



TEST REPORT



**China Harbour Engineering Co Ltd**

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

**TSEUNG KWAN O AREA 137 FILL BANK  
QUARTERLY EM&A SUMMARY REPORT  
NO.03**

**(FROM JULY 2022 TO SEPTEMBER 2022)**

Prepared by:

LAU, Wing Sum  
Assistant Environmental Officer

Checked by:

LAU, Chi Leung  
Environmental Team Leader

Issue Date: 24 October 2022

Report No: ENA25726

Our Ref: PL-202301038

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

30 January 2023

Dear Mr. Lau,

**RE: Contract No. CV/2021/09**  
**Handling of Surplus Public Fill (2022-2023)**  
**Quarterly EM&A Report (No. 3) for July to September 2022 for the Tseung Kwan O Area 137**  
**Fill Bank**

Reference is made to your submission of the Quarterly EM&A Report for July to September 2022 for the Tseung Kwan O Area 137 Fill Bank, we are pleased to inform you that we have no adverse comment on the captioned report.

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

Yours faithfully,



F. C. Tsang  
Independent Environmental Checker

cc. CEDD – Mr. T M YEUNG

## TABLE OF CONTENTS

Page

### EXECUTIVE SUMMARY

<b>1.0</b>	<b>INTRODUCTION</b>	1
<b>2.0</b>	<b>PROJECT INFORMATION</b>	
	2.1 Scope of the Project	1
	2.2 Site Description	1
	2.3 Project Activities	2
	2.4 Project Organization and Management Structure	2
	2.5 Contact Details of Key Personnel	2
<b>3.0</b>	<b>SUMMARY OF EM&amp;A REQUIREMENTS</b>	
	3.1 EM&A Programme	2
	3.2 Monitoring Stations and Parameters	2
	3.3 Monitoring Methodology and Calibration Details	2
	3.4 Environmental Quality Performance Limits (Action/Limit Levels)	3
	3.5 Environmental Mitigation Measures	3
<b>4.0</b>	<b>MONITORING RESULTS</b>	
	4.1 Air Quality	3
	4.2 Noise	4
	4.3 Marine Water Quality	4
<b>5.0</b>	<b>INSPECTION RESULTS</b>	
	5.1 Inspection Results	5
	5.2 Status of Environmental Licensing and Permitting	5 – 6
	5.3 Advice on Solids and Liquid Waste Management Status	7
<b>6.0</b>	<b>NON-COMPLIANCE OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS</b>	
	6.1 Summary of Non-compliance	7
	6.2 Review of the Reasons for and the implication of non-compliance	7
	6.3 Summary of Action Taken	7
	6.4 Summary of Environmental Complaint, Notification of Summons and Successful	7
<b>7.0</b>	<b>COMMENTS, CONCLUSIONS AND RECOMMENDATION</b>	8-9

### APPENDIX

A	Organization Chart and Lines of Communication
B	Graphical Plots of Impact Air Quality Monitoring Data
C	Graphical Plots of Impact Noise Monitoring Data
D1	Graphical Plots of Impact Marine Water Quality Monitoring Data
D2	Graphical Plots of Impact Marine Water Quality Monitoring Data(3RS project)
E	Environmental Quality Performance (Action / Limit Levels)
F	Event-Action Plans
G	Work Programme
H	Implementation Schedule of Environmental Mitigation Measures (EMIS)
I1	Statistical Analysis of the Trend of Suspended Solids in the Quarter
I2	Statistical Analysis of the Trend of Suspended Solids in the Quarter(3RS project)
J	Site General Layout Plan
K	Weather Condition

### Figures

Figure 1	Locations of Water Quality Monitoring Stations
Figure 2	Noise Environmental Monitoring Station
Figure 3	Locations of Air Quality Monitoring Stations – Tseung Kwan O Area 137 Fill Bank
Figure 4	Locations of Water Quality Monitoring Stations (3RS project)

## **Tables**

2.1	Contact Details of Key Personnel
4.1	Summary of Number of Exceedances for 1-hr and 24-hr TSP Monitoring
4.2	Comparison of Baseline and Various Period of Average 1-hr and 24-hr TSP Impact Monitoring Results
4.3	Summary of Impact Monitoring Results of Noise Daytime Monitoring
4.4	Total Number of Marine Water Quality Exceedances in the Quarter
4.5	Total Number of Marine Water Quality Exceedances in the Quarter (3RS project)
4.6	Summary of Statistically Significant Results of SS
4.7	Summary of Statistically Significant Results of SS (3RS project)
5.1	Summary of Environmental Licensing and Permit Status
5.2	Estimated Offsite Waste Disposal in the Reporting Quarter
6.1	Summary of Environmental Complaints and Prosecutions

## **EXECUTIVE SUMMARY**

This is Quarterly Environmental Monitoring and Audit (EM&A) Summary Report No.03 prepared by ETS-Testconsult Ltd (ET) for the "Contract No: CV/2021/09 –Handling of Surplus Public Fill (2022-2023) – Tseung Kwan O (TKO) Area 137 Fill Bank" (The Project).

This report documents the findings of EM&A Works conducted during the operation phase of Fill Bank at Tseung Kwan O Area 137 from 01 July 2022 to 30 September 2022.

### **Site Activities**

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

#### *July 2022*

1. Operation of the Public Fill Reception Facilities at Tseung Kwan O Fill Bank (TKOFB);
2. Operation of dewatering plant at TKOFB;
3. Operation of crushing plants at TKOFB;
4. Delivery of public fill to Taishan at TKOFB;
5. Enhancement of Mobile Data Network at TKOFB;
6. Operation and Maintenance of Artificial Intelligent System for Crushing Plant at TKOFB;
7. Operation of the Integrated Public Fill Reception at TKOFB;
8. Operation and Maintenance of the 3 nos. Wash House at TKOFB;
9. Personnel Position Tracking and Proximity Detection System of Moving Plant at TKOFB;
10. Modification and Operation a Digital Works Supervision System (DWSS) for TKOFB;
11. Operation and maintenance of Wheel Washing Facility at TKOFB;
12. Carrying out of preliminary sorting of public fill for 3RS project at TKOFB
13. Repair of Seawall Coping at TKOFB

#### *August 2022*

1. Operation of the Public Fill Reception Facilities at Tseung Kwan O Fill Bank (TKOFB);
2. Operation of dewatering plant at TKOFB;
3. Operation of crushing plants at TKOFB;
4. Delivery of public fill to Taishan at TKOFB;
5. Operation and Maintenance of Artificial Intelligent System for Crushing Plant at TKOFB;
6. Operation of the Integrated Public Fill Reception at TKOFB;
7. Operation and Maintenance of the Wash House at TKOFB;
8. Personnel Position Tracking and Proximity Detection System of Moving Plant at TKOFB;
9. Modification and Operation a Digital Works Supervision System (DWSS) for TKOFB;
10. Operation and maintenance of Wheel Washing Bays and Facilities at TKOFB;
11. Operation a New Soil Platform for preliminary sorting of public fill at TKOFB
12. Repair of Seawall Coping at TKOFB
13. Maintenance of the Drainage Systems at TKOFB;
14. Construction of Gabion Wall at TKOFB;
15. Upgrade of Integrated Public Fill Reception Platform at TKOFB

#### *September 2022*

1. Operation of the Public Fill Reception Facilities at Tseung Kwan O Fill Bank (TKOFB);
2. Operation of dewatering plant at TKOFB;
3. Operation and Maintenance of crushing plants at TKOFB;
4. Operation and Maintenance of Artificial Intelligent System for Crushing Plant at TKOFB;
5. Operation of the Integrated Public Fill Reception at TKOFB;
6. Operation and Maintenance of the Wash House at TKOFB;
7. Personnel Position Tracking and Proximity Detection System of Moving Plant at TKOFB;
8. Modification and Operation a Digital Works Supervision System (DWSS) for TKOFB;
9. Operation and maintenance of Wheel Washing Bays and Facilities at TKOFB;
10. Maintenance of the Drainage Systems at TKOFB;
11. Construction of Gabion Wall at TKOFB;
12. Upgrade of Integrated Public Fill Reception Platform at TKOFB
13. Trial Production of Blanket Layer Material Recycled from Public Fill at TKOFB
14. Upgrading and Repairing Works for Lightning Protection System at TKOFB

Dump truck traffic and hauling activities at Barge Handling Area (BHA) were the major dust sources. Barge delivery of fill material was also undertaken in the reporting quarter. Besides the Fill Bank operation, the other dust sources near TKO Area 137 also included operation of C&DMSF and dumping activities at the SENT Landfill.

The desilting facilities were in proper operation to avoid silt discharge and the silt curtains were properly installed. There was no sediment plume observed during the monitoring events.

The major noise sources during the reporting quarter were the dump truck traffic and construction activities near the site egress. Noise impact on the sensitive receivers was insignificant in the reporting quarter according to the results of noise monitoring and site inspections.

**Environmental Monitoring Works**  
**Noise Monitoring**

No exceedance of Action and Limit levels for noise monitoring was recorded in the reporting quarter.

**Air Monitoring**

No exceedance of Action and Limit levels was recorded for 1-hr and 24-hr TSP monitoring in this quarter.

**Marine Water Quality Monitoring**

According to the summary of marine water monitoring results, no exceedance of Action and Limit levels was recorded in this reporting quarter.

**Environmental Complaints, Notification of summons and successful prosecutions**

One complaint was received on 18 July 2022 and two complaints were received on 08 August 2022 and 12 August 2022. No notification of summons or successful prosecutions with respect to environmental issues was received in this quarter.

## 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) – Tseung Kwan O (TKO) Area 137 Fill Bank” (The Project).

In accordance with the Environmental Permit (No.: EP-134/2002/O) (the EP), an EM&A programme should be implemented in accordance with the procedures and requirements in the EM&A Manual of the approved EIA report (Registration No. AEIAR-060/2002). The EM&A programme for this study as stated in Section 2.3.1 of the EM&A Manual covers the following environmental aspects during the establishment, operation and removal phases of the Fill Bank at Tseung Kwan O Area 137:

- *Fugitive Dust;*
- *Noise generation from onsite activities;*
- *Water Quality; and*
- *Landscape and Visual.*

The EM&A programme requires environmental monitoring for air quality, noise and water quality and environmental site inspections for air quality, noise, 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 EIA study final report; and*
- *Environmental requirements in contract documents.*

Baseline monitoring was completed in August and September 2002 by MaterialLab. Action and Limit Levels were established for air and water quality parameters based on the baseline monitoring results.

This quarterly report documented the findings of EM&A Works conducted during the operation phase of Fill Bank at Tseung Kwan O Area 137 from July 2022 to September 2022.

## 2.0 PROJECT INFORMATION

### 2.1 Scope of the Project

The scale and scope of the Project as stated in the EP include:

- *Site clearance;*
- *Construction of a temporary storm water system;*
- *Stockpiling of 6 million m<sup>3</sup> of public fill;*
- *Setting up two barging points: one at the Tseung Kwan O Basin (TKO Basin) and one at the Construction and Demolition Material Sorting Facility (C&DMSF) for transporting the stockpiled public fill by barges;*
- *Construction and operation of a Construction and Demolition Material Sorting Facility (C&DMSF);*
- *Setting up a Construction and Demolition Material Crushing Facility at the TKO Basin; and*
- *Remove the temporary fill bank.*

### 2.2 Site Description

Tseung Kwan O Area 137 is located at the southern end of Wan Po Road. In the vicinity of the site are other industrial uses such as SENT landfill, TKO Industrial Estate, etc. Both Island Resort and Fullview Garden are also situated at more than 1.8km from the site. Other existing ASRs and NSRs, including resident developments and schools, are located at a further distance away from TKO Area 137.

### 2.3 Work Programme

Details of work programme in this quarter are shown in Appendix G.

### 2.4 Project Organization and Management Structure

The project organization chart is shown in Appendix A.

### 2.5 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

## 3.0 SUMMARY OF EM&A REQUIREMENTS

### 3.1 EM&A Programme

The EM&A programme required environmental monitoring for air quality, noise and marine water quality and environmental site inspections for air quality, noise, marine 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 EIA study final report; and
- Environmental requirements in contract documents.

The advice on implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 5 of the Report.

### 3.2 Monitoring Stations and Parameters

The EM&A Manual designates several locations to monitor environmental impacts in terms of air quality, noise and water quality due to the Project. The description and detailed locations of monitoring stations for air quality, noise and marine water quality are shown in Figures 1, 2 and 3 and relevant sections of this Report.

### 3.3 Monitoring Methodology and Calibration Details

All monitoring works were conducted and monitoring equipment was calibrated in according with the EM&A Manual.

### 3.4 Environmental Quality Performance Limits (Action/Limit Levels)

The environmental quality performance limits, i.e. Action/Limit Levels (AL Levels) were derived from the baseline monitoring results. If the measured environmental quality parameters exceed the AL Levels, the respective action plan will be implemented. The AL Levels for each monitoring parameter are given in Appendix E. The event action plan is given in Appendix F.

### 3.5 Environmental Mitigation Measures

Relevant mitigation measures were recommended in the EM&A Manual for the Contractor to implement. A list of mitigation measures is given in Appendix H.

## 4.0 MONITORING RESULTS

### 4.1 Air Quality

In accordance with the EM&A Manual, 1-hr and 24-hr TSP air quality monitoring were conducted three times and once per six days correspondingly.

No exceedance of Action and Limit levels was recorded for 1-hr and 24-hr TSP monitoring in this quarter. The trend of air quality during the reporting quarter is present in Appendix B. Wind data included wind speed and wind direction were extracted from Tseung Kwan O Station of Hong Kong Observatory and presented in Appendix K.

Major dust sources in the Fill Bank were dump truck traffic and hauling activities at BHA.

Table 4.1 presents the number of exceedances recorded in each month of the reporting quarter. The number of monitoring event included regular monitoring events and additional ones.

Table 4.1 Summary of Number of Exceedances for 1-hr and 24-hr TSP Monitoring

Monitoring Parameter	Level of Exceedance	July 2022	August 2022	September 2022
24-hr TSP	No of monitoring events	5	5	5
	Action Level	0	0	0
	Limit Level	0	0	0
1-hr TSP	No of monitoring events	15	17	16
	Action Level	0	0	0
	Limit Level	0	0	0

Table 4.2 presents the 1-hr and 24-hr TSP averages in the baseline period and for each month in the reporting quarter. It was found that the 1-hr TSP averages at both stations in the reporting quarter were higher than the baseline levels but they were within the AL Levels. Besides, the 24-hr TSP average results were below the baseline level and within the AL Levels. As a result, the Contractor should provide more mitigation measures refer to the EM&A Manual to avoid dust generation.

Table 4.2 Comparison of Baseline and Various Period of Averaged 1-hr and 24-hr TSP Impact monitoring Results

Period	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )		24-hr TSP ( $\mu\text{g}/\text{m}^3$ )	
	TKO-A1	TKO-A2a	TKO-A1	TKO-A2a
Baseline (29/08 – 13/09)	195		123	
July 2022	220	205	106	97
August 2022	215	200	104	96
September 2022	218	203	104	95

## 4.2 Noise

Noise monitoring was required to be conducted at least once per month. Only daytime noise was monitored in the reporting quarter.

All recorded noise levels complied with the AL Levels. The registered noise levels in the past three months are plotted in Appendices C. Table 4.3 presents the limit level and average impact noise monitoring results during the reporting quarter.

Table 4.3 Summary of Impact Monitoring results of Noise Daytime Monitoring

Monitoring Location	Limit Level	July 2022	August 2022	September 2022
	Leq, dB(A)			
TKO-N1	75	60.4	63.5	67.3

The major noise sources in the reporting quarter were dump truck traffic and construction activities near the site egress. The noise impact was insignificant as the Fill Bank was remote from sensitive receivers.

## 4.3 Marine Water Quality

In accordance with the EM&A Manual, the marine water quality monitoring was conducted at the monitoring station (M4) and the control station (C1) in the reporting quarter.

Impact marine water quality monitoring was conducted three days per week. Measurements were taken at both mid-ebb and mid-flood tides at three depths (i.e. 1m below surface, mid depth and 1m above seabed). The AL Levels are included in Appendix E.

According to Environmental Permit (Permit no.:EP-134/2002/N) Condition 3.2, water quality survey/monitoring shall be conducted at control station C1a, monitoring stations M4a and M5 for the period from two weeks before commencement of operation of the additional 5 barging points to 4 weeks after cessation of their operation. The water quality survey/monitoring frequency and parameters at stations C1a, M4a and M5 shall be same as the requirements set out in the EM&A Manual and the monitoring results shall be incorporated in the monthly EM&A reports.

Due to "Hong Kong International Airport, Three Runway System Project Contract 3206 – Main Reclamation Works "(3RS project) operation of the additional barging point at TKO Area 137, the ET started monitoring events at the impact station M4a, M5 and the control station C1a from 14 May 2018 onwards.

Table 4.4 presents the total number of marine water quality exceedances in the reporting quarter. The trend of marine water quality in the past three months is depicted in Appendix D1.

Table 4.4 Total Number of Marine Water Quality Exceedances in the Quarter

Parameter	Exceedance Level	July 2022	August 2022	September 2022
Number of monitoring days		12	13	13
Dissolved Oxygen, DO (S&M)	Action	0	0	0
	Limit	0	0	0
Dissolved Oxygen, DO (B)	Action	0	0	0
	Limit	0	0	0
Turbidity	Action	0	0	0
	Limit	0	0	0
Suspended Solids, SS	Action	0	0	0
	Limit	0	0	0
Total Number Exceedances	Action	0	0	0
	Limit	0	0	0

Table 4.5 presents the total number of marine water quality exceedances (3RS project) in the reporting quarter. The trend of marine water quality in the past three months is depicted in Appendix D2.

Table 4.5 Total Number of Marine Water Quality Exceedances (3RS project) in the Quarter

Parameter	Exceedance Level	July 2022	August 2022	September 2022
Number of monitoring days		12	13	13
Dissolved Oxygen, DO (S&M)	Action	0	0	0
	Limit	0	0	0
Dissolved Oxygen, DO (B)	Action	0	0	0
	Limit	0	0	0
Turbidity	Action	0	0	0
	Limit	0	0	0
Suspended Solids, SS	Action	0	0	0
	Limit	0	0	0
Total Number Exceedances	Action	0	0	0
	Limit	0	0	0

A comparison between the quarterly mean/median of SS and the 1.3 times of the baseline mean was made for each tide at each station. The statistical analysis results are given in Appendix I1 and it shows that a generally better marine quality was recorded in the reporting quarter in respect to 130% of the baseline mean. Monitoring stations with significant difference ( $p < 0.05$ ) is summarized in Table 4.6.

Table 4.6 Summary of Statistically Significant Results of SS

Monitoring Station	Significant difference?	
	Mid-ebb	Mid-flood
C1	0	0
M4	0	0

A comparison between the quarterly mean/median of SS and the 1.3 times of the baseline mean was made for each tide at each station. The statistical analysis results (3RS project) are given in Appendix I2 and it shows that a generally better marine quality was recorded in the reporting quarter in respect to 130% of the baseline mean. Monitoring stations with significant difference ( $p < 0.05$ ) is summarized in Table 4.7.

Table 4.7 Summary of Statistically Significant Results of SS (3RS project)

Monitoring Station	Significant difference?	
	Mid-ebb	Mid-flood
C1a	X	X
M4a	X	X
M5	X	X

## 5.0 INSPECTION RESULTS

### 5.1 Implementation Status of Environmental Mitigation Measures

ET conducted weekly site inspections to monitor the Contractor's implementation of environmental mitigation measures. In this reporting period, thirteen weekly site inspections were conducted. After each site inspection, the Contractor was notified of ET's observations and recommendations. A corrective action plan detailing the environmental observations was prepared by ET and the Contractor then completed this plan to propose/report their remedial works.

Air quality was the major environmental issue in the reporting quarter. The Contractor generally implemented most of the environmental mitigation measures in the reporting quarter. Dump truck traffic was the major dust source in the Fill Bank. Generally, the Contractor implemented adequate

dust mitigation measures in the reporting quarter including dampening of haul roads, water spraying on the truckloads, operation of automatic wheel washing facilities and mist spraying systems, dampening of fill material prior to handling or stockpiling, etc.

Dump truck traffic and construction activities near the site egress were the major noise sources. As the Fill Bank was remote from the nearby NSRs, the noise impact was minimal. The powered mechanical equipment were generally operated and maintained properly.

Regarding the observations about the damaged silt curtain, the Contractor was reminded to maintain the silt curtain properly to serve the function of refuse containment boom to confine floating refuse. Furthermore, Dust emission was found upward trend, the Contractor was reminded to increase the watering to avoid dust emission.

Although there were a few observations regarding dust control, such as fugitive dust emission and accumulation of fill materials, the Contractor rectified most of these problems. Besides, the Contractor should increase the site watering in order to minimize the fugitive dust emissions.

The germination rate on the panel was satisfactory in this reporting quarter. The Contractor was reminded to maintain the panel properly.

## 5.2 Status of Environmental Licensing and Permitting

The status of licences and permits is summarized in Table 5.1.

Table 5.1 Summary of environmental licensing and permit status

Description	Permit No.	Valid Month		Section
		From	To	
Environmental Permit	EP-134/2002/O	20/08/19	01/01/27	<ul style="list-style-type: none"> <li>▪ Site clearance</li> <li>▪ Construction of a temporary storm water system</li> <li>▪ Stockpiling of 6 million m3 of public fill</li> <li>▪ Setting up two barging points for transporting the stockpiled public fill by barges</li> <li>▪ Setting up a temporary barging point at the existing Explosive Off-loading Barging Point for the month of May 2004 to December 2004 for transporting the stockpiled public fill by barge</li> <li>▪ Construction of operation of a construction and Demolition Material Sorting Facility (C&amp;DMSF)</li> <li>▪ Setting up a Construction and Demolition Material Crushing Facility at the TKO Basin</li> <li>▪ Remove the temporary fill bank</li> </ul>
Chemical Waste Producer	5919-839-C3750-04	19/04/17	---	Spent battery cell containing heavy metals and spent lubricating oil
Effluent Discharge License	WT000411 69-2022	06/06/22	30/06/27	Effluent, Surface Run-off, and all other wastewater discharges from screen and sedimentation tank
Marine Dumping Permit	EP/MD/22-132	25/05/22	30/08/22	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 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	End of Contract	---
Notification Pursuant to Section 3(1) of the Air Pollution Control (Construction Dust)	475209	12/04/17	End of Contract	---

### 5.3 Advice on Solids and Liquid Waste Management Status

The Contractor usually disposed of non-inert waste, including general refuse and materials segregated from the existing stockpiles, to SENT landfill. Table 5.2 summarizes data on offsite waste disposal in the quarter.

Table 5.2 Estimated Offsite Waste Disposal in the Reporting Quarter

Waste Type	July 2022	August 2022	September 2022
Public Fill ('000m <sup>3</sup> )	0	0	0
C&D Waste (general refuse) ('000kg)	119.19	87.07	18.94
Chemical Waste (kg/L)	0 (L)	0 (L)	0 (L)

The site toilet and shower room and several chemical toilets were in use throughout the reporting quarter. Discharge from the site toilet and shower room was made to the additional drainage DP4 after passing through the sewage treatment system. A licensed collector also regularly collected waste from the chemical toilets.

## 6.0 NON-COMPLIANCE OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS

### 6.1 Summary of Non-compliance

In this reporting quarter, no exceedance of Action and limit levels on marine water quality was recorded.

No exceedances on 1-hour and 24-hour TSP monitoring results were recorded in this quarter.

Besides, no day-time noise level measured at the monitoring station exceeded the Action and Limit Level in this quarter.

### 6.2 Review of the Reasons for and the Implications of Non-compliance

Since there was no exceedance recorded in this quarter, the review of the reasons for the non-compliance was not required.

### 6.3 Summary of Actions Taken

Since there was no exceedance recorded in this quarter, no further action was not required to be taken.

### 6.4 Summary of Environmental Complaint, Notifications of Summons and Successful Prosecutions Handling

One complaint on dust emission was received on 18 July 2022. Two complaints related to the muddy discharge of Fill bank area were received on 08 August 2022 and 12 August 2022. No notification of summon and successful prosecution was received in this quarter.

A summary of environmental complaints and prosecutions was given in Table 6.1.

Table 6.1 Summary of Environmental Complaints and Prosecutions

<i>Period</i>	<i>Complaints logged</i>	<i>Summon served</i>	<i>Successful Prosecution</i>
<i>July 2022</i>	<i>1</i>	<i>0</i>	<i>0</i>
<i>August 2022</i>	<i>2</i>	<i>0</i>	<i>0</i>
<i>September 2022</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>Cumulative</i>	<i>16</i>	<i>0</i>	<i>0</i>

## 7.0 COMMENTS, CONCLUSIONS AND RECOMMENDATION

In this quarter, major activity in the Fill Bank was the import and dumping of fill material. Air quality was the major environmental issue in the Fill Bank. Generally, the Contractor implemented most of the mitigation measures to minimize the dust impact.

No exceedance of Action and Limit levels was recorded for 1-hour and 24-hour TSP monitoring in this quarter.

No exceedance of Action and Limit Level of noise was recorded in this reporting quarter.

No exceedance of Action and limit level on marine water quality was recorded in this quarter

One complaint related to the dust emission of Fill bank area was received on 18 July 2022. Two complaints related to the muddy discharge of Fill bank area were received on 08 August 2022 and 12 August 2022. No notification of summon and successful prosecution was received in this quarter.

According to the ET weekly site inspection and IEC site audits carried out in this quarter, it was indicated that site practices of the Contractor were generally undertaken in an environmentally acceptable manner and the overall site environmental performance was up to standard. The Contractor generally implemented sufficient dust mitigation measures, including operation of the mist spraying systems, provision of automatic water sprinklers at the crushing plants and automatic wheel washing facilities, dampening of haul roads and stockpiling areas.

According to the environmental site inspections performed in this quarter, 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;
- Provide continuously water spraying system for crushing plant including receiving point and unloading point;
- Provide enclosed conveyor belt for transporting the crushed material directly to the unloading point
- Provide dust screen fenced for crushing plant, and the receiving point of crushing facility would be situated inside an enclosure with one side opening for vehicular access;
- 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 boswer;
- 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 site 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, permanent desilting chambers, DP3 & DP4 regularly;
- Operate and maintain the silt curtains regularly;
- Operate the cleaning vessel within the TKO Basin regularly;
- Provide proper treatment for the oil discharge from the area near air monitoring station TKO-A1;
- Clean up the fill material on the concrete pavement at BHA frequently; 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 mesh screen on top of the additional drainage, DP3 to avoid improper dumping of rubbish;
- Maintain good housekeeping at the workshop area;
- Ensure sufficient tarpaulin sheets are provided to cover drip trays; and
- Avoid soil being polluted during oil filling and equipment maintenance; hence, properly remove and store the contaminated soil, if any.

**Landscape and Visual**

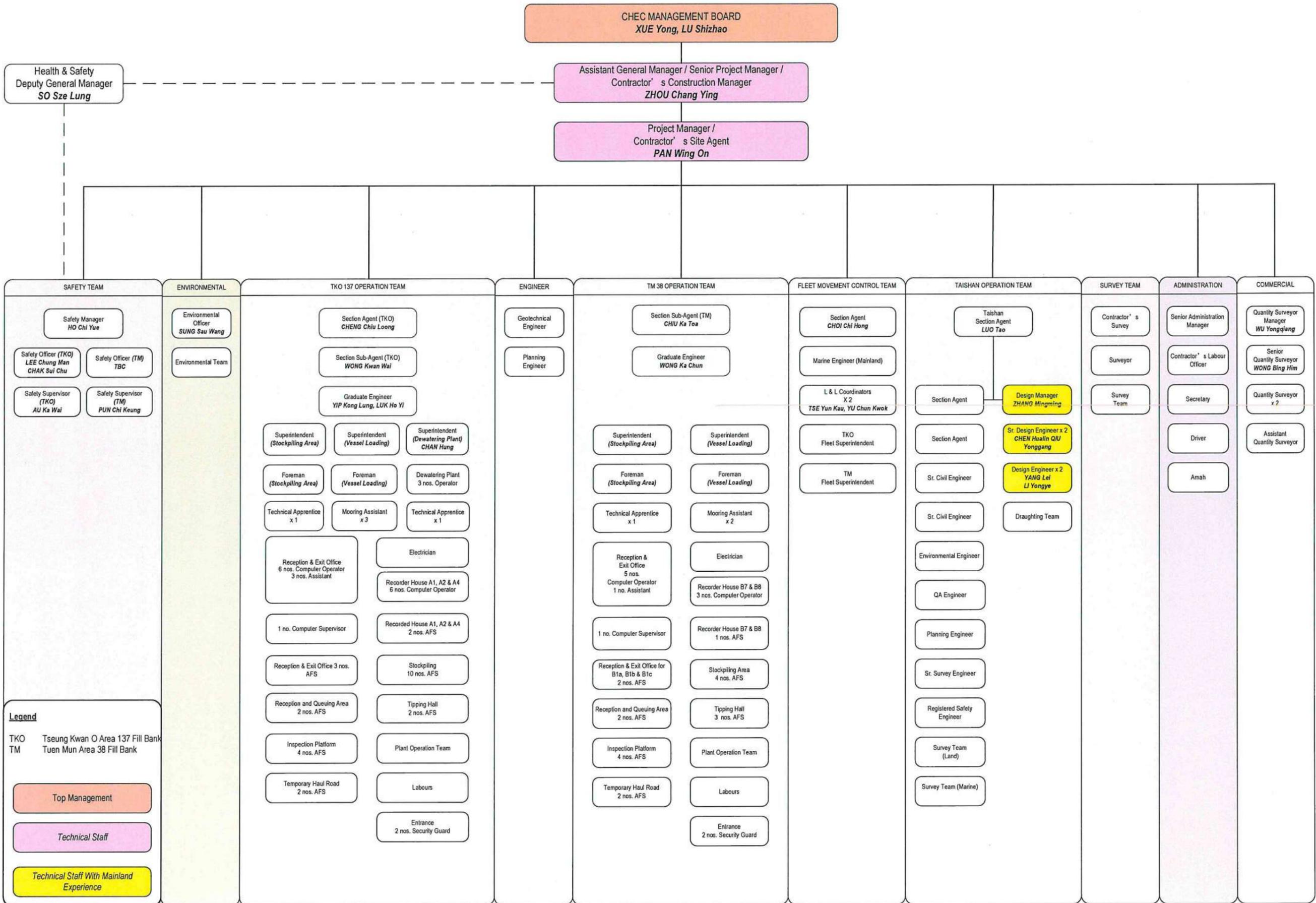
- Provide hydroseeding on the exposed slopes, on which the final profile has been formed;
- Erect all the site hoarding/chaining fences in accordance with agreed design at proper location;
- Maintain the hydroseeding slopes in accordance with the Landscape Plan.

- END OF REPORT -

## **Appendix**

### **A**

#### **Organization Chart**



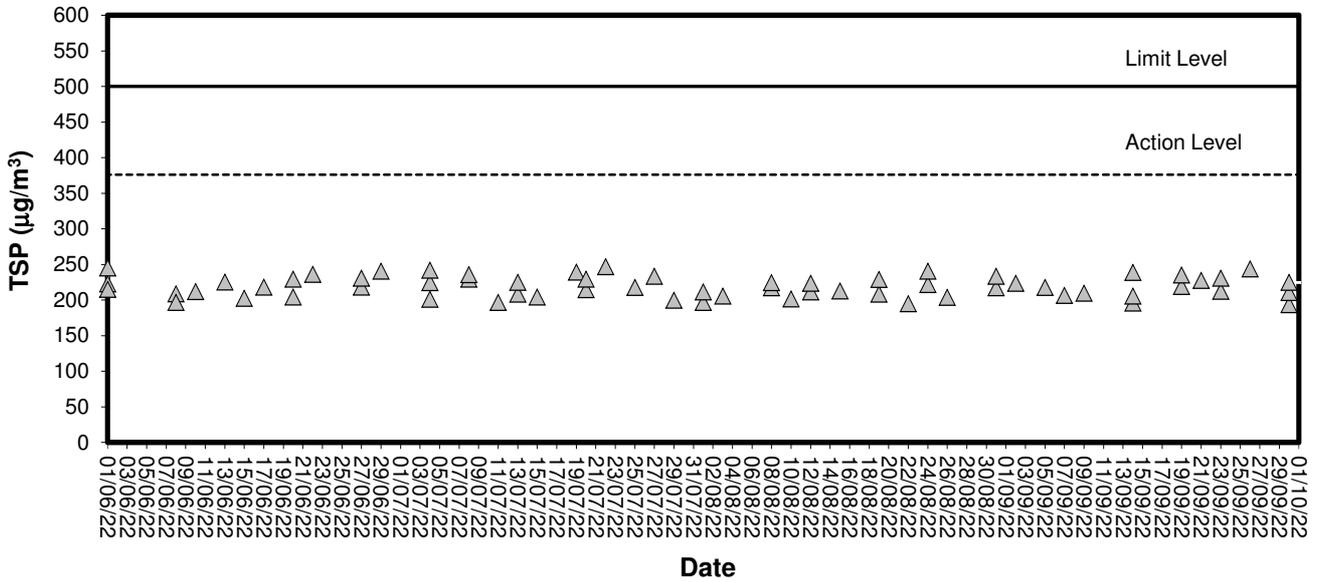
## **Appendix**

### **B**

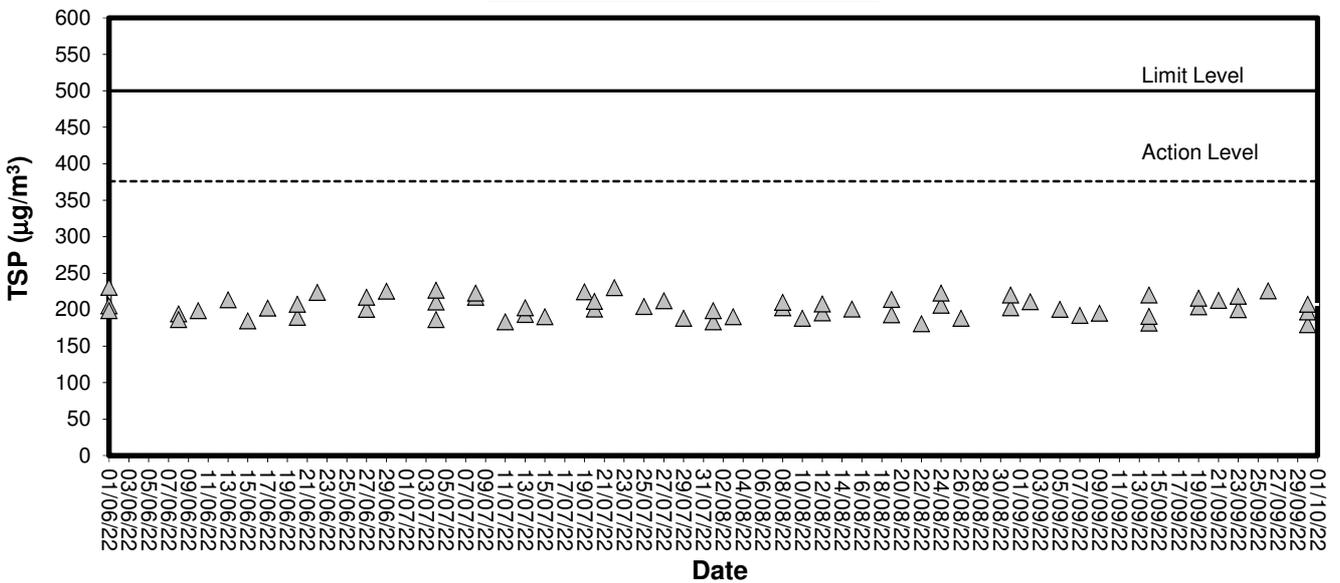
#### **Graphical Plots of Air Quality Monitoring Data**



### 1-hour TSP level at TKO-A1

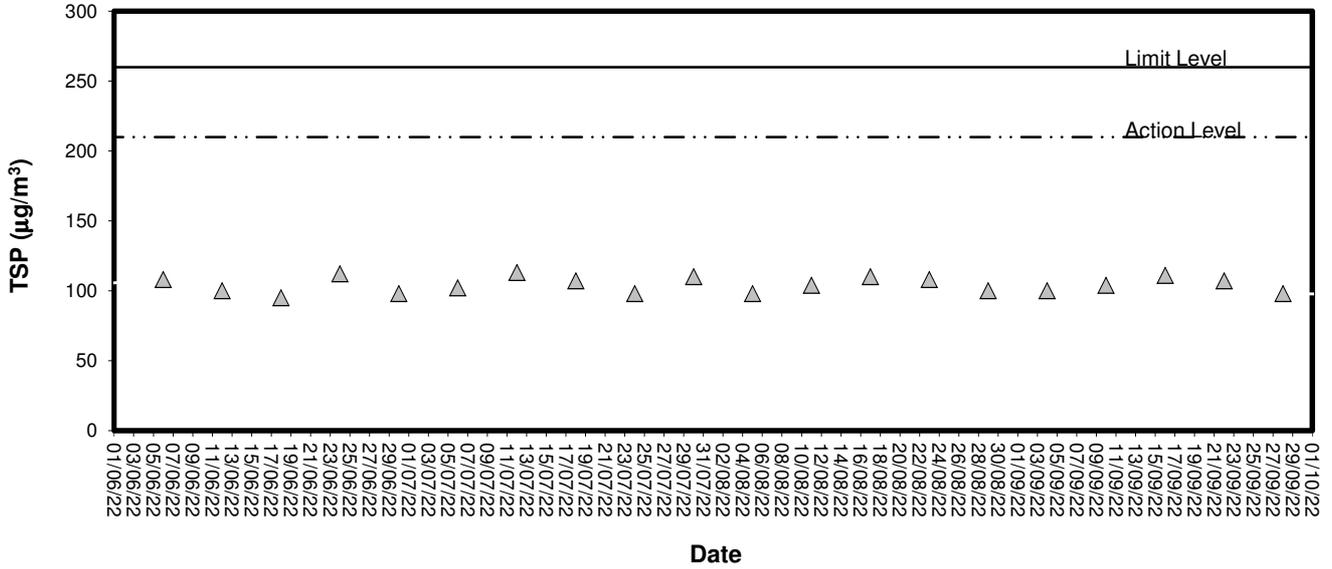


### 1-hour TSP level at TKO-A2a

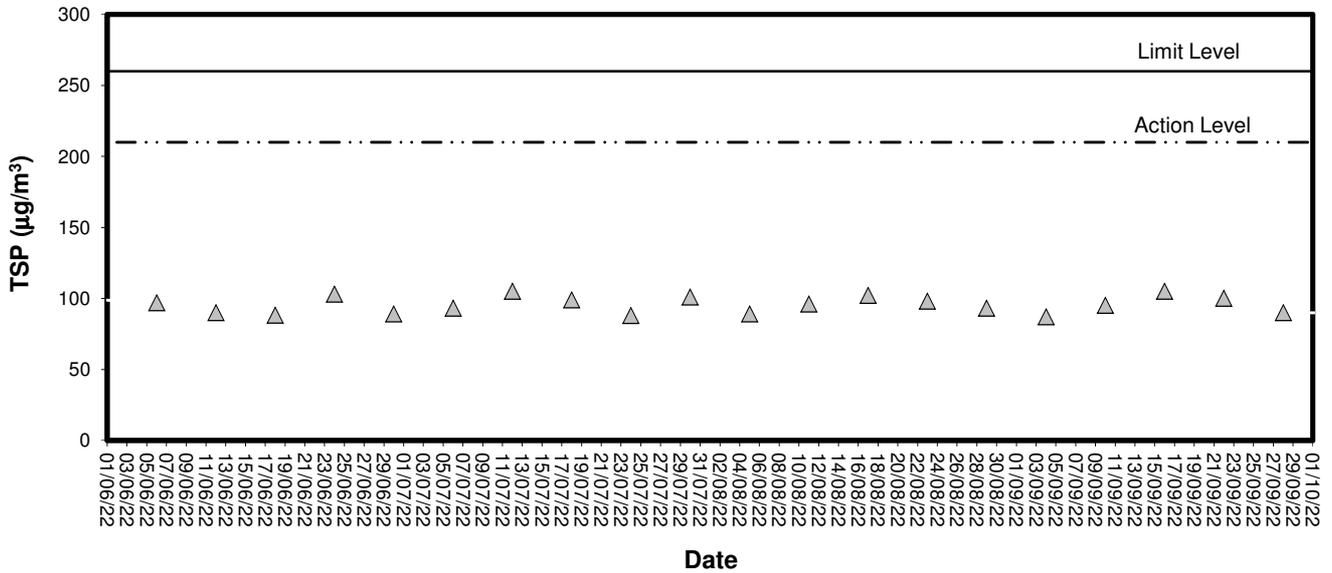




### 24-hour TSP level at TKO-A1



### 24-hour TSP level at TKO-A2a

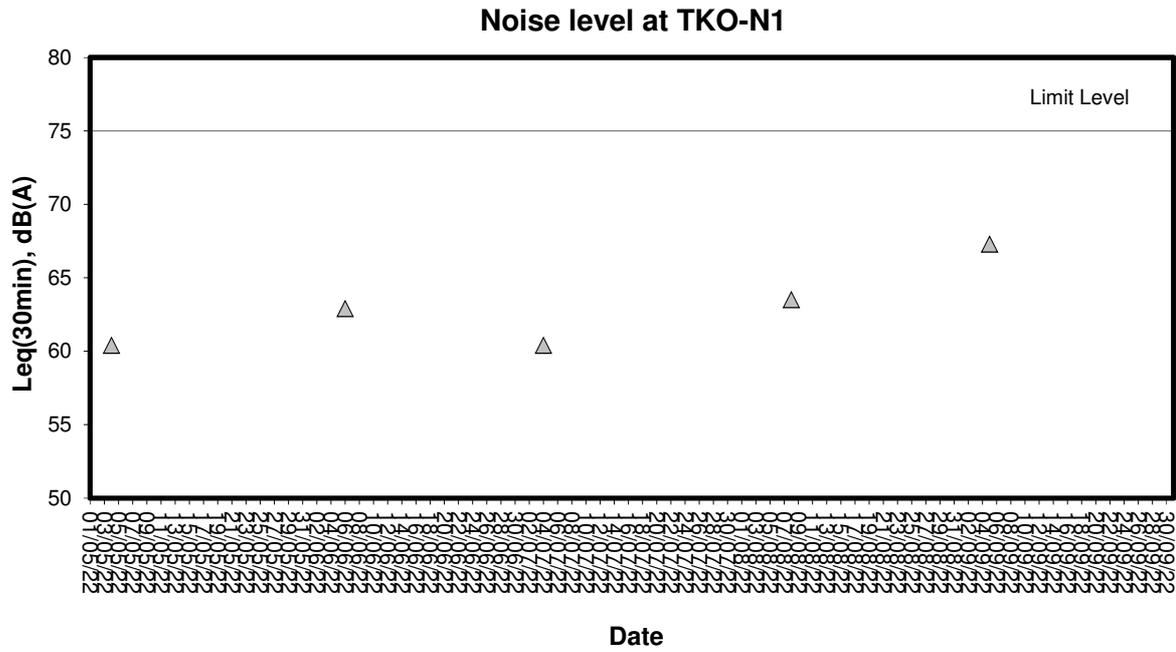


## **Appendix**

### **C**

#### **Graphical Plots of Noise Monitoring Data**

## Noise Monitoring (Day-time)

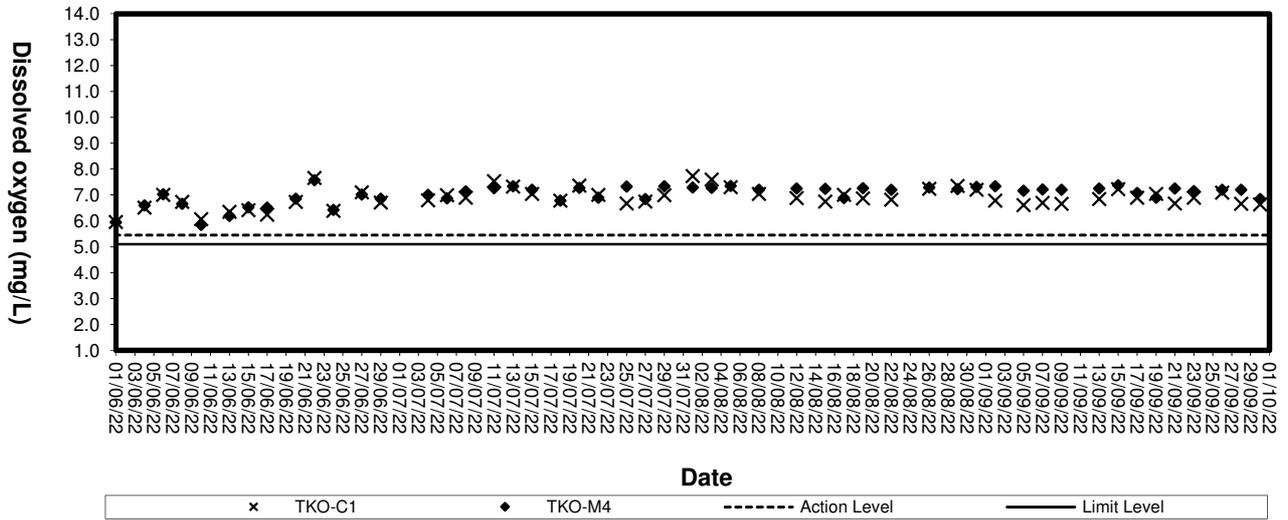


## **Appendix**

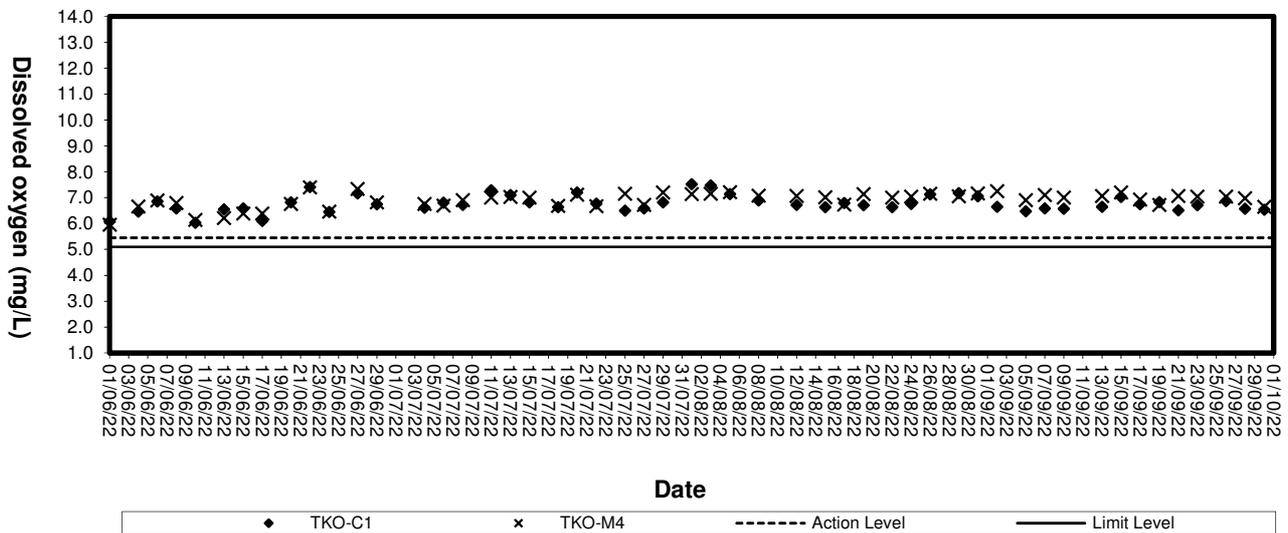
### **D1**

#### **Graphical Plots of Impact Marine Water Quality Monitoring Data**

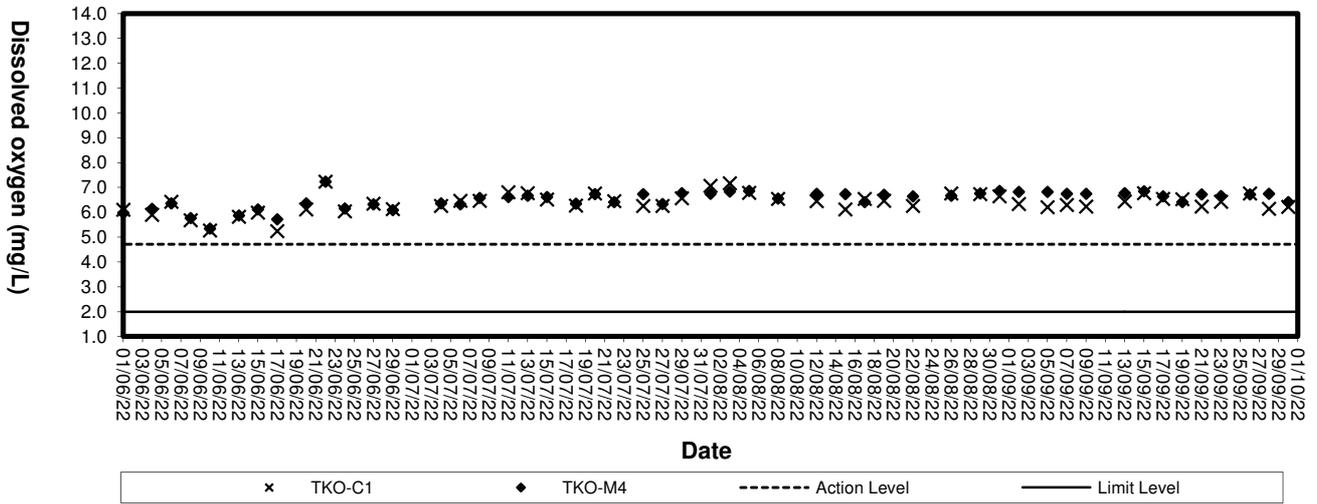
### Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide



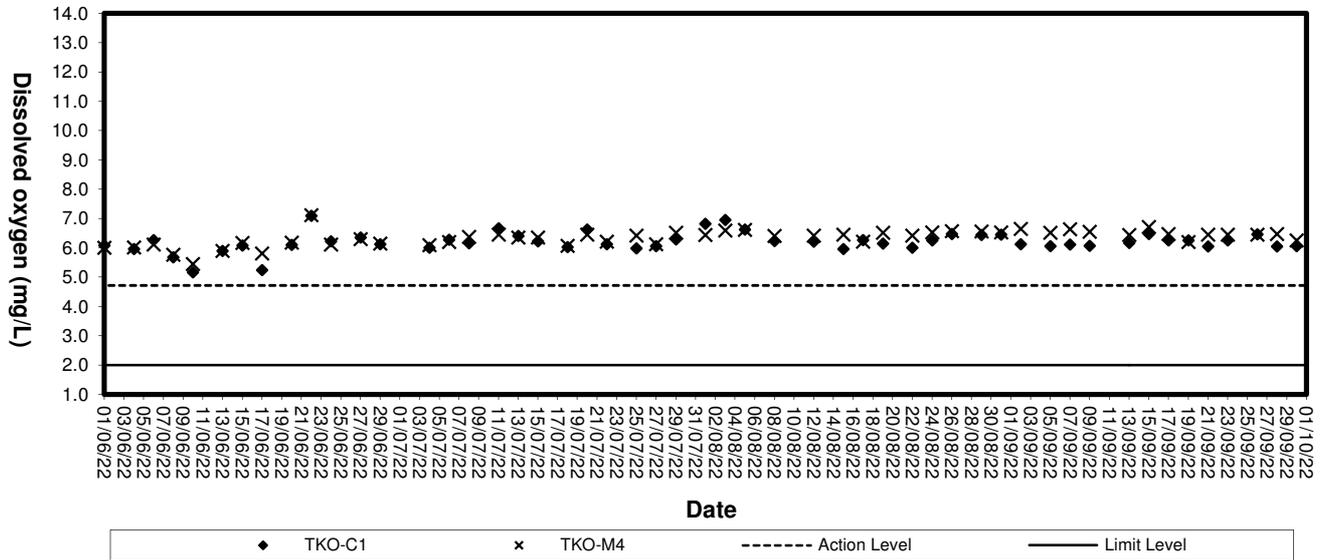
### Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide



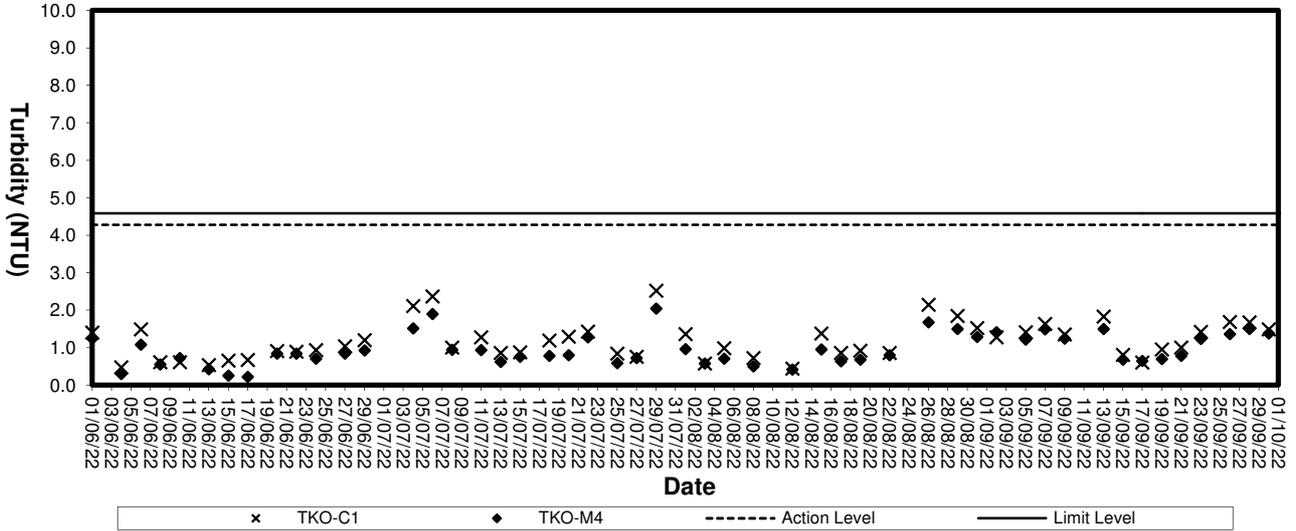
### Dissolved Oxygen (Bottom) at Mid-Flood Tide



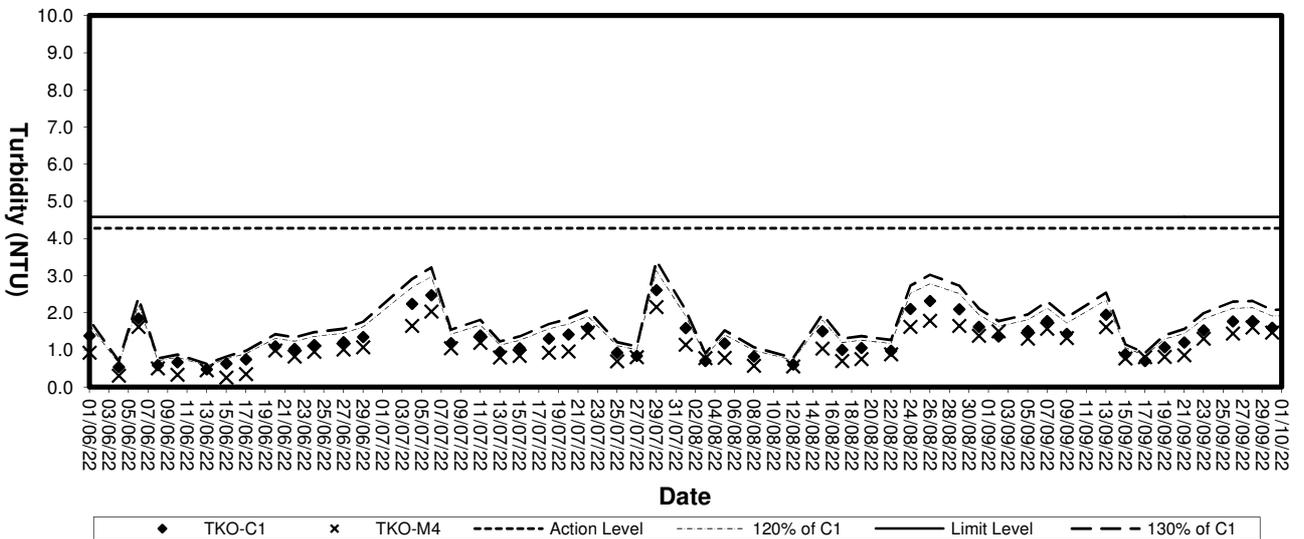
### Dissolved Oxygen (Bottom) at Mid-Ebb Tide



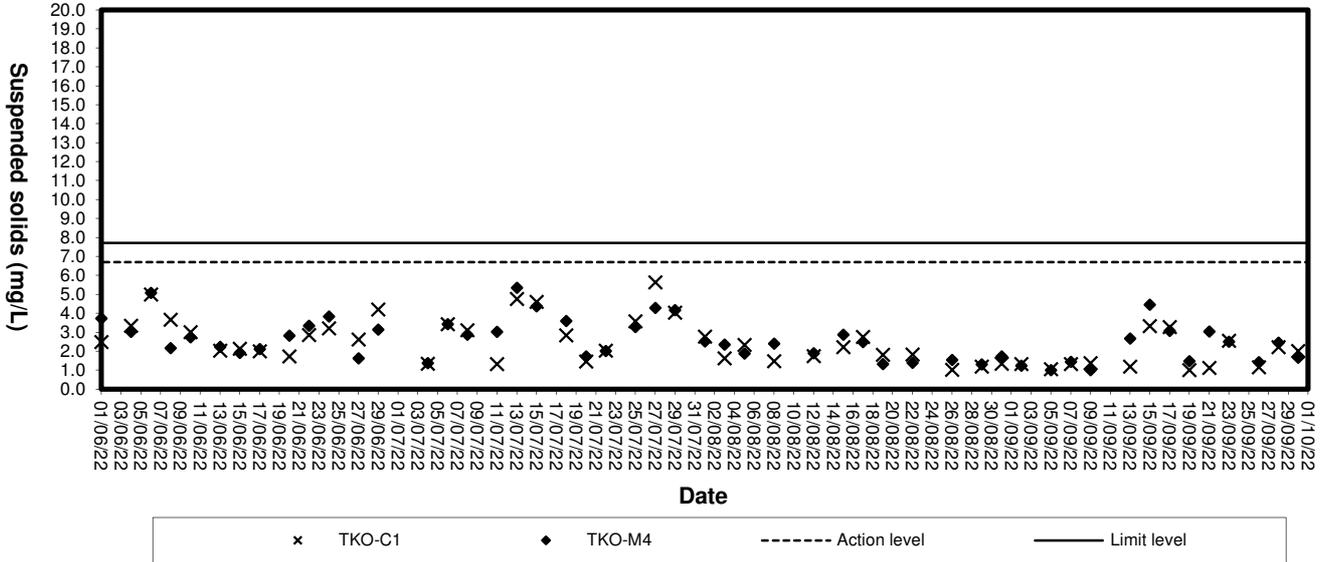
### Turbidity (Depth-average) at Mid-Flood Tide



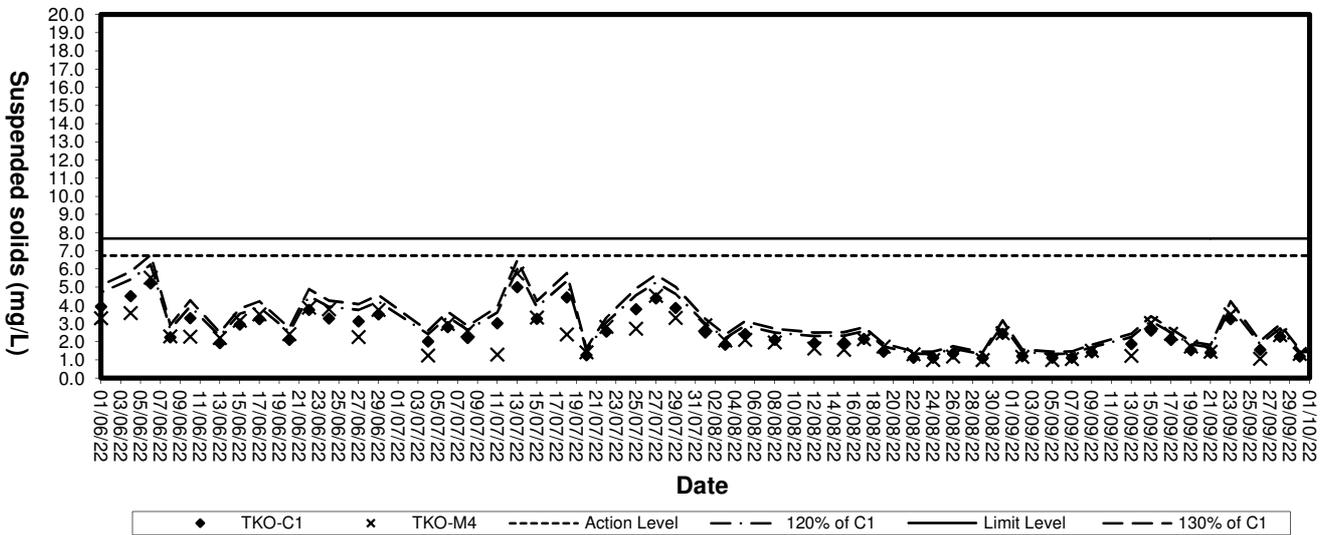
### Turbidity (Depth-average) at Mid-Ebb Tide



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



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

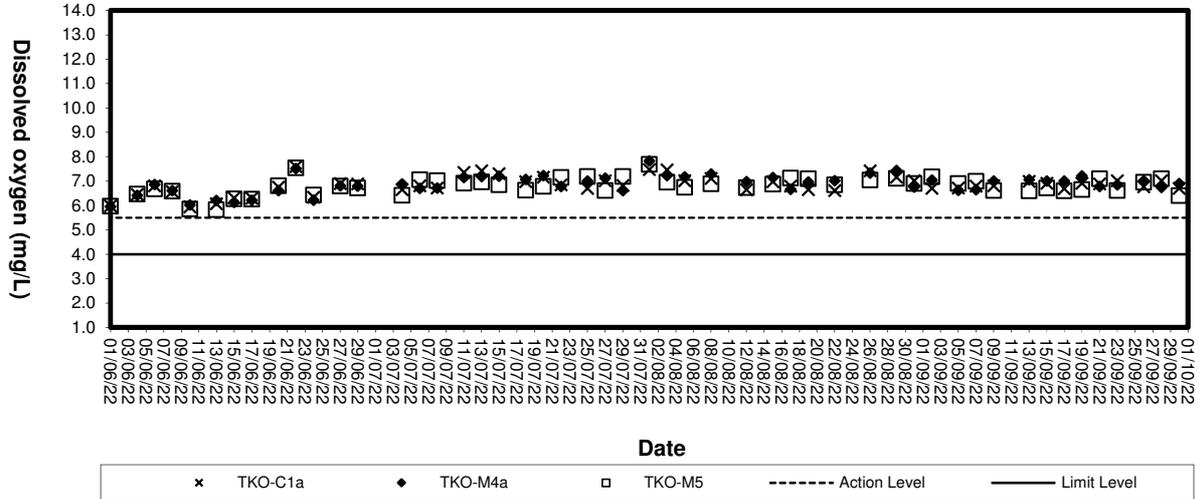


## **Appendix**

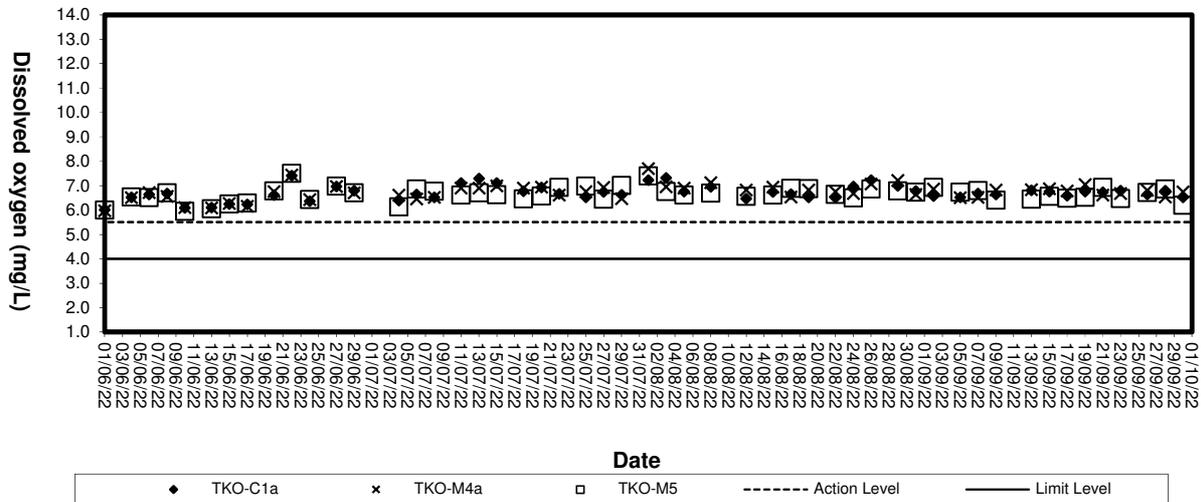
### **D2**

#### **Graphical Plots of Impact Marine Water Quality Monitoring Data (3RS project)**

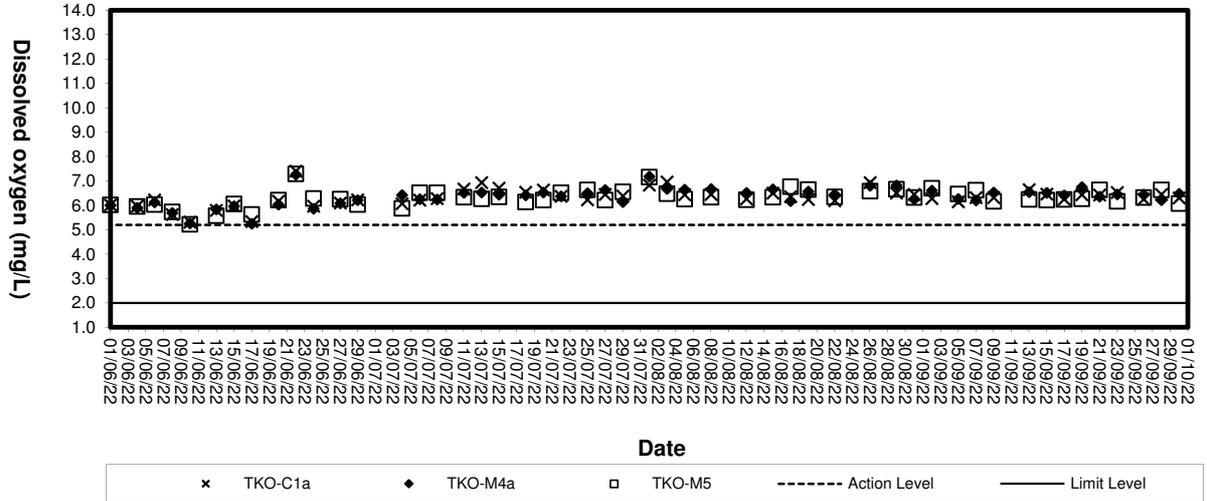
**Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide (3RS project)**



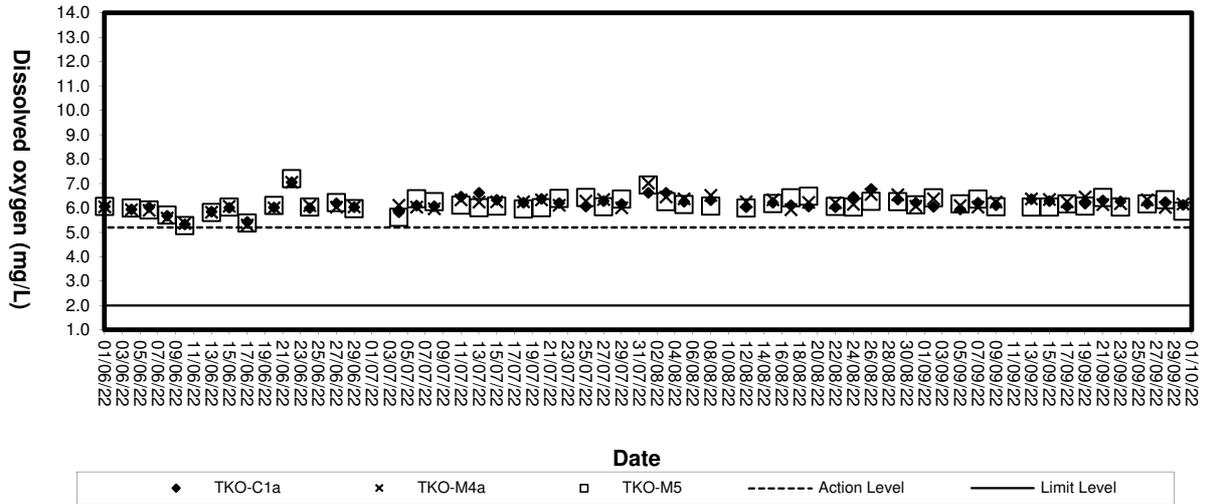
**Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide (3RS project)**



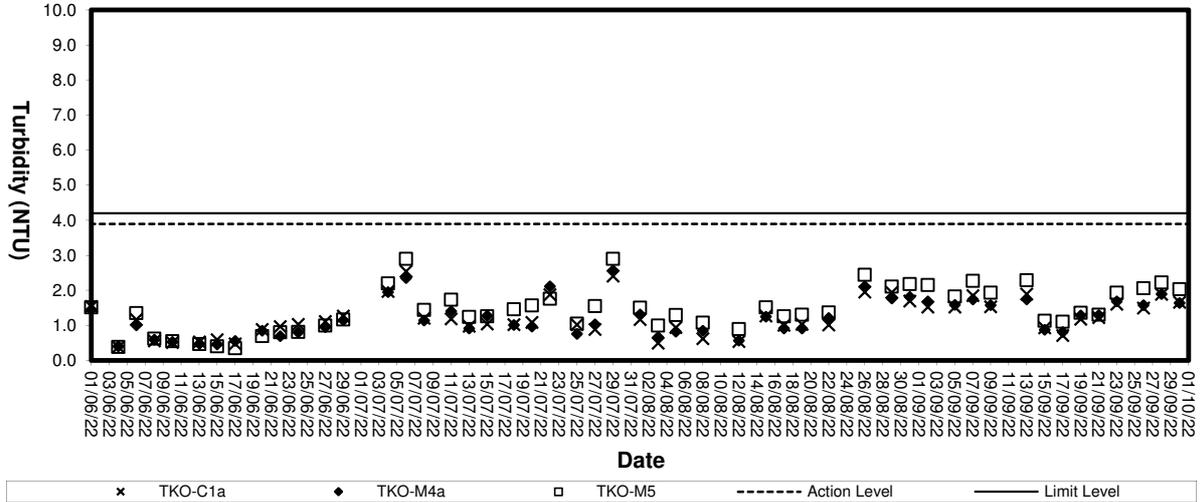
**Dissolved Oxygen (Bottom) at Mid-Flood Tide (3RS project)**



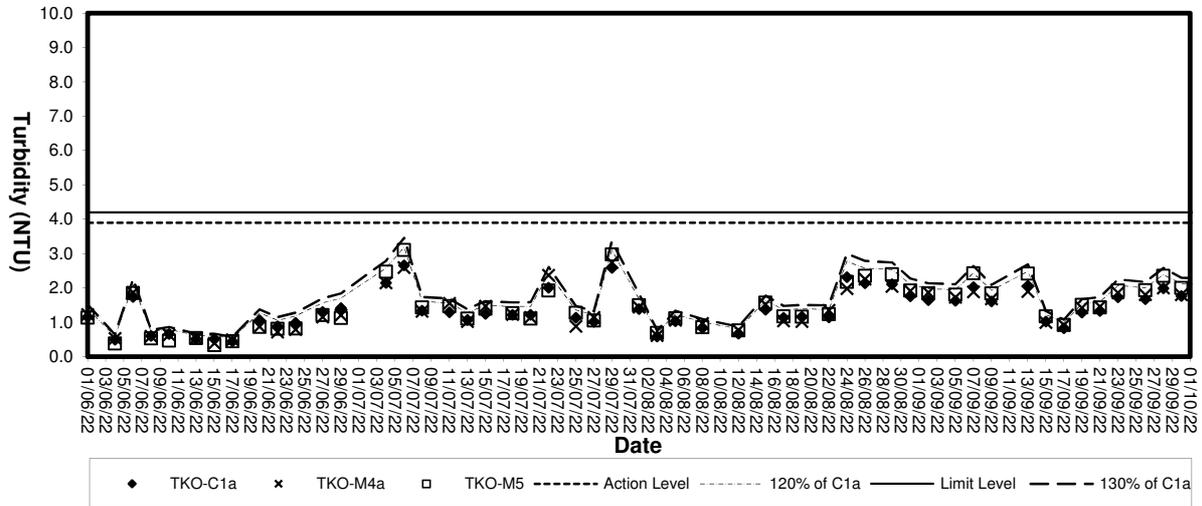
**Dissolved Oxygen (Bottom) at Mid-Ebb Tide (3RS project)**



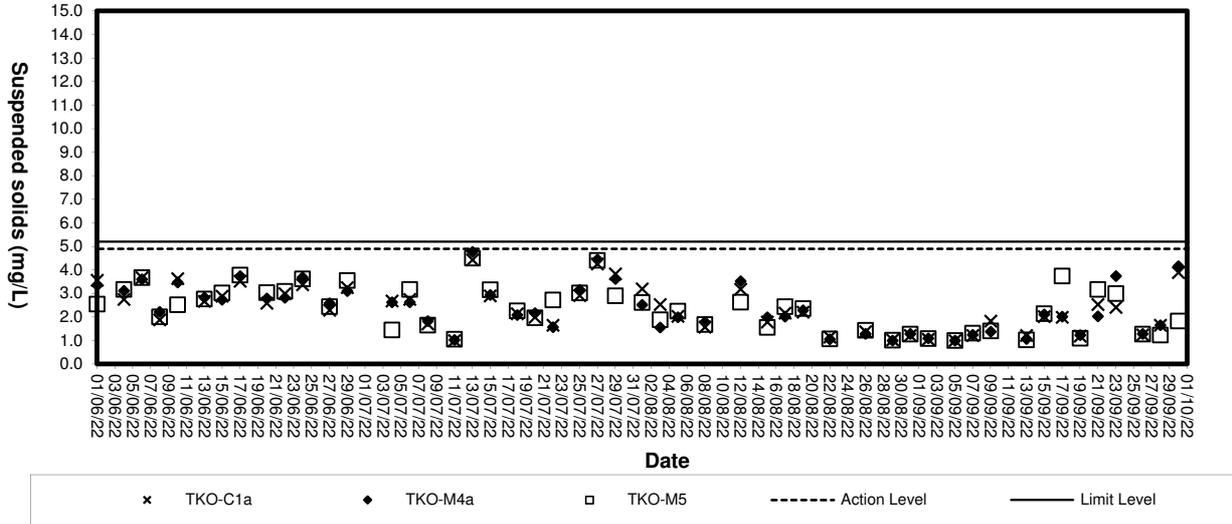
**Turbidity (Depth-average) at Mid-Flood Tide (3RS project)**



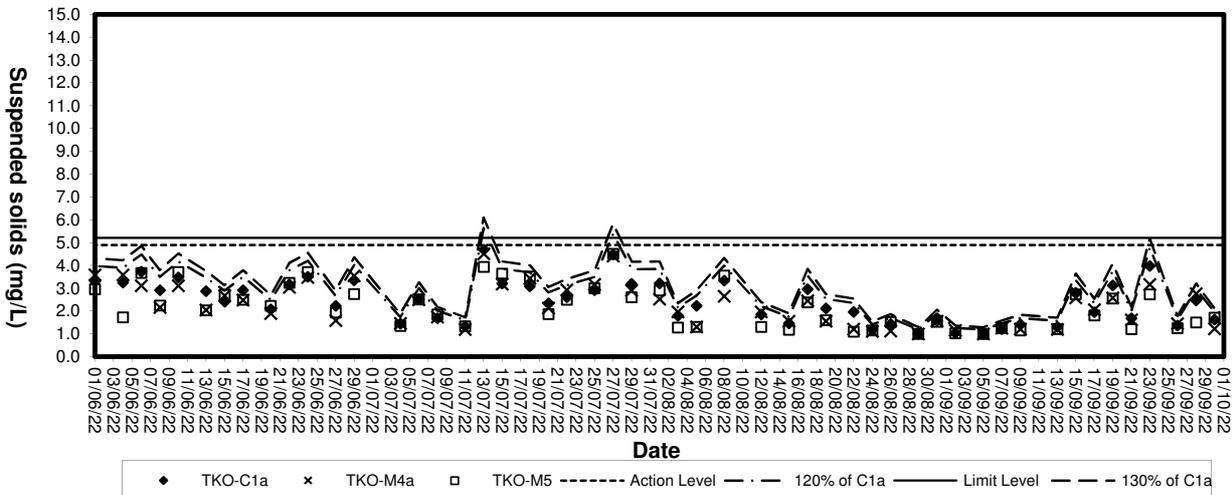
**Turbidity (Depth-average) at Mid-Ebb Tide (3RS project)**



**Suspended solids (Depth-average) at Mid-Flood Tide (3RS project)**



**Suspended Solids (Depth-average) at Mid-Ebb Tide (3RS project)**



## **Appendix**

### **E**

#### **Environmental Quality Performance (Action / Limit Levels)**

**Action and Limit Levels for Air Quality**
**Action and Limit Levels for 1-Hour TSP**

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
A1	376	500
A2		

**Action and Limit Levels for 24-Hour TSP**

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
A1	210	280
A2		

**Action and Limit Levels for Noise**

Time Period	Action	Limit
0900-2100 hrs on all days	When one documented complaint is received	75*dB(A)

**Action and Limit Levels for Water Quality**

Parameters	Action	Limit
Dissolved oxygen, DO mg/L (Surface, Middle & Bottom)	<u>Surface &amp; Middle</u> DO < 5.45 (5%-ile of baseline data) <u>Bottom</u> DO < 4.72 (5%-ile of baseline data)	<u>Surface &amp; Middle</u> DO < 5.10 (1%-ile of baseline data) <u>Bottom</u> 2 mg/L
Suspended solids, SS mg/L (Depth-averaged)	SS > 6.74 (95%-ile of baseline data or SS > 120% of upstream control stations SS at the same tide of the same day)	SS > 7.67 (99%-ile of baseline data or SS > 130% of upstream control stations SS at the same tide of the same day)
Turbidity, Tby NTU (Depth-averaged)	Tby > 4.28 (95%-ile of baseline data or Tby > 120% of upstream control stations Tby at the same tide of the same day)	Tby > 4.58 (99%-ile of baseline data or Tby > 130% of upstream control stations Tby at the same tide of the same day)

**Action and Limit Levels for Water Quality (3RS project) <sup>Ⓢ</sup>**

Parameter <sup>Ⓢ</sup>	Action Level <sup>Ⓢ</sup>	Limit Level <sup>Ⓢ</sup>
DO (mg/L) <sup>Ⓢ</sup>	<u>Surface &amp; Middle</u> <sup>Ⓢ</sup> <5.5 mg/L <sup>Ⓢ</sup> <u>Bottom</u> <sup>Ⓢ</sup> <5.2 mg/L <sup>Ⓢ</sup>	<u>Surface &amp; Middle</u> <sup>Ⓢ</sup> <4.00 mg/L (1%-ile of baseline data) <sup>Ⓢ</sup> <u>Bottom</u> <sup>Ⓢ</sup> <2.00 mg/L <sup>Ⓢ</sup>
SS (mg/L) <sup>Ⓢ</sup> (Depth-averaged) <sup>Ⓢ</sup>	>4.9 mg/L or >120% of the upstream control station's SS at the same tide on the same day <sup>Ⓢ</sup>	>5.2 mg/L or >130% of the upstream control station's SS at the same tide on the same day <sup>Ⓢ</sup>
Turbidity (NTU) (Depth-averaged) <sup>Ⓢ</sup>	>3.9NTU or >120% of the upstream control station's turbidity at the same tide on the same day <sup>Ⓢ</sup>	>4.2 NTU or >130% of the upstream control station's turbidity at the same tide on the same day <sup>Ⓢ</sup>

## **Appendix**

### **F**

#### **Event-Action Plans**

# EVENT/ACTION PLAN FOR AIR QUALITY EXCEEDANCE

ET Leader	ACTION	Contractor
IC(E)	ER	

	ACTION LEVEL		
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures</li> <li>2. Inform ER, IC(E) and Contractor</li> <li>3. Repeat measurement to confirm finding</li> <li>4. Increase monitoring frequency to daily</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by the ET</li> <li>2. Check contractor's working method</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor</li> </ol>
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures</li> <li>2. Inform IC(E) and Contractor</li> <li>3. Repeat measurements to confirm finding</li> <li>4. Increase monitoring frequency to daily</li> <li>5. Discuss with IC(E) and Contractor on remedial actions</li> <li>6. If exceedance continues, arrange meeting with IC(E) and ER.</li> <li>7. If exceedance stops, cease additional monitoring</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by the ET</li> <li>2. Check the Contractor's working method</li> <li>3. Discuss with ET and Contractor on possible remedial measures</li> <li>4. Advise the ER on the effectiveness of the proposed remedial measures</li> <li>5. Supervise implementation of remedial measures</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing</li> <li>2. Notify the Contractor</li> <li>3. Ensure remedial measures properly implemented</li> </ol>
<b>LIMIT LEVEL</b>			
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures</li> <li>2. Inform ER, Contractor and EPD</li> <li>3. Repeat measurement to confirm finding</li> <li>4. Increase monitoring frequency to daily</li> <li>5. Assess the effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by the ET</li> <li>2. Check Contractor's working method</li> <li>3. Discuss with ET and Contractor on possible remedial measures</li> <li>4. Advise the ER on the effectiveness of the proposed remedial measures</li> <li>5. Supervise implementation of remedial measures</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing</li> <li>2. Notify the Contractor</li> <li>3. Ensure remedial measures properly implemented</li> </ol>
			<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance</li> <li>2. Submit proposals for remedial actions to IC(E) within 3 working days of notification</li> <li>3. Implement the agreed proposals</li> <li>4. Amend proposal if appropriate.</li> </ol>

## EVENT/ACTION PLAN FOR AIR QUALITY EXCEEDANCE

EVENT	ACTION			Contractor
	ET Leader	IC(E)	ER	
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures</li> <li>2. Notify IC(E), ER, EPD and Contractor</li> <li>3. Repeat measurement to confirm finding</li> <li>4. Increase monitoring frequency to daily</li> <li>5. Carry out analysis of contractor's working procedures to determine possible mitigation to be implemented</li> <li>6. Arrange meeting with IC(E) and ER to discuss the remedial actions to be taken</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results</li> <li>8. If exceedance stops, cease additional monitoring</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET and Contractor on the potential remedial actions</li> <li>2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly</li> <li>3. Supervise the implementation of remedial measures</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing</li> <li>2. Notify Contractor</li> <li>3. In consultation with the IC(E), agree with the Contractor on the remedial measures to be implemented</li> <li>4. Ensure remedial measures are properly implemented</li> <li>5. If exceedances continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedances</li> <li>2. Submit proposals for remedial actions to IC(E) within 3 working days of notification</li> <li>3. Implement the agreed proposals</li> <li>4. Resubmit proposals if problem still not under control</li> <li>5. Stop the relevant activity of works as determined by the ER until the exceedance is abated</li> </ol>

## EVENT/ACTION PLAN FOR NOISE EXCEEDANCE

EVENT	ACTION			
	ET Leader	IC(E)	ER	Contractor
Action Level	<ol style="list-style-type: none"> <li>1. Notify the IC(E) and the Contractor.</li> <li>2. Carry out investigation.</li> <li>3. Report the results of investigation to the IC(E) and the Contractor.</li> <li>4. Discuss with the Contractor and formulate remedial measures.</li> <li>5. Increase monitoring frequency to check mitigation effectiveness</li> </ol>	<ol style="list-style-type: none"> <li>1. Review the analysed results submitted by the ET.</li> <li>2. Review the proposed remedial measures by the Contractor and advise the ER accordingly.</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing.</li> <li>2. Notify the Contractor.</li> <li>3. Require the Contractor to propose remedial measures for the analysed noise problem.</li> <li>4. Ensure remedial measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IC(E).</li> <li>2. Implement noise mitigation proposals.</li> </ol>
Limit Level	<ol style="list-style-type: none"> <li>1. Notify the IC(E), the ER, the EPD and the Contractor.</li> <li>2. Identify source.</li> <li>3. Repeat measurement to confirm findings.</li> <li>4. Increase monitoring frequency.</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented.</li> <li>6. Inform the IC(E), the ER and the EPD the causes &amp; actions taken for the exceedances.</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep the IC(E), the EPD and the ER informed of the results</li> <li>8. If exceedance due to the construction works stops, cease additional monitoring</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst the ER, the ET Leader and the Contractor on the potential remedial actions.</li> <li>2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing.</li> <li>2. Notify the Contractor.</li> <li>3. Require the Contractor to propose remedial measures for the analysed noise problem.</li> <li>4. Ensure remedial measures are properly implemented.</li> <li>5. If exceedances continue, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedances is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance</li> <li>2. Submit proposals for remedial actions to IC(E) within 3 working days of notification.</li> <li>3. Implement the agreed proposals.</li> <li>4. Resubmit proposals if problem still not under control.</li> <li>5. Stop the relevant activity of works as determined by the ER until the exceedances is abated.</li> </ol>

## EVENT AND ACTION PLAN FOR WATER QUALITY EXCEEDANCE

Event	ACTION		
	ET Leader	Contractor	ER IEC
<p>Action level being exceeded by one sampling day</p>	<ol style="list-style-type: none"> <li>1. Identify source(s) of impact;</li> <li>2. Repeat in-situ measurement to confirm findings;</li> <li>3. Notify Contractor in writing within 24 hours of identification of the exceedance</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Carry out investigation</li> <li>6. Report the results of investigation to the Contractor within 3 working days of identification of exceedance and advise contractor if exceedance is due to contractor's construction works</li> <li>7. Discuss mitigation measures with Contractor if exceedance is due to the construction works within 4 working days</li> <li>8. Repeat measurement on next day of exceedance if exceedance is due to the construction works</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify the ER and IEC in writing within 24 hours of identification of exceedance</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Submit investigation report to IEC and ER within 3 working days of the identification of an exceedance</li> <li>5. Consider changes of working method if exceedance is due to the construction works</li> <li>6. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER if exceedance is due to the construction works within 4 working days of identification of an exceedance</li> <li>7. Implement the agreed mitigation measures within reasonable time scale</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify EPD and other relevant governmental agencies in writing within 24 hours of the identification of the exceedance</li> <li>2. Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>3. Require contractor to propose remedial measures for the analysed problem if related to the construction works</li> <li>4. Ensure remedial measures are properly implemented</li> <li>5. Assess the effectiveness of the mitigation measure</li> </ol>
			<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET</li> <li>2. Confirm ET assessment if exceedance is due / not due to the works</li> <li>3. Discuss with ET, ER and Contractor on the mitigation measures</li> <li>4. Review contractor's mitigation measures whenever necessary to ensure their effectiveness and advise the ER accordingly</li> <li>5. Supervise the implementation of mitigation measures</li> </ol>

## EVENT AND ACTION PLAN FOR WATER QUALITY

Event	ACTION			IEC
	ET Leader	Contractor	ER	
<p>Action level being exceeded by more than one consecutive sampling days</p>	<ol style="list-style-type: none"> <li>1. Identify source(s) of impact;</li> <li>2. Repeat in-situ measurement to confirm findings</li> <li>3. Notify Contractor in writing within 24 hours of identification</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Carry out investigation</li> <li>6. Report the results of investigation to the Contractor within 3 working days of identification of exceedance and advise contractor if exceedance is due to contractor's construction works</li> <li>7. Discuss mitigation measures with IEC and Contractor within 4 working of identification of an exceedance</li> <li>8. Ensure mitigation measures are implemented;</li> <li>9. Prepare to increase the monitoring frequency to daily;</li> <li>10. Repeat measurement on next day of exceedance.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify IEC and ER in writing within 24 hours of identification of exceedance</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Consider changes of working methods;</li> <li>5. Submit the results of the investigation to IEC and ER within 3 working days of the identification of an exceedance</li> <li>6. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 4 working days of identification of an exceedance</li> <li>7. Implement the agreed mitigation measures within reasonable time scale</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify EPD and other relevant governmental agencies in writing within 24 hours of the identification of the exceedance</li> <li>2. Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>3. Require contractor to propose remedial measures for the analysed problem if related to the construction works</li> <li>4. Ensure remedial measures are properly implemented</li> <li>5. Assess the effectiveness of the mitigation measure</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET</li> <li>2. Confirm ET assessment if exceedance is due / not due to the works</li> <li>3. Discuss with ET, ER and Contractor on the mitigation measures.</li> <li>4. Review contractor's mitigation measures whenever necessary to ensure their effectiveness and advise the ER accordingly</li> <li>5. Assess the effectiveness of the implemented mitigation measures.</li> </ol>

## EVENT AND ACTION PLAN FOR WATER QUALITY EXCEEDANCE

Event	ACTION		
	ET Leader	Contractor	ER
Limit level being exceeded by one sampling day	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurement to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Notify Contractor in writing within 24 hours of identification of the exceedance</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Carry out investigation</li> <li>6. Report the results of investigation to the Contractor within 3 working days of identification of exceedance and advise contractor if exceedance is due to contractor's construction works</li> <li>7. Discuss mitigation measures with IEC, ER and Contractor within 4 working of identification of an exceedance</li> <li>8. Ensure mitigation measures are implemented;</li> <li>9. Increase the monitoring frequency to daily until no exceedance of Limit Level.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify IEC and ER in writing; within 24 hours of the identification of the exceedance</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Consider changes of working methods;</li> <li>5. Submit the results of the investigation to IEC and ER within 3 working days of the identification of an exceedance</li> <li>6. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 4 working days of the identification of an exceedance</li> <li>7. Implement the agreed mitigation measures within reasonable time scale</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify EPD and other relevant governmental agencies in writing within 24 hours of identification of exceedance</li> <li>2. Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>3. Request Contractor to critically review the working methods;</li> <li>4. Ensure remedial measures are properly implemented</li> <li>5. Assess the effectiveness of the implemented mitigation measures.</li> </ol>
			<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET</li> <li>2. Confirm ET assessment if exceedance is due / not due to the works</li> <li>3. Discuss with ET, ER and Contractor on the mitigation measures.</li> <li>4. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly.</li> <li>5. Assess the effectiveness of the implemented mitigation measures</li> </ol>

## EVENT AND ACTION PLAN FOR WATER QUALITY EXCEEDANCE

Event	ACTION			
	ET Leader	Contractor	ER	IEC
<p>Limit Level being exceeded by more than one consecutive sampling days</p>	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurement to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Notify Contractor in writing within 24 hours of identification of the exceedance</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Carry out investigation</li> <li>6. Report the results of investigation to the Contractor within 3 working days of identification of exceedance and advise contractor if exceedance is due to contractor's construction works</li> <li>7. Discuss mitigation measures with IEC, ER and Contractor;</li> <li>8. Ensure mitigation measures are implemented;</li> <li>9. Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify ER and IEC in writing within 24 hours of the identification of the exceedance and Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Consider changes of working methods;</li> <li>8. Submit the results of the investigation to IEC and ER within 3 working days of the identification of an exceedance</li> <li>5. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 4 working days;</li> <li>6. Implement the agreed mitigation measures within reasonable time scale</li> <li>7. As directed by the Engineer, to slow down or to stop all or part of the marine work or construction activities.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify EPD and other relevant governmental agencies in writing within 24 hours of identification of exceedance</li> <li>2. Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>3. Request Contractor to critically review the working methods;</li> <li>6. Ensure remedial measures are properly implemented</li> <li>4. Assess the effectiveness of the implemented mitigation measures;</li> <li>5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine work until no exceedance of Limit Level.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET</li> <li>2. Confirm ET assessment if exceedance is due / not due to the works</li> <li>3. Discuss with ER, ET and Contractor on the mitigation measures.</li> <li>4. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly.</li> <li>5. Assess the effectiveness of the implemented mitigation measures.</li> </ol>

## **Appendix**

### **G**

#### **Work Programme**

ID	Task Name	Start	Finish	Duration	Predecessor	Time risk allow	Total Slack	Gantt Chart														
								Jul '22			Aug '22			Sep '22								
								27	4	11	18	25	1	8	15	22	29	5	12	19	26	3
1	Contract duration of Contract CV/2021/9	Sat 1/1/22	Sun 31/12/23	730 days			0 days	1/7/22 30/9/22														
2	Contract date , Date of the Letter of Acceptance (assumed)	Mon 20/12/21	Mon 20/12/21	0 days			742 days															
3	Starting Date of the Works	Sat 1/1/22	Sat 1/1/22	0 days			729 days															
4	Starting Date of Section 1 of the Works	Sat 1/1/22	Sat 1/1/22	0 days			0 days															
5	Starting Date of Section 2 of the Works	Sat 1/1/22	Sat 1/1/22	0 days			729 days															
6	Starting Date of Section 3 of the Works	Sat 1/1/22	Sat 1/1/22	0 days			120 days															
7	Date for Completion of the Works	Sun 31/12/23	Sun 31/12/23	0 days			1 day															
8	Completion Date of Section 1 of the Works	Sun 31/12/23	Sun 31/12/23	0 days			0 days															
9	Completion Date of Section 2 of the Works	Sun 31/12/23	Sun 31/12/23	0 days			0 days															
10	Completion Date of Section 3 of the Works	Sun 31/12/23	Sun 31/12/23	0 days			0 days															
11	Planned completion dates	Sun 31/12/23	Sun 31/12/23	0 days			0 days															
12	Planned completion date of Section 1	Sun 31/12/23	Sun 31/12/23	0 days			0 days															
13	Planned completion date of Section 2	Sun 31/12/23	Sun 31/12/23	0 days			0 days															
14	Planned completion date of Section 3	Sun 31/12/23	Sun 31/12/23	0 days			0 days															
15	Access Date of the Site	Sat 1/1/22	Sat 1/1/22	0 days			729 days															
16	Portion A2, A3a, A3b, A3c, A4, A5a, A5b, A7c2, A10 and A11 (within 60 days after starting date)	Sat 1/1/22	Sat 1/1/22	0 days			0 days															
17	Portion B1, B3, B6a, B6b and B7 (within 60 days after starting date)	Sat 1/1/22	Sat 1/1/22	0 days			0 days															
18	Portion A1, A7a, A7b, A7c1, A9, A9a and B6c (7 day's advance notice after starting date)	Sat 1/1/22	Sat 1/1/22	0 days			0 days															
19	Portion B6c (7 day's advance notice after starting date)	Sat 1/1/22	Sat 1/1/22	0 days			0 days															
20	Hand back of the Site	Sun 31/12/23	Sun 31/12/23	0 days			0 days															
21	Portion A2, A3a, A3b, A3c, A4, A5a, A7c2, A10 and A11 (or at an earlier date notified by the Project Manager with 30 days' advance notice)	Sun 31/12/23	Sun 31/12/23	0 days			0 days															
22	Portion A1, A7b, A7c1, A9 and A9a (or at an earlier date as notified by the Project Manager with 30 days' advance notice)	Sun 31/12/23	Sun 31/12/23	0 days			0 days															
23	Portion B1, B3, B6a, B6b and B7 (or at an earlier date as notified by the Project Manager with 30 days' advance notice)	Sun 31/12/23	Sun 31/12/23	0 days			0 days															
24	Portion B6c (or at an earlier date as notified by the Project Manager with 30 days' advance notice)	Sun 31/12/23	Sun 31/12/23	0 days			0 days															
25	Section 1 of the Works - Tseung Kwan O Area 137 Fill Bank	Sat 1/1/22	Sun 31/12/23	730 days	4SS		0 days															
26	Taking over the existing facilities at the Tseung Kwan O Area 137 Fill Bank within Portion A of the Site	Sat 1/1/22	Sat 1/1/22	1 day	4SS	0	0 days															
27	Operation of the the Tseung Kwan O Area 137 Fill Bank within Portion A of the Site	Sat 1/1/22	Sun 31/12/23	730 days	26SS	0	0 days															
28	Operation and maintenance of the surveillance system within Portion A of the Site	Sat 1/1/22	Sun 31/12/23	730 days	26SS	0	0 days															
29	Operation and maintenance of the existing tipping halls at the Tseung Kwan O Area 137 Fill Bank within Portion A of the Site	Sat 1/1/22	Sun 31/12/23	730 days	26SS	0	0 days															
30	Provision, operation and maintenance of the Crushing Plant at the Tseung Kwan O Area 137 Fill Bank within Portion A of the Site	Sat 1/1/22	Sun 31/12/23	730 days	26SS	0	0 days															
31	Operation and maintenance of the dewatering plant at the Tseung Kwan O Area 137 Fill Bank within portion A of the Site.	Sat 1/1/22	Sun 31/12/23	730 days	26SS	0	0 days															
32	Collection and delivery of Public Fill by barges from the Chai Wan and Mui Wo Barging Points to the TKO Area 137 Fill Bank within Portion A of the Site	Sat 1/1/22	Sun 31/12/23	730 days	26SS	0	0 days															
33	Construction of Gabion wall	Sat 19/2/22	Sun 31/12/23	681 days			0 days															
34	Preparing and submitting a method statement for approval	Sat 19/2/22	Wed 2/3/22	12 days		2	0 days															
35	Preparing and submitting the material submission	Sat 19/2/22	Wed 2/3/22	12 days		2	0 days															
36	Obtaining approval from the Project Manager	Tue 26/4/22	Tue 26/4/22	1 day	35,34	2	0 days															
37	Construction of Gabion wall	Tue 19/4/22	Sun 31/12/23	622 days		7	0 days															
38	Re-surfacing of the access road at A11 TKOFB	Mon 21/3/22	Fri 22/4/22	33 days			0 days															
39	Submission of method statement of re-surfacing the access road	Mon 21/3/22	Fri 25/3/22	5 days		0	0 days															
40	Obtaining approval from the Project Manager	Thu 7/4/22	Thu 7/4/22	1 day	39	2	0 days															

Project: 3month rolling Programme Jul22 to Sept22 CV/2021/09 Date: [25/6/2022]	Task		External Tasks		Duration-only		External Tasks	
	Split		External Milestone		Manual Summary Rollup		External Milestone	
	Milestone		Inactive Milestone		Manual Summary		Progress	
	Summary		Inactive Summary		Start-only		Deadline	
	Project Summary		Manual Task		Finish-only			

ID	Task Name	Start	Finish	Duration	Predecessors	Time risk allow	Total Slack	Gantt Chart (Jul '22 to Sep '22)														
								27	4	11	18	25	1	8	15	22	29	5	12	19	26	3
41	Milling off the existing pavement, overlaying new pavement on the access road	Fri 15/4/22	Fri 22/4/22	8 days	40	1	0 days	1/7/22 30/9/22														
42	Handing over the facilities at the Tseung Kwan O Area 137 Fill Bank within Portion A of the Site to the Employer	Sun 31/12/23	Sun 31/12/23	0 days	8SS	0	0 days															
43	Planned Completion Date (Section 1)	Sun 31/12/23	Sun 31/12/23	0 days			1 day															
44	<b>Section 2 of the Works - Tuen Mun Area 38 Fill Bank</b>	Sat 1/1/22	Sun 31/12/23	730 days			0 days															
45	Taking over the existing facilities at the Tuen Mun Area 38 Fill Bank within Portion B of the Site	Sat 1/1/22	Sat 1/1/22	1 day	5SS	0	0 days															
46	Operation of the Tuen Mun Area 38 Fill Bank within Portion B of the Site	Sat 1/1/22	Sun 31/12/23	730 days	5SS	0	0 days															
47	Operation and maintenance of the surveillance system within Portion B of the Site	Sat 1/1/22	Sun 31/12/23	730 days	5SS	0	0 days															
48	Operation and maintenance of the existing tipping halls at the Tuen Mun Area 38 Fill Bank within Portion B of the Site	Sat 1/1/22	Sun 31/12/23	730 days	5SS	0	0 days															
49	Operation and Maintenance of the Crushing Plant at the Tuen Mun Area 38 Fill Bank within Portion B of the Site	Sat 1/1/22	Sun 31/12/23	730 days	5SS	0	0 days															
50	Operation and maintenance of glass cullet storage compartment at the Tuen Mun Area 38 Fill Bank within Portion B of the Site	Sat 1/1/22	Sun 31/12/23	730 days	5SS	0	0 days															
51	<b>PMI no.05 Construction of vehicle washing house facilities</b>	Wed 6/4/22	Thu 28/7/22	114 days			521 days															
52	Submission of method statement of vehicle washing house facilities	Wed 6/4/22	Wed 6/4/22	1 day		1	0 days															
53	Obtaining approval from the Project Manager	Mon 25/4/22	Mon 25/4/22	1 day	52	2	0 days															
54	Fabrication and delivery of the vehicle washing house facilities materials on site	Mon 2/5/22	Thu 30/6/22	60 days		5	524 days															
55	Installation of the vehicle washing house facilities	Sat 2/7/22	Mon 25/7/22	24 days	54	2	523 days															
56	Trial run of vehicle washing house facilities	Thu 28/7/22	Thu 28/7/22	1 day	55	0	521 days															
57	Handing over the facilities at the Tuen Mun Area 38 Fill Bank within Portion B of the Site to the Employer	Sun 31/12/23	Sun 31/12/23	1 day	9SS	0	0 days															
58	Planned Completion Date (Section 2)	Sun 31/12/23	Sun 31/12/23	0 days			0 days															
59	<b>Section 3 of the Works - Designated Reclamation Sites in the Mainland</b>	Tue 7/12/21	Sun 31/12/23	755 days			0 days															
60	<b>Collection and delivery of 2 million tonnes of Public Fill by vessels from Tseung Kwan O Area 137 Fill Bank and the Tuen Mun Area 38 Fill Bank to the Designated Reclamation Sites in the Mainland</b>	Tue 7/12/21	Wed 20/12/23	744 days			11 days															
61	<b>1st and 2nd quarter of first year</b>	Tue 7/12/21	Thu 30/6/22	206 days			549 days															
62	Installing Front End Mobile Unit (FEMU) onto the proposed vessels	Mon 20/12/21	Sun 26/12/21	7 days		2	705 days															
63	Submitting application documents to EPD for application of dumping permits	Tue 28/12/21	Tue 28/12/21	1 day		0	0 days															
64	Obtaining the dumping permit from EPD	Wed 29/12/21	Sat 30/4/22	123 days	63	2	580 days															
65	Submitting Application documents to the Employer for the application of the dumping permit of waste at the sea	Tue 7/12/21	Tue 7/12/21	1 day			0 days															
66	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer (assumed on 31/12/21)	Tue 26/4/22	Tue 26/4/22	1 day		14	0 days															
67	Obtaining all necessary permits, licenses, approvals and consents	Sun 17/4/22	Sat 30/4/22	14 days		14	580 days															
68	Collection and delivery of 166666 tonnes of Public Fill	Wed 1/6/22	Thu 30/6/22	30 days	66,64,67	10	549 days															
69	<b>3rd quarter of first year</b>	Fri 20/5/22	Fri 30/9/22	134 days			12 days															
70	Submitting application documents to EPD for application of dumping permits	Fri 17/6/22	Fri 17/6/22	1 day		0	12 days															
71	Obtaining the dumping permit from EPD (assumed on 30/6/22)	Sat 18/6/22	Thu 30/6/22	13 days	70	14	12 days															
72	Submitting Application documents to the Employer for the application of the dumping permit of waste at the sea	Fri 20/5/22	Fri 20/5/22	1 day		0	12 days															
73	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer	Sat 21/5/22	Thu 30/6/22	41 days	72	14	12 days															
74	Obtaining all necessary permits, licenses, approvals and consents	Fri 17/6/22	Thu 30/6/22	14 days		0	12 days															
75	Collection and delivery of 499998 tonnes of Public Fill	Fri 1/7/22	Fri 30/9/22	92 days	74,71,73	14	12 days															
76	<b>4th quarter of first year</b>	Sat 20/8/22	Sat 31/12/22	134 days			12 days															
77	Submitting application documents to EPD for application of dumping permits	Sat 17/9/22	Sat 17/9/22	1 day		0	12 days															
78	Obtaining the dumping permit from EPD (assumed on 30/9/22)	Sun 18/9/22	Fri 30/9/22	13 days	77	2	12 days															
79	Submitting Application documents to the Employer for the application of the dumping permit of waste at the sea	Sat 20/8/22	Sat 20/8/22	1 day		0	12 days															

Project: 3month rolling Programme Jul22 to Sept22 CV/2021/09  
Date: [25/6/2022]

Task		External Tasks		Duration-only		External Tasks	
Split		External Milestone		Manual Summary Rollup		External Milestone	
Milestone		Inactive Milestone		Manual Summary		Progress	
Summary		Inactive Summary		Start-only		Deadline	
Project Summary		Manual Task		Finish-only			

ID	Task Name	Start	Finish	Duration	Precedence	Time risk allow	Total Slack	Gantt Chart (Jul '22 to Sep '22)											
80	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer (assumed on 30/9/22)	Sun 21/8/22	Fri 30/9/22	41 days	79	14	12 days	[Gantt bar from 21/8/22 to 30/9/22]											
81	Obtaining all necessary permits, licenses, approvals and consents	Sat 17/9/22	Fri 30/9/22	14 days		2	12 days	[Gantt bar from 17/9/22 to 30/9/22]											
82	Collection and delivery of 250000 tonnes of Public Fill	Sat 1/10/22	Sat 31/12/22	92 days	75,81,80	14	12 days	[Gantt bar from 1/10/22 to 31/12/22]											
83	<b>1st quarter of second year</b>	Sun 20/11/22	Fri 31/3/23	132 days			12 days	[Gantt bar from 20/11/22 to 31/3/23]											
84	Submitting application documents to EPD for application of dumping permits	Sun 18/12/22	Sun 18/12/22	1 day		0	12 days	[Gantt bar from 18/12/22 to 18/12/22]											
85	Obtaining the dumping permit from EPD (assumed on 31/12/22)	Mon 19/12/22	Sat 31/12/22	13 days	84	2	12 days	[Gantt bar from 19/12/22 to 31/12/22]											
86	Submitting Application documents to the Employer for the application of the dumping permit of waste at the sea	Sun 20/11/22	Sun 20/11/22	1 day		0	12 days	[Gantt bar from 20/11/22 to 20/11/22]											
87	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer	Mon 21/11/22	Sat 31/12/22	41 days	86	14	12 days	[Gantt bar from 21/11/22 to 31/12/22]											
88	Obtaining all necessary permits, licenses, approvals and consents	Sun 18/12/22	Sat 31/12/22	14 days		2	12 days	[Gantt bar from 18/12/22 to 31/12/22]											
89	Collection and delivery of 250000 tonnes of Public Fill	Sun 1/1/23	Fri 31/3/23	90 days	82,88,87	14	12 days	[Gantt bar from 1/1/23 to 31/3/23]											
90	<b>2nd quarter of second year</b>	Sat 18/2/23	Fri 30/6/23	133 days			12 days	[Gantt bar from 18/2/23 to 30/6/23]											
91	Submitting application documents to EPD for application of dumping permits	Sat 18/3/23	Sat 18/3/23	1 day		0	12 days	[Gantt bar from 18/3/23 to 18/3/23]											
92	Obtaining the dumping permit from EPD (assumed on 31/3/23)	Sun 19/3/23	Fri 31/3/23	13 days	91	2	12 days	[Gantt bar from 19/3/23 to 31/3/23]											
93	Submitting Application documents to the Employer for the application of the dumping permit of waste at the sea	Sat 18/2/23	Sat 18/2/23	1 day		0	12 days	[Gantt bar from 18/2/23 to 18/2/23]											
94	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer (assumed on 31/3/23)	Sun 19/2/23	Fri 31/3/23	41 days	93	14	12 days	[Gantt bar from 19/2/23 to 31/3/23]											
95	Obtaining all necessary permits, licenses, approvals and consents	Sat 18/3/23	Fri 31/3/23	14 days		2	12 days	[Gantt bar from 18/3/23 to 31/3/23]											
96	Collection and delivery of 250000 tonnes of Public Fill	Sat 1/4/23	Fri 30/6/23	91 days	89,92,94	14	12 days	[Gantt bar from 1/4/23 to 30/6/23]											
97	<b>3rd quarter of second year</b>	Sat 20/5/23	Sat 30/9/23	134 days			12 days	[Gantt bar from 20/5/23 to 30/9/23]											
98	Submitting application documents to EPD for application of dumping permits	Sat 17/6/23	Sat 17/6/23	1 day		0	12 days	[Gantt bar from 17/6/23 to 17/6/23]											
99	Obtaining the dumping permit from EPD (assumed on 30/6/23)	Sun 18/6/23	Fri 30/6/23	13 days	98	14	12 days	[Gantt bar from 18/6/23 to 30/6/23]											
100	Submitting Application documents to the Employer for the application of the dumping permit of waste at the sea	Sat 20/5/23	Sat 20/5/23	1 day		0	12 days	[Gantt bar from 20/5/23 to 20/5/23]											
101	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer (assumed on 30/6/23)	Sun 21/5/23	Fri 30/6/23	41 days	100	14	12 days	[Gantt bar from 21/5/23 to 30/6/23]											
102	Obtaining all necessary permits, licenses, approvals and consents	Sat 17/6/23	Fri 30/6/23	14 days		2	12 days	[Gantt bar from 17/6/23 to 30/6/23]											
103	Collection and delivery of 250000 tonnes of Public Fill	Sat 1/7/23	Sat 30/9/23	92 days	96,102,9	14	12 days	[Gantt bar from 1/7/23 to 30/9/23]											
104	<b>4th quarter of second year</b>	Sun 20/8/23	Wed 20/12/23	123 days			11 days	[Gantt bar from 20/8/23 to 20/12/23]											
105	Submitting application documents to EPD for application of dumping permits	Sun 17/9/23	Sun 17/9/23	1 day		0	12 days	[Gantt bar from 17/9/23 to 17/9/23]											
106	Obtaining the dumping permit from EPD (assumed on 30/9/23)	Mon 18/9/23	Sat 30/9/23	13 days	105	2	12 days	[Gantt bar from 18/9/23 to 30/9/23]											
107	Submitting Application documents to the Employer for the application of the dumping permit of waste at the sea	Sun 20/8/23	Sun 20/8/23	1 day		0	12 days	[Gantt bar from 20/8/23 to 20/8/23]											
108	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer (assumed on 30/9/23)	Mon 21/8/23	Sat 30/9/23	41 days	107	14	12 days	[Gantt bar from 21/8/23 to 30/9/23]											
109	Obtaining all necessary permits, licenses, approvals and consents	Sun 17/9/23	Sat 30/9/23	14 days		0	12 days	[Gantt bar from 17/9/23 to 30/9/23]											
110	Collection and delivery of 250000 tonnes of Public Fill	Mon 2/10/23	Wed 20/12/23	80 days	103,109,	14	11 days	[Gantt bar from 2/10/23 to 20/12/23]											
111	Collection and delivery of 8 million tonnes of Public Fill by vessels from Tseung Kwan O Area 137 Fill Bank and the Tuen Mun Area 38 Fill Bank to the Designated Reclamation Sites in the Mainland (subject to Project's Manager's instruction)	Tue 7/12/21	Wed 20/12/23	744 days			11 days	[Gantt bar from 7/12/21 to 20/12/23]											
112	<b>1st quarter of first year</b>	Tue 7/12/21	Thu 30/6/22	206 days			549 days	[Gantt bar from 7/12/21 to 30/6/22]											
113	Installing Front End Mobile Unit (FEMU) onto the proposed vessels	Mon 20/12/21	Sun 26/12/21	7 days		1	674 days	[Gantt bar from 20/12/21 to 26/12/21]											
114	Submitting application documents to EPD for application of dumping permits	Tue 28/12/21	Tue 28/12/21	1 day		0	549 days	[Gantt bar from 28/12/21 to 28/12/21]											
115	Obtaining the dumping permit from EPD (assumed on 31/12/21)	Wed 29/12/21	Sat 30/4/22	123 days	114	2	549 days	[Gantt bar from 29/12/21 to 30/4/22]											
116	Submitting Application documents to the Employer for the application of the dumping permit of waste at the sea	Tue 7/12/21	Tue 7/12/21	1 day		0	563 days	[Gantt bar from 7/12/21 to 7/12/21]											
117	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer (assumed on 31/12/21)	Wed 8/12/21	Sat 16/4/22	130 days	116	2	563 days	[Gantt bar from 8/12/21 to 16/4/22]											
118	Obtaining all necessary permits, licenses, approvals and consents	Sun 17/4/22	Sat 30/4/22	14 days		2	549 days	[Gantt bar from 17/4/22 to 30/4/22]											

Project: 3month rolling Programme Jul22 to Sept22 CV/2021/09  
Date: [25/6/2022]

Task		External Tasks		Duration-only		External Tasks	
Split		External Milestone		Manual Summary Rollup		External Milestone	
Milestone		Inactive Milestone		Manual Summary		Progress	
Summary		Inactive Summary		Start-only		Deadline	
Project Summary		Manual Task		Finish-only			

ID	Task Name	Start	Finish	Duration	Predecessor	Time risk allow	Total Slack	Gantt Chart (Jul '22 to Sep '22)													
119	Collection and delivery of 666666 tonnes of Public Fill	Sun 1/5/22	Thu 30/6/22	61 days	118,117, 14		549 days	[Gantt bar from 1/5/22 to 30/6/22]													
120	<b>2nd quarter of first year</b>	Fri 18/2/22	Thu 30/6/22	133 days			12 days	[Gantt bar from 18/2/22 to 30/6/22]													
121	Submitting application documents to EPD for application of dumping permits	Sat 12/3/22	Sat 12/3/22	1 day		0	18 days	[Gantt bar from 12/3/22 to 12/3/22]													
122	Obtaining the dumping permit from EPD (assumed on 31/3/22)	Sat 19/3/22	Sat 30/4/22	43 days	121	2	12 days	[Gantt bar from 19/3/22 to 30/4/22]													
123	Submitting Application documents to the Employer for the application of the dumping permit of waste at the sea	Fri 18/2/22	Fri 18/2/22	1 day		0	36 days	[Gantt bar from 18/2/22 to 18/2/22]													
124	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer	Tue 1/3/22	Sat 16/4/22	47 days	123	2	26 days	[Gantt bar from 1/3/22 to 16/4/22]													
125	Obtaining all necessary permits, licenses, approvals and concents	Sun 17/4/22	Sat 30/4/22	14 days		0	12 days	[Gantt bar from 17/4/22 to 30/4/22]													
126	Collection and delivery of 666666 tonnes of Public Fill	Sun 1/5/22	Thu 30/6/22	61 days	125,124, 14		12 days	[Gantt bar from 1/5/22 to 30/6/22]													
127	<b>3rd quarter of first year</b>	Fri 20/5/22	Fri 30/9/22	134 days			12 days	[Gantt bar from 20/5/22 to 30/9/22]													
128	Submitting application documents to EPD for application of dumping permits	Fri 17/6/22	Fri 17/6/22	1 day		0	12 days	[Gantt bar from 17/6/22 to 17/6/22]													
129	Obtaining the dumping permit from EPD (assumed on 30/6/22)	Sat 18/6/22	Thu 30/6/22	13 days	128	2	12 days	[Gantt bar from 18/6/22 to 30/6/22]													
130	Submitting Application documents to the Employer for the application of the dumping permit of waste at the sea	Fri 20/5/22	Fri 20/5/22	1 day		0	12 days	[Gantt bar from 20/5/22 to 20/5/22]													
131	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer	Sat 21/5/22	Thu 30/6/22	41 days	130	14	12 days	[Gantt bar from 21/5/22 to 30/6/22]													
132	Obtaining all necessary permits, licenses, approvals and concents	Fri 17/6/22	Thu 30/6/22	14 days		0	12 days	[Gantt bar from 17/6/22 to 30/6/22]													
133	Collection and delivery of 1666665 tonnes of Public Fill	Fri 1/7/22	Fri 30/9/22	92 days	129,132, 14		12 days	[Gantt bar from 1/7/22 to 30/9/22]													
134	<b>4th quarter of first year</b>	Sat 20/8/22	Sat 31/12/22	134 days			12 days	[Gantt bar from 20/8/22 to 31/12/22]													
135	Submitting application documents to EPD for application of dumping permits	Sat 17/9/22	Sat 17/9/22	1 day		0	12 days	[Gantt bar from 17/9/22 to 17/9/22]													
136	Obtaining the dumping permit from EPD (assumed on 30/9/22)	Sun 18/9/22	Fri 30/9/22	13 days	135	2	12 days	[Gantt bar from 18/9/22 to 30/9/22]													
137	Submitting Application documents to the Employer for the application of the dumping permit of waste at the sea	Sat 20/8/22	Sat 20/8/22	1 day		0	12 days	[Gantt bar from 20/8/22 to 20/8/22]													
138	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer (assumed on 30/9/22)	Sun 21/8/22	Fri 30/9/22	41 days	137	14	12 days	[Gantt bar from 21/8/22 to 30/9/22]													
139	Obtaining all necessary permits, licenses, approvals and concents	Sat 17/9/22	Fri 30/9/22	14 days		2	12 days	[Gantt bar from 17/9/22 to 30/9/22]													
140	Collection and delivery of 1 million tonnes of Public Fill	Sat 1/10/22	Sat 31/12/22	92 days	139,133, 14		12 days	[Gantt bar from 1/10/22 to 31/12/22]													
141	<b>1st quarter of second year</b>	Sun 20/11/22	Fri 31/3/23	132 days			12 days	[Gantt bar from 20/11/22 to 31/3/23]													
142	Submitting application documents to EPD for application of dumping permits	Sun 18/12/22	Sun 18/12/22	1 day		0	12 days	[Gantt bar from 18/12/22 to 18/12/22]													
143	Obtaining the dumping permit from EPD (assumed on 31/12/22)	Mon 19/12/22	Sat 31/12/22	13 days	142	2	12 days	[Gantt bar from 19/12/22 to 31/12/22]													
144	Submitting Application documents to the Employer for the application of the dumping permit of waste at the sea	Sun 20/11/22	Sun 20/11/22	1 day		0	12 days	[Gantt bar from 20/11/22 to 20/11/22]													
145	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer	Mon 21/11/22	Sat 31/12/22	41 days	144	14	12 days	[Gantt bar from 21/11/22 to 31/12/22]													
146	Obtaining all necessary permits, licenses, approvals and concents	Sun 18/12/22	Sat 31/12/22	14 days		2	12 days	[Gantt bar from 18/12/22 to 31/12/22]													
147	Collection and delivery of 1 million tonnes of Public Fill	Sun 1/1/23	Fri 31/3/23	90 days	140,146, 14		12 days	[Gantt bar from 1/1/23 to 31/3/23]													
148	<b>2nd quarter of second year</b>	Sat 18/2/23	Fri 30/6/23	133 days			12 days	[Gantt bar from 18/2/23 to 30/6/23]													
149	Submitting application documents to EPD for application of dumping permits	Sat 18/3/23	Sat 18/3/23	1 day		0	12 days	[Gantt bar from 18/3/23 to 18/3/23]													
150	Obtaining the dumping permit from EPD (assumed on 31/3/23)	Sun 19/3/23	Fri 31/3/23	13 days	149	2	12 days	[Gantt bar from 19/3/23 to 31/3/23]													
151	Submitting Application documents to the Employer for the application of the dumping permit of waste at the sea	Sat 18/2/23	Sat 18/2/23	1 day		0	12 days	[Gantt bar from 18/2/23 to 18/2/23]													
152	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer	Sun 19/2/23	Fri 31/3/23	41 days	151	14	12 days	[Gantt bar from 19/2/23 to 31/3/23]													
153	Obtaining all necessary permits, licenses, approvals and concents	Sat 18/3/23	Fri 31/3/23	14 days		2	12 days	[Gantt bar from 18/3/23 to 31/3/23]													
154	Collection and delivery of 1 million tonnes of Public Fill	Sat 1/4/23	Fri 30/6/23	91 days	147,153, 14		12 days	[Gantt bar from 1/4/23 to 30/6/23]													
155	<b>3rd quarter of second year</b>	Sat 20/5/23	Sat 30/9/23	134 days			12 days	[Gantt bar from 20/5/23 to 30/9/23]													
156	Submitting application documents to EPD for application of dumping permits	Sat 17/6/23	Sat 17/6/23	1 day		0	12 days	[Gantt bar from 17/6/23 to 17/6/23]													
157	Obtaining the dumping permit from EPD (assumed on 30/6/23)	Sun 18/6/23	Fri 30/6/23	13 days	156	2	12 days	[Gantt bar from 18/6/23 to 30/6/23]													
158	Submitting Application documents to the Employer for the application of the dumping permit of waste at the sea	Sat 20/5/23	Sat 20/5/23	1 day		0	12 days	[Gantt bar from 20/5/23 to 20/5/23]													

Project: 3month rolling Programme Jul22 to Sept22 CV/2021/09  
Date: [25/6/2022]

Task		External Tasks		Duration-only		External Tasks	
Split		External Milestone		Manual Summary Rollup		External Milestone	
Milestone		Inactive Milestone		Manual Summary		Progress	
Summary		Inactive Summary		Start-only		Deadline	
Project Summary		Manual Task		Finish-only			

ID	Task Name	Start	Finish	Duration	Predecessor	Time risk allow	Total Slack	Gantt Chart (Jul '22, Aug '22, Sep '22)											
159	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer	Sun 21/5/23	Fri 30/6/23	41 days	158	14	12 days	[Gantt bar from 27/7/22 to 30/9/22]											
160	Obtaining all necessary permits, licenses, approvals and consents	Sat 17/6/23	Fri 30/6/23	14 days		2	12 days	[Gantt bar from 17/6/23 to 30/6/23]											
161	Collection and delivery of 1million tonnes of Public Fill	Sat 1/7/23	Sat 30/9/23	92 days	160,154,	14	12 days	[Gantt bar from 1/7/23 to 30/9/23]											
162	4th quarter of second year	Sun 20/8/23	Wed 20/12/23	123 days			11 days	[Gantt bar from 20/8/23 to 20/12/23]											
163	Submitting application documents to EPD for application of dumping permits	Sun 17/9/23	Sun 17/9/23	1 day		0	12 days	[Gantt bar from 17/9/23 to 17/9/23]											
164	Obtaining the dumping permit from EPD (assumed on 30/9/23)	Mon 18/9/23	Sat 30/9/23	13 days	163	2	12 days	[Gantt bar from 18/9/23 to 30/9/23]											
165	Submitting Application documents to the Employer for the application of the dumping permit of waste at the sea	Sun 20/8/23	Sun 20/8/23	1 day		0	12 days	[Gantt bar from 20/8/23 to 20/8/23]											
166	Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republic of China through the Employer (assumed on 30/9/23)	Mon 21/8/23	Sat 30/9/23	41 days	165	14	12 days	[Gantt bar from 21/8/23 to 30/9/23]											
167	Obtaining all necessary permits, licenses, approvals and consents	Sun 17/9/23	Sat 30/9/23	14 days		2	12 days	[Gantt bar from 17/9/23 to 30/9/23]											
168	Collection and delivery of 1 million tonnes of Public Fill	Mon 2/10/23	Wed 20/12/23	80 days	161,166,	14	11 days	[Gantt bar from 2/10/23 to 20/12/23]											
169	Removal, excavation and deposition of stockpiled and/or deposited Public Fill within the Designated Reclamation Sites in the Mainland	Sun 1/5/22	Sun 31/12/23	610 days	6SS		0 days	[Gantt bar from 1/5/22 to 31/12/23]											
170	Removal, excavation and deposition of stockpiled and/or deposited public fill	Sun 1/5/22	Sun 31/12/23	610 days		14	0 days	[Gantt bar from 1/5/22 to 31/12/23]											
171	Operation and maintenance of the existing navigation channel and turning basins in association with the existing berthing facility at Zone E of the Designated Reclamation Sites in the Mainland	Sun 1/5/22	Sun 31/12/23	610 days	6SS		0 days	[Gantt bar from 1/5/22 to 31/12/23]											
172	Operation and maintenance of the existing navigation channel and turning basins	Sun 1/5/22	Sun 31/12/23	610 days		14	0 days	[Gantt bar from 1/5/22 to 31/12/23]											
173	Design, construction, operation and maintenance of the new navigation channel and turning basins in association with the new berthing facility at Zone B of the Designated Reclamation Sites in the Mainland (subject to Project's Manager's instruction)	Sun 1/5/22	Sun 31/12/23	610 days			0 days	[Gantt bar from 1/5/22 to 31/12/23]											
174	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 1/5/22)	Sun 1/5/22	Sun 1/5/22	1 day		0	1 day	[Gantt bar from 1/5/22 to 1/5/22]											
175	Preparation of design submission	Mon 2/5/22	Tue 31/5/22	30 days	174	7	1 day	[Gantt bar from 2/5/22 to 31/5/22]											
176	Obtaining all necessary design approvals and consents	Wed 1/6/22	Thu 30/6/22	30 days	175	7	1 day	[Gantt bar from 1/6/22 to 30/6/22]											
177	Construction of the new navigation channel and turning basins	Fri 1/7/22	Sun 27/11/22	150 days	176	14	1 day	[Gantt bar from 1/7/22 to 27/11/22]											
178	Obtaining the construction completion certificate	Mon 28/11/22	Tue 27/12/22	30 days	177	7	1 day	[Gantt bar from 28/11/22 to 27/12/22]											
179	Operation and maintenance of navigation channel and turning basins	Thu 29/12/22	Sun 31/12/23	368 days	178	14	0 days	[Gantt bar from 29/12/22 to 31/12/23]											
180	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)	Sun 1/5/22	Sun 31/12/23	610 days			0 days	[Gantt bar from 1/5/22 to 31/12/23]											
181	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 1/5/22)	Sun 1/5/22	Sun 1/5/22	1 day		0	0 days	[Gantt bar from 1/5/22 to 1/5/22]											
182	Preparation of design submission	Mon 2/5/22	Tue 31/5/22	30 days	181	7	0 days	[Gantt bar from 2/5/22 to 31/5/22]											
183	Obtaining all necessary design approvals and consents	Wed 1/6/22	Thu 30/6/22	30 days	182	7	0 days	[Gantt bar from 1/6/22 to 30/6/22]											
184	Construction of the berthing facilities	Fri 1/7/22	Tue 27/12/22	180 days	183	14	0 days	[Gantt bar from 1/7/22 to 27/12/22]											
185	Obtaining the construction completion certificate	Wed 28/12/22	Thu 26/1/23	30 days	184	7	0 days	[Gantt bar from 28/12/22 to 26/1/23]											
186	Operation and maintenance of new berthing facilities	Fri 27/1/23	Sun 31/12/23	339 days	185	14	0 days	[Gantt bar from 27/1/23 to 31/12/23]											
187	Design and construction of seawalls (approximate 200m) in association with new berthing facility at Zone B of the Designated Reclamation Sites in the Mainland (subject to Project's Manager's instruction)	Sun 1/5/22	Fri 28/10/22	181 days			429 days	[Gantt bar from 1/5/22 to 28/10/22]											
188	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 1/5/22)	Sun 1/5/22	Sun 1/5/22	1 day		0	429 days	[Gantt bar from 1/5/22 to 1/5/22]											
189	Preparation of design submission	Mon 2/5/22	Tue 31/5/22	30 days	188	7	429 days	[Gantt bar from 2/5/22 to 31/5/22]											
190	Obtaining all necessary design approvals and consents	Wed 1/6/22	Thu 30/6/22	30 days	189	7	429 days	[Gantt bar from 1/6/22 to 30/6/22]											
191	Construction of seawalls	Fri 1/7/22	Wed 28/9/22	90 days	190	14	429 days	[Gantt bar from 1/7/22 to 28/9/22]											
192	Obtaining the construction completion certificate	Thu 29/9/22	Fri 28/10/22	30 days	191	7	429 days	[Gantt bar from 29/9/22 to 28/10/22]											
193	Planned Completion Date (Section 3)	Sun 31/12/23	Sun 31/12/23	0 days			1 day	[Gantt bar from 31/12/23 to 31/12/23]											

Project: 3month rolling Programme Jul22 to Sept22 CV/2021/09  
Date: [25/6/2022]

Task		External Tasks		Duration-only		External Tasks	
Split		External Milestone		Manual Summary Rollup		External Milestone	
Milestone		Inactive Milestone		Manual Summary		Progress	
Summary		Inactive Summary		Start-only		Deadline	
Project Summary		Manual Task		Finish-only			

## **Appendix**

### **H**

#### **Implementation Schedule of Environmental Mitigation Measures (EMIS)**

## Environmental Mitigation Implementation Schedule

Environmental Protection Measures	Location	Implementation Status			
		Implemented	Partially implemented	Not implemented	Not Applicable
<b>Air Quality</b>					
• Dust control / mitigation measures shall be provided to prevent dust nuisance.	All areas		√		
• A buffer zone of at least 100m shall be maintained between the edge of the stockpiling area and the nearest ASRs at the TKO Industrial Estate. Within the buffer zone, no dusty material shall be stockpiled and no loading / unloading and similar activities should be allowed.	Northern Site Boundary	√			
• Water sprays shall be provided and used to dampen materials.	All areas	√			
• Regular cleaning and watering the site shall be provided to minimize the fugitive dust emissions.	All areas	√			
• All vehicles shall be restrict to a maximum speed of 10 km per hour.	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.	Site Egress	√			
• The designated site main haul rout shall be paved or regular watering.	All haul roads	√			
• Frequent watering of work site shall be at least three times per day.	All areas	√			
• Wheel washing facilities including high pressure water jet shall be provided at the entrance of work site.	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, especially those facing to the north of the site shall be covered with impermeable sheet or sprayed with water or protected by other method approved by CEDD.	All areas	√			
• 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.	All areas	√			
• When fill material is transfer by belt conveyor systems, the conveyors shall be enclosed on top and 2 sides.	C&DMSF	√			
• The belt scraper shall be equipped with bottom plates or other similar means to prevent falling of material from the return belt.	C&DMFS	√			
• The level of stockpiling belt conveyor shall be adjustable such that the vertical distance between the belt conveyor and the material landing point is maintained at no more than 1m.	C&DMFS	√			
• All plant and equipment should be well maintained e.g. without black smoke emission.		√			
<b>Noise Impact</b>		√			
• Approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted.	All areas				
• Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	All areas	√			
• Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	All areas	√			
• 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	√			

Environmental Protection Measures	Location	Implementation Status			
		Implemented	Partially implemented	Not implemented	Not Applicable
<b>Water Quality</b>					
▪ Drainage system should be adequate and well maintained to prevent flooding and overflow, especially after rain storms.	All areas	√			
▪ The permanent drainage channels should have sediment basin, traps and baffles and maintain properly.	All areas	√			
▪ 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	√			
▪ Manholes should be covered and sealed.	All areas	√			
▪ Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding.	All areas		√		
▪ A buffer distance of at least 100m shall be maintained between the boundary of the public fill stockpiling area and the sea front.	Public fill stockpiling area	√			
▪ A buffer distance of at least 20m shall be maintained between the boundary of the C&DMFS and the seafront.	C&DMFS	√			
▪ The stormwater intercepting system shall be effective to collect of runoff and remove suspended solids before discharge.	All areas	√			
▪ The temporary slope surfaces, especially those facing to the north of the site shall be covered with impermeable sheet or sprayed with water or protected by other method approved by CEDD.	Temporary Slopes	√			
▪ 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.	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	√			
▪ 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.	Wheel Washing facility	√			
▪ Sewage from toilets shall be discharged in to a foul sewer, or chemical toilets shall be provided. 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	√			
▪ Oil intercept in addition of sand / silt removal facilities shall be provided at the car parking areas and work shop.	All areas	√			
▪ Tipping halls enclosed with top and 3-side to prevent spillage of material into marine water.	Barge Handling Area (BHA)	√			
▪ 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.	Barge Handling Area (BHA)	√			
▪ All vessels used for transportation of fill material shall have tight fitting seals to their bottom openings to prevent leakage of material during transport.	Barge Handling Area (BHA)	√			
▪ Adequate environmental control measures shall be provided to prevent / avoid dropping of fill material into the sea during the transfer.	Along the seafront	√			
▪ 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.	Barge Handling Area (BHA)	√			
▪ 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.	Along the seafront	√			
▪ Existing silt curtain at the outward side of the basin near the Barging Handling Area throughout the period shall be repair, maintain and service when there is public fill intake by barges to the Fill Bank in accordance with PS Clause 1.68. The total length of the silt curtains shall not be less than 160m, and a gap of about 80m shall be left open for access of barges. The silt curtain shall be properly maintained such that it can also serve the function of refuse containment boom to confine floating refuse.	Along the seafront	√			
▪ A waste collection vessel shall be deployed to remove floating debris.	Along the seafront	√			

Environmental Protection Measures	Location	Implementation Status			
		Implemented	Partially implemented	Not implemented	Not Applicable
<b><i>Landscape and Visual</i></b>					
• Construction of lighting to avoid spillage and glare	All areas	√			
• Hydroseeding	Completed slopes	√			
• Hoarding erection	Site boundary	√			
• Damage to surrounding area avoided	All areas	√			
<b><i>Other Environmental Factors</i></b>					
• C&D waste sorted from mixed C&D material shall be transfer to SENT landfill for disposal.	All areas	√			
• Plan and stock construction materials carefully to minimise generation of waste.	All areas	√			
• Any unused materials or those with remaining functional capacity should be recycled.	All areas	√			
• All generators, fuel and oil storage are within bunded areas.	All areas	√			
• Oil leakage from machinery, vehicle and plant is prevented.	All areas		√		
• Bund chemical storage area to 110% capacity.	All areas	√			
• Prevent disposal of hazardous materials to air, soil and water body	All areas	√			
• Provide rubbish skips at all work areas	All areas	√			
• 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.	All areas	√			
• To encourage collection of aluminium cans by individual collectors, separate labelled bins should be provided to segregate this waste from other general refuse generated by the workforce.	All areas	√			

## **Appendix**

### **I1**

#### **Statistical Analysis of the Trend of Suspended Solids in the Quarter**

## Statistical Analysis of the Trend of Suspended Solids

### For Mid-Flood Tide

#### Station: M4

#### t-test

Group Name	N	Missing	Mean	Std Dev	SE
130% Baseline Mean	12	0	6.9690	1.0690	0.3086
Quarterly Mean	38	0	2.4509	1.1012	0.1810

#### Result:

Difference between means = 4.5181  
(95% CI : 2.7898 < Diff < 5.2464)

t-value of difference = 12.6710 (19 degrees of freedom)

Calculated t-value > Critical t-value

#### Conclusion:

There is statistically significant difference between the groups.  
The P-Value of 130% Baseline Mean is larger than quarterly mean = >0.99  
The result of suspended solids in this reporting period is lower than that of 130% baseline.

#### Station: C1

#### t-test

Group Name	N	Missing	Mean	Std Dev	SE
130% Baseline Mean	12	0	6.969	0.950	0.2742
Quarterly Mean	38	0	2.2505	1.1809	0.1941

#### Result:

Difference between means = 4.7185  
(95% CI : 3.9647 < Diff < 5.4723)

t-value of difference = 14.1054 (23 degrees of freedom)

Calculated t-value > Critical t-value

#### Conclusion:

There is statistically significant difference between the groups.  
The P-Value of 130% Baseline Mean is larger than quarterly mean = >0.99  
The result of suspended solids in this reporting period is lower than that of 130% baseline.

## Statistical Analysis of the Trend of Suspended Solids

### For Mid-Ebb Tide

#### Station: M4

#### t-test

Group Name	N	Missing	Mean	Std Dev	SE
130% Baseline Mean	12	0	6.897	1.449	0.4183
Quarterly Mean	38	0	2.1184	1.0534	0.1709

#### Result:

Difference between means = 4.7786  
(95% CI : 4.0089 < Diff < 5.5483)

t-value of difference = 10.5756 (15 degrees of freedom)

Calculated t-value > Critical t-value

#### Conclusion:

There is statistically significant difference between the groups.  
The P-Value of 130% Baseline Mean is larger than quarterly mean = >0.99  
The result of suspended solids in this reporting period is lower than that of 130% baseline.

#### Station: C1

#### t-test

Group Name	N	Missing	Mean	Std Dev	SE
130% Baseline Mean	12	0	6.933	1.045	0.3017
Quarterly Mean	38	0	2.2355	1.0292	0.1670

#### Result:

Difference between means = 4.6975  
(95% CI : 4.0098 < Diff < 5.3852)

t-value of difference = 13.6244 (18 degrees of freedom)

Calculated t-value > Critical t-value

#### Conclusion:

There is statistically significant difference between the groups.  
The P-Value of 130% Baseline Mean is larger than quarterly mean = >0.99  
The result of suspended solids in this reporting period is lower than that of 130% baseline.

## **Appendix**

**I2**

### **Statistical Analysis of the Trend of Suspended Solids in the Quarter (3RS)**

## Statistical Analysis of the Trend of Suspended Solids

### For Mid-Flood Tide

#### Station: C1a

##### t-test

Group Name	N	Missing	Mean	Std Dev	SE
130% Baseline Mean	12	0	4.1580	1.3670	0.3946
Quarterly Mean	37	0	2.1329	0.9457	0.1555

##### Result:

Difference between means = 2.0251  
(95% CI : 1.3171 < Diff < 2.7331)  
t-value of difference = 4.7746 (15 degrees of freedom)

Calculated t-value > Critical t-value

##### Conclusion:

There is statistically significant difference between the groups.  
The P-Value of 130% Baseline Mean is larger than quarterly mean = >0.99  
The result of suspended solids in this reporting period is lower than that of 130% baseline.

#### Station: M4a

##### t-test

Group Name	N	Missing	Mean	Std Dev	SE
130% Baseline Mean	12	0	3.9020	1.1420	0.3297
Quarterly Mean	37	0	2.1392	1.0291	0.1692

##### Result:

Difference between means = 1.7628  
(95% CI : 1.0567 < Diff < 2.4689)  
t-value of difference = 4.7574 (17 degrees of freedom)

Calculated t-value > Critical t-value

##### Conclusion:

There is statistically significant difference between the groups.  
The P-Value of 130% Baseline Mean is larger than quarterly mean = >0.99  
The result of suspended solids in this reporting period is lower than that of 130% baseline.

#### Station: M5

##### t-test

Group Name	N	Missing	Mean	Std Dev	SE
130% Baseline Mean	12	0	3.9360	1.4140	0.4082
Quarterly Mean	37	0	2.1005	0.9602	0.1579

##### Result:

Difference between means = 1.8355  
(95% CI : 1.1113 < Diff < 2.5597)  
t-value of difference = 4.1941 (14 degrees of freedom)

Calculated t-value > Critical t-value

##### Conclusion:

There is statistically significant difference between the groups.  
The P-Value of 130% Baseline Mean is larger than quarterly mean = >0.99  
The result of suspended solids in this reporting period is lower than that of 130% baseline.

## Statistical Analysis of the Trend of Suspended Solids

### For Mid-Ebb Tide

#### Station: C1a

##### t-test

Group Name	N	Missing	Mean	Std Dev	SE
130% Baseline Mean	12	0	4.2860	1.3530	0.3906
Quarterly Mean	38	0	2.2294	0.9700	0.1574

##### Result:

Difference between means = 2.0566

(95% CI : 1.3402 < Diff < 2.7730)

t-value of difference = 4.8841 (15 degrees of freedom)

Calculated t-value > Critical t-value

##### Conclusion:

There is statistically significant difference between the groups.

The P-Value of 130% Baseline Mean is larger than quarterly mean = >0.99

The result of suspended solids in this reporting period is lower than that of 130% baseline.

#### Station: M4a

##### t-test

Group Name	N	Missing	Mean	Std Dev	SE
130% Baseline Mean	12	0	4.0900	1.3250	0.3825
Quarterly Mean	38	0	2.0772	0.9299	0.1509

##### Result:

Difference between means = 2.0128

(95% CI : 1.3245 < Diff < 2.7011)

t-value of difference = 4.8953 (15 degrees of freedom)

Calculated t-value > Critical t-value

##### Conclusion:

There is statistically significant difference between the groups.

The P-Value of 130% Baseline Mean is larger than quarterly mean = >0.99

The result of suspended solids in this reporting period is lower than that of 130% baseline.

#### Station: M5

##### t-test

Group Name	N	Missing	Mean	Std Dev	SE
130% Baseline Mean	12	0	3.7900	1.4650	0.4229
Quarterly Mean	38	0	1.9912	0.9489	0.1539

##### Result:

Difference between means = 1.7988

(95% CI : 1.0738 < Diff < 2.5238)

t-value of difference = 3.9968 (14 degrees of freedom)

Calculated t-value > Critical t-value

##### Conclusion:

There is statistically significant difference between the groups.

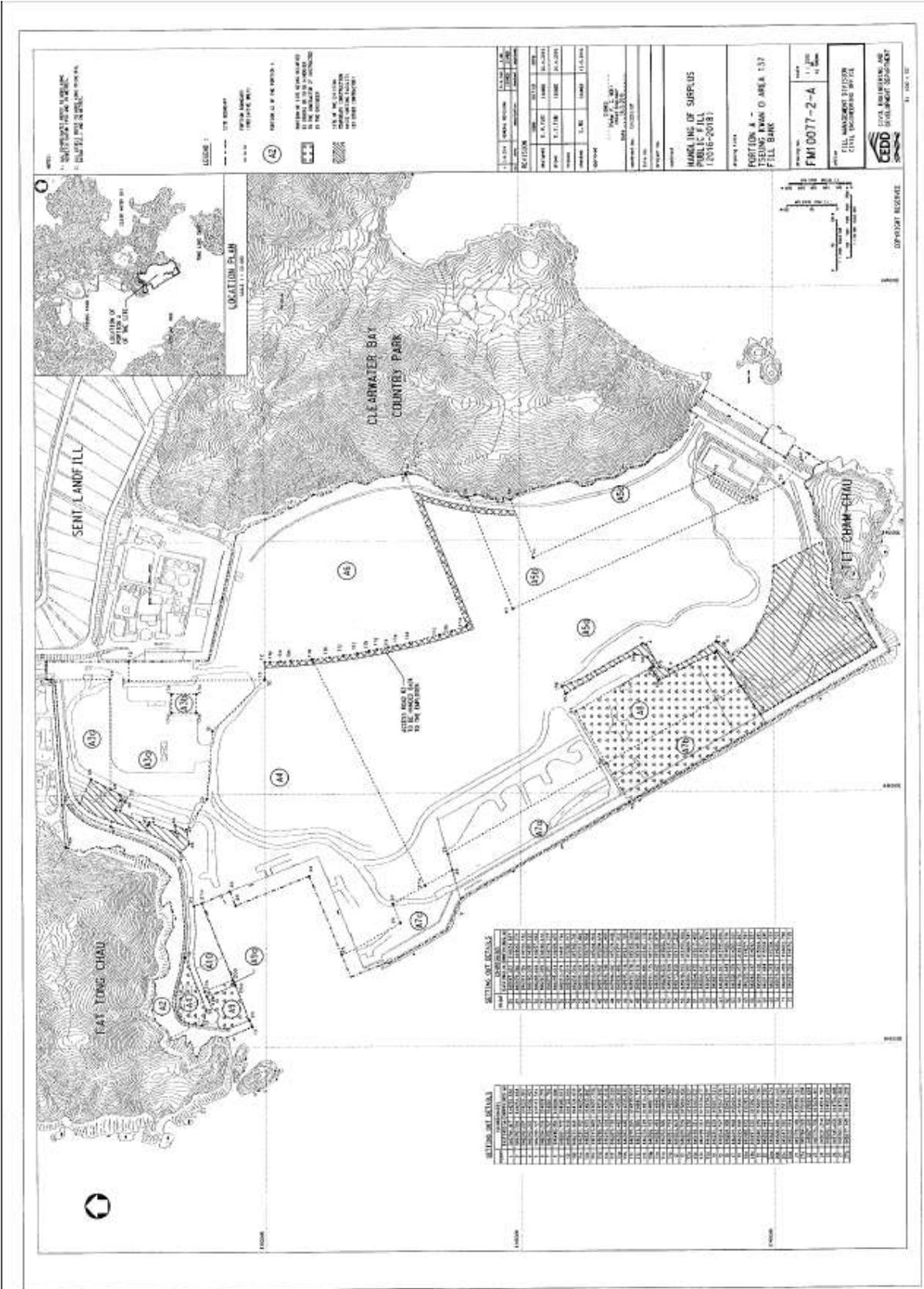
The P-Value of 130% Baseline Mean is larger than quarterly mean = >0.99

The result of suspended solids in this reporting period is lower than that of 130% baseline.

## **Appendix**

### **J**

#### **Site General Layout plan**



NO.	DATE	REVISION	BY	CHKD.
1	2016.07.15	ISSUE FOR TENDER	ETS	ETS
2	2016.08.15	REVISED FOR CONSTRUCTION	ETS	ETS
3	2016.09.15	REVISED FOR CONSTRUCTION	ETS	ETS
4	2016.10.15	REVISED FOR CONSTRUCTION	ETS	ETS
5	2016.11.15	REVISED FOR CONSTRUCTION	ETS	ETS
6	2016.12.15	REVISED FOR CONSTRUCTION	ETS	ETS
7	2017.01.15	REVISED FOR CONSTRUCTION	ETS	ETS
8	2017.02.15	REVISED FOR CONSTRUCTION	ETS	ETS
9	2017.03.15	REVISED FOR CONSTRUCTION	ETS	ETS
10	2017.04.15	REVISED FOR CONSTRUCTION	ETS	ETS
11	2017.05.15	REVISED FOR CONSTRUCTION	ETS	ETS
12	2017.06.15	REVISED FOR CONSTRUCTION	ETS	ETS
13	2017.07.15	REVISED FOR CONSTRUCTION	ETS	ETS
14	2017.08.15	REVISED FOR CONSTRUCTION	ETS	ETS
15	2017.09.15	REVISED FOR CONSTRUCTION	ETS	ETS
16	2017.10.15	REVISED FOR CONSTRUCTION	ETS	ETS
17	2017.11.15	REVISED FOR CONSTRUCTION	ETS	ETS
18	2017.12.15	REVISED FOR CONSTRUCTION	ETS	ETS
19	2018.01.15	REVISED FOR CONSTRUCTION	ETS	ETS
20	2018.02.15	REVISED FOR CONSTRUCTION	ETS	ETS
21	2018.03.15	REVISED FOR CONSTRUCTION	ETS	ETS
22	2018.04.15	REVISED FOR CONSTRUCTION	ETS	ETS
23	2018.05.15	REVISED FOR CONSTRUCTION	ETS	ETS
24	2018.06.15	REVISED FOR CONSTRUCTION	ETS	ETS
25	2018.07.15	REVISED FOR CONSTRUCTION	ETS	ETS
26	2018.08.15	REVISED FOR CONSTRUCTION	ETS	ETS
27	2018.09.15	REVISED FOR CONSTRUCTION	ETS	ETS
28	2018.10.15	REVISED FOR CONSTRUCTION	ETS	ETS
29	2018.11.15	REVISED FOR CONSTRUCTION	ETS	ETS
30	2018.12.15	REVISED FOR CONSTRUCTION	ETS	ETS

PROJECT NAME: MARKING OF SURPLUS PUBLIC FILL (2016-2018)  
 PROJECT NO.: FMI D077-2-A  
 POSITION A - TSEI TING KWAN O AREA 137 FILL BANK  
 DRAWN BY: ETS  
 CHECKED BY: ETS  
 DATE: 2018.12.15

SCALE: 1:500  
 SHEET NO.: 1 OF 1  
 PROJECT NO.: FMI D077-2-A  
 DRAWING NO.: FMI D077-2-A-01

ETS-TESTCONSULT LTD.  
 CIVIL ENGINEERING AND SURVEYING CONSULTANTS

SETTING OUT DETAILS

NO.	GRID X	GRID Y	ELEVATION
1	1000	1000	100.00
2	1000	1005	100.00
3	1000	1010	100.00
4	1000	1015	100.00
5	1000	1020	100.00
6	1000	1025	100.00
7	1000	1030	100.00
8	1000	1035	100.00
9	1000	1040	100.00
10	1000	1045	100.00
11	1000	1050	100.00
12	1000	1055	100.00
13	1000	1060	100.00
14	1000	1065	100.00
15	1000	1070	100.00
16	1000	1075	100.00
17	1000	1080	100.00
18	1000	1085	100.00
19	1000	1090	100.00
20	1000	1095	100.00
21	1000	1100	100.00
22	1000	1105	100.00
23	1000	1110	100.00
24	1000	1115	100.00
25	1000	1120	100.00
26	1000	1125	100.00
27	1000	1130	100.00
28	1000	1135	100.00
29	1000	1140	100.00
30	1000	1145	100.00
31	1000	1150	100.00
32	1000	1155	100.00
33	1000	1160	100.00
34	1000	1165	100.00
35	1000	1170	100.00
36	1000	1175	100.00
37	1000	1180	100.00
38	1000	1185	100.00
39	1000	1190	100.00
40	1000	1195	100.00
41	1000	1200	100.00
42	1000	1205	100.00
43	1000	1210	100.00
44	1000	1215	100.00
45	1000	1220	100.00
46	1000	1225	100.00
47	1000	1230	100.00
48	1000	1235	100.00
49	1000	1240	100.00
50	1000	1245	100.00
51	1000	1250	100.00
52	1000	1255	100.00
53	1000	1260	100.00
54	1000	1265	100.00
55	1000	1270	100.00
56	1000	1275	100.00
57	1000	1280	100.00
58	1000	1285	100.00
59	1000	1290	100.00
60	1000	1295	100.00
61	1000	1300	100.00
62	1000	1305	100.00
63	1000	1310	100.00
64	1000	1315	100.00
65	1000	1320	100.00
66	1000	1325	100.00
67	1000	1330	100.00
68	1000	1335	100.00
69	1000	1340	100.00
70	1000	1345	100.00
71	1000	1350	100.00
72	1000	1355	100.00
73	1000	1360	100.00
74	1000	1365	100.00
75	1000	1370	100.00
76	1000	1375	100.00
77	1000	1380	100.00
78	1000	1385	100.00
79	1000	1390	100.00
80	1000	1395	100.00
81	1000	1400	100.00
82	1000	1405	100.00
83	1000	1410	100.00
84	1000	1415	100.00
85	1000	1420	100.00
86	1000	1425	100.00
87	1000	1430	100.00
88	1000	1435	100.00
89	1000	1440	100.00
90	1000	1445	100.00
91	1000	1450	100.00
92	1000	1455	100.00
93	1000	1460	100.00
94	1000	1465	100.00
95	1000	1470	100.00
96	1000	1475	100.00
97	1000	1480	100.00
98	1000	1485	100.00
99	1000	1490	100.00
100	1000	1495	100.00

SETTING OUT DETAILS

NO.	GRID X	GRID Y	ELEVATION
101	1005	1000	100.00
102	1005	1005	100.00
103	1005	1010	100.00
104	1005	1015	100.00
105	1005	1020	100.00
106	1005	1025	100.00
107	1005	1030	100.00
108	1005	1035	100.00
109	1005	1040	100.00
110	1005	1045	100.00
111	1005	1050	100.00
112	1005	1055	100.00
113	1005	1060	100.00
114	1005	1065	100.00
115	1005	1070	100.00
116	1005	1075	100.00
117	1005	1080	100.00
118	1005	1085	100.00
119	1005	1090	100.00
120	1005	1095	100.00
121	1005	1100	100.00
122	1005	1105	100.00
123	1005	1110	100.00
124	1005	1115	100.00
125	1005	1120	100.00
126	1005	1125	100.00
127	1005	1130	100.00
128	1005	1135	100.00
129	1005	1140	100.00
130	1005	1145	100.00
131	1005	1150	100.00
132	1005	1155	100.00
133	1005	1160	100.00
134	1005	1165	100.00
135	1005	1170	100.00
136	1005	1175	100.00
137	1005	1180	100.00
138	1005	1185	100.00
139	1005	1190	100.00
140	1005	1195	100.00
141	1005	1200	100.00
142	1005	1205	100.00
143	1005	1210	100.00
144	1005	1215	100.00
145	1005	1220	100.00
146	1005	1225	100.00
147	1005	1230	100.00
148	1005	1235	100.00
149	1005	1240	100.00
150	1005	1245	100.00
151	1005	1250	100.00
152	1005	1255	100.00
153	1005	1260	100.00
154	1005	1265	100.00
155	1005	1270	100.00
156	1005	1275	100.00
157	1005	1280	100.00
158	1005	1285	100.00
159	1005	1290	100.00
160	1005	1295	100.00
161	1005	1300	100.00
162	1005	1305	100.00
163	1005	1310	100.00
164	1005	1315	100.00
165	1005	1320	100.00
166	1005	1325	100.00
167	1005	1330	100.00
168	1005	1335	100.00
169	1005	1340	100.00
170	1005	1345	100.00
171	1005	1350	100.00
172	1005	1355	100.00
173	1005	1360	100.00
174	1005	1365	100.00
175	1005	1370	100.00
176	1005	1375	100.00
177	1005	1380	100.00
178	1005	1385	100.00
179	1005	1390	100.00
180	1005	1395	100.00
181	1005	1400	100.00
182	1005	1405	100.00
183	1005	1410	100.00
184	1005	1415	100.00
185	1005	1420	100.00
186	1005	1425	100.00
187	1005	1430	100.00
188	1005	1435	100.00
189	1005	1440	100.00
190	1005	1445	100.00
191	1005	1450	100.00
192	1005	1455	100.00
193	1005	1460	100.00
194	1005	1465	100.00
195	1005	1470	100.00
196	1005	1475	100.00
197	1005	1480	100.00
198	1005	1485	100.00
199	1005	1490	100.00
200	1005	1495	100.00

## **Appendix**

### **K**

#### **Weather Condition**

## Daily Extract of Meteorological Observations , July 2022 - Tseung Kwan O

Day	Mean Pressure (hPa)	Air Temperature			Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
		Absolute Daily Max (deg. C)	Mean (deg. C)	Absolute Daily Min (deg. C)					
1	1000.7	29.7	27.2	25.4	24.5	85	63	80	59.3
2	999.1	28.4	26.9	25.6	24.9	89	72.4	110	57.8
3	1001.5	30.3	29	28.2	25.6	82	-	180	47.9
4	1002.2	29.4	28.8	27.9	25.6	83	0.4	200	44.8
5	1004.2	29.7	29	28.4	25.6	82	0.2	200	34.8
6	1005.7	30.3	28.8	28	25	81	0.5	220	22.5
7	1007.3	31.6	28.7	27.2	26.1	86	13.1	140	19.6
8	1007.4	33.8	30	27.7	25.8	79	Trace	90	17
9	1005.7	33.3	29.9	28.6	26.2	81	Trace	90	23.8
10	1006.5	34.2	30.5	28.6	26	77	Trace	100	13.7
11	1007.3	35.1	30.9	28.5	25.4	73	-	90	9.2
12	1006.9	35.2	31.1	28.6	25.2	72	-	110	10.2
13	1005.9	35.2	31	28.4	24.8	71	-	130	11.9
14	1005.6	33.1	30.4	28.5	25.2	75	-	190	11.3
15	1006.5	34.3	30.4	28.6	25.7	77	0.2	230	16.2
16	1006	33.3	30.5	28.8	26	77	1.5	230	31.3
17	1005.7	32.6	30.5	28.8	25.8	76	1.2	230	33.1
18	1004.9	32.7	30.4	28.5	26	78	2.7	220	25.5
19	1006.6	33.7	30.8	29.1	25.9	75	Trace	190	19.5
20	1009.8	34.2	30.8	29.2	26.1	76	0.6	130	22
21	1012	35.2	30.9	28.1	25.7	74	0.3	150	12.9
22	1010.8	35.6	31.2	28.2	25.2	72	-	240	11.7
23	1008.7	34.9	31.4	29.2	26.1	74	-	240	18.7
24	1007.1	36.1	32	29.5	26	72	-	240	18.3
25	1007.6	35.8	32	29.9	26.6	74	-	230	15.9
26	1007.7	35.2	31.2	29.1	25.1	71	-	210	12.8
27	1007.1	34.2	31	29	24.5	69	-	230	16.9
28	1006.2	35.3	31.2	28.8	25.7	73	-	250	17.3
29	1004.7	35.3	31.7	29.7	26.4	74	-	260	14.9
30	1004.3	31.2	29.5	26.5	25.9	81	2.4	220	8.8
31	1004.3	34	30.8	28.3	25.8	76	-	230	16

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

## Daily Extract of Meteorological Observations , August 2022 - Tseung Kwan O

Day	Mean Pressure (hPa)	Air Temperature			Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
		Absolute Daily Max (deg. C)	Mean (deg.C)	Absolute Daily Min (deg. C)					
1	1005.9	35.7	31.4	29.1	25	69	-	230	12.7
2	1007.1	35.2	31.1	28	24.9	70	0.2	220	10.7
3	1006.7	30.8	28.2	25.6	24.7	82	34.9	30	14.5
4	1004.5	28.4	27.1	25.9	24.6	86	14.9	290	19.6
5	1007.6	28.6	26.1	24.5	25.1	94	165.5	30	15.1
6	1007.6	30.9	27.9	26.1	25.9	89	5.5	50	18.5
7	1006.7	32.6	29.6	27.6	26.1	82	2.8	80	27.3
8	1006.3	30.9	28.3	26.2	25.8	87	33.3	90	27.9
9	1003.6	28.5	26.7	25.4	24.5	88	72	100	50.9
10	1004.1	29.6	27.4	25.8	25.6	90	49.7	110	44.4
11	1007.8	28.8	26.7	25.5	25	90	12.4	90	25.8
12	1008.8	27.1	26.1	24.9	24.8	93	76	120	14.3
13	1008	32.6	28.7	25.8	25.1	81	-	20	6.2
14	1007.2	33.3	29.5	26.9	25.1	78	-	170	4.7
15	1006.2	33.6	30	28.1	25.6	78	-	160	5.8
16	1005.6	33.2	29.4	26.2	25.9	82	9.1	80	16.4
17	1005.8	32.3	28.2	26.2	25.6	86	29.8	100	18.1
18	1005.5	30.4	28.1	26.2	25.6	87	22.1	100	10.8
19	1004.9	32	28.3	26.4	25.5	85	4.8	100	16.1
20	1007.5	31.9	28.2	26.5	25	83	8.4	140	30.6
21	1008.3	32.9	29	26.6	25.9	84	1.9	140	18.6
22	1006.9	32.9	30.1	28.2	25.5	77	-	240	18.1
23	1005	34.5	31.1	28.6	26.4	77	-	270	11.6
24	1002.3	34.9	30.8	26.4	25.2	73	5.5	70	36.5
25	1006.3	29.8	27.2	25	24.4	85	48.1	100	39.6
26	1010.6	32.9	29.4	27.5	25.6	80	0.1	130	13.8
27	1009.2	33	29.7	27.4	25.4	78	-	240	14.8
28	1008.4	34.4	30.5	28.3	26.7	80	-	80	12.1
29	1010.2	34.6	30.1	28.6	25.9	78	-	80	10.3
30	1008.8	32.3	29.5	27.9	25.7	80	13.1	220	4.9
31	1006.7	31.7	29.7	28.1	25.8	80	4.7	260	4.7

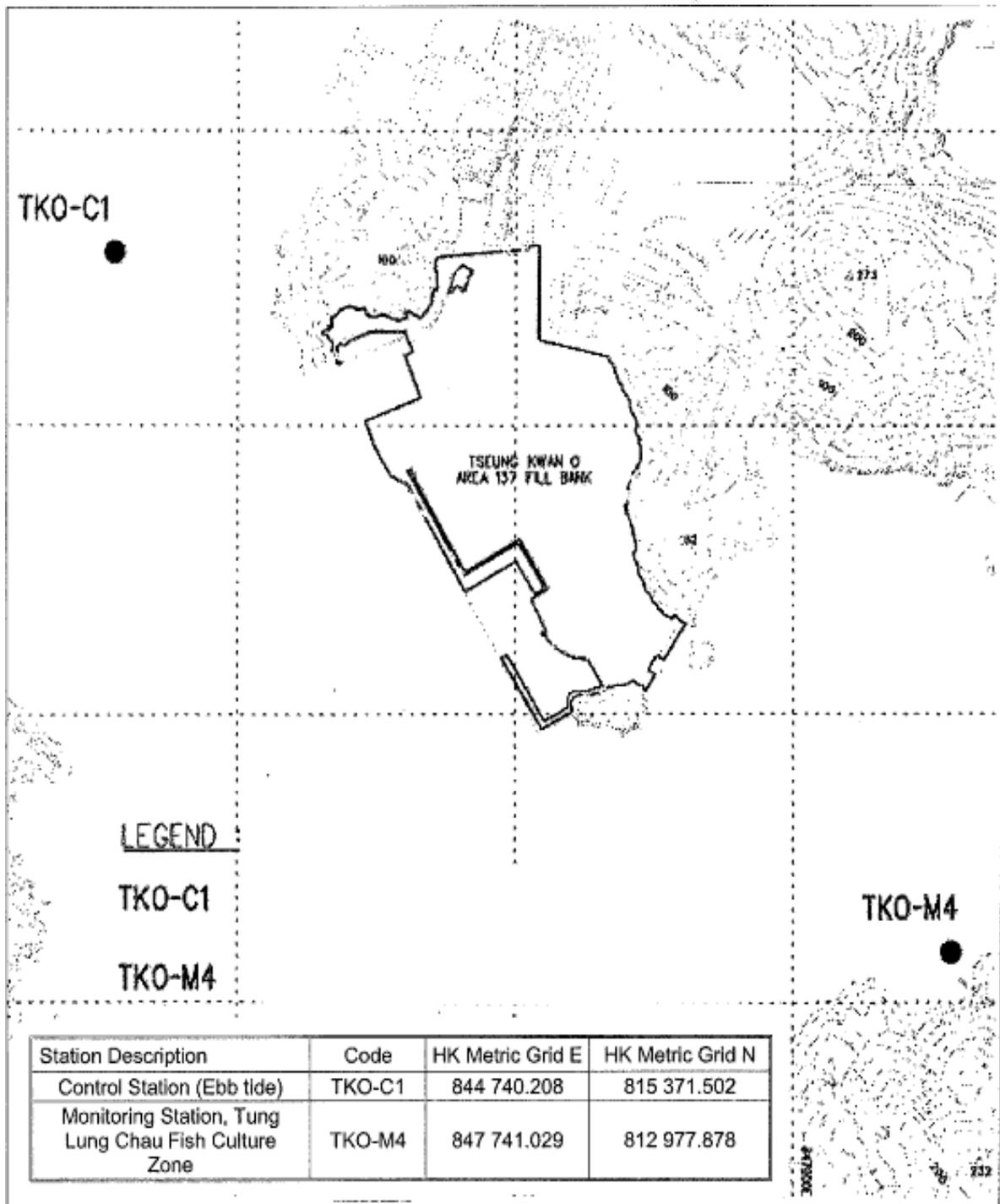
Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

## Daily Extract of Meteorological Observations , September 2022 - Tseung Kwan O

Day	Mean Pressure (hPa)	Air Temperature			Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
		Absolute Daily Max (deg. C)	Mean (deg. C)	Absolute Daily Min (deg. C)					
1	1007.9	32.9	29.4	26.9	25	78	2.8	340	9.5
2	1005.9	32.3	29.5	27.3	21.6	63	-	360	24.8
3	1002.8	33.9	30	26.9	19.5	54	-	350	18.3
4	1002.9	34.7	30.8	27.7	20.6	55	-	360	13.7
5	1004.4	35.3	31.1	28.8	20.1	52	-	360	11.7
6	1008.2	34.5	30.8	28.4	22.3	61	-	80	11
7	1013.3	29.6	28.4	26.7	24.7	81	8.6	70	35.5
8	1014.2	32.8	29.5	27.8	23.3	70	Trace	80	22.8
9	1013.1	33.3	29.6	27.5	19.4	55	-	100	10.6
10	1011.4	31.4	28.9	27.6	24.2	76	Trace	70	11
11	1009.1	32.1	29.4	27.4	25	78	-	240	13.2
12	1007.4	33.7	30.8	28.2	23.1	66	-	260	10.3
13	1007.3	35.9	31.7	28.8	21.2	56	-	250	12.8
14	1007	35.5	31.7	29.6	18.6	46	-	280	18.1
15	1005.9	34.5	31.3	28.7	19.9	52	-	350	9.4
16	1005.1	33.8	30.8	28.6	22.9	63	Trace	250	7.9
17	1006	33.9	31.1	29.1	24.4	69	Trace	240	12.1
18	1005.7	34	30.1	27.4	25.4	77	20.3	250	21.2
19	1005.9	32.3	28.8	25.9	24.4	77	3.3	250	13.8
20	1008.2	30.7	28.9	26.2	24.8	79	3.5	80	26.6
21	1010.7	30.4	28.1	25.8	22.6	72	8.5	90	35.3
22	1011.1	31.2	28.5	26.9	23.2	73	-	80	24.8
23	1010.8	32.1	28.5	25.6	24	77	13.4	90	16
24	1011.2	31	28.3	25.8	22.5	71	-	80	35.7
25	1010.4	32.7	28.8	26.9	22.8	71	-	80	22.9
26	1009.1	33.7	29.4	27.2	23.2	70	-	70	30.8
27	1007.7	32.3	29.2	28.1	23.6	72	Trace	70	49.7
28	1008	31.2	28.8	27.7	23.5	73	-	80	49.1
29	1010.1	29.7	28	25	24.4	81	8.1	80	38.6
30	1012.3	28.3	26.4	24.8	24.8	91	102.7	90	28.8

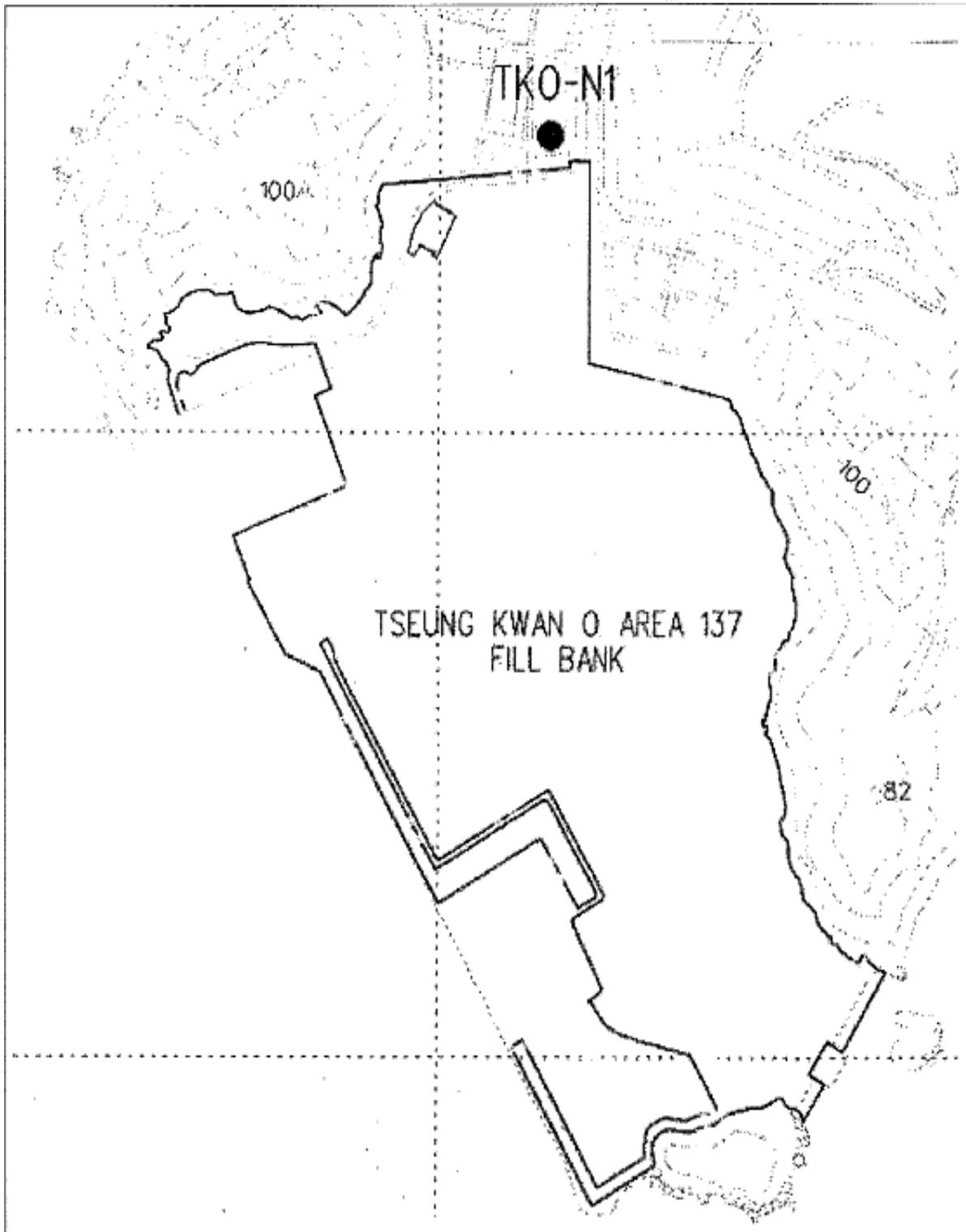
Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

## Figures



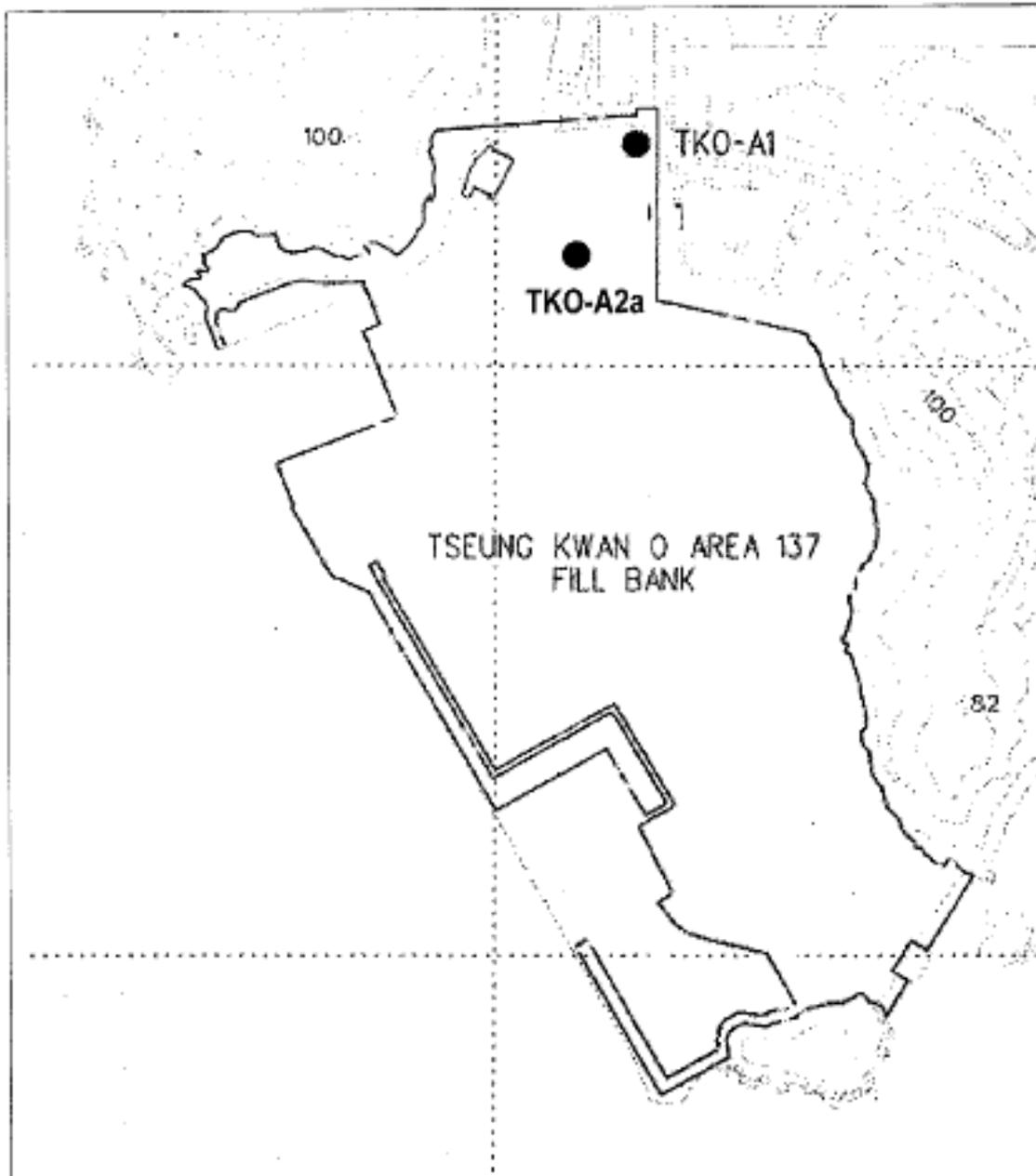
Contract No. CV/2015/07  
Handling of Surplus Public Fill (2016-2018)

Figure 1  
Locations of Water Quality Monitoring Stations –  
Tseung Kwan O Area 137 Fill Bank



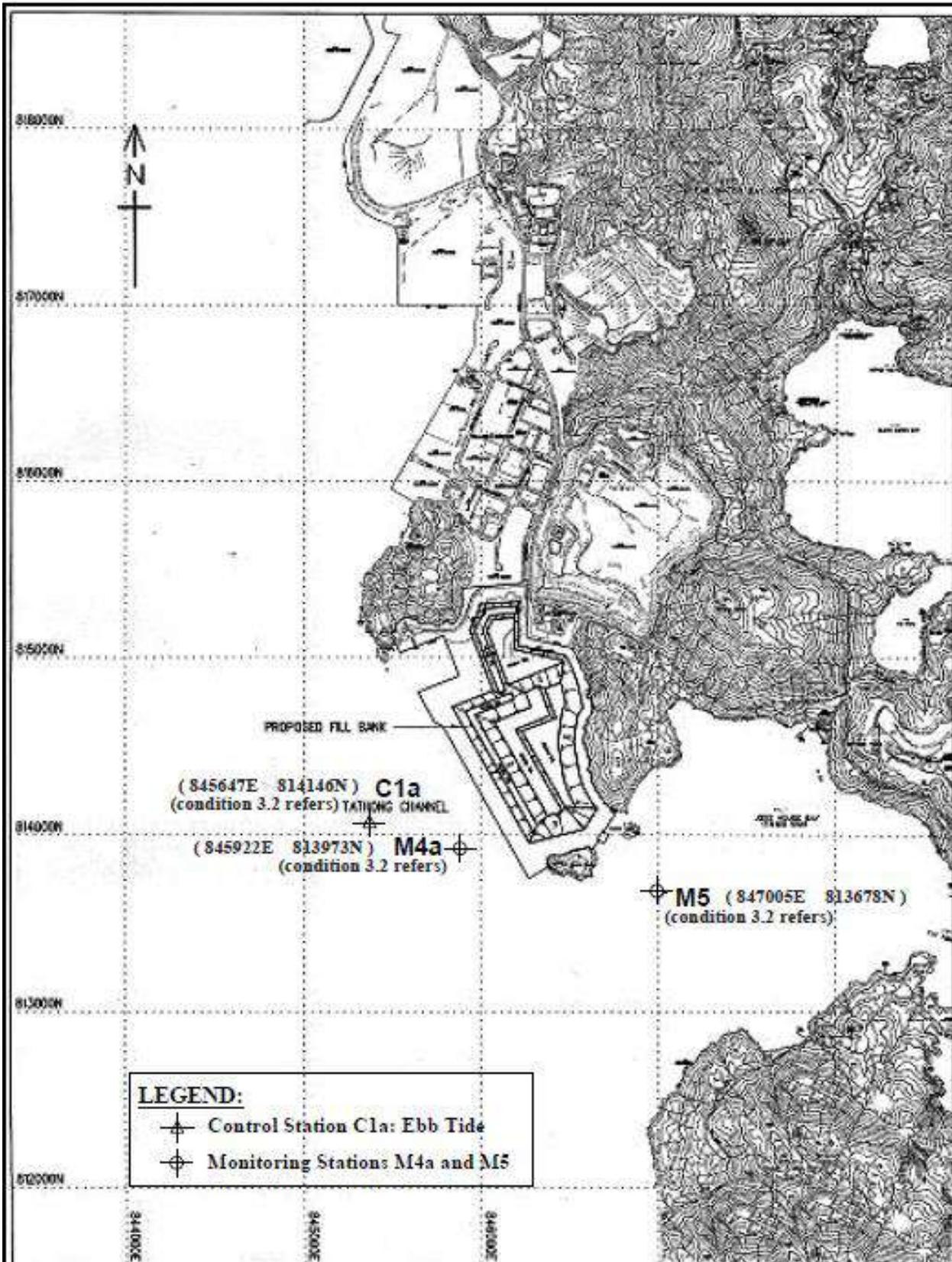
Contract No. CV/2015/07  
Handling of Surplus Public Fill (2016-2018)

Figure 2  
Location of Noise Monitoring Station –  
Tseung Kwan O Area 137 Fill Bank



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

Figure 3  
Locations of Air Quality Monitoring Stations –  
Tseung Kwan O Area 137 Fill Bank



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

Figure 4  
 Locations of Additional Water Quality Monitoring Stations (3RS  
 project)  
 Tseung Kwan O Area 137 Fill Bank