CONTRACT NO: HY/2019/14

NEW WANG TONG RIVER BRIDGE

UNDER ENVIRONMENTAL PERMIT NO. EP-555/2018/A

MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT OCTOBER 2024

CLIENTS:

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CERTIFIED BY:

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Environmental Team Leader

DATE:

15 November 2024



Highways Department

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Kowloon Date: 18 November 2024

Your reference:

Our reference:

Hong Kong

Attention: Mr Coleman Chan

BY EMAIL & POST

HKHYD202/50/110137

(email: e3-3.wd@hyd.gov.hk)

Dear Sirs

Agreement No. WD 23/2020

Environmental Monitoring and Audit for New Wang Tong River Bridge Monthly Environmental Monitoring & Audit Report (October 2024)

We refer to email of 11 November 2024 attaching a Monthly Environmental Monitoring & Audit Report (October 2024) prepared by the Environmental Team (ET) of the captioned.

We have no further comment and hereby verified the Monthly Environmental Monitoring & Audit Report (October 2024) in accordance with Clause 3.4 of the Environmental Permit no. EP-555/2018/A.

Should you have any queries, please do not hesitate to contact the undersigned or our Mr Chris Ip on 2618 2831.

Yours faithfully

ANEWR CONSULTING LIMITED

James Choi

Independent Environmental Checker

CPSJ/LCCR/ICHC/thy

cc Lam Environmental Services Limited – Mr Raymond Dai (Fax no.: 2882 3331)

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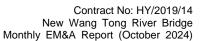
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- i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report October 2024 of New Wang Tong River Bridge under Environmental Permit no. EP-555/2018/A (Hereafter as "the Project"). The construction works of the Project was commenced on 12 July 2021 and the tentative completion date is Q3 2024. This is the 40th EM&A report presenting the environmental monitoring findings and information recorded during the period of 1 October 2024 to 31 October 2024. The cut-off date of reporting is at the end of each reporting month.
- ii. In the reporting month, the principal work activities conducted are as follow:
 - Construct Retaining wall RCS1, RSC2 and associated road surface
 - Handrail fabrication and installation
 - Tree planting works
 - Footpath and cycle track construction works
 - Bicycle stand installation

Noise Monitoring

- iii. Noise monitoring was conducted at one noise monitoring station once per week in the reporting month.
- iv. No action or limit level exceedance was recorded in this reporting period.

Air Quality Monitoring

- v. 1-hour and 24-hour Total Suspended Particulates (TSP) monitoring was conducted at two monitoring station. 24-hour TSP shall be sampled at least once in every 6 days, while sampling for 1-hour TSP shall be at least 3 times in every 6 day in the reporting month.
- vi. No action or limit level exceedance was recorded in this reporting period.

Water Quality Monitoring

- vii. Water quality monitoring was conducted at seven monitoring stations three days per week according to the schedule in the reporting month.
- viii. Owing to accessibility and safety issues, water quality monitoring at Station W3 was cancelled with verification from the IEC in November 2020 and approval from the EPD in December 2020.
- ix. No action or limit level exceedance was recorded in this reporting period.

Site Inspections and Audit

x. The Environmental Team (ET) conducted weekly site inspections on 2, 9, 16, 23 and 30 October 2024. IEC attended the joint site inspection on 23 October 2024. No non-compliance



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was found during the site inspection while reminders on environmental measures were recommended.

xi. The Environmental Team (ET) conducted monthly landscape site inspections on 23 October 2024. No non-compliance was found during the site inspection.

Complaints, Notifications of Summons and Successful Prosecutions

xii. No environmental complaint, notification of summons and successful prosecution regarding the construction works was recorded in the reporting period.

Reporting Changes

xiii. There are no particular reporting changes.

Future Key Issues

xiv. In coming reporting 3 months, the scheduled construction activities and the recommended mitigation measures are listed as follows:

Key Construction Works	Recommended Mitigation Measures		
 Laying washed granolithic finish at bicycle parking area Bitumen laying works Road kerb construction FRP cover installation 	 Dust control during dust generating works; Implementation of proper noise pollution control; Covering noisy part of piling machine with proper sound insulation material; Provision of surface runoff collection and perimeter protection to properly treat runoff without direct discharge into Wang Tong River; Provision of water-tight cofferdam for piling construction in Wang Tong River; and Proper waste handling and storage. 		



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1 Introduction

1.1 Scope of the Report

- 1.1.1. Lam Environmental Services Limited (LES) has been appointed to work as the Environmental Team (ET) under Environmental Permit (EP) no. EP-555/2018/A to implement the Environmental Monitoring and Audit (EM&A) programme as stipulated in the EM&A Manual of the approved Environmental Impact Assessment (EIA) Report for New Wang Tong River Bridge (Register No.: AEIAR-199/2016).
- 1.1.2. In accordance with Clause 3.4 stated in EP-522/2018/A, 1 hard copy and 1 electronic copy of Monthly EM&A Report shall be submitted to the Director within 10 working days after the end of each reporting month.
- 1.1.3. According to Section 10.3.1 of the Project EM&A Manual, the Monthly EM&A Report should be submitted within 10 working days of the end of each reporting month, with the first report due in the month after construction commences.

1.2 Structure of the Report

- **Section 1** *Introduction* details the scope and structure of the report.
- **Section 2 Project Background** summarizes background and scope of the project, site description, project organization and contact details of key personnel during the reporting period.
- **Section 3 Status of Regulatory Compliance** summarizes the status of valid Environmental Permits / Licenses during the reporting period.
- **Section 4** *Monitoring Requirements* summarizes all monitoring parameters, monitoring methodology and equipment, monitoring locations, monitoring frequency, criteria and respective event and action plan and monitoring programmes.
- **Section 5** *Monitoring Results* summarizes the monitoring results obtained in the reporting period.
- **Section 6 Compliance Audit** summarizes the auditing of monitoring results, all exceedances environmental parameters.
- Section 7 Environmental Site Audit summarizes the findings of weekly site inspections

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undertaken within the reporting period, with a review of any relevant follow-up actions within the reporting period.

Section 8 Complaints, Notification of summons and Prosecution – summarizes the cumulative statistics on complaints, notification of summons and prosecution

Section 9 Conclusion

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2 Project Background

2.1 Background

- 2.1.1. Silver Mine Bay is a popular bathing beach in Mui Wo, Lantau that attracted 4,550 visitors on a peak day and over 69,000 visitors utilized the beach in 2012.
- 2.1.2. In order to relieve the overcrowding problem and the road safety concern of Wang Tong Bridge (hereafter called "Old Bridge"), two bridges (pedestrian bridge and cycle bridge) are proposed to replace the Old Bridge. The new pedestrian bridge and the new cycle bridge (hereafter called "New Bridge") are also designed to align with the future amenity development on the northern side of the Old Bridge. The location of the project site is shown in *Figure 2.1*.
- 2.1.3. The Project consists of a designated project under Part I, Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) which is Item C.12 (a)...a dredging operation which is less than 500m from the nearest boundary of an existing...(iii) bathing beach...
- 2.1.4. The major components of the Project under Environmental Permit (EP) (EP No. EP-555/2018/A) comprises: (i) demolition of the existing Wang Tong River Bridge; and (ii) construction of a new twin bridge with segregation for pedestrians and cyclists.

2.2 Project Organization and Contact Personnel

- 2.2.1 Highways Department is the overall project controllers for the Project. For the construction phase of the Project, Contractor(s), Environmental Team and Independent Environmental Checker are appointed to manage and control environmental issues.
- 2.2.2 The project organization and lines of communication with respect to environmental protection works are shown in <u>Figure 2.2</u>. Key personnel and contact particulars are summarized in **Table 2.2**:



Table 2.2 Contact Details of Key Personnel

Party	Role	Post	Name	Contact No.	Contact Fax
Highways	The Engineer for the Contract	Senior Engineer	Mr. Terry Chung	3903 6799	3188 3418
Department (HyD)	Engineer's Representative	Engineer	Mr. Yeung Sui Chung	3903 6813	3188 3418
Unison Construction	Contractor	Site Agent	Mr. Peter Lui	2690 2232	2363 3199
Engineering Limited		Environmental Officer	Ms. Rita Fong		
ANewR Consulting Limited	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Mr. James Choi	2618 2831	3007 8648
Lam Environmental Services Limited	Environmental Team (ET)	Environmental Team Leader (ETL)	Mr. Raymond Dai	2882 3939	2882 3331

2.3 Construction Activities

- 2.3.1 In the reporting month, the principal work activities conducted are as follow.
 - Construct Retaining wall RCS1, RSC2 and associated road surface
 - Handrail fabrication and installation
 - · Tree planting works
 - Footpath and cycle track construction works
 - · Bicycle stand installation
- 2.3.2 In coming reporting 3 months, the scheduled construction activities are listed as follows:
 - Laying washed granolithic finish at bicycle parking area
 - Bitumen laying works
 - Road kerb construction
 - FRP cover installation

3 Status of Regulatory Compliance

3.1 Status of Environmental Licensing and Permitting under the Project

3.1.1. A summary of the current status on licences and/or permits on environmental protection pertinent to the Project is shown in *Table 3.1*.

Table 3.1 Summary of the current status on licences and/or permits on environmental protection pertinent to the Project

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
Environmental Permit	EP-555/2018/A	16 Dec 2020	N/A	Valid
Billing Account for Disposal of Construction Waste	7038550	29 Mar 2021	End of the Project	Valid
Registration as a Chemical Waste Producer	5213-962-U2333-01	28 Jun 2021	N/A	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation	Form NA submitted to EPD on 25 Jun 2021.			
Discharge Licence	WT00040069-2021	10/1/2022	31/1/2027	Valid
Construction Noise Permit	N/A			

3.2 Status of Submission under the EP-555/2018/A

3.2.1. A summary of the current status on submission under EP-555/2018/A is shown in *Table 3.2*.

Table 3.2 Summary of submission status under EP-555/2018/A

EP Condition	Submission	Date of Latest Submission^ or Approval#
Condition 1.12	Notification of Commencement Date of Works	3 June 2021 ^
Condition 2.7	Submission of Management Organization of Main Construction Companies, the ET and the IEC	20 May 2021 ^
Condition 2.8	Submission of Construction Works Schedule and Location Plan	22 June 2021 #
Condition 2.9	Submission of Breeding Bird Survey Report	29 December 2020 #
Condition 3.3	Submission of Baseline Monitoring Report	24 June 2021 #
Condition 4.2	Setting up Dedicated Internet Website	28 April 2021 ^

4 Monitoring Requirements

4.1 Noise Monitoring

NOISE MONITORING STATIONS

4.1.1. The noise monitoring stations for the Project are listed and shown in *Table 4.1* and *Figure 4.1*.

Table 4.1 Noise Monitoring Station

Monitoring Station ID	Monitoring Location	Measurement Type	Level (in terms of no. of floor)
NMS1 A	1 Tung Wan Tau Road	Free-field	G/F

Remarks A: As discussed with the lot owner, a fine adjustment of location at the boundary of 1 Tung Wan Tau Road was proposed and approved in the Baseline Monitoring Report, in order to prevent access obstruction.

NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

4.1.2. For daytime construction work on normal weekdays (0700-1900 Monday to Saturday), one set of 30-min measurement shall be carried out at each NMS every week. Measurement procedures shall be referred to the Noise Control Ordinance-TM. Construction noise level shall be measured in terms of the A-weighted equivalent continuous sound pressure level (Leq). Leq 30min shall be used as the monitoring parameter. As supplementary information for data auditing, statistical results such as L10 and L90 shall also be obtained for reference.

MONITORING EQUIPMENT

4.1.3. Noise monitoring was performed using sound level meter at the designated monitoring locations. The sound level meters shall comply with the International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications. Acoustic calibrator shall be deployed to check the sound level meters at a known sound pressure level. Brand and model of the equipment is given in *Table 4.2*.

Table 4.2 Noise Monitoring Equipment

Equipment	Brand and Model	Series Number
Integrated Sound Level Meter	Larson Davis LxT	6346
Acoustic Calibrator	HLES-02	2016611465

4.1.4. The calibration certificates of the noise monitoring equipment are attached in Appendix 4.2.

SAMPLING PROCEDURE AND MONITORING EQUIPMENT

4.1.5 Monitoring Procedure

- (a) The monitoring station shall normally be at a point 1m from the exterior of the sensitive receiver's building façade and be at a position 1.2m above the ground.
- (b) Façade measurements were made at the monitoring locations. For free-field

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- measurement, a correction factor of +3 dB (A) would be applied.
- (c) The battery condition was checked to ensure the correct functioning of the meter.
- (d) Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
- (e) Frequency weighting: A, Time weighting: Fast, Measurement time set: continuous 5 mins
- (f) Prior and after to the noise measurement, the meter was checked using the acoustic calibrator for 94dB (A) at 1000 Hz. If the difference in the calibration level before and after measurement was more than ±1 dB (A), the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.

4.1.6 Maintenance and Calibration

- (a) The microphone head of the sound level meter was cleaned with soft cloth at regular intervals.
- (b) The sound level meter and calibrator were calibrated at yearly intervals.

EVENT AND ACTION PLAN

4.1.7 Noise Standards for Daytime Construction Activities are specified under EIAO-TM. The Action and Limit levels for construction noise are defined in *Table 4.3* and *Appendix 4.1*. Should non-compliance of the criteria occurs, action in accordance with the Event and Action Plan in *Appendix 6.1* shall be carried out.

Table 4.3 Action and Limit Level for Noise Monitoring

Monitoring Station	Action Level	Limit Level
NMS1	When one documented complaint is received	75 dB(A)

4.2 Air Monitoring

AIR QUALITY MONITORING STATIONS

4.2.1 The air monitoring stations for the Project are listed and shown in *Table 4.4* and *Figure 4.3*.

Table 4.4 Air Monitoring Station

Monitoring Station	Location	Level (in terms of no. of floor)
AMS1 ^A	Silvermine Beach Resort	G/F
AMS2 B, C	1 Tung Wan Tau Road	G/F

Remarks A: AMS1 recommended under EM&A manual is at the north of boundary wall of Silvermine Beach Resort. Positioning of HVS on a narrow road at the northern boundary wall would obstruct access of passengers. After liaison with the resort owner, HVS is located near the eastern boundary wall, which is representative and suitable for air quality monitoring. Thus, fine adjustment of location at the boundary of Silvermine Beach Resort was therefore proposed and approved in the Baseline Monitoring Report.

Remarks B: As discussed with the lot owner, a fine adjustment of location at the boundary of 1 Tung Wan Tau Road was proposed and approved in the Baseline Monitoring Report, in order to prevent access obstruction and to minimize noise nuisance induced from HVS operation.

Remarks C: As the agreement of ER and IEC, a fine adjustment of location at the boundary of 1 Tung Wan Tau Road was proposed and approved in the impact monitoring since mid-September 2021, in order to prevent the interruption of GI working area conducted by contractor.

AIR MONITORING PARAMETERS, FREQUENCY AND DURATION

- 4.2.2 One-hour and 24-hour TSP levels should be measured to indicate the impacts of construction dust on air quality.
- 4.2.3 24-hour TSP shall be sampled at least once in every 6 days, while sampling for 1-hour TSP shall be at least 3 times in every 6 days when the highest dust impact takes place.

SAMPLING PROCEDURE AND MONITORING EQUIPMENT

- 4.2.4 24-hour TSP Measuring Installation (HVS)
 - (a) The HVS was installed in the vicinity of the air sensitive receivers. The following criteria were considered in the installation of the HVS.
 - (b) No furnace or incinerator flues were nearby.
 - (c) Airflow around the sampler was unrestricted
 - (d) 0.6 1.7 m³ per minute adjustable flow range
 - (e) Equipped with a timing / control device with +/- 5 minutes accuracy for 24 hours operation;
 - (f) Installed with elapsed-time meter with +/- 2 minutes accuracy for 24 hours operation;
 - (g) Equipped with a shelter to protect the filter and sampler;
 - (h) Capable of operating continuously for a 24-hour period.
- 4.2.5 24-hour Measuring Procedures
 - (a) The power supply was checked to ensure the HVS works properly.
 - (b) The filter holder and the area surrounding the filter were cleaned.
 - (c) The filter holder was removed by loosening the four bolts and a new filter, with stamped number upward, on a supporting screen was aligned carefully.



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- (d) The filter was properly aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter.
- (e) The swing bolts were fastened to hold the filter holder down to the frame. The pressure applied should be sufficient to avoid air leakage at the edges.
- (f) Then the shelter lid was closed and was secured with the aluminum strip.
- (g) The HVS was warmed-up for about 5 minutes to establish run-temperature conditions.
- (h) A new flowrate record sheet was set into the flow recorder.
- (i) The flow rate of the HVS was checked and adjusted at around 1.2 m³/min. The range specified in the EM&A Manual was between 0.6-1.7 m³/min.
- (j) The programmable timer was set for a sampling period of 24 hrs + 1 hr, and the starting time, weather condition and the filter number were recorded.
- (k) The initial elapsed time was recorded.
- (I) At the end of sampling, the sampled filter was removed carefully and folded in halflength so that only surfaces with collected particulate matter were in contact.
- (m) It was then placed in a clean plastic envelope and sealed.
- (n) All monitoring information was recorded on a standard data sheet.
- (o) Filters were sent to laboratory for further testing.

4.2.6 1-hour Measuring Procedures

- (a) Check the calibration period of portable direct reading dust meter prior to monitoring (The direct reading dust meter was calibrated at 2-years interval and checked with High Volume Sampler (HVS) yearly, details refer to Section 2.5.4)
- (b) Record the site condition near / around the monitoring stations.
- (c) Install the portable direct reading dust meter to the monitoring location.
- (d) Slide the power switch to turn the power on.
- (e) Check of portable direct reading dust meter to ensure the equipment operation in normal condition.
- (f) Select the period of measurement to 60mins.
- (g) Check and set the correct time.
- (h) Select the appropriate unit display for the equipment.
- (i) Slide the power switch to turn the power off when the monitoring period ended (3 times 1 hour TSP monitoring per day).
- (j) Uninstall the portable direct reading dust meter
- (k) Collected the sampled data for analysis.

Remark: Procedures (c) to (h) may be different subject to the brands and models of portable direct reading dust.

4.2.7 Maintenance and Calibration

- (a) The direct reading dust meter was calibrated at 2-years interval and checked with High Volume Sampler (HVS) yearly to determine the accuracy and validity of the results measured.
- (b) Checking of direct reading dust meter will be carried out in order to determine the conversion factor between the direct reading dust meter and the standard equipment, HVS. The comparison check is to be considered valid based on correlation coefficient checked by HOKLAS laboratory

4.2.8 High Volume Sampler (HVS – Model TE-5170) completed with the appropriate sampling inlets were installed for the 24-hour TSP sampling. 1-hour TSP air quality monitoring was performed by using portable direct reading dust meters at each designated monitoring station, which was verified by IEC and approved by the Engineer's Representative (ER) on 4 December 2020 according to Section 3.4.5 and 3.3.2 of the Project EM&A Manual. The brand and model of the equipment are given in *Table 4.5*.

Table 4.5 Air Quality Monitoring Equipment

Equipment	Brand and model	Series Number
Portable direct reading dust meter	Met One Aerocet 831	W15449, Y23153
High Volume Sampler	TE-5170	HVS019 HVS020

4.2.9 The calibration certificates of the air quality monitoring equipment are attached in <u>Appendix</u>
4.2.

WIND DATA

4.2.10 Hong Kong Observatory (HKO) meteorological information is widely accepted to be used in various environmental monitoring practices within HKSAR due to its professional quality and precision. Therefore, the daily wind data including Prevailing Wind Direction (degrees) and Mean Wind Speed (km/h) were obtained from Peng Chau Automatic Weather Station to serve as the representative data for meteorological condition during monitoring. The method was agreed by the IEC and approved by the ER on 4 December 2020. The representative wind data from Peng Chau Station were obtained covering the 1-hour and 24-hour TSP monitoring periods. The wind data were extracted and shown in *Appendix 4.3*.

EVENT AND ACTION PLAN

4.2.11 The Action and Limit levels for construction air quality are defined in *Table 4.6* and *Appendix*4.1. Should non-compliance of the air quality criteria occur, action in accordance with the Event and Action Plan in *Appendix 6.1* shall be carried out.

Table 4.6 Action and Limit Level for Air Quality Monitoring

Parameter	Monitoring Station	Action Level (μg/m³)	Limit Level (µg/m³)
24-hour TSP Level	AMS1	176.0	260.0
24-flodi 101 Level	AMS2	176.0	260.0
1-hour TSP Level	AMS1	276.5	500.0
Thou for Level	AMS2	283.7	500.0





4.3 Water Quality Monitoring

WATER QUALITY MONITORING STATIONS

4.3.1. Water quality monitoring was undertaken at 7 monitoring stations in the reporting month. The proposed water quality monitoring stations of the Project are shown in *Table 4.7* and *Figure* 4.3.

Table 4.7 Marine Water Quality Stations for Water Quality Monitoring

Station	Description	Monitoring Period	Monitoring Station	Easting	Northing
W1	Wang Tong River	Mid-Flood	Impact	817747	814519
VVI	(Major tributary)	Mid-Ebb	Control	01//4/	014319
W2	Wang Tong River	Mid-Flood	Impact	817775	814471
VVZ	(Major tributary)	Mid-Ebb	Control	617773	014471
W3 *	Wang Tong River	Mid-Flood	Impact	817803	814537
VVS	(Minor tributary to Tai Wai Yuen)	Mid-Ebb	Control	017003	014557
W4	Wang Tong River	Mid-Flood	Impact	817825	814481
V V 4	(Minor tributary to Tai Wai Yuen)	Mid-Ebb	Control	017023	014401
W5	Silvermine Bay	Mid-Flood	Control	817909	814452
VVS	(Near Silvermine Bay Beach)	Mid-Ebb	Impact	617909	014432
W6	Silvermine Bay	Mid-Flood	Control	818024	01/1/17
VVO	(Near Silvermine Bay Beach)	Mid-Ebb	Impact	010024	814447
W7	Silvermine Bay	Mid-Flood	Control	818061	814277
V V 7	(Open Water)	Mid-Ebb	Impact	010001	014277
W8	Silvermine Bay	Mid-Flood	Control	818224	011111
VVO	(Open Water)	Mid-Ebb	Impact	010224	814444

Remark *: Water quality monitoring at Station W3 was cancelled with verification from the IEC and approval from the EPD.

WATER QUALITY PARAMETERS, FREQUENCY AND DURATION

- 4.3.2. The levels of dissolved oxygen (DO), turbidity, salinity and pH shall be measured in situ while suspended solids (SS) is determined by laboratory analysis at all the designated monitoring stations.
- 4.3.3. In association with the water quality parameters, other relevant data shall also be recorded, such as monitoring location / position, time, water temperature, DO saturation, weather conditions, and any special phenomena underway near the monitoring station.
- 4.3.4. Impact Monitoring shall be carried out 3 days per week, at mid-flood and mid-ebb tides (within ± 1.75 hour of the predicted time). The interval between two sets of monitoring shall not be less than 36 hours. The monitoring period should avoid concurrent marine project in the vicinity.
- 4.3.5. The sampling frequency of at least three days per week should be undertaken when the highest dust impact occurs. Upon completion of the construction works, the monitoring exercise at the designated monitoring locations should be continued for four weeks in the same manner as the impact monitoring. In case exceedance of Action/Limit Level is recorded, the frequency shall be increased as per the Event and Action Plan.



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4.3.6. To ensure the robustness of in-situ measurement, parameters shall be measured in duplicate. In case the difference between duplicates is larger than 25%, a third set of measurement shall be carried out.

SAMPLING PROCEDURES AND MONITORING EQUIPMENT

Dissolved Oxygen, pH And Temperature Measuring Equipment

- 4.3.7. The instrument should be a portable, weatherproof dissolved oxygen and pH measuring instrument complete with cable, sensor, comprehensive operation manuals, and use a DC power source. It should be capable of measuring:
 - a dissolved oxygen level in the range of 0-20 mg/l and 0-200% saturation
 - a pH level in the range of 0 to 14 units
 - a temperature of 0-45 degree Celsius
- 4.3.8. It should have a membrane electrode with automatic temperature compensation complete with a cable. Sufficient stocks of spare electrodes and cables should be available for replacement where necessary. Salinity compensation shall be build-in in the DO equipment

Turbidity Measurement Instrument

4.3.9. Nephelometric method shall be used in measuring turbidity in-situ. The instrument shall be portable, weatherproof complete with a cable, sensor, comprehensive operation manuals and DC power source. It shall have a photoelectric sensor capable of measuring turbidity between 0-1000 NTU and complete with a cable with at least 25 m in length. The meter shall be calibrated in order to establish the relationship between NTU units and suspended solids level. Turbidity shall be measured on split water sample collected from the same depths of suspended solid samples.

Sampler

4.3.10. A water sampler, consisting of a transparent PVC or glass cylinder of a capacity of not less than two litres which can be effectively sealed with cups at both ends shall be used. The water sampler shall have 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.

Sampler Container and Storage

4.3.11. A water sampler, Water samples for suspended solids measurement should be collected in high-density polythene bottles, packed in ice (cooled to 4°C without being frozen), and delivered to ALS Technichem (HK) Pty Ltd. as soon as possible after collection for analysis.

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Water Depth Detector

4.3.12. A portable, battery-operated echo sounder shall be used for the determination of water depth at each designated monitoring station. This unit can either be handheld or affixed to the bottom of the workboat, if the same vessel is to be used throughout the monitoring programme.

Salinity

4.3.13. A portable salinometer capable of measuring salinity in the range of 0-40% shall be provided for measuring salinity of the water at each of monitoring location.

Monitoring Position Equipment

4.3.14. A hand-held or boat-fixed type digital Global Positioning System (GPS) with waypoint bearing indication or other equivalent instrument of similar accuracy shall be provided and used during monitoring to ensure the monitoring vessel is at the correct location before taking measurements.

MONITORING METHODOLOGY

4.3.15 Monitoring Procedure

- (a) The condition near the monitoring stations shall be observed and recorded on the data log sheet.
- (b) Check of sensors and electrodes with certified standard solutions before each use.
- (c) Wet bulb calibration for a DO meter should be carried out before measurement.
- (d) Water depth should be recorded by detector before sampling.
- (e) Sample would be taken using bucket sampler at surface level.
- (f) Transfer the sampled water carefully into cleaned water bottles (2x 1000ml) provided by the laboratory at the spot after the collection of the water sample for the subsequent laboratory Suspended Solid testing.
- (g) Transfer the sampled water from the bucket sampler to the rinsed water container for in-situ measurement (In case of the in-situ measurement cannot be carried at spot due to safety and adverse weather condition, sampled water from the bucket sampler will be transfer to cleaned water bottles provided by laboratory. Then, In-situ measurement will be conducted at a safe location which sampled water inside cleaned water bottle will be transfer to the rinsed water container for in-situ measurement) In-situ measurement shall be measured in duplicate.
- (h) Parameters including Water Temperature (°C), pH (units), Salinity (ppt), DO (mg/L), DO saturation (%) will be measured by the Multifunctional Meter and Turbidity (NTU) will be measured by turbid meter. (Water Temperature and Salinity will be measured as reference parameters)
- (i) Record the result on the data log sheet and record any special finding during / after in-situ measurement.
- (j) The water sample bottles will be stored in a cool box (at cooled to 4°C without being frozen), which shall be delivered to HOKLAS laboratory (ALS Technichem (HK) Pty Ltd) for further testing to determine the level of SS.

- 4.3.16 Maintenance and Calibration
 - (a) The responses of sensors and electrodes of the water quality monitoring equipment were cleaned and checked at regular intervals.
 - (b) DO meter (Multifunctional Meter) and turbid meter was certified by a laboratory accredited under HOKLAS or any other international accreditation scheme, and subsequently re-calibrated at three monthly intervals.
- 4.3.17 Brand and model of the equipment are given in *Table 4.8*.

Table 4.8 Water Quality Monitoring Equipment

Equipment	Brand and model	Series Number
Multifunctional Meter	YSI Professional Plus	14E101065
Turbid meter	Xin Rui WGZ-3B	1807073

4.3.18 Calibration certificates of the water quality monitoring equipment attached in <u>Appendix 4.2</u> will be prepared in the reporting month during commencement of monitoring.

LABORATORY MEASUREMENT / ANALYSIS

4.3.19 Analysis of suspended solids will be carried out in a HOKLAS accredited laboratory, which is ALS Technichem (HK) Pty Ltd.

EVENT AND ACTION PLAN

4.3.20 The Action and Limit levels for construction water quality are defined in **Table 4.9** and <u>Appendix 4.1</u>. Should the monitoring results of the water quality parameters at any designated monitoring station exceed the water quality criteria, action in accordance with the Event and Action Plan in <u>Appendix 6.1</u> shall be carried out.

Table 4.9 Action and Limit Level for Water Quality Monitoring

Monitoring		DO (m	ig/L) +	Turbidity	/ (NTU) ~	SS (m	ıg/L) ~
Station	Depth	Action	Limit	Action	Limit	Action	Limit Level
Station		Level	Level	Level	Level	Level	Lillin Level
W1				7.7 NTU or 120% of upstream	12.4 NTU or 130% of upstream	8.9 mg/L or 120% of upstream	11.3 mg/L or 130% of upstream
W2	Surface, Middle & Bottom	6.5	5.3	control station's turbidity at the same	control station's turbidity at the same	control station's SS at the same tide of the	control station's SS at the same tide
W4				tide of the same day, whichever is higher	tide of the same day, whichever is higher	same day, whichever is higher	of the same day, whichever is higher
W5	Surface,			9.8 NTU or	10.5 NTU	12.6	15.0 mg/L
W6	Middle &			120% of upstream	or 130% of upstream	mg/L or 120% of	or 130% of upstream
W7	Bottom			control	control	upstream	control
W8	Surface & Middle	5.9	5.5	station's turbidity at the same tide of the same day, whichever	station's turbidity at the same tide of the same day, whichever	control station's SS at the same tide of the same day, whichever	station's SS at the same tide of the same day, whichever
	Bottom	5.9	5.5	is higher	is higher	is higher	is higher

Remarks +: For DO, non-compliance occurs when monitoring results is lower than the limits.

Remarks ~: For SS and Turbidity, non-compliance occurs when monitoring results is larger than the limits



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5 **Monitoring Results**

- 5.0.1 The environmental monitoring will be implemented based on the division of works areas of each designed projects. Overall layout showing work areas and monitoring stations is shown in Figure 2.1 and Figure 4.1 – 4.3 respectively.
- 5.0.2 The environment monitoring schedules for reporting month and coming month are presented in Appendix 5.1.

5.1 **Noise Monitoring Results**

- 5.1.1 Noise monitoring results measured in this reporting period are reviewed and summarized. Details of noise monitoring results and graphical presentation can be referred in Appendix 5.2.
- 5.1.2 No action or limit level exceedance was recorded in this reporting month.

5.2 **Air Monitoring Results**

- 5.2.1 Air quality monitoring results measured in this reporting period are reviewed and summarized. Details of air monitoring results and graphical presentation can be referred in Appendix 5.3.
- 5.2.2 No action or limit level exceedance was recorded in this reporting month.

5.3 **Water Quality Monitoring Results**

- 5.3.1 Water quality monitoring results measured in this reporting period are reviewed and summarized. Details of water quality monitoring results and graphical presentation can be referred in Appendix 5.4.
- 5.3.2 No exceedances were recorded in this reporting month. Event and Action Plan has been implemented with appropriate action taken as referred to corresponding notification of exceedance. Summary of exceedances recorded during the reporting month are summarized in **Table 5.3**.



Table 5.1 Summary of Water Quality Exceedances

	Parameter	DO (8	S&M)	DO (Bo	ttom)	Turk	oidity	S	S	Excee	dance
										co	unt
Station	Level	Mid Ebb	Mid	Mid Ebb	Mid	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood	Mid	Mid
	exceeded		Flood		Flood					Ebb	Flood
W1	Action	N/A	ı	N/A	-	N/A	-	N/A	-	N/A	-
	Limit	N/A	•	N/A	-	N/A	-	N/A	-	N/A	-
W2	Action	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-
	Limit	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-
W4	Action	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-
	Limit	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-
W5	Action	-	N/A	-	N/A	-	N/A	-	N/A	-	N/A
	Limit	-	N/A	-	N/A	-	N/A	-	N/A	-	N/A
W6	Action	-	N/A	-	N/A	-	N/A	-	N/A	-	N/A
	Limit	-	N/A	-	N/A	-	N/A	-	N/A	-	N/A
W7	Action	-	N/A	-	N/A	-	N/A	-	N/A	-	N/A
	Limit	-	N/A	-	N/A	-	N/A	-	N/A	-	N/A
W8	Action	-	N/A	-	N/A	-	N/A	-	N/A	-	N/A
Surface	Limit	-	N/A	-	N/A	-	N/A	-	N/A	-	N/A
W8	Action	-	N/A	-	N/A	-	N/A	-	N/A	-	N/A
Bottom	Limit	-	N/A	-	N/A	-	N/A	-	N/A	_	N/A
Total	Action	-	-	-	-	-	-	-	-	-	-
	Limit	-	-	-	-	-	-	-	-	-	-

5.3.3 No action or limit level exceedance was recorded in this reporting month.

5.4 **Waste Management**

5.4.1 The quantities of waste for disposal in the Reporting Period are summarized in Table 5.2 and Table 5.3. The Monthly Summary Waste Flow Table is shown in Appendix 5.5. Whenever possible, materials were reused on-site as far as practicable.

Table 5.2 Summary of Quantities of Inert C&D Materials

Waste Type	Quantity (this month)	Quantity (Project commencement to the end of last month)	Cumulative Quantity-to-Date
Hard Rock and Large Broken Concrete (Inert) (in '000m³)	0	0.007	0.007
Reused in this Contract (Inert) (in '000m³)	0	0	0
Reused in other Projects (Inert) (in '000m³)	0	0	0
Disposal as Public Fill (Inert) (in '000m³)	0	1.05063	1.05063

Table 5.3 Summary of Quantities of C&D Wastes

Waste Type	Quantity (this month)	Quantity (Project commencement to the end of last month)	Cumulative Quantity-to-Date
Metals (in '000kg)	0	0	0
Paper / Cardboard Packing (in '000kg)	0	0	0
Plastics (in '000kg)	0	0.003	0.003
Chemical Wastes (in '000kg)	0	0	0
General Refuses (in '000m³)	0	0.52855	0.52855

6 Compliance Audit

- 6.1.1 The Event Action Plan for construction noise, air quality and water quality are presented in *Appendix 6.1*.
- 6.1.2 The summary of exceedance is presented in **Appendix 6.2**
- 6.2 Noise Monitoring.
- 6.2.1 No action or limit level exceedance was recorded in this reporting period.
- 6.3 Air Quality Monitoring
- 6.3.1 No action or limit level exceedance was recorded in this reporting period.
- 6.4 Water Quality Monitoring
- 6.4.1 No action or limit level exceedance was recorded in this reporting period.
- 6.5 Review of the Reasons for and the Implications of Non-compliance
- 6.5.1 No environmental non-compliance was recorded in the reporting month.
- 6.6 Summary of action taken in the event of and follow-up on non-compliance
- 6.6.1 There was no particular action taken since no non-compliance was recorded in the reporting period.

7 Environmental Site Audit

- 7.0.1. Within this reporting month, weekly environmental site audits were conducted on 2, 9, 16, 23 and 30 October 2024. IEC attended the joint site inspection on 23 October 2024.
- 7.0.2. No non-compliance was found during the site inspection while reminders on environmental measures were recommended. Results and findings of these inspections in this reporting month are listed below in *Table 7.1*.

Table 7.1 Summary of Environmental Inspections

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
20241002_1	02 Oct 2024	Nil.	Nil.	Nil.
20241009_1	09 Oct 2024	Reminder 1: Beware of tree protection zones when using excavators.	Increase distance of excavators to trees protection zones.	Completed.
20241016_1	16 Oct 2024	Nil.	Nil.	Nil.
20241023_1	23 Oct 2024	Obs. 1: Stock pile should be covered with impermeable sheets to prevent dust or leakage.	Stock pile covered by impermeable sheets.	Completed
20241030_1	30 Oct 2024	Nil.	Nil.	Nil.

- 7.0.3. Within this reporting month, monthly landscape site audits were conducted on 23 October 2024.
- 7.0.4. No non-compliance was found during the landscape site inspection. Results and findings of these inspections in this reporting month are listed below in *Table 7.2*.

Table 7.2 Summary of Landscape site inspections

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
20241023_1	23 Oct 2024	Nil.	Nil.	Nil.

8. Complaints, Notification of Summons and Prosecution

- 8.0.1. No environmental complaint, notification of summons and successful prosecution regarding construction works was recorded in the reporting period.
- 8.0.2. The details of cumulative complaint log and updated summary of complaints are presented in *Appendix 8.1*.
- 8.0.3. Cumulative statistic on complaints and successful prosecutions are summarized in *Table 8.1* and *Table 8.2* respectively.

Table 8.1 Cumulative Statistics on Complaints

Reporting Period	No. of Complaints
October 2024	0
Project commencement to the end of last reporting month	1
Total	1

Table 8.2 Cumulative Statistics on Successful Prosecutions

Environmental Parameters	Cumulative No. Brought Forward	No. of Successful Prosecutions this month (Offence Date)	Cumulative No. Project-to-Date
Air	-	0	0
Noise	-	0	0
Water	-	0	0
Waste	-	0	0
Total	-	0	0

9. Conclusion

- 9.0.1. The EM&A programme was carried out in accordance with the EM&A Manual requirements, minor alterations to the programme proposed were made in response to changing circumstances.
- 9.0.2. Mitigation measures according to the environmental mitigation implementation schedule and the EIA were generally implemented by the Contractor. Hence, the EM&A programme was considered effective and shall be maintained.
- 9.0.3. The scheduled construction activities and the recommended mitigation measures for the coming 3 months are listed in *Table 9.1*. The construction programmes of the Project are provided in *Appendix 9.1*.

Table 9.1 Construction Activities and Recommended Mitigation Measures in Coming Reporting 3 Months

Constitution of the constitution of a
It control during dust generating works; Ilementation of proper noise pollution control; Itering noisy part of piling machine with proper and insulation material; Itering noisy part of piling machine with proper and insulation material; Itering noisy part of piling machine with proper and insulation material; Itering noisy part of piling machine with proper and insulation material; Itering noisy part of piling machine with proper transfer and insulation and storage.
r



Figure 2.1

Project Layout



Figure 2.2

Project Organization Chart



Project Organization Chart

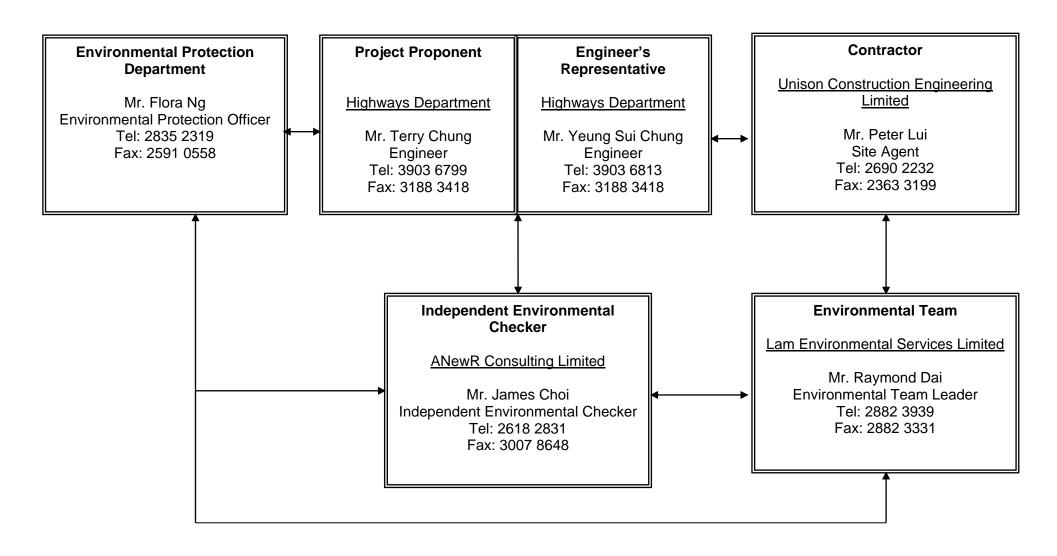
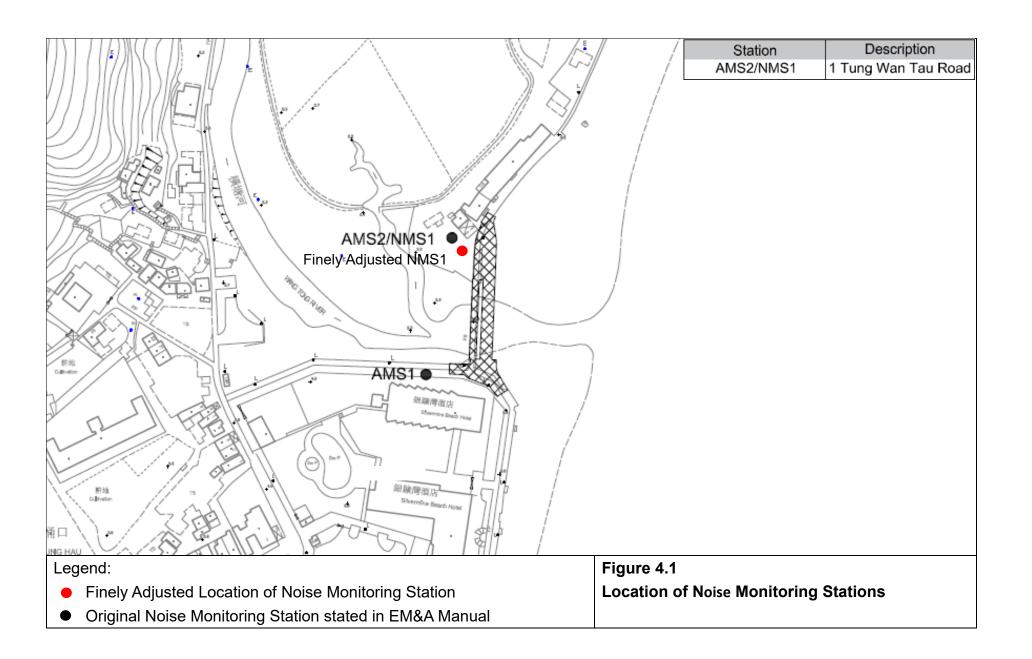
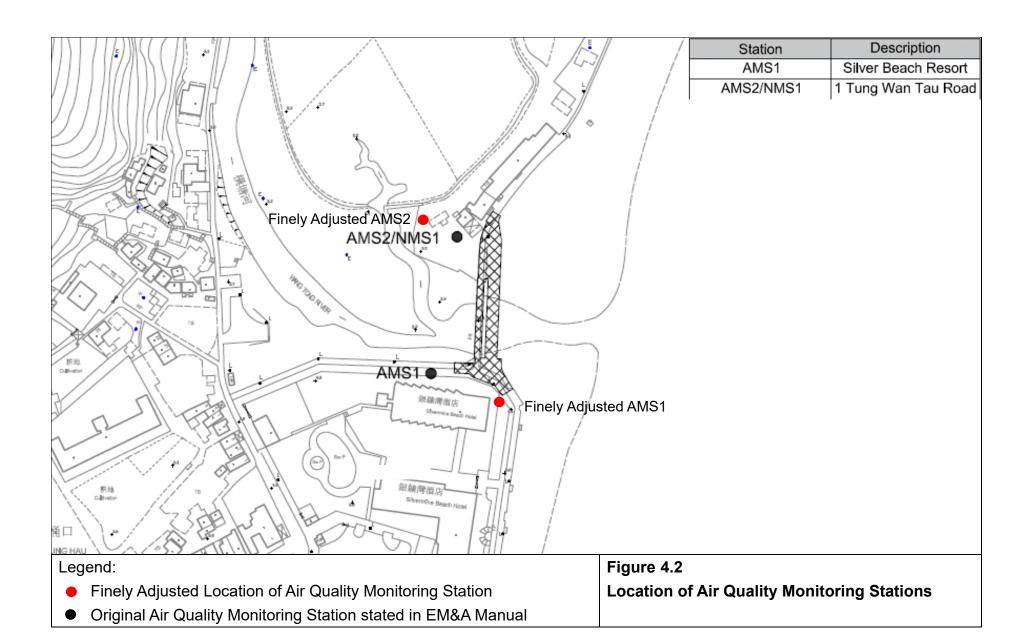
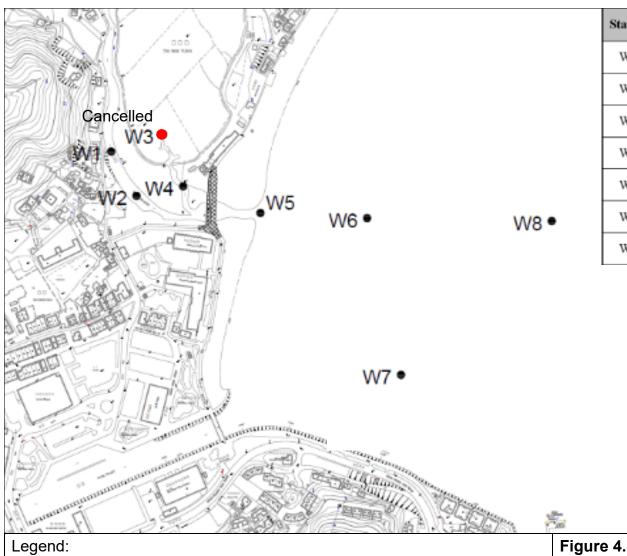


Figure 4.1 to Figure 4.3

Locations of Monitoring Stations







Station	Description	Easting	Northing
W1	Wang Tong River	817747	814519
**1	(Major tributary)	01//4/	014212
W2	Wang Tong River	817775	814471
***2	(Major tributary)	017773	014471
W4	Wang Tong River	817825	814481
77.4	(Minor tributary to Tai Wai Yuen)	01/023	014401
W5	Silvermine Bay	817909	814452
***	(Near Silvermine Bay Beach)	017909	014472
W6	Silvermine Bay	818024	814447
WO	(Near Silvermine Bay Beach)	010024	014447
W7	Silvermine Bay	818061	814277
W/	(Open Water)	010001	0142//
W8	Silvermine Bay	818224	814444
wo	(Open Water)	010224	014444

- Cancelled Water Quality Monitoring Station
- Original Water Quality Monitoring Station stated in EM&A Manual

Figure 4.3
Location of Water Quality Monitoring Stations

Appendix 3.1

Environmental Mitigation Implementation Schedule

Appendix 3.1 - Implementation of Recommended Mitigation Measures

EM&A	<u> </u>	Objectives of the Recommended	Who to	Location of the	When to	What requirements or standard for
Ref.	Recommended Mitigation Measures	Measure &	Implement	measure	implement the	the measure to achieve
Kei.	Recommended Wingarion Weasures	Main Concerns to address	the measure	ilicasure	-	the measure to achieve
Air Qualit	v Impact	Main Concerns to address	the measure		measure	
Construction	-					
	Good housekeeping to minimize dust generation, e.g. by properly handling		HyD's	Whole	Throughout	
A1	and storing dusty materials	To minimize dust generation	Contractor	construction	construction	EIAO-TM, APCO
711	and storing dusty materials	To minimize dust generation	Communication	site	phase	Enio IIII, In Co
	Adopt dust control measures, such as dust suppression using water spray on	To minimize dust generation due to	HyD's	Whole	Throughout	
A2	exposed soil, in areas with dusty construction	erosion	Contractor	construction	construction	EIAO-TM, APCO
1.12	activities, and during material handling			site	phase	
A3	Dust suppression shall be applied to the working area	To minimize dust generation due to	HyD's	Whole	Throughout	EIAO-TM, APCO
	immediately before, during and immediately after site clearance, excavation	erosion	Contractor	construction site	construction phase	,
	or earth moving operation to keep the surface wet.					
	Use water spray to wet the remaining dusty materials on the floor after	To minimize dust generation due to	HyD's	Whole	Throughout	
A4	removing stockpile. The surface of roads or streets	erosion	Contractor	construction	construction	EIAO-TM, APCO
	shall be free from dust			site	phase	·
	Storage of dusty materials and debris shall be either entirely covered by	To minimize dust generation due to	HyD's	Whole	Throughout	
	impervious sheeting or stored in a three-side and top enclosed area.	erosion	Contractor	construction site	construction phase	
A5	Alternatively, it should be sprayed with water or a dust suppression chemical					EIAO-TM, APCO
	to maintain the entire surface wet					
	All demolished items (e.g. trees, vegetation, structures, debris and rubbish)		HyD's	Whole	Throughout	
	that may dislodge dust particles shall be covered entirely by impervious		Contractor	construction site	construction phase	
A6	sheeting or placed in a three-side and top enclosed area within a day of	To minimize dust generation			_	EIAO-TM, APCO
	demolition.					
	6		II Di	Whole	The state of	
A 7	Store cement bags in shelter with 3 sides and the top covered by impervious materials if the stack exceeds 20 bags	T	HyD's Contractor		Throughout construction	FIAO TM ADGO
A7	inaterials if the stack exceeds 20 bags	To prevent leakage of cement	Contractor	construction site	phase	EIAO-TM, APCO
	Cement bag shall be debagged, batched and mixed in a three- side and top		HyD's	Whole	Throughout	
A8	enclosed area	To minimize dust generation	Contractor	construction site	construction	EIAO-TM, APCO
Ao	Cherosed area	10 minimize dust generation	Contractor	construction site	phase	EIAO-IM, AFCO
	Maintain a reasonable height when dropping excavated materials to limit	To minimize dust generation	HyD's	Whole	Throughout	
A9	dust generation	during movement of excavated	Contractor	construction site	construction	EIAO-TM, APCO
		materials			phase	
	Minimize exposed earth after completion of work in a certain area by	To minimize dust generation due to	HyD's	Whole	Throughout	
A10	hydroseeding, vegetating, soil compacting or paving	erosion	Contractor	construction	construction	EIAO-TM, APCO
				site	phase	

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to Implement the measure		When to implement the measure	What requirements or standard for the measure to achieve
A11	Cover materials on trolleys and trucks before leaving the site to prevent debris from dropping during traffic movement or being blown away by wind	To prevent falling of debris during traffic movement and by wind	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO
A12	Water or a dust suppression chemical shall be continuously sprayed on the surface where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation is carried out, unless the process is accompanied by the operation of an effective dust extraction and filtering device	To minimize dust emission	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO
A13	Regular maintenance of plant equipment to prevent black smoke emission	To minimize black smoke emission	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO
A14	Throttle down or switch off unused machines or machine in intermittent use	To minimize unnessary emission	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO
A15	Minimize excavation area as far as possible	To minimize dust emission and potential release of odour from exposed ground	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO
A16	Cover open stockpiles of construction materials (e.g. aggregates, sand and fill materials) with impermeable materials such as tarpaulin during rainstorms.	To prevent soil erosion under rainstorm	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO
A17	Hoarding of not less than 2.4 m high shall be erected from ground level to surround the work area except for a site entrance or exit	To minimize dust emission	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO
A18	Carry out air quality monitoring throughout the construction period	To monitor construction dust level	HyD's Contractor	At representative ASRs	Prior to and throughout construction phase	EIAO-TM
A19	Carry out regular site inspection to audit the implementation of mitigation measures	To check the implemenation status and effectiveness of mitigation measures	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO

EM&A		Objectives of the Recommended	Who to	Location of the	When to	What requirements or standard for			
Ref.	Recommended Mitigation Measures	Measure &	Implement	measure	implement the	the measure to achieve			
1011	Accommended Mangaron Measures	Main Concerns to address	the measure	incusur c	measure	line measure to demote			
Noise Imp	Noise Impact								
Construction	on Phase								
	Schedule noisy activities to minimise exposure of nearby NSRs to high levels	To minimize construction noise level	HyD's	Whole	Throughout				
N1	of construction noise		Contractor	construction	construction	NCO, EIAO-TM			
				site	phase	·			
	Use hand-held plant equipment or manual equipment as far as possible	To minimize construction noise level	HyD's	Whole	Throughout				
N2			Contractor	construction	construction	NCO, EIAO-TM			
				site	phase				
	Use Quality Powered Mechanical Equipment (QPME) which produces lower	To minimize construction noise level	HyD's	Whole	Throughout				
N3	noise level		Contractor	construction site	construction	NCO, EIAO-TM			
					phase				
	In the direction of noise sensitive receivers, erect mobile barriers with 3m in			Whole	Throughout				
	height from a few metres of stationary plants, and from about 5m of more			construction site	construction phase				
	mobile plant such as hydraulic breaker to prevent direct view. The barrier		H-D'-						
N4	should have skid footing and a small cantilevered upper portion. The minimum surface density of the movable noise barrier is 7 kg/m²and provide	To lower noise transmission	HyD's Contractor			NCO, EIAO-TM			
	with noise absorbing material.		Contractor						
	with hoise absorbing material.								
	Position mobile noisy equipment in location and direction away from NSR	To minimize noise transmission to	HyD's	Whole	Throughout				
N5		NSR	Contractor	construction	construction	NCO, EIAO-TM			
				site	phase				
	Use silencer or muffler on plant equipment and should be properly		HyD's	Whole	Throughout				
N6	maintained	To minimize noise transmission	Contractor	construction	construction	NCO, EIAO-TM			
				site	phase				
	Operate noisy plant equipment such as air compressor, generator and		HyD's	Whole	Throughout				
N7	concrete pump within enclosure	To minimize noise transmission	Contractor	construction	construction	NCO, EIAO-TM			
				site	phase				
			HyD's	Whole	Throughout				
N8	Cover the noisy part of piling machine with acoustic mat	To minimize noise transmission	Contractor	construction site	construction	NCO, EIAO-TM			
			** 51	**** 1	phase				
	Throttle down or switch off unused machines or machine in intermittent use		HyD's	Whole	Throughout				
N9	between work	To mimize noise production	Contractor	construction site	construction	NCO, EIAO-TM			
			** 51	**** 1	phase				
			HyD's	Whole	Throughout	VGC 574.0 574.			
N10	Avoid carrying out noisy activities at the same time	To mimize noise production	Contractor	construction site	construction	NCO, EIAO-TM			
				site	phase				

EM&A		Objectives of the Recommended	Who to	Location of the	When to	What requirements or standard for
Ref.	Recommended Mitigation Measures	Measure &	Implement	measure	implement the	the measure to achieve
		Main Concerns to address	the measure		measure	
			HyD's	Whole	Throughout	
N11	Reduce the percentage on-time for some noisy PMEs	To mimize noise production	Contractor	construction	construction	NCO, EIAO-TM
				site	phase	
N12	Carry out noise monitoring throughout the construction period	To monitor construction noise level	HyD's	At representative	Prior to and	EIAO-TM
			Contractor	NSRs	throughout	
					construction	
					phase	

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to Implement the measure	Location of the measure	When to implement the measure	What requirements or standard for the measure to achieve
Construction	• •					
W1	Works in the river (excavation within highwater mark and cutting of pier of Old Bridge) shall be carried out inside the watertight cofferdam. The cofferdam can only be removed after completion of work.	To prevent the excavated materials or cuttings from falling into the water and being carried into the sea	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM
W2	Install sheet piles by vibratory action.	To minimize dispersion of sand	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM
W3	Erect water-tight temporary working platform that can contain falling debris above Wang Tong River. The platform shall be sheltered by tarpaulin for directing rainwater away from the working platform.	To prevent falling of debris and generation of surface runoff into the river	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM
W4	Water removed from the cofferdam should be desilted before discharge.	To prevent discharge of silty water	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM
W5	Surface run-off from construction sites should be discharged into storm waterdrains via adequately designed sand/silt removal facilities such as sand traps, silt traps, sedimentation tanks and sediment basins.	To reduce the amount of suspended solid in wastewater	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 2/23, EIAO-TM
W6	Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times	To prevent silt, construction materials or debris from getting into the drainage system and prevent failure that may lead to flooding	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 2/23, EIAO-TM
W7	Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly.	To prevent blockage that may lead to flooding	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 2/23, EIAO-TM
W8	Design works program carefully to minimize work areas, hence minimize soil exposure and site runoff.	To minimize surface runoff and chance of erosion	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 2/23, EIAO-TM
	Construction works should be programmed to minimize soil excavation works in rainy seasons (generally from April to September) as far as possible. If this cannot be achieved, the following measures should be implemented:					
W9	Temporarily exposed slope surfaces should be covered (e.g. by tarpaulin)" Temporary access roads should be protected by crushed stone or gravel.	To minimize surface runoff and chance of erosion	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 2/23, EIAO-TM
	3. Arrangements should always be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm.					

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to Implement the measure	Location of the measure	When to implement the measure	What requirements or standard for the measure to achieve
W10	Minimize exposed earth after completion of work in a certain area by hydroseeding, vegetating, soil compacting or paving	To prevent soil erosion under rainstorm	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM
W11	Open stockpiles of construction materials (e.g. aggregates, sand and fill material)	To prevent soil erosion under rainstorm	HyD's Contractor	Whole construction	Throughout construction	ProPECC PN 2/23, EIAO-TM
W12	Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent surface run-off from getting into foul sewers.	To prevent overloading of foul sewers	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 2/23, EIAO-TM
W13	Placing equipment, materials and wastes away from Wang Tong River and Silver Mine Bay	To prevent water contamination	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM
W14	Remove waste from the site regularly.	To prevent waste accumulation	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM
W15	Apply discharge license for effluent discharge. Treat the discharge to comply with the requirement in TM-DSS.	To ensure compliance with effluent discharge requirement	HyD's Contractor	Whole construction site	Throughout construction phase	WPCO, TM-DSS, EIAO-TM
W16	Reuse treated effluent onsite, e.g. dust suppression and general cleaning.	To minimize wastewater generation	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO- TM
W17	Monitor effluent water quality.	To ensure compliance with effluent discharge requirement	HyD's Contractor	Whole construction site	Throughout construction phase	WPCO, EIAO-TM
W18	Register as chemical waste producer if chemical waste will be generated.	To control chemical waste	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal (Chemical Waste) (General) Regulation, EIAO-TM
W19	Perform maintenance of vehicles and equipment that have oil leakage and spillage potential on hard standings within a bunded area with sumps and oil interceptors.	To prevent oil leakage or spillage	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal (Chemical Waste) (General) Regulation, EIAO-TM
W20	Dispose chemical waste in accordance to Waste Disposal Ordinance. Follow the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes, examples as follows: - Store chemical wastes at designated safe location with adequate space	To avoid accident in waste storage and handling	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO- TM
W21	Placing chemical toilet away from waterbodies as far as possible and on stable, impermeable surface	To minimize accidental leakage of sewage into waterbodies	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to Implement the measure		When to implement the measure	What requirements or standard for the measure to achieve
W22	Carry out water quality monitoring at water sensitive receivers	To identify any water quality impact due to the project	HyD's Contractor	Whole construction site	Before, throughout and after construction phase	EIAO-TM
W23	Carry out regular site inspection to audit the implementation of mitigation measures	To check the implemenation status and effectiveness of mitigation measures	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to Implement the measure			What requirements or standard for the measure to achieve
Ecological	Impact					
Construction	n Phase					
E1	Before site clearance, the work area should be inspected by ecologist to confirm no active bird nest is present. If any active bird nest is identified, suitable size of buffer area should be established until the nest is abandoned.	To minimize direct impact on the breeding activity of Black- collared Starling	HyD's Contractor	Whole construction site	Before site clearance	EIAO-TM
E2	Erection of hoarding, fencing or provision of clear demarcation of work zones	To minimize direct impact outside work boundary	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to Implement the measure	Location of the measure	When to implement the measure	What requirements or standard for the measure to achieve
Waste Ma						
Construction						
	Allocate an area for waste sorting and storage of C&D materials into the following categories for reuse, recycle or disposal if possible. Remove waste from the Site for sorting once generated if no suitable space can be identified.	To minimize waste generation		Whole construction site	Throughout construction phase	
WM1	- excavated material suitable for reuse		HyD's Contractor			Waste Disposal Ordinance, EIAO- TM
	- inert C&D materials for reuse/disposal offsite - non-inert C&D materials for disposal at landfills					
	- non-inert C&D materials for disposal at landfills - chemical waste					
	- chemical waste - general refuse					
	Adopt good site practice as follows:	To proper handling of waste	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO- TM
	- Provide training to workers on site cleanliness, waste management (waste reduction, reuse and recycle) and chemical handling procedures					
WM2	- Provide sufficient waste collection points and regular removal					
	- Cover waste materials with tarpaulin or in enclosure during transportation					
	- Maintain drainage systems, sumps and oil interceptors					
	- Sort out chemical waste for proper handling and treatment onsite or offsite					
	Adopt waste reduction measures as follows:					
WM3	- Allocate area/containers for sorting, recovering and storing waste for reuse, recycle or disposal (e.g. demolition debris and excavated materials, general refuse like aluminium cans). Remove waste from the Site for sorting once generated if no suitable space can be identified.	To minimize waste generation	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO- TM
	- Allocate area for proper storage of construction materials to prevent contamination					

EM&A Ref.	Recommended Mitigation Measures Prepare and implement a site specific Waste Management Plan (WMP) as part of Environmental Management Plan (EMP) in accordance with ETWB TCW No. 19/25. Detail waste management method in the form of avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal according to the recommendations on the EIA and EM&A Manual. It should be approved by the ER and regularly reviewed.	Objectives of the Recommended Measure & Main Concerns to address To provide guidance to waste management	Who to Implement the measure HyD's Contractor	Whole construction site	implement the measure Throughout construction phase	What requirements or standard for the measure to achieve ETWB TCW No. 19/2005, EIAO- TM
WM5	Store waste materials properly as follows: - Avoid contamination by proper handling and storing waste - Prevent erosion by covering waste - Maintain and clean storage area regularly - Sort and stockpile different materials at designated location to enhance reuse	To properly store waste	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 2/23, EIAO-TM
WM6	Apply for relevant waste disposal permits in accordance with the Waste Disposal Ordinance (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28).	To properly dispose waste	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28), Dumping at Sea Ordinance (Cap. 466), EIAO- TM
WM7	Implement trip-ticket system for recording the amount of waste generated, recycled and disposed, including chemical wastes	To monitor movement of waste	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal (Chemical Waste) (General) Regulation, Waste Disposal Ordinance, EIAO-TM
WM8		To minimize load to reception facilities	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO- TM
WM9	, ,	To minimize load to reception facilities	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO- TM

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to Implement the measure	Location of the measure	When to implement the measure	What requirements or standard for the measure to achieve
WM10	Follow the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste as follows: - Store chemical wastes with suitable containers. Seal and maintain the container to avoid leakage or spillage during storage, handling and transport - Label chemical waste containers in both English and Chinese with instructions in accordance to Schedule 2 of the Waste Disposal (Chemical Waste) (General) Regulation - The container capacity should be smaller than 450 litres unless agreed by the EPD	To avoid accident in waste storage and handling	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO- TM
WM11	Comply with the requirement of the chemical storage area: - Store only chemical waste and label clearly the chemical characters of the waste - Have at least 3 sides enclosed and protected from rainfall with cover - Provide sufficient ventilation - Have impermeable floor and has bunds to contain 110% of the capacity of the largest container or 20% of the total volume of the stored waste in the area, whichever is larger - Adequately spaced incompatible materials	To ensure proper storage of chemical waste	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO- TM
WM12	Transfer used lubricants, waste oils and other chemicals to oil recycling companies, if possible, and empty oil drums for reuse or refill. No direct or indirect discharge is permitted	To ensure proper disposal of chemical waste	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal (Chemical Waste) (General) Regulation, EIAO-TM
WM13	Hire licensed chemical waste disposal contractors for waste collection and removal. Dispose chemical waste at the approved CWTC at Tsing Yi or other licensed facility	To ensure proper disposal of chemical waste	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal (Chemical Waste) (General) Regulation, EIAO-TM
WM14	Provide recycling bins for sorting out recyclables for collection by recycling companies. Non-recyclables should be removed to designated landfills every day by licensed collectors to prevent environmental and health nuisance.	To ensure proper recycling and disposal of general refuse	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO- TM
WM15	Terminate excavation work if contaminated soil is found. Prepare Land Contamination Plan (CAP) in accordance with EPD's Guidance Note for Contaminated Land Assessment and Remediation for identifying soil and groundwater sampling locations, followed by testing and remediation where necessary.	To identify presence of contaminated soil and provide proper remediation	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO- TM

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to Implement the measure	Location of the measure	When to implement the measure	What requirements or standard for the measure to achieve
Landscape	and Visual					
Construction	n Phase					
CM1	The construction area and contractor's temporary works areas should be minimised to avoid impacts on adjacent landscape. (Measure for mitigating Landscape and Visual impacts)	To minimise landscape footprint and reduce potential for visual impact	HyD's Contractor	Adjacent to existing bridge	Construction Phase	To approved Detailed Design and RLA's Approval
CM2	Reduction of construction period to practical minimum. (Measure for mitigating Visual impact)	To reduce duration of impacts	HyD's Contractor	N/A	Construction Phase	To approved Detailed Design and RLA's Approval
CM3	Construction traffic (land and sea) including construction plant, construction vessels and barges should be kept to a practical minimum. (Measure for mitigating Visual impact)	To minimise temporary visual impacts	HyD's Contractor	Connecting roads to site and Silver Mine Bay	Construction Phase	To approved Detailed Design and RLA's Approval
CM4	Erection of decorative mesh screens or construction hoardings around works areas in visually unobtrusive colours. (Measure for mitigating Visual impact)	To screen works sites and plant	HyD's Contractor	Around works areas	Construction Phase	To approved Detailed Design and RLA's Approval
CM5	Avoidance of excessive height and bulk of site buildings and structures. (Measure for mitigating Visual impact)	To reduce temporary visual impacts	HyD's Contractor	Within works sites	Construction Phase	To approved Detailed Design and RLA's Approval
СМ6	Control of night-time lighting by hooding all lights and through minimisation of night working periods. (Measure for mitigating Visual impact)	To reduce temporary visual impacts	HyD's Contractor	Within works sites	Construction Phase	To approved Detailed Design and RLA's Approval

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to Implement the measure	Location of the measure	When to implement the measure	What requirements or standard for the measure to achieve
СМ7	All existing trees shall be carefully protected before, during construction and after construction. A Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees or trees to be transplanted, including trees in contractor's works areas for approval by the Registered Landscape Architect (RLA). This method statement for tree protection and transplanting shall make reference to "Guidelines on Tree Preservation during Construction" and "Guidelines on Tree Transplanting" published by GLTM of the DEVB. Early preparation of trees to be transplanted shall be undertaken to increase their likely survival rate following transplanting. (Measure for mitigating Landscape impact)	To minimise tree impacts and maximise tree preservation	HyD's Contractor	Within and adjacent to works sites	Construction Phase	To approved Detailed Design and RLA Approval
CM8	Minimisation of Impacts to Wang Tong River through minimised and carefully controlled dredging for pile/abutment removal/construction works. (Measure for mitigating Landscape impact)	To minimise contamination of Wang Tong River	HyD's Contractor	Wang Tong River	Construction Phase	To approved Detailed Design and RLA Approval

Appendix 4.1

Action and Limit Level



Lam Environmental Services Limited

Contract No: HY/2019/14 New Wang Tong River Bridge

Action and Limit Level

Action and Limit Level for Noise Monitoring

Monitoring Station ID	Time Period	Parameter	Action Level	Limit Level dB(A)
NMS1	0700-1900 hrs on normal weekdays	Leq, 30min	When one documented complaint is received	75

Baseline Level for Noise Monitoring (For reference and calculation of Construction Noise Levels (CNLs))

Monitoring		0700-1900 hrs on	normal weekdays
Station ID	Monitoring Station	L _{eq (30min)} , dB(A)	
Station ib		Average	Range
NMS1	1 Tung Wan Tau Road	60.1	52.7 – 64.4

Remark:

Each of daily 30-minute sampling period includes six consecutive L_{eq (5min)} readings.

Due to free-field measurement, a correction factor of +3 dB(A) is adopted.

All the Construction Noise Levels (CNLs) reported in this report were adjusted with the corresponding baseline level (i.e. Measured Leq – Baseline Leq = CNL), in order to facilitate the interpretation of the noise exceedance.

Action and Limit Level for Air Quality Monitoring

Monitoring Station	1-hour T	SP Level	24-hour TSP Level		
ID	Action Level (µg/m³)	Limit Level (µg/m³)	Action Level (μg/m³)	Limit Level (µg/m³)	
AMS1	276.5	500.0	176.0	260.0	
AMS2	283.7	500.0	176.0	260.0	



Lam Environmental Services Limited

Contract No: HY/2019/14 New Wang Tong River Bridge

Action and Limit Level for Water Monitoring

Monitoring		DO (m	ng/L) +	Turbidity	/ (NTU) ~	SS (m	ıg/L) ~
Station	Depth	Action	Limit	Action	Limit	Action	Limit
Station		Level	Level	Level	Level	Level	Level
W 1				7.7 NTU or 120% of upstream control	12.4 NTU or 130% of upstream control station's	8.9 mg/L or 120% of upstream control	11.3 mg/L or 130% of upstream control
W2	Middle	6.5	5.3	station's turbidity at the same tide of the same day, whichever is	turbidity at the same tide of the same day,	station's SS at the same tide of the same day, whichever is	station's SS at the same tide of the same day, whichever is
W4			higher	higher	whichever is higher	higher	higher
W5					10.5 NTU or		
W6	Middle			9.8 NTU or 120% of	130% of	12.6 mg/L or 120% of	15.0 mg/L or 130% of
W7				upstream	upstream	upstream	upstream
W8	Surface & Middle	5.9	5.5	control station's turbidity at the same tide of the same day, whichever is higher	control station's turbidity at the same tide of the same day, whichever is higher	control station's SS at the same tide of the same day, whichever is higher	control station's SS at the same tide of the same day, whichever is higher
	Bottom	5.9	5.5		ingiloi		

Remarks +: For DO, non-compliance occurs when monitoring results is lower than the limits.

Remarks ~: For SS and Turbidity, non-compliance occurs when monitoring results is larger than the limits.



Appendix 4.2

Copies of Calibration Certificates



香港新界葵涌永基路22-24號好爸爸創科大廈 Good Ba Ba Hitech Building, Nos. 22-24 Wing Kei Road, Kwai Chung, New Territories, Hong Kong Tel: (852) 2873 6860 Fax: (852) 2555 7533 E-mail: smec@cigismec.com Website: www.cigismec.com



2



CERTIFICATE OF CALIBRATION

Certificate No.:

24CA0510 02-03

Page:

of

Item tested

Description:

Acoustical Calibrator (Class 1)

Manufacturer:

Honglim Co., Ltd.

Type/Model No.: Serial/Equipment No.: HLES-02 2016611465

Adaptors used:

_

Item submitted by

Curstomer:

Lam Environmental Services Limited.

Address of Customer:

-

Request No.: Date of receipt:

-

10-May-2024

Date of test:

13-May-2024

Reference equipment used in the calibration

Description: Lab standard microphone Preamplifier Measuring amplifier Signal generator Digital multi-meter Audio analyzer	Model: B&K 4180 B&K 2673 B&K 2610 DS 360 34401A 8903B	Serial No. 3257888 3353200 2346941 61227 US36087050 GB41300350	Expiry Date: 15-Aug-2024 13-Jun-2024 13-Jun-2024 28-Jun-2024 01-Jun-2024 13-Jun-2024	Traceable to: SCL CEPREI CEPREI CEPREI CEPREI CEPREI
Universal counter	53132A	MY40003662	07-Jun-2024	CEPREI

Ambient conditions

Temperature:

21 ± 1 °C

Relative humidity:

55 ± 10 %

Air pressure:

1005 ± 5 hPa

Test specifications

- The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.
- 2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- 3, The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

This is to certify that the sound calibrator conforms to the requirements of annex B of IEC 60942: 1997 for the conditions under which the test was performed. This does not imply that the sound calibrator meets IEC 60942 under any other conditions.

Details of the performed measurements are presented on page 2 of this certificate.

Junai

Approved Signatory:

Date:

14-May-2024

Company Chop:

of calibration and

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument. The results apply to the item as received.

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Form No.CARP156-1/Issue 1/Rev.D/01/03/2007



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CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.:

24CA0510 02-03

Page:

2

Measured Sound Pressure Level 1.

> The output Sound Pressure Level in the calibrator head was measured at the setting and frequency shown using a calibrated laboratory standard microphone and insert voltage technique. The results are given in below with the estimated uncertainties.

Frequency	Output Sound Pressure	Measured Output	Estimated Expanded
Shown	Level Setting	Sound Pressure Level	Uncertainty
Hz	dB	dB	dB
1000	94.00	94.18	0.10

Sound Pressure Level Stability - Short Term Fluctuations 2,

The Short Term Fluctuations was determined by measuring the maximum and minimum of the fast weighted DC output of the B&K 2610 measuring amplifier over a 20 second time interval as required in the standard. The Short Term Fluctuation was found to be:

At 1000 Hz

STF = 0.016 dB

Estimated expanded uncertainty

0.005 dB

Actual Output Frequency 3,

The determination of actual output frequency was made using a B&K 4180 microphone together with a B&K 2673 preamplifier connected to a B&K 2610 measuring amplifier. The AC output of the B&K 2610 was taken to an universal counter which was used to determine the frequency averaged over 20 second of operation as required by the standard. The actual output frequency at 1 KHz was:

At 1000 Hz

Actual Frequency = 1003.2 Hz

Estimated expanded uncertainty

0.1 Hz

Coverage factor k = 2.2

Total Noise and Distortion 4.

For the Total Noise and Distortion measurement, the unfiltered AC output of the B&K 2610 measuring amplifier was connected to an Agilent Type 8903 B distortion analyser. The TND result at 1 KHz was:

At 1000 Hz

TND = 1.2 %

Estimated expanded uncertainty

0.7 %

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

Calibrated by:

Fnd

Date:

Funa Chi Yir

Checked by:

Date:

14-May-2024

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.

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Form No.CARP156-2/Issue 1/Rev.C/01/05/2005



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CERTIFICATE OF CALIBRATION

Certificate No.:

24CA0510 02-01

Page

of

Item tested

Description: Manufacturer: Type/Model No.: Sound Level Meter (Class 1)

Larson Davis

LxT1 0006346 Microphone PCB 377B02 326425 Preamp PCB PRMLxT1L 069995

2

Serial/Equipment No.: Adaptors used: Item submitted by

Customer Name:

Lam Environmental Services Limited

Address of Customer:

ner:

Request No.: Date of receipt:

10-May-2024

Date of test:

13-May-2024

Reference equipment used in the calibration

Description:

Multi function sound calibrator

Model: B&K 4226 Serial No.

Expiry Date:

Traceable to:

Multi function so

DS 360

2288444 61227 28-Aug-2024 28-Jun-2024 CIGISMEC CEPREI

Ambient conditions

Temperature:

21 ± 1 °C 55 ± 10 %

Relative humidity: Air pressure:

1005 ± 5 hPa

Test specifications

 The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.

2, The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.

 The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsess of the Sound Level Meter.

Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

eng Jung

Actual Measurement data are documented on worksheets.

Approved Signatory:

Date:

14-May-2024

Company Chop:

SENGINETAL SENGINETAL

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument. The results apply to the item as received.

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Form No.CARP152-1/Issue 1/Rev.C/01/02/2007



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CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.:

24CA0510 02-01

2

Electrical Tests

The electrical tests were performed using an equivalent capacitance substituted for the microphone. The results are given in below with test status and the estimated uncertainties. The "Pass" means the result of the test is inside the tolerances stated in the test specifications. The "-" means the result of test is outside these tolerances.

			Expanded	Coverage
Test:	Subtest:	Status:	Uncertanity (dB)	Factor
Self-generated noise	A	Pass	0.3	
Sell-generated holse	Ĉ	Pass	0.8	2.1
	Lin	Pass	1.6	2.2
Linearity range for Leq	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
Emounty rungo for Eoq	Reference SPL on all other ranges	Pass	0.3	
	2 dB below upper limit of each range	Pass	0.3	
	2 dB above lower limit of each range	Pass	0.3	
Linearity range for SPL	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
Frequency weightings	Α	Pass	0.3	
	С	Pass	0.3	
	Lin	Pass	0.3	
Time weightings	Single Burst Fast	Pass	0.3	
5 5	Single Burst Slow	Pass	0.3	
Peak response	Single 100µs rectangular pulse	Pass	0.3	
R.M.S. accuracy	Crest factor of 3	Pass	0.3	
Time weighting I	Single burst 5 ms at 2000 Hz	Pass	0.3	
Annotation and washing the Constitution of the	Repeated at frequency of 100 Hz	Pass	0.3	
Time averaging	1 ms burst duty factor 1/103 at 4kHz	Pass	0.3	
3 3	1 ms burst duty factor 1/104 at 4kHz	Pass	0.3	
Pulse range	Single burst 10 ms at 4 kHz	Pass	0.4	
Sound exposure level	Single burst 10 ms at 4 kHz	Pass	0.4	
Overload indication	SPL	Pass	0.3	
	Leq	Pass	0.4	

2, Acoustic tests

The complete sound level meter was calibrated on the reference range using a B&K 4226 acoustic calibrator with 1000Hz and SPL 94 dB. The sensitivity of the sound level meter was adjusted. The test result at 125 Hz and 8000 Hz are given in below with test status and the estimated uncertainties.

Test:	Subtest	Status	Expanded Uncertanity (dB)	Coverage Factor
Acoustic response	Weighting A at 125 Hz	Pass	0.3	
•	Weighting A at 8000 Hz	Pass	0.5	

3, Response to associated sound calibrator

N/A

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

Calibrated by:

ung Chi Yip

Checked by:

Chan Yuk Yiu

Date:

13-May-2024

Date: 14-May-2024

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.

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Form No.CARP152-2/Issue 1/Rev.C/01/02/2007



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Test Data for Sound Level Meter

Page 1 of 5

Sound level meter type:

LxT1

Serial No.

0006346

Date 13-May-2024

Microphone Preamp type: type: 377B02 PRMLxT1L Serial No. Serial No.

326425 069995

Report: 24CA0510 02-01

SELF GENERATED NOISE TEST

The noise test is performed in the most sensitive range of the SLM with the microphone replaced by an equivalent impedance.

Noise level in A weighting

10.2

dB dB

Noise level in C weighting

.

Noise level in Lin

12.5 21.6

dB

LINEARITY TEST

The linearity is tested relative to the reference sound pressure level using a continuous sinusoidal signal of frequency 4 kHz. The measurement is made on the reference range for indications at 5 dB intervals starting from the 94 dB reference sound pressure level. And until within 5 dB of the upper and lower limits of the reference range, the measurements shall be made at 1 dB intervals.(SLM set to LEQ/SPL)

Reference/Expected level	Actua	l level	Tolerance Devia		ition
Reference/Expected level	non-integrated	integrated		non-integrated	integrated
dB	dB	dB	+/- dB	dB	dB
94.0	94.0	94.0	0.7	0.0	0.0
99.0	99.0	99.0	0.7	0.0	0.0
104.0	104.0	104.0	0.7	0.0	0.0
109.0	109.0	109.0	0.7	0.0	0.0
114.0	114.0	114.0	0.7	0.0	0.0
115.0	115.0	115.0	0.7	0.0	0.0
116.0	116.0	116.0	0.7	0.0	0.0
117.0	117.0	117.0	0.7	0.0	0.0
118.0	118.0	118.0	0.7	0.0	0.0
119.0	119.0	119.0	0.7	0.0	0.0
120.0	120.0	120.0	0.7	0.0	0.0
89.0	89.0	89.0	0.7	0.0	0.0
84.0	84.0	84.0	0.7	0.0	0.0
79.0	79.0	79.0	0.7	0.0	0.0
74.0	74.0	74.0	0.7	0.0	0.0
69.0	69.0	69.0	0.7	0.0	0.0
64.0	64.0	64.0	0.7	0.0	0.0
59.0	59.0	59.0	0.7	0.0	0.0
54.0	54.0	54.0	0.7	0.0	0.0
49.0	49.0	49.0	0.7	0.0	0.0
44.0	44.0	44.0	0.7	0.0	0.0
39.0	39.0	39.0	0.7	0.0	0.0
34.0	34.0	34.0	0.7	0.0	0.0
33.0	33.0	33.0	0.7	0.0	0.0

Form No.: CAWS 152/Issue 1/Rev. B/01/02/2007



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Test Data for Sound Level Meter Page 2 of 5

Sound level me	eter type:	LxT1		Serial No.	0006346	Date	e 13-May-2024
Microphone Preamp	type: type:	377B02 PRMLxT1L		Serial No. Serial No.	326425 069995	Rep	ort: 24CA0510 02-01
32.0		32.0	32.0	0.7		0.0	0.0
31.0		30.9	30.9	0.7		-0.1	-0.1
30.0		29.9	29.9	0.7		-0.1	-0.1

Measurements for an indication of the reference SPL on all other ranges which include it

Other ranges	Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
20-120	94.0	94.0	0.7	0.0

Measurements on all level ranges for indications 2 dB below the upper limit and 2 dB above the lower limit

Ranges	Reference/Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
00.400	30.0	29.9	0.7	-0.1
20-120	118.0	118.0	0.7	0.0

FREQUENCY WEIGHTING TEST

The frequency response of the weighting netwoks are tested at octave intervals over the frequency ranges 31.5 Hz to 12500 Hz. The signal level at 1000 Hz is set to give an indication of the reference SPL.

Frequency weighting A:

Frequency	Ref. level	Expected level	Actual level	Tolerar	nce(dB)	Deviation
Hz	dB	dB	dB	+	-	dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	54.6	54.6	1.5	1.5	0.0
63.1	94.0	67.8	67.8	1.5	1.5	0.0
125.9	94.0	77.9	77.9	1.0	1.0	0.0
251.2	94.0	85.4	85.4	1.0	1.0	0.0
501.2	94.0	90.8	90.8	1.0	1.0	0.0
1995.0	94.0	95.2	95.2	1.0	1.0	0.0
3981.0	94.0	95.0	95.0	1.0	1.0	0.0
7943.0	94.0	92.9	92.9	1.5	3.0	0.0
12590.0	94.0	89.7	89.6	3.0	6.0	-0.1

Frequency weighting C:

Frequency	Ref. level	Expected level	Actual level	Tolerar	nce(dB)	Deviation
Hz	dB	dB	dB	+	-	dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	91.0	91.0	1.5	1.5	0.0
63.1	94.0	93.2	93.2	1.5	1.5	0.0
125.9	94.0	93.8	93.8	1.0	1.0	0.0
251.2	94.0	94.0	94.0	1.0	1.0	0.0
501.2	94.0	94.0	94.0	1.0	1.0	0.0

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Page 3 of 5

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Test Data for Sound Level Meter

Sound level me	eter type:	LxT1	Serial No.	000	6346	Date	13-May-2024
Microphone Preamp	type: type:	377B02 PRMLxT1L	Serial No. Serial No.		425 995	Report:	24CA0510 02-01
1995.0	94.0	93.8	93.8	1.0	1.0	0.0	
3981.0	94.0	93.2	93.3	1.0	1.0	0.1	
7943.0	94.0	91.0	91.0	1.5	3.0	0.0	
12590.0	94.0	87.8	87.6	3.0	6.0	-0.2	

Frequency weighting Lin:

Frequency	Ref. level	Expected level	Actual level	Tolerar	nce(dB)	Deviation
Hz	dB	dB	dB	+	-	dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	94.0	94.0	1.5	1.5	0.0
63.1	94.0	94.0	94.0	1.5	1.5	0.0
125.9	94.0	94.0	94.0	1.0	1.0	0.0
251.2	94.0	94.0	94.0	1.0	1.0	0.0
501.2	94.0	94.0	94.0	1.0	1.0	0.0
1995.0	94.0	94.0	94.0	1.0	1.0	0.0
3981.0	94.0	94.0	94.0	1.0	1.0	0.0
7943.0	94.0	94.0	94.1	1.5	3.0	0.1
12590.0	94.0	94.0	94.0	3.0	6.0	0.0

TIME WEIGHTING FAST TEST

Time weighting F is tested on the reference range with a single sinusoidal burst of duration 200 ms at a frequency 2000 Hz and an amplitude which produces an indication 4 dB below the upper limit of the primary indicator range when the signal is continuous (Weight A. Maximum hold)

William and digital to domainadas.	(,			
Ref. level	Expected level	Actual level	Tolera	nce(dB)	Deviation
dB	dB	dB	+	-	dB
116.0	115.0	115.0	1.0	1.0	0.0

TIME WEIGHTING SLOW TEST

Time weighting S is tested on the reference range with a single sinusoidal burst of duration 500 ms at a frequency 2000 Hz and an amplitude which produces an indication 4 dB below the upper limit of the primary indicator range when the signal is continuous. (Weight A, Maximum hold)

Ref. level	Expected level	Actual level	Tolera	nce(dB)	Deviation
dB	dB	dB	+	-	dB
116.0	111.9	111.9	1.0	1.0	0.0

PEAK RESPONSE TEST

The onset time of the peak detector is tested on the reference range by comparing the response to a 100 us rectangular test pulse with the response to a 10 ms reference pulse of the same amplitude. The amplitude of the 10 ms reference pulse is such as to produce an indication 1 dB below the upper limit of the primary indicator range.

Positive polarities: (Weighting Z, set the generator signal to single, Lzpeak)

collino polaritico.	(0 , 1 ,	
Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
119.0	119.0	119.5	2.0	0.5

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Test Data for Sound Level Meter

Page 4 of 5

Sound level meter type:

Serial No.

0006346

Date 13-May-2024

Microphone Preamp

type: type: 377B02 PRMLxT1L

LxT1

Serial No. Serial No. 326425 069995

Report: 24CA0510 02-01

Negative polarities:

Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
119.0	119.0	119.5	2.0	0.5

RMS ACCURACY TEST

The RMS detector accuracy is tested on the reference range for a crest factor of 3.

Test frequency:

Tone burst signal:

2000 Hz

Amplitude:

2 dB below the upper limit of the primary indicator range.

Burst repetition frequency:

40 Hz

11 cycles of a sine wave of frequency 2000 Hz.

(Set to INT)

Torio barot oig	TOTAL				
	Ref. Level	Expected level	Tone burst signal	Tolerance	Deviation
Time wighting	dB	dB	indication(dB)	+/- dB	dB
Slow	114.0+6.6	114.0	113.9	0.5	-0.1

TIME WEIGHTING IMPULSE TEST

Time weighting I is tested on the reference range (Set the SLM to LAImax)

Test frequency:

2000 Hz

Amplitude:

The upper limit of the primary indicator range.

Single sinusoidal burst of duration 5 ms:

Ref. Level	Single burs	Single burst indication		Deviation
dB	Expected (dB)	Actual (dB)	+/- dB	dB
120.0	111.2	111.1	2.0	-0.1

Repeated at 100 Hz

Ref. Level	Repeated burst indication		Tolerance	Deviation
dB	Expected (dB)	Actual (dB)	+/- dB	dB
120.0	117.3	117.1	1.0	-0.2

TIME AVERAGING TEST

This test compares the SLM reading for continuous sine signals with readings obtained from a sine tone burst sequence having the same RMS level. The test level is 30 dB below the upper limit of the linearity range and repeated for Type 1 SLM with 40 dB below the upper limit of the linearity.

Frequency of tone burst:

4000 Hz

Duration of tone burst:

1 ms

Duration of tone burst.	1 1113					
Repetition Time	Level of tone burst	Expected Leq	Actual Leq	Tolerance	Deviation	Remarks
msec	dB	dB	dB	+/- dB	dB	
1000	90.0	90.0	89.9	1.0	-0.1	60s integ.
10000	80.0	80.0	80.0	1.0	0.0	6min. integ.

PULSE RANGE AND SOUND EXPOSURE LEVEL TEST

The test tone burst signal is superimposed on a baseline signal corresponding to the lower limit of reference range

Test frequency:

4000 Hz

Integration time:

10 sec

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Test Data for Sound Level Meter

Page 5 of 5

Sound level meter type:

LxT1

Serial No.

0006346

Date 13-May-2024

Microphone Preamp type: type: 377B02 PRMLxT1L Serial No. Serial No. 326425 069995

Report: 24CA0510 02-01

The integrating sound level meter set to Leg:

Duration	Rms level of	Expected	Actual	Tolerance	Deviation
msec	tone burst (dB)	dB	dB	+/- dB	dB
10	90.0	60.0	60.0	1.7	0.0

The integrating sound level meter set to SEL:

Duration	Rms level of	Expected	Actual	Tolerance	Deviation
msec	tone burst (dB)	dB	dB	+/- dB	dB
10.0	90.0	70.0	70.0	1.7	0.0

OVERLOAD INDICATION TEST

For SLM capable of operating in a non-integrating mode.

Test frequency:

2000 Hz

Amplitude:

2 dB below the upper limit of the primary indicator range.

Burst repetition frequency:

40 Hz

Tone burst signal:

11 cycles of a sine wave of frequency 2000 Hz.

Level	Level reduced by	Further reduced	Difference	Tolerance	Deviation
at overload (dB)	1 dB	3 dB	dB	dB	dB
114.3	113.3	110.3	3.0	1.0	0.0

For integrating SLM, with the instrument indicating Leq.

For integrating SLM, with the instrument indicating Leq and set to the reference range. The test signal as following: The test tone burst signal is superimposed on a baseline signal corresponding to the lower limit of reference range

Test frequency:

4000 Hz

Integration time: Single burst duration: 10 sec 1 msec

Rms level	Level reduced by	Expected level	Actual level	Tolerance	Deviation
at overload (dB)	1 dB	dB	dB	dB	dB
121.0	120.0	80.0	80.0	2.2	0.0

ACOUSTIC TEST

The acoustic test of the complete SLM is tested at the frequency 125 Hz and 8000 Hz using a B&K type 4226 Multifunction Acoustic Calibrator. The test is performed in A weighting.

Frequency	Expected level	Actual level	Tolerar	nce (dB)	Deviation
Hz	dB	Measured (dB)	+	-	dB
1000	94.0	94.0	0.0	0.0	0.0
125	77.9	77.9	1.0	1.0	0.0
8000	92.9	90.9	1.5	3.0	-2.0

-----END-----

Form No.: CAWS 152/Issue 1/Rev. B/01/02/2007





RECALIBRATION DUE DATE:

February 26, 2025

Certificate of Calibration

Calibration Certification Information

Cal. Date: February 26, 2024

Rootsmeter S/N: 438320

Ta: 293

°K

Operator: Jim Tisch

Pa: 747.0

mm Hg

Calibration Model #: TE-5025A

Calibrator S/N: 3880

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4460	3.3	2.00
2	3	4	1	1.0230	6.4	4.00
3	5	6	1	0.9150	8.0	5.00
4	7	8	1	0.8720	8.9	5.50
5	9	10	1	0.7190	12.9	8.00

	Data Tabulation						
Vstd	Qstd	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$		Qa	√∆H(Ta/Pa)		
(m3)	(x-axis)	(y-axis)	Va	(x-axis)	(y-axis)		
0.9953	0.6883	1.4140	0.9956	0.6885	0.8857		
0.9911	0.9688	1.9997	0.9914	0.9691	1.2526		
0.9890	1.0809	2.2357	0.9893	1.0812	1.4004		
0.9878	1.1328	2.3448	0.9881	1.1331	1.4688		
0.9824	1.3664	2.8280	0.9827	1.3668	1.7714		
	m=	2.08688		m=	1.30677		
QSTD	b=	-0.02140	QA	b=	-0.01341		
٠	r=	0.99999	1 ~.	r=	0.99999		

	Calculation	ns	
Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	Va=	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	Qa=	Va/ΔTime
	For subsequent flow ra	te calculatio	ns:
Qstd=	$1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$	Qa=	$1/m\left(\left(\sqrt{\Delta H(Ta/Pa)}\right)-b\right)$

Standard Conditions						
Tstd:	Tstd: 298.15 °K					
Pstd:	760 r	nm Hg				
Key						
ΔH: calibrator manometer reading (in H2O)						
	ΔP: rootsmeter manometer reading (mm Hg)					
Ta: actual absolute temperature (°K)						
Pa: actual barometric pressure (mm Hg)						
b: intercept						
m: slope	m: slope					

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

Tisch Environmental, Inc.

145 South Miami Avenue

Village of Cleves, OH 45002

www.tisch-env.com

TOLL FREE: (877)263-7610

FAX: (513)467-9009



Calibration Data for High Volume Sampler (TSP Sampler)

Location :		AMS1		J		Calbra	ation Date	:	2-Sep-24
Equipment no. : HVS020			Calbration Due Date :		: -	2-Nov-24			
CALIBRATION OF CON	ITINUOUS	S FLOW R	ECORDER						
				Ambient (Condition				
Temperature, T _a		303.	6	Kelvin	Pressure, P	a		1008	mmHg
			Orifice Tr	ansfer Sta	ındard Inforr	nation			
Equipment No.		3880		Slope, m _c	1.306	77	Intercept, bc		-0.01341
Last Calibration Date		16-Feb-2	24		(Нх	P _a / 1	013.3 x 298	/ T _a)	1/2
Next Calibration Date		15-Feb-2	25		=	m _c	$x Q_{std} + b_c$		
				Calibratio	n of TSP				
Calibration	Mar	nometer R	eading	C) _{std}	Cont	inuous Flow		IC
Point	Н (inches of	water)	(m ³	/ min.)	Re	corder, W	(W(Pa	/1013.3x298/T _a) ^{1/2} /35.3
	(up)	(down)	(difference)	X-	axis		(CFM)		Y-axis
1	1.2	1.2	2.4	1.1	1817		38		37.5493
2	2.0	2.0	4.0	1.5	5226		44		43.4782
3	3.0	3.0	6.0	1.8	8625		50		49.4070
4	4.2	4.2	8.4	2.5	2019		56		55.3358
5	5.4	5.4	10.8	2.4	4953		62		61.2647
By Linear Regression of Correlation Co Calibration	Slope, m	= =	17.9 0.99 Yes/	96	Inte	ercept, b	= 16	3.2106	
* if Correlation Coefficier ** Delete as appropriate. Remarks:		check and	d recalibration	n again.					
Calibrated by	ŀ	Harry Po				Check	ed by	:	Derek Lo
Date :		2-Sep-24				Date		: _	2-Sep-24



Calibration Data for High Volume Sampler (TSP Sampler)

				•	• •	•	•
Location :		AMS2			Calbrati	on Date	: 2-Sep-24
Equipment no.	I	HVS019			Calbrati	on Due Date	: 2-Nov-24
CALIBRATION OF CON	ITINUOUS	S FLOW R	ECORDER				
				Ambient Condition		T	
Temperature, T _a		303.	6	Kelvin Pressure, F	D a	1	008 mmHg
			Orifice Tr	ansfer Standard Infor	rmation		
Equipment No.		3880		Slope, m _c 1.306	677	Intercept, bc	-0.01341
Last Calibration Date		26-Feb-2	24	(H)	x P _a / 101	13.3 x 298 /	$(T_a)^{1/2}$
Next Calibration Date		25-Feb-2	25		m _c x	$Q_{std} + b_c$	
				Calibration of TSP			
Calibration	Mar	nometer R	eading	Q _{std}	Contin	uous Flow	IC
Point	Н (і	inches of	water)	(m ³ / min.)	Reco	order, W	(W(P _a /1013.3x298/T _a) ^{1/2} /35.31
	(up)	(down)	(difference)	X-axis	(0	CFM)	Y-axis
1	1.4	1.4	2.8	1.2753		32	31.6142
2	2.4	2.4	4.8	1.6666		42	41.4936
3	3.8	3.8	7.6	2.0945		50	49.3972
4	4.6	4.6	9.2	2.3034		54	53.3490
5	5.8	5.8	11.6	2.5852		60	59.2766
By Linear Regression of	Y on X	l.			ı		
	Slope, m	=	20.69	979 In	tercept, b =	5.	9410
Correlation Co	pefficient*	=	0.99	81			
Calibration	Accepted	=	Yes/	\o **			
* if Correlation Coefficier	nt < 0.990,	, check and	d recalibration	n again.			
** Delete as appropriate.							
Remarks :							
Calibrated by	ŀ	Harry Po			Checked	d by	: Derek Lo
Date	2	2-Sep-24	-		Date		: 2-Sep-24



Certificate No. 401106

1 of 2 Pages Page

Customer: Lam Environmental Services Limited

 $(23 \pm 3)^{\circ}C$

Address: 19/F, Remex Centre, 42 Wong Chuk Hang Road, Hong Kong

Order No.: Q40468

Date of receipt

5-Feb-24

Item Tested

Description : Aerosol Mass Monitor

Manufacturer: Met One

I.D.

Model

: Aerocet 831

Serial No.

: W15449

Test Conditions

Date of Test:

1-Mar-24

Supply Voltage : --

Relative Humidity: (50 ± 25) %

Ambient Temperature: **Test Specifications**

Calibration check.

Calibration procedure:

Manufacturer recommended method (gravimetric), Z28.

Test Results

All results were within the tolerance(s).

The results are shown in the attached page(s).

Main Test equipment used:

Traceable to Equipment No. Description Cert. No. Stop Watch 303117 SCL-HKSAR S136B NIM-PRC Micro Balance 108228 S238 NIST Std. Test Dust 61291 S201 NIM-PRC LL-2104002489 S207B Std Flowmeter

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance 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 measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant. The test results apply to the above Unit-Under-Test only

Calibrated by:

1-Mar-24

This Certificate is issued by:

Hong Kong Calibration Ltd.

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong

Tel: 2425 8801 Fax: 2425 8646 The copyright of this certificate is owned by Hong Kong Calibration Ltd.. It may not be reproduced except in full.



Certificate No. 401106

Page 2 of 2 Pages

Results:

1. General

Internal Filters: checked and found clean.

2. Flow Meter

UUT Nominal	Measured Value	Tolerance	
Value (LPM)	(LPM)	(LPM)	Uncertainty
2.83	2.80	± 0.15	± 0.05

3. Timer

Reference Value	UUT Reading	Tolerance	Uncertainty
10′ 00″ 19	10 min	± 2 sec/hr	\pm 0.5 sec/hr

4. Dust Particle (TSP)

Applied Value (μg/m³)	UUT Reading (μg/m³) K Factor : 0.66	Tolerance	Uncertainty
410	391	± 20 %	± 10 %

Remark: 1. UUT: Unit-Under-Test

- 2. The uncertainty claimed is for a confidence probability of not less than 95%.
- 3. ISO 12103-1 A1 respirable standard test dust was used for the calibration.
- 4. The K Factor had been adjusted from 0.62 to 0.66.

TIKT	
 END	



Certificate No. 401107

Page

2 Pages

Customer: Lam Environmental Services Limited

Address: 19/F, Remex Centre, 42 Wong Chuk Hang Road, Hong Kong

Order No.: Q40468

Date of receipt

5-Feb-24

Item Tested

Description: Aerosol Mass Monitor

Manufacturer: Met One

I.D.

Model

: Aerocet 831

Serial No.

: Y23153

Test Conditions

Date of Test:

1-Mar-24

Supply Voltage

Ambient Temperature:

 $(23 \pm 3)^{\circ}C$

Relative Humidity: (50 ± 25) %

Test Specifications

Calibration check.

Calibration procedure:

Manufacturer recommended method (gravimetric), Z28.

Test Results

All results were within the tolerance(s).

The results are shown in the attached page(s).

Main Test equipment used:

Equipment No. Description

Cert. No.

Traceable to

S136B

Stop Watch

303117

SCL-HKSAR

S238

Micro Balance

108228

NIM-PRC

S201

Std. Test Dust

61291

NIST

S207B

Std. Flowmeter

LL-2104002489

NIM-PRC

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance 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 measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant. The test results apply to the above Unit-Under-Test only

Calibrated by :

Approved by:

This Certificate is issued by:

Hong Kong Calibration Ltd.

1-Mar-24

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.

Tel: 2425 8801 Fax: 2425 8646



Certificate No. 401107

Page 2 of 2 Pages

Results:

1. General

Internal Filters: checked and found clean.

2. Flow Meter

UUT Nominal	Measured Value	Tolerance	
Value (LPM)	(LPM)	(LPM)	Uncertainty
2.83	2.80	± 0.15	± 0.05

3. Timer

Reference Value	UUT Reading	Tolerance	Uncertainty
9' 59" 91	10 min	± 2 sec/hr	\pm 0.5 sec/hr

4. Dust Particle (TSP)

Applied Value (μg/m³)	UUT Reading (μg/m³) K Factor : 2.25	Tolerance	Uncertainty
670	704	± 20 %	± 10 %

Remark: 1. UUT: Unit-Under-Test

- 2. The uncertainty claimed is for a confidence probability of not less than 95%.
- 3. ISO 12103-1 A1 respirable standard test dust was used for the calibration.
- 4. The K Factor had been adjusted from 1.00 to 2.25.

 FND	

Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BD090012

Date of Issue

: 05 September 2024

Page No.

: 1 of 2

PART A - CUSTOMER INFORMATION

Lam Environmental Services Limited

PART B - SAMPLE INFORMATION

Name of Equipment:

YSI Professional Plus Multi Parameters

Manufacturer:

YSI

Serial Number:

14E101065

Date of Received:

03 September 2024

Date of Calibration:

04 September 2024

Date of Next Calibration:

03 December 2024

Request No.:

D-BD090012

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter

Reference Method

pH value

APHA 21e 4500-H+ B

Temperature

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

2008: Working Thermometer Calibration Procedure

Dissolved oxygen

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

Salinity

APHA 21e 2520 B

PART D - CALIBRATION RESULT

(1) pH value

N SI Z A COMP II NO SINGER			
Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	3.90	-0.10	Satisfactory
7.42	7.26	-0.16	Satisfactory
10.01	9.84	-0.17	Satisfactory

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

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
19.0	17.1	-1.9	Satisfactory
27.0	25.5	-1.5	Satisfactory
36.5	35.2	-1.3	Satisfactory

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

(3) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
6.87	6.75	-0.12	Satisfactory
5.58	5.28	-0.30	Satisfactory
3.66	3.64	-0.02	Satisfactory
0.56	0.35	-0.21	Satisfactory

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

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED SIGNATORY:

Assistant Manager



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

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

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BD090012

Date of Issue

: 05 September 2024

Page No.

: 2 of 2

(4) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.29	2.90	Satisfactory
20	20.88	4.40	Satisfactory
30	32.09	6.97	Satisfactory

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

Remark(s)

- 'The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from 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 from relevant international standards.

--- END OF REPORT ---



Calibration Report

Calibration No. 60408001-H12E2401

Laboratory FT LaboratoriesLtd.

Address Lot No. DD77 Section 1552 S.Ass 1RP, Ng Chow South Road, Ping Che, Fanling, New Territories

Telephone : (852) 2758 4861

Facsimile : (852) 2758 8962

Customer Lam Environmental Services Limited

Address : 19/F., Remex Centre, 42 Wong Chuk Hang Road, Hong Kong

Item Calibrated : Name/Description: Turbidimeter

Manufacturer: Shanghai Xinrui Instruments & Meters co.,Ltd

Model no: WGZ-3B Equipment no.: 1807073

Reference Standard / C23/01 under NCRM reference material number GBW(E) 120125.

Major Measurement Standard Solution of Formazine Turbidity

Equipment

Calibration Method : In-house calibration method according to Ref: APHA22nd ed 213 OB

Date of item received 12 Aug.,2024

Date of Calibration : 14 Aug.,2024

Location of Calibration Calibration Laboratory of FT LaboratoriesLtd.

Calibration Conditions

Notes:

Temperature : 20 ± 3 °C

Relative Humidity 30% to 80%

Test Results : The test results are detailed in the subsequent page(s).

Certified by:

Date of Issue: 15 AUG 2024

CHAN Joseph Nicolas (Senior Technical Engineer)

(1) The above equipment has been call brately against standards which are traceable to internationally recognized standards.

(2) This certificate shall not be reproduced, except in full, without the written approval of FT LaboratoriesLtd.



Calibration Report

Calibration No.

60408001-H12E2401

Results

Turbidity of standard solution used (NTU)	Measured value (NTU)	Error (%)
0	0	
4	4.00	0.00%
10	9.99	-0.10%
40	39.90	-0.25%
100	99.60	-0.40%
400	399.0	-0.25%
1000	998.0	-0.20%

Remarks:

- (A) Each reported result is the mean of three measurements on UUT (unit-under-test).
- (B) The values given in this Calibration Report only relate to the unit-under-test and the values measured at the time of the test. Any uncertainties quoted will not include allowances for the environmental changes, variation and shock during transportation, or the capability of any other laboratory to repeat the measurement.
- (C) Before calibration, UUT and reference equipment was placed in the laboratory for at least one hour.

< End of Report >

Calibrated by:

CH Chrung

Checked by:

Date:

14 Aug.,2024

Date:



Lot No. DD77 Section 1552 S.A. ss IRP Ng Chow South Road, Ping Che

Fanling, New Territories Tel.: (852) 2758 4861 Fax.: (852) 2758 8962 E-mail: info@ft.com.hk

Transmittal Form

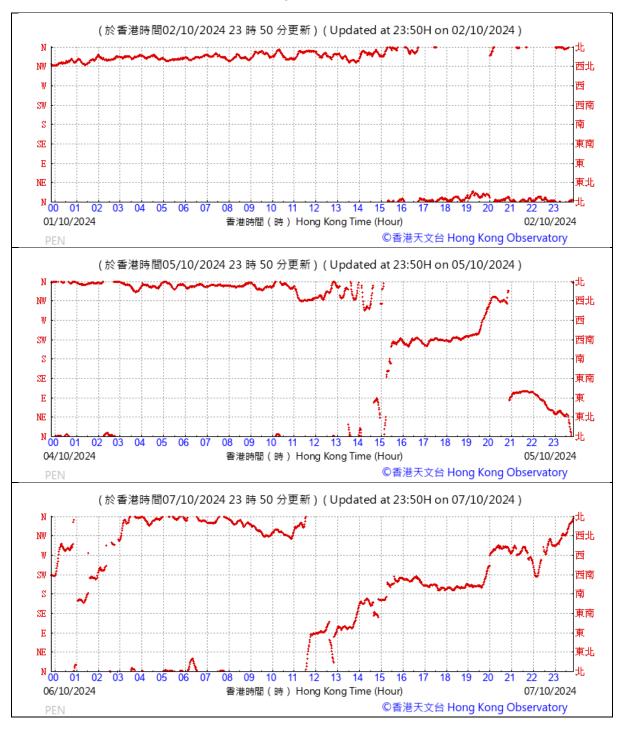
Т	o: Lam Environmental Services Lin	nited	Date:			
	o.: FT-CAL-TR24- 322	= Chuk Hang Road, Hong Kong		Mr. Lo (2882 3939) Calibration Report		
Proje	ct:		= :			
Dear	Sir/Madam,					
We are se	ending Herewit	h Under Separate Cover	☐ Oth	ners		
Item No.	1	Description	Job No.	Reference No.	Test Date	No. of Copies
1	Turbidimeter		60408001	H12E2401	14-Aug-24	11
* Select i	if inappropriate		-	1		
	F or your review	For your approval		For your referer	ce	
	For your submission	For your use				
	Invoice attached					
General	remarks:					
If enclos	sures received are not as listed above, ki	ndly notify us at once.				
Yours s	sincerely,		Receive	d by:		
	HAN Joseph Nicolas (Assisti ni Manaler) HOI Wai Lee (Assistant General Manaler)			ull Name & Signature of ompany Represenative		mpany Chop

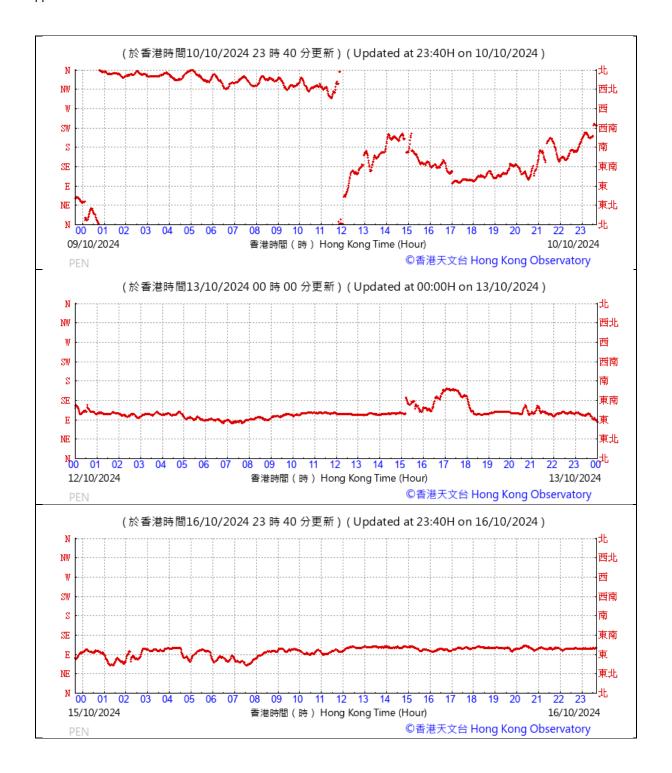


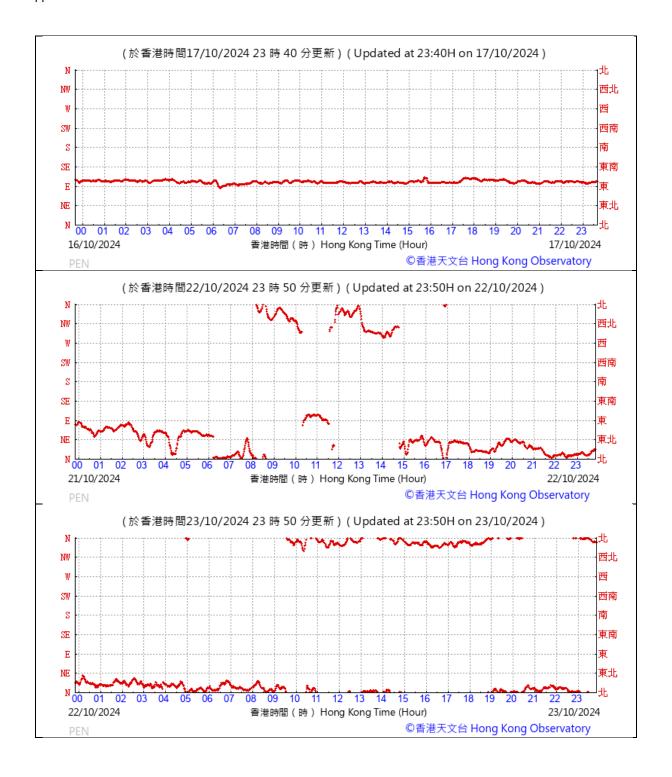
Appendix 4.3

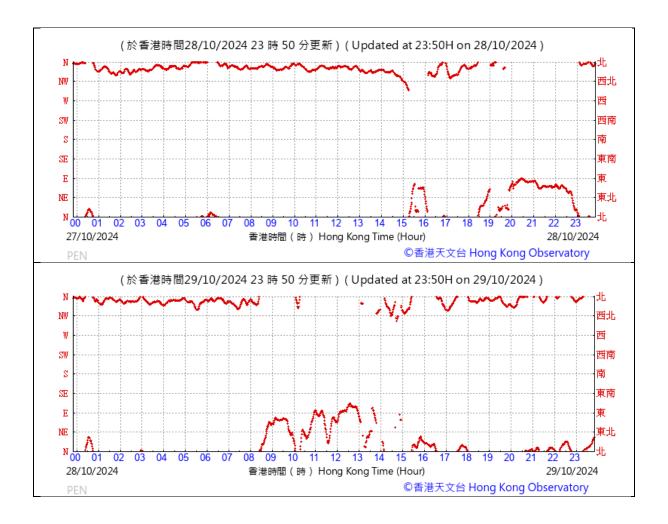
Wind data extracted from HKO Automatic Weather Station

A. Wind Direction extracted from Peng Chau Automatic Weather

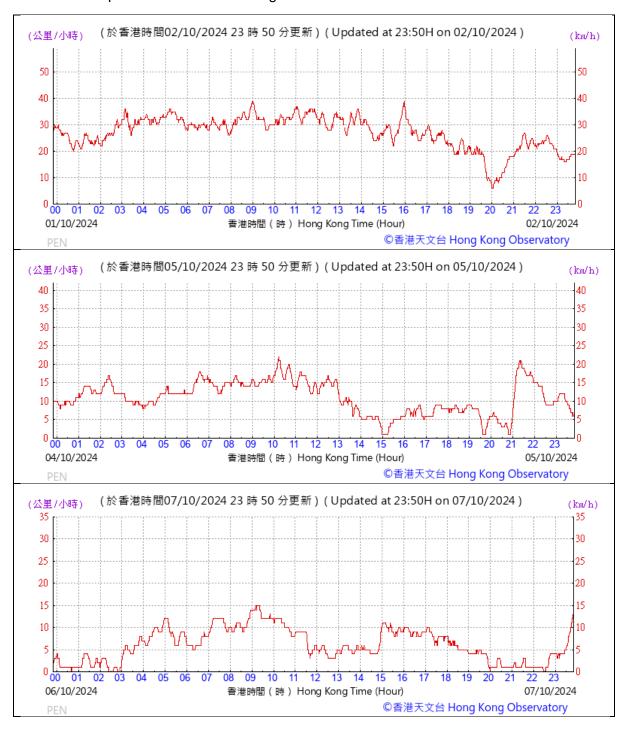


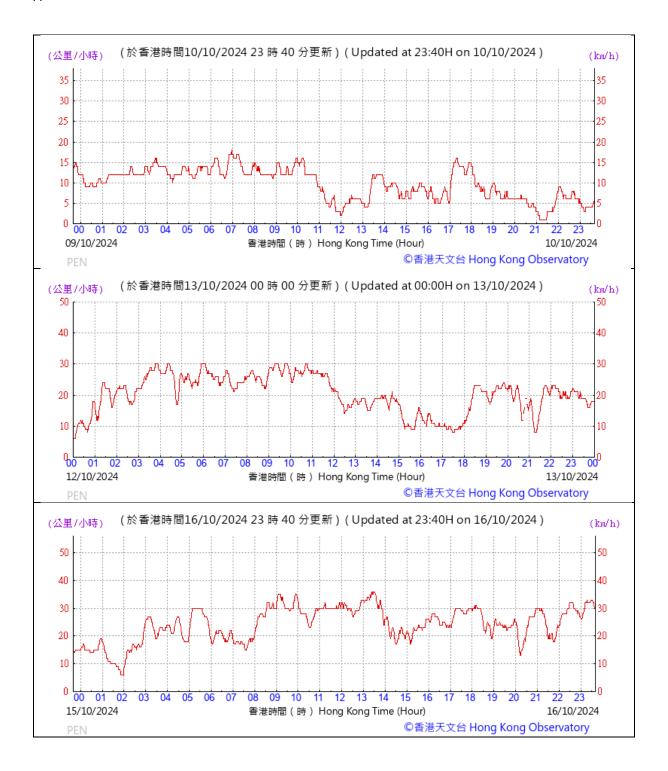


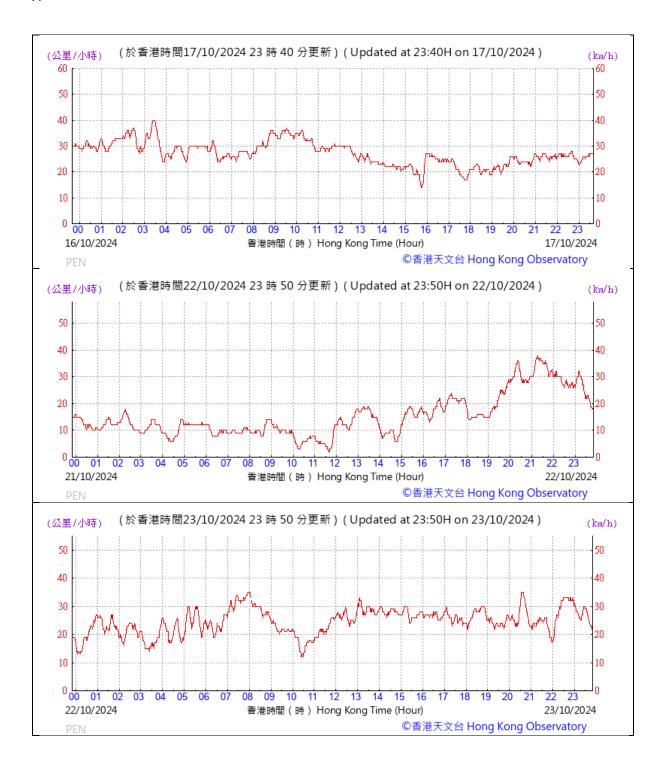


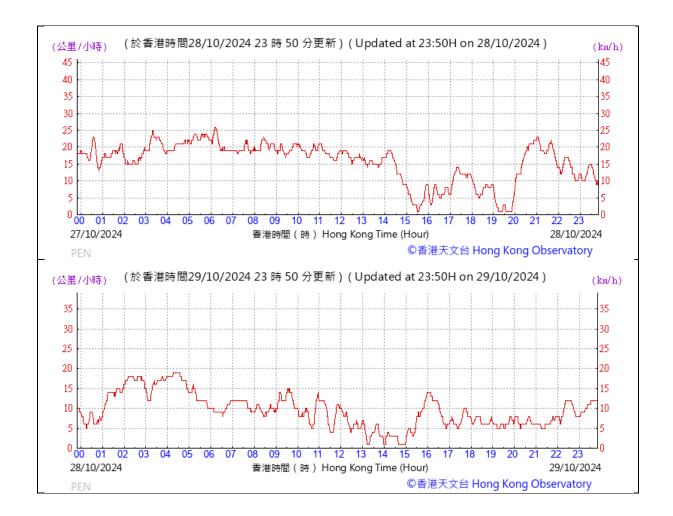


B. Wind Speed extracted from Peng Chau Automatic Weather Station











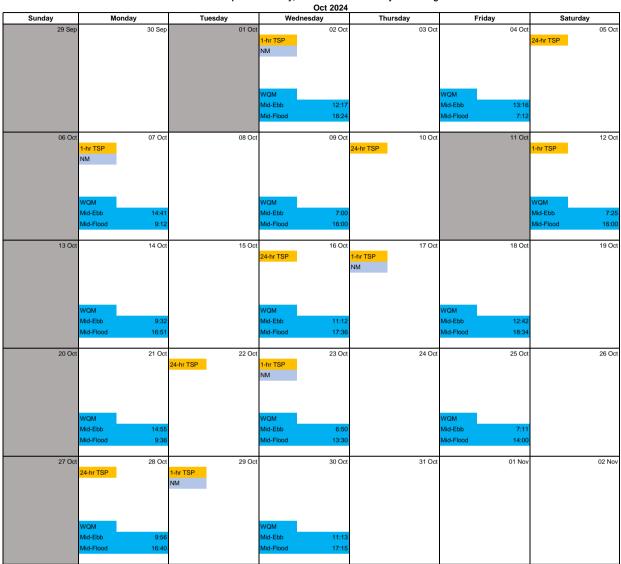
Appendix 5.1

Monitoring Schedules for Reporting Month



Contract No. HY/2019/14 New Wang Tong River Bridge

Tentative Impact Air Quality, Noise and Water Quality Monitoring Schedule



Remarks

24-hr TSP stands for 24-hour Total Suspended Particulates Monitoring;

1-hr TSP stands for 1-hour Total Suspended Particulate Monitoring;

NM stands for Noise Monitoring;

WQM stands for Water Quality Monitoring tenatively scheduled and

Based on previous discussion with contractor and IEC, all monitoring will not be scheduled on any public holidays and Sundays as there will be no construction works.

Actual WQM starting date will be subjected to the date of actual commencement of retaining wall S1 and Wing wall construction works after finishing the sheet-pilling works.



Contract No. HY/2019/14 New Wang Tong River Bridge

Tentative Impact Air Quality, Noise and Water Quality Monitoring Schedule

			Nov 2024			
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27 Oct	28 Oct	29 Oct	30 Oct	31 Oct	01 Nov	02 Nov 24-hr TSP
99 No.	04 Nov	or New	00 Nov		WQM Mid-Ebb 12:18 Mid-Flood 17:49	09 Nov
03 Nov	1-hr TSP NM	05 Nov	06 Nov	07 Nov	08 Nov 24-hr TSP	1-hr TSP
	WQM Mid-Ebb 13:44 Mid-Flood 8:27		WQM Mid-Ebb 15:00 Mid-Flood 9:00		WQM Mid-Ebb 6:45 Mid-Flood 16:30	
10 Nov	11 Nov	12 Nov	13 Nov	24-hr TSP	15 Nov 1-hr TSP NM	16 Nov
	WQM Mid-Ebb 7:53 Mid-Flood 15:24		WQM Mid-Ebb 9:57 Mid-Flood 16:20		WQM Mid-Ebb 11:38 Mid-Flood 17:21	
17 Nov	18 Nov	19 Nov	24-hr TSP	21 Nov 1-hr TSP NM	22 Nov	23 Nov
	WQM Mid-Ebb 13:56 Mid-Flood 8:42		WQM Mid-Ebb 15:00 Mid-Flood 10:00		WQM Mid-Ebb 6:55 Mid-Flood 15:00	
24 Nov	25 Nov	26 Nov 24-hr TSP	27 Nov 1-hr TSP NM	28 Nov	29 Nov	30 Nov
	WQM Mid-Ebb 8:02 Mid-Flood 15:12		WQM Mid-Ebb 9:54 Mid-Flood 15:58		WQM Mid-Ebb 11:12 Mid-Flood 16:32	

Remarks:

24-hr TSP stands for 24-hour Total Suspended Particulates Monitoring;

1-hr TSP stands for 1-hour Total Suspended Particulate Monitoring;

NM stands for Noise Monitoring;

WQM stands for Water Quality Monitoring tenatively scheduled and

Based on previous discussion with contractor and IEC, all monitoring will not be scheduled on any public holidays and Sundays as there will be no construction works.

Actual WQM starting date will be subjected to the date of actual commencement of retaining wall S1 and Wing wall construction works after finishing the sheet-piling works.



Appendix 5.2

Noise Monitoring Results and Graphical Presentations



Noise Monitoring Result

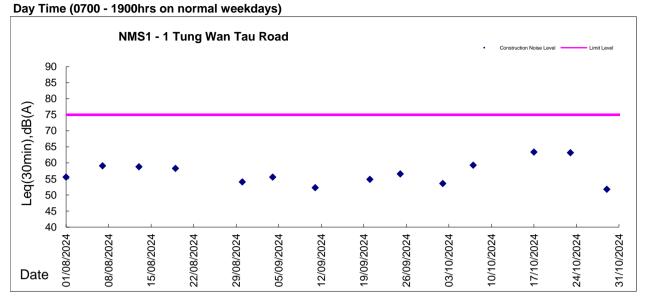
Day Time (0700 - 1900hrs on normal weekdays)

Location: NMS1 - 1 Tung Wan Tau Road

			Measure	ement Noi	se Level	Average Noise Level#	Baseline Level	Construction Noise Level	Limit Level
Date	Weather	Time	L _{eq}	L ₁₀	L ₉₀	L _{eq}	L_{eq}	L_{eq}	L _{eq}
			Unit:	dB(A), (30)-min)		Unit: dl	B(A), (30-min)	
2 Oct 2024	Sunny	9:30	53.6	55.1	48.9	53.6	60.1	<baseline level<="" td=""><td>75</td></baseline>	75
7 Oct 2024	Sunny	9:30	59.3	61.4	51.7	59.3	60.1	<baseline level<="" td=""><td>75</td></baseline>	75
17 Oct 2024	Sunny	9:30	63.4	64.7	53.6	63.4	60.1	60.7	75
23 Oct 2024	Sunny	9:30	63.2	64.7	54.3	63.2	60.1	60.3	75
29 Oct 2024	Sunny	9:30	51.8	53.5	47.7	51.8	60.1	<baseline level<="" td=""><td>75</td></baseline>	75



Graphic Presentation of Noise Monitoring Result





Appendix 5.3

Air Quality Monitoring Results and Graphical Presentations



Report on 1-hour TSP monitoring at AMS1 - Slivermine Beach Resort Limit Level (µg/m $^3\!\!$) -

500.0

Date	Weather Condition	Time	TSP Level (µg/m³)
2-Oct-24	Sunny	8:48	32.6
2-Oct-24	Sunny	9:48	27.3
2-Oct-24	Sunny	10:48	32.9
7-Oct-24	Sunny	10:11	52.6
7-Oct-24	Sunny	11:11	55.8
7-Oct-24	Sunny	12:11	48.7
12-Oct-24	Sunny	13:12	63.9
12-Oct-24	Sunny	14:12	66.1
12-Oct-24	Sunny	15:12	66.3
17-Oct-24	Sunny	9:13	20.2
17-Oct-24	Sunny	10:13	27.6
17-Oct-24	Sunny	11:13	24.1
23-Oct-24	Sunny	9:04	45.8
23-Oct-24	Sunny	10:04	46.9
23-Oct-24	Sunny	11:04	49.3
29-Oct-24	Sunny	13:21	60.1
29-Oct-24	Sunny	14:21	61.2
29-Oct-24	Sunny	15:21	67.4



Report on 1-hour TSP monitoring at AMS2 - 1 Tung Wan Tau Road Limit Level ($\mu g/m^3$) -

500.0

Date	Weather Condition	Time	TSP Level (µg/m³)
2-Oct-24	Sunny	9:01	46.8
2-Oct-24	Sunny	10:01	49.3
2-Oct-24	Sunny	11:01	50.2
7-Oct-24	Sunny	10:32	15.6
7-Oct-24	Sunny	11:32	16.7
7-Oct-24	Sunny	12:32	11.2
12-Oct-24	Sunny	13:28	23.5
12-Oct-24	Sunny	14:28	24.6
12-Oct-24	Sunny	15:28	20.1
17-Oct-24	Sunny	9:30	31.3
17-Oct-24	Sunny	10:30	32.6
17-Oct-24	Sunny	11:30	24.8
23-Oct-24	Sunny	9:23	66.6
23-Oct-24	Sunny	10:23	67.2
23-Oct-24	Sunny	11:23	68.3
29-Oct-24	Sunny	12:58	18.2
29-Oct-24	Sunny	13:58	16.7
29-Oct-24	Sunny	14:58	19.4



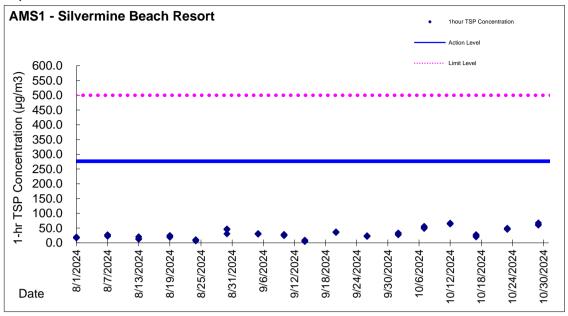
Contract No. HY/2019/04

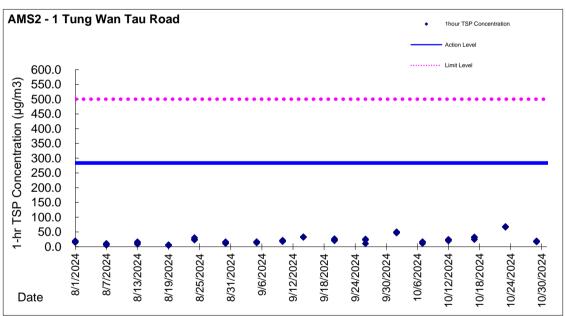
New Wang Tong River Bridge

	Date	Sampling	Weather	Filter paper no.	Filter W	eight, g	Elapse	Time, hr	Sampling	FI	Flow Rate, m ³ /min			TSP Level,
	Date	Time	Condition	Titter paper no.	Initial	Final	Initial	Final	Time, hr	Initial, Qsi	Final, Qsf	Average	Volume, m ³	μg/m³
AMS1	05/10/24	8:00	Sunny	011617	2.7765	2.8250	5958.75	5982.75	24.00	0.70	1.00	0.85	1224	39.6
AMS1	10/10/24	8:00	Sunny	011618	2.7696	2.8282	5982.75	6006.75	24.00	0.66	1.01	0.83	1200	48.8
AMS1	16/10/24	8:00	Sunny	011619	2.7659	2.7872	6006.75	6030.75	24.00	0.64	1.00	0.82	1184	18.0
AMS1	22/10/24	8:00	Sunny	011620	2.7630	2.8083	6030.75	6054.75	24.00	0.67	1.00	0.84	1205	37.6
AMS1	28/10/24	8:00	Sunny	011621	2.7631	2.8587	6054.75	6078.75	24.00	0.66	1.01	0.84	1203	79.4
AMS2	05/10/24	8:00	Sunny	011884	2.7586	2.7775	6446.59	6470.59	24.00	1.18	1.18	1.18	1696	11.1
AMS2	10/10/24	8:00	Sunny	011885	2.7677	2.7987	6470.59	6494.59	24.00	1.19	1.18	1.19	1707	18.2
AMS2	16/10/24	8:00	Sunny	011886	2.7646	2.7875	6494.59	6518.59	24.00	1.18	1.18	1.18	1700	13.5
AMS2	22/10/24	8:00	Sunny	011634	2.7661	2.8850	6518.59	6542.59	24.00	1.18	1.18	1.18	1698	70.0
AMS2	28/10/24	8:00	Sunny	011887	2.7584	2.7955	6542.59	6566.59	24.00	1.19	1.19	1.19	1710	21.7



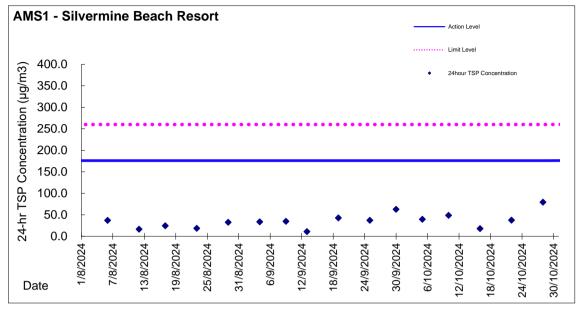
Graphic Presentation of TSP Result

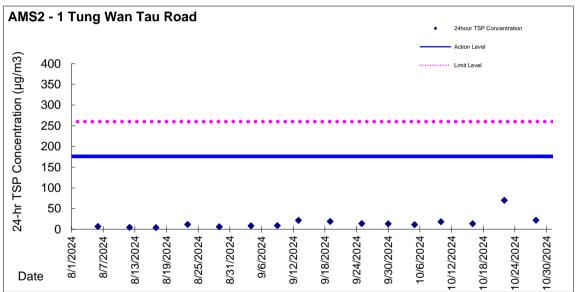






Graphic Presentation of TSP Result







Appendix 5.4

Water Quality Monitoring Results and Graphical Presentations

Water Quality Monitoring at Station W1 (Middle) - Ebb Tide

	Sampling		Sampling	Water	Sampling	Sampling	Te	emperatur	re		рН			Salinity		DO Satu	ation		DO		Turbidity			S	SS
Station Reference	Date	Weather	Time	Depth	Level	Depth		°C			-		ppt			%		mg/L			NTU		mg	g/L	
	Date		111110	m	Level	m	Valu	ie	Average	Value		Average	Val	ue	Average	Value	Average	Valu	е	Average	Value	е	Average	Value	Average
	10/2/2024	Sunny	11:15	0.50		0.25	22.00	22.00	22.0	7.46	7.46	7.5	2.77	2.77	2.8	84.80 84	84.6	8.12	8.08	8.1	3.51	3.51	3.5	2.00	2.0
	10/2/2024	Guilly	11:20	0.50		0.25	22.00	22.00	22.0	7.46	7.46	7.5	2.77	2.77	2.0	84.80 84	40	8.12	8.08	0.1	3.51	3.51	0.0	2.00	
	10/4/2024	Sunny	6:45	0.50		0.25	23.60	23.60	23.6	7.25	7.25	7.3	2.94	2.94	2.9	90.10 89	89.9	8.10	8.06	8.1	3.23	3.23	3.2	2.00	2.0
			6:50	0.50		0.25	23.60	23.60		7.25	7.25	7.0	2.94	2.94	2.0	90.10 89	70	8.10	8.06	***	3.23	3.23		2.00	
	10/7/2024	Sunny	13:15	0.50		0.25	23.60	23.60	23.6	8.09	8.09	8.1	0.82	0.82	0.8	90.30 89		8.11	8.06	8.1	3.52	3.52	3.5	2.00	
			13:20	0.50		0.25	23.60	23.60		8.09	8.09	***	0.82	0.82		90.30 89	70	8.11	8.06		3.52	3.52		2.00	-
	10/9/2024	Cloudy / Sunny	6:45	0.50		0.25	22.20	22.20 22.2	7.36	7.36	7.4	0.79	0.79	0.8	87.80 87		8.12	8.07	8.1	3.56	3.56	3.6	2.00		
		,	6:50	0.50		0.25	22.20	22.20		7.36	7.36		0.79	0.79		87.80 87		8.12	8.07		3.56	3.56		2.00	
	10/12/2024	Sunny	7:00	0.50		0.25	22.60	22.60	22.6	7.33	7.33	7.3	1.44	1.44		88.90 88		8.16	8.11	8.1	4.56	4.56	4.6	2.60	2.5
			7:05	0.50		0.25	22.60	22.60		7.33	7.33	65 7.7	1.44	1.44		88.90 88		8.16	8.11		4.56	4.56		2.40	\vdash
	10/14/2024	Sunny	9:00 9:05	0.50		0.25 0.25	23.80	23.80	23.8	7.65 7.65	7.65		0.68	0.68	0.7	89.60 89 89.60 89		8.36 8.36	8.30 8.30	8.3	3.32	3.32	3.3	2.00	2.0
W1			10:45	0.50		0.25	25.10	25.10		7.05	7.03		1.01	1.07		87.80 87	10	7.86	7.81		7.70	7.60		2.40	\vdash
Wang Tong River	10/16/2024	Sunny	10:43	0.50	Middle	0.25	25.10	25.10	25.1	7.38	7.38	7.4	1.01	1.07	1.0	87.80 87		7.86	7.81	7.8	7.70	7.60	7.7	2.40	2.2
(Major tributary)			11:30	0.50		0.25	26.50	26.50		7.52	7.52		0.84	0.84		82.40 82	20	7.89	7.84		6.12	6.03		2.80	
	10/18/2024	Sunny / Cloudy	11:35	0.50	i	0.25	26.50	26.50	26.5	7.52	7.52	7.5	0.84	0.84	0.8	82.40 82		7.89	7.84	7.9		6.03		2.00	2.4
		_	14:00	0.50		0.25	27.60	27.60		7.67	7.67		1.06	1.06		91.80 91	20	8.16	8.11		4.29	4.17		2.70	
	10/21/2024	Sunny	14:05	0.50		0.25	27.60	27.60	27.6	7.67	7.67	7.7	1.06	1.06	1.1	91.80 91		8.16	8.11	8.1	4.29	4.17	4.2	2.60	2.7
	10/23/2024	Sunny	6:30	0.50	1	0.25	23.70	23.70	23.7	7.30	7.30	7.3	1.63	1.63	1.6	89.60 88	90 89.3	8.06	8.01	8.0	0.87	0.87	0.9	6.80	0.4
	10/23/2024	Suriny	6:35	0.50		0.25	23.70	23.70	23.1	7.30	7.30	1.3	1.63	1.63	1.0	89.60 88	90	8.06	8.01	0.0	0.87	0.87	0.5	6.00	6.4
	10/25/2024	Sunny	6:45	0.50		0.25	25.40	25.40	25.4	7.38	7.38	7.4	2.18	2.18	2.2	91.50 90	91,2	8.50	8.44	8.5	1.41	1.41	1.4	3.10	3.2
	10/23/2024	Suring	6:50	0.50		0.25	25.40	25.40	23.4	7.38	7.38	7.4	2.18	2.18	2.2	91.50 90	31.2	8.50	8.44	0.0	1.41	1.41	1.4	3.30	3.2
	10/28/2024	Sunny / Cloudy	9:15	0.50		0.25	24.60	24.60	24.6	7.77	7.77	7.8	0.52	0.52	0.5	92.70 92		8.75	8.70	8.7	0.43	0.43	0.4	2.00	2.0
10/28	10/20/2024	carry / Gloddy	9:20	0.50		0.25	24.60	24.60	2 1.0	7.77	7.77		0.52	0.52	0.0	92.70 92	0	8.75	8.70		0.43 0.	0.43	3	2.00	2.0
	10/30/2024	Sunny	10:30	0.50		0.25	23.80	23.80	23.8	7.46	7.46	7.5	1.87	1.87	1.9	93.70 93	93.5	8.32	8.25	8.3	0.27	0.27	0.3	2.10	2.4
			10:35	0.50		0.25	23.80	23.80		7.46	7.46		1.87	1.87		93.70 93	20	8.32	8.25		0.27	0.27		2.60	

Remarks:

Water Quality Monitoring at Station W1 (Middle) - Flood Tide

·	Sampling		Sampling	Water	Sampling	Sampling	Te	emperatur	re		pН			Salinity		DC	Saturatio	n		DO			Turbidity		S	SS
Station Reference	Date	Weather	Time	Depth	Depth	Depth		°C			-			ppt			%			mg/L			NTU		m	g/L
	Date		Time	m	Борин	m	Val	ue	Average	Valu	ıe	Average	Valu	е	Average	Valu	ie	Average	Valu	е	Average	Val	ue	Average	Value	Averag
	10/2/2024	Sunny	17:15	0.50		0.25	22.40	22.40	22.4	7.74	7.74	7.7	3.17	3.17	3.2	88.50	88.00	88.3	8.09	8.04	8.1	4.90	4.90	4.0	2.00	2
	10/2/2024	Suriny	17:20	0.50	1	0.25	22.40	22.40	22.4	7.74	7.74	1 '.'	3.17	3.17	3.2	88.50	88.00	00.3	8.09	8.04	0.1	4.90	4.90	4.9	2.00	1 -
	10/4/2024	Sunny	12:15	0.50		0.25	23.90	23.90	23.9	7.51	7.51	7.5	3.53	3.53	3.5	86.70	86.10	86.4	8.03	7.98	8.0	4.41	4.41	4.4	3.00	3
	10/4/2024	Suriny	12:20	0.50		0.25	23.90	23.90	23.9	7.51	7.51	7.5	3.53	3.53	3.5	86.70	86.10	00.4	8.03	7.98	0.0	4.41	4.41	4.4	4.60]
	10/7/2024	Sunny	8:45	0.50		0.25	23.50	23.50	23.5	7.77	7.77	7.8	0.52	0.52	0.5	89.20	88.80	89.0	8.07	8.03	8.1	4.13	4.13	4.1	3.60	3
	10/7/2024	Sullily	8:50	0.50		0.25	23.50	23.50	23.3	7.77	7.77	7.0	0.52	0.52	0.5	89.20	88.80	05.0	8.07	8.03	0.1	4.13	4.13	4.1	2.50	ا ا
	10/9/2024	Cloudy / Sunny	15:30	0.50		0.25	22.10	22.10	22.1	7.29	7.29	7.3	1.02	1.02	1.0	89.20	88.80	89.0	8.35	8.30	8.3	3.37	3.37	3.4	2.50	2
	10/9/2024	Cloudy / Suriny	15:35	0.50		0.25	22.10	22.10	22.1	7.29	7.29	7.3	1.02	1.02	1.0	89.20	88.80	09.0	8.35	8.30	0.3	3.37	3.37	3.4	2.70]
	10/12/2024	Sunny	15:15	0.50		0.25	22.60	22.60	22.6	7.31	7.31	7.3	1.84	1.84	1.8	88.80	88.30	88.6	8.29	8.23	8.3	3.47	3.47	3.5	2.00	2
	10/12/2024	Suriny	15:20	0.50		0.25	22.60	22.60	22.0	7.31	7.31	7.3	1.84	1.84	1.0	88.80	88.30	00.0	8.29	8.23	0.3	3.47	3.47	3.5	2.00	-
	10/14/2024	Sunny	16:15	0.50		0.25	24.10	24.10	24.1	7.86	7.86	7.9	1.23	1.23	1.2	84.90	84.50	84.7	8.61	8.57	8.6	3.86	3.86	3.9	2.00	2
1414	10/14/2024	Sullily	16:20	0.50		0.25	24.10	24.10	24.1	7.86	7.86	1.5	1.23	1.23	1.2	84.90	84.50	04.7	8.61	8.57	0.0	3.86	3.86	3.5	2.00	2.
W1 Wang Tong River	10/16/2024	Sunny	16:30	0.50	Middle	0.25	25.40	25.40	25.4	7.41	7.41	7.4	1.04	1.04	1.0	81.90	81.40	81.7	7.33	7.27	7.3	4.30	4.32	4.2	2.00	2
(Major tributary)	10/10/2024	Sullily	16:35	0.50	ivildule	0.25	25.40	25.40	23.4	7.41	7.41	7.4	1.04	1.04	1.0	81.90	81.40	01.7	7.33	7.27	7.3	4.30	4.32	4.3	2.00	
(',' ',' ','	10/18/2024	Sunny / Cloudy	17:30	0.50		0.25	27.00	27.00	27.0	7.47	7.47	7.5	0.94	0.94	0.0	87.80	87.20	87.5	8.03	7.98	8.0	7.12	6.97	7.0	3.70	4
	10/10/2024	Suriny / Cloudy	17:35	0.50		0.25	27.00	27.00	21.0	7.47	7.47	7.5	0.94	0.94	0.5	87.80	87.20	67.5	8.03	7.98	0.0	7.12	6.97	7.0	4.80	4
	10/21/2024	Sunny	9:00	0.50		0.25	26.50	26.50	26.5	7.58	7.58	7.6	0.92	0.92	3.8	89.00	88.50	88.8	8.31	8.23	0.2	5.10	5.00	5.1	2.60	3
	10/21/2024	Guilly	9:05	0.50		0.25	26.50	26.50	20.0	7.58	7.58	7.0	0.92	12.51	5.0	89.00	88.50	00.0	8.31	8.23	0.0	5.10	5.00	5.1	4.00	
	10/23/2024	Sunny	12:15	0.50		0.25	24.10	24.10	24.1	7.30	7.30	7.3	1.58	1.58	16	93.60	93.00	93.3	8.77	8.71	8.7	1.74	1.74	17	2.00	2.
	10/23/2024	Sullily	12:20	0.50		0.25	24.10	24.10	24.1	7.30	7.30	7.3	1.58	1.58	1.0	93.60	93.00	33.3	8.77	8.71	0.7	1.74	1.74	1.7	2.00	
	10/25/2024	Sunny	13:00	0.50		0.25	25.20	25.20	25.2	7.64	7.64	76	2.70	2.70	2.7	92.90	92.50	92.7	8.97	8.92	8.9	1.01	1.01	1.0	2.80	3
	10/23/2024	Guilly	13:05	0.50		0.25	25.20	25.20	20.2	7.64	7.64	7.0	2.70	2.70	2.7	92.90	92.50	32.7	8.97	8.92	0.5	1.01	1.01	1.0	3.10	J
	10/28/2024	Sunny / Cloudy	15:30	0.50		0.25	24.30	24.30	24.3	8.02	8.02	8.0	0.83	0.83	0.8	94.30	93.70	94.0	8.72	8.62	8.7	0.13	0.13	0.1	4.50	5
	10/20/2024	Guilly / Cloudy	15:35	0.50		0.25	24.30	24.30	24.3	8.02	8.02	6.0	0.83	0.83	0.0	94.30	93.70	34.0	8.72	8.62	0.7	0.13	0.13	0.1	5.70	,
	10/30/2024	Sunny	16:00	0.50		0.25	24.00	24.00	24.0	7.32	7.32	73	5.39	5.39	5.4	82.30	81.70	82.0	7.48	7.40	7.4	0.57	0.57	0.6	2.30	2
	10/00/2024	Guilly	16:05	0.50	ĺ	0.25	24.00	24.00	24.0	7.32	7.32	7.3	5.39	5.39	3.4	82.30	81.70	02.0	7.48	7.40	7.4	0.57	0.57	0.0	2.20	_

Water Quality Monitoring at Station W2 (Middle) - Ebb Tide

	Complian		Sampling	Water	Camaliaa	Sampling	Te	mperature	е	p	Н			Salinity		DO Satur	ation	D)	Turbid	ity	S	SS
Station Reference	Sampling Date	Weather	Time	Depth	Sampling Level	Depth		°C			-			ppt		%		mg	/L	NTU		mg	g/L
	Date			m	2010.	m	Valu	ie	Average	Value	Av	verage	Valu	ie	Average	Value	Average	Value	Average	Value	Average	Value	Average
	10/2/2024	Sunny	11:30	0.50		0.25	22.50	22.50	22.5	7.48	7.48	7.5	5.10	5.10	5.1	81.60 81.3	81.4	7.95	7.90 7.9	5.53 5.	5.5	4.50	4.4
	10/2/2024	Odiniy	11:35	0.50		0.25	22.50	22.50	22.0	7.48	7.48	7.5	5.10	5.10	5.1	81.60 81.	20	7.95	7.90	5.53 5.	53	4.20	7.7
	10/4/2024	Sunny	7:00	0.50		0.25	23.60	23.60	23.6		7.31	73	4.46	4.46	4.5	89.60 89.	89.4		7.94 8.0	4.46 4.	46 4.5	2.10	3.8
	10/4/2024	Curiny	7:05	0.50		0.25	23.60	23.60	20.0		7.31	7.5	4.46	4.46	4.0	89.60 89.	0		7.94		46	5.40	5.0
	10/7/2024	Sunny	13:30	0.50		0.25	24.20	24.20	24.2		7.78	7.8	0.70	0.70	0.7	89.40 89.			8.1	7.84 7.		6.40	6.1
	10/1/2021	Guiniy	13:35	0.50		0.25	24.20	24.20	21.2		7.78	7.0	0.70	0.70	0.7	89.40 89.	0		3.02	7.84 7.	84	5.70	U
	10/9/2024	Cloudy / Sunny	7:00	0.50		0.25	22.20	22.20	22.2		7.13	71	1.76	1.76	1.8	88.60 88.	88.3		7.90	4.90 4.	90 49	3.30	3.2
	10/0/2021	oloddy / odilliy	7:05	0.50		0.25	22.20	22.20	LLIL		7.13	***	1.76	1.76		88.60 88.	00		7.90		90	3.10	0.2
	10/12/2024	Sunny	7:15	0.50		0.25	22.30	22.30	22.3		7.18	7.2	4.09	4.09	4.1	88.00 87.	87.8		8.1	5.37 5.	5.4	2.00	2.0
		,	7:20	0.50		0.25	22.30	22.30			7.18		4.09	4.09		88.00 87.	50	8.10	3.05	5.37 5.		2.00	لــــــــا
	10/14/2024	Sunny	9:15	0.50		0.25	24.30	24.30	24.3		7.46	7.5	1.41	1.41	1.4	88.90 88.	88.7		8.10	4.27 4.	43	3.60	4.1
W2		,	9:20	0.50		0.25	24.30	24.30			7.46		1.41	1.41		88.90 88.	10		3.10		27	4.60	
Wang Tong River	10/16/2024	Sunny	11:00	0.50	Middle	0.25	25.50	25.50	25.5		7.30	7.3	2.35	2.35	2.4	84.40 83.			7.20	5.40 4.		4.20	3.8
(Major tributary)		,	11:05	0.50		0.25	25.50	25.50			7.30		2.35	2.35		84.40 83.	30		7.20		98	3.40	
	10/18/2024	Sunny / Cloudy	11:45	0.50		0.25	27.80	27.80	27.8		7.52	7.5	1.79	1.79	1.8	80.50 80.	80.3		7.62	7.17 7.	72	7.10	7.2
			11:50	0.50		0.25	27.80	27.80			7.52		1.79	1.79		80.50 80.			7.62	7.17 7.		7.30	$oldsymbol{oldsymbol{}}$
	10/21/2024	Sunny	14:15	0.50		0.25	28.00	28.00	28.0		7.45	7.5	1.77	1.77	1.8	90.80 90.:			7.98	4.33 4.		3.50	4.2
			14:20	0.50		0.25	28.00	28.00			7.45		1.77	1.77		90.80 90.:			7.98		43	4.80	-
	10/23/2024	Sunny	6:45	0.50		0.25	23.70	23.70	23.7		7.17	7.2	4.91	4.91	4.9	90.10 89.			8.1		1.1	2.40	2.4
			6:50	0.50		0.25	23.70	23.70			7.17		4.91	4.91		90.10 89.	_		3.04		13	2.40	$oldsymbol{oldsymbol{}}$
	10/25/2024	Sunny	7:00	0.50		0.25	25.50	25.50	25.5		7.35	7.4	6.14	6.14	6.1	91.70 91.	91.4		8.59	2.39 2.	2.4	3.80	3.8
			7:05	0.50		0.25	25.50	25.50			7.35		6.14	6.14		91.70 91.			3.59	2.39 2.	_	3.80	-
	10/28/2024	Sunny / Cloudy	9:30	0.50		0.25	24.80	24.80	24.8	7.58	7.58	7.6	1.04	1.04	1.0	91.90 91.	91.7		8.4	0.93 0.		3.50	4.1
			9:35	0.50		0.25	24.80	24.80		7.58	7.58		1.04	1.04		91.90 91.			3.40		93	4.60	
	10/30/2024	Sunny	10:45	0.50		0.25	23.90	23.90	23.9	7.48	7.48	7.5	9.23	9.23	9.2	91.00 90.			8.1		1.0	2.80	2.6
		· ·	10:50	0.50	1	0.25	23.90	23.90		7.48	7.48		9.23	9.23		91.00 90.	50	8.11	3.07	1.01 1.	01	2.40	1 1

Remarks:

Water Quality Monitoring at Station W2 (Middle) - Flood Tide

	0 1'		0 1"	Water	0	Sampling	Te	emperatur	re		pН			Salinity		DO	Saturation	on		DO			Turbidity		S	SS
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Sampling Depth	Depth		°C			-			ppt			%			mg/L			NTU		m	g/L
	Date		Tille	m	Берит	m	Val	ue	Average	Valu	ıe	Average	Valu	ie	Average	Valu	e	Average	Value	е	Average	Val	ue	Average	Value	Average
	10/2/2024	Sunny	17:30	0.50		0.25	22.50	22.50	22.5	7.70	7.70	7.7	8.90	8.90	8.9	87.90	87.10	87.5	7.95	7.91	7.9	5.17	5.17	5.2	3.60	3.5
	10/2/2024	Suriny	17:35	0.50		0.25	22.50	22.50	22.5	7.70	7.70	7.7	8.90	8.90	0.9	87.90	87.10	67.5	7.95	7.91	7.9	5.17	5.17	5.2	3.40	3.5
	10/4/2024	Sunny	12:30	0.50		0.25	23.70	23.70	23.7	7.41	7.41	7.4	5.01	5.01	5.0	85.60	85.00	85.3	7.98	7.94	8.0	7.13	7.13	7.1	3.10	3.3
	10/4/2024	Guilly	12:35	0.50		0.25	23.70	23.70	20.7	7.41	7.41	7.5	5.01	5.01	5.0	85.60	85.00	00.0	7.98	7.94	0.0	7.13	7.13	7.1	3.50	0.0
	10/7/2024	Sunny	9:00	0.50		0.25	24.10	24.10	24.1	7.60	7.60	7.6	1.02	1.02	1.0	91.10	90.80	91.0	8.04	7.98	8.0	8.88	8.88	8.9	10.70	9.9
	10///2021	Guiniy	9:05	0.50		0.25	24.10	24.10	2	7.60	7.60	7.0	1.02	1.02	1.0	91.10	90.80	01.0	8.04	7.98	0.0	8.88	8.88	0.0	9.10	0.0
	10/9/2024	Cloudy / Sunny	15:45	0.50		0.25	21.80	21.80	21.8	7.27	7.27	7.3	1.13	1.13	1.1	87.80	87.30	87.6	8.34	8.29	8.3	4.68	4.68	4.7	3.00	3.0
		,	15:50	0.50		0.25	21.80	21.80		7.27	7.27		1.13	1.13		87.80	87.30		8.34	8.29		4.68	4.68		3.00	
	10/12/2024	Sunny	15:30	0.50		0.25	23.80	23.80	23.8	7.51	7.51	7.5	1.45	1.45	1.5	89.50	89.10	89.3	8.41	8.36	8.4	5.52	5.52	5.5	4.60	4.0
		,	15:35	0.50		0.25	23.80	23.80		7.51	7.51		1.45	1.45		89.50	89.10		8.41	8.36	***	5.52	5.52		3.40	
	10/14/2024	Sunny	16:30	0.50		0.25	24.80	24.80	24.8	7.68	7.68	7.7	2.27	2.27	2.3	85.10	84.70	84.9	8.11	8.08	8.1	8.82	8.82	8.8	9.50	7.8
W2		,	16:35	0.50		0.25	24.80	24.80		7.68	7.68		2.27	2.27		85.10	84.70		8.11	8.08		8.82	8.82		6.10	
Wang Tong River	10/16/2024	Sunny	16:45	0.50	Middle	0.25	26.80	26.80	26.8	7.40	7.40	7.4	1.59	1.59	1.6	81.50	80.80	81.2	7.17	7.12	7.1	5.93	5.62	5.8	5.50	5.3
(Major tributary)		-	16:50	0.50		0.25	26.80	26.80		7.40	7.40		1.59	1.59		81.50	80.80		7.17	7.12		5.93	5.62		5.00	
	10/18/2024	Sunny / Cloudy	17:45	0.50		0.25	27.30	27.30	27.3	7.43	7.43	7.4	0.94	0.94	0.9	83.10	82.70	82.9	7.72	7.68	7.7	5.14	5.14	5.1	3.60	3.6
			17:50 9:15	0.50		0.25	27.30 29.00	27.30		7.43 7.49	7.43		0.94 6.12	0.94 6.12		83.10 83.60	82.70 83.00		7.72	7.68		5.14 0.35	5.14		3.50	
	10/21/2024	Sunny	9:15	0.50		0.25	29.00	29.00	29.0	7.49	7.49 7.49	7.5	6.12	6.12	6.1	83.60	83.00	83.3	7.88 7.88	7.82	7.9	0.35	0.49	0.4	7.50 8.10	7.8
			12:30	0.50		0.25	25.10	25.10		7.49	7.49		3.92	3.92		91.00	90.50		8.37	8.30		3.49	3.49		5.00	
	10/23/2024	Sunny	12:35	0.50		0.25	25.10	25.10	25.1	7.35	7.35	7.4	3.92	3.92	3.9	91.00	90.50	90.8	8.37	8.30	8.3	3.49	3.49	3.5	4.40	4.7
			13:15	0.50	ł	0.25	25.70	25.70		7.51	7.51		7.09	7.09	-	90.50	90.00		8.62	8.57		2.59	2.59		5.20	—
	10/25/2024	Sunny	13:20	0.50		0.25	25.70	25.70	25.7	7.51	7.51	7.5	7.09	7.09	7.1	90.50	90.00	90.3	8.62	8.57	8.6	2.59	2.59	2.6	4.30	4.8
			15:45	0.50	1	0.25	24.70	24.70		7.61	7.61		2.85	2.85		95.00	94.50		8.89	8.84		2.75	2.75		5.70	
	10/28/2024	Sunny / Cloudy	15:50	0.50	1	0.25	24.70	24.70	24.7	7.61	7.61	7.6	2.85	2.85	2.9	95.00	94.50	94.8	8.89	8.84	8.9	2.75	2.75	2.8	5.20	5.5
	10/00/0001		16:15	0.50	1	0.25	25.00	25.00		7.34	7.34		6.43	6.43		81.70	81.10		7.34	7.28	= 0	1 50	1.59		4.00	
	10/30/2024	Sunny	16:20	0.50	1	0.25	25.00	25.00	25.0	7.34	7.34	7.3	6.43	6.43	6.4	81.70	81.10	81.4	7.34	7.28	7.3	1.59	1.59	1.6	4.30	4.2

Water Quality Monitoring at Station W4 (Middle) - Ebb Tide

	Camalian		Sampling	Water	Camaliaa	Sampling	Te	emperatur	е		рН			Salinity		DO Satura	tion		DO		Turbidity		S	SS
Station Reference	Sampling Date	Weather	Time	Depth	Sampling Level	Depth		°C			-			ppt		%			mg/L		NTU		mg	g/L
	Date		111110	m	LCVCI	m	Valu	ie	Average	Value		Average	Valu	ie	Average	Value	Average	Value	Aver	ge Va	lue	Average	Value	Average
	10/2/2024	Sunny	11:45	0.50		0.25	23.90	23.90	23.9	7.79	7.79	7.0	27.55	27.55	27.6	81.70 81.3	81.5	7.65	7.60	19.97	19.97	20.0	39.50	38.2
	10/2/2024	Suriny	11:50	0.50		0.25	23.90	23.90	23.5	7.79	7.79	7.0	27.55	27.55	27.0	81.70 81.3	0 01.5	7.65	7.60	19.97	19.97	20.0	36.90	30.2
	10/4/2024	Sunny	7:15	0.50		0.25	24.60	24.60	24.6	7.61	7.61	76	9.45	9.45	9.5	84.30 83.9	84.1	7.96	7.91	14.42	14.42	14.4	17.40	17.1
	10/4/2024	Odiniy	7:20	0.50		0.25	24.60	24.60	24.0	7.61	7.61	7.0	9.45	9.45	3.5	84.30 83.9	0	7.96	7.91	14.42	14.42		16.70	
	10/7/2024	Sunny	13:45	0.50		0.25	24.80	24.80	24.8	7.69	7.69	77	1.16	1.16	1.2	89.90 89.3	896	8.08	8.03	11.24	11.24	112	10.20	10.9
	10///2021	Cumy	13:50	0.50		0.25	24.80	24.80	20	7.69	7.69		1.16	1.16		89.90 89.3	0 00.0	8.08	8.03	11.24	11.24		11.60	
	10/9/2024	Cloudy / Sunny	7:15	0.50		0.25	22.20	22.20	22.2	7.21	7.21	7.2	2.49	2.49	2.5	86.60 86.0		7.91	7.87	7.84	7.84		5.60	5.4
	10/0/2021	Gloddy / Garrily	7:20	0.50		0.25	22.20	22.20	LLIL	7.21	7.21		2.49	2.49	2.0	86.60 86.0	0	7.91	7.87	7.84	7.84	7.0	5.20	
	10/12/2024	Sunny	7:30	0.50		0.25	21.90	21.90	21.9	7.40	7.40	7.4	2.85	2.85	2.9	84.20 83.7		8.00	7.96	6.02	6.02		3.70	3.6
		,	7:35	0.50		0.25	21.90	21.90		7.40	7.40		2.85	2.85		84.20 83.7	0	8.00	7.96	6.02	6.02		3.40	
	10/14/2024	Sunny	9:30	0.50		0.25	25.10	25.10	25.1	7.96	7.96	8.0	2.67	2.67	2.7	89.00 88.7		8.28	8.22	9.10	9.10	91	8.20	7.9
W4		, ,	9:35	0.50		0.25	25.10	25.10		7.96	7.96		2.67	2.67		89.00 88.7		8.28	8.22	9.10	9.10		7.60	<u> </u>
Wang Tong River	10/16/2024	Sunny	11:15	0.50	Middle	0.25	25.70	25.70	25.7	7.30	7.30	7.3	3.21	3.21	3.2	86.70 86.2	86.5	7.69	7.63	6.50	6.41	6.5	2.20	2.7
(Minor tributary to Tai Wai Yuen)			11:20	0.50		0.25	25.70	25.70		7.30	7.30		3.21	3.21		86.70 86.2		7.69	7.63	6.50	6.41		3.10	——
vvai rucii)	10/18/2024	Sunny / Cloudy	12:00	0.50		0.25	28.40	28.40	28.4	7.61	7.61	7.6	1.90	1.90	1.9	79.70 79.3		7.50	7.46	5.69	5.68	5.7	9.30	9.7
			12:05	0.50		0.25	28.40	28.40		7.61	7.61		1.90	1.90		79.70 79.3		7.50	7.46	5.69	5.68		10.00	
	10/21/2024	Sunny	14:30 14:35	0.50		0.25	29.10 29.10	29.10 29.10	29.1	7.64 7.64	7.64	7.6	4.82 4.82	4.82 4.82	4.8	89.70 89.3 89.70 89.3		7.95 7.95	7.88 7.9	3.26	3.33		11.20 10.90	11.1
			7:00	0.50		0.25	23.40	23.40		7.64	7.64		4.82	4.82		89.70 89.3 86.90 86.2		8.00	7.88	0.83	0.83		2.30	\vdash
	10/23/2024	Sunny	7:00	0.50		0.25	23.40	23.40	23.4	7.29	7.29	7.3	4.91	4.91	4.9	86.90 86.2 86.90 86.2		8.00	7.94 8.0	0.83	0.83	- 08	2.30	2.4
			7:15	0.50		0.25	26.40	26.40		7.63	7.63		7.68	7.68		89.90 89.4		8.40	8.34	3.04	3.04		4.90	\vdash
	10/25/2024	Sunny	7:15	0.50		0.25	26.40	26.40	26.4	7.63	7.63	7.6	7.68	7.68	7.7	89.90 89.4		8.40	8.34 8.4	3.04	3.04	3.0	4.80	4.9
			9:45	0.50		0.25	25.00	25.00		7.63	7.63		4.05	4.05		89.60 89.0	n	8.31	8.26	6.19	6.19		11.50	
	10/28/2024	Sunny / Cloudy	9:50	0.50		0.25	25.00	25.00	25.0	7.63	7.63	7.6	4.05	4.05	4.1	89.60 89.0		8.31	8.26 8.3	6.19	6.19	6.2	12.80	12.2
		1	11:00	0.50		0.25	24.30	24.30		7.61	7.61		15.49	15.49		89.90 89.5	n	7.99	7 92	1.12	1.12		4.10	—
	10/30/2024	Sunny	11:05	0.50		0.25	24.30	24.30	24.3	7.61	7.61	7.6	15.49	15.49	15.5	89.90 89.5		7.99	7.92 8.0	1.12	1.12		3.10	3.6

Remarks:

Water Quality Monitoring at Station W4 (Middle) - Flood Tide

	Sampling		Sampling	Water	Sampling	Sampling	Tem	nperature			pН			Salinity		DO	Saturatio	n		0	Т	urbidity		S	SS
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Depth	Depth		°C			-			ppt			%		m	g/L		NTU		m	g/L
	Date		Tillie	m	Deptil	m	Value	e A	Average	Valu	е	Average	Val	ue	Average	Valu	ie	Average	Value	Averag	e Value	9	Average	Value	Average
	10/2/2024	Sunny	17:45	0.50		0.25	22.40	22.40	22.4	7.87	7.87	7.9	10.28	10.28	10.3	88.40	87.90	88.2	7.85	7.80	6.69	6.69	6.7	5.70	5.5
	10/2/2024	Suriny	17:50	0.50		0.25	22.40	22.40	22.4	7.87	7.87	7.9	10.28	10.28	10.3	88.40	87.90	00.2	7.85	7.80	6.69	6.69	0.7	5.20	5.0
	10/4/2024	Sunny	12:45	0.50		0.25	23.90	23.90	23.9	7.35	7.35	7.4	5.68	5.68	5.7	84.90	84.50	84.7	7.97	7.92	6.90	6.90	6.9	6.60	5.7
	10/4/2024	Outility	12:50	0.50		0.25	23.90	23.90	20.5	7.35	7.35	74	5.68	5.68	5.7	84.90	84.50	04.7	7.97	7.92	6.90	6.90	0.5	3.60	5.
	10/7/2024	Sunny	9:15	0.50		0.25	25.60	25.60	25.6	7.83	7.83	7.8	1.61	1.61	1.6	89.60	89.20	89.4	8.00	7.96	7.25	7.25	7.3	13.50	13.4
	10/1/2024	Outility	9:20	0.50	J	0.25	25.60	25.60	20.0	7.83	7.83	7.0	1.61	1.61	1.0	89.60	89.20	03.4	8.00	7.96	7.25	7.25	7.5	13.20	10
	10/9/2024	Cloudy / Sunny	16:00	0.50		0.25	21.90	21.90	21.9	7.30	7.30	7.3	1.61	1.61	1.6	87.40	87.00	87.2	8.31	8.27	6.94	6.94	6.9	4.00	5.4
	10/0/2021	Cioday / Cariny	16:05	0.50	J	0.25	21.90	21.90	21.0	7.30	7.30	7.0	1.61	1.61	1.0	87.40	87.00	07.2	8.31	8.27	6.94	6.94	0.0	6.80	0.
	10/12/2024	Sunny	15:45	0.50		0.25	25.30	25.30	25.3	7.65	7.65	7.7	2.13	2.13	2.1	84.50	84.00	84.3	8.16	8.10	4.69	4.69	4.7	8.40	8.6
	10/12/2021	Curry	15:50	0.50		0.25	25.30	25.30	20.0	7.65	7.65		2.13	2.13	2	84.50	84.00	01.0	8.16	8.10	4.69	4.69		8.80	0.0
	10/14/2024	Sunny	16:45	0.50		0.25	25.20	25.20	25.2	7.81	7.81	7.8	2.51	2.51	2.5	87.70	87.30	87.5	7.89	7.85	9.62	9.62	9.6	6.50	6.9
W4			16:50	0.50		0.25	25.20	25.20		7.81	7.81		2.51	2.51		87.70	87.30		7.89	7.85	9.62	9.62		7.30	
Wang Tong River	10/16/2024	Sunny	17:00	0.50	Middle	0.25	27.60	27.60	27.6	7.56	7.56	7.6	2.60	2.60	2.6	82.20	81.80	82.0	7.19	7.14	2 4.21	4.22	4.2	5.40	5.5
(Minor tributary to Tai Wai Yuen)		,	17:05	0.50		0.25	27.60	27.60		7.56	7.56		2.60	2.60		82.20	81.80		7.19	7.14	4.21	4.22		5.50	
wai ruen)	10/18/2024	Sunny / Cloudy	18:00	0.50		0.25	27.40	27.40	27.4	7.47	7.47	7.5	1.04	1.04	1.0	85.00	84.50	84.8	7.88	7.82		3.12	3.1	2.90	3.0
			18:05	0.50	ł l	0.25	27.40	27.40		7.47	7.47		1.04	1.04		85.00	84.50		7.88	7.82	3.13	3.12		3.10	<u> </u>
	10/21/2024	Sunny	9:30	0.50	ł I	0.25	29.20	29.20	29.2	7.51	7.51	7.5	3.53	3.53	3.5	84.90	84.20	84.6	8.12	8.07	1 3.12	3.18	3.2	7.00	7.4
-			9:35	0.50	1	0.25	29.20	29.20		7.51	7.51		3.53	3.53		84.90	84.20		8.12	8.07	3.12	3.18		7.80	
	10/23/2024	Sunny	12:45	0.50		0.25	25.70	25.70	25.7	7.50	7.50	7.5	5.47	5.47	5.5	90.00	89.50	89.8	8.31	8.25 8.25	3 4.13	4.13	4.1	7.80	7.7
-			12:50 13:30	0.50		0.25	25.70 26.00	25.70 26.00		7.50	7.50		5.47	5.47		90.00 85.60	89.50		8.31		4.13	4.13		7.60 4.70	
	10/25/2024	Sunny	13:30	0.50		0.25 0.25	26.00	26.00	26.0	7.61 7.61	7.61 7.61	7.6	7.08	7.08	7.1	85.60	85.10 85.10	85.4	8.38 8.38	8.32 8.32	4 2.03	2.03	2.0	4.70	4.8
-			16:00	0.50		0.25	24.70	24.70		7.67	7.67		3.09	3.09	 	92.20	91.60		8.34	8.32	3.19	3.19		7.80	
	10/28/2024	Sunny / Cloudy	16:05	0.50		0.25	24.70	24.70	24.7	7.67	7.67	7.7	3.09	3.09	3.1	92.20	91.60	91.9	8.34	8.30	3.19	3.19	3.2	7.90	7.9
-			16:30	0.50		0.25	25.60	25.60		7.46	7.46		9.59	9.59	 	79.90	79.40		7.20	7.15 _	2.83	2.83		7.40	
	10/30/2024	Sunny	16:35	0.50	1	0.25	25.60	25.60	25.6	7.46	7.46	7.5	9.59	9.59	9.6	79.90	79.40	79.7	7.20	7.15	2 2.83	2.83	2.8	6.00	6.7



Water Quality Monitoring at Station W5 (Middle) - Ebb Tide

	Camalian		Camalian	Water	Camaliaa	Sampling	Te	mperatur	e		рН			Salinity		DO Satura	tion		DO	Turbio	lity	S	SS
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Sampling Level	Depth		°C			-			ppt		%			mg/L	NTU	J	mg	g/L
	Date		111110	m	LCVCI	m	Valu	ie	Average	Value		Average	Valu	ıe	Average	Value	Average	Value	Averag	Value	Average	Value	Average
	10/2/2024	Sunny	12:00	0.50		0.25	24.20	24.20	24.2	7.80	7.80	7.0	23.42	23.42	23.4	82.00 81.5	81.8	7.41	7.34 7.4	17.67 17	.67	33.40	31.7
	10/2/2024	Sullily	12:05	0.50		0.25	24.20	24.20	24.2	7.80	7.80	7.0	23.42	23.42	23.4	82.00 81.5	0 81.8	7.41	7.34	17.67 17	.67	30.00	31.7
	10/4/2024	Sunny	7:30	0.50		0.25	23.80	23.80	23.8	7.35	7.35	7.4	5.15	5.15	5.2	86.90 86.5	86.7	8.09	8.04 8.1	5.23 5	5.2	4.40	4.2
	10/4/2024	Guilly	7:35	0.50		0.25	23.80	23.80	20.0	7.35	7.35	7.4	5.15	5.15	3.2	86.90 86.5	0	8.09	8.04		.23	4.00	7.2
	10/7/2024	Sunny	14:00	0.50		0.25	25.30	25.30	25.3	7.65	7.65	77	1.17	1.17	1.2	88.70 88.2	88.5	7.99	7.93		.07	8.90	8.7
	10///2021	Cumy	14:05	0.50		0.25	25.30	25.30	20.0	7.65	7.65		1.17	1.17		88.70 88.2	0 00.0	7.99	7.93	9.07 9	.07	8.40	0.7
	10/9/2024	Cloudy / Sunny	7:30	0.50		0.25	22.20	22.20	22.2	7.15	7.15	7.2	2.60	2.60	2.6	87.40 86.9		7.94	7.89 7.9		.74	2.00	2.4
	10/0/2021	Gloddy / Garrily	7:35	0.50		0.25	22.20	22.20	LLIL	7.15	7.15		2.60	2.60	2.0	87.40 86.9	0	7.94	7.89		.74	2.80	
	10/12/2024	Sunny	7:45	0.50		0.25	22.00	22.00	22.0	7.26	7.26	7.3	4.49	4.49	4.5	85.10 84.7		8.02	7.98 8.0		.28 5.3	3.20	3.4
		,	7:50	0.50		0.25	22.00	22.00		7.26	7.26		4.49	4.49		85.10 84.7		8.02	7.98		.28	3.60	
	10/14/2024	Sunny	9:45	0.50		0.25	25.10	25.10	25.1	7.62	7.62	7.6	2.60	2.60	2.6	86.00 85.5		8.04	7.98		.15 9.2	6.70	6.7
W5		, ,	9:50	0.50		0.25	25.10	25.10		7.62	7.62		2.60	2.60		86.00 85.5		8.04	7.98		.15	6.60	
Silvermine Bay	10/16/2024	Sunny	11:30	0.50	Middle	0.25	26.00	26.00	26.0	7.42	7.42	7.4	7.65	7.65	7.7	81.30 80.8		7.37	7.29 7.3		.98 5.1	3.20	3.4
(Near Silvermine Bay Beach)			11:35	0.50		0.25	26.00	26.00		7.42	7.42		7.65	7.65		81.30 80.8		7.37	7.29		.98	3.50	
Deacii)	10/18/2024	Sunny / Cloudy	12:15	0.50		0.25	28.30	28.30	28.3	7.58	7.58	7.6	4.55	4.55	4.6	78.60 78.1		7.40	7.36		.12 6.1	7.40	7.9
			12:20	0.50		0.25	28.30	28.30		7.58	7.58		4.55	4.55		78.60 78.1		7.40	7.36		.12	8.40	
	10/21/2024	Sunny	14:45 14:50	0.50		0.25 0.25	28.90 28.90	28.90 28.90	28.9	7.44 7.44	7.44	7.4	11.18	11.18 11.18	11.2	83.80 83.1 83.80 83.1		7.73 7.73	7.67 7.7		7.1	11.50	10.8
			7:15	0.50		0.25	23.60	28.90		7.44			11.18 7.12	7.12		85.80 83.1 85.10 84.6		7.73	7.79		_	2.50	
	10/23/2024	Sunny	7:15	0.50		0.25	23.60	23.60	23.6	7.15	7.15	7.2	7.12	7.12	7.1	85.10 84.6 85.10 84.6	849	7.84	7.79 7.8		.01 1.0	2.50	2.6
			7:30	0.50		0.25	26.20	26.20		7.15	7.15		7.12	7.12		87.90 87.3		8.22	8.17		.88	6.00	
	10/25/2024	Sunny	7:35	0.50		0.25	26.20	26.20	26.2	7.52	7.52	7.5	7.52	7.52	7.5	87.90 87.3 87.90 87.3		8.22	8.17		.88 2.9	5.10	5.6
		1	10:00	0.50		0.25	24.80	24.80		7.52	7.59		2.26	2.26		84.90 84.3		8.11	8.06		.28	4.70	
	10/28/2024	Sunny / Cloudy	10:05	0.50		0.25	24.80	24.80	24.8	7.59	7.59	7.6	2.26	2.26	2.3	84.90 84.3		8.11	8.06		.28 2.3	3.10	3.9
		1	11:15	0.50		0.25	24.30	24.30		7.49	7.49		3.91	3.91		87.90 87.5	n	7.97	7 91		.64	2.70	\vdash
	10/30/2024	Sunny	11:20	0.50	1	0.25	24.30	24.30	24.3	7.49	7.49	7.5	3.91	3.91	3.9	87.90 87.5		7.97	7.91 7.9		.64 0.6	2.60	2.7

Remarks:

Water Quality Monitoring at Station W5 (Middle) - Flood Tide

	0		0	Water	0	Sampling	T	emperatur	·e		pН			Salinity		DO	Saturation	on		DO			Turbidity		S	SS
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Sampling Depth	Depth		°C			-			ppt			%			mg/L			NTU		m	ıg/L
	Date		Tillic	m	Борит	m	Val	ue	Average	Valu	ıe	Average	Valu	ıe	Average	Valu	ie	Average	Value	е	Average	Valu	ıe	Average	Value	Average
	10/2/2024	Sunny	18:00	0.50		0.25	22.30	22.30	22.3	7.94	7.94	7.9	14.81	14.81	14.8	86.80	86.30	86.6	7.78	7.74	7.8	12.24	12.24	12.2	22.40	21.7
	10/2/2024	Suring	18:05	0.50		0.25	22.30	22.30	22.3	7.94	7.94	7.5	14.81	14.81	14.0	86.80	86.30	00.0	7.78	7.74	7.0	12.24	12.24	12.2	21.00	21.7
	10/4/2024	Sunny	13:00	0.50		0.25	24.20	24.20	24.2	7.55	7.55	7.6	11.24	11.24	11.2	81.10	80.60	80.9	7.26	7.20	7.2	7.46	7.46	7.5	8.80	7.9
	10/4/2024	Outlify	13:05	0.50		0.25	24.20	24.20	24.2	7.55	7.55	7.0	11.24	11.24	11.2	81.10	80.60	00.5	7.26	7.20	7.2	7.46	7.46	7.5	7.00	7.5
	10/7/2024	Sunny	9:30	0.50		0.25	25.50	25.50	25.5	7.69	7.69	7.7	2.64	2.64	2.6	86.20	85.70	86.0	7.89	7.84	7.9	12.07	12.07	12.1	11.20	11.2
	10/1/2024	Outlify	9:35	0.50		0.25	25.50	25.50	20.0	7.69	7.69	7.7	2.64	2.64	2.0	86.20	85.70	00.0	7.89	7.84	7.5	12.07	12.07	12.1	11.10	11.2
	10/9/2024	Cloudy / Sunny	16:15	0.50		0.25	22.10	22.10	22.1	7.26	7.26	7.3	2.95	2.95	3.0	84.40	84.00	84.2	8.20	8.14	8.2	7.62	7.62	7.6	5.60	5.9
		,	16:20	0.50		0.25	22.10	22.10		7.26	7.26		2.95	2.95		84.40	84.00		8.20	8.14		7.62	7.62		6.10	
	10/12/2024	Sunny	16:00	0.50		0.25	25.10	25.10	25.1	7.68	7.68	7.7	2.40	2.40	2.4	85.10	84.70	84.9	8.21	8.17	8.2	12.48	12.48	12.5	8.60	8.1
			16:05	0.50		0.25	25.10	25.10		7.68	7.68		2.40	2.40		85.10	84.70		8.21	8.17		12.48	12.48		7.60	
	10/14/2024	Sunny	17:00	0.50		0.25	25.10	25.10	25.1	7.76	7.76	7.8	3.33	3.33	3.3	83.70	83.30	83.5	7.70	7.65	7.7	12.01	12.01	12.0	7.80	6.2
W5			17:05	0.50		0.25	25.10	25.10		7.76	7.76		3.33	3.33		83.70	83.30		7.70	7.65		12.01	12.01		4.50	
Silvermine Bay	10/16/2024	Sunny	17:15	0.50	Middle	0.25	27.50	27.50	27.5	7.55	7.55	7.6	4.37	4.37	4.4	81.00	80.40	80.7	7.16	7.10	7.1	5.60	5.68	5.6	6.80	7.1
(Near Silvermine Bay Beach)		-	17:20	0.50	ł	0.25	27.50	27.50		7.55	7.55		4.37	4.37		81.00	80.40		7.16	7.10		5.60	5.68		7.40	
Deacily	10/18/2024	Sunny / Cloudy	18:15	0.50		0.25	28.00	28.00	28.0	7.51	7.51	7.5	3.21	3.21	3.2	81.80	81.10	81.5	7.28	7.23	7.3	4.18	4.19	4.2	6.30	6.2
			18:20	0.50		0.25	28.00	28.00		7.51	7.51		3.21	3.21		81.80	81.10		7.28	7.23		4.18	4.19		6.00	
	10/21/2024	Sunny	9:45	0.50		0.25	29.10	29.10 29.10	29.1	7.45 7.45	7.45 7.45	7.5	2.73	2.73	2.7	84.00 84.00	83.50 83.50	83.8	7.97 7.97	7.97 7.97	8.0	6.03	6.03	6.0	5.00	5.7
			9:50 13:00	0.50		0.25	29.10 25.10	25.10		7.45	7.45		4.86	4.86	-	88.10	83.50		8.14	8.07		2.97	6.03 2.97		6.40	-
	10/23/2024	Sunny	13:05	0.50		0.25	25.10	25.10	25.1	7.51	7.51	7.5	4.86	4.86	4.9	88.10	87.60	87.9	8.14	8.07	8.1	2.97	2.97	3.0	4.40	4.2
			13:05	0.50		0.25	25.10	25.10		7.51	7.83		9.02	9.02	-	81.70	81.00		8.14	8.07		2.53	2.53		5.50	├── ┦
	10/25/2024	Sunny	13:50	0.50		0.25	25.90	25.90	25.9	7.83	7.83	7.8	9.02	9.02	9.0	81.70	81.00	81.4	8.17	8.09	8.1	2.53	2.53	2.5	5.00	5.3
			16:15	0.50	1	0.25	24.60	24.60		7.59	7.59		3.30	3.30		90.70	90.10		8.16	8.10		2.54	2.54		7.50	
	10/28/2024	Sunny / Cloudy	16:20	0.50	1	0.25	24.60	24.60	24.6	7.59	7.59	7.6	3.30	3.30	3.3	90.70	90.10	90.4	8.16	8.10	8.1	2.54	2.54	2.5	6.20	6.9
			16:45	0.50	1	0.25	25.70	25.70	1	7.54	7.54		12.13	12.13		79.10	78.60		7.10	7.02		2.09	2.09		5.00	
	10/30/2024	Sunny	16:50	0.50	1	0.25	25.70	25.70	25.7	7.54	7.54	7.5	12.13	12.13	12.1	79.10	78.60	78.9	7.10	7.02	7.1	2.09	2.09	2.1	4.70	4.9

Water Quality Monitoring at Station W6 (Middle) - Ebb Tide

	0		0	Water	0 1"	Sampling	Ter	mperature	,	р	Н			Salinity		DO Satura	tion		DO		Т	urbidity		S	ss
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Sampling Level	Depth		°C			-			ppt		%			mg/L			NTU		mg	g/L
	Date		Time	m	LCVCI	m	Value	e i	Average	Value	A۱	verage	Valu	ie	Average	Value	Average	Value	. Α	Average	Value	9	Average	Value	Average
	10/2/2024	Sunny	12:15	1.90		0.95	24.20	24.20	24.2	8.06	8.06	8.1	32.09	32.09	32.1	75.60 75.0	75.3	6.12	6.02	6.1	10.94	10.94	10.9	14.70	15.0
	10/2/2024	Suriny	12:20	1.90		0.95	24.20	24.20	24.2	8.06	8.06	0.1	32.09	32.09	32.1	75.60 75.0	0 75.5	6.12	6.02	0.1	10.94	10.94	10.5	15.30	13.0
	10/4/2024	Sunny	7:45	1.90		0.95	25.70	25.70	25.7	8.04	8.04	8.0	32.44	32.44	32.4	80.00 79.2	79.6	6.20	6.15	6.2	3.52	3.52	3.5	7.20	8.3
	10/4/2024	Guilly	7:50	1.90		0.95	25.70	25.70	20.7		8.04	0.0	32.44	32.44	32. 1	80.00 79.2	0	6.20	6.15	0.2	3.52	3.52	0.0	9.40	0.0
	10/7/2024	Sunny	14:15	1.70		0.85	26.40	26.40	26.4		8.00	8.0	33.04	33.04	33.0	79.30 78.8	79.1	5.97	5.97	6.0	7.41	7.41	7.4	7.90	7.2
	10///2021	Guiniy	14:20	1.70		0.85	26.40	26.40	20.1	8.00	8.00	0.0	33.04	33.04	00.0	79.30 78.8	0	5.97	5.97	0.0	7.41	7.41		6.40	
	10/9/2024	Cloudy / Sunny	7:45	1.60		0.80	23.90	23.90	23.9		7.96	8.0	32.82	32.82	32.8	75.70 75.2		6.13	6.08	6.1	7.76	7.76	7.8	7.50	7.7
	10/0/2021	oloddy / Callify	7:50	1.60		0.80	23.90	23.90	20.0		7.96	0.0	32.82	32.82	02.0	75.70 75.2	0	6.13	6.08	0.1	7.76	7.76	7.0	7.80	
	10/12/2024	Sunny	8:00	1.90		0.95	24.60	24.60	24.6		7.96	8.0	32.15	32.15	32.2	81.60 81.0		6.12	6.09	6.1	5.60	5.60	5.6	7.70	7.8
		,	8:05	1.90		0.95	24.60	24.60			7.96	0.0	32.15	32.15		81.60 81.0	0	6.12	6.09	***	5.60	5.60	***	7.90	
	10/14/2024	Sunny	10:00	2.00		1.00	24.40	24.40	24.4		8.01	8.0	33.05	33.05	33.1	83.00 82.6		7.08	7.02	7.1	2.95	2.95	3.0	7.50	7.8
W6		,	10:05	2.00		1.00	24.40	24.40			8.01		33.05	33.05		83.00 82.6	_	7.08	7.02		2.95	2.95		8.10	لنب
Silvermine Bay	10/16/2024	Sunny	11:45	1.90	Middle	0.95	27.10	27.10	27.1		7.94	7.9	30.89	30.89	30.9	85.40 85.0		7.39	7.30	7.3	6.70	6.70	6.7	9.00	9.7
(Near Silvermine Bay Beach)			11:50	1.90		0.95	27.10	27.10		7.94	7.94		30.89	30.89		85.40 85.0	_	7.39	7.30		6.70	6.70		10.30	
Deacil)	10/18/2024	Sunny / Cloudy	12:30	1.90		0.95	27.30	27.30	27.3		7.97	8.0	29.09	29.09	29.1	90.50 90.0		6.95	6.89	6.9	6.66	6.17	6.4	4.20	4.6
			12:35	1.90		0.95	27.30	27.30		7.97	7.97		29.09	29.09		90.50 90.0	_	6.95	6.89		6.66	6.17		5.00	
	10/21/2024	Sunny	15:00 15:05	1.80		0.90	28.40 28.40	28.40	28.4	7.92 7.92	7.92	7.9	31.02 31.02	31.02 31.02	31.0	89.00 88.5 89.00 88.5		6.78	6.74	6.8	6.84	6.89	6.9	6.90 7.00	7.0
			7:30	1.50		0.90	26.10	26.10		7.92			30.97	30.97		89.00 88.5 81.90 81.3	_	6.78 6.58	6.50		4.65	4.65		6.80	
	10/23/2024	Sunny	7:30	1.50		0.75	26.10	26.10	26.1		7.84	7.8	30.97	30.97	31.0	81.90 81.3 81.90 81.3	816	6.58	6.50	6.5	4.65	4.65	4.7	5.90	6.4
			7:45	1.90		0.75	25.30	25.30		7.90	7.90		30.97	30.97		83.90 83.3		7.55	7.50		1.14	1.14		8.90	
	10/25/2024	Sunny	7:50	1.90		0.95	25.30	25.30	25.3		7.90	7.9	30.97	30.97	31.0	83.90 83.3		7.55	7.50	7.5	1.14	1.14	1.1	12.40	10.7
			10:15	1.90		0.95	25.20	25.20		7.90	7.88		31.01	31.01		94.10 93.7	0	7.55	7.60		0.53	0.53		9.80	
	10/28/2024	Sunny / Cloudy	10:15	1.80		0.90	25.20	25.20	25.2		7.88	7.9	31.01	31.01	31.0	94.10 93.7		7.64	7.60	7.6	0.53	0.53	0.5	8.50	9.2
		1	11:30	1.90		0.95	25.50	25.50		7.91	7 91		31.11	31.11		88.90 88.3	n	7.67	7.61		2.64	2.64		8.40	
	10/30/2024	Sunny	11:35	1.90		0.95	25.50	25.50	25.5		7.91	7.9	31.11	31.11	31.1	88.90 88.3		7.67	7.61	7.6	2.64	2.64	2.6	7.40	7.9

Remarks:

Water Quality Monitoring at Station W6 (Middle) - Flood Tide

	Sampling		Sampling	Water	Camalian	Sampling	T	emperatur	е		pН			Salinity		DO	Saturatio	n		DO			Turbidity		S	SS
Station Reference	Date	Weather	Time	Depth	Sampling Depth	Depth		°C			-			ppt			%			mg/L			NTU		m	g/L
	Date		Tille	m	Берш	m	Val	ue	Average	Valu	ie	Average	Val	ue	Average	Valu	e	Average	Valu	ie	Average	Valu	ıe	Average	Value	Average
	10/2/2024	Sunny	18:15	2.20		1.10	24.80	24.80	24.8	8.03	8.03	8.0	31.81	31.81	31.8	86.10	85.70	85.9	6.47	6.42	6.4	16.69	16.69	16.7	15.10	15.4
	10/2/2024	Suring	18:20	2.20		1.10	24.80	24.80	24.0	8.03	8.03	0.0	31.81	31.81	31.0	86.10	85.70	00.9	6.47	6.42	0.4	16.69	16.69	10.7	15.60	13.4
	10/4/2024	Sunny	13:15	2.20		1.10	24.40	24.40	24.4	8.06	8.06	8.1	31.98	31.98	32.0	81.70	81.00	81.4	6.59	6.54	6.6	8.09	8.09	8.1	10.30	10.3
	10/1/2021	Outility	13:20	2.20		1.10	24.40	24.40	2	8.06	8.06	0.1	31.98	31.98	02.0	81.70	81.00	01	6.59	6.54	0.0	8.09	8.09	0.1	10.30	10.0
	10/7/2024	Sunny	9:45	2.10		1.05	26.60	26.60	26.6	7.94	7.94	7.9	32.97	32.97	33.0	78.90	78.20	78.6	5.80	5.75	5.8	6.10	6.10	6.1	8.20	8.4
	10/1/2021	Curry	9:50	2.10		1.05	26.60	26.60	20.0	7.94	7.94	7.0	32.97	32.97	00.0	78.90	78.20	70.0	5.80	5.75	0.0	6.10	6.10	0.1	8.60	0
	10/9/2024	Cloudy / Sunny	16:30	2.10		1.05	23.90	23.90	23.9	7.98	7.98	8.0	30.76	30.76	30.8	79.80	79.50	79.7	7.08	7.00	7.0	8.91	8.91	8.9	8.40	8.8
		,	16:35	2.10		1.05	23.90	23.90		7.98	7.98		30.76	30.76		79.80	79.50		7.08	7.00		8.91	8.91		9.20	
	10/12/2024	Sunny	16:15	2.20		1.10	25.50	25.50	25.5	8.02	8.02	8.0	29.72	29.72	29.7	81.60	81.20	81.4	6.57	6.52	6.5	12.25	12.25	12.3	7.60	7.8
			16:20	2.20		1.10	25.50	25.50		8.02	8.02		29.72	29.72		81.60	81.20		6.57	6.52		12.25	12.25		8.00	
	10/14/2024	Sunny	17:15	2.20		1.10	25.40	25.40	25.4	8.07	8.07	8.1	31.11	31.11	31.1	89.70	89.20	89.5	6.78	6.74	6.8	15.29	15.29	15.3	27.20	28.5
W6		,	17:20	2.20		1.10	25.40	25.40		8.07	8.07		31.11	31.11		89.70	89.20		6.78	6.74		15.29	15.29		29.80	
Silvermine Bay (Near Silvermine Bay	10/16/2024	Sunny	17:30	2.20	Middle	1.10	28.40	28.40	28.4	8.02	8.02	8.0	30.00	30.00	30.0	83.40	82.90	83.2	6.39	6.32	6.4	4.33	4.31	4.3	11.70	14.8
(Near Silvermine Bay Beach)			17:35	2.20		1.10	28.40	28.40		8.02	8.02		30.00	30.00		83.40	82.90		6.39	6.32		4.33	4.31		17.80	
Deacily	10/18/2024	Sunny / Cloudy	18:30	2.10		1.05	28.20	28.20	28.2	8.15	8.15	8.2	29.67	29.67	29.7	90.60	90.00	90.3	7.47	7.42	7.4	5.02	5.03	5.0	5.10	4.9
			18:35	2.10		1.05	28.20	28.20		8.15	8.15		29.67	29.67		90.60	90.00		7.47	7.42		5.02	5.03		4.60	
	10/21/2024	Sunny	10:00	2.00		1.00	27.00	27.00	27.0	7.85	7.85 7.85	7.9	30.75	30.75 30.75	30.8	84.80 84.80	84.30 84.30	84.6	6.75	6.70	6.7	3.17	3.39	3.3	8.90 8.60	8.8
			10:05 13:15	2.00		1.00	27.00 26.50	27.00 26.50		7.85 7.92	7.85		30.75 30.94	30.75		84.80 85.90	84.30 85.30		6.75	7.91		10.27	3.39 10.27		15.60	
	10/23/2024	Sunny	13:15	2.10		1.05	26.50	26.50	26.5	7.92	7.92	7.9	30.94	30.94	30.9	85.90	85.30	85.6	7.97 7.97	7.91	7.9	10.27	10.27	10.3	19.20	17.4
ŀ			13:20	2.10		1.05	25.60	25.60		7.92	7.92		30.94	30.94	-	85.80	85.30 85.20		8.30	8.22		2.03	2.03		9.00	
	10/25/2024	Sunny	14:05	2.10		1.05	25.60	25.60	25.6	7.95	7.95	8.0	30.60	30.60	30.6	85.80	85.20	85.5	8.30	8.22	8.3	2.03	2.03	2.0	10.50	9.8
			16:30	2.10		1.05	25.40	25.40		7.95	7.93		30.88	30.88		83.00	82.30		7.92	7.86		2.03	2.03		9.20	
	10/28/2024	Sunny / Cloudy	16:35	2.10		1.05	25.40	25.40	25.4	7.94	7.94	7.9	30.88	30.88	30.9	83.00	82.30	82.7	7.92	7.86	7.9	2.18	2.18	2.2	10.00	9.6
			17:00	2.10		1.10	25.40	25.40		7.95	7.95		31.43	31.43		80.30	79.80		6.29	6.23		6.79	6.79		15.40	
	10/30/2024	Sunny	17:05	2.20		1.10		25.40	25.4	7.95	7.95	8.0	31.43	31.43	31.4	80.30	79.80	80.1	6.29	6.23	6.3	6.79	6.79	6.8	16.40	15.9

Water Quality Monitoring at Station W7 (Middle) - Ebb Tide

	Sampling		Sampling	Water	Sampling	Sampling	Tei	mperature)	F	Н			Salinity		DO Satur	ation		DO		Τι	urbidity		S	SS
Station Reference	Date	Weather	Time	Depth	Level	Depth		°C			-			ppt		%			mg/L			NTU		mg	g/L
	Date			m	2010.	m	Valu	е	Average	Value	Av	verage	Valu	ie	Average	Value	Average	Valu	е	Average	Value		Average	Value	Average
	10/2/2024	Sunny	12:30	2.90		1.45	23.60	23.60	23.6	8.05	8.05	8.1	32.83	32.83	32.8	78.80 78.4	78.6	6.42	6.38	6.4	9.68	9.68	9.7	17.20	16.4
	10/2/2024	Guilly	12:35	2.90		1.45	23.60	23.60	20.0	8.05	8.05	0.1	32.83	32.83	32.0	78.80 78.4	10.0	6.42	6.38	0.4	9.68	9.68	3.1	15.50	10.4
	10/4/2024	Sunny	8:00	2.90		1.45	24.90	24.90	24.9	8.07	8.07	8.1	33.39	33.39	33.4	78.90 78.4		6.19	6.13	6.2	3.13	3.13	3.1	6.20	5.1
	10/1/2021	Guiniy	8:05	2.90		1.45	24.90	24.90	21.0	8.07	8.07	0.1	33.39	33.39	00.1	78.90 78.4	10	6.19	6.13	0.2	3.13	3.13	0.1	3.90	U
	10/7/2024	Sunny	14:30	2.70		1.35	26.10	26.10	26.1	8.07	8.07	8.1	33.60	33.60	33.6	79.50 79.0	79.3	5.95	5.90	5.9	6.88	6.88	6.9	7.10	7.5
	10///2021	Gainiy	14:35	2.70		1.35	26.10	26.10	20.1	8.07	8.07	0.1	33.60	33.60	00.0	79.50 79.0	00	5.95	5.90	0.0	6.88	6.88	0.0	7.80	
	10/9/2024	Cloudy / Sunny	8:00	2.60		1.30	24.00	24.00	24.0	8.05	8.05	8.1	33.24	33.24	33.2	77.90 77.5		6.48	6.40	6.4	7.60	7.60	7.6	7.70	8.5
		,	8:05	2.60		1.30	24.00	24.00		8.05	8.05		33.24	33.24		77.90 77.5	50	6.48	6.40	• • • •	7.60	7.60		9.30	
	10/12/2024	Sunny	8:15	2.90		1.45	24.50	24.50	24.5	8.00	8.00	8.0	34.16	34.16	34.2	82.00 81.0		6.20	6.14	6.2	4.55	4.55	4.6	5.80	5.2
		,	8:20	2.90		1.45	24.50	24.50		8.00	8.00		34.16	34.16		82.00 81.0		6.20	6.14		4.55	4.55		4.50	
	10/14/2024	Sunny	10:15	3.00		1.50	24.20	24.20	24.2	8.02	8.02	8.0	33.90	33.90	33.9	78.80 78.3		6.59	6.54	6.6	3.12	3.12	3.1	4.60	4.3
W7		,	10:20	3.00		1.50	24.20	24.20		8.02	8.02		33.90	33.90		78.80 78.3		6.59	6.54		3.12	3.12		4.00	<u> </u>
Silvermine Bay	10/16/2024	Sunny	12:00	2.90	Middle	1.45	27.30	27.30	27.3	7.97	7.97	8.0	31.48	31.48	31.5	83.70 83.0	83.4	7.21	7.16	7.2	6.43	6.43	6.4	8.60	9.2
(Open Water)			12:05	2.90		1.45	27.30	27.30		7.97	7.97		31.48	31.48		83.70 83.0		7.21	7.16		6.43	6.43		9.80	
	10/18/2024	Sunny / Cloudy	12:45	2.90		1.45	27.20	27.20	27.2	7.98	7.98	8.0	30.86	30.86	30.9	89.60 89.0		6.87	6.82	6.8	5.18	5.01	5.1	7.60	8.3
			12:50	2.90		1.45	27.20	27.20		7.98	7.98		30.86	30.86		89.60 89.0		6.87	6.82		5.18	5.01		8.90	
	10/21/2024	Sunny	15:15 15:20	2.80		1.40	27.90 27.90	27.90 27.90	27.9	7.93 7.93	7.93	7.9	30.97 30.97	30.97 30.97	31.0	87.30 86.9 87.30 86.9		6.58	6.50 6.50	6.5	5.17 5.17	5.18 5.18	5.2	11.40	11.2
		-	7:45	2.80		1.40	26.30	26.30		7.93	7.85		30.97	31.01		80.00 79.		6.41	6.37		3.78	3.78		5.40	\vdash
	10/23/2024	Sunny	7:50	2.50		1.25	26.30	26.30	26.3	7.85	7.85	7.9	31.01	31.01	31.0	80.00 79.		6.41	6.37	6.4	3.78	3.78	3.8	4.80	5.1
		-	8:00	2.90		1.45	25.10	25.10		7.87	7.87		30.88	30.88		81.90 81.3		7.47	7.41		1.01	1.01		10.70	—
	10/25/2024	Sunny	8:05	2.90		1.45	25.10	25.10	25.1	7.87	7.87	7.9	30.88	30.88	30.9	81.90 81.3	81.6	7.47	7.41	7.4	1.01	1.01	1.0	10.70	10.7
			10:30	2.80		1.45	25.50	25.50		7.88	7.88		30.66	30.71		92.10 91.	70	7.47	7.41		0.35	0.35		11.70	—
	10/28/2024	Sunny / Cloudy	10:35	2.80		1.40	25.50	25.50	25.5	7.88	7.88	7.9	30.71	30.71	30.7	92.10 91.		7.36	7.29	7.3	0.35	0.35	0.4	10.10	10.9
		1	11:45	2.90		1.45	25.60	25.60		7.94	7 94		31.77	31.77		80.70 80.	0	7.07	7.00		1.76	1.76		6.30	
	10/30/2024	Sunny	11:50	2.90		1.45	25.60	25.60	25.6	7.94	7.94	7.9	31.77	31.77	31.8	80.70 80.		7.07	7.00	7.0	1.76	1.76	1.8	6.10	6.2

Remarks:

Water Quality Monitoring at Station W7 (Middle) - Flood Tide

	Camalia		Camalian	Water	Camaliaa	Sampling	Te	emperatur	е		pН			Salinity		DC	Saturation Saturation	n		DO			Turbidity		S	SS
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Sampling Depth	Depth		°C			-			ppt			%			mg/L			NTU		m	ıg/L
	Date		Tillie	m	Бериі	m	Val	ue	Average	Valu	ıe	Average	Valu	ue	Average	Valu	ıe	Average	Valu	ie	Average	Val	ue	Average	Value	Average
	10/2/2024	Sunny	18:30	3.20		1.60	24.60	24.60	24.6	8.10	8.10	8.1	32.06	32.06	32.1	82.70	82.10	82.4	8.97	8.91	8.9	14.19	14.19	14.2	15.10	14.6
	10/2/2024	Suriny	18:35	3.20		1.60	24.60	24.60	24.0	8.10	8.10	0.1	32.06	32.06	32.1	82.70	82.10	02.4	8.97	8.91	0.9	14.19	14.19	14.2	14.10	14.0
	10/4/2024	Sunny	13:30	3.20		1.60	23.80	23.80	23.8	8.08	8.08	8.1	32.70	32.70	32.7	80.30	79.70	80.0	6.67	6.58	6.6	4.82	4.82	4.8	6.80	6.3
	10/4/2024	Guilly	13:35	3.20		1.60	23.80	23.80	20.0	8.08	8.08	0.1	32.70	32.70	32.7	80.30	79.70	00.0	6.67	6.58	0.0	4.82	4.82	4.0	5.70	0.0
	10/7/2024	Sunny	10:00	3.10		1.55	26.80	62.80	44.8	8.03	8.03	8.0	33.33	33.33	33.3	78.30	77.90	78.1	5.75	5.70	5.7	5.66	5.66	5.7	6.90	7.5
	10///2021	Guiniy	10:05	3.10		1.55	26.80	62.80	11.0	8.03	8.03	0.0	33.33	33.33	00.0	78.30	77.90	70.1	5.75	5.70	0.1	5.66	5.66	0.7	8.00	
	10/9/2024	Cloudy / Sunny	16:45	3.10		1.55	24.00	24.00	24.0	8.05	8.05	8.1	32.46	32.46	32.5	74.90	74.40	74.7	6.88	6.81	6.8	8.27	8.27	8.3	6.40	7.1
		,	16:50	3.10		1.55	24.00	24.00		8.05	8.05		32.46	32.46		74.90	74.40		6.88	6.81		8.27	8.27		7.80	
	10/12/2024	Sunny	16:30	3.20		1.60	25.50	25.50	25.5	8.12	8.12	8.1	33.72	33.72	33.7	81.20	80.90	81.1	6.41	6.35	6.4	7.95	7.95	8.0	5.80	5.7
		,	16:35	3.20		1.60	25.50	25.50		8.12	8.12		33.72	33.72		81.20	80.90		6.41	6.35	***	7.95	7.95		5.60	
	10/14/2024	Sunny	17:30	3.20		1.60	25.00	25.00	25.0	8.18	8.18	8.2	33.73	33.73	33.7	88.80	88.20	88.5	6.37	6.32	6.3	7.41	7.41	7.4	7.20	
W7		,	17:35	3.20		1.60	25.00	25.00		8.18	8.18		33.73	33.73		88.80	88.20		6.37	6.32		7.41	7.41		6.70	
Silvermine Bay	10/16/2024	Sunny	17:45	3.20	Middle	1.60	28.20	28.20	28.2	8.04	8.04	8.0	31.78	31.78	31.8	80.80	80.00	80.4	6.06	6.01	6.0	5.19	6.01	5.6	9.10	9.0
(Open Water)		-	17:50	3.20		1.60	28.20	28.20		8.04	8.04		31.78	31.78		80.80	80.00		6.06	6.01		5.19	6.01		8.80	
	10/18/2024	Sunny / Cloudy	18:45	3.10		1.55	28.10	28.10	28.1	8.10	8.10	8.1	30.94	30.94	30.9	88.90	88.40	88.7	7.12	7.06	7.1	6.17	6.18	6.2	7.50	(./
			18:50 10:15	3.10		1.55	28.10 26.80	28.10 26.80		8.10	8.10		30.94	30.94		88.90 84.30	88.40 83.70		7.12 6.69	7.06 6.61		6.17 7.14	6.18		7.90	
	10/21/2024	Sunny	10:15	3.00		1.50	26.80	26.80	26.8	7.88 7.88	7.88 7.88	7.9	31.14 31.14	31.14 31.14	31.1	84.30	83.70	84.0	6.69	6.61	6.7	7.14	7.15 7.15	7.1	9.30	
			13:30	3.10		1.55	26.70	26.70		7.00	7.95		31.14	31.14		79.70	79.20		7.25	7.18		8.56	8.56		13.50	
	10/23/2024	Sunny	13:35	3.10		1.55	26.70	26.70	26.7	7.95	7.95	8.0	31.26	31.26	31.3	79.70	79.20	79.5	7.25	7.18	7.2	8.56	8.56	8.6	12.20	12.9
			14:15	3.10		1.55	26.00	26.00		8.00	8.00		31.43	31.43		82.10	81.60		8.13	8.04		3.01	3.01		13.20	
	10/25/2024	Sunny	14:13	3.10		1.55	26.00	26.00	26.0	8.00	8.00	8.0	31.43	31.43	31.4	82.10	81.60	81.9	8.13	8.04	8.1	3.01	3.01	3.0	12.40	12.8
			16:45	3.10		1.55	25.40	25.40	1	7.96	7.96		31.35	31.35		80.80	80.30		7.19	7.09		2.03	2.03		7.20	
	10/28/2024	Sunny / Cloudy	16:50	3.10		1.55	25.40	25.40	25.4	7.96	7.96	8.0	31.35	31.35	31.4	80.80	80.30	80.6	7.19	7.09	7.1	2.03	2.03	2.0	7.50	
		_	17:15	3.20		1.60	25.70	25.70		7.99	7.99		31.75	31.75		81.90	81.40		6.32	6.22		3.62	3.62		11.00	
	10/30/2024	Sunny	17:20	3.20		1.60	25.70	25.70	25.7	7.99	7.99	8.0	31.75	31.75	31.8	81.90	81.40	81.7	6.32	6.22	6.3	3.62	3.62	3.6	11.80	11.4



Water Quality Monitoring at Station W8 (Surface) - Ebb Tide

	Sampling		Sampling	Water	Sampling	Sampling	Te	emperatur	е		рН			Salinity		DO Sat	uration		DO	Turbio	ity	SS
Station Reference	Date	Weather	Time	Depth	Level	Depth		°C			-			ppt		%	,		mg/L	NTU	1	mg/L
				m		m	Valu	ue	Average	Value	е	Average	Val	ue	Average	Value	Avera	je Va	lue Average	Value	Average	Value Average
	10/2/2024	Sunny	12:45	3.90		1.00	23.50	23.50	23.5	8.09	8.09	8.1	32.11	32.11	32.1	76.10 7	5.70 75.9	6.16	6.09 6.1	10.25 10	25 10.3	14.10
	10/2/2024	Guilly	12:50	3.90		1.00	23.50	23.50	20.0	8.09	8.09	0.1	32.11	32.11	52.1	76.10 7	5.70	6.16	6.09	10.25 10	25	15.10
	10/4/2024	Sunny	8:15	3.90		1.00	25.00	25.00	25.0	8.12	8.12	8.1	33.10	33.10	33.1	77.80 7	7.20 77.5	6.09	6.02 6.1	3.10 3	10 3.1	3.90
	10/4/2024	Guilly	8:20	3.90	4	1.00	25.00	25.00	20.0	8.12	8.12	0.1	33.10	33.10	55.1		7.20	6.09	6.02		10	4.70
	10/7/2024	Sunny	14:45	3.70	4	1.00	25.90	25.90	25.9	8.09	8.09	8.1	33.59	33.59	33.6		5.90 76.2	5.98	5.93 6.0		6.6	7.20 6.9
	10/1/2021	ou,	14:50	3.70		1.00	25.90	25.90	20.0	8.09	8.09	0.1	33.59	33.59	00.0		5.90	5.98	5.93		60	6.50
	10/9/2024	Cloudy / Sunny	8:15	3.60		1.00	23.90	23.90	23.9	8.08	8.08	8.1	33.46	33.46	33.5		5.50 75.7	6.20	6.11 6.2		94 6.9	4.00
	10/0/2021	oloddy / Calliny	8:20	3.60		1.00	23.90	23.90	20.0	8.08	8.08	0.1	33.46	33.46			5.50	6.20	6.11		94	5.40
	10/12/2024	Sunny	8:30	3.90		1.00	24.90	24.90	24.9	8.06	8.06	8.1	33.72	33.72			8.20 78.4	6.08	6.02 6.1		25 4.3	4.40 5.0
		,	8:35	3.90		1.00	24.90	24.90		8.06	8.06		33.72	33.72			8.20	6.08	6.02		25	5.60
	10/14/2024	Sunny	10:30	4.00		1.00	23.90	23.90	23.9	8.06	8.06	8.1	33.44	33.44	33.4		7.30 77.6	6.45	6.40		21 3.2	3.60
W8		,	10:35	4.00		1.00	23.90	23.90		8.06	8.06		33.44	33.44			7.30	6.45	6.40		21	4.40
Silvermine Bay	10/16/2024	Sunny	12:15	3.90	Surface	1.00	27.00	27.00	27.0	8.02	8.02	8.0	31.57	31.57	31.6		3.90 84.1	7.34	7.28 7.3		5.8	7.00
(Open Water)		,	12:20	3.90		1.00	27.00	27.00		8.02	8.02		31.57	31.57			3.90	7.34	7.28		80	8.00
	10/18/2024	Sunny / Cloudy	13:00	3.90		1.00	27.80	27.80	27.8	8.02	8.02	8.0	31.17	31.17	31.2		2.20 82.4	6.58	6.52 6.6		6.5	8.70 8.1
			13:05	3.90		1.00	27.80	27.80		8.02	8.02		31.17	31.17			2.20	6.58	6.52		89	7.50
	10/21/2024	Sunny	15:30	3.80		1.00	28.50	28.50	28.5	7.96	7.96	8.0	31.03	31.03	31.0		4.40 84.7	6.33	6.28 6.3		6.0	7.90 8.0
			15:35	3.80		1.00	28.50	28.50		7.96	7.96		31.03	31.03			4.40	6.33	6.28		03	8.00
	10/23/2024	Sunny	8:00	3.50	4	1.00	26.20	26.20	26.2	7.90	7.90	7.9	31.17	31.17	31.2		0.40 80.8	6.51	6.47		76 3.8	9.00
			8:05	3.50	4	1.00	26.20	26.20		7.90	7.90		31.17	31.17	 		0.40	6.51	6.47		76	9.00
	10/25/2024	Sunny	8:15	3.90	4	1.00	25.20	25.20	25.2	7.92	7.92	7.9	31.22	31.22			1.70 82.0	7.52	7.42 7.5		1.1	8.80 5.9
			8:20	3.90	4	1.00	25.20	25.20		7.92	7.92		31.22	31.22	 		1.70	7.52	7.42		06	2.90
	10/28/2024	Sunny / Cloudy	10:45	3.80		1.00	25.50	25.50	25.5	7.95	7.95	8.0	31.53	31.53	31.5		93.6	7.53	7.47 7.5		0.3	7.60 7.3
			10:50	3.80		1.00	25.50	25.50		7.95	7.95		31.53	31.53			3.30	7.53	7.47		27	7.00
	10/30/2024	Sunny	12:00	3.90	4	1.00	25.60	25.60	25.6	7.96	7.96	8.0	31.74	31.74			9.50 79.7	6.92	6.87		2.1	6.60 6.8
	ĺ	1	12:05	3.90	1	1.00	25.60	25.60		7.96	7.96		31.74	31.74	1	79.90 7	9.50	6.92	6.87	2.10 2	10	6.90

Remarks:

Water Quality Monitoring at Station W8 (Surface) - Flood Tide

	Complian		Camalian	Water	Camalian	Sampling	Te	emperature	е		pН			Salinity		DC	O Saturatio	on	DO				Turbidity	S	SS	
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Sampling Depth	Depth		°C						ppt		%			mg/L			NTU			m	g/L
	Date		Timic	m	Бериі	m	Vali	Value Average		e Value		Average	Val	ue	Average	Val	ue	Average	Val	ue A	verage	Vali	ue	Average	Value	Average
	10/2/2024	Sunny	18:45	4.20	0	1.00	25.00	25.00 25.0	8.10	8.10	8.1	32.39	32.39	32.4	81.40	80.90	81.2	6.20	6.11	6.2	16.06	16.06	16.1	13.50	12.8	
	10/2/2021	Gainny	18:50	4.20		1.00	25.00	25.00	20.0	8.10	8.10	0.1	32.39	32.39	O.L.	81.40	80.90	01.2	6.20	6.11	0.2	16.06	16.06		12.00	12.0
	10/4/2024	Sunny	13:45	4.20	-1 1	1.00	23.90	23.90	23.9	8.14	8.14	8.1	32.77	32.77	32.8	79.50	79.00	79.3	6.33	6.28	6.3	6.38	6.38	6.4	6.30	5.6
			13:50	4.20	-1 1	1.00	23.90	23.90		8.14	8.14		32.77	32.77		79.50	79.00		6.33	6.28		6.38	6.38	***	4.90	
	10/7/2024	Sunny	10:15	4.10		1.00	26.50	26.50	26.5	8.05	8.05	8.1	33.55	33.55	33.6	77.20	76.80	77.0	5.88	5.81	5.8	5.69	5.69	5.7	7.90	7.3
10/7/202		,	10:20	4.10	-1 1	1.00	26.50	26.50		8.05	8.05		33.55	33.55	00.0	77.20	76.80	77.0	5.88	5.81		5.69	5.69		6.70	
	10/9/2024	Cloudy / Sunny		17:00 4.10		1.00	24.30	24.30	24.3	8.09	8.09	8.1	33.59	33.59		73.40	73.00	73.2	6.39	6.35	6.4	7.87	7.87	7.9	7.60	7.5
		,	17:05	4.10		1.00	24.30	24.30		8.09	8.09		33.59	33.59		73.40	73.00		6.39	6.35		7.87	7.87		7.40	
	10/12/2024	Sunny	16:45	4.20		1.00	25.80	25.80	25.8	8.08	8.08	8.1	33.60	33.60	33.6	80.00	79.60	79.8	6.24	6.19	6.2	7.88	7.88	7.9	5.40	4.9
			16:50	4.20		1.00	25.80	25.80		8.08	8.08		33.60	33.60	 	80.00	79.60		6.24	6.19		7.88	7.88		4.40	<u> </u>
	10/14/2024	Sunny	17:45 17:50	4.20 4.20		1.00	25.40 25.40	25.40 25.40	25.4	8.22 8.22	8.22 8.22	8.2	33.60 33.60	33.60 33.60	33.6	90.00	89.60 89.60	89.8	6.48	6.44	6.5	6.65	6.65 6.65	6.7	5.20 5.40	5.3
			18:00	4.20		1.00	28.20 28.20		9.11 9.11		33.60	33.60	1	81.20	89.60		6.48			6.65 5.11				-		
Silvermine Bay	10/16/2024	Sunny	18:00	4.20	Surface	1.00	28.20	28.20		8.11	8.11	8.1	31.49	31.49	31.5	81.20	80.60	80.9	6.13 6.13	6.08	6.1	5.11	5.11 5.11	5.1	8.50 7.90	8.2
(Open Water)			19:00	4.20		1.00	28.10	28.10		8.09	8.09		31.49	31.49	31.1	86.90	86.50		7.05	7.00		7 20	7.29		7.90	
	10/18/2024	Sunny / Cloudy	19:05	4.10	-1 1	1.00	28.10	28.10	28.1	8.09	8.09	8.1	31.11	31.11		86.90	86.50	86.7	7.05	7.00	7.0	7.28	7.29	7.3	7.20	7.6
			10:30	4.00		1.00	26.90	26.90		7.92	7.92		31.33	31.33		78.80	78.10		6.33	6.27		2 13	2.14		9.40	1
	10/21/2024	Sunny	10:35	4.00		1.00	26.90	26.90	26.9	7.92	7.92	7.9	31.33	31.33	31.3	78.80	78.10	78.5	6.33	6.27	6.3	2.13	2.14	2.1	8.30	8.9
		_	13:45	4.10		1.00	26.60	26.60		7.93	7.93		31.17	31.17	7	80.00	79.40		7.29	7.20		5.74	5.74		11.30	T
	10/23/2024	Sunny	13:50	4.10		1.00	26.60	26.60	26.6	7.93	7.93	7.9	31.17	31.17	31.2	80.00	79.40	79.7	7.29	7.20	7.2	5.74	5.74	5.7	11.50	11.4
	10/05/0001	_	14:30	4.10		1.00	26.00	26.00		7.98	7.98		31.24	31.24	24.0	80.60	79.80		8.09	8.00		2.69	2.69		21.40	
	10/25/2024	Sunny	14:35	4.10		1.00	26.00	26.00	26.0	7.98	7.98	8.0	31.24	31.24	31.2	80.60	79.80	80.2	8.09	8.00	8.0	2.69	2.69	2.7	21.90	21.7
	10/28/2024	Sunny / Cloudy	17:00	4.10	1	1.00	25.20	25.20	25.2	7.98	7.98		31.54	31.54	31.5	79.70	79.20		7.03	6.97	7.0	1.03	1.03	1.0	5.40	6.1
	10/26/2024	Suriny / Cloudy	17:05	4.10		1.00	25.20	25.20	25.2	7.98	7.98	8.0	31.54	31.54		79.70	79.20		7.03	6.97	7.0		1.03	1.0	6.70	6.1
	40/20/2024	Sunnv	17:30	4.20	1	1.00	25.60	25.60	25.6	7.97	7.97	0.0	31.79	31.79	31.8	80.50	80.00	90.2	6.30	6.25	6.2	3.23	3.23	2.2	10.80	10.2
10/30/2024	10/30/2024	Sunny	17:35	4.20		1.00	25.60	25.60	25.6	7.97	7.97	8.0	31.79	31.79		80.50	80.00	80.3	6.30	6.25	6.3	3.23	3.23		9.50	10.2

Remarks:

General Note: Additional data of temperature, pH, salinity, DO saturation, DO and turbidty were obtained in each duplicate set for better representativeness.

Water Quality Monitoring at Station W8 (Bottom) - Ebb Tide

	Sampling Water Sampling Popts Samp				Camaliaa	Sampling Temperature			pl	1		Salinity		DO Satura	tion		0	Turbid	S	SS		
Station Reference	Date	Weather	Time	Depth	Sampling Level	Depth	°C Value Average				ppt		%		m	g/L	NTU	m	g/L			
	Date		111110	m	LCVCI	m			Average	Value	Avera	e V	alue	Average	Value	Average	Value	Average	Value	Average	Value	Average
	10/2/2024	Sunny	13:00	3.90	0	2.90	23.60	23.60	3.60 23.6	8.10	8.10	32.19	32.19	32.2	77.70 77.1	77.4	6.07	6.02	9.16 9.	9.2	14.00	14.1
	10/2/2024	Suriny	13:05	3.90		2.90	23.60	23.60	23.0	8.10	8.10	32.19	32.19	32.2	77.70 77.10) //.4	6.07	6.02	9.16 9.	16	14.20	14.1
	10/4/2024	Sunny	8:30	3.90		2.90	25.60	25.60	25.6	8.13	8.13	33.03	33.03		78.70 78.2	78.5	6.10	6.05	3.24 3.	3.2	6.50	6.9
	10/4/2024	Outliny	8:35	3.90		2.90	25.60	25.60	20.0	8.13	8.13	33.00	33.03	30.0	78.70 78.2) / 0.5	6.10	6.05	3.24 3.	24	7.20	0.5
	10/7/2024	Sunny	15:00	3.70		2.70	25.90	25.90	25.9		8.10	33.59	33.59		75.90 75.4		5.90	5.93	5.91 5.		7.20	6.9
	10/1/2024	Gainly	15:05	3.70		2.70	25.90	25.90	23.3		8.10	33.59	33.59	9	75.90 75.4)	5.90	5.93	5.91 5.	91	6.60	0.5
	10/9/2024	Cloudy / Sunny	8:30	3.60		2.60	23.70	23.70	23.7		8.09	33.4	33.44		76.30 75.	76.1	6.37	6.33	5.67 5.	5.7	6.40	5.9
	10/0/2021	Gloddy / Gdilliy	8:35	3.60		2.60	23.70	23.70	20.7	8.09	8.09	33.4	33.44	1	76.30 75.8)	6.37	6.33	5.67 5.	67	5.30	0.0
	10/12/2024	Sunny	8:45	3.90		2.90	24.60	24.60	24.6	8.07	8.07	33.70	33.70		75.90 75.4	75.7	6.01	5.96 6.0	3.67 3.	3.7	4.00	4.2
		· · · · · · · · · · · · · · · · · · ·	8:50	3.90		2.90	24.60	24.60		8.07	8.07	33.70	33.70)	75.90 75.4		6.01	5.96	3.67 3.		4.40	
	10/14/2024	Sunny	10:45	4.00		3.00	23.70	23.70	23.7		8.08	33.3	33.37		76.50 76.0	76.3	6.37	6.32	2.76 2.	28	2.00	2.0
W8	10/11/2021	Curry	10:50	4.00		3.00	23.70	23.70			8.08	33.3	33.37	7	76.50 76.0)	6.37	6.32	2.76 2.	76	2.00	
Silvermine Bay	10/16/2024	Sunny	12:30	3.90	Bottom	2.90		27.00	27.0		8.02	31.54	31.54		81.00 80.3	80.7	7.00	6.93 7.0	7.12 7.		6.60	5.9
(Open Water)		,	12:35	3.90		2.90	27.00	27.00			8.02	31.54	31.54	1	81.00 80.3		7.00	6.93	7.12 7.		5.20	
	10/18/2024	Sunny / Cloudy	13:15	3.90	1	2.90	27.60	27.6	27.6		8.04	30.8	30.85		81.70 81.2	815	6.30	6.24	7.17 7.	72	11.10	8.9
		,	13:20	3.90			2.90 27.60 27.60				8.04	30.8	30.85		81.70 81.2		6.30	6.24	7.17 7.		6.60	
	10/21/2024	Sunny	15:45	3.80		2.80	28.30	28.30	28.3		7.96	30.8	30.87		81.90 81.1	815	6.18	6.12	6.03 6.	6.0	8.10	8.0
		· ·	15:50	3.80		2.80	28.30	28.30			7.96	30.8	30.87		81.90 81.1		6.18	6.12	6.03 6.		7.80	
	10/23/2024	Sunny	8:15	3.50		2.50	26.50	26.50	26.5		7.90 7.9	31.09	31.09		78.70 78.0		6.29	6.21	3.26 3.:		6.20	6.2
			8:20	3.50		2.50	26.50	26.50			7.90	31.09	31.09		78.70 78.0		6.29	6.21	3.26 3.:	_	6.20	
	10/25/2024	Sunny	8:30	3.90		2.90	25.20	25.20	25.2		7.92 7.9	31.20			78.60 77.8	− /8.2	7.20	7.12 7.2	1.15 1.		4.00	4.2
			8:35	3.90		2.90	25.20	25.20			7.92	31.20			78.60 77.80		7.20	7.12	1.15 1.		4.40	
	10/28/2024	Sunny / Cloudy	11:00	3.80		2.80	25.20	25.20	25.2		7.96	31.5	31.54		88.20 87.8	88.0	7.24	7.19 7.2	0.25 0.:		5.90	6.0
			11:05	3.80		2.80	25.20	25.20		7.96	7.96	31.5	31.5		88.20 87.8		7.24	7.19	0.25 0.:		6.00	
	10/30/2024	Sunny	12:15	3.90		2.90	25.70	25.70	25.7		7.95	31.68	31.68		78.60 78.1		6.77	6.71	2.03 2.		6.90	6.9
	l		12:20	3.90	1	2.90	25.70	25.70		7.95	7.95	31.68	31.68	3	78.60 78.10	וכ	6.77	6.71	2.03 2.	03	6.90	1

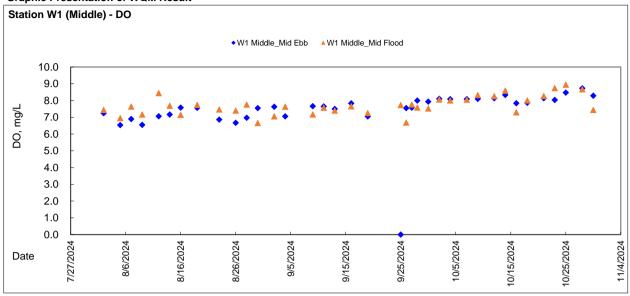
Remarks:

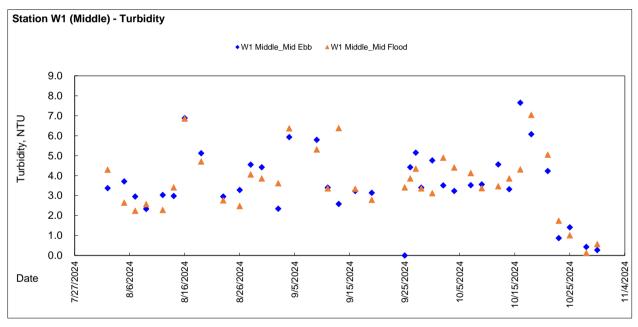
Water Quality Monitoring at Station W8 (Bottom) - Flood Tide

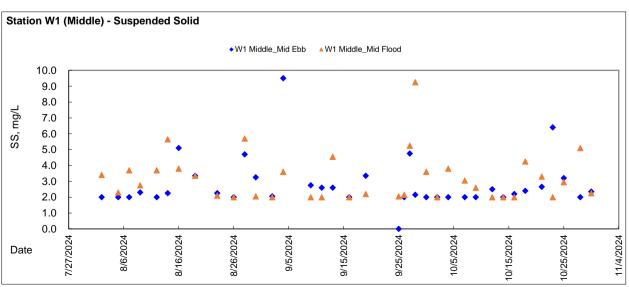
	Sampling	, ,	Camalian	Water	Sampling	Sampling	Te	emperatur	е		pН			Salinity		DC	Saturatio	n	DO				Turbidity	S	SS	
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Depth	Depth		°C			-			ppt			%			mg/L			NTU		mg	ıg/L
	Date		Tillie	m	Бериі	m	Value		Average	Valu	Value Average		Value		Average	Valu	e Average		Value		Average	Average Value		Average	Value	Average
	10/2/2024	Sunny	19:00	4.20		3.20	24.60	24.60	24.6	8.10	8.10	0 0.4	32.49	32.49	32.5	82.20	81.90	82.1	6.28	6.22	6.3	16.05	16.05	16.1	12.30	12.
	10/2/2024	Sunny	19:05	4.20		3.20	24.60	24.60	24.0	8.10	8.10	8.1	32.49	32.49	32.5	82.20	81.90	82.1	6.28	6.22	6.3	16.05	16.05	10.1	12.10	12.
	10/4/2024	Sunny	14:00	4.20		3.20	24.20	24.20	24.2	8.14	8.14	8.1	32.91	32.91	32.9	77.20	76.80	77.0	6.17	6.10	6.1	5.67	5.67	5.7	6.90	6.
	10/4/2024	Suring	14:05	4.20		3.20	24.20	24.20	24.2	8.14	8.14	0.1	32.91	32.91	32.9	77.20	76.80	77.0	6.17	6.10	0.1	5.67	5.67	3.7	5.20	0.
	10/7/2024	Sunny	10:30	4.10		3.10	27.20	27.20	27.2	8.05	8.05	8.1	33.42	33.42	33.4	80.70	80.20	80.5	5.98	5.92	6.0	4.72	4.72	47	5.80	- 5.
10	10/1/2024	Curity	10:35	4.10		3.10	27.20	27.20	21.2	8.05	8.05	0.1	33.42	33.42	55.4	80.70	80.20	80.5	5.98	5.92	0.0	4.72	4.72	4.7	5.40	
	10/9/2024	Cloudy / Sunny	17:15	4.10		3.10	24.00	24.00	24.0	8.10	8.10	8.1	33.44	33.44	33.4	71.70	71.20	71.5	6.00	5.92	6.0	7.01	7.01	7.0	6.00	6.
10/3/2024	10/0/2021	Cicady / Carri	17:20	4.10		3.10	24.00	24.00	21.0	8.10	8.10	0.1	33.44	33.44	00.1	71.70	71.20		6.00	5.92	0.0	7.01	7.01	7.0	6.80	0.
10/12/202	10/12/2024	Sunny	17:00	4.20		3.20	25.70	25.70	25.7	8.09	8.09	8.1	33.58	33.58	33.6	79.80	79.20	79.5	6.10	6.05	6.1	6.70	6.70	6.7		
		,	17:05	4.20		3.20		25.70		8.09	8.09		33.58	33.58		79.80	79.20		6.10	6.05		6.70	6.70			
10/14/2024 W8	10/14/2024	Sunny	18:00	4.20		3.20	25.30	25.30	25.3	8.24	8.24	8.2	33.58	33.58	33.6	88.30	87.80	88.1	6.39	6.34	6.4	5.93	5.93	5.9		5
		,	18:05	4.20		3.20	25.30	25.30		8.24	8.24		33.58	33.58		88.30	87.80		6.39	6.34		5.93	5.93			
Silvermine Bay	10/16/2024	Sunny	18:15	4.20	Bottom	3.20	28.30	28.30		8.13	8.13	8.1	31.44	31.44	31.4	84.60	84.20	84.4	6.50	6.46	6.5	5.00	5.01	5.0		
(Open Water)			18:20	4.20	ł	3.20	28.30	28.30		8.13	8.13		31.44	31.44		84.60	84.20		6.50	6.46		5.00	5.01			
	10/18/2024	Sunny / Cloudy	19:15	4.10		3.10	28.10		28.1	8.15	8.15	8.2	30.99	30.99	31.0	85.70	85.10	85.4	7.01	6.97	7.0	7.28	7.28	7.3	12.30 12.10 6.90 5.20 5.80 6.00 6.80 4.90 4.70 4.80 5.20 7.00 6.70 3.60 4.50 7.70 11.50 11.80 10.10 4.40 5.70 10.10 6.90	4
			19:20	4.10		3.10	28.10	28.10		8.15	8.15		30.99	30.99	-	85.70	85.10		7.01	6.97		7.28	7.28			
	10/21/2024	Sunny	10:45 10:50	4.00 4.00		3.00	26.70	26.70 26.70	26.7	7.93 7.93	7.93 7.93	7.9	31.16 31.16	31.16 31.16	31.2	75.60 75.60	75.10 75.10	75.4	6.10	6.00	6.1	6.66 6.66	6.87 6.87	6.8		
			14:00	4.00		3.00	3.00 26.70 3.10 26.70	26.70		7.93	7.93	7.9	31.16	31.16	31.1	77.90	77.50	77.7	7.00	6.93		5.96	5.96			_
	10/23/2024	Sunny	14:05	4.10		3.10	26.70	26.70	26.7	7.93	7.93		31.10	31.10		77.90	77.50		7.00	6.93	7.0	5.96	5.96	6.0		11.
			14:45	4.10		3.10	25.80	25.80		7.93	7.93		31.10	31.10		79.20	78.70	79.0 80.2	7.00	7.91		1.51	1.51			
	10/25/2024	Sunny	14:43	4.10		3.10	25.80	25.80	25.8	7.98	7.98	8.0	31.20	31.20		79.20	78.70		7.98	7.91	7.9	1.51	1.51	1.5		
			17:15	4.10		3.10	25.40	25.40	25.4	7.99	7.99	8.0	31.52	31.52	31.5	80.40	79.90		7.10	7.04		1.01	1.01			
	10/28/2024	Sunny / Cloudy	17:20	4.10	1		25.40	25.40		7.99	7.99		31.52	31.52		80.40	79.90		7.10	7.04	7.1	1.01	1.01	→ 1.0		5.
			17:45	4.20	1	3.20	25.70	25.70		7.98	7.98		31.72	31.72		79.20	78.80		6.16	6.09		2.54	2.54			
	10/30/2024	Sunny	17:50	4.20	1	3.20	25.70	25.70	25.7	7.98	7.98	8.0	31.72	31.72	31.7	79.20	78.80	79.0	6.16	6.09	6.1	2.54	2.54	2.5		6.8



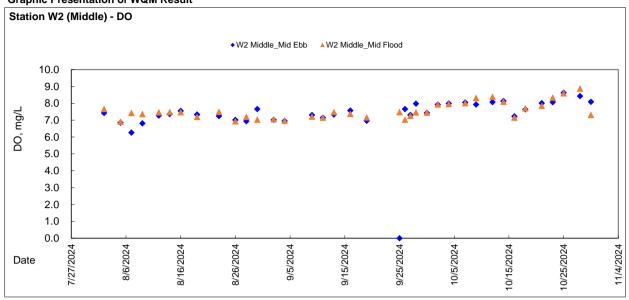
Graphic Presentation of WQM Result

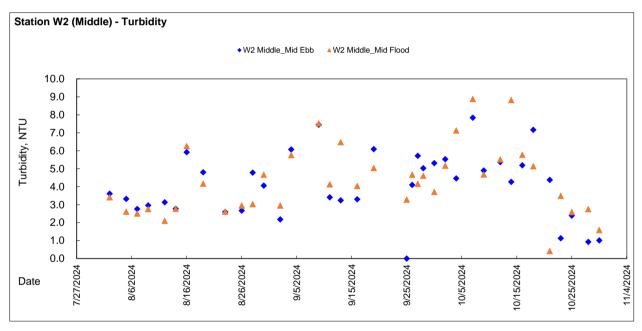


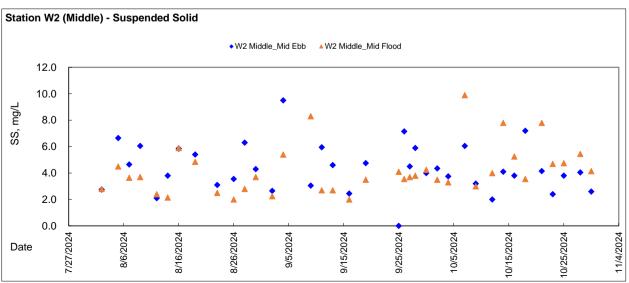




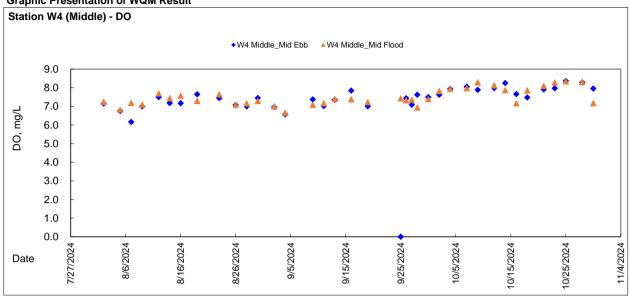


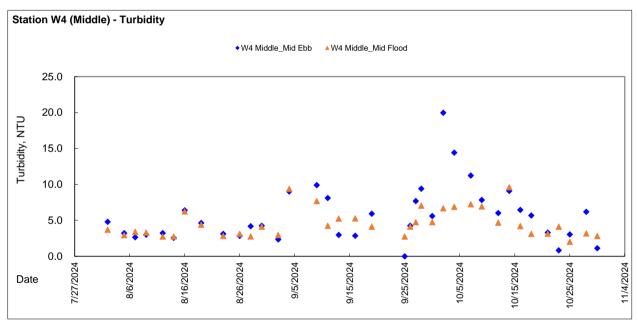


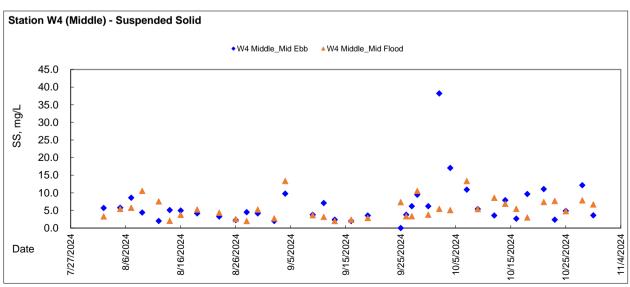




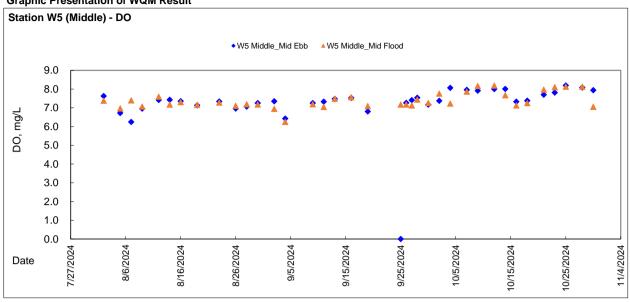


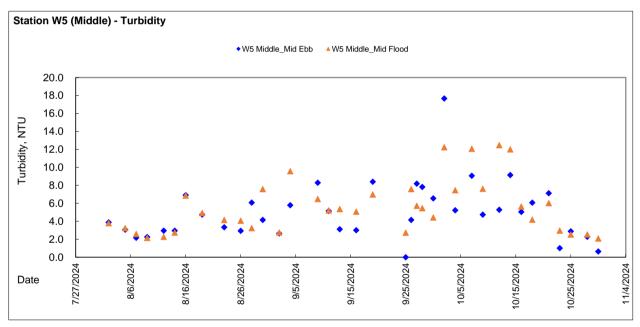


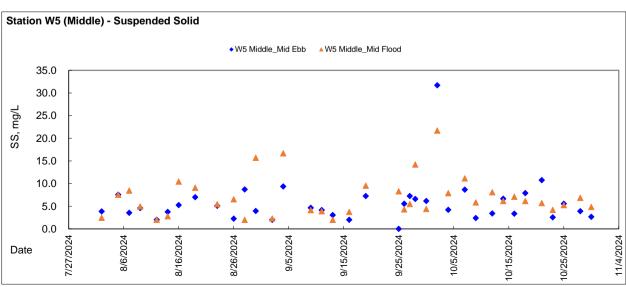






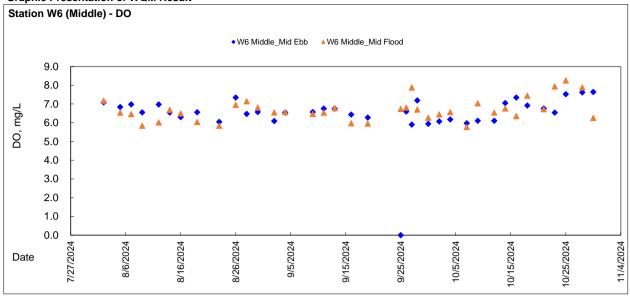


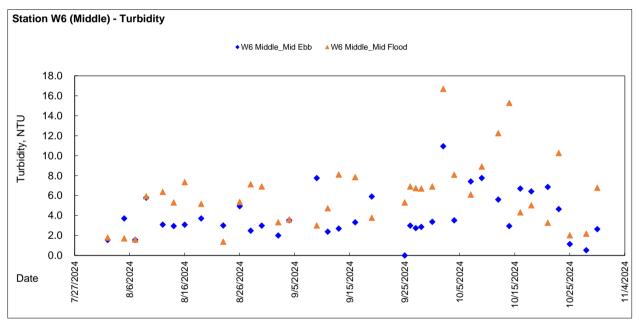


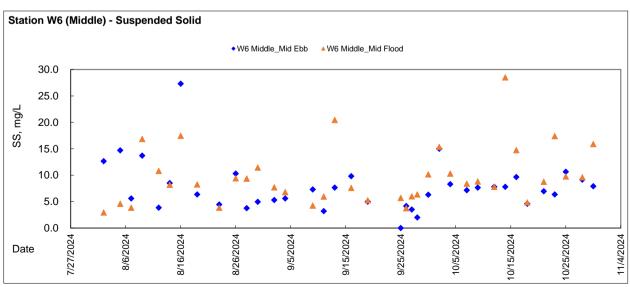




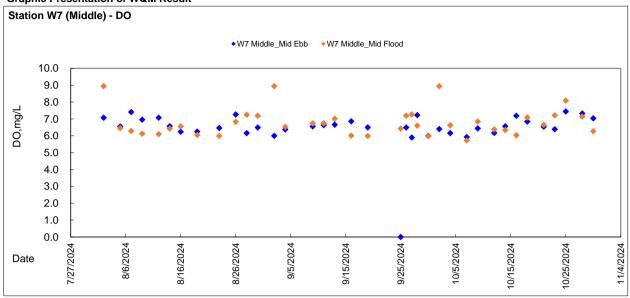


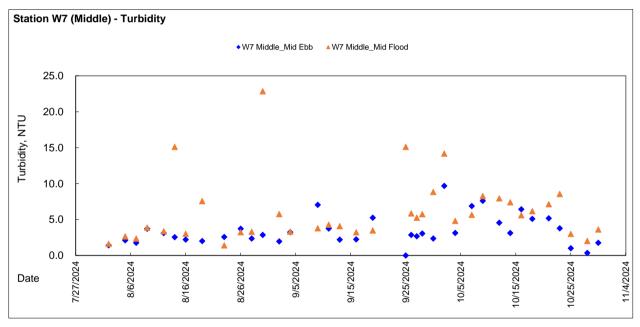


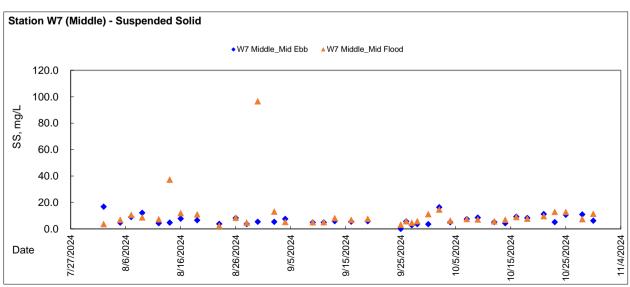




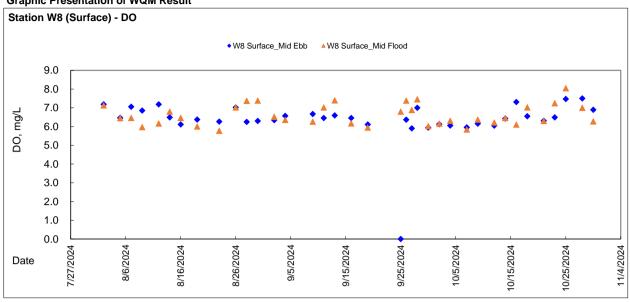


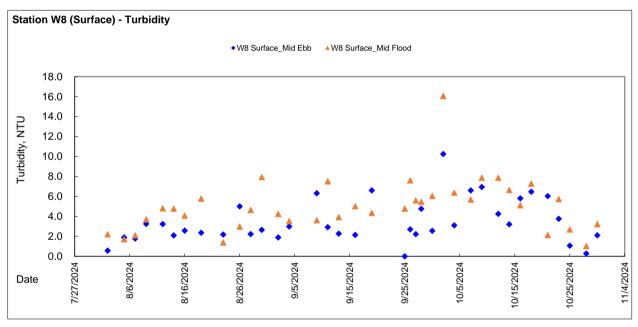


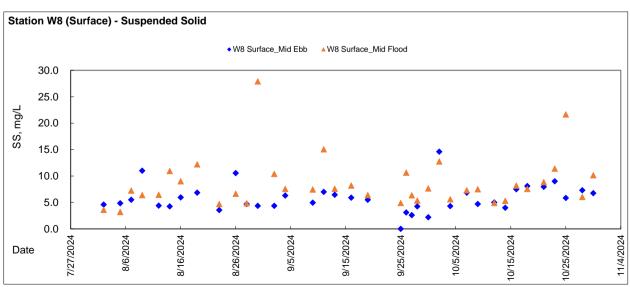




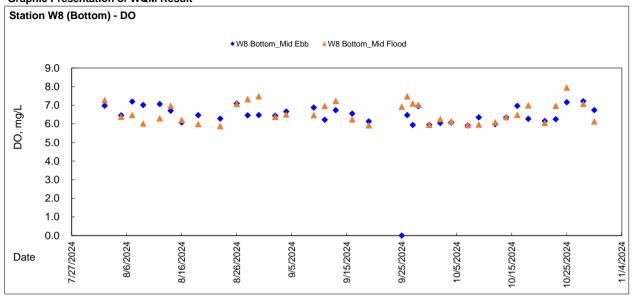


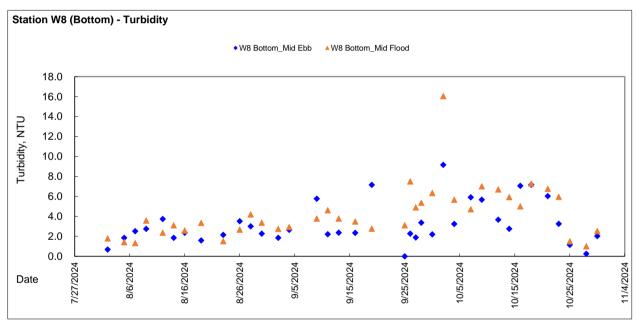


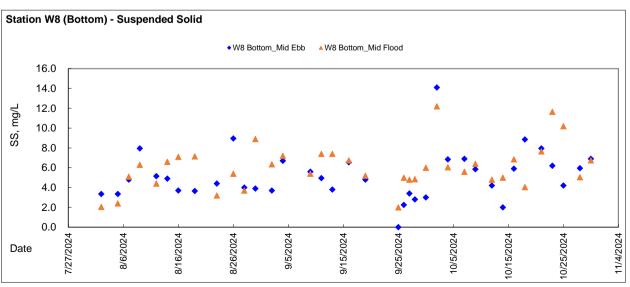














Appendix 5.5

Monthly Summary Waste Flow Table

Name of Department: A	ArchSD/CEDD/HA/EMSD/HyD/WSD
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Contract No.: HY/2019/14

(Notes: The following Waste Flow Table should be used for contracts either not included under the Pay for Safety and Environment Scheme or exempted from the full requirement for environmental management)

Monthly Summary Waste Flow Table for 2021

	Actual Quantities of Inert C&D Materials Generated							ctual Quantiti	es of C&D W	astes Generat	ed
Monthly ending	Total Quantity Generated	Broken Concrete (see Note 3)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000m ³)
Jan	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0
Mar	0.014	0.007	0	0	0	0	0	0	0	0	0.007
Apr	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0
Jun	0.01	0	0	0	0	0	0	0	0.003	0	0.007
Sub Total	0.024	0.007	0	0	0	0	0	0	0.003	0	0.014
Jul	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0
Sept	0	0	0	0	0	0	0	0	0	0	0
Oct	0.007	0	0	0	0	0	0	0	0	0	0.007
Nov	0	0	0	0	0	0	0	0	0	0	0
Dec	0.005	0	0	0	0	0	0	0	0	0	0.005
Total	0.036	0.007	0	0	0	0	0	0	0.003	0	0.026

- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) Broken concrete for recycling into aggregates.

Contract No.: HY/2019/14

(Notes: The following Waste Flow Table should be used for contracts either not included under the Pay for Safety and Environment Scheme or exempted from the full requirement for environmental management)

Monthly Summary Waste Flow Table for 2022

	Actual Quantities of Inert C&D Materials Generated Actual Quantities of C&D Wastes Generated Actual Quantities of C&D Wastes Generated								ad		
			unes of mert		us Generated	1	A	_	es of C&D W	asies Generat	
Monthly ending	Total Quantity Generated	Broken Concrete (see Note 3)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000m ³)
Jan	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0
Mar	0.01	0	0	0	0.01	0	0	0	0	0	0
Apr	0.01	0	0	0	0.01	0	0	0	0	0	0
May	0.019	0	0	0	0.019	0	0	0	0	0	0.015
Jun	0	0	0	0	0	0	0	0	0	0	0
Sub Total	0.039	0	0	0	0.039	0	0	0	0	0	0.015
Jul	0.009	0	0	0	0.009	0	0	0	0	0	0
Aug	0.056	0	0	0	0.056	0	0	0	0	0	0.0672
Sept	0.25	0	0	0	0.25	0	0	0	0	0	0
Oct	0.022	0	0	0	0.022	0	0	0	0	0	0
Nov	0.004	0	0	0	0.004	0	0	0	0	0	0.0111
Dec	0.013	0	0	0	0.013	0	0	0	0	0	0.0114
Total	0.393	0	0	0	0.393	0	0	0	0	0	0.1047

- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) Broken concrete for recycling into aggregates.

Name of Department: ArchSD/CEDD/HA/EMSD/HyD/WSI

Contract No.: HY/2019/14

(Notes: The following Waste Flow Table should be used for contracts either not included under the Pay for Safety and Environment Scheme or exempted from the full requirement for environmental management)

Monthly Summary Waste Flow Table for 2023

	Actual Quantities of Inert C&D Materials Generated						Actual Quantities of C&D Wastes Generated				
Monthly ending	Total Quantity Generated	Broken Concrete (see Note 3)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000m ³)
Jan	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0.0183
Apr	0	0	0	0	0	0	0	0	0	0	0.0134
May	0.008	0	0	0	0.008	0	0	0	0	0	0.0125
Jun	0	0	0	0	0	0	0	0	0	0	0
Sub Total	0.401	0	0	0	0.401	0	0	0	0	0	0.1489
Jul	0.0132	0	0	0	0.0132	0	0	0	0	0	0.0092
Aug	0.04147	0	0	0	0.04147	0	0	0	0	0	0
Sept	0.01687	0	0	0	0.01687	0	0	0	0	0	0.0312
Oct	0.05277	0	0	0	0.05277	0	0	0	0	0	0.0081
Nov	0	0	0	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	0	0	0	0	0	0
Total	0.52531	0	0	0	0.52531	0	0	0	0	0	0.1974

- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) Broken concrete for recycling into aggregates.

Name of De	partment:	ArchSD/	CEDD/HA	/EMSD/ E	IvD /WSD

Contract No.: <u>HY/2019/14</u>

(Notes: The following Waste Flow Table should be used for contracts either not included under the Pay for Safety and Environment Scheme or exempted from the full requirement for environmental management)

Monthly Summary Waste Flow Table for 2024

	Actual Quantities of Inert C&D Materials Generated						Actual Quantities of C&D Wastes Generated				
Monthly ending	Total Quantity Generated	Broken Concrete (see Note 3)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000m ³)
Jan	0.22423	0	0	0	0.22423	0	0	0	0	0	0.0089
Feb	0.04492	0	0	0	0.04492	0	0	0	0	0	0.0089
Mar	0	0	0	0	0	0	0	0	0	0	0.007
Apr	0.03549	0	0	0	0.03549	0	0	0	0	0	0.01925
May	0.08588	0	0	0	0.08588	0	0	0	0	0	0.00785
Jun	0.06943	0	0	0	0.06943	0	0	0	0	0	0.0157
Sub Total	0.98526	0	0	0	0.98526	0	0	0	0	0	0.2650
Jul	0.00436	0	0	0	0.00436	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0.00975
Sept	0.06101	0	0	0	0.06101	0	0	0	0	0	0.005
Oct	0	0	0	0	0	0	0	0	0	0	0
Nov											
Dec											
Total	1.05063	0	0	0	1.05063	0	0	0	0	0	0.27975

- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) Broken concrete for recycling into aggregates.



Appendix 6.1

Event Action Plans

Appendix 6.1 Event and Action Plan

Event and Action Plan for Construction Air Quality

EVENT		ACTIO	N	
EVENT	ET	IEC	ER	CONTRACTOR
ACTION LEVE	L			
1. Exceedance for one sample	 Inform IEC, ER and Contractor; Identify source, investigate the causes of exceedance and propose remedial measures; Repeat measurement to confirm finding. 	 Check monitoring data submitted by ET; Check Contractor's working method. 	1. Notify Contractor.	 Rectify any unacceptable practice; Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	1. Inform IEC, ER and Contractor; 2. Identify source; 3. Advise the ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC, ER and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET/ER on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures.	Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measures properly implemented.	 Submit proposals for remedial to ER and IEC within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate.

Event and Action Plan for Construction Air Quality

EVENT		A	ACTION	
Z V Zi V I	ET	IEC	ER	CONTRACTOR
LIMIT LEVEL				
1.Exceedance for one sample	1. Inform IEC, ER, Contractor and EPD; 2. Identify source, investigate the causes of exceedance and propose remedial measures; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures.	Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measures properly implemented.	1. Take immediate action to avoid further exceedance; 2. Discuss with ET and IEC on remedial actions 3. Submit proposals for remedial actions to IEC within 3 working days of notification; 4. Implement the agreed proposals; 5. Amend proposal if appropriate.
2.Exceedance for two or more consecutive samples	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER and Contractor to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 5. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to terminate that portion of work until the exceedance ceases.	1. Take immediate action to avoid further exceedance; 2. Discuss with ET and IEC on remedial actions 3. Submit proposals for remedial actions to ER and IEC within 3 working days of notification; 4. Implement the agreed proposals; 5. Resubmit proposals if problem still not under control; 6. Stop the relevant portion of works as determined by the ER until the exceedance ceases.

Event and Action Plan for Construction Noise

EVENT			ACTION	
EVENI	ET	IEC	ER	CONTRACTOR
Action Level	1. Notify IEC, ER and Contractor of exceedance; 2. Identify source 3. Investigate the causes of exceedance and propose remedial measures; 4. Report the results of investigation to the IEC, ER and Contractor; 5. Discuss with the IEC, ER and Contractor and formulate remedial measures; 6. Increase monitoring frequency to check mitigation effectiveness.	1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	Confirm receipt of notification of failure in writing; Notify Contractor; Require Contractor to propose remedial measures for the analysed noise problem; Ensure remedial measures are properly implemented	Submit noise mitigation proposals to ER with copy to ET and IEC; Implement noise mitigation proposals.
Limit Level	1. Inform IEC, ER, EPD and Contractor; 2. Identify source; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	 Discuss amongst ER, ET, and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; Supervise the implementation of remedial measures. 	 Confirm receipt of notification of failure in writing; Notify Contractor; Require Contractor to propose remedial measures for the analysed noise problem; Ensure remedial measures are properly implemented; If exceedance continues, investigate what portion of the work is responsible and instruct the Contractor to terminate that portion of work until the exceedance ceases. 	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to ER with copy to ET and IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Terminate the relevant portion of works as determined by the ER until the exceedance ceases.

Event and Action Plan for Water Quality

EN (EN ME)		A	CTION	
EVENT	ET Leader	IEC	ER	Contractor
ACTION LEVEL				
Action level being exceeded by one sampling day	 Repeat in situ measurement on next day of exceedance to confirm findings; Identify source(s) of impact; Inform IEC, contractor and ER; Check monitoring data, all plant, equipment and Contractor's working methods. 	Check monitoring data submitted by ET and Contractor's working methods.	Confirm receipt of notification of non-compliance in writing; Notify Contractor.	Inform the ER and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Amend working methods if appropriate.
	 Repeat measurement on next day of exceedance to confirm findings; Identify source(s) of impact; Inform IEC, contractor, ER and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, ER and Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Action level. 	 Check monitoring data submitted by ET and Contractor's working method; Discuss with ET and Contractor on possible remedial actions; Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly; Supervise the implementation of mitigation measures. 	Discuss with IEC on the proposed mitigation measures; Ensure mitigation measures are properly implemented; Assess the effectiveness of the implemented mitigation measures.	 Inform the ER and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment and consider changes of working methods; Submit proposal of additional mitigation measures to ER within 3 working days of notification and discuss with ET, IEC and ER; Implement the agreed mitigation measures.

Event and Action Plan for Water Quality

ICK/ICA//IC	ACTION								
EVENT	ET Leader	IEC	ER	Contractor					
LIMIT LEVEL									
Limit level being exceeded by one sampling day	 Repeat measurement on next day of exceedance to confirm findings; Identify source(s) of impact; Inform IEC, contractor, ER and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, ER and Contractor. 	 Check monitoring data submitted by ET and Contractor's working method; Discuss with ET and Contractor on possible remedial actions; Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly. 	 Confirm receipt of notification of failure in writing; Discuss with IEC, ET and Contractor on the proposed mitigation measures; Request Contractor to review the working methods. 	 Inform the ER and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment and consider changes of working methods; Submit proposal of mitigation measures to ER within 3 working days of notification and discuss with ET, IEC and ER. 					
Limit level being exceeded by two or more consecutive sampling days	 Repeat measurement on next day of exceedance to confirm findings; Identify source(s) of impact; Inform IEC, contractor, ER and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, ER and Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days. 	 Check monitoring data submitted by ET and Contractor's working method; Discuss with ET and Contractor on possible remedial actions; Review the Contractor's mitigation measures whenever necessary to assure their effectiveness and advise the ER accordingly; Supervise the implementation of mitigation measures. 	 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; Ensure mitigation measures are properly implemented; Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit level. 	 Take immediate action to avoid further exceedance; Submit proposal of mitigation measures to ER within 3 working days of notification and discuss with ET, IEC and ER; Implement the agreed mitigation measures; Resubmit proposals of mitigation measures if problem still not under control; As directed by the Supervising Officer, to slow down or to stop all or part of the construction activities until no exceedance of Limit level. 					



Appendix 6.2

Summary for Notification of Exceedance



Lam Environmental Services Limited

Contract No: HY/2019/14 New Wang Tong River Bridge

Summary for Notification of Exceedance

Ref No.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up Action
-	-	-	-	-	-	-	-

Ref. No.	Date	Time	Location	Construction Noise Level	Parameter	Action Level	Limit Level	Follow-up action
-	-	-	-	-	-	-	-	-



Appendix 8.1

Complaint Log





Environmental Complaints Log

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
-	-	-	-	-	-	-



Appendix 9.1

Construction Programme of Individual Contracts

				Contrac	3-Month Rolling Program						
識別碼	Task Name		Period	Start	End	2024年第三季	22.6		年第四季	2025	年第一季
1	Removal of temporary st area for HAD event on 5	eel cover and install safety barriers at all works Oct 2024	7 days	9月23日星期-	9月30日星期一		23/9 3	0/9			
2	Temporary open both fo	otbridge and cycle bridge for HAD event (Site i	4 days	10月2日星期	三 10月5日星期六		2/10	5/10			
3	Stainless steel hand railir	ng fabrication for cycle bridge	48 days	9月11日星期	三 11月8日星期五	11/	/9		8/11		
4	Bicycle parking rail instal	lation	4 days	10月7日星期-	- 10月10日星期四		7/10	10/10			
5	Type II railing installation	at cycle bridge northern end	3 days	10月12日星期7	六 10月15日星期二		12/1	0 15/10			
6	RCS1, RCS2 and Outlet C	onstruction	28 days	10月7日星期-	一 11月8日星期五		7/10		8/11		
7	Soil testing for Type D re	taining wall	24 days	10月7日星期-	一 11月4日星期一		7/10	4/	/11		
8	Natural granite stone fac	ing installation	25 days	10月16日星期	三 11月13日星期三		16,	/10	13/11		
9	Temporary open both fo competition on 3 Nov 20	otbridge and cycle bridge for dragon boat 24	1 day	11月2日星期2	六 11月2日星期六			2/11 2/1	11		
10	Re-enclose cycle bridge	after event	1 day	11月4日星期-	11月4日星期一			4/11 4/	/11		
11	Sheetpiling removal wor	ks	13 days	11月13日星期	三 11月27日星期三			13/11	27/11		
12	Road kerb installation (E	ntrence of Cycle Bridge)	6 days	11月14日星期日	四 11月20日星期三			14/11	20/11		
13	Sign post installtion		3 days	11月18日星期-	- 11月20日星期三			18/1	.1 20/11		
14	Paving block installation	(Retaining Wall S1 and S2)	6 days	11月21日星期日	四 11月27日星期三			21/	/11 27/11		
15	Footbridge and cycle bri	dge painting works	18 days	11月21日星期日	四 12月11日星期三			21/	/11 11/12		
16	Bituminous finish laying	works (Phase 1 - Cycle Bridge)	5 days	11月22日星期	五 11月27日星期三			22,	/11 27/11		
17	Traffic diversion (Open C	ycle bridge, Enclose Footbridge)	1 day	11月28日星期	四 11月28日星期四				28/11 28/11		
18	Road kerb installation (E	ntrence of Footbridge)	6 days	11月29日星期	五 12月5日星期四				29/11 5/12		
19	Paving block installation	(Type D Retaining Wall)	6 days	12月6日星期	五 12月12日星期四				6/12 12/12		
20	Road marking		5 days	12月6日星期	五 12月11日星期三				6/12 🎽 11/12		
21	U Channel construction a	and road level raising at southern cycle track	14 days	11月29日星期	五 12月14日星期六				29/11 14/12		
22	Bituminous finish laying	works (Phase 2 - Southern cycle track)	2 days	12月16日星期-	一 12月17日星期二				16/12 🕈 17/12		
23	Opening Ceremony		2 days	12月18日星期	三 12月19日星期四				18/12 🛮 19/12		
24	Site hoarding removal w	orks and site clearance	25 days	12月20日星期	五 1月20日星期一				20/12	20/1	
			型要徑任務		專案摘要	■ 非作用中的摘要		僅定義開始	日期	期限	\$
HY/2019					摘要群組 ▼	■ 手動任務	\Diamond	僅包含完成	時間 ▼───▼		
3-Month Date: 20	n Rolling Programme 0241107	■ 里程碑	型進度 ■		非作用中的任務 ————	——— 僅包含工期			♦		
		摘要 ▼ 分割	1		非作用中的里程碑 🔻	手動上顯型摘要	•	外部里程碑			
		上顯型任務 外部任	王務		非作用中的里程碑 🔙 🚃 💮	手動摘要	•	進度			