





Contract No. 13/WSD/16

Mainlaying in Tseung Kwan O

**Monthly EM&A Report No. 57
(Period from 1 to 30 April 2023)**

8 May 2023

(Rev. 1)

	Prepared by:	Reviewed and Certified by:
Name	Howard Chan	Jacky Leung
Position	Environmental Team Member	Environmental Team Leader
Signature		
Date:	8 May 2023	8 May 2023



Water Supplies Department
New Works Branch
Construction Division
11 Tai Yip Lane
Kowloon Bay
Kowloon
Hong Kong

Your reference:

Our reference: HKWSD201/50/108786

Date: 11 May 2023

Attention: Mr Jeff Yuen

BY POST

Dear Sirs

Quotation No.: WQ/17/A071
Independent Environmental Checker for Water Supplies Department
– Proposed Desalination Plant in TKO Area 137 for Contract No. 13/WSD/16
Verification of Monthly EM&A Report No.57

We refer to email of 8 May 2023 attaching Monthly EM&A Report No.57 for the captioned project prepared by the ET.

We have no comment and hereby verify the captioned report in accordance with Clause 3.5 of the Environmental Permit no. EP-503/2015/A.

Should you have any queries regarding the above, please do not hesitate to contact the undersigned or our Mr Louis Kwan 2618 2831.

Yours faithfully
ANEWR CONSULTING LIMITED

James Choi
Independent Environmental Checker

CPSJ/KSYL/lsm

Revision History

Rev.	DESCRIPTION OF MODIFICATION	DATE
0	1 st Submission	08/05/2023

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EXECUTIVE SUMMARY

Introduction

- A1. Penta-Ocean - Concentric Joint Venture (POCJV) is contracted to carry out the Mainlaying in Tseung Kwan O under Contract No. 13/WSD/16 (hereinafter known as “the Project”).
- A2. In accordance with the Environmental Monitoring and Audit (EM&A) Manual for the Project, EM&A works should be carried out by Environmental Team (ET), Acuity Sustainability Consulting Limited (ASCL), during the construction phase of the Project.
- A3. This is the 57th Monthly EM&A Report, prepared by ASCL, for the Project summarizing the monitoring results and audit findings of the EM&A programme at and around Tseung Kwan O (TKO) during the reporting period from 1 April to 30 April 2023.
- A4. The EM&A programme for this contract has covered environmental monitoring on construction noise level at selected NSRs and Contractor’s environmental performance auditing in the aspects of construction dust, construction noise, water quality, waste management, landscape and visual and ecology.

Summary of Main Works Undertaken & Key Mitigation Measures Implemented

- A5. Key works carried out in this reporting period for the Project included the followings:

Location	Construction activities carried in the reporting month
Wan Po Road and TKO Area 137	<ul style="list-style-type: none"> • Open trench method • Water main installation inside sleeve pipe
TKO Promenade (Stage 1 Landfill) & Po Yap Road Roundabout	<ul style="list-style-type: none"> • Open trench method • Water main installation inside sleeve pipe • Trenchless Method (sleeve pipe)
HK Velodrome	<ul style="list-style-type: none"> • Open trench method • Water main installation inside sleeve pipe • Trenchless Method (sleeve pipe)
Po Lam Road South / Ling Hong Road	<ul style="list-style-type: none"> • Open trench method • Water main installation inside sleeve pipe
Tsui Lam Road / Abandoned Road	<ul style="list-style-type: none"> • Open trench method • Pile cap construction

- A6. The major environmental impacts brought by the above construction works include:
- Construction dust and noise generation from mainlaying of pipes, and excavation;
 - Waste generation from the construction activities; and
 - Impact on water quality from construction activities
- A7. The key environmental mitigation measures implemented for the Project in this reporting period associated with the above construction works include:
- Reduction of construction dust generation from mainlaying of pipes, and excavation;
 - Reduction of noise from equipment and machinery on-site;
 - Sorting and storage of general refuse and construction waste; and
 - Treatment of wastewater through water treatment facilities before discharge

Summary of Exceedance & Investigation & Follow-up

- A8. Noise monitoring was scheduled in the reporting month for NSR4 Creative Secondary School on 4, 15, 21 and 27 April 2023 as construction works were conducted within 300m to the noise sensitive receiver. No Action or Limit Level exceedance was recorded during the reporting period.
- A9. Landfill gas monitoring was carried out by the Registered Safety Officer of the Contractor at the excavation locations and within the consultation zones for 420 times. All the measured results were presented in **Appendix J** and were within the Action and Limit Levels.

Complaint Handling and Prosecution

- A10. No environmental complaint, notifications of summons and prosecution was received in the reporting month.

Reporting Change

- A11. There were no changes reported that may affect the on-going EM&A programme.

Summary of Upcoming Key Issues and Key Mitigation Measures

- A12. Key works in the next reporting month for the Project will include the followings:

Location	Construction activities to be carried out in next reporting month
Wan Po Road and TKO Area 137	<ul style="list-style-type: none"> • Open trench method • Water main installation inside sleeve pipe
TKO Promenade (Stage 1 Landfill) & Po Yap Road Roundabout	<ul style="list-style-type: none"> • Open trench method • Water main installation inside sleeve pipe • Trenchless Method (sleeve pipe)
HK Velodrome	<ul style="list-style-type: none"> • Open trench method • Water main installation inside sleeve pipe • Trenchless Method (sleeve pipe)
Po Lam Road South / Ling Hong Road	<ul style="list-style-type: none"> • Open trench method • Water main installation inside sleeve pipe
Tsui Lam Road / Abandoned Road	<ul style="list-style-type: none"> • Open trench method

- A13. The major environmental impacts brought by the above construction works will include:
- Construction dust and noise generation of mainlaying of pipes, and excavation works;
 - Waste generation from construction activities; and
 - Impact on water quality from construction activities.
- A14. The key environmental mitigation measures for the Project in the coming reporting period associated with the above construction works will include:
- Reduction of construction dust generation of mainlaying of pipes, and excavation works by regular water spraying and covering of dusty materials with screenings;
 - Reduction of noise from equipment and machinery on-site;
 - Sorting and storage of general refuse and construction waste; and
 - Treatment of wastewater through water treatment facilities before discharge.

1. BASIC PROJECT INFORMATION

1.1 Background

The proposed Desalination Plant at Tseung Kwan O (DPTKO) will produce potable water with an initial capacity of 135 million liters per day (MLD), expandable to an ultimate capacity of 270 MLD in the future to provide a secure and alternative freshwater resource complying with the World Health Organization (WHO) standards. The plant will adopt the Seawater Reverse Osmosis (SWRO) technology, which dominates the market due to its reliability and progressive reduction in cost as the technology advances.

Pursuant to the Environmental Impact Assessment Ordinance (EIAO), the Director of Environmental Protection granted the Variation of Environmental Permit (No. EP-503/2015/A) to Water Supplies Department (WSD) for the Project on 26 January 2018.

The scope of the Contract may be considered in brief, to consist of the laying of about 10 km long 1200 mm diameter freshwater mains and the associated works along the alignment of the Project as shown with the overall view in **Appendix B**.

1.2 The Reporting Scope

This is the 57th Monthly EM&A Report for the Project which summarizes the key findings of the EM&A programme during the reporting period from 1 April to 30 April 2023.

1.3 Project Organization

The Project Organization structure for Construction Phase is presented in **Figure 1.1**.

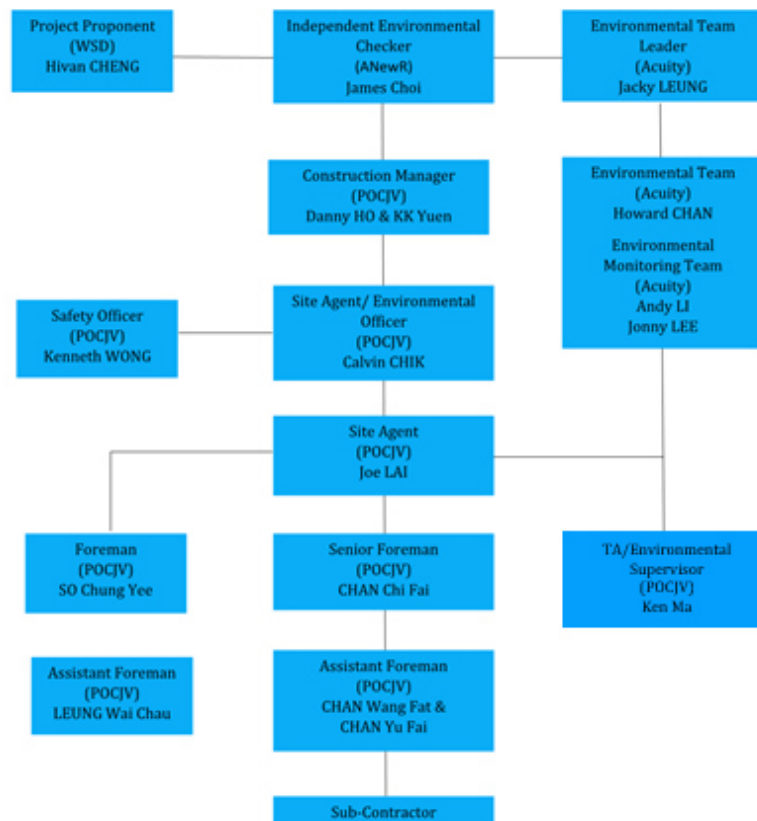


Figure 1.1 Project Organization Chart

Contact details of the key personnel are presented in **Table 1.1** below:

Table 1.1 Contact details of the key personnel

Party	Position	Name	Telephone no.
Penta-Ocean - Concentric Joint Venture	Environmental Officer	Calvin Chik	9863 5630
Acuity Sustainability Consulting Limited	Environmental Team Leader	Jacky Leung	2698 6833
ANewR Consulting Limited	Independent Environmental Checker	James Choi	2618 2831

1.4 Summary of Construction Works

Details of the major construction works undertaken in this reporting period are shown in **Table 1.2** and the construction works locations are shown in **Appendix B**. The construction programme is presented in **Appendix A**.

Table 1.2 Summary of the Construction Works Undertaken during the Reporting Month

Location	Construction activities carried out in the reporting month
Wan Po Road and TKO Area 137	<ul style="list-style-type: none"> Open trench method Water main installation inside sleeve pipe
TKO Promenade (Stage 1 Landfill) & Po Yap Road Roundabout	<ul style="list-style-type: none"> Open trench method Water main installation inside sleeve pipe Trenchless Method (sleeve pipe)
HK Velodrome	<ul style="list-style-type: none"> Open trench method Water main installation inside sleeve pipe Trenchless Method (sleeve pipe)
Po Lam Road South / Ling Hong Road	<ul style="list-style-type: none"> Open trench method Water main installation inside sleeve pipe
Tsui Lam Road / Abandoned Road	<ul style="list-style-type: none"> Open trench method Pile cap construction

A summary of the valid permits, licences, and or notifications on environmental protection for this Project is presented in **Table 1.3**.

Table 1.3 Summary of the Status of Environmental Licence, Notification and Permit

Reference No.	Valid Period		Status	Remark
	From	To		
Variation of Environmental Permit				
EP no.: EP-503/2015/A	--	--	Valid	N/A
Notification of Construction Works under the Air Pollution Control (Construction Dust) Regulation				
423775	--	--	Valid	N/A
Chemical Waste Producer Registration				
5213-839-P3287-01	--	--	Valid	N/A

Reference No.	Valid Period		Status	Remark
	From	To		
Billing Account for Disposal of Construction Waste				
A/C no.: 7029491	--	--	Valid	N/A
Water Discharge Licence				
WT00032336-2018	10 Dec 2018	31 Dec 2023	Valid	N/A
Construction Noise Permit (CNP)				
GW-RE0091-23	6 Feb 2023	29 Apr 2023	Expired	Construction site near junction of Wan Po Road and Pung Loi Road

The status for all environmental aspects is presented **Table 1.4**.

Table 1.4 Summary of Status for Key Environmental Aspects under the EM&A Manual

Parameters	Status
Noise	
Baseline Monitoring	The baseline noise monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under VEP Condition 3.4.
Impact Monitoring	On-going
Waste Management	
Mitigation Measures in Waste Management Plan	On-going
Landfill Gas	
Impact Monitoring	On-going
Environmental Audit	
Site Inspection	On-going

Other than the EM&A works by ET, regular environmental management meetings were conducted in order to enhance environmental awareness and closely monitor the environmental performance of the contractors.

The EM&A programme has been implemented in accordance with the recommendations presented in the approved EIA Report and the EM&A Manual. A summary of implementation status of the environmental mitigation measures for the construction phase of the Project during the reporting period is provided in **Appendix C**.

2. NOISE MONITORING

2.1 Monitoring Requirements

To ensure no adverse noise impact, noise monitoring is recommended to be carried out within 300m radius from the nearby noise sensitive receivers (NSRs), during construction phase. The NSRs selected as monitoring station are (i) NSR4 – Creative Secondary School, (ii) NSR24 – PLK Laws Foundation College, and (iii) NSR31 – School of Continuing and Professional Studies – CUHK respectively.

Referring to EM&A Manual Section 4.1.2, the impact noise monitoring should be carried out at all the designated monitoring stations when there are project-related construction activities undertaken within a radius of 300m from the monitoring stations.

Impact monitoring for noise impact was conducted in the reporting month for NSR4 – Creative Secondary School on 4, 15, 21 and 27 April 2023 as construction works were conducted within 300m to the noise sensitive receiver. Detailed monitoring results can be found in **Appendix G**.

2.2 Noise Monitoring Parameters, Time, Frequency

Impact noise monitoring was conducted weekly in the reporting period between 0700-1900 on normal weekdays. Construction works will follow the requirements as stipulated in the valid CNPs if works have to be conducted in the restricted hours.

Construction noise level was measured in terms of the A-weighted equivalent continuous sound pressure level (L_{Aeq}). $L_{Aeq, 30min}$ was used as the monitoring parameter for the time period between 0700 and 1900 on normal weekdays. **Table 2.1** summarizes the monitoring parameters, frequency, and duration of the impact noise monitoring. The monitoring schedule is provided in **Appendix D**.

Table 2.1 Noise Monitoring Parameters, Time, Frequency and Duration

Time	Frequency	Duration	Parameters
Daytime: 0700-1900	Once per week	Continuously in $L_{Aeq, 5min}/L_{Aeq, 30min}$ (average of 6 consecutive $L_{Aeq, 5min}$)	L_{Aeq} , L_{10} & L_{90}

2.3 Noise Monitoring Locations

The monitoring locations should normally be made at a point 1m from the exterior of the NSRs building façade and be at a position 1.2m above the ground. A correction of +3dB(A) should be made to the free-field measurements.

According to the environmental findings detailed in the EIA report and Baseline Monitoring Report, the designated locations for the construction noise monitoring are listed in **Table 2.2** below.

Table 2.2 Noise Monitoring Location

NSR ID	Noise Sensitive Receivers	Monitoring Location	Position
NSR 4	Creative Secondary School	Roof Floor	1 m from facade
NSR 24	PLK Laws Foundation College	Pedestrian Road on Ground Floor	Free-field
NSR 31	School of Continuing and Professional Studies - CUHK	Roof Floor	1 m from facade

Three noise monitoring locations for impact monitoring at the nearby sensitive receivers are shown in **Figure 2.1-2.3**.



Figure 2.1 NSR4 Creative Secondary School



Figure 2.2 NSR24 PLK Laws Foundation College



Figure 2.3 NSR31 School of Continuing and Professional Studies - CUHK

2.4 Impact Monitoring Methodology

Integrated sound level meters were used for the noise monitoring. The meters were in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications. Immediately prior to and following each noise measurement the accuracy of the sound level meters was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration level before and after the noise measurements agree to within 1.0 dB(A).

Calibration certificates of the instruments used are presented in **Appendix E**. Noise measurements were not made in the presence of fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. The wind speed was checked with a portable wind speed meter capable of measuring the wind speed in m/s.

Table 2.3 Impact Noise Monitoring Equipment

Equipment	Brand and Model	Serial Number	Date of Calibration	Expiry Date
Sound Level Meter	Svantek 971	96062	27/06/2022	26/06/2023
Sound Level Meter Calibrator	RION NC-75	34524163	09/05/2022	08/05/2023
Pocket Wind Meter Anemometer	Kestrel 1000 Wind Meter	Nil	Nil	Nil

2.5 Action and Limit Levels

The Action/Limit Levels are in line with the criteria of Practice Note for Professional Persons (ProPECC PN 2/93) “Noise from Construction Activities – Non-statutory Controls” and Technical Memorandum on Environmental Impact Assessment Process issued by HKSAR Environmental Protection Department [“EPD”] under the Environmental Impact Assessment Ordinance, Cap 499, S.16 are presented in **Table 2.4**.

Table 2.4 Action and Limit Levels for Noise

Time Period	Action Level	Limit Level (dB(A))
0700-1900 on normal weekdays	When one documented complaint is received from any one of the noise sensitive receivers	<ul style="list-style-type: none"> • 70 dB(A) for school and • 65 dB(A) during examination period
Notes: (a) Limits specified in the GW-TM and IND-TM for construction and operation noise, respectively.		

If exceedances are found during noise monitoring, the actions in accordance with the Event and Action Plan will be carried out according to **Appendix F**.

2.6 Monitoring Results and Observations

Referring to EM&A Manual Section 4.1.2, impact monitoring for noise impact was scheduled weekly in the reporting month for NSR4 – Creative Secondary School on 4, 15, 21 and 27 April 2023. Detailed monitoring results are presented in **Appendix G**.

No construction works were conducted within 300m radius of NSR24 and NSR31. Thus, no construction noise monitoring works was carried at these two locations in the reporting month.

No action or limit level exceedance was recorded for construction noise monitoring during the reporting period.

3. WASTE MANAGEMENT

The waste generated from this Project includes inert construction and demolition (C&D) materials, and non-inert C&D materials. Non-inert C&D materials are made up of general refuse, vegetative wastes, and recyclable wastes such as plastics and paper/cardboard packaging waste. Steel materials generated from the project are also grouped into non-inert C&D materials as these materials were not disposed of with other inert C&D materials. With reference to relevant handling records and trip tickets of this Project, the quantities of different types of waste generated in the reporting month are summarised in **Table 3.1**. Details of cumulative waste management data are presented as a waste flow table in **Appendix H**.

Table 3.1 Quantities of waste generated from the Project

Reporting period	Quantity					
	Inert C&D Materials (in '000m ³)	Chemical Waste (in '000kg)	Non-inert C&D Materials			
			Others, e.g., General Refuse disposed at Landfill (in '000m ³)	Recycled materials		
				Paper/cardboard (in '000kg)	Plastics (in '000kg)	Metals (in '000kg)
Apr 2023	1.484	0.000	0.001	0.056	0.000	0.000

4. LANDFILL GAS MONITORING

4.1 Monitoring Requirement

In accordance with Section 11 of the EM&A Manual, monitoring of landfill gas is required for construction works within the 250m Consultation Zone. Part of the desalination plant and the indicative area of natural slope mitigation works fall within the SENT Landfill Extension Consultation Zone; and part of the 1,200 mm diameter fresh water mains along Wan Po Road falls within the SENT Landfill and SENT Landfill Extension Consultation Zones, TKO Stage II/III Restored Landfill and TKO Stage I Restored Landfill Consultation Zones.

4.2 Monitoring Location

Monitoring of oxygen, methane, carbon dioxide and barometric pressure was performed for excavations at 1m depth or more within the Consultation Zone.

During construction of works within the consultation zones, excavations of 1m depth or more was monitored:

- At the ground surface before excavation commences;
- Immediately before any worker enters the excavation;
- At the beginning of each working day for the entire period when the excavation remains open; and
- Periodically through the working day whilst workers are in the excavation.

For excavations between 300mm and 1m deep, measurements should be carried out:

- Directly after the excavation has been completed; and
- Periodically whilst the excavation remains open.

The area required to be monitored for landfill gas in the reporting period are shown in **Figure 4.1** to **Figure 4.9**.

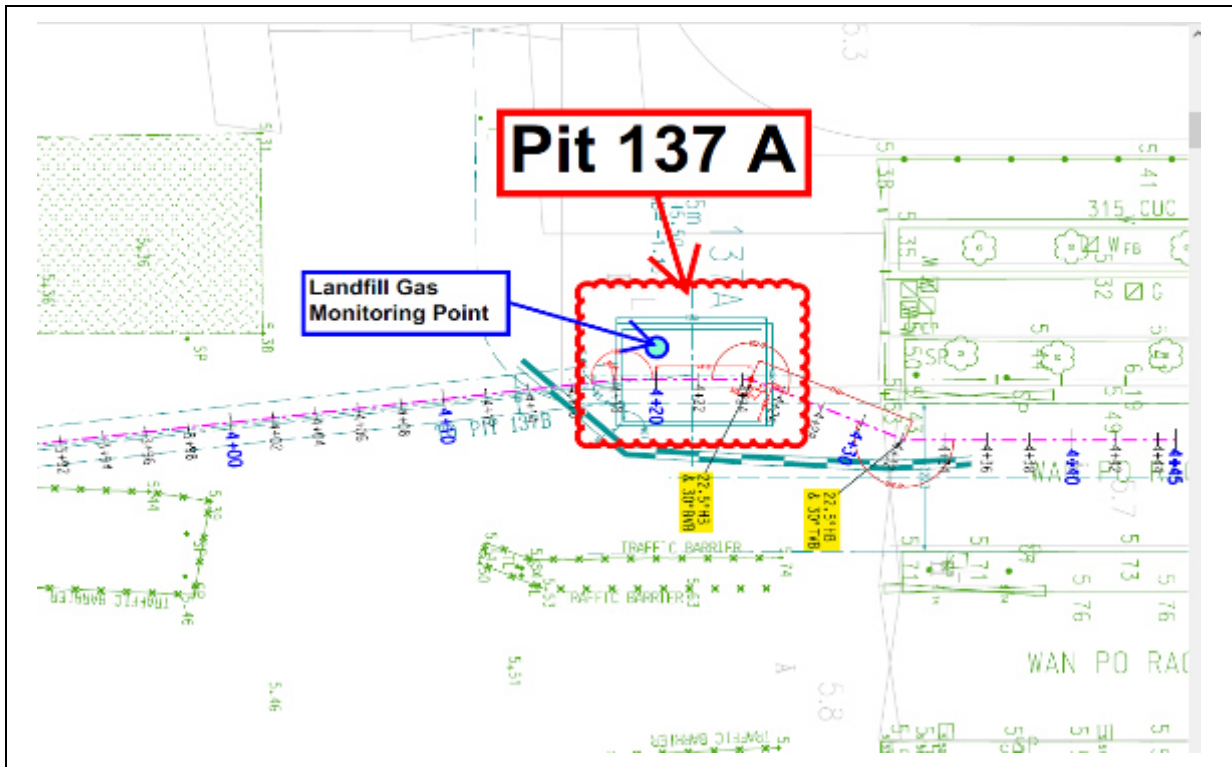


Figure 4.4 Monitoring Location – Pit 137A (137 Pit A)

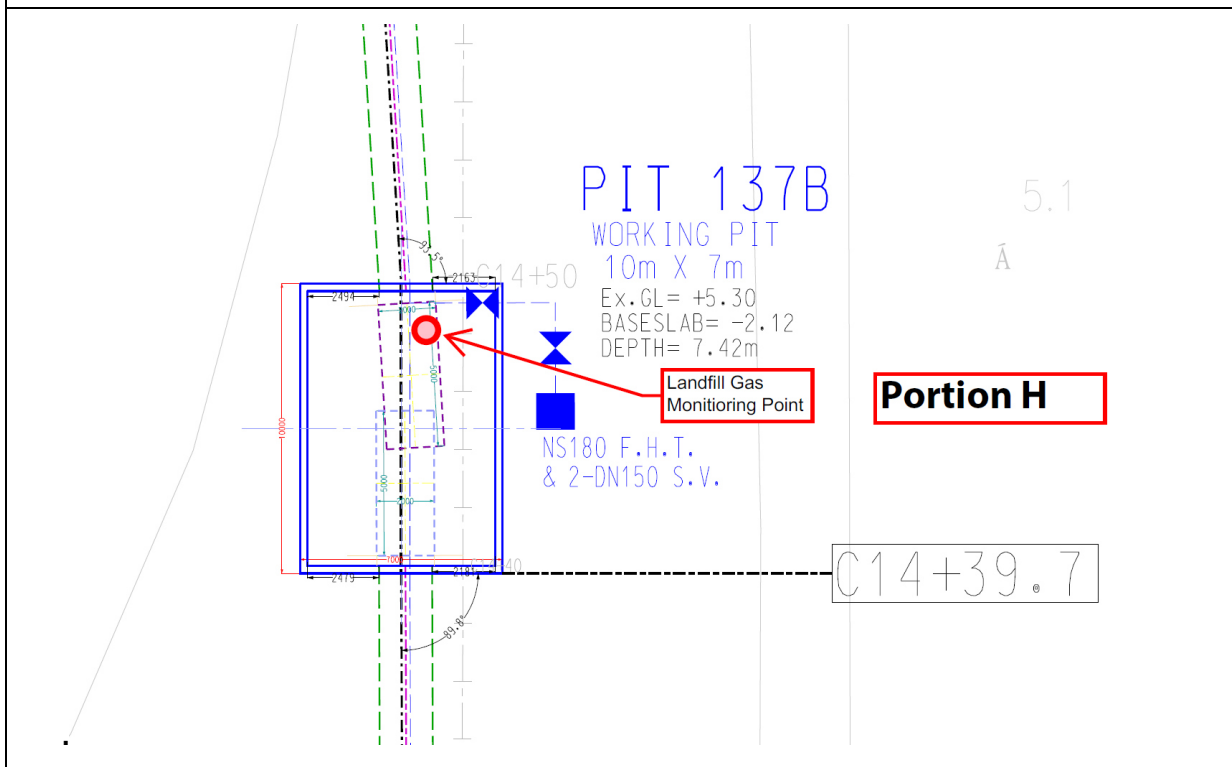


Figure 4.5 Monitoring Location – Pit 137B (137 Pit B)

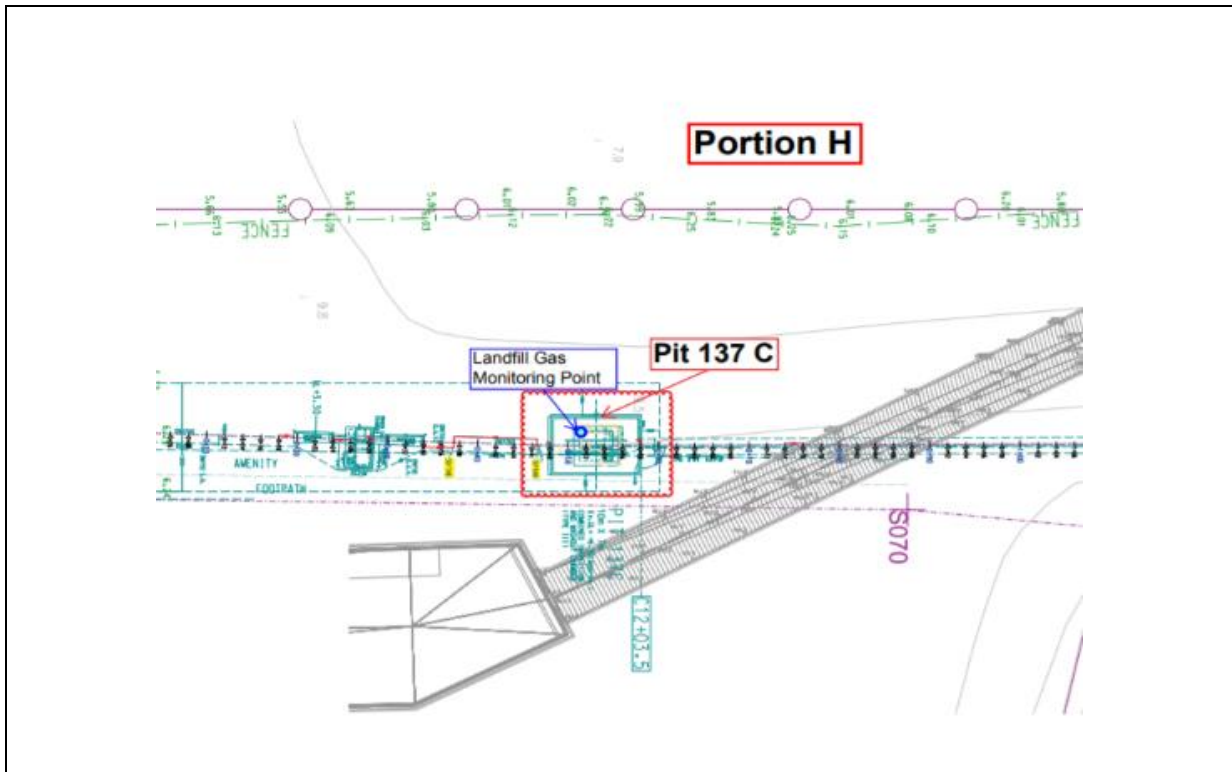


Figure 4.6 Monitoring Location - Pit 137C (137 Pit C)

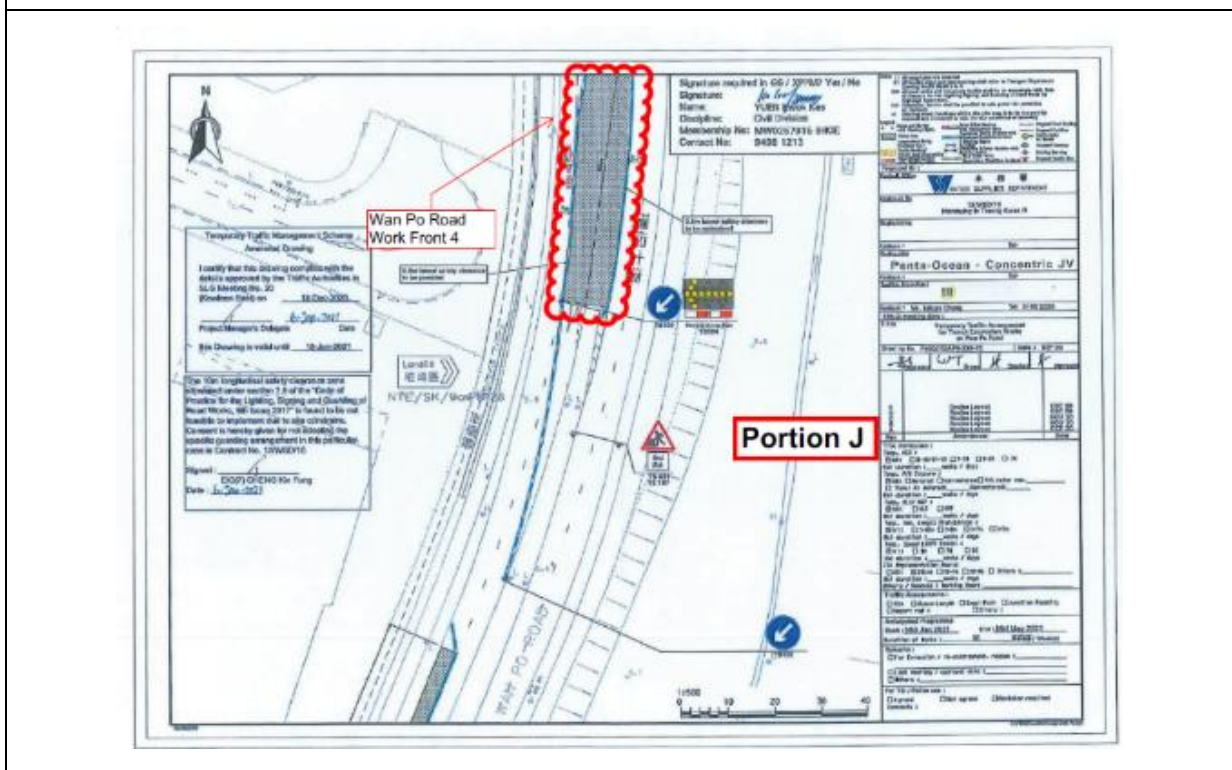


Figure 4.7 Monitoring Location - Wan Po Road 4

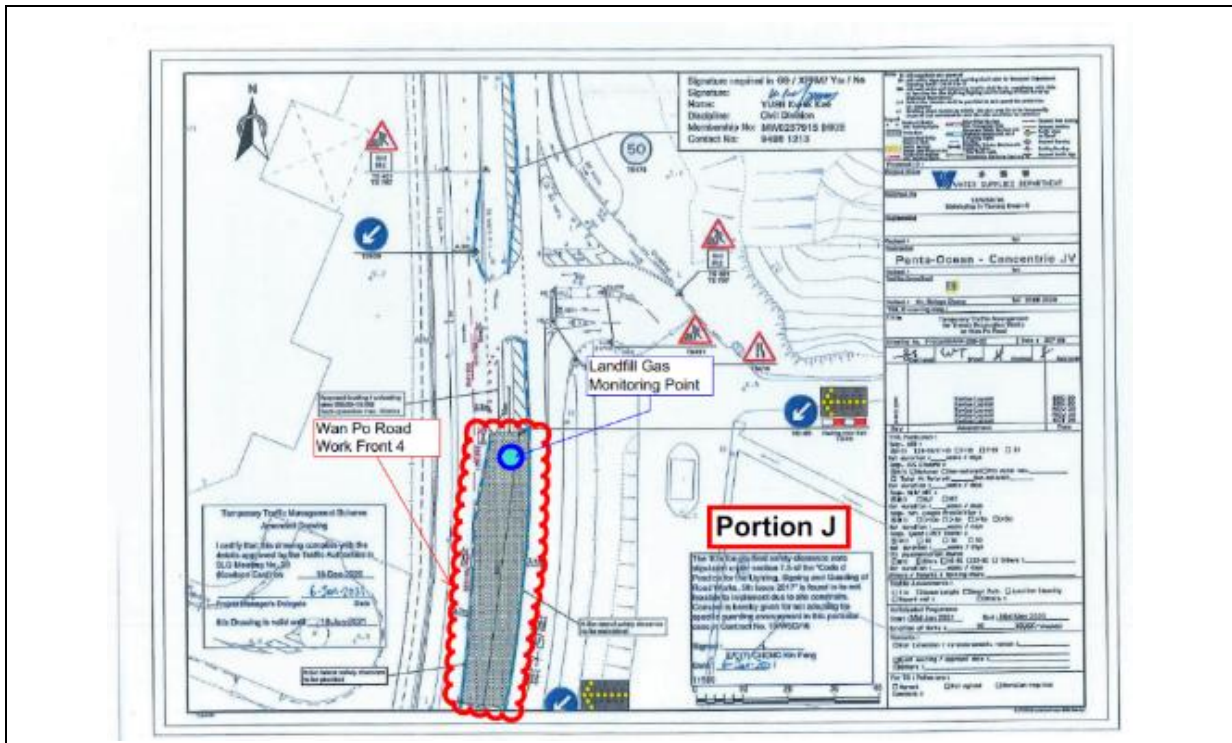


Figure 4.8 Monitoring Location – Wan Po Road 5

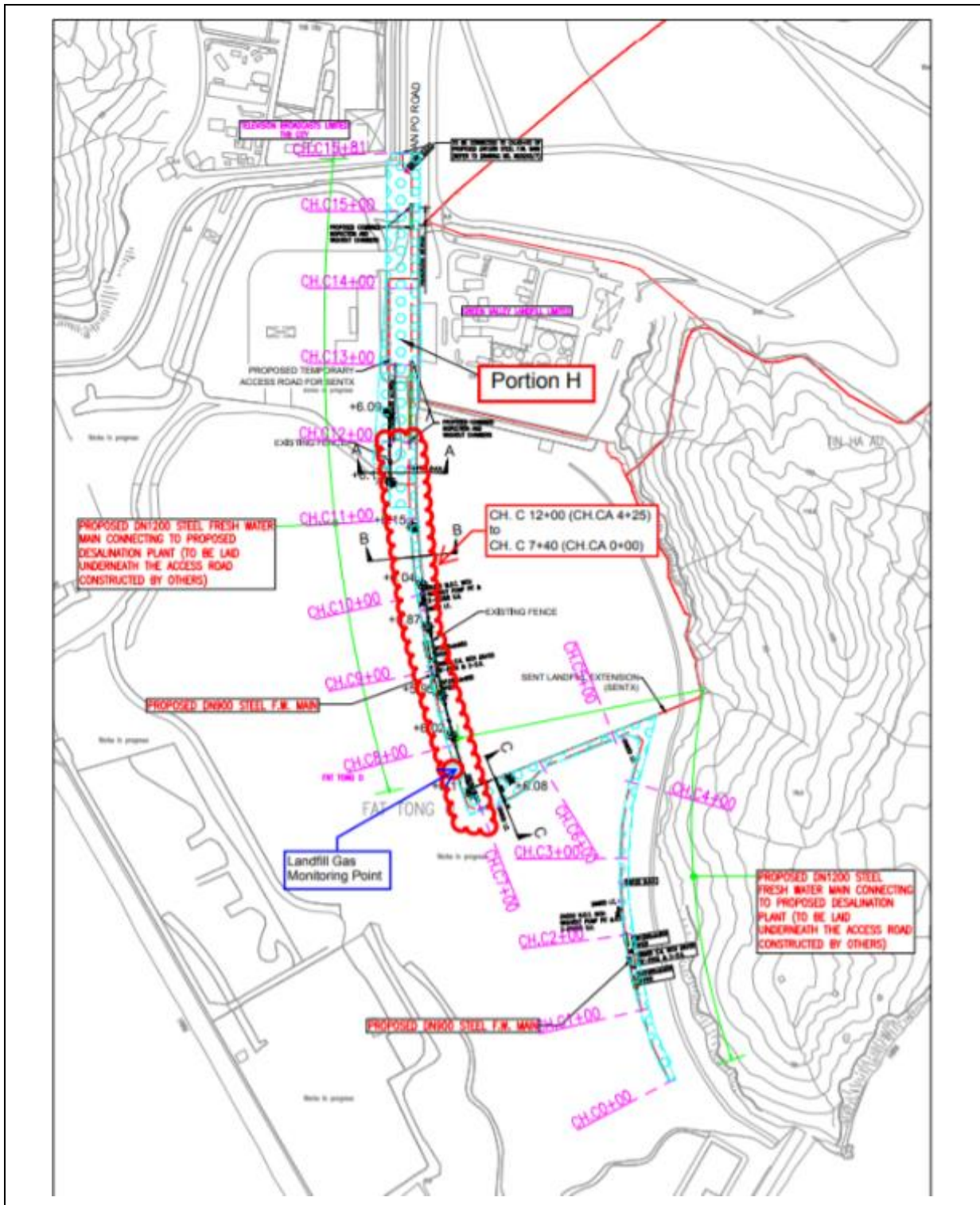


Figure 4.9 Monitoring Location –CH.CA 0+00 to CH.CA 04+25 (CH.C 7+40 ~ 12+00)

4.3 Monitoring Parameters

Landfill Gas monitoring was carried out to identify any migration between the landfill and the Project and to ensure the safety of the construction, operation and maintenance personnel working on-site, visitors and any other person within the Project area.

The following parameters were monitored:

- Methane.
- Oxygen.
- Carbon Dioxide.
- Barometric Pressure.

4.4 Action and Limit Level

Action and Limit Level are provided in **Table 4.1**.

Table 4.1 Action and Limit Level for Landfill Gas Monitoring Equipment

Parameters	Action Level	Limit Level
Oxygen (O ₂)	<19% O ₂	<19% O ₂
Methane (CH ₄)	>10% LEL	>20% LEL
Carbon Dioxide (CO ₂)	>0.5% CO ₂	>1.5% CO ₂

4.5 Monitoring Equipment

Landfill Gas monitoring was carried out using intrinsically safe, portable multi-gas monitoring instruments. The gas monitoring equipment is:

- Complying with the Landfill Gas Hazard Assessment Guidance Note as intrinsically safe;
- Capable of continuous barometric pressure and gas pressure measurements;
- Normally operated in diffusion mode unless required for spot sampling, when it should be capable of operating by means of an aspirator or pump;
- Having low battery, fault and over range indication incorporated;
- Capable of storing monitoring data, and shall be capable of being down-loaded directly;
- Measure in the following ranges:

methane	0-100% Lower Explosion Limit (LEL) and 0-100% v/v;
oxygen	0-25% v/v;
carbon dioxide	0-5% v/v; and
barometric pressure	mBar (absolute)

alarm (both audibly and visually) in the event that the concentrations of the following are exceeded:

methane	>10% LEL;
oxygen	<19% by volume; and
carbon dioxide	>0.5% by volume
barometric pressure	mBar (absolute)

Monitoring Equipment used in the reporting period are summarised in **Table 4.2**. The Landfill Gas monitoring equipment calibration certificate is presented in **Appendix I**.

Table 4.2 Landfill Gas Monitoring Equipment

Equipment	Brand and Model	Calibration Expiry Date
Portable Gas Detector	PGM-2500 QRAE III	27 July 2023
	XT-XWHM-Y-OR	2 September 2023
CO2 Analyzer	TES, 1307H	16 November 2023

4.6 Monitoring Results

In the reporting period, construction works within the consultation zones, excavations of 1m depth or more was monitored. Landfill gas monitoring was carried out by the Registered Safety Officer of the Contractor at the excavation locations for 420 times. All the measured results were presented in **Appendix J** and were within the Action and Limit Levels.

Table 4.3 Action and Limit Levels and Event and Action Plan for LFG Hazard

Parameters	Level	Action
Oxygen (O ₂)	Action Level < 19% O ₂	Ventilate trench/void to restore O ₂ to > 19% Stop works
	Limit Level < 19% O ₂	Evacuate personnel/prohibit entry Increase ventilation to restore O ₂ to > 19%
Methane (CH ₄)	Action Level >10% LEL	Post "No Smoking" signs Prohibit hot works Increase ventilation to restore CH ₄ to <10% LEL Stop works
	Limit Level >20% LEL	Evacuate personnel/prohibit entry Increase ventilation to restore CH ₄ to <10% LEL
Carbon Dioxide (CO ₂)	Action Level >0.5% CO ₂	Ventilate to restore CO ₂ to < 0.5% Stop works
	Limit Level >1.5% CO ₂	Evacuate personnel / prohibit entry Increase ventilation to restore CO ₂ to <0.5%

5. SUMMARY OF EXCEEDANCE, COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTIONS

The Environmental Complaint Handling Procedure is shown in below **Figure 5.1**:

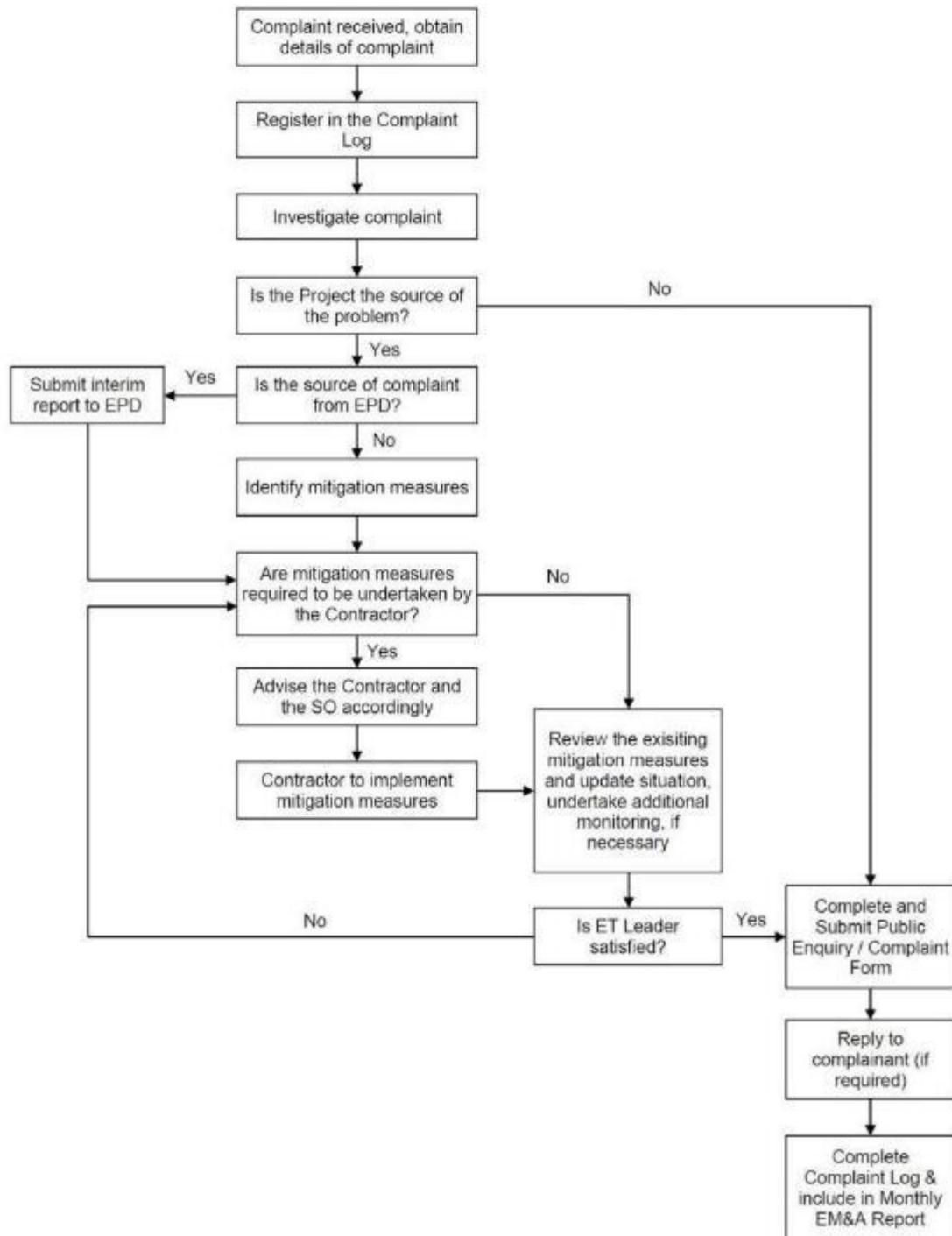


Figure 5.1 Environmental Complaint Handling Procedure

Impact monitoring for noise impact was scheduled in the reporting month for NSR4 – Creative Secondary School on 4, 15, 21 and 27 April 2023 as construction works were conducted within 300m to the noise sensitive receiver. Detailed monitoring results can be found in **Appendix G**. No action or limit levels exceedance was recorded in the reporting period.

Landfill gas monitoring was carried out by the Registered Safety Officer of the Contractor at the excavation locations and within the consultation zones for 420 times. All the measured results were presented in **Appendix J** and were within the Action and Limit Levels.

No environmental complaint, notification of summons and prosecution was received in the reporting period.

Statistics on complaints and regulatory compliance are summarized in **Appendix K**.

6. EM&A SITE INSPECTION

Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting period, site inspections were carried out on 4, 12, 21 and 25 April 2023 at the site portions list in **Table 6.1** below. One joint site inspection with IEC was carried out on 25 April 2023.

Table 6.1 Site Inspection Record

Date	Inspected Site Portion	Time
4 April 2023	Portion J	09:30 - 10:30
12 April 2023	Portion J	09:30 - 10:30
21 April 2023	Portion J	14:00 - 15:30
25 April 2023	Portion J	14:15 - 15:15

Minor deficiencies were observed during weekly site inspections. Key observations during the site inspections are summarized in **Table 6.2**.

Table 6.2 Site Observations

Date	Environmental Observations	Follow-up Status
4 April 2023	<ol style="list-style-type: none"> 1. Water in trench should be treated before discharge. (Shek Kok Road Roundabout) 2. The grouting machine should be covered on top and 3 side during the cement mixing works to reduce dust emission. (Shek Kok Road Pit D1) 3. Direct discharge of muddy water should not be allowed, the Contractor was required to treat all the wastewater and the discharge should be complied with the discharge license standard. (Shek Kok Road Pit D1) 4. The sedimentation tank should be cleaned on a regular basis and ensure the wastewater treatment facilities were functioned properly. (Shek Kok Road Pit D1) 	<ol style="list-style-type: none"> 1. Water in trench was treated before discharge. 2. The grouting machine was covered with impervious materials on top and 3 side during the cement mixing works. 3. All wastewater was treated before discharge. 4. The sedimentation tank was cleaned.
12 April 2023	No major environmental deficiency was observed during site inspection.	N/A
21 April 2023	<ol style="list-style-type: none"> 1. The Contractor should prevent the oil leakage of generator in Y to Y1. 	<ol style="list-style-type: none"> 1. Generator was removed on site.
25 April 2023	<ol style="list-style-type: none"> 1. Manhole should be covered and sheltered to prevent silt runoff getting into the drainage system. (Location B) 2. Chemical containers should be stored with drip tray. (Location B). 3. Oil stain was observed at Location B near the excavator, the Contractor was required to prevent oil leakage from the excavator and clean the oil stain. 	<ol style="list-style-type: none"> 1. Manhole was covered properly. 2. Chemical was removed. 3. Oil stain was cleared.

According to the EIA Study Report, Environmental Permit, contract documents and EM&A Manual, the mitigation measures detailed in the documents should be implemented as much as practical during the reporting period. An updated Implementation Status of Environmental Mitigation Measures (EMIS) is provided in **Appendix C**.

Site inspection proforma of the reporting period is provided in **Appendix L**.

7. FUTURE KEY ISSUES

Key works that will be anticipated in the next reporting period for the Project are shown in **Table 7.1**.

Table 7.1. Key works for the next reporting month

Location	Construction activities to be carried out in next reporting month
Wan Po Road and TKO Area 137	<ul style="list-style-type: none"> • Open trench method • Water main installation inside sleeve pipe
TKO Promenade (Stage 1 Landfill) & Po Yap Road Roundabout	<ul style="list-style-type: none"> • Open trench method • Water main installation inside sleeve pipe • Trenchless Method (sleeve pipe)
HK Velodrome	<ul style="list-style-type: none"> • Open trench method • Water main installation inside sleeve pipe • Trenchless Method (sleeve pipe)
Po Lam Road South / Ling Hong Road	<ul style="list-style-type: none"> • Open trench method • Water main installation inside sleeve pipe
Tsui Lam Road / Abandoned Road	<ul style="list-style-type: none"> • Open trench method

The major environmental impacts brought by the above construction works will include:

- Construction dust and noise generation of mainlaying of pipes, TBM break through, and excavation works;
- Waste generation from construction activities; and
- Impact on water quality from construction activities.

The key environmental mitigation measures for the Project in the coming reporting period associated with the above construction works will include:

- Dust suppression by regular wetting and water spraying for excavation works, mainlaying of pipes and TBM break through works;
- Reduction of noise from equipment and machinery on-site;
- Sorting and storage of general refuse and construction waste; and
- Treatment of wastewater with water treatment facilities before discharge.

The proactive environmental protection proforma for the next reporting month is listed in **Appendix M**.

Referring to EM&A Manual Section 4.1.2, the impact noise monitoring should be carried out at all the designated monitoring stations when there are project-related construction activities undertaken within a radius of 300m from the monitoring stations.

The tentative impact monitoring schedule for the next reporting month is attached in **Appendix N**.

8. CONCLUSION AND RECOMMENDATIONS

This is the 57th monthly Environmental Monitoring and Audit (EM&A) Report presenting the EM&A works undertaken during the period from 1 April to 30 April 2023 in accordance with the EM&A Manual and the requirement under EP-503/2015/A.

Impact monitoring for noise impact was scheduled in the reporting month for NSR4 – Creative Secondary School on 4, 15, 21 and 27 April 2023 as construction works were conducted within 300m to the noise sensitive receiver. No action and limit level exceedance for construction noise monitoring was recorded in the reporting period.

Landfill gas monitoring was carried out by the Registered Safety Officer of the Contractor at the excavation locations and within the consultation zones for 420 times. All the measured results were presented in **Appendix J** and were within the Action and Limit Levels.

No exceedance of the action and limit level for landfill gas monitoring was recorded during the reporting period.

Weekly environmental site inspections were conducted during the reporting month. Observations and Recommendations were made during site inspection, Contractor was reminded that sedimentation facilities shall be provided on site to remove silt particles from runoff before discharge and to meet the requirements of the TM standard under the WPCO.

According to the environmental site inspections performed in the reporting month, the contractor is reminded to pay attention on maintaining site tidiness, water treatment facilities, and proper materials storage.

No environmental complaint, notification of summons and prosecution was received in the reporting month.

The ET will keep track on the construction works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

Appendix A

Construction Programme

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish	Gantt Chart																				
											2018	2019	2020	2021	2022	2023	2024	2025													
												Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Key Dates	2495 days	Tue 7/11/17	Thu 5/9/24	Calendar Day			0%	Tue 7/11/17	NA	[Gantt bar from 2018 Q1 to 2025 Q4]																				
2	Contract Date	0 days	Tue 7/11/17	Tue 7/11/17	Calendar Day		67,59,60FS+27 days,61,62,58	100%	Tue 7/11/17	Tue 7/11/17	◆ 7/11																				
3	Starting Date	0 days	Thu 16/11/17	Thu 16/11/17	Calendar Day		4,5FS+730 days,6FS+1279 days	100%	Thu 16/11/17	Thu 16/11/17	◆ 16/11																				
4	Access Date of Portion A, B, C, D, E, F, G and J	0 days	Thu 16/11/17	Thu 16/11/17	Calendar Day	3	90,63,71,73,75,78,79	100%	Thu 16/11/17	Thu 16/11/17	◆ 16/11																				
5	Access Date of Portion H	0 days	Sat 16/11/19	Sat 16/11/19	Calendar Day	3FS+730 days	110	100%	Sat 16/11/19	Sat 16/11/19	◆ 16/11																				
6	Completion Date (Contract)	0 days	Tue 18/5/21	Tue 18/5/21	Calendar Day	3FS+1279 days	7	100%	Tue 18/5/21	Tue 18/5/21	◆ 18/5																				
7	EOT for CE No. 23 Inclement Weather - In June 2018	0 days	Tue 18/5/21	Tue 18/5/21	HK Working Day	6	8	100%	Tue 18/5/21	Tue 18/5/21	◆ 18/5																				
8	EOT for CE No. 01	246 days	Wed 19/5/21	Wed 19/1/22	Calendar Day	7	9FF	0%	NA	NA	◆ 19/1																				
9	Revised Completion Date	0 days	Wed 19/1/22	Wed 19/1/22	Calendar Day	8FF	11FS+365 days	0%	NA	NA	◆ 19/1																				
10	Planned Completion	0 days	Thu 5/9/24	Thu 5/9/24	Calendar Day	12FF		0%	NA	NA	◆ 5/9																				
11	Defect Date	0 days	Thu 19/1/23	Thu 19/1/23	Calendar Day	9FS+365 days		0%	NA	NA	◆ 19/1																				
12	Mainlaying in Tseung Kwan O	2495 days	Tue 7/11/17	Thu 5/9/24	Calendar Day		10FF	77%	Tue 7/11/17	NA	[Gantt bar from 2018 Q1 to 2025 Q4]																				
13	Issued Compensation Events (General)	1316 days	Tue 12/6/18	Tue 18/1/22	Calendar Day			100%	Tue 12/6/18	Tue 18/1/22	[Gantt bar from 2018 Q2 to 2022 Q4]																				
56	Preliminaries	1636 days	Tue 7/11/17	Sat 30/4/22	Calendar Day			100%	Tue 7/11/17	Sat 30/4/22	[Gantt bar from 2018 Q1 to 2022 Q4]																				
57	Submission and Permit Application	322 days	Tue 7/11/17	Mon 24/9/18	Calendar Day			100%	Tue 7/11/17	Mon 24/9/18	[Gantt bar from 2018 Q1 to 2018 Q3]																				
69	Subcontracting	1122 days	Thu 16/11/17	Fri 11/12/20	Calendar Day			100%	Thu 16/11/17	Fri 11/12/20	[Gantt bar from 2018 Q1 to 2020 Q4]																				
88	Site Establishment	220 days	Tue 2/1/18	Thu 9/8/18	Calendar Day			100%	Tue 2/1/18	Thu 9/8/18	[Gantt bar from 2018 Q1 to 2018 Q2]																				
91	Procurement of Major Material	1485 days	Sat 7/4/18	Sat 30/4/22	Calendar Day			100%	Sat 7/4/18	Sat 30/4/22	[Gantt bar from 2018 Q1 to 2022 Q4]																				
101	Mainlaying in Tseung Kwan O Area 137 (Portion H)	1260 days	Tue 11/12/18	Wed 15/3/23	HK Working Day			92%	Tue 11/12/18	NA	[Gantt bar from 2018 Q4 to 2023 Q1]																				
102	Early Possession of Portion H	0 days	Mon 29/7/19	Mon 29/7/19	Calendar Day			100%	Mon 29/7/19	Mon 29/7/19	◆ 29/7																				
103	Issue Date of CE No. 07 -Water Supply to No. TKO Desalination Plant at Portion H (NS250 HDPE Pipe)	0 days	Tue 22/1/19	Tue 22/1/19	Calendar Day		104	100%	Tue 22/1/19	Tue 22/1/19	◆ 22/1																				
104	Material Procurement and Delivery in Batches	330 days	Tue 11/12/18	Tue 5/11/19	Calendar Day	103		100%	Tue 11/12/18	Tue 5/11/19	[Gantt bar from 2018 Q4 to 2019 Q3]																				
105	Open Cut Excavation, Pipe Laying and Reinstatement at TKO Area 137	597 days	Sat 10/8/19	Sat 14/8/21	HK Working Day		761	100%	Sat 10/8/19	Sat 14/8/21	[Gantt bar from 2019 Q1 to 2021 Q1]																				
121	Trenchless Works (DN1200 MS PIPE + NS250 HDPE PIPE) at TKO Area 137	1162 days	Tue 22/1/19	Thu 22/12/22	HK Working Day		784,762	83%	Tue 22/1/19	NA	[Gantt bar from 2019 Q1 to 2023 Q4]																				
164	Final Connection of NS250 HDPE Pipe to Existing at Wan Po Road	14 days	Tue 28/2/23	Wed 15/3/23	HK Working Day	788		0%	NA	NA	[Gantt bar from 2023 Q1 to 2023 Q1]																				
165	Mainlaying From Boundary of Tseung Kwan O Area 137 to TKO Fresh Water Service Reservoir (Portion I)	1866 days	Tue 7/11/17	Mon 26/2/24	HK Working Day			74%	Tue 7/11/17	NA	[Gantt bar from 2018 Q1 to 2024 Q2]																				
166	Open Cut Excavation, Pipe Laying and Reinstatement at Wan Po Road	1506 days	Thu 30/8/18	Thu 28/9/23	HK Working Day			81%	Thu 30/8/18	NA	[Gantt bar from 2018 Q3 to 2023 Q4]																				
249	Trenchless Work at Wan Po Road From Pit A to Pit F	1866 days	Tue 7/11/17	Mon 26/2/24	HK Working Day			56%	Tue 7/11/17	NA	[Gantt bar from 2018 Q1 to 2024 Q2]																				
368	Open Cut Excavation, Pipe Laying and Reinstatement at TKO Landfill Stage 1 and TKO South Waterfront Promenade	1221 days	Thu 23/8/18	Fri 7/10/22	HK Working Day			91%	Thu 23/8/18	NA	[Gantt bar from 2018 Q3 to 2022 Q4]																				
413	Water Mains Near Pung Loi Road (CH.FD0+00 - CH.A3+51)	1020 days	Wed 17/6/20	Thu 23/11/23	HK Working Day			60%	Wed 17/6/20	NA	[Gantt bar from 2020 Q2 to 2023 Q4]																				
436	Water Mains near Pung Loi Road and Po Yap Road (CH.FE0+00 - CH.A3+58)	758 days	Thu 20/8/20	Sat 11/3/23	HK Working Day		765	78%	Thu 20/8/20	NA	[Gantt bar from 2020 Q3 to 2023 Q4]																				
479	Trenchless Work from Po Yap Road Roundabout to KMB Depot (Pit K to Pit L) (Pit O to Pit P)	822 days	Fri 28/2/20	Mon 5/12/22	HK Working Day		765	55%	Fri 28/2/20	NA	[Gantt bar from 2020 Q1 to 2022 Q4]																				
517	Trenchless Work from Po Yap Road Roundabout (Hong Kong Velodrome)	1251 days	Tue 2/4/19	Mon 26/6/23	HK Working Day		765	80%	Tue 2/4/19	NA	[Gantt bar from 2019 Q1 to 2023 Q4]																				
583	Water Mains from KMB Depot to TKO Fresh Water Preliminary Service Reservoir	1649 days	Tue 7/11/17	Mon 5/6/23	HK Working Day			80%	Tue 7/11/17	NA	[Gantt bar from 2018 Q1 to 2023 Q4]																				
759	DN800 - CH.ADN1200 MS Pipe Static Pressure Test, Pipeline Cleaning, CCTV Inspection, Sterilization and Water Sampling	1232 days	Wed 24/3/21	Tue 6/8/24	Calendar Day			13%	Wed 24/3/21	NA	[Gantt bar from 2021 Q3 to 2024 Q2]																				
760	Static Pressure Test	1112 days	Wed 24/3/21	Mon 8/4/24	Calendar Day			18%	Wed 24/3/21	NA	[Gantt bar from 2021 Q3 to 2024 Q2]																				
771	Pipeline Cleaning and CCTV Inspection	1153 days	Wed 12/5/21	Sun 7/7/24	Calendar Day			10%	Wed 12/5/21	NA	[Gantt bar from 2021 Q3 to 2024 Q2]																				
781	Sterilization and Water Sampling	30 days	Mon 8/7/24	Tue 6/8/24	Calendar Day			0%	NA	NA	[Gantt bar from 2024 Q1 to 2024 Q1]																				
783	NS250 HDPE Pipe Static Pressure, Pipeline Cleaning, CCTV Inspection, Sterilization and Water Sampling	60 days	Fri 23/12/22	Mon 20/2/23	Calendar Day			0%	NA	NA	[Gantt bar from 2023 Q4 to 2024 Q1]																				
786	Handover Portion I and Portion H to WSD Region	563 days	Tue 21/2/23	Thu 5/9/24	Calendar Day			0%	NA	NA	[Gantt bar from 2023 Q4 to 2024 Q3]																				
789	Water Supply to Tseung Kwan O Desalination Plant at Fill Bank of Tseung Kwan O Area 137 (Portion J)	445 days	Tue 7/11/17	Sat 11/5/19	HK Working Day			99%	Tue 7/11/17	NA	[Gantt bar from 2018 Q1 to 2019 Q1]																				

Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish	Timeline																			
											2018	2019	2020	2021	2022	2023	2024	2025	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Key Dates	2495 days	Tue 7/11/17	Thu 5/9/24	Calendar Day			0%	Tue 7/11/17	NA	[Timeline bars for Key Dates]																			
10	Planned Completion	0 days	Thu 5/9/24	Thu 5/9/24	Calendar Day	12FF		0%	NA	NA	[Timeline bar for Planned Completion]																			
12	Mainlaying In Tseung Kwan O	2495 days	Tue 7/11/17	Thu 5/9/24	Calendar Day		10FF	77%	Tue 7/11/17	NA	[Timeline bar for Mainlaying In Tseung Kwan O]																			
165	Mainlaying From Boundary of Tseung Kwan O Area 137 to TKO Fresh Water Service Reservoir (Portion I)	1866 days	Tue 7/11/17	Mon 26/2/24	HK Working Day			74%	Tue 7/11/17	NA	[Timeline bar for Mainlaying From Boundary of Tseung Kwan O Area 137 to TKO Fresh Water Service Reservoir (Portion I)]																			
249	Trenchless Work at Wan Po Road From Pit A to Pit F	1866 days	Tue 7/11/17	Mon 26/2/24	HK Working Day			56%	Tue 7/11/17	NA	[Timeline bar for Trenchless Work at Wan Po Road From Pit A to Pit F]																			
251	Trenchless Works (Pit A to Pit D)	1354 days	Fri 2/8/19	Mon 26/2/24	HK Working Day		763	51%	Fri 2/8/19	NA	[Timeline bar for Trenchless Works (Pit A to Pit D)]																			
273	New Routing From Pit A to Pit D)	553 days	Thu 14/4/22	Mon 26/2/24	HK Working Day			0%	Thu 14/4/22	NA	[Timeline bar for New Routing From Pit A to Pit D)																			
275	XP Application for WPR, SKR and Open Trench at Shek Kok Road	60 days	Tue 19/4/22	Thu 30/6/22	HK Working Day	274	278,279,286	0%	NA	NA	[Timeline bar for XP Application for WPR, SKR and Open Trench at Shek Kok Road]																			
279	Trial Pit Excavation at Pit SKR	10 days	Sat 2/7/22	Wed 13/7/22	HK Working Day	275	288,285,284	0%	NA	NA	[Timeline bar for Trial Pit Excavation at Pit SKR]																			
284	Pipe Laying (OC) from Pit SKR to Pit D (1st 200m)	200 days	Thu 14/7/22	Tue 14/3/23	HK Working Day	279	288	0%	NA	NA	[Timeline bar for Pipe Laying (OC) from Pit SKR to Pit D (1st 200m)]																			
288	Construction of Pit SKR	90 days	Wed 15/3/23	Thu 6/7/23	HK Working Day	279,284	290	0%	NA	NA	[Timeline bar for Construction of Pit SKR]																			
290	Headshield Tunneling fom Pit SKR to Pit WPR (64m)	107 days	Fri 7/7/23	Sat 11/11/23	HK Working Day	288	292	0%	NA	NA	[Timeline bar for Headshield Tunneling fom Pit SKR to Pit WPR (64m)]																			
292	MS Pipe Laying in Segment from Pit SKR to Pit WPR	30 days	Sun 12/11/23	Mon 11/12/23	Calendar Day	290	295,296	0%	NA	NA	[Timeline bar for MS Pipe Laying in Segment from Pit SKR to Pit WPR]																			
295	Pipe Connection Works and construction of Inspoecion Chamber at Pit WPR	60 days	Tue 12/12/23	Mon 26/2/24	HK Working Day	292,283		0%	NA	NA	[Timeline bar for Pipe Connection Works and construction of Inspoecion Chamber at Pit WPR]																			
296	Pipe Connection Works and construction of Washout Chamber at Pit SKR	60 days	Tue 12/12/23	Mon 26/2/24	HK Working Day	292		0%	NA	NA	[Timeline bar for Pipe Connection Works and construction of Washout Chamber at Pit SKR]																			
759	DN800 - CH.ADN1200 MS Pipe Static Pressure Test, Pipeline Cleaning, CCTV Inspection, Sterilization and Water Sampling	1232 days	Wed 24/3/21	Tue 6/8/24	Calendar Day			13%	Wed 24/3/21	NA	[Timeline bar for DN800 - CH.ADN1200 MS Pipe Static Pressure Test, Pipeline Cleaning, CCTV Inspection, Sterilization and Water Sampling]																			
760	Static Pressure Test	1112 days	Wed 24/3/21	Mon 8/4/24	Calendar Day			18%	Wed 24/3/21	NA	[Timeline bar for Static Pressure Test]																			
763	DN1200 MS Pipe - Static Pressure Test From DN900 Valve Chamber at Wan Po Road (CH.A12+50) to DN900 Valve Chamber at TKO Landfill Stage I Area A (CH.FB1+66) (Approx. 1.4km)	42 days	Tue 27/2/24	Mon 8/4/24	Calendar Day	224,251,306	774	0%	NA	NA	[Timeline bar for DN1200 MS Pipe - Static Pressure Test From DN900 Valve Chamber at Wan Po Road (CH.A12+50) to DN900 Valve Chamber at TKO Landfill Stage I Area A (CH.FB1+66) (Approx. 1.4km)]																			
771	Pipeline Cleaning and CCTV Inspection	1153 days	Wed 12/5/21	Sun 7/7/24	Calendar Day			10%	Wed 12/5/21	NA	[Timeline bar for Pipeline Cleaning and CCTV Inspection]																			
774	DN1200 MS Pipe - Pipeline Cleaning and CCTV Inspection From DN900 Valve Chamber at Wan Po Road (CH.A12+50) to DN900 Valve Chamber at TKO Landfill Stage I Area A	90 days	Tue 9/4/24	Sun 7/7/24	Calendar Day	763	782	0%	NA	NA	[Timeline bar for DN1200 MS Pipe - Pipeline Cleaning and CCTV Inspection From DN900 Valve Chamber at Wan Po Road (CH.A12+50) to DN900 Valve Chamber at TKO Landfill Stage I Area A]																			
781	Sterilization and Water Sampling	30 days	Mon 8/7/24	Tue 6/8/24	Calendar Day			0%	NA	NA	[Timeline bar for Sterilization and Water Sampling]																			
782	DN1200 MS Pipe - Portion I & Portion H (Total Water = 9700 cu.m)	30 days	Mon 8/7/24	Tue 6/8/24	Calendar Day	772,773,774,775,777,778,7787		0%	NA	NA	[Timeline bar for DN1200 MS Pipe - Portion I & Portion H (Total Water = 9700 cu.m)]																			
786	Handover Portion I and Portion H to WSD Region	563 days	Tue 21/2/23	Thu 5/9/24	Calendar Day			0%	NA	NA	[Timeline bar for Handover Portion I and Portion H to WSD Region]																			
787	DN1200 MS Pipe - Portion I & Portion H (Area 137)	30 days	Wed 7/8/24	Thu 5/9/24	Calendar Day	782		0%	NA	NA	[Timeline bar for DN1200 MS Pipe - Portion I & Portion H (Area 137)]																			

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

Project: Mainlaying in Tseung Kwan O																																										
ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish	Gantt Chart (2018-2025)																															
											2018	2018	2018	2018	2019	2019	2019	2019	2020	2020	2020	2020	2021	2021	2021	2021	2022	2022	2022	2022	2023	2023	2023	2023	2024	2024	2024	2024	2025	2025	2025	2025
											Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Key Dates	2495 days	Tue 7/11/17	Thu 5/9/24	Calendar Day			0%	Tue 7/11/17	NA	[Gantt bar from 7/11/17 to 5/9/24]																															
2	Contract Date	0 days	Tue 7/11/17	Tue 7/11/17	Calendar Day		67,59,60FS+27 days,61,62,58	100%	Tue 7/11/17	Tue 7/11/17	◆ 7/11																															
3	Starting Date	0 days	Thu 16/11/17	Thu 16/11/17	Calendar Day		4,5FS+730 days,6FS+1279 days	100%	Thu 16/11/17	Thu 16/11/17	◆ 16/11																															
4	Access Date of Portion A, B, C, D, E, F, G and J	0 days	Thu 16/11/17	Thu 16/11/17	Calendar Day	3	90,63,71,73,75,78,79	100%	Thu 16/11/17	Thu 16/11/17	◆ 16/11																															
5	Access Date of Portion H	0 days	Sat 16/11/19	Sat 16/11/19	Calendar Day	3FS+730 days	110	100%	Sat 16/11/19	Sat 16/11/19	◆ 16/11																															
6	Completion Date (Contract)	0 days	Tue 18/5/21	Tue 18/5/21	Calendar Day	3FS+1279 days	7	100%	Tue 18/5/21	Tue 18/5/21	◆ 18/5																															
7	EOT for CE No. 23 Inclement Weather - In June 2018	0 days	Tue 18/5/21	Tue 18/5/21	HK Working Day	6	8	100%	Tue 18/5/21	Tue 18/5/21	◆ 18/5																															
8	EOT for CE No. 01	246 days	Wed 19/5/21	Wed 19/1/22	Calendar Day	7	9FF	0%	NA	NA	◆ 19/1																															
9	Revised Completion Date	0 days	Wed 19/1/22	Wed 19/1/22	Calendar Day	8FF	11FS+365 days	0%	NA	NA	◆ 19/1																															
10	Planned Completion	0 days	Thu 5/9/24	Thu 5/9/24	Calendar Day	12FF		0%	NA	NA	◆ 5/9																															
11	Defect Date	0 days	Thu 19/1/23	Thu 19/1/23	Calendar Day	9FS+365 days		0%	NA	NA	◆ 19/1																															
12	Mainlaying In Tseung Kwan O	2495 days	Tue 7/11/17	Thu 5/9/24	Calendar Day		10FF	77%	Tue 7/11/17	NA	[Gantt bar from 7/11/17 to 5/9/24]																															
13	Issued Compensation Events (General)	1316 days	Tue 12/6/18	Tue 18/1/22	Calendar Day			100%	Tue 12/6/18	Tue 18/1/22	[Gantt bar from 12/6/18 to 1/18/22]																															
14	Issue CE No. 03 - Upgrading of bandwidth of Internet Services for Site Accommodation	0 days	Tue 12/6/18	Tue 12/6/18	Calendar Day		68	100%	Tue 12/6/18	Tue 12/6/18	◆ 12/6																															
15	Issue CE No. 01 - Change in Pressure Rating of Watermain, Valves and Fittings from PN16 to PN25	0 days	Thu 12/7/18	Thu 12/7/18	Calendar Day		68	100%	Thu 12/7/18	Thu 12/7/18	◆ 12/7																															
16	Issue CE No. 08 - Change in Number of Fixed IP Address for Broadband Connection for Site Accommodation	0 days	Tue 4/12/18	Tue 4/12/18	Calendar Day			100%	Tue 4/12/18	Tue 4/12/18	◆ 4/12																															
17	Issue CE No. 10 - Contractor Design of The Realignment	0 days	Thu 28/2/19	Thu 28/2/19	Calendar Day			100%	Thu 28/2/19	Thu 28/2/19	◆ 28/2																															
18	Issue CE No. 13 - Excavation of Inspection Pits for the Realignments	0 days	Wed 15/5/19	Wed 15/5/19	Calendar Day			100%	Wed 15/5/19	Wed 15/5/19	◆ 15/5																															
19	Issue CE No. 26 - Change in Cathodic Protection System for Mild Steel Pipes	0 days	Fri 16/8/19	Fri 16/8/19	Calendar Day		85	100%	Fri 16/8/19	Fri 16/8/19	◆ 16/8																															
20	Issue CE No. 35 - Feasibility Study on the Alternative Alignment by Trenchless Method in the Wan Po Road J/O Lohas Park Road	0 days	Tue 31/12/19	Tue 31/12/19	Calendar Day			100%	Tue 31/12/19	Tue 31/12/19	◆ 31/12																															
21	Issue CE No. 56 - Excavation of Inspection Pits for the Alternative Alignment (Batch No. 2)	0 days	Fri 22/5/20	Fri 22/5/20	Calendar Day			100%	Fri 22/5/20	Fri 22/5/20	◆ 22/5																															
22	Issue CE No. 64 - Tree Survey at Tsui Lam (Location A and Location B)	0 days	Tue 9/6/20	Tue 9/6/20	Calendar Day			100%	Tue 9/6/20	Tue 9/6/20	◆ 9/6																															
23	Issue CE No. 74 - Reinstatement of existing carriageway along Wan Po Road using PMSMA10	0 days	Thu 13/8/20	Thu 13/8/20	Calendar Day			100%	Thu 13/8/20	Thu 13/8/20	◆ 13/8																															
24	Issue CE No. 66 - Excavation of Inspection Pits for the Alternative Alignment (Batch No. 3)	0 days	Fri 21/8/20	Fri 21/8/20	Calendar Day			100%	Fri 21/8/20	Fri 21/8/20	◆ 21/8																															
25	Issue CE No. 72 - Temporary Reinstatement of Deteriorated Grasscrete Road by Bituminous Pavement along TKO South Waterfront Promenade	0 days	Mon 31/8/20	Mon 31/8/20	Calendar Day			100%	Mon 31/8/20	Mon 31/8/20	◆ 31/8																															
26	Issue CE No. 73 - Reinstatement of existing Geotextile in Area of Stage 1 Landfill between Chainage FC12+20 and Chainage FC13+26	0 days	Wed 9/9/20	Wed 9/9/20	Calendar Day			100%	Wed 9/9/20	Wed 9/9/20	◆ 9/9																															
27	Issue CE No. 81 - Additional Noise Monitoring for the Realignment Works	0 days	Tue 22/9/20	Tue 22/9/20	Calendar Day			100%	Tue 22/9/20	Tue 22/9/20	◆ 22/9																															
28	Issue CE No. 78 - Excavation of Inspection Pits for Additional Connection Point to The Existing Water Supply system	0 days	Wed 23/9/20	Wed 23/9/20	Calendar Day			100%	Wed 23/9/20	Wed 23/9/20	◆ 23/9																															
29	Issue CE No. 82 - Suspension of Site Works due to Coronavirus Disease	0 days	Wed 21/10/20	Wed 21/10/20	Calendar Day			100%	Wed 21/10/20	Wed 21/10/20	◆ 21/10																															
30	Issue CE No. 85 - Affected Trees across the Natural Stream Course at Tsui Lam (Location A)	0 days	Wed 28/10/20	Wed 28/10/20	Calendar Day			100%	Wed 28/10/20	Wed 28/10/20	◆ 28/10																															
31	Issue CE No. 90 - Temporary Relocation of Bicycle Parking spaces near HK Velodrome	0 days	Mon 23/11/20	Mon 23/11/20	Calendar Day			100%	Mon 23/11/20	Mon 23/11/20	◆ 23/11																															
32	Issue CE No. 83 - Inspection pits for the Realignment in Wan Po Road and Lohas Park Road	0 days	Sat 19/12/20	Sat 19/12/20	Calendar Day			100%	Sat 19/12/20	Sat 19/12/20	◆ 19/12																															
33	Issue CE No. CE - Site Clearance of Affected Trees and Plants for Mainlaying works near Po Hong Road and Ling Hong Road	0 days	Fri 18/12/20	Fri 18/12/20	Calendar Day			100%	Fri 18/12/20	Fri 18/12/20	◆ 18/12																															
34	Issue CE No. 99 - Excavation of Inspection pit near Mau Wu Tsai Village at Po Lam Road South	0 days	Wed 20/1/21	Wed 20/1/21	Calendar Day			100%	Wed 20/1/21	Wed 20/1/21	◆ 20/1																															
35	Issue CE No. 101 - Uncharted Irrigation Pipe in TKO South Promenade Waterfront's Cycle Track at CH.FC6+64	0 days	Fri 29/1/21	Fri 29/1/21	Calendar Day			100%	Fri 29/1/21	Fri 29/1/21	◆ 29/1																															
36	Issue CE No. 103 - Renewal of Excavation Permit	0 days	Wed 10/2/21	Wed 10/2/21	Calendar Day			100%	Wed 10/2/21	Wed 10/2/21	◆ 10/2																															
37	Issue CE No. 105 - Suspension of Works in Wan Po Road 1st Works Site due to Shortage of Backfilling Material Caused by COVID-19	0 days	Tue 23/2/21	Tue 23/2/21	Calendar Day			100%	Tue 23/2/21	Tue 23/2/21	◆ 23/2																															
38	Issue CE No. 104 - Works in Tsui Lam Section (Batch No.2) were Suspended due to Disruption to Supply of Construction Material Caused b COVID-19	0 days	Fri 26/2/21	Fri 26/2/21	Calendar Day			100%	Fri 26/2/21	Fri 26/2/21	◆ 26/2																															
39	Issue CE No. 106 - Works in Tsui Lam Section (Batch No.3) were Suspended due to Disruption to Supply of Construction Material Caused b COVID-19	0 days	Fri 26/2/21	Fri 26/2/21	Calendar Day			100%	Fri 26/2/21	Fri 26/2/21	◆ 26/2																															
40	Issue CE No. 108 - Works in Tsui Lam Section (Batch No.3) were Suspended due to Disruption to Supply of Construction Material Caused b COVID-19	0 days	Fri 26/2/21	Fri 26/2/21	Calendar Day			100%	Fri 26/2/21	Fri 26/2/21	◆ 26/2																															
41	Issue CE No. 107 - Affected Trees near Mau Wu Tsai Village between CH.HA0+00 and Ch. HA0+70	0 days	Mon 8/3/21	Mon 8/3/21	Calendar Day			100%	Mon 8/3/21	Mon 8/3/21	◆ 8/3																															
42	Issue CE No. 110 - Inaccessible to Works Area Ch.HA2+10 due to Deteriorated Concrete Access	0 days	Thu 8/4/21	Thu 8/4/21	Calendar Day			100%	Thu 8/4/21	Thu 8/4/21	◆ 8/4																															

Working Programme No. 15
Data Date : 24 May 2022

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

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish	Gantt Chart																			
											2018	2019	2020	2021	2022	2023	2024	2025												
674	Tree survey, TPRP Submission and Receiving TPRP approval (HyD)	227 days	Mon 31/8/20	Tue 8/6/21	HK Working Day		676	100%	Mon 31/8/20	Tue 8/6/21	[Gantt bar from 31/8/20 to 8/6/21]																			
675	East Portion - Foundation Works (PC-C1, PC-T1 & PC-P1)	283 days	Wed 9/6/21	Tue 24/5/22	HK Working Day			99%	Wed 9/6/21	NA	[Gantt bar from 9/6/21 to 24/5/22]																			
676	Mobilization and Tree Removal	24 days	Wed 9/6/21	Thu 8/7/21	HK Working Day	674	677	100%	Wed 9/6/21	Thu 8/7/21	[Gantt bar from 9/6/21 to 8/7/21]																			
677	Erect Temporary Timber Platform for Piling Works	7 days	Fri 9/7/21	Fri 16/7/21	HK Working Day	676	678	100%	Fri 9/7/21	Fri 16/7/21	[Gantt bar from 9/7/21 to 16/7/21]																			
678	Pre-drilling works (PD6, PD7 & PD8) & confirmation of rock head and depth of mini-pile	25 days	Sat 17/7/21	Sat 14/8/21	HK Working Day	677	679,686	100%	Sat 17/7/21	Sat 14/8/21	[Gantt bar from 17/7/21 to 14/8/21]																			
679	Mobilization and Driving Dia. 323mm steel Casting (14 nos)	39 days	Mon 16/8/21	Thu 30/9/21	HK Working Day	678	680	100%	Mon 16/8/21	Thu 30/9/21	[Gantt bar from 16/8/21 to 30/9/21]																			
680	Cleaning, Insert T50 reinforcement and Grouting	18 days	Mon 11/10/21	Mon 1/11/21	HK Working Day	679	681,684	100%	Mon 11/10/21	Mon 1/11/21	[Gantt bar from 11/10/21 to 1/11/21]																			
681	Setup and Loading Test of Mini-Pile (T-1)	15 days	Tue 1/3/22	Thu 17/3/22	HK Working Day	680	683,682	100%	Tue 1/3/22	Thu 17/3/22	[Gantt bar from 1/3/22 to 17/3/22]																			
682	Setup and Loading Test of Mini-Pile (C1-2)	8 days	Fri 18/3/22	Sat 26/3/22	HK Working Day	681		100%	Fri 18/3/22	Sat 26/3/22	[Gantt bar from 18/3/22 to 26/3/22]																			
683	Construction Pile Caps (P1) with Pier 1	50 days	Fri 18/3/22	Sat 21/5/22	HK Working Day	681	684	100%	Fri 18/3/22	Sat 21/5/22	[Gantt bar from 18/3/22 to 21/5/22]																			
684	Remove Timber platform for Piling Works	2 days	Mon 23/5/22	Tue 24/5/22	HK Working Day	683,680	694	0%	Mon 23/5/22	NA	[Gantt bar from 23/5/22 to 24/5/22]																			
685	West Portion - Foundation Works (PC-P2, PC-P3 & PC-C2)	241 days	Tue 5/10/21	Fri 29/7/22	HK Working Day			98%	Tue 5/10/21	NA	[Gantt bar from 5/10/21 to 29/7/22]																			
686	Mobilization and Tree Removal	3 days	Tue 5/10/21	Thu 7/10/21	HK Working Day	678	687	100%	Tue 5/10/21	Thu 7/10/21	[Gantt bar from 5/10/21 to 7/10/21]																			
687	Erect Temporary Timber Platform for Piling Works	5 days	Thu 28/10/21	Tue 2/11/21	HK Working Day	686	688	100%	Thu 28/10/21	Tue 2/11/21	[Gantt bar from 28/10/21 to 2/11/21]																			
688	Pre-drilling works (P WPR, PSKR, PD3, PD4 & PD5) & confirmation of rock head and depth of mini-pile	16 days	Fri 26/11/21	Tue 14/12/21	HK Working Day	687,703,707	689	100%	Fri 26/11/21	Tue 14/12/21	[Gantt bar from 26/11/21 to 14/12/21]																			
689	Driving Dia. 323mm steel Casting (26 nos)	58 days	Wed 15/12/21	Sat 26/2/22	HK Working Day	688	690	100%	Wed 15/12/21	Sat 26/2/22	[Gantt bar from 15/12/21 to 26/2/22]																			
690	Cleaning, Insert T50 reinforcement and Grouting	50 days	Sat 26/2/22	Fri 29/4/22	HK Working Day	689	692,691	100%	Sat 26/2/22	Fri 29/4/22	[Gantt bar from 26/2/22 to 29/4/22]																			
691	Construction Pile Caps with Pier 2	36 days	Mon 21/3/22	Wed 27/7/22	HK Working Day	690	692	95%	Mon 21/3/22	NA	[Gantt bar from 21/3/22 to 27/7/22]																			
692	Remove Timber platform for Piling Works	2 days	Thu 28/7/22	Fri 29/7/22	HK Working Day	690,691	694	0%	NA	NA	[Gantt bar from 28/7/22 to 29/7/22]																			
693	Pipelaying on Mini-pile Foundation	66 days	Sat 30/7/22	Tue 18/10/22	HK Working Day			0%	NA	NA	[Gantt bar from 30/7/22 to 18/10/22]																			
694	Temporary Working Platform for Pipe Installation	6 days	Sat 30/7/22	Fri 5/8/22	HK Working Day	684,692	695	0%	NA	NA	[Gantt bar from 30/7/22 to 5/8/22]																			
695	Cut Temporary casting and Bend the T50 to designated position	12 days	Sat 6/8/22	Fri 19/8/22	HK Working Day	694	696	0%	NA	NA	[Gantt bar from 6/8/22 to 19/8/22]																			
696	Pipe Installation / Welding / Testing / Painting	24 days	Sat 20/8/22	Sat 17/9/22	HK Working Day	695	697,701	0%	NA	NA	[Gantt bar from 20/8/22 to 17/9/22]																			
697	Concrete Hunching	12 days	Mon 19/9/22	Mon 3/10/22	HK Working Day	696	698	0%	NA	NA	[Gantt bar from 19/9/22 to 3/10/22]																			
698	Apply top coating of aliphatic polyurethane on site	6 days	Wed 5/10/22	Tue 11/10/22	HK Working Day	697	699	0%	NA	NA	[Gantt bar from 5/10/22 to 11/10/22]																			
699	Remove Temporary Working Platform	6 days	Wed 12/10/22	Tue 18/10/22	HK Working Day	698	702	0%	NA	NA	[Gantt bar from 12/10/22 to 18/10/22]																			
700	Open Trench Pipe Laying at Po Lam Road (East Bound)	551 days	Thu 8/4/21	Tue 14/2/23	HK Working Day		768	60%	Thu 8/4/21	NA	[Gantt bar from 8/4/21 to 14/2/23]																			
701	Open Cut, CH.HC0+00 - CH.HC0+08; Connecting to CH.HB	60 days	Mon 19/9/22	Tue 29/11/22	HK Working Day	696,706	702	0%	NA	NA	[Gantt bar from 19/9/22 to 29/11/22]																			
702	Open Cut, CH.HC0+08 - CH.HC0+12	60 days	Wed 30/11/22	Tue 14/2/23	HK Working Day	699,701		0%	NA	NA	[Gantt bar from 30/11/22 to 14/2/23]																			
703	Open Cut, CH.HC0+12 - CH.HC0+97 with SACP	104 days	Wed 16/6/21	Tue 19/10/21	HK Working Day		704,688	100%	Wed 16/6/21	Tue 19/10/21	[Gantt bar from 16/6/21 to 19/10/21]																			
704	Open Cut, CH.HC0+97 - CH.HC1+56(Portion B4) with SACP	62 days	Wed 24/11/21	Thu 10/2/22	HK Working Day	703,707	705	99%	Wed 24/11/21	NA	[Gantt bar from 24/11/21 to 10/2/22]																			
705	Open Cut, CH.HC1+56 - CH.HC2+04	60 days	Fri 11/2/22	Tue 26/4/22	HK Working Day	704	706	0%	NA	NA	[Gantt bar from 11/2/22 to 26/4/22]																			
706	Open Cut, CH.HC2+04 - CH.HC2+70 with SACP	60 days	Wed 27/4/22	Sat 9/7/22	HK Working Day	705	701	0%	NA	NA	[Gantt bar from 27/4/22 to 9/7/22]																			
707	Open Cut, CH.HC2+70 - CH.HC3+22 with SACP	58 days	Tue 14/9/21	Tue 23/11/21	HK Working Day	708	704,688	100%	Tue 14/9/21	Tue 23/11/21	[Gantt bar from 14/9/21 to 23/11/21]																			
708	Open Cut, CH.HC3+22 - CH.HC3+70 /CH.HD0+00	131 days	Thu 8/4/21	Sat 11/9/21	HK Working Day		707	100%	Thu 8/4/21	Sat 11/9/21	[Gantt bar from 8/4/21 to 11/9/21]																			
709	Water Main Structure and Associated Pipe Support from Po Lam Road to Tsui Lam Road (Location B)(CH.HD0+00 ~ CH.H WPR+01)	771 days	Tue 16/6/20	Thu 19/1/23	HK Working Day		768	82%	Tue 16/6/20	NA	[Gantt bar from 16/6/20 to 19/1/23]																			
710	Issue CE No. 62 - Design of Pipe Support in Tsui Lam (Location B)	0 days	Tue 16/6/20	Tue 16/6/20	Calendar Day		711	100%	Tue 16/6/20	Tue 16/6/20	[Milestone diamond at 16/6/20]																			
711	Design Submission (CE No. 62) for Water Main Structure and Associated at Tsui Lam	356 days	Wed 17/6/20	Fri 27/8/21	HK Working Day	710	712	100%	Wed 17/6/20	Fri 27/8/21	[Gantt bar from 17/6/20 to 27/8/21]																			
712	WSD & GEO Approval	0 days	Tue 21/9/21	Tue 21/9/21	Calendar Day	711	716	100%	Tue 21/9/21	Tue 21/9/21	[Milestone diamond at 21/9/21]																			
713	TTA Drawing approval for Tsui Lam Road	0 days	Thu 30/9/21	Thu 30/9/21	HK Working Day		719	100%	Thu 30/9/21	Thu 30/9/21	[Milestone diamond at 30/9/21]																			
714	LCSD's Consent	0 days	Tue 5/10/21	Tue 5/10/21	HK Working Day		715FS+18 days	100%	Tue 5/10/21	Tue 5/10/21	[Milestone diamond at 5/10/21]																			
715	Approval of Excavation Permit for Tsui Lam Road	0 days	Mon 1/11/21	Mon 1/11/21	HK Working Day	714FS+18 days		100%	Mon 1/11/21	Mon 1/11/21	[Milestone diamond at 1/11/21]																			

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

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish	Gantt Chart																							
											2018 Q1	2018 Q2	2018 Q3	2018 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4
758	Construction of flowmeter kiosks and GI cable ducts for Combined EMF and MBV Chamber at CH.HF1+30	90 days	Tue 7/11/17	Mon 26/2/18	HK Working Day			0%	NA	NA	[Gantt Chart]																							
759	DN800 - CH.ADN1200 MS Pipe Static Pressure Test, Pipeline Cleaning, CCTV Inspection, Sterilization and Water Sampling	1232 days	Wed 24/3/21	Tue 6/8/24	Calendar Day			13%	Wed 24/3/21	NA	[Gantt Chart]																							
760	Static Pressure Test	1112 days	Wed 24/3/21	Mon 8/4/24	Calendar Day			18%	Wed 24/3/21	NA	[Gantt Chart]																							
761	DN1200 MS Pipe - Static Pressure Test From DN900 Valve Chamber at CH.CA4+24 to CH.CT.2+65 (Approx. 0.7km)	49 days	Wed 24/3/21	Tue 11/5/21	Calendar Day	105	772	100%	Wed 24/3/21	Tue 11/5/21	[Gantt Chart]																							
762	DN1200 MS Pipe - Static Pressure Test From DN900 Valve Chamber at CH.CA4+24 to DN900 Valve Chamber at Wan Po Road (CH.A12+50) (Approx. 1.7km)	51 days	Fri 29/9/23	Sat 18/11/23	Calendar Day	121,167,184,213,224	773	0%	NA	NA	[Gantt Chart]																							
763	DN1200 MS Pipe - Static Pressure Test From DN900 Valve Chamber at Wan Po Road (CH.A12+50) to DN900 Valve Chamber at TKO Landfill Stage I Area A (CH.FB1+66) (Approx. 1.4km)	42 days	Tue 27/2/24	Mon 8/4/24	Calendar Day	224,251,306	774	0%	NA	NA	[Gantt Chart]																							
764	DN1200 MS Pipe - Static Pressure Test From DN900 Valve Chamber at TKO Landfill Stage I Area A (CH.FB1+66) to DN900 Valve Chamber at CH.FD3+43 (approx. 2.1km)	63 days	Tue 12/9/23	Mon 13/11/23	Calendar Day	372,434	775	0%	NA	NA	[Gantt Chart]																							
765	DN1200 MS Pipe - Static Pressure Test From DN900 Valve Chamber at CH.FD 3+43 to DN900 Valve Chamber at Mau Wu Tsai (CH.HA0+44) (approx. 1.4km)	42 days	Tue 12/9/23	Mon 23/10/23	Calendar Day	436,479,517,594,434	776	0%	NA	NA	[Gantt Chart]																							
766	DN1200 MS Pipe - Static Pressure Test From Pit Y (CH>GSKR.20 to CH.HA3+70)	11 days	Tue 19/4/22	Fri 29/4/22	Calendar Day			100%	Tue 19/4/22	Fri 29/4/22	[Gantt Chart]																							
767	DN1200 MS Pipe - Static Pressure Test From DN900 Valve Chamber at Mau Wu Tsai (CH.HA0+44) to DN900 Valve at Mau Wu Tsai (CH.HA6+45) (approx. 0.7km)	30 days	Fri 1/4/22	Sat 30/4/22	Calendar Day	628,623,658	777	0%	NA	NA	[Gantt Chart]																							
768	DN1200 MS Pipe - Static Pressure Test From DN900 Valve at Mau Wu Tsai (CH.HA6+45) to DN800 EMF & BV Chamber at TKO F.W.S.R.(CH.HE1+90) & (CH.HF1+30) (Approx. 1.1km)	33 days	Tue 6/6/23	Sat 8/7/23	Calendar Day	658,667,700,709,734	778	0%	NA	NA	[Gantt Chart]																							
769	DN800 MS Pipe - Static Pressure Test From DN800 EMF & BV Chamber at TKO F.W.S.R.(CH.HE1+90) to CH.HE2+11 (approx. 20m)	6 days	Tue 26/7/22	Sun 31/7/22	Calendar Day	742	779	0%	NA	NA	[Gantt Chart]																							
770	DN800 MS Pipe - Static Pressure Test From DN800 EMF & BV Chamber at TKO F.W.S.R.(CH.HF1+30) to CH.HF3+10 (Approx. 80m)	6 days	Wed 25/5/22	Mon 30/5/22	Calendar Day	750	780	0%	NA	NA	[Gantt Chart]																							
771	Pipeline Cleaning and CCTV Inspection	1153 days	Wed 12/5/21	Sun 7/7/24	Calendar Day			10%	Wed 12/5/21	NA	[Gantt Chart]																							
772	DN1200 MS Pipe - Pipeline Cleaning and CCTV Inspection From DN900 Valve Chamber at CH.CA4+24 to CH.CT.2+65	60 days	Wed 12/5/21	Sat 10/7/21	Calendar Day	761	782	100%	Wed 12/5/21	Sat 10/7/21	[Gantt Chart]																							
773	DN1200 MS Pipe - Pipeline Cleaning and CCTV Inspection From DN900 Valve Chamber at CH.CA4+24 to DN900 Valve Chamber at Wan Po Road (CH.A12+50)	90 days	Sun 19/11/23	Fri 16/2/24	Calendar Day	762	782	0%	NA	NA	[Gantt Chart]																							
774	DN1200 MS Pipe - Pipeline Cleaning and CCTV Inspection From DN900 Valve Chamber at Wan Po Road (CH.A12+50) to DN900 Valve Chamber at TKO Landfill Stage I Area A	90 days	Tue 9/4/24	Sun 7/7/24	Calendar Day	763	782	0%	NA	NA	[Gantt Chart]																							
775	DN1200 MS Pipe - Pipeline Cleaning and CCTV Inspection From DN900 Valve Chamber at TKO Landfill Stage I Area A (CH.FB1+66) to DN900 Valve Chamber at CH.FD3+43	90 days	Tue 14/11/23	Sun 11/2/24	Calendar Day	764	782	0%	NA	NA	[Gantt Chart]																							
776	DN1200 MS Pipe - Pipeline Cleaning and CCTV From DN900 Valve Chamber at CH.FD 3+43 to DN900 Valve Chamber at Mau Wu Tsai (CH.HA0+44)	90 days	Tue 24/10/23	Sun 21/1/24	Calendar Day	765	782	0%	NA	NA	[Gantt Chart]																							
777	DN1200 MS Pipe - Pipeline Cleaning and CCTV Inspection From From DN900 Valve Chamber at Mau Wu Tsai (CH.HA0+44) to DN900 Valve at Mau Wu Tsai (CH.HA6+45)	60 days	Sun 1/5/22	Wed 29/6/22	Calendar Day	767	782	0%	NA	NA	[Gantt Chart]																							
778	DN1200 MS Pipe - Pipeline Cleaning and CCTV Inspection From DN900 Valve at Mau Wu Tsai (CH.HA6+45) to DN800 EMF & BV Chamber at TKO F.W.S.R.(CH.HE1+90) & DN800 MS Pipe - Pipeline Cleaning and CCTV Inspection From DN800 EMF & BV Chamber at TKO F.W.S.R.(CH.HE1+90) to CH.HE2+11	60 days	Sun 9/7/23	Wed 6/9/23	Calendar Day	768	782	0%	NA	NA	[Gantt Chart]																							
779	DN800 MS Pipe - Pipeline Cleaning and CCTV Inspection From DN800 EMF & BV Chamber at TKO F.W.S.R.(CH.HE1+90) to CH.HE2+11	18 days	Mon 1/8/22	Thu 18/8/22	Calendar Day	769	782	0%	NA	NA	[Gantt Chart]																							
780	DN800 MS Pipe - Pipeline Cleaning and CCTV Inspection From DN800 EMF & BV Chamber at TKO F.W.S.R.(CH.HF1+30) to CH.HF3+10	18 days	Tue 31/5/22	Fri 17/6/22	Calendar Day	770	782	0%	NA	NA	[Gantt Chart]																							
781	Sterilization and Water Sampling	30 days	Mon 8/7/24	Tue 6/8/24	Calendar Day			0%	NA	NA	[Gantt Chart]																							
782	DN1200 MS Pipe - Portion I & Portion H (Total Water = 9700 cu.m)	30 days	Mon 8/7/24	Tue 6/8/24	Calendar Day	772,773,774,775,777,778,778		0%	NA	NA	[Gantt Chart]																							
783	NS250 HDPE Pipe Static Pressure, Pipeline Cleaning, CCTV Inspection, Sterilization and Water Sampling	60 days	Fri 23/12/22	Mon 20/2/23	Calendar Day			0%	NA	NA	[Gantt Chart]																							
784	NS250 HDPE Pipe - Static Pressure Test - Portion H (Area 137)	30 days	Fri 23/12/22	Sat 21/1/23	Calendar Day	121	785	0%	NA	NA	[Gantt Chart]																							
785	NS250 HDPE Pipe - Pipeline Cleaning and CCTV Inspection, Sterilization and Water Sampling - Portion H (Area 137)	30 days	Sun 22/1/23	Mon 20/2/23	Calendar Day	784	788	0%	NA	NA	[Gantt Chart]																							
786	Handover Portion I and Portion H to WSD Region	563 days	Tue 21/2/23	Thu 5/9/24	Calendar Day			0%	NA	NA	[Gantt Chart]																							
787	DN1200 MS Pipe - Portion I & Portion H (Area 137)	30 days	Wed 7/8/24	Thu 5/9/24	Calendar Day	782		0%	NA	NA	[Gantt Chart]																							
788	NS250 HDPE Pipe - Portion H (Area 137)	7 days	Tue 21/2/23	Mon 27/2/23	Calendar Day	785	164	0%	NA	NA	[Gantt Chart]																							
789	Water Supply to Tseung Kwan O Desalination Plant at Fill Bank of Tseung Kwan O Area 137 (Portion J)	445 days	Tue 7/11/17	Sat 11/5/19	HK Working Day			99%	Tue 7/11/17	NA	[Gantt Chart]																							
790	Issue of CE No. 02	0 days	Fri 16/11/18	Fri 16/11/18	HK Working Day	791		100%	Fri 16/11/18	Fri 16/11/18	[Gantt Chart]																							
791	Procurement of Major Material	48 days	Sat 17/11/18	Thu 3/1/19	Calendar Day	790	792	100%	Sat 17/11/18	Thu 3/1/19	[Gantt Chart]																							
792	Installation of NS250 HDPE Pipe from A to B in accordance with the Drawing No. 13/WSD/16/SK13 to SK15 and W20203/4A	89 days	Fri 4/1/19	Thu 25/4/19	HK Working Day	791	793	100%	Fri 4/1/19	Thu 25/4/19	[Gantt Chart]																							
793	Sterilization and Flushing NS250 HDPE Pipe (From T0+00 to T23+64)	4 days	Wed 24/4/19	Sun 28/4/19	HK Working Day	792	794	100%	Wed 24/4/19	Sun 28/4/19	[Gantt Chart]																							
794	Take Water Sampling	1 day	Mon 29/4/19	Mon 29/4/19	HK Working Day	793	795	100%	Mon 29/4/19	Mon 29/4/19	[Gantt Chart]																							
795	Backfill at T23+64 after completion of Water Sampling Test	1 day	Sat 11/5/19	Sat 11/5/19	HK Working Day	794	796FF	100%	Sat 11/5/19	Sat 11/5/19	[Gantt Chart]																							
796	Handover Portion J to WSD Region	0 days	Sat 11/5/19	Sat 11/5/19	HK Working Day	795FF		100%	Sat 11/5/19	Sat 11/5/19	[Gantt Chart]																							
797		1 day	Tue 7/11/17	Tue 7/11/17	None			0%	NA	NA	[Gantt Chart]																							

Working Programme No. 15
Data Date : 24 May 2022

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

Appendix B

Overview of Mainlaying in Tseung Kwan O

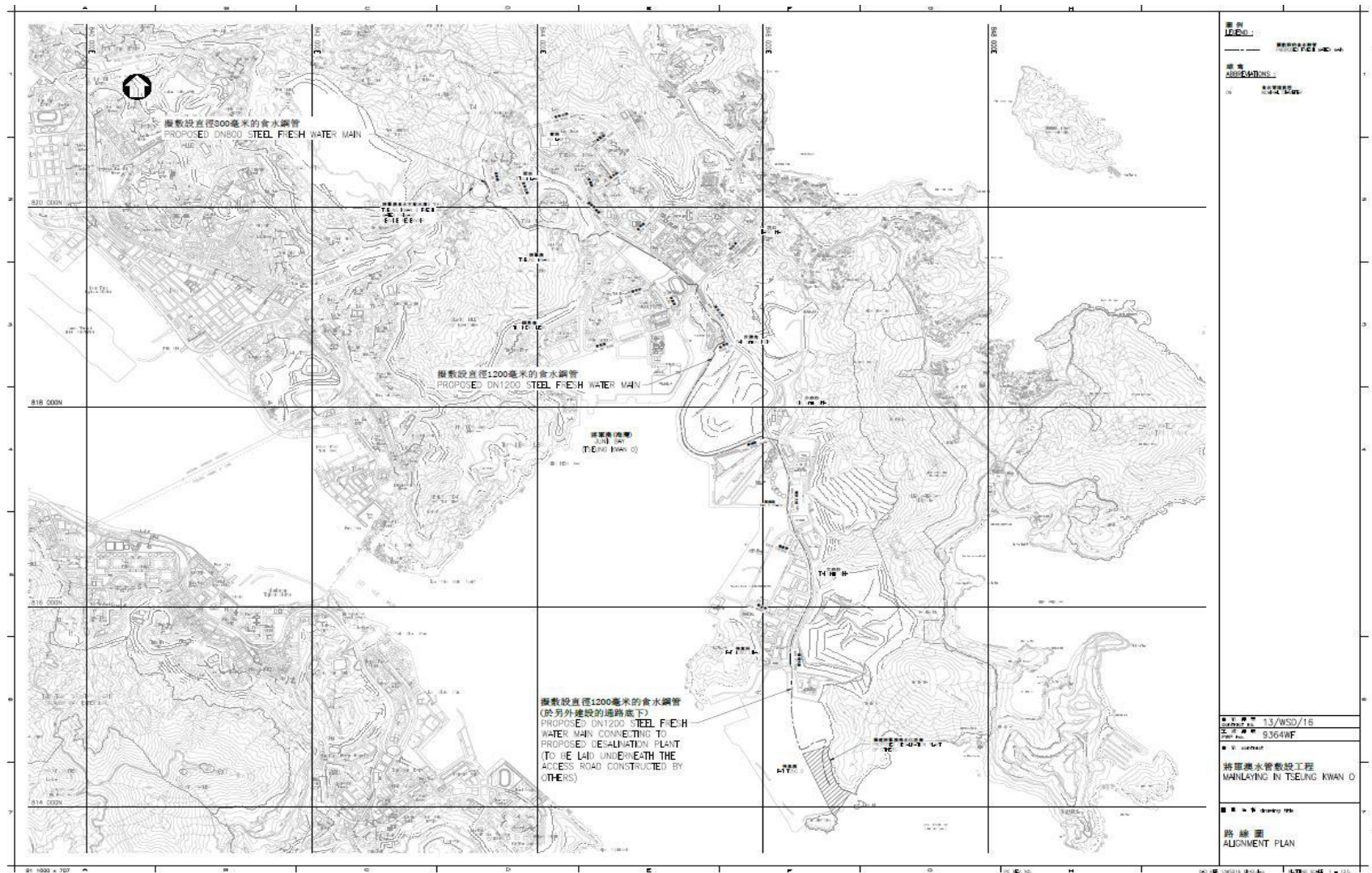


Figure B1. Overview of Mainlaying in TKO

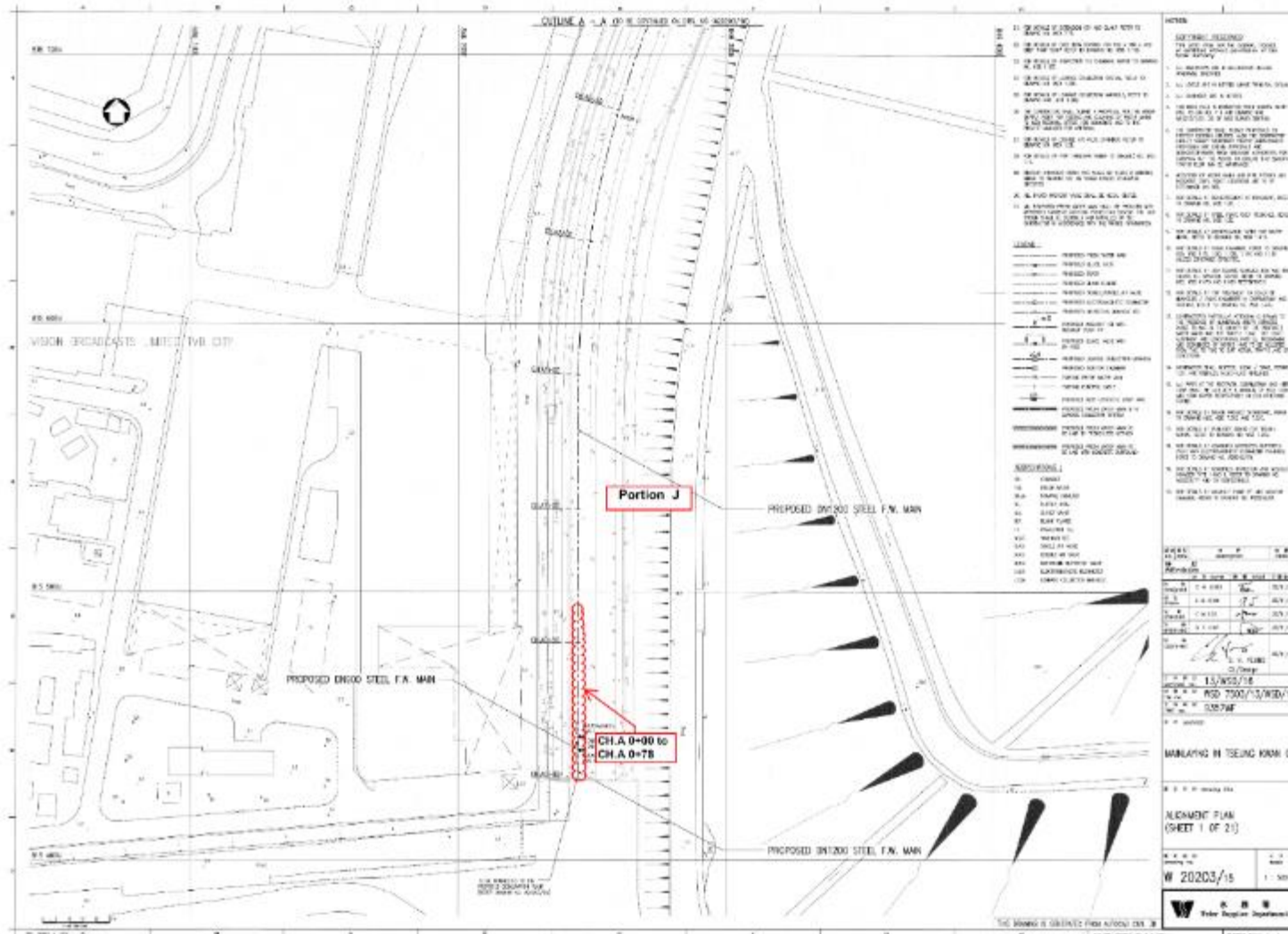


Figure B2. Location Plan for Portion J - CH.A 0+00 to CH.A 0+78

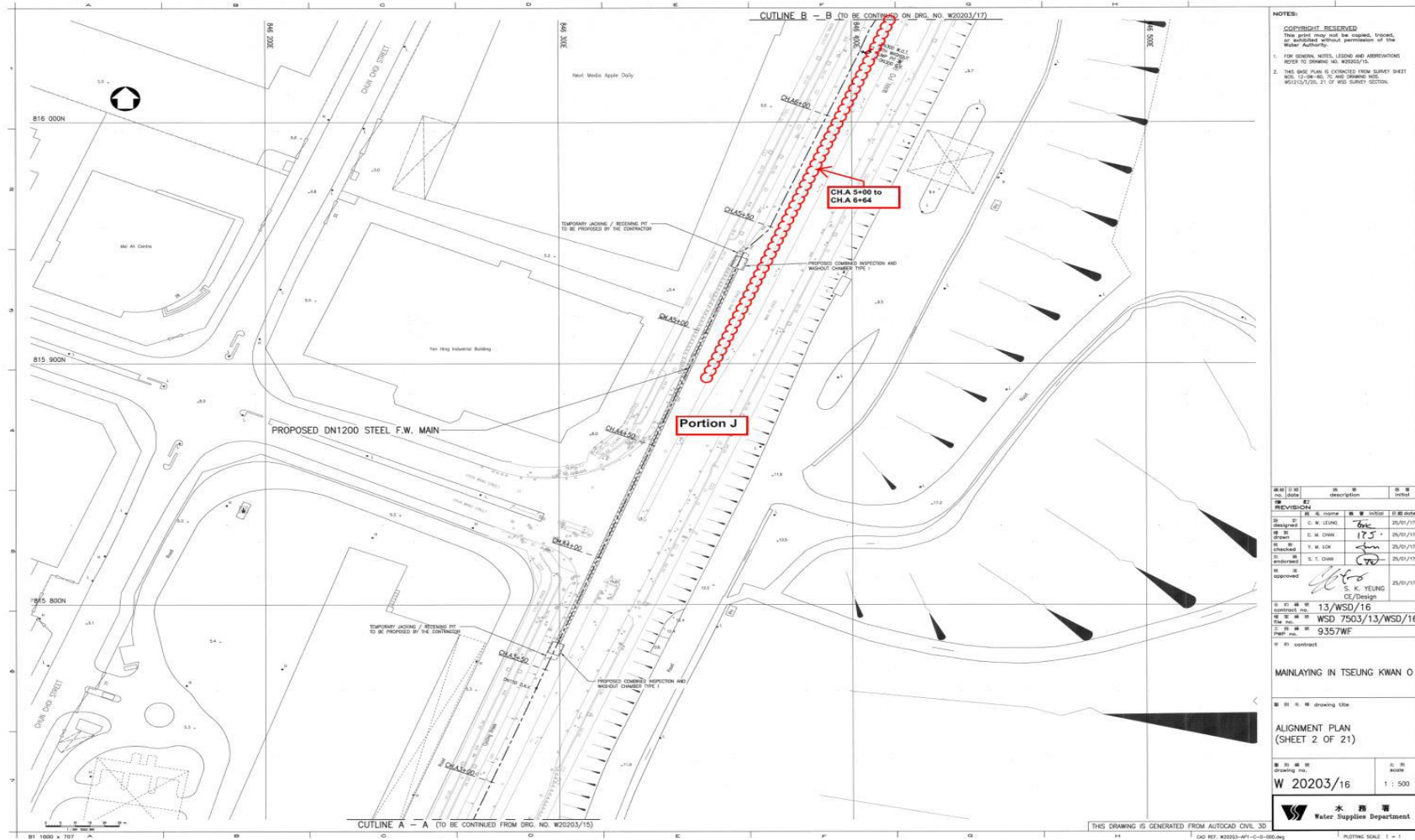


Figure B3. Location Plan for Portion J - CH.A 5+00 to CH.A 6+64

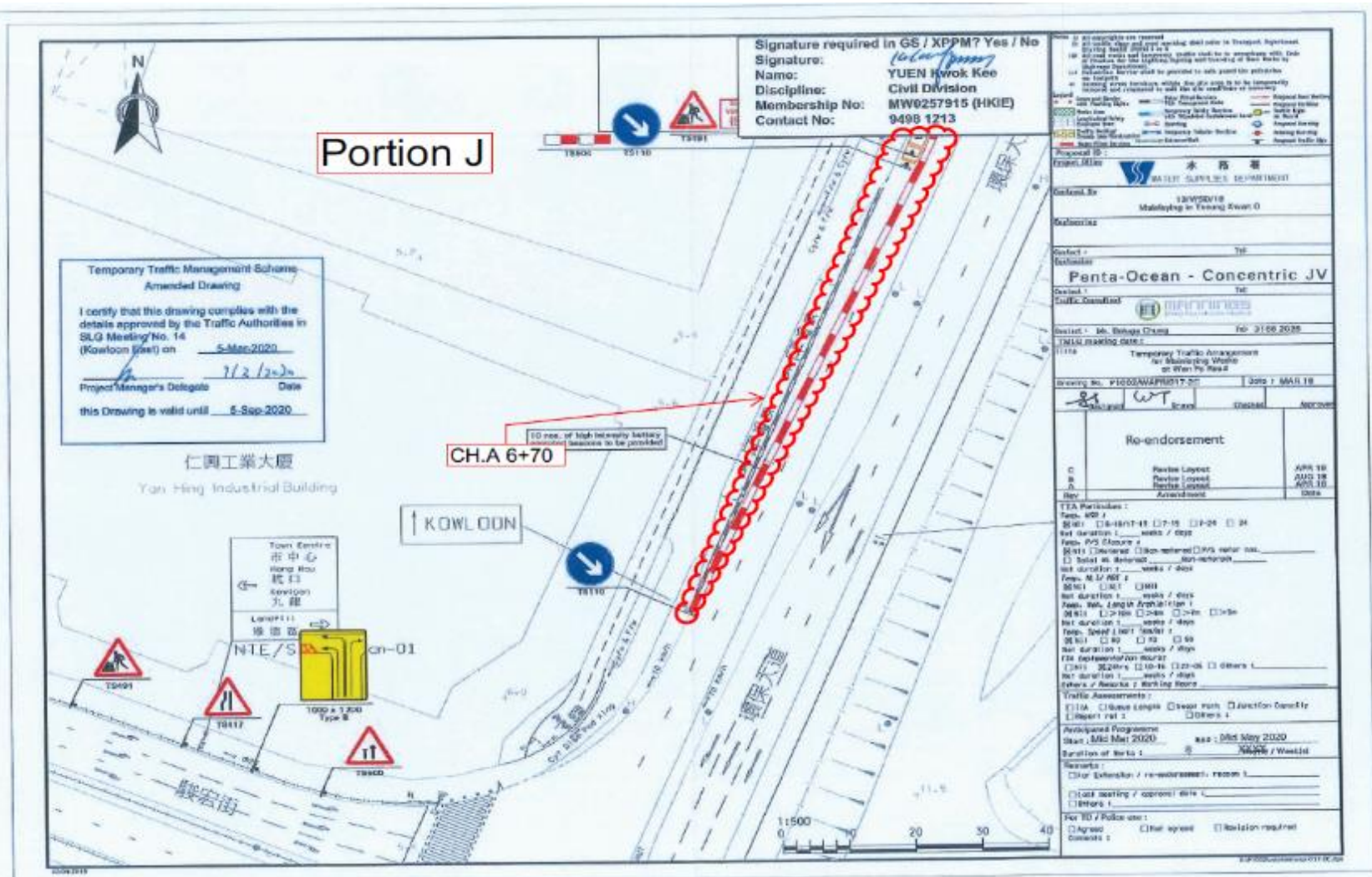


Figure B5. Location Plan for Portion J - CH.A 6+70

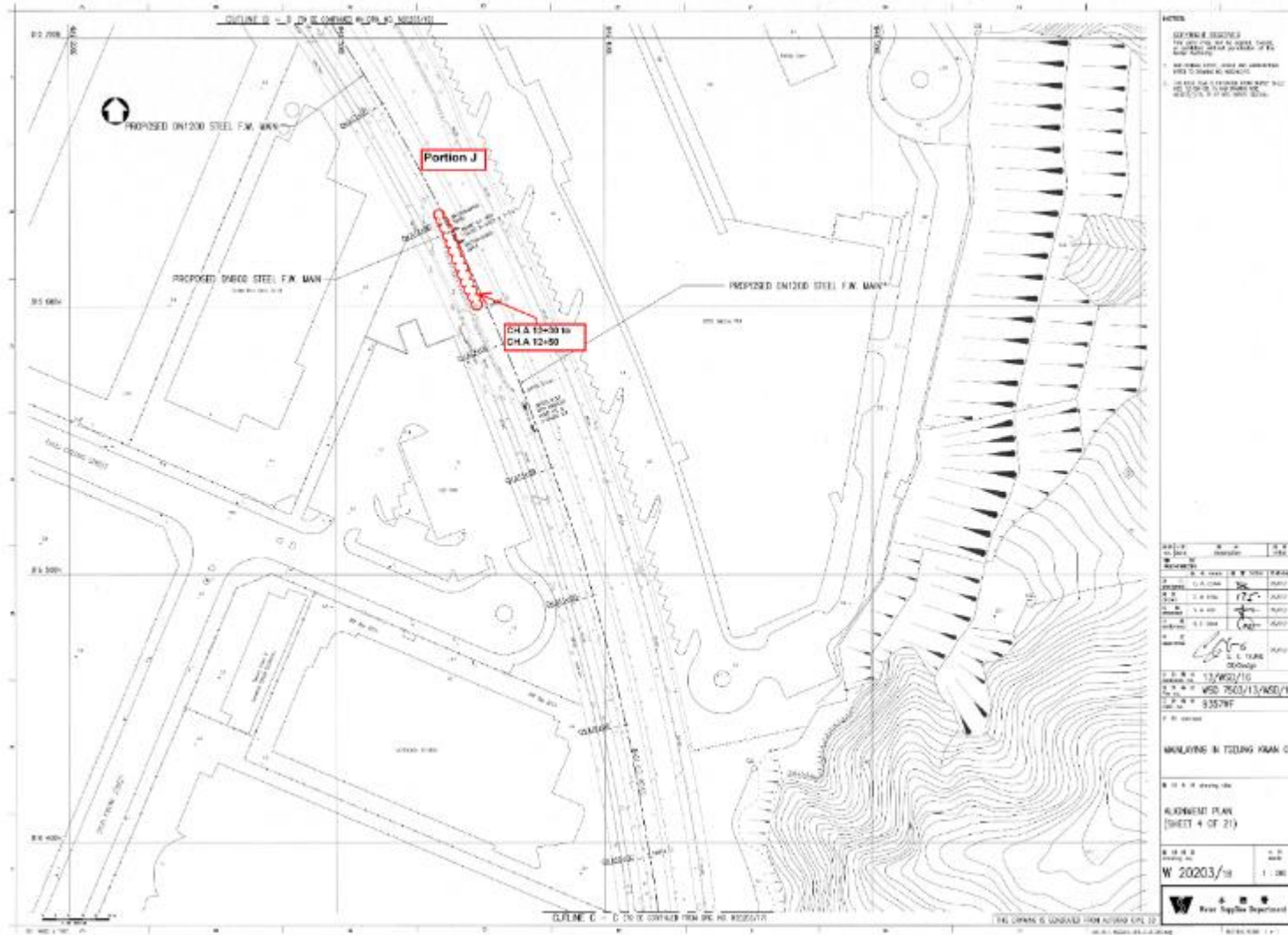


Figure B6. Location Plan for Portion J - CH.A 12+30 to CH.A 12+50

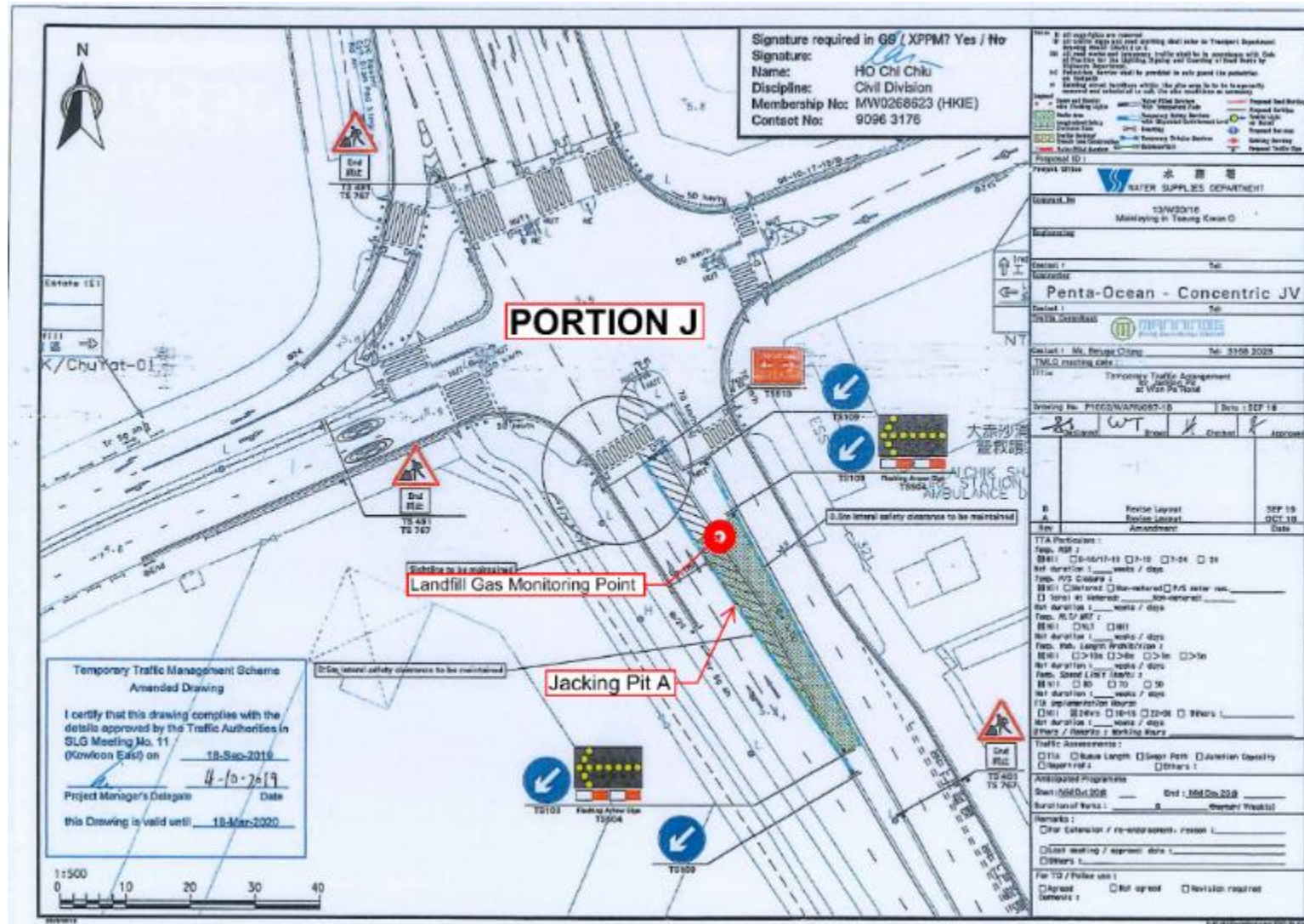


Figure B7. Location Plan for Portion J – CH. A13+50 to CH.A 14+00 (Pit A)

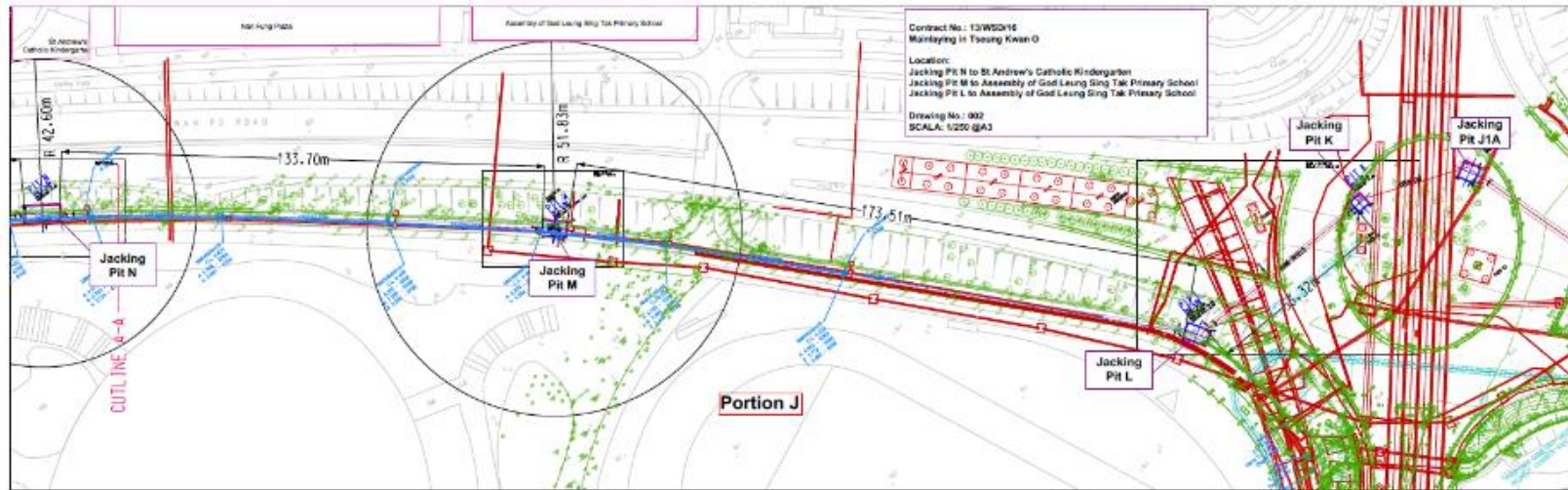


Figure B8a. Location Plan for Portion J – Pit L-M-N, K, J1A



Figure B8b. Location Plan for Portion J – Pit N-O-P

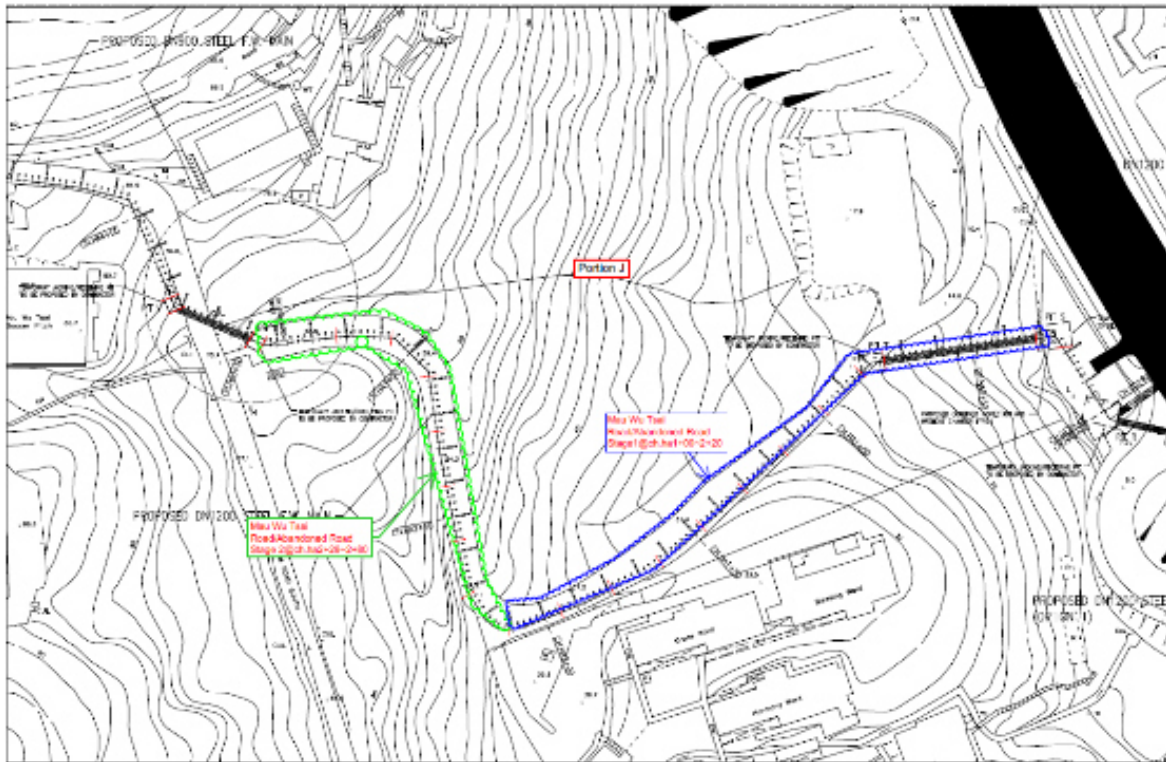


Figure B9c. Abandoned Mau Wu Tsai Road



Figure B10. Monitoring Location – Po Lam South Road

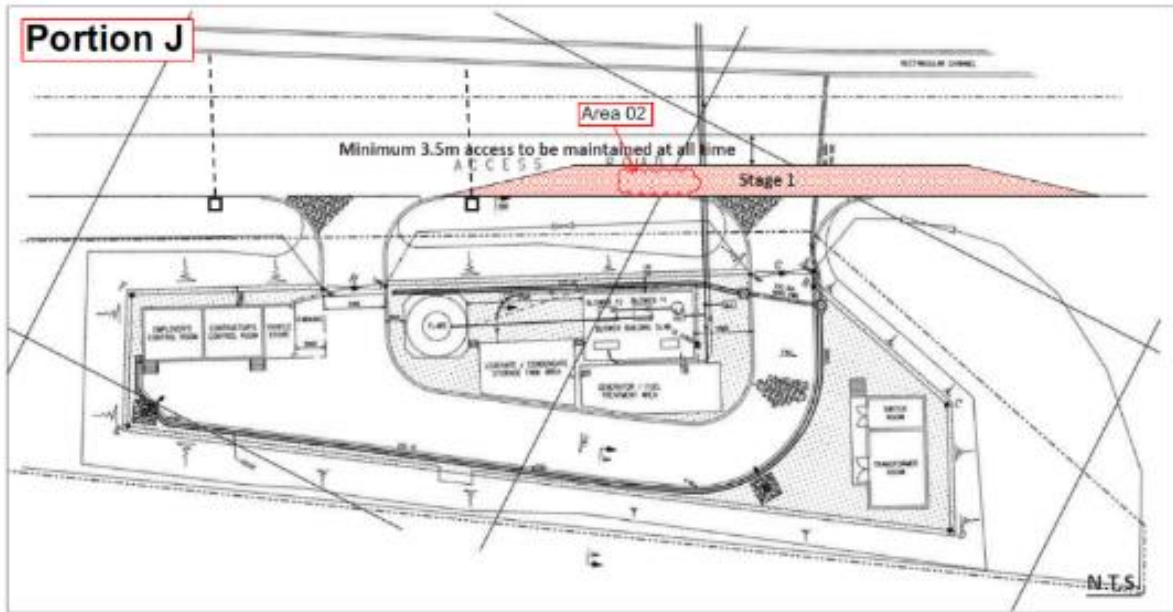


Figure B11. Monitoring Location – Area A02

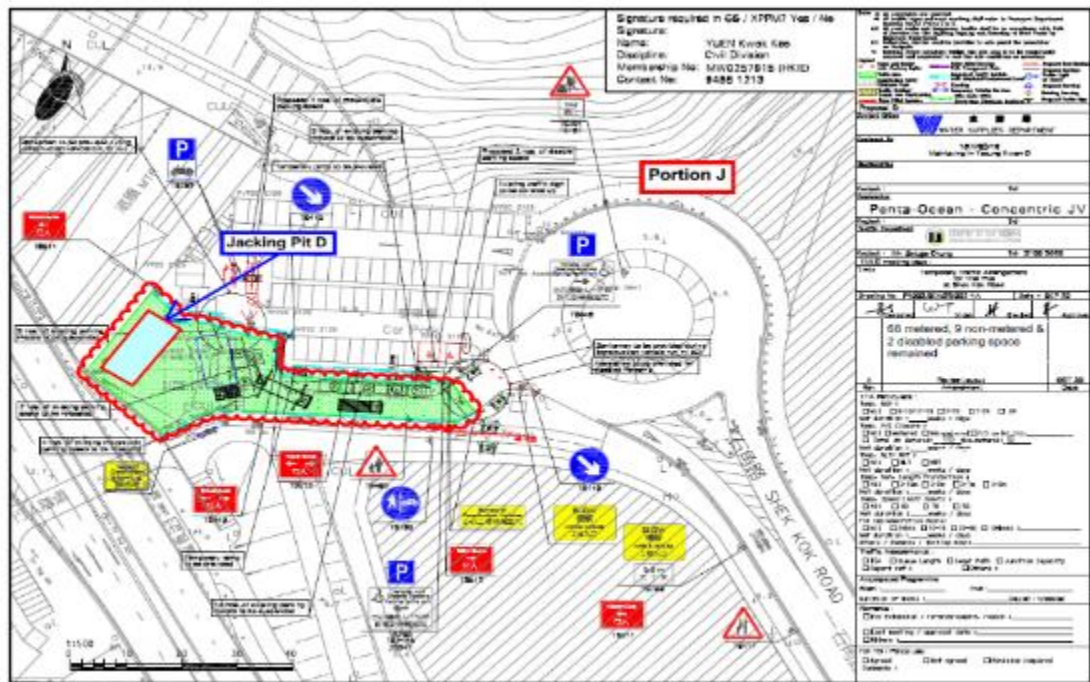


Figure B12. Location Plan for Jacking Pit D

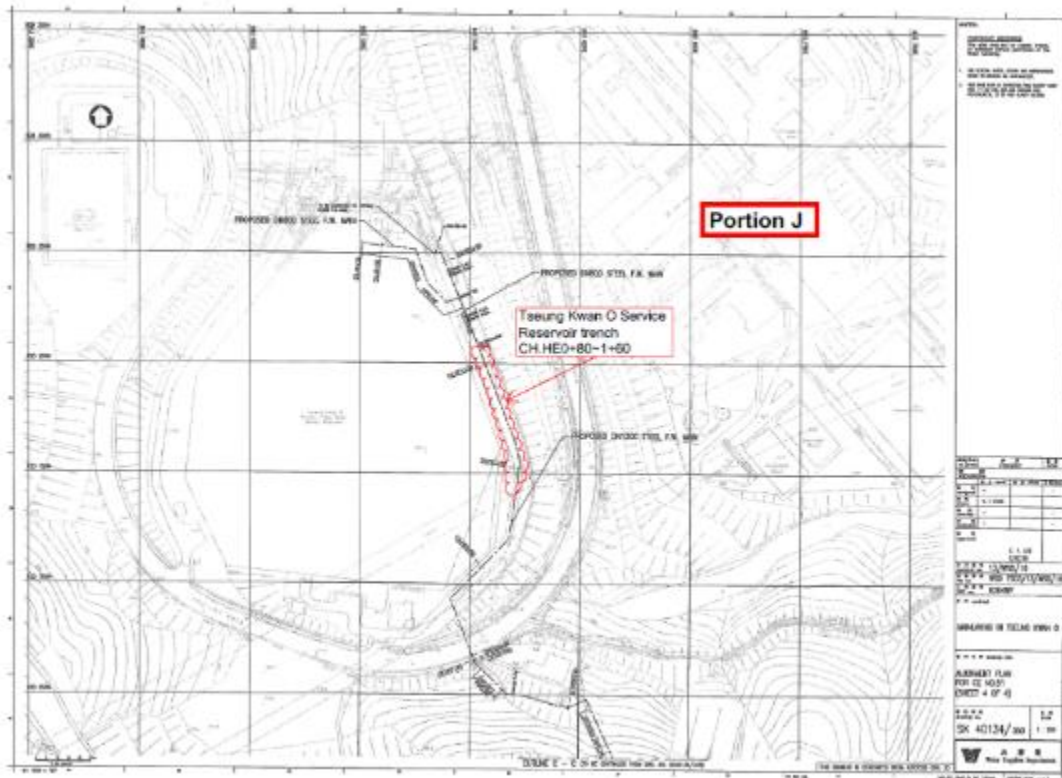


Figure B13. Location Plan for CH.HE0+80-1+60

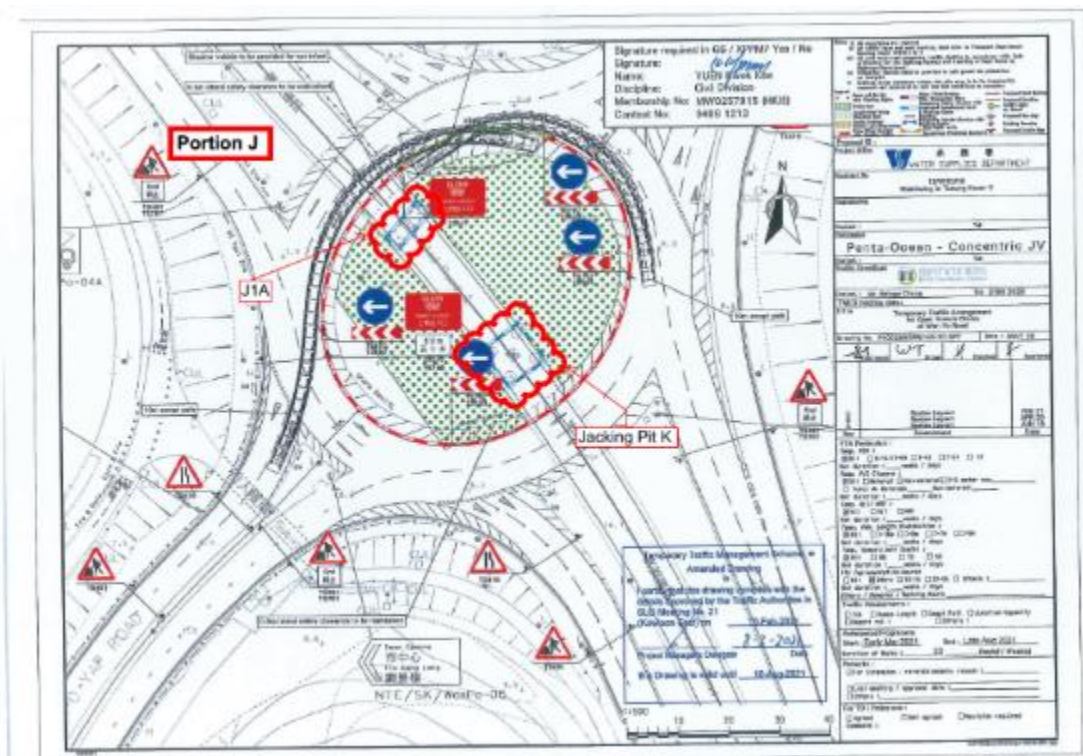


Figure B14. Location Plan for Pit K

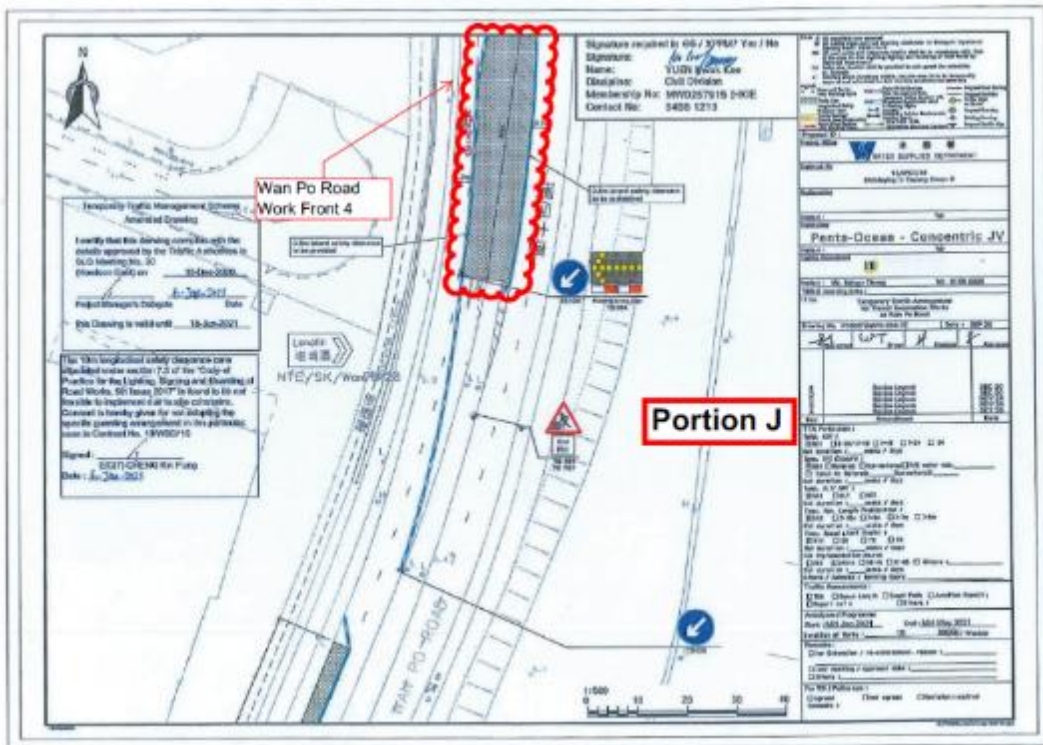


Figure B15. Location Plan for Wan Po Road 4

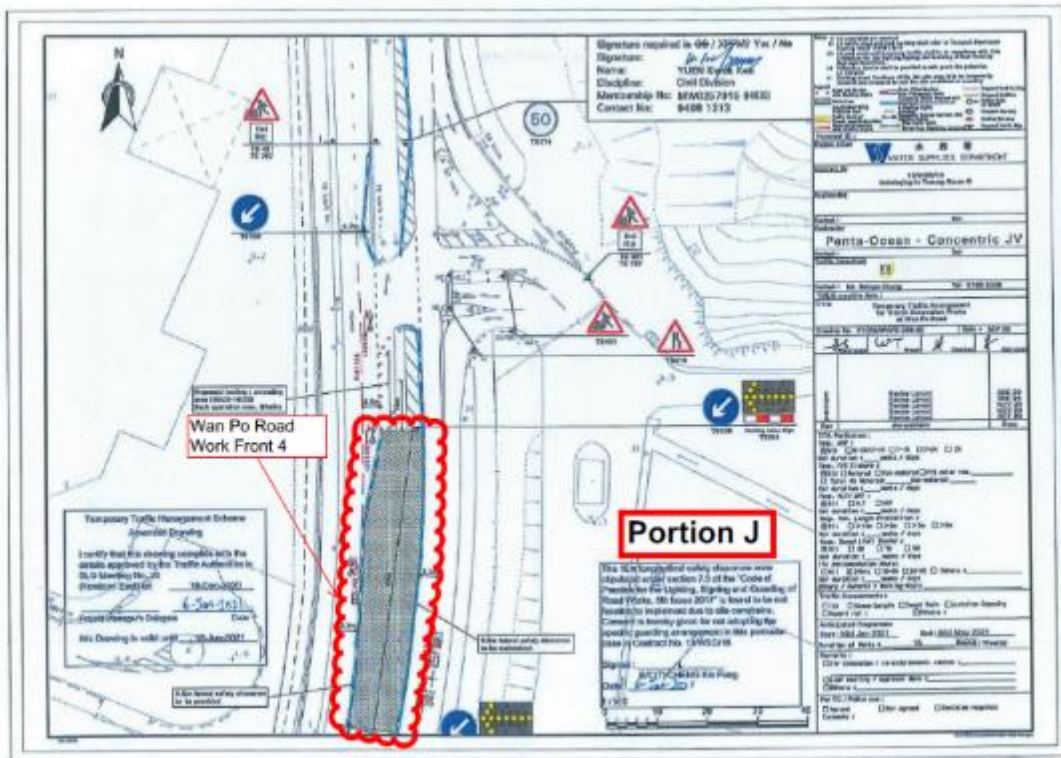


Figure B16. Location Plan for Wan Po Road 4

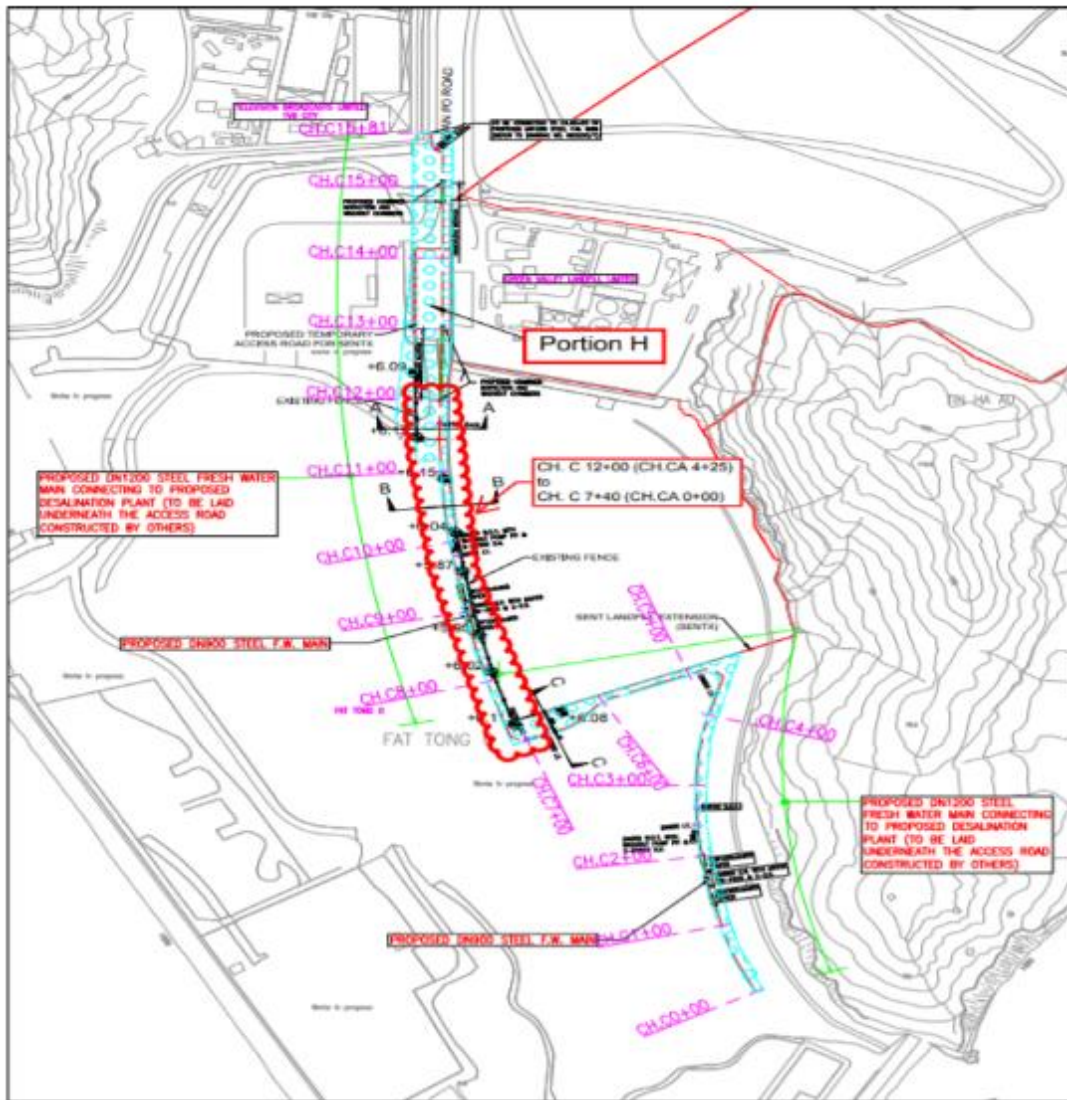


Figure B17. Location Plan for Portion H– CH.C 7+40~CH.C 12+00 (CH.CA 0+00 ~ CH.CA4+25)

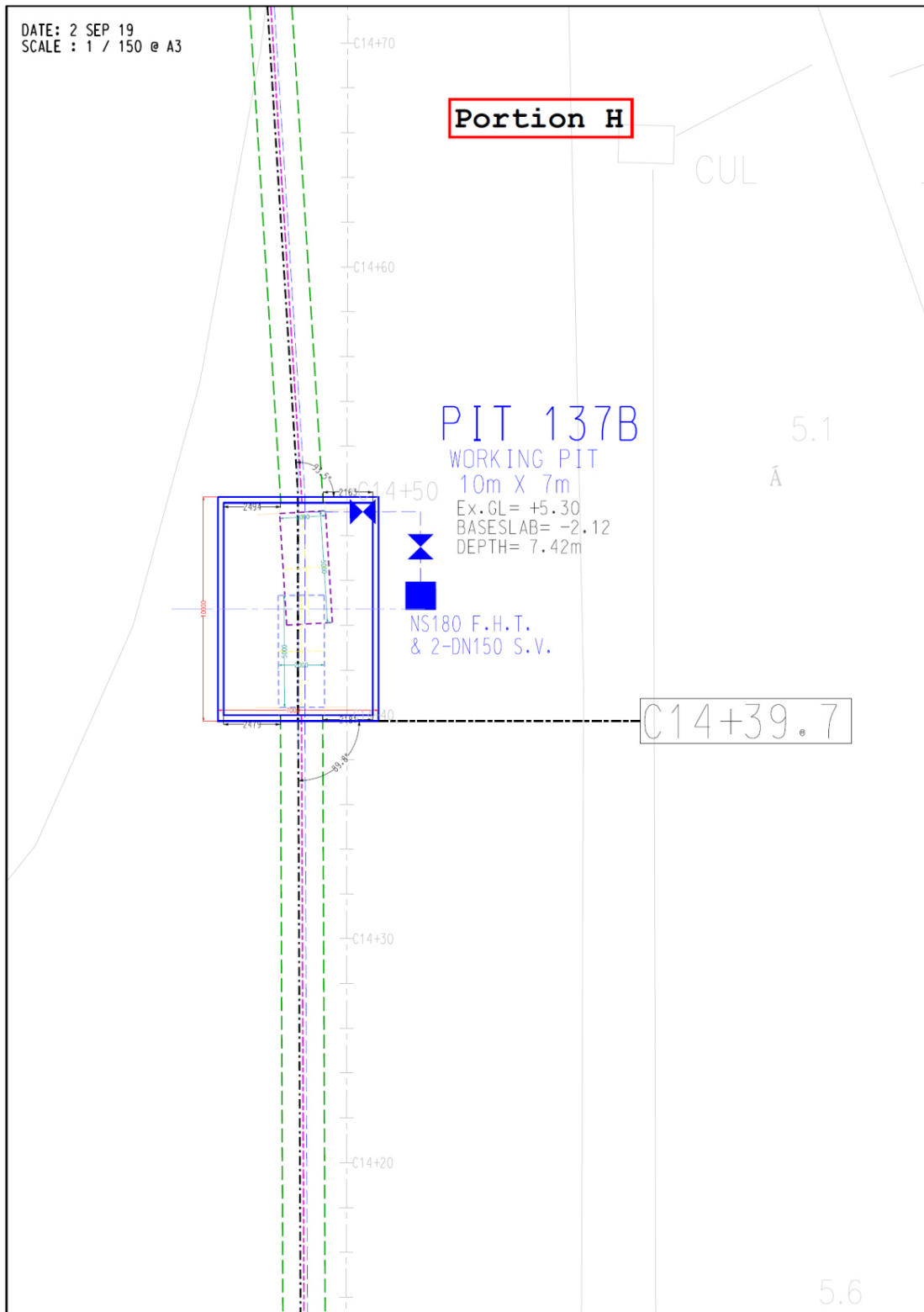


Figure B18. Location Plan for Portion H- Pit 137B

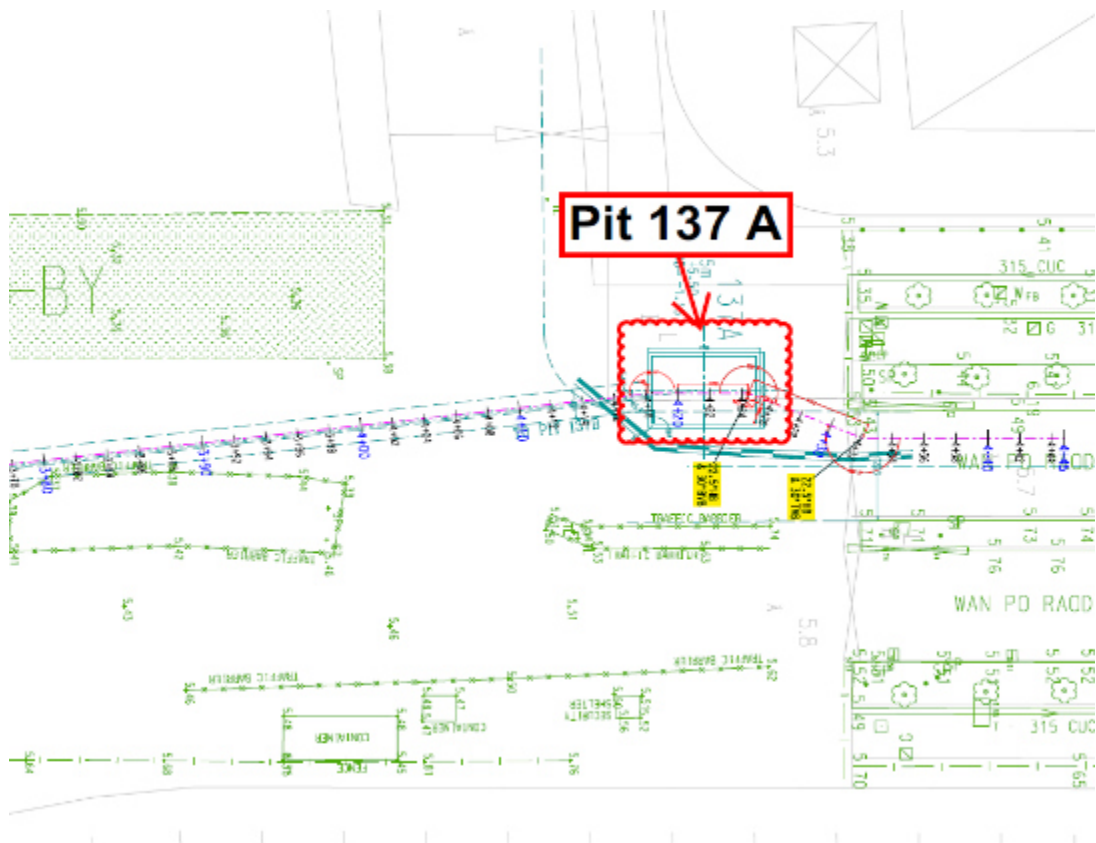


Figure B19. Location Plan for Portion H- Pit 137A

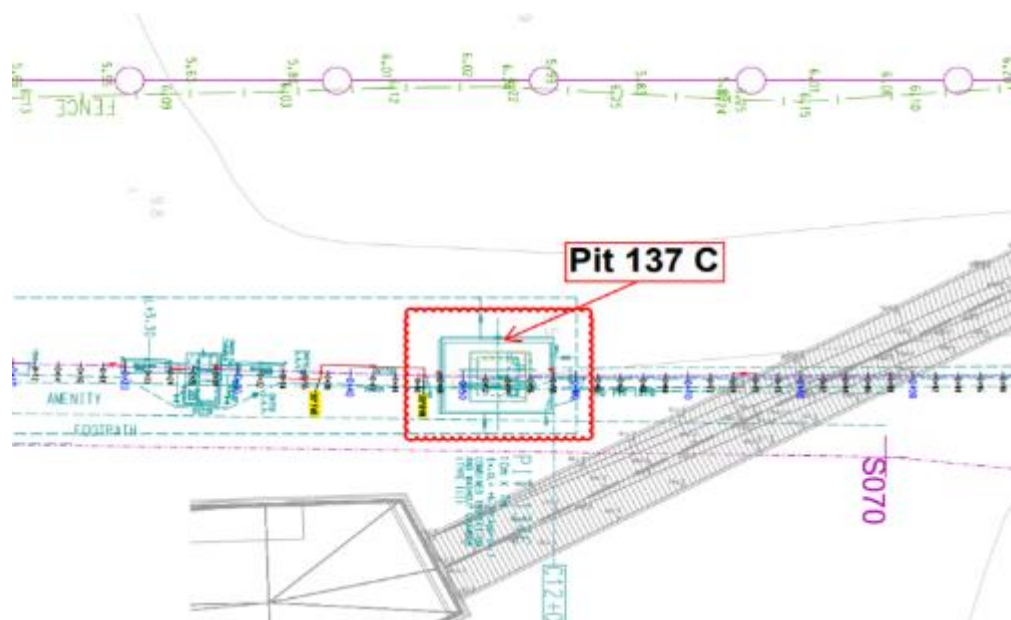


Figure B20. Location Plan for Portion H- Pit 137C

Appendix C

Summary of Implementation Status of Environmental Mitigation

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
Air Quality								
S4.8.1	Impervious dust screen or sheeting will be provided to enclose scaffolding from the ground floor level of building for construction of superstructure of the new buildings.	Land site/ During Construction	Contractor(s)		✓		N/A	Air Pollution Control (Construction Dust)
S4.8.1	Impervious sheet will be provided for skip hoist for material transport.	Land site/ During Construction, particularly dry season	Contractor(s)		✓		N/A	
S4.8.1	The area where dusty work takes place should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after dusty activities as far as practicable.	Land site/ During Construction	Contractor(s)		✓		Implemented	
S4.8.1	All dusty materials should be sprayed with water or a dust suppression chemical immediately prior to any loading, unloading or transfer operation.	Land site/ During Construction	Contractor(s)		✓		Implemented	
S4.8.1	Dropping heights for excavated materials should be controlled to a practical height to minimize the fugitive dust arising from unloading.	Land site/ During Construction	Contractor(s)		✓		Implemented	
S4.8.1	During transportation by truck, materials should not be loaded to a level higher than the side and tail boards and should be dampened or covered before transport.	Land site/ During Construction	Contractor(s)		✓		Implemented	
S4.8.1	Wheel washing device should be provided at the exits of the work sites. Immediately before leaving a construction site, every vehicle shall be washed to remove any dusty material from its body and wheels as far as practicable.	Land site/ During Construction	Contractor(s)		✓		Implemented	
S4.8.1	Road sections between vehicle-wash areas and vehicular entrance will be paved.	Land site/ During Construction	Contractor(s)		✓		N/A	
S4.8.1	Hoarding of not less than 2.4m high from ground level will be provided along the length of the Project Site boundary.	Land site/ During construction	Contractor(s)	✓	✓		Implemented	

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
S4.8.1	Haul roads will be kept clear of dusty materials and will be sprayed with water so as to maintain the entire road surface wet at all times.	Land site/ During construction	Contractor(s)		✓		Implemented	
S4.8.1	Temporary stockpiles of dusty materials will be either covered entirely by impervious sheets or sprayed with water to maintain the entire surface wet all the time.	Land site/ During construction	Contractor(s)		✓		Implemented	Air Pollution Control (Construction Dust)
S4.8.1	Stockpiles of more than 20 bags of cement, dry pulverised fuel ash and dusty construction materials will be covered entirely by impervious sheeting sheltered on top and 3-sides.	Land site/ During construction	Contractor(s)		✓		Implemented	
S4.8.1	All exposed areas will be kept wet always to minimize dust emission.	Land site/ During construction	Contractor(s)		✓		Implemented	
S4.8.1	Ultra-low-Sulphur diesel (ULSD) will be used for all construction plant on-site, as defined as diesel fuel containing not more than 0.005% Sulphur by weight) as stipulated in Environment, Transport and Works Bureau Technical Circular (ETWB-TC(W)) No 19/2005 on Environmental Management on Construction Sites.	Land site/ During construction/ During Operation	Contractor(s)		✓	✓	Implemented	Environment, Transport and Works Bureau Technical Circular (ETWB-TC(W)) No 19/2005 on Environmental Management on Construction Sites
S4.8.1	The engine of the construction equipment during idling will be switched off.	Land site/ During construction	Contractor(s)		✓		Implemented	-
S4.8.1	Concrete batching plant will be required on site. control measures recommended in the Guidance Note on a Best Practicable Means for Cement Works (Concrete Batching Plant) (BPM 3/2 (93)) will be implemented. The control measures recommended in the Guidance Note on a Best Practicable Means for Cement Works (Concrete Batching Plant) (BPM 3/2 (93)) will be implemented.	Land site/ During construction	Contractor(s)		✓		N/A	Guidance Note on a Best
S4.8.1	Regular maintenance of construction equipment deployed on-site will be conducted to prevent black smoke emission.	Land site/ During construction	Contractor(s)		✓		Implemented	-

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
S4.10	To ensure proper implementation of the recommended dust mitigation measures and good construction site practices during the construction phase, environmental site audits on weekly basis is recommended throughout the construction period.	Land site/ During construction	Contractor(s)/ (ET & IEC)		✓		Implemented	-

Note: D – Design stage C – Construction O – Operation

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
Noise								
S5.7	Only well-maintained plant will be operated on-site and plant will be serviced regularly during the construction phase.	All area/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Silencers or mufflers on construction equipment will be utilised and will be properly maintained during the construction phase.	Noise control/ During construction	Contractor(s)		✓		N/A	
S5.7	Mobile plant, if any, will be sited as far away from NSRs as possible.	Noise control/ During construction	Contractor(s)		✓		Implemented	
S5.7	Machines and plant (such as trucks) that may be in intermittent use will be shut down between work periods or will be throttled down to a minimum.	Noise control/ During construction	Contractor(s)		✓		Implemented	
S5.7	Plants known to emit noise strongly in one direction will, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.	Noise control/ During construction	Contractor(s)		✓		Implemented	
S5.7	Material stockpiles and other structures will be effectively utilised, wherever practicable, in screening noise from on-site construction activities.	Noise control/ During construction	Contractor(s)		✓		N/A	
S5.7	Use of Quite Powered Mechanical Equipment (QPME).	Noise control/ During construction	Contractor(s)		✓		Implemented	
S5.7	Movable noise barriers of 3m in height with skid footing should be used and located within a few metres of stationary plant and mobile plant such that the line of sight to the NSR is blocked by the barriers. The length of the barrier should be at least five times greater than its height. The noise barrier material should have a superficial surface density of at least 7 kg m ⁻² and have no openings or gaps.	Noise control/ During construction	Contractor(s)		✓		N/A	
S5.7	The noise insulating sheet should be deployed such that there would be no opening or gaps on the joints.	Noise control/ During construction	Contractor(s)		✓		N/A	
S5.7	Construction activities (e.g. excavation/shoring, reinstatement (asphalt), and pipe jacking) will be planned and carried out in sequence, such that items of PME proposed for these activities will not be operated simultaneously.	Noise control/ During construction	Contractor(s)		✓		Implemented	

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
S5.7	PMEs will not be used at the works areas near educational institutions with residual impact (i.e. the “influence area” within a radius of 40m) during school hours in order to reduce impact to the educational institutions.	Noise control / During construction	Contractor(s)		✓		Implemented	-
S5.7	Noise enclosures or acoustic sheds would be used to cover stationary PME such as generators. Portable/Movable noise enclosure made of material with superficial surface density of at least 7 kg m ⁻² may be used for screening the noise from operation of the saw/groover, concrete.	Noise control/ Pre-construction/ During construction	Contractor(s)	✓	✓		N/A	-
S5.9	Saw cutting pavement, breaking up of pavement, excavation /shoring, pipe laying, backfilling, reinstatement (concrete) and pipe jacking shall be scheduled outside the examination period.	Noise control/ Pre-construction/ During construction	Contractor(s)	✓	✓		Implemented	-
S5.9	In view the duration of noise exceedance at Creative Secondary School, PLK Laws Foundation College, TKO Kei Tak Primary School and School of Continuing and Professional Studies-CUHK is limited to 8 weeks, the construction work in the influence areas near the four schools shall be scheduled during long school holidays (e.g. summer holiday, Easter holiday or Christmas holiday, etc.) as far as practicable. Scheduling the construction work for the four schools.	Noise control/ Pre-construction/ During construction	Contractor(s)	✓	✓		Implemented	-
S5.10	A noise monitoring programme shall be implemented for the construction phase.	During construction phase	ET		✓		Implemented	-
S5.10	The effectiveness of on-site control measures could also be evaluated through the regular site audits.	All facilities/ During construction	Contractor(s)/ ET & IEC		✓		Implemented	-

Note: D – Design stage C – Construction O – Operation

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
Water Quality								
S6.9	Silt removal facilities such as silt traps or sedimentation facilities will be provided to remove silt particles from runoff to meet the requirements of the TM standard under the WPCO. The design of silt removal facilities will be based on the guidelines provided in ProPECC PN 1/94. All drainage facilities and erosion and sediment control structures will be inspected on a regular basis and maintained to confirm proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit will be removed regularly.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented after observation	ProPECC PN 1/94 TM Standard under the WPCO
S6.9	Earthworks to form the final surfaces will be followed up with surface protection and drainage works to prevent erosion caused by rainstorms.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	-
S6.9	Appropriate surface drainage will be designed and provided where necessary.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	-
S6.9	The precautions to be taken at any time of year when rainstorms are likely together with the actions to be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	ProPECC PN 1/94
S6.9	Oil interceptors will be provided in the drainage system where necessary and regularly emptied to prevent the release of oil and grease into the storm water drainage system after accidental spillages.	Land site & drainage/ During construction	Contractor(s)		✓		N/A	-
S6.9	Temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge, if any, will be adequately designed for the controlled release of storm flows.	Land site & drainage/ During construction	Contractor(s)		✓		N/A	-
S6.9	The temporary diverted drainage, if any, will be reinstated to the original condition when the construction work has finished or when the temporary diversion is no longer required.	Land site & drainage/ During construction	Contractor(s)		✓		N/A	-

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
S6.9	Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers over the construction site to prevent direct disposal of sewage into the water environment.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	-
S6.9 and S6.12	The sterilization water should be dechlorinated with total residual chlorine (TRC) level below 1 mg/L before discharge to public sewer. In situ testing of TRC should also be conducted for the discharge of chlorinated water for pipeline disinfection to ensure sufficient dechlorination before discharge to public sewer.	Sterilization of water mains prior to commissioning	Contractor(s)		✓	✓	N/A	Technical Memorandum for Effluents Discharged into Drainage and Sewerage Systems Inland and Coastal Waters
S6.9	The cleaning and flushing water should also be treated and desilted to the relevant discharge requirement stipulated in TM-DSS before discharging.	Sterilization of water mains prior to commissioning	Contractor(s)		✓	✓	N/A	
S6.9	Site drainage should be well maintained, and good construction practices should be observed to ensure that oil, fuels, solvents and other chemicals are managed, stored and handled properly and do not enter the nearby water streams.	Land site & drainage/ During construction/ During operation	Contractor(s)		✓	✓	Implemented after observation	-
S6.12	Regular site inspections will be carried out in order to confirm that regulatory requirements are being met and that contractors are implementing the standard site practice and mitigation measures as proposed to reduce potential impacts to water quality.	During construction	Contractor(s)/ ET & IEC		✓		Implemented	-

Note: D – Design stage C – Construction O – Operation

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation Status	Relevant Legislation & Guidelines
				D	C	O		
Waste Management								
S8.5	Nomination of approved personnel to be responsible for standard site practices, arrangements for collection and effective disposal to an appropriate facility of all wastes generated at the site.	Contract mobilization/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Training of site personnel in proper waste management and chemical handling procedures. Training will be provided to workers on the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling at the beginning of the construction works.	Contract mobilization/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Provision of sufficient waste disposal points and regular collection for disposal.	All area/ During construction/ During operation	Contractor(s)		✓	✓	Implemented	DEVB TC(W) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness.
S8.5	Appropriate measures to reduce windblown litter and dust transportation of waste by either covering trucks or by transporting wastes in enclosed containers.	All area/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness.
S8.5	A waste management plan (WMP) as stated in the "ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites" for the amount of waste generated, recycled and disposed of (including the disposal sites) will be established and implemented during the construction phase as part of the Environmental Management Plan (EMP). The Contractor will be required to prepare the EMP and submits it to the Architect/ Engineer under the Contract for approval prior to implementation.	All area/ During construction	Contractor(s)		✓		Implemented	ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites
S8.5	Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Centre at Tsing Yi.	All area/ During construction	Contractor(s)		✓		N/A.	Chapters 2 & 3 Code of Practice on the Packaging, Labelling & Storage of Chemical Wastes published under the Waste Disposal Ordinance (Cap 354), Section 35

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation Status	Relevant Legislation & Guidelines
				D	C	O		
S8.5	Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.	Land site/ During construction	Contractor(s)		✓		Implemented	Waste Disposal Ordinance (Cap 354)
S8.5	A recording system for the amount of wastes generated/ recycled and disposal sites. The trip- ticket system will be included as one of the contractual requirements and implemented by the contractor(s).	Land site/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S8.5	Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of material and their proper disposal.	Land site/ During construction/ During operation	Contractor(s)		✓		Implemented	WBTC 32/92, The Use of Tropical Hard Wood on Construction Site
S8.5	Encourage collection of aluminium cans and wastepaper by individual collectors during construction with separate labelled bins provided to segregate these wastes from other general refuse by the workforce.	Land site/ During construction	Contractor(s)		✓		Implemented	ETWB TCW No. 33/2002, Management of Construction and Demolition Material Including Rock
S8.5	Any unused chemicals and those with remaining functional capacity will be recycled as far as possible.	Land site/ During construction	Contractor(s)		✓		N/A	-
S8.5	Use of reusable non-timber formwork to reduce the amount of C&D materials.	All areas/ During construction	Contractor(s)		✓		N/A	WBTC 32/92, The Use of Tropical Hard Wood on Construction Site
S8.5	Prior to disposal of construction waste, wood, steel and other metals will be separated to the extent practical, for re-use and/or recycling to reduce the quantity of waste to be disposed of to landfill.	All areas/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S8.5	Proper storage and site practices to reduce the potential for damage or contamination of construction materials.	All areas/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Plan and stock construction materials carefully to reduce amount of waste generated and avoid unnecessary generation of waste.	All areas/ During construction	Contractor(s)		✓		Implemented	-
S8.5	The management of dredged/ excavated sediment management requirement from ETWB TC(W) No. 34/2002 will be incorporated in the Specification of the Contract Documents.	Marine works/ During construction	WSD/ Contractor(s)		✓		Implemented	ETWB TC(W) No. 34/2002 and Dumping at Sea Ordinance (DASO)

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation Status	Relevant Legislation & Guidelines
				D	C	O		
S8.5	The contractor will open a billing account with EPD in accordance with the Waste Disposal (Charges for Disposal of Construction Waste) Regulation for the payment of disposal charges.	Contract mobilisation/ During construction	Contractor(s)		✓		Implemented	Cap 354N Waste Disposal (Charges for Disposal of Construction Waste) Regulation
S8.5	A trip-ticket system will be established in accordance with DEVB TC(W) No. 6/2010 to monitor the reuse of surplus excavated materials off-site and disposal of construction waste and general refuse at transfer facilities/ landfills, and to control fly-tipping.	Contract mobilisation/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S8.5	The project proponent will also conduct regular inspection of the waste management measures implemented on site as described in the Waste Management Plan.	All area/ During construction	Contractor(s)/ ET & IEC		✓		Implemented	ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites
S8.5	A recording system (similar to summary table as shown in Annex 5 and Annex 6 of Appendix G of ETWB TC(W) No. 19/2005) for the amount of waste generated, recycled and disposed of (including the disposal sites) will be established during the construction phase.	All area/ During construction	Contractor(s)		✓		Implemented	Annex 5 and Annex 6 of Appendix G of ETWB TC(W) No. 19/2005
S8.5	Inert C&D materials (public fill) will be reused within the Project as far as practicable.	All area/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Public fill and construction waste shall be segregated and stored in different containers or skips to facilitate reuse or recycling of materials and their proper disposal.	All area/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Specific areas of the work site will be designated for such segregation and storage if immediate use is not practicable.	All area/ During construction	Contractor(s)		✓		Implemented	-
S8.5	To reduce the potential dust and water quality impacts of site formation works, C&D materials will be wetted as quickly as possible to the extent practice after filling.	All area/ During construction	Contractor(s)		✓		Implemented	Air Pollution Control (Construction Dust) Regulation (Cap 311R); WPCO (Cap 358)
S8.5	Open stockpiles of excavated/ fill materials or construction wastes on-site should be covered with tarpaulin or similar fabric.	Land site/ During Construction, particularly dry season	Contractor(s)		✓		Implemented	Air Pollution Control (Construction Dust) Regulation (Cap 311R)

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation Status	Relevant Legislation & Guidelines
				D	C	O		
S8.5	Chemical waste container shall be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented after observation	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Chemical waste container shall have a capacity of less than 450 L unless the specifications have been approved by the EPD.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	A label in English and Chinese shall be displayed on the chemical container in accordance with instructions prescribed in Schedule 2 of the Regulations.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	Storage areas for chemical waste shall be enclosed on at least 3 sides.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	Storage areas for chemical waste shall have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	Storage areas for chemical waste shall have adequate ventilation.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	Storage areas for chemical waste shall be covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary).	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	Storage areas for chemical waste shall be arranged so that incompatible materials are appropriately separated.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	General refuse will be stored in enclosed bins or compaction units separately from construction and chemical wastes.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented after reminder	
S8.5	Adequate number of waste containers will be provided to avoid over-spillage of waste.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation Status	Relevant Legislation & Guidelines
				D	C	O		
S8.5	A reputable waste collector will be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimise odour, pest and litter impacts.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	-
S8.5	Recycling bins will be provided at strategic locations within the Site to facilitate recovery of recyclable materials (including aluminium can, waste paper, glass bottles and plastic bottles) from the Site. Materials recovered will be sold for recycling.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	-
S8.5	To avoid any odour and litter impact, accurate number of portable toilets will be provided for workers on-site.	All area/ During construction	Contractor(s)		✓		Implemented	-
S8.5	The burning of refuse on construction sites is prohibited by law.	All area/ During construction	Contractor(s)		✓		Implemented	Air Pollution Control Ordinance (Cap 311)
S8.7	To facilitate monitoring and control over the contractors' performance on waste management, a waste inspection and audit programme will be implemented throughout the construction phase.	All facilities/ During construction	ET/ IEC		✓		Implemented	-

Note: D – Design stage C – Construction O – Operation

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation Status	Relevant Legislation & Guidelines
				D	C	O		
Ecology								
S9.7	Erect fences along the boundary of the works area before the commencement of works to prevent vehicle movements and encroachment of personnel onto adjacent areas.	All area/ During construction	Contractor(s)		✓		Implemented	-
S9.7	Regularly check the work site boundaries to ensure that they are not breached, and that damage does not occur to surrounding areas.	All area/ During construction	Contractor(s)/ Environmental Team (ET)		✓		Implemented	-
S9.7	Avoid any damage and disturbance, particularly those caused by filling and illegal dumping, to the surrounding habitats through proper management of waste disposal.	All area/ During construction	Contractor(s)		✓		Implemented	-
S9.7	Reinstate temporarily affected areas, particularly the habitats of plantation and shrubland-grassland immediately after completion of construction works, through on-site tree/shrub planting. The tree/shrub species will be chosen with reference to those in the surrounding area.	All area/ During construction	Contractor(s)		✓		N/A	-

Note: D – Design stage C – Construction O – Operation

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation Status	Relevant Legislation & Guidelines
				D	C	O		
Landscape & Visual								
S11.10 & 11.11	The construction area and area allowed for temporary structures, such as the contractor's office, will be minimized to a practical minimum. (MM1)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	-
S11.10 & 11.11	At the detailed design stage, the design team will seek to minimize the landscape footprint of the Project and above ground facilities, while satisfying all other requirements. (MM2)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	-
S11.10 & 11.11	Design principles will be adopted to take into account the surrounding area, particularly Clear Water Bay Country Park behind and the nearby waterfront, with due consideration given to: - roadside planting; - aesthetic treatment of all structures; - vertical greening; - screen planting along application site; and - landscape enhancement with amenity planting where practical including planting along the edge (site boundary) fence with native shrubs where feasible to reduce their visual impact and blend them into the surrounding landscape.(MM3)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	-
S11.10 & 11.11	All trees within the Project Site or the potential slope mitigation works area will be carefully protected during construction according to DEVB TCW No. 10/2013 – Tree Preservation (MM4)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented after reminder	ETWB TCW No. 3/2006 - Tree Preservation.
S11.10 & 11.11	No tree within the Country Park will be felled. Trees within the Site unavoidably affected by the works will be transplanted where necessary and practical. For trees that need to be felled, compensatory planting will be provided to the satisfaction of relevant Government departments. A compensatory tree planting proposal including locations of tree compensation will be submitted to seek relevant government department's approval, in accordance with DEVB TC(W) No. 10/2013. (MM5)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	N/A	DEVB TC(W) No. 10/2013

Note: D – Design stage C – Construction O – Operation

EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation Status	Relevant Legislation & Guidelines
				D	C	O		
Landfill Gas Hazard								
S12.7	During all works, safety procedures should be implemented to minimise the risks of fires and explosions, asphyxiation of workers and toxicity effects resulting from contact with contaminated soil and groundwater.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	-
S12.7	During trenching and excavation as well as creation of confined spaces at near to or below ground level, precautions should be clearly laid down and rigidly Gas detection equipment and appropriate breathing apparatus should be available and used when entering confined spaces or trenches deeper than 1 metre.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	The Contractor should make the workers are aware of potential hazards of working in confined spaces (any chamber, manhole or culvert which is large enough to permit access to personnel). Such work in confined spaces is controlled by the Factories and Industrial Undertakings (Confined Spaces) Regulations of the Factories and Industrial Undertakings Ordinance. Following the Safety Guide to Working in Confined Spaces ensures compliance with the above regulations.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	Safety officers, specifically trained with regard to landfill gas and leachate related hazards and the appropriate actions to take in adverse circumstances, should be present on the site throughout the works, in particular, when works are undertaken below grade.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	All personnel who work on site and all visitors to the site should be made aware of the possibility of ignition of gas in the vicinity of the works, the possible presence of contaminated water and the need to avoid physical contact with it.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	Monitoring for landfill gas should be undertaken in all excavations, manholes, chambers (particularly during pipe jacking) and any confined spaces through the use of an intrinsically safe portable instrument, appropriately calibrated and capable of measuring the concentrations	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	

	of methane, carbon dioxide and oxygen.						
S12.7	Monitoring frequency and areas to be monitored should be specified prior to commencement of groundwork, either by the Safety Officer, or by an appropriately qualified person. All measurements should be recorded and documented.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented
S12.7	Proceed drilling with adequate care and precautions against the potential hazards which may be encountered.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented
S12.7	Prior to the commencement of the site works, the drilling contractor should devise a 'method-of- working' statement covering all normal and emergency procedures (including but not limited to number of operatives, experience and special skills of operatives, normal method of operations, emergency procedures, supervisors' responsibilities, storage and use of safety equipment, safety procedures and signs, barriers and guarding). The site supervisor and all operatives must be familiar with this statement.	All area/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented
S12.7	Where below ground service entries are necessary to the Incoming Switchgear Room, 132 kV Substation and Chlorine Store (I) and (II), the entry point should be sealed to prevent gas entry. In addition, any below grade cable trenches entering the Incoming Switchgear Room and 132 kV Substation can become the pathway for landfill gas and hence gridded metal covers should be used.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	N/A
S12.7	It is recommended regular landfill gas monitoring should be carried out at the Incoming Switchgear Room, 132 kV Substation and Chlorine Store (I) and (II). The monitoring frequency will be monthly for the first year of operation. If the monitoring results show no sign of landfill gas migration, reduce the monitoring frequency to once every six months.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	N/A
S12.7	The manholes and utility pits within the Project Site and along the fresh water mains. Each manhole/ utility pit should be monitored with two measurements (at mid depth and base). Each measurement should be monitored for a minimum of 10 minutes. A steady reading and peak reading should be recorded at each manhole/ utility pit	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented

	and for each measurement. The need for venting the manhole/ utility pit and further monitoring will be reviewed after the initial monitoring.							
S12.7	All construction, operation and maintenance personnel working on-site as well as visitors should be made aware of the hazards of landfill gas and its possible presence on-site. This should be achieved through a combination of posting warning signs in prominent places and also by access to detailed information on landfill gas hazards and the designs and procedural means by which these hazards are being minimized on-site.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	

Appendix D

Impact Monitoring Schedule of the Reporting Month

Contract No. 13/WSD/16
Mainlaying in Tseung Kwon O
Environmental Monitoring Schedule (April 2023)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4 Impact Noise Monitoring	5	6	7	8
9	10	11	12	13	14	15 Impact Noise Monitoring
16	17	18	19	20	21 Impact Noise Monitoring	22
23	24	25	26	27 Impact Noise Monitoring	28	29
30						

Appendix E

Noise Monitoring Equipment Calibration Certificate



Certificate of Calibration

for

Description: *Sound Level Meter*
Manufacturer: *SVANTEK*
Type No.: *971 (Serial No.: 96062)*
Microphone: *ACO 7052 E (Serial No.:79778)*
Preamplifier: *SVANTEK SV 18 (Serial No.:97276)*

Submitted by:

Customer: *Acuity Sustainability Consulting Limited*
Address: *Unit E, 12/F., Ford Glory Plaza,
Nos. 37-39 Wing Hong Street,
Cheung Sha Wan, Kowloon, Hong Kong*

Upon receipt for calibration, the instrument was found to be:

- Within (31.5 Hz to 4k Hz)**
 Outside

the allowable tolerance.

The test equipment used for calibration are traceable to National Standards via:


- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 21 June 2022

Date of calibration: 27 June 2022

Date of NEXT calibration: 26 June 2023

Calibrated by: 
_____ **Calibration Technician**

Certified by: 
_____ **Mr. Tang Cheuk Hang**
Quality Manager

Date of issue: 27 June 2022

Certificate No.: APJ22-029-CC002



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Calibration Precaution:

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

1. Calibration Conditions:

Air Temperature: 24.2 °C
 Air Pressure: 1004 hPa
 Relative Humidity: 60.8 %

2. Calibration Equipment:

	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV200041	HOKLAS

3. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)				Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
25-124.5	dBA SPL	Fast	94	1000	94.0	±0.4	

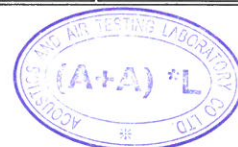
Linearity

Setting of Unit-under-test (UUT)				Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
25-124.5	dBA SPL	Fast	94	1000	94.0	Ref	
			104		104.0	±0.3	
			114		114.0	±0.3	

Time Weighting

Setting of Unit-under-test (UUT)				Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
25-124.5	dBA SPL	Fast	94	1000	94.0	Ref	
		Slow			94.0	±0.3	

Certificate No.: APJ22-029-CC002



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Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB	
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
25-124.5	dB	SPL	Fast	94	31.5	94.3	±2.0
					63	94.2	±1.5
					125	94.1	±1.5
					250	94.1	±1.4
					500	94.0	±1.4
					1000	94.0	Ref
					2000	93.7	±1.6
					4000	93.1	±1.6

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB	
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
25-124.5	dBA	SPL	Fast	94	31.5	54.9	-39.4±2.0
					63	68.0	-26.2±1.5
					125	78.0	-16.1±1.5
					250	85.4	-8.6±1.4
					500	90.8	-3.2±1.4
					1000	94.0	Ref
					2000	94.9	+1.2±1.6
					4000	94.2	+1.0±1.6

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB	
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
25-124.5	dBC	SPL	Fast	94	31.5	91.3	-3.0±2.0
					63	93.4	-0.8±1.5
					125	93.9	-0.2±1.5
					250	94.1	-0.0±1.4
					500	94.1	-0.0±1.4
					1000	94.0	Ref
					2000	93.6	-0.2±1.6
					4000	92.4	-0.8±1.6

4. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.15
	63 Hz	± 0.05
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.10
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)*L shall not be liable for any loss or damage resulting from the use of the equipment.



CALIBRATION CERTIFICATE

Product : SOUND CALIBRATOR
 Type : NC-75
 Serial number : 34524163
 Manufacturer : RION CO., LTD.
 Calibration quantities : Sound pressure level (with reference standard microphone)
 Calibration method : Measured by specified secondary standard microphone
 according to JCSS calibration procedure specified by RION.
 Ambient conditions : Temperature 23.4 °C, Relative humidity 48 %,
 Static pressure 100.9 kPa
 Calibration date : 09/05/2022 (DD/MM/YYYY)
 Calibration location : 3-20-41 Higashimotomachi, Kokubunji, Tokyo 185-8533, Japan
 RION CO., LTD. Calibration Room

We hereby certify that the results of this calibration were as follows.

Issue date : 12/05/2022 (DD/MM/YYYY)

Junichi Kawamura
 Manager
 Quality Assurance Section,
 Quality Assurance Department,
 Environmental Instrument Division,
 RION CO., LTD.
 3-20-41 Higashimotomachi, Kokubunji,
 Tokyo 185-8533, Japan



This certificate is based on article 144 of the Measurement Law and indicates the result of calibration in accordance with measurement standards traceable to Primary Measurement Standards (National Standards) which realizes the physical units of measurement according to the International System of Units (SI).

The accreditation symbol is attestation of which the result of calibration is traceable to Primary Measurement Standards (National Standards).

The certificate shall not be reproduced except in full, without the written approval of the issuing laboratory.

The calibration laboratory who issued this calibration certificate conforms to ISO/IEC 17025:2017.

This calibration certificate was issued by the calibration laboratory accredited by IAJapan who is a signatory to the Mutual Recognition Arrangement (MRA) of International Laboratory Accreditation Cooperation (ILAC) and Asia Pacific Accreditation Cooperation (APAC). This (These) calibration result(s) may be accepted internationally through ILAC/APAC MRA.

CALIBRATION RESULT

1. Sound pressure level (with reference standard microphone)

Measured value	Expanded uncertainty *1
93.98 dB	0.09 dB

Specified secondary standard microphone:

Type : 4160

Serial number : 2973341

Reference Sound pressure : 2×10^{-5} Pa

*1 Defines an interval estimated to have a level of confidence of approximately 95 %.

Coverage factor $k=2$

Calibration result is the calibration value in ambient conditions during calibration.

BE OUT OF JCSS CALIBRATION

1. Frequency

Measured value	Measurement uncertainty ($k=2$)
1000.0 Hz	3.9×10^{-4} Hz

Working measurement standard universal counter:

Type : 53132A

Serial number : MY40005574

(JCSS Calibration Certificate No. 21081499079575510)

2. Total distortion

Measured value
0.3 %

Working measurement standard distortion meter:

Type : VA-2230A

Serial number : 11076061

(A2LA Calibration Certificate No. 1501-03080)

- closing -



Certificate of Conformity

This instrument was produced under rigorous factory production control and documented standard procedures. It was individually inspected and leak tested and the functioning of the display, backlight, buttons and firmware was verified. The accuracy of each of its primary measurements was individually calibrated and/or validated against standards traceable to the National Institute of Standards and Technology (“NIST”) or other calibrated standards in accordance with the documented standard test methods detailed below. This instrument is warranted to perform in compliance with the published specifications for the specific measurements and features of its model number including specified typical drift since its date of manufacture. (See *Kestrel Limited Warranty for full warranty terms.*)

Standards Used in Testing

Wind Speed:

The Kestrel Weather & Environmental Meter impeller installed in this unit was individually tested in a subsonic wind tunnel operating at approximately 300 fpm (1.5 m/s) and 1200 fpm (6.1 m/s) monitored by a Gill Instruments Model 1350 ultrasonic time-of-flight anemometer. The Gill 1350 is calibrated regularly and is traceable to NIST with a maximum combined uncertainty of $\pm 1.04\%$ within the airspeed range 711.4 to 3930 fpm (3.61 to 19.96 m/s), and $\pm 1.66\%$ within the airspeed range 170 to 711.4 fpm (0.86 to 3.61 m/s).

Temperature:

Temperature response is verified in comparison with an Ametek DTI-050 Digital Temperature Indicator and STS Reference Sensor. The DTI-050 is calibrated annually and is traceable to NIST with a maximum relative expanded uncertainty of $\pm 0.04\text{C}$.

Relative Humidity:

Relative humidity is verified in comparison with an Edgetech HT120 Humidity Transmitter. The HT120 is calibrated annually and is traceable to NIST with a maximum relative expanded uncertainty of $\pm 1.0\%RH$.

Barometric Pressure:

Pressure response is verified against a Vaisala PTB210A Digital Barometer. The Vaisala Barometer is calibrated annually and is traceable to NIST with a maximum relative expanded uncertainty of $\pm 0.3hPa$.

Approved By:

Michael Naughton
Chief Product Officer, Nielsen-Kellerman

Product Specifications for Kestrel Weather Meters, Model Numbers 1000-3500

SENSORS

SENSOR	ACCURACY (+/-)	RESOLUTION	SPECIFICATION RANGE	NOTES
Wind Speed Air Speed	Larger of 3% of reading, least significant digit or 20 ft/min	0.1 m/s 1 ft/min 0.1 km/h 0.1 mph 0.1 knots 1 B	0.6 to 40.0 m/s 118 to 7,874 ft/min 2.2 to 144.0 km/h 1.3 to 89.5 mph 1.2 to 77.8 knots 0 to 12 B	1 inch 25 mm diameter impeller with precision axle and low-friction Zytel® bearings. Startup speed stated as lower limit, readings may be taken down to 0.4 m/s 79 ft min 1.5 km/h .9 mph .8 kt after impeller startup. Off-axis accuracy -1% @ 5° off axis; -2% @ 10°; -3% @ 15°. Calibration drift < 1% after 100 hours use at 16 MPH 7 m/s. Replacement impeller (NK PN-0801) field installs without tools (US Patent 5,783,753). Wind speed calibration and testing should be done with triangle on impeller located at the top front face of the Kestrel. Measuring wind speeds above 60 m/s / 134.2 mph can damage the impeller.
Ambient Temperature	0.9 °F 0.5 °C	0.1 °F 0.1 °C	-20.0 to 158.0 °F -29.0 to 70.0 °C	Airflow of 2.2 mph 1 m/s or greater provides fastest response and reduction of insulation effect. For greatest accuracy, avoid direct sunlight on the temperature sensor and prolonged sunlight exposure to the unit in low airflow conditions. Calibration drift is negligible for the life of the product. For further details, see Display & Battery Operational Temperature Limits.
Relative Humidity	3%RH	0.1 %RH	5 to 95% 25°C non-condensing	To achieve stated accuracy, unit must be permitted to equilibrate to external temperature when exposed to large, rapid temperature changes and be kept out of direct sunlight. Calibration drift is typically less than ±0.25% per year.
Pressure	1.5 hPa mbar 0.044 inHg 0.022 PSI	0.1 hPa mbar 0.01 inHg 0.01 PSI	25°C/77°F 750-1100 hPa mbar 22.15-32.48 inHg 10.88-15.95 PSI	Monolithic silicon piezo-resistive pressure sensor with second-order temperature correction. Between 1100-1600 mbar, unit will operate with reduced accuracy. Sensor may not operate above 1600 mbar and can be damaged above 6,000 mbar or below 10 mbar. Calibration drift is negligible for the life of the product.

CALCULATED MEASUREMENTS

MEASUREMENT	ACCURACY (+/-)	RESOLUTION	SENSORS EMPLOYED
Altitude	typical: 23.6 ft/7.2 m from 750 to 1100 mBar max: 48.2 ft/14.7 m from 300 to 750 mBar	1 ft 1 m	Pressure, User Input (Reference Pressure)
Barometric Pressure	0.07 inHg 2.4 hPa mbar 0.03 PSI	0.01 inHg 0.1 hPa mbar 0.01 PSI	Pressure, User Input (Reference Altitude)
Delta T	3.2 °F 1.8 °C	0.1 °F 0.1 °C	Temperature, Relative Humidity, Pressure
Dew Point	3.4 °F 1.9 °C 15-95% RH. Refer to Range for Temperature Sensor	0.1 °F 0.1 °C	Temperature, Relative Humidity
Heat Index	7.1°F 4.0°C	0.1 °F 0.1 °C	Temperature, Relative Humidity
Wet Bulb Temperature - Psychrometric	3.2 °F 1.8 °C	0.1 °F 0.1 °C	Temperature, Relative Humidity, Pressure
Wind Chill	1.6 °F 0.9 °C	0.1 °F 0.1 °C	Wind Speed, Temperature

ADDITIONAL PRODUCT INFO

Display	Reflective LCD
Backlight	Standard or dim red (NV models only) backlight. Manual activation with auto-off.
Response Time & Display Update	Display updates every 1 second. After exposure to large environmental changes, all sensors require an equilibration period to reach stated accuracy. Measurements employing RH may require longer periods particularly after prolonged exposure to very high or very low humidity.
Auto Shutdown	After 45 minutes with no key presses.
Clock	Real Time Hour:Minute Display
Certifications	CE certified, RoHS and WEEE compliant. Individually tested to NIST-traceable standards.
Origin	Designed and manufactured in the USA from US and imported components. Complies with Regional Value Content and Tariff Code Transformation requirements for NAFTA Preference Criterion B.
Bluetooth® Data Connect	Wireless range up to 100ft. Employs Kestrel Link protocol for data transmission with Kestrel Link Ballistics App. (iOS/Android)
Battery	Requires one CR2032 battery, included. Up to 300 hours of use, reduced by backlight or Bluetooth use.
Shock Resistance	MIL-STD-810g, Transit Shock, Method 516.7 Procedure IV; unit only; impact may damage replaceable impeller.
Sealing	Waterproof (IP67 and NEMA-6)
Display & Battery Operational Temperature Limits	14° F to 131° F -10 °C to 55 °C Measurements may be taken beyond the limits of the operational temperature range of the display and batteries by maintaining the unit within the operational range and then exposing it to the more extreme environment for the minimum time necessary to take reading.
Storage Temperature	-22.0 °F to 140.0 °F -30.0 °C to 60.0 °C.
Size & Weight	4.8 x 1.9 x 1.1 in 12.2 x 4.8 x 2.8 cm, 3.6 oz 102 g (Including slip-on cover).

*Note: Accuracy calculated as uncertainty of the measurement derived from statistical analysis considering the combined effects from primary sensor specifications, circuit conversions, and all other sources of error using a coverage factor of k=2, or two standard deviations (2σ)

**Note: For Kestrel 1000, 2000, 2500, 3000, 3500 series these specifications are valid for units with a serial number higher than 2262687. If your product has a lower serial number, please reference the K4000 specifications 329011.

Appendix F

Event / Action Plan for Noise Exceedance

Event and Action Plan for Construction Noise Monitoring

Event	Action			
	ET	IEC	ER	Contractor
Action Level	<ol style="list-style-type: none"> Carry out investigation to identify the source and cause of the complaint/ exceedance(s) Notify IEC, ER, and Contractor and report the results of investigation to the Contractor, ER and the IEC Discuss with the Contractor and IEC for remedial measures required If the complaint is related to the Project, conduct additional monitoring for checking mitigation effectiveness and report the findings and results to the IEC, ER and the Contractor 	<ol style="list-style-type: none"> Review the analyzed results submitted by the ET Review the proposed remedial measures by the Contractor and advise the ER accordingly Supervise the implementation of remedial measures 	<ol style="list-style-type: none"> Confirm receipt of Notification of Exceedance in writing Require Contractor to propose remedial measures for the analysed noise problem Ensure remedial measures are properly implemented 	<ol style="list-style-type: none"> Submit noise mitigation proposals, if required, to the IEC and ER Implement noise mitigation proposals.
Limit Level	<ol style="list-style-type: none"> Notify IEC, ER, EPD and Contractor Identify the source(s) of impact by reviewing all the relevant monitoring data and the corresponding construction activities. Exceedances should also be confirmed by immediate verification in the field as far as practical. Repeat measurement to confirm findings Increase monitoring frequency Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented. inform IEC, ER and EPD the cause & actions taken for the exceedances Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> Discuss amongst ER, ET, and Contractor on the potential remedial actions Review Contractor's remedial actions to assure their effectiveness and advise the ER & ET accordingly Supervise the implementation of the remedial measures 	<ol style="list-style-type: none"> Confirm receipt of notification of exceedance in writing Notify Contractor Require Contractor to propose remedial measures for the analyzed noise problem Ensure remedial measures are properly implemented If exceedance continuous, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is aborted 	<ol style="list-style-type: none"> Take immediate action to avoid further exceedance Identify practicable measures to minimize the noise impact. Submit proposals for remedial actions to ER within three working days of notification Implement the agreed proposals Resubmit proposal if problem still not under control Stop the relevant portion of works as determined by the ER until the exceedance is abated

Appendix G

Noise Monitoring Data

Table G 1 Summary of Noise Monitoring Result

Date	Time	Weather	Leq-5min, dB(A)						Leq-30min, dB(A)	L10-30mins, dB(A)	L90-30mins dB(A)	Limit Level, dB(A)*	Noise Meter
			Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)					
04/04/2023	10:49 - 11:19	Cloudy	68.3	68.9	68.1	67.6	68.9	68.1	68.3	74.3	63.3	70.0	Svantek 971
15/04/2023	11:15 - 11:45	Fine	67.7	69.1	68.2	69.3	66.8	67.9	68.2	71.9	58.9	70.0	Svantek 971
21/04/2023	12:28 - 12:58	Cloudy	68.2	68.1	65.9	66.6	65.2	67.0	67.0	74.0	63.5	70.0	Svantek 971
27/04/2023	11:59 - 12:29	Sunny	67.5	68.8	65.7	67.1	66.3	67.4	67.2	73.7	63.2	70.0	Svantek 971

Remarks:

*No examinations were scheduled for NSR4 Creative Secondary School in the reporting month.

Appendix H

Waste Flow Table

Appendix H – Waste Flow Table

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of Non-C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Project	Disposed as Public Fill	Imported Fill	Metals	Paper / Cardboard packaging	Plastics	Chemical Waste	Other, e.g., general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in'000kg)	(in'000kg)	(in'000kg)	(in'000kg)	(in '000m ³)
Jan 2023	0.542	0.015	0.122	--	0.420	0.389	--	0.052	--	--	0.002
Feb 2023	1.213	0.076	0.206	--	1.007	1.044	--	0.055	--	--	0.000
Mar 2023	1.093	0.045	0.188	--	0.905	1.382	--	0.059	--	--	0.005
Apr 2023	1.484	0.000	0.363	--	1.121	1.796	--	0.056	--	--	0.001
May 2023											
Jun 2023											
Sub-total	4.332	0.136	0.879	0.000	3.453	4.611	0.000	0.222	0.000	0.000	0.008
Jul 2023											
Aug 2023											
Sep 2023											
Oct 2023											
Nov 2023											
Dec 2023											
Total	4.332	0.136	0.879	0.000	3.453	4.611	0.000	0.222	0.000	0.000	0.008

Notes:

- 1) Total quantity Generated only refers to the actual Quantitates of inert C&D materials generated monthly excluding those that will be recycled (Hard rock & large broken concrete, reused in contract and reused in another contract). Imported fill will not be included in total quantity generated as those C&D materials are not generated from this project.
- 2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- 3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.

Appendix I

Landfill Gas Monitoring Equipment Calibration Certificate



路達國際有限公司

ROTTER INTERNATIONAL LIMITED

香港新界葵涌葵昌路58-70號永祥工業大廈10樓B室

Unit B, 10/F., Wing Cheung Industrial Building, 58-70 Kwai Cheong Road, Kwai Chung, New Territories, HK

Tel: (852) 2751 7770 Fax: (852) 2756 2051 E-mail: rotter@rotter.com.hk

Calibration Report - Gas Detector

PGM-2500 (QRAE III) --- LEL/O2/CO/H2S

UNIT INFORMATION :

Customer:	Penta Ocean Construction Co Ltd	Serial #:	M02A001708	Model:	QRAE III
		Firmware:	V2.12	Sensor:	LEL/O2/CO/H2S
		Cal date:	28-Jul-2022	Inspected:	Teddy

SENSOR DATA :

	LEL sensor (ME)	O2 sensor	CO sensor (Tox1)	H2S sensor (Tox2)
Calibration dates:	28-Jul-2022	28-Jul-2022	28-Jul-2022	28-Jul-2022
After Calibration levels:	50%	18.00%	50 ppm	10.0 ppm
Alarm levels (Low):	10.00%	19.50%	35 ppm	10 ppm
Alarm levels (High):	20.00%	23.50%	200 ppm	20 ppm
TWA Level :	--	--	35 ppm	10 ppm
STEL Level :	--	--	100 ppm	15 ppm

Status:

Pump Speed	Low	Back Light	Manual
Clock	Yes	Measure	Average

LEL Gas Selection

LEL Calibration Gas	Methane	LEL measurement Gas	Methane
LEL Custom Gas	LEL_custom_gas	LEL Custom Factor	1.0

Gas types used : 4-Gas Mix: (18% O2, 50ppm CO, 10ppm H2S, 50% LEL CH4, BAL N2) Gas lot #WO350201-3

*** Fresh Air Calibration is highly recommended to proceed prior for measurement each time.

Replaced Parts:

Notes:

The unit was calibrated and checked under good working condition

**Next calibration due on or before 27 July 2023

Serviced by Teddy Wong
Rotter International Ltd



PROMAT (HK) LTD

寶時(香港)有限公司

901 New Trend Centre, 704 Prince Edward Road East, San Po Kong, Kowloon, HK
Tel.: 2661 2392 Fax.: 2661 2086 email : sales@promat.hk http://www.promat.hk/



Your Solution To Testing Instrument

VERIFICATION CERTIFICATE OF CO2 Analyzer

Report No. : 22040
Date : 17/11/2022
Client : Penta Ocean Concentric JV

EQUIPMENT TO BE VERIFIED

Equipment Name : CO2 Analyzer
Supplier : TES
Model No. : 1307H
Serial No. : 200901259
Date of Verification : 17/11/2022
Due Verification : 16/11/2023

VERIFICATION DEVICES USED

Reference Equipment	: CO2 in N2	CO2 in N2
Supplier	: NorLab	NorLab
Model No.	: H1013500PN	H1013.3VN
Lot #	: 0-353-790	1-006-27
Expiry date	: 12/2/2024	10/3/2025
Accuracy	: Within +/-2%	Within +/-2%

ENVIRONMENTAL CONDITION

Ambient Temp : 25°C
Relative Humidity : 57%

Verification Result

Test Number	Concentration (Mole%)	Results
Test 1	500ppm	505ppm
Test 2	0.50%	0.52%

Remarks

- 1 The Gas reference used in this verification has traceable accuracy to Manufacturer Standard
- 2 The above equipment was operated by the competent person
- 3 Promat is Registered ISO9001:2015 Quality Management System in Sales, Repair and Calibration Services

Certification

Verification by


Ms. Ning Lee / Service Coordinator

Checked by


Mr. Hei Kong / Technical Engineer



Calibration Certificate

Cert. Ref. No.: BW/XT/3RD/17974

Date: 2022 09 02

Customer: Renopipe Construction Company Limited

Purchase Order No.: SME-C-20-21-6/2020-76554

九龍觀塘海濱道133號萬兆豐中心6樓K2室

Date: 2020 07 07 INVOICE NO: AP

Email: damonhuang@renopipe.com.hk

Attn: Damon Huang

Tel: 3998 3193

Fax: 3998 3225

Mobile Phone

User Details:

Gas Detector Model: XT-XWHM-Y-OR

Serial No.: MA220-012709

Pump S/N: 420373

Calibration Record:

Inpection before calibration	Visual inspection	Functional Test
Basic Unit - Case, Clip & Display etc.	OK	OK
Battery and charge etc.	OK	OK
Motorized Pump	OK	OK
Other items		

Type of Sensor	Expiry Date
Oxygen Sensor	
CO & H2S Sensor	
Combustible(LEL) Sensor	

Type of calibration	Date of calibration	H2S (ppm)	CO (ppm)	O2 (%)	LEL (%)
3rd Calibration	2022 09 02	25	100	18	50
Result of Calibration		OK	OK	OK	OK

Calibration Cost: (As per attached invoice) F.O.C

Calibration remarks: Oxygen sensor replaced by new one
Warranty : Oxygen Sensor 1 years warranty

Next calibration date of this instrument will be : 2023 09 02

IMPORTANT NOTES TO BW GAS DETECTOR USERS

USERS MUST READ THE OPERATOR'S MANUAL THOROUGHLY BEFORE OPERATING THIS EQUIPMENT AND FOLLOW THEIR OWN SAFETY SUPERVISOR'S INSTRUCTION TO WORK.

All gas detection instrumentation on the market requires periodic calibration to accurately measure gas. Calibration is only as accurate as the test gas used. BW Technologies quality test gases are made to the highest accuracy and trace-ability to N. I.S.T. Standards.

Calibrated By: Sara Tse

Service Hotline: 2592 2120 Ms. Tse - Service Dept.

Asia Pacific Industrial Safety EquipmentUnit B, 1/F., Hing Yip Centre, 31 Hing Yip Street,
Kwun Tong, Kowloon, Hong Kong
Tel:2592 2100 Fax: 3165 8960**Asia Technologies**
亞洲科技

Appendix J

Landfill Gas Monitoring Data

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	3/4/2023	0830	Rain/ Fine	0	0	0	20.9	19 / 10/0	8.4
	v	1330	Rain/ Fine	0	0	0	20.9	18 / 10/0	8.4
	v	1700	Rain/ Fine	0	0	0	20.9	20 / 10/0	8.4
Area 137 Pit B	v	0830	Rain/ Fine	0	0	0	20.9	18 / 10/0	8.6
	v	1330	Rain/ Fine	0	0	0	20.9	17 / 10/0	8.6
	v	1700	Rain/ Fine	0	0	0	20.9	19 / 10/0	8.6
Area 137 Pit C	v	0830	Rain/ Fine	0	0	0	20.9	20 / 10/0	10
	v	1330	Rain/ Fine	0	0	0	20.9	18 / 10/0	10
	v	1700	Rain/ Fine	0	0	0	20.9	17 / 10/0	10

Name & Designation

Signature

Y

Date

3/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	4/4/2023	0830	Rain/Fine	0	0	0	20.9	17/10/0	8.4
	✓	1330	Rain/Fine	0	0	0	20.9	18/10/0	8.4
	✓	1700	Rain/Fine	0	0	0	20.9	20/1009	8.4
Area 137 Pit B	✓	0830	Rain/Fine	0	0	0	20.9	18/10/0	8.6
	✓	1330	Rain/Fine	0	0	0	20.9	19/10/0	8.6
	✓	1700	Rain/Fine	0	0	0	20.9	18/10/0	8.6
Area 137 Pit C	✓	0830	Rain/Fine	0	0	0	20.9	17/1009	10
	✓	1330	Rain/Fine	0	0	0	20.9	19/10/0	10
	✓	1700	Rain/Fine	0	0	0	20.9	20/1009	10

Name & Designation

Signature

8

Date 4/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	6/4/2023	0830	Rain/Fine	0	0	0	20.9	17 / 1009	8.4
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 1009	8.4
	✓	1700	Rain/Fine	0	0	0	20.9	18 / 1010	8.4
Area 137 Pit B	✓	0830	Rain/Fine	0	0	0	20.9	20 / 1010	8.6
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 1009	8.6
	✓	1700	Rain/Fine	0	0	0	20.9	17 / 1010	8.6
Area 137 Pit C	✓	0830	Rain/Fine	0	0	0	20.9	18 / 1009	10
	✓	1330	Rain/Fine	0	0	0	20.9	20 / 1009	10
	✓	1700	Rain/Fine	0	0	0	20.9	19 / 1010	10

Name & Designation

Signature

Y

Date

6/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	11/4/2023	0830	Rain/Fine	0	0	0	20.9	18 / 10/0	8.4
	✓	1330	Rain/Fine	0	0	0	20.9	20 / 10/0	8.4
	✓	1700	Rain/Fine	0	0	0	20.9	19 / 10/0	8.4
Area 137 Pit B	✓	0830	Rain/Fine	0	0	0	20.9	17 / 10/0	8.6
	✓	1330	Rain/Fine	0	0	0	20.9	18 / 10/0	8.6
	✓	1700	Rain/Fine	0	0	0	20.9	19 / 10/0	8.6
Area 137 Pit C	✓	0830	Rain/Fine	0	0	0	20.9	18 / 10/0	10
	✓	1330	Rain/Fine	0	0	0	20.9	17 / 10/0	10
	✓	1700	Rain/Fine	0	0	0	20.9	19 / 10/0	10

Name & Designation

Signature

✓

Date

11/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	12/4/2023	0830	Rain/Fine	0	0	0	20.9	17 / 10/0	8.4
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 1009	8.4
	✓	1700	Rain/Fine	0	0	0	20.9	18 / 1009	8.4
Area 137 Pit B	✓	0830	Rain/Fine	0	0	0	20.9	19 / 10/0	8.6
	✓	1330	Rain/Fine	0	0	0	20.9	20 / 10/0	8.6
	✓	1700	Rain/Fine	0	0	0	20.9	18 / 1009	8.6
Area 137 Pit C	✓	0830	Rain/Fine	0	0	0	20.9	17 / 1009	10
	✓	1330	Rain/Fine	0	0	0	20.9	18 / 10/0	10
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 10/0	10

Name & Designation

Signature

✓

Date 12/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	13/4/2023	0830	Rain/Fine	0	0	0	20.9	18 / 10/0	8.4
	✓	1330	Rain/Fine	0	0	0	20.9	17 / 1009	8.4
	✓	1700	Rain/Fine	0	0	0	20.9	19 / 1009	8.4
Area 137 Pit B	✓	0830	Rain/Fine	0	0	0	20.9	18 / 10/0	8.6
	✓	1330	Rain/Fine	0	0	0	20.9	20 / 1009	8.6
	✓	1700	Rain/Fine	0	0	0	20.9	17 / 10/0	8.6
Area 137 Pit C	✓	0830	Rain/Fine	0	0	0	20.9	17 / 10/0	10
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 1009	10
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 10/0	10

Name & Designation

Signature

Y

Date

13/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	4/4/2023	0830	Rain/Fine	0	0	0	20.9	19/1/009	8.4
	✓	1330	Rain/Fine	0	0	0	20.9	20/1/0/0	8.4
	✓	1700	Rain/Fine	0	0	0	20.9	18/1/009	8.4
Area 137 Pit B	✓	0830	Rain/Fine	0	0	0	20.9	17/1/009	8.6
	✓	1330	Rain/Fine	0	0	0	20.9	19/1/0/0	8.6
	✓	1700	Rain/Fine	0	0	0	20.9	20/1/0/0	8.6
Area 137 Pit C	✓	0830	Rain/Fine	0	0	0	20.9	18/1/009	10
	✓	1330	Rain/Fine	0	0	0	20.9	17/1/0/0	10
	✓	1700	Rain/Fine	0	0	0	20.9	19/1/009	10

Name & Designation

Signature

Date 14/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	17/4/2023	0830	Rain/Fine	0	0	0	20.9	17 / 1009	8.4
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 1009	8.4
	✓	1700	Rain/Fine	0	0	0	20.9	18 / 1010	8.4
Area 137 Pit B	✓	0830	Rain/Fine	0	0	0	20.9	18 / 1009	8.6
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 1010	8.6
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 1010	8.6
Area 137 Pit C	✓	0830	Rain/Fine	0	0	0	20.9	19 / 1009	10
	✓	1330	Rain/Fine	0	0	0	20.9	18 / 1009	10
	✓	1700	Rain/Fine	0	0	0	20.9	17 / 1009	10

Name & Designation

Signature

✓

Date

17/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	18/4/2023	0830	Rain/Fine	0	0	0	20.9	18 / 10/0	8.4
	✓	1330	Rain/Fine	0	0	0	20.9	17 / 1009	8.4
	✓	1700	Rain/Fine	0	0	0	20.9	19 / 1009	8.4
Area 137 Pit B	✓	0830	Rain/Fine	0	0	0	20.9	20 / 10/0	8.6
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 10/0	8.6
	✓	1700	Rain/Fine	0	0	0	20.9	18 / 1009	8.6
Area 137 Pit C	✓	0830	Rain/Fine	0	0	0	20.9	17 / 1009	10
	✓	1330	Rain/Fine	0	0	0	20.9	18 / 10/0	10
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 10/0	10

Name & Designation

Signature

Y

Date

18/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	19/4/2023	0830	Rain/Fine	0	0	0	20.9	17 / 10/0	8.4
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 10/0	8.4
	✓	1700	Rain/Fine	0	0	0	20.9	18 / 10/0	8.4
Area 137 Pit B	✓	0830	Rain/Fine	0	0	0	20.9	19 / 10/0	8.6
	✓	1330	Rain/Fine	0	0	0	20.9	20 / 10/0	8.6
	✓	1700	Rain/Fine	0	0	0	20.9	18 / 10/0	8.6
Area 137 Pit C	✓	0830	Rain/Fine	0	0	0	20.9	17 / 10/0	10
	✓	1330	Rain/Fine	0	0	0	20.9	20 / 10/0	10
	✓	1700	Rain/Fine	0	0	0	20.9	19 / 10/0	10

Name & Designation

Signature

Date 19/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	20/4/2023	0830	Rain/Fine	0	0	0	20.9	19 / 1009	8.4
	✓	1330	Rain/Fine	0	0	0	20.9	18 / 1010	8.4
	✓	1700	Rain/Fine	0	0	0	20.9	19 / 1009	8.4
Area 137 Pit B	✓	0830	Rain/Fine	0	0	0	20.9	20 / 1009	8.6
	✓	1330	Rain/Fine	0	0	0	20.9	18 / 1010	8.6
	✓	1700	Rain/Fine	0	0	0	20.9	17 / 1009	8.6
Area 137 Pit C	✓	0830	Rain/Fine	0	0	0	20.9	19 / 1010	10
	✓	1330	Rain/Fine	0	0	0	20.9	20 / 1010	10
	✓	1700	Rain/Fine	0	0	0	20.9	18 / 1009	10

Name & Designation

Signature



Date

20/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	21/4/2023	0830	Rain/Fine	0	0	0	20.9	18 / 10/0	8.4
	√	1330	Rain/Fine	0	0	0	20.9	17 / 10/09	8.4
	√	1700	Rain/Fine	0	0	0	20.9	20 / 10/09	8.4
Area 137 Pit B	√	0830	Rain/Fine	0	0	0	20.9	19 / 10/0	8.6
	√	1330	Rain/Fine	0	0	0	20.9	18 / 10/09	8.6
	√	1700	Rain/Fine	0	0	0	20.9	20 / 10/0	8.6
Area 137 Pit C	√	0830	Rain/Fine	0	0	0	20.9	19 / 10/0	10
	√	1330	Rain/Fine	0	0	0	20.9	18 / 10/09	10
	√	1700	Rain/Fine	0	0	0	20.9	17 / 10/09	10

Name & Designation

Signature



Date

21/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	4/4/2023	0830	Rain/Fine	0	0	0	20.9	17/1009	8.4
	✓	1330	Rain/Fine	0	0	0	20.9	19/10/0	8.4
	✓	1700	Rain/Fine	0	0	0	20.9	20/10/0	8.4
Area 137 Pit B	✓	0830	Rain/Fine	0	0	0	20.9	18/1009	8.6
	✓	1330	Rain/Fine	0	0	0	20.9	20/1009	8.6
	✓	1700	Rain/Fine	0	0	0	20.9	19/10/0	8.6
Area 137 Pit C	✓	0830	Rain/Fine	0	0	0	20.9	18/1009	10
	✓	1330	Rain/Fine	0	0	0	20.9	20/10/0	10
	✓	1700	Rain/Fine	0	0	0	20.9	17/10/0	10

Name & Designation

Signature

Date



24/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	25/4/2023	0830	Rain/Fine	0	0	0	20.9	19 / 1009	8.4
	✓	1330	Rain/Fine	0	0	0	20.9	18 / 1009	8.4
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 10/0	8.4
Area 137 Pit B	✓	0830	Rain/Fine	0	0	0	20.9	17 / 1009	8.6
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 10/0	8.6
	✓	1700	Rain/Fine	0	0	0	20.9	18 / 10/0	8.6
Area 137 Pit C	✓	0830	Rain/Fine	0	0	0	20.9	17 / 1009	10
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 10/0	10
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 10/0	10

Name & Designation

Signature

✓

Date

25/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	26/4/2023	0830	Rain/Fine	0	0	0	20.9	19 / 10/0	8.4
	√	1330	Rain/Fine	0	0	0	20.9	18 / 10/0	8.4
	√	1700	Rain/Fine	0	0	0	20.9	20 / 10/0	8.4
Area 137 Pit B	√	0830	Rain/Fine	0	0	0	20.9	17 / 10/0	8.6
	√	1330	Rain/Fine	0	0	0	20.9	18 / 10/0	8.6
	√	1700	Rain/Fine	0	0	0	20.9	19 / 10/0	8.6
Area 137 Pit C	√	0830	Rain/Fine	0	0	0	20.9	18 / 10/0	10
	√	1330	Rain/Fine	0	0	0	20.9	20 / 10/0	10
	√	1700	Rain/Fine	0	0	0	20.9	17 / 10/0	10

Name & Designation

Signature

Date 26/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	27/4/2023	0830	Rain/Fine	0	0	0	20.9	18 / 1000	8.4
	√	1330	Rain/Fine	0	0	0	20.9	17 / 1000	8.4
	√	1700	Rain/Fine	0	0	0	20.9	19 / 1000	8.4
Area 137 Pit B	√	0830	Rain/Fine	0	0	0	20.9	20 / 1000	8.6
	√	1330	Rain/Fine	0	0	0	20.9	19 / 1000	8.6
	√	1700	Rain/Fine	0	0	0	20.9	17 / 1000	8.6
Area 137 Pit C	√	0830	Rain/Fine	0	0	0	20.9	18 / 1000	10
	√	1330	Rain/Fine	0	0	0	20.9	19 / 1000	10
	√	1700	Rain/Fine	0	0	0	20.9	20 / 1000	10

Name & Designation

Signature

✓

Date

27/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture

Area 137 Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	2/4/2023	0830	Rain/Fine	0	0	0	20.9	18/10/0	8.4
	✓	1330	Rain/Fine	0	0	0	20.9	19/10/0	8.4
	✓	1700	Rain/Fine	0	0	0	20.9	20/10/0	8.4
Area 137 Pit B	✓	0830	Rain/Fine	0	0	0	20.9	17/10/0	8.6
	✓	1330	Rain/Fine	0	0	0	20.9	18/10/0	8.6
	✓	1700	Rain/Fine	0	0	0	20.9	20/10/0	8.6
Area 137 Pit C	✓	0830	Rain/Fine	0	0	0	20.9	19/10/0	10
	✓	1330	Rain/Fine	0	0	0	20.9	18/10/0	10
	✓	1700	Rain/Fine	0	0	0	20.9	19/10/0	10

Name & Designation

Signature

J

Date

28/4/2028

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						Remark Depth (m)
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	
WPRTTA 4	3/4/2023	0830	Rain/ Fine	0	0	0	20.9	18 / 1009	3.7
	✓	1330	Rain/ Fine	0	0	0	20.9	20 / 1010	3.7
	✓	1700	Rain/ Fine	0	0	0	20.9	17 / 1010	3.7
WPRTTA 5	✓	0830	Rain/ Fine	0	0	0	20.9	19 / 1009	3.6
	✓	1330	Rain/ Fine	0	0	0	20.9	18 / 1010	3.6
	✓	1700	Rain/ Fine	0	0	0	20.9	17 / 1009	3.6

Name & Designation

Signature

8

Date

3/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	4/4/2023	0830	Rain/Fine	0	0	0	20.9	17 / 1009	3.7
	✓	1330	Rain/Fine	0	0	0	20.9	18 / 1009	3.7
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 1010	3.7
WPRTTA 5	✓	0830	Rain/Fine	0	0	0	20.9	18 / 1010	3.6
	✓	1330	Rain/Fine	0	0	0	20.9	17 / 1009	3.6
	✓	1700	Rain/Fine	0	0	0	20.9	19 / 1010	3.6

Name & Designation

Signature

8

Date

4/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	6/14/2023	0830	Rain/Fine	0	0	0	20.9	19 / 10/0	3.7
	v	1330	Rain/Fine	0	0	0	20.9	20 / 10/0	3.7
	v	1700	Rain/Fine	0	0	0	20.9	18 / 10/0	3.7
WPRTTA 5	v	0830	Rain/Fine	0	0	0	20.9	19 / 10/0	3.6
	v	1330	Rain/Fine	0	0	0	20.9	17 / 10/0	3.6
	v	1700	Rain/Fine	0	0	0	20.9	18 / 10/0	3.6

Name & Designation

Signature



Date

6/14/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	11/14/2023	0830	Rain/Fine	0	0	0	20.9	17 / 1009	3.7
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 1009	3.7
	✓	1700	Rain/Fine	0	0	0	20.9	18 / 1010	3.7
WPRTTA 5	✓	0830	Rain/Fine	0	0	0	20.9	19 / 1010	3.6
	✓	1330	Rain/Fine	0	0	0	20.9	20 / 1010	3.6
	✓	1700	Rain/Fine	0	0	0	20.9	17 / 1009	3.6

Name & Designation

Signature



Date

11/14/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	12/14/2023	0830	Rain/Fine	0	0	0	20.9	18 / 1009	3.7
	√	1330	Rain/Fine	0	0	0	20.9	20 / 1010	3.7
	√	1700	Rain/Fine	0	0	0	20.9	19 / 1010	3.7
WPRTTA 5	√	0830	Rain/Fine	0	0	0	20.9	17 / 1009	3.6
	√	1330	Rain/Fine	0	0	0	20.9	19 / 1010	3.6
	√	1700	Rain/Fine	0	0	0	20.9	20 / 1010	3.6

Name & Designation

Signature

Y

Date 12/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	13/4/2023	0830	Rain/Fine	0	0	0	20.9	17 / 10/0	3.7
	✓	1330	Rain/Fine	0	0	0	20.9	18 / 10/0	3.7
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 10/0	3.7
WPRTTA 5	✓	0830	Rain/Fine	0	0	0	20.9	18 / 10/0	3.6
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 10/0	3.6
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 10/0	3.6

Name & Designation

Signature

✓

Date

13/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	14/4/2023	0830	Rain/Fine	0	0	0	20.9	19 / 1009	3.7
	v	1330	Rain/Fine	0	0	0	20.9	20 / 1009	3.7
	v	1700	Rain/Fine	0	0	0	20.9	18 / 1010	3.7
WPRTTA 5	v	0830	Rain/Fine	0	0	0	20.9	19 / 1010	3.6
	v	1330	Rain/Fine	0	0	0	20.9	17 / 1009	3.6
	v	1700	Rain/Fine	0	0	0	20.9	18 / 1009	3.6

Name & Designation

Signature

J

Date 14/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						Remark Depth (m)
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	
WPRTTA 4	17/4/2023	0830	Rain/Fine	0	0	0	20.9	18 / 1010	3.7
	✓	1330	Rain/Fine	0	0	0	20.9	17 / 1009	3.7
	✓	1700	Rain/Fine	0	0	0	20.9	19 / 1009	3.7
WPRTTA 5	✓	0830	Rain/Fine	0	0	0	20.9	18 / 1009	3.6
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 1010	3.6
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 1010	3.6

Name & Designation

Signature

Y

Date

17/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	18/4/2023	0830	Rain/Fine	0	0	0	20.9	19/1009	3.7
	✓	1330	Rain/Fine	0	0	0	20.9	18/1009	3.7
	✓	1700	Rain/Fine	0	0	0	20.9	17/10/0	3.7
WPRTTA 5	✓	0830	Rain/Fine	0	0	0	20.9	18/10/0	3.6
	✓	1330	Rain/Fine	0	0	0	20.9	19/1009	3.6
	✓	1700	Rain/Fine	0	0	0	20.9	17/1009	3.6

Name & Designation

Signature

✓

Date

18/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	19/14/2023	0830	Rain/Fine	0	0	0	20.9	19/1/009	3.7
	✓	1330	Rain/Fine	0	0	0	20.9	17/1/009	3.7
	✓	1700	Rain/Fine	0	0	0	20.9	18/1/0/0	3.7
WPRTTA 5	✓	0830	Rain/Fine	0	0	0	20.9	20/1/0/0	3.6
	✓	1330	Rain/Fine	0	0	0	20.9	18/1/009	3.6
	✓	1700	Rain/Fine	0	0	0	20.9	19/1/0/0	3.6

Name & Designation

Signature

Date

19/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	20/4/2023	0830	Rain/ Fine	0	0	0	20.9	17 / 1/0	3.7
	√	1330	Rain/ Fine	0	0	0	20.9	18 / 1/0	3.7
	√	1700	Rain/ Fine	0	0	0	20.9	20 / 1/0	3.7
WPRTTA 5	√	0830	Rain/ Fine	0	0	0	20.9	18 / 1/0	3.6
	√	1330	Rain/ Fine	0	0	0	20.9	19 / 1/0	3.6
	√	1700	Rain/ Fine	0	0	0	20.9	17 / 1/0	3.6

Name & Designation

Signature

Date

20/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	21/4/2023	0830	Rain/Fine	0	0	0	20.9	18/1009	3.7
	✓	1330	Rain/Fine	0	0	0	20.9	19/10/0	3.7
	✓	1700	Rain/Fine	0	0	0	20.9	17/10/0	3.7
WPRTTA 5	✓	0830	Rain/Fine	0	0	0	20.9	19/1009	3.6
	✓	1330	Rain/Fine	0	0	0	20.9	18/1009	3.6
	✓	1700	Rain/Fine	0	0	0	20.9	17/10/0	3.6

Name & Designation

Signature

✓

Date

21/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	4/4/2023	0830	Rain/Fine	0	0	0	20.9	19 / 10/0	3.7
	✓	1330	Rain/Fine	0	0	0	20.9	20 / 10/0	3.7
	✓	1700	Rain/Fine	0	0	0	20.9	17 / 10/0	3.7
WPRTTA 5	✓	0830	Rain/Fine	0	0	0	20.9	18 / 10/0	3.6
	✓	1330	Rain/Fine	0	0	0	20.9	20 / 10/0	3.6
	✓	1700	Rain/Fine	0	0	0	20.9	19 / 10/0	3.6

Name & Designation

Signature

8

Date

4/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	25/4/2023	0830	Rain/Fine	0	0	0	20.9	19/1/009	3.7
	✓	1330	Rain/Fine	0	0	0	20.9	20/1/0/0	3.7
	✓	1700	Rain/Fine	0	0	0	20.9	17/1/0/0	3.7
WPRTTA 5	✓	0830	Rain/Fine	0	0	0	20.9	18/1/009	3.6
	✓	1330	Rain/Fine	0	0	0	20.9	19/1/009	3.6
	✓	1700	Rain/Fine	0	0	0	20.9	20/1/0/0	3.6

Name & Designation

Signature

Date

25/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	26/4/2023	0830	Rain/Fine	0	0	0	20.9	17/10/0	3.7
	✓	1330	Rain/Fine	0	0	0	20.9	19/10/0	3.7
	✓	1700	Rain/Fine	0	0	0	20.9	20/10/0	3.7
WPRTTA 5	✓	0830	Rain/Fine	0	0	0	20.9	18/10/0	3.6
	✓	1330	Rain/Fine	0	0	0	20.9	17/10/0	3.6
	✓	1700	Rain/Fine	0	0	0	20.9	19/10/0	3.6

Name & Designation

Signature

✓

Date 26/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	27/4/2023	0830	Rain/Fine	0	0	0	20.9	17 / 1009	3.7
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 1010	3.7
	✓	1700	Rain/Fine	0	0	0	20.9	18 / 1010	3.7
WPRTTA 5	✓	0830	Rain/Fine	0	0	0	20.9	19 / 1009	3.6
	✓	1330	Rain/Fine	0	0	0	20.9	20 / 1010	3.6
	✓	1700	Rain/Fine	0	0	0	20.9	18 / 1009	3.6

Name & Designation

Signature

Date

27/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	28/4/2023	0830	Rain/Fine	0	0	0	20.9	18/1009	3.7
	√	1330	Rain/Fine	0	0	0	20.9	19/1010	3.7
	√	1700	Rain/Fine	0	0	0	20.9	17/1010	3.7
WPRTTA 5	√	0830	Rain/Fine	0	0	0	20.9	20/1009	3.6
	√	1330	Rain/Fine	0	0	0	20.9	18/1009	3.6
	√	1700	Rain/Fine	0	0	0	20.9	19/1010	3.6

Name & Designation

Signature

Date

28/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	3/4/2023	0830	Rain/ Fine	0	0	0	20.9	19 / 10/0	5.5
	✓	1330	Rain/ Fine	0	0	0	20.9	17 / 1009	5.5
	✓	1700	Rain/ Fine	0	0	0	20.9	18 / 1009	5.5
Area B	✓	0830	Rain/ Fine	0	0	0	20.9	20 / 10/0	5.5
	✓	1330	Rain/ Fine	0	0	0	20.9	19 / 1009	5.5
	✓	1700	Rain/ Fine	0	0	0	20.9	17 / 1009	5.5

Name & Designation

Signature



Date 3/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	4/4/2023	0830	Rain/Fine	0	0	0	20.9	18/10/0	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	19/10/0	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	17/1009	5.5
Area B	✓	0830	Rain/Fine	0	0	0	20.9	17/1009	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	18/10/0	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	20/10/0	5.5

Name & Designation

Signature



Date

4/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	6/4/2023	0830	Rain/Fine	0	0	0	20.9	17 / 10/0	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	18 / 10/0	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 10/0	5.5
Area B	✓	0830	Rain/Fine	0	0	0	20.9	19 / 10/0	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	20 / 10/0	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	18 / 10/0	5.5

Name & Designation

Signature

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Date

6/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	11/4/2023	0830	Rain/Fine	0	0	0	20.9	18 / 1009	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	20 / 1010	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	19 / 1010	5.5
Area B	✓	0830	Rain/Fine	0	0	0	20.9	17 / 1009	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 1009	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 1010	5.5

Name & Designation

Signature



Date

11/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	12/4/2023	0830	Rain/Fine	0	0	0	20.9	19 / 10/0	5.5
	v	1330	Rain/Fine	0	0	0	20.9	17 / 1009	5.5
	v	1700	Rain/Fine	0	0	0	20.9	18 / 1009	5.5
Area B	v	0830	Rain/Fine	0	0	0	20.9	17 / 10/0	5.5
	v	1330	Rain/Fine	0	0	0	20.9	19 / 10/0	5.5
	v	1700	Rain/Fine	0	0	0	20.9	20 / 1009	5.5

Name & Designation

Signature

Date 12/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	13/4/2023	0830	Rain/Fine	0	0	0	20.9	19 / 1009	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	17 / 1009	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	18 / 1010	5.5
Area B	✓	0830	Rain/Fine	0	0	0	20.9	17 / 1009	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 1009	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 1010	5.5

Name & Designation

Signature



Date

13/4/2023

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	14/4/2023	0830	Rain/Fine	0	0	0	20.9	19/1009	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	18/1009	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	20/10/0	5.5
Area B	✓	0830	Rain/Fine	0	0	0	20.9	18/10/0	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	20/1009	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	19/1009	5.5

Name & Designation

Signature

Date

14/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	17/4/2023	0830	Rain/Fine	0	0	0	20.9	19/10/0	5.5
	√	1330	Rain/Fine	0	0	0	20.9	20/10/0	5.5
	√	1700	Rain/Fine	0	0	0	20.9	18/1009	5.5
Area B	√	0830	Rain/Fine	0	0	0	20.9	17/1009	5.5
	√	1330	Rain/Fine	0	0	0	20.9	19/10/0	5.5
	√	1700	Rain/Fine	0	0	0	20.9	20/10/0	5.5

Name & Designation

Signature

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Date

17/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	18/4/2023	0830	Rain/Fine	0	0	0	20.9	17 / 1009	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 1009	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 1010	5.5
Area B	✓	0830	Rain/Fine	0	0	0	20.9	18 / 1010	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	20 / 1010	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	19 / 1009	5.5

Name & Designation

Signature

Y

Date

18/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	19/4/2023	0830	Rain/Fine	0	0	0	20.9	18/1/009	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	19/1/009	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	17/1/0/0	5.5
Area B	✓	0830	Rain/Fine	0	0	0	20.9	18/1/0/0	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	20/1/0/0	5.5
		1700	Rain/Fine	0	0	0	20.9	19/1/009	5.5

Name & Designation

Signature

Date

19/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	20/4/2023	0830	Rain/ Fine	0	0	0	20.9	18/1009	5.5
	✓	1330	Rain/ Fine	0	0	0	20.9	19/10/0	5.5
	✓	1700	Rain/ Fine	0	0	0	20.9	17/10/0	5.5
Area B	✓	0830	Rain/ Fine	0	0	0	20.9	17/10/0	5.5
	✓	1330	Rain/ Fine	0	0	0	20.9	18/1009	5.5
	✓	1700	Rain/ Fine	0	0	0	20.9	20/1009	5.5

Name & Designation

Signature

✓

Date

20/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	21/4/2023	0830	Rain/Fine	0	0	0	20.9	18 / 1009	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	20 / 1010	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	19 / 1010	5.5
Area B	✓	0830	Rain/Fine	0	0	0	20.9	17 / 1009	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	19 / 1009	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 1010	5.5

Name & Designation

Signature

8

Date

21/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	4/4/2023	0830	Rain/Fine	0	0	0	20.9	18/1009	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	20/10/0	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	19/10/0	5.5
Area B	✓	0830	Rain/Fine	0	0	0	20.9	17/1009	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	18/16/2	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	19/1009	5.5

Name & Designation

Signature

Date



24/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	25/4/2023	0830	Rain/Fine	0	0	0	20.9	19 / 1000	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	18 / 1009	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 1009	5.5
Area B	✓	0830	Rain/Fine	0	0	0	20.9	19 / 1000	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	17 / 1009	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	18 / 1009	5.5

Name & Designation

Signature



Date

25/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	26/4/2023	0830	Rain/Fine	0	0	0	20.9	18/10/0	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	17/10/0	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	19/10/0	5.5
Area B	✓	0830	Rain/Fine	0	0	0	20.9	20/10/0	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	18/10/0	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	19/10/0	5.5

Name & Designation

Signature

Date



26/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	27/4/2023	0830	Rain/Fine	0	0	0	20.9	17 / 1009	5.5
	√	1330	Rain/Fine	0	0	0	20.9	20 / 1010	5.5
	√	1700	Rain/Fine	0	0	0	20.9	19 / 1009	5.5
Area B	√	0830	Rain/Fine	0	0	0	20.9	18 / 1010	5.5
	√	1330	Rain/Fine	0	0	0	20.9	19 / 1010	5.5
	√	1700	Rain/Fine	0	0	0	20.9	20 / 1009	5.5

Name & Designation

Signature

Date

27/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
XT-XWHM-Y-OR	2/9/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	28/4/2023	0830	Rain/Fine	0	0	0	20.9	17 / 10/0	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	18 / 10/0	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	20 / 10/0	5.5
Area B	✓	0830	Rain/Fine	0	0	0	20.9	19 / 10/0	5.5
	✓	1330	Rain/Fine	0	0	0	20.9	20 / 10/0	5.5
	✓	1700	Rain/Fine	0	0	0	20.9	18 / 10/0	5.5

Name & Designation

Signature

Date

28/4/2023

Field Operator: Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PAM-2500 (QRAE III)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pie A	1/4/2023	08:30	Reamy	0	0	0	20.9	19 / 999	G
		13:30	..	0	0	0	20.9	20 / 999	G
		16:30	..	0	0	0	20.9	20 / 999	G
							/		
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Field Operator: Name & Designation Signature Date
 MAK KA CHUN [Signature] 1/4/2023

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2000 (ORAE III)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pie A	3/4/2023	08:30	Rainy	0	0	0	20.9	20 / 999	G
		13:30	"	0	0	0	20.9	20 / 999	G
		16:30	"	0	0	0	20.9	20 / 999	G
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Field Operator: Name & Designation MAK KA CHUN Signature [Signature] Date 3/4/2023

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500 (ORAE 111)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit A	4/4/2023	08:30	Rain	0	0	0	20.4	19 / 999	G
		13:30	-	0	0	0	20.4	20 / 999	G
		16:30	-	0	0	0	20.4	19 / 999	G
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Field Operator: Name & Designation MAK KA CHUN Signature [Signature] Date 4/4/2023

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PLM-2000 (SRAE 111)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pie A	6/4/2023	08:30	Sunny	0	0	0	20.9	20 / 999	G
		13:30	"	0	0	0	20.9	21 / 999	G
		16:30	"	0	0	0	20.9	21 / 999	G
							/		
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Field Operator: Name & Designation Signature Date
 MAK KA CHUN [Signature] 6/4/2023

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PAM-2500 (QRAE III)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
PZ A	11/4/2023	08:30	Sunny	0	0	0	20.9	19 / 999	9
		13:30	"	0	0	0	20.9	20 / 999	9
		16:30	"	0	0	0	20.9	20 / 999	9
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Field Operator: Name & Designation Signature Date
 MAK KA CHUN (Signature) 11/4/2023

Laboratory Staff:


Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PHM-2500 (ORAE III)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit A	12/4/2023	08:30	Sunny	0	0	0	20.4	18 / 999	9
		13:30	Sunny	0	0	0	20.4	19 / 999	9
		16:30	Sunny	0	0	0	20.4	19 / 999	9
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Field Operator: Name & Designation MAK KA CHUN Signature  Date 12/4/2023

Laboratory Staff:


Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PLM-2500 (QRAE III)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pie A	13/4/2023	09:30	Sunny	0	0	0	20.9	18 / 999	G
		13:30	✓	0	0	0	20.9	19 / 999	G
		16:30	✓	0	0	0	20.9	18 / 999	G
							/		
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Field Operator: Name & Designation MAK KA CHUN Signature  Date 13/4/2023

Laboratory Staff:


Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PHM-2500 (ORAE III)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
PE A	14/4/2023	08:30	Sunny	0	0	0	20.9	19 / 999	G
		13:30	.	0	0	0	20.9	20 / 999	G
		16:30	.	0	0	0	20.9	19 / 999	G
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Field Operator: Name & Designation MAK KA CHUN Signature  Date 14/4/2023

Laboratory Staff:

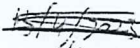


Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PAM-2500 (QRAE III)	28/7/2022
1327H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
PZ A	15/4/2023	08:30	Sunny	0	0	0	20.9	18 / 999	9
		13:30	☀	0	0	0	20.9	20 / 999	9
		16:30	☀	0	0	0	20.9	19 / 999	9
								/	
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
	Name & Designation	Signature	Date
Field Operator:	MAK KA CHUN		
Laboratory Staff:			15/4/2023
Checked by:			

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PHM-2500 (ORAE III)	28/7/2022
1327H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
PE A	17/4/2023	08:30	Sunny	0	0	0	20.9	18 / 999	G
		13:30	"	0	0	0	20.9	19 / 999	G
		16:30	"	0	0	0	20.9	19 / 999	G
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Field Operator: Name & Designation Signature Date
 MAK KA CHUN  17/4/2023

Laboratory Staff:


Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PLM-2500 (ORAE III)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pie A	18/4/2023	09:30	Sunny	0	0	0	20.9	19 / 999	G
		13:30	-	0	0	0	20.9	20 / 999	G
		16:30	-	0	0	0	20.9	20 / 999	G
							/		
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Field Operator: Name & Designation MAK KA CHUN Signature  Date 18/4/2023

Laboratory Staff:


Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PLM-2500 (SRAE III)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit A	19/4/2023	08:30	Sunny	0	0	0	20.9	18 / 999	9
		13:30	,	0	0	0	20.9	19 / 999	9
		16:30	,	0	0	0	20.9	19 / 999	9
								/	
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Field Operator: Name & Designation MAK KA CHUN Signature  Date 19/4/2023

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PAM-2500 (GRAE 111)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pie A	20/4/2023	09:30	Rainy	0	0	0	20.9	18 / 999	G
		13:30	"	0	0	0	20.9	19 / 999	G
		16:30	"	0	0	0	20.9	19 / 999	G
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Field Operator: Name & Designation MAK KA CHUN Signature Date 20/4/2023

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PHM-2500 (ORAE III)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
PE A	21/4/2023	08:30	Sunny	0	0	0	20.9	19 / 999	G
		13:30	"	0	0	0	20.9	20 / 999	G
		16:30	"	0	0	0	20.9	19 / 999	G
								/	
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								/	
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Field Operator: Name & Designation Signature Date
 MAK KA CHUN (Signature) 21/4/2023

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PHM-2500 (ORAE 111)	28/7/2022
1327H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
PZ A	22/4/2023	08:30	Rainy	0	0	0	20.9	12 / 999	9
		13:30	☺	0	0	0	20.9	19 / 999	9
		16:30	☺	0	0	0	20.9	19 / 999	9
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Field Operator: Name & Designation Signature Date
 MAK KA CHUN [Signature] 22/4/2023

Laboratory Staff:


Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PLM-2500 (2RAE III)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pie A	24/4/2023	08:30	Sunny	0	0	0	20.9	17 / 999	9
		13:30	"	0	0	0	20.9	19 / 999	9
		16:30	"	0	0	0	20.9	19 / 999	9
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Field Operator: Name & Designation MAK KA CHUN Signature  Date 24/4/2023

Laboratory Staff:


Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PLM-2000 (ORAE 111)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
PA A	25/4/2023	08:30	Rainy	0	0	0	20.4	19 / 999	G
		13:30	.	0	0	0	20.4	19 / 999	G
		16:30	.	0	0	0	20.4	19 / 999	G
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Field Operator: Name & Designation MAK KA CHUN Signature  Date 25/4/2023

Laboratory Staff:


Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PLM-2500 (RAE III)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pie A	26/4/2023	09:30	Sunny	0	0	0	20.9	19 / 999	9
		13:30	"	0	0	0	20.9	18 / 999	9
		16:30	"	0	0	0	20.9	20 / 999	9
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Field-Operator: Name & Designation Signature Date
 MAK KA CHUN  26/4/2023

Laboratory Staff:


Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2000 (ORAE 111)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pie A	27/4/2023	08:30	Sunny	0	0	0	20.9	19 / 999	4
		13:30	,	0	0	0	20.9	20 / 999	4
		16:30	,	0	0	0	20.9	19 / 999	4
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Field Operator: Name & Designation MAK KA CHUN Signature  Date 27/4/2023

Laboratory Staff:


Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PLM-2500 (SRAE III)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit A	28/4/2023	08:30	Rainy	0	0	0	20.9	19 / 999	9
		13:30	"	0	0	0	20.9	19 / 999	9
		16:30	"	0	0	0	20.9	20 / 999	9
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Field Operator: Name & Designation MAK KA CHUN Signature  Date 28/4/2023

Laboratory Staff:

Checked by:

Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O
 Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500 (SRAE III)	28/7/2022
1307H	17/11/2022

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pie A	29/4/2023	08:30	Sunny	0	0	0	20.9	19 / 999	G
		13:30	☺	0	0	0	20.9	20 / 999	G
		16:30	☺	0	0	0	20.9	20 / 999	G
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Field Operator: Name & Designation MAK KA CHUN Signature [Signature] Date 29/4/2023

Laboratory Staff:

Checked by:

Appendix K

Complaint Log and Regulatory Compliance Proforma

Table K-1 Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 - 30 April 2023	0	3	N/A

Table K-2 Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Details
1 - 30 April 2023	0	0	N/A

Table K-3 Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
1 - 30 April 2023	0	0	N/A

Appendix L

Site Inspection Proforma

Contract No.: 13/WSD/16 Mainlaying in Tseung Kwan O

WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

Inspection Date: 4/4/2023

Inspected by:

ET: Howard Chan

WSD: Mr. C. K. Chu

Inspection Time: 09:30-10:30

Contractor: Mr. Kam Ma

IEC: /

Weather							
Condition	<input type="checkbox"/> Sunny	<input checked="" type="checkbox"/> Fine	<input type="checkbox"/> Overcast	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Rain	<input type="checkbox"/> Storm	<input type="checkbox"/> Hazy
Temperature	<input type="text" value="24"/> C		Humidity	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low	
Wind	<input type="checkbox"/> Calm	<input checked="" type="checkbox"/> Light	<input type="checkbox"/> Breeze	<input type="checkbox"/> Strong			

		N/A	Yes	No	Photo/Remarks
0.00	General				
0.01	Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
0.02	Is ET Leader's log-book kept readily available for inspections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.00	Construction Dust				
1.01	Are dusty materials, such as excavated materials, building debris and construction materials, and exposed earth surface properly covered to prevent dust emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.02	Are screenings, enclosures, water spraying or vacuum cleaning devices provided to dusty construction works for dust suppression?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.03	Are fumes or smoke emitting plants or construction activities shielded by a screen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.04	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.05	Is wheel-washing provided to all vehicles leaving the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.06	Are road section near the site exit free from dusty material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.07	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.08	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.09	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.10	Are the working areas for uprooting of trees, shrubs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.11	Is exposed earth properly treated within six months after the last construction activity on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.12	Does the operation of plants on site free form dark smoke emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.13	Are vehicles travelling at speed not exceeding 15km/hr within the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.14	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top and 3 sides?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	002

Contract No.: 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
1.15	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	002
1.16	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	Is open burning prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.00	Construction Noise (Airborne)				
2.01	Are quiet plants adopted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.02	Are the PMEs operating on site well-maintained to minimize the generation of excessive noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.03	Are plants throttled down or turned off when not in use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.04	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	Are moveable barriers provided to screen NSRs from plant or noisy operations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	Are silencers, mufflers and enclosures provided to plants?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.07	Are the hoods, cover panels and inspection hatches of PMEs closed during operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.08	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to nearby sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.10	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	Are valid noise emission label(s) affixed to all air compressors operating on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.12	Are all construction noise permit(s) applied for percussive piling work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	Are construction noise permit(s) applied for general construction works during restricted hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	Are valid construction noise permit(s) displayed at all vehicular exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.00	Water Quality				
3.01	Is effluent discharge license obtained for wastewater discharge from site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	Is effluent discharged according to the effluent discharge license?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	003,001
3.03	Is wastewater discharge from site properly treated prior to discharge?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	003,001
3.04	Are perimeter channels provided to intercept storm runoff from outside the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.05	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided to remove sand/silt particles from runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	001,003,004
3.06	Is surface runoff diverted to sedimentation facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Contract No.: 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
3.07	Is the drainage system properly maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.08	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.09	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.10	Are temporary access roads protected by crushed gravel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.11	Are exposed slope surface properly protected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.12	Is trench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.13	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.14	Is runoff from wheel-washing facilities avoided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.15	Is oil leakage or spillage prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.16	Are there any measures to prevent the release of oil and grease into the storm drainage system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.17	Are the oil interceptors/ grease traps properly maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.18	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.19	Are all fuel tanks and storage areas provided with locks and be sited on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.20	Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.21	Are sufficient chemical toilets provided on site to handle sewage from construction work force?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.22	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.23	Is concrete washing water properly collected and treated prior to discharge?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.00	Waste Management				
4.01	Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.03	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.04	Are trip tickets for chemical waste disposal available for inspection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05	Is chemical waste reused and recycled on site as far as practicable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Contract No.: 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
4.06	Are all containers for chemical waste properly labelled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
4.07	Is drip tray provided for chemical storage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.08	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
4.09	Are incompatible chemical wastes stored in different areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
4.10	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.11	Is an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or of 20% by volume of the chemical waste stored in that area, whichever is the greatest, provide?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.12	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.13	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.14	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.15	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.16	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.17	Are C&D wastes sorted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.18	Are C&D waste disposed of properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.19	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.20	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.21	Are the construction materials stored properly to minimize the potential for damage or contamination?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.22	Is a dumping license obtained to deliver public fill to public filling areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
5.00	Landscape and Visual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.01	Are Is site hoarding provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.02	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.03	Is construction light oriented away from the sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.04	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Contract No.: 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
5.05	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
5.06	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.07	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
5.08	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.00	Ecology				
6.01	Is site runoff properly treated to prevent any silty runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>Del. 003</i>
6.02	Are silt trap installed and well-maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.03	Are stockpiles properly covered to avoid generating silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
6.04	Are construction works restricted to works area which are clearly defined?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
7.00	Overall				
7.01	Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Contract No.: 13/WSD/16 Mainlaying in Tseung Kwan O

Remark / Follow up of Observation(s) and Non-compliance(s) of Last Weekly Site Inspection:

Observation:

- 001: Water in trench should be treated before discharge. (Shek Kok Road Roundabout)
- 002: The grout machine should be covered on top and 3 side during the cement mixing work to reduce dust emission. (SKR Roundabout) ^{P.t.D1}
- 003: Direct discharge of muddy water should not be allowed, the Contractor was required to ~~treat~~ all the wastewater and the discharge should be complied with the discharge licence standard. (SKR Roundabout) ^{P.t.D1}
- 004: Sedimentation Tank should be cleaned at a regular basis and ensure the wastewater treatment facilities were functional properly. (SKR Roundabout) ^{P.t.D1}

Reminder:

- R01: General refuse shall be collected and disposal of properly. (SKR Roundabout)


Signatures:


ET
Representative


Contractor's
Representative

WSD's
Representative

IEC's
Representative


(Name: Howard Chan)


(Name: Ken Ma)


(Name: CHAU
CHEUK KI)

(Name:)

Contract No.: 13/WSD/16 Mainlaying in Tseung Kwan O

WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

Inspection Date: 12/4/2023

Inspected by:

ET: Howard Chan

WSD: Mr. K.C. Tse

Inspection Time: 09:30-10:30

Contractor: Mr. Ken Ma

IEC: _____

Weather							
Condition	<input checked="" type="checkbox"/> Sunny	<input type="checkbox"/> Fine	<input type="checkbox"/> Overcast	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Rain	<input type="checkbox"/> Storm	<input type="checkbox"/> Hazy
Temperature	<u>24</u> C		Humidity	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Low	
Wind	<input type="checkbox"/> Calm	<input checked="" type="checkbox"/> Light	<input type="checkbox"/> Breeze	<input type="checkbox"/> Strong			

		N/A	Yes	No	Photo/Remarks
0.00	General				
0.01	Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
0.02	Is ET Leader's log-book kept readily available for inspections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.00	Construction Dust				
1.01	Are dusty materials, such as excavated materials, building debris and construction materials, and exposed earth surface properly covered to prevent dust emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.02	Are screenings, enclosures, water spraying or vacuum cleaning devices provided to dusty construction works for dust suppression?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>R04</u>
1.03	Are fumes or smoke emitting plants or construction activities shielded by a screen?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.05	Is wheel-washing provided to all vehicles leaving the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.06	Are road section near the site exit free from dusty material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.07	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.08	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.09	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.10	Are the working areas for uprooting of trees, shrubs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.11	Is exposed earth properly treated within six months after the last construction activity on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.12	Does the operation of plants on site free form dark smoke emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.13	Are vehicles travelling at speed not exceeding 15km/hr within the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.14	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top and 3 sides?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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		N/A	Yes	No	Photo/Remarks
1.15	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	Is open burning prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.00	Construction Noise (Airborne)				
2.01	Are quiet plants adopted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.02	Are the PMEs operating on site well-maintained to minimize the generation of excessive noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.03	Are plants throttled down or turned off when not in use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.04	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	Are moveable barriers provided to screen NSRs from plant or noisy operations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	Are silencers, mufflers and enclosures provided to plants?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.07	Are the hoods, cover panels and inspection hatches of PMEs closed during operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.08	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to nearby sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	Are valid noise emission label(s) affixed to all air compressors operating on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.12	Are all construction noise permit(s) applied for percussive piling work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	Are construction noise permit(s) applied for general construction works during restricted hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	Are valid construction noise permit(s) displayed at all vehicular exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.00	Water Quality				
3.01	Is effluent discharge license obtained for wastewater discharge from site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	Is effluent discharged according to the effluent discharge license?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.03	Is wastewater discharge from site properly treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	203
3.04	Are perimeter channels provided to intercept storm runoff from outside the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.05	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided to remove sand/silt particles from runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.06	Is surface runoff diverted to sedimentation facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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		N/A	Yes	No	Photo/Remarks
3.07	Is the drainage system properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.08	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.09	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.10	Are temporary access roads protected by crushed gravel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.11	Are exposed slope surface properly protected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.12	Is trench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.13	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.14	Is runoff from wheel-washing facilities avoided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.15	Is oil leakage or spillage prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.16	Are there any measures to prevent the release of oil and grease into the storm drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.17	Are the oil interceptors/ grease traps properly maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.18	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.19	Are all fuel tanks and storage areas provided with locks and be sited on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.20	Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.21	Are sufficient chemical toilets provided on site to handle sewage from construction work force?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.22	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.23	Is concrete washing water properly collected and treated prior to discharge?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.00	Waste Management				
4.01	Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.03	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.04	Are trip tickets for chemical waste disposal available for inspection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05	Is chemical waste reused and recycled on site as far as practicable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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		N/A	Yes	No	Photo/Remarks
4.06	Are all containers for chemical waste properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.07	Is drip tray provided for chemical storage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.08	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
4.09	Are incompatible chemical wastes stored in different areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
4.10	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.11	Is an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or of 20% by volume of the chemical waste stored in that area, whichever is the greatest, provide?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.12	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.13	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.14	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.15	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.16	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.17	Are C&D wastes sorted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.18	Are C&D waste disposed of properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.19	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.20	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.21	Are the construction materials stored properly to minimize the potential for damage or contamination?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
4.22	Is a dumping license obtained to deliver public fill to public filling areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
5.00	Landscape and Visual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.01	Are Is site hoarding provided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
5.02	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
5.03	Is construction light oriented away from the sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.04	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

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		N/A	Yes	No	Photo/Remarks
5.05	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.06	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.07	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	R02
5.08	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.00	Ecology				
6.01	Is site runoff properly treated to prevent any silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.02	Are silt trap installed and well-maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03	Are stockpiles properly covered to avoid generating silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.04	Are construction works restricted to works area which are clearly defined?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.00	Overall				
7.01	Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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Remark / Follow up of Observation(s) and Non-compliance(s) of Last Weekly Site Inspection:

Reminder²

RO1: The Contractor was reminded to display the NRMM label on the excavator. (WPR1)

RO2: The Contractor was reminded to properly protect the retained trees at WPR1.

RO3: The Contractor was reminded that muddy water in trench should be treated before discharge. (WPR1)

RO4: The Contractor was reminded to provide screening for excavation works for dust suppression. (WPR1)

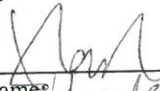
Signatures:


ET
Representative


Contractor's
Representative

WSD's
Representative

IEC's
Representative


(Name: Howard Chan)


(Name: Ken Ma)


(Name: YEE KA CHUN)
AOI/15)

(Name:)

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		N/A	Yes	No	Photo/Remarks
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1.17	Is open burning prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.00	Construction Noise (Airborne)				
2.01	Are quiet plants adopted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.02	Are the PME's operating on site well-maintained to minimize the generation of excessive noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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3.00	Water Quality				
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3.04	Are perimeter channels provided to intercept storm runoff from outside the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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3.10	Are temporary access roads protected by crushed gravel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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3.14	Is runoff from wheel-washing facilities avoided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.15	Is oil leakage or spillage prevented?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Obs 1
3.16	Are there any measures to prevent the release of oil and grease into the storm drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.17	Are the oil interceptors/ grease traps properly maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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3.19	Are all fuel tanks and storage areas provided with locks and be sited on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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3.21	Are sufficient chemical toilets provided on site to handle sewage from construction work force?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.22	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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4.00	Waste Management				
4.01	Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.03	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.04	Are trip tickets for chemical waste disposal available for inspection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05	Is chemical waste reused and recycled on site as far as practicable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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		N/A	Yes	No	Photo/Remarks
4.06	Are all containers for chemical waste properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.07	Is drip tray provided for chemical storage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	R03
4.08	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.09	Are incompatible chemical wastes stored in different areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.10	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.11	Is an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or of 20% by volume of the chemical waste stored in that area, whichever is the greatest, provide?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.12	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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4.21	Are the construction materials stored properly to minimize the potential for damage or contamination?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	R04
4.22	Is a dumping license obtained to deliver public fill to public filling areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.00	Landscape and Visual				
5.01	Are Is site hoarding provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.02	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.03	Is construction light oriented away from the sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.04	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Contract No.: 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
5.05	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.06	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.07	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.08	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.00	Ecology				
6.01	Is site runoff properly treated to prevent any silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.02	Are silt trap installed and well-maintained?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.03	Are stockpiles properly covered to avoid generating silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.04	Are construction works restricted to works area which are clearly defined?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.00	Overall				
7.01	Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Contract No.: 13/WSD/16 Mainlaying in Tseung Kwan O

Remark / Follow up of Observation(s) and Non-compliance(s) of Last Weekly Site Inspection:

Observation

O01: The Contractor should prevent the oil leakage of generator in Y to Y1

Reminder

R01 The Contractor should replace "NRMM label" on excavators in Y2

R02 The Contractor should replace NRMM label on generator in pit 0

R03

The generator should be stored in drip tray in Y to Y2

R04: The Contractor should conduct daily cleaning.


Signatures:


ET
Representative


Contractor's
Representative

WSD's
Representative

IEC's
Representative


(Name: Grace Hung)


(Name: Ken Man)


(Name: Au Wai Lok)

(Name:)

Contract No.: 13/WSD/16 Mainlaying in Tseung Kwan O

WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

Inspection Date: 25/4/2023

Inspected by: ET: Howard Chan

WSD: Mr. Alex Wan

Inspection Time: 14:15 - 15:15

Contractor: Mr. Hon Ma

IEC: Mr. Louis Kwan

Weather							
Condition	<input type="checkbox"/> Sunny	<input type="checkbox"/> Fine	<input type="checkbox"/> Overcast	<input type="checkbox"/> Drizzle	<input checked="" type="checkbox"/> Rain	<input type="checkbox"/> Storm	<input type="checkbox"/> Hazy
Temperature	<input type="text" value="23"/> °C	Humidity	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low		
Wind	<input type="checkbox"/> Calm	<input checked="" type="checkbox"/> Light	<input type="checkbox"/> Breeze	<input type="checkbox"/> Strong			

		N/A	Yes	No	Remarks
0.00	General				
0.01	Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.00	Construction Dust				
1.01	Are dusty materials, such as excavated materials, building debris and construction materials, and exposed earth surface properly covered to prevent dust emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.02	Are screenings, enclosures, water spraying, or vacuum cleaning devices provided to dusty construction works for dust suppression?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.03	Are fumes or smoke emitting plants or construction activities shielded by a screen?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	Are wheel-washing facilities with high-pressure water jets provided at all sites exits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.05	Is wheel-washing provided to all vehicles leaving the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.06	Are road section near the site exit free from dusty material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ROS
1.07	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.08	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.09	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.10	Are the working areas for uprooting of trees, shrubs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.11	Is exposed earth properly treated within six months after the last construction activity on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.12	Does the operation of plants on site free form dark smoke emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.13	Are vehicles travelling at speed not exceeding 15km/hr within the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.14	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top and 3 sides?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.15	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	Are hoardings of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	Is open burning prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Contract No.: 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Remarks
2.00	Construction Noise (Airborne)				
2.01	Are quiet plants adopted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.02	Are the PME's operating on site well-maintained to minimize the generation of excessive noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.03	Are plants throttled down or turned off when not in use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.04	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	Are moveable barriers provided to screen NSRs from plant or noisy operations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	Are silencers, mufflers and enclosures provided to plants?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.07	Are the hoods, cover panels and inspection hatches of PME's closed during operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.08	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to nearby sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.10	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.11	Are valid noise emission label(s) affixed to all air compressors operating on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.12	Are all construction noise permit(s) applied for percussive piling work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.13	Are construction noise permit(s) applied for general construction works during restricted hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.14	Are valid construction noise permit(s) displayed at all vehicular exits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.00	Water Quality				
3.01	Is effluent discharge license obtained for wastewater discharge from site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.02	Is effluent discharged according to the effluent discharge license?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	RO2
3.03	Is wastewater discharge from site properly treated prior to discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	RO2
3.04	Are perimeter channels provided to intercept storm runoff from outside the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.05	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided to remove sand/silt particles from runoff?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.06	Is surface runoff diverted to sedimentation facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.07	Is the drainage system properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	RO4, 001
3.08	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.09	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.10	Are temporary access roads protected by crushed gravel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.11	Is trench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Contract No.: 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Remarks
3.12	Are exposed slope surface properly protected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.13	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.14	Is runoff from wheel-washing facilities avoided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.15	Is oil leakage or spillage prevented?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	003
3.16	Are there any measures to prevent the release of oil and grease into the storm drainage system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.17	Are the oil interceptors/ grease traps properly maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.18	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.19	Are all fuel tanks and storage areas provided with locks and be sited on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.20	Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.21	Are sufficient chemical toilets provided on site to handle sewage from construction work force?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.22	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.23	Is concrete washing water properly collected and treated prior to discharge?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.00	Waste Management				
4.01	Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.02	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.03	Is chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.04	Are trip tickets for chemical waste disposal available for inspection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05	Is chemical waste reused and recycled on site as far as practicable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.06	Are all containers for chemical waste properly labelled?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.07	Is drip tray provided for chemical storage?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	002
4.08	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.09	Are incompatible chemical wastes stored in different areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.10	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.11	Is an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or of 20% by volume of the chemical waste stored in that area, whichever is the greatest, provide?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.12	Is a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	204

Contract No.: 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Remarks
4.13	Are sufficient general refuse disposal/collection points provided on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.14	Is general refuse disposed of properly and regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.15	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.16	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.17	Are C&D wastes sorted on site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.18	Are C&D waste disposed of properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.19	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.20	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.21	Are the construction materials stored properly to minimize the potential for damage or contamination?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.22	Is a dumping license obtained to deliver public fill to public filling areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.00	Landscape and Visual				
5.01	Are Is site hoarding provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.02	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.03	Is construction light oriented away from the sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.04	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.05	Are damages to trees outside site boundary due construction works avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.06	Are excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.07	Are the retained and transplanted tree(s) properly protected and in good conditions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	201
5.08	Are surgery works carried out for damaged trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.00	Ecology				
6.01	Is site runoff properly treated to prevent any silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.02	Are silt trap installed and well-maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03	Are stockpiles properly covered to avoid generating silty runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.04	Are construction works restricted to works area which are clearly defined?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7.00	Overall				
7.01	Is the EM&A properly implemented in general?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Contract No.: 13/WSD/16 Mainlaying in Tseung Kwan O

Remark / Observation(s) / Recommendation and Non-compliance(s) of Weekly Site Inspection:

observation

- O01: Manhole should be covered and sheltered to prevent silt runoff getting into drainage system. (Location B).
- O02: Chemical container should be stored with drip tray. (Location B)
- O03: Oil ~~leakage~~^{stain} was observed at location B near the excavator. The Contractor was required to prevent oil leakage from the excavator and clean the oil stain.

Reminders:

- R01: The Contractor was reminded to establish tree protection zone to protect the retained trees at location B.
- R02: Rainwater in trench shall be treated before discharge. (Location B)
- R03: The Contractor was reminded to keep the site exit free of dust. (Location B).
- R04: The Contractor was reminded to clear the rubbish and leaves at the storm drain (Location B).

Signatures:


ET
Representative


Contractor's
Representative


WSD's
Representative

IEC's
Representative


(Name: Howard Chan)


(Name: Ken Ma)


(Name: Alex Kwok)


(Name: Louis Kwan)

Appendix M

Proactive Environmental Protection Proforma

Proactive Environmental Protection for the Next Reporting Month

Reporting Period	Activity	Major Environmental Impact	Environmental Mitigation Measure
1- 31 May 2023	<ul style="list-style-type: none"> - Excavation of trench - Mainlaying of pipe - Backfilling of the trench - Work fronts for pipe jacking 	<ul style="list-style-type: none"> - Construction dust - Noise generation; - Construction waste - Impact of water quality - Ecology 	<ul style="list-style-type: none"> - Dust suppression by regular wetting and water spraying - Reduction of noise from equipment and machinery on-site - Sorting and storage of general refuse and construction waste - Chemical shall be stored properly with drip tray. - Treatment of water with water treatment facilities before discharge. - Rainwater pumped from trench should be discharged via waster water treatment facilities. - Retained tree shall be carefully protected and tree protect zone should be established.

Appendix N

Impact Monitoring Schedule of Next Reporting Month

Contract No. 13/WSD/16
 Mainlaying in Tseung Kwon O
 Tentative Environmental Monitoring Schedule (May 2023)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3 Impact Noise Monitoring	4	5	6
7	8	9	10	11	12	13 Impact Noise Monitoring
14	15	16	17	18	19 Impact Noise Monitoring	20
21	22	23	24	25 Impact Noise Monitoring	26	27
28	29	30	31 Impact Noise Monitoring			

The schedule may be changed due to unforeseen circumstances (adverse weather, etc.)