

# 東業德勤測試顧問有限公司 ETS-TESTCONSULT LTD.

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

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

**TEST REPORT** 



# China Harbour Engineering Co Ltd

Contract No.: CV/2023/10 Handling of Surplus Public Fill (2024-2027)

TSEUNG KWAN O AREA 137 FILL BANK

QUARTERLY EM&A SUMMARY REPORT NO.01

(FROM JULY 2024 TO SEPTEMBER 2024)

Prepared by:

LAU, Wing Sum

Assistant Environmental Officer

Checked by:

LAU, Chi Leung

Environmental Team Leader



#### **UMWELT CONSULTING LIMITED**

23/F, On Hong Commercial Building, 145 Hennessy Road, Wan Chai, Hong Kong

By Post

Our Ref : P231104-EMA-TKOFB-202409-V

Date : 14<sup>th</sup> October 2024

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

Attn: Mr. LAU Chi Leung

# Environmental Permit (EP) No. EP-134/2002/Q Fill Bank at Tseung Kwan O Area 137 Quarterly EM&A Report for July to September 2024

Dear Sir,

Pursuant to Condition 3.4 of Environmental Permit (EP) No. EP-134/2002/Q, please note the report "Tseung Kwan O Area 137 Fill Bank Quarterly EM&A Summary Report No.01 (From July 2024 to September 2024)" dated 9 October 2024 submitted under the EP, certified by the Environmental Team Leader on 9 October 2024, had been reviewed and is hereby verified.

Should you have any query, please feel free to contact the undersigned at 3756 9590 or ivanting@umwelt.consulting.

Your faithfully,

For and on behalf of:

**Umwelt Consulting Limited** 

Ting Po Chung Ivan

Independent Environmental Checker



Handling of Surplus Public Fill (2024-2027) Tseung Kwan O Area 137 Fill Bank ENA45832 Quarterly EM&A Summary Report No.01

\_

TABLE OF C	CONTENTS	Page
EXECUTIVE	SUMMARY	
1.0	INTRODUCTION	1
2.0	PROJECT INFORMATION	
	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
3.0	SUMMARY OF EM&A REQUIREMENTS	
	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
4.0	MONITORING RESULTS	
	4.1 Air Quality	3
	4.2 Noise	4
	4.3 Marine Water Quality	4
5.0	INSPECTION RESULTS	
	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
6.0	NON-COMPLIANCE OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS	3
0.0	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
7.0	COMMENTS, CONCLUSIONS AND RECOMMENDATION	, 8-9
7.0	COMMENTS, CONCESSIONS AND RECOMMENDATION	0-9
APPENDIX		
Α	Organization Chart and Lines of Communication	
В	Graphical Plots of Impact Air Quality Monitoring Data	
С	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	
Н	Implementation Schedule of Environmental Mitigation Measures (EMIS)	

#### **Figures**

11

12

J K

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)
Figure 5	Locations of Additional Air Quality Monitoring Stations – Tseung Kwan O Area 137 Fill Bank

Statistical Analysis of the Trend of Suspended Solids in the Quarter

Site General Layout Plan

Weather Condition

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



Handling of Surplus Public Fill (2024-2027) Tseung Kwan O Area 137 Fill Bank

ENA45832 Quarterly EM&A Summary Report No.01

**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 TSP Impact Monitoring Results
4.3	Comparison of Baseline and Various Period of Average 24-hr TSP Impact Monitoring Results
4.4	Summary of Impact Monitoring Results of Noise Daytime Monitoring
4.5	Total Number of Marine Water Quality Exceedances in the Quarter
4.6	Total Number of Marine Water Quality Exceedances in the Quarter (3RS project)
4.7	Summary of Statistically Significant Results of SS
4.8	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



Handling of Surplus Public Fill (2024-2027) Tseung Kwan O Area 137 Fill Bank ENA45832 Quarterly EM&A Summary Report No.01

**EXECUTIVE SUMMARY** 

This is Quarterly Environmental Monitoring and Audit (EM&A) Summary Report No.01 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) and "Contract No: CV/2023/10 – Handling of Surplus Public Fill (2024-2027) – 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 2024 to 30 September 2024.

#### **Site Activities**

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

July 2024

- 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 Artificial Intelligent System for Crushing Number 2, 3 and 4 (Model QJ241) at TKOFB:
- 4. Operation of the Integrated Public Fill Reception (Fixed Rigid Platform) at TKOFB;
- 5. Operation and maintenance of Wheel Washing Bays and Facilities 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. Operation and Maintenance a Digital Works Supervision System (DWSS) for TKOFB;
- 9. Maintenance of the Drainage Systems at TKOFB;
- 10. Operation and Maintenance of crushing plants at TKOFB;
- 11. Delivery of Public Fill to Taishan at TKOFB;
- 12. Construction of Gabion Wall at TKOFB;
- 13. Implementation of C Easy system at TKOFB (Phase 1)
- 14. Carry out GCO Probe test and SRT
- 15. Operation of recycling public fill as blanket layer material of reclamation projects PMI No.70
- 16. PMI No. 94 Post Geotechnical Monitoring at TKOFB
- 17. Relocation works of soil platforms

#### August 2024

- 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 Artificial Intelligent System for Crushing Number 2, 3 and 4 (Model QJ241) at TKOFB:
- 4. Operation of the Integrated Public Fill Reception (Fixed Rigid Platform) at TKOFB;
- 5. Operation and maintenance of Wheel Washing Bays and Facilities 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. Operation and Maintenance a Digital Works Supervision System (DWSS) for TKOFB;
- 9. Maintenance of the Drainage Systems at TKOFB;
- 10. Operation and Maintenance of crushing plants at TKOFB;
- 11. Delivery of Public Fill to Taishan at TKOFB;
- 12. Construction of Gabion Wall at TKOFB;
- 13.Implementation of C Easy system at TKOFB (Phase 1)
- 14. Carry out GCO Probe test and SRT
- 15. Operation of recycling public fill as blanket layer material of reclamation projects PMI No.70
- 16.PMI No. 94 Post Geotechnical Monitoring at TKOFB
- 17. Relocation works of soil platforms

### September 2024

- 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 Artificial Intelligent System for Crushing Number 2, 3 and 4 (Model QJ241) at TKOFB:
- 4. Operation of the Integrated Public Fill Reception (Fixed Rigid Platform) at TKOFB;
- 5. Operation and maintenance of Wheel Washing Bays and Facilities 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. Operation and Maintenance a Digital Works Supervision System (DWSS) for TKOFB;
- 9. Maintenance of the Drainage Systems at TKOFB;
- 10. Operation and Maintenance of crushing plants at TKOFB;
- 11. Delivery of Public Fill to Taishan at TKOFB;
- 12. Construction of Gabion Wall at TKOFB;
- 13. Implementation of C Easy system at TKOFB (Phase 1)
- 14. Carry out GCO Probe test and SRT



Handling of Surplus Public Fill (2024-2027) Tseung Kwan O Area 137 Fill Bank ENA45832 Quarterly EM&A Summary Report No.01

- 15. Operation of recycling public fill as blanket layer material of reclamation projects PMI No.70
- 16. PMI No. 94 Post Geotechnical Monitoring at TKOFB
- 17. Construction of concrete access road to fixed rigid platform

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

No complaint, notification of summons or successful prosecutions with respect to environmental issues was received in this quarter.



Handling of Surplus Public Fill (2024-2027) Tseung Kwan O Area 137 Fill Bank ENA45832 Quarterly EM&A Summary Report No.01

#### 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) and "Contract No: CV/2023/10 –Handling of Surplus Public Fill (2024-2027) – Tseung Kwan O (TKO) Area 137 Fill Bank" (The Project)".

Contract No: CV/2021/09 –Handling of Surplus Public Fill (2022-2023) – Tseung Kwan O (TKO) Area 137 Fill Bank" (The Project) ended on 03 August 2024 and was replaced by Contract No: CV/2023/10 –Handling of Surplus Public Fill (2024-2027) – Tseung Kwan O (TKO) Area 137 Fill Bank" (The Project), from 04 August 2024.

In accordance with the Environmental Permit (No.: EP-134/2002/Q) (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 MateriaLab. 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 2024 to September 2024.

#### 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 m³ 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.



Handling of Surplus Public Fill (2024-2027) Tseung Kwan O Area 137 Fill Bank ENA45832 Quarterly EM&A Summary Report No.01

#### 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 (Umwelt)	Mr. Ivan Ting	IEC	3756 9590	3582 3310
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 to 5 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.

Contract No.: CV/2023/10
Handling of Surplus Public Fill (2024-2027)

Tseung Kwan O Area 137 Fill Bank

ENA45832 Quarterly EM&A Summary Report No.01

#### 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	Level of	July 2024	August 2024	September 2024
Parameter	Exceedance			
24-hr TSP	No of monitoring	5	6	5
	events			
	Action Level	0	0	0
	Limit Level	0	0	0
1-hr TSP	No of monitoring	15	15	17
	events			
	Action Level	0	0	0
	Limit Level	0	0	0

Table 4.2 and 4.3 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 TSP Impact monitoring Results

Period		1-hr TSP (μg/m³)			
Fellou	TKO-A1	TKO-A2a	TKO-A3	TKO-A4	
Baseline (29/08 – 13/09)	195				
July 2024	238	241			
August 2024	247	251	129	122	
September 2024	241	245	122	115	

Handling of Surplus Public Fill (2024-2027) Tseung Kwan O Area 137 Fill Bank ENA45832 Quarterly EM&A Summary Report No.01

Table 4.3 Comparison of Baseline and Various Period of Averaged 24-hr TSP Impact monitoring Results

Period	24-hr TSP (μg/m³)			
Penou	TKO-A1	TKO-A2a	TKO-A3	TKO-A4
Baseline (29/08 – 13/09)		123		
July 2024	138	141		
August 2024	142	145	66	61
September 2024	140	144	56	51

#### 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 4.4 presents the limit level and average impact noise monitoring results during the reporting quarter.

Table 4.4 Summary of Impact Monitoring results of Noise Daytime Monitoring

Monitoring	Limit Level	July 2024	August 2024	September 2024		
Location		Leq, dB(A)				
TKO-N1	75	56.6	62.4	64.3		

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 4.5 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 4.5 Total Number of Marine Water Quality Exceedances in the Quarter

able to Total Harrison of Marine Hater Quality Exceedances in the Quality					
Parameter	Exceedance	July 2024	August 2024	September 2024	
	Level				
Number of monitoring days		13	14	13	
Dissolved	Action	0	0	0	
Oxygen, DO (S&M)	Limit	0	0	0	

Handling of Surplus Public Fill (2024-2027) Tseung Kwan O Area 137 Fill Bank ENA45832 Quarterly EM&A Summary Report No.01

Dissolved	Action	0	0	0
Oxygen, DO (B)	Limit	0	0	0
Turbidity	Action	0	0	0
Turbidity	Limit	0	0	0
Suspended	Action	0	0	0
Solids, SS	Limit	0	0	0
Total Number	Action	0	0	0
Exceedances	Limit	0	0	0

Table 4.6 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 4.6 Total Number of Marine Water Quality Exceedances (3RS project) in the Quarter

Parameter	Exceedance Level	July 2024	August 2024	September 2024
Number of monitor	ing days	13	14	13
Dissolved	Action	0	0	0
Oxygen, DO (S&M)	Limit	0	0	0
Dissolved	Action	0	0	0
Oxygen, DO (B)	Limit	0	0	0
Turbidity	Action	0	0	0
	Limit	0	0	0
Suspended	Action	0	0	0
Solids, SS	Limit	0	0	0
Total Number	Action	0	0	0
Exceedances	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 4.7.

Table 4.7 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 4.8.

Table 4.8 Summary of Statistically Significant Results of SS (3RS project)

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

Contract No.: CV/2023/10 Handling of Surplus Public Fill (2024-2027)

FNA45832 Tseung Kwan O Area 137 Fill Bank Quarterly EM&A Summary Report No.01

#### 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	on
From To	
Environmental   EP-   31/10/23   01/01/27   Site clearance   Construction of a temp system   Stockpiling of 6 million   Setting up two barging transporting the stockpharges   Setting up a temporary existing Explosive Offfor the month of May 2	n m3 of public fill points for poiled public fill by wharging point at the cloading Barging Point 2004 to December the stockpiled public fill tion of a construction al Sorting Facility tion and Demolition ility at the TKO Basin



Handling of Surplus Public Fill (2024-2027)

Tseung Kwan O Area 137 Fill Bank

ENA45832 Quarterly EM&A Summary Report No.01

	<b>50.40.000</b>	10/01/:-		
Chemical	5213-839-	19/04/17		Spent battery cell containing heavy metals and
Waste	C3750-04			spent lubricating oil
Producer	(CV/2021/09)			
	&			
	5213-839-			
	C3750-05			
	(CV/2023/10)			
Effluent	WT00041169-	06/06/22	30/06/27	Effluent, Surface Run-off, and all other
Discharge	2022			wastewater discharges from screen and
License	(CV/2021/09)			sedimentation tank
	&			
	Ref. Number			
	10008449			
	(CV/2023/10)			
Marine	EP/MD/25-005	01/01/24	30/09/24	Approval for dumping 499,999 tons
Dumping				(approximately equal to 277,777 cu.m. bulked
Permit				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	7042821	22/05/17	End of	
for Waste	(CV/2021/09)		Contract	
Disposal	8			
Diopoca.	7051970			
	(CV/2023/10)			
Notification	475209	12/04/17	End of	
Pursuant to	(CV/2021/09)	_, _, , , ,	Contract	
Section 3(1) of	&			
the Air	10007977			
Pollution	(CV/2023/10)			
Control	(37/2020/10)			
(Construction				
Dust)				
Dust)				

#### 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 2024	August 2024	September 2024
Public Fill ('000m³)	0	0	0
C&D Waste (general refuse) ('000kg)	84.04	4.28 (for CV/2021/09) & 54.85 (for CV/2023/10)	240.53
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.



Handling of Surplus Public Fill (2024-2027) Tseung Kwan O Area 137 Fill Bank ENA45832 Quarterly EM&A Summary Report No.01

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

No complaint, 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

	•		
Period	Complaints	Summon	Successful
renou	logged	served	Prosecution
July 2024	0	0	0
August 2024	0	0	0
September 2024	0	0	0
Cumulative	18	0	0

#### 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

No complaint, 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;



Handling of Surplus Public Fill (2024-2027) Tseung Kwan O Area 137 Fill Bank

ENA45832 Quarterly EM&A Summary Report No.01

- 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.

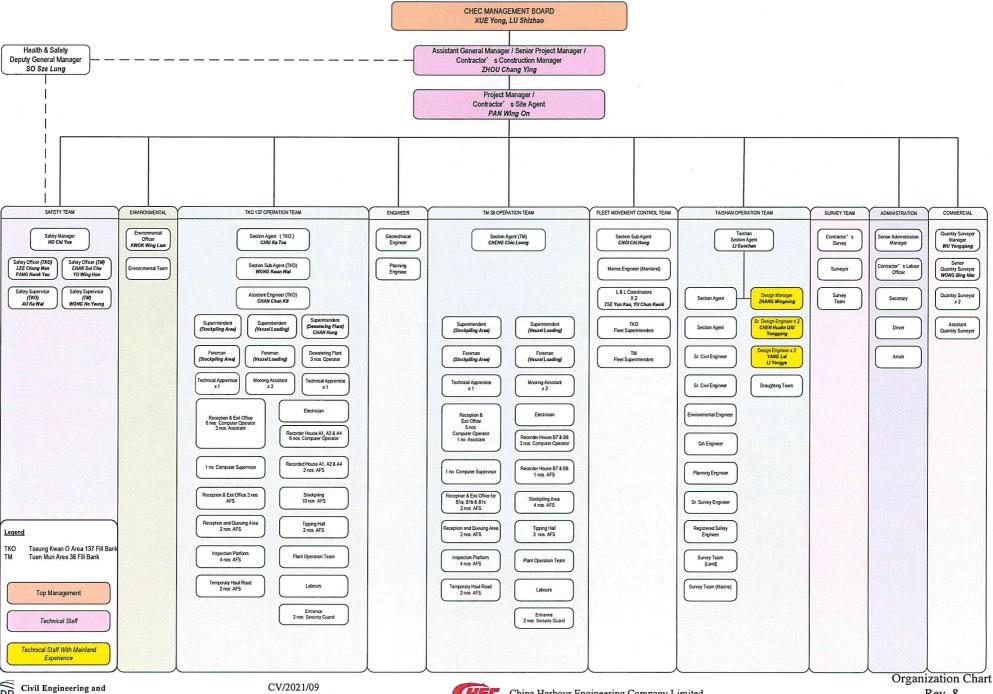
- END OF REPORT -



**Appendix** 

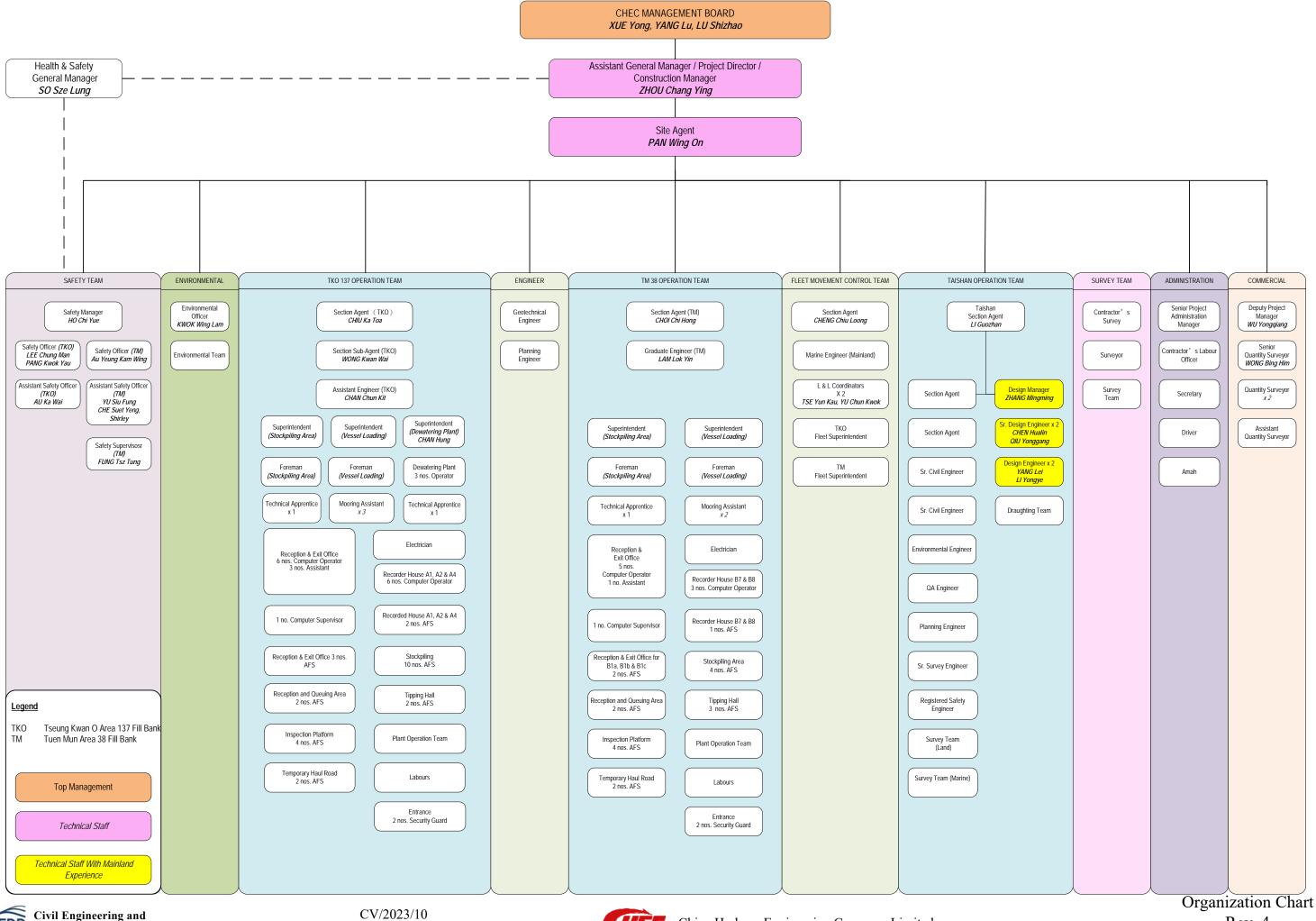
Α

**Organization Chart** 









Handling of Surplus Public Fill (2024 - 2027)

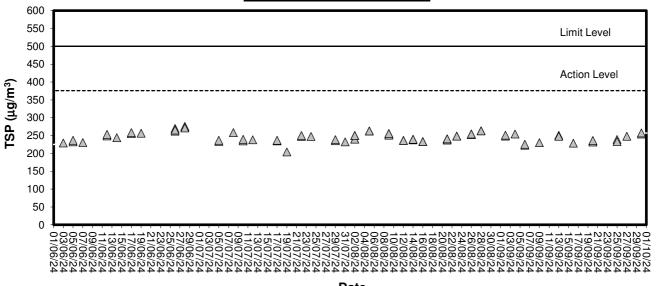


# **Appendix**

В

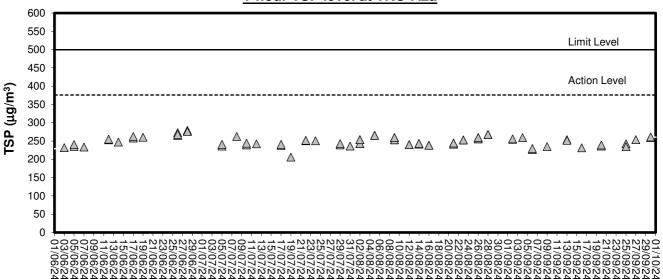
**Graphical Plots of Air Quality Monitoring Data** 





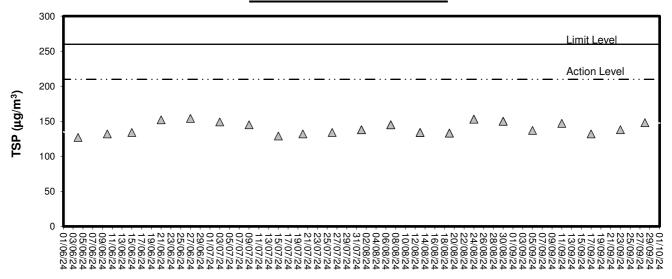
#### **Date**

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



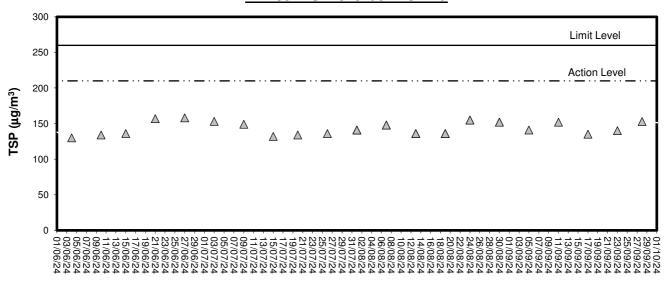
**Date** 





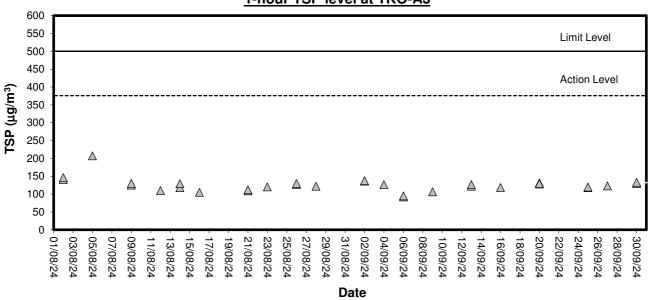
#### Date

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

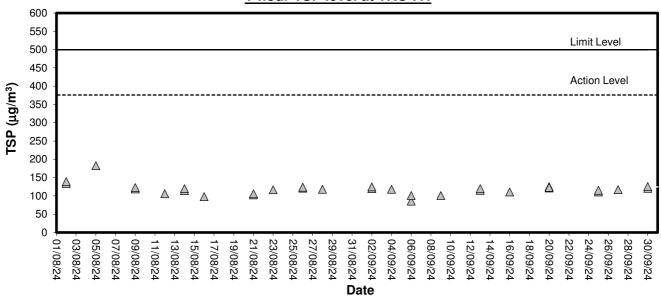


Date

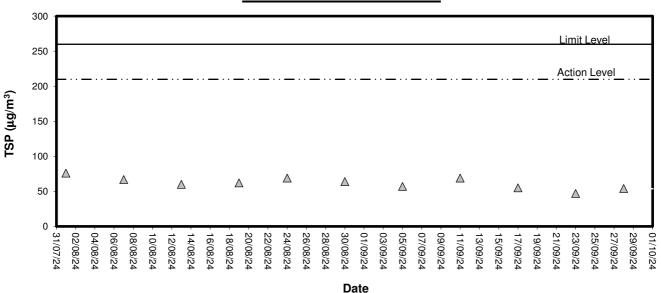




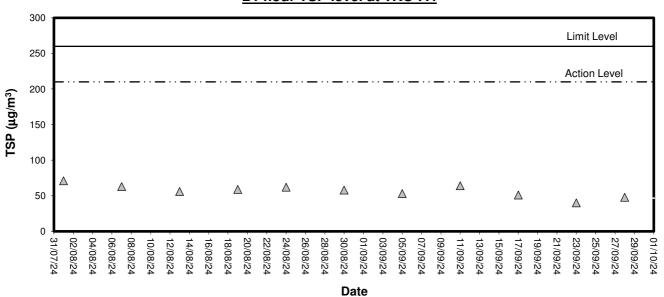
### 1-hour TSP level at TKO-A4







### 24-hour TSP level at TKO-A4





# **Appendix**

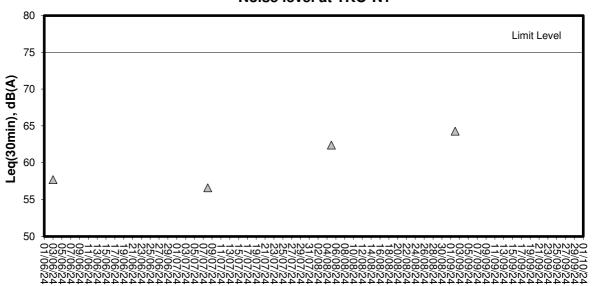
C

**Graphical Plots of Noise Monitoring Data** 



# Noise Monitoring (Day-time)

### Noise level at TKO-N1



Date



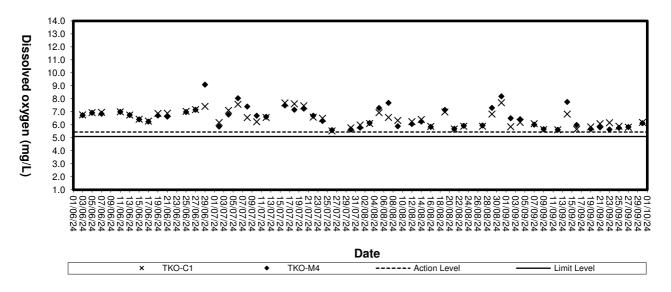
### **Appendix**

D1

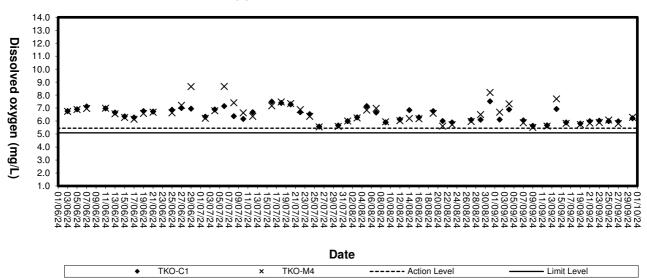
**Graphical Plots of Impact Marine Water Quality Monitoring Data** 



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

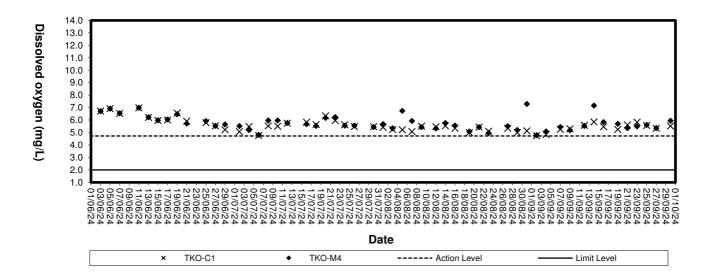


### Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide

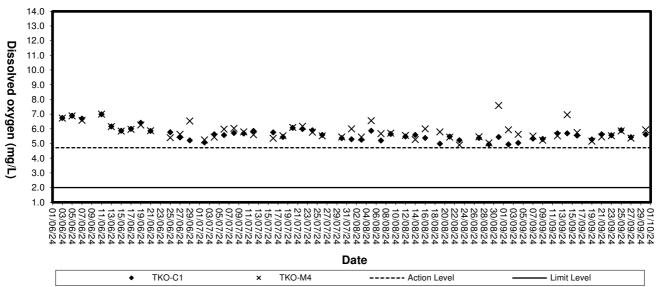




#### Dissolved Oxygen (Bottom) at Mid-Flood Tide

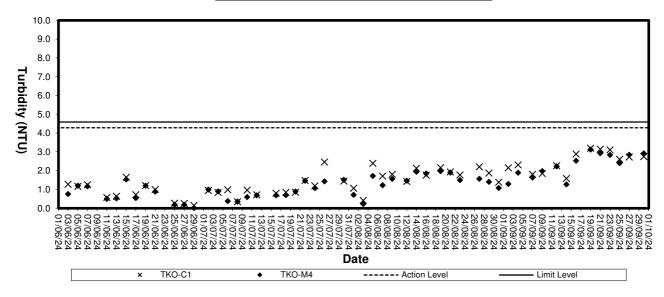


#### **Dissolved Oxygen (Bottom) at Mid-Ebb Tide**

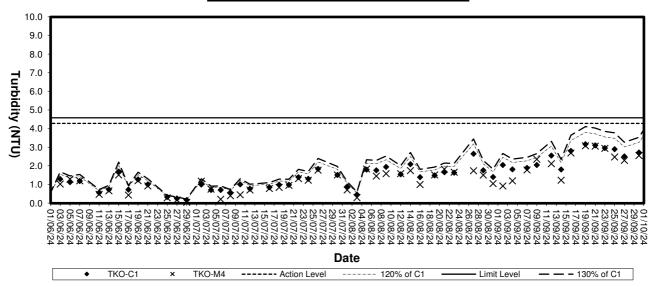




### **Turbidity (Depth-average) at Mid-Flood Tide**

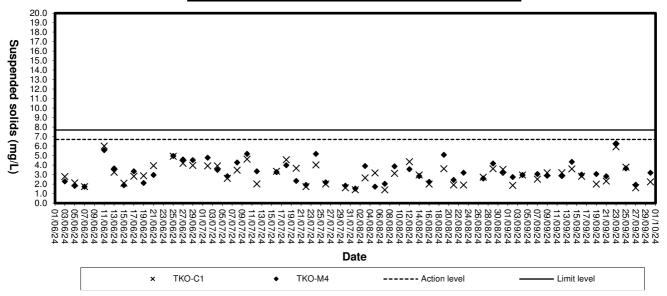


#### Turbidity(Depth-average) at Mid-Ebb Tide

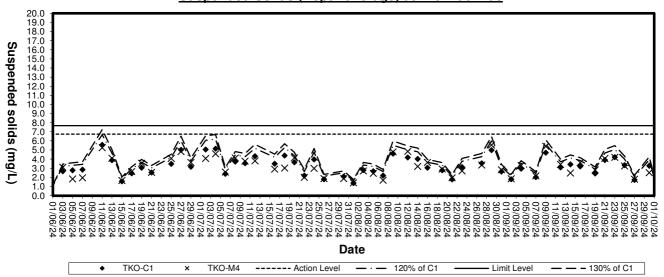




#### Suspended solids (Depth-average) at Mid-Flood Tide



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





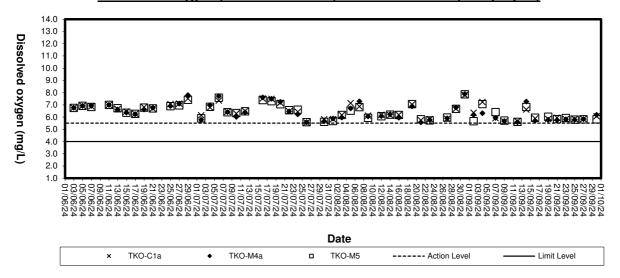
### **Appendix**

**D2** 

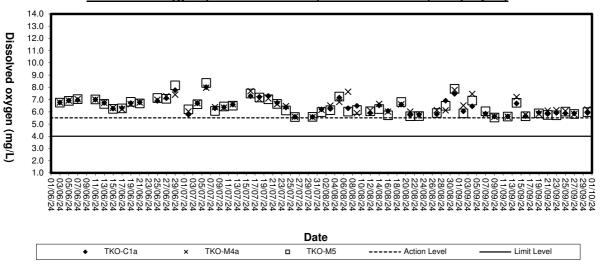
Graphical Plots of Impact Marine Water Quality Monitoring Data (3RS project)



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

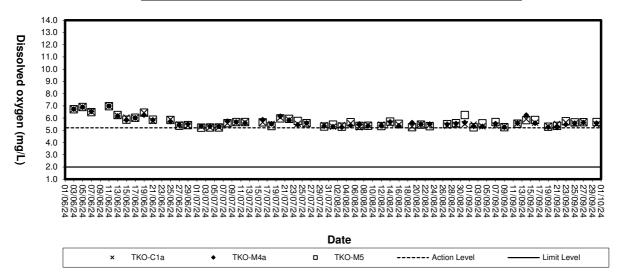


#### Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide (3RS project)

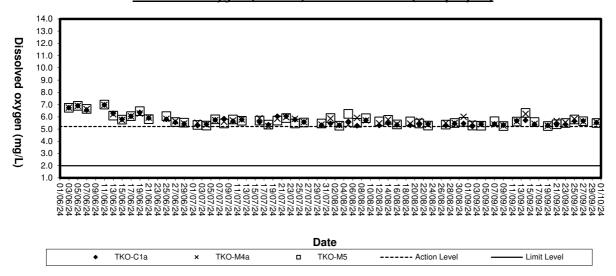




#### Dissolved Oxygen (Bottom) at Mid-Flood Tide (3RS project)

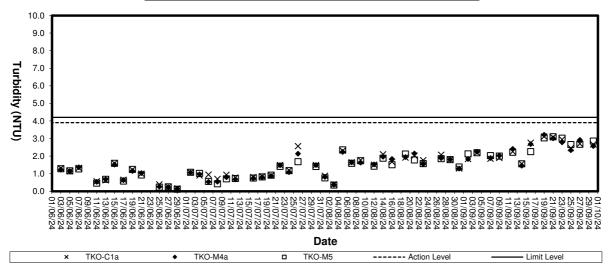


#### Dissolved Oxygen (Bottom) at Mid-Ebb Tide (3RS project)

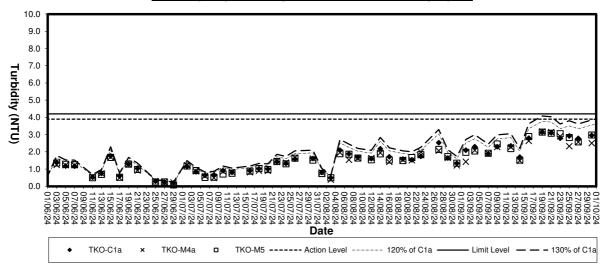




#### Turbidity (Depth-average) at Mid-Flood Tide (3RS project)

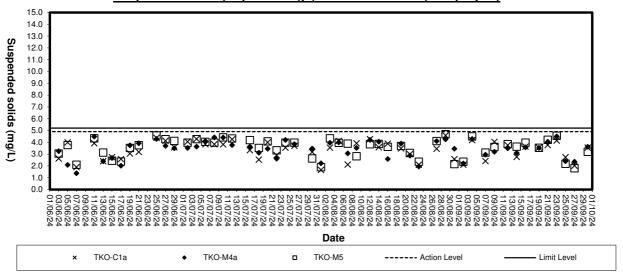


#### Turbidity(Depth-average) at Mid-Ebb Tide (3RS project)

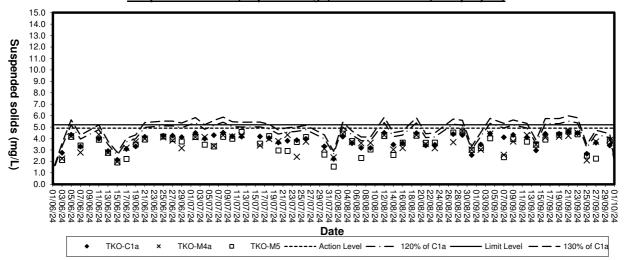




#### Suspended solids (Depth-average) at Mid-Flood Tide (3RS project)



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





### **Appendix**

Ε

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



## Action and Limit Levels for Air Quality

## Action and Limit Levels for 1-Hour TSP

Location	Action Level, (μg/m³)	Limit Level, (μg/m³)
A1		
A2a	276	E00
A3	376	500
A4		

## Action and Limit Levels for 24-Hour TSP

Location	Action Level, (μg/m³)	Limit Level, (μg/m³)
A1		
A2a	210	360
A3	210	260
A4		

### Action and Limit Levels for Noise

Time Period	Action	Limit
0700-1900 hrs on normal	When one documented complaint is	75 dB(A)
weekday	received	

## Action and Limit Levels for Water Quality

Parameter	Action Level	Limit Level
DO (mg/L)	Surface & Middle <5.45 mg/L (5%-ile of baseline data) Bottom <4.72 mg/L (5%-ile of baseline data)	Surface & Middle <5.10 mg/L (1%-ile of baseline data) Bottom <2.00 mg/L
SS (mg/L)	>6.74 mg/L (95%-ile of baseline data) or	>7.67 mg/L (99%-ile of baseline data) or
(Depth-	>120% of the upstream control station's	>130% of the upstream control station's
averaged)	SS at the same tide on the same day	SS at the same tide on the same day
Turbidity	>4.28 NTU (95%-ile of baseline data) or	>4.58 NTU (99%-ile of baseline data) or
(NTU) (Depth-	>120% of the upstream control station's	>130% of the upstream control station's
averaged)	turbidity at the same tide on the same day	turbidity at the same tide on the same day

# Action and Limit Levels for Water Quality (3RS project)

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



F

**Event-Action Plans** 

-				dia C		dial
	Contractor		Rectify any unacceptable practise Amend working methods if appropriate	Submit proposals for remedial actions to IC(E) within 3 working days of notification Implement the agreed proposals Amend proposal if appropriate	of moiton of cipoment of the	avoid further exceedance action to avoid further exceedance Submit proposals for remedial actions to IC(E) within 3 working days of notification Implement the agreed proposals Amend proposal if appropriate.
			. 2	<del>-,</del> -, -, -, -, -, -, -, -, -, -, -, -, -,	ļ	÷ 2, €, 4,
ITY EXCEEDANCE	0		1. Notify Contractor	Confirm receipt of notification of failure in writing     Notify the Contractor     Ensure remedial measures property implemented		<ol> <li>Confirm receipt of notification of failure in writing</li> <li>Notify the Contractor</li> <li>Ensure remedial measures properly implemented</li> </ol>
UAL	-			e e ible		e sible
EVENT/ACTION PLAN FOR AIR QUALITY EXCEEDANCE	ACTION	IC(E)	Check monitoring data submitted by the ET	Check monitoring data submitted by the ET Leader Check the Contractor's working method Discuss with ET and Contractor on possible remedial measures Advise the ER on the effectiveness of the proposed remedial measures Supervise implementation of remedial measures	LIMIT LEVEL	Check monitoring data submitted by the ET Leader Check Contractor's working method Discuss with ET and Contractor on possible remedial measures Advise the ER on the effectiveness of the proposed remedial measures Supervise implementation of remedial measures
EVE	ļ		<b>-</b> ' α'	÷ 5.6. 4. 7.		∸. ડાધ, 4. rž
		ET Leader	Identify source, investigate the causes of exceedance and propose remedial measures. Inform ER, IC(E) and Contractor. Repeat measurement to confirm finding. Increase monitoring frequency to daily	Identify source, investigate the causes of exceedance and propose remedial measures     Inform IC(E) and Contractor     Repeat measurements to confirm finding     Increase monitoring frequency to daily biscuss with IC(E) and Contractor on remedial actions     If exceedance continues, arrange meeting with IC(E) and ER.     If exceedance stops, cease additional monitoring		<ol> <li>Identify source, investigate the causes of exceedance and propose remedial measures</li> <li>Inform ER, Contractor and EPD</li> <li>Repeat measurement to confirm finding</li> <li>Increase monitoring frequency to daily horses the effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results</li> </ol>
-			- 4. 4.		-	
EVENT			for one sample	2. Exceedance for two or more consecutive samples		1, Exceedance for one sample
ш.				1		1

EVENT		EVENT/ACTION PLAN FOR AIR QUALITY EXCEEDANCE	LITY EXCEEDANCE		
'93		ACTION			
	ET Leader	IC(E)	ER	Contractor	
2. Exceedance	1. Identify source, investigate the causes	1. Discuss amongst ER, ET and Contractor on	1. Confirm receipt of notification	1. Take immediate action to	<u>۔</u>
for two or	of exceedance and propose remedial	the potential remedial actions	of failure in writing		ces
more	measures	2. Review Contractor's remedial actions	2. Notify Contractor	2. Submit proposals for remedial	medial
consecutive	2. Notify IC(E), ER, EPD and Contractor	whenever necessary to assure their	<ol><li>In consultation with the IC(E),</li></ol>	actions to IC(E) within 3	~
sambles	3. Repeat measurement to confirm	effectiveness and advise the ER accordingly	agree with the Contractor on	working days of notification	tion
•	finding	3. Supervise the implementation of remedial	the remedial measures to be	<ol><li>Implement the agreed</li></ol>	
	4. Increase monitoring frequency to daily	measures	implemented	proposals	
	5. Carry out analysis of contractor's		<ol><li>Ensure remedial measures</li></ol>	<ol><li>Resubmit proposals if</li></ol>	
	working procedures to determine		are properly implemented	problem still not under control	control
	possible mitigation to be implemented		5. If exceedances continues,	<ol><li>Stop the relevant activity of</li></ol>	ty of
	6. Arrange meeting with IC(E) and ER to		consider what portion of the	works as determined by the	y the
	_		work is responsible and	ER until the exceedance is	s is
	taken		instruct the Contractor to stop	abated	
-	7. Assess effectiveness of Contractor's		that portion of work until the	•	
-	remedial actions and keep IC(E), EPD		exceedance is abated		
<u>™</u>	and ER informed of the results				
	8. If exceedance stops, cease additional				-
	monitoring				

				<b>EVENT/ACTION PLAN FOR NOISE EXCEEDANCE</b>	N N	OISE EXCEEDANCE			
EVENT				ACTION	Z				1
	_	ET Leader		IC(E)		ER		Contractor	7
Action Level	+ 4 € + 4 €	Notify the IC(E) and the Contractor. Carry out investigation. Report the results of investigation to the IC(E) and the Contractor. Discuss with the Contractor and formulate remedial measures. Increase monitoring frequency to check mitigation effectiveness	3. 2. 1.	Review the analysed results submitted by the ET. Review the proposed remedial measures by the Contractor and advise the ER accordingly. Supervise the implementation of remedial measures.	÷ 2.6. 4.	Confirm receipt of notification of failure in writing. Notify the Contractor. Require the Contractor to propose remedial measures for the analysed noise problem. Ensure remedial measures are properly implemented.	<del>.</del>	Submit noise mitigation proposals to IC(E). Implement noise mitigation proposals.	
Limit	<u> -</u>	Notify the IC(E), the ER, the EPD	<del></del>	Discuss amongst the ER, the ET	<u> </u>	Confirm receipt of notification of	<del>-:</del>	Take immediate action to avoid	777
Level		and the Contractor.		Leader and the Contractor on the	•	failure in writing.		Turther exceedance	
2.00 <b>2</b> 70	٧i			potential remedial actions.	٠į	Notify the Contractor.	N.	Submit proposals for remedial	
	લ	Repeat measurement to confirm	۲,	Review the Contractor's remedial	က်	Require the Contractor to propose		actions to IC(E) within 3	
-1-0-410		findings.		actions whenever necessary to		remedial measures for the		working days of notification.	
	4	Increase monitoring frequency.		assure their effectiveness and		analysed noise problem.	က်	Implement the agreed	
	က်			advise the ER accordingly.	4.	Ensure remedial measures are	•	proposals.	
		working procedures to determine	က်	Supervise the implementation of	ı	properly implemented.	4.	Resubmit proposals if problem	_
<del></del>		possible mitigation to be		remedial measures.	ဂံ	If exceedances continue, consider	Ľ	Still flot dilder conflict.	
		_				what activity of the work is	က်	Stop the refevalities activity of	~
	ဖ					responsible and instruct the		works as determined by the ER	<del>.</del> .
		EPU the causes & actions taken for				כטונומכוטן וט פוטף ווומר מכוואונץ טו			-
		•				work until the exceedances is		abated.	
	۲.					abated.			
		Contractor's remedial actions and							
	•	keep the IC(E), the EPD and the							
		ER informed of the results							
	ထ								-
		construction works stops, cease							-
		additional monitoring							

Event		EVEN.	IT A	EVENT AND ACTION PLAN FOR WATER QUALITY EXCEEDANCE	ATE	ER QUALITY EXCEEDANC	Ж	
uçı sılı				ACTION	z			
		ET Leader		Contractor		ER		IEC
Action level	-	Identify source(s) of impact:	<u> -</u>	Notify the ER and IEC in writing	<u>-</u> :	Notify EPD and other relevant	<del>-</del>	Check monitoring data
heing exceeded	د د	Reneat in-situ measurement to		within 24 hours of identification of	,	governmental agencies in writing		submitted by ET
by one	i	confirm findings:		exceedance		within 24 hours of the	2	Confirm ET assessment if
sampling day	•		7			identification of the exceedance		exceedance is due / not due
Con Standards	; 		က်		2.	Discuss with IEC, ET and		to the works
		exceedance	4			Contractor on the proposed	က်	Discuss with ET, ER and
	4			and ER within 3 working days of		mitigation measures;		Contractor on the mitigation
				the identification of an	က	Require contractor to propose		measures
		working methods:		exceedance		remedial measures for the	4.	Review contractor's
	ď		က်			analysed problem if related to the		mitigation measures
	(c)			method if exceedance is due to		construction works		whenever necessary to
	; 	_		the construction works	4.	Ensure remedial measures are		ensure their effectiveness
·		days of identification of	9			properly implemented		and advise the ER
		exceedance and advise		propose mitigation measures to	ů.	Assess the effectiveness of the		accordingly
		contractor if exceedance is due to		IEC and ER if exceedance is due		mitigation measure	ri,	Supervise the
		contractor's construction works		to the construction works within 4				implementation of mitigation
	7.			working days of identification of	_			measures
		Contractor if exceedance is due		an exceedance				
		to the construction works within 4	7.	Implement the agreed mitigation				
		working days		measures within reasonable time				
	ω.	Repeat measurement on next day		scale				
		of exceedance if exceedance is						
		due to the construction works	_				_	

. . .\_

Event	<u> </u>		1"	EVENT AND ACTION PLAN FOR WATER QUALITY	FO	R WATER QUALITY	1	
				ACTION	×			
	Ŀ	ET Leader		Contractor		ER		IEC
Action level	7	Identify source(s) of impact;	Ŀ	Notify IEC and ER in writing	<b>~</b>	Notify EPD and other relevant	+	Check monitoring data
being	2	Repeat in-situ measurement		within 24 hours of		governmental agencies in		
exceeded by		to confirm findings		identification of exceedance		writing within 24 hours of the	તં	_
more than one	က်	Notify Contractor in writing	2	٠		identification of the		if exceedance is due /
consecutive		within 24 hours of	က	Check all plant and		exceedance		_
sampling days		identification		equipment;	7	Discuss with IEC, ET and	က	_
	4.	Check monitoring data, all	4.	U		Contractor on the proposed		Contractor on the
		plant, equipment and		methods;	· · ·	mitigation measures;		mitigation measures.
		Contractor's working methods;	က်	UJ	က	Require contractor to propose	4.	
	ry.	Carry out investigation		investigation to IEC and ER		remedial measures for the		mitigation measures
	9			within 3 working days of the		analysed problem if related to		whenever necessary to
		investigation to the Contractor		identification of an		the construction works	·	ensure their
horio		within 3 working days of		exceedance	4.	Ensure remedial measures		effectiveness and advise
		identification of exceedance	ဖ်	Discuss with ET, IEC and ER		are properly implemented		_
		and advise contractor if		and propose mitigation	r.	Assess the effectiveness of	က်	•
		exceedance is due to		measures to IEC and ER		the mitigation measure		of the implemented
		contractor's construction		within 4 working days of				mitigation measures.
				identification of an				
	7.			exceedance				
		with IEC and Contractor within	7.	Implement the agreed				
		4 working of identification of		mitigation measures within				
•		an exceedance		reasonable time scale				
- of the last	ထ	Ensure mitigation measures						
		are implemented;						
	<u>o</u>	. Prepare to increase the						
· · · · · · · · · · · · · · · · · · ·		monitoring frequency to daily;						
	<del>~</del>	10. Repeat measurement on next						
		day of exceedance.						

.

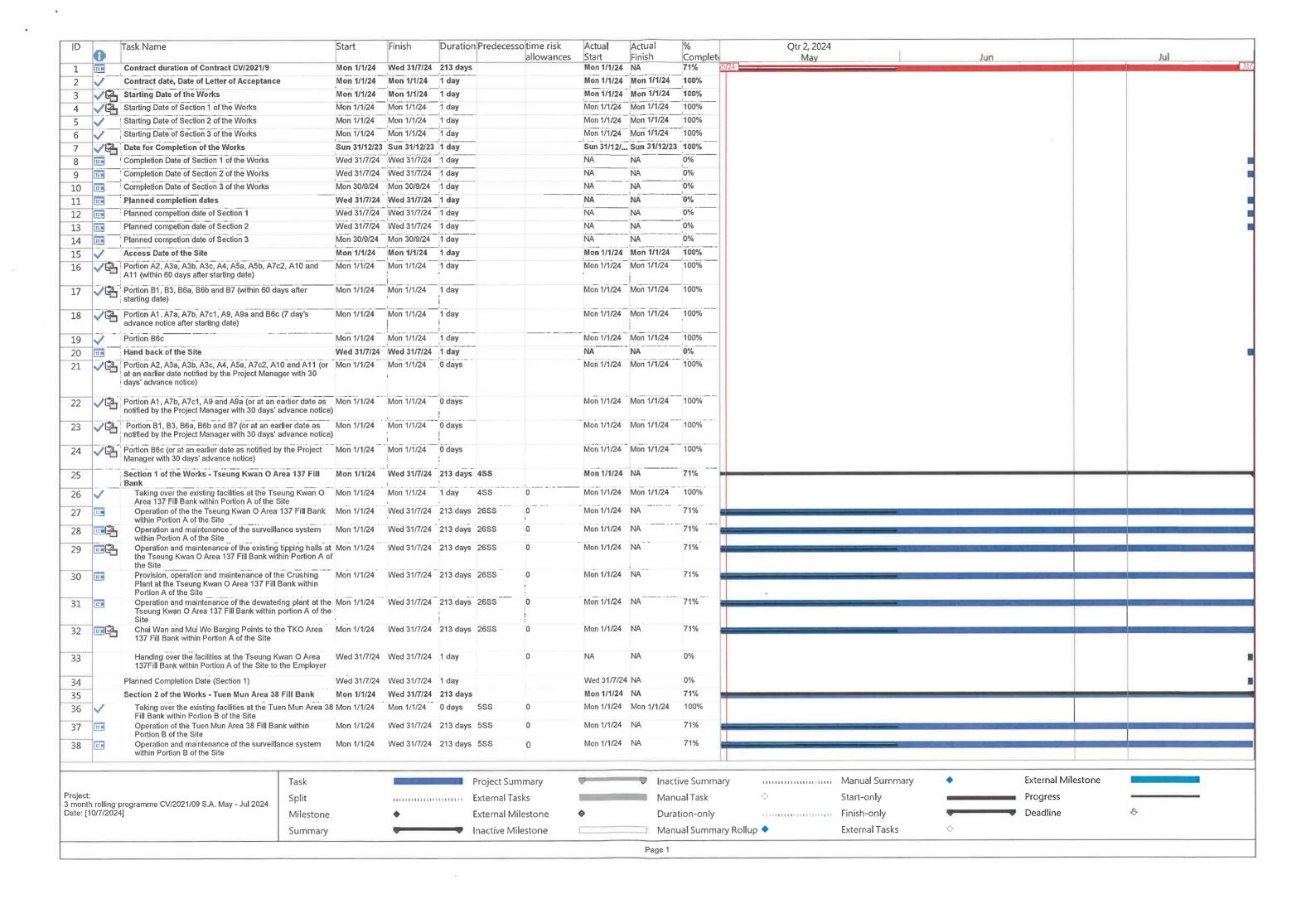
Event		EVENT AND	Ϋ́		ATE	ACTION PLAN FOR WATER QUALITY EXCEEDANCE	Щ		
الانتخا <del>م و</del> ر				ACTION	Z				
		ET Leader		Contractor		ER		IEC	Υ
Limit level	Υ-	Repeat in-situ measurement	1.	Notify IEC and ER in writing;	<del></del>	Notify EPD and other relevant	<del>. :</del>	Check monitoring data	
being		to confirm findings;		within 24 hours of the		governmental agencies in		submitted by E.I.	
exceeded by	7	_		identification of the		writing within 24 hours of	7	Confirm ET assessment	
one sampling	"			exceedance		identification of exceedance		if exceedance is due /	
8		_	2	Rectify unacceptable practice;	2	Discuss with IEC, ET and		not due to the works	
<u> </u>		identification of the	က	Check all plant and		Contractor on the proposed	က်	Discuss with ET, ER and	
		exceedance		equipment;		mitigation measures;		Contractor on the	
	4	_	4	Consider changes of working	က	Request Contractor to critically		mitigation measures.	
		_		methods:		review the working methods;	4.	Review proposals on	
		Contractor's working methods:	ιĊ	Submit the results of the	4	Ensure remedial measures		mitigation measures	
•	r.	_	:	investigation to IEC and ER		are properly implemented		submitted by Contractor	
				within 3 working days of the	<u>ب</u>	Assess the effectiveness of		and advise the ER	
-		-		identification of an		the implemented mitigation		accordingly.	
		within 3 working days of		exceedance		measures.	က်	Assess the effectiveness	
		identification of exceedance	6	Discuss with ET, IEC and ER				of the implemented	
		and advise contractor if	i	and propose mitigation				mitigation measures	<u></u>
	•	exceedance is due to		measures to IEC and ER					
<del>4</del>		contractor's construction		within 4 working days of the					
		works		identification of an					
<b>1</b> 2	7			exceedance					
		with IEC, ER and Contractor	۲.						
نىچىدى <u>ت</u>		within 4 working of		mitigation measures within					
		identification of an		reasonable time scale					
		exceedance							
	<u></u>	<ol><li>Ensure mitigation measures</li></ol>							
		are implemented;							
<del></del>	0	<ol><li>Increase the monitoring</li></ol>							
		frequency to daily until no							
	-	exceedance of Limit Level.							

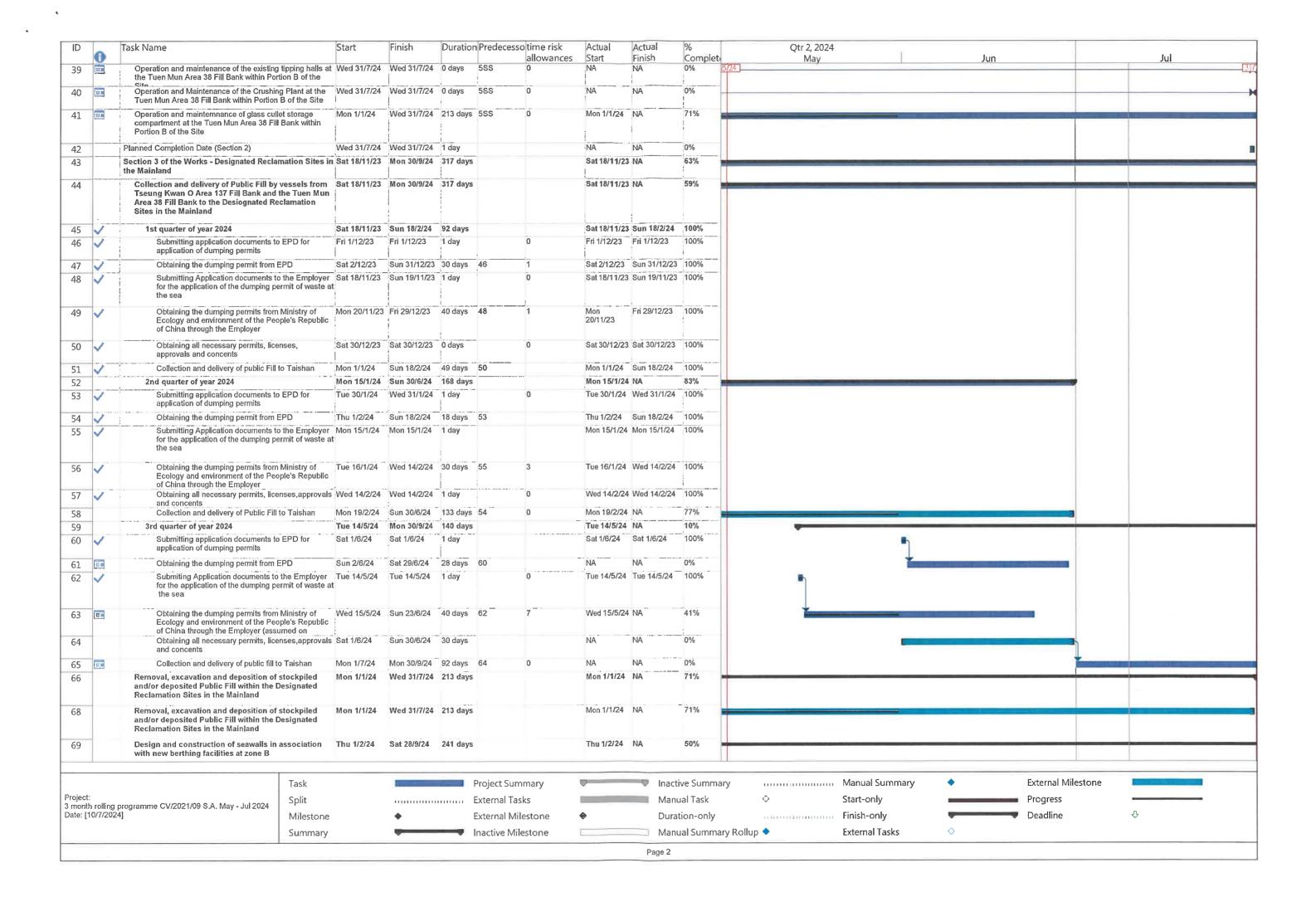
Event		EVEN	<b> </b>	EVENT AND ACTION PLAN FOR WATER QUALITY EXCEEDANCE	'ATE	R QUALITY EXCEEDANC	ш	
*- <del></del>				ACTION	Ž			
-		ET Leader		Contractor		ER		IEC
Limit Level	-	Repeat in-situ measurement	-	Notify ER and IEC in writing	<del>-</del> -		<del>-</del> :	Check monitoring data
being		to confirm findings;		within 24 hours of the		governmental agencies in	_	submitted by E.I
exceeded by	2			identification of the		writing within 24 hours of	۲,	Confirm ET assessment
more than one	က်			exceedance and		identification of exceedance		if exceedance is due /
consecutive	;	•	2	Rectify unacceptable practice;	7	Discuss with IEC, ET and		not due to the works
sampling days		identification of the	က်	Check all plant and		Contractor on the proposed	က	Discuss with ER, ET and
		exceedance		equipment;		mitigation measures;		Contractor on the
	4		4.	Consider changes of working	က	Request Contractor to critically		mitigation measures.
~~~	:			methods;		review the working methods;	4.	Review proposals on
	_	Contractor's working methods:	<u></u>	Submit the results of the	ô,	Ensure remedial measures		mitigation measures
نث ج	ιC			investigation to IEC and ER		are properly implemented		submitted by Contractor
	<b>ф</b>			within 3 working days of the	4.	Assess the effectiveness of		and advise the ER
	;	· -		identification of an		the implemented mitigation		accordingly.
		within 3 working days of		exceedance		measures;	က်	Assess the effectiveness
		identification of exceedance	က်	Discuss with ET, IEC and ER	က်	Consider and instruct, if		of the implemented
******		and advise contractor if		and propose mitigation		necessary, the Contractor to		mitigation measures.
		exceedance is due to		measures to IEC and ER		slow down or to stop all or part		
••••		contractor's construction		within 4 working days;		of the marine work until no		
		works	6	Implement the agreed		exceedance of Limit Level.		
	۲.	Discuss mitigation measures		mitigation measures within				
		with IEC, ER and Contractor;		reasonable time scale				
	ω.		7.	As directed by the Engineer,				
34.33		are implemented;		to slow down or to stop all or				
	<u>ග</u>			part of the marine work or				
		frequency to daily until no		construction actives.				
		exceedance of Limit Level for						
		two consecutive days.						

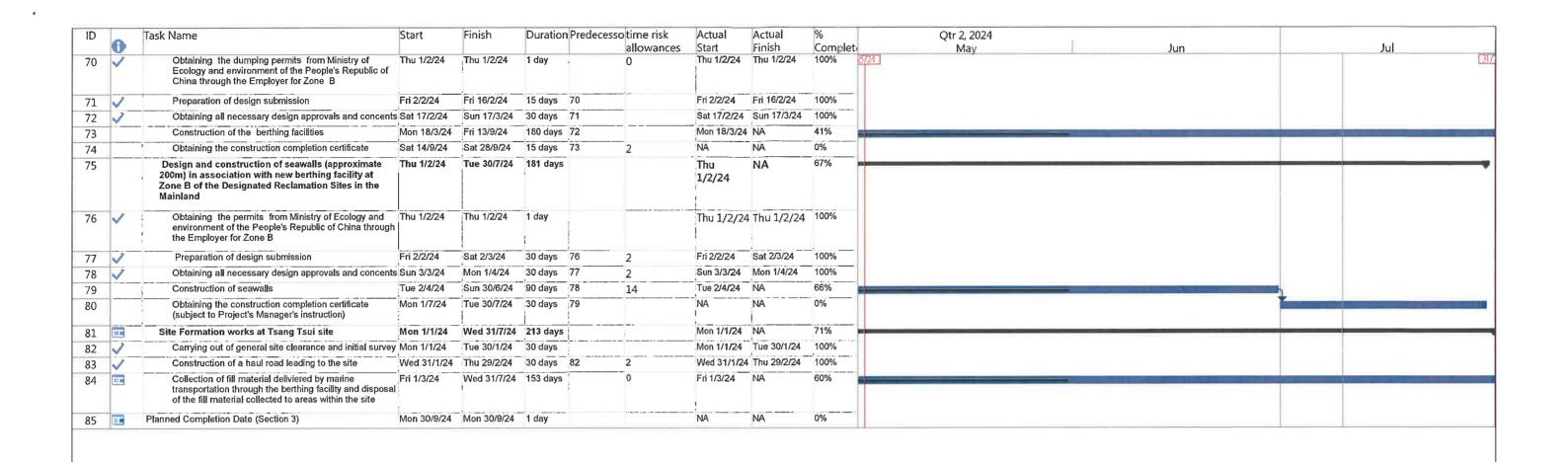


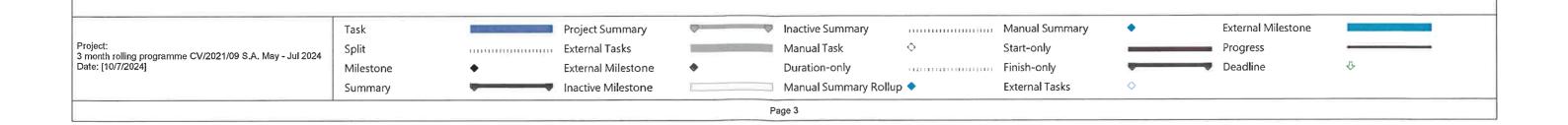
G

**Work Programme** 

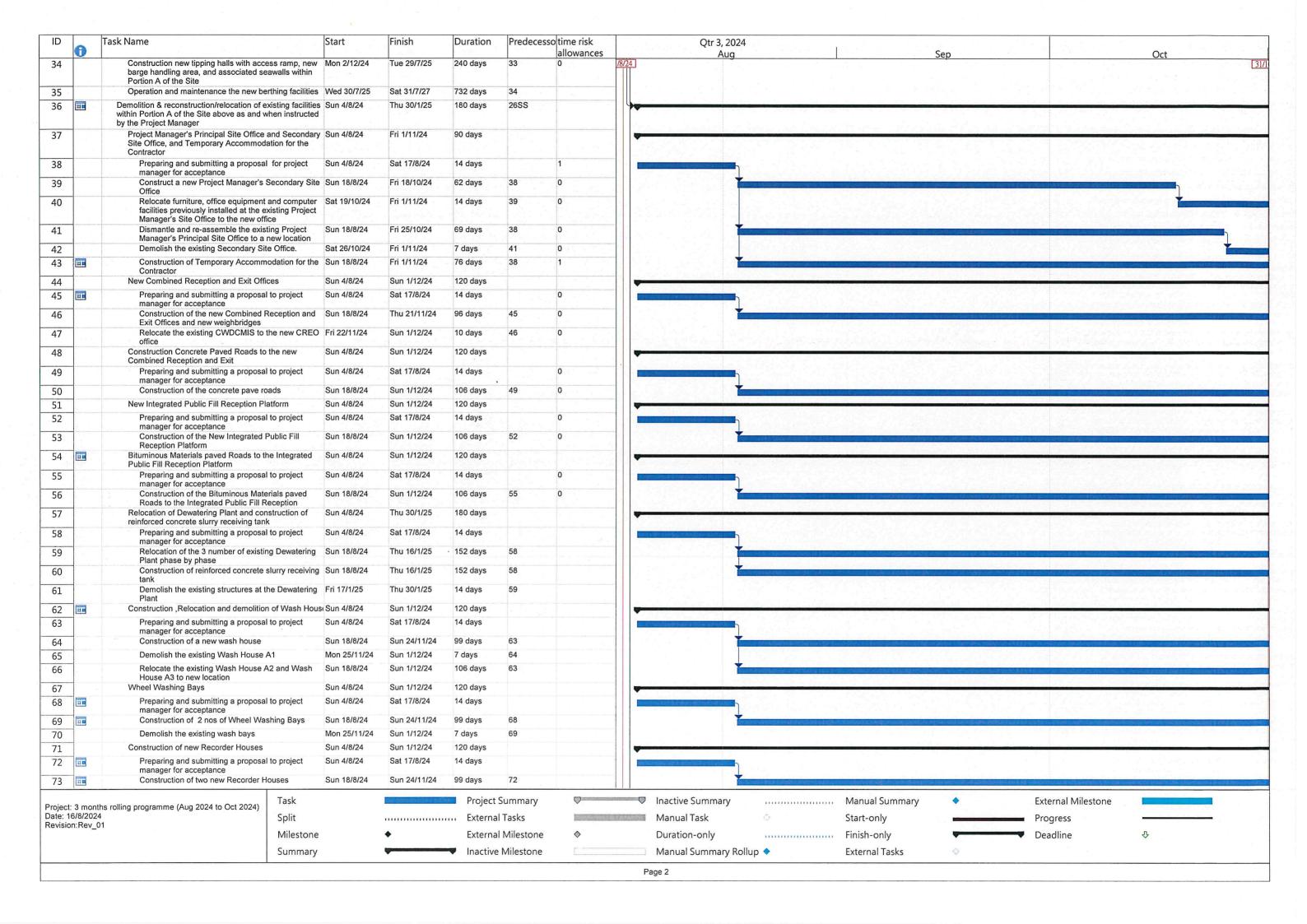


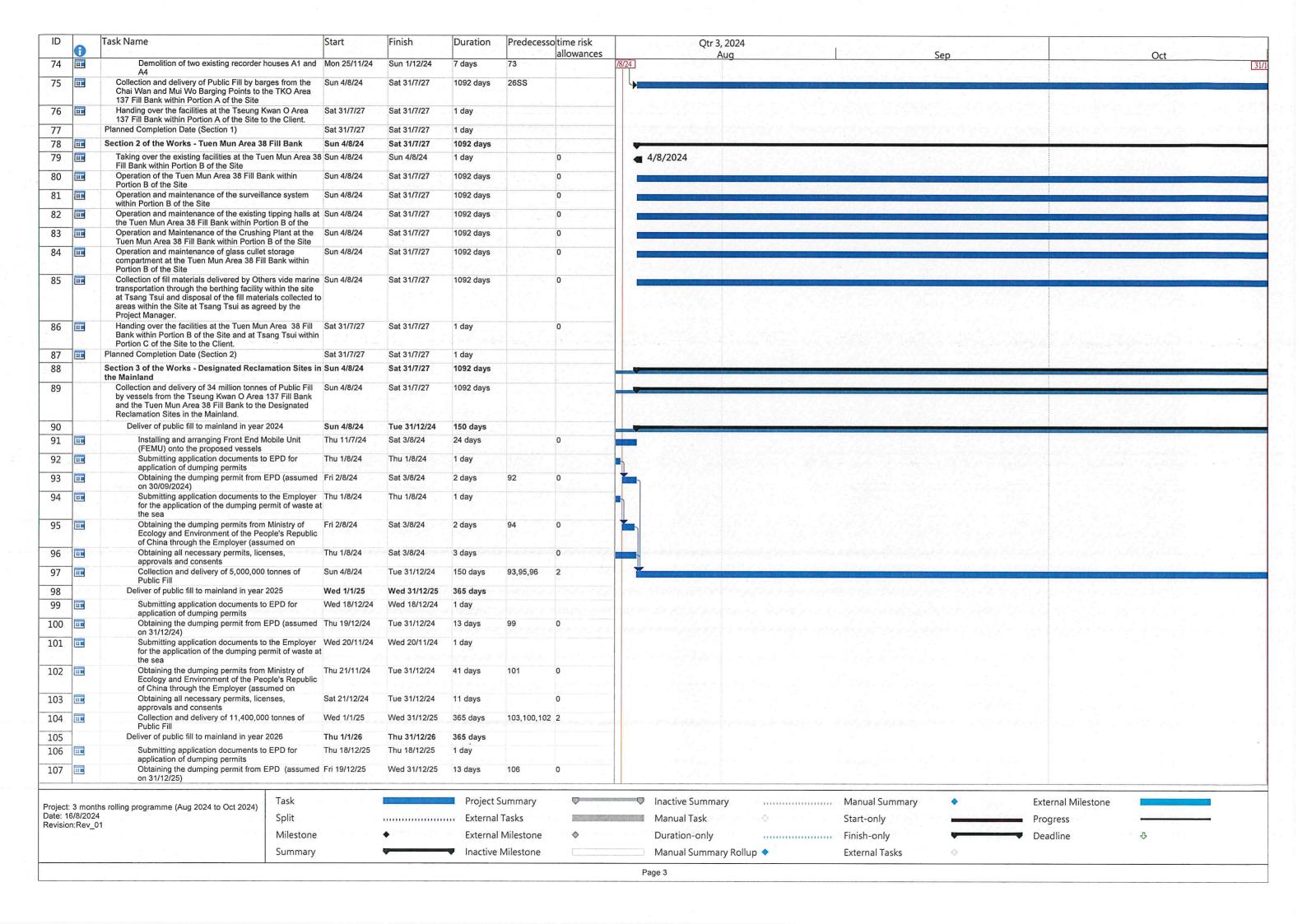






ID (	0	Task Name	Start	Finish	Duration	Predecesso	allowances	Qtr 3, 2024 Aua	Sen	Oct
1	iii	Contract duration of Contract CV/2023/10	Sun 4/8/24	Sat 31/7/27	1092 days		anowances	/8/24]	Зер	OCI
		Contract date, Date of Letter of Acceptance	Thu 11/7/24	Thu 11/7/24	1 day					
		Starting Date of the Works	Sun 4/8/24	Sun 4/8/24	1 day			<b>4/8/2024</b>		
		Starting Date of Section 1 of the Works	Sun 4/8/24	Sun 4/8/24	1 day			4/8/2024		
	HH H	Starting Date of Section 2 of the Works	Sun 4/8/24	Sun 4/8/24	1 day			4/8/2024		
		Starting Date of Section 3 of the Works	Sun 4/8/24	Sun 4/8/24	1 day			4/8/2024		
	_	Date for Completion of the Works	Sat 31/7/27	Sat 31/7/27	1 day					
		Completion Date of Section 1 of the Works	Sat 31/7/27	Sat 31/7/27	1 day	4SF+1092 da				
		Completion Date of Section 2 of the Works	Sat 31/7/27	Sat 31/7/27	1 day	5SF+1092 da				
		Completion Date of Section 3 of the Works	Sat 31/7/27	Sat 31/7/27	1 day	6SF+1092 da				
-		Planned completion dates	Sat 31/7/27	Sat 31/7/27	1 day					
		Planned completion date of Section 1	Sat 31/7/27	Sat 31/7/27	1 day					
		Planned completion date of Section 2	Sat 31/7/27	Sat 31/7/27	1 day					
		Planned completion date of Section 3	Sat 31/7/27	Sat 31/7/27	1 day					
		Access Date of the Site	Sun 4/8/24	Sun 4/8/24	1 day			4/8/2024		
		Portion A2, A3a, A3b, A3c, A4a1, A4a2, A4b1, A4b2,		Sun 4/8/24	1 day			4/8/2024		
		A5b, A5c, A7a, A7b, A7c and A10 (within 60 days after starting date or later date notified by the Project Manawith 2 days advance notice)	er ager	CGII 110127	, 30)			1,0,2024		
		Portion B1, B3, B6a, B6b, B7 and C (within 60 days a starting date or later date notified by the Project Mana with 2 days advance notice)	iger	Sun 4/8/24	1 day			4/8/2024		
8		Portion A1, A9, A9a and B6c (7 day's advance notice starting date)	after Sun 4/8/24	Sun 4/8/24	1 day			4/8/2024		
9 [	<b>H</b>	Hand back of the Site	Sat 31/7/27	Sat 31/7/27	1 day					
		Portion A2, A3a, A3b, A3c, A4a1, A4a2, A4b1, A4b2, A5b, A5c, ,A7a, A7b, A7c and A10 of the site on the completion date of the section 1 of the works (or at a date notified by the Project Manager with 30 days' advantage.	n earlier	Sat 31/7/27	1 day					
1		notice)  Portion A1, A9 and A9a of the site if the Contractor has accessed to them ,on the completion date of the sectithe works (or at an earlier date as notified by the Pro	ion 1 of	Sat 31/7/27	1 day					
2		Manager with 30 days' advance notice)  Portion B1, B3, B6a, B6b, B7 and C of the site on the completion date of the section 2 of the works (or at a date as notified by the Project Manager with 30 days'		Sat 31/7/27	1 day					
3		advance notice) Portion B6c of the site if the Contractor has accessed them ,on the completion date of the section 2 of the w (or at an earlier date as notified by the Project Manage 30 days' advance notice)	orks	Sat 31/7/27	1 day					
4	TT .	Portions C of the Site on the completion date of the set of the works (or at an earlier date as notified by the Pri Manager with 30 days' advance notice)		Sat 31/7/27	1 day					
5		Section 1 of the Works - Tseung Kwan O Area 137 Bank	Fill Sun 4/8/24	Sat 31/7/27	1092 days	4SS		<b>&gt;</b>		
6	HE.	Taking over the existing facilities at the Tseung Kw Area 137 Fill Bank within Portion A of the Site	van O Sun 4/8/24	Sun 4/8/24	1 day	4SS	0	4/8/2024		
7	H	Operation of the Tseung Kwan O Area 137 Fill Ba within Portion A of the Site	nk Sun 4/8/24	Sat 31/7/27	1092 days	26SS	0	<b>\</b>		
3		Operation and maintenance of the surveillance sys	stem Sun 4/8/24	Sat 31/7/27	1092 days	26SS	0			
		within Portion A of the Site								
		Operation and maintenance of the existing tipping the Tseung Kwan O Area 137 Fill Bank within Port the Site	ion A of	Sat 31/7/27	1092 days		0			
	5B	Provision, operation and maintenance of the Crush Plant at the Tseung Kwan O Area 137 Fill Bank with Portion A of the Site	thin	Sat 31/7/27	1092 days		0			
1		Operation and maintenance of the dewatering plan Tseung Kwan O Area 137 Fill Bank within portion A Site Facility to the Tseung Kwan O Area 137 Fill B within Portion A of the Site.	A of the	Sat 31/7/27	1092 days	26SS	0			
2	DB	Design, construction, operation and maintenance on nos. new tipping halls with access ramp, new barghandling area, and associated seawalls within Port the Site as and when instructed by the Project Mar	e tion A of	Sat 31/7/27	1092 days	26SS		-		
3		Submission of design proposals to Project Man		Sun 1/12/24	120 days		0			
		acceptance						TILL STREET, S		
									<del></del>	
oiect: 3	3 month	ns rolling programme (Aug 2024 to Oct 2024)		the interest of	Project S	Summary		Inactive Summary	Manual Summary	External Milestone
te: 16/	8/2024	Split	-		External	Tasks		Manual Task	Start-only	Progress
ision:	:Rev_01	1	stone	•		Milestone	<b>♦</b>			
		30000000000		•			$\Diamond$	Duration-only	,	Deadline &
		Sum	nmary		Inactive	Milestone		Manual Summary Rollup 🔷	External Tasks	





ID	A .	Task Name	Start	Finish	Duration	Predecesso			Qtr 3, 20					V	
108		Submitting application documents to the Empl		Thu 20/11/25	1 day	A & R. m - r	allowances	/8/24	Aug			Sep		Oct	
109		for the application of the dumping permit of wa the sea  Obtaining the dumping permits from Ministry of		Wed 31/12/25	41 days	108	0								
, # M.		Ecology and Environment of the People's Rep of China through the Employer (assumed on	ublic	1-12-15-1-1			Calcon Fare	. In the State of the day							
110		Obtaining all necessary permits, licenses, approvals and consents	Sun 21/12/25	Wed 31/12/25	11 days		0								
111		Collection and delivery of 11,400,000 tonnes of Public Fill		Thu 31/12/26	365 days	107,109,110	2								
112		Deliver of public fill to mainland in year 2027	Fri 1/1/27	Sat 31/7/27	212 days										
113	HH	Submitting application documents to EPD for application of dumping permits	Fri 18/12/26	Fri 18/12/26	1 day										
114		Obtaining the dumping permit from EPD (ass on 31/12/26)	umed Sat 19/12/26	Thu 31/12/26	13 days	113	0								
115		Submitting application documents to the Empl for the application of the dumping permit of wa the sea		Fri 20/11/26	1 day										
116		Obtaining the dumping permits from Ministry of Ecology and Environment of the People's Rep		Thu 31/12/26	41 days	115	0								
117		of China through the Employer (assumed on Obtaining all necessary permits, licenses,	Mon 21/12/26	Thu 31/12/26	11 days		0								
118		approvals and consents  Collection and delivery of 6,200,000 tonnes of	Fri 1/1/27	Sat 31/7/27	212 days	114,116,117	2								
119		Public Fill  Removal, excavation and deposition of stockpiled ar deposited Public Fill within the Designated Reclamate		Sat 31/7/27	1092 days			1							
120		Sites in the Mainland  Removal, excavation and deposition of stockpiled	Sun 4/8/24	Sat 31/7/27	1092 days		0								Your En
121	J. 2 4 1	and/or deposited public fill Operation and maintenance of the existing navigatio		Sat 31/7/27	1092 days			Tack						entra de hazi heri ya	
		channel and turning basins in association with the ex- berthing facility at Zone E of the Designated Reclam Sites in the Mainland.													
122	1	Operation and maintenance of the existing navigation channel and turning basins	tion Sun 4/8/24	Sat 31/7/27	1092 days		0				DOLAN SECTION SECTION SECTION				- the
123		Design, construction, operation and maintenance of new navigation channel and turning basins in associ with the new berthing facility at Zone B of the Design Reclamation Sites in the Mainland.	ation	Sat 31/7/27	1092 days										
124		Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republi China through the Employer for Zone B	Sun 4/8/24 c of	Sun 4/8/24	1 day		0								
125		Design submission of new navigation channel and turning basins and obtaining all necessary design approvals and consents	Mon 5/8/24	Thu 3/10/24	60 days	124	0			Anna Anna Anna Anna Anna Anna Anna Anna					
126	18	Construction of the new navigation channel	Wed 4/9/24	Fri 31/1/25	150 days	125SS+30 d	le 2								4147
127		Construction of the new turning basins	Tue 3/12/24	Fri 31/1/25	60 days	126SS+90 d	la 1								
128	es tu	Obtaining the construction completion certificate new navigation channel and turning basins		Sat 1/2/25	1 day	127	0								
129		Operation and maintenance of the new navigation channel and turning basins	Sun 2/2/25	Sat 31/7/27	910 days	128	0	Tree Con							
130		Design, construction, operation and maintenance of berthing facility at Zone B of the Designated Reclam Sites in the Mainland.		Sat 31/7/27	1092 days			-							
131		Obtaining the dumping permits from Ministry of Ecology and environment of the People's Republi China through the Employer for Zone B	Sun 4/8/24 c of	Sun 4/8/24	1 day										
132		Design submission of new berthing facilities and obtaining all necessary design approvals and con	Mon 5/8/24	Thu 3/10/24	60 days	131	0					NOSA ESPERANTES			
133		Precasting cassion units and coping units	Wed 4/9/24	Mon 2/12/24	90 days	132SS+30 d	la 1		ne of tree de						19-12-14.
134		Construction of rubber mound foundation	Fri 4/10/24	Wed 1/1/25	90 days	132SS+60 d	la 2			100	- 2"eşcəpsir-2"		<b>—</b>		
135		Installation of cassion units and coping units	Sun 3/11/24	Fri 31/1/25	90 days	132SS+90 d									
136		Backfilling and in-situ concreting	Tue 3/12/24	Fri 31/1/25	60 days	132SS+120		p raid							
137		Installation of rubber fenders and bollards	Thu 2/1/25	Fri 31/1/25	30 days	132SS+150	c 2								
138		Obtaining the construction completion certificate berthing facilities		Sat 1/2/25	1 day	137	0								
139		Operation and maintenance of new berthing facili		Sat 31/7/27	910 days	138									
140	HE	Design and construction of seawalls (approximate 4,400m) in association with new berthing facility at Z of the Designated Reclamation Sites in the Mainland	Sun 4/8/24 one B	Sat 31/7/27	1092 days		- 100 120 -		1,27						
				= -						.32					
Project:	3 month	as rolling programme (Aug 2024 to Oct 2024)		10.00.000.000.0000	Project S	Summary		▽ In	active Summary		Manual Summary	• • • • • • • •	External Milestone		
Date: 16	6/8/2024 n:Rev_01	Split		miniminimini	External	Tasks		М	anual Task	•	Start-only		<ul><li>Progress</li></ul>	10,000	<b>-</b> ",
.0 113101		Milest	one	•	External	Milestone	$\Diamond$	D	uration-only		Finish-only	_	Deadline	<b>\$</b>	
		Summ	ary		Inactive	Milestone		M	anual Summary I	Rollup 🔷	External Tasks	$\Diamond$			
									4						

ID _	Task Name	Start	Finish	Duration Pre	edecessoti	ime risk	Qtr 3, 202	24	* * . 1 *		F L	. h	
•		and the second	1 154 3	1 5 K-3/1 S	a	llowances	Aug			Sep		Oct	1 2 2 3
141	Obtaining the permits from Ministry of Ecology and environment of the People's Republic of China throug the Employer for Zone B	Sun 4/8/24 jh	Sun 4/8/24	1 day	0	/8/24							31.
.42	Design submission of seawalls and obtaining all necessary design approvals and consents	Mon 5/8/24	Tue 3/9/24	30 days 141	0	1	12-3-5-6-6-6-1-6-2-7-5						
43	Construction of seawalls (approx. 4400m)	Wed 4/9/24	Fri 30/7/27	1060 days 142	2 2							TELEPHONE OF THE PERSON OF	
L44	Obtaining the construction completion certificate of seawalls	Sat 31/7/27	Sat 31/7/27	1 day 143	0								
45 🛅	Planned Completion Date (Section 3)	Sat 31/7/27	Sat 31/7/27	1 day			andre en and also						
										×.			
oject: 3 mon	ths rolling programme (Aug 2024 to Oct 2024)			Project Summ		Q Q	Inactive Summary	27/2 Cruminomin		A Second of the	External Milestone		
roject: 3 mon ate: 16/8/202 evision:Rev_	Split			External Task	S	<b>V</b>	Manual Task	e o o o o o o o o o o o o o o o o o o o	Start-only	•	Progress		
'roject: 3 mon late: 16/8/202 levision:Rev_	ths folling programme (Aug 2024 to Oct 2024)	- 12 E	•		s stone	□		· · · · · · · · · · · · · · · · · · ·	Start-only	•		<b>\$</b>	-



Н

Implementation Schedule of Environmental Mitigation Measures (EMIS)



# **Environmental Mitigation Implementation Schedule**

				Implementa	tion Status	
	Environmental Protection Measures	Location	Implemented	Partially implemented	Not implemented	Not Applicable
Ai	r Quality					
•	Dust control / mitigation measures shall be provided to prevent dust nuisance.	All areas		V		
•	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	V			
•	Regular cleaning and watering the site shall be provided to minimize the fugitive dust emissions.	All areas	V			
•	All vehicles shall be restrict to a maximum speed of 10 km per hour.	All areas	<b>√</b>			
•	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	<b>V</b>			
•	The designated site main haul rout shall be paved or regular watering.	All haul roads	V			
•	Frequent watering of work site shall be at least three times per day.	All areas	$\checkmark$			
•	Wheel washing facilities including high pressure water jet shall be provided at the entrance of work site.	Site Egress	$\checkmark$			
•	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	$\sqrt{}$			
•	The belt scraper shall be equipped with bottom plates or other similar means to prevent falling of material from the return belt.	C&DMFS	$\sqrt{}$			
•	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.		√			
No	sise Impact		V			
•	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	$\checkmark$			



#### 東 業 德 勤 測 試 顧 問 有 限 公 司 ETS-TESTCONSULT LIMITED

	Location		Implementa	tion Status	
Environmental Protection Measures		Implemented	Partially implemented	Not implemented	Not Applicable
Water Quality					
<ul> <li>Drainage system should be adequate and well maintained to prevent flooding and overflow, especially after rain storms.</li> </ul>	All areas	√			
The permanent drainage channels should have sediment basin, traps and baffles and maintain properly.	All areas	√			
<ul> <li>Temporary intercepting drains should be used at the stockpilling area to divert polluted stormwater to the intercepting channels.</li> <li>Earth bunds and sand bay barriers shall be used to assist the diversion of polluted stormwater to the intercepting channels.</li> </ul>	All areas	√			
<ul> <li>Manholes should be covered and sealed.</li> </ul>	All areas	$\sqrt{}$			
<ul> <li>Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding.</li> </ul>	All areas		$\sqrt{}$		
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	√			
<ul> <li>A buffer distance of at least 20m shall be maintained between the boundary of the C&amp;DMSF and the seafront.</li> </ul>	C&DMFS	V			
<ul> <li>The stormwater intercepting system shall be effective to collect of runoff and remove suspended solids before discharge.</li> </ul>	All areas	√			
<ul> <li>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.</li> </ul>	Temporary Slopes	√			
<ul> <li>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.</li> </ul>	Temporary Slopes	√			
<ul> <li>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.</li> </ul>	All areas	<b>√</b>			
<ul> <li>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.</li> </ul>	Wheel Washing facility	√			
<ul> <li>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.</li> </ul>	Wheel Washing facility	√			
<ul> <li>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.</li> </ul>	All areas	√			
Oil intercept in addition of sand / silt removal facilities shall be provided at the car parking areas and work shop.	All areas	$\sqrt{}$			
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)	√			
<ul> <li>All vessels used for transportation of fill material shall have tight fitting seals to their bottom openings to prevent leakage of material during transport.</li> </ul>	Barge Handling Area (BHA)	√			
<ul> <li>Adequate environmental control measures shall be provided to prevent / avoid dropping of fill material into the sea during the transfer.</li> </ul>	Along the seafront	√			
<ul> <li>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.</li> </ul>	Barge Handling Area (BHA)	√			
<ul> <li>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.</li> </ul>	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.		V			
<ul> <li>A waste collection vessel shall be deployed to remove floating debris.</li> </ul>	Along the seafront	V			



		Location		Implementa	tion Status	
	Environmental Protection Measures		Implemented	Partially implemented	Not implemented	Not Applicable
Lá	andscape and Visual					
•	Construction of lighting to avoid spillage and glare	All areas	$\sqrt{}$			<u> </u>
•	Hydroseeding	Completed slopes	$\sqrt{}$			İ
•	Hoarding erection	Site boundary	$\sqrt{}$			İ
•	Damage to surrounding area avoided	All areas	$\sqrt{}$			İ
0	ther Environmental Factors					
•	C&D waste sorted from mixed C&D material shall be transfer to SENT landfill for disposal.	All areas	$\sqrt{}$			İ
•	Plan and stock construction materials carefully to minimise generation of waste.	All areas	$\sqrt{}$			İ
•	Any unused materials or those with remaining functional capacity should be recycled.	All areas	$\sqrt{}$			İ
•	All generators, fuel and oil storage are within bunded areas.	All areas	$\sqrt{}$			İ
•	Oil leakage from machinery, vehicle and plant is prevented.	All areas		√		<u> </u>
•	Bund chemical storage area to 110% capacity.	All areas	√			<u> </u>
•	Prevent disposal of hazardous materials to air, soil and water body	All areas	√			<u> </u>
•	Provide rubbish skips at all work areas	All areas	V			
•	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	√			



11

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	40	0	3.2429	1.0734	0.1697

### Result:

Difference between means = 3.7261 (95% CI : 3.0171 < Diff < 4.4351)

t-value of difference = 10.5799 (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.

## 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	40	0	2.9492	1.0229	0.1617

## Result:

Difference between means = 4.0198 (95% CI : 3.3539 < Diff < 4.6857)

t-value of difference = 12.6260 (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.



# 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	40	0	3.2375	1.0176	0.1609	

### Result:

Difference between means = 3.6955 (95% CI : 3.0187 < Diff < 4.3723)

t-value of difference = 10.8090 (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.

### 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	40	0	3.1671	1.0502	0.1661

# Result:

Difference between means = 3.7299 (95% CI : 2.9697 < Diff < 4.4901)

t-value of difference = 8.2879 (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.



12

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	40	0	3.4050	0.7471	0.1181

### Result:

Difference between means = 0.7530 (95% CI : 0.1448 < Diff < 1.3612)

t-value of difference = 1.8280 (13 degrees of freedom)

Calculated t-value < Critical t-value

### **Conclusion:**

There is no statistically significant difference between the groups.

### 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	40	0	3.4875	0.6824	0.1079

# Result:

Difference between means = 0.4145 (95% CI: -0.1186 < Diff < 0.9476)

t-value of difference = 1.1950 (13 degrees of freedom)

Calculated t-value < Critical t-value

### **Conclusion:**

There is no statistically significant difference between the groups.

### 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	40	0	3.5854	0.7702	0.1218

### Result:

Difference between means = 0.3506 (95% CI : -0.2775 < Diff < 0.9787)

t-value of difference = 0.8230 (13 degrees of freedom)

Calculated t-value < Critical t-value

### **Conclusion:**

There is no statistically significant difference between the groups.



# Statistical Analysis of the Trend of Suspended Solids

## For Mid-Ebb Tide

Station: C1a

#### t-test

<u></u>					
Group Name	N	Missing	Mean	Std Dev	SE
130% Baseline Mean	12	0	4.2860	1.3530	0.3906
Quarterly Mean	40	0	3.8467	0.5971	0.0944

### Result:

Difference between means = 0.4393 (95% CI: -0.1062 < Diff < 0.9848)

t-value of difference = 1.0933(12 degrees of freedom)

Calculated t-value < Critical t-value

### **Conclusion:**

There is no statistically significant difference between the groups.

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	40	0	3.6925	0.6409	0.1013

## Result:

Difference between means = 0.3975 (95% CI: -0.1582 < Diff < 0.9532)

t-value of difference = 1.0046 (13 degrees of freedom)

Calculated t-value < Critical t-value

## **Conclusion:**

There is no statistically significant difference between the groups.

Station: M5

### t-test

Group Name	N	Missing	Mean	Std D0ev	SE
130% Baseline Mean	12	0	3.7900	1.4650	0.4229
Quarterly Mean	40	0	3.5842	0.7607	0.1203

### Result:

Difference between means = 0.2058 (95% CI : -0.4295 < Diff < 0.8411)

t-value of difference = 0.4681 (13 degrees of freedom)

Calculated t-value < Critical t-value

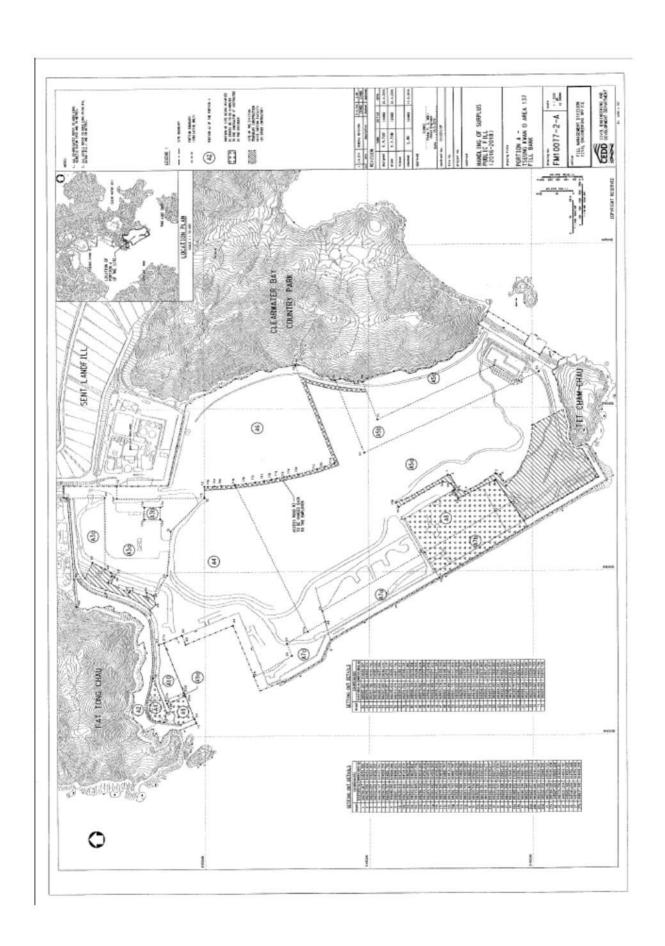
# **Conclusion:**

There is no statistically significant difference between the groups.



J

Site General Layout plan





K

**Weather Condition** 

Daily Extract of Meteorological Observations , July 2024 - Tseung Kwan O

	Mean		J		Mean	Mean	Total	Prevailing	Mean
	Pressure	Ai	r Temperatı	ıre	Dew	Relative	Rainfall	Wind	Wind
			•						
Day	(hPa)				Point	Humidity	(mm)	Direction	Speed
Duy		Absolute	Mean	Absolute	(deg. C)	(%)		(degrees)	(km/h)
		Daily	(deg.C)	Daily					
		Max		Min					
		(deg. C)		(deg. C)					
1	1005.4	32.4	30.6	29.3	26.4	78	2.5	210	31.5
2	1006.9	32.7	30.5	29.1	26.4	79	5.3	190	28.8
3	1011.5	33.6	30.5	28.7	26.1	78	-	100	12.7
4	1011.8	32.5	30.2	27.7	25.9	78	5.1	130	6.1
5	1008.8	34.6	30.7	28.5	25.9	76	1.5	110	3.6
6	1008.2	34	30.8	29.2	26.3	77	0.2	120	8.5
7	1008.9	34.8	31.6	29.6	26.3	74	Trace	160	14.7
8	1008.2	34.4	31.1	29.5	25.4	72	0.2	220	11.8
9	1008.3	34.3	31	28.9	25.3	72	Trace	190	11.7
10	1008.6	34.5	30.6	27	25.6	75	10.7	180	9.7
11	1006.8	32.2	30.2	28.5	25.9	78	6.5	180	13.1
12	1004.8	31.7	29.5	27.4	26.4	84	24.4	170	11.6
13	1005.3	33.8	30.7	27.7	26	76	8	160	16.3
14	1007.3	34.6	30.3	26.7	26.7	82	90	90	24
15	1008.4	33	29.7	27.9	26.8	85	13.6	90	25.6
16	1008.5	30.4	29	26	26.4	86	15.7	90	20.8
17	1008.9	32.7	29.5	26.7	26.1	83	13.7	100	16.7
18	1009.1	30.9	28.4	26.7	26.1	88	19.6	100	16.4
19	1007.5	30.8	29	27.1	27	89	40.5	80	11.1
20	1007.5	33.5	30.3	29	27.5	85	3.7	80	23.7
21	1007.1	32.1	30.1	28.6	27	83	4.7	90	23.9
22	1005.3	33.5	30.6	29	26.8	80	0.2	90	16.7
23	1001.6	33.3	30.7	28.8	25.9	76	-	230	14.2
24	996.9	32.7	30.3	28.7	26.3	80	-	260	22.3
25	992.2	33.1	30.9	29.5	26.6	78	Trace	250	47.5
26	995.2	30.3	29.8	28.9	27	85	3.9	240	39.3
27	1002.8	30.2	28.7	27	26.4	88	34.7	220	24.5
28	1005.9	27.8	27.1	26.4	26	94	69.4	110	17.8
29	1006.1	29.6	27.6	26.6	25.6	89	6.7	110	20.5
30	1006	30.3	27.6	26.1	25.6	89	29.5	110	10.8
31	1007.7	30.2	28.1	26.2	25.9	88	48.2	200	17.5

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

Daily Extract of Meteorological Observations , August 2024 - Tseung Kwan O

	Mean				Mean	Mean	Total	Prevailing	Mean
	Pressure	Ai	r Temperatu	ire	Dew	Relative	Rainfall	Wind	Wind
	(hPa)				Point	Humidity	(mm)	Direction	Speed
Day		Absolute	Mean	Absolute	(deg. C)	(%)		(degrees)	(km/h)
		Daily	(deg.C)	Daily					
		Max	(acg.c)	Min					
		(deg. C)		(deg. C)					
1	1008.2	32.9	30.2	28.2	26.2	79	2.3	190	23.9
2	1007.8	31.5	29.8	28.2	26.1	81	0.4	190	18.9
3	1008.7	33.3	30.4	28.7	25.6	76	-	240	14.9
4	1007.8	34.2	30.7	28.3	25.7	76	-	250	19.2
5	1005.7	35.4	31.8	29.3	26.9	76	-	230	12.9
6	1005.4	34.9	30.6	26.6	26.3	78	10.3	30	4.9
7	1006.5	33.7	30.7	28.6	26.5	79	-	240	12.7
8	1006.7	33.2	30.7	29.3	26.1	77	-	250	26.3
9	1005.6	33	30.4	28.7	25.7	76	-	230	26.6
10	1004.1	32.7	30.5	29	26.5	79	Trace	230	22.3
11	1003.1	32	30.3	29.2	26.6	81	-	250	13.4
12	1004.1	31.8	29.2	26	26.3	85	20.9	230	11.8
13	1006	33.4	29.7	28	26.3	82	5	260	4.1
14	1006.3	30.5	29.2	28.2	25.7	82	0.1	260	4.5
15	1005.2	29.9	27.7	26	25.5	88	8	270	9.5
16	1005.1	29.5	27.7	26.5	24.8	84	0.4	220	11.8
17	1006.7	28.8	27.3	25.2	25.8	92	116.2	220	11.8
18	1006.1	30.3	28.3	25.8	25.8	87	32.5	230	27.7
19	1004.5	28.8	28	26.9	25.8	88	19.3	240	29.5
20	1006.3	28.5	27.5	25.6	25.6	89	11.4	240	28.7
21	1009.8	28.2	27.1	26.3	24.9	87	3.9	240	14.2
22	1010.4	32	28.9	26.6	25.7	83	-	170	4.3
23	1010.5	31.4	29.3	28	25.8	82	-	230	10.2
24	1009.3	34.3	30.2	28.1	25.6	77	-	240	10
25	1008	33.7	30.1	28	25	75	-	250	12
26	1006.7	33.8	30.3	28.4	25.2	75	-	240	10.7
27	1005.4	34.1	30.6	28.5	25.4	74	-	250	18.8
28	1003.5	34.8	30.7	27.6	25.6	75	Trace	250	17.4
29	1004.6	33.6	30.5	28.3	25.6	76	Trace	60	8.7
30	1006.9	33.7	30.3	27.9	26.9	82	23.3	90	19.5
31	1008.2	32.2	29.6	27.8	26.4	84	7.5	90	26.4

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

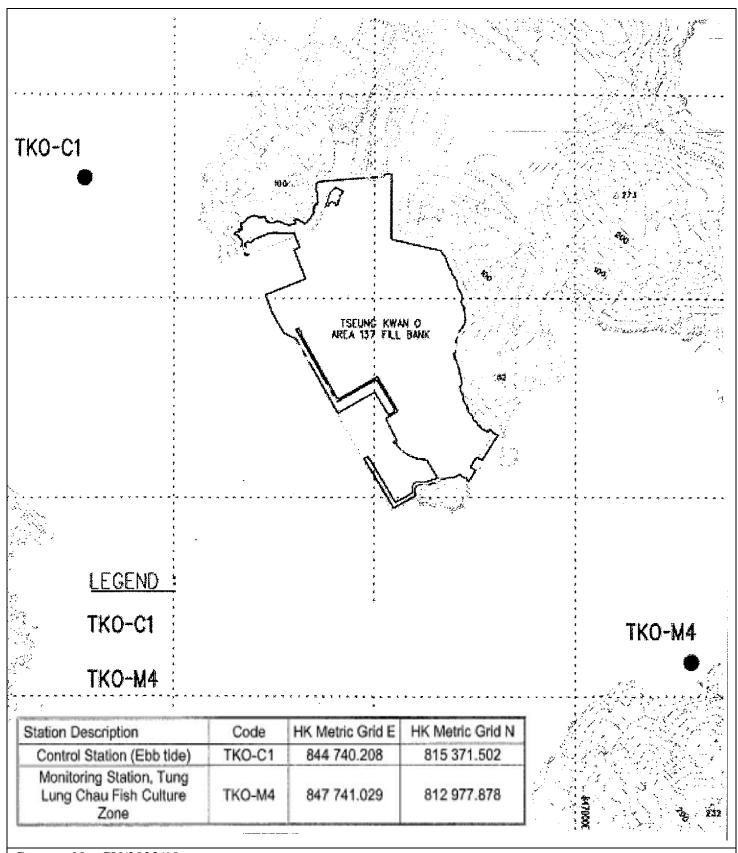
Daily Extract of Meteorological Observations , September 2024 - Tseung Kwan O

				<del> </del>		-р		13cuilg K	
	Mean				Mean	Mean	Total	Prevailing	Mean
	Pressure	Ai	r Temperatı	ıre	Dew	Relative	Rainfall	Wind	Wind
	(hPa)			Point	Humidity	(mm)	Direction	Speed	
Day		Absolute	Mean	Absolute	(deg. C)	(%)		(degrees)	(km/h)
		Daily	(deg.C)	Daily					
		Max		Min					
		(deg. C)		(deg. C)					
1	1008.1	33	30.1	28.1	26.5	82	Trace	130	5.7
2	1007.6	34.2	30.6	28.4	26.2	78	Trace	160	4.3
3	1006.1	33.5	30.2	25.5	25.8	78	35.5	180	4.5
4	1002.3	32.5	29.7	26.5	24.7	75	0.6	70	14.5
5	999.5	33.4	30.4	26.2	24.5	71	21.5	50	53.8
6	1001.6	28.8	27.6	25.9	25.7	90	84.1	70	56.8
7	1007.1	30.9	29.2	27.9	26.9	88	5.8	100	31.5
8	1008.6	30.1	28.2	27.3	26.5	91	37.8	80	16.3
9	1007.7	30	27.8	26.3	25.1	85	13	80	11.7
10	1007.3	33.3	29.4	26.8	24.8	77	-	80	9.9
11	1008.1	34.3	30.4	28.2	25.4	76	-	40	6.7
12	1007	32.2	29.8	27.7	25.1	77	-	230	4.9
13	1005.1	34.5	30.4	28.2	24.9	73	0.1	70	7.3
14	1002.8	33.5	29.2	26.7	24.4	76	57.2	10	5.4
15	1002.3	31.7	29.3	27.4	24.6	76	2.4	360	6.4
16	1004	30.6	28.5	25.8	24.8	81	27.4	50	25.1
17	1004.1	35.7	30.8	26.3	25.5	74	16	40	20.6
18	1003.9	32.8	29.7	26.8	24.3	73	Trace	70	37.5
19	1003.2	33.6	30.2	28.7	25.2	75	-	70	26.4
20	1003.2	32.6	29.8	27.4	25.7	79	4.6	50	12.4
21	1003.5	28.8	27.7	25.7	25.8	90	72.9	80	10.9
22	1005.8	30.1	27.1	24.4	24.8	88	32.1	360	22.6
23	1009	28	25.7	23.4	23.9	90	24.9	10	23.3
24	1010.6	28.2	26.7	25.2	25.2	91	75	190	11.7
25	1011.2	31.4	28.5	26.9	25.2	83	5.4	240	11
26	1011.2	31.6	29.4	27.4	25.1	78	-	250	16.4
27	1010.1	32.4	29.9	28.1	25.1	76	-	250	20.6
28	1009.2	32.1	29.1	27.5	25.4	80	1.3	80	16.8
29	1008.6	31.8	29.2	26.6	24.4	76	3.3	100	8
30	1005.5	33.3	30.5	27.9	24.4	71	-	280	13.2

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



# **Figures**



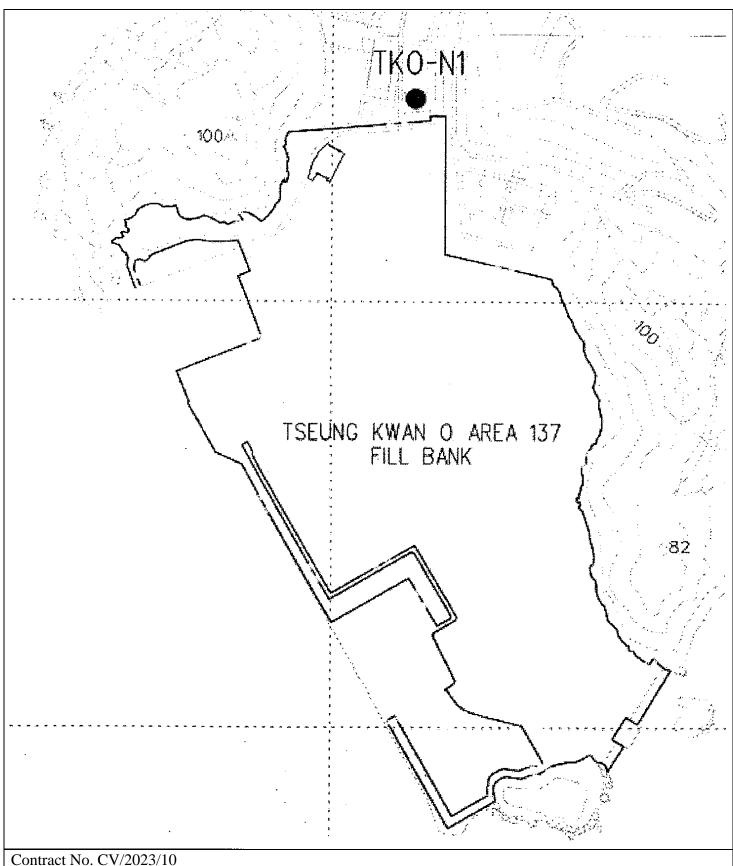
Contract No. CV/2023/10

Handling of Surplus Public Fill (2024-2027)

Figure 1

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



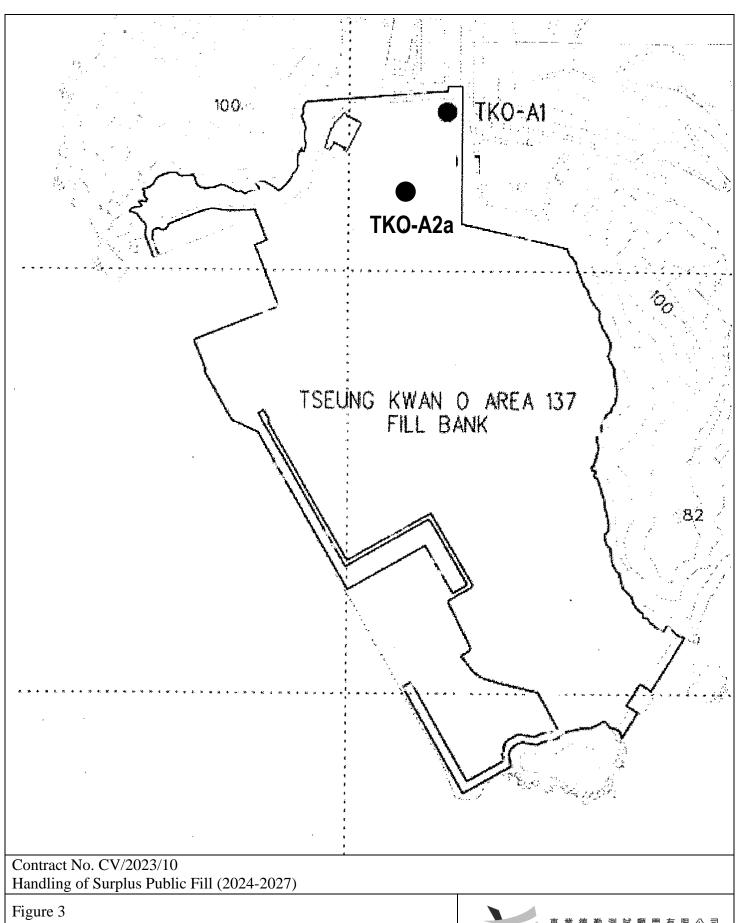


Contract No. CV/2023/10 Handling of Surplus Public Fill (2024-2027)

Figure 2

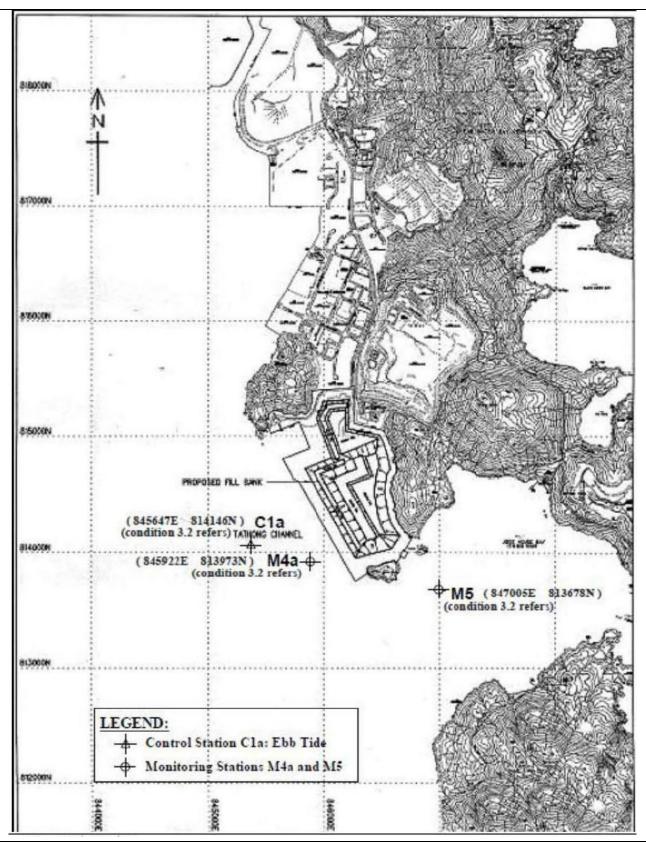
Location of Noise Monitoring Station – Tseung Kwan O Area 137 Fill Bank





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

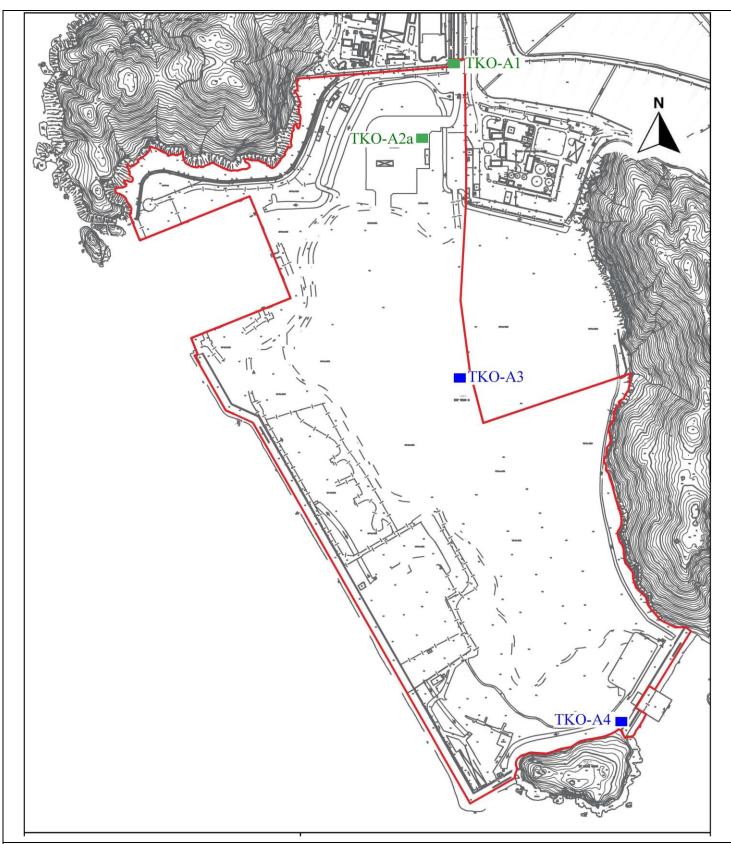




Contract No. CV/2023/10 Handling of Surplus Public Fill (2024-2027)

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





Contract No. CV/2023/10 Handling of Surplus Public Fill (2024-2027)

Figure 5

Locations of Additional Air Quality Monitoring Stations Tseung Kwan O Area 137 Fill Bank

