

CONTRACT NO: SD 6/2020

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

UNDER ENVIRONMENTAL PERMIT NO. EP-538/2017

MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT

APRIL 2022 REVISION 2.4

CLIENTS:

Drainage Services Department

PREPARED BY:

Lam Environmental Services Limited

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

Telephone: (852) 2882-3939 Facsimile: (852) 2882-3331 E-mail: <u>info@lamenviro.com</u> Website: <u>http://www.lamenviro.com</u>

CERTIFIED BY:

Melody Cheng **Environmental Team Leader**

DATE:

20 May 2022



local people global experience

Our ref: 7076811/L28637/AW/KL/TK/rw

20 May 2022

Drainage Services Department Sewage Services Branch Special Duty Division Group 3 42/F Revenue Tower 5 Gloucester Road Wan Chai, Hong Kong

By Email and Post (kschan04@dsd.gov.hk)

Attention: Mr Silas CHAN

Dear Sir

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

With reference to the Monthly EM&A Report (April 2022) Revision 2.4 dated and certified by the ET Leader on 20 May 2022, please note that we have no adverse comments on the captioned and we hereby verify the captioned in accordance with Condition 3.4 of the Environmental Permit No. EP-538/2017. This verification letter will supersede the letter ref.: 7076811/L28600/AW/KL/TK/rw issued by the IEC on 13 May 2022.

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

Binnies

KLCW-JV

Lam

Ir Kitty LEE Independent Environmental Checker

СС	

24) 	Mr Clarence CHAK
-	Ms Melody CHENG / Mr Raymond DAI
-	Mr Charles TSE

by email by email by email

SMEC ASIA LIMITED 27/F Ford Glory Plaza, 37-39 Wing Hong Street Cheung Sha Wan, Kowloon, Hong Kong T +852 3995 8100 F +852 3995 8101

E hongkong@smec.com

W www.smec.com





TABLE OF CONTENTS

1	INTRODUCTION		
	1.1 1.2	Scope of the Report Structure of the Report	
2	ENVIRC	ONMENTAL STATUS	8
	2.1 2.2 2.3	Construction Programme Works undertaken during the month Drawing showing the project area, environmental sensitive receivers and monitoring locations	. 8
~			
3.		IENTATION STATUS	9
	3.1	Advice on the implementation status of environmental protection and pollution control/mitigation measures	9
	3.2	Environmental Mitigation Measures	
	3.3	Environmental monitoring requirements and contractual requirements	
	3.4	Site Inspection and Audit Reports	
4.	MONITO	DRING RESULTS 1	3
	4.1 4.2 4.3 4.4	Noise Monitoring Water Quality Monitoring Ecology Waste Management	16 23
_		-	
5.	COMPL	AINTS, NOTIFICATION OF SUMMONS AND PROSECUTION	<u>2</u> 5
6.	OTHER	S2	26
7	CONCLUSION		

1



Lam Environmental Services Limited

LIST OF TABLES

- Table 3.1 Summary of submission status under EP-538/2017
- Table 3.2 Summary of the current status on licences and/or permits on environmental protection pertinent to the Project
- Table 3.3 Summary of Environmental Inspections
- Noise Monitoring Equipment Table 4.1
- Noise Monitoring Station Table 4.2
- Table 4.3 Water Quality Monitoring Equipment
- Table 4.4 Marine Water Quality Stations for Water Quality Monitoring
- Action and Limit Levels of Water Quality Table 4.5
- Table 4.6 Summary of Marine Water Quality Exceedances (EM&A manual)
- Table 4.7 Review of Exceedances in Turbidity and SS (proposed "and" approach)
- Summary of Quantities of Waste Material (as of April 2022) Table 4.8
- Table 5.1 **Cumulative Statistics on Complaints**
- Table 5.2 **Cumulative Statistics on Successful Prosecutions**
- Table 6.1 Construction Activities and Recommended Mitigation Measures in Coming **Reporting 3 Months**

LIST OF FIGURES

- Figure 2.1 Master Layout Plan
- Figure 2.2 Contract Layout Plan
- Figure 2.3 Locations of Noise Monitoring Station
- Figure 2.4 Locations of Water Quality Monitoring Stations
- Figure 2.5 Mark up Figure 5.4i extracted from approved EIA Report (AEIAR-210/2017) Figure 2.6 Location Plan for Temporary Holding Nursery

LIST OF APPENDICES

Appendix 4.1 Copies of Calibration Certificates

- Appendix 4.2 Impact Monitoring Schedule
- Appendix 4.3 **Noise Monitoring Results and Graphical Presentations**
- Appendix 4.4 Marine Water Quality Monitoring Results and Graphical Presentations
- Appendix 4.5 Monthly Summary Waste Flow Table
- Appendix 6.1 3 Months Rolling Programme May 2022 to July 2022



EXECUTIVE SUMMARY

- i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report April 2022 of 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. The EM&A report presenting the environmental monitoring findings and information recorded during the period of 01 April 2022 to 30 April 2022. The cut-off date of reporting is at the end of each reporting month.
- ii. In the reporting month, the principal work activities conducted are as follow:
 - Maintenance works for tree in holding nursery and Site
 - Excavation and site formation works at San Shek Wan Sewage Treatment Works (SSWSTW) and Pui O Sewage Pumping Station (POSPS).
 - Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen
 - Excavation of Trial Pit at Chi Ma Wan Road and South Lantau Road
 - Pre-drilling works at Pui O beach road
 - Preparation of HDD works
 - Installation of silt curtain and construction of temporary marine platform

Exceedances of Action/Limit Levels

Noise Monitoring

- iii. Noise monitoring was conducted at five (5) noise monitoring stations N12a, N12b, N13, N14 and N17 once per week in the reporting month.
- iv. No action or limit level exceedance was recorded in construction noise level in this reporting period.

Water Quality Monitoring

- Marine-based construction works commenced on 19 April 2022. Water quality monitoring had been commenced on 12 April 2022 at seven (7) monitoring stations three days per week. Results to be provided.
- vi. Marine-based construction works commenced on 19 April 2022, water quality monitoring was commenced on 12 April 2022. 66 action level exceedances on DO, 4 action level and 81 limit level exceedances on turbidity, 2 action level and 49 limit level exceedances on SS were recorded in the reporting month.
- vii. Out of 66 action level exceedances on DO, 61 of these exceedances were due to background contribution as recorded at the control stations on 14, 16, 18, 20, 22 and 29 April 2022 whereas action level exceedance on DO recorded at SR9 and SR10 on 27 April 2022 were reviewed



with no exceedance recorded at nearby upstream stations SR5 and SR6 from the location of marine-based construction works and concluded as non-project related.

viii. Out of the 4 action level and 81 limit level exceedances on turbidity, 2 action level and 49 limit level exceedances on SS were recorded in the reporting month, 4 action level exceedances on SS were concluded after removing those false alarm exceedance using the "and" approach proposed in the baseline report. Action level exceedance on SS recorded on 27 April 2022 was reviewed with no exceedance recorded at nearby upstream stations SR5 and SR6 from the location of marine-based construction works and concluded as non-project related.

Ecological Impact Monitoring

- ix. Transplanting of the trees of *Aquilaris sinensis* was completed on 26 April 2022. Maintenance works for trees in holding nursery have commenced.
- x. Preservation of retain tree of *Aquilaris sinensis* on Project Site.

Complaint log

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

Notifications of Any Summons and Successful Prosecutions

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

Reporting Changes

xiii. Commencement date of marine works was 19 May 2022 and silt curtain installation works was commenced on the same day.



Future Key Issues

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

Ke	y Construction Works	Recommended Mitigation Measures
•	Maintenance and establishment works for transplanted trees in holding nursery. Preservation of existing trees on Project Site	 Provide caring measures for the health, form and structural conditions for transplant trees including <i>Aquilaris sinensis</i> in holding nursery; Fully implement tree preservation works on site and holding nursery to ensure compliance of relevant legislation and guidelines stated in EM&A Manual.
•	Village sewers (excavation, sewer laying, construction of manhole) at Pui O Lo Uk Tsuen and Chi Ma Wan Beach Trunk Sewers and Rising Mains outside village and to POSPS	 Implementation of noise pollution control in accordance with Construction Noise Mitigation Plan; Dust control during dust generating works; Adopt surface drainage and sediment control facilities for sewage installation in village and public roads;
•	Construction of POSPS Horizontal directional drilling (HDD) works for SSWSTW land side	Adopt temporary drainage and sediment control facilities on Site;
•	Retaining wall construction and slope modification works at SSWSTW	 Vehicle wheel-washing and body washing facilities should be provided at the site entrance; Regular water spraying on exposed area; and Proper waste handling, recycling and storage.
•	HDD works at sea side	• Silt curtains should be installed to surround the marine dredging area in accordance with Silt Curtain Deployment Plan.



1 Introduction

1.1 Scope of the Report

- 1.1.1. Lam Environmental Services Limited (LES) has been appointed to work as the Environmental Team (ET) under Environmental Permit (EP) no. EP-538/2017 to implement the Environmental Monitoring and Audit (EM&A) programme as stipulated in the EM&A Manual of the approved Environmental Impact Assessment (EIA) Report for 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 *Environmental Status* 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

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 *Others* – An account of the future key issues as reviewed from the works programme and work method statements.

Section 7 Conclusion



2 Environmental Status

2.1 Construction Programme

- 2.1.1 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.
- 2.1.2 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*.
- 2.1.3 The major components of the Project under Environmental Permit (EP) (EP No. EP-538/2017) comprises: (i) construction of sewage treatment works at San Shek Wan (SSWSTW) and associated submarine outfall; (ii) construction of sewage pumping station at Pui O (POSPS); (iii) village sewage works at Pui O; and (iv) trunk sewers and rising mains on carriageways.
- 2.1.4 No construction programme with fine tuning of construction activities showing the interrelationship with environmental protection/ mitigation measures for the month.

2.2 Works undertaken during the month

- 2.2.1 In the reporting month, the principal work activities conducted are as follow:
 - Maintenance works for tree in holding nursery and Site
 - Excavation and site formation works at San Shek Wan Sewage Treatment Works (SSWSTW) and Pui O Sewage Pumping Station (POSPS).
 - Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen
 - Excavation of Trial Pit at Chi Ma Wan Road and South Lantau Road
 - Pre-drilling works at Pui O beach road
 - Preparation of HDD works
 - Installation of silt curtain and construction of temporary marine platform

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

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

2.3.1 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.
- 3.1.2 Ecological mitigation measures Preservation and protection of trees of *Aquilaris sinensis*. Advices are the following:
 - a) Protection and preservation of retain tree Aquilaris sinensis (tree no. T370) on Project Site;
 - b) Proper soiling and mulching practices for transplanted tree *Aquilaris sinensis* (tree no. T392) in holding nursery.
 - c) Timely conduct rectification works to enhance recovery of tree in transit nursery.
- 3.1.3 Landscape & Visual mitigation measures Transplantation of 6 trees no. T113, T114, T742, T751, T758 and T392 have completed on 1st March 2022. Advices are the following:
 - a) Monitoring and maintaining transplanted trees in holding nursery should follow General Specification of Civil Engineering Works – Section 3 and "Guidelines on Tree Transplanting" specified in EM&A Manual.
 - b) Timely conduct rectification works to enhance recovery of tree in transit nursery.
- 3.1.4 Tree Protection and Preservation Retain trees in the Project Site should be protected and preserved in accordance with CEDD G.S. Section 3 and DEVB TC(W) No. 7/2015. In particular, maintaining Tree Protection Zone with proper tree label.
- 3.1.5 Water quality mitigation measures Silt curtain should be installed around the dredging area and pilot hole exit area vertically from sea surface to seabed. The silt curtain extent, offset distance from the works area should follow Silt Curtain Deployment Plan.

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*.

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. 4)	25 June 2021^
Condition 2.12	Submission of Compensatory Woodland Planting Plan (Rev. 5)	2 July 2021^
Condition 2.13	Silt Curtain Deployment Plan (Rev. 11)	29 April 2022^
Condition 2.14	Landscape Mitigation Plan	To be confirmed
Condition 2.15	Construction Noise Mitigation Plan (Rev. 14)	8 April 2022^

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

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 (dd-mm-yyyy to dd-mm-yyyy)	Status
Notification of Works Under APCO	466408	14 Apr 2021	N/A	Valid
Discharge Licence	POPS: WT00039820-2021	31 Dec 2021	31-12-2021 to 31-12-2026	Valid
Discharge Licence	SSWSTW: WT00039636-2021	30 Dec 2021	30-12-2021 to 31-12-2026	
Billing account under Waste Disposal Ordinance	Account No.: 7040411	05 May 2021	N/A	Valid
Registration as a Chemical Waste Producer	0000-931-K3428-01	13 May 2021	N/A	Valid
Construction Noise Permit	GW-RS0921-21	26 Nov 2021	29-11-2021 to 28-05-2022	Valid



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

3.4 Site Inspection and Audit Reports

- 3.4.1 Within this reporting month, weekly environmental site inspections were conducted on 06, 13, 19 and 26 April 2022. IEC attended the SSEMC meeting held on 19 April 2022. Holding nursery visit for transplanted trees on 26 April 2022.
- 3.4.2 No non-compliance was found during the site inspection while reminders on environmental measures were recommended. Results and findings of these inspections in this reporting month are listed below in *Table 3.3*.

Inspection Date	Reminder and Recommendations	Close-out Date / Status
6 Apr 2022	 Lo Uk Tsuen Village Sewer Works 1. Reminder for using QPME for village sewer works San Shek Wan Sewage Treatment Works 2. Fully implement tree preservation and protection on site, including provision of tree label and tree status, set up tree protection zone for retain trees Trial pit 	13 Apr 2022
	 3. Fully implement tree preservation and protection on site, including provision of tree label and tree status, set up tree protection zone for retain trees Lo Uk Tsuen Village Sewer Works 	
13 Apr 2022	Fully implement tree preservation and protection on site, including provision of tree label and tree status, set up tree protection zone for retain trees	19 Apr 2022
19 Apr 2022	Lo Uk Tsuen Village Sewer Works Observation 1 - Fully implement tree preservation and protection on site, construction waste should not be placed within tree protection zone for retain trees. San Shek Wan Sewage Treatment Works Observation 2 – Remove debris in drainage facilities to ensure proper function Reminder 1 - Provide vehicle wheel-washing facilities as soon as possible <u>Pui O Sewage Pumping Station</u> Please be reminded wet season has started. Temporary drainage has	21 Apr 2022

Table 3.3 Summary of Environmental Inspections



	to be properly implemented and be prepared for heavy rainstorm event to avoid effluent discharge accidentally washed out with muddy water.	
26 Apr 2022	 Transplant trees in holding nursery <u>Observation 1:</u> Additional soil smothered on rootball surface and trunk flare for all transplanted trees. Soil mix should be backfilled under the bottom of rootball Recommended measures: rectify soil and required soil size Mulch layer is too thick (over 50mm thick) and should not be placed to trunk flare. Recommended measures: apply mulch in accordance with CEDD G.S. and GLTMS Guideline on Tree Transplanting stated in Annex A of EM&A Manual 	Pending

Lam Environmental Services Limited



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

NAME OF LABORATORY AND EQUIPMENT USED AND CALIBRATION DETAILS

4.1.2 Noise monitoring was performed using sound level meter at the designated monitoring locations. The sound level meters shall comply with the International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications. Acoustic calibrator shall be deployed to check the sound level meters at a known sound pressure level. Brand and model of the equipment is given in *Table 4.1*.

Table 4.1 Noise	Monitoring	Equipment
-----------------	------------	-----------

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

4.1.3 The calibration certificates of the noise monitoring equipment are attached in <u>Appendix 4.1.</u>

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 five (5) noise monitoring stations N12a, N12b, N13, N14 and N17 once per week in the reporting month.

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
N16b	Residences at Ham Tin	Free-Field	G/F
N17	Bui O Public School	Façade	R/F

Table 4.2 Noise Monitoring Station

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 <u>Appendix 4.2</u>.

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 <u>Appendix 4.3</u>.
- 4.1.10 No action or limit level exceedance was recorded in construction noise level in this reporting period.



4.2 Water Quality Monitoring

MONITORING METHODOLOGY

- 4.2.1 Monitoring Procedure
 - (a) The condition near the monitoring stations shall be observed and recorded on the data log sheet.
 - (b) Check of sensors and electrodes with certified standard solutions before each use.
 - (c) Wet bulb calibration for a DO meter should be carried out before measurement.
 - (d) Water depth should be recorded by detector before sampling.
 - (e) Sample would be taken using bucket sampler at surface level.
 - (f) Transfer the sampled water carefully into cleaned water bottles (2x 1000ml) provided by the laboratory at the spot after the collection of the water sample for the subsequent laboratory Suspended Solid testing.
 - (g) Transfer the sampled water from the bucket sampler to the rinsed water container for in-situ measurement (In case of the in-situ measurement cannot be carried at spot due to safety and adverse weather condition, sampled water from the bucket sampler will be transfer to cleaned water bottles provided by laboratory. Then, In-situ measurement will be conducted at a safe location which sampled water inside cleaned water bottle will be transfer to the rinsed water container for in-situ measurement) In-situ measurement shall be measured in duplicate.
 - 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°, Detection Limit: 1mm/s)
- (c) dGPS positioning device (Resolution: Horizontal: 0.25m; Vertical: 0.50 m)
- (d) Water sampler (Horizontal discrete type, Capacity: 2.2L)

Sampler Container and Storage

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

Water Depth Detector

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

CALIBRATION DETAILS

- 4.2.6 Maintenance and Calibration
 - (a) The responses of sensors and electrodes of the water quality monitoring equipment were cleaned and checked at regular intervals.
 - (b) DO meter (Multifunctional Meter) and turbid meter was certified by a laboratory accredited under HOKLAS or any other international accreditation scheme, and subsequently re-calibrated at three monthly intervals.
- 4.2.7 Brand and model of the equipment are given in *Table 4.3*.

Table 4.3 Water Quality Monitoring Equipment

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

The calibration certificates of the water quality monitoring equipment are attached in Appendix 4.1.



4.2.8 Marine-based construction works commenced on 19 April 2022, water quality monitoring commenced on 12 April 2022.

PARAMETERS MONITORED

4.2.9 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

4.2.10 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	SR5 Ecological Sensitive Receiver (Coral Communities) at Pui O Wan		810540
SR6	SR6 Gazetted Bathing Beach at Lower Cheung Sha		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

- 4.2.11 The levels of dissolved oxygen (DO), temperature, turbidity and salinity were measured in situ while suspended solids (SS) is determined by laboratory analysis at all the monitoring stations in *Table 4.4* three times a week. Impact monitoring schedule can be referred to <u>Appendix 4.2</u>.
- 4.2.12 In association with the water quality parameters, other relevant data shall also be recorded, such as monitoring location / position, time, water temperature, DO saturation, weather conditions, and any special phenomena underway near the monitoring station.
- 4.2.13 Impact Monitoring shall be carried out three days per week, at mid-flood and mid-ebb tides (within ± 1.75 hour of the predicted time). The interval between two sets of monitoring shall not be less than 36 hours. The monitoring period should avoid concurrent marine project in the vicinity.



- 4.2.14 The sampling frequency of at least three days per week should be undertaken when the highest dust impact occurs. Upon completion of the construction works, the monitoring exercise at the designated monitoring locations should be continued for four weeks in the same manner as the impact monitoring. In case exceedance of Action/Limit Level is recorded, the frequency shall be increased as per the Event and Action Plan.
- 4.2.15 To ensure the robustness of in-situ measurement, parameters shall be measured in duplicate.In case the difference between duplicates is larger than 25%, a third set of measurement shall be carried out.

MONITORING RESULTS

- 4.2.16 Marine water quality monitoring results measured in this reporting period are reviewed and summarized. Details of marine water quality monitoring results and graphical presentation can be referred in <u>Appendix 4.4</u>
- 4.2.17 Water quality monitoring is evaluated against Action and Limit Levels. Note that derived Action and Limit Level was proposed in Baseline Monitoring Report for approval. Action and Limit Levels of marine water quality monitoring have been set with reference to the EM&A Manual criteria and derived criteria as shown in *Table 4.5* below.

Table 4.5	Action and Limit Levels of Water Quality
-----------	--

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

Notes (with proposed amendments in AL/LL in <u>underlined text</u>):

A. "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.

B. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.

C. For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

D. Action Level and Limit Level with 95%-ile / 99%-ile derived from baseline data "and" 20% / 30% exceedance of control station proposed in Baseline Monitoring Report.



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

	Parameter	DO (\$	S&M)	DO (B	ottom)	Turk	oidity	S	S	Excee	
Station	Level exceeded	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood
SR4	Action	14/04/22 18/04/22 20/04/22	18/04/22 20/04/22	18/04/22 20/04/22 22/04/22 29/04/22	18/04/22 22/04/22	-	-	-	-	7	4
	Limit	-	-	-	-	12/04/22 14/04/22 20/04/22 22/04/22 25/04/22 27/04/22 29/04/22	12/04/22 18/04/22 22/04/22 25/04/22 27/04/22 29/04/22	16/04/22 20/04/22 25/04/22 27/04/22 29/04/22	18/04/22 20/04/22 22/04/22 25/04/22 27/04/22	13	12
SR5	Action	14/04/22 18/04/22 20/04/22	18/04/22 20/04/22 22/04/22	14/04/22 16/04/22 20/04/22 22/04/22 29/04/22	20/04/22 22/04/22 29/04/22	18/04/22 22/04/22	-	18/04/22	-	11	6
	Limit	-	-	-	-	12/04/22 14/04/22 20/04/22 25/04/22 27/04/22 29/04/22	18/04/22 20/04/22 25/04/22 27/04/22 29/04/22	14/04/22 16/04/22 20/04/22 22/04/22 25/04/22 27/04/22	18/04/22 20/04/22 22/04/22 27/04/22	13	10
SR6	Action	16/04/22 20/04/22 22/04/22	18/04/22 20/04/22 22/04/22 29/04/22	-	-	-	-	-	-	3	4
	Limit	-	-	-	-	12/04/22 14/04/22 18/04/22 20/04/22 22/04/22 25/04/22 29/04/22	12/04/22 18/04/22 20/04/22 22/04/22 25/04/22 29/04/22	14/04/22 16/04/22 25/04/22 27/04/22	18/04/22 20/04/22 22/04/22	11	9
SR9	Action	12/04/22 14/04/22 18/04/22 27/04/22 29/04/22	29/04/22	12/04/22 16/04/22 18/04/22 20/04/22 22/04/22 27/04/22	18/04/22 20/04/22 22/04/22 27/04/22 29/04/22	-	-	-	-	11	6
	Limit	-	-	-	-	12/04/22 14/04/22 18/04/22 20/04/22 25/04/22 27/04/22	12/04/22 18/04/22 20/04/22 25/04/22 27/04/22 29/04/22	16/04/22	18/04/22 20/04/22	7	8
SR10	Action	16/04/22 20/04/22	20/04/22 22/04/22 27/04/22	-	-	27/04/22	-	20/04/22	-	4	3
	Limit			-	-	12/04/22 16/04/22 18/04/22 25/04/22 29/04/22	18/04/22 20/04/22 27/04/22 29/04/22	16/04/22 27/04/22	18/04/22 20/04/22 25/04/22 27/04/22	7	8
SR12	Action	16/04/22 20/04/22 22/04/22	20/04/22	-	-	-	20/04/22	-	-	3	2
	Limit	-	-	-	-	12/04/22 16/04/22 18/04/22 25/04/22 27/04/22	12/04/22 18/04/22 25/04/22 27/04/22	16/04/22 27/04/22	12/04/22 18/04/22 20/04/22 25/04/22 27/04/22	7	9

Table 4.6 Summary of	of Marine Water Quality Exc	ceedances (EM&A manual)
----------------------	-----------------------------	-------------------------



Lam Environmental Services Limited

	Parameter	DO (S&M)	DO (B	ottom)	Turb	oidity	S	S	Excee	
Station	Level exceeded	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood
SR15	Action	12/04/22 16/04/22 18/04/22 20/04/22 22/04/22	12/04/22 14/04/22 20/04/22	-	-	-	-	-	-	5	3
	Limit	-	-	-	-	12/04/22 18/04/22 20/04/22 25/04/22 29/04/22	12/04/22 18/04/22 20/04/22 25/04/22 29/04/22	25/04/22 29/04/22	12/04/22 18/04/22 20/04/22 25/04/22	7	9
Total	Action	24	17	15	10	3	1	2	0	7:	2
	Limit	0	0	0	0	43	38	22	27	13	80

- 4.2.19 In accordance with the EM&A Manual, 66 action level exceedances on DO, 4 action level and81 limit level exceedances on turbidity, 2 action level and 49 limit level exceedances on SS were recorded in the reporting month.
- 4.2.20 With respect to marine-based construction works commenced on 19 April 2022, Event and Action Plan stated in EM&A Manual were implemented for exceedance recorded starting from 20 April 2022 whereas those monitoring results before 19 April 2020 were taken as reference.
- 4.2.21 Action level exceedances on DO were also recorded at control station CE on 14, 16, 18, 20, 22 and 29 April 2022 and control station CF on 14, 18, 20 and 22 April 2022 which such that these recorded exceedance could be the background contribution to DO exceedances at the impact stations on 14, 16, 18, 20, 22 and 29 April 2022.
- 4.2.22 For action level exceedance on DO recorded at SR9 and SR10 on 27 April 2022, no exceedance on DO were recorded at the nearby upstream stations SR5 and SR6 from the location of marine-based construction works, these exceedance was non-project related.
- 4.2.23 For turbidity and SS exceedances, no muddy water plume observed immediately outside the silt curtain on 19, 20, 21, 22, 25, 26, 28 and 29 April 2022 as per the site condition recorded by ET. As such, majority of the exceedance were considered to be false alarm with review of the "<u>and</u>" approach for counteracting the over-sensitivity of control station criteria as proposed in the baseline report. Reviewing the "<u>and</u>" approach, the number of exceedances recorded without false alarm are summarized in *Table 4.7*.

	Parameter	Turbidity		SS		Exceedance count	
Station	Level exceeded	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood	Mid Ebb	Mid Flood
SR4	Action	-	-	27/04/22	22/04/22	1	1
	Limit	-	-	-	-	0	0
SR5	Action	-	-	-	22/04/22	0	1
	Limit	-	-	-	-	0	0
SR6	Action	-	-	-	-	0	0
	Limit	-	-	-	-	0	0
SR9	Action	-	-	-	-	0	0
	Limit	-	-	-	-	0	0
SR10	Action	-	-	-	-	0	0
	Limit	-	-	-	-	0	0
SR12	Action	-	-	-	12/04/22	0	1
	Limit	-	-	-	-	0	0
SR15	Action	-	-	-	-	0	0
	Limit	-	-	-	-	0	0
Total	Action	0	0	1	3	4	4
	Limit	0	0	0	0	(0

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

- 4.2.24 Avoiding false alarm notification was considered in the Event and Action Plan implementation. For the action level exceedance on SS recorded on 27 Apr 2022, no exceedance on SS were recorded at the nearby stations SR5 and SR6 from the marine-based construction works, these exceedance was non-project related.
- 4.2.25 After considering the above-mentioned investigation results, it is concluded that out of 66 action level exceedances on DO, 61 of these exceedances were due to background contribution as recorded at the control stations on 14, 16, 18, 20, 22 and 29 April 2022 whereas action level exceedance on DO recorded at SR9 and SR10 on 27 April 2022 were reviewed with no exceedance recorded at nearby upstream stations SR5 and SR6 from the location of marine-based construction works and concluded as non-project related.
- 4.2.26 Out of the 4 action level and 81 limit level exceedances on turbidity, 2 action level and 49 limit level exceedances on SS were recorded in the reporting month, 4 action level exceedances on SS were concluded after removing those false alarm exceedance using the "and" approach proposed in the baseline report. Action level exceedance on SS recorded on 27 April 2022 was reviewed with no exceedance recorded at nearby upstream stations SR5 and SR6 from the location of marine-based construction works and concluded as non-project related.



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 The original location of *Aquilaris sinensis* is at SSWSTW (*Figure 2.5*). The tree is transplanted to temporary holding nursery (*Figure 2.6*) for establishment.
- 4.3.6 Retain tree of *Aquilaris sinensis* at SSWSTW Project Site.

MONITORING DATE, TIME, FREQUENCY AND DURATION

- 4.3.7 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.
- 4.3.8 Monitoring programme for post-transplantation will be conducted once per month (26 April 2022).

MONITORING RESULTS

4.3.9 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 4.6. The Monthly Summary Waste Flow Table is shown in <u>Appendix 4.5</u>.

Table 4.8 Summary of Quantities of Waste Material (as of April 2022)

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)	0.62390	2.51320	6.37295
Metals (in '000kg)	0.00450	1.55	1.56170
Paper / Cardboard Packing (in '000kg)	0.04600	0	0.07048
Plastics (in '000kg)	0.00350	0	0.01046
Chemical Wastes (in '000kg)	0	0	0
General Refuses (in '000kg)	9.74	34.82	276.11

*: Further breakdown into sub-group if considered applicable;

*: Please also provide daily dumping report for our records.

*: Delete as appropriate



5. Complaints, Notification of Summons and Prosecution

- 5.1.1 No environmental complaint, notification of summons and successful prosecution regarding construction works was recorded in the reporting period.
- 5.1.2 Cumulative statistic on complaints and successful prosecutions are summarized in *Table 5.1* and *Table 5.2* respectively.

Table 5.1 Cumulative Statistics on Complaints

Reporting Period	No. of Complaints
April 2022	0
Project commencement to the end of last reporting month	-
Total	0

Table 5.2 Cumulative Statistics on Successful Prosecutions

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



6. Others

- 6.1.1 In coming reporting 3 months, the scheduled construction activities are listed as follows:
 - Maintenance works for tree in holding nursery and Site
 - Excavation and site formation works at San Shek Wan Sewage Treatment Works (SSWSTW) and Pui O Sewage Pumping Station (POSPS).
 - Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen
 - Excavation of Trial Pit at Chi Ma Wan Road and South Lantau Road
 - Pre-drilling works at Pui O beach road
 - Preparation of HDD works
 - Installation of silt curtain and construction of temporary marine platform
- 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 May 2021 to Jul 2022 in <u>Appendix 6.1</u>.

Key Construction Works	Recommended Mitigation Measures
 Maintenance and establishment works for transplanted trees in holding nursery. Preservation of existing trees on Project Site 	 Provide caring measures for the health, form and structural conditions for transplant trees including <i>Aquilaris sinensis</i> in holding nursery; Fully implement tree preservation works on site and holding nursery to ensure compliance of relevant legislation and guidelines stated in EM&A Manual.
 Village sewers (excavation, sewer laying, construction of manhole) at Pui O Lo Uk Tsuen and Chi Ma Wan Beach Trunk Sewers and Rising Mains outside village and to POSPS 	 Implementation of noise pollution control in accordance with Construction Noise Mitigation Plan; Dust control during dust generating works; Adopt surface drainage and sediment control facilities for sewage installation in village and public roads;
 Construction of POSPS Horizontal directional drilling (HDD) works for SSWSTW land side 	 Adopt temporary drainage and sediment control facilities on Site;

Table 6.1 Construction Activities and Recommended Mitigation Measures in ComingReporting 3 Months



Key Construction Works	Recommended Mitigation Measures
Retaining wall construction and slope modification works at SSWSTW	 Vehicle wheel-washing and body washing facilities should be provided at the site entrance; Regular water spraying on exposed area; and Proper waste handling, recycling and storage.
HDD works at sea side	• Silt curtains should be installed to surround the marine dredging area in accordance with Silt Curtain Deployment Plan.



7 Conclusion

7.1 Noise Monitoring.

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

7.2 Water Quality Monitoring

- 7.2.1 Marine-based construction works commenced on 19 April 2022, water quality monitoring was commenced on 12 April 2022. 66 action level exceedances on DO, 4 action level and 81 limit level exceedances on turbidity, 2 action level and 49 limit level exceedances on SS were recorded in the reporting month.
- 7.2.2 Out of 66 action level exceedances on DO, 61 of these exceedances were due to background contribution as recorded at the control stations on 14, 16, 18, 20, 22 and 29 April 2022 whereas action level exceedance on DO recorded at SR9 and SR10 on 27 April 2022 were reviewed with no exceedance recorded at nearby upstream stations SR5 and SR6 from the location of marine-based construction works and concluded as non-project related.
- 7.2.3 Out of the 4 action level and 81 limit level exceedances on turbidity, 2 action level and 49 limit level exceedances on SS were recorded in the reporting month, 4 action level exceedances on SS were concluded after removing those false alarm exceedance using the "and" approach proposed in the baseline report. Action level exceedance on SS recorded on 27 April 2022 was reviewed with no exceedance recorded at nearby upstream stations SR5 and SR6 from the location of marine-based construction works and concluded as non-project related.

7.3 Ecological Impact Monitoring

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

7.4 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

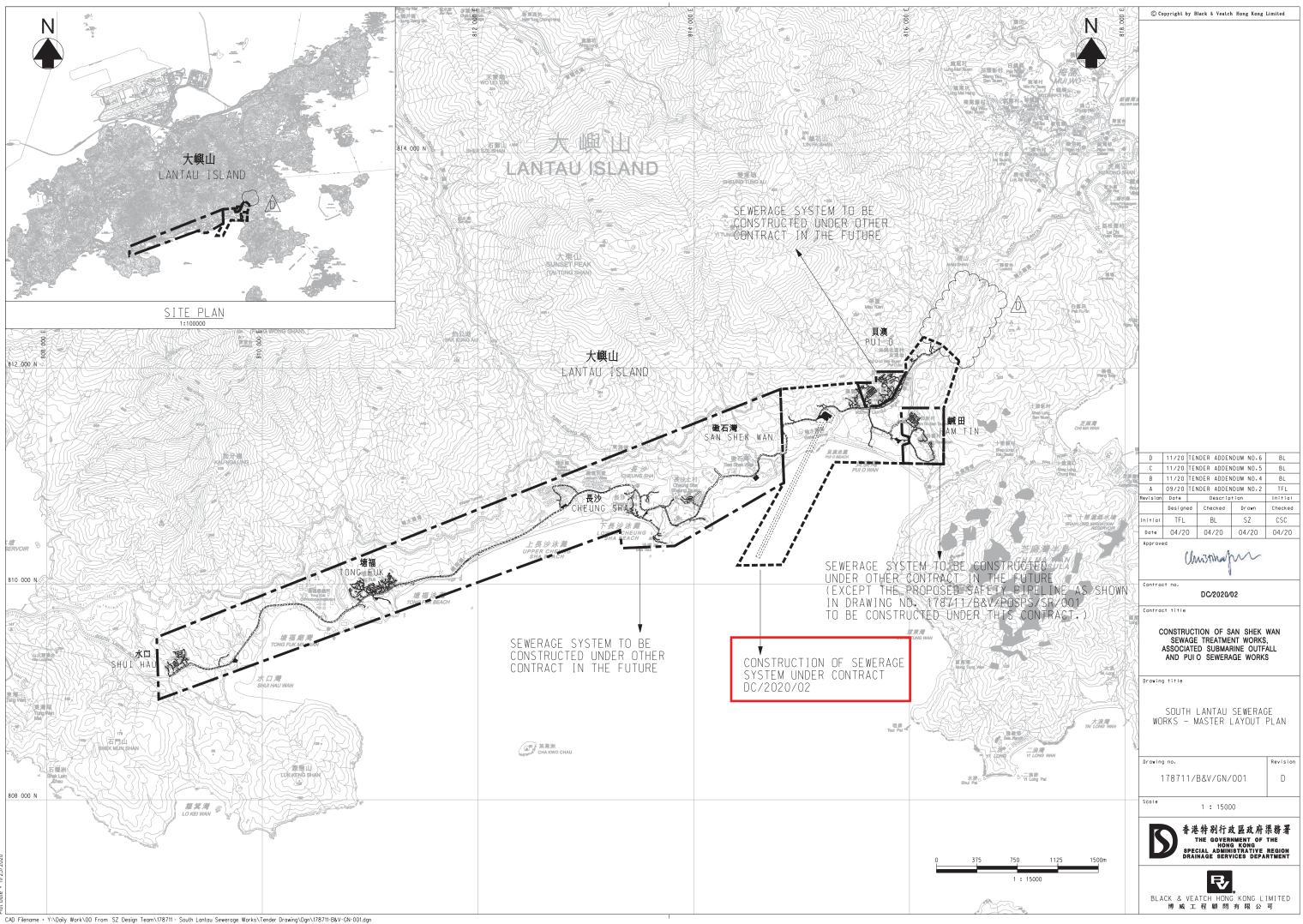




Figure 2.2

Contract Layout Plan

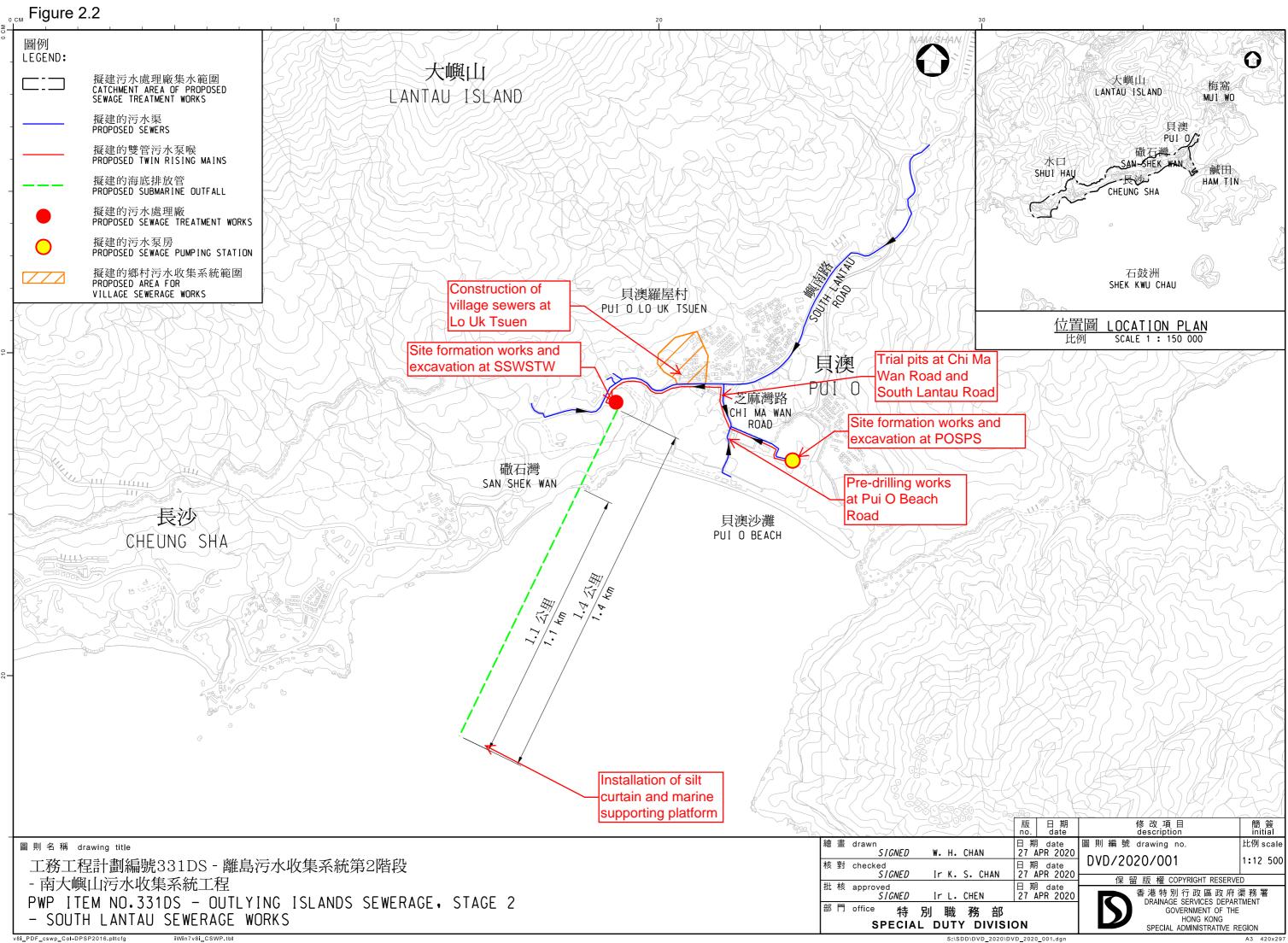




Figure 2.3

Locations of Noise Monitoring Station

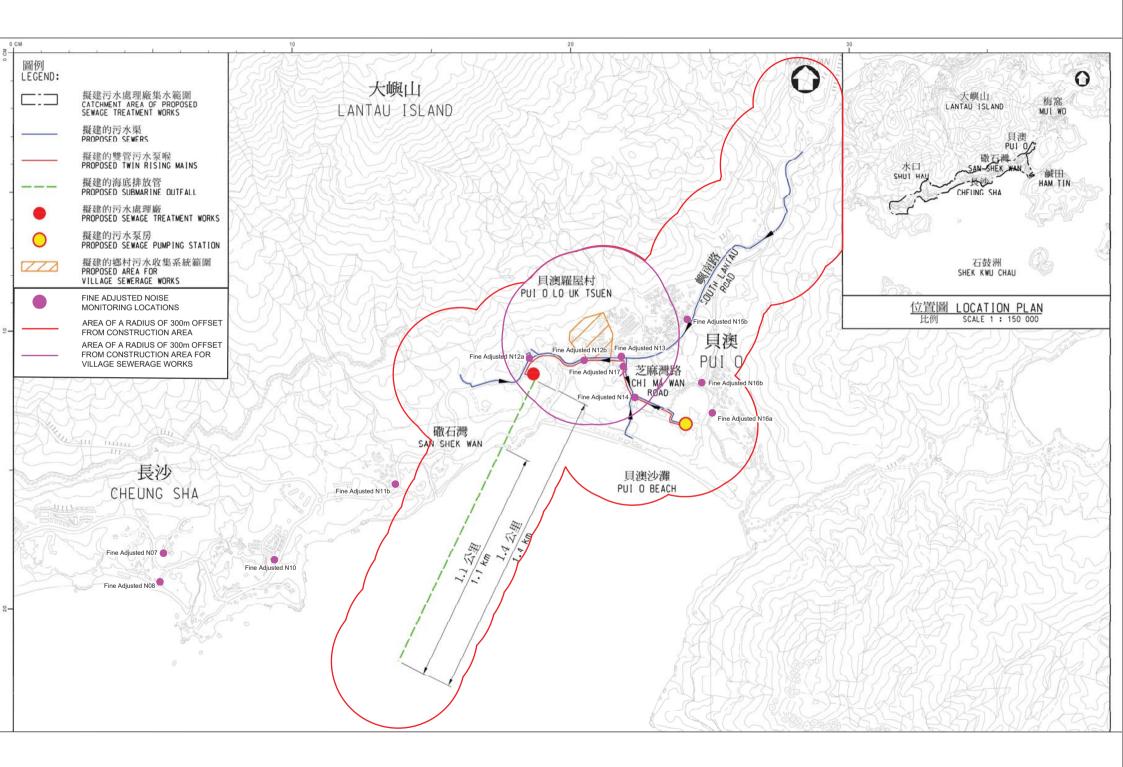
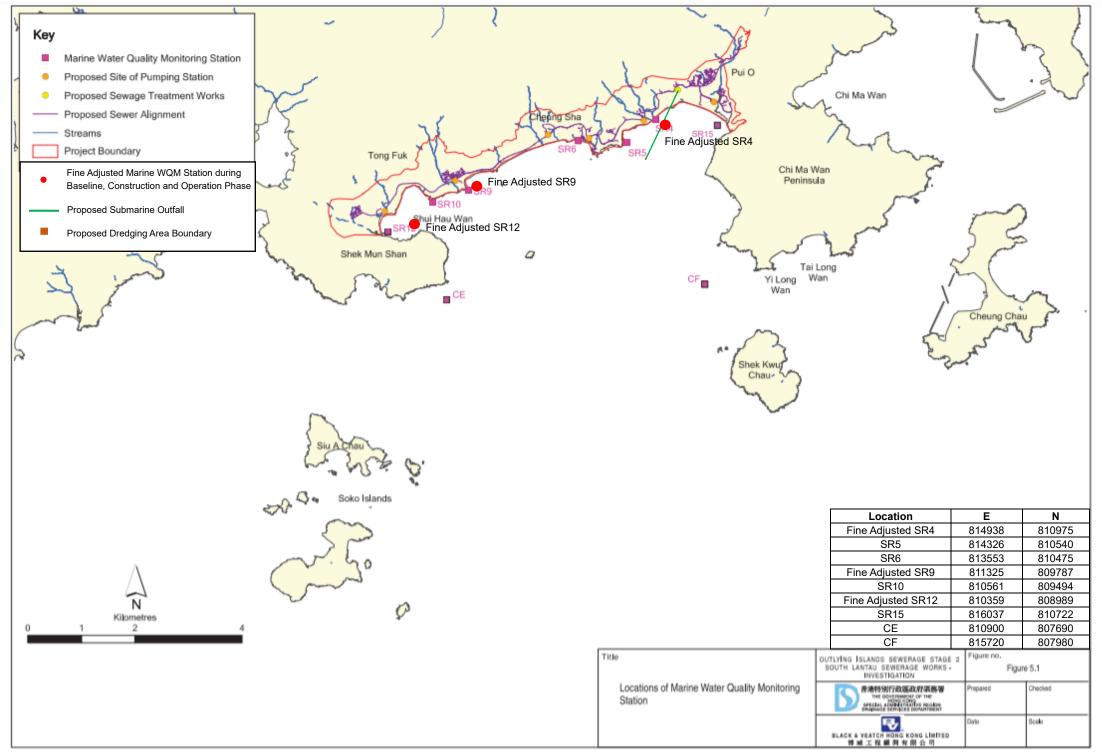




Figure 2.4

Locations of Water Quality Monitoring Stations

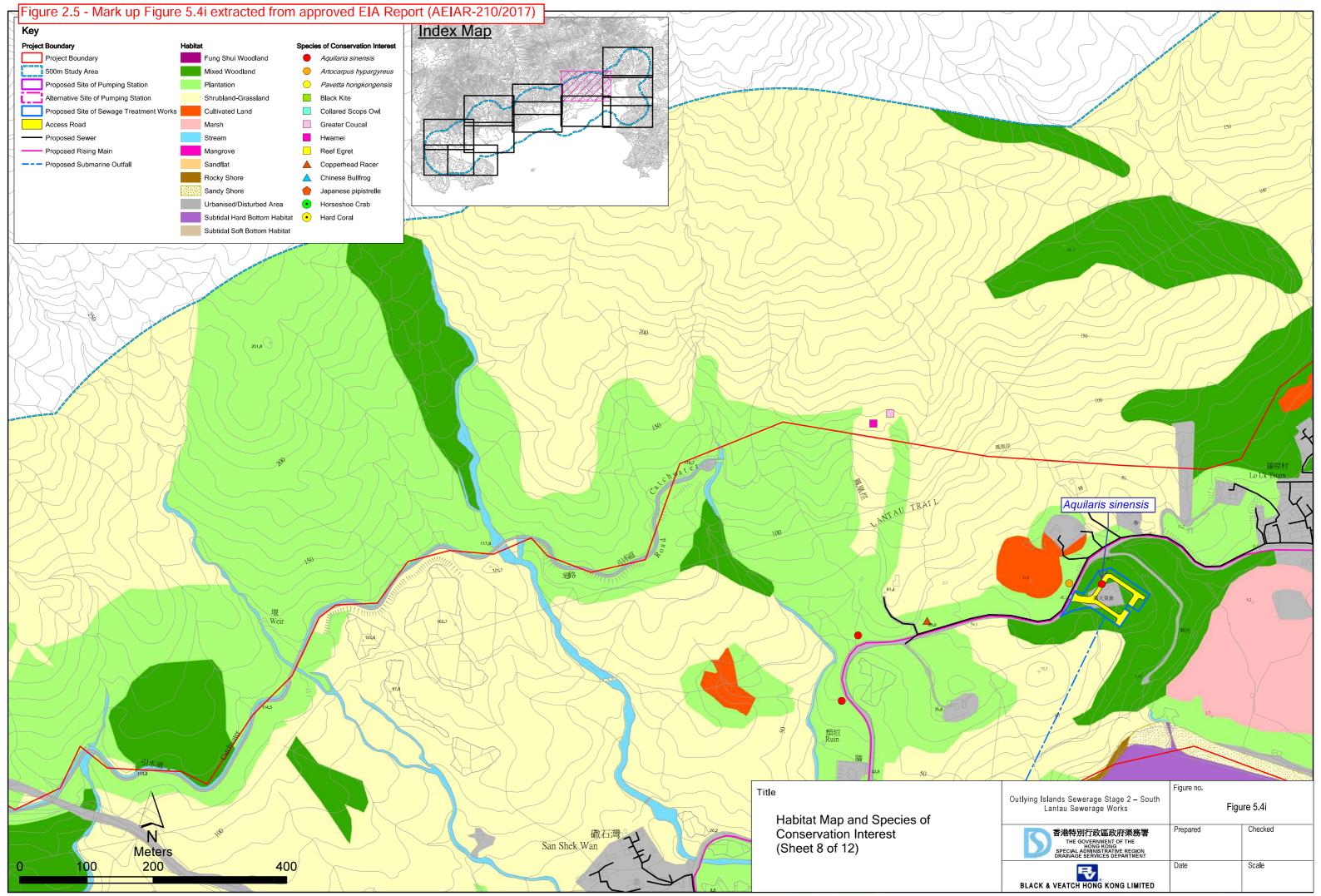


File: T:/GIS/CONTRACT/0227541/Mxd/0227541_Marine_Water_Quality_Monitoring_Stations.mxd Date: 5/8/2015



Figure 2.5

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

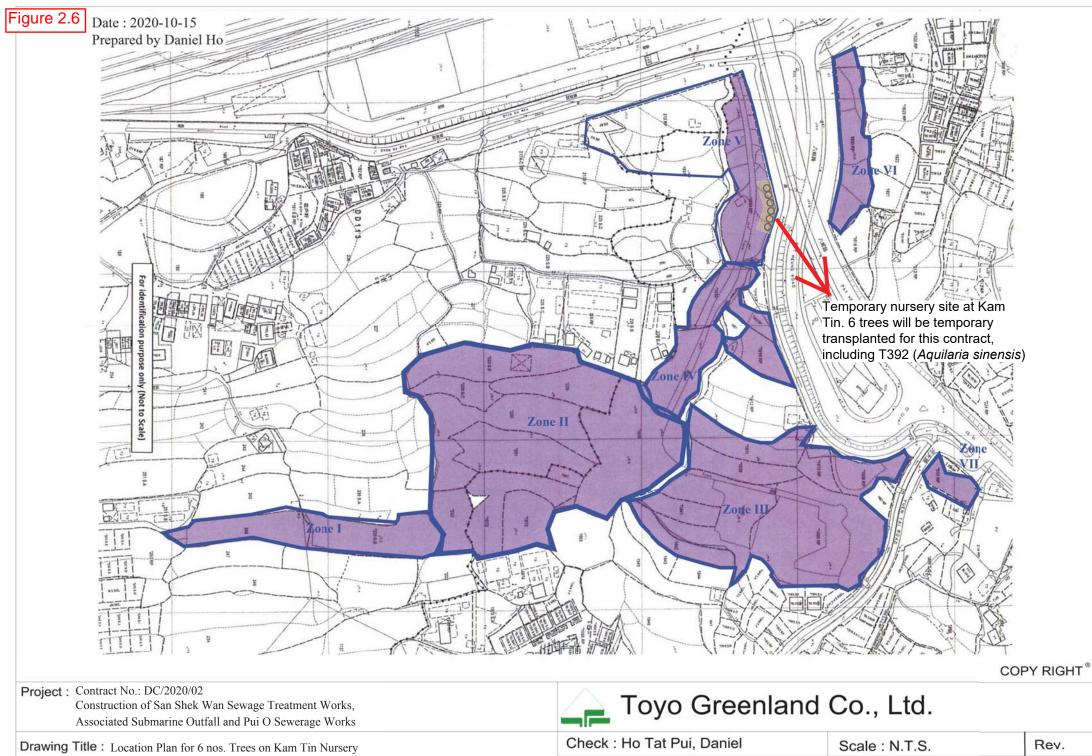


File: T:\GIS\CONTRACT\0227541\Mxd\Ecology\0227541_Habitat_8.mxd Date: 16/8/2016



Figure 2.6

Location Plan for Temporary Holding Nursery



Ref: C3109/22/TGD0164

Date : 10 January 2022

00



Appendix 4.1

Copies of Calibration Certificates

Noise monitoring equipment



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

香港新界奏涌永基路22-24號好爸爸創科大度 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.:	22CA0412 03		Page	1	of	2
Item tested					4 w 1911	
Description:	Sound Level Meter (Class 1)	Microphone		Preamp	
Manufacturer:	Larson Davis	Sanata and an	PCB		PCB	
Type/Model No.:	LxT1		377B02		PRMLxT	1L
Serial/Equipment No.:	0006346		326425		069995	
Adaptors used:	-		-		-	
Item submitted by						
Customer Name:	Lam Environmental	Services Limited				
Address of Customer:						
Request No.:	1.5.					
Date of receipt:	12-Apr-2022					
				0.01	627	
Date of test:	17-Apr-2022					
Reference equipment	used in the calibra	ition				
Description:	Model:	Serial No.	Expiry Date:		Traceab	le to:
Description:	Model: B&K 4226		Expiry Date: 23-Aug-2022		Traceab CIGISME	
2 S.		Serial No.				
Description: Multi function sound calibrator	B&K 4226	Serial No. 2288444	23-Aug-2022		CIGISME	
Description: Multi function sound calibrator Signal generator Ambient conditions	B&K 4226 DS 360	Serial No. 2288444	23-Aug-2022		CIGISME	
Description: Multi function sound calibrator Signal generator	B&K 4226	Serial No. 2288444	23-Aug-2022		CIGISME	

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:

V Fenc Jungi

19-Apr-2022

Company Chop:



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.

Date:

© Soils & Materials Engineering Co., Ltd.

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



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

香港新界萘涌永基路22-24號好爸爸創科大度 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.: 22CA0412 03 Page 2 of 2

1, Electrical Tests

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

			Expanded	Coverage
Test:	Subtest:	Status:	Uncertanity (dB)	Factor
Self-generated noise	А	Pass	0.3	
Sell-generated holse	ĉ	Pass	0.8	2.1
	Lin	Pass	1.6	2.2
Linearity range for Log		Pass	0.3	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		0.3	
	2 dB above lower limit of each range	Pass		
Linearity range for SPL	At reference range , Step 5 dB at 4 kHz	Pass	0.3	
Frequency weightings	A	Pass	0.3	
	С	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	
	LON		0.4	

2, Acoustic tests

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

Test:	Subtest	Status	Expanded Uncertanity (dB)	Coverage Factor
Acoustic response	Weighting A at 125 Hz	Pass	0.3	
NE CETTICULE D'INNERALISTICE TIMERE CET E LE CONTRACTORISTIC	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.

	1	- End -	α
Calibrated by:	1	Checked by:	Indl
Date:	Fung Chi Yip	Date:	Chan Yuk Yiu 19-Apr-2022

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

© Soils & Materials Engineering Co., Ltd.

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





Test Data for So	und Level Me	eter				Page 1 of 5
Sound level me	eter type:	LxT1	Serial No.	0006346	Date	17-Apr-2022
Microphone Preamp	type: type:	377B02 PRMLxT1L	Serial No. Serial No.	326425 069995	Report	: 22CA0412 03

SELF GENERATED NOISE TEST

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

Noise level in A weighting	9.3	dB
Noise level in C weighting	12.5	dB
Noise level in Lin	19.1	dB

LINEARITY TEST

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

Reference/Expected level	Actual level		Tolerance	Devia	Deviation		
Reference/Expected level	non-integrated	integrated		non-integrated	integrated		
dB	dB	dB	+/- dB	dB	dB		
94.0	94.0	94.0	0.7	0.0	0.0		
99.0	99.0	99.0	0.7	0.0	0.0		
104.0	104.0	104.0	0.7	0.0	0.0		
109.0	109.0	109.0	0.7	0.0	0.0		
114.0	114.0	114.0	0.7	0.0	0.0		
115.0	115.0	115.0	0.7	0.0	0.0		
116.0	116.0	116.0	0.7	0.0	0.0		
117.0	117.0	117.0	0.7	0.0	0.0		
118.0	118.0	118.0	0.7	0.0	0.0		
119.0	119.0	119.0	0.7	0.0	0.0		
120.0	120.0	120.0	0.7	0.0	0.0		
89.0	89.0	89.0	0.7	0.0	0.0		
84.0	84.0	84.0	0.7	0.0	0.0		
79.0	79.0	79.0	0.7	0.0	0.0		
74.0	74.0	74.0	0.7	0.0	0.0		
69.0	69.0	69.0	0.7	0.0	0.0		
64.0	64.0	64.0	0.7	0.0	0.0		
59.0	59.0	59.0	0.7	0.0	0.0		
54.0	54.0	54.0	0.7	0.0	0.0		
49.0	48.9	48.9	0.7	-0.1	-0.1		
44.0	44.0	44.0	0.7	0.0	0.0		
39.0	39.0	39.0	0.7	0.0	0.0		
34.0	34.0	34.0	0.7	0.0	0.0		
33.0	33.0	33.0	0.7	0.0	0.0		

(c)Soils Materials Eng. Co., Ltd.





Page 2 of 5

Test Data for Sound Level Meter

Sound level me	eter type:	LxT1		Serial No.	0006346	Dat	e 17-Apr-2022
Microphone Preamp	type: type:	377B02 PRMLxT1L		Serial No. Serial No.	326425 069995	Rep	oort: 22CA0412 03
32.0		31.9	31.9	0.7		-0.1	-0.1
31.0		30.9	30.9	0.7		-0.1	-0.1
30.0		29.9	29.9	0.7		-0.1	-0.1

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

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

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

Ranges	Reference/Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
20.120	30.0	29.9	0.7	-0.1
20-120	118.0	118.0	0.7	0.0

FREQUENCY WEIGHTING TEST

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

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

(c)Soils Materials Eng. Co., Ltd.



SM	EC	Lab

Page 3 of 5

Date 17-Apr-2022 Serial No. 0006346 Sound level meter type: LxT1 377B02 Serial No. 326425 Microphone type: Report: 22CA0412 03 069995 Preamp type: PRMLxT1L Serial No. 93.9 1.0 1.0 0.1 94.0 1995.0 93.8 93.3 1.0 1.0 0.1 3981.0 94.0 93.2 1.5 3.0 0.0 7943.0 94.0 91.0 91.0 0.0 94.0 87.8 87.8 3.0 6.0 12590.0 Frequency weighting Lin: Tolerance(dB) Deviation Ref. level Expected level Actual level Frequency dB dB dB dB + Hz 94.0 0.0 0.0 0.0 94.0 1000.0 94.0 31.6 94.0 94.0 94.0 1.5 1.5 0.0 1.5 0.0 63.1 94.0 94.0 94.0 1.5 94.0 94.0 1.0 1.0 0.0 125.9 94.0 1.0 0.0 251.2 94.0 94.0 94.0 1.0 0.0 94.0 94.0 1.0 1.0 94.0 501.2 1.0 0.0 94.0 1.0 94.0 94.0 1995.0 1.0 1.0 0.0 94.0 94.0 3981.0 94.0 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

Test Data for Sound Level Meter

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	Tolera	nce(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	Tolera	nce(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 7, set the generator signal to single, Lzpeak)

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

(c)Soils Materials Eng. Co., Ltd





Test Data for So	und Level Me	eter				Page 4 of 5
Sound level me	eter type:	LxT1	Serial No.	0006346	Date	17-Apr-2022
Microphone type: 377B02 Preamp type: PRMLxT1L		Serial No. Serial No.	326425 069995	Report:	22CA0412 03	
Negative polar	ities:		· · · · · · · · · · · · · · · · · · ·			
Re	ef. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation	
	dB	dB	dB	+/- dB	dB	
1	19.0	119.0	119.3	2.0	0.3	

RMS ACCURACY TEST

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

Test frequency:		2000 Hz	and the second second second second		
Amplitude: 2 dB below the upper limit of			per limit of the primary	y indicator range.	
Burst repetition	n frequency:	40 Hz			
Tone burst sig	nal:	11 cvcles of a sine	e wave of frequency 2	000 Hz. (Set	to INT)
		and the second se			
	Ref. Level	Expected level	Tone burst signal	Tolerance	Deviation
Time wighting					,

TIME WEIGHTING IMPULSE TEST

Time weighting I is tested on the reference range (Set the SLM to LAImax) Test frequency: 2000 Hz

Amplitude:

The upper limit of the primary indicator range.

Single sinusoidal burst of duration 5 ms:

Ref. Level	Single burs	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 bu	Repeated burst indication		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.

4000 Hz Frequency of tone burst:

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 4000 Hz Test frequency: Integration time: 10 sec

(c)Soils Materials Eng. Co., Ltd.





Test Data for Sou	and Level Meter					Page 5 of 5
Sound level me	eter type: L	xT1	Serial No.	0006346	Date	17-Apr-2022
Microphone Preamp	-)	77B02 PRMLxT1L	Serial No. Serial No.	326425 069995	Report:	22CA0412 03
The integrating	sound level me	ter set to Leq:				
Duration	Rms level o	f Expected	Actual	Tolerance	Deviatior	1
msec	tone burst (d	3) 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					
		2 dB below the upper limit of the primary indicator range.					
		40 Hz					
Tone burst s	signal:	11 cycles of a sine wave of frequency 2000 Hz.					
Level	Level reduced by	Further reduced	Difference	Tolerance	Deviation		
at overload (dB)	1 dB	3 dB	dB	dB	dB		
114.2	113.2	110.2	3.0	1.0	0.0		

For integrating SLM, with the instrument indicating Leq.

For integrating SLM, with the instrument indicating Leq and set to the reference range. The test signal as following: The test tone burst signal is superimposed on a baseline signal corresponding to the lower limit of reference range Test frequency: 4000 Hz Integration time: 10 sec

Single burst duration: 1 msec

Rms level	Level reduced by	Expected level	Actual level	Tolerance	Deviation
at overload (dB)	1 dB	dB	dB	dB	dB
120.9	119.9	79.9	79.9	2.2	0.0

ACOUSTIC TEST

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

Frequency	Expected level	Actual level	Tolerar	nce (dB)	Deviation
Hz	dB	Measured (dB)	+	-	dB
1000	94.0	94.0	0.0	0.0	0.0
125	77.9	77.9	1.0	1.0	0.0
8000	92.9	90.8	1.5	3.0	-2.1

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

(c)Soils Materials Eng. Co., Ltd.



综合試驗有限公司
 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



Noise monitoring equipment

CERTIFICATE OF CALIBRATION

Certificate No.:	21CA1021 05-01		Page:	1 of	2
Item tested					
Description:	Acoustical Calibra	tor (Class 1)			
Manufacturer:	Honglim Co., Ltd.				
Type/Model No.:	HLES-02				
Serial/Equipment No.:	2016611465				
Adaptors used:	5				
Item submitted by					
Curstomer:	Lam Environment	al Services Limited.			
Address of Customer:	9				
Request No.:	- 				
Date of receipt:	21-Oct-2021				
Date of test:	25-Oct-2021				
Date of test: Reference equipment		pration			
		oration Serial No.	Expiry Date:	Traceat	ole to:
Reference equipment	used in the calib		Expiry Date: 04-May-2022	Traceat SCL	ole to:
Reference equipment	used in the calib Model:	Serial No.			
Reference equipment Description: Lab-standard microphone	used in the calib Model: B&K 4180	Serial No. 2341427	04-May-2022	SCL	I
Reference equipment Description: Lab standard microphone Preamplifier Measuring amplifier Signal generator	used in the calib Model: B&K 4180 B&K 2673	Serial No. 2341427 2239857 2346941 33873	04-May-2022 31-May-2022 01-Jun-2022 27-May-2022	SCL CEPRE CEPRE CEPRE	
Reference equipment Description: Lab standard microphone Preamplifier Measuring amplifier	used in the calib Model: B&K 4180 B&K 2673 B&K 2610	Serial No. 2341427 2239857 2346941	04-May-2022 31-May-2022 01-Jun-2022	SCL CEPRE CEPRE CEPRE CEPRE	
Reference equipment Description: Lab standard microphone Preamplifier Measuring amplifier Signal generator	Model: B&K 4180 B&K 2673 B&K 2610 DS 360	Serial No. 2341427 2239857 2346941 33873	04-May-2022 31-May-2022 01-Jun-2022 27-May-2022	SCL CEPRE CEPRE CEPRE	
Reference equipment Description: Lab standard microphone Preamplifier Measuring amplifier Signal generator Digital multi-meter	Model: B&K 4180 B&K 2673 B&K 2610 DS 360 34401A	Serial No. 2341427 2239857 2346941 33873 US36087050	04-May-2022 31-May-2022 01-Jun-2022 27-May-2022 27-May-2022	SCL CEPRE CEPRE CEPRE CEPRE	
Reference equipment Description: Lab standard microphone Preamplifier Measuring amplifier Signal generator Digital multi-meter Audio analyzer	Wodel: B&K 4180 B&K 2673 B&K 2610 DS 360 34401A 8903B	Serial No. 2341427 2239857 2346941 33873 US36087050 GB41300350	04-May-2022 31-May-2022 01-Jun-2022 27-May-2022 27-May-2022 28-May-2022	SCL CEPRE CEPRE CEPRE CEPRE CEPRE	
Reference equipment Description: Lab-standard microphone Preamplifier Measuring amplifier Signal generator Digital multi-meter Audio analyzer Universal counter	Wodel: B&K 4180 B&K 2673 B&K 2610 DS 360 34401A 8903B	Serial No. 2341427 2239857 2346941 33873 US36087050 GB41300350	04-May-2022 31-May-2022 01-Jun-2022 27-May-2022 27-May-2022 28-May-2022	SCL CEPRE CEPRE CEPRE CEPRE CEPRE	
Reference equipment Description: Lab standard microphone Preamplifier Measuring amplifier Signal generator Digital multi-meter Audio analyzer Universal counter Ambient conditions	Model: B&K 4180 B&K 2673 B&K 2610 DS 360 34401A 8903B 53132A	Serial No. 2341427 2239857 2346941 33873 US36087050 GB41300350	04-May-2022 31-May-2022 01-Jun-2022 27-May-2022 27-May-2022 28-May-2022	SCL CEPRE CEPRE CEPRE CEPRE CEPRE	

- 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 presente	ed on page	a 2 of this certifica	te.	Sub ENGINEERIES 综合試驗 S
Approved Signatory:	FengJunqi	Date:	26-Oct-2021	Company Chop:	有限公司 新SNOS ** OLI
Comments: The results	reported in this certificate re	fer to the	conditon of the ins	strument on the date of a	calibration and

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.

© Soils & Materials Engineering Co., Ltd.

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



徐 合 試 験 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

香 港 新 齐 癸 禰 水 基 路 2 2 - 2 4 號 好 仓 仓 狥 科 天 厦 Good Ba Ba Hitech Building, Nos. 22-24 Wing Kei Road, Kwai Chung, New Territories, Hong Kong Tel: (852) 2873 6860 Fax: (852) 2555 7533 E-mail: smec@cigismec.com Website: www.cigismec.com



2

CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.:

21CA1021 05-01

Page:

2 of

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.

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

2, Sound Pressure Level Stability - Short Term Fluctuations

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

At 1000 Hz	STF = 0.017 dB
Estimated expanded uncertainty	0.005 dB

3, Actual Output Frequency

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

At 1000 Hz	Actual Frequency =	1003.7 Hz	
Estimated expanded uncertainty	:2	0.1 Hz	Coverage factor k = 2.2

4, Total Noise and Distortion

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

At 1000 Hz	TND = 1.5 %
Estimated expanded uncertainty	0.7 %

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

	A	= End -	16
Calibrated by:	1~~	Checked by:	Jauli
	Fung Chi Yip		Chan Yuk Yiu
Date:	25-Oct-2021-	Date:	26-Oct-2021

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

© Soils & Materials Engineering Co., Ltd.

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





CERTIFICATE OF CALIBRATION

Certificate No.:	21CA1021 05-02		Page:	1	of	2
Item tested						
Description:	Acoustical Calibra	tor (Class 1)				
Manufacturer:	Honglim Co., Ltd.					
Type/Model No.:	HLES-02					
Serial/Equipment No.:	2019612534					
Adaptors used:	122					
Item submitted by						
Curstomer:	Lam Environment	al Services Limited.				
Address of Customer:	25					
Request No.:						
Date of receipt:	21-Oct-2021					
Date of test:	25-Oct-2021	•				
Reference equipment	used in the calib	ration				
Description:	Model:	Serial No.	Expiry Date:	Т	raceab	le to:
Lab standard microphone	B&K 4180	2341427	04-May-2022	S	CL	
Preamplifier	B&K 2673	2239857	31-May-2022	С	EPREI	
Measuring amplifier	B&K 2610	2346941	01-Jun-2022	-	EPREI	
Signal generator	DS 360	33873	27-May-2022	С	EPREI	
Digital multi-meter	34401A	US36087050	27-May-2022	С	EPREI	
Audio analyzer	8903B	GB41300350	28-May-2022	С	EPREI	
Universal counter	53132A	MY40003662	02-Jun-2022	С	EPREI	
Ambient conditions						
Temperature:	22 ± 1 °C					
Temperature: Relative humidity:	22 ± 1 °C 55 ± 10 %					

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.
- 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 Jungi

26-Oct-2021

Company Chop:

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.

Date:

© Soils & Materials Engineering Co., Ltd.

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





宿 袍 刷 齐 癸 備 水 茎 떠 2 2 - 2 4 號 好 色 色 創 杵 八 度 Good Ba Ba Hitech Building, Nos. 22-24 Wing Kei Road, Kwai Chung, New Territories, Hong Kong Tel: (852) 2873 6860 Fax: (852) 2555 7533 E-mail: smec@cigismec.com Website: www.cigismec.com



CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.:

21CA1021 05-02

Page:

2 of 2

1, Measured Sound Pressure Level

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

			(Output level in dB re 20 µPa)
Frequency	Output Sound Pressure	Measured Output	Estimated Expanded
Shown	Level Setting	Sound Pressure Level	Uncertainty
Hz	dB	dB	dB
1000	94.00	94.02	0.10

2, Sound Pressure Level Stability - Short Term Fluctuations

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

At 1000 Hz	STF = 0.011 dB
Estimated expanded uncertainty	0.005 dB

3, Actual Output Frequency

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

At 1000 Hz	Actual Frequency = 998.27 Hz	
Estimated expanded uncertainty	0.1 Hz	Coverage factor k = 2.2

4, Total Noise and Distortion

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

At 1000 Hz	TND = 0.4 %
Estimated expanded uncertainty	0.7 %

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



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.

© Soils & Materials Engineering Co., Ltd.

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



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

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT: CLIENT:	ALAN NG LAM GEOTECHNICS LIMITED	WORK ORDER:	HK2212773
ADDRESS:	19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD HONG KONG	SUB- BATCH: LABORATORY: DATE RECEIVED: DATE OF ISSUE:	0 HONG KONG 11-Apr-2022 19-Apr-2022

SPECIFIC COMMENTS

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client. The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

The "Tolerance Limit" quoted is the acceptance criteria applicable for similar equipment used by the laboratory or quoted from relevant international standards.

The "Next Calibration Date" is recommended according to best practice principle as practised by the laboratory or quoted from relevant international standards.

The validity of equipment/ meter performance only applies to the result(s) stated in the report.

Equipment Type:	Multifunctional Meter
Service Nature:	Performance Check
Scope:	Dissolved Oxygen, pH Value, Salinity and Temperature
Brand Name/ Model No.:	[YSI]/ [Professional Plus]
Serial No./ Equipment No.:	[16J104708/17F100236]/ [N/A]
Date of Calibration:	19-April-2022

GENERAL COMMENTS

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

Ms. Lin Wai Yu, Iris Assistant Manager - Inorganics

This report may not be reproduced except with prior written approval from ALS Technichem (HK) Pty Ltd.

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER:	HK2212773			
SUB- BATCH: DATE OF ISSUE: CLIENT:	0 19-Apr-2022 LAM GEOTECHNICS LIMITED			(ALS)
Equipment Type:	Multifunctional Meter			
Brand Name/ Model No.:	[YSI]/ [Professional Plus]			
Serial No./ Equipment No.:	[16J104708/17F100236]/ [N/A	A]		
Date of Calibration:	19-April-2022	Date of Next Calibration:	19-July-2022	

PARAMETERS:

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

	g menneter cambration riotedure.			
Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)		
8.0	8.0	+0.0		
24.0	23.8	-0.2		
38.0	37.1	-0.9		
	Tolerance Limit (°C)	±2.0		

Reference Thermometer:

* The calibration solutions do not have Certificate of Analysis.

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

Ms. Lin Wai Yu, Iris Assistant Manager - Inorganics

Page 3 of 3



REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

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

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

COMMENTS

It is certified that the item under performance check/calibration has been calibrated/checked by corresponding calibrated equipment in the laboratory.

Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal acceptance criteria of FT Laboratories Ltd will be followed.

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

Remarks:

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

Certified By:

WONG Chi Wai Sanio Senior Chemist

Issue Date:

11/04/2022

This report may not be reproduced except with prior written approval from FT Laboratories Ltd. Form No.: HG022-002 Rev 0 20190101

Page 1 of 2



REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

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

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

Parameters:

Turbidity

Method Ref: APHA 22nd ed. 2130B

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

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

This report may not be reproduced except with prior written approval from FT Laboratories Ltd. Form No.: HG022-002 Rev 0 20190101



Appendix 4.2

Impact Monitoring Schedule



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

Apr 2022 Monday Tuesday Wednesday Thursday Friday Saturday 27 M 28 M 29 M 30 Ma 31 Ma 01 Ap 02 Apr 05 Apr 07 Ap 03 Api 08 Ap 09 Apr 04 Apr 06 Ap loise Monitoring 16 Apr 15 Apr 10 Apr 11 Apr 12 Apr 13 Ap 14 Ap loise Monitoring ∕lid-Ebb id-Ebb /id-Ebb 12:0 lid-Floo 14:4 lid-Floo lid-Floo 18:2 16:4 17 Api 18 Ap 19 Ap 20 Apr 21 Ap 22 Ap 23 Apr oise Monitoring /id-Flood lid-Flood lid-Flood 9:0 16:40 13:2 14:43 lid-ebb id-ebb id-ebb 24 Api 27 Ap 29 Ap 25 Ap 26 Ap 28 Ap 30 Apr oise Monitoring /lid-Ebb /lid-Ebb /id-Ebb lid-Flo id-Flo 16.0 lid-Floc 17:4

Remark:

Noise Monitoring to be conducted at the designated monitoring stations when there are project-related construction activities undertaken within a radius of 300m from the monitoring stations; and Water Quality Monitoring to be scheduled upon the commencement of marine construction work site and conducted during marine construction works.



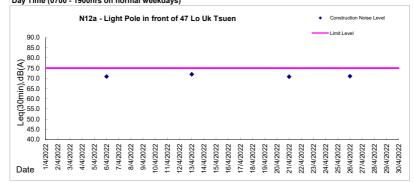
Appendix 4.3

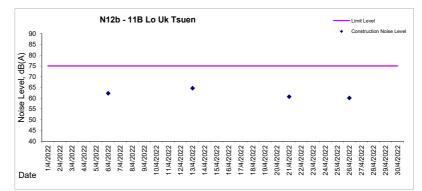
Noise Monitoring Results and Graphical Presentations

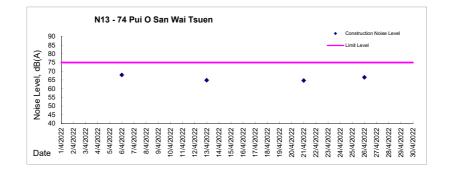


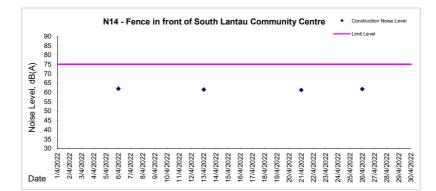
Contract No. SD 6/2020 Construction of San Shek Wan Sewage Treatment Works, Associated Submarine Outfall and Pui O Sewerage Works - ET Services (2021 - 2022)

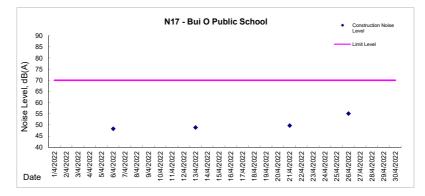
Graphic Presentation of Noise Monitoring Result Day Time (0700 - 1900hrs on normal weekdays)













Day Time (0700 - 1900hrs on normal weekdays)

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

			Measure	ement Noi	se Level	Average Noise Level	Baseline Level	Construction Noise Level	Limit Level	
Date	Weather	Time	Leq	L10	L90	Leq	Leq	Leq	Leq	
			Unit:	Unit: dB(A), (5-min)			Unit: dB(A), (30-min)			
		10:51	72.5	76.5	51.1					
		10:56	70.6	74.0	48.5					
6 Apr 2022	Sunny	11:01	68.6	71.6	49.2	70.9	73.3	<baseline level<="" td=""><td>I 75</td></baseline>	I 75	
0 Apr 2022	Sunny	11:06	70.1	74.2	48.7	10.5	75.5		15	
		11:11	71.7	75.2	48.8					
		11:16	70.8	75.7	47.3					
		10:11	72.0	76.0	51.3					
		10:16	71.4	75.9	51.3			<baseline level<="" td=""><td></td></baseline>		
13 Apr 2022	Cloudy	10:21	68.3	72.2	48.8	71.9	73.3		75	
107401 2022	Cloudy	10:26	73.6	77.0	51.4	11.5				
		10:31	73.5	76.2	55.2					
		10:36	70.8	74.8	54.4					
		12:56	70.5	74.6	48.2			73.3 <baseline level<="" td=""><td></td></baseline>		
		13:01	72.7	72.6	47.7				75	
21 Apr 2022	Sunny	13:06	71.9	75.3	47.9	70.8	73.3			
	Carny	13:11	67.9	72.3	46.5	10.0		15		
		13:16	70.9	73.6	47.3					
		13:21	69.0	72.9	47.6					
		10:51	71.2	73.9	49.1					
		10:56	70.7	74.6	50.5					
26 Apr 2022	Sunny	11:01	68.9	72.4	49.5	71.0	71.0 73.3	73.3	<baseline 7<="" level="" td=""><td>75</td></baseline>	75
	Cariny	11:06	71.6	74.8	48.4	71.0	75.5		,0	
		11:11	71.7	77.1	49.8					
		11:16	71.5	71.9	46.8					



Day Time (0700 - 1900hrs on normal weekdays)

Location: N12b - 11B Lo Uk Tsuen

Date	Weather	Time	Measurement Noise Level		Average Noise Level	Baseline Level	Construction Noise Level	Limit Level	
			Leq	L10	L90	Leq	Leq	Leq	Leq
			Unit: dB(A), (5-min)			Unit: dB(A), (30-min)			
6 Apr 2022	Sunny	11:26	62.3	65.9	48.1	62.3	76.8	<baseline level<="" td=""><td rowspan="6">75</td></baseline>	75
		11:31	61.5	64.3	44.5				
		11:36	64.5	65.7	47.8				
	Conny	11:41	64.6	67.0	47.6	02.0			
		11:46	58.9	63.7	42.6				
		11:51	57.4	62.9	43.0				
		10:46	63.9	68.0	49.9		76.8	<baseline level<="" td=""><td rowspan="6">75</td></baseline>	75
	Cloudy	10:51	67.0	69.4	59.9	64.6			
13 Apr 2022		10:56	67.7	70.1	57.3				
107412022		11:01	58.9	62.9	49.2				
		11:06	61.2	64.5	47.7				
		11:11	63.0	65.3	48.5				
	Sunny	11:21	57.8	62.3	47.5	60.7	76.8	<baseline level<="" td=""><td rowspan="6">75</td></baseline>	75
		11:26	59.1	63.5	45.3				
21 Apr 2022		11:31	58.9	62.9	43.4				
		11:36	65.2	70.3	44.4				
		11:41	57.3	62.4	42.6				
		11:46	60.3	66.3	43.7				
	Sunny	11:26	61.1	64.8	48.7	60.1	76.8	<baseline level<="" td=""><td rowspan="6">75</td></baseline>	75
26 Apr 2022		11:31	60.2	59.7	45.3				
		11:36	60.7	62.6	45.0				
		11:41	61.6	65.9	45.2				
		11:46	58.0	61.5	44.2				
		11:51	57.9	60.5	46.1				



Day Time (0700 - 1900hrs on normal weekdays)

Location: N13 - 74 Pui O San Wai Tsuen

Date	Weather	Time	Measurement Noise Level		Average Noise Level	Baseline Level	Construction Noise Level	Limit Level	
			Leq	L10	L90	Leq	Leq	Leq	Leq
			Unit: dB(A), (5-min)			Unit: dB(A), (30-min)			
	Sunny	13:11	67.6	70.1	60.5	67.9	73.6	<baseline level<="" td=""><td rowspan="6">75</td></baseline>	75
		13:16	65.2	67.8	57.5				
6 Apr 2022		13:21	65.4	68.1	56.7				
0 Api 2022	Sunny	13:26	68.8	69.8	61.3	07.5	75.0		
		13:31	70.4	74.4	60.7				
		13:36	67.7	70.1	61.5				
	Cloudy	11:21	62.8	66.2	52.5		73.6	<baseline level<="" td=""><td rowspan="6">75</td></baseline>	75
		11:26	62.4	65.0	51.6				
13 Apr 2022		11:31	63.7	67.4	53.1	64.9			
13 Apr 2022		11:36	68.3	70.6	52.9	- 04.9			
		11:41	65.4	68.3	55.0				
		11:46	63.5	67.2	53.5				
	Sunny	10:51	62.1	65.7	56.4	64.7	73.6	<baseline level<="" td=""><td rowspan="6">75</td></baseline>	75
		10:56	62.8	65.7	55.5				
21 Apr 2022		11:01	65.0	67.4	55.7				
2174712022		11:06	66.6	69.7	58.1				
		11:11	66.1	69.7	57.4				
		11:16	63.6	67.5	55.1				
	Sunny	14:16	67.4	71.2	62.2	66.5	73.6	<baseline level<="" td=""><td rowspan="3">75</td></baseline>	75
26 Apr 2022		14:21	67.6	68.9	61.9				
		14:26	67.9	68.9	61.8				
		14:31	63.7	65.3	62.0				
		14:36	65.6	68.5	62.2				
		14:41	65.1	67.3	62.1				



Day Time (0700 - 1900hrs on normal weekdays)

Location: N14 - Fence in front of South Lantau Community Centre

			Measure	Measurement Noise Level		Average Noise Level	Baseline Level	Construction Noise Level	Limit Level	
Date	Weather	Time	Leq	L10	L90	Leq	Leq	Leq	Leq	
			Unit: dB(A), (5-min)			Unit: dB(A), (30-min)				
	Sunny	12:36	59.0	61.2	44.4	61.9	62.2	<baseline level<="" td=""><td rowspan="6">75</td></baseline>	75	
		12:41	59.0	58.4	44.8					
6 Apr 2022		12:46	63.9	65.7	46.5					
071012022	Ournry	12:51	63.5	64.8	47.9	01.5				
		12:56	59.8	61.7	48.1					
		13:01	63.3	65.5	49.4					
	Cloudy	12:56	57.7	60.0	42.5		62.2	<baseline level<="" td=""><td rowspan="6">75</td></baseline>	75	
		13:01	57.9	61.1	40.8					
13 Apr 2022		13:06	62.9	64.2	42.2	61.5				
1074012022		13:11	63.3	67.0	44.4					
		13:16	63.1	62.2	43.9					
		13:21	60.6	61.4	42.5					
	Sunny	9:41	59.5	62.7	49.1	61.2	62.2	<baseline level<="" td=""><td rowspan="6">75</td></baseline>	75	
		9:46	62.7	65.1	49.8					
21 Apr 2022		9:51	62.7	66.2	51.8					
217491 2022		9:56	62.2	64.6	52.6					
		10:01	59.7	61.6	54.0					
		10:06	58.8	61.7	47.7					
	Sunny	13:41	63.7	66.7	46.7	61.8	62.2	<baseline level<="" td=""><td rowspan="3">75</td></baseline>	75	
26 Apr 2022		13:46	63.6	61.9	46.6					
		13:51	60.4	62.7	47.6					
		13:56	62.4	63.9	50.3				10	
		14:01	61.4	63.1	47.8					
		14:06	53.6	56.5	42.9					



Day Time (0700 - 1900hrs on normal weekdays)

Location: N17 - Bui O Public School

			Measurement Noise Level		Average Noise Level	Baseline Level	Construction Noise Level	Limit Level				
Date	Weather	Time	Leq	L10	L90	Leq	Leq	Leq	Leq			
			Unit: dB(A), (5-min)				Unit: dB(A), (30-min)					
6 Apr 2022		12:06	49.7	51.6	44.0		62.3	<baseline level<="" td=""><td rowspan="6">70</td></baseline>	70			
	Sunny	12:11	46.1	48.3	42.6	48.3						
		12:16	48.9	51.4	44.3							
	Sunny	12:21	48.2	51.2	43.2	40.5						
		12:26	47.9	50.3	42.4							
		12:31	48.1	50.3	43.1							
		13:31	49.1	52.1	42.7		62.3	<baseline level<="" td=""><td rowspan="6">65</td></baseline>	65			
	Cloudy	13:36	48.7	52.1	43.4	48.8						
13 Apr 2022		13:41	49.8	53.5	42.4							
15 Apr 2022		13:46	48.4	51.4	43.1							
		13:51	49.3	49.9	43.1							
		13:56	47.3	50.0	42.0							
	Sunny	10:16	50.0	52.5	46.5	49.7	62.3	<baseline level<="" td=""><td rowspan="6">70</td></baseline>	70			
		10:21	49.7	51.5	47.3							
21 Apr 2022		10:26	49.8	52.0	46.6							
2174012022		10:31	49.1	50.9	46.8							
		10:36	48.2	50.4	44.1							
		10:41	51.1	53.3	47.9							
	Sunny	13:01	59.1	62.6	50.4	- 55.1	62.3	<baseline level<="" td=""><td rowspan="4">70</td></baseline>	70			
26 Apr 2022		13:06	54.6	57.6	49.8							
		13:11	51.6	53.8	48.6							
•		13:16	55.3	58.5	49.4							
		13:21	53.8	56.2	49.0							
		13:26	50.6	52.3	48.1				l			

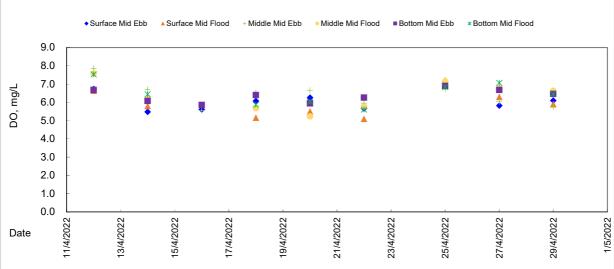


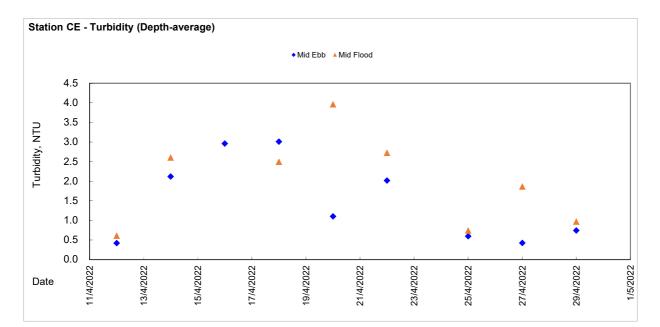
Appendix 4.4

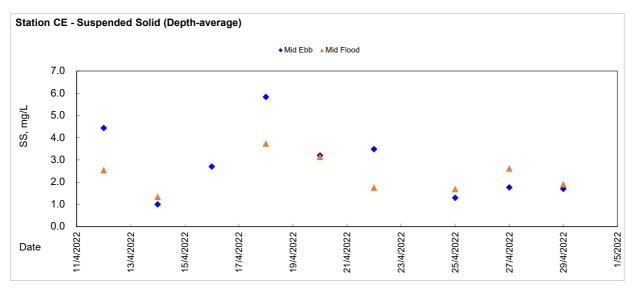
Marine Water Quality Monitoring Results and Graphical Presentations





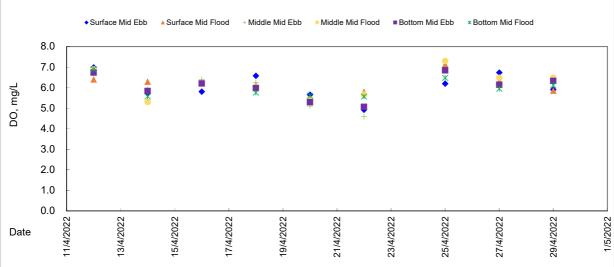


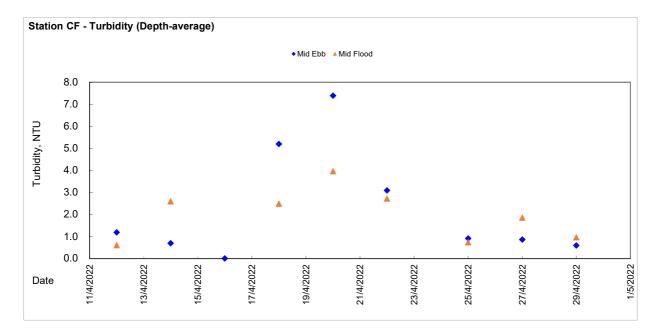


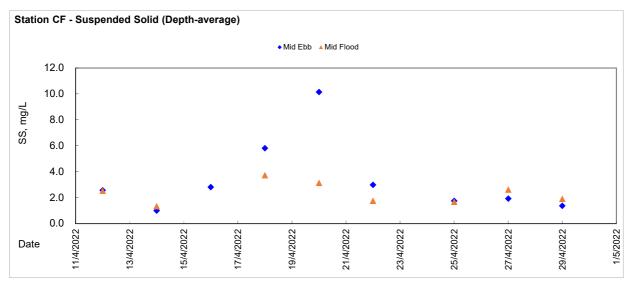






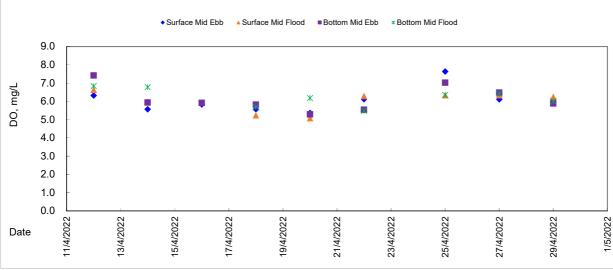


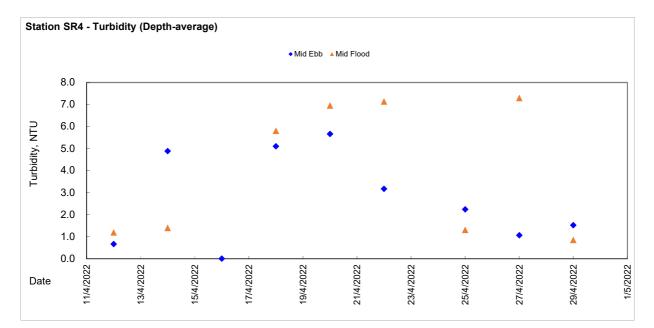


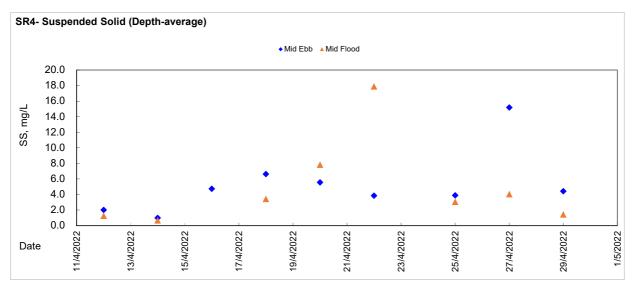






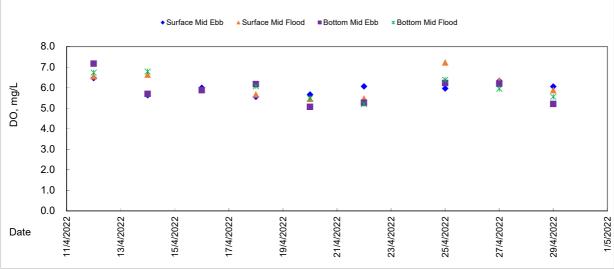


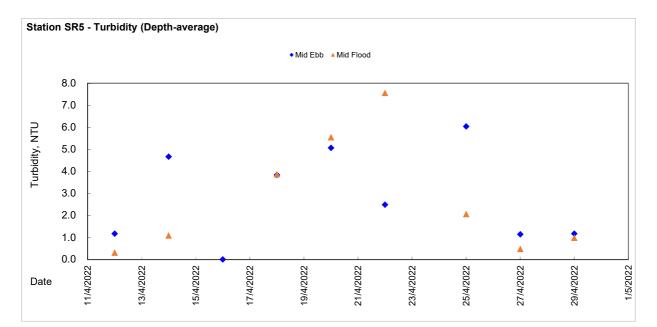


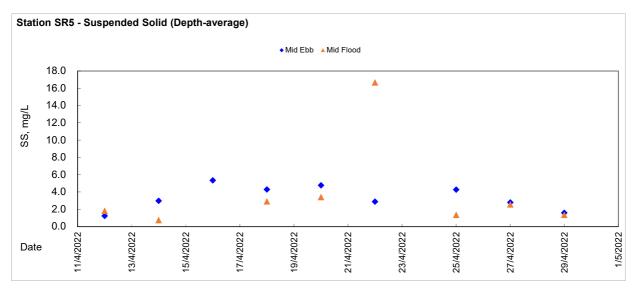






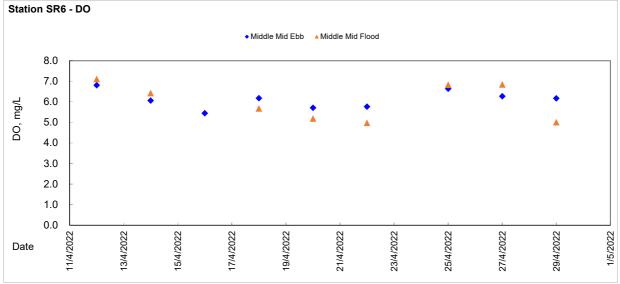


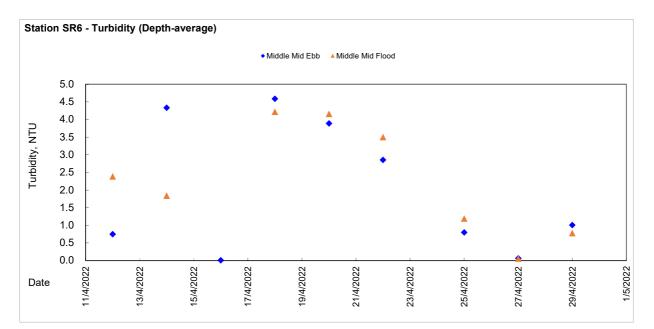


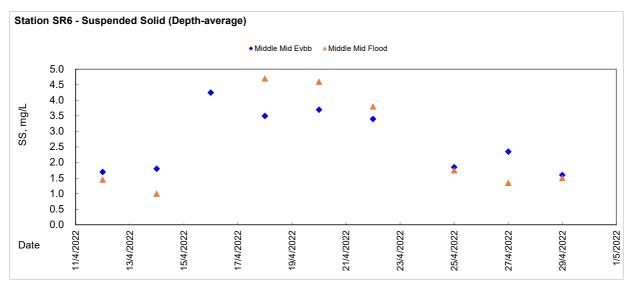




Graphic Presentation of WQM Result



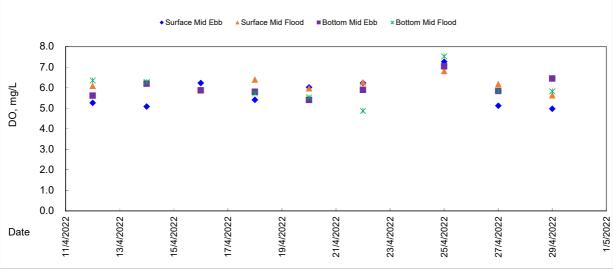


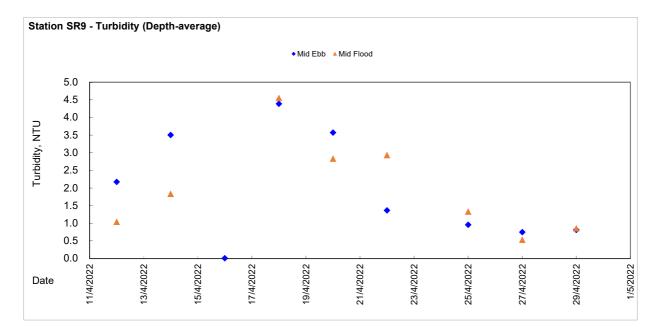


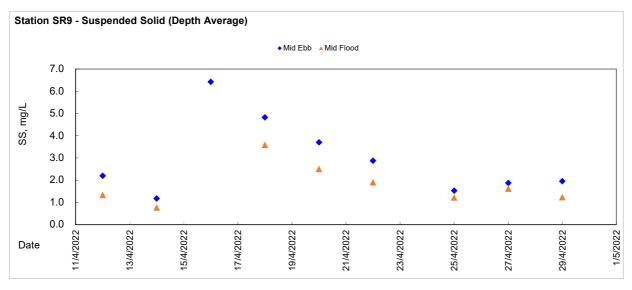


Graphic Presentation of WQM Result



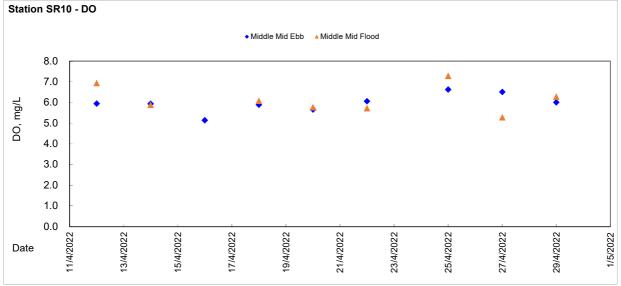


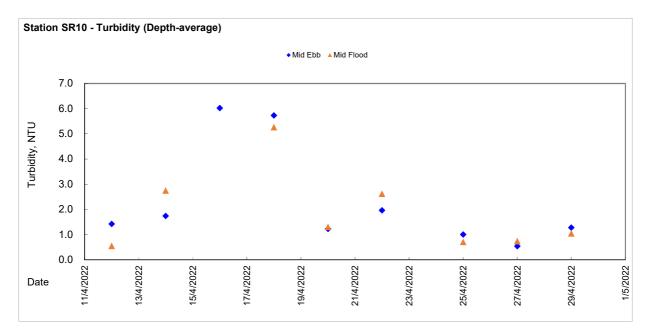


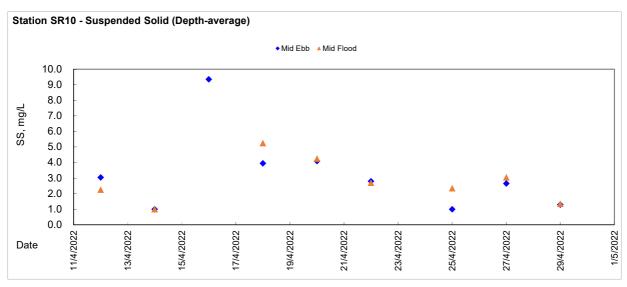




Graphic Presentation of WQM Result

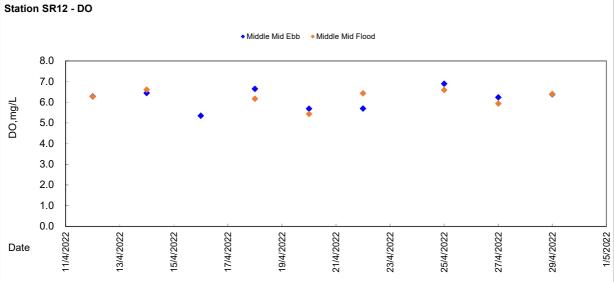


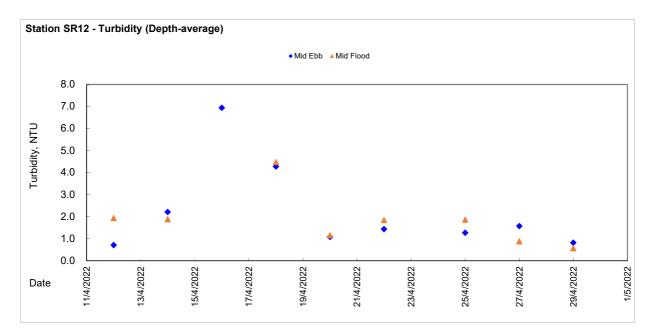


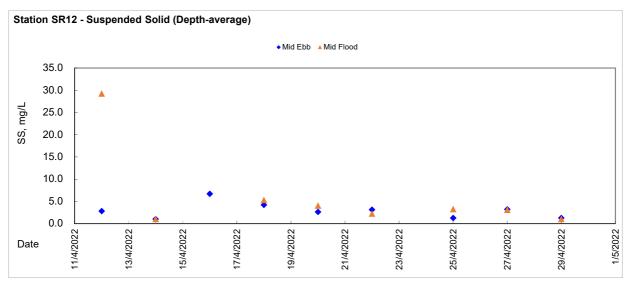




Graphic Presentation of WQM Result

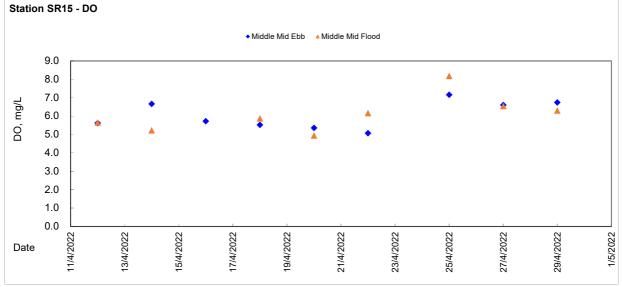


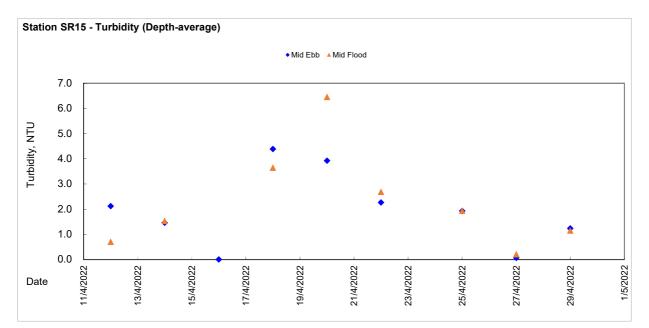


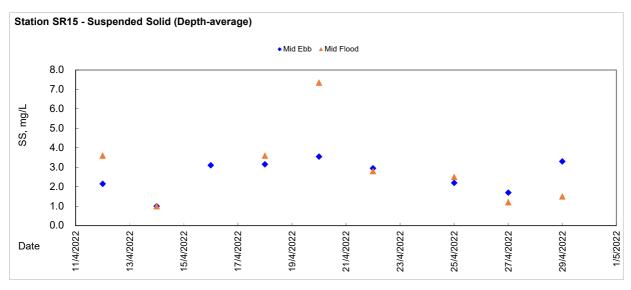




Graphic Presentation of WQM Result







	Complian		Comulian	Water	Sampling	Tempe	rature	p	H	Sal	inity	DO Sa	turation	D	0	Turb	oidity	S	S
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Depth	°	0		-	р	pt	c.	6	mg	g/L	N	TU	m	g/L
	Date		TITLE	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	11:13	3.6	1.0	24.30	24.35	8.52	8.53	30.93	30.89	88.80	90.20	6.23	6.33	0.59	0.66	1.2	1.4
	12/4/2022	Sunny	11:15	3.6	1.0	24.40	24.00	8.54	0.00	30.85	30.03	91.60	30.20	6.42	0.00	0.73	0.00	1.5	1.4
	14/4/2022	Sunny	9:51	4.2	1.0	23.80	23.70	8.22	8.23	30.70	30.70	70.60	75.95	5.17	5.57	6.09	6.05	<1.0	1.0
	14/4/2022	Ganny	9:53	4.2	1.0	23.60	20.70	8.23	0.20	30.69	00.70	81.30	10.00	5.97	0.07	6.01	0.00	<1.0	1.0
	16/4/2022	Monsoon	9:25	3.7	1.0	22.10	22.10	8.29	8.29	31.43	31.28	85.20	80.15	6.20	5.83	0.01	0.01	3.6	3.7
	10/4/2022	signal	9:27	3.7	1.0	22.10	22.10	8.29	0.20	31.13	01.20	75.10	00.10	5.46	0.00	0.01	0.01	3.8	0.1
	18/4/2022	Cloudy	11:26	4.0	1.0	21.60	21.60	8.38	8.38	32.30	32.31	71.50	76.25	5.22	5.57	5.41	4.62	5.0	4.7
	10/4/2022	oloudy	11:28	4.0	1.0	21.60	21.00	8.38	0.00	32.32	02.01	81.00	10.20	5.91	0.07	3.83	4.02	4.4	4.7
SR4	20/4/2022	Cloudy	11:22	3.9	1.0	21.50	21.50	8.35	8.35	32.55	32.58	72.00	73.55	5.26	5.37	5.11	5.55	6.5	6.3
0.11	2014/2022	oloudy	11:24	3.9	1.0	21.50	21.00	8.35	0.00	32.61	02.00	75.10	10.00	5.48	0.07	5.98	0.00	6.0	0.0
	22/4/2022	Cloudy	11:02	3.8	1.0	23.60	23.60	8.34	8.35	32.53	32.54	86.70	87.05	6.10	6.13	2.77	2.25	2.8	2.7
	22/4/2022	oloudy	11:04	3.8	1.0	23.60	20.00	8.35	0.00	32.54	02.04	87.40	07.00	6.15	0.10	1.73	2.20	2.6	2.1
	25/4/2022	Cloudy	9:49	3.1	1.0	25.10	25.10	8.09	8.13	31.47	31.34	116.30	110.65	8.02	7.64	0.44	1.00	3.4	3.4
	20/4/2022	oloudy	9:51	3.1	1.0	25.10	20.10	8.16	0.10	31.21	01.04	105.00	110.00	7.25	7.04	1.56	1.00	3.4	0.4
	27/4/2022	Sunny	9:09	3.1	1.0	26.20	26.15	8.37	8.38	29.63	29.67	83.20	89.25	5.70	6.12	0.01	0.40	8.9	5.6
	211712022	Cariny	9:11	3.1	1.0	26.10	20.15	8.38	0.50	29.70	23.07	95.30	33.25	6.53	0.12	0.79	0.40	2.2	5.0
	29/4/2022	Sunny	9:16	0.0	1.0	26.20	26.30	8.40	8.40	29.48	29.42	86.50	89.45	5.93	6.12	1.12	1.23	8.9	5.6
	201712022	Ganny	9:18	0.0	1.0	26.40	20.00	8.40	0.40	29.36	20.42	92.40	33.43	6.31	0.12	1.34	1.20	2.2	5.0

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

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.

am

am

Lam Environmental Services Limited

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

	Sampling		Sampling	Water	Sampling	Tempe		p	Н	Sal	inity	DO Sa	turation	D	0	Turl	oidity	5	SS
Station Reference	Date	Weather	Time	Depth	Depth	°C)			р	pt	9	6	mg	g/L	N	TU	m	g/L
	but		Time	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	15:37	3.4	1.0	25.50	25.50	8.57	8.58	30.85	30.76	94.30	96.40	6.48	6.63	1.59	1.13	1.8	1.6
	12/4/2022	Sunny	15:39	3.4	1.0	25.50	20.00	8.58	0.50	30.67	30.70	98.50	30.40	6.78	0.05	0.66	1.15	1.4	1.0
	14/4/2022	Sunny	13:16	4.0	1.0	24.60	24.65	8.54	8.55	30.28	30.24	83.60	85.10	5.86	5.97	0.01	1.03	<1.0	1.0
	14/4/2022	Sunny	13:18	4.0	1.0	24.70	24.00	8.55	0.00	30.20	30.24	86.60	65.10	6.07	5.97	2.04	1.03	<1.0	1.0
	16/4/2022	Monsoon	0:00	0.0	1.0	-		Sam	nling		ancella		to ad	Voreo	weath	or			
	10/4/2022	signal		0.0	1.0	-		Jam	ping	was co	ancene	su uue	เบลน	10130	weau	CI			
	18/4/2022	Cloudy	9:22	3.8	1.0	21.20	21.30	8.16	8.17	32.35	32.32	62.30	71.30	4.58	5.24	6.50	5.80	4.6	4.7
	10/4/2022	Cloudy	9:24	3.8	1.0	21.40	21.30	8.17	0.17	32.28	32.32	80.30	71.30	5.89	5.24	5.09	5.60	4.8	4.7
SR4	20/4/2022	Cloudy	9:22	3.8	1.0	21.20	21.20	8.17	8.18	32.61	32.58	62.70	69.20	4.60	5.08	5.24	6.10	10.6	10.8
314	20/4/2022	Cloudy	9:24	3.8	1.0	21.20	21.20	8.19	0.10	32.54	32.30	75.70	69.20	5.56	5.06	6.95	0.10	11.0	10.0
	22/4/2022	Cloudy	9:03	3.7	1.0	23.10	23.10	8.01	8.03	32.46	32.42	83.00	86.10	6.25	6.29	3.20	2.76	3.2	3.2
	22/4/2022	Cloudy	9:05	3.7	1.0	23.10	23.10	8.05	0.03	32.38	32.42	89.20	00.10	6.33	0.29	2.32	2.70	3.1	3.2
	25/4/2022	Cloudy	11:45	3.3	1.0	26.00	25.85	8.42	8.43	31.44	31.46	116.30	98.65	7.91	6.72	0.52	1.26	2.2	2.3
	23/4/2022	Cloudy	11:47	3.3	1.0	25.70	25.65	8.44	0.43	31.47	31.40	81.00	90.00	5.53	0.72	2.00	1.20	2.4	2.3
	27/4/2022	Sunny	10:52	3.2	1.0	26.60	26.60	8.44	8.45	29.48	29.49	91.10	93.05	6.20	6.33	0.15	0.92	3.8	3.7
	2114/2022	Sunny	10:54	3.2	1.0	26.60	20.00	8.45	0.45	29.49	29.49	95.00	93.05	6.46	0.33	1.68	0.92	3.5	3.7
	29/4/2022	Sunny	12:46	0.0	1.0	26.60	26.65	8.51	8.51	28.71	28.72	85.20	91.65	5.81	6.25	0.24	0.78	<1.0	1.0
	23/4/2022	Sunny	12:48	0.0	1.0	26.70	20.00	8.51	0.01	28.73	20.72	98.10	91.05	6.68	0.25	1.31	0.76	<1.0	1.0

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

	Compling		Sampling	Water	Sampling	Tempe	erature	p	Н	Sal	inity	DO Sa	turation	D	0	Turt	bidity	5	SS
Station Reference	Sampling Date	Weather	Time	Depth	Depth	°	0		-	р	pt	q	6	m	g/L	N	TU	m	g/L
	Dute		Time	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	11:16	3.6	2.6	23.80	23.85	8.59	8.60	30.88	30.88	104.70	105.00	7.41	7.42	0.73	0.68	2.6	2.7
	12/4/2022	Sunny	11:18	3.6	2.6	23.90	20.00	8.60	0.00	30.88	50.00	105.30	103.00	7.43	7.42	0.63	0.00	2.8	2.1
	14/4/2022	Sunnv	9:57	4.2	3.2	23.20	23.15	8.41	8.42	30.85	30.88	81.30	75.90	5.93	5.94	4.10	3.72	<1.0	1.0
	14/4/2022	Sunny	9:59	4.2	3.2	23.10	23.15	8.42	0.42	30.90	50.00	70.50	75.50	5.95	3.34	3.34	5.72	<1.0	1.0
	16/4/2022	Monsoon	9:29	4.0	2.7	22.20	22.25	8.32	8.32	31.45	31.44	85.50	81.75	6.20	5.92	0.01	0.01	5.9	5.8
	10/4/2022	signal	9:31	3.7	2.7	22.30	22.20	8.31	0.02	31.43	01.44	78.00	01.70	5.64	0.02	0.01	0.01	5.6	0.0
	18/4/2022	Cloudy	11:30	4.0	3.0	21.70	21.65	8.38	8.38	32.37	32.37	79.50	79.90	5.79	5.83	5.89	5.60	8.7	8.6
	10/4/2022	Cloudy	11:32	4.0	3.0	21.60	21.00	8.38	0.00	32.36	02.01	80.30	10.00	5.86	0.00	5.30	0.00	8.4	0.0
SR4	20/4/2022	Cloudy	11:26	3.9	2.9	21.50	21.45	8.35	8.36	32.62	32.66	81.70	72.35	5.97	5.29	6.91	5.78	5.0	4.9
01(4	201412022	Cloudy	11:28	3.9	2.9	21.40	21.40	8.36	0.00	32.69	02.00	63.00	72.00	4.60	0.20	4.65	0.70	4.7	4.5
	22/4/2022	Cloudy	11:04	3.8	2.8	23.20	23.20	8.34	8.34	32.59	32.59	73.40	78.35	5.20	5.55	3.52	4.11	4.8	5.0
	22/4/2022	Cloudy	11:06	3.8	2.8	23.20	20.20	8.34	0.04	32.59	02.00	83.30	10.00	5.89	0.00	4.69	4.11	5.2	0.0
	25/4/2022	Cloudy	9:53	3.1	2.1	24.80	24.80	8.17	8.19	31.58	31.58	102.60	101.40	7.11	7.03	3.50	3.49	4.2	4.4
	2014/2022	Cloudy	9:55	3.1	2.1	24.80	24.00	8.20	0.10	31.57	01.00	100.20	101.40	6.94	7.00	3.47	0.40	4.6	7.7
	27/4/2022	Sunny	9:13	3.1	2.1	26.10	26.10	8.39	8.39	29.66	29.68	97.40	94.65	6.67	6.48	2.57	1.74	34.4	24.8
	2114/2022	Gunny	9:15	3.1	2.1	26.10	20.10	8.38	0.00	29.70	20.00	91.90	04.00	6.29	0.40	0.90	1.74	15.2	24.0
	29/4/2022	Sunny	9:20	0.0	2.2	26.10	26.15	8.40	8.41	29.74	29.67	80.60	85.90	5.52	5.88	2.42	1.83	3.2	3.3
	2014/2022	Ganny	9:22	0.0	2.2	26.20	20.15	8.41	0.41	29.60	23.07	91.20	33.30	6.24	5.00	1.23	1.05	3.4	5.5

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.

am

Lam Environmental Services Limited

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

	Sampling		Sampling	Water	Sampling	Tempe	rature	р	Н	Sal	inity	DO Sa	turation	D	0	Turl	oidity	5	S
Station Reference	Date	Weather	Time	Depth	Depth	°	0			р	pt	9	%	m	g/L	N	TU	m	g/L
	Duie		Time	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	15:40	3.4	2.4	25.50	25.50	8.58	8.59	30.70	30.70	100.10	99.40	6.89	6.84	1.13	1.26	2.1	2.2
	12/4/2022	Sunny	15:42	3.4	2.4	25.50	20.00	8.59	0.55	30.70	30.70	98.70	33.40	6.79	0.04	1.39	1.20	2.3	2.2
	14/4/2022	Sunny	13:22	4.0	3.0	24.50	24.50	8.53	8.53	30.44	30.44	98.90	96.80	6.93	6.78	1.08	1.76	<1.0	1.0
	14/4/2022	Sunny	13:24	4.0	3.0	24.50	24.00	8.53	0.55	30.44	30.44	94.70	30.00	6.63	0.70	2.44	1.70	<1.0	1.0
	16/4/2022	Monsoon	0:00	0.0	-1.0	-		Ś	omolio	a wae	cance	م الم	ue to :	advore	se wea	othor			
	10/4/2022	signal		0.0	-1.0	-		00	ampiin	y was		-iieu u		auvera					
	18/4/2022	Cloudy	9:26	3.8	2.8	21.40	21.40	8.20	8.21	32.31	32.29	74.20	77.40	5.45	5.68	5.40	5.81	5.3	5.6
	10/4/2022	Cloudy	9:28	3.8	2.8	21.40	21.40	8.21	0.21	32.26	52.23	80.60	77.40	5.91	5.00	6.21	5.01	5.8	5.0
SR4	20/4/2022	Cloudy	9:25	3.8	2.8	21.30	21.30	8.21	8.20	32.71	32.69	82.80	84.40	6.06	6.18	7.52	7.81	12.4	12.7
0114	20/4/2022	Cloudy	9:27	3.8	2.8	21.30	21.50	8.19	0.20	32.67	52.05	86.00	04.40	6.30	0.10	8.10	7.01	12.9	12.7
	22/4/2022	Cloudy	9:06	3.7	2.7	22.90	22.90	8.05	8.06	32.60	32.12	76.80	76.70	5.47	5.48	12.34	11.50	25.6	50.5
	22/4/2022	Cloudy	9:08	3.7	2.7	22.90	22.30	8.07	0.00	31.64	52.12	76.60	10.10	5.49	5.40	10.66	11.50	75.4	50.5
	25/4/2022	Cloudy	11:50	3.3	2.3	24.90	24.90	8.38	8.39	31.67	31.68	101.20	92.80	7.00	6.42	14.97	13.33	9.6	9.8
	23/4/2022	Cloudy	11:52	3.3	2.3	24.90	24.30	8.39	0.53	31.69	51.00	84.40	32.00	5.83	0.42	11.68	10.00	10.0	3.0
	27/4/2022	Sunny	0:00	3.2	2.2	26.40	26.40	8.43	8.43	29.93	29.93	92.50	93.35	6.30	6.36	1.41	1.70	5.8	5.5
	217 112022	canny		3.2	2.2	26.40	20.40	8.43	0.40	29.92	20.00	94.20	50.00	6.42	0.00	1.98	1.70	5.2	0.0
	29/4/2022	Sunny	12:50	0.0	3.3	26.78	26.74	8.51	8.51	28.90	28.88	93.50	88.25	6.37	6.02	1.36	0.93	3.4	3.3
	20/4/2022	Cariny	12:52	0.0	3.3	26.70	20.74	8.51	0.01	28.86	20.00	83.00	30.23	5.66	0.02	0.50	0.33	3.1	5.5

Station Reference	Sampling	Weather	Sampling	Water Depth	Sampling Depth	Tempe °(p	Н		linity		turation	D			bidity		S
Station Reference	Date	weather	Time	m	m		AVG	Value	AVG	Value p	opt AVG	Value	% AVG	mg Value	g/L AVG		TU AVG		g/L AVG
			11:24	3.6	1.0	24.20		8.57	,	30.99	-	91.20	-	6.40	////0	1.01		<1.0	/
	12/4/2022	Sunny	11:26	3.6	1.0	24.30	24.25	8.57	8.57	30.89	30.94	93.20	92 20	6.54	6.47	0.48	0.75	<1.0	1.0
			10:02	4.0	1.0	23.90		8.45		30.53		75.20		5.32		5.36		<1.0	
	14/4/2022	Sunny	10:04	4.0	1.0	23.80	23.85	8.45	8.45	30.69	30.61	84.10	79.65	5.95	5.64	3.70	4.53	<1.0	1.0
		Monsoon	9:35	4.1	1.0	22.40		8.33		31.39		86.00		6.22		0.01		6.2	
	16/4/2022	signal	9:37	4.1	1.0	22.30	22.35	8.33	8.33	31.43	31.41	79.70	82.85	5.77	6.00	0.01	0.01	5.8	6.0
	18/4/2022	01	11:18	4.1	1.0	21.30	21.35	8.37	8.38	32.16	32.27	84.20	75.85	6.18	5.56	3.87	3.62	3.2	3.0
	18/4/2022	Cloudy	11:20	4.1	1.0	21.40	21.35	8.39	8.38	32.37	32.27	67.50	/5.85	4.94	5.50	3.36	3.62	2.8	3.0
SR5	20/4/2022	Cloudy	11:16	4.1	1.0	21.30	21.35	8.35	8.35	32.37	32.43	77.40	77.30	5.68	5.67	6.26	5.65	4.2	4.0
010	20/4/2022	Cloudy	11:18	4.1	1.0	21.40	21.55	8.35	0.35	32.49	32.43	77.20	11.30	5.65	5.07	5.04	5.05	3.7	4.0
	22/4/2022	Cloudy	10:54	4.3	1.0	23.60	23.60	8.34	8.34	32.48	32.48	88.60	86.15	6.24	6.07	2.07	1.34	2.5	2.4
	22/4/2022	Cloudy	10:56	4.3	1.0	23.60	23.00	8.33	0.54	32.48	52.40	83.70	00.15	5.89	0.07	0.61	1.54	2.3	2.4
	25/4/2022	Cloudy	9:57	3.9	1.0	24.40	24.45	8.17	8.18	31.75	31.69	80.00	85.60	5.58	5.97	6.52	7.49	3.2	3.4
	20/4/2022	oloudy	9:59	3.9	1.0	24.50	24.40	8.19	0.10	31.62	01.00	91.20	00.00	6.35	0.07	8.45	1.40	3.5	0.4
	27/4/2022	Sunny	9:17	4.1	1.0	25.90	25.90	8.38	8.38	30.11	30.11	88.00	92.25	6.04	6.33	1.26	1.16	3.5	3.3
	2	canny	9:19	4.1	1.0	25.90	20.00	8.38	0.00	30.10		96.50		6.62	0.00	1.05	1.10	3.1	0.0
	29/4/2022	Sunny	9:24	0.0	1.0	26.40	26.35	8.41	8.41	29.22	29.22	91.50	88.50	6.26	6.06	2.82	1.54	1.9	1.8
		,	9:26	0.0	1.0	26.30		8.41		29.21		85.50		5.85		0.25		1.7	

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

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.

am

am

Lam Environmental Services Limited

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

	0 "		o "	Water	Sampling	Tempe	erature	p	H	Sal	inity	DO Sa	turation	D	0	Turb	oidity	S	SS
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Depth	°	0		-	р	pt	q	%	mg	g/L	N	τu	m	g/L
	Date		TIME	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	15:17	4.2	1.0	24.90	24.90	8.56	8.57	30.80	30.77	97.90	94.35	6.80	6.56	0.37	0.42	3.0	3.2
	12/4/2022	Sunny	15:19	4.2	1.0	24.90	24.30	8.58	0.57	30.74	30.77	90.80	34.33	6.31	0.50	0.46	0.42	3.4	5.2
	14/4/2022	Sunny	13:05	3.5	1.0	24.40	24.35	8.52	8.52	30.42	30.35	95.80	94.40	6.73	6.64	1.76	1.13	1.1	1.3
	14/4/2022	Sunny	13:07	3.5	1.0	24.30	24.00	8.51	0.52	30.28	30.33	93.00	34.40	6.54	0.04	0.49	1.15	1.4	1.5
	16/4/2022	Monsoon	0:00	0.0	1.0	-		Sa	mpling	was	cancel	led du	ie to a	dverse	- weat	her			
	10/4/2022	signal		0.0	1.0	-		ou		, was (- woul				
	18/4/2022	Cloudy	9:33	4.3	1.0	21.50	21.50	8.25	8.24	32.30	32.30	78.70	77.45	5.75	5.67	4.23	3.99	2.9	3.1
	10/4/2022	Cloudy	9:35	4.3	1.0	21.50	21.50	8.23	0.24	32.30	32.30	76.20	11.45	5.58	5.07	3.74	5.55	3.2	5.1
SR5	20/4/2022	Cloudy	9:29	4.5	1.0	21.20	21.25	8.24	8.25	32.56	32.59	78.30	74.45	5.74	5.46	4.99	5.52	5.8	5.6
010	20/4/2022	Cloudy	9:31	4.5	1.0	21.30	21.25	8.25	0.25	32.62	32.33	70.60	74.43	5.17	5.40	6.04	0.02	5.4	5.0
	22/4/2022	Cloudy	9:10	3.1	1.0	22.80	22.80	8.07	8.09	32.58	32.58	81.00	76.75	5.77	5.47	6.68	7.38	14.9	14.7
	22/4/2022	Cloudy	9:12	3.1	1.0	22.80	22.00	8.10	0.00	32.58	02.00	72.50	10.10	5.17	0.47	8.08	1.00	14.5	14.7
	25/4/2022	Cloudy	11:38	4.0	1.0	25.20	25.20	8.36	8.36	31.20	31.23	102.90	104.85	7.09	7.23	0.53	1.80	2.6	2.7
	20/4/2022	Cloudy	11:40	4.0	1.0	25.20	20.20	8.35	0.00	31.25	01.20	106.80	104.00	7.36	7.20	3.06	1.00	2.7	2.1
	27/4/2022	Sunny	10:42	4.4	1.0	26.40	26.35	8.43	843	29.88	29.93	90.90	93.20	6.19	6.35	0.25	0.13	2.8	27
	217 112022	canny	10:44	4.4	1.0	26.30	20.00	8.43	0.40	29.97	20.00	95.50	50.20	6.51	0.00	0.01	0.10	2.5	2.1
	29/4/2022	Sunny	12:39	0.0	1.0	27.30	27.05	8.51	8.51	28.72	28.81	80.00	86.70	5.40	5.88	1.18	0.81	1.8	1.8
	20/ 1/2022	canny	12:41	0.0	1.0	26.80	21.00	8.50	0.01	28.89	20.01	93.40	30.70	6.35	0.00	0.43	0.01	1.8	1.0

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

	Sampling		Sampling	Water	Sampling	Tempe	rature	p	Н	Sal	linity	DO Sa	turation	D	0	Turt	bidity	9	SS
Station Reference	Date	Weather	Time	Depth	Depth	°C	0		-	р	pt	q	6	m	g/L	N.	TU	m	ig/L
	Dute		Time	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	11:28	3.6	2.6	23.80	23.75	8.58	8.58	31.07	31.07	102.40	101.35	7.24	7.17	0.71	1.61	1.4	1.5
	12/4/2022	Sunny	11:30	3.6	2.6	23.70	23.15	8.58	0.00	31.06	51.07	100.30	101.55	7.10	7.17	2.50	1.01	1.6	1.5
	14/4/2022	Sunnv	10:06	4.0	3.0	23.60	23.65	8.46	8.46	30.75	30.77	80.20	80.20	5.70	5.70	5.75	4.81	7.1	5.0
	14/4/2022	Sunny	10:08	4.0	3.1	23.70	23.05	8.45	0.40	30.78	30.77	80.20	00.20	5.69	5.70	3.87	4.01	2.8	5.0
	16/4/2022	Monsoon	9:40	4.1	3.1	22.50	22.45	8.34	8.35	31.47	31.48	79.80	81.35	5.76	5.88	0.01	0.01	4.8	4.7
	10/4/2022	signal	9:42	4.1	3.1	22.40	22.40	8.35	0.00	31.48	01.40	82.90	01.00	6.00	0.00	0.01	0.01	4.6	4.7
	18/4/2022	Cloudy	11:22	4.1	3.1	21.50	21.45	8.39	8.39	32.35	32.35	84.50	84.40	6.18	6.18	4.95	4.08	5.4	5.6
	10/4/2022	Cloudy	11:24	4.1	3.1	21.40	21.40	8.39	0.00	32.35	02.00	84.30	04.40	6.17	0.10	3.20	4.00	5.8	0.0
SR5	20/4/2022	Cloudy	11:20	4.1	3.1	21.50	21.45	8.36	8.36	32.69	32.69	76.00	69.50	5.54	5.07	4.33	4.49	5.8	5.6
0110	2014/2022	oloudy	11:22	4.1	3.1	21.40	21.40	8.36	0.00	32.69	02.00	63.00	00.00	4.60	0.07	4.65	4.40	5.4	0.0
	22/4/2022	Cloudy	10:58	4.3	3.3	23.20	23.20	8.34	8.34	32.47	32.53	79.70	74.40	5.65	5.27	4.07	3.65	3.6	3.4
	22/4/2022	oloudy	11:00	4.3	3.3	23.20	20.20	8.34	0.04	32.58	02.00	69.10	14.40	4.89	0.21	3.22	0.00	3.2	0.4
	25/4/2022	Cloudy	10:02	3.9	2.9	24.20	24.20	8.20	8.20	31.84	31.84	92.00	89.05	6.43	6.23	5.10	4.61	5.0	5.2
	23/4/2022	Cloudy	10:04	3.9	2.9	24.20	24.20	8.19	0.20	31.84	51.04	86.10	03.05	6.03	0.25	4.11	4.01	5.4	5.2
	27/4/2022	Sunny	9:20	4.1	3.1	25.70	25.75	8.39	8.39	30.18	30.16	84.80	90.05	5.83	6.19	0.70	1.14	2.2	2.3
	2114/2022	Cariny	9:22	4.1	3.1	25.80	20.10	8.39	0.55	30.13	30.10	95.30	30.03	6.54	0.13	1.57	1.14	2.4	2.5
	29/4/2022	Sunny	9:28	0.0	3.0	26.20	26.25	8.42	8.42	29.65	29.50	79.20	76.15	5.42	5.21	1.21	0.82	1.5	1.4
	201712022	Ganny	9:30	0.0	3.0	26.30	20.20	8.42	0.42	29.35	23.30	73.10	70.15	5.00	5.21	0.43	0.02	1.3	1.4

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.

am

Lam Environmental Services Limited

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

Station Reference	Sampling	Weather	Sampling	Water Depth	Sampling Depth		erature °C		oH -		inity nt	-	turation %	D	0		oidity TU		S all
otation reference	Date	Weather	Time	m	m		AVG		AVG	p Value	AVG	Value	/0 AVG		AVG		AVG	Value	g/L AVG
	12/4/2022	0	15:25	4.2	3.2	25.10	24.90	8.59	8.59	30.69	30.71	97.20	96.90	6.74	6.74	0.20	0.21	2.3	
	12/4/2022	Sunny	15:27	4.2	3.2	24.70	24.90	8.59	8.59	30.73	30.71	96.60	96.90	6.73	6.74	0.21	0.21	2.2	2.3
	14/4/2022	Sunnv	13:11	3.5	2.5	24.60	24.55	8.53	8.53	30.25	30.23	96.80	96.75	6.79	6.79	0.47	1.06	<1.0	1.0
	14/4/2022	Sunny	13:13	3.5	2.5	24.50	24.00	8.53	0.00	30.20	30.23	96.70	90.75	6.79	0.79	1.65	1.00	<1.0	1.0
	16/4/2022	Monsoon	0:00	0.0	-1.0	-		•	Sar	nnlina	wasi	ancel	led du	e to a	dverse	weat	her	•	
	10/4/2022	signal		0.0	-1.0	-			. Oui	inpining	wast			c lo u		weat			
	18/4/2022	Cloudy	9:37	4.3	3.3	21.50	21.50	8.27	8.27	32.31	32.31	85.70	83.10	6.27	6.08	3.63	3.76	5.4	5.7
	10/4/2022	Cloudy	9:39	4.3	3.3	21.50	21.00	8.26	0.27	32.31	02.01	80.50	00.10	5.88	0.00	3.89	0.10	6.0	0.1
SR5	20/4/2022	Cloudy	9:33	4.5	3.5	21.30	21.35	8.26	8.26	32.60	32.61	79.30	74.90	5.81	5.49	4.82	5.59	4.5	4.7
0110	20/4/2022	Cloudy	9:35	4.5	3.5	21.40		8.26		32.62	02.01	70.50		5.16	0.40	6.35	0.00	4.8	4.7
	22/4/2022	Cloudy	9:15	3.1	2.1	23.00	23.00	8.10	8.12	32.54	32.54	66.80	73.25	4.74	5.20	8.03	7.74	42.3	35.3
	LEIHILOLL	Cloudy	9:17	3.1	2.1	23.00		8.14		32.53	02.04	79.70		5.66	0.20	7.44	1.14	28.3	00.0
	25/4/2022	Cloudy	11:42	4.0	3.0	24.90	24 90	8.36	8.36	31.39	31.39	95.30	92 15	6.60	6.39	3.14	2.34	1.4	1.4
	20/4/2022	Cloudy	11:44	4.0	3.0	24.90	24.00	8.36		31.38	01.00	89.00		6.17	0.00	1.53	2.04	1.4	1.4
	27/4/2022	Sunny	10:46	4.4	3.4	25.90	25.90	8.43	8.43	30.26	30.25	90.40	86.80	6.20	5.95	1.27	0.83	4.9	5.1
			10:48	4.4	3.4	25.90	20.00	8.43	0.10	30.23	50.20	83.20		5.70	0.00	0.39	0.00	5.2	0.1
	29/4/2022	Sunny	12:43	0.0	3.0	26.70	26.70	8.50	8.50	28.93	28.94	74.90	81.65	5.10	5.56	0.88	1.18	2.1	2.3
	20/ 1/2022	canny	12:45	0.0	3.0	26.70	20.10	8.50	0.00	28.95	20.04	88.40	51.00	6.02	0.00	1.47	1.10	2.4	2.0

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

	Sampling		Sampling	Water	Sampling	Tempe		F	Η	Sa	linity	-	turation		0		oidity		SS
Station Reference	Date	Weather	Time	Depth	Depth	°C)		-	р	pt	(%	mg	g/L	N	TU	m	ig/L
	Bato			m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	11:48	2.5	1.3	24.40	24.45	8.55	8.56	30.62	30.61	98.70	97.15	6.92	6.81	0.72	0.75	1.8	1.7
	12/4/2022	Sunny	11:50	2.5	1.3	24.50	24.40	8.56	0.00	30.60	30.01	95.60	97.15	6.70	0.01	0.78	0.75	1.6	1.7
	4.4/4/0000	0	10:20	6.0	3.0	22.60	00.00	8.39	0.00	31.68	04.50	93.50	04.05	6.73	0.07	3.63	4.04	1.8	1.8
	14/4/2022	Sunny	10:22	6.0	1.4	22.60	22.60	8.39	8.39	31.49	31.59	75.00	84.25	5.40	6.07	5.04	4.34	1.8	1.0
	16/4/2022	Monsoon	9:46	2.7	1.4	22.30	22.20	8.34	8.34	31.41	31.46	74.60	75.00	5.41	5.45	0.01	0.01	4.4	4.3
	10/4/2022	signal	9:48	2.7	1.4	22.10	22.20	8.34	0.34	31.51	31.40	75.40	75.00	5.48	5.45	0.01	0.01	4.1	4.5
	18/4/2022	Cloudy	11:07	2.7	1.4	21.60	21.55	8.38	8.38	32.32	32.11	79.90	84.50	5.83	6.18	4.57	4.59	3.6	3.5
	10/4/2022	Cloudy	11:09	2.7	1.4	21.50	21.55	8.38	0.30	31.90	32.11	89.10	64.50	6.53	0.10	4.61	4.59	3.4	3.5
SR6	20/4/2022	Claudu	11:05	2.9	1.5	21.60	21.50	8.37	8.37	31.96	32.27	79.00	78.10	5.78	5.71	4.58	3.89	3.6	3.7
	20/4/2022	Cloudy	11:07	2.9	1.5	21.40	21.50	8.36	0.37	32.57	32.27	77.20	76.10	5.64	5.71	3.20	3.69	3.8	3.7
	22/4/2022	Cloudy	10:43	2.7	1.4	23.30	23.30	8.32	8.32	31.91	32.19	80.30	81.40	5.70	5.77	2.69	2.86	3.3	3.4
	22/4/2022	Cloudy	10:45	2.7	1.4	23.30	23.30	8.31	0.32	32.47	32.19	82.50	01.40	5.84	5.77	3.02	2.00	3.5	3.4
	25/4/2022	Cloudy	10:08	2.4	1.2	24.80	24.80	8.24	8.26	31.41	31.41	98.00	95.80	6.79	6.64	1.59	0.80	1.9	1.9
	25/4/2022	Cloudy	10:10	2.4	1.2	24.80	24.00	8.27	0.20	31.40	31.41	93.60	95.60	6.49	0.04	0.01	0.60	1.8	1.9
	27/4/2022	Sunny	9:25	3.4	1.7	25.90	25.90	8.39	8.40	30.22	30.21	90.00	91.45	6.17	6.27	0.01	0.07	2.2	2.4
	21/4/2022	Sunny	9:27	3.4	1.7	25.90	25.90	8.40	0.40	30.19	30.21	92.90	91.45	6.37	0.27	0.12	0.07	2.5	2.4
	29/4/2022	Sunny	9:32	0.0	1.4	26.30	26.35	8.45	8.46	28.74	18.60	88.00	90.00	6.04	6.18	0.38	1.01	1.5	1.6
	2014/2022	Guility	9:34	0.0	1.4	26.40	20.35	8.46	0.40	8.46	10.00	92.00	30.00	6.31	0.10	1.64	1.01	1.7	1.0

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.

am

Lam Environmental Services Limited

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

	Sampling		Sampling	Water	Sampling	Tempe	erature	р	Н	Sal	inity	DO Sa	turation	D	0	Turt	bidity	5	S
Station Reference	Date	Weather	Time	Depth	Depth	°	0		-	р	pt	q	6	mg	g/L	N	TU		g/L
	Duc		Time	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	14:59	2.6	1.3	25.30	25.25	8.56	8.56	30.63	30.64	102.80	102.90	7.10	7.11	1.28	2.39	1.6	1.5
	12/4/2022	Ganny	15:01	2.6	1.3	25.20	20.20	8.55	0.00	30.64	00.04	103.00	102.00	7.12	7.11	3.49	2.00	1.3	1.0
	14/4/2022	Sunny	12:50	2.7	1.4	24.20	24.25	8.47	8.47	30.85	30.82	91.40	91.75	6.41	6.42	2.14	1.84	<1.0	1.0
	14/4/2022	Sunny	12:52	2.7	1.4	24.30	24.23	8.47	0.47	30.79	30.02	92.10	31.75	6.43	0.42	1.54	1.04	<1.0	1.0
	16/4/2022	Monsoon	0:00	0.0	0.0	-	•		Samn	lina w	ae can	اممالمما	duo ta	adve	erse w	aathai	-	•	
	10/4/2022	signal		0.0	0.0	-			Jamp	ing wa		Celleu	uue ii	Jauve		cather			
	18/4/2022	Cloudy	9:43	2.0	1.0	21.60	21.55	8.29	8.28	31.19	31.64	77.90	77.45	5.72	5.68	4.54	4.22	4.4	4.7
	10/4/2022	Cloudy	9:45	2.0	1.0	21.50	21.00	8.26	0.20	32.09	51.04	77.00	11.45	5.63	5.00	3.89	4.22	5.0	4.7
SR6	20/4/2022	Cloudy	9:43	3.1	1.6	21.10	21.20	8.27	8.28	32.67	32.69	65.00	70.70	4.78	5.19	4.59	4.16	4.8	4.6
	20/4/2022	Cloudy	9:45	3.1	1.6	21.30	21.20	8.28	0.20	32.70	52.05	76.40	10.10	5.59	5.15	3.73	4.10	4.4	4.0
	22/4/2022	Cloudy	9:22	3.1	1.6	23.10	23.10	8.19	8.18	32.55	32.56	72.30	70.05	5.13	4.97	2.98	3.50	3.6	3.8
	22/4/2022	Cloudy	9:24	3.1	1.6	23.10	23.10	8.17	0.10	32.57	52.50	67.80	70.05	4.81	4.37	4.02	5.50	4.0	5.0
	25/4/2022	Cloudy	11:32	2.8	1.4	25.10	25.10	8.37	8.37	31.10	31.13	101.20	98.75	6.99	6.83	1.93	1.19	1.6	1.8
	23/4/2022	Cloudy	11:34	2.8	1.4	25.10	20.10	8.36	0.57	31.15	51.15	96.30	30.73	6.66	0.05	0.45	1.15	1.9	1.0
	27/4/2022	Sunny	10:38	2.7	1.4	26.10	26.05	8.42	8.42	30.28	30.32	102.10	93.00	6.97	6.84	0.10	0.06	1.2	1.4
	211712022	Canny	10:40	2.7	1.4	26.00	20.00	8.41	0.42	30.36	30.32	83.90	33.00	6.71	0.04	0.01	0.00	1.5	
	29/4/2022	Sunny	12:29	0.0	1.4	27.30	27.05	8.50	8.51	28.80	28.68	65.90	73.80	4.45	5.01	0.37	0.78	1.4	1.5
	23/4/2022	Sunny	12:31	0.0	1.4	26.80	27.00	8.52	0.51	28.55	20.00	81.70	75.00	5.56	5.01	1.18	0.70	1.6	1.5

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

	Sampling		Sampling	Water	Sampling	Tempe	rature	F	Н	Sa	linity	DO Sa	turation	D	0	Turt	bidity		SS
Station Reference	Date	Weather	Time	Depth	Depth	°C	2		-	р	pt	0	%	mę	g/L	N	TU	m	ig/L
	Duto			m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	12:08	4.1	1.0	24.90	24.95	8.49	8.49	30.05	30.03	72.30	75.50	5.05	5.27	2.29	2.35	1.6	1.5
	12/4/2022	Sunny	12:10	4.1	1.0	25.00	24.33	8.48	0.43	30.01	30.03	78.70	75.50	5.48	5.27	2.40	2.00	1.4	1.5
	14/4/2022	Sunny	10:36	4.1	1.0	23.50	23.50	8.40	8.40	31.01	31.03	73.40	71.55	5.22	5.09	4.98	3.65	1.3	1.4
	14/4/2022	Sunny	10:38	4.1	1.0	23.50	23.00	8.40	0.40	31.05	31.03	69.70	71.55	4.95	5.09	2.32	3.05	1.4	1.4
	16/4/2022	Monsoon	9:58	4.3	1.0	22.40	22.40	8.35	8.36	31.35	31.35	85.50	86.05	6.19	6.23	-	0.01	5.4	5.7
	10/4/2022	signal	10:00	4.1	1.0	22.40	22.40	8.36	0.50	31.34	51.55	86.60	00.05	6.26	0.25	0.01	0.01	5.9	5.7
	18/4/2022	Cloudy	10:55	4.3	1.0	21.40	21.45	8.34	8.34	32.22	32.21	67.60	73.85	4.96	5.41	3.59	4.17	5.3	5.6
	10/4/2022	Cloudy	10:57	4.3	1.0	21.50	21.45	8.33	0.54	32.20	52.21	80.10	75.05	5.86	5.41	4.74	4.17	5.8	5.0
SR9	20/4/2022	Cloudy	10:50	4.2	1.0	21.20	21.20	8.34	8.35	32.60	32.29	79.00	81.90	5.80	6.02	4.12	3.53	3.8	4.0
0110	20/4/2022	Cloudy	10:52	4.2	1.0	21.20	21.20	8.36	0.55	31.97	52.25	84.80	01.30	6.24	0.02	2.93	0.00	4.1	4.0
	22/4/2022	Cloudy	10:29	3.7	1.0	23.10	23.10	8.32	8.33	32.45	32.39	99.40	87.60	7.07	6.23	2.12	1.55	3.6	3.4
	22/4/2022	Cloudy	10:31	3.7	1.0	23.10	23.10	8.34	0.00	32.32	52.55	75.80	07.00	5.38	0.25	0.98	1.55	3.2	0.4
	25/4/2022	Cloudy	10:21	4.1	1.0	25.00	24.95	8.26	8.28	31.47	31.45	106.60	104.90	7.37	7.26	0.11	0.95	1.9	1.8
	23/4/2022	Cloudy	10:23	4.1	1.0	24.90	24.95	8.29	0.20	31.43	31.43	103.20	104.90	7.15	7.20	1.79	0.95	1.6	1.0
	27/4/2022	Sunny	9:30	4.1	1.0	26.30	26.30	8.36	8.35	30.22	30.31	85.40	75.25	5.82	5.13	0.61	0.69	2.4	2.3
	21/4/2022	Gunny	9:32	4.1	1.0	26.30	20.30	8.34	0.35	30.40	30.31	65.10	75.25	4.43	5.15	0.77	0.09	2.1	2.3
	29/4/2022	Sunny	9:46	0.0	1.0	26.70	26.95	8.45	8.45	28.56	28.54	71.00	72.80	4.90	4.98	0.89	0.64	1.8	1.6
	2014/2022	Sullity	9:48	0.0	1.0	27.20	20.95	8.45	0.40	28.51	20.04	74.60	72.00	5.05	4.90	0.38	0.04	1.4	1.0

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.

am

am

Lam Environmental Services Limited

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

	Sampling		Sampling	Water	Sampling		erature	p	Н	Sal	inity	DO Sa	turation	D	0	Turt	pidity	S	S
Station Reference	Date	Weather	Time	Depth	Depth	°	2		-	р	pt	9	6	mę	g/L	N	TU		g/L
	Duc		Time	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	14:41	4.4	1.0	25.10	25.10	8.50	8.49	30.17	30.11	91.40	87.70	6.35	6.09	1.11	1.31	2.1	2.3
	12/4/2022	Sunny	14:43	4.4	1.0	25.10	20.10	8.48	0.43	30.05	30.11	84.00	07.70	5.83	0.03	1.50	1.51	2.5	2.5
	14/4/2022	Sunny	12:34	4.3	1.0	23.70	23.75	8.51	8.51	30.44	30.60	80.10	87.50	5.69	6.21	2.83	1.67	<1.0	1.0
	14/4/2022	Sunny	12:36	4.3	1.0	23.80	23.15	8.51	0.01	30.76	30.00	94.90	87.50	6.72	0.21	0.50	1.07	<1.0	1.0
	16/4/2022	Monsoon	0:00	0.0	1.0	-			Ś	amplin	n wae	cance	elled d	ue to	advor		othor		
	10/4/2022	signal		0.0	1.0	-			. 00	ampin	iy was	cance	sileu u		auvera				
	18/4/2022	Cloudy	9:55	4.3	1.0	21.40	21.45	8.27	8.28	32.13	32.18	86.80	87.30	6.36	6.39	4.31	4.54	4.5	4.7
	10/4/2022	Cloudy	9:57	4.3	1.0	21.50	21.40	8.29	0.20	32.23	32.10	87.80	07.30	6.42	0.39	4.76	4.04	4.9	4.7
SR9	20/4/2022	Cloudy	9:56	4.4	1.0	21.20	21.20	8.29	8.29	32.62	32.63	89.60	81.30	6.58	5.97	2.48	2.67	4.3	4.2
0103	20/4/2022	Cloudy	9:58	4.4	1.0	21.20	21.20	8.29	0.29	32.64	32.03	73.00	01.30	5.36	5.97	2.86	2.07	4.0	4.2
	22/4/2022	Cloudy	9:35	4.2	1.0	23.00	22.95	8.21	8.22	32.76	32.64	89.80	73.05	6.37	6.26	2.17	2.91	2.9	3.1
	22/4/2022	Cloudy	9:37	4.2	1.0	22.90	22.95	8.23	0.22	32.52	32.04	56.30	73.05	6.15	0.20	3.65	2.91	3.3	3.1
	25/4/2022	Cloudy	11:15	4.2	1.0	25.00	25.00	8.35	8.35	31.52	31.52	95.00	98.62	6.56	6.81	2.29	1.28	<1.0	1.0
	23/4/2022	Cloudy	11:17	4.2	1.0	25.00	25.00	8.35	0.55	31.52	31.52	102.23	90.02	7.06	0.01	0.26	1.20	<1.0	1.0
	27/4/2022	Sunny	10:23	4.2	1.0	26.10	26.10	8.40	8.40	30.63	30.62	98.20	90.65	6.69	6.18	0.98	0.50	1.7	1.6
	211712022	Cariny	10:25	4.2	1.0	26.10	20.10	8.39	0.40	30.61	30.02	83.10	30.03	5.66	0.10	0.01	0.50	1.5	1.0
	29/4/2022	Sunny	12:17	0.0	1.0	26.80	27.25	8.47	8.47	28.54	28.55	89.70	83.25	6.10	5.63	0.44	0.86	1.4	1.6
	2014/2022	Gunny	12:19	0.0	1.0	27.70	21.25	8.47	0.47	28.55	20.00	76.80	03.20	5.16	5.05	1.28	0.00	1.7	1.0

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

	Complian		Compliant	Water	Sampling	Temperature	pН
Station Reference	Sampling Date	Weather	Sampling	Depth	Depth	°C	-

	Compling		Compling	Water	Sampling	Tempe	erature	F	н	Sa	linity	DO Sa	turation	D	0	Turt	bidity	5	SS
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Depth	°	C		-	р	pt	c.	6	m	g/L	N.	TU	m	ig/L
	Date		TITLE	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	12:12	4.1	3.1	24.50	24.50	8.48	8.48	30.24	30.26	76.80	80.00	5.39	5.62	1.84	2.01	3.1	2.9
	12/4/2022	Sunny	12:14	4.1	3.1	24.50	24.00	8.48	0.40	30.28	30.20	83.20	80.00	5.84	5.02	2.17	2.01	2.7	2.9
	14/4/2022	Sunny	10:40	4.1	3.1	23.40	23.80	8.40	8.40	31.28	31.21	85.20	87.65	6.06	6.20	3.76	3.36	<1.0	1.0
	14/4/2022	Sunny	10:42	4.1	3.1	24.20	23.00	8.40	0.40	31.14	31.21	90.10	67.10	6.33	0.20	2.96	3.30	<1.0	1.0
	16/4/2022	Monsoon	10:03	4.3	3.1	22.40	22.40	8.38	8.38	31.33	31.34	77.10	81.15	5.58	5.87	0.01	0.01	7.4	7.2
	10/4/2022	signal	10:05	4.1	3.1	22.40	22.40	8.37	0.50	31.34	51.54	85.20	01.15	6.16	5.07	0.01	0.01	7.0	1.2
	18/4/2022	Cloudy	10:59	4.3	3.3	21.50	21.50	8.35	8.35	32.21	32.24	75.50	79.30	5.52	5.80	5.09	4.62	3.9	4.1
	10/4/2022	Cloudy	11:01	4.3	3.3	21.50	21.50	8.35	0.55	32.27	52.24	83.10	13.50	6.08	5.00	4.14	4.02	4.3	4.1
SR9	20/4/2022	Cloudy	10:54	4.2	3.2	21.30	21.30	8.36	8.37	32.67	32.62	76.10	73.80	5.57	5.41	4.18	3.62	3.6	3.5
5113	20/4/2022	Cloudy	10:56	4.2	3.2	21.30	21.50	8.37	0.57	32.57	52.02	71.50	75.00	5.24	3.41	3.06	5.02	3.3	5.5
	22/4/2022	Cloudy	10:33	3.7	2.7	22.90	22.93	8.35	8.35	32.33	32.12	78.00	82.60	5.56	5.90	1.86	1.18	2.5	2.4
	22/4/2022	Cloudy	10:35	3.7	2.7	22.96	22.33	8.35	0.00	31.90	52.12	87.20	02.00	6.23	5.50	0.50	1.10	2.2	2.4
	25/4/2022	Cloudy	10:25	4.1	3.1	24.50	24.50	8.30	8.30	31.53	31.47	93.00	101.00	6.48	7.04	0.01	0.97	1.4	1.3
	23/4/2022	Cloudy	10:27	4.1	3.1	24.50	24.30	8.30	0.50	31.41	51.47	109.00	101.00	7.60	7.04	1.92	0.37	1.2	1.5
	27/4/2022	Sunny	9:35	4.1	3.1	26.00	26.00	8.37	8.37	30.58	30.57	87.40	85.55	5.97	5.84	0.09	0.81	1.4	1.5
	21/4/2022	Guility	9:37	4.1	3.1	26.00	20.00	8.36	0.37	30.56	30.57	83.70	00.00	5.71	5.64	1.53	0.01	1.6	1.5
	29/4/2022	Sunny	9:50	0.0	3.4	26.80	26.80	8.46	8.46	28.43	28.42	92.80	94.55	6.33	6.45	0.18	1.00	2.2	2.3
	201412022	Cariny	9:52	0.0	3.4	26.80	20.00	8.46	0.40	28.41	20.42	96.30	34.33	6.56	0.45	1.81	1.00	2.4	2.5

General Note:

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

am

am

Lam Environmental Services Limited

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

	Sampling		Sampling	Water	Sampling	Tempe		р	Н		linity	-	turation		0		oidity		SS
Station Reference	Date	Weather	Time	Depth	Depth	°C			-		pt		6	mç		N			g/L
				m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	14:45	4.4	3.4	24.20	24.25	8.50	8.50	30.88	30.89	91.10	90.50	6.40	6.36	0.78	0.78	1.8	1.7
	12/4/2022	Guility	14:47	4.4	3.4	24.30	24.20	8.50	0.00	30.89	00.00	89.90	50.00	6.31	0.00	0.77	0.70	1.6	
	14/4/2022	Sunny	12:40	4.3	3.3	24.60	24.55	8.50	8.50	30.52	30.34	92.00	89.45	6.44	6.27	1.27	2.00	1.2	1.3
	14/4/2022	Sunny	12:42	4.3	3.3	24.50	24.00	8.50	0.00	30.15	30.34	86.90	09.40	6.10	0.27	2.73	2.00	1.4	1.5
	16/4/2022	Monsoon	0:00	0.0	-1.0	-			Son	anlina	woo o	ancell		to ac	lvorco	wooth	or	•	
	16/4/2022	signal		0.0	-1.0	-			San	ipiing	wasu	ancen		s io ac	iveise	weau	IEI		
	40/4/0000	01	9:58	4.3	3.3	21.60	04.00	8.31	0.00	32.31	00.00	78.50	70.40	5.73	5 70	4.21	4.50	5.9	
	18/4/2022	Cloudy	10:00	4.3	3.3	21.60	21.60	8.32	8.32	32.32	32.32	78.30	78.40	5.71	5.72	4.94	4.58	6.2	6.1
SR9	001110000	<u>.</u>	10:00	4.4	3.4	21.30		8.32		31.81		69.80	75.05	5.14		3.68		3.1	
SK9	20/4/2022	Cloudy	10:02	4.4	3.4	21.30	21.30	8.32	8.32	32.49	32.15	80.70	75.25	5.91	5.53	2.32	3.00	3.6	3.4
			9:38	4.2	3.2	22.90		8.27		32.25		70.70		5.04		3.35		2.8	
	22/4/2022	Cloudy	9:40	4.2	3.2	22.80	22.85	8.26	8.27	32.49	32.37	65.80	68.25	4.70	4.87	2.56	2.96	2.4	2.6
			11:19	4.2	3.2	24.60		8.37		31.51		108.20		7.52		2.45		2.7	
	25/4/2022	Cloudy	11:21	4.2	3.2	24.60	24.60	8.37	8.37	31.50	31.51	108.20	108.20	7.52	7.52	0.33	1.39	2.6	2.7
		_	10:28	4.2	3.2	26.20		8.39		29.80		84.00		5.74		0.23		3.5	
	27/4/2022	Sunny	10:30	4.2	3.2	26.20	26.20	8.38	8.39	30.45	30.13	87.20	85.60	5.94	5.84	0.90	0.57	3.0	3.3
		_	12:22	0.0	3.3	27.00		8.49		28 45		80.10		5.44		1.15		2.2	
	29/4/2022	Sunny	12:24	0.0	3.3	27.10	27.05	8.42	8.45	28.40	28 43	91.50	85.80	6.20	5.82	0.54	0.85	2.1	2.2

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

	O a man line m		O a mar line a	Water	Sampling	Tempe	erature	р	Н	Sal	inity	DO Sa	turation	D	0	Turt	oidity	S	SS
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Depth	0	С		-	р	pt	Q	%	m	g/L	N	τu	m	g/L
	Date		TIME	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	12:27	2.9	1.5	24.50	24.50	8.13	8.31	30.08	30.38	81.30	85.00	5.69	5.95	1.42	1.43	2.8	3.1
	12/4/2022	Sunny	12:29	2.9	1.5	24.50	24.30	8.49	0.01	30.68	30.30	88.70	00.00	6.21	5.55	1.43	1.43	3.3	5.1
	14/4/2022	Sunny	10:50	2.9	1.5	23.80	23.85	8.44	8.45	30.68	30.67	84.30	83.80	5.98	5.94	1.16	1.74	<1.0	1.0
	14/4/2022	Ganny	10:52	2.9	1.4	23.90	20.00	8.45	0.40	30.65	00.01	83.30	00.00	5.90	0.04	2.32	1.74	<1.0	1.0
	16/4/2022	Monsoon signal	10:07	2.0	1.4	21.20	21.25	8.43	8.43	31.04	31.12	66.00	72.95	4.38	5.14	5.10	6.03	9.3	9.4
	10/4/2022	Wonsoon signal	10:09	2.8	1.4	21.30	21.20	8.42	0.40	31.20	01.12	79.90	12.00	5.90	0.14	6.95	0.00	9.4	5.4
	18/4/2022	Cloudy	10:48	2.0	1.0	21.60	21.60	8.36	8.36	32.03	32.03	85.00	80.70	6.20	5.89	5.41	5.73	4.1	4.0
	10/4/2022	Cloudy	10:50	2.0	1.0	21.60	21.00	8.36	0.00	32.03	02.00	76.40	00.70	5.58	0.00	6.05	0.70	3.8	4.0
SR10	20/4/2022	Cloudy	10:38	3.1	1.6	20.90	20.90	8.35	8.36	32.70	32.69	79.50	76.65	5.87	5.66	1.64	1.23	4.3	4.1
o	201412022	oloudy	10:40	3.1	1.6	20.90	20.00	8.36	0.00	32.68	02.00	73.80	10.00	5.45	0.00	0.82	1.20	3.9	3.1
	22/4/2022	Cloudy	10:24	2.8	1.4	23.90	23.90	8.33	8.33	32.40	32.40	87.10	86.60	6.10	6.07	1.36	1.97	3.0	2.8
	22/4/2022	oloudy	10:26	2.8	1.4	23.90	20.00	8.33	0.00	32.40	02.40	86.10	00.00	6.03	0.07	2.57	1.01	2.6	2.0
	25/4/2022	Cloudy	10:30	2.6	1.3	25.00	25.05	8.33	8.33	31.35	31.36	106.90	96.15	7.37	6.63	0.01	1.01	<1.0	1.0
	201412022	Cloudy	10:32	2.6	1.3	25.10	20.00	8.32	0.00	31.36	01.00	85.40	50.10	5.89	0.00	2.00	1.01	<1.0	1.0
	27/4/2022	Sunny	9:40	3.1	1.6	26.40	26.40	8.39	8.39	30.23	30.22	96.80	95.90	6.58	6.52	0.01	0.54	2.5	2.7
	2114/2022	Cariny	9:42	3.1	1.6	26.40	20.40	8.39	0.53	30.20	30.22	95.00	35.50	6.45	0.52	1.07	0.54	2.8	2.1
	29/4/2022	Sunny	9:54	0.0	1.4	37.20	31.90	8.45	8.45	28.49	28.66	89.10	88.50	6.03	6.01	2.10	1.28	1.2	1.3
	20, 1,2022	Canny	9:56	0.0	1.4	26.60	51.50	8.45	0.40	28.83	20.00	87.90	50.00	5.99	0.01	0.45	1.20	1.4	1.0

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.

am

Lam Environmental Services Limited

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

	Sampling		Sampling	Water	Sampling	Tempe		p	H		linity	-	turation	D	-		oidity		SS
Station Reference	Date	Weather	Time	Depth	Depth	°C			-		opt		6		g/L	N	-		ig/L
				m	m		AVG		AVG	Value	AVG		AVG		AVG		AVG		AVG
	12/4/2022	Sunny	14:28	2.9	1.5	25.10	25.10	8.56	8.56	30.38	30.41	97.30	100.15	6.75	6.94	0.45	0.55	2.5	2.3
		,	14:30	2.9	1.5	25.10		8.56		30.43		103.00		7.13		0.65		2.0	
	14/4/2022	Sunny	12:22	2.9	1.5	23.80	23.70	8.51	8.51	30.77	30.74	75.90	82.25	5.38	5.89	4.59	2.75	<1.0	1.0
	14/4/2022	Sunny	12:24	2.9	1.5	23.60	23.70	8.51	0.01	30.71	30.74	88.60	02.20	6.39	5.05	0.90	2.15	<1.0	1.0
	16/4/2022	Managan sinnal	0:00	0.0	0.0	-			. 63	mnlinc	j was o	cancel	Ind du	a ta a	dvored	woot	hor		
	10/4/2022	Monsoon signal		0.0	0.0	0.0 - 1.0 21.60 21.5			Jai	nping	jwasi	Janue	ieu uu	e 10 a	uveise				
	18/4/2022	01	10:03	2.0	1.0	21.60	04.55	8.31	8.31	32.09	32.01	83.30	83.05	6.09	6.08	4.11	5.26	5.0	5.3
	16/4/2022	Cloudy	10:05	2.0	1.0	21.50	21.00	8.31	0.31	31.93	32.01	82.80	63.05	6.07	0.06	6.41	5.20	5.5	5.3
0540	00/1/0000	Ol	10:04	2.8	1.4	21.20	04.05	8.31	0.04	32.56	00.00	76.00	00.45	5.57	c 77	1.61	1.31	4.1	4.0
SR10	20/4/2022	Cloudy	10:06	2.8	1.4	21.30	21.25	8.31	8.31	32.64	32.60	84.30	80.15	5.96	5.77	1.00	1.31	4.4	4.3
	00/1/0000	Ol	9:43	2.6	1.3	23.10	00.40	8.27	0.00	32.46	00.44	75.30	04.05	5.35	5 70	3.10	2.62	2.8	0.7
	22/4/2022	Cloudy	9:45	2.6	1.3	23.10	23.10	8.28	8.28	32.42	32.44	86.80	81.05	6.10	5.73	2.14	2.62	2.6	2.7
			11:11	2.6	1.3	25.10		8.37		31.38		101.10		6.96		0.01		2.2	
	25/4/2022	Cloudy	11:13	2.6	1.3	25.10	25.10	8.38	8.38	31.36	31.37	110.20	105.65	7.61	7.29	1.40	0.71	2.5	2.4
			10:19	2.5	1.3	26.30		8.43		30.09		65.30		4.45		0.01		3.2	
	27/4/2022	Sunny	10:21	2.5	1.3	26.30	26.30	8.43	8.43	30.10	30.10	89.90	77.60	6.11	5.28	1.47	0.74	2.9	- 3.1
		1	12:10	0.0	1.4	27.10		8.48		28.60	1	99.80		6.77		1.30		1.3	<u> </u>
	29/4/2022	Sunny	12:12	0.0	1.4	27.90	27.50	8.47	8.48	28.40	28.50	84.60	92.20	5.79	6.28	0.79	1.05	1.4	1.4

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

	Sampling		Sampling	Water	Sampling	Tempe		F	Η	Sa	linity		turation		0		oidity		SS
Station Reference	Date	Weather	Time	Depth	Depth	°C)		-	р	pt	(%	mg	g/L	N	ΓU	m	ig/L
	Dato			m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	12:45	2.3	1.2	24.20	24.25	8.52	8.53	30.96	30.96	82.00	89.50	5.76	6.29	0.76	0.71	2.6	2.8
	12/4/2022	Sunny	12:47	2.3	1.2	24.30	24.20	8.53	0.00	30.96	30.90	97.00	09.00	6.81	0.29	0.66	0.71	3.0	2.0
	4.4/4/00000	0	10:57	2.8	1.4	23.80	00.75	8.48	8.48	30.73	00.70	97.60	00.00	6.92	6.45	1.65	2.22	<1.0	1.0
	14/4/2022	Sunny	10:59	2.8	1.3	23.70	23.75	8.47	0.40	30.79	30.76	84.20	90.90	5.98	0.45	2.78	2.22	<1.0	1.0
	16/4/2022	Monsoon	10:28	2.5	1.3	21.30	21.30	8.43	8.43	31.24	31.28	76.60	76.30	5.65	5.35	7.17	6.94	6.8	6.7
	10/4/2022	signal	10:30	2.5	1.3	21.30	21.30	8.43		31.31	31.20	76.00	70.30	5.05	5.35	6.71	0.94	6.6	
	18/4/2022	Cloudy	10:45	2.5	1.3	21.60	21.50	8.36	8.36	32.12	32.22	84.30	90.90	6.16	6.65	4.20	4.28	4.4	4.2
	10/4/2022	Cloudy	10:47	2.5	1.3	21.40	21.50	8.35	0.30	32.31	32.22	97.50	90.90	7.14	C0.0	4.36	4.20	4.0	4.2
SR12	20/4/2022	Cloudy	10:33	3.1	1.6	20.80	20.80	8.36	8.36	32.67	32.65	77.80	77.00	5.75	5.69	0.43	1.08	2.5	2.7
SKIZ	20/4/2022	Cloudy	10:35	3.1	1.6	20.80	20.00	8.36	0.30	32.63	32.05	76.20	11.00	5.63	5.09	1.73	1.00	2.8	2.1
	22/4/2022	Cloudy	10:20	2.9	1.5	23.50	23.45	8.33	8.34	32.39	32.40	78.60	80.70	5.55	5.70	2.10	1.44	3.3	3.2
	22/4/2022	Cloudy	10:22	2.9	1.5	23.40	23.45	8.35	0.34	32.40	32.40	82.80	80.70	5.85	5.70	0.78	1.44	3.0	3.2
	25/4/2022	Cloudy	10:36	2.1	1.1	25.30	25.30	8.32	8.33	31.44	31.42	95.30	100.30	6.55	6.90	2.32	1.28	1.2	1.3
	23/4/2022	Cloudy	10:38	2.1	1.1	25.30	20.00	8.33	0.33	31.40	31.42	105.30	100.30	7.24	0.90	0.23	1.20	1.3	1.5
	27/4/2022	Sunny	9:45	2.7	1.4	26.20	26.20	8.40	8.41	30.11	30.10	91.70	91.55	6.25	6.24	1.16	1.58	3.1	3.2
	21/4/2022	Sunny	9:47	2.7	1.4	26.20	20.20	8.41	0.41	30.09	30.10	91.40	91.55	6.23	0.24	2.00	1.50	3.3	3.2
	29/4/2022	Sunny	9:58	0.0	1.4	26.90	26.85	8.46	8.46	28.46	28.49	87.40	93.85	5.94	6.39	0.56	0.83	1.2	1.3
	2014/2022	Guility	10:00	0.0	1.4	26.80	20.00	8.45	0.40	28.52	20.49	100.30	33.05	6.83	0.39	1.09	0.03	1.3	1.5

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.

am

Lam Environmental Services Limited

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

	Sampling		Sampling	Water	Sampling	Tempe	erature	р	Н	Sal	inity	DO Sa	turation	D	0	Turt	bidity	S	SS
Station Reference	Date	Weather	Time	Depth	Depth	°	0			р	pt	9	6	mg	g/L	N	TU	m	g/L
	Duc		Time	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	14:23	2.4	1.2	24.80	24.85	8.53	8.53	30.95	30.94	91.00	90.20	6.33	6.27	1.78	1.94	55.8	29.3
	12/4/2022	Cunny	14:25	2.4	1.2	24.90	24.00	8.53	0.00	30.93	00.04	89.40	50.20	6.21	0.27	2.10	1.04	2.7	20.0
	14/4/2022	Sunny	12:14	2.9	1.5	24.10	24.10	8.49	8.49	30.70	30.71	89.50	93.75	6.30	6.61	1.07	1.89	<1.0	1.0
	14/4/2022	Gainiy	12:16	2.9	1.5	24.10	24.10	8.48	0.40	30.71	00.71	98.00	50.70	6.92	0.01	2.71	1.00	<1.0	1.0
	16/4/2022	Monsoon	0:00	0.0	0.0	-			Sam	nlina v	Nas ca	ancelle	d due	to ad	verse	weath	er		
	10/4/2022	signal		0.0	0.0	-			Cam	ping			u uuc	to au	10130	wcain			
	18/4/2022	Cloudy	10:07	2.0	1.0	21.60	21.55	8.31	8.31	32.18	32.13	83.00	84 35	6.06	6.17	4.16	4.48	5.1	5.3
	10/4/2022	oloudy	10:09	2.0	1.0	21.50	21.00	8.31	0.01	32.08	02.10	85.70	04.00	6.28	0.17	4.80	4.40	5.5	0.0
SR12	20/4/2022	Cloudy	10:09	3.4	1.7	21.20	21.20	8.32	8.32	32.71	32.68	70.40	74.00	5.16	5.44	1.83	1.16	3.9	4.1
01112	2014/2022	oloudy	10:11	3.4	1.7	21.20	21.20	8.31	0.02	32.64	02.00	77.60	14.00	5.71	0.44	0.49	1.10	4.2	7.1
	22/4/2022	Cloudy	9:47	2.4	1.2	22.70	22.70	8.29	8.29	32.23	32.24	91.00	87.35	6.52	6.44	2.17	1.86	2.1	2.3
	2214/2022	oloudy	9:49	2.4	1.2	22.70	22.10	8.29	0.20	32.25	02.24	83.70	07.00	6.35	0.44	1.54	1.00	2.4	2.0
	25/4/2022	Cloudy	11:07	2.5	1.3	25.60	25.55	8.38	8.38	31.39	31.40	99.90	96.30	6.84	6.60	2.16	1.87	3.3	3.3
	23/4/2022	Cloudy	11:09	2.5	1.3	25.50	20.00	8.3.7	0.50	31.40	51.40	92.70	30.30	6.35	0.00	1.57	1.07	3.2	5.5
	27/4/2022	Sunny	10:11	2.9	1.5	26.30	26.30	8.42	8.43	30.08	30.08	84.10	87.15	5.74	5.94	1.08	0.89	3.3	3.1
	2114/2022	Gainiy	10:13	2.9	1.5	26.30	20.00	8.43	0.40	30.08	00.00	90.20	07.10	6.14	0.04	0.70	0.00	2.9	0.1
	29/4/2022	Sunny	12:05	0.0	1.4	27.80	27.60	8.48	8.49	28.45	28.48	91.50	95.20	6.13	6.40	0.45	0.58	<1.0	1.0
	201712022	Cariny	12:07	0.0	1.4	27.40	27.00	8.49	0.43	28.51	20.40	98.90	35.20	6.67	0.40	0.70	0.50	<1.0	1.0

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

	Sampling		Sampling	Water	Sampling	Tempe	erature	F	Н	Sal	inity	DO Sa	turation	D	0	Tur	oidity	S	SS
Station Reference	Date	Weather	Time	Depth	Depth	°	0		-	р	pt	C	%	m	g/L	N	TU	m	g/L
	Date		TITIC	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	10:55	2.2	1.1	24.70	24.70	8.46	8.47	30.99	30.97	82.60	80.75	5.75	5.62	1.55	2.13	2.1	2.2
	12/4/2022	Outifry	10:57	2.2	1.1	24.70	24.70	8.47	0.47	30.95	50.57	78.90	00.75	5.49	0.02	2.70	2.15	2.2	2.2
	14/4/2022	Sunny	9:40	2.7	1.4	23.60	23.70	8.39	8.41	30.05	30.13	94.10	93.60	6.71	6.67	2.47	1.46	<1.0	1.0
	14/4/2022	Outifry	9:42	2.7	1.4	23.80	23.70	8.42	0.41	30.21	50.15	93.10	35.00	6.62	0.07	0.45	1.40	<1.0	1.0
	16/4/2022	Monsoon signal	9:18	2.6	1.3	22.10	22.00	8.22	8.21	31.44	31.50	83.90	78.65	6.10	5.73	0.01	0.01	3.0	3.1
	10/4/2022	Nonsoon signal	9:20	2.6	1.3	21.90	22.00	8.19	0.21	31.56	51.50	73.40	70.03	5.35	5.75	0.01	0.01	3.2	5.1
	18/4/2022	Cloudy	11:32	2.6	1.3	21.40	21.45	8.38	8.38	32.30	32.26	70.70	75.45	5.18	5.53	3.99	4.39	3.0	3.2
	10/4/2022	Cioudy	11:34	2.6	1.3	21.50	21.45	8.38	0.00	32.22	52.20	80.20	75.45	5.87	0.00	4.79	4.55	3.3	0.2
SR15	20/4/2022	Cloudy	11:30	2.9	1.5	21.50	21.55	8.36	8.36	32.70	32.67	69.90	73.55	5.10	5.36	3.36	3.93	3.7	3.6
OITIO	20/4/2022	Cloudy	11:32	2.9	1.5	21.60	21.00	8.36	0.00	32.63	02.01	77.20	10.00	5.62	0.00	4.49	0.00	3.4	0.0
	22/4/2022	Cloudy	11:07	2.6	1.3	23.40	23.45	8.34	8.35	32.60	32.61	68.50	71.90	4.84	5.08	1.16	2.27	3.1	3.0
	22/4/2022	Cloudy	11:09	2.6	1.3	23.50	20.40	8.35	0.00	32.61	02.01	75.30	11.00	5.31	0.00	3.38	2.21	2.8	0.0
	25/4/2022	Cloudy	9:41	2.6	1.3	25.40	25.40	8.05	8.02	31.31	31.36	108.50	104.15	7.46	7.16	2.32	1.93	2.2	2.2
	20/4/2022	Cloudy	9:43	2.6	1.3	25.40	20.40	7.98	0.02	31.40	01.00	99.80	104.10	6.86	7.10	1.54	1.00	2.2	2.2
	27/4/2022	Sunny	9:03	2.6	1.3	26.00	26.00	8.36	8.35	29.34	29.34	98.60	96.00	6.79	6.61	0.13	0.07	1.8	1.7
	211-7/2022	Canny	9:05	2.6	1.3	26.00	20.00	8.34	0.55	29.34	23.34	93.40	30.00	6.42	0.01	0.01	0.07	1.6	1.7
	29/4/2022	Sunny	9:12	0.0	1.4	26.20	26.25	8.36	8.37	29.35	29.37	100.50	98.60	6.88	6.75	0.39	1.24	3.5	3.3
	20, 1/2022	canny	9:14	0.0	1.4	26.30	20.20	8.38	0.01	29.38	20.01	96.70	50.00	6.61	0.70	2.09	1.24	3.1	0.0

General Note:

am

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	Weather	Sampling	Water Depth	Sampling Depth	Tempe °(F	эН -		inity pt	DO Sat	uration %	D	-	Turt N ⁻	oidity TU	1	SS g/L
	Date		Time	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG		AVG	Value	AVG		AVG
	12/4/2022	Sunny	15:51	2.5	1.3	25.60	25.60	8.55	8.55	30.73	30.74	86.00	82.20	5.91	5.65	0.51	0.71	3.4	3.6
	12/4/2022	Sunny	15:53	2.5	1.3	25.60	25.60	8.55	0.55	30.74	30.74	78.40	02.20	5.39	5.65	0.90	0.71	3.8	3.0
	14/4/2022	Sunny	13:26	2.6	1.3	24.90	24.90	8.49	8.50	30.27	30.23	79.30	74.85	5.53	5.22	1.14	1.54	<1.0	1.0
	14/4/2022	Gunny	13:28	2.6	1.3	24.90	24.30	8.50	0.50	30.19	50.25	70.40	74.00	4.91	5.22	1.93	1.54	<1.0	1.0
	16/4/2022	Monsoon signal	0:00	0.0	0.0	-			. e	Samnli	ng was	, cance	alled di	ie to a	dverse	weath	her	•	
	10, 112022	inonocon oignai		0.0	0.0	-				Jampi	ing was				uverse	wcau			
	18/4/2022	Cloudy	9:17	2.0	1.0	21.40	21.50	8.08	8.10	32.40	32.39	76.60	80.65	5.61	5.87	2.69	3.65	3.9	3.6
		,	9:19	2.0	1.0	21.60		8.11		32.38		84.70		6.13		4.61		3.3	
SR15	20/4/2022	Cloudy	9:18	2.6	1.3	21.00	21.05	8.13	8.14	32.63	32.61	65.20	72.70	4.80	4.94	6.88	6.46	7.5	7.4
		,	9:20	2.6	1.3	21.10		8.15		32.59		80.20		5.08		6.03		7.2	
	22/4/2022	Cloudy	8:59	2.9	1.5	23.10	23.10	7.91	7.94	32.53	32.52	86.90	86.65	6.17	6.16	2.93	2.69	2.7	- 28
		,	9:01	2.9	1.5	23.10		7.97		32.51		86.40		6.14		2.45		2.9	
	25/4/2022	Cloudy	11:56	2.4	1.2	26.10	26.05	8.49	8 4 9	31.39	31.40	134.30	120.55	9.10	8.18	2.25	1.94	2.4	2.5
		,	11:58	2.4	1.2	26.00		8.48		31.40		106.80		7.26		1.63		2.6	
	27/4/2022	Sunny	10:58	2.6	1.3	26.10	26.10	8.46	8.46	29.48	29.52	85.90	95.45	5.89	6.55	0.18	0.21	1.0	1.2
		,	11:00	2.6	1.3	26.10		8.46		29.55		105.00		7.20		0.24		1.4	
	29/4/2022	Sunny	12:54	0.0	1.4	27.00	26.95	8.50	8.50	28.80	28.99	87.70	92.90	5.95	6.30	1.14	1.15	1.4	1.5
		,	12:56	0.0	1.4	26.90		8.49		29.18		98.10		6.65		1.16		1.6	

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

	Compline		Complian	Water	Sampling	Tempe	erature	р	Н	Sal	inity	DO Sa	turation	D	0	Turb	idity	S	SS
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Depth	°	С			р	pt	c	6	mg	g/L	N	ΓU	m	g/L
	Bale		Time	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	12:53	7.8	1.0	23.90	23.85	8.59	8.60	30.41	30.40	86.30	95.00	6.12	6.74	0.19	0.15	1.2	1.4
	12/4/2022	ounny	12:55	7.8	1.0	23.80	20.00	8.60	0.00	30.38	00.40	103.70	00.00	7.35	0.74	0.11	0.10	1.5	1.4
	14/4/2022	Sunnv	11:11	8.0	1.0	23.00	23.00	8.54	8.55	30.78	30.78	65.60	76.45	4.71	5.49	1.54	1.14	<1.0	1.0
	14/4/2022	Ounny	11:13	8.0	1.0	23.00	25.00	8.55	0.00	30.77	50.70	87.30	70.45	6.26	5.45	0.73	1.14	<1.0	1.0
	16/4/2022	Monsoon signal	10:38	8.0	1.0	21.80	21.80	8.44	8.44	31.07	31.22	76.00	76.60	5.57	5.61	5.94	3.82	3.4	3.2
	10/4/2022	Nonsoon signal	10:40	8.0	1.0	21.80	21.00	8.44	0.44	31.37	51.22	77.20	70.00	5.65	5.01	1.70	5.02	3.0	5.2
	18/4/2022	Cloudy	10:33	8.6	1.0	21.50	21.55	8.36	8.37	32.24	32.30	80.10	83.10	5.86	6.08	4.00	3.05	3.5	3.7
	10/4/2022	Cloudy	10:35	8.6	1.0	21.60	21.00	8.37	0.57	32.35	52.50	86.10	05.10	6.29	0.00	2.09	5.05	3.9	5.7
CE	20/4/2022	Cloudy	10:27	8.3	1.0	21.00	21.00	8.37	8.37	32.73	32.75	83.70	85.10	6.16	6.26	1.54	1.15	3.7	3.5
0L	20/4/2022	Cloudy	10:29	8.3	1.0	21.00	21.00	8.37	0.57	32.77	52.75	86.50	05.10	6.36	0.20	0.75	1.15	3.3	5.5
	22/4/2022	Cloudy	10:08	8.4	1.0	22.96	22.93	8.32	8.33	32.25	32.24	77.90	79.45	5.55	5.67	3.18	2.07	3.2	3.1
	22/4/2022	Cloudy	10:10	8.4	1.0	22.90	22.93	8.33	0.55	32.23	32.24	81.00	79.43	5.78	5.07	0.95	2.07	3.0	3.1
	25/4/2022	Cloudy	10:45	10.0	1.0	24.60	24.60	8.31	8.32	31.62	31.53	100.89	102.75	7.01	7.14	0.01	0.55	1.7	1.8
	23/4/2022	Cloudy	10:47	10.0	1.0	24.60	24.00	8.32	0.52	31.43	51.55	104.60	102.75	7.27	7.14	1.08	0.55	1.9	1.0
	27/4/2022	Sunny	9:50	8.0	1.0	26.60	26.60	8.45	8.43	30.37	30.39	98.80	86.05	6.69	5.83	0.28	0.15	1.4	1.3
	21/4/2022	Sunny	9:52	8.0	1.0	26.60	20.00	8.41	0.43	30.40	50.59	73.30	80.05	4.96	5.65	0.01	0.15	1.2	1.5
	29/4/2022	Sunny	10:05	0.0	1.0	26.40	26.50	8.48	8.49	28.48	28.47	98.10	89.00	6.73	6.10	0.05	0.47	<1.0	1.0
	2014/2022	Guility	10:07	0.0	1.0	26.60	20.30	8.49	0.49	28.46	20.47	79.90	39.00	5.47	0.10	0.89	0.47	<1.0	1.0

General Note:

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

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

am

	Compliant		Sampling	Water	Sampling	Tempe	rature	р	Η	Sal	inity	DO Sa	turation	D	0	Turk	oidity	00	SS
Station Reference	Sampling Date	Weather	Time	Depth	Depth	°C	2		-	р	pt	0	6	mg	g/L	N	ΓU	m	ıg/L
	Date		TITIC	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	14:02	7.8	1.0	24.20	24.10	8.55	8.57	30.43	30.39	98.40	93.90	6.94	6.63	0.55	0.58	1.2	1.4
	12/4/2022	Sunny	14:04	7.8	1.0	24.00	24.10	8.58	0.57	30.34	30.39	89.40	93.90	6.32	0.05	0.60	0.50	1.5	
	14/4/2022	Sunny	11:47	7.9	1.0	22.80	22.90	8.52	8.53	30.99	30.95	68.40	80.65	4.93	5.80	1.06	0.90	<1.0	1.0
	14/4/2022	Sunny	11:49	7.9	1.0	23.00	22.90	8.53	0.00	30.91	30.95	92.90	00.05	6.67	5.60	0.74	0.90	<1.0	1.0
	16/4/2022	Monsoon signal	0:00	0.0	1.0	-				Somoli		aanaa	المط طب	o to od	Voraal	vootha	r		•
	10/4/2022	Monsoon signal		0.0	1.0	-	_			sampiii	ng was	cance	lied du	e lo au	verse	weathe			
	18/4/2022	Cloudy	10:16	8.3	1.0	21.40	21.45	8.36	8.36	32.05	32.09	67.90	70.40	4.98	5.16	2.53	2.75	1.9	1.7
	10/4/2022	Cloudy	10:18	8.3	1.0	21.50	21.43	8.36	0.50	32.12	32.09	72.90	70.40	5.34	5.10	2.96	2.75	1.5	1.7
CE	20/4/2022	Cloudy	10:14	8.6	1.0	21.00	21.05	8.34	8.35	32.74	32.75	69.20	74.80	5.10	5.50	0.25	0.36	1.1	1.3
0E	20/4/2022	Cioudy	10:16	8.6	1.0	21.10	21.05	8.35	0.55	32.76	32.15	80.40	74.00	5.90	5.50	0.47	0.30	1.4	1.5
	22/4/2022	Cloudy	9:57	8.3	1.0	22.70	22.70	8.33	8.32	32.37	32.31	77.90	71.25	5.58	5.10	4.04	2.64	2.9	2.8
	22/4/2022	Cloudy	9:59	8.3	1.0	22.70	22.70	8.30	0.52	32.24	52.51	64.60	71.25	4.62	5.10	1.23	2.04	2.6	
	25/4/2022	Cloudy	10:54	10.1	1.0	24.50	24.50	8.35	8.35	31.46	31.47	106.50	103.50	7.42	7.21	0.70	0.73	<1.0	1.0
	23/4/2022	Cloudy	10:56	10.1	1.0	24.50	24.30	8.35	0.55	31.47	51.47	100.50	103.30	7.00	1.21	0.76	0.75	<1.0	1.0
	27/4/2022	Sunny	10:04	8.2	1.0	26.00	26.00	8.42	8.42	30.28	30.32	86.20	89.60	5.89	6.30	0.01	0.05	<1.0	1.0
	27/4/2022	Sunny	10:06	8.2	1.0	26.00	20.00	8.42	0.42	30.36	30.32	93.00	09.00	6.70	0.30	0.09	0.05	<1.0	1.0
	29/4/2022	Sunny	11:40	0.0	1.0	26.80	27.00	8.50	8.50	28.73	28.73	73.00	87.00	4.97	5.90	0.01	0.29	1.8	1.7
	23/4/2022	Guility	11:42	0.0	1.0	27.20	21.00	8.49	0.50	28.72	20.75	101.00	37.00	6.83	5.90	0.56	0.29	1.5	

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

	O a martine m		0	Water	Sampling	Tempe	erature	р	Н	Sal	inity	DO Sa	turation	D	0	Turb	idity	S	SS
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Depth	0	С		-	р	pt	0	6	mg	g/L	N	ΓU	mg	g/L
	Date		TILLO	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	12:57	7.8	3.9	22.70	22.60	8.58	8.58	31.42	31.42	100.70	108.95	7.25	7.86	0.85	0.65	2.1	2.3
	12/4/2022	Ganny	12:59	7.8	3.9	22.50	22.00	8.58	0.00	31.41	01.42	117.20	100.00	8.46	1.00	0.44	0.00	2.5	2.0
	14/4/2022	Sunny	11:15	8.0	4.0	23.00	23.00	8.55	8.55	30.86	30.88	92.70	93.45	6.65	6.71	0.67	1.38	<1.0	1.0
	14/4/2022	Gunny	11:17	8.0	4.0	23.00	20.00	8.55	0.00	30.89	50.00	94.20	33.43	6.76	0.71	2.08	1.50	<1.0	1.0
	16/4/2022	Monsoon signal	10:43	8.0	4.0	21.70	21.70	8.44	8.44	31.31	31.31	72.00	75.80	5.28	5.56	2.15	2.31	2.6	2.7
	10/4/2022	Worlsoon signal	10:45	8.0	4.0	21.70	21.70	8.44	0.44	31.31	51.51	79.60	75.00	5.83	5.50	2.47	2.51	2.8	2.1
	18/4/2022	Cloudy	10:37	8.6	4.3	21.60	21.60	8.38	8.38	32.39	32.38	89.50	89.50	6.53	6.53	2.60	3.07	6.2	6.2
	10/4/2022	Cloudy	10:39	8.6	4.3	21.60	21.00	8.37	0.00	32.37	02.00	89.50	00.00	6.53	0.00	3.53	0.07	6.1	0.2
CE	20/4/2022	Cloudy	0:00	8.3	4.2	21.10	21.10	8.37	8.37	32.81	32.81	92.80	90.55	6.82	6.66	1.78	1.14	3.4	3.4
0L	20/4/2022	Cloudy		8.3	4.2	21.10	21.10	8.37	0.57	32.80	32.01	88.30	90.55	6.49	0.00	0.49	1.14	3.4	3.4
	22/4/2022	Cloudy	10:12	8.4	4.2	23.00	22.95	8.33	8.33	32.27	32.27	76.80	83.45	5.47	5.95	2.58	1.90	3.2	3.4
	22/4/2022	Cloudy	10:14	8.4	4.2	22.90	22.95	8.33	0.55	32.27	52.21	90.10	03.43	6.43	5.95	1.22	1.90	3.6	3.4
	25/4/2022	Cloudy	10:49	10.0	5.0	24.30	24.30	8.34	8.34	31.50	31.48	90.70	96.15	6.34	6.72	0.01	0.46	1.2	1.1
	23/4/2022	Cloudy	10:51	10.0	5.0	24.30	24.30	8.34	0.34	31.46	51.40	101.60	90.15	7.10	0.72	0.90	0.40	1.0	1.1
	27/4/2022	Sunny	9:55	8.0	4.0	26.00	25.95	8.42	8.42	30.32	30.36	94.60	88.30	6.47	6.04	0.01	0.33	1.6	1.8
	21/4/2022	Gunny	9:57	8.0	4.0	25.90	23.85	8.42	0.42	30.40	30.30	82.00	30.30	5.60	0.04	0.64	0.55	1.9	1.0
	29/4/2022	Sunny	10:09	0.0	4.2	26.30	26.30	8.49	8.49	28.62	28.63	68.00	83.40	4.67	5.73	0.82	0.86	1.8	1.7
	2014/2022	Guility	10:11	0.0	4.2	26.30	20.30	8.49	0.49	28.63	20.03	98.80	33.40	6.79	5.75	0.90	0.00	1.6	1.7

General Note:

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

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

Sampling Temperature pН Salinity DO Saturation DO Turbidity SS Water Sampling Sampling Station Reference Weather Depth Depth °C NTU ppt mg/L mg/L Date Time Value AVG Value AVG Value AVG Value AVG Value AVG AVG m m Value AVG Value 14:07 7.8 3.9 23.10 8.58 31.20 100.20 7.17 0.26 2.2 12/4/2022 23.10 8.58 Sunny 31.20 105.95 7.58 0.37 2.2 14:09 7.8 3.9 23.10 8.58 31.20 111.70 7.99 0.47 2.1 0:00 7.9 4.0 22.90 8.53 30.98 87.50 6.29 2.77 <1.0 14/4/2022 22.90 8.53 30.92 86.65 6.23 2.87 1.0 Sunnv 7.9 4.0 22.90 8.53 30.85 85.80 6.17 2.96 <1.0 0:00 0.0 0.0 Sampling was cancelled due to adverse weather 16/4/2022 Monsoon signa 0.0 0.0 10:21 8.3 4.2 21.50 8.37 32.32 83.00 6.06 1.80 1.7 18/4/2022 Cloudy 21.50 8.37 77.75 5.68 2.38 32.34 1.8 2.95 1.8 21.50 8.37 32.36 72.50 5.30 10:23 8.3 4.2 10:18 8.6 4.3 21.20 8.36 32.89 68.70 5.03 1.43 1.6 CE 20/4/2022 21.20 8.37 32.90 71.55 Cloudy 5.24 1.11 1.8 4.3 21.20 8.37 32.90 74.40 5.45 0.79 1.9 10:20 8.6 2.4 10:02 8.3 4.2 22.80 8.31 32.18 87.60 6.27 2.85 22.70 8.32 32.21 80.55 5.77 2.5 22/4/2022 Cloudy 2.93 10:04 8.3 4.2 22.60 8.32 32.23 73.50 5.27 3.01 2.6 10:58 10.1 24.40 8.36 31.48 101.10 7.06 0.01 1.4 5.1 24.35 31.47 102.30 7.15 0.81 1.5 25/4/2022 Cloudy 8.36 11:00 10.1 5.1 24.30 8.36 31.46 103.50 7.24 1.60 1.6 0:00 8.2 4.1 25.60 8.42 30.70 96.60 6.64 0.01 1.4 27/4/2022 25.60 30.67 98.70 0.16 1.5 Sunny 8.42 6.78 1.6 8.2 4.1 25.60 8.42 30.63 100.80 6.92 0.31 11:45 0.0 4.0 26.50 8.50 28.77 93.80 6.42 0.46 1.2 97.10 1.2 29/4/2022 Sunny 26.55 8.51 28.69 6.64 0.46 4.0 26.60 8.51 28.61 100.40 6.86 11:47 0.0 1.1

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

	Compliant		Compliant	Water	Sampling	Tempe	erature	р	Н	Sal	inity	DO Sa	turation	D	0	Turb	idity	S	SS
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Depth	٩	С		-	р	pt	c	6	mg	g/L	N	ΓU	m	ıg/L
	Dute		Time	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	13:01	7.8	6.8	21.80	21.90	8.52	8.51	32.04	32.04	99.20	91.95	7.22	6.69	0.57	0.47	9.9	9.7
	12/4/2022	Gunny	13:03	7.8	6.8	22.00	21.00	8.49	0.01	32.04	02.04	84.70	01.00	6.15	0.00	0.36	0.47	9.4	0.1
	14/4/2022	Sunny	11:20	8.0	7.0	23.40	23.25	8.50	8.51	31.59	31.58	89.00	85.45	6.32	6.08	4.61	3.85	<1.0	1.0
	14/4/2022	Gunny	11:22	8.0	7.0	23.10	20.20	8.51	0.01	31.56	01.00	81.90	00.40	5.84	0.00	3.09	0.00	<1.0	1.0
	16/4/2022	Monsoon signal	10:51	8.0	7.0	21.80	21.85	8.45	8.45	31.36	31.35	78.40	80.15	5.73	5.86	3.34	2.76	2.3	2.2
	10/4/2022	Monsoon signal	10:53	8.0	7.0	21.90	21.00	8.45	0.40	31.33	01.00	81.90	00.10	5.98	0.00	2.17	2.10	2.1	2.2
	18/4/2022	Cloudy	10:41	8.6	7.6	21.60	21.60	8.38	8.38	32.38	32.39	87.10	87.80	6.36	6.41	3.07	2.92	7.8	7.7
	10/4/2022	Cloudy	10:43	8.6	7.6	21.60	21.00	8.38	0.00	32.39	02.00	88.50	07.00	6.45	0.41	2.77	2.02	7.5	1.1
CE	20/4/2022	Cloudy	0:00	8.3	7.3	21.20	21.15	8.38	8.38	32.91	32.88	81.40	81.00	5.97	5.95	2.06	1.04	2.5	2.7
0L	20/4/2022	Cloudy		8.3	7.3	21.10	21.15	8.38	0.50	32.85	52.00	80.60	01.00	5.92	0.00	0.01	1.04	2.9	2.1
	22/4/2022	Cloudy	10:16	8.4	7.4	22.90	22.85	8.34	20.35	32.35	32.36	90.00	87.75	6.42	6.27	2.50	2.10	3.8	4.0
	22/4/2022	Cloudy	10:18	8.4	7.4	22.80	22.05	32.36	20.33	32.36	52.50	85.50	01.15	6.11	0.27	1.69	2.10	4.1	4.0
	25/4/2022	Cloudy	10:54	10.0	9.0	24.40	24.40	8.34	8.34	31.55	31.57	98.60	98.90	6.88	6.90	1.56	0.79	<1.0	1.0
	23/4/2022	Cloudy	10:56	10.0	9.0	24.40	24.40	8.34	0.54	31.59	51.57	99.20	30.30	6.92	0.30	0.01	0.13	<1.0	1.0
	27/4/2022	Sunny	10:00	8.0	7.0	24.70	24.70	8.40	8.40	31.50	31.51	93.60	96.20	6.50	6.68	1.61	0.81	2.1	2.3
	21/4/2022	Gunny	10:02	8.0	7.0	24.70	24.70	8.40	0.40	31.52	31.31	98.80	30.20	6.86	0.00	0.01	0.01	2.4	2.5
	29/4/2022	Sunny	10:13	0.0	7.3	25.90	25.95	8.47	8.47	29.88	29.89	90.00	94.25	6.18	6.47	0.50	0.90	2.3	2.4
	2014/2022	Gunny	10:15	0.0	7.3	26.00	23.85	8.46	0.47	29.89	29.09	98.50	34.23	6.75	0.47	1.30	0.90	2.5	2.4

General Note:

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

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

am

	Sompling		Sampling	Water	Sampling	Tempe	rature	р	Η	Sal	inity	DO Sa	turation	D	0	Turb	oidity	9	SS
Station Reference	Sampling Date	Weather	Time	Depth	Depth	°C	2		-	р	pt	c.	%	mg	J/L	N	ΓU	m	ng/L
	Date		TITIC	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	14:12	7.8	6.8	22.30	22.25	8.56	8.56	31.67	31.68	102.10	103.80	7.39	7.53	0.76	0.67	2.6	2.7
	12/4/2022	Sunny	14:14	7.8	6.8	22.20	22.25	8.56	0.50	31.69	51.00	105.50	103.00	7.67	1.55	0.57	0.07	2.7	2.1
	14/4/2022	Sunny	11:53	7.9	6.9	22.50	22.45	8.50	8.50	31.77	31.82	86.00	89.50	6.19	6.45	1.93	3.20	1.7	1.6
	14/4/2022	Sunny	11:55	7.9	6.9	22.40	22.43	8.49	0.50	31.86	51.02	93.00	09.50	6.70	0.45	4.46	5.20	1.4	1.0
	16/4/2022	Monsoon signal	0:00	0.0	-1.0	-			C C	Samnlir	ng was	cance	المط طبية	he ot e		weathe	r		
	10/4/2022	Monsoon signal		0.0	-1.0	-				Jampin	ig was	cance		5 10 44	10130	<i>NCallic</i>	1		
	18/4/2022	Cloudy	10:25	8.3	7.3	21.50	21.55	8.37	8.37	32.38	32.37	83.30	80.45	6.08	5.88	2.60	2.40	1.6	1.6
	10/4/2022	Cloudy	10:27	8.3	7.3	21.60	21.55	8.37	0.37	32.36	52.57	77.60	00.43	5.67	5.00	2.19	2.40	1.6	1.0
CE	20/4/2022	Cloudy	10:22	8.6	7.6	21.20	21.20	8.37	8.37	32.92	32.93	80.30	82.55	5.88	6.05	2.34	1.43	2.3	2.5
0L	20/4/2022	Cloudy	10:24	8.6	7.6	21.20	21.20	8.37	0.57	32.93	52.35	84.80	02.55	6.21	0.00	0.51	1.45	2.6	2.0
	22/4/2022	Cloudy	10:06	8.3	7.3	22.60	22.60	8.32	8.33	32.22	32.30	83.00	78.10	5.95	5.60	1.61	1.66	2.2	2.2
	22/4/2022	Cloudy	10:08	8.3	7.3	22.60	22.00	8.33	0.55	32.38	52.50	73.20	70.10	5.25	5.00	1.71	1.00	2.2	2.2
	25/4/2022	Cloudy	11:02	10.1	9.1	24.40	24.40	8.36	8.36	31.55	31.55	96.50	97.95	6.74	6.84	0.01	0.29	2.5	2.5
	23/4/2022	Cloudy	11:04	10.1	9.1	24.40	24.40	8.36	0.30	31.55	51.55	99.40	97.95	6.93	0.04	0.56	0.29	2.4	2.5
	27/4/2022	Sunny	0:00	8.2	7.2	24.70	24.65	8.42	8.42	31.32	31.31	4.90	51.55	7.30	7.07	0.63	0.32	2.4	2.4
	21/4/2022	Sunny		8.2	7.2	24.60	24.03	8.42	0.42	31.30	51.51	98.20	51.55	6.84	7.07	0.01	0.32	2.4	2.4
	29/4/2022	Sunny	11:50	0.0	7.0	25.90	25.90	8.49	8.49	29.67	29.66	95.80	93.85	6.59	6.46	1.73	0.92	<1.0	1.0
	23/4/2022	Guility	11:52	0.0	7.0	25.90	20.90	8.49	0.49	29.64	29.00	91.90	35.05	6.32	0.40	0.11	0.92	<1.0	1.0

	Sampling		Sampling	Water	Sampling	Tempe	erature	р	Н	Sal	inity	DO Sa	turation	D	0	Turb	oidity	S	SS
Station Reference	Date	Weather	Time	Depth	Depth	°	2			р	pt	c	6	mg	/L	N	ΓU	m	ıg/L
	Bdio			m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	10:18	9.2	1.0	23.80	23.75	7.53	8.00	31.14	31.08	99.70	98.75	7.04	6.98	1.01	0.99	2.9	3.2
	12/4/2022	Sunny	10:20	9.2	1.0	23.70	25.75	8.47	0.00	31.01	51.00	97.80	30.75	6.92	0.30	0.97	0.55	3.4	5.2
	14/4/2022	Sunny	9:15	9.9	1.0	22.50	22.45	8.22	8.25	30.61	30.64	81.30	78.85	5.90	5.72	0.50	0.38	<1.0	1.0
	14/4/2022	Gunny	9:17	9.9	1.0	22.40	22.45	8.28	0.25	30.67	50.04	76.40	10.05	5.54	5.72	0.25	0.50	<1.0	1.0
	16/4/2022	Monsoon signal	9:03	8.4	1.0	21.50	21.35	7.23	7.47	31.99	32.13	82.50	79.20	6.04	5.81	0.01	0.01	2.1	2.3
	10/4/2022	Nonsoon signal	9:05	8.4	1.0	21.20	21.00	7.71	1.41	32.26	52.15	75.90	13.20	5.58	5.01	0.01	0.01	2.5	2.5
	18/4/2022	Cloudy	11:49	8.7	1.0	21.40	21.45	8.38	8.39	32.54	32.49	90.40	90.00	6.61	6.58	3.85	3.73	3.9	7.7
	10/4/2022	Cloudy	11:51	8.7	1.0	21.50	21.40	8.39	0.00	32.44	02.40	89.60	00.00	6.54	0.00	3.61	0.70	11.5	1.1
CF	20/4/2022	Cloudy	11:45	8.7	1.0	21.70	21.70	8.37	8.38	32.83	32.84	79.90	77.90	5.81	5.66	5.63	5.41	12.7	12.5
01	20/4/2022	Cloudy	11:47	8.7	1.0	21.70	21.70	8.38	0.00	32.84	52.04	75.90	11.30	5.51	5.00	5.19	5.41	12.2	12.5
	22/4/2022	Cloudy	11:25	7.9	1.0	22.70	22.70	8.34	8.34	32.25	32.19	73.40	68.80	5.26	4.93	4.09	2.55	2.4	2.3
	22/4/2022	Cloudy	11:27	7.9	1.0	22.70	22.70	8.35	0.54	32.13	52.15	64.20	00.00	4.60	4.35	1.01	2.00	2.2	2.5
	25/4/2022	Cloudy	9:25	7.3	1.0	24.20	24.15	7.14	7.26	30.79	30.76	81.40	87.95	5.73	6.20	0.64	0.97	2.1	2.3
	23/4/2022	Cloudy	9:27	7.3	1.0	24.10	24.15	7.37	7.20	30.72	50.70	94.50	07.35	6.66	0.20	1.29	0.57	2.4	2.5
	27/4/2022	Sunny	8:40	8.2	1.0	25.70	25.60	7.83	7.93	29.93	30.12	108.20	97.70	7.44	6.73	1.08	1.07	3.0	2.8
	21/7/2022	Gunny	8:42	8.2	1.0	25.50	23.00	8.02	1.85	30.30	30.12	87.20	31.10	6.02	0.73	1.05	1.07	2.5	2.0
	29/4/2022	Sunny	8:50	0.0	1.0	26.00	26.05	8.21	8.23	29.49	29.46	76.40	86.10	5.25	5.91	0.01	0.65	<1.0	1.0
	2017/2022	Gunny	8:52	0.0	1.0	26.10	20.05	8.25	0.23	29.42	29.40	95.80	30.10	6.57	5.91	1.28	0.05	<1.0	1.0

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) - Flood Tide

am

	O a mare line of		0	Water	Sampling	Tempe	erature	р	Н	Sal	inity	DO Sat	uration	D	0	Turk	oidity	5	SS
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Depth	°C	0		-	p	pt	9	6	mg	g/L	N	ΓU	m	ig/L
	Date		TITIC	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	16:13	10.4	1.0	24.40	24.45	8.59	8.60	30.71	30.72	89.90	91.30	6.30	6.40	0.01	0.01	3.6	3.5
	12/4/2022	Guility	16:15	10.4	1.0	24.50	24.43	8.60	0.00	30.73	50.72	92.70	31.50	6.49	0.40	0.01	0.01	3.4	5.5
	14/4/2022	Sunny	13:49	8.1	1.0	23.60	23.55	8.51	8.51	30.34	30.41	81.60	88.15	5.82	6.29	1.64	1.02	<1.0	1.0
	14/4/2022	Sunny	13:52	8.1	1.0	23.50	23.33	8.51	0.51	30.48	30.41	94.70	00.15	6.76	0.29	0.39	1.02	<1.0	1.0
	16/4/2022	Monsoon signal	0:00	0.0	1.0	-			Sampli	ina wa	s cance	- lled di	ie to a	dverse	weath	٥r			
	10/4/2022	Monsoon signal		0.0	1.0	-			Campi	ing wa					weath				
	18/4/2022	Cloudy	8:59	8.2	1.0	21.50	21.50	7.42	7.49	31.69	31.88	79.60	83.90	5.84	6.15	1.84	2.20	4.8	5.0
	10/4/2022	Cloudy	9:01	8.2	1.0	21.50	21.50	7.56	7.45	32.07	51.00	88.20	03.90	6.46	0.15	2.56	2.20	5.1	5.0
CF	20/4/2022	Cloudy	8:57	9.4	1.0	21.00	21.10	7.50	7.58	32.60	32.60	68.90	72.55	5.07	5.34	3.13	3.97	3.6	3.8
UF	20/4/2022	Cloudy	8:59	9.4	1.0	21.20	21.10	7.66	7.50	32.60	32.00	76.20	72.55	5.60	5.54	4.81	3.97	4.0	5.0
	22/4/2022	Cloudy	8:44	8.6	1.0	22.40	22.40	7.00	7.12	31.79	31.89	75.40	80.30	5.44	5.80	3.09	3.15	1.1	1.2
	22/4/2022	Cloudy	8:46	8.6	1.0	22.40	22.40	7.24	1.12	31.99	51.05	85.20	00.30	6.15	5.00	3.20	3.15	1.3	1.2
	25/4/2022	Cloudy	12:10	8.2	1.0	24.90	24.90	8.43	8.43	31.10	31.09	101.00	572.25	7.00	7.13	1.07	0.54	<1.0	1.0
	25/4/2022	Cloudy	12:12	8.2	1.0	24.90	24.90	8.42	0.43	31.07	31.09	1,043.50	572.25	7.25	1.13	0.01	0.54	<1.0	1.0
	27/4/2022	Sunny				25.90	25.90	8.44	8.39	30.08	30.08	90.70	92.05	6.23	6.32	0.49	0.62	2.1	2.3
	21/4/2022	Sunny				25.90	25.90	8.34	0.39	30.08	30.00	93.40	92.05	6.41	0.32	0.75	0.02	2.4	2.3
	29/4/2022	Sunny	13:08	0.0	1.0	28.20	28.40	8.49	8.48	29.14	29.22	95.10	88.45	6.31	5.85	1.65	1.40	1.4	1.6
	29/4/2022	Sunny	13:10	0.0	1.0	28.60	20.40	8.47	0.40	29.29	29.22	81.80	00.45	5.39	5.65	1.15	1.40	1.7	1.0

	Compline		Compliant	Water	Sampling	Tempe	erature	F	H	Sal	inity	DO Sa	turation	D	0	Turk	oidity	5	S
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Depth	°	С		-	р	pt	c	6	mg	g/L	N	TU	m	g/L
	Date		TILLC	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	10:23	9.2	4.6	23.40	23.45	8.49	8.50	31.13	31.19	101.50	96.15	7.22	6.84	1.62	1.51	2.9	2.7
	12/4/2022	Odiniy	10:25	9.2	4.6	23.50	20.40	8.51	0.50	31.25	51.15	90.80	30.13	6.45	0.04	1.39	1.01	2.5	2.1
	14/4/2022	Sunny	9:19	9.9	5.0	22.20	22.25	8.31	8.32	30.87	30.86	78.20	81.20	5.69	5.91	0.49	0.47	<1.0	1.0
	14/4/2022	Outifry	9:21	9.9	5.0	22.30	22.25	8.33	0.52	30.84	30.00	84.20	01.20	6.13	5.51	0.45	0.47	<1.0	1.0
	16/4/2022	Monsoon signal	9:08	8.4	4.2	21.30	21.30	7.90	7.95	32.26	32.28	82.40	87.05	6.05	6.39	0.01	0.01	2.9	2.8
	10/4/2022	NUTSOUT SIGNAL	9:10	8.4	4.2	21.30	21.30	8.00	7.95	32.29	52.20	91.70	07.05	6.73	0.59	0.01	0.01	2.6	2.0
	18/4/2022	Cloudy	11:53	8.7	4.4	21.50	21.50	8.40	8.40	32.51	32.48	85.50	85.55	6.24	6.25	6.10	6.02	4.7	4.5
	10/4/2022	Cioudy	11:55	8.7	4.4	21.50	21.50	8.40	0.40	32.45	52.40	85.60	00.00	6.25	0.25	5.94	0.02	4.3	4.5
CF	20/4/2022	Cloudy	11:50	8.7	4.4	21.60	21.60	8.39	8.39	33.01	33.00	72.70	70.05	5.29	5.10	8.10	7.48	10.6	10.4
Gi	20/4/2022	Cioudy	11:52	8.7	4.4	21.60	21.00	8.39	0.55	32.99	33.00	67.40	70.03	4.90	5.10	6.86	7.40	10.2	10.4
	22/4/2022	Cloudy	11:29	7.9	4.0	22.60	22.55	8.35	8.35	32.35	32.35	72.10	63.90	5.17	4.59	2.33	3.50	3.1	3.0
	22/4/2022	Cioudy	11:31	7.9	4.0	22.50	22.00	8.35	0.00	32.35	52.55	55.70	05.30	4.00	4.55	4.67	5.50	2.8	5.0
	25/4/2022	Cloudy	9:29	7.3	3.7	24.20	24.15	7.67	7.61	30.93	30.94	97.70	99.05	6.87	6.97	1.62	1.10	1.7	1.8
	23/4/2022	Cioudy	9:31	7.3	3.7	24.10	24.15	7.55	7.01	30.94	50.34	100.40	33.03	7.06	0.57	0.57	1.10	1.9	1.0
	27/4/2022	Sunny	8:44	8.2	4.1	25.40	25.40	8.16	8.15	30.47	30.55	99.80	90.10	6.88	6.21	1.78	1.24	1.6	1.7
	2114/2022	Odiniy	8:46	8.2	4.1	25.40	20.40	8.13	0.15	30.62	30.33	80.40	30.10	5.54	0.21	0.69	1.24	1.8	1.7
	29/4/2022	Sunny	8:54	0.0	4.1	26.00	25.95	8.31	8.30	29.62	29.63	98.20	91.45	6.75	6.29	0.11	0.25	1.2	1.4
	20/4/2022	Canny	8:56	0.0	4.1	25.90	20.00	8.29	0.50	29.64	23.05	84.70	31.43	5.82	0.23	0.39	0.23	1.5	1.4

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

General Note:

am

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	Weather	Sampling	Water Depth	Sampling Depth	Tempe	erature		oH -		inity pt	DO Sat	turation %		iO g/L		oidity TU		SS ıg/L
	Date		Time	m	m		AVG	Value	AVG	Value	AVG	-	AVG	Value	AVG		AVG	Value	AVG
	12/4/2022	Sunnv	16:17	10.4	5.2	23.20	23.20	8.59	8.59	31.37	31.35	102.10	96.75	7.28	6.90	1.04	0.68	2.3	2.
	12/4/2022	Sunny	16:19	10.4	5.2	23.20	23.20	8.59	0.59	31.33	31.35	91.40	90.75	6.52	0.90	0.31	0.00	2.6	i 2.
	14/4/2022	Sunny	13:55	8.1	4.1	23.60	23.60	8.52	8.52	30.57	30.57	73.00	74.60	5.19	5.31	2.53	3.27	1.1	- 1
	14/4/2022	Sunny	13:58	8.1	4.1	23.60	23.00	8.52	0.52	30.57	30.37	76.20	74.00	5.42	5.51	4.00	3.27	1.3	
	16/4/2022	Monsoon signal	0:00	0.0	0.0	-			San	nlina	was ca	incelle	d due t	o adve	erse we	ather			
	TO WEBEE	inonocon olgital		0.0	0.0	-			. Oun		1140 04			ouun		Jaanor			
	18/4/2022	Cloudy	9:03	8.2	4.1	21.40	21.40	7.71	7.74	32.18	32.00	74.50	81.90	5.46	6.03	2.50	2.59	3.2	3
		,	9:05	8.2	4.1	21.40		7.77		31.81		89.30		6.60		2.68		3.6	i
CF	20/4/2022	Cloudy	9:01	9.4	4.7	21.20	21.20	7.82	7.86	32.66	32.67	68.60	74.15	5.04	5.45	3.64	3.64	3.1	- 3
		,	9:03	9.4	4.7	21.20		7.90		32.67		79.70		5.85		3.64		2.8	
	22/4/2022	Cloudy	8:48	8.6	4.3	22.40	22.40	7.46	7.50	32.07	32.08	71.00	78.60	5.12	5.67	2.29	2.64	1.9	- 1
		- ,	8:50	8.6	4.3	22.40		7.54		32.08		86.20		6.21		2.99	-	1.6	
	25/4/2022	Cloudy	12:15	8.2	4.1	24.80	24.90	8.42	842	31.18	31.23	107.20	105.40	7.44	7.31	1.99	1.00	1.8	- 1
		- ,	12:17	8.2	4.1	25.00		8.42		31.28		103.60		7.17		0.01		1.7	-
	27/4/2022	Sunny	11:19	8.0	4.0	25.60	25.60	8.43	8.43	30.29	30.30	95.50	94.25	6.57	6.49	1.89	0.95	2.6	- 2
			11:21	8.0	4.0	25.60		8.43		30.31		93.00		6.40		0.01		2.6	
	29/4/2022	Sunny	11:19	8.0	4.0	25.60	25.60	8.43	8.43	30.29	30.30	95.50	94.25	6.57	6.49	1.89	0.95	2.6	
			11:21	8.0	4.0	25.60		8.43		30.31		93.00		6.40		0.01		2.6	5

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

	Sampling		Sampling	Water	Sampling	Tempe	rature	p	Н	Sal	inity	DO Sa	turation	D	0	Turt	bidity	5	SS
Station Reference	Date	Weather	Time	Depth	Depth	°C	0		-	р	pt	q	%	mę	g/L	N	TU	m	ig/L
	Duc		Time	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	10:28	9.2	8.2	23.20	23.15	8.52	8.52	31.25	31.27	97.30	94.30	6.94	6.74	1.14	1.08	1.8	1.9
	12/4/2022	Sunny	10:30	9.2	8.2	23.10	20.10	8.51	0.52	31.29	51.27	91.30	34.50	6.53	0.74	1.01	1.00	1.9	1.5
	14/4/2022	Sunnv	9:25	9.9	8.9	22.30	22.25	8.37	8.36	30.45	30.68	78.40	80.10	5.71	5.84	1.92	1.26	<1.0	1.0
	14/4/2022	Sunny	9:27	9.9	8.9	22.20	22.25	8.35	0.50	30.90	30.00	81.80	00.10	5.96	5.04	0.60	1.20	<1.0	1.0
	16/4/2022	Monsoon	9:12	8.4	7.4	21.30	21.25	8.10	8.13	32.26	32.28	78.00	84.35	5.73	6.20	0.01	0.01	3.2	3.4
	10/4/2022	signal	9:14	8.4	7.4	21.20	21.20	8.15	0.10	32.30	02.20	90.70	04.00	6.67	0.20	0.01	0.01	3.6	0.4
	18/4/2022	Cloudy	12:00	8.7	7.7	21.50	21.50	8.40	8.40	32.61	32.63	86.80	81.85	6.34	5.98	5.71	5.86	5.0	5.3
	10/4/2022	Cloudy	12:02	8.7	7.7	21.50	21.00	8.40	0.40	32.64	02.00	76.90	01.00	5.61	0.00	6.00	0.00	5.5	0.0
CF	20/4/2022	Cloudy	11:54	8.7	7.7	21.50	21.50	8.39	8.39	33.03	33.01	78.10	72.60	5.69	5.29	8.94	9.29	7.4	7.6
01	2014/2022	Cloudy	11:56	8.7	7.7	21.50	21.00	8.39	0.00	32.99	00.01	67.10	12.00	4.89	0.20	9.64	0.20	7.8	1.0
	22/4/2022	Cloudy	11:35	7.9	6.9	22.60	22.65	8.35	8.35	32.46	32.46	61.20	70.80	4.38	5.07	4.00	3.23	3.5	3.7
	22/4/2022	Cloudy	11:37	7.9	6.9	22.70	22.00	8.35	0.00	32.45	02.40	80.40	10.00	5.76	0.07	2.45	0.20	3.9	0.1
	25/4/2022	Cloudy	9:33	7.3	6.3	24.40	24.35	7.86	7.84	31.01	31.01	106.90	97.60	7.49	6.84	0.06	0.68	1.3	1.2
	2014/2022	Cloudy	9:35	7.3	6.3	24.30	24.00	7.82	1.04	31.00	01.01	88.30	57.00	6.19	0.04	1.30	0.00	1.1	1.2
	27/4/2022	Sunny	8:48	8.2	7.2	24.60	24.65	8.21	8.22	31.24	31.24	79.80	88.25	5.55	6.14	0.60	0.31	1.3	1.4
	211712022	Ganny	8:50	8.2	7.2	24.70	24.00	8.23	0.22	31.24	51.24	96.70	30.23	6.73	0.14	0.01	0.51	1.4	1.4
	29/4/2022	Sunny	8:58	0.0	7.1	25.30	25.30	8.32	8.32	95.50	63.09	95.50	91.20	6.60	6.33	0.20	0.89	1.9	1.8
	201712022	Ganny	9:00	0.0	7.1	25.30	20.00	8.31	0.52	30.67	33.03	86.90	31.20	6.06	0.00	1.58	0.03	1.6	1.0

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.

am

Lam Environmental Services Limited

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

	Constitute		Compliant	Water	Sampling	Tempe	rature	р	H	Sal	inity	DO Sa	turation	D	0	Turl	oidity	S	SS
Station Reference	Sampling Date	Weather	Sampling Time	Depth	Depth	°C	0		-	р	pt	9	6	m	g/L	N	TU	m	ig/L
	Date		TIME	m	m	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG	Value	AVG
	12/4/2022	Sunny	16:23	10.4	9.4	22.50	22.55	8.56	8.56	31.74	31.73	98.30	95.80	7.08	6.90	0.99	1.14	1.9	1.7
	12/4/2022	Ounny	16:25	10.4	9.4	22.60	22.00	8.55	0.00	31.72	01.70	93.30	55.00	6.72	0.00	1.29	1.14	1.4	1.7
	14/4/2022	Sunny	14:00	8.1	7.1	22.80	22.80	8.48	8.48	32.10	31.78	77.10	79 35	5.28	5.57	4.00	3 5 3	1.9	1.8
	14/4/2022	Ounny	14:05	8.1	7.1	22.80	22.00	8.48	0.40	31.46	01.70	81.60	10.00	5.86	0.01	3.05	0.00	1.7	1.0
	16/4/2022	Monsoon	0:00	0.0	-1.0	-			Som	nlina v		ncollo		to od	/erse \	Noath	or		
	10/4/2022	signal		0.0	-1.0	-			Jain	ping v	vas ca	licelle	u uue	iu auv		weatin		_	
	18/4/2022	Cloudy	9:07	8.2	7.2	21.40	21.40	7.89	7.91	32.29	32.30	70.70	78.65	5.18	5.76	2.17	2.70	3.0	2.9
	10/4/2022	Oloddy	9:09	8.2	7.2	21.40	21.40	7.93	1.01	32.31	02.00	86.60	10.00	6.34	0.70	3.22	2.70	2.7	2.0
CF	20/4/2022	Cloudy	9:05	9.4	8.4	21.10	21.10	8.03	8.02	32.82	32.82	82.70	76.45	6.08	5.62	3.68	4.28	2.8	2.7
0.	2014/2022	Oloddy	9:07	9.4	8.4	21.10	21.10	8.00	0.02	32.81	02.02	70.20	10.40	5.15	0.02	4.88	4.20	2.5	2.1
	22/4/2022	Cloudy	8:52	8.6	7.6	22.40	22.40	7.76	7.74	32.19	32.19	85.20	77.30	6.13	5.57	2.69	2.39	2.4	2.3
	22/4/2022	Cloudy	8:54	8.6	7.6	22.40	22.40	7.72	1.14	32.18	32.13	69.40	11.50	5.00	5.57	2.08	2.55	2.2	2.5
	25/4/2022	Cloudy	12:21	8.2	7.2	25.00	25.00	8.42	8.42	31.28	31.29	86.00	48.07	5.95	6.48	0.97	0.69	2.4	2.3
	2014/2022	Oloddy	12:23	8.2	7.2	25.00	20.00	8.42	0.42	31.29	01.20	10.13	40.01	7.00	0.40	0.40	0.00	2.2	2.0
	27/4/2022	Sunny	11:25	8.0	7.0	25.30	25.30	8.41	8.41	30.84	30.85	94.10	86.25	6.49	5.95	2.63	4.02	2.9	3.0
	2	canny	11:27	8.0	7.0	25.30	20.00	8.41	0.41	30.85	50.00	78.40	30.20	5.41	0.00	5.41	4.02	3.1	0.0
	29/4/2022	Sunny	13:21	0.0	7.3	26.60	26.60	8.52	8.52	29.06	29.06	97.40	89.85	6.64	6.12	1.06	0.56	1.4	1.6
	2014/2022	Ounny	13:23	0.0	7.3	26.60	20.00	8.52		29.06	20.00	82.30	00.00	5.60	0.12	0.06	0.00	1.7	1.0



Appendix 4.5

Monthly Summary Waste Flow Table

	A	ctual Quantities	of Inert C&D	Material Gen	erated Monthl	У	Actu	al Quantities o	f C&D Wastes	Generated Mo	onthly
Month	Total Quantity Generated (a)	Hard Rocks and Large Broken Concrete (b)	Reused in the Contract (c)	Reused in other Projects (d)	Disposed as Public Fill (a-b-c-d)	Imported Fill	Metals	Paper/card- board packaging	Plastics [see Note 3]	Chemical waste	Others. e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)
Jan	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.00	0.00	58.35
Feb	2.37	0.00	0.00	0.00	2.37	0.00	0.00	0.00	0.00	0.00	52.60
Mar	2.51	0.00	0.00	0.00	2.51	0.00	1.55	0.00	0.00	0.00	34.82
Apr	0.62	0.00	0.00	0.00	0.62	0.00	0.00	0.05	0.00	0.00	9.74
May											
Jun											
Sub-total	5.52	0.00	0.00	0.00	5.52	0.00	1.56	0.06	0.01	0.00	155.51
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total	5.52	0.00	0.00	0.00	5.52	0.00	1.56	0.06	0.01	0.00	155.51

Monthly Summary Waste Flow Table for 2022

Notes:

(1) The inert C&D material except slurry and bentonite are disposed at Mui Wo Temporary Public Fill Bank (MW-PFRF)

(2) The slurry and bentonite are disposed at Tseung Kwan O Area 137 Fill Bank (TKO137FB)

(3) The non-inert waste is disposed at NENT or Outlying Islands Transfer Facilities

(4) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(5) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material

(6) Assume the density of fill material is 2 tonne/m3.



Appendix 6.1

Three Months Rolling Programme – May 2022 to July 2022

KL-CW JV

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

Reference No. : DC/2020/02 Revision No. : -

Tentative Three Months (May, June & July 2022) Construction Rolling Program

ltem	Construction Activities
1	Excavation, sewer laying, construction of manhole at Pui O Lo UkTsuen
2	SSWSTW and HDD works
3	Site formation works for POSPS
4	Drilling works
5	Excavation works
6	ELS works