

Contract No. EP/SP/66/12 Integrated Waste Management Facilities, Phase 1 Monthly EM&A Report No.40



Monthly EM&A Report No.40 (Period from 1 October to 31 October 2021)

(Clause 3.3, Further Environmental Permit FEP-01/429/2012/A)

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Revision History

Rev.	DESCRIPTION OF MODIFICATION	DATE
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EXECUTIVE SUMMARY

Introduction

- A1. The Project, Integrated Waste Management Facility (IWMF), is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO) and is currently governed by a Further Environmental Permit (FEP No. FEP-01/429/2012/A) for the construction and operation of the Project.
- A2. In accordance with the Updated Environmental Monitoring and Audit (EM&A) Manual for the Project, EM&A works for marine water quality, noise, waste management and ecology should be carried out by Environmental Team (ET), Acuity Sustainability Consulting Limited (ASCL), during the construction phase of the Project.
- A3. This is the 40th Monthly EM&A Report, prepared by ASCL, for the Project summarizing the monitoring results and audit findings of the EM&A programme at and around Shek Kwu Chau (SKC) during the reporting period from 1 October to 31 October 2021.

Summary of Main Works Undertaken & Key Mitigation Measures Implemented

- A4. Key activities carried out in this reporting period for the Project included the following:
 - Reclamation Area:
 - Reclamation works
 - PVD Remedial Works
 - Installation of Instrumentation
 - Site Investigation works for foundation
 - Foundation works
 - Seawall Portion:
 - Installation of caisson
 - Installation of Chinese Pod
 - Caisson extension works, from +3mPD to +6mPD, at Seawall A and B
- A5. The major environmental impacts brought by the above construction activities include:
 - Deterioration of water quality of nearby water body by reclamation
- A6. The key environmental mitigation measures implemented for the Project in this reporting period associated with the construction activities include:
 - Reduction of noise from equipment and machinery on-site;
 - Sorting, recycling, storage and disposal of general refuse and construction waste;
 - Management of chemicals and avoidance of oil spillage on-site;
 - Regulation on rate and means for filling works as stipulated in Table 1 of FEP or the approved Supporting Document for Reviewing Dredging Rate and Filling Rate, whichever is applicable;

- Confirmation of the absence of silt content in the rock filling material and the filling work is properly conducted;
- Dust suppression measures for exposed earth surface and stockpile of dusty material;
 and
- Site runoff control measure during rainstorm.

Summary of Exceedance & Investigation & Follow-up

- A7. The EM&A works for water quality, construction waste, marine mammal and White-Bellied Sea Eagle (WBSE) were conducted during the reporting period in accordance with the Updated EM&A Manual.
- A8. No exceedance of the Action or Limit Levels in relation to noise, construction waste and WBSE monitoring was recorded in the reporting month.
- A9. During the reporting period, eighteen (18) of the general water quality monitoring results of suspended solids (SS) obtained had exceeded Action Level. Thirty-four (34) of general water quality monitoring results of SS obtained during the reporting period had exceeded the Limit Level. Investigation was carried out immediately for each of the exceedance cases.
- A10. No project-related Action Level & Limit Level exceedance was recorded from 1 October 2021 to 31 October 2021.
- A11. Weekly site inspections of the construction work by ET were carried out on 5, 12, 19 and 26 October 2021 to audit the mitigation measures implementation status. Monthly joint site inspection was carried out on 19 October 2021 by ET and IEC. Observations were recorded in the site inspection checklists and provided to the contractors together with the appropriate follow-up actions where necessary.

Complaint Handling and Prosecution

- A12. No project-related environmental complaint was received during the reporting period.
- A13. Neither notifications of summons nor prosecution was received for the Project.

Reporting Change

A14. There was no change to be reported that may affect the on-going EM&A programme.

Summary of Upcoming Key Issues and Key Mitigation Measures

- A15. Key activities anticipated in the next reporting period for the Project will include the following:
 - Reclamation Area:
 - Reclamation works
 - PVD Remedial works
 - Installation of instrumentation

- Site Investigation works for foundation
- Foundation works
- Seawall Portion:
 - Installation of caisson
 - Installation of Chinese Pod
 - Caisson extension works, from +3mPD to +6mPD, at Seawall A and B
- A16. The major environmental impacts brought by the above construction activities will include:
 - Deterioration of water quality of nearby water body by reclamation.
- A17. The key environmental mitigation measures for the Project in the coming reporting period associated with the construction activities will include:
 - Reduction of noise from equipment and machinery on-site;
 - Sorting, recycling, storage and disposal of general refuse and construction waste;
 - Management of chemicals and avoidance of oil spillage on-site, especially under heavy rains and adverse weather;
 - Confirmation of the absence of silt content in the rock filling material and the filling work is properly conducted;
 - Dust control of exposed soil surface and stockpile of dusty material at reclaimed area;
 - Dust suppression measures for exposed earth surface and stockpile of dusty material;
 and
 - Site runoff control measure during rainstorm.

1. BASIC PROJECT INFORMATION

1.1 Background

- 1.1.1 The Government of Hong Kong SAR will develop the Integrated Waste Management Facilities (IWMF) Phase 1 (hereafter "the Project") with incineration to achieve substantial bulk reduction of unavoidable municipal solid waste (MSW) and to recover energy from the incineration process. The IWMF will be on an artificial island to be formed by reclamation at the south-western coast of Shek Kwu Chau. Keppel Seghers Zhen Hua Joint Venture (KSZHJV) was awarded the contract under Contract No. EP/SP/66/12 Integrated Waste Management Facilities Phase 1 to construct and operate the Project.
- 1.1.2 An environmental impact assessment (EIA) study for the Project has been conducted and the EIA Report was approved under the Environmental Impact Assessment Ordinance on 17 January 2012. An Environmental Permit (EP) (EP No.: EP-429/2012) was granted to EPD on 19 January 2012 for the construction and operation of the Project. Subsequently, the EP was amended (EP No.: EP-429/2012/A) and a further EP (FEP) (EP No.: FEP-01/429/2012/A) was granted to the Keppel Seghers Zhen Hua Joint Venture (KSZHJV) on 27 December 2017.
- 1.1.3 A further EP (FEP) (EP No.: FEP-02/429/2012/A) on Submarine Cable for the Development of the Project was granted to CLP Power Hong Kong Limited (CLP) on 17 Jan 2020.
- 1.1.4 The key design and construction elements of the Project include the Design and the Works including but not limited to the design, engineering procurement, construction, testing and commissioning of the Facility including:
 - Ground Treatment works;
 - Seawall and Breakwater construction;
 - Non-dredged Reclamation;
 - Other Marine works and Harbour and Port Facilities;
 - Site formation;
 - Municipal Solid Waste (MSW) Treatment Processes;
 - Energy Recovery for Power Generation and Surplus Electricity export;
 - Wastewater treatment process;
 - Desalination and water treatment process;
 - Civil works;
 - Building and Structural works;
 - Electrical and Mechanical works;
 - Building Services;
 - Architectural and Landscaping works; and
 - All other design and works required for the operation and maintenance of the Facility according to the Contract requirements.

1.1.5 The location of the IWMF near Shek Kwu Chau (SKC) and general layout of IWMF are shown in **Figure 1.1** and **Figure 1.2** respectively.

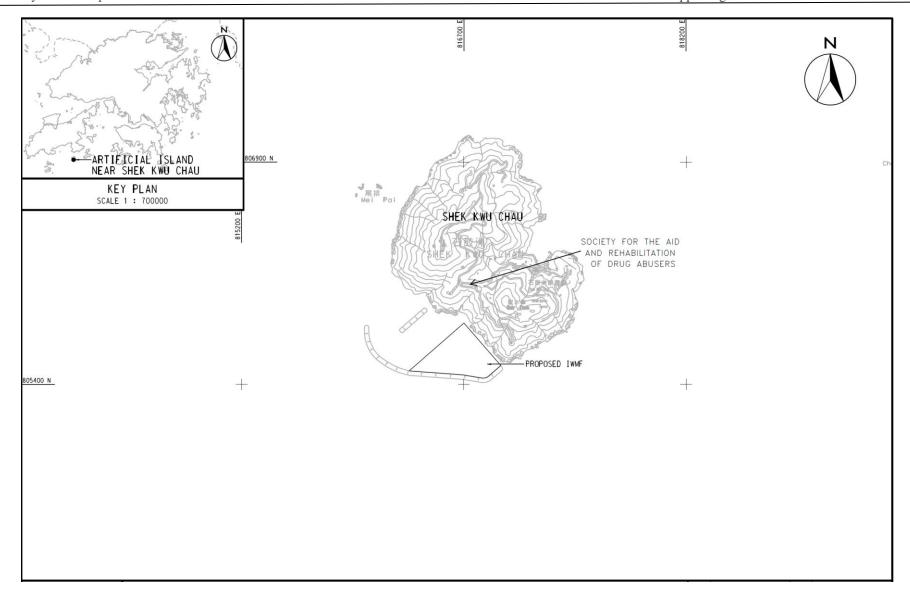


Figure 1.1 Location of the IWMF at the Artificial Island near SKC

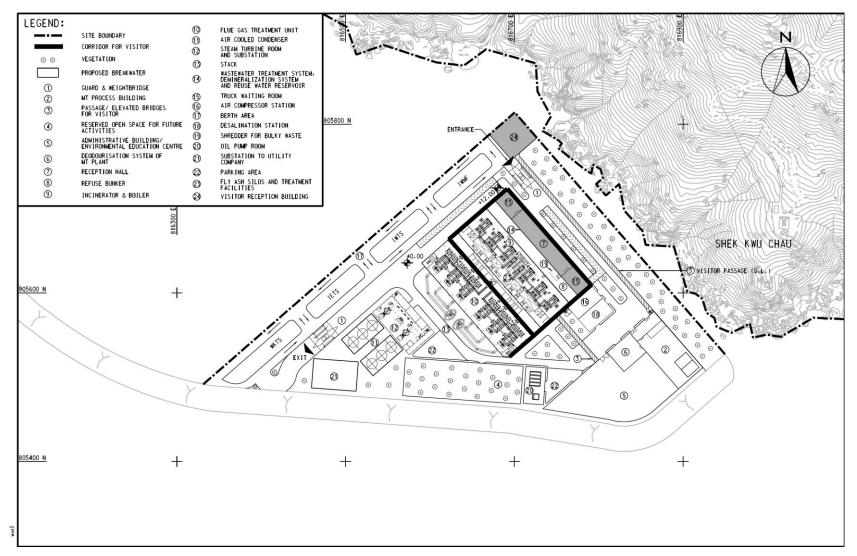


Figure 1.2 General Layout of the IWMF at the Artificial Island near SKC

- 1.2 The Reporting Scope
- 1.2.1 This is the 40th Monthly EM&A Report for the Project which summarizes the key findings of the EM&A programme during the reporting period from 1 October 2021 to 31 October 2021.
- 1.3 Project Organization
- 1.3.1 The Project Organization structure for Construction Phase is presented in **Figure 1.3**.

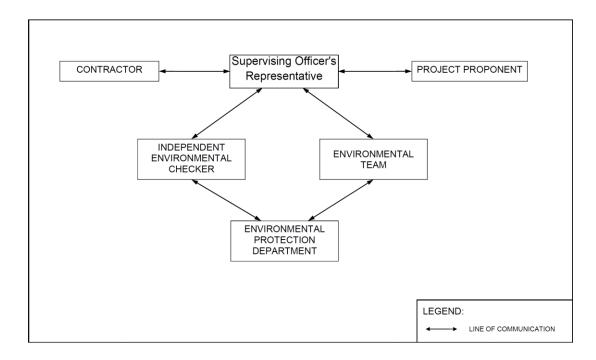


Figure 1.3 Project Organization Chart

1.3.2 Contact details of the key personnel are presented in **Table 1.1** below:

Table 1.1 Contact Details of Key Personnel

Party	Position	Name	Telephone no.
Keppel Seghers – Zhen Hua Joint Venture	Project Manager	Kenny Yu	2192-0606
Acuity Sustainability Consulting Limited	Environmental Team Leader	F.C. Tsang	2698-6833
ERM-Hong Kong, Limited	Independent Environmental Checker	Mandy To	2271-3000

1.4 Summary of Construction Works

1.4.1 Details of the major construction activities undertaken in this reporting period are shown in **Table 1.2** and **Figure 1.4** below. The construction programme is presented in **Appendix A**.

Table 1.2 Summary of the Construction Activities Undertaken during the Reporting Month

Location of works	Construction activities undertaken	Remarks on progress
Reclamation area	Reclamation works	On-going
	PVD Remedial works	On-going
	Installation of Instrumentation	On-going
	Site Investigation works for foundation	On-going
	Foundation works	On-going
Seawall portion	Installation of caisson	On-going
	Installation of Chinese Pod	On-going
	• Caisson extension works, from +3mPD to +6mPD, at Seawall A and B	On-going



Figure 1.4 Location of Major Construction Activities Undertaken during the Reporting Month

1.5 Summary of Environmental Status

1.5.1 A summary of the valid permits, licences, and /or notifications on environmental protection for this Project is presented in **Table 1.3**

Table 1.3 Summary of the Status of Valid Environmental Licence, Notification, Permit and Documentations

Permit/ Licences/ Notification	Reference	Validity Period	Remarks
Variation of Environmental Permit	EP-429/2012/A	Throughout the Contract	
Further Environmental Permit	FEP-01/429/2012/A	Throughout the Contract	
Notification of Construction Works under the Air Pollution Control (Construction Dust) Regulation (Form NA)	Ref No.: 428778	15/12/2017 – 22/09/2024	
Wastewater	WT00033787-2019	22/08/2019 – 31/08/2024	
Discharge Licence Chemical Waste Producer Registration	WPN0017-933- K3301-01 WPN5213-961- K3301-02	Throughout the Contract Throughout the Contract	
	WPN5296-839- K3301-03	Throughout the Contract	
Construction Noise Permit (24 hours)	GW-RS0675-21	15/09/2021– 14/03/2022	Portion 1, 1A & 1B
	GW-RE0467-21	23/05/2021– 22/11/2021	Portion 8
Construction Noise Permit (Percussive piling)	PP-RS0013-21	03/09/2021- 02/03/2022	Portion 1, 1A & 1B
Billing Account for Disposal of Construction Waste	A/C No.:7029768	Throughout the Contract	

1.5.2 The status for all environmental aspects is presented in **Table 1.4**.

Table 1.4 Summary of Status for Key Environmental Aspects under the Updated EM&A Manual

Parameters	Status
Water Quality	D VAN VAL
Baseline Monitoring under Updated EM&A Manual and Detailed Plan on DCM	The baseline water quality monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under FEP Condition 3.4
Impact Monitoring	On-going
Post DCM Monitoring	All DCM was completed on 14 October 2020, regular DCM monitoring for further 4 weeks (i.e form 16 October 2020 to 14 November 2020) was completed according to the approved Detailed Plan on Deep Cement Mixing
Initial Intensive DCM Monitoring	Conducted from 11 February 2019 to 10 March 2019, had not been resumed since there was no DCM related parameter exceeding the AL/LL.
Baseline Water Quality of wet season	Completed over 13 August 2018 to 7 September 2018
Noise	
Baseline Monitoring	The baseline noise monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under FEP Condition 3.4
Impact Monitoring	On-going
Waste Management	
Mitigation Measures in Waste Monitoring Plan	On-going
Coral	
Pre-translocation Survey and Coral Mapping	The Coral Translocation Plan was submitted and approved by EPD under EP Condition 2.12
Coral Translocation	Completed on 28 March 2018
Post-Translocation Coral Monitoring	Survey affected by missing of translocated and tagged coral colonies after typhoons in September 2018, completed on 28 March 2019.
Pre-construction Coral Survey and Tagging	Completed on 26 June 2018
Tagged Coral Monitoring	Survey obstructed due to missing of tagged coral colonies after typhoons in September 2018
Coral Survey and Retagging	Re-tagging at Indirect Impact Site was conducted on 23 November and Re-tagging at Control Site was conducted on 3 December 2018.
Post Re-tagging Coral Monitoring	On-going
Marine Mammal	
Vessel-based Line- transect Survey Baseline Monitoring	The baseline marine mammal monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under FEP Condition 3.4
Vessel-based Line- transect Survey Impact Monitoring	On-going
Land-based Theodolite Tracking	30 days of theodolite surveys were started on 21 Feb 2019 and completed in May 2019.

Parameters	Status	
Passive Acoustic	30 days of PAM surveys were started on 1 May 2019 and	
Monitoring	completed until the end of May 2019.	
White-bellied Sea Eagle		
Baseline Monitoring	The baseline WBSE monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under FEP Condition 3.4	
Impact Monitoring	On-going On-going	
Environmental Audit		
Site Inspection covering Measures of Air Quality, Noise Impact, Water Quality, Waste, Ecological Quality, Fisheries, Landscape and Visual Mitigation Measures in	On-going Installation of caisson No.19 was completed on 18 March	
Marine Mammal Watching Plan (MMWP)	2021, which the reclamation area had been totally enclosed by permanent structure. Floating type silt curtain at marine access was removed on 18 March 2021. No enclosed area shall be formed by deployment of silt curtain for the remaining works programme.	
Mitigation Measures in Detailed Monitoring Programme on Finless Porpoise (DMPFP)	Installation of caisson No.19 was completed on 18 March 2021, which the reclamation area had been totally enclosed by permanent structure. Floating type silt curtain at marine access was removed on 18 March 2021. No enclosed area shall be formed by deployment of silt curtain for the remaining works programme.	
Mitigation Measures in Vessel Travel Details	On-going	
Daily Site Audit and Monitoring for Dredging Work	Completed	

- 1.5.3 Other than the EM&A work by ET, environmental briefings, trainings and regular environmental management meetings were conducted, in order to enhance environmental awareness and closely monitor the environmental performance of the contractors.
- 1.5.4 The EM&A programme has been implemented in accordance with the recommendations presented in the approved EIA Report and the Updated EM&A Manual. A summary of implementation status of the environmental mitigation measures for the construction phase of the Project during the reporting period is provided in **Appendix B**.

2. MARINE WATER QUALITY MONITORING

- 2.1 Water Quality Requirements
- 2.1.1 To ensure no adverse water quality impact, water quality monitoring is recommended to be carried out at the nearby water sensitive receivers (WSRs) during construction phase including proposed reclamation, breakwater construction, etc.
- 2.1.2 In accordance with the Updated EM&A Manual, impact water quality monitoring were conducted 3 days per week at mid-flood and mid-ebb tide to obtain impact water quality levels at the eleven monitoring stations during general water quality monitoring for the reporting period.
- 2.2 Water Quality Parameters, Time, Frequency
- 2.2.1 Dissolved Oxygen (DO), Turbidity, Suspended Solids (SS), Salinity and pH have been undertaken at the eleven monitoring stations during general water quality monitoring.
- 2.2.2 DO, temperature, salinity, turbidity and pH have been measured in-situ and the SS, has been assayed in a HOKLAS laboratory.
- 2.2.3 In associate with the water quality parameters, other relevant data were also measured, such as monitoring location/position, time, water depth, sampling depth, tidal stages, weather conditions and any special phenomena or work underway nearby were also recorded. The monitoring schedule is provided in **Appendix C**.
- 2.2.4 Impact water quality monitoring was conducted 3 days per week in the reporting period. All parameters were monitored during mid-flood and mid-ebb tides at three water depths for general water quality monitoring. The interval between two sets of monitoring has not been less than 36 hours.
- 2.2.5 **Table 2.1** summarizes the monitoring parameters, frequency and duration of the impact water quality monitoring during construction phase.

Table 2.1 Water Quality Monitoring Parameters, Frequency and Duration

Parameter, unit	Frequency	No. of Depths
 Water Depth (m) Temperature (°C) Salinity (ppt) pH (pH unit) Dissolved Oxygen (DO) (mg/L and % of saturation) Turbidity (NTU) Suspended Solids (SS), mg/L 	General water quality monitoring: 3 days per week, at mid-flood and mid-ebb tides	3 water depths: 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

2.3 Water Quality Monitoring Locations

2.3.1 Impact water quality monitoring was conducted at eleven monitoring locations (B1-B4, H1, C1, C2, F1, CR1, CR2 & M1) during general water quality monitoring as shown in **Figure 2.1**. As per the relocation proposal verified by IEC and approved by EPD, the monitoring location C1, C2, S2, F1 are relocated at C1A, C2A, S2A, F1A as equivalent points respectively to clear up the concerns from stakeholders.

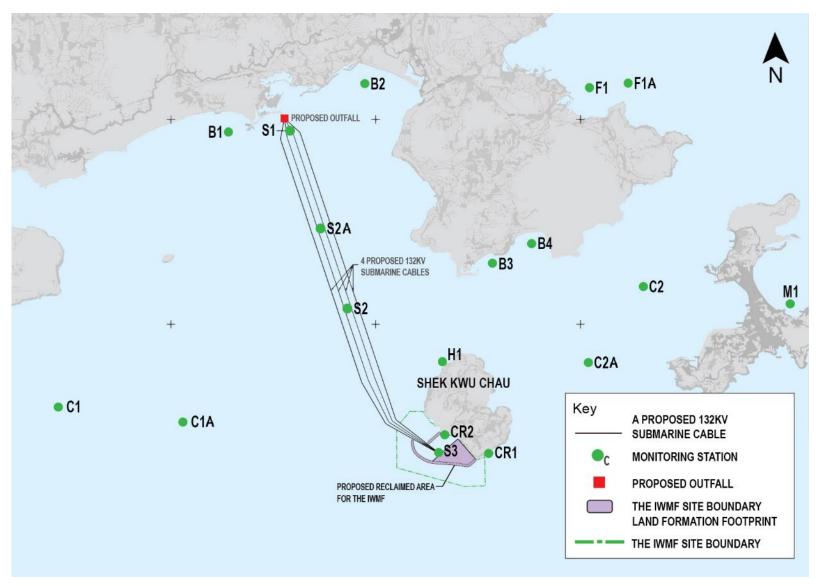


Figure 2.1 Water monitoring locations at Artificial Island near SKC

- 2.3.2 B1 to B4 are located at 4 beaches respectively at the southern shore of Lantau Island. Monitoring station H1 is located at the horseshoe crab habitat at northern SKC, while CR1 and CR2 are located at the coral communities at southwestern shore of SKC. Monitoring station F1 is located at the Cheung Sha Wan Fish Culture Zone while monitoring station M1 is located at Tung Wan at Cheung Chau. Monitoring station F1A is relocated for F1 at the Cheung Sha Wan Fish Culture Zone. S1, S2 and S3 are located at the northern landing site, midway and southern landing site of the proposed submarine cable, respectively. S2A is the relocated monitoring station of S2 which represents the midway landing site of the proposed submarine cable. S1, S2/S2A and S3 are required for monitoring due to the laying of submarine cable. Control stations C1 and C2 at far field locations are for comparison. Control stations C1A and C2A are relocated for C1 and C2 respectively as equivalent far field locations for comparison.
- 2.3.3 Fourteen monitoring stations are listed in **Table 2.2**:

Table 2.2 – Locations of Marine Water Quality Stations

Monitoring station	Description	Easting	Northing
B1	Beach – Cheung Sha Lower	813342	810316
B2	Beach – Pui O	815340	811025
В3	Beach – Yi Long Wan	817210	808395
B4	Beach – Tai Long Wan	817784	808682
H1	Horseshoe Crab – Shek Kwu Chau	816477	806953
C1	Control Station (note i)	810850	806288
C1A	Relocated Control Station	812823	806300
C2	Control Station (note ii)	819421	808053
C2A	Relocated Control Station	818869	806808
F1	Cheung Sha Wan Fish Culture Zone (note iii)	818631	810966
F1A	Cheung Sha Wan Fish Culture Zone	819109	810924
S1	Submarine Cable Landing Site	814245	810335
S2	Submarine Cable (note iv)	815076	807747
S2A	Submarine Cable	814808	808515
S3	Submarine Cable Landing Site	816420	805621
CR1	Coral	817144	805597
CR2	Coral	816512	805882
M1	Tung Wan	821572	807799

Note:

- i. Relocated to C1A in Mar 2019
- ii. Relocated to C2A in Mar 2019
- iii. Relocated to S2A in Mar 2019
- iv. Relocated to F1A in Mar 2019

2.4 Impact Monitoring Methodology

- 2.4.1 General water quality monitoring was conducted three days per week, at mid-flood and mid-ebb tides, at the designated water quality monitoring stations during the reporting period.
- 2.4.2 The interval between 2 sets of monitoring was not less than 36 hours. Sampling was collected at three water depths, namely, 1m below water surface, mid-depth and 1m above seabed, except where the water depth is less than 6m, the mid-depth was omitted. If the water depth was less than 3m, only the mid-depth station was monitored.
- 2.4.3 All observations and results were recorded in the data record sheets in **Appendix D**. Duplicate in-situ measurements and water sampling were carried out in each sampling event. The monitoring probes were retrieved out of water after the first measurement and then redeployed for the second measurement. When the difference in value between the first and second readings of DO or turbidity is more than 25% of the value of the first reading, the reading would be discarded and further readings would be taken.

In-situ Measurement

Levels of DO, pH, temperature, turbidity and salinity would be measured in-situ by 2.4.4 portable and weatherproof measuring instrument, e.g. YSI ProDSS and Horiba Multiparameter complete with cable and sensor. specification http://www.ysi.com/ProDSS for YSI ProDSS technical and https://static.horiba.com/fileadmin/Horiba/Products/Process and Environmental/Wat er Pollution/Instruction Manuals/U-50/U-50 SS E.pdf for Horiba U-53 technical specification). Water current velocity and Water Current direction would be measured by portable and weatherproof current meter, e.g. SonTek Hydrosurveyor (Refer to https://www.sontek.com/hydrosurveyor for SonTek Hydrosurveyor M9 technical specification). Parameters measured by in-situ measurement is tabulated in **Table 2.3**

Table 2.3 – Parameters Measured by In-situ Measurement

Parameter	Resolution	Range
Temperature	0.1 °C	-5-70 °C
Dissolved Oxygen (DO)	0.01 mg/L	0-50.0 mg/L
Turbidity	0.1 NTU	0-1000 NTU
pН	pH 0.01	pH 0-14
Salinity	0.01 ppt	0-40 ppt
Water Current Velocity	0.001m/s	±20m/s
Water Current Direction	±1°	±2°

Laboratory Analysis

2.4.5 Analysis of SS shall be carried out in a HOKLAS accredited laboratory, as shown in **Appendix E**. Sufficient water samples shall be collected at the monitoring stations for carrying out the laboratory determinations. The determination work shall be started within 24 hours after collection of the water samples. Analytical methods and detection limits for SS is presented in **Table 2.4**.

Table 2.4 - Analytical Methods Applied to Water Quality Samples

Parameter	Analytical method	Detection Level
Suspended Solids, SS	APHA 2540 D _i	1 mg/L

Footnote:

 "APHA 2540 D" stands for American Public Health Association Standard Methods for the Examination of Water and Wastewater, 23rd Edition.

Field Log

2.4.6 Other relevant data was recorded, such as: monitoring location / position, time, water depth, weather conditions and any special phenomena underway near the monitoring station.

2.5 Monitoring Equipment

2.5.1 Equipment used in the impact water quality monitoring programme is summarized in **Table 2.5** below. Calibration certificates for the water quality monitoring equipment are attached in **Appendix F**.

Table 2.5 Impact Water Quality Monitoring Equipment

Monitored Parameter	Equipment	Brand and Model
DO, Temperature, Salinity,	Multi-functional Meter	Horiba U-53
pH and Turbidity		YSI ProDSS Multi Parameter
Coordinates	Positioning Equipment	Garmin GPSMAP 78s
Water depth	Water Depth Detector	Hummingbird 160 Portable
SS	Water Sampler	Wildco 2 L Water Sampler
		with messenger

2.5.2 Dissolved Oxygen and Temperature Measuring Equipment

The instrument is a portable and weatherproof DO probe mounted on the multifunctional meter complete with cable and sensor and is powered by a DC supply source. The equipment was capable of measuring:

- A DO level in the range of 0 50 mg/L; and
- Temperature of -5 70 degree Celsius.

2.5.3 Turbidity Measurement Instrument

The instrument is a portable and weatherproof turbidity-measuring probe mounted on the multi-functional meter and is powered by a DC supply source. The instrument is equipped with a photoelectric sensor which is capable of measuring turbidity between $0-1000~\rm NTU$.

2.5.4 pH Measurement Instrument

The probe consists of a potentiometer, a glass electrode, a reference electrode and a temperature-compensating device mounted on the multi-functional meter. It is readable to 0.1 pH in a range of 0 to 14. Standard buffer solutions of at least pH 7 and pH 10 were used for calibration of the instrument before and after use.

2.5.5 Salinity Measurement Instrument

A portable salinometer mounted on the multi-functional meter capable of measuring salinity in the range of 0-40 parts per thousand (ppt) was provided for measuring salinity of the water at each monitoring location.

2.5.6 Sampler

The water sampler comprises a transparent PVC cylinder, with a capacity of not less than 2 litres, which can be effectively sealed with latex cups at both ends. The sampler has a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler is at the selected water depth.

2.5.7 Sample Containers and Storage

Water samples for SS were stored in high density polythene bottles with no preservative added, packed in ice (cooled to 4°C without being frozen) and delivered to the laboratory and analysed as soon as possible after collection. Sufficient volume of samples was collected to achieve the detection limit stated in **Table 2.4**.

2.5.8 Water Depth Detector

A portable, battery-operated echo sounder was used for the determination of water depth at each designated monitoring station. This unit could either be hand-held or affixed to the bottom of the work boat, if the same vessel is to be used throughout the monitoring programme.

2.5.9 Monitoring Position Equipment

Hand-held digital Differential Global Positioning System (DGPS) with way point bearing indication and Radio Technical Commission for maritime (RTCM) Type 16 error message 'screen pop-up' facilities (for real-time auto-display of error messages and DGPS corrections from the Hong Kong Hydrographic Office) was provided and used to ensure that the water sampling locations were correct during the water quality monitoring work.

2.6 Maintenance and Calibration

- 2.6.1 The multi-functional meters were checked and calibrated before use. Multi-functional meters were certified by a laboratory accredited under HOKLAS or any other international accreditation scheme, and subsequently re-calibrated at three monthly intervals throughout all stages of the water quality monitoring. Responses of sensors and electrodes were checked with certified standard solutions before each use. Wet bulb calibration for a DO meter was carried out before commencement of monitoring and after completion of all measurements each day. Calibration was not conducted at each monitoring location as daily calibration is adequate for the type of DO meter employed.
- 2.6.2 Sufficient stocks of spare parts were provided and maintained for replacements when necessary. Backup monitoring equipment was prepared for uninterrupted monitoring during equipment maintenance or calibration during monitoring.

2.7 Action and Limit Levels

2.7.1 The Action and Limit Levels have been set based on the derivation criteria specified in the Updated EM&A Manual and Detailed DCM Plan, as shown in **Table 2.6** below.

Table 2.6 Criteria of Action and Limit Levels for Water Quality

Parameters	Action	Limit			
Construction Ph	Construction Phase Impact Monitoring				
DO in mg/L	≤ 5 %-ile of baseline data	≤4			
SS in mg/L	≥ 95 %-ile of baseline data or	≥ 99 %-ile of baseline data or 130%			
	120% of control station's SS at	of control station's SS at the same			
	the same tide of the same day of	tide of the same day of			
	measurement, whichever is	measurement, whichever is higher			
	higher				
Turbidity in	≥ 95 %-ile of baseline data or	≥ 99 %-ile of baseline data or 130%			
NTU	120% of control station's	of control station's turbidity at the			
	turbidity at the same tide of the	same tide of the same day of			
	same day of measurement,	measurement, whichever is higher			
	whichever is higher				
Temperature in °C	1.8°C above the temperature recorded at representative control station at the same tide of the same day	2°C above the temperature recorded at representative control station at the same tide of the same day			

2.7.2 Based on the baseline monitoring data and the derivation criteria specified above, the Action/Limit Levels have been derived and are presented in **Table 2.7** and **Table 2.8** for both dry seasons (October – March) and wet seasons (April – September).

Table 2.7 Derived Action and Limit Levels for Water Quality Monitoring (Dry Season)

Parameters	Action	Limit
Construction Pl	hase Impact Monitoring	
DO in mg/L	≤7.13	≤ 4
SS in mg/L	\geq 8 or 120% of control station's	≥ 10 or 130% of control station's
	SS at the same tide of the same	SS at the same tide of the same day
	day of measurement, whichever	of measurement, whichever is
	is higher	higher
Turbidity in	\geq 5.6 or 120% of control station's	\geq 12.8 or 130% of control station's
NTU	turbidity at the same tide of the	turbidity at the same tide of the
	same day of measurement,	same day of measurement,
	whichever is higher	whichever is higher

Parameters	Action	Limit
Temperature in °C	1.8°C above the temperature recorded at representative control station at the same tide of the same day	2°C above the temperature recorded at representative control station at the same tide of the same day

Notes:

- i. "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.
- ii. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
- For turbidity, SS and Salinity, non-compliance of the water quality limits occurs when monitoring result is higher than
 the limits.

Table 2.8 Derived Action and Limit Levels for Water Quality (Wet Season)

Parameters	Action	Limit		
Construction Ph	Construction Phase Impact Monitoring			
DO in mg/L	≤ 5.28	≤ 4		
SS in mg/L	\geq 12 or 120% of control station's	≥ 14 or 130% of control station's		
	SS at the same tide of the same	SS at the same tide of the same day		
	day of measurement, whichever	of measurement, whichever is		
	is higher	higher		
Turbidity in	\geq 4.0 or 120% of control station's	\geq 4.3 or 130% of control station's		
NTU	turbidity at the same tide of the	turbidity at the same tide of the		
	same day of measurement,	same day of measurement,		
	whichever is higher	whichever is higher		
Temperature	1.8°C above the temperature	2°C above the temperature recorded		
in°C	recorded at representative control station at the same tide of the	at representative control station at the same tide of the same day		
N.	same day	the same tide of the same day		

Notes:

- i. "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.
- ii. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
- For turbidity, SS and Salinity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
- 2.7.3 If exceedances were found during water quality monitoring, the actions in accordance with the Event and Action Plan shall be carried out according to **Appendix G**.
- 2.8 Monitoring Results and Observations
- 2.8.1 As confirmed by the Contractor on 14 October 2020, all DCM works was completed on 14 October 2020, the post DCM water quality monitoring was completed for further 4 weeks (i.e. from 16 October 2020 to 14 November 2020) according to the approved Detailed Plan on Deep Cement Mixing. As all DCM work and post DCM water quality monitoring were completed, no water quality monitoring was conducted at S1, S2A and S3 during the reporting period. General water quality monitoring at all the eleven monitoring stations were conducted on 1, 4, 6, 11, 15, 17, 19, 21, 24, 26, 28 and 30 October 2021.
- 2.8.2 Monitoring results of 6 key parameters: Salinity, DO, turbidity, SS, pH and temperature in this reporting peroid, are summarized in **Table 2.9**, and details results are presented in **Appendix D.**

Table 2.9 Summary of Impact Water Quality Monitoring Results

					Parameters			
Locations		Salinity (ppt)	Dissolved Oxygen (mg/L)		рH	Turbidity	Suspended	Temp.(°C)
		Summey (ppe)	Surface & Middle	Bottom	PII	(NTU)	Solids (mg/L)	Tempi(e)
	Avg.	30.62	8.85	8.81	8.30	3.4	8.19	28.1
B1	Min.	28.27	6.98	6.72	8.11	2.0	2.50	26.3
	Max.	32.37	10.53	9.97	8.61	5.6	26.00	29.9
	Avg.	30.51	8.69	8.73	8.29	3.3	7.71	28.1
B2	Min.	28.07	7.14	6.37	8.05	2.1	2.50	26.3
	Max.	31.94	10.55	10.44	8.56	5.7	18.00	30.1
	Avg.	30.79	8.64	8.72	8.31	3.2	9.04	28.1
В3	Min.	28.82	6.32	7.23	8.04	2.0	2.50	26.3
	Max.	32.39	10.15	10.07	8.59	5.9	18.00	30.2
	Avg.	30.77	8.70	8.77	8.31	3.4	8.43	28.1
B4	Min.	28.46	7.03	6.44	8.06	2.0	2.50	26.4
	Max.	32.33	9.98	10.00	8.56	5.9	20.00	30.2
	Avg.	30.73	8.64	8.70	8.32	4.8	8.40	28.1
C1A	Min.	28.19	6.39	7.08	8.06	3.1	2.50	26.4
	Max.	32.50	10.34	10.20	8.59	8.9	27.00	29.9
	Avg.	30.72	8.67	8.71	8.30	4.6	8.40	28.2
C2A	Min.	28.64	6.57	6.65	8.00	2.9	3.00	26.4
	Max.	32.58	10.26	10.32	8.59	7.6	18.00	30.3
	Avg.	30.63	8.59	8.68	8.32	3.3	8.21	28.1
CR1	Min.	28.46	6.97	7.43	8.04	1.9	2.50	26.3
	Max.	32.43	9.70	10.20	8.62	5.5	19.00	30.4
	Avg.	30.54	8.61	8.66	8.30	3.3	8.50	28.0
CR2	Min.	28.34	6.35	6.52	8.08	1.8	2.50	26.5
	Max.	32.52	10.25	10.10	8.61	6.1	22.00	30.3
	Avg.	30.77	8.74	8.61	8.28	3.4	8.89	28.1
F1A	Min.	28.07	6.57	6.88	8.02	1.9	2.50	26.2
	Max.	32.27	10.29	10.16	8.58	6.2	18.00	30.4
	Avg.	30.75	8.60	8.62	8.29	3.4	8.24	28.1
H1	Min.	28.54	6.31	6.76	8.05	1.9	2.50	26.7
	Max.	32.69	9.92	9.75	8.51	5.7	23.00	30.4
	Avg.	30.72	8.64	8.75	8.31	3.2	7.87	28.1
M1	Min.	28.32	6.77	6.35	8.11	2.0	2.50	26.4
	Max.	32.70	9.87	9.85	8.50	5.0	16.00	30.3
C 1	Avg.	-	-	-	-	-	-	-
S1	Min.	-	-	-	-	-	-	-
	Max.	-	-	-	-	-	-	-
G2 :	Avg.	-	-	-	-	-	-	-
S2A	Min.	-	-	-	-	-	-	-
	Max.	-	-	-	-	-	-	-
CO	Avg.	-	-	-	-	-	-	-
S3	Min.	-	-	-	-	-	-	-
	Max.	-	-	-	-	-	-	-

Notes:

i. "Avg", "Min" and "Max" is the average, minimum and maximum respectively of the data from measurements conducted under mid-flood and mid-ebb tides at three water depths, except that of DO where the data for "Surface & Middle" and "Bottom" are calculated separately.

ii. As all DCM works and post DCM water quality monitoring were completed, no water quality monitoring was conducted at S1, S2A and S3 in the report period.

iii. As all DCM works were completed on 14 October 2020, no water quality monitoring for total alkalinity was conducted in the report period.

- 2.8.3 During the impact monitoring period for October 2021, eighteen (18) of the general water quality monitoring results of suspended solids (SS) obtained had exceeded Action Level. Thirty-four (34) of general water quality monitoring results of SS obtained during the reporting period had exceeded the Limit Level. Investigation was carried out immediately for each of the exceedance cases.
- 2.8.4 Water impact monitoring events on 8 and 13 October 2021 were cancelled due to tropical storm LIONROCK and typhoon KOMPASU respectively. No supplementary water monitoring was conducted for water monitoring event on 8 October 2021 due to adverse weather and sea condition on 9 & 10 October 2021. Water impact monitoring event on 13 October 2021 was rescheduled to 17 October 2021.
- 2.8.5 Details of the exceedance are presented in **Section 8**.
- 2.8.6 Mitigation measures minimizing the adverse impacts on water implemented are listed in the implementation schedule given in **Appendix B.**

3. Noise Monitoring

- 3.1 Monitoring Requirements
- 3.1.1 To ensure no adverse noise impact, noise monitoring is recommended to be carried out at the nearby noise sensitive receivers (NSRs) during construction phase.
- 3.1.2 In accordance with the Updated EM&A Manual, baseline noise level at the noise monitoring stations was established as presented in the Baseline Monitoring Report. Impact noise monitoring was conducted once per week in the form of 30-minutes measurements Leq, L10 and L90 levels recorded at each monitoring station between 0700 and 1900 hours on normal weekdays.
- 3.1.3 In accordance with the Updated EM&A Manual, additional weekly impact monitoring should be carried out during respective restricted hours period (1900 0700 hours) if the construction works were conducted at evening and night time. Additional weekly noise monitoring was conducted once per week in the form of 5-minutes measurements Leq, L10 and L90 levels recorded at each monitoring station between 1900 and 0700 hours as well as public holidays and Sundays.
- 3.2 Noise Monitoring Parameters, Time, Frequency
- 3.2.1 Impact noise monitoring was conducted weekly in the reporting period between 0700-1900 hours on normal weekdays. Additional impact noise monitoring was conducted weekly in the reporting period between 1900-0700 hours on all days as well as public holidays and Sundays.
- 3.2.2 Construction noise level measured in terms of the A-weighted equivalent continuous sound pressure level (LAeq). Leq 30min was used as the monitoring parameter for the time period between 0700 and 1900 hours on normal weekdays. Leq 5mins was used as the monitoring parameter for the time period between 1900 and 0700 hours as well as public holidays and Sundays. **Table 3.1** summarizes the monitoring parameters, frequency and duration of the impact noise monitoring and additional impact noise monitoring. The monitoring schedule is provided in **Appendix C**.

Table 3.1 Noise Monitoring Parameters, Time, Frequency and Duration

Monitoring Station	Time	Duration	Parameters
	Day time: 0700-1900 hrs (during normal weekdays)	Once per week $L_{eq \; 5min}/L_{eq \; 30min}$ (average of 6 consecutive $L_{eq \; 5min}$)	L _{eq} , L ₁₀ & L ₉₀
M1/ N_S1, M2/ N_S2, M3/ N_S3	Evening time: 1900-2300 hrs (including normal weekdays, also public holidays and Sundays)	Once per week $L_{eq 5min}$ (3 sets of $L_{eq 5min}$)	$L_{eq}, L_{10} \& L_{90}$
	Night time: 2300-0700 hrs (including normal weekdays, also public holidays and Sundays)	Once per week Leq 5min (3 sets of Leq 5min)	L _{eq} , L ₁₀ & L ₉₀

3.3 Noise Monitoring Locations

3.3.1 Three noise monitoring locations for impact monitoring and additional impact monitoring at the nearby sensitive receivers are shown in **Figure 3.1.**

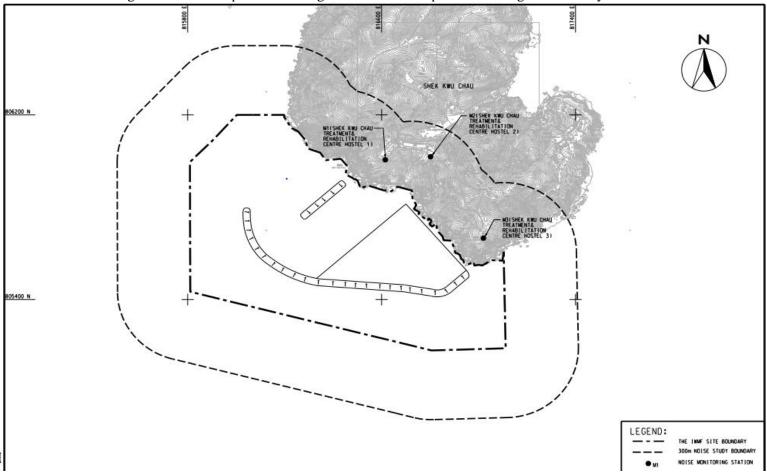


Figure 3.1 Noise monitoring locations at SKC

- 3.3.2 M1, M2 and M3 are Shek Kwu Chau Treatment and Rehabilitation Centre Hostel 1, 2 and 3 respectively of The Society for the Aid and Rehabilitation of Drug Abusers (SARDA) located at southern part of Shek Kwu Chau.
- 3.3.3 Measurements at M1 & M3 were conducted at a point 1m from the exterior of the sensitive receivers building façade and at a position 1.2m above the ground. Measurement setup at M3 has been varying with minor adjustment to minimize the disturbance to the users of Treatment Centre. Measurement at M2 was conducted at a point 1m from building façade of the ceiling of 1st floor level for avoidance of mutual disturbance with users of Treatment Centre. The minor adjustment of monitoring locations, which were in favour to mutual convenience with the users of Treatment Centre, were found with no effect on monitoring result based on on-site observation and experience from the Baseline monitoring of the Project. The noise monitoring stations are summarized in **Table 3.2** below.

Table 3.2 Noise Monitoring Location

Station	NSR ID in EIA Report	Noise Monitoring Location	Type of sensitive receiver(s)	Measurement Type
M1	N_S1	Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 1	Residential	Façade
M2	N_S2	Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 2	Residential	Façade
M3	N_S3	Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 3	Residential	Façade

- 3.4 Impact Monitoring Methodology
- 3.4.1 At each designated monitoring location, measurements of six 5-minutes A-weighted equivalent sound pressure level ["Leq 5min"] was carried out between 0700 and 1900 hours for daytime measurements on a normal weekdays (exclude Sunday or general holiday). The measured six impact noise levels at each monitoring location shall then be averaged in logarithmic scale and expressed in terms of the 30 minutes A-weighted equivalent continuous sound pressure level (Leq 30min) for the time period between 0700 and 1900 hours on normal weekdays.
- 3.4.2 At each designated monitoring location, measurements of three 5-minutes A-weighted equivalent sound pressure level ["Leq 5min"] was carried out between 1900 and 0700 hours for evening time and night time measurements.
- 3.4.3 The monitoring procedures are as follows:
 - The microphone head of the lead level meter was normally positioned 1m exterior of the noise sensitive façade and lowered sufficiently so that the building's external wall acts as a reflecting surface.
 - If there is a problem with the access to the normal monitoring position, an alternative may be chosen and appropriate correction would be applied according to acoustic principle when necessary. For reference, +3 dB(A) correction would be made for free-filed measurements.
 - The battery condition was checked to ensure good functioning of the meter.
 - Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - Frequency weight: ATime weighting: Fast
 - Measurement time: 5 minutes

- Prior to and after noise measurement, the meter was calibrated using the calibrator for 94.0 dB at 1000Hz. If the difference in the calibration level before and after measurement is more than 1.0 dB, the measurement was considered invalid and repeat of noise measurement was required after re-calibration or repair of the equipment.
- For Noise monitoring was carried out for 30 mins by sound level meter. At the end of the monitoring period, noise levels in terms of L_{eq}, L₁₀ and L₉₀ were recorded. In addition, site conditions and noise sources were recorded when the equipment were checked and inspected.
- All the monitoring data within the sound level meter system was downloaded through the computer software.

3.5 Monitoring Equipment

- 3.5.1 Integrated sound level meter was used for the noise monitoring. The meter shall comply with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications.
- 3.5.2 Equipment used in the impact noise monitoring programme is summarized in **Table** 3.3 below. Calibration certificates for the noise monitoring equipment are attached in **Appendix H**.

Table 3.3 Impact Noise Monitoring Equipment

Equipment	Brand and Model
Sound Level Meter	NTi XL2
	SVANTEK 971
Sound Calibrator	Svantek SV33B

3.6 Maintenance and Calibration

- 3.6.1 The maintenance and calibration procedures were as follows:
 - The microphone head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.
 - The sound level meter and calibrator were checked and calibrated at yearly intervals
 - Immediately prior to and following each noise measurement the accuracy of the sound level meter shall be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration levels from before and after the noise measurement agree to within 1.0dB.

3.7 Action and Limit Levels

3.7.1 The Action/Limit Levels in line with the criteria of Practice Note for Professional Persons (ProPECC PN 2/93) "Noise from Construction Activities – Non-statutory Controls" and Technical Memorandum on Environmental Impact Assessment Process issued by HKSAR Environmental Protection Department ["EPD"] under the Environmental Impact Assessment Ordinance, Cap 499, S.16 is presented in **Table 3.4**.

Table 3.4 Action and Limit Levels for Noise per Updated EM&A Manual

Time Period	Action	Limit (dB(A))
0700-1900 hrs on normal	When one documented	75 dD(A)
weekdays	complaint is received	75 dB(A)

Notes: If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed.

- 3.7.2 If exceedances were found during noise monitoring. The actions in accordance with the Event and Action Plan shall be carried out according to **Appendix I**.
- 3.8 Monitoring Results and Observations
- 3.8.1 Impact monitoring for noise impact for daytime was carried out on 4, 11, 18, 19, 25 and 26 October 2021. Impact monitoring for noise impact for evening time and night time was carried out on 4&5, 11&12, 18&19, 19&20, 25&26 and 26&27 October 2021. The impact noise levels at Noise Monitoring Stations at SKC (i.e. M1/N_S1 to M3/N_S3) are summarized in **Table 3.6**, **Table 3.7** and **Table 3.8** respectively. Details of noise monitoring results are presented in **Appendix J**.
- 3.8.2 Major construction activity, major noise source and extreme weather which might affect the results were recorded during the impact monitoring.
- 3.8.3 According to our field observations, the major noise source identified at the noise monitoring station in the reporting month are summarised in **Table 3.5**. No noticeable noise source was found near the monitoring station M1 and M2 and air conditioning units were observed nearby monitoring stations M3.

Table 3.5 Summary of Field Observation

Monitoring Station	Major Noise Source
M1	Nil
M2	Nil
M3	Air-conditioner

No data from impact monitoring during daytime has exceeded the stipulated limit level at $75 \, dB(A)$.

Table 3.6 Summary of Impact Noise Monitoring Results during Day Time (0700 – 1900 hours)

Location	Measured Noise Level in dB(A)								
	Range of Leq 30min	Range of L _{10 30min}	Range of L _{90 30min}						
M1	55.9 – 57.5	57.6 – 59.0	53.9 – 55.3						
M2	54.2 – 55.9	56.2 – 58.1	46.1 – 53.7						
M3	52.0 – 55.5	53.8 – 56.9	49.1 – 53.4						

Applicable mitigation measures for construction works are fully implemented as shown in **Appendix B**, where double-glazed windows and air conditioning system were also installed and confirmed operable for the NSRs (N_S1, N_S2 & N_S3).

During the noise monitoring event, frontline staff of ET had inquired the treatment centre users on any noise disturbance from the construction activities at evening and night time, where no complaint and adverse opinions was received.

Where site inspection and auditing on Contractor's record have shown that the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority for construction works during restricted hours were followed. No inappropriate practice was spotted during evening time and night time construction works, thus the stipulated requirement on noise impact control during night time and evening time was achieved.

Table 3.7 Summary of Additional Impact Noise Monitoring Results during Evening Time (1900 – 2300 hours)

Location	Measured Noise Level in dB(A)								
	Range of Leq 5min	Range of L _{90 5min}							
M1	43.0 – 56.1	43.9 – 57.8	42.2 – 53.2						
M2	48.3 – 58.8	50.3 – 63.2	46.1 – 53.7						
M3	43.1 – 58.9	44.0 – 60.5	41.1 – 54.6						

Table 3.8 Summary of Additional Impact Noise Monitoring Results during Night Time $(2300-0700\ hours)$

Location	Measured Noise Level in dB(A) ^[1]								
	Range of Leq 5min	Range of L _{10 5min}	Range of L _{90 5min}						
M1	42.8 – 55.1	43.8 – 57.2	41.9 – 52.9						
M2	47.3 – 57.8	47.9 – 58.2	45.7 – 52.7						
M3	42.1 – 55.0	42.9 – 57.7	41.2 – 52.3						

Note:

[1] No construction work was conducted during the night time period in October 2021.

4. WASTE

- 4.1 The waste generated from this Project includes inert construction and demolition (C&D) materials, and non-inert C&D materials. Non-inert C&D materials are made up of general refuse, vegetative wastes and recyclable wastes such as plastics and paper/cardboard packaging waste. Steel materials generated from the project are also grouped into non-inert C&D materials as the materials were not disposed of with other inert C&D materials.
- 4.2 As advised by the Contractor, No C&D material was generated on site in the reporting month. For C&D waste, no metals were generated and collected by registered recycling collector. No paper was generated on site and collected by the registered recycling collector. No plastic waste was collected by registered recycling collector. No chemical waste was collected by the licensed chemical waste collector. No other types of wastes (e.g. general refuse) was generated on site and disposed of at designated landfill. 6,888.5 m³ of fill rock was imported during the reporting period. No public fill was imported in October 2021.
- 4.3 Chemical waste generated from the cleaning of oil stain and leakage on deck of barges was stored in the chemical waste storage area on the barges.
- 4.4 With reference to relevant handling records and trip tickets of this Project, the quantities of different types of waste generated in the reporting month are summarised in **Table 4.1**. Details of cumulative waste management data are presented as a waste flow table in **Appendix K**.

Table 4.1 Quantities of Waste Generated from the Project during October 2021

Reporting Month		Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly						
	Total	Hard Rock and		Reused in other Projects	Disposed as Public Fill	Imported Fill							Others	
	Quantity Generat	Broken Concrete (see Note				Sand	Public Fill	Rock	Metals	Paper / cardboard packaging	Plastics (see Note 2)	Chemical Waste		Others, e.g. general refuse (see Note 3)
	(in ,000 m ³)	(in ,000m ³)	(in ,000 m ³)	(in ,000 m ³)	(in ,000m ³	(in ,000m ³)		(in ,000 kg)	(in ,000kg)	(in ,000 kg)	(in ,000 kg)	(in ,000 L)	(in ,000m ³)	
Oct 202	1 0	0	0	0	0	0	0	6.8885	0	0	0	0	0	0

Notes:

- (1) Broken concrete for recycling into aggregates.
- (2) Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials.
- (3) Use the conversion factor: 1 full load of dumping truck being equivalent to 6.5m³ by volume.
- 4.5 Although there is not much waste generation anticipated in the coming month from the Project, the Contractor is advised to sort and store any solid and liquid waste on-site properly prior to disposal.

5. CORAL

- 5.1 Coral Monitoring Requirements
- 5.1.1 To monitor the health condition of corals during different phases, corals located within areas likely to be affected by the Project, corals located at control sites (areas unlikely to be affected by the Project), the trans-located coral colonies as well as the tagged natural coral colonies at the recipient site were chosen, in order to identify any adverse indirect impact from the marine works. The size, percentage cover and health condition of corals (i.e. any sign of abnormal appearance, such as layer of mucus, bleaching, partial mortality etc.) at representative transects should be recorded during each monitoring.
- 5.2 Coral Monitoring Parameters, Time, Frequency
- 5.2.1 Rapid Ecological Assessment (REA) survey was conducted on 26 June 2018 at the suggested control site and indirect impact site within two weeks before commencement of the construction work which was 29 June 2018. 10 selected hard coral colonies with the similar species were tagged at both control and indirect impact sites. Following coral translocation in the recipient site R3, 16 coral colonies attached to rocks less than 50 cm in diameter were translocated and tagged, as well as 10 selected natural coral colonies, at the recipient site. One additional REA survey was conducted in December 2018 to further assess the seabed condition at Indirect Impact Site after Typhoon Mangkhut.
- 5.2.2 Tagged coral colonies at the suggested control site and indirect impact site are being monitored weekly for the first month and followed by monthly monitoring for two months. Quarterly monitoring will be carried out after the first three-months monthly monitoring for until the completion of marine works and bi-annual monitoring will be carried out after the completion of marine works. The selected Control Site is located at Yuen Kong Chau of Soko Islands about 7 km away from the project area. Tagged coral colonies at the proposed recipient site are being monitored quarterly for one year. The selected recipient site R3 is located at the opposite side of the Project area at about 2 km away. The detailed survey of the Control Site and Impact Site were conducted before the commencement of the Construction Phase.
- 5.2.3 Monitoring recorded the following parameters (using the same methodology adopted during the pre-translocation survey); the size, presence, health conditions (percentage of mortality/bleaching) and percentage of sediment of each tagged coral colony. The general environmental conditions including weather, sea, and tidal conditions of impact site, control site and recipient site were monitored.
- 5.2.4 **Table 5.1** summarizes the monitoring locations, time and frequency of the tagged coral colonies monitoring. The monitoring schedule is provided in **Appendix C**.

Table 5.1 Tagged Coral Monitoring Locations, Time and Frequency

Monitoring Location	Monitoring	Frequency	No. of Monitoring
Monitoring Location	Month/Year		Survey
	1st Month	Weekly Survey	4
10 selected hard coral	2 nd to 3 th Months	Monthly Survey	2
colonies at control site /	4 th Month (postponed	Re-tagging of Cora	al Colonies in Indirect
indirect impact site	to 5 th month due to	Impact Site after Ty	phoon Mangkhut
	diver accident in Shek		-

Monitoring Location	Monitoring Month/Year	Frequency	No. of Monitoring Survey
	Kwu Chau in October 2018)		
	4 th Month (postponed to 5 th month due to diver accident in Shek Kwu Chau in October 2018 and further postpone to 6 th month due to adverse weather)	Site after Typhoon Mangkhut	
	5 th Month (postponed to 6 th month due to diver accident in Shek Kwu Chau and further postponed to 7 th month due to delay of re-tagging activities at both Indirect Impact Site and Control Site)	Post Re-tagging Monthly Survey	1
	7 th to 45 th Months (postponed to 8 th to 76 th month due to diver accident in Shek Kwu Chau in October 2018)	Quarterly Survey	13
	46 th to 76 th Months (The marine construction work is anticipated to be completed by March 2022, the frequency of monitoring will be changed to bi-annual with reference to the Updated EM&A Mannual (Rev.E))	Bi-annually Survey	5
16 translocated hard coral colonies and 10 selected natural hard coral colonies at recipient site R3	1st Year	Quarterly Survey	4

5.3 Coral Monitoring Locations

5.3.1 Location of the ten tagged coral colonies at each of the proposed indirect impact site (re-tagging after typhoon Mangkhut), control site (baseline) and recipient site R3 (translocation) are shown in **Figure 5.1**, **Figure 5.2** and **Figure 5.3** respectively:

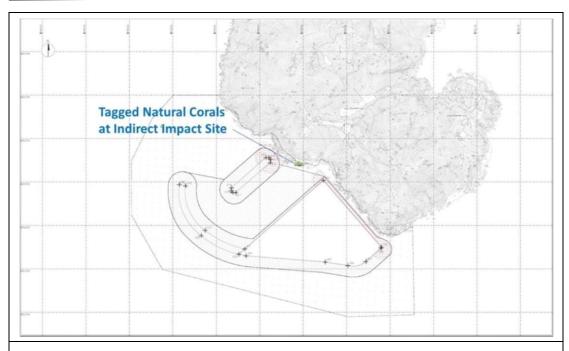


Figure 5.1 Tagged Natural Corals at Indirect Impact Site Near SKC for re-tagging after typhoon Mangkhut



Figure 5.2 Tagged Natural Corals at Control Site Near Yuen Kong Chau for retagging after typhoon Mangkhut



Figure 5.3 Tagged Translocation Corals at Recipient Site R3 near SKC

5.3.2 The GPS coordinates of the tagged coral colonies, retagged coral colonies and recipient site were shown in **Table 5.2**, **Table 5.3** and **Table 5.4** respectively.

Table 5.2 Tagged Natural Corals during Baseline and Re-tagged Natural Corals after Typhoon Manghkut at Control Site near Yuen Long Chau

Coral #	GPS Coo	ordinates
1	N22°09'45.96"	E113°54'57.81"
2R	N22°11'29.12"	E113°59'09.01"
3	N22°09'45.81"	E113°54'57.78"
4	N22°09'45.70"	E113°54'57.95"
5R	N22°11'29.10"	E113°59'09.18"
6	N22°09'45.75"	E113°54'58.02"
7R	N22°11'29.17"	E113°59'08.86"
7	N22°09'45.65"	E113°54'57.94"
8	N22°09'45.53"	E113°54'57.90"
9	N22°09'46.23"	E113°54'54.70"
10R	N22°11'29.18"	E113°59'08.91"

Notes:

Table 5.3 Re-tagged Natural Corals after Typhoon Manghkut at Indirect Impact Site near SKC

Coral # note i	GPS	Coordinates
11R	N22°11'29.14"	E113°59'08.92"
12R	N22°11'29.12"	E113°59'09.01"
13R	N22°11'29.11"	E113°59'09.07"
14R	N22°11'29.13"	E113°59'09.12"
15R	N22°11'29.10"	E113°59'09.18"
16R	N22°11'29.07"	E113°59'09.23"

i. The re-tagged corals were marked as #R.

Coral # note i	GPS Coordinates		
17R	N22°11'29.17"	E113°59'08.86"	
18R	N22°11'29.14"	E113°59'08.94"	
19R	N22°11'29.20"	E113°59'08.81"	
20R	N22°11'29.18"	E113°59'08.91"	

Notes:

Table 5.4 GPS Coordinates of Recipient Site R3

Site	GPS Coordinates	
R3	N22°11'43.69"	E113°28.99"

- 5.4 Impact Monitoring Methodology
- 5.4.1 Health status of coral was assessed by the following criteria:
 - Hard coral: Percentage of surface area exhibiting partial mortality and blanched/bleached area of each coral colony and degree of sedimentation.
- 5.5 Action and Limit Levels
- 5.5.1 Monitoring result was reviewed and compared against the below Action Level and Limit Level (AL/LL) as set with the below **Table 5.5** and **Table 5.6**.

i. The re-tagged corals were marked as #**R**.

Table 5.5 Action and Limit Levels for Construction Phase Coral Monitoring

Parameter	Action Level	Limit Level
Mortality	If during Impact Monitoring a 15% increase in the percentage of partial mortality on the corals occurs at more than 20% of the tagged indirect impact site coral colonies that is not recorded on the tagged corals at the control site, then the Action Level is exceeded.	on the corals occurs at more

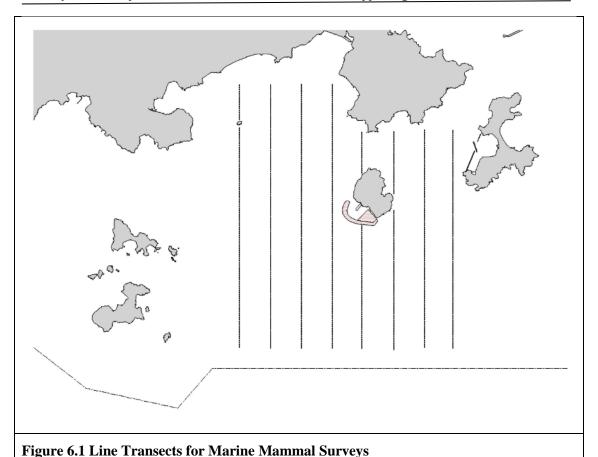
Table 5.6 Action and Limit Levels for Post-Translocation Coral Monitoring

Parameter	Action Level	Limit Level
Mortality	If during Post-Translocation Monitoring a 15% increase in the percentage of partial mortality on the corals occurs at more than 20% of the translocated coral colonies that is not recorded on the original corals in the recipient site, then the Action Level is exceeded.	If during Post-Translocation Monitoring a 25% increase in the percentage of partial mortality on the corals occurs at more than 20% of the translocated coral colonies that is not recorded on the original corals in the recipient site, then the Limit Level is exceeded.

- 5.5.2 If exceedance was found during coral monitoring. The actions in accordance with the Event and Action Plan should be carried out according to **Appendix L.**
- 5.6 Monitoring Results and Observations
- 5.6.1 No coral monitoring survey had been done during the reporting period and the 12th quarterly coral monitoring during construction phase at both Indirect Impact Site and Control Site would be scheduled in December 2021.

6. MARINE MAMMAL

- 6.1 Monitoring Requirements
- 6.1.1 The marine mammal monitoring programme would focus on Finless Porpoise, as the study area near Shek Kwu Chau has been identified as a hotspot for this species, while the Chinese White Dolphins rarely occurred there in the past.
- 6.1.2 The monitoring will verify the predicted impacts on marine mammals and examine whether the mitigation measures recommended in the EIA report have been effectively implemented to protect marine mammals from negative impacts from construction activities.
- 6.1.3 The Vessel-based Line-transect Survey, the Passive Acoustic Monitoring and the Landbased Theodolite Tracking will be conducted to provide systematic, quantitative measurements of occurrence, encounter rate, habitat use, movement and behavioural patterns of marine mammals within or near the Project Area during construction and operational phases.
- 6.1.4 The mammal monitoring works during construction consist of the following three survey methods:
 - Vessel-based Line-transect Survey to monitor the occurrence of Finless Porpoises (and Chinese White Dolphins) in the study area during construction works, by comparing with the findings of the pre-construction marine mammal monitoring;
 - Passive Acoustic Monitoring to study the usage of the Project Area and two control sites in South Lantau Waters by Finless Porpoise during construction works, in reference with the baseline findings of the pre-construction marine mammal monitoring; and
 - Land-based Theodolite Tracking to study the movement and behavioral pattern of Finless Porpoise within and around the Project Area during construction works.
- 6.1.5 The marine mammal observation works of Marine Mammal Exclusion Zone (MMEZ) and Marine Mammal Watching as two of the specific mitigation measures recommended in the approved EIA report shall be fully and properly implemented for the Project to minimize disturbance on Finless Porpoise during construction and operational phases.
- 6.2 Survey Methods
- 6.2.1 Vessel-based Line-transect Survey
- 6.2.1.1 For the vessel-based marine mammal surveys, the monitoring team adopted the standard line-transect method (Buckland et al. 2001) as same as that adopted during the EIA study and pre-construction phase monitoring to allow fair comparison of marine mammal monitoring results.
- 6.2.1.2 Eight transect lines are set at Southeast Lantau survey area, including Shek Kwu Chau, waters between Shek Kwu Chau and the Soko Islands, inshore waters of Lantau Island (e.g. Pui O Wan) as well as southwest corner of Cheung Chau as shown in **Figure 6.1** below:



6.2.1.3 The surveys should cover all 4 seasons in order to take natural fluctuation and seasonal variations into account for data analysis of distribution, encounter rate, density and habitat use of both porpoises and dolphins (if any). In comparison to the baseline monitoring results, results from the analysed construction phase monitoring data would allow the detection of any changes of their usage of habitat, in response to the scheduled construction works. The monitoring surveys shall be conducted throughout the construction phase involving marine construction work with the frequency shown in **Table 6.1** below:

Table 6.1 Vessel-based Line-transect Survey Frequency

Season	Months	Frequency
Peak Season	December, January, February,	Twice per month
	March, April & May	
Non-peak Season	June, July, August, September,	Once per month
	October & November	_

6.2.1.4 For each vessel survey, a 15-m inboard vessel with an open upper deck (about 4.5 m above water surface) would be used to make observations from the flying bridge area. Two experienced marine mammal observers (a data recorder and a primary observer) would make up the on-effort survey team, and the survey vessel would transit different transect lines at a constant speed of 13-15 km per hour. The data recorder shall search with unaided eyes and fill out the datasheets, while the primary observer shall search for dolphins and porpoises continuously through 7 x 50 marine binoculars. Both observers shall search the sea ahead of the vessel, between 270° and 90° (in relation to the bow, which is defined as 0°). Two additional experienced observers shall be available on the boat to work in shift (i.e. rotate every 30 minutes) in order to minimize fatigue of the survey team members. All observers shall be experienced

in small cetacean survey techniques and identifying local cetacean species with extensive training by marine mammal specialist of the ET.

- 6.2.1.5 During on-effort survey periods, the survey team shall record effort data including time, position (latitude and longitude), weather conditions (Beaufort sea state and visibility), and distance travelled in each series (a continuous period of search effort) with the assistance of a handheld GPS (Garmin eTrex Legend). Data including time, position and vessel speed would also be automatically and continuously logged by handheld GPS throughout the entire survey for subsequent review.
- 6.2.1.6 When porpoises or dolphins are sighted, the survey team shall end the survey effort, and immediately record the initial sighting distance and angle of the porpoise or dolphin group from the survey vessel, as well as the sighting time and position. Then the research vessel shall be diverted from its course to approach the animals for species identification, group size estimation, assessment of group composition, behavioural observations, and collection of identification photos (feasible only for Chinese White Dolphin). The perpendicular distance (PSD) of the porpoise or dolphin group to the transect line would then be calculated from the initial sighting distance and angle, which shall be used in the line-transect analysis for density and abundance estimation.
- 6.2.1.7 The line-transect survey data shall be integrated with a Geographic Information System (GIS) to visualize and interpret different spatial and temporal patterns of porpoise and dolphin distribution using their sighting positions collected from vessel surveys. Location data of porpoise and dolphin groups would be plotted on map layers of Hong Kong using a desktop GIS (e.g. ArcView© 3.1) to examine their distribution patterns in details. The encounter rate could be used as an indicator to determine areas or time periods of importance to porpoises within the study area. For encounter rate analysis of finless porpoises, only survey data collected under Beaufort 2 or below condition would be used for encounter rate analysis.
- 6.2.1.8 To take into account of the variations of survey effort across different sections within survey area, the quantitative grid analysis of habitat use would be conducted to examine finless porpoise usage among 1-km² grids within the Southeast Lantau survey area. For the grid analysis, SPSE (sighting density) and DPSE (porpoise density) values would be deduced for evaluation on level of porpoise usage. First, positions of on-effort porpoise sightings from the study period are plotted onto 68 grids (1 km x 1 km each) within the survey area. Sighting density grids and porpoise density grids shall then be normalized with the amount of survey effort conducted within each grid. The total amount of survey effort spent on each grid shall be calculated by examining the survey coverage on each line-transect survey to determine how many times the grid had been surveyed during study period. With the amount of survey effort calculated for each grid, the sighting density and porpoise density of each grid shall be further normalized (i.e. divided by the unit of survey effort).
- 6.2.1.9 The newly-derived unit for sighting density was termed SPSE, representing the number of on-effort sightings per 100 units of survey effort. In addition, the derived unit for actual porpoise density was termed DPSE, representing the number of dolphins/porpoise per 100 units of survey effort. Among the 1-km² grids that were partially covered by land, the percentage of sea area was calculated using GIS tools, and their SPSE and DPSE values were adjusted accordingly. The following formulae shall be used to estimate SPSE and DPSE in each 1-km² grid within the study area:

 $SPSE = ((S / E) \times 100) / SA\%$

$$DPSE = ((D / E) \times 100) / SA\%$$

where S = total number of on-effort sightings

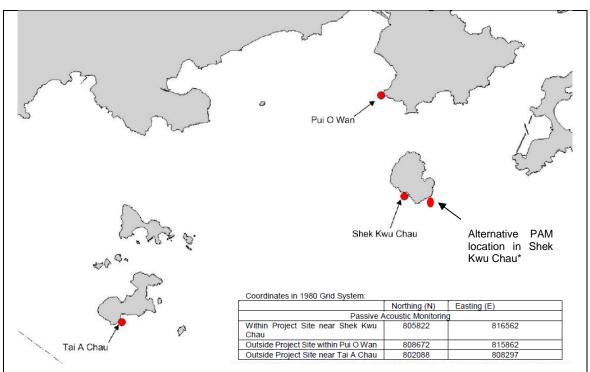
D = total number of dolphins/porpoises from on-effort sightings

E = total number of units of survey effort

SA% = percentage of sea area

6.2.2 Passive Acoustic Monitoring (PAM)

The PAM aims to study the usage of an area by Finless Porpoise by using an array of automated static porpoise detectors (e.g. C-POD) which would be deployed at different locations to detect the unique ultra-high frequency sounds produced by Finless Porpoise. During the construction period, the PAM survey will be conducted including placement of two passive porpoise detectors outside the Project Area as control site (i.e. within Pui O Wan and to the south of Tai A Chau) and one porpoise detector within the Project Area (i.e. near Shek Kwu Chau) as shown in **Figure 6.2** below.



Note*: The alternative PAM device adjacent to the Project site was deployed from 5 Mar to 11 Apr 2019, which contained a full 37 days acoustic monitoring data set. After the confirmation of loss of the original PAM within the Project site, this data set was proposed to replace that of the original one, as consulted with AFCD accordingly.

Figure 6.2 Locations of Passive Acoustic Monitoring

6.2.3 These three detectors will be deployed on-site to carry out 24-hours monitoring for a period listed as **Table 6.2** below during the construction phase.

Table 6.2 PAM Deployment Period

Season	Months	Deployment Period
Peak Season	December, January, February,	At least 30 days during the peak
	March, April or May	months of porpoise occurrence
	2	in South Lantau waters

6.2.3.1 The automated static porpoise detectors shall detect the presence and number of finless porpoise and Chinese White Dolphins respectively over the deployment period,

with the false signal such as boat sonar and sediment transport noise distinguished and filtered out. The detectors shall be deployed and retrieved by professional dive team on the seabed of the three selected location shown in **Figure 6.2**. During each deployment, the C-POD unit serial numbers as well as the time and date of deployments shall be recorded. Information including the GPS positions and water depth at each of the deployment locations shall also be obtained.

- 6.2.3.2 The diel patterns (i.e. 24-hour activity pattern) of finless porpoise occurrence among the three sites at Shek Kwu Chau, Tai A Chau and Pui O Wan shall be analyzed. Peaks and troughs of finless porpoise occurrence per hour of day would be identified and compared with the results obtained from pre-construction monitoring.
- 6.2.4 Land-based Theodolite Tracking
- 6.2.4.1 The Land-based Theodolite Tracking study would use the same station as in the AFCD monitoring study (same as the baseline monitoring location), which is situated at the southwest side of Shek Kwu Chau (GPS position: 22°11.47' N and 113°59.33' E) as shown in below **Figure 6.3**. The station was selected based on its height above sea level (at least 20 metres), close proximity to shore, and relatively unobstructed views of the entire Project Area to the southwest of Shek Kwu Chau. The height of the Shek Kwu Chau Station established by the HKCRP team is 74.6 m high at mean low water, and only a few hundred metres to the IWMF reclamation site, which is ideal for the purpose for the present behavioural and movement monitoring of finless porpoises as well during construction phase considering there as an un-obstructed vantage point at a height above the Project Site.

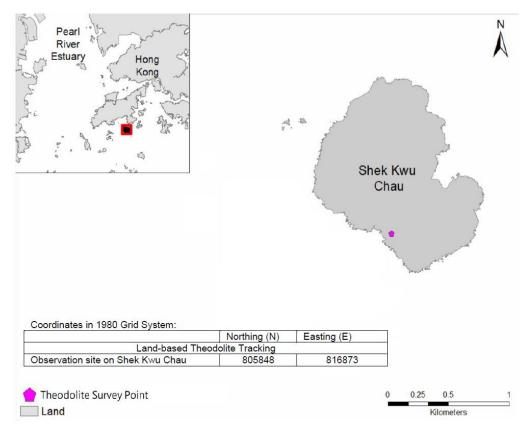


Figure 6.3 Locations of Land-based Theodolite Tracking

During the construction phase, Land-based Theodolite Tracking will be carried out for approximately six hours of tracking for each day of field work for a period listed as **Table 6.3** below, preferably at the initial stage of the construction period (i.e. December 2018 to May 2019).

Table 6.3 Land-based Theodolite Tracking Survey Period

Season	Months	Survey Period
Peak Season	December, January, February,	30 days during the peak months
	March, April or May	of porpoise occurrence in South
		Lantau waters

6.2.4.2 The monitoring period for land-based theodolite tracking will be proposed to be overlapped with the PAM. The monitoring team consists of one experienced theodolite operator and at least two field observers for assistance. To conduct theodolite tracking, the observers will search systematically for Finless Porpoise using the unaided eye and 7 x 50 handheld binoculars on each survey day throughout the study area. When an individual or group of porpoises is located, a theodolite tracking session will be initiated and focal follow methods will be used to track the porpoise(s). Behavioural state data (i.e. resting, milling, travelling, feeding and socializing) shall also be recorded every 5 minutes for the focal individual or group. Positions of porpoises and boats shall be measured using a digital theodolite connected to a laptop computer. This tracking survey was conducted during the peak season between December 2018 and May 2019 for 30 surveys spanning across 15-16 weeks during the peak season to provide good temporal coverage during the initial stage of the construction period.

6.3 Specific Mitigation Measures

6.3.1 Monitored exclusion zones

- 6.3.1.1 A MMEZ with 250 m distance from silt curtain shall be established during the above situation. If 3 or more construction vessels are required with MMO's duty and operating in close proximity, for the purpose of avoiding accidental entrance to the works area by Marine Mammal, a cluster MMEZ plan will be implemented to form a MMEZ with 250 m distance from the boundary of a work area as indicated in Figure 1 for reference. A team of MMO (i.e. at least two MMOs per day/night shift teams) would be arranged at the out-lying construction vessels to form the cluster MMEZ. The MMEZ serves as a monitoring approach to provide appropriate and immediate actions once finless porpoise or Chinese White Dolphin is sighted within the MMEZ. All MMEZ will be monitored by competent Marine Mammal Observers (MMOs) to be provided by the Environmental Team for the IWMF and trained by the Marine Mammal Monitoring Specialist of the ET who is independent from KSZHJV. The marine mammal observer(s) shall be independent of the construction contractor and shall form part of the Environmental Team and have the power to call-off construction activities.
- 6.3.1.2 According to the Condition 2.25 of the FEP, MMEZ should be implemented during the installation/re-installation/relocation process of floating type silt curtains in order to avoid the accidental entrance and entrapment of marine mammals within the silt curtains. Also, marine construction works expected to produce underwater acoustic disturbance as per Condition 2.27 of the FEP, especially within December and May, would require the implementation of MMEZ, which currently all those specific construction activities have been replaced by less acoustically disturbing construction methods such as Deep Cement Mixing (DCM) and Precast Concrete Blocks

Installation as discussed in Section 5.3 of the Detailed Monitoring Programme on Finless Porpoise, however, MMEZ would also be implemented for precautionary purpose for DCM works.

6.3.1.3 A MMEZ with 250 m distance from the boundary of a work area shall be established during the above situation. A typical MMEZ is indicated in **Figure 6.4** for reference. The MMEZ serves as a monitoring approach to provide appropriate and immediate actions once finless porpoise or Chinese White Dolphin is sighted within the MMEZ. All MMEZ will be monitored by competent Marine Mammal Observers (MMOs) to be provided by the Environmental Team (ET) for the IWMF and trained by the Marine Mammal Monitoring Specialist of the ET who is independent from KSZHJV.

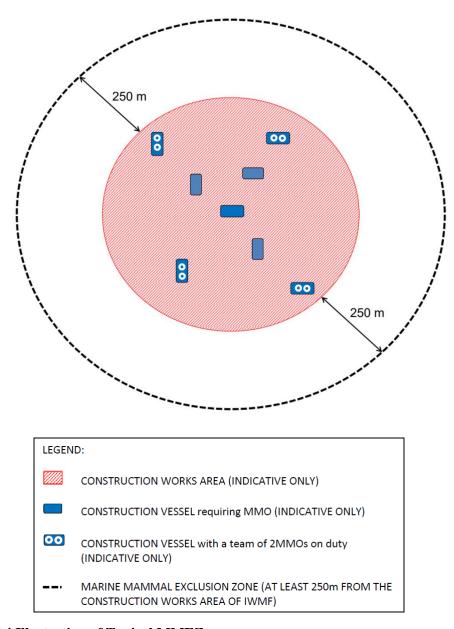


Figure 6.4 Illustration of Typical MMEZ

6.3.1.4 Prior to the commencement of construction activity, our MMOs shall ensure the boundary of a marine work area and setting up of the MMEZ for the work area and get access to the monitoring location on a barge or a lookout point where there is no obstructed views for monitoring the MMEZ during the construction activity. The

MMEZ shall be scanned thoroughly by a MMO for any presence of marine mammal e.g. finless porpoise for an initial period of 30 minutes. Construction activity shall only be commenced after the MMO has confirmed that the MMEZ is clear of the marine mammal for the initial period of 30 minutes. The MMO shall then inform the construction superintendent through mobile phone or handheld transceivers to certify the commencement of construction activity. The MMEZ monitoring shall be carried on throughout the period for all active construction activities requiring implementation of MMEZ.

- 6.3.1.5 When any mammal marine, e.g. Finless Porpoise, is detected by the MMO within the MMEZ during construction, the MMO shall inform the construction superintendent immediately through mobile phone or handheld transceivers to cease construction activity within the MMEZ. Construction activity shall not be re-commenced until the MMO confirms that the MMEZ is continuously clear of marine mammal for a period of 30 minutes. The MMO shall then inform the construction superintendent through mobile phone or handheld transceivers to certify the re-commencement of construction activity.
- 6.3.1.6 As there could be a number of Contractors working at the same time within a work area for the IWMF project, a full contact list of MMEZ monitoring team members of the ET and the relevant responsible construction superintendents of the Contractor at the site shall be prepared, updated regularly and circulated to all parties involved in the MMEZ monitoring. With a full contact list, our MMOs shall be able to find out the contacts of corresponding persons in case of marine mammal sighting within and near the MMEZ or emergent occurrence of any unpredictable impact on marine mammal.
- 6.3.1.7 If a marine mammal is still observed in close vicinity but outside the MMEZ, the MMO shall inform the construction superintendent about the presence of marine mammal. The MMO shall remain in position and closely observe the movement of the marine mammal as well as searching for the appearance of any other marine mammal within the MMEZ. No matter the marine mammal is observed within or in close vicinity but outside the MMEZ, the construction superintendent or relevant persons shall inform all vessel captains involved in construction activities around the MMEZ to pay special attention of the presence of the marine mammal in order to reduce chance of collision with them. In case of injury or live-stranded marine mammal being found within the MMEZ, the marine mammal observer shall immediately inform the construction superintendent to suspend construction activities within the works area and contact AFCD through "1823" marine mammal stranding hotline.
- 6.3.2 Marine mammal watching plan
- 6.3.2.1 Upon the completion of silt curtain installation/re-installation/relocation, the marine works would be conducted within an enclosed environment within the silt curtain. Subsequently, Visual Inspection of the Waters Surrounded by Silt Curtains (Section 2.1, MMWP) and Regular Inspection of Deployed Silt Curtain (Section 2.2, MMWP) inspection under Marine Mammal Watching Plan would be implemented (where applicable, Marine Mammal Exclusion Zone shall be conducted at the meantime).
- 6.3.2.2 Before commencement of dredging/sand blanket laying work at each designated area, a trained MMO shall check whether position frame silt curtains are ready, well prepared and operated without any obvious damage. Also, the MMO shall confirm the presence of the relevant frontline staff of the main contractor or its sub-contractors and engineers on board to ensure the effective communication, coordination and

implementation of the response plan in relation to any incidents involving marine mammals within the waters surrounded by the position frame type silt curtains and the work areas. Also, there are lookout points at an elevated level on each barge, clear and safe access at the edges of the derrick lighter/ flag-top barge for inspection during dredging/sand blanket laying works, provision of sufficient lighting is required if working at night.

- 6.3.2.3 During the operation, the inspection will be conducted daily. The MMO will walk along the edge of derrick lighter (DL) and flag-top barge (FB) along the position frame silt curtain or proper location without obstacles where appropriate to inspect the position frame silt curtain with naked eyes, the MMO will check that the position frame silt curtains are maintained in the correct positions with no obvious defects / entanglement and there is no observable muddy water passing through the position frame silt curtain system. Any floating refuse trapped by the silt curtain shall be removed as part of the regular inspection. For night inspection, spotlight will be used to provide sufficient brightness to assist the inspection in dark condition.
- 6.3.2.4 For the re-deployment of the localized silt curtains (frame-type, cage-type or enclosed floating-type silt curtains), MMO will conduct visual inspection to confirm that there is no presence of marine mammal within the localized silt curtains (frame-type, cagetype or enclosed floating-type silt curtains). Visual inspection will be conducted every an hour by MMO for confirming that there is no any marine mammal observed in the surrounding area of the deployed silt curtain during re-deployment of localized silt curtains (frame-type, cage-type or enclosed floating-type silt curtains). The duration will be subject to various conditions, e.g. weather or angle of observation. The works can only commence after confirming that the surrounding waters of the localized silt curtains has not contain any marine mammal. Thereafter, frontline staff, i.e. foremen, site agent, superintendents and engineers will assist our MMO in implementing the plan from the active work fronts within the waters surrounded by the silt curtains throughout the work period. The MMO will conduct regular check to observe the presence of any marine mammal around the localized silt curtain or being trapped by the localized silt curtain daily. The MMOs will also check if the localized silt curtains are in correct positions.
- 6.3.2.5 The MMO shall fill up our Marine Mammal Sighting Record Sheet. After inspection, those records should be kept properly and submitted to the project team. In case there is any marine mammal being found, the MMO should carry out the response actions and communicate with relevant parties to stop and then resume work after the discovered marine mammal leaves. After lifting up and mobilization of silt curtain, the MMO will repeat the procedures of regular and visual inspection until the end of the construction works.
- 6.3.2.6 Each lookout point will have an unobstructed view to waters around the DL and FB. The MMO will move around the DL and FB to establish a clear and unobstructed view as much as they can without compromising the safety concern. When appropriate, the lookout point can be replaced by a proper location if unobstructed view can be assured.
- 6.3.2.7 Installation of caisson No.19 was completed on 18 March 2021, which the reclamation area had been totally enclosed by permanent structure. Floating type silt curtain at marine access was removed on 18 March 2021. No enclosed area shall be formed by deployment of silt curtain for the remaining works programme.

6.4 Results and Observations

6.4.1 Vessel-based Line-transect Survey

The monthly survey was conducted on 25 October 2021. As this is the designated off- peak season (June – November), one survey was completed. A total of 40.9 km on effort (transects only) survey length was completed, 87.8% of which was conducted at Beaufort Sea State 2 or better (**Table 6.4**). No on-effort finless porpoise sighting was recorded.

Table 6.4 Summary of Vessel-based Line-transect Survey Effort

Date	Area*	Beaufort	Effort (km)	Season	Vessel	Effort Type**
25 October		1	14.8		CEAMAD	
25 October	SEL	2	21.1	AUTUMN	SEAMAR	P
2021		3	5.0		HK	

^{*} As shown in **Figure. 6.1**

- 6.4.1.1 A review of the long term AFCD marine mammal monitoring programme, the EIA and pre-construction baseline monitoring was conducted. Pre-construction baseline monitoring and the EIA were conducted during the peak porpoise months, Feb-Apr 2018 and Dec-May 2008-09, respectively, and cannot be compared to the month of October. The AFCD long term monitoring data can be compared directly to October 2021 impact survey results. The October 2019 & 2020 impact survey results could be compared directly to October 2021 impact survey results. It was noted that the 16th & 28th month of impact monitoring is October 2019 & 2020 respectively and these data were included.
- 6.4.1.2 A review of the Beaufort Sea State in October survey conditions between 2009 and 2017 (only data available from AFCD at time of writing; AFCD 2018¹; 2017²; 2016³; 2015⁴; 2014⁵; 2013⁶; 2012⁷; 2011⁸; 2010⁹) show that between 0% and 100% of survey effort has been conducted at Beaufort Sea State 2 or better in the past For this project in October 2021, 87.8% of the survey was conducted at Beaufort Sea State 2 or better and, as such, survey conditions in October 2021 are better than average for previous AFCD surveys conducted in this month
- 6.4.1.3 A review of the porpoise sightings in the survey area for October between 2009-2017 (no effort was recorded in 2010) indicated that that it is rare to record sightings in this month. For all weather conditions, and for the seven years data available, zero (0) sighting was recorded in three years (2011, 2012 and 2015 conducted by AFCD), one (1) sighting was recorded in one year (2013 conducted by AFCD), two (2) sighting was recorded in one year (2017 conducted by AFCD) and three (3) sightings were recorded in three year (2009, 2014 and 2016 conducted by AFCD). For impact monitoring in October 2018, 2019 & 2020, no sighting was recorded. For impact monitoring in October 2021 conducted by ET, no sighting was recorded. Effort varied considerably between years and the average number of sightings (per km) was 0.0 km⁻¹. For October 2018, 2019 & 2020, the calculated encounter rates were 0.00 sightings km⁻¹. For October 2021, the calculated encounter rate was 0.00 sightings km⁻¹
- 6.4.1.4 The impacts of the Project on marine mammals as predicted in the EIA were that construction activities would cause individuals to move away from the area. The month of October usually records no porpoise sightings since before construction commenced, so a sighting in this month is unusual, but not unprecedented. October is considered to be off peak season for porpoise, as indicated in the long-term

^{**} P (from AFCD) denotes the ON EFFORT survey on the transect line, not the adjoining passages

monitoring sightings data published by AFCD. This observation is only for daylight hours, and visual detection. The number of sightings in October 2021 is comparable to the numbers recorded during AFCD long term monitoring studies, prior to the commencement of IWMF and the first three year's impact monitoring records.

- 6.4.1.5 This observation was only for daylight hours, and visual detection. The analyses of the static PAM dataset provided detailed information on diurnal occurrence patterns. Each static PAM station recorded porpoise at each site every day of the PAM study and therefore, showed that the area immediately adjacent to the Project site has not been abandoned during parts of the designated peak season for porpoise.
- 6.4.2 PAM and Land-based Theodolite Tracking
- 6.4.2.1 30 days of PAM surveys were started at 1 May 2019 and completed until the end of May 2019. Multiple PAM systems were deployed at three sites. The PAM system located at the IWMF was lost, however, an alternative data set had been identified. The PAM systems at the two control sites Tai A Chau and Pui O were recovered on 3 August 2019. A summary of marine mammal detections showed that porpoise were recorded every day of deployment at each site, but at varying frequencies. The detailed theodolite result was presented in 17th Monthly EM&A report (November 2019) while detailed PAM result was presented in 18th Monthly EM&A report (December 2019).
- For the baseline study, the DPM for each site was 11,160 (Shek Kwu Chau), 16,089 6.4.2.2 (Tai A Chau) and 3645 (Pui O Wan), totalling 30,894 DPM across all three sites, compared to DPMs of 4740 (Shek Kwu Chau), 7725 (Tai A Chau) and 23,986 (Pui O Wan), totalling 36,451 DPM, for the impact phase study. As the impact phase study was longer than the baseline study, it is not appropriate to directly compare total counts of DPM, however, the DPM rate (the average number of detections per day) for each site can be more directly compared. During the baseline study, Shek Kwu Chau averaged 338.2 DPM per day compared to 124.8 DPM per day, during the impact phase study. This showed a decrease in the daily average of porpoise detection at Shek Kwu Chau. During the baseline study, Tai A Chau averaged 487.6 DPM per day compared to 179.7 DPM per day, during the impact phase study. This showed a decrease in the daily average of porpoise detection at Tai A Chau. During the baseline study, Pui O Wan averaged 98.5 DPM per day compared to 557.8 DPM per day, during the impact phase study. This showed a significant increase in the daily average of porpoise detections at Pui O Wan.
- 6.4.2.3 Overall, the PAM study showed that porpoise continue to consistently utilise the Shek Kwu Chau habitat immediately adjacent to the IWMF construction activities, although to a lesser degree than that prior to construction activities. In addition, the Pui O Wan site, which is 2.5 km away from the IWMF construction area, was also consistently utilised during the impact phase PAM study. A continued assessment of fine scale habitat use, particularly through PAM which yielded large quantities of data, would allow a more comprehensive assessment of the EIA predictions.
- 6.4.2.4 Theodolite surveys were completed in May 2019. In total, thirty four days of theodolite tracking were completed between February May 2019, comprising 167 hours and 49 minutes of observation. No Chinese white dolphin was observed and only one finless was recorded. The finless porpoise encounter rate was calculated as 0.006 finless porpoise per hour, in all weather conditions.
- 6.4.2.5 A total of 2620 vessels of ten different types were observed and tracked within or in the proximity of the IWMF construction site. These comprised fishing boats (236),

speed boats (29), container boats (155), government boats (22), high speed ferries (53), others (13) and IWMF-Related construction platforms (974), tug boats (240), transportation boats (363), construction boats (531) and approximately 8 buoys were present marking the site boundary.

- 6.4.2.6 The baseline theodolite tracking was conducted immediately prior to and during the site preparation activities of the site. The baseline data records a decrease in porpoise sightings as site preparation activities commenced and notes that the decrease was most likely due to the onset of site preparation activities. The impact theodolite tracking conducted for this study records a marked increase in the number of Project related vessels and platforms and, in agreement with baseline conclusions, shows a concomitant decrease in finless porpoise sightings.
- 6.4.3 Specific Mitigation Measures
- 6.4.3.1 Trainings for the MMO were provided by the ET prior to the monitoring of the Marine Mammal Exclusion Zone (MMEZ) for installation/re-installation/relocation process of silt curtains, with a cumulative total of 98 individuals being trained and the training records kept by the ET.

6.4.5 References

- 1. Agriculture, Fisheries and Conservation Department (AFCD) 2018. *Annual Marine Mammal Monitoring Programme April 2017-March 2018*) The Agriculture, Fisheries and Conservation Department, Government of the Hong Kong SAR. <a href="http://www.afcd.gov.hk/english/conservation/con_mar/con_mar_chi/con_mar_ch
- 2. Agriculture, Fisheries and Conservation Department (AFCD) 2017. *Annual Marine Mammal Monitoring Programme April 2016-March 2017*) The Agriculture, Fisheries and Conservation Department, Government of the Hong Kong SAR. <a href="http://www.afcd.gov.hk/english/conservation/con_mar/con_mar_chi/con_mar_ch
- 3. Agriculture, Fisheries and Conservation Department (AFCD) 2016. *Annual Marine Mammal Monitoring Programme April 2015-March 2016*) The Agriculture, Fisheries and Conservation Department, Government of the Hong Kong SAR. http://www.afcd.gov.hk/english/conservation/con_mar_chi_chi.html
- 4. Agriculture, Fisheries and Conservation Department (AFCD) 2015. Annual Marine Mammal Monitoring Programme April 2014-March 2015) The Agriculture, Fisheries and Conservation Department, Government of the Hong Kong SAR. http://www.afcd.gov.hk/english/conservation/con_mar_chi.html
- 5. Agriculture, Fisheries and Conservation Department (AFCD) 2014. *Annual Marine Mammal Monitoring Programme April 2013-March 2014*) The Agriculture, Fisheries and Conservation Department, Government of the Hong Kong SAR.

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- 7. Agriculture, Fisheries and Conservation Department (AFCD) 2012. *Annual Marine Mammal Monitoring Programme April 2011-March 2012*) The Agriculture, Fisheries and Conservation Department, Government of the Hong Kong SAR.

 <a href="http://www.afcd.gov.hk/english/conservation/con_mar/con_mar_chi/con_mar_c
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 <a href="http://www.afcd.gov.hk/english/conservation/con_mar/con_mar_chi/con_mar_c
- 9. Agriculture, Fisheries and Conservation Department (AFCD) 2010. *Annual Marine Mammal Monitoring Programme April 2009-March 2010*) The Agriculture, Fisheries and Conservation Department, Government of the Hong Kong SAR.

 <a href="http://www.afcd.gov.hk/english/conservation/con_mar_chi/con_m

7. WHITE-BELLIED SEA EAGLE

7.1 Monitoring Requirement

- 7.1.1 On Shek Kwu Chau Island, a nest of WBSE is located about 60 m above ground within a hillside shrubland habitat, 130 m in-land from shore, about 550 m away from the proposed reclaimed land, with no human access. 3 phases monitoring programme will be comprised of pre-construction phase, construction phase and operation phase.
- 7.1.2 The Pre-Construction WBSE monitoring was started on 30 January 2018 and the location of WBSE nest was confirmed on 21 February 2018 and it is located at the western part of SKC Island (Figure 7.1). Two adults and two chicks were also recorded on 5th March 2018 survey till the end of the Pre-construction monitoring on 15th May 2018. Construction Phase monitoring were carried out followed by the commencement of the Construction Phase on 28th June 2018.
- 7.2 WBSE Monitoring Parameters, Time, Frequency
- 7.2.1 The objective of the construction phase monitoring should be to verify the utilisation of the area by WBSE, their responses to construction disturbance, as well as the effectiveness of the proposed mitigation measures. Throughout the construction phase, field surveys should be conducted twice per month during their core breeding season (from December to May), and once per month outside their core breeding season (from June to November). The monitoring frequency should be increased to weekly during the incubation period of each year. In order to confirm their foraging ground near the construction site, it is necessary to conduct daily monitoring during the first week of nestling period in each year.
- 7.2.2 Since the location of the WBSE nest was located at the southwest of SKC within the hillside shrubland, it is impossible to observe the eggs during incubation period. Therefore, monitoring with increased frequency during incubation period will be continued until chick was seen in the nest. Daily monitoring will be carried out once any chick is recorded during the monitoring day. The monitoring schedule during the reporting period is provided in **Appendix C**.

7.3 Monitoring Location

7.3.1 Since there are no suitable land footings along the coast of SKC, only boat surveys were conducted. On Shek Kwu Chau Island, a nest of WBSE is located about 60 m above ground within a hillside shrubland habitat, 130 m in-land from shore, about 550 m away from the proposed reclaimed land, with no human access.

7.4 Monitoring Methodology

- 7.4.1 Information to be collected included feeding, perching/roosting, preening, soaring, flying, nesting and territorial guarding and the time spent on each activity. The responses and reactions to any disturbance to the WBSEs were also recorded and examined in conjunction with the construction noise and/or other events in the vicinity. Other disturbances such as weather condition, or invasion by other fauna species were also recorded.
- 7.4.2 Binocular, scope, camera, lens and GPS device used are summarized as **Table 7.1** below:

Table 7.1 List of Equipment Used during Construction Phase Monitoring

Equipment	Quantity
Swarovski EL 8.5 x 42 Binocular	1
Swarovski EL Range 8 x 42 Binocular	1
Swarovski ATX 25-60 x 85 Spotting Scope	1
Canon 1Dx Mark II Camera	1
Canon EF300mm F2.8 Lens with Canon 2x Teleconverter	1
Canon PowerShot G7X Camera	1
Garmin GPSMAP 64S	1

7.4.3 If event such as absence of White-bellied Sea Eagle during a whole day of monitoring was found during WBSE monitoring, the actions in accordance with the Event and Action Plan should be carried out according to **Appendix M.**

7.5 Results and Observations

7.5.1 To verify the utilization of the area by WBSE, their responses to construction disturbance, as well as the effectiveness of the proposed mitigation measures. Since there is no landing point along the western part of SKC, boat survey was used for the monitoring survey. In order to increase the chance of finding the WBSEs, monitoring survey was carried out early in the morning. The weather condition of monitoring survey was shown in **Table 7.2**.

Table 7.2 Weather Conditions during the WBSE Monitoring

Date	Condition	Temperature ($^{\circ}$ C)
	- Northeast wind force 4 to 5	
28 October 2021	- Sunny Day	29

- 7.5.2 No abnormal behavior of the recorded adults during the construction phase in October 2021. Two adults of WBSE were recorded during the monitoring survey (Figure 7.2). All marine works during the monitoring period did not show any affects to the WBSE.
- 7.5.3 No disturbances from anthropogenic activities on the island were recorded during the monitoring survey. No invasion of other fauna species was recorded as well.
- 7.5.4 A construction phase monitoring will be continued once per month outside their core breeding season (between June to November) in order to monitor the utilization of the area by WBSE and their responses to construction disturbance.



Figure 7.1 Location of WBSE Nest on SKC

7.5.5 Photo record of WBSE from the survey this month is shown below:



Figure 7.2 Photo Records of WBSE on SKC During the Reporting Period

8. SUMMARY OF MONITORING EXCEEDANCE, COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTIONS

8.1 The Environmental Complaint Handling Procedure is shown in below **Figure 8.1**:

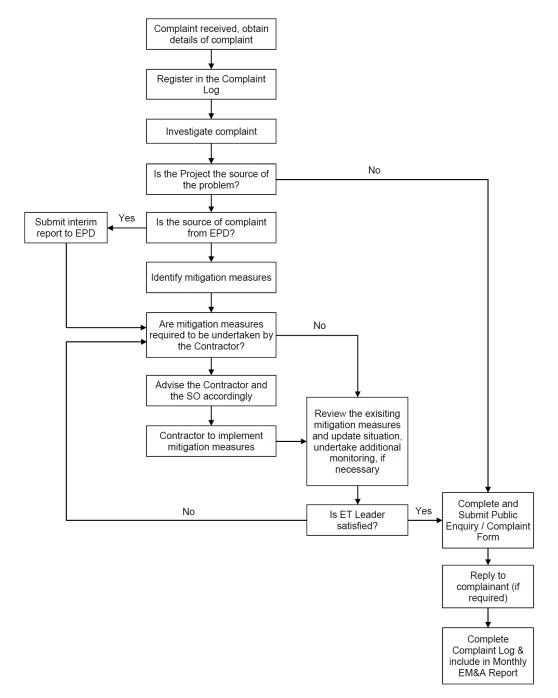


Figure 8.1 Environmental Complaint Handling Procedures

8.2 No exceedance of the Action and Limit Levels of the regular WBSE monitoring was recorded during the reporting period.

Table 8.1 Summary of SS Compliance Status at Impact Stations (Mid-Ebb Tide)

Date	B1	B2	В3	B4	CR1	CR2	F1A	H1	S1	S2A	S3	M1
01-10-2021												
04-10-2021												
06-10-2021												
08-10-2021												
11-10-2021												
13-10-2021												
15-10-2021												
17-10-2021												
19-10-2021												
21-10-2021												
24-10-2021												
26-10-2021												
28-10-2021												
30-10-2021												
No. of SS Exceedances	4	1	2	4	3	3	4	2	0	0	0	1

Note 1: Detailed results are presented in **Appendix D**

Legend:

1.
No exceedance of Action Level and Limit Level
Exceedance of Action Level recorded at monitoring station located downstream of
the Project based on dominant tidal flow
Exceedance of Action Level recorded at monitoring station located
upstream/unrelated stream (neither upstream nor downstream, far away) of the
Project based on dominant tidal flow
Exceedance of Limit Level recorded at monitoring station located downstream of the
Project based on dominant tidal flow
Exceedance of Limit Level recorded at monitoring station located upstream/unrelated
stream of the Project based on dominant tidal flow
Upstream/unrelated stream station with respect to IWMF Project during the
respective tide based on dominant tidal flow
Downstream station with respect to IWMF Project during the respective tide based
on dominant tidal flow/station within the Project site
NA for measurement
Cancelled due to incident or adverse weather

Table 8.2 Summary of SS Compliance Status at Impact Stations (Mid-Flood Tide)

Date	B1	B2	В3	B4	CR1	CR2	F1A	H1	S1	S2A	S3	M1
01-10-2021												
04-10-2021												
06-10-2021												
08-10-2021												
11-10-2021												
13-10-2021												
15-10-2021												
17-10-2021												
19-10-2021												
21-10-2021												
24-10-2021												
26-10-2021												
28-10-2021												
30-10-2021												
No. of SS Exceedances	3	3	6	2	1	5	2	3	0	0	0	3

Note 1: Detailed results are presented in **Appendix D**

Legend:

Legene	ł.
	No exceedance of Action Level and Limit Level
	Exceedance of Action Level recorded at monitoring station located downstream of
	the Project based on dominant tidal flow
	Exceedance of Action Level recorded at monitoring station located
	upstream/unrelated stream (neither upstream nor downstream, far away) of the
	Project based on dominant tidal flow
	Exceedance of Limit Level recorded at monitoring station located downstream of the
	Project based on dominant tidal flow
	Exceedance of Limit Level recorded at monitoring station located upstream/unrelated
	stream of the Project based on dominant tidal flow
	Upstream/unrelated stream station with respect to IWMF Project during the
	respective tide based on dominant tidal flow
	Downstream station with respect to IWMF Project during the respective tide based
	on dominant tidal flow/station within the Project site
	NA for measurement
	Cancelled due to incident or adverse weather

- 8.3 Eighteen (18) of the general water quality monitoring results of suspended solids (SS) obtained had exceeded Action Level. Thirty-four (34) of general water quality monitoring results of SS obtained during the reporting period had exceeded the Limit Level. Investigation was carried out immediately for each of the exceedance cases during the reporting period.
- 8.4 No project-related Action Level & Limit Level exceedance was recorded from the 1 October 2021 to 31 October 2021 as shown in **Appendix N**.
- 8.5 Water impact monitoring events on 8 and 13 October 2021 were cancelled due typhoon LIONROCK and typhoon KOMPASU respectively. No supplementary water monitoring was conducted for water monitoring event on 8 October 2021 due to adverse weather and sea condition on 9 & 10 October 2021. Water impact monitoring event on 13 October 2021 was rescheduled to 17 October 2021.
- 8.6 No notification of summons and prosecution was received in the reporting period.
- 8.7 Statistics on complaints, notifications of summons and successful prosecutions are summarized in **Appendix O**.

9. EM&A SITE INSPECTION

9.1 Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting period, site inspections were carried out on 5, 12, 19 and 26 October 2021 at the site portions listed in **Table 9.1** below.

Table 9.1 Site Inspection Record

Date	Inspected Site Portion	Time
5 October 2021	Portion 1, 1A & 1B (near SKC)	10:30 – 11:30 AM
12 October 2021	Portion 7 (Siu Ho Wan)	9:30 – 10:30 AM
19 October 2021	Portion 1, 1A & 1B (near SKC)	10:30 – 11:30 AM
26 October 2021	Portion 1, 1A & 1B (near SKC)	10:30 – 11:30 AM

- 9.2 One joint site inspection with IEC was carried out on 19 October 2021.
- 9.3 Environmental deficiencies were observed during weekly site inspection. Key observations during the site inspections and during the reporting period are summarized in **Table 9.2**.

Table 9.2 Site Observations

Date	Environmental Observations	Follow-up Status
	Observation(s) and Recommendation(s)	
	1. At seawall A, no NRMM label was	1. The "Under
	displayed on generator 896.	Maintenance 等待維
		修 "sign had been
5 October 2021		posted on generator to prohibit its use.
(Site inspection)	2. At seawall A, drip tray for generator	2. The drip tray of generator
	896 was not plugged.	896 had been plugged.
	3. At seawall A, chemical in-use should be placed on drip tray.	3. The oil drum had been relocated and placed on drip tray.
12 October 2021	Observation(s) and Recommendation(s)	
(Site inspection)	No major observation was observed.	Nil
19 October 2021	Observation(s) and Recommendation(s)	
(Site inspection)	No major observation was observed.	Nil
26 October 2021	Observation(s) and Recommendation(s)	
(Site inspection)	No major observation was observed.	Nil

- 9.4 The Contractor had rectified all the observations identified during environmental site inspections in the reporting period.
- 9.5 According to the EIA Study Report, Environmental Permit, contract documents and Updated EM&A Manual, the mitigation measures detailed in the documents are implemented as much as practical during the reporting period. An updated Implementation Status of Environmental Mitigation Measures (EMIS) is provided in **Appendix B**.

10. FUTURE KEY ISSUES

- 10.1 Works to be undertaken in the next reporting month are:
 - Reclamation Area:
 - Reclamation works
 - PVD Remedial Works
 - Installation of Instrumentation
 - Site Investigation works for foundation
 - Foundation works
 - Seawall Portion:
 - Installation of caisson
 - Installation of Chinese Pod
 - Caisson extension works, from +3mPD to +6mPD, at Seawall A and B
- 10.2 Potential environmental impacts arising from the above construction activities are mainly associated with water quality, construction noise, waste management and ecology.
- 10.3 The key environmental mitigation measures for the Project in the coming reporting period expected to be associated with the construction activities include:
 - Reduction of noise from equipment and machinery on-site;
 - Sorting, recycling, storage and disposal of general refuse and construction waste;
 - Management of chemicals and avoidance of oil spillage on-site, especially under heavy rains and adverse weather;
 - Confirmation of the absence of silt content in the rock filling material and the filling work is properly conducted;
 - Dust control of exposed soil surface and stockpile of dusty material at reclaimed area;
 - Dust suppression measures for exposed earth surface and stockpile of dusty material;
 - Site runoff control measure during rainstorm. and
 - Dust and noise control of foundation works.
- 10.4 The tentative schedule of regular construction noise, water quality and ecology monitoring in the next reporting period is presented in **Appendix P**. The regular construction noise, water quality and ecology monitoring will be conducted at the same monitoring locations in the next reporting period.

11. CONCLUSION AND RECOMMENDATIONS

- 11.1 This 40th monthly Environmental Monitoring and Audit (EM&A) Report presents the EM&A works undertaken during the period from 1 October to 31 October 2021, in accordance with the Updated EM&A Manual and the requirement under EP-429/2012/A and FEP-01/429/2012/A.
- 11.2 Construction noise, water quality, construction waste, marine mammal and WBSE monitoring were carried out in the reporting period. No project-related exceedance of the Action and Limit Level was recorded from 1 October 2021 to 31 October 2021.
- 11.3 Weekly environmental site inspections were conducted during the reporting period. Environmental deficiencies were observed during site inspection and were rectified.
- 11.4 According to the environmental site inspections performed in the reporting month, the Contractor was reminded to pay attention on on-site housekeeping and the proper storage of the chemicals and construction waste and dust control measure by covering the stockpile of dusty material with impervious sheeting.
- 11.5 No environmental complaint was received in the reporting period.
- 11.6 No notification of summon or prosecution was received since commencement of the Contract.
- 11.7 The ET will keep track of the construction works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

Contract No. EP/SP/66, Integrated Waste Manag	/12 gement Facilities, Phase 1	Keppel Seghers – Zhen Hua Joint Venture
Appendix A	Master Programme	



Contract No. EP/SP/66/12 Integrated Waste Management Facilities, Phase 1



	ACTIVITY INVITED	Planned Duration	At Completion Duration % Duration Complete	Activity % Complete	Remaining Primary Duration Constraint	Current Start	Current Finish	Late Start	Late Finish	Iotal Float M47	+/ rtemarks	Oct	2021 Nov	Dec	2022 Jan
												47	48	49	50
tal		3485	3485 41.29%		2046	22-Nov-17 A	07-Jun-27	07-Sep-21	07-Jun-27	0					
roject: EP_SP	P_66_12-WP6B-M47 Programme for Design and Construction Wc	3485	3485 41.29%		2046	22-Nov-17 A	07-Jun-27	07-Sep-21	07-Jun-27	0					
-	12-WP6B-M47.01 Key Dates	3485	3485 54.63%		1581	22-Nov-17 A	07-Jun-27	06-Apr-23	07-Jun-27	0					
WBS: EP_SP_66_	12-WP6B-M47.01.1 Contractual Key Dates	2811	2811 86.8%		371	22-Nov-17 A	02-Aug-25	27-Jul-24	02-Aug-25	0					
WBS:EP_SP_66	6_12-WP6B-M47.01.1.1 Design and Construction Phase	2755	2755 88.57%		315	22-Nov-17 A	07-Jun-25	27-Jul-24	07-Jun-25	0					
01-1000	Contract Award/Date of Acceptance of Tender	0	0 100%	100%	0 Mandatory	22-Nov-17 A									
01-1010	Date of Commencement of the Design and the Works	0	0 100%	100%	0 Mandatory	15-Dec-17 A									
01-1015(3)(M12)	Original Substantial Completion of the Works	0	0 0%	0%	0 Mandatory		27-Jul-24*		27-Jul-24	0					
01-1020	Extended Substantial Completion of The Works	0	0 0%	0%	0 Mandatory		07-Jun-25*	•	07-Jun-25	0 Aw	warded EOT uptc				
WBS: EP_SP_66	6_12-WP6B-M47.01.1.3 Extension of Time Granted	315	315 0%	,	315	27-Jul-24	07-Jun-25	27-Jul-24	07-Jun-25	0					
01-1015-1(3)(M12	(Claim No.1 to No.72) *Claim No.9 excluded	315	315 0%	0%	315	27-Jul-24	07-Jun-25	27-Jul-24	07-Jun-25	0 EC	OTAwarded upto				
WBS: EP_SP_66	6_12-WP6B-M47.01.1.2 Operation Phase	56	56 0%	,	56	08-Jun-25	02-Aug-25	08-Jun-25	02-Aug-25	0					
01-1030	Commencement of Operation	0	0 0%	0%		08-Jun-25*		08-Jun-25		0 8-J	Jun-25				
01-1230	Issue Certificate of Completion of the Works (56 days after Substantial Completion)	0	0 0%	0%	Start 0 Finish On o		02 Aug 25*	*	02-Aug-25	0					
	, , ,	1557	1557 00/	0%	0 Finish On C		02-Aug-25*		-	0					
WBS: EP_SP_66_1 01-1030(5a)	12-WP6B-M47.01.2 Planned Completion Dates Grid Connection Agreement (GCA)	1557	0 0%	0%	0 As Late As		31-Oct-23	06-Apr-23	31-Oct-23	0					·
		0	0 0%							0					
01-1040	Incoming Power Energization to IWMF Substation	U	0 0%	0%	0 Finish On		31-Oct-24*		30-Oct-24	0					
01-1050	Export Power to Grid	0	0 0%	0%	0 Finish On o		31-Oct-24*		13-Jan-25	75					
01-1060	Issuance of FS Certificate	0	0 0%	0%	0		07-Oct-24		16-Nov-24	40					
01-1070	Completion of Civil Provision for Transmission	0	0 0%		0		03-Mar-23		06-Apr-23	34					
01-1080	Commencement of C1.3.4.11 System Commissioning Test	0	0 0%		0 As Late As			03-Nov-24		-49					
01-1090	Completion of C1.3.4.11 System Commission Test	0	0 0%		0	1	18-Jan-25		30-Dec-24	-19					
01-1100	Physical Completion of 90 Days Plant Commissioning Test Works	0	0 0%		0 As Late As		07-Jun-25		07-Jun-25	0					
01-1110(3)(M15)	Planned Substantial Completion of the Works	0	0 0%		0		31-Jul-25		07-Jun-25	-54					
01-1110-1(5a)	Completion of 180 Days for Installation, T&C of CCTV System and Onshore Power System	0	0 0%		0 Finish On		04-Dec-25*		04-Dec-25	0					
01-1110-2(5a)	Replacement of Onshore Cranes within 2 yrs at Portion 2	0	0 0%		0		07-Jun-27		07-Jun-27	0					
. ,	12-WP6B-M47.01.3 Dates of Site Pocessions	2732			851			07-May-23		0					
01-1120	Possession of Portion 1	0	0 100%		0		15-Dec-17	-	00-0 un-25	U					
01-1130	Possession of Portion 1A	0	0 100%		0		15-Dec-17								
	Possession of Portion 1B	0	0 100%		0		15-Dec-17								· j
01-1140		0		-	-	00 1 05	13-Dec-17								
01-1150	Possession of Portion 2	0	0 0%		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	08-Jun-25	07 5-1- 00	08-Jun-25	07.1400	0					
01-1160	Possession of Portion 3	0	0 0%		0 As Late As		07-Feb-23		07-May-23	89					
01-1170	Possession of Portion 4	0	0 0%		0 As Late As		07-Feb-23		07-May-23	89					
01-1180	Possession of Portion 5	0	0 0%		0 As Late As		07-Feb-23		07-May-23	89					
01-1190	Possession of Portion 6	0	0 0%		0 As Late As			20-Oct-24		-49					
01-1200	Possession of Portion 7	0	0 100%		0 Finish On o		05-Jan-18								
01-1210	Possession of Portion 7A	0	0 100%		0 Finish On o		07-Dec-18								
01-1210(5a)	Possession of Portion 8	0	0 100%		0	29-Apr-20 A									
	12-WP6B-M47.02 Contract Preliminaries	697	774 0%		697	15-Aug-21 A				194					
	_12-WP6B-M47.02.3 Erection of Concrete Batching Plant on Artificial Island	697	774 0%		697	15-Aug-21 A				194					
02-1100	Opertaion of Concrete Batching Plant	697	774 0%			15-Aug-21 A	-	-	-	194					
	_12-WP6B-M47.02.4 Establishment of Public Relation Office	61	92 50.82%		30	30-Aug-21 A				16					
	5_12-WP6B-M47.02.4.2 South Lantau (SLIO)	61	92 50.82%		30	30-Aug-21 A				16					
02-1120-1(6C)	Establishment of IWMF Information Office(s)	61	92 50.82%			30-Aug-21 A				16				29-Nov-21*, Establishmen	t of IWMF Information Office(s), Esta
	i_12-WP6B-M47.03 Licence/Permit Applications	2190	2338 40.68%		1299	27-Dec-18 A			-	0					
	12-WP6B-M47.03.1 License/Permit for Construction	2120	2120 38.73%		1299	02-Aug-19 A									<u> </u>
03-1080	CNP for Percussive Piling Works	90	90 0%			31-Oct-21				42		31-Oct-21			
03-1360(2)	CNP for 24Hrs	2120	2120 38.73%			-			-	0					
03-1370_1(M34)	·	180	661 33.33%			08-May-20 A				9					
	_12-WP6B-M47.03.2 DG Licence	180			180	15-Nov-21				9					
	6_12-WP6B-M47.03.2.1 Day Tank & Fuel Oil Storage (Cat 5)	180	180 0%	+	180	15-Nov-21	<u>-</u>			9			45.00		<u></u>
03-1400	General Building Plans and FSI Provision Design Submission to FSD (Cat 5)	180	180 0%			15-Nov-21			-	9			15-Nov-21		
	_12-WP6B-M47.03.4 Fire Services Installations (FSI) Certificatie	805		_	195	10-Apr-19 A				9					
	5_12-WP6B-M47.03.4.3 Fire Engineering Report	654	979 93.27%		44	10-Apr-19 A				55				20 New 24 Demands	d Submission of Fire Francisco
05-3000	Perparation and Submission of Fire Engineering Report to FSD	550	965 94.55%			10-Apr-19 A				55			00 N		d Submission of Fire Engineering Report
05-4450	Approval of Fire Engineering Report by FSD	14				30-Nov-21				55			30-No	/-21 13-Dec-2	1, Approval of Fire Engineering Report
	6_12-WP6B-M47.03.4.1 Fire Services Installations Certificate Inspection	271			195	01-Dec-20 A				9				20 New 04 Commel D. 11 "	ng Plane and FOI Provision Decision
03-1555(5a)	General Building Plans and FSI Provision Design Submission to FSD	90	364 66.67%			01-Dec-20 A				69				29-Nov-21, General Buildii	ng Plans and FSI Provision Design St
03-1555-1(5a)	Approval of General Building Plans and FSI Provision Design Submission	105	105 0%			29-Jan-22			-	9					29-Jan
	_12-WP6B-M47.03.5 Air Pollution Control (Specified Processes) License	600			30	27-Dec-18 A								00 N 01 F 1 F	
03-1730(3)	Early Engagement With EPD SP Licensing Department for Information exchange	600	1069 95%			27-Dec-18 A				129				29-Nov-21, Early Engagen	nent With EPD SP Licensing Departn
	12-WP6B-M47.04 General Submissions	1593			180	18-Dec-17 A				533					
	_12-WP6B-M47.04.3 Accommodation Plans	14			14	18-Jan-22			_						
04-1030	Submission of Employer on Island Temporary Accommodation Plan	14				18-Jan-22			<u> </u>	67					18-Jan-22
	12-WP6B-M47.04.1 Contractor's Plans Submission and Approval	1593	1593 88.7%		180	18-Dec-17 A									
04-1100(1)	Technical Resources Plan (TRP)	240	1474 74.17%	30%	62	19-Dec-17 A	31-Dec-21	บ3-Aug-23	03-Oct-23	641					31-Dec-21, Technical Reso

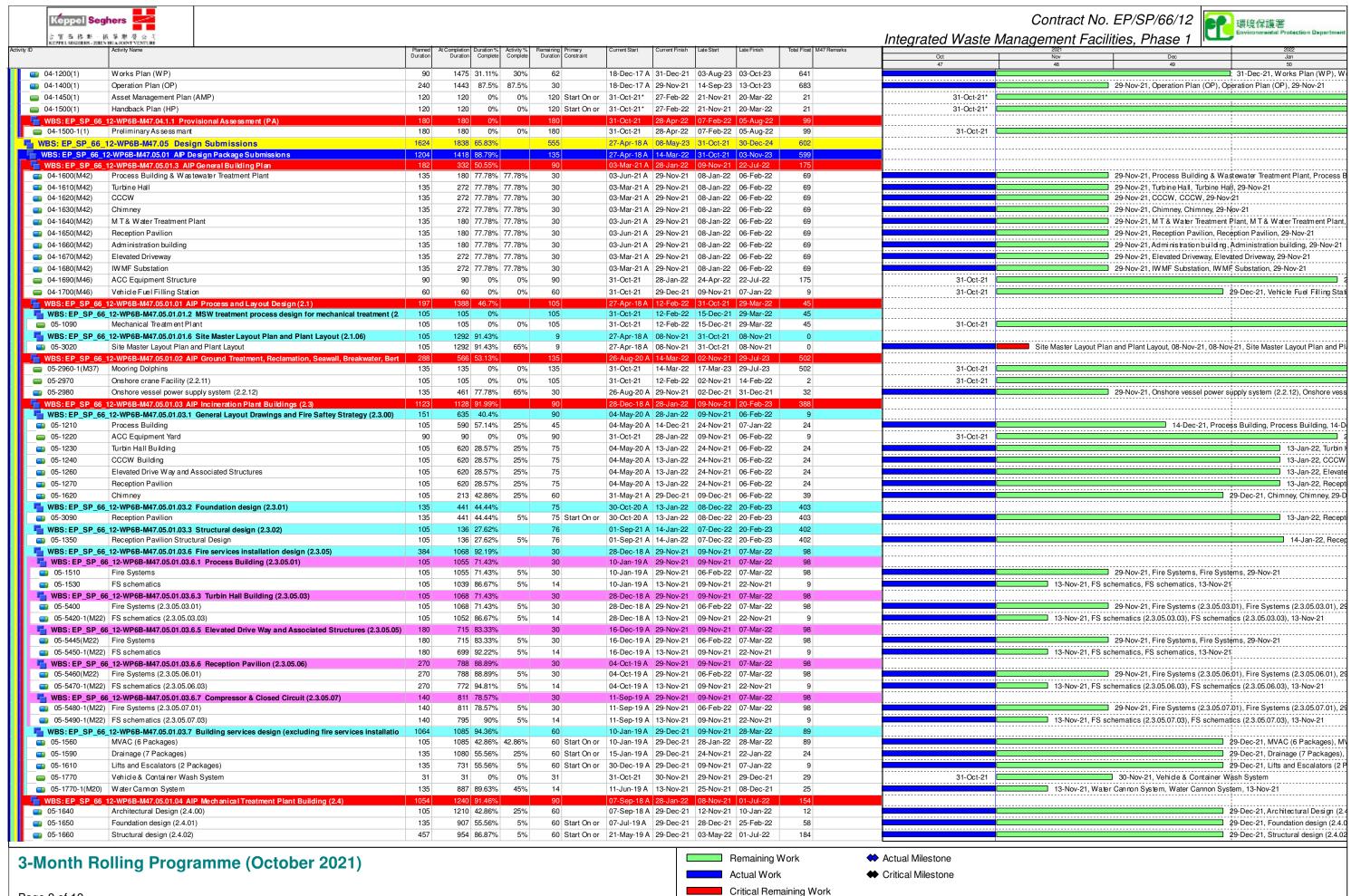
3-Month Rolling Programme (October 2021)

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Remaining Work Actual Work Critical Remaining Work Milestone

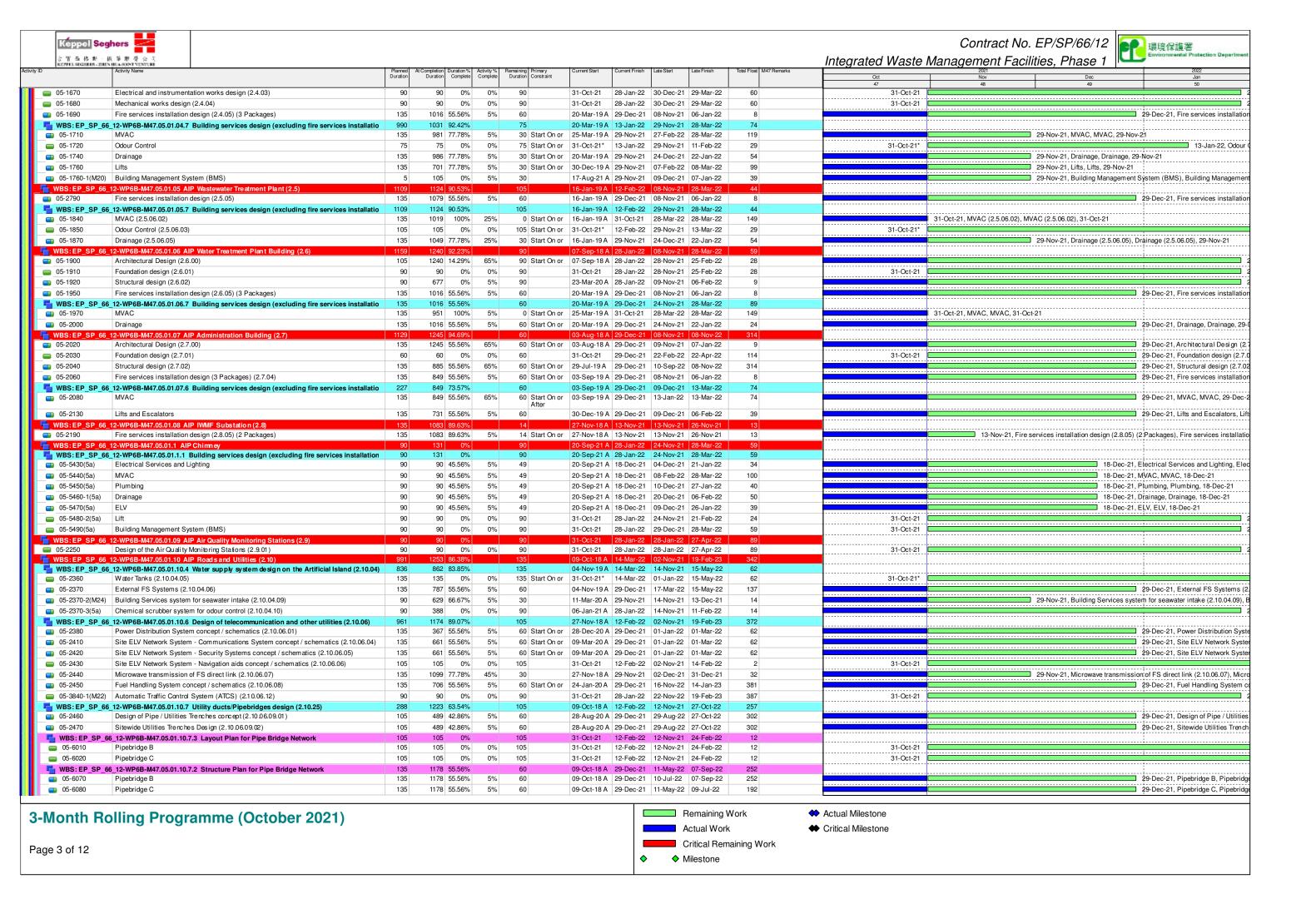
Actual Milestone

Critical Milestone



Milestone

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Contract No. EP/SP/66/12 Integrated Waste Management Facilities, Phase 1



REFFEL SEGURES - ZHEN HUA JOINT VENT Activity Name	I SME	Planned	At Completion Duration %	Activity %	Remaining Primary	Current Start C	urrent Finish	Late Start Late Fir	sh Total Flo	oat M47 Remarks	integrated vvaste ivia	2021	,	2022
		Duration	Duration Complete	Complete	Duration Constraint						Oct 47	Nov 48	Dec 49	Jan 50
WBS:EP_SP_66_12-WP6B-M	147.05.01.11 AIP Architectural, Finishes and Landscaping Works (2.11)	531	715 74.58%	,	135	30-Mar-20 A 1	4-Mar-22	01-Nov-21 09-A	g-22 14	48				
	M47.05.01.11.1 External and internal finishes design for Incineration Plant		715 73%		135			01-Nov-21 29-A _I		46				
05-2510 External a	nd internal finishes design for Incineration Plant Building (2.11.01)	135	605 55.56%	5%	60 Start On o	or 04-May-20 A 29	9-Dec-21	15-Jan-22 15-M	r-22 7	76				29-Dec-21, External and i
05-2520 External a	nd internal finishes design for ACC Equipment Yard	135	135 0%	0%	135	31-Oct-21 14	4-Mar-22	01-Nov-21 15-M	r-22	1	31-Oct-21			
05-2530 External at	nd internal finishes design for Turbine Hall Building	135	605 55.56%	5%	60 Start On o	or 04-May-20 A 29	9-Dec-21	15-Jan-22 15-M	r-22 7	76				29-Dec-21, External and i
05-2540 External a	nd internal finishes design for CCCW Building	135	605 55.56%	5%	60 Start On o	or 04-May-20 A 29	9-Dec-21	11-Jan-22 11-Ma	r-22 7	72				29-Dec-21, External and i
05-2550 External a	nd internal finishes design for Chimney	45	45 0%	5%	45	31-Oct-21 14	4-Dec-21	30-Jan-22 15-M	r-22 9	91	31-Oct-21		14-Dec-2	I, External and internal finishes de
■ 05-2560 External a	nd internal finishes design for Reception Pavilion	135	640 55.56%	5%	60 Start On o	or 30-Mar-20 A 29	9-Dec-21	15-Jan-22 15-M	r-22 7	76				29-Dec-21, External and i
o5-2570 External a	nd internal finishes design for MT Plant Building (2.11.02)	136	612 55.88%	5%	60 Start On o	or 27-Apr-20 A 29	9-Dec-21	13-Jan-22 13-M	r-22 7	74				29-Dec-21, External and i
	nd internal finishes design for the Wastewater Treatment Plant (2.11.03)	62	605 3.23%	25%	60 Start On o	or 04-May-20 A 29	9-Dec-21	01-Mar-22 29-A	r-22 12	21				29-Dec-21, External and i
	nd internal finishes design for the Water Treatment Plant Building (2.11.04)	62	247 3.23%		60 Start On o	,								29-Dec-21, External and i
_	nd internal finishes design for the Administration Building (2.11.05)	135	612 55.56%			or 27-Apr-20 A 29				74				29-Dec-21, External and i
	M47.05.01.11.7 Landscape masterplan (2.11.07)	180	661 33.33%	. 070	120			26-Feb-22 26-A		58				to bee 21, External and 1
	ature (2.11.07.01)	105	619 87.62%	5%	-	or 19-Jun-20 A 27				58				
05-2920 1(M34) Turbine Ha	· · · · ·	105	661 87.62%		13			14-Apr-22 26-A		58				
05-2920_1(M34) Reception	<u> </u>	105	601 42.86%		60			26-Feb-22 26-A		18				29-Dec-21. Reception Pa
05-2920_2(M34) Reception	Pavilion (2.11.07.06)	105	601 42.86%	5 5%	60	08-May-20 A 28	:9-Dec-21	26-Feb-22 26-A	1-22	16				29-Dec-21, Reception Par
05-2920 3(M34) MT Plant E	Building and Water Treatment Plant Building (2.11.07.07)	105	661 87.62%	5%	13	08-May-20 A 2	7-Feb-22	14-Apr-22 26-A	r-22 5	58				
05-2920 4(M34) Administra	ation Building (2.11.07.08)	105	661 87.62%	5%	13	08-May-20 A 27	7-Feb-22	14-Apr-22 26-A	r-22 5	58				
05-2920 5(M34) IWMF Sub	• , ,	105	661 87.62%	5%	13			14-Apr-22 26-A	r-22 5	58				-
05-2920 6(M34) Process B	, ,	105	661 87.62%		13	,		14-Apr-22 26-Apr		58				
, ,	M47.05.01.11.8 Architectural Detailing - Site Wide (2.11.29)	105	207 80.95%		20	,		21-Jul-22 09-Ai						
	ral Detailing - Site Wide Concept	105	207 80.95%		-	27-Apr-21 A 19						19-Nov-2	Architectural Detailing - Sit	e Wide Concept, Architectural Det
	M47.05.01.11.9 External and internal finishes design for Elavated Drive way		605 0%		60	·		01-Mar-22 29-A	0				,, moral country of	
	nd internal finishes design for Elevated Driveway	0	605 0%			or 04-May-20 A 29								29-Dec-21, External and i
	147.05.01.12 AIP Testing and Commissioning (2.12)	959	1027 89.05%		105			29-Jun-22 03-No						1
	cc eptance Testing plan (2.12.01.02-07) (8 Packages)	105	982 42.86%					29-Jun-22 27-A						29-Dec-21, Factory Accer
. , , ,	ptaince Testing plan (2.12.02)	105	105 0%		105	· ·	2-Feb-22		•		31-Oct-21			Ţ,·,
	ommissioning plan (2.12.03)	105	105 0%		105		2-Feb-22		•		31-Oct-21			
	missioning plan (2.12.04)	105	105 0%					05-Jun-23 17-Se			31-Oct-21			
	31 ()	136	549 55.88%		60			12-May-23 17-S		-	31-001-21			
	147.05.01.13 AIP Transportation Facilities for the Operation (2.13) vehicles for MSW and Ash and Residues delivery (2.13.01)	105	549 42.86%					12-May-23 17-3						29-Dec-21, Design of vehi
	, , ,	105						,						<u></u> ‡
	marine vessels for the use of the Employer and visitors (2.13.02)		478 42.86%		60			20-Jul-23 17-Se						29-Dec-21, Design of mar
	147.05.01.14 AIP Miscellaneous Works (2.14) visitors and environmental education facilities (2.14.02)	105	542 42.86% 542 42.86%		60			10-Jan-23 10-M 10-Jan-23 10-M						29-Dec-21, Design of visit
	147.05.01.15 AIP Miscellaneous Detailing (2.15)	135	135 0%	3 /6	135			26-Jan-22 22-Se						25-Dec-21, Design of visit
	valkway at passenger berth (2.15.02)	105	105 0%	0%			2-Feb-22			92 87	31-Oct-21			
	es (2.15.03)	135	135 0%					11-May-22 22-Se		-	31-Oct-21			
	· · · · ·	105						-			31-Oct-21			
	dge office (2.15.04)		105 0%					16-May-22 28-Ai	ŭ		31-00-21			
	147.05.01.16 AIP Auxiliary Plant Systems (2.16)	500	671 73%		135	To may 2071		=0 1101 = 1 = 111	0		21.0~4.01			
*	nce workshops (2.16.01)	135	135 0%					22-Oct-22 05-M			31-Oct-21			-
·	uel Filling Station (2.16.02)	135	135 0%		135			13-Nov-22 27-M			31-Oct-21			
	stems (2.16.03)	135	135 0%		135			25-Jan-22 08-Ju			31-Oct-21			
` ' '	poratory (2.16.04)	135	596 55.56%		60	13-May-20 A 29	9-Dec-21	30-May-22 28-Ju						29-Dec-21, IWMF Labora
05-2780-2(5a) hoisting sy	ystems (2.16.09)	135	470 55.56%	5%	60	16-Sep-20 A 29	9-Dec-21	25-Nov-21 23-Ja	n-22 2	25				29-Dec-21, hoisting syste
	47.05.02 DDA De sig n Package Sub missions	1570	1667 64.65%	,	555			31-Oct-21 30-D		02				
	147.05.02.3 DDA General Building Plan	272	471 33.82%		180		_	13-Dec-21 20-O		_				
· / /	Building & Wastewater Treatment Plant	90	123 33.33%	5%		-		07-Feb-22 07-A _I		99				29-Dec-21, Process Build
05-6010-1(M42) Turbine Ha	all	105	215 71.43%	5%	30	29-Apr-21 A 29	9-Nov-21	09-Mar-22 07-A _l	r-22 12	29			29-Nov-21, Turbine Hall, Tu	bine Hall, 29-Nov-21
05-6020-2(M42) CCCW		105	216 71.43%	5%	30	28-Apr-21 A 29	9-Nov-21	09-Mar-22 07-A	r-22 12	29			29-Nov-21, CCCW, CCCW	29-Nov-21
05-6030-2(M42) Chimney		90	93 66.67%	5%	30	29-Aug-21 A 29	9-Nov-21	09-Mar-22 07-A _l	r-22 12	29			29-Nov-21, Chimney, Chim	iey, 29-Nov-21
05-6040-2(M42) M T & W at	ter Treatment Plant	90	93 66.67%	0%	30	29-Aug-21 A 29	9-Nov-21	09-Mar-22 07-A	r-22 12	29			29-Nov-21, M T & Water Tre	atment Plant, MT & Water Treatn
05-6050-2(M42) Reception	Pavilion	90	93 66.67%	0%	30	29-Aug-21 A 29	9-Nov-21	09-Mar-22 07-A	r-22 12	29			29-Nov-21, Reception Pavil	on, Reception Pavilion, 29-Nov-2
05-6060-2(M42) Administra	ation building	90	93 66.67%	0%	30	29-Aug-21 A 29	9-Nov-21	09-Mar-22 07-A _l	r-22 12	29			29-Nov-21, Admi nis tration l	uilding, Administration building, 2
05-6070-1(M42) Elevated D	Driveway	105	204 71.43%	5%	30	10-May-21 A 2	9-Nov-21	09-Mar-22 07-A	r-22 12	29			29-Nov-21, Elevated Drivew	ay, Elevated Driveway, 29-Nov-21
05-6080-1(M42) IWMF Sub	•	105	321 71.43%		30			09-Mar-22 07-A						n, IWMF Substation, 29-Nov-21
. , ,	e Arch Details	105	197 89.52%		11			13-Dec-21 23-De		43			de Arch Details, Side Wide A	
·	pment Structure	90	90 0%			· ·		23-Jul-22 20-O						29-J
	uel Filling Station	90	90 0%					08-Jan-22 07-A		9			30-De	
. , ,	•							31-Oct-21 19-Ju		-			30-De	r=1
	147.05.02.01 DDA Process and Layout Design (2.1) M47.05.02.01.1 MSW treatment process design for incineration (2.1.13)	636 501	1145 66.98% 692 72.85%		210 136			31-Oct-21 19-Ju 31-Oct-21 04-M		50				i
	on System (2.1.13.01) (2 Packages) (link up with 05-3610)	501 105	594 0%					23-Nov-21 07-A		23				
	overy Boiler (2.1.13.02) (2 Packages) (link up with 05-3620)	105	692 0%			or 23-Apr-20 A 15				23			(0.4.40.04) (0.5)	04 N-104 04 N1 04 A 1 0
	es (2.1.13.04) (2 Packages)	105	350 79.05%		22			31-Oct-21 21-No		0		Ash Cı	anes (2.1.13.04) (2 Packages	ı, 21-Nov-21, 21-Nov-21, Ash Crar
	Collection and Treatment (2.1.13.05) (2 Packages)	105	105 0%	0%	105	31-Oct-21 12	2-Feb-22	20-Jan-22 04-M	y-22 8	81	31-Oct-21			
05-5120 Leachate 0	, ,, ,,													
05-5120 Leachate 0 05-5130 Waste Wa	ater Treatment System (2.1.13.06) (2 Packages) an Water Scheme (2.1.13.07)	105 105	404 14.29%	5%	90	20-Jan-21 A 27	27-Feb-22	31-Jan-22 30-A		62 62				

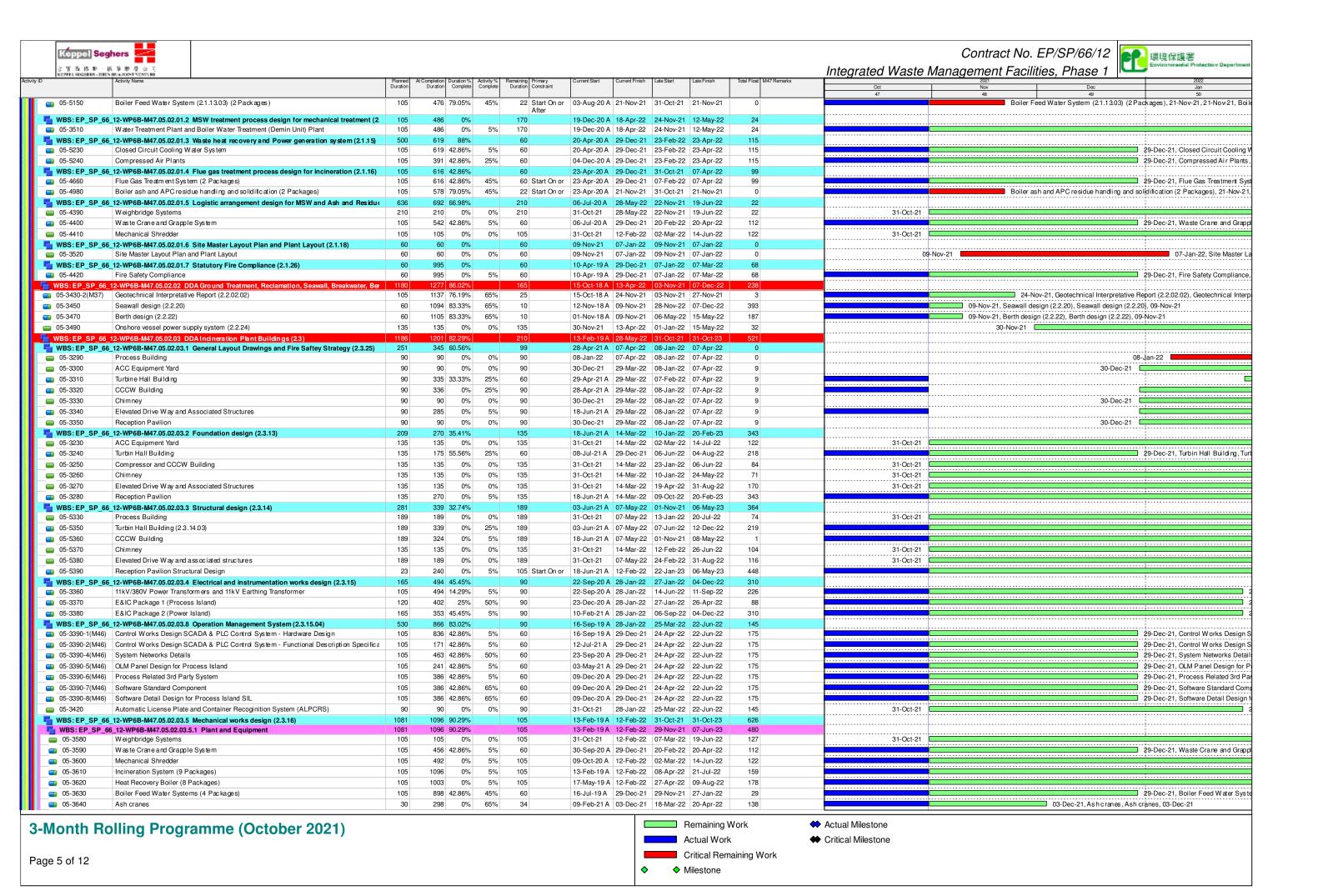


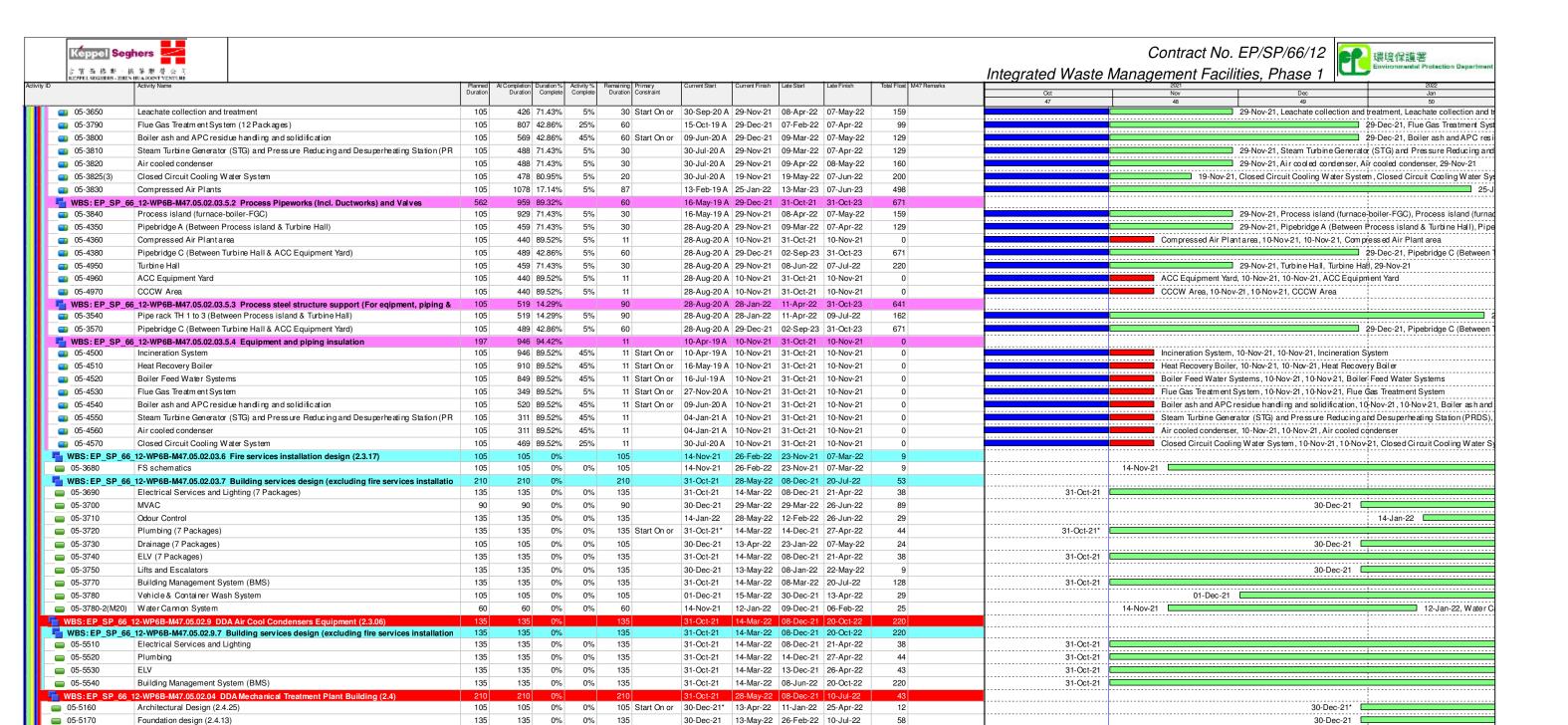
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Actual Milestone

Critical Milestone





27-Feb-22 07-Jan-22 07-Mar-22

28-May-22 08-Dec-21 26-Jun-22

14-Mar-22 08-Dec-21 21-Apr-22

27-Feb-22 29-Mar-22 26-Jun-22

28-May-22 12-Feb-22 26-Jun-22

14-Mar-22 14-Dec-21 27-Apr-22

14-Mar-22 23-Jan-22 07-May-22

14-Mar-22 08-Dec-21 21-Apr-22

12-Feb-22 09-Mar-22 22-May-22

13-Apr-22 08-Jan-22 22-May-22

14-Mar-22 26-Apr-22 07-Sep-22

10-Mar-22 18-Apr-22 26-Aug-22

12-Feb-22 15-Feb-22 30-May-22

27-Feb-22 07-Jan-22 07-Mar-22

14-Mar-22 08-Dec-21 26-Jun-22

14-Mar-22 08-Dec-21 21-Apr-22

31-Oct-21 28-Jan-22 29-Mar-22 26-Jun-22

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169

107

149

3-Month Rolling Programme (October 2021)

Electrical and instrumentation works design (2.5.15)

Fire services installation design (2.5.17) (2 Packages)

Mechanical works design (2.5.16) (2 Packages)

Fire services installation design (2.4.17)

MVAC

Odour Contro

Lighting and small power

Structural design (2.5.14)

Building Management System (BMS)

Lifts and Escalators

Plumbing.

LV and Emergency Power Distribution Design

66_12-WP6B-M47.05.02.04.7 Building services design (excluding fire services instal

66_12-WP6B-M47.05.02.05.7 Building services design (excluding fire services installati

LV and Emergency Power Distribution Design for IWMF Waste Water Treatment Plant

— 05-5210

WBS: EP_S

05-3850

05-3860

a 05-3870

05-3880

a 05-3890

05-3900

= 05-3910

05-3910-1

05-3940

05-3950

05-3960

05-3970

WBS: EP_S

05-3980

05-3990

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30-Dec-21

30-Nov-21

31-Oct-21

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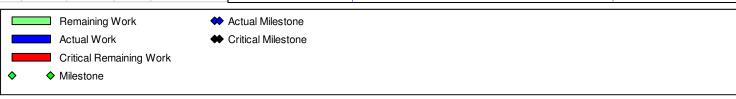
31-Oct-21

31-Oct-21

31-Oct-21

135 Start On or 31-Oct-21*

60 Start On or 30-Dec-21



30-Nov-21

30-Nov-21

30-Nov-21

30-Nov-21

31-Oct-21

31-Oct-21

31-Oct-21

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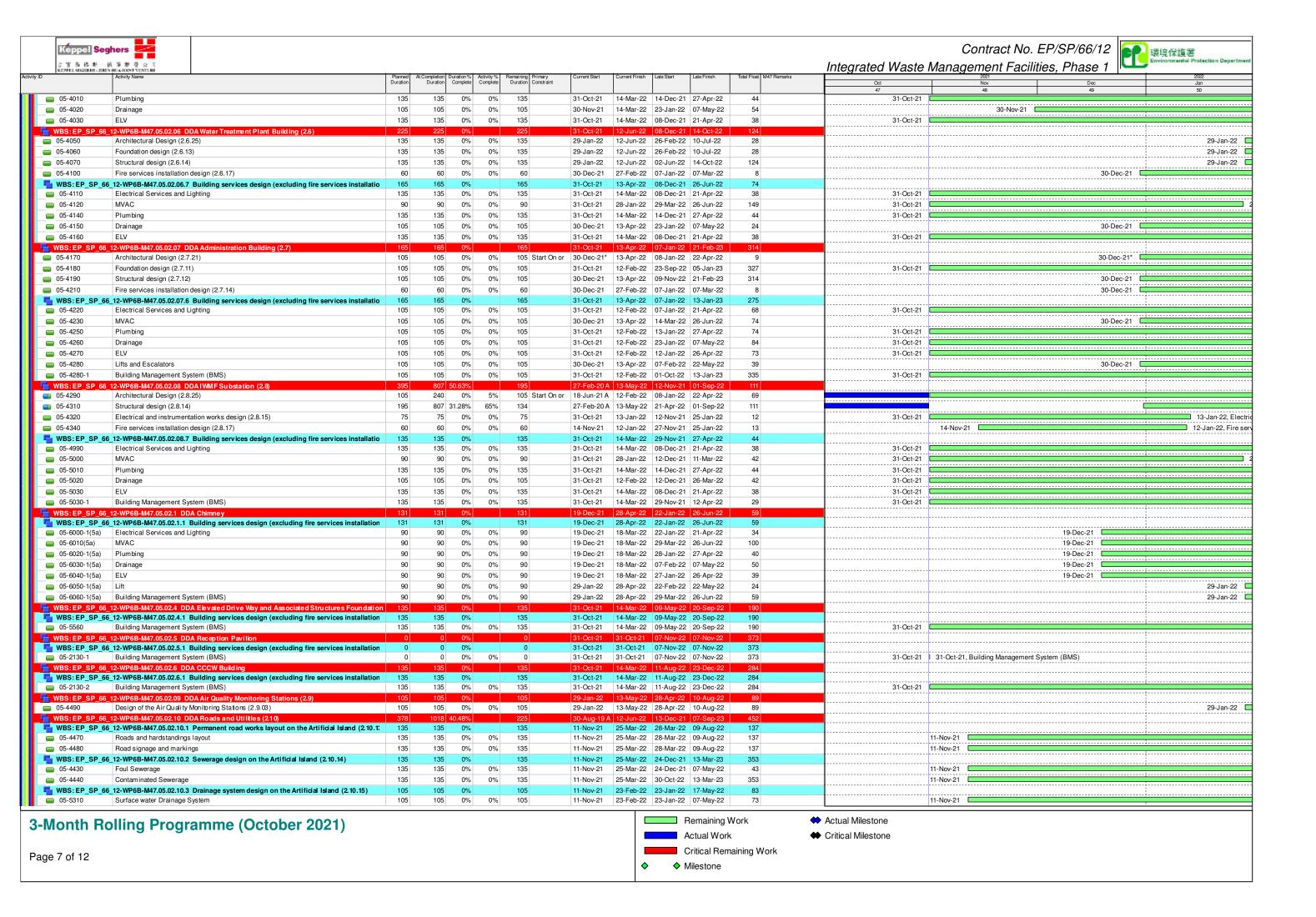
31-Oct-21

31-Oct-21

30-Dec-21

30-Dec-21*

14-Jan-22 [





Integrated Waste Management Facilities. Phase 1 Duration Constraint First Flush Drainage System concept 105 0% 105 23-Feb-22 02-Feb-22 17-May-22 05-5320 105 0% 11-Nov-21 WBS: EP_SP_66_12-WP6B-M47.05.02.10.4 Water supply system design on the Artificial Island (2.10.16) 30-Aug-19 A 12-Jun-22 13-Dec-21 22-Sep-22 37 1018 05-5250 Potable Water Distribution System 135 135 0% 0% 135 31-Oct-21 14-Mar-22 11-May-22 22-Sep-22 192 31-Oct-21 14-Mar-22 11-May-22 22-Sep-22 **05-5260** Recycled Water System 0% 0% 135 31-Oct-21 05-5270 135 135 0% 0% 31-Oct-21 14-Mar-22 14-Dec-21 27-Apr-22 31-Oct-21 Irrigation System 135 **a** 05-5280 135 14-Mar-22 14-Dec-21 27-Apr-22 31-Oct-21 Rainwater harvesting System 135 0% 0% 135 31-Oct-21 30-Aug-19 A 14-Mar-22 13-Dec-21 26-Apr-22 05-5300-1(M24) E&M system for seawater intake (2.10.16.07) 5% 135 135 928 0% 05-5300-2(M24) Building Services system for seawater intake (2.10.16.09) 135 135 135 30-Nov-21 13-Apr-22 14-Dec-21 27-Apr-22 0% 0% 135 135 0% 135 12-Jun-22 12-Feb-22 26-Jun-22 29-Jan-22 05-5300-3(5a) Chemical scrubber system for odour control (2.10.16.10) 0% 29-Jan-22 14 WBS: EP_SP_66_12-WP6B-M47.05.02.10.6 Design of telecommunication and other utilities (2.10.18 31-Oct-21 12-Jun-22 13-Dec-21 07-Sep-23 05-3400 (M21) Computerised Maintenance Management System (CMMS) 90 0% 0% 28-Jan-22 25-Mar-22 22-Jun-22 31-Oct-21 90 90 31-Oct-21 145 05-3410 (M21) Information and Document Management System (IDMS) 90 0% 0% 90 31-Oct-21 28-Jan-22 25-Mar-22 22-Jun-22 145 31-Oct-21 **05-4580** Power Distribution System concept / schematics 75 0% 0% 30-Dec-21 14-Mar-22 02-Mar-22 15-May-22 62 30-Dec-21 **05-4590** Site Lighting Concept / Schematics 135 135 0% 0% 135 31-Oct-21 14-Mar-22 26-Apr-23 07-Sep-23 31-Oct-21 542 05-4600 Lightning Protection System concept / schematics 135 135 0% 0% 135 31-Oct-21 14-Mar-22 13-Dec-21 26-Apr-22 43 31-Oct-21 **=** 05-4610 75 75 0% 75 30-Dec-21 14-Mar-22 02-Mar-22 15-May-22 Site ELV Network System - Communications System concept / schematics 0% 62 30-Dec-21 05-4620 Site ELV Network System - Security Systems concept / schematics 75 0% 0% 30-Dec-21 14-Mar-22 02-Mar-22 15-May-22 30-Dec-21 **=** 05-4640 Microwave transmission of FS direct link 135 0% 0% 30-Nov-21 13-Apr-22 01-Jan-22 15-May-22 30-Nov-21 0% 16-Dec-21 29-Apr-22 01-Jan-23 15-May-23 05-4650 Fuel Handling System concept / schematics 135 135 0% 135 381 16-Dec-21 135 05-5400-1(M22) Automatic Traffic Control System (ATCS) 135 0% 0% 135 29-Jan-22 12-Jun-22 20-Feb-23 04-Jul-23 387 29-Jan-22 28-Aug-20 A 13-May-22 09-Feb-22 11-Mar-23 WBS: EP_SP_66_12-WP6B-M47.05.02.10.7 Utility ducts/Pipebridges design (2.10.26) 624 46.13% 05-5040 0% 30-Dec-21 Design of Pipe / Utilities Trenches concept 135 135 0% 135 30-Dec-21 13-May-22 28-Oct-22 11-Mar-23 302 **05-5050** Sitewide Utilities Trenches Design 135 135 0% 0% 135 13-May-22 28-Oct-22 11-Mar-23 302 09-Oct-20 A 23-Jan-22 16-Apr-22 09-Jul-22 472 37.04% WBS: EP_SP_66_12-WP6B-M47.05.02.10.7.3 Layout Plan for Pipe Bridge Network 135 05-7000 Pipebridge A (Prefab. 3) 135 472 37.04% 5% 85 09-Oct-20 A 23-Jan-22 16-Apr-22 09-Jul-22 167 23-Ja 09-Oct-20 A 14-Mar-22 09-Feb-22 09-Jul-22 o5-7030 Pipebridge A (Prefab. 3) 135 472 37.04% 5% 09-Oct-20 A 23-Jan-22 16-Apr-22 09-Jul-22 167 135 **—** 05-7040 Pipebridae B 135 0% 5% 135 31-Oct-21 14-Mar-22 09-Feb-22 23-Jun-22 101 31-Oct-21 **—** 05-7050 Pipebridge C 135 135 0% 5% 135 14-Mar-22 16-Feb-22 30-Jun-22 108 66 12-WP6B-M47.05.02.10.7.2 Structure Plan for Pipe Bridge Network 28-Aug-20 A 23-Jan-22 16-Apr-22 09-Jul-22 135 514 37.04% 167 WBS: EP SP **05-7060** Pipebridge A (Prefab. 3) 135 472 37.04% 5% 85 09-Oct-20 A 23-Jan-22 16-Apr-22 09-Jul-22 167 23-Ja 135 **o**5-7070 459 77.78% 5% 28-Aug-20 A 29-Nov-21 10-Jun-22 09-Jul-22 222 29-Nov-21, Pipebridge B, Pipebridge B, 29-Nov-2 **05-7080** Pipebridge C 135 459 77.78% 5% 30 28-Aug-20 A 29-Nov-21 10-Jun-22 09-Jul-22 222 29-Nov-21, Pipebridge C, Pipebridge C, 29-Nov-2 WBS: EP_SP_66_12-WP6B-M47.05.02.11.1 External and internal finishes design 05-4670 External and internal finishes design for Incineration Plant Building (2.11.15) 135 135 13-May-22 16-Mar-22 28-Jul-22 30-Dec-21 135 0% 30-Dec-21 **05-4690** External and internal finishes design for Turbine Hall Building 135 135 0% 0% 135 Start On or 30-Dec-21* 13-May-22 16-Mar-22 28-Jul-22 30-Dec-21* **a** 05-4700 External and internal finishes design for CCCW Building 135 135 Start On or 30-Dec-21* 13-May-22 12-Mar-22 24-Jul-22 72 **05-4710** 135 135 15-Dec-21 28-Apr-22 16-Mar-22 28-Jul-22 15-Dec-21 External and internal finishes design for Chimney 135 0% 0% 91 **05-4720** External and internal finishes design for Reception Pavilion 135 Start On or 30-Dec-21* 13-May-22 16-Mar-22 28-Jul-22 30-Dec-21* **05-4730** 137 137 30-Dec-21 15-May-22 14-Mar-22 28-Jul-22 0% 137 External and internal finishes design for MT Plant Building (2.11.16) 0% 74 30-Dec-21 **05-4740** External and internal finishes design for the Wastewater Treatment Plant (2.11.17) 90 90 0% 0% 30-Dec-21 29-Mar-22 30-Apr-22 28-Jul-22 121 **05-4750** 30-Dec-21 29-Mar-22 30-Apr-22 28-Jul-22 30-Dec-21 External and internal finishes design for the Water Treatment Plant Building (2.11.08) 90 0% 0% 121 **o**5-4760 External and internal finishes design for the Administration Building (2.11.19) 137 137 0% 0% 137 30-Dec-21 15-May-22 14-Mar-22 28-Jul-22 30-Dec-21 31-Oct-21 **o**5-4770 External and internal finishes design for the IWMF Substation (2.11.20) 137 0% 0% 137 16-Mar-22 30-Nov-21 15-Apr-22 30 **o**5-5420 External and internal finishes design for Elevated Driveway 90 90 0% 0% 90 30-Dec-21 29-Mar-22 30-Apr-22 28-Jul-22 121 30-Dec-21 WBS: EP_SP_66_12-WP6B-M47.05.02.11.7 Landscape masterplan (2.11.21) 30-Dec-21 13-Apr-22 27-Apr-22 09-Aug-22 105 105 0% 30-Dec-21 05-4780-2(6C) Reception Pavilion (2.11.07.06) 0% 105 30-Dec-21 13-Apr-22 27-Apr-22 09-Aug-22 118 WBS: EP_SP_66_12-WP6B-M47.05.02.11.8 Architectural Detailing - Site Wide (2.11.30) 28-Apr-21 A 10-Nov-21 05-Apr-22 15-Apr-22 Architectural Detailing - Site Wide Concept (Combined with 05-6090(M42)) 105 197 89.52% 5% 28-Apr-21 A 10-Nov-21 05-Apr-22 15-Apr-22 156 10-Nov-21, Architectural Detailing - Site Wide Concept (Combined with 05-6090 (M42)), Arch 11 WBS: EP SP 66 12-WP6B-M47.05.02.11.10 Facade Structural Design 01-Jun-21 A 28-Jan-22 03-Jan-22 11-Jun-22 5% 05-8000(M45) Facade structural design for Chimney 90 242 0% 90 01-Jun-21 A 28-Jan-22 03-Jan-22 02-Apr-22 64 05-8010(M45) Facade structural design for IWMF Sub-station 90 03-Jun-21 A 28-Jan-22 14-Mar-22 11-Jun-22 0% 5% 134 0% 0% 05-4810-1(5a) Factory Acceptance Testing plan (2.12.09.02-07) (8 Packages) 105 30-Dec-21 13-Apr-22 28-Aug-22 10-Dec-22 30-Dec-21 0% 0% 30-Dec-21 Design of vehicles for MSW and Ash and Residues delivery (2.13.05 355 355 30-Dec-21 19-Dec-22 11-Jul-23 29-Jun-24 558 470 470 470 30-Dec-21 13-Apr-23 18-Sep-23 30-Dec-24 627 05-4860 Design of marine vessels for the use of the Employer and visitors (2.13.06) 0% 0% 30-Dec-21 Design of visitors and environmental education facilities (2.14.06) 0% 0% 14-Jan-22 08-May-23 26-Mar-23 17-Jul-24 IWMF Laboratory (2.16.08) 135 0% 30-Dec-21 13-May-22 29-Jul-22 10-Dec-22 05-4940-1(5a) 135 0% 135 211 30-Dec-21 135 135 30-Dec-21 13-May-22 24-Jan-22 07-Jun-22 hoisting systems (2.16.10) 0% 0% 1815 69 24% 01-Mar-18 A 18-Feb-23 07-Sep-21 26-Jun-23 WBS: EP SP 66 12-WP6B-M47.06 Procurement of Major Equipment 1545 129 WBS: EP SP 66 12-WP6B-M47.06.1 Off-site Fabrication of Incineration Modu Mechanical Equipment Material Submission and Approval 1270 66.67% 58% 09-Jul-18 A 29-Dec-21 27-Apr-22 25-Jun-22 29-Dec-21, Mechanical Equipment 29-Dec-21, Pipe Material Submiss Pipe Material Submission and Approval 180 793 66.67% 58% 60 29-Oct-19 A 29-Dec-21 27-Apr-22 25-Jun-22 178

3-Month Rolling Programme (October 2021)

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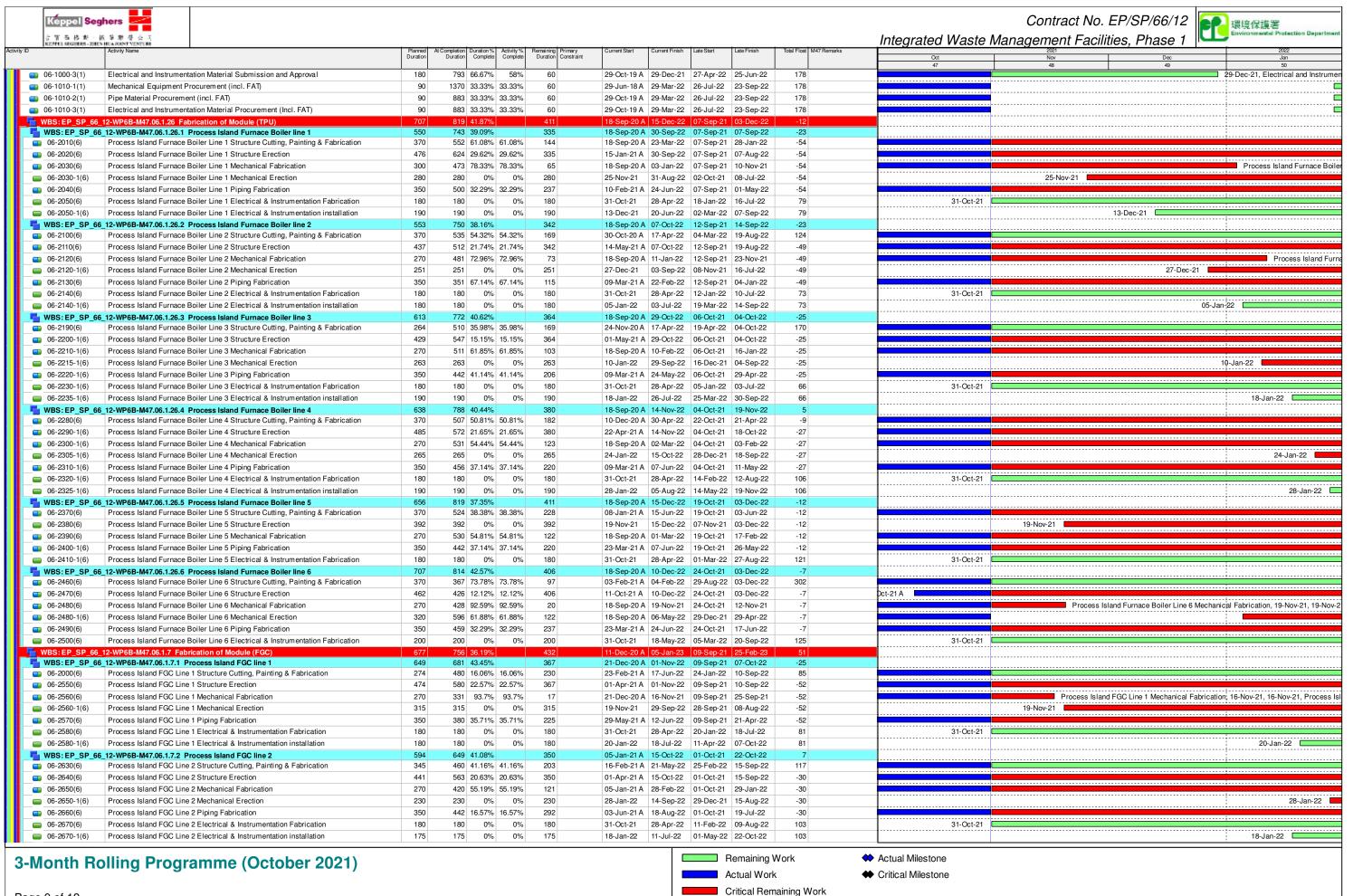


Actual Milestone

Contract No. EP/SP/66/12

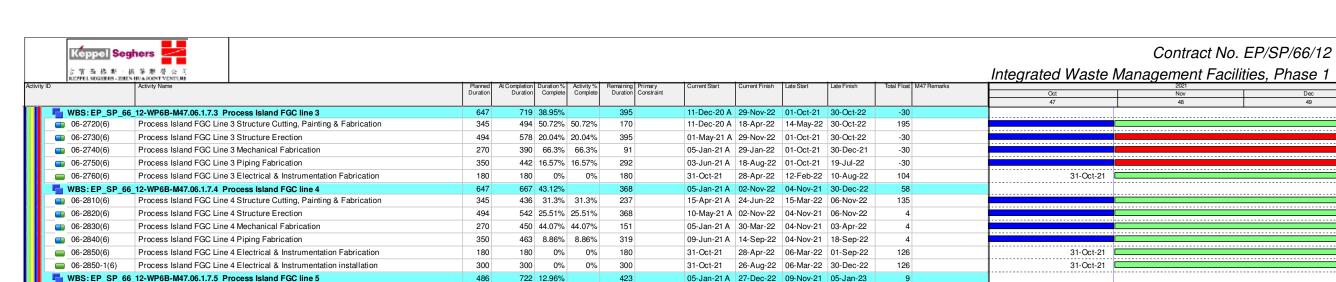
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Critical Milestone



Milestone

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17-Jun-21 A 29-Nov-21 21-Sep-22 20-Oct-22

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06-2910(6) Process Island FGC Line 5 Structure Erection 455 608 7.03% 7.03% 423 29-Apr-21 A 27-Dec-22 09-Nov-21 05-Jan-23 05-Jan-21 A 29-Apr-22 09-Nov-21 08-May-22 Process Island FGC Line 5 Mechanical Fabrication 270 480 32.96% 32.96% **10** 06-2920(6) 181 06-2930(6) Process Island FGC Line 5 Piping Fabrication 350 454 8.86% 8.86% 319 18-Jun-21 A 14-Sep-22 09-Nov-21 23-Sep-22 **6** 06-2940(6) Process Island FGC Line 5 Electrical & Instrumentation Fabrication 180 180 31-Oct-21 28-Apr-22 07-Apr-22 03-Oct-22 0% 0% 180 158 WBS: EP SP 66 12-WP6B-M47.06.1.7.6 Process Island FGC line 6 524 05-Jan-21 A 05-Jan-23 07-Nov-21 25-Feb-23 **06-2990(6)** Process Island FGC Line 6 Structure Cutting, Painting & Fabrication 345 448 22.03% 22.03% 269 05-May-21 A 26-Jul-22 07-Nov-21 02-Aug-22 Process Island FGC Line 6 Structure Erection 427 427 0% 0% 427 05-Nov-21 05-Jan-23 12-Nov-21 12-Jan-23 06-3000(6) o6-3010(6) Process Island FGC Line 6 Mechanical Fabrication 270 490 29.26% 29.26% 191 05-Jan-21 A 09-May-22 25-Feb-22 03-Sep-22 **6-3010-1(6)** Process Island FGC Line 6 Mechanical Erection 230 0% 0% 230 31-Dec-21 17-Aug-22 27-Apr-22 12-Dec-22 06-3020(6) Process Island FGC Line 6 Piping Fabrication 180 180 0% 0% 180 31-Oct-21 28-Apr-22 30-Mar-22 25-Sep-22 150 06-3030(6) Process Island FGC Line 6 Electrical & Instrumentation Fabrication 180 180 0% 0% 180 28-Apr-22 18-Jun-22 14-Dec-22 230 06-3030-1(6) Process Island FGC Line 6 Electrical & Instrumentation installation 190 190 0% 0% 190 02-Jan-22 10-Jul-22 20-Aug-22 25-Feb-23 230

345

452 22.03% 22.03%

1400 33.33% 33.33% Pipe Material Submission and Approval 90 06-1050-3(1) Electrical and Instrumentation Material Submission and Approval 1351 33 33% 33 33% 06-1060-1(1) Mechanical Equipment Procurement (Incl. FAT) 380 1351 84.21% 84.21% Pipe Material Procurement (Incl. FAT) 701 66.67% 66.67% 06-1060-2(1) 180 o6-1060-3(1) Electrical and Instrumentation Material Procurement (Incl. FAT) 365 761 84.93% 84.93%

WBS: EP SP 66 12-WP6B-M47.06.2.2.1 Turbine Module 1 Turbine Module 1 - Structure Cutting, Painting, Pre-assembly & Erection **06-4000(6)** 480 **106-4010(6)** Turbine Module 1 - Steam Turbine 1 Fabrication 450 Turbine Module 1 - Generator & Equipment Installation 06-4020(6) 450 o6-4040(6) Turbine Module 1 - TBS Tower 1 Fabrication & installation 330 WBS: EP SP 66 12-WP6B-M47.06.2.2.2 Turbine Module 2 Turbine Module 2 - Structure Cutting, Painting, Pre-assembly & Erection **06-4200(6)** 480

Process Island FGC Line 5 Structure Cutting, Painting & Fabrication

06-4240(6)
 Turbine Module 2 - TBS Tower 2 Fabrication & installation
 WBS: EP_SP_66_12-WP6B-M47.06.2.2.3 Turbine Module 3
 06-4400(6)
 Turbine Module 3 - Structure Cutting, Painting, Pre-assembly & Erection
 06-4410(6)
 Turbine Module 3 - Steam Turbine 3 Fabrication
 06-4420(6)
 Turbine Module 3 - Generator & Equipment Installation
 06-4440(6)
 Turbine Module 3 - TBS Tower 3 Fabrication & installation
 WBS: EP_SP_66_12-WP6B-M47.06.3 Procurement for ACC Units

Procurement of Transfromers

12-WP6B-M47.06.7.2 Procurement

Material Submission and Approval

Material & Equipment Procurement

12-WP6B-M47.06.8 Procurement for C

Turbine Module 2 - Steam Turbine 2 Fabrication

Turbine Module 2 - Generator & Equipment Installation

WBS: EP_SP_66_12-WP6B-M47.06.2 Off-site Fabrication of Turbine Modules

■ 06-1110 Material & Equipment Procurement

■ 06-1120 Off-site Fabrication of ACC Units

■ WBS: EP_SP_66_12-WP6B-M47.06.5 Procurement for WWTP Equipment

■ 06-1190-3(1) Electrical and Instrumentation Material Submission and Approval

■ 06-1200-3(1) Electrical and Instrumentation Material Procurement (Incl. FAT)

■ WBS: EP_SP_66_12-WP6B-M47.06.7 Procurement for HV Transformers and Associated Equipment

□ 06-1310 SCADA System & Software Devlopment

□ WBS: EP_SP_66_12-WP6B-M47.06.10 Procruement and Off-site Fabrication of Pipe Bridges (Incl. Piping

□ 06-1390(1) Material Submission and Approval

□ 06-1400 Material & Equipment Procurement

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o6-1280(1)

WBS:EP SP

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Actual Milestone

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31-Dec-21

02-Jan-22

29-Nov-21, Material & Equipment Procurement, Material & Equipment

30-Dec-21

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29-Jan-22

29-Jan-22

29-Jan-22

Critical Milestone



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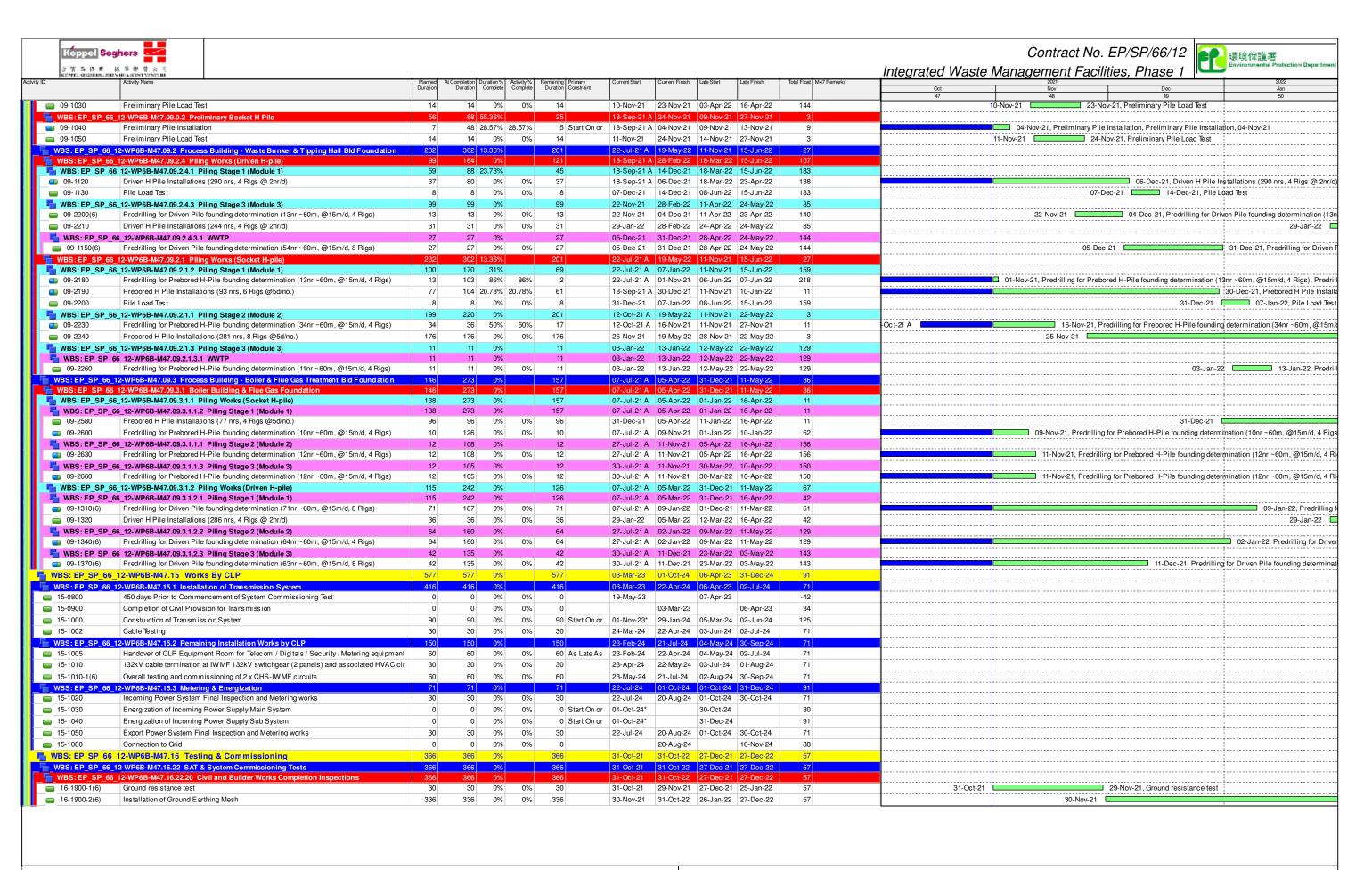
Integrated Waste Management Facilities, Phase 1 Duration Constraint Material Submission & Equipment Procurement (for IWMF Substation) WBS: EP SP 66_12-WP6B-M47.06.13 Procurement for Fire Services System WRS-FP SP 66 12-WP6R-M47 06 13 1 IWMF Substati 365 0% 0% 365 Material Submission & Equipment Procurement (For IWMF Substation) 365 14-Jan-22 13-Jan-23 26-Jan-22 25-Jan-23 14-Jan-22 Material Submission and Approval 30-Dec-21 27-Feb-22 21-Apr-22 19-Jun-22 66 12-WP6B-M47.06.22 Procurement for Air Material Submission and Approval 45 45 0% 0% 45 30-Dec-21 12-Feb-22 24-Apr-22 07-Jun-22 115 30-Dec-21 06-1870(1) Material Submission and Approval 180 180 0% 0% 11-Nov-21 09-May-22 11-Nov-21 09-May-22 06-2250(1) 29-Oct-19 A 17-Jul-22 24-Oct-21 19-Feb-24 WBS: EP SP 66 12-WP6B-M47.08 Maritime Works 960 992 73% WBS: EP_SP_66_12-WP6B-M47.08.1 Marine Construction WBS: EP SP 66 12-WP6B-M47.08.1.1.1 Seawall and Berth at DCM Area 29-Oct-19 A 07-Jun-22 02-Nov-21 07-Dec-22 900 953 75.56% 220 183 900 29-Oct-19 A 07-Jun-22 02-Nov-21 07-Dec-22 WBS: EP SP 66 12-WP6B-M47.08.1.1.1.5 Seawall Structural Works 953 75.56% 220 27-Nov-21, Caisson infill, Solid ballast, toe protection, precast concrete 761 88.8% 88.8% **08-1115(3)** Caisson infill. Solid ballast, toe protection, precast concrete blocks ..etc Laving 250 28 29-Oct-19 A 27-Nov-21 13-Apr-22 10-May-22 164 WBS: EP SP 66 12-WP6B-M47.08.1.1.1.5.1 Remain Works 264 4.35% 17-Sep-21 A 07-Jun-22 02-Nov-21 07-Dec-22 08-1105-08(6) Prefabrication of Precast Beam and Slab for Seawall A 141 27.86% 27.86% 21-Sep-21 A 08-Feb-22 01-Dec-21 11-Mar-22 101 08-1105-09(6) Prefabrication of Precast Beam & Slab for Seawall B 140 141 27.86% 27.86% 101 21-Sep-21 A 08-Feb-22 16-Nov-21 24-Feb-22 16 Construction of Seawall and Wave Wall Extension from +3mPD to Deck Level for Seawa 220 0% 0% 220 17-Sep-21 A 07-Jun-22 02-Nov-21 09-Jun-22 08-1120-1(6) Construction of Seawall and Wave Wall Extension from +3mPD to Deck Level for Seawa 220 258 0% 0% 220 23-Sep-21 A 07-Jun-22 02-May-22 07-Dec-22 183 WBS: EP SP 66 12-WP6B-M47.08.1.2.1 Reclamation WBS: EP_SP_66_12-WP6B-M47.08.1.2.1.6 Reclamation Works 435 26.19% 08-May-21 A 17-Jul-22 24-Oct-21 21-Sep-22 WBS: EP_SP_66_12-WP6B-M47.08.1.2.1.6.1 Reclamation Fill 08-3030(6) Fill up +2.5 to +7.5mPD at East Edge Area (91,0000 m3 @ 4000 m3/d) 163 74% 74% 29-May-21 A 08-Nov-21 24-Oct-21 01-Nov-21 Fill up +2.5 to +7.5mPD at East Edge Area (91,0000m3 @ 40,00m3/d), 08-Nov-21, 08-Nov-21, Fil 32 08-3040(6) Fill up +2.5 to +7.5mPD at West Edge Area (91,000m3@4000m3/d) 32 118 25% 25% 29-Jul-21 A 23-Nov-21 12-Dec-21 04-Jan-22 23-Nov-21, Fill up +2.5 to +7.5mPD at West Edge Area (91,000m3@ 4000m3 24 08-3070(6) Fill up +2.5 to +7.5mPD at South Edge Area (102,000m3@4000m3/d) 26 0% 0% 24-Nov-21 19-Dec-21 05-Feb-22 02-Mar-22 19-Dec-21, Fill up +2.5 to +7.5mPD at South Ec 26 73 WBS: EP_SP_66_12-WP6B-M47.08.1.2.1.6.3 Surcharge Filling 08-May-21 A 18-Jan-22 25-Oct-21 25-Mar-22 ■ 08-3020-1(6) Fill up +6 to +12mPD at ACC Building & Substation (Stage 4) (51,000m3@ 2500m3/d) 20 183 65% 65% 08-May-21 A 06-Noy-21 25-Oct-21 31-Oct-21 Fill up +6 to +12mPD at ACC Building & Substation (Stage 4) (51,000m3@2500m3/d), 06-Nov-21 **08-3050(6)** Fill up +7.5 to +11&13mPD at East Edge Area (Stage 5) (66,000m3@ 2500m3/d) 26 0% 0% 08-Nov-21 04-Dec-21 02-Nov-21 27-Nov-21 04-Dec-21, Fill up +7.5 to +11&13mPD at East Edge Area (Stage 26-Dec-21, Fill up +7.5 to +11&12mPD **08-3060(6)** Fill up +7.5 to +11&12mPD at West Edge Area (Stage +6) (55,000m3 @ 2500m3/d) 22 22 0% 0% 04-Dec-21 26-Dec-21 05-Jan-22 26-Jan-22 **08-3080(6)** Fill up +7.5 to +11&13mPD at South Edge Area (Stage 7) (58,000m3 @ 2500m3/d) 23 0% 26-Dec-21 18-Jan-22 03-Mar-22 25-Mar-22 WBS: EP_SP_66_12-WP6B-M47.08.1.2.1.6.4 Surcharge Period 338 26 19% 13-Aug-21 A 17-Jul-22 01-Nov-21 21-Sep-22 **08-3100(6)** 07-Nov-21, Loading @ +11&12mPD at Process Building (West) (Stage 2a), Loading @ +11&12n Loading @ +11&12mPD at Process Building (West) (Stage 2a) 180 87 95 56% 95 56% 13-Aug-21 A 07-Nov-21 06-Nov-21 13-Nov-21 08-3110(6) Loading @ +12mPD at TH & CCCW Building (Stage 3) 180 17.78% 17.78% 29-Sep-21 A 27-Mar-22 12-Nov-21 08-Apr-22 ■ 08-3110-1(6) Loading @ +12mPD at ACC Building & Substation (Stage 4) 180 180 0% 0% 180 07-Nov-21 05-May-22 01-Nov-21 29-Apr-22 07-Nov-21 **08-3120(6)** Loading @ +11&+13mPD at at East Edge Area (Stage 5) 180 0% 04-Dec-21 02-Jun-22 28-Nov-21 26-May-22 26-Dec-21 24-Jun-22 27-Jan-22 25-Jul-22 26-Dec-21 08-3120-1(6) Loading @ +11&12mPD at West Edge Area (Stage 6) 180 180 0% 0% Loading @ +11&+13mPD at South Edge Area (Stage 7) 18-Jan-22 17-Jul-22 26-Mar-22 21-Sep-22 WBS: EP_SP_66_12-WP6B-M47.08.1.2.1.6.7 Surcharge Removal 06-Oct-21 A 21-Nov-21 14-Nov-21 16-Apr-22 21-Nov-21, Remove Surcharge at Process Building (West) (Stage 2a) (53,000m 08-3180(6) Remove Surcharge at Process Building (West) (Stage 2a) (53,000m3 @ 4000m3/d) 14 14 0% 0% 08-Nov-21 21-Nov-21 14-Nov-21 27-Nov-21 ■ 08-3180-1(M45) Remove Surcharge at Process Building (West) (Stage 2b) (26,500m3 @ 4000m3/d) 06-Oct-21 A 06-Nov-21 10-Apr-22 16-Apr-22 06-Nov-21, Remove Surcharge at Process Building (West) (Stage 2b) (26,500m3 @ 4000m3/d), R 17-Jun-21 A 18-Jan-22 31-Oct-21 19-Feb-24 WBS: FP_SP_66_12-WP6B-M47.08.1.2.1.1_Instrumentation 215 63.65% 0% 08-1370 (M23) Extension of instruments to finished levels 42 159 0% 42 14-Jul-21 A 20-Dec-21 09-Jan-24 19-Feb-24 792 20-Dec-21. Extension of instruments to finishe 65 08-1375 (M23) Extension of instruments to surcharge top levels 174 0% 28-Jul-21 A 18-Jan-22 19-Jun-22 22-Aug-22 217 WBS: EP SP 66 12-WP6B-M47.08.1.2.1.1.1 Instruments above +2.5mPD 17-Jun-21 A 20-Nov-21 31-Oct-21 02-Mar-22 29-Jul-21 A 01-Nov-21 31-Oct-21 01-Nov-21 WBS: EP_SP_66_12-WP6B-M47.08.1.2.1.1.1.7 IWMF Substation (East) 08-2060 (M42) Drilling and installation of Instrumentation (11nrs.) 96 97 73% 97 73% 29-Jul-21 A 01-Nov-21 31-Oct-21 01-Nov-21 Drilling and installation of Instrumentation (11nrs.), 01-Nov-21, 01-Nov-21, Drilling and installation of Instrumentation (11nrs.) WBS: EP_SP_66_12-WP6B-M47.08.1.2.1.1.1.8 IWMF Substation (South) 17-Jun-21 A | 20-Nov-21 | 10-Feb-22 | 02-Mar-22 17-Jun-21 A 20-Nov-21 10-Feb-22 02-Mar-22 20-Nov-21, Drilling and installation of Instrumentation (8nrs.), Drilling and installation 08-2070 (M42) Drilling and installation of Instrumentation (8nrs.) 68% 103 WBS: EP SP 66 12-WP6B-M47.08.1.2.1.2 PVD Remedial Works 31-Oct-21 28-May-22 04-Jan-22 01-Aug-22 08-1390 (M34)15 Install Sand Drains at Zone D (approx. 62 nr @ 4nr/day/2 set of equipment) 0% 0% 31-Oct-21 15-Nov-21 18-Jan-22 02-Feb-22 31-Oct-21 15-Nov-21, Install Sand Drains at Zone D (approx. 62 nr @ 4nr/day/2 set of equipment) 08-1390 (M34)20 GI for ground condition varification at other Zone for PVD (10 nr approx @0.5 nr/day) Inc F 0% 31-Oct-21 27-Nov-21 06-Jan-22 02-Feb-22 31-Oct-21 27-Nov-21, Gl for ground condition varification at other Zone for PVD (10 n 08-1390 (M34)30 Lay Surcharge at remetial works area 30 30 0% 0% 30 31-Oct-21 29-Nov-21 04-Jan-22 02-Feb-22 31-Oct-21 29-Nov-21, Lay Surcharge at remetial works area 08-1390 (M34)40 Surcharge Period at remedial area 180 0% 30-Nov-21 28-May-22 03-Feb-22 01-Aug-22 WBS: EP SP 66 12-WP6B-M47.08.1.2.2 Breakwater 19-Jun-20 A 31-Jan-22 31-Mar-22 22-Sep-22 592 75.5% **08-1280** Rubble Mound Laying (100,000m3 approx, @550m3/d) 188 450 84.04% 84.04% 30 06-Sep-20 A 29-Nov-21 26-Apr-22 25-May-22 177 29-Nov-21, Rubble Mound Laying (100,000m3 approx, @550m3/d), Rub 08-1285(1) Prefabrication for Caission 180 69% 69% 19-Jun-20 A 25-Dec-21 31-Mar-22 25-May-22 151 25-Dec-21, Prefabrication for Caission, **08-1290** Caisson Laying (Total 29nrs, @2 nrs/week) 150 397 77.33% 77.33% 24-Dec-20 A 24-Jan-22 22-May-22 24-Jun-22 151 24-, 08-1295(3) Caisson Infill, Solid ballast, toe protection, precast concrete blocks ..etc Laying 403 86.9% 86.9% 25-Dec-20 A 31-Jan-22 27-Aug-22 22-Sep-22 WBS: EP_SP_66_12-WP6B-M47.08.1.2.3 Seawall and Berth at Marine Access 19-Mar-21 A 29-Nov-21 16-Apr-22 15-May-22 29-Nov-21. Caisson Infill, Solid ballast, toe protection, precast concret ■ 08-1320(5A) Caisson Infill, Solid ballast, toe protection, precast concrete blocks ..etc Laying 30 256 0% 0% 19-Mar-21 A 29-Nov-21 16-Apr-22 15-May-22 167 07-Jul-21 A 19-May-22 09-Nov-21 15-Jun-22 WBS: EP SP 66 12-WP6B-M47.09 Foundation Works WBS: EP SP 66 12-WP6B-M47.09.0 Site Investigation and Pr 132 0% 0% 08-Jul-21 A 16-Nov-21 11-Nov-21 27-Nov-21 16-Nov-21, Ground Investigation, Ground Investigation, 16-Nov-21 **3** 09-1000 Ground Investigation 53 0% 0% 10 Start On or 18-Sep-21 A 09-Nov-21 24-Mar-22 02-Apr-22 09-Nov-21, Preliminary Pile Installation, Preliminary Pile Installation, 09-Nov-21 **3** 09-1020 Preliminary Pile Installation Remaining Work Actual Milestone 3-Month Rolling Programme (October 2021) ◆ Critical Milestone Actual Work

Critical Remaining Work

Milestone

Contract No. EP/SP/66/12

環境保護署



3-Month Rolling Programme (October 2021)

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Remaining Work
Actual Work
Critical Remaining Work

Milestone

Actual Milestone

Critical Milestone

Contract No. EP/SP/66/12	
Integrated Waste Management Facilities, Phase	1

Keppel Seghers – Zhen Hua Joint Venture

Appendix B Summary of Implementation Status of Environmental Mitigation

Appendix B

Table B.1 Implementation Schedule for Air Quality Measures for the IWMF at the artificial island near SKC

				Imp	lementa	ation St	ages*	Relevant	Implementati
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	on Status and Remarks
S3b.8.1	 Air Pollution Control (Construction Dust) Regulation & Good Site Practices Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather. Use of frequent watering for particularly dusty construction areas and areas close to ASRs. Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines. Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs. Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations. Establishment and use of vehicle wheel and body washing facilities at the exit points of the site. Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading 	Work site / During the construction period	Contractor					Air Pollution Control (Construction Dust) Regulation	Implemented. N/A for dust control measures for transportation outside site boundary.

	Environmental Protection Measures /			lmp	lementa	ation St	tages*	Relevant	Implementati
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	on Status and Remarks
	points, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods. Imposition of speed controls for vehicles on unpaved site roads. Ten kilometers per hour is the recommended limit. Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.								
S3b.6.3	Odour Removal by Deodorizers Deodorizers with 95% odour removal efficiency would be installed for the air ventilated from the mechanical treatment plant before discharge to the atmosphere	Waste reception halls, the waste storage area, the mechanical treatment plant / During design & operation phase		V		✓		EIAO-TM	N/A
S3b.8.2	Air Pollution Control and Stack Monitoring	IWMF stack emissions / During	IWMF Operator	√		✓		EIAO-TM, Supporting Document for	N/A

				lmp	lementa	ation S	tages*	Relevant	Implementati
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	on Status and Remarks
	 Air pollution control and stack monitoring system will be installed for the IWMF to ensure that the emissions from the IWMF stack will meet the proposed target emission limits. Voluntary Enhancement Measures in Flue Gas Cleaning and Emission Monitoring: Two-stage bag filter system with reagent recirculation; In addition to SCR, provide SNCR for removal of NOx; tighten emission limit for half-hourly and daily NOx to 160 mg/m³ and 80 mg/m³ respectively; Well-mixed feed waste: to minimize the fluctuation of pollutant loading on the flue gas treatment system; Two more AQMSs would be set up at South Lantau and Shek Kwu Chau respectively; Limit levels will be set under the IWMF DBO contract to require that waste feed shall cease if any of the air pollutant has exceeded 95% of the emission concentration limit as stipulated in the Special Process license; and Each incineration chamber shall be fitted with auxiliary burners to ensure complete burn out of the combustion gases. 	design & operation phase						Application for Variation of Environmental Permit (EP-429/2012)	

	Environmental Protection Messures /			Imp	lementa	ation St	ages*	Relevant	Implementati
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Implementa Timing Agent		Des	С	0	Dec	Legislation and Guidelines	on Status and Remarks
	Treated Fly Ash and Air Pollution Control Residues: During testing and commissioning, the Contractor shall sample and test every container of treated fly ash and air pollution control residues for conformance to the Incineration Residue Pollution Control Limits and leachability criteria shown in Table 2 of the Environmental Permit. If a test result confirms that any one of the samples does not conform to the limits and the criteria, the Contractor shall be required to sample and test every container of treated fly ash and air pollution control residues for conformance to the Incineration Residue Pollution Control Limits and leachability criteria for the next six months. During the first six months of operation, if the requirements in (a) could be fully conformed with, the Contractor shall sample and test every shipload of treated fly ash and air pollution control residues for conformance to the Incineration Residue Pollution Control Limits and leachability criteria shown in Table 2 of the Environmental Permit. The Contractor shall take two samples from each shipload for testing and the Contractor shall not dispose of any of that shipload of treated fly ash and air	IWMF stack emissions / During design & operation phase	IWMF Operator					Supporting Document for Application for Variation of Environmental Permit (EP- 429/2012)	N/A

				lmp	lement	ation S	tages*	Relevant	Implementati
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	on Status and Remarks
	pollution control residues until the test								
	results confirm that the two samples								
	conform to the limits and the criteria. If								
	a test result confirms that any one of								
	the two samples does not conform to								
	the limits and the criteria, the								
	Contractor shall be required to sample								
	and test every shipload of treated fly								
	ash and air pollution control residues								
	for conformance to the Incineration								
	Residue Pollution Control Limits and								
	leachability criteria for the next six								
	months. The Contractor shall make								
	due allowance in the Design and the								
	Operation for the time to sample and								
	test treated fly ash and air pollution								
	control residues before disposal.								
	 Provided that there is no non- 								
	conformance to the Incineration								
	Residue Pollution Control Limits and								
	leachability criteria shown in Table 2 of								
	the Environmental Permit throughout a								
	continuous sixmonth period in the								
	Operation Period, the testing frequency								
	shall be reduced to monthly								
	interval.Two samples from one								
	shipload of treated fly ash and air								
	pollution control residues shall be								
	collected and tested for conformance								
	to the Incineration Residue Pollution								
	Control Limits and leachability criteria.								
	The Contractor shall not dispose of any								
	of the treated fly ash and air pollution								

				lmp	lement	ation S	tages*	Relevant	Implementati
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	on Status and Remarks
	control residues in the shipload which the samples are taken until the test results confirm that the samples conform to the limits and the criteria. If the test result confirm that any one of the samples does not conform to the limits and the criteria, the Contractor shall be required to sample and test every shipload of treated fly ash and air pollution control residues for conformance to the Incineration Residue Pollution Control Limits and leachability criteria shown in Table 2 of the Environmental Permit for the next six months.								
-	During testing and commissioning, the Contractor shall sample and test every container of bottom ash for conformance to the leachability criteria shown in Table 2 of the Environmental Permit. If a test result confirms that any one of the samples does not conform to the criteria, the Contractor shall be required to sample and test every container of bottom ash for conformance to the leachability criteria for the next six months. During the first six months of operation, if the requirements in (d) could be fully conformed with, the Contractor shall sample and test one shipload of bottom ash each month for	IWMF stack emissions / During design & operation phase	IWMF Operator	V		✓		Supporting Document for Application for Variation of Environmental Permit (EP- 429/2012)	N/A

				Imp	lement	ation S	tages*	Relevant	Implementati
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	on Status and Remarks
	conformance to the leachability								
	criteria shown in Table 2 of the								
	Environmental Permit. The Contractor								
	shall take two samples from the								
	shipload for testing and the Contractor								
	shall not dispose of any of that								
	shipload of bottom ash until the test								
	results confirm that the two samples								
	conform to the criteria. If a test result								
	confirms that any one of the two								
	samples does not conform to the								
	criteria, the Contractor shall be								
	required to sample and test each								
	shipload of bottom ash for								
	conformance to the leachability								
	criteria for the next six months. The								
	Contractor shall make due allowance								
	in the Design and the Operation for the								
	time to sample and test bottom ash								
	before disposal.								
	 Provided that there is no non- 								
	conformance to the leachability								
	criteria shown in Table 2 of the								
	Environmental Permit throughout a								
	continuous six month period in the								
	Operation Period, the Contractor shall								
	be allowed to take two samples from								
	any one shipload of bottom ash once								
	every six months for conformance to								
	the leachability criteria. The								
	Contractor shall not dispose of any of								
	the bottom ash in the shipload which								
	the samples are taken until the test								

	Environmental Protection Measures / Mitigation Measures			lmp	Implementation St			Relevant	Implementati
EIA Ref		Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	on Status and Remarks
	results confirm that the samples								
	conform to the criteria. If the test result								
	confirm that any one of the samples								
	does not conform to the criteria, the								
	Contractor shall be required to sample								
	and test one shipload of bottom ash								
	each month for conformance to the								
	leachability criteria shown in Table 2								
	of the Environmental Permit for the								
	next six months as stipulated above.								

^{*} Des - Design, C - Construction, O - Operation, and Dec - Decommissioning

Table B.2 Implementation Schedule for Noise Impact Measures for the IWMF at the artificial island near SKC

				Imple	ment	ation	Stages*		Implementatio
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	n Status and Remarks
S4b.8	Good site practices to limit noise emissions a source and use of quiet plant and working methods, whenever practicable.	Construction	EPD and its contractors		√			EIAO-TM	Implemented
S4b.6 & S4b.8	All the ventilation fans installed in the below will be provided with silencers or acoustics treatment. (i) Stack of the incinerator (ii) Ventilation systems within the IWMF Enclosure and discharge silencer or other acoustic treatment equipment should be installed in the air-cooled chillers Other than provision of silencer or other acoustic treatment equipment for the stack of the incinerator and ventilation system, the detailed design should incorporate the following good practice in order to minimize the nuisance on the neighboring NSRs. (i) The exhaust of the ventilation system and any opening of the building should be located facing away from any NSRs; and (ii) Louver or other acoustic treatment equipment could also be applied to the exhaust of the ventilation system.	Within IWMF area / Construction Period	EPD and its contractors			~		EIAO-TM	N/A

Integrated Waste Management Facilities, Phase 1

- <u>Voluntary Enhancement Measure</u>	IWMF site	Design team,	✓	✓	Supporting	Implemented
Provision of air-conditioner and double glazed windows to nearby NSR at Shek Kwu Chau (i.e. SARDA) as precautionary measures.		contractor, IWMF operator			Document for Application for Variation of Environmental Permit (EP- 429/2012)	

^{*} Des - Design, C - Construction, O - Operation, and Dec - Decommissioning

Integrated Waste Management Facilities, Phase 1

Table B.3 Implementation Schedule for Water Quality Measures for the Artificial Island near SKC

				Imple	mentat	ion S	tages*		Implementation Status and Remarks
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	
S5b.8.1.1	Drainage and Construction Site Runoff The site practices outlined in ProPECC PN 1/94 "Construction Site Drainage" should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. These practices include the following items:	Work site / During the construction period	Contractor		*			EIAO-TM; ProPECC PN 1/94; WPCO	Covering exposed slope/soil surfaces with tarpaulin and Compacting earthwork final surfaces were implemented. N/A for others.
	At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented	perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control							
	Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct storm water to silt removal facilities. The design of the temporary on-site drainage system will be undertaken by the contractor prior to the commencement of construction.								
	Boundaries of earthworks should be surrounded by dykes or embankments for flood protection, as necessary.								
	Sand/silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the TM-DSS. The design of efficient silt removal facilities								

				Impler	menta	tion S	tages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt/sand traps should be 5 minutes under maximum flow conditions. The detailed design of the sand/silt traps shall be undertaken by the contractor prior to the commencement of construction.								
	Water pumped out from foundation piles must be discharged into silt removal facilities.								
	Measures should be taken to minimize the ingress of site runoff and drainage into excavations. Drainage water pumped out from excavations should be discharged into storm drains via silt removal facilities.								
	During rainstorms, exposed slope/soil surfaces should be covered by a tarpaulin or other means, as far as practicable. Other measures that need to be implemented before, during and after rainstorms are summarized in ProPECC PN 1/94.								
	Exposed soil areas should be minimized to reduce potential for increased siltation and contamination of runoff.								
	Earthwork final surfaces should be well compacted and subsequent permanent work or surface protection should be immediately performed.								

				Impler	menta	tion S	tages*		Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	 Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms. 								
S5b.8.1.2	General Construction Activities Construction solid waste should be collected, handled and disposed of properly to avoid entering to the nearby watercourses and public drainage system. Rubbish and litter from construction sites should also be collected to prevent spreading of rubbish and litter from the site area. It is recommended to clean the construction sites on a regular basis.	Work site / During the construction period	Contractor		✓		P	IAO-TM; roPECC PN 1/94; /PCO	Implemented.

				Imple	menta	tion S	ages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
S5b.8.1.3	There is a need to apply to EPD for a discharge license for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge license. All the run-off 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 and general cleaning etc., can minimize 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 which is under the ambit of regional office of EPD.	Work site / During the construction period	Contractor		V			EIAO-TM; ProPECC PN 1/94; WPCO	Discharge License was issued on 22/08/2019.
S5b.8.1.4	Accidental Spillage Contractor must register as a chemical waste producer if chemical wastes would be produced from 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.	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO; WDO	Implemented.
S5b.8.1.5	Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas which	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO; WDO	Implemented.

			Imple	menta	tion S	tages*	Relevant	Implementation	
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	appropriately equipped to control these discharges.								
S5b.8.1.6	Oils and fuels should only be used and stored in designated areas which have pollution prevention facilities. All fuel tanks and storage areas should be sited on sealed areas in order to prevent spillage of fuels and solvents to the nearby watercourses. All waste oils and fuels should be collected in designated tanks prior to disposal.	Work site / During the construction period	Contractor		√			EIAO-TM; ProPECC PN 1/94; WPCO; WDO	Deficiency of Mitigation Measures but rectified by the Contractor.
S5b.8.1.7	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows:	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO; WDO	Implemented.
	 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. 								
S5b.8.1.8	Sewage Effluent Temporary sanitary facilities, such as	Work site / During the	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO	N/A
	portable chemical toilets, should be employed on-site where necessary to	construction period						WPGO	

			Imple	menta	tion S	tages*	Relevant	Implementation	
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	handle sewage from the workforce. A licensed contractor would be responsible. for appropriate disposal and maintenance of these facilities.								
S5b.8.1.9	Reclamation and Construction of Breakwaters The proposed dredging and reclamation should be commenced in phases. The breakwaters and seawalls should be constructed and the reclamation should be started within the enclosed breakwaters after the completion of the breakwater. Silt curtain should be applied around caissons / blockwork during the filling of the cell to prevent the loss of fine in the filling material. The maximum production rate for dredging for the anti-scouring protection layer shall not exceed the permitted maximum daily dredging rate and carried out within its respective distance from the nearest non-translocatable coral community by the dredging contractor as specified in S.2.18 of the Further Environmental Permit (no.:FEP-01/429/2012/A). It is recommended to employ closed grab with small capacity of 2 m³ to control the dredging rate. Any gap that may need to be provided for marine access will be located at the middle of the North Western seawall, away from the identified coral communities and will be shielded by silt curtains systems to control sediment plume dispersion. The silt curtain system at marine access		Contractor					EIAO-TM; WPCO, Supporting Document for Application of Environmental Permit (EP- 429/2012) Further Environmental Permit No. FEP- 01/429/2012/A	N/A
	opening should be closed as soon as the								

				Implei	menta	tion S	tages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	barges passes through the marine access opening in order to minimize the period of curtain opening. Filling should only be carried out behind the silt curtain when the silt curtain is completely closed.								
	 To enhance the effectiveness of the silt curtain at the marine access, the northern breakwater would be built before the commencement of the reclamation to reduce the current velocity towards the marine access opening. 								
	The silt curtain system at marine access opening should be regularly checked and maintained to ensure proper functioning.								
	Where public fill is proposed for filling below +2.5mPD, the fine content in the public fill will be controlled to 25% which is in line with the CEDD's General Specification;								
	• The filling for reclamation should be carried out behind the seawall. The filling material should only consist of public fill, rock and sand. The filling composition and filling rates at each filling area should follow those delineated in Table 1 of the FEP-01/429/2012/. The filling above high watermark is not restricted;								
	No dredging should be carried out within 16m to the nearest non-translocatable coral community;								
	Daily site audit including full-time on-site monitoring by the ET is recommended during the dredging for anti-scouring protection layer								

				Imple	menta	tion S	tages*	Relevant	Implementation Status and Remarks
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	
	for checking the compliance with the permitted no. of grab;								
	 Closed grab dredger should be used to minimize the loss of sediment during the raising of the loaded grabs through the water column; 								
	Frame-type silt curtains should be deployed around the dredging operations;								
	 Floating-type silt curtains should be used to surround the circular cell during the sheetpiling work; 								
	The descent speed of grabs should be controlled to minimize the seabed impact speed;								
	 Barges should be loaded carefully to avoid splashing of material; 								
	 All barges used for the transport of dredged materials should be fitted with tight bottom seals in order to prevent leakage of material during loading and transport; 								
	 All barges should be filled to a level which ensures that material does not spill over during loading and transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action. 								
	No DCM works should be carried out within 100m to the nearest non-translocatable coral colony / colonies.								

				Imple	menta	tion S	tages* Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec Legislation and Guidelines	Status and Remarks
	Silt curtains should be employed to enclose DCM field trial and any full scale DCM work to minimize the potential impacts on water aspect.							
	 A sand blanket is to be placed on top of the marine deposit using tremie pipes prior to the DCM ground treatment to avoid seabed sediment disturbance. 							
S5b.8.2.3	Operational Phase Discharges A pipeline drainage system will serve the development area collecting surface runoff from paved areas, roof, etc. Sustainable drainage principle would be adopted in the drainage system design to minimize peak surface runoff, maximize permeable surface and maximize beneficial use of rainwater.	Within IWMF site / During the operational phase	IWMF Operator	✓		•	WPCO	N/A
S5b.8.2.4	Oil interceptors should be provided in the drainage system of any potentially contaminated areas (such as truck parking area and maintenance workshop) and regularly cleaned to prevent the release of oil products into the storm water drainage system in case of accidental spillages. Accidental spillage should be cleaned up as soon as practicable and all waste oils and fuels should be collected and handled in compliance with the Waste Disposal Ordinance.	Within IWMF site / During the operational phase	IWMF Operator	~		✓	WPCO; WDO	N/A
S5b.8.2.5	Refuse Entrapment Collection and removal of floating refuse should be performed at regular intervals for keeping the water within the Project site	Within the Project site / During the operational phase	IWMF Operator			√	WPCO	N/A

				Imple	menta	tion S	tages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	boundary and the neighboring water free from rubbish.								
S5b.8.2.6	Transportation of bottom ash, fly ash and APC residues to WENT Landfill for disposal Covered container should be used in the shipping of the incineration waste to limit the contact between the incineration waste and the marine water. A comprehensive emergency response plan for any accidental spillage should be submitted by the operation contractor to the EPD for agreement before the operation of the facilities. Salvage and cleanup action to recover the spilled incineration waste containers following the spillage should be carried out according to the emergency response plan to mitigate the environmental impact in case of spillage.	Transportat ion of Incineration Ash / During the operational phase	IWMF Operator			•			N/A

^{*} Des - Design, C - Construction, O - Operation, and Dec - Decommissioning

Integrated Waste Management Facilities, Phase 1

Table B.4 Implementation Schedule for Waste Management Measures for the IWMF at the artificial island near SKC

				Imple	ementa	tion S	tages'	1	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
6b.5.1.2	Good Site Practices Adverse environmental impacts in relation to waste management are not expected, provided that good site practices are strictly followed. Recommendations for good site practices during the construction activities would include: Obtain relevant waste disposal permits from appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354) and subsidiary Regulations and the Land (Miscellaneous Provisions) Ordinance (Cap. 28); Provide staff training for proper waste management and chemical handling procedures; Provide sufficient waste disposal points and regular waste collection; Provide appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; and Carry out regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; Separate chemical wastes for special handling and disposed of to licensed facility for treatment; and Employ licensed waste collector to collect waste.	Period	Contractor		✓			WDO; LDO; ETWB TCW No. 19/2005; EIAO-TM	Implemented.

				Imple	ementa	tion S	tages*	Relevant	Implementation Status and Remarks
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	
6b.5.1.3	Waste Reduction Measures Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include: Design foundation works that could minimize the amount of excavated material to be generated. Provide training to workers on the importance of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling; Sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc.); Segregate and store different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; Encourage the collection of aluminum cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the work force; Proper storage and site practices to minimize the potential for damage or contamination of construction materials; and	Work Site/ During Design & Construction Period	Contractor	✓	✓				Implemented. N/A for foundation and demolition items

					Imple	menta	tion S	tages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementa Agent	tion	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	 Plan and stock construction materials carefully to minimize amount of waste to be generated and to avoid unnecessary generation of waste. 									
6b.5.1.7	Dredged Sediment – Application of Dumping Permit The project proponent should agree in advance with MFC of CEDD on the site allocation. The project proponent or contractor for the dredging works shall then apply for the site allocations of marine sediment disposal based on the prior agreement with MFC/CEDD. The project proponent or contractor should also be responsible for the application of all necessary permits from relevant authorities, including the dumping permit as required under DASO from EPD, for the disposal of dredged sediment prior to the commencement of the dredging works.	Seawall and Reclamation site / Construction Period	EPD and contractor	its	✓	✓		I	DASO ETWB TCW 34/2002	Implemented
6b.5.1.8	Dredged Sediment – Sediment Quality Report The project proponent or contractor will need to satisfy the appropriate authorities that the quality of the marine sediment to be dredged has been identified according to the requirements of ETWB TCW 34/2002. This should be completed well before the dredging works and would include at least the submission of a formal Sediment Quality Report under Tier I of ETWB TCW No. 34/2002 to DEP for approval. Subject to advice from DEP, it is possible that further marine SI in accordance with ETWB TCW 34/2002 might be necessary for the	Seawall and Reclamation site / Construction Period	EPD and contractor	its	V			I	DASO ETWB TCW 34/2002	Implemented

EIA Ref	Environmental Protection Measures / Mitigation Measures			Implementation Stages*				Relevant	Implementation
		Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	application of dumping permit under DASO. In such case, a sediment sampling and testing proposal shall be submitted to and approved by DEP before the additional marine SI works.								
6b.5.1.9	Dredged Sediment – Sediment Transportation The barge transporting the sediments to the designated disposal sites should be equipped with tight fitting seals to prevent leakage and should 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 selfmonitoring devices as specified by the DEP.	Seawall and Reclamation site / Construction Period	EPD and its contractor		✓			DASO ETWB TCW 34/2002	Implemented
6b.5.1.10	Construction and Demolition Materials In order to minimize the impact resulting from collection and transportation of C&D materials for off-site disposal, the excavated material arising from site formation and foundation works should be reused onsite as backfilling material and for landscaping works as far as practicable. Other mitigation requirements are listed below: • A Waste Management Plan (WMP), which becomes part of the Environmental Management Plan (EMP), should be prepared in accordance with ETWB TCW No.19/2005;	Work Site/ During Design & Construction Period	Contractor	✓	✓			ETWB TCW No. 19/2005	Implemented

EIA Ref	Environmental Protection Measures / Mitigation Measures			Imple	menta	tion S	tages*	Relevant	Implementation
		Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	 A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be adopted for easy tracking; and 								
	 In order to monitor the disposal of C&D materials at public filling facilities and landfills and to control fly-tipping, a trip- ticket system should be adopted (refer to ETWB TCW No. 31/2004). 								
6b.5.1.11 - 6b.5.1.12	The Contactor should prepare and implement an EMP in accordance with ETWB TCW No.19/2005, which describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from construction activities. Such a management plan should incorporate site specific factors, such as the designation of areas for segregation and temporary storage of reusable and recyclable materials. The EMP should be submitted to the Engineer for approval. The Contractor should implement waste management practices in the EMP throughout the construction stage of the Project. The EMP should be reviewed regularly and updated by the Contractor, preferably on a monthly basis. All surplus C&D materials arising from or in connection with construction works should become the property of the Contractor when it is removed unless otherwise stated. The Contractor would be responsible for devising a	Work Site/ During Design & Construction Period	Contractor					ETWB TCW No. 19/2005	Implemented

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Implementation Timing Agent	Imple	menta	ation S	tages*	Relevant	Implementation	
			<u>-</u>	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	system to work for on-site sorting of C&D materials and promptly removing all sorted and process materials arising from the construction activities to minimize temporary stockpiling on-site. The system should be included in the EMP identifying the source of generation, estimated quantity, arrangement for on-site sorting, collection, temporary storage areas and frequency of collection by recycling Contractors or frequency of removal off-site.								
6b.5.1.13	Chemical Wastes Should chemical wastes be produced at the construction site, the Contractor would be required to register with EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste (such as explosive, flammable, oxidizing, irritant, toxic, harmful, or corrosive). The Contractor should employ a licensed collector to transport and dispose of the chemical wastes, to either the Chemical Waste Treatment Centre at Tsing Yi, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Work Site/ During Construction Period	Contractor		✓			Waste Disposal (Chemical Waste) (General) Regulation	Deficiency of Mitigation Measures but rectified by the Contractor.

EIA Ref	Environmental Protection Measures / Mitigation Measures			Implementation Stages*				Relevant	Implementation
		Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
6b.5.1.14	General refuse should be stored in enclosed bins or compaction units separate from C&D materials. A licensed waste collector should be employed by the Contractor to remove general refuse from the site, separately from C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	Work Site/ During Construction Period	Contractor		√			Public Health and Municipal Services Ordinance	Implemented.
6b.5.1.16 - 6b.5.1.33	Biogas Generation The Contractor shall review the data and analysis results, and the data from further Site Investigation, if any. Subject to the review findings, the following gas protection measures may be considered if necessary: - gas monitoring after reclamation; - passive ventilation; - gas impermeable membrane; - ventilation with "at risk" rooms; - protection of utilities or below ground services; - precautions during construction works; - precautions prior to entry of belowground services	Reclamation site (if dredging at the reclamation site is not required) / Design & Construction Period	Designer and/or contractor		✓			EPD/TR8/97	N/A
6b.5.2.1	Good Site Practices	IWMF Site/During	IWMF Operator			✓		Waste Disposal Ordinance (Cap.354);	N/A

	Environmental Protection Measures / Mitigation Measures			Imple	menta	tion S	tages*	Relevant Legislation and Guidelines	Implementation Status and Remarks
EIA Ref		Location / Timing	Implementation Agent	Des	С	0	Dec		
	It is recommended that the following good operational practices should be adopted to minimise waste management impacts: • Obtain the necessary waste disposal permits from the appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354) and Waste Disposal (Chemical Waste) (General) Regulation; • Nomination of an approved person to be responsible for good site practice, arrangements for collection and effective disposal to an appropriate facility of all wastes generated at the site; • Use of a waste haulier licensed to collect specific category of waste; • A trip-ticket system should be included	Operation Period	Agent						Remarks
	as one of the contractual requirements and implemented by the Environmental Team to monitor the disposal of solid wastes at landfills, and to control fly tipping. Reference should be made to ETWB TCW No. 31/2004. Training of site personnel in proper waste management and chemical waste handling procedures; Separation of chemical wastes for special handling and appropriate treatment at a licensed facility; Routine cleaning and maintenance programme for drainage systems, sumps and oil interceptors;								

	Environmental Protection Measures / Mitigation Measures			Imple	menta	tion S	tages*	Relevant Legislation and Guidelines	Implementation Status and Remarks
EIA Ref		Location / Timing	Implementation Agent	Des	С	0	Dec		
	 Provision of sufficient waste disposal points and regular collection for disposal; Adoption of appropriate measures to minimize windblown litter and dust during transportation of waste, such as covering trucks or transporting wastes in enclosed containers; and Implementation of a recording system for the amount of wastes generated, and disposed of (including recycled the disposal sites). 								
6b.5.2.2	 Waste Reduction Measures Good management and control can prevent the generation of significant amounts of waste. It is recommended that the following good operational practices should be adopted to ensure waste reduction: Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; Encourage collection of aluminum cans, plastic bottles and packaging material (e.g. carton boxes) and office paper by individual collectors. Separate labelled bins should be provided to help segregate this waste from other general refuse generated by the work force; and Any unused chemicals or those with remaining functional capacity should be reused as far as practicable. 		IWMF Operator			✓			Implemented

		Implementation State					* Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	O Dec	Legislation and Guidelines	Status and Remarks
6b.5.2.3	 Storage, Handling, Treatment, Collection and Disposal of Incineration By-Products The following measures are recommended for the storage, handling and collection of the incineration by-products: Ash should be stored in storage silos; Ash should be handled and conveyed in closed systems fully segregatedfrom the ambient environment; Ash should be wetted with water to control fugitive dust, where necessary; All fly ash and APC residues should be treated, e.g. by cement solidification or chemical stabilization, for compliance with the proposed Incineration Residue Pollution Control Limits and leachability criteria prior to disposal; The ash should be transported in covered trucks or containers to the designated landfill site. The Contractor should provide EPD with chemical analysis results of the bottom ash, and treated fly ash and APC 	IWMF Site/ During Operation Period	IWMF Operator				Incineration Residue Pollution Control Limits	N/A
	residues to confirm that the ash/residue can comply with the proposed Incineration Residue Pollution Control Limits before disposal.							

				Imple	menta	tion S	tages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
6b.6.3.1	 Fuel Oil Tank Construction and Test The fuel tank to be installed should be of specified durability. Double skin tanks are preferred. Underground fuel storage tank should be placed within a concrete pit. The concrete pit shall be accessible to allow regular tank integrity tests to be carried out at regular intervals. Tank integrity tests should be conducted by an independent 	Fuel Oil Storage Tank/ During Design, Construction and Operation Periods	IWMF Contractor	✓	✓	✓			N/A
	 qualified surveyor or structural engineer. Any potential problems identified in the test should be rectified as soon as possible. 								
6b.6.3.1	 Fuel Oil Pipeline Construction and Test Installation of aboveground fuel oil pipelines is preferable; if underground pipelines are unavoidable, concrete lined trenches should be constructed to contain the pipelines. Double skin pipelines are preferred. Distance between the fuel oil refuelling points and the fuel oil storage tank shall be minimized. 	Fuel Oil Pipelines/ During Design, Construction and Operation Periods	IWMF Contractor	~	✓	V			N/A

				Imple	menta	tion S	tages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	 Integrity tests for the pipelines should be conducted by an independent qualified surveyor or structural engineer at regular intervals. Any potential problems identified in the test should be rectified as soon as possible. 								
6b.6.3.1	 Installation of leak detection device at storage tank and pipelines. Installation and use of pressure gauges (e.g. at the two ends of a filling line) in fuel filling, which allows unexpected pressure drop or difference and sign of leakage to be detected. 	Fuel Oil Storage Tank and Pipelines/ During Design, Construction and Operation Periods	IWMF Contractor	~	✓	V			N/A
6b.6.3.1	Storage Tank Refuelling Storage tank refuelling (from road tanker) should only be conducted by authorized staff of the oil company using the company's standard procedures.	Fuel Oil Refuelling Point/ During Operation Period	IWMF Operator			√			N/A
6b.6.3.1	Fuel Oil Spillage Response An Oil Spill Response Plan should be prepared by the operator to document the appropriate response procedures for oil spillage incidents in detail. General procedures to be taken in case of fuel oil spillage are presented below. • Training	IWMF Site/ During Operation Period	IWMF Operator			✓			N/A

				Imple	menta	tion S	tages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	- Training on oil spill response actions should be given to relevant staff. The training shall cover the followings:								
	 Tools & resources to combat oil spillage and fire, e.g. locations of oil spill handling equipment and fire fighting equipment; General methods to deal with oil spillage and fire incidents; Procedures for emergency drills in the event of oil spills and fire; and Regular drills shall be carried out. 								
	Communication								
	-Establish communication channel with the Fire Services Department (FSD) and EPD to report any oil spillage incident so that necessary assistance from relevant department can be quickly sought.								
	Response Procedures								
	 -Any fuel oil spillage within the IWMF site should be immediately reported to the Plant Manager with necessary details including location, source, possible cause and extent of the spillage. 								
	-Plant Manager should immediately attend to the spillage and initiate any appropriate action to confine and clean up the spillage. The response								

				Imple	menta	tion S	tages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	procedures shall include the following: >Identify and isolate the source of spillage as soon as possible. >Contain the oil spillage and avoid infiltration into soil/ groundwater and discharge to storm water channels. >Remove the oil spillage.								
	➤Clean up the contaminated area.								
	 If the oil spillage occurs during storage tank refuelling, the refueling operation should immediately be stopped. Recovered contaminated fuel oil and the associated material to remove the spilled oil should be considered as chemical waste. The handling and disposal procedures for chemical wastes are discussed in the following paragraphs. 								
6b.6.3.2	 Chemicals and Chemical Wastes Handling & Storage Chemicals and chemical wastes should only be stored in suitable containers in purpose-built areas. The storage of chemical wastes should comply with the requirements of the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. 	Chemicals and Chemical Wastes Storage Area / During Operation Period	IWMF Operator			•			N/A
	 The storage areas for chemicals and chemical wastes shall have an 								

				Imple	menta	tion S	tages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	impermeable floor or surface. The impermeable floor/ surface shall possess the following properties:								
	 Not liable to chemically react with the materials and their containers to be stored. 								
	 Able to withstand normal loading and physical damage caused by container handling 								
	 The integrity and condition of the impermeable floor or surface should be inspected at regular intervals to ensure that it is satisfactorily maintained 								
	For liquid chemicals and chemical wastes storage, the storage area should be bunded to contain at least 110% of the storage capacity of the largest containers or 20% of the total quantity of the chemicals/chemical wastes stored, whichever is the greater.								
	Storage containers shall be checked at regular intervals for their structural integrity and to ensure that the caps or fill points are tightly closed.								
	Chemical handling shall be conducted by trained workers under supervision.								
6b.6.3.2	Chemicals and Chemical Wastes Spillage Response	IWMF Site/ During	IWMF Operator			✓			N/A

				Implementation Stages*		tages*	Relevant	Implementation	
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	A Chemicals and/ or Chemical Wastes Spillage Response Plan shall be prepared by the operator to document in detail the appropriate response procedures for chemicals or chemical wastes spillage incidents. General procedures to be undertaken in case of chemicals/ chemical waste spillages are presented below.	Operation Period							
	• Training								
	 Training on spill response actions should be given to relevant staff. The training shall cover the followings: 								
	Tools & resources to handle spillage, e.g. locations of spill handling equipment;								
	General methods to deal with spillage; and								
	Procedures for emergency drills in the event of spills.								
	Communication								
	 Establish communication channel with FSD and EPD to report the spillage incident so that necessary assistance from relevant department can be quickly sought. 								
	Response Procedures								

				Imple	menta	tion S	tages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	 Any spillage within the IWMF site should be reported to the Plant Manager. 								
	 Plant Manager shall attend to the spillage and initiate any appropriate actions needed to confine and clean up the spillage. The response procedures shall include the followings: 								
	Identify and isolate the source of spillage as soon as possible;								
	Contain the spillage and avoid infiltration into soil/ groundwater and discharge to storm water channels (in case the spillage occurs at locations out of the designated storage areas);								
	Remove the spillage; the removal method/ procedures documented in the Material Safety Data Sheet (MSDS) of the chemicals spilled should be observed;								
	Clean up the contaminated area (in case the spillage occurs at locations out of the designated storage areas); and								

				Imple	menta	tion S	tages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	The waste arising from the cleanup operation should be considered as chemical wastes.								
6b.6.3.3	Preventive Measures for Incineration By-products Handling The recommended measures listed below can minimize the potential contamination to the surrounding environment due to the incineration by-products: • Ash should be stored in storage silos; • Ash should be handled and conveyed in closed systems fully segregated from the ambient environment; • Ash should be wetted with water to control fugitive dust, where necessary; • All fly ash and APC residues should be treated, e.g. by cement solidification or chemical stabilization, for compliance with the proposed Incineration Residue Pollution Control Limits and leachability criteria prior to disposal; • The ash should be transported in covered trucks or containers to the designated landfill site.	Storage, Handling & Collection of Incineration Ash at IWMF/ During Operation Period	IWMF Operator			V			N/A
6b.6.3.4 - 6b.6.3.6	Incident Record	IWMF Site/ During	IWMF Operator			√	fo	Guidance Manual or Use of Risk- ased Remediation	•

				Implementation Stages			tages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	After any spillage, an incident report should be prepared by the Plant Manager. The incident report should contain details of the incident including the cause of the incident, the material spilled and estimated spillage amount, and also the response actions undertaken. The incident record should be kept carefully and able to be retrieved when necessary.	Operation Period						Goals for Contaminated Land Management and the Guidance Note for Contaminated Land and Remediation.	
	The incident report should provide sufficient details for the evaluation of any environmental impacts due to the spillage and assessment of the effectiveness of measures taken.								
	In case any spillage or accidents results in significant land contamination, EPD should be informed immediately and the IWMF operator should be responsible for the cleanup of the affected area. The responses procedures described in Section 6b.6.3.1 and Section 6b.6.3.2 of EIA report should be followed accordingly together with the land contamination assessment and remediation guidelines stipulated in the Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management and the Guidance Note for								
	Contaminated Land and Remediation.								

^{*} Des - Design, C - Construction, O - Operation, and Dec - Decommissioning

Integrated Waste Management Facilities, Phase 1

Table B.5 Implementation Schedule for Ecological Quality Measures for the IWMF at the artificial island near SKC

Table B.5	Implementation Schedule for Ecological Qua	ality weasures to	or the IWMF at the art	ificiai isian	a near SK		1
				Implemer	tation Sta	ges* Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des C	0 [Legislation and Guidelines	Status and Remarks
7b.8.2.1	Measures to avoid direct loss of intertidal habitat • The site boundary has been proposed to avoid direct contact with the intertidal natural rocky shore of Shek Kwu Chau. It avoids direct loss of intertidal communities and the existing natural rocky shore habitat, where Reef Egret and White-bellied Sea Eagle have been recorded within and in the vicinity of this habitat.	IWMF site	Design team	V		EIAO-TM	N/A
7b.8.2.2	Measures to minimise loss of coastal subtidal habitat Extensive coral colonies were recorded at the coastal hard bottom habitat at Shek Kwu Chau. To avoid and minimise the extensive direct impact on the coral colonies, the proposed reclamation area has been moved further offshore to minimise loss of subtial habitat near shore.	IWMF site	Design team	V		EIAO-TM	N/A
7b.8.2.3	Zero Discharge Scheme The design scheme of the Project has avoided discharge of wastewater into the marine environment. A zero discharge scheme would be adopted during the operation of the Project. An on-site wastewater treatment plant would be provided to treat the wastewater generated from the IWMF (mainly human sewage). The treated effluent would be re-used in the incineration	IWMF site	Design team, IWMF operator	✓	~	WPCO	N/A

				Imple	ement	tation	Stages*	Relevant	Implementation Status and Remarks
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	
	plant and mechanical treatment plant, or for onsite washdown and landscape.								
7b.8.2.4	Measures to avoid loss of plant species of conservation importance	Cheung Sha landing portal	Design team, Contractor	*	√		V	EIAO-TM	N/A
	 Landing portal construction works would not cause direct lost to the recorded individual of protected plant species, Aquilaria sinensis, at the coastal shrubland habitat at Cheung Sha. As a precautionary measure, the plant should be tagged with eye-catching tape and fenced off prior to works, in order to avoid any damage by workers. 								
7b.8.3.1- 7b.8.3.15	 Measures to minimise water quality impact Measures for water quality as recommended in Section 5b of the EIA Report should be implemented. 	Work site	Design team, contractor, IWMF operator	V	✓	✓	✓	EIAO-TM; ProPECC PN 1/94; WPCO	Implemented
7b.8.3.16 - 7b.8.3.30	Measures to minimise disturbance on Finless Porpoise Minimisation of Habitat Loss for Finless Porpoise • Substantial revision has been made on the layout plan and form of the breakwater, in order to minimise the potential loss of important habitat for Finless Porpoise. The revision has greatly reduced the size of the embayment area, as well as the Project footprint. As a result, the size of habitat loss for Finless Porpoise has	IWMF site, work site, marine traffic route	,		✓	V	~	EIAO-TM, Supporting Document for Application for Variation of the Environmental Permit (EP- 429/2012)	Implemented for avoidance of construction works that may produce underwater acoustic disturbance, Vessel Travel Route implementation, training of staff; N/A for others

				Imple	ement	ation	Stages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	reduced from the original ~50 ha, down to ~31 ha.								
	Avoidance of peak season for finless porpoise occurrence								
	 To minimise potential acoustic disturbance from construction activities on Finless Porpoise, construction works that may produce underwater acoustic disturbance should be scheduled outside the months with peak Finless Porpoise occurrence (December to May), including: sheet piling works for construction of cofferdam surrounding the reclamation area (Phase 1); sheet piling works for construction of the shorter section of breakwater (Phase 1); sheet piling works for construction of the remaining section of breakwater (Phase 3) and bored piling works for berth area (Phase 3) 								
	Such works should be restricted within June to November. This approach would not only avoid the peak season for Finless Porpoise occurrence, the magnitude of impacts arise from acoustic disturbance would also be minimised.								

				Imple	ement	ation	Stages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	Since the DCM ground treatment and the installation of precast seawalls and								
	breakwaters should generate no underwater acoustic disturbance to Finless Porpoise, no specific mitigation measures are required.								
	Opt for quieter construction methods and plants								
	Considering the sensitivity of marine								
	mammals to underwater acoustic disturbance, instead of the previously								
	proposed conventional breakwater and								
	reclamation peripheral structure, which requires noisy piling works, the current								
	circular cells structure for breakwater and reclamation peripheral structure is								
	proposed. A quieter sheet piling method								
	using vibratory hammer or hydraulic impact hammer, should be adopted for the								
	installation of circular cells for cellular cofferdam and northern breakwater during								
	Phase 1, and southern breakwater Phase								
	3;								
	Non-percussive bore piling method would be								
	adopted for the installation of tubular piles for the berth construction during Phase 3.								
	Monitored exclusion zones								
	During the installation/re-								
	installation/relocation process of floating type silt curtains, in order to avoid the accidental								

				Imple	ement	ation	Stages*	Relevant	Implementation Status and Remarks
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	
	entrance and entrapment of marine mammals within the silt curtains, a monitored exclusion zone of 250 m radius from silt curtain should be implemented. The exclusion zone should be closely monitored by an experienced marine mammal observer at least 30 minutes before the start of installation/reinstallation/relocation process. If a marine mammal is noted within the exclusion zone, all marine works should stop immediately and remain idle for 30 minutes, or until the exclusion zone is free from marine mammals.								
	The experienced marine mammal observer should be well trained to detect marine mammals. Binoculars should be used to search the exclusion zone from an elevated platform with unobstructed visibility. The observer should also be independent from the project proponent and has the power to call-off construction activities.								
	In addition, as marine mammals cannot be effectively monitored within the proposed monitored exclusion zone at night, or during adverse weather conditions (i.e. Beaufort 5 or above, visibility of 300 meters or below), marine works should be avoided under weather conditions with low visibility.								

				Imple	ement	ation	Stages*	Relevant	Implementation Status and Remarks
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	
	Marine mammal watching plan								
	Upon the completion of the installation/re-installation/relocation of floating type silt curtain, all marine works would be conducted within a fully enclosed environment within the silt curtain, hence exclusion zone monitoring would no longer be required. Subsequently, a marine mammal watching plan should be implemented. The plan should include regular inspection of silt curtains, and visual inspection of the waters surrounded by the curtains. Special attention should be paid to Phase 2 (reclamation) where the floating type still curtain would be opened occasionally for vessel access, leaving a temporary 50 m opening. An action plan should be devised to cope with any unpredicted incidents such as the case when marine mammals are found within the waters surrounded by the silt curtains.								
	Small openings at silt curtains								
	The openings for vessel access at the silt curtains should be as small as possible to minimise the risk of accidental entrance.								
	Adoption of regular travel route								

				Imple	ment	ation	Stages*	Relevant	Implementation Status and Remarks
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	
	During construction and operation, captains of all vessels should adopt regular travel route, in order to minimize the chance of vessel collision with marine mammals, which may otherwise result in damage to health or mortality. The regular travel route should avoid areas with high sighting density of Finless Porpoise as much as possible.								
	Vessel speed limit								
	The frequent vessel traffic in the vicinity of works area may increase the chance of mammal mammals being killed or seriously injured by vessel collision. A speed limit of ten knots should be strictly enforced within areas with high density of Finless Porpoise.								
	 Passive acoustic monitoring and land-based theodolite monitoring surveys should be adopted to verify the predicted impacts and effectiveness of the proposed mitigation measures. 								
	Training of Staff								
	Staff, including captains of vessels, should be aware of the guidelines for safe vessel operations in the presence of cetaceans during construction and								

				Imple	emen	tation	Stages*	Relevant	Implementation Status and Remarks
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	Des C	0	Dec	Legislation and Guidelines	
	operation phases. Adequate trainings should be provided								
7b.8.3.31 - 7b.8.3.34	Measures to minimise impact on corals Coral translocation	IWMF site	Design team, contractor, IWMF operator	✓	✓	√	*	EIAO-TM	Implemented, tagged coral found missing after hitting by typhoons
	Coral communities within and in proximity to the proposed dredging sites would be disturbed by the Project due to the dredging operations. In order to minimise direct loss of coral communities, translocation of corals that are attached to movable rocks with diameter less than 50 cm are recommended. In order to avoid disturbance to corals during the spawning period, the spawning season of corals (June to August) should be avoided; and that translocation should be carried out during the winter season (November-March).								Re-tagging of 10 coral colonies at indirect impact site and control site were conducted in November and December 2018 respectively.
	The REA survey results suggest that the 198 directly affected coral colonies were attached to movable rocks (less than 50 cm in diameter). It is technically feasible to translocate them to avoid direct loss.								
	 Prior to coral translocation, a more detailed baseline survey, including a coral mapping survey, is recommended to further confirm the exact number and location of 								

				Imple	ement	ation	Stages*	Relevant	Implementation Status and Remarks
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	
	coral colonies within the potentially affected area. A more detailed coral translocation plan, including selection of suitable recipient site, plan for coral translocation, and event / action plan for coral monitoring should be submitted upon approval of this Project, prior to commencement of construction works. Advice from relevant governmental departments (i.e. AFCD) and professionals would be sought after, in order to identify a desirable location for the relocation of coral communities. Post-translocation monitoring on the translocated corals should also be considered.								
	Coral monitoring programme								
	 A coral monitoring programme is recommended to assess any adverse and unacceptable impacts to the coral communities at the coasts of Shek Kwu Chau during construction of the Project. 								
	Phasing of Works								
	To minimize environmental impacts, the proposed phasing of construction works has been carefully designed to reduce the amount of concurrent works, hence minimize SS elevation and the associated impacts on corals.								

					Imple	ement	ation	Stages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Impleme Age		Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
7b.8.3.35 - 7b.8.3.41	Specific measures to minimize disturbance on breeding White-bellied Sea Eagle Avoidance of noisy works during the breeding season of White-bellied Sea Eagle To minimize potential noise disturbance from construction activities on WBSE, noisy construction works should be scheduled outside their breeding season (December to May) to minimise potential degradation in breeding ground quality and breeding activities, including: - sheet pilling works for construction of cofferdam surrounding the reclamation area (Phase 1); - sheet pilling works for construction of the shorter section of breakwater (Phase 1); - sheet pilling works for construction of the remaining section of breakwater (Phase 3); and - bored pilling works for berth area (Phase 3). Opt for quieter construction methods and plants To minimise potential construction noise disturbance on WBSE, quieter construction methods and plants should be adopted. The recommended noise mitigation measures in		Design Contractor, operator	Team, IWMF					EIAO-TM	Implemented

				Imple	ement	ation	Stages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	the Noise chapter (Section 4b.8 of the EIA Report) should be implemented to minimise potential noise disturbance to acceptable levels.								
	Restriction on vessel access near the nest of White-bellied Sea Eagle								
	 During construction and operation, in order to minimize disturbance on the existing WBSE nest, a pre-defined practical route to restrict vessel access near the nest should be adopted to keep vessels and boats as far away from the nest as possible. White-bellied Sea Eagle monitoring programme A WBSE monitoring programme is recommended to assess any adverse and unacceptable impacts to the breeding activities of WBSE during construction and operation of the Project. Monitoring surveys for WBSE would include preconstruction phase (twice per month for duration of three months during their breeding season -between December and May, immediately before the commencement of works), construction 								

				Imple	ment	ation	Stages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	Surveys should be conducted twice per month								
	during their breeding season (from December to May); and once per month outside breeding season (June to November). More details on monitoring for WBSE are presented in the EM&A Manual.								
	Education of staff								
	Staff, including captains of all vessels during construction and operation phases, should be aware of the ecological importance of WBSE. Awareness should be raised among staff to minimise any intentional or unintentional disturbance to the nest.								
	Minimisation of Glare Disturbance								
	To minimise glare disturbance on WBSE, which may cause disorientation of birds by interfering with their magnetic compass, and disruption in behavioural patterns such as reproduction, fat storage and foraging pattern, any un-necessary outdoor lighting should be avoided, and in-ward and downward pointing of lights should be adopted.								
-	Construction of Seawall/Breakwaters To widen the open channel between the Artificial Island and Shek Kwu Chau.	IWMF site	Design team, contractor, IWMF operator	√	√			Supporting Document for Application for Variation of Environmental	N/A

				Imple	ement	ation	Stages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des C O Dec	Legislation and Guidelines	Status and Remarks			
	To design the precast concrete seawall with environmental friendly features.							Permit (EP- 429/2012)	
7b.8.3.42	 Opt for Quieter Construction Methods and Plants Quieter construction methods and plants should be used to minimise disturbance to the nearby terrestrial habitat and the associated wildlife. 	Work site	Design team, contractor, IWMF operator	~	√	✓	✓	EIAO-TM	Implemented
7b.8.3.43	Measures to minimize impacts from artificial lighting Unnecessary lighting should be avoided, and shielding of lights should be provided to minimize disturbance from light pollution on fauna groups.	IWMF site	Design team, contractor, IWMF operator	✓	√	√		EIAO-TM	Implemented
7b.8.3.44 - 7b.8.3.45	 Measures to minimize accidental spillage Regular maintenance of vessels, vehicles and equipment that may cause leakage and spillage should only be undertaken within pre-designated areas, which are appropriately equipped to control the associated discharges. Oils, fuels and chemicals should be contained in suitable containers, and only be used and stored in designated areas which have pollution prevention facilities. All fuel tanks and storage areas should be sited on sealed areas in order to prevent spillage of fuels and solvents to the nearby 	Work site	Contractor, IWMF operator		~	✓	•	EIAO-TM	Deficiency of Mitigation Measures but rectified by the Contractor.

				Imple	ement	ation S	Stages*	* Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	watercourses. All waste oils and fuels should be collected in designated tanks prior to disposal.								
7b.8.3.46	Measures to minimise sewage effluent Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce.	Work site	Contractor		√			EIAO-TM	N/A
7b.8.3.47	 Measures to minimise drainage and construction runoff Potential ecological impacts resulted from potential degradation of water quality due to unmitigated surface runoff could be minimised via the detailed mitigation measures in Section 5b.8 of the EIA Report. The following presents some of the mitigation measures: On-site drainage system with implemented sedimentation control facilities. Channels, earth bunds or sand bag barriers should be provided on site to direct storm water to silt removal facilities. Provision of embankment at boundaries of earthworks for flood protection. Water pumped out from foundation piles must be discharged into silt removal facilities. 	Work site	Contractor		•			EIAO-TM	N/A

				Imple	ment	ation	Stages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	 During rainstorms, exposed slope/soil surfaces should be covered by tarpaulin or other means, as far as practicable. Exposed soil surface should be minimized to reduce siltation and runoff. Earthwork final surfaces should be well compacted. Subsequent permanent surface protection should be immediately performed. Open stockpiles of construction materials, and construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms. 								
7b.8.3.48	Measures to minimise impacts from general construction activities To avoid the entering of construction solid waste into the nearby habitats, construction solid waste should be collected, handled and disposed of properly to avoid entering to the nearby habitats. It is recommended to clean the construction sites on a regular basis.	Work site	Contractor		√			EIAO-TM	Implemented
7b.8.3.49	Pest Control Good waste management practices should be adopted at the IWMF in order to minimise the risk of introduction of pest to the island: - Transportation of wastes in enclosed containers	IWMF site	IWMF operator			√			N/A

				Imple	ement	tation	Stages ³	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	- Waste storage area should be well								
	maintained and cleaned - Waste should only be disposed of								
	at designated areas								
	- Timely removal of the newly arrived								
	waste								
	 Removal of items that are capable of 								
	retaining water								
	- Rapid clean up of any waste spillages								
	Maintenance of a tidy and clean site environment								
	- Regular application of pest control								
	- Education of staff the importance of site								
	cleanliness								
b.8.3.50	Control of Marine Habitat Quality during	IWMF site	IWMF operator			✓		EIAO-TM; WPCO	N/A
	Operation Phase								
	Depending on the seabed condition of								
	the approach channel for marine vessels								
	during operation phase of the IWMF,								
	maintenance dredging may be required to								
	ensure safe access. In order to avoid								
	degradation in water quality due to elevation								
	in SS and dispersion of sediment plume due								
	to dredging works, it is recommended that any future maintenance dredging works								
	should not be carried out within 100 m								
	from the shore, similar to that of the								
	dredging for anti-scouring protection								
	layer during construction phase.								
	All maintenance dredging works should be								
	carried out with the implementation of silt								
	curtain to control the dispersion of SS. The								

				Imple	ement	ation	Stages*	S* Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	production rate should comply with the permit dredging rate and number of grab per hour.								
7b.8.4.1 –	Compensation of loss of important habitat of Finless Porpoise	Waters between Shek	Project Proponent	✓		✓		EIAO-TM	N/A
7b.8.4.8		Kwu Chau and							
	Designation of Marine Park	Soko Islands							
	The Project Proponent has made a firm								
	commitment to seek to designate a marine								
	park of approximately 700 ha in the waters								
	between Soko Islands and Shek Kwu Chau,								
	in accordance with the statutory process stipulated in the Marine Parks Ordinance, as								
	a compensation measure for the habitat loss								
	arising from the construction of the IWMF at the artificial island near SKC.								
	the artificial island flear SNC.								
	• The Project Proponent shall seek to								
	complete the designation by 2018 to tie in								
	with the operation of the IWMF at the								
	artificial island near SKC.								
	A further study should be carried out to								
	review relevant previous studies and collate								
	available information on the ecological								
	characters of the proposed area for marine park designation; and review								
	available survey data for Finless Porpoise,								
	water quality, fisheries, marine traffic and								
	planned development projects in the vicinity.								
	Based on the findings, ecological profiles of								

		_			Imple	ment	ation	Stages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	/	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	the proposed area for marine park designation should be established, and the extent and location of the proposed marine park be determined. The adequacy of enhancement measures should also be reviewed.									
	In addition, a management plan for the proposed marine park should be proposed, covering information on the responsible departments for operation and management (O&M) of the marine park, as well as the O&M duties of each of the departments involved. Consultation with relevant government departments and stakeholders should be conducted under the study. The study should be submitted to Director of Environmental Protection (DEP) for approval before the commencement of construction works.									
	The Project Proponent should provide assistance to AFCD during the process of the marine park designation.									
7b.8.5.1 -	Additional Enhancement or Precautionary Measures Deployment of	Within the proposed	the	Project Proponent	√		✓		EIAO-TM	N/A
7b.8.5.4	Artificial Reefs	under th	ark his							
	Deployment of artificial reefs (ARs) is an enhancement measure for the marine habitats. ARs are proposed to be deployed within the proposed marine park under	study								

				Imple	ement	tation	Stages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
	this Project. The exact location, dimension and type of ARs to be deployed are to be further investigated along with the further study of the proposed marine park under this Project. The proposed ARs would be deployed at the same time as the complete designation of marine park. Release of Fish Fry at Artificial Reefs and Marine Park								
	 Release of fish fry at the proposed ARs, as well as the proposed marine park under this study, should enhance the fish resources in the nearby waters, and subsequently food sources for Finless Porpoise. The proposed ARs with various micro-habitats would have the potential to provide shelter and nursery ground for the released fish fry. The frequency and quantity of fry to be released should be agreed by AFCD. 								

^{*} Des - Design, C - Construction, O - Operation, and Dec - Decommissioning

Table B.6 Implementation Schedule for Fisheries Measures for the IWMF at the artificial island near SKC

	-				nplemei	tation	Stages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	D	es C	0	Dec	Legislation and Guidelines	Status and Remarks
8b.8.1.2	Measure to minimize loss of and disturbance on fisheries resources	IWMF site	Design team contractor	,	✓		*	EIAO-TM	N/A
	 Alteration to the phasing of works, construction method, and layout plan of the IWMF at the artificial island near SKC has been made. The total fishing ground to be permanently lost due to the project has been significantly reduced from ~50 ha to ~31 ha. By adopting the current circular cells instead of the conventional seawall construction method, SS elevation would be greatly reduced, minimizing adverse impact on the health of fisheries resources. 								
8b.8.1.3	Measure to minimize impingement and entrainment Provision of a screen at the water intake point for desalination plant would be essential to minimize the risk of impingement and entrainment of fisheries resources (including fish, larvae and egg) through the intake point.	IWMF site	Design team contractor, IWN operator		V	✓		EIAO-TM	N/A

				Imple	ement	tation	Stages*	Relevant	Implementation
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
8b.8.1.4- 8b.8.1.6	Measures to control water quality No wastewater effluent, anti-fouling agent, heavy metals and other contaminants would be released during operation phase of the Project.	Work site, IWMF site	Design team, contractor, IWMF operator	✓	✓	~	✓	EIAO-TM	Implemented
	Mitigation measures recommended in the water quality impact assessment during construction and operation would serve to protect fisheries resources from indirect impacts resulted from the Project								
8b.8.1.7 - 8b.8.1.8	Additional Enhancement / Precautionary Measures Artificial Reefs (ARs) are proposed to be deployed within the proposed marine park under this Project as an enhancement measure for the marine habitats. This enhancement feature would bring positive impacts to the previously identified important spawning and nursery ground for fisheries resources. Release of Fish Fry at Artificial Reefs Release of fish fry has been proposed under this Project. The proposed deployment of ARs within the proposed marine park would provide shelter and nursery ground for the released fish fry. The frequency and quantity of fry to be released should be agreed by AFCD.	Within the proposed marine park in the waters between Soko Islands and Shek Kwu Chau	, ,			\		EIAO-TM	N/A

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Integrated Waste Management Facilities, Phase 1

Table B.7 Implementation Schedule for Landscape and Visual Measures for the IWMF at the artificial island near SKC

Table B.7	Environmental Protection		Implementation				Stages*	Relevant	Implementation
EIA Ref	Measures / Mitigation Measures	Location / Timing	Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
S10b.10 MLVC- 01	Grass-hydroseeded bare soil surface and stock pile area	Work site / During construction phase	Contractor		✓				N/A
S10b.10 MLVC-02	 Landscape Design Early planting using fast grow trees and tall shrubs at strategic locations within site as buffer to block view corridors to the site from the VSRs, and to locally screen haul roads, excavation works and site preparation works. Use of tree species of dense tree crown to serve as visual barrier. Hard and soft landscape treatment (e.g. trees and shrubs) of open areas within development to provide a background for the outdoor containers from open view, shade and shelter, and a green appearance from surrounding viewpoints. Planting strip along the periphery of the project site. Selected tree species suitable for the coastal condition. 	Work site / During design & construction phases	Contractor		V				N/A

	Environmental Protection		Implementation	Imple	ment	ation	Stages*	Relevant	Implementation
EIA Ref	Measures / Mitigation Measures	Location / Timing	Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
S10b.10 MLVC-03	Adoption of Natural Features of the Existing Shoreline 1) Use of boulders in different sizes and with the similar textures of the existing rocky shores for the construction of breakwater and artificial shoreline in order to blend into the existing natural shoreline.	Work site / During construction phase	Contractor		✓				N/A
	 Use of cellular cofferdam together with the natural boulders to form a curvature shoreline for the reclamation area to echo with the natural shoreline of SKC. 								
S10b.10 MLVC-04	Greening Design (Rooftop & Vertical Greening) 1) Implementation of rooftop and vertical greening (vertical building envelope) along the periphery of each building block to increase the amenity value of the work, moderate temperature extremes and enhance building energy performance. The greening appearance of the building shall enhance its visual harmony with the natural surroundings as well as reduce the apparent visual mass of the structure.	During design & construction phases	Contractor	•	✓				N/A
	 Sufficient space between concrete enclosure and stack to minimize heat transfer. 								
	3) Introduction of landscape decks at the stack to further enhance the overall natural and green concept unique for this site.								

	Environmental Protection		Implementation	Imple	ment	ation	Stages*	* Relevant	Implementation
EIA Ref	Measures / Mitigation Measures	Location / Timing	Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
S10b.10 MVC-01	Visual Mitigation and Aesthetic Design	Structures in IWMF /	Contractor	✓	✓				N/A
WIVC-01	Use of natural materials with recessive color to minimize the bulkiness of the building.	During design & constructio							
	2) Adoption of innovative aesthetic design to the chimney to minimize or visually mitigate the massing of the chimney so as to reduce its visual impact to the surroundings.								
	 Color of the chimney in a gradual changing manner to match with the color of the sky. 								
	 Provision of observation deck for public enjoyment at the top of the chimney to diminish the feeling of chimney. 								
	5) Provision of sky gardens between the two stacks to allow additional greening for enhancing the aesthetic quality. Maintenance access (elevator and staircase) from the ground floor to the sky gardens will be provided to allow maintenance of the sky gardens.								
	 Integration of the visitor's walkway with different material façade design of incinerator plant to enhance the aesthetic quality. 								
S10b.10 MVC-02	Control of the security floodlight for construction areas at night to avoid excessive glare to the surrounding receiver.	Work site / During construction phase	Contractor		✓				Implemented

	Environmental Protection		Implementation	Imple	ment	ation	Stages*	Relevant	Implementation
EIA Ref	Measures / Mitigation Measures	Location / Timing	Agent	Des	С	0	Dec	Legislation and Guidelines	Status and Remarks
S10b.10 MVC-03	Optimization of the construction sequence and construction programme to minimize the duration of impact.	Work site / During design & construction phases	Contractor	✓	√				Implemented
S10b.10 MVC-04	Storage of the backfilling materials for site formation & construction materials / wastes on site at a maximum height of 2m, covered with an impermeable material of visually unobtrusive material (in earth tone).	Work site / During construction phase	Contractor		✓				N/A
S10b.10 MVC-05	Reduction of the number of construction traffic at the site to practical minimum.	Work site / During construction phase	Contractor		√				Implemented
S10b.10 MLVO-01	Planting Maintenance Provision of proper planting maintenance and replacement of defective plant species on the new planting areas to enhance aesthetic and landscape quality.	Project site / During Operation phase	Contractor			✓			N/A
S10b.10 MVO-01	Environmental Education Centre Development of an Environmental Education Center, in which regular exhibitions and lectures to promote environmental awareness and waste reduction concept would be provided, as a part of the IWMF for the general public to alleviate negative public perceptions of the development.	Project site / During Operation phase	Contractor			√			N/A
S10b.10 MVO-02	Control of Light Control the numbers of lights and their intensity to a level that is good enough to meet the safety requirements at night but not excessive.	Project site / During Operation phase	Contractor			✓			N/A

Integrated Waste Management Facilities, Phase 1

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implement Des C	ation 9	Stages* Dec	Relevant Legislation and Guidelines	Implementation Status and Remarks
\$10b.10 MVO-03	Control of Operation Time Minimization of the frequency of waste transportation to practical minimum (e.g. limit the reception of MSW from 8 am to 8 pm)	Project site / During Operation phase	Contractor		✓			N/A

^{*} Des - Design, C - Construction, O - Operation, and Dec - Decommissioning

Contract No. EP/SP/66 Integrated Waste Mana	/12 gement Facilities, Phase 1	Keppel Seghers – Zhen Hua Joint Venture
Appendix C	Impact Monitoring Schedul	e of the Reporting
	Month	

		Impact Monitoring Schedule for IWMF		
		Oct-21		
Sun	Mon Tue	Wed	Thu	Fri Sat
				Impact Water Quality monitoring for BJ, 82, B3, 84, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 04:00 - 12:51 Flood Tide: 12:51 - 20:00 Monitoring Time: *\$#Mid-ebb: 08:00 - 11:30 Mid-flood: 14:40 - 18:10
3	4 5	6	7	8 9
	Impact Water Quality monitoring for B1, B2, B3, B4, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 07:10 - 14:24 Flood Tide: 14:24 - 20:53 Monitoring Time: Mid-ebb: 09:02 - 12:32 & Mid-flood: 15:53 - 19:00 Daytime & Evening Noise monitoring for M1, M2 & M3	Impact Water Quality monitoring for B1, B2, B3, B4, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Eb Tide: 09:00 - 15:21 Flood Tide: 15:21 - 21:30 Monitoring Time: Mid-ebb: 10:25 - 13:55 #&Mid-flood: 15:39 - 19:00		
10	11 12	13	14	15 16
	Impact Water Quality monitoring for B1, B2, B3, B4, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 14:12 - 17:49 Flood Tide: 06:43 - 14:12 Monitoring Time: Mid-ebb: 14:15 - 17:45 Mid-flood: 08:42 - 12:12 Daytime & Evening Noise monitoring for M1, M2 & M3			Impact Water Quality monitoring for B1, B2, B3, B4, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 04:14 - 12:23 Flood Tide: 12:23 - 20:00 Monitoring Time: *Mid-ebb: 08:00 - 10:03 Mid-flood: 14:26 - 17:56
17	18 19	20	21	22 23
Impact	Impact Daytime & Evening Noise monitoring for M2 & M3 Water Quality monitoring for B1, B2, B3, B4, H1, C1A, C2A, F1A, CR1, CR: M1 Tidal Period: Ebb Tide: 08:27 - 14:42 Flood Tide: 14:42 - 21:12 Monitoring Time: Mid-ebb: 09:49 - 13:19 SMid-flood: 15:01 - 18:31 Night time Noise monitoring for M2 & M3 Daytime & Evening Noise monitoring for M1	Impact Night time Noise monitoring for M1	Impact Water Quality monitoring for B1, B2, B3, B4, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 10:00 - 15:30 Filood Tide: 15:30 - 21:47 Monitoring Time: Mid-ebb: 11:00 - 14:30 \$&Mid-flood: 15:48 - 19:00	
24	25 26			29 30
Impact	Impact Daytime & Evening Noise monitoring for M1 & M3 Ecology monitoring for Marine Mammals by Vessel-based Line-Transect Survey M1 Tidal Period: Ebb Tide: 13:00 - 17:00 Flood Tide: 07:00 - 13:00 Monitoring Time: Mid-ebb: 13:15 - 16:45 & Mid-flood: 8:15 - 11:45 Night time Noise monitoring for M1 & M3 Daytime & Evening Noise monitoring for M2	Impact P, Night time Noise monitoring for M2	Impact Water Quality monitoring for BJ, B2, B3, B4, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 00:00 - 09:13 Flood Tide: 09:13 - 23:59 Monitoring Time: *#\$Mid-ebb: 08:00 - 08:45 Mid-flood: 14:51 - 18:21 Ecology monitoring for WBSE	Impact Water Quality monitoring for B1, B2, B3, B4, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 03:00 - 11:34 Flood Tide: 11:34 - 19:00 Monitoring Time: *#\$Mid-ebb: 08:00 - 11:08 Mid-flood: 13:32 - 17:02
Remarks:				

Remarks:

1. Daytime Noise Monitoring (07:00-1900), Evening Time Noise Monitoring (1900-2300), Night Time Noise Monitoring (2300-0700)

2. Water Quality Monitoring for S1,S2 and S3 will only conduct during DCM works, refer to Detailed DCM Plan

3. Water impact monitoring events on 8 and 13 Cotober 2021 were cancelled due to tropical storm LIONROCK and typhoon KOMPASU respectively

4. No supplementary water monitoring was conducted for water monitoring event on 8 October 2021 due to adverse weather and sea condition on 9 & 10 October 2021

5. Water impact monitoring event on 13 October 2021 was rescheduled to 17 October 2021

Note:

* as per Marine Department Notice No 107 of 2018, all vessels employed for the works should stay in the works area outside the hours of works (0700 to 2300). Due to safty concern, Water Quality Monitoring would start at 0800.
- Prioritized routing: Mid-Ebb: C1-533-CR2-CR1-H1-Remaining stations and Mid-Flood: C2-CR1-533-CR2-H1-Remaining stations
\$ - Since predicted tide is shorter than 3.5 hours, method of 90% tidal period as monitoring time is approached.
& - Due to safety concern for sampling event in night-time, method of 90% tidal period as monitoring time is approached.

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Appendix D	Water Quality Monito	oring Data

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
B1	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	08:54	7.98	8.41	30.48	28.74	3.01	12
B1	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	08:54	8.08	8.31	30.73	28.85	2.66	15
B1	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	4.1	08:53	9.14	8.36	31.48	28.9	2.94	13
B1	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	4.1	08:53	9.06	8.5	31.62	29.01	3.2	13
B2	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	09:10	8.07	8.32	31.51	29.25	3.1	11
B2	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	09:10	7.87	8.45	31.47	29.39	2.67	11
B2	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	4.6	09:09	8.03	8.26	30.57	28.68	3.63	14
B2	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	4.6	09:09	7.9	8.43	30.77	28.91	3.37	13
В3	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	10:48	8.81	8.3	31.57	30.16	3.09	13
В3	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	10:48	8.53	8.34	31.64	30.11	3.22	10
В3	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	4.5	10:47	8.63	8.44	31.85	30.17	3.6	10
В3	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	4.5	10:47	8.76	8.28	31.71	30.04	3.03	12
B4	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	10:37	8.72	8.45	31.83	30.21	3.21	13
B4	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	10:37	8.69	8.39	31.83	30.09	2.85	13
B4	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	3.7	10:36	8.23	8.48	30.79	29.99	4.3	13
B4	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	3.7	10:36	8.52	8.51	30.61	30	4.26	11
C1A	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	08:23	9.2	8.48	31.38	28.98	3.77	10
C1A	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	08:23	9.27	8.5	31.43	29.1	3.62	10
C1A	20211001	Cloudy	Moderate	Mid-Ebb	Middle	4.95	08:22	8.19	8.29	31.09	28.76	4.01	13
C1A	20211001	Cloudy	Moderate	Mid-Ebb	Middle	4.95	08:22	8.48	8.36	30.93	28.8	3.8	13
C1A	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	8.9	08:21	8.31	8.43	31.18	28.67	3.45	14
C1A	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	8.9	08:21	8.42	8.41	30.87	28.76	3.96	14
C2A	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	10:25	8.27	8.36	30.67	29.9	3.75	17
C2A	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	10:25	8.34	8.35	30.7	30.03	3.45	17
C2A	20211001	Cloudy	Moderate	Mid-Ebb	Middle	6.25	10:24	8.37	8.43	30.75	29.91	3.85	8
C2A	20211001	Cloudy	Moderate	Mid-Ebb	Middle	6.25	10:24	8.55	8.49	30.87	29.92	3.75	8
C2A	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	11.5	10:23	9.24	8.33	31.06	28.78	3.54	15
C2A	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	11.5	10:23	9.09	8.41	30.87	28.95	4.11	13
CR1	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	10:05	9.17	8.48	30.95	28.81	3.14	10
CR1	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	10:05	9.27	8.36	31.04	28.98	3.21	10
CR1	20211001	Cloudy	Moderate	Mid-Ebb	Middle	6.25	10:04	8.85	8.39	31.32	29.34	2.98	5
CR1	20211001	Cloudy	Moderate	Mid-Ebb	Middle	6.25	10:04	8.98	8.38	31.48	29.36	2.54	6
CR1	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	11.5	10:03	8.98	8.43	31.38	29.19	2.97	8
CR1	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	11.5	10:03	9.08	8.46	31.29	29.24	3.03	7
CR2	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	09:53	8.49	8.31	31.77	29.98	2.27	6
CR2	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	09:53	8.45	8.27	31.87	29.92	2.34	8
CR2	20211001	Cloudy	Moderate	Mid-Ebb	Middle	5.45	09:52	8.43	8.37	31.76	29.86	2.63	9
CR2	20211001	Cloudy	Moderate	Mid-Ebb	Middle	5.45	09:52	8.48	8.34	31.77	29.91	2.98	7
CR2	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	9.9	09:51	8.64	8.4	30.74	28.37	3.77	7
CR2	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	9.9	09:51	8.8	8.43	30.85	28.52	3.16	8
F1A	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	10:05	8.98	8.46	30.9	28.81	3	9

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
F1A	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	10:05	9.09	8.37	31.09	28.91	3.52	9
F1A	20211001	Cloudy	Moderate	Mid-Ebb	Middle	4.3	10:04	9.13	8.45	31.36	29.2	2.36	15
F1A	20211001	Cloudy	Moderate	Mid-Ebb	Middle	4.3	10:04	9	8.53	31.19	29.18	2.51	15
F1A	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	7.6	10:03	8.67	8.22	31.8	29.91	2.91	9
F1A	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	7.6	10:03	8.51	8.29	31.74	29.9	2.88	9
H1	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	09:37	8.83	8.47	30.97	28.3	2.41	12
H1	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	09:37	8.93	8.4	30.74	28.37	2.76	12
H1	20211001	Cloudy	Moderate	Mid-Ebb	Middle	4.45	09:36	8.75	8.43	30.63	28.26	3.11	12
H1	20211001	Cloudy	Moderate	Mid-Ebb	Middle	4.45	09:36	8.75	8.5	30.67	28.24	2.61	13
H1	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	7.9	09:35	7.63	8.5	30.71	28.3	3.66	14
H1	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	7.9	09:35	7.65	8.39	30.69	28.42	4.04	12
M1	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	09:32	7.66	8.42	30.59	28.35	2.74	7
M1	20211001	Cloudy	Moderate	Mid-Ebb	Surface	1	09:32	7.89	8.48	30.7	28.3	3.12	7
M1	20211001	Cloudy	Moderate	Mid-Ebb	Middle	4.95	09:31	7.74	8.35	30.55	28.42	3.29	7
M1	20211001	Cloudy	Moderate	Mid-Ebb	Middle	4.95	09:31	7.69	8.42	30.77	28.34	3.09	6
M1	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	8.9	09:30	7.9	8.46	31.42	29.42	2.98	8
M1	20211001	Cloudy	Moderate	Mid-Ebb	Bottom	8.9	09:30	8.09	8.38	31.53	29.49	2.9	7
B1	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	16:05	8.58	8.28	31.25	29.28	3.04	14
B1	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	16:05	8.55	8.31	31.47	29.17	2.55	13
B1	20211001	Cloudy	Moderate	Mid-Flood	Bottom	4.6	16:04	7.64	8.32	32.2	29.17	3.41	12
B1	20211001	Cloudy	Moderate	Mid-Flood	Bottom	4.6	16:04	7.87	8.32	32.28	29.22	3.42	10
B2	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	16:21	8.6	8.33	31.37	29.34	2.36	14
В2	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	16:21	8.62	8.43	31.16	29.21	2.4	13
В2	20211001	Cloudy	Moderate	Mid-Flood	Bottom	4.2	16:20	8.95	8.29	31.56	29.3	2.97	3
В2	20211001	Cloudy	Moderate	Mid-Flood	Bottom	4.2	16:20	8.93	8.44	31.49	29.36	3.48	3
В3	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	14:41	8.42	8.34	30.69	29.14	2.82	14
В3	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	14:41	8.45	8.33	30.44	29.08	2.63	12
В3	20211001	Cloudy	Moderate	Mid-Flood	Bottom	3.3	14:40	8.57	8.4	31.61	29.1	2.82	15
В3	20211001	Cloudy	Moderate	Mid-Flood	Bottom	3.3	14:40	8.19	8.43	31.56	29.14	2.94	15
В4	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	14:50	8.42	8.45	32.2	29.21	2.86	13
В4	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	14:50	8.58	8.34	32.24	29.32	3.25	14
В4	20211001	Cloudy	Moderate	Mid-Flood	Bottom	4.5	14:49	8.8	8.54	30.7	29.25	2.48	10
В4	20211001	Cloudy	Moderate	Mid-Flood	Bottom	4.5	14:49	8.81	8.53	30.73	29.34	2.52	10
C1A	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	15:38	8.15	8.49	32.5	29.31	3.9	14
C1A	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	15:38	8.19	8.35	32.34	29.22	3.41	12
C1A	20211001	Cloudy	Moderate	Mid-Flood	Middle	5	15:37	8.05	8.44	32.24	29.15	3.62	14
C1A	20211001	Cloudy	Moderate	Mid-Flood	Middle	5	15:37	8.16	8.41	32.36	29.34	3.89	13
C1A	20211001	Cloudy	Moderate	Mid-Flood	Bottom	9	15:36	8.83	8.55	30.57	29.19	3.43	13
C1A	20211001	Cloudy	Moderate	Mid-Flood	Bottom	9	15:36	8.53	8.59	30.74	29.18	3.46	12
C2A	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	14:42	8.76	8.48	30.8	29.39	3.57	14
C2A	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	14:42	8.94	8.44	30.95	29.25	3.69	12

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
C2A	20211001	Cloudy	Moderate	Mid-Flood	Middle	5.7	14:41	8.27	8.31	30.46	29.04	3.19	13
C2A	20211001	Cloudy	Moderate	Mid-Flood	Middle	5.7	14:41	8.04	8.29	30.52	29.17	3.16	13
C2A	20211001	Cloudy	Moderate	Mid-Flood	Bottom	10.4	14:40	8.47	8.36	31.76	29.09	3.69	9
C2A	20211001	Cloudy	Moderate	Mid-Flood	Bottom	10.4	14:40	8.32	8.3	31.75	29.23	3.51	9
CR1	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	15:03	8.01	8.45	32.43	29.2	3.1	16
CR1	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	15:03	8.09	8.62	32.14	29.32	3.07	16
CR1	20211001	Cloudy	Moderate	Mid-Flood	Middle	6.5	15:02	7.87	8.47	32.12	29.27	2.89	12
CR1	20211001	Cloudy	Moderate	Mid-Flood	Middle	6.5	15:02	8.27	8.56	32.38	29.31	3.15	12
CR1	20211001	Cloudy	Moderate	Mid-Flood	Bottom	12	15:01	8.54	8.43	32.09	29.14	3.92	13
CR1	20211001	Cloudy	Moderate	Mid-Flood	Bottom	12	15:01	8.59	8.45	32.27	29.14	3.72	13
CR2	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	15:18	8.08	8.24	30.52	29.19	2.98	14
CR2	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	15:18	8.25	8.36	30.82	29.18	2.59	12
CR2	20211001	Cloudy	Moderate	Mid-Flood	Middle	5.95	15:17	8.12	8.25	30.74	29.24	2.68	12
CR2	20211001	Cloudy	Moderate	Mid-Flood	Middle	5.95	15:17	7.91	8.24	30.57	29.22	2.95	15
CR2	20211001	Cloudy	Moderate	Mid-Flood	Bottom	10.9	15:16	7.89	8.61	32.32	29.35	2.66	11
CR2	20211001	Cloudy	Moderate	Mid-Flood	Bottom	10.9	15:16	7.94	8.59	32.24	29.25	2.71	8
F1A	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	15:21	8.42	8.55	30.8	29.22	3.33	12
F1A	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	15:21	8.62	8.52	30.89	29.25	2.89	13
F1A	20211001	Cloudy	Moderate	Mid-Flood	Middle	3.85	15:20	8.59	8.49	30.99	29.1	3.36	9
F1A	20211001	Cloudy	Moderate	Mid-Flood	Middle	3.85	15:20	8.65	8.44	30.87	29.08	2.93	9
F1A	20211001	Cloudy	Moderate	Mid-Flood	Bottom	6.7	15:19	8.28	8.32	30.53	29.15	3.7	13
F1A	20211001	Cloudy	Moderate	Mid-Flood	Bottom	6.7	15:19	8.1	8.33	30.48	29.23	3.12	15
H1	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	16:52	8.72	8.42	30.79	29.35	3.27	14
H1	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	16:52	8.67	8.35	30.82	29.39	3.4	13
H1	20211001	Cloudy	Moderate	Mid-Flood	Middle	3.9	16:51	8.62	8.43	30.6	29.39	3.38	13
H1	20211001	Cloudy	Moderate	Mid-Flood	Middle	3.9	16:51	8.5	8.45	30.76	29.34	3.53	13
H1	20211001	Cloudy	Moderate	Mid-Flood	Bottom	6.8	16:50	8.81	8.29	30.63	29.26	3.36	14
H1	20211001	Cloudy	Moderate	Mid-Flood	Bottom	6.8	16:50	8.75	8.29	30.59	29.27	3.07	13
M1	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	15:49	7.52	8.24	31.98	29.08	3.28	14
M1	20211001	Cloudy	Moderate	Mid-Flood	Surface	1	15:49	7.88	8.23	32.04	29.22	3.22	16
M1	20211001	Cloudy	Moderate	Mid-Flood	Middle	4.15	15:48	7.51	8.21	32.07	29.07	3.38	14
M1	20211001	Cloudy	Moderate	Mid-Flood	Middle	4.15	15:48	7.94	8.19	32.09	29.17	2.96	12
M1	20211001	Cloudy	Moderate	Mid-Flood	Bottom	7.3	15:47	8.15	8.5	32.18	29.35	2.72	12
M1	20211001	Cloudy	Moderate	Mid-Flood	Bottom	7.3	15:47	8.26	8.37	32.17	29.33	2.84	14
B1	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	09:51	8.29	8.28	28.77	29.3	2.66	15
B1	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	09:51	8.11	8.24	28.63	29.41	2.91	15
B1	20211004	Sunny	Moderate	Mid-Ebb	Bottom	3.9	09:50	8.88	8.5	29.34	29.57	2.14	5
B1	20211004	Sunny	Moderate	Mid-Ebb	Bottom	3.9	09:50	8.86	8.61	29.02	29.56	2.34	7
B2	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	10:08	7.98	8.25	29.42	30.05	3.22	5
B2	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	10:08	7.99	8.29	29.2	30.09	2.97	6
B2	20211004	Sunny	Moderate	Mid-Ebb	Bottom	4.8	10:07	8.29	8.36	28.67	29.43	2.86	7

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
B2	20211004	Sunny	Moderate	Mid-Ebb	Bottom	4.8	10:07	8.32	8.28	28.59	29.4	3.35	4
В3	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	11:54	8.83	8.47	29	30.14	2.53	8
В3	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	11:54	9.06	8.48	29.19	30	2.81	5
В3	20211004	Sunny	Moderate	Mid-Ebb	Bottom	3.6	11:53	8.9	8.54	29.24	30.08	2.56	6
В3	20211004	Sunny	Moderate	Mid-Ebb	Bottom	3.6	11:53	8.97	8.47	29.03	30.17	2.57	5
B4	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	11:44	9.09	8.56	29.36	29.94	2.02	5
B4	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	11:44	9.14	8.53	29.06	30.16	2.04	8
B4	20211004	Sunny	Moderate	Mid-Ebb	Bottom	3.8	11:43	9.33	8.51	29.59	30.23	3.58	3
B4	20211004	Sunny	Moderate	Mid-Ebb	Bottom	3.8	11:43	9.26	8.53	29.29	30.15	3.41	4
C1A	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	09:19	8.97	8.5	29.02	29.65	3.67	6
C1A	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	09:19	8.78	8.55	29.09	29.66	3.34	5
C1A	20211004	Sunny	Moderate	Mid-Ebb	Middle	5.4	09:18	8.02	8.54	28.48	29.69	3.13	5
C1A	20211004	Sunny	Moderate	Mid-Ebb	Middle	5.4	09:18	8.4	8.57	28.84	29.71	3.27	8
C1A	20211004	Sunny	Moderate	Mid-Ebb	Bottom	9.8	09:17	8.34	8.51	28.56	29.85	3.57	6
C1A	20211004	Sunny	Moderate	Mid-Ebb	Bottom	9.8	09:17	8.21	8.5	28.58	29.79	3.93	6
C2A	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	11:23	9.32	8.5	29.37	30.14	2.86	8
C2A	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	11:23	9.13	8.52	29.3	30.16	2.88	11
C2A	20211004	Sunny	Moderate	Mid-Ebb	Middle	5.95	11:22	9.07	8.52	29.61	30.17	3.4	7
C2A	20211004	Sunny	Moderate	Mid-Ebb	Middle	5.95	11:22	9.38	8.57	29.66	30.28	2.89	6
C2A	20211004	Sunny	Moderate	Mid-Ebb	Bottom	10.9	11:21	8.43	8.58	28.67	30.3	3.26	6
C2A	20211004	Sunny	Moderate	Mid-Ebb	Bottom	10.9	11:21	8.4	8.59	28.79	30.18	3.45	9
CR1	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	11:03	8.37	8.4	29.66	29.81	2.48	8
CR1	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	11:03	8.61	8.47	29.62	29.73	2.28	8
CR1	20211004	Sunny	Moderate	Mid-Ebb	Middle	6.55	11:02	8.34	8.36	29.36	29.66	2.25	12
CR1	20211004	Sunny	Moderate	Mid-Ebb	Middle	6.55	11:02	8.65	8.43	29.58	29.66	1.89	13
CR1	20211004	Sunny	Moderate	Mid-Ebb	Bottom	12.1	11:01	7.89	8.28	28.61	29.78	3.08	10
CR1	20211004	Sunny	Moderate	Mid-Ebb	Bottom	12.1	11:01	7.57	8.27	28.46	29.79	3	7
CR2	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	10:51	7.55	8.37	28.34	29.65	3.43	12
CR2	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	10:51	7.79	8.33	28.64	29.61	3.21	12
CR2	20211004	Sunny	Moderate	Mid-Ebb	Middle	5.85	10:50	7.73	8.38	28.77	29.69	3.63	11
CR2	20211004	Sunny	Moderate	Mid-Ebb	Middle	5.85	10:50	7.59	8.35	28.7	29.65	3.11	13
CR2	20211004	Sunny	Moderate	Mid-Ebb	Bottom	10.7	10:49	7.89	8.37	29.01	30.18	3.91	11
CR2	20211004	Sunny	Moderate	Mid-Ebb	Bottom	10.7	10:49	8.16	8.39	29.29	30.21	3.9	11
F1A	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	11:13	8.45	8.56	29.02	30.37	1.94	10
F1A	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	11:13	8.34	8.57	28.88	30.22	1.99	10
F1A	20211004	Sunny	Moderate	Mid-Ebb	Middle	4	11:12	8.23	8.49	28.9	30.17	2.84	11
F1A	20211004	Sunny	Moderate	Mid-Ebb	Middle	4	11:12	8.32	8.58	28.58	30.28	3.11	11
F1A	20211004	Sunny	Moderate	Mid-Ebb	Bottom	7	11:11	8.28	8.46	29.58	29.69	3.07	2.5
F1A	20211004	Sunny	Moderate	Mid-Ebb	Bottom	7	11:11	8.53	8.36	29.49	29.89	2.93	2.5
H1	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	10:36	8.06	8.49	29.21	30.02	2.64	11
H1	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	10:36	7.89	8.39	29.53	29.89	2.29	11

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
H1	20211004	Sunny	Moderate	Mid-Ebb	Middle	4.45	10:35	7.78	8.45	29.5	30	1.88	6
H1	20211004	Sunny	Moderate	Mid-Ebb	Middle	4.45	10:35	7.81	8.45	29.36	30.05	1.85	6
H1	20211004	Sunny	Moderate	Mid-Ebb	Bottom	7.9	10:34	8.44	8.24	29.62	30.43	2.61	6
H1	20211004	Sunny	Moderate	Mid-Ebb	Bottom	7.9	10:34	8.01	8.24	29.35	30.21	2.9	9
M1	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	10:41	7.91	8.48	29.13	30.11	2.43	12
M1	20211004	Sunny	Moderate	Mid-Ebb	Surface	1	10:41	7.82	8.4	29.25	30.27	2.75	12
M1	20211004	Sunny	Moderate	Mid-Ebb	Middle	4.55	10:40	7.97	8.49	28.88	30.12	2.55	9
M1	20211004	Sunny	Moderate	Mid-Ebb	Middle	4.55	10:40	7.81	8.42	29.02	30.18	2.69	10
M1	20211004	Sunny	Moderate	Mid-Ebb	Bottom	8.1	10:39	7.79	8.43	29.11	30.12	3.2	12
M1	20211004	Sunny	Moderate	Mid-Ebb	Bottom	8.1	10:39	7.9	8.46	29.33	30.05	3.01	12
B1	20211004	Sunny	Moderate	Mid-Flood	Surface	1	17:16	9.11	8.56	28.42	29.35	2.62	9
B1	20211004	Sunny	Moderate	Mid-Flood	Surface	1	17:16	9.22	8.43	28.27	29.05	2.41	9
B1	20211004	Sunny	Moderate	Mid-Flood	Bottom	4.1	17:15	8.26	8.3	28.36	29.88	3.38	4
B1	20211004	Sunny	Moderate	Mid-Flood	Bottom	4.1	17:15	8.18	8.32	28.51	29.72	3.55	3
B2	20211004	Sunny	Moderate	Mid-Flood	Surface	1	17:32	9.54	8.55	28.35	29.24	2.13	7
B2	20211004	Sunny	Moderate	Mid-Flood	Surface	1	17:32	8.88	8.44	28.07	29.31	2.06	7
B2	20211004	Sunny	Moderate	Mid-Flood	Bottom	3.8	17:31	9.43	8.53	28.42	29.04	2.9	4
B2	20211004	Sunny	Moderate	Mid-Flood	Bottom	3.8	17:31	9.05	8.56	28.08	29.26	3.18	2.5
В3	20211004	Sunny	Moderate	Mid-Flood	Surface	1	15:54	7.84	8.32	28.9	29.53	2.51	13
В3	20211004	Sunny	Moderate	Mid-Flood	Surface	1	15:54	8.48	8.28	28.82	29.53	2.42	12
В3	20211004	Sunny	Moderate	Mid-Flood	Bottom	3.6	15:53	7.95	8.34	28.94	29.25	3.19	2.5
В3	20211004	Sunny	Moderate	Mid-Flood	Bottom	3.6	15:53	7.98	8.33	29.16	29.47	2.98	2.5
B4	20211004	Sunny	Moderate	Mid-Flood	Surface	1	16:04	8.03	8.21	28.62	29.86	2.25	6
B4	20211004	Sunny	Moderate	Mid-Flood	Surface	1	16:04	7.71	8.26	28.51	29.86	2.34	4
B4	20211004	Sunny	Moderate	Mid-Flood	Bottom	4.5	16:03	8.9	8.42	28.46	29.57	3.22	5
B4	20211004	Sunny	Moderate	Mid-Flood	Bottom	4.5	16:03	8.67	8.3	28.84	29.52	3.01	6
C1A	20211004	Sunny	Moderate	Mid-Flood	Surface	1	16:49	8.68	8.33	28.59	29.8	3.16	3
C1A	20211004	Sunny	Moderate	Mid-Flood	Surface	1	16:49	8.4	8.37	28.57	29.79	3.09	4
C1A	20211004	Sunny	Moderate	Mid-Flood	Middle	5.45	16:48	8.39	8.28	28.6	29.59	3.54	4
C1A	20211004	Sunny	Moderate	Mid-Flood	Middle	5.45	16:48	8.01	8.28	28.72	29.5	4.08	6
C1A	20211004	Sunny	Moderate	Mid-Flood	Bottom	9.9	16:47	8.61	8.51	28.19	29.19	4.18	8
C1A	20211004	Sunny	Moderate	Mid-Flood	Bottom	9.9	16:47	8.74	8.4	28.44	29.22	3.83	8
C2A	20211004	Sunny	Moderate	Mid-Flood	Surface	1	15:55	8.63	8.42	28.64	29.61	3.76	4
C2A	20211004	Sunny	Moderate	Mid-Flood	Surface	1	15:55	8.47	8.3	28.7	29.75	3.52	4
C2A	20211004	Sunny	Moderate	Mid-Flood	Middle	5.8	15:54	8.34	8.3	28.84	29.72	3.45	4
C2A	20211004	Sunny	Moderate	Mid-Flood	Middle	5.8	15:54	8.61	8.33	28.94	29.61	3.4	5
C2A	20211004	Sunny	Moderate	Mid-Flood	Bottom	10.6	15:53	7.68	8.39	28.97	29.2	3.49	4
C2A	20211004	Sunny	Moderate	Mid-Flood	Bottom	10.6	15:53	7.48	8.4	29.26	29.35	3.07	4
CR1	20211004	Sunny	Moderate	Mid-Flood	Surface	1	16:18	8.28	8.53	28.54	29.74	2.52	12
CR1	20211004	Sunny	Moderate	Mid-Flood	Surface	1	16:18	8.05	8.47	28.54	29.7	2.53	13
CR1	20211004	Sunny	Moderate	Mid-Flood	Middle	6.5	16:17	8.15	8.44	28.65	29.66	2.28	10

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
CR1	20211004	Sunny	Moderate	Mid-Flood	Middle	6.5	16:17	8.16	8.43	28.83	29.41	2.71	10
CR1	20211004	Sunny	Moderate	Mid-Flood	Bottom	12	16:16	7.84	8.18	28.68	29.82	3.66	14
CR1	20211004	Sunny	Moderate	Mid-Flood	Bottom	12	16:16	7.46	8.21	28.56	29.84	3.11	14
CR2	20211004	Sunny	Moderate	Mid-Flood	Surface	1	16:31	8.2	8.4	28.94	28.91	2.84	14
CR2	20211004	Sunny	Moderate	Mid-Flood	Surface	1	16:31	8.46	8.39	28.99	28.85	2.42	14
CR2	20211004	Sunny	Moderate	Mid-Flood	Middle	5.75	16:30	8.05	8.38	29.18	29.13	3.11	10
CR2	20211004	Sunny	Moderate	Mid-Flood	Middle	5.75	16:30	8.08	8.43	29.26	29.18	3.12	10
CR2	20211004	Sunny	Moderate	Mid-Flood	Bottom	10.5	16:29	8.01	8.42	28.74	29.55	2.45	2.5
CR2	20211004	Sunny	Moderate	Mid-Flood	Bottom	10.5	16:29	8.21	8.54	28.6	29.65	2.43	2.5
F1A	20211004	Sunny	Moderate	Mid-Flood	Surface	1	16:37	8.52	8.41	28.07	29.15	2.33	4
F1A	20211004	Sunny	Moderate	Mid-Flood	Surface	1	16:37	8.66	8.49	28.39	29.13	2.71	4
F1A	20211004	Sunny	Moderate	Mid-Flood	Middle	3.8	16:36	8.48	8.4	28.42	29.07	2.28	4
F1A	20211004	Sunny	Moderate	Mid-Flood	Middle	3.8	16:36	8.72	8.41	28.17	29.06	2.65	5
F1A	20211004	Sunny	Moderate	Mid-Flood	Bottom	6.6	16:35	7.98	8.38	28.89	29.18	2.91	15
F1A	20211004	Sunny	Moderate	Mid-Flood	Bottom	6.6	16:35	8.05	8.38	29.13	28.9	2.73	15
H1	20211004	Sunny	Moderate	Mid-Flood	Surface	1	17:58	9.04	8.23	28.94	29.1	2.7	7
H1	20211004	Sunny	Moderate	Mid-Flood	Surface	1	17:58	9.08	8.16	28.94	29.15	3.17	7
H1	20211004	Sunny	Moderate	Mid-Flood	Middle	4.05	17:57	8.49	8.27	28.82	29.26	2.88	12
H1	20211004	Sunny	Moderate	Mid-Flood	Middle	4.05	17:57	9.08	8.16	28.74	29	2.87	12
H1	20211004	Sunny	Moderate	Mid-Flood	Bottom	7.1	17:56	8.75	8.27	28.62	29.06	3.66	5
H1	20211004	Sunny	Moderate	Mid-Flood	Bottom	7.1	17:56	8.66	8.3	28.54	29.2	3.26	5
M1	20211004	Sunny	Moderate	Mid-Flood	Surface	1	17:08	8.46	8.35	28.32	29.72	3.03	11
M1	20211004	Sunny	Moderate	Mid-Flood	Surface	1	17:08	8.38	8.31	28.67	29.67	2.87	12
M1	20211004	Sunny	Moderate	Mid-Flood	Middle	3.8	17:07	8.37	8.35	28.7	29.6	2.5	9
M1	20211004	Sunny	Moderate	Mid-Flood	Middle	3.8	17:07	8.41	8.3	28.72	29.85	2.78	9
M1	20211004	Sunny	Moderate	Mid-Flood	Bottom	6.6	17:06	8	8.26	28.42	29.55	2.68	11
M1	20211004	Sunny	Moderate	Mid-Flood	Bottom	6.6	17:06	8.16	8.3	28.46	29.72	2.78	11
B1	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	10:53	9.14	8.43	29.55	29.24	2.15	15
B1	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	10:53	9.28	8.28	29.54	29.31	2.5	16
B1	20211006	Sunny	Moderate	Mid-Ebb	Bottom	3.6	10:52	8.77	8.22	29.72	29.86	3.65	4
B1	20211006	Sunny	Moderate	Mid-Ebb	Bottom	3.6	10:52	8.89	8.23	29.54	29.8	3.1	5
В2	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	11:09	9.28	8.49	29.55	29.57	3.01	5
В2	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	11:09	9.48	8.44	29.53	29.61	3.41	5
В2	20211006	Sunny	Moderate	Mid-Ebb	Bottom	4.1	11:08	9.21	8.27	29.58	29.13	3.32	6
В2	20211006	Sunny	Moderate	Mid-Ebb	Bottom	4.1	11:08	9.41	8.36	29.71	29.2	3.42	4
В3	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	12:36	8.66	8.16	31.07	29.8	3.16	5
В3	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	12:36	8.65	8.13	30.87	29.85	3.32	3
В3	20211006	Sunny	Moderate	Mid-Ebb	Bottom	3.6	12:35	8.79	8.06	30.98	30.01	3.58	7
В3	20211006	Sunny	Moderate	Mid-Ebb	Bottom	3.6	12:35	8.51	8.21	30.95	29.97	3.73	6
В4	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	12:26	8.62	8.09	31.06	29.8	3.14	4
В4	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	12:26	8.59	8.18	30.93	29.9	2.96	5

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
B4	20211006	Sunny	Moderate	Mid-Ebb	Bottom	3.4	12:25	9.41	8.22	30.33	29.54	4.34	4
B4	20211006	Sunny	Moderate	Mid-Ebb	Bottom	3.4	12:25	9.34	8.25	30.32	29.43	3.78	5
C1A	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	10:27	8.74	8.08	29.66	29.79	4.86	6
C1A	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	10:27	8.68	8.1	29.77	29.76	4.36	6
C1A	20211006	Sunny	Moderate	Mid-Ebb	Middle	5	10:26	9.09	8.44	30.7	29.36	4.7	9
C1A	20211006	Sunny	Moderate	Mid-Ebb	Middle	5	10:26	9.26	8.4	30.79	29.47	4.31	9
C1A	20211006	Sunny	Moderate	Mid-Ebb	Bottom	9	10:25	9.31	8.31	30.7	29.4	4.88	9
C1A	20211006	Sunny	Moderate	Mid-Ebb	Bottom	9	10:25	9.29	8.38	30.78	29.27	5.11	9
C2A	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	12:20	9.41	8.2	30.28	29.4	3.79	11
C2A	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	12:20	9.31	8.22	30.15	29.5	4.11	9
C2A	20211006	Sunny	Moderate	Mid-Ebb	Middle	6.2	12:19	9.42	8.33	30.33	29.4	3.94	9
C2A	20211006	Sunny	Moderate	Mid-Ebb	Middle	6.2	12:19	9.29	8.31	30.07	29.57	3.89	10
C2A	20211006	Sunny	Moderate	Mid-Ebb	Bottom	11.4	12:18	9.28	8.18	30.93	29.87	3.98	9
C2A	20211006	Sunny	Moderate	Mid-Ebb	Bottom	11.4	12:18	9.14	8.23	30.99	29.86	3.43	8
CR1	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	12:03	9.05	8.25	30.87	29.88	3.11	5
CR1	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	12:03	9.19	8.23	30.77	29.68	3.54	5
CR1	20211006	Sunny	Moderate	Mid-Ebb	Middle	6.85	12:02	9.22	8.21	30.9	29.67	2.59	3
CR1	20211006	Sunny	Moderate	Mid-Ebb	Middle	6.85	12:02	9.07	8.27	30.88	29.75	2.84	4
CR1	20211006	Sunny	Moderate	Mid-Ebb	Bottom	12.7	12:01	9.48	8.18	30.48	30.38	2.88	4
CR1	20211006	Sunny	Moderate	Mid-Ebb	Bottom	12.7	12:01	9.28	8.18	30.68	30.38	3.4	3
CR2	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	11:49	9.23	8.35	30.71	29.52	2.16	14
CR2	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	11:49	9.41	8.36	30.79	29.53	2.32	14
CR2	20211006	Sunny	Moderate	Mid-Ebb	Middle	5.8	11:48	9.36	8.43	30.77	29.64	3.17	10
CR2	20211006	Sunny	Moderate	Mid-Ebb	Middle	5.8	11:48	9.32	8.37	30.76	29.65	3.07	10
CR2	20211006	Sunny	Moderate	Mid-Ebb	Bottom	10.6	11:47	8.76	8.29	30.2	30.28	3.2	12
CR2	20211006	Sunny	Moderate	Mid-Ebb	Bottom	10.6	11:47	8.83	8.13	30.2	30.15	2.76	13
F1A	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	11:55	9.42	8.18	30.64	30.19	2.1	9
F1A	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	11:55	9.31	8.13	30.57	30.21	2.37	9
F1A	20211006	Sunny	Moderate	Mid-Ebb	Middle	4.1	11:54	9.38	8.19	30.51	30.24	2.34	7
F1A	20211006	Sunny	Moderate	Mid-Ebb	Middle	4.1	11:54	9.53	8.26	30.57	30.28	2.32	7
F1A	20211006	Sunny	Moderate	Mid-Ebb	Bottom	7.2	11:53	9.29	8.32	30.82	29.42	3.45	9
F1A	20211006	Sunny	Moderate	Mid-Ebb	Bottom	7.2	11:53	9.26	8.3	30.68	29.5	3.33	9
H1	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	11:35	8.72	8.28	30.06	30.2	2.35	5
H1	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	11:35	8.66	8.25	30.26	30.19	2.24	4
H1	20211006	Sunny	Moderate	Mid-Ebb	Middle	3.9	11:34	8.77	8.23	30.07	30.25	2.21	3
H1	20211006	Sunny	Moderate	Mid-Ebb	Middle	3.9	11:34	8.65	8.22	30.07	30.24	2.49	6
H1	20211006	Sunny	Moderate	Mid-Ebb	Bottom	6.8	11:33	9.01	8.28	30.57	29.59	2.66	5
H1	20211006	Sunny	Moderate	Mid-Ebb	Bottom	6.8	11:33	8.84	8.34	30.48	29.71	3.12	3
M1	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	11:26	8.97	8.4	30.54	29.77	2.43	11
M1	20211006	Sunny	Moderate	Mid-Ebb	Surface	1	11:26	9.02	8.27	30.52	29.65	2.03	11
M1	20211006	Sunny	Moderate	Mid-Ebb	Middle	4.4	11:25	8.91	8.38	30.62	29.8	2.38	6

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
M1	20211006	Sunny	Moderate	Mid-Ebb	Middle	4.4	11:25	8.88	8.25	30.61	29.59	2.17	6
M1	20211006	Sunny	Moderate	Mid-Ebb	Bottom	7.8	11:24	9.52	8.4	29.63	29.81	3.49	8
M1	20211006	Sunny	Moderate	Mid-Ebb	Bottom	7.8	11:24	9.52	8.39	29.53	29.63	3.8	5
B1	20211006	Sunny	Moderate	Mid-Flood	Surface	1	16:07	8.72	8.22	30.19	29.25	2.66	2.5
B1	20211006	Sunny	Moderate	Mid-Flood	Surface	1	16:07	8.57	8.18	30.3	29.08	2.95	4
B1	20211006	Sunny	Moderate	Mid-Flood	Bottom	3.5	16:06	9.81	8.4	31.1	28.87	3.53	10
B1	20211006	Sunny	Moderate	Mid-Flood	Bottom	3.5	16:06	9.68	8.33	30.84	28.81	2.98	10
B2	20211006	Sunny	Moderate	Mid-Flood	Surface	1	16:23	8.63	8.19	30.12	29.13	3.6	10
B2	20211006	Sunny	Moderate	Mid-Flood	Surface	1	16:23	8.7	8.24	30.26	29.24	3.57	11
B2	20211006	Sunny	Moderate	Mid-Flood	Bottom	4.1	16:22	8.7	8.23	30.1	29.29	3.76	14
B2	20211006	Sunny	Moderate	Mid-Flood	Bottom	4.1	16:22	8.68	8.21	30.33	29.27	4.03	13
В3	20211006	Sunny	Moderate	Mid-Flood	Surface	1	15:53	9.35	8.34	29.66	29.34	2.76	4
В3	20211006	Sunny	Moderate	Mid-Flood	Surface	1	15:53	9.32	8.32	29.43	29.39	3.08	3
В3	20211006	Sunny	Moderate	Mid-Flood	Bottom	3.9	15:52	9.33	8.32	29.41	29.4	3.93	14
В3	20211006	Sunny	Moderate	Mid-Flood	Bottom	3.9	15:52	9.4	8.38	29.42	29.22	3.84	14
B4	20211006	Sunny	Moderate	Mid-Flood	Surface	1	16:02	9.81	8.3	30.94	28.91	2.28	6
B4	20211006	Sunny	Moderate	Mid-Flood	Surface	1	16:02	9.68	8.36	31.04	28.94	2.05	6
B4	20211006	Sunny	Moderate	Mid-Flood	Bottom	3.9	16:01	9.66	8.35	30.8	28.93	3.38	10
В4	20211006	Sunny	Moderate	Mid-Flood	Bottom	3.9	16:01	9.69	8.31	30.95	28.83	2.9	11
C1A	20211006	Sunny	Moderate	Mid-Flood	Surface	1	15:42	9.11	8.14	30.19	28.46	3.64	14
C1A	20211006	Sunny	Moderate	Mid-Flood	Surface	1	15:42	9.18	8.08	30.11	28.62	4.03	14
C1A	20211006	Sunny	Moderate	Mid-Flood	Middle	5.15	15:41	8.78	8.37	31.04	28.93	3.79	9
C1A	20211006	Sunny	Moderate	Mid-Flood	Middle	5.15	15:41	8.78	8.33	30.93	28.79	4.12	9
C1A	20211006	Sunny	Moderate	Mid-Flood	Bottom	9.3	15:40	8.99	8.11	30.14	29.05	4.18	11
C1A	20211006	Sunny	Moderate	Mid-Flood	Bottom	9.3	15:40	8.98	8.2	30.27	28.86	4.05	12
C2A	20211006	Sunny	Moderate	Mid-Flood	Surface	1	15:41	9.19	8.2	30.09	28.55	3.89	9
C2A	20211006	Sunny	Moderate	Mid-Flood	Surface	1	15:41	9.26	8.09	29.89	28.5	4.19	9
C2A	20211006	Sunny	Moderate	Mid-Flood	Middle	5.75	15:40	8.87	8.39	30.94	28.88	3.82	7
C2A	20211006	Sunny	Moderate	Mid-Flood	Middle	5.75	15:40	8.89	8.33	30.8	28.75	4.23	7
C2A	20211006	Sunny	Moderate	Mid-Flood	Bottom	10.5	15:39	9.06	8.08	30.48	28.99	4.07	7
C2A	20211006	Sunny	Moderate	Mid-Flood	Bottom	10.5	15:39	9.07	8.13	30.46	28.98	4.06	7
CR1	20211006	Sunny	Moderate	Mid-Flood	Surface	1	17:14	9	8.39	30.76	28.89	2.65	5
CR1	20211006	Sunny	Moderate	Mid-Flood	Surface	1	17:14	8.92	8.32	31.14	28.88	2.44	4
CR1	20211006	Sunny	Moderate	Mid-Flood	Middle	6.05	17:13	8.98	8.31	30.82	29.04	2.85	8
CR1	20211006	Sunny	Moderate	Mid-Flood	Middle	6.05	17:13	8.96	8.32	30.77	29.02	2.38	7
CR1	20211006	Sunny	Moderate	Mid-Flood	Bottom	11.1	17:12	9.04	8.32	30.8	29	2.95	8
CR1	20211006	Sunny	Moderate	Mid-Flood	Bottom	11.1	17:12	8.88	8.35	31.05	28.94	3.4	8
CR2	20211006	Sunny	Moderate	Mid-Flood	Surface	1	17:00	9.17	8.3	29.9	28.58	2.15	7
CR2	20211006	Sunny	Moderate	Mid-Flood	Surface	1	17:00	9.09	8.26	29.93	28.54	1.89	10
CR2	20211006	Sunny	Moderate	Mid-Flood	Middle	5.65	16:59	9.12	8.3	29.91	28.55	2.37	5
CR2	20211006	Sunny	Moderate	Mid-Flood	Middle	5.65	16:59	9.19	8.21	29.77	28.69	2.14	7

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
CR2	20211006	Sunny	Moderate	Mid-Flood	Bottom	10.3	16:58	9.15	8.35	29.97	28.56	2.28	7
CR2	20211006	Sunny	Moderate	Mid-Flood	Bottom	10.3	16:58	9.07	8.23	29.91	28.48	2.42	8
F1A	20211006	Sunny	Moderate	Mid-Flood	Surface	1	16:37	8.77	8.29	29.91	29.4	2.93	10
F1A	20211006	Sunny	Moderate	Mid-Flood	Surface	1	16:37	8.88	8.23	30.15	29.23	3.32	10
F1A	20211006	Sunny	Moderate	Mid-Flood	Middle	3.9	16:36	8.87	8.32	30.22	29.41	2.56	9
F1A	20211006	Sunny	Moderate	Mid-Flood	Middle	3.9	16:36	8.78	8.25	30.21	29.38	2.57	10
F1A	20211006	Sunny	Moderate	Mid-Flood	Bottom	6.8	16:35	8.81	8.31	30.35	29.39	3.06	11
F1A	20211006	Sunny	Moderate	Mid-Flood	Bottom	6.8	16:35	8.91	8.21	29.97	29.23	3.25	10
H1	20211006	Sunny	Moderate	Mid-Flood	Surface	1	16:50	8.49	8.36	29.34	28.79	2.41	8
H1	20211006	Sunny	Moderate	Mid-Flood	Surface	1	16:50	8.56	8.34	29.68	28.93	2.56	8
H1	20211006	Sunny	Moderate	Mid-Flood	Middle	3.85	16:49	8.43	8.4	29.34	28.88	2.51	8
H1	20211006	Sunny	Moderate	Mid-Flood	Middle	3.85	16:49	8.59	8.42	29.34	28.97	2.66	8
H1	20211006	Sunny	Moderate	Mid-Flood	Bottom	6.7	16:48	8.56	8.34	29.36	28.97	3.25	13
H1	20211006	Sunny	Moderate	Mid-Flood	Bottom	6.7	16:48	8.5	8.32	29.36	28.96	2.76	10
M1	20211006	Sunny	Moderate	Mid-Flood	Surface	1	17:08	9.53	8.43	30.46	29.4	3.15	7
M1	20211006	Sunny	Moderate	Mid-Flood	Surface	1	17:08	9.69	8.36	30.61	29.39	2.64	7
M1	20211006	Sunny	Moderate	Mid-Flood	Middle	4.05	17:07	9.64	8.47	30.72	29.43	2.84	12
M1	20211006	Sunny	Moderate	Mid-Flood	Middle	4.05	17:07	9.67	8.38	30.61	29.34	2.67	10
M1	20211006	Sunny	Moderate	Mid-Flood	Bottom	7.1	17:06	9.67	8.34	30.35	29.45	2.73	8
M1	20211006	Sunny	Moderate	Mid-Flood	Bottom	7.1	17:06	9.55	8.34	30.35	29.47	3.1	5
B1	20211011	Sunny	Moderate	Mid-Flood	Surface	1	10:12	8.73	8.44	32.08	28.92	2.52	8
B1	20211011	Sunny	Moderate	Mid-Flood	Surface	1	10:12	8.82	8.38	32.02	29.01	2.99	8
B1	20211011	Sunny	Moderate	Mid-Flood	Bottom	4.2	10:11	8.88	8.48	31.71	29	2.87	6
B1	20211011	Sunny	Moderate	Mid-Flood	Bottom	4.2	10:11	9.12	8.48	32.32	28.94	2.89	5
B2	20211011	Sunny	Moderate	Mid-Flood	Surface	1	10:32	7.68	8.29	30.4	29.02	2.92	6
B2	20211011	Sunny	Moderate	Mid-Flood	Surface	1	10:32	7.74	8.33	30.11	28.97	2.8	5
B2	20211011	Sunny	Moderate	Mid-Flood	Bottom	3.9	10:31	8.16	8.29	30.21	29.01	2.52	6
B2	20211011	Sunny	Moderate	Mid-Flood	Bottom	3.9	10:31	7.99	8.28	30.53	29.02	2.81	6
В3	20211011	Sunny	Moderate	Mid-Flood	Surface	1	10:59	7.95	8.4	30.78	28.96	2.25	11
В3	20211011	Sunny	Moderate	Mid-Flood	Surface	1	10:59	7.96	8.34	30.63	28.96	2.31	7
В3	20211011	Sunny	Moderate	Mid-Flood	Bottom	3.6	10:58	7.66	8.31	30.68	28.94	4.15	9
В3	20211011	Sunny	Moderate	Mid-Flood	Bottom	3.6	10:58	7.6	8.41	30.68	29.05	3.72	7
B4	20211011	Sunny	Moderate	Mid-Flood	Surface	1	10:49	7.42	8.41	31.03	29.02	3.84	10
В4	20211011	Sunny	Moderate	Mid-Flood	Surface	1	10:49	7.43	8.3	30.64	29.1	3.41	10
В4	20211011	Sunny	Moderate	Mid-Flood	Bottom	3.5	10:48	8.01	8.35	29.93	29.09	2.78	5
В4	20211011	Sunny	Moderate	Mid-Flood	Bottom	3.5	10:48	7.68	8.3	30.54	29.18	3.03	6
C1A	20211011	Sunny	Moderate	Mid-Flood	Surface	1	09:40	7.91	8.45	31.44	29.16	6.17	7
C1A	20211011	Sunny	Moderate	Mid-Flood	Surface	1	09:40	8.13	8.31	31.21	29.15	5.52	7
C1A	20211011	Sunny	Moderate	Mid-Flood	Middle	5.1	09:39	8.95	8.47	30.68	28.49	6.61	9
C1A	20211011	Sunny	Moderate	Mid-Flood	Middle	5.1	09:39	8.86	8.39	30.97	28.61	6.88	10
C1A	20211011	Sunny	Moderate	Mid-Flood	Bottom	9.2	09:38	8.71	8.51	31.19	28.56	6.39	8

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
C1A	20211011	Sunny	Moderate	Mid-Flood	Bottom	9.2	09:38	8.63	8.45	30.65	28.53	6.92	6
C2A	20211011	Sunny	Moderate	Mid-Flood	Surface	1	08:48	8.85	8.36	30.47	28.2	6.64	6
C2A	20211011	Sunny	Moderate	Mid-Flood	Surface	1	08:48	8.93	8.49	30.38	28.17	6.36	6
C2A	20211011	Sunny	Moderate	Mid-Flood	Middle	5.55	08:47	8.79	8.42	31.81	28.35	7.19	6
C2A	20211011	Sunny	Moderate	Mid-Flood	Middle	5.55	08:47	8.75	8.41	31.86	28.41	7.02	6
C2A	20211011	Sunny	Moderate	Mid-Flood	Bottom	10.1	08:46	8.75	8.44	31.71	28.34	5.99	6
C2A	20211011	Sunny	Moderate	Mid-Flood	Bottom	10.1	08:46	8.8	8.43	32.17	28.37	6.14	7
CR1	20211011	Sunny	Moderate	Mid-Flood	Surface	1	09:09	7.74	8.39	29.86	28.52	2.82	6
CR1	20211011	Sunny	Moderate	Mid-Flood	Surface	1	09:09	8.2	8.39	29.9	28.46	2.68	6
CR1	20211011	Sunny	Moderate	Mid-Flood	Middle	6.2	09:08	8.1	8.42	30.1	28.56	3.52	6
CR1	20211011	Sunny	Moderate	Mid-Flood	Middle	6.2	09:08	8.19	8.48	29.96	28.61	3.22	7
CR1	20211011	Sunny	Moderate	Mid-Flood	Bottom	11.4	09:07	8.97	8.38	30.39	28.19	3.07	8
CR1	20211011	Sunny	Moderate	Mid-Flood	Bottom	11.4	09:07	8.78	8.47	30.27	28.2	2.67	6
CR2	20211011	Sunny	Moderate	Mid-Flood	Surface	1	09:22	8.62	8.37	31.23	28.6	3.29	9
CR2	20211011	Sunny	Moderate	Mid-Flood	Surface	1	09:22	8.66	8.5	30.65	28.57	3.35	5
CR2	20211011	Sunny	Moderate	Mid-Flood	Middle	5.8	09:21	8.52	8.43	30.81	28.96	3.89	5
CR2	20211011	Sunny	Moderate	Mid-Flood	Middle	5.8	09:21	8.32	8.32	30.95	28.89	4.01	7
CR2	20211011	Sunny	Moderate	Mid-Flood	Bottom	10.6	09:20	8.3	8.36	30.68	28.94	4.08	7
CR2	20211011	Sunny	Moderate	Mid-Flood	Bottom	10.6	09:20	8.5	8.32	30.41	28.99	4.24	6
F1A	20211011	Sunny	Moderate	Mid-Flood	Surface	1	10:18	8.5	8.29	31.78	28.49	2.12	6
F1A	20211011	Sunny	Moderate	Mid-Flood	Surface	1	10:18	8.68	8.32	31.25	28.54	2.01	7
F1A	20211011	Sunny	Moderate	Mid-Flood	Middle	4.05	10:17	8.61	8.42	31.12	28.55	2.56	6
F1A	20211011	Sunny	Moderate	Mid-Flood	Middle	4.05	10:17	8.5	8.27	31.26	28.56	2.58	6
F1A	20211011	Sunny	Moderate	Mid-Flood	Bottom	7.1	10:16	8.57	8.41	31.33	28.42	2.6	5
F1A	20211011	Sunny	Moderate	Mid-Flood	Bottom	7.1	10:16	8.65	8.4	31.17	28.57	2.38	6
H1	20211011	Sunny	Moderate	Mid-Flood	Surface	1	10:59	8.18	8.29	31.18	28.9	3.06	5
H1	20211011	Sunny	Moderate	Mid-Flood	Surface	1	10:59	8	8.32	30.85	29.06	2.77	6
H1	20211011	Sunny	Moderate	Mid-Flood	Middle	3.8	10:58	8.39	8.37	31.32	28.98	3.01	6
H1	20211011	Sunny	Moderate	Mid-Flood	Middle	3.8	10:58	8.15	8.32	30.77	28.95	3	4
H1	20211011	Sunny	Moderate	Mid-Flood	Bottom	6.6	10:57	7.79	8.3	30.62	29.04	3.86	6
H1	20211011	Sunny	Moderate	Mid-Flood	Bottom	6.6	10:57	7.5	8.31	30.69	29.07	3.73	7
M1	20211011	Sunny	Moderate	Mid-Flood	Surface	1	09:52	9.1	8.42	32.02	28.9	3.11	7
M1	20211011	Sunny	Moderate	Mid-Flood	Surface	1	09:52	8.66	8.37	31.89	28.91	3.15	5
M1	20211011	Sunny	Moderate	Mid-Flood	Middle	4.2	09:51	7.88	8.35	31.2	29.17	2.9	7
M1	20211011	Sunny	Moderate	Mid-Flood	Middle	4.2	09:51	8.02	8.41	31.34	29.22	3.27	8
M1	20211011	Sunny	Moderate	Mid-Flood	Bottom	7.4	09:50	8.24	8.47	31.04	29.29	2.52	8
M1	20211011	Sunny	Moderate	Mid-Flood	Bottom	7.4	09:50	8.19	8.46	31.39	29.19	2.44	6
B1	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	14:47	7.86	8.37	30.2	29.77	2.34	8
B1	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	14:47	7.86	8.49	30.41	29.64	2.77	8
B1	20211011	Sunny	Moderate	Mid-Ebb	Bottom	3.6	14:46	9.24	8.32	31.55	29.53	4.2	8
B1	20211011	Sunny	Moderate	Mid-Ebb	Bottom	3.6	14:46	9.35	8.28	31.42	29.49	4.12	8

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
B2	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	15:04	7.87	8.39	30.37	29.79	2.22	7
B2	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	15:04	7.84	8.48	30.7	29.62	2.08	7
B2	20211011	Sunny	Moderate	Mid-Ebb	Bottom	4.6	15:03	7.85	8.49	30.24	29.8	2.85	5
B2	20211011	Sunny	Moderate	Mid-Ebb	Bottom	4.6	15:03	7.98	8.47	30.7	29.68	3.27	6
В3	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	14:31	8.35	8.37	31.65	28.84	2.98	8
В3	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	14:31	8.56	8.37	31.96	29.05	2.93	10
В3	20211011	Sunny	Moderate	Mid-Ebb	Bottom	4.5	14:30	8.58	8.36	31.39	28.81	3.38	9
В3	20211011	Sunny	Moderate	Mid-Ebb	Bottom	4.5	14:30	8.48	8.36	31.5	29.02	2.87	9
B4	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	14:40	9.38	8.2	31.57	29.55	3.1	11
B4	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	14:40	9.15	8.21	31.61	29.69	3.05	8
B4	20211011	Sunny	Moderate	Mid-Ebb	Bottom	3.6	14:39	9.18	8.22	31.54	29.72	3.66	8
B4	20211011	Sunny	Moderate	Mid-Ebb	Bottom	3.6	14:39	9.38	8.26	31.26	29.54	3.98	7
C1A	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	14:17	8.19	8.38	31.35	29.17	6.34	10
C1A	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	14:17	8.25	8.39	31.59	29.34	5.93	10
C1A	20211011	Sunny	Moderate	Mid-Ebb	Middle	4.95	14:16	8.01	8.53	31.57	29.46	5.22	11
C1A	20211011	Sunny	Moderate	Mid-Ebb	Middle	4.95	14:16	7.88	8.49	31.89	29.19	5.63	11
C1A	20211011	Sunny	Moderate	Mid-Ebb	Bottom	8.9	14:15	8.49	8.35	31.6	29.73	4.95	11
C1A	20211011	Sunny	Moderate	Mid-Ebb	Bottom	8.9	14:15	8.72	8.45	31.79	29.52	5.01	11
C2A	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	14:17	8.32	8.48	31.8	29.46	5.55	14
C2A	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	14:17	8.39	8.4	31.51	29.35	5.72	14
C2A	20211011	Sunny	Moderate	Mid-Ebb	Middle	5.95	14:16	8.18	8.51	31.76	29.26	5.73	8
C2A	20211011	Sunny	Moderate	Mid-Ebb	Middle	5.95	14:16	8.18	8.54	31.72	29.39	5.42	7
C2A	20211011	Sunny	Moderate	Mid-Ebb	Bottom	10.9	14:15	8.46	8.36	31.7	29.61	5.42	10
C2A	20211011	Sunny	Moderate	Mid-Ebb	Bottom	10.9	14:15	8.73	8.42	31.53	29.52	5.61	10
CR1	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	15:57	8.55	8.57	30.88	29.27	2.49	11
CR1	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	15:57	8.62	8.56	30.41	29.08	2.33	11
CR1	20211011	Sunny	Moderate	Mid-Ebb	Middle	6.55	15:56	8.82	8.58	30.44	29.3	2.28	7
CR1	20211011	Sunny	Moderate	Mid-Ebb	Middle	6.55	15:56	8.48	8.49	30.86	29.22	2.3	6
CR1	20211011	Sunny	Moderate	Mid-Ebb	Bottom	12.1	15:55	8.59	8.47	30.6	29.19	3.24	8
CR1	20211011	Sunny	Moderate	Mid-Ebb	Bottom	12.1	15:55	8.6	8.52	30.97	29.25	3.16	8
CR2	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	15:45	9.34	8.44	30.18	29.13	2.99	5
CR2	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	15:45	9.02	8.42	29.94	28.91	2.56	5
CR2	20211011	Sunny	Moderate	Mid-Ebb	Middle	6.05	15:44	9	8.47	30.12	29.06	2.47	3
CR2	20211011	Sunny	Moderate	Mid-Ebb	Middle	6.05	15:44	9.2	8.51	30.22	29.11	2.25	4
CR2	20211011	Sunny	Moderate	Mid-Ebb	Bottom	11.1	15:43	8.96	8.55	30.4	28.9	3.61	8
CR2	20211011	Sunny	Moderate	Mid-Ebb	Bottom	11.1	15:43	8.94	8.47	29.82	29.08	3.13	8
F1A	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	15:13	8.88	8.3	31.72	29.44	2.96	13
F1A	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	15:13	8.75	8.28	31.25	29.42	2.64	13
F1A	20211011	Sunny	Moderate	Mid-Ebb	Middle	4.2	15:12	8.59	8.31	31.65	29.49	2.42	17
F1A	20211011	Sunny	Moderate	Mid-Ebb	Middle	4.2	15:12	8.63	8.29	31.34	29.46	2.16	17
F1A	20211011	Sunny	Moderate	Mid-Ebb	Bottom	7.4	15:11	8.6	8.31	31.74	29.41	3.33	16

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
F1A	20211011	Sunny	Moderate	Mid-Ebb	Bottom	7.4	15:11	8.78	8.32	31.47	29.4	2.86	18
H1	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	15:30	8.73	8.23	31.5	29.82	2.82	8
H1	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	15:30	8.67	8.29	31.37	29.71	2.9	6
H1	20211011	Sunny	Moderate	Mid-Ebb	Middle	4.15	15:29	8.96	8.3	31.81	29.65	2.77	9
H1	20211011	Sunny	Moderate	Mid-Ebb	Middle	4.15	15:29	8.63	8.27	31.96	29.67	2.59	9
H1	20211011	Sunny	Moderate	Mid-Ebb	Bottom	7.3	15:28	8.58	8.29	31.84	29.77	2.87	10
H1	20211011	Sunny	Moderate	Mid-Ebb	Bottom	7.3	15:28	8.82	8.34	31.66	29.68	2.91	10
M1	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	15:39	9.1	8.2	32.12	29.44	3.3	5
M1	20211011	Sunny	Moderate	Mid-Ebb	Surface	1	15:39	9.1	8.27	31.8	29.49	2.85	5
M1	20211011	Sunny	Moderate	Mid-Ebb	Middle	4.55	15:38	9.1	8.29	31.79	29.67	3.06	9
M1	20211011	Sunny	Moderate	Mid-Ebb	Middle	4.55	15:38	9.13	8.31	31.79	29.67	2.84	6
M1	20211011	Sunny	Moderate	Mid-Ebb	Bottom	8.1	15:37	8.86	8.29	32.03	29.44	3.36	2.5
M1	20211011	Sunny	Moderate	Mid-Ebb	Bottom	8.1	15:37	8.99	8.25	31.68	29.53	3.26	2.5
B1	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	08:37	9.14	8.38	29.37	27.11	2.57	10
B1	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	08:37	9.04	8.44	29.41	26.94	2.39	10
B1	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	3.7	08:36	9.21	8.38	28.81	26.9	3.3	15
B1	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	3.7	08:36	8.92	8.44	28.79	26.84	3.47	15
B2	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	08:55	9.22	8.41	29.15	26.43	3.53	12
B2	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	08:55	9.13	8.38	29.3	26.39	3.08	12
B2	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	4.6	08:54	9	8.37	29.19	26.41	3.57	13
B2	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	4.6	08:54	8.89	8.38	29.33	26.31	3.54	16
В3	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	09:53	8.48	8.54	29.56	26.83	2.52	18
В3	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	09:53	8.34	8.59	29.65	26.86	2.11	18
В3	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	3.7	09:52	8.56	8.59	29.75	26.83	3.8	15
В3	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	3.7	09:52	8.3	8.48	29.58	26.69	3.18	15
B4	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	09:44	8.41	8.53	29.72	26.67	2.66	14
B4	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	09:44	8.45	8.52	29.69	26.89	3.16	14
B4	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	3.6	09:43	9.1	8.36	29.33	27.13	4.13	17
B4	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	3.6	09:43	8.73	8.4	29.42	27.18	4.01	17
C1A	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	08:02	8.93	8.43	28.7	26.96	5.41	17
C1A	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	08:02	8.93	8.39	28.6	26.8	5.05	17
C1A	20211015	Cloudy	Moderate	Mid-Ebb	Middle	4.8	08:01	7.81	8.49	29.68	26.43	4.33	10
C1A	20211015	Cloudy	Moderate	Mid-Ebb	Middle	4.8	08:01	8.06	8.47	29.53	26.6	4.76	7
C1A	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	8.6	08:00	8.08	8.44	29.58	26.55	4.36	10
C1A	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	8.6	08:00	8.11	8.51	29.67	26.61	4.16	7
C2A	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	10:10	8.4	8.42	29.93	26.75	3.61	10
C2A	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	10:10	8.1	8.34	29.72	26.76	3.53	8
C2A	20211015	Cloudy	Moderate	Mid-Ebb	Middle	5.65	10:09	8.26	8.41	29.79	26.76	4.04	8
C2A	20211015	Cloudy	Moderate	Mid-Ebb	Middle	5.65	10:09	8.18	8.33	29.75	26.8	3.84	7
C2A	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	10.3	10:08	8.1	8.4	29.81	26.68	3.47	9
C2A	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	10.3	10:08	8.2	8.41	29.82	26.65	3.26	9

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
CR1	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	09:44	8.79	8.41	29.38	27.14	2.63	9
CR1	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	09:44	8.83	8.39	29.32	27.31	2.88	11
CR1	20211015	Cloudy	Moderate	Mid-Ebb	Middle	6.25	09:43	8.93	8.34	29.44	27.32	3.83	17
CR1	20211015	Cloudy	Moderate	Mid-Ebb	Middle	6.25	09:43	8.92	8.4	29.27	27.23	3.42	17
CR1	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	11.5	09:42	7.91	8.51	30.05	26.63	3.64	17
CR1	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	11.5	09:42	7.73	8.43	30.14	26.6	3.49	17
CR2	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	09:59	7.9	8.43	30	26.46	2.66	20
CR2	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	09:59	8.21	8.42	30.12	26.51	3.05	20
CR2	20211015	Cloudy	Moderate	Mid-Ebb	Middle	5.65	09:58	8.15	8.45	30.13	26.54	3.21	22
CR2	20211015	Cloudy	Moderate	Mid-Ebb	Middle	5.65	09:58	8	8.4	30.01	26.52	3.03	22
CR2	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	10.3	09:57	8.13	8.48	30.05	26.51	3.96	8
CR2	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	10.3	09:57	8.21	8.48	30.02	26.56	3.66	8
F1A	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	09:19	7.83	8.52	29.94	26.6	2.57	10
F1A	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	09:19	7.67	8.48	30.09	26.63	2.48	8
F1A	20211015	Cloudy	Moderate	Mid-Ebb	Middle	4.2	09:18	8.45	8.46	29.19	27.14	2.93	11
F1A	20211015	Cloudy	Moderate	Mid-Ebb	Middle	4.2	09:18	8.46	8.54	29.23	27.08	2.85	11
F1A	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	7.4	09:17	9.01	8.32	29.17	26.25	3.06	8
F1A	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	7.4	09:17	9.09	8.3	29.2	26.18	3.26	10
H1	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	09:19	7.65	8.44	29.98	26.8	3.18	20
H1	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	09:19	7.7	8.43	29.98	26.69	2.67	19
H1	20211015	Cloudy	Moderate	Mid-Ebb	Middle	4.25	09:18	8.28	8.51	29.14	27.14	2.92	18
H1	20211015	Cloudy	Moderate	Mid-Ebb	Middle	4.25	09:18	8.47	8.46	29.17	27.02	3.22	18
H1	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	7.5	09:17	8.23	8.5	29.23	27.03	3.22	16
H1	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	7.5	09:17	8.43	8.46	29.39	26.97	3.07	16
M1	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	08:52	8.98	8.35	29.9	26.97	2.84	8
M1	20211015	Cloudy	Moderate	Mid-Ebb	Surface	1	08:52	8.92	8.35	30.04	26.96	3.26	7
M1	20211015	Cloudy	Moderate	Mid-Ebb	Middle	4.75	08:51	9	8.34	29.92	26.82	2.7	7
M1	20211015	Cloudy	Moderate	Mid-Ebb	Middle	4.75	08:51	9.03	8.35	30.04	26.72	3.04	9
M1	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	8.5	08:50	8.87	8.36	29.6	26.97	2.93	9
M1	20211015	Cloudy	Moderate	Mid-Ebb	Bottom	8.5	08:50	9.04	8.36	29.35	27.04	3.41	7
B1	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	14:59	8.65	8.4	28.87	26.55	3.08	12
B1	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	14:59	8.62	8.33	29.13	26.6	2.89	12
B1	20211015	Cloudy	Moderate	Mid-Flood	Bottom	4.2	14:58	8.71	8.45	29.76	26.34	3.31	10
B1	20211015	Cloudy	Moderate	Mid-Flood	Bottom	4.2	14:58	8.58	8.51	29.88	26.41	3.05	10
B2	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	15:15	8.67	8.32	29.08	26.59	3.61	18
B2	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	15:15	8.56	8.34	29.12	26.45	3.07	18
B2	20211015	Cloudy	Moderate	Mid-Flood	Bottom	3.9	15:14	8.69	8.3	28.83	26.54	3.65	9
B2	20211015	Cloudy	Moderate	Mid-Flood	Bottom	3.9	15:14	8.68	8.37	28.95	26.39	4.06	9
В3	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	14:40	8.38	8.36	29.39	26.38	2.38	9
В3	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	14:40	8.57	8.37	29.53	26.37	2.69	8
В3	20211015	Cloudy	Moderate	Mid-Flood	Bottom	4.3	14:39	8.53	8.41	29.69	26.34	3.26	12

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
В3	20211015	Cloudy	Moderate	Mid-Flood	Bottom	4.3	14:39	8.62	8.38	29.37	26.42	2.86	13
B4	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	14:50	8.59	8.46	30.01	26.56	3.24	16
B4	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	14:50	8.6	8.56	29.86	26.52	2.98	20
B4	20211015	Cloudy	Moderate	Mid-Flood	Bottom	4.4	14:49	8.74	8.53	29.78	26.39	3.71	11
B4	20211015	Cloudy	Moderate	Mid-Flood	Bottom	4.4	14:49	8.66	8.49	29.96	26.35	4.02	14
C1A	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	14:28	9.15	8.56	29.08	27.09	3.3	7
C1A	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	14:28	9.21	8.53	29.02	27.06	3.3	8
C1A	20211015	Cloudy	Moderate	Mid-Flood	Middle	5.15	14:27	8.36	8.52	30.17	26.39	4.06	9
C1A	20211015	Cloudy	Moderate	Mid-Flood	Middle	5.15	14:27	8.39	8.49	30.29	26.37	3.82	6
C1A	20211015	Cloudy	Moderate	Mid-Flood	Bottom	9.3	14:26	8.82	8.36	30.46	26.89	4.14	7
C1A	20211015	Cloudy	Moderate	Mid-Flood	Bottom	9.3	14:26	8.97	8.38	30.54	26.89	3.76	7
C2A	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	14:28	9.03	8.42	29.16	27.13	4.36	6
C2A	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	14:28	9.12	8.5	29.26	26.97	4.42	5
C2A	20211015	Cloudy	Moderate	Mid-Flood	Middle	6	14:27	8.23	8.55	30.08	26.45	4.54	8
C2A	20211015	Cloudy	Moderate	Mid-Flood	Middle	6	14:27	8.51	8.45	29.95	26.36	4.53	7
C2A	20211015	Cloudy	Moderate	Mid-Flood	Bottom	11	14:26	8.91	8.37	30.54	26.85	4.69	7
C2A	20211015	Cloudy	Moderate	Mid-Flood	Bottom	11	14:26	8.99	8.26	30.28	26.91	4.29	6
CR1	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	16:09	8.01	8.51	29.38	26.49	3.18	6
CR1	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	16:09	7.91	8.54	29.34	26.43	2.88	7
CR1	20211015	Cloudy	Moderate	Mid-Flood	Middle	6.2	16:08	7.91	8.54	29.39	26.5	2.96	9
CR1	20211015	Cloudy	Moderate	Mid-Flood	Middle	6.2	16:08	8.16	8.5	29.13	26.33	2.94	10
CR1	20211015	Cloudy	Moderate	Mid-Flood	Bottom	11.4	16:07	7.85	8.55	29.38	26.42	3.85	2.5
CR1	20211015	Cloudy	Moderate	Mid-Flood	Bottom	11.4	16:07	8.14	8.56	29.1	26.43	4.22	2.5
CR2	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	15:56	8.76	8.48	28.86	26.6	2.58	6
CR2	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	15:56	8.46	8.42	28.84	26.51	2.74	5
CR2	20211015	Cloudy	Moderate	Mid-Flood	Middle	5.6	15:55	8.69	8.39	28.97	26.74	3.45	8
CR2	20211015	Cloudy	Moderate	Mid-Flood	Middle	5.6	15:55	8.74	8.38	28.94	26.62	3.07	13
CR2	20211015	Cloudy	Moderate	Mid-Flood	Bottom	10.2	15:54	8.57	8.4	29.12	26.66	3.43	7
CR2	20211015	Cloudy	Moderate	Mid-Flood	Bottom	10.2	15:54	8.58	8.38	29.08	26.69	3.83	6
F1A	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	15:24	8.65	8.38	29.42	26.77	3.55	7
F1A	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	15:24	8.38	8.39	29.47	26.74	3.24	7
F1A	20211015	Cloudy	Moderate	Mid-Flood	Middle	4	15:23	8.7	8.42	29.29	26.65	3.22	18
F1A	20211015	Cloudy	Moderate	Mid-Flood	Middle	4	15:23	8.5	8.41	29.61	26.62	3.17	16
F1A	20211015	Cloudy	Moderate	Mid-Flood	Bottom	7	15:22	8.51	8.47	29.39	26.73	3.83	5
F1A	20211015	Cloudy	Moderate	Mid-Flood	Bottom	7	15:22	8.58	8.38	29.48	26.76	3.85	6
H1	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	15:48	8.62	8.42	30.05	27.14	2.35	17
H1	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	15:48	8.38	8.38	30.11	26.92	2.22	17
H1	20211015	Cloudy	Moderate	Mid-Flood	Middle	4.15	15:47	8.49	8.32	30.04	26.94	2.93	16
H1	20211015	Cloudy	Moderate	Mid-Flood	Middle	4.15	15:47	8.37	8.42	30.03	26.93	2.47	16
H1	20211015	Cloudy	Moderate	Mid-Flood	Bottom	7.3	15:46	8.34	8.42	29.87	27.11	3.08	6
H1	20211015	Cloudy	Moderate	Mid-Flood	Bottom	7.3	15:46	8.6	8.33	29.97	27.14	2.65	5

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
M1	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	15:53	8.67	8.33	28.86	26.5	3.09	6
M1	20211015	Cloudy	Moderate	Mid-Flood	Surface	1	15:53	8.91	8.38	28.66	26.41	3.18	8
M1	20211015	Cloudy	Moderate	Mid-Flood	Middle	4.05	15:52	8.72	8.41	28.99	26.51	3.42	7
M1	20211015	Cloudy	Moderate	Mid-Flood	Middle	4.05	15:52	8.75	8.31	28.87	26.59	3.56	5
M1	20211015	Cloudy	Moderate	Mid-Flood	Bottom	7.1	15:51	8.82	8.37	28.67	26.47	3.29	8
M1	20211015	Cloudy	Moderate	Mid-Flood	Bottom	7.1	15:51	8.86	8.42	28.83	26.56	3.34	8
B1	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	08:58	8.03	8.32	30.91	27.1	2	26
B1	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	08:58	8.21	8.22	30.74	27.05	2.18	26
B1	20211017	Sunny	Moderate	Mid-Ebb	Bottom	3.6	08:57	8.15	8.28	31.02	27.08	3.28	8
B1	20211017	Sunny	Moderate	Mid-Ebb	Bottom	3.6	08:57	8.25	8.23	30.64	27.06	3.36	7
B2	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	09:15	8.22	8.15	30.69	26.65	2.59	6
B2	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	09:15	8.1	8.4	30.73	26.85	2.97	8
B2	20211017	Sunny	Moderate	Mid-Ebb	Bottom	4.9	09:14	8.05	8.16	30.98	27.13	2.54	3
B2	20211017	Sunny	Moderate	Mid-Ebb	Bottom	4.9	09:14	8.06	8.24	30.84	27.05	2.8	3
В3	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	10:55	8.25	8.37	31.15	27.08	2.03	9
В3	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	10:55	8.21	8.22	30.87	27.05	1.98	6
В3	20211017	Sunny	Moderate	Mid-Ebb	Bottom	4.3	10:54	7.97	8.23	30.65	27.16	2.89	8
В3	20211017	Sunny	Moderate	Mid-Ebb	Bottom	4.3	10:54	7.93	8.35	30.63	27.18	2.66	7
B4	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	10:45	8.03	8.21	30.82	27.19	2.97	9
B4	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	10:45	8.23	8.33	30.95	27.15	2.5	7
B4	20211017	Sunny	Moderate	Mid-Ebb	Bottom	4	10:44	7.93	8.28	31.11	27.16	2.95	7
B4	20211017	Sunny	Moderate	Mid-Ebb	Bottom	4	10:44	8.14	8.15	31.17	27	3.1	9
C1A	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	08:30	7.92	8.22	30.76	26.97	3.92	8
C1A	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	08:30	8.18	8.1	30.71	26.92	4.41	6
C1A	20211017	Sunny	Moderate	Mid-Ebb	Middle	4.75	08:29	7.99	8.41	30.89	27.54	3.28	7
C1A	20211017	Sunny	Moderate	Mid-Ebb	Middle	4.75	08:29	7.92	8.19	31.22	27.46	3.78	9
C1A	20211017	Sunny	Moderate	Mid-Ebb	Bottom	8.5	08:28	8.03	8.42	30.67	27.53	3.75	9
C1A	20211017	Sunny	Moderate	Mid-Ebb	Bottom	8.5	08:28	8	8.06	31.13	27.4	3.2	10
C2A	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	10:30	8.15	8.1	30.7	27.06	3.41	10
C2A	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	10:30	8.05	8.18	30.8	27.05	2.98	9
C2A	20211017	Sunny	Moderate	Mid-Ebb	Middle	5.75	10:29	8.23	8.4	30.68	27.17	3.66	10
C2A	20211017	Sunny	Moderate	Mid-Ebb	Middle	5.75	10:29	8.07	8.43	30.7	27.16	3.93	14
C2A	20211017	Sunny	Moderate	Mid-Ebb	Bottom	10.5	10:28	8.1	8.23	31	27.15	3.41	9
C2A	20211017	Sunny	Moderate	Mid-Ebb	Bottom	10.5	10:28	8.02	8.17	30.87	27.19	3.53	10
CR1	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	10:09	8.2	8.4	31.22	27.27	2.81	11
CR1	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	10:09	8.25	8.17	31.14	27.09	3	9
CR1	20211017	Sunny	Moderate	Mid-Ebb	Middle	6.75	10:08	8.08	8.37	30.87	27.38	2.31	5
CR1	20211017	Sunny	Moderate	Mid-Ebb	Middle	6.75	10:08	8.21	8.37	31.03	27.37	2.64	5
CR1	20211017	Sunny	Moderate	Mid-Ebb	Bottom	12.5	10:07	8.01	8.34	31.22	27.33	3.05	4
CR1	20211017	Sunny	Moderate	Mid-Ebb	Bottom	12.5	10:07	8.18	8.34	30.89	27.37	3.39	4
CR2	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	09:55	8.24	8.1	31.2	26.81	2.46	7

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
CR2	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	09:55	8.17	8.43	31.14	26.93	2.76	4
CR2	20211017	Sunny	Moderate	Mid-Ebb	Middle	5.55	09:54	8.09	8.21	30.77	26.9	3.21	4
CR2	20211017	Sunny	Moderate	Mid-Ebb	Middle	5.55	09:54	8.18	8.15	30.91	26.72	2.86	5
CR2	20211017	Sunny	Moderate	Mid-Ebb	Bottom	10.1	09:53	8.16	8.25	30.67	27.17	3.51	4
CR2	20211017	Sunny	Moderate	Mid-Ebb	Bottom	10.1	09:53	8.03	8.08	31.24	27.2	3.2	4
F1A	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	10:09	7.96	8.22	30.85	27.2	2.43	12
F1A	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	10:09	8.07	8.41	30.86	27.16	2.86	12
F1A	20211017	Sunny	Moderate	Mid-Ebb	Middle	4.5	10:08	8.11	8.32	30.73	27.28	2.73	10
F1A	20211017	Sunny	Moderate	Mid-Ebb	Middle	4.5	10:08	7.92	8.35	31.15	27.38	3.16	13
F1A	20211017	Sunny	Moderate	Mid-Ebb	Bottom	8	10:07	8.1	8.16	31.19	26.87	2.74	9
F1A	20211017	Sunny	Moderate	Mid-Ebb	Bottom	8	10:07	8.2	8.33	31.05	26.9	3.08	10
H1	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	09:41	8.26	8.36	31.1	27.1	2.52	10
H1	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	09:41	8.04	8.25	31.05	27.12	2.28	10
H1	20211017	Sunny	Moderate	Mid-Ebb	Middle	4.15	09:40	8.08	8.12	31.17	26.87	2.41	6
H1	20211017	Sunny	Moderate	Mid-Ebb	Middle	4.15	09:40	8.22	8.23	30.78	26.96	2.08	3
H1	20211017	Sunny	Moderate	Mid-Ebb	Bottom	7.3	09:39	8.14	8.11	30.72	26.81	3.09	7
H1	20211017	Sunny	Moderate	Mid-Ebb	Bottom	7.3	09:39	8.2	8.38	31.14	26.78	3.57	9
M1	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	09:41	7.95	8.28	30.64	27.25	1.96	4
M1	20211017	Sunny	Moderate	Mid-Ebb	Surface	1	09:41	8.12	8.4	31.16	27.22	2.02	4
M1	20211017	Sunny	Moderate	Mid-Ebb	Middle	4.95	09:40	8.2	8.19	31.03	26.89	3.07	6
M1	20211017	Sunny	Moderate	Mid-Ebb	Middle	4.95	09:40	7.92	8.41	30.67	27.06	2.64	4
M1	20211017	Sunny	Moderate	Mid-Ebb	Bottom	8.9	09:39	8.23	8.26	30.81	26.96	3.09	3
M1	20211017	Sunny	Moderate	Mid-Ebb	Bottom	8.9	09:39	8.13	8.33	30.98	27.03	2.76	5
B1	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	16:51	6.98	8.33	30.99	27.93	2.5	4
B1	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	16:51	7.76	8.13	30.99	27.91	2.49	3
B1	20211017	Cloudy	Moderate	Mid-Flood	Bottom	4.6	16:50	7.7	8.34	30.87	27.8	3.58	5
B1	20211017	Cloudy	Moderate	Mid-Flood	Bottom	4.6	16:50	6.72	8.2	30.58	27.64	3.28	5
В2	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	17:07	7.51	8.35	30.3	27.95	2.99	6
B2	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	17:07	7.14	8.26	30.23	27.83	2.57	5
B2	20211017	Cloudy	Moderate	Mid-Flood	Bottom	4.1	17:06	7.4	8.18	30.92	27.95	2.67	11
B2	20211017	Cloudy	Moderate	Mid-Flood	Bottom	4.1	17:06	6.37	8.1	30.56	28.03	2.69	11
В3	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	15:31	6.32	8.08	30.27	27.21	2.62	2.5
В3	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	15:31	7.66	8.11	30.52	27.08	2.28	2.5
В3	20211017	Cloudy	Moderate	Mid-Flood	Bottom	4	15:30	8.44	8.43	30.54	27.79	3.46	11
В3	20211017	Cloudy	Moderate	Mid-Flood	Bottom	4	15:30	7.23	8.18	30.69	27.7	3.51	11
B4	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	15:39	7.03	8.24	30.88	27.25	2.42	5
B4	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	15:39	7.62	8.41	30.85	27.39	2.08	5
B4	20211017	Cloudy	Moderate	Mid-Flood	Bottom	4.5	15:38	7.36	8.38	30.95	27.47	3.33	5
B4	20211017	Cloudy	Moderate	Mid-Flood	Bottom	4.5	15:38	6.44	8.34	30.38	27.27	2.93	4
C1A	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	16:22	6.98	8.16	30.25	27.25	3.98	6
C1A	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	16:22	6.57	8.24	30.96	27.15	4.13	9

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
C1A	20211017	Cloudy	Moderate	Mid-Flood	Middle	5.15	16:21	6.39	8.22	30.24	27.11	4.6	7
C1A	20211017	Cloudy	Moderate	Mid-Flood	Middle	5.15	16:21	7.78	8.24	30.78	27.24	4.26	7
C1A	20211017	Cloudy	Moderate	Mid-Flood	Bottom	9.3	16:20	7.08	8.33	30.89	27.62	4.04	24
C1A	20211017	Cloudy	Moderate	Mid-Flood	Bottom	9.3	16:20	7.86	8.41	30.33	27.66	3.9	27
C2A	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	15:32	6.57	8.2	30.52	27.32	3.65	10
C2A	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	15:32	7.29	8.25	30.35	27.47	3.2	7
C2A	20211017	Cloudy	Moderate	Mid-Flood	Middle	5.55	15:31	7.18	8.41	30.85	27.07	3.74	7
C2A	20211017	Cloudy	Moderate	Mid-Flood	Middle	5.55	15:31	6.89	8.24	30.64	27.13	3.58	7
C2A	20211017	Cloudy	Moderate	Mid-Flood	Bottom	10.1	15:30	6.65	8.48	30.49	27.83	3.97	5
C2A	20211017	Cloudy	Moderate	Mid-Flood	Bottom	10.1	15:30	7.81	8.43	30.77	27.75	3.55	8
CR1	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	15:50	7.01	8.13	30.76	27.55	2.3	7
CR1	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	15:50	6.97	8.08	30.27	27.49	2.69	10
CR1	20211017	Cloudy	Moderate	Mid-Flood	Middle	6.1	15:49	7.4	8.37	30.86	27.56	2.15	5
CR1	20211017	Cloudy	Moderate	Mid-Flood	Middle	6.1	15:49	7.85	8.31	30.33	27.42	2.15	5
CR1	20211017	Cloudy	Moderate	Mid-Flood	Bottom	11.2	15:48	7.43	8.35	30.23	27.39	3.36	6
CR1	20211017	Cloudy	Moderate	Mid-Flood	Bottom	11.2	15:48	7.77	8.38	30.65	27.33	3.14	5
CR2	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	16:04	7.32	8.41	30.62	27.88	3.12	7
CR2	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	16:04	6.35	8.22	30.2	27.75	2.72	4
CR2	20211017	Cloudy	Moderate	Mid-Flood	Middle	5.55	16:03	7.29	8.19	30.28	27.9	2.96	8
CR2	20211017	Cloudy	Moderate	Mid-Flood	Middle	5.55	16:03	7.63	8.17	30.57	27.86	2.68	8
CR2	20211017	Cloudy	Moderate	Mid-Flood	Bottom	10.1	16:02	6.89	8.12	30.75	27.61	3.13	8
CR2	20211017	Cloudy	Moderate	Mid-Flood	Bottom	10.1	16:02	6.52	8.42	30.96	27.54	2.79	8
F1A	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	16:11	7.3	8.28	30.34	27.66	3.1	8
F1A	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	16:11	6.57	8.11	30.95	27.75	2.66	5
F1A	20211017	Cloudy	Moderate	Mid-Flood	Middle	4.05	16:10	7.1	8.34	30.44	27.58	2.73	5
F1A	20211017	Cloudy	Moderate	Mid-Flood	Middle	4.05	16:10	7.7	8.46	30.64	27.67	3.04	7
F1A	20211017	Cloudy	Moderate	Mid-Flood	Bottom	7.1	16:09	6.88	8.18	30.45	27.72	3.01	7
F1A	20211017	Cloudy	Moderate	Mid-Flood	Bottom	7.1	16:09	7.45	8.26	30.2	27.82	2.69	7
H1	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	17:33	6.31	8.43	30.8	27.76	2.17	3
H1	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	17:33	6.47	8.06	30.55	27.76	2.53	5
Н1	20211017	Cloudy	Moderate	Mid-Flood	Middle	4.15	17:32	6.68	8.44	30.68	27.62	2.87	5
H1	20211017	Cloudy	Moderate	Mid-Flood	Middle	4.15	17:32	7.21	8.33	30.33	27.64	2.43	3
H1	20211017	Cloudy	Moderate	Mid-Flood	Bottom	7.3	17:31	7.58	8.27	30.67	27.68	3.41	7
H1	20211017	Cloudy	Moderate	Mid-Flood	Bottom	7.3	17:31	6.76	8.05	30.85	27.74	3.43	6
M1	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	16:38	7.77	8.31	30.9	27.65	2.29	9
M1	20211017	Cloudy	Moderate	Mid-Flood	Surface	1	16:38	6.77	8.3	30.62	27.64	2.21	9
M1	20211017	Cloudy	Moderate	Mid-Flood	Middle	4.15	16:37	6.8	8.44	30.62	27.8	2.58	6
M1	20211017	Cloudy	Moderate	Mid-Flood	Middle	4.15	16:37	7.25	8.16	30.87	27.57	2.42	6
M1	20211017	Cloudy	Moderate	Mid-Flood	Bottom	7.3	16:36	7.98	8.2	30.8	27.26	2.69	9
M1	20211017	Cloudy	Moderate	Mid-Flood	Bottom	7.3	16:36	6.35	8.32	30.41	27.06	3	11
B1	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	11:16	9.39	8.29	32.23	28.2	3.44	8

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
B1	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	11:16	9.5	8.24	32.37	28.17	3.5	8
B1	20211019	Sunny	Moderate	Mid-Ebb	Bottom	4.1	11:15	9.5	8.28	32.31	28.01	3.57	6
B1	20211019	Sunny	Moderate	Mid-Ebb	Bottom	4.1	11:15	9.62	8.25	32.3	28.06	3.77	7
B2	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	11:34	9.31	8.11	31.83	27.78	2.89	6
B2	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	11:34	9.28	8.13	31.93	27.71	2.9	5
B2	20211019	Sunny	Moderate	Mid-Ebb	Bottom	4.3	11:33	9.45	8.23	31.87	27.78	3.12	6
B2	20211019	Sunny	Moderate	Mid-Ebb	Bottom	4.3	11:33	9.3	8.14	31.93	27.61	3.43	5
В3	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	12:06	8.86	8.32	31.89	28.29	3.44	8
В3	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	12:06	8.76	8.31	31.77	28.23	3.23	8
В3	20211019	Sunny	Moderate	Mid-Ebb	Bottom	4.2	12:05	8.83	8.31	32	28.2	3.46	8
В3	20211019	Sunny	Moderate	Mid-Ebb	Bottom	4.2	12:05	8.93	8.35	31.86	28.22	2.94	5
B4	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	11:57	8.78	8.29	31.87	28.18	2.78	5
B4	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	11:57	8.69	8.36	32.02	28	3.14	6
B4	20211019	Sunny	Moderate	Mid-Ebb	Bottom	3.4	11:56	9.41	8.23	31.7	27.72	2.41	4
B4	20211019	Sunny	Moderate	Mid-Ebb	Bottom	3.4	11:56	9.5	8.14	31.95	27.8	2.49	6
C1A	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	09:51	8.46	8.16	32.06	27.35	6.7	7
C1A	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	09:51	8.38	8.22	32.32	27.29	6.31	7
C1A	20211019	Sunny	Moderate	Mid-Ebb	Middle	4.8	09:50	9.1	8.09	31.82	27.25	5.48	8
C1A	20211019	Sunny	Moderate	Mid-Ebb	Middle	4.8	09:50	9	8.14	31.71	27.51	5.68	8
C1A	20211019	Sunny	Moderate	Mid-Ebb	Bottom	8.6	09:49	8.99	8.19	31.63	27.49	5.12	8
C1A	20211019	Sunny	Moderate	Mid-Ebb	Bottom	8.6	09:49	9.21	8.09	31.64	27.31	4.98	8
C2A	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	12:10	8.36	8.27	30.85	28.02	3.71	10
C2A	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	12:10	8.26	8.27	30.78	27.99	4.07	10
C2A	20211019	Sunny	Moderate	Mid-Ebb	Middle	5.85	12:09	8.26	8.28	30.88	27.85	4.04	10
C2A	20211019	Sunny	Moderate	Mid-Ebb	Middle	5.85	12:09	8.26	8.2	30.65	27.92	4.48	10
C2A	20211019	Sunny	Moderate	Mid-Ebb	Bottom	10.7	12:08	8.31	8.28	30.75	27.91	4.97	15
C2A	20211019	Sunny	Moderate	Mid-Ebb	Bottom	10.7	12:08	8.38	8.28	30.8	27.89	4.78	15
CR1	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	10:22	9.31	8.18	31.48	27.77	2.64	6
CR1	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	10:22	9.14	8.18	31.24	27.79	3.02	6
CR1	20211019	Sunny	Moderate	Mid-Ebb	Middle	6.35	10:21	8.44	8.28	31.74	28.18	3.32	9
CR1	20211019	Sunny	Moderate	Mid-Ebb	Middle	6.35	10:21	8.63	8.28	31.65	28.39	3.66	9
CR1	20211019	Sunny	Moderate	Mid-Ebb	Bottom	11.7	10:20	8.58	8.25	31.64	28.25	3.28	10
CR1	20211019	Sunny	Moderate	Mid-Ebb	Bottom	11.7	10:20	8.48	8.27	31.56	28.3	3.32	10
CR2	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	10:09	8.47	8.24	32.42	27.56	3.07	6
CR2	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	10:09	8.26	8.16	32.27	27.57	3.42	6
CR2	20211019	Sunny	Moderate	Mid-Ebb	Middle	5.75	10:08	8.26	8.17	32.52	27.34	2.81	6
CR2	20211019	Sunny	Moderate	Mid-Ebb	Middle	5.75	10:08	8.44	8.19	32.42	27.43	3.09	5
CR2	20211019	Sunny	Moderate	Mid-Ebb	Bottom	10.5	10:07	8.41	8.23	32.21	27.41	2.68	9
CR2	20211019	Sunny	Moderate	Mid-Ebb	Bottom	10.5	10:07	8.3	8.23	32.24	27.41	2.7	9
F1A	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	11:21	8.82	8.07	31.09	27.63	2.32	14
F1A	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	11:21	8.79	8.04	30.94	27.71	2.2	12

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
F1A	20211019	Sunny	Moderate	Mid-Ebb	Middle	4.6	11:20	8.97	8.04	30.92	27.66	2.75	10
F1A	20211019	Sunny	Moderate	Mid-Ebb	Middle	4.6	11:20	8.94	8.04	31.03	27.81	3.09	10
F1A	20211019	Sunny	Moderate	Mid-Ebb	Bottom	8.2	11:19	8.88	8.02	30.86	27.79	2.69	12
F1A	20211019	Sunny	Moderate	Mid-Ebb	Bottom	8.2	11:19	8.96	8.07	30.93	27.75	2.99	13
H1	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	10:45	8.66	8.29	31.28	28.28	2.93	7
H1	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	10:45	8.82	8.31	31.44	28.11	2.49	6
H1	20211019	Sunny	Moderate	Mid-Ebb	Middle	4.25	10:44	9.27	8.27	31.25	27.92	2.9	6
H1	20211019	Sunny	Moderate	Mid-Ebb	Middle	4.25	10:44	9.09	8.21	31.27	27.85	2.77	6
H1	20211019	Sunny	Moderate	Mid-Ebb	Bottom	7.5	10:43	9.29	8.21	31.47	27.79	2.94	5
H1	20211019	Sunny	Moderate	Mid-Ebb	Bottom	7.5	10:43	9.33	8.23	31.42	27.8	2.62	7
M1	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	10:51	9.5	8.28	32.35	28.22	2.93	9
M1	20211019	Sunny	Moderate	Mid-Ebb	Surface	1	10:51	9.59	8.3	32.24	28.1	3.37	9
M1	20211019	Sunny	Moderate	Mid-Ebb	Middle	4.4	10:50	8.92	8.28	31.42	28.22	3.1	4
M1	20211019	Sunny	Moderate	Mid-Ebb	Middle	4.4	10:50	8.68	8.27	31.3	28.18	2.7	6
M1	20211019	Sunny	Moderate	Mid-Ebb	Bottom	7.8	10:49	8.9	8.3	31.43	28.31	3.12	9
M1	20211019	Sunny	Moderate	Mid-Ebb	Bottom	7.8	10:49	8.87	8.27	31.41	28.12	3.39	9
B1	20211019	Sunny	Moderate	Mid-Flood	Surface	1	15:31	9.2	8.44	30.18	28	2.9	4
B1	20211019	Sunny	Moderate	Mid-Flood	Surface	1	15:31	9.39	8.44	30.46	28.1	2.48	3
B1	20211019	Sunny	Moderate	Mid-Flood	Bottom	3.9	15:30	9.06	8.26	30.69	27.67	3.1	14
B1	20211019	Sunny	Moderate	Mid-Flood	Bottom	3.9	15:30	8.82	8.2	31.19	27.94	3.09	13
B2	20211019	Sunny	Moderate	Mid-Flood	Surface	1	15:47	9.28	8.44	30.4	28.23	3.08	12
B2	20211019	Sunny	Moderate	Mid-Flood	Surface	1	15:47	9.33	8.4	30.71	28.01	2.81	11
B2	20211019	Sunny	Moderate	Mid-Flood	Bottom	3.4	15:46	9.22	8.35	30.68	28.03	2.63	14
B2	20211019	Sunny	Moderate	Mid-Flood	Bottom	3.4	15:46	9.31	8.4	30.37	28.01	3.14	12
В3	20211019	Sunny	Moderate	Mid-Flood	Surface	1	15:19	8.68	8.42	31.64	28.51	2.32	15
В3	20211019	Sunny	Moderate	Mid-Flood	Surface	1	15:19	8.5	8.34	31.55	28.39	2.16	12
В3	20211019	Sunny	Moderate	Mid-Flood	Bottom	3.9	15:18	8.7	8.31	31.5	28.37	3.4	14
В3	20211019	Sunny	Moderate	Mid-Flood	Bottom	3.9	15:18	8.77	8.35	31.53	28.5	3	12
B4	20211019	Sunny	Moderate	Mid-Flood	Surface	1	15:29	9.15	8.26	30.87	27.85	2.35	14
B4	20211019	Sunny	Moderate	Mid-Flood	Surface	1	15:29	9.16	8.23	30.91	27.9	2.31	13
В4	20211019	Sunny	Moderate	Mid-Flood	Bottom	3.9	15:28	9.04	8.22	31.08	27.85	2.75	13
В4	20211019	Sunny	Moderate	Mid-Flood	Bottom	3.9	15:28	8.94	8.28	30.82	27.91	3.18	14
C1A	20211019	Sunny	Moderate	Mid-Flood	Surface	1	15:04	9.1	8.2	30.16	28.31	4.21	4
C1A	20211019	Sunny	Moderate	Mid-Flood	Surface	1	15:04	9.29	8.25	30.17	28.43	4.24	3
C1A	20211019	Sunny	Moderate	Mid-Flood	Middle	4.95	15:03	8.92	8.35	31.68	28.39	3.92	7
C1A	20211019	Sunny	Moderate	Mid-Flood	Middle	4.95	15:03	8.58	8.34	31.77	28.31	4.06	5
C1A	20211019	Sunny	Moderate	Mid-Flood	Bottom	8.9	15:02	8.05	8.31	31.57	27.52	4.07	6
C1A	20211019	Sunny	Moderate	Mid-Flood	Bottom	8.9	15:02	8.28	8.31	31.72	27.76	3.61	5
C2A	20211019	Sunny	Moderate	Mid-Flood	Surface	1	15:03	9.21	8.21	30.13	28.39	5.71	3
C2A	20211019	Sunny	Moderate	Mid-Flood	Surface	1	15:03	9.37	8.14	30.3	28.56	5.89	3
C2A	20211019	Sunny	Moderate	Mid-Flood	Middle	5.65	15:02	8.58	8.43	32.04	28.35	6.09	4

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
C2A	20211019	Sunny	Moderate	Mid-Flood	Middle	5.65	15:02	8.85	8.46	31.8	28.31	5.45	5
C2A	20211019	Sunny	Moderate	Mid-Flood	Bottom	10.3	15:01	8.3	8.31	31.39	27.59	5.63	6
C2A	20211019	Sunny	Moderate	Mid-Flood	Bottom	10.3	15:01	8.11	8.34	31.58	27.77	6.11	6
CR1	20211019	Sunny	Moderate	Mid-Flood	Surface	1	16:43	9.19	8.44	30.38	28.23	3.45	9
CR1	20211019	Sunny	Moderate	Mid-Flood	Surface	1	16:43	9.31	8.35	30.64	28.18	2.91	9
CR1	20211019	Sunny	Moderate	Mid-Flood	Middle	6.25	16:42	9.13	8.44	30.23	28.36	3.84	6
CR1	20211019	Sunny	Moderate	Mid-Flood	Middle	6.25	16:42	9.35	8.41	30.2	28.33	3.44	4
CR1	20211019	Sunny	Moderate	Mid-Flood	Bottom	11.5	16:41	9.38	8.41	30.41	28.12	3.27	9
CR1	20211019	Sunny	Moderate	Mid-Flood	Bottom	11.5	16:41	9.28	8.42	30.09	28.23	3.59	9
CR2	20211019	Sunny	Moderate	Mid-Flood	Surface	1	16:28	9.27	8.13	30.68	28.27	1.8	5
CR2	20211019	Sunny	Moderate	Mid-Flood	Surface	1	16:28	8.98	8.15	30.41	28.33	2.03	4
CR2	20211019	Sunny	Moderate	Mid-Flood	Middle	5.85	16:27	9.05	8.14	30.55	28.36	2.36	12
CR2	20211019	Sunny	Moderate	Mid-Flood	Middle	5.85	16:27	9.16	8.16	30.16	28.38	2.74	12
CR2	20211019	Sunny	Moderate	Mid-Flood	Bottom	10.7	16:26	9.26	8.15	30.19	28.22	2.68	12
CR2	20211019	Sunny	Moderate	Mid-Flood	Bottom	10.7	16:26	9.2	8.2	30.38	28.09	3.17	15
F1A	20211019	Sunny	Moderate	Mid-Flood	Surface	1	15:58	8.49	8.28	31.33	27.7	2.47	4
F1A	20211019	Sunny	Moderate	Mid-Flood	Surface	1	15:58	8.39	8.27	31.41	27.66	2.75	2.5
F1A	20211019	Sunny	Moderate	Mid-Flood	Middle	4	15:57	8.63	8.19	31.5	27.53	3.22	5
F1A	20211019	Sunny	Moderate	Mid-Flood	Middle	4	15:57	8.43	8.27	31.48	27.51	3.52	5
F1A	20211019	Sunny	Moderate	Mid-Flood	Bottom	7	15:56	8.52	8.32	31.29	27.69	3.73	6
F1A	20211019	Sunny	Moderate	Mid-Flood	Bottom	7	15:56	8.58	8.26	31.6	27.61	3.95	6
H1	20211019	Sunny	Moderate	Mid-Flood	Surface	1	16:14	8.12	8.34	30.88	27.58	3.24	11
H1	20211019	Sunny	Moderate	Mid-Flood	Surface	1	16:14	7.92	8.35	30.84	27.44	2.84	11
H1	20211019	Sunny	Moderate	Mid-Flood	Middle	4.3	16:13	8.25	8.26	30.61	27.64	3.39	12
H1	20211019	Sunny	Moderate	Mid-Flood	Middle	4.3	16:13	8.21	8.36	30.63	27.6	3.81	12
H1	20211019	Sunny	Moderate	Mid-Flood	Bottom	7.6	16:12	8.09	8.35	30.86	27.57	3.74	6
H1	20211019	Sunny	Moderate	Mid-Flood	Bottom	7.6	16:12	8	8.3	30.87	27.5	3.83	5
M1	20211019	Sunny	Moderate	Mid-Flood	Surface	1	16:26	8.83	8.35	31.03	28.34	2.62	14
M1	20211019	Sunny	Moderate	Mid-Flood	Surface	1	16:26	8.7	8.35	31.09	28.34	2.78	11
M1	20211019	Sunny	Moderate	Mid-Flood	Middle	3.7	16:25	8.77	8.41	31.02	28.39	2.18	9
M1	20211019	Sunny	Moderate	Mid-Flood	Middle	3.7	16:25	8.58	8.31	31.18	28.39	2.23	9
M1	20211019	Sunny	Moderate	Mid-Flood	Bottom	6.4	16:24	8.63	8.42	30.98	28.34	3.01	11
M1	20211019	Sunny	Moderate	Mid-Flood	Bottom	6.4	16:24	8.63	8.33	31.29	28.26	2.56	11
B1	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	11:38	9.86	8.26	31.36	27.45	4.86	10
B1	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	11:38	9.67	8.24	31.22	27.48	5.26	11
B1	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	3.7	11:37	8.92	8.12	31.37	27.56	4.99	9
B1	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	3.7	11:37	8.97	8.13	31.26	27.52	5.28	9
В2	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	11:54	9.14	8.17	31.04	27.43	5	8
В2	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	11:54	9.13	8.21	31.24	27.35	5.32	8
В2	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	4.3	11:53	9.32	8.12	31.01	27.43	4.62	15
B2	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	4.3	11:53	9.31	8.13	31.01	27.36	4.6	12

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
В3	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	13:03	8.77	8.3	31.4	28.03	3.07	12
В3	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	13:03	8.95	8.35	31.58	27.89	3.64	12
В3	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	4.4	13:02	8.78	8.36	31.4	27.97	2.93	12
В3	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	4.4	13:02	8.97	8.35	31.46	27.96	2.71	12
B4	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	12:53	9.41	8.17	30.94	27.7	5.51	2.5
B4	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	12:53	9.72	8.18	31.11	27.59	5.87	2.5
B4	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	3.7	12:52	9.65	8.24	31.12	27.64	5.58	14
B4	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	3.7	12:52	9.65	8.22	31.06	27.55	5.74	14
C1A	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	11:07	8.99	8.1	31.3	27.6	7.21	14
C1A	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	11:07	8.72	8.13	31.44	27.62	7.23	14
C1A	20211021	Cloudy	Moderate	Mid-Ebb	Middle	5.05	11:06	9.27	8.34	31.77	27.82	6.83	10
C1A	20211021	Cloudy	Moderate	Mid-Ebb	Middle	5.05	11:06	9	8.39	31.9	28	6.96	9
C1A	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	9.1	11:05	9.03	8.34	31.81	27.82	7.16	11
C1A	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	9.1	11:05	9.07	8.4	31.81	27.79	7.34	11
C2A	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	13:14	10.26	8.17	31.59	27.61	6.19	9
C2A	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	13:14	9.98	8.23	31.65	27.75	6.15	9
C2A	20211021	Cloudy	Moderate	Mid-Ebb	Middle	6.1	13:13	10.18	8.19	31.58	27.77	6.14	8
C2A	20211021	Cloudy	Moderate	Mid-Ebb	Middle	6.1	13:13	9.95	8.19	31.41	27.6	6.44	10
C2A	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	11.2	13:12	10.13	8.26	31.51	27.63	5.74	10
C2A	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	11.2	13:12	10.24	8.19	31.5	27.63	5.9	9
CR1	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	12:53	8.88	8.35	31.41	28.03	2.6	7
CR1	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	12:53	8.93	8.33	31.33	28.03	2.17	8
CR1	20211021	Cloudy	Moderate	Mid-Ebb	Middle	6.85	12:52	9.59	8.21	31.03	27.48	2.49	12
CR1	20211021	Cloudy	Moderate	Mid-Ebb	Middle	6.85	12:52	9.7	8.26	30.89	27.62	2.87	12
CR1	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	12.7	12:51	9.47	8.27	30.64	27.42	2.75	9
CR1	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	12.7	12:51	9.67	8.29	30.64	27.24	3.15	11
CR2	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	12:39	9.73	8.25	30.52	27.3	3.5	7
CR2	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	12:39	9.55	8.27	30.49	27.3	4.08	6
CR2	20211021	Cloudy	Moderate	Mid-Ebb	Middle	5.7	12:38	9.7	8.25	30.68	27.19	3.43	13
CR2	20211021	Cloudy	Moderate	Mid-Ebb	Middle	5.7	12:38	9.7	8.27	30.65	27.25	3.24	13
CR2	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	10.4	12:37	9.86	8.27	31.07	27.66	4.38	13
CR2	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	10.4	12:37	9.7	8.2	31.12	27.64	4.45	13
F1A	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	12:17	8.73	8.21	31.64	27.3	4.84	9
F1A	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	12:17	8.87	8.14	31.42	27.53	4.6	9
F1A	20211021	Cloudy	Moderate	Mid-Ebb	Middle	4.6	12:16	8.68	8.13	31.59	27.32	3.47	10
F1A	20211021	Cloudy	Moderate	Mid-Ebb	Middle	4.6	12:16	8.85	8.16	31.64	27.52	3.85	12
F1A	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	8.2	12:15	9.28	8.11	31.17	27.39	4.7	8
F1A	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	8.2	12:15	9.1	8.11	31.23	27.38	4.01	9
H1	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	12:23	9.71	8.26	31.16	27.48	5.07	7
H1	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	12:23	9.85	8.27	31	27.55	4.69	7
H1	20211021	Cloudy	Moderate	Mid-Ebb	Middle	3.95	12:22	9.92	8.27	31.03	27.66	5.41	11

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
H1	20211021	Cloudy	Moderate	Mid-Ebb	Middle	3.95	12:22	9.89	8.26	31.08	27.54	5.62	11
H1	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	6.9	12:21	8.74	8.23	31.42	27.39	5.55	6
H1	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	6.9	12:21	8.76	8.22	31.47	27.36	5.66	8
M1	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	11:51	8.68	8.24	30.84	27.71	3.15	12
M1	20211021	Cloudy	Moderate	Mid-Ebb	Surface	1	11:51	8.72	8.17	30.82	27.85	2.86	12
M1	20211021	Cloudy	Moderate	Mid-Ebb	Middle	4.6	11:50	8.95	8.16	30.76	27.71	3.3	9
M1	20211021	Cloudy	Moderate	Mid-Ebb	Middle	4.6	11:50	8.89	8.22	30.8	27.65	3.44	9
M1	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	8.2	11:49	9.82	8.24	31.26	27.44	3.11	7
M1	20211021	Cloudy	Moderate	Mid-Ebb	Bottom	8.2	11:49	9.83	8.23	31.33	27.38	2.97	8
B1	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	16:21	10.5	8.17	31.43	27.7	4.26	8
B1	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	16:21	10.53	8.19	31.49	27.64	4.66	9
B1	20211021	Cloudy	Moderate	Mid-Flood	Bottom	4	16:20	9.89	8.45	31.82	27.08	4.39	8
B1	20211021	Cloudy	Moderate	Mid-Flood	Bottom	4	16:20	9.97	8.45	31.92	26.99	4.68	8
B2	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	16:37	10.47	8.24	31.65	27.5	3.06	7
B2	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	16:37	10.55	8.24	31.42	27.73	2.68	8
B2	20211021	Cloudy	Moderate	Mid-Flood	Bottom	3.9	16:36	10.44	8.19	31.33	27.62	2.98	6
B2	20211021	Cloudy	Moderate	Mid-Flood	Bottom	3.9	16:36	10.43	8.16	31.61	27.7	2.96	9
В3	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	16:04	9.55	8.19	30.59	26.9	5.3	9
В3	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	16:04	9.63	8.21	30.42	26.72	5.87	7
В3	20211021	Cloudy	Moderate	Mid-Flood	Bottom	4.2	16:03	9.53	8.25	30.55	26.73	5.94	8
В3	20211021	Cloudy	Moderate	Mid-Flood	Bottom	4.2	16:03	9.58	8.18	30.3	26.68	5.14	8
B4	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	16:12	9.87	8.43	32.14	26.94	4.13	9
B4	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	16:12	9.98	8.45	32.08	27.02	3.49	9
B4	20211021	Cloudy	Moderate	Mid-Flood	Bottom	4.5	16:11	9.92	8.46	32.05	26.95	3.2	16
B4	20211021	Cloudy	Moderate	Mid-Flood	Bottom	4.5	16:11	10	8.47	31.93	27.07	3.36	16
C1A	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	15:50	9.1	8.32	30.95	27.14	8.78	6
C1A	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	15:50	9.02	8.38	31.04	27.02	8.8	9
C1A	20211021	Cloudy	Moderate	Mid-Flood	Middle	5.55	15:49	10.22	8.15	30.41	27.57	8.4	9
C1A	20211021	Cloudy	Moderate	Mid-Flood	Middle	5.55	15:49	10.17	8.21	30.57	27.52	8.53	9
C1A	20211021	Cloudy	Moderate	Mid-Flood	Bottom	10.1	15:48	9.43	8.36	31.56	27.34	8.73	8
C1A	20211021	Cloudy	Moderate	Mid-Flood	Bottom	10.1	15:48	9.41	8.4	31.39	27.3	8.91	6
C2A	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	15:50	9.13	8.35	30.88	26.94	7.36	18
C2A	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	15:50	9.07	8.34	30.86	27.03	7.32	18
C2A	20211021	Cloudy	Moderate	Mid-Flood	Middle	5.85	15:49	10.13	8.17	30.38	27.34	7.31	17
C2A	20211021	Cloudy	Moderate	Mid-Flood	Middle	5.85	15:49	10.09	8.18	30.52	27.43	7.61	15
C2A	20211021	Cloudy	Moderate	Mid-Flood	Bottom	10.7	15:48	9.55	8.34	31.49	27.26	6.91	17
C2A	20211021	Cloudy	Moderate	Mid-Flood	Bottom	10.7	15:48	9.54	8.37	31.65	27.26	7.07	17
CR1	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	17:31	9.36	8.16	31.48	27.43	4.12	12
CR1	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	17:31	9.33	8.22	31.19	27.64	3.69	11
CR1	20211021	Cloudy	Moderate	Mid-Flood	Middle	6.05	17:30	9.41	8.16	31.45	27.59	4.01	19
CR1	20211021	Cloudy	Moderate	Mid-Flood	Middle	6.05	17:30	9.41	8.19	31.46	27.46	4.39	19

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
CR1	20211021	Cloudy	Moderate	Mid-Flood	Bottom	11.1	17:29	9.29	8.17	31.29	27.58	4.27	9
CR1	20211021	Cloudy	Moderate	Mid-Flood	Bottom	11.1	17:29	9.29	8.16	31.19	27.48	4.67	9
CR2	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	17:18	8.86	8.37	30.75	26.94	4.9	12
CR2	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	17:18	8.9	8.4	30.47	26.77	5.68	13
CR2	20211021	Cloudy	Moderate	Mid-Flood	Middle	5.75	17:17	8.92	8.41	30.8	26.91	5.03	8
CR2	20211021	Cloudy	Moderate	Mid-Flood	Middle	5.75	17:17	8.98	8.37	30.51	26.8	4.84	7
CR2	20211021	Cloudy	Moderate	Mid-Flood	Bottom	10.5	17:16	9.62	8.24	31.11	26.81	5.98	10
CR2	20211021	Cloudy	Moderate	Mid-Flood	Bottom	10.5	17:16	9.59	8.29	31.28	26.89	6.05	10
F1A	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	17:17	8.9	8.42	30.59	26.76	5.35	11
F1A	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	17:17	8.85	8.44	30.78	26.99	5.11	11
F1A	20211021	Cloudy	Moderate	Mid-Flood	Middle	3.8	17:16	9.71	8.28	31.33	26.73	3.98	11
F1A	20211021	Cloudy	Moderate	Mid-Flood	Middle	3.8	17:16	9.69	8.23	31.24	26.91	4.36	11
F1A	20211021	Cloudy	Moderate	Mid-Flood	Bottom	6.6	17:15	9.57	8.23	31.13	26.76	5.21	13
F1A	20211021	Cloudy	Moderate	Mid-Flood	Bottom	6.6	17:15	9.59	8.25	31.16	26.73	4.52	13
H1	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	17:05	9.18	8.23	30.61	26.9	4.98	23
H1	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	17:05	9.17	8.17	30.73	26.91	4.6	20
H1	20211021	Cloudy	Moderate	Mid-Flood	Middle	3.8	17:04	9.23	8.25	30.74	26.96	5.32	8
H1	20211021	Cloudy	Moderate	Mid-Flood	Middle	3.8	17:04	9.2	8.25	30.51	26.84	5.53	6
H1	20211021	Cloudy	Moderate	Mid-Flood	Bottom	6.6	17:03	9.19	8.23	30.62	26.99	5.46	9
H1	20211021	Cloudy	Moderate	Mid-Flood	Bottom	6.6	17:03	9.19	8.2	30.61	26.84	5.57	9
M1	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	16:51	8.9	8.13	31.23	26.7	4.18	11
M1	20211021	Cloudy	Moderate	Mid-Flood	Surface	1	16:51	8.78	8.18	31.4	26.73	3.59	11
M1	20211021	Cloudy	Moderate	Mid-Flood	Middle	3.8	16:50	8.8	8.19	31.22	26.8	4.33	13
M1	20211021	Cloudy	Moderate	Mid-Flood	Middle	3.8	16:50	8.84	8.16	31.4	26.71	4.47	13
M1	20211021	Cloudy	Moderate	Mid-Flood	Bottom	6.6	16:49	8.91	8.17	31.41	26.71	4.14	9
M1	20211021	Cloudy	Moderate	Mid-Flood	Bottom	6.6	16:49	8.85	8.2	31.1	26.84	4	9
B1	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	09:34	9.08	8.18	30.22	27.53	3.85	2.5
B1	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	09:34	9.24	8.21	30.28	27.53	4	3
B1	20211024	Cloudy	Moderate	Mid-Flood	Bottom	4.1	09:33	9.28	8.15	30.36	27.37	3.73	3
B1	20211024	Cloudy	Moderate	Mid-Flood	Bottom	4.1	09:33	9.46	8.22	30.19	27.57	3.51	3
B2	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	09:49	9.12	8.1	30.94	26.91	3.6	2.5
B2	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	09:49	9.13	8.05	30.87	26.92	4.23	2.5
B2	20211024	Cloudy	Moderate	Mid-Flood	Bottom	3.7	09:48	9.09	8.12	30.95	26.89	3.79	6
B2	20211024	Cloudy	Moderate	Mid-Flood	Bottom	3.7	09:48	9.28	8.11	30.87	26.71	3.7	6
В3	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	10:27	8.87	8.27	31.37	26.89	3.65	10
В3	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	10:27	9.02	8.32	31.64	26.75	3.87	13
В3	20211024	Cloudy	Moderate	Mid-Flood	Bottom	3.8	10:26	8.87	8.27	31.66	26.95	4.03	14
В3	20211024	Cloudy	Moderate	Mid-Flood	Bottom	3.8	10:26	8.7	8.33	31.69	26.73	4.28	14
В4	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	10:17	8.9	8.31	31.44	26.8	3.54	6
В4	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	10:17	9.2	8.33	31.4	26.79	3.39	6
В4	20211024	Cloudy	Moderate	Mid-Flood	Bottom	3.9	10:16	8.01	8.17	31.52	27.66	3.96	7

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
B4	20211024	Cloudy	Moderate	Mid-Flood	Bottom	3.9	10:16	8.48	8.15	31.46	27.74	4.43	7
C1A	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	09:06	8.39	8.13	30.1	27.61	5.06	4
C1A	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	09:06	8.51	8.16	30.19	27.53	4.6	4
C1A	20211024	Cloudy	Moderate	Mid-Flood	Middle	5.25	09:05	8.6	8.15	31.89	26.98	5.03	6
C1A	20211024	Cloudy	Moderate	Mid-Flood	Middle	5.25	09:05	8.34	8.17	31.83	27.22	5.05	7
C1A	20211024	Cloudy	Moderate	Mid-Flood	Bottom	9.5	09:04	8.29	8.16	31.61	27.14	5.35	2.5
C1A	20211024	Cloudy	Moderate	Mid-Flood	Bottom	9.5	09:04	8.41	8.19	31.63	27.12	5.01	4
C2A	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	08:09	8.98	8.29	31.22	27.26	5.84	4
C2A	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	08:09	9.38	8.32	31.05	27.29	5.11	4
C2A	20211024	Cloudy	Moderate	Mid-Flood	Middle	5.5	08:08	9.09	8.04	30.45	27.48	4.66	9
C2A	20211024	Cloudy	Moderate	Mid-Flood	Middle	5.5	08:08	9.39	8.04	30.51	27.7	5.45	9
C2A	20211024	Cloudy	Moderate	Mid-Flood	Bottom	10	08:07	9.25	8.06	30.36	27.67	4.75	6
C2A	20211024	Cloudy	Moderate	Mid-Flood	Bottom	10	08:07	9.38	8	30.33	27.43	4.39	5
CR1	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	08:31	8.34	8.11	30.93	26.79	2.73	5
CR1	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	08:31	8.2	8.06	30.94	26.74	3.24	5
CR1	20211024	Cloudy	Moderate	Mid-Flood	Middle	6.4	08:30	8.36	8.12	30.96	26.95	3.35	12
CR1	20211024	Cloudy	Moderate	Mid-Flood	Middle	6.4	08:30	8.07	8.09	31.09	26.84	3.02	9
CR1	20211024	Cloudy	Moderate	Mid-Flood	Bottom	11.8	08:29	8.93	8.31	31.11	27.44	3.59	6
CR1	20211024	Cloudy	Moderate	Mid-Flood	Bottom	11.8	08:29	9.16	8.27	30.92	27.39	3.97	6
CR2	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	08:48	8.4	8.18	31.52	27.17	3.82	7
CR2	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	08:48	8.71	8.14	31.59	27.19	3.5	7
CR2	20211024	Cloudy	Moderate	Mid-Flood	Middle	5.35	08:47	8.6	8.1	31.29	27.29	2.75	11
CR2	20211024	Cloudy	Moderate	Mid-Flood	Middle	5.35	08:47	8.14	8.15	31.37	27.16	2.3	10
CR2	20211024	Cloudy	Moderate	Mid-Flood	Bottom	9.7	08:46	8.66	8.12	31.33	27.07	2.09	11
CR2	20211024	Cloudy	Moderate	Mid-Flood	Bottom	9.7	08:46	8.28	8.11	31.48	27.09	2.19	13
F1A	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	09:43	8.75	8.16	31.45	27.46	4.21	9
F1A	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	09:43	8.63	8.17	31.31	27.35	4.54	6
F1A	20211024	Cloudy	Moderate	Mid-Flood	Middle	3.9	09:42	8.34	8.15	31.33	27.4	4.13	5
F1A	20211024	Cloudy	Moderate	Mid-Flood	Middle	3.9	09:42	8.61	8.13	31.27	27.56	3.69	6
F1A	20211024	Cloudy	Moderate	Mid-Flood	Bottom	6.8	09:41	8.82	8.15	31.29	27.6	4.64	5
F1A	20211024	Cloudy	Moderate	Mid-Flood	Bottom	6.8	09:41	8.33	8.14	31.52	27.36	4.55	4
H1	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	10:15	8.06	8.15	31.23	27.52	4.11	6
H1	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	10:15	8.15	8.17	31.44	27.52	3.62	6
H1	20211024	Cloudy	Moderate	Mid-Flood	Middle	4.1	10:14	8.12	8.14	31.52	27.53	3.63	3
H1	20211024	Cloudy	Moderate	Mid-Flood	Middle	4.1	10:14	8.39	8.13	31.52	27.68	3.69	2.5
H1	20211024	Cloudy	Moderate	Mid-Flood	Bottom	7.2	10:13	9.09	8.1	31.09	26.97	3.74	4
H1	20211024	Cloudy	Moderate	Mid-Flood	Bottom	7.2	10:13	9.49	8.09	31.24	26.9	3.87	4
M1	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	09:17	9.08	8.15	30.33	27.66	3.56	6
M1	20211024	Cloudy	Moderate	Mid-Flood	Surface	1	09:17	9.46	8.19	30.07	27.59	3.35	6
M1	20211024	Cloudy	Moderate	Mid-Flood	Middle	4.05	09:16	8.5	8.14	30.26	27.58	3.11	10
M1	20211024	Cloudy	Moderate	Mid-Flood	Middle	4.05	09:16	8.4	8.12	29.99	27.55	2.95	11

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
M1	20211024	Cloudy	Moderate	Mid-Flood	Bottom	7.1	09:15	8.61	8.13	30.27	27.54	4.14	11
M1	20211024	Cloudy	Moderate	Mid-Flood	Bottom	7.1	09:15	8.71	8.15	30.13	27.58	4.12	11
B1	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	12:52	8.96	8.11	31.13	27.57	3.29	2.5
B1	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	12:52	9.08	8.16	31.2	27.45	2.91	2.5
B1	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	4.2	12:51	9.21	8.19	30.7	27.33	4.66	6
B1	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	4.2	12:51	8.87	8.25	30.79	27.23	4.09	6
B2	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	13:08	9.05	8.16	31.13	27.54	3.13	5
B2	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	13:08	8.9	8.15	31.16	27.46	3.51	7
B2	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	4.9	13:07	8.86	8.11	31.17	27.5	2.96	7
B2	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	4.9	13:07	8.98	8.14	31.22	27.54	3.06	7
В3	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	12:38	9.31	8.27	32.05	27.87	3.11	7
В3	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	12:38	9.14	8.28	31.94	27.82	2.68	7
В3	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	3.5	12:37	9.43	8.3	31.91	27.85	2.71	7
В3	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	3.5	12:37	9.46	8.31	31.99	27.8	2.52	7
B4	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	12:48	9.09	8.23	30.82	27.26	3.94	5
B4	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	12:48	9.1	8.23	30.8	27.34	3.54	6
B4	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	3.6	12:47	9.19	8.24	30.74	27.24	4.45	5
B4	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	3.6	12:47	8.92	8.2	30.69	27.2	4.23	4
C1A	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	12:23	8.2	8.34	32.08	27.85	4.94	11
C1A	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	12:23	8.36	8.36	32.16	27.74	4.58	11
C1A	20211024	Cloudy	Moderate	Mid-Ebb	Middle	4.9	12:22	8.55	8.35	32.21	27.89	5.06	12
C1A	20211024	Cloudy	Moderate	Mid-Ebb	Middle	4.9	12:22	8.61	8.34	32.16	27.82	4.6	9
C1A	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	8.8	12:21	9.29	8.1	31.2	27.73	5.81	7
C1A	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	8.8	12:21	9.26	8.14	31.14	27.75	5.4	7
C2A	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	12:23	8.2	8.34	32.1	27.78	3.71	6
C2A	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	12:23	8.13	8.3	32.15	27.84	4.12	6
C2A	20211024	Cloudy	Moderate	Mid-Ebb	Middle	6.05	12:22	8.42	8.34	32.16	27.74	4.07	4
C2A	20211024	Cloudy	Moderate	Mid-Ebb	Middle	6.05	12:22	8.63	8.29	32.1	27.88	3.68	4
C2A	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	11.1	12:21	9.33	8.19	31.09	27.78	4.1	6
C2A	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	11.1	12:21	9.46	8.15	31.21	27.72	4.06	6
CR1	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	14:02	8.57	8.11	31.33	27.48	3.85	7
CR1	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	14:02	8.76	8.13	31.34	27.57	3.23	7
CR1	20211024	Cloudy	Moderate	Mid-Ebb	Middle	6.85	14:01	8.81	8.15	31.43	27.54	3.54	7
CR1	20211024	Cloudy	Moderate	Mid-Ebb	Middle	6.85	14:01	8.69	8.17	31.46	27.51	3.74	7
CR1	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	12.7	14:00	8.75	8.13	31.35	27.47	4.32	8
CR1	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	12.7	14:00	8.55	8.16	31.37	27.6	4.13	6
CR2	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	13:49	8.04	8.4	31.89	27.15	2.45	5
CR2	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	13:49	8.01	8.31	31.76	27.1	2.62	6
CR2	20211024	Cloudy	Moderate	Mid-Ebb	Middle	5.95	13:48	8.3	8.37	31.84	27.14	3.31	6
CR2	20211024	Cloudy	Moderate	Mid-Ebb	Middle	5.95	13:48	8.16	8.36	31.89	27.01	2.82	6
CR2	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	10.9	13:47	9.12	8.35	31.61	27.48	2.84	5

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
CR2	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	10.9	13:47	9.01	8.34	31.57	27.52	2.66	8
F1A	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	13:19	9.05	8.18	31.69	27.38	2.83	12
F1A	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	13:19	8.96	8.2	31.66	27.32	2.61	12
F1A	20211024	Cloudy	Moderate	Mid-Ebb	Middle	4.5	13:18	8.89	8.16	31.71	27.36	2.66	7
F1A	20211024	Cloudy	Moderate	Mid-Ebb	Middle	4.5	13:18	8.89	8.18	31.7	27.23	2.9	7
F1A	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	8	13:17	9.24	8.16	31.57	27.27	3.69	12
F1A	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	8	13:17	8.91	8.23	31.62	27.26	3.45	12
H1	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	13:34	9.32	8.37	31.74	27.86	4.3	10
H1	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	13:34	9.34	8.32	31.82	27.89	4.36	10
H1	20211024	Cloudy	Moderate	Mid-Ebb	Middle	4.45	13:33	9.15	8.36	31.71	27.86	4.09	6
H1	20211024	Cloudy	Moderate	Mid-Ebb	Middle	4.45	13:33	9.12	8.32	31.86	27.85	4.17	5
H1	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	7.9	13:32	9.19	8.32	31.85	27.91	4.3	6
H1	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	7.9	13:32	9.08	8.31	31.75	27.88	4.95	7
M1	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	13:48	8.23	8.41	31.75	27.13	2.91	5
M1	20211024	Cloudy	Moderate	Mid-Ebb	Surface	1	13:48	8.15	8.38	31.89	27.12	2.73	5
M1	20211024	Cloudy	Moderate	Mid-Ebb	Middle	4.85	13:47	9.06	8.39	31.59	27.52	2.5	6
M1	20211024	Cloudy	Moderate	Mid-Ebb	Middle	4.85	13:47	8.86	8.33	31.61	27.54	2.78	7
M1	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	8.7	13:46	9.06	8.39	31.62	27.51	2.99	7
M1	20211024	Cloudy	Moderate	Mid-Ebb	Bottom	8.7	13:46	8.9	8.29	31.61	27.43	2.6	7
B1	20211026	Sunny	Moderate	Mid-Flood	Surface	1	09:36	8.53	8.3	29.26	27.88	4.17	8
B1	20211026	Sunny	Moderate	Mid-Flood	Surface	1	09:36	8.52	8.45	29.17	28	4.99	8
B1	20211026	Sunny	Moderate	Mid-Flood	Bottom	4.5	09:35	8.77	8.29	29.08	28	5.55	9
B1	20211026	Sunny	Moderate	Mid-Flood	Bottom	4.5	09:35	8.54	8.46	28.96	27.95	5.17	9
B2	20211026	Sunny	Moderate	Mid-Flood	Surface	1	09:54	7.6	8.32	29.13	28.03	4.09	5
B2	20211026	Sunny	Moderate	Mid-Flood	Surface	1	09:54	7.58	8.3	29.35	27.97	4.27	6
B2	20211026	Sunny	Moderate	Mid-Flood	Bottom	4.2	09:53	7.98	8.32	29.41	28.08	4.79	9
B2	20211026	Sunny	Moderate	Mid-Flood	Bottom	4.2	09:53	8.03	8.27	29.12	27.95	5.72	9
В3	20211026	Sunny	Moderate	Mid-Flood	Surface	1	10:43	9.25	8.09	29.89	26.96	3.41	9
В3	20211026	Sunny	Moderate	Mid-Flood	Surface	1	10:43	9.17	8.07	29.73	26.97	2.98	9
В3	20211026	Sunny	Moderate	Mid-Flood	Bottom	4.1	10:42	9.15	8.08	29.84	26.94	3.5	13
В3	20211026	Sunny	Moderate	Mid-Flood	Bottom	4.1	10:42	9	8.09	29.91	27.04	3.24	13
В4	20211026	Sunny	Moderate	Mid-Flood	Surface	1	10:32	8.93	8.06	29.88	26.95	2.89	8
В4	20211026	Sunny	Moderate	Mid-Flood	Surface	1	10:32	8.88	8.12	29.91	27.09	3.32	6
B4	20211026	Sunny	Moderate	Mid-Flood	Bottom	4.2	10:31	8.43	8.29	29.46	27.68	3.14	5
В4	20211026	Sunny	Moderate	Mid-Flood	Bottom	4.2	10:31	8.3	8.35	29.63	27.58	2.85	4
C1A	20211026	Sunny	Moderate	Mid-Flood	Surface	1	09:08	8.64	8.37	29.67	27.07	4.87	5
C1A	20211026	Sunny	Moderate	Mid-Flood	Surface	1	09:08	8.98	8.24	29.6	27.2	4.28	4
C1A	20211026	Sunny	Moderate	Mid-Flood	Middle	5.95	09:07	8.31	8.38	29.37	27.09	6.09	5
C1A	20211026	Sunny	Moderate	Mid-Flood	Middle	5.95	09:07	7.94	8.43	29.56	27.1	5.88	7
C1A	20211026	Sunny	Moderate	Mid-Flood	Bottom	10.9	09:06	8.43	8.42	29.6	27.26	5.32	6
C1A	20211026	Sunny	Moderate	Mid-Flood	Bottom	10.9	09:06	8.01	8.43	29.53	27.18	4.99	8

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
C2A	20211026	Sunny	Moderate	Mid-Flood	Surface	1	08:17	8.32	8.16	30.34	27.77	5.3	9
C2A	20211026	Sunny	Moderate	Mid-Flood	Surface	1	08:17	8.17	8.02	30.27	27.81	5.87	9
C2A	20211026	Sunny	Moderate	Mid-Flood	Middle	5.7	08:16	8.93	8.18	29.48	27.84	4.86	5
C2A	20211026	Sunny	Moderate	Mid-Flood	Middle	5.7	08:16	8.8	8.19	29.62	27.73	4.78	7
C2A	20211026	Sunny	Moderate	Mid-Flood	Bottom	10.4	08:15	9.1	8.29	29.58	27.85	5.83	6
C2A	20211026	Sunny	Moderate	Mid-Flood	Bottom	10.4	08:15	8.69	8.18	29.38	27.69	5.24	6
CR1	20211026	Sunny	Moderate	Mid-Flood	Surface	1	08:36	7.51	8.17	29.05	27	3.68	4
CR1	20211026	Sunny	Moderate	Mid-Flood	Surface	1	08:36	7.66	8.24	29.14	27.17	3.51	5
CR1	20211026	Sunny	Moderate	Mid-Flood	Middle	6.4	08:35	7.56	8.16	29.33	27.04	4.23	5
CR1	20211026	Sunny	Moderate	Mid-Flood	Middle	6.4	08:35	7.58	8.21	29.13	27.01	4.31	4
CR1	20211026	Sunny	Moderate	Mid-Flood	Bottom	11.8	08:34	8.03	8.14	30.17	27.83	3.2	8
CR1	20211026	Sunny	Moderate	Mid-Flood	Bottom	11.8	08:34	8.13	8.11	30.07	27.73	2.88	8
CR2	20211026	Sunny	Moderate	Mid-Flood	Surface	1	08:49	8.11	8.45	29.39	27.08	2.02	15
CR2	20211026	Sunny	Moderate	Mid-Flood	Surface	1	08:49	8.22	8.3	29.31	27.09	2.41	15
CR2	20211026	Sunny	Moderate	Mid-Flood	Middle	5.6	08:48	8.56	8.23	29.15	27.01	3.88	6
CR2	20211026	Sunny	Moderate	Mid-Flood	Middle	5.6	08:48	8.45	8.26	29.13	27.09	4.26	5
CR2	20211026	Sunny	Moderate	Mid-Flood	Bottom	10.2	08:47	8.73	8.21	29.12	26.94	4.84	5
CR2	20211026	Sunny	Moderate	Mid-Flood	Bottom	10.2	08:47	8.65	8.11	29.11	26.99	4.46	6
F1A	20211026	Sunny	Moderate	Mid-Flood	Surface	1	10:00	9.34	8.15	30.85	27.85	5.37	6
F1A	20211026	Sunny	Moderate	Mid-Flood	Surface	1	10:00	9.13	8.13	30.71	27.96	4.92	6
F1A	20211026	Sunny	Moderate	Mid-Flood	Middle	4.35	09:59	9.32	8.24	30.77	27.99	5.53	6
F1A	20211026	Sunny	Moderate	Mid-Flood	Middle	4.35	09:59	8.95	8.21	30.79	28	5.14	8
F1A	20211026	Sunny	Moderate	Mid-Flood	Bottom	7.7	09:58	7.78	8.27	29.37	27.91	5.33	11
F1A	20211026	Sunny	Moderate	Mid-Flood	Bottom	7.7	09:58	7.75	8.2	29.17	27.96	5.12	11
H1	20211026	Sunny	Moderate	Mid-Flood	Surface	1	10:22	8.22	8.4	29.7	27.65	2.95	4
H1	20211026	Sunny	Moderate	Mid-Flood	Surface	1	10:22	8.6	8.43	29.47	27.6	2.68	4
H1	20211026	Sunny	Moderate	Mid-Flood	Middle	4.25	10:21	8.52	8.41	29.44	27.53	2.73	6
Н1	20211026	Sunny	Moderate	Mid-Flood	Middle	4.25	10:21	8.59	8.27	29.6	27.69	2.41	5
H1	20211026	Sunny	Moderate	Mid-Flood	Bottom	7.5	10:20	8.9	8.12	30.86	27.86	4.77	8
H1	20211026	Sunny	Moderate	Mid-Flood	Bottom	7.5	10:20	8.87	8.17	30.74	27.84	5.17	7
M1	20211026	Sunny	Moderate	Mid-Flood	Surface	1	09:35	8.4	8.4	29.24	27.96	4.2	6
M1	20211026	Sunny	Moderate	Mid-Flood	Surface	1	09:35	8.92	8.42	29.04	27.89	4.98	4
M1	20211026	Sunny	Moderate	Mid-Flood	Middle	4.15	09:34	8.86	8.26	29.46	27.24	3.7	8
M1	20211026	Sunny	Moderate	Mid-Flood	Middle	4.15	09:34	8.63	8.3	29.66	27.14	3.8	8
M1	20211026	Sunny	Moderate	Mid-Flood	Bottom	7.3	09:33	8.8	8.27	29.62	27.22	4.29	6
M1	20211026	Sunny	Moderate	Mid-Flood	Bottom	7.3	09:33	8.54	8.31	29.61	27.11	4.33	6
B1	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	13:44	8.15	8.2	30.37	27.6	3.78	6
B1	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	13:44	7.91	8.19	30.49	27.77	3.17	4
B1	20211026	Sunny	Moderate	Mid-Ebb	Bottom	4	13:43	7.64	8.13	29.98	27.77	4.34	3
B1	20211026	Sunny	Moderate	Mid-Ebb	Bottom	4	13:43	7.59	8.12	30.17	27.71	5.06	4
B2	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	14:00	7.87	8.15	30.48	27.79	3.49	4

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
В2	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	14:00	8.14	8.18	30.48	27.61	3.48	3
В2	20211026	Sunny	Moderate	Mid-Ebb	Bottom	4.5	13:59	8	8.14	30.53	27.74	3.64	4
В2	20211026	Sunny	Moderate	Mid-Ebb	Bottom	4.5	13:59	8.16	8.17	30.32	27.79	4.2	2.5
В3	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	13:29	8.09	8.1	30.38	28.07	2.97	3
В3	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	13:29	7.87	8.04	30.32	27.93	3.47	4
В3	20211026	Sunny	Moderate	Mid-Ebb	Bottom	3.7	13:28	7.81	8.16	30.56	28.09	3.1	5
В3	20211026	Sunny	Moderate	Mid-Ebb	Bottom	3.7	13:28	8.08	8.13	30.38	28	3.6	5
B4	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	13:39	7.78	8.13	30.14	27.74	4.18	12
B4	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	13:39	7.45	8.21	30.23	27.84	3.91	12
B4	20211026	Sunny	Moderate	Mid-Ebb	Bottom	3.4	13:38	7.62	8.18	30.09	27.6	4.75	5
В4	20211026	Sunny	Moderate	Mid-Ebb	Bottom	3.4	13:38	7.7	8.14	30.09	27.8	5.13	4
C1A	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	13:17	7.77	8.26	29.95	28.22	5.93	5
C1A	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	13:17	7.76	8.29	29.75	28.06	5.89	6
C1A	20211026	Sunny	Moderate	Mid-Ebb	Middle	4.7	13:16	7.76	8.29	30.31	28.39	4.3	8
C1A	20211026	Sunny	Moderate	Mid-Ebb	Middle	4.7	13:16	7.54	8.26	30.47	28.4	4.55	8
C1A	20211026	Sunny	Moderate	Mid-Ebb	Bottom	8.4	13:15	7.66	8.17	30.48	27.51	5.19	5
C1A	20211026	Sunny	Moderate	Mid-Ebb	Bottom	8.4	13:15	7.88	8.08	30.37	27.5	4.86	6
C2A	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	13:17	7.88	8.24	29.86	28.11	4.99	4
C2A	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	13:17	7.66	8.34	29.95	28.3	4.87	6
C2A	20211026	Sunny	Moderate	Mid-Ebb	Middle	5.9	13:16	7.58	8.3	30.36	28.34	4.98	10
C2A	20211026	Sunny	Moderate	Mid-Ebb	Middle	5.9	13:16	7.52	8.26	30.25	28.25	5.28	10
C2A	20211026	Sunny	Moderate	Mid-Ebb	Bottom	10.8	13:15	7.73	8.16	30.53	27.5	4.71	6
C2A	20211026	Sunny	Moderate	Mid-Ebb	Bottom	10.8	13:15	7.84	8.16	30.41	27.69	4.65	6
CR1	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	14:56	7.79	8.1	30.15	28.11	4.17	7
CR1	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	14:56	7.79	8.12	30.23	28.2	4.31	11
CR1	20211026	Sunny	Moderate	Mid-Ebb	Middle	6.15	14:55	7.91	8.14	30.08	28.24	4.94	7
CR1	20211026	Sunny	Moderate	Mid-Ebb	Middle	6.15	14:55	7.9	8.1	30.12	28.16	4.87	7
CR1	20211026	Sunny	Moderate	Mid-Ebb	Bottom	11.3	14:54	7.82	8.04	30.12	28.26	5.5	8
CR1	20211026	Sunny	Moderate	Mid-Ebb	Bottom	11.3	14:54	8.02	8.05	30.2	28.26	5.25	5
CR2	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	14:42	8.78	8.15	29.55	27.72	3.15	5
CR2	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	14:42	8.55	8.18	29.33	27.93	3.13	7
CR2	20211026	Sunny	Moderate	Mid-Ebb	Middle	6.05	14:41	8.64	8.11	29.32	27.83	2.45	8
CR2	20211026	Sunny	Moderate	Mid-Ebb	Middle	6.05	14:41	8.62	8.09	29.55	27.8	2.8	8
CR2	20211026	Sunny	Moderate	Mid-Ebb	Bottom	11.1	14:40	8.85	8.1	29.36	27.79	3.4	9
CR2	20211026	Sunny	Moderate	Mid-Ebb	Bottom	11.1	14:40	8.72	8.16	29.34	27.74	3.01	9
F1A	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	14:09	7.49	8.17	30.38	28.13	4.6	6
F1A	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	14:09	7.58	8.2	30.15	28.11	4.58	7
F1A	20211026	Sunny	Moderate	Mid-Ebb	Middle	3.95	14:08	7.78	8.23	30.22	28.28	5.29	11
F1A	20211026	Sunny	Moderate	Mid-Ebb	Middle	3.95	14:08	7.54	8.18	30.42	28.3	4.85	11
F1A	20211026	Sunny	Moderate	Mid-Ebb	Bottom	6.9	14:07	7.59	8.17	30.23	28.16	6.2	6
F1A	20211026	Sunny	Moderate	Mid-Ebb	Bottom	6.9	14:07	7.52	8.23	30.15	28.15	6.06	6

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
H1	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	14:27	7.92	8.24	30.18	27.65	3.8	7
H1	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	14:27	8.04	8.12	30	27.45	3.91	7
H1	20211026	Sunny	Moderate	Mid-Ebb	Middle	4.15	14:26	8.06	8.23	29.95	27.58	4.65	3
H1	20211026	Sunny	Moderate	Mid-Ebb	Middle	4.15	14:26	8.19	8.14	29.93	27.69	4.49	3
H1	20211026	Sunny	Moderate	Mid-Ebb	Bottom	7.3	14:25	7.99	8.12	29.95	27.46	5.22	6
H1	20211026	Sunny	Moderate	Mid-Ebb	Bottom	7.3	14:25	8.1	8.2	30.03	27.62	4.53	5
M1	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	14:39	8.63	8.32	30.37	27.75	3.72	9
M1	20211026	Sunny	Moderate	Mid-Ebb	Surface	1	14:39	8.92	8.29	30.18	27.67	3.51	9
M1	20211026	Sunny	Moderate	Mid-Ebb	Middle	4.85	14:38	8.9	8.27	30.23	27.72	3.48	2.5
M1	20211026	Sunny	Moderate	Mid-Ebb	Middle	4.85	14:38	8.75	8.31	30.22	27.86	3.18	2.5
M1	20211026	Sunny	Moderate	Mid-Ebb	Bottom	8.7	14:37	8.66	8.26	30.22	27.8	3.64	8
M1	20211026	Sunny	Moderate	Mid-Ebb	Bottom	8.7	14:37	8.86	8.25	30.21	27.78	3.53	8
B1	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	08:54	9.4	8.36	31.13	27.04	2.3	14
B1	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	08:54	9.3	8.29	31.16	26.96	2.4	13
B1	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	4.2	08:53	9.53	8.36	31.04	27.11	3.68	5
B1	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	4.2	08:53	9.49	8.26	31.18	27.02	4.16	6
B2	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	09:12	9.33	8.45	31.23	26.81	4.18	5
B2	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	09:12	9.29	8.34	31.38	26.66	3.79	7
B2	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	4.3	09:11	9.57	8.32	31.19	27.05	3.16	10
B2	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	4.3	09:11	9.6	8.33	31.35	27.18	3.78	10
В3	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	10:29	9.07	8.32	32.39	27.97	3.43	8
В3	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	10:29	9.09	8.3	32.33	27.82	2.89	11
В3	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	3.6	10:28	9.46	8.19	32.21	27.77	3.44	13
В3	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	3.6	10:28	9.62	8.21	32.24	27.82	3.67	13
В4	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	10:19	9.58	8.2	32.16	28	3.01	15
В4	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	10:19	9.4	8.26	32.33	27.98	3.22	15
В4	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	3.5	10:18	9.46	8.44	30.91	27.13	3.67	7
В4	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	3.5	10:18	9.69	8.41	30.95	27.28	3.84	6
C1A	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	08:25	9.4	8.34	31.02	27.22	3.7	4
C1A	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	08:25	9.48	8.28	31.08	27.1	3.42	5
C1A	20211028	Cloudy	Moderate	Mid-Ebb	Middle	5.35	08:24	9.93	8.25	32.32	26.94	3.39	8
C1A	20211028	Cloudy	Moderate	Mid-Ebb	Middle	5.35	08:24	9.88	8.31	32.47	26.76	3.43	10
C1A	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	9.7	08:23	9.88	8.23	32.34	26.98	3.85	6
C1A	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	9.7	08:23	10.2	8.32	32.29	26.88	3.89	6
C2A	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	10:31	8.83	8.36	32.58	27.97	3.81	5
C2A	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	10:31	8.76	8.29	32.23	27.98	3.23	4
C2A	20211028	Cloudy	Moderate	Mid-Ebb	Middle	5.65	10:30	8.72	8.37	32.35	27.97	3.82	7
C2A	20211028	Cloudy	Moderate	Mid-Ebb	Middle	5.65	10:30	8.78	8.3	32.2	27.9	3.88	6
C2A	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	10.3	10:29	9.5	8.2	32.44	27.98	3.61	7
C2A	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	10.3	10:29	9.6	8.19	32.06	27.75	4.22	7
CR1	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	10:09	9.5	8.48	30.96	27.05	3.44	7

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
CR1	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	10:09	9.42	8.47	30.85	27.3	3.72	4
CR1	20211028	Cloudy	Moderate	Mid-Ebb	Middle	6.8	10:08	9.64	8.41	30.87	27.18	3.67	6
CR1	20211028	Cloudy	Moderate	Mid-Ebb	Middle	6.8	10:08	9.65	8.43	30.95	27.3	3.92	5
CR1	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	12.6	10:07	10.05	8.29	31.67	27.73	3.27	5
CR1	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	12.6	10:07	10.2	8.19	31.55	27.57	3.04	6
CR2	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	09:53	10.25	8.25	31.56	27.63	2.82	12
CR2	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	09:53	9.91	8.22	31.55	27.74	2.5	11
CR2	20211028	Cloudy	Moderate	Mid-Ebb	Middle	5.75	09:52	10.04	8.24	31.39	27.62	2.69	3
CR2	20211028	Cloudy	Moderate	Mid-Ebb	Middle	5.75	09:52	9.97	8.28	31.68	27.46	2.79	6
CR2	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	10.5	09:51	10.06	8.29	31.2	27.67	4.94	5
CR2	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	10.5	09:51	10.1	8.18	31.02	27.71	4.53	5
F1A	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	09:48	10.29	8.25	31.23	27.91	4.2	6
F1A	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	09:48	10.24	8.21	31.29	27.92	4.61	5
F1A	20211028	Cloudy	Moderate	Mid-Ebb	Middle	4.3	09:47	10.16	8.19	31.08	27.74	3.94	5
F1A	20211028	Cloudy	Moderate	Mid-Ebb	Middle	4.3	09:47	10.04	8.29	31.19	27.79	3.82	6
F1A	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	7.6	09:46	8.71	8.18	31.77	26.91	4.03	5
F1A	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	7.6	09:46	8.88	8.18	32.15	27.06	4.17	5
H1	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	09:39	8.9	8.13	31.97	27.05	3.43	7
H1	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	09:39	8.8	8.25	31.92	26.95	3.43	10
H1	20211028	Cloudy	Moderate	Mid-Ebb	Middle	4.45	09:38	8.79	8.24	31.94	26.92	3.72	8
H1	20211028	Cloudy	Moderate	Mid-Ebb	Middle	4.45	09:38	8.81	8.23	31.98	27.02	3.27	4
H1	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	7.9	09:37	8.73	8.19	32.69	27.22	4.72	6
H1	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	7.9	09:37	8.85	8.19	32.59	27.21	4.67	8
M1	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	09:22	8.8	8.12	32.49	27	3.65	6
M1	20211028	Cloudy	Moderate	Mid-Ebb	Surface	1	09:22	8.63	8.22	32.35	26.88	4.21	7
M1	20211028	Cloudy	Moderate	Mid-Ebb	Middle	4.4	09:21	8.57	8.21	32.7	26.91	4.26	2.5
M1	20211028	Cloudy	Moderate	Mid-Ebb	Middle	4.4	09:21	8.9	8.15	32.44	26.97	4.15	2.5
M1	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	7.8	09:20	9.05	8.38	31.48	26.85	4.01	7
M1	20211028	Cloudy	Moderate	Mid-Ebb	Bottom	7.8	09:20	9.16	8.41	31.24	26.67	4.56	8
B1	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	15:19	9.43	8.44	31.16	27.67	3.75	5
B1	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	15:19	9.73	8.44	31.15	27.82	3.45	6
B1	20211028	Cloudy	Moderate	Mid-Flood	Bottom	3.4	15:18	8.85	8.24	32.31	26.83	4.26	5
B1	20211028	Cloudy	Moderate	Mid-Flood	Bottom	3.4	15:18	8.75	8.24	32.21	26.87	4.89	5
В2	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	15:35	9.58	8.4	31.2	27.78	2.67	8
B2	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	15:35	9.52	8.48	31.38	27.63	2.74	7
B2	20211028	Cloudy	Moderate	Mid-Flood	Bottom	3.9	15:34	9.59	8.43	31.2	27.67	3.89	6
B2	20211028	Cloudy	Moderate	Mid-Flood	Bottom	3.9	15:34	9.38	8.42	31.21	27.78	3.56	7
В3	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	15:05	10.15	8.41	31.56	26.95	2.84	7
В3	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	15:05	10.06	8.46	31.41	26.7	3.09	5
В3	20211028	Cloudy	Moderate	Mid-Flood	Bottom	3.6	15:04	10.05	8.49	31.77	26.85	3	6
В3	20211028	Cloudy	Moderate	Mid-Flood	Bottom	3.6	15:04	10.07	8.41	31.6	26.87	3.5	6

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
B4	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	15:15	8.7	8.22	32.09	26.9	2.22	5
B4	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	15:15	8.76	8.25	32.09	27.11	2.34	4
B4	20211028	Cloudy	Moderate	Mid-Flood	Bottom	3.9	15:14	8.71	8.27	32.19	26.84	3.21	6
B4	20211028	Cloudy	Moderate	Mid-Flood	Bottom	3.9	15:14	8.7	8.33	32.32	27.04	3.11	6
C1A	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	14:53	10.34	8.25	31.27	27.52	4.03	5
C1A	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	14:53	10.07	8.25	31.48	27.44	4.11	6
C1A	20211028	Cloudy	Moderate	Mid-Flood	Middle	5.45	14:52	8.83	8.13	31.27	26.99	3.99	10
C1A	20211028	Cloudy	Moderate	Mid-Flood	Middle	5.45	14:52	8.78	8.16	30.98	27.11	3.91	10
C1A	20211028	Cloudy	Moderate	Mid-Flood	Bottom	9.9	14:51	9.94	8.34	31.06	27.66	4.56	5
C1A	20211028	Cloudy	Moderate	Mid-Flood	Bottom	9.9	14:51	10.06	8.39	30.85	27.73	4.2	7
C2A	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	14:53	9.97	8.28	31.22	27.55	3.84	6
C2A	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	14:53	10.08	8.33	31.45	27.43	4.02	7
C2A	20211028	Cloudy	Moderate	Mid-Flood	Middle	5.95	14:52	8.99	8.21	31.26	26.86	3.7	3
C2A	20211028	Cloudy	Moderate	Mid-Flood	Middle	5.95	14:52	8.68	8.13	31.19	27.01	3.71	6
C2A	20211028	Cloudy	Moderate	Mid-Flood	Bottom	10.9	14:51	10.11	8.46	31.05	27.75	3.77	7
C2A	20211028	Cloudy	Moderate	Mid-Flood	Bottom	10.9	14:51	10.32	8.45	31	27.82	3.6	7
CR1	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	16:34	9.46	8.37	31.8	26.9	4.82	6
CR1	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	16:34	9.46	8.3	32.04	26.9	4.83	7
CR1	20211028	Cloudy	Moderate	Mid-Flood	Middle	6.35	16:33	9.32	8.34	32.03	27.04	4.79	11
CR1	20211028	Cloudy	Moderate	Mid-Flood	Middle	6.35	16:33	9.25	8.37	31.96	26.79	5.1	12
CR1	20211028	Cloudy	Moderate	Mid-Flood	Bottom	11.7	16:32	9.38	8.28	31.93	26.84	5.26	6
CR1	20211028	Cloudy	Moderate	Mid-Flood	Bottom	11.7	16:32	9.34	8.27	31.74	26.88	4.53	5
CR2	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	16:19	9.52	8.33	30.87	27.56	4.81	9
CR2	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	16:19	9.23	8.39	30.81	27.62	4.49	9
CR2	20211028	Cloudy	Moderate	Mid-Flood	Middle	5.95	16:18	9.25	8.33	31	27.53	5.12	11
CR2	20211028	Cloudy	Moderate	Mid-Flood	Middle	5.95	16:18	9.4	8.32	31	27.68	4.82	11
CR2	20211028	Cloudy	Moderate	Mid-Flood	Bottom	10.9	16:17	9.5	8.42	31.09	27.66	5.1	8
CR2	20211028	Cloudy	Moderate	Mid-Flood	Bottom	10.9	16:17	9.46	8.32	31.09	27.37	4.85	8
F1A	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	15:47	10.16	8.36	32.27	27.11	2.78	5
F1A	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	15:47	10.17	8.3	32.23	27.2	3.18	4
F1A	20211028	Cloudy	Moderate	Mid-Flood	Middle	4.05	15:46	10.13	8.25	31.91	27.09	3	5
F1A	20211028	Cloudy	Moderate	Mid-Flood	Middle	4.05	15:46	9.95	8.31	32.08	27.1	3.58	4
F1A	20211028	Cloudy	Moderate	Mid-Flood	Bottom	7.1	15:45	9.93	8.32	31.9	27.19	3.63	3
F1A	20211028	Cloudy	Moderate	Mid-Flood	Bottom	7.1	15:45	10.16	8.24	31.97	27.22	3.11	3
H1	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	16:02	9.43	8.28	32	27.38	3.48	6
H1	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	16:02	9.75	8.34	31.9	27.44	3.87	6
H1	20211028	Cloudy	Moderate	Mid-Flood	Middle	3.85	16:01	9.46	8.25	31.9	27.42	3.59	6
H1	20211028	Cloudy	Moderate	Mid-Flood	Middle	3.85	16:01	9.68	8.35	32.09	27.19	3.65	4
H1	20211028	Cloudy	Moderate	Mid-Flood	Bottom	6.7	16:00	9.75	8.32	31.88	27.41	3.46	6
H1	20211028	Cloudy	Moderate	Mid-Flood	Bottom	6.7	16:00	9.61	8.3	32.13	27.23	3.34	6
M1	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	16:16	9.87	8.29	30.87	27.13	3.53	7

Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
M1	20211028	Cloudy	Moderate	Mid-Flood	Surface	1	16:16	9.62	8.27	30.91	27.12	3.35	5
M1	20211028	Cloudy	Moderate	Mid-Flood	Middle	4	16:15	9.79	8.2	30.95	27.05	3.57	6
M1	20211028	Cloudy	Moderate	Mid-Flood	Middle	4	16:15	9.73	8.28	30.76	27.26	4.19	7
M1	20211028	Cloudy	Moderate	Mid-Flood	Bottom	7	16:14	9.85	8.28	30.92	27.05	4.76	9
M1	20211028	Cloudy	Moderate	Mid-Flood	Bottom	7	16:14	9.68	8.2	31.06	27.24	4.64	9
B1	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	08:54	9.11	8.26	31.24	28.07	2.75	6
B1	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	08:54	9.25	8.29	31.48	28.25	2.79	6
B1	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	3.6	08:53	9.17	8.16	30.63	27.46	3.49	6
B1	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	3.6	08:53	9.3	8.16	30.6	27.6	3.45	7
B2	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	09:11	8.41	8.3	31.4	27.6	3.37	5
В2	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	09:11	8.22	8.34	31.37	27.54	3.23	3
B2	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	4	09:10	8.16	8.33	31.4	27.57	4.5	8
B2	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	4	09:10	8.08	8.29	31.08	27.77	4.03	6
В3	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	10:05	8.45	8.43	31.01	27.64	3.68	4
В3	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	10:05	8.15	8.41	30.84	27.71	3.22	3
В3	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	3.8	10:04	9.36	8.44	31.21	27.93	3.72	7
В3	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	3.8	10:04	9.19	8.45	31.27	27.77	3.34	5
B4	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	09:27	8.81	8.3	31.15	27.68	2.9	6
B4	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	09:27	8.94	8.24	30.84	27.89	3.41	6
B4	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	3.5	09:26	8.72	8.29	30.86	27.8	3.38	14
B4	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	3.5	09:26	8.9	8.28	30.95	27.8	3.59	14
C1A	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	08:24	9.49	8.22	30.6	27.39	4.86	9
C1A	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	08:24	9.45	8.16	30.61	27.56	4.92	9
C1A	20211030	Cloudy	Moderate	Mid-Ebb	Middle	5.5	08:23	9.14	8.24	30.33	28.23	5.47	8
C1A	20211030	Cloudy	Moderate	Mid-Ebb	Middle	5.5	08:23	9.47	8.21	29.97	28.49	5.59	8
C1A	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	10	08:22	9.32	8.25	30.22	28.35	5.26	7
C1A	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	10	08:22	9.46	8.25	30.23	28.23	5.33	5
C2A	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	10:25	8.08	8.13	30.57	27.72	3.69	10
C2A	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	10:25	8.21	8.09	30.58	27.75	3.97	10
C2A	20211030	Cloudy	Moderate	Mid-Ebb	Middle	6.05	10:24	8.07	8.11	30.68	27.7	3.24	10
C2A	20211030	Cloudy	Moderate	Mid-Ebb	Middle	6.05	10:24	7.95	8.14	30.33	27.76	3.35	10
C2A	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	11.1	10:23	8.31	8.15	30.45	27.76	4.55	10
C2A	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	11.1	10:23	7.98	8.09	30.45	27.73	4.09	10
CR1	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	10:05	8.24	8.41	30.81	27.59	3.74	17
CR1	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	10:05	8.39	8.41	30.91	27.77	3.76	16
CR1	20211030	Cloudy	Moderate	Mid-Ebb	Middle	6.55	10:04	8.37	8.39	30.92	27.61	3.27	7
CR1	20211030	Cloudy	Moderate	Mid-Ebb	Middle	6.55	10:04	8.41	8.37	30.83	27.81	3.04	8
CR1	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	12.1	10:03	9.26	8.36	31.32	27.91	3.27	9
CR1	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	12.1	10:03	9.23	8.37	31.57	27.85	3.22	5
CR2	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	09:51	9.31	8.39	31.2	28	2.71	9
CR2	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	09:51	9.1	8.41	31.52	27.91	2.59	7

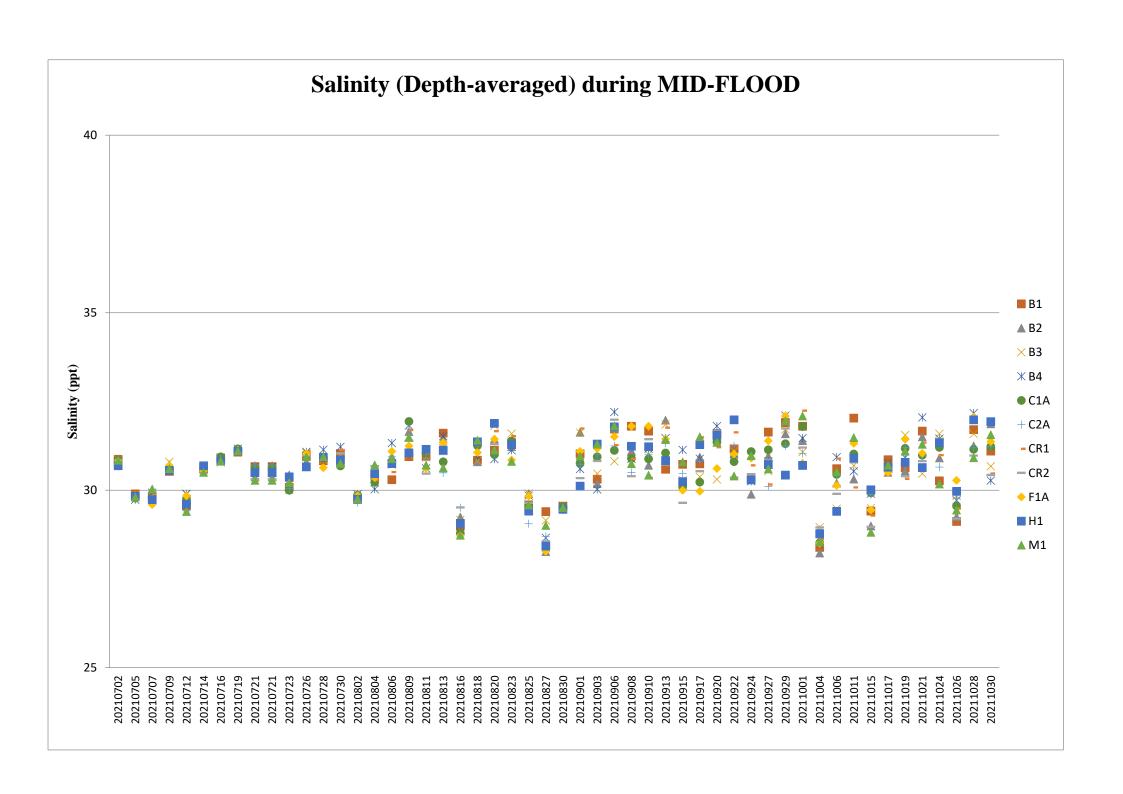
Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
CR2	20211030	Cloudy	Moderate	Mid-Ebb	Middle	5.5	09:50	8.82	8.42	31.71	28	4.14	6
CR2	20211030	Cloudy	Moderate	Mid-Ebb	Middle	5.5	09:50	8.88	8.35	31.9	27.97	3.65	5
CR2	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	10	09:49	8.68	8.36	31.5	27.97	3.94	3
CR2	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	10	09:49	8.91	8.34	31.66	27.97	3.91	4
F1A	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	09:27	9.39	8.18	31.98	27.92	3.24	10
F1A	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	09:27	9.39	8.16	31.77	27.83	3.45	10
F1A	20211030	Cloudy	Moderate	Mid-Ebb	Middle	4.35	09:26	8.78	8.25	30.98	27.75	3.49	14
F1A	20211030	Cloudy	Moderate	Mid-Ebb	Middle	4.35	09:26	8.81	8.26	30.94	27.67	3.34	12
F1A	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	7.7	09:25	8.28	8.32	31.37	27.75	4.34	9
F1A	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	7.7	09:25	8.38	8.29	31.23	27.57	3.65	9
H1	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	09:37	8.74	8.42	31.93	28	4.07	10
H1	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	09:37	8.54	8.41	31.68	28.05	3.86	12
H1	20211030	Cloudy	Moderate	Mid-Ebb	Middle	4.15	09:36	9.35	8.19	31.79	27.96	4.06	3
H1	20211030	Cloudy	Moderate	Mid-Ebb	Middle	4.15	09:36	9.32	8.18	31.73	27.82	3.89	3
H1	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	7.3	09:35	9.42	8.13	32.07	27.71	4.34	4
H1	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	7.3	09:35	9.39	8.19	31.84	27.71	4.14	5
M1	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	09:00	8.59	8.13	30.91	27.85	4.1	7
M1	20211030	Cloudy	Moderate	Mid-Ebb	Surface	1	09:00	8.24	8.11	30.9	27.78	3.96	5
M1	20211030	Cloudy	Moderate	Mid-Ebb	Middle	4.35	08:59	8.24	8.14	30.99	27.84	3.74	10
M1	20211030	Cloudy	Moderate	Mid-Ebb	Middle	4.35	08:59	8.47	8.14	30.57	27.96	3.5	10
M1	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	7.7	08:58	9.26	8.19	31.52	28.09	2.51	10
M1	20211030	Cloudy	Moderate	Mid-Ebb	Bottom	7.7	08:58	8.96	8.2	31.57	28.28	2.33	10
B1	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	13:59	8.83	8.14	31.66	28.51	3.31	3
B1	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	13:59	8.82	8.12	31.91	28.3	3.52	5
B1	20211030	Cloudy	Moderate	Mid-Flood	Bottom	4.6	13:58	8	8.21	30.38	28.56	4.6	3
B1	20211030	Cloudy	Moderate	Mid-Flood	Bottom	4.6	13:58	7.98	8.23	30.46	28.44	3.91	4
B2	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	14:16	8.77	8.15	31.93	28.47	2.53	7
B2	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	14:16	8.6	8.17	31.94	28.27	2.34	7
В2	20211030	Cloudy	Moderate	Mid-Flood	Bottom	4.1	14:15	8.87	8.15	31.92	28.41	3.42	7
В2	20211030	Cloudy	Moderate	Mid-Flood	Bottom	4.1	14:15	8.73	8.14	31.69	28.29	3.27	7
В3	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	13:45	8.08	8.15	30.73	28.02	4.51	7
В3	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	13:45	8.02	8.15	30.73	27.88	4.37	7
В3	20211030	Cloudy	Moderate	Mid-Flood	Bottom	3.6	13:44	8.01	8.18	30.66	28.09	4.15	9
В3	20211030	Cloudy	Moderate	Mid-Flood	Bottom	3.6	13:44	8.17	8.18	30.58	28.06	3.91	9
В4	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	13:54	7.94	8.23	30.27	28.47	3.63	6
В4	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	13:54	8.07	8.19	30.31	28.58	3.49	6
В4	20211030	Cloudy	Moderate	Mid-Flood	Bottom	4.5	13:53	7.79	8.2	30.27	28.39	4.76	2.5
B4	20211030	Cloudy	Moderate	Mid-Flood	Bottom	4.5	13:53	8.12	8.19	30.24	28.55	4.29	2.5
C1A	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	13:34	9.07	8.28	30.51	28.11	4.57	10
C1A	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	13:34	9.14	8.19	30.54	28.18	4.61	8
C1A	20211030	Cloudy	Moderate	Mid-Flood	Middle	5.35	13:33	8.53	8.22	31.52	28.3	5.44	7

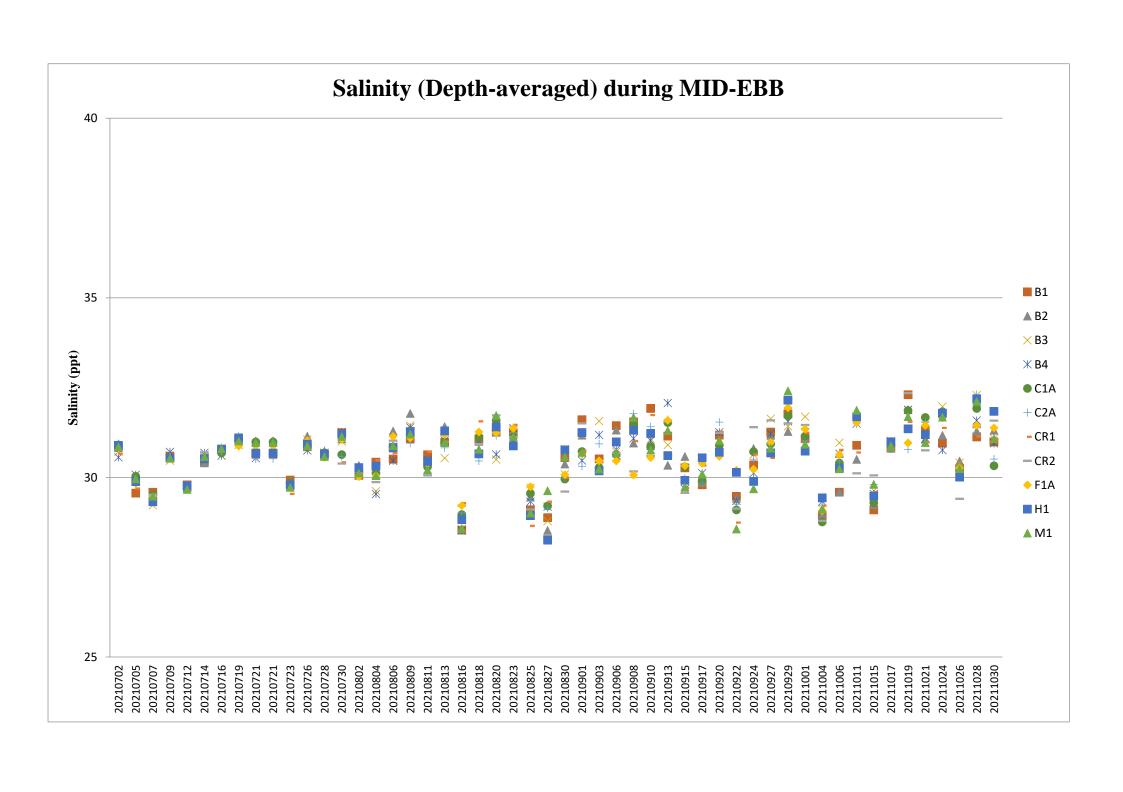
Contract No. EP/SP/66/12 Integrated Waste Management Facilities, Phase 1

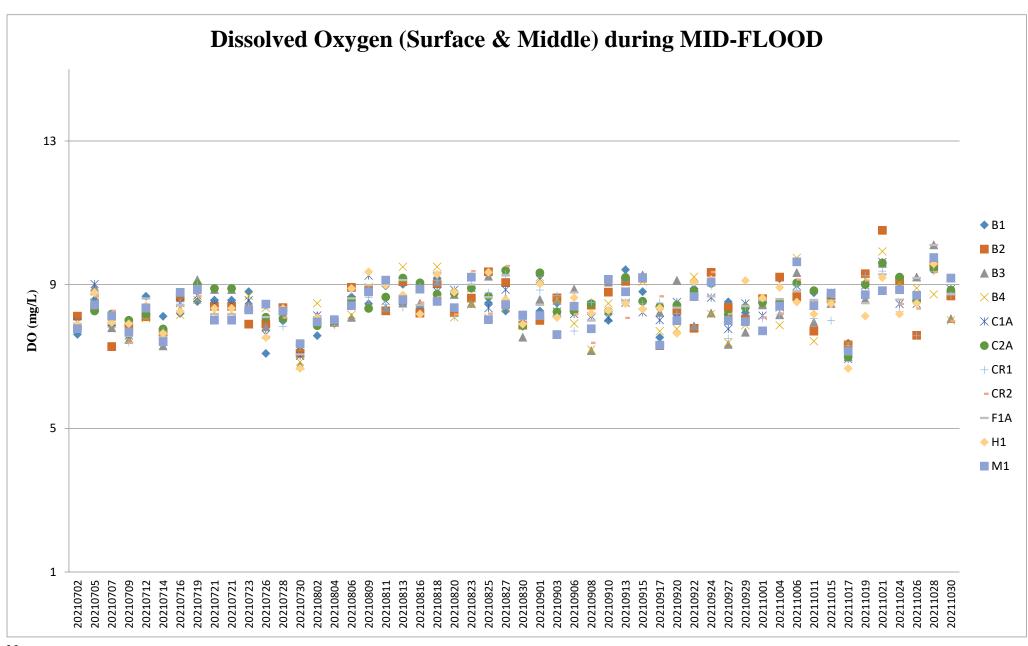
Location	Date (YYYYMMDD)	Weather	Sea Condition	Tidal	Water Level	Depth (m)	Time	DO (mg/L)	рН	Sal (ppt)	Temp (°C)	Turbidty (NTU) Note 1	SS (mg/L)
C1A	20211030	Cloudy	Moderate	Mid-Flood	Middle	5.35	13:33	8.76	8.3	31.49	28.4	5.5	6
C1A	20211030	Cloudy	Moderate	Mid-Flood	Bottom	9.7	13:32	7.95	8.28	31.66	28.67	6.35	7
C1A	20211030	Cloudy	Moderate	Mid-Flood	Bottom	9.7	13:32	8.18	8.22	31.66	28.79	5.76	4
C2A	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	13:34	9.1	8.24	30.86	28.02	5.33	10
C2A	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	13:34	8.99	8.26	30.49	28	6.15	10
C2A	20211030	Cloudy	Moderate	Mid-Flood	Middle	6	13:33	8.73	8.31	31.51	28.41	7.07	8
C2A	20211030	Cloudy	Moderate	Mid-Flood	Middle	6	13:33	8.58	8.22	31.2	28.42	6.03	8
C2A	20211030	Cloudy	Moderate	Mid-Flood	Bottom	11	13:32	7.89	8.3	31.7	28.81	6.9	8
C2A	20211030	Cloudy	Moderate	Mid-Flood	Bottom	11	13:32	8.04	8.3	31.64	28.73	7.02	8
CR1	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	15:12	8.89	8.22	30.51	28.66	3.42	8
CR1	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	15:12	8.6	8.12	30.64	28.5	3.66	8
CR1	20211030	Cloudy	Moderate	Mid-Flood	Middle	6.15	15:11	8.58	8.12	30.3	28.51	3.57	3
CR1	20211030	Cloudy	Moderate	Mid-Flood	Middle	6.15	15:11	8.75	8.2	30.38	28.63	3.68	3
CR1	20211030	Cloudy	Moderate	Mid-Flood	Bottom	11.3	15:10	8.78	8.21	30.36	28.68	4.88	2.5
CR1	20211030	Cloudy	Moderate	Mid-Flood	Bottom	11.3	15:10	8.96	8.19	30.65	28.53	4.42	4
CR2	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	14:58	7.96	8.11	30.42	28.52	3.91	3
CR2	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	14:58	8.13	8.12	30.29	28.53	3.93	2.5
CR2	20211030	Cloudy	Moderate	Mid-Flood	Middle	5.75	14:57	7.85	8.2	30.18	28.5	3.85	2.5
CR2	20211030	Cloudy	Moderate	Mid-Flood	Middle	5.75	14:57	8	8.12	30.66	28.45	3.29	2.5
CR2	20211030	Cloudy	Moderate	Mid-Flood	Bottom	10.5	14:56	7.98	8.17	30.54	28.68	3.44	9
CR2	20211030	Cloudy	Moderate	Mid-Flood	Bottom	10.5	14:56	7.79	8.18	30.5	28.68	3.21	9
F1A	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	14:26	8.87	8.18	31.33	29.05	3.92	8
F1A	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	14:26	8.67	8.2	31.48	28.97	3.75	8
F1A	20211030	Cloudy	Moderate	Mid-Flood	Middle	4.2	14:25	8.83	8.17	31.43	29.03	4.2	6
F1A	20211030	Cloudy	Moderate	Mid-Flood	Middle	4.2	14:25	8.6	8.24	31.3	28.98	4	5
F1A	20211030	Cloudy	Moderate	Mid-Flood	Bottom	7.4	14:24	8.59	8.18	31.34	28.95	3.6	11
F1A	20211030	Cloudy	Moderate	Mid-Flood	Bottom	7.4	14:24	8.86	8.22	31.34	28.91	3.31	11
H1	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	14:44	9.27	8.12	32.05	28.02	4.07	7
H1	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	14:44	8.98	8.15	32.04	27.87	3.58	7
H1	20211030	Cloudy	Moderate	Mid-Flood	Middle	3.8	14:43	9.24	8.18	31.84	27.86	3.87	3
H1	20211030	Cloudy	Moderate	Mid-Flood	Middle	3.8	14:43	9.22	8.17	31.94	27.82	3.84	2.5
H1	20211030	Cloudy	Moderate	Mid-Flood	Bottom	6.6	14:42	9.27	8.13	31.75	28.07	4	11
H1	20211030	Cloudy	Moderate	Mid-Flood	Bottom	6.6	14:42	9.01	8.08	31.97	27.94	3.79	11
M1	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	14:55	9.25	8.31	31.45	28.87	2.8	2.5
M1	20211030	Cloudy	Moderate	Mid-Flood	Surface	1	14:55	9.24	8.31	31.69	28.73	2.92	3
M1	20211030	Cloudy	Moderate	Mid-Flood	Middle	4.3	14:54	9.1	8.37	31.41	28.7	3.15	3
M1	20211030	Cloudy	Moderate	Mid-Flood	Middle	4.3	14:54	9.14	8.3	31.57	28.83	3.1	2.5
M1	20211030	Cloudy	Moderate	Mid-Flood	Bottom	7.6	14:53	9	8.41	31.44	28.93	2.59	2.5
M1	20211030	Cloudy	Moderate	Mid-Flood	Bottom	7.6	14:53	9.35	8.4	31.81	28.69	2.47	2.5

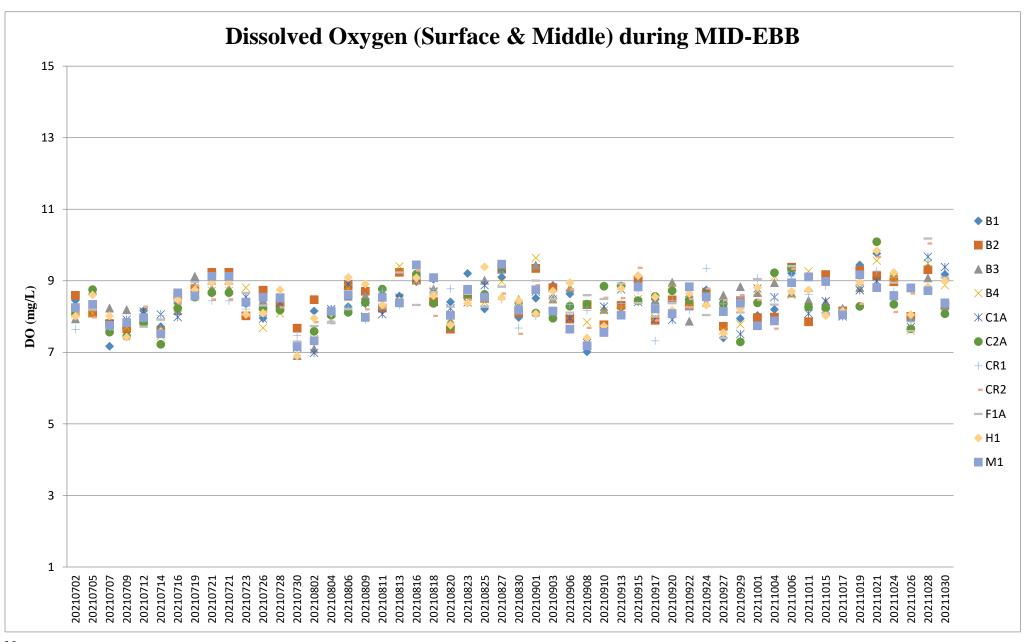
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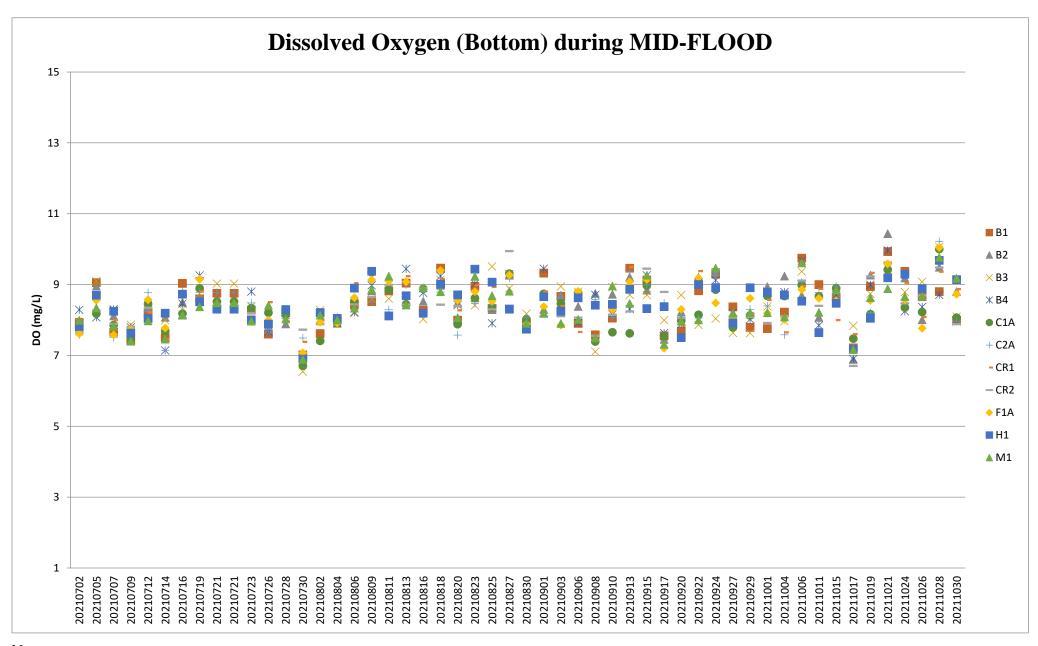
Note 1: Measurements of turbidity would be rounding to 0.1 NTU for proven accuracy as per the equipment specs during utilization of data.

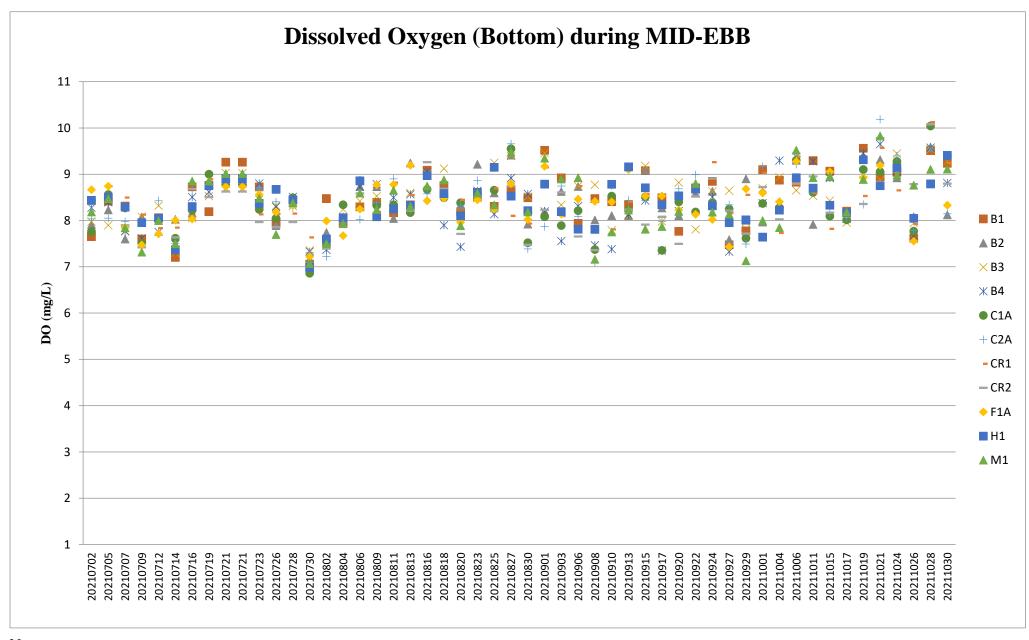


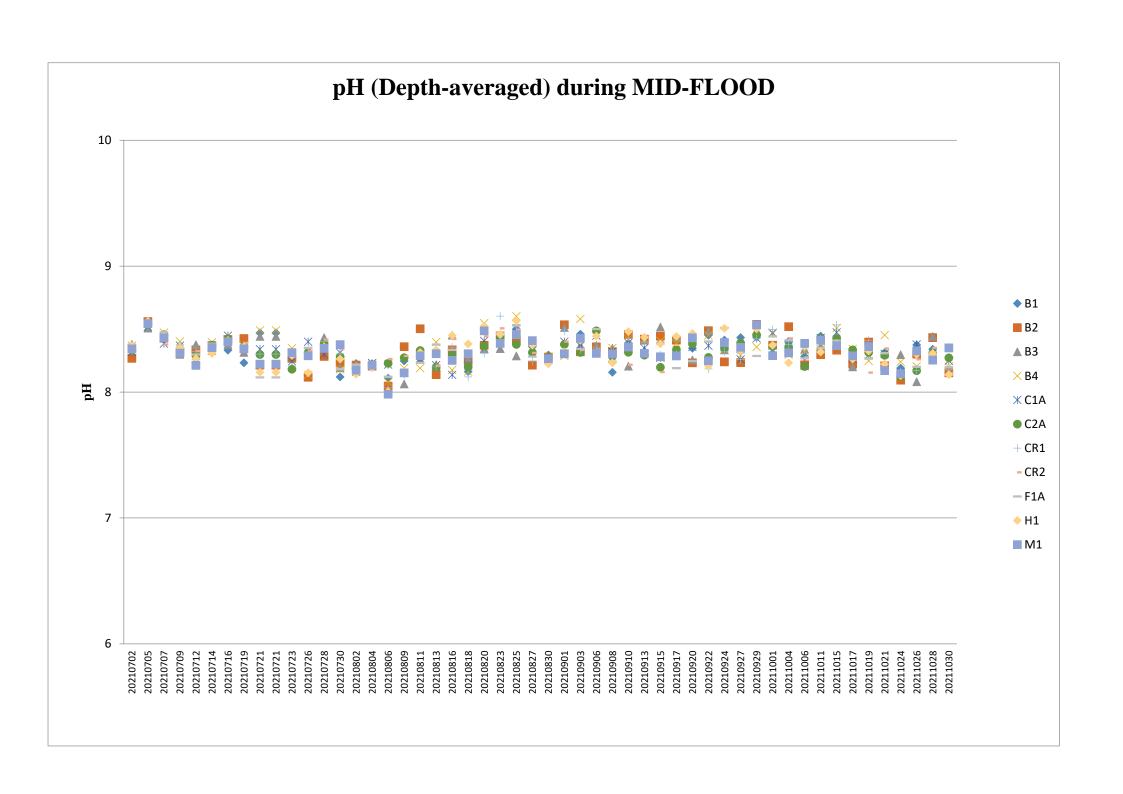


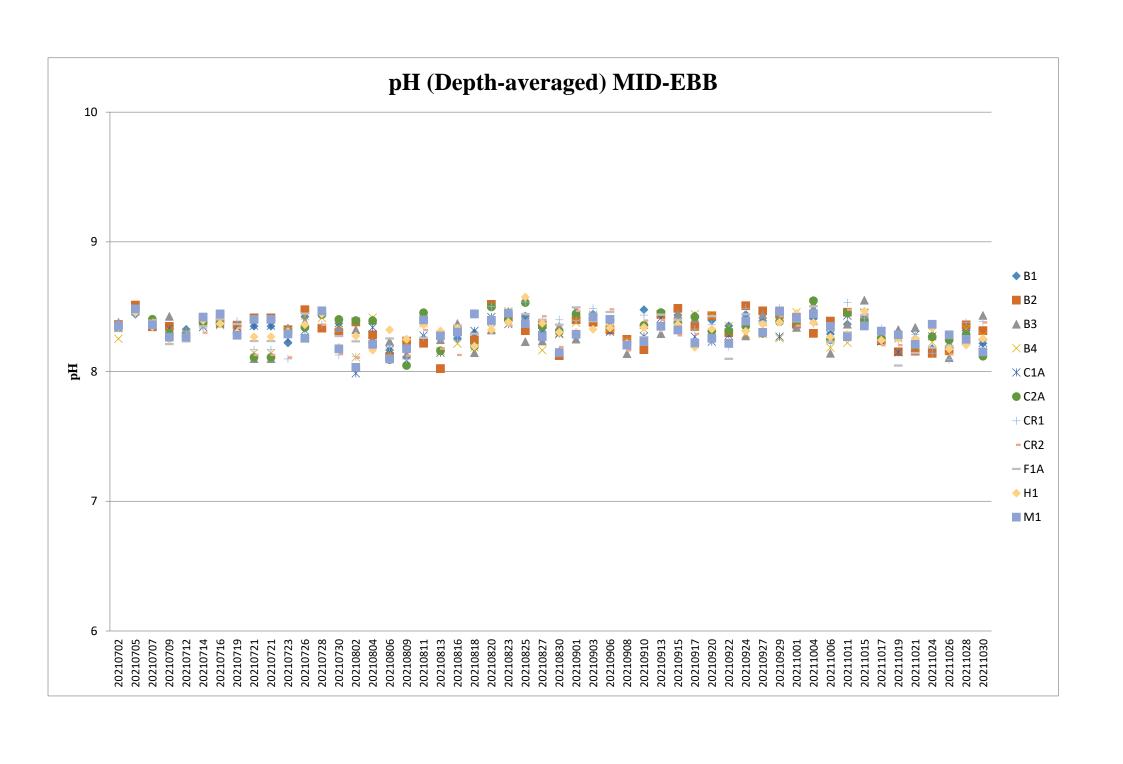


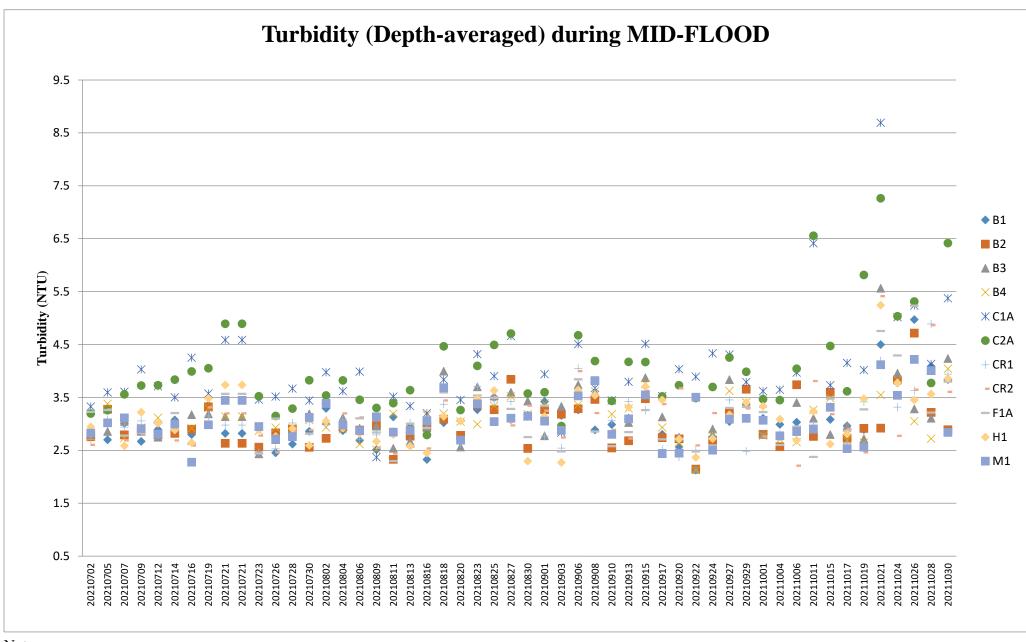


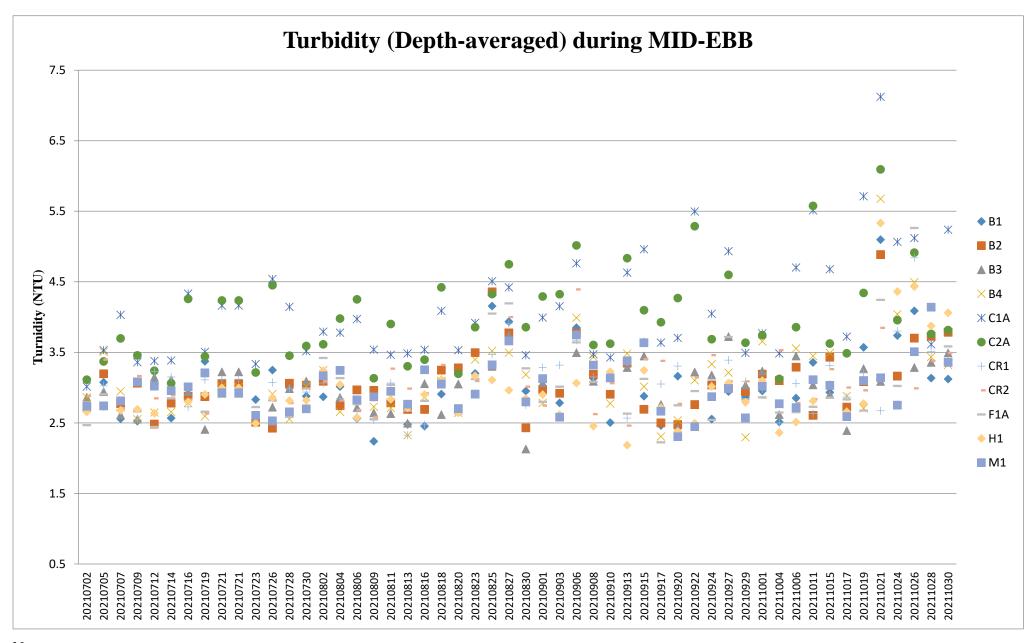


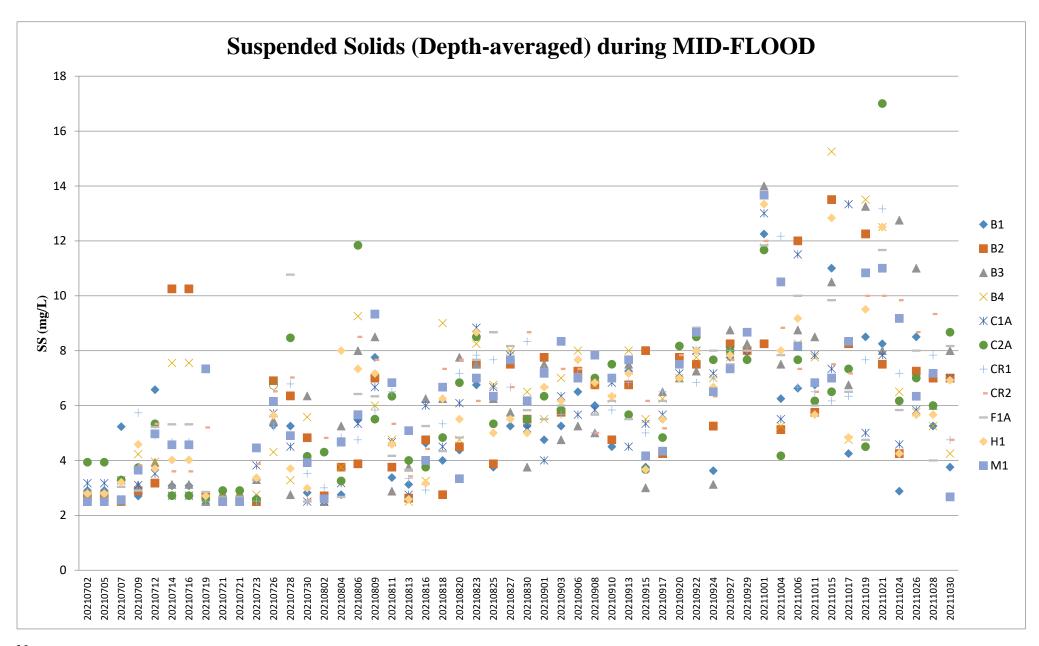


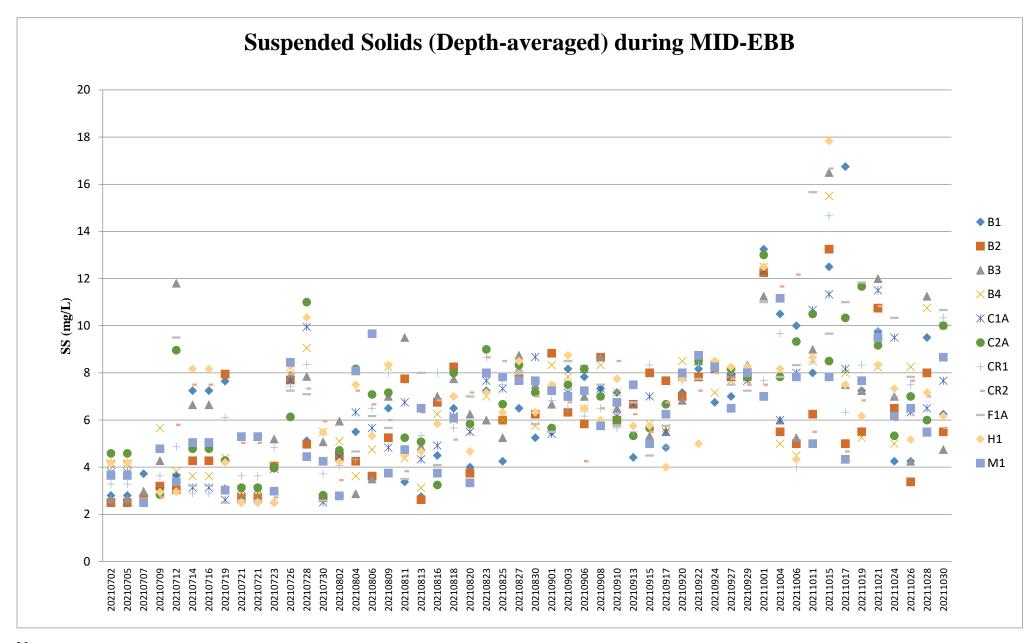


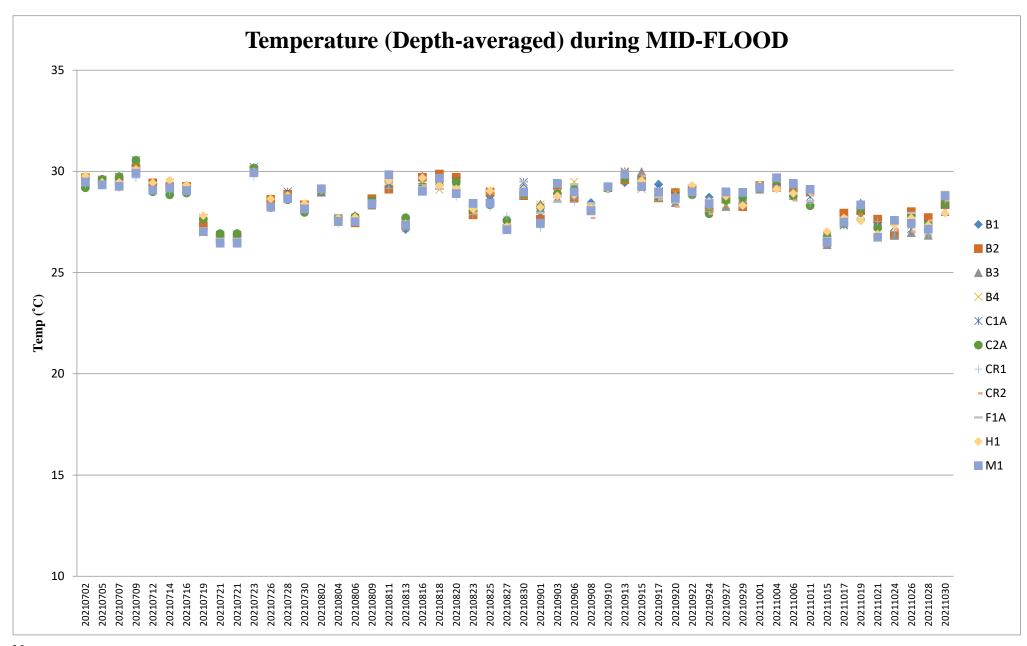




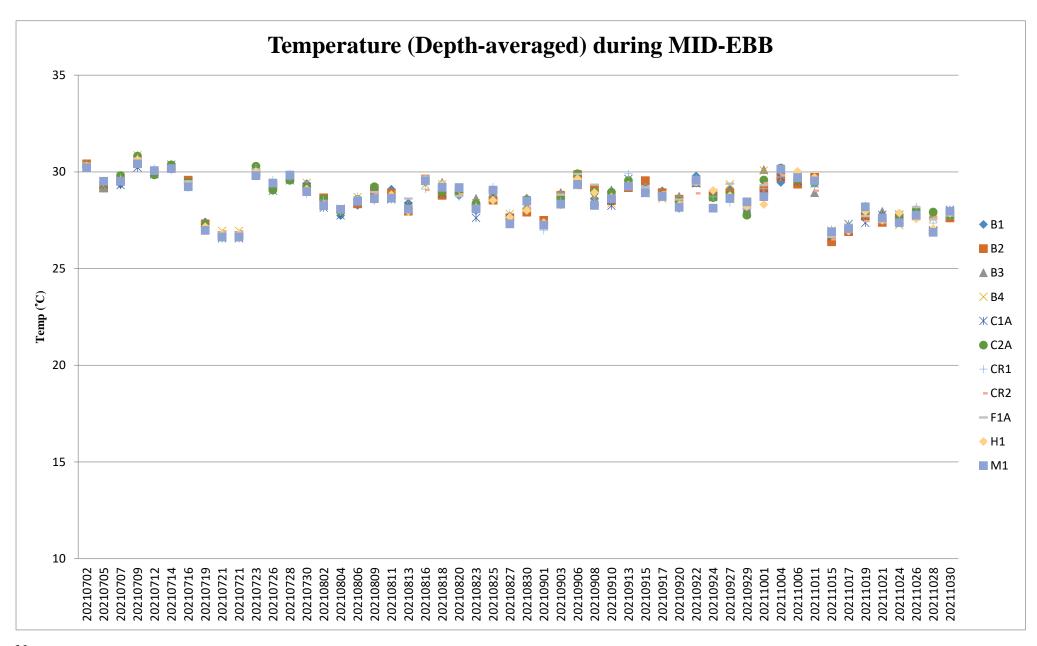








1. The Action and Limit Level of temperature can be referred to **Table 2.8** of the monthly EM&A report.



1. The Action and Limit Level of temperature can be referred to **Table 2.8** of the monthly EM&A report.

Contract No. EP/SP/66 Integrated Waste Mana	5/12 agement Facilities, Phase 1	Keppel Seghers – Zhen Hua Joint Venture
Appendix E	HOKLAS Laboratory Cert	ificate



Hong Kong Accreditation Service 香港認可處

Certificate of Accreditation

認可證書

This is to certify that 特此證明

ALS TECHNICHEM (HK) PTY LIMITED

11/F., Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, New Territories, Hong Kong 香港新界葵涌永業街1-3號忠信針織中心11樓

has been accepted by the HKAS Executive, on the recommendation of the Accreditation Advisory Board, as a 為香港認可處執行機關根據認可諮詢委員會建議而接受的

HOKLAS Accredited Laboratory 「香港實驗所認可計劃」認可實驗所

This laboratory meets the requirements of ISO / IEC 17025 : 2005 - General requirements for the competence 此實驗所符合ISO / IEC 17025: 2005 - 《测試及校正實驗所能力的通用規定》所訂的要求 of testing and calibration laboratories and it has been accredited for performing specific tests or calibrations as 獲認可進行截於香港實驗所認可計劃(認可實驗所名冊)內下述測試類別中的指定 listed in the HOKLAS Directory of Accredited Laboratories within the test category of 测试或校正工作

Environmental Testing 環境測試

This laboratory is accredited in accordance with the recognised international Standard ISO / IEC 17025 : 2005. 本實驗所乃根據公認的國際標準 ISO/IEC 17025: 2005 獲得認可。 This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory 這項認可資格深示在指定範疇所需的技術能力及實驗所質量管理體系的運作 quality management system (see joint IAF-ILAC-ISO Communiqué). (見國際認可論權、國際實驗所認可含作組織及國際標準化組織的關合公報)。

The common seal of the Hong Kong Accreditation Service is affixed hereto by the authority of the HKAS Executive 香港認可處根據認可處執行機關的權限在此蓋上通用印章

CHAN Sing Sing, Terence, Executive Administrator

執行幹事 陳成城 Issue Date: 5 May 2009

簽發日期:二零零九年五月五日

Registration Number : HONDAS 066

註冊號碼:

Date of First Registration: 15 September 1995 首次註冊日期:一九九五年九月十五日



Hong Kong Accreditation Service 香港認可處

Certificate of Accreditation

認可證書

This is to certify that 特此證明

ACUMEN LABORATORY AND TESTING LIMITED

浩科檢測中心有限公司

Lot 12, Tam Kon Shan Road, North Tsing Yi, New Territories, Hong Kong

香港新界青衣北担杆山路12路段

has been accepted by the HKAS Executive, on the recommendation of the Accreditation Advisory Board, as a 在認可諮詢委員會的建議下獲香港認可處執行機關接受為

HOKLAS Accredited Laboratory

「香港實驗所認可計劃」認可實驗所

This laboratory meets the requirements of ISO/IEC 17025:2005 and it has been accredited for performing specific tests or calibrations as listed in the scope of accreditation within the test category of

Environmental Testing

此實驗所符合ISO/IEC 17025:2005所訂的要求 並獲認可進行載於認可範圍內下逃測試類別中的指定測試或校正工作

環境測試

This accreditation to ISO/IEC 17025:2005 demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (see joint IAF-ILAC-ISO Communiqué). 並項 ISO/IEC 17025:2005 的認可資格證明此實驗所具傳播定範疇內所須的技術能力並 實施一套實驗所質量管理體系(見圖際語可論理・國際實驗所認可合作組織及國際標準化組織的聯合公報)。

The common seal of the Hong Kong Accreditation Service is affixed hereto by the authority of the HKAS Executive 現經香港認可處執行機關授權在此蓋上香港認可處的印章

WONG Wang-wan, Executive Administrator

執行幹事 黃宏華 Issue Date: 16 July 2014 簽發日期: 二零一四年七月十六日

Registration Number: HOKLAS 241

Date of First Registration: 16 July 2014 首次註冊日期:二零一四年七月十六日

This certificate is issued subject to the terms and conditions laid down by HKAS. 本證書按照香港間可處訂立的條款及條件發出

L 001195

Contract No. EP/SP/66. Integrated Waste Mana	gement Facilities, Phase 1	Keppel Seghers – Zhen Hua Joint Venture
Appendix F	Water Quality Equipment	Calibration Certificate



Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong Email: info@qualityprotest.com; Website: www.qualityprotest.com Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No.

BA080063

Date of Issue

19 August 2021

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PART A - CUSTOMER INFORMATION

Acuity Sustainability Consulting Limited Unit C, 11/F, Ford Glory Plaza 37-39 Wing Hong Street Cheung Sha Wan, Kowloon, Hong Kong

Attn: Mr. Nelson TSUI

PART B - DESCRIPTION

Name of Equipment

Multi Water Quality Checker U-53

Manufacturer

Horiba

Serial Number

NEKVM2XU

Date of Received

Aug 13, 2021

Date of Calibration

Aug 13, 2021 Aug 16, 2021

Date of Next Calibration^(a)

Nov 15, 2021

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

<u>Parameter</u>

Reference Method

pH at 25°C

APHA 21e 4500-H⁺ B

Dissolved Oxygen

APHA 21e 4500-O G APHA 21e 2520 B

Salinity Turbidity

APHA 21e 2130 B

Temperature

Section 6 of international Accreditation New Zealand Technical

Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

PART D - CALIBRATION RESULTS(b,c)

(1) pH at 25°C

Target (pH unit)	Displayed Reading(d) (pH Unit)	Tolerance ^(e) (pH Unit)	Results
4.00	4.10	0.10	Satisfactory
7.42	7.40	-0.02	Satisfactory
10.01	10.00	-0.01	Satisfactory

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

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
15	15.27	0.27	Satisfactory
27	26.98	-0.02	Satisfactory
34.1	34.85	0.75	Satisfactory

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

~ CONTINUED ON NEXT PAGE ~

<u>Remark(s): -</u>

(a) 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

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

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

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

LEE Chun-ning, Desmond Senior Chemist



Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong Email: info@qualityprotest.com; Website: www.qualityprotest.com Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

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PART D - CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
1.35	1.61	0.26	Satisfactory
3.73	3.57	-0.16	Satisfactory
5.98	5.98	0.00	Satisfactory
7.74	7.64	-0.10	Satisfactory

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

(4) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.18	1.80	Satisfactory
20	21.26	6.30	Satisfactory
30	32.52	8.40	Satisfactory

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

(5) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
0	0.12		Satisfactory
10	10.2	2.0	Satisfactory
20	20.0	0.0	Satisfactory
100	101	1.0	Satisfactory
800	800	0.0	Satisfactory

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

~ END OF REPORT ~

Remark(s):

⁽⁰⁾ "Displayed Reading" presents the figures 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.



Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong Email: info@qualityprotest.com; Website: www.qualityprotest.com Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No.

BA100007

Date of Issue

05 October 2021

Page No.

1 of 2

PART A - CUSTOMER INFORMATION

Acuity Sustainability Consulting Limited Unit C, 11/F, Ford Glory Plaza 37-39 Wing Hong Street Cheung Sha Wan, Kowloon, Hong Kong

PART B - DESCRIPTION

Name of Equipment

Attn: Mr. Nelson TSUI

Multi Water Quality Checker U-53

Manufacturer

Horiba

Serial Number

Date of Received

UHB5F2BB Sep 28, 2021

Date of Calibration

Sep 29, 2021

Date of Next Calibration(a)

Dec 28, 2021

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter

Reference Method

pH at 25°C

APHA 21e 4500-H+ B

Dissolved Oxygen

APHA 21e 4500-O G APHA 21e 2520 B

Salinity Turbidity

APHA 21e 2130 B

Temperature

Section 6 of international Accreditation New Zealand Technical

Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

Oxidation-Reduction Potential

APHA 22e 2580 B

PART D - CALIBRATION RESULTS(b,c)

(1) pH at 25°C

Target (pH unit)	Displayed Reading(d) (pH Unit)	Tolerance ^(e) (pH Unit)	Results
4.00	3.82	-0.18	Satisfactory
7.42	7.43	0.01	Satisfactory
10.01	10.03	0.02	Satisfactory

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

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
15	15.1	0.1	Satisfactory
25	25.1	0.1	Satisfactory
33.5	33.1	-0.4	Satisfactory

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

~ CONTINUED ON NEXT PAGE ~

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.

> LEE Chun-ning Senior Chemist



Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong Email: info@qualityprotest.com; Website: www.qualityprotest.com Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No.

: BA100007

Date of Issue

: 05 October 2021

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PART D - CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.65	0.56	-0.09	Satisfactory
1.91	1.79	-0.12	Satisfactory
3.30	3.34	0.04	Satisfactory
6.98	6.99	0.01	Satisfactory

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

(4) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.18	1.80	Satisfactory
20	20.70	3.50	Satisfactory
30	31.45	4.83	Satisfactory

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

(5) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
0	0.00		Satisfactory
10	10.5	5.0	Satisfactory
20	20.3	1.5	Satisfactory
100	106	6.0	Satisfactory
800	788	-1.5	Satisfactory

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

(6) Oxidation-Reduction Potential

Expected Reading (mV)	Displayed Reading (mV)	Tolerance (mV) ^(g)	Results
229	231	2	Satisfactory

Tolerance limit of Oxidation-Reduction Potential should be less than ± 10 (mV)

~ END OF REPORT ~

Remark(s): -

Tisplayed Reading" presents the figures 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

⁽b) 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.



Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong Email: info@qualityprotest.com; Website: www.qualityprotest.com Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No.

BA090020

Date of Issue

08 September 2021

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PART A - CUSTOMER INFORMATION

Acuity Sustainability Consulting Limited Unit C, 11/F, Ford Glory Plaza 37-39 Wing Hong Street Cheung Sha Wan, Kowloon, Hong Kong

Attn: Mr. Nelson TSUI

PART B - DESCRIPTION

Name of Equipment

YSI ProDSS Multi Parameters

Manufacturer

YSI

Serial Number

15M101091

Date of Received

Sep 03, 2021

Date of Calibration

Sep 06, 2021

Date of Next Calibration(a)

Dec 06, 2021

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter

Reference Method

pH at 25°C

APHA 21e 4500-H+ B

Dissolved Oxygen

APHA 21e 4500-O G APHA 21e 2520 B

Salinity **Turbidity**

APHA 21e 2130 B

Temperature

Section 6 of international Accreditation New Zealand Technical

Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

PART D - CALIBRATION RESULTS(b,c)

(1) pH at 25°C

Target (pH unit)	Displayed Reading ^(d) (pH Unit)	Tolerance ^(e) (pH Unit)	Results
4.00	4.12	0.12	Satisfactory
7.42	7.51	0.09	Satisfactory
10.01	10.06	0.05	Satisfactory

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

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
15	14.9	-0.1	Satisfactory
28	27.5	-0.5	Satisfactory
34.5	34.2	-0.3	Satisfactory

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

~ CONTINUED ON NEXT PAGE ~

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.

LEE Chun-ning Senior Chemist



Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong Email: info@qualityprotest.com; Website: www.qualityprotest.com Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No.

BA090020

Date of Issue

08 September 2021

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PART D - CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.14	0.23	0.09	Satisfactory
2.60	2.53	-0.07	Satisfactory
4.57	4.56	-0.01	Satisfactory
7.55	7.32	-0.23	Satisfactory

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

(4) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.96	-0.40	Satisfactory
20	20.37	1.85	Satisfactory
30	31.17	3.90	Satisfactory

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

(5) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
0	-0.34		Satisfactory
10	10.23	2.3	Satisfactory
20	19.25	-3.8	Satisfactory
100	106.49	6.5	Satisfactory
800	849.67	6.2	Satisfactory

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

~ END OF REPORT ~

Remark(s): -

⁽Displayed Reading) presents the figures 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.

Contract No. EP/SP/66. Integrated Waste Mana	/12 gement Facilities, Phase 1	Keppel Seghers – Zhen Hua Joint Ventur
Appendix G	Event / Action Plan for Wat	er Quality Exceedance

Event		Act	ion	
	ET	IEC	SO	Contractor
Action level being exceeded by one sampling day	Repeat in-situ measurement to confirm findings; Identify 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. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the SO accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with IEC on the proposed mitigation measures; Make agreement on the mitigation measures to be implemented. (The above actions should be taken within 1 working day after the exceedance is identified)	Inform the SO and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET and IEC and propose mitigation measures to IEC and SO within 3 working days; Implement the agreed mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)
Action level being exceeded by more than one consecutive sampling days	Identify 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 working day of exceedance. (The above actions should be taken within 1 working day after Action Level being exceeded by two consecutive sampling days)	Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the SO accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after Action Level being exceeded by two consecutive sampling days)	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. (The above actions should be taken within 1 working day after Action Level being exceeded by two consecutive sampling days)	Inform the SO and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET and IEC and propose mitigation measures to IEC and SO within 3 working days; Implement the agreed mitigation measures. (The above actions should be taken within 1 working day after Action Level being exceeded by two consecutive sampling days)

Event		Ac	tion	
	ET	IEC	SO	Contractor
Limit level	Inform the SO and confirm	Discuss with ET and	Discuss with IEC, ET and	Inform the SO and confirm
being exceeded	notification of the non-	Contractor on the mitigation	Contractor on the proposed	notification of the non-
by one	compliance in writing;	measures;	mitigation measures;	compliance in writing;
sampling day	Rectify unacceptable practice;	Review proposals on	Request Contractor to	Rectify unacceptable practice;
	Check all plant and	mitigation measures submitted	critically review the working	Check all plant and
	equipment;	by Contractor and advise the	methods;	equipment;
	Consider changes of working	SO accordingly;	Make agreement on the	Consider changes of working
	methods;	Assess the effectiveness of	mitigation measures to be	methods;
	Discuss with Contractor, IEC	the implemented mitigation	implemented.	Discuss with ET, IEC and SO
	and SO and propose	measures.	Assess the effectiveness of	and propose mitigation
	mitigation measures to IEC	(The above actions should be	the implemented measures.	measures to IEC and SO
	and SO within 3 working days;	taken within 1 working day	(The above actions should be	within 3 working days;
	Implement the agreed	after the exceedance is	taken within 1 working day	Implement the agreed
	mitigation measures.	identified)	after the exceedance is	mitigation measures.
	(The above actions should be		identified)	(The above actions should be
	taken within 1 working day			taken within 1 working day
	after the exceedance is			after the exceedance is
	identified)			identified)

Event		Act	tion	
	ET	IEC	SO	Contractor
Limit level being exceeded by more than one consecutive sampling days	Identify 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, SO and Contractor. Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days. (The above actions should be taken within 1 working day after Limit Level being exceeded by two consecutive sampling days)	Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the SO accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after Limit Level being exceeded by two consecutive sampling days)	Discuss with IEC, ET and Contractor on the proposed mitigation measures; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented. Assess the effectiveness of the implemented measures. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine work until no exceedance of Limit level. (The above actions should be taken within 1 working day after Limit Level being exceeded by two consecutive sampling days)	Inform the SO and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET, IEC and SO and propose mitigation measures to IEC and SO within 3 working days; Implement the agreed mitigation measures; As directed by the SOR, to slow down or to stop all or part of the marine work or construction activities. (The above actions should be taken within 1 working day after Limit Level being exceeded by two consecutive sampling days)

Contract No. EP/SP/66. Integrated Waste Mana	/12 gement Facilities, Phase 1	Keppel Seghers – Zhen Hua Joint Venture
Appendix H	Noise Monitoring Equipmer Certificate	nt Calibration

Certificate of Calibration

for

Description:

Sound Level Meter

Manufacturer:

NTi Audic

Type No.:

XL2 (Serial No.: Az.4-13548-E0)

Microphone:

ACO 7352 (Serial No.:73780)

Preamplifier:

NT. Audio M2211 MA220 (Serial No.:5235)

Submitted by:

Customer:

Acu ty Sustainability Consulting Limited

Address:

Unit C, 11/F., Ford Glory Plaza, No. 37-39 Wing Hong Street,

Cheung Sha Wan, Kowloon

Upon receipt for calibration, the instrument was found to be:

Within.

☐ Outside

the allowable tolerance.

The test equipment used for collibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 10 December 2020

Date of calibration: 12 December 2020

Celibrated by:

Certified by:

Mr. Ng Yan Wa Aboratory Manager

Date of issue: 12 December 2020

Cal brain: Technici in

Page 1 of 4

Certificate No.: APJ20-1.4 CC001

Acoustics and Air Testing Laboratory Co. Ltd. 聲學及空氣測試實驗室有限公司

1. Calibration Precaution:

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

2. Calibration Conditions:

Air Temperature:

23.7°**C**

Air Pressure:

1006 **hPa**

Relative Humidity:

61.8 %

3. Calibration Equipment:

Type

Serial No.

Calibration Report Number

Traceal le to

Multifunction Calibrator

B&K 42.16 2288467

AV200041

HOKI A 3

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Set	ing of Unit-under-	test (UUT)	App	Applied value UUT Reading,		IEC 61672 Class 1
Range, dB	Fi eq. Weighting	Tirae Weighting	Level, 1B	Frequency, Hz	dB	Specification, dB
30-130	dBA. SPL	Fast	94	1000	94.0	±0.4

Linearity

Setti	ting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. W	eighting	Time Weighting	Le el 1B	Frequency, Hz	dB	Specification, dB
				94		94.0	Ref
30-130	dBA	SPL	Fast	104	1000	104.0	±0.3
				114		114.0	±0.3

Time Weighting

Setti	ng r i Ui	nit-under-t	est (UJT)	Applied value UUT Reading		UUT Reading,	IEC 61672 Class 1
Range, d's	Freq. V	Weighting	C.me Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA	SPL	Fast	94	1000	94.0	Ref
30-130	UDA	SPL	Slow	94	1000	94.0	±0.3

Certificate No.: APJ20-1,4-CC001

(A+A) *L

Page 2 of 4

Homepage: http://www.aa-lab.com

E-mail: inquiry@aa-lab.com



Acoustics and Air Testing Laboratory Co. Ltd. 聲學及空氣測試實驗室有限公司

Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Appl	i d value	UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq. We	eighting	Time Weighting	Level, dP	Frequency, Hz	dB	Specification, dB
					31.5	94.1	±2.0
					63	94.1	±1.5
					125	94.1	±1.5
					250	94.1	+1.4
30-130	dB	SPL	Fast	94	J00	94.1	±1.4
					1000	94.0	Ref
					2000	93.8	±1.6
					4000	93.4	±1/3
					8000	92.7	+2/1; -3.1

A-weighting

Setting of Unit-under-test (UU1)			Appl	ied value	UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
				31.5	54.7	-39.4 ±2.0
				63	68.0	-26.2 ±1.5
				125	75.0	-16.1 ±1.5
				250	85.4	-8.6 ±1.4
30-130	d'3A SPL	Fast	95	500	90.8	-3.2 ±1.4
				1000	94.0	Ref
	/ /			2000	95.0	+1.2 ±1.6
				4000	94.4	+1.0 ±1.6
				8000	91.6	-1.1+2.1; -3.1

C-weighting

	Setting of Unit-under-test (UUT)			Aypl	ied value	UUT Reading,	IEC 61672 Class 1
R	ange, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
					31.5	91.1	-3.0 ±2.0
					63	93.3	-0.8 ±1.5
					125	93.9	-0.2 ±1.5
					250	94.1	-0.0 ± 1.4
	30-130	dBC SPL	Tast	94	500	94.1	-0.0 ± 1.4
V					1000	94.0	Ref
			\		2000	93.7	-0.2 ±1.6
$^{\prime\prime}$					4000	92.6	-0.8 ±1.6
			1/		8000	89.7	-3.0 +2.1: -3.1

Certificate No.: 1PJ20-1,4-CC001



Page 3 of 4

Homepage: http://www.aa-lab.com

E-mail: inquiry@aa-lab.com



5. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 010
	63 Hz	± 0.15
	125 Hz	0.10
	250 Hz	+ 0.10
	500 Hz	± 0.10
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
	8000 Hz	± 0.10
104 dB	1000 H:	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the colibration. (A+A)*L shall not be liable for any loss or damage resulting from the use of the equipment.



Certificate No.: APJ20-1+4-CC001

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Certificate of Calibration

for

Description:

Sound Level Meter

Manufacturer:

SVANTEK

Type No.:

971 (Serial No.: 96063)

Microphone:

ACO 7052 E (Serial No.: 78092)

Preamplifier:

SVANTEK SV 18 (Serial No.:97278)

Submitted by:

Customer:

Acuity Sustainability Consulting Limited

Address:

Unit 1908, Nos. 301-305 Castle Peak Road,

Kwai Chung, N.T.

Upon receipt for calibration, the instrument was found to be:

Within

☐ Outside

the allowable tolerance.

The test equipment used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 28 June 2021

Date of calibration: 30 June 2021

Calibrated by:

Calibration Technician

Certified by:

//Mr. Ng Yan Wa aboratory Manager

Date of issue: 30 June 2021

Certificate No.: APJ21-030-CC001

A+A) *LPage 1 of 4

Acoustics and Air Testing Laboratory Co. Ltd. 聲學及空氣測試實驗室有限公司

1. Calibration Precaution:

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

2. Calibration Conditions:

Air Temperature:

24.2 °**C**

Air Pressure:

1004 hPa

Relative Humidity:

60.8 %

3. Calibration Equipment:

Type

Serial No.

Calibration Report Number

Traceable to

Multifunction Calibrator

B&K 4226

2288467

AV200041

HOKLAS

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

			est (UUT)	App	lied value	UUT Reading	IEC 61672 Class 1
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz		Specification, dB
20-140	dBA	SPL	Fast	94	1000	93.7	±0.4

Linearity

Setting of Unit-under-test (UUT)			App	lied value	IIIIT Reading	IEC 61672 Class 1				
Range, dB	Freq. W	eighting	Time Weighting			li i	Specification, dB			
20-140	dBA	an.	ant	ans	CDY		94		93.7	Ref
20-140	UBA	SPL	Fast	104	1000	103.7	±0.3			
				114		113.7	±0.3			

Time Weighting

Setting of Unit-under-test (UUT)			Appl	ied value	UUT Reading	IEC 61672 Class 1	
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz		Specification, dB
20-140	dBA	SPL	Fast	2 10		93.7	
		51 L	Slow	94	1000	93.7	Ref ±0.3

Certificate No.: APJ21-030-CC001

(A+A) *L

Representation of 4

Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	1	Specification, dB
					31.5	94.0	±2.0
				63	93.9	±1.5	
			125	94.0	±1.5		
				250	94.0	±1.4	
20-140	dB	SPL	Fast	94	500	93.9	±1.4
					1000	93.7	Ref
					2000	93.8	±1.6
1					4000	95.6	±1.6
					8000	92.1	+2.1; -3.1

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz		Specification, dB
					31.5	54.7	-39.4 ±2.0
		2			63	67.8	-26.2 ±1.5
			125	77.9	-16.1 ±1.5		
				250	85.3	-8.6 ± 1.4	
20-140	dBA	SPL	Fast	94	500	90.7	-3.2 ±1.4
					1000	93.7	Ref
					2000	95.0	+1.2 ±1.6
					4000	96.3	+1.0 ±1.6
					8000	91.2	-1.1 +2.1; -3.1

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz		Specification, dB
					31.5	90.9	-3.0 ±2.0
				63	93.1	-0.8 ± 1.5	
			125	93.8	-0.2 ±1.5		
				250	94.0	-0.0 ±1.4	
20-140	dBC	SPL	Fast	94	500	93.9	-0.0 ± 1.4
					1000	93.7	Ref
					2000	93.6	-0.2 ±1.6
				4000	94.5	-0.8 ±1.6	
					8000	89.3	-3.0 +2.1; -3.1

Certificate No.: APJ21-030-CC001



Homepage: http://www.aa-lab.com

Fax:(852) 2668 6946

E-mail: inquiry@aa-lab.com



5. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.05
	63 Hz	± 0.10
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
	8000 Hz	± 0.10
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)*L shall not be liable for any loss or damage resulting from the use of the equipment.

Certificate No.: APJ21-030-CC001



Certificate of Calibration

for

Description:

Sound Level Meter

Manufacturer:

SVANTEK

Type No.:

971 (Serial No.: 96062)

Microphone:

ACO 7052 E (Serial No.:78090)

Preamplifier:

SVANTEK SV 18 (Serial No.:103808)

Submitted by:

Customer:

Acuity Sustainability Consulting Limited

Address:

Unit 1908, Nos. 301-305 Castle Peak Road.

Kwai Chung, N.T.

Upon receip	for calibration,	the instrument	was	found	to be:
-------------	------------------	----------------	-----	-------	--------

Within (31.5 Hz to 4k Hz)

Outside

the allowable tolerance.

The test equipment used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 2 July 2021

Date of calibration: 5 July 2021

Date of issue: 5 July 2021

Certified by:

Mr. Ng Yan Wa

age 1 of 4

Laboratory Manager

Certificate No.: APJ21-029-CC001

Room 422, Leader Industrial Centre, 57-59 Au Pui Wan Street, Fo Tan, Shatin, N.T., Hong Kong Tel: (852) 2668 3423 Fax: (852) 2668 6946 Homepage: http://www.aa-lab.com

E-mail: inquiry@aa-lab.com

Acoustics and Air Testing Laboratory Co. Ltd. 聲學及空氣測試實驗室有限公司

1. Calibration Precaution:

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

2. Calibration Conditions:

Air Temperature:

24.2°C

Air Pressure:

1004 hPa

Relative Humidity:

60.8 %

3. Calibration Equipment:

Type

Serial No.

Calibration Report Number

Traceable to

Multifunction Calibrator

B&K 4226

2288467

AV200041

HOKLAS

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)		Applied value		UUT Reading,	IEC 61672 Class 1		
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
20-140	dBA	SPL	Fast	94	1000	94.0	±0.4

Linearity

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
				94		94.0	Ref
20-140	dBA	dBA SPL	Fast	104	1000	104.0	±0.3
				114		114.0	±0.3

Time Weighting

Setting of Unit-under-test (UUT)		Applied value		UUT Reading,	IEC 61672 Class 1		
Range, dB	Freq.	Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
20-140	dBA	SPL	Fast	94	1000	94.0	Ref
	ub/ t		Slow	94	1000	94.0	±0.3

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Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq. W	eighting	Time Weighting	Level, dB			Specification, dB
					31.5	94.1	±2.0
					63	94.1	±1.5
			125	94.1	±1.5		
20-140	dB	SPL	Fast	94	250	94.1	±1.4
20 7 10	ub	SiL		24	500	94.1	±1.4
					1000	94.0	Ref
			2000	93.8	±1.6		
					4000	93.3	±1.6

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq. V	Veighting	Time Weighting	Level, dB			Specification, dB
				31.5	54.9	-39.4 ±2.0	
					63	68.0	-26.2 ±1.5
			125	78.0	-16.1 ±1.5		
20-140	dBA	SPL	Fast	94	250	85.4	-8.6 ± 1.4
20110	GD11	OI L		24	500	90.8	-3.2 ±1.4
					1000	94.0	Ref
				2000	95.0	+1.2 ±1.6	
					4000	94.3	$+1.0\pm1.6$

C-weighting

Sett	Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
				300	31.5	91.1	-3.0 ±2.0
					63	93.3	-0.8 ±1.5
				125	93.9	-0.2 ±1.5	
20-140	dBC	SPL	Fast	94	250	94.1	-0.0 ± 1.4
20 110	ubc	SIL	rast	94	500	94.1	-0.0 ± 1.4
					1000	94.0	Ref
					2000	93.6	-0.2 ±1.6
					4000	92.5	-0.8 ±1.6

Certificate No.: APJ21-029-CC001

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Tel: (852) 2668 3423 Fax:(852) 2668 6946
Homepage: http://www.aa-lab.com E-mail: inquiry@aa-lab.com



5. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.15
	63 Hz	± 0.10
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)*L shall not be liable for any loss or damage resulting from the use of the equipment.

Certificate No.: APJ21-029-CC001





CALIBRATION CERTIFICATE

Certificate Information

Date of Issue 20-Mar-2021 Certificate Number MLCN210569S

Customer Information

Company Name Acuity Sustainability Consulting Limited

Address Unit C, 11/F., Ford Glory Plaza, Nos. 37-39 Wing Hing Street,

Cheung Sha Wan, Kowloon, HK

Equipment-under-Test (EUT)

Description Sound Calibrator

Manufacturer Svantek

Model Number SV 33B Serial Number 83042

Equipment Number --

Calibration Particular

Date of Calibration 20-Mar-2021

Calibration Equipment | 4231(MLTE008) / AV200063 / 23-Jun-23

1357(MLTE190) / MLEC20/05/02 / 26-May-21

Calibration Procedure MLCG00, MLCG15

Calibration Conditions Laboratory Temperature 23 °C ± 5 °C

Relative Humidity $55\% \pm 25\%$

EUT Stabilizing Time Over 3 hours
Warm-up Time Not applicable

Power Supply Internal battery

Calibration Results Calibration data were detailed in the continuation pages.

All calibration results were within EUT specification.

Approved By & Date

/ K.O. Lo 20-Mar-2021

Statements

- * Calibration equipment used for this calibration are traceable to national / international standards.
- * The results on this Calibration Certificate only relate to the values measured at the time of the calibration and the uncertainties quoted will not include allowance for the EUT long term drift, variation with environmental changes, vibration and shock during transportation, overloading, mishandling, misuse, and the capacity of any other laboratory to repeat the measurement.
- * MaxLab Calibration Centre Limited shall not be liable for any loss or damage resulting from the use of the EUT.
- * The copy of this Certificate is owned by MaxLab Calibration Centre Limited. No part of this Certificate may be reproduced without the prior written approval of MaxLab Calibration Centre Limited.

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Certificate No. MLCN210569S

Calibration Data	THE PARTY.	PASTER E	扩张 等数数数	NAME OF THE PERSON OF THE PERS
EUT Setting	Standard Reading	EUT Error	Calibration Uncertainty	EUT Specification
114 dB	114.0 dB	0.0 dB	0.15 dB	± 0.3 dB

- END -

Calibrated By:

Dan

Checked

K.O. Lo

Date:

20-Mar-21

Date:

20-Mar-21

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Contract No. EP/SP/66 Integrated Waste Mana	gement Facilities, Phase 1	Keppel Seghers – Zhen Hua Joint Venture
Appendix I	Event / Action Plan for No	ise Exceedance

Frant	Actions to be taken by	Actions to be taken by	Actions to be taken by	Actions to be taken by
Event	Environmental Team as	Independent Environmental	Supervising Officer's	Contractor as
	immediate as practicable	Checker as immediate as	Representative as immediate	immediate as
		practicable	as practicable	practicable
Action Level being exceeded	to the IEC, SO and Contractor; 4. Discuss with the IEC and	 Review the investigation results submitted by the ET; Review the proposed remedial measures by the Contractor and advise the SO accordingly; Advise the SO on the effectiveness of the proposed remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified). 	 Confirm receipt of notification of failure in writing; Notify Contractor; In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; Supervise the implementation of remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified). 	 Submit noise mitigation proposals to IEC and SO; Implement noise mitigation proposals. (The above actions should be taken within 2 working days after the exceedance is identified)
Limit Level being exceeded	 Inform IEC, SO, Contractor and EPD; Repeat measurements to confirm findings; Increase monitoring frequency; Identify source and investigate the cause of exceedance; Carry out analysis of Contractor's working procedures; Discuss with the IEC, Contractor and SO on remedial measures required; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and SO informed of the results; If exceedance stops, cease additional monitoring. (The above actions should be taken within 2 working days after the exceedance is identified) 	 Discuss amongst SO, ET, and Contractor on the potential remedial actions; Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the SO accordingly; (The above actions should be taken within 2 working days after the exceedance is identified) 	In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC and SO within 3 working days of notification; Implement the agreed proposals; Submit further proposal if problem still not under control; Stop the relevant portion of works as instructed by the SO until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified)

Contract No. EP/SP/66 Integrated Waste Mana	5/12 agement Facilities, Phase 1	Keppel Seghers – Zhen Hua Joint Venture
Appendix J	Noise Monitoring Data	

Location: Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 1 (M1 /

N_S1)

Monitoring date: 4, 11, 19, 25 October 2021 (Daytime)

4&5, 11&12, 19&20, 25&26 October 2021 (Evening & Night time)

Parameter : $L_{eq 30min}$ (Daytime), $L_{eq 5min}$ (Evening & Night time)

Noise source other than Nil construction activities from

the Project:

Noise Monitoring Data:

Date	Start time		End time	Weather	$\begin{array}{c} L_{eq \ 30min} dB(A) / \\ L_{eq \ 5min} dB(A) \end{array}$	Sound Level Meter Used	Calibrator Used	
4 Oct 2021	14:11	-	14:41	Fine	57.5	XL2 (Serial No. A2A-13548-E0)	Svantek SV33B (No. 83042)	
4.0-4	19:11	-	19:16		54.0	VI 2 (C - :: -1 N -	Svantek SV33B	
4 Oct 2021	20:16	-	20:21	Fine	56.1	XL2 (Serial No. A2A-13548-E0)		
2021	21:31	-	21:36		53.4	A2A-13348-EU)	(No. 83042)	
5 Oct	01:11	-	01:16		53.2	XL2 (Serial No.	Svantek SV33B	
2021	03:21	-	03:26	Fine	52.3	A2A-13548-E0)	(No. 83042)	
2021	05:31	-	05:36		53.2	A2A-13346-E0)	(10. 63042)	
11 Oct 2021	14:07	-	14:37	Cloudy	57.1	XL2 (Serial No. A2A-13548-E0)	Svantek SV33B (No. 83042)	
11 Oct	19:17	-	19:22		51.6	XL2 (Serial No.	Svantek SV33B	
2021	20:17	-	20:22	Fine	51.7	A2A-13548-E0)	(No. 83042)	
2021	21:32	-	21:37		51.5	A2A-13346-E0)	(110. 03042)	
12 Oct	01:37	-	01:42		55.1	XL2 (Serial No.	Svantek SV33B	
2021	03:32	-	03:37	Fine	54.3	A2A-13548-E0)	(No. 83042)	
2021	05:27	-	05:32		50.0	A2A-13346-E0)	,	
19 Oct 2021	13:34	-	14:04	Sunny	56.2	SVAN 971 (Serial No. 96063)	Svantek SV33B (No. 83042)	
19 Oct	19:04	-	19:09		47.9	SVAN 971 (Serial	Svantek SV33B	
2021	20:14	-	20:19	Fine	49.6	No. 96063)	(No. 83042)	
2021	21:19	-	21:24		48.9	110. 90003)	(110. 63042)	
20 Oct	01:19	-	01:24		47.7	SVAN 971 (Serial	Svantek SV33B	
20001	03:14	-	03:19	Fine	45.7	No. 96063)	(No. 83042)	
2021	05:04	-	05:09		45.0	100. 90003)	(10. 63042)	
25 Oct 2021	13:33	-	14:03	Sunny	55.9	SVAN 971 (Serial No. 96062)	Svantek SV33B (No. 83042)	
25 Oct	19:03	-	19:08		46.8	SVAN 971 (Serial	Svantek SV33B	
2021	20:28	-	20:33	Fine	50.5	No. 96062)		
2021	21:18	-	21:23		43.0	110. 30002)	(No. 83042)	
26 Oct	1:23	-	01:28		42.8	SVAN 971 (Serial	Svantek SV33B	
2021	3:18	-	03:23	Fine	43.0	No. 96062)	(No. 83042)	
2021	5:13	-	05:18		45.5	110. 70002)		

Location: Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 2 (M2 /

N_S2)

Monitoring date: 4, 11, 18, 26 October 2021 (Daytime)

4&5, 11&12, 18&19, 26&27 October 2021 (Evening & Night time)

Parameter : $L_{eq 30min}$ (Daytime), $L_{eq 5min}$ (Evening & Night time)

Noise source other than Nil construction activities from

the Project:

Noise Monitoring Data:

Date	Start time		End time	Weather	$\begin{array}{c} L_{eq~30min}dB(A)~/\\ L_{eq~5min}dB(A) \end{array}$	Sound Level Meter Used	Calibrator Used	
4 Oct 2021	13:10	1	13:40	Fine	55.4	SVAN 971 (Serial No. 96063)	Svantek SV33B (No. 83042)	
4 Oct	19:10	1	19:15		54.1	CVAN 071 (Carial	Svantek SV33B	
2021	20:10	1	20:15	Fine	55.3	SVAN 971 (Serial No. 96063)	(No. 83042)	
2021	21:10	ı	21:15		52.9	140. 90003)	(110. 63042)	
5 Oct	01:10	ı	01:15		51.4	CVAN 071 (Comic)	Svantek SV33B	
2021	03:10	ı	03:15	Fine	49.8	SVAN 971 (Serial No. 96063)	(No. 83042)	
2021	05:40	-	05:45		51.2	No. 90003)	(NO. 83042)	
11 Oct 2021	13:27	1	13:57	Cloudy	55.9	SVAN 971 (Serial No. 96062)	Svantek SV33B (No. 83042)	
11 Oct	19:32	-	19:37		56.1	SVAN 971 (Serial	Svantek SV33B	
2021	20:32	ı	20:37	Fine	58.8	No. 96062)		
2021	22:22	ı	22:27		56.0	No. 90002)	(No. 83042)	
12 Oct	04:22	1	04:27		55.2	CVAN 071 (Carial	Svantek SV33B	
2021	04:57	1	05:02	Fine	57.8	SVAN 971 (Serial No. 96062)	(No. 83042)	
2021	05:17	ı	05:22		53.0	No. 90002)	(110. 63042)	
18 Oct 2021	13:09	1	13:39	Sunny	54.2	SVAN 971 (Serial No. 96062)	Svantek SV33B (No. 83042)	
10.004	19:04	1	19:09		48.3	CVAN 071 (Carial	Caramatala CV/22D	
18 Oct 2021	20:19	1	20:24	Fine	49.5	SVAN 971 (Serial No. 96062)	Svantek SV33B	
2021	21:34	1	21:39		51.1	No. 90002)	(No. 83042)	
10.0-4	1:39	-	01:44		47.5	CY/ANI 071 (C: -1	C 1- CW22D	
19 Oct 2021	3:24	-	03:29	Fine	47.8	SVAN 971 (Serial No. 96062)	Svantek SV33B (No. 83042)	
2021	5:14	1	05:19		48.0	1NO. 90002)	(110. 63042)	
26 Oct 2021	13:18	1	13:23	Sunny	54.3	SVAN 971 (Serial No. 96062)	Svantek SV33B (No. 83042)	
26.0-4	19:03	-	19:08		49.8	CY/ANI 071 (C: -1	C 1- CW22D	
26 Oct	20:13	1	20:18	Fine	50.5	SVAN 971 (Serial	Svantek SV33B	
2021	21:23	1	21:28		48.7	No. 96062)	(No. 83042)	
27 Oct	1:18	1	01:23		47.3	CVANIO71 (Comic)	Crontal CV22D	
27 Oct 2021	3:23	-	03:28	Fine	49.0	SVAN 971 (Serial No. 96062)		
2021	5:18	-	05:23		48.0	110. 30002)	(No. 83042)	

Location: Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 3 (M3 /

N_S3)

Monitoring date: 4, 11, 18, 25 October 2021 (Daytime)

4&5, 11&12, 18&19, 25&26 October 2021 (Evening & Night time)

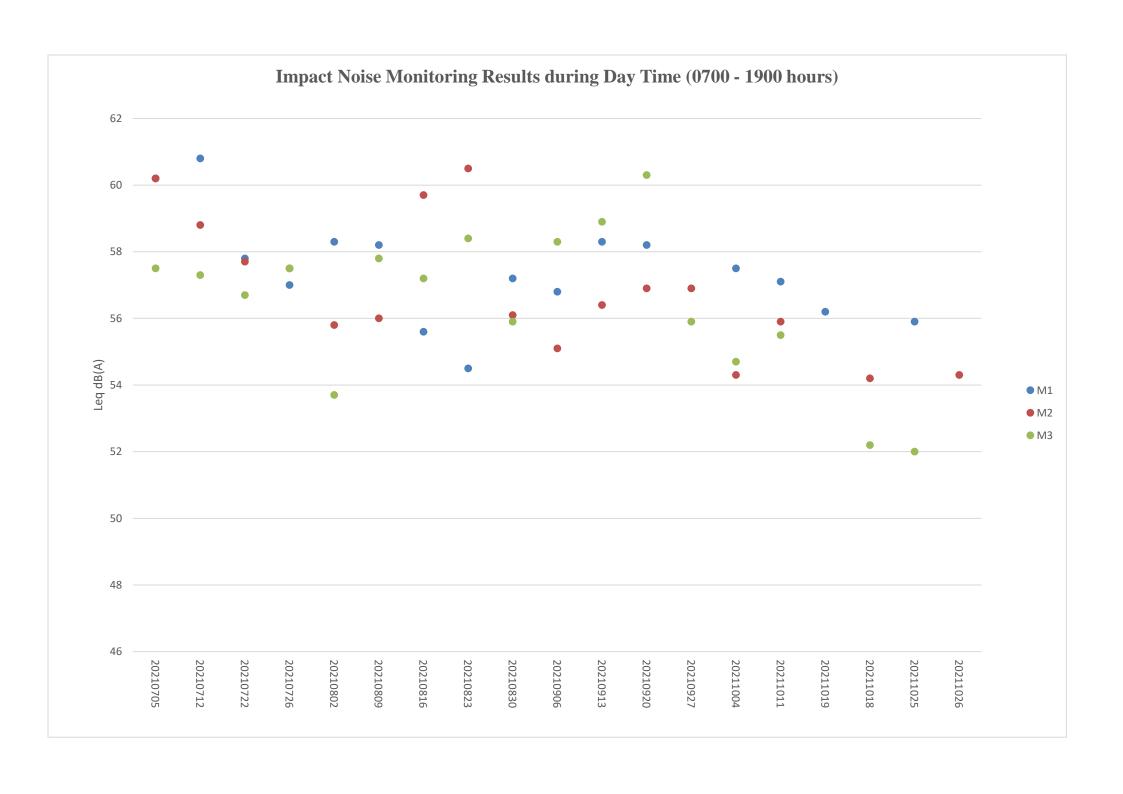
Parameter : $L_{eq 30min}$ (Daytime), $L_{eq 5min}$ (Evening & Night time)

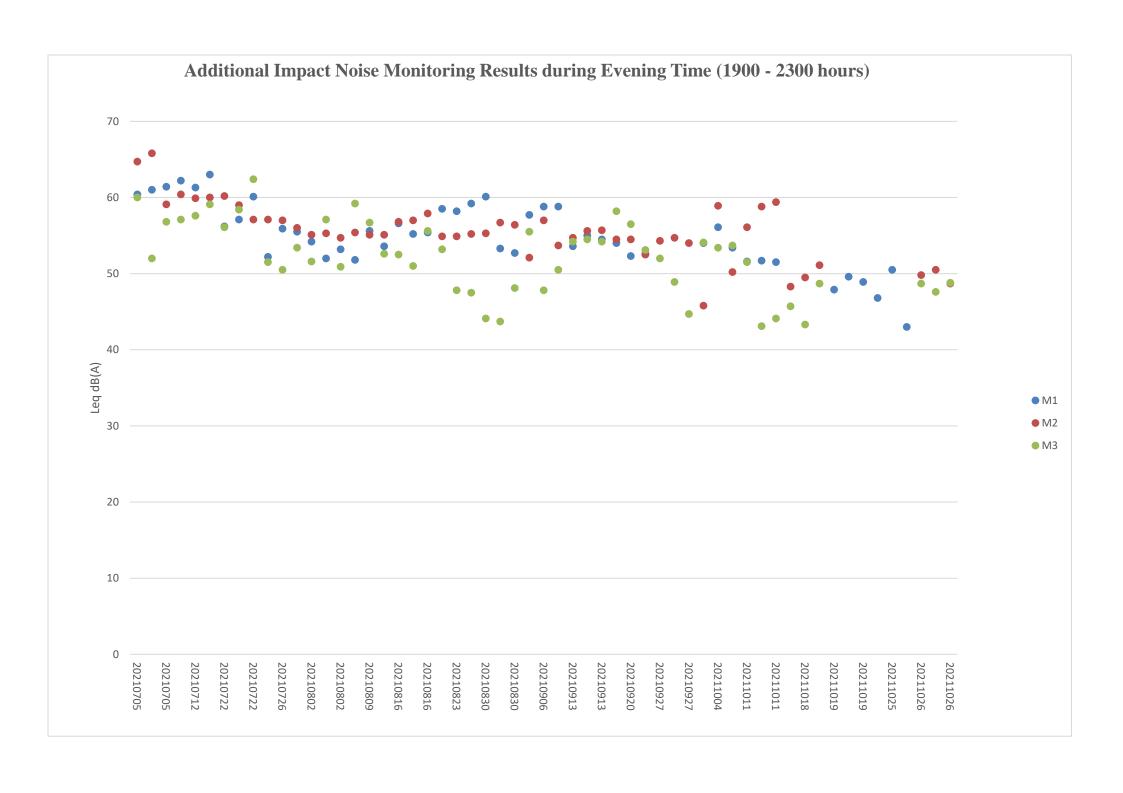
Noise source other than construction activities from the Project:

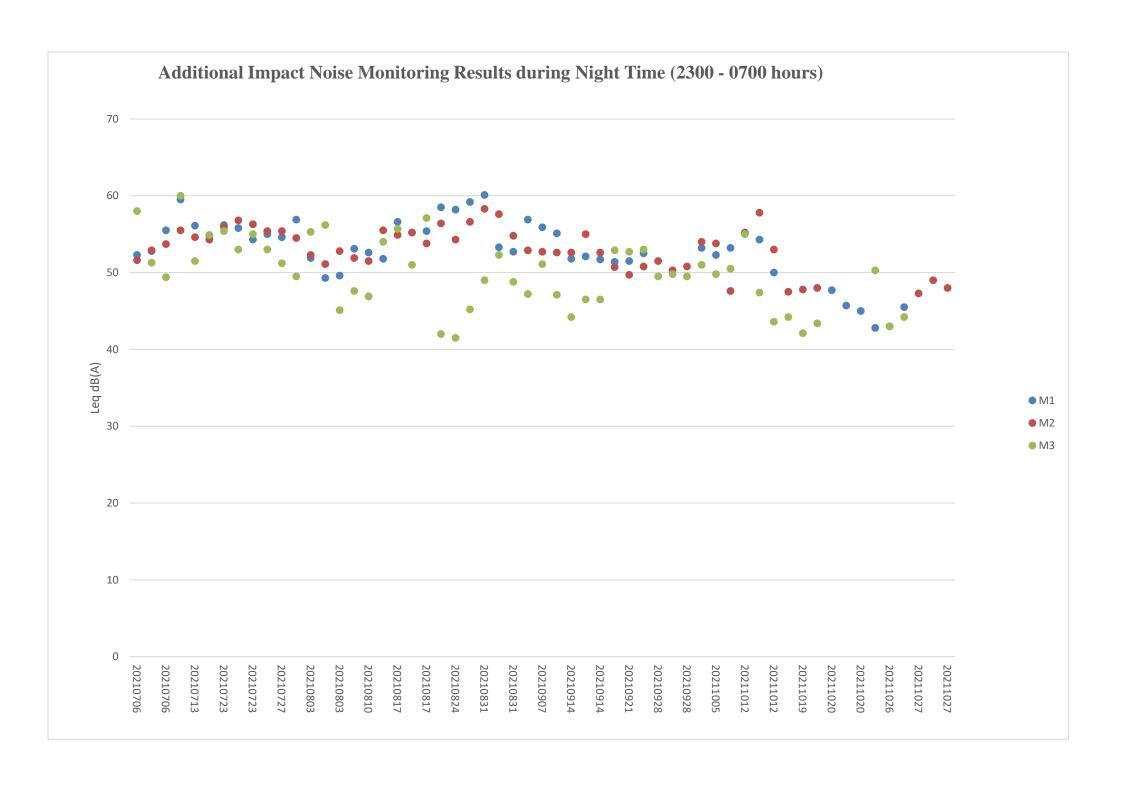
Air-conditioner

Noise Monitoring data:

Date	Start time		End time	Weather	$\begin{array}{c} L_{eq \; 30min} dB(A) \; / \\ L_{eq \; 5min} dB(A) \end{array}$	Sound Level Meter Used	Calibrator Used	
4 Oct 2021	14:26	-	14:56	Fine	55.2	SVAN 971 (Serial No. 96062)	Svantek SV33B (No. 83042)	
4 Oct	19:11	-	19:16		45.2	CVAN 071 (Carial	Caramada (SV22D	
2021	20:11	-	20:16	Fine	58.9	SVAN 971 (Serial No. 96062)	Svantek SV33B (No. 83042)	
2021	21:31	-	21:36		53.7	140. 90002)	(140. 63042)	
5 Oct	01:21	-	01:26		53.1	SVAN 971 (Serial	Svantek SV33B	
2021	02:56	-	03:01	Fine	48.3	No. 96062)	(No. 83042)	
2021	05:46	-	05:51		45.1	No. 90002)	(140. 65042)	
11 Oct 2021	14:04	-	14:34	Cloudy	55.5	SVAN 971 (Serial No. 96063)	Svantek SV33B (No. 83042)	
11 Oct	19:14	-	19:19		51.5	CVAN 071 (Comic)	Svantek SV33B	
2021	20:09	-	20:14	Fine	43.1	SVAN 971 (Serial No. 96063)	(No. 83042)	
2021	21:24	-	21:27		44.1	No. 90003)	(NO. 83042)	
12 Oct	01:09	-	01:14		55.0	SVAN 971 (Serial	Svantek SV33B	
2021	03:14	-	03:19	Fine	47.4	No. 96063)	(No. 83042)	
2021	05:14	-	05:19		43.6	100. 90003)	(140. 65042)	
18 Oct 2021	13:25	-	13:55	Sunny	52.2	SVAN 971 (Serial No. 96063)	Svantek SV33B (No. 83042)	
18 Oct	19:10	-	19:15		45.7	CVAN 071 (Carial	Caramada (SV22D	
2021	20:15	-	20:20	Fine	43.3	SVAN 971 (Serial	Svantek SV33B	
2021	21:15	-	21:20		48.7	No. 96063)	(No. 83042)	
19 Oct	1:15	-	01:20		44.2	CVAN 071 (Carial	Svantek SV33B	
2021	3:30	-	03:35	Fine	42.1	SVAN 971 (Serial No. 96063)	(No. 83042)	
2021	5:25	-	05:30		43.4	140. 90003)	(140. 63042)	
25 Oct 2021	13:20	-	13:50	Sunny	52.0	SVAN 971 (Serial No. 96063)	Svantek SV33B (No. 83042)	
25 Oct	19:20	-	19:25		48.7	CVAN 071 (Comic)	Svantek SV33B	
2021	20:25	-	20:30	Fine	47.6	SVAN 971 (Serial No. 96063)	(No. 83042)	
2021	21:30	-	21:35		48.8	110. 30003)	(110. 03044)	
26 Oct	1:35	-	1:40		50.3	SVAN 971 (Serial	Svantek SV33B	
2021	3:15	-	3:20			No. 96063) (No. 83042)		
2021	5:35	-	5:40		44.2	140. 30003)	(110. 03042)	







Contract No. EP/SP/66. Integrated Waste Mana	/12 gement Facilities, Phase 1	Keppel Seghers – Zhen Hua Joint Venture
Appendix K	Waste Flow Table	





2018 **Monthly Summary Waste Flow Table for** (year)

Project : In	oject : Integrated Waste Management Facilities, Phase 1										Con	tract No.: EP	/SP/66/12	
		Actual (Quantities of	Inert C&D	Materials Ger	nerated Mon	thly			Metals cardboard packaging Plastics (see Note 2) Chemical Waste refuse (see Note 3) n ,000 kg) (in ,000kg) (in ,000kg) (in ,000kg) (in ,000kg) (in ,000 m³) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		lonthly		
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill Sand	Imported Fill Public fill	Imported Fill Rock	Metals	cardboard		Chemica	l Waste	
	(in ,000m ³)	$(in ,000m^3)$	(in ,000m ³)	(in ,000m ³	(in ,000m ³)	(1	$\frac{(m^3)^3}{(m^2)^3}$	r	(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	$(in ,000 m^3)$
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0065
Sep	0	0	0	0	0	2.9619	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0	3.0771	0	0	0	0	0	0	0	0.0130
Nov	0	0	0	0	0	6.7871	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	59.0709	0	0	0	0	0	0.2000	0.8700	0
Total	0	0	0	0	0	71.8970	0	0	0	0	0	0.2000	0.8700	0.0195

- Broken concrete for recycling into aggregates. (1)
- Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials. (2)
- Use the conversion factor: 1 full load of dumping truck being equivalent to 6.5m³ by volume.





Monthly Summary Waste Flow Table for 2019 (year)

Project : In	roject : Integrated Waste Management Facilities, Phase 1										Con	tract No.: EP	/SP/66/12	
		Actual	Quantities of	Inert C&D	Materials Ger	nerated Mon	thly			Actual	Quantities of	C&D Wastes	Generated M	lonthly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill Sand	Imported Fill Public fill	Imported Fill Rock	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemica	l Waste	Others, e.g. general refuse (see Note 3)
	(in ,000m ³)	(in ,000m ³)	(in ,000m ³)	(in ,000m ³	(in ,000m ³)	(in ,000m ³)		(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m ³)
Jan	0	0	0	0	0	82.6139	0	0	0	0	0	0	0	0.0065
Feb	0	0	0	0	0	46.7821	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	97.1000	0	0.7552	0	0.2560	0	0	0	0
Apr	0	0	0	0	0	58.0413	0	0	0	0	0	0	0	0
May	0	0	0	0	0	14.5625	0	1.4648	0	0	0	0	0	0.0065
Jun	0	0	0	0	0	0	0	6.8421	0	0	0	0	0	0
Sub-total	0	0	0	0	0	299.0998	0	9.0621	0	0.2560	0	0	0	0.0130
Jul	0	0	0	0	0	0	0	0.4289	0	0	0	0	8.4000	0.0130
Aug	0	0	0	0	0	2.5775	0	10.5600	0	0	0	0	0	0
Sep	0	0	0	0	0	6.1081	0	8.4704	0	0.3530	0	0	0	0.0065
Oct	0	0	0	0	0	9.8875	0	7.1900	0	0	0	0	0	0
Nov	0	0	0	0	0	38.3088	0	19.3105	0	0	0	0	0	0.0195
Dec	0	0	0	0	0	54.3469	0	26.9807	0	0	0	0	0	0.0910
Total	0	0	0	0	0	410.3286	0	82.0026	0	0.6090	0	0	8.4000	0.1430

- Broken concrete for recycling into aggregates. (1)
- Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials. (2)
- Use the conversion factor: 1 full load of dumping truck being equivalent to 6.5m³ by volume.





(year)

Monthly Summary Waste Flow Table for 2020

Project : In	roject : Integrated Waste Management Facilities, Phase 1										Con	tract No.: EP	/SP/66/12	
		Actual	Quantities of	Inert C&D	Materials Ger	nerated Mon	thly			packaging (see Note 2) (see Note 3) ,000 kg) (in ,000kg) (in ,000kg) (in ,000L) (in ,000 m³) 0 0 0 0 0.0065 0 0 0 0 0.0065 0 0 0 0 0.0065 0 0 0 0 0.0195 0 0 0 0 0.0195 0 0 0 0 0.0065 0 0 0 0 0.0065 0 0 0 0 0.0065 0 0 0 0 0.0065 0 0 0 0 0.0195 0 0 0 0 0.0195 0 0 0 0 0.0195 0 0 0 0 0.0195 0 0 0 0 0.0195 0 0 0 0 0				
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill Sand	Imported Fill Public fill	Imported Fill Rock	Metals	cardboard		Chemica	l Waste	refuse
	(in ,000m ³)	(in ,000m ³)	(in ,000m ³)	(in ,000m ³	(in ,000m ³)	(in ,000m ³)	T	(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m ³)
Jan	0	0	0	0	0	37.1550	0	25.0812	0	0	0	0	0	0.0065
Feb	0	0	0	0	0	27.7910	0	18.8300	0	0	0	0	0	0.0065
Mar	0	0	0	0	0	22.5669	0	26.1586	0	0	0	0	7.2000	0.0065
Apr	0	0	0	0	0	12.7800	0	10.1825	0	0	0	0	0	0.0195
May	0	0	0	0	0	16.1138	0	24.3740	0	0.4220	0	0	0	0.0195
Jun	0	0	0	0	0	31.5177	0	28.3030	0	0	0	0	0	0.0065
Sub-total	0	0	0	0	0	147.9244	0	132.9293	0	0.4220	0	0	7.2000	0.0650
Jul	0	0	0	0	0	34.7856	17.0606	35.1800	0	0	0	0	0	0.0195
Aug	0	0	0	0	0	27.1375	65.5667	27.9335	0	0	0	0	0	0
Sep	0	0	0	0	0	11.9813	110.1328	43.5435	0	0	0	0	0	0.0195
Oct	0	0	0	0	0	2.8213	131.6600	22.5415	0	0	0	0	0	0.0130
Nov	0	0	0	0	0	0	162.1811	44.6475	0	0.4090	0	0	0.4000	0.0130
Dec	0	0	0	0	0	0	174.9800	57.8380	0	0	0	0	0	0.0130
Total	0	0	0	0	0	224.6501	661.5812	364.6133	0	0.8310	0	0	7.6000	0.1430

- Broken concrete for recycling into aggregates. (1)
- Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials. (2)
- Use the conversion factor: 1 full load of dumping truck being equivalent to 6.5m³ by volume.





Monthly Summary Waste Flow Table for 2021 (year)

Project: In	ect : Integrated Waste Management Facilities, Phase 1									Contract No.: EP/SP/66/12				
		Actual	Quantities of	of Inert C&D	Materials G	enerated Mo	nthly			Actual	Quantities of	C&D Wastes	Generated M	Ionthly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill Sand	Imported Fill Public fill	Imported Fill Rock	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemica	l Waste	Others, e.g. general refuse (see Note 3)
	(in ,000m ³)	$(in ,000m^3)$	(in ,000m ³)	(in ,000m ³	(in ,000m ³)		(in ,000m ³)	ı	(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m ³)
Jan	0	0	0	0	0	0	198.1311	36.4775	0	0	0	0	0	0.0065
Feb	0	0	0	0	0	0	143.9511	20.9960	0	0	0	0	0	0.6305
Mar	0	0	0	0	0	0	103.1833	23.4510	0	0	0	0	0	0.0130
Apr	0	0	0	0	0	0	161.2956	27.2810	0	0	0	0	0	0.0130
May	0	0	0	0	0	0	193.3300	20.5265	0	0	0	0	0	0.0715
Jun	0	0	0	0	0	0	141.5728	23.7825	0	0.2440	0	0	0	0.0455
Sub-total	0	0	0	0	0	0	941.4639	152.5145	0	0.2440	0	0	0	0.7800
Jul	0	0	0	0	0	0	105.1083	30.6065	0	0	0	0	0	0.0195
Aug	0	0	0	0	0	0	11.1822	7.5180	0	0	0	0	0	0.0130
Sep	0	0	0	0	0	0	0	5.7575	0	0	0	0	0.6000	0.0390
Oct	0	0	0	0	0	0	0	6.8885	0	0	0	0	0	0
Nov														
Dec														
Total	0	0	0	0	0	0	1057.7544	203.2850	0	0.2440	0	0	0.6000	0.8515

- Broken concrete for recycling into aggregates. (1)
- Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials. (2)
- Use the conversion factor: 1 full load of dumping truck being equivalent to 6.5m³ by volume.

Contract No. EP/SP/66/1 Integrated Waste Manag	ement Facilities, Phase 1	Keppel Seghers – Zhen Hua Joint Venture
Appendix L	Event / Action Plan for Co	oral Monitoring

Event		Actio	n	
ī	ET Leader II	EC S	о с	ontractor
Exceedance 3	Check monitoring data Inform the IEC, SO and Contractor of the findings; Increase the monitoring to at least once a month to confirm findings; Propose mitigation measures for consideration	ET and the Contractor;	Discuss with the IEC 1. additional monitoring requirements and any other measures proposed by the 2. ET; Make the agreement on the measures to be 3. implemented.	notification of the non-compliance in writing; Discuss with the ET and the IEC and propose measures to the IEC and the SO;
Limit Level ¹ Exceedance	. Undertake Steps 1-4 as in 1. the Action Level Exceedance. If further 2. exceedance of Limit Level, propose enhancement measures for consideration.	ET and the Contractor;	Discuss with the IEC 1. additional monitoring requirements and any other measures proposed by the 2. ET; Make the agreement on the measures to be 3. implemented.	notification of the non-compliance in writing; Discuss with the ET and the IEC and propose measures to the IEC and the SO;

Contract No. EP/SP/66/12 Integrated Waste Manager		Keppel Seghers – Zhen Hua Joint Venti	are
Appendix M	Event / Action Plan for \	White-Bellied Sea Eagle	

Event	Action			
	Environmental	Audit Team	Contractor	
	Team			
Absence of White-bellied Sea Eagle during a whole day of monitoring.	Inform audit team. Increase monitoring frequency to daily.	 Inform site engineer and contractor. If the absence remains: Review construction activities and noise monitoring records of the associated period; Identify potential causes of the absence; Propose remedial measures, such as change of construction method and sequence; Confirm the feasibility of the proposed remedial measures with site engineer and contractor; Discuss with environmental team about the effectiveness of the proposed remedial measures. 	Implement the agreed remedial measures.	

Contract No. EP/SP/66/12 Integrated Waste Management Facilities, Phase 1		Keppel Seghers – Zhen Hua Joint Venture
Appendix N	Exceedance Report	

Statistical Summary of Exceedances in the Reporting Period

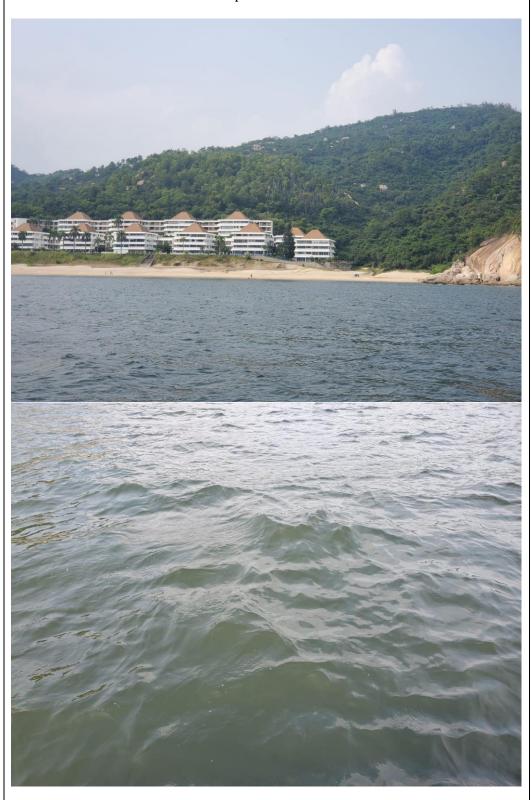
Water Quality (Regular Monitoring)					
Location	tion Action Level Limit Level				
B1	4	3	7		
B2	1	3	4		
В3	2	6	8		
B4	1	5	6		
CR1	1	3	4		
CR2	4	4	8		
F1A	1	5	6		
H1	3	2	5		
S1	0	0	0		
S2A	0	0	0		
S3	0	0	0		
M1	1	3	4		

	Noise (Day Time)			
Location Action Level Limit Level T					
M1	0	0	0		
M2	0	0	0		
M3	0	0	0		
<u>, </u>	Noise (E	vening Time)			
Location Action Level Limit Level					
M1	0	0	0		
M2	0	0	0		
M3	0	0	0		
·	Noise (I	Night Time)	·		
Location Action Level Limit Level Total					
M1	0	0	0		
M2	0	0	0		
M3	0	0	0		

Incident Report on Action Level or Limit Level Non-compliance

Parameter Suspended Solid (SS) Action & Limit Levels Action Level Action Level 14.0 mg/L (120% of C2A) Impact Station(s) of Exceedance 14.0 mg/L (B3) 13.0 mg/L (C1A) 11.7 mg/L (C2A) Possible reason for Action or Limit Level Non-compliance Possible reason for Action or Limit Level Non-compliance No construction work was conducted on 1 Oct 2021 due to the public holiday wit reference to the site diary. No construction was found at B3 on 1 Oct 2021. B3 is located a unrelated stream direction (neither upstream nor downstream, far away) to the work location, exceedance of this monitoring station is deemed to be unrelated to the Project.	Project	Integrated Waste Management Facilities, Phase 1			
Monitoring Location B3 B10 B10 B10 B10 B10 B10 B10	Date	01 Oct 2021 (Lab result received on 8 Oct 2021)			
Parameter Action & Limit Levels Action & Limit Levels Action & Limit Level Action Level Impact Station(s) of Exceedance It-0 mg/L (120% of C2A) Impact Station(s) of Exceedance It-0 mg/L (120% of C2A) Inpact Station(s) of Exceedance It-0 mg/L (120% of C2A) Possible reason for Action or Limit Level Non-compliance Possible reason for Action or Limit Level Non-compliance No construction work was conducted on 1 Oct 2021 due to the public holiday wit reference to the site diary. Dominating sea current direction was found to be from Southeast to Northwest a waters around Shek Kwu Chau. Exceedance of SS action level was found at B3 on 1 Oct 2021. B3 is located a unrelated stream direction (neither upstream nor downstream, far away) to the work location, exceedance of this monitoring station is deemed to be unrelated to the Project. The installation of caisson No.19 was completed on 18 Mar 2021, the reclamation are	Time	14:40-18:10 (Mid Flood)			
Parameter Suspended Solid (SS) Action & Limit Level Action Level Action Level 14.0 mg/L (120% of C2A) 17.0 mg/L (C1A) 18.3 mg/L (C1A) 11.7 mg/L (C2A) Possible reason for Action or Limit Level Non-compliance Possible reason for Action or Limit Level Non-compliance No construction work was conducted on 1 Oct 2021 due to the public holiday wit reference to the site diary. Dominating sea current direction was found to be from Southeast to Northwest a waters around Shek Kwu Chau. Exceedance of SS action level was found at B3 on 1 Oct 2021. B3 is located a unrelated stream direction (neither upstream nor downstream, far away) to the work location, exceedance of this monitoring station is deemed to be unrelated to the Project. The installation of caisson No.19 was completed on 18 Mar 2021, the reclamation are		Mid-Fl	ood		
Action & Limit Levels Action Level Limit Level ≥ 14.0 mg/L (120% of C2A) ≥ 15.2 mg/L (130% of C2A) Measurement Level Impact Station(s) of Exceedance Control Stations Impact Station(s) without Exceedance 14.0 mg/L (B3) 13.0 mg/L (C1A) 12.3 mg/L (B1) 11.7 mg/L (C2A) 8.3 mg/L (B2) 11.8 mg/L (B4) 11.8 mg/L (F1A) 13.3 mg/L (M1) 13.7 mg/L (CR1) 12.0 mg/L (CR2) Possible reason for Action or Limit Level Non-compliance No construction work was conducted on 1 Oct 2021 due to the public holiday wit reference to the site diary. Dominating sea current direction was found to be from Southeast to Northwest a waters around Shek Kwu Chau. Exceedance of SS action level was found at B3 on 1 Oct 2021. B3 is located a unrelated stream direction (neither upstream nor downstream, far away) to the work location, exceedance of this monitoring station is deemed to be unrelated to the Project. The installation of caisson No.19 was completed on 18 Mar 2021, the reclamation are	Monitoring Location	B3 B1 S2A APROPOSED LISTAY SPEC ROUGH ALL H1 SHEK KWU CHAU FROPOSED RECLAMED AREA FOR THE INMIT FROPOSED RECLAMED AREA FOR THE INMIT FROPOSED RECLAMED AREA FOR THE INMIT THE IWMF SITE BOUNDARY LIND FOOTMATION FOOTPRINT THE IWMF SITE BOUNDARY LIND FOOTMATION FOOTPRINT THE IWMF SITE BOUNDARY			
Action & Limit Levels Action Level Limit Level ≥ 14.0 mg/L (120% of C2A) ≥ 15.2 mg/L (130% of C2A) Measurement Level Impact Station(s) of Exceedance Control Stations Impact Station(s) without Exceedance 14.0 mg/L (B3) 13.0 mg/L (C1A) 12.3 mg/L (B1) 11.7 mg/L (C2A) 8.3 mg/L (B2) 11.8 mg/L (B4) 11.8 mg/L (F1A) 13.3 mg/L (M1) 13.7 mg/L (CR1) 12.0 mg/L (CR2) Possible reason for Action or Limit Level Non-compliance No construction work was conducted on 1 Oct 2021 due to the public holiday wit reference to the site diary. Dominating sea current direction was found to be from Southeast to Northwest a waters around Shek Kwu Chau. Exceedance of SS action level was found at B3 on 1 Oct 2021. B3 is located a unrelated stream direction (neither upstream nor downstream, far away) to the work location, exceedance of this monitoring station is deemed to be unrelated to the Project. The installation of caisson No.19 was completed on 18 Mar 2021, the reclamation are	Parameter	Suspended Solid (SS)			
≥ 14.0 mg/L (120% of C2A) ≥ 15.2 mg/L (130% of C2A)				Limit Level	
Impact Station(s) of Exceedance	retion & Elimit Ecvels				130% of C2A)
Possible reason for Action or Limit Level Non-compliance No construction work was conducted on 1 Oct 2021 due to the public holiday wit reference to the site diary. Dominating sea current direction was found to be from Southeast to Northwest a waters around Shek Kwu Chau. Exceedance of SS action level was found at B3 on 1 Oct 2021. B3 is located a unrelated stream direction (neither upstream nor downstream, far away) to the work location, exceedance of this monitoring station is deemed to be unrelated to the Project. The installation of caisson No.19 was completed on 18 Mar 2021, the reclamation are	Measurement Level	Impact Station(s) of	Control Stat		Impact Station(s) without
Possible reason for Action or Limit Level Non-compliance No construction work was conducted on 1 Oct 2021 due to the public holiday with reference to the site diary. Dominating sea current direction was found to be from Southeast to Northwest a waters around Shek Kwu Chau. Exceedance of SS action level was found at B3 on 1 Oct 2021. B3 is located a unrelated stream direction (neither upstream nor downstream, far away) to the work location, exceedance of this monitoring station is deemed to be unrelated to the Project. The installation of caisson No.19 was completed on 18 Mar 2021, the reclamation are		14.0 mg/L (B3)	11.7 mg/L (C2A) 8.3 mg/L (B2) 11.8 mg/L (B4) 11.8 mg/L (F1A) 13.3 mg/L (H1) 13.7 mg/L (M1) 13.7 mg/L (CR1)		
location, exceedance of this monitoring station is deemed to be unrelated to the Project. The installation of caisson No.19 was completed on 18 Mar 2021, the reclamation are		reference to the site diary. Dominating sea current direction was found to be from Southeast to Northwest at			
		The installation of caisson No.19 was completed on 18 Mar 2021, the reclamation area			

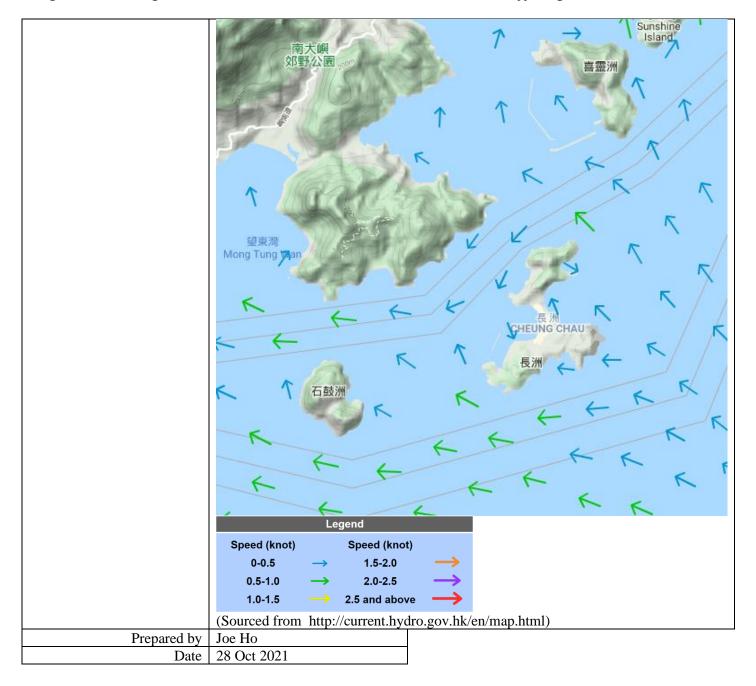
According to the field observation by sampling team during sampling event, no silt plume was observed in the Project site and the weather was fine during the sampling event taken at B3 as shown at the site photo below:



No major observation of improper site practices that could contribute to the increase of the suspended solids was recorded during the weekly inspection on 28 September 2021.

Remarks

Current direction during mid-flood sampling on 1 Oct 2021:



Incident Report on Action Level or Limit Level Non-compliance

Project	Integrated Waste Management Facilities, Phase 1			
Date	04 Oct 2021 (Lab result received on 11 Oct 2021)			
Time	09:02 – 12:32 (Mid-Ebb)			
	15:53 – 19:00 (Mid-Flood)			
	Mid-E	Ebb		
Monitoring Location	B1, H1, M1, CR1, CR2			
	B1 S1 PROPOSED DUTFALL + B1 S1 PROPOSED DISCOV B132NV SICRIANNIC CARLES B3 APROPOSED 132NV SICRIANNIC CARLES B3 Key APROPOSED 132NV SUBMARINE CABLE MONITORING STATION PROPOSED OUTFALL THE IMMF SITE BOUNDARY LAND FORMATION FOOTPRINT THE IMMF SITE BOUNDARY LAND FORMATION FOOTPRINT THE IMMF SITE BOUNDARY			
Parameter	Suspended Solid (SS)			
Action & Limit Levels	Action Level		Limit Level	
7 Ction & Limit Levels	$\geq 8.0 \text{ mg/L}$		$\geq 10.0 \text{ mg/L}$	
Measurement Level	Impact Station(s) of	Control Stati		Impact Station(s) without
Weastrement Level	Exceedance	Control Stati	.0115	Exceedance
	10.5 mg/L (B1)	6.0 mg/L (C	1Δ)	5.5 mg/L (B2)
	8.2 mg/L (H1)	7.8 mg/L (C2	*	6.0 mg/L (B3)
	1	7.8 mg/L (C.	2A)	• , ,
	11.2 mg/L (M1)			5.0 mg/L (B4)
	9.7 mg/L (CR1)			7.8 mg/L (F1A)
Descible masses for Astion or	11.7 mg/L (CR2)	1 04 Oct 202	1 include insta	llation of opigeon stampage
Possible reason for Action or	Works scheduled on site or			**
Limit Level Non-compliance	landfilling works, installation		entation, piling	pre-drilling works, pilling
	works and existing caisson extension.			
	Dominating sea current direction was found to be from Northwest to Southeast at waters around Shek Kwu Chau.			
	Exceedances of SS action level were found at H1 and CR1 on 04 Oct 2021 and exceedances of SS limit level were found at B1, M1 and CR2 on 04 Oct 2021. B1, H1 and M1 are located at unrelated stream direction (neither upstream nor downstream, far away) to the works location, exceedance of these monitoring stations are deemed to be unrelated to the Project. CR1 and CR2 are located close to the works location within the Project site while no marine work was conducted on 04 Oct 2021.			

The installation of caisson No.19 was completed on 18 Mar 2021, the reclamation area was enclosed.

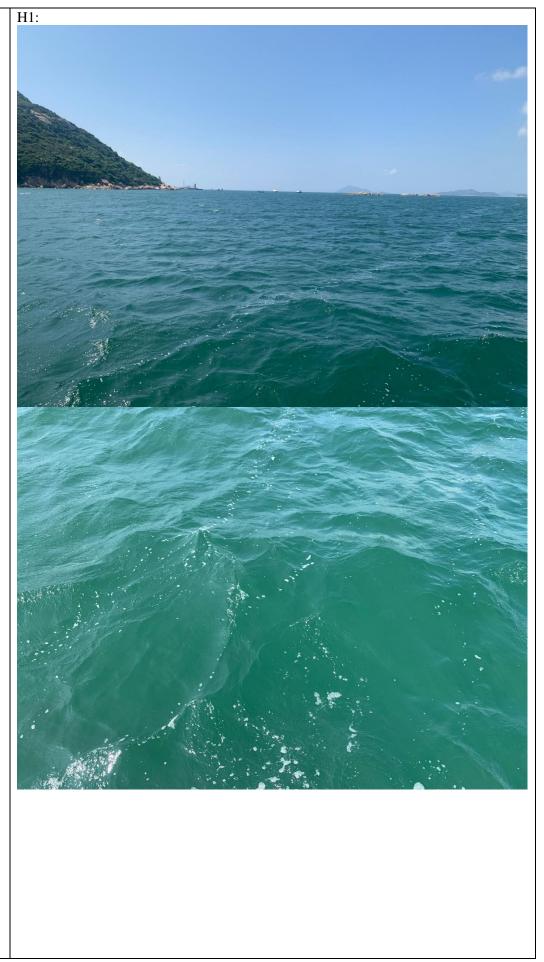
According to the field observation by sampling team during sampling event, no silt plume was observed in the Project site and the weather was fine during the sampling event.

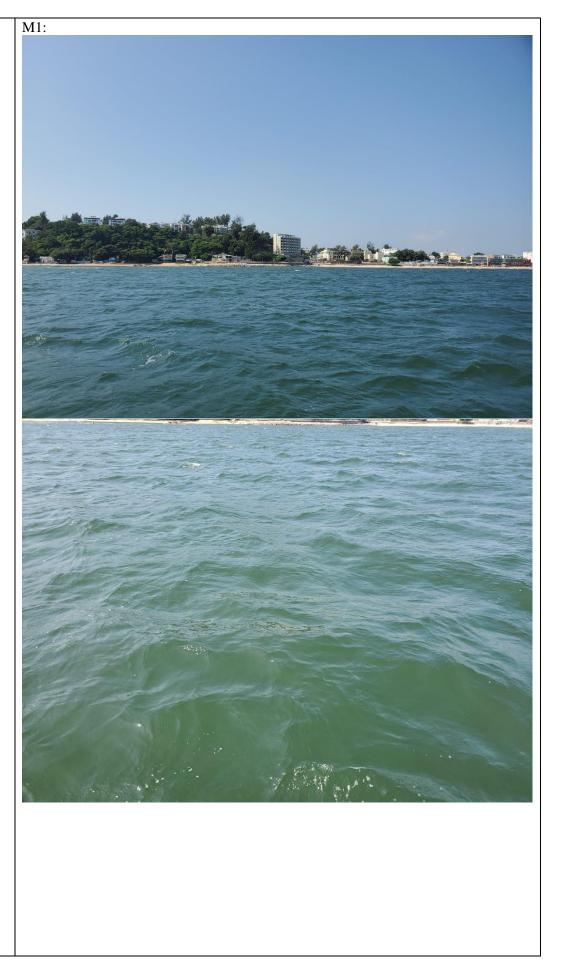
No major observation of improper site practices that could contribute to the increase of the suspended solids was recorded during the weekly inspection on 28 September 2021.

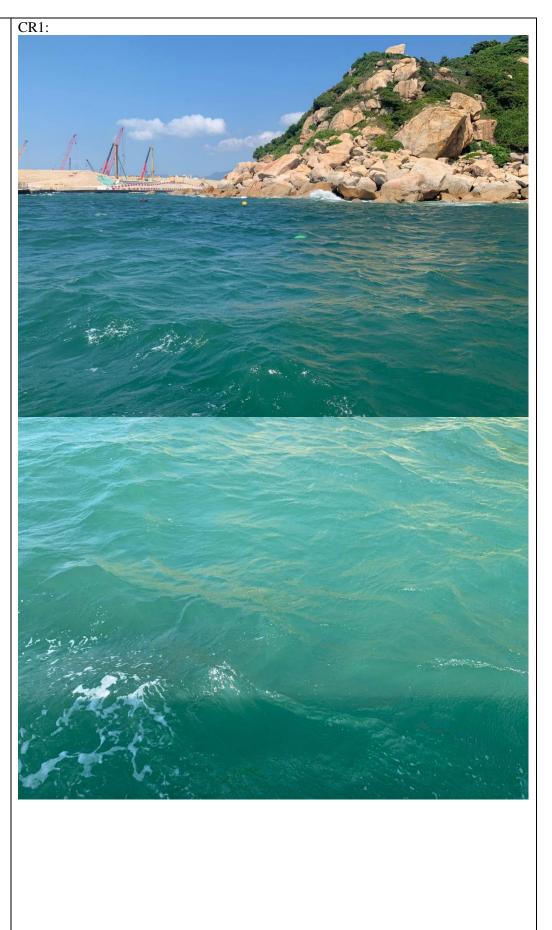
After the investigation, the exceedances on 04 Oct 2021 at B1, H1, M1, CR1 and CR2 are deemed to be unrelated to the Project.

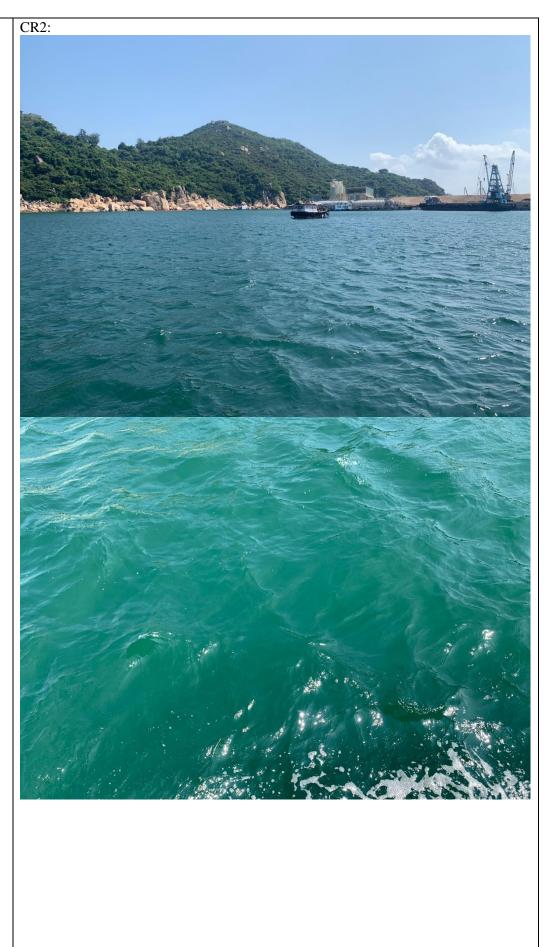
Monitoring photos of stations with exceedance

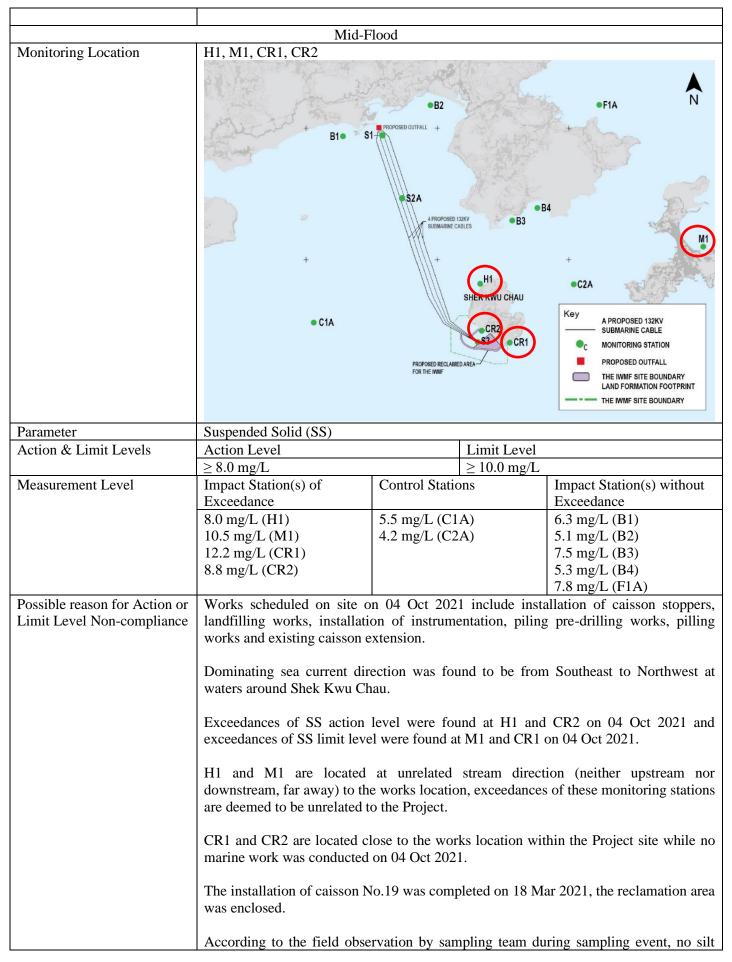




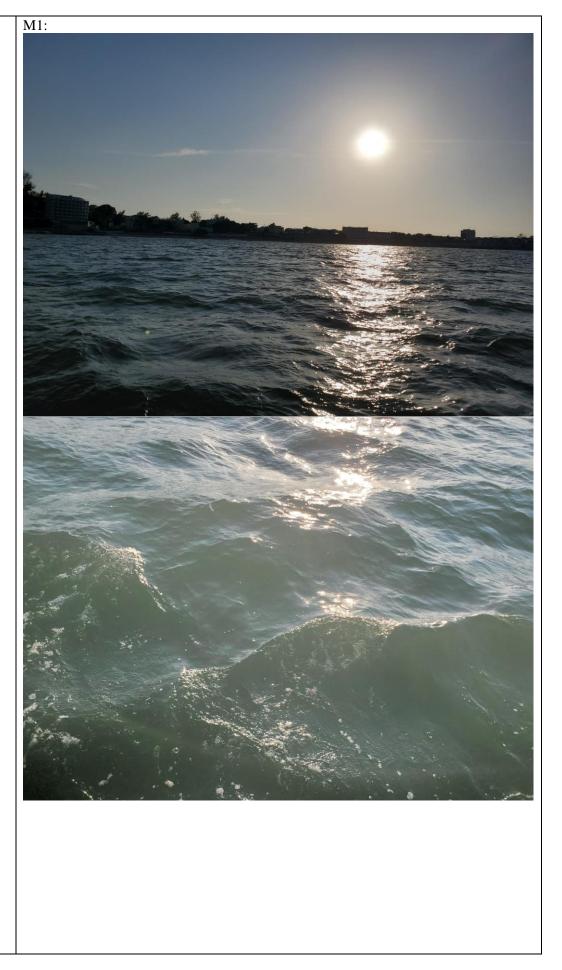




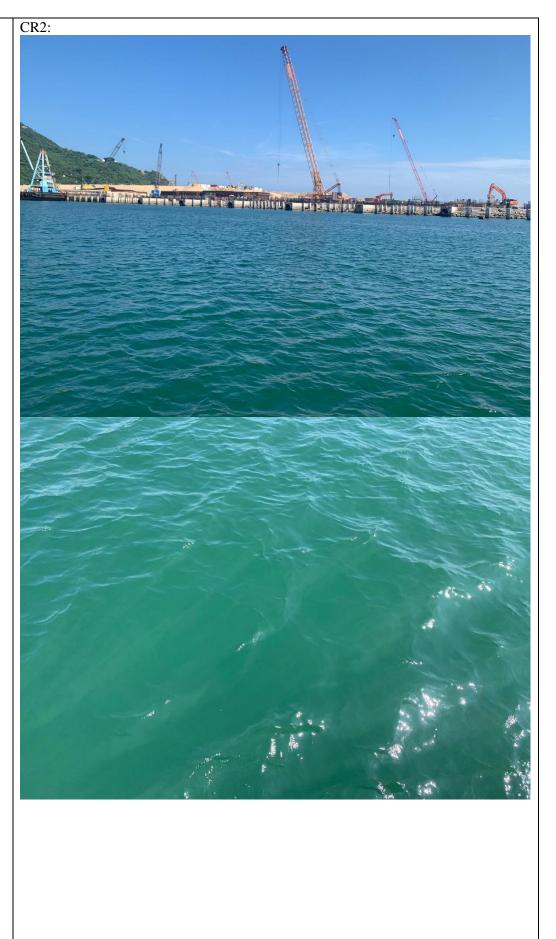


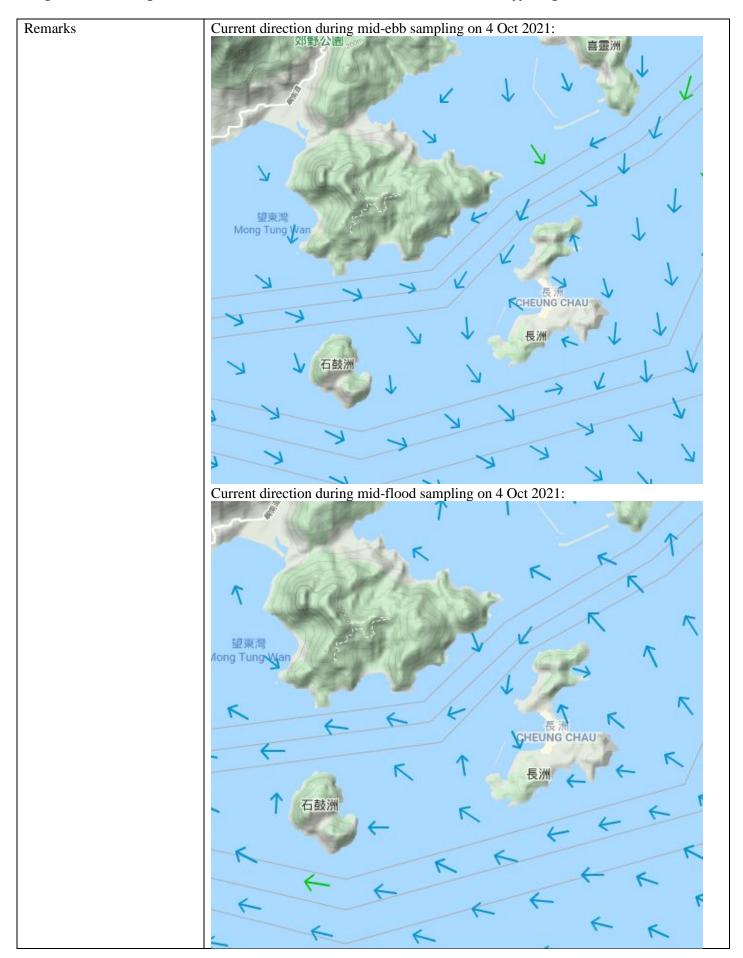


plume was observed in the Project site and the weather was fine during the sampling event. No major observation of improper site practices that could contribute to the increase of the suspended solids was recorded during the weekly inspection on 28 September 2021. After the investigation, the exceedances on 04 Oct 2021 at H1, M1, CR1 and CR2 are deemed to be unrelated to the Project. Monitoring photos of H1: stations with exceedance









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	Legend				
	Speed (knot)		Speed (knot)		
	0-0.5	\rightarrow	1.5-2.0	\rightarrow	
	0.5-1.0	\rightarrow	2.0-2.5	\rightarrow	
	1.0-1.5		2.5 and above	\rightarrow	
	(Sourced from http://current.hydro.gov.hk/en/map.html)				
Prepared by	Joe Ho				
Date	1 Nov 2021				

Incident Report on Action Level or Limit Level Non-compliance

Project	Integrated Waste Management Facilities, Phase 1					
Date	06 Oct 2021 (Lab result received on 12 Oct 2021)					
Time	10:25 – 13:55 (Mid-Ebb)					
	15:39 – 19:00 (Mid-Flood)					
	Mid-Ebb					
Monitoring Location	Location B1, CR2					
	+ B1 S1	PROPOSED OUTFALL 4 PROPOSED 13 SUBMARINE CA	H1 SHEK KWU CHAU CR2 CR1	F1A M1 + C2A Key A PROPOSED 132KV SUBMARINE CABLE MONITORING STATION PROPOSED OUTFALL THE IWMF SITE BOUNDARY LAND FORMATION FOOTPRINT THE WMF SITE BOUNDARY		
Parameter	Suspended Solid (SS)					
Action & Limit Levels	Action Level		Limit Level			
retion & Emili Ecvers	\geq 9.6 mg/L (120% of C1A)		$\geq 10.4 \text{ mg/L}$ (130% of C1A)		
Measurement Level	Impact Station(s) of	Control Stati		Impact Station(s) without		
Wiedsdreinent Zever	Exceedance	Control Stations		Exceedance		
	10.0 mg/L (B1) 8.0 mg/L (C1A)		(A)	5.0 mg/L (B2)		
	12.2 mg/L (CR2)			5.3 mg/L (B3)		
	12.2 11.8, 2 (01.2)) 10 mg/2 (02		4.5 mg/L (B4)		
				8.3 mg/L (F1A)		
				4.3 mg/L (H1)		
		7.8 mg/L (M1)				
			4.0 mg/L (CR1)			
Possible reason for Action or Limit Level Non-compliance	on or Works scheduled on site on 06 Oct 2021 include laying of underlayer, landfilling					

CR2 is located close to the works location within the Project site while no marine work was conducted on 06 Oct 2021.

The installation of caisson No.19 was completed on 18 Mar 2021, the reclamation area was enclosed.

According to the field observation by sampling team during sampling event, no silt plume was observed in the Project site and the weather was fine during the sampling event.

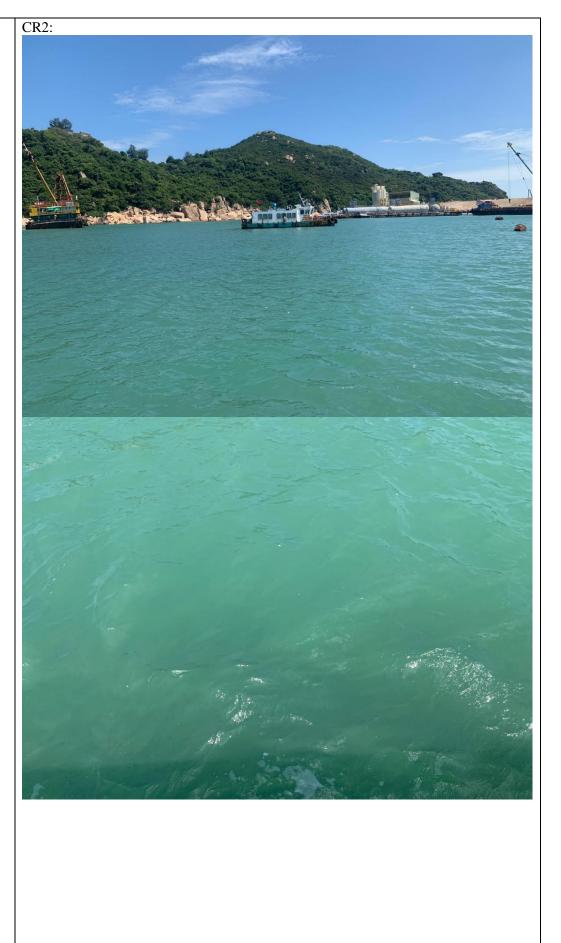
No major observation of improper site practices that could contribute to the increase of the suspended solids was recorded during the weekly inspection on 05 Oct 2021.

After the investigation, the exceedances on 06 Oct 2021 at B1 and CR2 are deemed to be unrelated to the Project.

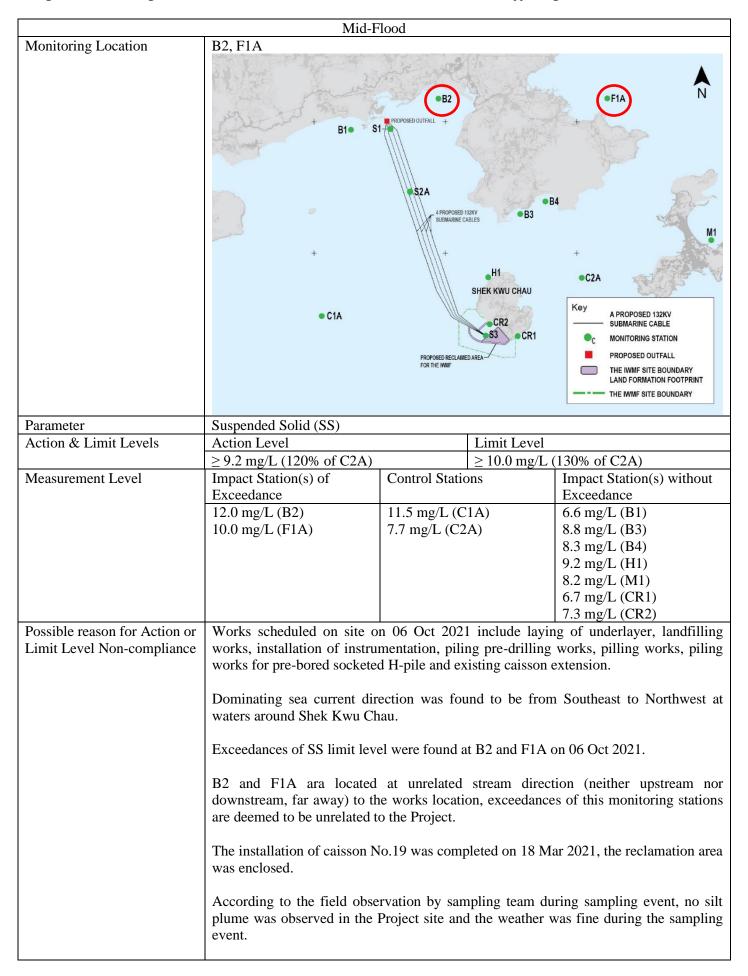
Monitoring photos of stations with exceedance



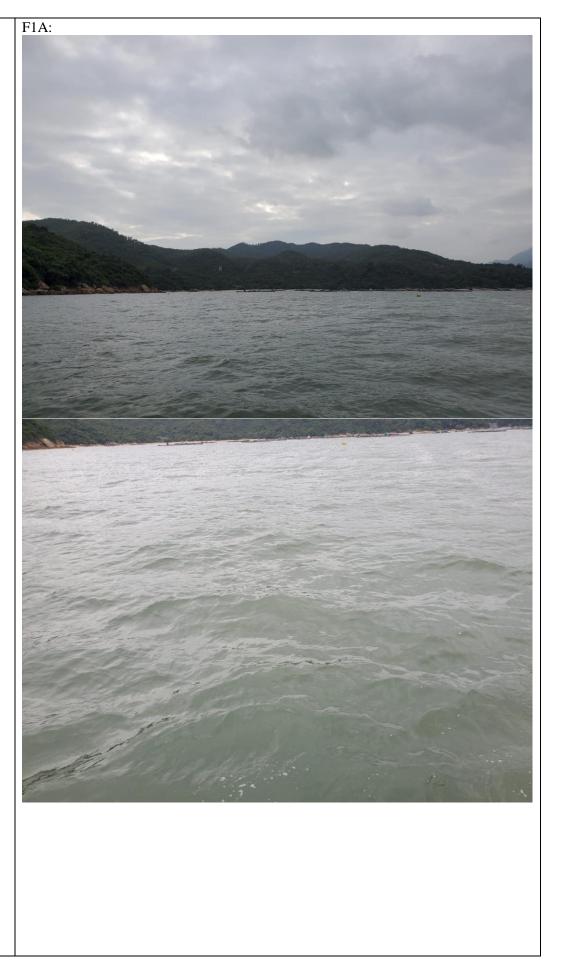
Page 2 of 8

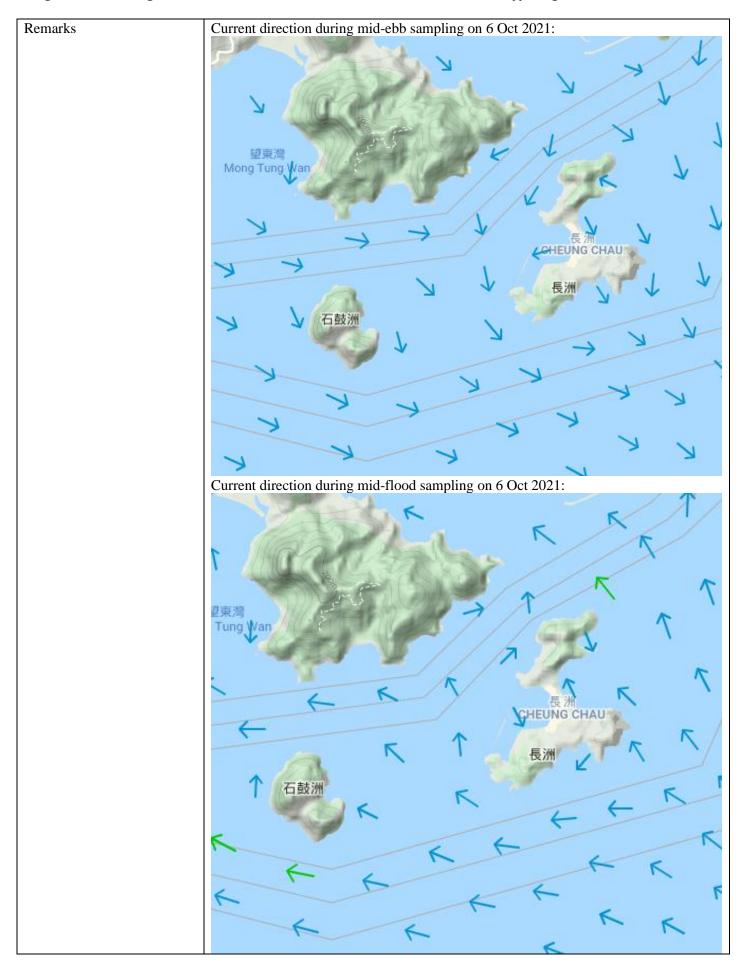


Page 3 of 8



No major observation of improper site practices that could contribute to the increase of the suspended solids was recorded during the weekly inspection on 5 Oct 2021. After the investigation, the exceedances on 06 Oct 2021 at B2 and F1A are deemed to be unrelated to the Project. Monitoring photos of B2: stations with exceedance





Page 7 of 8

	Legend			
	Speed (knot)		Speed (knot)	
	0-0.5	\rightarrow	1.5-2.0	\rightarrow
	0.5-1.0	\rightarrow	2.0-2.5	\rightarrow
	1.0-1.5		2.5 and above	\rightarrow
	(Sourced from http	://current	t.hydro.gov.hk/en/n	nap.html)
Prepared by	Joe Ho			
Date	1 Nov 2021			

Incident Report on Action Level or Limit Level Non-compliance

Incident Report on Action Level or Limit Level Non-compliance						
Project	Integrated Waste Management Facilities, Phase 1					
Date	11 Oct 2021 (Lab result received on 18 Oct 2021)					
Time	14:15 – 17:45 (Mid-Ebb)					
	08:42 – 12:12 (Mid-Flood)					
	Mid-E	Ebb				
Monitoring Location	F1A					
	+ B1 S1-	PROPOSED OUTFALL + 4 PROPOSED 132KV SUBMARINE CABLES B H1 SHEK KWU CHALL PROPOSED RECLAIMED AREA FOR THE IMMIF	Key A PROPOSED 132KV SUBMARINE CABLE MONITORING STATION PROPOSED OUTFALL THE IWMF SITE BOUNDARY LAND FORMATION FOOTPRINT			
7			THE IWMF SITE BOUNDARY			
Parameter	Suspended Solid (SS)	1	-			
Action & Limit Levels	Action Level	Limit Lev				
	\geq 12.8 mg/L (120% of C1A)		g/L (130% of C1A)			
Measurement Level	Impact Station(s) of	Control Stations	Impact Station(s) without			
	Exceedance		Exceedance			
	15.7 mg/L (F1A)	10.7 mg/L (C1A)	8.0 mg/L (B1)			
		10.5 mg/L (C2A)	6.3 mg/L (B2)			
			9.0 mg/L (B3)			
			8.5 mg/L (B4)			
		8.7 mg/L (H1)				
			5.0 mg/L (M1)			
			8.5 mg/L (CR1)			
			5.5 mg/L (CR2)			
Possible reason for Action or Limit Level Non-compliance	Works scheduled on site on 11 Oct 2021 include installation of instrumentation, piling pre-drilling works, pilling works, pilling works for driven pile, piling works for pre-bored socketed H-pile and existing caisson extension.					
	Dominating sea current direction was found to be from Northwest to Southeast at waters around Shek Kwu Chau.					
	Exceedance of SS limit level was found at F1A on 11 Oct 2021.					
	F1A is located at unrelated stream direction (neither upstream nor downstream, fa away) to the works location, exceedance of this monitoring station is deemed to b unrelated to the Project.					
	T	, executance of this mo.	8			

was enclosed.

According to the field observation by sampling team during sampling event, no silt plume was observed in the Project site and the weather was fine during the sampling event.

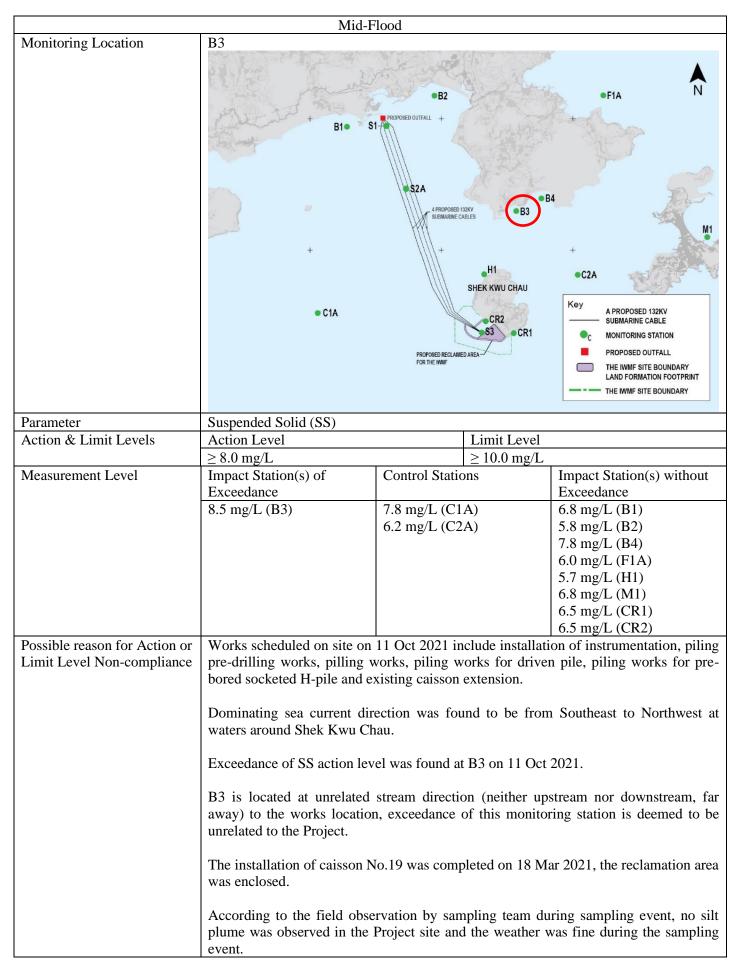
No major observation of improper site practices that could contribute to the increase of the suspended solids was recorded during the weekly inspection on 5 Oct 2021.

After the investigation, the exceedance on 11 Oct 2021 at F1A is deemed to be unrelated to the Project.

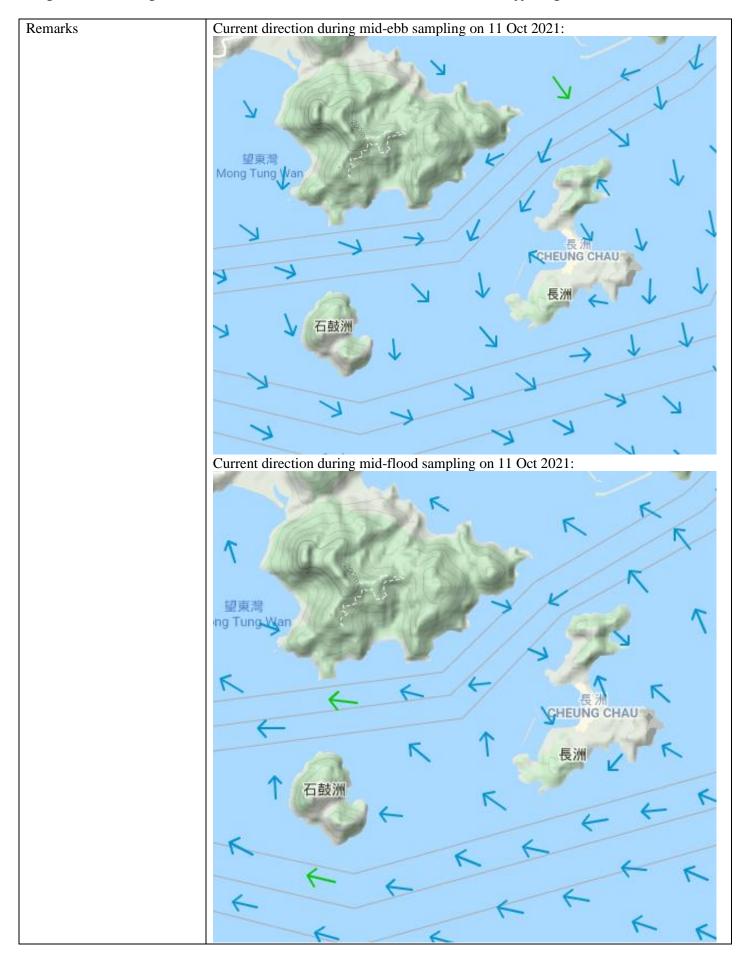
Monitoring photos of stations with exceedance

F1A:





No major observation of improper site practices that could contribute to the increase of the suspended solids was recorded during the weekly inspection on 5 Oct 2021. After the investigation, the exceedance on 11 Oct 2021 at B3 is deemed to be unrelated to the Project. Monitoring photos of B3: stations with exceedance



Page 5 of 6

	Legend					
	Speed (knot)		Speed (knot)			
	0-0.5	\rightarrow	1.5-2.0	\rightarrow		
	0.5-1.0	\rightarrow	2.0-2.5	\rightarrow		
	1.0-1.5		2.5 and above	\rightarrow		
	(Sourced from http://current.hydro.gov.hk/en/map.html)					
Prepared by	Joe Ho					
Date	1 Nov 2021					

Incident Report on Action Level or Limit Level Non-compliance

Project	Integrated Waste Management Facilities, Phase 1					
Date	15 Oct 2021 (Lab result received on 22 Oct 2021)					
Time	08:00 – 10:03 (Mid-Ebb)					
	14:26 – 17:56 (Mid-Flood)					
	Mid-Ebb					
Monitoring Location	B3, B4, H1, CR1, CR2					
	+ B1 S1-	PROPOSED OUTFALL + 4 PROPOSED 13 SUBMARINE CAL PROPOSED RECLAIMED FOR THE IMMF	H1 SHER RWU CHAU CR2 CR1	F1A M1 + C2A Key A PROPOSED 132KV SUBMARINE CABLE MONITORING STATION PROPOSED OUTFALL THE IWMF SITE BOUNDARY LAND FORMATION FOOTPRINT THE IWMF SITE BOUNDARY		
Parameter	Suspended Solid (SS)					
Action & Limit Levels	Action Level		Limit Level			
7 Ction & Limit Levels	\geq 13.6 mg/L (120% of C1A)		\geq 14.7 mg/L (130% of C1A)		
Measurement Level	Impact Station(s) of	Control Station		Impact Station(s) without		
Weastrement Level	Exceedance	Control Stations		Exceedance		
	16.5 mg/L (B3)	11.2 mg/L (C1A)		12.5 mg/L (B1)		
	15.5 mg/L (B4)	11.3 mg/L (C1A) 8.5 mg/L (C2A)		13.3 mg/L (B1) 13.3 mg/L (B2)		
	C v /	6.5 Hig/L (C2	za)			
	17.8 mg/L (H1)			9.7 mg/L (F1A)		
	14.7 mg/L (CR1)			7.8 mg/L (M1)		
D '11 C A 4'	16.7 mg/L (CR2)	15.0 + 2021	. 1 1			
Possible reason for Action or	Works scheduled on site on 15 Oct 2021 include installation of blockwork marine					
Limit Level Non-compliance	access facility, landfilling w					
	works, pilling works, piling works for driven pile, piling works for pre-bored socketed					
	H-pile and existing caisson ex	xtension.				
	Dominating sea current direction was found to be from Northwest to Southeast at waters around Shek Kwu Chau.					
	Exceedances of SS limit level were found at B3, B4, H1, CR1 and CR2 on 15 Oct 2021					
	B3, B4, H1 are located at unrelated stream direction (neither upstream nor downstream, far away) to the works location, exceedances of these monitoring stations are deemed to be unrelated to the Project.					
	CR1 and CR2 are located close to the works location within the Project site while no					

marine work was conducted on 15 Oct 2021.

The installation of caisson No.19 was completed on 18 Mar 2021, the reclamation area was enclosed.

According to the field observation by sampling team during sampling event, no silt plume was observed in the Project site and the weather was cloudy and rainy during the sampling event.

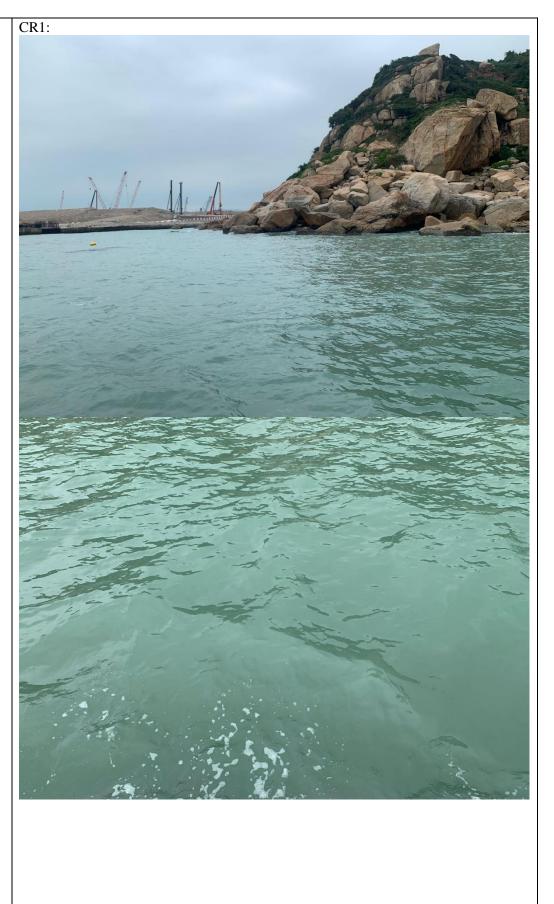
After the investigation, the exceedances on 15 Oct 2021 at B3, B4, H1, CR1 and CR2 are deemed to be unrelated to the Project.

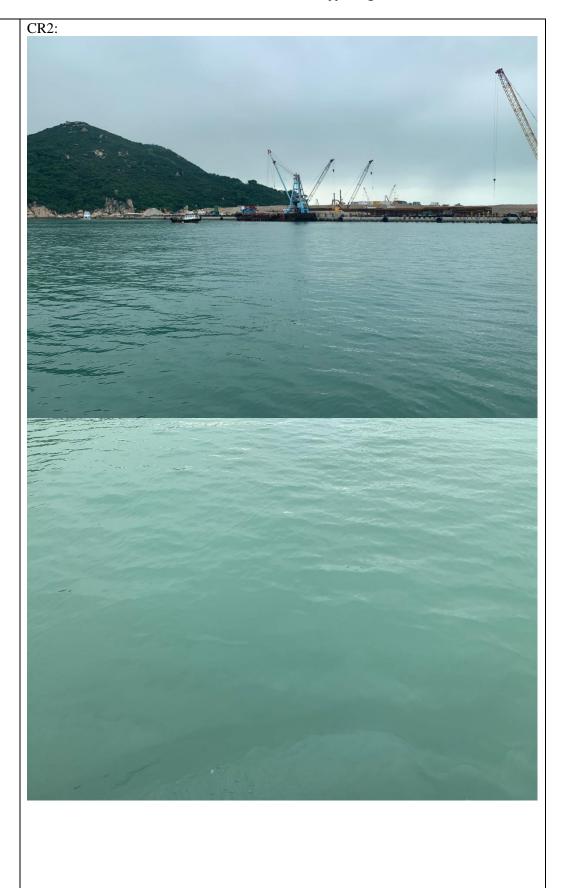
Monitoring photos of stations with exceedance

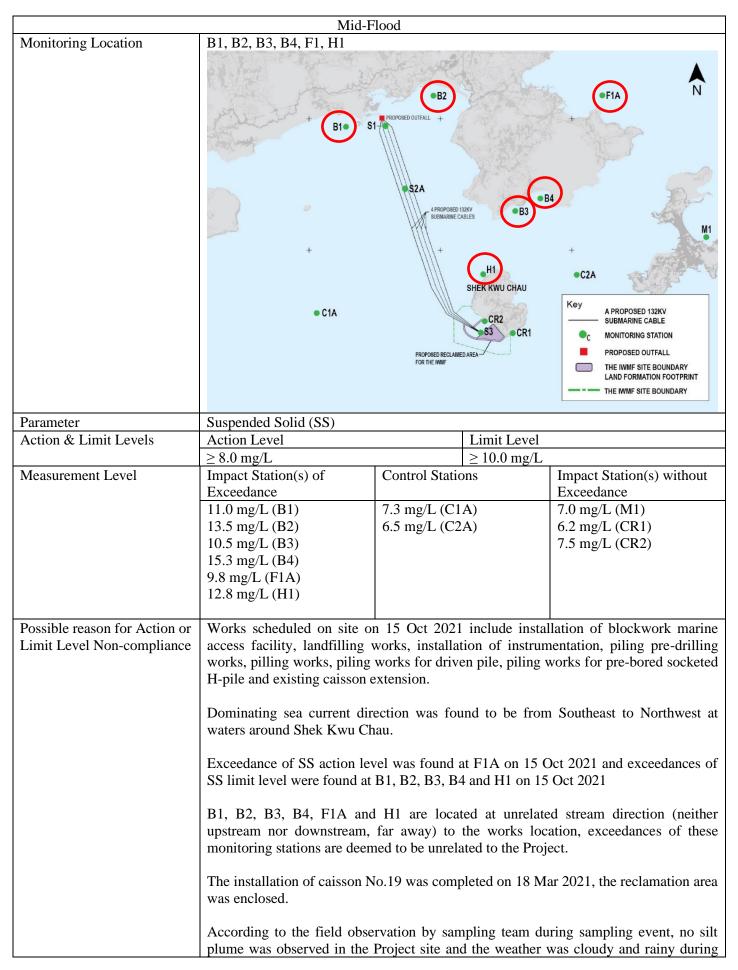












the sampling event. After the investigation, the exceedances on 15 Oct 2021 at B1, B2, B3, B4, F1A and H1 are deemed to be unrelated to the Project. Monitoring photos of B1: stations with exceedance

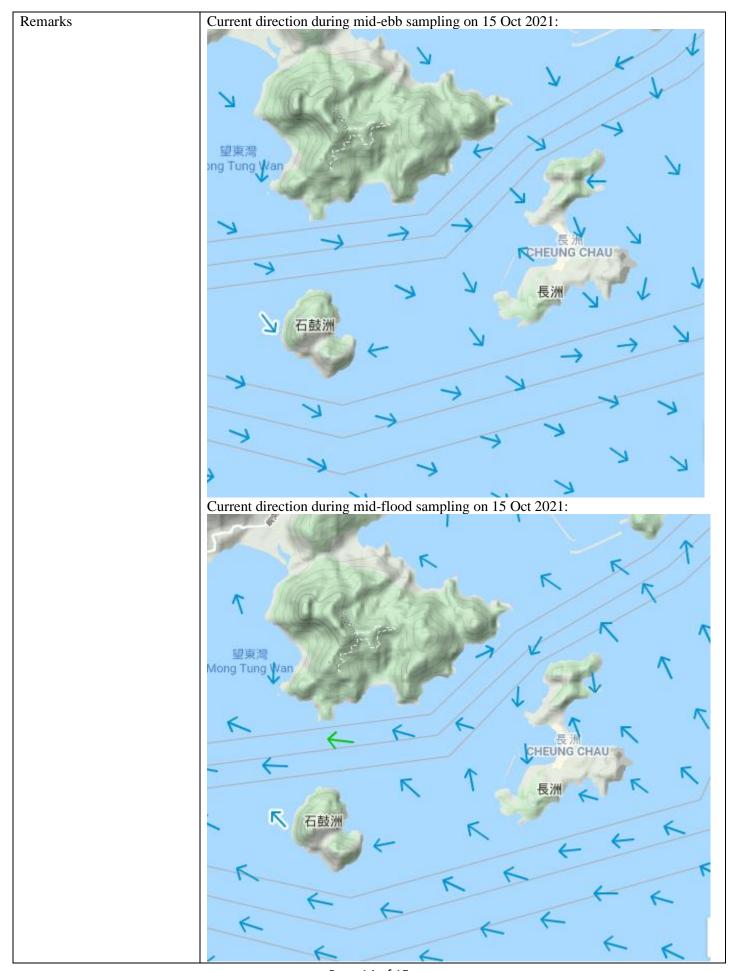












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	Legend			
	Speed (knot)		Speed (knot)	
	0-0.5	\rightarrow	1.5-2.0	\rightarrow
	0.5-1.0	\rightarrow	2.0-2.5	\rightarrow
	1.0-1.5		2.5 and above	\rightarrow
	(Sourced from http	://curren	t.hydro.gov.hk/en/n	nap.html)
Prepared by	Joe Ho			
Date	1 Nov 2021			

Project	Integrated Waste Management Facilities, Phase 1				
Date	17 Oct 2021 (Lab result received on 22 Oct 2021)				
Time	08:28 – 11:58 (Mid-Ebb)				
	Mid-E	Ebb			
Monitoring Location	B1, F1A B1 S1	PROPOSED OUTFALL + PROPOSED APPROPOSED SUBMARINE CO	H1 SHEK KWU CHAU CR2 S3 CR1	Key A PROPOSED 132KV SUBMARINE CABLE MONITORING STATION PROPOSED OUTFALL THE IWMF SITE BOUNDARY LAND FORMATION FOOTPRINT THE WMF SITE BOUNDARY	
Parameter	Suspended Solid (SS)				
Action & Limit Levels	Action Level		Limit Level		
retion & Emili Bevers	\geq 8.2 mg/L (120% of C1A)		\geq 10.6 mg/L (130% of C1A)	
Measurement Level	Impact Station(s) of Exceedance 16.8 mg/L (B1) 11.0 mg/L (F1A)	Control Stations 8.2 mg/L (C1A) 10.3 mg/L (C2A)		Impact Station(s) without Exceedance 5.0 mg/L (B2) 7.5 mg/L (B3) 8.0 mg/L (B4) 7.5 mg/L (H1) 4.3 mg/L (M1)	
Possible reason for Action or	6.3 mg/L (CR1) 4.7 mg/L (CR2) Works scheduled on site on 17 Oct 2021 include installation of blockwork marine				
Limit Level Non-compliance	access facility, installation of concrete mattress, landfilling works, pilling works and existing caisson extension. Dominating sea current direction was found to be from Northwest to Southeast at waters around Shek Kwu Chau. Exceedances of SS limit level were found at B1 and F1A on 17 Oct 2021 B1 and F1A are located at unrelated stream direction (neither upstream nor downstream, far away) to the works location, exceedances of these monitoring stations are deemed to be unrelated to the Project. The installation of caisson No.19 was completed on 18 Mar 2021, the reclamation area was enclosed.				

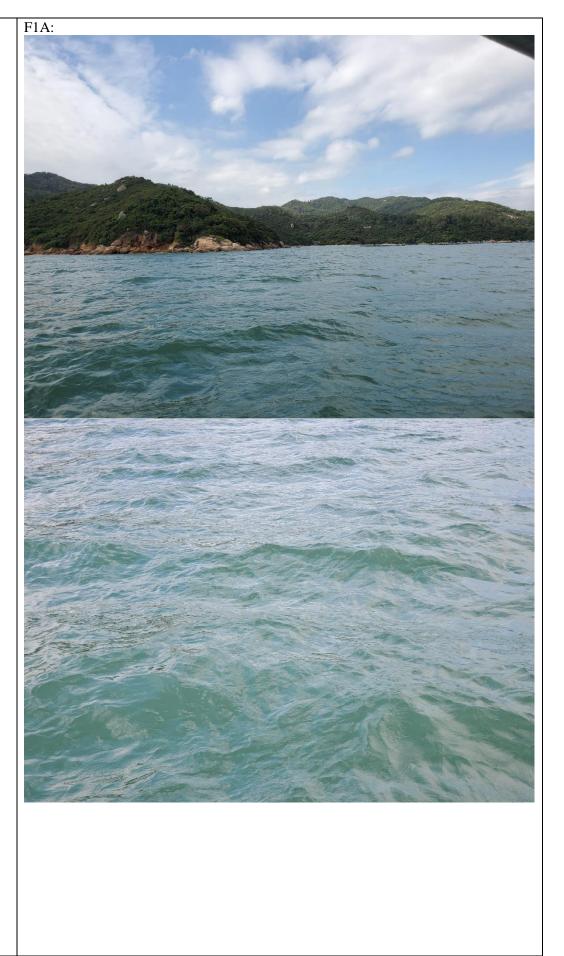
According to the field observation by sampling team during sampling event, no silt plume was observed in the Project site and the weather was fine during the sampling event.

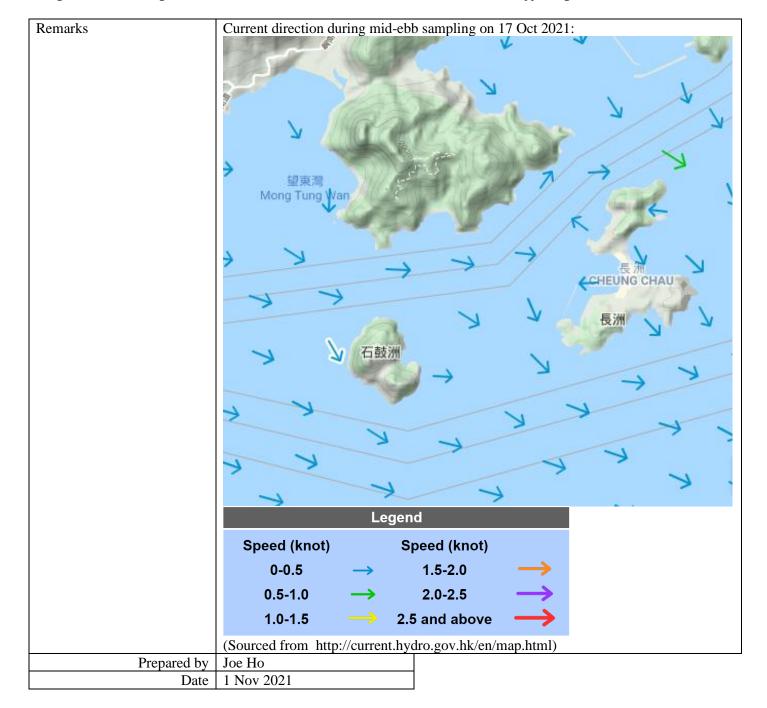
No major observation of improper site practices that could contribute to the increase of the suspended solids was recorded during the weekly inspection on 05 Oct 2021.

After the investigation, the exceedances on 17 Oct 2021 at B1 and F1A are deemed to be unrelated to the Project.

Monitoring photos of stations with exceedance







Project	Integrated Waste Management Facilities, Phase 1					
Date	19 Oct 2021 (Lab result received on 28 Oct 2021)					
Time	09:49 – 13:19 (Mid-Ebb)					
	15:01 – 18:31 (Mid-Flood)					
Mid-Ebb						
Monitoring Location	F1A					
	+ B1 S1	B2 RROPOSED DUTFALL + 4 PROPOSED 132KV SUBMARNE CABLES B3 H1 SHEK KWU CHAU PROPOSED RECLAIMED AREA FOR THE IMME	Key A PROPOSED 132KV SUBMARINE CABLE MONITORING STATION PROPOSED OUTFALL THE IWMF SITE BOUNDARY LAND FORMATION FOOTPRINT THE IWMF SITE BOUNDARY			
Parameter	Suspended Solid (SS)					
Action & Limit Levels	Action Level	Limit Level				
Action & Limit Levels	\geq 9.2 mg/L (120% of C1A)	$\geq 10.0 \text{ mg/L}$				
Measurement Level	Impact Station(s) of	Control Stations	Impact Station(s) without			
Wiedsurement Level	Exceedance	Control Stations	Exceedance			
	11.8 mg/L (F1A)	7.7 mg/L (C1A)	7.3 mg/L (B1)			
	11.0 mg/2 (1 111)	11.7 mg/L (C2A)	5.5 mg/L (B2)			
		11.7 mg/2 (0211)	7.3 mg/L (B3)			
			5.3 mg/L (B4)			
			6.2 mg/L (H1)			
			7.7 mg/L (M1)			
		8.3 mg/L (CR1) 6.8 mg/L (CR2)				
Possible reason for Action or Limit Level Non-compliance	Works scheduled on site on 19 Oct 2021 include installation of caisson, laying of rock armour, landfilling works, installation of instrumentation, piling pre-drilling works, pilling works and existing caisson extension. Dominating sea current direction was found to be from Northwest to Southeast at waters around Shek Kwu Chau.					
	Exceedance of SS limit level was found at F1A on 19 Oct 2021					
	F1A is located at unrelated stream direction (neither upstream nor downstream, far away) to the works location, exceedance of this monitoring station is deemed to be unrelated to the Project.					

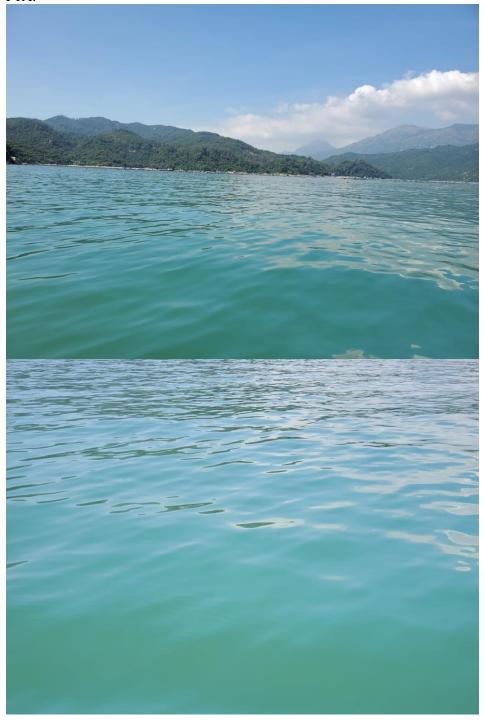
According to the field observation by sampling team during sampling event, no silt plume was observed in the Project site and the weather was fine during the sampling event.

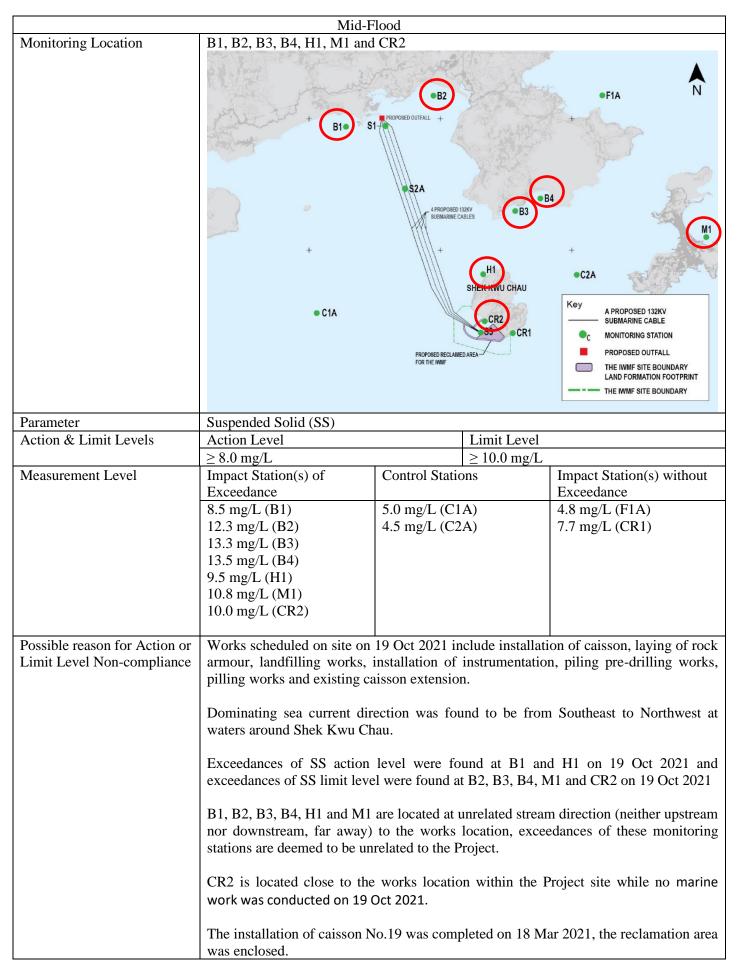
No major observation of improper site practices that could contribute to the increase of the suspended solids was recorded during the weekly inspection on 19 Oct 2021.

After the investigation, the exceedance on 19 Oct 2021 at F1A is deemed to be unrelated to the Project.

Monitoring photos of stations with exceedance

F1A:





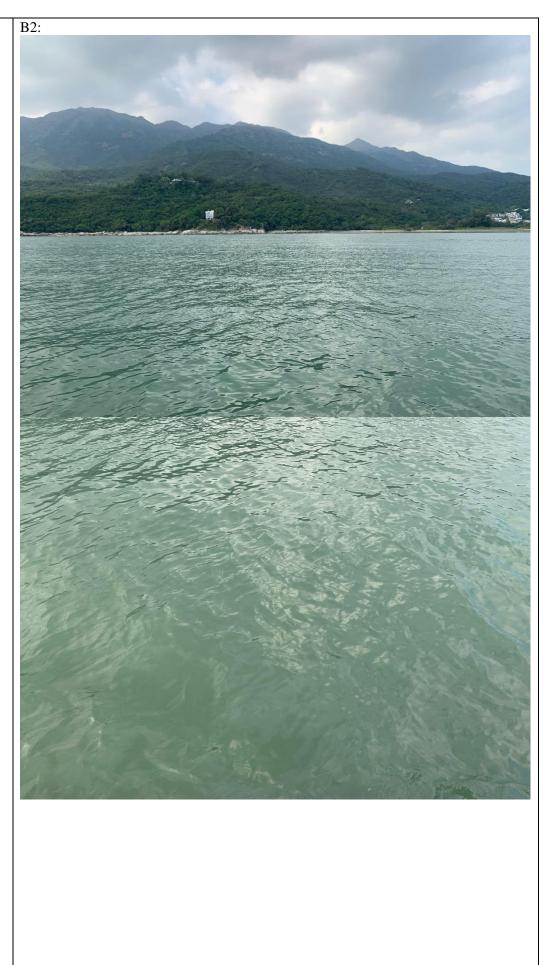
According to the field observation by sampling team during sampling event, no silt plume was observed in the Project site and the weather was fine during the sampling event.

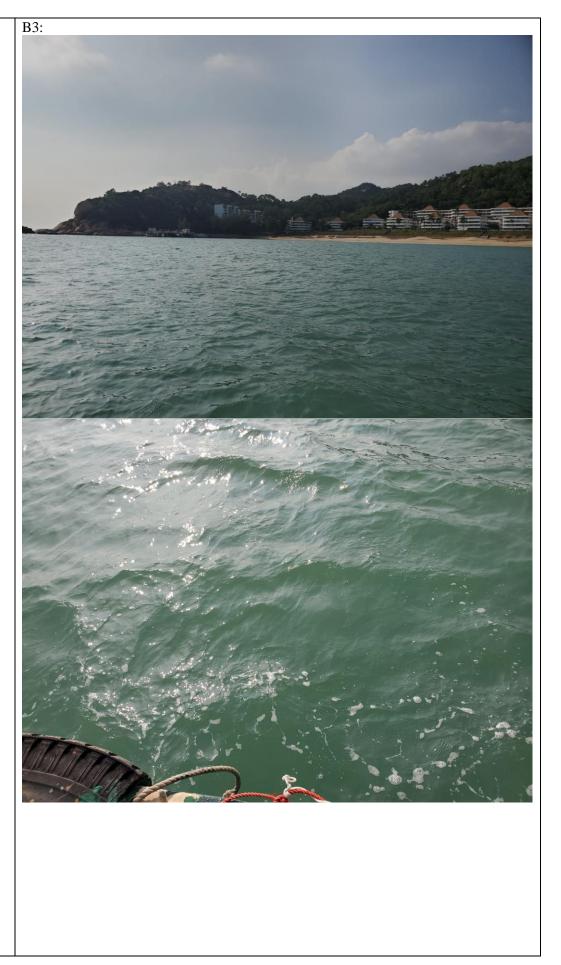
No major observation of improper site practices that could contribute to the increase of the suspended solids was recorded during the weekly inspection on 05 Oct 2021.

After the investigation, the exceedances on 19 Oct 2021 at B1, B2, B3, B4, H1, M1 and CR2 are deemed to be unrelated to the Project.

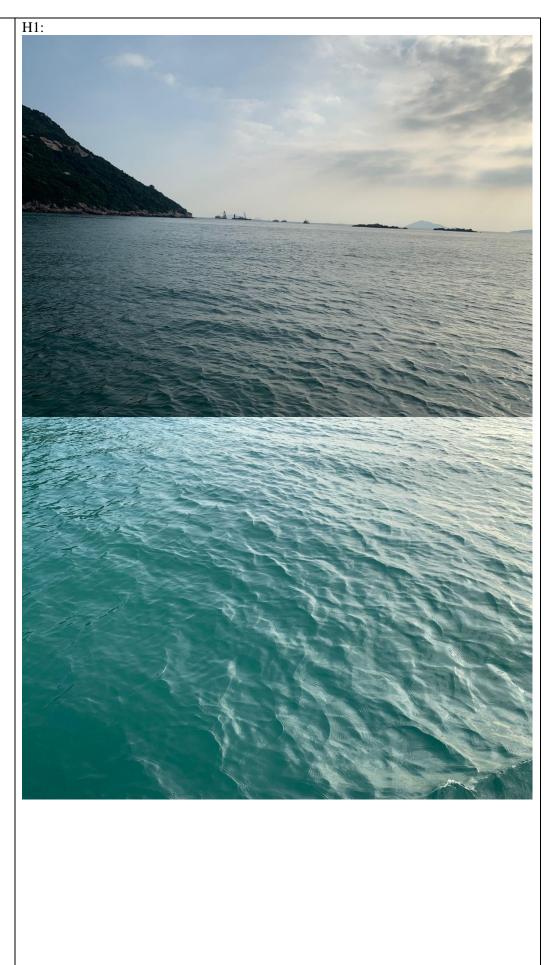
Monitoring photos of stations with exceedance



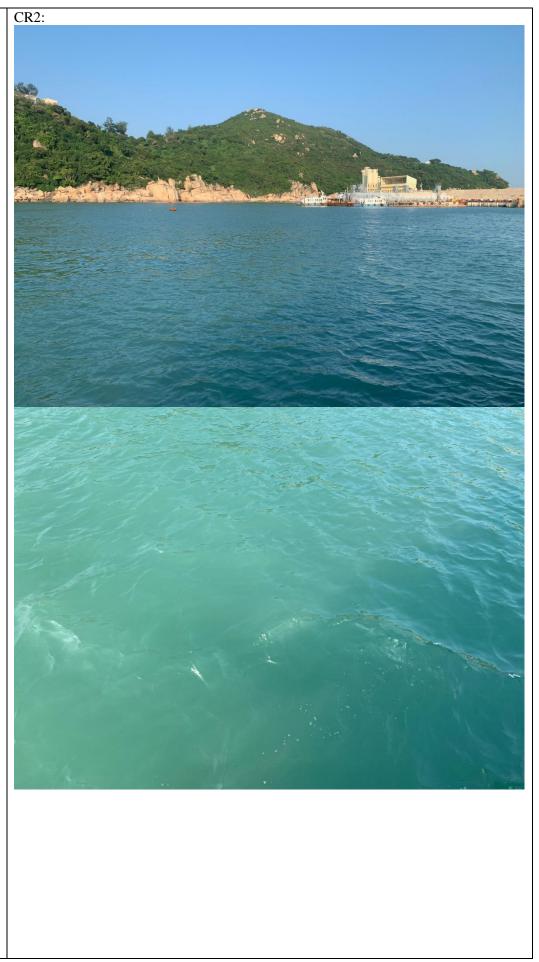


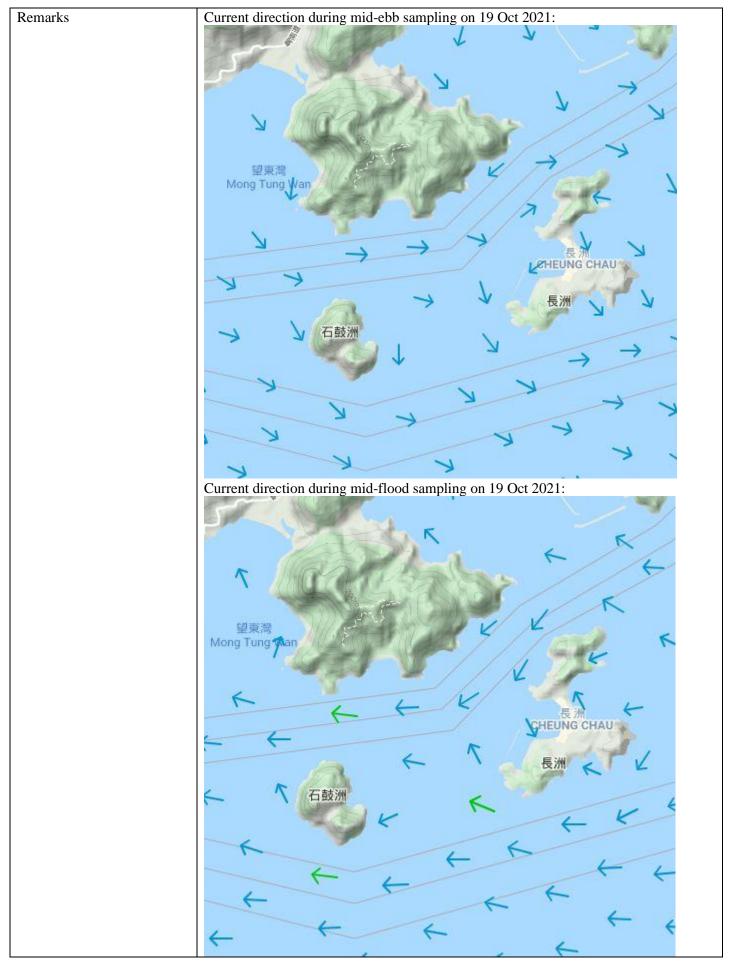












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	Legend			
	Speed (knot)		Speed (knot)	
	0-0.5	\rightarrow	1.5-2.0	\rightarrow
	0.5-1.0	\rightarrow	2.0-2.5	\rightarrow
	1.0-1.5		2.5 and above	\rightarrow
	(Sourced from http	://current	t.hydro.gov.hk/en/n	nap.html)
Prepared by	Joe Ho			
Date	1 Nov 2021			

Project	Integrated Waste Management Facilities, Phase 1						
Date	24 Oct 2021 (Lab result received on 1 Nov 2021)						
Time	08:06 – 11:36 (Mid-Flood)						
	Mid-Flood						
Monitoring Location	B3, M1 and CR2 B1 C1A	PROPOSED OUTFALL + 4 FROPOSED SUBMARNE C PROPOSED RECLAIMING FOR THE IMME	H1 SHEK KWU CHAU CR2 CR1	F1A N N F1A N N N N N N N N N N N N N			
Parameter	Suspended Solid (SS)						
Action & Limit Levels	Action Level		Limit Level				
	$\geq 8.0 \text{ mg/L}$		$\geq 10.0 \text{ mg/L}$				
Measurement Level	Impact Station(s) of Exceedance	Control Statio		Impact Station(s) without Exceedance			
	12.8 mg/L (B3) 9.2 mg/L (M1) 9.8 mg/L (CR2)	4.6 mg/L (C1A) 6.2 mg/L (C2A) 2.9 mg/L (B1) 4.3 mg/L (B2) 6.5 mg/L (B4) 4.3 mg/L (H1) 5.8 mg/L (F1A) 7.2 mg/L (CR1)		4.3 mg/L (B2) 6.5 mg/L (B4) 4.3 mg/L (H1) 5.8 mg/L (F1A)			
Possible reason for Action or Limit Level Non-compliance	Works scheduled on site on 24 Oct 2021 include installation of caisson stoppers and construction of blockwork marine access facility						
	Dominating sea current direction was found to be from Southeast to Northwest at waters around Shek Kwu Chau.						
	Exceedances of SS action level were found at M1 and CR2 on 24 Oct 2021 and exceedance of SS limit level was found at B3 on 24 Oct 2021						
	B3 and M1 are located at unrelated stream direction (neither upstream nor downstream, far away) to the works location, exceedances of these monitoring stations are deemed to be unrelated to the Project.						
	CR2 is located close to the works location within the Project site while no marine work was conducted on 24 Oct 2021.						

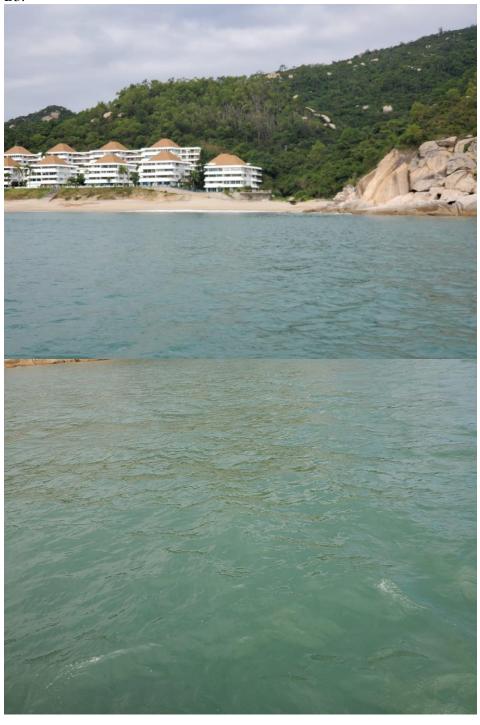
According to the field observation by sampling team during sampling event, no silt plume was observed in the Project site and the weather was fine during the sampling event.

No major observation of improper site practices that could contribute to the increase of the suspended solids was recorded during the weekly inspection on 19 Oct 2021.

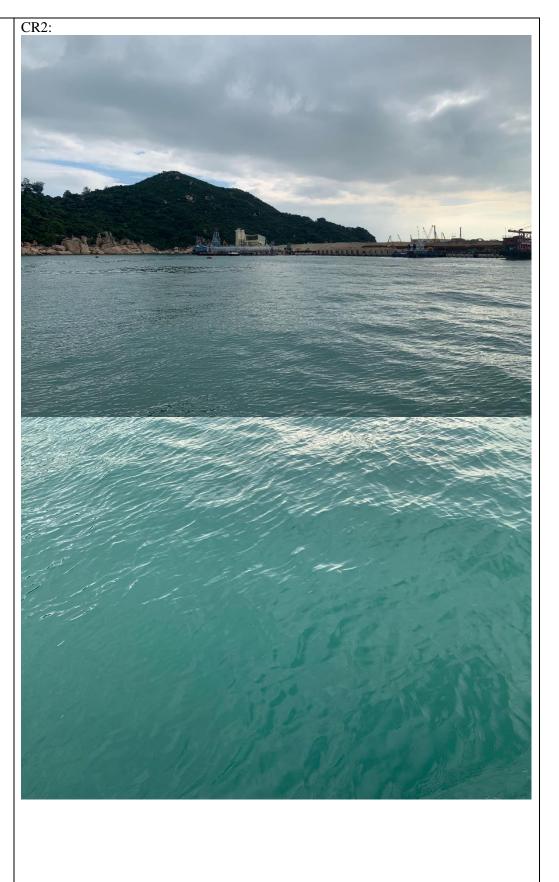
After the investigation, the exceedances on 24 Oct 2021 at B3, M1 and CR2 are deemed to be unrelated to the Project.

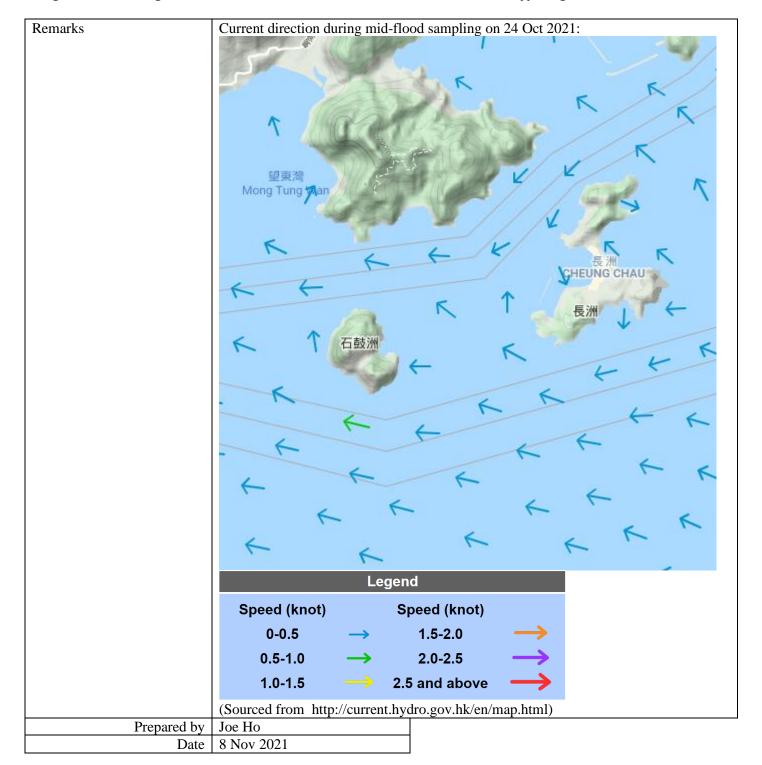
Monitoring photos of stations with exceedance

B3:









Project	Integrated Waste Management Facilities, Phase 1					
Date	26 Oct 2021 (Lab result received on 2 Nov 2021)					
Time	13:15 – 16:45 (Mid-Ebb)					
	08:15 – 11:45 (Mid-Flood)					
	Mid-Ebb					
Monitoring Location	B4 B1 S1	■ PROPOSED OUTFALL +	F1A N F1A N Key A PROPOSED 132KV SUBMARINE CABLE MONITORING STATION PROPOSED OUTFALL			
Parameter	Suspended Solid (SS)	FOR THE WIMP	THE IWMF SITE BOUNDARY LAND FORMATION FOOTPRINT THE IWMF SITE BOUNDARY			
Action & Limit Levels	Action Level	Limit Level				
	≥ 8.0 mg/L	$\geq 10.0 \text{ mg/L}$				
Measurement Level	Impact Station(s) of	Control Stations	Impact Station(s) without			
	Exceedance		Exceedance			
	8.3 mg/L (B4)	6.3 mg/L (C1A)	4.3 mg/L (B1)			
		7.0 mg/L (C2A)	3.4 mg/L (B2)			
			4.3 mg/L (B3)			
			7.8 mg/L (F1A)			
			5.2 mg/L (H1)			
			6.5 mg/L (M1)			
			7.5 mg/L (CR1)			
			7.7 mg/L (CR2)			
Possible reason for Action or Limit Level Non-compliance	Works scheduled on site on 26 Oct 2021 include levelling of rock armour, landfilling works, installation of instrumentation, piling pre-drilling works, pilling works and existing caisson extension.					
	_	Dominating sea current direction was found to be from Northwest to Southeast at waters around Shek Kwu Chau.				
	Exceedance of SS action level was found at B4 on 26 Oct 2021.					
B4 is located at unrelated stream direction (neither upstream nor downs away) to the works location, exceedance of this monitoring station is deer unrelated to the Project.						

According to the field observation by sampling team during sampling event, no silt plume was observed in the Project site and the weather was fine during the sampling event.

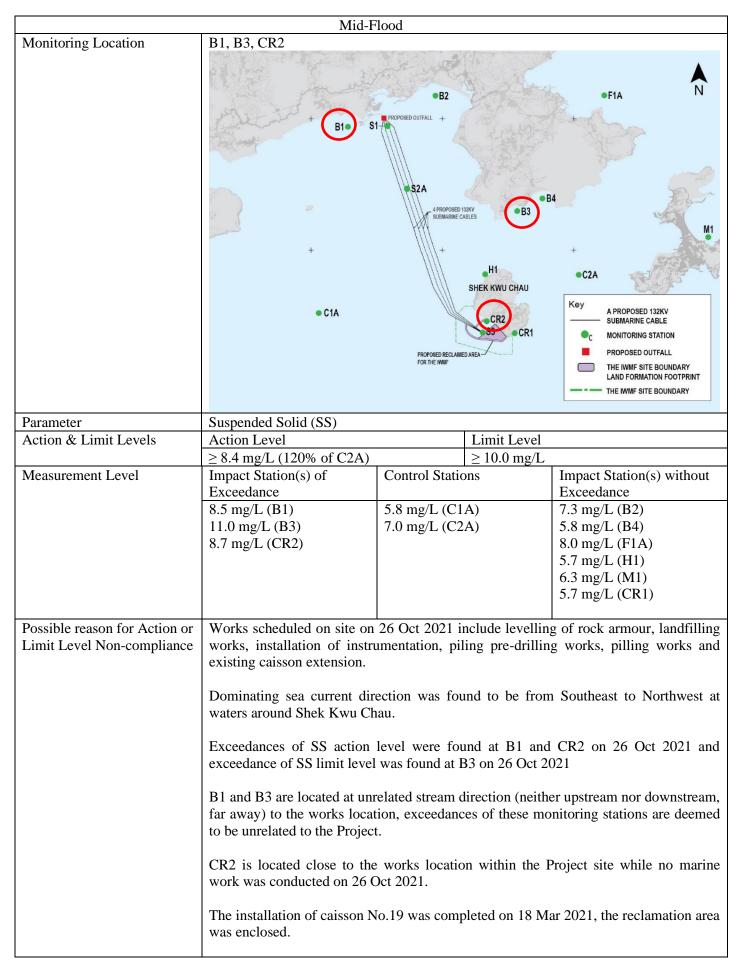
No major observation of improper site practices that could contribute to the increase of the suspended solids was recorded during the weekly inspection on 26 Oct 2021.

After the investigation, the exceedance on 26 Oct 2021 at B4 is deemed to be unrelated to the Project.

Monitoring photos of stations with exceedance

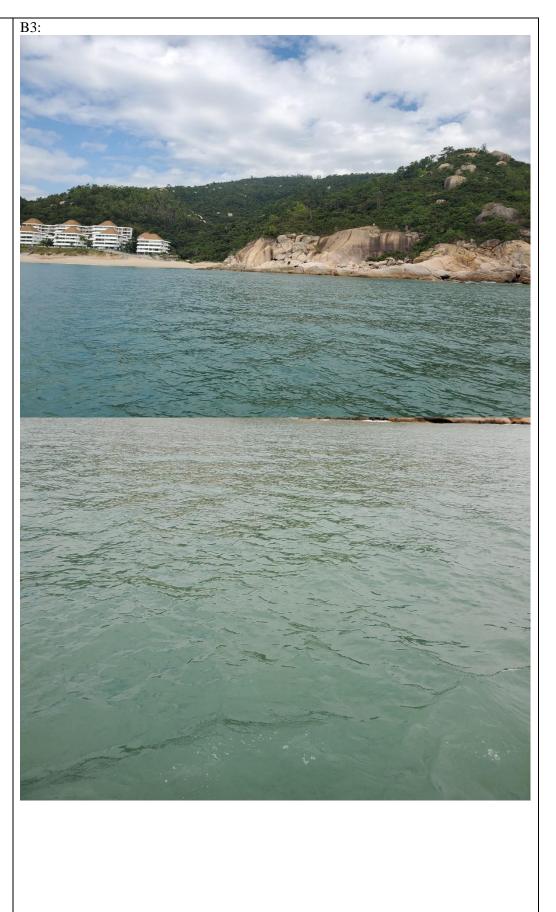
B4:



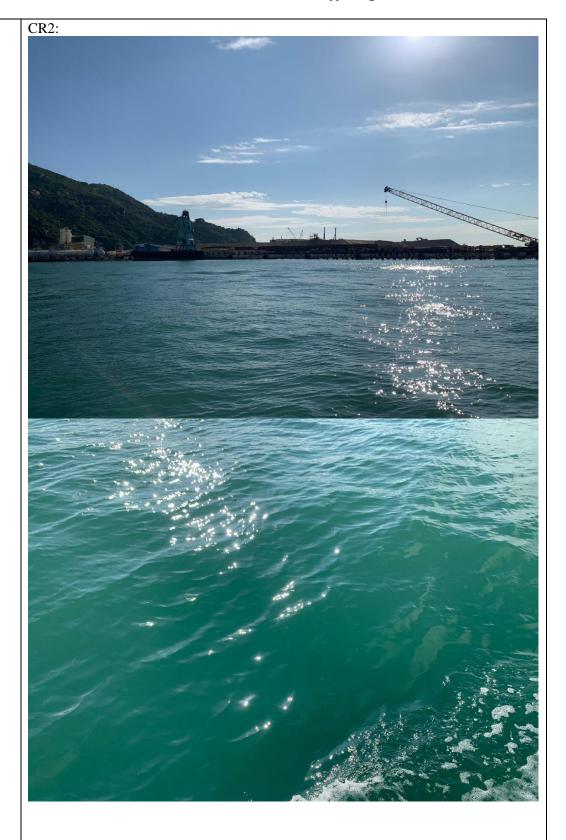


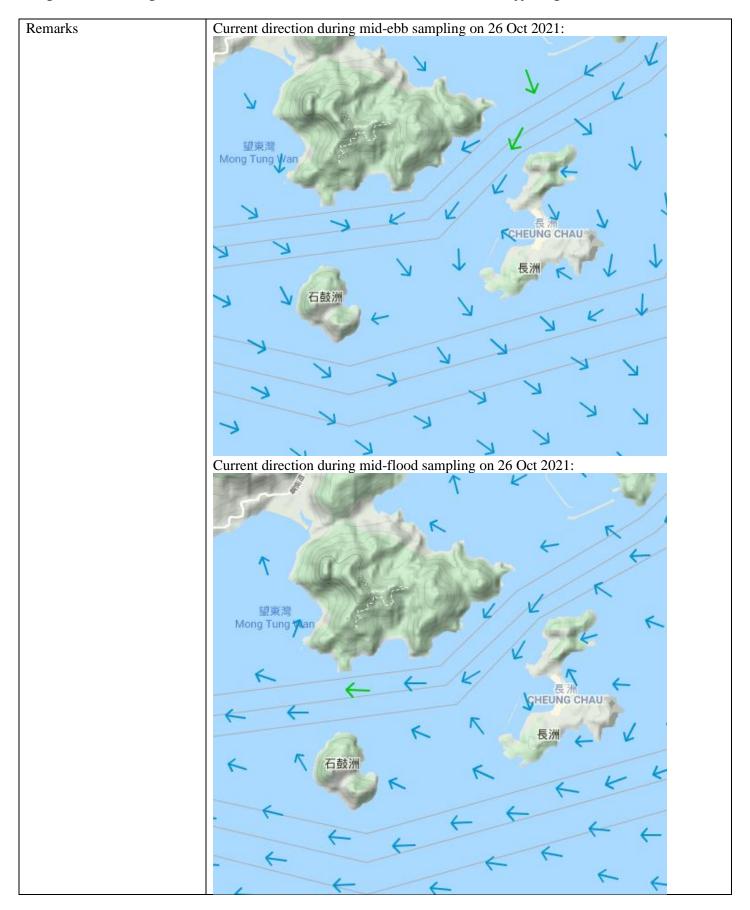
According to the field observation by sampling team during sampling event, no silt plume was observed in the Project site and the weather was fine during the sampling event. No major observation of improper site practices that could contribute to the increase of the suspended solids was recorded during the weekly inspection on 05 Oct 2021. After the investigation, the exceedances on 26 Oct 2021 at B1, B3 and CR2 are deemed to be unrelated to the Project. Monitoring photos of B1: stations with exceedance

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	Legend			
	Speed (knot)		Speed (knot)	
	0-0.5	\rightarrow	1.5-2.0	\rightarrow
	0.5-1.0	\rightarrow	2.0-2.5	\rightarrow
	1.0-1.5		2.5 and above	\rightarrow
	(Sourced from http	://current	t.hydro.gov.hk/en/n	nap.html)
Prepared by	Joe Ho			
Date	8 Nov 2021			

Project	Integrated Waste Management Facilities, Phase 1				
Date	28 Oct 2021 (Lab result received on 4 Nov 2021)				
Time	08:00 – 08:45 (Mid-Ebb)				
	14:51 – 18:21 (Mid-Flood)				
	Mid-F	Ebb			
Monitoring Location	B1, B2, B3, B4				
	+ Bio Si		FIA N FIA N N FIA N N N N N N N N N N N N N		
Parameter	Suspended Solid (SS)				
Action & Limit Levels	Action Level	I in	nit Level		
Action & Limit Levels	$\geq 8.0 \text{ mg/L}$		0.0 mg/L		
Magazzarant I aval	č		Š		
Measurement Level	Impact Station(s) of Exceedance	Control Stations	Impact Station(s) without Exceedance		
		(5 /T (C(1 A))			
	9.5 mg/L (B1)	6.5 mg/L (C1A)	5.3 mg/L (F1A)		
	8.0 mg/L (B2)	6.0 mg/L (C2A)	7.2 mg/L (H1)		
	11.3 mg/L (B3)		5.5 mg/L (M1)		
	10.8 mg/L (B4)		5.5 mg/L (CR1)		
			7.0 mg/L (CR2)		
Possible reason for Action or Limit Level Non-compliance	Works scheduled on site on 28 Oct 2021 include laying of geotextile, landfilling works, installation of instrumentation, pilling pre-drilling works, pilling works, pilling works for driven pile, piling works for pre-bored socketed H-pile and existing caisson extension. Dominating sea current direction was found to be from Northwest to Southeast at waters around Shek Kwu Chau. Exceedances of action level were found at B1 and B2 and exceedances of limit level were found at B3 and B4. B1, B2, B3 and B4 are located at unrelated stream direction (neither upstream nor downstream, far away) to the works location, exceedances of these monitoring stations are deemed to be unrelated to the Project.				

According to the field observation by sampling team during sampling event, no silt plume was observed in the Project site and the weather was fine during the sampling event.

No major observation of improper site practices that could contribute to the increase of the suspended solids was recorded during the weekly inspection on 26 Oct 2021.

After the investigation, the exceedances on 28 Oct 2021 at B1, B2, B3 and B4 are deemed to be unrelated to the Project.

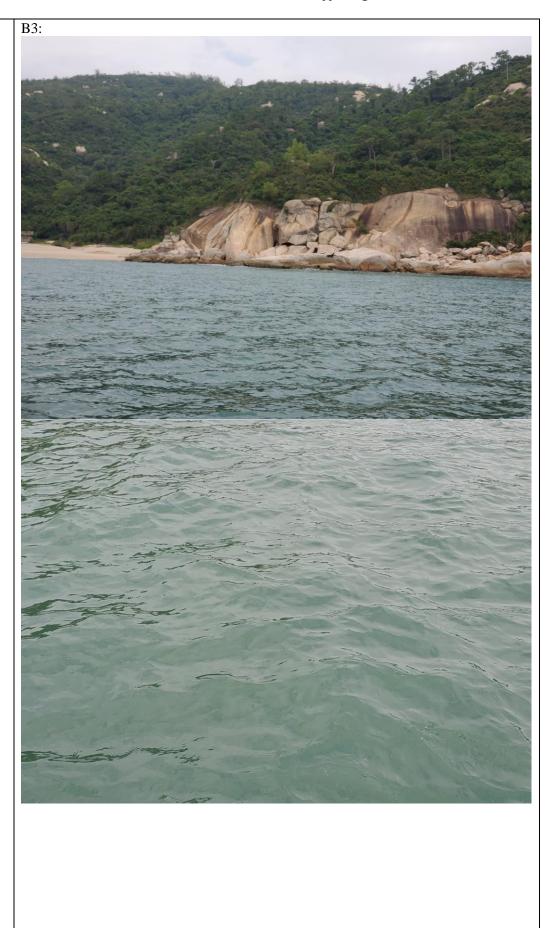
Monitoring photos of stations with exceedance

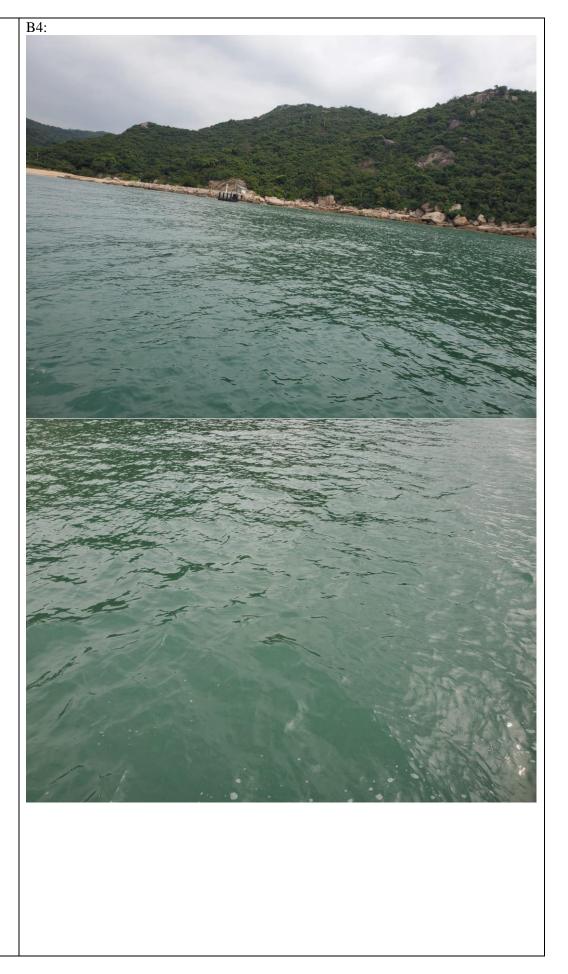
B1:

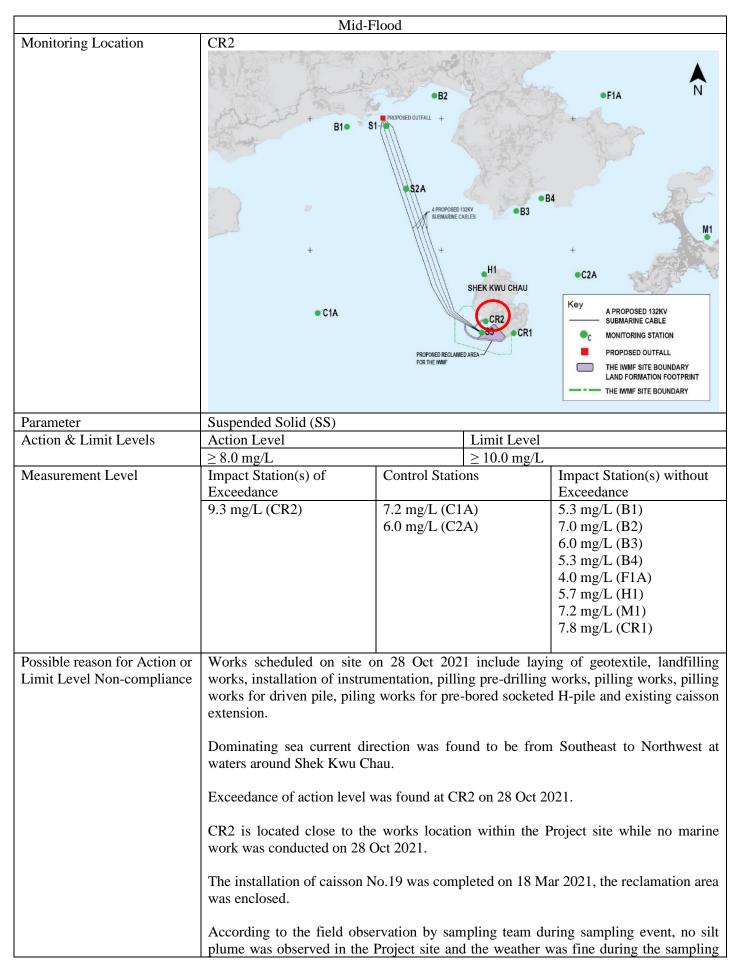




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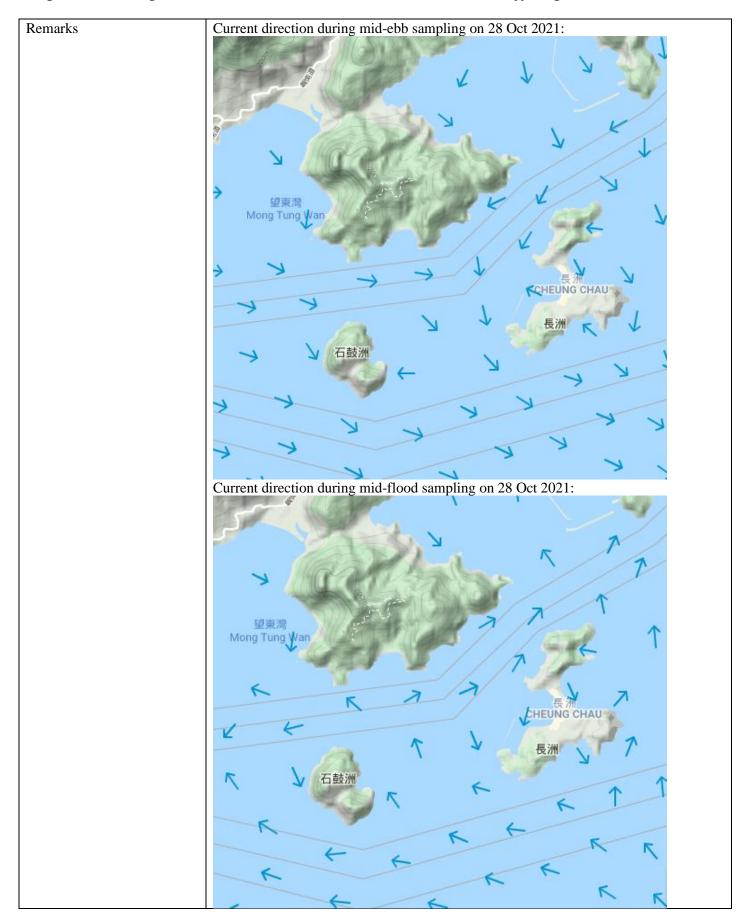
event.

No major observation of improper site practices that could contribute to the increase of the suspended solids was recorded during the weekly inspection on 05 Oct 2021.

After the investigation, the exceedances on 28 Oct 2021 at CR2 is deemed to be unrelated to the Project.

Monitoring photos of stations with exceedance





	Legend			
	Speed (knot)		Speed (knot)	
	0-0.5	\rightarrow	1.5-2.0	\rightarrow
	0.5-1.0	\rightarrow	2.0-2.5	\rightarrow
	1.0-1.5		2.5 and above	\rightarrow
	(Sourced from http	://current	t.hydro.gov.hk/en/n	nap.html)
Prepared by	Joe Ho			
Date	8 Nov 2021			

Incident Report on Action Level or Limit Level Non-compliance

Project	Integrated Waste Management Facilities, Phase 1					
Date	30 Oct 2021 (Lab result received on 5 Nov 2021)					
Time	08:00 – 11:08 (Mid-Ebb)					
Mid-Ebb						
Monitoring Location	`	PROPOSED OUTFALL + PROPOSED A PROPOSED SUBMARNE C	H1 SHEK KWU CHAU CR2 S3 CR1	Key A PROPOSED 132KV SUBMARINE CABLE MONITORING STATION PROPOSED OUTFALL		
Parameter	Suspended Solid (SS)		Ix. vx 1	THE IWMF SITE BOUNDARY LAND FORMATION FOOTPRINT THE IWMF SITE BOUNDARY		
Action & Limit Levels	Action Level		Limit Level			
Measurement Level	≥ 9.2 mg/L (120% of C1A) Impact Station(s) of Exceedance 10.0 mg/L (B4) 10.7 mg/L (F1A) 10.3 mg/L (CR1)	7.7 mg/L (C1A) 6 10.0 mg/L (C2A) 5 4 6 8 5		Impact Station(s) without Exceedance 6.3 mg/L (B1) 5.5 mg/L (B2) 4.8 mg/L (B3)		
Descible recess for Astica or				6.2 mg/L (H1) 8.7 mg/L (M1) 5.7 mg/L (CR2)		
Possible reason for Action or Limit Level Non-compliance	Works scheduled on site on 30 Oct 2021 include laying of geotextile, landfilling works, installation of instrumentation, pilling pre-drilling works, pilling works, pilling works for driven pile, piling works for pre-bored socketed H-pile, existing caisson extension and armour scour protection.					
	Dominating sea current direction was found to be from Northwest to Souther waters around Shek Kwu Chau.					
		1. ion (neither upstream nor of these monitoring stations				

CR1 is located close to the works location within the Project site while no marine work was conducted on 30 Oct 2021.

The installation of caisson No.19 was completed on 18 Mar 2021, the reclamation area was enclosed.

According to the field observation by sampling team during sampling event, no silt plume was observed in the Project site and the weather was fine during the sampling event.

No major observation of improper site practices that could contribute to the increase of the suspended solids was recorded during the weekly inspection on 26 Oct 2021.

After the investigation, the exceedances on 30 Oct 2021 at B4, F1A and CR1 are deemed to be unrelated to the Project.

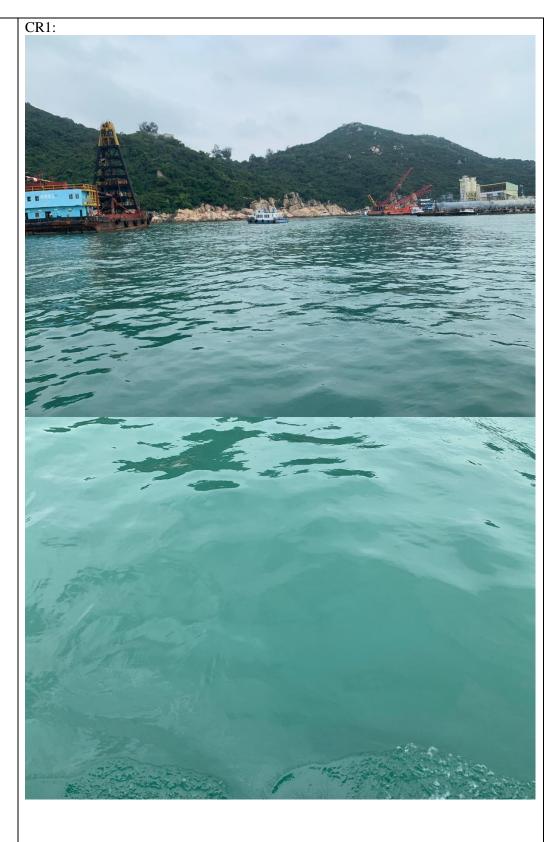
Monitoring photos of stations with exceedance

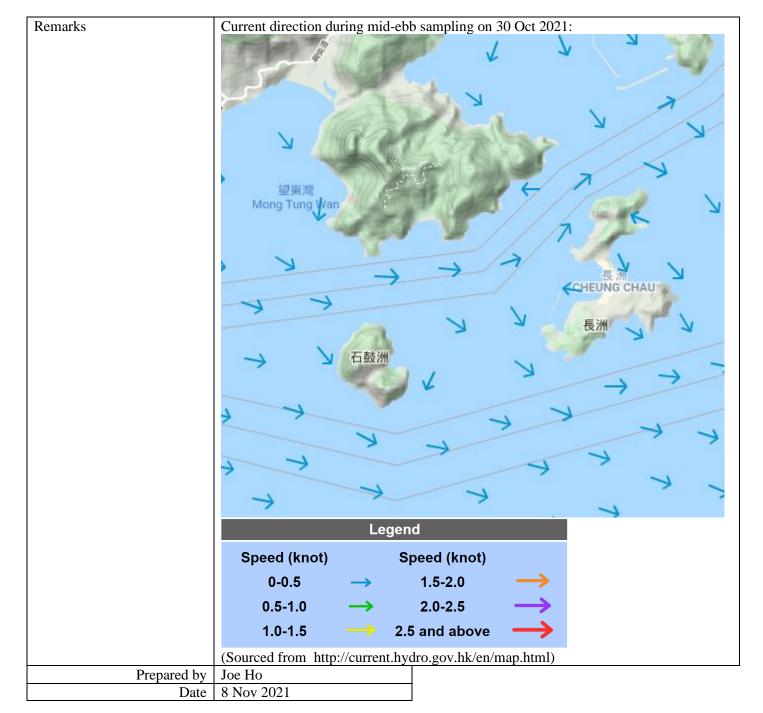




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Contract No. EP/SP/66. Integrated Waste Management	/12 gement Facilities, Phase 1	Keppel Seghers – Zhen Hua Joint Venture
Appendix O	Complaint Log	

Statistical Summary of Environmental Complaints

Reporting	Environmental Complaint Statistics			
Period	Frequency	Cumulative	Complaint Nature	
1 Oct 2021- 31 Oct 2021	0	0	N/A	

Statistical Summary of Environmental Summons

Reporting	Environmental Summons Statistics			
Period	Frequency	Frequency Cumulative		
1 Oct 2021- 31 Oct 2021	0	0	N/A	

Statistical Summary of Environmental Prosecution

Reporting	Environmental Prosecution Statistics			
Period	Frequency	Cumulative	Details	
1 Oct 2021-	0	0	N/A	
31 Oct 2021				

Contract No. EP/SP/66/ Integrated Waste Manag	/12 gement Facilities, Phase 1	Keppel Seghers – Zhen Hua Joint Venture
Appendix P	Impact Monitoring Schedul Month	e of Next Reporting

Impact Monitoring Schedule for IWMF						
Nov-21						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
	Impact Water Quality monitoring for 81, 82, 83, 84, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 05:46 - 13:00 Flood Tide: 13:00 - 20:00 Monitoring Time: Mid-ebb: 08:00 - 11:08 *Mid-flood: 14:45 - 18:15 Daytime & Evening Noise monitoring for M1 & M3	Impact Night time Noise monitoring for M1 & M3 Daytime & Evening Noise monitoring for M2	Impact Water Quality monitoring for B1, B2, B3, B4, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 08:00 - 14:03 Flood Tide: 14:03 - 20:20 Monitoring Time: Mid-ebb: 09:16 - 12:46 #8.Mid-flood: 15:26 - 18:56 Night time Noise monitoring for M2	Impact Ecology monitoring for Marine Mammals by Vessel-based Line-Transect Survey	Impact Water Quality monitoring for B1, B2, B3, B4, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 10:00 - 15:09 Flood Tide: 15:09 - 21:00 Monitoring Time: Mid-ebb: 10:49 - 14:19 \$&Mid-flood: 15:26 - 18:56	
7	8	9	10	11	12	13
	Impact Water Quality monitoring for 81, 82, 83, 84, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 13:11 - 17:00 Flood Tide: 05:45 - 13:11 Monitoring Time: Mid-ebb: 13:20 - 16:50 *Mid-flood: 08:00 - 11:13 Daytime & Evening Noise monitoring for M1 & M3	Impact Night time Noise monitoring for M1 & M3 Daytime & Evening Noise monitoring for M2	Impact Water Quality monitoring for 81, 82, 83, 84, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 15:00 - 19:00 Flood Tide: 08:00 - 15:00 Monitoring Time: Mid-ebb: 15:15 - 18:45 Mid-flood: 09:45 - 13:15 Night time Noise monitoring for M2		Impact Water Quality monitoring for B1, B2, B3, B4, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 02:00 - 10:26 Flood Tide: 10:26 - 19:00 Monitoring Time: ##5Mid-ebb: 08:00 - 10:00 Mid-flood: 12:58 - 16:28	
14	15	16	17	18	19	20
	Impact Water Quality monitoring for 81, 82, 83, 84, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 06:31 - 13:00 Flood Tide: 13:00 - 19:55 Monitoring Time: Mid-ebb: 08:00 - 11:30 Mid-flood: 14:42 - 18:12 Daytime & Evening Noise monitoring for M1 & M3	Impact Night time Noise monitoring for M1 & M3 Daytime & Evening Noise monitoring for M2	Impact Water Quality monitoring for B1, B2, B3, B4, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 08:21 - 13:53 Flood Tide: 13:53 - 20:28 Monitoring Time: Mid-ebb: 09:22 - 12:52 #8.Mid-flood: 15:25 - 18:55 Night time Noise monitoring for M2		Impact Water Quality monitoring for 81, B2, 83, 84, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 1:0:00 - 14:38 Flood Tide: 14:38 - 21:00 Monitoring Time: Mid-ebb: 10:34 - 14:04 #\$&Mid-flood: 14:57 - 18:27	
21	22	23	24	25	26	27
	Impact Water Quality monitoring for 81, 82, 83, 84, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 12:00 - 15:00 Flood Tide: 05:18 - 12:00 Monitoring Time: Mid-ebb: 11:45 - 15:15 #5Mid-flood: 08:00 - 11:30 Daytime & Evening Noise monitoring for M1 & M3	Impact Night time Noise monitoring for M1 & M3 Daytime & Evening Noise monitoring for M2	Impact Water Quality monitoring for B1, B2, B3, B4, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 13:00 - 16:00 Flood Tide: 06:45 - 13:00 Monitoring Time: Mid-ebb: 12:45 - 16:15 #R.Mid-flood: 08:07 - 11:37 Night time Noise monitoring for M2		Impact Water Quality monitoring for 81, B2, 83, 84, H1, C14, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 15:00 - 19:00 Flood Tide: 08:34 - 15:00 Monitoring Time: Mid-ebb: 15:15 - 18:45 #&Mid-flood: 10:02 - 13:32 Ecology monitoring for WBSE	
28	29	30				
	Impact Water Quality monitoring for 81, 82, 83, 84, H1, C1A, C2A, F1A, CR1, CR2, M1 Tidal Period: Ebb Tide: 04:00 - 11:13 Flood Tide: 11:13 - 18:38 Monitoring Time: *#\$Mid-ebb: 08:00 - 10:51 Mid-flood: 13:10 - 16:40 Daytime & Evening Noise monitoring for M1 & M3	Impact Night time Noise monitoring for M1 & M3 Daytime & Evening Noise monitoring for M2				

Remarks:

1. Daytime Noise Monitoring (07:00-1900), Evening Time Noise Monitoring (1900-2300), Night Time Noise Monitoring (2300-0700)

2. Water Quality Monitoring for \$1,52 and \$3 will only conduct during DCM works, refer to Detailed DCM Plan

Note:

* as per Marine Department Notice No 107 of 2018, all vessels employed for the works should stay in the works area outside the hours of works (0700 to 2300). Due to safty concern, Water Quality Monitoring would start at 0800.

- Prioritized routing: Mid-Ebio: C1-533-CR2-9CR1-9H1-9Remaining stations and Mid-Flood: C2-9CR1-9S3-9CR2-9H1-9Remaining stations

\$ - Since predicted tide is shorter than 3.5 hours, method of 90% tidal period as monitoring time is approached.

& - Due to safety concern for sampling event in night-time, method of 90% tidal period as monitoring time is approached and end at 1900.