CONTRACT NO: SD 15/2022

OUTLYING ISLAND SEWERAGE STAGE 2 – SOUTH LANTAU SEWAGE WORKS – ENVIRONMENTAL TEAM SERVICES (2023 – 2024)

UNDER ENVIRONMENTAL PERMIT NO. EP-538/2017

MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT

OCTOBER 2024
REVISION 4

CLIENTS:

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14 November 2024

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14 November 2024

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Attn: Mr. CHAN Ka Keung

Dear Sir

Contract No. SD 7/2020
Independent Environmental Checker ("IEC") for Environmental Monitoring Work for South Lantau Sewerage Works
Verification of Monthly EM&A Report (October 2024)

With reference to the Monthly EM&A Report (October 2024) Revision 4 dated and certified by the ET Leader on 14 November 2024, 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

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EXECUTIVE SUMMARY

i. This is the Monthly Environmental Monitoring and Audit (EM&A) Report – October 2024 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 31 October 2024. 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, sewer laying, construction of manhole at Pui O Lo Uk Tsuen, South Lantau Road, Chi Ma Wan Road
- Excavation and site formation at San Shek Wan Sewage Treatment Works (SSWSTW) and Pui O Sewage Pumping Station (POSPS)
- Removal works of Excavation and Lateral Support (ELS)
- ELS works
- Superstructure Reinforced Concrete (RC) Works
- Electrical and Mechanical (E&M) Installation at POSPS

Exceedances of Action/Limit Levels

Noise Monitoring

iii. Noise monitoring was conducted at eight (8) noise monitoring stations (*N12a, N12b, N13, N14, N15b, N16a, N16b and N17*) once per week in the reporting period.

iv. No school examination was taken place at N17 – Bui O Public School in the reporting period.

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

Water Quality Monitoring

vi. Water quality monitoring (WQM) 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.

vii. According to the Contractor's construction programme and confirmed with Engineer Representative, there is no potential marine work until further notice. As such, pursuant to Condition 3.1 of the Environmental Permit No. EP-538/2017, proposal of temporary suspension of impact marine water quality monitoring was submitted to EPD on 12 July 2024 for approval. This proposal was reviewed and verified by the Independent Environmental Checker (IEC) on 12 July 2024. The proposal was approved by EPD on 27 August 2024, thus, impact marine water quality monitoring had been temporarily suspended starting from 28

August 2024 until further notice. Once Contractor and Engineer Representative confirm the actual date to resume marine work, ET will notify EPD one month in advance, and ET will resume impact marine water quality monitoring two weeks prior to the start of marine works.

viii. According to the Contractor's construction programme and confirmed with Engineer Representative (Binnies), the marine works will be tentatively commenced on 21 October 2024, ET notified EPD immediately on 17 September 2024 to resume the marine water quality monitoring two weeks prior to commencement of marine works, WQM was resumed from 7 Oct 2024.

ix. Further confirmed with the Contactor and ER, marine works has yet to resume and no marine work were ongoing in October 2024.

x. In accordance with the action level and limit level in Baseline Monitoring Report Rev. 9.2 agreed by EPD on 2 September 2022, action level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR9, SR10 and SR12 from 07:56 to 08:12 during ebb tide on 12 Oct 2024. Action level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR5 and SR6 from 9:07 to 9:19 during flood tide as well as at SR10 and SR12 from 14:04 to 14:11 during ebb tide on 21 Oct 2024. Action level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR15 from 13:37 to 13:38 during flood tide on 23 Oct 2024. Limit level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR4 and SR15 from 09:20 to 09:30 during ebb tide on 28 Oct 2024. Action level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR5, SR6, SR9,SR10, and SR12 from 09:38 to 10:24 during ebb tide as well as at SR4, SR5, SR6, SR9,SR10, SR12and SR15 from 16:01 to 17:07 during flood tide on 28 Oct 2024. Action level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR10 and SR12 during both ebb and flood tide from 11:25 to 11:32 and 16:32 to 16:38 respectively on 30 Oct 2024.

xi. As the suspended solids (SS) result is determined by laboratory analysis that require 7 working days, it is not possible to increase the monitoring frequency to daily until no exceedance of Action Level after 30 Oct 2024. If such exceedances continuous during marine works commencement, ET will check with contractor the implementation of the mitigation measures and daily WQM monitoring will be considered.

xii. As no marine work were ongoing since Jan 2024, no sign of pollution was observed during site inspection or marine water samples collection, it is considered that the exceedance was not related to Project works.

xiii. For the limit level exceedances of suspended solid recorded on 28 Oct 2024, confirmed with our field technician, the seawater was observed turbid during sampling. As no marine work was conducted in Oct 2024 and no other evidence indicate that the limit level exceedance was affected by the site activities, it can be concluded that the limit level exceedances were possibly induced by other factors such as natural variation or changes of water quality in the vicinity of water quality monitoring station.

Ecological Impact Monitoring

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

xv. 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.

xvi. The weekly site audit was carried out by ET include checking whether good site practices are being properly implemented by the Contractor.

xvii. The extent of the work site boundaries was checked by the ET during the weekly site audit.

Complaint log

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

Notifications of Any Summons and Successful Prosecutions

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

Reporting Changes

xx. There are no particular reporting changes.

Future Key Issues

xxi. 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, South Lantau Road, Chi Ma Wan Road
- Dredging at marine *
- Site formation works at SSWSTW
- Trenchless drilling works (Chi Ma Wan Road)
- Excavation works (at site area)
- ELS works at SSWSTW

- Superstructure RC Works at SSWSTW
- Removal works of ELS at POSPS
- E&M Installation at POSPS

* Note: Further confirmed with the Contactor and ER, marine works has yet to resume and no marine work were ongoing in October 2024. The impact marine water quality monitoring was resumed from 7 October 2024.

xxii. 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, South Lantau Road, Chi Ma Wan Road • Dredging at marine* • Site formation works • Drilling works • Excavation works • ELS works • Superstructure RC Works • Removal works of ELS • E&M Installation at POSPS	• Implementation of noise pollution control in accordance with Construction Noise Mitigation Plan; • Dust control during dust generating works; • Silt curtain should be maintained in good condition prior to and during dredging and related marine 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 excavation works for dust control; and • Proper waste handling, recycling and storage.

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. KK Chan	2594 7297	3104 6426
Binnies Hong Kong Limited	Engineer's Representative	Resident Engineer	Mr. Kevin Chan	3529 3003	-
Kwan Lee – Chun Wo Joint Venture	Contractor	Sub Agent	Mr. Daniel Chu	6737 6701	2744 6937
		Environmental Officer	Ms. Hassan Ka Sin / Mr. Rico Chan	6993 0990 / 6224 9332	
SMEC Hong Kong	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Ms. Kitty Lee	3995 8140	3422 3631
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 secondary sewage treatment works (STW) at San Shek Wan in South Lantau; (ii) construction of sewage pumping station (SPS) at Pui O, San Shek Wan,

Cheung Sha and Cheung Fu Street; (iii) construction of about 1.4 kilometres (km) of submarine outfall with a diameter of 350 millimetres (mm) for the disposal of treated effluent from the STW at San Shek Wan; (iv) construction of about 10.1 km of gravity sewers with diameters ranging from 150 mm to 375 mm along South Lantau Road and Chi Ma Wan road and at Pui O; and (v) construction of about 3.1 km twin rising mains with a diameter of 200 mm to 250 mm along South Lantau Road and Chi Ma Wan Road.

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, sewer laying, construction of manhole at Pui O Lo Uk Tsuen, South Lantau Road, Chi Ma Wan Road
- Excavation and site formation at San Shek Wan Sewage Treatment Works (SSWSTW) and Pui O Sewage Pumping Station (POSPS)
- Removal works of Excavation and Lateral Support (ELS)
- ELS works
- Superstructure Reinforced Concrete (RC) Works
- Electrical and Mechanical (E&M) Installation at POSPS

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. 23)	9 September 2022#
Condition 2.12	Submission of Compensatory Woodland Planting Plan (Rev. 23)	15 May 2023^
Condition 2.13	Silt Curtain Deployment Plan (Rev. 11)	1 June 2022#
Condition 2.14	Landscape Mitigation Plan	To be confirmed
Condition 2.15	Construction Noise Mitigation Plan (Rev. 20)	4 August 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
Wastewater Discharge Licence under *Water Pollution Control Ordinance*	SSWSTW: WT00039636-2021	30 Dec 2021	30-12-2021 to 31-12-2026	Valid
	POPS: WT00039820-2021	31 Dec 2021	31-12-2021 to 31-12-2026	Valid
	SSWSTW: Gravity Sewer & Raising Main: WT00042613-2022	09 Jan 2023	09-01-2023 to 31-01-2028	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 under Noise Control Ordinance for SSWSTW	GW-RS0658-24	17 July 2024	09-08-2024 to 08-02-2025	Valid
Construction Noise Permit under Noise Control Ordinance for POSPS	GW-RS0856-24	17 Sep 2024	27-09-2024 to 26-03-2025	Valid
Marine Dumping Permit (Dredged Sediment Requiring Type 1 – Open Sea Disposal	-	-	-	Renewed Marine Dumping Permit under application

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 02, 08, 17, 21 and 29 October 2024. IEC attended the SSEMC meeting held on 21 October 2024. Holding nursery visit for transplanted trees on 23 October 2024.

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
2 October 2024	Pui O Sewage Pumping Station (POSPS) – Obs1: Water barriers and cover at site boundary were found damaged by strong wind, contractor is requested to fix/replace the damaged barriers and cover. San Shek Wan Sewage Treatment Works (SSWSTW) – R1. Tarpaulin sheets on slope found damaged by strong wind, contractor is reminded to arrange replacement.	Rectified by the Contractor on 8 October 2024
8 October 2024	Pui O Sewage Pumping Station (POSPS) – Obs.1: Sediment accumulated in the wheel washing facilities should be removed regularly Obs.2: Construction waste outside the site boundary should be removed regularly South Lantau Road (car park area) Rising Mains – Obs.3: Direct discharge observed, contractor is requested to stop immediately and re-connected to silt removal facilities prior to discharge San Shek Wan Sewage Treatment Works (SSWSTW) – R1. Contractor is reminded to provide regular watering on main haul road during dry season.	Rectified by the Contractor on 8 November 2024
17 October 2024	Pui O Sewage Pumping Station (POSPS) – Obs.1: Copies of Environmental Permit (EP) should be displayed at site entrances San Shek Wan Sewage treatment Works(SSWSTW) – Obs.2: drip tray should be provided to chemical container	Rectified by the Contractor on 21 October 2024
21 October 2024	Pui O Sewage Pumping Station (POSPS) – Obs.1: Drip tray should be provided to chemical container	Chemical container was removed during site inspection on 29 Oct 2024
29 October 2024	Pui O Sewage Pumping Station (POSPS) – Obs.1: Drip tray should be provide to chemical container	Rectified by the Contractor on 5 November 2024

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	0004797
Acoustic Calibrator	Larson Davis CAL200	13128

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 (L_{eq}). $L_{eq(30min)}$ 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 $L_{eq(30min)}$ noise level as six consecutive $L_{eq(5min)}$ 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 Eight (8) noise monitoring stations N12a, N12b, N13, N14, N15b, 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 school examination was taken place at N17 – Bui O Public School in the reporting period.

4.1.11 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 (˚C), pH (units), Salinity (ppt), DO (mg/L), DO saturation (%) will be measured by the Multifunctional Meter and Turbidity (NTU) will be measured by turbid meter. (Water Temperature and Salinity will be measured as reference parameters)
(i) Record the result on the data log sheet and record any special finding during / after in-situ measurement.
(j) The water sample bottles will be stored in a cool box (at cooled to 4°C without being frozen), which shall be delivered to HOKLAS laboratory (ALS Technichem (HK) Pty Ltd) for further testing to determine the level of SS.

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	YSI Professional Plus	17G100383
Turbid meter	WGZ-3B	1807063

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 To support water quality monitoring, the silt curtain deployment plan has minor updates to include an additional brand of geosynthetic material as alternative for selection and adopt underwater robot for inspecting condition of silt curtain.

4.2.12 For the upcoming marine works (stage 3 and stage 4), new silt curtain extension to be applied at diffuser and emergency bypass constructions has been proposed and supplemented in the revised silt curtain deployment plan. Typical details of proposed silt curtain are shown in ***Figure 2.7***.

4.2.13 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***.

4.2.14 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.

4.2.15 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.

4.2.16 The sampling frequency of at least three days per week should be undertaken. 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.

4.2.17 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

4.2.18 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***

4.2.19 Water quality monitoring is evaluated against Action and Limit Levels. The derived Action and Limit Level proposed in Baseline Monitoring Report Rev. 9.2 was agreed by EPD on 2 September 2022. Action and Limit Levels of marine water quality monitoring have been set with reference to the derived criteria as shown in ***Table 4.5*** below for reference.

Table 4.5 Action and Limit Levels of Water Quality

Parameters	Action Level	Limit Level
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.

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

Table 4.6 Summary of Marine Water Quality Exceedances

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	/	/	/	/	/	/	/	/	0	0
	Limit	/	/	/	/	/	/	1	/	1	0
SR5	Action	/	/	/	/	/	/	1	2	1	2
	Limit	/	/	/	/	/	/	/	/	0	0
SR6	Action	/	/	/	/	/	/	1	2	1	2
	Limit	/	/	/	/	/	/	/	/	0	0
SR9	Action	/	/	/	/	/	/	2	1	2	1
	Limit	/	/	/	/	/	/	/	/	0	0
SR10	Action	/	/	/	/	/	/	4	2	4	2
	Limit	/	/	/	/	/	/	/	/	0	0
SR12	Action	/	/	/	/	/	/	4	2	4	2
	Limit	/	/	/	/	/	/	/	/	0	0
SR15	Action	/	/	/	/	/	/	/	2	0	2
	Limit	/	/	/	/	/	/	1	/	1	0
Total	Action	0	0	0	0	0	0	12	11	23	
	Limit	0	0	0	0	0	0	2	0	2	

4.2.21 According to the Contractor's construction programme and confirmed with Engineer Representative, there is no potential marine work until further notice. As such, pursuant to Condition 3.1 of the Environmental Permit No. EP-538/2017, proposal of temporary suspension of impact marine water quality monitoring was submitted to EPD for approval on 12 July 2024. This proposal was reviewed and verified by the Independent Environmental Checker (IEC) on 12 July 2024. The proposal was approved by EPD on 27 August 2024, thus, impact marine water quality monitoring had been temporarily suspended starting from 28 August 2024 until further notice. Once Contractor and Engineer Representative confirm the actual date to resume marine work, ET will notify EPD one month in advance, and ET will resume impact marine water quality monitoring two weeks prior to the start of marine works.

4.2.22 According to the Contractor's construction programme and confirmed with Engineer Representative (Binnies), the marine works will be commenced on 21 October 2024, ET notified EPD immediately on 17 September 2024 to resume the marine water quality monitoring two weeks prior to commencement of marine works, WQM was resumed from 7 Oct 2024.

4.2.23 Further confirmed with the Contactor and ER, marine works has yet to resume and no marine work were ongoing in October 2024.

4.2.24 In accordance with the action level and limit level in Baseline Monitoring Report Rev. 9.2 agreed by EPD on 2 September 2022, action level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR9, SR10 and SR12 from 07:56 to 08:12 during ebb tide on 12

Oct 2024. Action level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR5 and SR6 from 9:07 to 9:19 during flood tide as well as at SR10 and SR12 from 14:04 to 14:11 during ebb tide on 21 Oct 2024. Action level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR15 from 13:37 to 13:38 during flood tide on 23 Oct 2024. Limit level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR4 and SR15 from 09:20 to 09:30 during ebb tide on 28 Oct 2024. Action level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR5, SR6, SR9,SR10, and SR12 from 09:38 to 10:24 during ebb tide as well as at SR4, SR5, SR6, SR9,SR10, SR12and SR15 from 16:01 to 17:07 during flood tide on 28 Oct 2024. Action level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR10 and SR12 during both ebb and flood tide from 11:25 to 11:32 and 16:32 to 16:38 respectively on 30 Oct 2024.

4.2.25 As the suspended solids (SS) result is determined by laboratory analysis that require 7 working days, it is not possible to increase the monitoring frequency to daily until no exceedance of Action Level after 30 Oct 2024. If such exceedances continuous during marine works commencement, ET will check with contractor the implementation of the mitigation measures and daily WQM monitoring will be considered.

4.2.26 As no marine work were ongoing since Jan 2024, no sign of pollution was observed during site inspection or marine water samples collection, it is considered that the exceedance was not related to Project works.

4.2.27 For the limit level exceedances of suspended solid recorded on 28 Oct 2024, confirmed with our field technician, the seawater was observed turbid during sampling. As no marine work was conducted in Oct 2024 and no other evidence indicate that the limit level exceedance was affected by the site activities, it can be concluded that the limit level exceedances were possibly induced by other factors such as natural variation or changes of water quality in the vicinity of water quality monitoring station.

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 was conducted on 23 October 2024 once per month.

MONITORING RESULTS

4.3.8 The weekly site audit was carried out by ET include checking whether good site practices are being properly implemented by the Contractor.

4.3.9 The extent of the work site boundaries was checked by the ET during the weekly site audit.

4.3.10 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 4.7***. The Monthly Summary Waste Flow Table is shown in ***Appendix 4.5***.

Table 4.7 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)	0.38	1.53802	25.09089
Metals (in '000kg)	0	0.00300	15.69570
Paper / Cardboard Packing (in '000kg)	0	0.01100	0.83538
Plastics (in '000kg)	0	0.00190	0.07496
Chemical Wastes (in '000kg)	0	0	0
General Refuses (in '000kg)	12.49	15.89000	683.21
Marine Sediment (Type 1 – Open Sea Disposal) , m3	0	0	60.2

5 Complaints, Notification of Summons and Prosecution

5.1.1 No environmental complaint was recorded in the reporting month.

5.1.2 No notification of summons and successful prosecution regarding construction works were recorded in the reporting month.

5.1.3 Cumulative statistic on complaints, summary of complaints and successful prosecutions are summarized in ***Table 5.1***, ***Table 5.2*** and ***Table 5.3*** respectively.

Table 5.1 Cumulative Statistics on Complaints

Reporting Period	No. of Complaints
October 2024	0
Project commencement to the end of last reporting month	3
Total	**3**

Table 5.2 Summary of Complaints

Date of Notification from EPD	Date of Complaint	Description of Complaint	Validity of Complaint	Close-Out Date / Status
26 May 2022	22 May 2022	A complaint is regarding to noise nuisance from marine site of San Shek Wan, Lantau Island.	Based on the investigation, the works activities of marine works did not result in any noise nuisance to Noise Sensitive Receivers (NSRs), noise nuisance from the Project is unlikely to be valid.	The interim report was submitted to EPD in June 2022. EPD replied no further comments on the final investigation report on 13 July 2022.
23 Dec 2022	21 Dec 2022	A complaint is regarding to the water quality for Pui O Beach, Lantau Island.	Based on the investigation, the works activities at POPS did not result in any water quality impacts to the Pui O Beach.	The interim report was submitted to EPD on 4 Jan 2023.
16 Aug 2024 2024	15 Aug 2024	A complaint is regarding to the damaged silt curtain	Based on the investigation, no marine works since Dec 2023 till present, the land based works activities at	The interim report was submitted to EPD on 31 Aug 2024.

		and potential water quality impact.	POPS did not result in any water quality impacts to the Pui O Wan.	

Table 5.3 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

6.1.1 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, South Lantau Road, Chi Ma Wan Road
- Dredging at marine *
- Site formation works at SSWSTW
- Trenchless drilling works (Chi Ma Wan Road)
- Excavation works (at site area)
- ELS works at SSWSTW
- Superstructure RC Works at SSWSTW
- Removal works of ELS at POSPS
- E&M Installation at POSPS

* Note: Further confirmed with the Contactor and ER, marine works has yet to resume and no marine work were ongoing in October 2024. The impact marine water quality monitoring was resumed from 7 October 2024.

6.1.2 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 – November 2024 to January 2025 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, South Lantau Road, Chi Ma Wan Road • Dredging at marine* • Site formation works • Drilling works • Excavation works • ELS works • Superstructure RC Works • Removal works of ELS • E&M Installation at POSPS	• Implementation of noise pollution control in accordance with Construction Noise Mitigation Plan; • Dust control during dust generating works; • Silt curtain should be maintained in good condition prior to and during dredging and related marine 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 excavation works for dust control; and • Proper waste handling, recycling and storage.

7 Conclusion

7.1 Noise Monitoring

7.1.1 No school examination was taken place at N17 – Bui O Public School in the reporting period.

7.1.2 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 According to the Contractor's construction programme and confirmed with Engineer Representative, there is no potential marine work until further notice. As such, pursuant to Condition 3.1 of the Environmental Permit No. EP-538/2017, proposal of temporary suspension of impact marine water quality monitoring was submitted to EPD for approval on 12 July 2024. This proposal was reviewed and verified by the Independent Environmental Checker (IEC) on 12 July 2024. The proposal was approved by EPD on 27 August 2024, thus, impact marine water quality monitoring had been temporarily suspended starting from 28 August 2024 until further notice. Once Contractor and Engineer Representative confirm the actual date to resume marine work, ET will notify EPD one month in advance, and ET will resume impact marine water quality monitoring two weeks prior to the start of marine works.

7.2.3 According to the Contractor's construction programme and confirmed with Engineer Representative (Binnies), the marine works will be commenced on 21 October 2024, ET notified EPD immediately on 17 September 2024 to resume the marine water quality monitoring two weeks prior to commencement of marine works, WQM was resumed from 7 Oct 2024.

7.2.4 Further confirmed with the Contactor and ER, marine works has yet to resume and no marine work were ongoing in October 2024.

7.2.5 In accordance with the action level and limit level in Baseline Monitoring Report Rev. 9.2 agreed by EPD on 2 September 2022, action level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR9, SR10 and SR12 from 07:56 to 08:12 during ebb tide on 12 Oct 2024. Action level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR5 and SR6 from 9:07 to 9:19 during flood tide as well as at SR10 and SR12 from 14:04 to 14:11 during ebb tide on 21 Oct 2024. Action level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR15 from 13:37 to 13:38 during flood tide on 23 Oct 2024. Limit level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR4 and SR15 from 09:20 to 09:30 during ebb tide on 28 Oct 2024. Action level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR5, SR6, SR9,SR10, and SR12 from 09:38 to 10:24 during ebb tide as well as at SR4, SR5, SR6, SR9,SR10, SR12and SR15

from 16:01 to 17:07 during flood tide on 28 Oct 2024. Action level exceedances of Depth-averaged on suspended solids (SS) was recorded at SR10 and SR12 during both ebb and flood tide from 11:25 to 11:32 and 16:32 to 16:38 respectively on 30 Oct 2024.

7.2.6 As the suspended solids (SS) result is determined by laboratory analysis that require 7 working days, it is not possible to increase the monitoring frequency to daily until no exceedance of Action Level after 30 Oct 2024. If such exceedances continuous during marine works commencement, ET will check with contractor the implementation of the mitigation measures and daily WQM monitoring will be considered.

7.2.7 As no marine work were ongoing since Jan 2024, no sign of pollution was observed during site inspection or marine water samples collection, it is considered that the exceedance was not related to Project works.

7.2.8 For the limit level exceedances of suspended solid recorded on 28 Oct 2024, confirmed with our field technician, the seawater was observed turbid during sampling. As no marine work was conducted in Oct 2024 and no other evidence indicate that the limit level exceedance was affected by the site activities, it can be concluded that the limit level exceedances were possibly induced by other factors such as natural variation or changes of water quality in the vicinity of water quality monitoring station.

7.3 Ecological Impact Monitoring

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

7.3.2 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.

7.3.3 The weekly site audit was carried out by ET include checking whether good site practices are being properly implemented by the Contractor.

7.3.4 The extent of the work site boundaries was checked by the ET during the weekly site audit.

7.3.5 Within this reporting period, holding nursery visit for transplanted trees on 23 October 2024.

7.3.6 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
23 October 2024	No particular findings	N/A

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

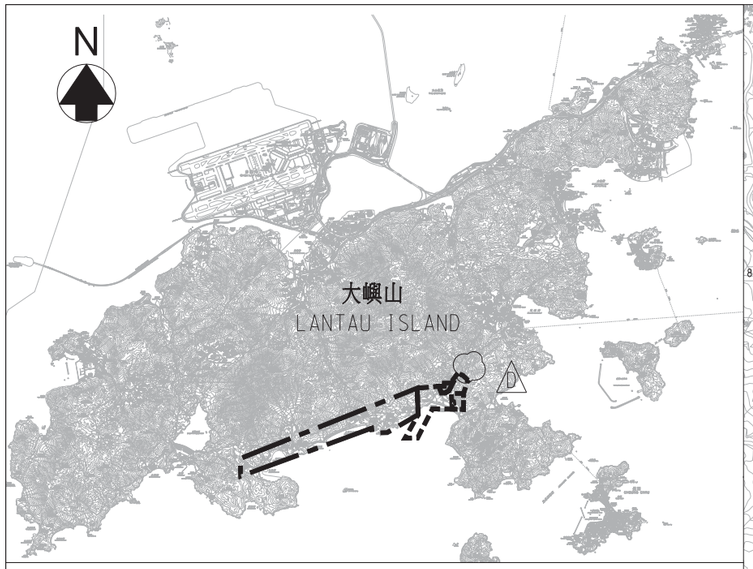
7.4.1 No environmental non-compliance was recorded in the reporting month.

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

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

Construction of sewers at South Lantau Road

Site formation works and excavation at SSWSTW

貝澳羅屋村
PUI O LO UK TSUEN

Construction of village sewers at Lo Uk Tsuen

貝澳
PUI O

芝麻灣路
CHI MA WAN ROAD

Construction of sewers & E&M installation at POSPS

Construction of sewers at Chi Ma Wan Road

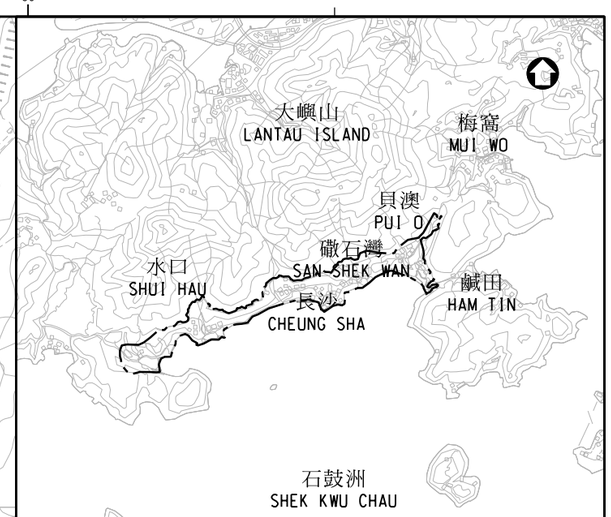
磯石灣
SAN SHEK WAN

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



位置圖 LOCATION PLAN
比例 SCALE 1 : 150 000

版 no.	日 期 date	修 改 項 目 description	簡 簽 initial

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

繪 畫 drawn *SIGNED* W. H. CHAN	日 期 date 27 APR 2020	圖 則 編 號 drawing no. DVD/2020/001
核 對 checked *SIGNED* Ir K. S. CHAN	日 期 date 27 APR 2020	比例 scale 1:12 500
批 核 approved *SIGNED* Ir L. CHEN	日 期 date 27 APR 2020	

部 門 office 特 別 職 務 部
SPECIAL DUTY DIVISION

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

Figure 2.3

Locations of Noise Monitoring Station

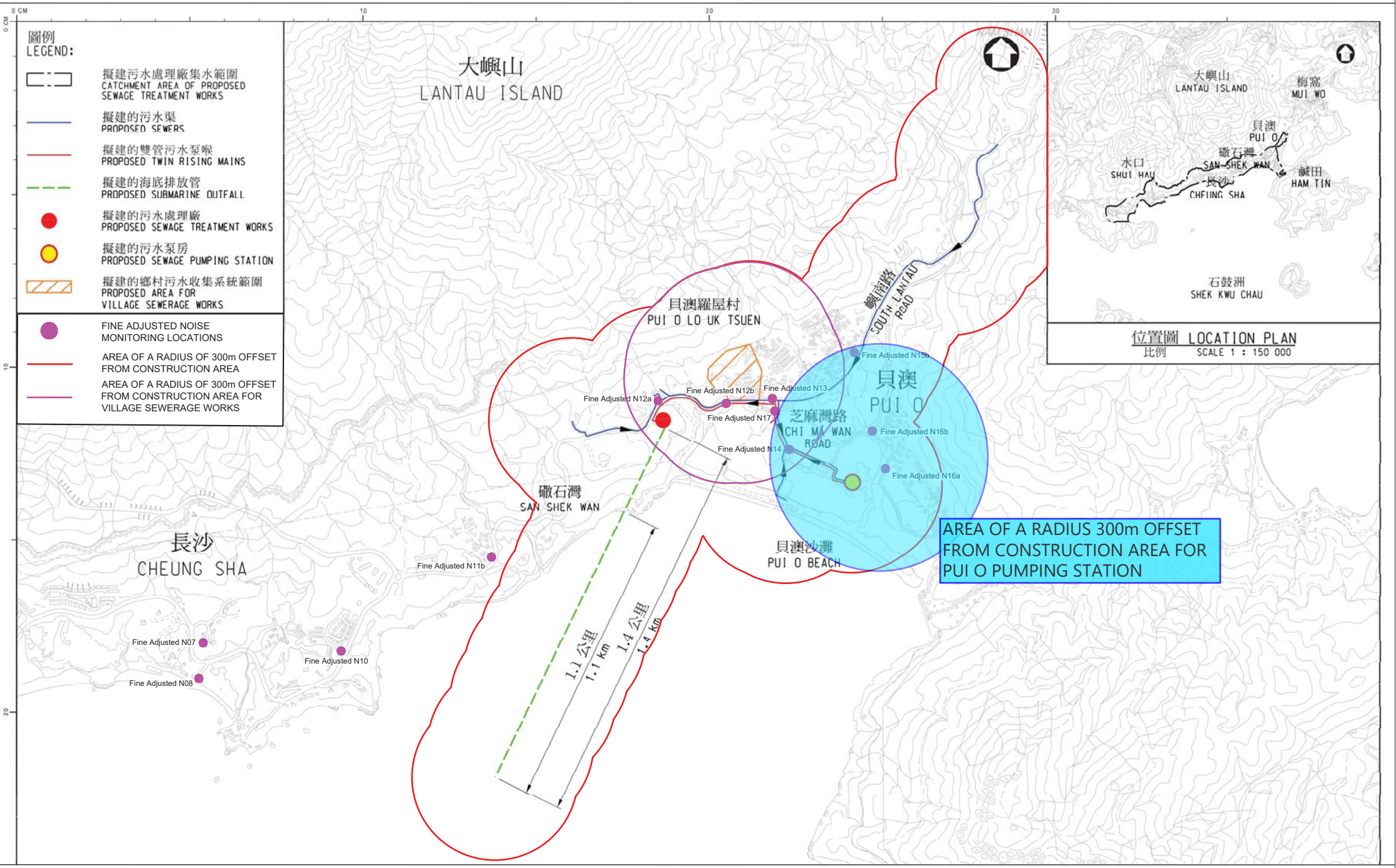
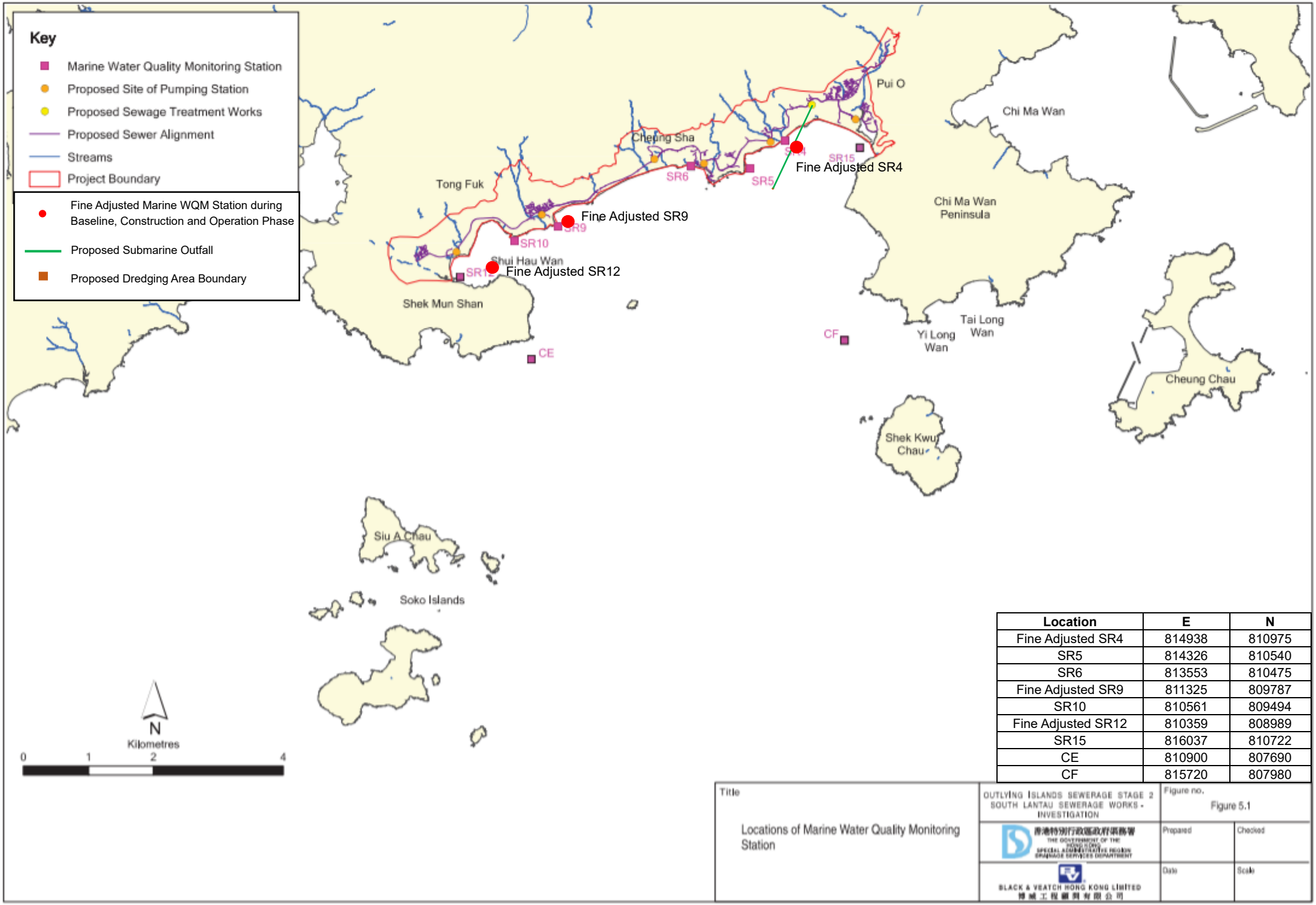

圖例
LEGEND:
擬建污水處理廠集水範圍
CATCHMENT AREA OF PROPOSED SEWAGE TREATMENT WORKS
擬建的污水渠
PROPOSED SEWERS
擬建的雙管污水泵喉
PROPOSED TWIN RISING MAINS
擬建的海底排放管
PROPOSED SUBMARINE OUTFALL
擬建的污水處理廠
PROPOSED SEWAGE TREATMENT WORKS
擬建的污水泵房
PROPOSED SEWAGE PUMPING STATION
擬建的鄉村污水收集系統範圍
PROPOSED AREA FOR VILLAGE SEWERAGE WORKS
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 N15b
Fine Adjusted N12a
Fine Adjusted N12b
Fine Adjusted N13
Fine Adjusted N17
Fine Adjusted N14
Fine Adjusted N16b
Fine Adjusted N16a
Fine Adjusted N11b
Fine Adjusted N07
Fine Adjusted N08
Fine Adjusted N10
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
大嶼山
LANTAU ISLAND
梅窩
MUI WO
貝澳
PUI O
磡石灣
SAN SHEK WAN
水口
SHUI HAU
長沙
CHEUNG SHA
鹹田
HAM TIN
石鼓洲
SHEK KWU CHAU
位置圖 LOCATION PLAN
比例 SCALE 1 : 150 000

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

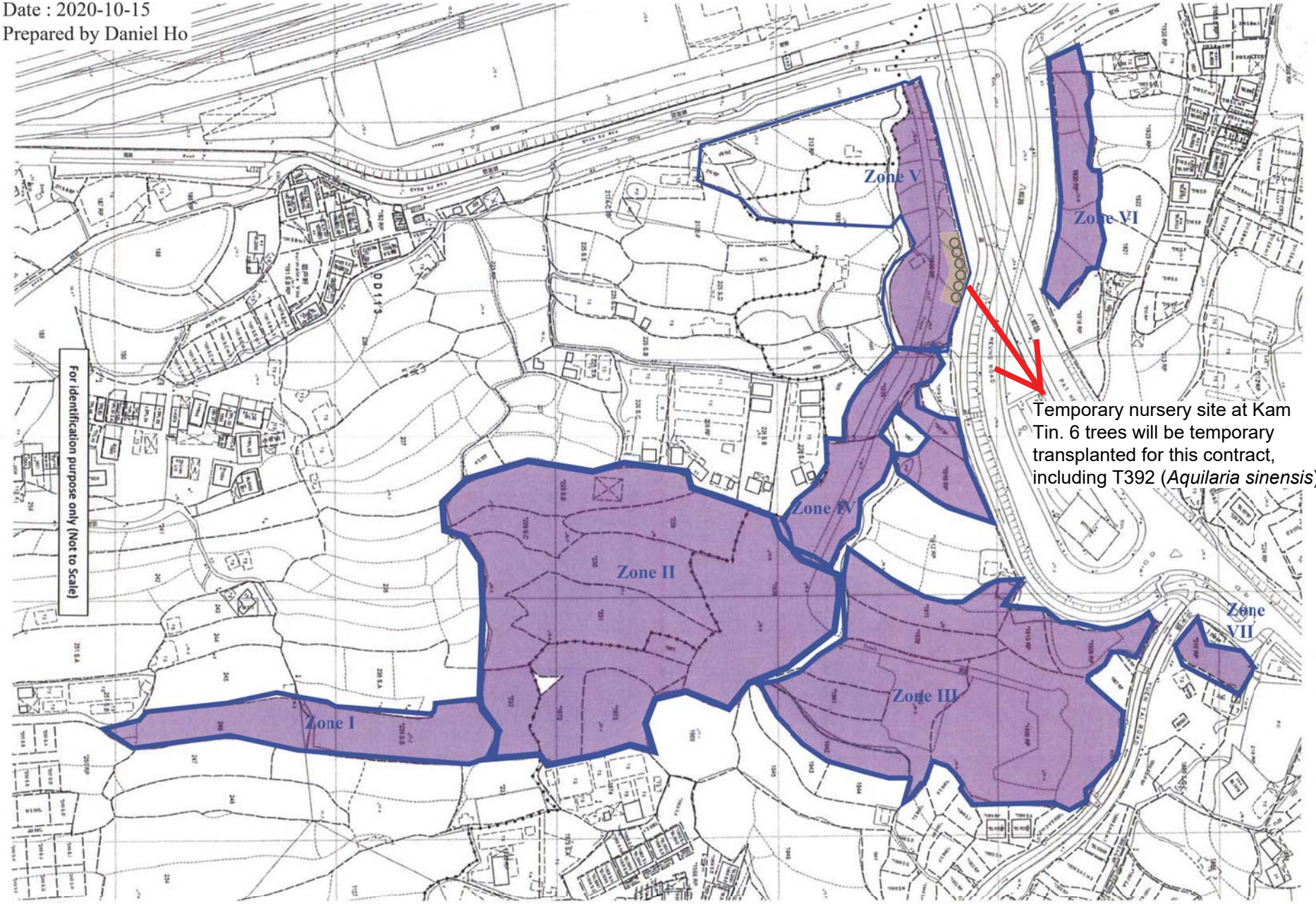
File: T:\GIS\CONTRACT\0227541\Mxd\Ecology\0227541_Habitat_8.mxd
Date: 16/8/2016

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

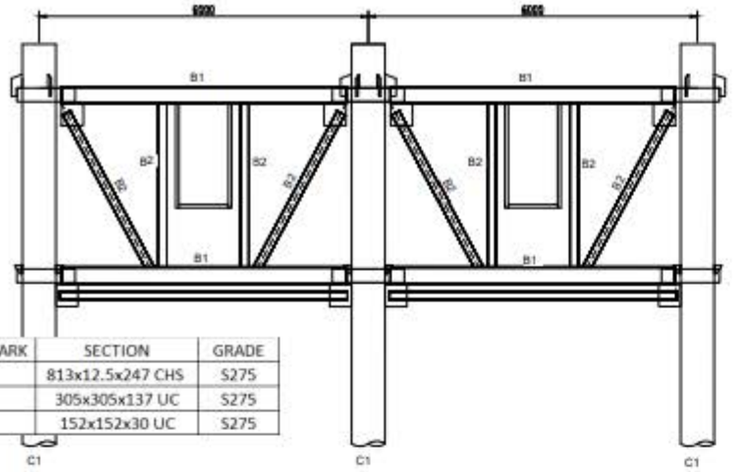
Check : Ho Tat Pui, Daniel	Scale : N.T.S.	Rev.
Ref: C3109/22/TGD0164	Date : 10 January 2022	00

Figure 2.7

Typical Details of Proposed Silt Curtain

Stage 1 & Stage 2

Marine supporting platform & HDD works



MEMBER MARK	SECTION	GRADE
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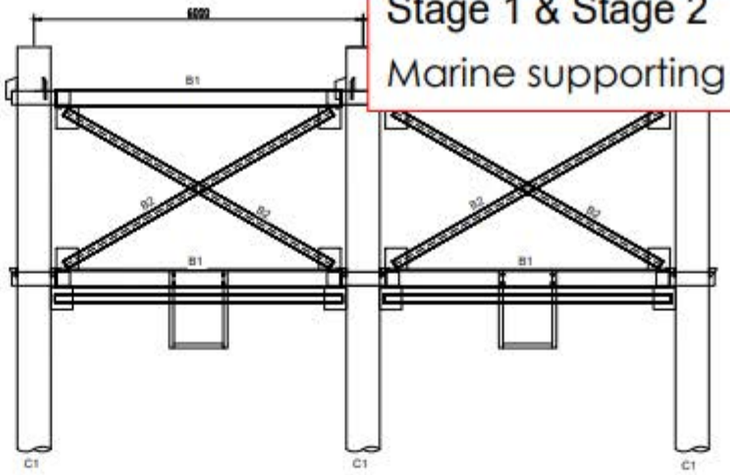
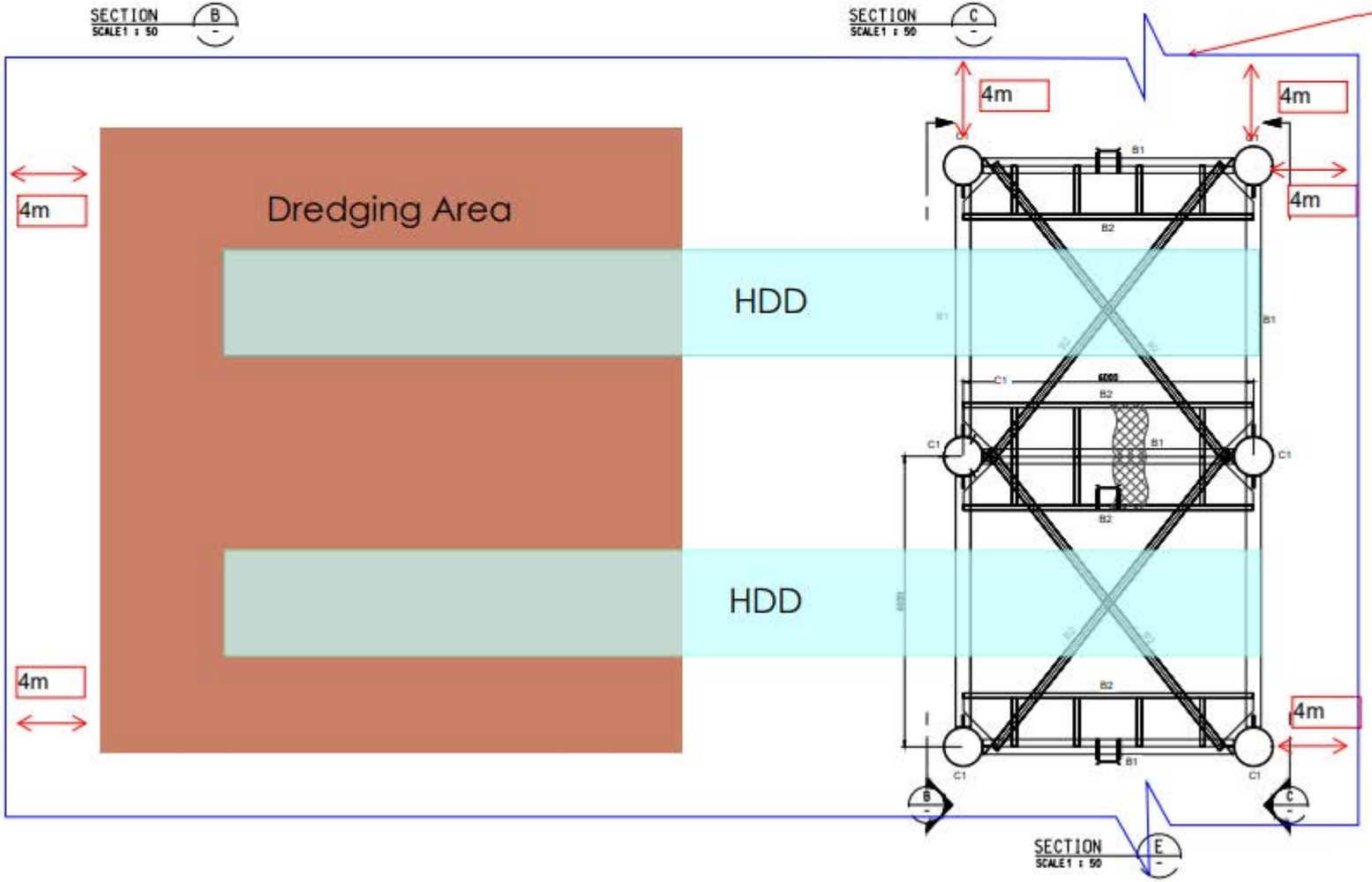
B1	305x305x137 UC	S275
B2	152x152x30 UC	S275



SECTION B
SCALE1 : 50

SECTION C
SCALE1 : 50



SECTION E
SCALE1 : 50

Contract No. DC/2020/02
CONSTRUCTION OF SAN SHEK WAN SEWAGE TREATMENT WORKS, ASSOCIATED SUBMARINE OUTFALL AND PUI O SEWERAGE WORKS

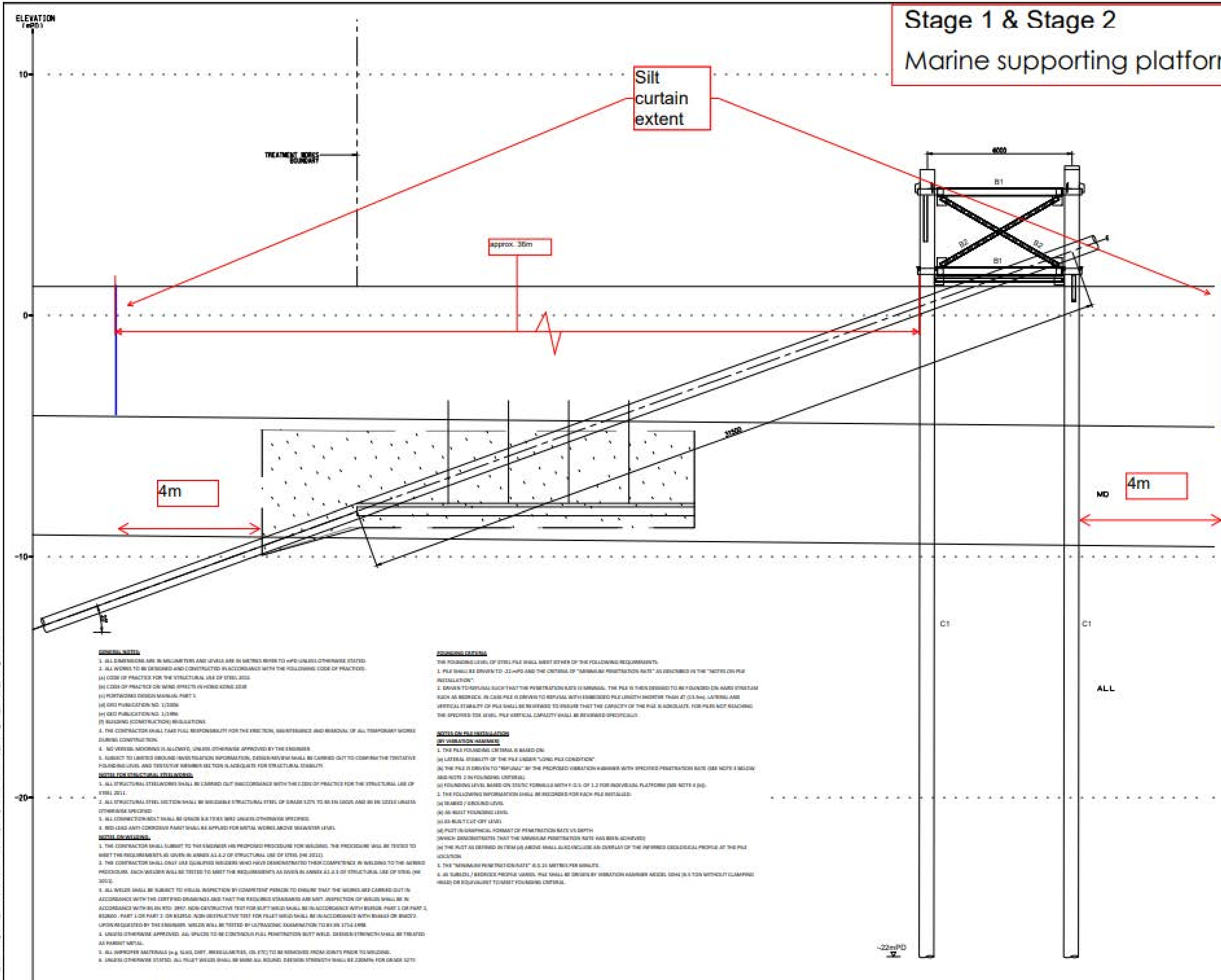
DETAILS OF HDD TEMPORARY STEEL SCAFFOLD (SEA SIDE)

Project Manager's Representative: binnies
Contractor: 群利-俊和聯營體 KL-CW JV
Supported by: ATKINS

Drawing no.	Rev.
CJ2103DC1-SK-001	-
Drawn By: JC	Checked By: FT	Approved By: JC
Scale: 1 : 50	Status: -

Stage 1 & Stage 2

Marine supporting platform & HDD works



SECTION OF DIFFUSER INSTALLTION A
SCALE 1 : 75

Rev.	Description	By	Date

Project Manager's Representative: binnies

Contractor: 群利-俊和聯營體 KL-CW JV

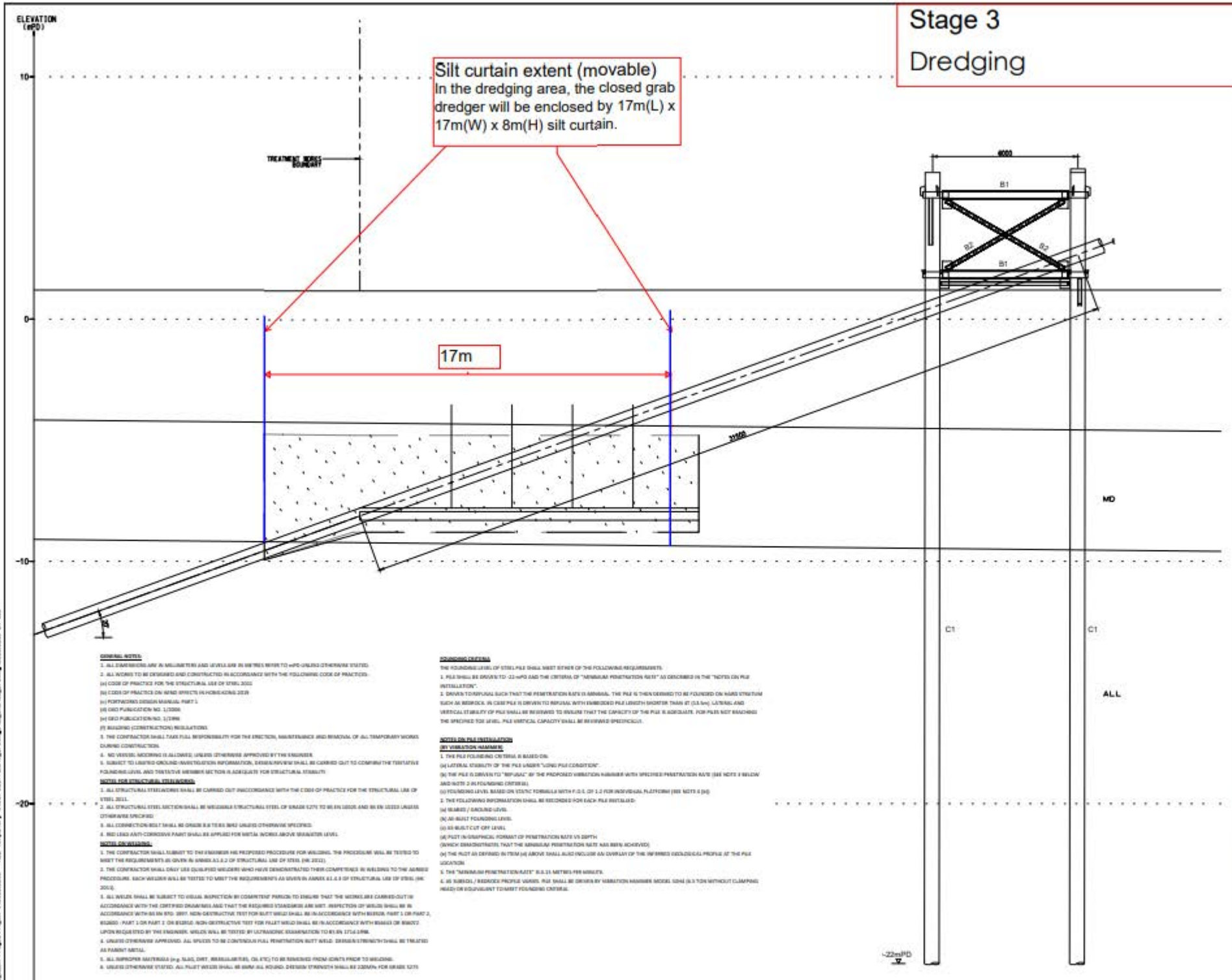
Supported by: ATKINS

Project title:
Contract No. DC/2020/02
CONSTRUCTION OF SAN SHEK WAN SEWAGE TREATMENT WORKS, ASSOCIATED SUBMARINE OUTFALL AND PUI O SEWERAGE WORKS

Drawing title:
TEMPORARY CONNECTION AT TIE-IN POINT OF SUBMARINE OUTFALL

Drawing no.	CJ2103DC1-SK-002	Rev.	-
Drawn By	JC	Checked By	FT
Approved By	JC	Scale	1 : 75
Status	-		

Stage 3
Dredging



SECTION OF DIFFUSER INSTALLTION (A)
SCALE1 : 75

GENERAL NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METRES REFER TO mPD UNLESS OTHERWISE STATED.
2. ALL WORKS TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING CODE OF PRACTICES:
(a) CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011
(b) CODE OF PRACTICE ON WIND EFFECTS IN HONG KONG 2019
(c) FORTWORKS DESIGN MANUAL PART 1
(d) GEO PUBLICATION NO. 1/2006
(e) GEO PUBLICATION NO. 1/1996
(f) BUILDING (CONSTRUCTION) REGULATIONS.
3. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR THE ERECTION, MAINTENANCE AND REMOVAL OF ALL TEMPORARY WORKS DURING CONSTRUCTION.
4. NO VESSEL MOORING IS ALLOWED, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. SUBJECT TO LIMITED GROUND INVESTIGATION INFORMATION, DESIGN REVIEW SHALL BE CARRIED OUT TO CONFIRM THE TENTATIVE FOUNDING LEVEL AND TENTATIVE MEMBER SECTION IS ADEQUATE FOR STRUCTURAL STABILITY.

NOTES FOR STRUCTURAL STEELWORKS:
1. ALL STRUCTURAL STEELWORKS SHALL BE CARRIED OUT INACCORDANCE WITH THE CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.
2. ALL STRUCTURAL STEEL SECTION SHALL BE WELDABLE STRUCTURAL STEEL OF GRADE S275 TO BS EN 10025 AND BS EN 10210 UNLESS OTHERWISE SPECIFIED.
3. ALL CONNECTION BOLT SHALL BE GRADE 8.8 TO BS 3692 UNLESS OTHERWISE SPECIFIED.
4. RED LEAD ANTI-CORROSIVE PAINT SHALL BE APPLIED FOR METAL WORKS ABOVE SPLASH ZONE LEVEL.

NOTES ON WELDING:
1. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER HIS PROPOSED PROCEDURE FOR WELDING. THE PROCEDURE WILL BE TESTED TO MEET THE REQUIREMENTS AS GIVEN IN ANNEX A3.3.2 OF STRUCTURAL USE OF STEEL (HK 2011).
2. THE CONTRACTOR SHALL ONLY USE QUALIFIED WELDERS WHO HAVE DEMONSTRATED THEIR COMPETENCE IN WELDING TO THE AGREED PROCEDURE. EACH WELDER WILL BE TESTED TO MEET THE REQUIREMENTS AS GIVEN IN ANNEX A3.4.3 OF STRUCTURAL USE OF STEEL (HK 2011).
3. ALL WELDS SHALL BE SUBJECT TO VISUAL INSPECTION BY COMPETENT PERSON TO ENSURE THAT THE WORKS ARE CARRIED OUT IN ACCORDANCE WITH THE CERTIFIED DRAWINGS AND THAT THE REQUIRED STANDARDS ARE MET. INSPECTION OF WELDS SHALL BE IN ACCORDANCE WITH BS EN 970: 1997. NON-DESTRUCTIVE TEST FOR BUTT WELD SHALL BE IN ACCORDANCE WITH BS3923, PART 1 OR PART 2, 6520(3) - PART 1 OR PART 2 OR BS2910. NON-DESTRUCTIVE TEST FOR FILLET WELD SHALL BE IN ACCORDANCE WITH BS4331 OR BS6072 UPON REQUESTED BY THE ENGINEER. WELDS WILL BE TESTED BY ULTRASONIC EXAMINATION TO BS EN 1714:1998.
4. UNLESS OTHERWISE APPROVED, ALL SPLICES TO BE CONTINOUS FULL PENETRATION BUTT WELD. DESIGN STRENGTH SHALL BE TREATED AS PARENT METAL.
5. ALL IMPROPER MATERIALS (e.g. SLAG, DIRT, BRASS, LUBRITIES, OIL ETC) TO BE REMOVED FROM JOINTS PRIOR TO WELDING.
6. UNLESS OTHERWISE STATED, ALL FILLET WELDS SHALL BE 6MM ALL ROUND. DESIGN STRENGTH SHALL BE 220MPa FOR GRADE S275

FOUNDING CRITERIA
THE FOUNDING LEVEL OF STEEL PILE SHALL MEET EITHER OF THE FOLLOWING REQUIREMENTS.
1. PILE SHALL BE DRIVEN TO -22 mPD AND THE CRITERIA OF "MINIMUM PENETRATION RATE" AS DESCRIBED IN THE "NOTES ON PILE INSTALLATION".
2. DRIVEN TO REFUSAL SUCH THAT THE PENETRATION RATE IS MINIMAL. THE PILE IS THEN DEEMED TO BE FOUNDED ON HARD STRATUM SUCH AS BEDROCK. IN CASE PILE IS DRIVEN TO REFUSAL WITH EMBEDDED PILE LENGTH SHORTER THAN 6T (3.5m), LATERAL AND VERTICAL STABILITY OF PILE SHALL BE REVIEWED TO ENSURE THAT THE CAPACITY OF THE PILE IS ADEQUATE. FOR PILES NOT REACHING THE SPECIFIED TOE LEVEL, PILE VERTICAL CAPACITY SHALL BE REVIEWED SPECIFICALLY.

NOTES ON PILE INSTALLATION
(B) VIBRATION HAMMER
1. THE PILE FOUNDING CRITERIA IS BASED ON:
(a) LATERAL STABILITY OF THE PILE UNDER "LONG PILE CONDITION".
(b) THE PILE IS DRIVEN TO "REFUSAL" BY THE PROPOSED VIBRATION HAMMER WITH SPECIFIED PENETRATION RATE (SEE NOTE 4 BELOW AND NOTE 2 IN FOUNDING CRITERIA).
(c) FOUNDING LEVEL BASED ON STATIC FORMULA WITH F.O.S. OF 1.2 FOR INDIVIDUAL PLATFORM (SEE NOTE 4 (b))
2. THE FOLLOWING INFORMATION SHALL BE RECORDED FOR EACH PILE INSTALLED:
(a) SEABED / GROUND LEVEL
(b) AS-BUILT FOUNDING LEVEL
(c) AS-BUILT CUT OFF LEVEL
(d) PILOT IN GRAPHICAL FORMAT OF PENETRATION RATE VS DEPTH
(WHICH DEMONSTRATES THAT THE MINIMUM PENETRATION RATE HAS BEEN ACHIEVED)
(e) THE PILOT AS DEFINED IN ITEM (d) ABOVE SHALL ALSO INCLUDE AN OVERLAY OF THE INFERRED GEOLOGICAL PROFILE AT THE PILE LOCATION
3. THE "MINIMUM PENETRATION RATE" IS 0.11 METRES PER MINUTE.
4. AS SUBSOIL / BEDROCK PROFILE VARIES, PILE SHALL BE DRIVEN BY VIBRATION HAMMER MODEL S266 (8.5 TON WITHOUT CLAMPING HEAD) OR EQUIVALENT TO MEET FOUNDING CRITERIA.

Rev.	Description	By	Date

Project Manager's Representative: binnies
Contractor: 群利-俊和聯營體 KL-CW JV
Supported by: ATKINS

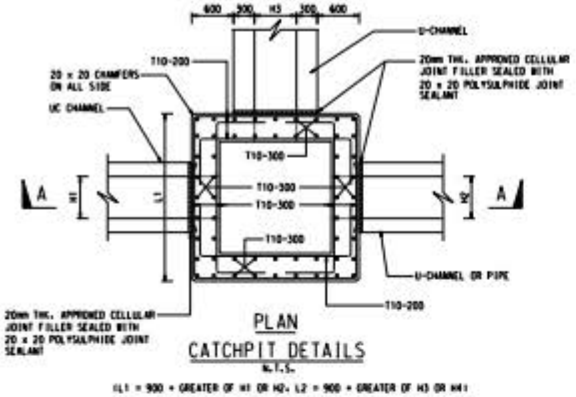
Project title
Contract No. DC/2020/02
CONSTRUCTION OF SAN SHEK WAN SEWAGE TREATMENT WORKS, ASSOCIATED SUBMARINE OUTFALL AND PUI O SEWERAGE WORKS

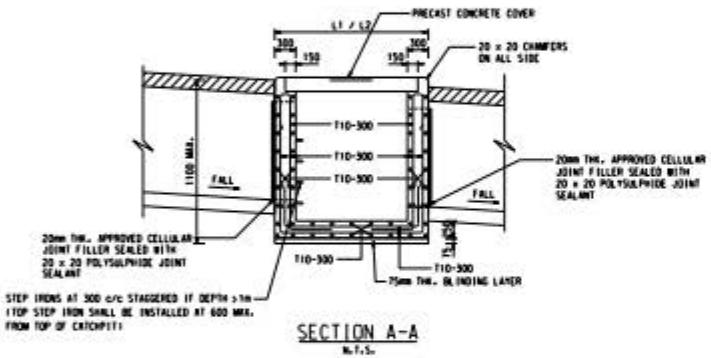
Drawing title
TEMPORARY CONNECTION AT TIE-IN POINT OF SUBMARINE OUTFALL

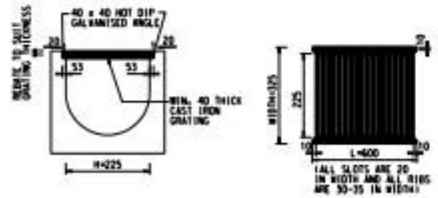
Drawing no.	Rev.
CJ2103DC1-SK-002	-

Drawn By	Checked By	Approved By
JC	FT	JC

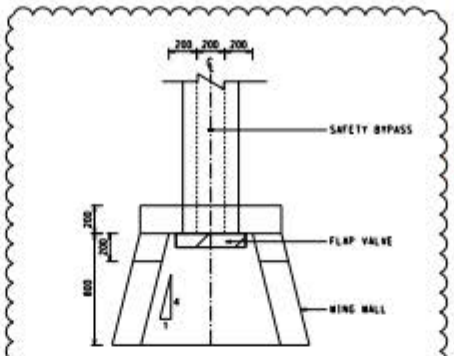
Scale: 1 : 75
Status: -

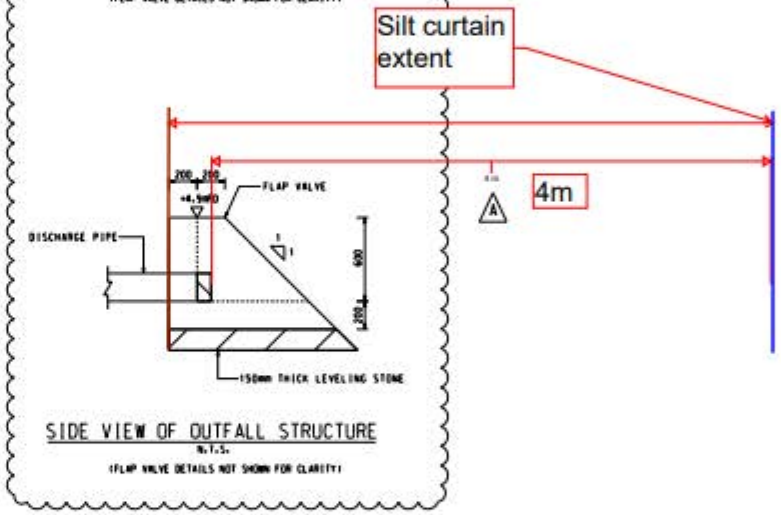






TYPICAL SECTION OF U-CHANNEL WITH CAST IRON GRATING
N.T.S.





Stage 4

Construction and installation of pre-cast emergency outfall

NOTES:

6. FOR LOCATION OF OUTFALL, REFERS TO DRAWING NO.178711/B&V/SSWSTW/SR/001.
7. CONCRETE FOR OUTFALL STRUCTURE SHALL BE GRADE 50/20 WITH DESIGN MIX PREPARED IN ACCORDANCE WITH CEDD'S PUBLICATIONS, "RECOMMENDED SPECIFICATION FOR REINFORCED CONCRETE IN MARINE ENVIRONMENT" AND CONCRETE COVER TO MAIN REINFORCEMENT SHALL BE 75mm. THE CLASS OF EXTERNAL FINISH SHALL BE F2 FOR FORMED FINISH AND U3 FOR UNFORMED FINISH AND INTERNAL FINISH SHALL BE F4 FOR FORMED FINISH AND U5 FOR UNFORMED FINISH.
8. FLAP VALVE SHALL BE OF A PROPRIETY BRAND PRODUCT. THE CONTRACTOR SHALL SUBMIT THE PARTICULARS OF THE FLAP VALVE, PREPARE NECESSARY SHOP DRAWINGS AND PROPOSE THE EXACT LOCATION OF THE FLAP VALVE FOR APPROVAL BY THE ENGINEER.
9. REINFORCEMENT FOR THE OUTFALL SHALL BE A252 MESH PLACED CENTRALLY.
10. ALIGNMENT OF THE DRAINAGE OUTLET SHOULD BE DETERMINED ON SITE BY PROJECT MANAGER TO SUIT ACTUAL SITE CONDITIONS.

Revision	Date	Description	Initial
A	10/20	TENDER ADDENDUM NO.3	BL

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

Approved

Contract no.
DC/2006/02

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

Drawing title
TYPICAL DRAINAGE DETAILS

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

Revision
A

Scale
N.T.S.

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
柏威工程顧問有限公司

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

CERTIFICATE OF CALIBRATION

Certificate No.: 23CA1110 03 **Page** 1 **of** 2

Item tested

Description:	Sound Level Meter (Type 1)	Microphone	Preamp
Manufacturer:	Larson Davis	PCB	PCB
Type/Model No.:	LxT1	377B02	PRMLxT1L
Serial/Equipment No.:	0004797	171529	028019
Adaptors used:	-	-	-

Item submitted by

Customer Name:	Lam Environmental Service Limited.
Address of Customer:	-
Request No.:	-
Date of receipt:	10-Nov-2023

Date of test: 14-Nov-2023

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	28-Aug-2024	CIGISMEC
Signal generator	DS 360	33873	31-Jan-2024	CEPREI

Ambient conditions

Temperature:	21 ± 1 °C
Relative humidity:	60 ± 10 %
Air pressure:	1010 ± 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:** 15-Nov-2023 **Company Chop:** SOILS & MATERIALS ENGINEERING CO., 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.

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.: 23CA1110 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:** 14-Nov-2023

Checked by: Chan Yuk Yiu **Date:** 15-Nov-2023

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
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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.	0004797	Date	14-Nov-2023
Microphone type:	377B02	Serial No.	171529		
Preamp type:	PRMLxT1L	Serial No.	028019	Report:	23CA1110 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	13.2	dB
Noise level in C weighting	17.5	dB
Noise level in Lin	23.3	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	43.9	43.9	0.7	-0.1	-0.1
39.0	38.9	38.9	0.7	-0.1	-0.1
34.0	33.9	33.9	0.7	-0.1	-0.1
33.0	32.9	32.9	0.7	-0.1	-0.1

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SMECLab

Sound level meter type:	LxT1	Serial No.	0004797	Date	14-Nov-2023
Microphone type:	377B02	Serial No.	171529		
Preamp type:	PRMLxT1L	Serial No.	028019	Report:	23CA1110 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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SMECLab

Sound level meter type:	LxT1	Serial No.	0004797	Date	14-Nov-2023
Microphone type:	377B02	Serial No.	171529		
Preamp type:	PRMLxT1L	Serial No.	028019	Report:	23CA1110 03

1995.0	94.0	93.8	93.9	1.0	1.0	0.1
3981.0	94.0	93.2	93.2	1.0	1.0	0.0
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	118.4	2.0	-0.6

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SMECLab

Sound level meter type:	LxT1	Serial No.	0004797	Date	14-Nov-2023
Microphone type:	377B02	Serial No.	171529		
Preamp type:	PRMLxT1L	Serial No.	028019	Report:	23CA1110 03

Negative polarities:

Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
119.0	119.0	118.4	2.0	-0.6

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	117.0+6.6	117.0	116.6	0.5	-0.4

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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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.	0004797	Date	14-Nov-2023
Microphone type:	377B02	Serial No.	171529		
Preamp type:	PRMLxT1L	Serial No.	028019	Report:	23CA1110 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
115.7	114.7	111.7	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
122.4	121.4	81.4	81.4	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	78.1	1.0	1.0	0.2
8000	92.9	91.7	1.5	3.0	-1.2

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

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HOKLAS 028 CAL

CERTIFICATE OF CALIBRATION

Certificate No.: 24CA0205 01-02 **Page:** 1 **of** 2

Item tested

Description:	Acoustical Calibrator (Class 1)
Manufacturer:	Larson Davis
Type/Model No.:	CAL200
Serial/Equipment No.:	13128
Adaptors used:	-

Item submitted by

Curstomer:	Lam Environmental Services Ltd.
Address of Customer:	-
Request No.:	-
Date of receipt:	05-Feb-2024

Date of test: 06-Feb-2024

Reference equipment used in the calibration

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

Ambient conditions

Temperature:	21 ± 1 °C
Relative humidity:	55 ± 10 %
Air pressure:	1005 ± 5 hPa

Test specifications

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:** 07-Feb-2024 **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.

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HOKLAS 028 CAL

CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 24CA0205 01-02 **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	93.74	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 = 0.016 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 = 999.4 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 = 0.8%**

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:** 06-Feb-2024

Checked by: Chan Yuk Yiu **Date:** 07-Feb-2024

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

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD090011
Date of Issue : 05 September 2024

PART A - CUSTOMER INFORMATION

Lam Environmental Services Limited

PART B - SAMPLE INFORMATION

Name of Equipment :	YSI Professional Plus Multi Parameters
Manufacturer :	YSI
Serial Number :	17G100383
Date of Received :	03 September 2024
Date of Calibration :	04 September 2024
Date of Next Calibration :	03 December 2024
Request No. :	D-BD090011

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500-H^+ B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure
Dissolved oxygen	APHA 23e 4500-O G (Membrane Electrode Method)
Salinity	APHA 21e 2520 B

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.01	0.01	Satisfactory
7.42	7.45	0.03	Satisfactory
10.01	10.02	0.01	Satisfactory

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

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
19.0	18.0	-1.0	Satisfactory
27.0	26.0	-1.0	Satisfactory
36.5	35.5	-1.0	Satisfactory

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

(3) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
6.87	6.38	-0.49	Satisfactory
5.58	5.48	-0.10	Satisfactory
3.66	3.54	-0.12	Satisfactory
0.56	0.44	-0.12	Satisfactory

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

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED SIGNATORY:

LEE Chun-ning
Assistant Manager

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD090011
Date of Issue : 05 September 2024

(4) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.98	-0.20	Satisfactory
20	20.15	0.75	Satisfactory
30	30.96	3.20	Satisfactory

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

Remark(s)

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

·The results relate only to the calibrated equipment as received

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

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

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

--- END OF REPORT ---

FT Laboratories Ltd
科達測檢試驗所有限公司

Calibration Report

Calibration No.	:	60408001-H15E3501
Laboratory	:	FT LaboratoriesLtd.
Address	:	Lot No. DD77 Section 1552 S.Ass 1RP, Ng Chow South Road, Ping Che, Fanling, New Territories
Telephone	:	(852) 2758 4861
Facsimile	:	(852) 2758 8962
Customer	:	**Lam Environmental Services Limited**
Address	:	**19/F., Remex Centre, 42 Wong Chuk Hang Road, Hong Kong**
Item Calibrated	:	Name/Description: Turbidimeter
		Manufacturer: Shanghai Xinrui Instruments & Meters co.,Ltd
		Model no: WGZ-3B
		Equipment no.: 1807063
Reference Standard / Major Measurement Equipment	:	C23/01 under NCRM reference material number GBW(E) 120125. Standard Solution of Formazine Turbidity
Calibration Method	:	In-house calibration method according to Ref: APHA22nd ed 213 OB
Date of item received	:	15 Aug.,2024
Date of Calibration	:	20 Aug.,2024
Location of Calibration	:	Calibration Laboratory of FT LaboratoriesLtd.
Calibration Conditions		
Temperature	:	20 ± 3 °C
Relative Humidity	:	30% to 80%
Test Results	:	The test results are detailed in the subsequent page(s).

Certified by : _____ Date of Issue: 20 AUG 2024

☑ CHAN Joseph Nicolas (Senior Technical Engineer)

Notes: **(1) The above equipment has been calibrated against standards which are traceable to internationally recognized standards.**

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

FT Laboratories Ltd
科達測檢試驗所有限公司

Calibration Report

Calibration No. : 60408001-H15E3501

Results

Turbidity of standard solution used (NTU)	Measured value (NTU)	Error (%)
0	0	---
4	3.99	-0.25%
10	9.97	-0.30%
40	39.80	-0.50%
100	99.50	-0.50%
400	399.0	-0.25%
1000	997.0	-0.30%

Remarks:

(A) Each reported result is the mean of three measurements on UUT (unit-under-test).

(B) The values given in this Calibration Report only relate to the unit-under-test and the values measured at the time of the test. Any uncertainties quoted will not include allowances for the environmental changes, variation and shock during transportation, or the capability of any other laboratory to repeat the measurement.

(C) Before calibration, UUT and reference equipment was placed in the laboratory for at least one hour.

< End of Report >

Calibrated by: CH Cheung
Date: 20 Aug.,2024

Checked by: Joseph Chan
Date: 20 AUG 2024

Appendix 4.2

Impact Monitoring Schedule for Reporting Month and Next Month

CONTRACT NO: SD 15/2022
OUTLYING ISLAND SEWERAGE STAGE 2 – SOUTH LANTAU SEWAGE WORKS –
ENVIRONMENTAL TEAM SERVICES (2023 – 2024)
Environmental Monitoring Schedule (Rev. 4)
Oct 2024

Note:
*Mid-tide time during daylight period of the ebb/flood tide is scheduled in consideration of navigation safety and to capture major marine works operation.
Marine water quality monitoring will be started from 7 Oct 2024 (2 week prior to commencement of marine works on 21 Oct 2024)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29 Sep	30 Sep WQM was temporary suspension due to no marine works untill further notice ~~Mid-Ebb 11:11~~ ~~Mid-Flood 17:52~~	01 Oct	02 Oct WQM was temporary suspension due to no marine works untill further notice ~~Mid-Ebb 12:17~~ ~~Mid-Flood 18:24~~	03 Oct Noise Monitoring	04 Oct WQM was temporary suspension due to no marine works untill further notice ~~Mid-Ebb 13:16~~ ~~Mid-Flood 7:12~~	05 Oct
06 Oct	07 Oct Mid-Ebb 14:41* Mid-Flood 9:12	08 Oct	09 Oct Noise Monitoring Mid-Ebb 07:00* Mid-Flood 16:00*	10 Oct	11 Oct	12 Oct Mid-Ebb 7:25 Mid-Flood 16:00*
13 Oct	14 Oct Mid-Ebb 9:32 Mid-Flood 16:51	15 Oct	16 Oct Noise Monitoring Mid-Ebb 11:12 Mid-Flood 17:36	17 Oct	18 Oct Mid-Ebb 12:42 Mid-Flood 18:34	19 Oct
20 Oct	21 Oct Mid-Ebb 14:55* Mid-Flood 9:36	22 Oct	23 Oct Noise Monitoring Mid-Ebb 6:50* Mid-Flood 13:30*	24 Oct	25 Oct Mid-Ebb 7:11 Mid-Flood 14:00*	26 Oct
27 Oct	28 Oct Mid-Ebb 9:56 Mid-Flood 16:40	29 Oct	30 Oct Noise Monitoring Mid-Ebb 11:13 Mid-Flood 17:15	31 Oct	01 Nov Mid-Ebb 12:18 Mid-Flood 17:49	02 Nov

CONTRACT NO: SD 15/2022
OUTLYING ISLAND SEWERAGE STAGE 2 – SOUTH LANTAU SEWAGE WORKS –
ENVIRONMENTAL TEAM SERVICES (2023 – 2024)
Tentative Impact Marine Water Quality Monitoring Schedule (Rev. 4)
Nov 2024

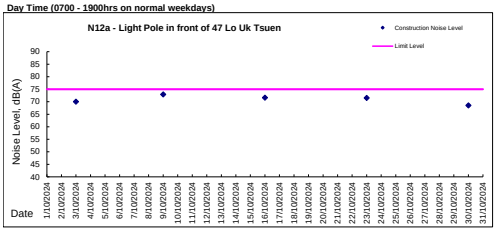
Note:
*Mid-tide time during daylight period of the ebb/flood tide is scheduled in consideration of navigation safety and to capture major marine works operation.

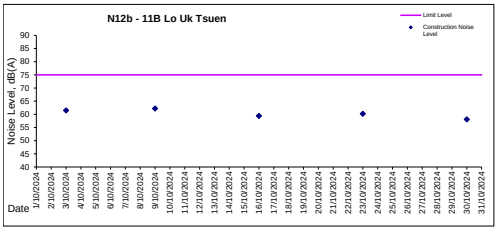
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27 Oct	28 Oct Mid-Ebb 9:56 Mid-Flood 16:40	29 Oct	30 Oct Mid-Ebb 11:13 Mid-Flood 17:15	31 Oct	01 Nov Mid-Ebb 12:18 Mid-Flood 17:49	02 Nov
03 Nov	04 Nov Mid-Ebb 13:44 Mid-Flood 8:27	05 Nov	06 Nov Mid-Ebb 15:00* Mid-Flood 09:00*	07 Nov	08 Nov Mid-Ebb 06:45* Mid-Flood 16:30*	09 Nov
10 Nov	11 Nov Mid-Ebb 7:53 Mid-Flood 15:24	12 Nov	13 Nov Mid-Ebb 9:57 Mid-Flood 16:20	14 Nov	15 Nov Mid-Ebb 11:38 Mid-Flood 17:21	16 Nov
17 Nov	18 Nov Mid-Ebb 13:56* Mid-Flood 8:42	19 Nov	20 Nov Mid-Ebb 15:00* Mid-Flood 10:00	21 Nov	22 Nov Mid-Ebb 6:55* Mid-Flood 15:00*	23 Nov
24 Nov	25 Nov Mid-Ebb 8:02 Mid-Flood 15:12	26 Nov	27 Nov Mid-Ebb 9:54 Mid-Flood 15:58	28 Nov	29 Nov Mid-Ebb 11:12 Mid-Flood 16:32	30 Nov

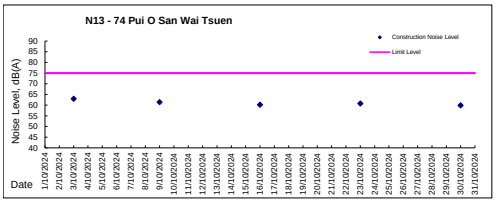
Appendix 4.3

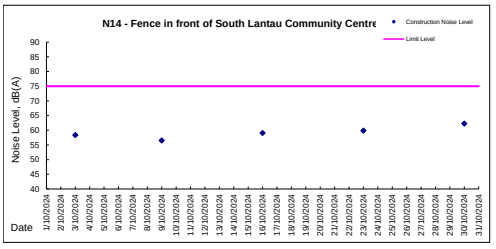
Noise Monitoring Results and Graphical Presentations

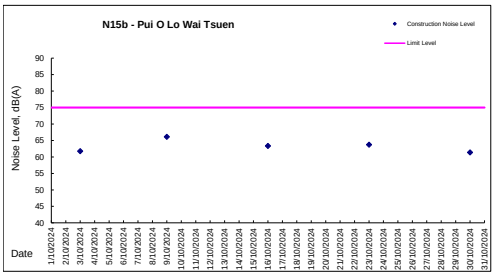
Graphic Presentation of Noise Monitoring Result
Day Time (0700 - 1900hrs on normal weekdays)

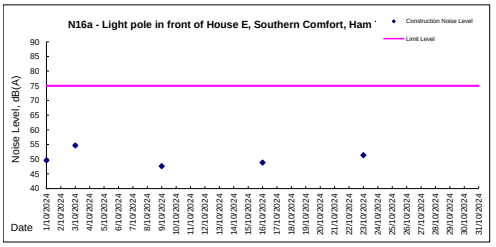


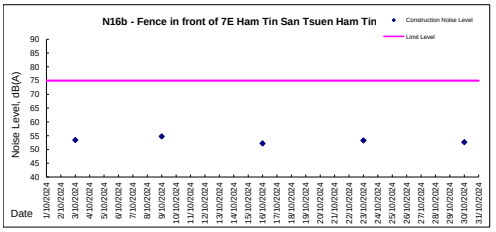


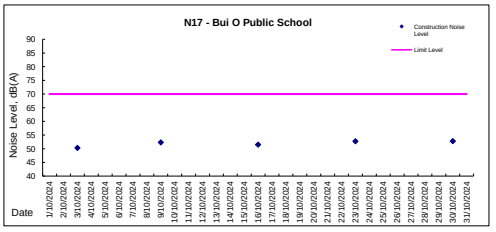












Noise Monitoring Result

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)					
3 Oct 2024	Sunny	0.0	94.1	14:15	69.7	72.6	61.3	70.0	73.3	<Baseline Level	75	N/A	Traffic
				14:20	68.6	71.2	62.6						
				14:25	65.4	68.6	60.4						
				14:30	69.3	72.3	61.2						
				14:35	71.2	73.4	63.2						
				14:40	72.6	75.5	65.3						
9 Oct 2024	Sunny	0.0	94.1	14:15	71.2	73.6	60.4	72.9	73.3	<Baseline Level	75	N/A	Traffic
				14:20	73.6	76.2	58.9						
				14:25	70.4	72.8	59.3						
				14:30	75.2	77.6	62.6						
				14:35	73.1	75.4	63.5						
				14:40	72.2	74.3	59.6						
16 Oct 2024	Sunny	0.0	94.1	16:00	71.2	73.2	57.7	71.6	73.3	<Baseline Level	75	N/A	Traffic
				16:05	71.3	74.0	58.5						
				16:10	69.5	71.7	56.1						
				16:15	72.8	75.5	60.9						
				16:20	71.9	74.3	59.3						
				16:25	72.2	74.3	57.8						
23 Oct 2024	Sunny	0.0	94.1	16:20	71.0	73.3	58.8	71.5	73.3	<Baseline Level	75	N/A	Traffic
				16:25	71.5	73.8	59.2						
				16:30	69.4	71.5	57.4						
				16:35	72.9	75.0	61.2						
				16:40	71.7	74.0	60.2						
				16:45	71.8	74.0	58.5						
30 Oct 2024	Sunny	0.0	94.1	14:15	68.9	70.7	56.3	68.5	73.3	<Baseline Level	75	N/A	Traffic
				14:20	67.2	69.2	58.6						
				14:25	66.5	68.5	54.5						
				14:30	68.5	70.2	59.2						
				14:35	69.1	71.1	55.5						
				14:40	70.0	71.6	56.8						

* N/A refers to no major construction noise observed during noise monitoring

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)					
3 Oct 2024	Sunny	0.0	94.1	13:40	59.3	62.3	55.5	61.5	76.8	<Baseline Level	75	N/A	Traffic
				13:45	58.6	61.8	54.3						
				13:50	60.3	63.3	53.2						
				13:55	63.1	66.6	53.1						
				14:00	64.5	67.2	52.7						
				14:05	59.7	62.1	51.4						
9 Oct 2024	Sunny	0.0	94.1	13:40	66.2	69.7	58.2	62.2	76.8	<Baseline Level	75	N/A	Traffic
				13:45	55.9	62.6	57.2						
				13:50	62.0	67.3	57.5						
				13:55	63.5	66.5	56.8						
				14:00	58.6	61.4	59.1						
				14:05	59.3	62.3	58.3						
16 Oct 2024	Sunny	0.0	94.1	13:35	61.8	65.3	56.1	59.4	76.8	<Baseline Level	75	N/A	Traffic
				13:40	56.0	60.8	55.3						
				13:45	58.3	63.3	55.2						
				13:50	60.2	63.5	55.1						
				13:55	58.1	61.4	56.5						
				14:00	59.9	63.4	55.0						
23 Oct 2024	Sunny	0.0	94.1	14:50	62.6	65.9	56.8	60.2	76.8	<Baseline Level	75	N/A	Traffic
				14:55	56.9	61.4	56.3						
				15:00	59.1	63.4	55.9						
				15:05	60.7	63.9	56.1						
				15:10	59.1	61.8	57.3						
				15:15	60.7	64.1	56.2						
30 Oct 2024	Sunny	0.0	94.1	13:40	57.5	60.6	55.3	58.1	76.8	<Baseline Level	75	Lifting machine	Traffic
				13:45	56.6	59.7	54.2						
				13:50	55.3	58.4	54.0						
				13:55	56.6	59.7	55.1						
				14:00	58.7	61.8	54.3						
				14:05	61.2	64.3	53.2						

* N/A refers to no major construction noise observed during noise monitoring

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)					
3 Oct 2024	Sunny	0.0	94.1	11:30	63.4	66.8	53.6	63.0	73.6	<Baseline Level	75	N/A	Demolation works at Restaurant
				11:35	62.5	66.9	54.5						
				11:40	61.8	65.6	55.5						
				11:45	60.9	64.1	55.6						
				11:50	62.7	66.2	56.7						
				11:55	65.3	69.2	52.3						
9 Oct 2024	Sunny	0.0	94.1	11:30	64.6	69.3	55.2	61.4	73.6	<Baseline Level	75	N/A	Demolation works at Restaurant
				11:35	55.9	57.4	53.4						
				11:40	62.0	66.6	53.9						
				11:45	61.8	66.1	54.8						
				11:50	60.3	64.7	55.3						
				11:55	59.4	65.0	53.6						
16 Oct 2024	Sunny	0.0	94.1	14:10	62.1	67.4	52.2	60.2	73.6	<Baseline Level	75	N/A	Demolation works at Restaurant
				14:15	57.6	59.9	51.8						
				14:20	59.7	63.5	51.2						
				14:25	58.7	62.6	52.8						
				14:30	60.4	64.9	53.4						
				14:35	61.1	65.3	51.8						
23 Oct 2024	Sunny	0.0	94.1	14:10	62.6	67.6	53.2	60.8	73.6	<Baseline Level	75	N/A	Demolation works at Restaurant
				14:15	58.5	60.6	53.1						
				14:20	60.0	63.8	52.6						
				14:25	59.5	63.4	54.0						
				14:30	61.1	64.9	54.5						
				14:35	61.7	65.6	53.2						
30 Oct 2024	Sunny	0.0	94.1	11:30	59.6	63.9	51.1	59.9	73.6	<Baseline Level	75	N/A	Demolation works at Restaurant
				11:35	59.8	63.2	51.8						
				11:40	57.4	60.4	50.6						
				11:45	56.3	59.3	52.9						
				11:50	61.2	64.1	53.1						
				11:55	62.3	65.4	52.1						

* N/A refers to no major construction noise observed during noise monitoring

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)					
3 Oct 2024	Sunny	0.0	94.1	10:55	58.6	60.2	43.6	58.4	62.2	<Baseline Level	75	Fan, Excavating	Traffic
				11:00	58.6	60.3	40.9						
				11:05	58.7	61.2	40.8						
				11:10	57.4	59.6	43.2						
				11:15	57.3	59.7	42.5						
				11:20	59.2	60.8	42.6						
9 Oct 2024	Sunny	0.0	94.1	10:55	59.4	62.5	43.0	56.5	62.2	<Baseline Level	75	Excavating	Traffic
				11:00	57.6	60.5	43.6						
				11:05	54.7	60.3	44.9						
				11:10	55.5	58.9	45.9						
				11:15	56.1	59.3	45.8						
				11:20	53.1	56.6	44.3						
16 Oct 2024	Sunny	0.0	94.1	14:35	61.0	62.7	51.0	59.1	62.2	<Baseline Level	75	Excavating	Traffic
				14:40	59.2	61.1	51.3						
				14:45	57.9	61.5	52.3						
				14:50	59.4	61.9	53.2						
				14:55	58.7	60.8	53.0						
				15:00	57.2	59.9	51.7						
23 Oct 2024	Sunny	0.0	94.1	9:50	61.8	63.4	52.3	59.9	62.2	<Baseline Level	75	Excavating	Traffic
				9:55	59.9	61.8	52.8						
				10:00	58.9	62.2	53.4						
				10:05	60.2	62.0	54.4						
				10:10	59.4	61.5	54.2						
				10:15	58.2	60.6	53.3						
30 Oct 2024	Sunny	0.0	94.1	10:55	62.5	63.2	61.2	62.3	62.2	45	75	Excavating	Traffic
				11:00	61.4	61.7	61.1						
				11:05	61.8	62.6	61.2						
				11:10	63.5	64.3	61.8						
				11:15	61.5	61.9	62.1						
				11:20	62.6	63.5	61.5						

* N/A refers to no major construction noise observed during noise monitoring

Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

Location: N15b - Pole in front of 7A Pui O Lo Wai Tsuen

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)					
3 Oct 2024	Sunny	0.0	94.1	15:00	61.2	65.3	50.8	61.8	70.7	<Baseline Level	75	N/A	Traffic
				15:05	62.3	65.8	52.8						
				15:10	60.2	63.4	51.9						
				15:15	60.9	63.9	52.6						
				15:20	62.7	65.1	52.4						
				15:25	62.7	65.3	51.9						
9 Oct 2024	Sunny	0.0	94.1	15:00	69.3	70.3	67.1	66.1	70.7	<Baseline Level	75	N/A	Traffic
				15:05	60.7	62.0	54.1						
				15:10	69.1	72.7	62.5						
				15:15	65.4	67.8	63.2						
				15:20	63.5	64.6	54.3						
				15:25	60.8	62.3	55.3						
16 Oct 2024	Sunny	0.0	94.1	14:05	64.7	68.1	59.0	63.4	70.7	<Baseline Level	75	N/A	Traffic
				14:10	62.2	63.2	52.3						
				14:15	64.8	69.3	57.1						
				14:20	62.9	65.5	57.3						
				14:25	62.7	63.2	51.8						
				14:30	61.9	64.0	52.8						
23 Oct 2024	Sunny	0.0	94.1	11:10	65.3	68.4	59.5	63.8	70.7	<Baseline Level	75	N/A	Traffic
				11:15	62.6	63.5	53.1						
				11:20	64.7	69.4	57.7						
				11:25	63.5	65.6	57.8						
				11:30	63.3	63.5	53.1						
				11:35	62.3	63.9	53.9						
30 Oct 2024	Sunny	0.0	94.1	15:00	59.7	64.5	51.6	61.4	70.7	<Baseline Level	75	N/A	Traffic
				15:05	63.6	63.8	51.8						
				15:10	59.4	63.8	51.9						
				15:15	60.3	62.6	51.6						
				15:20	61.2	61.9	51.3						
				15:25	62.6	64.6	51.7						

* N/A refers to no major construction noise observed during noise monitoring

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)					
3 Oct 2024	Sunny	0.0	94.1	9:45	50.0	53.1	46.5	49.7	68.1	<Baseline Level	75	N/A	Traffic
				9:50	51.2	53.2	46.8						
				9:55	48.8	52.2	47.2						
				10:00	47.6	50.3	48.9						
				10:05	49.3	52.8	49.5						
				10:10	50.2	51.9	46.3						
9 Oct 2024	Sunny	0.0	94.1	9:45	47.2	50.9	40.5	46.6	68.1	<Baseline Level	75	N/A	Traffic
				9:50	45.9	47.3	42.1						
				9:55	46.9	50.1	40.9						
				10:00	45.3	48.3	41.1						
				10:05	46.8	49.5	40.6						
				10:10	47.1	50.2	42.1						
16 Oct 2024	Sunny	0.0	94.1	13:30	47.0	50.6	39.1	47.7	68.1	<Baseline Level	75	N/A	Traffic
				13:35	45.3	47.9	40.4						
				13:40	49.8	52.8	41.0						
				13:45	47.2	50.1	40.3						
				13:50	47.7	50.3	40.3						
				13:55	47.8	51.7	40.6						
23 Oct 2024	Sunny	0.0	94.1	14:25	48.6	51.7	40.9	48.9	68.1	<Baseline Level	75	N/A	Traffic
				14:30	47.1	49.1	42.4						
				14:35	50.9	54.3	42.9						
				14:40	48.2	51.5	42.3						
				14:45	48.7	51.8	40.5						
				14:50	49.0	52.6	41.8						
30 Oct 2024	Sunny	0.0	94.1	9:45	49.7	52.8	42.0	51.4	68.1	<Baseline Level	75	N/A	Traffic
				9:50	48.1	51.1	42.4						
				9:55	54.5	57.7	44.6						
				10:00	51.3	54.3	43.2						
				10:05	50.7	53.2	40.5						
				10:10	51.2	54.6	42.3						

* N/A refers to no major construction noise observed during noise monitoring

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)					
3 Oct 2024	Sunny	0.0	94.1	10:20	51.2	53.2	46.0	53.4	68.5	<Baseline Level	75	N/A	Traffic
				10:25	53.5	56.8	48.3						
				10:30	55.5	58.6	46.2						
				10:35	51.3	54.2	46.8						
				10:40	53.5	57.3	47.1						
				10:45	53.8	57.8	46.9						
9 Oct 2024	Sunny	0.0	94.1	10:20	50.2	53.1	47.0	54.7	68.5	<Baseline Level	75	N/A	Traffic
				10:25	58.3	61.9	46.6						
				10:30	52.0	53.3	45.2						
				10:35	53.5	54.6	46.2						
				10:40	52.6	53.9	45.8						
				10:45	56.3	57.0	47.2						
16 Oct 2024	Sunny	0.0	94.1	14:43	52.5	53.1	43.1	52.2	68.5	<Baseline Level	75	N/A	Traffic
				14:48	52.7	56.4	42.6						
				14:53	49.5	52.5	41.1						
				14:58	50.5	53.1	42.0						
				15:03	52.0	54.2	42.4						
				15:08	54.2	55.7	43.0						
23 Oct 2024	Sunny	0.0	94.1	10:25	53.7	54.2	44.8	53.3	68.5	<Baseline Level	75	N/A	Traffic
				10:30	53.5	57.1	44.5						
				10:35	50.8	53.6	42.9						
				10:40	52.0	54.3	43.8						
				10:45	53.1	55.2	44.2						
				10:50	55.2	56.5	44.6						
30 Oct 2024	Sunny	0.0	94.1	10:20	56.1	54.4	42.7	52.6	68.5	<Baseline Level	75	N/A	Traffic
				10:25	48.4	51.5	42.1						
				10:30	49.3	54.0	40.6						
				10:35	50.2	53.2	41.3						
				10:40	53.3	55.3	42.5						
				10:45	53.4	55.0	42.6						

* N/A refers to no major construction noise observed during noise monitoring

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)					
3 Oct 2024	Sunny	0.0	94.1	13:00	49.7	52.3	48.3	50.3	62.3	<Baseline Level	70	N/A	Traffic
				13:05	50.6	52.3	47.3						
				13:10	51.3	53.5	48.9						
				13:15	49.8	52.1	46.5						
				13:20	49.9	50.9	49.0						
				13:25	50.2	52.6	47.3						
9 Oct 2024	Sunny	0.0	94.1	13:00	54.3	56.7	51.2	52.3	62.3	<Baseline Level	70	N/A	Traffic
				13:05	51.8	53.8	50.0						
				13:10	51.7	53.9	48.7						
				13:15	52.6	55.0	49.3						
				13:20	51.9	54.2	50.2						
				13:25	50.4	52.9	47.6						
16 Oct 2024	Sunny	0.0	94.1	15:10	53.0	54.8	49.5	51.5	62.3	<Baseline Level	70	N/A	Traffic
				15:15	51.6	53.2	49.3						
				15:20	50.0	52.1	48.0						
				15:25	50.7	53.0	47.9						
				15:30	52.6	55.2	50.9						
				15:35	49.9	52.7	48.0						
23 Oct 2024	Sunny	0.0	94.1	10:25	54.0	56.2	51.0	52.7	62.3	<Baseline Level	70	N/A	Traffic
				10:30	52.5	54.6	50.8						
				10:35	51.3	53.6	49.4						
				10:40	51.9	54.0	49.5						
				10:45	54.1	55.8	52.0						
				10:50	51.6	53.8	49.2						
30 Oct 2024	Sunny	0.0	94.1	13:00	53.0	54.8	50.6	52.7	62.3	<Baseline Level	70	N/A	Traffic
				13:05	52.9	54.5	50.8						
				13:10	50.0	52.3	50.3						
				13:15	51.2	53.1	49.3						
				13:20	55.3	57.0	53.2						
				13:25	52.1	54.6	50.6						

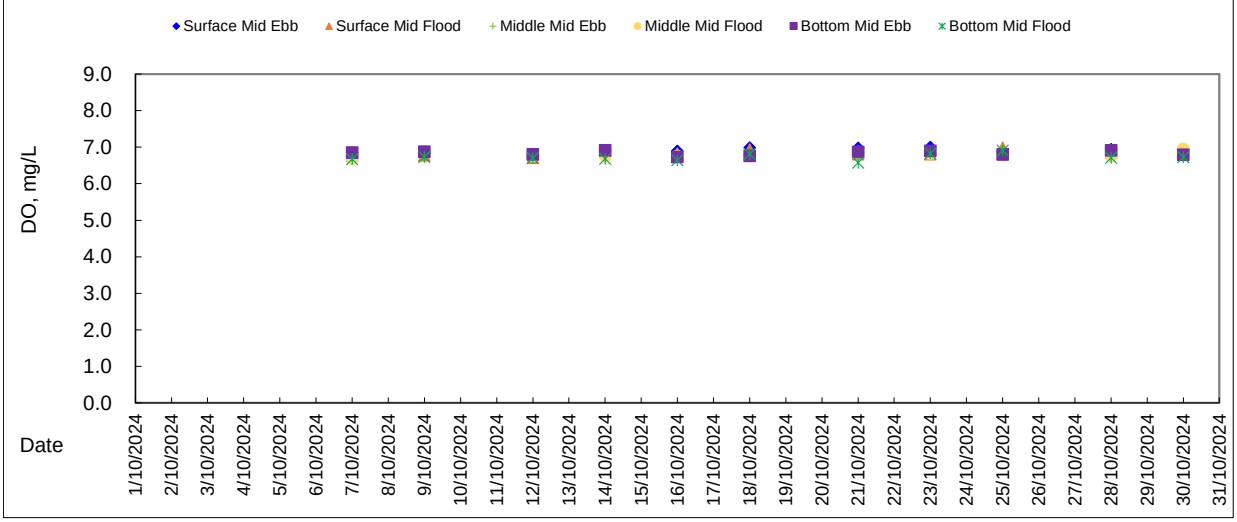
* N/A refers to no major construction noise observed during noise monitoring

Appendix 4.4

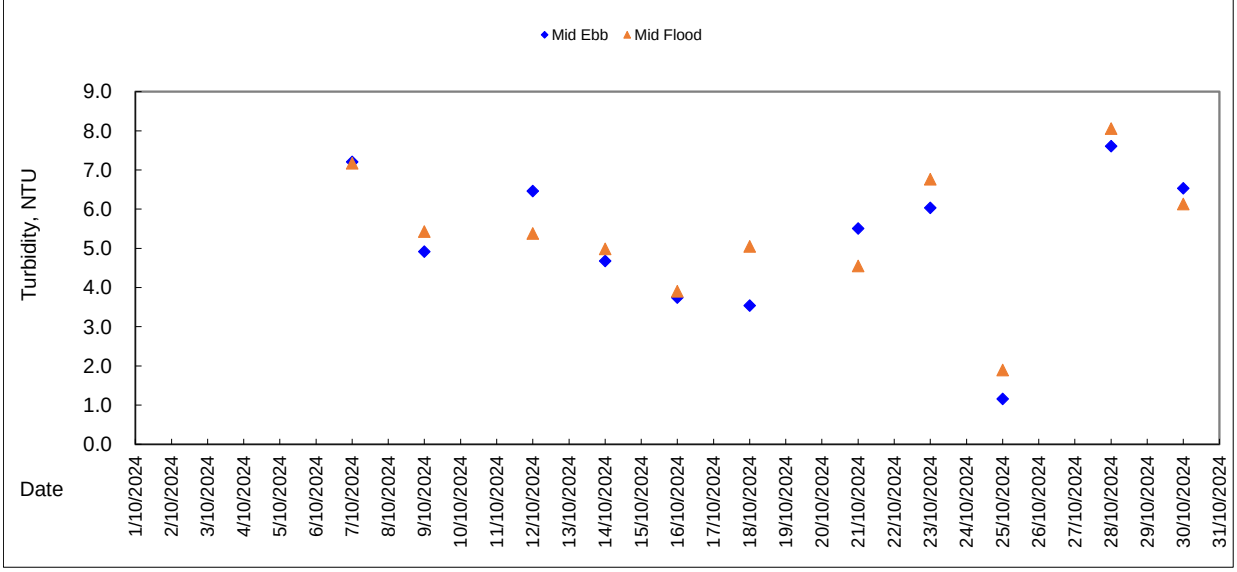
Marine Water Quality Monitoring Results and Graphical Presentations

Graphic Presentation of WQM Result

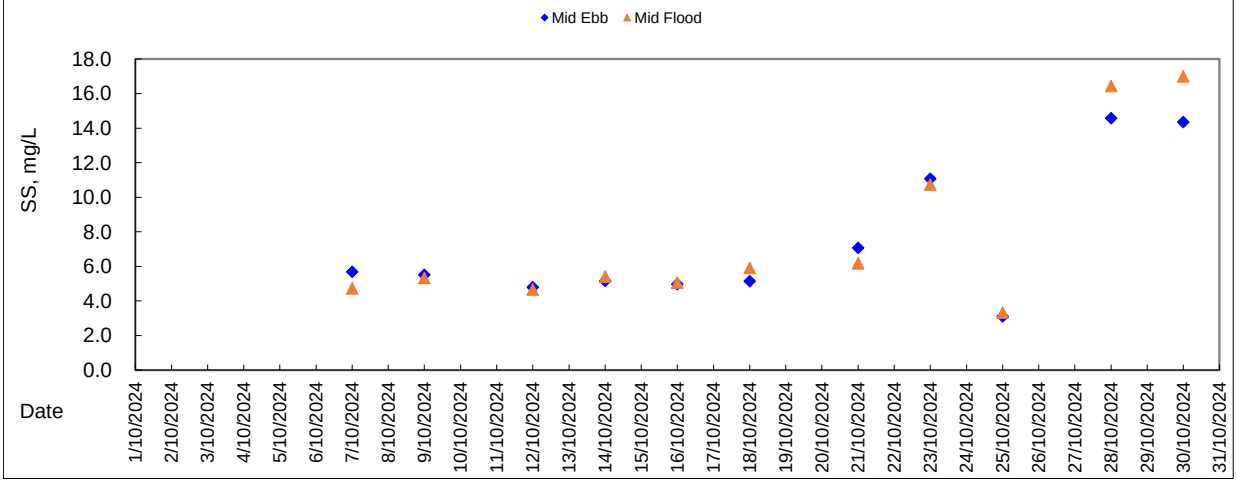
Station CE - DO



Station CE - Turbidity (Depth-average)

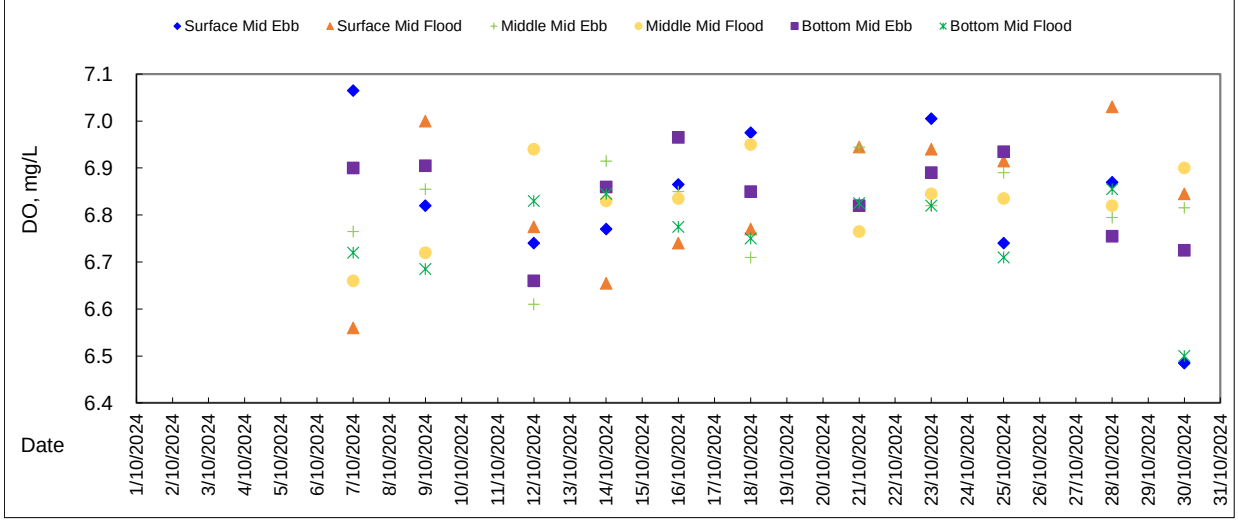


Station CE - Suspended Solid (Depth-average)

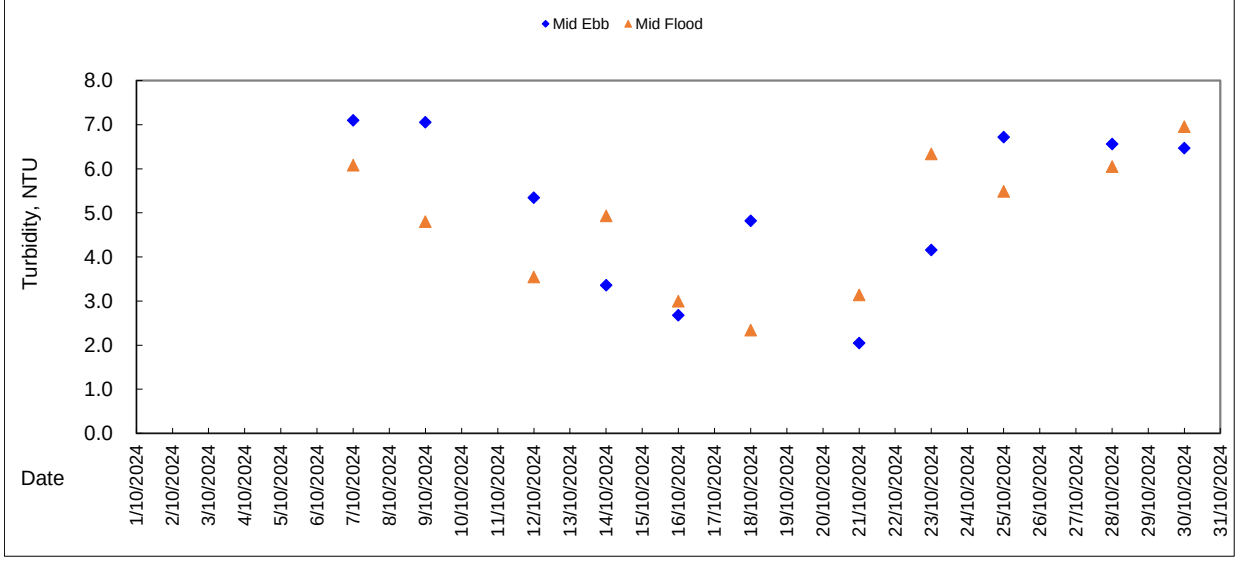


Graphic Presentation of WQM Result

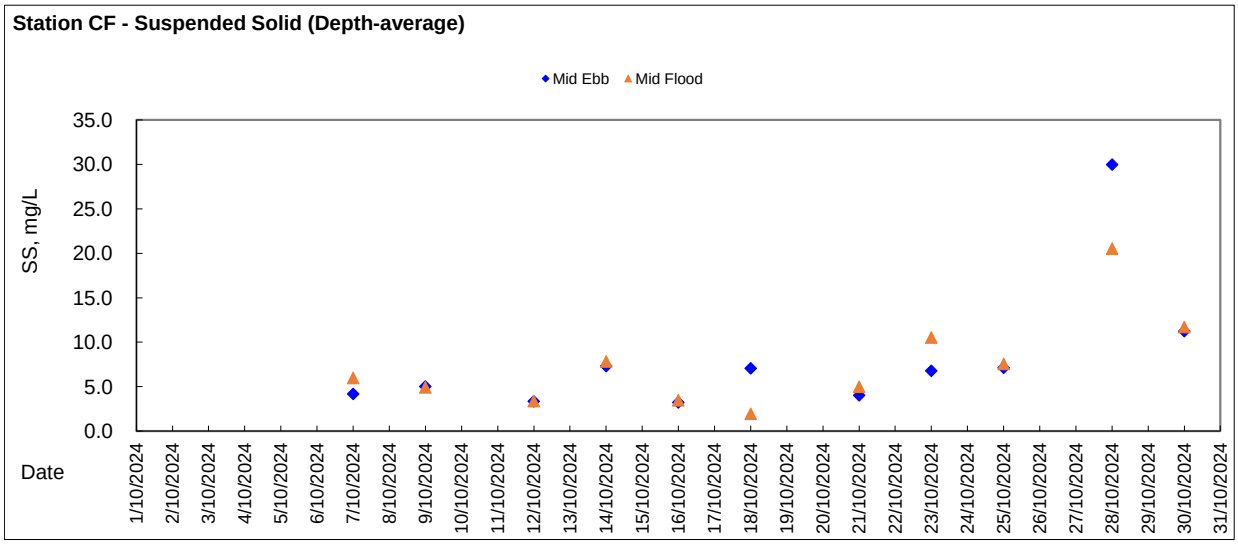
Station CF - DO



Station CF - Turbidity (Depth-average)

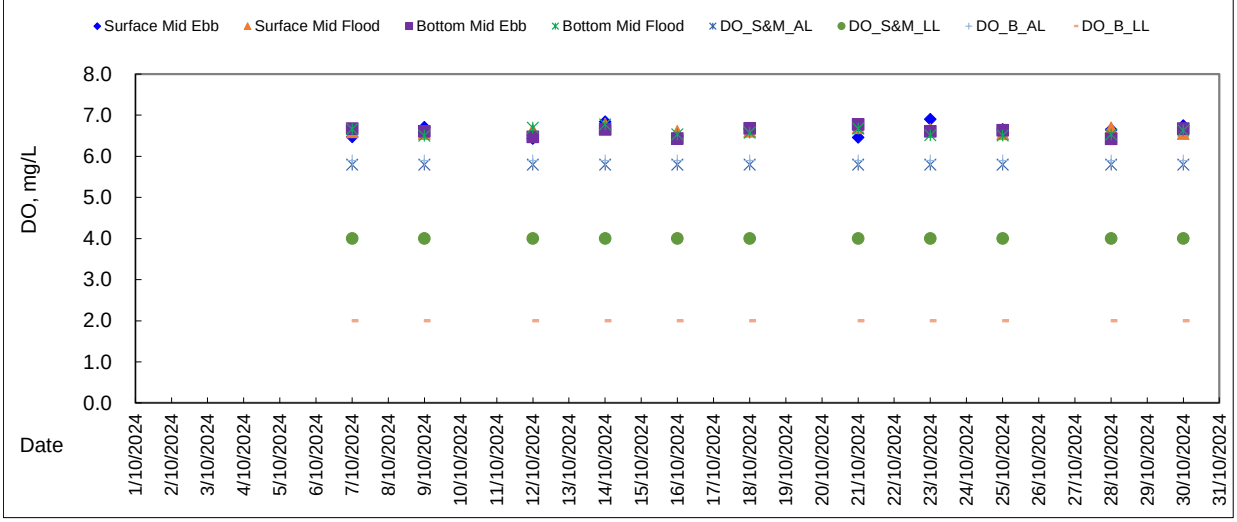


Station CF - Suspended Solid (Depth-average)

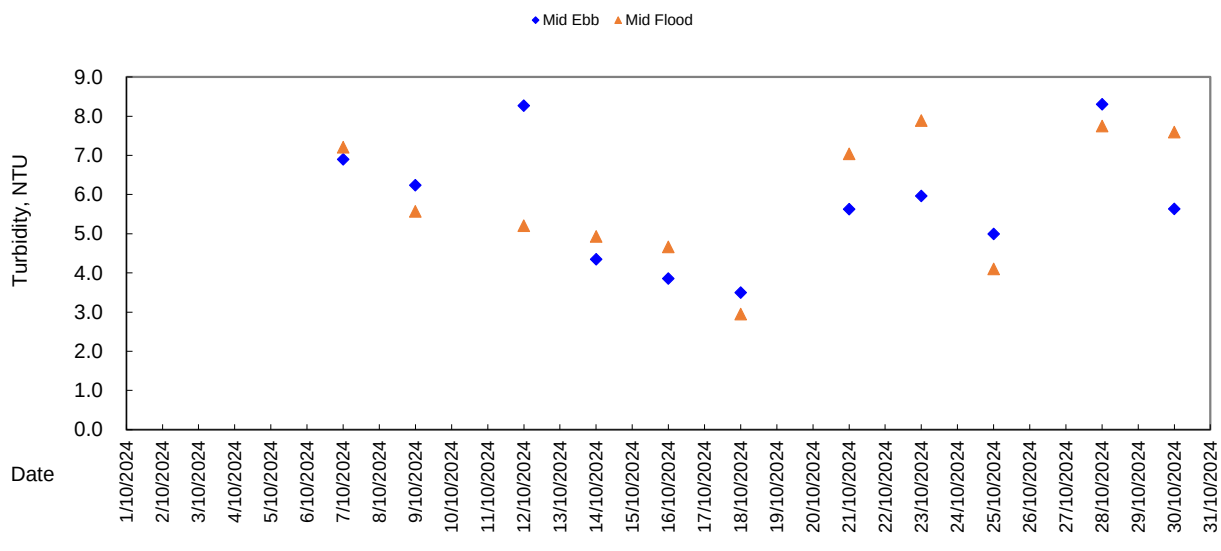


Graphic Presentation of WQM Result

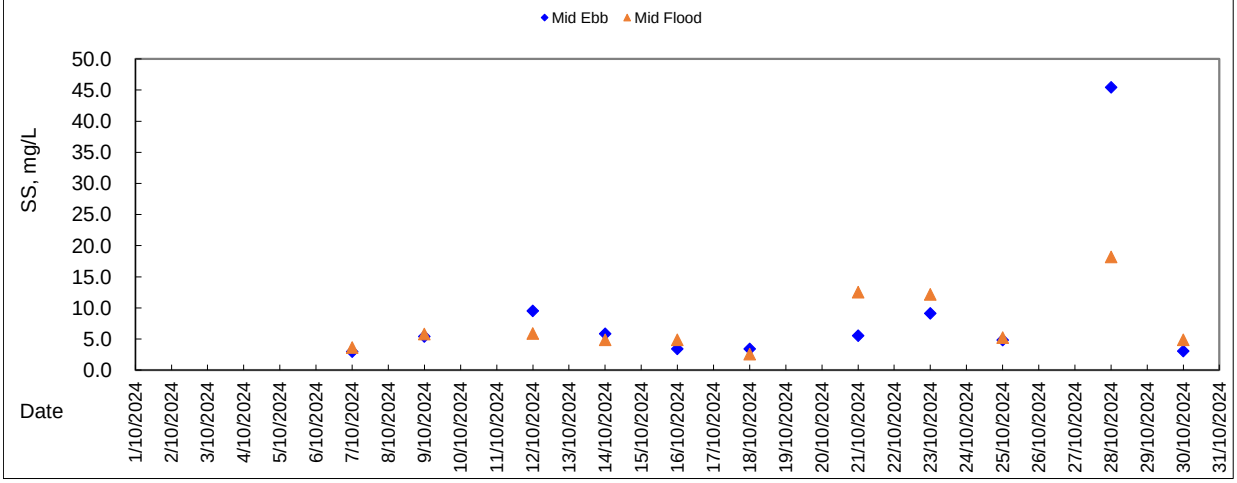
Station SR4 - DO



Station SR4 - Turbidity (Depth-average)

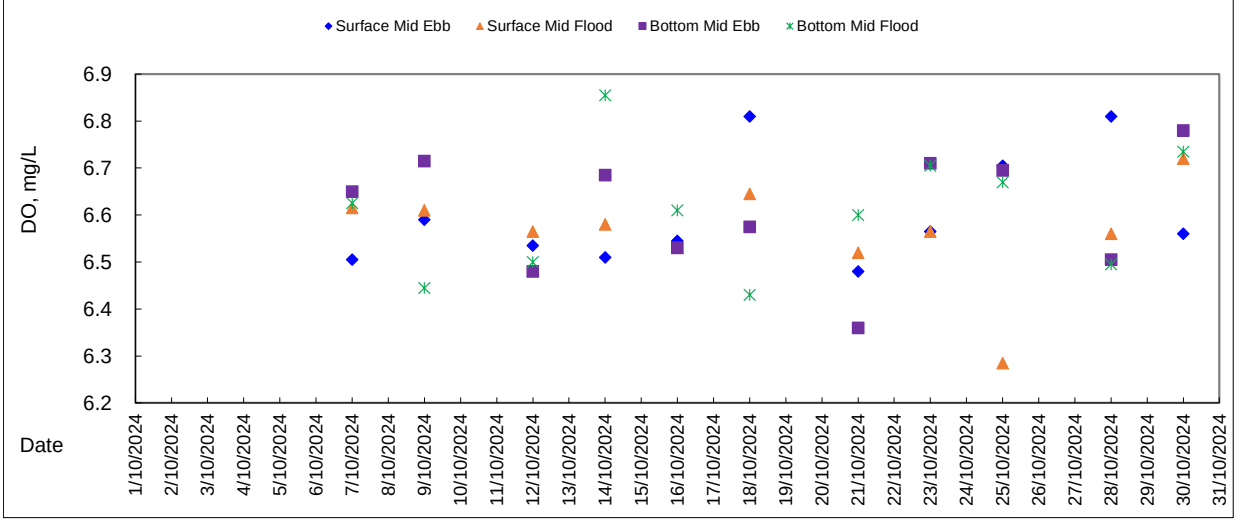


SR4- Suspended Solid (Depth-average)

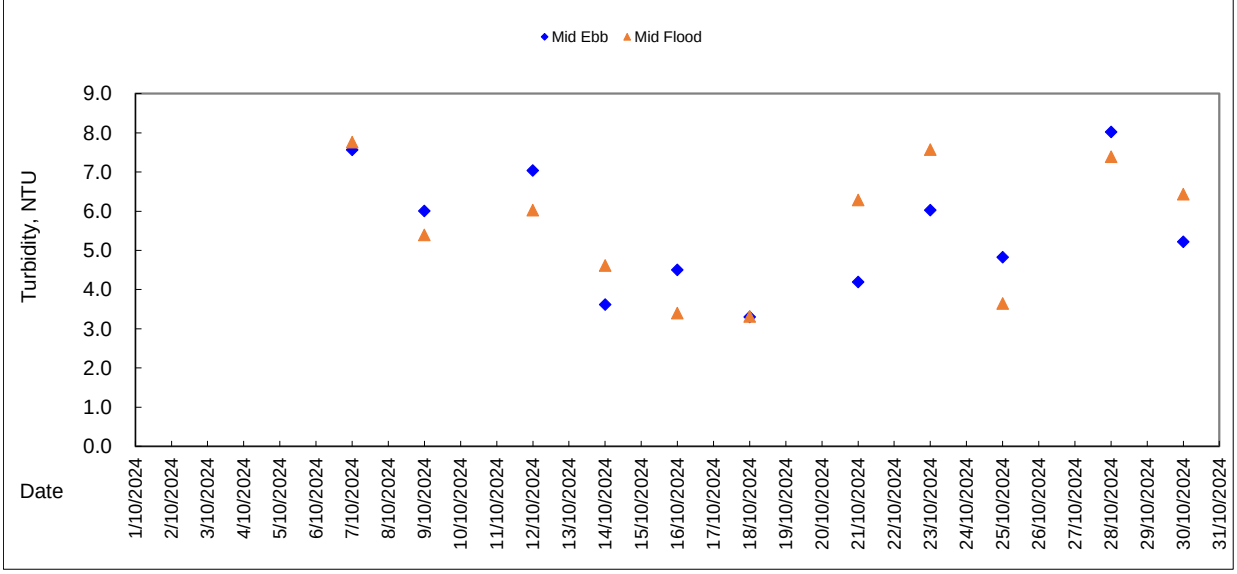


Graphic Presentation of WQM Result

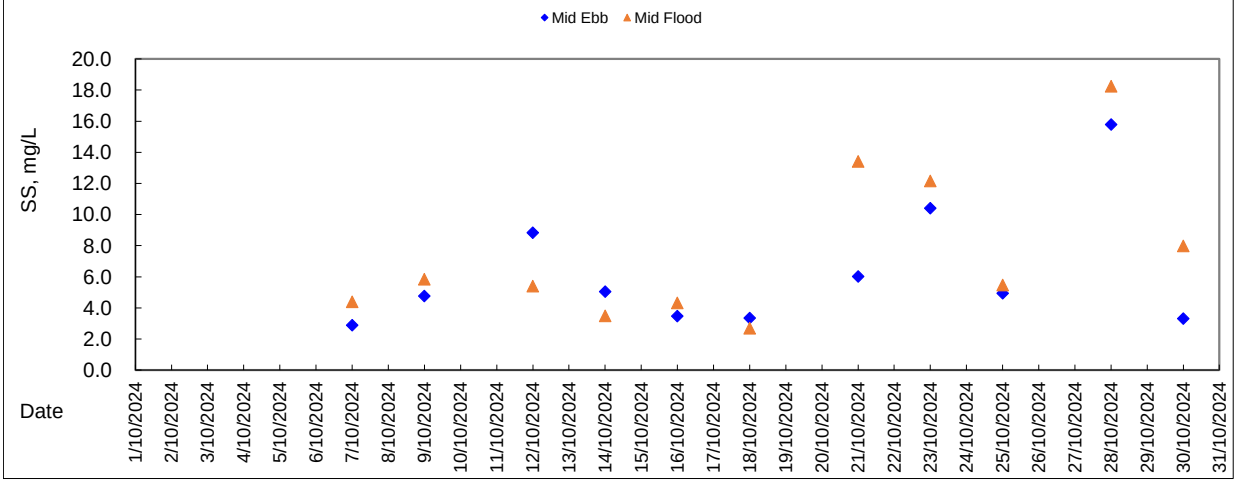
Station SR5 - DO



Station SR5 - Turbidity (Depth-average)

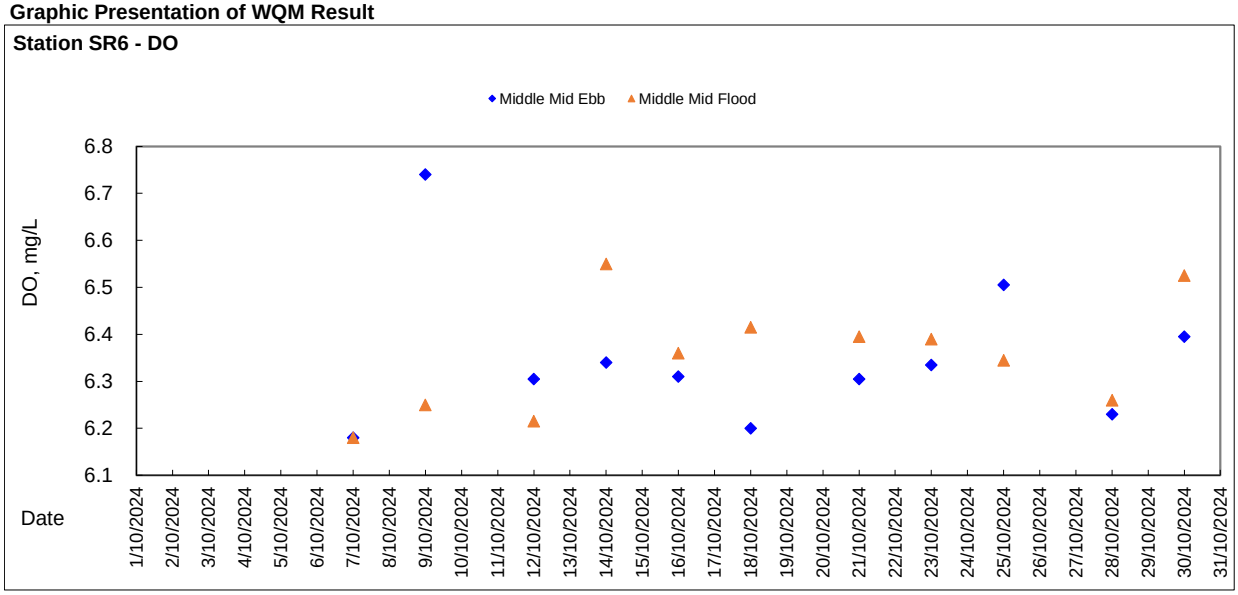


Station SR5 - Suspended Solid (Depth-average)

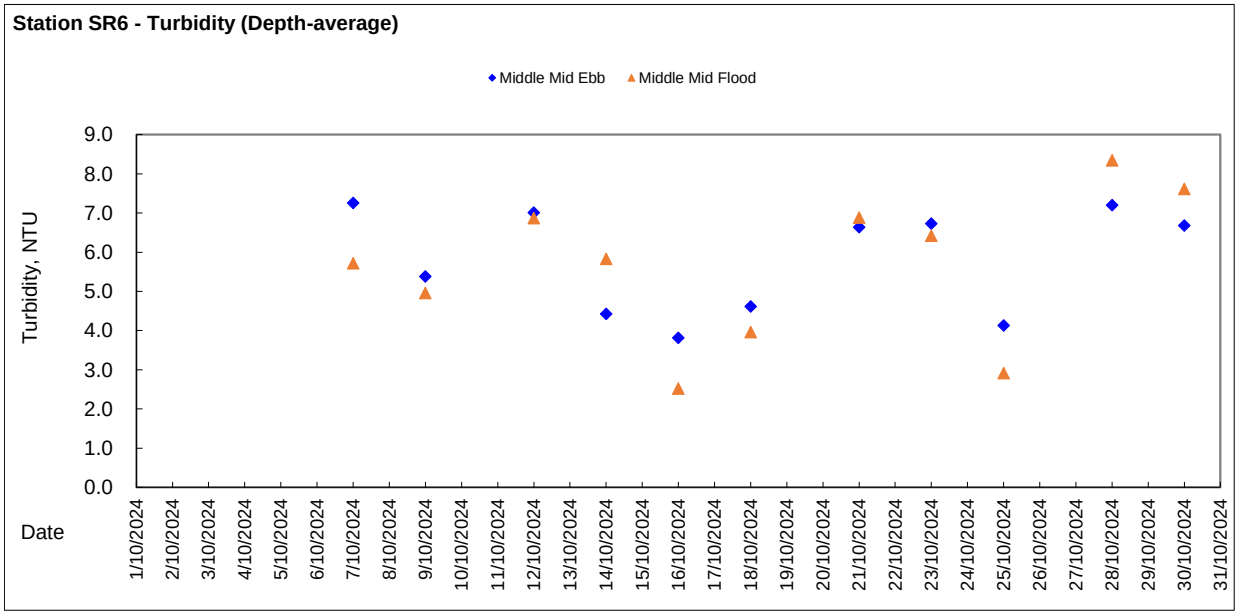


Graphic Presentation of WQM Result

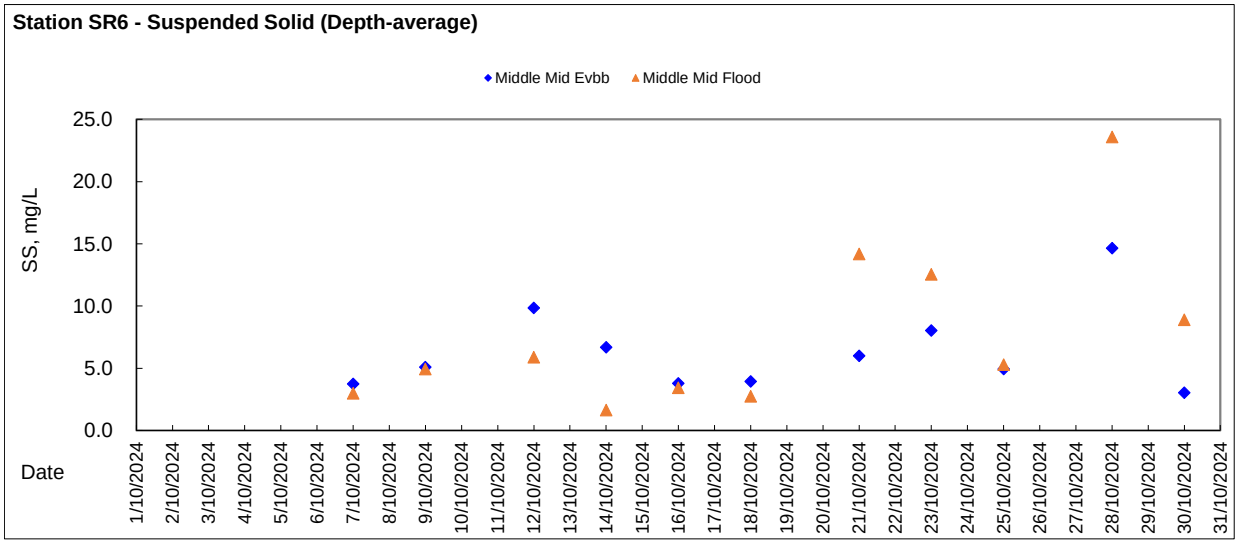
Station SR6 - DO



Station SR6 - Turbidity (Depth-average)

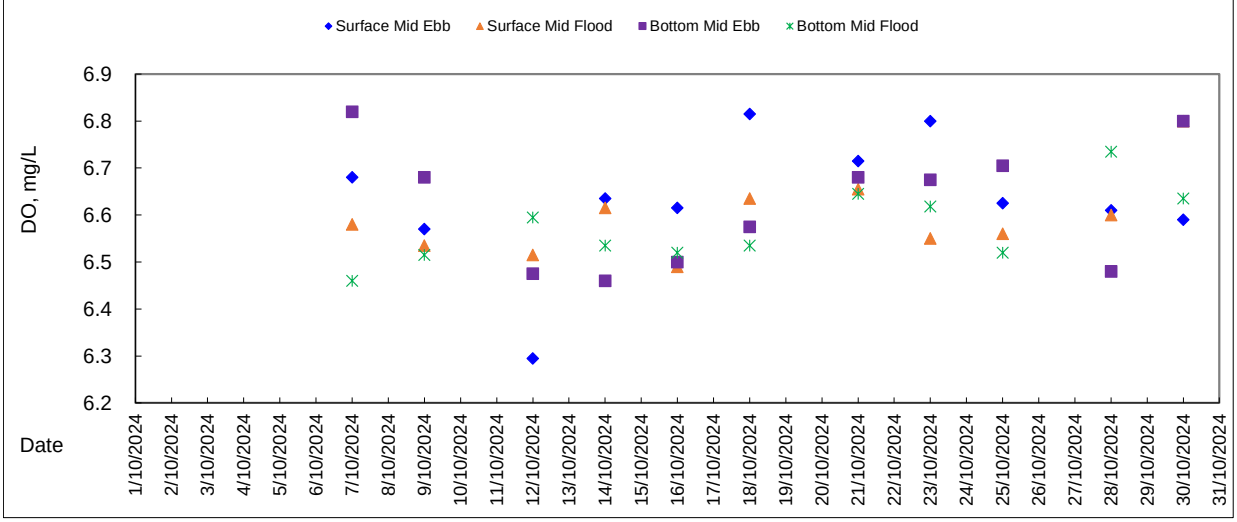


Station SR6 - Suspended Solid (Depth-average)

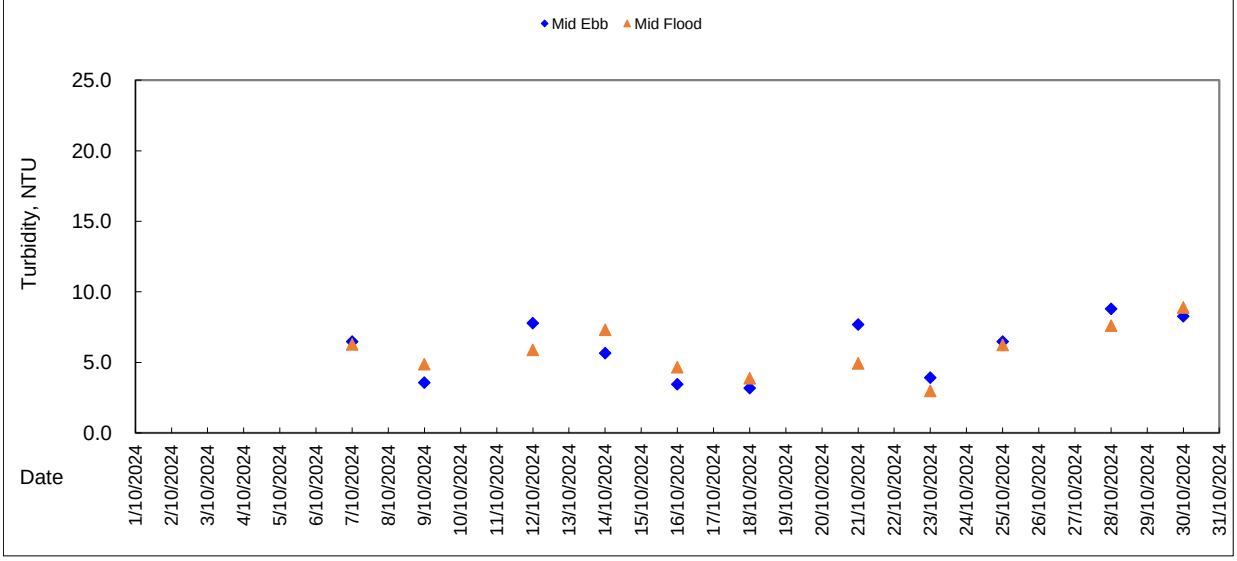


Graphic Presentation of WQM Result

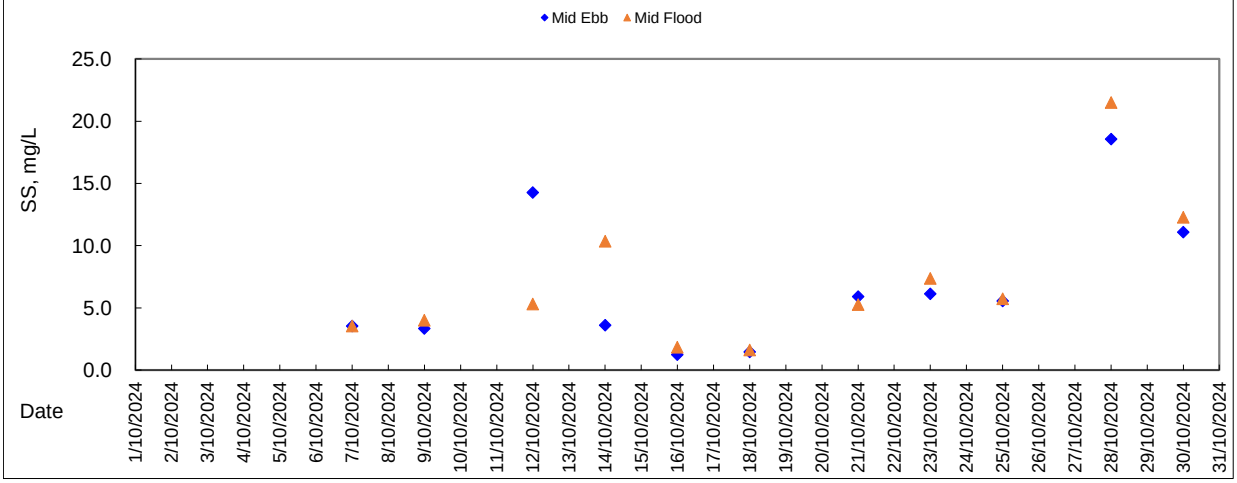
Station SR9 - DO



Station SR9 - Turbidity (Depth-average)

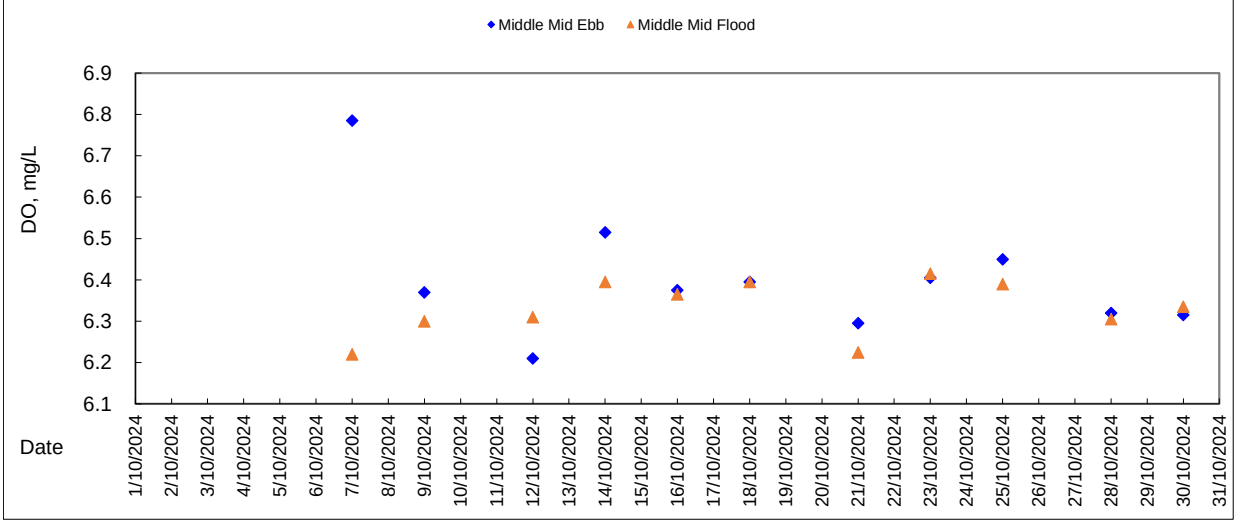


Station SR9 - Suspended Solid (Depth Average)

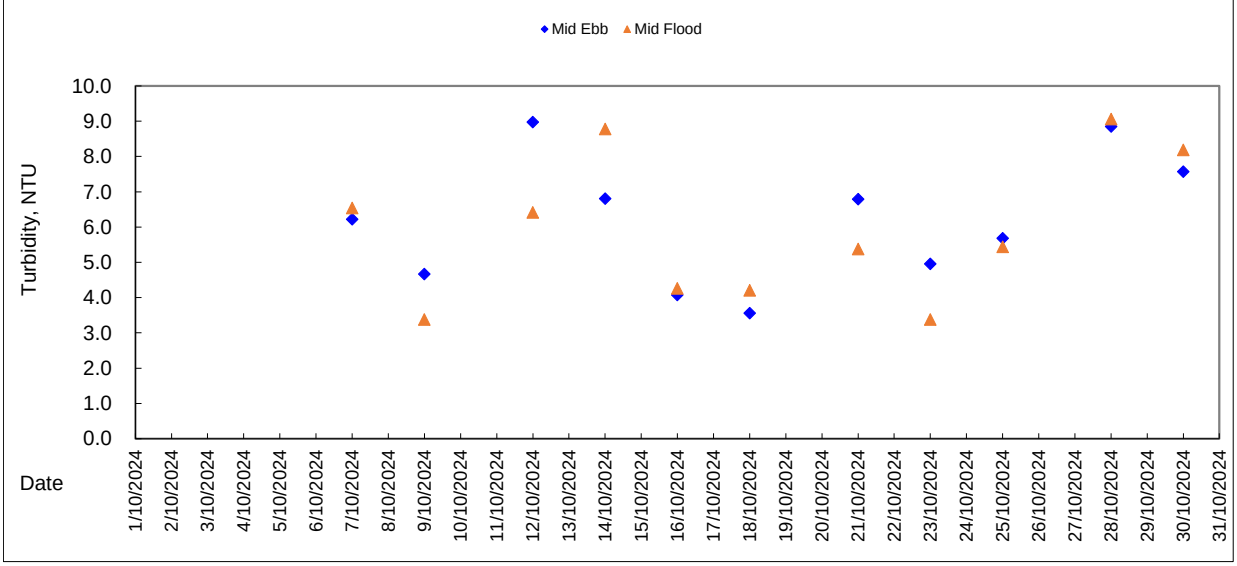


Graphic Presentation of WQM Result

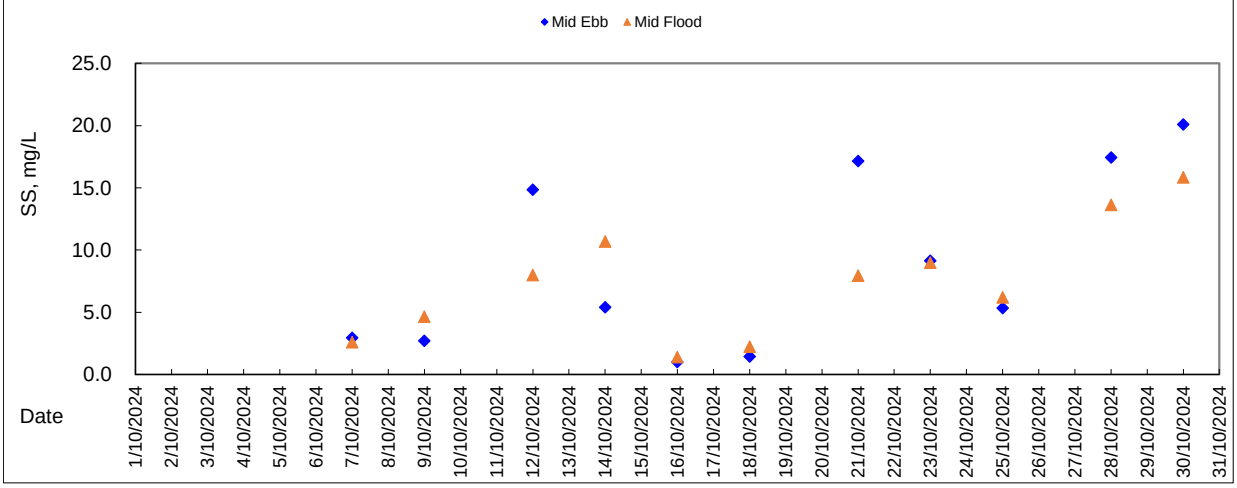
Station SR10 - DO



Station SR10 - Turbidity (Depth-average)

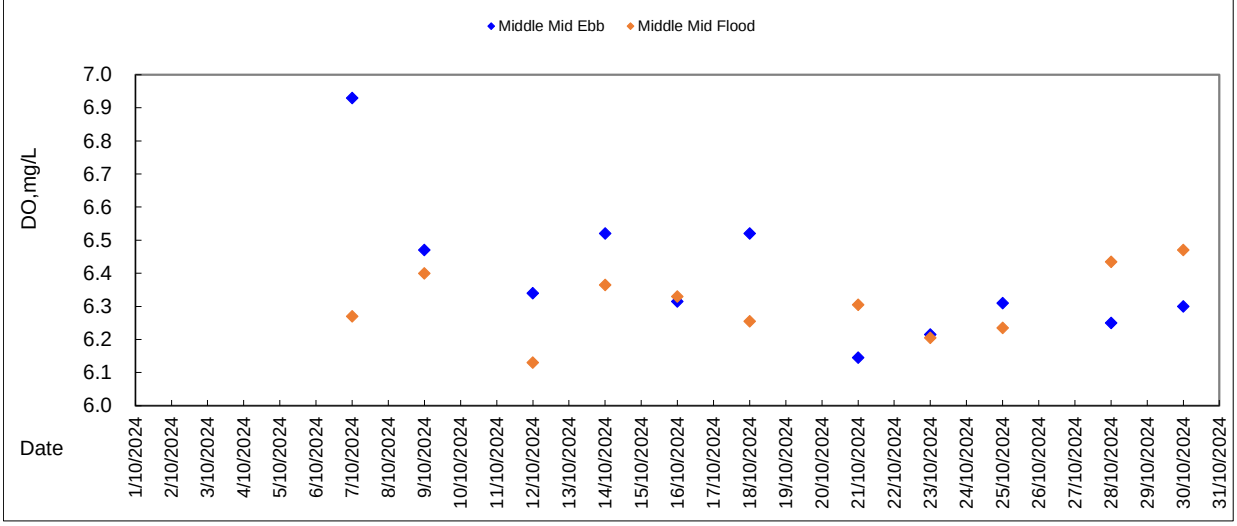


Station SR10 - Suspended Solid (Depth-average)

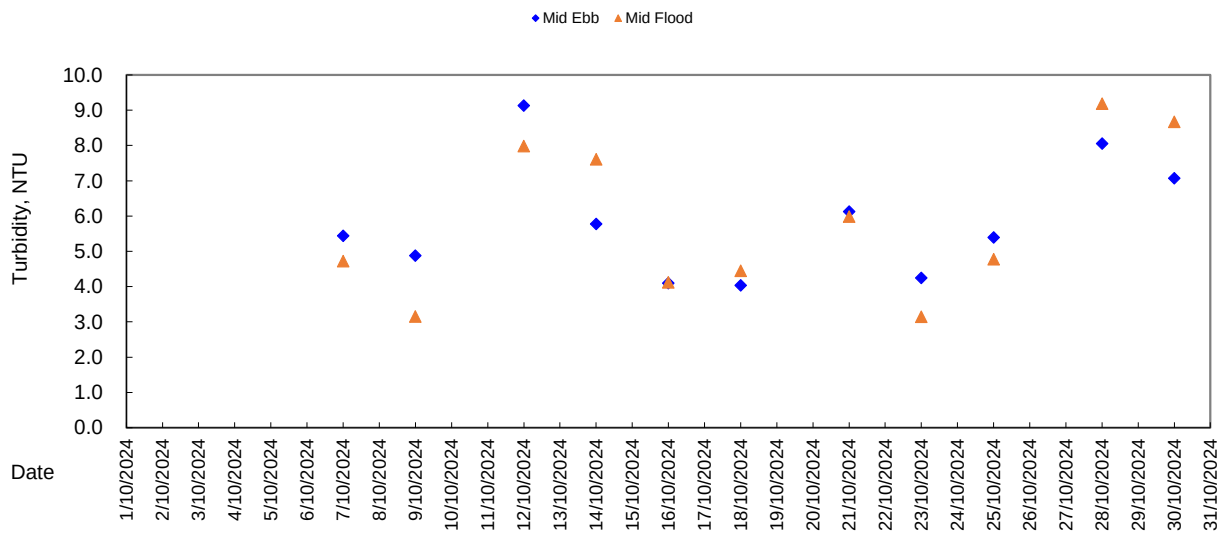


Graphic Presentation of WQM Result

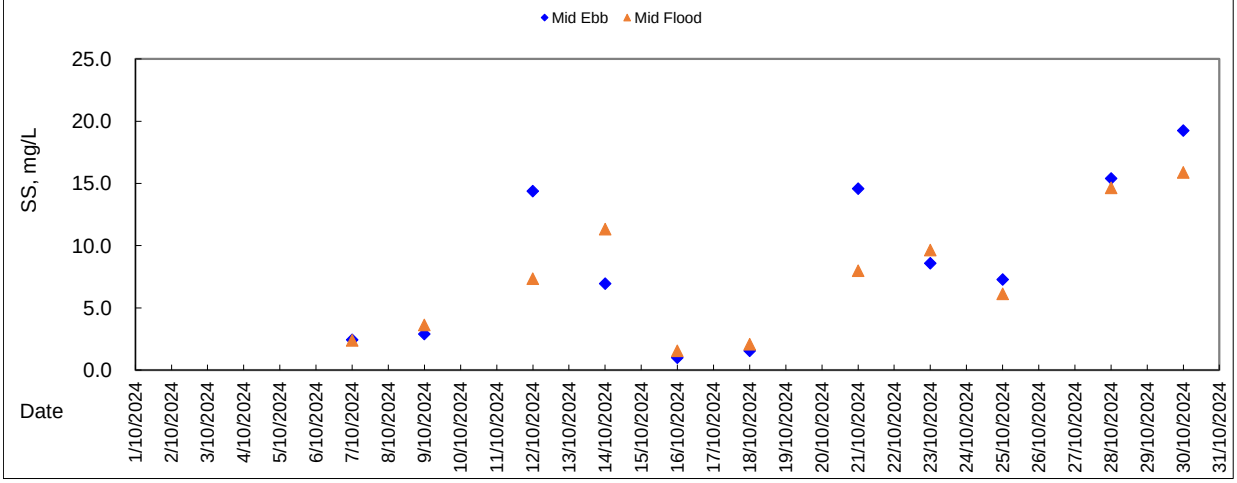
Station SR12 - DO



Station SR12 - Turbidity (Depth-average)

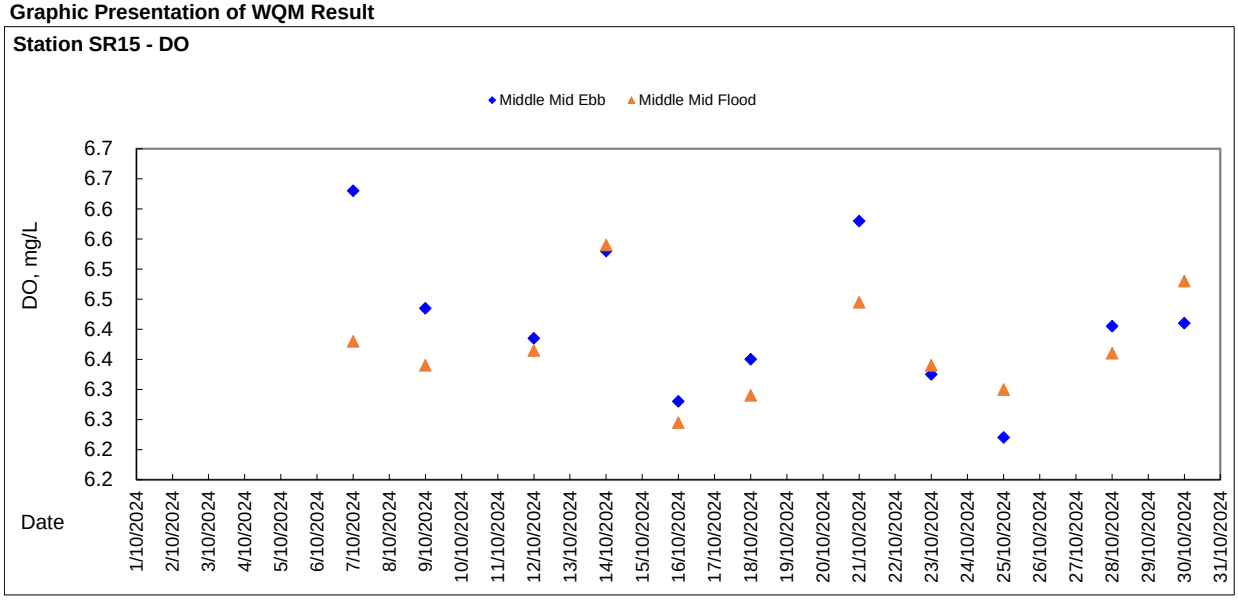


Station SR12 - Suspended Solid (Depth-average)

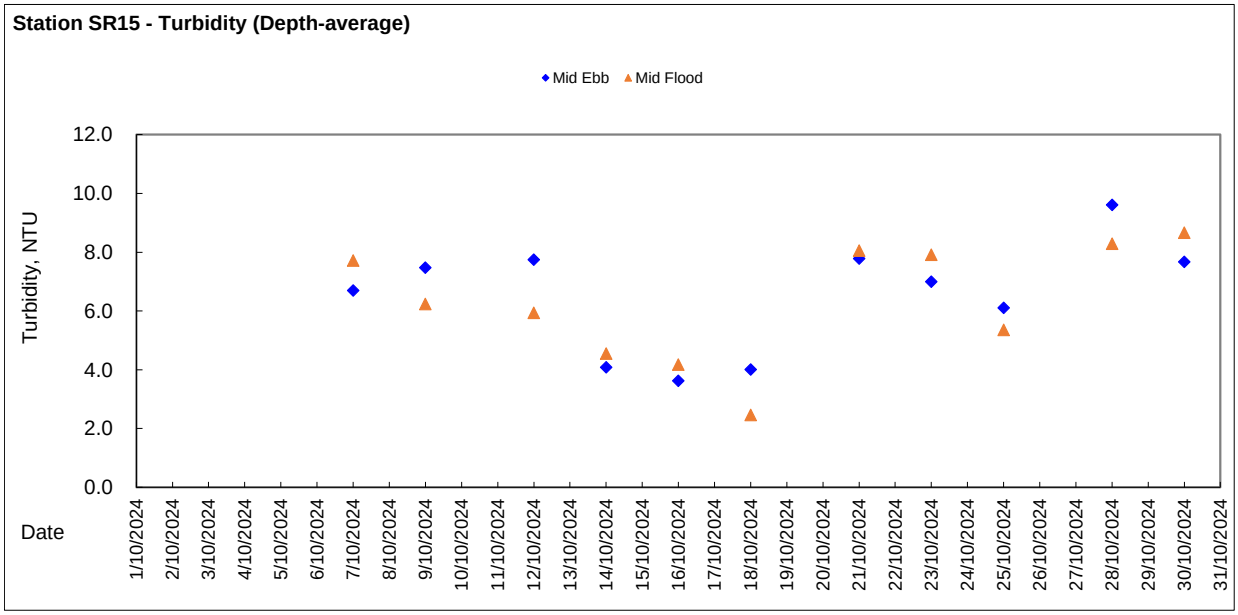


Graphic Presentation of WQM Result

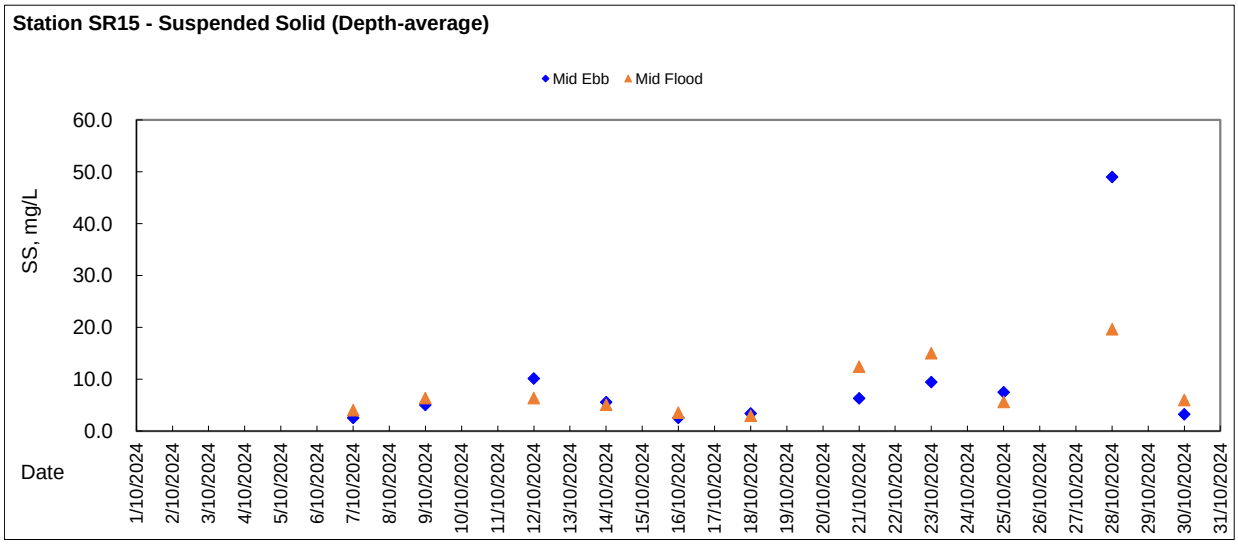
Station SR15 - DO



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		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	7/10/2024	Fine	14:22	3.7	1.0	28.00	28.15	7.86	7.87	31.94	31.89	85.60	86.40	6.40	6.47	7.44	7.38	3.0	2.7
			14:23	3.7	1.0	28.30		7.87		31.83		87.20		6.54		7.31		2.4	
	9/10/2024	Fine	7:09	3.3	1.0	27.40	27.35	7.98	7.93	32.85	32.75	91.00	92.10	6.64	6.71	6.65	6.40	5.6	5.4
			7:10	3.3	1.0	27.30		7.88		32.64		93.20		6.77		6.15		5.2	
	12/10/2024	Fine	7:21	3.8	1.0	27.80	27.75	7.90	7.90	32.99	32.97	88.60	88.20	6.45	6.44	8.06	8.02	8.5	9.2
			7:22	3.8	1.0	27.70		7.89		32.95		87.80		6.42		7.98		9.9	
	14/10/2024	Fine	9:07	3.8	1.0	28.00	28.10	7.91	7.91	32.23	32.20	97.70	97.45	6.85	6.84	4.01	4.25	5.3	5.9
			9:08	3.8	1.0	28.20		7.91		32.17		97.20		6.83		4.49		6.4	
	16/10/2024	Fine	10:47	3.9	1.0	27.80	27.85	7.96	7.96	32.59	32.54	90.40	89.10	6.59	6.50	3.92	4.09	3.7	3.5
			10:48	3.9	1.0	27.90		7.95		32.48		87.80		6.40		4.25		3.3	
	18/10/2024	Fine	12:03	3.8	1.0	28.54	28.48	7.99	8.00	33.84	33.96	100.40	99.75	6.69	6.67	3.01	3.30	3.4	3.5
			12:04	3.8	1.0	28.42		8.01		34.07		99.10		6.65		3.59		3.5	
	21/10/2024	Cloudy	14:58	3.8	1.0	29.06	29.04	7.83	7.84	32.02	32.01	102.50	101.70	6.51	6.46	5.77	5.81	5.8	6.0
			14:59	3.8	1.0	29.01		7.84		31.99		100.90		6.41		5.84		6.2	
	23/10/2024	Cloudy	7:06	3.6	1.0	26.14	26.21	7.53	7.57	32.05	32.61	100.90	101.15	6.89	6.90	6.54	6.67	8.3	8.9
			7:07	3.6	1.0	26.27		7.60		33.16		101.40		6.91		6.80		9.4	
	25/10/2024	Cloudy	7:15	3.8	1.0	25.47	25.47	7.87	7.88	33.96	34.05	84.90	85.35	6.61	6.66	5.87	5.95	4.8	4.8
			7:16	3.8	1.0	25.46		7.89		34.14		85.80		6.70		6.02		4.8	
	28/10/2024	Fine	9:27	3.9	1.0	25.76	25.70	7.38	7.39	33.75	33.80	96.60	96.50	6.65	6.65	8.47	8.52	49.8	49.6
			9:28	3.9	1.0	25.64		7.39		33.84		96.40		6.64		8.56		49.3	
	30/10/2024	Fine	10:38	3.8	1.0	26.53	26.51	7.96	7.95	33.10	33.12	97.20	97.65	6.72	6.75	5.49	5.30	3.0	2.8
			10:39	3.8	1.0	26.48		7.94		33.13		98.10		6.78		5.11		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 SR4 (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
SR4	7/10/2024	Fine	8:31	3.4	1.0	27.60	27.55	7.86	7.87	32.36	32.39	86.90	86.70	6.62	6.60	6.54	6.49	4.0	3.6
			8:32	3.4	1.0	27.50		7.87		32.41		86.50		6.57		6.44		3.2	
	9/10/2024	Fine	16:12	3.6	1.0	27.30	27.35	7.94	7.94	32.09	32.15	87.80	87.20	6.58	6.56	5.12	5.17	6.5	6.2
			16:13	3.6	1.0	27.40		7.94		32.21		86.60		6.53		5.22		5.8	
	12/10/2024	Fine	16:11	3.3	1.0	27.40	27.45	7.93	7.93	32.17	32.13	93.80	92.50	6.68	6.65	5.12	5.30	5.7	5.8
			16:12	3.3	1.0	27.50		7.92		32.09		91.20		6.61		5.47		5.9	
	14/10/2024	Fine	16:54	3.3	1.0	27.80	27.75	7.94	7.95	32.43	32.55	97.70	97.45	6.80	6.79	4.29	4.47	5.7	5.5
			16:55	3.3	1.0	27.70		7.95		32.67		97.20		6.77		4.64		5.2	
	16/10/2024	Fine	17:50	3.2	1.0	28.00	27.95	7.96	7.97	32.73	32.71	89.40	88.40	6.63	6.61	4.31	4.45	4.4	4.8
			17:51	3.2	1.0	27.90		7.97		32.69		87.40		6.58		4.59		5.1	
	18/10/2024	Fine	18:41	3.3	1.0	28.87	28.89	7.97	7.96	33.38	33.34	103.20	102.45	6.66	6.61	3.13	3.01	2.9	2.6
			18:42	3.3	1.0	28.90		7.95		33.30		101.70		6.55		2.89		2.2	
	21/10/2024	Cloudy	8:58	3.2	1.0	29.31	29.36	7.81	7.81	32.54	32.64	104.90	105.35	6.67	6.70	7.25	7.14	13.4	12.6
			8:59	3.2	1.0	29.40		7.80		32.74		105.80		6.72		7.02		11.7	
	23/10/2024	Cloudy	13:19	3.4	1.0	27.18	27.13	7.76	7.76	33.54	33.40	99.50	98.10	6.75	6.66	7.95	7.82	10.7	11.3
			13:20	3.4	1.0	27.07		7.76		33.25		96.70		6.56		7.68		11.8	
	25/10/2024	Cloudy	14:15	3.5	1.0	26.74	26.64	7.55	7.55	33.40	33.52	89.90	89.40	6.59	6.55	3.47	3.61	5.0	5.0
			14:16	3.5	1.0	26.53		7.54		33.64		88.90		6.51		3.74		5.0	
	28/10/2024	Fine	16:58	3.5	1.0	26.04	25.97	7.93	7.94	34.12	34.10	99.50	98.60	6.75	6.70	8.24	8.11	18.8	18.4
			16:59	3.5	1.0	25.89		7.94		34.07		97.70		6.64		7.98		18.0	
	30/10/2024	Fine	17:24	3.5	1.0	26.25	26.28	7.99	7.99	34.02	34.00	86.90	85.90	6.60	6.56	6.73	6.64	3.8	4.2
			17:25	3.5	1.0	26.31		7.99		33.98		84.90		6.51		6.54		4.6	

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 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	7/10/2024	Fine	14:24	3.7	2.7	28.30	28.25	7.87	7.87	32.19	32.28	89.80	89.10	6.73	6.68	6.31	6.42	3.2	3.3
			14:25	3.7	2.7	28.20		7.87		32.37		88.40		6.62		6.53		3.4	
	9/10/2024	Fine	7:11	3.8	2.8	27.50	27.40	7.86	7.86	32.49	32.62	91.70	90.95	6.62	6.61	6.02	6.07	5.7	5.4
			7:12	3.3	2.3	27.30		7.85		32.74		90.20		6.60		6.12		5.1	
	12/10/2024	Fine	7:23	3.8	2.8	27.90	27.85	7.92	7.92	32.80	32.84	87.60	88.30	6.43	6.48	8.25	8.52	9.4	9.9
			7:24	3.8	2.8	27.80		7.91		32.87		89.00		6.52		8.78		10.4	
	14/10/2024	Fine	9:09	3.8	2.8	28.10	28.15	7.90	7.90	32.23	32.37	95.80	96.00	6.63	6.66	4.67	4.44	6.4	5.9
			9:10	3.8	2.8	28.20		7.90		32.50		96.20		6.68		4.21		5.3	
	16/10/2024	Fine	10:49	3.8	2.9	27.90	27.90	7.95	7.96	32.43	32.43	88.80	88.50	6.48	6.44	3.73	3.62	3.0	3.4
			10:50	3.9	2.9	27.90		7.97		32.43		88.20		6.39		3.50		3.8	
	18/10/2024	Fine	12:05	3.8	2.8	28.54	28.64	7.90	7.90	33.47	33.30	101.20	100.50	6.70	6.68	3.55	3.70	3.6	3.4
			12:06	3.8	2.8	28.74		7.89		33.12		99.80		6.66		3.84		3.2	
	21/10/2024	Cloudy	15:00	3.8	2.8	28.56	28.72	7.84	7.84	31.80	31.95	106.20	105.35	6.82	6.78	5.73	5.45	4.9	5.2
			15:01	3.8	2.8	28.87		7.84		32.09		104.50		6.73		5.16		5.4	
	23/10/2024	Cloudy	7:08	3.6	2.6	26.70	26.72	7.63	7.62	32.84	32.89	97.00	97.45	6.59	6.61	5.38	5.25	9.8	9.5
			7:09	3.6	2.6	26.73		7.60		32.93		97.90		6.63		5.12		9.1	
	25/10/2024	Cloudy	7:17	3.8	2.8	25.47	25.61	7.87	7.88	34.25	34.15	84.80	85.35	6.59	6.64	3.87	4.04	5.3	4.9
			7:18	3.8	2.8	25.74		7.89		34.04		85.90		6.68		4.20		4.4	
	28/10/2024	Fine	9:29	3.9	2.9	25.49	25.63	7.43	7.42	33.19	33.31	93.40	93.30	6.45	6.43	8.14	8.09	42.6	41.4
			9:30	3.9	2.9	25.76		7.40		33.43		93.20		6.40		8.04		40.2	
	30/10/2024	Fine	10:40	3.8	2.8	26.52	26.63	7.95	7.96	33.35	33.35	93.40	93.60	6.66	6.68	5.80	5.96	4.0	3.4
			10:41	3.8	2.8	26.74		7.96		33.34		93.80		6.69		6.12		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 (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	7/10/2024	Fine	8:33	3.4	2.4	27.70	27.70	7.85	7.86	32.54	32.61	86.80	87.35	6.62	6.66	7.94	7.92	3.9	3.7
			8:34	3.4	2.4	27.70		7.86		32.67		87.90		6.70		7.90		3.5	
	9/10/2024	Fine	16:14	3.6	2.6	27.50	27.55	7.90	7.91	32.19	32.28	87.50	87.65	6.49	6.50	6.24	5.97	5.6	5.5
			16:15	3.6	2.6	27.60		7.91		32.36		87.80		6.51		5.69		5.4	
	12/10/2024	Fine	16:13	3.3	2.3	27.30	27.35	7.91	7.92	32.37	32.31	93.60	94.00	6.66	6.70	5.19	5.11	6.6	6.1
			16:14	3.3	2.3	27.40		7.92		32.25		94.40		6.73		5.03		5.5	
	14/10/2024	Fine	16:56	3.3	2.3	27.80	27.75	7.95	7.96	32.87	32.78	95.80	96.00	6.72	6.78	5.59	5.39	3.8	4.3
			16:57	3.3	2.3	27.70		7.96		32.69		96.20		6.83		5.19		4.8	
	16/10/2024	Fine	17:52	3.2	2.2	28.00	28.00	7.99	8.00	32.84	32.82	85.70	86.15	6.49	6.53	5.01	4.87	5.0	5.0
			17:53	3.2	2.2	28.00		8.01		32.80		86.60		6.57		4.73		5.0	
	18/10/2024	Fine	18:43	3.3	2.3	28.76	28.80	7.95	7.95	33.15	33.10	102.40	101.65	6.62	6.58	2.75	2.88	2.8	2.6
			18:44	3.3	2.3	28.84		7.95		33.04		100.90		6.53		3.01		2.4	
	21/10/2024	Cloudy	9:00	3.2	2.2	29.45	29.39	7.80	7.81	32.84	32.79	104.20	104.75	6.65	6.68	6.87	6.94	12.6	12.6
			9:01	3.2	2.2	29.33		7.82		32.73		105.30		6.70		7.01		12.5	
	23/10/2024	Cloudy	13:21	3.4	2.4	27.15	27.20	7.75	7.76	33.39	33.35	97.30	96.10	6.59	6.52	8.12	7.96	12.6	13.1
			13:22	3.4	2.4	27.25		7.76		33.31		94.90		6.44		7.80		13.6	
	25/10/2024	Cloudy	14:17	3.5	2.5	26.60	26.65	7.56	7.57	33.28	33.20	89.60	89.90	6.46	6.51	4.73	4.59	5.4	5.5
			14:18	3.5	2.5	26.69		7.57		33.12		90.20		6.55		4.45		5.6	
	28/10/2024	Fine	17:00	3.5	2.5	26.37	26.22	7.92	7.93	34.24	34.15	97.20	96.10	6.62	6.53	7.53	7.39	18.2	18.0
			17:01	3.5	2.5	26.06		7.93		34.06		95.00		6.44		7.24		17.8	
	30/10/2024	Fine	17:26	3.5	2.5	25.89	25.99	7.99	7.90	33.81	33.82	86.60	85.70	6.67	6.63	8.46	8.55	5.4	5.6
			17:27	3.5	2.5	26.09		7.80		33.82		84.80		6.59		8.64		5.8	

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 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	7/10/2024	Fine	14:14	4.1	1.0	28.40	28.45	7.87	7.87	32.39	32.45	86.40	87.10	6.48	6.51	7.37	7.20	2.3	2.6
			14:15	4.1	1.0	28.50		7.87		32.51		87.80		6.53		7.02		2.8	
	9/10/2024	Fine	7:18	4.1	1.0	27.60	27.60	7.86	7.87	32.62	32.56	91.00	90.10	6.61	6.59	5.74	5.79	5.4	5.3
			7:19	3.8	1.0	27.60		7.87		32.50		89.20		6.57		5.84		5.1	
	12/10/2024	Fine	7:31	4.1	1.0	28.00	27.95	7.93	7.93	32.59	32.67	90.20	89.50	6.59	6.54	6.57	6.72	8.0	8.2
			7:32	4.1	1.0	27.90		7.93		32.74		88.80		6.48		6.87		8.4	
	14/10/2024	Fine	9:16	4.1	1.0	28.30	28.25	7.90	7.90	31.74	31.82	92.90	93.55	6.47	6.51	3.49	3.25	4.0	4.4
			9:17	4.1	1.0	28.20		7.89		31.89		94.20		6.55		3.01		4.8	
	16/10/2024	Fine	10:57	3.9	1.0	27.60	27.60	7.94	7.94	32.49	32.47	90.20	89.70	6.58	6.55	4.20	4.34	3.7	3.7
			10:58	4.4	1.0	27.60		7.93		32.44		89.20		6.51		4.47		3.6	
	18/10/2024	Fine	12:11	3.9	1.0	28.84	28.74	7.96	7.96	32.89	32.97	102.60	103.10	6.76	6.81	2.42	2.58	2.7	2.9
			12:12	3.9	1.0	28.63		7.95		33.04		103.60		6.86		2.74		3.0	
	21/10/2024	Cloudy	14:49	4.2	1.0	28.42	28.40	7.85	7.85	32.25	32.15	101.50	100.90	6.54	6.48	4.37	4.19	6.5	6.0
			14:50	4.2	1.0	28.37		7.84		32.04		100.30		6.42		4.00		5.4	
	23/10/2024	Cloudy	7:16	3.8	1.0	26.84	26.84	7.62	7.63	33.40	33.32	96.80	96.90	6.56	6.57	6.87	7.03	10.8	11.3
			7:17	3.8	1.0	26.83		7.63		33.24		97.00		6.57		7.19		11.8	
	25/10/2024	Cloudy	7:25	4.0	1.0	25.60	25.55	7.88	7.87	33.73	33.79	87.50	88.05	6.69	6.71	5.12	4.93	4.4	4.5
			7:26	4.0	1.0	25.49		7.86		33.84		88.60		6.72		4.74		4.6	
	28/10/2024	Fine	9:38	4.1	1.0	26.02	26.20	7.50	7.54	33.50	33.38	98.00	98.85	6.78	6.81	8.24	8.19	15.7	15.5
			9:39	4.1	1.0	26.37		7.58		33.25		99.70		6.84		8.14		15.2	
	30/10/2024	Fine	10:47	4.0	1.0	27.01	26.98	7.97	7.97	33.74	33.85	93.20	92.95	6.58	6.56	5.04	4.89	3.4	4.0
			10:48	4.0	1.0	26.95		7.97		33.96		92.70		6.54		4.73		4.5	

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.

Lam Environmental Services Limited

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	7/10/2024	Fine	8:39	3.8	1.0	27.80	27.85	7.85	7.85	32.39	32.35	86.50	86.85	6.59	6.62	8.95	8.94	4.2	4.0
			8:40	3.8	1.0	27.90		7.85		32.30		87.20		6.64		8.93		3.8	
	9/10/2024	Fine	16:03	4.1	1.0	27.80	27.65	7.92	7.92	32.17	32.11	90.20	89.55	6.64	6.61	5.51	5.35	5.2	5.6
			16:04	4.1	1.0	27.50		7.92		32.04		88.90		6.58		5.19		6.0	
	12/10/2024	Fine	16:01	3.7	1.0	27.50	27.45	7.93	7.94	31.89	31.92	90.60	90.40	6.58	6.57	5.94	5.85	5.5	5.3
			16:02	3.7	1.0	27.40		7.94		31.95		90.20		6.55		5.76		5.1	
	14/10/2024	Fine	16:45	3.6	1.0	27.60	27.65	7.95	7.96	32.94	32.89	92.90	93.55	6.54	6.58	4.67	4.50	4.5	4.2
			16:46	3.6	1.0	27.70		7.96		32.83		94.20		6.62		4.33		3.9	
	16/10/2024	Fine	17:39	3.7	1.0	28.10	28.10	7.98	7.98	32.71	32.70	89.60	89.00	6.56	6.53	2.84	2.74	3.6	3.8
			17:40	3.7	1.0	28.10		7.98		32.69		88.40		6.50		2.64		4.0	
	18/10/2024	Fine	18:32	3.5	1.0	28.99	29.01	7.96	7.95	33.45	33.41	102.10	102.85	6.60	6.65	3.16	3.20	3.2	3.0
			18:33	3.5	1.0	29.02		7.94		33.36		103.60		6.69		3.24		2.7	
	21/10/2024	Cloudy	9:07	3.8	1.0	29.25	29.38	7.81	7.82	31.81	31.90	102.20	102.55	6.49	6.52	6.25	6.14	12.6	12.0
			9:08	3.8	1.0	29.50		7.82		31.99		102.90		6.55		6.02		11.4	
	23/10/2024	Cloudy	13:19	3.6	1.0	26.84	26.90	7.77	7.78	33.64	33.75	96.30	97.90	6.48	6.57	7.59	7.50	13.0	12.7
			13:20	3.6	1.0	26.95		7.78		33.86		99.50		6.65		7.40		12.3	
	25/10/2024	Cloudy	14:05	3.6	1.0	26.34	26.28	7.59	7.58	33.28	33.34	86.90	87.05	6.00	6.29	4.02	3.86	5.9	5.1
			14:06	3.6	1.0	26.22		7.57		33.39		87.20		6.57		3.70		4.3	
	28/10/2024	Fine	16:46	3.8	1.0	25.51	25.48	7.91	7.91	34.14	33.93	95.30	96.25	6.50	6.56	7.37	7.19	17.3	17.7
			16:47	3.8	1.0	25.44		7.90		33.72		97.20		6.62		7.00		18.1	
	30/10/2024	Fine	17:15	3.6	1.0	26.13	26.30	7.97	7.98	33.48	33.41	91.00	90.30	6.75	6.72	5.57	5.73	6.4	5.2
			17:16	3.6	1.0	26.47		7.98		33.34		89.60		6.69		5.89		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 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	7/10/2024	Fine	14:17	4.1	3.1	28.40	28.35	7.88	7.89	32.73	32.67	89.80	90.30	6.62	6.65	7.81	7.93	3.0	3.3
			14:18	4.1	3.1	28.30		7.89		32.60		90.80		6.68		8.05		3.5	
	9/10/2024	Fine	7:20	3.8	2.8	27.60	27.70	7.86	7.85	32.25	32.28	90.40	91.15	6.68	6.72	6.02	6.22	4.6	4.3
			7:21	3.8	2.8	27.80		7.84		32.30		91.90		6.75		6.42		4.0	
	12/10/2024	Fine	7:34	4.1	3.1	27.90	27.90	7.93	7.93	32.49	32.51	89.30	88.80	6.51	6.48	7.21	7.35	9.4	9.5
			7:35	4.1	3.1	27.90		7.92		32.52		88.30		6.45		7.49		9.6	
	14/10/2024	Fine	9:19	4.1	3.1	28.30	28.35	7.89	7.89	32.00	32.02	98.60	98.10	6.75	6.69	3.72	3.98	6.0	5.7
			9:20	4.1	3.4	28.40		7.88		32.04		97.60		6.62		4.24		5.4	
	16/10/2024	Fine	11:00	3.9	3.4	27.80	27.70	7.93	7.93	32.43	32.47	89.00	89.70	6.48	6.53	4.84	4.67	3.3	3.3
			11:01	4.4	3.4	27.60		7.93		32.50		90.40		6.58		4.50		3.3	
	18/10/2024	Fine	12:13	3.9	2.9	28.56	28.67	7.95	7.96	33.94	33.86	100.60	100.20	6.61	6.58	4.12	4.02	4.5	3.9
			12:14	3.9	2.9	28.78		7.96		33.78		99.80		6.54		3.91		3.2	
	21/10/2024	Cloudy	14:52	4.2	3.2	28.79	28.89	7.83	7.83	31.64	31.80	98.40	98.60	6.33	6.36	4.16	4.20	5.8	6.1
			14:53	4.2	3.2	28.99		7.83		31.95		98.80		6.39		4.24		6.4	
	23/10/2024	Cloudy	7:18	3.8	2.8	26.94	26.77	7.62	7.61	33.04	33.08	99.30	99.50	6.67	6.71	5.09	5.02	9.8	9.6
			7:19	3.8	2.8	26.59		7.60		33.12		99.70		6.75		4.95		9.3	
	25/10/2024	Cloudy	7:28	4.0	3.0	25.74	25.78	7.87	7.87	33.99	33.95	90.70	89.85	6.71	6.70	4.50	4.72	5.7	5.4
			7:29	4.0	3.0	25.81		7.87		33.90		89.00		6.68		4.94		5.1	
	28/10/2024	Fine	9:41	4.1	3.1	26.54	26.33	7.63	7.62	33.74	33.82	94.20	94.40	6.48	6.51	7.98	7.86	16.2	16.2
			9:42	4.1	3.1	26.11		7.61		33.89		94.60		6.53		7.73		16.1	
	30/10/2024	Fine	10:50	4.0	3.0	27.12	27.00	7.96	7.96	33.64	33.69	96.00	96.60	6.76	6.78	5.36	5.55	3.3	2.7
			10:51	4.0	3.0	26.87		7.96		33.73		97.20		6.80		5.73		2.1	

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.

Lam Environmental Services Limited

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	7/10/2024	Fine	8:41	3.8	2.8	27.90	27.90	7.85	7.86	32.24	32.27	87.90	87.50	6.67	6.63	6.73	6.58	4.6	4.8
			8:42	3.8	2.8	27.90		7.86		32.30		87.10		6.58		6.43		5.0	
	9/10/2024	Fine	16:06	4.1	3.1	27.60	27.65	7.89	7.89	31.98	32.00	86.40	86.50	6.44	6.45	5.12	5.44	5.8	6.1
			16:07	4.1	3.1	27.70		7.88		32.02		86.60		6.45		5.75		6.4	
	12/10/2024	Fine	16:03	3.7	2.7	27.50	27.50	7.92	7.92	32.05	32.10	89.20	89.60	6.49	6.50	6.02	6.20	5.0	5.5
			16:04	3.7	2.7	27.50		7.91		32.14		90.00		6.51		6.37		6.0	
	14/10/2024	Fine	16:47	3.6	2.6	27.80	27.85	7.96	7.97	33.02	33.01	98.60	98.10	6.91	6.86	4.94	4.73	3.2	2.8
			16:48	3.6	2.6	27.90		7.97		32.99		97.60		6.80		4.52		2.4	
	16/10/2024	Fine	17:41	3.7	2.7	28.10	28.05	7.97	7.98	32.79	32.80	89.30	88.35	6.72	6.61	3.97	4.05	5.4	4.9
			17:42	3.7	2.7	28.00		7.98		32.80		87.40		6.50		4.13		4.3	
	18/10/2024	Fine	18:34	3.5	2.5	28.97	29.05	7.96	7.96	33.42	33.41	101.20	100.30	6.49	6.43	3.54	3.43	2.0	2.5
			18:35	3.5	2.5	29.13		7.96		33.40		99.40		6.37		3.31		2.9	
	21/10/2024	Cloudy	9:09	3.8	2.8	29.54	29.40	7.80	7.81	32.54	32.59	103.80	103.95	6.59	6.60	6.98	6.44	13.7	14.9
			9:10	3.8	2.8	29.26		7.82		32.64		104.10		6.61		5.89		16.0	
	23/10/2024	Cloudy	13:21	3.6	2.6	27.06	27.03	7.80	7.79	33.74	33.62	99.70	99.60	6.71	6.71	7.44	7.65	12.4	11.7
			13:22	3.6	2.6	27.00		7.77		33.49		99.50		6.70		7.86		11.0	
	25/10/2024	Cloudy	14:07	3.6	2.6	26.25	26.21	7.59	7.59	33.54	33.40	89.00	87.90	6.70	6.67	3.38	3.43	5.6	5.9
			14:08	3.6	2.6	26.17		7.58		33.26		86.80		6.64		3.47		6.1	
	28/10/2024	Fine	16:48	3.8	2.8	25.37	25.20	7.92	7.91	34.12	33.99	96.10	95.70	6.52	6.50	7.45	7.60	18.5	18.8
			16:49	3.8	2.8	25.02		7.90		33.86		95.30		6.47		7.74		19.1	
	30/10/2024	Fine	17:17	3.6	2.6	26.50	26.39	7.96	7.97	33.12	33.28	90.30	90.85	6.70	6.74	7.01	7.13	11.4	10.8
			17:18	3.6	2.6	26.27		7.97		33.43		91.40		6.77		7.25		10.2	

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 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	7/10/2024	Fine	14:05	2.6	1.3	28.50	28.45	7.89	7.89	32.74	32.69	82.60	82.10	6.20	6.18	7.12	7.26	3.4	3.8
			14:06	2.6	1.3	28.40		7.88		32.63		81.60		6.16		7.39		4.1	
	9/10/2024	Fine	7:28	2.6	1.3	27.30	27.25	7.85	7.85	32.19	32.17	91.50	92.10	6.71	6.74	5.51	5.38	5.1	5.1
			7:29	2.6	1.3	27.20		7.84		32.15		92.70		6.77		5.24		5.1	
	12/10/2024	Fine	7:40	2.7	1.4	27.80	27.80	7.94	7.95	33.02	33.08	88.60	87.55	6.38	6.31	6.89	7.01	10.7	9.9
			7:41	2.7	1.4	27.80		7.95		33.14		86.50		6.23		7.12		9.0	
	14/10/2024	Fine	9:27	2.7	1.4	28.50	28.45	7.86	7.87	31.95	31.95	92.80	93.00	6.32	6.34	4.73	4.42	6.8	6.7
			9:28	2.7	1.4	28.40		7.87		31.94		93.20		6.36		4.11		6.6	
	16/10/2024	Fine	11:08	2.7	1.4	28.00	27.95	7.94	7.94	32.19	32.20	86.20	86.10	6.32	6.31	3.61	3.81	3.8	3.8
			11:09	2.7	1.4	27.90		7.94		32.21		86.00		6.30		4.01		3.8	
	18/10/2024	Fine	12:22	2.7	1.4	28.90	29.02	7.96	7.96	33.51	33.63	96.30	95.85	6.29	6.20	4.45	4.61	3.6	4.0
			12:23	2.7	1.4	29.13		7.95		33.75		95.40		6.11		4.77		4.3	
	21/10/2024	Cloudy	14:37	2.8	1.4	28.37	28.31	7.84	7.84	31.87	31.95	99.40	98.55	6.36	6.31	6.74	6.64	6.0	6.0
			14:38	2.8	1.4	28.25		7.84		32.03		97.70		6.25		6.53		6.0	
	23/10/2024	Cloudy	7:26	2.4	1.2	26.87	26.71	7.65	7.66	33.86	33.51	94.00	95.80	6.30	6.34	6.64	6.73	9.1	8.1
			7:27	2.4	1.2	26.55		7.67		33.16		97.60		6.37		6.82		7.0	
	25/10/2024	Cloudy	7:35	2.6	1.3	24.98	25.00	7.89	7.89	34.24	34.20	86.60	87.95	6.45	6.51	4.14	4.13	5.0	5.0
			7:36	2.6	1.3	25.01		7.89		34.16		89.30		6.56		4.11		4.9	
	28/10/2024	Fine	9:49	2.6	1.3	26.14	26.12	7.72	7.71	34.25	34.15	91.40	90.95	6.27	6.23	7.37	7.20	14.6	14.7
			9:50	2.6	1.3	26.09		7.69		34.04		90.50		6.19		7.02		14.7	
	30/10/2024	Fine	10:57	2.5	1.3	26.95	26.90	7.96	7.96	33.74	33.79	89.60	89.80	6.39	6.40	6.67	6.68	2.7	3.1
			10:58	2.5	1.3	26.84		7.96		33.84		90.00		6.40		6.69		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 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	7/10/2024	Fine	8:48	2.4	1.2	27.80	27.85	7.87	7.88	32.31	32.25	82.20	82.80	6.13	6.18	5.83	5.72	2.9	3.0
			8:49	2.4	1.2	27.90		7.88		32.19		83.40		6.23		5.60		3.1	
	9/10/2024	Fine	15:52	2.8	1.4	27.50	27.40	7.89	7.90	32.48	32.39	84.20	83.90	6.30	6.25	5.02	4.96	4.8	5.0
			15:53	2.8	1.4	27.30		7.91		32.30		83.60		6.20		4.89		5.1	
	12/10/2024	Fine	16:50	2.3	1.2	27.30	27.25	7.90	7.91	32.79	32.69	86.80	85.65	6.24	6.22	7.12	6.87	6.2	5.9
			16:51	2.3	1.2	27.20		7.92		32.59		84.50		6.19		6.62		5.6	
	14/10/2024	Fine	16:33	2.2	1.1	27.90	27.90	7.94	7.94	33.43	33.34	92.80	93.00	6.53	6.55	6.02	5.83	1.4	1.7
			16:34	2.2	1.1	27.90		7.93		33.24		93.20		6.57		5.63		1.9	
	16/10/2024	Fine	17:27	2.3	1.2	28.30	28.25	7.97	7.97	32.47	32.54	84.90	84.85	6.36	6.36	2.67	2.52	3.8	3.5
			17:28	2.3	1.2	28.20		7.96		32.60		84.80		6.36		2.37		3.1	
	18/10/2024	Fine	18:21	2.3	1.2	28.25	28.34	7.98	7.99	33.45	33.55	99.80	99.55	6.44	6.42	3.80	3.96	2.9	2.8
			18:22	2.3	1.2	28.42		8.00		33.64		99.30		6.39		4.12		2.6	
	21/10/2024	Cloudy	9:18	2.6	1.3	29.28	29.24	7.80	7.80	32.54	32.64	101.40	100.71	6.43	6.40	6.74	6.88	13.8	14.2
			9:19	2.6	1.3	29.20		7.80		32.74		100.02		6.36		7.02		14.6	
	23/10/2024	Cloudy	13:10	2.3	1.2	27.19	27.20	7.81	7.80	33.84	33.68	95.50	94.55	6.44	6.39	6.70	6.42	13.3	12.6
			13:11	2.3	1.2	27.20		7.78		33.51		93.60		6.34		6.14		11.8	
	25/10/2024	Cloudy	13:53	2.3	1.2	26.04	26.03	7.60	7.60	33.40	33.41	87.20	87.75	6.30	6.35	2.89	2.91	6.0	5.3
			13:54	2.3	1.2	26.02		7.59		33.42		88.30		6.39		2.93		4.6	
	28/10/2024	Fine	16:37	2.3	1.2	25.89	25.82	7.92	7.93	34.12	33.99	93.30	92.50	6.29	6.26	8.56	8.34	23.2	23.6
			16:38	2.3	1.2	25.74		7.94		33.86		91.70		6.23		8.12		24.0	
	30/10/2024	Fine	17:04	2.3	1.2	26.01	26.02	7.97	7.97	34.12	34.05	89.20	89.10	6.49	6.53	7.98	7.62	9.0	8.9
			17:05	2.3	1.2	26.02		7.97		33.98		89.00		6.56		7.25		8.8	

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) - 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	7/10/2024	Fine	13:51	4.3	1.0	28.40	28.35	7.83	7.83	32.19	32.26	90.10	89.25	6.74	6.68	6.21	6.05	4.1	3.3
			13:52	4.3	1.0	28.30		7.82		32.33		88.40		6.62		5.89		2.5	
	9/10/2024	Fine	7:45	3.9	1.0	27.40	27.35	7.91	7.91	32.81	32.76	89.40	89.10	6.59	6.57	3.22	3.35	3.8	3.4
			7:46	3.9	1.0	27.30		7.90		32.71		88.80		6.55		3.48		3.0	
	12/10/2024	Fine	7:56	4.2	1.0	27.60	27.55	7.90	7.91	32.65	32.57	86.80	86.65	6.30	6.30	7.19	7.39	12.3	13.4
			7:57	4.2	1.0	27.50		7.91		32.49		86.50		6.29		7.58		14.5	
	14/10/2024	Fine	9:43	4.1	1.0	28.30	28.25	7.92	7.93	32.16	32.23	91.70	91.95	6.59	6.64	5.73	5.49	3.4	2.9
			9:44	4.1	1.0	28.20		7.93		32.29		92.20		6.68		5.25		2.3	
	16/10/2024	Fine	11:25	4.1	1.0	27.90	27.85	7.95	7.96	32.87	32.74	91.20	90.90	6.64	6.62	3.57	3.41	1.5	1.3
			11:26	4.3	1.0	27.80		7.96		32.61		90.60		6.59		3.25		1.0	
	18/10/2024	Fine	12:40	4.1	1.0	28.49	28.74	7.00	7.50	33.59	33.58	105.40	106.25	6.75	6.82	3.25	3.11	1.2	1.5
			12:41	4.1	1.0	28.99		7.99		33.57		107.10		6.88		2.97		1.8	
	21/10/2024	Cloudy	14:27	4.3	1.0	29.17	29.33	7.84	7.84	32.94	32.87	105.80	103.45	6.78	6.72	7.74	7.66	5.5	5.7
			14:28	4.3	1.0	29.48		7.83		32.80		101.10		6.65		7.58		5.9	
	23/10/2024	Cloudy	7:42	3.9	1.0	27.24	27.19	7.80	7.81	33.84	33.75	102.60	101.65	6.87	6.80	5.27	5.15	7.0	6.5
			7:43	3.9	1.0	27.13		7.81		33.66		100.70		6.73		5.02		6.0	
	25/10/2024	Cloudy	8:45	4.1	1.0	26.09	26.09	7.80	7.81	33.28	33.20	88.70	88.15	6.64	6.63	7.49	7.26	6.0	5.9
			8:46	4.1	1.0	26.08		7.82		33.12		87.60		6.61		7.03		5.8	
	28/10/2024	Fine	10:06	4.2	1.0	25.59	25.47	7.79	7.80	33.71	33.64	94.30	95.05	6.56	6.61	8.47	8.36	18.6	18.1
			10:07	4.2	1.0	25.34		7.81		33.56		95.80		6.66		8.24		17.5	
	30/10/2024	Fine	11:14	4.1	1.0	26.37	26.46	7.96	7.96	33.41	33.33	93.20	93.40	6.58	6.59	8.42	8.33	8.5	9.3
			11:15	4.1	1.0	26.54		7.96		33.24		93.60		6.60		8.23		10.0	

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 (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
SR9	7/10/2024	Fine	9:06	3.8	1.0	28.20	28.30	7.82	7.83	32.40	32.51	89.60	89.00	6.64	6.58	7.45	7.25	3.4	3.0
			9:07	3.8	1.0	28.40		7.83		32.61		88.40		6.52		7.04		2.6	
	9/10/2024	Fine	15:36	4.2	1.0	27.90	27.80	7.97	7.97	32.61	32.74	88.40	88.10	6.58	6.54	4.95	4.80	4.5	4.1
			15:37	4.2	1.0	27.70		7.96		32.86		87.80		6.49		4.65		3.6	
	12/10/2024	Fine	15:34	3.7	1.0	27.70	27.65	7.93	7.94	32.39	32.48	90.40	89.80	6.56	6.52	6.12	6.00	5.2	5.5
			15:35	3.7	1.0	27.60		7.94		32.56		89.20		6.47		5.87		5.8	
	14/10/2024	Fine	16:16	3.7	1.0	27.40	27.50	7.96	7.96	32.74	32.67	92.20	92.80	6.58	6.62	6.89	6.78	10.4	10.3
			16:17	3.7	1.0	27.60		7.95		32.59		93.40		6.65		6.67		10.1	
	16/10/2024	Fine	17:11	3.7	1.0	28.10	28.05	7.97	7.97	32.91	32.86	87.80	86.70	6.54	6.49	4.64	4.50	1.9	2.1
			17:12	3.7	1.0	28.00		7.97		32.80		85.60		6.44		4.35		2.2	
	18/10/2024	Fine	18:06	3.7	1.0	29.24	29.16	8.00	8.01	33.41	33.51	101.10	102.40	6.60	6.64	3.74	3.65	1.4	1.7
			18:07	3.7	1.0	29.08		8.01		33.61		103.70		6.67		3.56		1.9	
	21/10/2024	Cloudy	9:33	4.0	1.0	30.02	29.92	7.83	7.83	32.14	32.08	105.70	104.00	6.72	6.66	4.07	4.16	3.6	3.4
			9:34	4.0	1.0	29.82		7.83		32.01		102.30		6.59		4.25		3.1	
	23/10/2024	Cloudy	12:54	3.7	1.0	27.78	27.65	7.79	7.79	33.08	33.14	96.80	97.70	6.49	6.55	3.24	2.98	7.4	7.4
			12:55	3.7	1.0	27.52		7.79		33.20		98.60		6.61		2.72		7.3	
	25/10/2024	Cloudy	13:37	3.7	1.0	26.74	26.68	7.61	7.62	33.74	33.67	91.00	90.45	6.62	6.56	6.24	6.31	6.6	6.0
			13:38	3.7	1.0	26.62		7.63		33.59		89.90		6.50		6.38		5.4	
	28/10/2024	Fine	16:19	3.8	1.0	26.37	26.28	7.82	7.83	33.54	33.58	97.40	97.00	6.62	6.60	7.42	7.27	20.7	21.6
			16:20	3.8	1.0	26.18		7.83		33.62		96.60		6.58		7.12		22.4	
	30/10/2024	Fine	16:48	3.7	1.0	26.09	26.14	7.98	7.98	33.84	33.74	94.60	94.75	6.79	6.80	8.71	8.83	10.3	10.9
			16:49	3.7	1.0	26.18		7.97		33.63		94.90		6.81		8.95		11.5	

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 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	7/10/2024	Fine	13:54	4.3	3.3	28.30	28.25	7.83	7.83	32.30	32.30	93.00	92.35	6.88	6.82	6.79	6.90	3.6	3.8
			13:55	4.3	3.3	28.20		7.83		32.29		91.70		6.76		7.01		4.0	
	9/10/2024	Fine	7:47	3.9	2.9	27.60	27.60	7.91	7.91	32.69	32.62	90.00	90.05	6.68	6.68	3.87	3.78	3.8	3.3
			7:48	3.9	2.9	27.60		7.91		32.54		90.10		6.68		3.69		2.8	
	12/10/2024	Fine	7:59	4.2	3.2	27.70	27.65	7.91	7.91	32.34	32.37	88.40	88.50	6.47	6.48	8.23	8.17	15.3	15.2
			8:00	4.2	3.2	27.60		7.91		32.40		88.60		6.48		8.10		15.0	
	14/10/2024	Fine	9:46	4.1	3.1	28.10	28.15	7.93	7.94	32.36	32.30	90.10	89.65	6.48	6.46	5.70	5.82	5.8	4.4
			9:47	4.1	3.3	28.20		7.94		32.24		89.20		6.44		5.94		3.0	
	16/10/2024	Fine	11:28	4.1	3.3	28.00	27.95	7.96	7.96	32.56	32.41	89.40	89.65	6.48	6.50	3.47	3.50	1.1	1.3
			11:29	4.3	3.3	27.90		7.96		32.25		89.90		6.52		3.52		1.4	
	18/10/2024	Fine	12:43	4.1	3.1	29.02	29.20	8.01	8.02	33.40	33.55	99.90	101.85	6.52	6.58	3.47	3.25	1.4	1.5
			12:44	4.1	3.1	29.37		8.02		33.69		103.80		6.63		3.02		1.5	
	21/10/2024	Cloudy	14:30	4.3	3.3	29.23	29.09	7.83	7.82	32.61	32.68	106.30	104.60	6.79	6.68	7.52	7.68	5.9	6.2
			14:31	4.3	3.3	28.94		7.81		32.74		102.90		6.57		7.84		6.4	
	23/10/2024	Cloudy	7:44	3.9	2.9	27.06	26.98	7.81	7.81	33.40	33.55	98.00	98.75	6.66	6.68	2.54	2.69	6.0	5.8
			7:45	3.9	2.9	26.89		7.81		33.70		99.50		6.69		2.84		5.6	
	25/10/2024	Cloudy	8:48	4.1	3.1	26.13	26.14	7.81	7.81	33.40	33.36	89.20	89.10	6.71	6.71	5.84	5.68	5.2	5.3
			8:49	4.1	3.1	26.14		7.81		33.32		89.00		6.70		5.52		5.3	
	28/10/2024	Fine	10:09	4.2	3.2	25.59	25.64	7.80	7.80	33.70	33.71	93.40	94.05	6.46	6.48	9.06	9.22	19.2	19.1
			10:10	4.2	3.2	25.68		7.79		33.72		94.70		6.50		9.37		19.0	
	30/10/2024	Fine	11:17	4.1	3.1	26.81	26.77	7.96	7.96	33.15	33.13	95.80	96.70	6.74	6.80	8.02	8.20	10.8	13.0
			11:18	4.1	3.1	26.73		7.95		33.10		97.60		6.86		8.37		15.1	

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.

Lam Environmental Services Limited

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	7/10/2024	Fine	9:08	3.8	2.8	28.20	28.20	7.81	7.82	32.42	32.39	87.80	87.10	6.50	6.46	5.16	5.30	3.7	4.1
			9:09	3.8	2.8	28.20		7.82		32.35		86.40		6.42		5.43		4.5	
	9/10/2024	Fine	15:39	4.2	3.2	27.80	27.85	7.94	7.94	32.98	32.89	87.50	87.80	6.48	6.52	4.89	4.96	3.4	4.0
			15:40	4.2	3.2	27.90		7.94		32.79		88.10		6.55		5.02		4.6	
	12/10/2024	Fine	15:36	3.7	2.7	27.70	27.70	7.93	7.93	32.19	32.21	90.80	90.70	6.60	6.60	5.63	5.79	4.9	5.2
			15:37	3.7	2.7	27.70		7.92		32.23		90.60		6.59		5.94		5.4	
	14/10/2024	Fine	16:18	3.7	2.7	27.60	27.55	7.96	7.97	32.89	32.91	91.60	91.80	6.52	6.54	7.76	7.86	11.0	10.5
			16:19	3.7	2.7	27.50		7.97		32.92		92.00		6.55		7.95		10.0	
	16/10/2024	Fine	17:13	3.7	2.7	28.00	28.00	7.98	7.98	32.84	32.82	87.20	86.90	6.55	6.52	4.67	4.81	1.2	1.7
			17:14	3.7	2.7	28.00		7.98		32.79		86.60		6.49		4.94		2.1	
	18/10/2024	Fine	18:08	3.7	2.7	29.13	29.19	8.00	8.00	32.95	32.91	99.20	100.70	6.48	6.54	3.98	4.11	1.9	1.6
			18:09	3.7	2.7	29.25		7.99		32.87		102.20		6.59		4.24		1.3	
	21/10/2024	Cloudy	9:36	4.0	3.0	29.74	29.67	7.82	7.82	31.54	31.64	103.70	102.45	6.76	6.65	5.74	5.69	7.6	7.2
			9:37	4.0	3.0	29.59		7.81		31.73		101.20		6.53		5.64		6.8	
	23/10/2024	Cloudy	12:56	3.7	2.7	27.80	27.77	7.80	7.80	33.15	33.13	99.10	98.35	6.67	6.62	2.86	2.99	7.3	7.4
			12:57	3.7	2.7	27.74		7.79		33.10		97.60		6.57		3.12		7.5	
	25/10/2024	Cloudy	13:39	3.7	2.7	26.82	26.88	7.64	7.64	33.87	33.95	90.40	89.90	6.56	6.52	6.21	6.17	5.4	5.5
			13:40	3.7	2.7	26.94		7.64		34.02		89.40		6.48		6.12		5.6	
	28/10/2024	Fine	16:21	3.8	2.8	26.51	26.50	7.83	7.82	34.25	34.15	98.00	98.75	6.70	6.74	8.02	7.93	21.2	21.5
			16:22	3.8	2.8	26.48		7.80		34.05		99.50		6.77		7.84		21.8	
	30/10/2024	Fine	16:50	3.7	2.7	26.29	26.27	7.97	7.97	34.18	34.22	89.20	89.95	6.61	6.64	9.04	8.96	13.2	13.7
			16:51	3.7	2.7	26.25		7.97		34.25		90.70		6.66		8.87		14.2	

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 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	7/10/2024	Fine	13:43	2.8	1.4	28.00	28.10	7.83	7.84	32.17	32.28	90.40	91.35	6.69	6.79	6.21	6.22	2.9	3.0
			13:44	2.8	1.4	28.20		7.84		32.38		92.30		6.88		6.22		3.0	
	9/10/2024	Fine	7:55	2.7	1.4	27.40	27.35	7.92	7.92	32.64	32.68	87.00	87.30	6.35	6.37	4.87	4.67	2.6	2.7
			7:56	2.5	1.3	27.30		7.91		32.71		87.60		6.39		4.46		2.8	
	12/10/2024	Fine	8:05	2.7	1.4	27.60	27.65	7.89	7.90	32.25	32.22	85.10	84.85	6.26	6.21	8.95	8.98	16.6	14.9
			8:06	2.7	1.4	27.70		7.90		32.19		84.60		6.16		9.00		13.1	
	14/10/2024	Fine	9:54	2.7	1.4	28.20	28.25	7.92	7.92	32.36	32.30	91.20	91.45	6.50	6.52	7.02	6.80	5.9	5.4
			9:55	2.7	1.4	28.30		7.92		32.23		91.70		6.53		6.58		4.9	
	16/10/2024	Fine	11:36	2.7	1.4	27.80	27.80	7.95	7.96	32.36	32.47	87.60	87.40	6.40	6.38	4.24	4.07	<1.0	1.0
			11:37	2.8	1.4	27.80		7.96		32.57		87.20		6.35		3.90		<1.0	
	18/10/2024	Fine	12:51	2.7	1.4	29.19	29.21	7.98	7.98	33.59	33.46	97.60	97.85	6.36	6.40	3.64	3.56	1.7	1.5
			12:52	2.7	1.4	29.22		7.98		33.33		98.10		6.43		3.47		1.2	
	21/10/2024	Cloudy	14:10	2.8	1.4	29.04	29.11	7.83	7.84	32.54	32.64	99.10	99.75	6.28	6.30	6.83	6.79	17.0	17.2
			14:11	2.8	1.4	29.17		7.84		32.74		100.40		6.31		6.74		17.3	
	23/10/2024	Cloudy	7:51	2.4	1.2	27.44	27.38	7.82	7.82	33.39	33.39	94.90	95.25	6.38	6.41	5.12	4.95	8.6	9.2
			7:52	2.4	1.2	27.31		7.82		33.38		95.60		6.43		4.78		9.7	
	25/10/2024	Cloudy	9:05	2.6	1.3	26.00	26.01	7.84	7.84	33.46	33.56	87.30	86.75	6.48	6.45	5.79	5.68	5.3	5.4
			9:06	2.6	1.3	26.02		7.83		33.66		86.20		6.42		5.56		5.4	
	28/10/2024	Fine	10:16	2.7	1.4	25.74	25.79	7.83	7.84	33.54	33.60	91.50	92.50	6.29	6.32	8.95	8.85	15.2	17.5
			10:17	2.7	1.4	25.84		7.84		33.66		93.50		6.35		8.74		19.7	
	30/10/2024	Fine	11:25	2.6	1.3	26.94	26.95	7.95	7.95	33.91	33.86	91.20	90.50	6.40	6.32	7.64	7.57	20.7	20.1
			11:26	2.6	1.3	26.95		7.94		33.81		89.80		6.23		7.49		19.5	

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 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	7/10/2024	Fine	9:15	2.4	1.2	28.20	28.15	7.83	7.83	32.29	32.35	82.40	83.30	6.15	6.22	6.89	6.54	2.8	2.6
			9:16	2.4	1.2	28.10		7.83		32.41		84.20		6.29		6.19		2.4	
	9/10/2024	Fine	15:25	2.7	1.4	27.60	27.65	7.95	7.96	32.91	32.97	86.80	85.80	6.32	6.30	3.24	3.38	4.7	4.7
			15:26	2.7	1.4	27.70		7.96		33.02		84.80		6.28		3.51		4.6	
	12/10/2024	Fine	15:23	2.3	1.2	27.80	27.85	7.92	7.92	32.15	32.12	88.10	87.50	6.35	6.31	6.67	6.41	8.6	8.0
			15:24	2.3	1.2	27.90		7.91		32.08		86.90		6.27		6.15		7.4	
	14/10/2024	Fine	16:05	2.2	1.1	27.70	27.65	7.94	7.95	32.74	32.76	90.10	89.95	6.40	6.40	8.87	8.78	10.0	10.7
			16:06	2.2	1.1	27.60		7.95		32.78		89.80		6.39		8.68		11.4	
	16/10/2024	Fine	16:59	2.5	1.3	28.00	27.95	7.98	7.98	32.84	32.90	82.90	83.55	6.34	6.37	4.27	4.26	1.8	1.4
			17:00	2.5	1.3	27.90		7.97		32.95		84.20		6.39		4.25		1.0	
	18/10/2024	Fine	17:53	2.4	1.2	28.98	28.97	7.98	7.97	33.01	33.00	96.80	98.55	6.30	6.40	4.37	4.21	2.4	2.3
			17:54	2.4	1.2	28.95		7.96		32.98		100.30		6.49		4.04		2.1	
	21/10/2024	Cloudy	9:43	2.5	1.3	29.42	29.51	7.80	7.81	31.16	31.40	98.30	97.20	6.32	6.23	5.67	5.38	7.6	8.0
			9:44	2.5	1.3	29.60		7.82		31.64		96.10		6.13		5.08		8.3	
	23/10/2024	Cloudy	12:43	2.3	1.2	26.84	26.93	7.80	7.81	32.93	32.89	95.60	96.00	6.40	6.42	3.50	3.38	8.9	9.0
			12:44	2.3	1.2	27.01		7.81		32.84		96.40		6.43		3.26		9.1	
	25/10/2024	Cloudy	13:25	2.4	1.2	26.47	26.40	7.66	7.66	34.24	34.18	87.60	88.20	6.38	6.39	5.50	5.44	6.0	6.2
			13:26	2.4	1.2	26.32		7.65		34.12		88.80		6.40		5.37		6.4	
	28/10/2024	Fine	16:07	2.3	1.2	26.94	26.87	7.85	7.85	34.14	34.11	92.70	92.30	6.33	6.31	9.13	9.06	14.0	13.7
			16:08	2.3	1.2	26.80		7.84		34.07		91.90		6.28		8.99		13.3	
	30/10/2024	Fine	16:37	2.4	1.2	26.22	26.25	7.96	7.97	24.43	24.33	89.40	90.80	6.25	6.34	8.25	8.19	15.5	15.9
			16:38	2.4	1.2	26.27		7.97		24.23		92.20		6.42		8.12		16.2	

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) - 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	7/10/2024	Fine	13:37	2.7	1.4	28.10	28.10	7.84	7.85	32.05	32.15	93.00	92.25	7.00	6.93	5.37	5.44	2.8	2.5
			13:38	2.7	1.4	28.10		7.85		32.24		91.50		6.86		5.51		2.1	
	9/10/2024	Fine	8:01	2.7	1.4	27.60	27.55	7.91	7.92	32.63	32.59	87.40	87.65	6.45	6.47	4.81	4.88	3.2	2.9
			8:02	2.6	1.3	27.50		7.93		32.54		87.90		6.49		4.94		2.6	
	12/10/2024	Fine	8:11	2.7	1.4	27.70	27.70	7.90	7.90	32.16	32.27	87.30	87.85	6.29	6.34	9.24	9.13	14.6	14.4
			8:12	2.7	1.4	27.70		7.90		32.37		88.40		6.39		9.02		14.2	
	14/10/2024	Fine	9:59	2.6	1.3	28.20	28.20	7.91	7.92	32.39	32.40	91.30	91.65	6.50	6.52	5.61	5.78	6.6	7.0
			10:00	2.6	1.5	28.20		7.92		32.40		92.00		6.54		5.94		7.3	
	16/10/2024	Fine	11:41	2.6	1.5	27.90	27.85	7.97	7.97	32.69	32.55	86.40	87.20	6.24	6.32	4.02	4.10	<1.0	1.0
			11:42	2.9	1.5	27.80		7.96		32.41		88.00		6.39		4.17		<1.0	
	18/10/2024	Fine	12:58	2.6	1.3	29.10	29.10	7.99	8.00	33.86	33.88	100.60	100.20	6.56	6.52	3.95	4.04	1.8	1.6
			12:59	2.6	1.3	29.09		8.01		33.89		99.80		6.48		4.12		1.3	
	21/10/2024	Cloudy	14:04	2.7	1.4	29.16	29.00	7.84	7.84	32.59	32.38	95.40	95.90	6.12	6.15	6.00	6.12	15.1	14.6
			14:05	2.7	1.4	28.84		7.84		32.17		96.40		6.17		6.24		14.1	
	23/10/2024	Cloudy	7:58	2.6	1.3	27.39	27.49	7.83	7.83	33.20	33.31	92.90	92.55	6.19	6.22	4.02	4.25	8.4	8.6
			7:59	2.6	1.3	27.59		7.83		33.41		92.20		6.24		4.47		8.8	
	25/10/2024	Cloudy	9:11	2.5	1.3	25.89	25.94	7.85	7.83	33.58	33.66	85.40	85.55	6.27	6.31	5.31	5.39	7.2	7.3
			9:12	2.5	1.3	25.99		7.80		33.74		85.70		6.35		5.47		7.4	
	28/10/2024	Fine	10:23	2.7	1.4	25.60	25.54	7.84	7.83	33.29	33.40	92.20	92.00	6.31	6.25	7.98	8.06	15.8	15.4
			10:24	2.7	1.4	25.47		7.82		33.50		91.80		6.19		8.13		15.0	
	30/10/2024	Fine	11:31	2.7	1.4	26.89	26.91	7.96	7.96	34.37	34.33	87.40	87.70	6.28	6.30	7.02	7.07	20.1	19.3
			11:32	2.7	1.4	26.92		7.95		34.29		88.00		6.32		7.12		18.4	

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.

Lam Environmental Services Limited

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	7/10/2024	Fine	9:20	2.5	1.3	28.20	28.25	7.82	7.83	32.39	32.32	84.90	85.10	6.20	6.27	4.59	4.72	2.4	2.4
			9:21	2.5	1.3	28.30		7.83		32.25		85.30		6.34		4.84		2.4	
	9/10/2024	Fine	15:20	2.7	1.4	27.60	27.55	7.96	7.95	32.25	32.13	84.00	84.45	6.38	6.40	3.28	3.15	3.1	3.7
			15:21	2.7	1.4	27.50		7.94		32.01		84.90		6.42		3.02		4.2	
	12/10/2024	Fine	15:16	2.4	1.2	27.80	27.80	7.93	7.93	32.17	32.13	84.60	84.40	6.15	6.13	7.94	7.98	7.5	7.4
			15:17	2.4	1.2	27.80		7.92		32.09		84.20		6.11		8.02		7.2	
	14/10/2024	Fine	15:57	2.3	1.2	27.50	27.55	7.94	7.94	32.95	32.85	90.23	89.47	6.44	6.37	7.48	7.61	11.7	11.4
			15:58	2.3	1.2	27.60		7.94		32.74		88.70		6.29		7.73		11.0	
	16/10/2024	Fine	16:53	2.4	1.2	28.00	28.00	7.97	7.97	32.76	32.78	83.60	82.90	6.38	6.33	3.99	4.12	1.6	1.6
			16:54	2.4	1.2	28.00		7.97		32.80		82.20		6.28		4.24		1.5	
	18/10/2024	Fine	17:51	2.3	1.2	28.87	28.88	7.97	7.97	33.37	33.47	97.70	96.55	6.34	6.26	4.25	4.45	2.1	2.1
			17:52	2.3	1.2	28.89		7.97		33.56		95.40		6.17		4.64		2.1	
	21/10/2024	Cloudy	9:50	2.4	1.2	29.89	29.81	7.82	7.83	31.94	31.89	99.10	97.75	6.44	6.31	5.85	5.99	8.0	8.0
			9:51	2.4	1.2	29.73		7.83		31.84		96.40		6.17		6.12		8.0	
	23/10/2024	Cloudy	12:36	2.4	1.2	27.05	27.07	7.81	7.82	32.80	32.81	91.60	93.15	6.12	6.21	3.05	3.15	9.4	9.7
			12:37	2.4	1.2	27.09		7.82		32.82		94.70		6.29		3.24		9.9	
	25/10/2024	Cloudy	13:19	2.3	1.2	26.40	26.28	7.68	7.68	34.54	34.47	87.20	86.80	6.29	6.24	4.74	4.78	5.9	6.2
			13:20	2.3	1.2	26.16		7.67		34.40		86.40		6.18		4.81		6.4	
	28/10/2024	Fine	16:01	2.4	1.2	26.45	26.45	7.86	7.86	34.37	34.25	94.80	94.70	6.44	6.44	9.12	9.18	14.9	14.7
			16:02	2.4	1.2	26.44		7.86		34.12		94.60		6.43		9.24		14.4	
	30/10/2024	Fine	16:32	2.5	1.3	26.22	26.17	7.97	7.97	33.64	33.80	91.80	90.40	6.48	6.47	8.79	8.67	15.1	15.9
			16:33	2.5	1.3	26.12		7.97		33.96		89.00		6.46		8.54		16.7	

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 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	7/10/2024	Fine	14:29	2.7	1.4	28.00	28.05	7.87	7.87	32.54	32.65	89.20	88.30	6.68	6.63	6.87	6.69	2.5	2.6
			14:30	2.7	1.4	28.10		7.86		32.76		87.40		6.58		6.51		2.7	
	9/10/2024	Fine	7:03	2.5	1.3	26.90	26.85	7.88	7.87	32.73	32.84	90.20	89.30	6.48	6.44	7.37	7.47	4.8	5.1
			7:04	2.5	1.3	26.80		7.86		32.94		88.40		6.39		7.57		5.3	
	12/10/2024	Fine	7:14	2.8	1.4	27.40	27.50	7.90	7.90	32.69	32.78	87.00	87.60	6.35	6.39	7.64	7.74	9.7	10.2
			7:15	2.8	1.4	27.60		7.90		32.87		88.20		6.42		7.84		10.6	
	14/10/2024	Fine	9:00	2.8	1.4	27.90	27.90	7.92	7.92	32.08	32.10	90.40	90.00	6.56	6.53	4.25	4.08	5.4	5.6
			9:01	2.8	1.4	27.90		7.91		32.12		89.60		6.50		3.90		5.8	
	16/10/2024	Fine	10:40	2.9	1.5	27.70	27.70	7.94	7.95	32.46	32.33	85.40	86.30	6.26	6.28	3.67	3.62	3.0	2.6
			10:41	2.9	1.5	27.70		7.95		32.19		87.20		6.30		3.57		2.2	
	18/10/2024	Fine	11:55	2.6	1.3	28.37	28.45	7.98	7.99	33.94	33.84	96.40	95.85	6.39	6.35	3.89	4.01	3.4	3.5
			11:56	2.6	1.3	28.52		8.00		33.74		95.30		6.31		4.12		3.5	
	21/10/2024	Cloudy	15:06	2.8	1.4	29.00	28.99	7.84	7.84	31.74	31.85	103.00	102.35	6.60	6.58	7.84	7.78	6.3	6.4
			15:07	2.8	1.4	28.98		7.83		31.96		101.70		6.56		7.71		6.4	
	23/10/2024	Cloudy	6:59	2.5	1.3	26.50	26.62	7.62	7.62	33.33	33.33	94.60	94.80	6.32	6.33	6.89	7.00	9.4	9.5
			7:00	2.5	1.3	26.73		7.62		33.33		95.00		6.33		7.10		9.6	
	25/10/2024	Cloudy	7:08	2.6	1.3	25.24	25.28	7.86	7.87	33.89	33.81	87.80	86.80	6.29	6.22	5.96	6.10	8.2	7.5
			7:09	2.6	1.3	25.32		7.87		33.73		85.80		6.15		6.24		6.8	
	28/10/2024	Fine	9:20	2.7	1.4	25.24	25.42	7.37	7.36	33.94	33.82	94.90	94.25	6.45	6.41	9.43	9.61	50.5	49.1
			9:21	2.7	1.4	25.60		7.35		33.69		93.60		6.36		9.78		47.6	
	30/10/2024	Fine	10:30	2.7	1.4	26.70	26.77	7.96	7.96	33.08	32.99	92.60	91.75	6.46	6.41	7.74	7.67	3.0	3.3
			10:31	2.7	1.4	26.84		7.96		32.89		90.90		6.36		7.60		3.5	

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 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	7/10/2024	Fine	8:24	2.5	1.3	27.10	27.15	7.85	7.86	32.21	32.35	82.90	83.85	6.32	6.38	7.69	7.71	4.2	4.1
			8:25	2.5	1.3	27.20		7.86		32.49		84.80		6.44		7.73		3.9	
	9/10/2024	Fine	16:19	2.8	1.4	27.20	27.30	7.95	7.95	32.38	32.30	84.10	85.20	6.26	6.34	6.35	6.24	6.4	6.4
			16:20	2.8	1.4	27.40		7.94		32.21		86.30		6.42		6.12		6.4	
	12/10/2024	Fine	16:19	2.4	1.2	27.00	27.05	7.93	7.93	32.40	32.50	89.30	88.70	6.41	6.37	6.12	5.93	6.4	6.4
			16:20	2.4	1.2	27.10		7.93		32.59		88.10		6.32		5.74		6.4	
	14/10/2024	Fine	17:02	2.3	1.2	27.60	27.65	7.97	7.97	32.42	32.46	90.40	90.00	6.57	6.54	4.24	4.55	5.7	5.2
			17:03	2.3	1.2	27.70		7.96		32.50		89.60		6.51		4.85		4.6	
	16/10/2024	Fine	17:57	2.4	1.2	27.80	27.85	7.97	7.97	32.63	32.79	83.60	83.20	6.28	6.25	4.25	4.17	3.6	3.6
			17:58	2.4	1.2	27.90		7.96		32.94		82.80		6.21		4.09		3.6	
	18/10/2024	Fine	18:49	2.2	1.1	28.89	28.83	7.97	7.98	33.27	33.21	98.20	97.35	6.38	6.29	2.32	2.46	2.8	3.0
			18:50	2.2	1.1	28.77		7.98		33.14		96.50		6.20		2.59		3.2	
	21/10/2024	Cloudy	8:50	2.5	1.3	29.83	29.63	7.82	7.82	32.54	32.28	101.20	101.55	6.42	6.45	7.98	8.05	12.7	12.5
			8:51	2.5	1.3	29.42		7.81		32.02		101.90		6.47		8.12		12.2	
	23/10/2024	Cloudy	13:37	2.4	1.2	27.23	27.16	7.73	7.73	33.38	33.61	94.20	94.95	6.31	6.34	7.99	7.92	14.8	15.1
			13:38	2.4	1.2	27.09		7.73		33.84		95.70		6.37		7.84		15.3	
	25/10/2024	Cloudy	14:22	2.3	1.2	26.58	26.48	7.53	7.54	33.08	33.04	86.80	86.60	6.26	6.30	5.64	5.36	5.4	5.7
			14:23	2.3	1.2	26.37		7.54		33.00		86.40		6.34		5.07		5.9	
	28/10/2024	Fine	17:06	2.3	1.2	25.89	25.72	7.95	7.94	33.30	33.27	94.90	93.80	6.44	6.36	8.43	8.29	19.0	19.7
			17:07	2.3	1.2	25.54		7.93		33.24		92.70		6.28		8.14		20.3	
	30/10/2024	Fine	17:32	2.4	1.2	26.18	26.22	7.94	7.95	33.76	33.86	83.60	84.10	6.47	6.48	8.58	8.66	6.1	6.1
			17:33	2.4	1.2	26.25		7.95		33.95		84.60		6.49		8.74		6.0	

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) - 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
CE	7/10/2024	Fine	13:26	8.7	1.0	28.60	28.65	7.91	7.92	32.47	32.36	93.20	92.80	6.88	6.85	7.19	7.24	3.6	3.8
			13:27	8.7	1.0	28.70		7.92		32.25		92.40		6.81		7.28		4.0	
	9/10/2024	Fine	8:13	8.5	1.0	27.60	27.55	7.96	7.96	32.96	32.86	92.20	93.20	6.80	6.84	4.12	4.24	6.8	5.5
			8:14	8.5	1.0	27.50		7.95		32.76		94.20		6.88		4.36		4.1	
	12/10/2024	Fine	8:23	8.6	1.0	27.70	27.65	7.93	7.92	31.34	31.45	95.40	94.40	6.83	6.74	5.89	6.06	3.4	4.0
			8:24	8.6	1.0	27.60		7.91		31.56		93.40		6.65		6.23		4.6	
	14/10/2024	Fine	10:12	8.5	1.0	28.40	28.35	7.94	7.95	32.79	32.76	98.10	97.00	6.94	6.90	4.08	4.11	5.5	5.1
			10:13	8.5	1.0	28.30		7.96		32.73		95.90		6.86		4.13		4.7	
	16/10/2024	Fine	11:53	8.8	1.0	27.50	27.55	7.99	7.99	32.64	32.65	95.00	95.10	6.89	6.90	3.89	3.95	4.3	4.6
			11:54	8.8	1.0	27.60		7.98		32.65		95.20		6.90		4.00		4.8	
	18/10/2024	Fine	13:00	8.7	1.0	28.75	28.85	7.96	7.97	33.42	33.56	109.60	108.55	7.01	6.99	2.73	2.66	4.5	4.5
			13:01	8.7	1.0	28.94		7.97		33.69		107.50		6.96		2.59		4.4	
	21/10/2024	Cloudy	13:50	8.7	1.0	28.98	28.83	7.85	7.85	32.06	32.10	109.30	109.50	6.96	6.98	5.68	5.58	5.8	6.2
			13:51	8.7	1.0	28.67		7.85		32.14		109.70		7.00		5.47		6.6	
	23/10/2024	Cloudy	8:10	8.4	1.0	27.28	27.24	7.87	7.87	33.50	33.44	107.40	106.90	7.02	7.01	4.79	4.93	10.4	11.1
			8:11	8.4	1.0	27.19		7.86		33.37		106.40		6.99		5.07		11.8	
	25/10/2024	Cloudy	9:24	8.5	1.0	26.59	26.61	7.40	7.39	33.50	33.51	89.80	88.85	6.88	6.88	1.49	1.27	2.8	3.7
			9:25	8.5	1.0	26.62		7.37		33.52		87.90		6.87		1.04		4.5	
	28/10/2024	Fine	10:35	8.7	1.0	25.71	25.72	7.92	7.91	34.01	34.01	98.50	100.60	6.82	6.94	7.02	6.96	13.2	13.4
			10:36	8.7	1.0	25.72		7.90		34.00		102.70		7.06		6.89		13.6	
	30/10/2024	Fine	11:44	8.6	1.0	26.47	26.39	7.97	7.97	33.87	33.79	95.40	96.20	6.87	6.91	5.55	5.46	10.4	10.0
			11:45	8.6	1.0	26.31		7.96		33.71		97.00		6.95		5.37		9.6	

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 (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
CE	7/10/2024	Fine	9:32	8.4	1.0	28.30	28.35	7.90	7.91	32.58	32.60	91.40	91.70	6.74	6.76	6.12	5.96	3.3	3.2
			9:33	8.4	1.0	28.40		7.91		32.61		92.00		6.78		5.79		3.0	
	9/10/2024	Fine	15:07	8.7	1.0	27.00	27.00	7.99	7.99	32.99	32.98	89.40	90.00	6.86	6.78	5.90	5.64	5.2	5.2
			15:08	8.7	1.0	27.00		7.98		32.97		90.60		6.69		5.38		5.2	
	12/10/2024	Fine	15:03	8.3	1.0	28.90	28.45	7.90	7.91	32.09	32.10	94.60	93.70	6.78	6.71	5.79	5.74	5.8	5.3
			15:04	8.3	1.0	28.00		7.91		32.11		92.80		6.64		5.68		4.8	
	14/10/2024	Fine	15:45	8.2	1.0	28.00	27.95	7.98	7.98	32.33	32.28	96.20	97.30	6.83	6.91	4.29	4.44	4.9	4.6
			15:46	8.2	1.0	27.90		7.97		32.23		98.40		6.98		4.59		4.3	
	16/10/2024	Fine	16:40	8.3	1.0	27.90	27.85	8.00	8.00	32.91	32.90	86.60	86.40	6.84	6.83	3.59	3.67	5.2	4.8
			16:41	8.3	1.0	27.80		7.99		32.88		86.20		6.81		3.74		4.3	
	18/10/2024	Fine	17:40	8.3	1.0	28.54	28.59	7.94	7.94	33.16	33.18	106.80	106.95	6.91	6.94	4.54	4.76	6.0	5.9
			17:41	8.3	1.0	28.64		7.94		33.19		107.10		6.96		4.97		5.8	
	21/10/2024	Cloudy	10:13	8.5	1.0	29.13	29.14	7.82	7.83	31.56	31.67	104.20	106.15	6.66	6.81	4.74	4.79	5.2	4.8
			10:14	8.5	1.0	29.14		7.84		31.78		108.10		6.96		4.84		4.3	
	23/10/2024	Cloudy	12:25	8.2	1.0	27.74	27.63	7.84	7.85	33.62	33.60	100.10	106.05	6.74	6.81	6.24	6.32	9.3	9.3
			12:26	8.2	1.0	27.51		7.85		33.58		112.00		6.87		6.40		9.3	
	25/10/2024	Cloudy	13:07	8.3	1.0	27.24	27.18	7.53	7.58	34.14	34.08	93.70	89.10	6.98	6.99	2.04	2.07	2.4	2.7
			13:08	8.3	1.0	27.12		7.63		34.02		84.50		6.99		2.10		3.0	
	28/10/2024	Fine	15:50	8.4	1.0	26.37	26.26	7.91	7.91	34.25	34.11	101.20	101.30	6.82	6.86	7.74	7.86	17.0	17.8
			15:51	8.4	1.0	26.14		7.90		33.96		101.40		6.89		7.98		18.6	
	30/10/2024	Fine	16:20	8.3	1.0	26.02	26.10	7.94	7.95	33.37	33.40	98.40	98.50	6.91	6.92	6.24	6.13	10.0	12.1
			16:21	8.3	1.0	26.18		7.95		33.42		98.60		6.92		6.02		14.2	

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 CE (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
CE	7/10/2024	Fine	13:30	8.7	4.4	28.50	28.45	7.88	7.89	32.30	32.33	92.20	91.20	6.79	6.78	6.53	6.44	5.2	5.4
			13:31	8.7	4.4	28.40		7.90		32.35		90.20		6.76		6.34		5.5	
	9/10/2024	Fine	8:17	8.5	4.3	27.70	27.70	7.97	7.97	32.75	32.80	91.40	92.02	6.76	6.80	5.94	5.82	5.6	5.5
			8:18	8.5	4.3	27.70		7.97		32.85		92.63		6.84		5.69		5.3	
	12/10/2024	Fine	8:27	8.6	4.3	27.90	27.90	7.92	7.93	31.76	31.83	93.60	94.10	6.69	6.71	6.44	6.37	3.1	3.7
			8:28	8.6	4.3	27.90		7.93		31.89		94.60		6.72		6.30		4.2	
	14/10/2024	Fine	10:16	8.5	4.3	28.30	28.25	7.95	7.96	32.84	32.90	92.40	93.60	6.71	6.77	4.80	4.67	4.8	5.1
			10:17	8.5	4.3	28.20		7.96		32.95		94.80		6.83		4.54		5.3	
	16/10/2024	Fine	11:57	8.8	4.4	27.70	27.70	7.98	7.98	32.60	32.60	94.60	94.20	6.84	6.82	3.88	3.76	4.2	4.8
			11:58	8.8	4.4	27.70		7.98		32.59		93.80		6.79		3.64		5.4	
	18/10/2024	Fine	13:04	8.7	4.4	28.74	28.68	7.96	7.96	33.44	33.35	106.70	104.95	6.88	6.80	2.67	2.74	5.6	5.4
			13:05	8.7	4.4	28.62		7.96		33.26		103.20		6.72		2.81		5.1	
	21/10/2024	Cloudy	13:54	8.7	4.4	28.90	28.93	7.86	7.86	32.11	32.10	106.70	108.20	6.79	6.90	5.39	5.39	6.0	6.6
			13:55	8.7	4.4	28.95		7.85		32.09		109.70		7.01		5.38		7.1	
	23/10/2024	Cloudy	8:14	8.4	4.2	27.24	27.25	7.87	7.87	33.40	33.46	99.60	100.35	6.74	6.82	6.66	6.45	11.4	11.9
			8:15	8.4	4.2	27.26		7.87		33.52		101.10		6.89		6.24		12.4	
	25/10/2024	Cloudy	9:28	8.5	4.3	26.58	26.66	7.39	7.41	33.56	33.53	89.80	89.50	6.90	6.91	1.27	1.28	2.4	2.5
			9:29	8.5	4.3	26.74		7.42		33.49		89.20		6.92		1.29		2.6	
	28/10/2024	Fine	10:39	8.7	4.4	25.86	25.83	7.91	7.91	33.74	33.74	99.00	98.95	6.90	6.88	7.98	7.86	12.9	13.5
			10:40	8.7	4.4	25.80		7.91		33.74		98.90		6.85		7.73		14.0	
	30/10/2024	Fine	11:48	8.6	4.3	26.59	26.61	7.95	7.96	33.95	34.04	95.20	95.80	6.81	6.83	6.84	6.86	10.1	13.2
			11:49	8.6	4.3	26.63		7.96		34.12		96.40		6.84		6.87		16.2	

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 CE (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
CE	7/10/2024	Fine	9:36	8.4	4.2	28.40	28.40	7.90	7.90	32.37	32.43	90.80	91.05	6.66	6.69	7.97	7.98	3.9	4.9
			9:37	8.4	4.2	28.40		7.90		32.48		91.30		6.71		7.99		5.9	
	9/10/2024	Fine	15:11	8.7	4.4	27.40	27.35	7.99	7.99	32.69	32.62	96.40	96.40	6.90	6.89	5.02	5.13	4.7	5.1
			15:12	8.7	4.4	27.30		7.99		32.54		96.40		6.88		5.24		5.4	
	12/10/2024	Fine	15:07	8.3	4.2	28.10	28.05	7.91	7.91	32.14	32.30	92.80	91.25	6.70	6.76	5.54	5.39	4.6	4.8
			15:08	8.3	4.2	28.00		7.91		32.45		89.70		6.81		5.24		5.0	
	14/10/2024	Fine	15:49	8.2	4.1	27.60	27.65	7.98	7.98	32.40	32.43	94.60	95.50	6.68	6.75	5.12	5.07	6.3.	3.9
			15:50	8.2	4.1	27.70		7.98		32.45		96.40		6.81		5.02		6.7	
	16/10/2024	Fine	16:44	8.3	4.2	27.90	27.90	7.98	7.98	32.86	32.87	89.40	89.15	6.74	6.77	3.81	3.78	4.9	5.2
			16:45	8.3	4.2	27.90		7.98		32.87		88.90		6.79		3.74		5.4	
	18/10/2024	Fine	17:44	8.3	4.2	28.59	28.54	7.94	7.93	32.83	32.79	104.80	104.50	6.76	6.76	5.32	5.18	4.9	5.4
			17:45	8.3	4.2	28.49		7.92		32.74		104.20		6.75		5.04		5.9	
	21/10/2024	Cloudy	10:17	8.5	4.3	29.00	29.00	7.83	7.83	31.62	31.63	108.30	106.40	6.98	6.84	4.82	4.81	5.2	5.6
			10:18	8.5	4.3	28.99		7.83		31.64		104.50		6.70		4.80		5.9	
	23/10/2024	Cloudy	12:29	8.2	4.1	27.84	27.87	7.85	7.85	33.67	33.71	102.00	102.10	6.82	6.83	6.79	6.69	10.6	11.3
			12:30	8.2	4.1	27.89		7.85		33.74		102.20		6.83		6.59		12.0	
	25/10/2024	Cloudy	13:11	8.3	4.2	27.47	27.53	7.54	7.67	33.90	33.90	93.40	93.65	6.76	6.78	2.22	2.31	3.5	3.4
			13:12	8.3	4.2	27.58		7.79		33.89		93.90		6.80		2.40		3.2	
	28/10/2024	Fine	15:54	8.4	4.2	26.14	26.20	7.92	7.93	34.14	34.20	98.60	98.50	6.76	6.76	8.04	8.02	14.4	14.9
			15:55	8.4	4.2	26.25		7.93		34.25		98.40		6.75		7.99		15.4	
	30/10/2024	Fine	16:24	8.3	4.2	26.17	26.16	7.96	7.97	34.19	34.22	98.90	98.45	6.96	6.95	5.73	5.86	17.2	18.7
			16:25	8.3	4.2	26.15		7.97		34.25		98.00		6.94		5.98		20.2	

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 CE (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
CE	7/10/2024	Fine	13:33	8.7	7.7	28.30	28.30	7.89	7.89	32.49	32.55	91.50	92.05	6.86	6.85	7.89	7.95	9.6	8.0
			13:34	8.7	7.7	28.30		7.88		32.61		92.60		6.84		8.01		6.3	
	9/10/2024	Fine	8:20	8.5	7.5	27.90	27.85	7.98	7.98	32.79	32.77	92.00	92.30	6.86	6.88	4.54	4.68	5.8	5.7
			8:21	8.5	7.5	27.80		7.97		32.74		92.60		6.89		4.82		5.5	
	12/10/2024	Fine	8:30	8.6	7.6	27.90	27.95	7.93	7.94	32.00	32.08	95.20	95.30	6.79	6.80	6.89	6.95	6.9	6.8
			8:31	8.6	7.6	28.00		7.94		32.15		95.40		6.81		7.01		6.6	
	14/10/2024	Fine	10:19	8.5	7.5	27.90	27.95	7.96	7.96	33.04	33.14	96.80	97.05	6.90	6.92	5.19	5.26	4.7	5.4
			10:20	8.5	7.5	28.00		7.96		33.24		97.30		6.93		5.32		6.0	
	16/10/2024	Fine	12:00	8.8	7.8	27.70	27.75	7.97	7.98	32.50	32.54	91.80	92.60	6.68	6.73	3.42	3.51	5.8	5.6
			12:01	8.8	7.8	27.80		7.98		32.57		93.40		6.78		3.60		5.4	
	18/10/2024	Fine	13:07	8.7	7.7	28.58	28.66	7.96	7.97	33.34	33.44	103.70	104.15	6.75	6.77	5.26	5.21	6.0	5.7
			13:08	8.7	7.7	28.73		7.97		33.54		104.60		6.78		5.16		5.3	
	21/10/2024	Cloudy	13:57	8.7	7.7	28.93	28.92	7.86	7.86	32.23	32.32	108.20	107.80	6.89	6.87	5.62	5.55	8.2	8.5
			13:58	8.7	7.7	28.90		7.85		32.41		107.40		6.84		5.47		8.8	
	23/10/2024	Cloudy	8:17	8.4	7.4	27.09	27.14	7.87	7.87	33.50	33.52	104.10	104.05	6.90	6.90	6.70	6.71	10.4	10.3
			8:18	8.4	7.4	27.18		7.87		33.53		104.00		6.90		6.72		10.1	
	25/10/2024	Cloudy	9:31	8.5	7.5	26.59	26.58	7.45	7.43	33.64	33.71	87.20	86.80	6.83	6.80	1.12	0.92	3.0	3.2
			9:32	8.5	7.5	26.56		7.41		33.77		86.40		6.77		0.72		3.4	
	28/10/2024	Fine	10:42	8.7	7.7	25.73	25.79	7.93	7.92	33.49	33.55	98.70	99.55	6.83	6.91	7.99	8.01	16.2	16.9
			10:43	8.7	7.7	25.85		7.91		33.60		100.40		6.99		8.02		17.6	
	30/10/2024	Fine	11:51	8.6	7.6	26.79	26.77	7.95	7.96	34.01	34.10	94.20	94.60	6.78	6.79	7.41	7.27	23.0	20.0
			11:52	8.6	7.6	26.74		7.96		34.18		95.00		6.80		7.12		16.9	

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.

Impact Water Quality Monitoring at Station CE (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
CE	7/10/2024	Fine	9:39	8.4	7.4	28.30	28.35	7.88	7.89	32.24	32.31	91.50	90.90	6.74	6.68	7.64	7.57	6.1	6.2
			9:40	8.4	7.4	28.40		7.89		32.37		90.30		6.61		7.50		6.2	
	9/10/2024	Fine	15:14	8.7	7.7	27.50	27.50	7.97	7.98	32.19	32.37	92.50	91.55	6.78	6.73	5.67	5.51	6.0	5.8
			15:15	8.7	7.7	27.50		7.99		32.54		90.60		6.68		5.34		5.6	
	12/10/2024	Fine	15:10	8.3	7.3	28.20	28.15	7.92	7.93	32.50	32.30	92.60	91.70	6.72	6.70	4.92	5.00	3.5	4.0
			15:11	8.3	7.3	28.10		7.93		32.10		90.80		6.68		5.08		4.4	
	14/10/2024	Fine	15:52	8.2	7.2	27.70	27.75	7.99	7.99	32.64	32.59	93.70	94.55	6.64	6.68	5.37	5.44	7.8	7.8
			15:53	8.2	7.2	27.80		7.98		32.54		95.40		6.72		5.50		7.8	
	16/10/2024	Fine	16:47	8.3	7.3	27.80	27.85	7.98	7.98	32.90	32.86	89.70	87.80	6.70	6.64	4.19	4.28	5.2	5.3
			16:48	8.3	7.3	27.90		7.98		32.82		85.90		6.58		4.36		5.4	
	18/10/2024	Fine	17:47	8.3	7.3	28.26	28.37	7.92	7.91	32.89	32.89	105.50	105.35	6.84	6.82	5.13	5.21	6.4	6.5
			17:48	8.3	7.3	28.48		7.90		32.88		105.20		6.79		5.29		6.5	
	21/10/2024	Cloudy	10:20	8.5	7.5	28.97	28.96	7.83	7.83	31.78	31.78	103.30	102.55	6.61	6.58	3.98	4.05	7.9	8.3
			10:21	8.5	7.5	28.95		7.82		31.77		101.80		6.54		4.11		8.6	
	23/10/2024	Cloudy	12:32	8.2	7.2	28.01	28.00	7.85	7.86	34.01	33.94	101.30	102.20	6.80	6.83	6.89	7.27	12.3	11.7
			12:33	8.2	7.2	27.99		7.86		33.87		103.10		6.85		7.65		11.0	
	25/10/2024	Cloudy	13:14	8.3	7.3	27.79	27.68	7.80	7.82	33.74	33.80	93.60	94.70	6.82	6.91	1.47	1.30	4.4	4.0
			13:15	8.3	7.3	27.56		7.83		33.85		95.80		6.99		1.13		3.5	
	28/10/2024	Fine	15:57	8.4	7.4	26.12	26.10	7.94	7.94	34.24	34.37	98.00	97.55	6.73	6.71	8.45	8.29	16.2	16.7
			15:58	8.4	7.4	26.07		7.94		34.50		97.10		6.69		8.13		17.1	
	30/10/2024	Fine	16:27	8.3	7.3	25.84	25.88	7.96	7.97	34.02	33.97	90.20	90.75	6.70	6.73	6.49	6.41	20.4	20.2
			16:28	8.3	7.3	25.91		7.97		33.92		91.30		6.75		6.32		20.0	

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 CF (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
CF	7/10/2024	Fine	14:47	8.6	1.0	28.70	28.65	7.88	7.88	32.52	32.63	95.30	94.25	7.14	7.07	7.81	7.84	4.0	4.2
			14:48	8.6	1.0	28.60		7.88		32.73		93.20		6.99		7.86		4.4	
	9/10/2024	Fine	6:44	8.5	1.0	27.60	27.60	7.89	7.89	32.37	32.43	92.50	92.25	6.84	6.82	7.02	7.19	3.7	4.1
			6:45	8.5	1.0	27.60		7.89		32.49		92.00		6.80		7.36		4.4	
	12/10/2024	Fine	6:53	8.7	1.0	27.70	27.75	7.87	7.87	31.38	31.22	93.60	93.15	6.78	6.74	5.47	5.61	2.5	3.0
			6:54	8.7	1.0	27.80		7.87		31.05		92.70		6.70		5.74		3.4	
	14/10/2024	Fine	8:40	8.7	1.0	28.40	28.45	7.87	7.88	31.84	31.79	93.00	94.00	6.74	6.77	2.24	2.39	8.5	6.6
			8:41	8.7	1.0	28.50		7.88		31.74		95.00		6.80		2.54		4.6	
	16/10/2024	Fine	10:20	8.9	1.0	28.10	28.05	7.94	7.94	31.79	31.89	93.40	93.50	6.84	6.87	2.04	2.09	3.5	3.1
			10:21	8.9	1.0	28.00		7.93		31.99		93.60		6.89		2.13		2.6	
	18/10/2024	Fine	11:35	8.7	1.0	28.68	28.61	7.95	7.94	32.87	32.91	106.70	107.55	6.97	6.98	4.46	4.36	5.9	6.3
			11:36	8.7	1.0	28.54		7.93		32.94		108.40		6.98		4.25		6.6	
	21/10/2024	Cloudy	15:24	8.7	1.0	30.77	30.81	7.86	7.86	32.51	32.40	106.60	106.20	6.84	6.82	1.24	1.31	2.8	2.6
			15:25	8.7	1.0	30.84		7.85		32.29		105.80		6.80		1.37		2.4	
	23/10/2024	Cloudy	6:40	8.4	1.0	27.60	27.60	7.46	7.46	33.32	33.37	107.10	106.65	7.02	7.01	3.59	3.61	5.2	5.4
			6:41	8.4	1.0	27.59		7.45		33.41		106.20		6.99		3.62		5.6	
	25/10/2024	Cloudy	6:48	8.5	1.0	26.00	26.04	7.70	7.71	33.34	33.40	87.70	88.35	6.72	6.74	6.49	6.50	4.9	6.5
			6:49	8.5	1.0	26.07		7.71		33.45		89.00		6.76		6.50		8.1	
	28/10/2024	Fine	9:00	8.7	1.0	25.74	25.69	7.24	7.19	34.10	34.05	100.00	100.25	6.86	6.87	5.94	6.00	28.3	29.3
			9:01	8.7	1.0	25.64		7.14		33.99		100.50		6.88		6.06		30.2	
	30/10/2024	Fine	10:10	8.6	1.0	27.01	26.86	7.94	7.95	33.66	33.57	90.20	90.00	6.50	6.49	6.02	6.13	9.8	9.6
			10:11	8.6	1.0	26.71		7.95		33.47		89.80		6.47		6.24		9.4	

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 CF (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
CF	7/10/2024	Fine	8:05	8.2	1.0	27.60	27.60	7.91	7.91	32.54	32.61	85.90	86.15	6.54	6.56	5.89	5.88	5.2	4.9
			8:06	8.2	1.0	27.60		7.91		32.67		86.40		6.58		5.87		4.6	
	9/10/2024	Fine	16:39	8.7	1.0	27.40	27.35	7.97	7.97	32.61	32.22	92.50	93.30	6.94	7.00	4.64	4.67	4.6	5.2
			16:40	8.7	1.0	27.30		7.96		31.82		94.10		7.06		4.70		5.8	
	12/10/2024	Fine	16:37	8.2	1.0	27.50	27.45	7.93	7.93	32.11	32.24	94.80	95.20	6.76	6.78	3.19	3.24	3.8	3.8
			16:38	8.2	1.0	27.40		7.93		32.37		95.60		6.79		3.28		3.7	
	14/10/2024	Fine	17:22	8.3	1.0	27.70	27.75	7.95	7.95	32.67	32.51	93.00	94.00	6.61	6.66	5.18	5.30	8.4	8.3
			17:23	8.3	1.0	27.80		7.94		32.35		95.00		6.70		5.42		8.2	
	16/10/2024	Fine	18:15	8.2	1.0	28.30	28.25	7.98	7.98	32.19	32.22	91.40	90.75	6.78	6.74	2.89	2.97	2.9	3.3
			18:16	8.2	1.0	28.20		7.98		32.24		90.10		6.70		3.05		3.6	
	18/10/2024	Fine	19:06	8.2	1.0	28.12	28.07	8.03	8.03	33.19	33.12	106.00	104.95	6.79	6.77	2.74	2.85	1.9	1.8
			19:07	8.2	1.0	28.02		8.03		33.04		103.90		6.75		2.95		1.7	
	21/10/2024	Cloudy	8:30	8.4	1.0	29.51	29.65	7.32	7.33	32.74	32.84	107.40	108.15	6.90	6.95	2.17	2.23	6.8	5.7
			8:31	8.4	1.0	29.78		7.34		32.94		108.90		6.99		2.29		4.5	
	23/10/2024	Cloudy	13:57	8.2	1.0	28.05	28.00	7.86	7.87	32.94	32.89	103.50	103.36	6.95	6.94	7.01	6.90	9.9	10.0
			13:58	8.2	1.0	27.94		7.87		32.83		103.21		6.93		6.79		10.0	
	25/10/2024	Cloudy	14:42	8.3	1.0	26.74	26.76	7.74	7.74	33.85	33.82	96.80	96.00	6.92	6.92	5.37	5.53	8.1	7.4
			14:43	8.3	1.0	26.79		7.73		33.78		95.20		6.91		5.69		6.6	
	28/10/2024	Fine	17:24	8.3	1.0	26.34	26.36	7.93	7.94	33.74	33.80	105.40	104.30	7.08	7.03	5.09	5.13	20.1	20.3
			17:25	8.3	1.0	26.37		7.95		33.86		103.20		6.98		5.17		20.5	
	30/10/2024	Fine	17:50	8.2	1.0	26.20	26.19	7.98	7.98	33.64	33.77	93.40	92.70	6.88	6.85	7.00	7.13	8.5	8.9
			17:51	8.2	1.0	26.18		7.97		33.89		92.00		6.81		7.25		9.2	

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		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	7/10/2024	Fine	14:51	8.6	4.3	28.70	28.70	7.89	7.90	32.51	32.49	89.90	89.95	6.73	6.77	6.81	6.64	3.8	4.2
			14:52	8.6	4.3	28.70		7.90		32.47		90.00		6.80		6.47		4.6	
	9/10/2024	Fine	6:48	8.5	4.3	27.60	27.65	7.90	7.90	32.73	32.62	92.50	92.95	6.83	6.86	7.27	7.20	5.8	5.8
			6:49	8.5	4.3	27.70		7.90		32.50		93.40		6.88		7.12		5.8	
	12/10/2024	Fine	6:57	8.7	4.4	27.80	27.85	7.88	7.88	31.25	31.47	93.00	92.50	6.68	6.61	5.51	5.40	3.4	3.5
			6:58	8.7	4.4	27.90		7.88		31.68		92.00		6.54		5.29		3.5	
	14/10/2024	Fine	8:44	8.7	4.4	28.40	28.35	7.85	7.85	31.98	31.99	97.20	97.50	6.90	6.92	4.48	4.37	7.7	7.6
			8:45	8.7	4.4	28.30		7.85		32.00		97.80		6.93		4.25		7.5	
	16/10/2024	Fine	10:24	8.9	4.5	28.00	28.00	7.93	7.93	32.12	32.30	93.00	92.60	6.87	6.85	3.08	2.99	3.7	3.6
			10:25	8.9	4.5	28.00		7.93		32.47		92.20		6.83		2.89		3.5	
	18/10/2024	Fine	11:39	8.7	4.4	28.67	28.55	7.98	7.98	33.64	33.68	101.20	100.95	6.73	6.71	5.01	5.11	8.0	8.1
			11:40	8.7	4.4	28.43		7.98		33.71		100.70		6.69		5.20		8.1	
	21/10/2024	Cloudy	15:28	8.7	4.4	30.24	30.21	7.85	7.85	32.19	32.27	106.80	108.60	6.87	6.95	1.99	1.86	4.6	3.4
			15:29	8.7	4.4	30.18		7.85		32.35		110.40		7.02		1.72		2.2	
	23/10/2024	Cloudy	6:44	8.4	4.2	27.39	27.32	7.47	7.47	33.50	33.47	99.40	100.00	6.78	6.82	3.66	3.64	4.6	7.5
			6:45	8.4	4.2	27.24		7.47		33.44		100.60		6.86		3.62		10.3	
	25/10/2024	Cloudy	6:52	8.5	4.3	26.16	26.15	7.72	7.72	33.73	33.69	90.20	89.50	6.94	6.89	6.87	6.98	6.8	7.0
			6:53	8.5	4.3	26.13		7.71		33.64		88.80		6.84		7.08		7.1	
	28/10/2024	Fine	9:04	8.7	4.4	25.52	25.68	7.16	7.17	33.98	34.02	98.30	98.65	6.78	6.80	6.13	6.21	28.4	28.9
			9:05	8.7	4.4	25.84		7.18		34.05		99.00		6.81		6.29		29.3	
	30/10/2024	Fine	10:14	8.6	4.3	26.60	26.74	7.94	7.94	33.59	33.61	95.20	95.95	6.77	6.82	6.38	6.31	10.8	10.2
			10:15	8.6	4.3	26.87		7.94		33.62		96.70		6.86		6.24		9.6	

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 (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
CF	7/10/2024	Fine	8:09	8.2	4.1	27.50	27.50	7.92	7.92	32.60	32.55	87.70	88.30	6.62	6.66	5.32	5.38	6.4	6.4
			8:10	8.2	4.1	27.50		7.91		32.49		88.90		6.70		5.43		6.4	
	9/10/2024	Fine	16:43	8.7	4.4	27.50	27.50	7.97	7.97	31.74	31.73	89.80	90.40	6.70	6.72	4.82	4.78	4.5	4.8
			16:44	8.7	4.4	27.50		7.97		31.72		91.00		6.74		4.73		5.0	
	12/10/2024	Fine	16:41	8.2	4.1	27.60	27.65	7.93	7.93	32.05	32.02	97.40	97.70	6.90	6.94	3.50	3.50	2.4	3.2
			16:42	8.2	4.1	27.70		7.92		31.98		98.00		6.98		3.49		4.0	
	14/10/2024	Fine	17:26	8.3	4.2	28.00	28.05	7.94	7.94	32.45	32.37	97.20	97.50	6.81	6.83	4.80	4.69	6.8	7.0
			17:27	8.3	4.2	28.10		7.93		32.29		97.80		6.85		4.57		7.1	
	16/10/2024	Fine	18:19	8.2	4.1	28.50	28.45	7.98	7.98	31.89	31.85	92.20	92.90	6.81	6.84	2.72	2.64	3.4	3.1
			18:20	8.2	4.1	28.40		7.97		31.80		93.60		6.86		2.56		2.8	
	18/10/2024	Fine	19:10	8.2	4.1	28.27	28.22	8.03	8.03	33.25	33.33	105.80	106.25	6.92	6.95	2.06	1.99	1.9	2.0
			19:11	8.2	4.1	28.17		8.03		33.41		106.70		6.98		1.92		2.0	
	21/10/2024	Cloudy	8:34	8.4	4.2	29.51	29.38	7.41	7.41	32.50	32.55	106.60	106.20	6.79	6.77	3.72	3.64	4.9	4.7
			8:35	8.4	4.2	29.24		7.41		32.59		105.80		6.74		3.56		4.4	
	23/10/2024	Cloudy	14:01	8.2	4.1	27.73	27.67	7.88	7.88	32.76	32.81	100.80	101.35	6.82	6.85	6.12	6.19	10.2	10.3
			14:02	8.2	4.1	27.60		7.87		32.86		101.90		6.87		6.26		10.3	
	25/10/2024	Cloudy	14:46	8.3	4.2	26.80	26.85	7.74	7.75	33.79	33.87	93.00	93.80	6.79	6.84	5.15	5.02	7.3	7.1
			14:47	8.3	4.2	26.90		7.75		33.94		94.60		6.88		4.89		6.8	
	28/10/2024	Fine	17:28	8.3	4.2	26.23	26.19	7.96	7.96	33.67	33.63	99.70	100.05	6.78	6.82	6.34	6.24	19.7	20.3
			17:29	8.3	4.2	26.14		7.96		33.59		100.40		6.86		6.14		20.8	
	30/10/2024	Fine	17:54	8.2	4.1	26.19	26.25	7.98	7.98	34.12	34.07	94.20	93.55	6.93	6.90	6.85	6.80	13.8	13.5
			17:55	8.2	4.1	26.30		7.98		34.01		92.90		6.87		6.75		13.1	

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.

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	7/10/2024	Fine	14:54	8.6	7.6	28.50	28.55	7.89	7.89	32.43	32.57	92.30	91.85	6.93	6.90	6.69	6.82	4.4	4.2
			14:55	8.6	7.6	28.60		7.89		32.71		91.40		6.87		6.95		4.0	
	9/10/2024	Fine	6:51	8.5	7.5	27.70	27.75	7.90	7.91	32.48	32.59	94.10	93.90	6.91	6.91	6.69	6.77	5.6	5.3
			6:52	8.5	7.5	27.80		7.91		32.69		93.70		6.90		6.85		4.9	
	12/10/2024	Fine	7:00	8.7	7.7	27.90	27.90	7.88	7.89	31.64	31.47	93.20	92.45	6.69	6.66	4.98	5.03	3.6	3.7
			7:01	8.7	7.7	27.90		7.89		31.30		91.70		6.63		5.07		3.8	
	14/10/2024	Fine	8:47	8.7	7.7	28.30	28.30	7.89	7.90	32.10	32.10	95.60	96.00	6.84	6.86	3.19	3.31	8.0	7.8
			8:48	8.7	7.7	28.30		7.90		32.09		96.40		6.88		3.42		7.6	
	16/10/2024	Fine	10:27	8.9	7.9	28.00	28.00	7.94	7.94	32.25	32.23	95.80	95.70	6.99	6.97	2.99	2.96	3.0	3.1
			10:28	8.9	7.9	28.00		7.94		32.20		95.60		6.94		2.93		3.1	
	18/10/2024	Fine	11:42	8.7	7.7	28.53	28.64	8.00	8.01	33.08	33.13	104.60	104.30	6.86	6.85	5.11	5.00	6.6	6.9
			11:43	8.7	7.7	28.74		8.01		33.17		104.00		6.84		4.89		7.2	
	21/10/2024	Cloudy	15:31	8.7	7.7	29.74	29.93	7.85	7.85	31.89	31.80	104.60	105.65	6.77	6.82	2.89	2.98	6.0	6.2
			15:32	8.7	7.7	30.12		7.84		31.70		106.70		6.87		3.07		6.3	
	23/10/2024	Cloudy	6:47	8.4	7.4	27.01	27.16	7.48	7.49	33.74	33.60	102.50	102.30	6.90	6.89	5.12	5.22	10.2	7.6
			6:48	8.4	7.4	27.31		7.49		33.45		102.10		6.88		5.32		4.9	
	25/10/2024	Cloudy	6:55	8.5	7.5	26.15	26.17	7.72	7.73	33.40	33.50	89.70	91.15	6.88	6.94	6.78	6.69	7.4	8.0
			6:56	8.5	7.5	26.18		7.73		33.59		92.60		6.99		6.59		8.5	
	28/10/2024	Fine	9:07	8.7	7.7	25.50	25.47	7.20	7.20	33.61	33.68	98.70	98.10	6.80	6.76	7.53	7.48	32.4	31.9
			9:08	8.7	7.7	25.43		7.19		33.75		97.50		6.71		7.42		31.3	
	30/10/2024	Fine	10:17	8.6	7.6	26.59	26.57	7.93	7.94	33.36	33.41	93.00	94.20	6.68	6.73	6.88	6.95	14.2	14.0
			10:18	8.6	7.6	26.54		7.94		33.46		95.40		6.77		7.02		13.7	

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) - 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	7/10/2024	Fine	8:12	8.2	7.2	27.50	27.50	7.91	7.91	32.57	32.50	88.80	89.40	6.71	6.72	7.01	6.98	7.0	6.7
			8:13	8.2	7.2	27.50		7.91		32.42		90.00		6.73		6.95		6.3	
	9/10/2024	Fine	16:46	8.7	7.7	27.60	27.55	7.96	7.96	32.84	32.92	88.00	89.20	6.66	6.69	4.89	4.95	4.5	4.9
			16:47	8.7	7.7	27.50		7.95		32.99		90.40		6.71		5.01		5.2	
	12/10/2024	Fine	16:44	8.2	7.2	27.80	27.75	7.92	7.92	31.95	32.04	95.80	96.25	6.80	6.83	3.98	3.90	2.6	3.2
			16:45	8.2	7.2	27.70		7.92		32.13		96.70		6.86		3.82		3.8	
	14/10/2024	Fine	17:29	8.3	7.3	28.00	28.00	7.94	7.95	32.27	32.42	98.40	97.40	6.90	6.85	4.64	4.80	7.8	8.3
			17:30	8.3	7.3	28.00		7.95		32.56		96.40		6.79		4.95		8.8	
	16/10/2024	Fine	18:22	8.2	7.2	28.20	28.20	7.98	7.98	31.72	31.66	92.80	91.70	6.84	6.78	3.24	3.38	4.3	4.2
			18:23	8.2	7.2	28.20		7.98		31.59		90.60		6.71		3.51		4.0	
	18/10/2024	Fine	19:13	8.2	7.2	28.08	28.14	8.02	8.02	32.92	32.83	105.90	105.35	6.76	6.75	2.25	2.19	2.5	2.2
			19:14	8.2	7.2	28.19		8.01		32.74		104.80		6.74		2.13		1.8	
	21/10/2024	Cloudy	8:37	8.4	7.4	29.01	29.16	7.45	7.46	32.32	32.37	106.70	106.80	6.82	6.83	3.50	3.54	4.8	4.8
			8:38	8.4	7.4	29.30		7.46		32.41		106.90		6.83		3.57		4.7	
	23/10/2024	Cloudy	14:04	8.2	7.2	27.50	27.58	7.88	7.88	33.01	33.06	101.80	100.65	6.86	6.82	6.01	5.93	11.9	11.4
			14:05	8.2	7.2	27.65		7.88		33.10		99.50		6.78		5.84		10.9	
	25/10/2024	Cloudy	14:49	8.3	7.3	27.12	27.06	7.75	7.75	34.12	34.04	93.00	93.05	6.72	6.71	5.74	5.91	7.6	8.3
			14:50	8.3	7.3	26.99		7.75		33.96		93.10		6.70		6.08		9.0	
	28/10/2024	Fine	17:31	8.3	7.3	26.09	26.15	7.93	7.95	33.21	33.31	101.50	100.85	6.91	6.86	6.67	6.77	21.0	21.2
			17:32	8.3	7.3	26.21		7.97		33.41		100.20		6.80		6.87		21.3	
	30/10/2024	Fine	17:57	8.2	7.2	26.24	26.26	7.98	7.99	33.88	33.93	86.90	86.35	6.52	6.50	6.87	6.94	15.7	12.9
			17:58	8.2	7.2	26.27		7.99		33.98		85.80		6.48		7.00		10.1	

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.

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 2024

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	1.68	0.00	0.00	0.00	1.68	0.00	0.0000	0.0000	0.0000	0.00	8.63
Feb	0.18	0.00	0.00	0.00	0.18	0.00	8.1554	0.0418	0.0011	0.00	17.86
Mar	0.19	0.00	0.00	0.00	0.19	0.00	0.0053	0.0454	0.0017	0.00	13.31
Apr	0.06	0.00	0.00	0.00	0.06	0.00	0.0000	0.0000	0.0000	0.00	7.67
May	1.27	0.00	0.00	0.00	1.27	0.00	0.0000	0.0000	0.0000	0.00	10.26
Jun	2.57	0.00	0.00	0.00	2.57	0.00	0.0000	0.0999	0.0000	0.00	12.42
Sub-total	5.96	0.00	0.00	0.00	5.96	0.00	8.1607	0.1871	0.0028	0.00	70.15
July	1.37	0.00	0.00	0.00	1.37	0.00	0.0000	0.0000	0.0000	0.00	8.96
Aug	0.90	0.00	0.00	0.00	0.90	0.00	0.0037	0.0486	0.0030	0.00	14.84
Sept	1.54	0.00	0.00	0.00	1.54	0.00	0.0030	0.0110	0.0019	0.00	15.89
Oct	0.38	0.00	0.00	0.00	0.38	0.00	0.0030	0.00	0.00	0.00	12.49
Nov											
Dec											
Total	10.15	0.00	0.00	0.00	10.15	0.00	8.1704	0.2467	0.0077	0.00	122.33

Notes:
(1) The inert C&D material except slurry and bentonite are disposed at Mui Wo Temporary Public Fill Bank (MW-PFRF) or Tuen Mun Area 38 Fill Bank (TM38-FB)
(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

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. : -

Construction Activities for the reporting period

Item	Construction Activities
1	Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen, South Lantau Road, Chi Ma Wan Road
2	Excavation and site formation at SSWSTW and POSPS
3	Removal works of ELS
4	ELS works
5	Superstructure RC Works
6	E&M Installation at POSPS

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 (November, December 2024 and January 2025) Construction Rolling Program

Item	Construction Activities
1	Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen, South Lantau Road, Chi Ma Wan Road
2	Dredging at marine
3	Site formation works at SSWSTW
4	Trenchless drilling works (Chi Ma Wan Road)
5	Excavation works (at site area)
6	ELS works at SSWSTW
7	Superstructure RC Works at SSWSTW
8	Removal works of ELS at POSPS
9	E&M Installation at POSPS