9	0.0	2.9	2.8	5	5
IVIO	1 1116	Moderate	11.21	0.0	Milaule	3.4	24.6	24.0	8.2	0.2	31.6	31.0	97.2	90.3	6.8		2.8	2.0	5	j
					Bottom	5.8	24.6	24.6	8.2	8.2	31.6	31.6	99.9	98.7	7.0	6.9	3.0		6	i
					DOMOIT	5.8	24.6	24.0	8.2	0.2	31.6	31.0	97.4	30.1	6.8	0.9	2.9		6	1

DA: Depth-averaged

Water Quality Monitoring Results on 25 October 22 during Mid-Flood Tide

Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	th (m)	Water Te	emperature (°C)	þ	ЭΗ	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	24.6	24.6	8.2	8.2	31.5	31.5	98.9	98.1	6.9		2.7		5.8	
					Juliace	1.0	24.6	24.0	8.2	0.2	31.5	31.3	97.2	30.1	6.8	6.9	2.7		6.1	1
C1	Fine	Moderate	08:24	8.8	Middle	4.4	24.6	24.6	8.2	8.2	31.5	31.5	99.6	98.7	6.9	0.5	3.3	3.4	4.1	4.6
		ouorato	00.2	0.0	Wildalo	4.4	24.6	21.0	8.2	0.2	31.5	01.0	97.8	00.7	6.8		3.4	0	4.5	
					Bottom	7.8	24.6	24.6	8.2	8.2	31.5	31.5	100.9	99.5	7.0	6.9	4.3		3.8	1
					Bottom	7.8	24.6	24.0	8.2	0.2	31.5	01.0	98.1	55.5	6.8	0.0	4.2		3.4	
					Surface	1.0	24.6	24.6	8.2	8.2	31.5	31.5	99.3	98.5	6.9		1.1		5.0	1
						1.0	24.6		8.2		31.5		97.6		6.8	6.9	1.1		5.4	1
C2	Fine	Moderate	08:07	8.6	Middle	4.3	24.6	24.6	8.2	8.2	31.5	31.5	100.2	99.1	7.0		3.0	2.6	5.8	6.4
						4.3	24.6		8.2		31.5		98.0		6.8		3.0		6.2	1
					Bottom	7.6	24.6	24.6	8.2 8.2	8.2	31.5	31.5	101.5	100.0	7.1	7.0	3.7		8.0	1
						7.6	24.6				31.5		98.5		6.9		3.7		7.8	
					Surface	1.0	24.4 24.4	24.4	8.2 8.2	8.2	31.6 31.6	31.6	99.3 97.5	98.4	6.9 6.8		4.3 4.2		3.8 4.1	1
						1.0	- 24.4		0.2		31.0		97.5		0.0	6.9	4.2		4.1	1
M1	Fine	Moderate	08:13	5.0	Middle	-	-	-		-	_	-	-	-			-	4.4	-	4.6
						4.0	24.4		8.2		31.3		101.0		7.1		4.6		5.6	1
					Bottom	4.0	24.4	24.4	8.2	8.2	31.6	31.5	98.3	99.7	6.9	7.0	4.5		5.0	1
					0 (1.0	24.4	04.4	8.2	0.0	31.6	04.0	99.2	00.0	6.9		2.8		4.8	
					Surface	1.0	24.4	24.4	8.2	8.2	31.6	31.6	99.4	99.3	7.0		2.9		5.0	ĺ
	- :		00.40	4.0	B 4" 1 11	-	-		-		-		-		-	7.0	-	0.0	-	1
M2	Fine	Moderate	08:16	4.2	Middle	-	-	-	-	-	-	-	-	-	-		-	3.3	-	4.5
					D-#	3.2	24.3	04.4	8.3	0.0	31.6	04.0	100.3	400.0	7.0	7.0	3.7		4.2	1
					Bottom	3.2	24.4	24.4	8.2	8.3	31.6	31.6	100.2	100.3	7.0	7.0	3.7		3.8	1
					Surface	1.0	24.4	24.5	8.2	8.2	31.6	31.6	98.1	96.9	6.8		4.0		5	
					Surface	1.0	24.5	24.5	8.2	6.2	31.6	31.0	95.6	96.9	6.7	6.8	4.0		5	1
M3	Fine	Moderate	08:20	7.0	Middle	3.5	24.4	24.5	8.2	8.2	31.6	31.6	99.3	98.0	6.9	0.0	5.5	5.4	5	5
IVIO	1 1116	woderate	00.20	7.0	Middle	3.5	24.5	24.5	8.2	0.2	31.6	51.0	96.7	30.0	6.7		5.4	5.4	5	
					Bottom	6.0	24.4	24.5	8.2	8.2	31.6	31.6	100.5	98.9	7.0	6.9	6.6		4	1
DA: Donth aver					Dottom	6.0	24.5	27.0	8.2	0.2	31.6	51.0	97.3	30.3	6.8	0.0	6.6		4	<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 27 October 22 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	24.5	24.6	8.3	8.3	31.5	31.5	100.7	100.7	7.0		1.8		6.1	
					Sullace	1.0	24.6	24.0	8.3	0.5	31.5	31.3	100.7	100.7	7.0	7.0	1.7		5.7	
C1	Fine	Moderate	12:43	8.2	Middle	4.1	24.5	24.6	8.3	8.3	31.5	31.5	100.6	100.7	7.0	7.0	2.8	2.8	6.5	6.6
O1	1 1116	Moderate	12.40	0.2	Wildale	4.1	24.6	24.0	8.3	0.5	31.5	31.3	100.7	100.7	7.0		2.7	2.0	6.8	0.0
					Bottom	7.2	24.5	24.6	8.3	8.3	31.5	31.5	101.1	100.9	7.0	7.0	3.8		7.0	
					Dottom	7.2	24.6	24.0	8.3	0.0	31.5	01.0	100.7	100.5	7.0	7.0	3.8		7.4	
					Surface	1.0	24.6	24.6	8.3	8.3	31.5	31.5	100.9	101.0	7.0		5.5		6.4	
					Curiaco	1.0	24.6	21.0	8.3	0.0	31.5	01.0	101.1	101.0	7.0	7.0	5.4		6.7	
C2	Fine	Moderate	12:59	7.8	Middle	3.9	24.5	24.6	8.3	8.3	31.5	31.5	100.7	100.9	7.0	1	6.1	6.2	5.6	5.9
						3.9	24.6		8.3		31.5		101.0		7.0		6.1		6.0	
					Bottom	6.8	24.6	24.6	8.3	8.3	31.5	31.5	100.9	101.0	7.0	7.0	7.1		5.4	
						6.8	24.6	_	8.3		31.5		101.0		7.0		7.0		5.0	
					Surface	1.0	24.4	24.4	8.3	8.3	31.6	31.6	100.3	100.1	7.0		3.4		5.9	
						1.0	24.4		8.3		31.6		99.9		7.0	7.0	3.3		6.3	
M1	Fine	Moderate	12:51	5.0	Middle	-	-	-	-	-	-	-	-	-	-		-	3.6	-	7.1
						-	-		-		-		-		-		-		-	
					Bottom	4.0	24.4 24.4	24.4	8.3 8.3	8.3	31.5 31.6	31.6	100.6 100.1	100.4	7.0 7.0	7.0	3.8		7.8 8.2	
	1					4.0 1.0	24.4		8.3				100.1		7.0		3.9 2.0		9.3	
					Surface	1.0	24.5	24.5	8.3	8.3	31.6 31.6	31.6	100.9	100.9	7.0		2.0		9.7	
						-	24.5		0.5		-		-		7.0	7.0	- 2.1		-	
M2	Fine	Moderate	12:53	4.6	Middle	-	-	-		-		-		-		1		2.6	_	8.6
						3.6	24.6		8.3		31.6		101.1		7.0		3.1		7.8	
					Bottom	3.6	24.5	24.6	8.3	8.3	31.6	31.6	100.8	101.0	7.0	7.0	3.1		7.4	
						1.0	24.4		8.3		31.6		99.6		7.0		2.3		9	
					Surface	1.0	24.4	24.4	8.3	8.3	31.6	31.6	98.9	99.3	6.9	1	2.2		9	
140	F.		40.47	0.0	A.C. I. II	3.1	24.4	24.4	8.3	0.0	31.6	04.0	99.5	00.0	7.0	7.0	3.3	0.0	9	
M3	Fine	Moderate	12:47	6.2	Middle	3.1	24.4	24.4	8.3	8.3	31.6	31.6	99.0	99.3	6.9	1	3.4	3.2	9	8
					D #	5.2	24.4	24.4	8.3	0.0	31.6	04.0	100.0	00.0	7.0	7.0	4.1		7	
					Bottom	5.2	24.4	24.4	8.3	8.3	31.6	31.6	99.5	99.8	6.9	7.0	4.1		7	

DA: Depth-averaged

Water Quality Monitoring Results on 27 October 22 during Mid-Flood Tide

Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	th (m)	Water Te	emperature (°C)		pН	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	24.4	24.4	8.2	8.3	31.4	31.4	98.9	98.3	7.0		2.7		5.0	·
					Surface	1.0	24.4	24.4	8.3	0.3	31.4	31.4	97.6	90.3	6.9	7.0	2.6		4.6	
C1	Fine	Moderate	09:43	8.0	Middle	4.0	24.3	24.4	8.2	8.3	31.6	31.5	99.8	98.8	7.1	7.0	3.5	3.6	5.4	5.8
	1 1110	Woderate	05.40	0.0	Wilddie	4.0	24.4	24.4	8.3	0.5	31.4	31.3	97.7	30.0	6.9		3.4	0.0	5.8	0.0
					Bottom	7.0	24.2	24.3	8.2	8.3	31.6	31.5	100.6	99.3	7.2	7.1	4.7		7.2	
					Dottom	7.0	24.4	24.0	8.3	0.5	31.4	31.3	98.0	99.0	7.0	7.1	4.7		6.9	
					Surface	1.0	24.3	24.3	8.3	8.3	31.6	31.6	98.1	97.6	7.0		3.1		6.8	
						1.0	24.3		8.3	0.0	31.5	0.10	97.0	0.10	7.0	7.0	3.1		6.6	
C2	Fine	Moderate	09:25	8.4	Middle	4.2	24.3	24.3	8.2	8.3	31.6	31.6	98.5	97.9	7.1		4.3	4.2	6.2	6.0
						4.2	24.3		8.3		31.5		97.3		7.0		4.3		5.8	
					Bottom	7.4	24.3	24.3	8.2	8.3	31.6	31.6	99.0	98.3	7.1	7.1	5.3		5.6	i
						7.4	24.3		8.3		31.5		97.6		7.0		5.3		5.2	
					Surface	1.0	24.2	24.2	8.2	8.2	31.5	31.6	97.1	97.5	7.0		4.8		4.5	
						1.0	24.2				31.6		97.8		7.0	7.0	4.8		5.0	
M1	Fine	Moderate	09:32	5.0	Middle	-	-	-	-	-	-	-	-	-	-		-	4.9	-	8.3
						4.0	24.2		8.2		31.0		101.2		7.3		- 5.1		11.2	
					Bottom	4.0	24.2	24.2	8.2	8.2	31.5	31.3	101.2	101.1	7.3	7.3	5.0		12.6	1
					0	1.0	24.1	04.4	8.3	0.0	31.7	04.7	97.1	07.0	6.9		1.5		5.9	
					Surface	1.0	24.1	24.1	8.3	8.3	31.7	31.7	96.9	97.0	7.0	7.0	1.4		6.2	i
140			00.05	4.0	N 4" 1 11	-	-		-		-		-		-	7.0	-	0.0	-	7.0
M2	Fine	Moderate	09:35	4.2	Middle	-	-	-	-	-	-	-	-	-	-		-	2.0	-	7.2
					D-#	3.2	24.1	24.1	8.3	0.0	31.7	31.7	97.3	97.2	7.0	7.0	2.6		8.6	
					Bottom	3.2	24.1	24.1	8.3	8.3	31.7	31.7	97.0	97.2	7.0	7.0	2.6		8.1	i
					Surface	1.0	24.2	24.2	8.2	0.2	31.6	31.6	96.5	96.6	6.9		3.5		6	
					Suitace	1.0	24.2	24.2	8.2	8.2	31.6	31.0	96.7	90.0	6.9	6.9	3.4		6	
M3	Fine	Moderate	09:38	7.0	Middle	3.5	24.2	24.2	8.2	8.2	31.6	31.6	97.1	97.2	6.9	0.9	4.5	4.5	7	7
IVIO	1 1116	Moderate	03.00	7.0	MIGG	3.5	24.2	27.2	8.2	0.2	31.6	31.0	97.3	31.2	6.9		4.4	4.5	6	,
					Bottom	6.0	24.2	24.2	8.2	8.2	31.6	31.6	100.8	100.6	7.2	7.2	5.4		8	
					Dottom	6.0	24.2	27.2	8.2	0.2	31.6	01.0	100.3	100.0	7.1	1.2	5.5		8	

DA: Depth-averaged

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

Water Quality Monitoring Results on 29 October 22 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition	Sampling	Water Depth	Sampling Dep	oth (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	25.3	25.3	8.3	8.3	33.7	33.7	100.1	100.5	6.8		2.7		7.5	
					Surface	1.0	25.3	25.5	8.3	0.3	33.7	33.7	100.9	100.5	6.9	6.8	2.5		7.7	
C1	Fine	Moderate	14:22	11.4	Middle	5.7	25.1	25.2	8.3	8.3	33.7	33.7	97.9	98.9	6.7	0.0	2.8	3.3	7.8	7.7
	1 1110	Woderate	14.22	11.4	Wildaic	5.7	25.3	20.2	8.3	0.0	33.7	00.7	99.9	30.3	6.8		2.7	0.0	7.6	, , ,
					Bottom	10.4	25.1	25.1	8.2	8.3	33.7	33.7	98.1	98.1	6.7	6.7	4.9		7.7	
					20110111	10.4	25.1	20	8.3	0.0	33.7	00	98.1	00	6.7	0	4.0		8.0	
					Surface	1.0	25.2	25.2	8.2	8.3	33.7	33.7	98.2	98.4	6.7		2.7		8.7	
						1.0	25.2	-	8.3		33.7		98.6		6.7	6.7	2.7		8.3	
C2	Fine	Moderate	14:45	11.0	Middle	5.5	25.1	25.1	8.2	8.2	33.7	33.7	97.2	97.1	6.6		4.3	4.4	7.2	7.3
						5.5	25.1		8.2		33.7		97.0		6.6		4.8		7.0	
					Bottom	10.0	25.1 25.1	25.1	8.2 8.2	8.2	33.7 33.7	33.7	94.7 96.8	95.8	6.4	6.5	6.3 5.5		6.2	
	1					10.0	25.1						103.2		7.0		2.4		7.5	
					Surface	1.0	25.5	25.5	8.3 8.3	8.3	33.7 33.7	33.7	103.4	103.3	7.0		2.4		7.5	
						-	- 25.5		-		-				7.0	7.0	-			
M1	Fine	Moderate	14:33	5.8	Middle		 	-		-		-	-	-				2.8	-	7.6
						4.8	25.2		8.2		33.8		100.9		6.9		3.5		8.1	
					Bottom	4.8	25.5	25.4	8.3	8.3	33.7	33.8	103.1	102.0	7.0	7.0	3.2		7.8	
						1.0	25.3		8.3		33.8		100.6	404.0	6.8		2.3		7.6	
					Surface	1.0	25.3	25.3	8.3	8.3	33.8	33.8	101.4	101.0	6.9		2.5		8.0	
M2	Fine	Madazata	44.00	5.0	Middle	-	-		-		-		-		-	6.9	-	3.4	-	7.4
IVI∠	rine	Moderate	14:36	5.8	ivildale	=	-	-	-	-	-	-	-	-	-		-	3.4	-	7.4
					Bottom	4.8	25.2	25.2	8.3	8.3	33.8	33.8	99.5	99.9	6.8	6.8	4.7		7.1	
					Bottom	4.8	25.2	25.2	8.3	0.5	33.8	33.0	100.2	99.9	6.8	0.0	4.2		6.7	
					Surface	1.0	25.3	25.3	8.3	8.3	33.7	33.7	100.8	100.9	6.8		2.5		6	
					Odridoc	1.0	25.3	20.0	8.3	0.0	33.7	00.7	101.0	100.5	6.9	6.8	2.4		5	
M3	Fine	Moderate	14:28	7.4	Middle	3.7	25.2	25.2	8.3	8.3	33.8	33.8	98.3	98.6	6.7	0.0	3.6	3.8	7	7
			0			3.7	25.2		8.3	0.0	33.7	00.0	98.8	00.0	6.7		3.5	0.0	7	.
					Bottom	6.4	25.1	25.1	8.2	8.3	33.8	33.8	97.4	98.0	6.6	6.7	5.3		9	ļ
DA: Donth sugar						6.4	25.1		8.3	2.0	33.8	23.0	98.6	13.0	6.7		5.2		9	

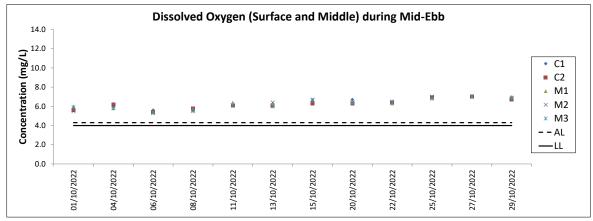
DA: Depth-averaged

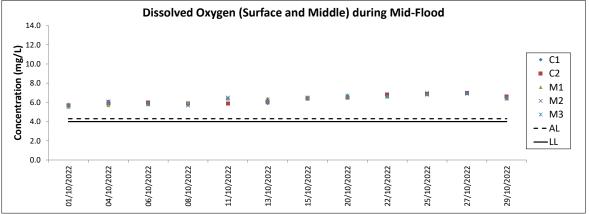
Water Quality Monitoring Results on 29 October 22 during Mid-Flood Tide

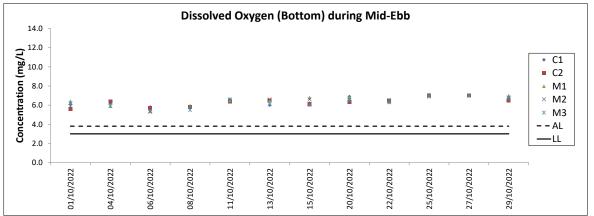
Monitoring	Weather	Sea Condition	Sampling	Water Depth	Sampling Dep	oth (m)	Water Te	emperature (°C)	рН		Salin	nity (ppt)	DO Satur	ation (%)	Dissolved (mg/L		Turbidity((NTU)	Suspende (mg.	
Station	Condition		Time	(m)	3 4 7 3 4	()	Value	Average	Value Av	verage	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	25.0	25.0	8.2	8.2	33.7	33.7	95.4	95.4	6.5		4.0		6.6	
					Surface	1.0	25.0	23.0	8.2	0.2	33.7	33.7	95.4	33.4	6.5	6.5	4.1		7.0]
C1	Fine	Moderate	09:35	10.8	Middle	5.4	25.0	25.0	8.2	8.2	33.7	33.7	95.3	95.2	6.5	0.5	4.2	4.9	7.3	7.2
01	1 1110	Wiodorato	00.00	10.0	Wildale	5.4	25.0	20.0	8.2	0.2	33.7	55.7	95.0	30.2	6.5		4.8	1.0	7.0]
					Bottom	9.8	24.9	24.9	8.2	8.2	33.7	33.7	95.4	95.1	6.5	6.5	6.3		7.5	j
					Dottom	9.8	24.9	24.5	8.2	0.2	33.6	55.7	94.8	30.1	6.5	0.0	6.0		7.6	
					Surface	1.0	25.0	25.0	8.2	8.2	33.7	33.7	96.4	96.4	6.6		4.2		6.9	
						1.0	25.0		8.2		33.7		96.4		6.6	6.6	4.2		6.5	
C2	Fine	Moderate	09:08	10.6	Middle	5.3	24.9	24.9	8.2	8.2	33.7	33.7	95.9	96.0	6.6		4.4	4.8	7.6	7.4
						5.3	24.9		8.2		33.7		96.0		6.6		4.7		7.2	
					Bottom	9.6	24.9	24.9	8.2	8.2	33.7	33.7	95.9	96.0	6.6	6.6	6.0		8.4	4
						9.6	24.9		8.2		33.7		96.0	l	6.6		5.0		8.0	
					Surface	1.0	25.0 25.0	25.0	8.2	8.2	33.9 33.9	33.9	94.3 94.2	94.3	6.4		3.5 3.5		6.6 6.4	ł
						1.0	25.0		0.2		33.9		94.2		0.4	6.4	3.5		- 0.4	ł
M1	Fine	Moderate	09:23	5.7	Middle	-		-	<u> </u>	-		-		-	-		-	3.9		7.5
						4.7	24.9		8.2		33.9		94.4		6.4		4.5		8.8	!
					Bottom	4.7	25.0	25.0	8.2	8.2	33.9	33.9	94.2	94.3	6.4	6.4	3.9		8.3	
					Surface	1.0	25.0	25.0	9.2	8.2	33.7	33.7	94.2	94.2	6.4		10.0		7.0	
					Surface	1.0	25.0	25.0	8.2	0.2	33.7	33.1	94.1	94.2	6.4	6.4	10.2		7.3	
M2	Fine	Moderate	09:18	4.9	Middle	-	-		-		-	_	-	_	-	0.4	-	8.0	-	7.6
IVIZ	Fille	Woderate	09.16	4.9	ivildale	-	-	-	-	-	-	-	-	-	-		-	0.0	-	7.0
					Bottom	3.9	25.0	25.0	8.2	8.2	33.8	33.8	94.8	94.4	6.5	6.5	6.0		8.1	
					DOMONI	3.9	25.0	23.0	8.2	0.2	33.7	33.0	93.9	34.4	6.4	0.5	5.9		7.8	
					Surface	1.0	25.1	25.1	8.2	8.2	33.5	33.6	96.8	96.6	6.6		2.8		9	
					Juliace	1.0	25.0	23.1	8.2	0.2	33.6	33.0	96.3	30.0	6.6	6.5	3.0		9	j
МЗ	Fine	Moderate	09:27	7.3	Middle	3.7	25.0	25.0	8.2	8.2	33.6	33.7	94.7	94.4	6.5	0.0	4.3	5.3	8	8
	0	ccorato	00.E1	1.0		3.7	25.0	23.0	8.2	Ŭ. <u>–</u>	33.7	55.1	94.1	.	6.4		4.0	0.0	8	
					Bottom	6.3	25.0	25.0	8.2	8.2	33.8	33.8	93.5	93.7	6.4	6.4	8.9		7	
					20110	6.3	25.0	20.0	8.2	J.=	33.8	00.0	93.8		6.4	J	8.7		8	<u> </u>

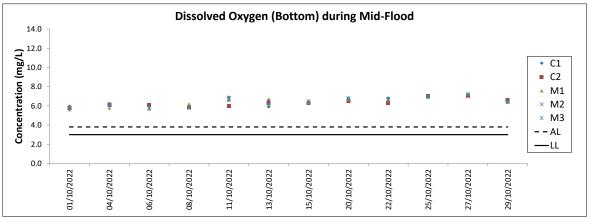
DA: Depth-averaged

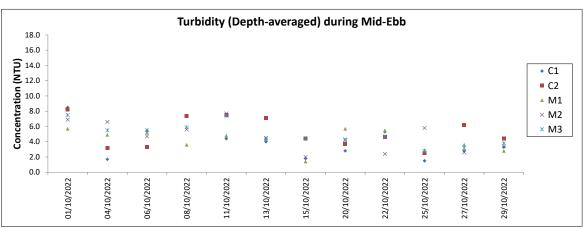
Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

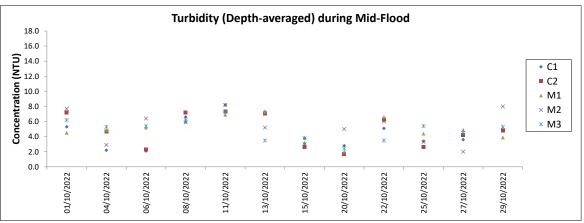










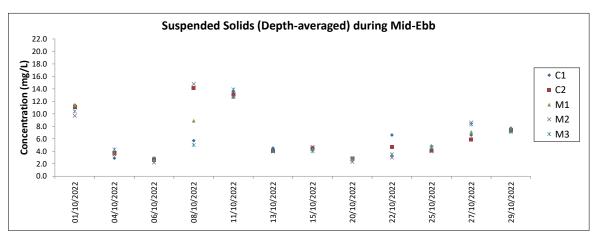


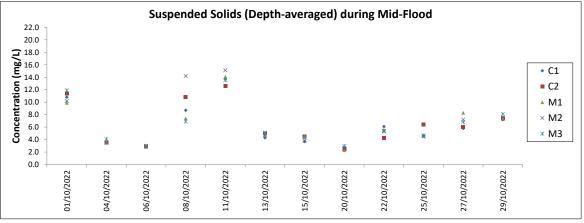
Note: The Action and Limit Level of turbidity can be referred to Table 2.3 of the monthly EM&A report.

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.





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.

Appendix E. Environmental Site Inspection Schedule

Oct-22

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
						Water Quality Mo	(1) onitoring 16:40
						mid- flood:	11:13
2	3	4	5	6	7	8	11.10
		(1)		(1)			(1)
		Water Quality Monitoring	Environmental Site Inspection	Water Quality Monitoring		Water Quality Mo	onitoring
		mid- ebb: 7:23	·	mid- ebb: 10:12		mid- ebb:	11:54
		mid- flood: 20:21		mid- flood: 17:42		mid- flood:	18:41
9	10	11	12	13	14	15	
		(1)		(1)			(1)
		Water Quality Monitoring	Environmental Site Inspection	Water Quality Monitoring		Water Quality Mo	onitoring
		mid- ebb: 13:48		mid- ebb: 14:54		mid- ebb:	16:00
		mid- flood: 7:48		mid- flood: 9:19		mid- flood:	11:05
16	17	18	19	20	21	22	
		(1) (2)		(1)			(1)
		Water Quality Monitoring	Environmental Site Inspection			Water Quality Mo	0
		mid- ebb: 6:20		mid- ebb: 9:14		mid- ebb:	11:00
		mid- flood: 19:11		mid- flood: 17:10		mid- flood:	17:42
23	24	25	26	27	28	29	
		(1)		(1)		Motor Ouglity Mo	(1)
		Water Quality Monitoring	Environmental Site Inspection	Water Quality Monitoring		Water Quality Mo	•
		mid- ebb: 12:52 mid- flood: 6:51		mid- ebb: 14:13 mid- flood: 8:26		mid- ebb: mid- flood:	15:44
20	31			mid- flood: 8:26		mia- iiooa:	10:20
30	31		g schedule under the ACL project		W. 10. IN 0. (
		(2) The water quality monitoring	on 18 Oct 2022 under the ACL	project was cancel due to Strong	Wind Signal No.3 in force and	sarety concern.	

Nov-22

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
		1	2	3	4	5	
		(1)		(1)			(1)
		Water Quality Monitoring	Environmental Site Inspection	-		Water Quality Monito	_
		mid- ebb: 5:45		mid- ebb: 8:40		mid- ebb:	10:42
	_	mid- flood: 18:26		mid- flood: 16:25	44	mid- flood:	17:28
6	7	8	9	10	11	12	(4)
		(1)	Environmental Cita Inchestion	(1) Water Quality Monitoring		Water Quality Monito	(1)
		Water Quality Monitoring mid- ebb: 12:48	Environmental Site Inspection	,		mid- ebb:	15:03
		mid- flood: 7:02		mid- ebb: 14:00 mid- flood: 8:36		mid- flood:	10:03
13	14	15	16	17	18	19	10.07
13	14	(1)		(1)	10	13	(1)
		Water Quality Monitoring	Environmental Site Inspection			Water Quality Monito	
		mid- ebb: 4:42		mid- ebb: 6:28		mid- ebb:	9:11
		mid- flood: 17:02		mid- flood: 19:31		mid- flood:	16:18
20	21	22	23	24	25	26	
		(1)		(1)			(1)
		Water Quality Monitoring	Environmental Site Inspection	Water Quality Monitoring		Water Quality Monito	ring
		mid- ebb: 11:44		mid- ebb: 13:16		mid- ebb:	14:47
		mid- flood: 17:29		mid- flood: 7:42		mid- flood:	9:30
27	28	29	30				
		(1)	<u> </u>				
		Water Quality Monitoring	Environmental Site Inspection				
		mid- ebb: 4:35					
		mid- flood: 17:04					
		Notes:					
		(1) The water quality monitoring	schedule under the ACL project	t.			

Appendix F. Waste Flow Table

AAHK Contract No. 19W10 Intermodal Transfer Terminal - Bonded Vehicular Bridge and Associated Roads Monthly Waste Flow Table

		Actual Quantities	s of Inert C&D M	aterials (excluding broken concrete	g excavated wast	e) (tonnes) e.g.		Actual Quantities	of Non-inert C&E) Waste (tonnes)			
		(a) Total inert C&D	(b) Reused in	(c) Reused in other	(d) Sent to	(e) Disposed to	(f) Recycled scrap	(g) Reused /	(h) Chemical waste	(i) Other waste	(j) Total non-inert	(k) Total recyclable	(I) Total
Month	Excavated Waste	material	contract	projects	recycling	public fill	metal	recycled timber	Crieffical waste	disposed to	C&D material	waste	construction
Wichian	(tonnes)	generated	CONTRACT	projects	company	public IIII	IIIetai	recycled tilliber		landfill	generated		waste generated
		(a) = (b) + (c)			oompany					Tariami	(j) = (f) + (g) +	(d) + (f) + (g)	(I) = (a) + (j)
		+ (d) + (e)									(h) + (i)	() () ()	() () ()
Jul-20	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-20	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
Sep-20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.04	4.04	0.00	4.04
Oct-20	740.49	740.49	0.00	0.00	0.00	740.49	0.00	0.00	0.00	3.55	3.55	0.00	744.04
Nov-20	574.90	574.90	0.00	0.00	0.00	574.90	0.00	0.00	0.00	6.76	6.76	0.00	581.66
Dec-20	536.08	536.08	0.00	0.00	0.00	536.08	0.00	0.00	0.00	2.33	2.33	0.00	538.41
Jan-21	1778.61	1778.61	0.00	0.00	0.00	1778.61	0.00	0.00	0.00	5.33	5.53	0.00	1784.14
Feb-21	4031.66	4031.66	0.00	2832.32	0.00	1199.34	0.00	0.00	0.00	4.40	4.40	2832.32	4036.06
Mar-21	1921.26 3929.82	1921.26 3929.82	0.00	419.77 1702.03	0.00	1501.49 2227.79	0.00	0.00	0.00	12.28	12.28 26.48	419.77	1933.54 3956.30
Apr-21 May-21	3929.82 2062.98	3929.82 2062.98	0.00	1702.03	0.00	368.46	0.00	0.00	0.00	26.48 12.63	26.48 12.63	1702.03 1694.52	3956.30 2075.61
Jun-21	5098.30	5098.30	0.00	4446.42	0.00	651.88	0.00	0.00	0.54	23.41	23.95	4446.42	5122.25
Jul-21	6868.66	6868.66	0.00	6440.45	0.00	428.21	0.00	0.00	0.00	12.92	12.92	6440.45	6881.58
Aug-21	6884.63	6884.63	0.00	5662.00	0.00	1222.63	8.56	0.00	1.08	38.91	48.55	5670.56	6933.18
Sep-21	3949.49	3949.49	0.00	2798.89	0.00	1150.60	0.00	0.00	0.00	15.66	15.66	2798.89	3965.15
Oct-21	389.98	389.98	0.00	235.10	0.00	154.88	6.20	0.00	0.00	15.48	21.68	241.30	411.66
Nov-21	1926.96	1926.96	285.00	650.00	0.00	991.96	13.78	0.00	0.00	16.18	29.96	948.78	1956.92
Dec-21	672.20	672.20	240.00	0.00	0.00	432.20	0.00	0.00	0.00	17.40	17.40	240.00	689.60
Jan-22	584.00	584.00	584.00	0.00	0.00	0.00	6.03	0.00	0.00	22.17	28.20	590.03	612.20
Feb-22	1056.52	1056.52	378.00	240.26	0.00	438.26	0.00	0.00	0.00	33.95	33.95	618.26	1090.47
Mar-22	1426.34	1426.34	0.00	1199.88	0.00	226.46	0.00	0.00	0.00	38.49	38.49	1199.88	1464.83
Apr-22	68.10	68.10	0.00	0.00	0.00	68.10	0.00	0.00	0.00	50.11	50.11	0.00	118.21
May-22	366.14	366.14	0.00	0.00	0.00	366.14	0.00	0.00	0.00	55.50	55.50	0.00	421.64
Jun-22	5806.30	5806.30	0.00	3751.49	0.00	2054.81	0.00	0.00	0.72	74.26	74.98	3751.49	5881.28
Jul-22	4334.71	4334.71	0.00	3561.75	0.00	772.96	0.00	0.00	0.00	81.66	81.66	3561.75	4416.37
Aug-22	7115.76	7115.76	1588.85	2406.49	0.00	3120.42	3.73	0.00	0.00	72.25	75.98	3999.07	7191.74
Sep-22	4345.65	4345.65	0.00	625.55	0.00	3720.10	0.00	0.00	0.00	66.94	66.94	625.55	4412.59
Oct-22	831.14	831.14	0.00	0.00	0.00	831.14	0.00	0.00	0.00	64.59	64.59	0.00	895.73
Total	66469.54	66469.54	3075.85	38666.92	0.00	25557.91	# 38.30	0.00	2.34	777.68	753.93	# 41781.07	67223.47

^{*}Chemical waste, Wasted oil density 0.9kg/L

Appendix G. Status of Environmental Permits and Licences

Table G.1: Summary of Environmental Licenses and Permits

Type of Licence / Permit	Reference No.	Valid From	Valid Until	Remark
Environmental Permit	EP-560/2018	24 August 2017	End of Project	N/A
Billing Account for Disposal of Construction Waste	7037763	6 July 2020	End of Project	N/A
Construction Dust Notification under APCO	458075	13 July 2020	N/A	N/A
Construction Noise Permit	GW-RS0607-22	27 Jul 2022	25 Jan 2023	GW-RS0607-22 was replaced by GW-RS0867-22 since 22 Oct 2022
	GW-RS0867-22	22 Oct 2022	20 Apr 2023	N/A
Chemical Waste Producer	5213-951- G2857-02	24 August 2020	End of Project	N/A
Water Discharge License – Landside	WT00037071- 2020	12 January 2021	31 January 2026	N/A
Water Discharge License – Marine	WT00037556- 2021	9 Jun 2021	31 May 2026	Variation of discharge license WT00037556-2021 granted on 14 May 2021

Appendix H. Environmental Mitigation Measures Implementation Status

Recommended Mitigation Measures for Air Quality Impact

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
		 Relevant control measures as required in the Air Pollution Control (Construction Dust) Regulation shall be implemented to minimise dust impact. 	Obs
		Skip hoist for material transport should be totally enclosed by impervious sheeting.	Yes
		 All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation to maintain the dusty materials wet. 	Yes
		 All stockpiles of aggregate or spoil should be covered and/or water applied. 	Obs/ Rem
S3.7.1	S2.2.1	 The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading. 	N/A
		 Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites. 	Rem
		 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. 	Yes
		 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. 	Yes
Recomme	ended Mitiga	tion Measures for Noise Impact	
EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
		Only well-maintained plant should be operated on-site and plant should be serviced regularly.	Yes
		Silencers or mufflers on construction plant should be utilised.	Yes
		Mobile plant should be sited as far away from sensitive uses as possible.	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
S4.5.2	S3.2.1	 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
		 Material stockpiles and other structures such as site hoarding should be effectively utilised to screen noise from on-site construction activities. 	N/A
		 Noisy construction activities such as road breaking, should be scheduled to less sensitive hours during the day, e.g. midday. 	Yes

Recommended Mitigation Measures for Water Quality Impact

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
S5.9.1	S4.3.1	 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. 	Yes
S5.9.2	S4.3.1	 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. 	Yes
\$5.9.3	S4.3.1	• 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
S5.9.5	S4.3.1	 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. 	Obs
S5.9.6	S4.3.1	 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. 	Yes
S5.9.7	S4.3.1	 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. 	Yes
S5.9.8	S4.3.1	• 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.	Yes

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
S5.9.9	S4.3.1	 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. 	Yes
S5.9.10	S4.3.1	 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 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. 	Yes
S5.9.11	S4.3.1	 If bentonite slurries are required for any construction works, they should be reconditioned and reused wherever practicable to minimise the disposal volume of used bentonite slurries. Temporary enclosed storage locations should be provided on-site for any unused bentonite that needs to be transported away after the related construction activities are completed. Requirements as stipulated in ProPECC Note PN 1/94 should be closely followed when handling and disposing bentonite slurries. 	N/A
		 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. 	N/A
S5.9.12	S4.3.1	 The barge transporting the excavated marine-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. 	N/A
		 Monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the Director of Environmental Protection (DEP). 	N/A
S5.9.13	S4.3.1	 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. 	N/A
S5.9.14	S4.3.1	 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. 	Yes
\$5.9.15	S4.3.1	• 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 on-site 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

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
S5.9.16	S4.3.1	 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 construction workforce. A licensed waste collector should be deployed to clean the chemical toilets on a regular basis. 	Yes
\$5.9.17	S4.3.1	 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. 	Yes
S5.9.18	S4.3.1	 The 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. 	Yes
S5.9.19	S4.3.1	 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. 	N/A
		 Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. 	Yes
S5.9.20	S4.3.1	 Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. 	Yes
		Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.	Yes
S5.9.22	S4.3.1	 For the operation of road works, a surface water drainage system should be provided to collect the road runoff. The road drainage should be provided with adequately designed silt trap as necessary. The design of the operational phase mitigation measures for the road works shall take into account the guidelines published in ProPECC PN 5/93 "Drainage Plans subject to Comment by the EPD" 	Yes
\$5.9.23 to 5.9.29		 <u>Design Measures:</u> Exposed surface shall be avoided within the roads to minimise soil erosion. The roads shall be hard paved. The drainage system should be designed to avoid flooding. 	Yes
	S4.3.1	 Devices and Facilities: Screening facilities such as standard gully grating and trash grille, with spacing which is capable of screening large substances such as rubbish should be provided at the inlet of drainage system. Road gullies with standard design and silt traps should be provided to remove particles present in stormwater runoff, where appropriate. 	N/A

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
		Administrative Measures: Good management measures such as regular cleaning and sweeping of road surface/ open areas are suggested. The	
		road surface/ open area cleaning should also be carried out prior to occurrence rainstorm.	Yes
		 Manholes, as well as stormwater gullies, ditches provided at the Project site should be regularly inspected and cleaned (e.g. monthly). Additional inspection and cleansing should be carried out before forecast heavy rainfall. 	
S5.9.30	S4.3.1	All the sewage flow generated from the proposed toilets should be properly collected and conveyed to the existing sewerage system on HKBCF Island. No direct discharge of sewage effluent into the marine water will be allowed.	Yes
Recomme	ended Mitiga	tion Measures for Waste Management	
EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
		Good Site Practices:	
		 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. 	Yes
		 Training of site personnel in site cleanliness, concepts of waste reduction, reuse and recycling, proper waste management and chemical waste handling procedures. 	Yes
S6.5.3	S5.2.1	Provision of sufficient waste reception/ disposal points, and regular collection of waste.	Yes
00.5.5		 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. 	Yes
		Provision of regular cleaning and maintenance programme for drainage systems and sumps.	Yes
		• Adoption of a recording system for the amount of wastes generated, recycled and disposed (including the disposal sites).	Yes
		Preparation of Waste Management Plan (WMP), as part of the Environmental Management Plan (EMP).	Yes
		Waste Reduction Measures:	
		 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. 	Yes
S6.5.4		 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. 	Yes
	S5.2.1	Recycle any unused chemicals or those with remaining functional capacity.	N/A
		Maximise the use of reusable steel formwork to reduce the amount of C&D materials.	Yes
		 Adopt proper storage and site practices to minimise the potential for damage to, or contamination of construction materials. 	Yes
		Plan the delivery and stock of construction materials carefully to minimise the amount of waste generated.	N/A

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
		Minimise over ordering and wastage through careful planning during purchasing of construction materials.	N/A
		 <u>C&D materials:</u> 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. 	Yes
		Covering materials during heavy rainfall.	N/A
S6.5.6	S5.2.1	Locating stockpiles to minimise potential visual impacts.	Implemented? ^ N/A Yes N/A N/A N/A N/A N/A N/A N/A N/A N/A
30.3.0	35.2.1	Minimising land intake of stockpile areas as far as possible.	
		 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&D materials. 	
		 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. 	N/A
\$6.5.7 to 6.5.9		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.	Obs
	S5.2.1	• 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.	Yes
		 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. 	N/A
S6.5.10 to 6.5.12		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
	S5.2.1	 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. 	Obs
		Any unused chemicals or those with remaining functional capacity should be collected for reuse as far as practicable.	N/A
S6.5.13 to 6.5.16	S5.2.1	 Sediment: The sediment should be excavated, handled, treated, transported and/or disposed of in a manner that would minimise adverse environmental impacts. 	N/A

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
		• Requirements of the Air Pollution Ordinance (Construction Dust) Regulation, where relevant, shall be adhered to during excavation, treatment, transportation and disposal of the sediment.	N/A
		• The land-based sediment will be treated using S/S technique and will be reused on site (e.g. as backfilling materials).	Yes
		 Any treatment area for the land-based sediment should be confined for carrying out the cement S/S process and any temporary stockpiling. The area should be designed to prevent leachate from entering the ground. Leachate, if any, should be collected 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. 	Yes
S6.5.17	S5.2.1	 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). 	N/A
S6.5.18 to 6.5.19	\$5.2.1	 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. 	N/A
S6.5.18 to 6.5.19	S5.2.1	 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. 	N/A
\$6.5.20 to 6.5.23		 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). 	N/A
	S5.2.1	 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 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). 	Yes
		 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 shall be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water. 	N/A
		 The barge 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 loading shall be conducted to ensure that loss of material does not take 	N/A

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
		place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the DEP.	
		Potential Floating Refuse:	
S6.5.24	S5.2.1	 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. 	N/A
Recommo	ended Mitiga	tion Measures for Marine Ecological Impact	
EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
S7.8.3	S6.3.3	Based upon a precautionary approach, a speed limit of 10 knots should be strictly enforced on all construction-related vessels.	Yes
S7.8.6	S6.3.1	 Good site practices, guidelines and mitigation measures detailed in Water Quality Sections 5.9.1 to 5.9.20 should be adopted to further alleviate water quality impacts. 	Yes
S7.8.9	S6.3.2	 Coral colonies at REA2 under the direct impacts of habitat loss should be translocated as a precautionary measure. A detailed Coral Translocation Proposal, including description of methodology and precautionary post-translocation monitoring programme, should be prepared and subject to agreement with the authority before commencement of the coral translocation. 	N/A
Recomme	ended Mitiga	tion Measures for Landscape and Visual Impact	
EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
		Preservation of New Tree Planting:	
S8.9.2	S7.3.1	 All the planned new trees to be retained and not to be affected by the Project shall be carefully protected during construction in accordance with DevB TCW No. 7/2015 – Tree Preservation during Development issued by GLTM Section of DevB. 	N/A
		 Any existing vegetation in landscaped area and natural terrain not to be affected by the Project shall be carefully preserved. 	N/A
		Transplanting of Affected Trees:	
S8.9.2	S7.3.1	 Planned trees to be planted under HKBCF unavoidably affected by the works shall be transplanted within the Project boundary or off-site within the Airport Island (i.e. within area of approx. 6.2km) as far as possible in accordance with DevB TCW No. 7/2015 – Tree Preservation and the latest Guidelines on Tree Transplanting issued by GLTM Section of DevB. 	N/A
S8.9.2	S7.3.1	Compensatory Tree Planting:	N/A

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
		 Any planned trees to be planted under HKBCF to be felled under the Project shall be compensated within the Project boundary or off-site within the Airport Island (i.e. within area of approx. 6.2km), in accordance with DevB TCW No. 7/2015 – Tree Preservation. The compensatory planting shall be of a ratio not less than 1:1 in terms of number, i.e. the number of compensatory trees shall not be lower than that of the number of trees to be felled. Justification shall be provided if tree compensation requirement could not be met. For trees to be compensated on slopes, the guidelines for tree planting stipulated in GEO Publication No. 1/2011 will be followed. 	
\$8.9.2	S7.3.1	Control of night-time lighting glare: • Any lighting provision of the construction works at night shall be carefully control to prevent light overspill to the nearby VSRs and into the sky.	N/A
S8.9.2	S7.3.1	 <u>Erection of Decorative Screen Hoarding:</u> Decorative Hoarding, which is compatible with the surrounding settings, shall be erected during construction to minimise the potential landscape and visual impacts due to the construction works and activities. 	N/A
S8.9.2	S7.3.1	 Management of Construction Activities and Facilities: The facilities and activities at works sites and areas, which include site office, temporary storage areas, temporary works etc., shall be carefully managed and controlled on the height, deposition and arrangement to minimise any potential adverse landscape and visual impacts. 	N/A
\$8.9.2	S7.3.1	Reinstatement of Temporarily Disturbed Landscape Areas: • All hard and soft landscape areas disturbed temporarily during construction shall be reinstated on like-to-like basis, to the satisfaction of the relevant Government Departments.	N/A
\$8.9.2	S7.3.1	Aesthetically Pleasing Design of Aboveground / Above-sea Structures: The proposed structures in regard of layouts, forms, materials and finishes shall be sensitively designed so as to blend in the structures to the adjacent landscape and visual context.	N/A
\$8.9.2	S7.3.1	Provision of Amenity Planting: • Amenity planting, including groundcover and trees shall be provided to soften the proposed above-ground structures on HKBCF as far as appropriate.	N/A

Notes:

Yes = Implemented where applicable

No = Not implemented

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.