CONTRACT NO: SD 6/2020

CONSTRUCTION OF SAN SHEK WAN SEWAGE TREATMENT WORKS ASSOCIATED SUBMARINE OUTFALL AND PUI O SEWERAGE WORKS

UNDER ENVIRONMENTAL PERMIT NO. EP-538/2017

MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT

JUNE 2022
REVISION 2

CLIENTS:

Drainage Services Department

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CERTIFIED BY:

Derek Lo
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DATE:

14 July 2022

Member of the Surbana Jurong Group

local people
global experience

Our ref: 7076811/L28837/AW/KL/TK/rw

14 July 2022

Drainage Services Department
Sewage Services Branch
Special Duty Division Group 3
42/F Revenue Tower
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By Email and Post
(kschan04@dsd.gov.hk)

Attention: Mr Silas CHAN

Dear Sir

Contract No. SD 7/2020
Independent Environmental Checker ("IEC") for Environmental Monitoring Work for South Lantau Sewerage Works
Verification of Updated Monthly EM&A Report (June 2022)

With reference to the Monthly EM&A Report (June 2022) Revision 2 dated and certified by the ET Leader on 14 July 2022, please note that we have no adverse comments on the captioned and we hereby verify the captioned in accordance with Condition 3.4 of the Environmental Permit No. EP-538/2017.

Should you have questions please do not hesitate to contact the undersigned at tel. 3995-8140 or by email to kitty.lee@smec.com.

Yours faithfully

Kitty LEE
Independent Environmental Checker

cc	Binnies	-	Mr Clarence CHAK	by email
	Lam	-	Ms Melody CHENG / Mr Raymond DAI	by email
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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

EXECUTIVE SUMMARY

i. This is the Monthly Environmental Monitoring and Audit (EM&A) Report – June 2022 for the Outlying Islands Sewerage Stage 2 – South Lantau Sewerage Works under Environmental Permit No. EP-538/2017 (Hereafter as "the Project"). The construction works of the Project was commenced on 3 November 2021 and the tentative completion date is Q1 2026. This Monthly EM&A Report presents the environmental monitoring findings and information recorded during the period of 1 to 30 June 2022. The cut-off date of reporting is at the end of each reporting month.

ii. In the reporting period, the principal work activities undertaken are as follows:

- Excavation and site formation works at San Shek Wan Sewage Treatment Works (SSWSTW) and Pui O Sewage Pumping Station (POSPS)
- Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen
- Excavation at South Lantau Road
- Tree pruning at POSPS
- HDD works

Exceedances of Action/Limit Levels

Noise Monitoring

iii. Noise monitoring was conducted at seven (7) noise monitoring stations (*N12a, N12b, N13, N14, N16a, N16b and N17*) once per week in the reporting period.

iv. No Action/Limit Level exceedances were recorded in this reporting period.

Water Quality Monitoring

v. Water quality monitoring had been commenced on 12 April 2022 the designated monitoring stations three days per week with respect to marine-based construction works commenced on 19 April 2022. HDD casing works commenced on 30 May 2022.

vi. In accordance with the EM&A Manual, 116 action level and 0 limit level exceedances on DO, 15 action level and 45 limit level exceedances on turbidity, 11 action level and 36 limit level exceedances on SS were recorded in the reporting month.

vii. Overall exceedances on turbidity and SS (i.e. SR4, SR15 downstream to the construction site during mid-ebb, SR5, SR6, SR9, SR10 and SR12 exceedances downstream to the construction site during mid-flood,) in the reporting month were referred to the 20% / 30% of control station criteria only whereas there were no exceedance as referred to 95%-ile / 99%-ile criteria, indicating that the exceedance is due to the localized water quality better than baseline range were captured at the control station whereas the impact station are still within the baseline ranges.

viii. Co-related the monitoring dates with those days with recorded marine works activities, no marine dredging works were active during the reporting month. Majority of recorded marine works activities were steel works and maintenance on working barge not in contact with water, except casing installation for marine HDD works on 28 June 2022 with silt curtain maintained. Reviewed the overall work situation with limited marine works, it can be concluded that all the turbidity and SS exceedances were possibly due to natural runoff from streams to the sea as a result of frequent rainfall as recorded in the reporting month (Heavy showers, rainstorm and squally thunderstorms during 7-11 June 2022 and 14-16 June 2022, Amber rainstorm warning signal recorded on 7, 11, 14, 15 June 2022; Amber and Red rainstorm warning signals and waterspout near Cheung Chau 2022 recorded on 8 June 2022).

ix. For Action level exceedances on DO were generally recorded at control station CE and CF on most monitoring dates except 11, 13, 15 and 30 June 2022 such that these recorded exceedance could be the background contribution to overall DO exceedances at the impact stations in general in the reporting month. Therefore, the exceedances could be the fluctuation around background ranges and hence considered as non-project related.

x. Reviewing the “and“ approach, no exceedance in turbidity and SS would be recorded on adopting the ‘and’ criteria in the Action and Limit Level as proposed in submitted Baseline Monitoring Report.

Ecological Impact Monitoring

xi. Transplanting of the trees of *Aquilaris sinensis* was completed on 26 April 2022. Maintenance works for trees in holding nursery have commenced.

xii. As per latest version of PTP, four tree found (1 no. of Aquilaria sinensis and 3 nos. of Gmelina chinensis) within the site of SSWSTW which are considered to be the plant species with conservative importance for temporarily transplanted to the nursery at Kam Tin and eventually be transplanted to Pui O Pumping Station.

Complaint log

xiii. No environmental complaint regarding the construction works was recorded in the reporting period.

xiv. The investigation report for the noise complaint on May 2022 was sent to EPD, no comment from EPD on the case.

Notifications of Any Summons and Successful Prosecutions

xv. No environmental notification of any summons and successful prosecution regarding the construction works was recorded in the reporting period.

Reporting Changes

xvi. There are no particular reporting changes.

Future Key Issues

6.1.1 In coming reporting 3 months, the scheduled construction activities are listed as follows:

- Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen
- Construction of trunk sewers and rising mains
- SSWSTW and HDD works
- Site formation works for POSPS
- Drilling works
- Excavation works
- ELS works
- Piling Works
- Superstructure RC Words

xvii. Key construction activities for the next three months with the recommended mitigation measures to be implemented are presented as follows:

Key Construction Works	**Recommended Mitigation Measures**
• Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen • Construction of trunk sewers and rising mains • SSWSTW and HDD works • Site formation works for POSPS • Drilling works • Excavation works • ELS works • Piling Works • Superstructure RC Words	• Implementation of noise pollution control in accordance with Construction Noise Mitigation Plan; • Dust control during dust generating works; • Adopt surface drainage and sediment control facilities for sewage installation in village and public roads; • Adopt temporary drainage and sediment control facilities on Site; • Vehicle wheel-washing and body washing facilities should be provided at the site entrance; • Regular water spraying on drilling and excavation works for dust control; and • Proper waste handling, recycling and storage.

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-538/2017 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 the Outlying Islands Sewerage Stage 2 – South Lantau Sewerage Works (Register No.: AEIAR-210/2017).

1.1.2. In accordance with Clause 3.4 stated in EP-538/2017, 4 hard copies and 1 electronic copy of Monthly EM&A Report shall be submitted to the Director within 2 weeks after the end of each reporting month.

1.1.3. According to Section 12.2 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 **Basic project Information and *Environmental Status*** – summarizes project organization and key personnel contact, construction programme and works undertaken for the month. Construction programme, works undertaken during the month with illustrations, drawing showing the project area, environmental sensitive receivers and monitoring locations.

Section 3 ***Implementation Status*** **–** advice on the implementation status of environmental protection and pollution control/mitigation measures, as recommended in the EIA Report and summarised in the updated implementation schedule.

Section 4 ***Monitoring Results*** – summarizes the monitoring results obtained in the reporting period, including monitoring methodology, name of laboratory and equipment used and calibration details, parameters monitored, monitoring locations (and depth), monitoring date, frequency, and duration.

Section 5 ***Report on Complaints, Notification of Summons and Successful Prosecutions*** – summarizes:

Record of all complaints received (written or verbal) for each media, including locations and nature of complaints investigation, liaison and consultation undertaken, actions and follow-up procedures taken, results and summary;

Record of notifications of summons and successful prosecutions for breaches of the current environmental protection/pollution control legislations, including locations and nature of the breaches, investigation, follow-up actions taken,

results and summary;

Review of the reasons for and the implications of non-compliance, complaints, summons and prosecutions including review of pollution sources and working procedures; and

Description of the actions taken in the event of non-compliance and deficiency reporting and any follow-up procedures related to non-compliance.

Section 6 ***Future Key Issues –*** An account of the future key issues as reviewed from the works programme and work method statements.

Section 7 ***Conclusion***

2 Basic project Information and Environmental Status

2.1 Basic Project Information

2.1.1. Drainage Services 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. Key personnel and contact particulars are summarized in ***Table 2.1:***

Table 2.1 Contact Details of Key Personnel

Party	Role	Post	Name	Contact No.	Contact Fax
Drainage Services Department (DSD)	The Engineer for the Contract	Engineer	Mr. Silas Chan	2594 7272	3104 6426
Binnies Hong Kong Limited	Engineer's Representative	Resident Engineer	Mr. Clarence Chak	6428 5532	-
Kwan Lee – Chun Wo Joint Venture	Contractor	Site Agent	Mr. Charles Tse	9270 3384	2744 6937
		Environmental Officer	Ms. Shirley Kong	5162 5933	
SMEC Hong Kong	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Ms. Kitty Lee	3995 8140	3995 8101
Lam Environmental Services Limited	Environmental Team (ET)	Environmental Team Leader (ETL)	Mr. Derek Lo	2882 3939	2882 3331

2.2 Construction Programme

2.2.1. The proposed sewerage works will collect the sewage generated from the unsewered areas of Shui Hau, Tong Fuk, Cheung Sha, San Shek Wan, Pui O and Ham Tin in South Lantau (i.e. within the Project Catchment Area) and convey it to a proposed sewage treatment works at San Shek Wan for treatment and disposal into outer bay of Pui O/ Chi Ma Wan via a submarine outfall.

2.2.2. The entire Project are divided into three contracts. Contract No. DC/2020/20 (the Contract) would have the following implementations as demonstrated in ***Figure 2.1***.

2.2.3. The major components of the Contract under Environmental Permit (EP) (EP No. EP-538/2017) comprises: (i) construction of sewage treatment works at San Shek Wan (SSWSTW) and associated submarine outfall; (ii) construction of sewage pumping station at Pui O (POSPS); (iii) village sewage works at Pui O; and (iv) trunk sewers and rising mains on carriageways.

2.2.4. The performance of the environmental management system of the reporting period was generally satisfied. 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.

2.3 Works undertaken during the month

2.3.1. In the reporting month, the principal work activities conducted are as follow:

- Excavation and site formation works at San Shek Wan Sewage Treatment Works (SSWSTW) and Pui O Sewage Pumping Station (POSPS)
- Tree pruning at POSPS
- Maintenance works for trees in holding nursery and construction site
- Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen
- Excavation at South Lantau Road
- HDD works

The locations of works are shown in ***Figure 2.2***.

2.4 Drawing showing the project area, environmental sensitive receivers and monitoring locations

2.4.1. Noise and water monitoring location plans with sensitive receivers are shown in ***Figure 2.3*** and ***Figure 2.4***.

3 Implementation Status

3.1 Advice on the implementation status of environmental protection and pollution control/mitigation measures

3.1.1. Mitigation measures according to the environmental mitigation implementation schedule in Annex A of EM&A Manual were generally implemented by the Contractor. Hence, the EM&A programme was considered effective and shall be maintained.

3.2 Environmental Mitigation Measures

3.2.1. Environmental mitigation measures mentioned the EIA Report were weekly reviewed and recorded in Weekly Environmental Site Audit Checklist. Also, a summary of the current status on submissions and measures mentioned in Environmental Permit (EP-538/2017) are shown in ***Table 3.1***.

Table 3.1 Summary of submission status under EP-538/2017

EP Condition	Submission	Date of Latest Submission to EPD^ / EPD Approval#
Condition 2.10	Waste Management Plan (Rev. 5) (electronic copy)	4 April 2022#
Condition 2.11	Submission of Preservation and/or Transplantation Plan for Plant Species of Conservation Importance (Rev. 12)	11 May 2022^
Condition 2.12	Submission of Compensatory Woodland Planting Plan (Rev. 5)	2 July 2021^
Condition 2.13	Silt Curtain Deployment Plan (Rev. 11)	29 April 2022^
Condition 2.14	Landscape Mitigation Plan	To be confirmed
Condition 2.15	Construction Noise Mitigation Plan (Rev. 14)	8 April 2022^

3.3 Environmental monitoring requirements and contractual requirements

3.3.1. A summary of the current status on licences and/or permits on environmental protection pertinent to the Project is shown in ***Table 3.2***.

Table 3.2 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.	Issued Date	Valid Period & Expiry Date	Status
Notification of Works Under APCO	466408	14 Apr 2021	N/A	Valid
Discharge Licence	POPS: WT00039820-2021 SSWSTW: WT00039636-2021	31 Dec 2021 30 Dec 2021	31-12-2021 to 31-12-2026 30-12-2021 to 31-12-2026	Valid
Billing account under Waste Disposal Ordinance	Account No.: 7040411	05 May 2021	N/A	Valid
Registration as a Chemical Waste Producer	0000-931-K3428-01	13 May 2021	N/A	Valid
Construction Noise Permit	GW-RS0428-22	26 May 2022	29-05-2022 to 28-11-2022	Valid

Note: Only include those valid or under application; fill in "N/A" for non-applicable item(s).

3.4 Site Inspection and Audit Reports

3.4.1. Within this reporting month, weekly environmental site inspections were conducted on 07, 14, 20 and 28 June 2022. IEC attended the SSEMC meeting held on 20 June 2022. Holding nursery visit for transplanted trees on 28 June 2022.

3.4.2. 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 3.3***.

Table 3.3 Summary of Environmental Inspections

Inspection Date	Reminder and Recommendations	Close-out Date / Status
7 June 2022	Site conditions were generally in order	N/A
14 June 2022	Site conditions were generally in order	N/A
20 June 2022	1. Adequate submersible pumps to be provided to collect surface runoff from silt traps and wheel washing bay to wastewater treatment facilities. 2. Sand bags and/or impermeable sheets to be put in place to demarcate excavated works from drain diversion channel. 3. Damaged bark on few branches observed on a retained tree, surface treatment to be applied on the damaged branches and tree protection zone to be implemented with material removed	28 June 2022
28 June 2022	1. Pui O Sewage Pumping Station & San Shek Wan Sewage Treatment Works - Various environmental permits and/or licenses shall be fully displayed at the entrances/exits of all works areas. 2. Village sewers works at Lo Uk Tsuen - Tree protection zones shall be established in order to prevent the trees in the vicinity of Lo Uk Tsuen from being damaged during construction. 3. Village sewers works at Lo Uk Tsuen - Preventive measures for water quality impacts between works area and the near-by stream in the vicinity of Lo Uk Tsuen shall be implemented. 4. Holding Nursery - Weeding all transplanted plant species at the holding nursery shall be undertaken. 5. Holding Nursery - Invasive exotic plant species, *Mikania micrantha*, being attached to the plant species of conservation importance shall be removed.	5 July 2022

4 Monitoring Results

4.1 Noise Monitoring

MONITORING METHODOLOGY

4.1.1 Monitoring Procedure

(a) The impact noise monitoring should be carried out at all the designated monitoring stations when there are project-related construction activities undertaken within a radius of 300m from the monitoring stations.

(b) 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.

(c) Façade measurements were made at the monitoring locations. For free-field measurement, a correction factor of +3 dB (A) would be applied.

(d) The battery condition was checked to ensure the correct functioning of the meter.

(e) Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:

(f) Frequency weighting: A, Time weighting: Fast, Measurement time set: continuous 5 mins

(g) 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 ±1.0 dB (A), the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.

(h) Noise measurements will be made in accordance with standard acoustical principles and shall not be made in fog, rain, wind with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

NAME OF LABORATORY AND EQUIPMENT USED AND CALIBRATION DETAILS

4.1.2 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 4.1***.

Table 4.1 Noise Monitoring Equipment

Equipment	Brand and Model	Series Number
Integrated Sound Level Meter	Larson Davis LxT1	0006346
Acoustic Calibrator	Honglim HLES-02	2016611465

4.1.3 The calibration certificates of the noise monitoring equipment are attached in ***Appendix 4.1*****.**

4.1.4 Calibration Details

(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.

PARAMETERS MONITORED

4.1.5 The construction noise level shall be measured in terms of the A-weighted equivalent continuous sound pressure level (Leq). Leq (30min) should be used as the monitoring parameter. Supplementary information for data auditing, statistical results such as L10 and L90 shall also be obtained for reference.

4.1.6 For impact monitoring for construction of village sewers / rising main, noise monitoring should be undertaken on weekly basis. One set of Leq (30min) noise level as six consecutive Leq (5min) between 07:00-19:00 hours on normal weekdays.

MONITORING STATIONS

4.1.7 The noise monitoring stations for the Project are listed and shown in ***Table 4.2***, impact noise monitoring was conducted at Seven (7) noise monitoring stations N12a, N12b, N13, N14, N16a, N16b and N17 once per week in the reporting month.

Table 4.2 Noise Monitoring Station

Monitoring Station ID (1)	Monitoring Location	Measurement Type	Level (in terms of no. of floor)
N01a	Shui Hau Village	Free-Field	G/F
N01c	Shui Hau Village	Free-Field	G/F
N03a	Tong Fuk Village	Free-Field	G/F
N05a	Residences at Cheung Fu Street	Free-Field	G/F
N07	Government Holiday Bungalows	Free-Field	G/F
N08	Cheung Sha Ha Tsuen	Free-Field	G/F
N10	Cheung Sha Sheung Tsuen	Façade	G/F
N11b	San Shek Wan – Ming Garden	Free-Field	G/F
N12a	Lo Uk Tsuen	Free-Field	G/F
N12b	Lo Uk Tsuen	Façade	G/F
N13	Pui O San Wai Tsuen	Façade	G/F
N14	South Lantau Community Centre	Free-Field	G/F
N15b	Pui O Lo Wai Tsuen	Façade	G/F
N16a	Residences at Ham Tin	Free-Field	G/F

Monitoring Station ID (1)	Monitoring Location	Measurement Type	Level (in terms of no. of floor)
N16b	Residences at Ham Tin	Free-Field	G/F
N17	Bui O Public School	Façade	R/F

Remarks (1): Fine adjustment of noise monitoring stations at all locations was proposed as per EP Condition 3.1.

MONITORING DATE, TIME, FREQUENCY AND DURATION

4.1.8 For daytime construction work on normal weekdays, monitoring of $L_{eq(30min)}$ should be carried out at each station at 0700-1900 hours on normal weekdays at a frequency of once a week. Impact monitoring schedule can be referred to ***Appendix 4.2*****.**

NOISE MONITORING RESULTS

4.1.9 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 4.3***.

4.1.10 No action or limit level exceedance was recorded in construction noise level in this reporting period.

4.2 Water Quality Monitoring

MONITORING METHODOLOGY

4.2.1 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 (℃), 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℃ without being frozen), which shall be delivered to HOKLAS laboratory (ALS Technichem (HK) Pty Ltd) for further testing to determine the level of SS.

NAME OF LABORATORY AND EQUIPMENT USED AND CALIBRATION DETAILS

LABORATORY MEASUREMENT / ANALYSIS

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

EQUIPMENT USED

Dissolved Oxygen, pH And Temperature Measuring Equipment

4.2.3 Multifunctional Meter and Turbid Meter are used at each designated monitoring station. They are capable of measuring:

(a) a dissolved oxygen level in the range of 0-20mg/L and 0-200% saturation (Detection

Limit: 0.1mg/L)

(b) a temperature of 0-45 degree Celsius (Detection Limit: 0.1 degree Celsius)

(c) turbidity level between 0-1000NTU (Detection Limit: 0.1NTU)

(d) salinity in the range of 0-40ppt (Detection Limit: 0.1ppt)

(e) pH value in range of 0.0 – 14.0 (Detection Limit: 0.1units)

Other monitoring equipment namely water depth meter, water current meter, dGPS positioning device, water sampler listed below were also deployed,

(a) Water depth meter (Range: 0.6 -100m, Resolution: 0.1m)

(b) Water current meter (Range: 0-360^{o}, Detection Limit: 1mm/s)

(c) dGPS positioning device (Resolution: Horizontal: 0.25m; Vertical: 0.50 m)

(d) Water sampler (Horizontal discrete type, Capacity: 2.2L)

Sampler Container and Storage

4.2.4 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.

Water Depth Detector

4.2.5 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.

CALIBRATION DETAILS

4.2.6 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.

4.2.7 Brand and model of the equipment are given in ***Table 4.3***.

Table 4.3 Water Quality Monitoring Equipment

Equipment	Brand and model	Series Number
Multifunctional Meter	Sonde YSI Professional Plus	17F100236
Turbid meter	Xin Rui WGZ-3B	2005060

Calibration certificates of the water quality monitoring equipment are attached in ***Appendix 4.1***.

PARAMETERS MONITORED

4.2.8 In construction phase, the levels of dissolved oxygen (DO), temperature, turbidity and salinity should be measured in situ while suspended solids (SS) is determined by laboratory analysis.

MONITORING STATIONS

4.2.9 Water quality monitoring involves 9 monitoring stations. The locations of water quality monitoring station are shown in ***Table 4.4***.

Table 4.4 Marine Water Quality Stations for Water Quality Monitoring

Station	Description	Easting	Northing
CE	Upstream control station at ebb tide	810838	807538
CF	Upstream control station at flood tide	815886	808081
SR4 (1)	Ecological Sensitive Receiver (Coral Communities) at Pui O Wan	814938	810975
SR5	Ecological Sensitive Receiver (Coral Communities) at Pui O Wan	814326	810540
SR6	Gazetted Bathing Beach at Lower Cheung Sha	810553	810475
SR9 (1)	Ecological Important Stream at Tong Fuk	811325	809787
SR10	Secondary Contact Recreational Zones at South Lantau	810561	809494
SR12 (1)	Proposed Special Site of Scientific Interest (SSSI) at Shui Hau Wan	810359	808989
SR15	Gazetted Bathing Beach at Pui O and Ecologically Important Stream at Pui O	816037	810722

Remarks (1): Fine adjustment of water quality monitoring stations at SR4, SR9 and SR12 was proposed as per EP Condition 3.1, and baseline monitoring was conducted at corresponding fine adjusted locations.

MONITORING DATE, TIME, FREQUENCY AND DURATION

4.2.10 Water quality monitoring had been commenced on 12 April 2022 the designated monitoring stations three days per week with respect to marine-based construction works commenced on 19 April 2022. HDD casing works commenced on 30 May 2022.

4.2.11 The levels of dissolved oxygen (DO), temperature, turbidity and salinity were measured in situ while suspended solids (SS) is determined by laboratory analysis at all the monitoring stations in *Table 4.4* three times a week. Impact monitoring schedule can be referred to ***Appendix 4.2***.

4.2.12 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.

4.2.13 Impact Monitoring shall be carried out three 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.

4.2.14 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.

4.2.15 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.

MONITORING RESULTS

4.2.16 Marine water quality monitoring results measured in this reporting period are reviewed and summarized. Details of marine water quality monitoring results and graphical presentation can be referred in ***Appendix 4.4***

4.2.17 Water quality monitoring is evaluated against Action and Limit Levels. Note that derived Action and Limit Level was proposed in Baseline Monitoring Report for approval. Action and Limit Levels of marine water quality monitoring have been set with reference to the EM&A Manual criteria and derived criteria as shown in ***Table 4.5*** below.

Table 4.5 Action and Limit Levels of Water Quality

Parameters	Action Level	Limit Level
Construction Phase Marine Water Monitoring - EM&A Manual criteria		
DO in mg/L	Surface and Middle: 5.8 mg/L Bottom: 5.9 mg/L	Surface and Middle: 4 mg/L Bottom: 2 mg/L
Turbidity in NTU (Depth-averaged [A]) [c]	14.4 NTU, **or** 20% exceedance of value at any impact station compared with corresponding data from control station	23.5 NTU, **or** 30% exceedance of value at any impact station compared with corresponding data from control station
SS in mg/L (Depth-averaged [A]) [c]	13.1 mg/L, **or** 20% exceedance of value at any impact station compared with corresponding data from control station	30.4 mg/L, **or** 30% exceedance of value at any impact station compared with corresponding data from control station
Construction Phase Marine Water Monitoring - derived criteria		
DO in mg/L [B]	Surface and Middle: 5.8 mg/L Bottom: 5.9 mg/L	Surface and Middle: 4 mg/L Bottom: 2 mg/L
Turbidity in NTU (Depth-averaged A) [C]	14.4 NTU **and** 20% exceedance of value at any impact station compared with corresponding data from control station [D]	23.5 NTU **and** 30% exceedance of value at any impact station compared with corresponding data from control station [D]
SS in mg/L (Depth-averaged [A]) [C]	13.1 mg/L **and** 20% exceedance of value at any impact station compared with corresponding data from control station [D]	30.4 mg/L **and** 30% exceedance of value at any impact station compared with corresponding data from control station [D]

Notes (with proposed amendments in AL/LL in underlined text):
A. "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.
B. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
C. For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
D. Action Level and Limit Level with 95%-ile / 99%-ile derived from baseline data "and" 20% / 30% exceedance of control station proposed in Baseline Monitoring Report.

4.2.18 Number of exceedances recorded during the reporting month are summarized in ***Table 4.6***.

Table 4.6 Summary of Marine Water Quality Exceedances (EM&A manual)

Station	Parameter	DO (S&M)		DO (Bottom)		Turbidity		SS		Exceedance count	
	Level exceeded	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood
SR4	Action	2022/06/02 2022/06/04 2022/06/07 2022/06/09 2022/06/17 2022/06/22	2022/06/02 2022/06/04 2022/06/09 2022/06/20	2022/06/02 2022/06/04 2022/06/09 2022/06/17 2022/06/22	2022/06/02 2022/06/04 2022/06/07 2022/06/09 2022/06/17 2022/06/20	2022/06/13 2022/06/15	2022/06/20	2022/06/30	2022/06/07	14	12
	Limit	/	/	/	/	2022/06/07 2022/06/09 2022/06/11 2022/06/20 2022/06/22	2022/06/04 2022/06/07 2022/06/09 2022/06/11 2022/06/22	2022/06/02 2022/06/04 2022/06/07 2022/06/09 2022/06/11 2022/06/15 2022/06/22	/	12	5
SR5	Action	2022/06/02 2022/06/04 2022/06/09 2022/06/17 2022/06/20	2022/06/02 2022/06/04 2022/06/07 2022/06/09 2022/06/17 2022/06/20	2022/06/02 2022/06/04 2022/06/07 2022/06/17 2022/06/22	2022/06/02 2022/06/04 2022/06/07 2022/06/09 2022/06/17 2022/06/20 2022/06/22	2022/06/20	2022/06/13 2022/06/17	2022/06/15	/	12	15
	Limit	/	/	/	/	2022/06/07 2022/06/09 2022/06/11 2022/06/15	2022/06/02 2022/06/04 2022/06/07 2022/06/11 2022/06/20 2022/06/22	2022/06/04 2022/06/07 2022/06/09 2022/06/11 2022/06/13 2022/06/22	2022/06/07	10	7
SR6	Action	2022/06/02 2022/06/04 2022/06/09 2022/06/17 2022/06/22	2022/06/02 2022/06/04 2022/06/07 2022/06/09 2022/06/17	/	/	2022/06/15 2022/06/20	/	2022/06/07 2022/06/22	2022/06/07	9	6
	Limit	/	/	/	/	2022/06/07 2022/06/09 2022/06/11 2022/06/13	2022/06/07 2022/06/11	2022/06/04 2022/06/09 2022/06/11 2022/06/15	2022/06/11	8	3
SR9	Action	2022/06/02 2022/06/04 2022/06/07 2022/06/09 2022/06/17	2022/06/02 2022/06/04 2022/06/07 2022/06/09 2022/06/17 2022/06/20	2022/06/02 2022/06/04 2022/06/07 2022/06/09 2022/06/17 2022/06/22	2022/06/02 2022/06/04 2022/06/07 2022/06/09 2022/06/17 2022/06/20	2022/06/07	2022/06/04 2022/06/11	2022/06/30	/	13	14
	Limit	/	/	/	/	2022/06/09 2022/06/11	2022/06/07	2022/06/04 2022/06/11 2022/06/28	2022/06/07	5	2
SR10	Action	2022/06/02 2022/06/04 2022/06/07 2022/06/09 2022/06/17 2022/06/20 2022/06/22	2022/06/02 2022/06/04 2022/06/07 2022/06/09 2022/06/17 2022/06/20 2022/06/22	/	/	2022/06/11	/	/	/	8	7
	Limit	/	/	/	/	2022/06/09 2022/06/13	/	2022/06/04 2022/06/07 2022/06/15	2022/06/07 2022/06/13	5	2
SR12	Action	2022/06/02 2022/06/04 2022/06/07 2022/06/09 2022/06/17 2022/06/20 2022/06/22	2022/06/02 2022/06/04 2022/06/07 2022/06/09 2022/06/17 2022/06/20 2022/06/22	/	/	/	2022/06/07	2022/06/30	2022/06/07	8	9
	Limit	/	/	/	/	2022/06/07 2022/06/09	/	2022/06/04 2022/06/11 2022/06/15	/	5	0
SR15	Action	2022/06/02 2022/06/04 2022/06/09 2022/06/17 2022/06/20	2022/06/02 2022/06/04 2022/06/07 2022/06/09 2022/06/17 2022/06/20	/	/	2022/06/30	2022/06/17	2022/06/07 2022/06/09	/	8	7

Station	Parameter	DO (S&M)		DO (Bottom)		Turbidity		SS		Exceedance count	
	Level exceeded	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood
	Limit	/	/	/	/	2022/06/07 2022/06/09 2022/06/11 2022/06/13 2022/06/15 2022/06/20 2022/06/22	2022/06/04 2022/06/07 2022/06/09 2022/06/11 2022/06/20	2022/06/04 2022/06/11 2022/06/15 2022/06/22	2022/06/20	11	6
Total	Action	40	41	16	19	8	7	8	3	142	
	Limit	0	0	0	0	26	19	30	6	81	

4.2.19 In accordance with the EM&A Manual, 116 action level and 0 limit level exceedances on DO, 15 action level and 45 limit level exceedances on turbidity, 11 action level and 36 limit level exceedances on SS were recorded in the reporting month.

4.2.20 SR4 and SR15 located at upstream of construction site during mid-flood such that the Action and Limit Level exceedances on turbidity and SS along these stations in general were contributed by upstream sources before entering the submarine outfall construction location. Similarly, SR5, SR6, SR9, SR10 and SR12 located at upstream of construction site during mid-ebb, such that the Action and Limit Level exceedances on turbidity and SS along these stations in general were contributed by upstream sources before entering the submarine outfall construction location.

4.2.21 Checked with contractor and RSS on the marine works activities in the reporting month, the following activities were recorded:

- 2/6/2022 - Preparation works for assembling and installing steel casing
- 4/6/2022 - Machine maintenance on working boat
- 7/6/2022 - Preparation works for installing mud pump; Machine maintenance on working boat
- 11/6/2022 - Installing mud jar on working boat
- 13/6/2022 - Machine maintenance on working boat
- 15/6/2022 - Machine maintenance on working boat; Preparation works for connection between mud pump and tank
- 17, 22, 24/6/2022 - Appliance maintenance on working boat
- 28/6/2022 - Appliance maintenance on working boat; Casing installation for marine HDD works

4.2.22 Overall exceedances on turbidity and SS (i.e. SR4, SR15 downstream to the construction site during mid-ebb, SR5, SR6, SR9, SR10 and SR12 exceedances downstream to the construction site during mid-flood,) in the reporting month were referred to the 20% / 30% of control station criteria only whereas there were no exceedance as referred to 95%-ile / 99%-ile criteria, indicating that the exceedance is due to the localized water quality better than baseline range were captured at the control station whereas the impact station are still within the baseline ranges.

4.2.23 Co-related the monitoring dates with those days with recorded marine works activities, no marine dredging works were active during the reporting month. Majority of recorded marine

works activities were steel works and maintenance on working barge not in contact with water, except casing installation for marine HDD works on 28 June 2022 with silt curtain maintained. Reviewed the overall work situation with limited marine works, it can be concluded that all the turbidity and SS exceedances were possibly due to natural runoff from streams to the sea as a result of frequent rainfall as recorded in the reporting month (Heavy showers, rainstorm and squally thunderstorms during 7-11 June 2022 and 14-16 June 2022, Amber rainstorm warning signal recorded on 7, 11, 14, 15 June 2022; Amber and Red rainstorm warning signals and waterspout near Cheung Chau 2022 recorded on 8 June 2022).

4.2.24 For Action level exceedances on DO were generally recorded at control station CE and CF on most monitoring dates except 11, 13, 15 and 30 June 2022 such that these recorded exceedance could be the background contribution to overall DO exceedances at the impact stations in general in the reporting month. Therefore, the exceedances could be the fluctuation around background ranges and hence considered as non-project related.

4.2.25 Reviewing the "*and*" approach, no exceedance in turbidity and SS would be recorded on adopting the 'and' criteria in the Action and Limit Level as proposed in submitted Baseline Monitoring Report as presented in ***Table 4.7***. Majority of the exceedance were considered to be false alarm with review of the "and" approach for counteracting the over-sensitivity of control station criteria as proposed in the baseline report.

Table 4.7 Review of Exceedances in Turbidity and SS (proposed "and" approach)

	Parameter	Turbidity		SS		Exceedance count	
Station	Level exceeded	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood
SR4	Action	-	-	-	-	0	0
	Limit	-	-	-	-	0	0
SR5	Action	-	-	-	-	0	0
	Limit	-	-	-	-	0	0
SR6	Action	-	-	-	-	0	0
	Limit	-	-	-	-	0	0
SR9	Action	-	-	-	-	0	0
	Limit	-	-	-	-	0	0
SR10	Action	-	-	-	-	0	0
	Limit	-	-	-	-	0	0
SR12	Action	-	-	-	-	0	0
	Limit	-	-	-	-	0	0
SR15	Action	-	-	-	-	0	0
	Limit	-	-	-	-	0	0
Total	Action	0	0	0	0	0	
	Limit	0	0	0	0	0	

4.3 Ecology

MONITORING METHODOLOGY

4.3.1 The weekly site audit to be carried out by the ET should include checking whether good site practices are being properly implemented by the Contractor.

4.3.2 Impact monitoring of the transplanted *Aquilaris sinensis* at holding nursery and one retain tree of *Aquilaris sinensis* in SSWSTW Project Site, establishment and after-establishment caring measures of the compensatory mixed woodland to ensure the affected tree would not be affected by any unacceptable construction works. The trees would be treated with establishment works immediately after transplanting.

PARAMETERS MONITORED

4.3.3 The extent of the work site boundaries should be checked by the ET during the weekly site audit. Any disturbance by the Contractor outside the works area especially any damage to the vegetation and surrounding habitats outside the Project area shall be reported to ER and IEC.

4.3.4 To identify any unacceptable construction works for the trees of *Aquilaris sinensis* during transplanting, establishment and after-establishment caring measures of the compensatory mixed woodland.

MONITORING LOCATION

4.3.5 As per latest version of PTP, four tree found (1 no. of *Aquilaria sinensis* and 3 nos. of *Gmelina chinensis*) within the site of SSWSTW (***Figure 2.5***) which are considered to be the plant species with conservative importance for temporarily transplanted to the nursery (***Figure 2.6***) at Kam Tin and eventually be transplanted to Pui O Pumping Station.

MONITORING DATE, TIME, FREQUENCY AND DURATION

4.3.6 The recommended good site practices to be audited once every week as part of the site audit programme. The weekly site audit to be carried out by the ET includes checking whether good site practices are being properly implemented by the Contractor. Results are recorded in Weekly Environmental Site Audit Checklist.

4.3.7 Monitoring programme for post-transplantation will be conducted once per month (28 June 2022).

MONITORING RESULTS

4.3.8 Results and findings of site audit in this reporting month are listed in ***Table 3.3***.

4.4 Waste Management

4.4.1 The quantities of waste for disposal in the Reporting Period are summarized in ***Table 4.8***. The Monthly Summary Waste Flow Table is shown in ***Appendix 4.5***.

Table 4.8 Summary of Quantities of Waste Material

Waste Type	Quantity this month	Quantity (the end of last month)	Cumulative Quantity-to-Date
Hard Rock and Large Broken Concrete (Inert) (in '000m^3)	0	0	0
Reused in this Contract (Inert) (in '000m^3)	0	0	0
Reused in other Projects (Inert) (in '000m^3)	0	0	0
Disposal as Public Fill (Inert) (in '000m^3)	0.01235	0.21077	6.59606
Metals (in '000kg)	0.00330	0	1.56500
Paper / Cardboard Packing (in '000kg)	0.06700	0	0.13748
Plastics (in '000kg)	0.00360	0	0.01406
Chemical Wastes (in '000kg)	0	0	0
General Refuses (in '000kg)	33.94	17.38	327.43

*: Further breakdown into sub-group if considered applicable;
*: Please also provide daily dumping report for our records.
*: Delete as appropriate
#: 5,000kg of timber recycled.

5 Complaints, Notification of Summons and Prosecution

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

5.1.2 The investigation report for the noise complaint on May 2022 was sent to EPD, no comment from EPD on the case.

5.1.3 Cumulative statistic on complaints and successful prosecutions are summarized in ***Table 5.2*** and ***Table 5.3*** respectively.

Table 5.1 Cumulative Statistics on Complaints

Reporting Period	No. of Complaints
June 2022	1
Project commencement to the end of last reporting month	-
Total	**1**

Table 5.2 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
Other	-	0	0
Total	**-**	**0**	**0**

6 Future Key Issues

6.1.2 In coming reporting 3 months, the scheduled construction activities are listed as follows:

- Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen
- Construction of trunk sewers and rising mains
- SSWSTW and HDD works
- Site formation works for POSPS
- Drilling works
- Excavation works
- ELS works
- Piling Works
- Superstructure RC Works

6.1.3 The scheduled construction activities and the recommended mitigation measures for the coming 3 months are listed in ***Table 6.1***. The major construction activities for the next 3 months are summarized in Three Months Rolling Programme - July 2022 to September 2022 in ***Appendix 6.1***.

Table 6.1 Construction Activities and Recommended Mitigation Measures in Coming Reporting 3 Months

Key Construction Works	Recommended Mitigation Measures
• Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen • Construction of trunk sewers and rising mains • SSWSTW and HDD works • Site formation works for POSPS • Drilling works • Excavation works • ELS works • Piling Works • Superstructure RC Words	• Implementation of noise pollution control in accordance with Construction Noise Mitigation Plan; • Dust control during dust generating works; • Adopt surface drainage and sediment control facilities for sewage installation in village and public roads; • Adopt temporary drainage and sediment control facilities on Site; • Vehicle wheel-washing and body washing facilities should be provided at the site entrance; • Regular water spraying on drilling and excavation works for dust control; and • Proper waste handling, recycling and storage.

7 Conclusion

7.1 Noise Monitoring

7.1.1 No action or limit level exceedance was recorded in construction noise level in this reporting period.

7.2 Water Quality Monitoring

7.2.1 Marine-based construction works commenced on 19 April 2022, HDD casing works commenced on 30 May 2022.

7.2.2 In accordance with the EM&A Manual, 116 action level and 0 limit level exceedances on DO, 15 action level and 45 limit level exceedances on turbidity, 11 action level and 36 limit level exceedances on SS were recorded in the reporting month. No exceedance in turbidity and SS would be recorded on adopting the "and" criteria in the Action and Limit Level as proposed in the Baseline Monitoring Report.

7.3 Ecological Impact Monitoring

7.3.1 Maintenance works for transplanted *Aquilaris sinensis* have commenced, preservation and protection of retain tree *Aquilaris sinensis* at SSWSTW.

7.3.2 Within this reporting period, holding nursery visit for transplanted trees on 28 June 2022.

7.3.3 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 period are listed below in ***Table 7.1***.

Table 7.1 Summary of Ecological Impact Monitoring

Inspection Date	Reminder and Recommendations	Close-out Date / Status
28 June 2022	1. Weeding all transplanted plant species at the holding nursery shall be undertaken. 2. Invasive exotic plant species, *Mikania micrantha*, being attached to the plant species of conservation importance shall be removed.	5 July 2022

7.4 Review of the Reasons for and the Implications of Non-compliance

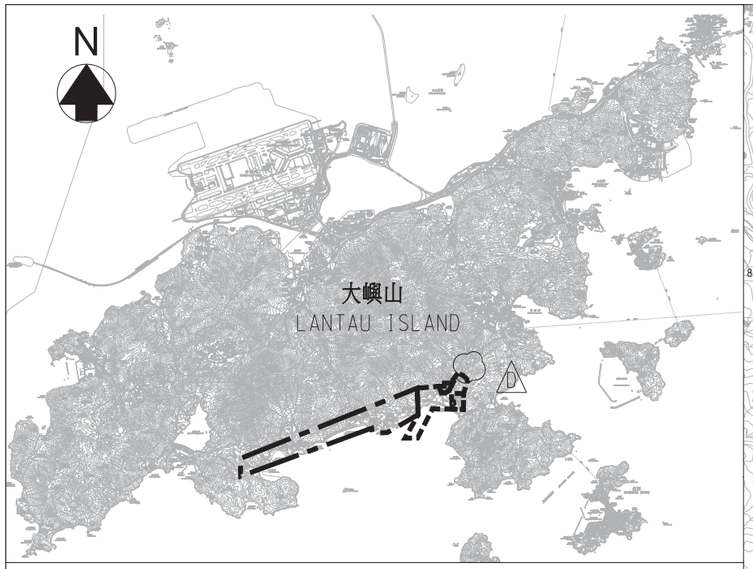
7.4.1 No environmental non-compliance was recorded in the reporting month.

7.5 Summary of action taken in the event of and follow-up on non-compliance

7.5.1 There was no particular action taken since no non-compliance was recorded in the reporting period.

Figure 2.1

Master Layout Plan



SITE PLAN
1:100000

SEWERAGE SYSTEM TO BE CONSTRUCTED UNDER OTHER CONTRACT IN THE FUTURE

SEWERAGE SYSTEM TO BE CONSTRUCTED UNDER OTHER CONTRACT IN THE FUTURE (EXCEPT THE PROPOSED SAFETY PIPELINE AS SHOWN IN DRAWING NO. 178711/B&V/POSPS/SR/001 TO BE CONSTRUCTED UNDER THIS CONTRACT.)

SEWERAGE SYSTEM TO BE CONSTRUCTED UNDER OTHER CONTRACT IN THE FUTURE

CONSTRUCTION OF SEWERAGE SYSTEM UNDER CONTRACT DC/2020/02

貝澳 PUI O
磡石灣 SAN SHEK WAN
鹹田 AM TIN
長沙 CHEUNG SHA
塘福 TONG FUK
水口 SHUI HAU
大嶼山 LANTAU ISLAND

0 375 750 1125 1500m
1 : 15000

Revision	Date	Description	Initial
D	11/20	TENDER ADDENDUM NO.6	BL
C	11/20	TENDER ADDENDUM NO.5	BL
B	11/20	TENDER ADDENDUM NO.4	BL
A	09/20	TENDER ADDENDUM NO.2	TFL

	Designed	Checked	Drawn	Checked
Initial	TFL	BL	SZ	CSC
Date	04/20	04/20	04/20	04/20

Approved

Contract no.
DC/2020/02

Contract title
CONSTRUCTION OF SAN SHEK WAN SEWAGE TREATMENT WORKS, ASSOCIATED SUBMARINE OUTFALL AND PUI O SEWERAGE WORKS

Drawing title
SOUTH LANTAU SEWERAGE WORKS - MASTER LAYOUT PLAN

Drawing no.
178711/B&V/GN/001

Revision
D

Scale
1 : 15000

香港特別行政區政府渠務署
THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION DRAINAGE SERVICES DEPARTMENT

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 11/25/2020

CAD Filename = Y:\Daily Work\00 From SZ Design Team\178711 - South Lantau Sewerage Works\Tender Drawing\Dgn\178711-B&V-GN-001.dgn

Figure 2.2

Contract Layout Plan

Figure 2.2

圖例
LEGEND:

- 擬建污水處理廠集水範圍 CATCHMENT AREA OF PROPOSED SEWAGE TREATMENT WORKS
- 擬建的污水渠 PROPOSED SEWERS
- 擬建的雙管污水泵喉 PROPOSED TWIN RISING MAINS
- 擬建的海底排放管 PROPOSED SUBMARINE OUTFALL
- 擬建的污水處理廠 PROPOSED SEWAGE TREATMENT WORKS
- 擬建的污水泵房 PROPOSED SEWAGE PUMPING STATION
- 擬建的鄉村污水收集系統範圍 PROPOSED AREA FOR VILLAGE SEWERAGE WORKS

大嶼山
LANTAU ISLAND

NAM SHAN

貝澳羅屋村
PUI O LO UK TSUEN

Excavation at South Lantau Road

Site formation works and excavation at SSWSTW

Construction of village sewers at Lo Uk Tsuen

貝澳
PUI O

芝麻灣路
CHI MA WAN ROAD

Site formation works and excavation at POSPS
Tree pruning at POSPS

磡石灣
SAN SHEK WAN

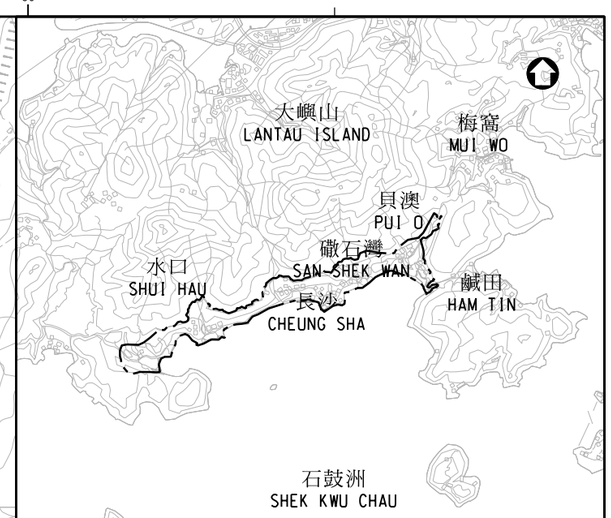
長沙
CHEUNG SHA

貝澳沙灘
PUI O BEACH

1.1 公里
1.1 km
1.4 公里
1.4 km

HDD works

位置圖 LOCATION PLAN
比例 SCALE 1 : 150 000



圖則名稱 drawing title

工務工程計劃編號331DS - 離島污水收集系統第2階段
- 南大嶼山污水收集系統工程
PWP ITEM NO.331DS - OUTLYING ISLANDS SEWERAGE, STAGE 2
- SOUTH LANTAU SEWERAGE WORKS

版 no.	日期 date	修改項目 description	簡簽 initial

繪畫 drawn	SIGNED W. H. CHAN	日期 date 27 APR 2020
核對 checked	SIGNED Ir K. S. CHAN	日期 date 27 APR 2020
批核 approved	SIGNED Ir L. CHEN	日期 date 27 APR 2020
部門 office	特別職務部 SPECIAL DUTY DIVISION	

圖則編號 drawing no. DVD/2020/001

比例 scale 1:12 500

香港特別行政區政府渠務署
DRAINAGE SERVICES DEPARTMENT
GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION

v8i_PDF_cswp_Col-DPSP2016.pltcfg iWin7v8i_CSWP.tbl S:\SDD\DVD_2020\DVD_2020_001.dgn A3 420x297

Figure 2.3

Locations of Noise Monitoring Station

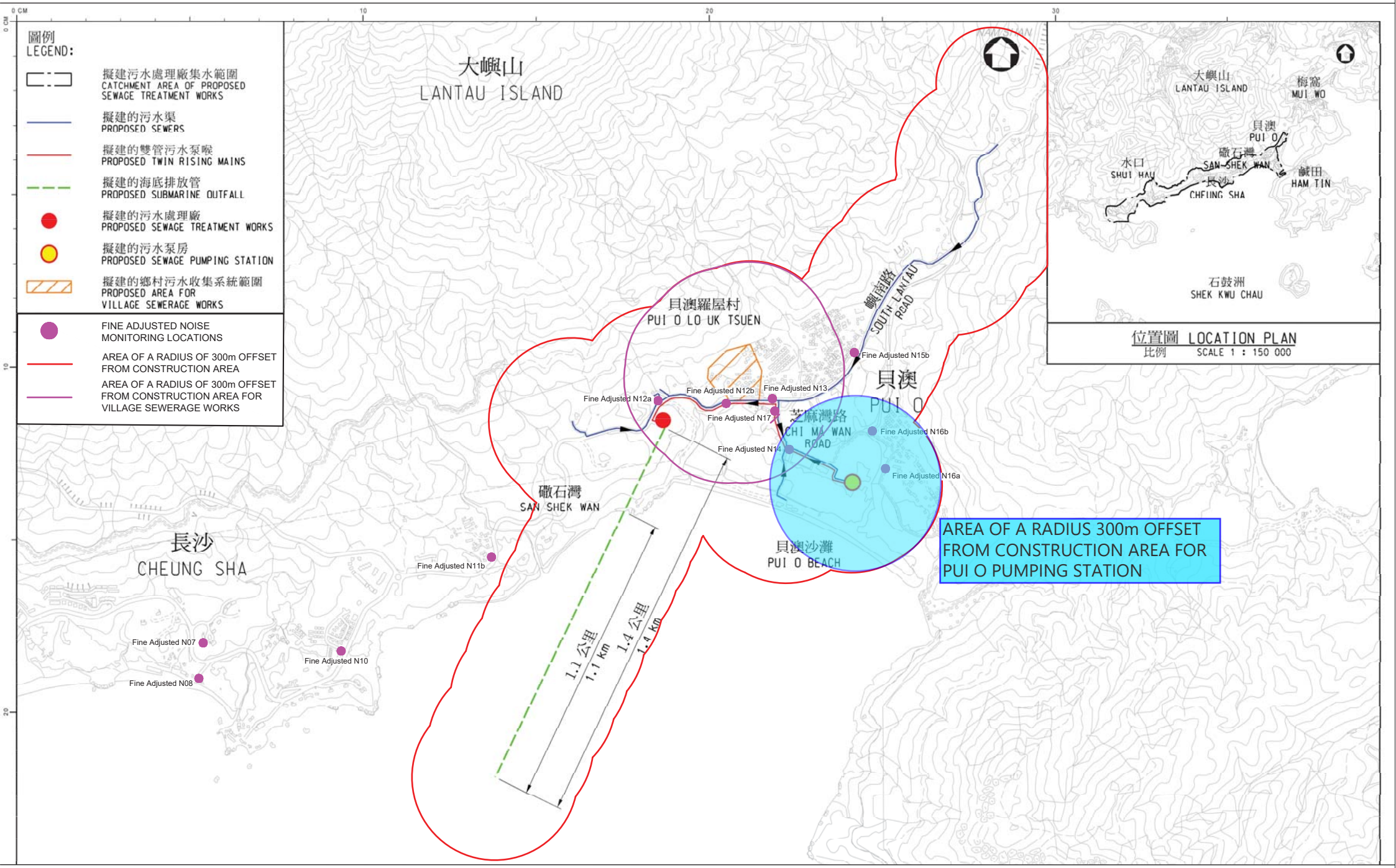
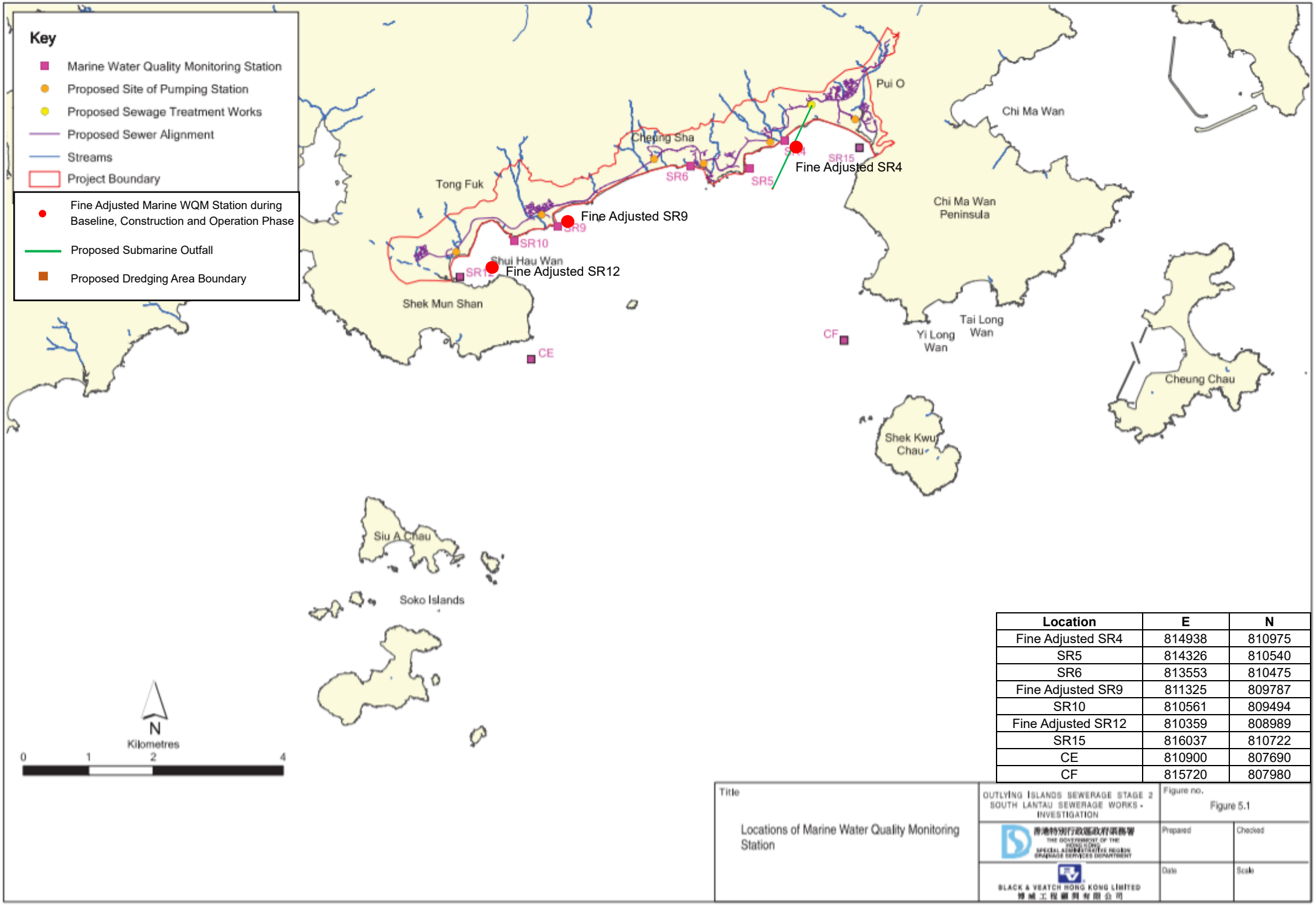

圖例
LEGEND:
擬建污水處理廠集水範圍
CATCHMENT AREA OF PROPOSED SEWAGE TREATMENT WORKS
擬建的污水渠
PROPOSED SEWERS
擬建的雙管污水泵喉
PROPOSED TWIN RISING MAINS
擬建的海底排放管
PROPOSED SUBMARINE OUTFALL
擬建的污水處理廠
PROPOSED SEWAGE TREATMENT WORKS
擬建的污水泵房
PROPOSED SEWAGE PUMPING STATION
擬建的鄉村污水收集系統範圍
PROPOSED AREA FOR VILLAGE SEWERAGE WORKS
FINE ADJUSTED NOISE MONITORING LOCATIONS
AREA OF A RADIUS OF 300m OFFSET FROM CONSTRUCTION AREA
AREA OF A RADIUS OF 300m OFFSET FROM CONSTRUCTION AREA FOR VILLAGE SEWERAGE WORKS
大嶼山
LANTAU ISLAND
貝澳羅屋村
PUI O LO UK TSUEN
嶼南路
SOUTH LANTAU ROAD
貝澳
PUI O
芝麻灣路
CHI MA WAN ROAD
磡石灣
SAN SHEK WAN
貝澳沙灘
PUI O BEACH
長沙
CHEUNG SHA
Fine Adjusted N07
Fine Adjusted N08
Fine Adjusted N10
Fine Adjusted N11b
Fine Adjusted N12a
Fine Adjusted N12b
Fine Adjusted N13
Fine Adjusted N14
Fine Adjusted N15b
Fine Adjusted N16a
Fine Adjusted N16b
Fine Adjusted N17
1.1 公里
1.1 km
1.4 公里
1.4 km
AREA OF A RADIUS 300m OFFSET FROM CONSTRUCTION AREA FOR PUI O PUMPING STATION
位置圖 LOCATION PLAN
比例 SCALE 1 : 150 000
大嶼山
LANTAU ISLAND
梅窩
MUI WO
貝澳
PUI O
磡石灣
SAN SHEK WAN
水口
SHUI HAU
鹹田
HAM TIN
長沙
CHEUNG SHA
石鼓洲
SHEK KWU CHAU

Figure 2.4

Locations of Water Quality Monitoring Stations



Location	E	N
Fine Adjusted SR4	814938	810975
SR5	814326	810540
SR6	813553	810475
Fine Adjusted SR9	811325	809787
SR10	810561	809494
Fine Adjusted SR12	810359	808989
SR15	816037	810722
CE	810900	807690
CF	815720	807980

Title

Locations of Marine Water Quality Monitoring Station

OUTLYING ISLANDS SEWERAGE STAGE 2 SOUTH LANTAU SEWERAGE WORKS - INVESTIGATION

Figure no. Figure 5.1

THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION DRAINAGE SERVICES DEPARTMENT

Prepared | Checked

BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司

Date | Scale

File: T:\GIS\CONTRACT\0227541\Mxd\0227541_Marine_Water_Quality_Monitoring_Stations.mxd
Date: 5/8/2015

Figure 2.5

Mark up Figure 5.4i extracted from approved EIA Report (AEIAR-210/2017)

Figure 2.5 - Mark up Figure 5.4i extracted from approved EIA Report (AEIAR-210/2017)

Key

Project Boundary
- Project Boundary
- 500m Study Area
- Proposed Site of Pumping Station
- Alternative Site of Pumping Station
- Proposed Site of Sewage Treatment Works
- Access Road
- Proposed Sewer
- Proposed Rising Main
- Proposed Submarine Outfall

Habitat
- Fung Shui Woodland
- Mixed Woodland
- Plantation
- Shrubland-Grassland
- Cultivated Land
- Marsh
- Stream
- Mangrove
- Sandflat
- Rocky Shore
- Sandy Shore
- Urbanised/Disturbed Area
- Subtidal Hard Bottom Habitat
- Subtidal Soft Bottom Habitat

Species of Conservation Interest
- *Aquilaria sinensis*
- *Artocarpus hypargyreus*
- *Pavetta hongkongensis*
- Black Kite
- Collared Scops Owl
- Greater Coucal
- Hwamei
- Reef Egret
- Copperhead Racer
- Chinese Bullfrog
- Japanese pipistrelle
- Horseshoe Crab
- Hard Coral

Index Map

Aquilaria sinensis

N
Meters
0 100 200 400

Title: Habitat Map and Species of Conservation Interest (Sheet 8 of 12)	Outlying Islands Sewerage Stage 2 – South Lantau Sewerage Works	Figure no. Figure 5.4i
	香港特別行政區政府渠務署 THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION DRAINAGE SERVICES DEPARTMENT	Prepared / Checked
	BLACK & VEATCH HONG KONG LIMITED	Date / Scale

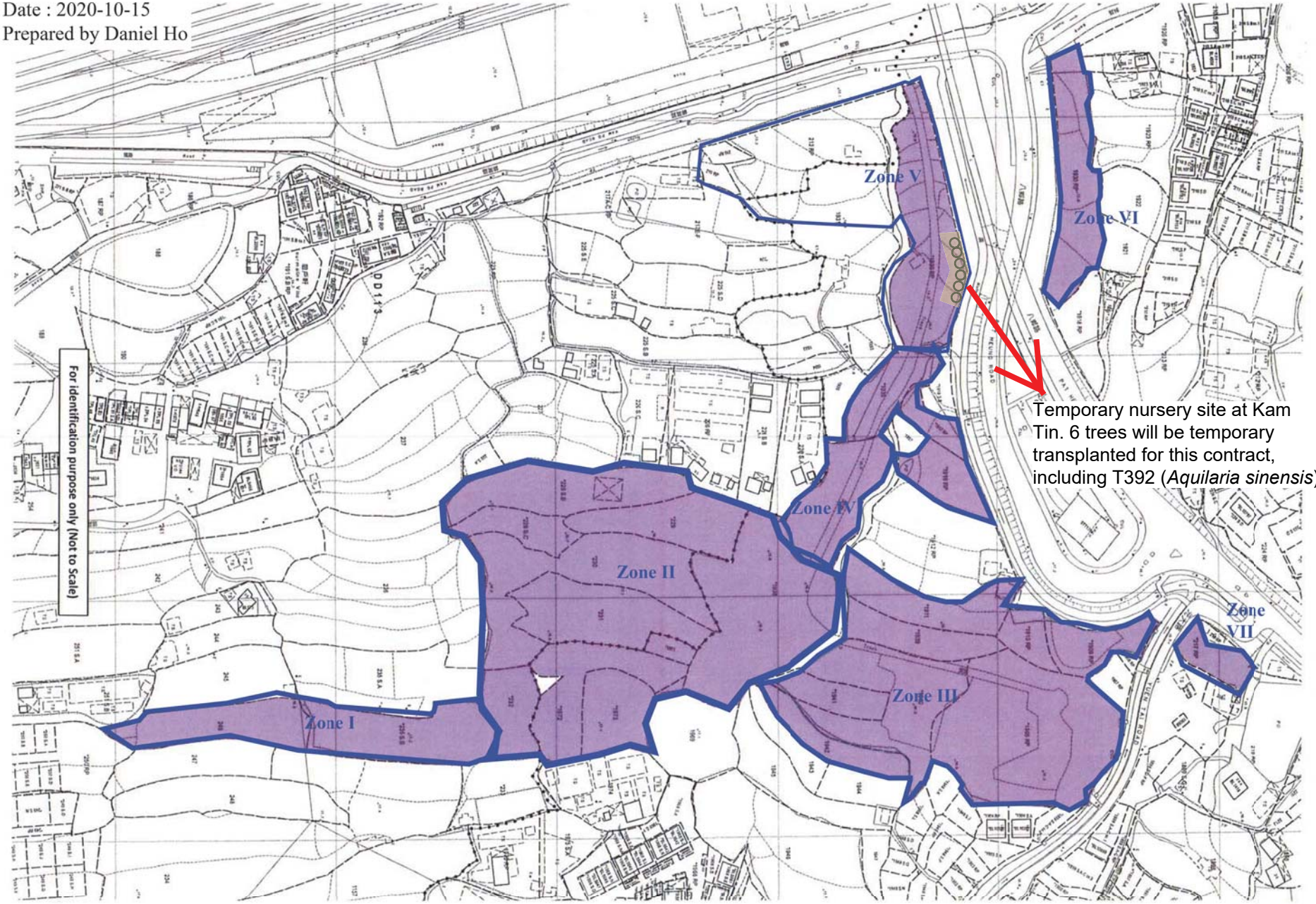
File: T:\GIS\CONTRACT\0227541\Mxd\Ecology\0227541_Habitat_8.mxd
Date: 16/8/2016

Figure 2.6

Location Plan for Temporary Holding Nursery

Figure 2.6

Date : 2020-10-15
Prepared by Daniel Ho



Project : Contract No.: DC/2020/02
Construction of San Shek Wan Sewage Treatment Works, Associated Submarine Outfall and Pui O Sewerage Works

Toyo Greenland Co., Ltd.

Drawing Title : Location Plan for 6 nos. Trees on Kam Tin Nursery

Check : Ho Tat Pui, Daniel	Scale : N.T.S.	Rev.
Ref: C3109/22/TGD0164	Date : 10 January 2022	00

Appendix 4.1

Copies of Calibration Certificates

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
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

HOKLAS 028 CAL

CERTIFICATE OF CALIBRATION

Certificate No.: 22CA0412 03 **Page** 1 **of** 2

Item tested

Description:	Sound Level Meter (Class 1)	Microphone	Preamp
Manufacturer:	Larson Davis	PCB	PCB
Type/Model No.:	LxT1	377B02	PRMLxT1L
Serial/Equipment No.:	0006346	326425	069995
Adaptors used:	-	-	-

Item submitted by

Customer Name:	Lam Environmental Services Limited
Address of Customer:	-
Request No.:	-
Date of receipt:	12-Apr-2022

Date of test: 17-Apr-2022

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	23-Aug-2022	CIGISMEC
Signal generator	DS 360	33873	27-May-2022	CEPREI

Ambient conditions

Temperature:	22 ± 1 °C
Relative humidity:	55 ± 10 %
Air pressure:	1005 ± 5 hPa

Test specifications

1, 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%.

3, 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.

Actual Measurement data are documented on worksheets.

Approved Signatory: Feng Junqi **Date:** 19-Apr-2022 **Company Chop:** SOILS AND MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

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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Tel: (852) 2873 6860 Fax: (852) 2555 7533 E-mail: smec@cigismec.com Website: www.cigismec.com

HOKLAS 028 CAL

CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 22CA0412 03 **Page** 2 **of** 2

1, Electrical Tests

The electrical tests were perfomed 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.

Test:	Subtest:	Status:	Expanded Uncertainty (dB)	Coverage Factor
Self-generated noise	A	Pass	0.3	
	C	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	
	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	A	Pass	0.3	
	C	Pass	0.3	
	Lin	Pass	0.3	
Time weightings	Single Burst Fast	Pass	0.3	
	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	
	Repeated at frequency of 100 Hz	Pass	0.3	
Time averaging	1 ms burst duty factor $1/10^3$ at 4kHz	Pass	0.3	
	1 ms burst duty factor $1/10^4$ 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 Uncertainty (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.

- End -

Calibrated by: Fung Chi Yip **Date:** 17-Apr-2022

Checked by: Chan Yuk Yiu **Date:** 19-Apr-2022

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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Tel: (852) 2873 6860 Fax: (852) 2555 7533 E-mail: smec@cigismec.com Website: www.cigismec.com

SMECLab

Sound level meter type:	LxT1	Serial No.	0006346	Date	17-Apr-2022
Microphone type:	377B02	Serial No.	326425		
Preamp type:	PRMLxT1L	Serial No.	069995	Report:	22CA0412 03

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	9.3	dB
Noise level in C weighting	12.5	dB
Noise level in Lin	19.1	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	Actual level		Tolerance	Deviation	
	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	48.9	48.9	0.7	-0.1	-0.1
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

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Tel: (852) 2873 6860 Fax: (852) 2555 7533 E-mail: smec@cigismec.com Website: www.cigismec.com

SMECLab

Sound level meter type:	LxT1	Serial No.	0006346	Date	17-Apr-2022
Microphone type:	377B02	Serial No.	326425		
Preamp type:	PRMLxT1L	Serial No.	069995	Report:	22CA0412 03

32.0	31.9	31.9	0.7	-0.1	-0.1
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
20-120	30.0	29.9	0.7	-0.1
	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	Tolerance(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	89.7	3.0	6.0	0.0

Frequency weighting C:

Frequency	Ref. level	Expected level	Actual level	Tolerance(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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Tel: (852) 2873 6860 Fax: (852) 2555 7533 E-mail: smec@cigismec.com Website: www.cigismec.com

SMECLab

Sound level meter type: LxT1 Serial No. 0006346 Date 17-Apr-2022

Microphone type: 377B02 Serial No. 326425

Preamp type: PRMLxT1L Serial No. 069995 Report: 22CA0412 03

1995.0	94.0	93.8	93.9	1.0	1.0	0.1
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	87.8	3.0	6.0	0.0

Frequency weighting Lin:

Frequency	Ref. level	Expected level	Actual level	Tolerance(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)

Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
dB	dB	dB	+	-	dB
116.0	115.0	114.9	1.0	1.0	-0.1

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	Tolerance(dB)		Deviation
dB	dB	dB	+	-	dB
116.0	111.9	111.8	1.0	1.0	-0.1

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)

Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
119.0	119.0	119.3	2.0	0.3

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Tel: (852) 2873 6860 Fax: (852) 2555 7533 E-mail: smec@cigismec.com Website: www.cigismec.com

SMECLab

Sound level meter type:	LxT1	Serial No.	0006346	Date	17-Apr-2022
Microphone type:	377B02	Serial No.	326425		
Preamp type:	PRMLxT1L	Serial No.	069995	Report:	22CA0412 03

Negative polarities:

Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
119.0	119.0	119.3	2.0	0.3

RMS ACCURACY TEST

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

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. (Set to INT)

	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 burst indication		Tolerance	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

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	79.9	1.0	-0.1	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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SMECLab

Sound level meter type:	LxT1	Serial No.	0006346	Date	17-Apr-2022
Microphone type:	377B02	Serial No.	326425		
Preamp type:	PRMLxT1L	Serial No.	069995	Report:	22CA0412 03

The integrating sound level meter set to Leq:

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
114.2	113.2	110.2	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: 10 sec
Single burst duration: 1 msec

Rms level	Level reduced by	Expected level	Actual level	Tolerance	Deviation
at overload (dB)	1 dB	dB	dB	dB	dB
120.9	119.9	79.9	79.9	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	Tolerance (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	90.8	1.5	3.0	-2.1

----------END---------

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CERTIFICATE OF CALIBRATION

Certificate No.: 21CA1021 05-01 **Page:** 1 **of** 2

Item tested

Description:	Acoustical Calibrator (Class 1)
Manufacturer:	Honglim Co., Ltd.
Type/Model No.:	HLES-02
Serial/Equipment No.:	2016611465
Adaptors used:	-

Item submitted by

Curstomer:	Lam Environmental Services Limited.
Address of Customer:	-
Request No.:	-
Date of receipt:	21-Oct-2021

Date of test: 25-Oct-2021

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2341427	04-May-2022	SCL
Preamplifier	B&K 2673	2239857	31-May-2022	CEPREI
Measuring amplifier	B&K 2610	2346941	01-Jun-2022	CEPREI
Signal generator	DS 360	33873	27-May-2022	CEPREI
Digital multi-meter	34401A	US36087050	27-May-2022	CEPREI
Audio analyzer	8903B	GB41300350	28-May-2022	CEPREI
Universal counter	53132A	MY40003662	02-Jun-2022	CEPREI

Ambient conditions

Temperature:	22 ± 1 °C
Relative humidity:	55 ± 10 %
Air pressure:	1005 ± 5 hPa

Test specifications

1. 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.

Approved Signatory: Feng Junqi **Date:** 26-Oct-2021 **Company Chop:** SOILS AND MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

Comments: The results reported in this certificate refer to the conditon 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.

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
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

CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 21CA1021 05-01 **Page:** 2 **of** 2

1, Measured Sound Pressure Level

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.

(Output level in dB re 20 μPa)

Frequency Shown Hz	Output Sound Pressure Level Setting dB	Measured Output Sound Pressure Level dB	Estimated Expanded Uncertainty dB
1000	94.00	94.01	0.10

2, Sound Pressure Level Stability - Short Term Fluctuations

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 = 0.017 dB**

Estimated expanded uncertainty 0.005 dB

3, Actual Output Frequency

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 = 1003.7 Hz**

Estimated expanded uncertainty 0.1 Hz Coverage factor k = 2.2

4, Total Noise and Distortion

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 = 1.5 %**

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.

- End -

Calibrated by: Fung Chi Yip **Date:** 25-Oct-2021

Checked by: Chan Yuk Yiu **Date:** 26-Oct-2021

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.

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
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

CERTIFICATE OF CALIBRATION

Certificate No.: 21CA1021 05-02 **Page:** 1 **of** 2

Item tested

Description:	Acoustical Calibrator (Class 1)
Manufacturer:	Honglim Co., Ltd.
Type/Model No.:	HLES-02
Serial/Equipment No.:	2019612534
Adaptors used:	-

Item submitted by

Curstomer:	Lam Environmental Services Limited.
Address of Customer:	-
Request No.:	-
Date of receipt:	21-Oct-2021

Date of test: 25-Oct-2021

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2341427	04-May-2022	SCL
Preamplifier	B&K 2673	2239857	31-May-2022	CEPREI
Measuring amplifier	B&K 2610	2346941	01-Jun-2022	CEPREI
Signal generator	DS 360	33873	27-May-2022	CEPREI
Digital multi-meter	34401A	US36087050	27-May-2022	CEPREI
Audio analyzer	8903B	GB41300350	28-May-2022	CEPREI
Universal counter	53132A	MY40003662	02-Jun-2022	CEPREI

Ambient conditions

Temperature:	22 ± 1 °C
Relative humidity:	55 ± 10 %
Air pressure:	1005 ± 5 hPa

Test specifications

1. 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.

Approved Signatory: Feng Junqi **Date:** 26-Oct-2021 **Company Chop:** SOILS AND MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

Comments: The results reported in this certificate refer to the conditon 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.

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
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

CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 21CA1021 05-02 **Page:** 2 **of** 2

1, Measured Sound Pressure Level

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.

(Output level in dB re 20 μPa)

Frequency Shown Hz	Output Sound Pressure Level Setting dB	Measured Output Sound Pressure Level dB	Estimated Expanded Uncertainty dB
1000	94.00	94.02	0.10

2, Sound Pressure Level Stability - Short Term Fluctuations

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 = 0.011 dB**

Estimated expanded uncertainty 0.005 dB

3, Actual Output Frequency

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 = 998.27 Hz**

Estimated expanded uncertainty 0.1 Hz Coverage factor k = 2.2

4, Total Noise and Distortion

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 = 0.4 %**

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.

- End -

Calibrated by: Fung Chi Yip **Date:** 25-Oct-2021

Checked by: Chan Yuk Yiu **Date:** 26-Oct-2021

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.

FT Laboratories Ltd
科達測檢試驗所有限公司

REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Information supplied by customer:

CONTACT:	**MR. DEREK LO**	**JOB REFERENCE NO.:**	**22777053-C31C3403**
CLIENT:	**LAM ENVIRONMENTAL SERVICES LTD.**		
DATE RECEIVED:	**31/03/2022**		
DATE OF ISSUE:	**11/04/2022**		
ADDRESS:	**19/F, REMAX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG**		
PROJECT:	**---**		

METHOD OF PERFORMANCE CHECK/ CALIBRATION:
Ref: APHA22nd ed 2130B

COMMENTS
It is certified that the item under performance check/calibration has been calibrated/checked by corresponding calibrated equipment in the laboratory.
Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal acceptance criteria of FT Laboratories Ltd will be followed.

Scope of Test:	Turbidity
Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	2005060
Equipment No.:	---
Date of Calibration:	09/04/2022

Remarks:
This is the Final Report. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

Certified By: _____ Issue Date: 11/04/2022

WONG Chi Wai Sanio
Senior Chemist

Address: Lot No. DD77 Section 1552 S.A. ss 1RP, Ng Chow South Road, Ping Che, N.T., H.K.
Tel: 27584861, Fax: 27588962

REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

WORK ORDER: 22777053-C31C3403
DATE OF ISSUE: 11/04/2022
CLIENT: LAM ENVIRONMENTAL SERVICES LTD.

Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	2005060
Equipment No.:	---
Date of Calibration:	09/04/2022
Date of next Calibation:	10/07/2022
Lab I.D.:	H220017-03

Parameters:
Turbidity

Method Ref: APHA 22nd ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance
0	0.00	---
4	3.99	-0.2%
10	9.99	-0.1%
40	40.00	0.0%
100	100.20	0.2%
400	399	-0.2%
1000	1000	0.0%
	Tolerance Limit (±)	10%

Remark: "Displayed Reading" presents the figures shown on item under calibration/checking regardless of equipment precision or significant figures.

Address: Lot No. DD77 Section 1552 S.A. ss 1RP, Ng Chow South Road, Ping Che, N.T., H.K.
Tel: 27584861, Fax: 27588962

ALS Technichem (HK) Pty Ltd
11/F, Chung Shun Knitting Centre
1-3 Wing Yip Street, Kwai Chung
N.T., Hong Kong
T: +852 2610 1044 | F: +852 2610 2021

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	DEREK LO	**WORK ORDER:**	HK2215669
CLIENT:	LAM ENVIRONMENTAL SERVICES LTD		
ADDRESS:	19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD,HONG KONG	**SUB- BATCH:**	0
		LABORATORY:	HONG KONG
		DATE RECEIVED:	04-May-2022
		DATE OF ISSUE:	12-May-2022

SPECIFIC COMMENTS

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client.
The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
The "Tolerance Limit" quoted is the acceptance criteria applicable for similar equipment used by the laboratory or quoted from relevant international standards.
The "Next Calibration Date" is recommended according to best practice principle as practised by the laboratory or quoted from relevant international standards.
The validity of equipment/ meter performance only applies to the result(s) stated in the report.

Equipment Type:	Multifunctional Meter
Service Nature:	Performance Check
Scope:	Dissolved Oxygen, pH Value, Salinity and Temperature
Brand Name/ Model No.:	[YSI]/ [Professional Plus]
Serial No./ Equipment No.:	[19H100656/14E101065]/ [N/A]
Date of Calibration:	10-May-2022

GENERAL COMMENTS

This report superseded any previous report(s) with same work order number.

Ms. Lin Wai Yu, Iris
Assistant Manager - Inorganics

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2215669

SUB- BATCH: 0
DATE OF ISSUE: 12-May-2022
CLIENT: LAM ENVIRONMENTAL SERVICES LTD

Equipment Type: Multifunctional Meter
Brand Name/ Model No.: [YSI]/ [Professional Plus]
Serial No./ Equipment No.: [19H100656/14E101065]/ [N/A]
Date of Calibration: 10-May-2022 Date of Next Calibration: 10-August-2022

PARAMETERS:

Dissolved Oxygen Method Ref: APHA (21st edition), 4500O: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.00	1.87	-0.13
5.54	5.64	+0.10
8.03	8.05	+0.02
	Tolerance Limit (mg/L)	±0.20

pH Value Method Ref: APHA (21st edition), 4500H: B

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	3.90	-0.10
7.0	6.88	-0.12
10.0	9.86	-0.14
	Tolerance Limit (pH unit)	±0.20

Salinity Method Ref: APHA (21st edition), 2520B

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	--
10	9.45	-5.5
20	19.14	-4.3
30	28.60	-4.7
	Tolerance Limit (%)	±10.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris
Assistant Manager - Inorganics

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2215669

SUB- BATCH: 0
DATE OF ISSUE: 12-May-2022
CLIENT: LAM ENVIRONMENTAL SERVICES LTD

Equipment Type: Multifunctional Meter
Brand Name/ Model No.: [YSI]/ [Professional Plus]
Serial No./ Equipment No.: [19H100656/14E101065]/ [N/A]
Date of Calibration: 10-May-2022 Date of Next Calibration: 10-August-2022

PARAMETERS:

Temperature

Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
7.0	7.2	+0.2
23.0	21.8	-1.2
40.0	38.4	-1.6
	Tolerance Limit (°C)	±2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris
Assistant Manager - Inorganics

Appendix 4.2

Impact Monitoring Schedule

Contract No. SD 6/2020
Construction of San Shek Wan Sewage Treatment Works, Associated Submarine Outfall and Pui O Sewerage Works
Environmental Team Services (2021 - 2022)
Impact Monitoring Schedule
Jun 2022

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29 May	30 May	31 May	01 Jun Noise Monitoring	02 Jun WQM Mid-Flood 06:16 Mid-Ebb 13:50	03 Jun	04 Jun WQM Mid-Flood 07:07 Mid-Ebb 15:03
05 Jun	06 Jun Noise Monitoring	07 Jun WQM Mid-Flood* 09:16 Mid-Ebb 17:36	08 Jun	09 Jun WQM Mid-Ebb 08:23 Mid-Flood 13:45	10 Jun	11 Jun WQM Mid-Ebb 09:50 Mid-Flood 16:15
12 Jun	13 Jun WQM Mid-Ebb 11:12 Mid-Flood 18:18	14 Jun	15 Jun WQM Mid-Ebb 12:45 Mid-Flood 20:13	16 Jun Noise Monitoring	17 Jun WQM Mid-Flood 07:21 Mid-Ebb 14:33	18 Jun
19 Jun	20 Jun WQM Mid-Flood 10:11 Mid-Ebb 17:13	21 Jun	22 Jun WQM Mid-Ebb 07:40 Mid-Flood 13:04	23 Jun Noise Monitoring	24 Jun WQM Mid-Ebb 09:37 Mid-Flood 15:46	25 Jun
26 Jun	27 Jun	28 Jun WQM Mid-Ebb 12:05 Mid-Flood 19:20	29 Jun	30 Jun Noise Monitoring WQM Mid-Ebb 13:11 Mid-Flood 20:34	01 Jul	02 Jul

Remark:

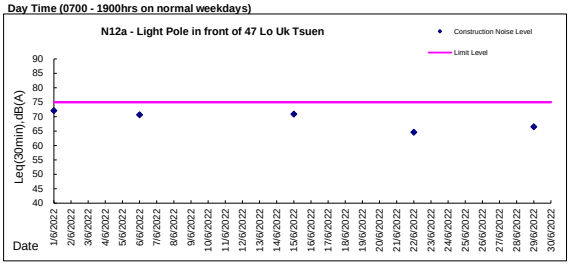
Noise Monitoring conducted at the designated monitoring stations when there are project-related construction activities undertaken within a radius of 300m from the monitoring stations; and

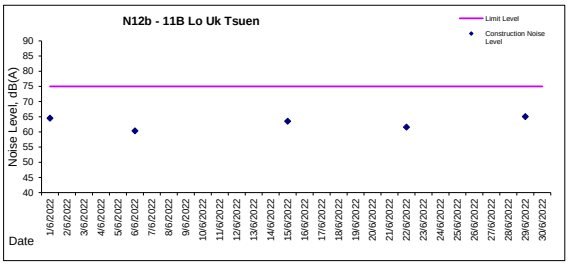
Water Quality Monitoring scheduled and conducted during daylight period of the ebb/flood tide in consideration of navigation safety and to capture major marine works operation with (*) denotes mid-tide time adjusted for this reason.

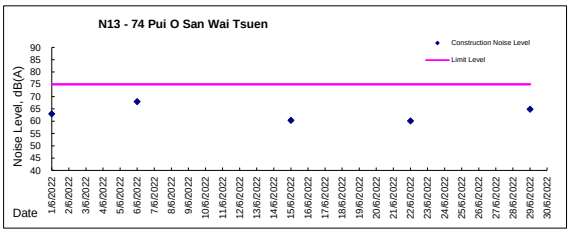
Appendix 4.3

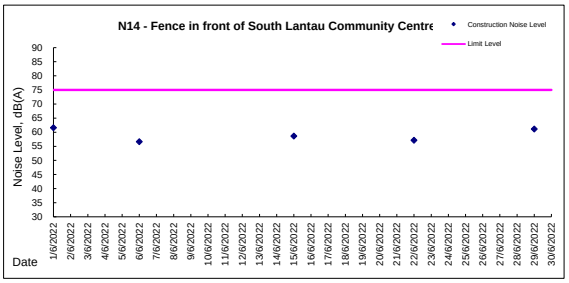
Noise Monitoring Results and Graphical Presentations

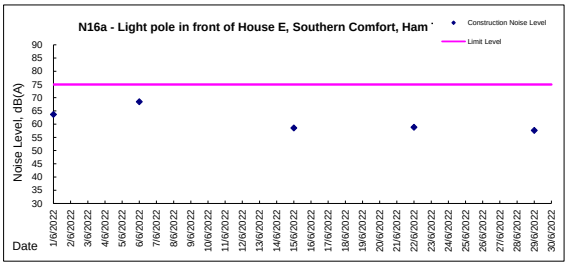
Graphic Presentation of Noise Monitoring Result
Day Time (0700 - 1900hrs on normal weekdays)

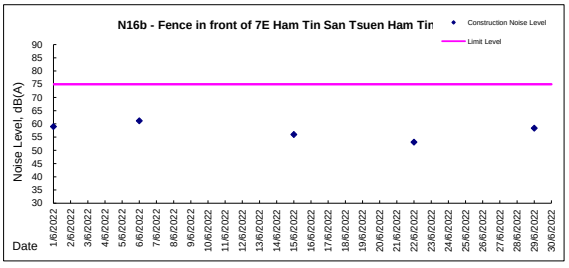


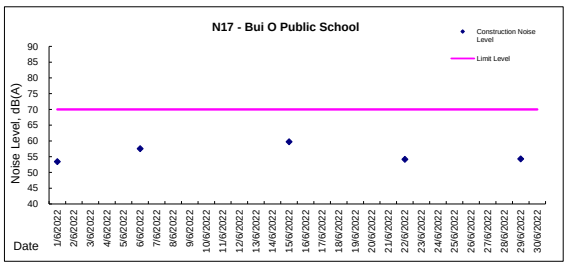












Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

Location: N12a - Light Pole in front of 47 Lo Uk Tsuen

Date	Weather	Wind Speed	Calibration Check	Time	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Action Level	Major Construction Noise Source(s)	Other Noise Source(s)
					Leq	L10	L90	Leq	Leq	Leq	Leq		
					Unit: dB(A), (5-min)			Unit: dB(A), (30-min)					
1 Jun 2022	Cloudy	1.5	94.1	13:31	73.4	78.1	57.7	72.1	73.3	<Baseline Level	75	Nil	Traffic
				13:36	71.8	75.6	56.3						
				13:41	72.5	74.5	56.8						
				13:46	69.3	72.4	56.9						
				13:51	73.5	77.7	57.3						
				13:56	70.5	74.3	57.9						
6 Jun 2022	Cloudy	0.8	94.1	14:21	72.2	76.0	57.2	70.6	73.3	<Baseline Level	75	blower	Traffic
				14:26	68.6	72.8	52.4						
				14:31	70.4	74.5	54.2						
				14:36	71.2	75.0	54.7						
				14:41	70.7	75.0	54.4						
				14:46	69.9	72.1	53.5						
15 Jun 2022	Cloudy	0.0	94.0	15:15	71.7	75.6	52.6	70.9	73.3	<Baseline Level	75	Nil	Traffic
				15:20	74.2	67.3	58.2						
				15:25	68.4	72.5	51.1						
				15:30	69.4	73.3	54.6						
				15:35	70.4	76.0	56.7						
				15:40	67.6	67.5	58.9						
22 Jun 2022	Sunny	1.0	94.0	13:40	65.6	69.6	57.6	64.6	73.3	<Baseline Level	75	Nil	Traffic
				13:45	61.3	63.8	54.5						
				13:50	64.9	67.8	55.6						
				13:55	65.1	58.9	54.3						
				14:00	57.2	70.3	55.7						
				14:05	67.3	72.4	56.2						
29 Jun 2022	Sunny	0.0	94.1	14:30	65.9	68.7	51.9	66.5	73.3	<Baseline Level	75	Nil	Traffic
				14:35	67.8	70.2	53.4						
				14:40	68.9	71.4	56.2						
				14:45	63.2	65.4	53.4						
				14:50	64.8	66.6	55.2						
				14:55	65.9	69.8	57.6						

Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

Location: N12b - 11B Lo Uk Tsuen

Date	Weather	Wind Speed	Calibration Check	Time	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Action Level	Major Construction Noise Source(s)	Other Noise Source(s)
					Leq	L10	L90	Leq	Leq	Leq	Leq		
					Unit: dB(A), (5-min)			Unit: dB(A), (30-min)					
1 Jun 2022	Cloudy	0.0	94.1	12:56	64.8	69.0	58.5	64.5	76.8	<Baseline Level	75	Generator	Traffic
				13:01	67.4	70.9	60.3						
				13:06	66.5	71.2	56.9						
				13:11	63.3	68.1	52.0						
				13:16	59.2	63.8	50.7						
				13:21	60.2	65.2	50.1						
6 Jun 2022	Cloudy	0.8	94.1	13:46	58.4	61.6	48.1	60.3	76.8	<Baseline Level	75	Nil	Traffic
				13:51	63.1	66.2	46.9						
				13:56	60.4	64.6	44.7						
				14:01	60.4	65.3	48.7						
				14:06	59.1	64.1	44.8						
				14:11	58.6	63.0	44.7						
15 Jun 2022	Cloudy	1.3	94.0	14:40	66.1	70.2	55.8	63.5	76.8	<Baseline Level	75	Village sewer works, generator	Traffic
				14:45	60.2	64.0	56.4						
				14:50	64.4	66.8	56.3						
				15:00	62.3	67.8	56.1						
				15:05	64.7	68.4	55.5						
				15:10	60.0	64.1	52.8						
22 Jun 2022	Sunny	1.0	94.0	14:15	60.3	62.5	57.6	61.5	76.8	<Baseline Level	75	Nil	Traffic
				14:20	63.2	67.8	59.7						
				14:25	58.9	60.1	49.8						
				14:30	57.6	59.1	50.1						
				14:35	59.8	62.4	53.2						
				14:40	64.9	70.1	59.9						
29 Jun 2022	Sunny	0.1	94.1	13:50	64.8	65.7	51.9	65.0	76.8	<Baseline Level	75	Nil	Traffic, mobile crane
				13:55	65.5	68.6	53.4						
				14:00	65.7	68.5	56.2						
				14:05	63.2	65.0	53.4						
				14:10	64.7	66.6	55.2						
				14:15	65.8	67.7	57.6						

Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

Location: N13 - 74 Pui O San Wai Tsuen

Date	Weather	Wind Speed	Calibration Check	Time	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Action Level	Major Construction Noise Source(s)	Other Noise Source(s)
					Leq	L10	L90	Leq	Leq	Leq	Leq		
					Unit: dB(A), (5-min)			Unit: dB(A), (30-min)					
1 Jun 2022	Cloudy	1.3	94.1	14:06	62.0	65.5	52.6	62.9	73.6	<Baseline Level	75	Excavation, grindling	Traffic
				14:11	63.6	66.9	54.6						
				14:16	62.9	66.7	54.2						
				14:21	64.4	68.1	55.1						
				14:26	62.7	65.4	55.2						
				14:31	61.4	64.7	54.4						
6 Jun 2022	Cloudy	1.0	94.1	13:11	70.2	72.6	55.3	67.9	73.6	<Baseline Level	75	Nil	Traffic
				13:16	63.8	66.1	54.0						
				13:21	66.3	69.8	53.9						
				13:26	61.9	64.6	53.1						
				13:31	69.2	71.7	57.1						
				13:36	70.1	73.1	57.9						
15 Jun 2022	Cloudy	2.0	94.0	14:10	61.9	66.2	54.6	60.3	73.6	<Baseline Level	75	Nil	Traffic
				14:15	60.1	63.2	53.9						
				14:20	60.7	63.5	52.6						
				14:25	59.3	61.8	54.0						
				14:30	60.3	64.2	52.8						
				14:35	58.9	60.1	54.1						
22 Jun 2022	Sunny	1.1	94.0	14:50	63.1	67.2	59.8	60.1	73.6	<Baseline Level	75	Nil	Traffic
				14:55	55.4	57.3	48.9						
				15:00	56.7	60.0	49.6						
				15:05	57.2	59.3	48.8						
				15:10	60.1	63.4	50.6						
				15:15	62.4	65.9	57.6						
29 Jun 2022	Sunny	0.3	94.1	10:20	65.0	65.6	52.8	64.9	73.6	<Baseline Level	75	Nil	Traffic
				10:25	63.9	66.9	53.7						
				10:30	63.9	67.5	54.4						
				10:35	62.4	65.9	54.2						
				10:40	64.0	66.8	56.2						
				10:45	67.8	67.0	58.3						

Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

Location: N14 - South Lantau Community Centre

Date	Weather	Wind Speed	Calibration Check	Time	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Action Level	Major Construction Noise	Other Noise Source(s)
					Leq	L10	L90	Leq	Leq	Leq	Leq		
					Unit: dB(A), (5-min)			Unit: dB(A), (30-min)					
1 Jun 2022	Cloudy	2.0	94.1	11:36	60.4	63.0	48.8	61.6	62.2	<Baseline Level	75	Trial pit	Traffic, sports
				11:41	62.7	66.8	50.2						
				11:46	61.9	64.5	48.4						
				11:51	58.0	58.8	52.0						
				11:56	60.4	62.2	55.5						
				12:01	63.9	65.0	61.9						
6 Jun 2022	Cloudy	1.3	94.1	14:51	57.0	59.8	49.2	56.7	62.2	<Baseline Level	75	Nil	Traffic
				14:56	56.0	60.4	47.5						
				15:01	53.9	56.8	47.6						
				15:06	55.9	60.6	48.8						
				15:11	57.6	59.9	50.7						
				15:16	58.3	62.5	49.4						
15 Jun 2022	Cloudy	1.5	94.2	13:40	54.6	58.3	47.9	58.7	62.2	<Baseline Level	75	Nil	Traffic
				13:45	58.6	62.3	49.5						
				13:50	60.6	63.2	48.6						
				13:55	60.6	65.5	50.6						
				14:00	56.9	59.8	49.4						
				14:05	57.8	62.1	49.9						
22 Jun 2022	Sunny	1.3	94.2	15:30	57.2	61.0	45.9	57.2	62.2	<Baseline Level	75	Nil	Traffic, sports
				15:35	59.3	64.8	46.0						
				15:40	55.5	59.9	45.5						
				15:45	57.2	60.8	46.1						
				15:50	55.8	58.7	46.3						
				15:55	56.8	59.4	47.1						
29 Jun 2022	Sunny	1.3	94.1	11:20	64.8	63.0	59.3	61.2	62.2	<Baseline Level	75	Nil	Traffic
				11:25	60.7	61.3	52.7						
				11:30	57.3	59.6	48.7						
				11:35	58.1	59.8	47.4						
				11:40	63.0	64.1	51.5						
				11:45	56.5	60.0	50.1						

Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

Location: N16a - Light pole in front of House E, Southern Comfort, Ham Tin

Date	Weather	Wind Speed	Calibration Check	Time	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Action Level	Major Construction Noise Source(s)	Other Noise Source(s)
					Leq	L10	L90	Leq	Leq	Leq	Leq		
					Unit: dB(A), (5-min)			Unit: dB(A), (30-min)					
1 Jun 2022	Cloudy	2.1	94.1	9:51	66.3	65.9	58.7	63.7	68.1	<Baseline Level	75	Nil	Traffic
				9:56	62.7	63.7	55.8						
				10:01	63.6	66.5	56.8						
				10:06	62.2	64.4	55.5						
				10:11	63.6	67.0	56.3						
				10:16	62.2	63.4	56.7						
6 Jun 2022	Cloudy	1.4	94.1	10:01	69.0	69.5	67.8	68.5	68.1	58	75	Nil	Traffic
				10:06	68.9	69.8	66.8						
				10:11	67.4	69.0	64.0						
				10:16	64.4	65.9	62.1						
				10:21	69.5	72.7	64.2						
				10:26	69.7	72.8	63.6						
15 Jun 2022	Cloudy	0.2	94.1	13:10	57.5	60.0	54.0	58.6	68.1	<Baseline Level	75	Nil	Traffic
				13:15	56.8	58.7	54.4						
				13:20	58.0	59.2	56.4						
				13:25	61.8	62.4	57.5						
				13:30	57.7	59.8	54.2						
				13:35	57.4	60.1	55.3						
22 Jun 2022	Sunny	1.3	94.0	16:30	61.2	62.8	51.2	58.9	68.1	<Baseline Level	75	Nil	Traffic, sports
				16:35	53.4	56.5	46.7						
				16:40	57.1	59.3	51.1						
				16:45	56.9	59.2	51.8						
				16:50	55.7	57.3	48.2						
				16:55	62.3	65.7	56.3						
29 Jun 2022	Sunny	1.1	94.1	9:00	53.2	53.9	49.2	57.6	68.1	<Baseline Level	75	Nil	Traffic
				9:05	59.5	60.6	49.1						
				9:10	54.6	56.0	51.4						
				9:15	57.5	58.6	51.9						
				9:20	57.2	58.9	53.5						
				9:25	60.0	59.5	53.8						

Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

Location: N16b - Fence in front of 7E Ham Tin San Tsuen, Ham Tin

Date	Weather	Wind Speed	Calibration Check	Time	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Action Level	Major Construction Noise	Other Noise Source(s)
					Leq	L10	L90	Leq	Leq	Leq	Leq		
					Unit: dB(A), (5-min)			Unit: dB(A), (30-min)					
1 Jun 2022	Cloudy	1.1	94.1	10:26	58.9	62.8	49.8	59.0	68.5	<Baseline Level	75	Nil	Traffic
				10:31	59.4	63.5	50.2						
				10:36	57.4	62.0	49.5						
				10:41	60.1	64.9	51.2						
				10:46	60.6	64.2	52.5						
				10:51	56.1	57.7	49.5						
6 Jun 2022	Cloudy	1.1	94.1	10:36	60.8	64.3	52.8	61.2	68.5	<Baseline Level	75	Nil	Traffic
				10:41	65.8	70.5	50.1						
				10:46	55.9	59.1	49.8						
				10:51	60.5	66.4	49.6						
				10:56	56.6	59.8	49.7						
				11:01	59.7	61.4	49.7						
15 Jun 2022	Cloudy	0.5	94.0	12:41	55.3	59.3	49.6	56.0	68.5	<Baseline Level	75	Nil	Traffic
				12:46	50.7	52.4	49.0						
				12:51	58.4	61.9	50.3						
				12:56	51.5	54.3	48.8						
				13:01	55.9	59.8	49.7						
				13:06	58.5	62.0	50.5						
22 Jun 2022	Sunny	1.3	94.0	16:00	54.2	57.9	48.0	53.1	68.5	<Baseline Level	75	Nil	Traffic, sports
				16:05	50.0	51.7	48.1						
				16:10	55.1	58.0	47.7						
				16:15	52.4	54.3	48.5						
				16:20	53.3	55.6	47.8						
				16:25	51.7	52.2	47.8						
29 Jun 2022	Sunny	1.3	93.5	9:35	54.5	57.2	45.9	58.4	68.5	<Baseline Level	75	Nil	Traffic
				9:40	54.5	57.7	45.1						
				9:45	57.8	63.7	48.9						
				9:50	61.8	62.2	61.0						
				9:55	59.1	60.0	58.1						
				10:00	58.2	59.5	56.8						

Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

Location: N17 - Bui O Public School

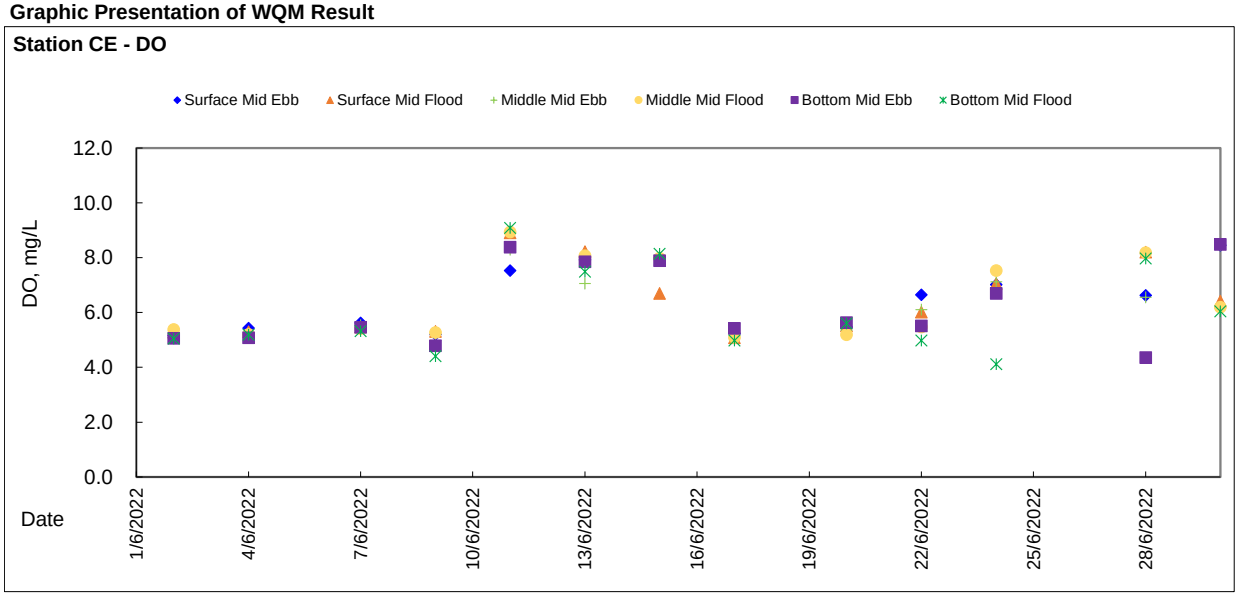
Date	Weather	Wind Speed	Calibration Check	Time	Measurement Noise Level			Average Noise Level	Baseline Level	Construction Noise Level	Limit Level	Major Construction Noise Source(s)	Other Noise Source(s)
					Leq	L10	L90	Leq	Leq	Leq	Leq		
					Unit: dB(A), (5-min)			Unit: dB(A), (30-min)					
1 Jun 2022	Cloudy	1.4	94.1	11:01	53.6	55.8	49.0	53.5	62.3	<Baseline Level	70	Nil	Traffic
				11:06	54.8	56.1	50.4						
				11:11	53.5	56.3	49.4						
				11:16	53.0	54.4	49.7						
				11:21	52.1	53.6	49.8						
				11:26	53.3	55.2	50.5						
6 Jun 2022	Cloudy	1.1	94.1	11:16	54.4	56.8	51.3	57.6	62.3	<Baseline Level	70	Nil	Traffic
				11:21	62.0	56.4	52.2						
				11:26	57.4	60.2	50.9						
				11:31	55.9	57..8	51.7						
				11:36	54.2	56.2	51.8						
				11:41	55.6	55.9	52.0						
15 Jun 2022	Cloudy	1.7	94.0	12:00	65.5	62.2	50.8	59.8	62.3	<Baseline Level	70	Nil	Traffic
				12:05	57.3	60.5	51.7						
				12:10	58.6	61.6	53.4						
				12:15	55.7	57.1	50.9						
				12:20	55.4	59.0	50.6						
				12:25	51.9	53.0	50.4						
22 Jun 2022	Sunny	3.1	94.0	13:00	50.8	51.9	49.5	54.2	62.3	<Baseline Level	70	Nil	Traffic
				13:05	51.3	53.3	49.7						
				13:10	51.1	52.6	50.2						
				13:15	53.0	55.9	49.8						
				13:20	51.1	53.1	48.4						
				13:25	59.3	61.2	55.1						
29 Jun 2022	Sunny	0.4	94.1	13:05	54.3	56.3	51.6	54.3	62.3	<Baseline Level	70	Nil	Traffic
				13:10	53.9	56.1	51.2						
				13:15	51.7	52.7	50.3						
				13:20	51.0	52.0	49.5						
				13:25	53.8	56.8	49.7						
				13:30	57.7	61.2	51.1						

Appendix 4.4

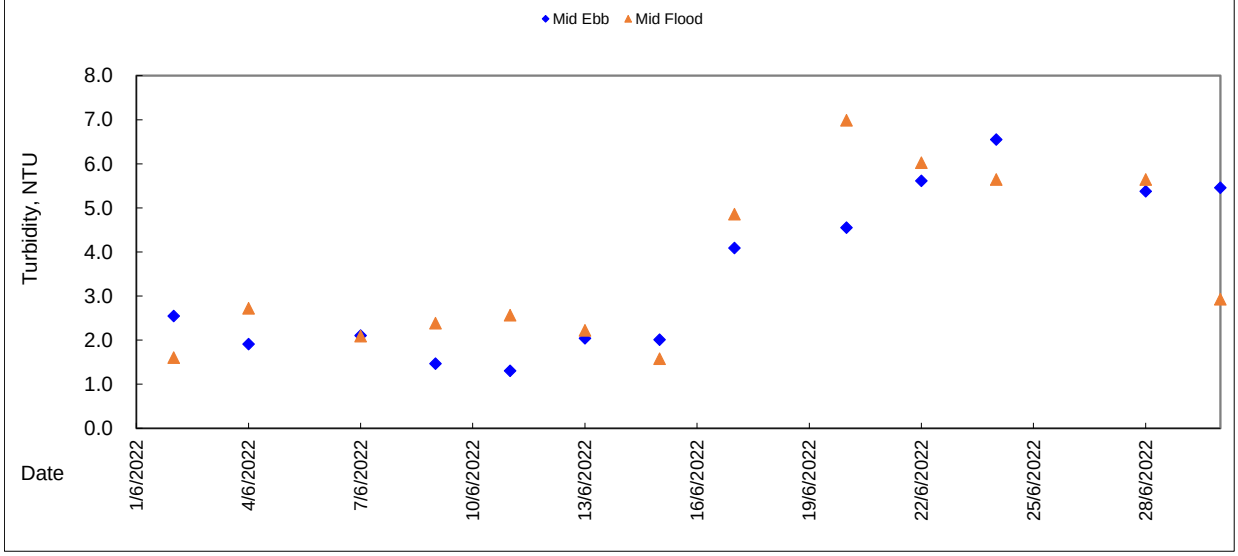
Marine Water Quality Monitoring Results and Graphical Presentations

Graphic Presentation of WQM Result

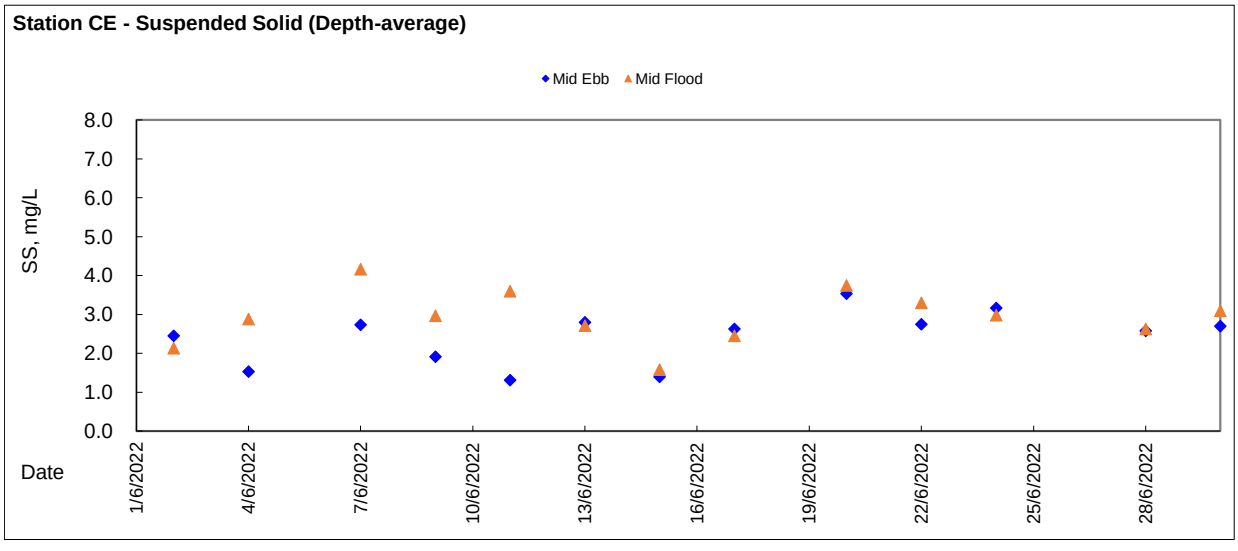
Station CE - DO



Station CE - Turbidity (Depth-average)

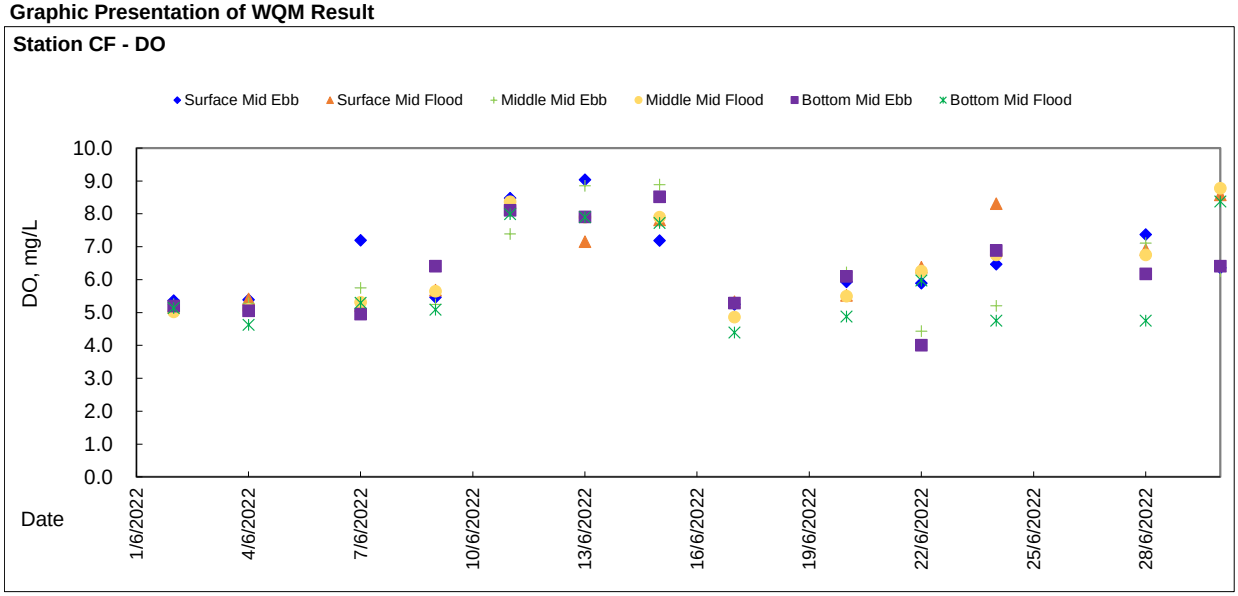


Station CE - Suspended Solid (Depth-average)

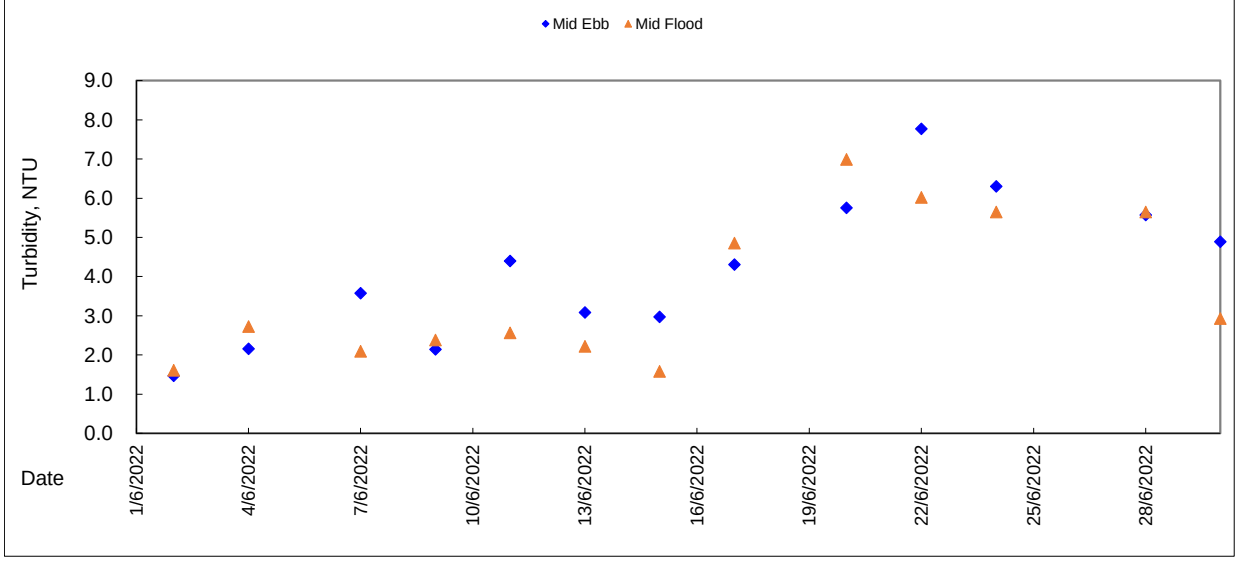


Graphic Presentation of WQM Result

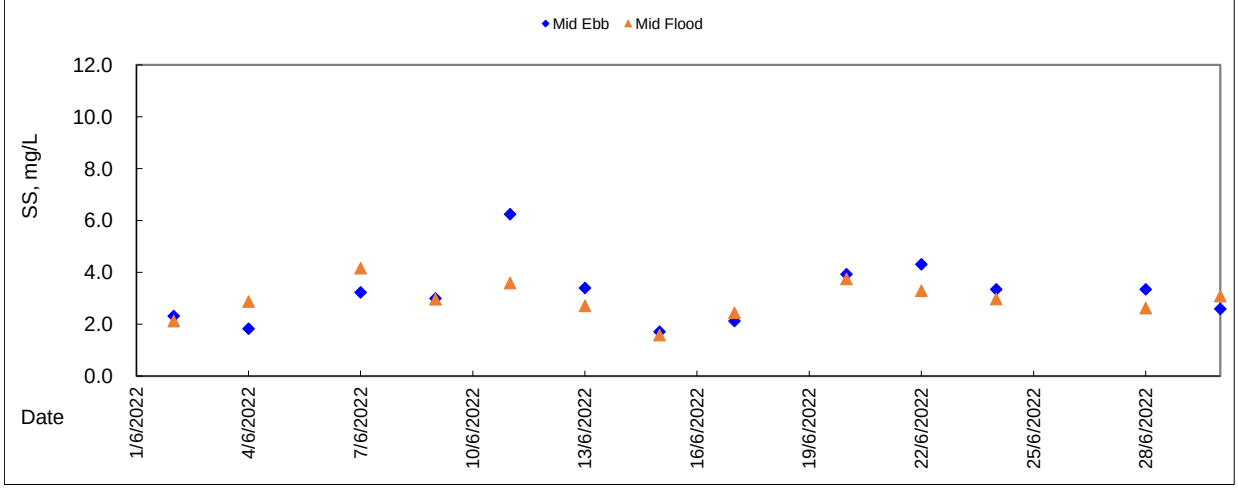
Station CF - DO



Station CF - Turbidity (Depth-average)

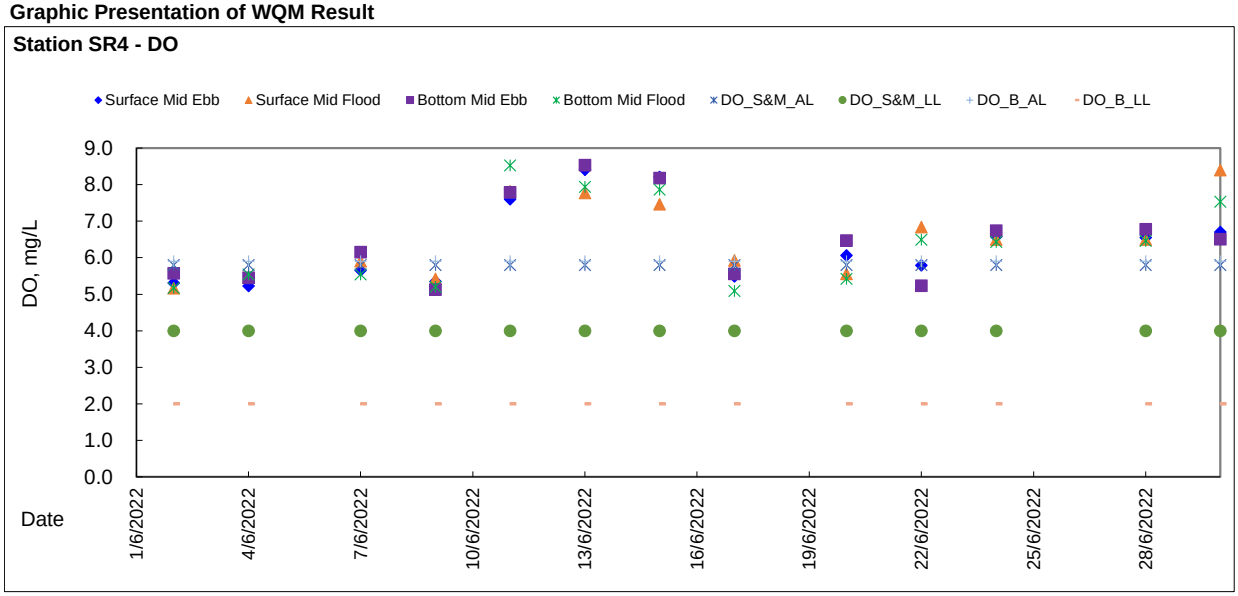


Station CF - Suspended Solid (Depth-average)

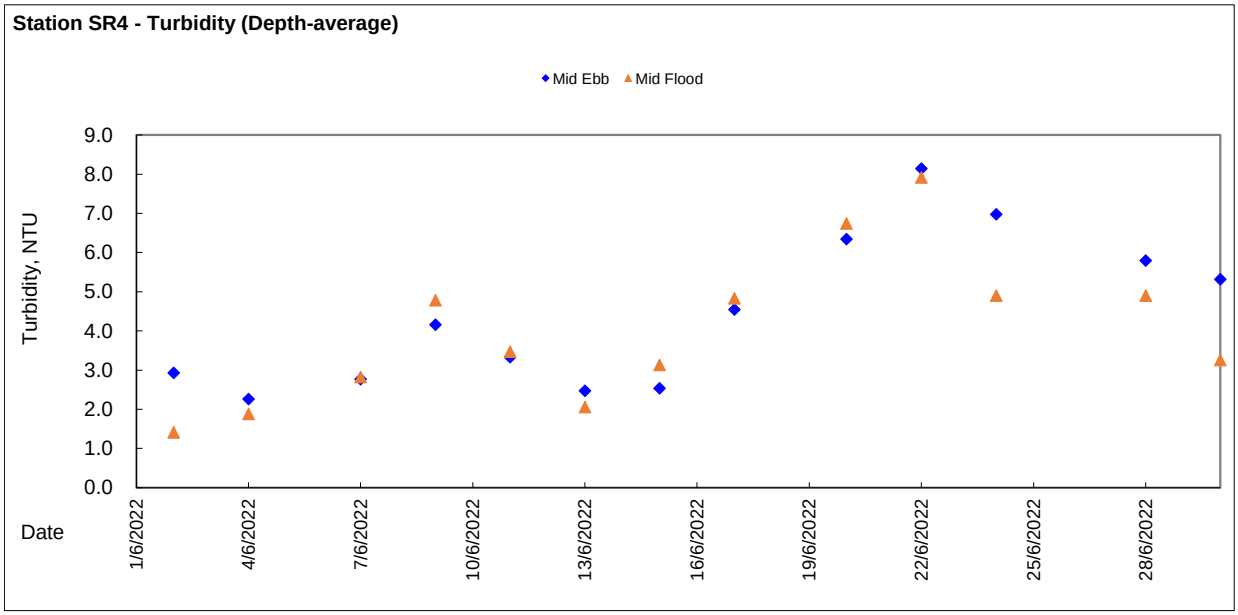


Graphic Presentation of WQM Result

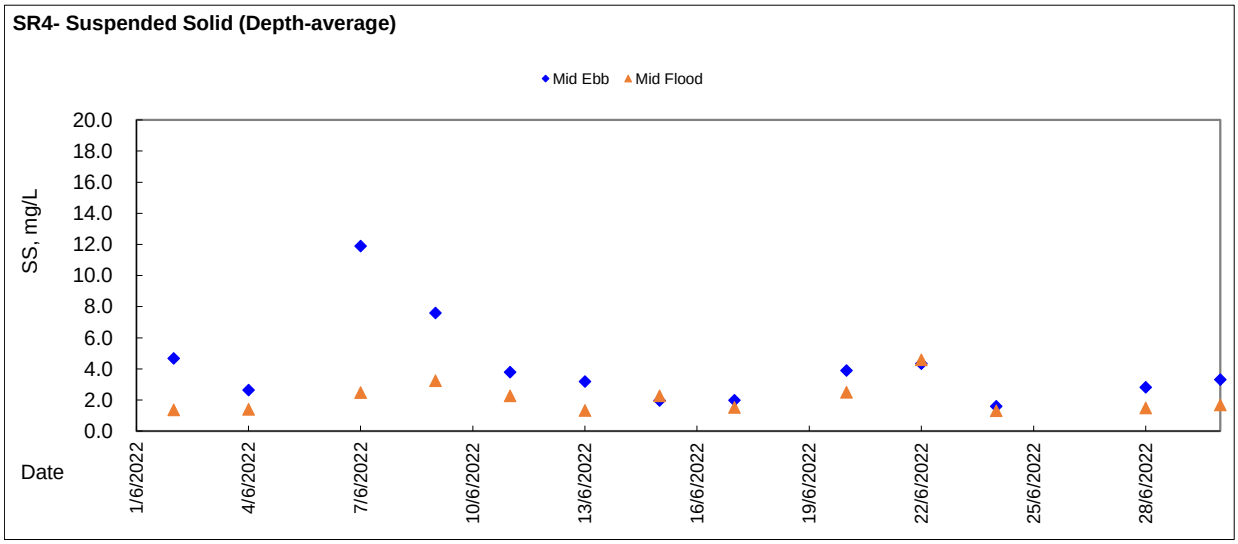
Station SR4 - DO



Station SR4 - Turbidity (Depth-average)

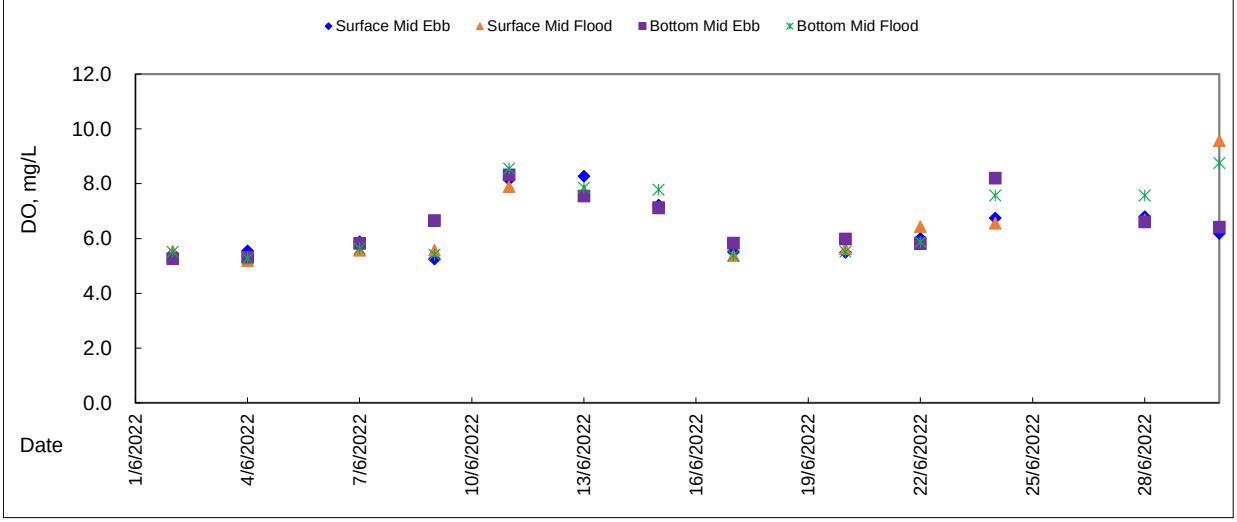


SR4- Suspended Solid (Depth-average)

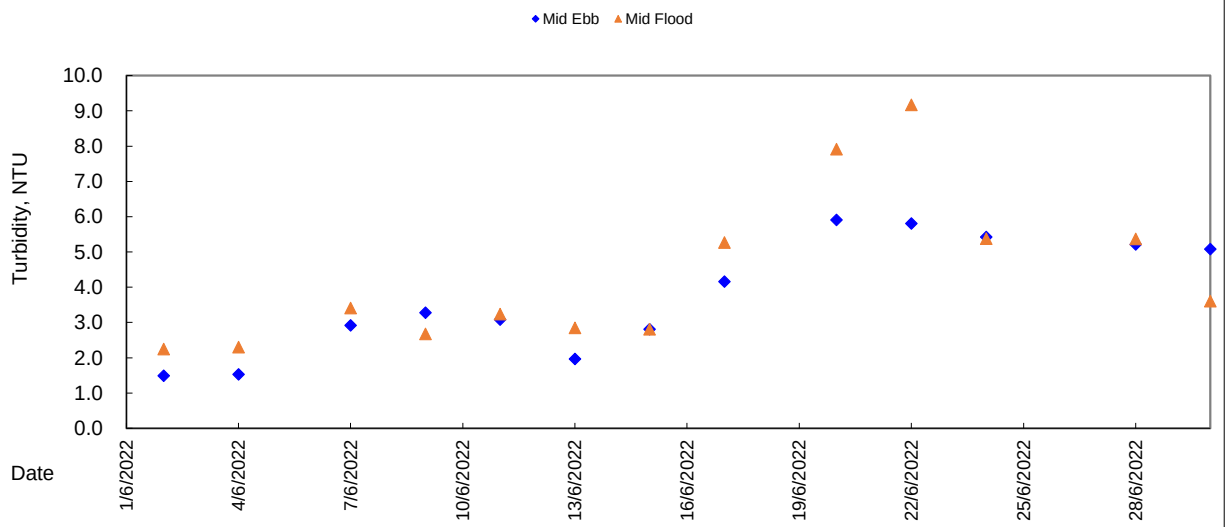


Graphic Presentation of WQM Result

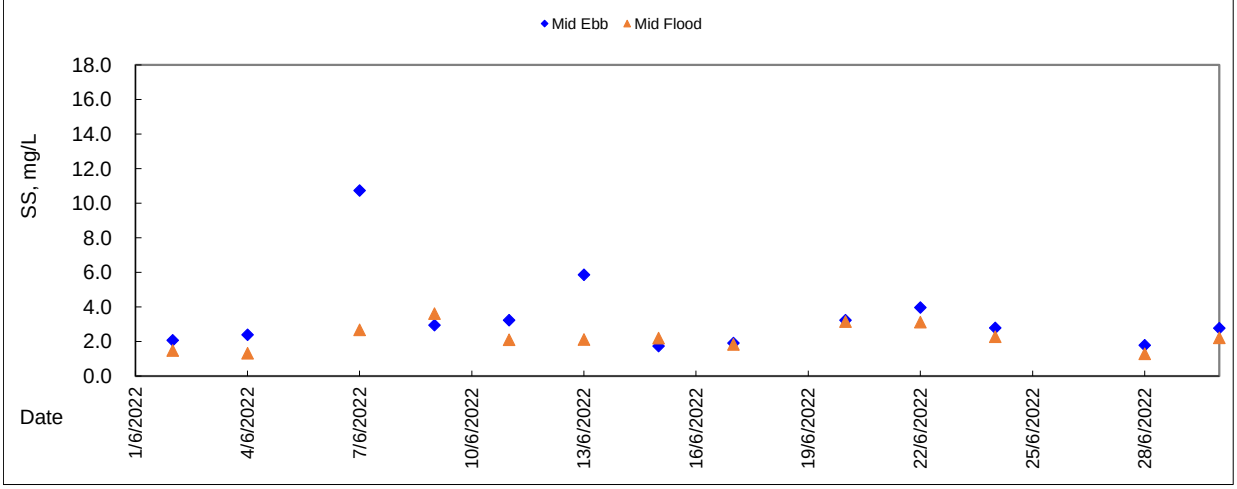
Station SR5 - DO



Station SR5 - Turbidity (Depth-average)

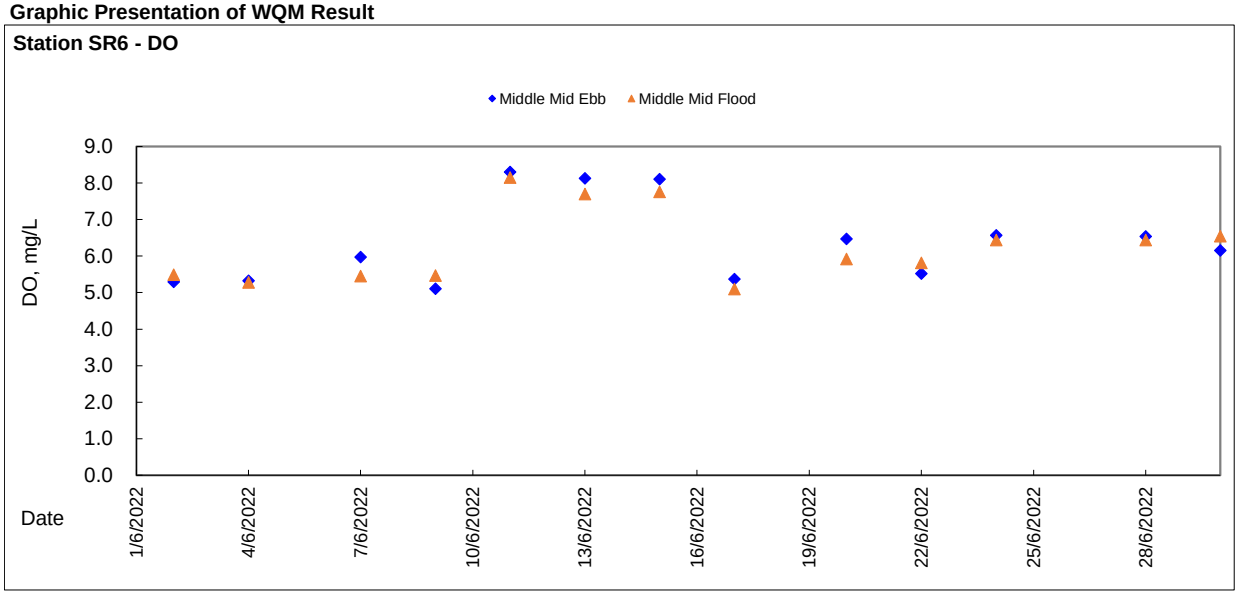


Station SR5 - Suspended Solid (Depth-average)

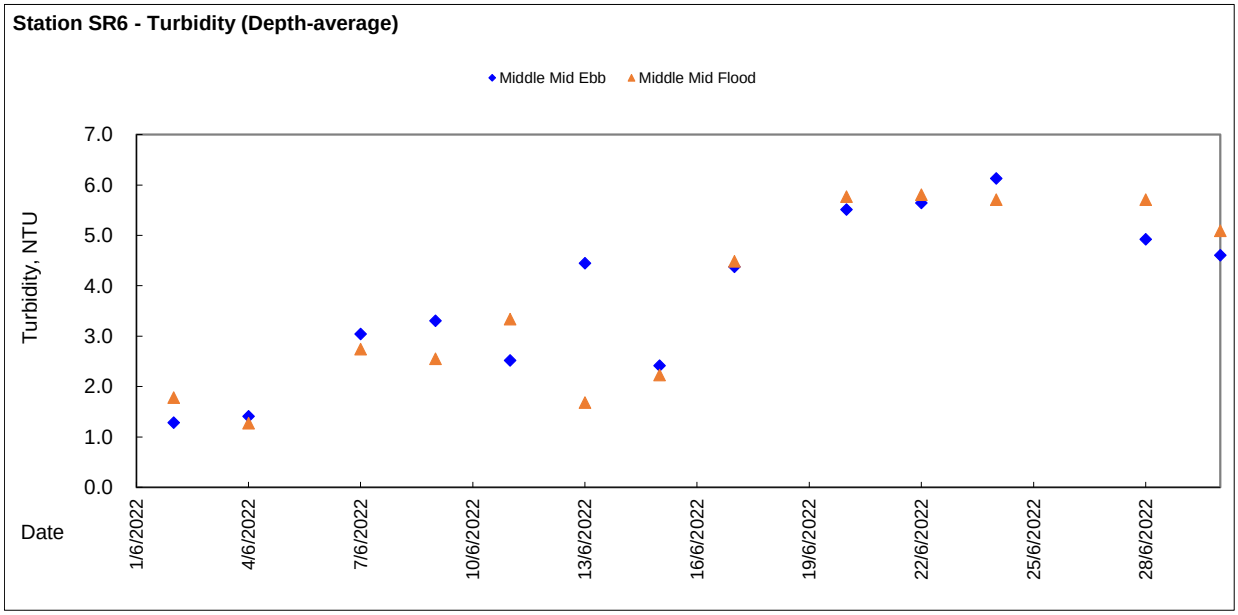


Graphic Presentation of WQM Result

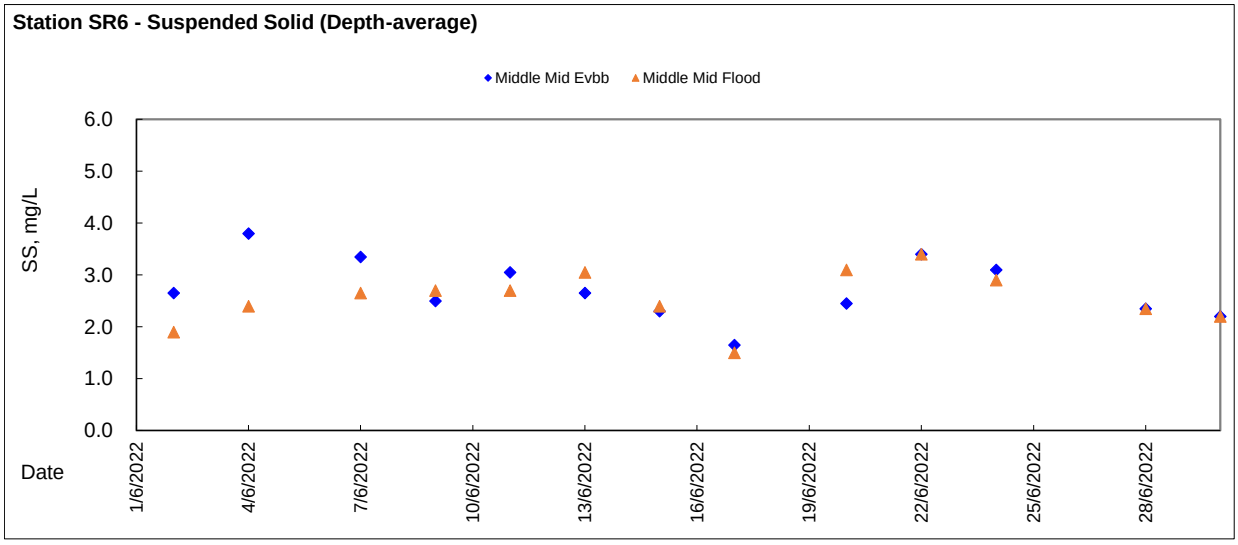
Station SR6 - DO



Station SR6 - Turbidity (Depth-average)

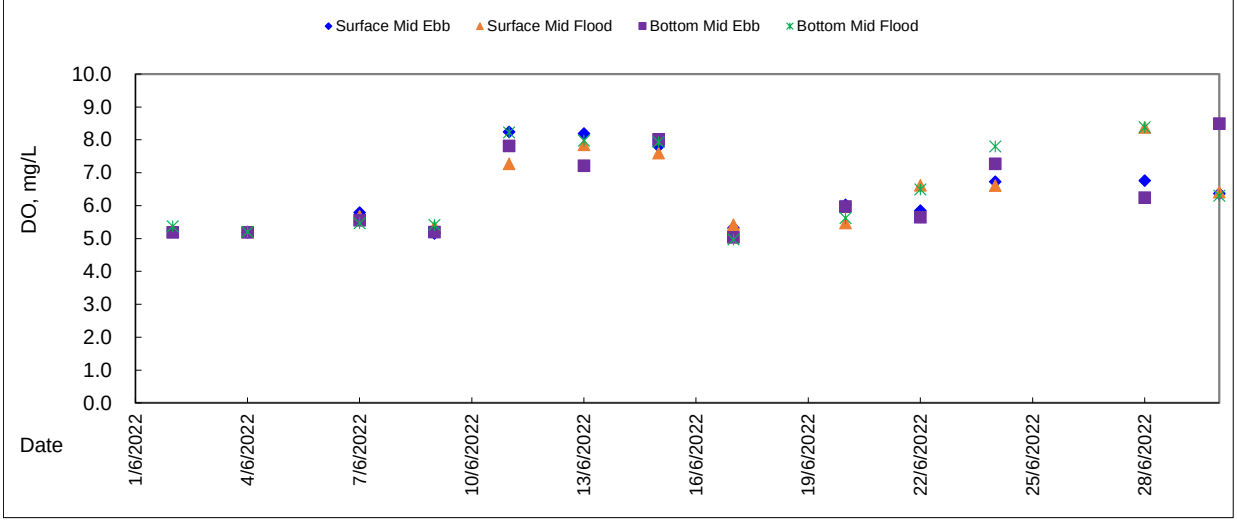


Station SR6 - Suspended Solid (Depth-average)

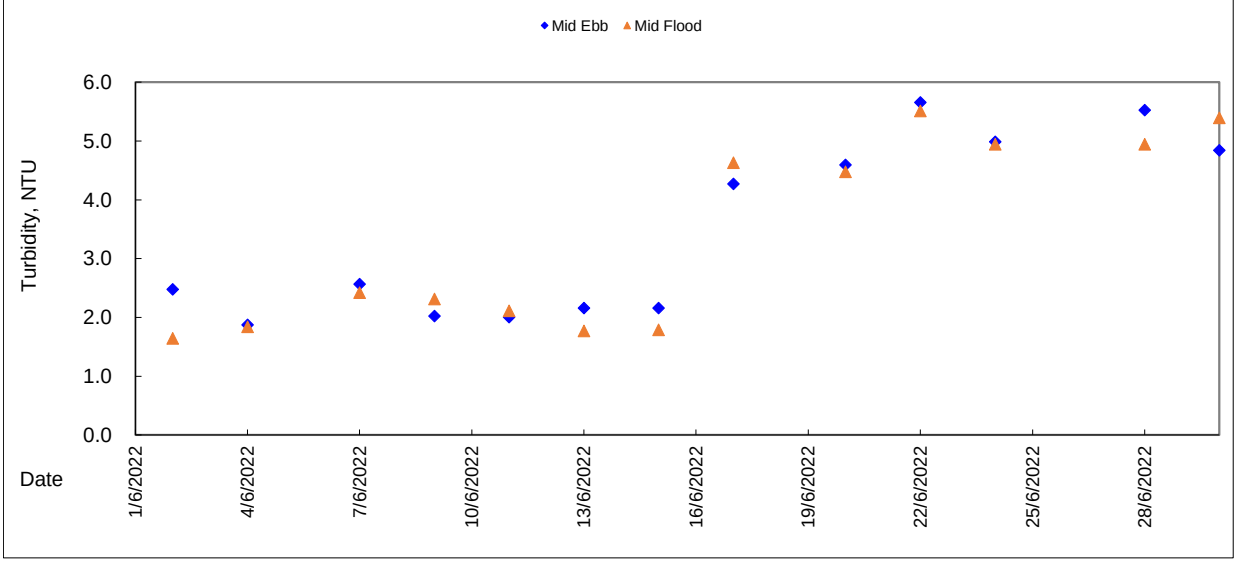


Graphic Presentation of WQM Result

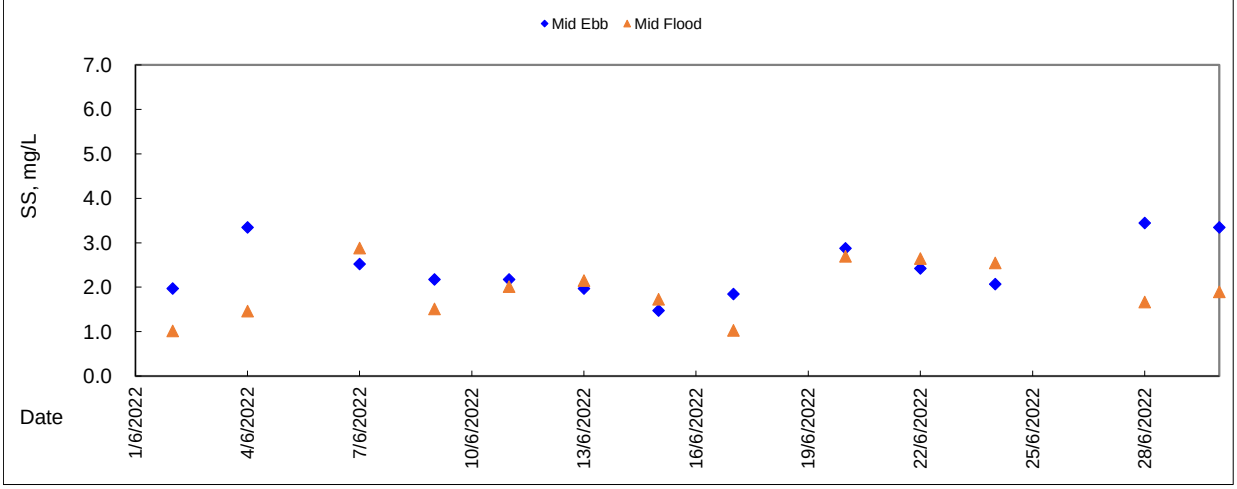
Station SR9 - DO



Station SR9 - Turbidity (Depth-average)

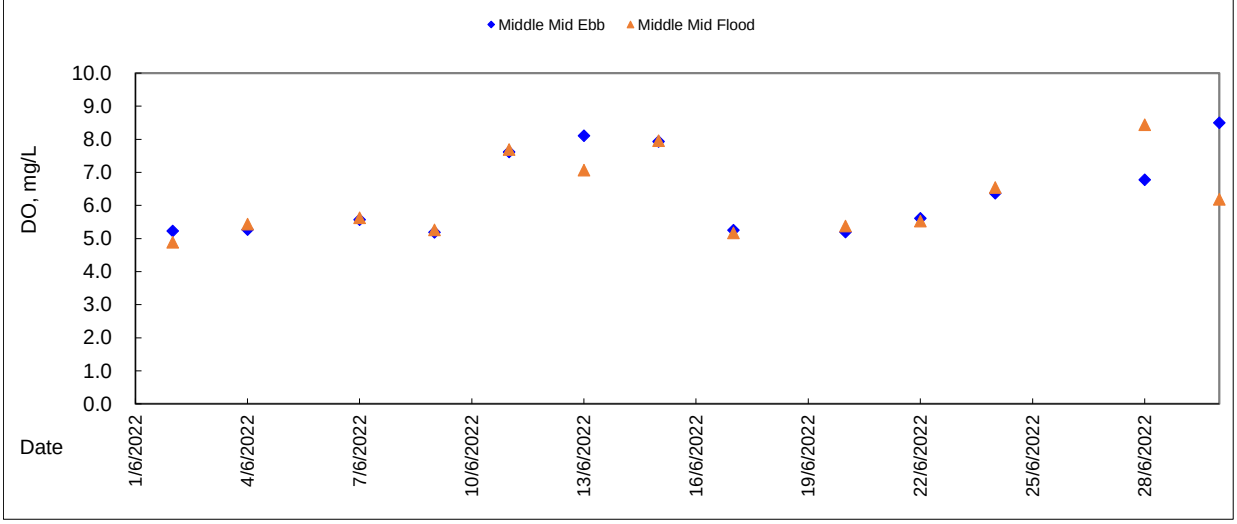


Station SR9 - Suspended Solid (Depth Average)

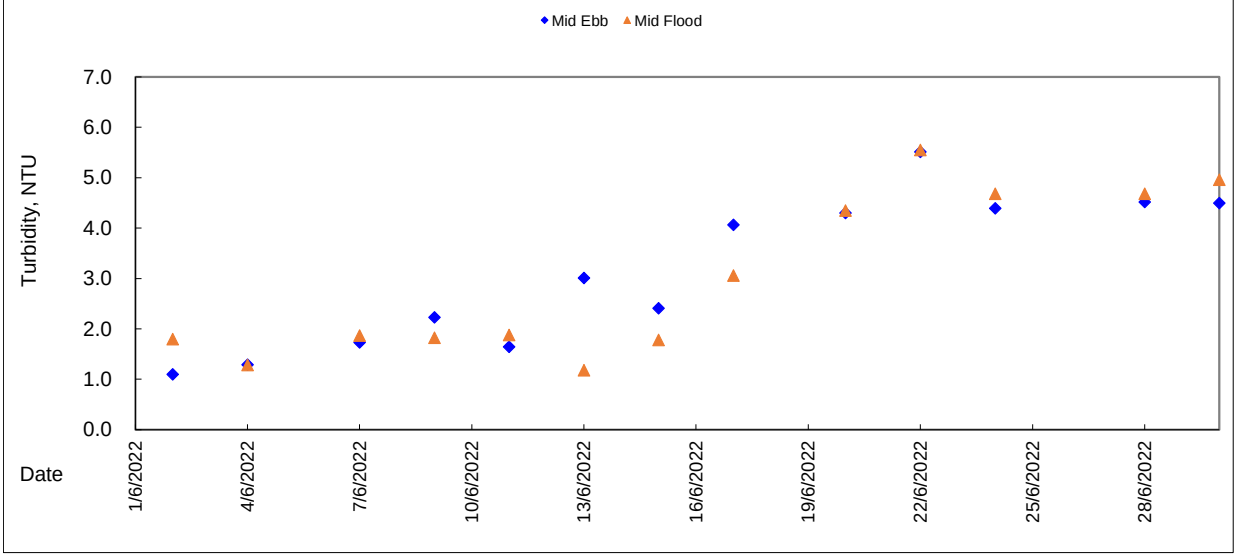


Graphic Presentation of WQM Result

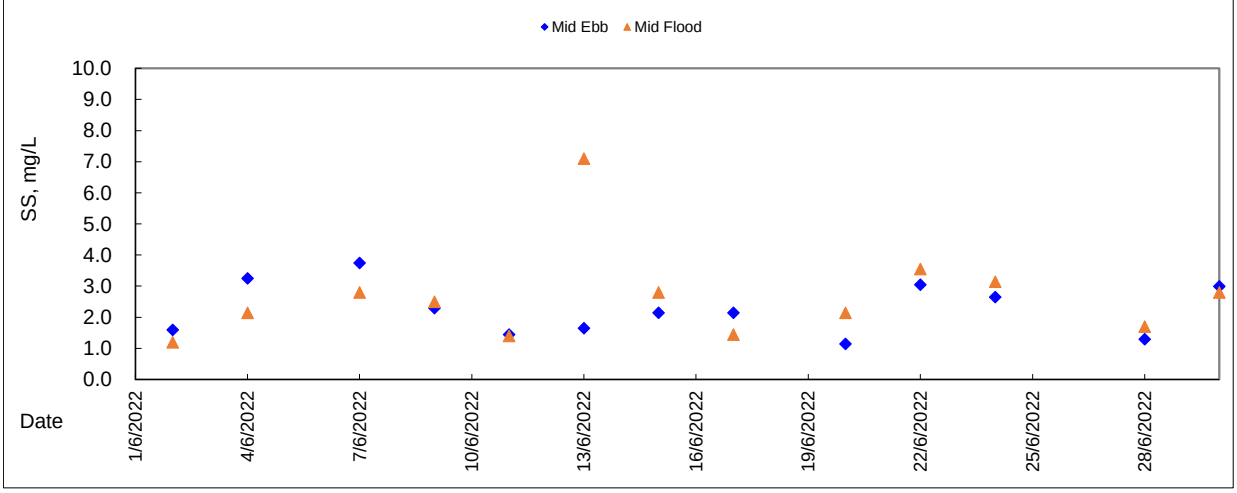
Station SR10 - DO



Station SR10 - Turbidity (Depth-average)

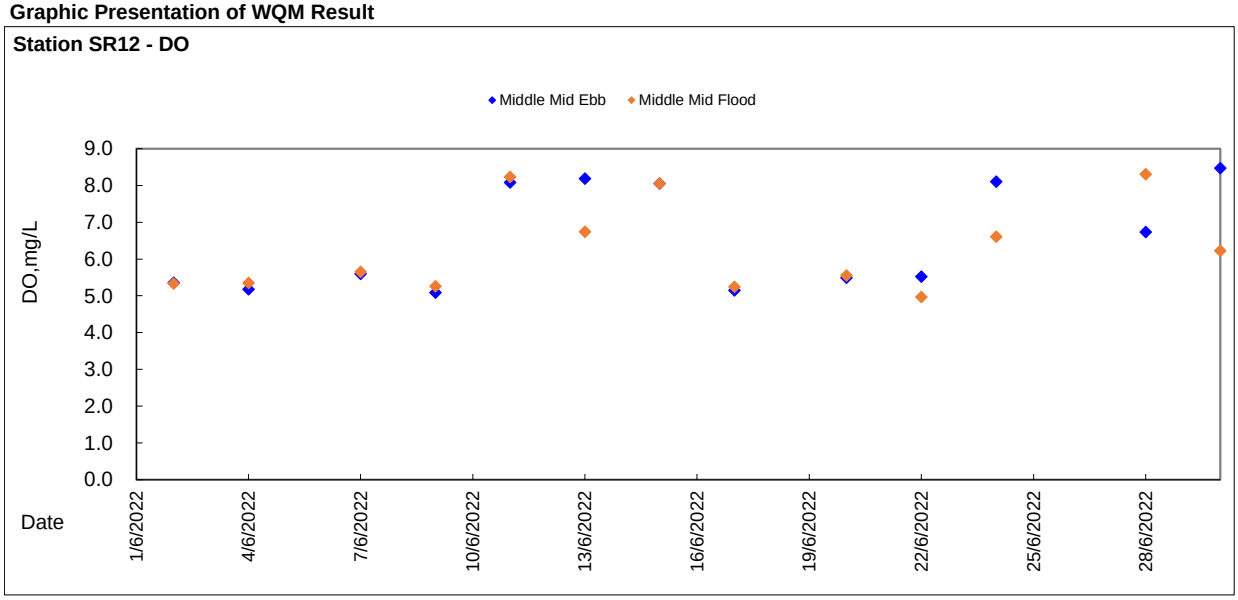


Station SR10 - Suspended Solid (Depth-average)

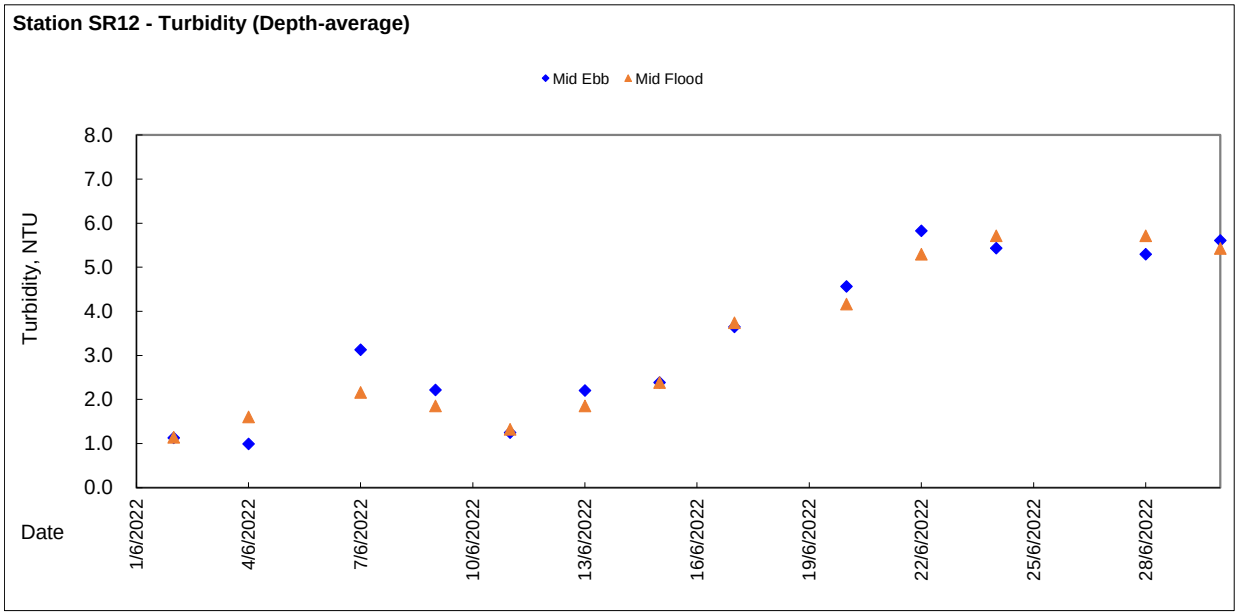


Graphic Presentation of WQM Result

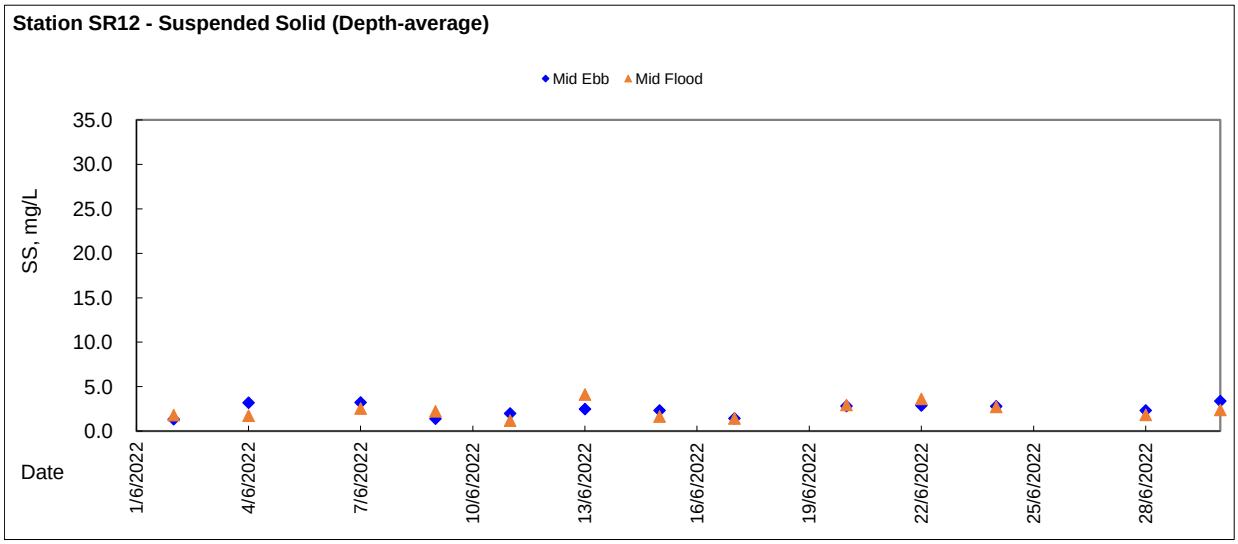
Station SR12 - DO



Station SR12 - Turbidity (Depth-average)

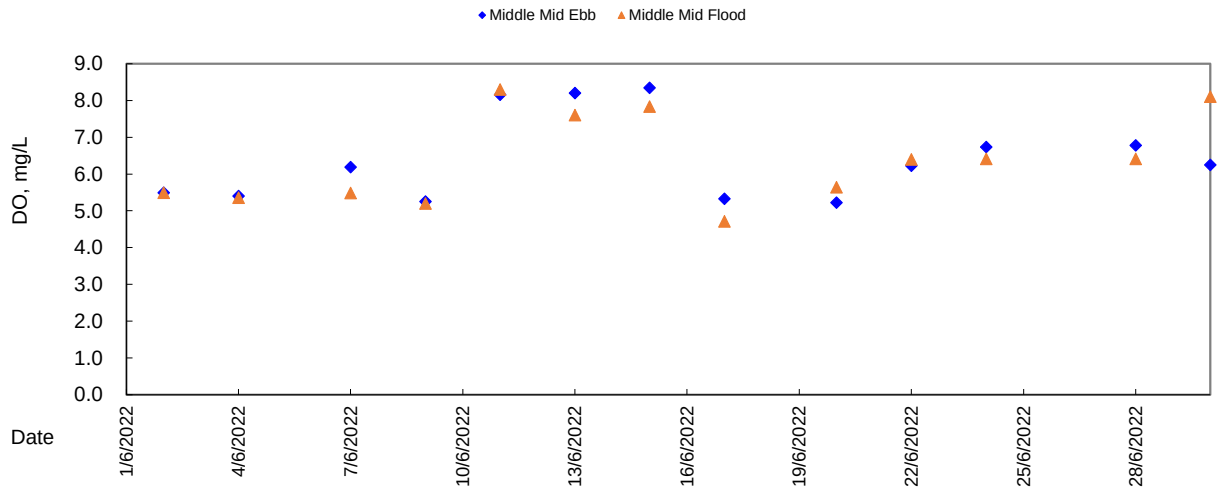


Station SR12 - Suspended Solid (Depth-average)

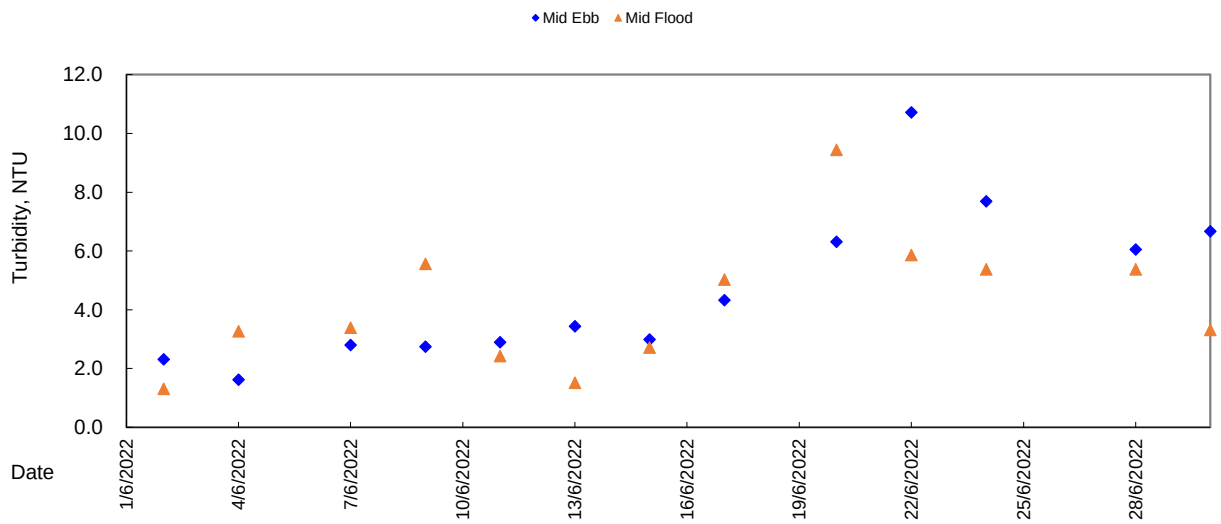


Graphic Presentation of WQM Result

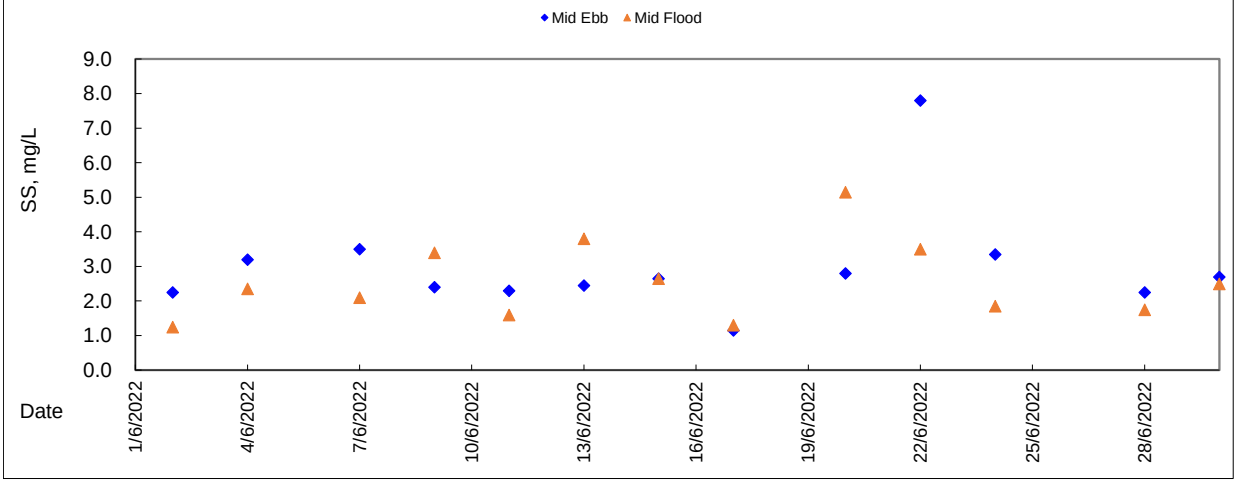
Station SR15 - DO



Station SR15 - Turbidity (Depth-average)



Station SR15 - Suspended Solid (Depth-average)



Impact Water Quality Monitoring at Station SR4 (surface) - Ebb Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		SS mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR4	2/6/2022	Rainy	12:54	4.0	1.0	27.40	27.45	8.50	8.50	32.20	27.70	74.70	76.45	5.18	5.31	1.42	1.41	2.9	3.0
			12:56	4.0	1.0	27.50		8.50		23.19		78.20		5.43		1.40		3.1	
	4/6/2022	Cloudy	12:48	2.9	1.0	27.60	27.55	8.44	8.44	20.48	20.43	71.40	74.20	5.02	5.23	1.97	1.89	2.4	2.4
			12:50	2.9	1.0	27.50		8.44		20.38		77.00		5.43		1.80		2.3	
	7/6/2022	Rainy	12:52	4.1	1.0	26.80	26.70	8.61	8.61	19.88	20.01	77.10	79.05	5.51	5.66	2.79	2.57	2.8	3.0
			12:54	4.1	1.0	26.60		8.61		20.13		81.00		5.80		2.35		3.1	
	9/6/2022	Sunny	9:14	3.4	1.0	26.30	26.30	8.21	8.23	21.11	20.65	76.10	74.45	5.45	5.35	3.58	3.73	5.2	5.1
			9:16	3.4	1.0	26.30		8.25		20.19		72.80		5.25		3.88		5.0	
	11/6/2022	Sunny	9:58	4.1	1.0	27.21	27.24	8.50	8.52	15.80	15.98	95.30	104.80	6.92	7.60	2.82	3.48	2.5	2.6
			10:00	4.1	1.0	27.27		8.53		16.16		114.30		8.28		4.13		2.7	
	13/6/2022	Sunny	9:28	3.8	1.0	27.87	27.88	8.07	7.85	14.58	12.14	117.00	117.75	8.31	8.41	3.13	2.69	4.3	4.2
			9:30	3.8	1.0	27.88		7.63		9.69		118.50		8.50		2.25		4.0	
	15/6/2022	Rainy	9:25	4.2	1.0	27.15	27.16	8.91	8.87	21.45	21.50	116.60	116.45	8.22	8.21	3.44	2.96	1.1	1.3
			9:27	4.2	1.0	27.16		8.82		21.54		116.30		8.19		2.48		1.4	
	17/6/2022	Sunny	12:53	4.1	1.0	26.90	26.90	8.09	8.09	21.36	21.36	78.30	77.50	5.55	5.49	4.23	4.37	1.7	1.8
			12:55	4.1	1.0	26.90		8.09		21.36		76.70		5.43		4.50		1.8	
	20/6/2022	Sunny	12:49	4.0	1.0	27.40	27.40	8.26	8.27	17.66	17.68	81.10	84.45	5.82	6.06	8.70	7.24	3.4	3.5
			12:51	4.0	1.0	27.40		8.27		17.69		87.80		6.30		5.77		3.6	
	22/6/2022	Sunny	8:45	3.5	1.0	29.30	28.30	7.64	7.67	18.98	19.06	79.50	81.55	5.62	5.79	8.04	7.90	3.7	3.5
			8:47	3.5	1.0	27.30		7.70		19.14		83.60		5.96		7.76		3.3	
	24/6/2022	Sunny	8:50	3.7	1.0	27.90	28.00	7.95	7.97	21.67	21.52	99.80	98.65	6.44	6.58	7.93	7.79	2.2	2.2
			8:52	3.7	1.0	28.10		7.99		21.36		97.50		6.71		7.65		2.1	
	28/6/2022	Sunny	9:08	3.8	1.0	28.20	28.25	7.99	8.01	17.90	17.88	93.30	94.00	6.49	6.56	5.49	5.46	2.4	2.6
			9:10	3.8	1.0	28.30		8.03		17.86		94.70		6.62		5.43		2.7	
	30/6/2022	Sunny	9:08	4.0	1.0	27.30	27.30	8.11	8.18	18.09	18.11	93.00	95.15	6.56	6.71	5.02	5.02	2.5	2.6
			9:10	4.0	1.0	27.30		8.24		18.13		97.30		6.85		5.01		2.7	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station SR4 (surface) - Flood Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		SS mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR4	2/6/2022	Rainy	8:54	3.8	1.0	26.30	26.55	8.23	8.25	23.17	23.16	74.30	73.55	5.22	5.17	1.73	1.39	1.8	1.8
			8:56	3.8	1.0	26.80		8.27		23.14		72.80		5.11		1.04		1.7	
	4/6/2022	Cloudy	8:56	3.4	1.0	27.20	27.15	8.21	8.23	20.27	20.20	75.80	76.85	5.37	5.45	1.71	1.72	1.6	1.7
			8:58	3.4	1.0	27.10		8.24		20.12		77.90		5.53		1.73		1.8	
	7/6/2022	Rainy	9:21	3.7	1.0	27.40	27.20	3.14	5.70	19.62	19.79	85.30	82.80	6.09	5.91	4.25	2.69	3.0	2.8
			9:23	3.7	1.0	27.00		8.26		19.96		80.30		5.72		4.11		2.6	
	9/6/2022	Sunny	12:50	3.2	1.0	26.90	26.25	8.50	8.45	19.60	21.57	76.50	75.20	5.57	5.43	3.14	4.57	4.6	4.3
			12:52	3.2	1.0	25.60		8.40		23.54		73.90		5.28		6.00		4.0	
	11/6/2022	Sunny	12:47	3.1	1.0	27.31	27.29	8.18	7.94	13.94	11.48	111.30	106.35	8.07	7.82	3.73	3.60	3.0	3.1
			12:49	3.1	1.0	27.26		7.70		9.01		101.40		7.57		3.47		3.2	
	13/6/2022	Sunny	12:58	3.1	1.0	28.62	28.61	8.67	8.73	19.14	19.06	111.40	111.50	7.76	7.77	1.93	2.16	1.6	1.7
			13:00	3.1	1.0	28.60		8.78		18.98		111.60		7.78		2.39		1.8	
	15/6/2022	Rainy	12:55	3.1	1.0	28.21	28.31	8.64	8.69	24.14	23.76	109.60	109.70	7.48	7.47	3.73	3.66	2.3	2.3
			12:57	3.1	1.0	28.40		8.73		23.38		109.80		7.45		3.58		2.2	
	17/6/2022	Sunny	9:47	3.9	1.0	26.70	26.70	7.62	7.64	21.68	21.68	80.20	83.55	5.69	5.93	5.01	5.02	3.0	2.9
			9:49	3.9	1.0	26.70		7.65		21.67		86.90		6.17		5.03		2.7	
	20/6/2022	Sunny	8:59	3.2	1.0	26.80	26.80	7.74	7.76	18.95	18.96	76.90	77.25	5.53	5.56	6.83	6.78	3.4	3.3
			9:01	3.2	1.0	26.80		7.77		18.96		77.60		5.58		6.72		3.2	
	22/6/2022	Sunny	12:58	3.7	1.0	27.90	27.95	8.33	8.35	17.65	17.58	97.20	96.80	6.90	6.84	7.06	7.07	4.3	4.5
			13:00	3.7	1.0	28.00		8.37		17.51		96.40		6.78		7.07		4.6	
	24/6/2022	Sunny	12:50	3.6	1.0	30.30	30.35	8.41	8.42	16.98	16.98	93.60	95.65	6.40	6.50	4.91	4.84	1.7	1.6
			12:52	3.6	1.0	30.40		8.43		16.97		97.70		6.60		4.76		1.5	
	28/6/2022	Sunny	12:47	3.6	1.0	30.20	30.30	8.41	8.42	16.98	16.98	93.60	95.65	6.40	6.50	4.91	4.84	1.7	1.8
			12:49	3.6	1.0	30.40		8.43		16.97		97.70		6.60		4.76		1.8	
	30/6/2022	Sunny	12:47	3.8	1.0	28.69	28.69	9.21	9.23	16.67	16.68	118.40	119.05	8.35	8.40	3.23	3.35	2.9	2.9
			12:49	3.8	1.0	28.69		9.24		16.68		119.70		8.44		3.47		2.8	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station SR4 (Bottom) - Ebb Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR4	2/6/2022	Rainy	12:57	4.0	3.0	27.50	27.35	8.50	8.48	23.36	24.15	80.60	80.60	5.59	5.58	2.13	4.45	6.6	6.4
			12:59	4.0	3.0	27.20		8.46		24.93		80.60		5.56		6.76		6.1	
	4/6/2022	Cloudy	12:51	2.9	1.9	27.70	27.70	8.44	8.44	20.40	20.40	77.60	77.60	5.45	5.45	2.35	2.63	3.1	3.0
			12:53	2.9	1.9	27.70		8.44		20.39		77.60		5.45		2.91		2.8	
	7/6/2022	Rainy	12:55	4.1	3.1	26.90	26.85	8.64	8.65	19.28	19.29	85.10	85.90	6.09	6.16	3.58	2.97	20.6	20.9
			12:57	4.1	3.1	26.80		8.65		19.30		86.70		6.22		2.35		21.1	
	9/6/2022	Sunny	10:01	4.1	3.1	26.30	26.25	8.26	8.23	21.63	22.65	71.80	72.15	5.13	5.13	4.99	4.58	9.9	10.1
			9:19	3.4	2.4	26.20		8.19		23.66		72.50		5.13		4.16		10.3	
	11/6/2022	Sunny	10:01	4.1	3.1	27.22	27.18	8.53	8.53	16.42	16.49	111.10	107.60	8.04	7.79	3.64	3.18	5.2	5.0
			10:03	4.1	3.1	27.14		8.52		16.56		104.10		7.54		2.71		4.8	
	13/6/2022	Sunny	9:31	3.8	2.8	27.62	27.68	7.86	8.08	10.31	13.98	118.70	118.10	8.70	8.53	2.52	2.25	2.3	2.3
			9:33	3.8	2.8	27.73		8.30		17.64		117.50		8.36		1.98		2.2	
	15/6/2022	Rainy	9:28	4.1	3.2	27.13	27.11	8.95	8.91	21.86	21.87	116.20	116.30	8.17	8.18	2.09	2.10	2.6	2.7
			9:30	4.2	3.2	27.08		8.86		21.88		116.40		8.19		2.11		2.8	
	17/6/2022	Sunny	12:56	4.1	3.1	26.90	26.90	8.09	8.09	21.40	21.43	78.20	78.20	5.54	5.56	5.01	4.72	2.2	2.3
			12:58	4.1	3.1	26.90		8.09		21.45		78.20		5.57		4.43		2.3	
	20/6/2022	Sunny	12:52	4.0	3.0	27.30	27.30	8.28	8.28	17.67	18.65	85.70	90.00	6.16	6.47	5.83	5.45	4.6	4.3
			12:54	4.0	3.0	27.30		8.28		19.63		94.30		6.78		5.07		4.0	
	22/6/2022	Sunny	8:48	3.5	2.5	27.00	27.00	7.76	7.72	23.49	23.62	78.00	76.70	5.34	5.23	8.33	8.38	5.4	5.2
			8:50	3.5	2.5	27.00		7.68		23.75		75.40		5.12		8.43		5.0	
	24/6/2022	Sunny	8:53	3.7	2.7	27.20	27.25	8.00	8.01	23.84	23.69	97.50	97.20	6.70	6.74	6.17	6.15	1.0	1.1
			8:55	3.7	2.7	27.30		8.01		23.54		96.90		6.78		6.13		1.1	
	28/6/2022	Sunny	9:22	3.8	2.8	28.10	28.10	8.01	8.03	21.31	21.37	99.40	98.65	6.84	6.78	6.09	6.12	3.0	3.1
			9:24	3.8	2.8	28.10		8.05		21.42		97.90		6.71		6.15		3.2	
	30/6/2022	Sunny	9:11	4.0	3.0	27.40	27.40	8.27	8.28	18.62	18.51	96.60	92.05	6.81	6.51	5.79	5.62	3.9	4.1
			9:13	4.0	3.0	27.40		8.29		18.39		87.50		6.20		5.44		4.2	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station SR4 (Bottom) - Flood Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR4	2/6/2022	Rainy	8:57	3.8	2.8	26.80	26.80	8.30	8.31	23.14	23.21	72.80	73.70	5.11	5.17	1.85	1.44	<1.0	1.0
			8:59	3.8	2.8	26.80		8.31		23.28		74.60		5.23		1.02		<1.0	
	4/6/2022	Cloudy	8:59	3.4	2.4	27.10	27.20	8.26	8.29	20.36	20.28	78.80	78.25	5.59	5.55	1.64	2.04	2.6	2.5
			9:01	3.4	2.4	27.30		8.31		20.19		77.70		5.50		2.44		2.4	
	7/6/2022	Rainy	9:24	3.7	2.7	27.10	27.05	8.36	8.38	19.85	19.79	78.40	77.70	5.58	5.54	4.39	2.96	4.9	4.7
			9:26	3.7	2.7	27.00		8.39		19.73		77.00		5.50		4.63		4.4	
	9/6/2022	Sunny	12:53	3.2	2.2	26.10	26.10	8.50	8.46	20.45	21.36	71.40	72.40	5.15	5.21	4.12	4.99	5.2	5.5
			12:55	3.2	2.2	26.10		8.42		22.26		73.40		5.26		5.85		5.7	
	11/6/2022	Sunny	12:49	3.1	2.1	27.24	27.23	7.52	7.54	7.59	7.63	114.70	114.10	8.57	8.53	3.70	3.33	3.5	3.7
			12:51	3.1	2.1	27.22		7.56		7.66		113.50		8.48		2.96		3.9	
	13/6/2022	Sunny	13:00	3.1	2.1	28.29	28.28	8.81	8.85	18.20	18.23	112.90	112.70	7.95	7.94	2.69	1.95	2.4	2.3
			13:02	3.1	2.1	28.27		8.88		18.26		112.50		7.92		1.20		2.2	
	15/6/2022	Rainy	12:58	3.1	2.1	27.78	27.72	8.67	8.73	21.76	21.83	112.90	112.95	7.86	7.87	2.82	2.61	4.4	4.6
			13:00	3.1	2.1	27.65		8.78		21.89		113.00		7.87		2.40		4.7	
	17/6/2022	Sunny	9:50	3.9	2.9	26.40	26.40	7.66	7.67	23.06	23.11	74.20	71.95	5.25	5.09	4.26	4.65	1.8	1.8
			9:52	3.9	2.9	26.40		7.68		23.15		69.70		4.93		5.03		1.7	
	20/6/2022	Sunny	9:02	3.2	2.2	26.80	26.80	7.81	7.82	18.95	18.95	74.00	75.50	5.32	5.43	6.80	6.71	4.4	4.2
			9:04	3.2	2.2	26.80		7.83		18.95		77.00		5.53		6.61		4.0	
	22/6/2022	Sunny	13:01	3.7	2.7	27.80	27.85	8.36	8.37	18.20	17.96	88.50	92.25	6.25	6.49	8.80	8.77	9.5	9.4
			13:03	3.7	2.7	27.90		8.38		17.72		96.00		6.73		8.74		9.2	
	24/6/2022	Sunny	12:53	3.6	2.6	30.30	30.20	8.43	8.43	17.14	17.09	94.90	95.30	6.45	6.43	4.91	4.97	2.8	2.9
			12:55	3.6	2.6	30.10		8.43		17.04		95.70		6.41		5.02		3.0	
	28/6/2022	Sunny	12:50	3.6	2.6	30.30	30.20	8.43	8.43	17.14	17.09	94.90	95.30	6.45	6.46	4.91	4.97	2.1	2.2
			12:52	3.6	2.6	30.10		8.43		17.04		95.70		6.47		5.02		2.3	
	30/6/2022	Sunny	12:45	3.8	2.8	28.59	28.58	9.72	9.59	16.67	16.70	96.90	106.60	6.84	7.53	3.03	3.16	2.1	2.2
			12:47	3.8	2.8	28.56		9.46		16.72		116.30		8.22		3.29		2.3	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station SR5 (surface) - Ebb Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR5	2/6/2022	Rainy	12:43	4.8	1.0	27.40	27.40	8.48	8.48	23.73	23.77	79.30	78.70	5.49	5.45	1.51	1.49	1.6	1.7
			12:45	4.8	1.0	27.40		8.47		23.80		78.10		5.40		1.46		1.7	
	4/6/2022	Cloudy	12:41	4.9	1.0	27.40	27.45	8.46	8.46	20.83	20.82	79.30	78.85	5.58	5.55	1.12	1.33	2.3	2.3
			12:43	4.9	1.0	27.50		8.45		20.81		78.40		5.52		1.54		2.3	
	7/6/2022	Rainy	12:44	4.6	1.0	26.70	26.60	8.58	8.58	19.62	19.60	83.30	81.80	5.98	5.88	3.46	3.20	4.4	4.7
			12:46	4.6	1.0	26.50		8.57		19.58		80.30		5.78		2.93		5.0	
	9/6/2022	Sunny	10:06	4.6	1.0	26.20	26.20	8.29	8.27	21.61	21.58	74.20	73.35	5.31	5.25	3.03	3.05	2.7	2.7
			9:24	4.0	1.0	26.20		8.25		21.55		72.50		5.19		3.06		2.6	
	11/6/2022	Sunny	10:06	4.6	1.0	27.19	27.24	8.46	8.25	17.26	15.34	108.20	112.00	7.78	8.15	3.75	3.80	3.6	3.7
			10:08	4.6	1.0	27.29		8.03		13.41		115.80		8.52		3.84		3.8	
	13/6/2022	Sunny	9:36	4.9	1.0	27.62	27.63	7.98	8.14	14.71	16.69	119.00	117.65	8.37	8.28	1.90	2.31	4.5	4.7
			9:38	4.9	1.0	27.64		8.29		18.66		116.30		8.18		2.72		4.8	
	15/6/2022	Rainy	9:36	5.3	1.0	27.32	27.33	8.81	8.82	21.79	21.73	114.20	102.85	8.01	7.22	3.50	3.14	1.3	1.3
			9:38	5.1	1.0	27.33		8.83		21.66		91.50		6.42		2.78		1.2	
	17/6/2022	Sunny	12:44	5.3	1.0	27.00	26.95	8.04	8.04	22.84	22.67	79.10	78.45	5.54	5.51	4.13	4.63	1.6	1.7
			12:46	5.3	1.0	26.90		8.04		22.50		77.80		5.48		5.13		1.8	
	20/6/2022	Sunny	12:40	5.3	1.0	27.30	27.25	8.22	8.23	18.51	18.61	82.40	83.75	5.90	5.49	5.67	6.14	3.0	2.5
			12:42	5.3	1.0	27.20		8.23		18.71		85.10		5.08		6.61		2.0	
	22/6/2022	Sunny	8:58	3.9	1.0	27.10	27.15	7.83	7.87	17.53	17.45	81.50	83.10	5.85	6.01	5.94	5.81	3.1	3.3
			9:00	3.9	1.0	27.20		7.91		17.36		84.70		6.16		5.67		3.4	
	24/6/2022	Sunny	9:03	4.2	1.0	28.10	28.15	8.12	8.14	20.27	20.39	97.40	97.10	6.74	6.75	5.54	5.55	2.4	2.5
			9:05	4.2	1.0	28.20		8.16		20.51		96.80		6.76		5.55		2.6	
	28/6/2022	Sunny	9:27	4.6	1.0	28.60	28.65	8.17	8.19	18.49	18.46	97.40	97.90	6.80	6.80	4.17	4.47	1.6	1.7
			9:29	4.6	1.0	28.70		8.21		18.43		98.40		6.79		4.76		1.8	
	30/6/2022	Sunny	9:22	5.0	1.0	27.80	27.80	8.36	8.37	17.96	17.98	98.30	93.45	6.17	6.19	5.30	5.16	3.3	3.2
			9:24	5.0	1.0	27.80		8.38		18.00		88.60		6.20		5.02		3.1	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

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Impact Water Quality Monitoring at Station SR5 (surface) - Flood Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR5	2/6/2022	Rainy	9:07	4.4	1.0	27.10	27.05	8.33	8.33	23.85	23.94	83.20	79.50	5.78	5.53	2.13	2.08	2.1	2.3
			9:09	4.4	1.0	27.00		8.33		24.02		75.80		5.28		2.03		2.4	
	4/6/2022	Cloudy	9:05	4.6	1.0	27.30	27.30	8.32	8.32	21.12	21.12	74.50	73.80	5.24	5.20	1.31	1.38	1.8	1.7
			9:07	4.6	1.0	27.30		8.31		21.11		73.10		5.15		1.44		1.5	
	7/6/2022	Rainy	9:26	4.4	1.0	26.80	26.80	8.34	8.34	20.22	20.08	79.00	77.95	5.65	5.58	7.35	3.51	3.0	3.2
			9:28	4.4	1.0	26.80		8.33		19.93		76.90		5.50		3.31		3.3	
	9/6/2022	Sunny	12:43	4.3	1.0	25.30	25.30	8.51	8.51	17.35	17.35	76.70	74.85	5.71	5.58	2.40	2.39	3.7	3.9
			12:45	4.3	1.0	25.30		8.51		17.35		73.00		5.44		2.37		4.0	
	11/6/2022	Sunny	12:41	3.7	1.0	27.30	27.36	7.99	8.01	14.94	14.76	109.70	110.40	7.79	7.90	3.73	3.59	2.7	2.7
			12:43	3.7	1.0	27.41		8.02		14.58		111.10		8.00		3.45		2.7	
	13/6/2022	Sunny	12:50	4.4	1.0	27.79	28.26	8.60	8.69	19.05	19.27	111.30	111.50	7.73	7.74	4.17	3.04	3.8	3.6
			12:52	4.4	1.0	28.73		8.77		19.49		111.70		7.75		1.90		3.4	
	15/6/2022	Rainy	12:47	4.8	1.0	28.46	28.46	8.69	8.74	21.24	21.41	110.70	103.00	7.64	7.11	3.20	2.92	3.8	3.7
			12:49	4.8	1.0	28.46		8.79		21.57		95.30		6.57		2.63		3.5	
	17/6/2022	Sunny	10:00	5.0	1.0	26.70	26.70	7.75	7.75	23.36	23.64	75.20	76.80	5.28	5.39	5.01	5.27	3.1	3.0
			10:02	5.0	1.0	26.70		7.75		23.92		78.40		5.49		5.53		2.9	
	20/6/2022	Sunny	9:12	4.1	1.0	26.70	26.70	7.81	7.83	19.99	19.99	79.90	78.55	5.72	5.63	7.65	7.39	3.0	3.1
			9:14	4.1	1.0	26.70		7.85		19.98		77.20		5.53		7.12		3.2	
	22/6/2022	Sunny	12:48	3.8	1.0	28.00	28.00	8.33	8.33	18.03	17.99	84.90	86.60	6.73	6.44	6.71	6.67	3.5	3.4
			12:50	3.8	1.0	28.00		8.33		17.94		88.30		6.14		6.62		3.3	
	24/6/2022	Sunny	12:40	3.9	1.0	29.70	29.65	8.38	8.38	17.43	18.02	95.70	97.05	6.40	6.56	5.07	5.10	3.0	3.0
			12:42	3.9	1.0	29.60		8.37		18.61		98.40		6.71		5.13		3.0	
	28/6/2022	Sunny	12:39	3.9	1.0	29.70	29.65	8.38	8.38	17.43	18.02	95.70	97.05	6.64	6.68	5.02	5.08	1.6	1.8
			12:41	3.9	1.0	29.60		8.37		18.61		98.40		6.71		5.13		2.0	
	30/6/2022	Sunny	12:39	4.9	1.0	28.79	28.82	9.20	9.18	15.83	15.92	173.60	155.10	9.64	9.57	3.82	3.74	2.8	2.8
			12:41	4.9	1.0	28.84		9.16		16.00		136.60		9.49		3.66		2.7	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station SR5 (Bottom) - Ebb Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR5	2/6/2022	Rainy	12:46	4.8	3.8	27.40	27.40	8.48	8.48	23.74	23.74	75.30	76.00	5.22	5.27	1.29	1.50	2.4	2.5
			12:48	4.8	3.8	27.40		8.48		23.73		76.70		5.31		1.70		2.6	
	4/6/2022	Cloudy	12:44	4.9	3.9	27.30	27.35	8.45	8.45	20.86	20.86	78.10	75.60	5.50	5.33	1.50	1.72	2.5	2.5
			12:46	4.9	3.9	27.40		8.45		20.85		73.10		5.15		1.94		2.5	
	7/6/2022	Rainy	12:47	4.6	3.6	26.80	26.75	8.57	8.58	20.33	20.33	81.60	81.45	5.83	5.82	3.04	2.64	16.6	16.8
			12:49	4.6	3.6	26.70		8.58		20.32		81.30		5.81		2.23		17.0	
	9/6/2022	Sunny	9:25	4.0	3.0	26.20	26.20	8.30	8.30	22.51	22.30	73.80	72.05	8.30	6.66	3.92	3.51	3.1	3.3
			9:27	4.0	3.0	26.20		8.30		22.08		70.30		5.02		3.09		3.4	
	11/6/2022	Sunny	10:09	4.6	3.6	27.13	27.16	8.42	8.43	19.03	19.50	117.50	116.95	8.37	8.32	2.28	2.37	3.0	2.8
			10:11	4.6	3.6	27.18		8.43		19.96		116.40		8.27		2.46		2.6	
	13/6/2022	Sunny	9:39	4.9	3.9	27.53	27.48	8.55	8.26	19.67	17.42	115.20	107.05	8.13	7.55	1.62	1.62	7.0	7.1
			9:41	4.9	4.1	27.43		7.97		15.16		98.90		6.97		1.62		7.2	
	15/6/2022	Rainy	9:39	5.3	4.1	27.26	27.25	8.79	8.81	21.18	21.21	114.10	101.20	8.04	7.13	2.46	2.47	2.1	2.3
			9:41	5.1	4.1	27.24		8.82		21.24		88.30		6.22		2.48		2.4	
	17/6/2022	Sunny	12:47	5.3	4.3	26.90	26.90	8.06	8.06	22.62	22.76	78.50	82.90	5.52	5.83	4.35	3.69	2.2	2.2
			12:49	5.3	4.3	26.90		8.06		22.89		87.30		6.14		3.03		2.1	
	20/6/2022	Sunny	12:43	5.3	4.3	27.20	27.20	8.24	8.25	18.73	18.77	83.60	83.80	5.97	5.99	5.67	5.67	3.9	4.0
			12:45	5.3	4.3	27.20		8.25		18.80		84.00		6.00		5.66		4.1	
	22/6/2022	Sunny	9:01	3.9	2.9	27.20	27.20	7.95	7.97	17.25	17.24	81.20	81.35	5.81	5.81	5.94	5.81	4.8	4.7
			9:03	3.9	2.9	27.20		7.99		17.22		81.50		5.81		5.67		4.6	
	24/6/2022	Sunny	9:06	4.2	3.2	27.50	27.55	8.16	8.18	22.74	22.57	116.30	115.15	8.51	8.20	5.15	5.29	3.2	3.1
			9:08	4.2	3.2	27.60		8.19		22.40		114.00		7.89		5.43		3.0	
	28/6/2022	Sunny	9:30	4.6	3.6	28.60	28.60	8.20	8.23	20.20	19.51	97.80	95.50	6.75	6.61	6.09	5.96	1.9	1.9
			9:32	4.6	3.6	28.60		8.25		18.82		93.20		6.46		5.82		1.9	
	30/6/2022	Sunny	9:25	5.0	4.0	27.90	27.90	8.39	8.40	18.00	18.00	89.10	91.50	6.26	6.42	4.97	4.99	2.4	2.4
			9:27	5.0	4.0	27.90		8.41		18.00		93.90		6.58		5.01		2.3	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station SR5 (Bottom) - Flood Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR5	2/6/2022	Rainy	9:10	4.4	3.4	26.90	26.85	8.34	8.35	24.11	24.48	78.90	79.20	5.50	5.52	2.54	2.42	2.3	2.2
			9:12	4.4	3.4	26.80		8.36		24.85		79.50		5.53		2.29		2.1	
	4/6/2022	Cloudy	9:08	4.6	3.6	27.50	27.45	8.32	8.32	21.24	21.24	75.60	75.00	5.31	5.27	2.69	3.23	2.5	2.4
			9:10	4.6	3.6	27.40		8.32		21.23		74.40		5.23		3.77		2.2	
	7/6/2022	Rainy	9:29	4.4	3.4	26.80	26.85	8.35	8.37	21.05	20.59	79.40	79.15	5.64	5.64	2.81	3.31	5.0	4.9
			9:31	4.4	3.4	26.90		8.38		20.13		78.90		5.63		4.12		4.8	
	9/6/2022	Sunny	12:46	4.3	3.3	25.90	25.90	8.48	8.49	19.66	19.72	77.20	74.45	5.62	5.42	2.66	2.97	7.2	7.0
			12:48	4.3	3.3	25.90		8.49		19.77		71.70		5.21		3.28		6.8	
	11/6/2022	Sunny	12:44	3.7	2.7	27.27	27.29	7.63	7.59	9.11	8.88	114.80	115.50	8.56	8.55	2.61	2.88	3.4	3.7
			12:46	3.7	2.7	27.31		7.54		8.65		116.20		8.54		3.14		3.9	
	13/6/2022	Sunny	12:53	4.4	3.4	28.48	28.43	8.78	8.83	19.16	19.27	112.60	112.55	7.86	7.86	4.07	2.66	3.0	2.8
			12:55	4.4	3.4	28.38		8.87		19.38		112.50		7.85		1.24		2.6	
	15/6/2022	Rainy	12:50	4.8	3.8	27.60	27.59	8.66	8.67	22.29	22.36	110.30	111.40	7.73	7.78	2.62	2.70	3.1	3.0
			12:52	4.8	3.8	27.58		8.67		22.43		112.50		7.83		2.77		2.8	
	17/6/2022	Sunny	10:03	5.0	4.0	26.70	26.70	7.76	7.75	24.33	23.89	73.70	76.70	5.16	5.38	5.51	5.26	2.6	2.5
			10:05	5.0	4.0	26.70		7.73		23.44		79.70		5.60		5.01		2.4	
	20/6/2022	Sunny	9:15	4.1	3.1	26.60	26.60	7.84	7.85	21.26	21.30	78.70	77.55	5.61	5.53	8.27	8.44	6.2	6.4
			9:17	4.1	3.1	26.60		7.86		21.33		76.40		5.44		8.60		6.6	
	22/6/2022	Sunny	12:51	3.8	2.8	27.20	27.20	8.26	8.24	21.46	21.46	85.00	85.95	5.85	5.88	11.93	11.67	6.2	6.0
			12:53	3.8	2.8	27.20		8.22		21.46		86.90		5.90		11.41		5.8	
	24/6/2022	Sunny	12:43	3.9	2.9	28.30	28.30	8.37	8.39	20.96	20.96	111.80	106.10	7.76	7.57	5.51	5.66	4.0	3.9
			12:45	3.9	2.9	28.30		8.41		20.95		100.40		7.38		5.80		3.7	
	28/6/2022	Sunny	12:42	3.9	2.9	28.30	28.30	8.37	8.39	20.96	20.96	111.80	109.10	7.76	7.57	5.51	5.66	2.2	2.1
			12:44	3.9	2.9	28.30		8.41		20.95		106.40		7.38		5.80		2.0	
	30/6/2022	Sunny	12:42	4.9	3.9	28.59	28.56	9.17	9.17	6.82	11.72	124.50	124.00	8.78	8.76	3.46	3.47	4.0	3.9
			12:44	4.9	3.9	28.52		9.17		16.61		123.50		8.73		3.48		3.8	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station SR6 (Middle) - Ebb Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR6	2/6/2022	Rainy	12:33	3.1	1.6	27.30	27.25	8.47	8.48	24.45	24.43	75.50	76.45	5.22	5.29	1.42	1.28	2.6	2.7
			12:35	3.1	1.6	27.20		8.48		24.41		77.40		5.36		1.14		2.7	
	4/6/2022	Cloudy	12:31	2.9	1.5	28.10	27.35	8.41	8.39	20.88	23.02	75.00	76.40	5.22	5.32	1.39	1.41	4.0	3.8
			12:33	2.9	1.5	26.60		8.37		25.16		77.80		5.42		1.42		3.6	
	7/6/2022	Rainy	12:24	2.8	1.4	26.10	26.40	8.52	8.55	21.59	20.60	80.60	83.20	5.78	5.97	3.05	3.04	3.6	3.4
			12:26	2.8	1.4	26.70		8.57		19.60		85.80		6.16		3.03		3.1	
	9/6/2022	Sunny	9:30	2.8	1.4	26.10	26.10	8.28	8.29	24.89	24.11	71.80	72.15	5.06	5.11	2.91	3.31	2.4	2.5
			9:32	2.8	1.4	26.10		8.30		23.33		72.50		5.15		3.70		2.6	
	11/6/2022	Sunny	10:15	2.7	1.4	27.27	27.27	7.83	8.11	12.04	16.11	114.50	114.45	8.49	8.30	2.41	2.52	2.9	3.1
			10:17	2.7	1.4	27.26		8.39		20.17		114.40		8.11		2.62		3.2	
	13/6/2022	Sunny	9:46	2.8	1.4	27.67	27.68	8.73	8.34	20.52	17.64	114.10	115.55	8.02	8.13	4.58	4.45	2.8	2.7
			9:48	2.8	1.5	27.68		7.94		14.75		117.00		8.23		4.31		2.5	
	15/6/2022	Rainy	9:46	2.8	1.5	27.01	27.01	8.84	8.86	20.63	20.51	113.90	114.05	8.08	8.10	2.55	2.41	2.2	2.3
			9:48	2.9	1.5	27.00		8.88		20.38		114.20		8.12		2.27		2.4	
	17/6/2022	Sunny	12:35	2.8	1.4	26.90	26.80	8.03	8.04	23.90	23.52	76.00	76.65	5.30	5.37	4.32	4.38	1.6	1.7
			12:37	2.8	1.4	26.70		8.04		23.13		77.30		5.44		4.43		1.7	
	20/6/2022	Sunny	12:30	2.8	1.4	27.20	27.15	8.24	8.25	17.82	17.82	89.80	89.90	6.46	6.47	5.49	5.51	2.4	2.5
			12:32	2.8	1.4	27.10		8.25		17.81		90.00		6.48		5.53		2.5	
	22/6/2022	Sunny	9:09	2.9	1.5	27.20	27.20	7.99	8.00	18.95	18.97	78.60	77.85	5.58	5.52	5.74	5.64	3.3	3.4
			9:11	2.9	1.5	27.20		8.01		18.98		77.10		5.46		5.54		3.5	
	24/6/2022	Sunny	9:18	2.8	1.4	27.60	27.60	8.20	8.22	22.23	22.14	96.90	95.55	6.65	6.57	5.96	6.13	3.2	3.1
			9:20	2.8	1.4	27.60		8.23		22.05		94.20		6.48		6.30		3.0	
	28/6/2022	Sunny	9:33	2.8	1.4	28.70	28.70	8.30	8.31	18.93	18.91	94.90	94.65	6.50	6.54	4.93	4.92	2.3	2.4
			9:35	2.8	1.4	28.70		8.31		18.88		94.40		6.58		4.91		2.4	
	30/6/2022	Sunny	9:33	2.8	1.4	28.00	28.00	8.43	8.44	17.77	17.73	86.90	86.20	6.10	6.16	4.60	4.61	2.2	2.2
			9:35	2.8	1.4	28.00		8.44		17.68		85.50		6.21		4.61		2.2	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Lam Environmental Services Limited

Impact Water Quality Monitoring at Station SR6 (Middle) - Flood Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR6	2/6/2022	Rainy	9:22	2.6	1.3	26.80	26.75	8.38	8.38	22.94	22.93	78.50	78.00	5.52	5.49	1.84	1.78	2.6	1.9
			9:24	2.6	1.3	26.70		8.38		22.91		77.50		5.46		1.72		1.2	
	4/6/2022	Cloudy	9:15	2.9	1.5	27.50	27.50	8.35	8.35	20.62	20.63	76.60	74.95	5.39	5.28	1.23	1.27	2.6	2.4
			9:17	2.9	1.5	27.50		8.34		20.64		73.30		5.16		1.31		2.2	
	7/6/2022	Rainy	9:38	2.8	1.4	26.80	26.75	8.38	8.38	20.55	21.24	76.80	76.85	5.47	5.46	3.23	2.74	2.6	2.7
			9:40	2.8	1.4	26.70		8.37		21.92		76.90		5.44		2.88		2.7	
	9/6/2022	Sunny	12:33	2.9	1.5	26.00	25.75	8.52	8.49	17.49	18.75	74.40	76.45	5.43	5.47	2.66	2.55	2.5	2.7
			12:35	2.9	1.5	25.50		8.46		20.00		78.50		5.51		2.44		2.9	
	11/6/2022	Sunny	12:32	2.9	1.5	27.47	27.45	8.15	7.88	14.00	11.24	112.80	109.50	8.27	8.15	3.62	3.34	2.8	2.7
			12:34	2.9	1.5	27.42		7.61		8.47		106.20		8.02		3.05		2.6	
	13/6/2022	Sunny	12:42	2.8	1.4	28.53	28.56	8.77	8.75	20.78	20.85	111.50	111.55	7.70	7.70	1.68	1.68	2.9	3.1
			12:44	2.8	1.4	28.58		8.72		20.91		111.60		7.70		1.68		3.2	
	15/6/2022	Rainy	12:38	2.8	1.4	28.07	28.06	8.70	8.72	21.07	21.02	111.20	111.50	7.73	7.76	2.95	2.23	2.5	2.4
			12:40	2.8	1.4	28.04		8.73		20.97		111.80		7.78		1.50		2.3	
	17/6/2022	Sunny	10:14	2.8	1.4	26.60	26.70	7.84	7.85	23.05	23.05	74.50	72.35	5.26	5.10	4.46	4.49	1.3	1.5
			10:16	2.8	1.4	26.80		7.85		23.05		70.20		4.93		4.51		1.7	
	20/6/2022	Sunny	9:24	2.9	1.5	26.90	26.90	7.95	7.96	19.14	19.23	83.60	82.55	6.00	5.92	5.51	5.77	3.0	3.1
			9:26	2.9	1.5	26.90		7.97		19.31		81.50		5.84		6.03		3.2	
	22/6/2022	Sunny	12:35	2.9	1.5	27.80	27.85	8.35	8.35	17.81	17.66	81.60	82.20	5.76	5.81	5.80	5.81	3.5	3.4
			12:37	2.9	1.5	27.90		8.34		17.51		82.80		5.86		5.81		3.3	
	24/6/2022	Sunny	12:31	2.9	1.5	28.50	28.50	8.36	8.36	21.74	21.77	92.80	94.00	6.48	6.44	5.61	5.71	3.1	2.9
			12:33	2.9	1.5	28.50		8.36		21.80		95.20		6.40		5.80		2.7	
	28/6/2022	Sunny	12:30	2.9	1.5	28.50	28.50	8.36	8.36	21.74	21.77	92.80	94.00	6.48	6.44	5.61	5.71	2.5	2.4
			12:32	2.9	1.5	28.50		8.36		21.80		95.20		6.40		5.80		2.2	
	30/6/2022	Sunny	12:30	2.7	1.4	29.00	29.00	8.49	8.50	17.69	17.72	93.80	93.60	6.53	6.55	5.16	5.09	2.1	2.2
			12:32	2.7	1.4	29.00		8.50		17.74		93.40		6.56		5.02		2.3	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station SR9 (surface) - Ebb Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		SS mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR9	2/6/2022	Rainy	12:22	4.8	1.0	28.30	27.90	8.44	8.45	25.27	25.19	74.30	76.70	5.03	5.23	1.56	1.50	1.2	1.4
			12:24	4.8	1.0	27.50		8.46		25.10		79.10		5.43		1.43		1.5	
	4/6/2022	Cloudy	12:20	3.9	1.0	28.10	28.10	8.38	8.38	23.89	23.90	74.30	75.90	5.08	5.19	2.03	1.99	4.4	4.5
			12:22	3.9	1.0	28.10		8.38		23.91		77.50		5.30		1.94		4.6	
	7/6/2022	Rainy	12:27	4.5	1.0	26.40	26.35	8.58	8.59	20.24	20.37	78.50	80.50	5.65	5.79	2.77	2.46	3.5	3.4
			12:29	4.5	1.0	26.30		8.59		20.50		82.50		5.93		2.14		3.2	
	9/6/2022	Sunny	9:43	4.4	1.0	26.30	26.25	8.33	8.34	21.74	22.36	71.10	72.40	5.08	5.16	2.44	2.24	1.8	1.9
			9:45	4.4	1.0	26.20		8.34		22.97		73.70		5.23		2.03		1.9	
	11/6/2022	Sunny	10:27	4.6	1.0	27.36	27.37	8.38	8.14	19.62	16.40	114.10	115.30	8.10	8.25	2.01	1.98	1.6	1.7
			10:29	4.6	1.0	27.38		7.90		13.18		116.50		8.39		1.94		1.8	
	13/6/2022	Sunny	9:59	5.3	1.0	28.00	28.00	8.81	8.31	19.06	14.27	113.30	114.70	7.97	8.19	3.39	2.71	2.4	2.3
			10:01	5.3	1.0	27.99		7.81		9.47		116.10		8.41		2.03		2.1	
	15/6/2022	Rainy	10:01	5.5	1.0	27.65	27.68	8.82	8.83	20.38	20.57	111.00	111.20	7.81	7.81	2.66	2.44	1.6	1.7
			10:03	5.4	1.0	27.71		8.84		20.75		111.40		7.81		2.21		1.7	
	17/6/2022	Sunny	12:22	5.5	1.0	26.80	26.80	8.01	8.01	24.53	24.57	73.80	76.80	5.15	5.32	4.13	4.04	2.6	2.5
			12:24	5.5	1.0	26.80		8.01		24.60		79.80		5.49		3.94		2.4	
	20/6/2022	Sunny	12:19	5.3	1.0	27.20	150.70	8.18	8.20	19.50	19.51	83.80	74.55	5.97	6.03	4.64	4.59	2.7	2.6
			12:21	5.3	1.0	274.20		8.21		19.51		65.30		6.08		4.53		2.5	
	22/6/2022	Sunny	9:23	4.1	1.0	27.30	27.30	8.02	8.04	18.77	18.76	81.50	81.95	5.81	5.85	6.22	6.16	2.8	2.7
			9:25	4.1	1.0	27.30		8.05		18.74		82.40		5.89		6.09		2.5	
	24/6/2022	Sunny	9:31	4.3	1.0	26.60	27.75	8.20	8.24	20.05	19.53	97.30	97.65	6.70	6.73	4.56	4.61	1.7	1.7
			9:33	4.3	1.0	28.90		8.28		19.00		98.00		6.75		4.65		1.6	
	28/6/2022	Sunny	9:47	4.0	1.0	28.80	28.80	8.35	8.37	18.18	18.27	97.20	97.80	6.69	6.76	4.79	4.96	2.9	2.9
			9:49	4.0	1.0	28.80		8.38		18.35		98.40		6.83		5.12		2.8	
	30/6/2022	Sunny	9:47	4.9	1.0	28.10	28.10	8.48	8.49	17.00	16.99	89.00	90.60	6.29	6.37	5.10	4.93	3.0	2.9
			9:49	4.9	1.0	28.10		8.49		16.97		92.20		6.45		4.76		2.8	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station SR9 (surface) - Flood Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		SS mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR9	2/6/2022	Rainy	9:35	4.9	1.0	27.00	26.95	8.39	8.40	23.93	23.97	73.50	75.00	5.12	5.23	1.41	1.32	1.2	1.2
			9:37	4.9	1.0	26.90		8.40		24.01		76.50		5.34		1.23		1.2	
	4/6/2022	Cloudy	9:30	4.7	1.0	27.00	27.05	8.35	8.35	20.83	20.81	74.40	72.95	5.27	5.22	1.44	1.54	1.4	1.6
			9:32	4.7	1.0	27.10		8.35		20.79		71.50		5.16		1.64		1.7	
	7/6/2022	Rainy	9:51	4.1	1.0	26.70	26.70	8.40	8.41	21.06	20.85	80.00	79.80	5.69	5.68	2.12	1.93	3.8	3.6
			9:53	4.1	1.0	26.70		8.42		20.64		79.60		5.67		2.76		3.4	
	9/6/2022	Sunny	12:21	4.5	1.0	26.20	26.20	8.49	8.47	19.74	21.12	73.20	74.65	5.30	5.37	1.64	2.68	1.5	1.5
			12:23	4.5	1.0	26.20		8.44		22.50		76.10		5.43		3.71		1.4	
	11/6/2022	Sunny	12:20	4.2	1.0	27.64	27.65	8.58	8.54	18.81	12.89	100.60	100.40	7.13	7.27	2.12	2.01	2.9	2.8
			12:22	4.2	1.0	27.66		8.50		6.96		100.20		7.41		1.89		2.7	
	13/6/2022	Sunny	12:29	4.6	1.0	28.86	28.86	8.81	8.82	21.15	21.09	114.80	114.25	7.88	7.85	1.97	1.93	2.4	2.6
			12:31	4.6	1.0	28.86		8.82		21.02		113.70		7.81		1.89		2.8	
	15/6/2022	Rainy	12:23	5.2	1.0	27.99	27.98	8.67	8.70	21.62	21.64	106.10	109.50	7.36	7.60	1.95	1.83	3.0	2.9
			12:25	5.2	1.0	27.96		8.73		21.66		112.90		7.84		1.70		2.7	
	17/6/2022	Sunny	10:27	5.2	1.0	26.50	26.55	7.83	7.84	23.57	23.53	77.20	77.15	5.43	5.43	4.12	4.03	1.2	1.3
			10:29	5.2	1.0	26.60		7.84		23.48		77.10		5.42		3.93		1.3	
	20/6/2022	Sunny	9:37	4.3	1.0	26.58	26.74	8.00	8.01	19.49	19.49	75.20	76.40	5.38	5.47	4.39	4.39	3.6	3.7
			9:39	4.3	1.0	26.90		8.02		19.49		77.60		5.56		4.39		3.8	
	22/6/2022	Sunny	12:22	4.6	1.0	28.10	28.10	8.22	8.25	18.39	18.38	91.30	93.80	6.46	6.62	5.49	5.51	4.4	4.4
			12:24	4.6	1.0	28.10		8.27		18.36		96.30		6.77		5.52		4.4	
	24/6/2022	Sunny	12:18	4.4	1.0	30.10	30.20	8.37	8.38	17.56	17.54	93.80	91.40	6.41	6.61	4.98	4.87	3.7	3.6
			12:20	4.4	1.0	30.30		8.38		17.52		89.00		6.81		4.76		3.4	
	28/6/2022	Sunny	12:19	4.4	1.0	30.10	30.20	6.41	6.21	17.56	17.54	93.80	91.45	8.37	8.38	4.98	4.87	2.3	2.3
			12:21	4.4	1.0	30.30		6.00		17.52		89.10		8.38		4.76		2.2	
	30/6/2022	Sunny	12:19	5.0	1.0	28.10	28.10	8.37	8.44	17.13	17.08	92.90	89.85	6.63	6.41	5.15	5.19	2.1	2.2
			12:21	5.0	1.0	28.10		8.51		17.03		86.80		6.19		5.23		2.2	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station SR9 (Bottom) - Ebb Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR9	2/6/2022	Rainy	12:25	4.8	3.8	27.10	27.15	8.46	8.46	24.45	50.88	73.40	75.35	5.06	5.19	3.69	3.46	2.8	2.6
			12:27	4.8	3.8	27.20		8.46		77.30		77.30		5.32		3.22		2.4	
	4/6/2022	Cloudy	12:23	3.9	2.9	28.30	28.35	8.41	8.41	21.02	20.94	73.80	74.85	5.11	5.19	1.15	1.76	2.4	2.2
			12:25	3.9	2.9	28.40		8.41		20.85		75.90		5.26		2.36		2.0	
	7/6/2022	Rainy	12:16	4.5	3.5	26.30	26.30	8.49	8.48	22.95	22.87	76.30	77.40	5.53	5.56	2.90	2.67	1.8	1.7
			12:18	4.5	3.5	26.30		8.47		22.79		78.50		5.58		2.44		1.6	
	9/6/2022	Sunny	9:46	4.4	3.4	26.30	26.25	8.40	8.38	21.37	22.04	72.80	72.80	5.21	5.20	1.88	1.81	2.6	2.5
			9:48	4.4	3.4	26.20		8.36		22.71		72.80		5.18		1.73		2.4	
	11/6/2022	Sunny	10:35	4.6	3.6	27.25	27.23	8.29	8.22	21.06	18.89	115.90	110.10	8.09	7.82	1.95	2.03	2.5	2.7
			10:37	4.6	3.6	27.20		8.14		16.72		104.30		7.54		2.11		2.8	
	13/6/2022	Sunny	10:02	5.3	4.3	27.77	27.73	7.47	7.67	19.14	18.32	91.40	102.00	6.45	7.21	1.95	1.60	1.6	1.7
			10:04	5.3	4.4	27.69		7.87		17.49		112.60		7.97		1.25		1.8	
	15/6/2022	Rainy	10:04	5.5	4.4	29.19	28.24	9.05	9.01	18.88	19.84	111.90	112.80	8.00	8.02	1.73	1.88	1.4	1.3
			10:06	5.4	4.4	27.28		8.96		20.80		113.70		8.03		2.03		1.2	
	17/6/2022	Sunny	12:25	5.5	4.5	26.80	26.75	8.02	8.02	24.44	24.48	75.60	74.70	5.28	5.04	4.27	4.50	1.3	1.2
			12:27	5.5	4.5	26.70		8.01		24.51		73.80		4.79		4.73		1.1	
	20/6/2022	Sunny	12:22	5.3	4.3	27.20	27.20	8.22	8.23	19.51	19.52	84.60	83.90	6.02	5.97	4.73	4.60	3.0	3.2
			12:24	5.3	4.3	27.20		8.23		19.52		83.20		5.92		4.47		3.3	
	22/6/2022	Sunny	9:26	4.1	3.1	17.30	22.35	8.10	8.12	18.75	18.74	79.90	80.10	5.62	5.65	5.15	5.16	2.3	2.2
			9:28	4.1	3.1	27.40		8.13		18.72		80.30		5.67		5.16		2.1	
	24/6/2022	Sunny	9:34	4.3	3.3	28.30	28.35	8.30	8.32	20.68	20.46	103.50	106.45	7.17	7.28	5.30	5.37	2.4	2.5
			9:36	4.3	3.3	28.40		8.33		20.24		109.40		7.38		5.43		2.6	
	28/6/2022	Sunny	9:50	4.0	3.0	28.60	28.60	8.31	8.31	19.64	19.43	90.90	91.35	6.21	6.25	6.10	6.10	4.2	4.1
			9:52	4.0	3.0	28.60		8.31		19.21		91.80		6.28		6.09		3.9	
	30/6/2022	Sunny	9:50	4.9	3.9	28.10	28.10	8.48	8.49	17.01	17.00	89.40	86.25	8.48	8.49	4.76	4.76	3.6	3.8
			9:52	4.9	3.9	28.10		8.50		16.98		83.10		8.50		4.75		4.0	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station SR9 (Bottom) - Flood Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR9	2/6/2022	Rainy	9:38	4.9	3.9	26.80	26.85	8.41	8.41	24.86	24.86	77.30	77.25	5.37	5.37	2.21	1.97	1.9	1.9
			9:40	4.9	3.9	26.90		8.41		24.86		77.20		5.37		1.72		1.8	
	4/6/2022	Cloudy	9:33	4.7	3.7	26.90	26.85	8.30	8.30	26.30	26.20	74.00	75.29	5.10	5.20	2.63	2.14	3.0	2.9
			9:35	4.7	3.7	26.80		8.30		26.10		76.58		5.30		1.64		2.7	
	7/6/2022	Rainy	9:54	4.1	3.1	26.70	26.70	8.40	8.40	22.30	22.14	75.60	77.30	5.34	5.47	4.71	2.92	4.9	5.1
			9:56	4.1	3.1	26.70		8.40		21.97		79.00		5.59		3.05		5.2	
	9/6/2022	Sunny	12:24	4.5	3.5	26.10	26.15	8.51	8.50	19.03	19.46	71.40	74.85	5.17	5.42	2.24	1.95	3.2	3.1
			12:26	4.5	3.5	26.20		8.49		19.89		78.30		5.66		1.65		3.0	
	11/6/2022	Sunny	12:23	4.2	3.2	27.45	27.51	8.05	8.32	13.89	16.44	118.10	115.85	8.39	8.23	1.70	2.22	3.0	3.3
			12:25	4.2	3.2	27.57		8.58		18.98		113.60		8.06		2.73		3.5	
	13/6/2022	Sunny	12:32	4.6	3.6	28.28	28.28	8.70	8.74	19.51	19.71	114.90	114.20	8.03	7.98	1.64	1.61	3.7	3.9
			12:34	4.6	3.6	28.27		8.77		19.91		113.50		7.92		1.57		4.0	
	15/6/2022	Rainy	12:26	5.2	4.2	27.66	27.69	8.81	8.74	21.75	21.52	113.60	113.70	7.92	7.94	1.61	1.75	2.2	2.4
			12:28	5.2	4.2	27.71		8.67		21.29		113.80		7.95		1.89		2.5	
	17/6/2022	Sunny	10:30	5.2	4.2	26.50	26.50	7.86	7.87	23.57	23.54	73.80	70.60	5.19	4.97	4.91	5.24	1.8	1.9
			10:32	5.2	4.2	26.50		7.87		23.50		67.40		4.75		5.56		1.9	
	20/6/2022	Sunny	9:40	4.3	3.3	26.80	26.80	8.05	8.05	19.52	19.52	78.70	78.45	5.64	5.62	4.50	4.56	4.6	4.4
			9:42	4.3	3.3	26.80		8.04		19.52		78.20		5.60		4.62		4.2	
	22/6/2022	Sunny	12:25	4.6	3.6	28.20	28.25	8.30	8.31	18.47	18.47	95.20	94.40	6.64	6.50	5.54	5.52	3.4	3.6
			12:27	4.6	3.6	28.30		8.31		18.47		93.60		6.35		5.50		3.7	
	24/6/2022	Sunny	12:21	4.4	3.4	29.00	29.10	8.36	8.39	20.40	19.97	119.20	117.40	7.77	7.80	5.23	5.02	4.0	4.1
			12:23	4.4	3.4	29.20		8.41		19.54		115.60		7.83		4.80		4.2	
	28/6/2022	Sunny	12:22	4.4	3.4	29.00	29.10	7.77	7.80	20.40	19.97	119.20	117.40	8.36	8.39	5.23	5.02	2.6	2.8
			12:24	4.4	3.4	29.20		7.83		19.54		115.60		8.41		4.80		2.9	
	30/6/2022	Sunny	12:22	5.0	4.0	28.10	28.05	8.52	8.53	17.09	17.09	88.60	89.40	6.36	6.30	5.53	5.60	3.3	3.5
			12:24	5.0	4.0	28.00		8.54		17.08		90.20		6.24		5.67		3.7	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station SR10 (Middle) - Ebb Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR10	2/6/2022	Rainy	12:13	2.8	1.4	27.80	27.75	8.47	8.47	24.96	24.86	76.90	76.35	5.26	5.23	1.23	1.10	1.4	1.6
			12:15	2.8	1.4	27.70		8.46		24.75		75.80		5.19		0.96		1.8	
	4/6/2022	Cloudy	12:15	2.7	1.4	26.10	27.15	8.42	8.42	21.48	21.49	75.20	76.10	5.21	5.27	1.25	1.29	3.1	3.3
			12:17	2.7	1.4	28.20		8.42		21.49		77.00		5.33		1.32		3.4	
	7/6/2022	Rainy	12:19	2.9	1.5	26.60	26.65	8.57	8.57	20.39	20.43	78.10	77.90	5.59	5.57	1.78	1.73	3.9	3.8
			12:21	2.9	1.5	26.70		8.56		20.46		77.70		5.55		1.68		3.6	
	9/6/2022	Sunny	10:38	2.9	1.5	26.30	26.25	8.39	8.39	21.77	21.90	72.40	72.60	5.17	5.19	2.44	2.23	2.4	2.3
			9:54	2.8	1.4	26.20		8.39		22.03		72.80		5.20		2.01		2.2	
	11/6/2022	Sunny	10:38	2.9	1.5	27.38	27.39	8.32	8.20	20.70	17.86	108.20	106.50	7.62	7.62	1.82	1.64	1.4	1.5
			10:40	2.9	1.5	27.39		8.07		15.01		104.80		7.62		1.46		1.5	
	13/6/2022	Sunny	10:08	2.7	1.4	27.83	27.84	8.48	8.27	24.67	18.06	113.40	113.80	7.87	8.11	3.84	3.01	1.5	1.7
			10:10	2.7	1.4	27.84		8.06		11.44		114.20		8.35		2.18		1.8	
	15/6/2022	Rainy	10:47	2.9	1.4	27.43	27.40	8.84	8.86	19.28	19.10	110.70	111.55	7.86	7.93	2.29	2.41	2.2	2.2
			10:49	2.7	1.4	27.36		8.87		18.91		112.40		8.00		2.52		2.1	
	17/6/2022	Sunny	12:17	2.9	1.5	27.10	27.10	8.01	8.01	23.75	23.76	77.60	75.40	5.41	5.25	3.90	4.07	2.3	2.2
			12:19	2.9	1.5	27.10		8.00		23.76		73.20		5.09		4.23		2.0	
	20/6/2022	Sunny	12:13	2.8	1.4	28.10	28.10	8.13	8.13	19.90	19.90	74.50	74.90	5.12	5.20	4.50	4.30	1.2	1.2
			12:15	2.8	1.4	28.10		8.13		19.89		75.30		5.27		4.10		1.1	
	22/6/2022	Sunny	9:35	2.8	1.4	17.30	22.35	8.17	8.18	19.06	19.07	80.20	80.05	5.61	5.62	5.55	5.51	3.2	3.1
			9:37	2.8	1.4	27.40		8.18		19.08		79.90		5.62		5.47		2.9	
	24/6/2022	Sunny	9:42	2.5	1.3	29.60	29.70	8.35	8.35	17.38	17.32	96.30	93.45	6.60	6.37	4.39	4.39	2.5	2.7
			9:44	2.5	1.3	29.80		8.35		17.26		90.60		6.13		4.39		2.8	
	28/6/2022	Sunny	9:58	2.8	1.4	29.10	29.10	8.34	8.35	18.84	18.84	99.25	98.98	6.84	6.78	4.53	4.52	1.2	1.3
			10:00	2.8	1.4	29.10		8.36		18.83		98.70		6.71		4.50		1.4	
	30/6/2022	Sunny	9:58	2.8	1.4	28.10	28.10	8.50	8.50	16.91	16.91	88.60	87.50	8.50	8.50	4.50	4.50	3.1	3.0
			10:00	2.8	1.4	28.10		8.50		16.90		86.40		8.50		4.49		2.9	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Lam Environmental Services Limited

Impact Water Quality Monitoring at Station SR10 (Middle) - Flood Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR10	2/6/2022	Rainy	9:44	2.6	1.3	27.00	27.05	8.41	8.41	24.44	24.44	71.50	70.40	4.96	4.89	2.33	1.80	1.3	1.2
			9:46	2.6	1.3	27.10		8.41		24.44		69.30		4.81		1.26		1.1	
	4/6/2022	Cloudy	9:39	2.7	1.4	27.40	27.45	8.37	8.37	21.50	21.46	77.30	77.55	5.42	5.44	1.31	1.28	2.0	2.2
			9:41	2.7	1.4	27.50		8.37		21.41		77.80		5.45		1.25		2.3	
	7/6/2022	Rainy	9:59	2.7	1.4	26.80	26.80	8.46	8.43	20.87	22.24	79.60	79.70	5.66	5.63	1.73	1.87	2.8	2.8
			10:01	2.7	1.4	26.80		8.40		23.60		79.80		5.59		3.35		2.8	
	9/6/2022	Sunny	12:14	2.6	1.3	25.70	25.75	8.41	8.45	22.41	21.08	72.80	73.00	5.23	5.27	2.00	1.82	2.6	2.5
			12:16	2.6	1.3	25.80		8.49		19.74		73.20		5.30		1.64		2.4	
	11/6/2022	Sunny	12:14	2.8	1.4	28.12	28.11	8.11	7.94	15.78	14.28	113.20	106.60	8.10	7.69	1.83	1.88	1.4	1.4
			12:16	2.8	1.4	28.10		7.77		12.78		100.00		7.28		1.92		1.4	
	13/6/2022	Sunny	12:21	2.6	1.3	29.42	29.51	8.24	8.52	20.15	20.08	95.40	103.55	6.52	7.07	1.33	1.18	7.3	7.1
			12:23	2.6	1.3	29.60		8.79		20.00		111.70		7.61		1.02		6.9	
	15/6/2022	Rainy	12:14	2.4	1.2	28.08	28.09	8.73	8.79	21.10	21.18	114.40	114.55	7.95	7.96	1.58	1.78	2.9	2.8
			12:16	2.4	1.2	28.10		8.85		21.26		114.70		7.97		1.98		2.7	
	17/6/2022	Sunny	10:38	2.8	1.4	26.80	26.80	7.90	7.90	23.71	23.73	72.50	73.90	5.07	5.17	3.21	3.06	1.3	1.5
			10:40	2.8	1.4	26.80		7.89		23.75		75.30		5.27		2.91		1.6	
	20/6/2022	Sunny	9:47	2.6	1.3	27.00	26.95	8.05	8.06	19.81	19.83	73.40	75.40	5.24	5.38	4.43	4.35	2.2	2.2
			9:49	2.6	1.3	26.90		8.06		19.85		77.40		5.52		4.26		2.1	
	22/6/2022	Sunny	12:13	2.7	1.4	29.90	29.90	8.16	8.18	19.15	19.14	82.60	81.85	5.57	5.53	5.56	5.55	3.4	3.6
			12:15	2.7	1.4	29.90		8.19		19.13		81.10		5.49		5.54		3.7	
	24/6/2022	Sunny	12:13	2.4	1.2	28.60	28.65	8.44	8.44	19.23	19.21	97.70	95.05	6.76	6.55	4.63	4.68	3.3	3.2
			12:15	2.4	1.2	28.70		8.44		19.18		92.40		6.33		4.73		3.0	
	28/6/2022	Sunny	12:14	2.4	1.2	28.60	28.65	67.60	36.97	19.23	19.21	97.70	95.05	8.44	8.44	4.63	4.68	1.6	1.7
			12:16	2.4	1.2	28.70		6.33		19.18		92.40		8.44		4.73		1.8	
	30/6/2022	Sunny	12:14	2.8	1.4	29.70	29.75	8.43	8.45	16.36	16.38	91.30	88.45	6.32	6.19	4.91	4.96	2.7	2.8
			12:16	2.8	1.4	29.80		8.46		16.39		85.60		6.05		5.01		2.8	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station SR12 (Middle) - Ebb Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR12	2/6/2022	Rainy	12:10	2.8	1.4	27.60	27.65	8.41	8.42	25.01	24.99	79.40	78.10	5.45	5.36	1.28	1.13	1.5	1.4
			12:12	2.8	1.4	27.70		8.43		24.96		76.80		5.26		0.97		1.2	
	4/6/2022	Cloudy	12:12	2.9	1.5	28.30	28.20	8.42	8.43	21.45	21.49	71.30	74.65	4.95	5.18	1.27	0.99	3.0	3.2
			12:14	2.9	1.5	28.10		8.43		21.53		78.00		5.40		0.71		3.4	
	7/6/2022	Rainy	12:12	2.6	1.3	26.70	26.70	8.50	8.51	22.20	22.18	78.90	79.10	5.61	5.60	3.36	3.13	3.4	3.3
			12:14	2.6	1.3	26.70		8.52		22.16		79.30		5.58		2.89		3.1	
	9/6/2022	Sunny	10:39	2.7	1.4	26.20	26.10	8.40	8.40	21.68	21.54	72.20	71.50	5.17	5.09	3.02	2.22	1.4	1.4
			10:00	2.6	1.3	26.00		8.39		21.39		70.80		5.00		1.41		1.4	
	11/6/2022	Sunny	10:39	2.7	1.4	27.42	27.44	8.10	8.31	15.08	18.03	111.80	113.15	8.12	8.09	1.34	1.25	1.6	2.0
			10:41	2.7	1.4	27.45		8.52		20.97		114.50		8.05		1.15		2.4	
	13/6/2022	Sunny	10:13	2.8	1.4	27.96	27.96	8.72	8.33	19.21	14.55	113.50	114.10	7.96	8.19	2.47	2.20	2.4	2.5
			10:15	2.8	1.4	27.96		7.94		9.88		114.70		8.41		1.93		2.6	
	15/6/2022	Rainy	12:10	2.8	1.4	27.51	27.56	8.10	8.44	21.83	21.91	115.90	115.30	8.10	8.05	2.95	2.38	2.4	2.4
			12:12	2.8	1.4	27.60		8.78		21.98		114.70		8.00		1.81		2.3	
	17/6/2022	Sunny	12:13	2.8	1.4	27.70	27.80	7.97	7.98	23.63	23.62	75.70	74.75	5.22	5.15	3.86	3.65	1.6	1.5
			12:15	2.8	1.4	27.90		7.98		23.61		73.80		5.07		3.43		1.3	
	20/6/2022	Sunny	12:09	2.9	1.5	28.20	28.10	8.15	8.15	19.92	19.94	78.10	78.55	5.46	5.50	4.73	4.56	2.7	2.9
			12:11	2.9	1.5	28.00		8.15		19.95		79.00		5.53		4.39		3.0	
	22/6/2022	Sunny	9:40	2.6	1.3	27.60	27.65	8.19	8.19	19.20	18.99	78.80	78.40	5.55	5.53	5.95	5.83	2.6	2.9
			9:42	2.6	1.3	27.70		8.19		18.78		78.00		5.50		5.70		3.2	
	24/6/2022	Sunny	9:49	2.8	1.4	28.30	28.25	8.36	8.40	20.64	20.64	117.30	117.05	8.13	8.11	5.55	5.43	3.0	2.8
			9:51	2.8	1.4	28.20		8.43		20.64		116.80		8.08		5.31		2.6	
	28/6/2022	Sunny	10:05	2.8	1.4	29.10	29.05	8.37	8.37	19.21	19.13	97.60	98.05	6.67	6.74	5.16	5.30	2.4	2.4
			10:07	2.8	1.4	29.00		8.37		19.05		98.50		6.80		5.43		2.3	
	30/6/2022	Sunny	10:05	2.7	1.4	28.20	28.25	8.47	8.48	17.03	17.04	87.60	88.05	8.47	8.48	5.53	5.61	3.5	3.4
			10:07	2.7	1.4	28.30		8.48		17.05		88.50		8.48		5.68		3.2	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station SR12 (Middle) - Flood Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR12	2/6/2022	Rainy	9:55	2.7	1.4	26.90	26.90	8.43	8.42	25.26	25.25	76.30	76.90	5.29	5.34	1.04	1.14	1.7	1.8
			9:57	2.7	1.4	26.90		8.41		25.24		77.50		5.38		1.24		1.9	
	4/6/2022	Cloudy	9:44	2.6	1.3	27.60	27.60	8.36	8.37	22.07	22.06	77.40	76.75	5.40	5.35	1.53	1.60	1.7	1.8
			9:46	2.6	1.3	27.60		8.37		22.04		76.10		5.30		1.67		1.8	
	7/6/2022	Rainy	10:05	2.9	1.5	26.90	26.95	8.49	8.49	20.84	20.85	79.80	79.70	5.66	5.65	2.02	2.16	2.6	2.6
			10:07	2.9	1.5	27.00		8.49		20.85		79.60		5.64		2.03		2.5	
	9/6/2022	Sunny	12:10	2.6	1.3	25.60	25.55	8.38	8.39	23.10	23.03	73.90	73.20	5.30	5.26	1.71	1.85	2.1	2.3
			12:12	2.6	1.3	25.50		8.40		22.96		72.50		5.21		1.99		2.4	
	11/6/2022	Sunny	12:09	2.7	1.4	27.73	27.92	8.52	8.17	22.97	18.32	117.70	117.95	8.14	8.23	1.37	1.32	1.2	1.2
			12:11	2.7	1.4	28.10		7.82		13.66		118.20		8.32		1.27		1.2	
	13/6/2022	Sunny	12:11	2.7	1.4	28.88	28.88	8.82	8.79	20.57	20.49	88.70	100.85	6.10	6.74	1.85	1.85	4.3	4.2
			12:13	2.7	1.4	28.88		8.76		20.41		113.00		7.38		1.85		4.0	
	15/6/2022	Rainy	12:10	2.6	1.3	27.51	27.56	8.71	8.75	21.83	21.91	115.90	115.30	8.10	8.05	2.95	2.38	1.6	1.7
			12:12	2.6	1.3	27.60		8.78		21.98		114.70		8.00		1.81		1.7	
	17/6/2022	Sunny	10:43	2.9	1.5	26.60	26.60	7.91	7.91	23.97	23.99	74.50	74.80	5.22	5.25	4.03	3.74	1.3	1.5
			10:45	2.9	1.5	26.60		7.90		24.01		75.10		5.27		3.45		1.6	
	20/6/2022	Sunny	9:54	2.8	1.4	26.90	26.90	8.06	8.08	20.01	20.01	77.30	77.75	5.52	5.55	4.26	4.16	2.8	3.0
			9:56	2.8	1.4	26.90		8.09		20.01		78.20		5.58		4.06		3.1	
	22/6/2022	Sunny	12:10	2.7	1.4	30.10	30.10	8.18	8.18	19.47	19.47	74.00	74.25	4.97	4.97	5.34	5.29	3.3	3.7
			12:12	2.7	1.4	30.10		8.18		19.47		74.50		4.96		5.24		4.0	
	24/6/2022	Sunny	12:10	2.7	1.4	28.00	28.05	8.24	8.31	20.53	20.49	98.30	95.70	6.78	6.61	5.79	5.71	2.9	2.8
			12:12	2.7	1.4	28.10		8.37		20.44		93.10		6.43		5.63		2.6	
	28/6/2022	Sunny	12:11	2.7	1.4	28.00	28.05	6.78	6.61	20.53	20.49	98.30	95.70	8.24	8.31	5.79	5.71	1.9	1.9
			12:13	2.7	1.4	28.10		6.43		20.44		93.10		8.37		5.63		1.8	
	30/6/2022	Sunny	12:11	2.9	1.5	30.10	30.05	8.46	8.47	16.99	17.01	89.40	89.30	6.26	6.23	5.54	5.43	2.3	2.4
			12:13	2.9	1.5	30.00		8.48		17.03		89.20		6.19		5.31		2.4	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station SR15 (Middle) - Ebb Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR15	2/6/2022	Rainy	12:59	2.7	1.4	27.40	27.45	8.49	8.50	23.58	23.50	78.60	79.25	5.45	5.50	2.47	2.31	2.3	2.3
			13:01	2.7	1.4	27.50		8.50		23.42		79.90		5.54		2.14		2.2	
	4/6/2022	Cloudy	12:52	2.8	1.4	27.60	27.60	8.44	8.45	20.30	20.30	76.60	76.75	5.39	5.40	1.59	1.62	3.0	3.2
			12:54	2.8	1.4	27.60		8.45		20.30		76.90		5.41		1.64		3.4	
	7/6/2022	Rainy	13:00	2.6	1.3	26.60	26.50	8.63	8.61	20.02	20.58	88.20	86.45	6.32	6.19	3.18	2.80	3.4	3.5
			13:02	2.6	1.3	26.40		8.59		21.14		84.70		6.05		2.41		3.6	
	9/6/2022	Sunny	9:08	2.5	1.3	26.30	26.25	8.14	8.13	22.51	22.32	73.30	73.75	5.21	5.25	3.45	2.74	2.5	2.4
			9:10	2.5	1.3	26.20		8.11		22.12		74.20		5.29		2.03		2.3	
	11/6/2022	Sunny	9:24	2.8	1.4	27.80	27.35	8.41	8.40	20.90	22.00	117.30	115.80	8.30	8.16	2.87	2.89	2.4	2.3
			9:26	2.8	1.4	26.90		8.38		23.09		114.30		8.02		2.91		2.2	
	13/6/2022	Sunny	9:22	2.8	1.4	27.85	27.69	7.55	7.94	11.58	15.49	119.30	115.15	8.53	8.21	3.07	3.43	2.6	2.5
			9:24	2.8	1.4	27.52		8.33		19.40		111.00		7.88		3.79		2.3	
	15/6/2022	Rainy	9:16	2.9	1.5	27.09	26.61	8.72	8.74	21.93	21.87	119.00	118.65	8.37	8.35	3.10	2.98	2.5	2.7
			9:18	2.9	1.5	26.12		8.76		21.81		118.30		8.32		2.86		2.8	
	17/6/2022	Sunny	12:59	2.9	1.5	26.90	26.90	8.07	8.07	21.16	21.16	74.60	75.00	5.30	5.33	4.53	4.32	1.2	1.2
			13:01	2.9	1.5	26.90		8.07		21.16		75.40		5.35		4.11		1.1	
	20/6/2022	Sunny	12:54	2.9	1.5	27.10	27.10	8.27	8.28	17.35	17.36	86.40	85.20	5.23	5.22	6.10	6.31	2.6	2.8
			12:56	2.9	1.5	27.10		8.28		17.37		84.00		5.21		6.51		3.0	
	22/6/2022	Sunny	8:37	2.9	1.5	27.40	27.55	7.45	7.45	17.56	19.76	77.50	77.65	6.28	6.23	10.66	10.71	8.0	7.8
			8:39	2.9	1.5	27.70		7.45		21.95		77.80		6.17		10.77		7.6	
	24/6/2022	Sunny	8:41	2.7	1.4	27.50	27.60	7.56	7.65	22.57	22.51	98.60	97.75	6.81	6.74	7.72	7.69	3.2	3.4
			8:43	2.7	1.4	27.70		7.73		22.44		96.90		6.66		7.65		3.5	
	28/6/2022	Sunny	9:00	2.9	1.5	28.20	28.25	7.73	7.77	19.45	19.17	97.20	98.30	6.74	6.78	6.09	6.05	2.3	2.3
			9:02	2.9	1.5	28.30		7.80		18.88		99.40		6.82		6.00		2.2	
	30/6/2022	Sunny	9:00	2.7	1.4	26.70	27.00	8.09	8.13	19.05	18.68	86.50	87.75	6.14	6.25	6.61	6.67	2.5	2.7
			9:02	2.7	1.4	27.30		8.17		18.31		89.00		6.35		6.72		2.8	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station SR15 (Middle) - Flood Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
SR15	2/6/2022	Rainy	8:46	2.5	1.3	26.70	26.70	8.13	8.16	22.42	22.37	75.90	77.65	5.36	5.49	1.44	1.31	1.2	1.3
			8:48	2.5	1.3	26.70		8.18		22.31		79.40		5.62		1.17		1.3	
	4/6/2022	Cloudy	8:49	2.6	1.3	26.90	26.85	8.10	8.08	20.06	20.11	74.90	74.95	5.35	5.36	3.25	3.26	2.5	2.4
			8:51	2.6	1.3	26.80		8.05		20.15		75.00		5.36		3.27		2.2	
	7/6/2022	Rainy	9:17	2.4	1.2	26.80	26.80	8.17	8.15	20.76	20.05	75.70	76.75	5.39	5.49	5.74	3.38	2.8	2.1
			9:19	2.4	1.2	26.80		8.13		19.33		77.80		5.58		3.69		1.4	
	9/6/2022	Sunny	12:56	2.7	1.4	25.90	25.90	8.43	8.43	22.28	22.25	72.60	72.60	5.20	5.20	6.39	5.56	3.6	3.4
			12:58	2.7	1.4	25.90		8.43		22.22		72.60		5.20		4.72		3.2	
	11/6/2022	Sunny	12:53	2.8	1.4	27.19	27.20	7.77	8.02	8.36	8.11	106.70	110.60	8.01	8.30	2.28	2.43	1.6	1.6
			12:55	2.8	1.4	27.20		8.27		7.86		114.50		8.59		2.57		1.6	
	13/6/2022	Sunny	13:04	2.9	1.5	28.32	28.32	8.73	8.74	18.48	18.36	104.50	108.15	7.34	7.60	1.52	1.52	3.6	3.8
			13:06	2.9	1.5	28.32		8.74		18.24		111.80		7.86		1.51		4.0	
	15/6/2022	Rainy	13:03	2.9	1.5	27.77	27.78	8.87	8.79	19.26	20.35	111.30	111.70	7.86	7.84	2.63	2.72	2.5	2.7
			13:05	2.9	1.5	27.79		8.71		21.44		112.10		7.81		2.80		2.8	
	17/6/2022	Sunny	9:40	2.9	1.5	26.40	26.35	7.51	7.53	22.46	22.60	70.30	66.35	5.00	4.72	5.03	5.03	1.2	1.3
			9:42	2.9	1.5	26.30		7.54		22.73		62.40		4.43		5.03		1.4	
	20/6/2022	Sunny	8:54	2.8	1.4	26.90	26.90	7.61	7.65	18.63	18.61	78.70	78.45	5.66	5.64	9.85	9.44	5.2	5.2
			8:56	2.8	1.4	26.90		7.68		18.58		78.20		5.62		9.03		5.1	
	22/6/2022	Sunny	13:02	2.6	1.3	28.40	28.50	8.41	8.41	16.43	16.24	89.20	91.50	6.21	6.40	5.95	5.86	4.0	3.5
			13:04	2.6	1.3	28.60		8.40		16.05		93.80		6.59		5.76		3.0	
	24/6/2022	Sunny	12:54	2.6	1.3	30.10	30.05	8.43	8.43	17.37	17.38	93.50	93.75	6.37	6.41	5.30	5.37	1.8	1.9
			12:56	2.6	1.3	30.00		8.43		17.38		94.00		6.45		5.44		1.9	
	28/6/2022	Sunny	12:55	2.6	1.3	30.10	30.05	8.43	8.43	17.37	17.38	93.50	93.75	6.37	6.41	5.30	5.37	1.8	1.8
			12:57	2.6	1.3	30.00		8.43		17.38		94.00		6.45		5.44		1.7	
	30/6/2022	Sunny	12:51	2.8	1.4	28.85	28.84	9.65	9.59	16.74	16.73	114.20	115.20	8.03	8.11	3.32	3.31	2.6	2.5
			12:53	2.8	1.4	28.82		9.53		16.71		116.20		8.18		3.30		2.4	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station CE (surface) - Ebb Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		SS mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
CE	2/6/2022	Rainy	12:00	8.6	1.0	26.74	26.62	8.44	8.42	25.95	26.56	74.40	75.35	5.12	5.16	1.79	2.11	1.6	1.7
			12:02	8.6	1.0	26.50		8.40		27.17		76.30		5.21		2.42		1.8	
	4/6/2022	Cloudy	12:03	8.7	1.0	27.10	27.10	8.42	8.42	21.55	21.62	77.90	77.10	5.49	5.44	0.92	1.12	1.8	1.9
			12:05	8.7	1.0	27.10		8.42		21.69		76.30		5.38		1.31		1.9	
	7/6/2022	Rainy	12:00	8.7	1.0	26.90	27.00	8.48	8.48	22.05	22.33	80.50	79.90	5.68	5.62	2.35	2.40	2.3	2.2
			12:02	8.7	1.0	27.10		8.47		22.60		79.30		5.56		2.44		2.1	
	9/6/2022	Sunny	10:08	8.6	1.0	25.90	25.75	8.42	8.40	21.46	22.39	71.20	72.50	5.12	5.21	1.53	1.69	2.5	2.6
			10:10	8.6	1.0	25.60		8.38		23.32		73.80		5.29		1.84		2.7	
	11/6/2022	Sunny	10:49	8.4	1.0	27.57	27.54	7.85	8.04	12.13	15.02	95.30	103.95	7.02	7.54	1.43	1.39	1.8	1.7
			10:51	8.4	1.0	27.51		8.23		17.90		112.60		8.05		1.35		1.5	
	13/6/2022	Sunny	10:23	8.0	1.0	27.91	27.97	8.55	8.32	21.90	19.31	112.70	114.35	7.82	7.93	2.62	2.34	1.6	1.7
			10:25	8.0	1.0	28.03		8.09		16.72		116.00		8.03		2.05		1.8	
	15/6/2022	Rainy	10:26	8.6	1.0	27.36	27.36	8.84	8.85	19.30	19.46	112.60	112.40	8.00	7.98	1.85	1.85	<1.0	1.0
			10:28	8.6	1.0	27.35		8.86		19.62		112.20		7.96		1.85		<1.0	
	17/6/2022	Sunny	12:00	9.4	1.0	26.30	26.30	7.95	7.96	24.58	25.61	72.10	74.40	5.07	5.23	3.74	3.56	2.5	2.7
			12:02	9.4	1.0	26.30		7.97		26.63		76.70		5.39		3.37		2.8	
	20/6/2022	Sunny	12:00	8.4	1.0	27.30	27.30	8.11	8.13	20.54	20.46	78.10	77.35	5.52	5.47	4.40	4.43	2.8	2.7
			12:02	8.4	1.0	27.30		8.14		20.38		76.60		5.42		4.46		2.6	
	22/6/2022	Sunny	9:53	8.4	1.0	27.50	27.50	8.20	8.22	18.28	18.26	98.60	93.25	7.03	6.65	6.20	6.08	3.8	3.6
			9:55	8.4	1.0	27.50		8.23		18.23		87.90		6.26		5.96		3.4	
	24/6/2022	Sunny	9:59	8.7	1.0	28.30	28.30	8.41	8.41	19.02	19.10	103.40	102.65	7.12	7.02	6.27	6.23	2.7	2.6
			10:01	8.7	1.0	28.30		8.41		19.17		101.90		6.92		6.19		2.5	
	28/6/2022	Sunny	10:15	8.4	1.0	28.70	28.75	8.37	8.37	17.48	17.47	97.80	95.20	6.83	6.63	5.57	5.49	1.6	1.7
			10:17	8.4	1.0	28.80		8.37		17.46		92.60		6.43		5.41		1.7	
	30/6/2022	Sunny	10:15	8.8	1.0	28.10	28.15	8.44	8.46	17.12	17.12	84.40	85.30	8.44	8.46	4.62	4.63	3.1	3.1
			10:17	8.8	1.0	28.20		8.47		17.12		86.20		8.47		4.63		3.0	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station CE (surface) - Flood Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		SS mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
CE	2/6/2022	Rainy	10:05	8.4	1.0	27.30	27.25	8.45	8.45	24.24	24.25	78.10	76.30	5.41	5.29	1.32	1.22	1.2	1.2
			10:07	8.4	1.0	27.20		8.45		24.25		74.50		5.16		1.12		1.2	
	4/6/2022	Cloudy	9:54	8.5	1.0	27.10	27.15	8.39	8.39	21.41	21.40	76.80	75.25	5.42	5.31	1.22	1.23	2.2	2.3
			9:56	8.5	1.0	27.20		8.39		21.39		73.70		5.19		1.23		2.4	
	7/6/2022	Rainy	10:14	8.5	1.0	27.00	27.10	8.49	8.49	21.48	21.24	75.00	77.40	5.31	5.47	2.15	1.67	1.4	1.6
			10:16	8.5	1.0	27.20		8.49		20.99		79.80		5.63		2.14		1.8	
	9/6/2022	Sunny	12:00	8.5	1.0	26.20	26.20	8.38	8.36	22.10	23.68	74.10	75.15	5.29	5.32	1.72	1.76	2.6	2.7
			12:02	8.5	1.0	26.20		8.33		25.25		76.20		5.34		1.79		2.8	
	11/6/2022	Sunny	12:09	8.7	1.0	27.93	27.67	9.14	8.60	17.89	16.09	129.30	125.00	9.00	8.91	2.11	1.56	1.3	1.4
			12:11	8.7	1.0	27.41		8.05		14.29		120.70		8.81		1.01		1.4	
	13/6/2022	Sunny	12:00	8.5	1.0	28.06	28.06	8.78	8.77	24.05	24.01	121.10	120.15	8.28	8.22	2.52	2.52	3.1	3.3
			12:02	8.5	1.0	28.06		8.76		23.96		119.20		8.16		2.52		3.4	
	15/6/2022	Rainy	12:00	8.5	1.0	27.14	27.15	10.41	9.51	23.90	23.82	93.50	96.30	6.50	6.70	2.02	2.01	1.1	1.2
			12:02	8.5	1.0	27.15		8.61		23.74		99.10		6.89		1.99		1.3	
	17/6/2022	Sunny	10:54	9.3	1.0	26.80	26.95	7.95	7.95	23.51	23.52	71.80	72.70	5.03	5.08	4.50	4.62	1.4	1.3
			10:56	9.3	1.0	27.10		7.95		23.52		73.60		5.13		4.74		1.2	
	20/6/2022	Sunny	10:05	8.3	1.0	26.70	26.70	8.10	8.10	20.60	20.61	74.40	77.25	5.31	5.52	4.50	4.47	2.7	2.9
			10:07	8.3	1.0	26.70		8.10		20.61		80.10		5.72		4.43		3.0	
	22/6/2022	Sunny	12:00	8.5	1.0	27.00	26.95	8.16	8.16	21.50	21.79	77.20	85.40	5.45	6.02	5.02	4.97	5.2	5.2
			12:02	8.5	1.0	26.90		8.16		22.08		93.60		6.58		4.91		5.1	
	24/6/2022	Sunny	12:00	8.5	1.0	27.00	27.00	8.19	8.21	23.50	23.72	100.90	102.75	6.96	7.06	6.71	6.66	2.4	2.5
			12:02	8.5	1.0	27.00		8.22		23.94		104.60		7.15		6.61		2.5	
	28/6/2022	Sunny	12:00	8.5	1.0	27.00	27.00	6.96	7.06	23.50	23.72	100.90	102.75	8.19	8.21	6.71	6.66	2.7	2.8
			12:02	8.5	1.0	27.00		7.15		23.94		104.60		8.22		6.61		2.9	
	30/6/2022	Sunny	12:00	8.7	1.0	28.00	28.00	8.47	8.49	17.16	17.22	91.20	89.95	6.52	6.42	4.39	4.42	2.9	2.8
			12:02	8.7	1.0	28.00		8.51		17.27		88.70		6.32		4.45		2.6	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station CE (Middle) - Ebb Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		SS mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
CE	2/6/2022	Rainy	12:03	8.6	4.3	26.00	26.20	8.34	8.36	29.70	28.62	71.10	73.95	4.88	5.09	3.13	2.95	2.4	2.5
			12:05	8.6	4.3	26.40		8.37		27.53		76.80		5.30		2.77		2.5	
	4/6/2022	Cloudy	12:06	8.7	4.4	27.00	26.70	8.39	8.36	21.41	25.16	74.30	74.50	5.26	5.19	1.55	1.79	1.6	1.6
			12:08	8.7	4.4	26.40		8.32		28.90		74.70		5.11		2.02		1.5	
	7/6/2022	Rainy	12:03	8.7	4.4	26.60	26.75	8.43	8.47	25.06	23.57	77.90	78.80	5.43	5.54	1.72	1.88	2.7	2.7
			12:05	8.7	4.4	26.90		8.50		22.07		79.70		5.65		2.03		2.6	
	9/6/2022	Sunny	10:11	8.6	4.3	26.00	26.00	8.43	8.44	21.70	21.70	74.80	72.60	5.37	5.22	1.17	1.51	1.7	1.8
			10:13	8.6	4.3	26.00		8.45		21.69		70.40		5.06		1.84		1.8	
	11/6/2022	Sunny	10:52	8.4	4.2	27.37	27.42	7.90	7.74	13.86	12.13	115.40	115.45	8.34	8.29	1.10	1.19	1.2	1.3
			10:54	8.4	4.2	27.46		7.57		10.39		115.50		8.24		1.28		1.4	
	13/6/2022	Sunny	10:26	8.0	4.0	27.46	25.94	8.88	8.83	23.85	23.97	89.60	102.00	6.20	7.06	2.09	1.98	2.8	2.7
			10:28	8.0	4.0	24.42		8.78		24.08		114.40		7.91		1.86		2.6	
	15/6/2022	Rainy	10:29	8.6	4.3	27.31	27.32	8.88	8.45	19.45	19.33	112.50	112.35	7.99	7.99	1.78	2.52	1.3	1.4
			10:31	8.6	4.3	27.32		8.02		19.21		112.20		7.98		3.25		1.5	
	17/6/2022	Sunny	12:03	9.4	4.7	26.30	26.30	7.99	7.54	24.50	24.55	76.80	75.05	5.40	5.28	6.13	5.28	2.5	2.5
			12:05	9.4	4.7	26.30		7.10		24.59		73.30		5.15		4.43		2.4	
	20/6/2022	Sunny	12:03	8.4	4.2	27.20	27.15	8.10	8.10	22.58	22.64	77.60	76.60	5.43	5.37	4.51	4.77	3.3	3.4
			12:05	8.4	4.2	27.10		8.10		22.70		75.60		5.30		5.03		3.5	
	22/6/2022	Sunny	9:56	8.4	4.2	27.50	27.55	8.24	8.25	18.87	18.57	88.00	86.55	6.20	6.10	5.29	5.37	3.0	2.9
			9:58	8.4	4.2	27.60		8.26		18.26		85.10		6.00		5.45		2.7	
	24/6/2022	Sunny	10:02	8.7	4.4	27.80	27.85	8.38	8.39	21.25	21.13	102.70	102.95	7.13	7.12	5.84	7.32	3.1	3.2
			10:04	8.7	4.4	27.90		8.40		21.00		103.20		7.10		8.80		3.3	
	28/6/2022	Sunny	10:18	8.4	4.2	28.50	28.70	8.33	8.36	20.30	19.17	93.50	95.15	6.40	6.56	5.80	5.65	2.5	2.7
			10:20	8.4	4.2	28.90		8.38		18.04		96.80		6.71		5.50		2.8	
	30/6/2022	Sunny	10:18	8.8	4.4	28.00	28.05	8.47	8.46	17.47	18.21	90.00	90.30	8.47	8.46	5.61	5.58	2.9	2.8
			10:20	8.8	4.4	28.10		8.44		18.94		90.60		8.44		5.54		2.7	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station CE (Middle) - Flood Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		SS mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
CE	2/6/2022	Rainy	10:08	8.4	4.2	27.20	27.15	8.46	8.46	24.48	24.45	75.30	77.65	5.22	5.39	1.56	1.27	2.2	2.3
			10:10	8.4	4.2	27.10		8.46		24.42		80.00		5.55		0.98		2.4	
	4/6/2022	Cloudy	9:57	8.5	4.3	27.00	26.45	8.39	8.39	21.41	21.44	74.30	73.50	5.26	5.20	1.55	1.37	2.5	2.7
			9:59	8.5	4.3	25.90		8.39		21.46		72.70		5.14		1.18		2.8	
	7/6/2022	Rainy	10:17	8.5	4.3	26.60	26.60	8.40	8.40	24.81	24.86	78.80	77.60	5.50	5.42	1.94	1.87	2.2	2.2
			10:19	8.5	4.3	26.60		8.39		24.91		76.40		5.33		2.82		2.1	
	9/6/2022	Sunny	12:03	8.5	4.3	26.30	26.30	8.41	8.43	22.08	22.03	74.30	74.00	5.29	5.27	1.23	1.51	3.9	4.2
			12:05	8.5	4.3	26.30		8.44		21.98		73.70		5.25		1.79		4.4	
	11/6/2022	Sunny	12:12	8.7	4.4	27.67	27.59	8.26	8.03	17.67	15.33	125.40	125.90	8.81	8.94	1.25	1.17	1.9	1.9
			12:14	8.7	4.4	27.50		7.79		12.99		126.40		9.06		1.09		1.8	
	13/6/2022	Sunny	12:03	8.5	4.3	27.50	27.54	8.84	8.84	24.36	24.22	117.90	117.00	8.13	8.07	1.77	1.82	3.7	3.7
			12:05	8.5	4.3	27.57		8.84		24.07		116.10		8.01		1.87		3.6	
	15/6/2022	Rainy	12:03	8.5	4.3	27.31	27.32	8.88	8.95	19.45	19.33	112.50	112.35	7.99	7.98	1.78	2.52	2.5	2.6
			12:05	8.5	4.3	27.32		9.02		19.21		112.20		7.97		3.25		2.7	
	17/6/2022	Sunny	10:57	9.3	4.7	26.70	26.70	7.95	7.95	23.52	23.52	75.30	72.50	5.29	5.09	5.02	4.58	1.6	1.8
			10:59	9.3	4.7	26.70		7.95		23.52		69.70		4.89		4.13		1.9	
	20/6/2022	Sunny	10:08	8.3	4.2	26.70	26.70	8.11	8.11	20.65	20.58	73.70	72.75	5.26	5.19	4.53	4.52	3.2	3.4
			10:10	8.3	4.2	26.70		8.11		20.51		71.80		5.12		4.51		3.6	
	22/6/2022	Sunny	12:03	8.5	4.3	27.00	26.95	8.17	8.15	21.80	22.54	82.00	79.50	5.64	5.47	5.49	5.51	4.2	4.4
			12:05	8.5	4.3	26.90		8.13		23.27		77.00		5.30		5.52		4.5	
	24/6/2022	Sunny	12:03	8.5	4.3	26.90	25.65	8.23	8.19	24.02	25.52	101.50	88.10	9.96	7.53	5.80	5.87	2.9	2.8
			12:05	8.5	4.3	24.40		8.14		27.03		74.70		5.10		5.94		2.7	
	28/6/2022	Sunny	12:03	8.5	4.3	26.90	26.65	6.96	6.03	24.07	25.55	101.50	88.10	8.23	8.19	5.80	5.87	2.5	2.4
			12:05	8.5	4.3	26.40		5.10		27.03		74.70		8.14		5.94		2.3	
	30/6/2022	Sunny	12:03	8.7	4.4	27.90	27.80	8.50	8.43	17.89	20.13	87.20	86.70	6.25	6.20	6.08	6.09	3.2	3.3
			12:05	8.7	4.4	27.70		8.36		22.37		86.20		6.14		6.09		3.4	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station CE (Bottom) - Ebb Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		SS mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
CE	2/6/2022	Rainy	12:06	8.6	7.6	26.30	26.60	8.31	8.32	30.28	29.83	75.60	429.55	5.14	5.06	2.54	2.59	3.0	3.2
			12:08	8.6	7.6	26.90		8.32		29.38		783.50		4.98		2.63		3.4	
	4/6/2022	Cloudy	12:09	8.7	7.7	26.60	26.60	8.32	8.32	28.52	28.52	74.30	74.30	5.08	5.08	2.83	2.83	1.2	1.2
			12:11	8.7	7.7	26.60		8.32		28.52		74.30		5.08		2.83		1.2	
	7/6/2022	Rainy	12:06	8.7	7.7	26.60	26.60	8.42	8.42	25.70	25.34	78.30	78.25	5.46	5.46	2.14	2.04	3.2	3.4
			12:08	8.7	7.7	26.60		8.42		24.98		78.20		5.46		1.94		3.5	
	9/6/2022	Sunny	10:14	8.6	7.6	25.50	25.50	8.32	8.31	27.12	27.36	68.70	68.30	4.82	4.79	1.31	1.21	1.5	1.4
			10:16	8.6	7.6	25.50		8.30		27.60		67.90		4.75		1.10		1.3	
	11/6/2022	Sunny	10:55	8.4	7.4	27.35	27.34	7.98	7.91	13.05	12.48	116.70	115.75	8.32	8.39	1.53	1.34	<1.0	1.0
			10:57	8.4	7.4	27.33		7.84		11.90		114.80		8.45		1.14		<1.0	
	13/6/2022	Sunny	10:29	8.0	7.0	27.12	27.12	8.60	8.22	26.67	20.58	113.30	112.40	7.76	7.86	2.08	1.80	4.2	4.0
			10:31	8.0	7.0	27.11		7.84		14.49		111.50		7.95		1.52		3.8	
	15/6/2022	Rainy	10:32	8.6	7.6	27.28	27.28	8.73	8.75	21.52	21.39	112.10	112.15	7.88	7.89	1.46	1.65	1.9	1.8
			10:34	8.6	7.6	27.28		8.77		21.25		112.20		7.90		1.84		1.7	
	17/6/2022	Sunny	12:06	9.4	8.4	26.20	26.20	7.99	8.00	24.84	24.82	77.70	77.25	5.46	5.43	3.73	3.44	2.7	2.8
			12:08	9.4	8.4	26.20		8.00		24.80		76.80		5.39		3.14		2.9	
	20/6/2022	Sunny	12:06	8.4	7.4	27.10	27.05	8.10	8.10	22.70	22.77	75.60	73.25	5.29	5.63	4.27	4.45	4.4	4.5
			12:08	8.4	7.4	27.00		8.10		22.84		70.90		5.97		4.62		4.6	
	22/6/2022	Sunny	9:59	8.4	7.4	27.00	27.15	8.13	8.13	22.89	22.51	81.40	81.10	5.58	5.52	5.33	5.38	1.7	1.8
			10:01	8.4	7.4	27.30		8.13		22.12		80.80		5.45		5.43		1.9	
	24/6/2022	Sunny	10:05	8.7	7.7	26.90	27.00	8.21	8.24	25.04	24.56	99.00	98.90	6.77	6.70	6.09	6.09	3.6	3.7
			10:07	8.7	7.7	27.10		8.27		24.07		98.80		6.63		6.08		3.8	
	28/6/2022	Sunny	10:21	8.4	7.4	26.70	26.70	8.08	8.09	28.88	29.38	69.80	66.90	4.50	4.36	5.00	4.99	3.5	3.5
			10:23	8.4	7.4	26.70		8.10		29.88		64.00		4.22		4.98		3.4	
	30/6/2022	Sunny	10:23	8.8	7.8	28.00	28.05	8.47	8.48	17.36	17.29	87.80	86.80	8.47	8.48	6.19	6.17	2.3	2.4
			10:25	8.8	7.8	28.10		8.49		17.22		85.80		8.49		6.14		2.4	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station CE (Bottom) - Flood Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		SS mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
CE	2/6/2022	Rainy	10:11	8.4	7.4	26.50	26.55	8.33	8.35	28.97	28.90	73.50	73.90	5.02	5.05	2.08	2.16	2.7	2.7
			10:13	8.4	7.4	26.60		8.36		28.82		74.30		5.07		2.23		2.7	
	4/6/2022	Cloudy	10:00	8.5	7.5	26.60	26.75	8.32	8.35	28.52	25.52	74.30	74.95	5.08	5.20	2.03	1.68	3.0	3.1
			10:02	8.5	7.5	26.90		8.38		22.51		75.60		5.31		1.32		3.2	
	7/6/2022	Rainy	10:20	8.5	7.5	26.60	26.60	8.38	8.38	25.24	25.33	75.90	76.35	5.29	5.32	2.40	1.64	2.5	2.4
			10:22	8.5	7.5	26.60		8.38		25.42		76.80		5.35		2.07		2.3	
	9/6/2022	Sunny	12:06	8.5	7.5	25.90	25.70	8.28	8.24	26.95	28.99	68.10	63.60	4.76	4.41	1.64	4.08	10.6	10.7
			12:08	8.5	7.5	25.50		8.19		31.03		59.10		4.06		6.51		10.8	
	11/6/2022	Sunny	12:15	8.7	7.7	27.47	27.66	7.60	7.91	11.21	10.91	123.80	125.55	8.88	9.09	3.02	2.32	2.6	2.7
			12:17	8.7	7.7	27.85		8.22		10.60		127.30		9.30		1.61		2.8	
	13/6/2022	Sunny	12:06	8.5	7.5	27.44	27.41	8.83	8.79	26.46	26.56	104.60	109.85	7.13	7.49	2.30	2.30	4.0	3.9
			12:08	8.5	7.5	27.37		8.75		26.65		115.10		7.85		2.30		3.8	
	15/6/2022	Rainy	12:06	8.5	7.5	27.03	27.03	8.58	8.65	27.51	27.63	119.80	119.40	8.18	8.15	6.07	5.24	3.8	4.0
			12:08	8.5	7.5	27.03		8.71		27.75		119.00		8.11		4.41		4.2	
	17/6/2022	Sunny	11:00	9.3	8.3	26.50	26.55	7.93	7.94	25.37	25.35	71.40	71.40	4.98	4.98	3.13	3.14	2.3	2.5
			11:02	9.3	8.3	26.60		7.94		25.32		71.40		4.97		3.14		2.7	
	20/6/2022	Sunny	10:11	8.3	7.3	26.50	26.50	8.00	8.01	25.33	17.07	76.00	76.50	5.30	5.60	7.90	7.70	4.6	3.6
			10:13	8.3	7.3	26.50		8.02		8.81		77.00		5.90		7.50		2.6	
	22/6/2022	Sunny	12:06	8.5	7.5	26.70	26.80	8.07	8.05	26.21	26.32	75.00	74.20	5.06	4.98	5.77	5.79	3.4	3.3
			12:08	8.5	7.5	26.90		8.02		26.43		73.40		4.90		5.80		3.1	
	24/6/2022	Sunny	12:06	8.5	7.5	26.10	26.20	7.97	7.97	30.71	30.35	64.40	63.05	4.26	4.12	6.71	6.72	3.2	3.4
			12:08	8.5	7.5	26.30		7.97		29.98		61.70		3.98		6.72		3.6	
	28/6/2022	Sunny	12:06	8.5	7.5	26.10	26.20	4.26	4.12	30.71	30.35	64.60	63.15	7.97	7.97	6.71	6.72	1.8	1.8
			12:08	8.5	7.5	26.30		3.98		29.98		61.70		7.97		6.72		1.7	
	30/6/2022	Sunny	12:06	8.7	7.7	27.40	27.40	8.21	8.18	26.51	26.57	85.50	85.45	6.08	6.05	5.15	5.12	4.0	3.8
			12:08	8.7	7.7	27.40		8.15		26.63		85.40		6.01		5.09		3.6	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station CF (surface) - Ebb Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		SS mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
CF	2/6/2022	Rainy	13:16	8.5	1.0	27.30	27.05	8.50	8.48	23.92	25.22	77.50	77.50	5.38	5.36	0.95	1.31	3.0	3.2
			13:18	8.5	1.0	26.80		8.45		26.51		77.50		5.34		1.67		3.4	
	4/6/2022	Cloudy	13:10	8.6	1.0	27.70	27.70	8.45	8.45	19.13	19.07	77.80	76.05	5.51	5.39	1.71	2.13	2.2	2.3
			13:12	8.6	1.0	27.70		8.45		19.01		74.30		5.26		2.55		2.4	
	7/6/2022	Rainy	13:17	8.7	1.0	26.80	26.95	8.63	8.63	19.19	19.40	86.70	83.70	8.63	7.20	2.03	5.33	2.6	2.5
			13:19	8.7	1.0	27.10		8.62		19.60		80.70		5.76		8.62		2.4	
	9/6/2022	Sunny	8:54	8.3	1.0	26.30	26.35	7.41	7.50	22.06	23.48	76.70	77.25	5.47	5.46	2.00	2.14	2.5	2.4
			8:56	8.3	1.0	26.40		7.59		24.90		77.80		5.45		2.28		2.3	
	11/6/2022	Sunny	8:59	8.4	1.0	26.90	26.90	7.95	8.00	18.70	20.15	118.60	118.85	8.53	8.48	5.21	4.05	4.0	4.1
			9:01	8.4	1.0	26.89		8.05		21.60		119.10		8.43		2.88		4.2	
	13/6/2022	Sunny	9:07	9.2	1.0	27.39	27.43	8.66	7.99	18.15	13.55	124.30	124.75	8.89	9.04	2.63	2.30	2.6	2.5
			9:09	9.2	1.0	27.46		7.32		8.95		125.20		9.19		1.97		2.4	
	15/6/2022	Rainy	9:00	9.4	1.0	26.94	26.95	9.98	9.37	23.21	23.29	111.70	102.75	7.82	7.19	4.37	3.15	<1.0	1.0
			9:02	9.4	1.0	26.96		8.76		23.36		93.80		6.56		1.93		<1.0	
	17/6/2022	Sunny	13:17	9.1	1.0	27.10	27.15	8.02	8.03	22.28	22.28	76.90	74.80	5.40	5.25	4.27	4.25	2.5	2.7
			13:19	9.1	1.0	27.20		8.04		22.28		72.70		5.09		4.23		2.8	
	20/6/2022	Sunny	13:12	9.0	1.0	27.40	27.45	8.25	8.25	15.92	15.90	83.60	82.00	6.05	5.93	5.67	5.80	2.4	2.4
			13:14	9.0	1.0	27.50		8.25		15.87		80.40		5.81		5.93		2.3	
	22/6/2022	Sunny	8:19	8.6	1.0	26.90	26.90	6.12	6.32	19.55	19.66	74.30	74.80	6.05	5.89	5.83	5.89	3.4	3.3
			8:21	8.6	1.0	26.90		6.52		19.76		75.30		5.73		5.95		3.2	
	24/6/2022	Sunny	8:23	9.0	1.0	28.00	27.95	6.64	6.92	20.19	20.39	92.30	92.85	6.45	6.47	5.45	5.38	2.5	2.7
			8:25	9.0	1.0	27.90		7.20		20.59		93.40		6.49		5.30		2.8	
	28/6/2022	Sunny	8:44	9.0	1.0	28.20	28.15	6.33	6.55	16.64	18.17	92.00	96.95	7.04	7.37	6.04	5.98	4.1	4.0
			8:46	9.0	1.0	28.10		6.76		19.69		101.90		7.70		5.92		3.8	
	30/6/2022	Sunny	8:44	9.8	1.0	27.30	27.30	6.22	6.52	17.01	17.11	89.30	92.05	6.22	6.36	4.59	4.76	3.0	3.1
			8:46	9.8	1.0	27.30		6.81		17.21		94.80		6.50		4.93		3.2	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station CF (surface) - Flood Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		SS mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
CF	2/6/2022	Rainy	8:27	8.1	1.0	26.60	26.60	7.03	7.44	23.13	24.62	73.40	73.65	5.17	5.15	1.84	1.75	1.4	1.3
			8:29	8.1	1.0	26.60		7.85		26.10		73.90		5.13		1.66		1.2	
	4/6/2022	Cloudy	8:30	8.3	1.0	26.50	26.55	6.88	7.22	17.44	17.64	75.90	74.35	5.53	5.41	2.44	2.55	2.2	2.4
			8:32	8.3	1.0	26.60		7.56		17.84		72.80		5.29		2.65		2.5	
	7/6/2022	Rainy	9:01	8.2	1.0	26.60	26.60	7.43	7.55	19.68	19.66	72.30	72.55	5.19	5.21	3.70	1.86	2.4	2.5
			9:03	8.2	1.0	26.60		7.66		19.63		72.80		5.23		1.95		2.6	
	9/6/2022	Sunny	13:12	8.5	1.0	25.50	25.25	8.49	8.49	16.39	16.81	76.10	75.95	5.68	5.68	2.82	2.86	3.4	3.4
			13:14	8.5	1.0	25.00		8.49		17.22		75.80		5.68		2.90		3.3	
	11/6/2022	Sunny	13:09	8.2	1.0	27.34	27.34	7.66	7.70	10.52	10.45	114.40	114.55	8.32	8.34	1.79	2.05	3.2	3.3
			13:11	8.2	1.0	27.33		7.73		10.38		114.70		8.36		2.30		3.4	
	13/6/2022	Sunny	13:21	8.8	1.0	28.33	28.28	8.67	8.77	18.49	18.72	111.00	101.90	7.80	7.16	2.99	2.47	2.2	2.3
			13:23	8.8	1.0	28.23		8.86		18.95		92.80		6.51		1.95		2.3	
	15/6/2022	Rainy	13:15	8.7	1.0	27.96	27.93	8.78	8.80	18.58	18.70	110.40	110.65	7.80	7.82	1.69	1.60	2.3	2.2
			13:17	8.7	1.0	27.90		8.81		18.81		110.90		7.83		1.51		2.1	
	17/6/2022	Sunny	9:15	9.1	1.0	26.50	26.50	7.19	7.19	20.06	20.06	74.00	74.00	5.33	5.33	4.00	4.66	3.0	3.1
			9:17	9.1	1.0	26.50		7.19		20.06		74.00		5.33		5.31		3.2	
	20/6/2022	Sunny	8:30	8.4	1.0	26.70	26.70	6.60	6.70	18.18	18.22	76.30	76.30	5.52	5.52	4.99	5.07	2.6	2.6
			8:32	8.4	1.0	26.70		6.79		18.25		76.30		5.52		5.15		2.6	
	22/6/2022	Sunny	13:21	8.4	1.0	27.70	27.70	8.36	8.37	17.75	17.84	89.20	90.00	6.32	6.38	5.81	5.72	3.8	3.9
			13:23	8.4	1.0	27.70		8.38		17.93		90.80		6.43		5.63		4.0	
	24/6/2022	Sunny	13:12	8.4	1.0	28.10	28.06	8.44	8.45	17.56	17.57	98.20	96.50	6.92	8.31	6.47	6.38	3.8	3.7
			13:14	8.4	1.0	28.01		8.46		17.58		94.80		9.69		6.28		3.6	
	28/6/2022	Sunny	13:09	8.4	1.0	28.10	28.10	8.44	8.45	17.56	17.57	98.20	96.50	6.92	6.91	6.47	6.38	3.3	3.2
			13:11	8.4	1.0	28.10		8.46		17.58		94.80		6.90		6.28		3.0	
	30/6/2022	Sunny	13:09	8.9	1.0	28.60	28.57	9.17	9.20	16.97	17.00	122.10	121.65	8.61	8.58	3.04	2.85	2.4	2.3
			13:11	8.9	1.0	28.54		9.22		17.03		121.20		8.55		2.65		2.2	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station CF (Middle) - Ebb Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		SS mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
CF	2/6/2022	Rainy	13:19	8.5	4.3	26.90	26.90	8.47	8.47	25.00	25.30	76.40	76.55	5.20	5.25	1.75	1.74	1.4	1.6
			13:21	8.5	4.3	26.90		8.47		25.60		76.70		5.30		1.72		1.7	
	4/6/2022	Cloudy	13:13	8.6	4.3	27.50	27.50	8.44	8.44	19.49	19.49	71.90	74.60	5.09	5.28	1.54	1.43	1.8	1.8
			13:15	8.6	4.3	27.50		8.44		19.49		77.30		5.47		1.32		1.8	
	7/6/2022	Rainy	13:20	8.7	4.4	27.00	26.95	8.63	8.64	19.36	19.28	78.20	80.40	5.59	5.75	2.66	2.35	3.2	3.4
			13:22	8.7	4.4	26.90		8.64		19.19		82.60		5.91		2.03		3.5	
	9/6/2022	Sunny	8:57	8.3	4.2	26.20	26.25	7.88	7.83	22.27	22.38	75.60	73.65	5.39	5.25	2.41	2.18	2.8	3.0
			8:59	8.3	4.2	26.30		7.78		22.48		71.70		5.10		1.95		3.1	
	11/6/2022	Sunny	9:02	8.4	4.2	26.90	26.90	8.08	8.15	22.11	22.18	108.70	104.85	7.66	7.39	4.21	3.64	6.2	6.0
			9:04	8.4	4.2	26.90		8.22		22.25		101.00		7.12		3.06		5.8	
	13/6/2022	Sunny	9:10	9.2	4.6	27.45	27.46	7.44	7.78	8.72	12.51	120.30	121.20	8.97	8.86	2.11	2.28	3.1	3.3
			9:12	9.2	4.6	27.47		8.11		16.30		122.10		8.74		2.44		3.4	
	15/6/2022	Rainy	9:03	9.4	4.7	26.96	26.96	8.76	8.72	23.65	23.68	128.70	127.25	8.99	8.89	2.70	2.58	1.6	1.5
			9:05	9.4	4.7	26.95		8.67		23.71		125.80		8.78		2.45		1.3	
	17/6/2022	Sunny	13:20	9.1	4.6	27.10	27.10	8.06	8.06	22.33	22.38	75.30	75.30	5.28	5.28	5.13	4.81	2.3	2.3
			13:22	9.1	4.6	27.10		8.05		22.42		75.30		5.28		4.49		2.2	
	20/6/2022	Sunny	13:15	9.0	4.5	27.40	27.35	8.26	8.26	16.21	16.15	85.50	86.00	6.18	6.22	5.61	5.64	4.4	4.2
			13:17	9.0	4.5	27.30		8.26		16.08		86.50		6.26		5.66		4.0	
	22/6/2022	Sunny	8:22	8.6	4.3	26.20	26.20	6.70	6.77	26.15	26.32	68.40	68.80	4.42	4.43	7.55	7.28	4.0	4.3
			8:24	8.6	4.3	26.20		6.83		26.48		69.20		4.44		7.00		4.5	
	24/6/2022	Sunny	8:26	9.0	4.5	26.90	26.85	7.30	7.32	25.55	25.63	71.40	73.30	5.27	5.21	6.09	6.11	3.4	3.2
			8:28	9.0	4.5	26.80		7.33		25.70		75.20		5.14		6.13		3.0	
	28/6/2022	Sunny	8:47	9.0	4.5	27.90	27.95	7.05	7.14	22.30	21.73	95.00	97.10	7.36	7.11	5.55	5.55	3.5	3.4
			8:49	9.0	4.5	28.00		7.23		21.16		99.20		6.86		5.54		3.3	
	30/6/2022	Sunny	8:47	9.8	4.9	27.40	27.35	7.15	7.29	17.59	22.42	88.20	88.70	6.22	6.26	4.91	4.95	2.7	2.6
			8:49	9.8	4.9	27.30		7.42		27.25		89.20		6.30		4.98		2.5	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station CF (Middle) - Flood Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature °C		pH -		Salinity ppt		DO Saturation %		DO mg/L		Turbidity NTU		SS mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
CF	2/6/2022	Rainy	8:30	8.1	4.1	26.60	26.65	7.61	7.68	24.54	24.38	70.00	71.50	4.89	5.02	1.94	1.63	2.4	2.3
			8:32	8.1	4.1	26.70		7.74		24.22		73.00		5.15		1.31		2.2	
	4/6/2022	Cloudy	8:33	8.3	4.2	26.50	26.50	7.66	7.72	19.53	19.16	73.90	70.60	5.32	5.10	2.69	3.29	2.8	2.9
			8:35	8.3	4.2	26.50		7.77		18.78		67.30		4.87		3.89		3.0	
	7/6/2022	Rainy	9:04	8.2	4.1	26.60	26.50	7.87	7.79	20.41	22.08	75.40	74.75	5.40	5.31	1.73	1.87	3.8	4.0
			9:06	8.2	4.1	26.40		7.70		23.75		74.10		5.22		4.14		4.2	
	9/6/2022	Sunny	13:15	8.5	4.3	25.80	25.75	8.18	8.33	16.64	16.66	76.40	76.05	5.67	5.65	2.45	2.29	2.8	3.0
			13:17	8.5	4.3	25.70		8.48		16.67		75.70		5.62		2.13		3.1	
	11/6/2022	Sunny	13:12	8.2	4.1	27.32	27.32	8.27	7.74	15.36	15.12	112.70	113.10	8.13	8.37	1.80	2.02	3.5	3.6
			13:14	8.2	4.1	27.32		7.21		14.87		113.50		8.61		2.24		3.6	
	13/6/2022	Sunny	13:24	8.8	4.4	28.05	28.05	8.85	8.81	18.28	18.22	111.90	111.80	7.91	7.90	2.42	2.19	2.6	2.7
			13:26	8.8	4.4	28.04		8.77		18.16		111.70		7.89		1.95		2.8	
	15/6/2022	Rainy	13:18	8.7	4.4	27.54	27.60	8.90	8.80	19.43	19.20	111.40	111.70	7.87	7.90	1.47	1.46	1.2	1.3
			13:20	8.7	4.4	27.66		8.70		18.96		112.00		7.93		1.44		1.4	
	17/6/2022	Sunny	9:18	9.1	4.6	26.40	39.30	7.29	7.26	22.33	22.57	68.20	68.50	4.84	4.86	6.47	5.77	2.6	2.5
			9:20	9.1	4.6	52.20		7.22		22.80		68.80		4.88		5.07		2.3	
	20/6/2022	Sunny	8:33	8.4	4.2	26.70	26.70	6.92	6.99	19.27	19.20	77.60	77.60	5.58	5.50	5.77	5.32	3.7	3.9
			8:35	8.4	4.2	26.70		7.05		19.13		75..3		5.42		4.87		4.0	
	22/6/2022	Sunny	13:24	8.4	4.2	27.50	27.50	8.39	8.39	18.01	18.19	89.00	88.40	6.32	6.26	5.79	5.87	3.2	3.3
			13:26	8.4	4.2	27.50		8.38		18.36		87.80		6.19		5.94		3.4	
	24/6/2022	Sunny	13:15	8.4	4.2	27.10	27.60	8.47	8.48	17.69	17.65	96.00	95.70	6.77	6.75	6.14	6.19	3.1	3.0
			13:17	8.4	4.2	28.10		8.48		17.60		95.40		6.73		6.24		2.8	
	28/6/2022	Sunny	13:12	8.4	4.2	28.10	28.10	8.47	8.48	17.69	17.65	96.00	95.70	6.77	6.75	6.14	6.19	2.6	2.6
			13:14	8.4	4.2	28.10		8.48		17.60		95.40		6.73		6.24		2.5	
	30/6/2022	Sunny	13:12	8.9	4.5	28.54	28.53	9.32	8.77	16.96	16.88	129.00	124.40	9.11	8.78	2.99	2.85	2.9	2.8
			13:14	8.9	4.5	28.52		8.21		16.80		119.80		8.45		2.71		2.7	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station CF (Bottom) - Ebb Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
CF	2/6/2022	Rainy	13:22	8.5	7.5	26.50	26.55	8.39	8.39	28.54	28.49	74.00	75.95	5.06	5.20	1.40	1.36	2.0	2.2
			13:24	8.5	7.5	26.60		8.39		28.44		77.90		5.33		1.31		2.4	
	4/6/2022	Cloudy	13:16	8.6	7.6	27.00	27.05	8.37	8.37	25.29	25.40	76.60	73.15	5.30	5.06	2.49	2.89	1.3	1.4
			13:18	8.6	7.6	27.10		8.36		25.51		69.70		4.81		3.29		1.5	
	7/6/2022	Rainy	13:23	8.7	7.7	26.10	26.10	8.41	8.39	27.60	27.81	70.40	71.55	4.88	4.96	2.85	3.05	4.0	3.9
			13:25	8.7	7.7	26.10		8.36		28.02		72.70		5.03		3.25		3.7	
	9/6/2022	Sunny	9:00	8.3	7.3	25.80	25.80	7.90	7.92	28.06	28.12	70.30	67.35	4.88	6.41	1.99	2.09	3.9	3.7
			9:02	8.3	7.3	25.80		7.93		28.17		64.40		7.93		2.19		3.4	
	11/6/2022	Sunny	9:05	8.4	7.4	26.91	26.91	8.39	8.37	25.03	24.27	116.10	116.60	8.05	8.11	6.16	5.50	8.5	8.7
			9:07	8.4	7.4	26.90		8.35		23.50		117.10		8.16		4.83		8.8	
	13/6/2022	Sunny	9:13	9.2	8.2	27.25	27.21	8.19	7.79	24.84	20.14	113.10	112.80	7.78	7.91	4.38	4.68	4.2	4.5
			9:15	9.2	8.2	27.16		7.38		15.43		112.50		8.04		4.97		4.7	
	15/6/2022	Rainy	9:06	9.4	8.4	26.95	26.95	8.71	8.71	24.02	23.84	120.40	122.15	8.39	8.52	1.78	3.19	2.5	2.7
			9:08	9.4	8.4	26.95		8.71		23.66		123.90		8.65		4.59		2.9	
	17/6/2022	Sunny	13:23	9.1	8.1	27.30	27.10	8.04	8.05	22.74	22.77	75.20	75.55	5.25	5.29	3.43	3.85	1.6	1.5
			13:25	9.1	8.1	26.90		8.06		22.79		75.90		5.33		4.27		1.4	
	20/6/2022	Sunny	13:18	9.0	8.0	27.20	27.20	8.24	8.25	17.29	17.02	85.30	84.50	6.15	6.10	5.67	5.81	5.1	5.3
			13:20	9.0	8.0	27.20		8.26		16.74		83.70		6.05		5.95		5.4	
	22/6/2022	Sunny	8:25	8.6	7.6	26.00	26.05	6.95	7.00	26.88	26.89	62.00	61.60	4.08	4.01	10.13	10.13	5.2	5.4
			8:27	8.6	7.6	26.10		7.04		26.90		61.20		3.93		10.12		5.6	
	24/6/2022	Sunny	8:29	9.0	8.0	26.30	26.30	7.31	7.32	27.78	27.62	56.60	56.45	9.84	6.89	8.85	7.41	4.4	4.2
			8:31	9.0	8.0	26.30		7.32		27.46		56.30		3.93		5.96		4.0	
	28/6/2022	Sunny	8:50	9.0	8.0	27.10	27.35	7.25	7.31	25.73	24.40	85.30	91.05	5.76	6.18	5.40	5.19	2.8	2.7
			8:52	9.0	8.0	27.60		7.36		23.07		96.80		6.59		4.97		2.6	
	30/6/2022	Sunny	8:50	9.8	8.8	27.40	27.30	7.55	7.63	19.55	19.44	89.90	91.25	6.31	6.41	5.01	4.96	2.2	2.2
			8:52	9.8	8.8	27.20		7.71		19.33		92.60		6.50		4.91		2.2	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Impact Water Quality Monitoring at Station CF (Bottom) - Flood Tide

Station Reference	Sampling Date	Weather	Sampling Time	Water Depth	Sampling Depth	Temperature		pH		Salinity		DO Saturation		DO		Turbidity		SS	
						°C		-		ppt		%		mg/L		NTU		mg/L	
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
CF	2/6/2022	Rainy	8:33	8.1	7.1	26.60	26.55	7.38	7.66	23.33	24.82	6.20	38.65	5.36	5.14	1.23	1.44	2.7	2.8
			8:35	8.1	7.1	26.50		7.94		26.31		71.10		4.92		1.64		2.9	
	4/6/2022	Cloudy	8:36	8.3	7.3	26.30	26.30	7.88	7.82	27.49	27.34	62.80	66.95	4.34	4.63	2.13	2.33	3.2	3.4
			8:38	8.3	7.3	26.30		7.76		27.19		71.10		4.92		2.52		3.6	
	7/6/2022	Rainy	9:07	8.2	7.2	26.30	26.30	7.86	7.91	24.28	24.25	73.70	75.20	5.19	5.30	4.42	2.54	5.8	6.0
			9:09	8.2	7.2	26.30		7.95		24.21		76.70		5.40		3.57		6.2	
	9/6/2022	Sunny	13:18	8.5	7.5	25.60	25.60	8.33	8.33	25.85	25.70	72.50	72.00	5.12	5.09	2.03	2.00	2.4	2.6
			13:20	8.5	7.5	25.60		8.33		25.54		71.50		5.06		1.96		2.8	
	11/6/2022	Sunny	13:15	8.2	7.2	27.20	27.22	7.90	7.98	17.46	18.56	116.10	115.05	8.06	8.00	3.52	3.62	3.8	4.0
			13:17	8.2	7.2	27.23		8.06		19.65		114.00		7.93		3.72		4.1	
	13/6/2022	Sunny	13:27	8.8	7.8	27.92	27.93	8.80	8.82	18.70	18.65	111.70	111.75	7.89	7.90	2.00	2.01	3.0	3.2
			13:29	8.8	7.8	27.94		8.84		18.60		111.80		7.90		2.01		3.4	
	15/6/2022	Rainy	13:21	8.7	7.7	27.36	27.41	8.78	8.76	20.13	20.07	106.50	109.30	7.53	7.73	1.73	1.68	1.1	1.3
			13:23	8.7	7.7	27.45		8.74		20.01		112.10		7.92		1.63		1.4	
	17/6/2022	Sunny	9:21	9.1	8.1	26..4	26.40	7.33	7.37	23.94	23.94	67.80	58.30	4.77	4.39	4.04	4.14	1.7	1.8
			9:23	9.1	8.1	26.40		7.41		23.93		48.80		4.01		4.23		1.9	
	20/6/2022	Sunny	8:36	8.4	7.4	26.40	26.35	7.38	7.33	26.29	26.49	73.50	58.10	5.14	4.88	10.12	10.56	4.6	4.8
			8:38	8.4	7.4	26.30		7.27		26.69		42.69		4.62		11.00		5.0	
	22/6/2022	Sunny	13:27	8.4	7.4	26.80	27.00	8.26	8.27	23.92	22.36	84.80	86.85	5.72	5.97	6.48	6.48	2.8	2.7
			13:29	8.4	7.4	27.20		8.28		20.80		88.90		6.22		6.47		2.6	
	24/6/2022	Sunny	13:18	8.4	7.4	26.40	26.60	8.17	8.16	28.69	27.59	66.70	70.00	4.49	4.75	4.25	4.37	2.4	2.3
			13:20	8.4	7.4	26.80		8.14		26.48		73.30		5.01		4.48		2.2	
	28/6/2022	Sunny	13:15	8.4	7.4	26.40	26.60	8.17	8.16	28.69	27.59	66.70	70.00	4.49	4.75	4.25	4.37	2.1	2.2
			13:17	8.4	7.4	26.80		8.14		26.48		73.30		5.01		4.48		2.3	
	30/6/2022	Sunny	13:15	8.9	7.9	28.59	28.60	9.23	8.74	17.10	17.09	119.00	118.85	8.39	8.38	3.21	3.08	4.0	4.2
			13:17	8.9	7.9	28.60		8.24		17.07		118.70		8.36		2.94		4.4	

General Note: For calculation of average concentration of SS, the minimum value for "NOT DETECTED" is treated as 1.0mg/L according to reporting limit.

Appendix 4.5

Monthly Summary Waste Flow Table

Drainage Services Department
Contract No. DC/2020/02
Construction of San Shek Wan Sewage Treatment Works,
Associated Submarine Outfall and Pui O Sewerage Works

Monthly Summary Waste Flow Table for 2022

Month	Actual Quantities of Inert C&D Material Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated (a) (in '000m^3)	Hard Rocks and Large Broken Concrete (b) (in '000m^3)	Reused in the Contract (c) (in '000m^3)	Reused in other Projects (d) (in '000m^3)	Disposed as Public Fill (a-b-c-d) (in '000m^3)	Imported Fill (in '000m^3)	Metals (in '000kg)	Paper/card-board packaging (in '000kg)	Plastics [see Note 3] (in '000kg)	Chemical waste (in '000kg)	Others. e.g. general refuse (in '000kg)
Jan	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.00	0.00	58.35
Feb	2.37	0.00	0.00	0.00	2.37	0.00	0.00	0.00	0.00	0.00	52.60
Mar	2.51	0.00	0.00	0.00	2.51	0.00	1.55	0.00	0.00	0.00	34.82
Apr	0.62	0.00	0.00	0.00	0.62	0.00	0.00	0.05	0.00	0.00	9.74
May	0.21	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	17.38
Jun	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.07	0.00	0.00	33.94
Sub-total	5.74	0.00	0.00	0.00	5.74	0.00	1.56	0.13	0.01	0.00	206.83
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total	5.74	0.00	0.00	0.00	5.74	0.00	1.56	0.13	0.01	0.00	206.83

Notes:
(1) The inert C&D material except slurry and bentonite are disposed at Mui Wo Temporary Public Fill Bank (MW-PFRF)
(2) The slurry and bentonite are disposed at Tseung Kwan O Area 137 Fill Bank (TKO137FB)
(3) The non-inert waste is disposed at NENT or Outlying Islands Transfer Facilities
(4) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(5) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
(6) Assume the density of fill material is 2 tonne/m3.

Appendix 6.1

Three Months Rolling Programme – July 2022 to September 2022

KL-CW JV

Tentative Three Months Construction Rolling Program **Contract No.: DC/2020/02** **Construction of San Shek Wan Sewage Treatment Works, Associated Submarine Outfall and Pui O Sewerage Works**	**Reference No. : DC/2020/02** **Revision No. : -**

Tentative Three Months (July, August & September 2022) Construction Rolling Program

Item	Construction Activities
1	Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen
2	Construction of trunk sewers and rising mains
3	SSWSTW and HDD works
4	Site formation works for POSPS
5	Drilling works
6	Excavation works
7	ELS works
8	Piling Works
9	Superstructure RC Works

IEC Comments on Monthly EM&A Report – June 2022

Item	IEC's Comment on 13 July 2022	ET's Response
1	**Cover page** – please clarify whether yourself has been nominated to EPD as the ET Leader for this project. If not, the ET Leader nominated to EPD should certify this report.	Noted
2	**Executive Summary para. ii, para. 2.2.1 and Figure 2.2** – some descriptions of construction works appear different from the three months programme of the Contractor, e.g., the 1st bullet describing excavation and site formation at SSWSTW and POSPS not found in the three months programme. Please check with the RSS and Contractor.	Revised
3	**Executive Summary para. iii and para. 4.1.7** – with reference to Figure 2.3 Locations of Noise Monitoring Station, please explain in writing why N15b which is located within 300m from construction area (the red line in Figure 2.3) was not monitored.	Please be clarified N15b is out of 300m of construction area
4	**Executive Summary para. xi** – "*Preservation of retain tree of Aquilaris sinensis on Project Site*" is an incomplete sentence and its meaning is not known. Please rectify.	Revised
5	**Heading of Sections 1, 2 and 4** – please delete "5." from "*5. 1 Introduction*", "*5. 2 Environmental Status*" and "*5. 4. Monitoring Results*".	Revised
6	**Section 1** – although the contact details of key personnel already provided in the 1st Monthly EM&A Report (Table 2.1 of the 1st Monthly EM&A Report refers), it is also required for the subsequent Monthly EM&A Report as per Section 12(b) (ii) 2nd bullet of the EM&A Manual. Therefore, please include the contact details for the change of personnel, e.g., the change of ET Leader and ET members, etc.	Updated
7	**Para. 2.1.3** – the major components described in this paragraph are for Contract No. DC/2020/20 rather than the entire Project. Therefore, please amend "the Project" to "the Contract" to avoid misunderstanding.	Amended
8	**Para. 2.1.4** – "*No construction programme with fine tuning of construction activities showing the inter-relationship with environmental protection/ mitigation measures for the month*" is an incomplete sentence and this paragraph should be properly amended to avoid misunderstanding.	Revised

9	**Heading of Section 3 "*5. Implementation Status*"** – please correct the heading number to 3.	Amended
10	**Table 3.3** a. Only 20 and 28 June inspection were presented. All the inspection dates should be listed in Table 3.3. b. For 28 June, please mark the locations for the observation, (i.e. POSPS, SSW STW, Lo Uk Tsuen Sewer Works, or Transplant Trees in holding nursery). See previous report. c. For the inspection on 20 June 2022, the Close-out Date/Status is "Immediate and on-going". Please clarify whether the three items were closed or still outstanding.	Revised
11	**Section 4.1** – as per Appendix 4.3, it seems that examination of N17 Bui O Public School should be carried out since the Limit Level of N17 was changed from 70dB(A) to 65dB(A) on 6 June 2022. Please briefly describe the examination period of N17 in this section.	Updated
12	**Para. 4.1.1** a. bullet (g) – please amend "±1 dB(A)" to "±1.0 dB(A)" as per Section 4.2 of the EM&A Manual. b. please add wind speed checking in this paragraph as per the requirements of Section 4.2 of the EM&A Manual	Amended
13	Para. 4.3.5 stating "*The original location of Aquilaris sinensis is at SSWSTW (Figure 2.5). The tree is transplanted to temporary holding nursery (Figure 2.6) for establishment*" and Para. 4.3.6 stating "*Retain tree of Aquilaris sinensis at SSWSTW Project Site*" contradict the latest version of PTP concluding "*four tree found (1 no. of Aquilaria sinensis and 3 nos. of Gmelina chinensis) within the site of SSWSTW which are considered to be the plant species with conservative importance will be temporarily transplanted to the nursery at Kam Tin and eventually be transplanted to Pui O Pumping Station*". Please review these two paragraphs as well as paras. x and xi of the Executive Summary and amend them properly.	Revised
14	**Para. 4.4.1** – "Table 4.6" should be read as "Table 4.8". Please amend.	amended

15	**Section 5** – please provide the updated results of the noise complaint in May 2022 in this Section as mentioned in Table 5.1 of the Monthly EM&A Report for May 2022.	Information provided
16	Section 6's heading number should be revised from "5" to "6".	Revised
17	**Section 6.1.1 and Table 6.1 and Executive Summary xv** – The paragraphs and table refer to the construction works to be taken in the next 3 months. Inconsistencies observed in the described works and those identified in the schedule. Please check and amend.	Revised
18	**Para. 7.3.1** – please summarise the findings of the ecological impact monitoring.	
19	**Appendix 4.1** – for the calibration certificate of the Multifunctional Meter, page 2 of 3 is omitted and only the calibration results of temperature on page 3 of 3 are provided. Please provide the calibration results of DO, pH and salinity.	Updated
20	**1. Appendix 4.3** a. Wind speed checking should be presented. b. The sound calibration results mentioned in para. 4.1.1 (g) should be briefly described. c. The major noise sources during each monitoring should be briefly described as per Annex B of the EM&A Manual. As per the Noise Monitoring Result Graph of N17 Bui O Public School, the Limit Level line between 1 and 15 June 2022 is not correct. It is because the Limit Level would not be gradually decreased from 70dB(A) to 65dB(A) from 1 to 6 June, and would not be gradually increased from 65dB(A) to 70dB(A) from 6 to 15 June 2022. Please rectify.	Revised
21	**Appendix 4.5** – we do not have sufficient time to check the water monitoring results. Please be reminded that the ET Leader and the ET shall be responsible for QA/QC rather than the IEC.	Noted