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TEST REPORT

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China Harbour Engineering Co Ltd

Contract No.: CV/2021/09 Handling of Surplus Public Fill (2022-2023)

TUEN MUN AREA 38 FILL BANK
MONTHLY EM&A REPORT NO.13
(JANUARY 2023)

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Issue Date: 14 January 2023

- Report No.: ENA30696





Our Ref: PL-202303002

ETS-Testconsult Limited 8/F, Block B, Veristrong Industrial Centre 34-36 Au Pui Wan Street Fo Tan, Hong Kong

Attention: Mr. C L Lau

1 March 2023

Dear Mr. Lau,

RE: Contract No. CV/2021/09

Handling of Surplus Public Fill (2022-2023)

Monthly EM&A Report (No. 13) for January 2023 for the Tuen Mun Area 38 Fill Bank

Reference is made to your submission of the Monthly EM&A Report for January 2023 for the Tuen Mun Area 38 Fill Bank, we are pleased to inform you that we have no adverse comment on the captioned report.

Thank you for your attention. Please do not hesitate to contact the undersigned should you have any queries.

Yours faithfully,

Tour Faulberg

F. C. Tsang

Independent Environmental Checker

CEDD - Mr. T M YEUNG cc.



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EXECUTIVE SUMMARY

This monthly Environmental Monitoring and Audit (EM&A) report No.13 was prepared by Environmental Team (ET) of ETS-Testconsult Ltd (ETL) for the "Contract No. CV/2021/09 Handling of Surplus Public Fill (2022-2023) – Tuen Mun (TM) Area 38 Fill Bank" (The Project).

This report documented the findings of EM&A Works conducted during the operation phase of Fill Bank at TM Area 38 in January 2023.

Site Activities

As informed by the Contractor, the site activities in this reporting period were as below:

- 1. Operation of the Public Fill Reception Facilities at Tuen Mun Fill Bank (TMFB);
- 2. Operation and Maintenance of Crushing plant at TMFB;
- 3. Delivery of public fill to Taishan at TMFB;
- 4. Operation of the Integrated Public Fill Reception at TMFB;
- 5. Operation and Maintenance of Wheel Washing Bays and Facilities at TMFB;
- 6. Operation and Maintenance of Wash House at TMFB
- 7. Personnel Position Tracking and Proximity Detection System of Moving Plant at TMFB;
- 8. Operation and Maintenance a Digital Works Supervision System (DWSS) for TMFB;
- 9. Operation of a New Soil Platform for Preliminary Sorting of Public Fill at TMFB;
- 10. Operation of Concrete Slab at Wet Deposition Platform in TMFB
- 11. Operation of Al System for Crushing Plant at TMFB
- 12. Implementation of C Easy system at TMFB (phase 1)

Environmental Monitoring Progress

The summary of the monitoring activities in this monitoring month is listed below:

- 24-hour TSP Monitoring: 5 Occasions at 2 designated locations
- 1-hour TSP Monitoring: 15 Occasions at 2 designated locations
- · Noise, Daytime: 9 Occasions at 2 designated locations
- Marine Water Quality Monitoring: 12 Occasions at 4 designated locations
- Weekly-site inspection: 4 Occasions

Air Monitoring

No exceedance of Action and Limit level was recorded for 1-hr and 24-hr TSP monitoring in the reporting period.

Noise Monitoring

No exceedance of Action and Limit level for noise monitoring was recorded in the reporting period.

Marine Water Quality Monitoring

No exceedance of action and limit level was recorded in the reporting period.

Weekly Site Inspection

In general, performance on environmental mitigation measures implemented was found to be satisfactory in this reporting period. The major findings observed during site inspections are presented in the Section 7.0.

Environmental Complaints, Notification of summons and successful prosecutions

No complaint, notification of summon and prosecution with respect to environmental issues was received in this reporting period.



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Future Key Issues

Based on the site inspections and forecast of engineering works in the coming month, key issues to be considered are as follows:

- Dust generation from activities on site, such as vehicular movements along unpaved area and rock crushing activities;
- Noise impact from operating equipment and machinery on site;
- · Wastewater and surface runoff from the site discharged into nearby water body; and
- Storage and usage of chemicals / fuel and chemical waste / waste oil.

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1.0 INTRODUCTION

China Harbour Engineering Co Ltd (CHEC) appointed Environmental Team (ET) of ETS-Testconsult Limited (ETL) to undertake the Environmental Monitoring and Audit (EM&A) for the "Contract No: CV/2021/09 –Handling of Surplus Public Fill (2022-2023) – Tuen Mun (TM) Area 38 Fill Bank" (The Project).

In accordance with the Condition 4 of Part C of Environmental Permit (No.: EP-210/2005/E) (the EP), an EM&A programme as set out in the Project Profile should be implemented.

The EM&A programme requires environmental monitoring for air quality, water quality and environmental site inspections for air quality, water quality, landscape and visual, and waste management. The EM&A requirements for each parameter described in the following sections include:

- All monitoring parameters;
- Monitoring schedules for the reporting month and forthcoming months:
- Action and Limit levels for all environmental parameters;
- Event/Action Plans:
- Environmental mitigation measures, as recommended in the Project Profile; and
- Environmental requirements in contract documents.

Baseline monitoring was completed in May 2003 by Stanger Asia Ltd. Action and Limit Levels were established for air and water quality parameters based on the baseline monitoring results.

This report documented the findings of EM&A Works conducted during the operation phase of Fill Bank at Tuen Mun Area 38 in January 2023.

2.0 PROJECT INFORMATION

2.1 Construction Programme

Details of construction programme are shown in Appendix G.

2.2 Project Organization and Management Structure

The organization chart and lines of communication with respect to the on-site environmental management and monitoring program are shown in Appendix A.

2.3 Contact Details of Key Personnel

The key personnel contact names and telephone numbers are shown in Table 2.1.

Table 2.1 Contact Details of Key Personnel

| Organization | Name of Key Staff | Project Role | Tel. No. | Fax No. |
|----------------------|------------------------------------|------------------------------|--------------------------|-----------|
| CEDD | Mr. C W Au Yeung, Andrew Cheung | Engineer's Representative | 2623 9267 / 2762 5588 | 2714 0113 |
| IEC (Acuity) | Mr. F C Tsang | IEC | 2698 9097 | 2333 1316 |
| Contractor (CHZH-JV) | Zhou Chang Ying | Senior Project Manager | 96266299 | 22474108 |
| ET (ETL) | C. L. Lau | ET Leader | 2946 7791 | 2695 3944 |

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3.0 CONSTRUCTION PROGRESS IN THIS REPORTING MONTH

As informed by the Contractor, the activities in the reporting month include:

- 1. Operation of the Public Fill Reception Facilities at Tuen Mun Fill Bank (TMFB);
- 2. Operation and Maintenance of Crushing plant at TMFB;
- 3. Delivery of public fill to Taishan at TMFB;
- 4. Operation of the Integrated Public Fill Reception at TMFB;
- 5. Operation and Maintenance of Wheel Washing Bays and Facilities at TMFB;
- 6. Personnel Position Tracking and Proximity Detection System of Moving Plant at TMFB;
- 7. Operation and Maintenance a Digital Works Supervision System (DWSS) for TMFB;
- 8. Operation of a New Soil Platform for Preliminary Sorting of Public Fill at TMFB;
- 9. Operation of Concrete Slab at Wet Deposition Platform in TMFB
- 10. Operation of Al System for Crushing Plant at TMFB
- 11. Implementation of C Easy System at TMFB (phase 1)

4.0 AIR QUALITY MONITORING

4.1 Monitoring Requirement

1-hr and 24-hr TSP levels were monitored in the reporting month. Table 4.3 shows the Action and Limit Levels for the environmental monitoring works.

4.2 Monitoring Equipment

Both 1-hour and 24-hour TSP air quality monitoring was performed using a GMWS2310 High Volume Air Sampler (HVS) located at each of the designated monitoring station. Table 4.1 summarizes the equipment used in the air quality monitoring programme. Copies of the calibration certificates for the HVS and calibrator are attached in Appendix B1.

Table 4.1 Air Quality Monitoring Equipment

| Equipment | Model and Make |
|------------|-------------------------|
| HVS | Graseby GMW 2484 & 1180 |
| Calibrator | Tisch TE-5025A 3999 |

4.3 Monitoring Parameters, Frequency and Duration

Table 4.2 summarizes the monitoring parameters, monitoring duration and frequencies of air quality monitoring.

Table 4.2 Monitoring parameters, duration, frequency of air quality monitoring

| Parameter | Duration | Frequency |
|-----------|----------|--------------------------|
| 24-hr TSP | 24 hr | Once per six days |
| 1-hr TSP | 1 hr | Three times per six days |

4.4 Monitoring Locations and Schedule

In accordance with the Project Profile, two air-quality monitoring stations, namely TM-A1 and TM-A2, were selected for the 1-hr TSP and 24-hr TSP sampling.

Since the area for existing air monitoring station TM-A2 near Tipping Hall No.1 was handed over to EcoPark, air monitoring station TM-A2 was cancelled and the air monitoring was carried out at an alternative air monitoring station TM-RA2 (refer to Figure 1 attached) from 28 October 2008.

The locations of monitoring stations are shown in Figure 1.

During the reporting month, 1-hr and 24-hr TSP monitoring were carried out as the schedule. The details for 24-hr and 1-hr TSP monitoring carried out in this reporting month are summarized in Appendix B2.

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4.5 Monitoring Methodology

Both 1-hr and 24-hr air quality monitoring (High Volume Sampler)

Instrumentation

High volume sampler (HVS) complete with appropriate sampling inlets were employed for both 1-hour and 24-hour TSP monitoring. The sampler is composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complies with that required by USEPA standard Title 40, Code of Federation Regulations Chapter 1 (Part 50).

Installation

The installation of HVS refers to the requirement stated in Appendix D2 "General Technical Requirements of Environmental Monitoring" in the Environmental Monitoring and Audit Guidelines for Development Projects in Hong Kong published by EPD.

Operation/Analytical Procedures

Operating/analytical procedures for the operation of HVS are as below:

- Prior to the commencement of the dust sampling, the flow rate of the high volume sampler was properly set (between 0.6m³/min and 1.7m³/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50. The flow rate is indicated on the flow rate chart.
- For TSP sampling, fiberglass filters (GA-55) were used.
- The power supply was checked to ensure the sampler worked properly.
- On sampling, the sampler was operated 5 minutes to establish thermal equilibrium before placing any filter media at designated air monitoring station.
- The filter holding frame was then removed by loosening the four nuts and carefully a weighted and conditioned filter was centered with the stamped number upwards, on a supporting screen.
- The filter was aligned on the screen so that the gasket formed an air-tight seal on the outer edges of the filter. Then the filter holder frame was tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges.
- The programmable timer will be set for a sampling period of 1 hour / 24 hours. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number.).
- After sampling, the filter was transferred from the filter holder of the HVS to a sealed plastic bag and sent to the laboratory for weighting. The elapsed time was also recoded.
- Before weighting, all filters were equilibrated in a 3esiccators for 24 hour with the temperature of 25°C + 3°C and the relative humidity (RH) <50% +5%.

Maintenance & Calibration

- The HVS and their accessories should be maintained in good working condition, such as replacing motor brushes routinely and checking electrical wiring to ensure a continuous power supply.
- HVS should be calibrated at bi-monthly intervals.

Wind Data Monitoring

Wind data included wind speed and wind direction were directly extracted from Tuen Mun Station of Hong Kong Observatory during this reporting month. The wind data are presented in Appendix E.

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4.6 Action and Limit Levels

Table 4.3 shows the Action and Limit levels for 24-hr TSP and 1-hr TSP monitoring.

Table 4.3 Action and Limit Levels for 24-hr TSP and 1-hr TSP

| Monitoring | 24-hr TSP (μg/m³) | | 1-hr TSP (μg/m³) | |
|------------|-------------------|-------------|------------------|-------------|
| Location | Action Level | Limit Level | Action Level | Limit Level |
| TM-A1 | 192 | 260 | 344 | 500 |
| TM-RA2 * | 192 | 260 | 344 | 500 |

Remark (*): Since the area for existing air monitoring station TM-A2 near Tipping Hall No.1 was handed over to EcoPark, air monitoring station TM-A2 was cancelled and the air monitoring was carried out at an alternative air monitoring station TM-RA2 from 28 October 2008. Since dust monitoring stations TM-A2 and TM-RA2 are located close to the major dust emission sources and no significant difference between them on the prevailing meteorological conditions, the baseline data from TM-A2 can also be valid in the case of TM-RA2.

4.7 Event-Action Plans

Please refer to Appendix F for details.

4.8 Results and Observations

All monitoring data of both 1-hr and 24-hr TSP monitoring is provided in Appendix B2. Graphical presentation of 1-hr and 24-hr TSP monitoring results for the reporting period is shown in Appendix B3. Wind data, including wind speed and wind direction, are annexed in Appendix E.

No exceedance of Action and Limit level was recorded for 1-hr and 24-hr TSP monitoring in the reporting month.

Generally, the Contractor implemented sufficient dust mitigation measures, including operation of wheel washing facilities and road dampening by water bowsers on the main haul roads and unpaved areas.

5.0 MARINE WATER QUALITY MONITORING

5.1 Monitoring Requirements

In accordance with the Project Profile, impact marine water quality monitoring was conducted three days per week. Measurements were taken at both mid-flood and mid-ebb tides at three depths (i.e. 1m below surface, mid depth and 1m from seabed) at two control monitoring stations (TM-FC1 and TM-FC2) and two impact monitoring stations (TM-FM1and TM-FM2).

5.2 Monitoring Locations

As stipulated in the EM&A requirement, there were four monitoring stations undertaken during the impact monitoring. Figure 2 shows the locations of the marine water quality monitoring stations.

5.3 Monitoring Parameters and Frequency

Monitoring of the marine water quality parameters and frequency are listed in Table 5.1.

Table 5.1 Monitoring Parameters and Frequency of the marine water

| Monitoring Station | Parameter | Frequency | No. of Depths | |
|----------------------|-------------------------|-----------------------------|---------------------|--|
| | Depth (m) | | | |
| Control Stations: | Temperature (°C) | 0 down hand | 3 (Surface, mid- | |
| TM-FC1 (Mid-ebb) and | Dissolved Oxygen | | | |
| TM-FC2 (Mid-flood) | (mg/L and % saturation) | 3 days/week, 2 tides/day | | |
| Impact Stations: | Turbidity (NTU) | 2 lides/day | depth & bottom) | |
| TM-FM1 and TM-FM2 | Salinity (ppt) | | | |
| | Suspended solids (mg/L) | | | |

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5.4 Monitoring Methodology and Equipment Used

For Location of the monitoring stations

Global Positing System (GPS)

A hand-held digital GPS was used to identify the designated monitoring stations prior to water sampling.

For Water Depth measurement

Echo Sounder

A portable, battery-operated echo sounder was used for the determination of water depth at each designated monitoring station.

For In-situ Water Quality Measurement

All in-situ monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme before use, and subsequently recalibrated at 3 monthly intervals or sometimes longer throughout all stages of the water quality monitoring.

Dissolved Oxygen, Salinity, Turbidity and Temperature Measuring Equipment

A portable, weatherproof multiparameter water quality meter (YSI Pro DSS) which complete with cable, sensor and DC power source were used for measuring DO, turbidity, salinity, pH and temperature:

- a dissolved oxygen level in the range of 0 to 50 mg/L and 0-500 % saturation;
- ■a turbidity in range 0-4000 NTU;
- a salinity in range 0-70 ppt;
- ■a temperature of -5-70 degree Celsius

A membrane electrode with automatic temperature compensation complete with a cable was installed.

For Water Sampling and Sample Analysis

In-situ monitoring was carried out at three depths: 1 meter below water surface, at mid-depth and 1 meter above the seabed. At each sampling depth, duplicate readings of dissolved oxygen content and turbidity were taken. The probes were drop into water, two consecutive measurements of dissolved oxygen (DO), dissolved oxygen saturation (DOS), turbidity and salinity were taken. The difference between the two readings of each set was more than 25% of the value of the first reading while a third measurement would be conducted to ensure data precision.

Water Sampler

A water sampler comprising a transparent PVC cylinder, with a capacity of not less than 2 liters, was lowered into the water body at the predetermined depth. The both opening ends of the sampler were then closed accordingly by dead weight and water samples were collected.

Water Container

The sample container, made by high-density polythene, was rinsed with a portion of the water sample. The water sample was then transferred to the container, labeled with a unique sample ID and sealed with a screw cap. The water samples were stored in a cool box maintained at 4°C. The water samples were then delivered to a local HOKLAS-accredited laboratory (Environmental Laboratory, ETS-Testconsult Ltd, HOKLAS Registration No. 022) on the same day for analysis.

The summary of testing method of testing parameter as recommended by EIA or required by EPD, with the QA/QC results in accordance with the requirement of HOKLAS or international accredited scheme is shown in Table 5.2. For the QA/QC procedures, one QC sample, one duplicate sample

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and one sample spike of every batch of 20 samples were analysis. The QA/QC results are summarized in Appendix N.

Table 5.2 Summary of testing procedure

| Laboratory Analysis | Testing Procedure | Detection Limit |
|------------------------|---|-----------------|
| Total suspended solids | In house method based on APHA 19 th ed 2540D | 1.0 mg/L |

In-situ measurement

All in-situ monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme before use. Responses of sensors and electrodes were checked with certified standard solutions before each use. The DO sensor was calibrated by wet bulb method and a zero check in distilled water was performed with the turbidity and salinity sensor before the strat of measurement.

At each measurement/sampling depth, two consecutive measurements of dissolved oxygen (DO), dissolved oxygen saturation (DOS), turbidity and salinity were taken. For DO, DOS ,Turbidity and Salinity, measurements were conducted three days per week at both mid-ebb and mid-flood tides at three depths (i.e. 1m below surface, mid depth and 1m from seabed). The duplicate measurements were averaged if the difference was not greater than 25%. If the difference is greater than 25%, repeat measurement will be required to be carried out.

Table 5.3 shows the equipment used for in-situ monitoring of water quality. The calibration certificates are attached in Appendix C1.

Table 5.3 Details of Marine Water Quality Monitoring Equipment (In-site measurement)

| Parameter | Model | Date of Calibration | Due Date | Equipment No. |
|---|---|---------------------|----------|----------------|
| Coordinate of Monitoring stations | Garmin eTrex 10 | | | ET/EW/005/09 |
| Dissolved Oxygen (Saturation), Temperature, Salinity, Turbidity | YSI Pro DSS Multiparameter Water Quality Meter | 28/11/22 | 27/02/23 | ET/EW/008/010* |
| Water Depth | Speedtech SM- 5 | | | ET/EW/002/08 |

Remark: Indicates the instrument should be calibrated on site.

5.5 Action and Limit Levels

The water quality criteria, namely Action and Limit (A/L) levels are presented in the table below.

Table 5.4Water Quality Action and Limit Levels

| Parameter | Action Level | Limit Level |
|----------------------------|---|---|
| DO (mg/L) Surface & Middle | | Surface & Middle |
| | <4.78 mg/L (5%-ile of baseline data) | <4.00 mg/L (1%-ile of baseline data) |
| | <u>Bottom</u> | <u>Bottom</u> |
| | <4.16 mg/L (5%-ile of baseline data) | <2.00 mg/L |
| SS (mg/L) | >120% of the upstream control station's | >130% of the upstream control station's |
| (Depth- | SS at the same tide on the same day | SS at the same tide on the same day |
| averaged) | | |
| Turbidity (NTU) | >120% of the upstream control station's | >130% of the upstream control station's |
| (Depth- | turbidity at the same tide on the same | turbidity at the same tide on the same |
| averaged) | day | day |

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5.6 Event and Action Plan

Please refer to the Appendix F for details.

5.7 Monitoring Duration and Period in this reporting period

Table 5.5 is the time schedule for the marine water quality monitoring events that were conducted in this reporting period. Duration of marine water quality monitoring is detailed in Appendix C2.

Table 5.5 Time Schedule of Marine Water Quality Monitoring

| | January 2023 | | | | | | | |
|--------|--------------|---------|-----------|----------|--------|----------|--|--|
| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | | |
| 1 | 2 | 3 | 4 | 5 ▼ | 6 | 7 | | |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 | | |
| 15 | 16 | 17 ▼ | 18 | 19 ▼ | 20 | 21 | | |
| 22 | 23 | 24 | 25 | 26 ▼ | 27 | 28 ▼ | | |
| 29 | 30 ▼ | 31 | | | | | | |
| | | | | | | | | |

Remark: (▼) = Marine water quality monitoring carried out by ET

5.8 Marine Water Quality Monitoring Results

The impact water quality measurement results are detailed in Appendix C2. Appendix C3 presents the water quality monitoring data and graphical presentations of monitoring results respectively. The summary of marine water quality exceedances is shown in Table 5.6.

Table 5.6 Summary of Marine Water Quality Exceedances in this reporting period

| | | Exceedance | D | 0 | | | |
|-----------|------------|------------|---------------------|--------|-----------|----|-------|
| Tide | Station | Level | Surface & Middle | Bottom | Turbidity | SS | Total |
| | TM-FM1 | Action | 0 | 0 | 0 | 0 | 0 |
| Mid-Ebb | TIVI-TIVIT | Limit | 0 | 0 | 0 | 0 | 0 |
| IVIIU-EDD | TM-FM2 | Action | 0 | 0 | 0 | 0 | 0 |
| | | Limit | 0 | 0 | 0 | 0 | 0 |
| | TM-FM1 | Action | 0 | 0 | 0 | 0 | 0 |
| Mid- | TIVI-TIVIT | Limit | 0 | 0 | 0 | 0 | 0 |
| Flood | TM-FM2 | Action | 0 | 0 | 0 | 0 | 0 |
| | | Limit | 0 | 0 | 0 | 0 | 0 |
| Т. | otal | Action | 0 | 0 | 0 | 0 | 0 |
| | Ulai | Limit | 0 | 0 | 0 | 0 | 0 |

According to the summary of marine water monitoring results, no exceedance of action and limit level was recorded in this reporting month.

6.0 Noise Monitoring

6.1 Monitoring Requirements

Noise monitoring was conducted at 2 designated monitoring stations as specified in the Sections 25.10A of the Particular Specification for good site practice.

The equipment, parameter, frequency, duration, methodology, calibration details, results and observations of the noise monitoring for the reporting month are presented in this section.

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6.2 Monitoring Equipment

An Integrating Sound Level Meter was used for noise monitoring. It was a Type 1 sound level meter capable of giving a continuous readout of the noise level reading including equivalent continuous sound pressure level (L_{eq}) and percentile sound pressure level (L_{x}). It complies with International Electro Technical Commission Publications IEC 61672 Type 1 specification, and speed in m/s was used to monitor the wind speed.

Table 6.1 summarizes noise monitoring equipment model being used. A copy of the calibration certificate for noise meter and calibrator are attached in Appendix D1.

Table 6.1 Noise Monitoring Equipment

| Equipment | Model |
|-------------------|------------|
| Sound Level Meter | Rion NL-52 |
| Calibrator | Rion NC-73 |

6.3 Monitoring Parameters, Duration and Frequency

Duration, frequencies and parameters of noise measurement are presented in Table 6.2.

Table 6.2 Duration, Frequencies and Parameters of Noise Monitoring

| Time period | Duration/min | Parameters | Frequency |
|---|--------------|---|----------------|
| Day-time: 0700-1900 hrs on normal weekday | 30 | L _{eq} , L ₁₀ , L ₉₀ | Twice per week |

6.4 Monitoring Locations and Period

Since Lands Dept did not approve to carry out noise monitoring at their own area where the noise monitoring stations TM-N1 and TM-N2 located due to the security, noise monitoring carried out at two noise monitoring stations TM-RN1 and TM-RN2 (refer to the figure 3 attached) from 18 December 2007.

The noise monitoring locations, TM-RN1 and TM-RN2 are shown in Figure 3. The noise measurement at TM-RN1 and TM-RN2 are façade measurement.

The noise-monitoring period of monitoring stations is summarized in Appendix D2.

6.5 Monitoring Procedures and Calibration Details

Operation/Analysis Procedures

- The Sound Level Meter was set on a tripod at a height of 1.2m above the ground.
- For free field measurement, the meter was positioned away from any nearby reflective surfaces.
- The battery condition was checked to ensure the correct functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:

Frequency weighting: A
 Time weighting: Fast
 Time measurement: 30 min

- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94 dB at 1000HZ. If the difference in the calibration level before and after measurement was more than 1dB, the measurement would be considered invalid and repeat measurement would be required after re-calibration or repair of the equipment.
- The wind speed was frequently checked with a portable wind meter.
- During the monitoring period, the Leq, L10 and L90 were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
- Free Field correction to the measurements should be made. Correction factor of +3dB(A) should be made to the free Field measurements. Noise monitoring would be cancelled in the presence of fog, rain, wind with a steady speed exceeding 5m/s, or wind gusts exceeding 10m/s.

Maintenance and Calibration

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- The microphone head of the sound level meter and calibrator are cleaned with soft cloth in quarterly intervals.
- The meter is sent to the supplier or HOKLAS laboratory to check and calibrated in yearly intervals.

6.6 Action and Limit Levels

The Action and Limit levels for noise levels derived as illustrated in Table 6.3.

Table 6.3 Action and Limit Levels for noise monitoring

| Time Period | Action | Limit |
|----------------------------------|---|----------|
| 0700-1900 hrs on normal weekdays | When one documented complaint is received | 65 dB(A) |

6.7 Event-Action Plans

Please refer to the Appendix F for details.

6.8 Results and Observation

The detail of the noise monitoring is provided in Appendix D2. Graphical presentation of the monitoring result for the reporting period is shown in Appendix D3.

Since no documented complaint on noise issue was received in this reporting period, no Action Level exceedance was recorded. Besides, no exceedance in Limit Level was recorded according to the result from Day-time noise monitoring.

The major sources of noise pollution observed in this reporting month were noise from the traveling dump trucks and from the operation of site machines.

7.0 ENVIRONMENTAL AUDIT

7.1 Weekly ET Site Inspections and EPD's Site Inspection

7.1.1 Weekly ET Site Inspections

Weekly site inspections were carried out by ET to monitor the timely implementation of proper environmental pollution control and mitigation measures for the Project. In this reporting month, four weekly site inspections were conducted on 05, 12, 19 and 27 January 2023. Summaries of key findings of weekly ET site inspections in this month are described in Table 7.1.

Table 7.1 Key Findings of Weekly ET Site Inspections in this reporting month

| | -, -, -, -, -, -, -, -, -, -, -, -, -, - | | | | | | |
|---------|--|-----------------------------|-------------------------|---------------|--|--|--|
| Date | Key Findings | Action(s) Taken | Action(s) Taken by | Rectification | | | |
| | | recommended by ET | the Contractor | Status by ET | | | |
| | | - | during the site audit | , | | | |
| 05 | | | | | | | |
| January | No defective work or obse | ervation was recorded durin | ng the weekly ET site i | inspection | | | |
| 2023 | 3 · · · · · · · · · · · · · · · · · · · | | | | | | |
| 12 | | | | | | | |
| January | No defective work or observation was recorded during the weekly ET site inspection | | | | | | |
| 2023 | , | | | | | | |
| 19 | | | | | | | |
| January | No defective work or obse | ervation was recorded durir | ng the weekly ET site | inspection | | | |
| 2023 | | | | | | | |
| 27 | | | | | | | |
| January | Oil drum was found near pier | To remove the oil drum | | Follow-up | | | |
| 2023 | no. 1 | properly | | | | | |

7.1.2 The State of Air Quality Control of 3RS area in TMFB

As there was the concern about the dust emission in the 3RS collection area of TMFB, EPD arranged a joint site inspection on 06 October 2022 and the contractor carried out mitigation

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measures, including increasing the frequency of water spraying by water lorries, setting up water spraying machine in the 3RS area and providing cleaning at the site haul road, to minimize the dust emission. The location of 3RS and discharge point would be inspected in every weekly environmental audit.

7.1.3 EPD's Site Inspection

No EPD's site inspection was carried out in the reporting month.

7.2 Review of Environmental Monitoring Procedures

The monitoring works conducted by the ET were inspected internally on a regular basis. The following observations have been recorded for the monitoring works:

Air Quality Monitoring

- The monitoring team recorded the observations around the monitoring stations within and outside of the construction site.
- The monitoring team recorded the temperature, air pressure and general weather condition on the monitoring day.

Water Quality Monitoring

- The monitoring team recorded the observations around the monitoring stations, which might affect the results; and
- Major water pollution sources were identified and recorded.

Noise Monitoring

- The monitoring team recorded the observations around the monitoring station, which might affect the results.
- Major noise sources were identified and recorded.

7.3 Status of Environmental Licensing and Permitting

All permits/licenses valid in this reporting month are summarized in Table 7.2.

Table 7.2 Summary of environmental licensing and permit status

| Description | Permit No. | Valid | Period | Section | | | | | |
|-----------------------|------------|----------|----------|--|--|--|--|--|--|
| | | From | То | | | | | | |
| Environmental | EP- | 22/12/21 | 31/12/23 | Issued | | | | | |
| Permit | 210/2005/E | | | | | | | | |
| Chemical Waste | 5296-421- | 20/04/17 | | Spent battery containing heavy metals and | | | | | |
| Registration | C1186-33 | | | spent lubricating oil | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Effluent Discharge | TBC | TBC | TBC | Effluent arising from vehicle washing and | | | | | |
| License | | | | dust suppression activities and | | | | | |
| | | | | contaminated surface runoff treated by | | | | | |
| | | | | screening facilities and sedimentation | | | | | |
| | | | | tanks (sedimentation and chemical | | | | | |
| | | | | precipitation). | | | | | |
| Marine Dumping | TBC | TBC | TBC | Approval for dumping 499,999 tons | | | | | |
| Permit | | | | (approximately equal to 277,777 cu.m. | | | | | |
| | | | | bulked quantity) of Public Fill (Reclamation | | | | | |
| | | | | Materials) from Tseung Kwan O Area 137 | | | | | |
| | | | | Fill Bank and Tuen Mun Area 38 Fill Bank | | | | | |
| | | | | to designated dumping area at | | | | | |
| D'Ilin au Alanaum (f | 70.40.00.4 | 00/05/47 | | Guanghaiwan of Taishan | | | | | |
| Billing Account for | 7042821 | 22/05/17 | | | | | | | |
| Waste Disposal | | | | | | | | | |

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| Notification Pursuant | 475208 | 12/04/17 | |
|-----------------------|--------|----------|------|
| to Section 3(1) of | | | |
| the Air Pollution | | | |
| Control | | | |
| (Construction Dust) | | | |
| , | | | |

7.4 Implementation Status

7.4.1 Implementation Status of Environmental Mitigation Measures

An updated summary of the Environmental Mitigation Implementation Schedule (EMIS) is presented in Appendix I. Most of the necessary mitigation measures were implemented properly.

7.4.2 Implementation Status of Event and Action Plan

No exceedance of Action and Limit levels was recorded for 1-hr and 24-hr TSP monitoring in the reporting month. Apart from this, there was no exceedance on noise recorded in this month.

According to the marine water monitoring results, no action-level and limit-level exceedance was recorded in this reporting period.

Hence, no further action was required to be implemented.

7.4.3 Implementation Status of Environmental Complaint, Notification of Summon and Successful Prosecution Handling

No complaint, notification of summon and prosecution with respect to environmental issues was received in this reporting period.

A summary of environmental complaints, notifications of summons and successful prosecutions was given in Table 7.3.

Table 7.3 Summary of Environmental Complaints and Prosecutions

| Complaints | logged | Summons served | | Successful Prosecution | |
|--------------|------------|-------------------------|---|------------------------|------------|
| January 2023 | Cumulative | January 2023 Cumulative | | January 2023 | Cumulative |
| 0 | 7 | 0 | 0 | 0 | 0 |

8.0 LANDSCAPE AND VISUAL

Landscape and visual site audit was carried out on a weekly basis to monitor environmental issues in order to ensure that all mitigation measures were implemented timely and properly. The findings in this reporting period were:

- The maximum stockpiling height at the Fill Bank was limited to a maximum of +40 mPD;
- The Contractor hydroseeded the outer slopes of the Fill Bank as far as practicable;
- The Contractor removed the stockpile of public fill in a sequence to allow the outer hydroseeded to be removed later than other portions as far as practicable; and
- Lighting was set to minimize night-time glare.

9.0 WASTE MANAGEMENT

9.1 Summary of Waste disposed of in this period

The actual amounts of different types of waste disposed of by the activities of the Project in the period are shown in Table 9.1 and the Monthly Summary Waste Flow Table is shown in Appendix K.

Table 9.1 Actual amounts of Waste generated in this reporting month

| Waste Type | Actual Amount | Disposal Locations |
|----------------------|---------------|-----------------------|
| Public Fill ('000m³) | 0 | Tuen Mun 38 Fill Bank |
| C&D Waste ('000kg) | 33.44 | WENT Landfill |

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| Chemical Waste (kg)/(L) | 0(L) | Collected by licensed collector |
|-------------------------|------|---------------------------------|
|-------------------------|------|---------------------------------|

9.2 Advice on the Solid and Liquid Waste Management Status

The Contractor should provide sufficient preventive measures during equipment maintenance works so as to avoid oil leakage on the ground. In the event of any oil leakage, the Contractor should clean up the polluted soil and handle all the materials used for this cleaning works as chemical waste.

The drain outlet of all the bunded areas should be plugged properly. Besides, pre-cast drip trays were provided for oil drums at several areas, such as workshop and chemical storage area. The Contractor should collect and dispose of any stagnant water accumulated in the concrete bunding and drip trays and handle them as chemical waste.

The Contractor should use suitable containers with proper labels to store chemical wastes in accordance with Code of Practice on the Packaging, Labeling and Storage of Chemical Waste. The Contractor should also advise their workers of the proper procedures in handling the chemical waste. All the trip tickets for chemical waste disposal should be properly kept in the site office.

The Contractor was reminded to increase the frequency of inspection and cleaning of the site drainage system, including permanent desilting chambers, desilting facilities, oil interceptor bypass tank and all the trapezoidal channels. Moreover, the Contractor should apply approved pesticides in the stagnant water ponds.

All the runoff from the parking area should be pumped to the desilting facilities and oil interceptors to remove suspended solids and oil & grease prior to discharge.

All the discharge measures were managed under Effluent Discharge License. No discharge is allowed before the approval of discharge permit.

10.0 ENVIRONMENTAL NON-CONFORMANCE

10.1 Summary of air quality, noise and marine water quality

No exceedance of Action and Limit level was recorded for 1-hr and 24-hr TSP monitoring in the reporting period.

According to the marine water monitoring results, no action-level and limit-level exceedance was recorded in the reporting period.

The noise level measured at the monitoring station complied with the Limit Level of 65dB(A). No complaint was received regarding noise issue in this reporting period.

10.2 Summary of Environmental Complaints

No complaint was received in this reporting period.

10.3 Summary of Notification of Summons and Prosecution

There was no notification of summon and prosecution respect to environmental issues registered in this reporting period.

11.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Impact monitoring of air quality, noise and water quality were carried out at designated locations in this reporting period.

According to the summary of air monitoring results, no exceedance of Action and Limit levels was recorded for 1-hr and 24-hr TSP monitoring in the reporting period.

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According to the marine water monitoring results, no action-level and limit-level exceedance was recorded in the reporting period.

The noise level measured at the monitoring station complied with the Limit Level of 65dB(A). No complaint was received regarding noise issue in this reporting period.

According to the weekly site inspections carried out in this reporting period, the Contractor generally implemented sufficient dust mitigation measures, including operation of the mist spraying systems and automatic wheel washing facilities, dampening of haul roads and stockpiling areas.

No complaint, prosecution or notification of summons was received in this reporting period.

Recommendations

According to the environmental site inspections performed in the reporting period, the following recommendations were provided:

Air Quality

- Ensure the frequency of water spraying on haul roads, unloading areas and stockpiles to be sufficient to suppress the dust sources;
- Provide proper maintenance for the powered mechanical equipment and barges to avoid emission of dark smoke:
- Provide water spraying onto the truckloads during inspection of fill material;
- Conduct road sweeping on all paved haul roads and public roads especially outside and near the site egress by the road sweeper. Undertake water spraying on stockpiling area by water bowser:
- Erect adequate speed limit signs to advise the truck drivers of the speed limit;
- Operate mist spraying systems and automatic water sprinklers in the Fill Bank;
- Implement the dust mitigation measures for the construction activities;
- Designate proper haul roads to ensure effective water spraying; and
- Ensure all vehicles to be washed before leaving the site egress by provision, operation and maintenance of automatic wheel washing facilities.

Noise

- Conduct noisy activities at a farther location from the NSRs.
- Proper schedule of noisy operation and use of quiet machineries on site.

Water Quality

- Maintain the drainage system, including the trapezoidal channels and permanent desilting chambers regularly; and
- Remove the stagnant water or provide approved pesticides for the stagnant water in the permanent desilting chambers, if any.

Chemical and Waste Management

- Remove waste materials from the site to avoid accumulation regularly;
- Handle and store chemical wastes properly;
- Remove unwanted material in the existing stockpiles and avoid further dumping of such material:
- Provide and maintain sufficient drip trays for diesel drums, chemical containers, chemical waste storage drums and diesel operated generator set;
- Maintain good housekeeping at the workshop area;
- Ensure sufficient tarpaulin sheets are provided to cover drip trays; and
- Avoid soil being polluted during oil filling and equipment maintenance; hence, properly remove and store the contaminated soil, if any.

Landscape and Visual

- Provide hydroseeding on the exposed slopes, on which the final profile has been formed;
- Erect all the site hoarding/chaining fences in accordance with agreed design at proper location;
- Maintain the hydroseeded slopes properly.

12.0 FUTURE KEY ISSUES

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Based on the site inspections and forecast of engineering works in the coming month, key issues to be considered are as follows:

- Dust generation from activities on site, such as vehicular movements along unpaved area and rock crushing activities;
- Noise impact from operating equipment and machinery on site;
- Wastewater and surface runoff from the site discharged into nearby water body;
- Regular checking of the drainage system;
- Flood prevention; and
- Noise from operation of the crushing plant.

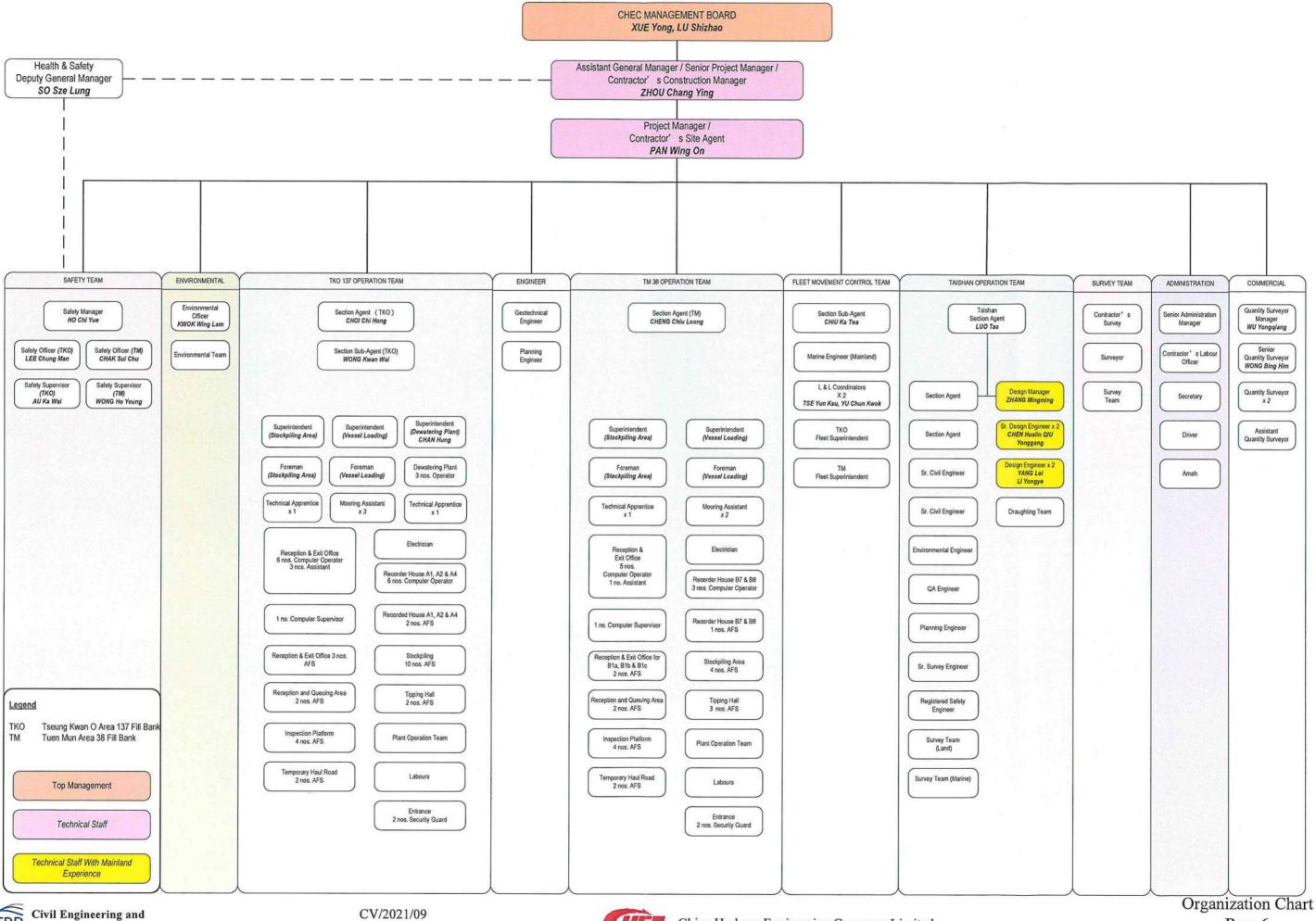
- END OF REPORT -

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Appendix A

Project Organization Chart







Handling of Surplus Public Fill



Appendix B1

Calibration Certificates for Impact Air Quality Monitoring Equipments



東業德勤測試顧問有限公司 ETS-TESTCONSULT LTD.

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T; +852 2695 8318 F; +852 2695 3944 E; ett@ets-testconsult.com W; www.ets-testconsult.com

TEST REPORT

Calibration Report

of

High Volume Air Sampler

Manufacturer

Graseby GMW

Date of Calibration

29 December 2022

Serial No.

2484 (ET/EA/003/27)

Calibration Due Date

28 February 2023

Method

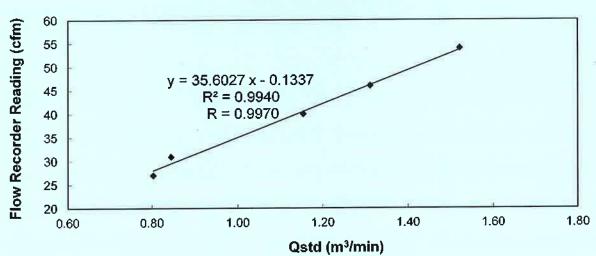
Five-point calibration by using standard calibration kit Tisch TE-5025A refer to the Operations

Manual

Results

| Flow recorder read | ling (cfm) | | 57 | 47 | 42 | 32 | 29 |
|---------------------|---------------|-------|------|--------|------|------|------|
| Qstd (Actual flow r | rate, m³/min) | | 1.58 | 1.36 | 1.17 | 0.89 | 0.83 |
| Pressure : | 768.81 | mm Hg | | Temp.: | 288 | Κ | |

Sampler 2484 Calibration Curve Site: Tuen Mun 38 (TM-A1)



Acceptance Criteria: Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point calibration

The high volume sampler complies* / does not comply* with the specified requirements and is deemed acceptable*/ unacceptable* for use.

Calibrated by

Mike that War

Checked by :

LAU, Chi Leung

MAK, Kei Wai (Assistant Supervisor)

(Environmental Team Leader)

- END OF REPORT -



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TEST REPORT

Calibration Report

of

High Volume Air Sampler

Manufacturer

Graseby GMW

Date of Calibration

29 December 2022

Serial No.

1180 (ET/EA/003/04)

Calibration Due Date

28 February 2023

Method

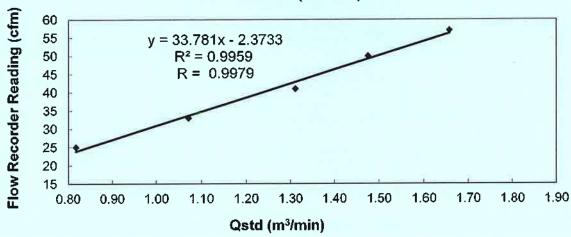
Based on Operations Manual for the 5-point calibration using standard calibration kit

manufactured by Tisch TE-5025 A

Results

| Flow recorder read | ling (cfm) | | 55 | 49 | 44 | 35 | 26 |
|---------------------|--------------|-------|------|--------|------|------|------|
| Qstd (Actual flow r | ate, m³/min) | | 1.68 | 1.55 | 1.35 | 1.13 | 0.83 |
| Pressure : | 768.81 | mm Hg | | Temp.: | 288 | K | |

Sampler 1180 Calibration Curve Site: Tuen Mun (TM-RA2)



Acceptance Criteria: Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point calibration

The high volume sampler complies* / dees not comply* with the specified requirements and is deemed acceptable* / unacceptable * for use.

Calibrated by

MAK, Kei Wai

(Assistant Supervisor)

Checked by

LAU, Chi Leung

(Environmental Team Leader)

- END OF REPORT -



RECALIBRATION DUE DATE:

January 21, 2023

Certificate of Calibration

Calibration Certification Information

Cal. Date: January 21, 2022

TE-5025A

Rootsmeter S/N: 438320

Calibrator S/N: 3999

Ta: 295
Pa: 754.1

°K

Operator: Jim Tisch Calibration Model #:

mm Hg

| Run | Vol. Init (m3) | Vol. Final (m3) | ΔVol. (m3) | ΔTime (min) | ΔP (mm Hg) | ΔH (in H2O) |
|-----|-------------------|--------------------|---------------|----------------|---------------|----------------|
| 1 | 1 | 2 | 1 | 1.4540 | 3.2 | 2.00 |
| 2 | 3 | 4 | 1 | 1.0230 | 6.4 | 4.00 |
| 3 | 5 | 6 | 1, | 0.9170 | 8.0 | 5.00 |
| 4 | 7 | 8 | 1 | 0.8750 | 8.9 | 5.50 |
| 5 | 9 | 10 | 1 | 0.7200 | 12.9 | 8.00 |

| | | Data Tabula | tion | | |
|-------------|----------|---|--------|----------|------------|
| Vstd | Qstd | $\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ | | Qa | √∆H(Ta/Pa) |
| (m3) | (x-axis) | (y-axis) | . Va | (x-axis) | (y-axis) |
| 0.9981 | 0.6865 | 1.4159 | 0.9958 | 0.6848 | 0.8845 |
| 0.9939 | 0.9715 | 2.0024 | 0.9915 | 0.9692 | 1.2509 |
| 0.9917 | 1.0815 | 2.2387 | 0.9894 | 1.0789 | 1.3985 |
| 0.9905 | 1.1320 | 2.3480 | 0.9882 | 1.1294 | 1.4668 |
| 0.9852 | 1.3684 | 2.8318 | 0.9829 | 1.3651 | 1.7690 |
| | m= | 2.08075 | | m≖ | 1.30293 |
| QSTD | b≃ | -0.01322 | QA | b= | -0.00826 |
| | r= | 0.99996 | | ŗ= | 0.99996 |

| Calculation | lS |
|--|---|
| Vstd= ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta) | Va = ΔVol((Pa-ΔP)/Pa) |
| Qstd= Vstd/ΔTime | Qa= Va/ΔTime |
| For subsequent flow rat | e calculations: |
| Qstd= $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$ | $Qa = 1/m \left(\left(\sqrt{\Delta H \left(Ta/Pa \right)} \right) - b \right)$ |

| | Standard Conditions |
|---------------|-------------------------------|
| Tstd: | 298.15 ° _K |
| Pstd: | 760 mm Hg |
| - | Key |
| | r manometer reading (in H2O) |
| ΔP: rootsmet | ter manometer reading (mm Hg) |
| Ta: actual ab | solute temperature (°K) |
| | rometric pressure (mm Hg) |
| b: intercept | |
| m: slope | |

RECALIBRATION

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



Appendix B2 Impact Air Quality Monitoring Results



Summary of 24-hr TSP Monitoring Results

Monitoring Station : TM-A1

| Sta | art | Fin | ish | Elaps | e Time | Sampling | Flow Rate | (m³/min.) | Average | Filter W | leight (g) | Cana (u.g/m ³) |
|----------|-------|----------|-------|----------|----------|------------|-----------|-----------|-----------|----------|------------|----------------------------|
| Date | Time | Date | Time | Initial | Final | Time (hrs) | Initial | Final | (m³/min.) | Initial | Final | Conc. (μg/m ³) |
| 02/01/23 | 10:00 | 03/01/23 | 10:00 | 15676.31 | 15700.31 | 24.00 | 1.0149 | 1.0149 | 1.0149 | 3.0056 | 3.1050 | 68 |
| 08/01/23 | 09:30 | 09/01/23 | 09:30 | 15703.31 | 15727.31 | 24.00 | 1.0430 | 1.0430 | 1.0430 | 3.0225 | 3.1291 | 71 |
| 14/01/23 | 10:00 | 15/01/23 | 10:00 | 15730.31 | 15754.31 | 24.00 | 1.0149 | 1.0149 | 1.0149 | 3.0109 | 3.1147 | 71 |
| 20/01/23 | 09:30 | 21/01/23 | 09:30 | 15757.31 | 15781.31 | 24.00 | 1.0149 | 1.0149 | 1.0149 | 3.0165 | 3.1144 | 67 |
| 26/01/23 | 09:05 | 27/01/23 | 09:05 | 15784.31 | 15808.31 | 24.00 | 1.0430 | 1.0430 | 1.0430 | 3.0038 | 3.1089 | 70 |

Monitoring Station : TM-RA2

| Sta | art | Fin | ish | Elapse | e Time | Sampling | Flow Rate | (m ³ /min.) | Average | Filter W | Veight (g) | Cana (u.g/m ³) |
|----------|-------|----------|-------|----------|----------|------------|-----------|------------------------|-----------|----------|------------|----------------------------|
| Date | Time | Date | Time | Initial | Final | Time (hrs) | Initial | Final | (m³/min.) | Initial | Final | Conc. (μg/m ³) |
| 02/01/23 | 10:10 | 03/01/23 | 10:10 | 30963.53 | 30987.53 | 24.00 | 1.1359 | 1.1359 | 1.1359 | 3.0385 | 3.1563 | 72 |
| 08/01/23 | 09:30 | 09/01/23 | 09:30 | 30990.53 | 31014.53 | 24.00 | 1.1655 | 1.1655 | 1.1655 | 3.0169 | 3.1512 | 80 |
| 14/01/23 | 10:10 | 15/01/23 | 10:10 | 31017.53 | 31041.53 | 24.00 | 1.1359 | 1.1359 | 1.1359 | 3.0244 | 3.1553 | 80 |
| 20/01/23 | 09:40 | 21/01/23 | 09:40 | 31044.53 | 31068.53 | 24.00 | 1.1359 | 1.1359 | 1.1359 | 3.0622 | 3.1914 | 79 |
| 26/01/23 | 09:15 | 27/01/23 | 09:15 | 31071.53 | 31095.53 | 24.00 | 1.1655 | 1.1655 | 1.1655 | 3.0176 | 3.1502 | 79 |



Summary of 1-hr TSP Monitoring Results

Monitoring Station : TM-A1

| MOUNTOINI | g Glallon | • | 1 171 | -/\ I | | | | | | | |
|-----------|-----------|--------|----------|----------|------------|-----------|-------------|-----------|----------|-----------|---------------|
| Date | Tir | me | Elapse | e Time | Sampling | Flow Rate | e (m³/min.) | Average | Filter W | eight (g) | Como (a/m³) |
| Dale | Start | Finish | Initial | Final | Time (hrs) | Initial | Final | (m³/min.) | Initial | Final | Conc. (µg/m³) |
| 03/01/23 | 11:00 | 12:00 | 15700.31 | 15701.31 | 1.00 | 0.9868 | 0.9868 | 0.9868 | 2.9871 | 2.9973 | 173 |
| 05/01/23 | 10:00 | 11:00 | 15701.31 | 15702.31 | 1.00 | 1.0149 | 1.0149 | 1.0149 | 3.0239 | 3.0348 | 179 |
| 07/01/23 | 14:45 | 15:45 | 15702.31 | 15703.31 | 1.00 | 1.0149 | 1.0149 | 1.0149 | 3.0308 | 3.0415 | 175 |
| 10/01/23 | 09:30 | 10:30 | 15727.31 | 15728.31 | 1.00 | 1.0149 | 1.0149 | 1.0149 | 3.0210 | 3.0318 | 177 |
| 10/01/23 | 11:00 | 12:00 | 15728.31 | 15729.31 | 1.00 | 0.9868 | 0.9868 | 0.9868 | 3.0060 | 3.0162 | 172 |
| 12/01/23 | 09:50 | 10:50 | 15739.31 | 15740.31 | 1.00 | 1.0149 | 1.0149 | 1.0149 | 2.9903 | 3.0011 | 178 |
| 17/01/23 | 09:30 | 10:30 | 15754.31 | 15755.31 | 1.00 | 0.9868 | 0.9868 | 0.9868 | 3.0059 | 3.0161 | 172 |
| 17/01/23 | 11:00 | 12:00 | 15755.31 | 15756.31 | 1.00 | 0.9868 | 0.9868 | 0.9868 | 3.0079 | 3.0182 | 174 |
| 19/01/23 | 09:30 | 10:30 | 15756.31 | 15757.31 | 1.00 | 1.0149 | 1.0149 | 1.0149 | 3.0352 | 3.0461 | 179 |
| 21/01/23 | 10:40 | 11:40 | 15781.31 | 15782.31 | 1.00 | 1.0149 | 1.0149 | 1.0149 | 3.0163 | 3.0267 | 171 |
| 21/01/23 | 14:30 | 15:30 | 15782.31 | 15783.31 | 1.00 | 1.0149 | 1.0149 | 1.0149 | 3.0043 | 3.0148 | 173 |
| 21/01/23 | 15:35 | 16:35 | 15783.31 | 15784.31 | 1.00 | 0.9868 | 0.9868 | 0.9868 | 3.0254 | 3.0353 | 167 |
| 28/01/23 | 09:20 | 10:20 | 15808.31 | 15809.31 | 1.00 | 1.0149 | 1.0149 | 1.0149 | 3.0307 | 3.0415 | 178 |
| 28/01/23 | 10:30 | 11:30 | 15809.31 | 15810.31 | 1.00 | 1.0149 | 1.0149 | 1.0149 | 3.0254 | 3.0360 | 174 |
| 31/01/23 | 10:00 | 11:00 | 15810.31 | 15811.31 | 1.00 | 1.0149 | 1.0149 | 1.0149 | 3.0455 | 3.0556 | 166 |

Summary of 1-hr TSP Monitoring Results



Monitoring Station : TM-RA2

| 5 . | Tiı | me | Elapse | e Time | Sampling | Flow Rate | e (m³/min.) | Average | Filter W | er Weight (g) | 2. |
|----------|-------|--------|----------|----------|------------|-----------|-------------|-----------|----------|---------------|----------------------------|
| Date | Start | Finish | Initial | Final | Time (hrs) | Initial | Final | (m³/min.) | Initial | Final | Conc. (μg/m ³) |
| 03/01/23 | 11:10 | 12:10 | 30987.53 | 30988.53 | 1.00 | 1.1063 | 1.1063 | 1.1063 | 3.0183 | 3.0307 | 187 |
| 05/01/23 | 10:10 | 11:10 | 30988.53 | 30989.53 | 1.00 | 1.1359 | 1.1359 | 1.1359 | 2.9971 | 3.0102 | 192 |
| 07/01/23 | 14:50 | 15:50 | 30989.53 | 30990.53 | 1.00 | 1.1359 | 1.1359 | 1.1359 | 3.0633 | 3.0761 | 188 |
| 10/01/23 | 09:35 | 10:35 | 31014.53 | 31015.53 | 1.00 | 1.1359 | 1.1359 | 1.1359 | 3.0476 | 3.0605 | 189 |
| 10/01/23 | 11:10 | 12:10 | 31015.53 | 31016.53 | 1.00 | 1.1063 | 1.1063 | 1.1063 | 3.0279 | 3.0401 | 184 |
| 12/01/23 | 09:55 | 10:55 | 31016.53 | 31017.53 | 1.00 | 1.1359 | 1.1359 | 1.1359 | 2.9945 | 3.0074 | 190 |
| 17/01/23 | 09:35 | 10:35 | 31041.53 | 31042.53 | 1.00 | 1.1063 | 1.1063 | 1.1063 | 3.0269 | 3.0391 | 184 |
| 17/01/23 | 11:10 | 12:10 | 31042.53 | 31043.53 | 1.00 | 1.1063 | 1.1063 | 1.1063 | 3.0089 | 3.0210 | 182 |
| 19/01/23 | 09:35 | 10:35 | 31043.53 | 31044.53 | 1.00 | 1.1359 | 1.1359 | 1.1359 | 3.0266 | 3.0398 | 193 |
| 21/01/23 | 10:45 | 11:45 | 31068.53 | 31069.53 | 1.00 | 1.1359 | 1.1359 | 1.1359 | 3.0321 | 3.0445 | 182 |
| 21/01/23 | 14:40 | 15:40 | 31069.53 | 31070.53 | 1.00 | 1.1359 | 1.1359 | 1.1359 | 3.0442 | 3.0564 | 179 |
| 21/01/23 | 15:45 | 16:45 | 31070.53 | 31071.53 | 1.00 | 1.1063 | 1.1063 | 1.1063 | 3.0308 | 3.0423 | 173 |
| 28/01/23 | 09:30 | 10:30 | 31095.53 | 31096.53 | 1.00 | 1.1359 | 1.1359 | 1.1359 | 3.0310 | 3.0441 | 192 |
| 28/01/23 | 10:35 | 11:35 | 31096.53 | 31097.53 | 1.00 | 1.1359 | 1.1359 | 1.1359 | 3.0312 | 3.0440 | 188 |
| 31/01/23 | 10:10 | 11:10 | 31097.53 | 31098.53 | 1.00 | 1.1359 | 1.1359 | 1.1359 | 3.0588 | 3.0710 | 179 |

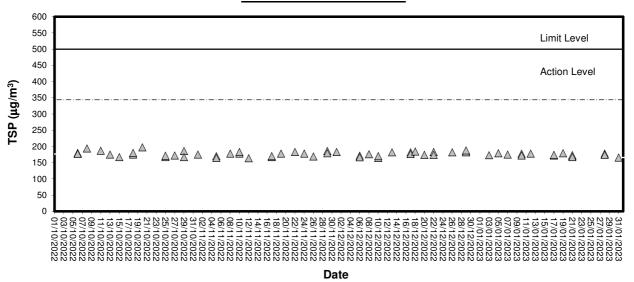


Appendix B3

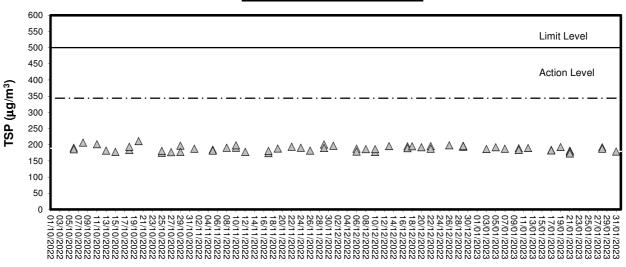
Graphical Plots of Impact Air Quality Monitoring Data



1-hour TSP level at TM-A1



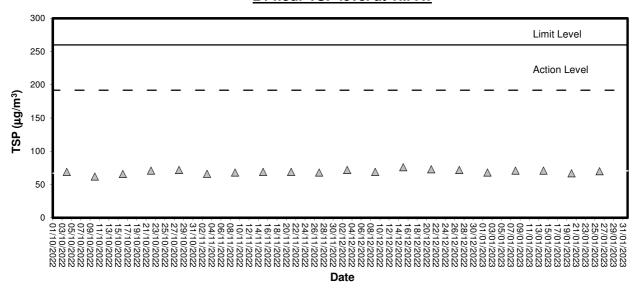
1-hour TSP level at TM-RA2



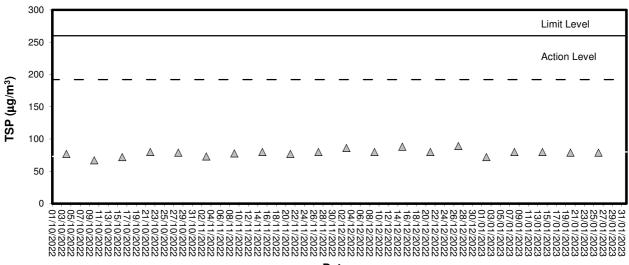
Date



24-hour TSP level at TM-A1



24-hour TSP level at TM-RA2



Date



Appendix C1

Calibration Certificates for Impact Marine Water Quality Monitoring Equipments

Performance Check / Calibration of Multiparameter Water Quality Meter

Equipment Ref. No. :

ET/EW/008/010

Manufacturer

YSI

Model No.

Pro DSS

Serial No.

18E105421

Date of Calibration

11/28/2022

Calibration Due Date

2/27/2023

Results

1. Temperature

(Method Reference: Section 6 of internation Accreditation New Zealand Technical Guide no. 3 Second edition March 2008:

Working Thermometer Calibration Procedure)

| Reading of Reference Thermometer (°C) | Displayed Reading (°C) | Tolerance (°C) |
|---------------------------------------|------------------------|----------------|
| 15.7 | 15.8 | +0.1 |
| 25.0 | 25.1 | +0.1 |
| 29.2 | 29.4 | +0.2 |

Tolerance Limit (°C): ± 2.0

2. pH

(Method Reference: APHA 19ed 4500-H B)

| Expected Reading (pH unit) | Displayed Reading (pH unit) | Tolerance (pH unit) |
|----------------------------|-----------------------------|---------------------|
| 4,00 | 7 - 9 | |
| 6.86 | | |
| 9.18 | | |

Tolerance Limit (pH unit): ± 0.10

3. Conductivity

(Method Reference: APHA 19ed 2510 B)

| Expected Reading (µS/cm) | Displayed Reading (μS/cm) | Tolerance (%) |
|--------------------------|---------------------------|---------------|
| 146.9 | 145.6 | -0.9 |
| 1412 | 1418 | +0.4 |
| 12890 | 12986 | +0.7 |
| 58760 | 58427 | -0.6 |

Tolerance Limit (μS/cm): ± 10.0%

4. Salinity

(Method Reference: APHA 19ed 2520 B)

| Expected Reading (g/L) | Displayed Reading (g/L) | Tolerance (%) |
|------------------------|-------------------------|---------------|
| 10.0 | 10.09 | +0.9 |
| 20.0 | 19.66 | -1.7 |
| 30.0 | 30.15 | +0.5 |

Tolerance Limit (g/L): ± 10.0%



| quipment Ref. No. ; ET/EW/008/010 | Manufacturer | : YSI |
|--|---|--|
| lodel No. : Pro DSS | Serial No. | : 18E105421 |
| ate of Calibration : 8/30/2022 | Calibration Du | e Date : 2/27/2023 |
| Dissolved Oxygen Method Reference: APHA 19ed 4500-O | | |
| Expected Reading (mg/L) | Displayed Reading (mg/L) | Tolerance (mg/L) |
| 1.78 | 1.86 | +0.08 |
| 4.59 5.81 | 4.52 5.92 | -0.07 +0.11 |
| olerance Limit (mg/L): ± 0.20 Turbidity | | |
| Method Reference: APHA 19ed 2130 B) | | |
| Expected Reading (NTU) | Displayed Reading (NTU) | Tolerance (%) |
| 10 | 10.2 | +2.0 |
| 40 | 40.3 | +0.8 |
| 100 400 | 99.4 394.7 | -0.6 -1.3 |
| | | |
| he equipment complies [#] / does not comp Delete as appropriate | ly [#] with the specified requirements and is deen | med acceptable # / unacceptable " for |
| | | |



Appendix C2

Impact Marine Water Quality Monitoring Results

Monitoring Station : TM-FC1



| | - | Ambient Temp (°C) / | Monitori | ng Depth | Temp | Salinit | ty (ppt) | Dissolv | red Oxygen | ı (mg/L) | | d Oxygen tion (%) | Τι | ırbidity (NT | Ū) | Susper | nded Solids | s (mg/L) |
|----------|----------|------------------------|----------|----------|------|--------------|----------|--------------|------------|-------------------|--------------|----------------------|--------------|--------------|-------------------|------------|-------------|-------------------|
| Date | Time | Weather Condition | | m) . | (°C) | Value | Average | Value | Average | Depth- average | Value | Average | Value | Average | Depth- average | Value | Average | Depth- average |
| | | 18 | Surface | 1.0 | 18.6 | 27.3 27.4 | 27.4 | 6.67 6.63 | 6.65 | 6.57 | 83.9 83.5 | 83.7 | 6.01 | 6.01 | | 2.4 | 2.4 | |
| 03/01/23 | 15:27:06 | | Middle | 11.7 | 18.9 | 28.0 27.8 | 27.9 | 6.49 6.47 | 6.48 | 0.07 | 82.5 82.0 | 82.3 | 6.72 6.73 | 6.73 | 6.64 | 3.3 | 3.2 | 3.2 |
| | | / Fine | Bottom | 22.3 | 19.2 | 28.4 28.4 | 28.4 | 6.20 6.15 | 6.18 | 6.18 | 79.4 78.6 | 79.0 | 7.16 7.18 | 7.17 | | 4.3 3.9 | 4.1 | |
| | | 18 | Surface | 1.0 | 18.7 | 27.2 27.4 | 27.3 | 6.64 | 6.67 | | 83.6 84.5 | 84.1 | 5.99 | 6.00 | | 3.2 | 3.0 | |
| 05/01/23 | 16:27:07 | 10 | Middle | 11.6 | 19.0 | 27.9 | 27.9 | 6.31 | 6.28 | 6.47 | 80.3 | 79.9 | 6.58 | 6.54 | 6.43 | 4.0 | 4.1 | 3.6 |
| | | / Fine | Bottom | 22.3 | 19.2 | 27.8 28.4 | 28.4 | 6.24 6.01 | 6.02 | 6.02 | 79.5 77.0 | 77.2 | 6.50 6.77 | 6.76 | | 4.2 | 3.6 | |
| | | | Surface | 1.0 | 17.8 | 28.4 28.0 | 28.0 | 6.03 6.84 | 6.83 | | 77.4 85.1 | 85.0 | 6.74 6.26 | 6.25 | | 3.2 2.8 | 2.8 | |
| 07/01/23 | 10:08:05 | 17 | Middle | 11.2 | 17.6 | 28.0 28.3 | 28.3 | 6.81 6.37 | 6.36 | 6.59 | 84.8 79.1 | 78.9 | 6.23 6.55 | 6.57 | 6.56 | 2.8 1.9 | 2.1 | 2.7 |
| 07/01/23 | 10.00.03 | / Fine | | | | 28.3 28.5 | | 6.34 6.02 | | 0.00 | 78.7 74.6 | | 6.59 6.87 | | 0.50 | 2.3 | | |
| | | | Bottom | 21.5 | 17.4 | 28.5 27.0 | 28.5 | 6.04 6.80 | 6.03 | 6.03 | 74.7 82.6 | 74.6 | 6.85 6.71 | 6.86 | | 3.7 1.2 | 3.3 | |
| | | 16 | Surface | 1.0 | 16.9 | 27.1 | 27.1 | 6.71 | 6.76 | 6.58 | 81.7 78.5 | 82.2 | 6.70 | 6.71 | | 1.8 | 1.5 | . |
| 10/01/23 | 10:27:07 | | Middle | 11.9 | 17.2 | 27.6 | 27.7 | 6.43 | 6.41 | | 78.9 | 78.7 | 7.45 | 7.44 | 7.35 | 1.0 | 1.1 | 1.3 |
| | | / Fine | Bottom | 22.8 | 17.3 | 28.4 28.6 | 28.5 | 6.13 6.15 | 6.14 | 6.14 | 75.8 75.9 | 75.9 | 7.90 7.92 | 7.91 | | 1.2 | 1.2 | |
| | | 20 | Surface | 1.0 | 20.8 | 28.9 28.9 | 28.9 | 7.47 7.45 | 7.46 | 7.00 | 98.9 98.4 | 98.7 | 2.94 2.92 | 2.93 | | 1.5 1.8 | 1.7 | |
| 12/01/23 | 11:06:05 | | Middle | 10.9 | 20.5 | 29.3 29.3 | 29.3 | 7.13 7.12 | 7.13 | 7.29 | 94.1 94.0 | 94.1 | 3.19 3.21 | 3.20 | 3.25 | 1.0 1.5 | 1.3 | 1.5 |
| | | / Fine | Bottom | 20.7 | 20.2 | 29.5 | 29.6 | 6.89 | 6.89 | 6.89 | 90.5 | 90.6 | 3.62 | 3.62 | | 1.2 | 1.5 | |
| | | 17 | Surface | 1.0 | 17.8 | 28.0 | 28.0 | 7.07 | 7.07 | | 88.0 87.8 | 87.9 | 3.31 | 3.33 | | 1.0 | 2.9 | |
| 14/01/23 | 12:55:01 | 17 | Middle | 11.2 | 17.5 | 28.3 | 28.2 | 6.75 6.74 | 6.75 | 6.91 | 83.6 83.5 | 83.6 | 3.82 | 3.84 | 3.75 | 4.8 | 5.1 | 4.2 |
| | | / Fine | Bottom | 21.3 | 17.3 | 28.5 | 28.5 | 6.39 | 6.38 | 6.38 | 79.0 | 78.9 | 4.08 | 4.07 | | 5.0 | 4.8 | 1 |
| | | 40 | Surface | 1.0 | 17.6 | 28.5 | 28.6 | 6.37 7.34 | 7.34 | | 78.8 91.3 | 91.3 | 4.06 2.86 | 2.86 | | 4.6 1.3 | 2.2 | |
| 17/01/23 | 14:38:06 | 16 | Middle | 11.2 | 17.4 | 28.6 | 28.9 | 7.34 | 7.18 | 7.26 | 91.3 89.1 | 89.0 | 2.86 3.17 | 3.17 | 3.14 | 3.1 5.2 | 5.6 | 4.6 |
| | | / Fine | Bottom | 21.4 | 16.8 | 28.8 | 29.1 | 7.17 6.95 | 6.94 | 6.94 | 88.8 85.4 | 85.3 | 3.16 | 3.41 | | 6.0 | 6.1 | |
| | | | Surface | 1.0 | 16.6 | 29.1 28.2 | 28.3 | 6.93 6.76 | 6.75 | | 85.1 82.3 | 82.2 | 3.42 3.10 | 3.09 | | 6.1 2.2 | 3.0 | |
| 19/01/23 | 16:14:05 | 15 | Middle | 11.3 | 16.5 | 28.3 28.4 | 28.4 | 6.73 6.48 | 6.49 | 6.62 | 82.1 78.8 | 79.0 | 3.08 3.22 | 3.24 | 3.27 | 3.7 | 3.2 | 3.4 |
| 19/01/23 | 16.14.05 | / Fine | | | | 28.4 28.6 | | 6.50 6.31 | | | 79.1 76.5 | | 3.26 3.48 | | 3.21 | 2.4 3.2 | | 3.4 |
| | | | Bottom | 21.7 | 16.3 | 28.5 28.3 | 28.6 | 6.35 7.15 | 6.33 | 6.33 | 77.0 88.8 | 76.8 | 3.45 3.74 | 3.47 | | 5.1 1.3 | 4.2 | |
| | | 16 | Surface | 1.0 | 17.6 | 28.2 | 28.2 | 7.13 | 7.14 | 6.96 | 88.5 | 88.6 | 3.78 | 3.76 | | 2.5 | 1.9 | |
| 21/01/23 | 9:47:49 | | Middle | 11.3 | 17.4 | 28.5 | 28.5 | 6.79 | 6.77 | | 84.1 | 83.8 | 4.12 | 4.13 | 4.12 | 1.9 | 2.0 | 2.2 |
| | | / Fine | Bottom | 21.6 | 17.2 | 28.9 28.9 | 28.9 | 6.13 6.11 | 6.12 | 6.12 | 75.8 75.6 | 75.7 | 4.47 | 4.48 | | 3.6 1.5 | 2.6 | |
| | | 16 | Surface | 1.0 | 17.3 | 28.7 28.7 | 28.7 | 6.95 6.93 | 6.94 | 6 65 | 86.0 85.8 | 85.9 | 3.88 3.91 | 3.90 | | 2.8 3.4 | 3.1 | |
| 26/01/23 | 11:42:51 | | Middle | 11.2 | 17.1 | 29.1 29.1 | 29.1 | 6.37 6.35 | 6.36 | 6.65 | 78.7 78.5 | 78.6 | 4.26 4.29 | 4.28 | 4.24 | 3.5 2.4 | 3.0 | 3.0 |
| | | / Fine | Bottom | 21.4 | 16.8 | 29.4 | 29.4 | 6.06 | 6.04 | 6.04 | 74.6 74.0 | 74.3 | 4.54 4.56 | 4.55 | 1 | 3.8 | 3.0 | |
| | | 16 | Surface | 1.0 | 17.1 | 28.3 | 28.3 | 6.73 | 6.72 | | 82.8 82.5 | 82.7 | 4.38 4.43 | 4.41 | | 2.0 | 2.3 | |
| 28/01/23 | 12:36:01 | 10 | Middle | 11.3 | 16.8 | 28.6 | 28.6 | 6.43 | 6.42 | 6.57 | 78.8 | 78.6 | 4.76 | 4.77 | 4.81 | 3.1 | 2.8 | 2.6 |
| | | / Fine | Bottom | 21.6 | 16.5 | 28.6 | 29.1 | 6.41 | 6.08 | 6.08 | 78.5 74.4 | 74.3 | 4.78 5.22 | 5.24 | 1 | 2.4 | 2.9 | 1 |
| | | | Surface | 1.0 | 16.8 | 29.1 29.0 | 29.1 | 6.07 6.67 | 6.66 | | 74.1 81.9 | 81.7 | 5.26 5.43 | 5.45 | | 3.1 2.6 | 4.3 | |
| 30/01/23 | 12:57:08 | 16 | Middle | 11.6 | 17.2 | 29.1 29.1 | 29.1 | 6.64 6.32 | 6.31 | 6.48 | 81.5 78.2 | 78.0 | 5.47 5.93 | 5.95 | 5.81 | 5.9 5.2 | 3.9 | 3.4 |
| 50/01/23 | 12.07.00 | / Fine | | | | 29.1 29.2 | | 6.29 6.07 | | 6.00 | 77.7 75.3 | | 5.96 6.02 | | 3.01 | 2.5 | | 3.4 |
| | | | Bottom | 22.2 | 17.3 | 29.3 | 29.3 | 6.09 | 6.08 | 6.08 | 75.6 | 75.5 | 6.06 | 6.04 | | 1.8 | 2.1 | |

Monitoring Station : TM-FM1



| Data | Time | Ambient Temp (°C) / | Monitori | ng Depth | Temp | Salinit | ty (ppt) | Dissolv | ed Oxygen | (mg/L) | | d Oxygen tion (%) | Tu | urbidity (NT | U) | Susper | nded Solids | s (mg/L) |
|----------|----------|------------------------|----------|----------|------|----------------------|----------|--------------|-----------|-------------------|--------------|----------------------|----------------------|--------------|-------------------|------------|-------------|-------------------|
| Date | Time | Weather Condition | (1 | m) | (°C) | Value | Average | Value | Average | Depth- average | Value | Average | Value | Average | Depth- average | Value | Average | Depth- average |
| | | 18 | Surface | 1.0 | 18.7 | 27.5 27.4 | 27.5 | 6.75 6.78 | 6.77 | 6.66 | 85.2 85.5 | 85.4 | 6.08 | 6.09 | | 4.1 | 4.3 | |
| 03/01/23 | 15:06:09 | | Middle | 8.9 | 19.1 | 28.1 28.2 | 28.2 | 6.54 6.58 | 6.56 | 0.00 | 83.5 83.9 | 83.7 | 6.43 6.42 | 6.43 | 6.40 | 3.2 | 3.6 | 3.6 |
| | | / Fine | Bottom | 16.9 | 19.3 | 28.6 | 28.7 | 6.24 6.26 | 6.25 | 6.25 | 80.2 80.5 | 80.4 | 6.70 | 6.70 | | 2.6 | 3.1 | |
| | | 18 | Surface | 1.0 | 18.8 | 27.4 | 27.9 | 6.59 6.62 | 6.61 | | 83.3 | 83.6 | 6.80 | 6.81 | | 3.3 | 2.7 | |
| 05/01/23 | 16:06:08 | 18 | Middle | 8.8 | 19.1 | 28.1 | 28.2 | 6.25 | 6.26 | 6.43 | 79.8 | 80.0 | 7.10 7.15 | 7.13 | 7.11 | 3.8 | 3.8 | 3.1 |
| | | / Fine | Bottom | 16.6 | 19.3 | 28.3 | 28.6 | 5.99 6.07 | 6.03 | 6.03 | 77.0 78.0 | 77.5 | 7.15 7.36 7.41 | 7.39 | | 3.4 | 2.9 | |
| | | 16 | Surface | 1.0 | 17.6 | 28.6 27.9 27.9 | 27.9 | 6.88 | 6.86 | | 85.2 84.6 | 84.9 | 5.98 6.01 | 6.00 | | 4.1 5.6 | 4.9 | |
| 07/01/23 | 9:43:03 | - 10 | Middle | 8.9 | 17.4 | 28.2 | 28.2 | 6.35 | 6.34 | 6.60 | 78.5 78.2 | 78.3 | 6.19 | 6.17 | 6.21 | 3.2 | 3.3 | 3.3 |
| | | / Fine | Bottom | 16.8 | 17.2 | 28.6 | 28.6 | 6.05 | 6.04 | 6.04 | 74.7 | 74.6 | 6.44 | 6.46 | | 1.3 | 1.9 | |
| | | 16 | Surface | 1.0 | 17.0 | 27.2 | 27.3 | 6.77 6.71 | 6.74 | | 82.6 81.8 | 82.2 | 6.10 6.13 | 6.12 | | 1.6 | 1.6 | |
| 10/01/23 | 10:06:09 | | Middle | 8.9 | 17.3 | 28.2 | 28.3 | 6.29 6.25 | 6.27 | 6.51 | 77.7 77.1 | 77.4 | 6.53 6.57 | 6.55 | 6.49 | 1.8 | 1.7 | 1.7 |
| | | / Fine | Bottom | 16.8 | 17.4 | 28.8 | 28.8 | 6.27 5.97 | 6.12 | 6.12 | 74.1 74.3 | 74.2 | 6.81 6.82 | 6.82 | | 1.7 | 1.8 | |
| | | 19 | Surface | 1.0 | 20.7 | 29.1 29.1 | 29.1 | 7.35 7.36 | 7.36 | 7.00 | 97.2 97.4 | 97.3 | 3.19 3.19 | 3.19 | | 1.8 | 1.5 | |
| 12/01/23 | 10:43:05 | | Middle | 9.2 | 20.5 | 29.4 29.4 | 29.4 | 7.09 7.09 | 7.09 | 7.22 | 93.6 93.8 | 93.7 | 3.33 3.31 | 3.32 | 3.34 | 1.0 | 1.7 | 1.5 |
| | | / Fine | Bottom | 17.4 | 20.2 | 29.7 29.7 | 29.7 | 6.92 6.92 | 6.92 | 6.92 | 91.0 91.0 | 91.0 | 3.51 3.50 | 3.51 | | 1.1 | 1.3 | |
| | | 17 | Surface | 1.0 | 17.7 | 28.2 28.2 | 28.2 | 7.21 7.19 | 7.20 | 7.04 | 89.6 89.4 | 89.5 | 3.04 3.07 | 3.06 | | 3.1 3.9 | 3.5 | |
| 14/01/23 | 12:36:42 | | Middle | 8.9 | 17.5 | 28.6 28.6 | 28.6 | 6.88 6.86 | 6.87 | 7.04 | 85.4 85.2 | 85.3 | 3.45 3.47 | 3.46 | 3.50 | 3.5 3.7 | 3.6 | 3.8 |
| | | / Fine | Bottom | 16.8 | 17.3 | 29.0 29.0 | 29.0 | 6.49 6.46 | 6.48 | 6.48 | 80.5 79.9 | 80.2 | 3.97 3.99 | 3.98 | | 4.2 | 4.3 | |
| | | 16 | Surface | 1.0 | 17.5 | 28.6 28.6 | 28.6 | 7.19 7.18 | 7.19 | 7.09 | 89.3 89.2 | 89.3 | 2.93 2.95 | 2.94 | | 5.9 6.7 | 6.3 | |
| 17/01/23 | 14:15:06 | | Middle | 9.6 | 17.3 | 28.8 28.8 | 28.8 | 6.99 6.99 | 6.99 | 7.00 | 86.6 86.4 | 86.5 | 3.24 3.24 | 3.24 | 3.21 | 4.9 5.8 | 5.4 | 4.9 |
| | | / Fine | Bottom | 18.2 | 16.9 | 29.0 29.0 | 29.0 | 6.71 6.72 | 6.72 | 6.72 | 82.6 83.0 | 82.8 | 3.45 3.42 | 3.44 | | 3.3 | 3.2 | |
| | | 16 | Surface | 1.0 | 16.9 | 28.3 28.4 | 28.4 | 7.09 7.12 | 7.11 | 6.97 | 86.9 87.3 | 87.1 | 3.54 3.52 | 3.53 | | 2.0 | 2.0 | |
| 19/01/23 | 15:48:05 | | Middle | 8.9 | 16.7 | 28.6 28.6 | 28.6 | 6.81 6.85 | 6.83 | | 83.3 83.7 | 83.5 | 3.80 3.77 | 3.79 | 3.76 | 2.1 3.5 | 2.8 | 3.0 |
| | | / Fine | Bottom | 16.8 | 16.6 | 28.7 28.7 | 28.7 | 6.65 6.62 | 6.64 | 6.64 | 81.2 80.7 | 81.0 | 3.99 3.95 | 3.97 | | 4.4 | 4.3 | |
| | | 17 | Surface | 1.0 | 17.7 | 28.2 28.2 | 28.2 | 7.24 7.22 | 7.23 | 7.02 | 90.0 89.8 | 89.9 | 3.86 3.88 | 3.87 | | 2.4 3.5 | 3.0 | |
| 21/01/23 | 9:19:35 | | Middle | 8.9 | 17.5 | 28.4 28.4 | 28.4 | 6.82 6.80 | 6.81 | 7.02 | 84.6 84.3 | 84.5 | 4.17 4.20 | 4.19 | 4.28 | 2.6 2.6 | 2.6 | 2.4 |
| | | / Fine | Bottom | 16.8 | 17.3 | 28.8 28.8 | 28.8 | 6.37 6.36 | 6.37 | 6.37 | 78.9 78.8 | 78.8 | 4.75 4.79 | 4.77 | | 2.1 1.4 | 1.8 | |
| | | 16 | Surface | 1.0 | 17.3 | 28.8 28.8 | 28.8 | 7.01 6.95 | 6.98 | 6.72 | 86.8 86.1 | 86.4 | 4.24 4.26 | 4.25 | | 3.3 2.2 | 2.8 | |
| 26/01/23 | 11:17:08 | | Middle | 8.9 | 17.1 | 29.0 | 29.0 | 6.48 | 6.46 | | 80.0 79.4 | 79.7 | 4.35 | 4.37 | 4.42 | 3.0 | 3.4 | 3.0 |
| | | / Fine | Bottom | 16.7 | 16.9 | 29.3 29.3 | 29.3 | 6.11 | 6.09 | 6.09 | 75.3 74.7 | 75.0 | 4.65 4.62 | 4.64 | | 3.2 2.7 | 3.0 | |
| | | 16 | Surface | 1.0 | 16.9 | 28.1 | 28.1 | 7.12 | 7.10 | 6.92 | 87.1 86.6 | 86.9 | 4.25 4.23 | 4.24 | | 3.6 | 3.4 | |
| 28/01/23 | 12:16:00 | | Middle | 8.8 | 16.6 | 28.4 | 28.4 | 6.74 | 6.74 | | 82.1 82.0 | 82.1 | 4.41 | 4.42 | 4.55 | 3.6 2.9 | 3.3 | 3.2 |
| | | / Fine | Bottom | 16.7 | 16.4 | 28.8 | 28.8 | 6.18 | 6.16 | 6.16 | 75.2 74.6 | 74.9 | 4.98 5.01 | 5.00 | | 3.0 | 2.9 | |
| | | 16 | Surface | 1.0 | 16.8 | 28.8 | 28.9 | 6.48 | 6.46 | 6.28 | 78.5 78.9 | 78.7 | 5.72 5.76 | 5.74 | | 1.7 | 1.7 | |
| 30/01/23 | 12:36:06 | | Middle | 8.7 | 17.2 | 29.2 | 29.3 | 6.12 | 6.11 | | 75.8 75.5 | 75.7 | 6.19 | 6.17 | 6.00 | 3.6 | 3.4 | 2.4 |
| | | / Fine | Bottom | 16.4 | 17.3 | 29.3 29.3 | 29.3 | 6.02 6.06 | 6.04 | 6.04 | 74.7 75.2 | 75.0 | 6.06 6.10 | 6.08 | | 1.8 | 2.1 | |

Monitoring Station : TM-FM2



| | | Ambient Temp (°C) / | Monitori | ng Depth | Temp | Salini | ty (ppt) | Dissolv | red Oxygen | (mg/L) | | d Oxygen tion (%) | Τι | urbidity (NT | U) | Suspe | nded Solid: | s (mg/L) |
|----------|----------|------------------------|----------|----------|------|--------------|----------|--------------|------------|-------------------|--------------|----------------------|--------------|--------------|-------------------|------------|-------------|-------------------|
| Date | Time | Weather Condition | | m) | (°C) | Value | Average | Value | Average | Depth- average | Value | Average | Value | Average | Depth- average | Value | Average | Depth- average |
| | | 18 | Surface | 1.0 | 18.7 | 27.6 27.5 | 27.6 | 6.73 6.74 | 6.74 | | 85.0 85.1 | 85.1 | 6.43 6.20 | 6.32 | | 3.8 | 3.7 | |
| 03/01/23 | 14:49:05 | | Middle | 8.6 | 18.9 | 27.9 28.1 | 28.0 | 6.52 6.47 | 6.50 | 6.62 | 82.9 82.4 | 82.7 | 6.70 6.69 | 6.70 | 6.71 | 2.9 | 2.9 | 3.0 |
| | | / Fine | Bottom | 16.2 | 19.2 | 28.5 | 28.5 | 6.37 | 6.36 | 6.36 | 81.7 81.2 | 81.5 | 7.11 7.14 | 7.13 | | 2.0 | 2.3 | |
| | | 40 | Surface | 1.0 | 19.0 | 27.6 | 27.6 | 6.80 | 6.81 | | 86.4 | 86.4 | 6.59 | 6.58 | | 2.9 | 2.7 | |
| 05/01/23 | 15:49:08 | 18 | Middle | 8.6 | 19.1 | 27.5 28.4 | 28.5 | 6.81 6.52 | 6.55 | 6.68 | 86.4 83.4 | 83.9 | 6.56 6.80 | 6.79 | 6.80 | 2.5 3.4 | 3.1 | 2.9 |
| | | / Fine | Bottom | 16.1 | 19.4 | 28.6 28.9 | 28.9 | 6.58 6.20 | 6.22 | 6.22 | 84.4 80.0 | 80.2 | 6.78 7.01 | 7.04 | | 2.8 3.0 | 3.0 | |
| | | | Surface | 1.0 | 17.8 | 28.9 28.1 | 28.1 | 6.23 6.78 | 6.77 | U.LL | 80.4 84.4 | 84.2 | 7.06 6.12 | 6.11 | | 2.9 3.6 | 4.6 | |
| 07/01/23 | 9:22:00 | 17 | Middle | 9.0 | 17.6 | 28.1 28.4 | 28.4 | 6.75 6.49 | 6.48 | 6.62 | 83.9 80.6 | 80.4 | 6.10 6.37 | 6.35 | 6.41 | 5.5 2.9 | 3.7 | 3.6 |
| | | / Fine | Bottom | 17.0 | 17.3 | 28.4 28.7 | 28.7 | 6.47 6.33 | 6.32 | 6.32 | 80.2 78.3 | 78.2 | 6.33 6.79 | 6.78 | | 4.5 2.5 | 2.4 | |
| | | | | | | 28.7 27.5 | | 6.30 6.80 | | | 78.0 82.7 | | 6.76 6.36 | | | 2.3 1.9 | | |
| | | 16 | Surface | 1.0 | 16.8 | 27.3 28.1 | 27.4 | 6.86 6.42 | 6.83 | 6.63 | 83.7 78.7 | 83.2 | 6.35 6.70 | 6.36 | | 2.6 1.2 | 2.3 | |
| 10/01/23 | 9:49:09 | / Fine | Middle | 8.7 | 17.0 | 28.2 | 28.2 | 6.45 6.07 | 6.44 | | 79.2 74.9 | 79.0 | 6.69 7.01 | 6.70 | 6.69 | 1.4 | 1.3 | 1.7 |
| | | | Bottom | 16.4 | 17.2 | 28.6 | 28.6 | 6.09 | 6.08 | 6.08 | 75.4 91.0 | 75.2 | 7.04 | 7.03 | | 1.8 | 1.5 | |
| | | 20 | Surface | 1.0 | 20.7 | 29.3 | 29.3 | 6.89 | 6.88 | 6.76 | 91.3 | 91.2 | 3.17 | 3.17 | | 2.2 | 2.2 | |
| 12/01/23 | 10:20:08 | | Middle | 8.6 | 20.5 | 29.5 29.5 | 29.5 | 6.62 6.64 | 6.63 | | 87.5 87.7 | 87.6 | 3.30 3.29 | 3.30 | 3.32 | 2.1 3.3 | 2.7 | 2.9 |
| | | / Fine | Bottom | 16.1 | 20.3 | 29.7 29.6 | 29.7 | 6.49 6.51 | 6.50 | 6.50 | 85.5 85.7 | 85.6 | 3.47 3.49 | 3.48 | | 2.3 5.3 | 3.8 | |
| | | 16 | Surface | 1.0 | 17.7 | 28.2 28.2 | 28.2 | 7.18 7.15 | 7.17 | 7.04 | 89.3 88.9 | 89.1 | 2.86 2.88 | 2.87 | | 4.4 | 4.3 | |
| 14/01/23 | 12:20:25 | | Middle | 9.0 | 17.4 | 28.5 28.4 | 28.4 | 6.92 6.90 | 6.91 | | 85.7 85.4 | 85.6 | 3.30 3.27 | 3.29 | 3.30 | 1.5 | 1.4 | 3.4 |
| | | / Fine | Bottom | 17.0 | 17.2 | 28.8 28.8 | 28.8 | 6.51 6.48 | 6.50 | 6.50 | 80.5 79.9 | 80.2 | 3.73 3.74 | 3.74 | | 5.1 3.9 | 4.5 | |
| | | 16 | Surface | 1.0 | 17.6 | 28.6 28.6 | 28.6 | 7.05 7.04 | 7.05 | 6.89 | 87.7 87.6 | 87.7 | 3.01 | 3.02 | | 4.2 6.1 | 5.2 | |
| 17/01/23 | 13:51:09 | | Middle | 8.8 | 17.3 | 28.7 28.7 | 28.7 | 6.73 6.75 | 6.74 | 0.00 | 83.3 83.5 | 83.4 | 3.29 3.22 | 3.26 | 3.26 | 3.3 2.6 | 3.0 | 3.7 |
| | | / Fine | Bottom | 16.5 | 17.0 | 28.9 28.9 | 28.9 | 6.52 6.55 | 6.54 | 6.54 | 80.3 80.7 | 80.5 | 3.52 3.52 | 3.52 | | 1.9 4.3 | 3.1 | |
| | | 16 | Surface | 1.0 | 16.8 | 28.4 | 28.4 | 7.04 7.01 | 7.03 | 6.90 | 86.1 85.9 | 86.0 | 3.66 3.69 | 3.68 | | 3.4 2.9 | 3.2 | |
| 19/01/23 | 15:25:07 | | Middle | 9.0 | 16.6 | 28.5 28.5 | 28.5 | 6.77 6.79 | 6.78 | 0.90 | 82.6 83.0 | 82.8 | 3.95 3.91 | 3.93 | 3.89 | 2.5 | 3.2 | 2.9 |
| | | / Fine | Bottom | 17.0 | 16.5 | 28.6 28.7 | 28.7 | 6.49 6.53 | 6.51 | 6.51 | 79.0 79.6 | 79.3 | 4.08 4.06 | 4.07 | | 1.7 3.1 | 2.4 | |
| | | 17 | Surface | 1.0 | 17.8 | 28.3 28.3 | 28.3 | 7.22 7.19 | 7.21 | 7.00 | 90.0 89.6 | 89.8 | 3.58 3.56 | 3.57 | | 2.2 1.4 | 1.8 | |
| 21/01/23 | 8:56:01 | | Middle | 9.0 | 17.6 | 28.6 28.6 | 28.6 | 6.81 6.76 | 6.79 | 7.00 | 84.7 84.1 | 84.4 | 3.95 3.98 | 3.97 | 3.94 | 2.5 2.5 | 2.5 | 2.2 |
| | | / Fine | Bottom | 17.1 | 17.4 | 29.0 | 29.0 | 6.11 | 6.09 | 6.09 | 75.9 75.2 | 75.6 | 4.31 4.27 | 4.29 | | 1.8 | 2.4 | |
| | | 16 | Surface | 1.0 | 17.3 | 28.4 | 28.4 | 7.05 7.04 | 7.05 | | 87.1 87.0 | 87.0 | 4.01 | 4.03 | | 2.9 | 3.1 | |
| 26/01/23 | 10:56:27 | | Middle | 9.0 | 17.2 | 28.7 | 28.7 | 6.81 | 6.79 | 6.92 | 84.1 83.5 | 83.8 | 4.17 | 4.18 | 4.25 | 2.6 | 2.7 | 3.1 |
| | | / Fine | Bottom | 17.0 | 16.8 | 29.0 | 29.0 | 6.33 | 6.32 | 6.32 | 77.7 77.5 | 77.6 | 4.54 | 4.56 | | 3.2 | 3.7 | |
| | | 16 | Surface | 1.0 | 17.0 | 28.2 | 28.2 | 6.97 6.95 | 6.96 | | 85.5 85.3 | 85.4 | 4.02 | 4.03 | | 2.8 | 2.9 | |
| 28/01/23 | 11:54:57 | | Middle | 9.0 | 16.7 | 28.5 | 28.5 | 6.61 6.57 | 6.59 | 6.78 | 80.7 80.3 | 80.5 | 4.36 4.34 | 4.35 | 4.36 | 2.8 | 3.0 | 3.0 |
| | | / Fine | Bottom | 17.0 | 16.5 | 28.9 | 28.9 | 6.15 | 6.15 | 6.15 | 75.0 74.9 | 75.0 | 4.69 | 4.71 | | 3.0 | 3.1 | |
| | | 16 | Surface | 1.0 | 16.8 | 28.6 | 28.6 | 6.39 | 6.37 | | 78.3 77.8 | 78.1 | 5.97 | 5.96 | | 3.0 | 3.9 | |
| 30/01/23 | 12:20:07 | | Middle | 8.6 | 17.2 | 28.8 | 28.8 | 6.05 | 6.07 | 6.22 | 74.7 75.1 | 74.9 | 6.27 | 6.28 | 6.15 | 4.0 | 3.3 | 3.3 |
| | | / Fine | Bottom | 16.3 | 17.3 | 29.0 | 29.1 | 5.88 | 5.86 | 5.86 | 72.8 | 72.6 | 6.21 | 6.20 | | 2.0 | 2.8 | |
| |] | | | | | 29.1 | | 5.84 | | <u> </u> | 72.3 | | 6.19 | <u> </u> | l | 3.5 | <u> </u> | |

Monitoring Station : TM-FC2



| Date | Time | Ambient Temp (°C) / | | ng Depth | Temp | Salini | ty (ppt) | Dissolv | ed Oxygen | (mg/L) | | d Oxygen tion (%) | Τι | ırbidity (NT | U) | Susper | nded Solids | s (mg/L) |
|----------|----------|------------------------|---------|----------|------|--------------|----------|--------------|-----------|-------------------|---------------|----------------------|--------------|--------------|-------------------|------------|-------------|-------------------|
| Date | Time | Weather Condition | 1) | m) | (°C) | Value | Average | Value | Average | Depth- average | Value | Average | Value | Average | Depth- average | Value | Average | Depth- average |
| | | 18 | Surface | 1.0 | 18.9 | 27.5 27.5 | 27.5 | 6.50 6.54 | 6.52 | | 82.4 82.7 | 82.6 | 6.40 6.41 | 6.41 | | 2.2 | 2.2 | |
| 03/01/23 | 14:30:05 | | Middle | 8.4 | 19.1 | 27.9 | 28.0 | 6.41 | 6.39 | 6.46 | 81.8 | 81.7 | 6.99 | 7.01 | 6.94 | 3.5 | 3.4 | 3.2 |
| | | / Fine | Bottom | 15.8 | 19.3 | 28.1 28.4 | 28.4 | 6.37 6.19 | 6.16 | 6.16 | 81.5 79.5 | 79.0 | 7.03 7.39 | 7.40 | | 3.2 4.9 | 4.1 | |
| | | | Bottom | 15.6 | 15.5 | 28.4 27.4 | 20.4 | 6.13 6.61 | 0.10 | 0.10 | 78.5 83.9 | 79.0 | 7.40 6.50 | 7.40 | | 3.3 3.5 | 4.1 | |
| | | 18 | Surface | 1.0 | 19.0 | 27.5 | 27.5 | 6.60 | 6.61 | 6.49 | 84.0 | 84.0 | 6.48 | 6.49 | | 2.5 | 3.0 | |
| 05/01/23 | 15:30:09 | | Middle | 8.3 | 19.3 | 27.9 28.1 | 28.0 | 6.39 6.35 | 6.37 | | 81.8 81.4 | 81.6 | 6.72 6.76 | 6.74 | 6.71 | 2.3 | 2.6 | 2.9 |
| | | / Fine | Bottom | 15.7 | 19.4 | 28.4 28.5 | 28.5 | 6.16 6.16 | 6.16 | 6.16 | 79.2 79.3 | 79.3 | 6.87 6.90 | 6.89 | | 3.4 2.8 | 3.1 | |
| | | 17 | Surface | 1.0 | 17.8 | 28.3 | 28.3 | 6.85 6.82 | 6.84 | 0.07 | 85.4 85.0 | 85.2 | 6.23 6.27 | 6.25 | | 3.9 | 3.8 | |
| 07/01/23 | 9:00:08 | | Middle | 8.7 | 17.5 | 28.6 28.6 | 28.6 | 6.51 6.48 | 6.50 | 6.67 | 80.9 80.3 | 80.6 | 6.44 6.46 | 6.45 | 6.59 | 2.8 | 3.2 | 3.4 |
| | | / Fine | Bottom | 16.4 | 17.2 | 29.0 | 29.0 | 6.12 | 6.12 | 6.12 | 75.7 | 75.7 | 7.08 | 7.07 | | 3.5 | 3.3 | |
| | | | | | | 29.0 27.3 | | 6.11 6.57 | | | 75.6 79.8 | | 7.06 6.47 | | | 3.0 1.3 | | |
| | | 16 | Surface | 1.0 | 16.8 | 27.4 | 27.4 | 6.61 | 6.59 | 6.39 | 80.4 76.3 | 80.1 | 6.50 | 6.49 | | 3.8 | 2.6 | |
| 10/01/23 | 9:30:07 | | Middle | 8.4 | 17.2 | 28.0 28.1 | 28.1 | 6.20 6.17 | 6.19 | | 75.8 | 76.1 | 6.91 6.98 | 6.95 | 6.96 | 1.2 | 1.6 | 2.2 |
| | | / Fine | Bottom | 15.9 | 17.2 | 28.6 28.5 | 28.6 | 6.00 5.99 | 6.00 | 6.00 | 74.1 73.9 | 74.0 | 7.42 7.46 | 7.44 | | 2.6 | 2.4 | |
| | | 20 | Surface | 1.0 | 20.7 | 29.2 29.2 | 29.2 | 7.23 7.23 | 7.23 | | 95.7 95.7 | 95.7 | 2.95 2.97 | 2.96 | | 2.1 3.2 | 2.7 | |
| 12/01/23 | 10:02:08 | 20 | Middle | 8.4 | 20.6 | 29.5 | 29.5 | 7.06 | 7.06 | 7.14 | 93.4 | 93.4 | 3.13 | 3.13 | 3.15 | 4.1 | 3.7 | 3.2 |
| | | / Fine | Bottom | 15.8 | 20.3 | 29.5 29.7 | 29.7 | 7.05 6.81 | 6.81 | 6.81 | 93.3 89.7 | 89.7 | 3.13 3.37 | 3.36 | | 3.2 2.5 | 3.2 | |
| | | | | | | 29.7 28.4 | | 6.81 7.06 | | | 89.7 88.1 | | 3.35 3.28 | | | 3.8 | | |
| | | 17 | Surface | 1.0 | 17.8 | 28.4 28.7 | 28.4 | 7.08 6.86 | 7.07 | 6.96 | 88.3 | 88.2 | 3.24 | 3.26 | | 3.5 | 3.5 | |
| 14/01/23 | 12:02:15 | | Middle | 8.8 | 17.6 | 28.7 | 28.7 | 6.85 | 6.86 | | 85.4 85.3 | 85.3 | 3.66 3.63 | 3.65 | 3.62 | 2.7 3.7 | 3.2 | 3.3 |
| | | / Fine | Bottom | 16.6 | 17.4 | 29.0 29.0 | 29.0 | 6.46 6.42 | 6.44 | 6.44 | 80.3 79.8 | 80.0 | 3.94 3.96 | 3.95 | | 3.3 | 3.2 | |
| | | 16 | Surface | 1.0 | 17.6 | 28.6 28.6 | 28.6 | 7.12 7.13 | 7.13 | 6.97 | 88.6 885.0 | 486.8 | 2.76 2.77 | 2.77 | | 3.8 6.3 | 5.1 | |
| 17/01/23 | 13:30:05 | | Middle | 8.7 | 17.4 | 28.8 28.7 | 28.8 | 6.82 6.82 | 6.82 | | 84.6 84.6 | 84.6 | 3.05 | 3.05 | 3.05 | 3.8 | 3.7 | 4.3 |
| | | / Fine | Bottom | 16.4 | 17.1 | 28.9 28.9 | 28.9 | 6.64 6.67 | 6.66 | 6.66 | 82.0 82.5 | 82.3 | 3.34 3.36 | 3.35 | | 5.5 2.7 | 4.1 | |
| | | 16 | Surface | 1.0 | 16.7 | 28.3 28.3 | 28.3 | 6.83 6.81 | 6.82 | | 83.4 83.1 | 83.3 | 3.43 3.45 | 3.44 | | 2.3 | 2.7 | |
| 19/01/23 | 15:00:09 | 10 | Middle | 8.8 | 16.5 | 28.4 | 28.5 | 6.65 | 6.67 | 6.74 | 80.9 | 81.1 | 3.63 | 3.62 | 3.64 | 3.0 2.5 | 2.7 | 2.7 |
| | | / Fine | D-# | | | 28.5 28.6 | | 6.68 6.40 | | 0.40 | 81.3 77.6 | | 3.60 3.88 | | | 2.9 | | |
| | | | Bottom | 16.6 | 16.3 | 28.6 28.6 | 28.6 | 6.44 7.18 | 6.42 | 6.42 | 78.3 89.7 | 78.0 | 3.84 3.68 | 3.86 | | 3.0 1.8 | 2.7 | |
| | | 17 | Surface | 1.0 | 17.8 | 28.6 | 28.6 | 7.14 | 7.16 | 7.00 | 89.1 | 89.4 | 3.67 | 3.68 | | 1.3 | 1.6 | |
| 21/01/23 | 8:32:19 | | Middle | 8.7 | 17.6 | 28.8 28.8 | 28.8 | 6.85 6.84 | 6.85 | | 85.3 85.2 | 85.2 | 4.12 4.08 | 4.10 | 4.12 | 3.1 2.8 | 3.0 | 2.2 |
| | | / Fine | Bottom | 16.5 | 17.4 | 29.2 29.2 | 29.2 | 6.36 6.32 | 6.34 | 6.34 | 79.1 78.5 | 78.8 | 4.55 4.59 | 4.57 | | 2.2 | 2.2 | |
| | | 16 | Surface | 1.0 | 17.2 | 28.5 | 28.5 | 6.89 | 6.88 | | 85.0 84.8 | 84.9 | 3.82 | 3.82 | | 3.5 | 3.5 | |
| 26/01/23 | 10:30:14 | | Middle | 8.7 | 17.1 | 28.8 28.8 | 28.8 | 6.54 6.53 | 6.54 | 6.71 | 80.7 80.4 | 80.5 | 4.13 4.15 | 4.14 | 4.15 | 3.7 | 3.3 | 3.2 |
| | | / Fine | Bottom | 16.5 | 16.8 | 29.0 | 29.0 | 6.20 | 6.17 | 6.17 | 76.1 | 75.7 | 4.47 | 4.48 | | 2.8 | 2.7 | |
| | | 16 | Surface | 1.0 | 17.1 | 29.0 | 28.0 | 6.13 7.14 | 7.13 | | 75.3 87.7 | 87.5 | 4.48 | 4.18 | | 2.6 | 2.5 | |
| 28/01/23 | 11:30:59 | 16 | Middle | 8.7 | 16.8 | 28.0 | 28.3 | 7.11 6.85 | 6.84 | 6.98 | 87.3 83.7 | 83.5 | 4.19 4.54 | 4.55 | 4.55 | 2.1 | 3.1 | 2.8 |
| | | / Fine | Bottom | 16.4 | 16.5 | 28.3 | 28.6 | 6.83 | 6.29 | 6.29 | 83.3 76.9 | 76.6 | 4.56 4.92 | 4.92 | | 3.2 | 3.0 | |
| | | | | | | 28.6 28.5 | | 6.27 6.43 | | | 76.4 78.6 | | 4.92 5.82 | | | 2.3 3.8 | | |
| | | 16 | Surface | 1.0 | 16.7 | 28.5 28.6 | 28.5 | 6.39 6.02 | 6.41 | 6.23 | 78.1 74.0 | 78.4 | 5.86 6.24 | 5.84 | | 4.5 | 4.2 | |
| 30/01/23 | 12:00:05 | / =:- | Middle | 8.3 | 17.0 | 28.5 | 28.6 | 6.06 | 6.04 | | 74.5 | 74.3 | 6.20 | 6.22 | 6.07 | 1.8 | 2.4 | 3.4 |
| | | / Fine | Bottom | 15.6 | 17.1 | 28.8 | 28.9 | 5.94 5.90 | 5.92 | 5.92 | 73.2 72.6 | 72.9 | 6.18 | 6.16 | | 5.2 2.1 | 3.7 | |

Monitoring Station : TM-FC1



| Date | Time | Ambient Temp (°C) / | | ng Depth | Temp | Salini | ty (ppt) | Dissolv | ed Oxygen | (mg/L) | | d Oxygen tion (%) | Tu | urbidity (NT | ·U) | Suspe | nded Solids | s (mg/L) |
|----------|----------|------------------------|---------|----------|------|--------------|----------|--------------|-----------|-------------------|--------------|----------------------|--------------|--------------|-------------------|------------|-------------|-------------------|
| Date | Time | Weather Condition | 1) | n) | (°C) | Value | Average | Value | Average | Depth- average | Value | Average | Value | Average | Depth- average | Value | Average | Depth- average |
| | | 18 | Surface | 1.0 | 18.7 | 26.9 27.0 | 27.0 | 6.30 6.35 | 6.33 | | 79.3 79.9 | 79.6 | 6.37 6.37 | 6.37 | | 4.6 4.0 | 4.3 | |
| 03/01/23 | 9:30:25 | | Middle | 11.3 | 18.9 | 27.4 | 27.5 | 6.01 | 6.02 | 6.17 | 76.1 | 76.3 | 6.77 | 6.78 | 6.72 | 2.9 | 4.0 | 3.8 |
| | | / Fine | Bottom | 21.7 | 19.2 | 27.5 27.9 | 28.0 | 6.02 5.92 | 5.94 | 5.94 | 76.4 75.6 | 76.0 | 6.79 7.01 | 7.01 | | 5.1 3.2 | 3.1 | |
| | | | Bollom | 21.7 | 19.2 | 28.1 27.1 | 26.0 | 5.96 6.32 | 5.94 | 3.94 | 76.4 80.0 | 76.0 | 7.00 6.18 | 7.01 | | 2.9 2.6 | 3.1 | |
| | | 18 | Surface | 1.0 | 19.0 | 27.0 | 27.1 | 6.24 | 6.28 | 6.14 | 79.0 | 79.5 | 6.19 | 6.19 | | 3.4 | 3.0 | |
| 05/01/23 | 11:30:09 | | Middle | 11.3 | 19.3 | 27.9 27.9 | 27.9 | 6.00 5.98 | 5.99 | | 76.8 76.6 | 76.7 | 6.73 6.75 | 6.74 | 6.65 | 2.8 | 2.9 | 3.2 |
| | | / Fine | Bottom | 21.6 | 19.5 | 28.3 28.4 | 28.4 | 5.88 5.92 | 5.90 | 5.90 | 75.7 76.1 | 75.9 | 7.01 7.06 | 7.04 | | 3.2 4.1 | 3.7 | |
| | | 17 | Surface | 1.0 | 17.8 | 28.7 | 28.6 | 6.79 | 6.77 | | 84.8 84.3 | 84.6 | 6.39 | 6.40 | | 4.6 5.5 | 5.1 | |
| 07/01/23 | 13:00:08 | | Middle | 11.2 | 17.6 | 28.9 28.9 | 28.9 | 6.36 6.35 | 6.36 | 6.56 | 79.3 79.2 | 79.2 | 6.78 6.81 | 6.80 | 6.81 | 3.7 | 3.5 | 4.1 |
| | | / Fine | Bottom | 21.3 | 17.4 | 29.2 29.2 | 29.2 | 6.14 6.12 | 6.13 | 6.13 | 76.4 76.0 | 76.2 | 7.22 7.26 | 7.24 | | 2.5 4.9 | 3.7 | |
| | | 40 | Surface | 1.0 | 16.7 | 27.2 | 27.2 | 6.24 | 6.27 | | 75.6 | 76.1 | 6.73 | 6.75 | | 1.0 | 1.0 | |
| 10/01/23 | 14:00:05 | 16 | Middle | 11.4 | 17.0 | 27.1 28.3 | 28.4 | 6.30 6.00 | 6.00 | 6.13 | 76.5 73.6 | 73.6 | 6.76 6.97 | 6.99 | 7.06 | 1.0 3.1 | 2.3 | 1.6 |
| 10/01/23 | 14.00.05 | / Fine | Wilddie | 11.4 | 17.0 | 28.5 28.8 | 20.4 | 5.99 5.86 | 6.00 | | 73.6 72.4 | 73.0 | 7.01 7.42 | 0.99 | 7.06 | 1.5 1.2 | 2.3 | 1.6 |
| | | 7 1 1110 | Bottom | 21.8 | 17.2 | 28.8 | 28.8 | 5.89 | 5.88 | 5.88 | 72.8 | 72.6 | 7.45 | 7.44 | | 1.9 | 1.6 | |
| | | 20 | Surface | 1.0 | 20.8 | 28.9 29.0 | 29.0 | 7.31 7.29 | 7.30 | 7.20 | 96.8 96.6 | 96.7 | 3.14 | 3.14 | | 2.4 1.2 | 1.8 | |
| 12/01/23 | 16:00:05 | | Middle | 10.7 | 20.6 | 29.4 29.4 | 29.4 | 7.09 7.09 | 7.09 | 7.20 | 93.8 93.6 | 93.7 | 3.29 3.27 | 3.28 | 3.33 | 2.7 3.8 | 3.3 | 3.1 |
| | | / Fine | Bottom | 20.5 | 20.3 | 29.6 29.6 | 29.6 | 6.81 | 6.80 | 6.80 | 89.7 89.4 | 89.6 | 3.59 3.57 | 3.58 | | 4.0 | 4.3 | |
| | | 17 | Surface | 1.0 | 17.8 | 28.0 28.0 | 28.0 | 7.04 6.99 | 7.02 | | 87.6 87.0 | 87.3 | 3.38 | 3.40 | | 3.2 | 3.3 | |
| 14/01/23 | 17:00:21 | | Middle | 11.1 | 17.5 | 28.3 28.3 | 28.3 | 6.65 6.62 | 6.64 | 6.83 | 82.4 82.1 | 82.3 | 3.96 3.98 | 3.97 | 3.99 | 3.4 4.3 | 3.9 | 4.2 |
| | | / Fine | Bottom | 21.2 | 17.3 | 28.6 28.6 | 28.6 | 6.17 6.15 | 6.16 | 6.16 | 76.3 76.1 | 76.2 | 4.59 4.62 | 4.61 | | 4.7 6.3 | 5.5 | |
| | | 16 | Surface | 1.0 | 17.3 | 28.6 | 28.6 | 7.22 7.21 | 7.22 | 7.10 | 89.3 89.2 | 89.3 | 3.11 | 3.12 | | 4.0 | 3.4 | |
| 17/01/23 | 8:32:08 | | Middle | 10.9 | 17.1 | 28.9 28.9 | 28.9 | 6.97 6.99 | 6.98 | 7.10 | 86.0 86.1 | 86.1 | 3.49 3.47 | 3.48 | 3.43 | 5.4 3.5 | 4.5 | 3.5 |
| | | / Fine | Bottom | 20.9 | 17.0 | 29.1 29.0 | 29.1 | 6.74 6.74 | 6.74 | 6.74 | 83.1 83.1 | 83.1 | 3.67 3.69 | 3.68 | | 2.7 2.5 | 2.6 | |
| | | 15 | Surface | 1.0 | 16.6 | 28.3 28.3 | 28.3 | 6.58 6.62 | 6.60 | | 80.1 80.6 | 80.4 | 3.34 3.30 | 3.32 | | 2.7 | 2.8 | |
| 19/01/23 | 10:30:08 | 15 | Middle | 11.2 | 16.5 | 28.5 | 28.5 | 6.34 | 6.33 | 6.47 | 77.2 | 77.0 | 3.43 | 3.44 | 3.50 | 3.8 | 3.2 | 2.8 |
| | | / Fine | Bottom | 21.4 | 16.3 | 28.4 28.6 | 28.6 | 6.32 6.09 | 6.08 | 6.08 | 76.7 73.9 | 73.8 | 3.45 3.74 | 3.73 | | 2.6 | 2.5 | |
| | | | | | | 28.6 28.0 | | 6.07 7.11 | | 0.08 | 73.6 88.5 | | 3.71 3.74 | | | 2.8 3.5 | | |
| | | 17 | Surface | 1.0 | 17.8 | 28.0 | 28.0 | 7.05 | 7.08 | 6.91 | 87.6 | 88.0 | 3.74 | 3.74 | | 3.3 | 3.4 | |
| 21/01/23 | 12:32:58 | | Middle | 11.2 | 17.5 | 28.3 28.3 | 28.3 | 6.74 6.72 | 6.73 | | 83.5 83.3 | 83.4 | 4.11 4.13 | 4.12 | 4.16 | 2.7 1.5 | 2.1 | 2.9 |
| | | / Fine | Bottom | 21.3 | 17.3 | 28.6 28.6 | 28.6 | 6.21 6.18 | 6.20 | 6.20 | 76.8 76.3 | 76.6 | 4.60 4.64 | 4.62 | | 3.9 2.6 | 3.3 | |
| | | 16 | Surface | 1.0 | 17.3 | 28.9 | 28.9 | 6.98 6.97 | 6.98 | 0 == | 86.5 86.3 | 86.4 | 3.82 3.85 | 3.84 | | 3.0 | 3.1 | |
| 26/01/23 | 16:00:19 | | Middle | 11.1 | 17.1 | 29.3 29.3 | 29.3 | 6.54 6.53 | 6.54 | 6.76 | 80.9 80.8 | 80.8 | 4.32 4.36 | 4.34 | 4.31 | 1.6 | 2.3 | 3.3 |
| | | / Fine | Bottom | 21.2 | 16.8 | 29.5 29.5 | 29.5 | 6.07 | 6.07 | 6.07 | 74.8 74.5 | 74.6 | 4.77 | 4.76 | | 5.0 | 4.6 | |
| | | 16 | Surface | 1.0 | 17.0 | 28.3 | 28.3 | 6.96 6.95 | 6.96 | ,_ | 85.5 85.3 | 85.4 | 4.56 4.55 | 4.56 | | 2.5 | 2.4 | |
| 28/01/23 | 17:00:59 | | Middle | 11.2 | 16.8 | 28.7 | 28.7 | 6.53 6.52 | 6.53 | 6.74 | 80.0 79.7 | 79.9 | 5.12 5.14 | 5.13 | 5.09 | 3.1 | 2.8 | 2.6 |
| | | / Fine | Bottom | 21.3 | 16.5 | 29.1 29.1 | 29.1 | 6.04 6.02 | 6.03 | 6.03 | 73.8 73.5 | 73.7 | 5.56 5.59 | 5.58 | | 2.5 | 2.7 | |
| | | 16 | Surface | 1.0 | 16.5 | 29.1 | 29.1 | 6.48 | 6.48 | | 79.2 79.0 | 79.1 | 5.84 5.86 | 5.85 | | 1.8 | 2.3 | |
| 30/01/23 | 17:30:05 | | Middle | 11.0 | 16.8 | 29.3 29.3 | 29.3 | 6.17 6.16 | 6.17 | 6.32 | 75.9 75.8 | 75.9 | 6.03 | 6.04 | 6.03 | 3.5 | 3.2 | 2.8 |
| | | / Fine | Bottom | 21.0 | 17.1 | 29.6 | 29.6 | 5.86 | 5.86 | 5.86 | 72.6 | 72.6 | 6.21 | 6.20 | • | 2.7 | 2.9 | |
| | <u> </u> | | | | | 29.6 | <u> </u> | 5.86 | | | 72.5 | <u> </u> | 6.19 | <u> </u> | | 3.1 | 1 | <u> </u> |

Monitoring Station : TM-FM1



| Data | Time | Ambient Temp (°C) / | Monitori | ng Depth | Temp | Salini | ty (ppt) | Dissolv | red Oxygen | (mg/L) | | d Oxygen tion (%) | Τι | ırbidity (NT | U) | Susper | nded Solids | s (mg/L) |
|----------|----------|------------------------|----------|----------|------|----------------------|----------|----------------------|------------|-------------------|----------------------|----------------------|----------------------|--------------|-------------------|-------------------|-------------|-------------------|
| Date | Time | Weather Condition | 1) | m) | (°C) | Value | Average | Value | Average | Depth- average | Value | Average | Value | Average | Depth- average | Value | Average | Depth- average |
| | | 18 | Surface | 1.0 | 18.7 | 27.3 27.4 | 27.4 | 6.75 6.78 | 6.77 | 6.60 | 85.1 85.7 | 85.4 | 6.02 | 6.03 | | 4.7 | 4.8 | |
| 03/01/23 | 9:50:06 | | Middle | 8.6 | 19.0 | 27.8 27.7 | 27.8 | 6.47 6.41 | 6.44 | 6.60 | 82.3 81.5 | 81.9 | 6.37 6.40 | 6.39 | 6.31 | 5.2 3.0 | 4.1 | 4.2 |
| | | / Fine | Bottom | 16.3 | 19.3 | 28.0 | 28.1 | 6.28 | 6.29 | 6.29 | 80.4 | 80.6 | 6.52 | 6.52 | | 3.6 | 3.7 | † |
| | | | Ourton | 4.0 | 40.0 | 28.2 27.2 | 07.0 | 6.30 6.69 | 0.70 | | 80.7 84.6 | 04.7 | 6.51 6.61 | 0.00 | | 3.8 2.2 | 0.5 | |
| | | 18 | Surface | 1.0 | 18.9 | 27.1 27.8 | 27.2 | 6.70 6.40 | 6.70 | 6.54 | 84.8 81.7 | 84.7 | 6.58 6.97 | 6.60 | | 2.8 | 2.5 | |
| 05/01/23 | 11:50:07 | | Middle | 8.5 | 19.2 | 28.1 | 28.0 | 6.37 | 6.39 | | 81.7 | 81.7 | 7.01 | 6.99 | 6.87 | 2.6 | 3.0 | 2.6 |
| | | / Fine | Bottom | 16.1 | 19.4 | 28.5 28.4 | 28.5 | 6.26 6.24 | 6.25 | 6.25 | 80.6 80.5 | 80.6 | 7.01 7.06 | 7.04 | | 1.5 3.4 | 2.5 | |
| | | 16 | Surface | 1.0 | 17.6 | 28.6 28.5 | 28.5 | 6.75 6.71 | 6.73 | 0.50 | 84.0 83.6 | 83.8 | 6.26 6.30 | 6.28 | | 1.9 | 2.0 | |
| 07/01/23 | 13:24:01 | | Middle | 8.8 | 17.5 | 28.9 28.9 | 28.9 | 6.28 6.25 | 6.27 | 6.50 | 78.1 77.7 | 77.9 | 6.50 6.54 | 6.52 | 6.55 | 2.2 3.6 | 2.9 | 2.7 |
| | | / Fine | Bottom | 16.5 | 17.3 | 29.2 | 29.2 | 6.01 5.97 | 5.99 | 5.99 | 74.6 74.1 | 74.3 | 6.85 | 6.86 | | 3.5 | 3.4 | |
| | | | Surface | 1.0 | 16.8 | 27.4 | 27.5 | 6.40 | 6.36 | | 77.9 | 77.4 | 6.64 | 6.66 | | 1.0 | 1.1 | |
| 10/01/23 | 14:20:07 | 16 | Middle | 8.7 | 17.0 | 27.5 28.2 | 28.3 | 6.32 6.26 | 6.24 | 6.30 | 76.9 76.8 | 76.6 | 6.67 7.11 | 7.10 | 6.98 | 1.2 | 1.1 | 1.5 |
| 10/01/23 | 14.20.07 | / Fine | ivildale | | | 28.4 28.7 | | 6.21 5.94 | | | 76.4 73.5 | | 7.08 7.19 | | 0.90 | 1.0 | | 1.5 |
| | | 7 1 110 | Bottom | 16.4 | 17.3 | 28.7 | 28.7 | 5.97 | 5.96 | 5.96 | 73.9 | 73.7 | 7.21 | 7.20 | | 2.9 | 2.3 | |
| | | 20 | Surface | 1.0 | 20.8 | 28.9 28.9 | 28.9 | 7.23 7.23 | 7.23 | 7.12 | 95.7 95.7 | 95.7 | 3.26 3.27 | 3.27 | | 1.6 3.1 | 2.4 | |
| 12/01/23 | 16:23:05 | | Middle | 9.0 | 20.6 | 29.4 29.4 | 29.4 | 7.02 7.01 | 7.02 | 7.12 | 92.9 92.7 | 92.8 | 3.41 | 3.40 | 3.41 | 1.6 | 1.8 | 2.4 |
| | | / Fine | Bottom | 16.9 | 20.4 | 29.6 29.7 | 29.7 | 6.91 6.93 | 6.92 | 6.92 | 91.2 91.5 | 91.4 | 3.54 3.56 | 3.55 | | 3.9 2.5 | 3.2 | <u> </u> |
| | | 16 | Surface | 1.0 | 17.7 | 28.3 | 28.3 | 7.24 7.23 | 7.24 | | 90.1 | 89.9 | 3.33 | 3.35 | | 3.5 | 4.2 | |
| 14/01/23 | 17:20:51 | 10 | Middle | 8.8 | 17.4 | 28.7 | 28.7 | 6.74 | 6.72 | 6.98 | 83.6 | 83.3 | 3.74 | 3.75 | 3.75 | 3.0 | 3.3 | 3.4 |
| | | / Fine | Bottom | 16.6 | 17.2 | 28.7 29.0 | 29.0 | 6.70 6.30 | 6.31 | 6.31 | 83.1 78.0 | 78.0 | 3.76 4.12 | 4.14 | | 3.5 2.2 | 2.7 | 1 |
| | | | | | | 29.0 28.6 | | 6.31 7.03 | | | 78.1 87.0 | | 4.15 3.29 | | | 3.2 2.5 | | |
| | | 16 | Surface | 1.0 | 17.3 | 28.6 28.8 | 28.6 | 7.03 6.71 | 7.03 | 6.88 | 87.0 82.8 | 87.0 | 3.31 3.56 | 3.30 | | 3.7 4.7 | 3.1 | |
| 17/01/23 | 8:56:09 | / Fine | Middle | 9.3 | 17.1 | 28.8 | 28.8 | 6.73 | 6.72 | | 83.0 | 82.9 | 3.57 | 3.57 | 3.53 | 4.0 | 4.4 | 3.9 |
| | | / Fine | Bottom | 17.5 | 16.9 | 29.0 29.0 | 29.0 | 6.69 6.68 | 6.69 | 6.69 | 82.3 82.3 | 82.3 | 3.72 3.72 | 3.72 | | 4.3 | 4.4 | |
| | | 16 | Surface | 1.0 | 16.8 | 28.4 28.4 | 28.4 | 6.90 6.93 | 6.92 | 0.04 | 84.4 84.7 | 84.6 | 3.35 3.31 | 3.33 | | 2.5 | 2.5 | |
| 19/01/23 | 10:55:08 | | Middle | 8.8 | 16.7 | 28.5 28.6 | 28.6 | 6.72 6.70 | 6.71 | 6.81 | 82.1 81.8 | 82.0 | 3.66 3.68 | 3.67 | 3.61 | 1.2 | 1.8 | 2.4 |
| | | / Fine | Bottom | 16.7 | 16.5 | 28.7 | 28.7 | 6.47 | 6.45 | 6.45 | 78.8 | 78.6 | 3.84 | 3.83 | | 1.6 | 2.8 | † |
| | | | Surface | 1.0 | 17.8 | 28.7 27.8 | 27.8 | 6.43 7.20 | 7.17 | | 78.4 89.5 | 89.1 | 3.81 3.94 | 3.95 | | 4.0 | 3.4 | |
| | | 17 | | | | 27.8 28.0 | | 7.14 6.76 | | 6.96 | 88.7 83.7 | | 3.96 4.19 | | | 2.7 1.8 | | |
| 21/01/23 | 12:56:05 | / Fine | Middle | 8.8 | 17.5 | 28.1 28.3 | 28.0 | 6.74 6.05 | 6.75 | | 83.4 74.7 | 83.5 | 4.21 4.71 | 4.20 | 4.29 | 2.3 | 2.1 | 2.9 |
| | | / Tille | Bottom | 16.6 | 17.3 | 28.3 | 28.3 | 5.99 | 6.02 | 6.02 | 73.8 | 74.3 | 4.73 | 4.72 | | 3.0 | 3.2 | |
| | | 16 | Surface | 1.0 | 17.3 | 28.8 28.9 | 28.9 | 7.05 7.01 | 7.03 | 6.95 | 87.3 86.8 | 87.1 | 4.04 4.07 | 4.06 | | 2.9 | 2.7 |] |
| 26/01/23 | 16:16:26 | | Middle | 8.7 | 17.1 | 29.2 29.2 | 29.2 | 6.88 6.84 | 6.86 | 3.33 | 85.1 84.6 | 84.8 | 4.28 4.26 | 4.27 | 4.36 | 2.0 3.0 | 2.5 | 2.7 |
| | | / Fine | Bottom | 16.5 | 16.9 | 29.4 | 29.4 | 6.23 6.21 | 6.22 | 6.22 | 76.8 76.6 | 76.7 | 4.75 4.77 | 4.76 | | 2.6 | 2.8 | † |
| | | 46 | Surface | 1.0 | 17.0 | 28.3 | 28.3 | 7.08 | 7.07 | | 86.9 | 86.8 | 4.46 | 4.47 | | 2.5 | 2.3 | |
| 28/01/23 | 17:24:01 | 16 | Middle | 8.8 | 16.7 | 28.3 | 28.6 | 7.06 6.69 | 6.68 | 6.87 | 86.7 | 81.6 | 4.48 | 4.99 | 4.93 | 1.8 | 1.8 | 2.0 |
| | | / Fine | Bottom | 16.5 | 16.5 | 28.6 29.0 | 29.0 | 6.66 6.18 | 6.17 | 6.17 | 81.4 75.4 | 75.3 | 5.01 5.33 | 5.34 | | 1.7 2.0 | 2.0 | |
| | | | | | | 29.0 28.8 | | 6.15 6.12 | | 0.17 | 75.1 74.6 | | 5.35 5.92 | | | 2.0 3.0 | | \vdash |
| | | 16 | Surface | 1.0 | 16.5 | 28.7 | 28.8 | 6.11 | 6.12 | 5.97 | 74.5 | 74.6 | 5.90 | 5.91 | | 2.5 | 2.8 | |
| 30/01/23 | 17:48:08 | | Middle | 8.3 | 16.7 | 29.0 | 29.0 | 5.82 | 5.82 | | 71.2 | 71.3 | 6.19 | 6.18 | 6.12 | 3.8 | 3.1 | 3.1 |
| | | / Fine | Bottom | 15.6 | 17.0 | 29.4 29.4 | 29.4 | 5.64 5.62 | 5.63 | 5.63 | 69.7 69.5 | 69.6 | 6.26 6.26 | 6.26 | | 3.4 | 3.6 | |
| 30/01/23 | 17:48:08 | | | | | 29.0 29.0 29.4 | | 5.82 5.82 5.64 | | | 71.3 71.2 69.7 | | 6.17 6.19 6.26 | | 6.12 | 2.4 3.8 3.4 | | <u> </u> |

Monitoring Station: TM-FM2



| | | Ambient Temp (°C) / | Monitori | ng Depth | Temp | Salini | ty (ppt) | Dissolv | red Oxygen | (mg/L) | | d Oxygen tion (%) | Τι | rbidity (NT | Ū) | Susper | nded Solids | s (mg/L) |
|----------|----------|------------------------|----------|----------|------|--------------|----------|--------------|------------|-------------------|--------------|----------------------|--------------|-------------|-------------------|------------|-------------|-------------------|
| Date | Time | Weather Condition | | n) | (°C) | Value | Average | Value | Average | Depth- average | Value | Average | Value | Average | Depth- average | Value | Average | Depth- average |
| | | 18 | Surface | 1.0 | 18.9 | 27.6 | 27.5 | 7.02 | 7.04 | a | 89.0 | 89.2 | 6.54 | 6.55 | | 4.3 | 4.0 | arerage |
| 03/01/23 | 10:06:07 | 10 | Middle | 8.4 | 19.1 | 27.4 27.9 | 27.9 | 7.06 6.87 | 6.87 | 6.95 | 89.4 87.6 | 87.6 | 6.56 6.97 | 6.99 | 6.93 | 3.6 | 2.4 | 3.9 |
| 03/01/23 | 10.06.07 | / Fine | ivildale | 0.4 | 19.1 | 27.9 28.2 | 27.9 | 6.86 6.59 | 0.07 | | 87.6 84.5 | 07.0 | 7.00 7.21 | 6.99 | 0.93 | 3.0 5.4 | 3.4 | 3.9 |
| | | / Fille | Bottom | 15.9 | 19.3 | 28.3 | 28.3 | 6.67 | 6.63 | 6.63 | 85.5 | 85.0 | 7.27 | 7.24 | | 3.4 | 4.4 | |
| | | 18 | Surface | 1.0 | 19.0 | 27.4 27.5 | 27.5 | 7.17 7.10 | 7.14 | | 91.0 90.0 | 90.5 | 6.49 6.54 | 6.52 | | 4.1 | 4.1 | |
| 05/01/23 | 12:06:08 | 10 | Middle | 8.4 | 19.2 | 28.2 | 28.3 | 6.86 | 6.88 | 7.01 | 87.8 | 88.1 | 6.80 | 6.82 | 6.81 | 3.3 | 3.3 | 3.6 |
| 00/01/20 | 12.00.00 | / Fine | IVIIGGIC | | 10.2 | 28.4 28.5 | 20.0 | 6.90 6.52 | 0.00 | | 88.4 84.0 | | 6.83 7.13 | 0.02 | 0.01 | 3.2 | 0.0 | 0.0 |
| | | 71110 | Bottom | 15.8 | 19.5 | 28.6 | 28.6 | 6.54 | 6.53 | 6.53 | 84.5 | 84.3 | 7.06 | 7.10 | | 3.6 | 3.4 | |
| | | 16 | Surface | 1.0 | 17.6 | 29.0 29.0 | 29.0 | 6.85 6.83 | 6.84 | | 85.4 85.2 | 85.3 | 6.31 6.34 | 6.33 | | 3.3 4.2 | 3.8 | |
| 07/01/23 | 13:59:59 | | Middle | 8.9 | 17.4 | 29.3 | 29.3 | 6.44 | 6.43 | 6.64 | 80.1 | 79.9 | 6.49 | 6.51 | 6.65 | 2.5 | 2.6 | 3.8 |
| | | / Fine | | | | 29.3 29.6 | | 6.42 6.17 | | | 79.7 76.6 | | 6.52 7.09 | | | 2.7 4.9 | | |
| | | , , , , , , | Bottom | 16.7 | 17.2 | 29.6 | 29.6 | 6.16 | 6.17 | 6.17 | 76.5 | 76.5 | 7.13 | 7.11 | | 4.9 | 4.9 | |
| | | 16 | Surface | 1.0 | 16.9 | 27.0 27.1 | 27.1 | 7.01 6.97 | 6.99 | | 85.2 84.9 | 85.1 | 6.87 6.89 | 6.88 | | 2.0 | 1.7 | |
| 10/01/23 | 14:36:05 | | Middle | 8.5 | 17.2 | 27.9 | 28.0 | 6.73 | 6.76 | 6.88 | 82.8 | 83.2 | 7.33 | 7.34 | 7.28 | 1.5 | 1.8 | 1.7 |
| | | / Fine | | | | 28.1 28.5 | | 6.79 6.52 | | | 83.6 80.6 | | 7.35 7.60 | | | 2.1 1.8 | | |
| | | | Bottom | 16.1 | 17.3 | 28.5 | 28.5 | 6.50 | 6.51 | 6.51 | 80.6 | 80.6 | 7.64 | 7.62 | | 1.6 | 1.7 | |
| | | 20 | Surface | 1.0 | 20.7 | 29.2 | 29.2 | 6.79 6.81 | 6.80 | | 89.9 90.1 | 90.0 | 3.39 | 3.40 | | 1.3 | 1.8 | |
| 12/01/23 | 16:42:09 | | Middle | 8.4 | 20.6 | 29.5 | 29.5 | 6.64 | 6.64 | 6.72 | 87.9 | 87.8 | 3.59 | 3.59 | 3.54 | 1.2 | 1.2 | 2.1 |
| | | / Fine | | | | 29.5 29.6 | | 6.64 6.51 | | | 87.7 85.7 | | 3.59 3.62 | | | 1.2 4.5 | | |
| | | | Bottom | 15.8 | 20.3 | 29.6 | 29.6 | 6.50 | 6.51 | 6.51 | 85.8 | 85.8 | 3.62 | 3.62 | | 2.0 | 3.3 | |
| | | 16 | Surface | 1.0 | 17.6 | 28.4 | 28.4 | 7.08 7.06 | 7.07 | | 88.0 87.7 | 87.9 | 3.18 | 3.18 | | 3.5 4.2 | 3.9 | |
| 14/01/23 | 17:43:14 | | Middle | 8.9 | 17.4 | 28.7 | 28.7 | 6.75 | 6.73 | 6.90 | 83.7 | 83.4 | 3.54 | 3.56 | 3.61 | 3.3 | 3.4 | 3.9 |
| | | / Fine | D-# | 40.0 | 47.4 | 28.7 29.1 | 00.4 | 6.71 6.29 | 0.00 | 0.00 | 83.0 77.7 | 77.0 | 3.57 4.08 | 4.40 | | 3.5 4.2 | 4.0 | |
| | | | Bottom | 16.8 | 17.1 | 29.1 | 29.1 | 6.26 | 6.28 | 6.28 | 77.5 | 77.6 | 4.12 | 4.10 | | 4.9 | 4.6 | |
| | | 16 | Surface | 1.0 | 17.4 | 28.5 28.5 | 28.5 | 6.87 6.87 | 6.87 | 6.75 | 85.1 85.1 | 85.1 | 3.27 3.27 | 3.27 | | 3.7 | 3.7 | |
| 17/01/23 | 9:19:06 | | Middle | 8.4 | 17.2 | 28.7 28.7 | 28.7 | 6.62 6.64 | 6.63 | 6.75 | 81.8 82.0 | 81.9 | 3.56 3.58 | 3.57 | 3.49 | 2.8 5.2 | 4.0 | 3.6 |
| | | / Fine | Bottom | 15.8 | 17.0 | 28.9 | 28.9 | 6.41 | 6.43 | 6.43 | 79.0 | 79.3 | 3.62 | 3.62 | | 3.7 | 3.2 | |
| | | | Dottom | 13.0 | 17.0 | 28.9 28.4 | 20.3 | 6.44 6.86 | 0.40 | 0.43 | 79.5 83.8 | 79.5 | 3.62 3.49 | 3.02 | | 2.7 1.5 | 5.2 | |
| | | 16 | Surface | 1.0 | 16.7 | 28.5 | 28.5 | 6.84 | 6.85 | 6.73 | 83.7 | 83.8 | 3.49 | 3.48 | | 1.3 | 1.4 | |
| 19/01/23 | 11:19:08 | | Middle | 8.9 | 16.6 | 28.6 28.6 | 28.6 | 6.59 6.62 | 6.61 | 0.70 | 80.4 80.8 | 80.6 | 3.73 3.75 | 3.74 | 3.71 | 2.0 | 2.1 | 2.3 |
| | | / Fine | Bottom | 16.8 | 16.4 | 28.7 | 28.7 | 6.75 | 6.73 | 6.73 | 77.2 | 77.0 | 3.90 | 3.92 | | 2.6 | 3.4 | |
| | | | | | | 28.7 28.2 | | 6.71 7.06 | | | 76.7 87.8 | | 3.94 3.54 | | | 4.2 1.9 | | |
| | | 17 | Surface | 1.0 | 17.7 | 28.2 | 28.2 | 7.03 | 7.05 | 6.91 | 87.4 | 87.6 | 3.58 | 3.56 | | 1.6 | 1.8 | |
| 21/01/23 | 13:17:17 | | Middle | 9.0 | 17.5 | 28.4 28.4 | 28.4 | 6.81 6.75 | 6.78 | | 84.4 83.7 | 84.1 | 3.97 3.99 | 3.98 | 3.97 | 1.4 | 1.4 | 1.7 |
| | | / Fine | Bottom | 16.9 | 17.3 | 28.7 | 28.7 | 6.04 | 6.03 | 6.03 | 74.8 | 74.5 | 4.36 | 4.37 | 1 | 1.9 | 1.8 | |
| | | | | | | 28.7 28.5 | | 6.01 6.99 | | | 74.2 86.6 | | 4.38 3.96 | | | 1.7 2.3 | | |
| | | 16 | Surface | 1.0 | 17.4 | 28.5 | 28.5 | 6.94 | 6.97 | 6.70 | 85.8 | 86.2 | 3.98 | 3.97 | | 5.1 | 3.7 | |
| 26/01/23 | 16:40:11 | | Middle | 8.9 | 17.2 | 28.9 28.9 | 28.9 | 6.43 | 6.43 | | 79.5 79.4 | 79.5 | 4.21 4.23 | 4.22 | 4.27 | 4.4 3.1 | 3.8 | 3.3 |
| | | / Fine | Bottom | 16.9 | 16.9 | 29.2 | 29.2 | 6.18 | 6.18 | 6.18 | 76.1 | 76.0 | 4.64 | 4.63 | | 2.3 | 2.3 | |
| | | | 0 | 4.0 | 40.0 | 29.2 28.5 | 00.5 | 6.17 6.87 | 0.00 | | 76.0 84.3 | 04.4 | 4.61 4.23 | 4.04 | | 2.3 | 0.1 | |
| | | 16 | Surface | 1.0 | 16.9 | 28.5 | 28.5 | 6.84 | 6.86 | 6.72 | 83.9 | 84.1 | 4.25 | 4.24 | | 3.7 | 3.1 | |
| 28/01/23 | 17:45:03 | | Middle | 8.9 | 16.6 | 28.7 28.7 | 28.7 | 6.60 6.56 | 6.58 | | 80.6 80.1 | 80.4 | 4.68 4.69 | 4.69 | 4.66 | 2.6 | 2.7 | 2.8 |
| | | / Fine | Bottom | 16.8 | 16.3 | 29.0 | 29.1 | 6.12 | 6.11 | 6.11 | 74.4 | 74.3 | 5.05 | 5.05 | | 2.5 | 2.7 | |
| | | | Cinte | 1.0 | 10.4 | 29.1 28.5 | 00.5 | 6.10 5.96 | FOF | | 74.2 72.4 | 70.0 | 5.04 6.22 | 6.00 | | 2.9 3.6 | 2.0 | |
| | | 16 | Surface | 1.0 | 16.4 | 28.5 | 28.5 | 5.93 | 5.95 | 5.87 | 71.9 | 72.2 | 6.23 | 6.23 | | 2.8 | 3.2 | |
| 30/01/23 | 18:09:08 | | Middle | 8.2 | 16.7 | 28.9 28.9 | 28.9 | 5.81 5.79 | 5.80 | <u> </u> | 71.2 70.9 | 71.1 | 6.35 6.34 | 6.35 | 6.32 | 3.7 | 3.3 | 3.1 |
| | | / Fine | Bottom | 15.4 | 17.0 | 29.1 | 19.1 | 5.77 | 5.77 | 5.77 | 71.2 | 71.2 | 6.40 | 6.39 | | 3.4 | 2.9 | |
| <u> </u> | 1 | <u> </u> | I | | | 9.1 | <u> </u> | 5.77 | <u> </u> | <u> </u> | 71.2 | <u> </u> | 6.37 | | <u> </u> | 2.4 | <u> </u> | |

Monitoring Station: TM-FC2



Dissolved Oxygen Suspended Solids (mg/L) Salinity (ppt) Dissolved Oxygen (mg/L) Turbidity (NTU) Saturation (%) Γemp (°C) Monitoring Depth Temp Date Time Weather (°C) Value Average Value Value Average Average Condition average average 27.2 93.2 7.37 6.51 4.1 Surface 18.9 27.3 7.34 93.0 40.26 3.3 1.0 27.4 7.31 92.8 74.00 2.4 7.22 27.6 7.11 3.2 90.5 6.76 03/01/23 10:25:09 Middle 7.9 19.1 27.6 7.10 90.3 6.75 18.01 3.7 4.6 27.5 7.08 90.1 6.74 4.1 / Fine 27.7 89.5 7.01 6.1 6.99 Bottom 14.7 27.7 6.98 89.3 6.9 27.7 6.96 89.0 7.01 7.6 27.5 7.60 92.5 6.41 3.6 Surface 1.0 19.2 27.5 7.44 92.5 6.44 3.8 18 27.4 7.28 92.5 6.46 4.0 7.21 27.8 6.69 05/01/23 12:25:08 Middle 7.8 19.3 27.9 6.98 89.3 6.71 6.73 3.4 3.7 27.9 89.1 6.73 3.0 / Fine 28.3 6.79 87.4 7.06 4.2 Bottom 14.6 19.5 28.4 6.81 6.81 87.7 7.03 4.0 28.5 87.9 7.00 3.7 6.82 28.9 6.69 83.4 6.64 3.9 Surface 1.0 17.6 28.9 6.69 83.2 6.67 4.7 16 28.9 6 68 83 1 6 69 5.5 6.45 29.2 6.22 77.2 6.99 6.0 07/01/23 Middle 8.6 17.3 29.2 6.22 77.2 7.00 7.00 5.6 4.8 29.2 6.21 77.1 7.01 5.1 / Fine 29.6 5.97 74.1 7.35 4.5 Bottom 17.2 29.6 73.9 16.2 5.96 5.96 7.33 4.1 29.6 5.95 73.7 7.31 3.6 27.4 7.13 7.16 1.8 87.1 Surface 1.0 17.0 27.3 7.15 87.1 7.18 1.8 16 27.2 7.16 87.1 7.20 1.8 6.98 28.4 7.44 6.80 83.6 1.2 10/01/23 14:55:09 Middle 8.0 17.1 28.3 6.81 83.7 7.45 7.43 1.4 1.6 28.1 6.81 83.7 7.46 1.5 / Fine 28.7 6.69 82.6 7 64 1.8 Bottom 15.1 17.2 28.7 6.67 6.67 82.4 7.66 1.6 28.7 6.64 82.2 7.67 1.4 29.1 7.18 94.8 2.86 3.0 Surface 1.0 20.6 29.2 7.18 94.9 2.86 2.0 19 29.2 94.9 7.18 2.86 1.0 7.05 29.4 6.92 91.4 2.94 1.3 17:05:05 Middle 8.3 20.5 29.4 6.92 91.4 2.97 1.2 1.9 12/01/23 2.93 2.92 29.4 6.92 91.4 1.1 / Fine 29.7 6.79 89.5 3.12 1.7 Bottom 15.6 20.3 29.7 6.80 6.80 89.7 2.4 29.7 6.81 89.9 3.10 3.1 28.7 7.18 89.5 3.66 4.3 Surface 1.0 17.7 7.16 3.67 3.8 16 28.7 7.14 88.9 3.68 3.2 6.97 28.9 6.78 84.2 3.93 2.6 14/01/23 18:07:39 Middle 17.4 6.78 4.02 3.8 8.6 28.9 84.1 3.94 3.4 28.9 6.77 84.1 3.95 4.1 29.4 4.3 77.2 Bottom 16.2 17.2 29.4 6.23 6.23 4.46 4.3 29.4 6.22 77.2 4.48 4.2 28.5 6.92 85.7 3.19 4.0 Surface 1.0 17.4 28.6 6.93 85.8 3.20 4.5 16 28.6 6.93 85.9 3.20 4.9 6.85 28.7 6 77 83.8 3 47 43 17/01/23 Middle 8.2 17.3 28.7 6.77 83.7 3.47 3.42 5.5 4.0 28.7 6.76 83.5 3.47 6.7 / Fine 28.9 6.54 80.7 3.59 2.0 Bottom 15.4 17.1 80.7 28.9 6.54 6.54 3.60 1.9 28.9 6.54 80.6 3.61 1.8 28.4 6.74 82.3 3.46 2.3 Surface 1.0 16.7 28.4 6.73 82.1 3.44 2.4 3.42 2.5 28.3 6.71 81.9 6.63 28.5 6.52 79.4 3.66 3.5 19/01/23 11:45:05 Middle 8.6 16.5 28.5 6.54 79.6 3.68 3.68 3.0 2.9 28.5 6.56 79.7 3.69 2.5 / Fine 28.7 6.23 75.6 3.93 3.2 16.3 28.6 6.20 75.2 3.91 3.3 28.3 6.98 87.0 3.81 2.4 Surface 1.0 17.8 28.3 6.96 86.7 3.83 2.7 17 28.3 86.3 3.84 6.94 6.74 28.5 6.52 81.1 4.15 1.5 21/01/23 13:44:21 Middle 8.6 17.6 28.5 6.52 81.0 4.17 4.25 2.2 2.4 28.5 6.51 81.0 4.18 2.9 / Fine 28.8 6.07 75.3 4.73 1.3 Bottom 16.3 17.4 28.8 6.05 6.05 75.0 4.75 2.2 28.8 6.03 74.7 4.76 3.1 28.7 7.02 86.9 3.63 1.6 Surface 6.99 3.65 1.8 16 28.7 6.96 86.1 3.66 1.9 6.76 29.0 6.53 80.7 3.90 2.8 26/01/23 17:01:21 Middle 8.6 17.1 29.0 6.53 80.6 3.92 3.96 2.8 2.6 29.0 6.52 80.5 3.93 2.8 29.3 6.04 74.3 4.32 3.2 Bottom 16.3 16.8 29.3 74.2 6.03 6.03 4.33 3.1 29.3 74.0 4.34 3.0 6.02 28.0 87.7 4.26 7.16 2.0 Surface 1.0 17.0 28.0 7.15 87.6 4.24 2.3 16 28.0 7.13 87.4 4.22 2.6 6.95 28.3 6.77 82.6 4.57 2.3 28/01/23 Middle 8.5 16.7 28.3 6.76 82.4 4.59 2.3 2.4 18:14:05 28.3 6.74 82.3 4 61 23 / Fine 28.6 6.26 76.1 4.89 2.7 Bottom 16.1 16.4 28.6 6.25 76.0 4.91 2.7 6.25 28.6 6.24 75.8 4.92 2.7 28.5 5.89 71.3 6.17 2.9 16.2 28.6 71.2 2.8 Surface 1.0 5.88 6.18 28.6 5.87 71.1 6.19 2.6 5.80 28.8 5.73 69.9 6.23 2.5 30/01/23 18:31:07 Middle 7.9 16.5 28.8 5.73 69.8 6.24 6.24 2.7 2.3 28.8 5.72 69.7 2.9 6.25 / Fine 29.0 5.59 68.8 6.29 1.9 5.60 1.5 29.0 5.61 69.2 6.32 1.1

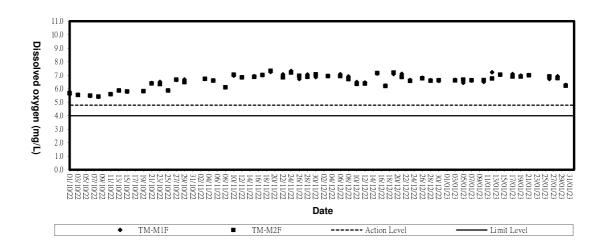


Appendix C3

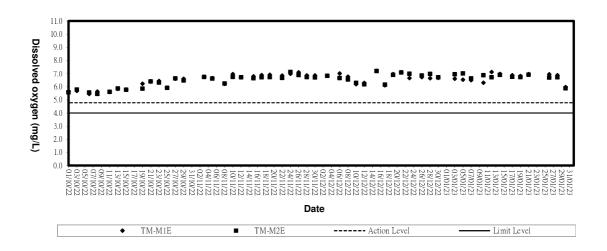
Graphical Plots of Impact Marine Water Quality Monitoring Data



Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide

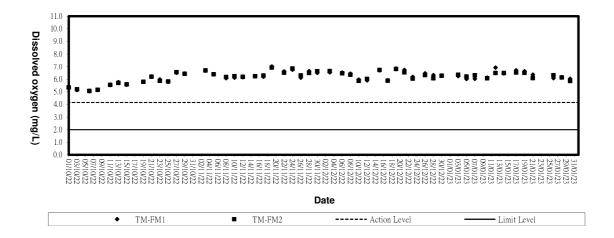


Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide

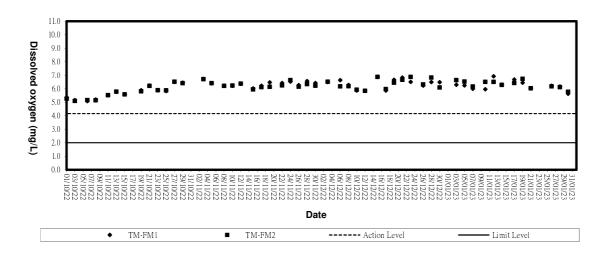




Dissolved Oxygen (Bottom) at Mid-Flood Tide

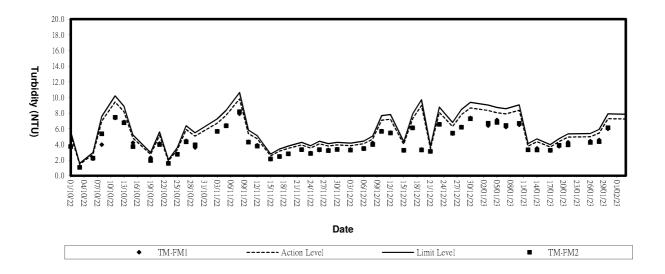


Dissolved Oxygen (Bottom) at Mid-Ebb Tide

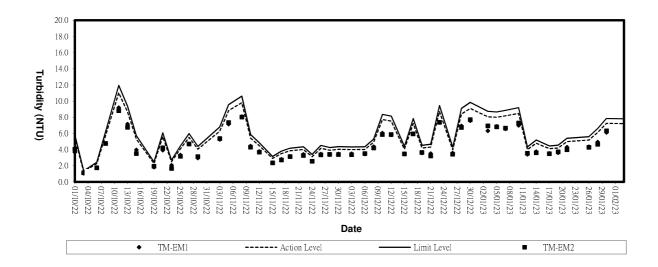




Turbidity (Depth-average) at Mid-Flood Tide

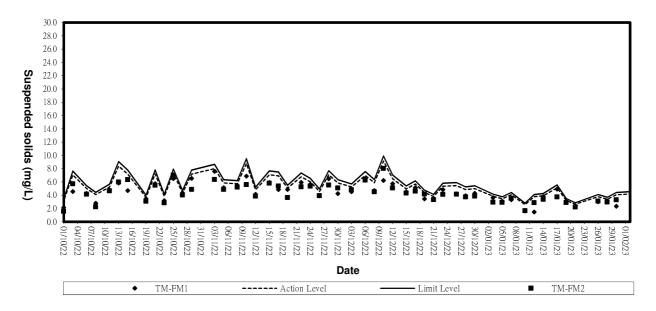


Turbidity (Depth-average) at Mid-Ebb Tide

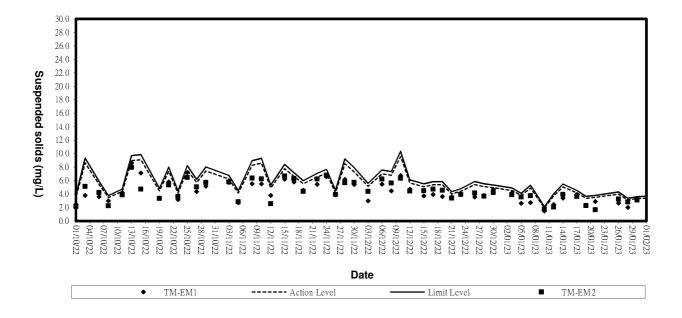




Suspended solids (Depth-average) at Mid-Flood Tide



Suspended Solids (Depth-average) at Mid-Ebb Tide





Appendix D1

Calibration Certificates for Impact Noise Monitoring Equipments



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Form Q/AS/C/02 Issue 1(1/4) [02/22]

Calibration Certificate

Certificate No.

CSA27669

Page

of

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Information Provided by Customer

Customer

: ETS - Testconsult Limited

Address

8/F., Block B, Veristrong Industrial Centre, 34 - 36 Au Pui Wan Street, Fotan, Shatin, Hong Kong

Information of Unit-under-test (UUT)

Description

Sound Level Calibrator

Manufacturer

RION

Equipment I.D.

ET/EN/002/01

Type

NC-73

Serial No.

10196943

Laboratory Information

Lab. Ref. No.

Date of Issue

Q/CAL/22/9442/I

Procedure

© CQS/002/A

Date of Calibration

7-Nov-2022 10-Nov-2022 Date of Receipt

1-Nov-2022

Calibration Location

Calibration Laboratory

Calibration Condition

Ambient Temperature : (20±3) °C

Relative Humidity

: (50±20) %

Stabilizing Time

: 30 minutes

Sampling

: As received

Ambient Pressure

: (1000±5) hPa

Reference equipment

- Multi-function sound calibrator, ET/2801/01
- Measuring Amplifier, ET/2702/01/01
- Signal generator, ET/2503/01
- Reference Oscilloscope, ET/2502/01

Calibration specification

To perform the calibration of sound level calibrator.

Calibration result

- The results are detailed on the subsequent pages.

Remarks

- The calibration results apply to the particular unit-under-test only.

- The values given in this calibration certificate only to the values measureed at the time of test & any underlainties quoted will not include allowance for the equipment long term drift, varifications with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement

Calibrated By:

Tommy TAM & Tony MA (Technician)

Approved By:

CHAN Chi Wai



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Calibration Certificate

Certificate No. : CSA27669

Page 2 of 2

Calibration Result:

1. Measured Sound Pressure Level:

| Nominal Frequency (Hz) | Nominal Output Sound Pressure (dB) | Measured Output (dB) | Expanded Uncertatiny (dB) | Coverage Factor |
|---------------------------|---------------------------------------|----------------------|------------------------------|--------------------|
| 1000 | 94.0 | 94.0 | 0,13 | 2.0 |

2. Actual Output Frequency:

| Nominal Frequency | Nominal Oulput | Measured Output (Hz) | Expanded | Coverage |
|-------------------|---------------------|----------------------|------------------|----------|
| (Hz) | Sound Pressure (dB) | | Uncertatiny (Hz) | Factor |
| 1000 | 94.0 | 981.906 | 0.13 | 2.0 |

Remark:

- The uncertainty quoted is based on 95 % confidence level.
- Measured output are mean of three measurements.

End of certificate



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Form Q/AS/C/01 Issue 1(1/7) [09/21]

Calibration Certificate

Certificate No.

CSA27977

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Information Provided by Customer

Customer

: ETS - Testconsult Limited

Address

: 8/F., Block B, Veristrong Industrial Centre, 34 - 36 Au Pui Wan Street, Fotan, Shatin, Hong Kong

Information of Unit-under-test (UUT)

| | Sound Level Meter | Microphone | Pre-amplifier |
|--------------------|-------------------|------------|---------------|
| Manufacturer | RION | RION | 17 1/2: |
| Туре | NL-52 | UC-59 | NH-25 |
| Equipment I.D. no. | ET/EN/003/16 | | |
| Serial No. | 00253765 | 07824 | 43795 |
| Adaptors used | | | 12 |
| Resolution | 0.1 dB | : | 18 |

Laboratory Information

Lab Ref No.

: Q/CAL/22/9824/I

Procedure

CQS/001/A

Date of Calibration

· 22-Nov-2022

Date of Receipt

16-Nov-2022

Date of Issue

· 23-Nov-2022

Calibration Location

Calibration Laboratory

Calibration Condition

Ambient Temperature : (20±3) °C

: 30 minutes

Relative Humidity

(50±20) %

Stabilizing Time

Sampling

: As received

Ambient Pressure

: (1000±5) hPa

Reference equipment

- Multi-function sound calibrator, ET/2801/01
- Signal generator, ET/2503/01

Calibration specification

- To perform the calibration of linearity and frequency response by multi-function sound calibrator.

Calibration result

- The results are detailed on the subsequent pages.

Remarks

- The calibration results apply to the particular unit-under-test only.
- The values given in this calibration certificate only to the values measureed at the time of test & any uncertainties quoted will not include allowance for the equipment long term drift, varifications with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement

Calibrated By:

Tommy TAM (Technician) Approved By:

CHAN Chi Wai

The results shown in this certificate are traceable to the International System of Units (SI) or recognised measurement standards. This report shall not be reproduced unless with prior written approval from this laboratory.



東業德勤測試顧問有限公司 By Weristrong Industrial Centre, 34-36 AU Pui Wen Street, Fo Tan, Horg Kong ETS-TESTCONSULT LTD. 1: 1852 2695 8318 F: +852 2695 3944 E: ell@els-lestconsult.com

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E: eti@ets-testconsult.com W: www.ets-testconsult.com



Calibration Certificate

Certificate No. CSA27977

Page 2 of 3

Calibration Result:

Reference Sound Pressure Level: (Unit in: dB)

| Ra | nge / Mode | | Reference Level | REF Frequency (kHz) | UUT Reading | Deviation | Expanded Uncertatiny | Coverage Factor |
|---------------|------------|-----------|--------------------|---------------------------|-------------|-----------|-------------------------|--------------------|
| | Self-cal | Before | 94.0 | | 94.3 | 0.3 | 0.13 | 2.0 |
| | Range | 30 to 130 | 104.0 | 1 | 104.3 | 0.3 | 0.13 | 2,0 |
| | Mode | Fast | 114.0 | | 114.3 | 0.3 | 0.13 | 2.0 |
| | Self-cal | After | 94.0 | | 94.0 | 0.0 | 0,13 | 2,0 |
| A-Weighting | Range | 30 to 130 | 104.0 | 1 | 104.0 | 0.0 | 0,13 | 2.0 |
| | Mode | Fast | 114.0 | | 114.0 | 0.0 | 0,13 | 2.0 |
| | Self-cal | After | 94.0 | | 94.0 | 0.0 | 0,13 | 2.0 |
| | Range | 30 to 130 | 104.0 | 1 | 104.0 | 0.0 | 0.13 | 2.0 |
| | Mode | Slow | 114.0 | | 114.0 | 0.0 | 0.13 | 2.0 |
| | Self-cal | After | 94.0 | | 94.0 | 0.0 | 0.13 | 2.0 |
| | Range | 30 to 130 | 104.0 | 1 | 104.0 | 0.0 | 0.13 | 2.0 |
| O Maiablina | Mode | Fast | 114.0 | | 114.0 | 0.0 | 0.13 | 2.0 |
| C-Weighting | Self-cal | After | 94.0 | | 94.0 | 0.0 | 0.13 | 2.0 |
| | Range | 30 to 130 | 104.0 | 1 | 104.0 | 0.0 | 0.13 | 2.0 |
| | Mode | Slow | 114.0 | | 114.0 | 0.0 | 0.13 | 2.0 |
| | Self-cal | After | 94.0 | | 94.0 | 0.0 | 0.13 | 2.0 |
| | Range | 30 to 130 | 104.0 | 1 | 104.0 | 0.0 | 0.13 | 2.0 |
| 7 Mestabile - | Mode | Fast | 114.0 | | 114.0 | 0.0 | 0.13 | 2.0 |
| Z-Weighting | Self-cal | After | 94.0 | | 94.0 | 0.0 | 0.13 | 2.0 |
| | Range | 30 to 130 | 104.0 | 1 | 104.0 | 0.0 | 0.13 | 2.0 |
| | Mode | Slow | 114.0 | | 114.0 | 0.0 | 0.13 | 2.0 |

Remark:

- The uncertainty quoted is based on 95 % confidence level.
- UUT reading are mean of three measurements.
- Deviation = UUT Reading Reference Level
- Laboratory reference multi-function sound calibrator was used to adjust the "Self cal" reading of UUT.



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Calibration Certificate

Form Q/AS/C/01 Issue 1(3/7) [09/21]

Certificate No.

C\$A27977

Page

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Calibration Result:

Acoustic Sensitivity and Frequency Response:

2 Frequency Response A-Weighting (Unit in: dB)

| Range | Mode | Applied Level | Frequency (Hz) | Reference Level | UUT Reading | Deviation | IEC 61672-1:2002 class 1 Specification |
|-----------|------|------------------|-------------------|--------------------|-------------|-----------|---|
| | | | 31.5 | 54.6 | 54.7 | 0,1 | -39,4 +/- 2,0 |
| | | | 63 | 67.8 | 69.0 | 0.2 | -26:2 +/- 1.5 |
| | | | 125 | 77,9 | 70.1 | 0.2 | -16,1 +/- 1,5 |
| | | | 250 | 85,4 | 85,5 | 0,1 | -8.6 +/- 1.4 |
| | | | 500 | 90,8 | 90,9 | 0,1 | -3,2 +/- 1.4 |
| 30 to 130 | Fast | 94 | 1000 (Ref.) | 94.0 | 94,0 | 0.0 | 0 +/- 1,1 |
| | | | 2000 | 95.1 | 95.0 | -0.1 | +1.2 +/- 1.6 |
| | | l i | 4000 | 94,9 | 94.1 | -0.8 | +1.0 +/- 1.6 |
| | | Ì | 6000 | 92.9 | 89,8 | -3,1 | -1,1 (+2,1; -3,1) |
| | | | 12500 | 89.7 | 83.7 | -6.0 | -4.3 (+3,0 ; -6.0) |
| | | 1 | 16000 | 87.5 | 76.9 | -10.6 | -6.6 (+3.5 ; -17.0) |

3 Frequency Response C-Weighling : (Unit in: dB)

| Range | Mode | Applied Level | Frequency (Hz) | Reference Level | UUT Reading | Deviation | IEC 61672-1:2002 class 1 Specification |
|-----------|------|------------------|-------------------|--------------------|-------------|-----------|---|
| | | | 31.5 | 91.0 | 91.1 | 0.1 | -3.0 +/- 2.0 |
| | | | 63 | 93.2 | 93,4 | 0.2 | -0.8 +/- 1.5 |
| | | | 125 | 93,8 | 94.0 | 0.2 | -0.2 +/- 1.5 |
| | | | 250 | 94.0 | 94.1 | 0.1 | 0.0 +/- 1.4 |
| | | | 500 | 94.0 | 94.1 | 0.1 | 0,0 +/- 1,4 |
| 30 to 130 | Fast | 94 | 1000 (Ref.) | 94.0 | 94.0 | 0.0 | 0 +/- 1.1 |
| | | | 2000 | 93.7 | 93.6 | -0.1 | -0.2 +/- 1.6 |
| | | | 4000 | 93.1 | 92.3 | -0.0 | -0.8 +/- 1.6 |
| | | | 8000 | 91.0 | 87.9 | -3.1 | -3.0 (+2.1; -3.1) |
| | | | 12500 | 87.8 | 81,8 | -6.0 | -6.2 (+3.0 ; -6.0) |
| | | | 16000 | 85.6 | 75.0 | -10.6 | -8.5 (+3.5 ; -17.0) |

4 Frequency Response Z-Weighting ; (Unit in: dB)

| Range | Mode | Applied Level | Frequency (Hz) | Reference Level | UUT Reading | Deviation | IEC 61672-1:2002 class 1 Specification |
|-----------|------|------------------|-------------------|--------------------|-------------|-----------|---|
| | | | 31.5 | 94.0 | 94.0 | 0.0 | 0.0 +/- 2.0 |
| | | | 63 | 94.0 | 94.1 | 0.1 | 0.0 +/- 1.5 |
| | | | 125 | 94.0 | 94.2 | 0.2 | 0.0 +/- 1.5 |
| | | | 250 | 94.0 | 94.1 | 0.1 | 0.0 +/- 1.4 |
| | | | 500 | 94.0 | 94.1 | 0.1 | 0.0 +/- 1.4 |
| 30 to 130 | Fast | 94 | 1000 (Ref.) | 94.0 | 94.0 | 0,0 | 0 +/- 1.1 |
| | | | 2000 | 94.0 | 93.8 | -0.2 | 0.0 +/- 1.6 |
| | | | 4000 | 94.0 | 93.1 | -0.8 | 0.0 +/- 1.6 |
| | | | 8000 | 94.0 | 90.9 | -3.1 | 0.0 (+2.1 ; -3.1) |
| | | | 12500 | 94.0 | 88.2 | -5.8 | 0.0 (+3.0 ; -6.0) |
| | | | 16000 | 94.0 | 84.6 | -9.4 | 0.0 (+3.5; -17.0) |

Expended uncertainty of measurement:

| | Rangé (Hz) | (dB) | Range (Hz) | (dB) |
|-------|------------|------|------------|------|
| | 31.5 | 0.20 | 2000 | 0.13 |
| 27 | 63 | 0.15 | 4000 | 0,13 |
| 94 dB | 125 | 0.15 | 8000 | 0.14 |
| 94 dB | 250 | 0.12 | 12500 | 0.16 |
| | 500 | 0.12 | 16000 | 0.16 |
| | 1000 | 0.13 | | |

Remark:

- Manufacturer specification:
- IEC 61672 class 1
- Signal level at 1000 Hz is set as indication of reference sound pressure level.
- The uncertainty quoted is based on 95 % confidence level with coverage factor $k\!=\!2.0$
- UUT reading are mean of three measurements.
- Deviation = UUT Reading Reference Level



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Form Q/AS/C/01 Issue 1(1/7) [09/21]

Calibration Certificate

Certificate No.

: CSA23783

: 1 of

Information Provided by Customer

Customer

ETS - TESTCONSULT LIMITED

Address

: 8/F., Block B, Veristrong Industrial Centre, 34 - 36 Au Pui Wan Street, Fotan, Shatin, Hong Kong

Information of Unit-under-test (UUT)

| | Sound Level Meter | Microphone | Pre-amplifier |
|--------------------|-------------------|------------|---------------|
| Manufacturer | RION | RION | RION |
| Туре | NL-52 | UC-59 | NH-25 |
| Equipment I.D. no. | ET/EN/003/17 | | |
| Serial No. | 00264519 | 03558 | 64644 |
| Adaptors used | - | | |
| Resolution | 0.1 dB | | |

Laboratory Information

Lab. Ref. No.

: Q/CAL/22/4437/I

Procedure

: CQS/001/A

Date of Calibration

22-Jun-2022

Date of Receipt

: 8-Jun-2022

Date of Issue

23-Jun-2022

Calibration Location

: Calibration Laboratory

Calibration Condition

Ambient Temperature : (20±3) °C

Relative Humidity

: (50±20) %

Stabilizing Time

: 30 minutes

Reference equipment

- Multi-function sound calibrator, ET/2801/01
- Signal generator, ET/2503/01

Calibration specification

- To perform the calibration of linearity and frequenny response by multi-function sound calibrator.

Calibration result

- The results are detailed on the subsequent pages.

Remarks

- The calibration results apply to the particular unit-under-test only.
- The values given in this calibration certificate only to the values measureed at the time of test & any uncertaintles quoted will not include allowance for the equipment long term drift, varifications with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement

Calibrated By:

Tommy TAM (Technician) Approved By:

CHAN Chi Wai



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Calibration Certificate

Certificate No. : CSA23783

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Calibration Result:

1 Reference Sound Pressure Level : (Unit in: dB)

| Ra | nge / Mode | | Reference Level | REF Frequency (kHz) | UUT Reading | Deviation | Expanded Uncertatiny | Coverage Factor |
|-------------|------------|--------|--------------------|---------------------------|-------------|-----------|-------------------------|--------------------|
| | Self-cal | 1 | 94.0 | | 94.0 | 0.0 | 0.13 | 2.0 |
| | Range | 30-130 | 104.0 | 1 | 104.1 | 0.1 | 0.13 | 2.0 |
| A Moighting | Mode | Fast | 114.0 | | 114.1 | 0.1 | 0.13 | 2.0 |
| A-Weighting | Self-cal | | 94.0 | TESTEVIEW. | 94.0 | 0.0 | 0.13 | 2.0 |
| | Range | 30-130 | 104.0 | 1 | 104.1 | 0.1 | 0.13 | 2.0 |
| | Mode | Slow | 114.0 | | 114.1 | 0.1 | 0.13 | 2.0 |
| Sug Well of | Self-cal | | 94.0 | 1 | 94.0 | 0.0 | 0.13 | 2.0 |
| | Range | 30-130 | 104.0 | | 104.1 | 0.1 | 0.13 | 2.0 |
| | Mode | Fast | 114.0 | | 114.0 | 0.0 | 0.13 | 2.0 |
| C-Weighting | Self-cal | | 94.0 | | 94.0 | 0.0 | 0.13 | 2.0 |
| | Range | 30-130 | 104.0 | 1 | 104.1 | 0.1 | 0.13 | 2.0 |
| | Mode | Slow | 114.0 | | 114.0 | 0.0 | 0.13 | 2.0 |
| | Self-cal | 1 - | 94.0 | FOX. TO | 94.0 | 0.0 | 0.13 | 2.0 |
| | Range | 30-130 | 104.0 | 1 | 104.1 | 0.1 | 0.13 | 2.0 |
| 7 Weightig | Mode | Fast | 114.0 | | 114.0 | 0.0 | 0.13 | 2.0 |
| Z-Weighting | Self-cal | - | 94.0 | | 94.0 | 0.0 | 0.13 | 2.0 |
| | Range | 30-130 | 104.0 | 1 | 104.1 | 0.1 | 0.13 | 2.0 |
| | Mode | Slow | 114.0 | | 114.0 | 0.0 | 0.13 | 2.0 |

Remark:

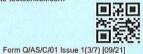
- The uncertainty quoted is based on 95 % confidence level.
- UUT reading are mean of three measurements.
- Deviation = UUT Reading Reference Level

**



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Calibration Certificate

Certificate No.

CSA23783

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Calibration Result:

Acoustic Sensitivity and Frequency Response:

3 Frequency Response A-Weighting (Unit in: dB)

| Range | Mode | Applied Level | Frequency (Hz) | Reference Level | UUT Reading | Deviation | Expanded Uncertainty | Coverage Factor |
|--------|------|------------------|-------------------|--------------------|-------------|-----------|-------------------------|--------------------|
| | | WAR END | 31.5 | 54.6 | 45.6 | -9.0 | 0.15 | 2.0 |
| | | | 63 | 67.8 | 62.3 | -5.5 | 0.13 | 2.0 |
| | | | 125 77.9 | 76.5 | -1.4 | 0.13 | 2.0 | |
| | | | 250 | 85.4 | 86.4 | 1.0 | 0.12 | 2.0 |
| | | 94 | 500 | 90.8 | 92.1 | 1.3 | 0.12 | 2.0 |
| 30-130 | Fast | | 1000 (Ref.) | 94.0 | 94.0 | 0.0 | 0.13 | 2.0 |
| | | | 2000 | 95.1 | 93.4 | -1.7 | 0.13 | 2.0 |
| | | | 4000 | 94.9 | 91.3 | -3.6 | 0.13 | 2.0 |
| | | | 8000 | 92.9 | 84.6 | -8.3 | 0.14 | 2.0 |
| | | | 12500 | 89.7 | 78.0 | -11.7 | 0.14 | 2.0 |
| | | 16000 | 87.5 | 72.4 | -15.1 | 0.14 | 2.0 | |

Frequency Response C-Weighting (Unit in: dB)

| Range | Mode | Applied Level | Frequency (Hz) | Reference Level | UUT Reading | Deviation | Expanded Uncertainty | Coverage Factor |
|-----------|---------|------------------|-------------------|--------------------|-------------|-----------|-------------------------|--------------------|
| | PANNE . | 31.5 | 91.0 | 80.2 | -10.8 | 0.22 | 2.3 | |
| | | | 63 | 93.2 | 87.6 | -5.6 | 0.13 | 2.0 |
| | | | 125 | 93.8 | 92.4 | -1.4 | 0.13 | 2.0 |
| | | | 250 | 94.0 | 95.0 | 1.0 | 0.12 | 2.0 |
| | | | 500 | 94.0 | 95.3 | 1.3 | 0.12 | 2.0 |
| 30-130 | Fast | 94 | 1000 (Ref.) | 94.0 | 94.0 | 0.0 | 0.13 | 2.0 |
| and value | | | 2000 | 93.7 | 92.0 | -1.7 | 0.13 | 2.0 |
| | | | 4000 | 93.1 | 89.6 | -3.5 | 0.13 | 2.0 |
| | | | 8000 | 91.0 | 82.7 | -8.3 | 0.14 | 2.0 |
| | | | 12500 | 87.8 | 76.2 | -11.6 | 0.14 | 2.0 |
| | | | 16000 | 85.6 | 70.6 | -15.0 | 0.14 | 2.0 |

Frequency Response Z-Weighting (Unit in: dB)

| Range | Mode | Applied Level | Frequency (Hz) | Reference Level | UUT Reading | Deviation | Expanded Uncertainty | Coverage Factor |
|------------|------------|------------------|-------------------|--------------------|-------------|-----------|-------------------------|--------------------|
| w, col 914 | Wall Samme | | 31.5 | 94.0 | 83.2 | -10.8 | 0.14 | 2.0 |
| Lv. M | | | 63 | 94.0 | 88.5 | -5.5 | 0.29 | 2.6 |
| | | | 125 | 94.0 | 92.6 | -1.4 | 0.15 | 2.0 |
| | | 250 | 94.0 | 95.0 | 1.0 | 0.12 | 2.0 | |
| | | Market St. | 500 | 94.0 | 95.3 | 1.3 | 0.12 | 2.0 |
| 30-130 | Fast | 94 | 1000 (Ref.) | 94.0 | 94.0 | 0.0 | 0.13 | 2.0 |
| | | | 2000 | 94.0 | 92.2 | -1.8 | 0.13 | 2.0 |
| | | 100 | 4000 | 94.0 | 90.3 | -3.7 | 0.13 | 2.0 |
| | | | 8000 | 94.0 | 85.6 | -8.4 | 0.14 | 2.0 |
| | | | 12500 | 94.0 | 82.7 | -11.3 | 0.14 | 2.0 |
| | | 16000 | 94.0 | 80.2 | -13.8 | 0.14 | 2.0 | |

Remark:

- Signal level at 1000 Hz is set as indication of reference sound pressure level.
- The uncertainty quoted is based on 95 % confidence level with coverage factor k=2.0.
- UUT reading are mean of three measurements.
- Deviation = UUT Reading Reference Level



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Form Q/AS/C/01 Issue 1(1/7) [09/21]

Calibration Certificate

Certificate No.

: CSA21717

1 of

Information Provided by Customer

Customer

: ETS - TESTCONSULT LIMITED

Address

8/F., Block B, Veristrong Industrial Centre, 34 - 36 Au Pui Wan Street, Fotan, Shatin, Hong Kong

Information of Unit-under-test (UUT)

| | Sound Level Meter | Microphone | Pre-amplifier |
|--------------------|-------------------|------------|---------------|
| Manufacturer | RION | RION | |
| Туре | NL-52 | UC-59 | NH-25 |
| Equipment I.D. no. | ET/EN/003/18 | | |
| Serial No. | 00264520 | 09668 | 64646 |
| Adaptors used | (=: | | |
| Resolution | 0.1 dB | | 7 |

Laboratory Information

Lab. Ref. No.

: Q/CAL/22/2402/I

Procedure

: CQS/001/A

Date of Calibration

4-Apr-2022

Date of Receipt

: 22-Mar-2022

Date of Issue

6-Apr-2022

Calibration Location

: Calibration Laboratory

Calibration Condition

Ambient Temperature : (20±3) °C

Relative Humidity

: (50±20) %

Stabilizing Time

: 30 minutes

Reference equipment

- Multi-function sound calibrator, ET/2801/01
- Signal generator, ET/2503/01

Calibration specification

- To perform the calibration of linearity and frequenny response by multi-function sound calibrator.

Calibration result

The results are detailed on the subsequent pages.

Remarks

The calibration results apply to the particular unit-under-test only.

- The values given in this calibration certificate only to the values measureed at the time of test & any uncertainties quoted will not include allowance for the equipment long term drift, varifications with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement

Calibrated By 🗄

Tommy TAM (Technician) Approved By:

CHAN Chi Wai



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Calibration Certificate

Certificate No. 3 CSA21717

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Calibration Result:

Reference Sound Pressure Level : (Unit in: dB)

| Ra | nge / Mode | | Reference Level | REF Frequency (kHz) | UUT Reading | Deviation | Expanded Uncertatiny | Coverage Factor |
|--------------|------------|-----------|--------------------|---------------------------|-------------|-----------|-------------------------|--------------------|
| | Self-cal | Before | 94.0 | | 94.5 | 0.5 | 0.11 | 2.0 |
| | Range | 30 to 130 | 104.0 | 1 | 104.5 | 0.5 | 0.11 | 2.0 |
| | Mode | Fast | 114.0 | | 114.5 | 0.5 | 0.11 | 2.0 |
| | Self-cal | After | 94.0 | | 94.0 | 0.0 | 0.11 | 2.0 |
| A-Weighting | Range | 30 to 130 | 104.0 | 1 | 104.0 | 0.0 | 0,11 | 2.0 |
| | Mode | Fast | 114.0 | | 114.0 | 0.0 | 0,11 | 2.0 |
| | Self-cal | After | 94.0 | | 94.0 | 0.0 | 0,11 | 2.0 |
| | Range | 30 to 130 | 104.0 | 1 | 104.0 | 0.0 | 0,11 | 2.0 |
| | Mode | Slow | 114.0 | | 114.0 | 0.0 | 0,11 | 2.0 |
| | Self-cal | (F) | 94.0 | | 94.0 | 0.0 | 0.14 | 2.1 |
| | Range | 30 to 130 | 104.0 | 1 | 104.0 | 0.0 | 0.11 | 2.0 |
| | Mode | Fast | 114.0 | | 114.0 | 0.0 | 0,11 | 2.0 |
| C-Weighting | Self-cal | 22 | 94.0 | | 94.0 | 0.0 | 0,14 | 2.1 |
| | Range | 30 to 130 | 104,0 | 1 | 104.0 | 0.0 | 0.11 | 2.0 |
| | Mode | Slow | 114.0 | | 114.0 | 0.0 | 0.11 | 2.0 |
| | Self-cal | 12 | 94.0 | | 94.0 | 0.0 | 0.11 | 2.0 |
| | Range | 30 to 130 | 104.0 | 1 | 104,0 | 0.0 | 0.11 | 2.0 |
| 7 164-1-E-4- | Mode | Fast | 114,0 | | 114.0 | 0.0 | 0.11 | 2.0 |
| Z-Weighting | Self-cal | * | 94.0 | | 94.0 | 0.0 | 0.11 | 2.0 |
| | Range | 30 to 130 | 104.0 | 1 | 104.0 | 0.0 | 0.11 | 2.0 |
| | Mode | Slow | 114.0 | | 114.0 | 0.0 | 0.11 | 2.0 |

Remark:

- The uncertainty quoted is based on 95 % confidence level.
- UUT reading are mean of three measurements.
- Deviation = UUT Reading Reference Level
- Laboratory reference multi-function sound calibrator was used to adjust the "Self cal" reading of UUT.



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Calibration Certificate

Form Q/AS/C/01 Issue 1(3/7) [09/21]

Certificate No.

CSA21717

Page

3 of 3

Calibration Result:

Acoustic Sensitivity and Frequency Response:

2 Frequency Response A-Weighting (Unit in: dB)

| Range | Mode | Applied Level | Frequency (Hz) | Reference Level | UUT Reading | Deviation | IEC 61672-1:2002 class 1 Specification |
|-----------|------|------------------|-------------------|--------------------|-------------|-----------|---|
| | | | 31.5 | 54.6 | 54.5 | -0,1 | -39.4 +/- 2.0 |
| | | 1 | 63 | 67.8 | 67.9 | 0.1 | -26.2 +/- 1.5 |
| | | | 125 | 77.9 | 77.9 | 0,0 | -16.1 +/- 1.5 |
| | | 1 | 250 | 85.4 | 85,4 | 0.0 | -8,6 +/- 1.4 |
| | | 1 | 500 | 90.8 | 90.8 | 0,0 | -3.2 +/- 1.4 |
| 30 to 130 | Fast | 94.0 | 1000 (Ref.) | 94.0 | 94,0 | 0.0 | 0 +/- 1.1 |
| | | 1 | 2000 | 95.1 | 95.1 | 0.0 | +1.2 +/- 1.6 |
| | | 1 | 4000 | 94.9 | 95.0 | 0.1 | +1,0 +/- 1.6 |
| | | | 8000 | 92.9 | 92.3 | -0.6 | -1.1 (+2.1 ; - 3.1) |
| | | | 12500 | 89.7 | 85,9 | -3.8 | -4,3 (+3.0 ; -6.0) |
| | | | 16000 | 97.5 | 80.2 | -7,3 | -6.6 (±3.5 ; -17.0) |

3 Frequency Response C-Weighting : (Unit in: dB)

| Range | Mode | Applied Levei | Frequency (Hz) | Reference Level | UUT Reading | Deviation | IEC 61672-1:2002 class 1 Specification |
|-----------|------|------------------|-------------------|--------------------|-------------|-------------|---|
| | | | 31,5 | 91.0 | 90,9 | 0.0 | -3.0 +/- 2.0 |
| | | | 63 | 93.2 | 93.2 | 0.0 | -0.8 +/- 1.5 |
| | | | 125 | 93.8 | 93,9 | 0.1 | -0.2 +/- 1.5 |
| | | 250 | 94.0 | 94.0 | 0,0 | 0.0 +/- 1.4 | |
| | | 1 | 500 | 94.0 | 94,0 | 0.0 | 0.0 +/- 1.4 |
| 30 to 130 | Fast | 94.0 | 1000 (Ref.) | 94,0 | 93.9 | -0.1 | 0 +/- 1.1 |
| | | | 2000 | 93.7 | 93,7 | 0.0 | -0.2 +/- 1.6 |
| | | | 4000 | 93,1 | 93.2 | 0.1 | -0.8 +/- 1.6 |
| | | | 9000 | 91.0 | 90,4 | -0.6 | -3.0 (+2.1 ; -3.1) |
| | | | 12500 | 87.8 | 84.0 | -3.8 | -6.2 (+3.0 ; -6.0) |
| | | | 16000 | 85.6 | 78.3 | -7.3 | -8.5 (+3.5 ; -17.0) |

4 Frequency Response Z-Weighling : (Unit în: dB)

| Range | Mode | Applied Level | Frequency (Hz) | Reference Level | UUT Reading | Deviation | IEC 61672-1:2002 class 1 Specification |
|-----------|------|------------------|-------------------|--------------------|-------------|-----------|---|
| | | | 31.5 | 94,0 | 93.9 | -0,1 | 0.0 +/- 2.0 |
| | | l Ì | 63 | 94.0 | 94,0 | 0.0 | 0.0 +/- 1.5 |
| 10 | | 1 | 125 | 94.0 | 94.0 | 0.0 | 0.0 +/- 1.5 |
| - 1 | | 1 1 | 260 | 94.0 | 94.0 | 0.0 | 0,0 +/- 1.4 |
| 1 | | 1 | 500 | 94:0 | 94.0 | 0.0 | 0.0 +/- 1.4 |
| 30 to 130 | Fast | 94.0 | 1000 (Ref.) | 94.0 | 94.0 | 0,0 | 0 +/- 1.1 |
| | | 1 | 2000 | 94.0 | 93.9 | 0.0 | 0.0 +/- 1.6 |
| - 1 | | | 4000 | 94,0 | 93.9 | 0.0 | 0.0 +/- 1.6 |
| | | 1 | 9000 | 94.0 | 93.3 | -0.7 | 0.0 (+2.1 ; -3.1) |
| | | 1 | 12500 | 94.0 | 90.5 | -3.5 | 0.0 (+3.0 ; -6.0) |
| | | 1 | 16000 | 94.0 | 69.0 | -6.1 | 0.0 (+3,5 ; -17.0) |

Remark:

- Manufacturer specification:

IEC 61672 class 1

- Signal level at 1000 Hz is set as indication of reference sound pressure level.
- The uncertainty quoted is based on 95 % confidence level with coverage factor k=2.0.
- UUT reading are mean of three measurements,
- Deviation = UUT Reading Reference Level
- Expended uncertainty of measurement:

| | Range (Hz) | (dB) | Range (Hz) | (dB) |
|-------|------------|------|------------|------|
| | 31.5 | 0.14 | 2000 | 0.11 |
| | 63 | 0.19 | 4000 | 0.11 |
| | 125 | 0.11 | 8000 | 0.12 |
| 94 dB | 250 | 0.11 | 12500 | 0.13 |
| | 500 | 0,11 | 16000 | 0.13 |
| | 1000 | 0.11 | | |



Appendix D2 Impact Noise Monitoring Results



Day-time Noise Monitoring`

Monitoring Location: TM-RN1 *

| Data | Start Sampling | Noi | se Level dB | (A) | Wind | Major Noise | Weather | |
|------------|-------------------|------------------------|-----------------|-----------------|----------------|----------------------|-----------|--|
| Date | Time (hh:mm) | L _{eq(30min)} | L ₁₀ | L ₉₀ | Speed (m/s) | Sources | Condition | |
| 03/01/2023 | 9:50 | 58.5 | 59.8 | 54.8 | 0.2 | General site work | Cloudy | |
| 05/01/2023 | 11:00 | 59.5 | 61.1 | 56.3 | 0.2 | General site work | Fine | |
| 10/01/2023 | 11:00 | 60.1 | 61.1 | 55.9 | 0.2 | General site work | Cloudy | |
| 12/01/2023 | 9:40 | 58.5 | 59.2 | 55.1 | 0.2 | General site work | Cloudy | |
| 17/01/2023 | 11:00 | 60.4 | 61.2 | 57.3 | 0.2 | General site work | Fine | |
| 19/01/2023 | 11:00 | 58.4 | 60.6 | 54.8 | 0.2 | Vehicle passing by | Fine | |
| 26/01/2023 | 14:00 | 57.6 | 59.1 | 55.2 | 0.2 | General site work | Cloudy | |
| 28/01/2023 | 13:00 | 59.5 | 61.0 | 56.8 | 0.2 | General site work | Fine | |
| 31/01/2023 | 11:00 | 59.4 | 60.1 | 55.7 | 0.2 | General site work | Fine | |

Remark: Since Lands Department did not approve us to enter their own area where the noise monitoring stations TM-N1 located due to the security, noise monitoring was carried out at noise monitoring stations TM-RN1 (refer to the figure 3 attached) in this reporting month.

Monitoring Location: TM-RN2*

| Date | Start Sampling | Noi | se Level dB | (A) | Wind Speed | Major Noise Sources | Weather Condition |
|------------|-------------------|------------|-----------------|-----------------|---------------|------------------------|----------------------|
| | Time (hh:mm) | Leq(30min) | L ₁₀ | L ₉₀ | (m/s) | | |
| 03/01/2023 | 9:55 | 57.9 | 59.0 | 53.6 | 0.2 | General site work | Cloudy |
| 05/01/2023 | 11:35 | 58.4 | 60.6 | 55.8 | 0.2 | General site work | Fine |
| 10/01/2023 | 11:35 | 59.5 | 61.2 | 55.8 | 0.2 | General site work | Cloudy |
| 12/01/2023 | 9:45 | 57.3 | 58.7 | 53.8 | 0.2 | General site work | Cloudy |
| 17/01/2023 | 11:35 | 58.4 | 60.6 | 55.8 | 0.2 | General site work | Fine |
| 19/01/2023 | 11:35 | 59.5 | 61.6 | 56.3 | 0.2 | Vehicle passing by | Fine |
| 26/01/2023 | 14:05 | 56.9 | 58.8 | 54.1 | 0.2 | General site work | Cloudy |
| 28/01/2023 | 13:35 | 59.9 | 60.6 | 55.4 | 0.2 | General site work | Fine |
| 31/01/2023 | 11:35 | 59.3 | 61.4 | 56.3 | 0.2 | General site work | Fine |

Remark: Since Lands Department did not approve us to enter their own area where the noise monitoring stations TM-N2 located due to the security, noise monitoring was carried out at noise monitoring stations TM-RN2 (refer to the figure 3 attached) in this reporting month.

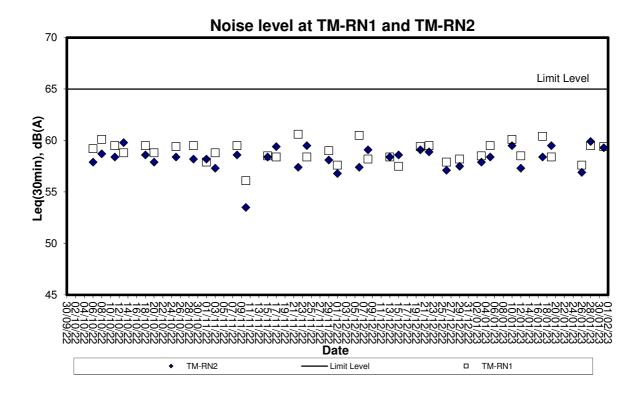


Appendix D3

Graphical Plots of Impact Noise Monitoring Data



Noise Monitoring (Day-time)





Appendix E Weather Condition

Daily Extract of Meteorological Observations , January 2023 - Tuen Mun

| | Mean | | | | Mean | Mean | Total | Prevailing | Mean |
|-----|----------|----------|-------------|----------|----------|----------|----------|------------|--------|
| | Mean | | . | | | | | | |
| | Pressure | Al | r Temperatu | re | Dew | Relative | Rainfall | Wind | Wind |
| | (hPa) | | | | Point | Humidity | (mm) | Direction | Speed |
| Day | | Absolute | Mean | Absolute | (deg. C) | (%) | | (degrees) | (km/h) |
| | | Daily | (deg.C) | Daily | | | | | |
| | | Max | (Log. c) | Min | | | | | |
| | | (deg. C) | | (deg. C) | | | | | |
| 1 | 1023.3 | 19.3 | 16.9 | 14.5 | 10.2 | 65 | 0.1 | 10 | 23.4 |
| 2 | 1023.1 | 21.6 | 18.7 | 17.2 | 12 | 65 | Trace | 20 | 21.8 |
| 3 | 1023.7 | 19.2 | 17.3 | 16.1 | 11.4 | 69 | Trace | 10 | 24.1 |
| 4 | 1023.4 | 19.9 | 17.4 | 15.8 | 12.7 | 74 | Trace | 60 | 26.8 |
| 5 | 1023.4 | 21.4 | 18.5 | 16.8 | 14.3 | 77 | - | 60 | 21.7 |
| 6 | 1022.6 | 23.4 | 19.8 | 17 | 11.9 | 62 | - | 10 | 18.4 |
| 7 | 1020.5 | 21.3 | 19.1 | 17.9 | 10.9 | 59 | - | 60 | 23.8 |
| 8 | 1020 | 20 | 18.6 | 17 | 9.8 | 57 | Trace | 70 | 35 |
| 9 | 1019.5 | 21.4 | 19.7 | 18.2 | 14.3 | 72 | 0.1 | 50 | 22.8 |
| 10 | 1018.8 | 19 | 18.2 | 17.6 | 16.8 | 91 | 5.5 | 40 | 23.4 |
| 11 | 1017.6 | 19.1 | 18.1 | 17 | 15.9 | 87 | 3.2 | 60 | 31 |
| 12 | 1014.5 | 19.6 | 18.8 | 17.5 | 16.8 | 88 | 0.5 | 50 | 26.9 |
| 13 | 1011 | 23.9 | 21.7 | 18.9 | 20.5 | 93 | 4.5 | 20 | 14.5 |
| 14 | 1009.4 | 24.7 | 22.7 | 20 | 20.9 | 90 | 3.4 | 250 | 9.4 |
| 15 | 1014.4 | 21.6 | 18.4 | 13 | 14.7 | 80 | Trace | 10 | 25.9 |
| 16 | 1021.6 | 13.2 | 12.3 | 11.3 | 6.2 | 66 | - | 360 | 30.6 |
| 17 | 1023.6 | 15.2 | 13.2 | 11 | 8 | 71 | - | 10 | 24.2 |
| 18 | 1024.1 | 17.1 | 14.3 | 11.5 | 6.2 | 58 | - | 10 | 22.5 |
| 19 | 1022.3 | 18.7 | 16.1 | 13.3 | 8.9 | 63 | - | 40 | 14.4 |
| 20 | 1021.4 | 20.9 | 17.6 | 15.9 | 10.1 | 62 | Trace | 20 | 20.6 |
| 21 | 1019.5 | 18.8 | 16.9 | 16 | 13.1 | 79 | Trace | 80 | 36.9 |
| 22 | 1016.5 | 22.4 | 18.8 | 16.6 | 15.8 | 83 | 0.6 | 40 | 15.5 |
| 23 | 1016.2 | 21.1 | 18.8 | 16.9 | 16.4 | 86 | - | 50 | 11.3 |
| 24 | 1024.5 | 18.7 | 14.7 | 12 | 4.3 | 51 | 0.3 | 10 | 48.6 |
| 25 | 1023.1 | 14.4 | 12.5 | 10.6 | 3.5 | 54 | - | 60 | 31.8 |
| 26 | 1019.3 | 18.6 | 15.7 | 13 | 9.4 | 66 | - | 60 | 26.8 |
| 27 | 1022.5 | 17.3 | 15.4 | 12.4 | 3.2 | 46 | - | 10 | 40.8 |
| 28 | 1024.1 | 15.7 | 12.9 | 10.6 | -5.2 | 28 | - | 10 | 32.6 |
| 29 | 1023.7 | 16 | 12.8 | 9.8 | -2.6 | 35 | - | 360 | 18.6 |
| 30 | 1022.2 | 18.8 | 15 | 11.7 | 3.5 | 48 | - | 60 | 18.3 |
| 31 | 1017.9 | 20.1 | 16.9 | 13.8 | 9.1 | 61 | - | 60 | 27.3 |

Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected



Appendix F Event-Action Plans

| | | ٠٠,٠٠٠ | _ | | | Т | |
|--|-------------|-----------|--|---|--|-------------|---|
| | Contractor | | Rectify any unacceptable | | actions to IC(E) within 3 working days of notification 2. Implement the agreed proposals 3. Amend proposal if appropriate | | 1. Take Immediate action to avoid further exceedance 2. Submit proposals for remedial actions to IC(E) within 3 working days of notification 3. Implement the agreed proposals 4. Amend proposal if appropriate. |
| | - | - | - | | | - | |
| ITY EXCEEDANCE | Cu | | A STATE OF THE PROPERTY OF THE | . Nouity Confector | 1. Confirm receipt of notinication of failure in writing 2. Notify the Contractor 3. Ensure remedial measures property implemented | | Confirm receipt of notification of faiture in writing Notify the Contractor Ensure remedial measures properly implemented |
| UAL | f | \dashv | | | H 90 | İ | E E |
| EVENT/ACTION PLAN FOR AIR QUALITY EXCEEDANCE | ACTION | IQE) | ACTION LEVEL | Check monitoring data submitted by the El | Check monitoring data submitted by the ET Leader Check the Contractor's working method Discuss with ET and Contractor on possible remedial measures Advise the ER on the effectiveness of the proposed remedial measures Supervise implementation of remedial measures | LIMIT LEVEL | Check monitoring data submitted by the ET Leader Check Contractor's working method Discuss with ET and Contractor on possible remedial measures Advise the ER on the effectiveness of the proposed remedial measures Supervise implementation of remedial measures |
| 盃 | | \Box | | - ' ' ' ' | + 52 4 6 | ' | ન બંધ, 4, ત્યું |
| | | ET Leader | | Identify source, investigate the causes of exceedance and propose remedial measures. Inform ER, IC(E) and Contractor. Repeat measurement to confirm finding. Increase monitoring frequency to daily | Identify source, investigate the causes of exceedance and propose remedial measures. Inform IC(E) and Contractor. Repeat measurements to confirm finding. Increase monitoring frequency to daily increase monitoring frequency to daily semedial actions. If exceedance continues, arrange meeting with IC(E) and ER. If exceedance stops, cease additional monitoring. | | 1. Identify source, investigate the causes of exceedance and propose remedial measures. 2. Inform ER, Contractor and EPD 3. Repeat measurement to confirm finding. 4. Increase monitoring frequency to daily norease the effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results. |
| - | | | | + 4 4 + + + + + + + + + + + + + + + + + | | - | |
| EVENT | | | | 1. Exceedance for one sample | 2. Exceedance for two or more consecutive samples | | 1. Exceedance for one sample |
| | | | <u>1</u> | <u> </u> | <u> </u> | _ | <u> </u> |

| EVENT | | EVENT/ACTION PLAN FOR AIR QUALITY EXCEEDANCE | ALITY EXCEEDANCE | |
|---------------|--|---|------------------------------------|---|
| | | ACTION | | |
| | ET Leader | (C(E) | ER | Contractor |
| 2. Exceedance | 1. Identify source, investigate the causes | s 1. Discuss amongst ER, ET and Contractor on | 1. Confirm receipt of notification | Take Immediate action to |
| for two or | of exceedance and propose remedial | | of fallure in writing | avoid further exceedances |
| толе | measures | 2. Review Contractor's remedial actions | 2. Notify Contractor | 2. Submit proposals for remedial |
| consecutive | 2. Notify IC(E), ER, EPD and Contractor | | 3. In consultation with the IC(E), | actions to IC(E) within 3 |
| sames | 3. Repeat measurement to confirm | effectiveness and advise the ER accordingly | agree with the Contractor on | working days of notification |
| | finding | 3. Supervise the implementation of remedial | the remedial measures to be | Implement the agreed |
| | 4. Increase monitoring frequency to daily | | implemented | proposals |
| | _ | | 4. Ensure remedial measures | Resubmit proposals if |
| | 5 | | are property implemented | problem still not under control |
| | possible mitigation to be implemented | | 5. If exceedances continues, | Stop the relevant activity of |
| | 6. Arrange meeting with IC(E) and ER to | | consider what portion of the | works as determined by the |
| | _ | | work is responsible and | ER until the exceedance is |
| | taken | | instruct the Contractor to stop | abated |
| | 7. Assess effectiveness of Contractor's | | that portion of work until the | • |
| | remedial actions and keep IC(E), EPD | · · | exceedance is abated | |
| ν. | and ER informed of the results | | | |
| | 8. If exceedance stops, cease additional | | | |
| | monitoring | | | |

| | | | | EVENT/ACTION PLAN FOR NOISE EXCEEDANCE | Z | OISE EXCEEDANCE | | | |
|-----------------|----------------|---|------------------|--|--------------------|--|------|---|---|
| EVENT | | | | ACTION | z | | | | |
| | | ET Leader | | IC(E) | | ER | | Contractor | ~ |
| Action Level | 는 Vi Wi 수 · Vi | Notify the Carry ou Report the Report the IC(E) Discuss tormulate Increase check mi | - 3 € | Review the analysed results submitted by the ET. Review the proposed remedial measures by the Contractor and advise the ER accordingly. Supervise the implementation of remedial measures. | ન જુણ 4 | Confirm receipt of notification of failure in writing. Notify the Contractor. Require the Contractor to propose remedial measures for the analysed noise problem. Ensure remedial measures are properly implemented. | - 2. | Submit noise mitigation proposals to IC(E). Implement noise mitigation proposals. | |
| Limit | <u> -</u> | Notify the IC(E), the ER, the EPD | ~- | Discuss amongst the ER, the ET | - | Confirm receipt of notification of | Ţ | Take immediate action to avoid | |
| Level | • | | | Leader and the Contractor on the notestial remedial actions | • | Tallure in writing. Notify the Contrador | ς. | Submit proposals for remedial | |
| | i | | c | Designation the Contractor's compatible | i 0 | Documents the Contractor to propose | i | actions to IC/E) within 3 | |
| | | | į | Keview the Contractor's remedial | ń | Regulie die Collactor to propose | | sections to today within 5 | |
| | | findings. | | | | remedial measures for the | | working days of notalication. | |
| | 4. | | | assure their effectiveness and | _ | analysed noise problem. | નં | Implement the agreed | |
| | ις | . Carry out analysis of Contractor's | | advise the ER accordingly. | 4. | Ensure remedial measures are | , | proposals. | |
| _ | | working procedures to determine | લ | | - | properly implemented. | 4 | Resubmit proposals if problem | |
| | | possible mitigation to be | | remedial measures. | က် | It exceedances continue, consider | Ц | Still not under control. | |
| | | | | | | what activity of the work is | ń | Stop the relevant activity of | |
| | ဖ် | | | | | responsible and instruct the | | works as determined by the ER | |
| | | EPD the causes & actions taken for | | | | Contractor to stop that activity of | | URIN IN exceedances is | |
| · · · · · | y, | the exceedances. | | | | work until the exceedances is | | abated. | |
| | ۲. | Assess effectiveness of | | | | abated. | | | |
| | _ | Contractor's remedial actions and | | | | - | | | |
| | | keep the IC(E), the EPD and the | | | | | | - | |
| | | ER informed of the results | | | | | | | |
| | ထ | | | | · | | | | |
| | | construction works stops, cease | | | | | | | |
| | | additional monitoring | | | ╛ | | | | 7 |

| Event | | EVEN | TA | EVENT AND ACTION PLAN FOR WATER QUALITY EXCEEDANCE | ATI | ER QUALITY EXCEEDANC | Щ | |
|----------------|----------|------------------------------------|----|--|----------------|------------------------------------|-----------|------------------------------|
| | | | | ACTION | z | | | |
| | | ET Leader | | Contractor | | ER | | EC |
| Action level | - | Identify source(s) of impact: | - | Notify the ER and IEC in writing | 1, | Notify EPD and other relevant | : | Check monitoring data |
| heing exceeded | ~ | Repeat in-situ measurement to | | within 24 hours of identification of | | governmental agencies in writing | | submitted by ET |
| hy one | i | confirm findings: | | exceedance | _ | within 24 hours of the | 2. | Confirm ET assessment if |
| sampling day | ۲. | _ | 2 | Rectify unacceptable practice; | | identification of the exceedance | | exceedance is due / not due |
| for Rundings | 5 | | e, | Check all plant and equipment; | 7 | Discuss with IEC, ET and | | to the works |
| | | exceedance | 4 | Submit investigation report to IEC | | Contractor on the proposed | က် | Discuss with ET, ER and |
| | 4 | | | and ER within 3 working days of | | mitigation measures; | | Contractor on the mitigation |
| | : | | | the identification of an | د . | Require contractor to propose | | measures |
| | | working methods: | | exceedance | | remedial measures for the | 4 | Review contractor's |
| | LC. | | ហ៍ | Consider changes of working | | analysed problem if related to the | | mitigation measures |
| | œ œ | | | method if exceedance is due to | | construction works | | whenever necessary to |
| | <u> </u> | _ | | the construction works | 4 | Ensure remedial measures are | | ensure their effectiveness |
| | | days of identification of | မှ | Discuss with ET, IEC and ER and | | property implemented | | and advise the ER |
| | | exceedance and advise | | | က် | Assess the effectiveness of the | | |
| | | contractor if exceedance is due to | | IEC and ER if exceedance is due | | mitigation measure | ശ് | |
| | | contractor's construction works | | to the construction works within 4 | | | | implementation of mitigation |
| | ۲. | | | working days of identification of | _ | | | measures · |
| دو | | Contractor if exceedance is due | | an exceedance | | | | |
| | | to the construction works within 4 | ۲. | Implement the agreed mitigation | | | | |
| | | working days | | measures within reasonable time | | | | |
| | ထ | Repeat measurement on next day | | scale | | | | |
| | | of exceedance if exceedance is | | | | | _ | |
| | | due to the construction works | _ | | _ | | | |

| Event | | | Ш | EVENT AND ACTION PLAN FOR WATER QUALITY | 6 | R WATER QUALITY | | |
|---------------|----------|---------------------------------|----|---|----|--------------------------------|----------------|--------------------------|
| | | | | ACTION | × | | | |
| | | ET Leader | | Contractor | | ER | | SEC |
| Action level | ÷ | Identify source(s) of impact; | 1. | Notify IEC and ER in writing | ÷ | Notify EPD and other relevant | - - | Check monitoring data |
| being | ٦i | Repeat in-situ measurement | | within 24 hours of | | governmental agencies in | | |
| exceeded by | | to confirm findings | | identification of exceedance | | writing within 24 hours of the | તં | - |
| more than one | က် | Notify Contractor in writing | 2 | Rectify unacceptable practice; | | identification of the | | if exceedance is due / |
| consecutive | | within 24 hours of | က | Check all plant and | | exceedance | | not due to the works |
| sampling days | | identification | | equipment; | 7 | Discuss with IEC, ET and | <i>ω</i> | |
| | 4. | Check monitoring data, all | 4 | Consider changes of working | | Contractor on the proposed | | Contractor on the |
| | | plant, equipment and | | methods; | | mitigation measures; | | mitigation measures. |
| | | Contractor's working methods; | က် | Submit the results of the | က | Require contractor to propose | 4 | Review contractor's |
| | ĸ | Carry out investigation | | investigation to IEC and ER | | remedial measures for the | _ | mitigation measures |
| | 6 | Report the results of | | within 3 working days of the | | analysed problem if related to | | whenever necessary to |
| | | investigation to the Contractor | | Identification of an | | the construction works | | ensure their |
| | | within 3 working days of | | exceedance | 4. | Ensure remedial measures | | effectiveness and advise |
| | | identification of exceedance | 9 | Discuss with ET, IEC and ER | | are properly implemented | | |
| | | and advise contractor if | | and propose mitigation | က် | Assess the effectiveness of | က် | |
| | | exceedance is due to | | measures to IEC and ER | | the mitigation measure | | of the implemented |
| | | contractor's construction | | within 4 working days of | | | | mitigation measures. |
| | | works | | identification of an | | | | |
| <u> </u> | ۲. | Discuss mitigation measures | | exceedance | | | | |
| | | with IEC and Contractor within | ۲. | Implement the agreed | | | | |
| | | 4 working of identification of | | mitigation measures within | | | | |
| •••• | | an exceedance | | reasonable time scale | | | | |
| - | တ် | Ensure mitigation measures | | | | | | |
| | | are implemented; | | | | | | |
| ·· | တ် | Prepare to increase the | | | | | | |
| | | monitoring frequency to daily; | | | | | | |
| | <u>ö</u> | | | | | | | |
| | _ | day of exceedance. | _ | | _ | | | |

| Event | | EVENT AND | ĭ≚ | | 'ATE | ACTION PLAN FOR WATER QUALITY EXCEEDANCE | ш | | |
|--------------|----------|-------------------------------|----------|--------------------------------|----------|--|--------------|-------------------------|----------|
| | _ | | | ACTION | Z | | | | |
| ··· | | ET Leader | | Contractor | | ER |] | IEC | <u> </u> |
| Limit level | F | Repeat in-situ measurement | - | Notify IEC and ER in writing; | <u></u> | Notify EPD and other relevant | ⇌ | Check monitoring data | |
| heind | | to confirm findings: | | within 24 hours of the | | governmental agencies in | | submitted by ET | |
| exceeded by | 7 | _ | | identification of the | _ | writing within 24 hours of | 2 | Confirm ET assessment | |
| one sampling | ٣. | | | exceedance | | identification of exceedance | | if exceedance is due / | |
| Sunday Neb | <u> </u> | _ | 2 | Rectify unacceptable practice; | % | Discuss with IEC, ET and | | not due to the works | |
| 6 | | identification of the | က | Check all plant and | | Contractor on the proposed | က် | Discuss with ET, ER and | |
| | | exceedance | | equipment: | | mitigation measures; | | Contractor on the | |
| | 4 | _ | 4 | Consider changes of working | က် | Request Contractor to critically | | mitigation measures. | |
| | | _ | | methods; | | review the working methods; | 4 | Review proposals on | |
| | | Contractor's working methods: | ις | Submit the results of the | 4 | Ensure remedial measures | | mitigation measures | _ |
| | ις | _ | | investigation to IEC and ER | | are properly implemented | | submitted by Contractor | |
| | <u> </u> | _ | | within 3 working days of the | က် | Assess the effectiveness of | _ | and advise the ER | |
| · | <u> </u> | ••• | | identification of an | | the implemented mitigation | | | " |
| | | within 3 working days of | | exceedance | | measures. | ശ് | | ori. |
| | | identification of exceedance | ဖ် | | | | | of the implemented | |
| | | and advise contractor if | | and propose mitigation | | | | mitigation measures | |
| | | exceedance is due to | | measures to IEC and ER | | | | | |
| | | contractor's construction | | within 4 working days of the | | | | | |
| . ** | | works | | identification of an | | | | | |
| | ۲. | | - | exceedance | | | _ | | |
| | | with IEC, ER and Contractor | <u>~</u> | implement the agreed | | | | | |
| | | within 4 working of | | mitigation measures within | | | _ _ _ | | |
| | | identification of an | | reasonable time scale | | | | | |
| | | exceedance | | | | | | | |
| | <u>∞</u> | . Ensure mitigation measures | | | | | | | |
| | | are implemented; | | | | | | | |
| | ക് | | | | | | | | |
| | | frequency to daily until no | | | | | | | |
| | _ | exceedance of Limit Level. | | | _ | | _ | | 7 |

:

| Event | | EVEN | ۲ | ND ACTION PLAN FOR WA | /ATE | EVENT AND ACTION PLAN FOR WATER QUALITY EXCEEDANCE | ш | |
|---------------|------------------|---------------------------------|----|--------------------------------|----------|--|--------------|--------------------------|
| ·— · | <u></u> | | | ACTION | ž | | - [| |
| -12 | | ET Leader | | Contractor | | ER | | EC |
| Limit Level | - | Repeat in-situ measurement | Ŀ | Notify ER and IEC in writing | <u>-</u> | Notify EPD and other relevant | . | Check monitoring data |
| peind | | to confirm findings; | | within 24 hours of the | | governmental agencies in | _ | submitted by ET |
| exceeded by | 2 | | | Identification of the | | writing within 24 hours of | તાં | Confirm ET assessment |
| more than one | က | | | exceedance and | | identification of exceedance | | if exceedance is due / |
| consecutive | _ | within 24 hours of | 2 | Rectify unacceptable practice; | તં | Discuss with IEC, ET and | _ | not due to the works |
| sampling days | | identification of the | က | Check all plant and | | Contractor on the proposed | က | Discuss with ER, ET and |
| | | exceedance | | equipment; | | mitigation measures; | | Confractor on the |
| | 4 | Check monitoring data, all | 4 | Consider changes of working | ઌ૽ | Request Contractor to critically | | mitigation measures. |
| | | plant, equipment and | | methods; | | review the working methods; | 4. | Review proposals on |
| | _ | Contractor's working methods; | 89 | Submit the results of the | တ် | Ensure remedial measures | | mitigation measures |
| | <u>۔۔۔</u> پی | _ | | investigation to IEC and ER | | are properly implemented | | submitted by Contractor |
| | Ó | | | within 3 working days of the | 4 | Assess the effectiveness of | | and advise the ER |
| | | investigation to the Contractor | | identification of an | | the implemented mitigation | ١ | accordingly. |
| | | within 3 working days of | | exceedance | | measures; | က် | Assess the effectiveness |
| | | identification of exceedance | က် | Discuss with ET, IEC and ER | က် | Consider and instruct, if | | of the implemented |
| ***** | | and advise contractor if | | and propose mitigation | <u></u> | necessary, the Contractor to | | mitigation measures. |
| | | exceedance is due to | | measures to IEC and ER | | slow down or to stop all or part | | |
| | | contractor's construction | | within 4 working days; | | of the marine work until no | | |
| | | works | ဖ | Implement the agreed | | exceedance of Limit Level. | | |
| | ۲. | Discuss mitigation measures | | mitigation measures within | | | | |
| | | with IEC, ER and Contractor; | | reasonable time scale | | | | |
| - | ထ | | ۲- | As directed by the Engineer, | | | | |
| | | are implemented; | | to slow down or to stop all or | | | | |
| | တ် | Increase the monitoring | | part of the marine work or | | | | |
| | | frequency to daily until no | | construction actives. | | | | |
| | | exceedance of Limit Level for | | | | | | |
| | | two consecutive days. | _[| | | | _[| |



Appendix G Construction Programme

| ID | A | Task Name | Baseline Start | Baseline Finish | Start | Finish | Duration | Predece | | Total Slack | Actual Start | Actual Finish | % Complete | Jan '23 9 26 2 9 16 | Feb '23 23 30 6 13 2 | Mar '23 | |
|---------|------------------|---|--------------------|--------------------|-----------------|------------------------------|----------|------------|-------|------------------|--------------------------|------------------|---------------|---|-----------------------------------|----------------------|---------|
| 1 | | Contract duration of Contract CV/2021/9 | Sat 1/1/22 | Sun 31/12/23 | Sat 1/1/22 | Sun 31/12/23 | 730 days | | (|) days | NA | NA | 0% | 1/1/23 | 23 30 6 13 2 | 20 27 6 13 2 | 31/3/23 |
| 2 | iii. | Contract date, Date of the Letter of Acceptance (assumed) | Mon 20/12/2 | 1 Mon 20/12/21 | Mon 20/12/21 | Mon 20/12/21 | 0 days | | 1 | 742 days | s NA | NA | 0% | 1 | | | |
| 3 | - Q | Starting Date of the Works | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | 0 days | | 7 | 729 days | s NA | NA | 0% | | | | |
| 4 | 11 | Starting Date of Section 1 of the Works | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | 0 days | | (| days | NA | NA | 0% | | | | |
| 5 | ••• | Starting Date of Section 2 of the Works | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | 0 days | | (| 0 days | NA | NA | 0% | | | | |
| 6 | | Starting Date of Section 3 of the Works | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | 0 days | | (| 0 days | NA | NA | 0% | | | | |
| 7 | <u></u> | Date for Completion of the Works | Sun 31/12/23 | Sun 31/12/23 | Sun 31/12/2 | 23 Sun 31/12/23 | 0 days | | | 1 day | NA | NA | 0% | | | | |
| 8 | 110 | Completion Date of Section 1 of the Works | Sun 31/12/23 | Sun 31/12/23 | Sun 31/12/2 | 23 Sun 31/12/23 | 0 days | | (| 0 days | NA | NA | 0% | | | | |
| 9 | H | Completion Date of Section 2 of the Works | Sun 31/12/23 | Sun 31/12/23 | Sun 31/12/2 | 23 Sun 31/12/23 | 0 days | | (| 0 days | NA | NA | 0% | | | | |
| 10 | 111 | Completion Date of Section 3 of the Works | Sun 31/12/23 | Sun 31/12/23 | Sun 31/12/2 | 23 Sun 31/12/23 | 0 days | | (| 0 days | NA | NA | 0% | | | | |
| 11 | H | Planned completion dates | Sun 31/12/23 | Sun 31/12/23 | Sun 31/12/2 | 23 Sun 31/12/23 | 0 days | | (| 0 days | NA | NA | 0% | 1 | | | |
| 12 | 1 | Planned competion date of Section 1 | Sun 31/12/23 | Sun 31/12/23 | Sun 31/12/2 | 23 Sun 31/12/23 | 0 days | | (| 0 days | NA | NA | 0% | 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | |
| 13 | H | Planned competion date of Section 2 | Sun 31/12/23 | Sun 31/12/23 | Sun 31/12/2 | 23 Sun 31/12/23 | 0 days | | (| 0 days | NA | NA | 0% | | | - | |
| 14 | H. | Planned competion date of Section 3 | Sun 31/12/23 | Sun 31/12/23 | Sun 31/12/2 | 23 Sun 31/12/23 | 0 days | | (| 0 days | NA | NA | 0% | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | |
| 15 | | Access Date of the Site | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | 0 days | | 7 | 729 days | s NA | NA | 0% | 1 | | | |
| 16 | √ © | Portion A2, A3a, A3b, A3c, A4, A5a, A5b, A7c2, A10 and (within 60 days after starting date) | A11 Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | 0 days | | (| 0 days | Sat 1/1/22 | Sat 1/1/22 | 100% | # 1 | | | |
| 17 | √ © | Portion B1, B3, B6a, B6b and B7 (within 60 days after st date) | arting Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | 0 days | | (| 0 days | Sat 1/1/22 | Sat 1/1/22 | 100% | 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | | | |
| 18 | √ [2 | Portion A1. A7a, A7b, A7c1, A9, A9a and B6c (7 day's advance notice after starting date) | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | 0 days | | (| 0 days | Sat 1/1/22 | Sat 1/1/22 | 100% | 1 | | | |
| 19 | 1 | Portion B6c (7 day's advance notice after starting date) | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | 0 days | | (| 0 days | Sat 1/1/22 | Sat 1/1/22 | 100% | 1 | | | |
| 20 | | Hand back of the Site | | Sun 31/12/23 | Sun 31/12/2 | 23 Sun 31/12/23 | 0 days | | (| 0 days | NA | NA | 0% | | | | |
| 21 | | Portion A2, A3a, A3b, A3c, A4, A5a, A7c2, A10 and A11 at an earlier date notified by the Project Manager with 30 days' advance notice) | | Sun 31/12/23 | Sun 31/12/23 | Sun 31/12/23 | 0 days | | (| 0 days | NA | NA | 0% | | | | |
| 22 | | Portion A1, A7b, A7c1, A9 and A9a (or at an earlier date notified by the Project Manager with 30 days' advance no | tice) | Sun 31/12/23 | 31/12/23 | Sun 31/12/23 | 0 days | | (| 0 days | NA | NA | 0% | | | | |
| 23 | | Portion B1, B3, B6a, B6b and B7 (or at an earlier date as notified by the Project Manager with 30 days' advance no | tice) | Sun 31/12/23 | 31/12/23 | Sun 31/12/23 | | | | 0 days | NA | NA | 0% | | | | |
| 24 | <u> </u> | Portion B6c (or at an earlier date as notified by the Proje Manager with 30 days' advance notice) | | Sun 31/12/23 | 31/12/23 | Sun 31/12/23 | | 400 | | 0 days | NA Sat 4/4/22 | NA | 0% 47% | | | | |
| 25 | | Section 1 of the Works - Tseung Kwan O Area 137 Fi Bank | | Sun 31/12/23 | | | • | | | 0 days | Sat 1/1/22 | NA | | | | | |
| 26 | ~ | Taking over the existing facilities at the Tseung Kwan Area 137 Fill Bank within Portion A of the Site | | Sat 1/1/22 | | Sat 1/1/22 | 1 day | | | 0 days | Sat 1/1/22 | | 100% | | | | |
| 076 | | Operation of the the Tseung Kwan O Area 137 Fill Ba within Portion A of the Site Operation and maintenance of the surveillance system | | | | Sun 31/12/23 Sun 31/12/23 | | | | 0 days 0 days | Sat 1/1/22 Sat 1/1/22 | NA NA | 49% | | | | |
| | •• <u>©</u> | within Portion A of the Site | | | | Sun 31/12/23 | | | | 0 days | Sat 1/1/22 | | 49% | | | | |
| | . 2 | the Site | A of | | | | | | | | out it like | | | | | | |
| 30 | D. | Provision, operation and maintenance of the Crushing Plant at the Tseung Kwan O Area 137 Fill Bank within Portion A of the Site | Sat 1/1/22 | Sun 31/12/23 | Sat 1/1/22 | Sun 31/12/23 | 730 days | 26SS | 0 (| 0 days | Sat 1/1/22 | NA | 49% | | | | |
| 31 | D. | Operation and maintenance of the dewatering plant a Tseung Kwan O Area 137 Fill Bank within portion A o Site. | the Sat 1/1/22 the | Sun 31/12/23 | Sat 1/1/22 | Sun 31/12/23 | 730 days | 26SS | 0 (| 0 days | Sat 1/1/22 | NA | 49% | | | | |
| 32 | 9 2 | | e Sat 1/1/22 a | Sun 31/12/23 | Sat 1/1/22 | Sun 31/12/23 | 730 days | 26SS | 0 (| 0 days | Sat 1/1/22 | NA | 49% | | | | |
| | | Та | sk | | | External Task | s | | | | Duration-only | | | External Tasks | ♦ | | |
| | | Sp | it | | | External Mile | stone | \Diamond | | 1 | Manual Summ | ary Rollup | * | External Miles | tone | Company of | |
| | 3 mon 0/12/20 | th rolling programme Jan23-mar 23 CV/2021/09 | estone | • | | Inactive Miles | stone | | | N | Manual Summ | narv | • | Progress | | | |
| ate. [3 | 0/12/20 | | | 3.50 | | | | | | | | , | Cal Canada | | p. | | |
| | | | mmary | | | Inactive Sum | | 1111111 | 00000 | | Start-only | | | Deadline | \Diamond | | |
| | | Pro | ject Summary | \bigcirc | ∇ | Manual Task | | 0 | | F | Finish-only | | V | Slack | - | | |
| | | | | | | | | Page 1 | | | | | | | | | |

| ID | A | Task Name | Base Start | | Baseline Finish | Start | Finish | Duration | Predec | | Total Slack | | Actual Finish | % Complete | 120 | Jan '23 | Feb '23 | Mar '23 | Ap |
|----------------------|--------------|--|---------------------|----------|--------------------|-----------------|----------------|--|------------|----------------------|----------------|-----------------|------------------|---------------|-------------|----------------------------|--|-----------|-------|
| 33 | U | Construction of Gabion wall | NA | | NA | Sat 19/2/22 | Sun 31/12/23 | 681 days | | - | 0 days | Sat 19/2/22 | NA | 14% | 26 | 2 9 16 23 3 | 30 6 13 20 27 | 6 13 20 2 | /3/23 |
| 34 | 1 | Preparing and submitting a method statement | for Sat 1 | 9/2/22 | | Sat 19/2/22 | | 12 days | | 2 | 0 days | Sat 19/2/22 | Wed 2/3/22 | 100% | | | | | |
| 35 | | approval Preparing and submitting the material submiss | sion Sat 5 | 5/3/22 | Fri 18/3/22 | Sat 19/2/22 | Wed 2/3/22 | 12 days | | 2 | 0 days | Sat 19/2/22 | Wed 2/3/22 | 100% | | 8 8 8 8 8 8 | | | |
| 36 | 1 | Obtaining approval from the Project Manager | | | Fri 1/4/22 | Tue 26/4/22 | | | 35,34 | 2 | 0 days | Tue 26/4/22 | | | | | | | |
| | B | Construction of Gabion wall | | | Sun 31/12/23 | | | 546 days | 2010 | 7 | 0 days | Mon 4/7/22 | | 10% | | | | | |
| 38 | 1 | Re-surfacing of the access road at A11 TKOFE | B NA | | NA | Mon 21/3/22 | Fri 22/4/22 | 33 days | | SOUTH REAL PROPERTY. | 0 days | Mon 21/3/22 | Fri 22/4/22 | 100% | | | | | |
| 39 | 1 | Submission of method statement of re-surfaci access road | ing the NA | | NA | Mon 21/3/22 | Fri 25/3/22 | 5 days | | 0 | 0 days | Mon 21/3/22 | Fri 25/3/22 | 100% | | | * | | |
| 40 | 1 | Obtaining approval from the Project Manager | NA | | NA | Thu 7/4/22 | Thu 7/4/22 | 1 day | 39 | 2 | 0 days | Thu 7/4/22 | Thu 7/4/22 | 100% | | | | | |
| 41 | V | Milling off the existing pavement, overlaying ne pavement on the access road | ew NA | | NA | Fri 15/4/22 | Fri 22/4/22 | 8 days | 40 | 1 | 0 days | Fri 15/4/22 | Fri 22/4/22 | 100% | | | | | |
| 42 | A. | PMI no.3 Trial Production of blanket layer mat recycled from public fill | terial Tue 2 | 28/6/22 | Wed 24/8/22 | Tue 28/6/22 | Wed 30/11/22 | 156 days | | | 0 days | Tue 28/6/22 | Wed 30/11/22 | 100% | | | | | |
| 43 | V | Submission of method statement | Tue 2 | 28/6/22 | Fri 29/7/22 | Tue 28/6/22 | Fri 29/7/22 | 32 days | | 1 | 0 days | Tue 28/6/22 | Fri 29/7/22 | 100% | | | | | |
| 44 | 1 | Obtaining approval from the Project Manager | Sat 3 | | | | Wed 17/8/22 | 1 day | | 2 | 0 days | Wed 17/8/22 | Wed 17/8/22 | 2 100% | | | | | |
| 45 | N. S. | Manufacturing and delivery of screening mach | nine Fri 22 | 2/7/22 | Thu 11/8/22 | | | 21 days | | 2 | 0 days | Fri 22/7/22 | Thu 11/8/22 | 100% | | | | | |
| 46 | V . | Trial Production of blanket layer material | Mon 2 | 22/8/22 | Wed 24/8/22 | Mon 17/10/22 | Wed 30/11/22 | 45 days | | 1 | 0 days | Mon 17/10/22 | Wed 30/11/22 | 100% | | | | | |
| 47 | | PMI no.24 Implementation of C easy system at | t TKOFB Mon | 22/8/22 | Tue 27/12/22 | Tue 30/8/22 | Mon 23/1/23 | 147 days | | | 8 days | Tue 30/8/22 | NA | 70% | | | } | | |
| 48 | . 1 | Submission of method statement for approval | Mon 2 | 22/8/22 | Sun 28/8/22 | Tue 30/8/22 | Tue 30/8/22 | 1 day | | | 0 days | Tue 30/8/22 | Tue 30/8/22 | 100% | | * | | | |
| 49 | 3 | Obtaining approval from the Project Manager | | | Sun 18/9/22 | | | 1 day | 48 | 2 | 0 days | Wed 31/8/22 | | | | | | | |
| 50 | 1 | Ordering and delivery of C easy system hardw site | vare to Mon | 19/9/22 | Wed 2/11/22 | Thu 1/9/22 | Thu 8/9/22 | 8 days | 49 | 3 | 0 days | Thu 1/9/22 | Thu 8/9/22 | 100% | | | | | |
| 51 | 1 | Installation of the C Easy system | Thu 3 | 3/11/22 | Wed 16/11/22 | Fri 9/9/22 | Tue 27/9/22 | 19 days | 50 | 2 | 0 days | Fri 9/9/22 | Tue 27/9/22 | 100% | | | | | |
| 52 | 1 | Trail run of the system | Thu 1 | 17/11/22 | Wed 30/11/22 | Tue 22/11/22 | Wed 30/11/22 | 9 days | 51 | 2 | 0 days | Tue 22/11/22 | Wed 30/11 | . 100% | | | | | |
| 53 | э. | Parallel run with the old system | Thu 1 | 1/12/22 | Mon 26/12/22 | Thu 1/12/22 | Sun 22/1/23 | 53 days | 52 | 2 | 8 days | Thu 1/12/22 | NA | 50% | to the same | | | | |
| 54 | HE | Operation with C easy system individually | Tue 2 | 27/12/22 | Tue 27/12/22 | Mon 23/1/23 | Mon 23/1/23 | 1 day | 53 | 0 | 8 days | NA | NA | 0% | | <u></u> | | | |
| 55 | HB | Handing over the facilities at the Tseung Kwan O Fill Bank within Portion A of the Site to the Emplo | yer | | | 31/12/23 | Sun 31/12/23 | | 8SS | 0 | 0 days | NA | NA | 0% | | | | | |
| 56 | HE | Planned Completion Date (Section 1) | | | | | Sun 31/12/23 | | | | 1 day | NA | NA | 0% | | | | | |
| | | Section 2 of the Works - Tuen Mun Area 38 Fill Ba | | | | | Sun 31/12/23 | 3200 Sept. 100 S | | | 0 days | Sat 1/1/22 | | 51% | | | | | |
| 58 | 1 | Taking over the existing facilities at the Tuen Mur Fill Bank within Portion B of the Site | n Area 38 Sat 1 | /1/22 | Sat 1/1/22 | Sat 1/1/22 | Sat 1/1/22 | 1 day | 5SS | 0 | 0 days | Sat 1/1/22 | Sat 1/1/22 | 100% | | 1 | | | |
| 59 | P. | Operation of the Tuen Mun Area 38 Fill Bank with B of the Site | | | | | Sun 31/12/23 | | | 0 | 0 days | Sat 1/1/22 | | | | | 25-10-69-1/4-1/5-1/6-5 | | |
| 60 | n. | Operation and maintenance of the surveillance sy within Portion B of the Site | ystem Sat 1 | /1/22 | Sun 31/12/23 | Sat 1/1/22 | Sun 31/12/23 | 730 days | 5SS | 0 | 0 days | Sat 1/1/22 | NA | 49% | | | | | |
| 61 | n. | Operation and maintenance of the existing tipping the Tuen Mun Area 38 Fill Bank within Portion B | of the Site | | | | Sun 31/12/23 | | | 0 | 0 days | | NA | 49% | | | | | |
| 62 | p. | Operation and Maintenance of the Crushing Plant Tuen Mun Area 38 Fill Bank within Portion B of th | t at the Sat 1 | /1/22 | Sun 31/12/23 | Sat 1/1/22 | Sun 31/12/23 | 730 days | 5SS | 0 | 0 days | Sat 1/1/22 | NA | 49% | -6-2 | | | | |
| 63 | 00 | Operation and maintemnance of glass cullet stora compartment at the Tuen Mun Area 38 Fill Bank Portion B of the Site | age Sat 1 within | /1/22 | Sun 31/12/23 | Sat 1/1/22 | Sun 31/12/23 | 730 days | 5SS | 0 | 0 days | Sat 1/1/22 | NA | 49% | | | and the second | | |
| 64 | V | PMI no.05 Construction of vehicle washing ho facilities | ouse Wed | 6/4/22 | Fri 2/9/22 | Wed 6/4/22 | Sun 2/10/22 | 180 days | | | 0 days | Wed 6/4/22 | Sun 2/10/22 | 100% | | | | | |
| 65 | V. | Submission of method statement of vehicle whouse facilities | vashing Wed | 6/4/22 | Wed 6/4/22 | Wed 6/4/22 | Wed 6/4/22 | 1 day | | 1 | 0 days | Wed 6/4/22 | Wed 6/4/22 | 100% | | | | | |
| | 1 | | Task | | | | External Tasks | 5 | | | | Duration-only | | | | External Tasks | ♦ | | 10 |
| _ | _ | | Split | | | | External Miles | tone | \Diamond | | | Manual Summ | ary Rollup | • | | External Milestone | | | |
| Project: Date: [3 | | nth rolling programme Jan23-mar 23 CV/2021/09 0221 | Milestone | | • | | Inactive Miles | tone | | | | Manual Summ | ary | • | | Progress | - | | |
| Date. [o | or 1 Smil Sm | , | Summary | | | | Inactive Sumr | | | | | Start-only | | | | Deadline | ſŗ | | |
| | | | · | | | | | nai y | | | | | | | | | N. | | |
| | | | Project Sumr | inary | | | Manual Task | | 0 | | | Finish-only | | * | _ | Slack | Processor Control of C | | |
| | | | | | | | | | Page 2 | | | | | | | | | | |

| D | | Task Name | Baseline Start | Baseline Finish | Start | Finish | Duration | Predeo | | Total Slack | Actual Start | Actual Finish | % Complete | Î | Jan '23 | Feb '23 | Mar '23 |
|----------|-------------------|--|--------------------------------|--------------------|-------------|----------------|-------------------|---------------------------|-------|----------------|-----------------|------------------|---------------|---------------------------------------|-----------------|---|---------------------------|
| | 0 | | | | | | | | unome | | | | 19 | 26 2 | | | 27 6 13 20 27 3 |
| 5 | 1 | Obtaning approval from the Project Manager | Mon 25/4/22 | Mon 25/4/22 | Mon 25/4/22 | Mon 25/4/22 | 1 day | 65 | 2 | 0 days | Mon 25/4/22 | Mon 25/4/22 | | 1/1/23 | | | 31/3/23 |
| | V | Fabrication and delivery of the vehicle washing h facilities materials on site | nouse Fri 10/6/22 | Mon 8/8/22 | Fri 10/6/22 | Thu 18/8/22 | 70 days | | 5 | 0 days | Fri 10/6/22 | Thu 18/8/22 | 100% | | | | |
| \neg | 1 | Installation of the vehicle washing house facilities | s Tue 9/8/22 | Thu 1/9/22 | Tue 13/9/22 | Thu 29/9/22 | 17 days | 67 | 2 | 0 days | Tue 13/9/22 | Thu 29/9/22 | 100% | 1 | | | |
| | V | Trial run of vehicle washing house facilities | Fri 2/9/22 | Fri 2/9/22 | Sun 2/10/22 | Sun 2/10/22 | 1 day | 68 | 0 | 0 days | Sun 2/10/22 | Sun 2/10/22 | 100% | | | | |
| 1 | | PMI no.20 Implementation of C easy system at T | MFB Mon 22/8/22 | Tue 27/12/22 | Wed 31/8/22 | 2 Mon 23/1/23 | 146 days | 100000000 | | 8 days | Wed 31/8/22 | NA | 68% | | | ъ | |
| 7 | 1 | Submission of method statement for approval | Mon 22/8/22 | Sun 28/8/22 | Wed 31/8/22 | 2 Wed 31/8/22 | 1 day | | 1 | 0 days | Wed 31/8/22 | Wed 31/8/22 | 100% | | 0.00 | | |
| | . 1 | Obtaining approval from the Project Manager | Mon 29/8/22 | Sun 18/9/22 | Thu 1/9/22 | Thu 1/9/22 | 1 day | 71 | 2 | 0 days | Thu 1/9/22 | Thu 1/9/22 | 100% | | | | |
| 1 | 1 | Ordering and delivery of C easy system hardward site | re to Mon 19/9/22 | Wed 2/11/22 | Sat 17/9/22 | Wed 21/9/22 | 5 days | 72 | 3 | 0 days | Sat 17/9/22 | Wed 21/9/22 | 100% | | | | |
| - | 1 | Installation of the C Easy system | Thu 3/11/22 | Wed 16/11/22 | Thu 22/9/22 | Sun 9/10/22 | 18 days | 73 | 2 | 0 days | Thu 22/9/22 | Sun 9/10/22 | 100% | | | | |
| - | | Trail run of the system | | Wed 30/11/22 | | | 8 days | | 2 | 0 days | | Thu 1/12/22 | | | | | |
| - | 100 | Parallel run with the old system | | Mon 26/12/22 | | | 53 days | | 2 | 8 days | Thu 1/12/22 | | 50% | | | | |
| | | Operation with C easy system individually | | Tue 27/12/22 | | | 20010 (0000 MOPE) | 76 | 0 | 8 days | NA | NA | 0% | | + | | |
| - | | Handing over the facilities at the Tuen Mun Area 38 Bank within Portion B of the Site to the Employer | | Sun 31/12/23 | | Sun 31/12/23 | 1 day | 988 | 0 | 0 days | NA | NA | 0% | | | | |
| \dashv | HE | Planned Completion Date (Section 2) | Sun 31/12/23 | Sun 31/12/23 | | 3 Sun 31/12/23 | 0 days | - | | 0 days | NA | NA | 0% | | | | |
| | | Section 3 of the Works - Designated Reclamation S the Mainland | | | | | | | | 0 days | Tue 7/12/21 | | 6% | | | | |
| | | Collection and delivery of 2 million tonnes of Pu Fill by vessels from Tseung Kwan O Area 137 Fil and the Tuen Mun Area 38 Fill Bank to the Desio Reclamation Sites in the Mainland | II Bank | Sun 31/12/23 | Tue 7/12/21 | Wed 20/12/23 | 744 days | | | 11 days | Tue 7/12/21 | NA | 10% | | | | |
| | 1 | 1st and 2nd quarter of first year | Mon 20/12/21 | Thu 31/3/22 | Tue 7/12/21 | Tue 14/6/22 | 190 days | | | 0 days | Tue 7/12/21 | Tue 14/6/22 | 100% | | | | |
| | 1 | Installing Front End Mobile Unit (FEMU) onto proposed vessels | | Sun 26/12/21 | | | 1 day | | 2 | 0 days | Fri 20/5/22 | | | | | | |
| | ~ | Submitting application documents to EPD for application of dumping permits | | | | 1 Tue 28/12/21 | 1 day | | 0 | 0 days | Tue 28/12/21 | | | | | | |
| | 1 | Obtaining the dumping permit from EPD | | Fri 31/12/21 | Wed 25/5/22 | 2 Wed 25/5/22 | 1 day | 84 | 2 | 0 days | Wed 25/5/22 | Wed 25/5/22 | 100% | | | | |
| | 1 | Submitting Application documents to the Emp for the application of the dumping permit of w the sea | | Mon 20/12/21 | Tue 7/12/21 | Tue 7/12/21 | 1 day | | | 0 days | Tue 7/12/21 | Tue 7/12/21 | 100% | | | | |
| | 1 | Obtaining the dumping permits from Ministry Ecology and environment of the People's Rep of China through the Employer | | Fri 31/12/21 | Tue 26/4/22 | Tue 26/4/22 | 1 day | | 14 | 0 days | Tue 26/4/22 | Tue 26/4/22 | 100% | | | | |
| | V | Obtaining all necessary permits, licenses,app and concents | provals Mon 20/12/21 | Fri 31/12/21 | Wed 25/5/22 | 2 Wed 25/5/22 | 1 day | | 14 | 0 days | Wed 25/5/22 | Wed 25/5/22 | 100% | | | | |
| | 1 | Collection and delivery of 166666 tonnes of P | Public Fil Sat 1/1/22 | Thu 31/3/22 | Wed 25/5/22 | 2 Tue 14/6/22 | 21 days | | 10 | 0 days | Wed 25/5/22 | Tue 14/6/22 | 100% | | | | |
| Ĩ | 1 | 3rd quarter of first year | Fri 20/5/22 | Fri 30/9/22 | Tue 28/12/2 | 1 Mon 13/6/22 | 168 days | | | 0 days | Tue 28/12/ | Mon 13/6/22 | 100% | | | | |
| | 1 | Submitting application documents to EPD for application of dumping permits | Fri 17/6/22 | Fri 17/6/22 | Tue 28/12/2 | 1 Tue 28/12/21 | 1 day | | 0 | 0 days | Tue 28/12/21 | Tue 28/12/21 | 1 100% | | | 1 | |
| | 1 | Obtaining the dumping permit from EPD | Sat 18/6/22 | Thu 30/6/22 | Wed 25/5/22 | 2 Wed 25/5/22 | 1 day | 91 | 14 | 0 days | Wed 25/5/22 | Wed 25/5/22 | 100% | | | | |
| | 1 | Submitting Application documents to the Emp for the application of the dumping permit of w | ployer Fri 20/5/22 vaste at | Fri 20/5/22 | Fri 8/4/22 | Fri 8/4/22 | 1 day | | 0 | 0 days | Fri 8/4/22 | Fri 8/4/22 | 100% | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | |
| | 1 | the sea Obtaining the dumping permits from Ministry Ecology and environment of the People's Rep | y of Sat 21/5/22 public | Thu 30/6/22 | Tue 26/4/22 | Tue 26/4/22 | 1 day | 93 | 14 | 0 days | Tue 26/4/22 | Tue 26/4/22 | 100% | | | | |
| - | 1 | of China through the Employer Obtaining all necessary permits, licenses, app | provals Fri 17/6/22 | Thu 30/6/22 | Wed 25/5/22 | 2 Wed 25/5/22 | 1 day | | 0 | 0 days | Wed 25/5/22 | Wed 25/5/22 | 100% | | | | |
| | | and concents | | | | | | 05.00.0 | | | | | | | | | |
| | V. | Collection and delivery of 499998 tonnes of P | | Fri 30/9/22 | | Mon 13/6/22 | Reliable to | 95,92,9 | 74 14 | 0 days | | Mon 13/6/22 | | | | | |
| | 4 | 4th quarter of first year | Sat 20/8/22 | Sat 31/12/22 | FII 22///22 | rn 30/9/22 | 71 days | | HE IS | 0 days | Fri 22/7/22 | FII 30/9/22 | 100% | | | | |
| | | Т | ask | 25.035 | | External Task | cs | Association in the second | | | Duration-only | 2 | | Ext | ernal Tasks | ◇ | |
| | | | Split | | | External Mile | stone | \Diamond | |) | Manual Summ | ary Rollup | • | Ext | ernal Milestone | Grant Constitution | |
| | 3 mont 0/12/20 | h rolling programme Jan23-mar 23 CV/2021/09 [22] N | Milestone | • | | Inactive Mile | stone | | | | Manual Summ | ary | • | Pro | gress | | _ |
| | | S | Summary | - | | Inactive Sum | mary | 11111 | | 9 | Start-only | - 1 | | Dea | adline | Û | |
| | | P | Project Summary | \bigcirc | - | Manual Task | ,m601 | 0 | | 1 | Finish-only | | _ | Sla | ck | | |
| | | | | | | | | Page 3 | 3 | | | | | | | | |

| ID | | Task Name | Baseline Start | Baseline Finish | Start | Finish | Duration | Predec | | Total Slack | | Actual Finish | % Complete | Jan '23 | Feb '23 | Mar '23 | F |
|--------|--------------|--|------------------------|--------------------|---|----------------|----------|--------------------|-------|----------------|-----------------|------------------|---------------|--|---------------------------------------|-----------------------|-------|
| | 0 | | | | | | | | | | | | | 6 2 9 16 23 30 | | 27 6 13 20 27 | |
| 8 | 1 | Submitting application documents to EPD for application of dumping permits | Sat 17/9/22 | Sat 17/9/22 | Fri 22/7/22 | Thu 4/8/22 | 14 days | | 0 | 0 days | Fri 22/7/22 | Thu 4/8/22 | 100% | 1/1/23 | | 31/ | /3/23 |
| 9 | 1 | Obtaining the dumping permit from EPD (assur | ned Sun 18/9/22 | Fri 30/9/22 | Thu 1/9/22 | Mon 5/9/22 | 5 days | 98 | 2 | 0 days | Thu 1/9/22 | Mon 5/9/22 | 100% | | | | |
| 00 | J. | Submiting Application documents to the Employ for the application of the dumping permit of wast the sea | | Sat 20/8/22 | Wed 10/8/22 | Wed 10/8/22 | 1 day | | 0 | 0 days | Wed 10/8/22 | Wed 10/8/22 | 100% | | | | |
| 01 | V | Obtaining the dumping permits from Ministry of Ecology and environment of the People's Repub of China through the Employer (assumed on | Sun 21/8/22 lic | Fri 30/9/22 | Mon 5/9/22 | Mon 5/9/22 | 1 day | 100 | 14 | 0 days | Mon 5/9/22 | Mon 5/9/22 | 100% | | | | |
|)2 | V | Obtaining all necessary permits, licenses, approvand concents | rals Sat 17/9/22 | Fri 30/9/22 | Mon 5/9/22 | Fri 30/9/22 | 1 day | | 2 | 0 days | Mon 5/9/22 | Fri 30/9/22 | 100% | | | | |
| 3 | 1 | Collection and delivery of 333332 tonnes of Pub | ic Fil Sat 1/10/22 | Sat 31/12/22 | Mon 5/9/22 | Mon 19/9/22 | 15 days | 96,102,1 | 1:14 | 0 days | Mon 5/9/22 | Mon 19/9/22 | 100% | | | | |
|)4 | | 1st quarter of second year | Sun 20/11/22 | Fri 31/3/23 | Sun 20/11/22 | Fri 31/3/23 | 132 days | - | | 12 days | NA | NA | 0% | | | | _ |
|)5 | ш | Submitting application documents to EPD for application of dumping permits | Sun 18/12/22 | Sun 18/12/22 | Sun 18/12/22 | Sun 18/12/22 | 1 day | | 0 | 12 days | NA | NA | 0% | | | | |
| 6 | | Obtaining the dumping permit from EPD (assur | ned Mon 19/12/22 | Sat 31/12/22 | | Sat 31/12/22 | 13 days | 105 | 2 | 12 days | NA | NA | 0% | | | | |
| 07 | n n | Submiting Application documents to the Employ for the application of the dumping permit of wast the sea | | Sun 20/11/22 | 1.1.4.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1 | Sun 20/11/22 | 1 day | | 0 | 12 days | NA | NA | 0% | | | | |
| 80 | | Obtaining the dumping permits from Ministry of Ecology and environment of the People's Repub- of China through the Employer | | Sat 31/12/22 | Mon 21/11/22 | Sat 31/12/22 | 41 days | 107 | 14 | 12 days | NA | NA | 0% | | | | |
| 09 | = | Obtaining all necessary permits, licenses, approvand concents | rals Sun 18/12/22 | Sat 31/12/22 | Sun 18/12/22 | Sat 31/12/22 | 14 days | | 2 | 12 days | NA | NA | 0% | | | | |
| 10 | | Collection and delivery of 250000 tonnes of Pub | lic F Sun 1/1/23 | Fri 31/3/23 | | Fri 31/3/23 | 90 days | 103,109 | , 14 | 12 days | NA | NA | 0% | | Samuel Samuel | | |
| | THE STATE OF | 2nd quarter of second year | Sat 18/2/23 | Fri 30/6/23 | Sat 18/2/23 | Fri 30/6/23 | 133 days | | | 12 days | NA | NA | 0% | | - | | |
| 2000 | | Submitting application documents to EPD for application of dumping permits | Sat 18/3/23 | Sat 18/3/23 | Sat 18/3/23 | Sat 18/3/23 | 1 day | | 0 | 12 days | NA | NA | 0% | | | 1 | |
| 13 | | Obtaining the dumping permit from EPD (assuration on 31/3/23) | ned Sun 19/3/23 | Fri 31/3/23 | Sun 19/3/23 | Fri 31/3/23 | 13 days | 112 | 2 | 12 days | NA | NA | 0% | 1 | | The same | |
| 14 | | Submiting Application documents to the Employ for the application of the dumping permit of wast the sea | | Sat 18/2/23 | Sat 18/2/23 | Sat 18/2/23 | 1 day | | 0 | 12 days | NA | NA | 0% | | | | |
| 15 | | Obtaining the dumping permits from Ministry of Ecology and environment of the People's Reput of China through the Employer (assumed on | | Fri 31/3/23 | Sun 19/2/23 | Fri 31/3/23 | 41 days | 114 | 14 | 12 days | NA | NA | 0% | | | | |
| 16 | | Obtaining all necessary permits, licenses, approven and concents | /als Sat 18/3/23 | Fri 31/3/23 | Sat 18/3/23 | Fri 31/3/23 | 14 days | | 2 | 12 days | NA | NA | 0% | | | | |
| 17 | | Collection and delivery of 250000 tonnes of Pub | olic F Sat 1/4/23 | Fri 30/6/23 | Sat 1/4/23 | Fri 30/6/23 | 91 days | 110,113 | 3, 14 | 12 days | NA | NA | 0% | | | | |
| 18 | | 3rd quarter of second year | Sat 20/5/23 | Sat 30/9/23 | Sat 20/5/23 | Sat 30/9/23 | 134 days | | | 12 days | NA | NA | 0% | | | | |
| 19 | | Submitting application documents to EPD for application of dumping permits | Sat 17/6/23 | Sat 17/6/23 | Sat 17/6/23 | Sat 17/6/23 | 1 day | | 0 | 12 days | NA | NA | 0% | | | | |
| 20 | | Obtaining the dumping permit from EPD (assurant on 30/6/23) | ned Sun 18/6/23 | Fri 30/6/23 | Sun 18/6/23 | Fri 30/6/23 | 13 days | 119 | 14 | 12 days | NA | NA | 0% | | | | |
| 21 | | Submiting Application documents to the Employ for the application of the dumping permit of wast the sea | er Sat 20/5/23 e at | Sat 20/5/23 | Sat 20/5/23 | Sat 20/5/23 | 1 day | | 0 | 12 days | NA | NA | 0% | | | | |
| 22 | | Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republing of China through the Employer (assumed on | Sun 21/5/23 | Fri 30/6/23 | Sun 21/5/23 | Fri 30/6/23 | 41 days | 121 | 14 | 12 days | NA | NA | 0% | | | | |
| 23 | 110 | Obtaining all necessary permits, licenses, approvand concents | /als Sat 17/6/23 | Fri 30/6/23 | Sat 17/6/23 | Fri 30/6/23 | 14 days | | 2 | 12 days | NA | NA | 0% | The state of the s | | | |
| 24 | ne | Collection and delivery of 250000 tonnes of Put | olic F Sat 1/7/23 | Sat 30/9/23 | Sat 1/7/23 | Sat 30/9/23 | 92 days | 117,123 | 3, 14 | 12 days | NA | NA | 0% | - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | |
| 25 | | 4th quarter of second year | Sun 20/8/23 | | | Wed 20/12/23 | 123 days | - | | 11 days | | NA | 0% | | | | |
| 26 | | Submitting application documents to EPD for | Sun 17/9/23 | Sun 17/9/23 | | | 1 day | | 0 | 12 days | | NA | 0% | | | | |
| 27 | | application of dumping permits Obtaining the dumping permit from EPD (assuron 30/9/23) | ned Mon 18/9/23 | Sat 30/9/23 | Mon 18/9/23 | Sat 30/9/23 | 13 days | 126 | 2 | 12 days | NA | NA | 0% | | | | |
| | | Tas | k | | | External Task | s | | | | Duration-only | | | External Tasks | • • • • • • • • • • • • • • • • • • • | | |
| | | Spli | | | | External Miles | | \rightarrow | | | Manual Summ | | | External Milestone | A | | |
| | | oth rolling programme Jan23-mar 23 CV/2021/09 | estone | • | | Inactive Miles | | | | | Manual Summ | | • | Progress | | | |
| ie: [3 | 0/12/2 | | nmary | _ | | Inactive Sumi | | | | | Start-only | | 76 | Deadline | T | | |
| | | | ject Summary | ▽ | | Manual Task | . nur y | ф. | | | Finish-only | | , | Slack | | | |
| | | 1115 | , | | | | | | | | Colombia and A. | | | | | | |

| ID | 0 | Task Name | | aseline art | Baseline Finish | Start | Finish | Duration | | | Total Slack | Actual Start | Actual Finish | % Complet | Jan '23 | Feb '23 | Mar '23 | |
|-------|----------|--|------------------|----------------|--------------------|--------------|---------------|----------|------------|----|----------------|-----------------|------------------|---|--------------------|--|----------------------|----------|
| 128 | | Submiting Application documents to the Emp | olover Sur | ın 20/8/23 | Sun 20/8/23 | Sun 20/8/23 | Sun 20/8/23 | 1 day | 1 | 0 | 12 days | NA | NA | 0% 19 2 | 6 2 9 16 23 3 | 0 6 13 20 | 27 6 13 20 2 | 27 3 |
| 120 | H | for the application of the dumping permit of w the sea | vaste at | 211 20/0/20 | 04112070720 | 0411 2070/20 | Out 20/0/20 | , au | | | nz dayo | .,,, | | _ | | | (2. | |
| 129 | H | Obtaining the dumping permits from Ministr Ecology and environment of the People's Re of China through the Employer(assumed on a | public | on 21/8/23 | Sat 30/9/23 | Mon 21/8/23 | Sat 30/9/23 | 41 days | 128 | 14 | 12 days | NA | NA | 0% | | | | |
| 130 | | Obtaining all necessary permits, licenses,app and concents | | un 17/9/23 | Sat 30/9/23 | Sun 17/9/23 | Sat 30/9/23 | 14 days | | 0 | 12 days | NA | NA | 0% | | | | |
| .31 | HE | Collection and delivery of 250000 tonnes of | Public F Su | un 1/10/23 | Sun 31/12/23 | Mon 2/10/23 | Wed 20/12/23 | 80 days | 124,130, | 14 | 11 days | NA | NA | 0% | | | | |
| 132 | | Removal, excavation and deposition of stockpil and/or deposited Public Fill within the Designat Reclamation Sites in the Mainland | | at 1/1/22 | Sun 31/12/23 | Sat 1/1/22 | Sun 31/12/23 | 730 days | 6SS | | 0 days | NA | NA | 0% | | | | |
| L33 | iiii | Removal, excavation and deposition of stockpile and/or deposited public fill | ed Sa | at 1/1/22 | Sun 31/12/23 | Sat 1/1/22 | Sun 31/12/23 | 730 days | | 14 | 0 days | NA | NA | 0% | | | | |
| 134 | | Operation and maintenance of the existing navi channel and turning basins in association with existing berthing facilituy at Zone E of the Desig Reclamation Sites in the Mainland | the | at 1/1/22 | Sun 31/12/23 | Sat 1/1/22 | Sun 31/12/23 | 730 days | 6SS | | 0 days | Sat 1/1/22 | NA | 20% | | | | |
| L35 | P. | Operation and maintenance of the existing navig channel and turning basins | gation Sa | at 1/1/22 | Sun 31/12/23 | Sat 1/1/22 | Sun 31/12/23 | 730 days | | 14 | 0 days | Sat 1/1/22 | NA | 20% | | | | |
| 136 | | Design, construction, operation and maintenant the new navigation channel and turning basins association with the new berthing facility at Zor the Designated Reclamation Sites in the Mainla (subject to Project's Manager's instruction) | in ne B of | at 12/12/09 | Sat 12/12/09 | Thu 16/6/22 | Sun 31/12/23 | 564 days | | | 0 days | NA | NA | 0% | | | | |
| 137 | | Obtaining the dumping permits from Ministry or Ecology and environment of the People's Reput China through the Employer for Zone A & B (as on 31/12/21) | olic of | i 31/12/21 | Mon 31/1/22 | Thu 16/6/22 | Thu 16/6/22 | 1 day | | 0 | 2 days | NA | NA | 0% | | | | |
| 38 | = | Preparation of design submission | Sa | at 1/1/22 | Sun 30/1/22 | Fri 17/6/22 | Sat 16/7/22 | 30 days | 137 | 7 | 2 days | NA | NA | 0% | | | | |
| 39 | | Obtaining all necessary design approvals and co | oncents Mo | on 31/1/22 | Tue 1/3/22 | Sun 17/7/22 | Mon 15/8/22 | 30 days | 138 | 7 | 2 days | NA | NA | 0% | | | | |
| .40 | | Construction of the new navigation channel and basins | turning We | /ed 2/3/22 | Fri 29/7/22 | Tue 16/8/22 | Thu 12/1/23 | 150 days | 139 | 14 | 2 days | NA | NA | 0% | | | | |
| 41 | THE . | Obtaining the construction completion certificate | e Sa | at 30/7/22 | Sun 28/8/22 | Fri 13/1/23 | Sat 11/2/23 | 30 days | 140 | 7 | 2 days | NA | NA | 0% | | | | |
| 42 | HE . | Operation and maintenance of navigation chan turning basins | nel and Mo | on 29/8/22 | Sun 31/12/23 | Tue 14/2/23 | Sun 31/12/23 | 321 days | 141 | 14 | 0 days | NA | NA | 0% | | | | 196397 |
| 143 | | Design, construction, operation and maintenan new berthing facilities at Zone B of the Designa Reclamation Sites in the Mainland (subject to P Manager's instruction) | ited | ri 31/12/21 | Sun 31/12/23 | Thu 16/6/22 | Sun 31/12/23 | 564 days | | | 0 days | NA | NA | 0% | | A | | |
| 144 | | Obtaining the dumping permits from Ministry on Ecology and environment of the People's Reput China through the Employer for Zone A & B (as on 31/12/21) | blic of | ri 31/12/21 | Fri 31/12/21 | Thu 16/6/22 | Thu 16/6/22 | 1 day | | | 0 days | NA | NA | 0% | | | | |
| 45 | | Preparation of design submission | Sa | at 1/1/22 | Sun 30/1/22 | Fri 17/6/22 | Sat 16/7/22 | 30 days | 144 | 7 | 0 days | NA | NA | 0% | | | | |
| 46 | = | Obtaining all necessary design approvals and of | oncents Mo | on 31/1/22 | Tue 1/3/22 | Sun 17/7/22 | Mon 15/8/22 | 30 days | 145 | 7 | 0 days | NA | NA | 0% | | | | |
| 47 | | Construction of the berthing facilities | We | /ed 2/3/22 | Sun 28/8/22 | Tue 16/8/22 | Sat 11/2/23 | 180 days | 146 | 14 | 0 days | NA | NA | 0% | | | | |
| 48 | 111 | Obtaining the construction completion certificate | e Mo | on 29/8/22 | Tue 27/9/22 | Sun 12/2/23 | Mon 13/3/23 | 30 days | 147 | 7 | 0 days | NA | NA | 0% | | No. of Contract of | | |
| 49 | | Operation and maintenance of new berthing fac | cilities We | /ed 28/9/22 | Sun 31/12/23 | Tue 14/3/23 | Sun 31/12/23 | 293 days | 148 | 14 | 0 days | NA | NA | 0% | | | | N. Salak |
| L50 | | Design and construction of seawalls (approxim 200m) in association with new berthing facility B of the Designated Reclamation Sites in the Ma | at Zone | ri 10/6/22 | Sat 4/2/23 | Sun 1/1/23 | Fri 30/6/23 | 181 days | | | 184 days | NA | NA | 0% | V | | | |
| 151 | | Obtaining the dumping permits from Ministry o Ecology and environment of the People's Reput China through the Employer for Zone A & B | of Sa blic of | at 1/1/22 | Sat 1/1/22 | Sun 1/1/23 | Sun 1/1/23 | 1 day | | 0 | 184 days | NA | NA | 0% | | | | |
| 152 | no. | Preparation of design submission (PMI no18) | Su | un 2/1/22 | Mon 31/1/22 | Mon 2/1/23 | Tue 31/1/23 | 30 days | 151 | 7 | 184 days | NA | NA | 0% | | | | |
| | | | Task | | | 535160 | External Task | S | | | | uration-only | , | 300000000000000000000000000000000000000 | External Tasks | 0 | | |
| | | | Split | | | | External Mile | stone | \Diamond | | N | 1anual Summ | nary Rollup | • | External Milestone | SIMILE WA | | |
| | 3 mon | oth rolling programme Jan23-mar 23 CV/2021/09 | Milestone | : | • | | Inactive Mile | stone | | | N | 1anual Summ | nary | • | Progress | | | |
| e. [3 | 10112121 | 022] | | | | - | Inactive Sum | | | | | tart-only | | 7 | Deadline | ₹. | | |
| | | | Summary | | | _ | | | | | | | | | | ~ | | |
| | | | Project Sui | ımmary | | 0 | Manual Task | | 0 | | F | inish-only | | - | Slack | THE RESERVE AND ADDRESS OF THE PERSON NAMED IN | | |

| ID | | Task Name | Baseline Start | Baseline Finish | Start | Finish | Duration | | | Total Slack | Actual Start | Actual Finish | % Complete | i. | | | | |
|----|----------|---|-------------------|--------------------|--------------|----------------|----------|-------|--------|----------------|-----------------|------------------|---------------|-----------------------|------------------------|-----------------------------|----------------------------------|------|
| | 0 | | | | | | | ā | allowa | | | | | 22 19 26 2 | Jan '23 9 16 23 | Feb '23 30 6 13 20 | Mar '23 27 6 13 20 27 | Ap |
| 53 | | Obtaining all necessary design approvals and concents | Tue 1/2/22 | Wed 2/3/22 | Wed 1/2/23 | Thu 2/3/23 | 30 days | 152 7 | 7 | 184 days | NA | NA | 0% | 1/1/23 | | | 31/. | 3/23 |
| 54 | = | Construction of seawalls (subject to Project's Manager's instruction) | Thu 3/3/22 | Tue 31/5/22 | Fri 3/3/23 | Wed 31/5/23 | 90 days | 153 1 | 14 | 184 days | NA | NA | 0% | | | | Passes I ver surrent on a | |
| 55 | HE. | Obtaining the construction completion certificate (subject to Project's Manager's instruction) | Wed 1/6/22 | Thu 30/6/22 | Thu 1/6/23 | Fri 30/6/23 | 30 days | 154 7 | 7 | 184 days | NA | NA | 0% | 1 | | | | |
| 56 | HE | Planned Completion Date (Section 3) | Sun 31/12/23 | Sun 31/12/23 | Sun 31/12/23 | 3 Sun 31/12/23 | 0 days | | | 1 day | NA | NA | 0% | | | | | |

External Tasks Task Duration-only External Tasks Split Manual Summary Rollup 🔷 External Milestone External Milestone Project: 3 month rolling programme Jan23-mar 23 CV/2021/09 Date: [30/12/2022] Inactive Milestone Manual Summary Progress Milestone Inactive Summary Deadline Summary Start-only Slack **Project Summary** ■ ■ Manual Task Finish-only Page 6



Appendix H Weekly ET's Site Inspection Record



Inspection Date : 1 /- 2013

Time : (6:00

Weather : Sunny / Rine / Cloudy / Overcast / Drizzle / Rain / Storm / Hazy

Wind : Calm / Light/ Breeze / Strong

Temperature : /

Humidity : High / Moderate / Low

| Inspected by | CEDD | Contractor / Sub-Contactor | ET |
|--------------|-------------|----------------------------|------------------|
| Signature: | A | | |
| Name: | Edmond Puva | KWOK WING CAM | A chan then lear |
| Title | EMPS | Eo | Technician |



| Environmental Checklist | | ement | | Remark |
|--|----------|-------|--------|--------|
| | Yes | No | N/A | |
| Fugitive Dust Emission | | | ánin . | |
| Dust control / mitigation measures shall be provided to prevent dust nuisance. | 1 | | | |
| Water sprays shall be provided and used to dampen materials. | 1 | | | |
| All stockpile of aggregate or spoil should be enclosed or covered and water applied in dry or windy condition. | V | | | |
| Any vehicle with open load carrying area used for moving materials which has the potential to create dust shall have properly fitting side and tail boards. Material having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin. | 4 | | | |
| Unpaved areas should be watered regularly to avoid dust generation. | √ | | | |
| The designated site main haul road shall be paved or regular watering. | 1 | | | |
| The haul road inside the site and public road around the site entrance should be kept clean and free from dust. | 4 | | | |
| Wheel washing facilities including high-pressure water jet shall be provided at the entrance of work site. | 1 | | | |
| Every vehicle shall be washed to remove any dusty materials from its body and wheels before leaving the fill bank. | 1 | | | |
| The temporary slope surfaces shall be covered with impermeable sheet or sprayed with water. | 1 | | | |
| Vehicle and equipment should be switched off while not in use. | 4 | | | , |
| All plant and equipment should be well maintained e.g. without black smoke emission. | 1 | | | |
| Open burning should be prohibited. | 4 | | | |
| Approval or exemption Non-road Mobile Machinery (NRMM) labels should be painted or securely fixed on regulated machines and non-road vehicles at a conspicuous position according to the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation (APCO Cap.311). | 4 | | | |
| Noise Impact | | | | |
| The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted. | 1 | | | |
| The constructions works should be scheduled to minimize noise nuisance. | 1 | ļ | | |
| Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works. | 1 | | | |
| Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials. | 1 | | | |
| Air compressors and hand held breakers should have noise labels. | 4 | | | |
| Compressors and generators should operate with door closed. | 4 | | | |
| Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum. | ٧ | | | |
| Noisy equipment and mobile plant shall always be site away from NSRs. | √ | | | |



| Environmental Checklist | | | entation Remark ges* | |
|--|--|--|-------------------------|-----|
| | Yes | No | N/A | |
| Water Quality | | | | |
| Drainage system and the sand / silt removal facilities should be adequate and well maintained to prevent flooding and overflow, especially after rain storms. | 1 | 868 25 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | |
| The storm water intercepting system shall be effective to collect of runoff and remove suspended solids before discharge. | 1 | | | |
| Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding. | 1 | | i | |
| The material shall be properly covered to prevent washed away especially before rainstorm. | 4 | | | |
| The temporary slope surfaces shall be covered with impermeable sheet or sprayed with water. | 4 | | | |
| Final slope surfaces, especially those facing to the north of the site shall be treated by compaction, followed by hydroseeding, vegetation planting or sealing with shotconcrete, latex, vinyl, bitumen, or other suitable surface stabilizer approved by CEDD. | 4 | | | |
| Existing and newly constructed Catchpits, sand and silt removal facilities and intercepting channels shall be maintained, and the deposited silt and grit shall be removed weekly and on a need basis especially at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times. | 1 | | | |
| A wheel washing bay shall be provided at the site exit and wash-water shall have sand and silt settled out or removed before being discharged into storm drains. | 4 | | | |
| The section of construction road between wheel washing bay and the public road shall be paved with concrete, bituminous materials or hardcores to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains. | 1 | | | |
| Sewage from toilets shall be discharged in to a foul sewer, or chemical toilets shall be provided. | 1 | | | |
| The chemical toilets (if use) shall be provided by a licensed contractor, who will be responsible for disposal and maintenance of these facilities. | 1 | | | |
| Tipping halls enclosed with top and 3-side to prevent spillage of material into marine water. | 1 | : | | |
| The barges shall be in right size such that adequate clearance in maintained between the vessels and the seabed at all states of the tide to ensure the undue turbidity is not generated by turbulence from vessel movement or propeller wash. | 1 | | | |
| All vessels used for transportation of fill material shall have tight fitting seals to their bottom openings to prevent leakage of material during transport. | 4 | | | |
| Barges shall not be filled to a level which may cause the overflow of material during loading or transportation. Barge effluents shall be properly collected and treated before disposal. | 4 | | | |
| Adequate environmental control measures shall be provided to prevent / avoid dropping of fill material into the sea during the transfer. | 7 | | E | |
| The work activities shall not cause any visible foam, oil, grease, scum, litter or other objectionable matters to be present on the water in the vicinity of the barging facilities. | 4 | | | • " |
| A waste collection vessel shall be deployed to remove floating debris. | 1 | | | |
| Landscape and Visual | and the state of t | | | |
| The maximum stockpilling height at the fill bank shall be limited to a maximum of +40mPD. | 1 | | | |
| Surface of outer slopes of the Fill Bank shall preferably be hydroseeded. | 1 | | | |
| • Stockpile of public fill shall be removed in a sequence to allow the outer hydrseeded to be removed later than other portions as far as practicable. | 1 | | | |
| Casuarina equisetifolia were planted as buffer tree along the northern perimeter of the Site. The height of Casuarina equisetifolia was maintained at bleast 3m above soil level. | 1 | | | |
| Lighting shall be set to minimise night-time glare. | 4 | | | |



| Environmental Checklist | | | tation | Remark |
|--|--------|--|--------|-----------------|
| | | | | 1 |
| Waste Management | | | | |
| Construction Waste Management | | | | |
| Relevant licence / permits for disposal of construction waste or excavated materials available for inspection. | 1 | | | |
| Excavated material to be generated from construction works to be re-used on-site as far as practicable to reduce off-site disposal. | 4 | | | |
| Mud and debris should be removed from waterworks access roads and associated drainage systems. | 1 | | | |
| Provision of sufficient waste disposal points and regular collection for disposal. Appropriate measures should be employed to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers. | 1 | | | |
| Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. | 1 | | | |
| Prior to disposal of C&D waste, recyclable materials should be salvaged for reuse (such as wood and metal) and inert waste utilised as public fill to minimise the quantity of waste to be disposed of to landfill. | V | | | |
| • In order to monitor the disposal of C&D material and solid wastes at public filling areas and landfills, and to control fly-tipping, a trip-ficket system should be included as one of the contractual requirements. | 1 | | | |
| Any soil contaminated with chemicals/oils shall be removed from site and the void created shall be filled with suitable materials. | 1 | | | |
| Chemical Waste Management | | | | LANCE OF STREET |
| It is required to register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes. | 1 | | | |
| After use, chemical wastes (e.g. cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. | 1 | | | |
| Spent chemicals should be stored and collected by an approved operator for disposal at the Chemical Waste Treatment Facility or other licensed facility in accordance with the Chemical Waste (General) Regulation. | 1 | | | |
| Chemical wastes should be separated for special handling and appropriate treatment at the Chemical Waste Treatment Facility. | 4 | | | |
| Chemical wastes including waste oil should be stored properly in designated areas, e.g. chemical waste storage area. | 4 | | | |
| The designated chemical waste storage area should only be used for storing chemical wastes. | 1 | | | |
| The set-up of chemical waste storage area should | ×93000 | | | |
| Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition. | 4 | | | |
| Be enclosed on at least 3 sides and securely closed, | 4 | | | |
| Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest. | 4 | | | |
| Have adequate ventilation. | 4 | | | .: |
| Be covered to prevent rainfall entering (water collected within the bund must be tested and disposal as chemical waste if necessary). | 4 | | | |
| Be arranged so that incompatible materials are adequately separated. | 1 | | | |



| | Environmental Checklist | | ement stages | | Remark |
|---|---|---|--|-----|-----------------------------|
| | | | No | N/A | |
| * | Warning panels should be displayed at the waste storage area. | 1 | | | |
| ٠ | Waste storage area should be cleaned and maintained regularly. | √ | | | |
| • | Chemical waste should be transported regularly by a registered chemical waste collector to a facility licensed to receive chemical waste. | 1 | | | |
| • | All generators, fuel and oil storage should be within bundle areas. | √ | | | |
| • | Oil leakage from machinery, vehicle and plant should be prevented. | √ | | | |
| • | in the event of chemical waste / dangerous goods / chemicals spillage or leakage, the procedures as outlined in the Spillage Response Plan should be followed. | 1 | | | |
| • | The dangerous goods / chemical spillage or leakage procedures (including equipments) should be in place. | V | | | |
| G | ood Site Practices | | | *** | |
| • | Nomination of approved personnel, such as site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site. | ٧ | | | - Carlos Marcolas Astronomy |
| • | Training of site personnel in proper waste management and chemical handling procedures should be provided. | 4 | | | |
| • | Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment. | 7 | | | - |
| • | Proper storage and site practices to minimise the potential for damage or contamination of construction materials. | 4 | | | |
| • | The Environmental Permit should be displaced conspicuously on site. | 4 | | | |
| • | Construction noise permits should be posted at site entrance or available for site inspection. | 4 | | | |
| | Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste. | 4 | | | |
| • | Chemical storage area provided with lock and located on sealed areas. | 1 | | | |
| • | All chemicals should be placed at the banded area with adequate band capacity (>110% of largest tank). | 4 | | | |
| | Any unused chemicals or those with remaining functional capacity should be recycled. | 7 | | | |
| • | Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors. | 4 | | | |
| • | To encourage collection of aluminium cans by individual collectors. | 1 | | | |
| • | Separate labelled bins should be provided to segregate this waste from other general refuse generated by the workforce. | 1 | | | |
| • | A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods. | 1 | | | |
| • | A collection area should be provided where waste can be stored and loaded prior to removal from site. An enclosed and covered area is preferred to reduce the occurrence of 'wind blown' light material. If an open area is unavoidable for the storage or loading/unloading of wastes, then the area should be bunded and all the polluted surface run-off collected within this area should be diverted into wastewater treatment system. | 1 | | | |



| Item | Details of defective works or observations | Proposed Follow Up Action | Photo Ref. | Further Action Required (Yes/No) | Target Completion Date |
|--------|--|---------------------------|------------|--|------------------------------|
| | | | | | |
| | | | | | |
| Remark | k | | | | |

| | Name | Title | Signature | Date |
|------------|----------|-------------------|-----------|-----------------|
| Checked by | June Lau | ET Representative | 1 w | 05 January 2023 |
| | | | <u> </u> | |



Inspection Date

12/1/23

Time

10:00

Weather

: Sunny / Fine / Cloudy / Overcast / Drizzle / Rain / Storm / Hazy

Wind

: Calm / Light/ Breeze / Strong

Temperature

180

Humidity

High / Moderate (Low)

| Inspected by | CEDD | Contractor / Sub-Contactor | ET |
|--------------|-------|----------------------------|-------------|
| Signature: | | | |
| | | 4 | Nak |
| Name: | C.K.M | knok Wing Lam | Mak Lei Wai |
| Title | A2~ | EO | E/T |



| Environmental Checklist | | | ation * | Remark |
|--|----------|--|------------|--|
| | Yes | No | N/A | |
| Fugitive Dust Emission | | | | |
| Dust control / mitigation measures shall be provided to prevent dust nuisance. | 4 | ************************************** | 12.001. | |
| Water sprays shall be provided and used to dampen materials. | 1 | | | |
| All stockpile of aggregate or spoil should be enclosed or covered and water applied in dry or windy condition. | V | | | |
| Any vehicle with open load carrying area used for moving materials which has the potential to create dust shall have properly fitting side and tail boards. Material having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin. | 1 | | | |
| Unpaved areas should be watered regularly to avoid dust generation. | √ | | | |
| The designated site main haul road shall be paved or regular watering. | 4 | | | |
| The haul road inside the site and public road around the site entrance should be kept clean and free from dust. | V | | | |
| Wheel washing facilities including high-pressure water jet shall be provided at the entrance of work site. | 4 | | | |
| Every vehicle shall be washed to remove any dusty materials from its body and wheels before leaving the fill bank. | 1 | | | |
| The temporary slope surfaces shall be covered with impermeable sheet or sprayed with water. | 1 | | | |
| Vehicle and equipment should be switched off while not in use. | 1 | ļ | · | |
| All plant and equipment should be well maintained e.g. without black smoke emission. | 1 | | | |
| Open burning should be prohibited. | 1 | | | |
| Approval or exemption Non-road Mobile Machinery (NRMM) labels should be painted or securely fixed on regulated machines and non-road vehicles at a conspicuous position according to the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation (APCO Cap.311). | 4 | | | |
| Noise Impact | | | | 2 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1) |
| The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted. | 4 | | | The second secon |
| The constructions works should be scheduled to minimize noise nuisance. | 4 | | | |
| Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works. | 4 | | | |
| Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials. | 1 | | | |
| Air compressors and hand held breakers should have noise labels. | ٧ | | | |
| Compressors and generators should operate with door closed. | V | | | |
| Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum. | 1 | | | |
| Noisy equipment and mobile plant shall always be site away from NSRs. | 1 | | | |



| Environmental Checklist | | | ation * | Remark |
|--|-----|--|------------|--------|
| | | | | |
| Water Quality | | | | |
| Drainage system and the sand / silt removal facilities should be adequate and well maintained to prevent flooding and overflow, especially after rain storms. | 1 | | | |
| The storm water intercepting system shall be effective to collect of runoff and remove suspended solids before discharge. | √ √ | | | |
| Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding. | 1 | | | |
| The material shall be properly covered to prevent washed away especially before rainstorm. | 1 | | | |
| The temporary slope surfaces shall be covered with impermeable sheet or sprayed with water. | √ | | | |
| Final slope surfaces, especially those facing to the north of the site shall be treated by compaction, followed by hydroseeding, vegetation planting or sealing with shotconcrete, latex, vinyl, bitumen, or other suitable surface stabilizer approved by CEDD. | 1 | | | |
| Existing and newly constructed Catchpits, sand and silt removal facilities and intercepting channels shall be maintained, and the deposited silt and grit shall be removed weekly and on a need basis especially at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times. | 4 | | | |
| A wheel washing bay shall be provided at the site exit and wash-water shall have sand and silt settled out or removed before being discharged into storm drains. | 1 | | | |
| The section of construction road between wheel washing bay and the public road shall be paved with concrete, bituminous materials or hardcores to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains. | 1 | | | |
| Sewage from toilets shall be discharged in to a foul sewer, or chemical toilets shall be provided. | 4 | | | |
| The chemical toilets (if use) shall be provided by a licensed contractor, who will be responsible for disposal and maintenance of these facilities. | 4 | | | |
| Tipping halls enclosed with top and 3-side to prevent spillage of material into marine water. | 4 | | | |
| The barges shall be in right size such that adequate clearance in maintained between the vessels and the seabed at all states of the tide to ensure the undue turbidity is not generated by turbulence from vessel movement or propeller wash. | √ | | | |
| All vessels used for transportation of fill material shall have tight fitting seals to their bottom openings to prevent leakage of material during transport. | 1 | | | |
| Barges shall not be filled to a level which may cause the overflow of material during loading or transportation. Barge effluents shall be properly collected and treated before disposal. | 4 | | | |
| Adequate environmental control measures shall be provided to prevent / avoid dropping of fill material into the sea during the transfer. | 4 | | | |
| The work activities shall not cause any visible foam, oil, grease, scurn, litter or other objectionable matters to be present on the water in the vicinity of the barging facilities. | 1 | | | |
| A waste collection vessel shall be deployed to remove floating debris. | √ | | | |
| Landscape and Visual | | | | |
| The maximum stockpilling height at the fill bank shall be limited to a maximum of +40mPD. | 1 | | | |
| Surface of outer slopes of the Fill Bank shall preferably be hydroseeded. | 1 | | | |
| Stockpile of public fill shall be removed in a sequence to allow the outer hydrseeded to be removed later than other portions as far as practicable. | 7 | | - | |
| Casuarina equisetifolia were planted as buffer tree along the northern perimeter of the Site. The height of Casuarina equisetifolia was maintained at bleast 3m above soil level. | √ | | | |
| Lighting shall be set to minimise night-time glare. | 1 | | | |



| Environmental Checklist | | | ation | Remark |
|--|-------------|----------|-----------------|--------|
| | | No | | - |
| Waste Management | | | | |
| onstruction Waste Management | | | | |
| Relevant licence / permits for disposal of construction waste or excavated materials available for inspection. | 1 | | | |
| Excavated material to be generated from construction works to be re-used on-site as far as practicable to reduce off-site disposal. | 1 | | | |
| Mud and debris should be removed from waterworks access roads and associated drainage systems. | 1 | | | |
| Provision of sufficient waste disposal points and regular collection for disposal. Appropriate measures should be employed to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers. | ٧ | | | |
| Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. | 1 | | | |
| Prior to disposal of C&D waste, recyclable materials should be salvaged for reuse (such as wood and metal) and inert waste utilised as public fill to minimise the quantity of waste to be disposed of to landfill. | 1 | | | |
| In order to monitor the disposal of C&D material and solid wastes at public filling areas and landfills, and to control fly-tipping, a trip-ticket system should be included as one of the contractual requirements. | 1 | | | |
| Any soil contaminated with chemicals/oils shall be removed from site and the void created shall be filled with suitable materials. | 1 | | | |
| Chemical Waste Management | rji kraji d | | ja Valorijas | |
| It is required to register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes. | 7 | | | |
| After use, chemical wastes (e.g. cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. | 1 | | | |
| Spent chemicals should be stored and collected by an approved operator for disposal at the Chemical Waste Treatment Facility or other licensed facility in accordance with the Chemical Waste (General) Regulation. | 4 | | | |
| Chemical wastes should be separated for special handling and appropriate treatment at the Chemical Waste Treatment Facility. | √ | l | | |
| Chemical wastes including waste oil should be stored properly in designated areas, e.g. chemical waste storage area. | 4 | | | |
| The designated chemical waste storage area should only be used for storing chemical wastes. | 1 | <u> </u> | | |
| The set-up of chemical waste storage area should | | | | |
| Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition. | 1 | | | |
| Be enclosed on at least 3 sides and securely closed. | 1 | | | |
| Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest. | 4 | | | |
| Have adequate ventilation. | 1 | | | |
| Be covered to prevent rainfall entering (water collected within the bund must be tested and disposal as chemical waste if necessary). | 1 | |] | |
| Be arranged so that incompatible materials are adequately separated. | √ | | | |



| | Environmental Checklist | | | | Remark |
|---|---|----------|----------|-----|--------|
| | | Yes | No | N/A | |
| • | Warning panels should be displayed at the waste storage area. | 1 | | | |
| - | Waste storage area should be cleaned and maintained regularly. | √ | | | |
| | Chemical waste should be transported regularly by a registered chemical waste collector to a facility licensed to receive chemical waste. | 1 | | | |
| • | All generators, fuel and oil storage should be within bundle areas. | 1 | <u> </u> | i – | |
| • | Oil leakage from machinery, vehicle and plant should be prevented. | 1 | | | |
| • | In the event of chemical waste / dangerous goods / chemicals spillage or leakage, the procedures as outlined in the Spillage Response Plan should be followed. | 1 | | | |
| • | The dangerous goods / chemical spillage or leakage procedures (including equipments) should be in place. | √ | | | |
| G | ood Site Practices | | | | |
| • | Nomination of approved personnel, such as site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site. | V | | | |
| • | Training of site personnel in proper waste management and chemical handling procedures should be provided. | √ | | | |
| • | Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment. | 1 | | | |
| • | Proper storage and site practices to minimise the potential for damage or contamination of construction materials. | √ | | | |
| ٠ | The Environmental Permit should be displaced conspicuously on site. | 1 | | | |
| ٠ | Construction noise permits should be posted at site entrance or available for site inspection. | √ | | | |
| • | Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste. | 1 | | | |
| • | Chemical storage area provided with lock and located on sealed areas. | 1 | | | |
| • | All chemicals should be placed at the banded area with adequate band capacity (>110% of largest tank). | 1 | | | |
| * | Any unused chemicals or those with remaining functional capacity should be recycled. | 1 | | | |
| • | Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors. | 1 | | | |
| • | To encourage collection of aluminium cans by individual collectors. | 4 | | | |
| • | Separate labelled bins should be provided to segregate this waste from other general refuse generated by the workforce. | 1 | | | |
| • | A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods. | 1 | | | |
| • | A collection area should be provided where waste can be stored and loaded prior to removal from site. An enclosed and covered area is preferred to reduce the occurrence of 'wind blown' light material. If an open area is unavoidable for the storage or loading/unloading of wastes, then the area should be bunded and all the polluted surface run-off collected within this area should be diverted into wastewater treatment system. | 1 | | | |



| Item | Details of defective works or observations | Proposed Follow Up Action | Photo Ref. | Further Action Required (Yes/No) | Target Completion Date | | | | | |
|--------|--|---------------------------|------------|--|------------------------------|--|--|--|--|--|
| | | | | | | | | | | |
| | | | | | | | | | | |
| Remark | emark | | | | | | | | | |

| | Name | Title | Signature | 1 | Date |
|------------|----------|-------------------|-----------|------|-----------------|
| Checked by | June Lau | ET Representative | | 1000 | 12 January 2023 |



Inspection Date : 19 - 1 - 23

Time : /0:00

Weather : Sunny / Fipe / Cloudy / Overcast / Drizzle / Rain / Storm / Hazy

Wind : Calm / Light / Breeze / Strong

Temperature : 16

Humidity : High Moderate / Low

| Inspected by | CEDD | Contractor / Sub-Contactor | ET |
|--------------|-----------|----------------------------|--------------|
| Signature: | A | | |
| Name: | K.C. Yung | Harley Knoic | char Hon Con |
| Title | 18~ | EO | Technician |



| Environmental Checklist | | Implementation Stages* | | | | Remark |
|---|------|---------------------------|-----|--|--|--------|
| | Yes | | N/A | | | |
| Fugitive Dust Emission | | | | | | |
| Dust control / mitigation measures shall be provided to prevent dust nuisance. | √ | 14/16/2016/5 | | thy patterning comments and the second | | |
| Water sprays shall be provided and used to dampen materials. | 4 | | | | | |
| All stockpile of aggregate or spoil should be enclosed or covered and water applied in dry or windy condition. | 1 | | | | | |
| Any vehicle with open load carrying area used for moving materials which has the potential to create dust shall have properly fitting side ar tail boards. Material having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin. | | | | | | |
| Unpaved areas should be watered regularly to avoid dust generation. | 4 | | | | | |
| The designated site main haul road shall be paved or regular watering. | 1 | | | | | |
| The haul road inside the site and public road around the site entrance should be kept clean and free from dust. | 1 | | | | | |
| Wheel washing facilities including high-pressure water jet shall be provided at the entrance of work site. | 1 | | | | | |
| Every vehicle shall be washed to remove any dusty materials from its body and wheels before leaving the fill bank. | 1 | - | | | | |
| The temporary slope surfaces shall be covered with impermeable sheet or sprayed with water. | 4 | | | | | |
| Vehicle and equipment should be switched off while not in use. | 1 | | | | | |
| All plant and equipment should be well maintained e.g. without black smoke emission. | √ | | | | | |
| Open burning should be prohibited. | 1 | | | | | |
| Approval or exemption Non-road Mobile Machinery (NRMM) labels should be painted or securely fixed on regulated machines and non-road vehicles at a conspicuous position according to the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation (APC Cap.311). | | | | | | |
| Noise Impact | | | | | | |
| The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapte | 1. √ | 94 | | A second section of the section of the second section of the section | | |
| The constructions works should be scheduled to minimize noise nuisance. | 1 | | | , | | |
| Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works. | 1 | | | | | |
| Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials. | 4 | | | | | |
| Air compressors and hand held breakers should have noise labels. | 4 | | | | | |
| Compressors and generators should operate with door closed. | 4 | | | | | |
| Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimur | ո, √ | | | | | |
| Noisy equipment and mobile plant shall always be site away from NSRs. | 1 | | | | | |



| Environmental Checklist | | ment | | Remark |
|--|---|------|---------|--------|
| | | | N/A | 1 |
| Water Quality | | | 2 | |
| Drainage system and the sand / silt removal facilities should be adequate and well maintained to prevent flooding and overflow, especially after rain storms. | 4 | | | |
| The storm water intercepting system shall be effective to collect of runoff and remove suspended solids before discharge. | 7 | | | |
| Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding. | 4 | | | |
| The material shall be properly covered to prevent washed away especially before rainstorm. | 1 | | | |
| The temporary slope surfaces shall be covered with impermeable sheet or sprayed with water. | √ | | | |
| Final slope surfaces, especially those facing to the north of the site shall be treated by compaction, followed by hydroseeding, vegetation planting or sealing with shotconcrete, latex, vinyl, bitumen, or other suitable surface stabilizer approved by CEDD. | 1 | | | |
| Existing and newly constructed Catchpits, sand and silt removal facilities and intercepting channels shall be maintained, and the deposited silt and grit shall be removed weekly and on a need basis especially at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times. | 1 | | | |
| A wheel washing bay shall be provided at the site exit and wash-water shall have sand and silt settled out or removed before being discharged into storm drains. | 4 | | | |
| The section of construction road between wheel washing bay and the public road shall be paved with concrete, bituminous materials or hardcores to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains. | 1 | | | |
| Sewage from toilets shall be discharged in to a foul sewer, or chemical toilets shall be provided. | 1 | | | |
| The chemical toilets (if use) shall be provided by a licensed contractor, who will be responsible for disposal and maintenance of these facilities. | 4 | | | |
| Tipping halls enclosed with top and 3-side to prevent spillage of material into marine water. | 1 | | | |
| The barges shall be in right size such that adequate clearance in maintained between the vessels and the seabed at all states of the tide to ensure the undue turbidity is not generated by turbulence from vessel movement or propeller wash. | 1 | | | |
| All vessels used for transportation of fill material shall have tight fitting seals to their bottom openings to prevent leakage of material during transport. | 1 | | | |
| Barges shall not be filled to a level which may cause the overflow of material during loading or transportation. Barge effluents shall be properly collected and treated before disposal. | 4 | | | |
| Adequate environmental control measures shall be provided to prevent / avoid dropping of fill material into the sea during the transfer. | 1 | | | |
| The work activities shall not cause any visible foam, oil, grease, scum, litter or other objectionable matters to be present on the water in the vicinity of the barging facilities. | 4 | | | |
| A waste collection vessel shall be deployed to remove floating debris, | √ | | | |
| Landscape and Visual | | | ·· · | |
| The maximum stockpiling height at the fill bank shall be limited to a maximum of +40mPD, | √ | | | |
| Surface of outer slopes of the Fill Bank shall preferably be hydroseeded. | 1 | | | |
| Stockpile of public fill shall be removed in a sequence to allow the outer hydrseeded to be removed later than other portions as far as practicable. | 1 | | | |
| Casuarina equisetifolia were planted as buffer tree along the northern perimeter of the Site. The height of Casuarina equisetifolia was maintained at bleast 3m above soil level. | 1 | | | |
| Lighting shall be set to minimise night-time glare. | 1 | | | |



| Environmental Checklist | | ement Stages | | Remark |
|--|---|--|-----|--|
| | | | N/A | |
| Waste Management | | ************************************** | | |
| Construction Waste Management | |): | | |
| Relevant licence / permits for disposal of construction waste or excavated materials available for inspection. | 4 | 1 | | x 1-1-0-x 10-0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 |
| Excavated material to be generated from construction works to be re-used on-site as far as practicable to reduce off-site disposal. | 4 | | | |
| Mud and debris should be removed from waterworks access roads and associated drainage systems. | 4 | | | |
| Provision of sufficient waste disposal points and regular collection for disposal. Appropriate measures should be employed to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers. | 1 | | | |
| Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. | 1 | | | |
| Prior to disposal of C&D waste, recyclable materials should be salvaged for reuse (such as wood and metal) and inert waste utilised as public fill to minimise the quantity of waste to be disposed of to landfill. | 1 | | | |
| In order to monitor the disposal of C&D material and solid wastes at public filling areas and landfills, and to control fly-tipping, a trip-ticket system should be included as one of the contractual requirements. | 1 | | | |
| Any soil contaminated with chemicals/oils shall be removed from site and the void created shall be filled with suitable materials. | 1 | | | |
| Chemical Waste Management | | | | |
| It is required to register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes. | 1 | | | |
| After use, chemical wastes (e.g. cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. | 4 | | | |
| Spent chemicals should be stored and collected by an approved operator for disposal at the Chemical Waste Treatment Facility or other licensed facility in accordance with the Chemical Waste (General) Regulation. | 4 | | | |
| Chemical wastes should be separated for special handling and appropriate treatment at the Chemical Waste Treatment Facility. | 4 | | | |
| Chemical wastes including waste oil should be stored properly in designated areas, e.g. chemical waste storage area. | 4 | | | |
| The designated chemical waste storage area should only be used for storing chemical wastes. | √ | | | |
| The set-up of chemical waste storage area should | | | | |
| Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition. | 1 | | | |
| Be enclosed on at least 3 sides and securely closed. | 1 | | | |
| Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest. | 4 | | | |
| Have adequate ventilation. | 4 | | | <u> </u> |
| Be covered to prevent rainfall entering (water collected within the bund must be tested and disposal as chemical waste if necessary). | 1 | | | |
| Be arranged so that incompatible materials are adequately separated. | 4 | | | |



| | Environmental Checklist | Implementation Stages* | | | Remark |
|----|---|---------------------------|----|-----|--------|
| | | Yes | No | N/A | · |
| • | Warning panels should be displayed at the waste storage area. | 1 | | | |
| • | Waste storage area should be cleaned and maintained regularly. | 4 | | | |
| • | Chemical waste should be transported regularly by a registered chemical waste collector to a facility licensed to receive chemical waste. | 4 | | | |
| • | All generators, fuel and oil storage should be within bundle areas. | V | | | |
| 4 | Oil leakage from machinery, vehicle and plant should be prevented. | 1 | | | |
| • | In the event of chemical waste / dangerous goods / chemicals spillage or leakage, the procedures as outlined in the Spillage Response Plan should be followed. | 7 | | | |
| • | The dangerous goods / chemical spillage or leakage procedures (including equipments) should be in place. | 4 | | | |
| Go | ood Site Practices | 50.248066 | | | |
| | Nomination of approved personnel, such as site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site. | 1 | | | 3.0 |
| | Training of site personnel in proper waste management and chemical handling procedures should be provided. | 4 | | | |
| • | Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment. | 1 | | | |
| • | Proper storage and site practices to minimise the potential for damage or contamination of construction materials. | 4 | | | |
| • | The Environmental Permit should be displaced conspicuously on site. | 1 | | | |
| ٠ | Construction noise permits should be posted at site entrance or available for site inspection. | 1 | | | |
| • | Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste. | V | | | |
| • | Chemical storage area provided with lock and located on sealed areas. | 1 | | | |
| • | All chemicals should be placed at the banded area with adequate band capacity (>110% of largest tank). | 1 | | | |
| • | Any unused chemicals or those with remaining functional capacity should be recycled. | 1 | | | |
| • | Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors. | 1 | | | |
| • | To encourage collection of aluminium cans by individual collectors. | 1 | | | |
| • | Separate labelled bins should be provided to segregate this waste from other general refuse generated by the workforce. | 1 | | | |
| • | A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods. | 4 | | - | |
| • | A collection area should be provided where waste can be stored and loaded prior to removal from site. An enclosed and covered area is preferred to reduce the occurrence of wind blown light material. If an open area is unavoidable for the storage or loading/unloading of wastes, then the area should be bunded and all the polluted surface run-off collected within this area should be diverted into wastewater treatment system. | V | | | |



| Item | Details of defective works or observations | Proposed Follow Up Action | Photo Ref. | Further Action Required (Yes/No) | Target Completion Date |
|--------|--|---------------------------|------------|--|------------------------------|
| | | | | | |
| | | | | | |
| Remark | | | | | |

| | Name | Title | Signature | Date |
|------------|----------|-------------------|-----------|-----------------|
| Checked by | June Lau | ET Representative | | 19 January 2023 |
| | | | 0 | |



Inspection Date

: 27/1/23

Time

10:00

Weather

:. Sunny / Fine / Cloudy / Overcast / Drizzle / Rain / Storm / Hazy

Wind

: Calm /Light/ Breeze / Strong

Temperature

17°6

Humidity

: High / Moderate (Low)

| Inspected by | CEDD | Contractor / Sub-Contactor | ET |
|--------------|------|---|-------------|
| Signature: | ì | | |
| | | de la companya della | M. a |
| | | | Nak |
| Name: | Ck.M | Hamle 1, and | |
| | | thok wing Lan | Mak Kei Wai |
| Title | An | | · |
| | / V | <u>EU</u> | E,T |



| Environmental Checklist | | | ation * | Remark |
|--|----------|-------------|------------|--------|
| | Yes | No | N/A | |
| Fugitive Dust Emission | | | | |
| Dust control / mitigation measures shall be provided to prevent dust nuisance. | V | | | |
| Water sprays shall be provided and used to dampen materials. | 4 | | | |
| All stockpile of aggregate or spoil should be enclosed or covered and water applied in dry or windy condition. | 4 | | | |
| Any vehicle with open load carrying area used for moving materials which has the potential to create dust shall have properly fitting side and tail boards. Material having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin. | 4 | | | |
| Unpaved areas should be watered regularly to avoid dust generation. | 1 | | | |
| The designated site main haul road shall be paved or regular watering. | 1 | | | |
| The haul road inside the site and public road around the site entrance should be kept clean and free from dust. | 4 | | | |
| Wheel washing facilities including high-pressure water jet shall be provided at the entrance of work site. | 4 | | | |
| Every vehicle shall be washed to remove any dusty materials from its body and wheels before leaving the fill bank. | 4 | | | |
| The temporary slope surfaces shall be covered with impermeable sheet or sprayed with water. | 7 | | | |
| Vehicle and equipment should be switched off while not in use. | 7 | | | |
| All plant and equipment should be well maintained e.g. without black smoke emission. | 4 | | | |
| Open burning should be prohibited. | 4 | | | ••• |
| Approval or exemption Non-road Mobile Machinery (NRMM) labels should be painted or securely fixed on regulated machines and non-road vehicles at a conspicuous position according to the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation (APCO Cap.311). | 4 | | | |
| Noise Impact | | 6 70 | | |
| The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted. | 4 | | | |
| The constructions works should be scheduled to minimize noise nuisance. | 4 | | | |
| Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works. | √ | | | |
| Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials. | 4 | | | |
| Air compressors and hand held breakers should have noise labels. | 1 | | | |
| Compressors and generators should operate with door closed. | 4 | | | |
| Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum. | 1 | | | |
| Noisy equipment and mobile plant shall always be site away from NSRs. | 1 | | | |



| Environmental Checklist | | Implementation Stages* | | Remark |
|--|-----|---------------------------|-----|--------|
| | Yes | No | N/A | |
| Water Quality | | | | 11892 |
| Drainage system and the sand / silt removal facilities should be adequate and well maintained to prevent flooding and overflow, especially after rain storms. | √ | | | |
| The storm water intercepting system shall be effective to collect of runoff and remove suspended solids before discharge. | . 1 | | | |
| Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding. | V | | | |
| The material shall be properly covered to prevent washed away especially before rainstorm. | 4 | | | |
| The temporary slope surfaces shall be covered with impermeable sheet or sprayed with water. | 4 | | | |
| Final slope surfaces, especially those facing to the north of the site shall be treated by compaction, followed by hydroseeding, vegetation planting or sealing with shotconcrete. latex, vinyl, bitumen, or other suitable surface stabilizer approved by CEDD. | 1 | | | |
| Existing and newly constructed Catchpits, sand and silt removal facilities and intercepting channels shall be maintained, and the deposited silt and grit shall be removed weekly and on a need basis especially at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times. | 1 | | | |
| A wheel washing bay shall be provided at the site exit and wash-water shall have sand and silt settled out or removed before being discharged into storm drains. | 4 | | | |
| The section of construction road between wheel washing bay and the public road shall be paved with concrete, bituminous materials or hardcores to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains. | 4 | | | |
| Sewage from toilets shall be discharged in to a foul sewer, or chemical toilets shall be provided. | 4 | | | |
| The chemical toilets (if use) shall be provided by a licensed contractor, who will be responsible for disposal and maintenance of these facilities. | 4 | | | |
| Tipping halls enclosed with top and 3-side to prevent spillage of material into marine water. | 1 | | | |
| The barges shall be in right size such that adequate clearance in maintained between the vessels and the seabed at all states of the tide to ensure the undue turbidity is not generated by turbulence from vessel movement or propeller wash. | 1 | | | |
| All vessels used for transportation of fill material shall have tight fitting seals to their bottom openings to prevent leakage of material during transport. | . √ | | | |
| Barges shall not be filled to a level which may cause the overflow of material during loading or transportation. Barge effluents shall be properly collected and treated before disposal. | 1 | | | |
| Adequate environmental control measures shall be provided to prevent / avoid dropping of fill material into the sea during the transfer. | 4 | | | |
| The work activities shall not cause any visible foam, oil, grease, scum, litter or other objectionable matters to be present on the water in the vicinity of the barging facilities. | 4 | | | |
| A waste collection vessel shall be deployed to remove floating debris. | 1 | | | |
| Landscape and Visual | | | | |
| The maximum stockpiling height at the fill bank shall be limited to a maximum of +40mPD. | √ √ | | | |
| Surface of outer slopes of the Fill Bank shall preferably be hydroseeded. | 1 | | | |
| Stockpile of public fill shall be removed in a sequence to allow the outer hydrseeded to be removed later than other portions as far as practicable. | √ | | | |
| Casuarina equisetifolia were planted as buffer tree along the northern perimeter of the Site. The height of Casuarina equisetifolia was maintained at bleast 3m above soil level. | 1 | | | |
| Lighting shall be set to minimise night-time glare. Lighting shall be set to minimise night-time glare. | 4 | | | |



| Environmental Checklist | | ment tages | | Remark |
|--|-----------|---------------|-------|----------|
| | | | N/A | <u> </u> |
| Waste Management | | | | |
| Construction Waste Management | | | | |
| Relevant licence / permits for disposal of construction waste or excavated materials available for inspection. | 4 | | ^;*** | |
| Excavated material to be generated from construction works to be re-used on-site as far as practicable to reduce off-site disposal. | 4 | | | |
| Mud and debris should be removed from waterworks access roads and associated drainage systems. | √ | | | |
| Provision of sufficient waste disposal points and regular collection for disposal. Appropriate measures should be employed to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers. | 1 | | | |
| Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. | 4 | | | |
| Prior to disposal of C&D waste, recyclable materials should be salvaged for reuse (such as wood and metal) and inert waste utilised as public fill to minimise the quantity of waste to be disposed of to landfill. | 4 | | | |
| In order to monitor the disposal of C&D material and solid wastes at public filling areas and landfills, and to control fly-tipping, a trip-ticket system should be included as one of the contractual requirements. | 4 | | | |
| Any soil contaminated with chemicals/oils shall be removed from site and the void created shall be filled with suitable materials. | 4 | | | |
| Chemical Waste Management | | | | |
| It is required to register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes. | 7 | | | |
| After use, chemical wastes (e.g. cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. | 4 | | | |
| Spent chemicals should be stored and collected by an approved operator for disposal at the Chemical Waste Treatment Facility or other licensed facility in accordance with the Chemical Waste (General) Regulation. | 1 | | | |
| Chemical wastes should be separated for special handling and appropriate treatment at the Chemical Waste Treatment Facility. | 4 | | |) |
| Chemical wastes including waste oil should be stored properly in designated areas, e.g. chemical waste storage area. | | 4 | | Item 1 |
| The designated chemical waste storage area should only be used for storing chemical wastes. | | <u> </u> | | |
| The set-up of chemical waste storage area should | i Çibiyaş | | | |
| Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition. | 4 | | | |
| ■ Be enclosed on at least 3 sides and securely closed. | 4 | | | |
| Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest. | 4 | | | |
| Have adequate ventilation. | 7 | | | |
| Be covered to prevent rainfall entering (water collected within the bund must be tested and disposal as chemical waste if necessary). | √ | | | |
| Be arranged so that incompatible materials are adequately separated. | 4 | | | |



| | Environmental Checklist | Implementati Stages* | | | Remark |
|----|---|-------------------------|---------------|----------------|--------|
| | | Yes | No | N/A | |
| • | Warning panels should be displayed at the waste storage area. | 4 | | | |
| • | Waste storage area should be cleaned and maintained regularly. | √ | | | |
| • | Chemical waste should be transported regularly by a registered chemical waste collector to a facility licensed to receive chemical waste. | 1 | · · · · · · · | | |
| • | All generators, fuel and oil storage should be within bundle areas. | √ | | | |
| • | Oil leakage from machinery, vehicle and plant should be prevented. | 1 | | | |
| • | In the event of chemical waste / dangerous goods / chemicals spillage or leakage, the procedures as outlined in the Spillage Response Plan should be followed. | 1 | | | |
| • | The dangerous goods / chemical spillage or leakage procedures (including equipments) should be in place. | √ | | | |
| Go | ood Site Practices | | 2.1124 | ing the second | |
| • | Nomination of approved personnel, such as site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site. | 1 | | | |
| • | Training of site personnel in proper waste management and chemical handling procedures should be provided. | 4 | | | |
| • | Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment. | 4 | | | |
| • | Proper storage and site practices to minimise the potential for damage or contamination of construction materials. | √ | | | |
| ٠ | The Environmental Permit should be displaced conspicuously on site. | 4 | | | |
| • | Construction noise permits should be posted at site entrance or available for site inspection. | 4 | | | |
| | Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste. | 4 | | | |
| • | Chemical storage area provided with lock and located on sealed areas. | 7 | | | |
| • | All chemicals should be placed at the banded area with adequate band capacity (>110% of largest tank). | 1 | | | |
| • | Any unused chemicals or those with remaining functional capacity should be recycled. | 4 | 1 | | |
| • | Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors. | 4 | | | |
| • | To encourage collection of aluminium cans by individual collectors. | 4 | | | |
| • | Separate labelled bins should be provided to segregate this waste from other general refuse generated by the workforce. | 1 | | | |
| • | A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods. | 4 | | | |
| | A collection area should be provided where waste can be stored and loaded prior to removal from site. An enclosed and covered area is preferred to reduce the occurrence of 'wind blown' light material. If an open area is unavoidable for the storage or loading/unloading of wastes, then the area should be bunded and all the polluted surface run-off collected within this area should be diverted into wastewater treatment system. | 1 | | | |



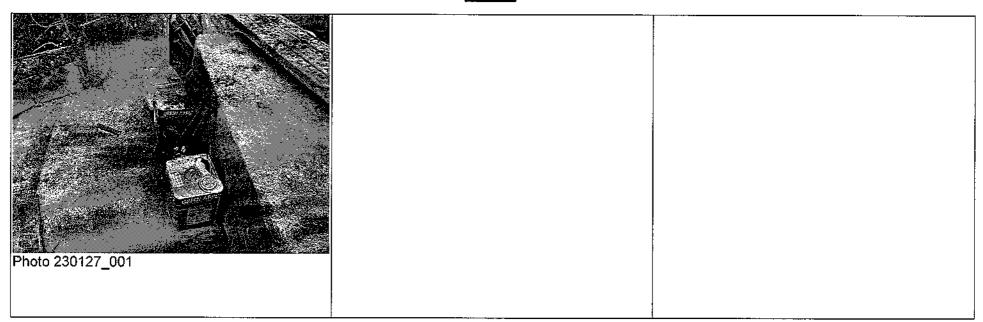
| Item | Details of defective works or observations | Proposed Follow Up Action | Photo Ref. | Further Action Required (Yes/No) | Target Completion Date |
|------|--|---------------------------------|------------|--|------------------------------|
| 1 | Oil drum was found near pier no. 1. | To remove the oil drum properly | 230127_001 | Yes | 2023-02-03 |
| | | | | | |

| R | emark | |
|---|-------|--|
| į | | |
| | | |
| | | |

| | Name | Title | Signature | Date |
|------------|----------|-------------------|-----------|-----------------|
| Checked by | June Lau | ET Representative | | 27 January 2023 |
| V | | | | |



<u>Photo</u>





Appendix I

Implementation Schedule of Mitigation Measures



Environmental Mitigation Implementation Schedule

| , | Location | | Implementa | tion Status | |
|--|----------------|--------------|-----------------------|-----------------|---------------------------------------|
| Environmental Protection Measures | | Implemented | Partially implemented | Not implemented | Not Applicable |
| Air Quality | | | | | |
| Dust control / mitigation measures shall be provided to prevent dust nuisance. | All areas | √ | | | |
| Water sprays shall be provided and used to dampen materials. | All areas | √ | | | |
| All stockpile of aggregate or soil should be enclosed or covered and water applied in dry or windy condition. | All areas | √ | | | · · · · · · · · · · · · · · · · · · · |
| Any vehicle with open load carrying area used for moving materials which has the potential to create dust shall have properly fitting side and tail boards. Material having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin. | All areas | V | | | |
| Unpaved areas should be watered regularly to avoid dust generation. | Site Egress | √ | | | · · · · · · · · · · · · · · · · · · · |
| The designated site main haul road shall be paved or regular watering. | All haul roads | √ | | | · · · · · · · · · · · · · · · · · · · |
| The public road around the site entrance should be kept clean and free from dust. | All areas | V | | | |
| Wheel washing facilities including high-pressure water jet shall be provided at the entrance of work site and wash-water shall have sand and silt settled out or removed before being discharged into storm drains. | Site Egress | √ | | | |
| Every vehicle shall be washed to remove any dusty materials from its body and wheels before leaving the fill bank. | Site Egress | √ | | | 1 |
| The temporary slope surfaces shall be covered with impermeable sheet or sprayed with water. | All areas | √ | | | 1 |
| Vehicle and equipment should be switched off while not in use. | All areas | √ | | | |
| All plant and equipment should be well maintained e.g. without black smoke emission. | All areas | √ | | | |
| Open burning should be prohibited. | All areas | V | | | |
| Approval or exemption Non-road Mobile Machinery (NRMM) labels should be painted or securely fixed on regulated machines and non-road vehicles at a conspicuous position according to the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation (APCO Cap.311). | All areas | V | | | |
| Noise Impact | | | | | |
| The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted. | All areas | $\sqrt{}$ | | | |
| Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works. | All areas | $\sqrt{}$ | | | |
| Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials. | All areas | V | | | |
| Air compressors and hand held breakers should have noise labels. | All areas | √ | | | |
| Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum. | All areas | √ | | | |
| Noisy equipment and mobile plant shall always be site away from NSRs. | All areas | \checkmark | | | <u></u> |



| | Location | Implementati | on Status | | |
|--|------------------------|--------------|-----------------------|-----------------|-------------------|
| Environmental Protection Measures | | Implemented | Partially implemented | Not implemented | Not Applicable |
| Water Quality | | | | | |
| The existing / realigned intercepting channels and the sand / silt removal facilities shall be used and maintained. | All areas | $\sqrt{}$ | | | |
| Temporary intercepting drains should be used at the stockpiling area to divert polluted stormwater to the intercepting channels. Earth bunds and sand bay barriers shall be used to assist the diversion of polluted stormwater to the intercepting channels. | All areas | √ | | | |
| The storm water intercepting system shall be effective to collect of runoff and remove suspended solids before discharge. | All areas | √ | | | |
| The material shall be properly covered to prevent washed away especially before rainstorm. | All areas | $\sqrt{}$ | | | |
| Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding. | All areas | | $\sqrt{}$ | | |
| The temporary slope surfaces shall be covered with impermeable sheet or sprayed with water. | Temporary Slopes | √ | | | |
| Existing and newly constructed Catchpits, sand and silt removal facilities and intercepting channels shall be maintained, and the deposited silt and grit shall be removed weekly and on a need basis especially at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times. | All areas | V | | | |
| A wheel washing bay shall be provided at the site exit and wash-water shall have sand and silt settled out or removed before being discharged into storm drains. | Wheel Washing facility | \checkmark | | | |
| The section of construction road between wheel washing bay and the public road shall be paved with concrete, bituminous materials or hardcores to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains. | Site Egress | √ | | | |
| Sewage from toilets shall be discharged in to a foul sewer, or chemical toilets shall be provided. | Site Office | √ | | | |
| The chemical toilets (if use) shall be provided by a licensed contractor, who will be responsible for disposal and maintenance of these facilities. | All areas | √ | | | |
| Tipping halls enclosed with top and 3-side to prevent spillage of material into marine water. | All areas | \checkmark | | | |
| Adequate environmental control measures shall be provided to prevent / avoid dropping of fill material into the sea during the transfer. | Along the seafront | √ | | | |
| A waste collection vessel shall be deployed to remove floating debris. | Along the seafront | \checkmark | | | |
| Landscape and Visual | | | | | |
| The maximum stockpiling height at the fill bank shall be limited to a maximum of +40mPD. | All areas | √ | | | |
| Surface of outer slopes of the Fill Bank shall preferably be hydroseeded. | Completed slopes | √ | | | |
| Stockpile of public fill shall be removed in a sequence to allow the outer hydrseeded to be removed later than other portions as far as practicable. | Completed slopes | √ | | | |
| • Casuarina equisetifolia were planted as buffer tree along the northern perimeter of the Site. The height of Casuarina equisetifolia was maintained at least 3m above soil level. | Site boundary | √ | | | |
| Lighting shall be set to minimise night-time glare. | All areas | √ | | | |
| Waste Management | | | | | |
| Construction Waste Management | | | | | |
| Relevant licence / permits for disposal of construction waste or excavated materials available for inspection. | All areas | √ | | | |



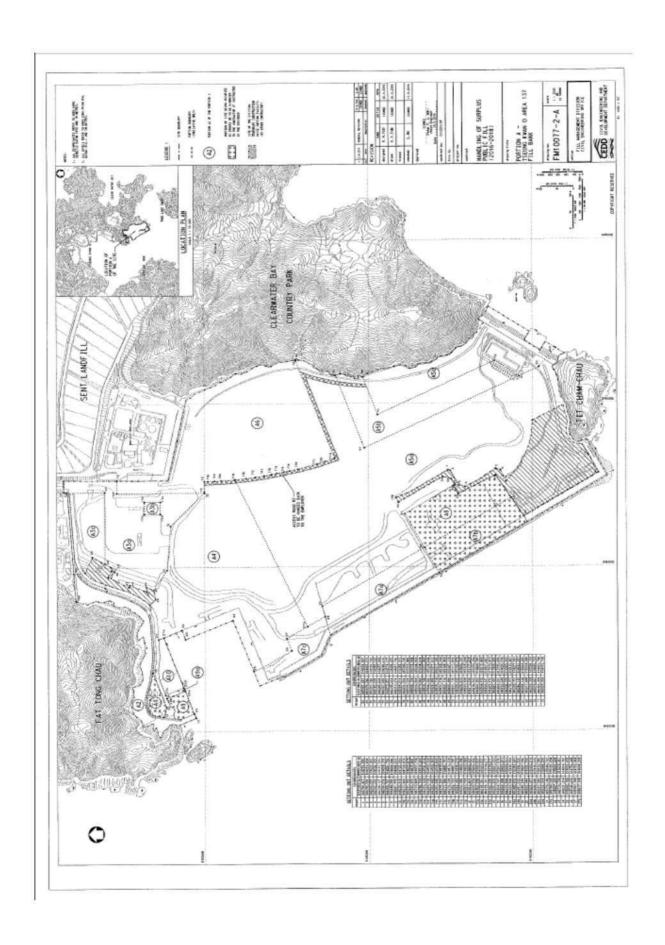
| | | Location | Implementation Status | | | | |
|----|--|-----------------------|-----------------------|-----------------------|-----------------|-------------------|--|
| | Environmental Protection Measures | | Implemented | Partially implemented | Not implemented | Not Applicable | |
| • | Excavated material to be generated from construction works to be re-used on-site as far as practicable to reduce off-site disposal. | All areas | \checkmark | | | | |
| • | Mud and debris should be removed from waterworks access roads and associated drainage systems. | All areas | V | | | | |
| • | Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. | All areas | √ | | | | |
| • | Prior to disposal of C&D waste, recyclable materials should be salvaged for reuse (such as wood and metal) and inert waste utilised as public fill to minimise the quantity of waste to be disposed of to landfill. | All areas | √ | | | | |
| • | In order to monitor the disposal of C&D material and solid wastes at public filling areas and landfills, and to control fly-tipping, a trip-ticket system should be included as one of the contractual requirements. | All areas | √ | | | | |
| • | Any soil contaminated with chemicals/oils shall be removed from site and the void created shall be filled with suitable materials. | All areas | $\sqrt{}$ | | | | |
| C | nemical Waste Management | | | | | | |
| • | It is required to register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes. | Waste Storage Area | √ | | | | |
| • | After use, chemical wastes (e.g. cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. | Waste Storage Area | √ | | | | |
| • | Spent chemicals should be stored and collected by an approved operator for disposal at the Chemical Waste Treatment Facility or other licensed facility in accordance with the Chemical Waste (General) Regulation. | Waste Storage Area | √ | | | | |
| • | Chemical wastes should be separated for special handling and appropriate treatment at the Chemical Waste Treatment Facility. | Waste Storage Area | V | | | | |
| • | Chemical wastes including waste oil should be stored properly in designated areas, e.g. chemical waste storage area. | Waste Storage Area | √ | | | | |
| • | The designated chemical waste storage area should only be used for storing chemical wastes. | Waste Storage Area | V | | | | |
| Tł | e set-up of chemical waste storage area should | | | | | | |
| • | Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition. | Waste Storage Area | √ | | | | |
| • | Be enclosed on at least 3 sides and securely closed. | Waste Storage Area | V | | | | |
| • | Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest. | Waste Storage Area | V | | | | |
| • | Have adequate ventilation. | Waste Storage Area | V | | | | |
| • | Be covered to prevent rainfall entering (water collected within the bund must be tested and disposal as chemical waste if necessary). | Waste Storage Area | V | | | | |
| • | Be arranged so that incompatible materials are adequately separated. | Waste Storage Area | √ | | | | |
| • | Warning panels should be displayed at the waste storage area. | Waste Storage Area | √ | | | | |



| | | Location | Implementation Status | | | | |
|-------------------|--|--------------------------|-----------------------|-----------------------|-----------------|-------------------|--|
| | Environmental Protection Measures | | Implemented | Partially implemented | Not implemented | Not Applicable | |
| • Wast | te storage area should be cleaned and maintained regularly. | Waste Storage Area | $\sqrt{}$ | | | <u> </u> | |
| • Cher | mical waste should be transported by a registered chemical waste collector to a facility licensed to receive chemical waste. | All areas | $\sqrt{}$ | | | 1 | |
| All ge | enerators, fuel and oil storage should be within bundle areas. | All areas | $\sqrt{}$ | | | I | |
| Oil le | eakage from machinery, vehicle and plant should be prevented. | All areas | √ | | |] | |
| | e event of chemical waste / dangerous goods / chemicals spillage or leakage, the procedures as outlined in the Spillage conse Plan should be followed. | All areas | √ | | | | |
| • The | dangerous goods / chemical spillage or leakage procedures (including equipments) should be in place. | All areas | \checkmark | | | 1 | |
| Good S | ite Practices | | | | | | |
| Nom and | ination of approved personnel, such as site manager, to be responsible for good site practices, arrangements for collection effective disposal to an appropriate facility, of all wastes generated at the site. | All areas | √ | | | | |
| • Train | ning of site personnel in proper waste management and chemical handling procedures should be provided. | All areas | V | | |] | |
| | d site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from ping into the nearby environment. | All areas | √ | | | | |
| • Prop | er storage and site practices to minimise the potential for damage or contamination of construction materials. | All areas | V | | |] | |
| The I | Environmental Permit should be displaced conspicuously on site. | Site Entrance | √ | | | <u> </u> | |
| • Cons | struction noise permits should be posted at site entrance or available for site inspection. | Site Entrance | | | | √ | |
| Plan wast | and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of e. | All areas | √ | | | | |
| | nical storage area provided with lock and located on sealed areas. | Chemical Storage Area | √ | | | <u> </u> | |
| | nemicals should be placed at the banded area with adequate band capacity (>110% of largest tank). | Chemical Storage Area | √ | | | | |
| Any | unused chemicals or those with remaining functional capacity should be recycled. | All areas | \checkmark | | | 1 | |
| • Regu | ular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors. | All areas | $\sqrt{}$ | | | <u> </u> | |
| | ncourage collection of aluminium cans by individual collectors, separate labelled bins should be provided to segregate this e from other general refuse generated by the workforce. | All areas | √ | | | | |
| A rec trip ti | cording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. cket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods. | All areas | √ | | | | |
| area loadi | llection area should be provided where waste can be stored and loaded prior to removal from site. An enclosed and covered is preferred to reduce the occurrence of 'wind blown' light material. If an open area is unavoidable for the storage or ng/unloading of wastes, then the area should be bunded and all the polluted surface run-off collected within this area should verted into wastewater treatment system. | All areas | ٧ | | | | |
| • Rem | ove wastes in a timely manner. | All areas | √ | | | | |



Appendix J Site General Layout plan





Appendix K Monthly Summary Waste Flow Table

Monthly Summary Waste Flow Table for 2023

Appendix C

| | | Actual Quantitie | es of Inert C&I | Materials Gene | erated Monthly | | | Actual Quantitie | es of C&D Was | stes Generated Mo | nthly |
|-----------|--------------------------------|---|---------------------------|--------------------------|----------------------------|--------------------------|--------------|----------------------------|--------------------------|-------------------|-----------------------------|
| Month | Total Quantity Generated | Hard Rock and Large Broken Concrete | Reused in the Contract | Reused in other Projects | Disposed as Public Fill | Imported Fill | Metals | Paper/ cardboard 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 '000 kg) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000kg) |
| Jan | 0 | 0 | 0 | 0 | 0 | 0 | 158.46 | 0 | 0 | 0.071 | 100.72 |
| Feb | | | | | | | | | | | |
| Mar | | | | | | | | | | | |
| Apr | | | | | | | | | | | |
| May | | | | | | | | | | | |
| Jun | | | | | | | | | | | |
| Sub-total | | | | | | | | | | | |
| Jul | | | | | | | | | | | |
| Aug | | | | | | | | | | | |
| Sep | | | | | | | | | | | |
| Oct | | | | | | | | | | | |
| Nov | | | | | | | | | | | |
| Dec | | | | | | | | | | | |
| Total | | | | | | | | | | | |

Notes:

- (1) The performance targets are given in **PS Clause 1.108(14)**.
- (2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
- (4) The *Contractor* shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the *works*, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the *works* is equal to or exceeding 50,000 m³.



Appendix L

Monitoring Schedule for the Coming Month



Time Schedule for Impact Water Quality Monitoring (WQM), Impact Air Monitoring (1-hrTSP, 24-hr TSP and 24-hr RSP), Weekly Site Inspection (Weekly SI) and Impact Noise Monitor February 2023

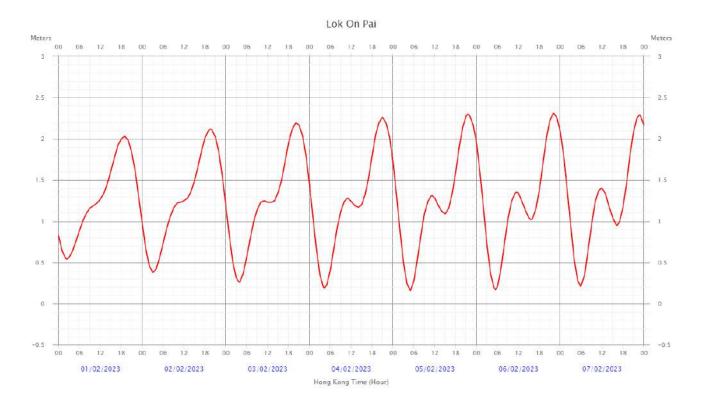
| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|------------------------|---|---|---|---|------------------------|---|
| 29-Jan | 30-Jan | 31-Jan | 1-Feb | | 3-Feb | 4-Fe |
| | | 1-hr TSP x 1 NM | 24-hr TSP 24-hr RSP | 1-hr TSP x 2 Weekly SI (am) NM | | 1-hr TSP x 1 |
| | WQM Mid-flood (12:00-13:30) Mid-ebb | | WQM Mid-flood (11:30-13:00) Mid-ebb | | | WQM Mid-ebb (12:30-14:00) Mid-flood |
| | (17:30-19:00) | | (18:30-20:00) | | | (16:00-17:30) |
| 5-Feb | 6-Feb | 7-Feb | 8-Feb | 9-Feb | 10-Feb | 11-Fel |
| | | 24-hr TSP 24-hr RSP NM WOM | | 1-hr TSP x 2 Weekly SI (am) NM WQM | | 1-hr TSP x 1 |
| | | Mid-flood (09:00-10:30) Mid-ebb (13:00-14:30) | | Mid-flood (09:00-10:30) Mid-ebb (14:00-15:30) | | Mid-flood (09:30-11:00) Mid-ebb (15:30-17:00) |
| 12-Feb | 13-Feb | 14-Feb | 15-Feb | 16-Feb | 17-Feb | 18-Fel |
| | 24-hr TSP 24-hr RSP | 1-hr TSP x 1 NM | | 1-hr TSP x 1 Weekly SI (am) NM | | 1-hr TSP x 1 |
| | WQM Mid-flood (10:00-11:30) Mid-ebb (16:30-18:00) | | WQM Mid-flood (13:00-14:30) Mid-ebb (17:30-19:00) | | | WQM Mid-ebb (11:30-13:00) Mid-flood (15:30-17:00) |
| 19-Feb | 20-Feb | 21-Feb | 22-Feb | 23-Feb | 24-Feb | 25-Fel |
| 24-hr TSP 24-hr RSP | | 1-hr TSP x 2 NM | | 1-hr TSP x 1 Weekly SI (am) NM | | 24-hr TSP 24-hr RSP |
| | | WQM Mid-flood (09:00-10:30) Mid-ebb (13:00-14:30) | | WQM Mid-flood (09:00-10:30) Mid-ebb (14:00-15:30) | | WQM Mid-flood (09:30-11:00) Mid-ebb (15:30-17:00) |
| 26-Feb | 27-Feb | 28-Feb | 1-Mar | 2-Mar | 3-Mar | 4-Ma |
| | | 1-hr TSP x 2 NM | | 1-hr TSP x 1 Weekly SI (am) NM | 24-hr TSP 24-hr RSP | |
| | | WQM Mid-flood (09:00-10:30) Mid-ebb | | | | |
| Remarks: | l | (17:00-18:30) | | | | |

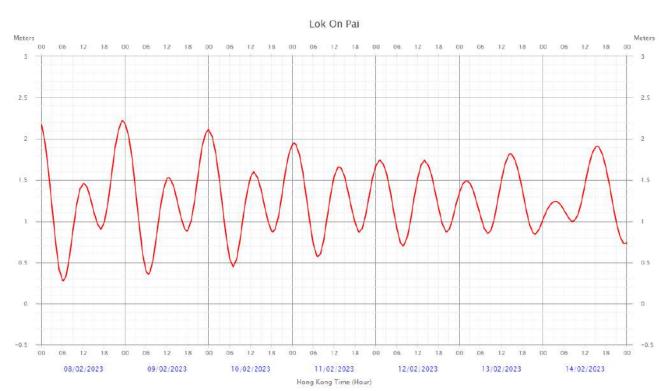
- The monitoring schedule may be changed due to unforeseen circumstances such as adverse weather.
 RSP measurement is not required in the EM&A manual and RSP would not presented in EM&A report.



Predicted tide schedule from the Hong Kong Observatory for Impact Water Quality Monitoring (WQM)

February 2023

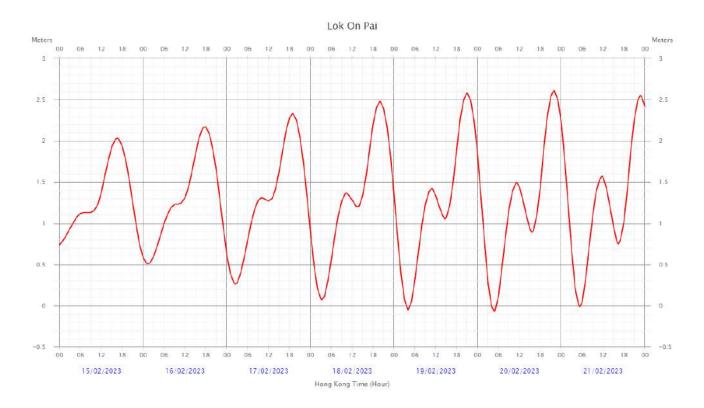


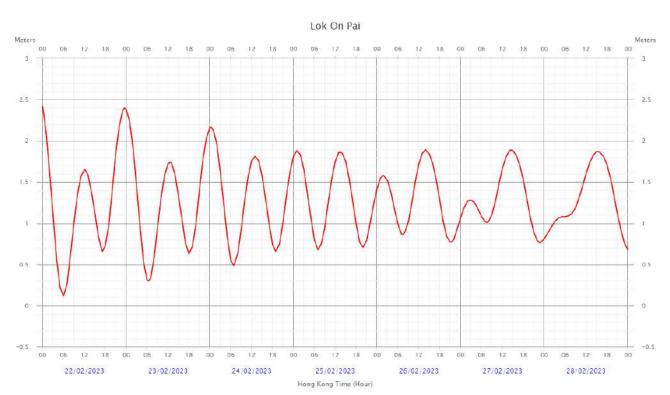




Predicted tide schedule from the Hong Kong Observatory for Impact Water Quality Monitoring (WQM)

February 2023







Appendix M

Reporting Month Monitoring Schedule



Time Schedule for Impact Water Quality Monitoring (WQM), Impact Air Monitoring (1-hrTSP, 24-hr TSP and 24-hr RSP), Weekly Site Inspection (Weekly Si) and Impact Noise Monitor January 2023

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|------------------------|---|---|---|---|---|---|
| 25-Dec | 26-Dec | 27-Dec | 28-Dec | 29-Dec | 30-Dec | 31-Dec |
| | 1-hr TSP x 1 NM WQM Mid-flood (10:00-11:30) Mid-ebb (14:30-16:00) | | WQM Mid-flood (11:00-12:30) Mid-ebb (16:30-18:00) | 1-hr TSP x 3 NM Weekly SI (am) | WQM Mid-ebb (08:30-10:00) Mid-flood (13:00-14:30) | |
| 1-Jan | 2-Jan | 3-Jan | 4-Jan | 5-Jan | | 7-Jan |
| | 24-hr TSP 24-hr RSP | 1-hr TSP x 1 NM WQM Mid-ebb (09:30-11:00) Mid-flood (14:30-16:00) | | 1-hr TSP x 1 NM Weekly SI (am) WQM Mid-ebb (11:30-13:00) Mid-flood (15:30-17:00) | | 1-hr TSP x 1 WQM Mid-flood (09:00-10:30) Mid-ebb (13:00-14:30) |
| 8-Jan | 9-Jan | 10-Jan | 11-Jan | 12-Jan | 13-Jan | 14-Jan |
| 24-hr TSP 24-hr RSP | | 1-hr TSP x 2 NM WQM Mid-flood (09:30-11:00) Mid-ebb (14:00-15:30) | | 1-hr TSP x 1 NM Weekly SI (am) WQM Mid-flood (10:00-11:30) Mid-ebb (16:00-17:30) | | 24-hr TSP 24-hr RSP WQM Mid-flood (12:00-13:30) Mid-ebb (17:00-18:30) |
| 15-Jan | 16-Jan | (14.00-13.00) 17-Jan | 18-Jan | (10.00-17.30) 19-Jan | 20-Jan | 21-Jan |
| | | 1-hr TSP x 2 NM WQM Mid-ebb (08:30-10:00) Mid-flood (13:30-15:00) | | 1-hr TSP x 1 NM Weekly SI (am) WQM Mid-ebb (10:30-12:00) Mid-flood (15:00-16:30) | 24-hr TSP 24-hr RSP | 1-hr TSP x 3 WQM Mid-flood (08:30-10:00) Mid-ebb (12:30-14:00) |
| 22-Jan | 23-Jan | 24-Jan | 25-Jan | 26-Jan | 27-Jan | 28-Jan |
| | | | | 24-hr TSP 24-hr RSP NM WQM Mid-flood (10:30-12:00) Mid-ebb (16:00-17:30) | Weekly SI (am) | 1-hr TSP x 2 NM WQM Mid-flood (11:30-13:00) Mid-ebb (17:00-18:30) |
| 29-Jan | 30-Jan | 31-Jan | 1-Feb | 2-Feb | 3-Feb | 4-Feb |
| | WQM Mid-flood (12:00-13:30) Mid-ebb (17:30-19:00) | 1-hr TSP x 1 NM | 24-hr TSP 24-hr RSP | | | |

- 1. The monitoring schedule may be changed due to unforeseen circumstances such as adverse weather.

 2. RSP measurement is not required in the EM&A manual and RSP would not presented in EM&A report.

 3. TM 38 Fill Bank is closed on Lunar New Year Eve, Lunar New Year Day, 2nd Day and 3rd Day.



Appendix N QA/QC Results of Laboratory Analysis



QA/QC Results of Laboratory Analysis of Total Suspended Solids

| | QC Sample Analysis | Sample Du | uplicate | Sample | Spike |
|---------------|-----------------------|-----------|-----------|-----------|------------|
| Sampling Date | % Recovery * | Sample ID | % Error # | Sample ID | % Recovery |
| | 97.8 | FC1-S | 4.26 | FM2-M | 104.9 |
| | 96.9 | FM2-B | 0.00 | EM1-S | 113.2 |
| 2023/1/3 | 97.7 | EM1-M | 3.77 | EC2-B | 107.4 |
| | 99.4 | FC1-S | 3.17 | FM2-M | 103.8 |
| | 99.4 | FM2-B | 0.00 | EM1-S | 101.7 |
| 2023/1/5 | 98.8 | EM1-M | 2.99 | EC2-B | 101.1 |
| | 98.6 | FC1-S | 3.64 | FM2-M | 108.8 |
| | 100.4 | FM2-B | 7.69 | EM1-S | 94.2 |
| 2023/1/7 | 101.4 | EM1-M | 8.70 | EC2-B | 97.4 |
| | 98.5 | FC1-S | 0.00 | FM2-M | 92.6 |
| | 102.1 | FM2-B | 8.70 | EM1-S | 106.9 |
| 2023/1/10 | 101.3 | EM1-M | 0.00 | EC2-B | 98.3 |
| | 101.4 | FC1-S | 0.00 | FM2-M | 91.0 |
| | 102.0 | FM2-B | 9.09 | EM1-S | 105.4 |
| 2023/1/12 | 101.1 | EM1-M | 6.45 | EC2-B | 93.3 |
| | 103.2 | FC1-S | 9.52 | FM2-M | 105.3 |
| | 103.3 | FM2-B | 4.00 | EM1-S | 91.0 |
| 2023/1/14 | 103.2 | EM1-M | 3.39 | EC2-B | 101.6 |
| | 99.3 | FC1-S | 7.41 | FM2-M | 107.4 |
| | 98.8 | FM2-B | 0.00 | EM1-S | 107.1 |
| 2023/1/17 | 98.3 | EM1-M | 8.89 | EC2-B | 100.2 |
| | 95.8 | FC1-S | 0.00 | FM2-M | 90.6 |
| | 101.8 | FM2-B | 5.71 | EM1-S | 101.2 |
| 2023/1/19 | 104.4 | EM1-M | 8.70 | EC2-B | 103.6 |
| | 99.4 | FC1-S | 7.41 | FM2-M | 94.6 |
| | 104.6 | FM2-B | 0.00 | EM1-S | 103.0 |
| 2023/1/21 | 100.6 | EM1-M | 5.41 | EC2-B | 103.2 |
| | 102.7 | FC1-S | 3.64 | FM2-M | 101.2 |
| | 101.2 | FM2-B | 6.06 | EM1-S | 104.5 |
| 2023/1/26 | 102.4 | EM1-M | 4.88 | EC2-B | 99.1 |
| | 102.2 | FC1-S | 0.00 | FM2-M | 92.9 |
| | 101.3 | FM2-B | 3.39 | EM1-S | 99.7 |
| 2023/1/28 | 100.5 | EM1-M | 5.71 | EC2-B | 108.5 |
| | 103.4 | FC1-S | 0.00 | FM2-M | 100.5 |
| | 103.1 | FM2-B | 0.00 | EM1-S | 103.7 |
| 2023/1/30 | 103.2 | EM1-M | 8.00 | EC2-B | 116.2 |

Note:(*)% Recovery of QC sample should be between 80% to 120%. (#)% Error of Sample Duplicate should be between -10% to 10%. (@)% Recovery of Sample Spike should be between 80% to 120%.



Appendix O

Complaint Log



Complaint Log

| Log Ref. | Location | Received Date | Details of Complaint | Investigation / Mitigation Action | Status |
|----------|---|------------------|---|--|--------|
| 001 | Lung Mun Road near Tuen Mun Area 38 Fill Bank | 24 May 2017 | One complaint received on 24 May 2017, which was forwarded to ET on 03 June 2017, from public against the rocks and debris deposited on the road surface along Lung Mun Road near Tuen Mun Area 38 Fill Bank. The complainant complained that waste generated caused an environmental nuisance. | Refer to the ET site investigation on 06 June 2017, the condition of Lung Mun Road near Tuen Mun Area 38 Fill Bank was found satisfactory. Details of Action(s) Taken by the Contactor: 1. Regular water spraying by water lorries is provided for road cleaning at Lung Mun Road; 2. Regular cleaning on Lung Mun Road and the access road at the site exit by road sweeper to remove mud and gravel is arranged four times on each working day; 3. Site vehicles are washed to remove any dusty materials from their bodies and wheels by using high pressure water jet manually at the entrance of work site before leaving; 4. Site vehicle for transporting materials are covered properly by using clean tarpaulin sheets; 5. Regular cleaning at the site haul road is provided to minimize the fugitive dust emission. | Closed |
| 002 | Lung Mun Road near Tuen Mun Area 38 Fill Bank | 16 April 2018 | One complaint received on 16 April 2018 from public and forwarded to ET by email at 10:51 on 25 May 2018. The complaint detail was"來往屯門第 38 區填料庫的龍門路沿路有很多泥頭車出入,泥頭會從車上掉至路面上,要求部門跟進及回覆。" | Refer to the ET site investigation on 26 May 2018, the condition of Lung Mun Road near Tuen Mun Area 38 Fill Bank was found satisfactory. Details of Action(s) Taken by the Contactor: 1. Regular cleaning on Lung Mun Road and the access road at the site exit by road sweeper to remove mud and gravel is arranged four times on each working day; 2. Regular water spraying by water lorries is provided for road cleaning at Lung Mun Road; 3. Site vehicles are washed to remove any dusty materials from their bodies and wheels by using high pressure water jet manually at the entrance of work site before leaving; 4. Site vehicles for transporting materials are covered properly by using clean tarpaulin sheets; Regular cleaning at the site haul road is provided. | Closed |



| 003 | Lung Mun Road near Tuen Mun Area 38 Fill Bank | 26 June 2018 | One complaint received on 26 June 2018 from public and forwarded to ET by email at 13:58 on 03 July 2018. The complaint detail was" 當天水車於 6 時出動洗街,導致交通阻塞." | Refer to the ET site investigation on 07 July 2018, the condition of Lung Mun Road near Tuen Mun Area 38 Fill Bank was found satisfactory. Details of Action(s) Taken by the Contactor: 1. Improve the road washing plan to avoid washing in traffic peak peroid 2. Revised the road washing schedule as soon as possible once there is traffic jam | Closed |
|-----|---|--------------------|--|--|--------|
| 004 | Tuen Mun Area 38 Fill Bank | 06 October 2021 | A complaint was received on 06 October 2021 from public regarding dust nuisance within TM38 Fill Bank and was forwarded to ET by email on 06 October 2021 for investigation. | Refer to the ET site investigation on 12 October 2021, no defective observation related to dust emission was recorded during the investigation. Details of Action(s) Taken by the Contactor: 1. Regular water spraying by water lorries is provided for dust suppression inside the Fill Bank. 2. Regular cleaning at the site haul road is provided to minimize the dust emission. | Closed |



| 005 | Tuen Mun Area 38 Fill Bank | 28 June 2022 | A complaint was received on 28 June 2022, which was forwarded to ET by email on 28 June 2022 for investigation, from public against "土木工程署屯門第 38 區填料庫經常發出異味,致現場的空氣及環境被受污染,土木工程拓展署難辭其咎,環保署亦應就現場大量大型車輛造成的空氣污染作出跟進。" | Refer to the ET site investigation on 30 June 2022, no defective observation related to dust emission was recorded during the investigation Details of Action(s) Taken by the Contactor: 1. Regular water spraying by water lorries is provided for dust suppression inside the Fill Bank; 2. Regular cleaning at the site haul road is provided to minimize the dust emission; 3. Site vehicles are washed to remove any dusty materials from their bodies and wheels by using high pressure water jet manually at the entrance of work site before leaving; | Closed |
|-----|----------------------------------|-----------------|---|---|--------|
| 006 | Tuen Mun Area 38 Fill Bank | 05 July 2022 | A complaint was received on 05 July 2022, which was forwarded to ET by email on 15 July 2022 for investigation, from an environmental group against "為何 TM38 區之斜坡不同蓋上帆布". | Refer to the ET site investigation on 14 July 2022, no defective observation related to dust emission was recorded during the investigation. Details of Action(s) Taken by the Contactor: 1. Regular water spraying by water lorries is provided for dust suppression inside the Fill Bank. 2. Regular cleaning at the site haul road is provided to minimize the dust emission. | Closed |

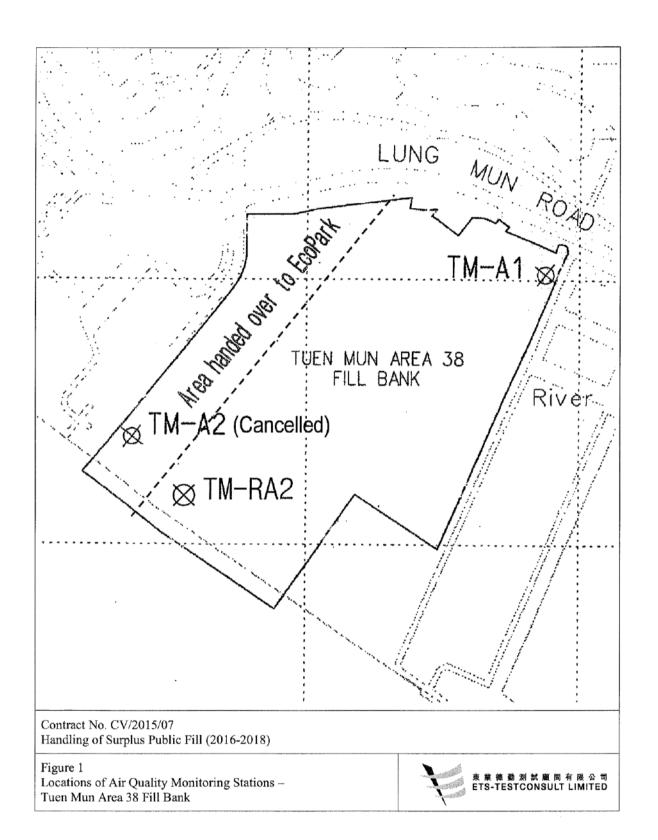


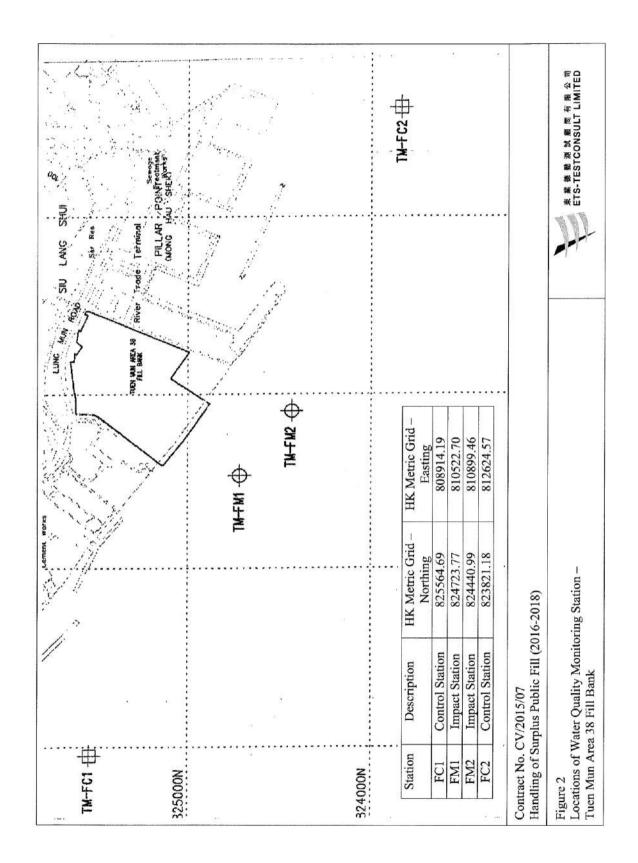
| 007 | Tuen Mun Area 38 Fill Bank | 30 September 2022 | A complaint was received on 30 September 2022, which was forwarded to ET by email on 03 October 2022 for investigation, against "In recent days, we found that there was significant dust emission from the fill bank. As you are aware that we need to conduct RSP and TSP monitoring at the site boundary with very tight limits. We worry that these situations might affect our measurement. Please see the videos attached. They are taken on 21 Sept and one on 26 Sept. Grateful if you could investigate the cases and ensure dust is properly controlled.". | The video provided by the complainant showed that there was serious dust emission in 3RS collection area of public fill. Based on this situation, mitigation measures implemented in TM38 Fill Bank were reviewed and enhanced to avoid dust emission. A joint site inspection and meeting was carried out on 06 October 2022 to discuss the dust emission at TM38 Fill Bank. The location of 3RS and discharge point would be inspected in every weekly environmental audit. The status of 3RS location would be recorded to monthly EM&A report. Details of Action(s) Taken by the Contactor: 1. Increasing the frequency of water spraying by water lorries inside the Fill Bank. 2. Setting up water spraying machine in the 3RS area 3. Regular cleaning at the site haul road is provided to minimize the dust emission. | Closed |
|-----|----------------------------------|-------------------------|--|---|--------|
|-----|----------------------------------|-------------------------|--|---|--------|

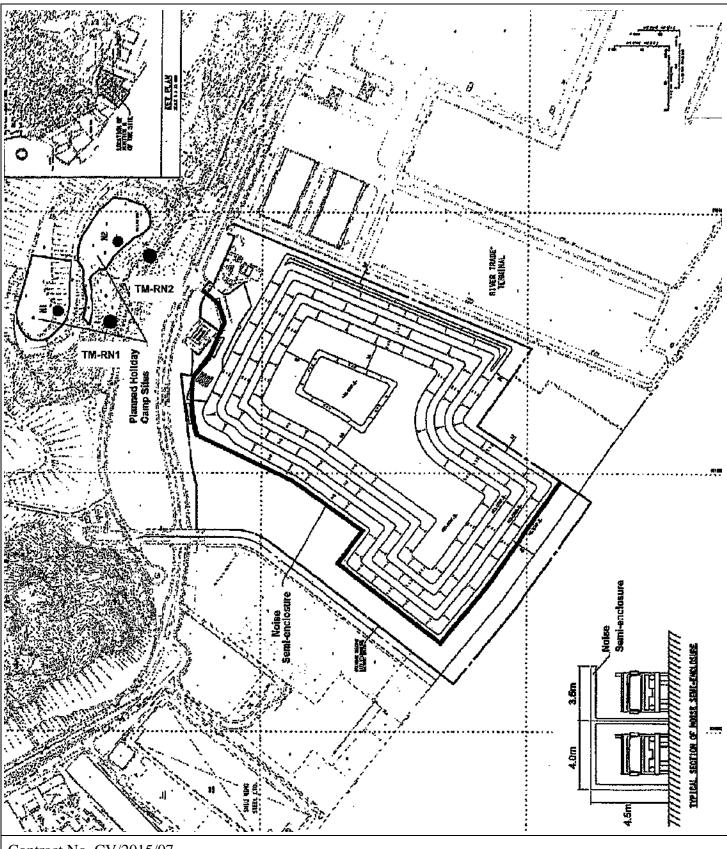


Figures









Contract No. CV/2015/07 Handling of Surplus Public Fill (2016 - 2018)

Figure 3 Locations of Noise Monitoring Stations – Tuen Mun Area 38 Fill Bank

