

Airport City Link

Monthly EM&A Report for December 2022 January 2023

Airport Authority Hong Kong

Mott MacDonald 3/F Manulife Place 348 Kwun Tong Road Kwun Tong Kowloon Hong Kong

T +852 2828 5757 mottmac.hk

Airport Authority Hong Kong

Airport City Link

Monthly EM&A Report for December 2022

January 2023

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

has been reviewed and certified by

the Environmental Team Leader (ETL) in accordance with

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

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

Certified by:

Mum Clea

Ir Thomas Chan Environmental Team Leader (ETL) Mott MacDonald Hong Kong Limited

Date

12 January 2023



AECOM 12/F, Grand Central Plaza, Tower 2, 138 Shatin Rural Committee Road, Shatin, Hong Kong 香港新界沙田**鄉**事會路 138 號 新城市中央廣場第 2 座 12 樓 www.aecom.com

+852 3922 9000 tel +852 3922 9797 fax

Your Ref: -Our Ref: 60664934/C/FYW2301121

By Email

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

Attn: Alan Chan (Manager, Civil)

12 January 2023

Dear Sir,

Contract C21C02 – Independent Environmental Checker Consultancy Services for Airport City Link

Monthly Environmental and Audit (EM&A) Report for December 2022

Reference is made to the Environmental Team's submission of Monthly EM&A Report for December 2022 in accordance with Condition 3.5 of the Environmental Permit (No: EP-581/2020) and Section 11.2 of the EM&A Manual of the Project certified by the ET Leader on 12 January 2023.

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

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

Yours faithfully, AECOM Asia Co. Ltd.

Y W Fung Independent Environmental Checker

Contents

Exe	ecutive	summary	4
1	Intro	duction	6
	1.1	Background	6
	1.2	Project Organisation	6
	1.3	Construction Works Programme and Construction Works Area	7
	1.4	Construction Works undertaken during the Reporting Period	7
2	Wate	er Quality	8
	2.1	Baseline Water Quality Monitoring	8
	2.2	Impact Water Quality Monitoring	8
		2.2.1 Monitoring Requirement	8
		2.2.2 Monitoring Locations	8
		2.2.3 Monitoring Parameters	9
		2.2.4 Monitoring Schedule for the Reporting Period	9
		2.2.5 Monitoring Equipment	9
		2.2.6 Maintenance and Calibration of In-situ Instruments	9
		2.2.7 Laboratory Measurement / Analysis	10
	2.3	Event and Action Plan	10
		2.3.1 Action and Limit Levels	10
		2.3.2 Event and Action Plan	10
	2.4	Water Quality Monitoring Results	10
		2.4.1 Impact Water Quality Monitoring	10
	2.5	Conclusion	11
3	Envi	ronmental Site Inspection and Audit	12
	3.1	Environmental Site Inspection	12
	3.2	Advice on the Solid and Liquid Waste Management Status	12
	3.3	Implementation Status of Environmental Mitigation Measures	13
	3.4	Summary of Exceedance of the Environmental Quality Performance Limit	13
	3.5	Summary of Complaints, Notifications of Summons and Successful Prosecutions	13
4	Futu	ire Key Issues	14
	4.1	Construction Programme for the Coming Month	14
	4.2	Environmental Site Inspection and Monitoring Schedule for the Next	
		Reporting Period	14
5	Con	clusions	15

Figure

Figure 2.1 Water Quality Monitoring Locations

Appendices

Appendix A. Project Organisation

Appendix B. Construction Works Programme

Appendix C. Construction Works Area

Appendix D. Environmental Site Inspection and Monitoring Schedule

Appendix E. Calibration Certificates

Appendix F. Event and Action Plan

Appendix G. Monitoring Data and Graphical Plots

Appendix H. Waste Flow Table

Appendix I. Status of Environmental Permits and Licences

Appendix J. Environmental Mitigation Measures Implementation Status

Tables

Table 1.1: Contact Information of Key Personnel	6
Table 2.1: Locations of Marine Water Quality Monitoring Stations	8
Table 2.2: Impact Water Quality Monitoring Equipment	9
Table 2.3: Derived Action and Limit Levels	10
Table 2.4: Summary of Exceedances	11
Table 3.1: Summary of Site Inspections and Recommendations	12
Table 3.2: Statistics on Environmental Complaints, Notifications of Summons and	
Successful Prosecutions	13
Table 4.1: Construction Activities for the Next Reporting Period	14

Executive summary

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

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

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

This is the 5th 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 December 2022.

Key Construction Works in the Reporting Period

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

Marine Section

- Plant mobilization and material delivery for marine bored piling works
- Marine bored piling works
- Marine substructure 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	14
Weekly environmental site inspections	4

Breaches of Action and Limit Levels

Water Quality

The water quality monitoring results for dissolved oxygen (DO) and turbidity obtained during the reporting period were within the corresponding Action and Limit Levels. For suspended solids (SS), three results triggered the Action Level (one result on 10 December 2022 and two results on 29 December 2022). For the event on 10 December 2022, after the investigation, it was concluded that the exceedance was not related to the Project. Investigation of the exceedance case on 29 December 2022 is in progress and the investigation summary will be presented in the next Monthly EM&A Report.

Complaint Log

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

Notifications of Summons and Successful Prosecutions

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

Reporting Changes

There was no reporting change during the reporting period.

Future Key Issues

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

Marine Section

- Plant mobilization and material delivery for marine bored piling works
- Marine bored piling works
- Marine substructure works

1 Introduction

1.1 Background

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

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

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

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

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

This is the 5th Monthly EM&A report summarising the key findings of the construction phase EM&A programme from 1 to 31 December 2022 (the reporting period) and is submitted to fulfil requirements in Condition 3.5 of EP and Section 11.2 of EM&A Manual of the Project.

1.2 Project Organisation

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

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

Table 1.1: Contact Information of Key Personnel

Party	Position	Name	Telephone
(AECOM Asia Company Limited)	Deputy Independent Environmental Checker	Lemon Lam	3922 9381
Main Contractor – Marine Section	Senior Project Manager	Brian Ho	9041 7535
(Gammon Engineering & Construction Company Limited)	Environmental Officer	Elena Lai	6841 3324
Main Contractor – Land Section	Project Manager	Kingsley Chiang	9424 8437
(China State Construction Engineering (HK) Ltd.)	Environmental Officer	Denzel Chan	6223 5374

1.3 Construction Works Programme and Construction Works Area

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

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

1.4 Construction Works undertaken during the Reporting Period

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

Marine Section

- Plant mobilization and material delivery for marine bored piling works
- Marine bored piling works
- Marine substructure works

2 Water Quality

2.1 Baseline Water Quality Monitoring

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

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

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

2.2 Impact Water Quality Monitoring

2.2.1 Monitoring Requirement

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

2.2.2 Monitoring Locations

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

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

Table 2.1: Locations of Marine Water Quality Monitoring Stations

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.

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

2.2.3 Monitoring Parameters

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

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

2.2.4 Monitoring Schedule for the Reporting Period

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

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

2.2.5 Monitoring Equipment

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

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

Equipment	Brand and Model	Quantity
Water Sampler	Van Dorn Water Sampler	2
Monitoring Position Equipment (measurement of DGPS)	Garmin eTrex 20x	1
Water Depth Detector (measurement of water depth)	Garmin STRIKER [™] Series	1
Multifunctional Meter (measurement of DO, DO%, temperature, turbidity, salinity and pH)	YSI ProDSS (Multiparameter Sampling Instrument)	3

Table 2.2: Impact Water Quality Monitoring Equipment

2.2.6 Maintenance and Calibration of In-situ Instruments

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

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

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

2.2.7 Laboratory Measurement / Analysis

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

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

2.3 **Event and Action Plan**

2.3.1 **Action and Limit Levels**

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

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

Notes:

1. For DO measurement, non-compliance occurs when the monitoring result is lower than the limits.

2. For parameters other than DO, non-compliance of water quality occurs when the monitoring result is higher than the limits.

Depth-averaged results are used unless specified otherwise. 3

Impact station M3 is represents the impact station SR1A of "Expansion of Hong Kong International Airport into 4 a Three-Runway System". The AL levels for M3 in Table 2.3 is referencing the agreed and adopted AL levels of SR1A from the Updated EM&A Manual for Expansion of Hong Kong International Airport into a Three-Runway System.

2.3.2 **Event and Action Plan**

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

Water Quality Monitoring Results 2.4

2.4.1 Impact Water Quality Monitoring

The water quality monitoring results for DO and turbidity obtained during the reporting period were within the corresponding Action and Limit Levels. For SS, three results triggered the Action Level

(one result on 10 December 2022 and two results on 29 December 2022). For the event on 10 December 2022, after the investigation, it was concluded that the exceedance was not related to the Project. Investigation of the exceedance case on 29 December 2022 is in progress and the investigation summary will be presented in the next Monthly EM&A Report.

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

Date	Parameter(s)	Affected Station(s)	Tide	Exceedance Type
10 Dec 2022	SS	M2	Flood Tide	Action Level
29 Dec 2022	SS	M1	Flood Tide	Action Level
	SS	M2	Flood Tide	Action Level

Table 2.4: Summary of Exceedances

Investigation on the Exceedance Case on 10 December 2022

As informed by the contractor, rock drilling was conducted at Pier 3, airlifting and testing was conducted at Pier 7, while access platform modification was carried out at Pier 8. No construction activity was carried out at other piers during flood tide.

No discharge and spillage incidents were recorded on 10 Dec 2022. No sediment plume and muddy conditions were observed in the vicinity during the monitoring. Furthermore, based on the daily visual inspection checklist and photo record for silt curtains at Pier 3.7 and 8 provided by the contractor, it was shown that the mitigation measures for water quality were properly implemented.

No exceedance of SS was found on 10 Dec 2022 at ebb tide for the same construction activities. During the monitoring, impact stations M2 and M3 were located downstream of the project area. However, no exceedance was recorded at impact station M3, and noted that impact station M1 which located upstream of construction area was recorded higher SS during the concerned period.

With regards to the above findings, it was concluded that the exceedance was not related to the Project. However, Gammon environmental team and operation team will keep monitoring the water quality and mitigation measures will be implemented when necessary to reduce the water quality impacts.

2.5 Conclusion

The water quality monitoring results for DO and turbidity obtained during the reporting period were within the corresponding Action and Limit Levels. For SS, three results triggered the Action Level (one result on 10 December 2022 and two results on 29 December 2022). For the event on 10 December 2022, after the investigation, it was concluded that the exceedance was not related to the Project. Investigation of the exceedance case on 29 December 2022 is in progress and the investigation summary will be presented in the next Monthly EM&A Report.

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

3 Environmental Site Inspection and Audit

3.1 Environmental Site Inspection

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

During the reporting period, site inspections were carried out on 6, 13, 20 and 28 December 2022 for marine section. Joint IEC site inspection for marine section was carried out on 13 December 2022.

Monthly landscape and visual site audit was carried out on 13 December 2022.

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

Marine Section				
Inspection Date	Key Observations / Reminders	Recommendations / Actions	Close- Out Date	
13 Dec 2022	Gammon 39 – Oil stain was observed on the vessel deck and underneath the powerpack.	The Contractor should clean up the oil stain and provide mitigation measures for the powerpack for prevention of oil spillage.	20 Dec 2022	
13 Dec 2022	No drip tray was provided for the chemical container at Pier 3.	The Contractor should provide a drip tray for the chemical container to prevent any potential spillage.	20 Dec 2022	
13 Dec 2022	Construction debris was observed at the temporary access platform at Pier 3.	The Contractor should provide regular cleaning and maintain good housekeeping to prevent any materials from getting into the sea.	20 Dec 2022	
13 Dec 2022	Floating refuse was observed trapped by the silt curtain at Pier 3.	The Contractor should clear the floating refuse to avoid adverse impacts to the marine environment.	20 Dec 2022	
28 Dec 2022	Silt curtains at Pier 5 and Pier 6 were not properly implemented (Reminder).	The Contractor was reminded to provide maintenance for the silt curtain at Pier 5 and Pier 6 to ensure the silt curtain remain intact.	28 Dec 2022	

Table 3.1: Summary of Site Inspections and Recommendations

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 H.

12

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

3.3 Implementation Status of Environmental Mitigation Measures

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

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

3.4 Summary of Exceedance of the Environmental Quality Performance Limit

Water Quality

The water quality monitoring results for DO and turbidity obtained during the reporting period were within the corresponding Action and Limit Levels. For SS, three results triggered the Action Level (one result on 10 December 2022 and two results on 29 December 2022). For the event on 10 December 2022, after the investigation, it was concluded that the exceedance was not related to the Project. Investigation of the exceedance case on 29 December 2022 is in progress and the investigation summary will be presented in the next Monthly EM&A Report.

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

3.5 Summary of Complaints, Notifications of Summons and Successful Prosecutions

Complaint Log

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

Notifications of Summons or Status of Prosecution

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

Cumulative Statistics

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

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

Reporting Period	Environmental Complaints	Notifications of Summons	Successful Prosecutions
This reporting period (Dec 2022)	0	0	0
From commencement date of construction to end of reporting period	0	0	0

4 Future Key Issues

4.1 Construction Programme for the Coming Month

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

Table 4.1: Construction Activities for the Next Reporting Period

	Ben a final sector and the
Period	Description of Activities
	Plant mobilization and material delivery for marine bored piling works
Jan 2023	Marine bored piling works
	Marine substructure works

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

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

5 Conclusions

General

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

Water Quality Monitoring

The water quality monitoring results for DO and turbidity obtained during the reporting period were within the corresponding Action and Limit Levels. For SS, three results triggered the Action Level (one result on 10 December 2022 and two results on 29 December 2022). For the event on 10 December 2022, after the investigation, it was concluded that the exceedance was not related to the Project. Investigation of the exceedance case on 29 December 2022 is in progress and the investigation summary will be presented in the next Monthly EM&A Report.

Environmental Site Inspections

Environmental site inspections were carried out 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

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

Reporting Changes

There was no reporting change during the reporting period.

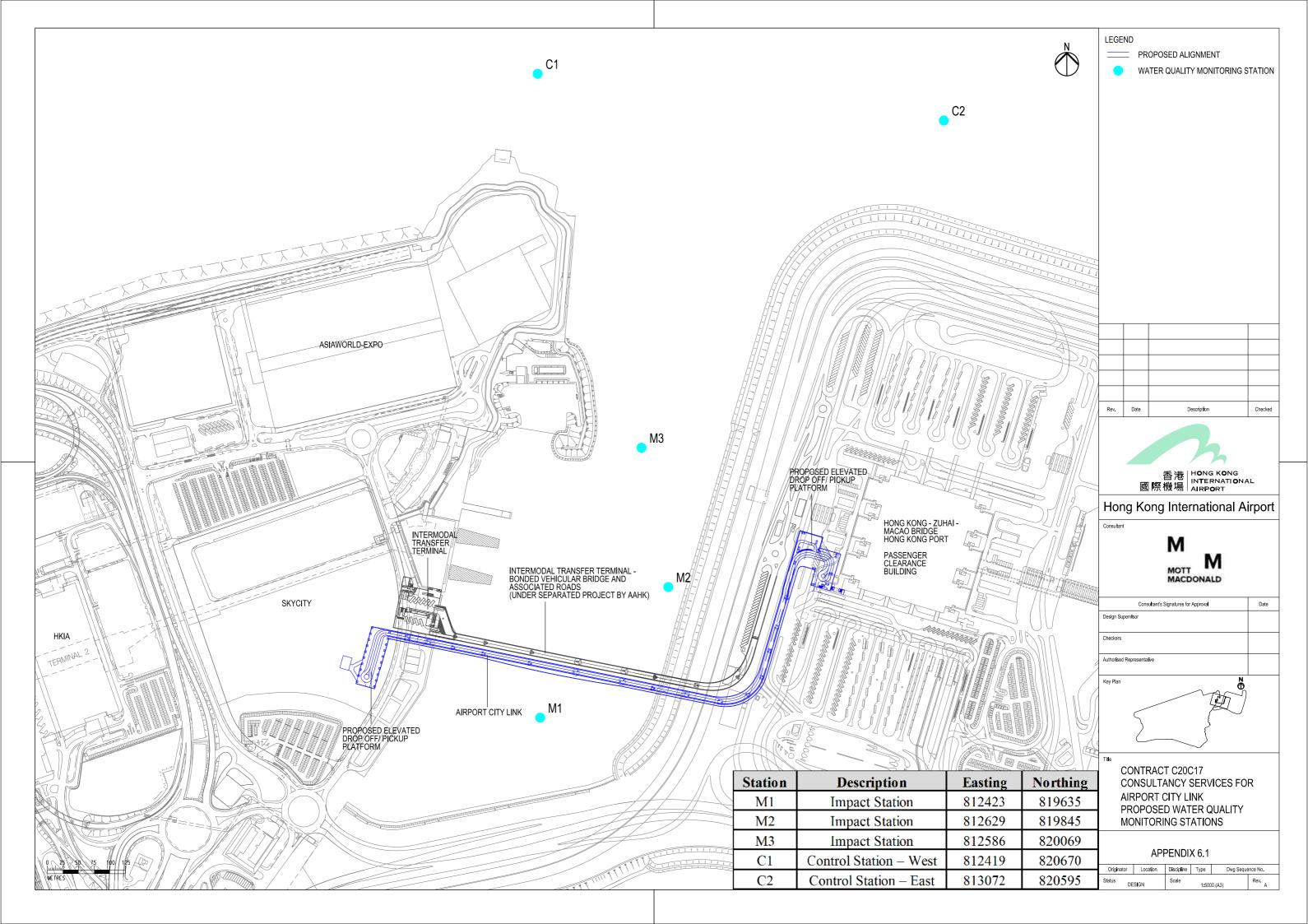
Notifications of Summons and Successful Prosecutions

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

Mott MacDonald | Airport City Link Monthly EM&A Report for December 2022

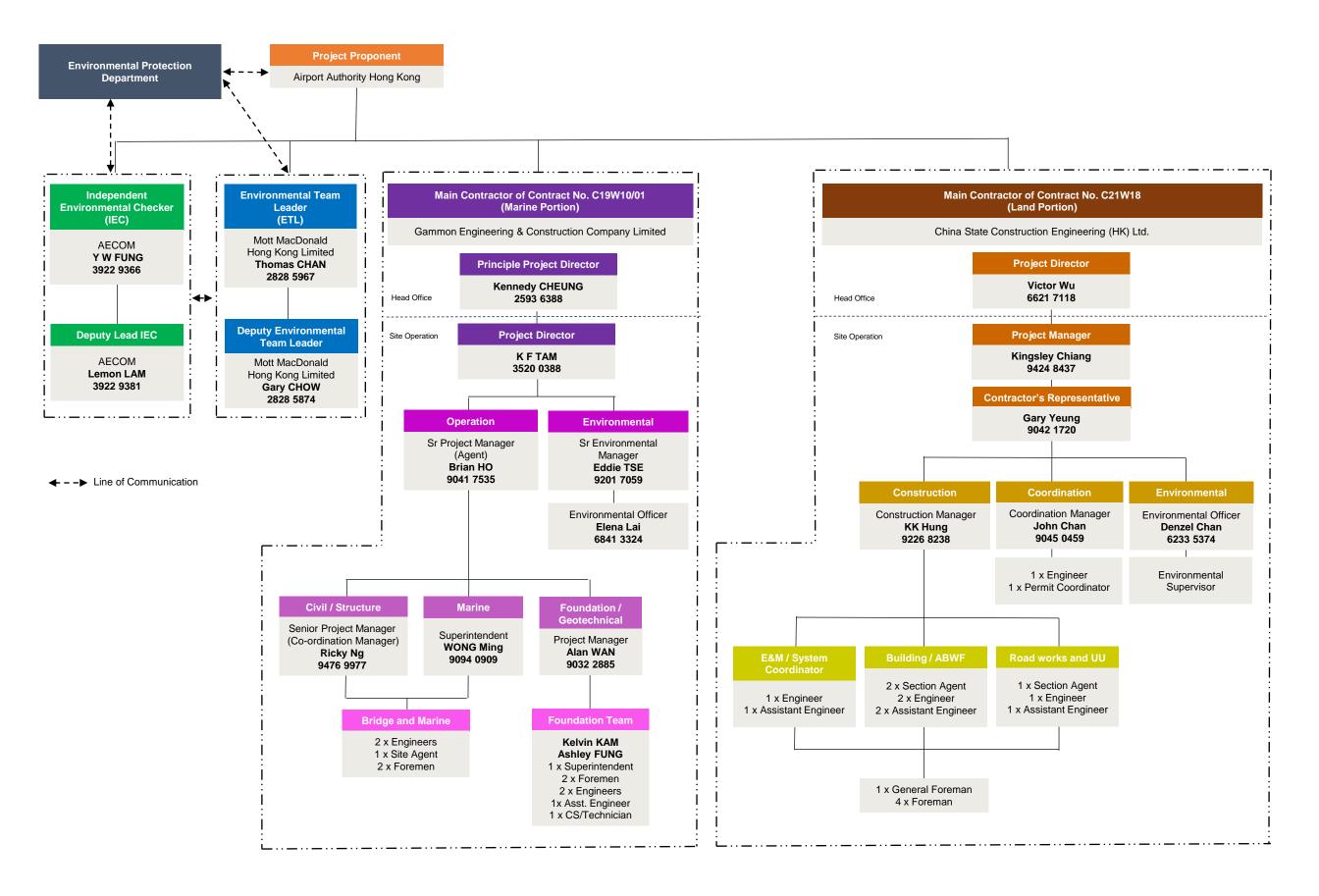
Figure

Figure 2.1 Water Quality Monitoring Locations



Appendices

Appendix A. Project Organisation



Appendix B. Construction Works Programme

y ID	Activity Name	Orig	DWP Rev.B	DWP Rev.B	Start	Finish	Total	Physical %	2022		
y iD	Addivity Name	Dur	Start	Finish	Otan	1 IIIIGH	Float	Complete	 Dec 11	Jan 12	
9W10/01 - ACL - Monthly Pro	gramme Rev.C Updated as of 31 December 2022		1	I	I	1				12	
Contract Dates											
Statutory Submission 19W10.A.C0W785	Design Preparation, Submissoin and Approval for Movement Joints (E	By others) 90	31-Dec-22	24-Apr-23	31-Dec-22	24-Apr-23	204	0%	d Approval for Movement Joints (By others)		
19W10.A.C0W895	Design Preparation, Submissoin and Approval for Navigation Aids	90		24-Apr-23	31-Dec-22	24-Apr-23	135		ubmissoin and Approval for Navigation Aids		
Erection of Working Platform									······		
19W10.A.C0W200	Removal of Platform for Pier 8 (Stage 1)	6	07-Jan-23	13-Jan-23	16-Dec-22 A	18-Dec-22 A			n for Pier 8 (Stage 1)		
19W10.A.C0W210	Platform for Pier 8 (Stage 2)	10	14-Jan-23	28-Jan-23	19-Dec-22 A	20-Dec-22 A		100%	tform for Pier 8 (Stage 2)		
Marine Piling Works 1st Pile Group											
ACL P5 (47m)											
Piling Works											
Sonic & Interface Core		7	24 Dec 00	00 1 00	04 D 00	00 1 00		00/	Removal of Pier 5 Platform		
19W10.H.VD0B190	Removal of Pier 5 Platform ment Submission for Completion	7	31-Dec-22	09-Jan-23	31-Dec-22	09-Jan-23	-4	0%	Removal of Fiel 5 Flationn		
19W10.H.VD0B200	Selection of Pile for Full Core Drilling Test	12	11-Oct-22	26-Oct-22	17-Nov-22 A	19-Dec-22 A		100%			
19W10.H.VD0B210	Full Core Platform Erection	6	16-Jan-23	25-Jan-23	12-Dec-22 A	19-Dec-22 A			tform Erection		
19W10. H. VD0B220	Full Core Drilling Test	6	26-Jan-23	01-Feb-23	21-Dec-22 A	03-Jan-23	-44	100%	Full Core Drilling Test	+	
19W10.H.VD0B230	Full Core Platform Dismantlement	6	04-Jan-23	10-Jan-23	04-Jan-23	10-Jan-23	-5	0%	Full Core Platform Dismantlem		
19W10.H.VD0B240	Submit Concrete Strength Report	12	04-Jan-23	17-Jan-23	04-Jan-23	17-Jan-23	-44	0%	Submit Concrete Strength Rep		
19W10.H.VD0B250	BA14 Acknowledgement Letter from BD (1st Pile Group)	5	18-Jan-23	26-Jan-23	18-Jan-23	26-Jan-23	-44	0%	BA14 Acknowledgement Letter	irom BD (1st Pile Group)	
Application of P5 and P6 S 19W10.H.VD0A340	Application of P5 and P6 Superstructure Concent	0	27-Jan-23	27-Jan-23	27-Jan-23	27-Jan-23	-44	0%	Application	of P5 and P6 Superstructure C	once
2nd Pile Group			21 0011 20	27 0011 20	27 001 20	27 0011 20		070	, pproduct		0.100
ACL P7 (66m)											
Piling Works											
Pile 1	Coning Installation and Sail Evenuation	10	05 Can 22	17 Can 00	19 Nov 22 A	06 lag 02	0	00/			
19W10. H. VD0A140 19W10. H. VD0B280	Casing Installation and Soil Excavation RCD Rock Drilling	10	05-Sep-22 07-Jan-23	17-Sep-22 13-Jan-23	18-Nov-22 A 07-Jan-23	06-Jan-23 13-Jan-23	0	0% 0%	RCD Rock	Drilling	
19W10.H.VD0B290	Air-Lifting, Steel Cage Installation, Concreting and Backfilling	6	14-Jan-23	20-Jan-23	14-Jan-23	20-Jan-23	0	0%	Air-Lifting, Steel Cage Installation, Concret	•	
Pile 2		Ŭ	TT Gall 20	20 0011 20	11001120	20 0011 20	•	070			·
19W10.H.VD0A150	Casing Installation and Soil Excavation	10	06-Oct-22	18-Oct-22	18-Nov-22 A	15-Dec-22 A		100%			
19W10.H.VD0B300	RCD Rock Drilling	6	19-Oct-22	25-Oct-22	16-Dec-22 A	22-Dec-22 A		100%	RCD Rock Drilling		
19W10.H.VD0B310	Air-Lifting, Steel Cage Installation, Concreting and Backfilling	6	01-Nov-22	08-Nov-22	23-Dec-22 A	31-Dec-22 A		100%	tion, Concreting and Backfilling	1	
Pile 3	Casing Installation and Soil Excavation	10	08-Nov-22	19-Nov-22	18-Nov-22 A	25-Jan-23	0	0%			
19W10.H.VD0B320	RCD Rock Drilling	6	26-Jan-23	01-Feb-23	26-Jan-23	01-Feb-23	0	0%		RCD Rock D	Drilling
19W10.H.VD0B330	Air-Lifting, Steel Cage Installation, Concreting and Backfilling	6	02-Feb-23	08-Feb-23	02-Feb-23	08-Feb-23	0	0%	Air-Lifting, Ste	el Cage Installation, Concreting	
Sonic & Interface Core											-
19W10.H.VD0A210	Sonic & Interface Core Test	10	09-Feb-23	20-Feb-23	09-Feb-23	20-Feb-23	0	0%		S	Sonic
19W10.H.VD0B410	Removal of Pier 7 Platform	6	21-Feb-23	27-Feb-23	21-Feb-23	27-Feb-23	10	0%			
ACL P4 (43m)											
Piling Works Sonic & Interface Core	est for ACL P4										
19W10.H.VD0A360	Sonic & Interface Core Test	12	26-Jan-23	08-Feb-23	26-Jan-23	08-Feb-23	10	0%		Sonic & Interface Core	∍Tes
19W10. H. VD0B420	Removal of Pier 4 Platform	6	09-Feb-23	15-Feb-23	09-Feb-23	15-Feb-23	20	0%			Rem
	ment Submission for Completion										
19W10.H.VD0A370	Submit BA14 and Completion Report for 1st Batch Pipe Group	3	21-Feb-23	24-Feb-23	21-Feb-23	24-Feb-23	0	0%		Submit BA14 and	1 Con
19W10.H.VD0B660 19W10.H.VD0B670	Selection of Pile for Full Core Drilling Test Full Core Platform Erection	12	24-Feb-23 10-Mar-23	10-Mar-23 17-Mar-23	24-Feb-23 10-Mar-23	10-Mar-23 17-Mar-23	0	0% 0%			
19W10.H.VD0B670	Full Core Drilling Test	6	10-Mar-23	24-Mar-23	10-iviar-23 17-Mar-23	24-Mar-23	0	0%			
19W10.H.VD0B690	Full Core Platform Dismantlement	6	24-Mar-23	31-Mar-23	24-Mar-23	31-Mar-23	64	0%			
19W10.H.VD0B700	Submit Concrete Strength Report	11		11-Apr-23	24-Mar-23	11-Apr-23	0	0%			
3rd Pile Group					1						
ACL P8 (67m)											
Piling Works											
Pile 2											
Actual LOE	Crit Milestone		Proi	iect ID: (C19W10/	01-DWP	-C-M	10	Data Date: 31-D		
Remaining LOE	Adual Milestone	Thursday	-	•					Printed: 07-Jan-	23 14:28 0/01 ACL 3MR M10	2
Actual Work Remaining Work		I nree-M	onth R	olling Pr	ogramme	•		cempe	TASK filter: 3 Mt		2
Critical Remaining Work	•				Page 1 of	2					
		1									- 15

	0000		
	2023 Feb	Ma	r
	13	14	
_			
ng 📘			
~			
ce Core			
Re	moval of Pier 7 Platform		
er 4 Pla			
lanart f	or 1st Batch Pipe Group		
	Pile for Full Core Drilling Test	Erostion	
	Full Core Platform		
		Ill Core Drilling Test	the second
		Core Platform Disman	
	Sul	bmit Concrete Strength	Report
, ,	Revision	Checked	Approved
22	Initial Works Programme	DW	BH
22	Detailed Works Programme	DW	BH
22	Detailed Works Programme	DW	RN
22	3MRP - Update	DW	RN
23	Detailed Works Programme	DW	RN
	· · · · · · · · · · · · · · · · · · ·		

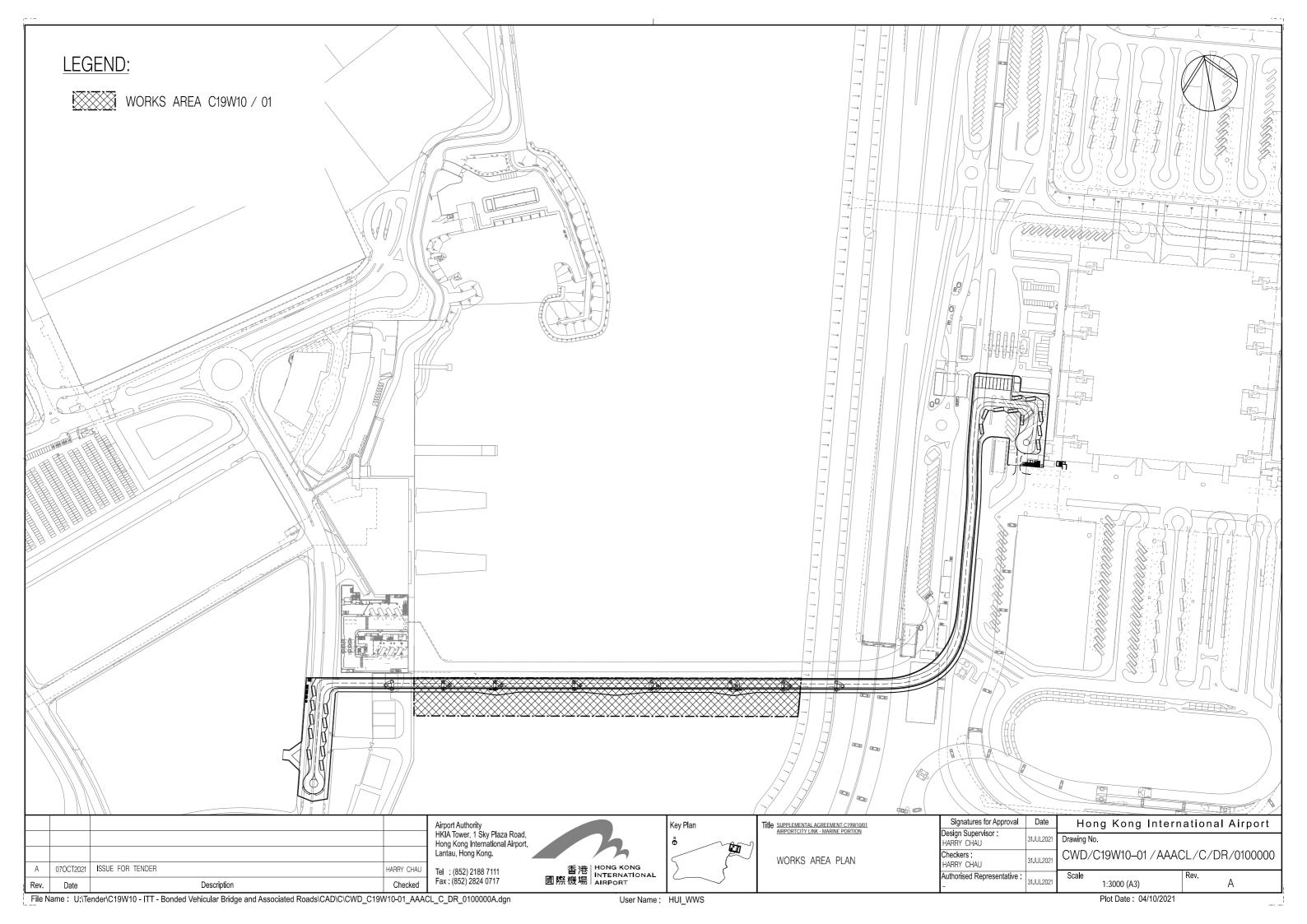
ivity ID	Activity Name		Orig Dur	DWP Rev.B Start	DWP Rev.B Finish	Start	Finish	Total	Physical % Complete	2022 Dec	Jan
			Dur	Sian	FINISH			Float	Complete	11	12
19W10.H.VD0B760	Air-Lifting, Steel Cage Installa	ation, Concreting and Backfilling	5	30-Dec-22	06-Jan-23	20-Nov-22 A	07-Dec-22 A		100%		
Pile 3											
19W10.H.VD0A420	Casing Installation and Soil E	Excavation	6	06-Jan-23	13-Jan-23	21-Dec-22 A	16-Feb-23	21	0%	allation and Soil Excavation	
19W10.H.VD0B770	RCD Rock Drilling		5	17-Feb-23	22-Feb-23	17-Feb-23	22-Feb-23	21	0%		
19W10.H.VD0B780	Air-Lifting, Steel Cage Installa	ation, Concreting and Backfilling	5	23-Feb-23	28-Feb-23	23-Feb-23	28-Feb-23	21	0%		Air-Lifting, Steel Cage Instal
Sonic & Interface Core											
19W10. H. VD0A430	Sonic & Interface Core Test		12	01-Mar-23	14-Mar-23	01-Mar-23	14-Mar-23	21	0%		
19W10.H.VD0B790	Removal of Pier 8 Platform		6	15-Mar-23	21-Mar-23	15-Mar-23	21-Mar-23	31	0%		
ACL P3 (26m)											
19W10.H.VD0B800	Founding Assessment Repor	rt	6	01-Aug-22	06-Aug-22	23-Nov-22 A	01-Dec-22 A		100%	1	
Piling Works											
Pile 1					1						
19W10.H.VD0A450	Casing Installation and Soil E	Excavation	6	26-Nov-22	03-Dec-22	18-Nov-22 A	01-Feb-23	21	0%		
19W10.H.VD0B810	RCD Rock Drilling		5	02-Feb-23	07-Feb-23	02-Feb-23	07-Feb-23	21	0%		RCD Rock Drilling
19W10.H.VD0B820	Air-Lifting, Steel Cage Installa	ation, Concreting and Backfilling	5	08-Feb-23	13-Feb-23	08-Feb-23	13-Feb-23	21	0%		Air-Lifting, Steel Cage Installation, Concreting and E
Pile 2							1				
19W10.H.VD0A460	Casing Installation and Soil E	Excavation	6	15-Dec-22	22-Dec-22	18-Nov-22 A	09-Dec-22 A		100%		
19W10.H.VD0B830	RCD Rock Drilling		5	22-Dec-22	30-Dec-22	10-Dec-22 A	17-Dec-22 A			ock Drilling	
19W10.H.VD0B840	Air-Lifting, Steel Cage Installa	ation, Concreting and Backfilling	5	30-Dec-22	06-Jan-23	18-Dec-22 A	20-Dec-22 A		100%	ncreting and Backfilling	
Pile 3											
19W10.H.VD0A470	Casing Installation and Soil E	Excavation	6	13-Jan-23	20-Jan-23	18-Nov-22 A	21-Dec-22 A		100%		
19W10.H.VD0B850	RCD Rock Drilling		5	20-Jan-23	30-Jan-23	22-Dec-22 A	17-Feb-23	26	0%	RCD Rock Drilling	
19W10.H.VD0B860	Air-Lifting, Steel Cage Installa	ation, Concreting and Backfilling	5	18-Feb-23	23-Feb-23	18-Feb-23	23-Feb-23	26	0%		Air-Lifting, Steel Cage Installation, C
Sonic & Interface Core	Test for ACL P3										
19W10.H.VD0A490	Sonic & Interface Core Test		11	24-Feb-23	08-Mar-23	24-Feb-23	08-Mar-23	26	0%		
19W10. H. VD0B870	Removal of Pier 3 Platform		6	09-Mar-23	15-Mar-23	09-Mar-23	15-Mar-23	36	0%		
Testing and Statutory Doc	ument Submission for Complet	lion									
19W10.H.VD0A500	Submit BA14 and Completion	n Report for 1st Batch Pipe Group	3	15-Mar-23	18-Mar-23	15-Mar-23	18-Mar-23	21	0%		
19W10.H.VD0B880	Selection of Pile for Full Core	e Drilling Test	12	18-Mar-23	01-Apr-23	18-Mar-23	01-Apr-23	21	0%		
Marine Substructure Works											
19W10.U.SD01	BA8 for PIIe Cap and Supers	tructure (P5 and P6)	23	27-Jan-23	22-Feb-23	27-Jan-23	22-Feb-23	-44	0%	BA8 fc	r PIIe Cap and Superstructure (P5 and P6)
19W10.U.SD02	BA10 for PIIe Cap and Super	rstructure (P5 and P6)	5	23-Feb-23	28-Feb-23	23-Feb-23	28-Feb-23	-44	0%		BA10 for PIIe Cap
19W10.U.SD17	Off-site fabrication and delive	ery for steel shell	28	27-Jan-23	28-Feb-23	27-Jan-23	28-Feb-23	-44	0%	Of	f-site fabrication and delivery for steel shell
P5 Substructure		-									
19W10.U.SD22	P5 Cofferdam Installation and	d Pile Cap Construction	24	01-Mar-23	28-Mar-23	01-Mar-23	28-Mar-23	-44	0%		P5 Coffere
19W10.U.SD42	P5 Pier Erection		21	29-Mar-23	26-Apr-23	29-Mar-23	26-Apr-23	-9	0%		
P6 Substructure			I	1							
19W10.U.SD52	P6 Cofferdam Installation and	d Pile Cap Construction	24	29-Mar-23	29-Apr-23	29-Mar-23	29-Apr-23	-44	0%		
Marine Viaduct Erection											
ACL P3 Span											
19W10.U.SD367	Fabrication and Delivery of B	Bearing (for P3 & P8)	180	31-Dec-22	18-Aug-23	31-Dec-22	18-Aug-23	87	0%	cation and Delivery of Bearing (for P3 & Pa	3)
Fender Installation											
19W10.A.C0W855	Off-site fabrication and delive	ery	160	31-Dec-22	24-Jul-23	31-Dec-22	24-Jul-23	136	0%	Off-site fabrication and delive	

	Actual LOE	•	Crit Milestone	Droinet ID: C10W10/01 DWD C M10	Data Date: 31-Dec-22	Date
	Remaining LOE	♦	Actual Milestone	Project ID: C19W10/01-DWP-C-M10	Printed: 07-Jan-23 14:28	26-Feb-22
	Actual Work	₽	Start Constraint	Three-Month Rolling Programme (as of 31 December 2022)	Layout: C19W10/01 ACL 3MR M10	10-May-22
	Remaining Work		₽ Finish Constraint		TASK filter: 3 Mths Rolling.	22-Aug-22
	Critical Remaining Work	٩	No Predecessors	r aye 2 01 2		31-Dec-22
♦ ♦	Milestone		No Successors			05-Jan-23

	2023			
	Feb		Ma	
	13		14	
	_			
	RCD Rock Drilling			
	, Concreting and Back	filling		
	, concreating and back			
	Sonic & Inter	ace Core Test		
			of Pier 8 Platform	
ng [
Backf	illing			
	[
Concre	eting and Backfilling			
	Sonic & Interface Co	re Test		
	I	Removal of Pier 3 F	Platform	
Subr	mitBA14 and Complet			
	S	election of Pile for	Full Core Drilling Test	
	o , , , , , , , , , , , , , , , , , , ,	1.50)		
p and	Superstructure (P5 an	d P6)		
dam li	nstallation and Pile Ca			
dan i			P	5 Pier Erection
		P6 Cofferdam	Installation and Pile Ca	ap Construction
				·
	Βονία		Checked	
	Revis	ion	Checked	Approved
22	Initial Works Prog	sion	DW	Approved BH
22	Initial Works Proc Detailed Works F	sion gramme Programme	DW DW	Approved BH BH
22 22 22	Initial Works Proc Detailed Works F Detailed Works F	sion gramme Programme	DW DW DW	Approved BH BH RN
22 22	Initial Works Proc Detailed Works F	sion gramme Programme Programme	DW DW	Approved BH BH

Appendix C. Construction Works Area

Marine Section



Appendix D. Environmental Site Inspection and Monitoring Schedule

ACL Environmental Monitoring and Site Inspection Schedule for Dec 2022

Dec-22 Sunday Saturday Monday Tuesday Wednesday Thursday Friday 1 2 3 Water Quality Monitoring Water Quality Monitoring mid- ebb: mid- ebb: 20:51 9:14 nid- flood: 14:52 nid- flood: 16:09 4 5 6 7 8 9 10 Environmental Site Inspection Water Quality Monitoring Water Quality Monitoring Water Quality Monitoring mid- ebb: 11:52 nid- ebb: 13:07 mid- ebb: 14:1 mid- flood: nid- flood: nid- flood: 17:24 7:57 9:19 17 11 12 13 14 15 16 **Environmental Site Inspection** Water Quality Monitoring Water Quality Monitoring Water Quality Monitoring mid- ebb: mid- ebb: 3:41 nid- ebb: 4:58 20:46 nid- flood: mid- flood: 15:59 nid- flood: 17:21 14:32 20 21 22 23 24 18 19 **Environmental Site Inspection** Water Quality Monitoring Water Quality Monitoring Water Quality Monitoring mid- ebb: mid- ebb: 10:24 mid- ebb: 12:16 13:52 mid-flood: 16:05 nid- flood: 6:55 nid- flood: 8:40 25 26 27 28 29 30 31 Environmental Site Inspection Water Quality Monitoring Water Quality Monitoring Water Quality Monitoring mid- ebb: mid- ebb: mid- ebb: 16:21 18:41 7:14 mid- flood: mid- flood: nid- flood: 11:08 12:54 14:28 Notes:

ACL Environmental Monitoring and Site Inspection Schedule for Jan 2023

Jan-23

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
1	2	3	4	5	6	7	
		Environmental Site Inspection					
		Water Quality Monitoring		Water Quality Monitoring		Water Quality Moni	•
		mid- ebb: 10:55		mid- ebb: 12:1		mid- ebb:	13:23
		mid-flood: 16:09		mid-flood: 7:2		mid- flood:	8:33
8	9	_10	11	12	13	14	
		Environmental Site Inspection					
		Water Quality Monitoring		Water Quality Monitoring		Water Quality Moni	<u> </u>
		mid- ebb: 15:03		mid- ebb: 16:2		mid- ebb:	18:09
		mid-flood: 10:05		mid-flood: 11:0		mid- flood:	12:16
15	16	17	18	19	20	21	
		Environmental Site Inspection					
		Water Quality Monitoring		Water Quality Monitoring		Water Quality Moni	-
		mid- ebb: 8:33		mid- ebb: 11:1		mid- ebb:	12:58
		mid-flood: 14:20		mid-flood: 16:0		mid- flood:	7:49
22	23	24	25	26	27	28	
					Environmental Site Inspection		
		Water Quality Monitoring		Water Quality Monitoring		Water Quality Moni	U
		mid- ebb: 15:15		mid- ebb: 16:5		mid- ebb:	18:51
		mid-flood: 9:53		mid-flood: 11:0	9	mid- flood:	12:22
29	30	31					
		Environmental Site Inspection Water Quality Monitoring					
		,					
		mid- ebb: 22:23 mid- flood: 9:45					
		Notes:	undeted if the contractor confi		and used hot was a 22/1/2022 (Su	a) and OF (1 (2002) (Mad)	
		(1) The schedule will be further t	ipuated if the contractor confi	rms no construction works will be o	onducted between 22/1/2023 (Su	n) anu 25/1/2023 (Wed).	

Appendix E. Calibration Certificates



REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. Date of Issue Page No. : R-BB100113 : 28 October 2022 : 1 of 2

PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd. Flat 2207, Yu Fun House Yu Chui Court, Shatin New Territories (HK) Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment :	YSI ProDSS (Multi-Parameters)
Manufacturer :	YSI (a xylem brand)
Serial Number :	16H104233
Date of Received :	28 October 2022
Date of Calibration :	28 October 2022
Date of Next Calibration :	27 January 2023
Request No. :	D-BB100113

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500 H ⁺
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March
	2008: Working Thermometer Calibration Procedure
Salinity	APHA 21e 2520 B
Dissolved oxygen	APHA 21e 4500 O
Turbidity	APHA 21e 2130 B
Conductivity	APHA 21c 2510 B

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.04	0.04	Satisfactory
7.42	7.50	0.08	Satisfactory
10.01	10.18	0.17	Satisfactory

Tolerance of pH value should be less than ± 0.2 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
10	10.0	0.0	Satisfactory
20	19.9	-0.1	Satisfactory
40	39.9	-0.1	Satisfactory

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

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.19	1.90	Satisfactory
20	20.33	1.65	Satisfactory
30	30.48	1.60	Satisfactory

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

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED SIGNATORY:

LEE Chumping

Assistant Manager (Chemical Testing)

This report shall not be reproduced unless with prior written approval from this laboratory



REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.	: R-BB100113		
Date of Issue	: 28 October 2022		
Page No.	: 2 of 2		

(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
7.65	8.00	0.35	Satisfactory
4.65	4.33	-0.32	Satisfactory
2.18	2.00	-0.18	Satisfactory
0.46	0.50	0.04	Satisfactory

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

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.10		Satisfactory
10	9.86	-1.4	Satisfactory
20	20.28	1.4	Satisfactory
100	100.59	0.6	Satisfactory
800	797.25	-0.3	Satisfactory

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

(6) Conductivity

Expected Reading (µS/cm at 25°C)	Display Reading	Tolerance (%)	Result
146.9	138.6	-5.65	Satisfactory
1412	1370.9	-2.91	Satisfactory
12890	12684	-1.6	Satisfactory
58670	57921	-1.28	Satisfactory
111900	111663	-0.21	Satisfactory

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

Remark(s)

•The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards. •The results relate only to the calibrated equipment as received

The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

"Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.

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

--- END OF REPORT ---



Test Report No. Date of Issue Page No. : R-BB090082 : 19 September 2022 : 1 of 2

PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd. Flat 2207, Yu Fun House Yu Chui Court, Shatin New Territories (HK) Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment :	YSI ProDSS (Multi-Parameters)
Manufacturer :	YSI (a xylem brand)
Serial Number :	17E100747
Date of Received :	16 September 2022
Date of Calibration :	16 September 2022
Date of Next Calibration :	15 December 2022
Request No :	D-BB090082

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500 H+
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March
	2008: Working Thermometer Calibration Procedure
Salinity	APHA 21e 2520B
Dissolved oxygen	APHA 21e 4500 O
Turbidity	APHA 21c 2130B
Conductivity	APHA 21e 2510B

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	3.95	-0.05	Satisfactory
7.42	7.37	-0.05	Satisfactory
10.01	9.94	-0.07	Satisfactory

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

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
40	40,1	0.1	Satisfactory
30	30.1	0,1	Satisfactory
10	10.0	0.0	Satisfactory

Tolerance of Temperature should be less than $\pm\,2.0$ (^{o}C)

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.19	1.90	Satisfactory
20	20.43	2.15	Satisfactory
30	30.33	1.10	Satisfactory

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

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED SIGNATORY:

LEE Chun-ning

Assistant Manager (Chemical Testing)

This report shall not be reproduced unless with prior written approval from this laboratory



Test Report No.	
Date of Issue	
Page No.	

: R-BB090082 : 19 September 2022 : 2 of 2

(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
7.38	7.58	0.20	Satisfactory
4.70	4.86	0.16	Satisfactory
1.48	1.81	0.33	Satisfactory
0.45	0.39	-0.06	Satisfactory

Tolerance of Dissolved oxygen should be less than ± 0.5 (mg/L)

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.10		Satisfactory
10	9.86	-1.40	Satisfactory
20	19.85	-0,70	Satisfactory
100	98.96	-1.00	Satisfactory
800	817.32	2.20	Satisfactory

Tolerance of Turbidity should be less than ± 10.0 (%)

(6) Conductivity

Expected Reading (µS/cm at 25°C)	Display Reading	Tolerance (%)	Result
146.9	136.8	-6.88	Satisfactory
1412	1372.4	-2.8	Satisfactory
12890	12522.6	-2.85	Satisfactory
58670	56891	-3.03	Satisfactory
111900	112764	0.77	Satisfactory

Tolerance of Conductivity should be less than ± 10.0 (%)

Remark(s)

•The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards. •The results relate only to the calibrated equipment as received

The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

"Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.

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

---- END OF REPORT ----



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

Unit 10, 5/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong Email: info@qualityprotest.com; Website: www.qualityprotest.com Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. Date of Issue Page No. : R-BB120080 : 20 December 2022 : 1 of 2

PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd. Flat 2207, Yu Fun House Yu Chui Court, Shatin New Territories (HK) Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment :	YSI ProDSS (Multi-Parameters)
Manufacturer :	YSI (a xylem brand)
Serial Number :	17E100747
Date of Received :	20 December 2022
Date of Calibration :	20 December 2022
Date of Next Calibration :	19 March 2023
Request No. :	D-BB120080

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500 H ⁺
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March
	2008: Working Thermometer Calibration Procedure
Salinity	APHA 21e 2520 B
Dissolved oxygen	APHA 21c 4500 O
Turbidity	APHA 21e 2130 B
Conductivity	APHA 21e 2510 B

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.02	0.02	Satisfactory
7.42	7.45	0.03	Satisfactory
10.01	10.06	0.05	Satisfactory

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

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
15	14.9	-0.1	Satisfactory
30	30.0	0.0	Satisfactory
45	49.9	4.9	Satisfactory

Tolerance of Temperature should be less than \pm 2.0 (^{o}C)

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.94	-0.60	Satisfactory
20	20.21	1.05	Satisfactory
30	30.20	0.67	Satisfactory

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

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED SIGNATORY:

LEE Chun-ning

Assistant Manager (Chemical Testing)

This report shall not be reproduced unless with prior written approval from this laboratory



Test Report No.	:]
Date of Issue	:2
Page No.	:2

: R-BB120080 : 20 December 2022 : 2 of 2

(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
9.37	9.60	0.23	Satisfactory
7.08	6.64	-0.44	Satisfactory
4.84	4.48	-0.36	Satisfactory
3.10	2.81	-0.29	Satisfactory

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

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.10	85-1	Satisfactory
10	9.85	-1.50	Satisfactory
20	19.77	-1.20	Satisfactory
100	99.16	-0.80	Satisfactory
800	796.62	-0.40	Satisfactory

Tolerance of Turbidity should be less than ± 10.0 (%)

(6) Conductivity

Expected Reading (µS/cm at 25°C)	Display Reading	Tolerance (%)	Result
146.9	151,2	2.93	Satisfactory
1412	1366	-3.26	Satisfactory
12890	13610	5.59	Satisfactory
58670	56516	-3.67	Satisfactory
111900	111612	-0.26	Satisfactory

Tolerance of Conductivity should be less than ± 10.0 (%)

Remark(s)

•The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards. •The results relate only to the calibrated equipment as received

•The performance of the equipment stated is checked with independent reference material and results compared against a calibrated secondary source. •"Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.

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

---- END OF REPORT ----



Test Report No. Date of Issue Page No. : R-BB090081 : 19 September 2022 : 1 of 2

PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd. Flat 2207, Yu Fun House Yu Chui Court, Shatin New Territories (HK) Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment :	YSI ProDSS (Multi-Parameters)
Manufacturer :	YSI (a xylem brand)
Serial Number :	16H104234
Date of Received :	16 September 2022
Date of Calibration :	16 September 2022
Date of Next Calibration :	15 December 2022
Request No. :	D-BB090081

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500 H+
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March
	2008: Working Thermometer Calibration Procedure
Salinity	APHA 21c 2520B
Dissolved oxygen	APHA 21e 4500 O
Turbidity	APHA 21e 2130B
Conductivity	APHA 21e 2510B

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	3.97	-0.03	Satisfactory
7.42	7.38	-0.04	Satisfactory
10.01	9.92	-0.09	Satisfactory

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

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
40	40.1	0.1	Satisfactory
30	30,1	0.1	Satisfactory
10	10.0	0.0	Satisfactory

Tolerance of Temperature should be less than $\pm\,2.0$ ($^\circ C$)

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.17	1.70	Satisfactory
20	20.50	2.50	Satisfactory
30	30.31	1.03	Satisfactory

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

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED SIGNATORY:

EEE-Chun-ning

Assistant Manager (Chemical Testing)

This report shall not be reproduced unless with prior written approval from this laboratory



Test Report No.	
Date of Issue	
Page No.	34

R-BB090081 19 September 2022 2 of 2

(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
7.38	7.60	0.22	Satisfactory
4.70	4.85	0.15	Satisfactory
1.48	1,80	0.32	Satisfactory
0.45	0.40	-0.05	Satisfactory

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

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.10		Satisfactory
10	9.84	-1.60	Satisfactory
20	19.82	-0.90	Satisfactory
100	97.79	-2.20	Satisfactory
800	819.11	2,40	Satisfactory

Tolerance of Turbidity should be less than ± 10.0 (%)

(6) Conductivity

Expected Reading (µS/cm at 25°C)	Display Reading	Tolerance (%)	Result
146.9	137.9	-6.13	Satisfactory
1412	1380.2	-2.25	Satisfactory
12890	12637.4	-1.96	Satisfactory
58670	57116	-2.65	Satisfactory
111900	112537	0.57	Satisfactory

Tolerance of Conductivity should be less than ± 10.0 (%)

Remark(s)

"The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards. The results relate only to the calibrated equipment as received

•The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

"Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.

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

---- END OF REPORT ----



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

Unit 10, 5/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong Email: info@qualityprotest.com; Website: www.qualityprotest.com Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. Date of Issue Page No. : R-BB120079 : 20 December 2022 : 1 of 2

PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd. Flat 2207, Yu Fun House Yu Chui Court, Shatin New Territories (HK) Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment :	YSI ProDSS (Multi-Parameters)
Manufacturer :	YSI (a xylem brand)
Serial Number :	16H104234
Date of Received :	20 December 2022
Date of Calibration :	20 December 2022
Date of Next Calibration :	19 March 2023
Request No. :	D-BB120079

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500 H+
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March
	2008: Working Thermometer Calibration Procedure
Salinity	APHA 21e 2520 B
Dissolved oxygen	APHA 21e 4500 O
Turbidity	APHA 21c 2130 B
Conductivity	APHA 21e 2510 B

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.08	0.08	Satisfactory
7,42	7.36	-0.06	Satisfactory
10.01	9.85	-0.16	Satisfactory

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

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
15	14.9	-0.1	Satisfactory
30	30.0	0.0	Satisfactory
45	49.9	4.9	Satisfactory

Tolerance of Temperature should be less than $\pm\,2.0$ ($^\circ C$)

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.92	-0.80	Satisfactory
20	20.19	0.95	Satisfactory
30	29.88	-0.40	Satisfactory

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

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED SIGNATORY:

LEE Chun-hing/ Assistant Manager (Chemical Testing)

This report shall not be reproduced unless with prior written approval from this laboratory



Test Report No.	
Date of Issue	
Page No.	

: R-BB120079 : 20 December 2022 : 2 of 2

(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
9.37	9.62	0.25	Satisfactory
7.08	6.80	-0.28	Satisfactory
4.84	4.40	-0.44	Satisfactory
3.10	2,91	-0.19	Satisfactory

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

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.10	it.	Satisfactory
10	9.82	-1.84	Satisfactory
20	19.84	-0.84	Satisfactory
100	98.80	-1.24	Satisfactory
800	797.46	-0.34	Satisfactory

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

(6) Conductivity

Expected Reading (µS/cm at 25°C)	Display Reading	Tolerance (%)	Result
146.9	150.1	2.18	Satisfactory
1412	1389	-1.63	Satisfactory
12890	13089	1.54	Satisfactory
58670	59635	1.64	Satisfactory
111900	110417	-1.33	Satisfactory

Tolerance of Conductivity should be less than ± 10.0 (%)

Remark(s)

•The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards. •The results relate only to the calibrated equipment as received

• The performance of the equipment stated is checked with independent reference material and results compared against a calibrated secondary source. • "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.

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

--- END OF REPORT ---

Appendix F. Event and Action Plan

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

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

		Ac	tion	
Event	ET	IEC	AAHK / PM	Contractor
	Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of limit level.	,		three working days; 6. Implement the agreed mitigation measures.
Limit level being exceeded by two or more consecutive sampling days	 Repeat <i>in-situ</i> measurement to confirm findings; Identify reasons for non-compliance and source(s) of impact; Inform IEC, Contractor and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, AAHK / PM and Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days. 	PM accordingly; 3. Assess the effectiveness of implemented mitigation measures.	 and Contractor on the proposed mitigation measures Request Contractor to critically review th working methods; Make agreement on the mitigation measures to be implemented; Assess the 	 and confirm notification of non- compliance in writing; e 2. Rectify unacceptabl practices; 3. Check all plant and equipment; 4. Consider changes of working method; 5. Discuss with ET, IE and AAHK / PM and propose mitigation measures to IEC ar AAHK / PM within 3 working days; 6. Implement the agreed mitigation measures:

Appendix G. Monitoring Data and Graphical Plots

Water Quality Monitoring

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

Monitoring	Weather	Sea Condition	Sampling	Water Depth	Sampling Dep	oth (m)		mperature (°C)	p	рН	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved (mg/l		Turbidity	(NTU)	Suspende (mg	
Station	Condition		Time	(m)	Company 2 op	()	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	23.0	23.1	7.9	7.9	29.3	29.4	87.3	87.4	6.2		7.4		10.3	
					Ganado	1.0	23.1	20.1	7.9	7.0	29.4	20.1	87.4	07.1	6.2	6.3	7.5		10.8	1
C1	Misty	Moderate	19:19	8.6	Middle	4.3	23.0	23.1	7.9	7.9	29.4	29.4	91.0	91.1	6.4		8.2	8.4	9.4	9.2
						4.3	23.1	-	7.9	-	29.4	-	91.1	-	6.5		8.1		9.1	4
					Bottom	7.6	23.0	23.0	7.9	7.9	29.4	29.4	95.0	95.2	6.8	6.8	9.4		7.6	4
		1		1		7.6	23.0		7.9		29.3		95.4		6.8		9.5		7.9	<u> </u>
					Surface	1.0 1.0	23.0 23.0	23.0	7.9 7.9	7.9	29.1 29.0	29.1	87.6 87.6	87.6	6.2 6.2	-	7.2 7.2		8.5 8.9	i i
						5.6	23.0		7.9		29.0		88.0		6.3	6.2	8.1		10.0	i i
C2	Misty	Moderate	19:43	11.2	Middle	5.6	23.0	23.0	7.9	7.9	29.1	29.2	88.1	88.1	6.2	-	8.2	8.1	10.0	11.0
					_	10.2	23.0		7.9		29.3		94.5		6.7		9.0		14.2	i i
					Bottom	10.2	23.0	23.0	7.9	7.9	29.0	29.2	94.2	94.4	6.8	6.8	9.0		13.8	i i
					Surface	1.0	22.7	22.7	7.9	7.9	28.1	28.2	94.2	94.2	6.8		8.1		12.8	
					Sunace	1.0	22.7	22.1	7.9	7.9	28.2	28.2	94.1	94.2	6.8	6.8	8.2		12.4	i i
M1	Misty	Moderate	19:31	5.8	Middle	-	-	_	-	_	-	-	-		-	0.0	-	8.6	-	12.0
IVII	willoty	Woderate	10.01	0.0	Middle	-	-		-		-		-		-		-	0.0	-	12.0
					Bottom	4.8	22.7	22.7	7.9	7.9	27.9	28.0	97.6	97.5	7.0	7.0	9.1		11.1	1
						4.8	22.7		7.9		28.1		97.3		7.0		9.0		11.7	<u> </u>
					Surface	1.0	22.7	22.7	7.9	7.9	28.2	28.2	95.2	95.3	6.8	_	6.8		10.1	4
						1.0	22.7		7.9		28.2		95.4	1	6.9	6.9	6.8		10.6	i i
M2	Misty	Moderate	19:36	5.6	Middle	-	-	-	-	-	-	-	-		-	-	-	7.1	-	10.8
						4.6	22.7		7.9		28.1		97.7		7.0		7.5		11.4	i i
					Bottom	4.6	22.7	22.7	7.9	7.9	28.2	28.2	97.8	97.8	7.0	7.0	7.3		11.4	i
						1.0	22.8		7.9		28.4		89.3		6.4		7.4		11	<u> </u>
					Surface	1.0	22.8	22.8	7.9	7.9	28.3	28.4	89.8	89.6	6.4		7.4		11	i i
MO	Michi	Madarat	10:25	7.0	Middle	3.9	22.9	22.0	7.9	7.0	28.8	20.6	93.2	93.1	6.7	6.6	8.1	8.2	12	10
M3	Misty	Moderate	19:25	7.8	Middle	3.9	22.8	22.9	7.9	7.9	28.4	28.6	93.0	93.1	6.7		8.1	8.2	13	13
					Bottom	6.8	22.9	22.9	7.9	7.9	29.1	28.8	97.4	97.3	6.9	7.0	9.1		14	i –
					BUILUITI	6.8	22.8	22.9	7.9	1.9	28.5	20.0	97.2	91.5	7.0	1.0	9.0		15	i -

DA: Depth-averaged

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

Water Quality Monitoring

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

Match Quu		toring Resu		1			110001	luc			r								-	
Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	oth (m)	Water Te	emperature (°C)	p	ъH	Salin	ity (ppt)	DO Satu	ation (%)	Dissolved ((mg/l		Turbidity((NTU)	Suspende (mg/	
Station	Condition		Time	(m)	5	. ,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	22.9	22.9	7.9	7.9	28.2	28.3	88.6	88.0	6.3		5.2		8.6	
					Odiface	1.0	22.9	22.5	7.9	7.5	28.4	20.0	87.4	00.0	6.3	6.4	5.2		8.2	1
C1	Misty	Moderate	13:40	9.4	Middle	4.7	22.9	23.0	7.9	7.9	28.6	28.6	88.6	88.2	6.5	0	7.1	6.8	9.6	9.5
	,					4.7	23.0		7.9	-	28.5		87.8		6.4		7.1		9.3	1
					Bottom	8.4	23.0	23.0	7.8	7.9	28.7	28.5	93.6	91.1	6.8	6.7	8.2		10.8	1
			1			8.4	22.9		7.9		28.3		88.5	1	6.5		8.1		10.3	
					Surface	1.0	22.9 23.0	23.0	7.8 7.8	7.8	28.5 29.1	28.8	87.1 87.1	87.1	6.4 6.2	-	7.3 7.3		9.4 9.0	1
						4.9	23.0		7.8		29.1		89.2		6.3	6.3	8.1		9.0	1
C2	Misty	Moderate	13:20	9.8	Middle	4.9	23.0	23.0	7.8	7.8	29.3	29.2	89.2	89.2	6.3		8.1	8.1	10.5	10.3
					_	8.8	22.9		7.8		29.1		91.7		6.7		8.9		11.1	1
					Bottom	8.8	23.0	23.0	7.8	7.8	29.0	29.1	91.7	91.7	6.5	6.6	8.9		11.4	1
					Surface	1.0	22.8	22.8	7.9	7.9	28.0	28.1	88.8	88.8	6.4		6.8		12.8	
					Sunace	1.0	22.8	22.0	7.9	7.9	28.1	20.1	88.7	00.0	6.4	6.4	6.9		12.4	1
M1	Misty	Moderate	13:30	4.8	Middle	-	-	_	-	-	-	-	-		-	0.4	-	7.2	-	11.0
	willoty	Woderate	10.00	4.0	Middle	-	-		-		-		-		-		-	1.2	-	11.0
					Bottom	3.8	22.7	22.8	7.9	7.9	27.9	28.0	94.8	94.8	7.0	7.0	7.5		9.6	1
			-	1		3.8	22.8		7.9		28.1		94.8		6.9		7.6		9.3	
					Surface	1.0 1.0	22.8 22.9	22.9	7.9 7.9	7.9	28.1 28.2	28.2	89.7 86.7	88.2	6.5 6.3	-	6.0		11.0 10.7	1
									7.9		28.2					6.4	5.9			1
M2	Misty	Moderate	13:32	4.8	Middle	-	-	-	-	-	-	-	-		-	-	-	6.1	-	11.6
						3.8	22.8		- 7.9		- 28.1		91.0		6.5	-	6.2		- 12.6	1
					Bottom	3.8	22.0	22.9	7.9	7.9	28.1	28.1	87.7	89.4	6.4	6.5	6.3		12.0	1
						1.0	22.8		7.8		28.0		88.6		6.5		5.6		9	
					Surface	1.0	22.8	22.8	7.9	7.9	28.0	28.0	88.6	88.6	6.4	1 <u>.</u> -	5.6		8	1
MO	Michi	Madarat	10.00	6.0	Middle	3.0	22.9	22.0	7.8	7.0	28.1	00.4	88.2	00.0	6.5	6.5	6.8	6 F	9	
M3	Misty	Moderate	13:36	6.0	Middle	3.0	22.8	22.9	7.9	7.9	28.0	28.1	88.9	88.6	6.4	1	6.9	6.5	9	9
					Bottom	5.0	22.9	22.9	7.8	7.9	28.2	28.1	88.1	88.6	6.4	6.4	7.1		11	1
					Bollom	5.0	22.8	22.3	7.9	1.5	28.0	20.1	89.1	00.0	6.4	0.4	7.0		10	

DA: Depth-averaged

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

Water Quality Monitoring

Water Quality Monitoring Results on 03 December 22 during Mid-Ebb Tide

Trator Quu		loning Kesu				during wild-									Dissolved	Oxvaen			Suspende	d Solide
Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	oth (m)	Water Te	emperature (°C)	F	bН	Salin	ity (ppt)	DO Satur	ation (%)	(mg/l		Turbidity((NTU)	(mg/	
Station	Condition		Time	(m)			Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	22.6	22.6	8.1	8.1	32.9	32.9	90.8	90.3	6.4		3.7		5.4	
					Odnace	1.0	22.6	22.0	8.1	0.1	32.9	02.0	89.7	50.0	6.3	6.3	3.9		4.2	1
C1	Cloudy	Moderate	09:48	10.4	Middle	5.2	22.7	22.8	8.2	8.2	33.0	33.1	90.2	89.5	6.3	0.0	6.6	6.2	4.7	5.2
0.	cicuuy	moderate	00110			5.2	22.8	22.0	8.1	0.2	33.1	00.1	88.8	0010	6.2		6.0	0.2	4.6	0
					Bottom	9.4	22.7	22.8	8.2	8.2	33.1	33.1	91.7	90.4	6.4	6.3	8.6		5.7	1
			-			9.4	22.9		8.1		33.1		89.0		6.2		8.3		6.3	
					Surface	1.0	23.0	23.0	8.0	8.0	33.2	33.2	88.6	88.5	6.2	-	4.1		5.2	1
						1.0	23.0		8.0		33.2		88.3		6.1	6.1	4.3		5.8	1
C2	Cloudy	Moderate	09:27	10.3	Middle	5.2	23.0	23.0	8.0 8.0	8.0	33.2 33.2	33.2	88.8	88.6	6.1	-	5.2	5.2	5.7	5.2
						5.2 9.3	23.0 22.9						88.3 89.8		6.1		4.2 6.9		4.9 4.4	1
					Bottom	9.3	22.9	23.0	8.1 8.0	8.1	33.2 33.2	33.2	89.8 88.1	89.0	6.2 6.1	6.2	6.9		4.4	1
						1.0	23.0		8.1		32.5		88.6		6.2		5.8		4.9 5.6	
					Surface	1.0	23.0	23.0	8.1	8.1	32.5	32.7	87.5	88.1	6.1		5.5		5.5	1
						-	-		-				-		-	6.2	-		-	1
M1	Cloudy	Moderate	09:37	5.8	Middle	-	-	-	-	-	-	-	-	-	-		-	6.9	-	5.2
					_	4.8	23.0		8.1		33.3		89.3		6.2		8.2		5.0	1
					Bottom	4.8	23.0	23.0	8.1	8.1	33.1	33.2	88.0	88.7	6.1	6.2	8.1		4.5	1
					0 (1.0	22.9	00.0	8.1	0.4	32.5	00.5	86.0	05.0	6.0		3.6		3.2	
					Surface	1.0	22.9	22.9	8.0	8.1	32.5	32.5	85.1	85.6	5.9	6.0	3.1		3.5	1
M2	Cloudy	Moderate	09:31	5.0	Middle	-	-		-		-	-	-		-	6.0	-	3.8	-	3.8
IVIZ	Cloudy	woderate	09:31	5.0	ivildale	-	-	-	-	-	-	-	-	-	-		-	3.0	-	3.0
					Bottom	4.0	23.0	23.0	8.1	8.1	33.1	33.0	87.4	86.6	6.1	6.1	4.3		4.0	1
					Bollom	4.0	23.0	23.0	8.1	0.1	32.8	33.0	85.7	00.0	6.0	0.1	4.2		4.3	. <u> </u>
					Surface	1.0	22.8	22.8	8.1	8.1	32.7	32.8	90.2	90.3	6.3		5.7		5	1
					Gunado	1.0	22.8	22.0	8.1	0.1	32.8	02.0	90.3	50.0	6.3	6.4	6.9		3	1
M3	Cloudy	Moderate	09:43	6.5	Middle	3.3	22.8	22.8	8.2	8.2	33.2	33.2	91.6	91.8	6.4	0.1	13.7	11.4	4	4
	cicacy	mederalo	001.0	0.0		3.3	22.8		8.2	0.2	33.2	00.2	92.0	0.10	6.4		13.9		4	
					Bottom	5.5	22.8	22.8	8.2	8.2	33.2	33.2	93.8	93.7	6.5	6.5	14.7		4	1
	1		1		201000	5.5	22.8		8.2	0.2	33.2	00.2	93.6		6.5	0.0	13.5		4	i

DA: Depth-averaged

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

Water Quality Monitoring

Water Quality Monitoring Results on 03 December 22 during Mid-Flood Tide

Water Qua		toring Resu			03 December 22	uuning Milu		lue												
Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	th (m)	Water Te	mperature (°C)	p	σΗ	Salin	ity (ppt)	DO Satu	ration (%)	Dissolved ((mg/l		Turbidity((NTU)	Suspende (mg/	
Station	Condition		Time	(m)			Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	22.8	22.8	8.0	8.0	33.0	33.0	92.8	92.5	6.5		3.8		5.6	
					Odiface	1.0	22.8	22.0	8.0	0.0	33.0	55.0	92.1	32.5	6.4	6.5	4.1		6.8	
C1	Cloudy	Moderate	15:14	10.5	Middle	5.3	22.7	22.7	8.0	8.0	33.0	33.0	92.9	92.4	6.6	0.0	4.8	6.2	6.8	6.2
						5.3	22.6		8.0		33.0		91.8		6.4		5.0		6.2	
					Bottom	9.5	22.5	22.6	8.0	8.0	33.0	33.0	94.7	93.3	6.6	6.5	9.5		5.9	
						9.5	22.6		8.0		33.0		91.8		6.4		10.0		5.6	
					Surface	1.0	22.7 22.7	22.7	8.3 8.3	8.3	33.0 33.0	33.0	91.5 90.9	91.2	6.5 6.5	-	4.2 4.2		5.3 5.6	
						5.1	22.7		8.3		33.0		90.9 91.3		6.5 6.5	6.5	4.2		5.6 6.0	
C2	Cloudy	Moderate	15:39	10.2	Middle	5.1	22.7	22.7	8.3	8.3	33.0	33.0	91.3	90.9	6.5		4.9 5.0	4.9	6.7	6.0
					_	9.2	22.7		8.3		33.1		91.9		6.6		5.8		6.5	
					Bottom	9.2	22.7	22.7	8.3	8.3	33.0	33.1	91.0	91.5	6.5	6.6	5.4		5.7	
					Surface	1.0	23.0	23.0	8.2	8.3	32.6	32.6	87.7	87.5	6.2		4.0		5.4	
					Sunace	1.0	23.0	23.0	8.3	0.3	32.6	32.0	87.3	67.5	6.2	6.2	3.9		4.1	
M1	Cloudy	Moderate	15:24	5.8	Middle	-	-		-	-	-	-	-	_	-	0.2	-	6.2	-	4.7
IVII	Cloudy	Moderate	10.24	5.0	Middle	-	-		-	-	-	-	-	_	-		-	0.2	-	4.7
					Bottom	4.8	23.1	23.1	8.2	8.2	32.9	33.0	88.2	87.7	6.3	6.3	9.0		4.8	
						4.8	23.1	-	8.2	-	33.1		87.1		6.2		7.7		4.6	
					Surface	1.0	23.2	23.2	8.0 8.0	8.0	32.6	32.7	90.1	89.2	6.4	-	4.5		5.9	
						1.0	23.1		8.0		32.8		88.2		6.3	6.4	4.1		7.1	
M2	Cloudy	Moderate	15:09	4.8	Middle	-	-	-	-	-	-	-	-		-	-	-	5.3	-	7.1
						3.8	23.0		8.0		32.9		- 90.6		- 6.4		- 6.2		- 8.1	
					Bottom	3.8	23.0	23.1	8.0	8.0	32.9	32.9	88.9	89.8	6.3	6.4	6.2		7.3	
						1.0	23.0		8.0		32.8		91.0		6.5		5.9		8	
					Surface	1.0	23.0	23.0	8.0	8.0	33.0	32.9	89.8	90.4	6.4	1	5.1		4	
MO	Olavel		45.00	7.0	NA: -U-U-	3.5	23.0	00.0	8.0	0.0	33.0	00.4	90.2	00.4	6.4	6.4	5.2	F 4	6	0
M3	Cloudy	Moderate	15:20	7.0	Middle	3.5	23.0	23.0	8.0	8.0	33.1	33.1	90.0	90.1	6.4	1	5.8	5.4	5	6
					Bottom	6.0	23.0	23.0	8.0	8.0	33.3	33.2	90.0	90.4	6.4	6.4	5.4		6	
					DUILUITI	6.0	23.0	23.0	8.0	0.0	33.0	33.Z	90.8	90.4	6.4	0.4	5.2		6	

DA: Depth-averaged

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

Water Quality Monitoring

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

C1 Fine Moderate 11:56 9.9 Surface 1.0 21.3 21.3 7.9			toring Resu			00 December 22			6												
Saidoi Conduitio Inte (int)			Sea Condition			Sampling Dep	oth (m)	Water Te	mperature (°C)	р	ЪН	Salin	ity (ppt)	DO Satur	ation (%)			Turbidity	(NTU)		
C1 Fine Moderate 11:56 9.9 Surface 10 21.3 7.9	Station	Condition		Time	(m)			Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $						Surface	1.0	21.3	21.3		7 0	32.0	32.0	92.0	92.0	6.8		3.1		5.5	
C1 Fine Moderate 11:56 9.9 Middle 5.0 21.3 7.9 7.9 7.0 <						Guilace		-	21.5	-	1.5		32.0	91.9	32.0		6.8				1
Image: bold in the section of the section o	C1	Fine	Moderate	11:56	9.9	Middle			21.3		79		32.0		91.9		0.0		40	5.5	5.6
1 1	01		moderate		0.0			-	2.110	-			02.0		0.110			-			0.0
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $						Bottom			21.3		7.9		32.0		91.3		6.7				1
C2 Fine Moderate 11:28 8.3 Middle 4.2 21.3 7.9			1		1										1	-					┝───
C2 Fine Moderate 11:28 8.3 Middle 4.2 21.3 7.9 7.9 7.9 31.9 31.9 91.4 91.4 6.7 6.8 3.1 3.3 5.0 5.0 Bottom 7.3 21.4 21.3 7.9 7.9 7.9 31.9 31.9 91.4 91.4 6.7 6.8 6.8 6.8 6.8 6.8 6.8 6.8 6.8 6.8 6.8 6.8 6.8						Surface			21.3		7.9		31.9		91.9						1
C2 Fine Moderate 11:28 8.3 Middle 4.2 21.3 7.9 7.9 31.9 91.3 91.4 6.7 6.7 3.1 3.7 4.7 Bottom 7.3 21.4 21.4 7.9 7.9 7.9 32.0 91.8 91.8 91.4 6.7 6.7 3.7 4.7 M Fine Moderate 11:43 4.8 Surface 1.0 20.7 7.9 7.9 31.3 31.3 90.4 90.4 6.8 6.7 6.8 6.8 7.0 7.0 7.9 7.9 7.9 7.9 7.9 7.9 7.9															1		6.8				i i
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	C2	Fine	Moderate	11:28	8.3	Middle			21.3		7.9		31.9	-	91.4		-		3.3	5.0	5.2
M1 Fine Calm Calm Surface 1.0 20.7 7.9								-		-						-		-			i i
Mag = Mag						Bottom			21.4		7.9		32.0		91.8		6.7				i i
$ M1 \ Fine \ Moderate \ 11:43 \ Has \ Middle \ 1.0 \ 20.7 \ 20.7 \ 7.9$														-		-		-			
$ \begin barrier Martin Marti$						Surface			20.7		7.9		31.3		90.4						i i
$ \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	144	Fine	Madarata	11.10	4.0	Middle	-	-		-				-		-	6.8	-	7.0	-	5.1
M2 Fine Calm 11:39 A.5 Bottom 3.8 20.7 20.7 7.9 31.3 31.3 90.7 90.7 6.8 6.8 7.0 5.5 M2 Fine Calm 11:39 A.5 Surface 1.0 20.7 7.9 7.9 31.2 31.2 90.6 90.6 6.8 6.8 7.0 5.5 M2 Fine Calm 11:39 A.5 Surface 1.0 20.7 7.9 7.9 31.2 31.2 90.6 90.6 6.8 6.8 3.1 31.3 31.3 31.2 90.6 90.6 6.8 6.8 7.0 6.8 7.0 6.8 7.0 6.8 7.0 6.8 7.0 7.0 7.9	IVII	Fine	woderate	11:43	4.0	Middle	-	-	-	-	-	-	-	-	1 -	-		-	7.0	-	5.1
M2 Fine Calm 11:39 Calm 11:49 Calm 11:49 Calm 11:49 Calm 11:49 Calm Calm 11:49 Calm						Bottom			20.7		70		31 3		90.7		6.8				l
M2 = Fine = Calm = 11:39 = A.5 =						Dottom		-	20.1	7.9	1.5	31.3	51.5	90.7	30.7		0.0	-			<u> </u>
M2 M3 Fine Calm 11:39 A.5 A						Surface			20.7		79		31.2		90.6						l
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $							1.0	20.7		7.9		31.2	•	90.6		6.8	6.8	3.1		6.8	1
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	M2	Fine	Calm	11:39	4.5	Middle			-	-	-	-	-			-	-		4.2		5.6
M3 Fine Calm 11:49 7.2 Bottom 3.5 20.7 7.9 7.9 7.9 7.9 31.3 90.1 90.1 6.7 6.7 5.3 5.6 M3 Fine Calm 11:49 7.2 Surface 1.0 20.8 20.8 7.9 7.9 31.5 31.5 91.6 91.6 6.8 3.9 3.9 4 M3 Fine Calm 11:49 7.2 Middle 3.6 20.9 20.9 7.9 7.9 31.6 31.6 91.6 91.7 91.7 6.8 3.9 3.8 4.4 6 Bottom 6.2 21.0 21.0 7.9 7.9 7.9 31.8 31.8 31.8 92.5 92.5 6.9 6.9 5.5 4										-		-				-					4
$ M3 Fine Fine Fine Calm 11:49 7.2 \frac{1.0}{0.4} \frac{1.0}{0.4} \frac{20.8}{0.9} \frac{7.9}{0.9} \frac{7.9}{7.9} \frac{31.5}{31.5} \frac{91.6}{91.6} \frac{91.6}{91.6} \frac{91.6}{91.6} \frac{6.8}{6.8} \frac{3.9}{3.9} \frac{4}{5} \frac{5}{6} 5$						Bottom			20.7		7.9		31.3		90.1		6.7				Í
$M3 Fine Calm 11:49 7.2 \frac{Surface}{1.0} \frac{20.8}{3.6} \frac{20.9}{20.9} \frac{7.9}{7.9} \frac{7.9}{31.5} \frac{31.5}{31.6} \frac{91.6}{91.7} \frac{91.6}{91.7} \frac{91.6}{91.7} \frac{3.9}{3.8} \frac{3.9}{3.8} \frac{3.9}{3.8} \frac{3.9}{3.8} \frac{3.9}{3.9} \frac{3.9}{5} \frac{3.9}{5} $		1		1				-							1	-					<u> </u>
$ M3 Fine Calm 11:49 7.2 Middle \frac{3.6}{3.6} \frac{20.9}{20.9} \frac{7.9}{7.9} \frac{7.9}{7.9} \frac{31.6}{31.6} \frac{91.7}{91.7} \frac{91.7}{91.7} \frac{6.8}{6.8} \frac{6.8}{3.9} \frac{4.4}{5} \frac{6.9}{5.5} + \frac{6.9}{5.5} \frac$						Surface			20.8		7.9		31.5		91.6		-				i i
Mi3 Fine Calm 11:49 7.2 Middle 3.6 20.9 7.9 7.9 31.6 31.0 91.7 6.8 3.9 4.4 5 Bottom 6.2 21.0 21.0 7.9 7.9 31.8 31.8 92.5 92.5 6.9 6.9 5.5 4										-							6.8				i –
Bottom 6.2 21.0 21.0 7.9 7.9 31.8 31.8 92.5 92.5 6.9 6.9 5.5 4	M3	Fine	Calm	11:49	7.2	Middle			20.9		7.9		31.6		91.7				4.4		5
						D					= 0										i –
						Bottom	6.2	21.0	21.0	7.9	7.9	31.8	31.8	92.5	92.5	6.8	6.9	5.5		5	i

DA: Depth-averaged

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

Water Quality Monitoring

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

		toring Resu			00 December 22	uunny wiu-		lue												
Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	oth (m)	Water Te	emperature (°C)	F	рH	Salin	ity (ppt)	DO Satu	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	21.1	21.1	8.0	8.0	31.8	31.8	93.5	93.5	6.9		4.4		3.2	
					Gunace	1.0	21.1	21.1	8.0	0.0	31.8	51.0	93.5	33.5	6.9	6.9	4.3		3.4	1
C1	Sunny	Rough	16:24	10.3	Middle	5.2	21.2	21.2	8.0	8.0	31.8	31.8	92.0	92.0	6.8	0.0	4.9	4.4	4.2	3.9
	,	0				5.2	21.2		8.0		31.8		92.0		6.8		4.9		4.1	1
					Bottom	9.3	20.9	20.9	8.0	8.0	31.9	31.9	91.8	91.8	6.8	6.8	4.0		4.2	4
			1			9.3	20.9		8.0		31.9		91.8	1	6.8		3.7		4.2	<u> </u>
					Surface	1.0 1.0	21.5 21.5	21.5	8.0 8.0	8.0	31.9 31.9	31.9	93.3 93.3	93.3	6.9 6.9	-	3.0 3.0		4.0 4.3	1
						5.4	21.3		7.9		31.9		93.3 91.7		6.7	6.8	3.0		4.3	i i
C2	Sunny	Moderate	16:49	10.8	Middle	5.4	21.3	21.3	7.9	7.9	31.9	31.9	91.7	91.7	6.7		3.5	4.7	4.6	4.4
						9.8	21.3		7.9		32.0		90.9		6.7		7.6		4.4	1
					Bottom	9.8	21.3	21.3	7.9	7.9	32.0	32.0	90.9	90.9	6.7	6.7	7.6		4.6	i i
					Surface	1.0	20.9	20.9	7.9	7.9	31.4	31.4	90.6	90.6	6.7		7.7		4.9	
					Sunace	1.0	20.9	20.9	7.9	7.9	31.4	51.4	90.6	90.0	6.7	6.7	7.6		4.7	l
M1	Sunny	Moderate	16:42	5.3	Middle	-	-	-	-	-	-	-	-		-	0.7	-	8.5	-	5.0
	canny	moderate		0.0		-	-		-		-		-		-		-	0.0	-	0.0
					Bottom	4.3	20.9	20.9	7.9	7.9	31.4	31.4	91.7	91.7	6.8	6.8	9.3		5.2	ł
						4.3	20.9		7.9		31.4		91.6	1	6.8		9.2		5.2	┢────
					Surface	1.0 1.0	20.9 20.9	20.9	7.9 7.9	7.9	31.3 31.3	31.3	91.3 91.3	91.3	6.8 6.8		5.1 5.1		5.1 4.5	i i
						1.0	- 20.9		7.9		31.3		91.5		0.0	6.8	5.1		4.5	i i
M2	Sunny	Moderate	16:38	4.7	Middle		-	-	-	-	-	-	-					5.5		4.7
						3.7	20.9		8.0		31.5		91.2		6.8		5.9		4.8	i i
					Bottom	3.7	20.9	20.9	8.0	8.0	31.5	31.5	91.2	91.2	6.8	6.8	5.9		4.4	1
					. <i>i</i>	1.0	21.1		8.0		31.5		93.4		6.9		3.8		4	
					Surface	1.0	21.1	21.1	8.0	8.0	31.5	31.5	93.5	93.5	6.9	6.9	3.8		5	i
M3	Sunny	Moderate	16:31	7.4	Middle	3.7	21.1	21.1	8.0	8.0	31.6	31.6	92.7	92.8	6.9	6.9	5.5	5.9	5	5
IVIS	Sunny	woderate	10.31	7.4	winddie	3.7	21.1	21.1	8.0	0.0	31.6	51.0	92.8	32.0	6.9		5.4	5.9	5	5
					Bottom	6.4	21.2	21.2	8.0	8.0	31.8	31.9	92.8	92.8	6.8	6.8	8.3		6	1
					Dottom	6.4	21.2	21.2	8.0	0.0	31.9	01.0	92.7	52.0	6.8	0.0	8.3		5	i -

DA: Depth-averaged

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

Water Quality Monitoring

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

Mater Qua		ioning Kesu			00 December 22															
Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	oth (m)	Water T	emperature (°C)	F	ъH	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved ((mg/l		Turbidity	(NTU)	Suspende (mg	
Station	Condition		Time	(m)			Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	22.1	22.1	8.0	8.0	34.7	34.7	93.0	92.8	6.8		6.2		18.9	
					Guilace	1.0	22.0	22.1	8.0	0.0	34.7	54.7	92.6	32.0	6.7	6.8	6.2		21.1	1
C1	Fine	Moderate	11:49	11.0	Middle	5.5	21.9	21.9	8.0	8.0	34.7	34.7	93.0	92.6	6.8	0.0	9.0	7.2	20.4	18.8
						5.5	21.9		8.0		34.7		92.2		6.7		8.1		18.9	1
					Bottom	10.0	21.8	21.9	8.0	8.0	34.7	34.7	93.3	92.9	6.8	6.8	6.6		16.9	1
			1			10.0	22.0		8.0		34.7		92.5		6.7		6.9		16.7	
					Surface	1.0	22.0 22.0	22.0	8.0 8.0	8.0	34.7 34.7	34.7	93.5 93.0	93.3	6.8 6.8	-	4.8		17.9 16.5	1
						1.0 5.3	-							1	6.8 6.8	6.8	4.8		16.5	1
C2	Fine	Moderate	12:12	10.5	Middle	5.3	21.9 22.0	22.0	8.0 8.0	8.0	34.7 34.7	34.7	93.4 92.7	93.1	6.7		5.9 5.1	5.1	18.8	17.2
						9.5	22.0		8.0		34.7		92.7		6.9		5.1		17.1	1
					Bottom	9.5	22.0	21.9	8.0	8.0	34.7	34.7	93.1	93.6	6.8	6.9	5.1		15.8	1
						1.0	21.5		8.1		34.3		93.3		6.9	İ.	6.0		16.2	
					Surface	1.0	21.5	21.5	8.0	8.1	34.3	34.3	92.4	92.9	6.8		5.8		17.6	1
M1	Fine	Madarata	11:58	5.6	Middle	-	-		-		-		-		-	6.9	-	7.2	-	15.7
IM1	Fine	Moderate	11:58	5.6	iviiddie	-	-	-	-	-	-	-	-	1 -	-		-	7.2	-	15.7
					Bottom	4.6	21.4	21.5	8.1	8.1	34.3	34.3	94.4	93.7	6.9	6.9	8.3		14.3	1
					Dottom	4.6	21.5	21.5	8.0	0.1	34.3	04.0	92.9	35.7	6.8	0.3	8.6		14.7	i
					Surface	1.0	21.5	21.5	8.0	8.0	34.4	34.4	92.5	92.4	6.8		10.4		15.9	1
						1.0	21.5		8.0		34.4		92.2		6.7	6.8	10.8		17.6	1
M2	Fine	Moderate	12:03	5.9	Middle	-	-	-	-	-	-	-	-		-		-	10.7	-	16.6
						-	-		-		-		-		-		-		-	1
					Bottom	4.9	21.4 21.5	21.5	8.0 8.0	8.0	34.4	34.4	93.0 92.4	92.7	6.8	6.8	10.6 10.9		17.3 15.7	1
						4.9	21.5		8.0		34.4 34.4		92.4 92.3		6.8 6.7		6.0		15.7	
					Surface	1.0	21.6	21.6	8.0	8.0	34.4	34.4	92.3 91.8	92.1	6.7	1	6.0 5.5		16	1
						3.7	21.6		8.0		34.5		91.8		6.8	6.7	7.1		10	1
M3	Fine	Moderate	11:54	7.3	Middle	3.7	21.6	21.6	8.0	8.0	34.5	34.5	92.3	92.1	6.7	1	7.1	7.1	17	17
						6.3	21.0		8.1		34.6		92.7		6.8		8.6		16	1
					Bottom	6.3	21.6	21.7	8.0	8.1	34.5	34.6	92.4	92.6	6.7	6.8	8.1		10	1
	1	1	1	1	1	0.0	21.5	1	0.0		01.0			1	0.1	1	0.1			

DA: Depth-averaged

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

Water Quality Monitoring

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

		toring Resu			06 December 22		11000 1	luc												
Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	oth (m)	Water Te	emperature (°C)	P	эΗ	Salin	ity (ppt)	DO Satu	ration (%)	Dissolved (mg/l		Turbidity	(NTU)	Suspende (mg/	
Station	Condition		Time	(m)	g		Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	21.8	21.8	8.0	8.0	34.6	34.6	92.4	92.3	6.6		7.7		16.5	
					Sunace	1.0	21.8	21.0	8.0	0.0	34.6	54.0	92.1	92.5	6.6	6.6	7.3		17.0	1
C1	Cloudy	Moderate	09:08	11.1	Middle	5.6	21.7	21.8	8.0	8.0	34.6	34.6	92.5	92.3	6.7	0.0	8.1	8.0	19.5	18.1
	,					5.6	21.8		8.0		34.6		92.0		6.6		8.1		19.2	-
					Bottom	10.1	21.7	21.8	8.0	8.0	34.5	34.6	93.6	92.9	6.7	6.7	8.7		19.0	1
			1			10.1	21.8		8.0		34.6		92.2		6.6		8.1		17.3	
					Surface	1.0	21.7 21.7	21.7	8.0 8.0	8.0	34.6 34.6	34.6	92.7 92.4	92.6	6.7 6.6	-	6.5 6.6		18.0 16.1	1
						5.1	21.7		8.0		34.6		92.4		6.7	6.7	6.4		16.1	1
C2	Cloudy	Moderate	08:40	10.2	Middle	5.1	21.7	21.7	8.0	8.0	34.6	34.6	92.9	92.6	6.6	-	6.6	6.7	17.3	16.9
					_	9.2	21.6		8.0		34.6		93.4		6.7		7.0		15.7	1
					Bottom	9.2	21.7	21.7	8.0	8.0	34.6	34.6	92.2	92.8	6.6	6.7	6.9		17.2	1
					Surface	1.0	21.5	21.5	8.0	8.0	34.3	34.3	91.1	91.1	6.6		8.3		15.7	
					Sunace	1.0	21.5	21.5	8.0	8.0	34.3	34.3	91.1	91.1	6.6	6.6	8.6		14.7	1
M1	Cloudy	Moderate	08:59	5.6	Middle	-	-	_	-		-	-	-	_	-	0.0	-	9.4	-	15.0
	Cloudy	modorato	00.00	0.0	Middlo	-	-		-		-		-		-		-	0.1	-	10.0
					Bottom	4.6	21.4	21.4	8.0	8.0	34.3	34.3	91.2	91.2	6.6	6.6	10.2		15.6	1
			1			4.6	21.4		8.0		34.3		91.2		6.6		10.3		13.9	
					Surface	1.0	21.4 21.4	21.4	8.0 8.0	8.0	34.3 34.3	34.3	92.4 91.9	92.2	6.7 6.7	-	4.8 4.7		14.7 15.1	1
						1.0	- 21.4		8.0		34.3		91.9		0.7	6.7	4.7		-	1
M2	Cloudy	Moderate	08:54	5.3	Middle		-	-	-	-	-	-	-		-	-		6.1	-	16.0
						4.3	21.4		8.0		34.3		93.0		6.7		7.3		16.7	1
					Bottom	4.3	21.4	21.4	8.0	8.0	34.3	34.3	92.2	92.6	6.7	6.7	7.4		17.4	1
					Quitan	1.0	21.4	04.4	8.0	0.0	34.3	04.0	92.4	04.0	6.7		5.9		16	
					Surface	1.0	21.4	21.4	8.0	8.0	34.3	34.3	91.2	91.8	6.6	6.7	6.1		18	1
M3	Cloudy	Moderate	09:03	7.0	Middle	3.5	21.4	21.5	8.0	8.0	34.4	34.4	92.9	92.2	6.7	0.7	7.8	7.3	16	17
IVIS	Cioudy	moderate	03.03	7.0	INITALE	3.5	21.5	21.5	8.0	0.0	34.4	54.4	91.4	32.2	6.6		8.8	1.5	17	17
					Bottom	6.0	21.4	21.5	8.0	8.0	34.5	34.5	93.6	92.9	6.8	6.8	7.7		16	I
					201011	6.0	21.5	20	8.0	0.0	34.4	0.10	92.2	02.0	6.7	0.0	7.5		16	ı

DA: Depth-averaged

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

Water Quality Monitoring

Water Quality Monitoring Results on 10 December 22 during Mid-Ebb Tide

		toring Resu			To December 22			6			1									
Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	th (m)	Water Te	mperature (°C)	F	ъH	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	20.7	20.7	7.9	7.9	31.7	31.8	94.2	93.8	7.0		6.0		9.7	
					Suilace	1.0	20.7	20.7	7.9	7.9	31.8	51.0	93.3	93.0	7.0	7.0	5.9		8.7	i
C1	Misty	Moderate	12:34	8.4	Middle	4.2	20.6	20.7	7.9	7.9	31.7	31.8	94.9	94.2	7.1	1.0	6.1	6.6	12.4	11.0
01	Miloty	modorato	12.01	0.1	Middlo	4.2	20.7	20.1	7.9	7.0	31.8	01.0	93.4	01.2	7.0		6.0	0.0	10.6	1
					Bottom	7.4	20.7	20.7	7.9	7.9	31.6	31.7	95.7	94.6	7.1	7.1	7.6		12.2	ł
						7.4	20.7		7.9		31.8		93.5		7.0		7.7		12.5	
					Surface	1.0	20.6	20.7	7.9	7.9	31.7	31.8	95.6	94.8	7.1		8.2		9.4	ł
						1.0	20.7	-	7.9	-	31.8		94.0		7.0	7.1	8.2		9.0	ł
C2	Misty	Moderate	12:51	10.0	Middle	5.0	20.6	20.7	7.9	7.9	31.7	31.8	96.0	95.1	7.2		9.2	9.1	9.8	9.3
						5.0	20.7		7.9		31.8		94.2		7.0		9.2		9.3	ł
					Bottom	9.0	20.6	20.7	7.9	7.9	31.7	31.8	96.5	95.5	7.2	7.1	10.0		9.9	ł
				1		9.0	20.7		7.9		31.8		94.5		7.0		10.0		8.1	,
					Surface	1.0 1.0	20.7 20.7	20.7	7.9 7.9	7.9	31.8	31.9	96.4 94.6	95.5	7.2	-	7.1 7.1		5.2 6.9	ł
											31.9					7.1				ł
M1	Misty	Moderate	12:44	4.8	Middle	-	-	-	-	-	-	-	-	-	-	-	-	7.6	-	6.4
						- 3.8	20.7		7.8		- 31.8		- 97.3		7.2		- 8.1		- 7.0	ł
					Bottom	3.8	20.7	20.7	7.0	7.9	31.8	31.8	97.3	96.5	7.1	7.2	8.0		6.3	ł
						1.0	20.7		7.9		31.8		96.6		7.1		3.2		12.1	
					Surface	1.0	20.6	20.6	7.9	7.9	31.8	31.8	95.4	96.0	7.1		3.2		10.4	ł
						-	-		-		-		-		-	7.2	-		-	1
M2	Misty	Moderate	12:41	5.6	Middle	-	-	-	-	-	-	-	-	-	-		-	3.7	-	11.1
					D. #	4.6	20.5	00.5	7.8	7.0	31.8	04.0	97.6		7.3	7.3	4.2		11.8	ł
					Bottom	4.6	20.5	20.5	7.9	7.9	31.8	31.8	95.9	96.8	7.2	7.3	4.2		10.2	ł
					Quiters	1.0	20.6	00.0	7.9	7.0	31.7	04.0	95.6	04.0	7.1		7.3		8	i
					Surface	1.0	20.6	20.6	7.9	7.9	31.8	31.8	94.0	94.8	7.0	7.1	7.3		7	ł
M3	Misty	Moderate	12:38	7.6	Middle	3.8	20.6	20.6	7.9	7.9	31.7	31.8	95.9	95.1	7.2	1 /.1	8.2	8.2	11	9
IVIS	iviisty	wouerate	12.30	7.0	INIQUIE	3.8	20.6	20.0	7.9	1.9	31.8	31.0	94.2	90.1	7.0	1	8.2	0.2	10	9
					Bottom	6.6	20.6	20.6	7.8	7.9	31.7	31.7	96.7	95.6	7.2	7.1	9.0		10	ł
					Bollom	6.6	20.6	20.0	7.9	7.9	31.7	51.7	94.5	33.0	7.0	···	9.0		10	i

DA: Depth-averaged

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

Water Quality Monitoring

Water Quality Monitoring Results on 10 December 22 during Mid-Flood Tide

Monitoring	Weather	Sea Condition	Sampling	Water Depth	Sampling Dep	th (m)		mperature (°C)	p	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 1.0	20.5 20.5	20.5	7.8 7.9	7.9	31.6 31.7	31.7	94.7 93.6	94.2	7.1 7.0		5.3 5.3		9.6 8.8	
						4.7	20.5		7.9		31.7		93.6 94.9		7.0	7.1	5.3 6.1		8.8	1
C1	Misty	Moderate	10:31	9.4	Middle	4.7	20.5	20.5	7.8	7.8	31.7	31.7	93.7	94.3	7.0		6.1	6.5	8.7	9.1
					D	8.4	20.5	00.5	7.8	7.0	31.6	04.7	95.5	0.1.7	7.1	7.4	8.0		9.4	1
					Bottom	8.4	20.5	20.5	7.8	7.8	31.7	31.7	93.8	94.7	7.0	7.1	7.9		9.2	1
					Surface	1.0	20.5	20.5	7.8	7.8	31.5	31.6	94.7	94.0	7.1		5.4		11.8	
					Guildoo	1.0	20.5	20.0	7.8	1.0	31.7	01.0	93.3	01.0	7.0	7.1	5.4		11.3	1
C2	Misty	Moderate	10:13	9.8	Middle	4.9	20.5	20.5	7.8	7.8	31.5	31.6	94.9	94.2	7.1		6.2	6.0	9.3	11.3
	-					4.9 8.8	20.5 20.5		7.8 7.8		31.7 31.4		93.4 95.4		7.0 7.2		6.2 6.3		9.6 12.3	1
					Bottom	8.8	20.5	20.5	7.8	7.8	31.4	31.5	93.6	94.5	7.0	7.1	6.2		12.3	1
					<i></i>	1.0	20.5		7.8	= 0	31.8		93.6		7.0		7.0		10.2	
					Surface	1.0	20.5	20.5	7.8	7.8	31.8	31.8	92.1	92.9	6.9	7.0	7.0		11.4	1
M1	Misty	Moderate	10:20	4.4	Middle	-	-	_	-	_	-	-	-	_	-	7.0	-	8.0	-	11.3
IVI I	wiisty	Woderate	10.20	7.7	Middle	-	-		-		-	-	-	_	-		-	0.0	-	11.5
					Bottom	3.4	20.4	20.5	7.8	7.8	31.7	31.8	94.3	93.6	7.1	7.0	9.0		11.2	1
						3.4	20.5		7.8		31.8		92.9		6.9		8.9		11.8	
					Surface	1.0	20.5 20.5	20.5	7.8 7.8	7.8	31.8 31.9	31.9	94.0 92.7	93.4	7.0 6.9		8.9 8.9		15.8 14.9	1
						-	- 20.5				31.9		92.7		0.9	7.0	- 0.9		- 14.9	1
M2	Misty	Moderate	10:23	4.8	Middle		-	-	-	-	-	-				•		9.0		<u>15.1</u>
					-	3.8	20.4		7.8		31.8		94.6		7.1		9.0		13.9	1
					Bottom	3.8	20.5	20.5	7.8	7.8	31.8	31.8	93.2	93.9	7.0	7.1	9.0		15.6	1
					Surface	1.0	20.5	20.5	7.8	7.8	31.8	31.9	92.9	91.9	6.9		4.1		19	
					Suilace	1.0	20.5	20.5	7.8	7.0	31.9	31.9	90.9	91.9	6.8	6.9	4.1		16	1
M3	Misty	Moderate	10:27	6.8	Middle	3.4	20.5	20.5	7.8	7.8	31.8	31.8	93.4	92.3	7.0	0.0	5.1	5.1	14	14
-			-			3.4	20.5		7.8	-	31.8		91.1		6.8		5.1	-	13	1
					Bottom	5.8	20.5	20.5	7.8 7.8	7.8	31.7	31.8	94.1	92.8	7.0	6.9	6.1		10	1
	1					5.8	20.5		1.8		31.8		91.4		6.8		6.1		10	

DA: Depth-averaged

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

Water Quality Monitoring

Water Quality Monitoring Results on 13 December 22 during Mid-Ebb Tide

					13 December 22										Dissolved	Oxvaen			Suspende	ed Solids
Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	th (m)	Water Te	mperature (°C)	F	pН	Salin	ity (ppt)	DO Satur	ation (%)	(mg/l		Turbidity	(NTU)	(mg	
Station	Condition		Time	(m)		. ,	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	20.5	20.6	7.8	7.8	34.6	34.8	91.8	92.4	6.6		5.9		8.8	
					Canado	1.0	20.6	2010	7.8		34.9	0.110	92.9		6.6	6.6	5.9		9.9	1
C1	Misty	Calm	05:20	10.2	Middle	5.1	20.4	20.5	7.8	7.8	34.6	34.8	88.5	90.5	6.4	-	6.6	6.5	9.4	9.3
						5.1	20.6		7.8		34.9		92.5		6.6		6.5		8.1	4
					Bottom	9.2 9.2	20.4 20.6	20.5	7.9 7.8	7.9	34.8 34.8	34.8	94.4 92.2	93.3	6.8 6.6	6.7	7.1 7.0		10.4 8.9	1
						9.2	20.6		7.8		34.8		92.2		6.7		4.1		8.9 8.7	
					Surface	1.0	20.0	20.7	7.8	7.8	34.8	34.8	93.0	93.5	6.6	-	4.1		9.2	1
						5.0	20.5		7.8		34.9		94.3		6.7	6.7	4.2		7.4	1
C2	Misty	Calm	05:04	10.0	Middle	5.0	20.6	20.6	7.8	7.8	34.8	34.9	93.3	93.8	6.6	-	4.2	4.5	8.5	8.8
					D	9.0	20.5	00.0	7.8	7.0	34.8	04.0	94.4	01.0	6.8	6.7	5.1		10.5	1
					Bottom	9.0	20.6	20.6	7.8	7.8	34.8	34.8	93.6	94.0	6.6	6.7	5.1		8.7	
					Surface	1.0	20.4	20.5	7.8	7.8	34.6	34.7	93.7	93.3	6.7		3.7		11.2	
					Guilace	1.0	20.5	20.5	7.8	7.0	34.7	54.7	92.9	33.5	6.7	6.7	3.6		9.5	1
M1	Misty	Calm	05:08	5.0	Middle	-	-	-	-	-	-	-	-		-	0.7	-	3.9	-	9.6
						-	-		-		-		-		-		-		-	1
					Bottom	4.0	20.4	20.4	7.8	7.8	34.5	34.6	94.9	94.1	6.8	6.8	4.2		9.6	4
						4.0	20.4		7.8		34.7		93.3		6.7 6.6		4.2 6.2		8.0 7.7	<u> </u>
					Surface	1.0 1.0	20.6 20.7	20.7	7.8 7.8	7.8	34.7 34.7	34.7	93.3 92.2	92.8	6.6	-	6.2		8.5	1
						-	-						-			6.6	- 0.2		-	i
M2	Misty	Calm	05:13	5.8	Middle	-	-	-	-	-	-	-	-	- 1	-	-	-	6.7	-	8.1
					5	4.8	20.5	00.0	7.8	7.0	34.7	047	94.8	00.0	6.8	0.7	7.1		8.7	i
					Bottom	4.8	20.6	20.6	7.8	7.8	34.7	34.7	92.8	93.8	6.6	6.7	7.1		7.5	1
					Surface	1.0	20.5	20.5	7.8	7.8	34.7	34.7	93.5	92.9	6.7		4.0		8	
					Sunace	1.0	20.5	20.5	7.8	1.0	34.7	34.7	92.3	92.9	6.6	6.7	4.0		7	i i
M3	Misty	Calm	05:16	7.4	Middle	3.7	20.4	20.5	7.8	7.8	34.7	34.7	94.1	93.4	6.8	0.7	4.1	4.6	8	8
	itiloty	Califi	00.10		Middle	3.7	20.5	20.0	7.8	7.0	34.7	01.7	92.6	00.4	6.6		4.0	1.0	9	Ĭ
					Bottom	6.4	20.4	20.5	7.8	7.8	34.7	34.7	94.5	93.8	6.8	6.7	5.7		8	4
						6.4	20.5		7.8		34.7		93.0		6.6	1	5.8		10	i i

DA: Depth-averaged

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

Water Quality Monitoring

Water Quality Monitoring Results on 13 December 22 during Mid-Flood Tide

water Qua		toring Resu			13 December 22		-i 1000 i	lue												
Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	oth (m)	Water Te	emperature (°C)	p	ъH	Salin	ity (ppt)	DO Satu	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	20.8	20.9	7.8	7.9	34.8	34.9	93.9	93.1	6.7		6.2		8.3	
					Sunace	1.0	20.9	20.9	7.9	7.9	34.9	54.9	92.3	95.1	6.5	6.6	6.3		8.6	1
C1	Misty	Calm	14:20	8.0	Middle	4.0	20.7	20.8	7.8	7.9	34.8	34.9	94.5	93.6	6.7	0.0	7.7	7.3	7.2	7.3
					middio	4.0	20.9	2010	7.9		34.9	0.110	92.7	00.0	6.6		7.6		6.8	1
					Bottom	7.0	20.7	20.8	7.8	7.9	34.7	34.8	95.9	94.6	6.8	6.7	8.1		6.6	1
						7.0	20.9		7.9		34.9		93.3		6.6		8.0		6.5	
					Surface	1.0	20.6	20.7	7.9	7.9	34.9	34.9	94.5	93.8	6.8	-	7.4		7.5	1
						1.0	20.7		7.9		34.9		93.1		6.7	6.8	7.4		6.9	1
C2	Misty	Calm	14:36	10.0	Middle	5.0	20.6 20.7	20.7	7.9 7.9	7.9	34.9	34.9	95.2 93.5	94.4	6.8 6.7	-	8.6 8.6	8.4	8.0 8.4	7.8
						5.0 9.0	20.7		7.9		34.9 34.8		93.5 96.2		6.7		8.6 9.1		8.4 8.0	1
					Bottom	9.0	20.8	20.7	7.0	7.9	34.0	34.9	96.2	95.2	6.7	6.8	9.1		8.0	1
						1.0	20.0		7.8		34.6		95.3		6.9		7.0		8.5	
					Surface	1.0	20.0	20.1	7.9	7.9	34.7	34.7	93.7	94.5	6.8	-	6.9		8.4	1
•••						-	-		-		-		-		-	6.9	-		-	
M1	Misty	Calm	14:30	5.2	Middle	-	-	-	-	-	-	-	-	-	-		-	7.3	-	8.0
					Bottom	4.2	20.0	20.1	7.8	7.9	34.7	34.7	95.5	94.8	6.9	6.9	7.6		8.3	1
					Bollom	4.2	20.1	20.1	7.9	7.9	34.7	34.7	94.1	94.0	6.8	0.9	7.7		6.9	I
					Surface	1.0	20.0	20.1	7.9	7.9	34.7	34.7	94.1	93.2	6.8		7.2		8.7	1
					Gundoo	1.0	20.1	20.1	7.9	7.0	34.6	01.1	92.3	00.2	6.7	6.8	7.1		7.2	1
M2	Misty	Calm	14:28	5.4	Middle	-	-	-	-	-	-	-	-	_	-	0.0	-	7.8	-	7.9
1112	whoty	Califi	11.20	0.1	Middlo	-	-		-		-		-		-		-	7.0	-	1.0
					Bottom	4.4	20.0	20.1	7.9	7.9	34.7	34.7	96.0	94.5	6.9	6.8	8.5		7.2	1
						4.4	20.1		7.9		34.6	• …	92.9	••	6.7		8.4		8.6	
					Surface	1.0	20.2	20.2	7.8	7.8	34.7	34.7	92.5	92.0	6.7		8.1		8	1
						1.0	20.2		7.8		34.7		91.5		6.6	6.7	8.0		8	1
M3	Misty	Calm	14:24	7.8	Middle	3.9	20.1	20.2	7.8	7.8	34.6	34.7	92.8	92.4	6.7	-	8.1	8.4	9	8
						3.9	20.2		7.8		34.7		91.9		6.6		8.2		10	1
					Bottom	6.8 6.8	20.2 20.2	20.2	7.8 7.8	7.8	34.5 34.7	34.6	94.1 92.2	93.2	6.8 6.7	6.8	9.1 9.0		7 8	1
			l			0.8	20.2		0.1		34.7		92.2	1	0.7		9.0		ŏ	

DA: Depth-averaged

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

Water Quality Monitoring

Water Quality Monitoring Results on 15 December 22 during Mid-Ebb Tide

		ioning Resu			15 December 22															
Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	oth (m)	Water Te	mperature (°C)	p	σΗ	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	19.5	19.5	7.9	7.9	35.0	35.0	96.8	96.8	7.0		4.0		5.1	
					Suilace	1.0	19.5	19.5	7.9	7.9	35.0	33.0	96.8	90.0	7.0	7.2	3.9		5.2	1
C1	Rainy	Calm	06:22	10.0	Middle	5.0	19.5	19.5	7.9	7.9	35.0	35.0	101.1	101.1	7.3	1.2	4.6	4.5	4.8	4.7
01	rearry	Califi	00.22	10.0	middio	5.0	19.5	10.0	7.9	7.0	35.0	00.0	101.1	101.1	7.3		4.6	1.0	4.6	1
					Bottom	9.0	19.5	19.5	7.9	7.9	35.0	35.0	102.6	102.6	7.5	7.5	5.1		4.3	1
			-			9.0	19.5		7.9	-	35.0		102.6		7.5		5.0		4.0	<u> </u>
					Surface	1.0	19.3	19.4	7.9	7.9	35.0	35.0	95.8	95.2	7.0		1.7		5.0	4
						1.0	19.4		7.9		35.0		94.5		6.8	6.9	1.8		4.6	4
C2	Rainy	Calm	05:55	9.6	Middle	4.8	19.3 19.4	19.4	7.9 7.9	7.9	35.0 35.0	35.0	96.3 94.9	95.6	6.9 6.9	-	2.7 2.6	2.7	4.4 4.5	4.5
						4.8	19.4		7.9		35.0		94.9 99.8		6.9 7.2		2.6		4.5	1
					Bottom	8.6	19.3	19.3	7.9	7.9	35.0	35.0	99.8 95.2	97.5	6.9	7.1	3.6		4.3	1
						1.0	19.6		7.9		34.9		101.1		7.3		3.1		4.0	<u> </u>
					Surface	1.0	19.6	19.6	7.9	7.9	34.9	34.9	101.1	101.1	7.3		3.2		4.3	1
	. .					-	-		-		-		-		-	7.3	-		-	1
M1	Rainy	Calm	06:05	5.4	Middle	-	-	-	-	-	-	-	-	-	-		-	4.0	-	4.4
					D-#	4.4	19.6	19.6	7.9	7.9	34.8	34.9	103.4	102.9	7.5	7.5	4.9		4.8	1
					Bottom	4.4	19.6	19.6	7.9	7.9	34.9	34.9	102.4	102.9	7.4	7.5	4.9		4.5	
					Surface	1.0	19.6	19.6	7.9	7.9	34.9	34.9	98.3	98.8	7.1		5.7		4.9	
					Sunace	1.0	19.6	13.0	7.9	1.5	34.9	54.5	99.2	30.0	7.2	7.2	5.6		4.6	1
M2	Rainy	Calm	06:11	5.0	Middle	-	-	-	-	-	-	-	-	-	-	1.2	-	6.0	-	5.1
						-	-		-		-		-		-		-		-	1
					Bottom	4.0	19.5	19.6	7.9	7.9	34.9	34.9	103.2	103.1	7.4	7.4	6.2		5.5	4
						4.0	19.6		7.9		34.9		102.9		7.4		6.3		5.2	
					Surface	1.0	19.4	19.4	7.9 7.9	7.9	35.0	35.0	99.4	97.4	7.2	-	4.9		4	1
						1.0 3.6	19.4		-		34.9		95.3		6.9	7.1	5.0		4	i –
M3	Rainy	Calm	06:16	7.2	Middle	3.6	19.3 19.4	19.4	7.9 7.9	7.9	35.0 34.9	35.0	100.6 96.1	98.4	7.3 7.0	-	5.4 5.4	5.7	5 5	5
						6.2	19.4		7.9		34.9		101.5		7.0	ł	5.4 6.8		5 6	i –
					Bottom	6.2	19.3	19.4	7.9	7.9	34.9	34.9	96.8	99.2	7.0	7.2	6.8		5	i –
		1	1			0.2	19.4		1.9		34.9		90.0		1.0		0.0		5	1

DA: Depth-averaged

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

Water Quality Monitoring

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

		toring Resu			15 December 22		11000	lue												
Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	oth (m)	Water Te	emperature (°C)	۴	рН	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved ((mg/l		Turbidity	(NTU)	Suspende (mg/	
Station	Condition		Time	(m)	g		Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	19.6	19.6	8.0	8.0	34.9	34.9	96.5	96.5	7.0		3.4		5.1	
					Sunace	1.0	19.6	19.0	8.0	0.0	34.9	54.5	96.5	90.5	6.9	7.0	3.4		4.9	1
C1	Misty	Calm	15:41	8.2	Middle	4.1	19.6	19.6	8.0	8.0	34.9	34.9	96.8	96.8	7.0	1.0	5.0	4.5	4.6	4.6
					middio	4.1	19.6		8.0	0.0	34.9	0.10	96.8	00.0	6.9		5.0		4.5	
					Bottom	7.2	19.6	19.6	8.0	8.0	34.9	34.9	100.6	101.1	7.3	7.3	5.1		4.2	1
						7.2	19.6		8.0		34.9		101.5		7.3		5.0		4.4	
					Surface	1.0	19.7	19.7	8.0	8.0	34.9	34.9	96.2	95.2	7.0	-	5.2		4.4	1
						1.0	19.7		7.9		34.9		94.2		6.8	6.9	5.1		4.8	1
C2	Misty	Calm	16:00	9.8	Middle	4.9	19.7 19.7	19.7	8.0 8.0	8.0	34.9	34.9	96.6	95.8	7.0 6.9	-	5.6 5.6	5.9	5.2 5.1	5.2
						4.9 8.8	19.7		8.0		34.9 34.9		94.9 97.5		6.9 7.0		5.6 6.8		5.1	1
					Bottom	8.8	19.7	19.7	8.0	8.0	34.9	34.9	97.5	96.4	6.9	7.0	6.9		5.6	1
						1.0	19.2		8.0		34.8		98.9		7.2		8.5		4.6	
					Surface	1.0	19.2	19.2	8.0	8.0	34.8	34.8	96.4	97.7	7.0		7.6		4.9	1
•••						-	-		-		-		-		-	7.1	-		-	
M1	Misty	Calm	15:53	5.0	Middle	-	-	-	-	-	-	-	-	- 1	-	1	-	8.1	-	5.4
					Bottom	4.0	19.2	19.2	8.0	8.0	34.8	34.8	97.3	99.1	7.1	7.2	7.7		5.8	1
					Bollom	4.0	19.2	19.2	8.0	0.0	34.7	34.0	100.8	99.1	7.2	1.2	8.5		6.2	i
					Surface	1.0	19.0	19.0	8.0	8.0	34.7	34.8	99.2	99.5	7.3		6.7		5.1	1
					Gundoo	1.0	19.0	10.0	8.0	0.0	34.8	01.0	99.8	00.0	7.4	7.4	6.7		5.5	1
M2	Misty	Calm	15:50	5.2	Middle	-	-	_	-		-	-	-		-	1.4	-	6.9	-	5.0
1112	whoty	Califi	10.00	0.2	Middlo	-	-		-		-		-		-		-	0.0	-	0.0
					Bottom	4.2	19.0	19.0	8.0	8.0	34.7	34.8	101.2	101.1	7.4	7.4	7.0		4.8	1
					Bottom	4.2	19.0		8.0	0.0	34.8	0.10	101.0		7.3		7.0		4.4	
					Surface	1.0	19.4	19.5	8.0	8.0	34.9	34.9	97.1	95.5	7.1		5.8		5	1
						1.0	19.5		8.0		34.9		93.9		6.8	7.0	5.8		5	1
MЗ	Misty	Calm	15:46	7.4	Middle	3.7	19.4	19.5	8.0	8.0	34.9	34.9	97.8	96.1	7.1	4	6.1	6.5	5	5
						3.7	19.5		8.0		34.9		94.4		6.9		6.2		5	1
					Bottom	6.4	19.4	19.5	8.0 8.0	8.0	34.9	34.9	98.5 95.1	96.8	7.2 6.9	7.1	7.5 7.5		4	1
			1			6.4	19.5		8.0		34.9		95.1		6.9		1.5		4	

DA: Depth-averaged

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

Water Quality Monitoring

Water Quality Monitoring Results on 17 December 22 during Mid-Ebb Tide

Walei Qua		toring Rest			T7 December 22	auring mia-														
Monitoring	Weather	Sea Condition		Water Depth	Sampling Dep	pth (m)	Water Te	emperature (°C)		pН	Salin	ity (ppt)	DO Satu	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	19.0	19.0	7.9	7.9	34.6	34.6	91.7	91.7	6.7		3.9		5.8	
					Sullace	1.0	19.0	19.0	7.9	7.9	34.6	54.0	91.7	31.7	6.7	6.7	3.9		6.0	
C1	Fine	Rough	19:46	10.1	Middle	5.1	19.0	19.0	7.9	7.9	34.6	34.6	91.9	91.9	6.7	0.7	3.7	4.2	5.2	5.1
01	1 110	rtough	10.10	10.1		5.1	19.0	10.0	7.9	7.0	34.6	01.0	91.8	01.0	6.7		3.6		4.9	0.1
					Bottom	9.1	18.9	19.0	8.0	8.0	34.6	34.6	93.2	93.2	6.9	6.9	4.9		4.4	
					Bottom	9.1	19.0		7.9	0.0	34.6	0.110	93.2	00.2	6.9	0.0	4.9		4.1	
					Surface	1.0	20.2	20.2	7.9	7.9	34.9	34.9	90.1	90.1	6.5		2.0		4.3	
						1.0	20.2	-	7.9	-	34.9		90.1		6.5	6.6	2.0		4.0	
C2	Fine	Rough	20:17	10.8	Middle	5.4	20.2	20.2	7.9	7.9	34.9	34.9	92.4	92.4	6.7		2.1	2.1	4.7	4.8
		Ū				5.4	20.2		7.9		34.9		92.4		6.7		2.1		4.9	
					Bottom	9.8	20.2	20.2	7.9	7.9	34.9	34.9	92.8	92.8	6.7	6.7	2.2		5.6	
						9.8	20.2		7.9		34.9		92.8		6.7		2.2		5.3	
					Surface	1.0	18.8 18.8	18.8	7.9 7.9	7.9	34.5 34.5	34.5	89.0 89.0	89.0	6.6 6.6		3.6 3.6		6.5	
						1.0					34.5					6.6			6.1	
M1	Fine	Rough	19:57	5.3	Middle	-	-	-	-	-	-	-	-		-		-	4.0	-	5.9
						4.3	- 18.8		7.9		- 34.5		- 88.7		6.5		4.4		5.5	
					Bottom	4.3	18.8	18.8	7.9	7.9	34.5	34.5	88.7	88.7	6.6	6.6	4.4		5.3	
						1.0	20.0		7.9		34.8		91.8		6.6		2.4		4.8	
					Surface	1.0	20.0	20.0	7.9	7.9	34.8	34.8	91.7	91.8	6.6		2.4		5.0	
	-					-	-		-		-		-		-	6.6	-		-	
M2	Fine	Rough	20:04	4.6	Middle	-	-	-	-	-	-	-	-	- 1	-		-	4.1	-	5.2
					Bottom	3.6	20.0	20.0	7.9	7.9	34.8	34.8	92.3	92.3	6.7	6.7	5.7		5.5	
					Bottom	3.6	20.0	20.0	7.9	7.9	34.8	34.8	92.2	92.3	6.7	6.7	5.8		5.3	
					Surface	1.0	18.8	18.8	7.9	7.9	34.5	34.5	90.1	90.1	6.6		2.9		5	
					Sunace	1.0	18.8	10.0	7.9	1.9	34.5	34.3	90.0	90.1	6.6	6.7	2.9		4	
M3	Fine	Rough	19:51	7.2	Middle	3.6	18.8	18.8	7.9	7.9	34.5	34.5	90.6	90.6	6.7	0.7	4.6	5.3	6	6
IVIS	1 1116	Rough	13.31	1.2	windule	3.6	18.8	10.0	7.9	1.9	34.5	54.5	90.5	30.0	6.7		4.7	0.0	6	0
					Bottom	6.2	18.8	18.8	7.9	7.9	34.5	34.5	91.2	91.2	6.7	6.7	8.3		7	
					Bottom	6.2	18.8	10.0	7.9	1.3	34.5	54.5	91.2	31.2	6.7	0.7	8.2		6	

DA: Depth-averaged

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

Water Quality Monitoring

Water Quality Monitoring Results on 17 December 22 during Mid-Flood Tide

		toring Resu			17 December 22		<u>-1 1000 1</u>	lue												
Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	oth (m)	Water Te	emperature (°C)	p	ъH	Salin	ity (ppt)	DO Satu	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	19.8	19.8	7.9	7.9	34.8	34.8	92.2	92.2	6.7		3.5		3.4	
					Gunace	1.0	19.8	13.0	7.9	1.5	34.8	34.0	92.2	52.2	6.7	6.7	3.5		3.7	1
C1	Cloudy	Rough	14:01	9.1	Middle	4.6	19.9	19.9	7.9	7.9	34.8	34.8	92.4	92.4	6.7	0.7	3.3	3.6	4.0	4.3
	,		_	_		4.6	19.9		7.9		34.8		92.3		6.6		3.4		4.4	-
					Bottom	8.1	19.8	19.8	7.9	7.9	34.8	34.8	93.1	93.1	6.7	6.7	4.0		4.9	1
						8.1	19.8		7.9		34.8		93.0	1	6.7		3.8		5.3	
					Surface	1.0 1.0	19.9 19.9	19.9	7.9 7.9	7.9	34.8 34.8	34.8	91.5 91.5	91.5	6.5 6.5	-	3.2 3.2		4.8 4.9	1
						4.5	19.9		7.9		34.8 34.8		91.5 92.2		6.6	6.6	3.2		4.9 5.8	1
C2	Cloudy	Rough	13:31	8.9	Middle	4.5	19.9	19.9	7.9	7.9	34.8	34.8	92.2	92.2	6.6	-	3.5	3.4	5.8	5.5
						7.9	19.9		7.9		34.8		93.1		6.6		3.6		6.2	1
					Bottom	7.9	19.9	19.9	7.9	7.9	34.8	34.8	93.0	93.1	6.6	6.6	3.6		6.0	1
					0	1.0	19.0	19.0	7.9	7.9	34.5	34.6	91.6	91.6	6.6		3.0		5.2	
					Surface	1.0	19.0	19.0	7.9	7.9	34.6	34.6	91.6	91.6	6.7	6.7	2.9		5.6	1
M1	Cloudy	Rough	13:47	4.1	Middle	-	-	_	-		-	-	-		-	0.7	-	3.2	-	6.0
IVII	Cloudy	Rough	10.47	4.1	Wilddie	-	-		-		-	_	-		-		-	5.2	-	0.0
					Bottom	3.1	19.1	19.1	7.9	7.9	34.7	34.7	92.3	92.3	6.7	6.7	3.3		6.3	1
						3.1	19.1	-	7.9	-	34.7	-	92.3		6.7		3.4		6.7	
					Surface	1.0	19.0	19.0	7.9	7.9	34.6	34.6	92.9	92.9	6.7	-	3.2		5.1	1
						1.0	19.0		7.9		34.5		92.8		6.7	6.7	3.1		5.5	1
M2	Cloudy	Rough	13:42	3.9	Middle		-	-	-	-	-	-	-		-		-	3.4	-	5.8
						2.9	- 19.1		- 8.0		- 34.6		- 94.5		- 6.9		- 3.7		6.3	1
					Bottom	2.9	19.1	19.1	8.0	8.0	34.6	34.6	94.3 94.3	94.4	6.9	6.9	3.7		6.1	1
						1.0	19.1		7.9		34.6		94.3		6.7		3.4		4	
					Surface	1.0	19.2	19.2	7.9	7.9	34.6	34.6	91.1	91.2	6.7	1	3.4		4	1
			10.55		N.C. L.H.	3.5	19.2	10.0	7.9	7.0	34.6		91.0		6.6	6.7	3.6		5	-
M3	Cloudy	Rough	13:55	6.9	Middle	3.5	19.2	19.2	7.9	7.9	34.6	34.6	91.0	91.0	6.6	1	3.6	3.9	5	5
					Bottom	5.9	19.2	19.2	7.9	7.9	34.7	34.7	90.1	90.2	6.6	6.6	4.7		6	1
					Bottom	5.9	19.2	19.2	7.9	7.9	34.7	34.7	90.2	90.2	6.6	0.0	4.7		5	

DA: Depth-averaged

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

Water Quality Monitoring

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

	inty morn	toring resu			20 December 22			6												
Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	oth (m)	Water Te	mperature (°C)	р	Η	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	18.7	18.7	7.9	7.9	35.1	35.1	95.6	95.3	7.2		4.4		4.0	
					Sunace	1.0	18.7	10.7	7.9	1.5	35.1	33.1	94.9	95.5	7.2	7.2	4.4		3.8]
C1	Fine	Calm	11:10	9.8	Middle	4.9	18.6	18.7	7.9	7.9	35.2	35.2	95.8	95.5	7.3	1.2	5.2	5.2	3.4	3.2
01	1 110	Califi	11.10	0.0		4.9	18.7	10.1	7.9	1.0	35.1	00.2	95.2	00.0	7.2		5.1	0.2	3.0	0.2
					Bottom	8.8	18.5	18.6	7.9	7.9	35.2	35.2	96.7	96.1	7.3	7.3	6.1		2.5	1
						8.8	18.7		7.9		35.1		95.4		7.2		6.2		2.3	Ļ
					Surface	1.0	18.6	18.6	7.9	7.9	35.1	35.2	95.0	94.7	7.2	-	2.1		2.5	4
						1.0	18.6		7.9		35.2		94.3		7.1	7.2	2.2		2.2	4
C2	Fine	Calm	10:50	9.2	Middle	4.6 4.6	18.6 18.6	18.6	7.8 7.9	7.9	35.2 35.2	35.2	95.3 94.5	94.9	7.2 7.2		3.3 3.4	3.3	2.9 3.2	3.1
						8.2	18.6		7.9				94.5 95.8		7.2		-		3.2 4.0	1
					Bottom	8.2	18.5	18.6	7.8	7.9	35.2 35.2	35.2	95.8 94.7	95.3	7.3	7.3	4.4 4.3		4.0 3.8	1
						1.0	18.3		7.9		34.9		94.7	 	7.3		4.3		2.8	<u> </u>
					Surface	1.0	18.2	18.3	7.9	7.9	35.0	35.0	94.7	95.1	7.2	-	4.2		2.5	1
						-	-		-		-		-		-	7.3	-		-	1
M1	Fine	Calm	10:57	5.2	Middle	-		-	-	-	-	-	-		-	-	-	4.8	-	2.9
					D	4.2	18.4		7.8		34.8		95.8		7.3		5.5		3.0	1
					Bottom	4.2	18.3	18.4	7.9	7.9	35.0	34.9	95.1	95.5	7.3	7.3	5.4		3.4	1
					Surface	1.0	18.2	18.1	7.8	7.9	34.8	34.9	95.1	94.8	7.3		4.6		1.9	
					Sunace	1.0	17.9	10.1	7.9	7.9	35.0	34.9	94.4	94.0	7.3	7.3	4.7		1.7	1
M2	Fine	Calm	11:00	4.6	Middle	-	-	-	-	-	-	-	-		-	7.5	-	5.0	-	2.1
IVIZ	T IIIC	Califi	11.00	4.0	Wilddie	-	-		-		-		-		-		-	0.0	-	2.1
					Bottom	3.6	18.3	18.2	7.8	7.9	34.7	34.8	95.9	95.3	7.3	7.3	5.3		2.2	1
						3.6	18.0		7.9		34.9		94.7		7.3		5.3		2.6	
					Surface	1.0	18.3	18.3	7.9	7.9	35.1	35.1	94.9	94.6	7.2		5.6		3	4
						1.0	18.3		7.9		35.1		94.2		7.2	7.2	5.5		3	4
M3	Fine	Calm	11:04	7.0	Middle	3.5	18.3	18.3	7.9	7.9	35.0	35.1	95.1	94.8	7.3	-	6.2	6.3	3	3
						3.5	18.3		7.9		35.1		94.4		7.2		6.2		4	1
					Bottom	6.0	18.4	18.4	7.8	7.9	35.0	35.1	96.0	95.3	7.3 7.2	7.3	7.0		5	i –
	1					6.0	18.3		7.9		35.1		94.6		1.2	1	7.1		4	i

DA: Depth-averaged

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

Water Quality Monitoring

 Water Quality Monitoring Results on
 20 December 22
 during Mid-Flood Tide

Tuto: Quu		loning Kesu				auring mia-	11000		r		r				Dissolved	0.0.00			Suspende	
Monitoring	Weather	Sea Condition	Sampling	Water Depth	Sampling Dep	oth (m)	Water Te	emperature (°C)	р	Η	Salin	ity (ppt)	DO Satu	ration (%)	Dissolved (mg/		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	18.6	18.6	8.0	8.0	34.7	34.7	95.5	95.6	7.3		1.2		2.6	
					Gunace	1.0	18.6	10.0	8.0	0.0	34.7	54.7	95.6	33.0	7.3	7.3	1.2		2.4	
C1	Fine	Calm	14:21	8.0	Middle	4.0	18.6	18.6	8.0	8.0	35.1	34.9	95.5	95.6	7.3	1.0	2.2	2.2	2.3	2.2
	-					4.0	18.6		8.0		34.6		95.6		7.3		2.2		2.1	
					Bottom	7.0	18.6	18.6	8.0	8.0	34.9	35.0	95.4	95.5	7.3	7.3	3.2		1.9	1
				1		7.0	18.6		8.0		35.1		95.6		7.3		3.1		1.8	<u> </u>
					Surface	1.0 1.0	18.7 18.7	18.7	7.9 7.9	7.9	35.0 35.1	35.1	96.0 95.5	95.8	7.3 7.2	-	2.1		1.8 1.7	-
						4.8	18.7		7.9		35.1		95.5 96.1		7.2	7.3	2.0 3.4		2.4	-
C2	Fine	Calm	14:38	9.6	Middle	4.8	18.6	18.7	7.9	7.9	35.2	35.1	96.1	95.8	7.3	-	3.4	3.2	2.4	2.3
						8.6	18.7		7.8		34.6		96.3		7.3		4.1		3.0	1
					Bottom	8.6	18.6	18.7	7.9	7.9	34.8	34.7	95.5	95.9	7.3	7.3	4.2		2.6	
					Surface	1.0	18.3	18.3	7.8	7.9	34.6	35.0	96.0	95.8	7.3		2.2		2.4	
					Sunace	1.0	18.3	16.3	7.9	7.9	35.3	35.0	95.5	95.8	7.3	7.3	2.2		2.2	
M1	Fine	Calm	14:29	4.8	Middle	-	-	_	-	-	-	-	-	_	-	1.5	-	2.7	-	2.6
1011	T IIIC	Califi	14.25	4.0	Wilddie	-	-		-		-		-		-		-	2.1	-	2.0
					Bottom	3.8	18.3	18.3	7.7	7.8	34.6	34.6	96.2	96.0	7.4	7.4	3.3		2.7	-
		1		 		3.8	18.3		7.8		34.6		95.7		7.3		3.2		2.9	<u> </u>
					Surface	1.0	18.7	18.8	7.8	7.9	34.8	34.7	96.8	96.7	7.3	_	3.0		3.8	-
						1.0	18.8		7.9		34.6		96.5		7.3	7.3	2.9		4.1	-
M2	Fine	Calm	14:32	5.0	Middle	-	-	-	-	-	-	-	-		-	-	-	3.2	-	3.4
						4.0	- 18.8		7.7		35.0		97.0		7.3	-	3.4		2.7	-
					Bottom	4.0	18.8	18.8	7.8	7.8	35.2	35.1	96.6	96.8	7.3	7.3	3.4		3.1	
						1.0	18.5		7.8		34.9		96.2		7.3		4.3		3	
					Surface	1.0	18.4	18.5	7.9	7.9	35.2	35.1	95.1	95.7	7.2	1	4.2		3	1
M3	Fine	Calm	14:26	7.2	Middle	3.6	18.5	18.5	7.8	7.9	34.7	34.8	96.1	95.8	7.3	7.3	5.3	5.5	2	2
IVI3	Fine	Calm	14:26	1.2	iviidale	3.6	18.5	18.5	7.9	7.9	34.9	34.8	95.4	95.8	7.3	1	5.3	5.5	2	2
					Bottom	6.2	18.6	18.6	7.8	7.9	34.5	34.6	96.4	96.1	7.3	7.3	6.9		2	
					Bottom	6.2	18.5	10.0	7.9	1.3	34.6	04.0	95.7	30.1	7.3	1.5	6.8		2	1

DA: Depth-averaged

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

Water Quality Monitoring

Water Quality Monitoring Results on 22 December 22 during Mid-Ebb Tide

Water Qua		ioning Resu			ZZ December ZZ			<u> </u>												
Monitoring	Weather	Sea Condition	Sampling	Water Depth	Sampling Dep	oth (m)	Water Te	mperature (°C)	p⊦	Н	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved ((mg/l		Turbidity	(NTU)	Suspende (mg	
Station	Condition		Time	(m)	Sampung Dop		Value	Average	Value A	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	18.0	18.1	8.3	8.3	32.5	32.5	94.9	95.0	7.4		4.7		10.8	
					Odnace	1.0	18.2	10.1	8.3	0.0	32.5	52.5	95.0	55.0	7.4	7.4	4.1		11.2	1
C1	Fine	Moderate	10:58	10.6	Middle	5.3	17.9	17.9	8.4	8.4	32.5	32.5	94.6	94.3	7.4		5.2	4.9	11.9	11.7
	-					5.3	17.9	-	8.3	-	32.5		94.0		7.3		5.3	_	11.6	4
					Bottom	9.6	17.9	18.0	8.4	8.4	32.5	32.5	94.6	94.6	7.4	7.4	5.3		12.4	4
						9.6	18.0		8.3		32.5		94.5		7.4		4.8		12.3	<u> </u>
					Surface	1.0 1.0	18.0 18.0	18.0	8.4 8.4	8.4	32.5 32.5	32.5	95.1 94.6	94.9	7.4	-	3.9 4.2		11.0 11.4	1
						5.1	17.9		8.4		32.5		94.0		7.4	7.4	4.2		10.1	1
C2	Fine	Moderate	11:24	10.2	Middle	5.1	17.9	17.9	8.4	8.4	32.5	32.5	94.1	94.6	7.4		4.9	4.4	10.1	10.2
					_	9.2	17.8		8.5		32.4		95.3		7.5		4.7		9.5	1
					Bottom	9.2	18.0	17.9	8.4	8.5	32.5	32.5	94.6	95.0	7.4	7.5	4.3		9.0	1
					Surface	1.0	17.5	17.6	8.3	8.3	32.3	32.3	94.1	94.2	7.4		8.2		11.2	
					Sunace	1.0	17.6	17.0	8.3	0.3	32.3	32.3	94.3	94.2	7.4	7.4	8.2		11.8	1
M1	Fine	Moderate	11:08	5.5	Middle	-	-	-	-	-	-		-	_	-	7.4	-	8.2	-	12.1
1011	1 IIIC	Woderate	11.00	0.0	Middle	-	-		-		-		-		-		-	0.2	-	12.1
					Bottom	4.5	17.5	17.5	8.3	8.3	32.3	32.3	94.1	94.1	7.4	7.4	8.2		12.6	1
						4.5	17.5		8.3		32.3		94.1	•	7.4		8.3		12.8	<u> </u>
					Surface	1.0	17.5 17.5	17.5	8.3	8.3	32.2	32.3	94.2	94.2	7.4	-	6.0		9.8	4
						1.0	-		8.3		32.3		94.1		7.4	7.4	6.4		9.5	1
M2	Fine	Moderate	11:13	5.5	Middle	-	-	-	-	-	-	-	-	-			-	6.4	-	10.0
						4.5	17.5		8.3		32.2		94.0		7.4		6.9		10.5	1
					Bottom	4.5	17.6	17.6	8.3	8.3	32.2	32.2	94.2	94.1	7.4	7.4	6.4		10.0	1
					o (1.0	17.5	.= .	8.3		32.3		94.2		7.4		6.5		11	<u> </u>
					Surface	1.0	17.7	17.6	8.3	8.3	32.4	32.4	95.0	94.6	7.5	7.4	5.3		12	1
M3	Fine	Moderate	11:03	7.3	Middle	3.7	17.5	17.6	8.3	8.3	32.3	32.4	93.9	94.2	7.4	7.4	6.8	6.4	12	12
IVIO	Fille	woderate	11:03	1.3	IVIIQUIE	3.7	17.6	17.0	8.3	0.3	32.4	32.4	94.5	94.2	7.4		6.0	0.4	12	12
					Bottom	6.3	17.5	17.5	8.3	8.3	32.3	32.3	93.9	94.0	7.4	7.4	7.0		13	j
					Douom	6.3	17.5	17.5	8.3	0.0	32.3	52.5	94.1	34.0	7.4	1.4	6.7		14	l I

DA: Depth-averaged

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

Water Quality Monitoring

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

		toring Resu				uunng wiu-		lue												
Monitoring	Weather	Sea Condition	Sampling		Sampling Dep	oth (m)	Water Te	emperature (°C)	F	рH	Salin	ity (ppt)	DO Satu	ration (%)	Dissolved (mg/		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	17.7	17.7	8.2	8.2	32.2	32.3	93.9	93.8	7.4		7.9		11.9	
					Gunace	1.0	17.7	17.7	8.2	0.2	32.3	32.5	93.7	33.0	7.4	7.4	7.9		12.4	I
C1	Fine	Moderate	07:01	10.8	Middle	5.4	17.6	17.7	8.2	8.2	32.2	32.3	94.0	93.8	7.4		8.8	8.1	10.7	10.9
						5.4	17.7		8.2	-	32.3		93.6		7.4		7.9		10.3	1
					Bottom	9.8	17.6	17.7	8.2	8.2	32.1	32.2	94.0	93.8	7.4	7.4	8.3		10.1	1
	1		1			9.8	17.7		8.2		32.3		93.5		7.3		8.0		9.7	<u> </u>
					Surface	1.0 1.0	17.6 17.6	17.6	8.2 8.2	8.2	32.1 32.2	32.2	94.0 93.9	94.0	7.4	-	6.7 6.8		10.0 10.3	ł
						5.2	17.6		8.2		32.2		93.9 94.0		7.4	7.4	6.9		10.3	I
C2	Fine	Moderate	06:37	10.4	Middle	5.2	17.6	17.6	8.2	8.2	32.2	32.1	93.6	93.8	7.4	-	7.5	7.1	10.8	10.9
						9.4	17.6		8.2		31.7		94.6		7.5		7.3		11.6	ł
					Bottom	9.4	17.6	17.6	8.2	8.2	32.1	31.9	93.9	94.3	7.4	7.5	7.1		11.4	I
					Surface	1.0	17.5	17.5	8.2	8.2	32.1	32.2	93.9	93.9	7.4		7.1		8.9	
					Sunace	1.0	17.4	17.5	8.2	0.2	32.2	32.2	93.8	93.9	7.4	7.4	6.4		9.3	l
M1	Fine	Moderate	06:51	5.8	Middle	-	-	-	-	-	-	-	-		-	7.4	-	7.3	-	10.1
		moderate	00101	0.0	inidalo	-	-		-		-		-		-		-		-	
					Bottom	4.8	17.4	17.4	8.2	8.2	32.1	32.2	94.0	93.9	7.4	7.4	7.8		11.0	ł
	1		1			4.8	17.4		8.2		32.2		93.8		7.4		7.8		11.3	<u> </u>
					Surface	1.0	17.4 17.4	17.4	8.2 8.2	8.2	32.1 32.2	32.2	93.2 93.4	93.3	7.4	-	7.7 8.1		11.0 10.7	1
						1.0	-		- 0.2		32.2		93.4		-	7.4	-		-	ł
M2	Fine	Moderate	06:47	5.9	Middle		-	-	-	-	-	-				-		7.9	-	11.5
						4.9	17.4		8.2		32.1		93.1		7.4		7.7		12.0	ł
					Bottom	4.9	17.4	17.4	8.2	8.2	32.1	32.1	93.4	93.3	7.4	7.4	7.9		12.4	ł
					<u> </u>	1.0	17.4	47.4	8.2		32.2		93.9	00.0	7.4		7.9		12	i
					Surface	1.0	17.4	17.4	8.2	8.2	32.2	32.2	93.7	93.8	7.4	7.4	7.7		12	ł
M3	Fine	Moderate	06:55	7.5	Middle	3.8	17.4	17.4	8.2	8.2	32.2	32.2	93.8	93.7	7.4	7.4	8.8	8.4	11	11
NIS	1 1110	moderate	00.00	1.5	wilddie	3.8	17.4	17.4	8.2	0.2	32.2	52.2	93.6	33.7	7.4]	8.3	0.4	11	1 ''
					Bottom	6.5	17.4	17.4	8.2	8.2	32.1	32.2	93.8	93.8	7.4	7.4	8.7		10	I
					Bottom	6.5	17.4		8.2	0.2	32.2	02.2	93.8	00.0	7.4		8.9		9	1

DA: Depth-averaged

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

Water Quality Monitoring

Water Quality Monitoring Results on 24 December 22 during Mid-Ebb Tide

		toring Kesu			24 December 22						0."	·· / ·›			Dissolved (Oxygen	-		Suspende	ed Solid:
Monitoring Station	Weather Condition	Sea Condition		Water Depth	Sampling Dep	th (m)	Water Te	emperature (°C)	F	рH	Salin	ity (ppt)	DO Satur	ation (%)	(mg/l		Turbidity	(N I U)	(mg	
Station	Condition		Time	(m)			Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	17.6	17.6	7.8	7.8	32.5	32.5	96.3	95.7	7.6		5.0		8.6	
						1.0	17.6		7.8		32.5		95.0		7.5	7.6	5.1		8.4	-
C1	Fine	Calm	12:38	10.2	Middle	5.1	17.3 17.5	17.4	7.8 7.8	7.8	32.5 32.5	32.5	96.8 94.7	95.8	7.6 7.5		6.6 6.5	6.4	9.0 9.4	9.7
						5.1 9.2	17.5		7.8		32.5		94.7 98.7		7.5		6.5 7.5		9.4 11.5	
					Bottom	9.2	17.4	17.6	7.8	7.8	32.5	32.5	95.9	97.3	7.5	7.7	7.3		11.0	•
						1.0	17.5		7.8		32.5		95.1		7.5		7.3		14.7	
					Surface	1.0	17.5	17.5	7.8	7.8	32.5	32.5	93.9	94.5	7.4		7.3		14.4	1
C2	Fine	Calm	12:56	11.2	Middle	5.6	17.5	17.5	7.8	7.8	32.5	32.5	96.0	95.0	7.6	7.5	8.1	8.2	16.5	16.3
02	FILIE	Callfi	12.50	11.2	INIQUIE	5.6	17.5	17.5	7.8	7.0	32.4	32.5	93.9	95.0	7.4		8.1	0.2	16.7	10.5
					Bottom	10.2	17.5	17.5	7.8	7.8	32.5	32.5	97.9	96.4	7.7	7.6	9.1		17.4	
						10.2	17.5		7.8		32.5	02.0	94.8		7.5		9.0		17.8	
					Surface	1.0	17.4	17.5	7.8	7.8	32.6	32.6	98.8	97.5	7.8		5.1		9.1	-
						1.0	17.5		7.8		32.6		96.1		7.6	7.7	5.2		9.6	-
M1	Fine	Calm	12:46	5.4	Middle	-	-	-	-	-	-	-	-		-		-	5.9	-	9.9
						4.4	17.4		7.8		32.5		100.6		7.9		6.6		10.6	•
					Bottom	4.4	17.5	17.5	7.8	7.8	32.6	32.6	97.8	99.2	7.7	7.8	6.6		10.0	
					Surface	1.0	17.4	17.5	7.8	7.8	32.6	32.6	100.2	99.1	7.9		5.1		9.5	
					Surrace	1.0	17.5	17.5	7.8	7.8	32.6	32.6	98.0	99.1	7.7	7.8	5.1		9.0	
M2	Fine	Calm	12:49	4.4	Middle	-	-	_	-	-	-		-		-	1.0	-	5.4	-	9.7
1112	1 110	Cull	12.10		Middlo	-	-		-		-		-		-		-	0.1	-	0.7
					Bottom	3.4	17.4	17.5	7.8	7.8	32.5	32.6	102.0	100.6	8.1	8.0	5.8		10.4	-
						3.4	17.5		7.8		32.6		99.1		7.8		5.7		10.0	┝───
					Surface	1.0 1.0	17.5 17.5	17.5	7.8 7.8	7.8	32.6 32.6	32.6	95.0 93.8	94.4	7.5 7.4		7.0 6.9		8	•
						4.1	17.3		7.8		32.6		96.4		7.4	7.5	7.9		9	1
M3	Fine	Calm	12:42	8.2	Middle	4.1	17.5	17.5	7.8	7.8	32.5	32.6	94.3	95.4	7.4		7.9	7.6	9	9
					D. //	7.2	17.4	17.5	7.8	7.0	32.5	00.5	97.5		7.7	7.0	8.0		10	1
					Bottom	7.2	17.6	17.5	7.8	7.8	32.5	32.5	94.8	96.2	7.5	7.6	8.0		10	1

DA: Depth-averaged

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

Water Quality Monitoring

 Water Quality Monitoring Results on
 24 December 22
 during Mid-Flood Tide

Monitoring	Weather	Sea Condition	Sampling	Water Depth	Sampling Dep	th (m)		mperature (°C)	p	рН	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved ((mg/l		Turbidity((NTU)	Suspende (mg/	
Station	Condition		Time	(m)	Camping Dop		Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0 1.0	17.2 17.2	17.2	7.8 7.8	7.8	32.4 32.4	32.4	96.0 94.5	95.3	7.6 7.5		7.1 7.1		9.0 8.7	
	_					4.8	17.2		7.8		32.4		94.5 99.0		7.8	7.6	8.3		8.2	1
C1	Fine	Calm	10:16	9.6	Middle	4.8	17.2	17.2	7.8	7.8	32.4	32.4	94.7	96.9	7.5		8.3	8.1	8.4	8.3
					Bottom	8.6	17.1	17.2	7.8	7.8	32.3	32.4	101.3	98.3	7.7	7.6	9.0		7.4	ł
					Bottom	8.6	17.2	11.2	7.8	7.0	32.4	02.1	95.2	00.0	7.5	1.0	9.0		7.8	<u> </u>
					Surface	1.0	17.1	17.1	7.8	7.8	32.3	32.3	95.8	95.5	7.6		7.9		20.7	ł
						1.0	17.1		7.8		32.3		95.1		7.6	7.6	7.9		20.2	ł
C2	Fine	Calm	09:54	9.8	Middle	4.9 4.9	17.1 17.1	17.1	7.8 7.8	7.8	32.4 32.4	32.4	96.7 95.2	96.0	7.7 7.6		8.1 8.1	8.4	21.3 21.6	21.6
						8.8	17.1		7.8		32.4		98.7		7.8		9.1		23.0	ł
					Bottom	8.8	17.1	17.2	7.8	7.8	32.3	32.4	95.6	97.2	7.6	7.7	9.0		22.9	ł
					Surface	1.0	17.3	17.3	7.8	7.8	32.5	32.5	95.7	95.2	7.6		5.2		16.8	
					Oundee	1.0	17.3	17.5	7.8	7.0	32.5	02.0	94.6	50.2	7.5	7.6	5.2		17.1	ł
M1	Fine	Calm	10:04	5.0	Middle	-	-	-	-	-	-	-	-		-		-	5.7	-	15.9
						- 4.0	- 17.3		- 7.8		- 32.5		- 102.3		- 7.2		- 6.2		- 15.0	ł
					Bottom	4.0	17.3	17.3	7.8	7.8	32.5	32.5	95.1	98.7	7.5	7.4	6.2		14.6	ł
					Quitan	1.0	17.3	17.3	7.8	7.8	32.5	32.5	95.3	94.8	7.5		4.9		25.4	
					Surface	1.0	17.3	17.3	7.8	7.8	32.5	32.5	94.3	94.8	7.5	7.5	5.0		25.8	ł
M2	Fine	Calm	10:08	5.6	Middle	-	-	-	-	_	-	-	-		-	7.5	-	5.1	-	22.0
IVIZ	1 IIIC	Caim	10.00	5.0	INIDUIE	-	-		-	_	-	_	-		-		-	5.1	-	22.0
					Bottom	4.6	17.3	17.3	7.8	7.8	32.5	32.5	99.8	97.5	7.7	7.6	5.2		18.6	ł
						4.6	17.3	-	7.8		32.5		95.1		7.5		5.1		18.3	<u> </u>
					Surface	1.0	17.3 17.3	17.3	7.8 7.8	7.8	32.5 32.5	32.5	94.2 93.1	93.7	7.4		5.7 5.7		17 17	ł
						3.5	17.3		7.8		32.5		93.1 95.0		7.4	7.4	5.7 6.8		17	i
M3	Fine	Calm	10:12	7.0	Middle	3.5	17.3	17.3	7.8	7.8	32.5	32.5	93.3	94.2	7.3	1	6.7	6.5	10	18
					D. //	6.0	17.3	47.0	7.8	7.0	32.4	00 F	98.9		7.5	7.5	7.0		20	ł
					Bottom	6.0	17.3	17.3	7.8	7.8	32.5	32.5	93.7	96.3	7.4	7.5	7.0		20	ł

DA: Depth-averaged

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

Water Quality Monitoring

Water Quality Monitoring Results on 27 December 22 during Mid-Ebb Tide

Monitoring	Weather Condition	Sea Condition		Water Depth (m)	Sampling Depth (m)		Water Temperature (°C)		рН		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
Station			Time				Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
C1 Sun		Rough	15:11	9.6	Surface	1.0	17.8	17.8	7.9	7.9	34.4	34.4	94.8	94.8	7.3	7.3	5.1		10.9	
	Sunny					1.0	17.8		7.9	1.0	34.4		94.8	01.0	7.3		5.2		11.2	10.3
					Middle	4.8	17.5	17.5	7.9) 7.9	34.4	34.4	93.6	93.6	7.3		8.8	7.8	10.3	
						4.8	17.5		7.9		34.4		93.6		7.3		8.8		9.9	
					Bottom	8.6	17.6	17.6	7.9	7.9	34.4	34.4	93.3	93.3	7.3	7.3	9.4		9.8	
						8.6	17.6		7.9		34.4		93.3		7.3		9.4		9.6	<u> </u>
C2		Moderate	15:44	9.7	Surface	1.0	17.7 17.7	17.7	8.0 8.0	8.0	34.4	34.4	96.1	96.1	7.5		8.6		9.8 10.2	4
	Sunny				Middle	1.0		17.5			34.4		96.1		7.5 7.5 7.5	8.5	- '	-	1	
						4.9 4.9	17.5 17.5		8.0 8.0	8.0	34.4 34.4	34.4	96.1 96.1	96.1	7.5	_	6.8 6.8	7.9	10.9 10.4	10.7
					Bottom	8.7	17.5	17.5	8.0		34.4		96.1		7.5	7.6	8.4		11.2	1
						8.7	17.5		8.0	8.0	34.4	34.4	98.1	98.1	7.6		8.4		11.6	1
			15:24	5.2	Surface	1.0	17.5	17.5	8.0		34.4	34.4	97.4		7.6		5.4	\neg	10.2	- 10.7
	0	Moderate				1.0	17.5		8.0	8.0	34.4		97.2	97.3	7.6		5.3		9.8	
					Middle	-	-		-		-		-		-	7.6	-	5.9 4	-	
M1	Sunny					-	- 1		-	-	-	-	-	-	-	1	-		-	
					Bottom	4.2	18.4	18/	8.0	8.0	34.0	34.0	97.8	97.8	7.5 7.5 7.5	7.5	6.4		11.6	
						4.2	18.4		8.0	8.0	34.0		97.7	97.8		7.5	6.3		11.2	
		Moderate	15:29	4.4	Surface Middle Bottom	1.0	17.7		8.0		34.4	34.4	34.4 96.6	067	7.5	Ţ	9.4		9.8	
M2						1.0	17.7		8.0 8.0	0.0	34.4	34.4	96.7	30.7	7.5	7.5	9.4	10.3	9.4	9.2
	Sunny					-	-		-		-	-	-		-	1.0	-		-	
	Canny					-	-		-	-	-		-		-		-		-	0.2
						3.4		17.6 17.6	8.0 8.0	34.4	34.4	96.2	96.2	7.5	7.5	11.3		8.6	1	
						3.4	17.6		8.0		34.4		96.2		7.5		11.2		8.8	
МЗ		Moderate	15:16	6.9	Surface	1.0	17.6	17.6	7.9	7.9	34.4	34.4	95.2	95.2	7.4	-	5.2		10	1
	Sunny					1.0	17.6		7.9		34.4	95.2			7.4	7.4	5.1		10	4
					Middle	3.5 3.5	17.5 17.5	1/5	7.9 7.9	7.9	34.4 34.4	34.4	95.2 95.2	95.2	7.4		6.8 6.8	6.7	12 12	11
					Bottom	3.5 5.9		5 17.5	7.9		34.4 34.4	34.4	95.2 95.4						12 12	1
						5.9	17.5		7.9	7.9				95.4	7.4 7.4	7.4	8.0 8.0		12	1
						5.9	17.5		7.9		34.4		95.4		7.4	·'	8.0		12	1

DA: Depth-averaged

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

Water Quality Monitoring

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

Matci Quu	inty monit	ioning nesu			ZI December ZZ		11000	lue												
Monitoring	Weather	Sea Condition	Sampling Time	Water Depth (m)	Sampling Dep	oth (m)	Water Temperature (°C)		рН		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solid (mg/L)	
Station	Condition						Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
C1 Si	Sunny	Moderate	10:43	8.9	Surface	1.0	17.6	17.6	8.0	8.0	34.4	34.4	96.3	96.3	7.5	7.5	6.2		11.2	
						1.0	17.6		8.0	0.0	34.4	01.1	96.3	30.3	7.5		6.2	6.4	11.5	10.6
					Middle	4.5	17.5	17.5	8.0	.0 8.0	34.4	34.4	95.9	96.0	7.5		8.7		11.0	
	,					4.5	17.5		8.0		34.4		96.0		7.5		8.7		10.8	
					Bottom	7.9	17.5	17.5	8.0 8.0	8.0	34.4	34.4	96.0	96.0	7.5 7.5	7.5	4.0		9.4	
						7.9	17.5		8.0	0.0	34.4	01.1	96.0		7.5		4.3		9.7	
C2		Moderate	10:15	8.6	Surface	1.0	17.5	17.6	7.9 7.9		34.4		96.2	96.2	7.5		5.6	6.4	9.5	8.9
					Middle	1.0	17.6	17.5			34.4		96.2		7.5 7.5	7.5	5.6		9.2 8.8	
	Sunny					4.3	17.5 17.5		7.9 7.9	7.9	34.4 34.4	34.4	95.9 95.9	95.9	7.5		6.4 6.3		8.8 9.0	
					Bottom	7.6	17.5		7.9		34.4	G	95.9 96.3		7.5		7.3		9.0 8.2	
						7.6	17.5	17.5	7.9	7.9	34.4	34.4	96.3	96.3	7.5	7.5	7.2		8.5	
M1			10:32	4.2	Surface	1.0	17.7	1//	8.0		34.6	- 34.6	96.3		7.5		5.7	6.5	10.4	Ť
	Sunny	Calm				1.0	17.7		8.0	8.0	34.6		96.3	96.3	7.5 7.5	7.5	5.7		10.1	1
					Middle	-	-	_	-		-	-	-	_	-	7.5	-		-	9.9
IVII						-	-	-	-	-	-	-			-	0.5	-			
					Bottom	3.2	17.7	17.7	8.0		34.6	34.6	96.4	96.4	7.5	7.5	7.3	-	9.6	1
						3.2	17.7		8.0	0.0	34.6		96.4	00.1	7.5	1.0	7.2		9.3	ļ
M2		Calm	10:26	3.8	Surface	1.0		17.7 17.7 -	7.9		34.5	34.5	95.8	95.8	7.4 7.4	7.4	8.8		9.8	1
						1.0	17.7		7.9		34.5		95.8				8.8		9.5	
	Sunny					-	-		-		-	-	-		-		-	9.6	-	10.3
	-				Bottom	-	-	- 7.6 7.6 17.6	-	- 7.9 7.9 7.9	-		-		-		-	-	-	4
						2.8	17.6		7.9		34.5 34.5		95.8 95.8	95.8	7.4 7.4	7.4	10.4 10.4		11.0	1
						2.8	17.6	1	7.9								5.4		10.7 9	
		Moderate	10:37	6.4	Surface	1.0 1.0	17.7	1//	7.9	7.9	34.5 34.5	34.5	97.0 96.9	97.0	7.5	7.5	5.4 5.4	6.7	9	i –
M3					Middle	3.2	17.6	17.6 17.6	8.0		34.5		96.5		7.5 7.5	7.5	6.4		10	i –
	Sunny					3.2	17.6		8.0	8.0	34.5	34.5	96.5	96.5	7.5	1	6.4		10	10
					Bottom	5.4	17.6	<u>)</u> 17.6	8.0	0	34.5		96.5		7.5		8.4		10	i –
						5.4	17.6		8.0 8.	8.0	34.5	34.5	96.5	96.5	7.5	7.5	8.4		11	i

DA: Depth-averaged

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

Water Quality Monitoring

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

Monitoring	Weather	Sea Condition	Compling	Water Depth				emperature (°C)	p	эΗ	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved ((mg/l		Turbidity	(NTU)	Suspende (mg	
Station	Condition	Sea Condition	Time	(m)	Sampling Dep	uu (m)	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	17.8	17.8	8.0	8.0	32.0	32.0	101.0	101.0	8.0		2.3		14.7	
						1.0	17.8		8.0		32.0		100.9		8.0	8.0	2.2		15.1	
C1	Fine	Calm	17:04	11.2	Middle	5.6 5.6	17.8 17.8	17.8	8.0 8.0	8.0	32.0 32.0	32.0	101.0 100.9	101.0	8.0 8.0		3.4 3.4	3.4	10.1 9.9	11.2
						10.2	17.8		8.1		32.0		100.3		8.0		4.5		8.8	
					Bottom	10.2	17.8	17.8	8.0	8.1	32.0	32.0	101.0	101.1	8.0	8.0	4.4		8.5	
					Surface	1.0	17.5	17.7	8.0	8.0	32.2	32.1	102.1	101.9	8.1		2.5		12.8	
					Sunace	1.0	17.8	17.7	8.0	8.0	32.0	32.1	101.6	101.9	8.1	8.1	2.5		12.8	
C2	Fine	Calm	17:17	10.4	Middle	5.2	17.3	17.6	8.0	8.0	32.3	32.1	101.8	101.9	8.1	0.1	3.9	3.6	11.3	11.0
02		C daini				5.2	17.8		8.0	0.0	31.9	02	101.9		8.1		3.9	0.0	11.5	
					Bottom	9.4	17.2	17.5	8.0	8.0	32.3	32.2	101.3	101.9	8.1	8.1	4.4		8.9	
						9.4	17.7 17.3		8.0 8.0		32.0 32.4		102.4 102.9		8.1 8.2		4.3 3.2		8.7 9.3	
					Surface	1.0	17.3	17.6	8.0	8.0	32.4	32.2	102.9	102.6	8.1		3.2		9.5	
						-	-		-		-		-		-	8.2	-		-	
M1	Fine	Calm	17:10	5.8	Middle	-	-	-	-	-	-	-	-	-	-		-	4.1	-	9.0
					Bottom	4.8	17.0	17.3	8.0	8.0	32.6	32.4	103.6	103.2	8.3	8.3	5.0		8.7	
					Bollom	4.8	17.5	17.3	8.0	8.0	32.2	32.4	102.7	103.2	8.2	0.3	4.9		8.5	
					Surface	1.0	17.8	17.8	8.0	8.0	32.0	32.0	101.2	101.3	8.0		2.4		7.6	
						1.0	17.8		8.0		32.0		101.3		8.0	8.0	2.4		8.0	
M2	Fine	Calm	17:13	5.2	Middle	-	-	-	-	-	-	-	-	-	-	-	-	3.1	-	8.3
						- 4.2	17.8		8.0		- 31.9		- 101.2		8.0		3.8		8.6	
					Bottom	4.2	17.8	17.8	8.0	8.0	32.0	32.0	101.2	101.3	8.0	8.0	3.9		9.0	
					o (1.0	17.8	17.0	8.0		32.0		101.9		8.1		1.3		18	
					Surface	1.0	17.8	17.8	8.0	8.0	32.0	32.0	101.1	101.5	8.0	8.1	1.3		19	
M3	Fine	Calm	17:08	7.2	Middle	3.6	17.7	17.8	8.0	8.0	32.1	32.1	102.2	101.8	8.1	0.1	2.5	2.5	18	18
IVIO	1 1110	Cain	17.00	1.2	INITALE	3.6	17.8	17.0	8.0	0.0	32.0	52.1	101.3	101.0	8.0		2.6	2.0	18	10
					Bottom	6.2	17.3	17.6	8.0	8.0	32.3	32.2	102.5	102.0	8.2	8.1	3.6		17	
						6.2	17.8		8.0		32.0		101.5		8.0		3.6		17	

DA: Depth-averaged

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

Water Quality Monitoring

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

Monitorina	Weather		Sampling	Water Depth				emperature (°C)	F	рН	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved ((mg/l		Turbidity((NTU)	Suspende (mg	
Station	Condition	Sea Condition	Time	(m)	Sampling Dep	oth (m)	Value	Average	Value	Average	Value	Average	Value	Average		DA	Value	DA	Value	DA
						1.0	17.8	5	8.0		32.0	-	101.7	, , , , , , , , , , , , , , , , , , ,	8.1		2.2		9.3	
					Surface	1.0	17.8	17.8	8.0	8.0	32.0	32.0	101.7	101.7	8.1	-	2.2		9.3 9.5	1
						4.7	17.8		8.0		32.0		101.7		8.1	8.1	3.3		9.3 8.2	1
C1	Fine	Calm	11:29	9.4	Middle	4.7	17.8	17.8	8.0	8.0	31.9	32.0	101.7	101.7	8.1	-	3.3	3.5	8.0	8.3
						8.4	17.8		8.0		32.0		101.7		8.2		5.0		7.6	1
					Bottom	8.4	17.8	17.8	8.0	8.0	31.9	32.0	101.8	101.8	8.2	8.2	5.0		7.2	1
						1.0	17.8	17.0	8.1		31.9		100.9		8.0		2.2		15.3	
					Surface	1.0	17.8	17.8	7.9	8.0	31.9	31.9	101.0	101.0	8.0		2.2		15.0	1
C2	Fine	Calm	11:10	10.4	Middle	5.2	17.8	17.8	8.1	8.0	31.9	31.9	100.9	101.0	8.0	8.0	3.3	3.4	12.9	13.0
62	Fine	Caim	11:10	10.4	widdie	5.2	17.8	17.6	7.9	8.0	31.9	31.9	101.0	101.0	8.0		3.3	3.4	12.5	13.0
					Bottom	9.4	17.8	17.8	8.1	8.0	31.9	31.9	100.8	100.9	8.0	8.1	4.8		11.2	
					Dollom	9.4	17.8	17.8	7.9	0.0	31.9	51.9	101.0	100.9	8.1	0.1	4.8		10.9	
					Surface	1.0	17.7	17.7	8.0	8.0	31.9	32.0	98.4	98.5	7.8		1.9		17.3	
					Cundoo	1.0	17.7		8.0	0.0	32.0	02.0	98.6	00.0	7.8	7.8	1.9		17.8	1
M1	Fine	Calm	11:21	5.6	Middle	-	-	-	-	-	-	-	-		-	1.0	-	2.1	-	15.7
						-	-		-		-		-		-		-		-	1
					Bottom	4.6	17.6	17.7	8.0	8.0	31.8	31.9	98.2	98.4	7.8	7.8	2.2		14.1	4
				1		4.6	17.7		8.0		31.9		98.5	1	7.8		2.2		13.7	┝───
					Surface	1.0	17.7	17.7	8.0	8.0	31.9	31.9	98.1	98.2	7.8		1.2		17.4	1
						1.0	17.7		7.9		31.9		98.2		7.8	7.8	1.3		17.8	1
M2	Fine	Calm	11:18	5.4	Middle	-	-	-	-	-	-	-	-		-	-	-	2.1	-	<u>15.8</u>
						-	- 17.7		-		- 31.9		- 98.0	1	- 7.8		- 2.8		- 14.2	1
					Bottom	4.4	17.7	17.7	8.0 7.9	8.0	31.9	31.9	98.0 98.2	98.1	7.8	7.8	2.8		14.2	1
						1.0	17.7		8.0		31.9		101.6		8.0	1	3.5		13.9	
					Surface	1.0	17.8	17.8	8.0	8.0	31.9	31.9	101.6	101.6	8.0	1	3.5		17	i –
						3.9	17.8		8.0		31.9		101.6		8.0	8.0	4.4		15	i -
M3	Fine	Calm	11:26	7.8	Middle	3.9	17.8	17.8	8.0	8.0	31.9	31.9	101.6	101.6	8.0	1	4.3	4.3	14	15
						6.8	17.8		8.0		31.9		101.6		8.0		5.1		13	1
					Bottom	6.8	17.8	17.8	8.0	8.0	31.9	31.9	101.6	101.6	8.0	8.0	5.2		13	i –

DA: Depth-averaged

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

Water Quality Monitoring

Water Quality Monitoring Results on 31 December 22 during Mid-Ebb Tide

Monitoring	Weather	Sea Condition	Compling	Water Depth	Sampling Dep			mperature (°C)	Ŗ	рН	Salin	ity (ppt)	DO Satur	ation (%)	Dissolved ((mg/l		Turbidity	(NTU)	Suspende (mg	
Station	Condition	Sea Condition	Time	(m)	Sampling Dep		Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	17.0	17.0	7.8	7.9	34.4	34.4	96.4	95.5	7.6		3.1		5.8	
						1.0	17.0		7.9		34.3	•	94.6	0010	7.4	7.6	3.0		5.5	1
C1	Fine	Calm	08:52	10.2	Middle	5.1	17.0	17.0	7.8	7.9	34.4	34.4	97.9	96.6	7.7		4.2	4.3	6.4	6.3
						5.1	17.0 17.0		7.9		34.4		95.2		7.5		4.2 5.6		6.1 6.7	1
					Bottom	9.2 9.2	17.0	17.0	7.8 7.8	7.8	34.4 34.4	34.4	99.8 95.5	97.7	7.8	7.7	5.6		7.0	1
						1.0	17.0		7.9		34.4		93.2		7.3		2.1		6.6	<u> </u>
					Surface	1.0	17.2	17.2	7.9	7.9	34.5	34.5	93.0	93.1	7.3		2.0		6.2	
C2	Fine	Calm	08:32	10.2	Middle	5.1	17.2	17.2	7.8	7.9	34.5	34.5	93.5	93.4	7.3	7.3	3.2	3.1	5.9	5.8
02	FILLE	Calli	00.32	10.2	Midule	5.1	17.2	17.2	7.9	7.9	34.5	34.5	93.2	93.4	7.3		3.1	3.1	5.6	5.0
					Bottom	9.2	17.2	17.2	7.8	7.9	34.5	34.5	93.9	93.7	7.3	7.4	4.1		5.3	1
					2011011	9.2	17.1		7.9		34.5	0.110	93.4		7.4		4.1		5.0	<u> </u>
					Surface	1.0	17.3	17.3	7.8	7.8	34.4	34.5	98.8	98.8	7.7		7.1		7.0	1
						1.0	17.3		7.8		34.5		98.8		7.8	7.8	7.2		6.7	1
M1	Fine	Calm	08:41	5.6	Middle	-	-	-	-	-	-	-	-	-	-	-	-	7.6	-	6.3
						4.6	17.3		7.7		34.2		100.5		7.9		8.1		5.5	
					Bottom	4.6	17.3	17.3	7.8	7.8	34.5	34.4	100.5	100.5	8.0	8.0	8.0		5.9	1
					Surface	1.0	17.2	17.2	7.8	7.8	34.4	34.4	99.5	98.6	7.8		4.6		6.6	
					Sunace	1.0	17.2	17.2	7.8	7.8	34.4	34.4	97.7	98.0	7.6	7.7	4.7		6.3	
M2	Fine	Calm	08:44	4.6	Middle	-	-	-	-	-	-	-	-	-	-	1.1	-	5.2	-	6.1
		Call				-	-		-		-		-		-		-	0.2	-	
					Bottom	3.6	17.2	17.2	7.7	7.8	34.2	34.3	101.2	99.9	8.0	8.0	5.7		5.6	4
						3.6 1.0	17.2 17.3		7.8 7.8		34.4		98.5 96.6		7.9 7.5		5.6 4.1		6.0 7	
					Surface	1.0	17.3	17.4	7.8	7.8	34.6 34.6	34.6	96.6	95.2	7.3	1	4.1		7	l
	_					3.8	17.4		7.8		34.5		97.5		7.7	7.5	5.9		6	
M3	Fine	Calm	08:47	7.6	Middle	3.8	17.4	17.4	7.8	7.8	34.6	34.6	94.7	96.1	7.4	1	6.0	5.5	7	6
					Dattam	6.6	17.3	17.3	7.8	7.0	34.5	34.6	98.3	97.1	7.7	7.6	6.4		6	l
					Bottom	6.6	17.3	17.3	7.8	7.8	34.6	34.0	95.9	97.1	7.5	1.6	6.4		6	1

DA: Depth-averaged

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

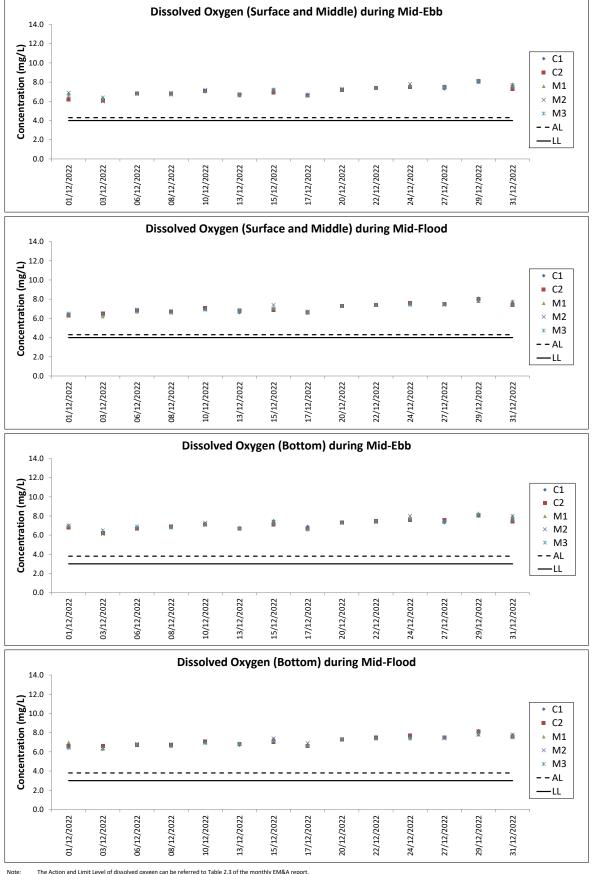
Water Quality Monitoring

Water Quality Monitoring Results on 31 December 22 during Mid-Flood Tide

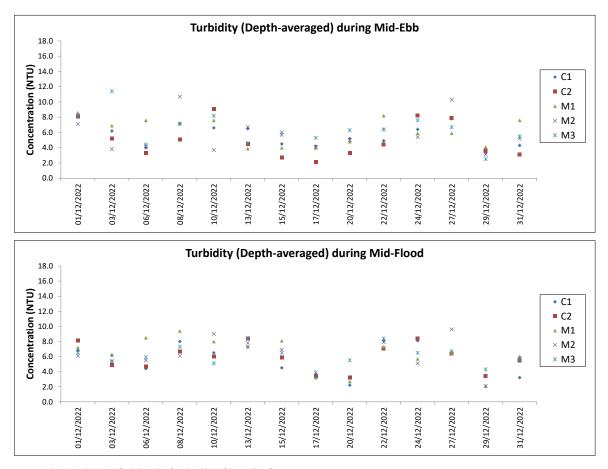
Monitoring	Weather	Sea Condition	Sompling	Water Depth	Sampling Dep			emperature (°C)	F	ъН	Salin	ity (ppt)	DO Satu	ation (%)	Dissolved (mg/l		Turbidity((NTU)	Suspende (mg/	
Station	Condition	Sea Condition	Time	(m)	Sampling Dep		Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA
					Surface	1.0	17.3	17.3	7.9	7.9	34.5	34.5	97.9	96.5	7.6		2.8		4.9	
						1.0	17.3		7.9		34.5		95.0		7.4	7.6	2.8		5.1	ł
C1	Fine	Calm	12:45	10.0	Middle	5.0 5.0	17.6 17.3	17.5	7.8 7.9	7.9	34.2 34.5	34.4	98.9 95.6	97.3	7.7 7.5	-	3.3 3.3	3.2	5.4 5.6	5.5
						9.0	17.3		7.9		34.0		100.5		7.8		3.5		5.8	
					Bottom	9.0	17.3	17.6	7.9	7.9	34.5	34.3	96.6	98.6	7.5	7.7	3.6		6.1	
					Surface	1.0	17.5	17.5	7.8	7.9	34.6	34.6	96.2	94.9	7.5		4.2		5.4	í
					Sunace	1.0	17.5	17.5	7.9	7.9	34.6	34.0	93.5	94.9	7.3	7.4	4.2		5.7	l
C2	Fine	Calm	13:02	10.4	Middle	5.2	17.7	17.6	7.8	7.9	34.4	34.5	97.8	95.9	7.6	1.4	5.8	5.5	6.2	6.4
02		Call	10102		middle	5.2	17.5		7.9		34.6	0.110	94.0		7.3		5.7	0.0	6.5	
					Bottom	9.4	17.8	17.7	7.8 7.9	7.9	34.3	34.5	99.7	97.6	7.7 7.4	7.6	6.5		7.4	ł
			1	[9.4	17.5 17.6		7.9		34.6 34.2		95.4 100.0		7.4		6.4 5.3		7.2 5.7	
					Surface	1.0	17.6	17.5	7.0	7.9	34.2	34.3	98.3	99.2	7.0	-	5.3		5.9	ł
						-	-		-		-		-		-	7.8	-		-	ł
M1	Fine	Calm	12:57	5.8	Middle	-	-	-	-	-	-	-	-		-		-	6.0	-	5.5
					Bottom	4.8	17.9	17.7	7.8	7.9	33.9	34.2	102.3	100.7	7.9	7.8	6.7		5.0	ł
					Bollom	4.8	17.4	17.7	7.9	7.9	34.4	34.2	99.1	100.7	7.7	7.0	6.7		5.3	1
					Surface	1.0	17.6	17.5	7.8	7.9	34.2	34.4	99.1	98.4	7.7		5.1		5.6	l
						1.0	17.3	-	7.9	-	34.5		97.6		7.6	7.7	5.0		5.2	ł
M2	Fine	Calm	12:54	5.6	Middle	-	-	-	-	-	-	-	-		-		-	5.8	-	5.8
						- 4.6	-		-		-		- 101.2		-		- 6.5		- 6.4	ł
					Bottom	4.6	18.0 17.4	17.7	7.8 7.9	7.9	33.9 34.4	34.2	98.2	99.7	7.8	7.8	6.5 6.4		6.4 6.0	ł
						1.0	17.4		7.9		34.5		95.0	1	7.4		4.3		5	
					Surface	1.0	17.4	17.4	7.9	7.9	34.5	34.5	94.4	94.7	7.4	1 <u> </u>	4.2		5	I
M3	Fine	Calm	12:50	7.6	Middle	3.8	17.4	17.4	7.9	7.9	34.5	34.5	95.3	95.0	7.4	7.4	6.3	5.6	6	e
11/13	Fine	Calm	12:50	7.6	iviidale	3.8	17.4	17.4	7.9	7.9	34.5	34.5	94.6	95.0	7.4		6.2	0.0	6	6
					Bottom	6.6	17.4	17.4	7.9	7.9	34.5	34.5	95.8	95.3	7.5	7.5	6.3		7	1
					Dottom	6.6	17.4	TT.T	7.9	1.5	34.5	07.0	94.7	55.5	7.4	1.5	6.3		7	i

DA: Depth-averaged

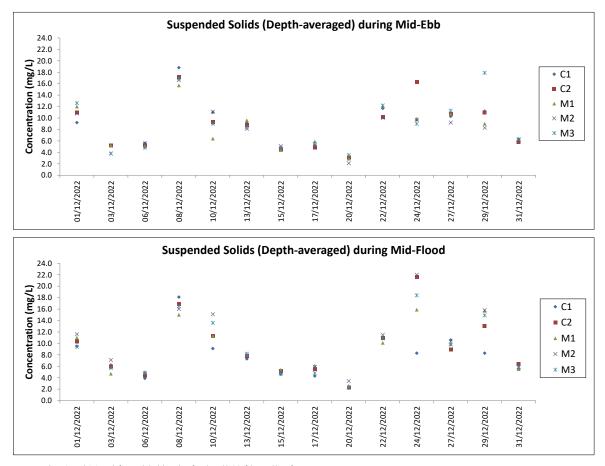
Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher



The Action and Limit Level of dissolved oxygen 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.



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. Note

Appendix H. Waste Flow Table

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

		Actual Quan		&D Materials (e s) e.g. broken co	•	vated waste)	Act	tual Quantities	of Non-inert C&	&D Waste (tonn	es)		
Month	Excavated Waste (tonnes)	(a) Total inert C&D material generated (a) = (b) + (c) + (d) + (e)	(b) Reused in contract	(c) Reused in other projects	(d) Sent to recycling company	(e) Disposed to public fill	(f) Recycled scrap metal	(g) Reused / recycled timber	(h) Chemical waste	(i) Other waste disposed to landfill		(k) Total recyclable waste (k) = (b) + (c) + (d) + (f) + (g)	(I) Total construction waste generated (I) = (a) + (j)
Apr-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jun-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aug-22	2591.67	2591.67	0.00	0.00	1584.00	1007.67	0.00	0.00	0.00	0.00	0.00	1584.00	2591.67
Sep-22	1340.00	1340.00	0.00	0.00	1340.00	0.00	0.00	0.00	0.36	0.00	0.36	1340.00	1340.36
Oct-22	1385.00	1385.00	0.00	0.00	1385.00	0.00	0.00	0.00	0.00	0.00	0.00	1385.00	1385.00
Nov-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	5316.67	5316.67	0.00	0.00	4309.00	1007.67	0.00	0.00	0.36	0.00	0.36	4309.00	5317.03

*Chemical waste, Wasted oil density 0.9kg/L

Appendix I. Status of Environmental Permits and Licences

Type of Licence / Permit	Reference No.	Valid From	Valid Until	Remark
Environmental Permit	EP-581/2020	5 Oct 2020	End of Project	N/A
Billing Account for Disposal of Construction Waste	7043487	18 Mar 2022	End of Project	N/A
Construction Dust Notification under APCO	477560	10 Mar 2022	N/A	N/A
Construction Noise Permit	GW-RS0867-22	22 Oct 2022	20 Apr 2023	N/A
Chemical Waste Producer	5213-951-G2961-01	19 Apr 2022	End of Project	N/A
Marine Dumping (Type 1 –	EP/MD/22-136	30 Jun 2022	29 Dec 2022	N/A
Open Sea Disposal)	EP/MD/23-080	30 Dec 2022	31 May 2023	N/A
Marine Dumping (Type 1 –	EP/MD/23-058	03 Nov 2022	02 Dec 2022	N/A
open sea Disposal) (Dedicated Site)	EP/MD/23-064	03 Dec 2022	02 Jan 2023	N/A

Table I.1: Summary of Environmental Licenses and Permits - Marine Section (Dec 2022)

Appendix J. Environmental Mitigation Measures Implementation Status

Environmental Mitigation Measures Implementation Status (Dec 2022)

Recommended Mitigation Measures for Air Quality Impact

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
			(Marine Section)
		 Relevant control measures as required in the Air Pollution Control (Construction Dust) Regulation shall be implemented to minimise dust impact. 	N/A
		Skip hoist for material transport should be totally enclosed by impervious sheeting.	N/A
		• All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation to maintain the dusty materials wet.	N/A
		All stockpiles of aggregate or spoil should be covered and/or water applied.	N/A
S6.1.1	S4.2.1	• The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading.	Yes
		• Immediately before leaving a construction site, every vehicle shall be washed to remove any dusty materials from its body and wheels.	N/A
		 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. 	N/A
		• 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	nded Mitiga	tion Measures for Noise Impact	
PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures
	Rei.		(Marine Section)
		 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
S6.2.1	S5.2.1	• 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
		• 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
Recomme	nded Mitiga	ation Measures for Water Quality Impact	
PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)
S6.3.1	S6.2.1	 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
S6.3.1	S6.2.1	 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
S6.3.1- S6.3.2	S6.2.1	• To minimise any adverse water quality impact during the excavation of sediment, a funnel should be placed at the top of pile casing during excavation and silt curtains should be deployed to completely enclose the cofferdam and steel pile casing. Silt curtains should be deployed prior to installation of temporary platform on barge, cofferdam and steel pile casing. Silt curtains should only be removed after completion of pile caps and piers. The Contractor should be responsible for the design, installation and maintenance of the silt curtain to minimise the impacts on water quality. The design and specification of the silt curtains should be submitted by the Contractor to the Project Manager or Project Manager's Representative of AAHK for approval. The marine bridge piers should not be constructed at the same time to avoid adverse hydrodynamic impact due to flow blockage increase during the interim construction stages. All vessels should be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash.	Rem
S6.3.1	S6.2.1	 For in-situ construction method, concrete would be delivered from existing concrete batching plants off-site to avoid on site concrete batching activity. During the in-situ bridge deck concreting, the concrete should be pumped or lifted inside an enclosed container for concreting the deck. Tarpaulin plastic sheet should be mounted at the bottom of the temporary working platform for concreting to prevent concrete from falling to the sea. 	N/A
S6.3.1	S6.2.1	 The marine works of the Project should be proactively planned and coordinated to avoid any concurrent marine works below seawater level with those of ITT-BVB to minimise cumulative water quality impact during construction phase. 	Yes
S6.3.1	S6.2.1	• 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.	Yes
S6.3.1	S6.2.1	 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 	N/A

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)
		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.	
S6.3.1	S6.2.1	• Construction works should be programmed to minimise soil excavation works in rainy seasons (April to September). If excavation in soil cannot be avoided in these months or at any time of year when rainstorms are likely, for the purpose of preventing soil erosion, temporary exposed slope surfaces should be covered e.g. by tarpaulin, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided (e.g. along the crest / edge of excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements should always be in place in such a way that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm.	N/A
S6.3.1	S6.2.1	• 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.	N/A
S6.3.1	S6.2.1	 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. 	N/A
S6.3.1	S6.2.1	 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. 	N/A
		• Good site practices should be adopted to remove rubbish and litter from construction sites so as to prevent the rubbish and litter from spreading from the site area. It is recommended to clean the construction sites on a regular basis. Also, the following mitigation measures related to the transportation of the sediment should be implemented to minimise the potential water quality impact:	
S6.3.1	S6.2.1	 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; 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; and 	Yes
		 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). 	
S6.3.1	S6.2.1	• 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.	Yes

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
	Rel.		(Marine Section)
S6.3.1	S6.2.1	• 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.	N/A
S6.3.1	S6.2.1	• There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. All the runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. The beneficial uses of the treated effluent for other 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.	N/A
S6.3.1	S6.2.1	 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
S6.3.1	S6.2.1	• 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
S6.3.1	S6.2.1	 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
S6.3.1	S6.2.1	 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. 	Obs
S6.3.1	S6.2.1	• Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.	Yes

Recommended Mitigation Measures for Waste Management

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
	Rei.		(Marine Section)
		<u>Good Site Practices:</u> 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
S6.4.1-	07.0.4	Provision of sufficient waste reception/ disposal points, and regular collection of waste.	Obs
S6.4.2	S7.2.1	 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
		 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. 	N/A
S6.4.1	S7.2.1	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.	Yes
		Minimise over ordering and wastage through careful planning during purchasing of construction materials.	Yes
S6.4.1	S7.2.1	<u>C&D materials:</u> The C&D materials generated should be sorted on-site into inert C&D materials (that is, public fill) and non-inert (C&D waste).	Yes
S6.4.1	\$7.2.1	• To minimise the impact resulting from collection and transportation of C&D materials as far as practicable, C&D waste, such as wood, plastic, steel and other metals should be reused or recycled and, as a last resort, disposed to landfill.	N/A

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
	Rei.		(Marine Section)
		 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
		Locating stockpiles to minimise potential visual impacts.	Yes
S6.4.1	S7.2.1	Minimising land intake of stockpile areas as far as possible.	N/A
		 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. 	N/A
		 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. 	Yes
		<u>General Refuse:</u> • General refuse should be stored in covered bins or compaction units separately from C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the site regularly, separately from C&D materials. An enclosed and covered area is preferred to reduce the occurrence of "wind blown" light materials.	Yes
S6.4.1	S7.2.1	• The recyclable component of general refuse, such as aluminium cans, paper and cleansed plastic containers shall be separated from other waste. Provision and collection of recycling bins for different types of recyclable waste shall be set up by the Contractor. The Contractor shall also be responsible for arranging recycling companies to collect these materials.	N/A
		• 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
		<u>Chemical Waste:</u> • 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 <i>Code of Practice on the Packaging, Labelling and Storage of</i> <i>Chemical Wastes</i> .	Yes
S6.4.1- S6.4.2	S7.2.1	• 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.	Yes
		• Trip ticket system shall be implemented to prevent illegal dumping in accordance with the "Trip Ticket System for Disposal of Construction and Demolition Materials'.	Yes
		Sediment:	Yes

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
		 The sediment should be excavated, handled, treated, transported and/or disposed of in a manner that would minimise adverse environmental impacts. 	(Marine Section)
		 Relevant ordinances (such as Waste Disposal Ordinance, Air Pollution Ordinance (Construction Dust) Regulation and Water Pollution Control Ordinance) shall be complied with during the excavation and handling of the sediment. 	Yes
S6.4.1 & S6.4.3	S7.2.1	• The temporary stockpiling area should be placed within earth bunds or sand bags to prevent leachate from entering the ground, nearby drains and surrounding water bodies. The temporary stockpiling area should be completely paved in order to avoid contamination to underlying soil or groundwater. Separate and clearly defined areas should be provided for stockpiling of contaminated and uncontaminated materials. Leachate, if any, should be collected, treated and discharged according to the Water Pollution Control Ordinance (WPCO). In order to minimise the exposure to contaminated materials, workers shall, if necessary, wear appropriate personal protective equipments (PPE) when handling contaminated sediments. Adequate washing and cleaning facilities shall also be provided on site.	Yes
S6.4.1	S7.2.1	 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
S6.4.1, 6.4.3	S7.2.1	• 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
		• 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.	Yes
S6.4.1	S7.2.1	• 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
		• 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 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 	Yes

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)
		 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 place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the DEP. 	Yes
S6.4.1	S7.2.1	 Potential Floating Refuse: Proper management and education should be given to construction site workers such that accidental release or intentional disposal would be avoided. The refuse should be stored in enclosed bin to avoid adverse impacts to the surroundings including marine environment. Regular checking should also be carried out to ensure that the refuse is stored properly. 	Obs
Recomme	nded Mitiga	tion Measures for Marine Ecological Impact	
PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)
		No underwater persuasive siling shall be conducted in this Designt	Yes
-	-	No underwater percussive piling shall be conducted in this Project	res
S6.5.1	S8.2.1	 Based upon a precautionary approach, a speed limit of 10 knots should be strictly enforced on all construction-related vessels. 	Yes
S6.5.1	S8.2.1	 Good site practices, guidelines and mitigation measures detailed in Water Quality Sections 6.3.1 of the Project Profile should be adopted to further alleviate water quality impacts. 	Yes
Recomme	nded Mitiga	tion Measures for Landscape and Visual Impact	
PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
			(Marine Section)
S6.6.1	S9.3.1	All affected trees will be felled and compensated, no transplantation is required.	N/A
S6.6.1	S9.3.1	 Optimising construction activities, e.g. minimising extent of temporary works area, installing site hoardings and minimising illumination on non-target areas. 	Yes
S6.6.1	S9.3.1	Minimise construction periods where possible.	Yes
S6.6.1	S9.3.1	Early establishment of planting areas as far as appropriate.	N/A

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
			(Marine Section)
S6.6.1	S9.3.1	 Erection of decorative mesh screen or construction hoardings. 	N/A
S6.6.1	S9.3.1	Control of night-time lighting.	N/A
S6.6.1	S9.3.1	 Temporary vertical greening, screen / buffer at-grade planting to soften the engineering structure of construction works. 	N/A
S6.6.1	S9.3.1	 Tree preservation in accordance with Development Bureau Technical Circular (Works) No. 4/2020 (ref: DEVB(GLTM) 200/2/1/1). 	N/A
S6.6.1	S9.3.1	 Proposed tree felling / tree compensation. 	N/A
Others			
PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
			(Marine Section)
-	-	 A copy of the valid Environmental Permit shall be displayed conspicuously on the Project site(s) at all vehicular site entrances/exits or at a convenient location for public's information at all times. The most updated information about the Permit, including any amended Permit, shall be displayed at such locations. If the Permit Holder surrenders a part or whole of the Permit, the notice he send to the Director shall also be displayed at the same locations as the original Permit. The suspended, varied or cancelled Permit shall be removed from display at the Project site(s). 	Yes
-	-	 The required licences should be obtained by the Contractor (including CNP (if any), WPCO licence, etc. 	N/A

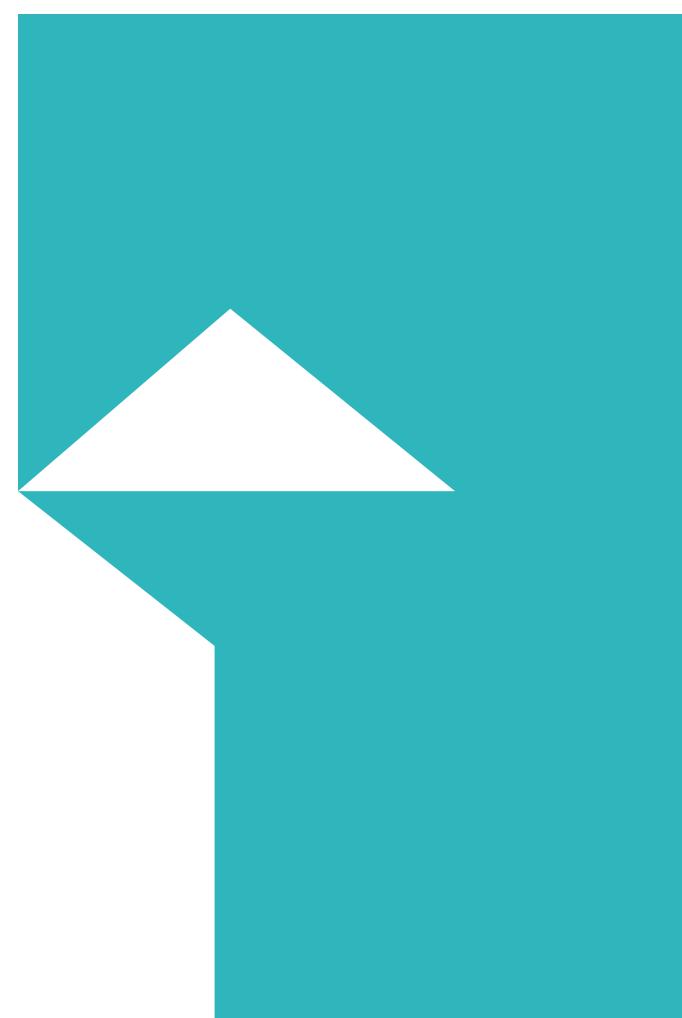
Notes:

Yes = Implemented where applicable

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

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

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



mottmac.hk