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TEST REPORT



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.11
(NOVEMBER 2022)

Prepared by:

LAU, Wing Sum

Assistant Environmental Officer

Checked by:

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Environmental Team Leader

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Report No.: ENA26947





Our Ref: PL-202212031

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

20 December 2022

Dear Mr. Lau,

RE: Contract No. CV/2021/09

Handling of Surplus Public Fill (2022-2023)

Monthly EM&A Report (No. 11) for November 2022 for the Tuen Mun Area 38 Fill Bank

Reference is made to your submission of the Monthly EM&A Report for November 2022 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 he sitate 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.11 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 November 2022.

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 AI 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: 13 Occasions at 4 designated locations
- Weekly-site inspection: 5 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 November 2022.

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:	i lemberanne i Gi			
TM-FC1 (Mid-ebb) and	Dissolved Oxygen	3 days/week, 2 tides/day	3 (Surface, mid- depth & bottom)	
TM-FC2 (Mid-flood)	(mg/L and % saturation)			
Impact Stations:	Turbidity (NTU)			
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	30/08/22 & 28/11/22	29/11/22 & 27/02/22	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) <u>Surface & Middle</u>		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

	Lable of Time Concade of Marine Trater Quality Memicerning									
	November 2022									
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 ▼							

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

Water quality monitoring (mid-Flood&Ebb) on 01/11/2022 and 02/11/2022 were cancelled due to the adverse weather condition (The Tropical Cyclone Signal No.3).

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		<u> </u>		
Tide	Station	Level	Surface & Middle	Bottom	Turbidity	SS	Total	
	TM-FM1	Action	0	0	0	0	0	
Mid-Ebb	I IVI-I-IVI I	Limit	0	0	0	0	0	
IVIIU-⊏DD	TM-FM2	Action	0	0	0	0	0	
		Limit	0	0	0	0	0	
	TM-FM1	Action	0	0	0	0	0	
Mid-		Limit	0	0	0	0	0	
Flood	TM EM2	Action	0	0	0	0	0	
	TM-FM2	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

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Equipment	Model
Sound Level Meter	Rion NL-31 / Rion NL-52
Calibrator	Castle GA607

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.

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Maintenance and Calibration

- 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, five weekly site inspections were conducted on 03, 10, 17, 25 and 28 November 2022. 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

Table 1.1	Rey I maings of Weekly LT 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				
03							
November	No defective work or ob	servation was recorded durir	ng the weekly ET site	inspection			
2022				•			
10 November 2022	Muddy water was observed at discharge point	To enhance water mitigation measure to avoid muddy discharge		Follow-up			
17 November	Muddy water was observed at discharge point	To enhance water mitigation measure to avoid muddy discharge	Soil near discharge point was cleaned	Closed			
2022	Dry soil surface was observed in the 3RS area	Provide water spraying to avoid dust generation		Follow-up			
25 November 2022	Dry soil surface was observed in the 3RS area	Provide water spraying to avoid dust generation	Water spraying was provided	Closed			

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28 November 2022	Soil was discarded near the seaside	To remove the soil properly		Follow-up	
------------------------	-------------------------------------	-----------------------------	--	-----------	--

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 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 Registration	5296-421- C1186-33	20/04/17		Spent battery containing heavy metals and spent lubricating oil
Effluent Discharge License	TBC	TBC	TBC	Effluent arising from vehicle washing and dust suppression activities and contaminated surface runoff treated by screening facilities and sedimentation tanks (sedimentation and chemical precipitation).
Marine Dumping Permit	EP/MD/23- 028	02/09/22	31/12/22	Approval for dumping 499,999 tons (approximately equal to 277,777 cu.m. bulked quantity) of Public Fill (Reclamation Materials) from Tseung Kwan O Area 137

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			Fill Bank and Tuen Mun Area 38 Fill Bank to designated dumping area at Guanghaiwan of Taishan
Billing Account for Waste Disposal	7042821	22/05/17	
Notification Pursuant to Section 3(1) of the Air Pollution Control (Construction Dust)	475208	12/04/17	

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

Ī	Complaints logged		Summons	served	Successful Prosecution		
Ī	November 2022	Cumulative	November 2022	Cumulative	November 2022	Cumulative	
ľ	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.

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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)	26.99	WENT Landfill		
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

A 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

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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.

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.

One complaint was received on 30 September 2022; No 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

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- 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

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.

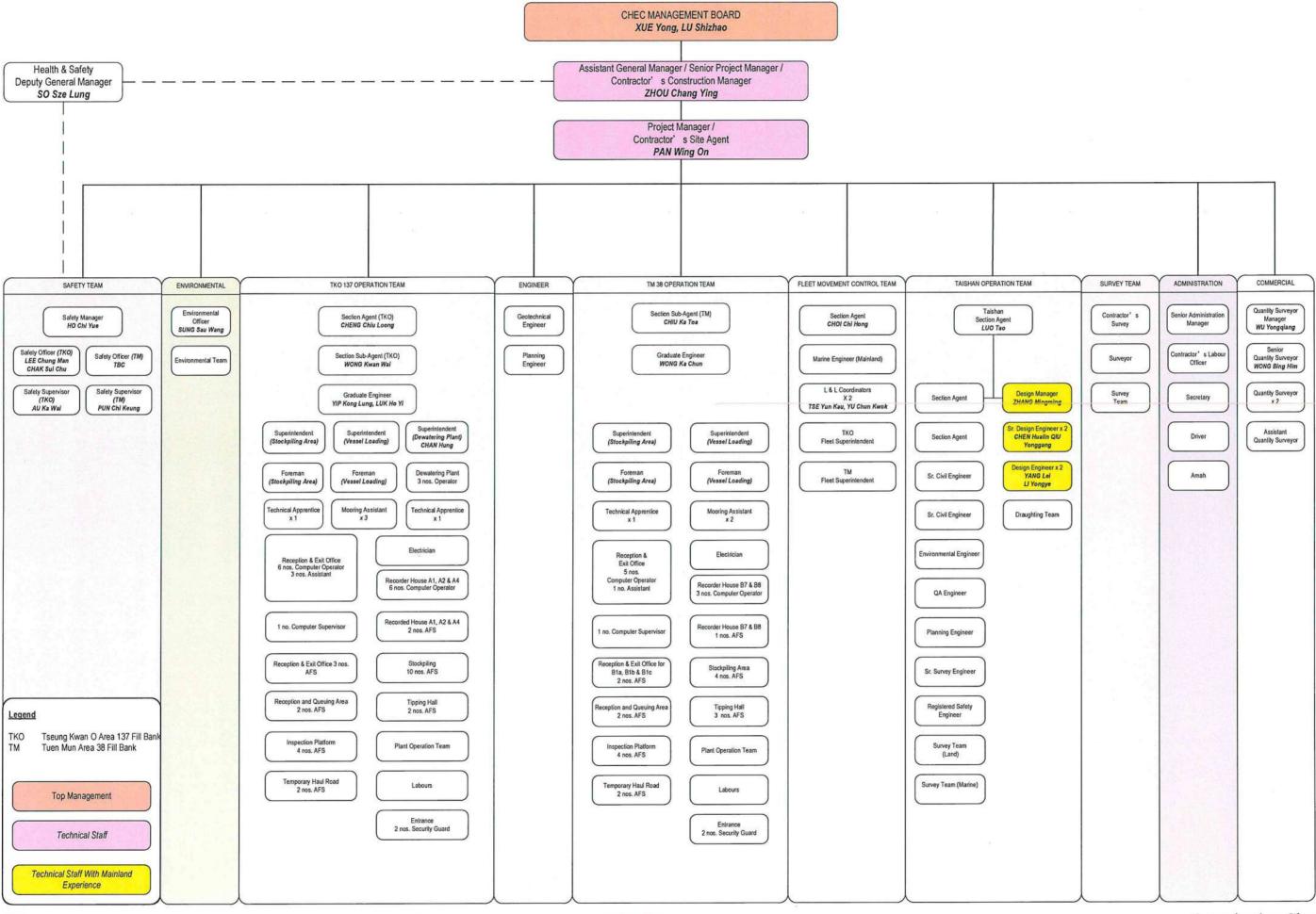
- END OF REPORT -

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Appendix A

Project Organization Chart





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.

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

T: +852 2695 8318 F: +652 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

01 November 2022

Serial No.

2484 (ET/EA/003/27)

Calibration Due Date :

31 December 2022

Method

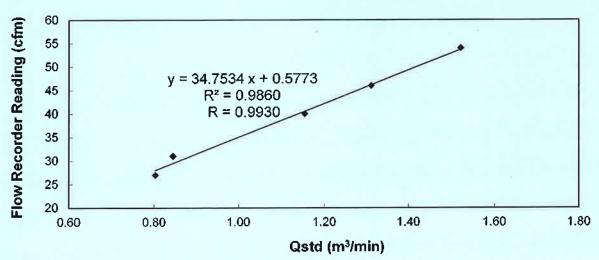
Five-point calibration by using standard calibration kit Tisch TE-5025A refer to the Operations

Manual

Results

Flow recorder reading (cfm)			54	47	40	33	27
Qstd (Actual flow rate, m ³ /min)			1.55	1.31	1.16	0.88	0.80
Pressure :	756.06	mm Hg		Temp.:	294	K	X -

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

MAK Kei Wai

(Assistant Supervisor)

Checked by :

LAU, Chi Leung

(Environmental Team Leader)

- END OF REPORT -



東業德勤測試顧問有限公司 ETS-TESTCONSULT LTD.

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TEST REPORT

Calibration Report

of

High Volume Air Sampler

Manufacturer

Graseby GMW

Date of Calibration

01 November 2022

Serial No.

1180 (ET/EA/003/04)

Calibration Due Date

31 December 2022

Method

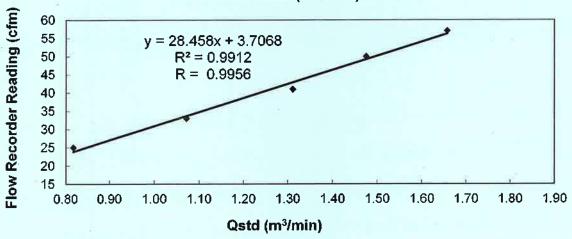
Based on Operations Manual for the 5-point calibration using standard calibration kit

manufactured by Tisch TE-5025 A

Results

Flow recorder rea	ding (cfm)		51	47	41	35	28
Ostd (Actual flow	rate, m³/min)	22	1.64	1.51	1.35	1.12	0.83
Pressure :	756.06	mm Hg		Temp.:	294	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* / does 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	(m ³ /min.)	Average	Filter W	eight (g)	Cana (u.g/m ³)
Date	Time	Date	Time	Initial	Final	Time (hrs)	Initial	Final	(m³/min.)	Initial	Final	Conc. (μg/m ³)
03/11/22	09:50	04/11/22	09:50	15406.31	15430.31	24.00	1.0193	1.0193	1.0193	3.0404	3.1376	66
09/11/22	09:30	10/11/22	09:30	15433.31	15457.31	24.00	1.0480	1.0480	1.0480	3.0954	3.1980	68
15/11/22	09:45	16/11/22	09:45	15460.31	15484.31	24.00	1.0193	1.0193	1.0193	3.0462	3.1475	69
21/11/22	09:30	22/11/22	09:30	15487.31	15511.31	24.00	1.0193	1.0193	1.0193	3.1089	3.2102	69
27/11/22	13:00	28/11/22	13:00	15514.31	15538.31	24.00	1.0480	1.0480	1.0480	3.0614	3.1640	68

Monitoring Station : TM-RA2

Sta	art	Fin	ish	Elapse	e Time	Sampling	Flow Rate	(m ³ /min.)	Average	Filter W	/eight (g)	Cana (u.g./m³)
Date	Time	Date	Time	Initial	Final	Time (hrs)	Initial	Final	(m³/min.)	Initial	Final	Conc. (μg/m ³)
03/11/22	09:55	04/11/22	09:55	30693.53	30717.53	24.00	1.1348	1.1348	1.1348	3.0684	3.1877	73
09/11/22	09:40	10/11/22	09:40	30720.53	30744.53	24.00	1.1699	1.1699	1.1699	3.0771	3.2080	78
15/11/22	09:55	16/11/22	09:55	30747.53	30771.53	24.00	1.1348	1.1348	1.1348	3.0685	3.1992	80
21/11/22	09:30	22/11/22	09:30	30774.53	30798.53	24.00	1.1348	1.1348	1.1348	3.1197	3.2455	77
27/11/22	13:00	28/11/22	13:00	30801.53	30825.53	24.00	1.1699	1.1699	1.1699	3.0818	3.2166	80



Summary of 1-hr TSP Monitoring Results

Monitoring Station : TM-A1

MOUTOUT	y Station	•	1 171	-A I							
Date	Tir	me	Elapse	e Time	Sampling	Flow Rate	e (m³/min.)	Average	Filter W	eight (g)	0 (3)
Dale	Start	Finish	Initial	Final	Time (hrs)	Initial	Final	(m³/min.)	Initial	Final	Conc. (µg/m³)
01/11/22	08:50	09:50	15405.31	15406.31	1.00	1.0193	1.0193	1.0193	3.0595	3.0702	175
05/11/22	11:20	12:20	15430.31	15431.31	1.00	1.0193	1.0193	1.0193	3.0722	3.0826	170
05/11/22	13:30	14:30	15431.31	15432.31	1.00	0.9905	0.9905	0.9905	3.0929	3.1027	165
08/11/22	11:00	12:00	15432.31	15433.31	1.00	1.0480	1.0480	1.0480	3.0795	3.0907	178
10/11/22	09:50	10:50	15457.31	15458.31	1.00	1.0480	1.0480	1.0480	3.0898	3.1010	178
10/11/22	13:00	14:00	15458.31	15459.31	1.00	1.0480	1.0480	1.0480	3.0620	3.0735	183
12/11/22	08:50	09:50	15459.31	15460.31	1.00	1.0480	1.0480	1.0480	3.0760	3.0863	164
17/11/22	09:30	10:30	15484.31	15485.31	1.00	1.0480	1.0480	1.0480	3.0749	3.0854	167
17/11/22	10:55	11:55	15485.31	15486.31	1.00	1.0480	1.0480	1.0480	3.0534	3.0641	170
19/11/22	11:00	12:00	15486.31	15487.31	1.00	1.0768	1.0768	1.0768	3.0817	3.0932	178
22/11/22	09:50	10:50	15511.31	15512.31	1.00	1.0193	1.0193	1.0193	3.0538	3.0650	183
24/11/22	09:45	10:45	15512.31	15513.31	1.00	1.0480	1.0480	1.0480	3.0716	3.0828	178
26/11/22	10:50	11:50	15513.31	15514.31	1.00	1.0193	1.0193	1.0193	3.0580	3.0683	169
29/11/22	09:55	10:55	15538.31	15539.31	1.00	1.0480	1.0480	1.0480	3.1131	3.1248	186
29/11/22	13:00	14:00	15539.31	15540.31	1.00	1.0193	1.0193	1.0193	3.0973	3.1082	179

Summary of 1-hr TSP Monitoring Results



Monitoring Station : TM-RA2

IVIOTILIOTIT	g Gtation		ı	1 17 12				1			ı
Date	Tir	me	Elapse	e Time	Sampling	Flow Rate	e (m³/min.)	Average	Filter W	eight (g)	Cono (wa/m³)
Date	Start	Finish	Initial	Final	Time (hrs)	Initial	Final	(m³/min.)	Initial	Final	Conc. (μg/m³)
01/11/22	08:50	09:50	30692.53	30693.53	1.00	1.1348	1.1348	1.1348	3.0613	3.0741	188
05/11/22	11:30	12:30	30717.53	30718.53	1.00	1.1348	1.1348	1.1348	3.1099	3.1225	185
05/11/22	13:40	14:40	30718.53	30719.53	1.00	1.0996	1.0996	1.0996	3.1066	3.1186	182
08/11/22	11:10	12:10	30719.53	30720.53	1.00	1.1699	1.1699	1.1699	3.0844	3.0978	191
10/11/22	10:00	11:00	30744.53	30745.53	1.00	1.1699	1.1699	1.1699	3.0982	3.1116	191
10/11/22	13:00	14:00	30745.53	30746.53	1.00	1.1699	1.1699	1.1699	3.0600	3.0739	198
12/11/22	08:55	09:55	30746.53	30747.53	1.00	1.1699	1.1699	1.1699	3.0723	3.0848	178
17/11/22	09:40	10:40	30771.53	30772.53	1.00	1.1699	1.1699	1.1699	3.0628	3.0750	174
17/11/22	11:00	12:00	30772.53	30773.53	1.00	1.1699	1.1699	1.1699	3.0741	3.0868	181
19/11/22	11:10	12:10	30773.53	30774.53	1.00	1.2050	1.2050	1.2050	3.1123	3.1259	188
22/11/22	10:00	11:00	30798.53	30799.53	1.00	1.1348	1.1348	1.1348	3.0597	3.0729	194
24/11/22	09:50	10:50	30799.53	30800.53	1.00	1.1699	1.1699	1.1699	3.0743	3.0877	191
26/11/22	11:00	12:00	30800.53	30801.53	1.00	1.1348	1.1348	1.1348	3.0788	3.0912	182
29/11/22	10:00	11:00	30825.53	30826.53	1.00	1.1699	1.1699	1.1699	3.0793	3.0934	201
29/11/22	13:00	14:00	30826.53	30827.53	1.00	1.1348	1.1348	1.1348	3.0523	3.0652	190

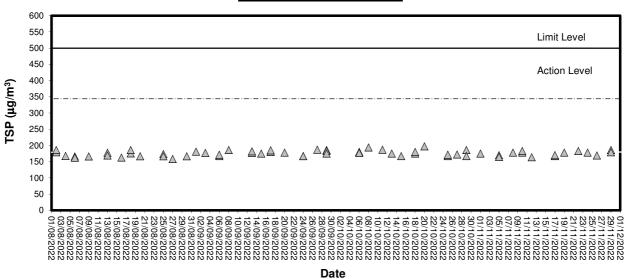


Appendix B3

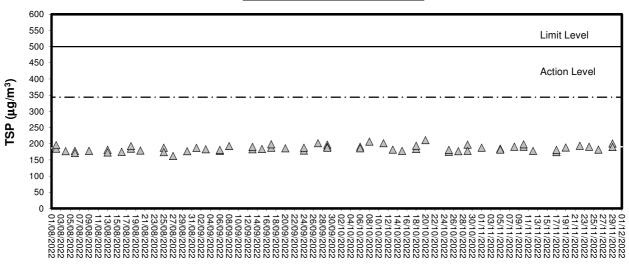
Graphical Plots of Impact Air Quality Monitoring Data



1-hour TSP level at TM-A1



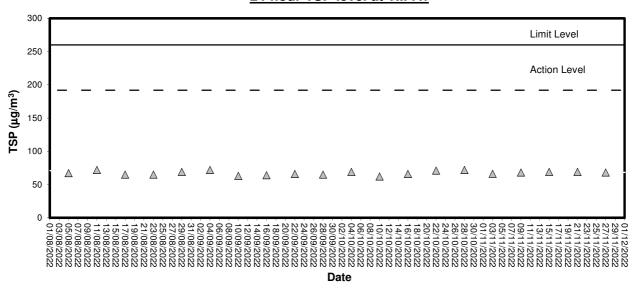
1-hour TSP level at TM-RA2



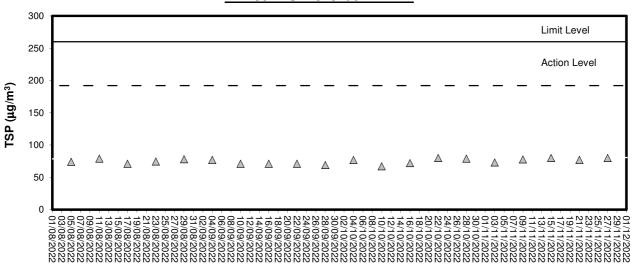
Date



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 :

8/30/2022

Calibration Due Date

11/29/2022

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)
16.7	16.9	+0.2
25.0	25.2	+0.2
28.3	28.4	+0.1

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		
6.86	(9)	
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	146.1	-0.5		
1412	1429	+1.2 -0.9		
12890	12774			
58760	59589	+1.4		

Tolerance Limit (μ S/cm): \pm 10.0%

4. Salinity

(Method Reference: APHA 19ed 2520 B)

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)
10.0	9.85	-1.5
20.0	19.23	-3.9
30.0	29.37	-2.1

Tolerance Limit (g/L): ± 10.0%



Performance Check / Calibration of Multiparameter Water Quality Meter							
Equipment Ref. No. :	Equipment Ref. No. : ET/EW/008/010		anufacturer	: YSI			
Model No. :	Pro DSS		rial No.	: 18E105421			
Date of Calibration :	8/30/2022		libration Due Date	: 11/29/2022			
	OI JOI BUBE	The state of the s	Horation Due Duit	1114714044			
5. Dissolved Oxygen (Method Reference: API Expected Readin		Displayed Reading (mg/L	Λ	Tolerance (mg/L)			
1.95	g (mg/L)	1.91		-0.04			
4.64		4.61		-0.03			
6.13				+0.05			
Tolerance Limit (mg/L): 6. Turbidity (Method Reference: API	HA 19ed 2130 B)			-	×		
Expected Readin	g (NTU)	Displayed Reading (NTU)	Tolerance (%)			
10		9.9		-1.0			
100		39.1		-2.3	***		
400		102.8 392.9		+2.8	-		
Tolerance Limit (NTU):	± 10 00%	374.7		-1.8			
	g g	a	×		*		
The equipment complies # / does not comply # with the specified requirements and is deemed acceptable # / unacceptable # for use.							
" Delete as appropriate				* * *	(2)		
5 00							
				_	115		
				5			
# ·					-		
					a -		
Calibrated by :	<u> </u>		Approved by:	_au.	=		

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
rate of Calibration : 8/30/2022	Calibration Due	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)		7.1
Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%) +2.0
10	10.2 40.3	+0.8
40 100	99.4	-0.6
400	394.7	-1.3
he equipment complies [#] / does not comp Delete as appropriate	ly [#] with the specified requirements and is deen	ned acceptable # / unacceptable " for



Appendix C2

Impact Marine Water Quality Monitoring Results

Monitoring Station : TM-FC1



Date	Date Time Ambient Temp (°C) / Weather			ng Depth	Temp	Salinit	ty (ppt)	Dissolv	red Oxygen	(mg/L)		d Oxygen tion (%)	Tu	ırbidity (NT	·U)	Susper	nded Solids	s (mg/L)
Date	Time			n)	(°C)	Value	Average	Value	Average	Depth- average	Value	Average	Value	Average	Depth- average	Value	Average	Depth- average
		25	Surface	1.0	23.7	30.8 30.8	30.8	6.68	6.68	6.68	94.2 94.2	94.2	4.06 3.99	4.03		7.7 8.1	7.9	
03/11/22	15:18:56		Middle	10.1	23.7	30.8 30.8	30.8	6.68 6.68	6.68	0.00	94.0 94.1	94.1	5.15 5.11	5.13	5.13	8.9 9.6	9.3	7.9
		/ Rainy	Bottom	19.3	23.6	30.9 30.9	30.9	6.68 6.68	6.68	6.68	94.1 94.1	94.1	6.21 6.26	6.24		6.2 7.1	6.7	
		25	Surface	1.0	23.6	30.7	30.7	6.74	6.72		94.7	94.5	5.46	5.50		4.4	4.0	
05/11/22	17:00:14	20	Middle	11.5	23.6	30.7 30.7	30.7	6.50 6.47	6.49	6.60	91.4 91.0	91.2	6.05 6.03	6.04	6.20	7.3	8.1	5.9
		/ Cloudy	Bottom	22.0	23.6	30.7	30.7	6.38	6.38	6.38	89.8	89.8	7.07	7.07	•	4.5	5.7	1
			Surface	1.0	23.3	30.7 30.6	30.6	6.38 6.10	6.10		89.7 85.3	85.3	7.06 7.47	7.43		6.9 7.5	7.3	
08/11/22	9:52:06	24	Middle	10.2	23.3	30.6 30.6	30.6	6.10 6.13	6.14	6.12	85.3 85.6	85.8	7.38 8.14	8.15	8.06	7.0 5.2	5.1	6.5
06/11/22	9.32.00	/ Cloudy				30.6 30.6		6.15 6.25		0.05	85.9 87.1		8.15 8.59		8.00	5.0 6.7		0.5
			Bottom	19.3	23.2	30.6 28.5	30.6	6.25 7.11	6.25	6.25	87.2 100.0	87.2	8.60 4.05	8.60		7.8 3.0	7.3	
		25	Surface	1.0	24.3	28.6	28.5	7.14 6.53	7.13	6.82	100.4	100.2	4.08	4.07		5.5 7.5	4.3	
10/11/22	9:37:02		Middle	11.2	24.1	28.8	28.8	6.51	6.52		91.4	91.5	4.32	4.33	4.42	8.0	7.8	6.6
		/ Fine	Bottom	21.5	23.9	29.1 29.1	29.1	6.28 6.24	6.26	6.26	88.0 87.3	87.6	4.89 4.85	4.87		7.1 8.2	7.7	
		25	Surface	1.0	24.6	27.3 27.3	27.3	7.03 6.95	6.99	6.64	98.7 97.6	98.1	3.24 3.23	3.24		1.9 2.1	2.0	
12/11/22	10:36:58		Middle	11.3	24.5	27.6 27.7	27.6	6.32 6.27	6.30	0.04	88.7 87.9	88.3	3.67 3.64	3.66	3.68	7.9 7.8	7.9	5.7
		/ Fine	Bottom	21.7	24.2	27.9 27.9	27.9	6.09 5.94	6.02	6.02	85.2 83.1	84.1	4.14 4.18	4.16		6.8 7.4	7.1	
		26	Surface	1.0	25.2	28.5	28.5	7.06	7.04		100.8	100.4	1.64	1.64		6.7	7.4	
15/11/22	12:09:18	20	Middle	11.3	24.6	28.9	28.9	6.46 6.44	6.45	6.74	91.5 91.0	91.3	1.98	1.97	2.01	7.7	7.4	6.6
	15/11/22 12:09:18	/ Fine	Bottom	21.6	24.3	28.8	29.5	6.09	6.07	6.07	86.1	85.8	2.42	2.44		4.9	4.9	
			Surface	1.0	25.3	29.5 26.5	26.6	6.05 7.32	7.33		85.6 103.5	103.7	2.45	2.27		4.9 5.5	5.5	
17/11/22	15:43:19	26	Middle	11.5	24.8	26.6 27.8	27.8	7.34 6.57	6.56	6.95	103.9 92.8	92.6	2.28	2.45	2.55	5.4 5.5	5.1	5.2
		/ Fine	Bottom	22.0	24.6	27.8 28.6	28.6	6.55 6.23	6.24	6.24	92.4 88.1	88.2	2.46 2.95	2.95		4.7	5.0	
			Surface	1.0	24.7	28.7 25.6	25.6	6.24 7.36	7.35	0.24	88.3 102.5	102.3	2.95 2.39	2.41		5.3 1.7	2.0	-
40/44/00	40.05.00	26				25.6 26.5		7.33 6.95		7.14	102.1 97.0		2.43 2.81		0.70	2.3 6.0		
19/11/22	16:25:09	/ Fine	Middle	11.4	24.5	26.6 27.2	26.6	6.93 6.78	6.94		96.7 94.8	96.8	2.82 2.93	2.82	2.73	4.0 5.1	5.0	4.4
			Bottom	21.7	24.4	27.2 29.5	27.2	6.75 7.36	6.77	6.77	94.2 104.8	94.5	2.97 2.86	2.95		7.1 2.7	6.1	
		26	Surface	1.0	24.7	29.4	29.5	7.38	7.37	7.20	105.0	104.9	2.83	2.85		4.6	3.7	
22/11/22	17:16:00		Middle	11.3	24.5	29.6 29.6	29.6	7.01 7.05	7.03		99.5 100.1	99.8	3.23	3.24	3.18	6.7 5.7	6.2	5.1
		/ Cloudy	Bottom	21.5	24.4	29.8 29.8	29.8	6.83 6.80	6.82	6.82	96.9 96.3	96.6	3.45 3.47	3.46		5.8 4.8	5.3	
		26	Surface	1.0	24.6	24.4 24.5	24.4	7.44 7.43	7.44	7.27	102.7 102.6	102.7	2.34	2.36		3.5	3.7	
24/11/22	9:21:56		Middle	8.7	24.5	24.7 24.8	24.7	7.12 7.08	7.10	1.21	98.3 97.6	98.0	2.69	2.71	2.73	5.2 4.9	5.1	4.7
		/ Cloudy	Bottom	16.4	24.4	25.2 25.2	25.2	6.75 6.72	6.74	6.74	93.3 92.9	93.1	3.16 3.11	3.14		4.9 5.8	5.4	
		26	Surface	1.0	24.8	24.4	24.4	7.18 7.15	7.17		99.5 99.0	99.2	3.05	3.04		2.6	2.5	
26/11/22	10:04:28		Middle	11.4	24.6	24.5	24.5	6.89 6.84	6.87	7.02	95.1 94.6	94.9	3.16 3.12	3.14	3.20	2.4	2.2	2.7
		/ Cloudy	Bottom	21.9	24.3	25.3	25.3	6.26	6.24	6.24	86.4	86.1	3.44	3.43	1	2.3	3.5	<u> </u>
			Surface	1.0	24.8	25.3 29.4	29.4	7.43	7.44		85.9 105.9	106.2	3.42 2.68	2.67		4.7 5.4	5.1	
28/11/22	11:45:57	26	Middle	11.3	24.7	29.4 29.5	29.5	7.45 7.19	7.18	7.31	106.4 102.4	102.2	2.65 2.59	2.58	2.76	4.8 6.2	5.7	6.3
		/ Cloudy				29.5 29.7	29.7	7.17 6.94	6.92	6.92	101.9 98.6		2.57 3.01			5.1 7.7		0.0
			Bottom	21.6	24.5	29.6 29.4		6.90 7.45		0.92	98.0 81.2	98.3	3.05 2.52	3.03		8.4 3.3	8.1	
		20	Surface	1.0	19.5	29.5 29.6	29.5	7.47 7.11	7.46	7.28	81.4 77.0	81.3	2.54	2.53		5.7 4.2	4.5	
30/11/22	14:42:38	/ Fine	Middle	8.8	19.2	29.6 29.3	29.6	7.10	7.11		76.8 74.2	76.9	2.77	2.77	2.77	3.6	3.9	4.0
		, ,	Bottom	16.5	18.9	29.5	29.4	6.92	6.91	6.91	74.5	74.4	3.01	3.00		3.9	3.7	

Monitoring Station: TM-FM1



	_	Ambient Temp (°C) /	Monitori	ng Depth	Temp	Salinit	ty (ppt)	Dissolv	ed Oxygen	(mg/L)		d Oxygen tion (%)	Τι	urbidity (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
		25	Surface	1.0	23.6	30.8 30.8	30.8	6.73 6.73	6.73	0.70	94.8 94.8	94.8	5.14 5.16	5.15		7.6 7.7	7.7	
03/11/22	15:03:57		Middle	9.1	23.6	30.8 30.9	30.8	6.72 6.71	6.72	6.72	94.6 94.5	94.6	5.60 5.63	5.62	5.70	6.8 7.4	7.1	7.6
		/ Rainy	Bottom	17.3	23.6	30.9	30.9	6.69	6.69	6.69	94.2	94.2	6.31	6.32		8.4	8.1	
		05	Surface	1.0	23.6	30.7	30.7	6.73 6.70	6.72		94.6	94.4	5.72	5.73		6.8	5.2	
05/11/22	16:43:16	25	Middle	9.1	23.6	30.7 30.7	30.7	6.51	6.50	6.61	94.1 91.5	91.3	5.73 6.28	6.29	6.45	3.5 3.9	4.3	5.1
		/ Cloudy	Bottom	17.2	23.6	30.7 30.7	30.7	6.48 6.40	6.40	6.40	91.1 90.0	90.0	6.30 7.33	7.33		4.6 7.1	6.0	
						30.7 30.6		6.40 6.10	6.10	0.40	89.9 85.3		7.33 6.77			4.9 5.7		
		24	Surface	1.0	23.4	30.6 30.6	30.6	6.10 6.09		6.10	85.3 85.2	85.3	6.79 8.40	6.78		5.7 4.0	5.7	
08/11/22	9:37:57	/ Cloudy	Middle	9.0	23.3	30.6	30.6	6.09	6.09		85.2 85.2	85.2	8.49 8.49	8.45	7.91	4.1 6.8	4.1	5.5
		7 Gloudy	Bottom	17.0	23.3	30.6	30.6	6.09	6.09	6.09	85.2	85.2	8.53	8.51		6.7	6.8	
		25	Surface	1.0	24.3	28.2 28.2	28.2	7.39 7.37	7.38	6.97	103.7 103.4	103.5	3.95 3.90	3.93		8.1 8.3	8.2	
10/11/22	9:17:20		Middle	8.9	24.1	29.5 29.5	29.5	6.59 6.51	6.55		92.8 91.5	92.2	4.33 4.36	4.35	4.33	5.8 3.5	4.7	6.9
		/ Fine	Bottom	16.8	23.8	31.4 31.4	31.4	6.14 6.10	6.12	6.12	87.0 86.4	86.7	4.74 4.72	4.73		7.7 7.8	7.8	
		25	Surface	1.0	24.6	27.3 27.3	27.3	7.25 7.24	7.25		101.7 101.6	101.7	3.58 3.56	3.57		5.0 3.6	4.3	
12/11/22	10:15:57		Middle	8.8	24.4	27.7	27.7	6.44	6.43	6.84	90.3	90.1	3.73	3.75	3.89	2.7	3.2	4.2
		/ Fine	Bottom	16.6	24.3	28.1	28.1	6.18	6.16	6.16	86.7	86.4	4.35 4.32	4.34		7.4	5.0	
			Surface	1.0	25.3	28.7	28.7	6.14 7.28	7.26		86.1 104.2	104.0	1.79	1.77		2.5 6.6	6.7	
15/11/22	11:47:17	26	Middle	9.0	24.7	28.7 29.0	29.0	7.24 6.62	6.60	6.93	103.7 94.0	93.8	1.75 2.03	2.05	2.11	6.7 4.5	4.5	5.9
10/11/22	11.47.17	/ Fine				29.0 29.4		6.58 6.24		0.04	93.6 88.5		2.06 2.54		2	4.4 5.9		. 0.0
			Bottom	16.9	24.5	29.5 27.9	29.5	6.23 7.42	6.24	6.24	88.2 106.0	88.4	2.51 2.05	2.53		7.4 5.3	6.7	
		26	Surface	1.0	25.4	28.1	28.0	7.38 6.65	7.40	7.01	105.5 94.4	105.8	2.03	2.04		4.0	4.7	
17/11/22	15:20:26	/ Fine	Middle	8.7	24.8	28.8	28.7	6.59	6.62		93.4	93.9	2.42	2.43	2.43	4.0	5.0	4.9
		/ Fine	Bottom	16.3	24.5	29.6 29.9	29.8	6.22 6.18	6.20	6.20	88.3 87.7	88.0	2.85	2.83		4.8 5.0	4.9	
		26	Surface	1.0	24.7	25.8 25.9	25.9	7.49 7.42	7.46	7.24	104.4	103.9	2.49	2.51		6.1 5.3	5.7	
19/11/22	16:05:08		Middle	8.9	24.5	26.5 26.6	26.6	7.02 7.03	7.03	7.21	97.9 98.1	98.0	2.71 2.75	2.73	2.78	6.2 4.2	5.2	4.9
		/ Fine	Bottom	16.8	24.4	27.1 27.2	27.2	7.02 7.00	7.01	7.01	98.1 97.8	98.0	3.10	3.09		3.7 3.8	3.8	
		25	Surface	1.0	24.6	29.3 29.4	29.4	7.17 7.14	7.16		101.8 101.4	101.6	3.02 3.06	3.04		8.0 7.5	7.8	
22/11/22	16:51:00		Middle	8.9	24.4	29.5	29.5	6.99	6.98	7.07	99.0	98.9	3.33	3.34	3.33	6.3	5.7	5.9
		/ Cloudy	Bottom	16.8	24.2	29.7	29.7	6.60	6.62	6.62	93.3	93.6	3.63	3.62		3.7	4.4	
			Surface	1.0	24.5	29.6	24.4	7.59	7.57		93.9 104.6	104.4	3.60 2.52	2.53		5.1 4.8	5.3	
24/11/22	9:05:58	25	Middle	8.6	24.4	24.5 24.4	24.5	7.54 7.09	7.06	7.31	104.1 97.6	97.1	2.53 2.85	2.85	2.91	5.8 6.8	6.0	5.6
	2.00.00	/ Cloudy		16.2		24.5 25.1		7.03 6.76		6.76	96.6 92.9	92.8	2.85 3.35			5.1 6.3	5.7	
-			Bottom		24.1	25.2 24.5	25.2	6.75 6.93	6.76	0./6	92.8 96.2		3.37 3.06	3.36		5.0 4.9		
		26	Surface	1.0	24.9	24.5	24.5	6.87 6.52	6.90	6.72	95.4 90.0	95.8	3.08	3.07		4.4	4.7	
26/11/22	9:43:39	/ Classets	Middle	8.8	24.5	24.7	24.7	6.54	6.53		90.5	90.2	3.26	3.24	3.28	2.8	3.4	3.9
		/ Cloudy	Bottom	16.5	24.3	25.3 25.2	25.2	6.13 6.12	6.13	6.13	84.6 84.5	84.5	3.53 3.56	3.55		5.1 2.3	3.7	
		26	Surface	1.0	25.0	29.5 29.5	29.5	7.14 7.11	7.13	7.05	102.2 101.8	102.0	3.03	3.02		5.1 4.7	4.9	
28/11/22	11:20:05		Middle	8.9	24.8	29.6 29.6	29.6	6.99 6.97	6.98		99.8 99.5	99.7	3.35 3.34	3.35	3.29	7.5 8.4	8.0	6.5
		/ Cloudy	Bottom	16.7	24.7	29.7 29.7	29.7	6.66 6.63	6.65	6.65	94.9 94.3	94.6	3.50 3.53	3.52		7.0 6.2	6.6	
		21	Surface	1.0	19.8	29.4	29.4	6.99 6.97	6.98		76.2 76.3	76.3	3.18	3.18		4.5	4.0	
30/11/22	14:07:25		Middle	9.2	19.6	29.7	29.6	6.78	6.76	6.87	74.0	73.8	3.44	3.42	3.38	4.6	4.8	4.3
		/ Fine	Bottom	17.3	19.3	29.5 30.1	30.0	6.73 6.50	6.51	6.51	73.5 70.5	70.6	3.40 3.54	3.54		4.9 5.5	4.1	
			Dottoill	0	. 5.6	29.9	33.0	6.52	0.01	0.01	70.7	. 5.0	3.54	0.04		2.6		

Monitoring Station : TM-FM2



Monitorin	ng Statio	n :	TM-FM	2														
Date	Time	Ambient Temp (°C) /		ng Depth	Temp	Salini	ty (ppt)	Dissolv	red Oxygen			d Oxygen tion (%)	Τι	urbidity (NT		Suspe	nded Solids	
		Weather Condition	(1	m)	(°C)	Value	Average	Value	Average	Depth- average	Value	Average	Value	Average	Depth- average	Value	Average	Depth- average
		25	Surface	1.0	23.6	30.8	30.8	6.74 6.74	6.74	0.70	94.8 94.9	94.9	5.09 5.11	5.10		6.8	6.5	
03/11/22	14:47:56		Middle	8.0	23.6	30.8 30.9	30.8	6.73 6.72	6.73	6.73	94.7 94.6	94.7	5.56 5.56	5.56	5.67	5.5 6.8	6.2	6.4
		/ Rainy	Bottom	15.1	23.6	30.9	30.9	6.70	6.70	6.70	94.4	94.4	6.34	6.34		6.9	6.5	1
			Surface	1.0	23.6	30.9 30.7	30.7	6.70 6.72	6.71		94.4 94.5	94.3	6.33 5.86	5.85		6.1 7.2	6.3	
		25				30.7 30.7		6.69 6.51		6.60	94.0 91.5		5.84 6.18			5.3 6.1		
05/11/22	16:21:22	/ Olavida	Middle	9.4	23.6	30.7	30.7	6.49	6.50		91.2	91.4	6.23	6.21	6.38	4.6	5.4	4.9
		/ Cloudy	Bottom	17.8	23.6	30.7 30.7	30.7	6.39 6.39	6.39	6.39	89.8 89.8	89.8	7.13 7.05	7.09		2.7 3.4	3.1	
		24	Surface	1.0	23.4	30.6 30.6	30.6	6.09	6.09	6.10	85.2 85.2	85.2	7.62 7.65	7.64		6.0 7.6	6.8	
08/11/22	9:22:02		Middle	8.0	23.3	30.6 30.6	30.6	6.10 6.12	6.11	0.10	85.3 85.5	85.4	8.29 8.28	8.29	8.18	5.2 4.9	5.1	5.2
		/ Cloudy	Bottom	15.1	23.3	30.6 30.6	30.6	6.18	6.18	6.18	86.3 86.2	86.3	8.61 8.65	8.63		3.5	3.8	1
			Surface	1.0	24.5	28.2	28.2	7.36	7.35		103.7	103.4	3.94	3.96		8.1	7.2	
40/44/00	0.50.44	25				28.3 28.4		7.33 6.74		7.04	103.1 94.6		3.98 4.29		4.00	6.3 7.3		
10/11/22	8:52:14	/ Fine	Middle	9.0	24.2	28.4 30.9	28.4	6.71 6.25	6.73		94.0 88.3	94.3	4.31 4.64	4.30	4.30	4.2 3.6	5.8	5.6
		71110	Bottom	17.1	23.8	30.8	30.8	6.22	6.24	6.24	88.0	88.1	4.62	4.63		4.1	3.9	
		25	Surface	1.0	24.6	27.5 27.6	27.5	7.14 7.12	7.13		100.3 99.9	100.1	3.35 3.38	3.37		5.6 4.5	5.1	
12/11/22	9:58:59		Middle	8.9	24.3	27.7 27.8	27.8	6.55	6.54	6.84	91.7 91.4	91.6	3.77	3.76	3.79	3.1 4.2	3.7	3.9
		/ Fine	Bottom	16.9	24.2	28.0	28.0	6.53 6.20	6.19	6.19	86.7	86.6	3.75 4.26	4.26		2.1	2.9	•
				1.0	25.3	28.0 28.4		6.18 7.13	7.10		86.5 101.9	101.4	4.25 1.85			3.7 7.8		
		26	Surface			28.5 28.7	28.4	7.07 6.66		6.88	100.9 94.2		1.89 2.09	1.87		5.5 6.8	6.7	
15/11/22	15/11/22 11:26:48	/ Fine	Middle	8.7	24.6	28.7	28.7	6.64	6.65		93.8	94.0	2.12	2.11	2.14	6.4	6.6	5.8
		/ Fille	Bottom	16.5	24.4	29.0 29.0	29.0	6.25 6.22	6.24	6.24	88.3 87.8	88.0	2.44 2.46	2.45		3.7 4.7	4.2	
		26	Surface	1.0	25.5	26.9 26.9	26.9	7.39 7.36	7.38	7.02	105.1 104.5	104.8	2.14	2.15		4.9	4.6	
17/11/22	14:57:00		Middle	9.3	24.9	27.5 27.5	27.5	6.68 6.65	6.67	7.02	94.3 94.0	94.1	2.45 2.41	2.43	2.45	6.2 7.7	7.0	5.4
		/ Fine	Bottom	17.6	24.7	28.8 28.8	28.8	6.31 6.27	6.29	6.29	89.5 88.9	89.2	2.74 2.78	2.76		4.7 4.5	4.6	
		26	Surface	1.0	24.7	25.8 25.9	25.9	7.59 7.52	7.56		105.8 104.9	105.4	2.48	2.48		4.3	3.6	
19/11/22	15:48:16		Middle	9.1	24.6	26.5 26.6	26.6	7.12 7.08	7.10	7.33	99.5	99.2	2.82	2.83	2.81	3.9	3.9	3.6
		/ Fine	Bottom	17.2	24.4	27.0	27.0	6.94	6.93	6.93	96.9	96.8	3.09	3.12		2.5	3.4	1
			Surface	1.0	24.6	27.0 29.4	29.4	6.92 6.92	6.93		96.6 98.3	98.4	3.14 3.19			4.3 8.0	7.8	
		25	Surface	1.0	24.0	29.4 29.6	29.4	6.94 6.77	0.93	6.84	98.4 95.8	90.4	3.17 3.33	3.18		7.6 4.7	7.0	
22/11/22	16:30:10		Middle	9.0	24.3	29.5	29.6	6.73	6.75		95.3	95.6	3.30	3.32	3.35	5.0	4.9	5.3
		/ Cloudy	Bottom	17.0	24.2	29.7 29.8	29.8	6.53 6.50	6.52	6.52	92.3 91.9	92.1	3.52 3.56	3.54		1.9 4.4	3.2	
		25	Surface	1.0	24.4	24.4 24.5	24.5	7.38 7.36	7.37		101.6 101.7	101.6	2.47 2.49	2.48		5.7 5.1	5.4	
24/11/22	8:48:41		Middle	9.2	24.5	24.9	24.9	7.05	7.03	7.20	97.4 96.9	97.2	2.74	2.75	2.85	6.8	6.4	5.4
		/ Cloudy	Bottom	17.5	24.4	25.3	25.4	6.88	6.86	6.86	95.2	94.8	3.27	3.31		4.4	4.3	1
			Surface	1.0	24.9	25.4 24.4	24.4	6.83 7.03	7.05		94.3 97.5	97.7	3.34 3.12	3.11		4.1 3.4	3.4	
		26				24.4 24.8		7.06 6.88		6.95	97.8 95.0		3.10 3.38			3.3		
26/11/22	9:24:18	/ Cloudy	Middle	9.0	24.5	24.8 25.1	24.8	6.84 6.32	6.86		94.3 87.1	94.7	3.38 3.52	3.38	3.34	4.9 3.4	4.4	3.9
		7 Gloudy	Bottom	17.1	24.3	25.1	25.1	6.29	6.31	6.31	86.6	86.9	3.56	3.54		4.7	4.1	
		26	Surface	1.0	25.0	29.5 29.6	29.6	6.99 7.03	7.01	6.88	100.0	100.4	3.05 3.02	3.04		6.3 6.5	6.4	
28/11/22	10:55:01		Middle	9.1	24.9	29.7 29.7	29.7	6.76 6.73	6.75	3.00	96.7 96.3	96.5	3.16 3.18	3.17	3.21	5.3 5.2	5.3	5.5
		/ Cloudy	Bottom	17.1	24.8	29.8	29.8	6.51	6.50	6.50	93.0 92.6	92.8	3.44	3.42		3.9	5.0	
			Surface	1.0	19.9	29.5	29.5	7.19	7.18		78.9	78.8	3.06	3.07		4.6	4.9	
30/11/22	13:29:24	21	Middle	9.1	19.5	29.4 29.5	29.5	7.17 6.95	6.96	7.07	78.7 75.7	75.8	3.07 3.34	3.34	3.36	5.2 5.0	5.8	5.1
00/11/22	10.20.24	/ Fine				29.5 29.8		6.96 6.61			75.8 71.5		3.34 3.67		0.00	6.5 4.0		. 5.1
			Bottom	17.2	19.2	29.7	29.8	6.66	6.64	6.64	72.1	71.8	3.66	3.67		5.2	4.6	

Monitoring Station : TM-FC2



Date	Time	Ambient Temp (°C) /		ng Depth	Temp	Salini	ty (ppt)	Dissolv	ed Oxyger			d Oxygen tion (%)	Tu	urbidity (NT		Susper	nded Solid:	
Suio	711110	Weather Condition	1)	m)	(°C)	Value	Average	Value	Average	Depth- average	Value	Average	Value	Average	Depth- average	Value	Average	Depth- average
		25	Surface	1.0	23.6	30.8 30.8	30.8	6.73 6.73	6.73		94.8 94.8	94.8	5.10 5.11	5.11		6.5 4.8	5.7	
03/11/22	14:30:58		Middle	8.0	23.6	30.8 30.8	30.8	6.73 6.72	6.73	6.73	94.7 94.7	94.7	5.47 5.54	5.51	5.59	6.7	7.3	6.7
		/ Rainy	Bottom	15.1	23.6	30.9	30.9	6.70	6.70	6.70	94.4	94.4	6.14	6.16		7.9 7.8	7.1	-
						30.9 30.7		6.70 6.82			94.4 95.8		6.18 5.70			6.3 5.3		
		25	Surface	1.0	23.6	30.7	30.7	6.76	6.79	6.68	94.9 92.7	95.4	5.62	5.66		5.0	5.2	-
05/11/22	16:01:07		Middle	8.8	23.6	30.7 30.7	30.7	6.60 6.55	6.58		92.7	92.4	6.25 6.27	6.26	6.43	4.5 3.4	4.0	4.9
		/ Cloudy	Bottom	16.6	23.6	30.7 30.7	30.7	6.41 6.40	6.41	6.41	90.1 90.0	90.1	7.35 7.36	7.36		6.6 4.5	5.6	
		24	Surface	1.0	23.4	30.6 30.6	30.6	6.20 6.18	6.19		86.7 86.4	86.6	7.67 7.68	7.68		2.8 6.5	4.7	
08/11/22	9:04:58	24	Middle	8.2	23.3	30.6	30.6	6.11	6.11	6.15	85.5	85.5	8.18	8.19	8.17	4.7	5.4	4.8
		/ Cloudy	Dettem	15.5	23.3	30.6 30.6	30.6	6.11 6.07	6.07	6.07	85.5 85.0	85.0	8.19 8.65	8.66		6.0 5.7	4.3	-
			Bottom			30.6 29.9		6.07 7.19		6.07	85.0 102.2		8.67 4.15			2.9 6.5		
		25	Surface	1.0	24.5	29.8	29.9	7.16	7.18	6.90	101.8	102.0	4.11	4.13		5.9	6.2	
10/11/22	8:30:10		Middle	8.8	24.2	30.4 30.5	30.5	6.62 6.64	6.63		93.9 94.4	94.2	4.48 4.48	4.48	4.49	8.1 8.6	8.4	7.3
		/ Fine	Bottom	16.6	23.9	30.7 30.8	30.7	6.37 6.33	6.35	6.35	90.0 89.4	89.7	4.86 4.83	4.85		6.7 8.1	7.4	
		25	Surface	1.0	24.5	27.5 27.5	27.5	7.26 7.22	7.24		101.8	101.6	3.59	3.61		3.9	4.1	
12/11/22	9:30:58	25	Middle	8.7	24.3	27.5	27.9	6.81	6.79	7.01	101.3 95.4	95.2	3.63 3.87	3.87	3.94	4.2 2.6	2.5	4.0
12/11/22	0.00.00	/ Fine				27.9 28.3		6.76 6.36			95.0 89.4		3.86 4.33		0.01	2.3 7.6		-
			Bottom	16.4	24.4	28.3	28.3	6.31	6.34	6.34	88.4	88.9	4.36	4.35		3.5	5.6	
		26	Surface	1.0	25.3	28.6 28.6	28.6	7.23 7.18	7.21	6.97	103.4 102.7	103.1	1.81	1.82		6.1 5.1	5.6	
15/11/22	11:00:10		Middle	8.7	24.7	29.0 28.9	28.9	6.75 6.72	6.74		95.8 95.4	95.6	2.06	2.08	2.13	4.9 7.6	6.3	5.9
		/ Fine	Bottom	16.5	24.3	29.2 29.2	29.2	6.34 6.29	6.32	6.32	89.5 88.9	89.2	2.51	2.50		5.1 6.6	5.9	
			Surface	1.0	25.5	26.7	26.7	7.23	7.22		102.7	102.5	2.33	2.32		6.3	6.4	
17/11/22	14:00:56	26	Middle	8.8	24.9	26.7 27.5	27.5	7.20 6.74	6.73	6.97	102.3 95.2	95.0	2.31 2.57	2.58	2.62	6.5 6.3	5.5	5.8
17/11/22	14.00.56	/ Fine				27.5 28.4		6.72 6.37			94.7 89.8		2.59 2.98		2.02	4.7 6.1		5.6
		,	Bottom	16.5	24.5	28.5	28.4	6.36	6.37	6.37	89.6	89.7	2.96	2.97		4.7	5.4	
		26	Surface	1.0	24.8	25.9 25.9	25.9	7.44 7.43	7.44	7.28	104.0	103.9	2.64 2.65	2.65		3.4 4.6	4.0	
19/11/22	15:30:08		Middle	8.6	24.7	26.5 26.5	26.5	7.13 7.12	7.13	7.20	99.8 99.7	99.7	2.96 2.99	2.98	2.92	4.4 5.1	4.8	4.2
		/ Fine	Bottom	16.1	24.5	26.9	26.9	6.87	6.85	6.85	96.0	95.7	3.15	3.15		4.2	4.0	
			Surface	1.0	24.7	26.9 29.5	29.5	6.83 7.44	7.46		95.3 105.9	106.2	3.15 3.05	3.06		3.7 4.5	5.2	
00/11/00	10:05:10	26				29.5 29.7		7.47 7.16		7.32	106.5 101.7		3.07 3.25		2.00	5.8 4.8		
22/11/22	16:05:12	/ Cloudy	Middle	8.7	24.5	29.6 29.8	29.7	7.20 6.90	7.18		102.4 97.9	102.1	3.21 3.55	3.23	3.28	6.7	5.8	5.7
		7 0.000	Bottom	16.5	24.4	29.9	29.9	6.88	6.89	6.89	97.7	97.8	3.52	3.54		6.1	6.1	
		25	Surface	1.0	24.5	24.6 24.9	24.7	7.45 7.42	7.44	7.27	102.8 102.5	102.7	2.59 2.63	2.61		4.9 6.8	5.9	
24/11/22	8:30:57		Middle	11.1	24.3	24.9 25.0	25.0	7.12 7.08	7.10	1.21	98.1 97.6	97.8	2.88 2.85	2.87	2.94	3.9 4.3	4.1	5.0
		/ Cloudy	Bottom	21.2	24.2	25.4	25.4	6.87	6.86	6.86	94.7	94.4	3.33	3.36		6.3	5.2	1
			Surface	1.0	24.8	25.4 24.4	24.3	6.84 7.14	7.13		94.2 98.9	98.7	3.38 3.19	3.16		4.0 2.4	2.9	
		25				24.3 24.7		7.12 6.85		6.98	98.6 94.4		3.12 3.37			3.3 4.7		-
26/11/22	9:00:25	/ Cloudy	Middle	8.7	24.4	24.8 25.1	24.7	6.82 6.18	6.84		94.0 85.0	94.2	3.35 3.67	3.36	3.40	5.8	5.3	3.8
		/ Gloddy	Bottom	16.3	24.2	25.1	25.1	6.16	6.17	6.17	84.8	84.9	3.68	3.68		3.3	3.3	
		26	Surface	1.0	24.9	29.4 29.5	29.5	7.24 7.22	7.23	715	103.4 103.2	103.3	2.96 2.99	2.98		5.2 6.9	6.1	
28/11/22	10:30:11		Middle	8.2	24.8	29.6 29.6	29.6	7.05 7.08	7.07	7.15	100.6 100.9	100.8	3.13 3.15	3.14	3.16	7.0 5.7	6.4	5.9
		/ Cloudy	Bottom	15.4	24.6	29.7	29.7	6.73	6.75	6.75	95.8	96.1	3.38	3.37		5.7	5.4	1
			Surface	1.0	19.7	29.7 29.5	29.5	6.77 7.33	7.34		96.3 80.1	80.2	3.36 3.18	3.17		5.0 3.9	4.5	-
	40	21				29.5 29.6		7.35 7.07		7.19	80.3 77.2		3.16 3.23			5.0 4.9		1
30/11/22	13:02:19	/ Fine	Middle	11.4	19.6	29.6 29.8	29.6	7.02 6.85	7.05		76.6 74.1	76.9	3.25	3.24	3.28	3.7	4.3	4.9
		/ FIIIE	Bottom	21.8	19.2	29.8	29.8	6.85	6.83	6.83	74.1	73.9	3.41	3.42		5.6 6.2	5.9	

Monitoring Station : TM-FC1



		Ambient Temp (°C) /	Monitori	ng Depth	Temp	Salini	ty (ppt)	Dissolv	red Oxygen	(mg/L)		d Oxygen tion (%)	Tu	ırbidity (NT	U)	Suspe	nded Solids	s (mg/L)
Date	Time	Weather Condition		m)	(°C)	Value	Average	Value	Average	Depth-	Value	Average	Value	Average	Depth-	Value	Average	Depth-
			Surface	1.0	23.6	30.8	30.8	6.76	6.76	average	95.1	95.1	4.59	4.56	average	4.4	5.0	average
		25				30.8 30.9		6.76 6.74		6.75	95.1 94.9		4.53 5.23			5.6 5.3		
03/11/22	9:01:20		Middle	10.1	23.6	30.9	30.9	6.74	6.74		94.9	94.9	5.26	5.25	5.24	5.2	5.3	5.2
		/ Rainy	Bottom	19.3	23.6	30.9 30.9	30.9	6.72 6.72	6.72	6.72	94.7 94.6	94.7	5.87 5.95	5.91		5.8 4.9	5.4	
			Surface	1.0	23.6	30.7	30.7	6.78	6.76		95.3	95.0	7.17	7.18		2.5	3.4	
		25	Curiacc	1.0	20.0	30.7 30.7	00.7	6.74 6.46	0.70	6.61	94.7 90.9	33.0	7.19 7.38	7.10		4.2 3.9	0.4	
05/11/22	10:01:32		Middle	11.0	23.6	30.7	30.7	6.44	6.45		90.6	90.8	7.34	7.36	7.35	2.8	3.4	3.5
		/ Cloudy	Bottom	21.1	23.6	30.7 30.7	30.7	6.39 6.39	6.39	6.39	89.9 89.9	89.9	7.51 7.49	7.50		2.5 4.9	3.7	
			Surface	1.0	23.3	30.6	30.6	6.15	6.15		86.0	86.0	7.60	7.61		7.9	7.8	
		24				30.6 30.6		6.14 6.15		6.15	85.9 85.9		7.61 8.27			7.6 6.8		
08/11/22	13:00:29		Middle	10.0	23.3	30.6	30.6	6.17	6.16		86.2	86.1	8.26	8.27	8.16	6.8	6.8	6.9
		/ Cloudy	Bottom	19.0	23.2	30.6 30.6	30.6	6.24	6.25	6.25	87.1 87.2	87.2	8.67 8.57	8.62		5.0 7.2	6.1	
			Surface	1.0	24.6	29.3	29.4	7.09	7.07		100.7	100.4	4.16	4.15		6.5	5.5	
		25				29.4 29.7		7.05 6.37		6.71	100.2 90.2		4.13 4.58			4.5 8.3		
10/11/22	13:33:07		Middle	11.2	24.3	29.6	29.7	6.33	6.35		89.6	89.9	4.56	4.57	4.51	7.4	7.9	7.2
		/ Fine	Bottom	21.5	23.9	29.7 29.7	29.7	5.98 6.01	6.00	6.00	84.1 84.5	84.3	4.79 4.83	4.81		9.7	8.2	
			Surface	1.0	24.9	27.1	27.2	6.82	6.83		96.1	96.2	3.46	3.47		4.9	5.4	
		26				27.2 28.0		6.83 6.65		6.73	96.3 93.5		3.48 3.96			5.8 3.4		
12/11/22	14:30:57		Middle	9.7	24.5	28.0	28.0	6.63	6.64		93.1	93.3	3.82	3.89	3.72	3.2	3.3	4.1
		/ Fine	Bottom	18.4	24.3	28.1 28.1	28.1	6.34	6.34	6.34	88.9 88.9	88.9	3.76 3.83	3.80		3.0 4.3	3.7	
			Surface	1.0	25.1	28.1	28.1	6.92	6.90		98.4	98.1	2.08	2.07		7.5	7.7	
45/44/00	0.05.55	26	N 41 -1 -11 -	44.4	04.0	28.1 28.7	00.7	6.87 6.35	0.04	6.62	97.7 90.1	00.0	2.05 2.32	0.04	0.40	7.8 7.8	7.0	0.5
15/11/22	8:05:55	, =:	Middle	11.1	24.8	28.7	28.7	6.33	6.34		89.9	90.0	2.36	2.34	2.42	6.7	7.3	6.5
		/ Fine	Bottom	21.3	24.6	28.9 28.9	28.9	6.07	6.06	6.06	86.0 85.5	85.7	2.85	2.87		5.2 3.8	4.5	
		00	Surface	1.0	25.3	26.5	26.5	6.85	6.85		96.9	96.8	2.53	2.54		4.7	4.7	
17/11/00	0.01.05	26	Middle	11.5	25.1	26.5 27.6	27.6	6.84 6.48	6.46	6.65	96.7 91.9	91.5	2.54 2.98	2.98	0.01	4.6 8.3	7.0	5.5
17/11/22	8:31:35	/ Fine	Middle	11.5	25.1	27.6 27.9	27.0	6.43 6.12	0.40		91.2 86.2	91.5	2.98 3.19	2.90	2.91	6.3 4.5	7.3	5.5
		/ Fille	Bottom	21.9	24.6	27.9	27.9	6.10	6.11	6.11	85.8	86.0	3.19	3.22		4.5	4.6	
		26	Surface	1.0	24.7	25.3 25.4	25.3	7.15 7.15	7.15		99.4 99.4	99.4	2.84	2.83		5.1 5.3	5.2	
19/11/22	9:00:41	20	Middle	11.0	24.6	25.4	25.4	6.57	6.56	6.86	91.2	91.0	3.19	3.17	3.22	3.7	4.3	4.6
13/11/22	3.00.41	/ Fine	IVIIdale	11.0	24.0	25.5 26.0	25.4	6.55 6.35	0.50		90.8 88.2	31.0	3.15 3.62	3.17	5.22	4.8	4.5	4.0
		/ Tille	Bottom	21.0	24.4	26.0	26.0	6.33	6.34	6.34	87.7	88.0	3.67	3.65		4.7	4.4	
		25	Surface	1.0	24.6	29.5 29.5	29.5	7.16 7.12	7.14		101.8 101.2	101.5	2.99 2.95	2.97		6.1 8.4	7.3	
22/11/22	11:01:01		Middle	11.2	24.4	29.7	29.7	6.76	6.78	6.96	95.9	96.1	3.42	3.41	3.34	4.0	4.1	5.5
22/11/22		/ Cloudy	·····adio			29.6 29.8		6.79 6.56			96.2 92.9		3.40 3.63		0.01	4.1 5.4		0.0
		, cloudy	Bottom	21.4	24.3	29.8	29.8	6.58	6.57	6.57	93.2	93.1	3.66	3.65		4.7	5.1	
		25	Surface	1.0	24.6	24.2	24.2	7.33 7.30	7.32		101.1	100.8	2.32	2.33		4.5 6.0	5.3	
24/11/22	13:31:18	_	Middle	10.9	24.3	24.4	24.4	6.96	6.94	7.13	95.6	95.2	2.53	2.54	2.61	8.8	7.4	5.9
		/ Cloudy				24.4 25.5		6.91 6.67			94.9 91.8		2.54 2.97			5.9		
			Bottom	20.9	24.1	25.5	25.5	6.59	6.63	6.63	90.9	91.4	2.95	2.96		4.9	5.1	
		25	Surface	1.0	24.7	25.6 25.6	25.6	7.14 7.10	7.12		99.4 98.9	99.1	3.01	3.02		3.0	3.3	
26/11/22	14:30:12		Middle	11.3	24.4	26.9	26.9	6.84	6.83	6.98	95.4	95.3	3.57	3.55	3.47	3.7	4.1	3.5
·		/ Cloudy				26.9 27.3		6.82 6.25			95.2 87.1		3.53 3.81			4.5 3.5		
			Bottom	21.6	24.2	27.3	27.3	6.23	6.24	6.24	86.9	87.0	3.85	3.83		2.7	3.1	
		26	Surface	1.0	24.9	29.5 29.4	29.5	7.36 7.33	7.35		105.2 104.7	105.0	3.08	3.08		8.9 7.7	8.3	
28/11/22	15:31:00		Middle	11.3	24.7	29.6	29.6	6.98	7.00	7.17	99.4	99.7	3.25	3.24	3.27	8.4	7.8	7.1
·		/ Cloudy				29.6 29.7		7.02 6.76			100.0 96.2		3.22 3.46			7.1 5.0		-
			Bottom	21.6	24.6	29.7	29.7	6.78	6.77	6.77	96.3	96.3	3.50	3.48		5.4	5.2	
		22	Surface	1.0	20.8	29.5 29.6	29.6	7.14 7.16	7.15	0.00	79.8 80.0	79.9	2.97 2.96	2.97		4.4 6.5	5.5	
30/11/22	8:08:14		Middle	11.1	20.5	29.7	29.6	6.77	6.77	6.96	75.2	75.2	3.44	3.45	3.36	7.7	7.4	6.1
		/ Fine	Bottom	21.3	20.2	29.5 29.8	29.6	6.76 6.54	6.55	6.55	75.1 72.2	72.3	3.46 3.67	3.66		7.1 5.0	5.4	-
			בטונטווו	۷۱.۵	20.2	29.4	23.0	6.56	0.00	0.00	72.4	12.3	3.65	3.00		5.8	5.4	

Monitoring Station: TM-FM1



Date	Time	Ambient Temp (°C) /	Monitori	ng Depth	Temp	Salinit	y (ppt)	Dissolv	red Oxygen	(mg/L)		d Oxygen tion (%)	Tu	rbidity (NT	TU)	Susper	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
		25	Surface	1.0	23.6	30.8 30.8	30.8	6.76 6.76	6.76	0.75	95.1 95.1	95.1	4.74 4.71	4.73		4.2	4.3	
03/11/22	9:17:56		Middle	9.1	23.6	30.8 30.8	30.8	6.75 6.74	6.75	6.75	95.0 94.9	95.0	5.26 5.37	5.32	5.24	4.3 5.4	4.9	5.7
		/ Rainy	Bottom	17.1	23.6	30.9	30.9	6.72	6.72	6.72	94.6	94.6	5.64 5.70	5.67		8.5	8.1	†
			Surface	1.0	23.6	30.9 30.7	30.7	6.71 6.92	6.87		94.6 97.2	96.5	6.83	6.86		7.6 3.5	2.8	
05/11/22	10:21:22	25	Middle	8.7	23.6	30.7 30.7	30.7	6.82 6.45	6.45	6.66	95.8 90.7	90.7	6.89 7.27	7.26	7.15	2.1	2.7	2.7
00/11/22	10.21.22	/ Cloudy				30.7 30.7		6.45 6.40		0.40	90.6 90.0		7.25 7.31		7.10	3.0 2.5		2,
			Bottom	16.3	23.6	30.7 30.6	30.7	6.40 6.22	6.40	6.40	90.0 86.8	90.0	7.32 7.69	7.32		2.7 5.7	2.6	
		24	Surface	1.0	23.2	30.6	30.6	6.22	6.22	6.22	86.8	86.8	7.65	7.67		3.8	4.8	
08/11/22	13:18:03		Middle	9.0	23.2	30.6 30.6	30.6	6.22 6.22	6.22		86.8 86.8	86.8	8.22 8.14	8.18	8.08	3.2 4.9	4.1	5.5
		/ Cloudy	Bottom	17.0	23.2	30.6 30.6	30.6	6.22	6.22	6.22	86.8 86.8	86.8	8.40 8.36	8.38		7.4 8.2	7.8	
		25	Surface	1.0	24.4	29.3 29.3	29.3	7.16 7.16	7.16		101.3 101.3	101.3	4.01 3.98	4.00		5.0 7.7	6.4	
10/11/22	13:58:18		Middle	8.8	24.2	29.6 29.6	29.6	6.75 6.77	6.76	6.96	95.3 95.4	95.4	4.43 4.45	4.44	4.43	4.2 5.0	4.6	5.5
		/ Fine	Bottom	16.6	23.8	30.0	30.0	6.22	6.22	6.22	87.4	87.3	4.85	4.84		5.4	5.6	
			Surface	1.0	25.0	30.0 27.4	27.4	6.21 6.77	6.78		87.1 95.7	95.8	4.83 3.47	3.46		5.7 3.6	4.6	
10/11/00		26				27.4 27.9		6.78 6.66		6.72	95.9 93.8		3.44 4.05		0.75	5.5 3.8		
12/11/22	14:46:57	/ Fine	Middle	9.1	24.6	27.8 28.1	27.8	6.65 6.37	6.66		93.5 89.5	93.6	4.02 3.73	4.04	3.75	2.6	3.2	3.8
		71110	Bottom	17.3	24.4	28.2	28.1	6.35	6.36	6.36	89.3	89.4	3.81	3.77		3.5	3.7	
		26	Surface	1.0	25.2	28.6 28.6	28.6	7.06 7.03	7.05	6.79	100.8	100.6	1.93 1.96	1.95		6.1 8.6	7.4	
15/11/22	8:26:29		Middle	8.7	24.7	28.8 28.9	28.9	6.55 6.51	6.53	0.75	92.9 92.2	92.6	2.24	2.27	2.36	6.1	6.1	6.2
		/ Fine	Bottom	16.4	24.5	29.1 29.0	29.0	6.03 6.01	6.02	6.02	85.3 85.0	85.2	2.88	2.86		5.1 5.3	5.2	1
		26	Surface	1.0	25.1	27.2	27.3	7.06	7.05		99.9 99.5	99.7	2.44	2.46		5.5	5.5	
17/11/22	8:53:03	20	Middle	8.7	24.9	27.8	27.9	6.75	6.72	6.88	95.5	95.1	2.84	2.85	2.80	7.6	6.8	5.8
		/ Fine	Bottom	16.4	24.4	27.9 28.2	28.2	6.69 6.23	6.23	6.23	94.7 87.6	87.5	2.85 3.11	3.09		5.9 5.3	5.2	1
					24.8	28.2 25.1	25.2	6.22 7.22	7.21		87.5 100.4	100.3	3.07 2.75			5.1 5.7	5.7	
		26	Surface	1.0		25.3 25.5		7.20 6.63		6.92	100.2 92.3		2.78 3.06	2.77		5.7 3.6		
19/11/22	9:21:31	/ Fine	Middle	8.7	24.7	25.5 25.9	25.5	6.61	6.62		92.0 90.0	92.1	3.09	3.08	3.16	3.9 5.0	3.8	4.6
		/ Tille	Bottom	16.3	24.5	25.9	25.9	6.45	6.47	6.47	89.5	89.8	3.66	3.65		3.4	4.2	
		25	Surface	1.0	24.5	29.4 29.3	29.4	7.02 7.05	7.04	6.85	99.6 99.9	99.8	3.01	3.03		5.4	5.4	
22/11/22	11:25:59		Middle	8.8	24.4	29.5 29.6	29.6	6.68	6.67	0.00	94.6 94.2	94.4	3.57 3.53	3.55	3.40	4.3 3.9	4.1	5.4
		/ Cloudy	Bottom	16.5	24.2	29.7 29.7	29.7	6.44 6.40	6.42	6.42	91.0 90.4	90.7	3.64 3.62	3.63		5.9 7.8	6.9	
		25	Surface	1.0	24.5	24.3	24.3	7.18	7.15		98.9	98.4	2.26	2.28		7.5	7.2	
24/11/22	13:46:56	20	Middle	8.5	24.4	24.3	24.6	7.11 6.82	6.83	6.99	98.0 93.9	94.1	2.29	2.38	2.54	6.8	5.3	6.6
		/ Cloudy	Bottom	16.1	24.3	24.7 25.5	25.5	6.84 6.53	6.53	6.53	94.2 90.2	90.1	2.38 2.98	2.97		4.1 7.8	7.3	1
						25.5 23.4		6.52 7.23		0.00	89.9 99.4		2.96 3.14			6.8 3.2		
		25	Surface	1.0	24.7	23.5 24.7	23.4	7.21 6.98	7.22	7.10	99.2 96.4	99.3	3.11 3.45	3.13		4.9 3.0	4.1	
26/11/22	14:49:41	/ Classes	Middle	8.8	24.5	24.8	24.7	6.96	6.97		96.0	96.2	3.47	3.46	3.44	3.7	3.4	3.9
		/ Cloudy	Bottom	16.5	24.2	26.5 26.6	26.5	6.29	6.27	6.27	87.3 86.8	87.0	3.76	3.74		4.4	4.3	
		26	Surface	1.0	24.9	29.6 29.5	29.6	6.95 6.97	6.96	6.87	99.4 99.8	99.6	3.19 3.17	3.18		8.5 6.1	7.3	
28/11/22	15:56:10		Middle	8.8	24.9	29.7 29.7	29.7	6.79 6.75	6.77	5.07	97.0 96.4	96.7	3.35 3.32	3.34	3.36	6.0 5.2	5.6	6.2
		/ Cloudy	Bottom	16.5	24.6	29.8 29.8	29.8	6.58 6.55	6.57	6.57	93.7	93.5	3.56 3.58	3.57		5.1	5.7	1
		24	Surface	1.0	20.8	29.4 29.3	29.4	7.06 7.05	7.06		78.9	78.9	3.13 3.15	3.14		5.2	4.9	
30/11/22	8:33:54	21	Middle	9.2	20.4	29.5	29.6	6.66	6.68	6.87	78.8 73.8	74.0	3.52	3.53	3.47	4.6	5.4	5.4
		/ Fine	Bottom	17.3	20.1	29.6 29.8	29.7	6.69 6.41	6.42	6.42	74.2 70.7	70.8	3.53 3.74	3.75		6.4 5.0	6.0	1
			טטונטווו	11.3	۷.۱	29.6	23.1	6.43	0.42	0.4∠	70.9	70.0	3.76	3.75		6.9	0.0	

Monitoring Station : TM-FM2



Date	Time	Ambient Temp (°C) /	Monitori	ng Depth	Temp	Salini	ty (ppt)	Dissolv	red Oxygen	(mg/L)		ed Oxygen ation (%)	Tu	urbidity (NT	U)	Suspe	nded Solid	
Date	Tillle	Weather Condition	1)	m)	(°C)	Value	Average	Value	Average	Depth- average	Value	Average	Value	Average	Depth- average	Value	Average	Depth- average
		25	Surface	1.0	23.6	30.8	30.8	6.75 6.75	6.75	0.74	95.1 95.1	95.1	4.67 4.69	4.68		5.8 6.2	6.0	
03/11/22	9:33:58		Middle	8.0	23.6	30.9 30.9	30.9	6.73 6.72	6.73	6.74	94.8 94.6	94.7	5.49 5.45	5.47	5.37	5.7 5.2	5.5	5.8
		/ Rainy	Bottom	15.0	23.6	30.9	30.9	6.71	6.71	6.71	94.5	94.5	5.92	5.95		6.3	6.0	
			Surface	1.0	23.6	30.9 30.7	30.7	6.71 6.76	6.74		94.5 95.0	94.7	5.98 7.24	7.24		5.6 2.9	2.3	
		25				30.7 30.7		6.72 6.51		6.62	94.4 91.6		7.23 7.45			1.6 4.3		-
05/11/22	10:41:13		Middle	8.4	23.6	30.7	30.7	6.49	6.50		91.2	91.4	7.50	7.48	7.35	2.5	3.4	2.9
		/ Cloudy	Bottom	15.9	23.6	30.7 30.7	30.7	6.41 6.41	6.41	6.41	90.1 90.1	90.1	7.37 7.31	7.34		3.3 2.5	2.9	
		24	Surface	1.0	23.2	30.6 30.6	30.6	6.25 6.25	6.25	6.24	87.2 87.2	87.2	7.30 7.28	7.29		6.5 5.8	6.2	
08/11/22	13:35:22		Middle	8.1	23.2	30.6 30.6	30.6	6.23 6.23	6.23	0.24	87.0 87.0	87.0	8.47 8.56	8.52	8.01	6.4	6.6	6.4
		/ Cloudy	Bottom	15.1	23.2	30.6 30.6	30.6	6.21 6.21	6.21	6.21	86.7 86.7	86.7	8.28 8.19	8.24		6.6 6.2	6.4	
		25	Surface	1.0	24.6	29.2	29.2	6.99	6.98		99.2	99.1	3.92	3.94		6.3 7.6	7.0	
10/11/22	14:18:21	25	Middle	8.7	24.3	29.5	29.5	6.51	6.50	6.74	92.0	91.8	4.26	4.28	4.29	6.0	5.4	6.2
		/ Fine	Bottom	16.5	23.9	29.5 29.9	29.9	6.48 6.23	6.24	6.24	91.5 87.7	87.7	4.30 4.66	4.65		4.8 7.5	6.4	1
						29.9 27.4		6.24 6.78		0.24	87.8 95.7		4.64 3.32			5.2 3.2		
		26	Surface	1.0	24.9	27.4 27.9	27.4	6.78 6.68	6.78	6.72	95.7 94.1	95.7	3.36 3.86	3.34		2.6	2.9	
12/11/22	15:05:59	/ Fin-	Middle	7.7	24.6	27.9	27.9	6.65	6.67		93.7	93.9	3.92	3.89	3.69	2.0	2.5	2.6
		/ Fine	Bottom	14.3	24.4	28.3 28.3	28.3	6.38 6.37	6.38	6.38	89.7 89.6	89.7	3.84	3.83		2.3	2.3	
		26	Surface	1.0	25.1	28.4	28.4	6.88 6.87	6.88	6.64	98.0 97.9	97.9	2.07	2.08		5.1 7.2	6.2	
15/11/22	8:46:31		Middle	8.8	24.6	28.5 28.5	28.5	6.43 6.39	6.41	0.04	90.9	90.6	2.22	2.24	2.36	6.1 6.1	6.1	6.7
		/ Fine	Bottom	16.7	24.5	28.7 28.7	28.7	5.96 5.94	5.95	5.95	84.2 83.7	83.9	2.77 2.73	2.75		7.5 8.0	7.8	
		26	Surface	1.0	25.3	27.4 27.4	27.4	6.99 6.97	6.98		99.3 99.1	99.2	2.30	2.31		5.0 7.0	6.0	
17/11/22	9:24:08		Middle	8.7	25.2	28.0	28.0	6.48	6.47	6.72	92.3	92.0	2.74	2.73	2.71	7.0	6.9	6.3
		/ Fine	Bottom	16.5	24.7	28.8	28.8	6.13	6.11	6.11	86.9	86.6	3.06	3.08		5.3	6.0	1
			Surface	1.0	24.7	28.8 25.1	25.1	6.09 7.03	7.04		86.2 97.6	97.6	3.09 2.63	2.66		6.7 5.8	5.4	
19/11/22	9:41:10	26	Middle	8.7	24.6	25.1 25.8	25.8	7.04 6.43	6.42	6.73	97.6 89.5	89.3	2.69 3.12	3.13	3.13	4.9 3.4	3.2	4.4
10/11/22	3.41.10	/ Fine				25.8 26.1		6.41 6.15		0.11	89.0 85.4		3.14 3.58		0.10	3.0	1	-
			Bottom	16.5	24.4	26.2 29.3	26.1	6.13 6.84	6.14	6.14	85.2 97.1	85.3	3.61 2.96	3.60		5.8 7.4	4.6	
		25	Surface	1.0	24.6	29.3	29.3	6.81	6.83	6.67	96.7 92.6	96.9	2.94	2.95		7.3	7.4	4
22/11/22	11:46:03		Middle	8.8	24.4	29.4	29.5	6.50	6.52		92.0	92.3	3.30	3.27	3.26	4.1	5.1	6.2
		/ Cloudy	Bottom	16.6	24.3	29.6 29.6	29.6	6.23 6.25	6.24	6.24	88.1 88.3	88.2	3.59 3.55	3.57		5.1 7.4	6.3	
		25	Surface	1.0	24.6	24.3 24.4	24.4	7.25 7.23	7.24		100.1 99.8	99.9	2.18	2.18		7.2 6.7	7.0	
24/11/22	14:03:58		Middle	9.0	24.4	24.7 24.7	24.7	7.01 6.98	7.00	7.12	96.6 96.2	96.4	2.41	2.42	2.56	5.4 5.3	5.4	6.8
		/ Cloudy	Bottom	17.1	24.1	25.3 25.4	25.4	6.65 6.61	6.63	6.63	91.5 91.0	91.2	3.09	3.08		8.0 8.2	8.1	1
		66	Surface	1.0	24.7	24.8	24.8	7.09	7.07		98.3	97.9	2.93	2.92		3.2	3.4	
26/11/22	15:08:30	26	Middle	8.7	24.4	24.9 25.6	25.7	7.05 6.73	6.72	6.89	97.6 93.2	93.1	2.91 3.39	3.41	3.35	3.5 2.7	3.5	4.0
		/ Cloudy	Bottom	16.3	24.5	25.7 27.0	27.0	6.70 6.15	6.15	6.15	93.0 86.0	85.8	3.42 3.69	3.72		4.2	5.1	1
						27.0 29.6		6.14 6.87		0.15	85.6 98.6		3.75 3.17			5.4 5.0	-	
		26	Surface	1.0	25.1	29.6 29.7	29.6	6.84	6.86	6.73	98.1 64.6	98.4	3.20	3.19		6.7 5.2	5.9	4
28/11/22	16:18:59	/ Cloudy	Middle	8.9	25.0	29.8	29.8	6.62	6.61		64.7	64.7	3.35	3.37	3.40	5.8	5.5	5.7
		/ Gloudy	Bottom	16.8	24.8	29.9	29.9	6.32	6.34	6.34	90.9	90.6	3.66	3.64		5.6	5.7	
		21	Surface	1.0	20.6	29.6 29.6	29.6	6.87 6.87	6.87	6.71	76.5 76.5	76.5	3.05 3.02	3.04		6.1 5.4	5.8	
30/11/22	9:05:57		Middle	9.2	20.3	29.8 29.5	29.7	6.55 6.53	6.54	J 1	72.5 72.2	72.4	3.41	3.41	3.38	4.5 4.5	4.5	5.7
		/ Fine	Bottom	17.5	20.1	29.9	29.9	6.22 6.23	6.23	6.23	68.6 68.7	68.7	3.69	3.69	1	6.4	7.0	

Monitoring Station : TM-FC2



Date	Time	Ambient Temp (°C) /	Monitori	ng Depth	Temp	Salini	ty (ppt)	Dissolv	ed Oxygen	(mg/L)		ed Oxygen ation (%)	Tu	urbidity (NT	U)	Susper	nded Solids	s (mg/L)
Date	rime	Weather Condition	1)	m)	(°C)	Value	Average	Value	Average	Depth- average	Value	Average	Value	Average	Depth- average	Value	Average	Depth- average
		25	Surface	1.0	23.6	30.8 30.8	30.8	6.74 6.74	6.74		94.9 94.9	94.9	4.71 4.74	4.73	J	4.8 6.5	5.7	
03/11/22	9:46:56	25	Middle	8.0	23.6	30.8	30.8	6.73	6.73	6.73	94.7	94.7	5.51	5.56	5.45	7.2	6.9	5.7
03/11/22	3.40.30	/ Rainy	ivildate			30.9 30.9		6.72 6.71			94.7 94.5		5.61 6.02	3.30	3.43	6.6 4.9		5.7
		, r.ay	Bottom	15.0	23.6	30.9	30.9	6.70	6.71	6.71	94.4	94.5	6.09	6.06		4.4	4.7	
		25	Surface	1.0	23.6	30.7 30.7	30.7	6.74	6.72		94.7	94.4	6.93	6.89		3.0	3.2	
05/11/22	11:01:14		Middle	8.4	23.6	30.7	30.7	6.45	6.45	6.58	90.7	90.7	7.01	7.00	6.91	3.5	3.7	3.5
		/ Cloudy				30.7 30.7		6.44 6.40			90.6 90.1		6.99 6.87			3.9 2.8		
			Bottom	15.8	23.6	30.7	30.7	6.40	6.40	6.40	90.0	90.1	6.84	6.86		4.1	3.5	
		24	Surface	1.0	23.2	30.6 30.6	30.6	6.24	6.24	6.22	87.1 87.1	87.1	7.36 7.32	7.34		6.1 5.2	5.7	
08/11/22	13:50:03		Middle	8.1	23.3	30.6 30.6	30.6	6.21 6.20	6.21	0.22	86.7 86.6	86.7	8.69 8.65	8.67	8.27	5.7 5.5	5.6	6.8
		/ Cloudy	Bottom	15.2	23.2	30.6	30.6	6.20	6.21	6.21	86.6	86.6	8.76	8.80		9.2	9.2	
						30.6 28.6		6.21 7.01		0.21	86.6 104.3		8.84 4.11			9.1 8.3		
		28	Surface	1.0	27.6	28.6	28.6	6.97	6.99	6.69	103.7	104.0	4.14	4.13		7.8	8.1	
10/11/22	14:43:30		Middle	8.6	27.0	30.7	30.7	6.35 6.42	6.39		94.6 95.7	95.2	4.43 4.41	4.42	4.42	7.2 5.7	6.5	6.7
		/ Fine	Bottom	16.2	26.0	31.5	31.6	6.03	6.01	6.01	88.8	88.4	4.69	4.72		5.9	5.7	
			0 (04.0	31.6 27.3	07.0	5.99 6.95	0.75		88.1 97.9	04.0	4.75 3.48	0.47		5.4 3.5	0.5	
		26	Surface	1.0	24.8	27.4	27.3	6.54	6.75	6.74	91.7	94.8	3.46	3.47		1.5	2.5	
12/11/22	15:23:12		Middle	8.1	24.6	27.8 27.9	27.8	6.75 6.71	6.73		95.0 93.5	94.2	3.64	3.67	3.68	2.7 4.1	3.4	2.8
		/ Fine	Bottom	15.1	24.3	28.1 28.1	28.1	6.49	6.49	6.49	91.0	91.0	3.88	3.90		2.6	2.4	
			Surface	1.0	25.1	28.4	28.5	6.49 7.11	7.09		91.0 101.3	101.1	1.85	1.84		6.8	6.0	
		26	Surface	1.0	25.1	28.5 28.5	20.5	7.06 6.63	7.09	6.85	100.8 93.7	101.1	1.82 2.30	1.04		7.0 5.9	0.9	
15/11/22	15/11/22 9:09:03		Middle	8.6	24.6	28.6	28.6	6.59	6.61		93.2	93.5	2.34	2.32	2.27	5.9	5.9	6.0
		/ Fine	Bottom	16.2	24.3	28.8 28.8	28.8	6.19 6.16	6.18	6.18	87.2 86.7	86.9	2.62	2.64		4.0 6.3	5.2	
			Surface	1.0	25.3	26.3	26.4	6.97	6.97		98.5	98.5	2.44	2.45		6.0	5.7	
						26.4 27.4		6.97 6.35		6.65	98.5 90.1		2.46 2.66			5.3 5.0		
17/11/22	9:52:33		Middle	8.7	25.2	27.4	27.4	6.32	6.34		89.7	89.9	2.63	2.65	2.75	3.1	4.1	4.6
		/ Fine	Bottom	16.5	24.6	28.4 28.5	28.5	5.96 5.92	5.94	5.94	84.2 83.7	83.9	3.15 3.14	3.15		4.3 3.7	4.0	
		200	Surface	1.0	24.8	24.9	24.9	7.25	7.24		100.7	100.5	2.76	2.75		3.5	4.1	
19/11/22	10:01:11	26	Middle	8.2	24.7	24.9 25.3	25.3	7.23 6.51	6.49	6.87	100.3 90.5	90.2	2.74 3.18	3.17	3.21	4.7 3.0	2.2	4.0
19/11/22	10:01:11	/ Fine	ivildale	8.2	24.7	25.3 25.7	25.3	6.47 6.18	6.49		89.9 85.8	90.2	3.15 3.72	3.17	3.21	3.5 3.5	3.3	4.0
		/ Fille	Bottom	15.5	24.5	25.7	25.8	6.17	6.18	6.18	85.7	85.8	3.68	3.70		5.5	4.5	4.5
		26	Surface	1.0	24.7	29.5 29.6	29.6	7.17 7.20	7.19		102.1 102.6	102.4	2.82	2.81		4.7 6.0	5.4	
22/11/22	12:11:20		Middle	8.6	24.5	29.7	29.7	6.95	6.93	7.06	98.7	98.4	2.94	2.96	3.02	4.1	5.1	5.1
		/ Cloudy				29.7 29.8		6.91 6.61			98.0 93.6		2.98 3.29			6.0		
		,	Bottom	16.3	24.3	29.8	29.8	6.63	6.62	6.62	93.9	93.8	3.26	3.28		3.8	4.9	
		25	Surface	1.0	24.5	24.4	24.4	7.56 7.54	7.55	7.40	104.2	104.1	2.27	2.26		5.0 7.2	6.1	
24/11/22	14:19:56		Middle	11.6	24.5	24.5	24.6	7.23	7.24	7.40	99.7	99.8	2.32	2.32	2.53	7.8	7.8	7.1
		/ Cloudy	Bottom	22.1	24.3	24.6 25.4	25.4	7.25 6.95	6.93	6.93	99.8 96.0	95.7	2.32	3.00		7.7 7.0	7.3	
				22.1	24.3	25.5 25.4	25.4	6.91 7.11	0.93	0.93	95.5 99.1	95./	3.01 2.97	3.00		7.6 4.9	1.3	
		26	Surface	1.0	24.8	25.5	25.4	7.14	7.13	6.84	99.5	99.3	2.99	2.98		5.9	5.4	
26/11/22	15:31:13		Middle	8.6	24.6	26.5 26.5	26.5	6.59 6.52	6.56	0.04	92.1 90.9	91.5	3.43	3.44	3.41	2.1 4.0	3.1	4.3
		/ Cloudy	Bottom	16.2	24.4	27.9	28.0	6.08	6.06	6.06	85.3	85.1	3.83	3.83		4.2	4.6	•
						28.0 29.5		6.04 7.05			84.8 100.6		3.82			4.9 4.9		
		26	Surface	1.0	24.8	29.5	29.5	7.09	7.07	6.95	101.3	101.0	3.02	3.03		5.3	5.1	<u> </u>
28/11/22	16:42:14		Middle	8.7	24.7	29.6 29.6	29.6	6.83 6.81	6.82		97.3 97.0	97.2	3.30 3.27	3.29	3.26	7.1 8.0	7.6	6.6
		/ Cloudy	Bottom	16.4	24.6	29.7	29.8	6.65	6.64	6.64	94.6	94.4	3.46	3.48		7.8	7.0	1
			Quefose	1.0	20.7	29.8 29.5	29.6	6.63 7.18	7.19		94.2 80.0	80.1	3.49 2.85	2.84		6.2 6.8	6.4	
		21	Surface	1.0	20.7	29.7 29.6	23.0	7.19 6.92	7.19	7.06	80.2 76.9	OU. I	2.82 2.96	2.04		6.0 6.4	0.4	
30/11/22	9:37:57	-	Middle	8.7	20.5	29.6	29.7	6.93	6.93		76.9	76.9	2.96	2.97	3.01	4.8	5.6	6.5
		/ Fine	Bottom	16.4	20.2	29.5 29.9	29.7	6.62 6.65	6.64	6.64	73.0 73.4	73.2	3.21 3.22	3.22		7.4 7.3	7.4	
	l	l	l .	l		29.9	1	0.05	l	l	/3.4	1	3.22	l	l	1.3	<u> </u>	l

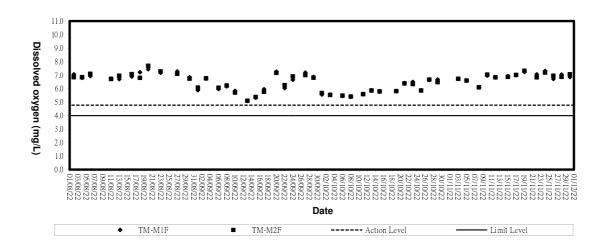


Appendix C3

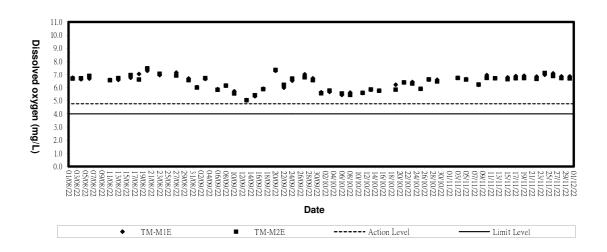
Graphical Plots of Impact Marine Water Quality Monitoring Data



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

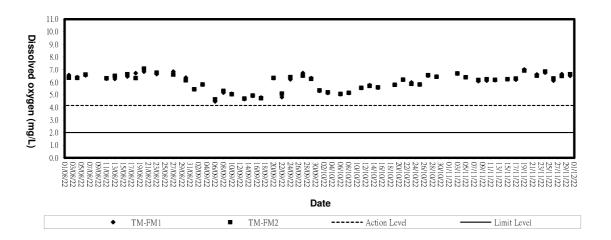


Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide

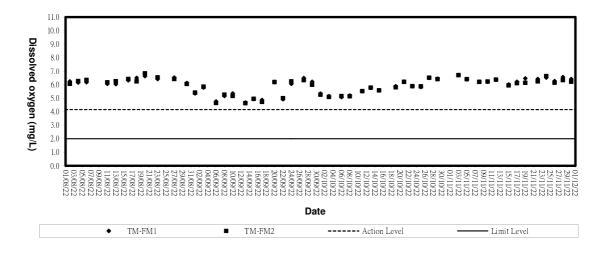




Dissolved Oxygen (Bottom) at Mid-Flood Tide

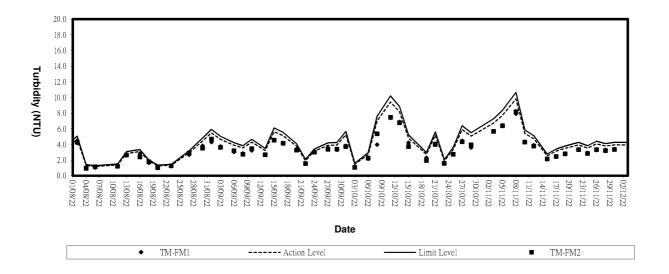


Dissolved Oxygen (Bottom) at Mid-Ebb Tide

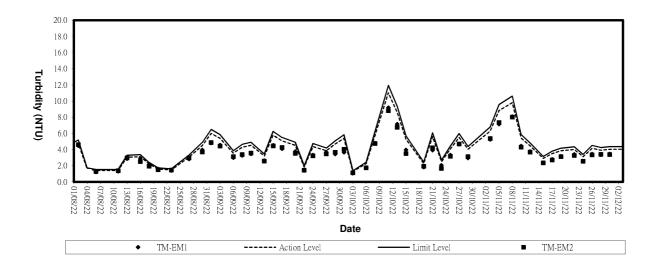




Turbidity (Depth-average) at Mid-Flood Tide

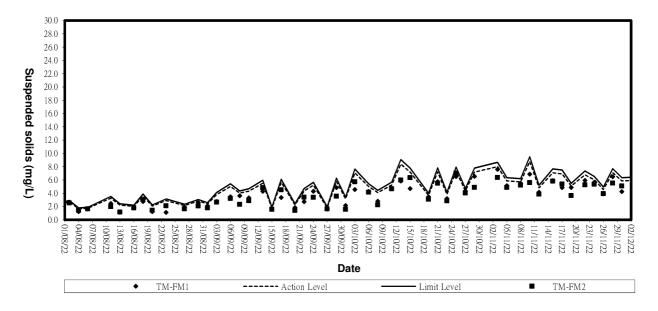


Turbidity (Depth-average) at Mid-Ebb Tide

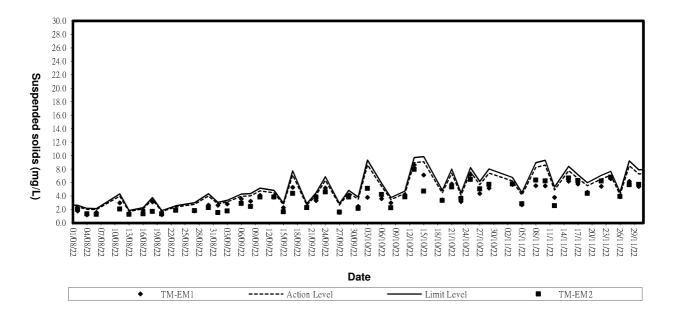




Suspended solids (Depth-average) at Mid-Flood Tide



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





Appendix D1

Calibration Certificates for Impact Noise Monitoring Equipments



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

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

Calibration Certificate

Certificate No.

: CSA23127

Page

: 1 of

2

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

Castle

Equipment I.D.

ET/EN/002/07

Туре

GA607

Serial No.

038641

Laboratory Information

Lab. Ref. No.

: Q/CAL/22/3697/I

IOALIZZI303111

Procedure

: CQS/002/A

Date of Calibration

: 18-May-2022

Date of Receipt

: 11-May-2022

Date of Issue

Stabilizing Time

: 18-May-2022

Calibration Location

: Calibration Laboratory

Calibration Condition

Ambient Temperature : (20±3) °C

rature : (20±3) °C : 30 minutes Relative Humidity

: (50±20) %

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 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



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

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Calibration Certificate

Certificate No. : CSA23127

Page: 2 of 2

Calibration Result:

1. Measured Sound Pressure Level:

Nominal Frequency (Hz)	Nominal Output Sound Pressure (dB)	UUT Reading (dB)	Expanded Uncertatiny (dB)	Coverage Factor
1000	94.0	93.7	0.13	2.0
1000	104.0	103.7	0.13	2.0

2. Actual Output Frequency:

Nominal Frequency (Hz)	Nominal Output Sound Pressure (dB)	UUT Reading (Hz)	Expanded Uncertatiny (Hz)	Coverage Factor
1000	94.0	1000.02	0.11	2.0
1000	104.0	1000.02	0.11	2.0

Remark:

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

End of certificate



東業德勤測試顧問有限公司

ETS-TESTCONSULT LTD.

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

Calibration Certificate

Certificate No.

: CSA20120

: 1 of

Information Provided by 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-31	UC-53A	NH-21
Equipment I.D. no.	ET/EN/003/12		
Serial No.	00773032	01291	25043
Adaptors used			
Resolution	0.1 dB		

Laboratory Information

Lab Ref No

Date of Issue

: Q/CAL/22/0142/I

Procedure

: CQS/001/A

Date of Calibration

: 6-Jan-2022

Date of Receipt

· 5-Jan-2022

11-Jan-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. : CSA20120

Page: 2 of 3

Result

Reference Sound Pressure Level: (Unit in: dB)

Range / Mode			Reference Level	REF Frequency (kHz)	UUT Reading	Deviation	Expanded Uncertatiny	Coverage Factor
	Self-cal	100-100	94.0		94.0	0.0	0.13	2.0
	Range	40 to 130	104.0	1	104.0	0.0	0.13	2.0
A-Weighting	Mode	Fast	114.0		114.0	0.0	0.13	2.0
A-vveighting	Self-cal		94.0		94.0	0.0	0.13	2.0
	Range	40 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	-	94.0		94.0	0.0	0.13	2.0
	Range	40 to 130	104.0	1	104.0	0.0	0.13	2.0
C Maighting	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	40 to 130	104.0	1 1	104.0	0.0	0.13	2.0
	Mode	Slow	114.0		113.9	-0.1	0.13	2.0

Measurement for other range on reference sound pressure level: (Unit in: dB)

Range / Mode			Reference Level	REF Frequency (kHz)	UUT Reading	Deviation	Expanded Uncertatiny	Coverage Factor	
A-Weighting	Range	20 to 100	94.0	1	94.1	0.1	0.13	2.0	
A-vveighting	Mode	Fast				0.1			
	Range	20 to 100	010						
C-Weighting	Mode Fast		94.0	1	94.0	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.

CSA20120

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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	IEC 61672-1:2002 class 1 Specification
		PARTITION NO.	31.5	54.6	54.7	0.1	-39.4 +/- 2.0
			63	67.8	67.9	0.1	-26.2 +/- 1.5
			125	77.9	78.0	0.1	-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
40 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
			4000	94.9	94.1	-0.8	+1.0 +/- 1.6
		No.	8000	92.9	90.4	-2.5	-1.1 (+2.1 ; - 3.1)
			12500	89.7	84.4	-5.3	-4.3 (+3.0 ; -6.0)
		Repair Line	16000	87.5	78.5	-9.0	-6.6 (+3.5 ; -17.0)

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

Range	Mode	Applied Level	Frequency (Hz)	Reference Level	UUT Reading	Deviation	IEC 61672-1:2002 class 1 Specification
		Water floor	31.5	91.0	90.9	-0,1	-3.0 +/- 2.0
			63	93.2	93.3	0.1	-0.8 +/- 1.5
		aviet en	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
40 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	-0.8	-0.8 +/- 1.6
			8000	91.0	88.5	-2.5	-3.0 (+2.1 ; -3.1)
			12500	87.8	82.5	-5.3	-6.2 (+3.0 ; -6.0)
			16000	85.6	76.7	-8.9	-8.5 (+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	0.20	2000	0.13
	63	0.13	4000	0.15
04 40	125	0.15	8000	0.14
94 dB	250	0.12	12500	0.14
	500	0.12	16000	0.14
	1000	0.13		



Calibration Certificate

Certificate No. 110698

3 Pages Page

Customer: ETS-Testconsult Limited

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

Order No.: Q14237

Date of receipt

1-Nov-21

Item Tested

Description: Sound Level Meter

Manufacturer: Rion : NL-52 Model

I.D.

: ET/EN/003/16

Serial No.

: 00253765

Test Conditions

Date of Test: 15-Nov-21

Supply Voltage

Ambient Temperature:

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

Relative Humidity: (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure: Z01, IEC 61672.

Test Results

All results were within the IEC 61672 type 1 or manufacturer's specification.

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

Main Test equipment used:

Equipment No. Description

Cert. No.

Traceable to

S017

Multi-Function Generator

C211339

SCL-HKSAR

S240

Sound Level Calibrator

106446

NIM-PRC & SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant.

The test results apply to the above Unit-Under-Test only

Calibrated by

Approved by :

15-Nov-21

Date:

This Certificate is issued by:

Hong Kong Calibration Ltd.

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

Tel: 2425 9801 Fax: 2425 9646

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Calibration Certificate

Certificate No. 110698

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Results:

Acoustical signal test

1. Self-generated noise: 15.2 dBA (Mfr's Spec ≤ 17 dBA)

2. Reference Sound Pressure Level

	UUT Se	etting			
Range (dB)	Frequency Weighting	Time Weighting	Octave Filter	Applied Value (dB)	UUT Reading (dB)
20 ~ 130	A	F	OFF	94.0	93.8
	1	S	OFF		93.8
	С	F	OFF		93.8
	Z	F	OFF		93.8
	A	F	OFF	114.0	113.8
	'	S	OFF		113.8
	C	F	OFF		113.8
	Z	F	OFF		113.8

IEC 61672 Type 1 Spec. : ± 1.1 dB

Uncertainty: $\pm 0.1 \text{ dB}$

Electrical signal tests

3. Electrical signal tests of frequency weightings (A weighting)

Frequency	Attenuation (dB)	IEC 61672 Type 1 Spec.
31.5 Hz	-39.6	- 39.4 dB, ± 2 dB
63 Hz	-26.3	$-26.2 \text{ dB}, \pm 1.5 \text{ dB}$
125 Hz	-16.2	- 16.1 dB, ± 1.5 dB
250 Hz	-8.7	- 8.6 dB, ± 1 dB
500 Hz	-3.3	- $3.2 dB, \pm 1.4 dB$
1 kHz	0.0 (Ref)	0 dB, ± 1.1 dB
2 kHz	+1.2	$+$ 1.2 dB, \pm 1.6 dB
4 kHz	+0.9	+ 1.0 dB, ± 1.6 dB
8 kHz	-1.1	$-1.1 \text{ dB}, +2.1 \text{ dB} \sim -3.1 \text{ dB}$
16 kHz	-8.1	$-6.6 \text{ dB}, +3.5 \text{ dB} \sim -17.0 \text{ dB}$

Uncertainty: ± 0.1 dB



Calibration Certificate

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Page 3 of 3 Pages

4. Frequency & Time weightings at 1 kHz

4.1 Frequency Weighting (Fast)

UUT Setting	Applied Value (dB)	UUT Reading (dB)	Difference (dB)	IEC 61672 Type 1 Spec.
A	94.0	94.0 (Ref.)		± 0.4 dB
C	94.0	94.0	0.0	
Z	94.0	94.0	0.0	

4.2 Time Weighting (A-weighted)

7.2 Time weighting	s (/1-worgined)			
UUT	Applied	UUT	Difference	IEC 61672
Setting	Value (dB)	Reading (dB)	(dB)	Type 1 Spec.
Fast	94.0	94.0 (Ref.)		± 0.3 dB
Slow	94.0	94.0	0.0	
Time-averaging	94.0	94.0	0.0	

Uncertainty: ± 0.1 dB

Remarks: 1. UUT: Unit-Under-Test

- 2. The uncertainty claimed is for a confidence probability of not less than 95%.
- 3. Atmospheric Pressure: 1 009 hPa.
- 4. Microphone model: UC-59, S/N: 07824.
- 5. Preamplifier model: NH-25, S/N: 43795.
- 6. Firmware Version: 1.5
- 7. Power Supply Check: OK
- 8. The UUT was adjusted with the laboratory's sound calibrator at the reference sound pressure level before the calibration.

----- END -----



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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		1001	
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.



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Calibration Certificate

Certificate No. CSA27977

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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		94.3	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	1	94.0	0.0	0,13	2.0
	Range	30 to 130	104.0		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	1	94.0	0.0	0.13	2.0
	Range	30 to 130	104.0		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.

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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
	T =		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:

31.5 0.20 2000 0. 63 0.15 4000 0					
63 0.15 4000 0 125 0.15 8000 0	ge (Hz)		(dB)	Range (Hz)	(dB)
125 0.15 8000 0	31.5		0.20	2000	0.13
94 dB 125 0.15 8000 0.	63		0.15	4000	0.13
	25		0.15	8000	0.14
250 0.12 12500 0	250	94 dB	0.12	12500	0.16
500 0.12 16000 0.	500		0.12	16000	0.16
1000 0.13	000		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		Company - Sprace	
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:

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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
C-Weighting	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:

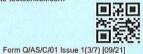
- The uncertainty quoted is based on 95 % confidence level.
- UUT reading are mean of three measurements.
- Deviation = UUT Reading Reference Level

**



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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	
		500	90.8	92.1	1.3	0.12	2.0	
30-130	Fast	94	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
All Sale			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
TIME S		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 American		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	
		94	500	94.0	95.3	1.3	0.12	2.0
30-130	Fast		1000 (Ref.)	94.0	94.0	0.0	0.13	2.0
		The leaving	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	
342		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	1	94.0	0.0	0.14	2.1
	Range	30 to 130	104.0		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
	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

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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	54.5	-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
			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)	
		1	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
			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
ю		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
	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
			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 S	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
01/11/2022	8:55	57.9	59.0	54.3	0.3	General site work	Cloudy
03/11/2022	9:40	58.8	59.6	55.4	0.2	General site work	Drizzle
08/11/2022	11:00	59.5	61.4	56.3	0.2	General site work	Cloudy
10/11/2022	13:00	56.1	58.0	49.2	0.2	General site work	Fine
15/11/2022	13:00	58.5	60.1	56.1	0.2	General site work	Fine
17/11/2022	11:00	58.4	62.6	55.8	0.2	Vehicle passing by	Fine
22/11/2022	11:00	60.6	61.1	56.8	0.2	General site work	Fine
24/11/2022	10:30	58.4	62.6	55.9	0.2	General site work	Overcast
29/11/2022	9:45	59.0	60.4	56.7	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	Date Start Sampling		Noise Level dB (A)			Major Noise Sources	Weather Condition
	Time (hh:mm)	Leq(30min)	L ₁₀	L ₉₀	Speed (m/s)		
01/11/2022	9:00	58.2	59.7	55.1	0.3	General site work	Cloudy
03/11/2022	9:45	57.3	58.8	54.6	0.2	General site work	Drizzle
08/11/2022	11:35	58.6	60.6	55.8	0.2	General site work	Cloudy
10/11/2022	11:25	53.5	55.6	50.4	0.2	General site work	Fine
15/11/2022	13:35	58.4	61.1	55.8	0.2	General site work	Fine
17/11/2022	11:35	59.4	62.1	56.3	0.2	Vehicle passing by	Fine
22/11/2022	11:35	57.4	60.6	53.2	0.2	General site work	Fine
24/11/2022	11:05	59.5	64.1	56.3	0.2	General site work	Overcast
29/11/2022	9:50	58.1	59.5	55.2	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.

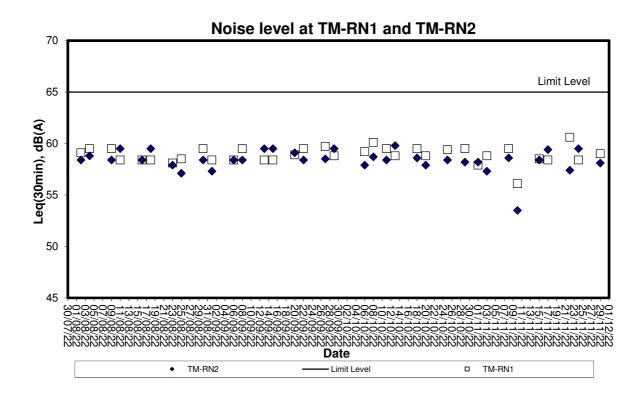


Appendix D3

Graphical Plots of Impact Noise Monitoring Data



Noise Monitoring (Day-time)





Appendix E Weather Condition

Daily Extract of Meteorological Observations , November 2022 - Tuen Mun

	Mean				Mean	Mean	Total	Prevailing	Mean
	Pressure	Ai	r Temperatu	ıre	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	(acg.e)	Min					
		(deg. C)		(deg. C)					
1	1008.2	25.3	22	18.9	14.4	64	4.5	10	57.7
2	1007	21.5	20.2	18.9	17.8	86	23.7	360	56.7
3	1012	23.2	22.1	20.9	20.8	93	58.1	80	29.3
4	1016.3	24	22.6	21.9	20.2	87	4	70	47.5
5	1019	22.2	21.5	20.8	17.6	79	Trace	70	36.6
6	1018.6	22.5	20.8	19.3	17.9	84	6.6	10	29.3
7	1017.3	23.5	21.5	19.7	18.8	85	1.6	10	19.8
8	1017.3	23.7	22.4	20.6	19.7	85	7.7	60	28.4
9	1017.3	26.7	23.8	21.6	19.4	77	-	50	18.4
10	1016.7	27.9	24.8	23	20.7	78	-	40	14.3
11	1016.2	28.1	25	23.5	20.6	77	-	70	20
12	1015.3	26.8	24.6	23.3	20.8	79	Trace	60	17.1
13	1015.7	28.5	24.8	22.9	21.3	81	-	50	14.8
14	1016.7	25.7	24.1	23.2	20.1	79	-	70	31.9
15	1015.5	26	24.3	23.4	20.1	78	-	60	24
16	1015	25.8	24.1	23.2	20.4	80	-	80	31.4
17	1014.6	27.2	24.5	22.9	20.7	80	-	70	20.3
18	1015.6	26.9	24.6	23.1	20.8	80	-	40	21.9
19	1015	27.6	25.1	23.7	20.7	77	-	60	19.7
20	1014	27.5	24.7	23.3	20.6	78	-	60	24.2
21	1013.6	25.3	23.9	23.1	19.9	78	0.5	70	41.5
22	1013.1	24.1	23.4	22.3	21	86	2.5	70	37.2
23	1013.8	24.8	23.4	22.5	21.9	91	3.4	60	32.6
24	1015.2	22.6	21.8	21.4	20.6	93	9.6	70	38.8
25	1015.6	23.4	22.3	21.3	20.9	92	4.8	70	25.6
26	1014.8	23.6	22.7	21.7	20.7	88	0.5	60	20.7
27	1012.6	23.7	23.1	22.1	21.3	90	1.9	80	25.9
28	1012.5	28.6	25.6	23.4	23.4	88	1.4	150	10.5
29	1013.5	27.8	25.5	24.3	22.7	85	-	50	10.7
30	1017.3	26.1	22.8	18.3	19.6	82	-	60	23.4
						at he detecte			

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



Appendix F Event-Action Plans

	 	٠٠,٠٠٠	_			T	
	Contractor		Rectify any imacceptable		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	QU		A STATE OF THE PARTY OF THE PAR	. Notiny Contractor	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	ŀ	\dashv		.	H 90		E E
EVENT/ACTION PLAN FOR AIR QUALITY EXCEEDANCE	ACTION	IQ(E)	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	ļ	\Box		- ' ' ' '	+ 52 % 4 · R.	'	— . બાબ, 4, π ે
		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	1. Identify source, investigate the causes of exceedance and propose remedial measures. 2. Inform IC(E) and Contractor. 3. Repeat measurements to confirm finding. 4. Increase monitoring frequency to daily increase with IC(E) and Contractor on remedial actions. 6. If exceedance continues, arrange meeting with IC(E) and ER. 7. 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 horease the effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results.
-				+ 9.0, 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
selumes	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	
·	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	<u></u> .	Notify the Carry ou Report the Report the IC(E) Discuss formulate 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.	7.	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	.	Take immediate action to avoid	
Level	_			Leader and the Contractor on the	c	Tallure in Writing.	0	Ruffier exceedance Submit proposals for remedial	_
	٠ <u>۱</u>		,	potential refriedral actions.	4 0	Doming the Contractor to prepage	i	actions to IC/El within 3	
,			'n	Review the Contractor's remedial	ń	Require the Contactor to propose			
badgan,		findings.				remedial measures for the		working days of nottalcation.	_
	4.	Increase monitoring frequency.		assure their effectiveness and		analysed noise problem.	က်	Implement the agreed	
	က်	Carry out analysis of Contractor's		advise the ER accordingly.	4.	Ensure remedial measures are		proposals.	
		working procedures to determine	લ	Supervise the Implementation of		properly implemented.	4	Resubmit proposals if problem	
** 1 -p=		possible mitigation to be		remedial measures.	က်	If exceedances continue, consider	ı	still not under control.	
-		_				what activity of the work is	က်	Stop the relevant activity of	
	φ.					responsible and instruct the		works as determined by the ER	_
		EPD the causes & actions taken for				Contractor to stop that activity of		until the exceedances is	•
	1 /1	the exceedances.				work until the exceedances is		abaled.	
	۲.	Assess effectiveness of				abated.			
-		Contractor's remedial actions and				-			
		keep the IC(E), the EPD and the			. <u>.</u>			-	
		ER informed of the results							
	ထ	If exceedance due to the			···				-
		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			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

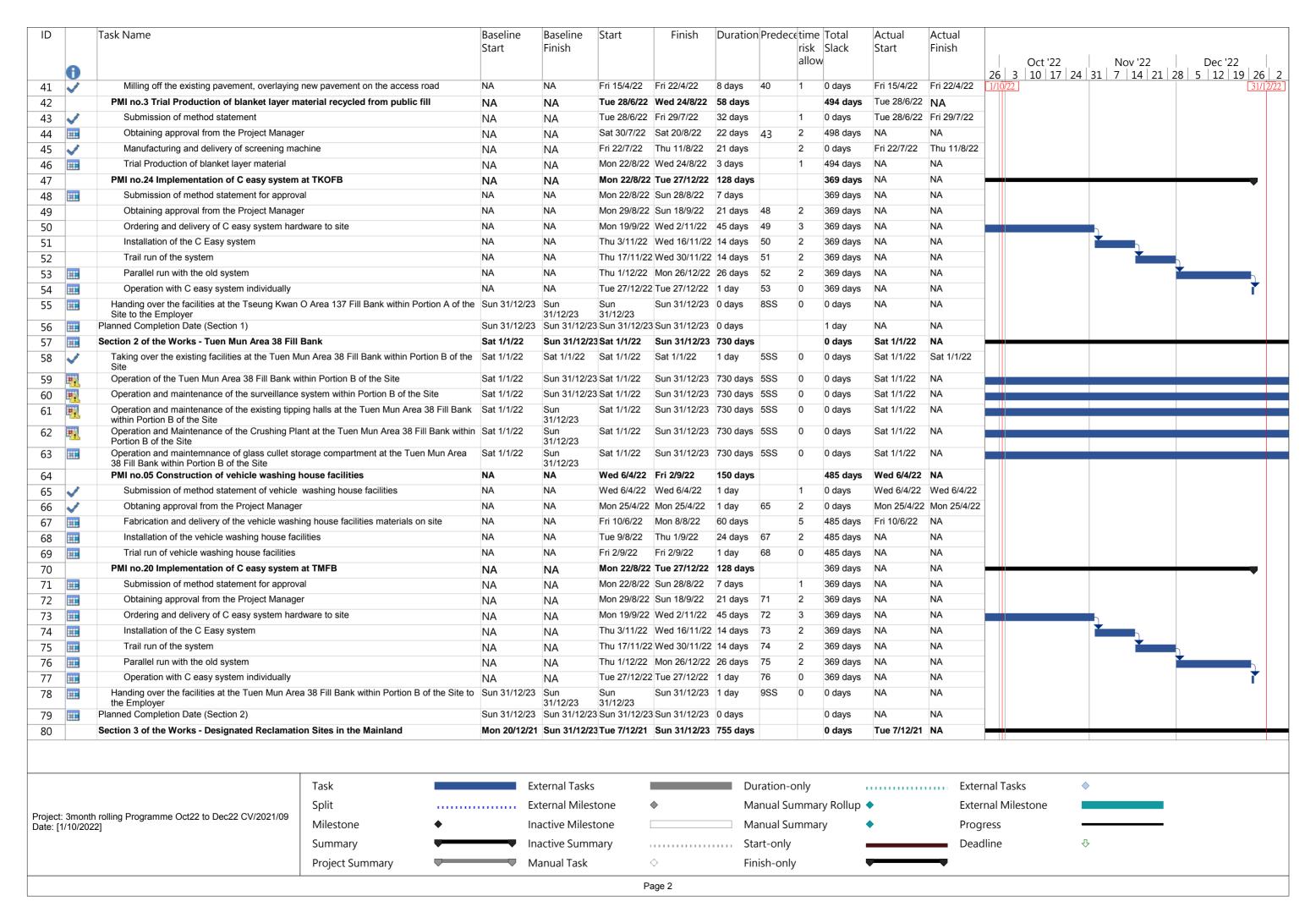
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Event		EVEN	۲	ND ACTION PLAN FOR WA	/ATE	EVENT AND ACTION PLAN FOR WATER QUALITY EXCEEDANCE	ш	
·— ·	<u></u>			ACTION	ž		- [
-12		ET Leader		Contractor		ER		EC
Limit Level	<u> </u> -	Repeat in-situ measurement	Ŀ	Notify ER and IEC in writing	<u>-</u>	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

	Task Name		Baseline Start	Baseline Finish	Start	Finish	Duration	Predecetime risk	Total Slack		Actual Finish					
								allov	v				t '22	Nov '22	Dec '22	
1 = (Contract duration of Contract CV/2021/9		Sat 1/1/22	Sun 31/12/2	3 Sat 1/1/22	Sun 31/12/23	730 days		0 days	NA	NA	26 3 10	17 24 3	31 7 14 21 2	28 5 12 19 2	26 2
	Contract date , Date of the Letter of Acceptance	(assumed)				1Mon 20/12/21			742 days		NA	1/10/22)1/12/22
_	<u> </u>	(assumeu)	Sat 1/1/22				0 days		729 days		NA					
	Starting Date of the Works Starting Date of Section 1 of the Works		Sat 1/1/22	Sat 1/1/22	Sat 1/1/22		0 days		0 days		NA					
1000	Starting Date of Section 2 of the Works		Sat 1/1/22				0 days		•		NA					
	Starting Date of Section 3 of the Works		Sat 1/1/22		Sat 1/1/22		0 days		0 days		NA					
<u> </u>	Date for Completion of the Works					Sun 31/12/23	,		1 day		NA					
	Completion Date of Section 1 of the Works					Sun 31/12/23			0 days		NA					
	Completion Date of Section 2 of the Works					Sun 31/12/23	,		0 days		NA					
3	Completion Date of Section 3 of the Works					3 Sun 31/12/23	-		0 days		NA					
	Planned completion dates					Sun 31/12/23	,		0 days		NA					
	Planned competion date of Section 1					3 Sun 31/12/23	-		0 days		NA					
	Planned competion date of Section 2					3 Sun 31/12/23	,		0 days		NA					
	Planned competion date of Section 3					Sun 31/12/23	,		0 days		NA					
	Access Date of the Site				Sat 1/1/22		0 days				NA					
	Portion A2, A3a, A3b, A3c, A4, A5a, A5b, A7c2, A10		Sat 1/1/22				0 days		0 days		Sat 1/1/22					
	date)								,							
	Portion B1, B3, B6a, B6b and B7 (within 60 days aft		Sat 1/1/22	Sat 1/1/22	Sat 1/1/22		0 days		0 days		Sat 1/1/22					
	Portion A1. A7a, A7b, A7c1, A9, A9a and B6c (7 da	, , ,	Sat 1/1/22	Sat 1/1/22	Sat 1/1/22		0 days		0 days		Sat 1/1/22					
· •	Portion B6c (7 day's advance notice after starting da	ite)	Sat 1/1/22		Sat 1/1/22		0 days		0 days		Sat 1/1/22					
	Hand back of the Site					Sun 31/12/23			0 days		NA					
	Project Manager with 30 days, advance notice)		Sun 31/12/23	Sun 31/12/23	Sun 31/12/23	Sun 31/12/23	0 days		0 days	NA	NA					
22 111 🖳 F	Portion A1, A7b, A7c1, A9 and A9a (or at an earlier	date as notified by the Project Manager	Sun 31/12/23		Sun	Sun 31/12/23	0 days		0 days	NA	NA					
	with 30 days' advance notice) Portion B1, B3, B6a, B6b and B7 (or at an earlier da		Sun 31/12/23	31/12/23 Sun	31/12/23 Sun	Sun 31/12/23	0 days		0 days	NA	NA					
	30 days advance notice)			31/12/23	31/12/23				o dayo							
24 🚟 🗓	Portion B6c (or at an earlier date as notified by the F notice)	Project Manager with 30 days' advance	Sun 31/12/23	Sun 31/12/23	Sun 31/12/23	Sun 31/12/23	0 days		0 days	NA	NA					
	Section 1 of the Works - Tseung Kwan O Area 13	7 Fill Bank	Sat 1/1/22	Sun 31/12/2		Sun 31/12/23	730 days	4SS	0 days	Sat 1/1/22	NA					
26 🗸	Taking over the existing facilities at the Tseung K	(wan O Area 137 Fill Bank within Portion A	Sat 1/1/22	Sat 1/1/22	Sat 1/1/22	Sat 1/1/22	1 day	4SS 0	0 days	Sat 1/1/22	Sat 1/1/22					
Ť	of the Site Operation of the the Tseung Kwan O Area 137 F	III Bank within Portion A of the Site	Sat 1/1/22	Cup 21/12/2	2 Cat 1/1/22	Sun 31/12/23	720 daya	2655 0	0 daya	Sat 1/1/22	NΙΛ					
27 111	Operation and maintenance of the surveillance s					Sun 31/12/23	,		0 days 0 days	Sat 1/1/22 Sat 1/1/22						
28	Operation and maintenance of the existing tipping			Sun		Sun 31/12/23			0 days	Sat 1/1/22 Sat 1/1/22						
29	Bank within Portion A of the Site	-	Jat 1/1/22	31/12/23	Jat 1/1/22	Sull 51/12/25	750 days	2000 0	o days	Sat 1/1/22	INA					
30	Provision, operation and maintenance of the Crust 137 Fill Bank within Portion A of the Site	shing Plant at the Tseung Kwan O Area		Sun 31/12/23	Sat 1/1/22	Sun 31/12/23	730 days	26SS 0	0 days	Sat 1/1/22	NA					
31	Operation and maintenance of the dewatering pla	ant at the Tseung Kwan O Area 137 Fill		Sun	Sat 1/1/22	Sun 31/12/23	730 days	26SS 0	0 days	Sat 1/1/22	NA					
	Bank within portion A of the SIte.	and the Obei War and Mai Wa Daning		31/12/23					0 4	0-14/4/00	NIA					
32	Collection and delivery of Public Fill by barges from Points to the TKO Area 137 Fill Bank within Porti	on A of the Site		Sun 31/12/23	Sat 1/1/22	Sun 31/12/23	730 days	2055 U	0 days	Sat 1/1/22	NA					
33	Construction of Gabion wall		NA	NA	Sat 19/2/22	Sun 31/12/23	681 days		0 days	Sat 19/2/22	NA					
34 🗸	Preparing and submitting a method statement	for approval	Sat 19/2/22	Fri 4/3/22	Sat 19/2/22	Wed 2/3/22	12 days	2	0 days	Sat 19/2/22	Wed 2/3/22					
35 🗸	Preparing and submitting the material submis	sion	Sat 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					
36 🗸	Obtaining approval from the Project Manager		Sat 19/3/22	Fri 1/4/22	Tue 26/4/22	Tue 26/4/22	1 day	35,34 2	0 days	Tue 26/4/22	Tue 26/4/22					
37	Construction of Gabion wall		Sat 2/4/22	Sun 31/12/23	3 Mon 4/7/22	Sun 31/12/23	546 days	7	0 days	Mon 4/7/22	NA					
38 🗸	Re-surfacing of the access road at A11 TKOF	3	NA	NA	Mon 21/3/22	Fri 22/4/22	33 days		0 days	Mon 21/3/22	Fri 22/4/22					
39 🗸	Submission of method statement of re-surface	ing the access road	NA	NA	Mon 21/3/22	Fri 25/3/22	5 days	0	0 days	Mon 21/3/22	Fri 25/3/22					
40 🗸	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					
	T							'								
		Task	Ext	ternal Tasks			Du	ration-only	1		Exter	nal Tasks	♦			
		Split	Ext	ternal Miles	tone	♦	Ma	nual Summai	ry Rollup	•	Exter	nal Mileston	ie 🔳			
	rolling Programme Oct22 to Dec22 CV/2021/09	Milestone •	lna	active Milest	tone		Ma	nual Summai	rv	•	Progi	ess	_			
Date: [1/10/2022]	·i								. 1	-	•		п			
		Summary		active Sumn	idry			•	1		Dead	ııne	Ŷ			
		Project Summary	■ Ma	anual Task		\Diamond	Fin	ish-only	ı		_					
						age 1										

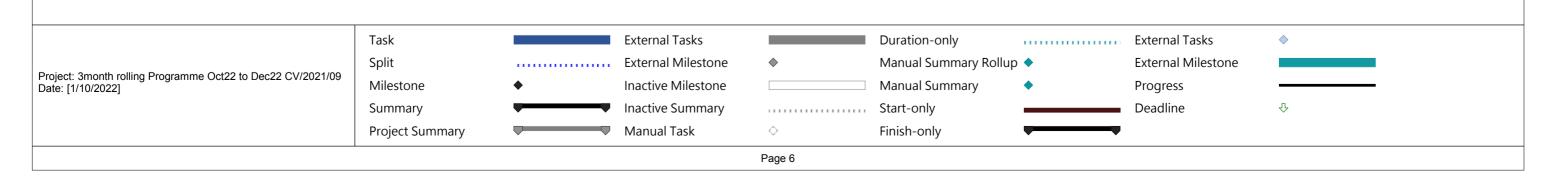


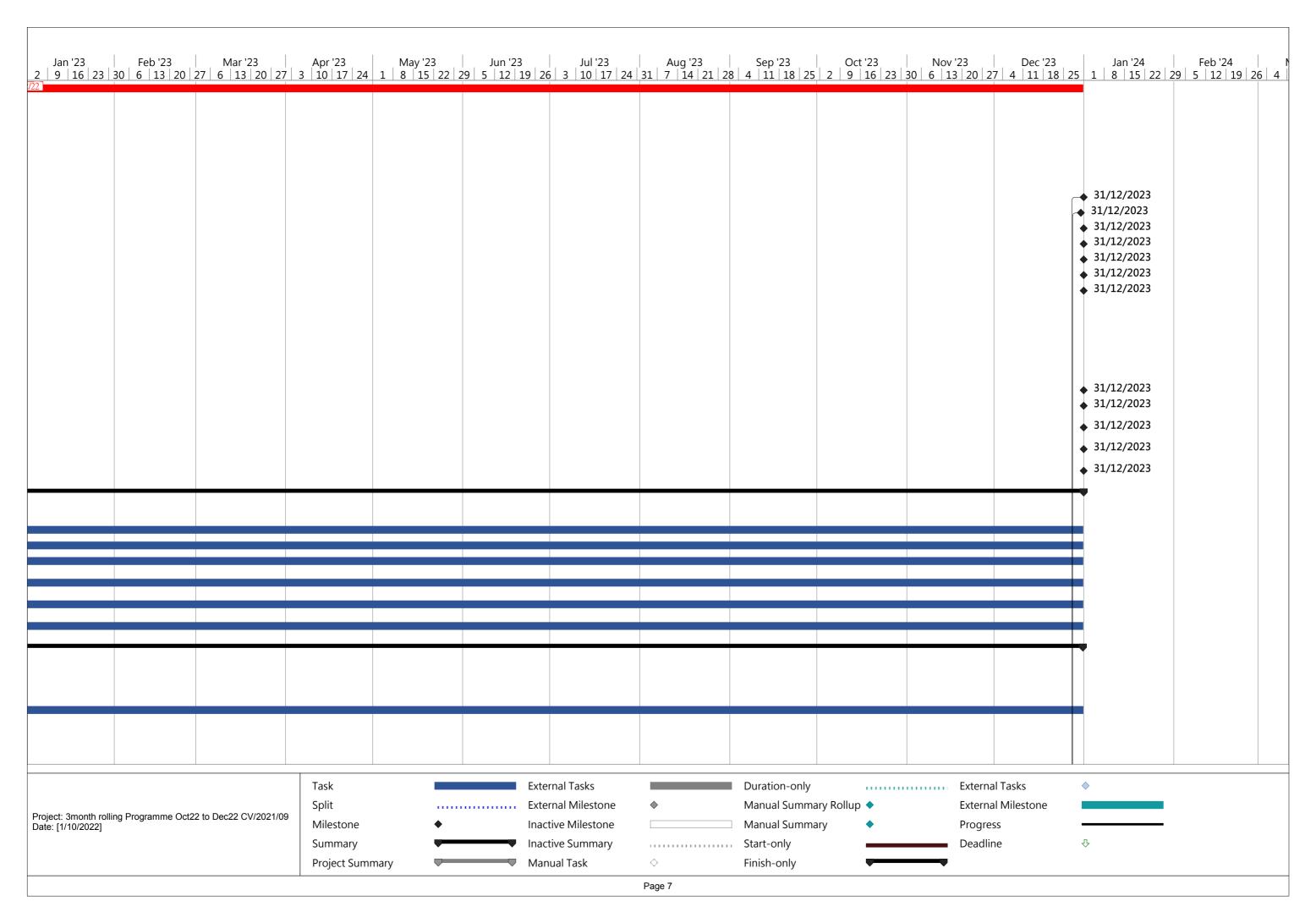
ID	Task Name		Baseline	Baseline	Start	Finish	Duration	Predece time	Total	Actual	Actual					
			Start	Finish					Slack	Start	Finish				1	1
A								allov	V			26	Oct '22	Nov '22	Dec '2	
81	Collection and delivery of 2 million tonnes of Kwan O Area 137 Fill Bank and the Tuen Mur Reclamation Sites in the Mainland		Mon 20/12/21	Sun 31/12/23	Tue 7/12/21	Wed 20/12/23	744 days		11 days	Tue 7/12/21	NA	1/10/2	3 10 17 2	24 31 7 14 21	28 5 12	31/12/2
82 🗸	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					
83 🗸	Installing Front End Mobile Unit (FEMU) of	into the proposed vessels	Mon 20/12/21	Sun 26/12/21	1 Fri 20/5/22	Fri 20/5/22	1 day	2	0 days	Fri 20/5/22	Fri 20/5/22					
84 🗸	Submitting application documents to EPD	for application of dumping permits	Mon 20/12/21	Mon 20/12/2	1Tue 28/12/2	1 Tue 28/12/21	1 day	0	0 days	Tue 28/12/21	Tue 28/12/2	1				
85 🗸	Obtaining the dumping permit from EPD		Tue 21/12/21	Fri 31/12/21	Wed 25/5/22	Wed 25/5/22	1 day	84 2	0 days	Wed 25/5/22	Wed 25/5/22					
86	permit of waste at the sea	Employer for the application of the dumping		20/12/21			1 day		0 days	Tue 7/12/21						
87	Obtaining the dumping permits from Min People's Republic of China through the E		Tue 21/12/21	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					
88 🗸	Obtaining all necessary permits, licenses,	•	Mon 20/12/21	Fri 31/12/21	Wed 25/5/22	Wed 25/5/22	1 day	14	0 days	Wed 25/5/22	Wed 25/5/22					
89 🗸	Collection and delivery of 166666 tonnes	of Public Fill	Sat 1/1/22	Thu 31/3/22	Wed 25/5/22	Tue 14/6/22	21 days	10	0 days	Wed 25/5/22	Tue 14/6/22					
90 🗸	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	:				
91 🗸	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 28/12/2	1				
92 🗸	Obtaining the dumping permit from EPD		Sat 18/6/22	Thu 30/6/22	Wed 25/5/22	Wed 25/5/22	1 day	91 14	0 days	Wed 25/5/22	Wed 25/5/22	Ī				
93 🗸		Employer for the application of the dumping	Fri 20/5/22	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					
94 🗸	permit of waste at the sea Obtaining the dumping permits from Min People's Republic of China through the E		Sat 21/5/22	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					
95 🗸	Obtaining all necessary permits, licenses,		Fri 17/6/22	Thu 30/6/22	Wed 25/5/22	Wed 25/5/22	1 day	0	0 days	Wed 25/5/22	Wed 25/5/22	<u> </u>				
96 🗸	Collection and delivery of 499998 tonnes	of Public Fill	Fri 1/7/22	Fri 30/9/22	Mon 13/6/22	Mon 13/6/22	1 day	95,92,94 14	0 days	Mon 13/6/22	Mon 13/6/22					
97	4th quarter of first year		Sat 20/8/22	Sat 31/12/22	Sat 20/8/22	Sat 31/12/22	134 days		12 days	NA	NA					
98 🚃	Submitting application documents to EPD	for application of dumping permits	Sat 17/9/22	Sat 17/9/22	Sat 17/9/22	Sat 17/9/22	1 day	0	12 days	NA	NA					
99 🚃	Obtaining the dumping permit from EPD	(assumed on 30/9/22)	Sun 18/9/22	Fri 30/9/22	Sun 18/9/22	Fri 30/9/22	13 days	98 2	12 days	NA	NA					
100	Submiting Application documents to the E	imployer for the application of the dumping	Sat 20/8/22	Sat 20/8/22	Sat 20/8/22	Sat 20/8/22	1 day	0	12 days	NA	NA					
101	Obtaining the dumping permits from Min People's Republic of China through the E	istry of Ecology and environment of the mployer (assumed on 30/9/22)	Sun 21/8/22	Fri 30/9/22	Sun 21/8/22	Fri 30/9/22	41 days	100 14	12 days	NA	NA					
102	Obtaining all necessary permits, licenses,		Sat 17/9/22	Fri 30/9/22	Sat 17/9/22	Fri 30/9/22	14 days	2	12 days	NA	NA					
103	Collection and delivery of 333332 tonnes	of Public Fill	Sat 1/10/22	Sat 31/12/22	Sat 1/10/22	Sat 31/12/22	92 days	96,102,1 14	12 days	NA	NA					
104	1st quarter of second year		Sun 20/11/22	Fri 31/3/23	Sun 20/11/2	2 Fri 31/3/23	132 days		12 days	NA	NA			-		
105	Submitting application documents to EPD	for application of dumping permits	Sun 18/12/22	Sun 18/12/22	2 Sun 18/12/2	2 Sun 18/12/22	1 day	0	12 days	NA	NA				F)
106	Obtaining the dumping permit from EPD	(assumed on 31/12/22)	Mon 19/12/22	Sat 31/12/22	Mon 19/12/2	2 Sat 31/12/22	13 days	105 2	12 days	NA	NA					
107	permit of waste at the sea	imployer for the application of the dumping		20/11/22	Sun 20/11/22	Sun 20/11/22	,	0	12 days		NA					
108	Obtaining the dumping permits from Min People's Republic of China through the E	mployer		Sat 31/12/22	21/11/22	Sat 31/12/22		107 14	12 days		NA					
109	Obtaining all necessary permits, licenses,	<u>''</u>					14 days	2	12 days		NA					
110	Collection and delivery of 250000 tonnes	OT PUBLIC FILL	Sun 1/1/23	Fri 31/3/23				103,109, 14	12 days		NA					
111	2nd quarter of second year	for application of description and the	Sat 18/2/23	Fri 30/6/23			133 days	_	12 days		NA NA					
112	Submitting application documents to EPD	11 1 01	Sat 18/3/23	Sat 18/3/23			1 day	0	12 days		NA	-				
113 114	Obtaining the dumping permit from EPD Submiting Application documents to the E	(assumed on 31/3/23) Employer for the application of the dumping	Sun 19/3/23 Sat 18/2/23	Fri 31/3/23 Sat 18/2/23			13 days 1 day	0	12 days 12 days		NA NA	$+ \parallel$				
115	permit of waste at the sea Obtaining the dumping permits from Min	istry of Ecology and environment of the	Sun 19/2/23		Sun 19/2/23		41 days	114 14	12 days		NA	-				
116	People's Republic of China through the E Obtaining all necessary permits, licenses,		Sat 18/3/23	Fri 31/3/23	Sat 18/3/23	Fri 31/3/23	14 days	2	12 days	NA	NA	$+\parallel\parallel$				
117	Collection and delivery of 250000 tonnes	· ·	Sat 1/4/23				,	110,113, 14	12 days		NA					
118	3rd quarter of second year		Sat 20/5/23	Sat 30/9/23			134 days		12 days		NA	$+\parallel\parallel$				
119	Submitting application documents to EPD	for application of dumping permits	Sat 17/6/23				1 day	0	12 days		NA					
														I		
		Task	Ex	kternal Tasks			Du	ıration-only			Exte	rnal Ta	sks	♦		
.		Split	E>	kternal Miles	tone	♦	Ma	anual Summa	ry Rollup	•	Exte	rnal M	ilestone			
Project: 3month Date: [1/10/202	h rolling Programme Oct22 to Dec22 CV/2021/09	Milestone •	In	active Milest	tone		Ma	anual Summa	ry	•	Proc	ress			ı	
	•	Summary		active Summ				art-only	-		Dead			Ŷ		
		•		lanual Task	,	\Diamond		,						•		
		Project Summary	■ IV	iai iudi TdSK		~	FIL	ish-only		▼	_					

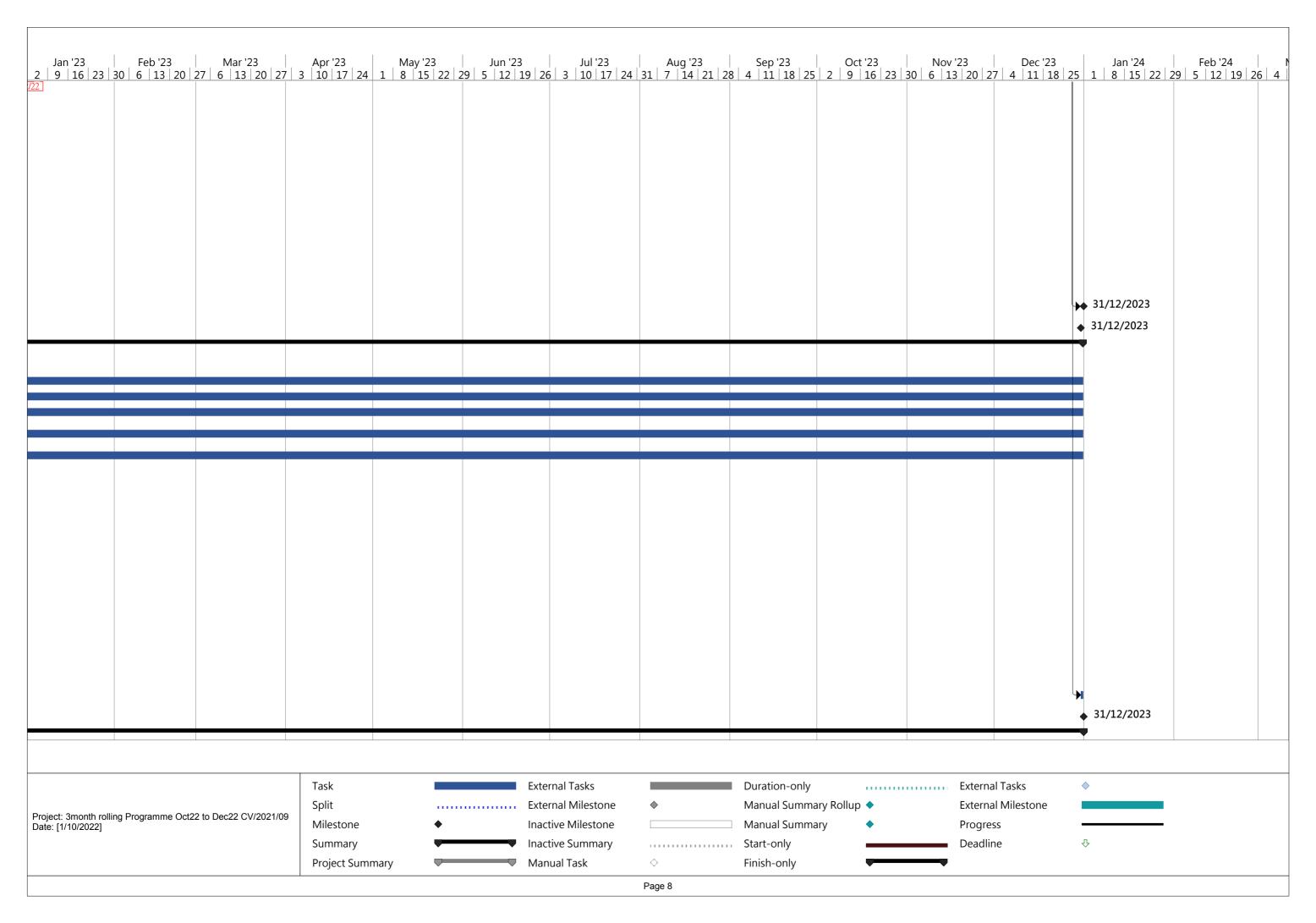
ID		Task Name		Baseline Start	Baseline Finish	Start	Finish	Duration			Total Slack	Actual Start	Actual Finish					
	0			Start	1 111311					allow		Start	1 1111311		Oct '22		Nov '22	Dec '22
120	U	Obtaining the dumping permit from EPD (assumed on 30/6/23)	Sun 18/6/23	Fri 30/6/23	Sun 18/6/23	Fri 30/6/23	13 days	119	14	12 days	NA	NA	26 <u>1/10/</u>		24 31	1 7 14 21 2	28 5 12 19 26 31/12
121		Submiting Application documents to the E	<u> </u>	Sat 20/5/23	Sat 20/5/23			1 day			12 days	NA	NA		==-			
122		permit of waste at the sea Obtaining the dumping permits from Mini-		Sun 21/5/23	Fri 30/6/23	Sun 21/5/23	Fri 30/6/23	41 days	121	14	12 days	NA	NA					
123		People's Republic of China through the En Obtaining all necessary permits, licenses,		Sat 17/6/23	Fri 30/6/23	Sat 17/6/23	Fri 30/6/23	14 days		2	12 days	NA	NA					
		Collection and delivery of 250000 tonnes	· ·	Sat 1/7/23	Sat 30/9/23			92 days	117,123,		12 days	NA	NA					
125		4th quarter of second year		Sun 20/8/23	Sun 31/12/23	Sun 20/8/23	Wed 20/12/23	,	1 1		11 days	NA	NA					
		Submitting application documents to EPD	for application of dumping permits	Sun 17/9/23				1 day			12 days	NA	NA					
127		Obtaining the dumping permit from EPD (assumed on 30/9/23)	Mon 18/9/23	Sat 30/9/23			13 days	126		12 days	NA	NA					
128		Submiting Application documents to the Epermit of waste at the sea	mployer for the application of the dumping	Sun 20/8/23	Sun 20/8/23	Sun 20/8/23	Sun 20/8/23	1 day		0	12 days	NA	NA					
129	-	Obtaining the dumping permits from Mini		Mon 21/8/23	Sat 30/9/23	Mon 21/8/23	Sat 30/9/23	41 days	128	14	12 days	NA	NA					
130		People's Republic of China through the En Obtaining all necessary permits, licenses,	, , ,	Sun 17/9/23	Sat 30/9/23	Sun 17/9/23	Sat 30/9/23	14 days		0	12 days	NA	NA					
131		Collection and delivery of 250000 tonnes	of Public Fill	Sun 1/10/23	Sun 31/12/23	Mon 2/10/23	Wed 20/12/23	80 days	124,130,	14	11 days	NA	NA					
132		Collection and delivery of 8 million tonnes of Kwan O Area 137 Fill Bank and the Tuen Mun	Area 38 Fill Bank to the Desiognated	Mon 20/12/2	1 Sun 31/12/23	Tue 7/12/21	Wed 20/12/23	744 days	6		11 days	NA	NA					
133	-	Reclamation Sites in the Mainland (subject to 1st quarter of first year	Project's Manager's instruction)	Mon 20/12/2	1 Thu 31/3/22	Tue 7/12/21	Thu 30/6/22	206 days			549 days	NA	NA					
1-		Installing Front End Mobile Unit (FEMU) or	nto the proposed vessels				21Sun 26/12/21				674 days		NA					
	## ##	Submitting application documents to EPD					1 Tue 28/12/21	,			549 days	NA	NA					
		Obtaining the dumping permit from EPD (· · · · · · · · · · · · · · · · · · ·		Fri 31/12/21			123 days	135		549 days	NA	NA					
		Submiting Application documents to the E	,	Mon 20/12/21	1 Mon		Tue 7/12/21	1 day			563 days		NA					
138	***	permit of waste at the sea Obtaining the dumping permits from Mini	stry of Ecology and environment of the	Tue 21/12/21	20/12/21 Fri 31/12/21	Wed 8/12/21	1 Sat 16/4/22	130 days	137	2	563 days	NA	NA					
		People's Republic of China through the En	nployer (assumed on 31/12/21)								•							
	III	Obtaining all necessary permits, licenses,	•••		1 Fri 31/12/21			14 days			549 days	NA	NA					
		Collection and delivery of 666666 tonnes of	Public Fill	Sat 1/1/22			Thu 30/6/22	61 days	139,138,		549 days	NA	NA					
		2nd quarter of first year	for application of dumping permits	Fri 18/2/22 Fri 18/3/22	Fri 18/3/22			133 days			12 days	NA NA	NA NA					
		Submitting application documents to EPD Obtaining the dumping permit from EPD (· · · · · · · · · · · · · · · · · · ·	Sat 19/3/22	Thu 31/3/22			1 day 43 days	142		18 days 12 days	NA NA	NA NA					
		Submiting Application documents to the E	•		Fri 18/2/22			1 day			36 days	NA	NA					
145		permit of waste at the sea Obtaining the dumping permits from Mini		Sat 19/2/22	Thu 31/3/22	Tue 1/3/22	Sat 16/4/22	47 days	144	2	26 days	NA	NA					
146		People's Republic of China through the En Obtaining all necessary permits, licenses,	• •	Fri 18/3/22	Thu 31/3/22	Sun 17/4/22	Sat 30/4/22	14 days		0	12 days	NA	NA					
		Collection and delivery of 666666 tonnes of	<u>''</u>	Fri 1/4/22			Thu 30/6/22	61 days	146,145,		12 days	NA	NA					
148		3rd quarter of first year		Fri 20/5/22	Fri 30/9/22			134 days	1 1		12 days	NA	NA					
149		Submitting application documents to EPD	for application of dumping permits	Fri 17/6/22	Fri 17/6/22			1 day			12 days	NA	NA					
		Obtaining the dumping permit from EPD (assumed on 30/6/22)	Sat 18/6/22	Thu 30/6/22	Sat 18/6/22	Thu 30/6/22	13 days	149		12 days	NA	NA					
		Submiting Application documents to the E	<u>'</u>	Fri 20/5/22	Fri 20/5/22	Fri 20/5/22	Fri 20/5/22	1 day		0	12 days	NA	NA	$\dashv \parallel$				
152		permit of waste at the sea Obtaining the dumping permits from Mini	stry of Ecology and environment of the	Sat 21/5/22	Thu 30/6/22	Sat 21/5/22	Thu 30/6/22	41 days	151	14	12 days	NA	NA	$-\parallel \parallel$				
153		People's Republic of China through the En Obtaining all necessary permits, licenses,		Fri 17/6/22	Thu 30/6/22	Fri 17/6/22	Thu 30/6/22	14 days	1	0	12 days	NA	NA	$-\parallel \parallel$				
154		Collection and delivery of 1666665 tonnes	<u>'</u>	Fri 1/7/22	Fri 30/9/22		Fri 30/9/22	92 days	150,153,		12 days	NA	NA					
155		4th quarter of first year		Sat 20/8/22			Sat 31/12/22	,	1		12 days	NA	NA					
156		Submitting application documents to EPD	for application of dumping permits	Sat 17/9/22	Sat 17/9/22			1 day			12 days	NA	NA					
		Obtaining the dumping permit from EPD(Sun 18/9/22	Fri 30/9/22			13 days	156	2	12 days	NA	NA					
158		Submiting Application documents to the Elepermit of waste at the sea	mployer for the application of the dumping	Sat 20/8/22	Sat 20/8/22	Sat 20/8/22	Sat 20/8/22	1 day		0	12 days	NA	NA					
			Task	E	xternal Tasks			Du	uration-o	nly			E	kternal Ta	asks	\langle		
			Split	E	xternal Milest	tone	♦	М	anual Sui	mman	y Rollup	•	E	kternal M	1ilestone			
		rolling Programme Oct22 to Dec22 CV/2021/09	Milestone •		nactive Milest				anual Sui			•		rogress		_		
Date: [1/1	10/2022	1								minar	у	▼		Ū		п		
			Summary		nactive Summ	,			art-only		1		D	eadline		$\hat{\mathbf{T}}$		
			Project Summary	N	1anual Task		\Diamond	Fir	nish-only	,	1							

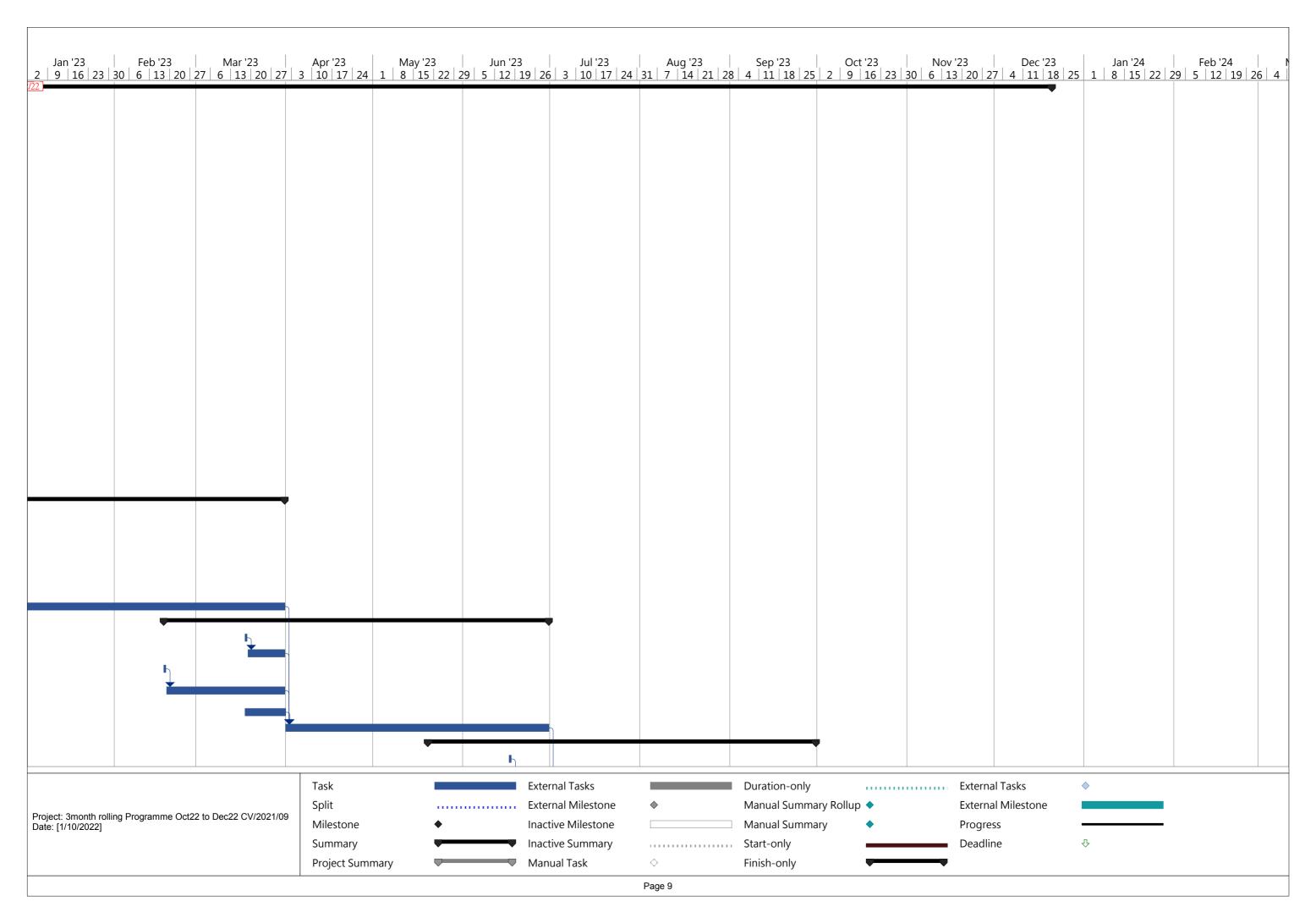
ID	Task Name		Baseline Start	Baseline Finish	Start	Finish	Duration			Slack	Actual Start	Actual Finish	Oct '22		Dec '22 28 5 12 19 26 2
159	Obtaining the dumping permits from Mir People's Republic of China through the E		Sun 21/8/22	Fri 30/9/22	Sun 21/8/22	Fri 30/9/22	41 days	158	14	12 days	NA	NA	1/10/22	24 31 7 14 21	28 5 12 19 28 2
160	Obtaining all necessary permits, licenses		Sat 17/9/22	Fri 30/9/22	Sat 17/9/22	Fri 30/9/22	14 days		2	12 days	NA	NA			
161	Collection and delivery of 1 million tonnes	s of Public Fill	Sat 1/10/22	Sat 31/12/22	Sat 1/10/22	Sat 31/12/22	92 days	160,154,	, 14	12 days	NA	NA			
162	1st quarter of second year		Sun 20/11/22	Fri 31/3/23	Sun 20/11/2	2 Fri 31/3/23	132 days			12 days	NA	NA			
163	Submitting application documents to EPD) for application of dumping permits				2 Sun 18/12/22	,		0	12 days	NA	NA		•	
164	Obtaining the dumping permit from EPD					2 Sat 31/12/22	,	163	2	12 days	NA	NA			1
165		Employer for the application of the dumping			Sun	Sun 20/11/22	,	100	0	12 days	NA	NA		_	
	permit of waste at the sea			20/11/22	20/11/22			105	0						
166	Obtaining the dumping permits from Mir People's Republic of China through the E	mployer			21/11/22	Sat 31/12/22		165	14	12 days	NA	NA			
167	Obtaining all necessary permits, licenses						14 days		2	12 days	NA	NA			
168	Collection and delivery of 1 million tonne	s of Public Fill	Sun 1/1/23	Fri 31/3/23			90 days	161,167,	, 14	12 days	NA	NA			
169	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			
170	Submitting application documents to EPI	of 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			
171 ===	Obtaining the dumping permit from EPD	(assumed on 31/3/23)	Sun 19/3/23	Fri 31/3/23	Sun 19/3/23	Fri 31/3/23	13 days	170	2	12 days	NA	NA			
172		Employer for the application of the dumping	Sat 18/2/23	Sat 18/2/23	Sat 18/2/23	Sat 18/2/23	1 day		0	12 days	NA	NA			
173	permit of waste at the sea Obtaining the dumping permits from Mir		Sun 19/2/23	Fri 31/3/23	Sun 19/2/23	Fri 31/3/23	41 days	172	14	12 days	NA	NA			
174	People's Republic of China through the E Obtaining all necessary permits, licenses		Sat 18/3/23	Fri 31/3/23	Sat 18/3/23	Fri 31/3/23	14 days		2	12 days	NA	NA			
175	Collection and delivery of 1 million tonnes	• •	Sat 1/4/23					168,174,		12 days	NA	NA			
	· ·	SOFT UDITED IN		Sat 30/9/23				100,174,	, 17		NA NA	NA			
176	3rd quarter of second year	Non application of dispersion accessite	Sat 20/5/23				134 days		0	12 days		NA NA			
177	Submitting application documents to EPE	• • • • • • • • • • • • • • • • • • • •	Sat 17/6/23	Sat 17/6/23			1 day		0	12 days	NA	1 1			
178	Obtaining the dumping permit from EPD	· ,	Sun 18/6/23	Fri 30/6/23				177	2	12 days	NA	NA			
179	permit of waste at the sea	Employer for the application of the dumping		Sat 20/5/23			1 day		0	12 days	NA	NA			
180	Obtaining the dumping permits from Mir People's Republic of China through the E		Sun 21/5/23	Fri 30/6/23	Sun 21/5/23	Fri 30/6/23	41 days	179	14	12 days	NA	NA			
181	Obtaining all necessary permits, licenses	approvals and concents	Sat 17/6/23	Fri 30/6/23	Sat 17/6/23	Fri 30/6/23	14 days		2	12 days	NA	NA			
182	Collection and delivery of 1million tonnes	s of Public Fill	Sat 1/7/23	Sat 30/9/23	Sat 1/7/23	Sat 30/9/23	92 days	181,175,	, 14	12 days	NA	NA			
183	4th quarter of second year		Sun 20/8/23	Sun 31/12/23	Sun 20/8/23	Wed 20/12/23	123 days			11 days	NA	NA			
184	Submitting application documents to EPE) for application of dumping permits	Sun 17/9/23	Sun 17/9/23	Sun 17/9/23	Sun 17/9/23	1 day		0	12 days	NA	NA			
185	Obtaining the dumping permit from EPD	(assumed on 30/9/23)	Mon 18/9/23	Sat 30/9/23	Mon 18/9/23	Sat 30/9/23	13 days	184	2	12 days	NA	NA			
186	Submiting Application documents to the E	Employer for the application of the dumping	Sun 20/8/23	Sun 20/8/23	Sun 20/8/23	Sun 20/8/23	1 day		0	12 days	NA	NA			
187	Obtaining the dumping permits from Mir People's Republic of China through the E		Mon 21/8/23	Sat 30/9/23	Mon 21/8/23	Sat 30/9/23	41 days	186	14	12 days	NA	NA			
188	Obtaining all necessary permits, licenses		Sun 17/9/23	Sat 30/9/23	Sun 17/9/23	Sat 30/9/23	14 days		2	12 days	NA	NA			
189 🛅	Collection and delivery of 1 million tonne	s of Public Fill	Sun 1/10/23	Sun 31/12/23	Mon 2/10/23	Wed 20/12/23	80 days	182,187,	, 14	11 days	NA	NA			
190	Removal, excavation and deposition of stoc	kpiled and/or deposited Public Fill within	Sat 1/1/22	Sun	Sat 1/1/22	Sun 31/12/23	730 davs	6SS		0 days	NA	NA			
	the Designated Reclamation Sites in the Mai			31/12/23											
191	Removal, excavation and deposition of stock	xpiled and/or deposited public fill	Sat 1/1/22	Sun 31/12/23	Sat 1/1/22	Sun 31/12/23	730 days		14	0 days	NA	NA			
192	Operation and maintenance of the existing nassociation with the existing berthing facility		Sat 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			
102	Reclamation Sites in the Mainland Operation and maintenance of the existing n	avigation channel and turning basins	Sat 1/1/22	Sun 31/12/22	Sat 1/1/22	Sun 31/12/23	730 dave		14	0 days	Sat 1/1/22	NA			
193	· ·	•							17	,		NA NA			
194	Design, construction, operation and mainter turning basins in association with the new b		3at 12/12/09	3at 12/12/09	111u 10/0/22	Juli 3 1/12/23	304 days			0 days	NA	INA			
195	Designated Reclamation Sites in the Mainlar Obtaining the dumping permits from Ministr	nd (subject to Project's Manager's ry of Ecology and environment of the	Fri 31/12/21	Mon 31/1/22	Thu 16/6/22	Thu 16/6/22	1 day		0	2 days	NA	NA			
	People's Republic of China through the Emp	oloyer for Zone A & B (assumed on							<u> </u>						
		Task	Ex	ternal Tasks			Du	ration-o	only				External Tasks	\limits	
		Split	Ex	ternal Milesto	one	♦	Ma	anual Sur	mma	ry Rollup	•	I	External Milestone		
	rolling Programme Oct22 to Dec22 CV/2021/09	Milestone •	Ina	active Milesto	one			anual Sur			•	ı	Progress		
										-			· ·		
Project: 3month Date: [1/10/2022		Summary	■ Ina	active Summa	ary		Sta	art-only					Deadline	$\hat{\Phi}$	
		Summary Project Summary		active Summa anual Task	-			art-only iish-only	′				Deadline	Ŷ	

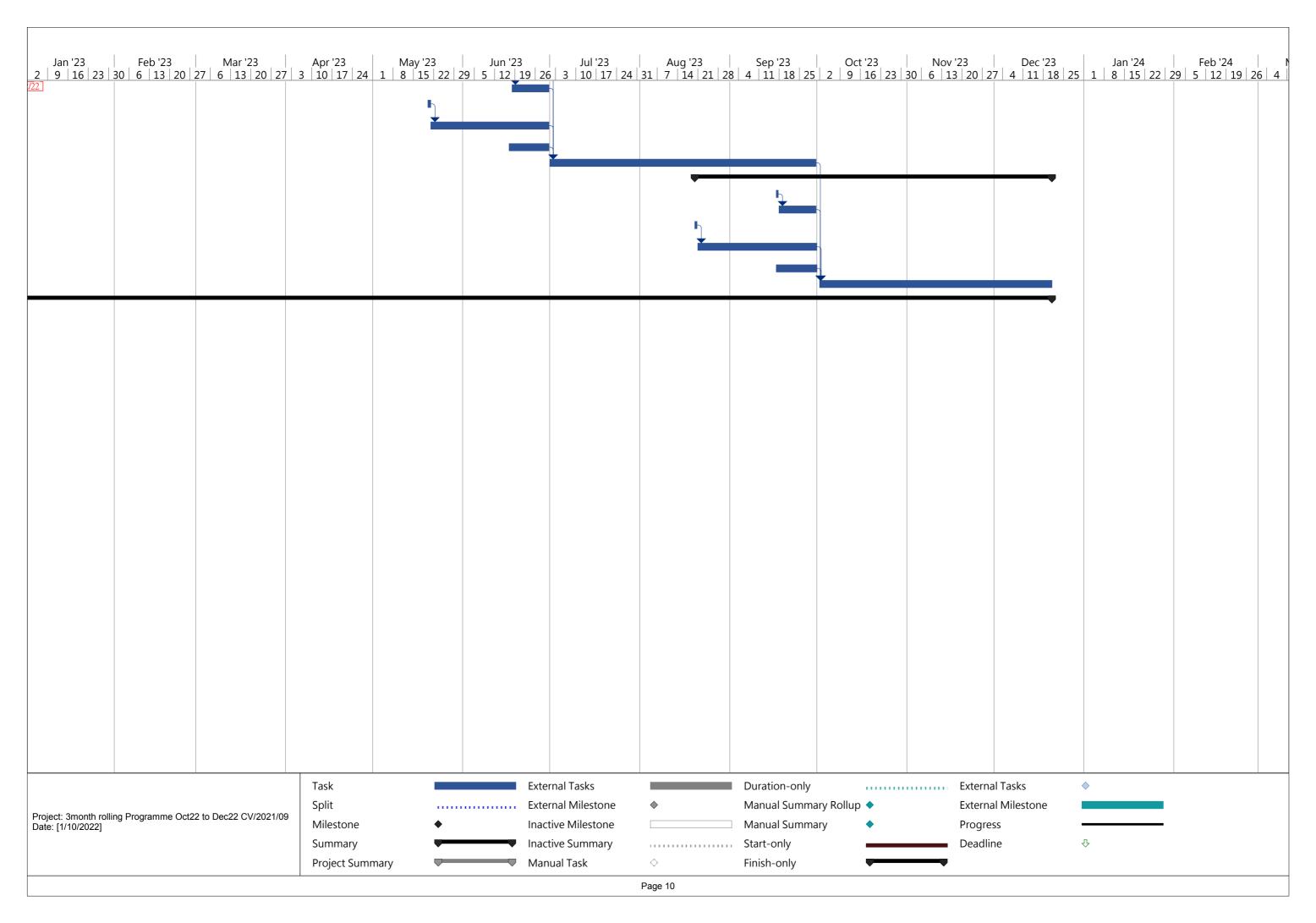
ID	Task Name	Baseline		Start	Finish	Duration	Predec			Actual	Actual					
		Start	Finish						Slack	Start	Finish					
A								allow	V			26	Oct '22		Nov '22	Dec '22 . 28 5 12 19 26
96 🟢	Preparation of design submission	Sat 1/1/22	Sun 30/1/22	Fri 17/6/22	Sat 16/7/22	30 days	195	7	2 days	NA	NA	1/10/2		12:,02		31/
97	Obtaining all necessary design approvals and concents	Mon 31/1/22	Tue 1/3/22	Sun 17/7/22	Mon 15/8/22	30 days	196	7	2 days	NA	NA					
98 🎹	Construction of the new navigation channel and turning basins	Wed 2/3/22	Fri 29/7/22	Tue 16/8/22	Thu 12/1/23	150 days	197	14	2 days	NA	NA					
.99	Obtaining the construction completion certificate	Sat 30/7/22	Sun 28/8/22	Fri 13/1/23	Sat 11/2/23	30 days	198	7	2 days	NA	NA					
00	Operation and maintenance of navigation channel and turning basins	Mon 29/8/22	Sun 31/12/23	Tue 14/2/23	Sun 31/12/23	321 days	199	14	0 days	NA	NA					
201	Design, construction, operation and maintenance of new berthing facilities at Zone B of the Designated Reclamation Sites in the Mainland (subject to Project's Manager's instruction)	Fri 31/12/21	Sun 31/12/23	Thu 16/6/22	Sun 31/12/23	564 days			0 days	NA	NA					
02	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer for Zone A & B (assumed on	Fri 31/12/21	Fri 31/12/21	Thu 16/6/22	Thu 16/6/22	1 day			0 days	NA	NA					
03 🔠	Preparation of design submission	Sat 1/1/22	Sun 30/1/22	Fri 17/6/22	Sat 16/7/22	30 days	202	7	0 days	NA	NA					
04	Obtaining all necessary design approvals and concents	Mon 31/1/22	Tue 1/3/22	Sun 17/7/22	Mon 15/8/22	30 days	203	7	0 days	NA	NA					
05	Construction of the berthing facilities	Wed 2/3/22	Sun 28/8/22	Tue 16/8/22	Sat 11/2/23	180 days	204	14	0 days	NA	NA					
06	Obtaining the construction completion certificate	Mon 29/8/22	Tue 27/9/22	Sun 12/2/23	Mon 13/3/23	30 days	205	7	0 days	NA	NA					
07	Operation and maintenance of new berthing facilities	Wed 28/9/22	Sun 31/12/23	Tue 14/3/23	Sun 31/12/23	293 days	206	14	0 days	NA	NA					
208	Design and construction of seawalls (approximate 200m) in association with new berthing facility at Zone B of the Designated Reclamation Sites in the Mainland	Fri 10/6/22	Sat 4/2/23	Thu 16/6/22	Tue 13/12/22	181 days			383 days	NA	NA					₩
09	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer for Zone A & B	Sat 1/1/22	Sat 1/1/22	Thu 16/6/22	Thu 16/6/22	1 day		0	383 days	NA	NA					
10	Preparation of design submission (PMI no18)	Sun 2/1/22	Mon 31/1/22	Fri 17/6/22	Sat 16/7/22	30 days	209	7	383 days	NA	NA					
11	Obtaining all necessary design approvals and concents	Tue 1/2/22	Wed 2/3/22	Sun 17/7/22	Mon 15/8/22	30 days	210	7	383 days	NA	NA					
12	Construction of seawalls (subject to Project's Manager's instruction)	Thu 3/3/22	Tue 31/5/22	Tue 16/8/22	Sun 13/11/22	90 days	211	14	383 days	NA	NA					
13 🚃	Obtaining the construction completion certificate (subject to Project's Manager's instruction)	Wed 1/6/22	Thu 30/6/22	Mon 14/11/22	Tue 13/12/22	30 days	212	7	383 days	NA	NA					
14	Planned Completion Date (Section 3)	Sun 31/12/23	Sun 31/12/23	Sun 31/12/23	Sun 31/12/23	0 days			1 day	NA	NA					

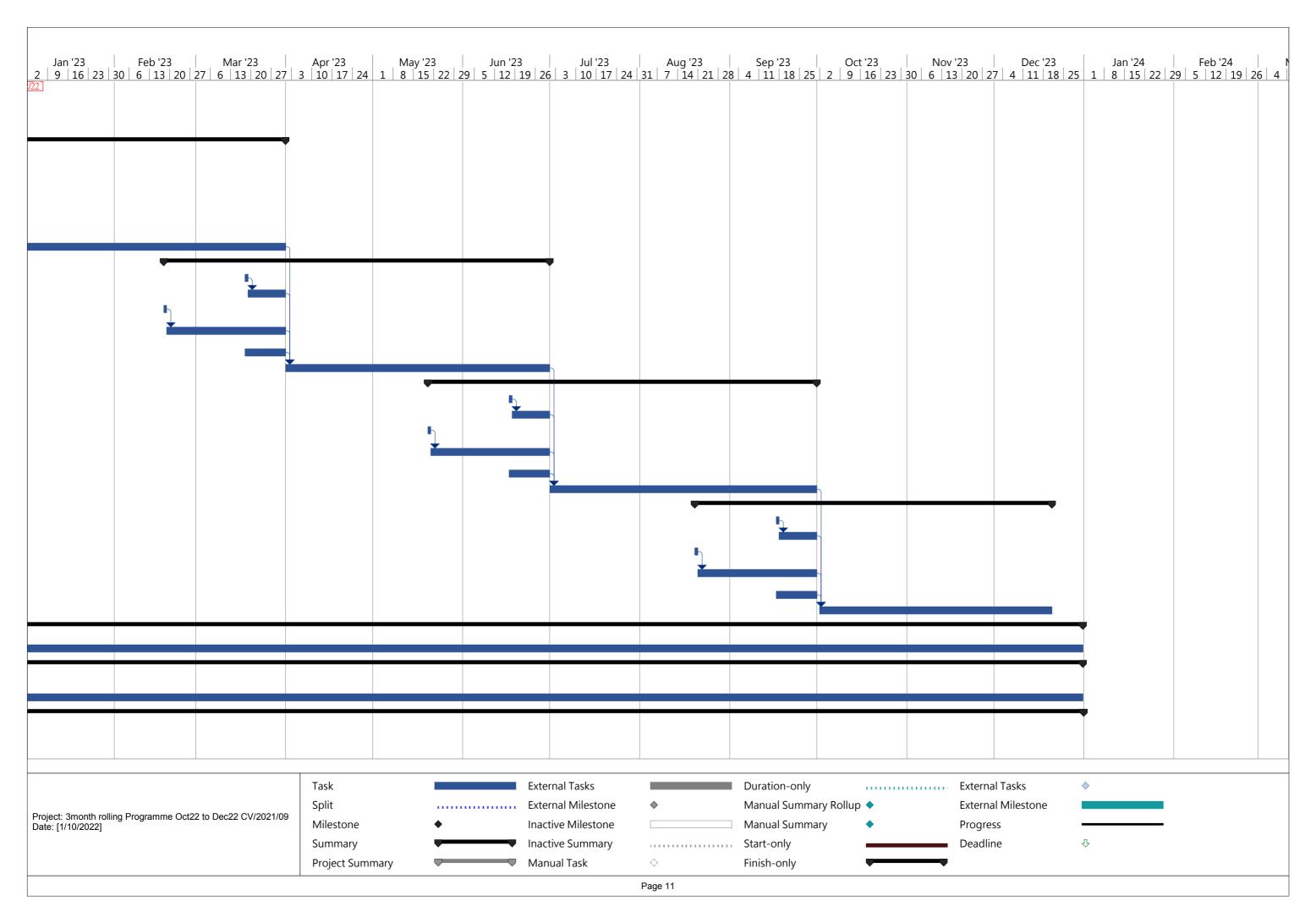


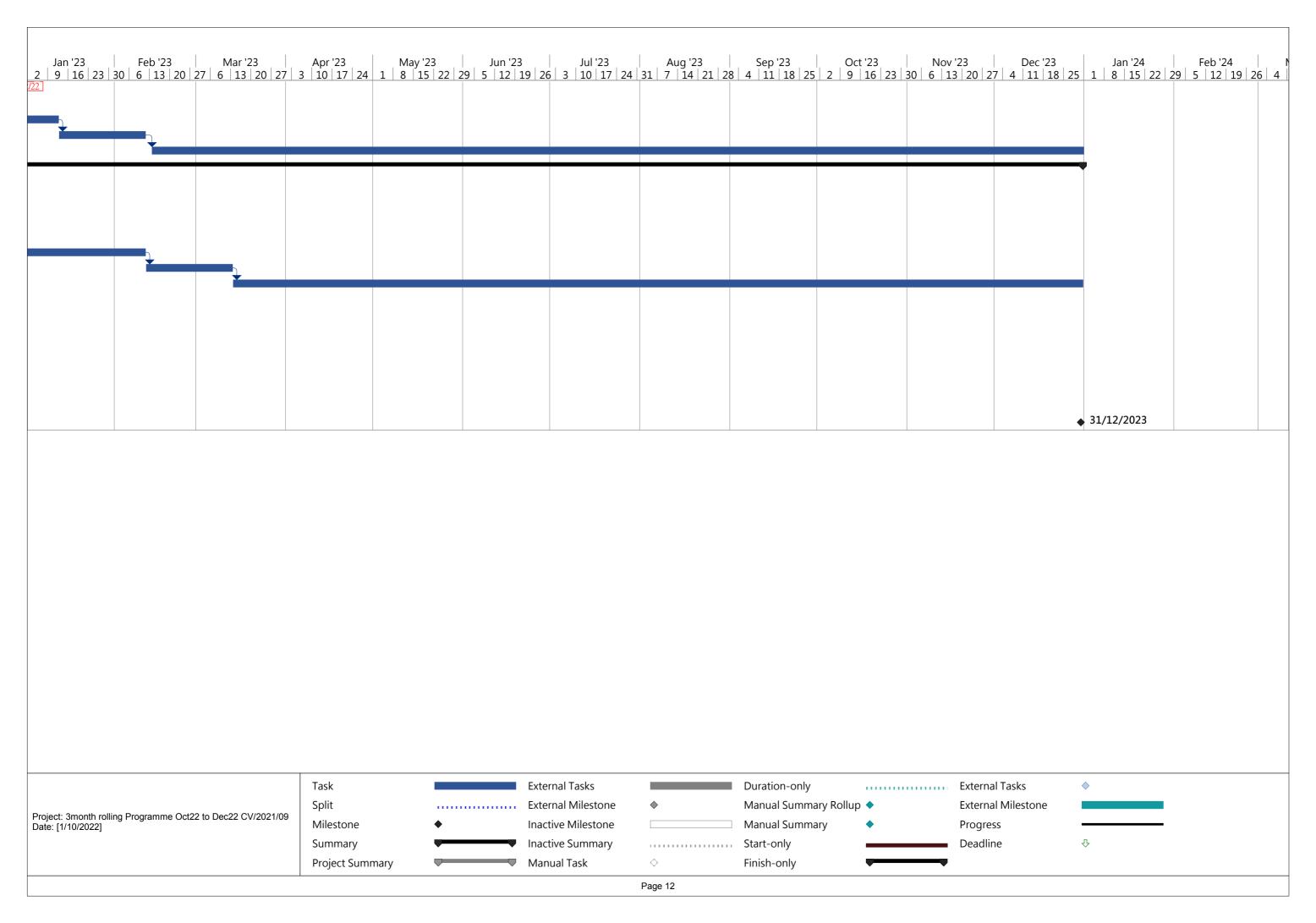














Appendix H Weekly ET's Site Inspection Record



Inspection Date

3/11/22

Time

10=00

Weather

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

Wind

: Calm / (Ligh) / Breeze / Strong

Temperature

21°(

Humidity

(High)/ Moderate / Low

Inspected by	CEDD	Contractor / Sub-Contactor	ET
Signature:	M		H I
			Nuk
Name:	C.t.No	Philip 1to	Neck the War
Title	Mos	S.M.	EIT



Environmental Checklist		ement stages		Remark
		No	N/A	
Fugitive Dust Emission				
Dust control / mitigation measures shall be provided to prevent dust nuisance.	4			
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 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. 	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. 	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.	4			
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 (APCC 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			
 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.	4			
Compressors and generators should operate with door closed.	√ √			
 Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum 				
Noisy equipment and mobile plant shall always be site away from NSRs.	7			



Environmental Checklist		ement stages		Remark
	Yes		N/A	-
Water Quality			Carrier .	
 Drainage system and the sand / silt removal facilities should be adequate and well maintained to prevent flooding and overflow, especially after rain storms. 	√		SINES C.	1 - SUPER COLUMN TO THE SECOND
The storm water intercepting system shall be effective to collect of runoff and remove suspended solids before discharge.	1	l		
 Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding. 	√			
The material shall be properly covered to prevent washed away especially before rainstorm.	1		<u> </u>	
The temporary slope surfaces shall be covered with impermeable sheet or sprayed with water.	1	1		
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.	17			
 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 sitt 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.	1	ļ <u> </u>		
 The chemical toilets (if use) shall be provided by a licensed contractor, who will be responsible for disposal and maintenance of these facilities. 	7			
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.	4			
 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.	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.	1			
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.	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.	4			
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.	7			
Lighting shall be set to minimise night-time glare.	1			



Environmental Checklist		menta tages		Remark
	Yes	No	N/A	1
Waste Management				
Construction Waste Management			A. F	
 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. 	1			
 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. 	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	e de la constante de la consta	a exercise	i i	
 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. 	√		<u> </u>	
 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		226		
 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. 	<u> </u>			
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		<u> </u>	
 Ве атranged so that incompatible materials are adequately separated. 	√			



	Environmental Checklist		ement Stages		Remark
		Yes	No		.
"	Warning panels should be displayed at the waste storage area.	4	<u> </u>		
•	Waste storage area should be cleaned and maintained regularly.	1			
•	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			
ı	The dangerous goods / chemical spillage or leakage procedures (including equipments) should be in place.	1			
Go	od Site Practices		\$000 - 		
•	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.	√			
•	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.	V	<u> </u>		
•	The Environmental Permit should be displaced conspicuously on site.	4	<u> </u>		
•	Construction noise permits should be posted at site entrance or available for site inspection.	V			
-	Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.	-√			
	Chemical storage area provided with lock and located on sealed areas.	4			
•	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			
•	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.	7			
•	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			



Summary of the Weekly Site Inspection:

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

F	Remark		 	

	Name	Title	Signature	Date
Checked by	June Lau	ET Representative	100	03 November 2022



Inspection Date : (0 / [(/ 2 / 2 Z

Time : 10 '() 0

Weather : Sunny /(Fine) Cloudy / Overcast / Drizzle / Rain / Storm / Hazy

Wind : (Calm) Light / Breeze / Strong

Temperature : 26

Humidity : High / Moderate / Low

Inspected by	CEDD	Contractor / Sub-Contactor	ET
Signature:	1	46	FEJ
Name:	C.K.H6	philip 1to)ell ip
Title	Atow	S.M.	Technit



Environmental Checklist		ment		Remark
	Yes	No	N/A	
Fugitive Dust Emission		-+:-4		
Dust control / mitigation measures shall be provided to prevent dust nuisance.	1			
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 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.	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. 	1			
 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.	4			
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.	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				
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.	1			
 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.	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. 	1			
Noisy equipment and mobile plant shall always be site away from NSRs.	1			



Environmental Checklist		ment tages		Remark
	Yes		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. 	1,200	1		Item 1
 The storm water intercepting system shall be effective to collect of runoff and remove suspended solids before discharge. 	4		ļ · —	
 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. 	7			
 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. 	V			
 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 rainsform 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. 	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.	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. 	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.	1			
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.	1			
A waste collection vessel shall be deployed to remove floating debris.	4	-		
Landscape and Visual				
The maximum stockpiling 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.	√			
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.	4			
Lighting shall be set to minimise night-time glare.	1			



Environmental Checklist	Implementation Stages*			Remark
	Yes	No	N/A	4.5
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. 	7			
 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. 	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. 	1			
 Chemical wastes should be separated for special handling and appropriate treatment at the Chemical Waste Treatment Facility. 	٧			
 Chemical wastes including waste oil should be stored properly in designated areas, e.g. chemical waste storage area. 	1			
The designated chemical waste storage area should only be used for storing chemical wastes.	1		·	
The set-up of chemical waste storage area should			- 20	
 Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition. 	√			
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. 	1			
Have adequate ventilation.	√			
 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		ement tages		Remark
		Yes		N/A	
•	Warning panels should be displayed at the waste storage area.	√ √	1.10	13775	·
•	Waste storage area should be cleaned and maintained regularly.	√		<u> </u>	
•	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			
•	Oit 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.	1			
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.	4			Tombe Pict Colonia and April
•	Training of site personnel in proper waste management and chemical handling procedures should be provided.	√	<u> </u>		
•	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.	1			
•	The Environmental Permit should be displaced conspicuously on site.	4	 		
•	Construction noise permits should be posted at site entrance or available for site inspection.	1	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.	4			
•	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.	√			·····
•	Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors.	√			
•	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.	1			



Summary of the Weekly Site Inspection:

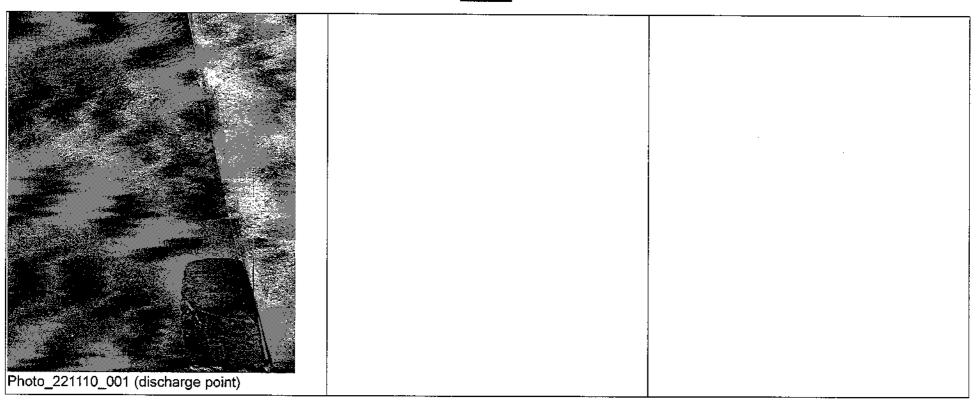
item	Details of defective works or observations	Proposed Follow Up Action	Photo Ref.	Further Action Required (Yes/No)	Target Completion Date
01	Muddy water was observed at discharge point.	To enhance water mitigation measure to avoid muddy discharge	221110_001	Yes	2022-11-17

F	Remark		
		•	

	Name	Title	Signature	Date
Checked by	June Lau	ET Representative	Jue	10 November 2022



Photo



CEDD Contract No.: CV/2021/09

Then Mun Area 38 Handling of Surplus Public Fill (2022-2023) - Tsoung Kwan O Area 137 Fill Bank



Inspection Date

: -7-11-22

Time

: (0:00

Weather

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

Wind

: Calm / Light / Breeze / Strong

Temperature

Humidity

Inspected by CEDD		CEDD Contractor / Sub-Contactor	
Signature:	1/2	My	
Name:	CK.M6	Philip th	cha Honla
Title	ALOW	SM	Technician



	Environmental Checklist			ation *	Remark	
		Yes	No	N/A		
Fug	itive Dust Emission				They	
•	Dust control / mitigation measures shall be provided to prevent dust nuisance.		4		Item 1	
•	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.	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.	1				
•	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.	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).	1				
Noi	se Impact					
•	The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted.	7				
•	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.	٧				
•	Air compressors and hand held breakers should have noise labels.	4				
•	Compressors and generators should operate with door closed.	1				
=	Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	4				
•	Noisy equipment and mobile plant shall always be site away from NSRs.	1				



Environmental Checklist			*	Remark
	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. 	√	3946e	<u> </u>	
 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			,, <u>.</u>
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Landscape and Visual				
 The maximum stockpiling 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.	4			
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Lighting shall be set to minimise night-time glare.	1			



Environmental Checklist			tion	Remark
		No		
Waste Management	5.00.000			
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. 	V			
 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			
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Chemical Waste Management		3	Para	
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Chemical wastes including waste oil should be stored properly in designated areas, e.g. chemical waste storage area.	V			
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. 	√			
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. 	1			
Have adequate ventilation.	1	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.	1		<u> </u>	



Environmental Checklist			ation *	Remark
	Yes		N/A	1
 Warning panels should be displayed at the waste storage area. 	1			
Waste storage area should be cleaned and maintained regularly.	1			
 Chemical waste should be transported regularly by a registered chemical waste collector to a facility licensed to receive chemical waste. 	1			
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Oil leakage from machinery, vehicle and plant should be prevented.	1			<u></u>
 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.	1			
Good Site Practices		ý.	1 735	
 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		e i jugarni	
 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			- N - N - N - N - N - N - N - N - N - N
 Proper storage and site practices to minimise the potential for damage or contamination of construction materials. 	√			
The Environmental Permit should be displaced conspicuously on site.	1			
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. 	1		i	
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. 	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			



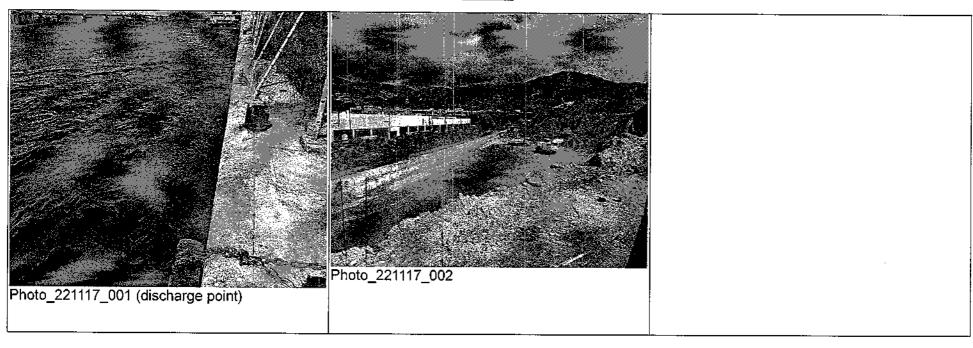
Summary of the Weekly Site Inspection:

Item	Details of defective works or observations	Proposed Follow Up Action	Photo Ref.	Further Action Required (Yes/No)	Target Completion Date
01	Dry soil surface was observed in the 3RS area.	Provide water spraying to avoid dust generation	221117_001	Yes	2022-11-25
02	Followed up Item 1 on 10/11/2022, soil near discharge point was cleaned.	**	221117_002	No	

F	Remark		 	
		· ···		

	Name	Title	Signature	Date
Checked by	June Lau	ET Representative	1	17 November 2022

<u>Photo</u>





Inspection Date

25/11/22

Time

10=00

Weather

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

Wind

: Calm / (ight) Breeze / Strong

Temperature

26°(

Humidity

High / Moderate /(Low)

Inspected by	CEDD	Contractor / Sub-Contactor	ET
Signature:			
	M		
			Nak
Name:	CKN		
		DANTEL CHIM	Hak Lei Wai
Title	Alex	(- 0	
		St M	EΛ



	Environmental Checklist		ment tages		Remark	
		Yes	No	N/A		
Fug	itive Dust Emission					
=	Dust control / mitigation measures shall be provided to prevent dust nuisance.	7				
•	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.	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.	1				
•	Unpaved areas should be watered regularly to avoid dust generation.	4	l			
•	The designated site main haul road shall be paved or regular watering.	7				
•	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.	√				
•	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.	1				
•	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.	4				
•	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				
Noi	se Impact			-78		
•	The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted.	1		Me Ariana	The EAST ACT OF THE PROPERTY O	
•	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.	1				
•	Compressors and generators should operate with door closed.	1				
•	Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	4				
•	Noisy equipment and mobile plant shall always be site away from NSRs.	1				



Environmental Checklist		ement Stages		Remark
		No		
Water Quality			4 E	
 Drainage system and the sand / silt removal facilities should be adequate and well maintained to prevent flooding and overflow, especially after rain storms. 	V			是一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个
 The storm water intercepting system shall be effective to collect of runoff and remove suspended solids before discharge. 	4			
 Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding. 	√			
The material shall be properly covered to prevent washed away especially before rainstorm.	1			<u>-</u>
The temporary slope surfaces shall be covered with impermeable sheet or sprayed with water.	1	-		
 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. 	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.	√			
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.	V			
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. 	1			
Adequate environmental control measures shall be provided to prevent / avoid dropping of fill material into the sea during the transfer.	7			
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.	1			
A waste collection vessel shall be deployed to remove floating debris.	√	<u></u>		· · · ·
Landscape and Visual		400	3.73	
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.	4			
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		ementa Stages		Remark
	Yes	No	N/A	
Waste Management	**************************************		spings Balays	
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. 	1			
 Mud and debris should be removed from waterworks access roads and associated drainage systems. 	1	1	<u> </u>	
 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. 	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. 	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		Willia.	. d	
 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. 	1			
Chemical wastes including waste oil should be stored properly in designated areas, e.g. chemical waste storage area.	1	<u>.</u>		
The designated chemical waste storage area should only be used for storing chemical wastes.	1 1	ļ		
The set-up of chemical waste storage area should	K.	أغدد		
 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.	√			
 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. 	1 .			
Have adequate ventilation.	√ √	1	<u> </u>	
 Be covered to prevent rainfall entering (water collected within the bund must be tested and disposal as chemical waste if necessary). 	4		1	
 Be arranged so that incompatible materials are adequately separated. 	1			



	Environmental Checklist		ement		Remark
		Yes	es No N/A		
•	Warning panels should be displayed at the waste storage area.	1		· · · · · · ·	
•	Waste storage area should be cleaned and maintained regularly.	1	<u> </u>		
•	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.	√	╁	<u> </u>	
•	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.	1			
Go	ood Site Practices	16	**************************************		
•	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.	1		 	
•	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.	√			
•	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.	7			
•	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.	√			
•	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.	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.	√			
•	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			



Summary of the Weekly Site Inspection:

Item	Details of defective works or observations	Proposed Follow Up Action	Photo Ref.	Further Action Required (Yes/No)	Target Completion Date
01	Followed up Item 1 on 17/11/2022, water spraying was provided in 3RS area.		221125_001	No	

R	lemark		

	Name	Title	Signature	Date
Checked by	June Lau	ET Representative		25 November 2022



Photo



Photo_221125_001



Inspection Date

28/11/22

Time

10=00

Weather

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

Wind

: Calm / (ight)/ Breeze / Strong

Temperature

26°(

Humidity

High / Moderate / Lov

Inspected by	CEDD	Contractor / Sub-Contactor	ET
Signature:		DAK .	Hak
Name:	CKN	Durie CHM	Hak skei War
Title	Azav	SEA	ΕJ



	Environmental Checklist	Implementation Stages*			Remark
		Yes	No	N/A	
Fugitive Dust En	nission				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 Dust control / n 	nitigation measures shall be provided to prevent dust nuisance.	4			An Appendix
 Water sprays s 	hall 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			
tail boards. Ma covered by a cl	\cdot	1			
 Unpaved areas 	s should be watered regularly to avoid dust generation.	\ \			
 The designated 	d site main haul road shall be paved or regular watering.	4			
 The haul road i 	inside the site and public road around the site entrance should be kept clean and free from dust.	1	<u> </u>		
 Wheel washing 	g facilities including high-pressure water jet shall be provided at the entrance of work site.	4			
 Every vehicle s 	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 eq 	uipment should be switched off while not in use.	1			
 All plant and ed 	quipment should be well maintained e.g. without black smoke emission.	√			
 Open burning s 	should be prohibited.	4		1	
Approval or ex- vehicles at a - Cap.311).	emption Non-road Mobile Machinery (NRMM) labels should be painted or securely fixed on regulated machines and non-road conspicuous position according to the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation (APCO	1			
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 construction	ons works should be scheduled to minimize noise nuisance.	1		1	
Only well main	tained plant should be operated on-site and plant should be serviced regularly during the construction works.	4			
 Powered mech 	nanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	1			" "
Air compresso	rs and hand held breakers should have noise labels.	1			
Compressors a	and generators should operate with door closed.	1			
Machines and	plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	4			
Noisy equipme	ent and mobile plant shall always be site away from NSRs.	4			



Environmental Checklist		ement		Remark
	Yes		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		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			
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.	1			
 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 sitt 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.	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.	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.	V			
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, scum, 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.	1 1			
Landscape and Visual			eren.	
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.	4			



Environmental Checklist			mentation Remark ages*	
	Yes		N/A	-
Waste Management	44. 200 20. 200			
Construction Waste Management			W. 1	
 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.		V		Item 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. 	7			
 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. 	√			
 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. 	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. 	1			
The designated chemical waste storage area should only be used for storing chemical wastes.	4		<u> </u>	
The set-up of chemical waste storage area should		X .	1.73	
 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.	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. 	٧			
Have adequate ventilation.	√			
 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.	1			



	Environmental Checklist		ement		Remark
144		Yes	Ño	N/A	
 VVarning panels 	should be displayed at the waste storage area.	1			
 Waste storage a 	area should be cleaned and maintained regularly.	1			
 Chemical waste 	should be transported regularly by a registered chemical waste collector to a facility licensed to receive chemical waste.	1	<u> </u>	<u> </u>	
 All generators, fi 	uel and oil storage should be within bundle areas.	1		<u> </u>	
 Oil leakage from 	n machinery, vehicle and plant should be prevented.	4			
 In the event of cl be followed. 	hemical waste / dangerous goods / chemicals spillage or leakage, the procedures as outlined in the Spillage Response Plan should	1			
 The dangerous 	goods / chemical spillage or leakage procedures (including equipments) should be in place.	1			
Good Site Pract	tices				
disposal to an a	approved personnel, such as site manager, to be responsible for good site practices, arrangements for collection and effective appropriate facility, of all wastes generated at the site.	1			BEILE
 Training of site 	personnel in proper waste management and chemical handling procedures should be provided.	1			
 Good site pract into the nearby 	tices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping environment.	1			
Proper storage	and site practices to minimise the potential for damage or contamination of construction materials.	1			
The Environment	ntal Permit should be displaced conspicuously on site.	1			
 Construction no 	pise 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.	√			
 Chemical storage 	ge area provided with lock and located on sealed areas.	4	<u> </u>		
 All chemicals sh 	hould be placed at the banded area with adequate band capacity (>110% of largest tank).	1			
 Any unused che 	emicals or those with remaining functional capacity should be recycled.	1			<u></u>
 Regular cleanin 	g and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors.	V			
To encourage co	cilection of aluminium cans by individual collectors.	4	ļ		
Separate labelle	d bins should be provided to segregate this waste from other general refuse generated by the workforce.	√			
A recording system for chemical was	rem for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system ste disposal. Quantities could be determined by weighing each load or other suitable methods.	7			
to reduce the oci	a should be provided where waste can be stored and loaded prior to removal from site. An enclosed and covered area is preferred currence of wind blown' light material. If an open area is unavoidable for the storage or loading/unloading of wastes, then the area and all the polluted surface run-off collected within this area should be diverted into wastewater treatment system.	1			



Summary of the Weekly Site Inspection:

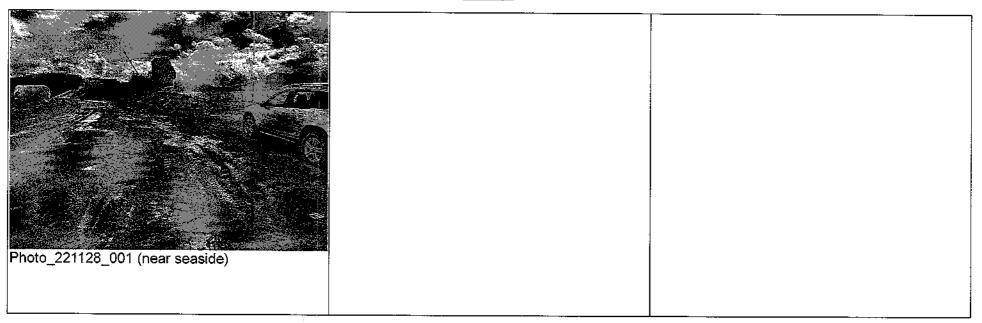
Item	Details of defective works or observations	Proposed Follow Up Action	Photo Ref.	Further Action Required (Yes/No)	Target Completion Date
01	Soil was discarded near the seaside.	To remove the soil properly	221128_001	Yes	2022-12-08

F	Remark		

	Name	Title	Signature	Date
Checked by	June Lau	ET Representative	1	28 November 2022



<u>Photo</u>





Appendix I

Implementation Schedule of Mitigation Measures



Environmental Mitigation Implementation Schedule

Environmental intigation implementation conceans	Location	Implementation 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	√				
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	√				
The temporary slope surfaces shall be covered with impermeable sheet or sprayed with water.	All areas	√				
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	√				
 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	√				
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	\checkmark				
Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	All areas	\checkmark				
Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	All areas	$\sqrt{}$				
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				



	Location	Implementation 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	\checkmark				
 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	V				
The storm water intercepting system shall be effective to collect of runoff and remove suspended solids before discharge.	All areas	\checkmark				
The material shall be properly covered to prevent washed away especially before rainstorm.	All areas	\checkmark				
 Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding. 	All areas		\checkmark			
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	√				
 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	$\sqrt{}$				
 Sewage from toilets shall be discharged in to a foul sewer, or chemical toilets shall be provided. 	Site Office	$\sqrt{}$				
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	$\sqrt{}$				
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	$\sqrt{}$				



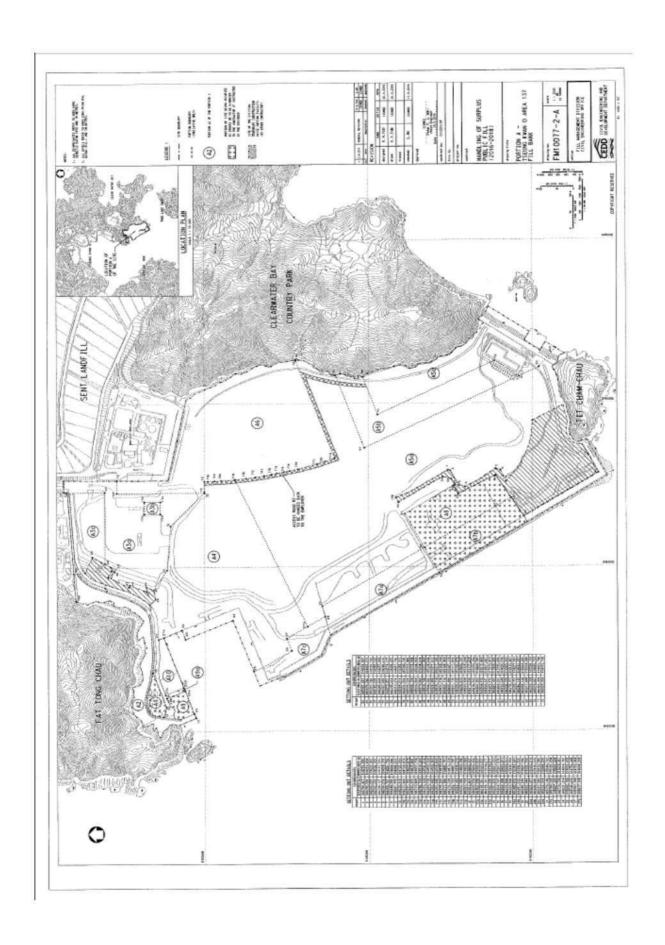
		Location	Implementation Status				
	Environmental Protection Measures		Implemented	Partially implemented	Not implemented	Not Applicable	
•	Excavated material to be generated from construction works to be re-used on-site as far as practicable to reduce off-site disposal.	All areas	\checkmark				
•	Mud 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	V				
•	Warning panels should be displayed at the waste storage area.	Waste Storage Area	√				



	Environmental Protection Measures		Implementation Status					
Envir	onmental Protection Measures		Implemented	Partially implemented	Not implemented	Not Applicable		
Waste storage area should be cleaned and r	maintained regularly.	Waste Storage Area	√					
	registered chemical waste collector to a facility licensed to receive chemical waste.	All areas	$\sqrt{}$					
All generators, fuel and oil storage should be	e within bundle areas.	All areas	$\sqrt{}$					
Oil leakage from machinery, vehicle and plan	nt should be prevented.	All areas	V					
In the event of chemical waste / dangerous Response Plan should be followed.	s goods / chemicals spillage or leakage, the procedures as outlined in the Spillage	All areas	V					
The dangerous goods / chemical spillage or	leakage procedures (including equipments) should be in place.	All areas	$\sqrt{}$					
Good Site Practices								
Nomination of approved personnel, such as and effective disposal to an appropriate facil	s site manager, to be responsible for good site practices, arrangements for collection lity, of all wastes generated at the site.	All areas	√					
Training of site personnel in proper waste ma	anagement and chemical handling procedures should be provided.	All areas	V					
Good site practices should be adopted to cle dropping into the nearby environment.	ean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from	All areas	V					
Proper storage and site practices to minimise	e the potential for damage or contamination of construction materials.	All areas	V					
The Environmental Permit should be displace.	ed conspicuously on site.	Site Entrance	V					
Construction noise permits should be posted	d at site entrance or available for site inspection.	Site Entrance				V		
Plan and stock construction materials care waste.	fully to minimise amount of waste generated and avoid unnecessary generation of	All areas	√					
Chemical storage area provided with lock an	nd located on sealed areas.	Chemical Storage Area	√					
,	d area with adequate band capacity (>110% of largest tank).	Chemical Storage Area	√					
Any unused chemicals or those with remaini	ing functional capacity should be recycled.	All areas	$\sqrt{}$					
Regular cleaning and maintenance programs	me for waste storage area, drainage systems, silt traps, sumps and oil interceptors.	All areas	$\sqrt{}$					
To encourage collection of aluminium cans waste from other general refuse generated by	by individual collectors, separate labelled bins should be provided to segregate this by the workforce.	All areas	√					
A recording system for the amount of waster trip ticket system for chemical waste disposa	s generated, recycled and disposed (including the disposal sites) should be used, e.g. al. Quantities could be determined by weighing each load or other suitable methods.	All areas	√					
area is preferred to reduce the occurrence	waste can be stored and loaded prior to removal from site. An enclosed and covered e of 'wind blown' light material. If an open area is unavoidable for the storage or should be bunded and all the polluted surface run-off collected within this area should m.	All areas	√					
Remove wastes in a timely manner.		All areas	V					



Appendix J Site General Layout plan





Appendix K Monthly Summary Waste Flow Table

Monthly Summary Waste Flow Table for 2022

		Actual Quantitie	es of Inert C&I	Materials Gene	rated Monthly		Actual Quantities of C&D Wastes Generated Monthly				
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	142.47	0	0	0	66.1
Feb	0	0	0	0	0	0	120	0	0	0	109.18
Mar	0	0	0	0	0	0	237.66	0	0	0	117.53
Apr	0	0	0	0	0	0	307.35	0	0	0	244.74
May	0	0	0	0	0	0	184.49	0	0	0	130.99
Jun	0	0	0	0	0	0	164.33	0	0	0.006	70.8
Sub-total	0	0	0	0	0	0	1156.3	0	0	0.006	739.34
Jul	0	0	0	0	0	0	87.07	0	0	0	157.76
Aug	0	0	0	0	38.83	0	103.67	0	0	0	128.13
Sep	0	0	0	0	0	0	113.71	0	0	0	55.73
Oct	0	0	0	0	0	0	108.45	0	0	0	70.46
Nov	0	0	0	0	0	0	185.68	0	0	0	63.24
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

Contract No. CV/2021/09 Handling of Surplus Public Fill (2022-2023) Tuen Mun 38

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 November 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30-Oct	31-Oct	1-Nov	2-Nov	3-Nov	4-Nov	5-No
		1-hr TSP x 1 NM WQM Mid-ebb (08:30-10:00)	W-QM Mid-ebb	24-hr TSP 24-hr RSP NM Weekly SI (am) WQM Mid-ebb		1-hr TSP x 2 WQM Mid-ebb
		Mid-flood (13:30-15:00)	(08:30-10:00) Mid-flood (14:30-16:00)	(09:00-10:30) Mid-flood (14:30-16:00)		(10:00-11:30) Mid-flood (16:00-17:30)
6-Nov	7-Nov	8-Nov	9-Nov	10-Nov	11-Nov	12-No
		1-hr TSP x 1 NM WQM Mid-flood (08:30-10:00) Mid-ebb (13:00-14:30)	24-hr TSP 24-hr RSP	1-hr TSP x 2 NM Weekly SI (am) WQM Mid-flood (08:30-10:00) Mid-ebb (13:30-15:00)		1-hr TSP x 1 WQM Mid-flood (09:30-11:00) Mid-ebb (14:30-16:00)
13-Nov	14-Nov	(10.00-14.00) 15-Nov	16-Nov	17-Nov	18-Nov	(14.50-10.00) 19-No
		24-hr TSP 24-hr RSP NM WQM Mid-ebb (08:00-09:30) Mid-flood (11:00-12:30)		1-hr TSP x 2 NM Weekly SI (am) WQM Mid-ebb (08:30-10:00) Mid-flood (14:00-15:30)		1-hr TSP x 1 WQM Mid-ebb (09:00-10:30) Mid-flood (15:30-17:00)
20-Nov	21-Nov	22-Nov	23-Nov	24-Nov	25-Nov	26-No
	24-hr TSP 24-hr RSP	1-hr TSP x 1 NM		1-hr TSP x 1 NM	Weekly SI (am)	1-hr TSP x 1
27-Nov	28-Nov	WQM Mid-ebb (11:00-12:30) Mid-flood (16:00-17:30)	30-Nov	WQM Mid-flood (08:30-10:00) Mid-ebb (13:00-14:30)		WQM Mid-flood (09:00-10:30) Mid-ebb (14:30-16:00)
27-INUV	20-INUV	29-NOV	30-NOV	I-Dec	Z-Dec	3-DE
24-hr TSP 24-hr RSP	Weekly SI (am)	1-hr TSP x 2 NM		1-hr TSP x 1 NM		24-hr TSP 24-hr RSP
	WQM Mid-flood (10:30-12:00) Mid-ebb (15:30-17:00)		WQM Mid-ebb (08:00-09:30) Mid-flood (13:00-14:30)			

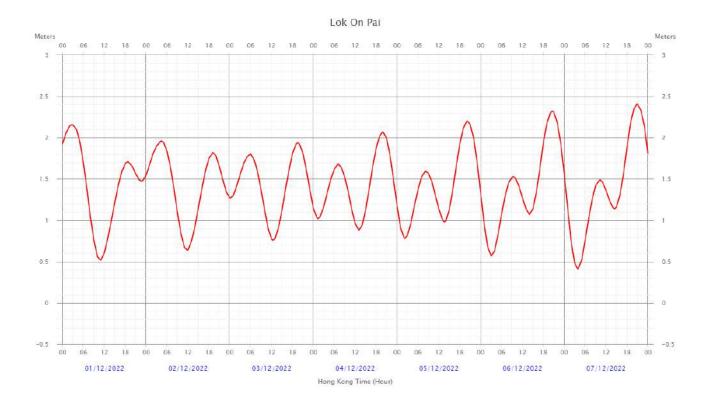
- 1. The monitoring schedule may be changed due to unforeseen circumstances such as adverse weather.
 2. RSP measurement is not required in the EM&A manual and RSP would not presented in EM&A report.
 3. Water quality monitoring (Mid-Flood &Ebb) on 01/11/2022 was cancelled due to the adverse weather condition (The Tropical Cyclone Signal No.3).
 4. Water quality monitoring (Mid-Flood &Ebb) on 02/11/2022 was cancelled due to the adverse weather condition (The Tropical Cyclone Signal No.3).

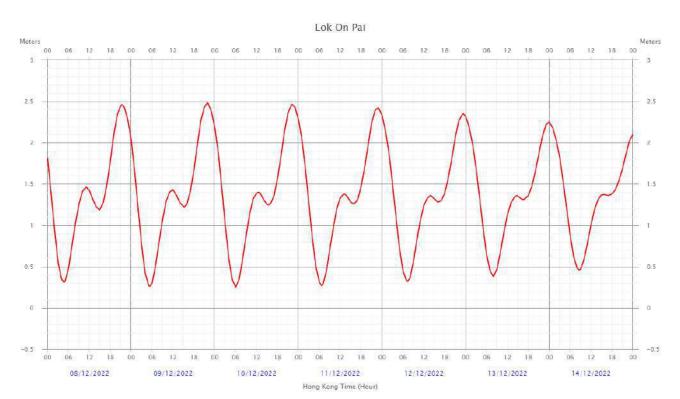


Contract No. CV/2021/09 Handling of Surplus Public Fill (2022-2023) Tuen Mun 38

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

December 2022



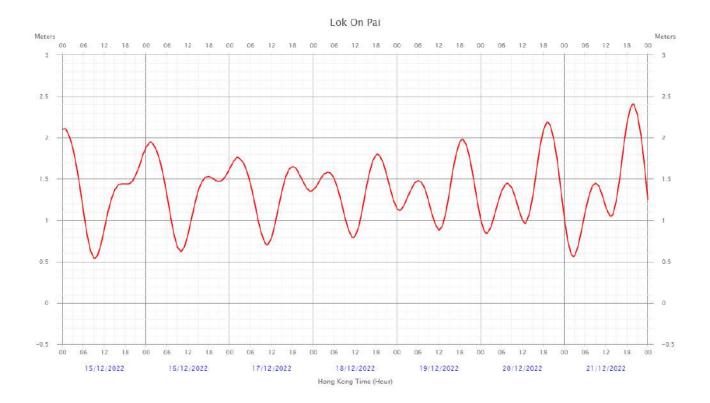


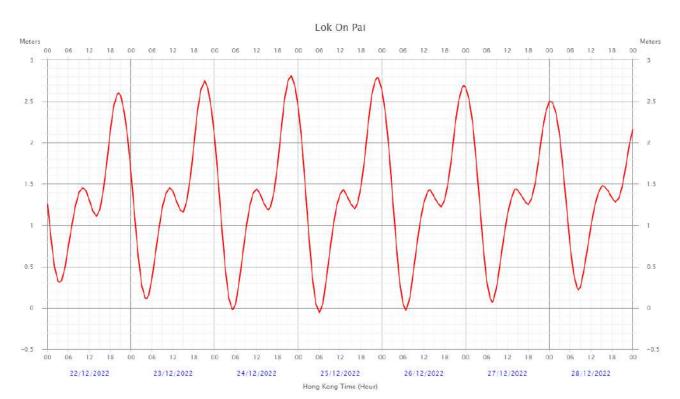


Contract No. CV/2021/09 Handling of Surplus Public Fill (2022-2023) Tuen Mun 38

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

December 2022



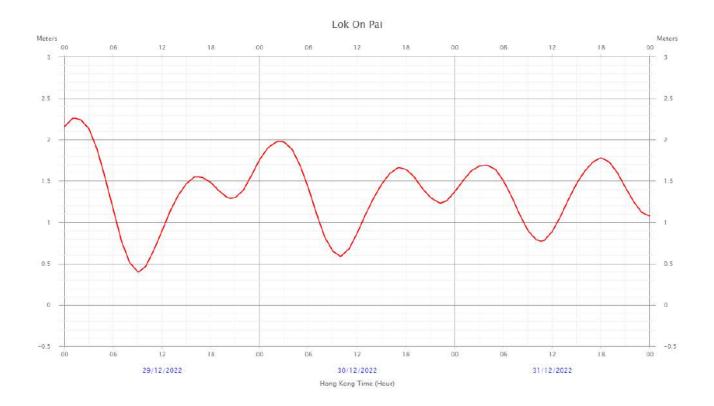




Contract No. CV/2021/09 Handling of Surplus Public Fill (2022-2023) Tuen Mun 38

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

December 2022





Appendix M

Reporting Month Monitoring Schedule



Contract No. CV/2021/09 Handling of Surplus Public Fill (2022-2023) Tuen Mun 38

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 December 2022

Sunday	Monday	Tuesda	y	Wednesday	Thursday	Friday	Saturday	
27-Nov		-Nov	29-Nov	30-Nov				3-Dec
24-hr TSP 24-hr RSP		1-hr TSP x 2 NM			1-hr TSP x 1 NM Weekly SI (am)		24-hr TSP 24-hr RSP	
	WQM Mid-flood (10:30-12:00) Mid-ebb (15:30-17:00)			WQM Mid-ebb (08:00-09:30) Mid-flood (13:00-14:30)			WQM Mid-ebb (09:00-10:30) Mid-flood (14:30-16:00)	
4-Dec		-Dec	6-Dec	7-Dec	8-Dec	9-Dec	(14.00 10.00)	10-Dec
		1-hr TSP x 2 NM			1-hr TSP x 1 NM Weekly SI (am)	24-hr TSP 24-hr RSP	1-hr TSP x 2	
		WQM Mid-ebb (11:00-12:30) Mid-flood (16:00-17:30)			WQM Mid-flood (08:30-10:00) Mid-ebb (12:30-15:00)		WQM Mid-flood (09:00-10:30) Mid-ebb (13:30-15:00)	
11-Dec	12	-Dec	13-Dec	14-Dec	15-Dec	: 16-Dec		17-Dec
		1-hr TSP x 1 NM			24-hr TSP 24-hr RSP NM Weekly SI (am)		1-hr TSP x 2	
	WQM Mid-flood (10:00-11:30) Mid-ebb (14:30-16:00)				WQM Mid-ebb (07:30-09:00) Mid-flood (11:30-13:00)		WQM Mid-ebb (08:30-10:00) Mid-flood (13:00-14:30)	
18-Dec		-Dec	20-Dec	21-Dec	22-Dec	23-Dec	(10100 1100)	24-De
	WQM Mid-ebb (09:00-10:30)	1-hr TSP x 1 NM		24-hr TSP 24-hr RSP WQM Mid-ebb (10:30-12:00)	1-hr TSP x 2 NM Weekly SI (am)	WQM Mid-flood (08:30-10:00)		
	Mid-flood			Mid-flood		Mid-ebb		
05.0	(14:30-16:00)	Date	07.0	(15:30-17:00)	20.5	(12:30-14:00)		04 D
25-Dec	1-hr TSP x 1 NM	24-hr TSP 24-hr RSP	27-Dec	28-Dec	1-hr TSP x 2 NM	30-Dec		31-Dec
	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)	Weekly SI (am)	WQM Mid-ebb (08:30-10:00) Mid-flood (13:00-14:30)		

Remarks:

- 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.



Appendix N QA/QC Results of Laboratory Analysis



QA/QC Results of Laboratory Analysis of Total Suspended Solids

	QC Sample Analysis	Sample Du	ıplicate	Sample	Spike
Sampling Date	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery
Camping Date	99.4	FC1-S	1.29	FM2-M	92.8
	100.0	FM2-B	4.26	EM1-S	115.6
2022/11/3	100.1	EM1-M	8.89	EC2-B	116.1
2022/11/0	99.0	FC1-S	4.65	FM2-M	108.8
	101.3	FM2-B	7.69	EM1-S	102.0
2022/11/5	100.1	EM1-M	8.00	EC2-B	106.5
	99.0	FC1-S	4.08	FM2-M	90.5
	99.4	FM2-B	8.22	EM1-S	99.1
2022/11/8	99.8	EM1-M	6.06	EC2-B	91.0
	99.6	FC1-S	3.28	FM2-M	90.6
	99.5	FM2-B	2.82	EM1-S	99.7
2022/11/10	99.5	EM1-M	4.88	EC2-B	111.4
	96.5	FC1-S	0.00	FM2-M	84.1
	98.3	FM2-B	9.09	EM1-S	83.4
2022/11/12	97.9	EM1-M	7.59	EC2-B	95.3
	104.4	FC1-S	5.80	FM2-M	95.3
	103.8	FM2-B	8.45	EM1-S	106.0
2022/11/15	104.6	EM1-M	1.63	EC2-B	104.0
	103.0	FC1-S	0.00	FM2-M	90.4
	101.3	FM2-B	2.15	EM1-S	97.6
2022/11/17	101.9	EM1-M	2.67	EC2-B	110.7
	103.1	FC1-S	0.00	FM2-M	95.8
	102.2	FM2-B	8.33	EM1-S	85.6
2022/11/19	102.8	EM1-M	2.82	EC2-B	86.6
	100.8	FC1-S	3.64	FM2-M	105.3
	99.3	FM2-B	5.13	EM1-S	91.5
2022/11/22	102.4	EM1-M	4.76	EC2-B	103.2
	103.6	FC1-S	2.82	FM2-M	95.5
	102.6	FM2-B	2.25	EM1-S	95.2
2022/11/24	103.3	EM1-M	1.57	EC2-B	95.5
	99.6	FC1-S	3.92	FM2-M	96.0
	99.4	FM2-B	2.90	EM1-S	113.8
2022/11/26	99.3	EM1-M	3.28	EC2-B	98.7
	100.1	FC1-S	1.83	FM2-M	96.9
	100.8	FM2-B	2.53	EM1-S	96.3
2022/11/28	102.1	EM1-M	1.68	EC2-B	96.5
	100.3	FC1-S	2.99	FM2-M	106.6
	102.1	FM2-B	5.13	EM1-S	99.5
2022/11/30	100.0	EM1-M	2.30	EC2-B	112.7

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

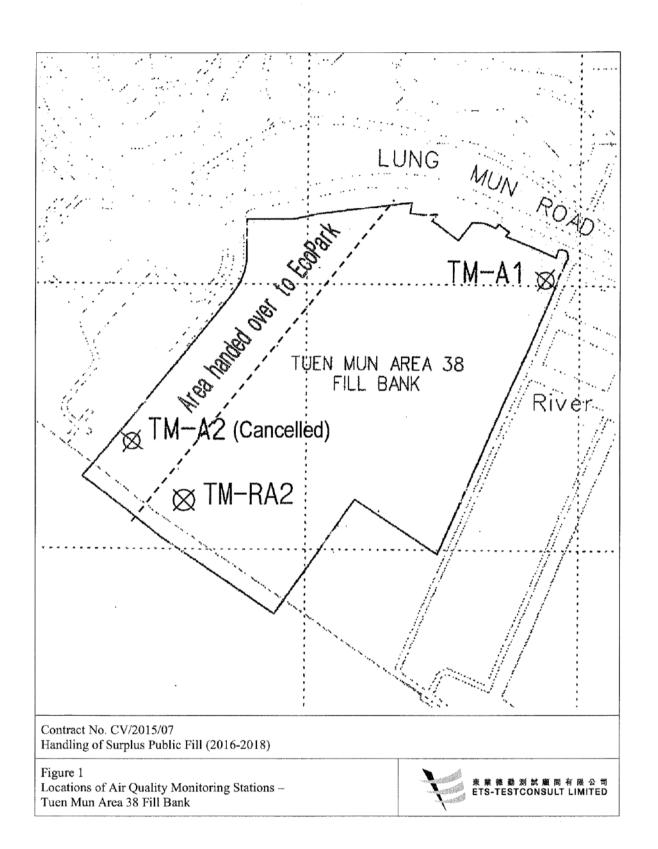


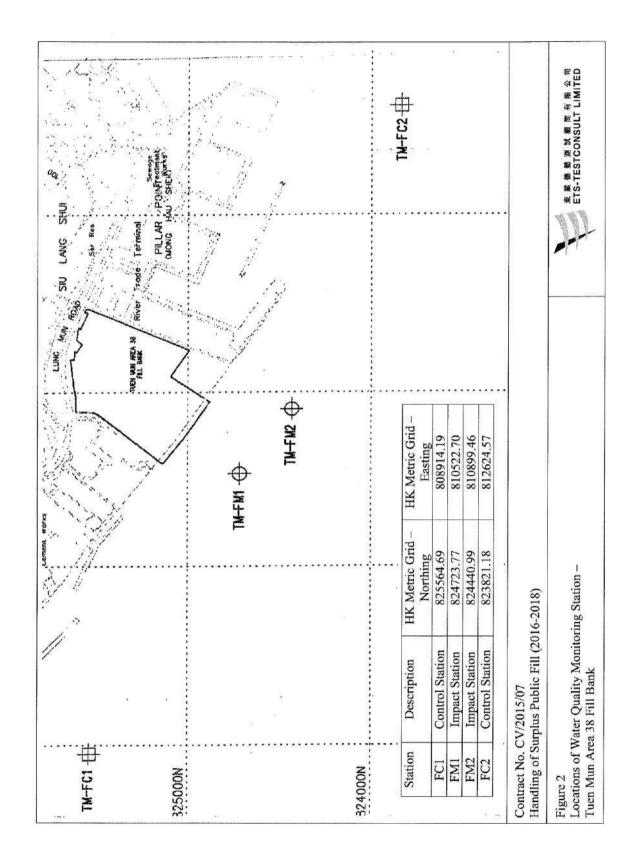
007	Tuen Mun Area 38 Fill Bank	30 September 2022	A complaint was received on 30 September 2022, which was forwarded to ET by email on 03 October 2022 for investigation, against "In recent days, we found that there was significant dust emission from the fill bank. As you are aware that we need to conduct 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
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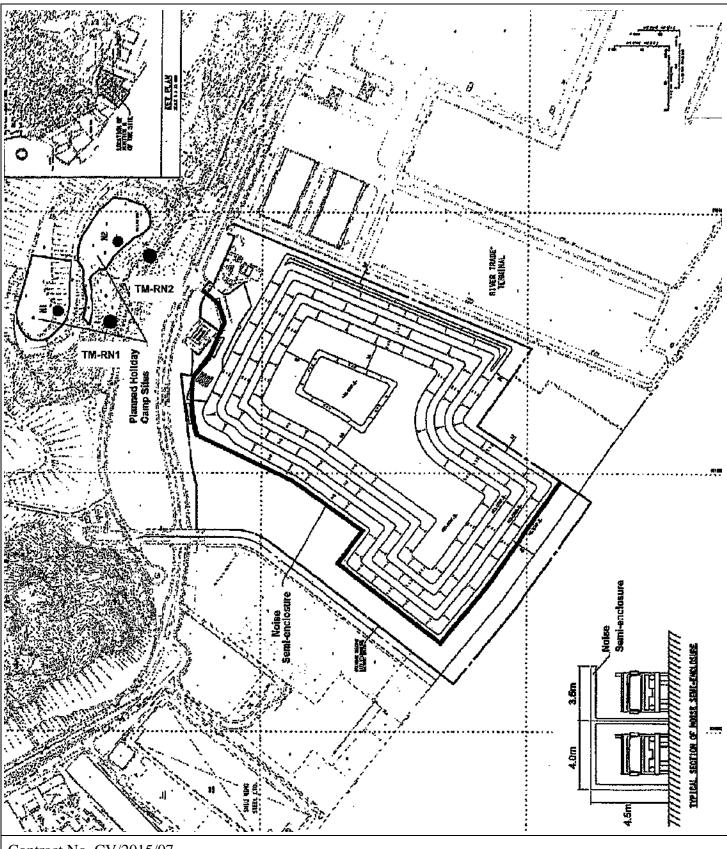


Figures









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

