



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

Your reference:

Our reference: HKWSD201/50/108056

Date: 10 June 2022

Attention: Mr Y M Chan

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.45

We refer to emails of 12, 23, 24 May and 9 June 2022 attaching Monthly EM&A Report No.45 for the captioned project prepared by the ET.

We have no further 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



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水務署

Water Supplies Department

Contract No. 13/WSD/16

Mainlaying in Tseung Kwan O

Monthly EM&A Report No. 45
(Period from 1 to 30 April 2022)

May 2022

(Rev. 0)

	Prepared by:	Reviewed and Certified by:
Name	Howard Chan	Jacky Leung
Position	Environmental Team	Environmental Team Leader
Signature		
Date:	24 May 2022	24 May 2022

Revision History

0	1 st Submission	12 Apr 2022
Rev.	DESCRIPTION OF MODIFICATION	DATE

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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 45th 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 2022.
- 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	Location	Forecast Works in Next Reporting Month
Portion H of the Project Site	TKO 137 Pit A	<ul style="list-style-type: none"> • Pipe installation works inside sleeve pipe between Pit 137A to Pit 137C
	TKO 137 Pit B	
	TKO 137 Pit C	
Portion J of the Project Site	Wan Po Rd – Workfront 1	<ul style="list-style-type: none"> • Excavation and ELS works for jacking pit 1
	Wan Po Rd – Workfront 2	<ul style="list-style-type: none"> • Setup for MTBM pipe jacking
	Wan Po Rd – Workfront 3	<ul style="list-style-type: none"> • Pipe trench excavation and pipe laying
	Wan Po Rd – Workfront 4	
	Wan Po Rd – Workfront 5	
	Wan Po Rd – Pit A	<ul style="list-style-type: none"> • Setup and commence for MTBM pipe jacking
	Wan Po Rd – Pit B	<ul style="list-style-type: none"> • MTBM pipe jacking
	Shek Kok Road – Pit D	<ul style="list-style-type: none"> • MTBM pipe jacking
	Shek Kok Road – Hand-shield	<ul style="list-style-type: none"> • Construction of wing wall
	Landfill Stage 1 – Area A	<ul style="list-style-type: none"> • Trench excavation and pipe laying
	Pet Garden’s Road	
	Pung Loi Road – Pit WPR1	<ul style="list-style-type: none"> • Set up for MTBM pipe jacking

	Creative school	<ul style="list-style-type: none"> • Construction of flood protection wall and re-construction of u-channel
	Roundabout – Pit G1A	<ul style="list-style-type: none"> • Pipe laying inside sleeve pipe
	Roundabout – Pit J1A	<ul style="list-style-type: none"> • Pipe laying inside sleeve pipe
	Velodrome – Pit K	<ul style="list-style-type: none"> • Grouting for sleeve pipe between Pit K to Pit L
	Velodrome – Pit O to Pit N	<ul style="list-style-type: none"> • Trench excavation and pipe laying
	Velodrome – Pit O to Pit P	<ul style="list-style-type: none"> • Site setup works for trenchless works
	Abandoned Road near Mau Wu Tsai WF-1	<ul style="list-style-type: none"> • Gate valve chamber construction • Trench reinstatement
	Po Lam Road South	<ul style="list-style-type: none"> • Trench excavation and pipe laying works
	Po Lam Road (D2)	<ul style="list-style-type: none"> • Trench excavation and pipe laying works
	Po Lam Road (C2)	<ul style="list-style-type: none"> • Pipe piling of pipe bridge at Location A Westside slop
	Po Lam Road (B4)	<ul style="list-style-type: none"> • Trench rock breaking • Trench excavation and pipe laying
	Tsui Lam Road	<ul style="list-style-type: none"> • Predrilling for mini pile
	TKO Primary Service Reservoir	<ul style="list-style-type: none"> • Trench excavation and pipe laying

A6. The major environmental impacts brought by the above construction works include:

- Construction dust and noise generation from mainlaying of pipes, TBM break through 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, TBM break through 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 8, 13, 21 and 29 April 2022 as construction works were conducted within 300m to the noise sensitive receiver. No project-related exceedance of the Action and Limit Level was recorded during the reporting period.

A9. No examinations were scheduled in the reporting month for NSR4 Creative Secondary School. Academic School Calendar can be found in **Appendix O**.

Complaint Handling and Prosecution

A10. No environmental complaint was received in the reporting month.

A11. Neither notifications of summons nor prosecution was received for the Project in the reporting month.

Reporting Change

A12. There were no changes reported that may affect the on-going EM&A programme.

Summary of Upcoming Key Issues and Key Mitigation Measures

A13. Key works in the next reporting month for the Project will include the followings:

Location	Location	Forecast Works in Next Reporting Month
Portion H of the Project Site	TKO 137 Pit A	<ul style="list-style-type: none"> • Pipe installation works inside sleeve pipe between Pit 137A to Pit 137C will be conducted.
	TKO 137 Pit B	
	TKO 137 Pit C	
Portion J of the Project Site	Wan Po Rd – Workfront 1	<ul style="list-style-type: none"> • Excavation and ELS works for jacking Pit 1
	Wan Po Rd – Workfront 2	<ul style="list-style-type: none"> • Setup for MTMB pipe jacking
	Wan Po Rd – Workfront 3	<ul style="list-style-type: none"> • Pipe trench excavation and pipe laying
	Wan Po Rd – Workfront 4	<ul style="list-style-type: none"> • Pipe trench excavation and pipe laying • Pipe installation inside sleeve pipe between WF4 & WF4B
	Wan Po Rd – Pit A	<ul style="list-style-type: none"> • Commence MTMB pipe jacking
	Wan Po Rd – Pit B	<ul style="list-style-type: none"> • MTBM pipe jacking
	Wan Po Rd – Pit D	
	Shek Kok Road – Pit D	
	Shek Kok Road – Hand-shield	<ul style="list-style-type: none"> • Construction of wing wall • Setup for hand shield pipe jacking
	Landfill Stage 1 – Area A	<ul style="list-style-type: none"> • Trench excavation and pipe laying
	Landfill Stage 1 – Area B	
	Pet Garden’s Road	
	Creative school	<ul style="list-style-type: none"> • Construction of flood protection well and re-construction of u-channel
	Pung Loi Road – Pit WPR1	<ul style="list-style-type: none"> • Setup for MTMB pipe jacking
	Roundabout – Pit G1A	<ul style="list-style-type: none"> • Pipe laying inside sleeve pipe
Roundabout – Pit J1A		

Location	Location	Forecast Works in Next Reporting Month
	Velodrome – Pit K	• Grouting for sleeve pipe between Pit K to Pit L
	Velodrome – Pit O to Pit N	• Trench excavation and pipe laying.
	Velodrome – Pit O to Pit P	• Site setup for trenchless works.
	Abandoned Road near Mau Wu Tsai – Workfront 1	• Gate valve chamber construction • Trench reinstatement
	Po Lam Road South	• Trench excavation and pipe laying
	Po Lam Road (C2)	• Pipe piling of pipe bridge at Location A Westside slope.
	Po Lam Road (D2)	• Trench excavation and pipe laying
	Po Lam Road (B4)	• Trench rock breaking • Trench excavation and pipe laying
	Tsui Lam Road	• Predrilling for mini pile
	TKO Primary Service Reservoir	• Trench excavation and pipe laying

A14. 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.

A15. 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, TBM break through 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 fresh water 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 fresh water 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 45th 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 2022.

1.3 Project Organization

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

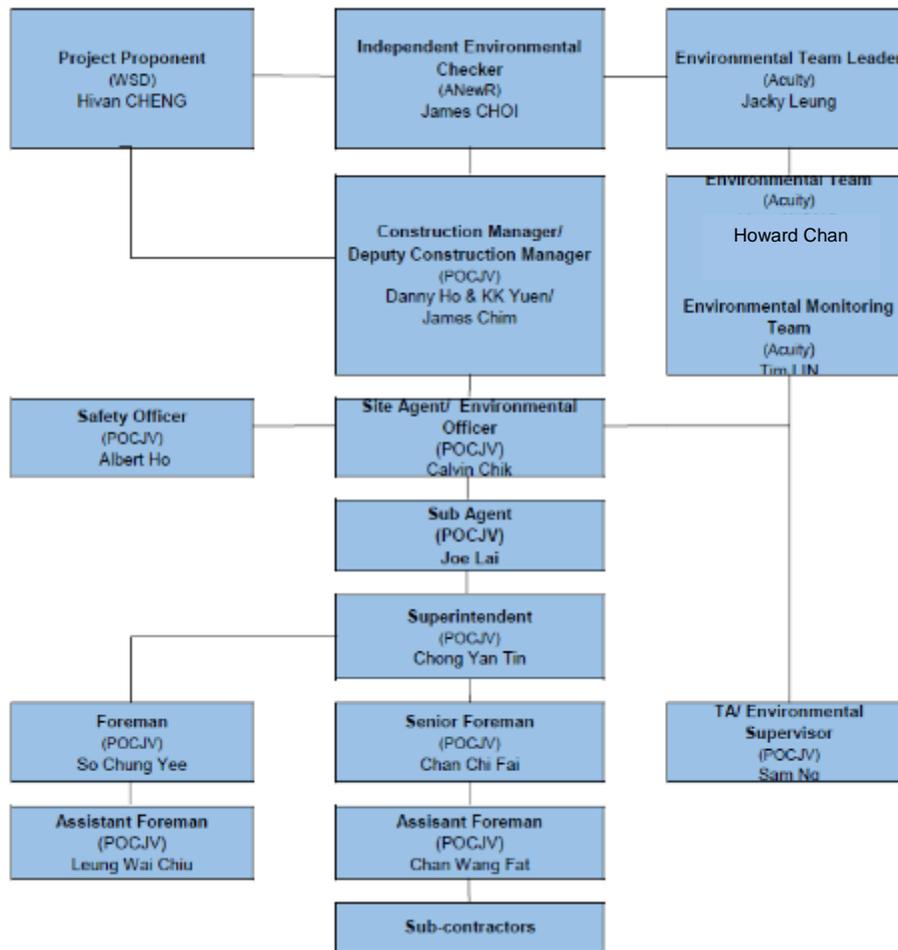


Figure 1.1 Project Organization Chart

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	Location	Forecast Works in Next Reporting Month
Portion H of the Project Site	TKO 137 Pit A	<ul style="list-style-type: none"> • Pipe installation works inside sleeve pipe between Pit 137A to Pit 137C
	TKO 137 Pit B	
	TKO 137 Pit C	
Portion J of the Project Site	Wan Po Rd – Workfront 1	<ul style="list-style-type: none"> • Excavation and ELS works for jacking pit 1
	Wan Po Rd – Workfront 2	<ul style="list-style-type: none"> • Setup for MTBM pipe jacking
	Wan Po Rd – Workfront 3	<ul style="list-style-type: none"> • Pipe trench excavation and pipe laying
	Wan Po Rd – Workfront 4	
	Wan Po Rd – Workfront 5	
	Wan Po Rd – Pit A	<ul style="list-style-type: none"> • Setup and commence for MTBM pipe jacking
	Wan Po Rd – Pit B	<ul style="list-style-type: none"> • MTBM pipe jacking
	Shek Kok Road – Pit D	<ul style="list-style-type: none"> • MTBM pipe jacking
	Shek Kok Road – Hand-shield	<ul style="list-style-type: none"> • Construction of wing wall
	Landfill Stage 1 – Area A	<ul style="list-style-type: none"> • Trench excavation and pipe laying
	Pet Garden’s Road	
	Pung Loi Road – Pit WPR1	<ul style="list-style-type: none"> • Set up for MTBM pipe jacking
	Creative school	<ul style="list-style-type: none"> • Construction of flood protection wall and re-construction of u-channel
	Roundabout – Pit G1A	<ul style="list-style-type: none"> • Pipe laying inside sleeve pipe
	Roundabout – Pit J1A	<ul style="list-style-type: none"> • Pipe laying inside sleeve pipe
	Velodrome – Pit K	<ul style="list-style-type: none"> • Grouting for sleeve pipe between Pit K to Pit L
	Velodrome – Pit O to Pit N	<ul style="list-style-type: none"> • Trench excavation and pipe laying
	Velodrome – Pit O to Pit P	<ul style="list-style-type: none"> • Site setup works for trenchless works
	Abandoned Road near Mau Wu Tsai WF-1	<ul style="list-style-type: none"> • Gate valve chamber construction • Trench reinstatement
	Po Lam Road South	<ul style="list-style-type: none"> • Trench excavation and pipe laying works
	Po Lam Road (D2)	<ul style="list-style-type: none"> • Trench excavation and pipe laying works
	Po Lam Road (C2)	<ul style="list-style-type: none"> • Pipe piling of pipe bridge at Location A Westside slop
	Po Lam Road (B4)	<ul style="list-style-type: none"> • Trench rock breaking • Trench excavation and pipe laying
Tsui Lam Road	<ul style="list-style-type: none"> • Pre-drilling for mini pile 	
TKO Primary Service Reservoir	<ul style="list-style-type: none"> • Trench excavation and pipe laying 	

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 Valid Environmental Licence, Notification, Permit and Documentations

Permit/ Licences/ Notification	Reference	Validity Period
Variation of Environmental Permit	EP no.: EP-503/2015/A	Throughout the Contract
Notification of Construction Works under the Air Pollution Control (Construction Dust) Regulation (Form NA)	Ref no.: 423775	Throughout the Contract
Chemical Waste Producer Registration	WPN: 5213-839-P3287-01	Throughout the Contract
Billing Account for Disposal of Construction Waste	A/C no.: 7029491	Throughout the Contract
Water Discharge Licence	WT00032336-2018	Until 31 Dec 2023
Construction Noise Permit (Hong Kong Velodrome)	GW-RE0330-22	Until 1 October 2022
Construction Noise Permit (Wan Po Road near Wan O Road and Chun Yat Street, Tseung Kwan O, N.T.)	GW-RE0326-22	Until 1 October 2022
Construction Noise Permit (Shek Kok Road near Shrewsbury International School Hong Kong, Tseung Kwan O, N.T.)	GW-RE0329-22	Until 1 October 2022
Construction Noise Permit (Wan Po Road near Chun Ying Street, Tseung Kwan O, N.T.)	GW-RE0353-22	Until 1 October 2022

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.

In accordance with the EM&A Manual, baseline noise level at the noise monitoring stations were established as presented in the Baseline Monitoring Report. Impact noise monitoring will be conducted once per week in the form of 30-minute measurements L_{eq} , L10 and L90 levels recorded at each monitoring station between 0700 and 1900 on normal weekdays.

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 8, 13, 21 and 29 April 2022 as construction works were conducted within 300m to the noise sensitive receiver. Detailed monitoring results can be found in **Appendix G**.

No examinations were scheduled in the reporting month for NSR4 Creative Secondary School. Academic School Calendar can be found in **Appendix O**.

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 would follow the requirements as stipulated in the valid CNPs if works have to be conducted during 1900-0700 in all days or any time on Sundays or general holidays.

Construction noise level was measured in terms of the A-weighted equivalent continuous sound pressure level (L_{Aeq}). $L_{eq\ 30min}$ 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 $L_{eq\ 5min}/L_{eq\ 30min}$ (average of 6 consecutive L_{eq} 5min)	L_{eq} , L10 & L90

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**.

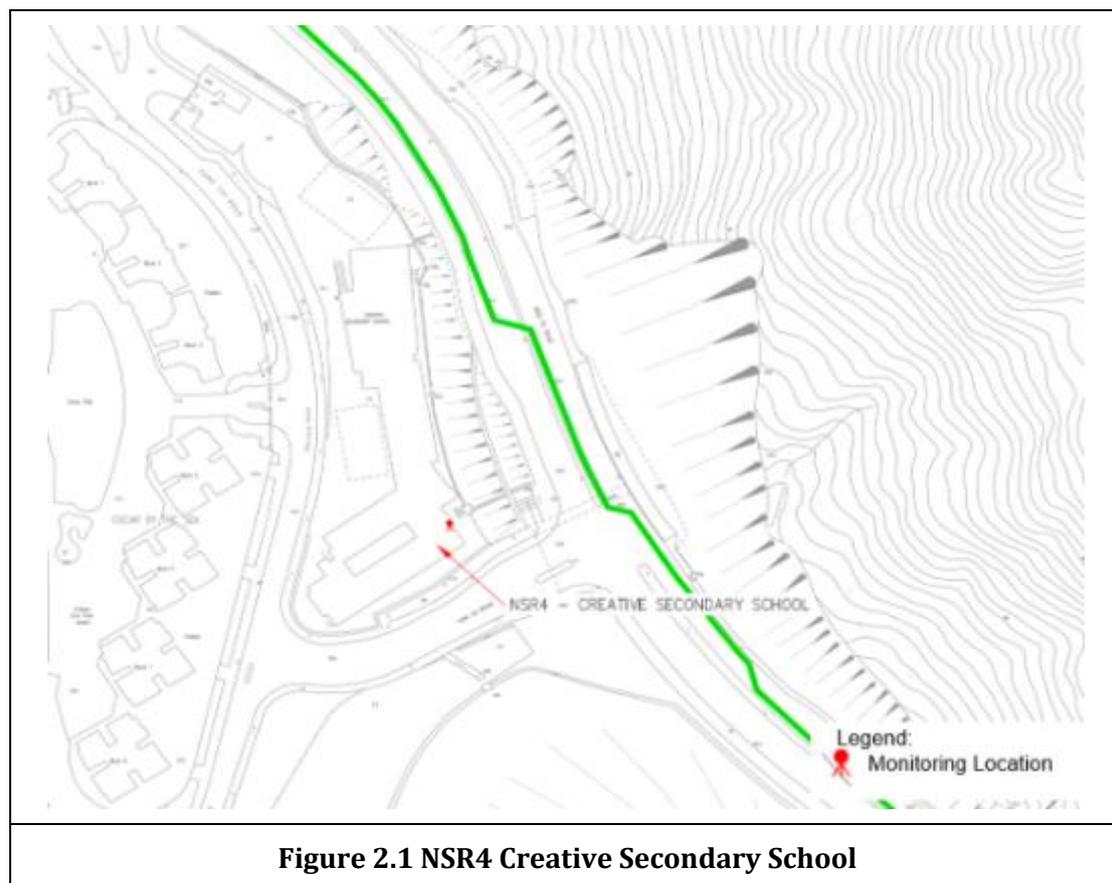


Figure 2.1 NSR4 Creative Secondary School



Figure 2.2 NSR24 PLK Laws Foundation College

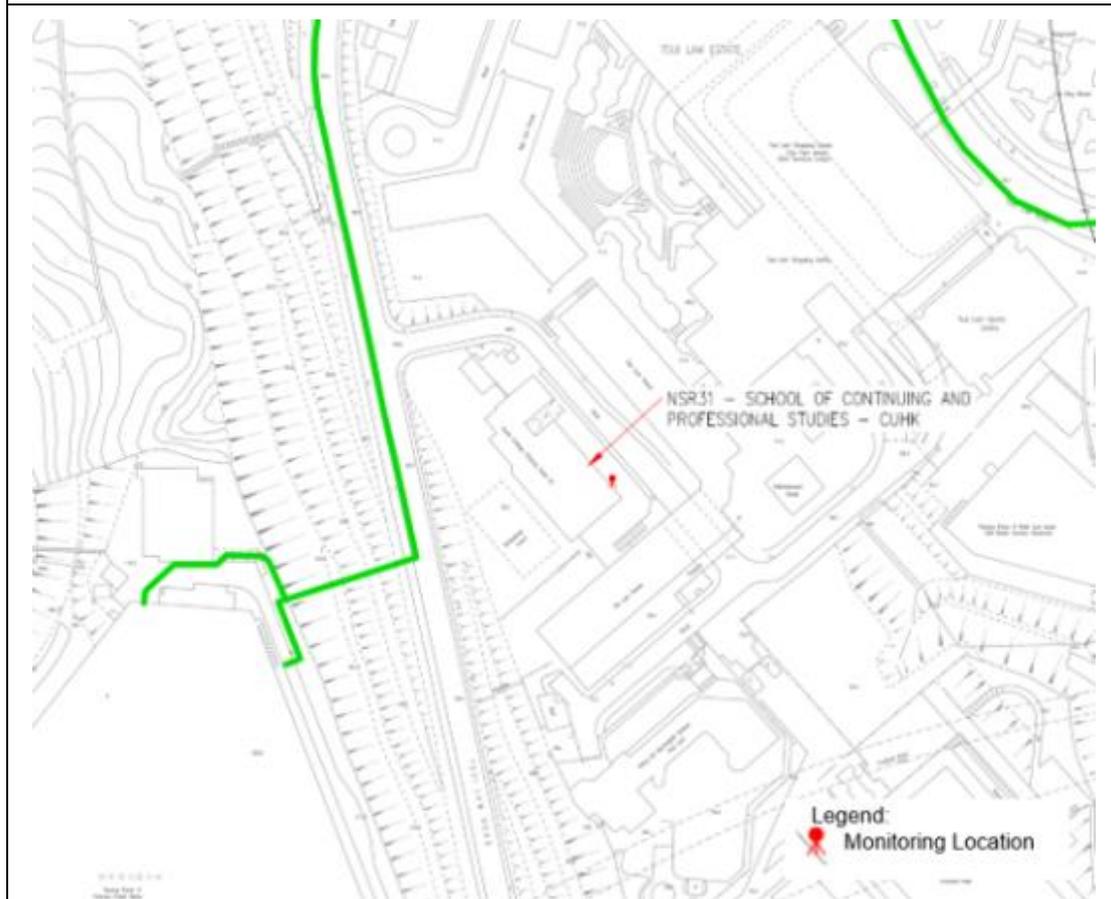


Figure 2.3 NSR31 School of Continuing and Professional Studies - CUHK

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	Calibration Certificate Expiry Date	Detection Limit
Sound Level Meter	Svantek 971	96062	05/07/2021	04/07/2022	15-140 dB(A)
Sound Level Meter Calibrator	Pulsar 105	63705	07/08/2021	06/08/2022	Nil
Pocket Wind Meter Anemometer	Kestrel 1000 Wind Meter	Nil	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 8, 13, 21 and 29 April 2022 Detailed monitoring results are presented in **Appendix G**.

No examinations were scheduled in the reporting month for NSR4 Creative Secondary School. Academic School Calendar can be found in **Appendix O**.

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.

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/card board (in '000kg)	Plastics (in '000kg)	Metals (in '000kg)
April 2022	0.840	0.000	0.003	0.055	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 4.20**.

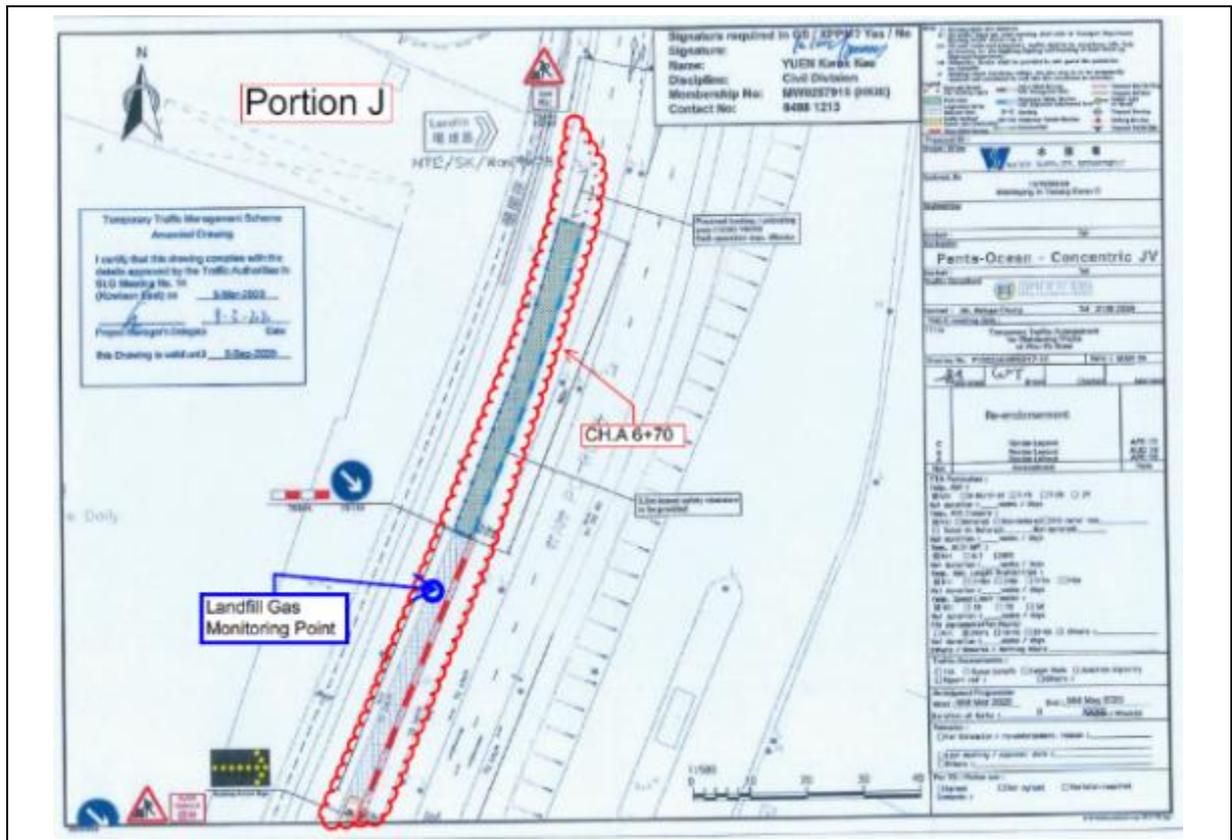


Figure 4.1 Monitoring Location - CHA 6+70

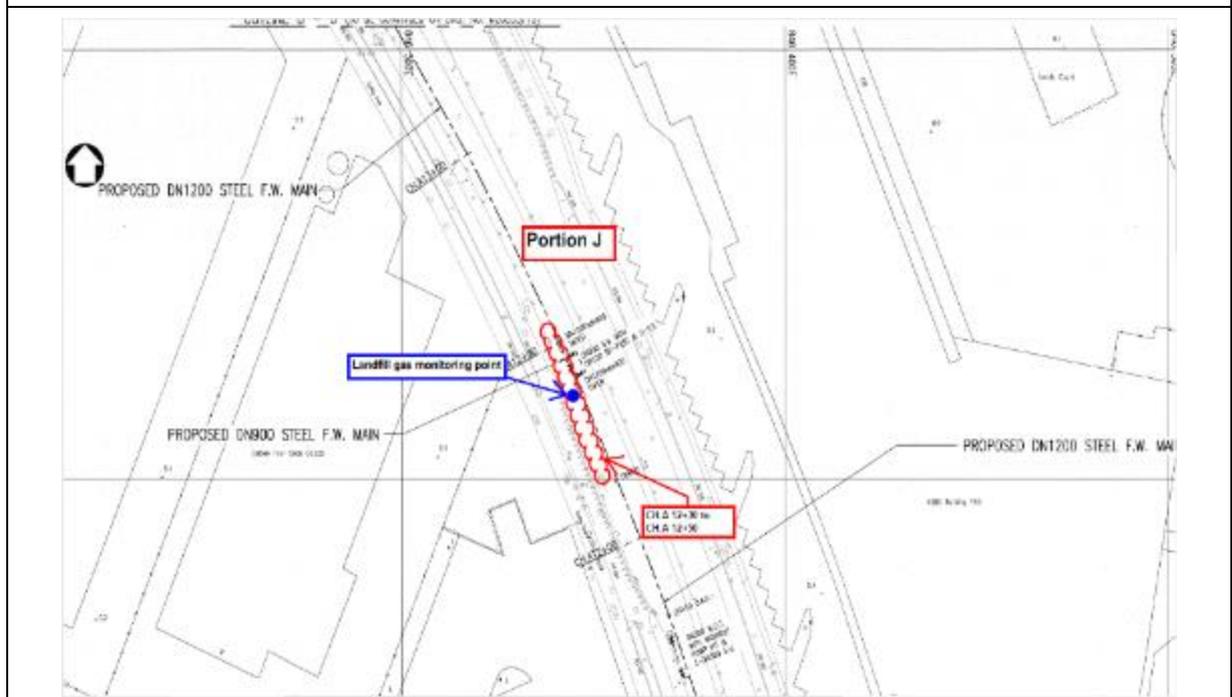


Figure 4.2 Monitoring Location - CHA 12+30 ~ 12+50

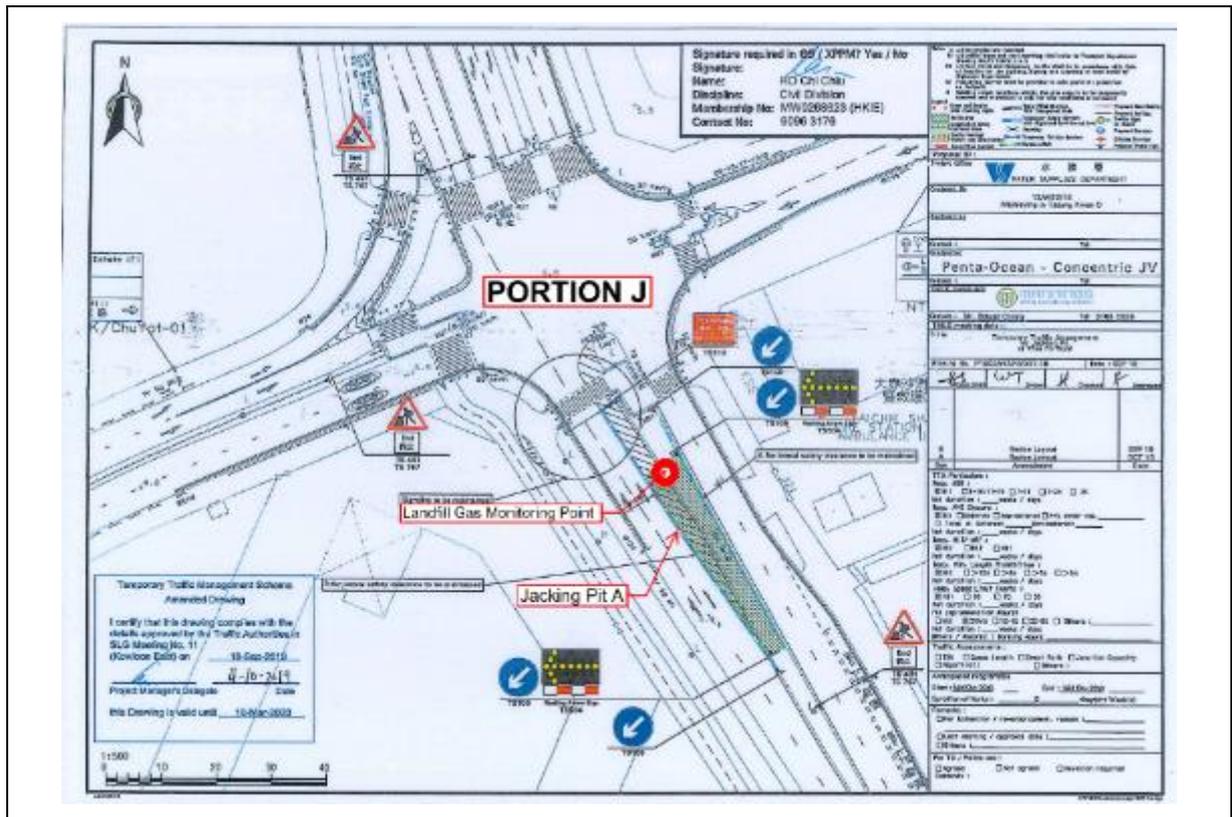


Figure 4.3 Monitoring Location - CH.A 13+50 ~ 14+00 (Pit A)

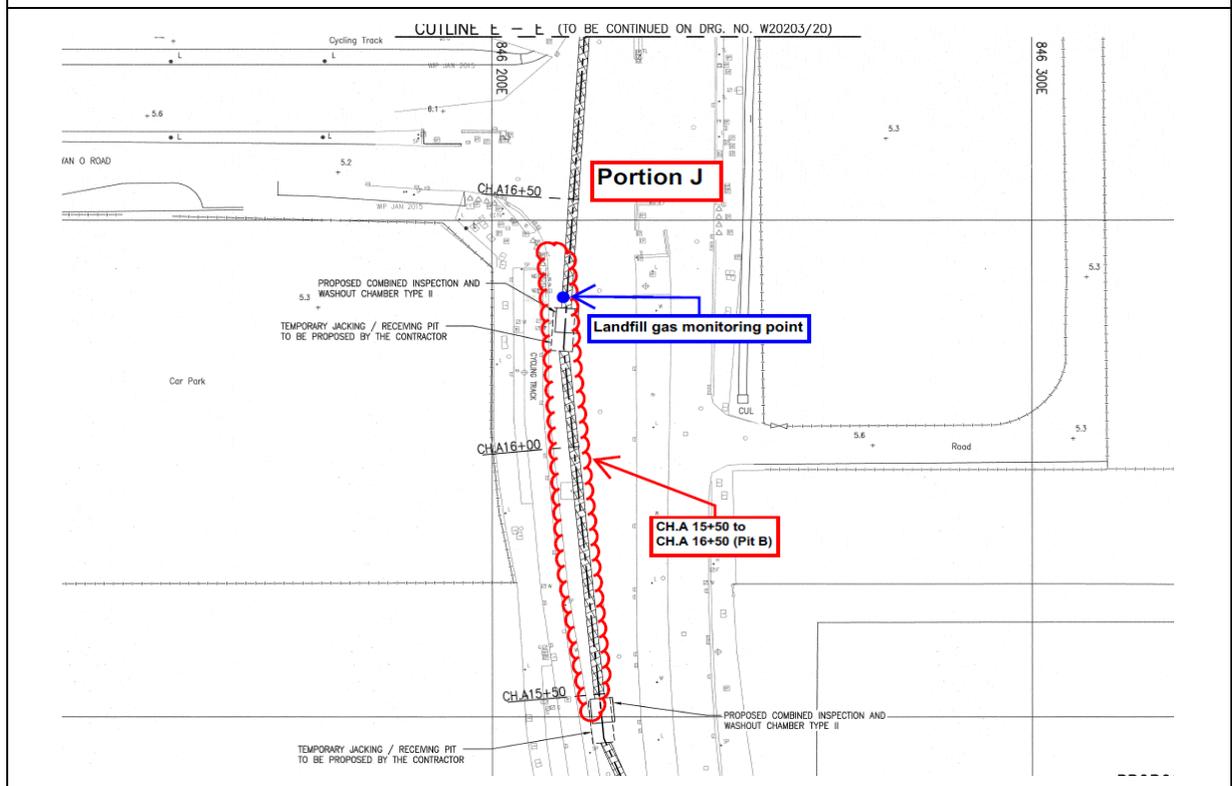


Figure 4.4 Monitoring Location - CH.A 15+50 ~16+50 (Jacking Pit B)

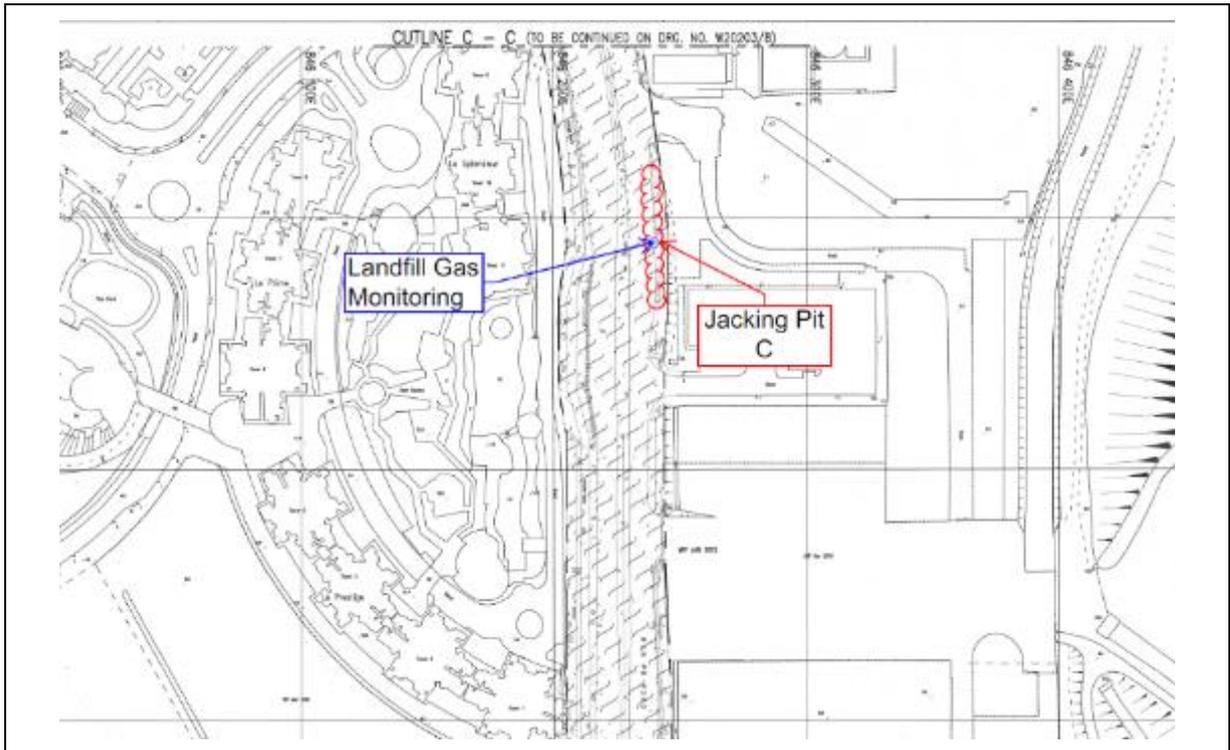


Figure 4.5 Monitoring Location - CH.A 19+15 ~19+50 (Pit C)

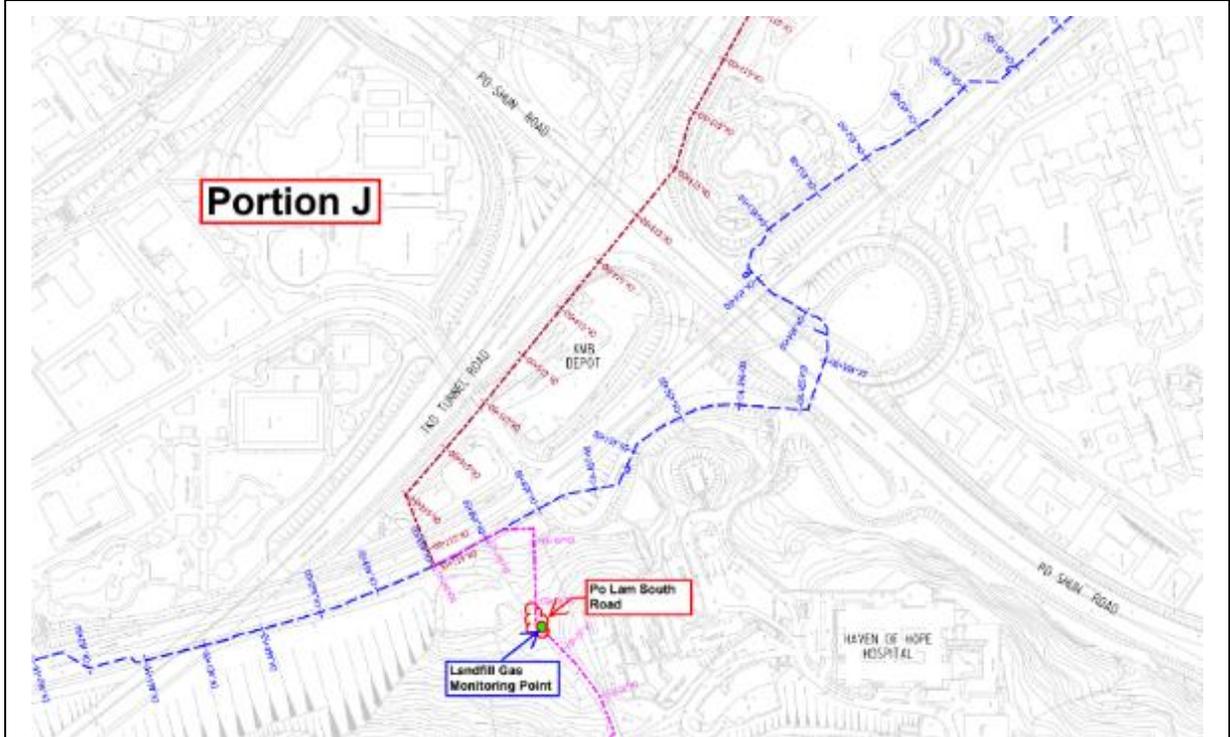


Figure 4.6a Monitoring Location - Mau Wu Tsai 1

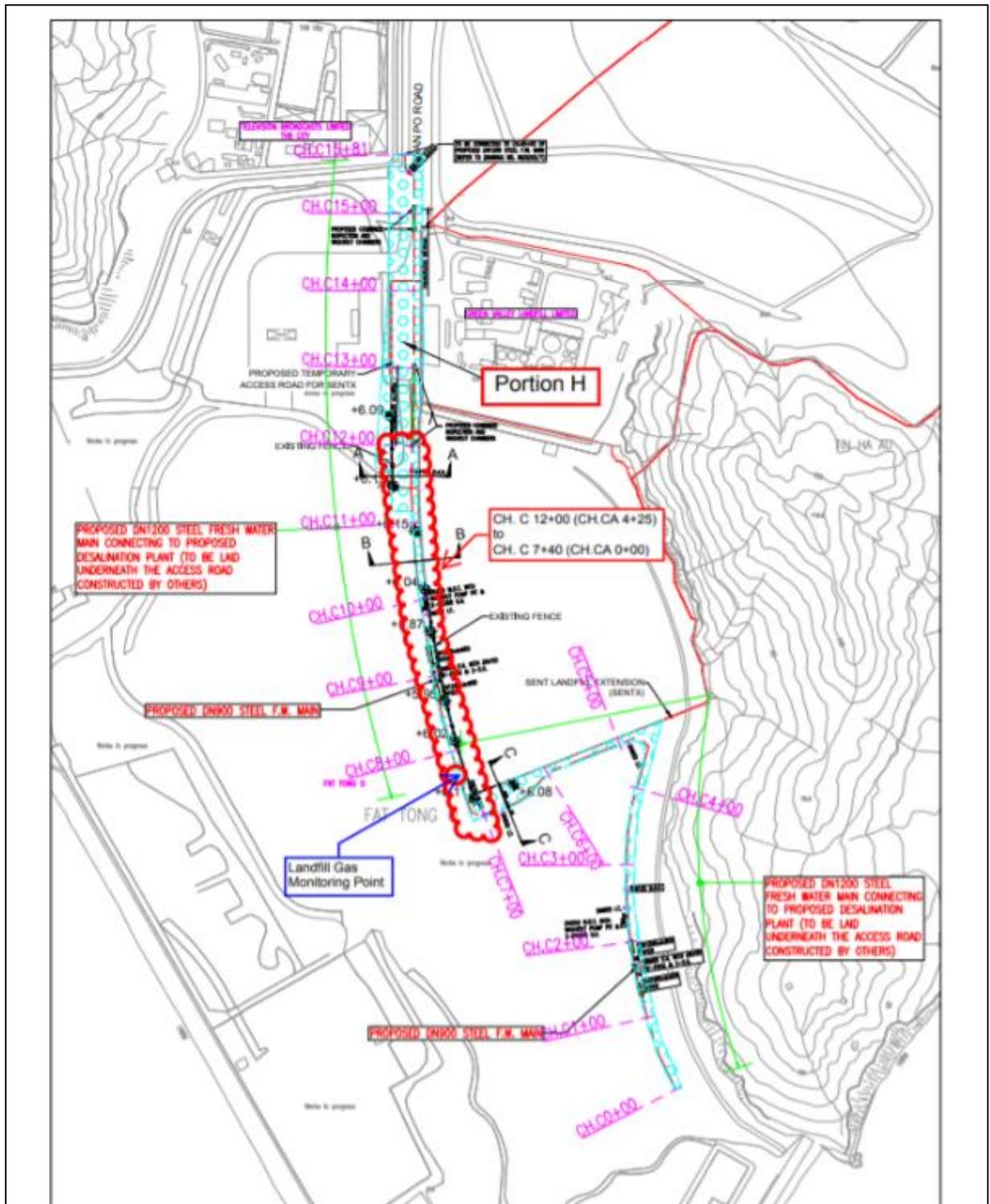


Figure 4.7 Monitoring Location –CH.CA 0+00 to CH.CA 04+25 (CH.C 7+40 ~ 12+00)

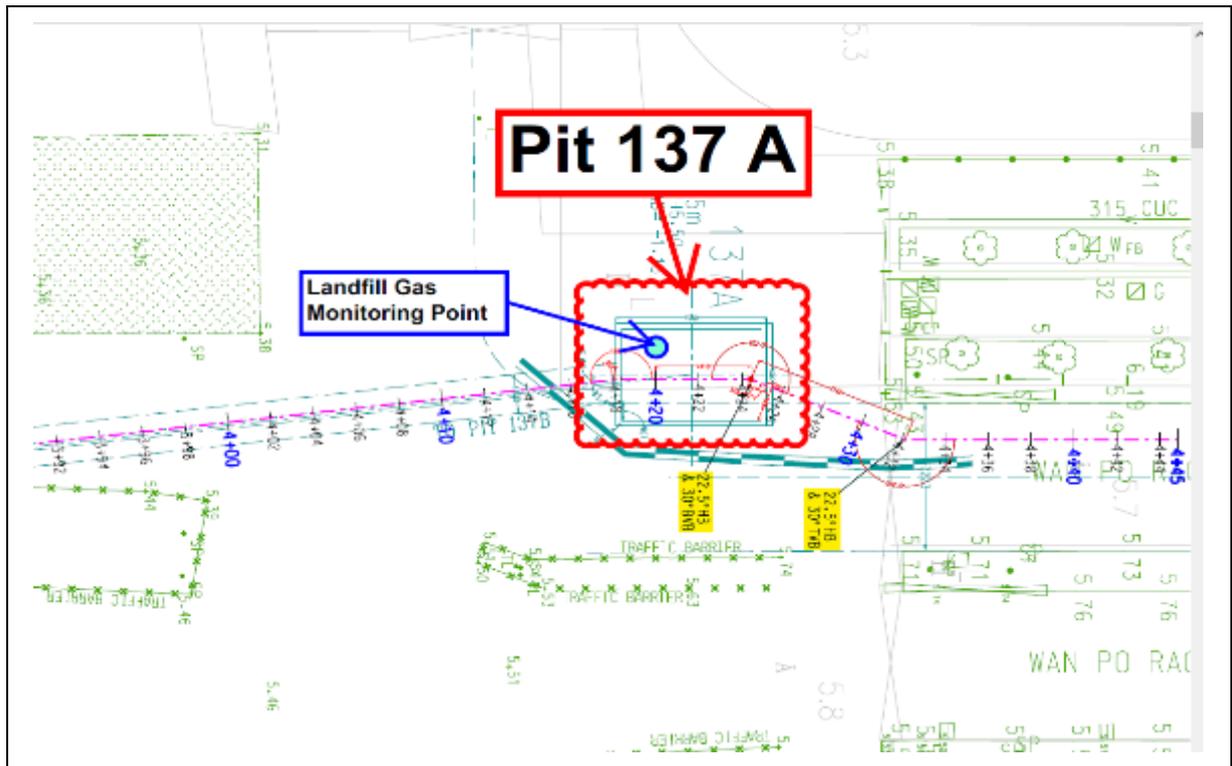


Figure 4.8a Monitoring Location - Pit 137A (137 Pit A)

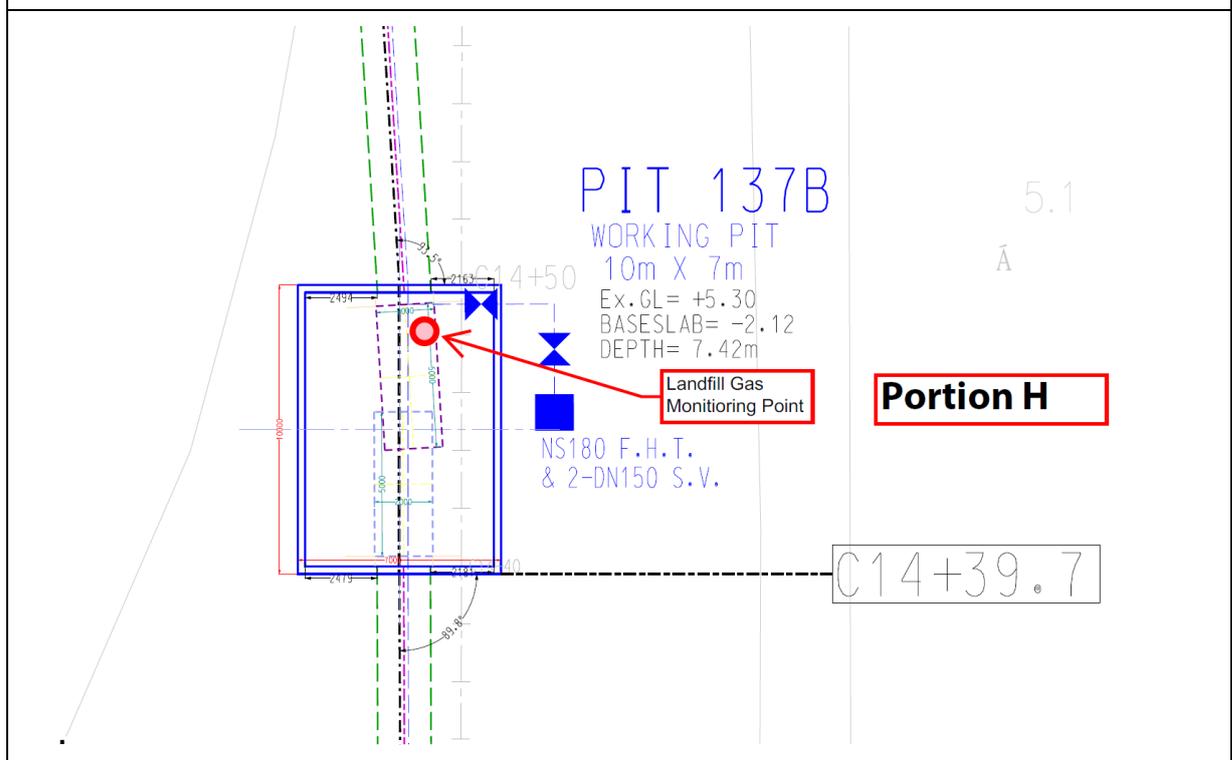


Figure 4.8b Monitoring Location - Pit 137B (137 Pit B)

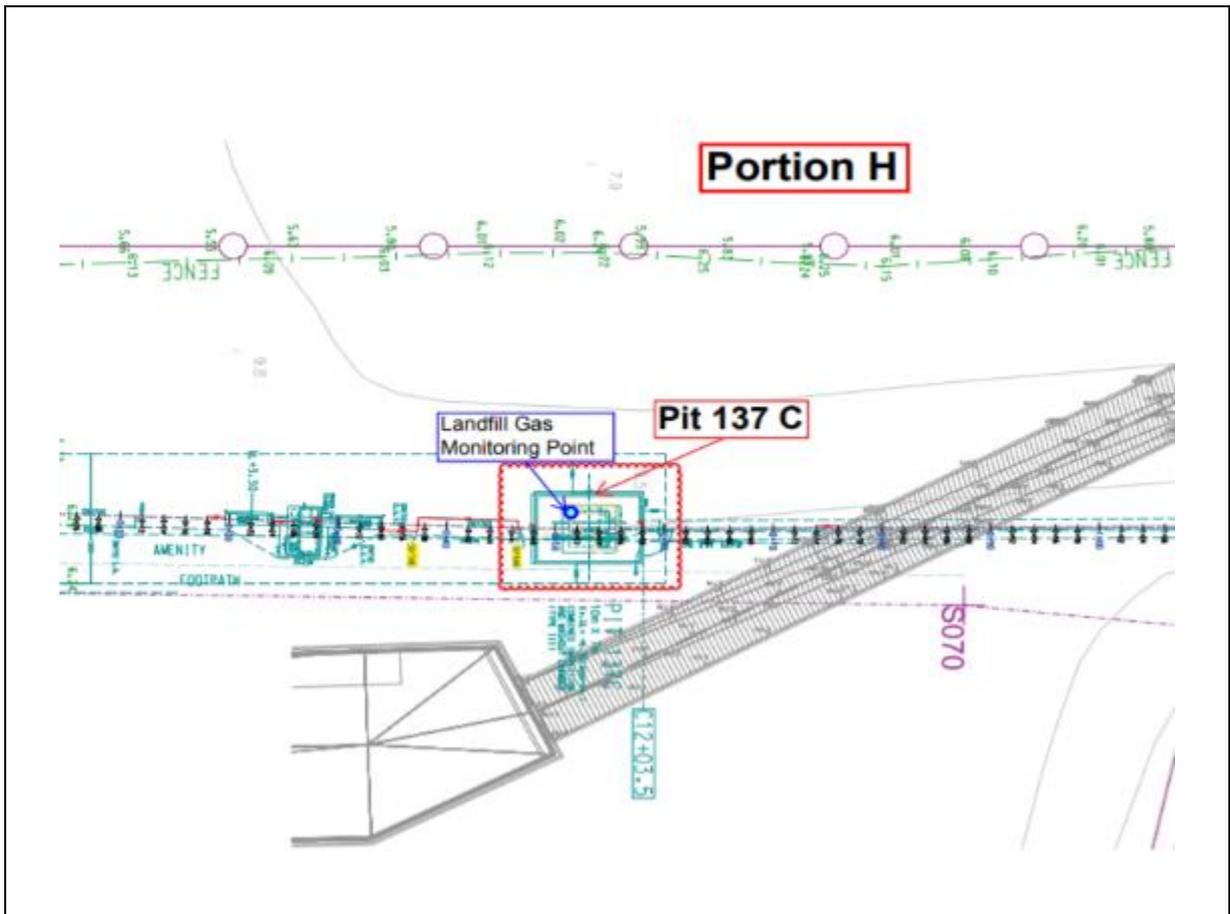


Figure 4.8c Monitoring Location - Pit 137C (137 Pit C)



Figure 4.9 Monitoring Location - Jacking Pit F

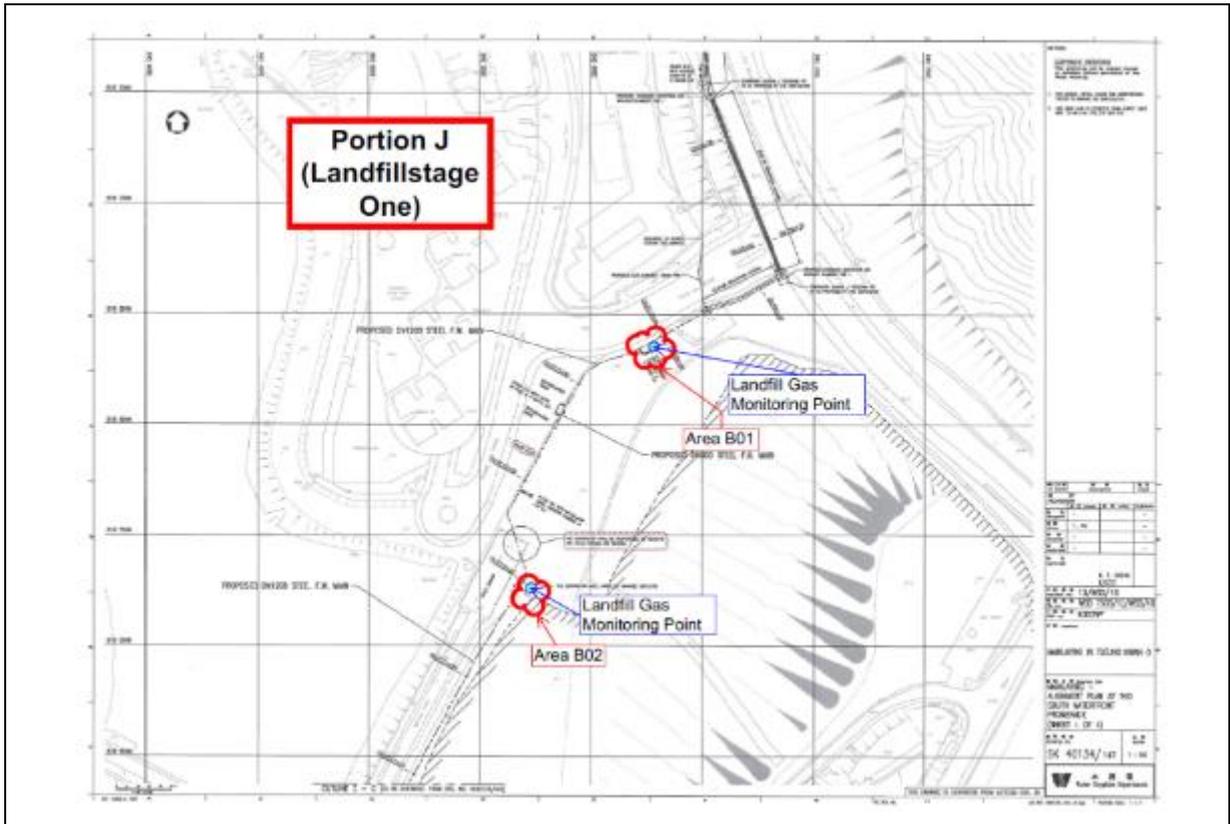


Figure 4.10a Monitoring Location - Landfill Stage 1 (Area B01-B02)

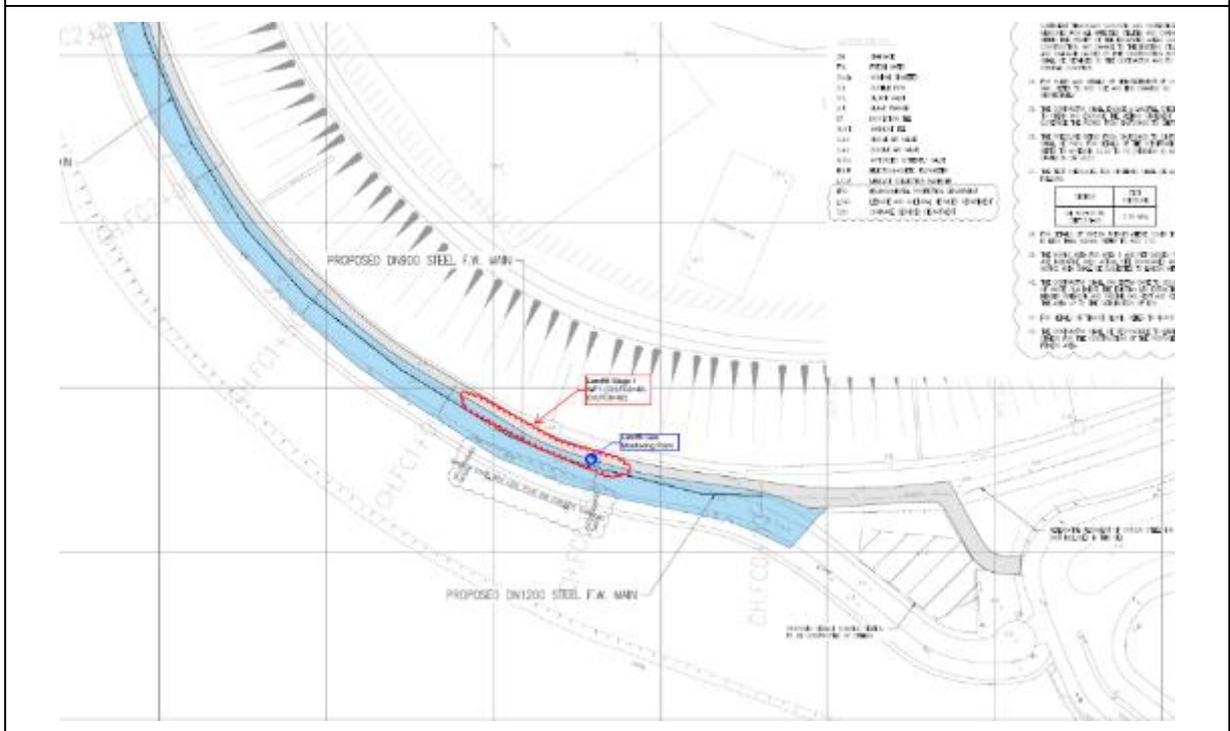


Figure 4.10b Monitoring Location - Landfill Stage 1 (FC0+64-FC0+92)

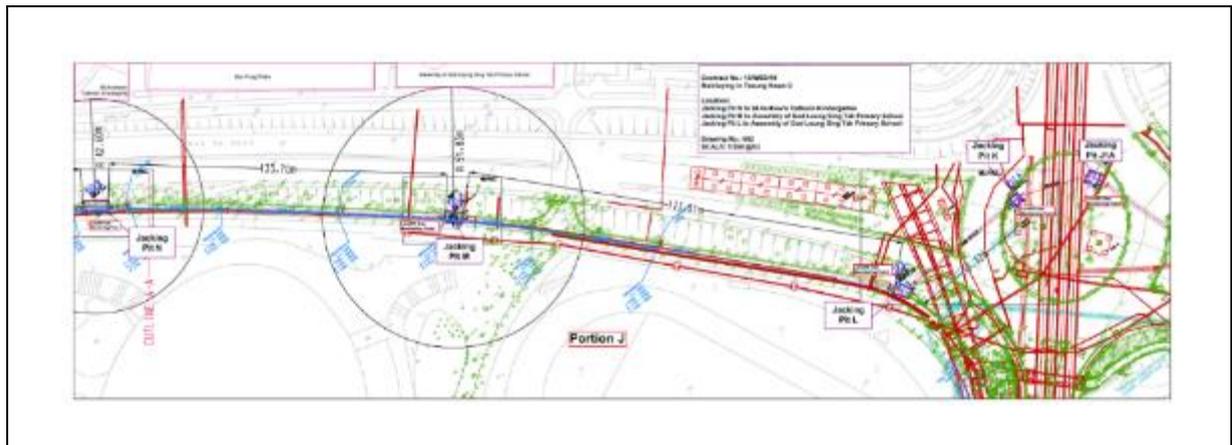


Figure 4.11a Monitoring Location - Pit L-M-N, J1A, K

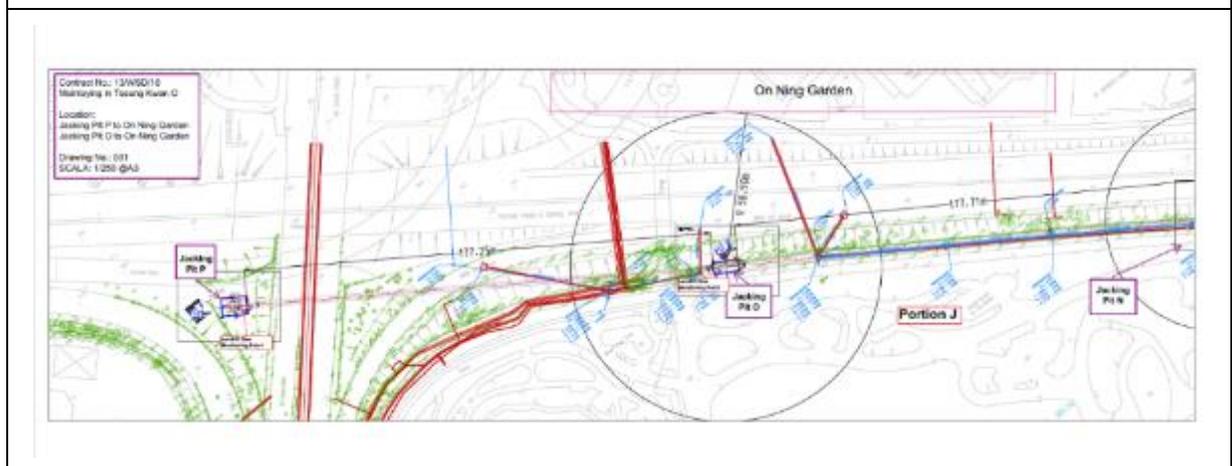


Figure 4.11b Monitoring Location - Pit N-O-P

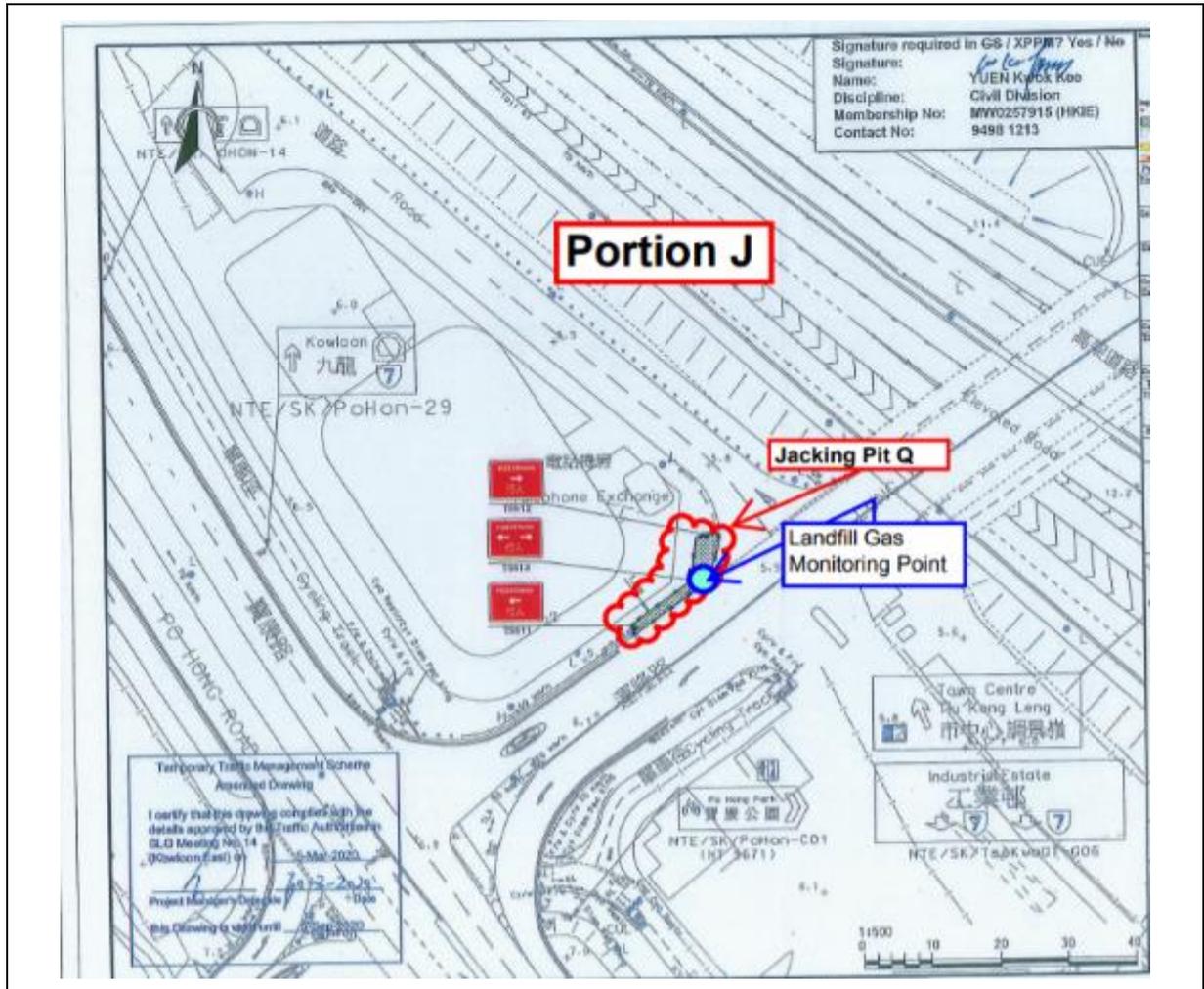


Figure 4.11c Monitoring Location – Pit Q



Figure 4.12 Po Lam South Road

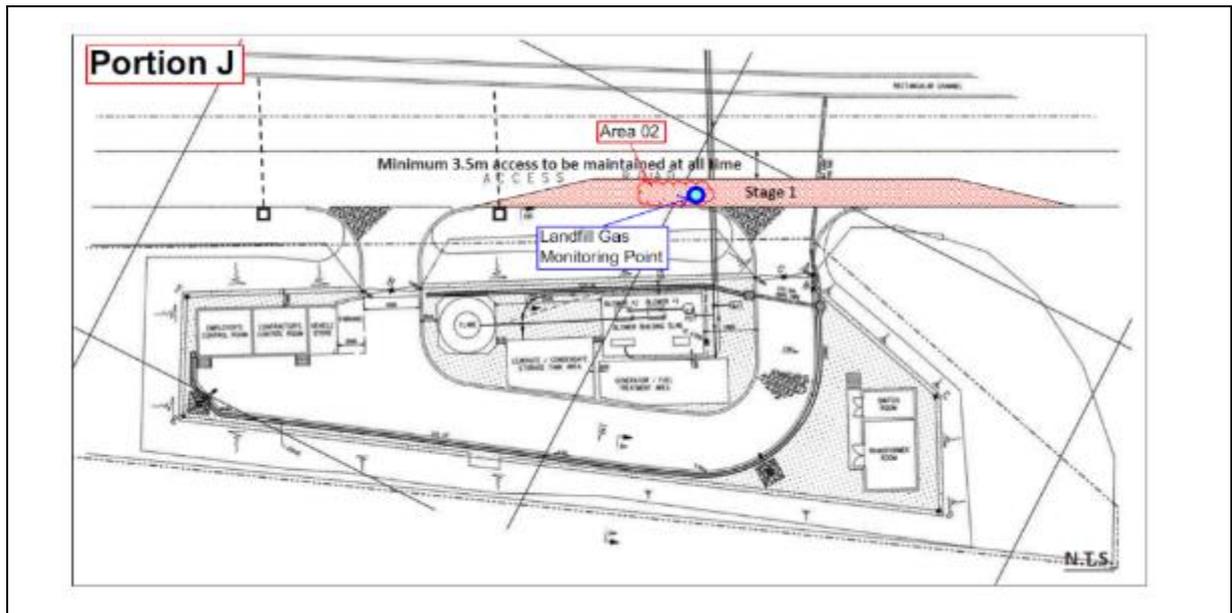


Figure 4.13 Monitoring Location – Area A02

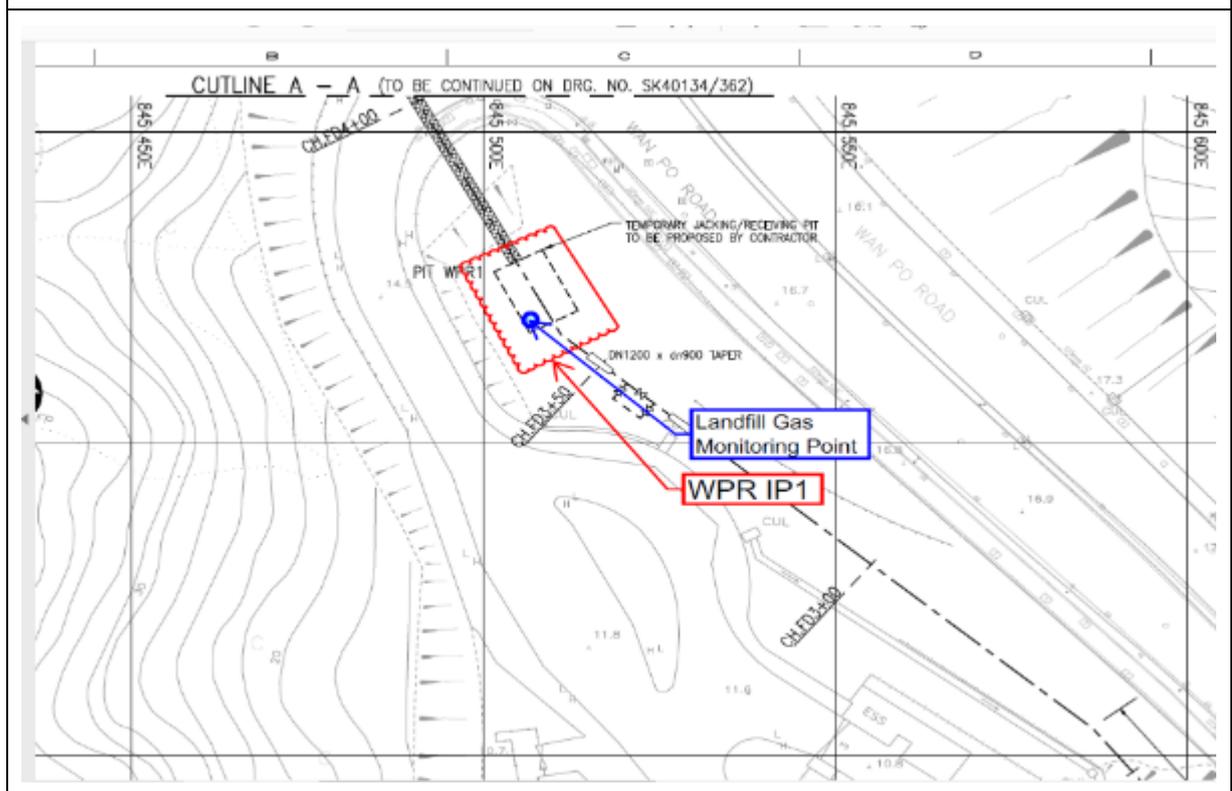


Figure 4.14 Monitoring Location – WPR IP1

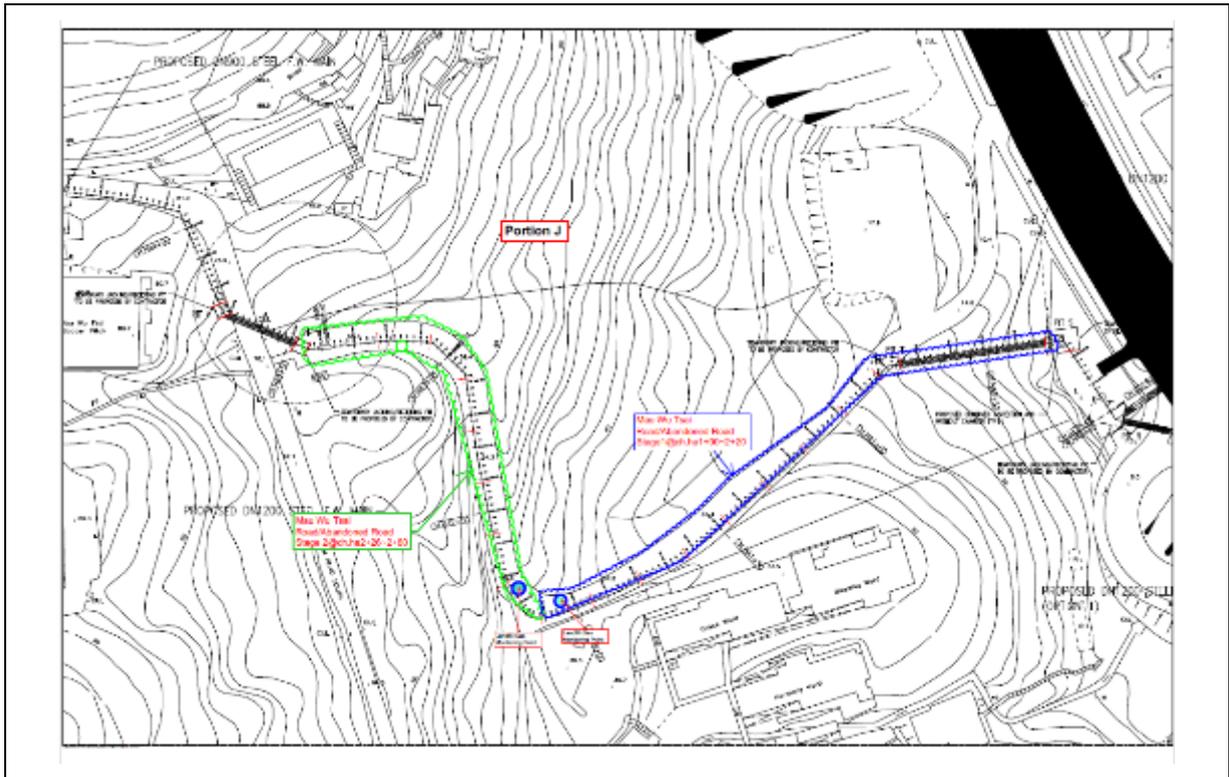


Figure 4.17 Monitoring Location – Mau Wu Tsai Abandoned Road

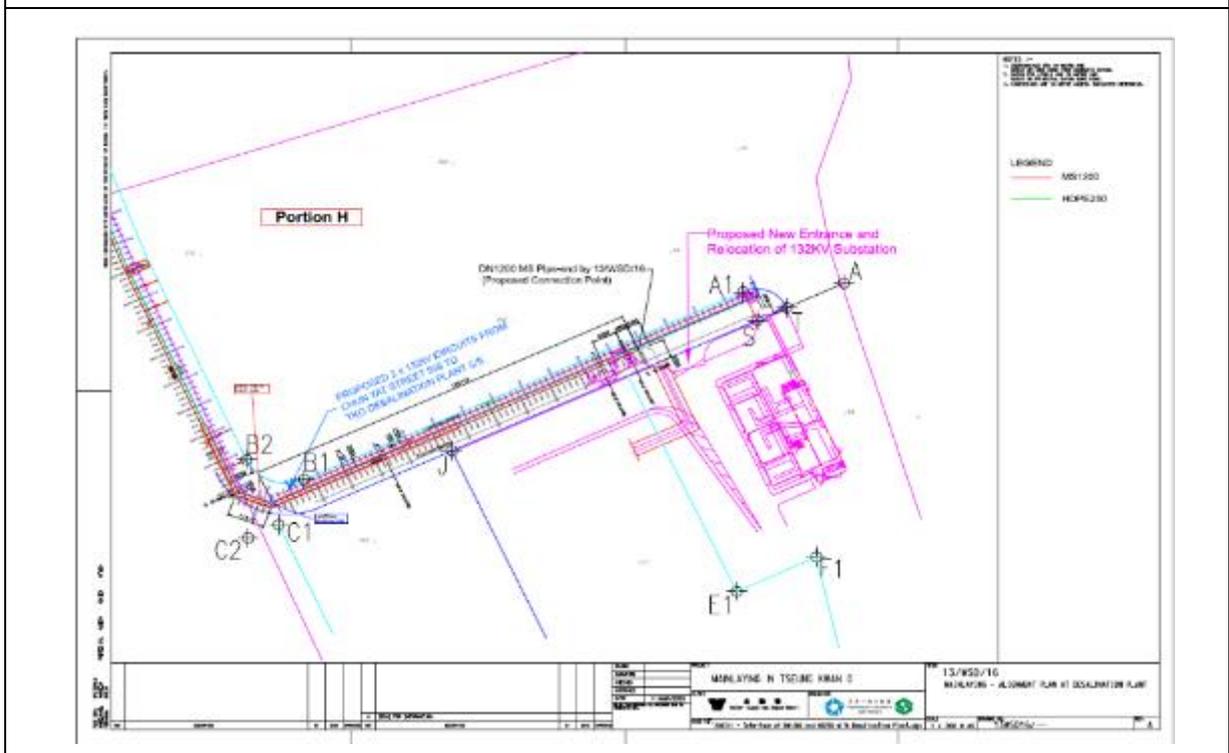


Figure 4.18a Monitoring Location - CH.CT 0+07 ~ 2+58

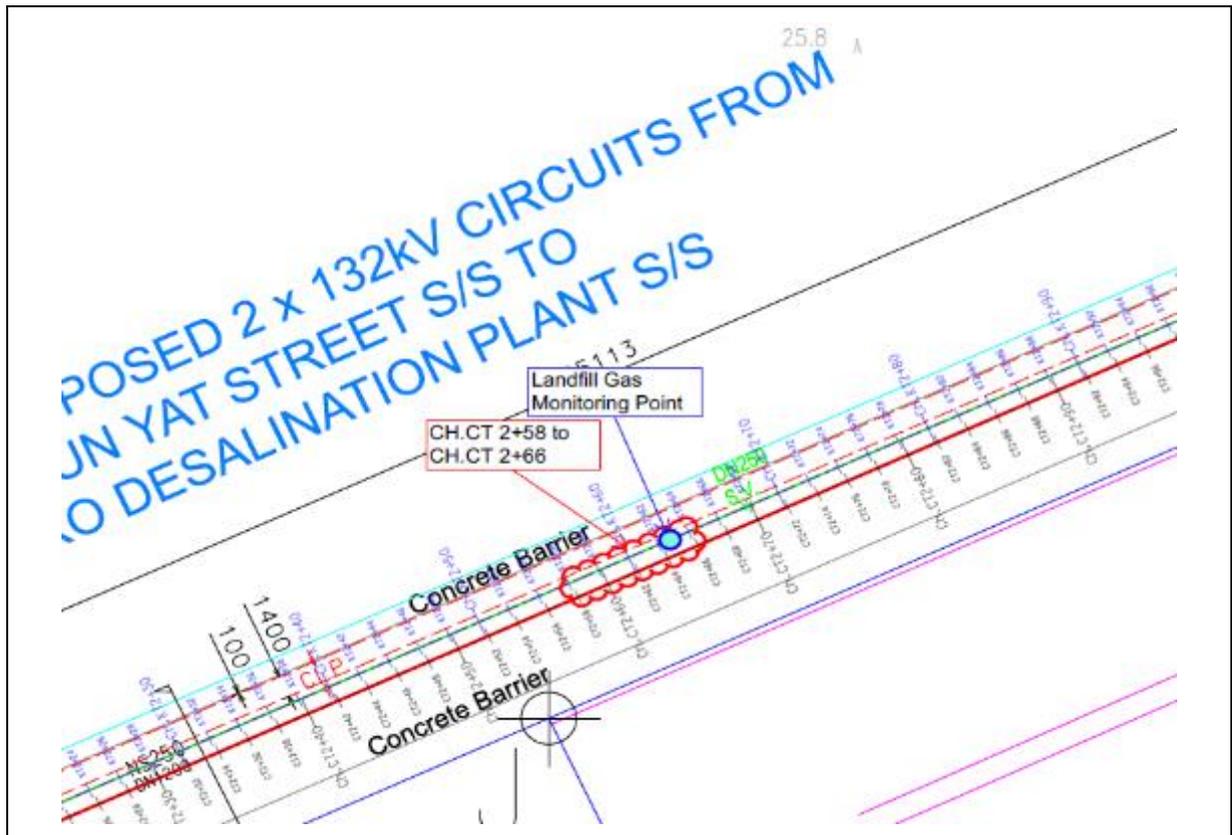


Figure 4.18b Monitoring Location - CH.CT 2+58 ~ 2+66

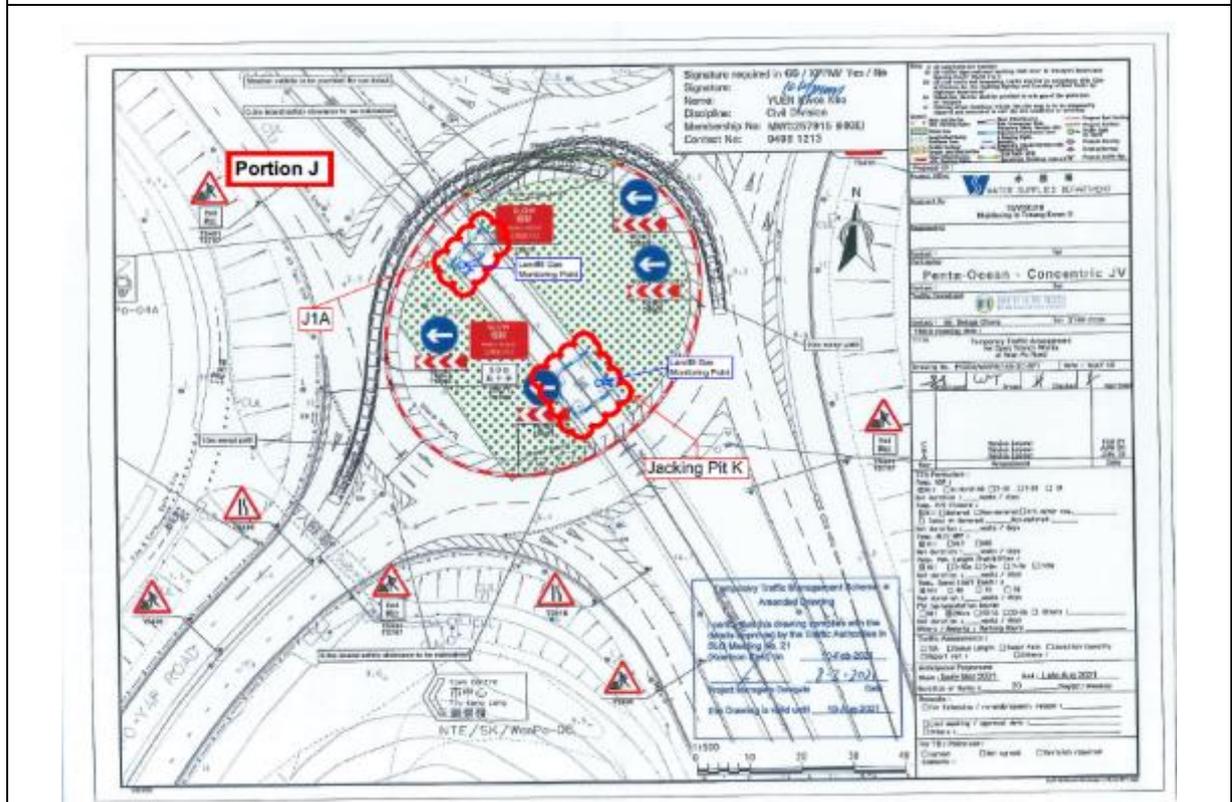


Figure 4.19 Monitoring Location - Pit K

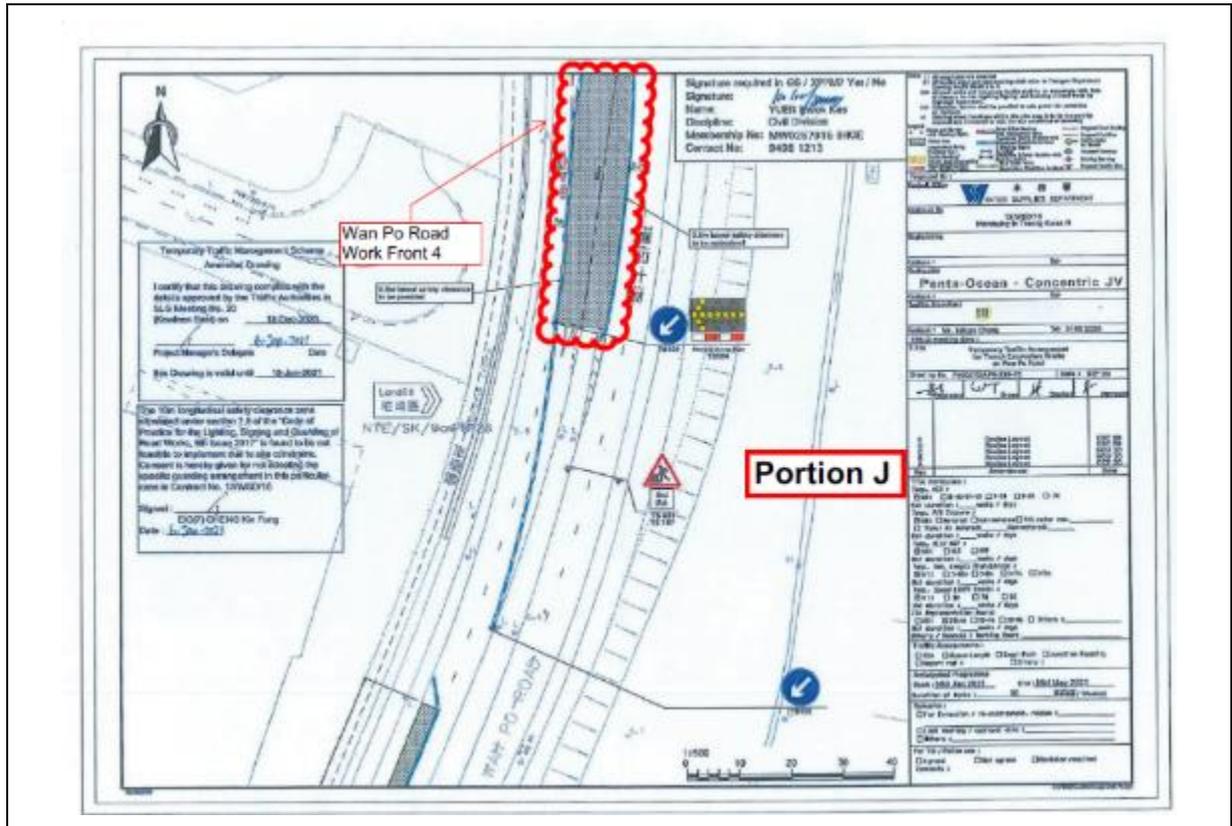


Figure 4.20a Monitoring Location - Wan Po Road 4

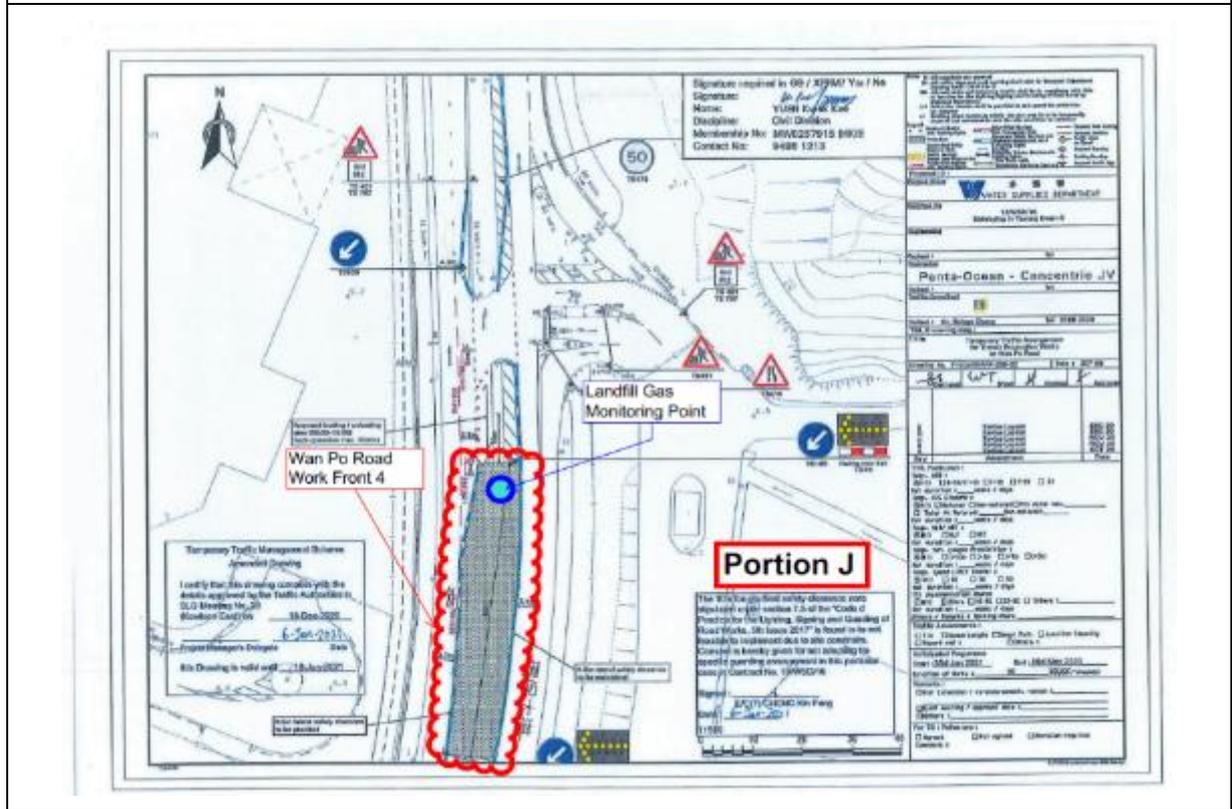


Figure 4.20b Monitoring Location - Wan Po Road 4

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	QRAE III	27 July 2022
CO2 Analyzer	TES, 1307H	14 November 2022

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 543 times. All the measured results were presented in **Appendix J** and were within the Action and Limit Levels.

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

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

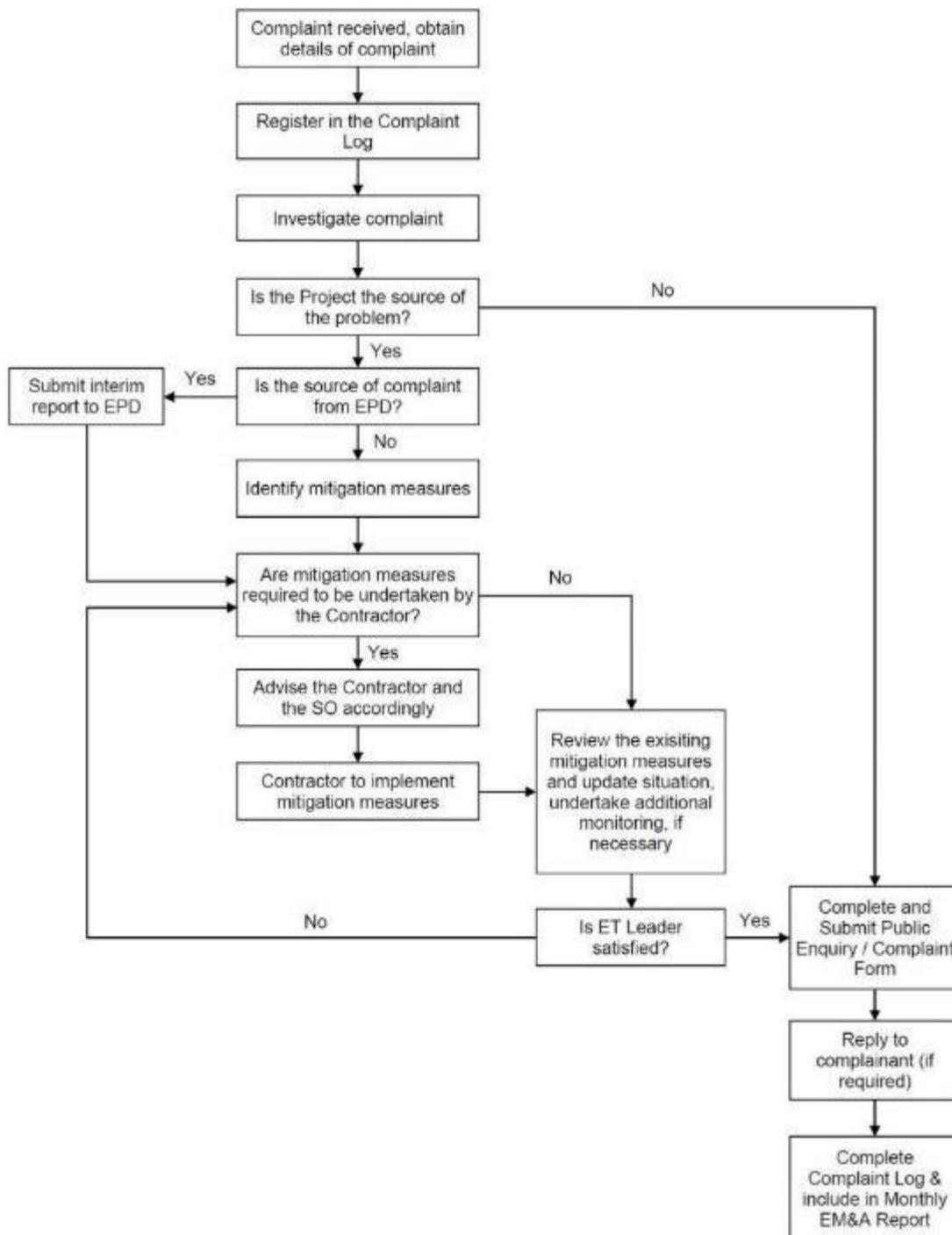


Figure 5.1 Environmental Complaint Handling Procedure

Impact monitoring for noise impact was scheduled in the reporting month for NSR4 – Creative Secondary School on 8, 13, 21 and 29 April 2022 as construction works were conducted within 300m to the noise sensitive receiver. Detailed monitoring results can be found in **Appendix G**.

No examinations were scheduled in the reporting month for NSR4 Creative Secondary School. Academic School Calendar can be found in **Appendix O**.

Landfill gas monitoring was carried out by the Registered Safety Officer of the Contractor at the excavation locations and within the consultation zones for 543 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 was recorded during the reporting period.

No environmental complaint was received in the reporting period.

No 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 8, 14, 21 and 25 April 2022 at the site portions list in **Table 6.1** below.

Table 6.1 Site Inspection Record

Date	Inspected Site Portion	Time
8 April 2022	Portion J	09:30am – 11:15am
14 April 2022	Portion J	09:30am – 10:30am
21 April 2022	Portion J	09:30am – 10:30am
25 April 2022	Portion J	14:00am – 14:45am

One joint site inspection with IEC was carried out on 25 April 2022.

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
8 April 2022	1. Drip tray should be provided for chemical storage. (HK Velodrome N)	1. Drip tray was provided for chemical storage.
14 April 2022	1. Drip tray should be provided for chemical storage. (Pit D)	1. Drip tray was provided for chemical storage.
21 April 2022	1. Drip tray should be provided for chemical storage. (Pit X and Location A) 2. Public road should be cleaned properly and regularly. (Po Lam South Road)	1. Drip tray was provided for chemical storage. 2. Public road was cleaned properly.
25 April 2022	1. No major observation were recorded on the reporting day.	Nil

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	Location	Forecast Works in Next Reporting Month
Portion H of the Project Site	TKO 137 Pit A	<ul style="list-style-type: none"> • Pipe installation works inside sleeve pipe between Pit 137A to Pit 137C will be conducted.
	TKO 137 Pit B	
	TKO 137 Pit C	
Portion J of the Project Site	Wan Po Rd – Workfront 1	<ul style="list-style-type: none"> • Excavation and ELS works for jacking Pit 1
	Wan Po Rd – Workfront 2	<ul style="list-style-type: none"> • Setup for MTMB pipe jacking
	Wan Po Rd – Workfront 3	<ul style="list-style-type: none"> • Pipe trench excavation and pipe laying
	Wan Po Rd – Workfront 4	<ul style="list-style-type: none"> • Pipe trench excavation and pipe laying • Pipe installation inside sleeve pipe between WF4 & WF4B
	Wan Po Rd – Pit A	<ul style="list-style-type: none"> • Commence MTMB pipe jacking
	Wan Po Rd – Pit B	<ul style="list-style-type: none"> • MTBM pipe jacking
	Wan Po Rd – Pit D	
	Shek Kok Road – Pit D	
	Shek Kok Road – Hand-shield	<ul style="list-style-type: none"> • Construction of wing wall • Setup for hand shield pipe jacking
	Landfill Stage 1 – Area A	<ul style="list-style-type: none"> • Trench excavation and pipe laying
	Landfill Stage 1 – Area B	
	Pet Garden’s Road	
	Creative school	<ul style="list-style-type: none"> • Construction of flood protection well and re-construction of u-channel
	Pung Loi Road – Pit WPR1	<ul style="list-style-type: none"> • Setup for MTMB pipe jacking
	Roundabout – Pit G1A	<ul style="list-style-type: none"> • Pipe laying inside sleeve pipe
	Roundabout – Pit J1A	
	Velodrome – Pit K	<ul style="list-style-type: none"> • Grouting for sleeve pipe between Pit K to Pit L
	Velodrome – Pit O to Pit N	<ul style="list-style-type: none"> • Trench excavation and pipe laying.
	Velodrome – Pit O to Pit P	<ul style="list-style-type: none"> • Site setup for trenchless works.
	Abandoned Road near Mau Wu Tsai – Workfront 1	<ul style="list-style-type: none"> • Gate valve chamber construction • Trench reinstatement
Po Lam Road South	<ul style="list-style-type: none"> • Trench excavation and pipe laying 	
Po Lam Road (C2)	<ul style="list-style-type: none"> • Pipe piling of pipe bridge at Location A Westside slope. 	
Po Lam Road (D2)	<ul style="list-style-type: none"> • Trench excavation and pipe laying 	

Location	Location	Forecast Works in Next Reporting Month
	Po Lam Road (B4)	<ul style="list-style-type: none"> • Trench rock breaking • Trench excavation and pipe laying
	Tsui Lam Road	<ul style="list-style-type: none"> • Predrilling for mini pile
	TKO Primary Service Reservoir	<ul style="list-style-type: none"> • Trench excavation and pipe laying

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 45th monthly Environmental Monitoring and Audit (EM&A) Report presenting the EM&A works undertaken during the period from 1 April to 31 April 2022, 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 8, 13, 21 and 29 April 2022 as construction works were conducted within 300m to the noise sensitive receiver. Detailed monitoring results can be found in **Appendix G**.

No examinations were scheduled in the reporting month for NSR4 Creative Secondary School. Academic School Calendar can be found in **Appendix O**.

Landfill gas monitoring was carried out by the Registered Safety Officer of the Contractor at the excavation locations and within the consultation zones for 543 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 was recorded during the reporting period.

Weekly environmental site inspections were conducted during the reporting month. Minor deficiencies were observed during site inspection and were rectified. The environmental performance of the project was therefore considered satisfactory.

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, dust suppression mitigations and proper materials storage.

No environmental complaint was received in the reporting month.

No notification of summons or prosecution was received since the commencement of the Contract.

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

Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish	Timeline																																															
											4. 2017 Nov/Dec	2018 Qtr 1, 2018 Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	2019 Qtr 1, 2019 Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	2020 Qtr 1, 2020 Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	2021 Qtr 1, 2021 Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	2022 Qtr 1, 2022 Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	2023 Qtr 1, 2023 Jan, Feb, Mar, Apr, May, Jun, Jul, Aug																																									
57	Site Establishment	220 days	2 Jan '18	9 Aug '18	Calendar Day			100%	2 Jan '18	9 Aug '18	[Gantt bar from 2 Jan '18 to 9 Aug '18]																																															
60	Procurement of Major Material	1104 days	7 Apr '18	14 Apr '21	Calendar Day			54%	7 Apr '18	NA	[Gantt bar from 7 Apr '18 to 14 Apr '21]																																															
70	Mainlaying From Boundary of Tseung Kwan O Area 137 to TKO Fresh Water Service Reservoir (Portion I)	1491 days	7 Nov '17	18 Nov '22	HK Working Day			26%	7 Nov '17	NA	[Gantt bar from 7 Nov '17 to 18 Nov '22]																																															
71	Open Cut Excavation, Pipe Laying and Reinstatement at Wan Po Road	1198 days	30 Aug '18	15 Sep '22	HK Working Day		638	52%	30 Aug '18	NA	[Gantt bar from 30 Aug '18 to 15 Sep '22]																																															
72	Open Cut CH.A0+00 to CH.A3+62 (Pit 1)	992 days	10 Sep '18	14 Jan '22	HK Working Day			66%	10 Sep '18	NA	[Gantt bar from 10 Sep '18 to 14 Jan '22]																																															
83	Trenchless Works (Pit 1 to Pit 2)	317 days	22 Jan '21	18 Feb '22	HK Working Day			0%	NA	NA	[Gantt bar from 22 Jan '21 to 18 Feb '22]																																															
84	Construction of Jacking / Receiving Pits	100 days	22 Jan '21	28 May '21	HK Working Day			0%	NA	NA	[Gantt bar from 22 Jan '21 to 28 May '21]																																															
87	TMB Pipe Jacking Pit 1- Pit 2	217 days	29 May '21	18 Feb '22	HK Working Day		99	0%	NA	NA	[Gantt bar from 29 May '21 to 18 Feb '22]																																															
98	Open Cut CH.A5+29.5 (Pit 2) to CH.A7+12	1088 days	30 Aug '18	5 May '22	HK Working Day			73%	30 Aug '18	NA	[Gantt bar from 30 Aug '18 to 5 May '22]																																															
108	Open Cut CH.A7+12 to CH.A13+79.5	1181 days	19 Sep '18	15 Sep '22	HK Working Day			47%	19 Sep '18	NA	[Gantt bar from 19 Sep '18 to 15 Sep '22]																																															
132	Trenchless Work at Wan Po Road From Pit A to Pit F	1443 days	7 Nov '17	21 Sep '22	HK Working Day		639	24%	7 Nov '17	NA	[Gantt bar from 7 Nov '17 to 21 Sep '22]																																															
133	Trenchless Works (Pit A to Pit C)	867 days	12 Aug '19	16 Jul '22	HK Working Day			17%	12 Aug '19	NA	[Gantt bar from 12 Aug '19 to 16 Jul '22]																																															
164	Crossing Wan Po Road and Lohas Park Road	1780 days	7 Nov '17	21 Sep '22	Calendar Day			7%	7 Nov '17	NA	[Gantt bar from 7 Nov '17 to 21 Sep '22]																																															
227	Miscellaneous	594 days	25 Jan '18	10 Sep '19	Calendar Day			80%	25 Jan '18	NA	[Gantt bar from 25 Jan '18 to 10 Sep '19]																																															
230	Open Cut Excavation, Pipe Laying and Reinstatement at TKO Landfill Stage 1 and TKO South Waterfront Promenade	1283 days	7 Nov '17	8 Mar '22	HK Working Day		640	54%	7 Nov '17	NA	[Gantt bar from 7 Nov '17 to 8 Mar '22]																																															
289	Burned Pipe, Exposed Pipe, Trenchless Works From Loi Avenue to Po Yap Road Roundabout	768 days	20 Apr '20	18 Nov '22	HK Working Day		641	7%	20 Apr '20	NA	[Gantt bar from 20 Apr '20 to 18 Nov '22]																																															
347	Trenchless Work from Po Yap Road Roundabout to KMB Depot (Pit K to Pit P)	590 days	18 Nov '19	13 Nov '21	HK Working Day		642	37%	18 Nov '19	NA	[Gantt bar from 18 Nov '19 to 13 Nov '21]																																															
428	Trenchless Work from KMB Depot to Po Hong Road (Pit P to Pit R)	515 days	3 Aug '20	29 Apr '22	HK Working Day		642	25%	3 Aug '20	NA	[Gantt bar from 3 Aug '20 to 29 Apr '22]																																															
452	Open Trench from Pit R to Pit S & Trenchless Works from Pit S to Pit T	524 days	3 Aug '20	12 May '22	HK Working Day		642	1%	3 Aug '20	NA	[Gantt bar from 3 Aug '20 to 12 May '22]																																															
471	Open Cut Excavation, Pipe Laying and Reinstatement at Abandoned Road / Mau Wu Tsai Village / Po Lam Road North	1486 days	7 Nov '17	12 Nov '22	HK Working Day			6%	7 Nov '17	NA	[Gantt bar from 7 Nov '17 to 12 Nov '22]																																															
472	Open Trench Pipelaying at Abandoned Road & Mau Wu Tsai Village	513 days	30 Nov '20	25 Aug '22	HK Working Day		642	0%	NA	NA	[Gantt bar from 30 Nov '20 to 25 Aug '22]																																															
475	Trenchless Work at Mau Wu Tsai Village	412 days	16 Dec '20	13 May '22	HK Working Day		642	0%	NA	NA	[Gantt bar from 16 Dec '20 to 13 May '22]																																															
476	Inspection Pit Excavation	16 days	16 Dec '20	6 Jan '21	HK Working Day			0%	NA	NA	[Gantt bar from 16 Dec '20 to 6 Jan '21]																																															
481	Construction of Jacking / Receiving Pits	62 days	5 Jan '21	20 Mar '21	HK Working Day			0%	NA	NA	[Gantt bar from 5 Jan '21 to 20 Mar '21]																																															
486	Hand Shield Pipe Jacking from Pit U to Pit V (~30m)	241 days	19 Mar '21	10 Jan '22	HK Working Day			0%	NA	NA	[Gantt bar from 19 Mar '21 to 10 Jan '22]																																															
498	Hand Shield Pipe Jacking from Pit W to Pit X (~85m)	336 days	22 Mar '21	13 May '22	HK Working Day			0%	NA	NA	[Gantt bar from 22 Mar '21 to 13 May '22]																																															
510	Open Trench Pipe Laying at Po Lam Road North	1314 days	7 Nov '17	14 Apr '22	HK Working Day		643	0%	NA	NA	[Gantt bar from 7 Nov '17 to 14 Apr '22]																																															
513	Water Main Structure and Associated Pipe Support across the Natural Stream Course (CH.HB0+00 ~ CH.HB0+94)	653 days	5 May '20	16 Jul '22	HK Working Day		643	19%	5 May '20	NA	[Gantt bar from 5 May '20 to 16 Jul '22]																																															

Working Programme No. 11
Data Date : 15 Nov 2020

Task Split

Milestone Summary

Project Summary

Inactive Milestone

Inactive Summary

Manual Task

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

External Tasks

External Milestone

Deadline

Critical

Critical Split

Manual Progress

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish	Gantt Chart																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successes	% Complete	Actual Start	Actual Finish	Gantt Chart																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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	3015	3016	3017	3018	3019	3020	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030	3031	3032	3033	3034	3035	3036	3037	3038	3039	3040	3041	3042	3043	3044	3045	3046	3047	3048	3049	3050	3051	3052	3053	3054	3055	3056	3057	3058	3059	3060	3061	3062	3063	3064	3065	3066	3067	3068	3069	3070	3071	3072	3073	3074	3075	3076	3077	3078	3079	3080	3081	3082	3083	3084	3085	3086	3087	3088	3089	3090	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110	3111	3112	3113	3114	3115	3116	3117	3118	3119	3120	3121	3122	3123	3124	3125	3126	3127	3128	3129	3130	3131	3132	3133	3134	3135	3136	3137	3138	3139	3140	3141	3142	3143	3144	3145	3146	3147	3148	3149	3150	3151	3152	3153	3154	3155	3156	3157	3158	3159	3160	3161	3162	3163	3164	3165	3166	3167	3168	3169	3170	3171	3172	3173	3174	3175	3176	3177	3178	3179	3180	3181	3182	3183	3184	3185	3186	3187	3188	3189	3190	3191	3192	3193	3194	3195	3196	3197	3198	3199	3200	3201	3202	3203	3204	3205	3206	3207	3208	3209	3210	3211	3212	3213	3214	3215	3216	3217	3218	3219	3220	3221	3222	3223	3224	3225	3226	3227	3228	3229	3230	3231	3232	3233	3234	3235	3236	3237	3238	3239	3240	3241	3242	3243	3244	3245	3246	3247	3248	3249	3250	3251	3252	3253	3254	3255	3256	3257	3258	3259	3260	3261	3262	3263	3264	3265	3266	3267	3268	3269	3270	3271	3272	3273	3274	3275	3276	3277	3278	3279	3280	3281	3282	3283	3284	3285	3286	3287	3288	3289	3290	3291	3292	3293	3294	3295	3296	3297	3298	3299	3300	3301	3302	3303	3304	3305	3306	3307	3308	3309	3310	3311	3312	3313	3314	3315	3316	3317	3318	3319	3320	3321	3322	3323	3324	3325	3326	3327	3328	3329	3330	3331	3332	3333	3334	3335	3336	3337	3338	3339	3340	3341	3342	3343	3344	3345	3346	3347	3348	3349	3350	3351	3352	3353	3354	3355	3356

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish	Gantt Chart																																															
											2017	2018	2019	2020	2021	2022	2023	2024																																								
563	Inspection Pit Excavation for DN800 EMF & BV at CH.HE1+70	21 days	17 Feb '21	12 Mar '21	HK Working Day	562	568	0%	NA	NA	[Gantt Chart]																																															
564	Excavation, Pipelaying & Reinstatement	558 days	23 Dec '20	12 Nov '22	None			0%	NA	NA	[Gantt Chart]																																															
565	Open Cut across Tsui Lam Road (CH. HE0+00 to 0+15) (Two Stages)	100 days	23 Dec '20	29 Apr '21	HK Working Day	560		0%	NA	NA	[Gantt Chart]																																															
566	Open Cut, CH. HE0+15 ~ CH.HE1+55) with DAV Chamber	165 days	27 Apr '22	12 Nov '22	HK Working Day	569		0%	NA	NA	[Gantt Chart]																																															
567	Open Cut, DN800 (CH.HE1+55 ~ CH.HE1+80) with DN800 EMF & BV	120 days	10 Aug '21	3 Jan '22	HK Working Day	568	570,655,51	0%	NA	NA	[Gantt Chart]																																															
568	Open Cut, DN800 (CH.HE1+80 ~ CH.HE2+00) with DN800 EMF & BV	120 days	13 Mar '21	9 Aug '21	HK Working Day	562,563	567,655,51	0%	NA	NA	[Gantt Chart]																																															
569	Construction of flowmeter kiosks and GI cable ducts	90 days	4 Jan '22	26 Apr '22	HK Working Day	568,567	566	0%	NA	NA	[Gantt Chart]																																															
570	Pipelaying, DN800 (CH. J0+00 ~ J0+057)	60 days	4 Jan '22	17 Mar '22	HK Working Day	567	655	0%	NA	NA	[Gantt Chart]																																															
571	Final Connection to TKO Fresh Water Service Reservoir	30 days	22 Apr '22	28 May '22	HK Working Day			0%	NA	NA	[Gantt Chart]																																															
572	Final Connection of DN800 (CH.HE2+00 ~ HE.2_06)	30 days	22 Apr '22	28 May '22	HK Working Day	654		0%	NA	NA	[Gantt Chart]																																															
573	Final Connection of DN800 (CH.J0+57 ~ Reservoir)	30 days	22 Apr '22	28 May '22	HK Working Day	654		0%	NA	NA	[Gantt Chart]																																															
574	Mainlaying in Tseung Kwan O Area 137 (Portion H)	1051 days	11 Dec '18	4 Jul '22	HK Working Day			59%	11 Dec '18	NA	[Gantt Chart]																																															
575	Issue Date of CE07 -Water Supply to TKO Desalination Plant at Portion H (NS250 HDPE Pipe)	0 days	22 Jan '19	22 Jan '19	Calendar Day	576		100%	22 Jan '19	22 Jan '19	[Gantt Chart]																																															
576	Material Procurement and Delivery in Batches	330 days	11 Dec '18	5 Nov '19	Calendar Day	575		100%	11 Dec '18	5 Nov '19	[Gantt Chart]																																															
577	Open Cut Excavation, Pipe Laying and Reinstatement at TKO Area 137	311 days	10 Aug '19	26 Aug '20	HK Working Day			98%	10 Aug '19	NA	[Gantt Chart]																																															
578	DN1200 MS PIPE + NS250 HDPE PIPE - Open Cut	299 days	10 Aug '19	12 Aug '20	HK Working Day			98%	10 Aug '19	NA	[Gantt Chart]																																															
579	CH. CT1+51 - 265 DN1200 MS Pipe OC	82 days	16 Apr '20	24 Jul '20	None			100%	16 Apr '20	24 Jul '20	[Gantt Chart]																																															
580	CH. CT0+51 - 1+51 DN1200 MS Pipe OC	44 days	10 Feb '20	31 Mar '20	HK Working Day			100%	10 Feb '20	31 Mar '20	[Gantt Chart]																																															
581	CH. CT0+00 - 0+51 DN1200 MS Pipe OC	74 days	2 Jan '20	31 Mar '20	HK Working Day			100%	2 Jan '20	31 Mar '20	[Gantt Chart]																																															
582	CH. CA0+00 - 4+00 DN1200 MS Pipe OC	192 days	10 Aug '19	31 Mar '20	HK Working Day	5		100%	10 Aug '19	31 Mar '20	[Gantt Chart]																																															
583	CH. KT2+80 - 3+60 NS250 HDPE Pipe OC with additional Tees and fire Hydrant	14 days	28 Jul '20	12 Aug '20	HK Working Day			0%	NA	NA	[Gantt Chart]																																															
584	CH. KT2+23 - 2+80 NS250 HDPE Pipe OC	29 days	20 Jun '20	25 Jul '20	HK Working Day			100%	20 Jun '20	25 Jul '20	[Gantt Chart]																																															
585	CH. KT1+51 - 2+23 NS250 HDPE Pipe OC	31 days	16 May '20	20 Jun '20	HK Working Day			100%	16 May '20	20 Jun '20	[Gantt Chart]																																															
586	CH. KT0+51 - 1+51 NS250 HDPE Pipe OC	19 days	10 Mar '20	31 Mar '20	HK Working Day			100%	10 Mar '20	31 Mar '20	[Gantt Chart]																																															
587	CH. KT0+00 - 0+51 NS250 HDPE Pipe OC	50 days	2 Feb '20	31 Mar '20	HK Working Day			100%	2 Feb '20	31 Mar '20	[Gantt Chart]																																															
588	CH. KA0+00 - 4+00 NS250 HDPE Pipe OC	143 days	10 Oct '19	31 Mar '20	HK Working Day			100%	10 Oct '19	31 Mar '20	[Gantt Chart]																																															
589	Construction of Chambers	99 days	29 Apr '20	26 Aug '20	HK Working Day			97%	29 Apr '20	NA	[Gantt Chart]																																															
590	Combined DAV & IT Chamber for DN1200 MS pipe at CH. CT2+47	60 days	5 May '20	15 Jul '20	HK Working Day			100%	5 May '20	15 Jul '20	[Gantt Chart]																																															
591	Combined Washout Pump Pit for DN1200 MS pipe and NS250 HDPE pipe at CH.CT2+43	71 days	3 Jun '20	26 Aug '20	HK Working Day			100%	3 Jun '20	26 Aug '20	[Gantt Chart]																																															
592	DN900 Valve Chamber with by-pass pipes at CH.CA4+;	60 days	29 Apr '20	11 Jul '20	HK Working Day			90%	29 Apr '20	NA	[Gantt Chart]																																															
593	Trenchless Works (DN1200 MS PIPE + NS250 HDPE PIPE) at TKO Area 137	793 days	2 Sep '19	10 May '22	HK Working Day		638,659	16%	2 Sep '19	NA	[Gantt Chart]																																															
594	Issue CE No. 17 - Realignment of Water Main by Trenchless Method in TKO Area 137	0 days	1 Jan '20	1 Jan '20	Calendar Day			100%	1 Jan '20	1 Jan '20	[Gantt Chart]																																															
595	Expected Issue CE No. 57 - Realignment of Water Main by Trenchless Method in SENTX	0 days	30 Dec '20	30 Dec '20	Calendar Day		599	0%	NA	NA	[Gantt Chart]																																															
596	Tendering & Approval	21 days	6 Jan '20	26 Jan '20	Calendar Day			100%	6 Jan '20	26 Jan '20	[Gantt Chart]																																															
597	WSD instructed to retender	0 days	3 Apr '20	3 Apr '20	Calendar Day		598	100%	3 Apr '20	3 Apr '20	[Gantt Chart]																																															
598	Retendering, Review & Approval	43 days	18 May '20	29 Jun '20	Calendar Day	597	599	100%	18 May '20	29 Jun '20	[Gantt Chart]																																															
599	Issue LOA	1 day	3 Sep '20	3 Sep '20	Calendar Day	598,595	605	100%	3 Sep '20	3 Sep '20	[Gantt Chart]																																															
600	Trial Pit Excavation for Trenchless Works at TKO Area 137	156 days	2 Sep '19	11 Mar '20	HK Working Day			100%	2 Sep '19	11 Mar '20	[Gantt Chart]																																															
601	Pit 137A	35 days	2 Sep '19	15 Oct '19	HK Working Day			100%	2 Sep '19	15 Oct '19	[Gantt Chart]																																															
602	Pit 137B	57 days	28 Oct '19	4 Jan '20	HK Working Day			100%	28 Oct '19	4 Jan '20	[Gantt Chart]																																															
603	Pit 137C	14 days	25 Feb '20	11 Mar '20	HK Working Day			100%	25 Feb '20	11 Mar '20	[Gantt Chart]																																															
604	Construction of Jacking / Receiving Pits	172 days	4 Sep '20	7 Apr '21	HK Working Day			0%	NA	NA	[Gantt Chart]																																															
605	Mobilization and Setup & Preliminary Works	15 days	4 Sep '20	18 Sep '20	Calendar Day	599	606,607,61	0%	NA	NA	[Gantt Chart]																																															
606	Receiving Pit 137A (Renopipe)	125 days	19 Sep '20	22 Feb '21	HK Working Day	605		0%	NA	NA	[Gantt Chart]																																															
607	Jacking / Receiving Pit 137B (Renopipe)	115 days	19 Sep '20	6 Feb '21	HK Working Day	605	610	0%	NA	NA	[Gantt Chart]																																															
608	Jacking Pit 137C (renopipe)	159 days	19 Sep '20	7 Apr '21	HK Working Day	605	622	0%	NA	NA	[Gantt Chart]																																															
609	TBM Pipe Jacking From Pit 137B to Pit 137A	231 days	8 Feb '21	19 Nov '21	HK Working Day		73	0%	NA	NA	[Gantt Chart]																																															
610	Establishment at Pit 137B	14 days	8 Feb '21	26 Feb '21	HK Working Day	607	611	0%	NA	NA	[Gantt Chart]																																															
611	OD1920 Steel Sleeve Pipe for both DN1200 & NS250 (Pit 137B - Pit 137A) (CH.CC0+10 to CH.CC.1+24) in Soil (114m; 5m/day)	23 days	27 Feb '21	25 Mar '21	HK Working Day	610	612	0%	NA	NA	[Gantt Chart]																																															
612	Remove setup at Pit 137B	6 days	26 Mar '21	1 Apr '21	HK Working Day	611	613,622	0%	NA	NA	[Gantt Chart]																																															

Working Programme No. 11
Data Date : 15 Nov 2020

Task Split, Milestone Summary, Project Summary, Inactive Task, Inactive Milestone, Inactive Summary, Manual Task, Manual Summary Rollup, Manual Summary, External Tasks, External Milestone, Devolve Critical, Critical Split Progress, Manual Progress

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish	Timeline																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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Appendix B

Overview of Mainlaying in Tseung Kwan O

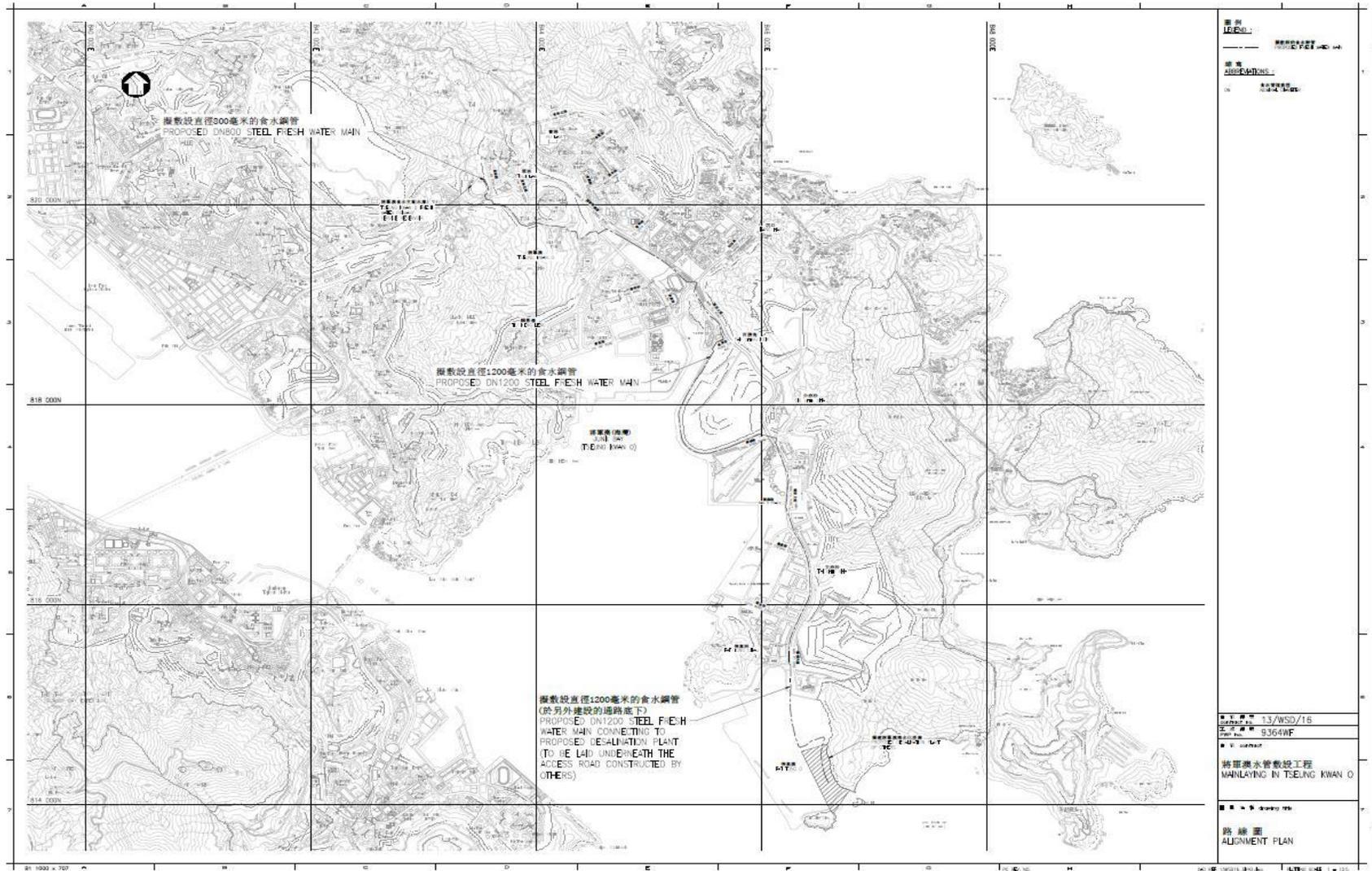


Figure B1. Overview of Mainlaying in TKO

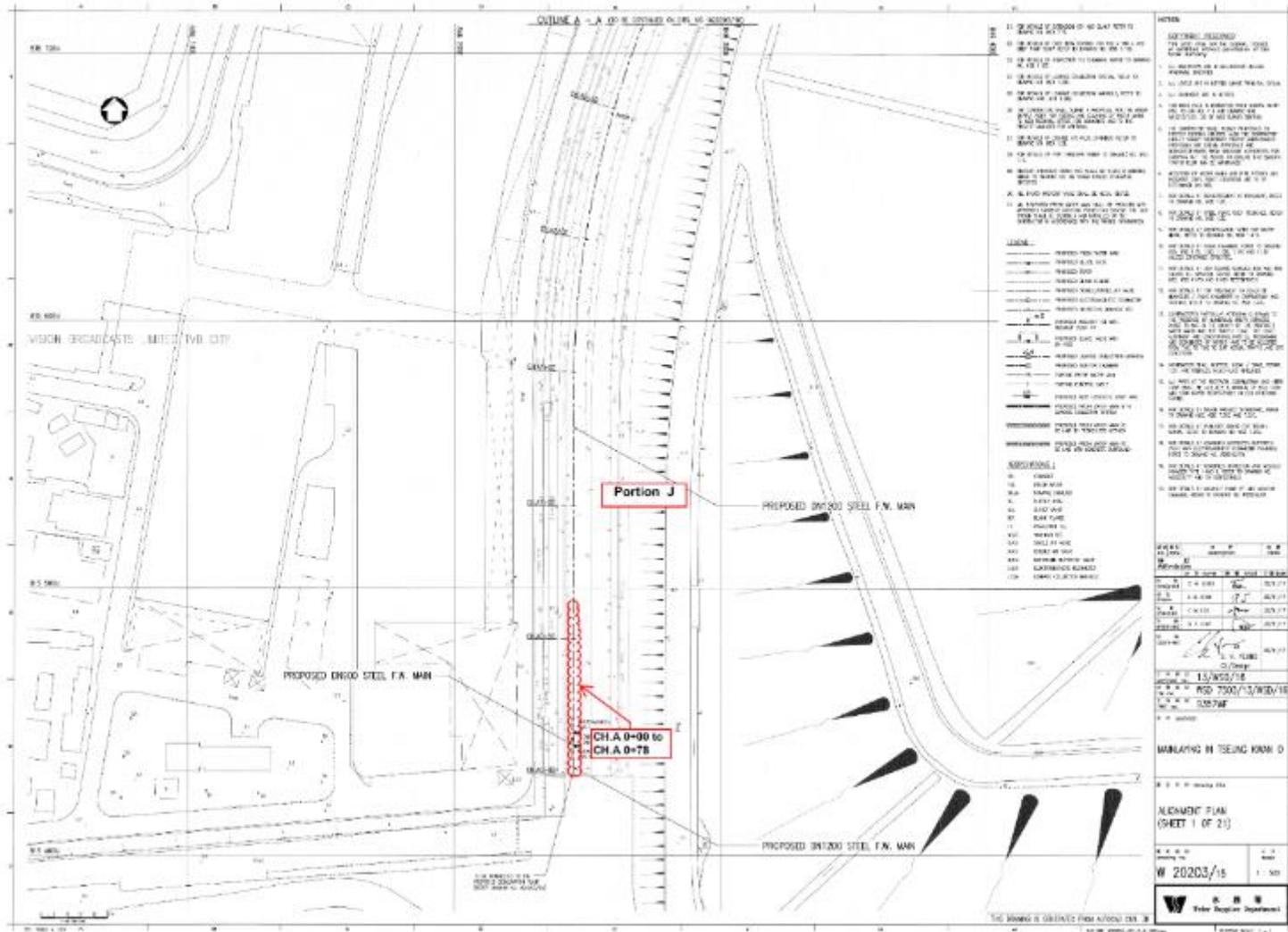


Figure B2. Location Plan for Portion J - CH.A 0+00 to CH.A 0+78

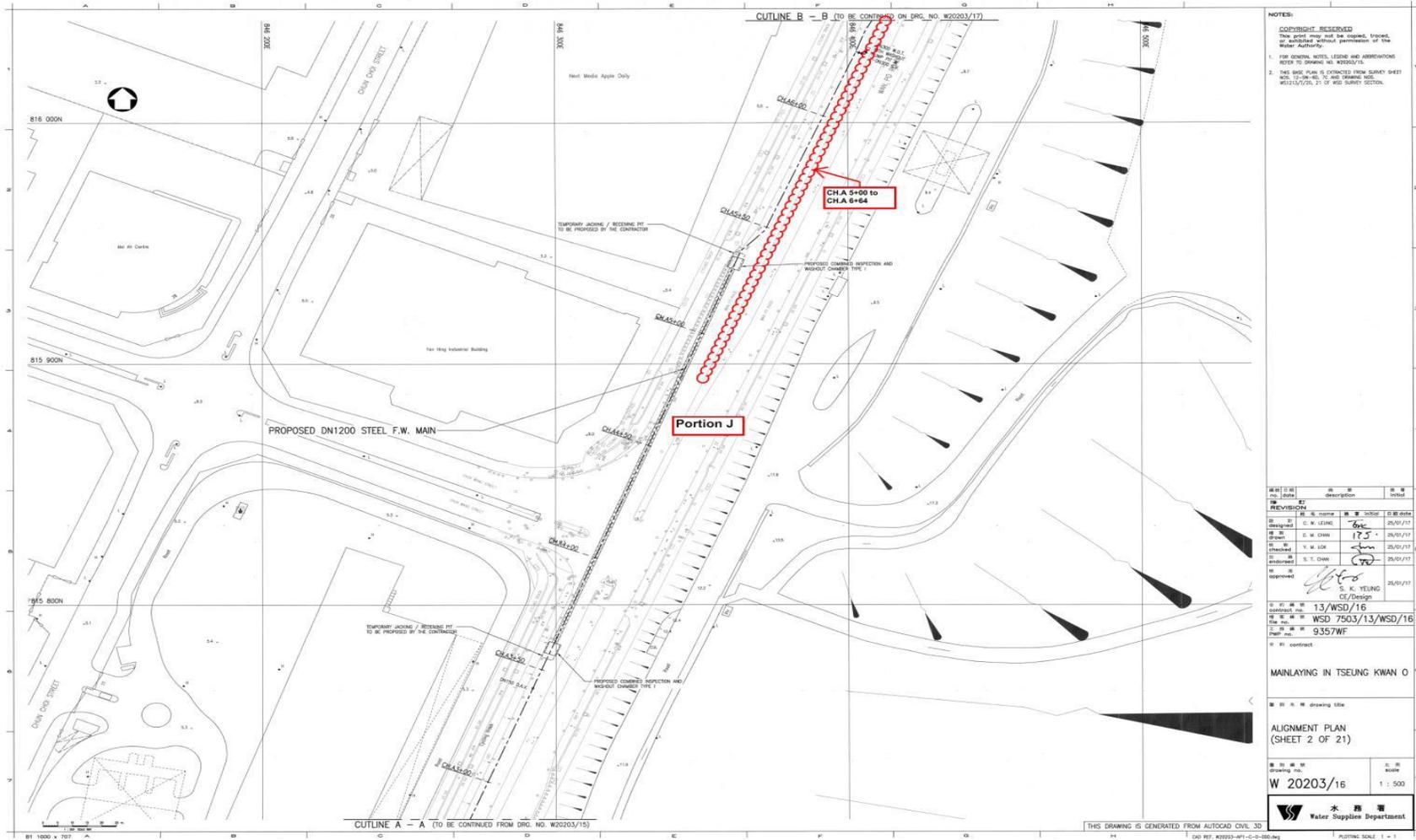


Figure B3a. Location Plan for Portion J - CH.A 5+00 to CH.A 6+64

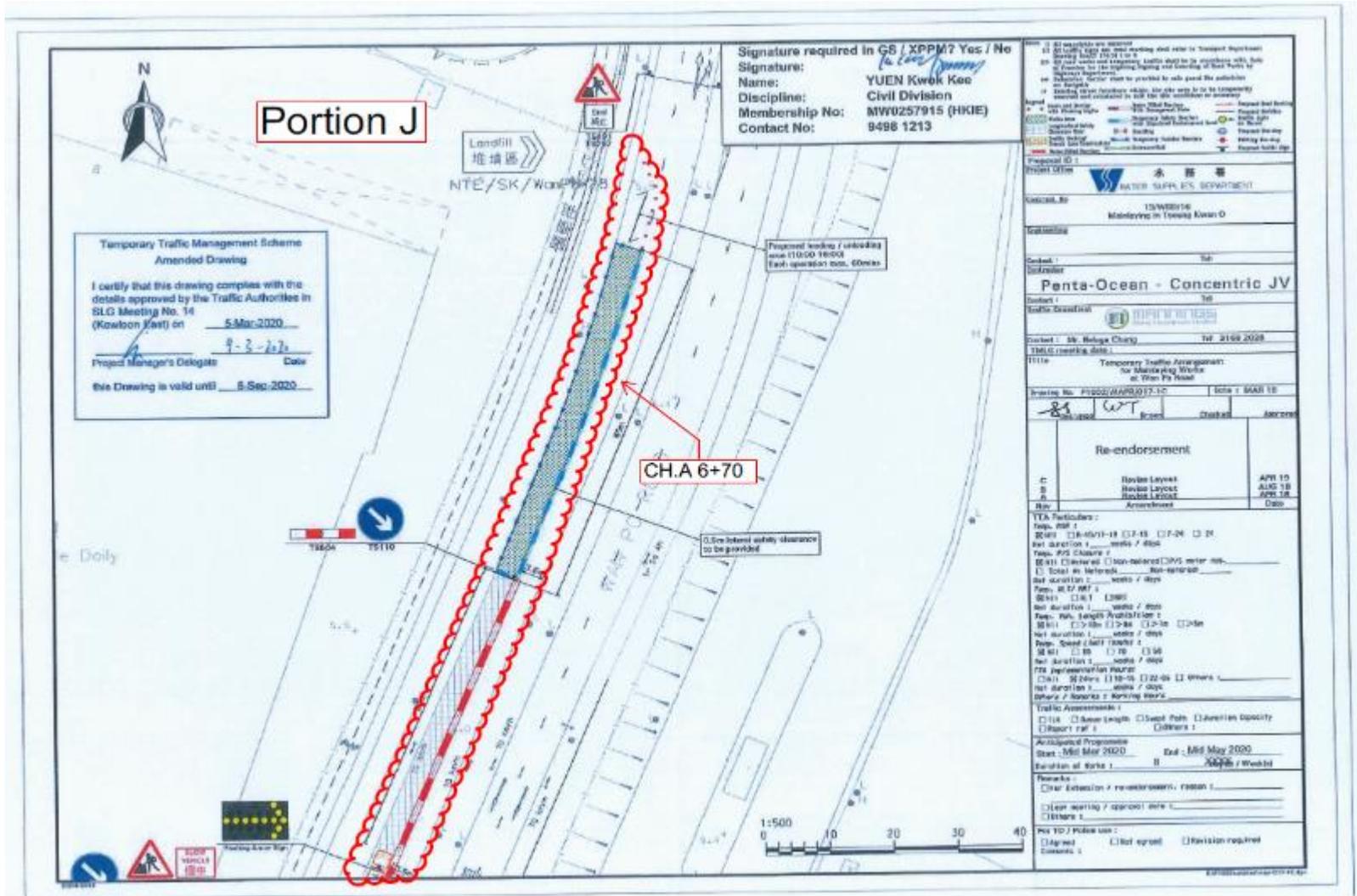


Figure B3b(i). Location Plan for Portion J - CH.A 6+70

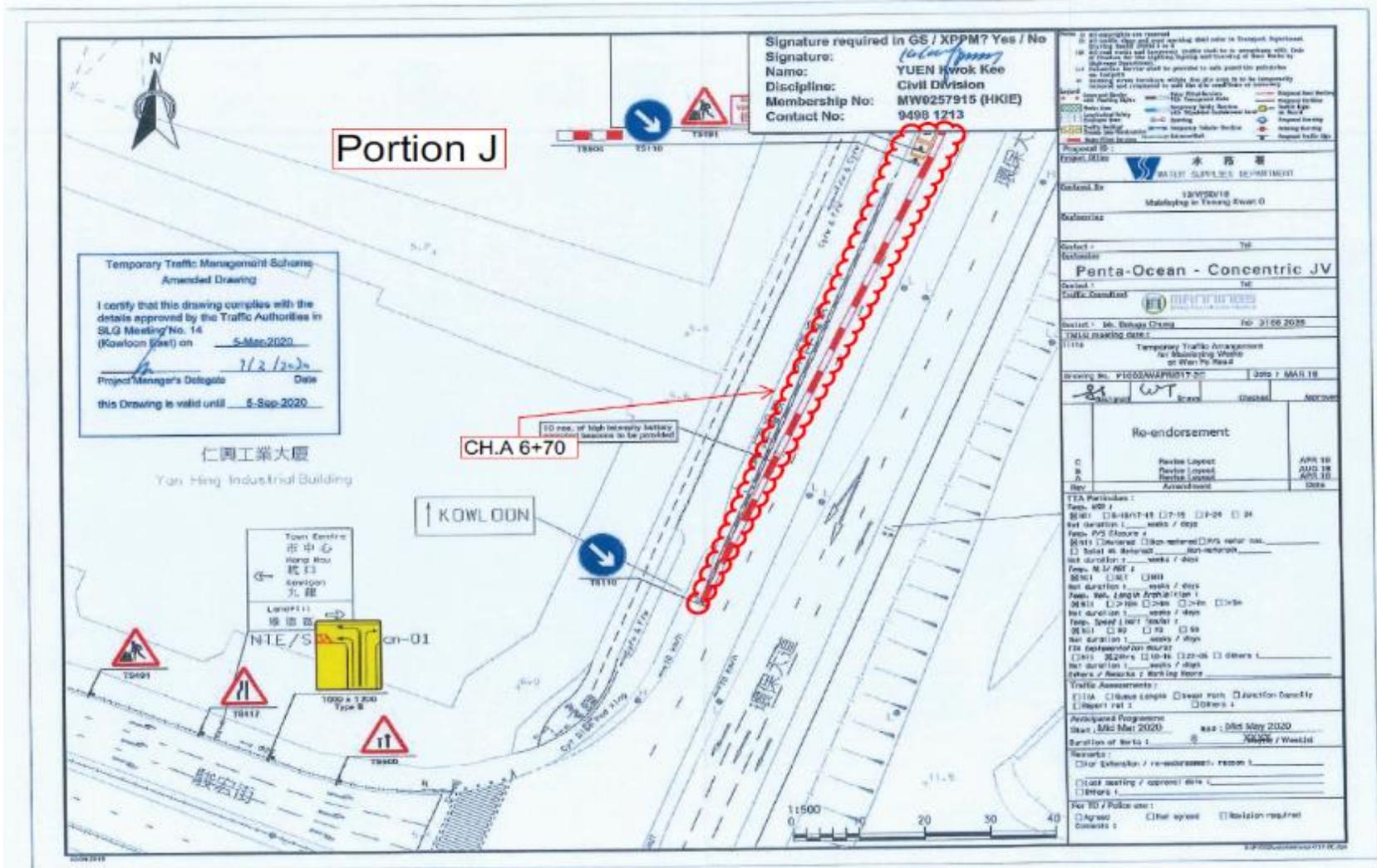


Figure B3b(ii). Location Plan for Portion J - CH.A 6+70

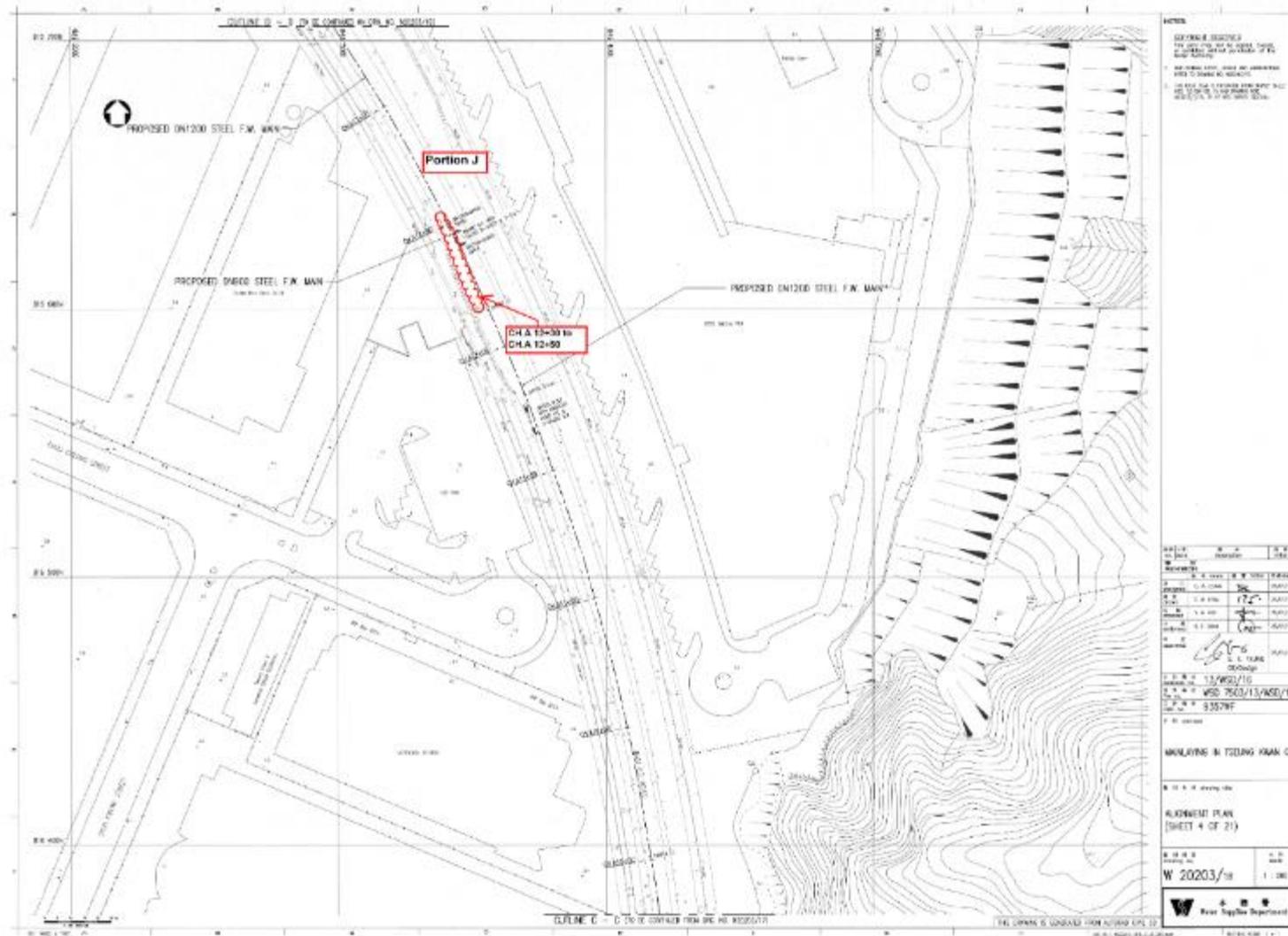


Figure B4. Location Plan for Portion J - CH.A 12+30 to CH.A 12+50

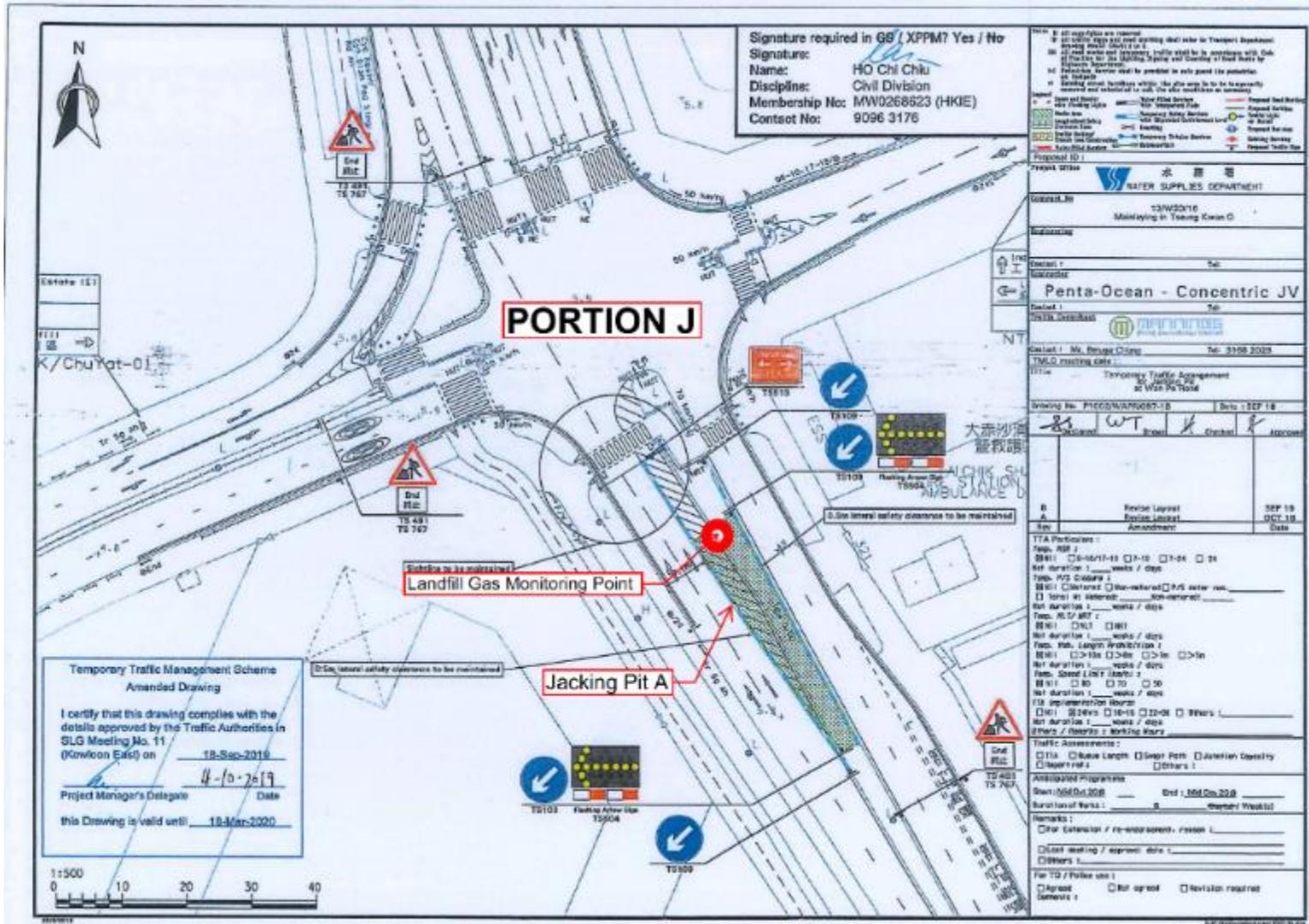


Figure B5. Location Plan for Portion J – CH. A13+50 to CH.A 14+00 (Pit A)

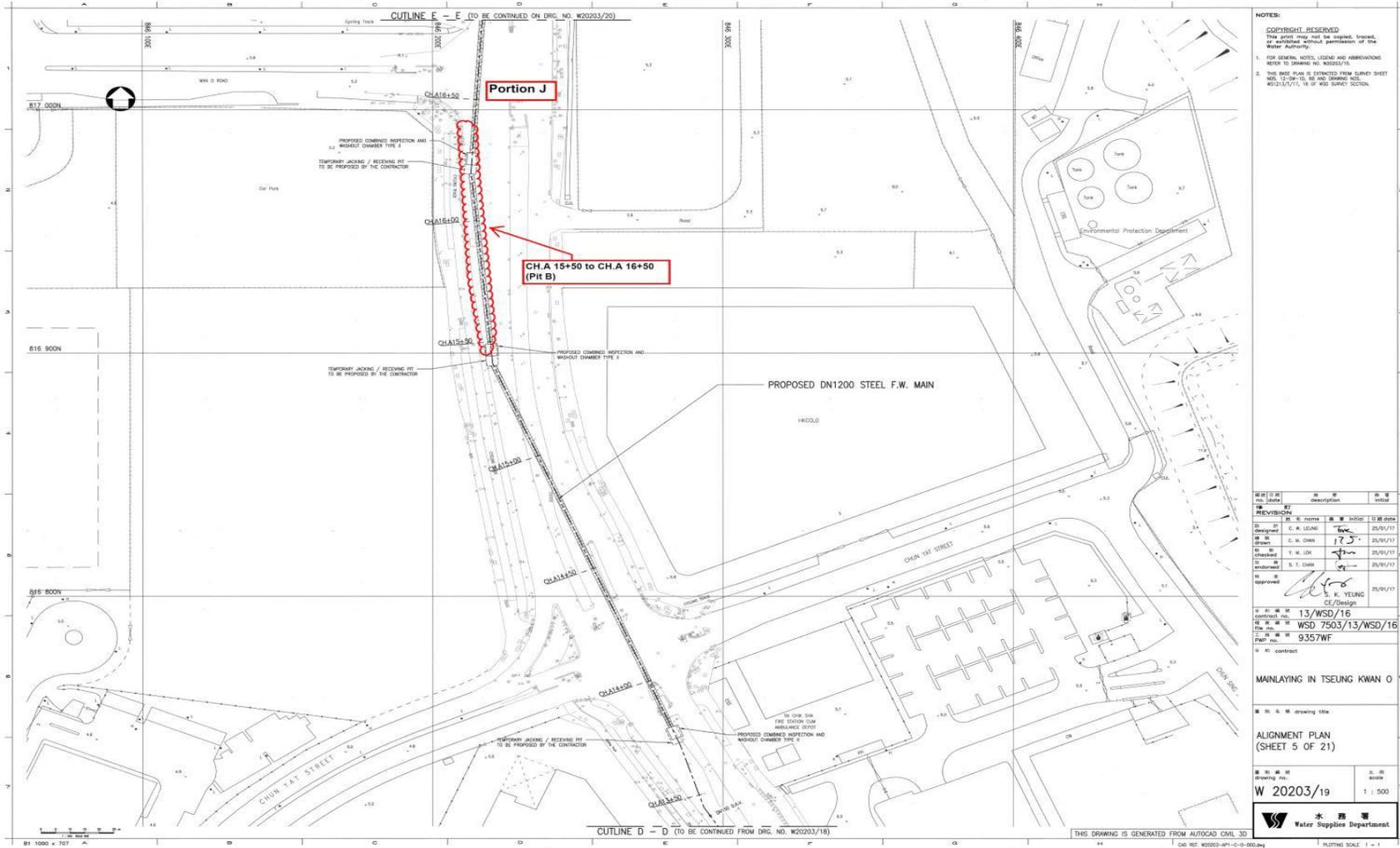


Figure B6. Location Plan for Portion J – CH. A15+50 to CH.A 16+50 (Pit B)

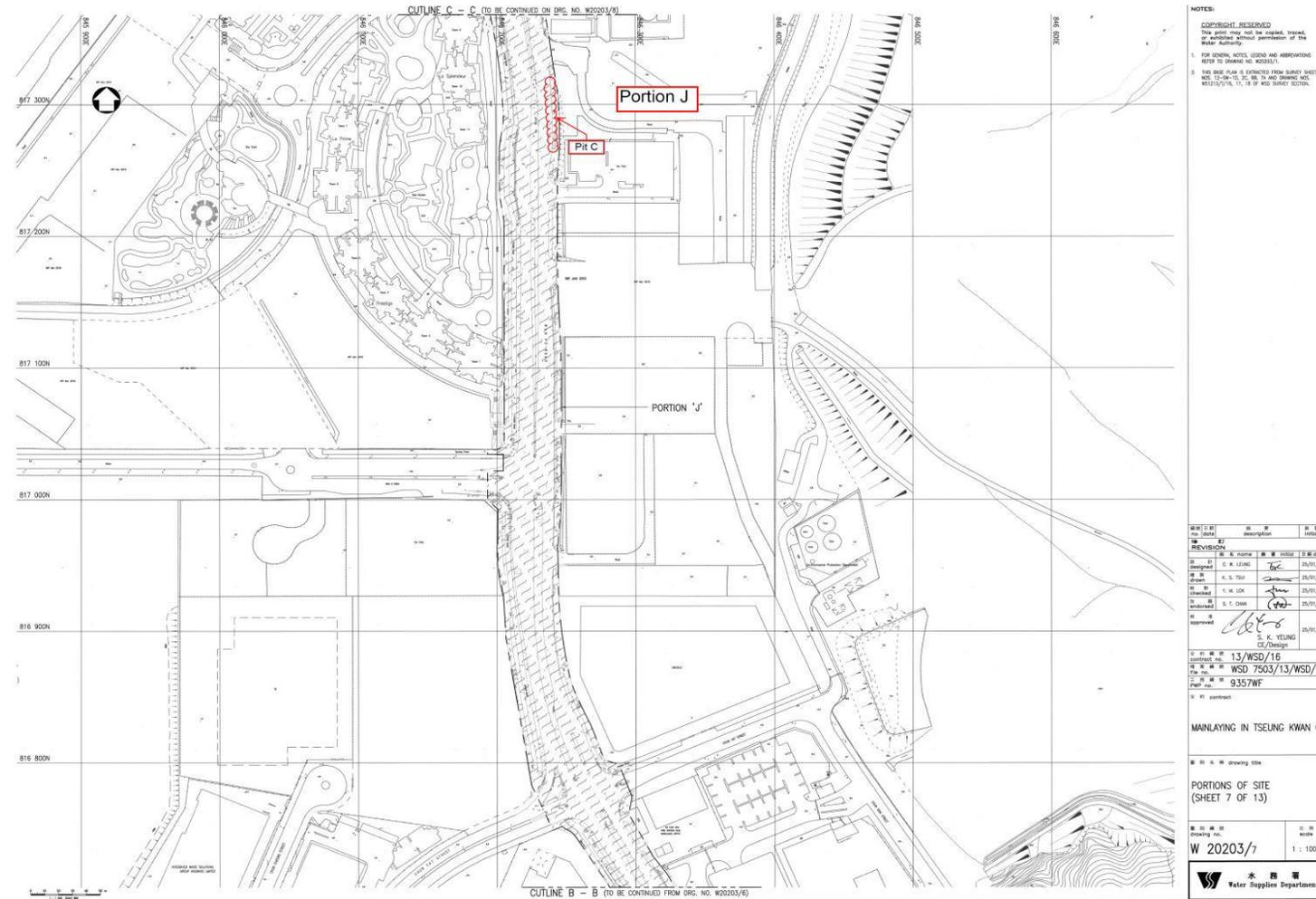


Figure B7. Location Plan for Portion J – CH.A 19+15 to CH.A 19+50 (Pit C)

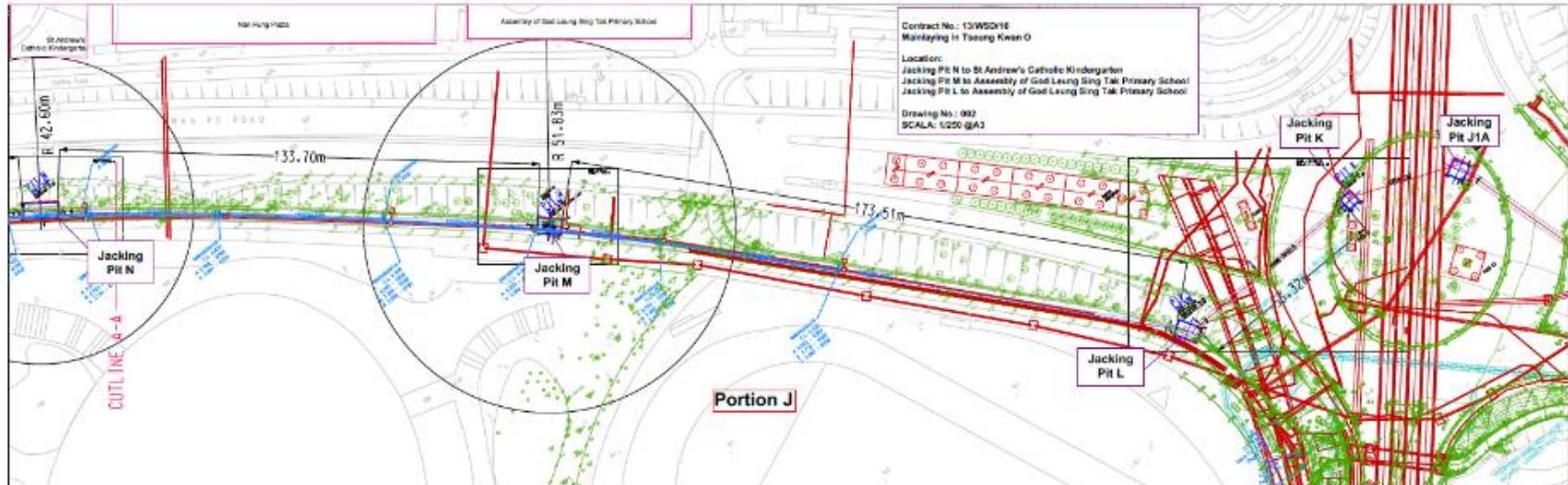


Figure B8a. Location Plan for Portion J – Pit L-M-N, K, J1A

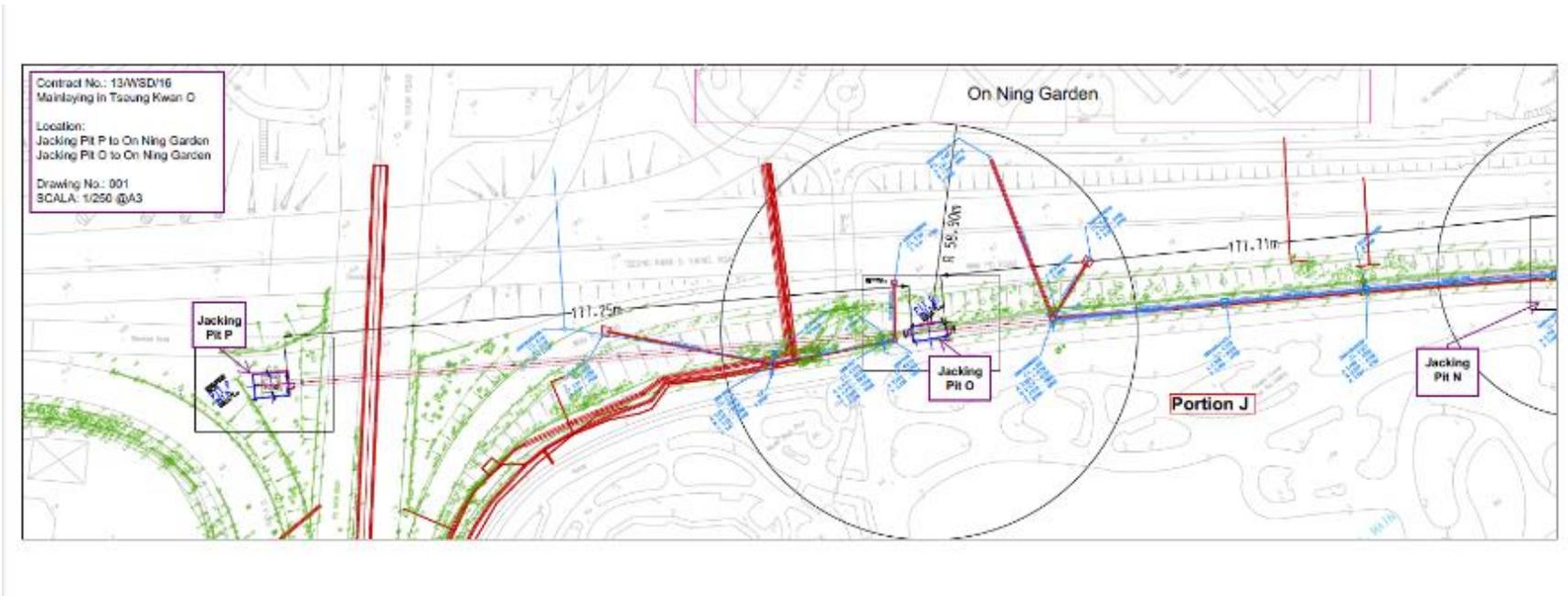


Figure B8b. Location Plan for Portion J – Pit N-O-P

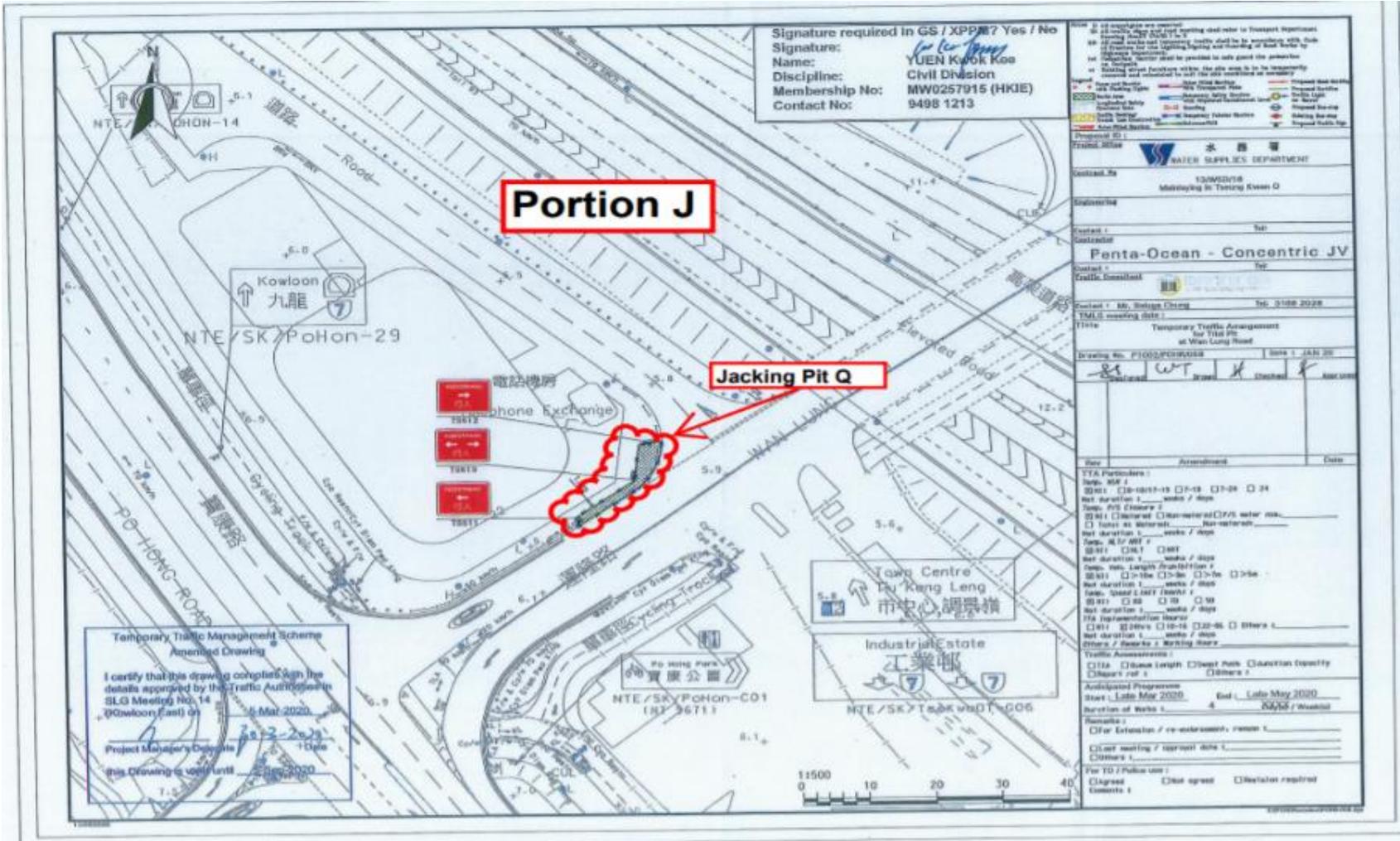


Figure B8c. Location Plan for Portion J – Pit Q

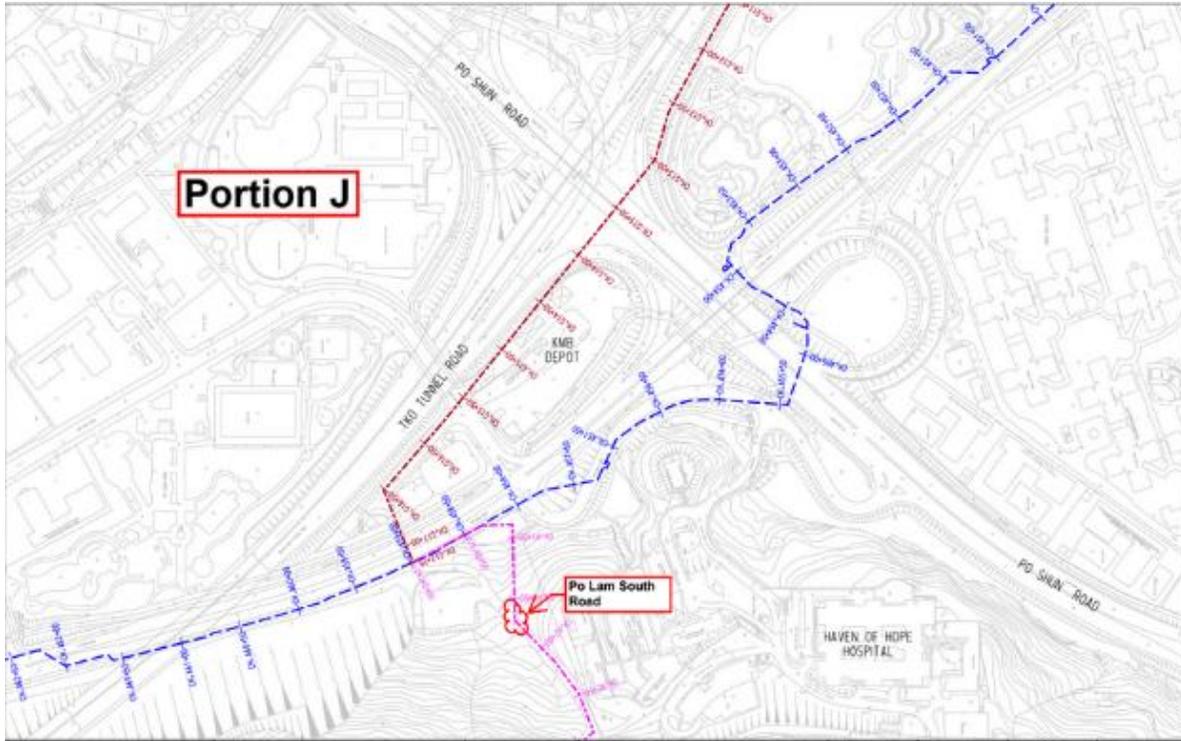


Figure B9a. Location Plan for Mau Wu Tsai 1

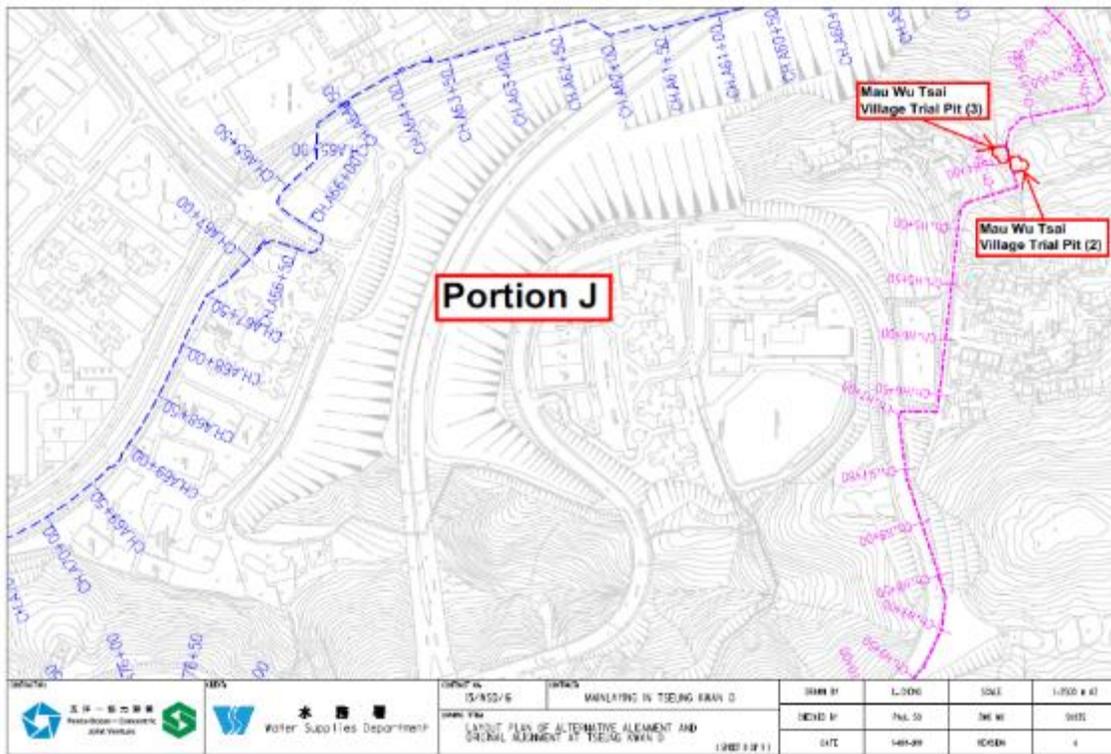


Figure B9b. Location Plan for Mau Wu Tsai 2 & 3

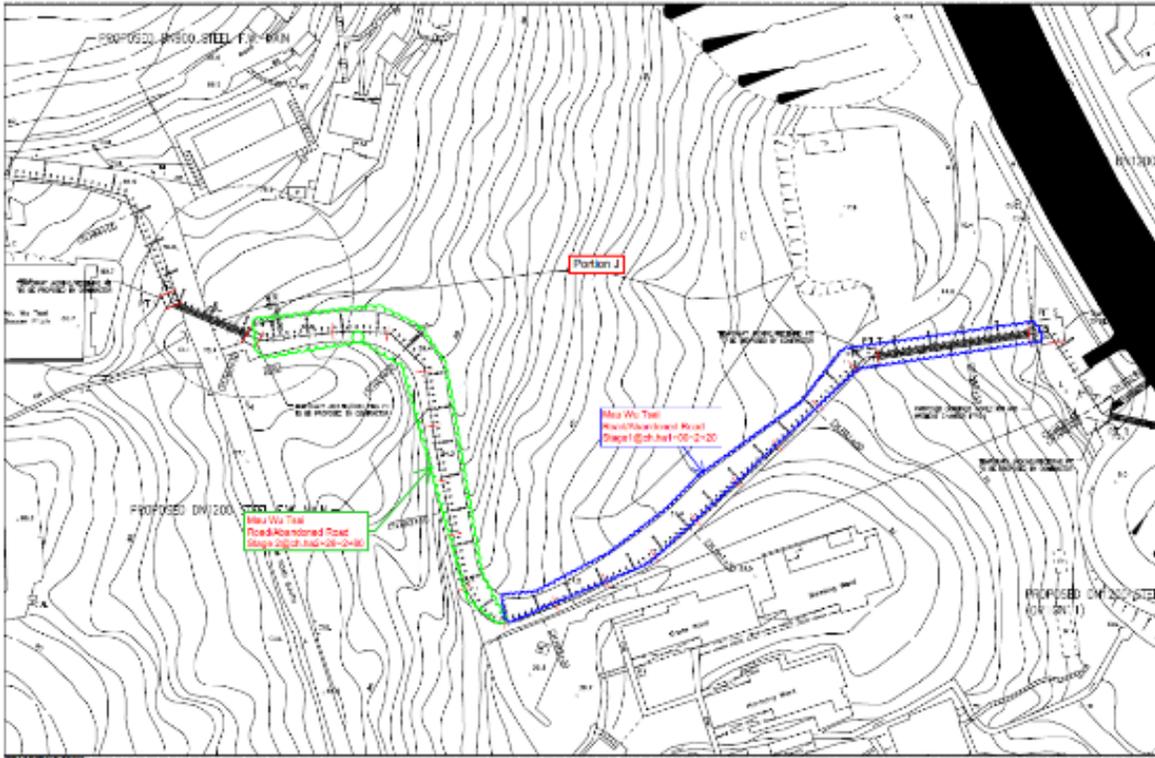


Figure B9c. Abandoned Mau Wu Tsai Road



Figure B10. Location Plan for Jacking Pit F

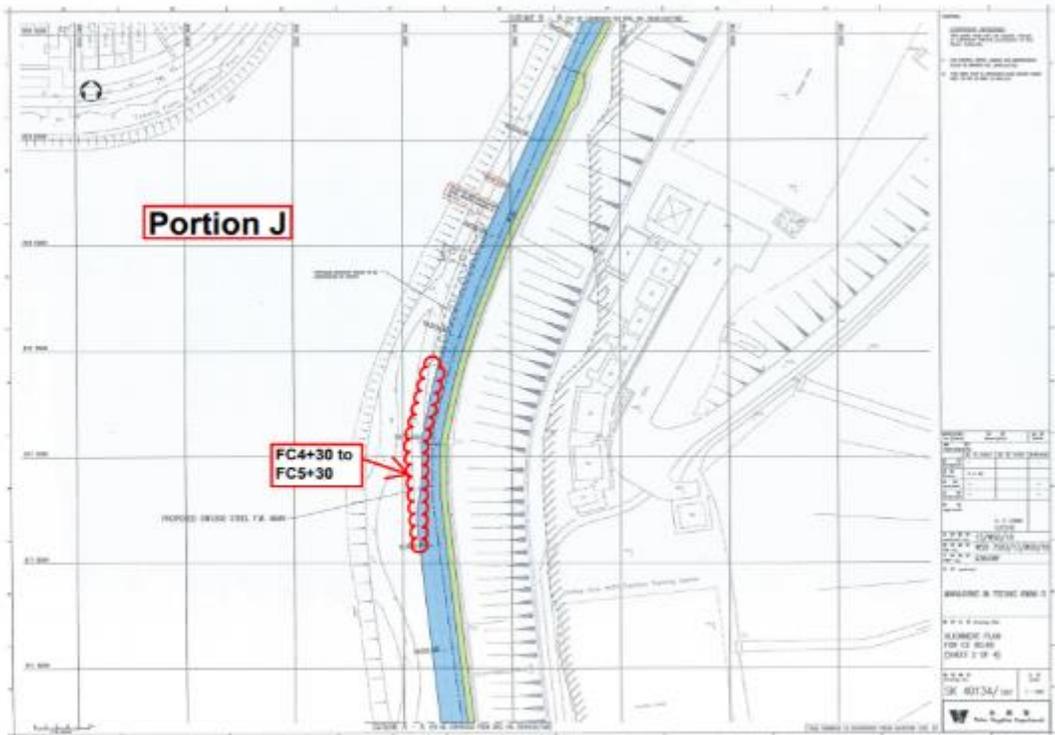


Figure B11c. Location Plan – Landfill Stage 1 (Area FC4+30 -FC5+30)

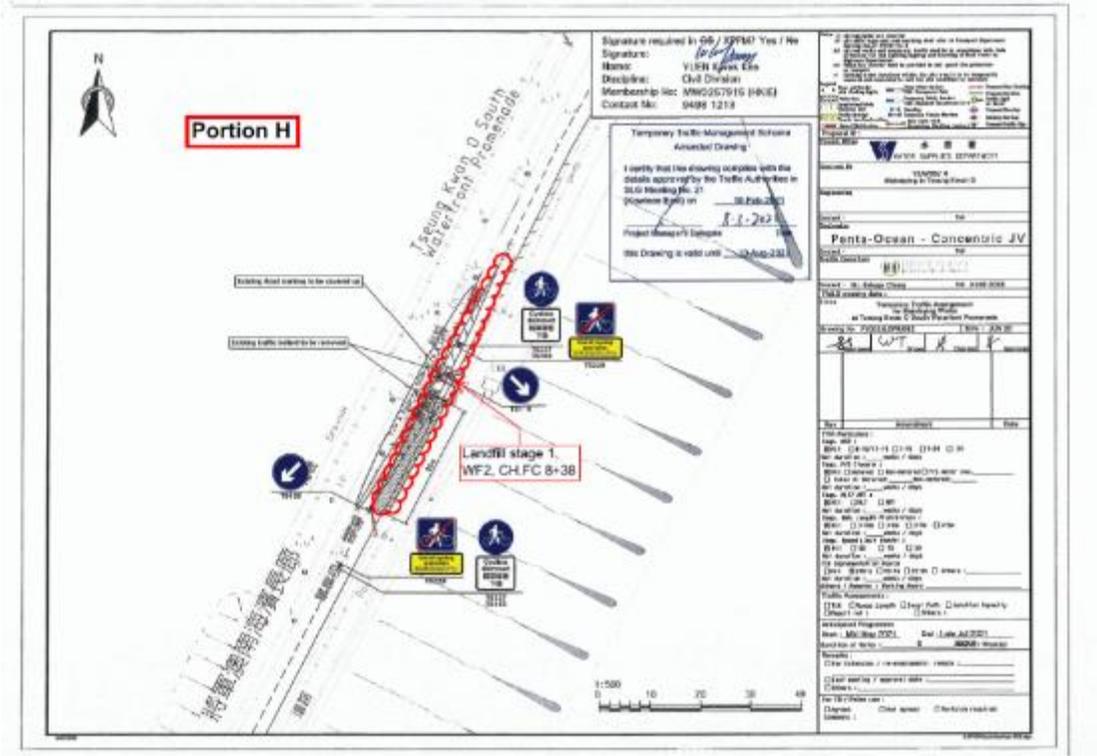


Figure B11d. Location Plan – Landfill Stage 1 (Area FC8+38)

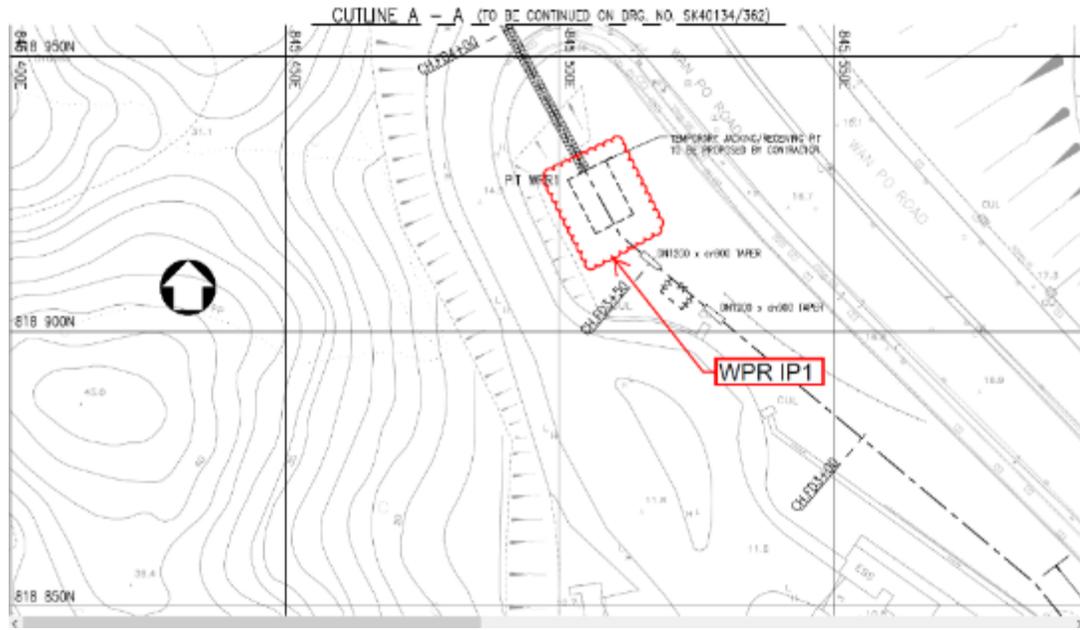


Figure B14. Location Plan for WPR IP1

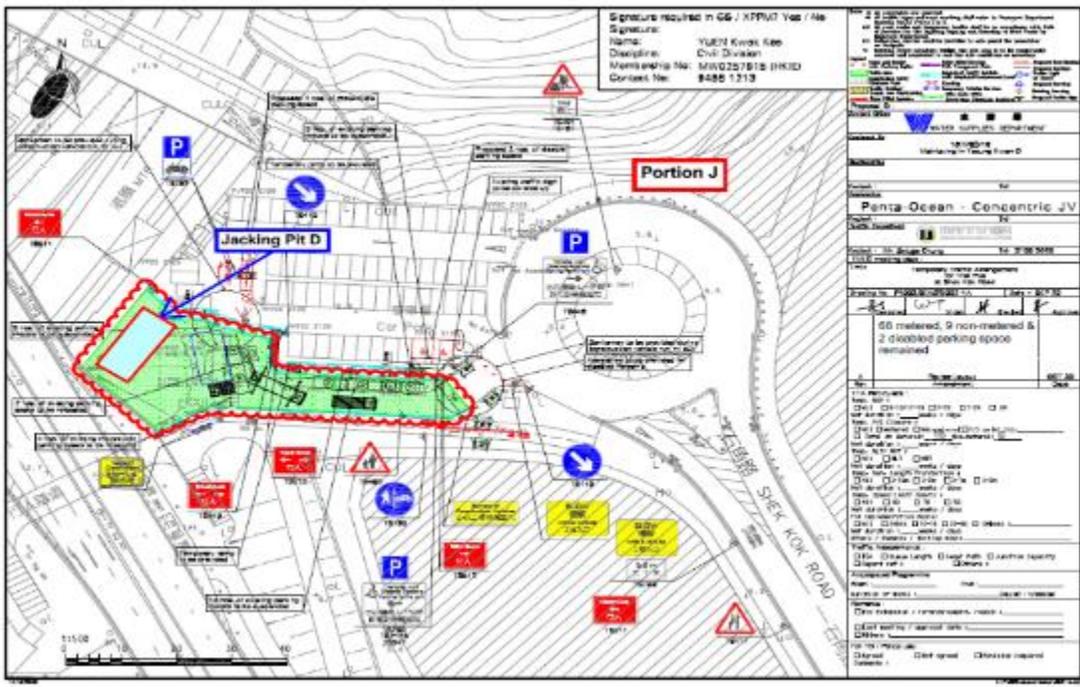


Figure B15. Location Plan for Jacking Pit D

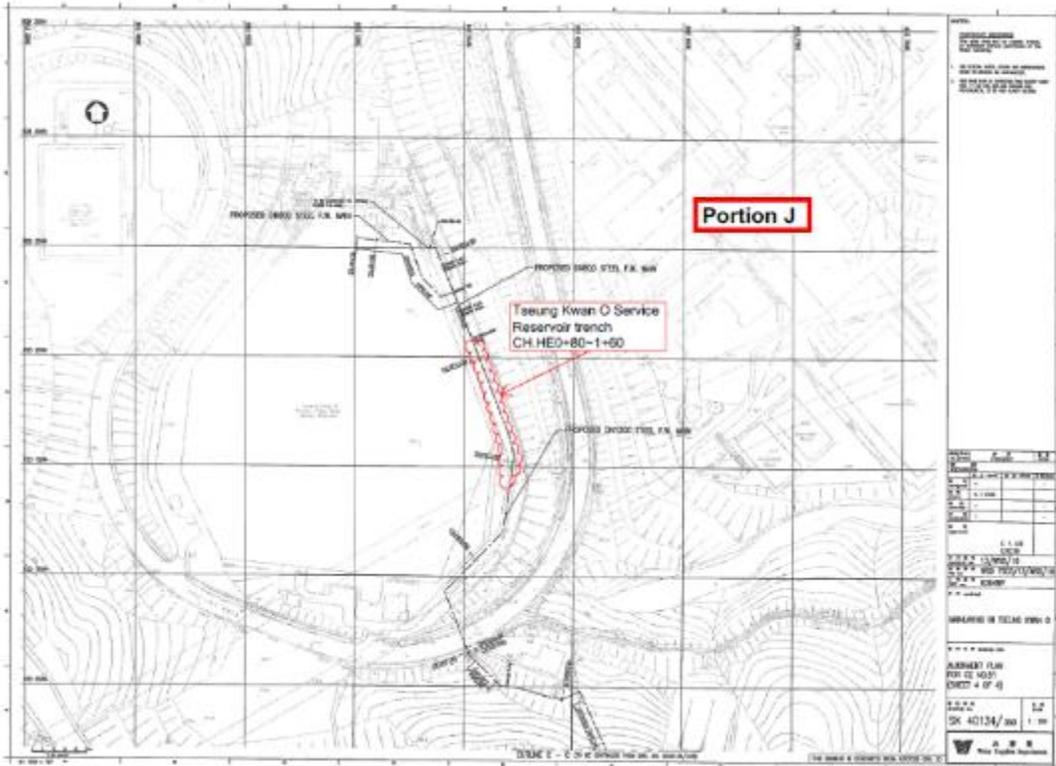


Figure B16. Location Plan for CH.HE0+80-1+60

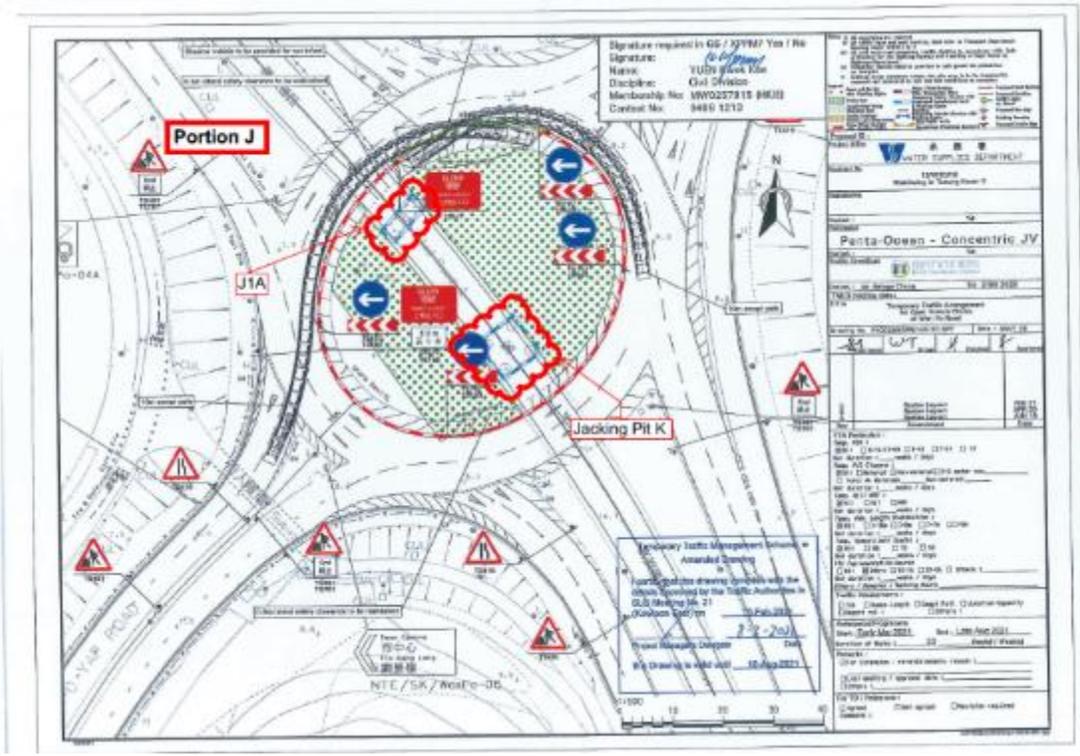


Figure B17. Location Plan for Pit K

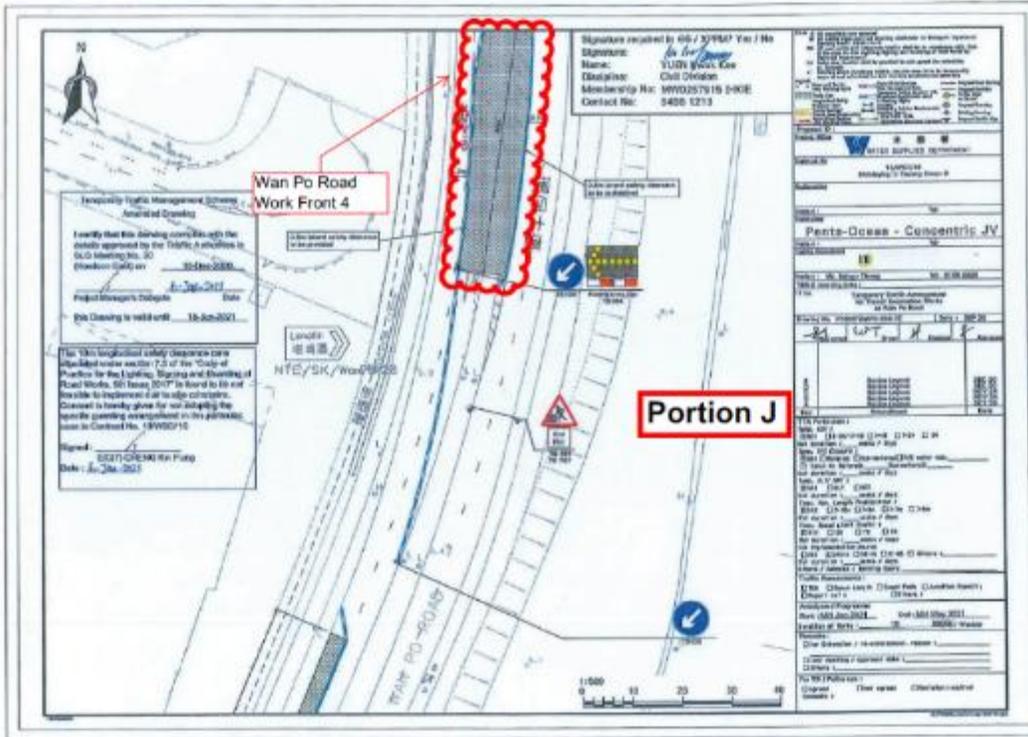


Figure B18a. Location Plan for Wan Po Road 4

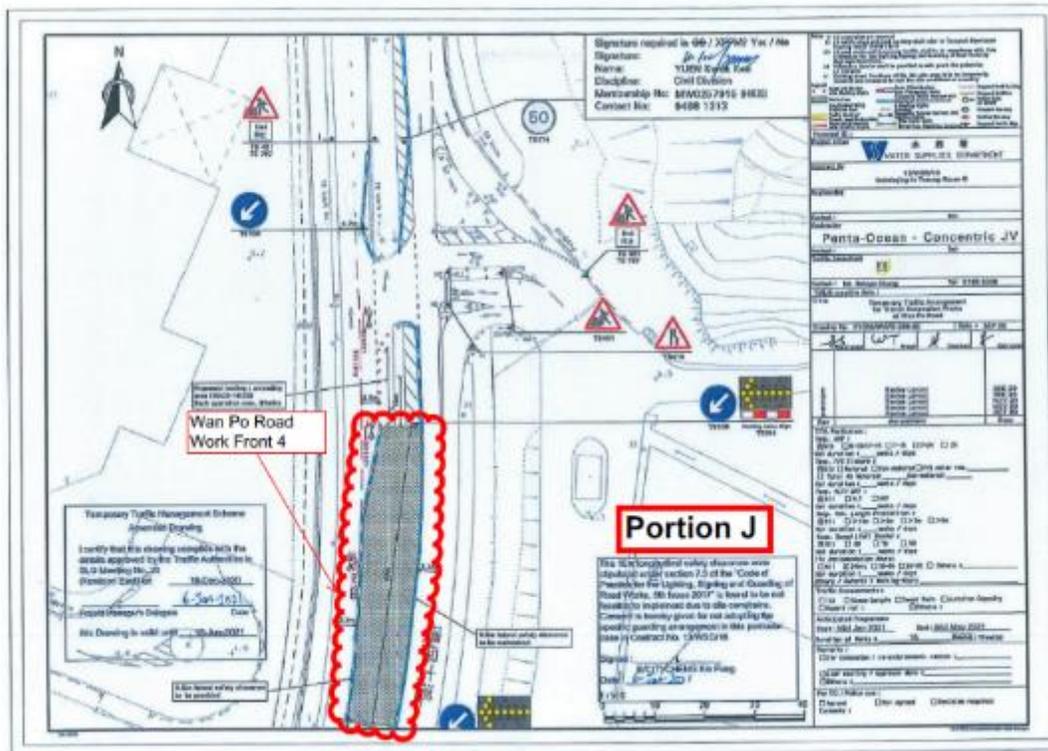


Figure B18b. Location Plan for Wan Po Road 4

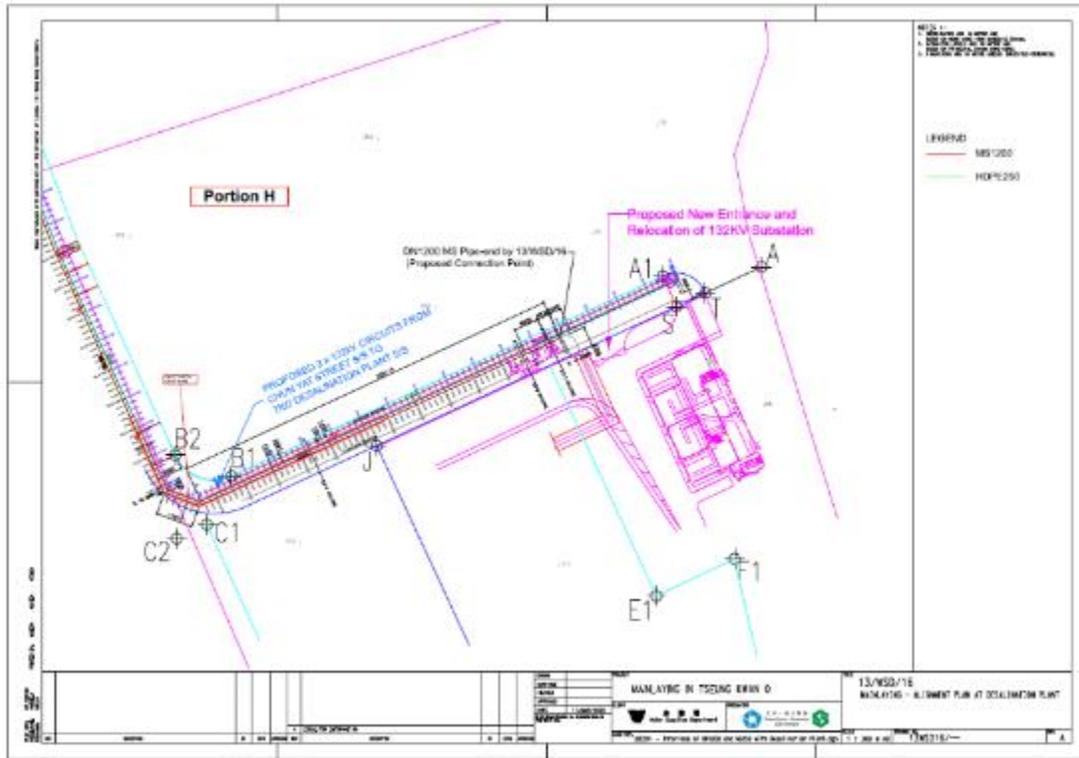


Figure B19a. Location Plan for CH.CT 0+07 – 2+58



Figure B19b. Location Plan for CH.CT 2+58 – 2+66

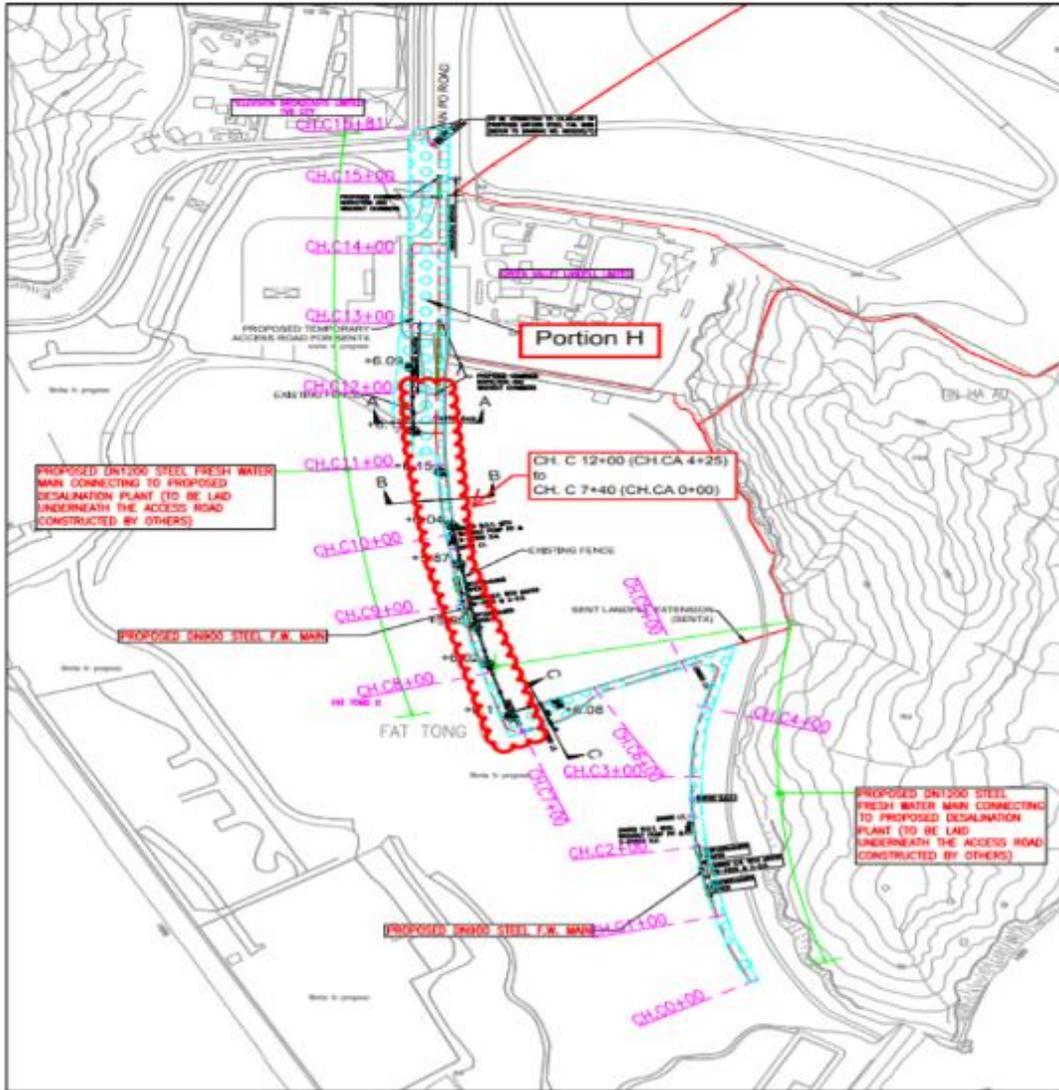


Figure B20. Location Plan for Portion H- CH.C 7+40~CH.C 12+00 (CH.CA 0+00 ~ CH.CA4+25)

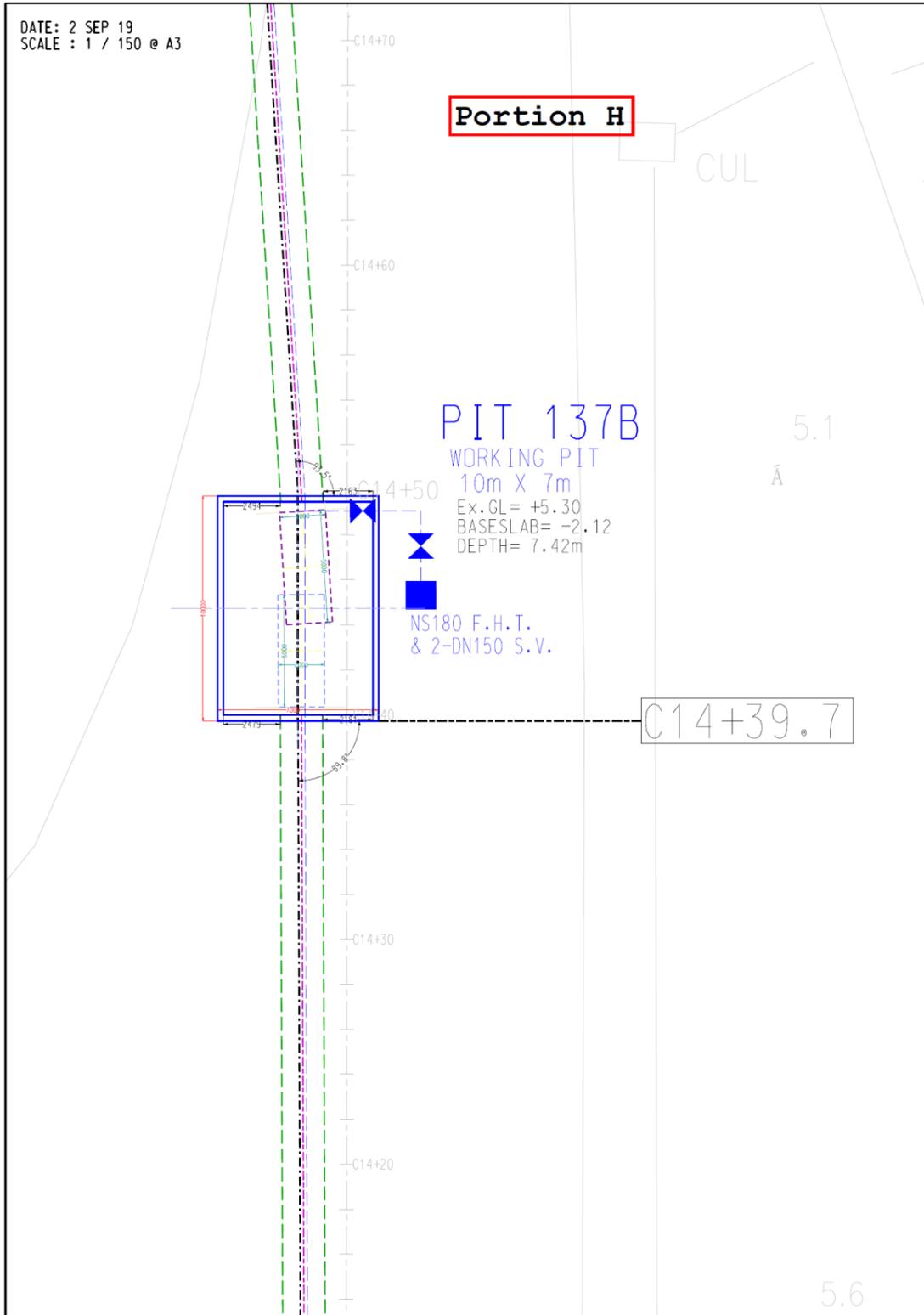


Figure B21a. Location Plan for Portion H- Pit 137B

Appendix C

Summary of Implementation Status of Environmental Mitigation

Contract No. 13/WSD/16
Mainlaying in Tseung Kwan O
Monthly EM&A Report



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)		✓		N/A	
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)	✓	✓		N/A	
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	

Contract No. 13/WSD/16
Mainlaying in Tseung Kwan O
Monthly EM&A Report



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	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)		✓		Reminder issued	
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 minimise dust emission.	Land site/ During construction	Contractor(s)		✓		Reminder issued	
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	
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)/ Environmental Team (ET) & Independent Environmental Checker (IEC)		✓		Implemented	

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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	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Mobile plant, if any, will be sited as far away from NSRs as possible.	Noise control/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
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	A Practical Guide for the Reduction of Noise from Construction Works,
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	A Practical Guide for the Reduction of Noise from Construction Works,
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	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Use of Quite Powered Mechanical Equipment (QPME).	Noise control/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
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	A Practical Guide for the Reduction of Noise from Construction Works,
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	A Practical Guide for the Reduction of Noise from Construction Works,
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	A Practical Guide for the Reduction of Noise from Construction Works

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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	Sawcutting 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.	Designated monitoring stations as defined in EM&A Manual/ During construction phase	Environmental Team (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	

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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)		✓		Observation and reminder issued. Rectified 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	-

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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	Technical Memorandum for Effluents Discharged into Drainage and Sewerage Systems Inland and Coastal Waters
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	-
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	-

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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
S8.5	Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.	Land site/ During construction	Contractor(s)		✓		Reminder issued	Waste Disposal Ordinance (Cap 354)

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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 waste paper 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)		✓		Reminder issued	-
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	A Sediment Quality Report (SQR) for sampling and chemical testing of the sediment will be prepared and submitted to the EPD for approval. The approved detailed sampling and chemical testing will be carried out prior to the commencement of the dredging activities to confirm the sediment disposal method.	Marine works/ During construction	Contractor(s)		✓		N/A	ETWB TC(W) No. 34/2002 and Dumping at Sea Ordinance (DASO)
S8.5	The management of dredged/ excavated sediment management requirement from <i>ETWB TC(W) No. 34/2002</i> 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)

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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)		✓		Reminder issued	Air Pollution Control (Construction Dust) Regulation (Cap 311R)

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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	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	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
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	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
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	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
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		✓	✓	Observation issued, Rectified after issued.	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Storage areas for chemical waste shall have adequate ventilation.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes

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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	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
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	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
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		✓	✓	Reminder issued	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
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	DEVB TC(W) No. 8/2010 Enhanced Specification for Site Cleanliness and Tidiness.
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)

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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	-

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Ecology								
S9.7	For slope mitigation works within the Clear Water Bay Country Park, to avoid tree felling and damages to trees, the exact locations of the flexible barrier foundation plates, soil nails and rock dowels can be adjusted during detailed design, and a setback distance from existing trees is recommended to be maintained as far as practical. A detailed specification describing the exact locations of the flexible barrier foundation plates, soil nails and rock dowels will be prepared to illustrate how the setback distance from existing trees would be implemented for tree avoidance.	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)	✓	✓		N/A	-
S9.7	Pruning of tree canopies along the alignment of the flexible barriers shall be limited to a minimum.	Slope mitigation works area/ During construction	Contractor(s)		✓		Implemented	
S9.7	The alignment of flexible barriers shall be optimized to preserve all species of conservation interest and minimize the impact to the existing vegetation as far as practicable. All individuals of <i>Marsdenia lachnostoma</i> within the slope mitigation areas shall be retained <i>in-situ</i> , by positioning the alignment of flexible barrier at a minimum 1.5m in a radius away from these individuals.	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)	✓	✓		N/A	-
S9.7 and 9.10	At the detailed design stage prior to the commencement of the slope mitigation works, a vegetation survey shall be carried out at the slope mitigation areas within the Clear Water Bay Country Park to assess the condition and identify the location of each individual of <i>Marsdenia lachnostoma</i> and other flora species of conservation interest that may be directly affected by the construction works.	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)	✓	✓		N/A	-
S9.7	Temporary fencing will be installed to fence off the concerned species either in groups of individually within the works area and in the close proximity to prevent from being damaged and disturbed during construction. A sign identifying the site shall be attached to the fence and flagging tape shall be attached to the individuals to visualize their locations.	Slope mitigation works area/ During construction	Contractor(s)		✓		N/A	-
S9.7 and S9.10	A specification for fencing and demarcating individuals of <i>Marsdenia lachnostoma</i> (or other flora species of conservation interest, if found) adjacent to the proposed alignment of the flexible barriers will be prepared to protect the species.	Slope mitigation works area/ During construction	Contractor(s)		✓		N/A	-

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S9.7	Induction training shall also be provided to all site personnel in order to brief them on this flora of conservation interest including the locations and their importance.	Slope mitigation works area/ During construction	Contractor(s)		✓		N/A	-
S9.7	The resident site supervisory staff will closely monitor the conditions of concerned individuals during construction of flexible barriers in the close proximity.	Slope mitigation works area/ During construction	Contractor(s)		✓		N/A	-
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	-
S9.7	Affected habitats within the Clear Water Bay Country Bay shall be reinstated by hydro-seeding and planting of climbers and native shrub seedlings where practical upon completion of the slope mitigation works.	All area/ During construction	Contractor(s)		✓		N/A	-

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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: - green roofs where practical (ie without equipment on the roof); - 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)	✓	✓	✓	Reminder issued	ETWB TCW No. 3/2006 - Tree Preservation.

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

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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 of methane, carbon dioxide and oxygen.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	

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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 grilled 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 and for each measurement. The need for venting the manhole/ utility pit and further monitoring will be reviewed after the initial monitoring.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	

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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	
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Appendix D

Impact Monitoring Schedule of the Reporting Month

Contract No. 13/WSD/16
Mainlaying in Tseung Kwon O
Environmental Monitoring Schedule

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

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

Appendix E

Noise Monitoring
Calibration Certificate

Equipment

Certificate of Calibration

for

Description: *Sound Level Meter*
Manufacturer: *SVANTEK*
Type No.: *971 (Serial No.: 96062)*
Microphone: *ACO 7052 E (Serial No.:78090)*
Preamplifier: *SVANTEK SV 18 (Serial No.:103808)*

Submitted by:

Customer: *Acuity Sustainability Consulting Limited*
Address: *Unit 1908, Nos. 301-305 Castle Peak Road,
Kwai Chung, N.T.*

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: 2 July 2021

Date of calibration: 5 July 2021

Calibrated by: _____
Calibration Technician

Certified by: _____
Mr. Ng Yan Wa
Laboratory Manager

Date of issue: 5 July 2021

Certificate No.: APJ21-029-CC001



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1. 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.

2. Calibration Conditions:

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

3. Calibration Equipment:

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

4. 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		
20-140	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		
20-140	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		
20-140	dBA	SPL	Fast	94	1000	94.0	Ref
			Slow			94.0	±0.3

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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		
20-140	dB	SPL	94	31.5	94.1	±2.0
				63	94.1	±1.5
				125	94.1	±1.5
				250	94.1	±1.4
				500	94.1	±1.4
				1000	94.0	Ref
				2000	93.8	±1.6
				4000	93.3	±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		
20-140	dBA	SPL	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	95.0	+1.2±1.6
				4000	94.3	+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		
20-140	dBC	SPL	94	31.5	91.1	-3.0±2.0
				63	93.3	-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	92.5	-0.8±1.6

5. 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	± 0.10
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
104 dB	4000 Hz	± 0.05
	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.



MAXLAB

CALIBRATION CERTIFICATE

<i>Certificate Information</i>	
Date of Issue	7-Aug-2021
Certificate Number	MLCN212053S
<i>Customer Information</i>	
Company Name	Acuity Sustainability Consulting Limited
Address	Unit C, 11/F., Ford Glory Plaza, Nos. 37-39 Wing Hing Street, Cheung Sha Wan, Kowloon, HK
<i>Equipment-under-Test (EUT)</i>	
Description	Acoustic Calibrator
Manufacturer	Pulsar
Model Number	105
Serial Number	63705
Equipment Number	--
<i>Calibration Particular</i>	
Date of Calibration	7-Aug-2021
Calibration Equipment	4231(MLTE008) / AV200063 / 23-Jun-23 1357(MLTE190) / MLEC21/05/02 / 26-May-22
Calibration Procedure	MLCG00, MLCG15
Calibration Conditions	Laboratory Temperature 23 °C ± 5 °C Relative Humidity 55% ± 25% EUT Stabilizing Time Over 3 hours Warm-up Time Not applicable Power Supply Internal battery
Calibration Results	Calibration data were detailed in the continuation pages. All calibration results were within EUT specification.
<i>Approved By & Date</i>	
	 K.O. Lo 7-Aug-2021
<i>Statements</i>	
<ul style="list-style-type: none">* Calibration equipment used for this calibration are traceable to national / international standards.* The results on this Calibration Certificate only relate to the values measured at the time of the calibration and the uncertainties quoted will not include allowance for the EUT long term drift, variation with environmental changes, vibration and shock during transportation, overloading, mishandling, misuse, and the capacity of any other laboratory to repeat the measurement.* MaxLab Calibration Centre Limited shall not be liable for any loss or damage resulting from the use of the EUT.* The copy of this Certificate is owned by MaxLab Calibration Centre Limited. No part of this Certificate may be reproduced without the prior written approval of MaxLab Calibration Centre Limited.	



MAXLAB

Certificate No.

MLCN212053S

<i>Calibration Data</i>				
EUT Setting	Standard Reading	EUT Error from Setting	Calibration Uncertainty	EUT Specification
94 dB	93.9 dB	-0.1 dB	0.20 dB	± 0.2 dB

- END -

Calibrated By : Keneth
Date : 7-Aug-21

Checked By : K.O. Lo
Date : 7-Aug-21

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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
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Appendix G

Noise Monitoring Data

Table G 1 Summary of Noise Monitoring Result

Date	Time	Weather	L _{eq-5mins} , dB(A)						L _{eq-30min} , dB(A)	L _{1030mins} , dB(A)	L _{9030mins} , dB(A)	Limit Level, dB(A)*	Noise Meter
			Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)					
08/04/2022	10:48 - 11:18	Sunny	69.1	67.9	69.2	68.8	68.1	67.9	68.5	71.8	60.0	70.0	Svantek 971
13/04/2022	12:00 - 12:30	Sunny	68.0	67.0	67.8	64.8	68.1	64.9	67.0	70.4	59.1	70.0	Svantek 971
21/04/2022	14:45 - 15:15	Sunny	66.1	68.5	69.7	69.9	67.5	68.1	68.5	72.9	60.2	70.0	Svantek 971
29/04/2022	11:20 - 11:50	Sunny	66.7	66.8	67.9	67.7	68.7	66.6	67.5	70.0	63.6	70.0	Svantek 971

Remarks:

*No examinations were scheduled for NSR4 Creative Secondary School in the reporting month. Academic School Calendar can be found in **Appendix O**.

Appendix H

Waste Flow Table



Appendix F - Monthly Summary Waste Flow Table for 1 April 2022 to 30 April 2022

APPENDIX 25.2 to GS

Name of Department: ArchSD/CEDD/DSD/EMSD/HyD/WSD

Contract No.: 13/WSD/16

Monthly Summary Waste Flow Table for 1 April 2022 to 30 April 2022

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 (see Note 3)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
Jan 22	2.342	0.145	--	--	2.014	0.328	--	0.065	--	--	0.006
Feb 22	2.184	0.240	--	--	1.855	0.329	--	0.058	--	--	0.001
Mar 22	1.284	0.028	0.096	--	1.188	0.860	--	0.054	--	--	0.002
Apr 22	0.840	0.012	0.188	--	0.652	0.751	--	0.055	--	--	0.003
May 22				--			--		--	--	
Jun 22				--			--		--	--	
Sub-total	6.650	0.425	0.284	--	5.709	2.268	--	0.232	--	--	0.012
Jul 22				--			--		--	--	
Aug 22				--			--		--	--	
Sep 22				--			--		--	--	
Oct 22				--			--		--	--	
Nov 22				--			--		--	--	
Dec 22				--			--		--	--	
Total	6.650	0.425	0.284	--	5.709	2.268	--	0.232	--	--	0.012

Notes:

- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.
- (3) Broken concrete for recycling into aggregate.
- (4) Sources and types of Imported Fill in the reporting period
 - (i) K. Wah Quarry Company Limited
 - i. Soil: 676.2 m³ (1352.4 tonnes / 22 cars)
 - ii. Subbase: 74.82 m³ (149.64 tonnes / 3 cars)
- (5) 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.

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-2021	Inspected:	Teddy

SENSOR DATA :

	LEL sensor (ME)	O2 sensor	CO sensor (Tox1)	H2S sensor (Tox2)
Calibration dates:	28-Jul-2021	28-Jul-2021	28-Jul-2021	28-Jul-2021
After Calibration levels:	50%	17.90%	50 ppm	10.1 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 #1412983 Cyl# 15
***** 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 2022

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 : service@promat.hk http:\ www.promat.hk



VERIFICATION CERTIFICATE OF CO2 Analyzer

Report No. : 21012
Date : 15/11/2021
Client : Penta Ocean Concentric JV

EQUIPMENT TO BE VERIFIED

Equipment Name : CO2 Analyzer
Supplier : TES
Model No. : 1307H
Serial No. : 200901259
Date of Verification : 15/11/2021
Due Verification : 14/11/2022

VERIFICATION DEVICES USED

Reference Equipment	: CO2 in N2	CO2 in N2
Supplier	: NorLab	NorLab
Model No.	: H1013500PN	H1013.3VN
Lot #	: 0-353-780	1-006-21
Expiry date	: 23/12/2023	10/1/2024
Accuracy	: Within +/-2%	Within +/-2%

ENVIRONMENTAL CONDITION

Ambient Temp : 25.2 °C
Relative Humidity : 53%

Verification Result

Test Number	Concentration (Mole%)	Results
Test 1	500ppm	510ppm
Test 2	0.50%	0.52%

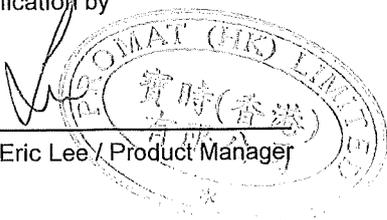
Remarks

- 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

Mr. Eric Lee / Product Manager



Appendix J

Landfill Gas Monitoring Data

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	1/4/2022	0830	Fine / Rain	0	0	0	20.9	17/10/11	8.4
	✓	1330	Fine / Rain	0	0	0	20.9	18/10/12	8.4
	✓	1700	Fine / Rain	0	0	0	20.9	18/10/12	8.4
Area 137 Pit B	✓	0830	Fine / Rain	0	0	0	20.9	18/10/10	8.6
	✓	1330	Fine / Rain	0	0	0	20.9	19/10/11	8.6
	✓	1700	Fine / Rain	0	0	0	20.9	19/10/11	8.6
Area 137 Pit C	✓	0830	Fine / Rain	0	0	0	20.9	19/10/10	10
	✓	1330	Fine / Rain	0	0	0	20.9	18/10/11	10
	✓	1700	Fine / Rain	0	0	0	20.9	18/10/10	10

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

1/4/2022

Laboratory Staff:

Checked by:

翟偉傑
Chak Wai Kit

RSO - POC JV



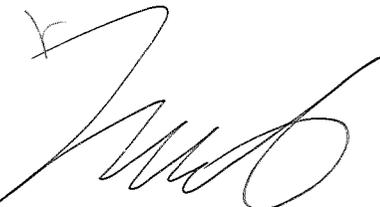
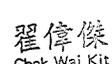
1/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

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 monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	1/4/2022	0830	Fine / Rain	0	0	0	20.9	17/1009	5.5
		1330	Fine / Rain	0	0	0	20.9	18/1010	5.5
		1700	Fine / Rain	0	0	0	20.9	18/1010	5.5
Area B	1/4/2022	0845	Fine / Rain	0	0	0	20.9	18/1010	2.5
		1345	Fine / Rain	0	0	0	20.9	19/1010	2.5
		1645	Fine / Rain	0	0	0	20.9	18/1010	2.5

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		1/4/2022
Laboratory Staff:	 RSO		1/4/2022
Checked by:	 Chak Wai Kit		

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	1/4/2022	0845	Fine / Rain	0	0	0	20.9	18/1009	4
	✓	1345	Fine / Rain	0	0	0	20.9	19/1008	4
	✓	1645	Fine / Rain	0	0	0	20.9	18/1009	4
WPRTTA 5	✓	0845	Fine / Rain	0	0	0	20.9	19/1010	3.6
	✓	1345	Fine / Rain	0	0	0	20.9	20/1009	3.6
	✓	1645	Fine / Rain	0	0	0	20.9	19/1009	3.6

Name & Designation

Signature

Date

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

Laboratory Staff:

Checked by:

翟偉傑
Chak Wei Kit
KSO POCJV



1/4/2022

1/4/2022

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	1-4-2022	08:04	Rain / Fine	0	0	0	20.9	22 / 999	9
		13:06	Fine	0	0	0	20.9	22 / 999	9
		16:44	Fine	0	0	0	20.9	22 / 999	9
Pit A	1-4-2022	08:11	Fine	0	0	0	20.9	22 / 999	9
		13:17	Fine	0	0	0	20.9	22 / 998	9
		16:57	Fine	0	0	0	20.9	22 / 998	9
Pit D	1-4-2022	08:34	Fine	0	0	0	20.9	21 / 996	9
		13:29	Fine	0	0	0	20.9	22 / 999	9
		17:02	Fine	0	0	0	20.9	22 / 999	9

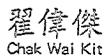
Field Operator: Chan Wai Chi [Wellcon] CP *Chan Wai Chi* 1-4-2022
 Laboratory Staff: *[Signature]*
 Checked by: 翟偉傑 Chak Wai Kit POCJV *RSO [Signature]* 1-4-2022

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	2/4/2022	0830	Fine / Rain	0	0	0	20.9	14/1009	5.5
	"	1330	Fine / Rain	0	0	0	20.9	13/1009	5.5
	"	1700	Fine / Rain	0	0	0	20.9	13/1009	5.5
Area B	"	0845	Fine / Rain	0	0	0	20.9	15/1010	2.5
	"	1345	Fine / Rain	0	0	0	20.9	16/1010	2.5
	"	1645	Fine / Rain	0	0	0	20.9	15/1009	2.5

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		2/4/2022
Laboratory Staff:	 PO CJV		2/4/2022
Checked by:	 Chak Wai Kit		

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
PGM-2500P (QRAE III)	28 JUL 2021

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 monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	2/4/2022	0830	Fine / Rain	0	0	0	20.9	14/1009	8.4
		1330	Fine / Rain	0	0	0	20.9	15/1010	8.4
		1700	Fine / Rain	0	0	0	20.9	15/1010	8.4
Area 137 Pit B		0830	Fine / Rain	0	0	0	20.9	14/1010	8.6
		1330	Fine / Rain	0	0	0	20.9	15/1011	8.6
		1700	Fine / Rain	0	0	0	20.9	15/1011	8.6
Area 137 Pit C		0830	Fine / Rain	0	0	0	20.9	14/1011	10
		1330	Fine / Rain	0	0	0	20.9	15/1010	10
		1700	Fine / Rain	0	0	0	20.9	15/1010	10

Name & Designation

Signature

Date

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

Laboratory Staff:

Checked by:

翟偉傑
 Chek Wai Kit

RSO. pocsjv



2/4/2022

2/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	2/4/2022	0845	Fine / Rain	0	0	0	20.9	15/1009	4
		1345	Fine / Rain	0	0	0	20.9	14/1010	4
		1645	Fine / Rain	0	0	0	20.9	15/1009	4
WPRTTA 5		0845	Fine / Rain	0	0	0	20.9	14/1010	3.6
		1345	Fine / Rain	0	0	0	20.9	15/1009	3.6
		1645	Fine / Rain	0	0	0	20.9	15/1009	3.6

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

2/4/2022

Laboratory Staff:

Checked by:

翟偉傑
Chak Wai Kit

RSO

POCTU



2/4/2022

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	2-4-2022		Rain / Fine	0	0	0	20.9	21 / 998	9
			Fine	0	0	0	20.9	22 / 999	9
			Fine	0	0	0	20.9	22 / 999	9
Pit A	2-4-2022		Fine	0	0	0	20.9	22 / 999	9
			Fine	0	0	0	20.9	23 / 999	9
			Fine	0	0	0	20.9	22 / 999	9
Pit D	2-4-2022		Fine	0	0	0	20.9	22 / 999	9
			Fine	0	0	0	20.9	22 / 999	9
			Fine	0	0	0	20.9	22 / 999	9

Name & Designation Signature Date

Field Operator: Chan Wai Chi [Wellcon] CP *Chan Wai Chi* 2-4-2022

Laboratory Staff:

Checked by: *Chak Wai Kit* POCJV *Chak Wai Kit* 2-4-2022

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
PGM-2500P (QRAE III)	28 JUL 2021

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 monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	4/4/2022	0830	Fine / Rain	0	0	0	20.9	18/1008	5.5
		1330	Fine / Rain	0	0	0	20.9	22/1010	5.5
		1700	Fine / Rain	0	0	0	20.9	21/1010	5.5
Area B		0845	Fine / Rain	0	0	0	20.9	18/1010	2.5
		1345	Fine / Rain	0	0	0	20.9	20/1011	2.5
		1645	Fine / Rain	0	0	0	20.9	20/1011	2.5

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		4/4/2022
Laboratory Staff:	翟偉傑 PGO POC JV		4/4/2022
Checked by:	Chak Wai Kit		

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	4/4/2022	0830	Fine / Rain	0	0	0	20.9	18/10/11	8.4
		1330	Fine / Rain	0	0	0	20.9	21/10/10	8.4
		1700	Fine / Rain	0	0	0	20.9	22/10/10	8.4
Area 137 Pit B		0830	Fine / Rain	0	0	0	20.9	19/10/10	8.6
		1330	Fine / Rain	0	0	0	20.9	22/10/11	8.6
		1700	Fine / Rain	0	0	0	20.9	21/10/11	8.6
Area 137 Pit C		0830	Fine / Rain	0	0	0	20.9	20/10/11	10
		1330	Fine / Rain	0	0	0	20.9	21/10/10	10
		1700	Fine / Rain	0	0	0	20.9	21/10/10	10

Name & Designation

Signature

Date

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

Laboratory Staff:

Checked by:

翟偉傑
Chak Wei Kit

RSO poc JV



4/4/2022

4/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	4/4/2022	0845	Fine / Rain	0	0	0	20.9	18/1008	4
	"	1345	Fine / Rain	0	0	0	20.9	20/1008	4
	"	1645	Fine / Rain	0	0	0	20.9	21/1009	4
WPRTTA 5	"	0845	Fine / Rain	0	0	0	20.9	18/1010	3.6
	"	1345	Fine / Rain	0	0	0	20.9	21/1011	3.6
	"	1645	Fine / Rain	0	0	0	20.9	21/1011	3.6

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

4/4/2022

Laboratory Staff:

Checked by:

翟偉傑
Chak Wai Kit

RSO POCJV



4/4/2022

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	4-4-2022	08:02	Rain / Fine	0	0	0	22.9	22 / 999	9
		13:00	Fine	0	0	0	22.9	22 / 999	9
		16:24	Fine	0	0	0	22.9	22 / 999	9
Pit A	4-4-2022	08:24	Fine	0	0	0	22.9	22 / 999	9
		13:21	Fine	0	0	0	22.9	22 / 999	9
		16:31	Fine	0	0	0	22.9	22 / 999	9
Pit D	4-4-2022	08:39	Fine	0	0	0	22.9	22 / 999	9
		13:42	Fine	0	0	0	22.9	22 / 999	9
		16:44	Fine	0	0	0	22.9	22 / 999	9

Name & Designation Signature Date

Field Operator: Chan Wai Chi [Wellcon) CP  4-4-2022

Laboratory Staff:

Checked by:  4-4-2022

翟偉基
 Chak Wai Ki POCJV

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	6/4/2022	0830	Fine / Rain	0	0	0	20.9	21/1008	5.5
		1330	Fine / Rain	0	0	0	20.9	23/1010	5.5
		1700	Fine / Rain	0	0	0	20.9	23/1010	5.5
Area B		0845	Fine / Rain	0	0	0	20.9	20/1008	2.5
		1345	Fine / Rain	0	0	0	20.9	22/1010	2.5
		1645	Fine / Rain	0	0	0	20.9	21/1010	2.5

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		6/4/2022
Laboratory Staff:			
Checked by:	 翟偉傑 Chak Wai Kit		6/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	6/4/2022	0830	Fine / Rain	0	0	0	20.9	21/1007	8.4
	✓	1330	Fine / Rain	0	0	0	20.9	23/1010	8.4
	✓	1700	Fine / Rain	0	0	0	20.9	23/1010	8.4
Area 137 Pit B	✓	0830	Fine / Rain	0	0	0	20.9	22/1010	8.6
	✓	1330	Fine / Rain	0	0	0	20.9	24/1011	8.6
	✓	1700	Fine / Rain	0	0	0	20.9	24/1011	8.6
Area 137 Pit C	✓	0830	Fine / Rain	0	0	0	20.9	23/1011	10
	✓	1330	Fine / Rain	0	0	0	20.9	24/1012	10
	✓	1700	Fine / Rain	0	0	0	20.9	24/1012	10

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

Laboratory Staff:

Checked by:

翟偉傑
Chek Wai Kit

RSD

POCJV

Name & Designation

Signature

Date

6/4/2022

6/4/2022



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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	6-4-2022	08:07	Rain / Fine	0	0	0	20.9	22 / 999	9
		13:02	Fine	0	0	0	20.9	22 / 999	9
		16:22	Fine	0	0	0	20.9	22 / 999	9
Pit A	6-4-2022	08:19	Fine	0	0	0	20.9	21 / 999	9
		13:16	Fine	0	0	0	20.9	22 / 999	9
		16:38	Fine	0	0	0	20.9	22 / 999	9
Pit D	6-4-2022	08:41	Fine	0	0	0	20.9	22 / 999	9
		13:41	Fine	0	0	0	20.9	22 / 999	9
		17:01	Fine	0	0	0	20.9	22 / 999	9

Name & Designation Signature Date

Field Operator: Chan Wai Chi [Wellcon] CP *Chan Wai Chi* 6-4-2022

Laboratory Staff:

Checked by:

Chak Wai Kit
 Chak Wai Kit POCJV *Chak Wai Kit* 6-4-2022

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	7/4/2022	0830	Fine / Rain	0	0	0	20.9	21/1009	5.5
		1330	Fine / Rain	0	0	0	20.9	23/1010	5.5
		1700	Fine / Rain	0	0	0	20.9	22/1009	5.5
Area B		0845	Fine / Rain	0	0	0	20.9	20/1010	2.5
		1345	Fine / Rain	0	0	0	20.9	22/1011	2.5
		1645	Fine / Rain	0	0	0	20.9	22/1011	2.5

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

7/4/2022

Laboratory Staff:

Checked by:

翟偉傑
Chak Wei Kit

ISO 9001 CTV



7/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	7/4/2022	0830	Fine / Rain	0	0	0	20.9	23/10/0	8.4
	✓	1330	Fine / Rain	0	0	0	20.9	24/10/11	8.4
	✓	1700	Fine / Rain	0	0	0	20.9	23/10/11	8.4
Area 137 Pit B	✓	0830	Fine / Rain	0	0	0	20.9	23/10/11	8.6
	✓	1330	Fine / Rain	0	0	0	20.9	25/10/10	8.6
	✓	1700	Fine / Rain	0	0	0	20.9	25/10/10	8.6
Area 137 Pit C	✓	0830	Fine / Rain	0	0	0	20.9	24/10/11	10
	✓	1330	Fine / Rain	0	0	0	20.9	25/10/12	10
	✓	1700	Fine / Rain	0	0	0	20.9	25/10/12	10

Name & Designation

Signature

Date

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

Laboratory Staff:

Checked by:

翟偉傑
Chak Wei Kit

RSO - POC JV



7/4/2022

7/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

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 monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	7/4/2022	0845	Fine / Rain	0	0	0	20.9	22/1008	4
		1345	Fine / Rain	0	0	0	20.9	24/1010	4
		1645	Fine / Rain	0	0	0	20.9	23/1009	4
WPRTTA 5		0845	Fine / Rain	0	0	0	20.9	23/1009	3.6
		1345	Fine / Rain	0	0	0	20.9	24/1010	3.6
		1645	Fine / Rain	0	0	0	20.9	25/1009	3.6

Name & Designation

Signature

Date

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

Laboratory Staff:

Checked by:

翟偉傑
Chak Wai Kit

RSO

POCTV

[Signature]

7/4/2022

7/4/2022

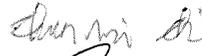
Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring –Field Measurement Recording Sheet

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

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	7-4-2022	08:11	Rain / Fine	0	0	0	20.9	22 / 999	9
		13:06	Fine	0	0	0	20.9	22 / 999	9
		16:24	Fine	0	0	0	20.9	22 / 999	9
Pit A	7-4-2022	08:24	Fine	0	0	0	20.9	22 / 999	9
		13:17	Fine	0	0	0	20.9	22 / 999	9
		16:31	Fine	0	0	0	20.9	22 / 999	9
Pit D	7-4-2022	08:44	Fine	0	0	0	20.9	23 / 998	9
		13:33	Fine	0	0	0	20.9	22 / 995	9
		16:48	Fine	0	0	0	20.9	22 / 999	9

Name & Designation Signature Date

Field Operator: Chan Wai Chi [Wellcon] CP  7-4-2022

Laboratory Staff:

Checked by:  7-4-2022
 Chak Wai Kit POCJV

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	8/4/2022	0830	Fine / Rain	0	0	0	20.9	22/1008	5.5
		1330	Fine / Rain	0	0	0	20.9	24/1009	5.5
		1700	Fine / Rain	0	0	0	20.9	24/1009	5.5
Area B		0845	Fine / Rain	0	0	0	20.9	22/1010	2.5
		1345	Fine / Rain	0	0	0	20.9	23/1011	2.5
		1645	Fine / Rain	0	0	0	20.9	22/1009	2.5

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		8/4/2022
Laboratory Staff:			
Checked by:	 翟偉傑 RSO POC JV Chak Wei Kit		8/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	8/4/2022	0830	Fine / Rain	0	0	0	20.9	22/1010	8.4
		1330	Fine / Rain	0	0	0	20.9	24/1011	8.4
		1700	Fine / Rain	0	0	0	20.9	24/1011	8.4
Area 137 Pit B		0830	Fine / Rain	0	0	0	20.9	23/1010	8.6
		1330	Fine / Rain	0	0	0	20.9	25/1011	8.6
		1700	Fine / Rain	0	0	0	20.9	25/1012	8.6
Area 137 Pit C		0830	Fine / Rain	0	0	0	20.9	24/1011	10
		1330	Fine / Rain	0	0	0	20.9	24/1010	10
		1700	Fine / Rain	0	0	0	20.9	23/1010	10

Name & Designation

Signature

Date

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

8/4/2022

Laboratory Staff:

Checked by:

翟偉傑
Chak Wai Kit

KSO

POCTV



8/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	8/4/2022	0845	Fine / Rain	0	0	0	20.9	22/1009	4
		1345	Fine / Rain	0	0	0	20.9	23/1010	4
		1645	Fine / Rain	0	0	0	20.9	23/1010	4
WPRTTA 5		0845	Fine / Rain	0	0	0	20.9	23/1009	3.6
		1345	Fine / Rain	0	0	0	20.9	23/1010	3.6
		1645	Fine / Rain	0	0	0	20.9	23/1010	3.6

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

8/4/2022

Laboratory Staff:

Checked by:

翟偉傑
Chak Wai Kit

RSO

POCJV



8/4/2022

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:

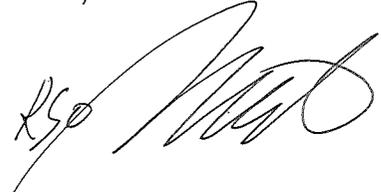
Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	8-4-2022	08:07	Rain / Fine	0	0	0	20.9	22 / 999	9
		13:22	Fine	0	0	0	20.9	22 / 999	9
		16:24	Fine	0	0	0	20.9	22 / 999	9
Pit A	8-4-2022	08:18	Fine	0	0	0	20.9	22 / 999	9
		13:41	Fine	0	0	0	20.9	22 / 999	9
		16:38	Fine	0	0	0	20.9	22 / 999	9
Pit D	8-4-2022	08:31	Fine	0	0	0	20.9	22 / 999	9
		14:00	Fine	0	0	0	20.9	22 / 999	9
		17:22	Fine	0	0	0	20.9	22 / 999	9

Name & Designation Signature Date

Field Operator: Chan Wai Chi [Wellcon] CP  8-4-2022

Laboratory Staff:

Checked by:  8-4-2022
 Chek Wai Kit POCJV

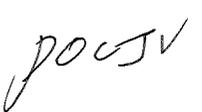
Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture
Landfill Gas Monitoring - Field Measurement Recording Sheet

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

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						Remark Depth (m)
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	
Area A	9/4/2022	0830	Fine / Rain	0	0	0	20.9	22/1008	5.5
		1330	Fine / Rain	0	0	0	20.9	24/1010	5.5
		1700	Fine / Rain	0	0	0	20.9	24/1010	5.5
Area B	9/4/2022	0845	Fine / Rain	0	0	0	20.9	23/1010	2.5
		1345	Fine / Rain	0	0	0	20.9	25/1011	2.5
		1645	Fine / Rain	0	0	0	20.9	25/1011	2.5

Field Operator: Name & Designation Jock Lee (Competent Person [CO-310218]) Signature  Date 9/4/2022

Laboratory Staff:   Date 9/4/2022

Checked by: 
 Chek Wai Kit

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	9/4/2022	0830	Fine / Rain	0	0	0	20.9	23/10/0.	8.4
		1330	Fine / Rain	0	0	0	20.9	24/10/11	8.4
		1700	Fine / Rain	0	0	0	20.9	24/10/11	8.4
Area 137 Pit B		0830	Fine / Rain	0	0	0	20.9	23/10/09	8.6
		1330	Fine / Rain	0	0	0	20.9	24/10/0.	8.6
		1700	Fine / Rain	0	0	0	20.9	24/10/0.	8.6
Area 137 Pit C		0830	Fine / Rain	0	0	0	20.9	23/10/0.	10
		1330	Fine / Rain	0	0	0	20.9	25/10/11	10
		1700	Fine / Rain	0	0	0	20.9	24/10/11.	10

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

9/4/2022.

Laboratory Staff:

Checked by:

翟偉傑
Chek Wai Kit

R50 POCTV



9/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	9/4/2022	0845	Fine / Rain	0	0	0	20.9	22/10/0	4
		1345	Fine / Rain	0	0	0	20.9	24/10/1	4
		1645	Fine / Rain	0	0	0	20.9	23/10/0	4
WPRTTA 5		0845	Fine / Rain	0	0	0	20.9	23/10/0	3.6
		1345	Fine / Rain	0	0	0	20.9	25/10/0	3.6
		1645	Fine / Rain	0	0	0	20.9	24/10/0	3.6

Name & Designation

Signature

Date

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

Laboratory Staff:

Checked by:

翟偉傑 RSO POCTV
 Chak Wai Kit

Signature of Jock Lee

9/4/2022

9/4/2022

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	9-4-2022	08:07	Rain / Fine	0	0	0	20.9	22 / 999	9
		13:11	Fine	0	0	0	20.9	22 / 999	9
		16:22	Fine	0	0	0	20.9	22 / 999	9
Pit A	9-4-2022	08:16	Fine	0	0	0	20.9	22 / 999	9
		13:24	Fine	0	0	0	20.9	22 / 999	9
		16:34	Fine	0	0	0	20.9	22 / 999	9
Pit D	9-4-2022	08:24	Fine	0	0	0	20.9	22 / 999	9
		13:50	Fine	0	0	0	20.9	22 / 999	9
		17:11	Fine	0	0	0	20.9	22 / 999	9

Name & Designation Signature Date

Field Operator: Chan Wai Chi [Wellcon] CP *Chan Wai Chi* 9-4-2022

Laboratory Staff:

Checked by:

Chak Wai Kit POC, JV *Chak Wai Kit* 9-4-2022

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	11/4/2022	0830	Fine / Rain	0	0	0	20.9	24/1008	5.5
		1330	Fine / Rain	0	0	0	20.9	26/1009	5.5
		1700	Fine / Rain	0	0	0	20.9	26/1009	5.5
Area B		0845	Fine / Rain	0	0	0	20.9	28/1010	2.5
		1345	Fine / Rain	0	0	0	20.9	26/1011	2.5
		1645	Fine / Rain	0	0	0	20.9	26/1011	2.5

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		11/4/2022 11/4/2022
Laboratory Staff:			
Checked by:	 翟偉傑 Chak Wai Kit		11/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	11/4/2022	0830	Fine / Rain	0	0	0	20.9	23/1010	8.4
	✓	1330	Fine / Rain	0	0	0	20.9	25/1011	8.4
	✓	1700	Fine / Rain	0	0	0	20.9	24/1011	8.4
Area 137 Pit B	✓	0830	Fine / Rain	0	0	0	20.9	24/1009	8.6
	✓	1330	Fine / Rain	0	0	0	20.9	26/1010	8.6
	✓	1700	Fine / Rain	0	0	0	20.9	25/1009	8.6
Area 137 Pit C	✓	0830	Fine / Rain	0	0	0	20.9	23/1011	10
	✓	1330	Fine / Rain	0	0	0	20.9	24/1012	10
	✓	1700	Fine / Rain	0	0	0	20.9	23/1011	10

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

Checked by:

翟偉傑
Chek Wai Kit

KSO POCJV



11/4/2022

11/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	11/4/2022	0845	Fine / Rain	0	0	0	20.9	24/1009	4
	-	1345	Fine / Rain	0	0	0	20.9	25/1010	4
	-	1645	Fine / Rain	0	0	0	20.9	25/1010	4
WPRTTA 5	-	0845	Fine / Rain	0	0	0	20.9	23/1008	3.6
	-	1345	Fine / Rain	0	0	0	20.9	26/1010	3.6
	-	1645	Fine / Rain	0	0	0	20.9	25/1009	3.6

Name & Designation

Signature

Date

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

Laboratory Staff:

Checked by:

翟偉傑
 Chak Wai Kit

PACTV



11/4/2022

11/4/2022

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	11-4-2021	08:00	Rain / Fine	0	0	0	20.9	24 / 998	9
	11-4-22	13:00	Fine	0	0	0	20.9	28 / 998	9
	11-4-22	17:00	Fine	0	0	0	20.9	24 / 998	9
								/	
Pit A	11-4-22	08:25	Fine	0	0	0	20.9	24 / 998	9
	11-4-22	13:25	Fine	0	0	0	20.9	28 / 998	9
	11-4-22	17:25	Fine	0	0	0	20.9	24 / 998	9
								/	
Pit D	11-4-22	08:40	Fine	0	0	0	20.9	24 / 998	8
	11-4-22	13:40	Fine	0	0	0	20.9	28 / 998	8
	11-4-22	17:40	Fine	0	0	0	20.9	24 / 998	8
								/	
								/	
								/	

Name & Designation Signature Date

Field Operator: Chan Wai Chi [Wellcon] CP  11-4-2021

Laboratory Staff:

Checked by:  11-4-2021
 Chak Wai Kit POCJV

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
PGM-2500P (QRAE III)	28 JUL 2021

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 monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	12/4/2022	0830	Fine / Rain	0	0	0	20.9	25/1009	5.5
	-	1330	Fine / Rain	0	0	0	20.9	26/1010	5.5
	-	1700	Fine / Rain	0	0	0	20.9	26/1010	5.5
Area B	-	0845	Fine / Rain	0	0	0	20.9	25/1010	2.5
	-	1345	Fine / Rain	0	0	0	20.9	27/1011	2.5
	-	1645	Fine / Rain	0	0	0	20.9	26/1010	2.5

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		12/4/2022
Laboratory Staff:			
Checked by:	翟偉傑 RSO Chak Wai Kit POCJV		12/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	12/4/2022	0830	Fine / Rain	0	0	0	20.9	25/1009	8.4
	"	1330	Fine / Rain	0	0	0	20.9	26/1010	8.4
	"	1700	Fine / Rain	0	0	0	20.9	25/1010	8.4
Area 137 Pit B	"	0830	Fine / Rain	0	0	0	20.9	24/1011	8.6
	"	1330	Fine / Rain	0	0	0	20.9	25/1011	8.6
	"	1700	Fine / Rain	0	0	0	20.9	23/1010	8.6
Area 137 Pit C	"	0830	Fine / Rain	0	0	0	20.9	24/1011	10
	"	1330	Fine / Rain	0	0	0	20.9	25/1012	10
	"	1700	Fine / Rain	0	0	0	20.9	24/1010	10

Name & Designation

Signature

Date

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

Laboratory Staff:

Checked by:

翟偉傑
 Chek Wai Kit

LSO

POCJV



12/4/2022

12/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	12/4/2022	0845	Fine / Rain	0	0	0	20.9	25/1009	4
	✓	1345	Fine / Rain	0	0	0	20.9	26/1010	4
	✓	1645	Fine / Rain	0	0	0	20.9	26/1010	4
WPRTTA 5	✓	0845	Fine / Rain	0	0	0	20.9	24/1010	3.6
	✓	1345	Fine / Rain	0	0	0	20.9	25/1009	3.6
	✓	1645	Fine / Rain	0	0	0	20.9	25/1009	3.6

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		12/4/2022
Laboratory Staff:	 RSO		12/4/2022
Checked by:	 翟偉傑 Chak Wai Kit		

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	12-4-2022	08:00	Rain / Fine	0	0	0	20.9	24 / 998	9
	12-4-2022	13:00	Fine	0	0	0	20.9	28 / 999	9
	12-4-2022	17:00	Fine	0	0	0	20.9	24 / 998	9
Pit A	12-4-2022	08:25	Fine	0	0	0	20.9	24 / 998	9
	12-4-2022	13:25	Fine	0	0	0	20.9	28 / 999	9
	12-4-2022	17:25	Fine	0	0	0	20.9	24 / 998	9
Pit D	12-4-2022	08:40	Fine	0	0	0	20.9	24 / 998	8
	12-4-2022	13:40	Fine	0	0	0	20.9	28 / 999	8
	12-4-2022	17:40	Fine	0	0	0	20.9	24 / 998	8

Name & Designation Signature Date

Field Operator: Chan Wai Chi [Wellcon] CP *Chan Wai Chi* 12-04-2022

Laboratory Staff:

Checked by: *Chak Wai Kit* POCJV *Chak Wai Kit* 12-04-2022

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	13/4/2022	0830	Fine / Rain	0	0	0	20.9	25/1009	5.5
	"	1330	Fine / Rain	0	0	0	20.9	27/1010	5.5
	"	1700	Fine / Rain	0	0	0	20.9	26/1010	5.5
Area B	"	0845	Fine / Rain	0	0	0	20.9	24/1008	2.5
	"	1345	Fine / Rain	0	0	0	20.9	25/1010	2.5
	"	1645	Fine / Rain	0	0	0	20.9	25/1009	2.5

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

翟偉傑
Chak Wai Kit

RSO

POCTV



Checked by:

~~13/4/2022~~
13/4/2022

13/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	13/4/2022	0830	Fine / Rain	0	0	0	20.9	25/1010	8.4
	"	1330	Fine / Rain	0	0	0	20.9	27/1011	8.4
	"	1700	Fine / Rain	0	0	0	20.9	27/1011	8.4
Area 137 Pit B	"	0830	Fine / Rain	0	0	0	20.9	24/1009	8.6
	"	1330	Fine / Rain	0	0	0	20.9	26/1010	8.6
	"	1700	Fine / Rain	0	0	0	20.9	26/1010	8.6
Area 137 Pit C	"	0830	Fine / Rain	0	0	0	20.9	25/1011	10
	"	1330	Fine / Rain	0	0	0	20.9	26/1012	10
	"	1700	Fine / Rain	0	0	0	20.9	26/1011	10

Name & Designation

Signature

Date

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

Laboratory Staff:

Checked by:

翟偉傑
Chek Wai Kit

KSO POCTV



13/4/2022

13/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	13/4/2022	0845	Fine / Rain	0	0	0	20.9	24/1008	4
	"	1345	Fine / Rain	0	0	0	20.9	25/1020	4
	"	1645	Fine / Rain	0	0	0	20.9	25/1010	4
WPRTTA 5	"	0845	Fine / Rain	0	0	0	20.9	24/1010	3.6
	"	1345	Fine / Rain	0	0	0	20.9	26/1011	3.6
	"	1645	Fine / Rain	0	0	0	20.9	25/1010	3.6

Name & Designation

Signature

Date

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

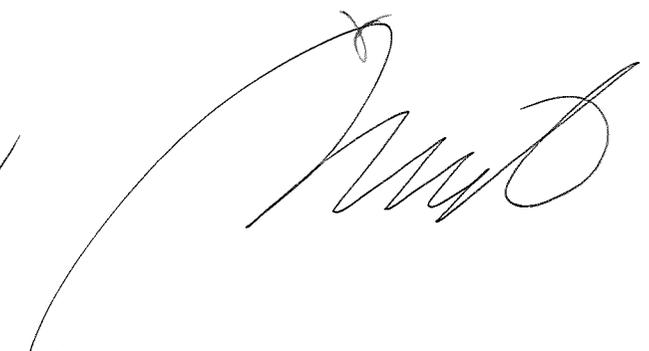
13/4/2022

Laboratory Staff:

Checked by:

翟偉傑
 Chek Wai Kit

RSO POCTV



13/4/2022

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	13-4-2022	08:00	Rain / Fine	0	0	0	20.9	23 / 999	9
	13-4-22	13:00	Fine	0	0	0	20.9	28 / 999	9
	13-4-22	17:00	Fine	0	0	0	20.9	24 / 999	9
								/	
Pit A	13-4-22	08:25	Fine	0	0	0	20.9	23 / 999	9
	13-4-22	08:25	Fine	0	0	0	20.9	28 / 999	9
	13-4-22	08:25	Fine	0	0	0	20.9	24 / 999	9
								/	
Pit B1	13-4-22	08:40	Fine	0	0	0	20.9	23 / 999	8
	13-4-22	13:40	Fine	0	0	0	20.9	28 / 999	8
	13-4-22	17:40	Fine	0	0	0	20.9	24 / 999	8
								/	
								/	
								/	

Name & Designation Signature Date

Field Operator: Chan Wai Chi [Wellcon] CP  13 - 4 - 2022

Laboratory Staff:

Checked by:  13 - 4 - 2022
 Chak Wai Ki POCJV

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	14/4/2022	0830	Fine / Rain	0	0	0	20.9	24/1009	5.5
		1330	Fine / Rain	0	0	0	20.9	25/1010	5.5
		1700	Fine / Rain	0	0	0	20.9	28/1010	5.5
Area B		0845	Fine / Rain	0	0	0	20.9	24/1010	2.5
		1345	Fine / Rain	0	0	0	20.9	26/1011	2.5
		1645	Fine / Rain	0	0	0	20.9	28/1010	2.5

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		14/4/2022
Laboratory Staff:			
Checked by:	翟偉傑 RSO Chak Wai Kit	PG CJV	14/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	14/4/2022	0830	Fine / Rain	0	0	0	20.9	24/1010	8.4
	✓	1330	Fine / Rain	0	0	0	20.9	26/1011	8.4
	✓	1700	Fine / Rain	0	0	0	20.9	25/1010	8.4
Area 137 Pit B	✓	0830	Fine / Rain	0	0	0	20.9	24/1009	8.6
	✓	1330	Fine / Rain	0	0	0	20.9	25/1010	8.6
	✓	1700	Fine / Rain	0	0	0	20.9	25/1010	8.6
Area 137 Pit C	✓	0830	Fine / Rain	0	0	0	20.9	23/1010	10
	✓	1330	Fine / Rain	0	0	0	20.9	25/1011	10
	✓	1700	Fine / Rain	0	0	0	20.9	25/1011	10

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

14/4/2022

Laboratory Staff:

Checked by:

翟偉傑
Chek Wai Kit

✓

POCJV



14/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	14/4/2022	0845	Fine / Rain	0	0	0	20.9	25/1009	4
	"	1345	Fine / Rain	0	0	0	20.9	25/1010	4
	"	1645	Fine / Rain	0	0	0	20.9	26/1010	4
WPRTTA 5	"	0845	Fine / Rain	0	0	0	20.9	24/1009	3.6
	"	1345	Fine / Rain	0	0	0	20.9	26/1010	3.6
	"	1645	Fine / Rain	0	0	0	20.9	25/1010	3.6

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		14/4/2022
Laboratory Staff:			
Checked by:	翟偉傑 Chak Wai Kit <i>RSO POC JV</i>		14/4/2022

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	14-4-2022	08:00	Rain / Fine	0	0	0	20.9	23 / 998	4
	14-4-22	08:00	Fine	0	0	0	20.9	27 / 999	9
	14-4-22	17:00	Fine	0	0	0	20.9	24 / 998	9
Pit A	14-4-22	08:26	Fine	0	0	0	20.9	23 / 998	9
	14-4-22	13:25	Fine	0	0	0	20.9	27 / 999	9
	14-4-22	17:25	Fine	0	0	0	20.9	24 / 998	9
Pit D	14-4-22	08:40	Fine	0	0	0	20.9	23 / 998	8
	14-4-22	13:40	Fine	0	0	0	20.9	27 / 999	8
	14-4-22	17:41	Fine	0	0	0	20.9	24 / 998	8

Name & Designation

Signature

Date

Field Operator:

Chan Wai Chi [Wellcon] CP *chan wai chi* 14 - 04 - 2022

Laboratory Staff:

Checked by:

翟偉傑 POCJV *Chak Wai Kit* 14 - 04 - 2022

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	19/4/2022	0830	Fine / Rain	0	0	0	20.9	19/10/0	5.5
		1330	Fine / Rain	0	0	0	20.9	20/10/1	5.5
		1700	Fine / Rain	0	0	0	20.9	20/10/1	5.5
Area B		0845	Fine / Rain	0	0	0	20.9	19/10/8	2.5
		1345	Fine / Rain	0	0	0	20.9	21/10/1	2.5
		1645	Fine / Rain	0	0	0	20.9	20/10/0	2.5

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		19/4/2022
Laboratory Staff:	翟偉傑 Chak Wai Kit		19/4/2022
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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	19/4/2022	0830	Fine / Rain	0	0	0	20.9	19/1010	8.4
	"	1330	Fine / Rain	0	0	0	20.9	20/1011	8.4
	"	1700	Fine / Rain	0	0	0	20.9	20/1011	8.4
Area 137 Pit B	"	0830	Fine / Rain	0	0	0	20.9	20/1010	8.6
	"	1330	Fine / Rain	0	0	0	20.9	21/1011	8.6
	"	1700	Fine / Rain	0	0	0	20.9	21/1011	8.6
Area 137 Pit C	"	0830	Fine / Rain	0	0	0	20.9	19/1010	10
	"	1330	Fine / Rain	0	0	0	20.9	20/1011	10
	"	1700	Fine / Rain	0	0	0	20.9	20/1010	10

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

19/4/2022

Laboratory Staff:

Checked by:

翟偉傑
Chak Wai Kit

RSO

BCSV



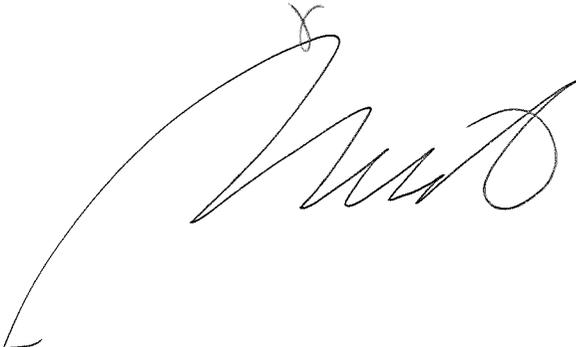
19/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

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 monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	19/4/2022	0845	Fine / Rain	0	0	0	20.9	19/1008	4
	✓	1345	Fine / Rain	0	0	0	20.9	19/1008	4
	✓	1645	Fine / Rain	0	0	0	20.9	20/1010	4
WPRTTA 5	✓	0845	Fine / Rain	0	0	0	20.9	19/1008 19/1008	3.6
	✓	1345	Fine / Rain	0	0	0	20.9	20/1010	3.6
	✓	1645	Fine / Rain	0	0	0	20.9	20/1010	3.6

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		19/4/2022.
Laboratory Staff:			
Checked by:	 翟偉傑 Chak Wai Kit	POCTV	19/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

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 monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	20/4/2022	0830	Fine / Rain	0	0	0	20.9	21/1009	5.5
	✓	1330	Fine / Rain	0	0	0	20.9	23/1010	5.5
	✓	1700	Fine / Rain	0	0	0	20.9	23/1010	5.5
Area B	✓	0845	Fine / Rain	0	0	0	20.9	22/1010	2.5
	✓	1345	Fine / Rain	0	0	0	20.9	24/1011	2.5
	✓	1645	Fine / Rain	0	0	0	20.9	24/1011	2.5

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		20/4/2022
Laboratory Staff:	 RSO Chak Wai Kit POCJV		20/4/2022
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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	20/4/2022	0830	Fine / Rain	0	0	0	20.9	21/1009	8.4
		1330	Fine / Rain	0	0	0	20.9	22/1010	8.4
		1700	Fine / Rain	0	0	0	20.9	22/1010	8.4
Area 137 Pit B	20/4/2022	0830	Fine / Rain	0	0	0	20.9	22/1010	8.6
		1330	Fine / Rain	0	0	0	20.9	24/1011	8.6
		1700	Fine / Rain	0	0	0	20.9	23/1011	8.6
Area 137 Pit C	20/4/2022	0830	Fine / Rain	0	0	0	20.9	23/1010	10
		1330	Fine / Rain	0	0	0	20.9	24/1011	10
		1700	Fine / Rain	0	0	0	20.9	24/1012	10

Name & Designation

Signature

Date

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

Laboratory Staff:

翟偉傑
Chak Wai Kit

RSO

POCTV

Checked by:



20/4/2022

20/4/2022

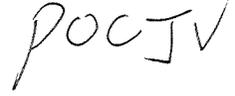
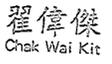
Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

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 monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	20/4/2022	0845	Fine / Rain	0	0	0	20.9	21/1009	4
	✓	1345	Fine / Rain	0	0	0	20.9	23/1010	4
	✓	1645	Fine / Rain	0	0	0	20.9	23/1010	4
WPRTTA 5	✓	0845	Fine / Rain	0	0	0	20.9	20/1010	3.6
	✓	1345	Fine / Rain	0	0	0	20.9	22/1011	3.6
	✓	1645	Fine / Rain	0	0	0	20.9	21/1010	3.6

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		20/4/2022
Laboratory Staff:	 RSO  POC JV		
Checked by:	 翟偉傑 <small>Chek Wai Kit</small>		20/4/2022

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	21/4/2022	0830	Fine / Rain	0	0	0	20.9	23/100	5.5
	"	1330	Fine / Rain	0	0	0	20.9	25/1010	5.5
	"	1700	Fine / Rain	0	0	0	20.9	24/1010	5.5
Area B	"	0845	Fine / Rain	0	0	0	20.9	24/1010	2.5
	"	1345	Fine / Rain	0	0	0	20.9	25/1011	2.5
	"	1645	Fine / Rain	0	0	0	20.9	25/1011	2.5

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

21/4/2022

Laboratory Staff:

翟偉傑
Chak Wai Kit

RSO POC JV

21/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	21/4/2022	0830	Fine / Rain	0	0	0	20.9	23/1009.	8.4
	"	1330	Fine / Rain	0	0	0	20.9	25/1010.	8.4
	"	1700	Fine / Rain	0	0	0	20.9	24/1010.	8.4
Area 137 Pit B	"	0830	Fine / Rain	0	0	0	20.9	23/1010.	8.6
	"	1330	Fine / Rain	0	0	0	20.9	24/1011.	8.6
	"	1700	Fine / Rain	0	0	0	20.9	24/1011.	8.6
Area 137 Pit C	"	0830	Fine / Rain	0	0	0	20.9	24/1010.	10
	"	1330	Fine / Rain	0	0	0	20.9	25/1012.	10
	"	1700	Fine / Rain	0	0	0	20.9	25/1012.	10

Name & Designation

Signature

Date

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

21/4/2022.

Laboratory Staff:

Checked by:

翟偉傑
Chak Wai Kit

RSO

POCJV



21/4/2022

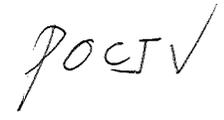
Contract no. 13/WSD/16
 Mainlaying in Tseung Kwan O
 Penta-Ocean - Concentric Joint Venture

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	21/4/2022	0845	Fine / Rain	0	0	0	20.9	23/1009	4
	✓	1345	Fine / Rain	0	0	0	20.9	25/1010	4
	✓	1645	Fine / Rain	0	0	0	20.9	24/1010	4
WPRTTA 5	✓	0845	Fine / Rain	0	0	0	20.9	23/1010	3.6
	✓	1345	Fine / Rain	0	0	0	20.9	25/1011	3.6
	✓	1645	Fine / Rain	0	0	0	20.9	24/1010	3.6

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		21/4/2022
Laboratory Staff:			
Checked by:	  翟偉傑 Chak Wai Kit		21/4/2022

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	22/4/2022	0830	Fine / Rain	0	0	0	20.9	23/1009	5.5
	"	1330	Fine / Rain	0	0	0	20.9	25/1010	5.5
	"	1700	Fine / Rain	0	0	0	20.9	25/1010	5.5
Area B	"	0845	Fine / Rain	0	0	0	20.9	24/1010	2.5
	"	1345	Fine / Rain	0	0	0	20.9	25/1011	2.5
	"	1645	Fine / Rain	0	0	0	20.9	24/1010	2.5

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		22/4/2022
Laboratory Staff:	 翟偉傑 Chak Wai Kit	POCSV	22/4/2022
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
PGM-2500P (QRAE III)	28 JUL 2021

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 monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	22/4/2022	0830	Fine / Rain	0	0	0	20.9	25/1010	8.4
		1330	Fine / Rain	0	0	0	20.9	26/1011	8.4
		1700	Fine / Rain	0	0	0	20.9	26/1011	8.4
Area 137 Pit B		0830	Fine / Rain	0	0	0	20.9	24/1010	8.6
		1330	Fine / Rain	0	0	0	20.9	25/1010	8.6
		1700	Fine / Rain	0	0	0	20.9	24/1010	8.6
Area 137 Pit C		0830	Fine / Rain	0	0	0	20.9	25/1011	10
		1330	Fine / Rain	0	0	0	20.9	26/1010	10
		1700	Fine / Rain	0	0	0	20.9	26/1010	10

Name & Designation

Signature

Date

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

22/4/2022

Laboratory Staff:

Checked by:

翟偉傑
 Chek Wai Kit

POCSV



22/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	22/4/2022	0845	Fine / Rain	0	0	0	20.9	23/1009	4
	✓	1345	Fine / Rain	0	0	0	20.9	24/1010	4
	✓	1645	Fine / Rain	0	0	0	20.9	24/1010	4
WPRTTA 5	✓	0845	Fine / Rain	0	0	0	20.9	24/1010	3.6
	✓	1345	Fine / Rain	0	0	0	20.9	25/1010	3.6
	✓	1645	Fine / Rain	0	0	0	20.9	25/1009	3.6

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		22/4/2022
Laboratory Staff:			
Checked by:	 翟偉傑 Chek Wai Kit		22/4/2022

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	23/4/2022	0830	Fine / Rain	0	0	0	20.9	26/1009	5.5
	"	1330	Fine / Rain	0	0	0	20.9	27/1010	5.5
	"	1700	Fine / Rain	0	0	0	20.9	27/1010	5.5
Area B	"	0845	Fine / Rain	0	0	0	20.9	25/1008	2.5
	"	1345	Fine / Rain	0	0	0	20.9	26/1010	2.5
	"	1645	Fine / Rain	0	0	0	20.9	25/1009	2.5

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		23/4/2022
Laboratory Staff:	 KSO 翟偉傑 Chak Wai Kit	POCJV	23/4/2022
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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	23/4/2022	0830	Fine / Rain	0	0	0	20.9	26/1010	8.4
	"	1330	Fine / Rain	0	0	0	20.9	28/1011	8.4
	"	1700	Fine / Rain	0	0	0	20.9	27/1011	8.4
Area 137 Pit B	"	0830	Fine / Rain	0	0	0	20.9	25/1009	8.6
	"	1330	Fine / Rain	0	0	0	20.9	26/1010	8.6
	"	1700	Fine / Rain	0	0	0	20.9	26/1010	8.6
Area 137 Pit C	"	0830	Fine / Rain	0	0	0	20.9	25/1011	10
	"	1330	Fine / Rain	0	0	0	20.9	27/1012	10
	"	1700	Fine / Rain	0	0	0	20.9	26/1010	10

Name & Designation

Signature

Date

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

Laboratory Staff:

Checked by:

翟偉傑
 Chek Wai Kit

ISO POC JV



23/4/2022

23/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

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 monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 4	23/4/2022	0845	Fine / Rain	0	0	0	20.9	25/1009	4
		1345	Fine / Rain	0	0	0	20.9	27/1011	4
		1645	Fine / Rain	0	0	0	20.9	26/1010	4
WPRTTA 5	23/4/2022	0845	Fine / Rain	0	0	0	20.9	24/1010	3.6
		1345	Fine / Rain	0	0	0	20.9	26/1011	3.6
		1645	Fine / Rain	0	0	0	20.9	25/1010	3.6

Name & Designation

Signature

Date

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

23/4/2022

Laboratory Staff:

Checked by:

翟偉傑
Chak Wai Kit

CSO

POCJV



23/4/2022

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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	25/4/2022	0830	Fine / Rain	0	0	0	20.9	27/1009	5.5
		1330	Fine / Rain	0	0	0	20.9	27/1010	5.5
		1700	Fine / Rain	0	0	0	20.9	28/1010	5.5
Area B		0845	Fine / Rain	0	0	0	20.9	28/1010	2.5
		1345	Fine / Rain	0	0	0	20.9	28/1010	2.5
		1645	Fine / Rain	0	0	0	20.9	28/1009	2.5

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

25/4/2022

Laboratory Staff:

翟偉傑
Chak Wai Kit

RSO poc JV

Checked by:

25/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	28/4/2022	0830	Fine / Rain	0	0	0	20.9	27/10/0	8.4
		1330	Fine / Rain	0	0	0	20.9	28/10/11	8.4
		1700	Fine / Rain	0	0	0	20.9	28/10/11	8.4
Area 137 Pit B	28/4/2022	0830	Fine / Rain	0	0	0	20.9	28/10/11	8.6
		1330	Fine / Rain	0	0	0	20.9	29/10/11	8.6
		1700	Fine / Rain	0	0	0	20.9	29/10/10	8.6
Area 137 Pit C	28/4/2022	0830	Fine / Rain	0	0	0	20.9	27/10/10	10
		1330	Fine / Rain	0	0	0	20.9	29/10/11	10
		1700	Fine / Rain	0	0	0	20.9	29/10/11	10

Name & Designation

Signature

Date

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

28/4/2022

Laboratory Staff:

Checked by:

翟偉傑
Chak Wai Kit

RSD

POCTV



25/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 5	25/4/2022	0830	Fine / Rain	0	0	0	20.9	27/1010	3.6
		1330	Fine / Rain	0	0	0	20.9	27/1009	3.6
		1700	Fine / Rain	0	0	0	20.9	28/1010	3.6

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		25/4/2022
Laboratory Staff:	翟偉傑 RSO POCJV Chak Wai Kit		25/4/2022
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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	26/4/2022	0830	Fine / Rain	0	0	0	20.9	26/1008	5.5
	-	1330	Fine / Rain	0	0	0	20.9	28/1009	5.5
	-	1700	Fine / Rain	0	0	0	20.9	27/1007	5.5
Area B	-	0845	Fine / Rain	0	0	0	20.9	28/1010	2.5
	-	1345	Fine / Rain	0	0	0	20.9	28/1009	2.5
	-	1645	Fine / Rain	0	0	0	20.9	28/1010	2.5

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

26/4/2022

Laboratory Staff:

翟偉傑
Chak Wai Kit

RGO POCJV

Checked by:

20/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	26/4/2022	0830	Fine / Rain	0	0	0	20.9	26/1010	8.4
	✓	1330	Fine / Rain	0	0	0	20.9	27/1009	8.4
	✓	1700	Fine / Rain	0	0	0	20.9	27/1009	8.4
Area 137 Pit B	✓	0830	Fine / Rain	0	0	0	20.9	26/1009	8.6
	✓	1330	Fine / Rain	0	0	0	20.9	26/1010	8.6
	✓	1700	Fine / Rain	0	0	0	20.9	27/1010	8.6
Area 137 Pit C	✓	0830	Fine / Rain	0	0	0	20.9	27/1010	10
	✓	1330	Fine / Rain	0	0	0	20.9	28/1010	10
	✓	1700	Fine / Rain	0	0	0	20.9	28/1010	10

Name & Designation

Signature

Date

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

26/4/2022

Laboratory Staff:

Checked by:

翟偉傑
 Chek Wai Kit

ASD POWSV



26/4/2022

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

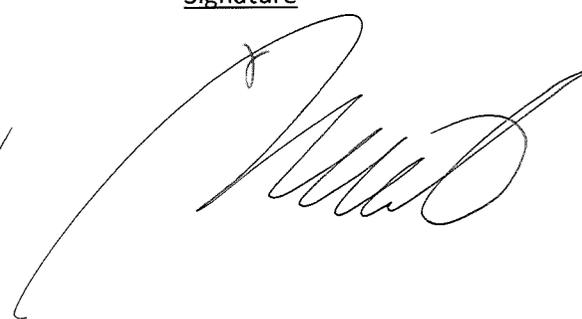
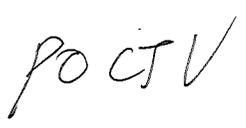
Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

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

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 5	26/4/2022	0830	Fine / Rain	0	0	0	20.9	28/10.0	3.6
	26/4/2022	1330	Fine / Rain	0	0	0	20.9	28/10.1	3.6
	26/4/2022	1700	Fine / Rain	0	0	0	20.9	28/10.1	3.6

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		26/4/2022
Laboratory Staff:	 RSO  PO CTU		26/4/2022
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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	27/4/2022	0830	Fine / Rain	0	0	0	20.9	27/1009	5.5
	"	1330	Fine / Rain	0	0	0	20.9	29/1010	5.5
	"	1700	Fine / Rain	0	0	0	20.9	28/1010	5.5
Area B	"	0845	Fine / Rain	0	0	0	20.9	28/1010	2.5
	"	1345	Fine / Rain	0	0	0	20.9	30/1011	2.5
	"	1645	Fine / Rain	0	0	0	20.9	29/1010	2.5

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

27/4/2022

Laboratory Staff:

翟偉傑
Chak Wai Kit

RSO POCJV



27/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	27/4/2022	0830	Fine / Rain	0	0	0	20.9	27/1010	8.4
		1330	Fine / Rain	0	0	0	20.9	28/1011	8.4
		1700	Fine / Rain	0	0	0	20.9	28/1011	8.4
Area 137 Pit B		0830	Fine / Rain	0	0	0	20.9	27/1009	8.6
		1330	Fine / Rain	0	0	0	20.9	27/1010	8.6
		1700	Fine / Rain	0	0	0	20.9	27/1010	8.6
Area 137 Pit C		0830	Fine / Rain	0	0	0	20.9	26/1010	10
		1330	Fine / Rain	0	0	0	20.9	28/1011	10
		1700	Fine / Rain	0	0	0	20.9	27/1011	10

Name & Designation

Signature

Date

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

Laboratory Staff:

Checked by:

翟偉傑
Chak Wai Kit

ASD *POZJV*



27/4/2022

27/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 5	27/4/2022	0830	Fine / Rain	0	0	0	20.9	27/1009	3.6
		1330	Fine / Rain	0	0	0	20.9	27/1010	3.6
		1700	Fine / Rain	0	0	0	20.9	27/1010	3.6

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		27/4/2022
Laboratory Staff:	翟偉傑 Chak Wai Kit		27/4/2022
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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	28/4/2022	0830	Fine / Rain	0	0	0	20.9	27/1008	5.5
		1330	Fine / Rain	0	0	0	20.9	27/1010	5.5
		1700	Fine / Rain	0	0	0	20.9	28/1009	5.5
Area B		0845	Fine / Rain	0	0	0	20.9	28/1009	2.5
		1345	Fine / Rain	0	0	0	20.9	28/1009	2.5
		1645	Fine / Rain	0	0	0	20.9	27/1010	2.5

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

28/4/2022.

Laboratory Staff:

翟偉傑
Chak Wai Kit

RSO

POCSV



28/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	28/4/2022	0830	Fine / Rain	0	0	0	20.9	28/10/0	8.4
	✓	1330	Fine / Rain	0	0	0	20.9	28/10/11	8.4
	✓	1700	Fine / Rain	0	0	0	20.9	28/10/11	8.4
Area 137 Pit B	✓	0830	Fine / Rain	0	0	0	20.9	28/10/09	8.6
	✓	1330	Fine / Rain	0	0	0	20.9	29/10/0	8.6
	✓	1700	Fine / Rain	0	0	0	20.9	28/10/10	8.6
Area 137 Pit C	✓	0830	Fine / Rain	0	0	0	20.9	28/10/11	10
	✓	1330	Fine / Rain	0	0	0	20.9	29/10/10	10
	✓	1700	Fine / Rain	0	0	0	20.9	28/10/11	10

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

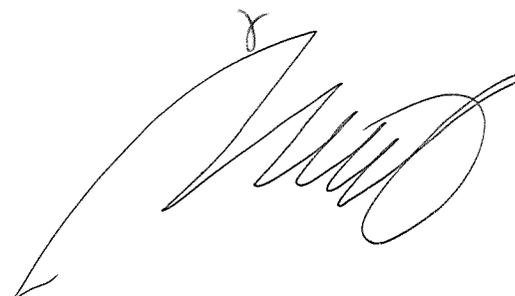
28/4/2022

Laboratory Staff:

翟偉傑
Chek Wai Kit

RSO

POCTV



Checked by:

28/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 5	28/4/2022	0830	Fine / Rain	0	0	0	20.9	28/10/21	3.6
	28/4/2022	1330	Fine / Rain	0	0	0	20.9	28/10/21	3.6
	28/4/2022	1700	Fine / Rain	0	0	0	20.9	28/10/21	3.6

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		28/4/2022
Laboratory Staff:	翟偉傑 KSO POC JV Chek Wei Kit		28 / 4 / 2022
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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	28/4/2022	0830	Fine / Rain	0	0	0	20.9	26/10/10	5.5
		1330	Fine / Rain	0	0	0	20.9	28/10/11	5.5
		1700	Fine / Rain	0	0	0	20.9	27/10/11	5.5
Area B		0845	Fine / Rain	0	0	0	20.9	27/10/11	2.5
		1345	Fine / Rain	0	0	0	20.9	29/10/12	2.5
		1645	Fine / Rain	0	0	0	20.9	28/10/11	2.5

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

翟偉傑 RSO POC JV
Chek Wai Kit

Checked by:

29/4/2022
29/4/2022



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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	29/4/2022	0830	Fine / Rain	0	0	0	20.9	27/1011	8.4
		1330	Fine / Rain	0	0	0	20.9	29/1012	8.4
		1700	Fine / Rain	0	0	0	20.9	28/1011	8.4
Area 137 Pit B		0830	Fine / Rain	0	0	0	20.9	28/1010	8.6
		1330	Fine / Rain	0	0	0	20.9	30/1011	8.6
		1700	Fine / Rain	0	0	0	20.9	29/1010	8.6
Area 137 Pit C		0830	Fine / Rain	0	0	0	20.9	27/1011	10
		1330	Fine / Rain	0	0	0	20.9	29/1010	10
		1700	Fine / Rain	0	0	0	20.9	28/1010	10

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

翟偉傑
Chak Wai Kit

R90 POC JV

Checked by:



29/4/2022

29/4/2022

Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

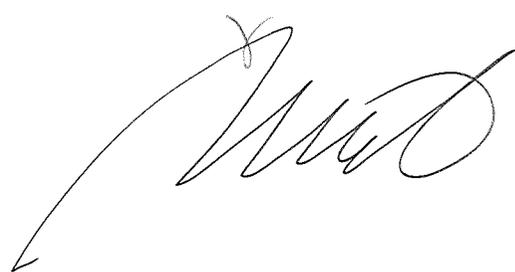
Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

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

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 5	29/4/2022	0830	Fine / Rain	0	0	0	20.9	28/108	3.6
	✓	1330	Fine / Rain	0	0	0	20.9	29/1010	3.6
	✓	1700	Fine / Rain	0	0	0	20.9	28/1009	3.6

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		29/4/2022
Laboratory Staff:	 翟偉傑 Chak Wai Kit		29/4/2022
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-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	30/4/2022	0830	Fine / Rain	0	0	0	20.9	26/1009	5.5
	✓	1330	Fine / Rain	0	0	0	20.9		5.5
	✓	1700	Fine / Rain	0	0	0	20.9		5.5
Area B	✓	0845	Fine / Rain	0	0	0	20.9	26/1010	2.5
	✓	1345	Fine / Rain	0	0	0	20.9		2.5
	✓	1645	Fine / Rain	0	0	0	20.9		2.5

Name & Designation

Signature

Date

Field Operator:

Jock Lee (Competent Person [CO-310218])

Laboratory Staff:

翟偉傑
Chak Wai Kit

RSO

POCTV

30/4/2022

30/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area 137 Pit A	30/4/2022	0830	Fine / Rain	0	0	0	20.9	27/1010	8.4
	✓	1330	Fine / Rain	0	0	0	20.9		8.4
	✓	1700	Fine / Rain	0	0	0	20.9		8.4
Area 137 Pit B	✓	0830	Fine / Rain	0	0	0	20.9	26/1011	8.6
	✓	1330	Fine / Rain	0	0	0	20.9		8.6
	✓	1700	Fine / Rain	0	0	0	20.9		8.6
Area 137 Pit C	✓	0830	Fine / Rain	0	0	0	20.9	26/1010	10
	✓	1330	Fine / Rain	0	0	0	20.9		10
	✓	1700	Fine / Rain	0	0	0	20.9		10

Name & Designation

Signature

Date

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

Laboratory Staff:

Checked by:

翟偉傑 KSO POCJV
Chek Wai Kit

30/4/2022
30/4/2022

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
PGM-2500P (QRAE III)	28 JUL 2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide (%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 5	30/4/2022	0830	Fine / Rain	0	0	0	20.9	26/10/0.	3.6
		1330	Fine / Rain	0	0	0	20.9		3.6
		1700	Fine / Rain	0	0	0	20.9		3.6

	<u>Name & Designation</u>	<u>Signature</u>	<u>Date</u>
Field Operator:	Jock Lee (Competent Person [CO-310218])		30/4/2022.
Laboratory Staff:	翟偉傑 RSO Chek Wai Kit	poc JV	
Checked by:			30/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	1/4/2022	8:30	0.0413	
		13:30	0.042	
		15:30	0.0416	
Area B	1/4/2022	8:45	0.041	
		13:45	0.0414	
		15:45	0.0413	
137 Pit C	1/4/2022	9:15	0.0412	
		14:15	0.0413	
		16:15	0.0419	
137 Pit B	1/4/2022	9:00	0.0416	
		14:00	0.0413	
		16:00	0.0412	
137 Pit A	1/4/2022	9:20	0.0417	
		14:20	0.0411	
		16:20	0.0418	
WPR WF5	1/4/2022	9:45	0.041	
		14:45	0.041	
		16:45	0.0417	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:



1/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307 H, 2609 01259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
WRP WF4	1/4/2022	9:30	0.0415	
		14:30	0.0414	
		16:30	0.0413	
Pit A	1/4/2022	10:00	0.0417	
		15:00	0.0417	
		17:00	0.0413	
Pit B	1/4/2022	10:15	0.0413	
		15:15	0.0418	
		17:15	0.0413	
Pit D	1/4/2022	10:15	0.0413	
		15:15	0.0416	
		17:15	0.0418	

Name & Designation

Signature

Date

Field Operator:

Laboratory Staff:

Checked by:

1/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	2/4/2022	8:30	0.0419	
		13:30	0.0416	
		15:30	0.0417	
Area B	2/4/2022	8:45	0.041	
		13:45	0.0415	
		15:45	0.0418	
137 Pit C	2/4/2022	9:15	0.0416	
		14:15	0.0415	
		16:15	0.0413	
137 Pit B	2/4/2022	9:00	0.0413	
		14:00	0.042	
		16:00	0.041	
137 Pit A	2/4/2022	9:20	0.0412	
		14:20	0.042	
		16:20	0.0413	
WPR WF5	2/4/2022	9:45	0.0415	
		14:45	0.0417	
		16:45	0.0417	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:



2/4/2022

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

Sampling equipment used:	Dates calibrated
CO ₂ Analyzer, 1307H, 20091259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
WRP WF4	2/4/2022	9:30	0.041	
		14:30	0.0419	
		16:30	0.0411	
Pit A	2/4/2022	10:00	0.042	
		15:00	0.0417	
		17:00	0.0414	
Pit B	2/4/2022	10:15	0.0418	
		15:15	0.0419	
		17:15	0.0417	
Pit D	2/4/2022	10:15	0.0414	
		15:15	0.0418	
		17:15	0.0411	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:

2/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	4/4/2022	8:30	0.0416	
		13:30	0.0411	
		15:30	0.0415	
Area B	4/4/2022	8:45	0.0419	
		13:45	0.0416	
		15:45	0.0411	
137 Pit C	4/4/2022	9:15	0.0417	
		14:15	0.0416	
		16:15	0.0419	
137 Pit B	4/4/2022	9:00	0.0414	
		14:00	0.0415	
		16:00	0.041	
137 Pit A	4/4/2022	9:20	0.0418	
		14:20	0.0416	
		16:20	0.0411	
WPR WF5	4/4/2022	9:45	0.0415	
		14:45	0.0411	
		16:45	0.0412	

Name & Designation
 Field Operator:
 Laboratory Staff:
 Checked by:

Signature


Date
 4/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer , 13074 12009 1259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
WRP WF4	4/4/2022	9:30	0.041	
		14:30	0.0418	
		16:30	0.0411	
Pit A	4/4/2022	10:00	0.041	
		15:00	0.0417	
		17:00	0.0413	
Pit B	4/4/2022	10:15	0.042	
		15:15	0.0412	
		17:15	0.0415	
Pit D	4/4/2022	10:15	0.0412	
		15:15	0.0415	
		17:15	0.042	

Field Operator: _____ Name & Designation _____ Signature _____ Date 4/4/2022
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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	6/4/2022	8:30	0.0419	
		13:30	0.0419	
		15:30	0.0417	
Area B	6/4/2022	8:45	0.0413	
		13:45	0.0413	
		15:45	0.0411	
137 Pit C	6/4/2022	9:15	0.0414	
		14:15	0.0417	
		16:15	0.0414	
137 Pit B	6/4/2022	9:00	0.0418	
		14:00	0.0411	
		16:00	0.0412	
137 Pit A	6/4/2022	9:20	0.041	
		14:20	0.0417	
		16:20	0.0417	
WPR WF5	6/4/2022	9:45	0.0415	
		14:45	0.0413	
		16:45	0.0419	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:



6/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 20091259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
WRP WF4	6/4/2022	9:30	0.0414	
		14:30	0.0414	
		16:30	0.0417	
Pit A	6/4/2022	10:00	0.0411	
		15:00	0.0415	
		17:00	0.042	
Pit B	6/4/2022	10:15	0.0419	
		15:15	0.0411	
		17:15	0.0419	
Pit D	6/4/2022	10:15	0.0414	
		15:15	0.0412	
		17:15	0.0411	

Name & Designation

Signature

Date

Field Operator:

Laboratory Staff:

Checked by:

6/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	7/4/2022	8:30	0.0412	
		13:30	0.0413	
		15:30	0.0417	
Area B	7/4/2022	8:45	0.042	
		13:45	0.0416	
		15:45	0.0419	
137 Pit C	7/4/2022	9:15	0.0419	
		14:15	0.0414	
		16:15	0.0418	
137 Pit B	7/4/2022	9:00	0.0412	
		14:00	0.0417	
		16:00	0.042	
137 Pit A	7/4/2022	9:20	0.0416	
		14:20	0.0414	
		16:20	0.0416	
WPR WF5	7/4/2022	9:45	0.0417	
		14:45	0.0414	
		16:45	0.042	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:



7/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 13074, 20091259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
WRP WF4	7/4/2022	9:30	0.042	
		14:30	0.0413	
		16:30	0.0418	
Pit A	7/4/2022	10:00	0.0413	
		15:00	0.0412	
		17:00	0.0417	
Pit B	7/4/2022	10:15	0.0413	
		15:15	0.0417	
		17:15	0.0412	
Pit D	7/4/2022	10:15	0.0419	
		15:15	0.0415	
		17:15	0.0411	

Field Operator: _____ Name & Designation _____ Signature _____ Date 7/4/2022
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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	8/4/2022	8:30	0.0415	
		13:30	0.0411	
		15:30	0.0412	
Area B	8/4/2022	8:45	0.0411	
		13:45	0.0411	
		15:45	0.0411	
137 Pit C	8/4/2022	9:15	0.042	
		14:15	0.041	
		16:15	0.041	
137 Pit B	8/4/2022	9:00	0.0414	
		14:00	0.0418	
		16:00	0.0419	
137 Pit A	8/4/2022	9:20	0.0419	
		14:20	0.042	
		16:20	0.0414	
WPR WF5	8/4/2022	9:45	0.0416	
		14:45	0.0415	
		16:45	0.042	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:



8/4/2022

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

Sampling equipment used:	Dates calibrated
Co2 Analyser, 1307H 2009 1259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
WRP WF4	8/4/2022	9:30	0.0417	
		14:30	0.0416	
		16:30	0.0418	
Pit A	8/4/2022	10:00	0.0419	
		15:00	0.0412	
		17:00	0.0411	
Pit B	8/4/2022	10:15	0.0413	
		15:15	0.0411	
		17:15	0.0413	
Pit D	8/4/2022	10:15	0.0411	
		15:15	0.0418	
		17:15	0.0416	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:

8/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	9/4/2022	8:30	0.0419	
		13:30	0.042	
		15:30	0.0414	
Area B	9/4/2022	8:45	0.0414	
		13:45	0.0412	
		15:45	0.0416	
137 Pit C	9/4/2022	9:15	0.0418	
		14:15	0.0417	
		16:15	0.0411	
137 Pit B	9/4/2022	9:00	0.0412	
		14:00	0.0414	
		16:00	0.0419	
137 Pit A	9/4/2022	9:20	0.0419	
		14:20	0.041	
		16:20	0.042	
WPR WF5	9/4/2022	9:45	0.042	
		14:45	0.0412	
		16:45	0.0412	

Field Operator:
Laboratory Staff:
Checked by:

Name & Designation

Signature



Date

9/4/2022

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

Sampling equipment used:	Dates calibrated
CO ₂ Analyzer, 1307H 20091259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
WRP WF4	9/4/2022	9:30	0.0419	
		14:30	0.0414	
		16:30	0.0412	
Pit A	9/4/2022	10:00	0.0414	
		15:00	0.0415	
		17:00	0.0418	
Pit B	9/4/2022	10:15	0.0415	
		15:15	0.0418	
		17:15	0.0415	
Pit D	9/4/2022	10:15	0.0416	
		15:15	0.0415	
		17:15	0.041	

Name & Designation

Signature

Date

Field Operator:

Laboratory Staff:

Checked by:

9/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	11/4/2022	8:30	0.0417	
		13:30	0.0411	
		15:30	0.041	
Area B	11/4/2022	8:45	0.0412	
		13:45	0.0413	
		15:45	0.0411	
137 Pit C	11/4/2022	9:15	0.0413	
		14:15	0.0418	
		16:15	0.0418	
137 Pit B	11/4/2022	9:00	0.0413	
		14:00	0.0419	
		16:00	0.0414	
137 Pit A	11/4/2022	9:20	0.0411	
		14:20	0.041	
		16:20	0.041	
WPR WF5	11/4/2022	9:45	0.0412	
		14:45	0.0411	
		16:45	0.0411	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:



11/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H 2009 1259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
WRP WF4	11/4/2022	9:30	0.0415	
		14:30	0.0412	
		16:30	0.042	
Pit A	11/4/2022	10:00	0.042	
		15:00	0.0418	
		17:00	0.0412	
Pit B	11/4/2022	10:15	0.0416	
		15:15	0.0414	
		17:15	0.041	
Pit D	11/4/2022	10:15	0.0412	
		15:15	0.041	
		17:15	0.0415	

Field Operator: _____ Name & Designation _____ Signature _____ Date 11/4/2022
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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	12/4/2022	8:30	0.0414	
		13:30	0.0417	
		15:30	0.0415	
Area B	12/4/2022	8:45	0.0413	
		13:45	0.0411	
		15:45	0.0414	
137 Pit C	12/4/2022	9:15	0.0412	
		14:15	0.0414	
		16:15	0.0419	
137 Pit B	12/4/2022	9:00	0.041	
		14:00	0.0417	
		16:00	0.0411	
137 Pit A	12/4/2022	9:20	0.0411	
		14:20	0.0417	
		16:20	0.0413	
WPR WF5	12/4/2022	9:45	0.0414	
		14:45	0.0415	
		16:45	0.0412	

Field Operator:
Laboratory Staff:
Checked by:

Name & Designation

Signature



Date

12/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H 20091259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
WRP WF4	12/4/2022	9:30	0.041	
		14:30	0.0416	
		16:30	0.0419	
Pit A	12/4/2022	10:00	0.0419	
		15:00	0.042	
		17:00	0.0415	
Pit B	12/4/2022	10:15	0.0419	
		15:15	0.0414	
		17:15	0.0418	
Pit D	12/4/2022	10:15	0.0415	
		15:15	0.0414	
		17:15	0.0413	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:

12/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	13/4/2022	8:30	0.0419	
		13:30	0.0419	
		15:30	0.0415	
Area B	13/4/2022	8:45	0.0418	
		13:45	0.041	
		15:45	0.0414	
137 Pit C	13/4/2022	9:15	0.041	
		14:15	0.0412	
		16:15	0.0414	
137 Pit B	13/4/2022	9:00	0.0415	
		14:00	0.0416	
		16:00	0.0417	
137 Pit A	13/4/2022	9:20	0.0412	
		14:20	0.0411	
		16:20	0.0419	
WPR WF5	13/4/2022	9:45	0.0417	
		14:45	0.0413	
		16:45	0.0417	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:



13/4/2022

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

Sampling equipment used:	Dates calibrated
Co2 Analyzer , 1307 H 20091259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
WRP WF4	13/4/2022	9:30	0.0412	
		14:30	0.0411	
		16:30	0.0415	
Pit A	13/4/2022	10:00	0.0414	
		15:00	0.0414	
		17:00	0.041	
Pit B	13/4/2022	10:15	0.041	
		15:15	0.041	
		17:15	0.0417	
Pit D	13/4/2022	10:15	0.0416	
		15:15	0.0414	
		17:15	0.0419	

Name & Designation

Signature

Date

Field Operator:

Laboratory Staff:

Checked by:

13/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	19/4/2022	8:30	0.0415	
		13:30	0.0417	
		15:30	0.042	
Area B	19/4/2022	8:45	0.0416	
		13:45	0.0414	
		15:45	0.0419	
137 Pit C	19/4/2022	9:15	0.0415	
		14:15	0.0416	
		16:15	0.0411	
137 Pit B	19/4/2022	9:00	0.0415	
		14:00	0.0411	
		16:00	0.042	
137 Pit A	19/4/2022	9:20	0.0416	
		14:20	0.0411	
		16:20	0.0414	
WPR WF5	19/4/2022	9:45	0.0419	
		14:45	0.0419	
		16:45	0.0416	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:



19/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H 20091259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
WRP WF4	19/4/2022	9:30	0.0418	
		14:30	0.0414	
		16:30	0.0416	
Pit A	19/4/2022	10:00		
		15:00		
		17:00		
Pit B	19/4/2022	10:15		
		15:15		
		17:15		
Pit D	19/4/2022	10:15		
		15:15		
		17:15		

Name & Designation

Signature

Date

Field Operator:

Laboratory Staff:

Checked by:

19/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	20/4/2022	8:30	0.0417	
		13:30	0.0419	
		15:30	0.041	
Area B	20/4/2022	8:45	0.042	
		13:45	0.0415	
		15:45	0.0417	
137 Pit C	20/4/2022	9:15	0.0411	
		14:15	0.0411	
		16:15	0.0417	
137 Pit B	20/4/2022	9:00	0.0418	
		14:00	0.0412	
		16:00	0.042	
137 Pit A	20/4/2022	9:20	0.0419	
		14:20	0.0415	
		16:20	0.041	
WPR WF5	20/4/2022	9:45	0.0414	
		14:45	0.0411	
		16:45	0.0412	

Name & Designation

Signature

Date

Field Operator:

Laboratory Staff:

Checked by:



20/4/2022

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

Sampling equipment used:	Dates calibrated
CO ₂ Analyzer, 1307H 20091259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
WRP WF4	20/4/2022	9:30	0.0414	
		14:30	0.0414	
		16:30	0.0417	
Pit A	20/4/2022	10:00		
		15:00		
		17:00		
Pit B	20/4/2022	10:15		
		15:15		
		17:15		
Pit D	20/4/2022	10:15		
		15:15		
		17:15		

Name & Designation

Signature

Date

Field Operator:

Laboratory Staff:

Checked by:

20/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	21/4/2022	8:30	0.0419	
		13:30	0.0419	
		15:30	0.0412	
Area B	21/4/2022	8:45	0.042	
		13:45	0.041	
		15:45	0.0417	
137 Pit C	21/4/2022	9:15	0.0411	
		14:15	0.042	
		16:15	0.0413	
137 Pit B	21/4/2022	9:00	0.0416	
		14:00	0.0413	
		16:00	0.0416	
137 Pit A	21/4/2022	9:20	0.0419	
		14:20	0.0417	
		16:20	0.041	
WPR WF5	21/4/2022	9:45	0.0412	
		14:45	0.0416	
		16:45	0.0418	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:



21/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 130717 20091259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
WRP WF4	21/4/2022	9:30	0.0411	
		14:30	0.0414	
		16:30	0.0412	
Pit A	21/4/2022	10:00		
		15:00		
		17:00		
Pit B	21/4/2022	10:15		
		15:15		
		17:15		
Pit D	21/4/2022	10:15		
		15:15		
		17:15		

Name & Designation

Signature

Date

Field Operator:

Laboratory Staff:

Checked by:

21/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	22/4/2022	8:30	0.0415	
		13:30	0.042	
		15:30	0.0419	
Area B	22/4/2022	8:45	0.0416	
		13:45	0.041	
		15:45	0.0413	
137 Pit C	22/4/2022	9:15	0.0418	
		14:15	0.0413	
		16:15	0.0416	
137 Pit B	22/4/2022	9:00	0.0416	
		14:00	0.0411	
		16:00	0.0412	
137 Pit A	22/4/2022	9:20	0.0413	
		14:20	0.0418	
		16:20	0.0414	
WPR WF5	22/4/2022	9:45	0.0413	
		14:45	0.0419	
		16:45	0.0417	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:



22/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
WRP WF4	22/4/2022	9:30	0.042	
		14:30	0.0411	
		16:30	0.041	
Pit A	22/4/2022	10:00		
		15:00		
		17:00		
Pit B	22/4/2022	10:15		
		15:15		
		17:15		
Pit D	22/4/2022	10:15		
		15:15		
		17:15		

Name & Designation

Signature

Date

Field Operator:

Laboratory Staff:

Checked by:

22/4/2022

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 :

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	23/4/2022	8:30	0.0415	
		13:30	0.0415	
		15:30	0.0416	
Area B	23/4/2022	8:45	0.0415	
		13:45	0.0415	
		15:45	0.0418	
137 Pit C	23/4/2022	9:15	0.0411	
		14:15	0.0411	
		16:15	0.0417	
137 Pit B	23/4/2022	9:00	0.0413	
		14:00	0.0413	
		16:00	0.0417	
137 Pit A	23/4/2022	9:20	0.0413	
		14:20	0.041	
		16:20	0.041	
WPR WF5	23/4/2022	9:45	0.0418	
		14:45	0.042	
		16:45	0.0415	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:



23/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 130TH 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
WRP WF4	23/4/2022	9:30	0.041	
		14:30	0.0417	
		16:30	0.041	
Pit A	23/4/2022	10:00		
		15:00		
		17:00		
Pit B	23/4/2022	10:15		
		15:15		
		17:15		
Pit D	23/4/2022	10:15		
		15:15		
		17:15		

Field Operator: _____ Name & Designation _____ Signature _____ Date 23/4/2022
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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	25/4/2022	8:30	0.0414	
		13:30	0.0419	
		15:30	0.0419	
Area B	25/4/2022	8:45	0.0415	
		13:45	0.0417	
		15:45	0.0415	
137 Pit C	25/4/2022	9:15	0.0419	
		14:15	0.041	
		16:15	0.0411	
137 Pit B	25/4/2022	9:00	0.0416	
		14:00	0.0412	
		16:00	0.0417	
137 Pit A	25/4/2022	9:20	0.0418	
		14:20	0.0411	
		16:20	0.0419	
WPR WF5	25/4/2022	9:45	0.0417	
		14:45	0.0418	
		16:45	0.041	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:



25/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	26/4/2022	8:30	0.0418	
		13:30	0.0415	
		15:30	0.0412	
Area B	26/4/2022	8:45	0.042	
		13:45	0.0411	
		15:45	0.0411	
137 Pit C	26/4/2022	9:15	0.0416	
		14:15	0.0418	
		16:15	0.0413	
137 Pit B	26/4/2022	9:00	0.0415	
		14:00	0.042	
		16:00	0.0412	
137 Pit A	26/4/2022	9:20	0.042	
		14:20	0.0412	
		16:20	0.041	
WPR WF5	26/4/2022	9:45	0.0414	
		14:45	0.042	
		16:45	0.0418	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:



26/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	27/4/2022	8:30	0.0414	
		13:30	0.0416	
		15:30	0.0417	
Area B	27/4/2022	8:45	0.042	
		13:45	0.0418	
		15:45	0.0419	
137 Pit C	27/4/2022	9:15	0.0418	
		14:15	0.042	
		16:15	0.0414	
137 Pit B	27/4/2022	9:00	0.041	
		14:00	0.0416	
		16:00	0.0415	
137 Pit A	27/4/2022	9:20	0.0419	
		14:20	0.0418	
		16:20	0.0412	
WPR WF5	27/4/2022	9:45	0.0412	
		14:45	0.0411	
		16:45	0.0413	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:



27/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	28/4/2022	8:30	0.0416	
		13:30	0.0417	
		15:30	0.042	
Area B	28/4/2022	8:45	0.0418	
		13:45	0.0414	
		15:45	0.0412	
137 Pit C	28/4/2022	9:15	0.0413	
		14:15	0.0418	
		16:15	0.0411	
137 Pit B	28/4/2022	9:00	0.0419	
		14:00	0.0414	
		16:00	0.041	
137 Pit A	28/4/2022	9:20	0.0412	
		14:20	0.0414	
		16:20	0.0419	
WPR WF5	28/4/2022	9:45	0.0418	
		14:45	0.041	
		16:45	0.0414	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:



28/4/2022

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

Sampling equipment used:	Dates calibrated
CO2 Analyzer, 1307H, 200901259	15/11/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission	Remark
			Carbon Dioxide (%)	
Area A	29/4/2022	8:30	0.0418	
		13:30	0.0419	
		15:30	0.0413	
Area B	29/4/2022	8:45	0.0414	
		13:45	0.0413	
		15:45	0.0417	
137 Pit C	29/4/2022	9:15	0.0412	
		14:15	0.0414	
		16:15	0.0419	
137 Pit B	29/4/2022	9:00	0.0416	
		14:00	0.0412	
		16:00	0.0415	
137 Pit A	29/4/2022	9:20	0.0418	
		14:20	0.0418	
		16:20	0.0415	
WPR WF5	29/4/2022	9:45	0.0419	
		14:45	0.041	
		16:45	0.0416	

Name & Designation

Signature

Date

Field Operator:
Laboratory Staff:
Checked by:



29/4/2022

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 2022	0	3	N/A

Table K-2 Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Details
1 – 30 April 2022	0	0	N/A

Table K-3 Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
1 – 30 April 2022	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: 8-4-2022

Inspected by: ET: Howard Chan

WSD: Mr. W. T. Au

Inspection Time: 09:30-11:45

Contractor: Mr. Sam Ng

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	<input type="checkbox"/> _____ 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 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 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 type="checkbox"/>	<input checked="" 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"/>	_____

Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
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 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 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 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"/>	_____

Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
3.04	Are perimeter channels provided to intercept storm runoff from outside the site?	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.07	Is the drainage system properly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Reminder!
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 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 checked="" type="checkbox"/>	<input 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 type="checkbox"/>	obs!
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"/>	Reminder!
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"/>	

Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
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 the Contractor registered as a chemical waste producer?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.04	Are chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05	Are trip tickets for chemical waste disposal available for inspection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.06	Is chemical waste reused and recycled on site as far as practicable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.07	Are all containers for chemical waste properly labelled?	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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"/>	Reminder 1
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 checked="" type="checkbox"/>	<input 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"/>	

Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Reminder 2
5.03	Is construction light oriented away from the sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.04	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input type="checkbox"/>	<input checked="" 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	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"/>	Reminder 2
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 / Follow up of Observation(s) and Non-compliance(s) of Last Weekly Site Inspection:

Observation:

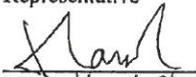
1. Drip tray should be provided for chemical storage.
(HK Velodrome N)

Reminder:

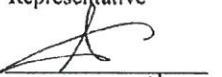
1. To clean the storm drain ^{and} to avoid blockage and accumulation of rubbish. (Pit P)
2. To Proper maintain tree protection zone and avoid stockpile of construction materials inside the tree protection zone.
(HK Velodrome N)

Signatures:

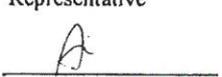
ET Representative


(Name: Huyend Chan
8/4/2016)

Contractor's Representative


(Name: Sam Ng.)

WSD's Representative


(Name: An Wai Tse)

IEC's Representative

(Name: _____)



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

Inspection Date: 14/4 (2022) Inspected by: ET: Hansel Chan WSD: _____
 Contractor: Mr. Sam Ng IEC: _____
 Inspection Time: 09:30 - 10:30

Weather	<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>30</u> C	Humidity		<input type="checkbox"/> High	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Low	
Wind	<input checked="" type="checkbox"/> Calm	<input 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 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 type="checkbox"/>	<input checked="" 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"/>	

Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
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 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 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 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"/>	

Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
3.04	Are perimeter channels provided to intercept storm runoff from outside the site?	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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 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 checked="" type="checkbox"/>	<input 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 type="checkbox"/>	obs 1
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"/>	

Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
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 the Contractor registered as a chemical waste producer?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.04	Are chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05	Are trip tickets for chemical waste disposal available for inspection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.06	Is chemical waste reused and recycled on site as far as practicable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.07	Are all containers for chemical waste properly labelled?	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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"/>	Reminder 2
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"/>	Reminder 3
4.19	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	<input checked="" type="checkbox"/>	<input 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"/>	

Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
5.03	Is construction light oriented away from the sensitive receivers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
5.04	Is grass hydroseeding provided to slopes as soon as the completion of works?	<input type="checkbox"/>	<input checked="" 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	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 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"/>	_____



Acuity Sustainability Consulting Limited

Unit 1908, Nos. 301-305 Castle Peak Road, Kwai Chung, N.T.
O: 2333-6823 | F: 2333-1316 | E: general@acuityhk.com | www.acuityhk.com

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:

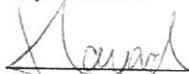
①: Drip tray should be provided for chemical storage. (PitD)

Reminder:

1. To display valid NRM 14 Label on regulated machinery. (PitD)
2. General refuse should be disposed of regularly. (PitD)
3. Housekeeping should be improved onsite (PitD)

Signatures:

ET
Representative


(Name: Howard)

Contractor's
Representative


(Name: Sam Ng)

WSD's
Representative


(Name: C.K. Chau)

IEC's
Representative

(Name:)

Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

Inspection Date: 21/4/2022 Inspected by: ET: Howard Chan WSD: Mr. Eric Tse
 Contractor: Mr. Sin Ng IEC: _____
 Inspection Time: 09:30 - 10:30

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	<input type="checkbox"/> <u>29</u> C	Humidity		<input type="checkbox"/> High	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Low	
Wind	<input checked="" type="checkbox"/> Calm	<input 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 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<u>absent</u>
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"/>	<u>Reminder 2</u>
1.12	Does the operation of plants on site free form dark smoke emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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		N/A	Yes	No	Photo/Remarks
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 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 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 type="checkbox"/>	<input checked="" 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 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"/>	_____

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		N/A	Yes	No	Photo/Remarks
3.04	Are perimeter channels provided to intercept storm runoff from outside the site?	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Reminder
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 checked="" type="checkbox"/>	<input 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 type="checkbox"/>	obs 1
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"/>	

Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
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 the Contractor registered as a chemical waste producer?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.04	Are chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05	Are trip tickets for chemical waste disposal available for inspection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.06	Is chemical waste reused and recycled on site as far as practicable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.07	Are all containers for chemical waste properly labelled?	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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"/>	Reminder 3
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"/>	Reminder 4
4.19	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	<input checked="" type="checkbox"/>	<input 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"/>	

Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
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 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	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"/>	Reminder!
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 / Follow up of Observation(s) and Non-compliance(s) of Last Weekly Site Inspection:

Reminder:

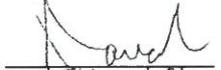
1. Proper erect tree protection fencing at Pit X.
2. Slope surface should be covered proper to reduce muddy surface runoff at Pit X.
3. General refuse should be disposed of properly at Pit X.
4. construction waste should be disposed of regularly at Pit X and Location A.

Observation:

1. Drip tray should be provided for chemical storage at Pit X and Location A.
2. Public road should be cleaned properly and regularly.

Signatures:

ET
Representative


(Name: Howard Chau)

Contractor's
Representative


(Name: Sam Ng)

WSD's
Representative


(Name: Eric He)

IEC's
Representative

(Name: _____)



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

Inspection Date: 25/4/2022

Inspected by:

ET:

Howard Chan
Mr. Calvin Cheuk

WSD:

Mr. I. K. Chan
Mr. Louis Kwan

Inspection Time: 14:00 - 14:45

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	<input type="checkbox"/> <u>30</u> C	Humidity	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Low		
Wind	<input checked="" type="checkbox"/> Calm	<input 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 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 type="checkbox"/>	<input checked="" 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"/>	

Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
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 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 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 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 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 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"/>	_____

Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

		N/A	Yes	No	Photo/Remarks
3.04	Are perimeter channels provided to intercept storm runoff from outside the site?	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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 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 checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" 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"/>	

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		N/A	Yes	No	Photo/Remarks
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 the Contractor registered as a chemical waste producer?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.04	Are chemical waste separated from other waste and collected by a licensed chemical waste collector?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05	Are trip tickets for chemical waste disposal available for inspection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.06	Is chemical waste reused and recycled on site as far as practicable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.07	Are all containers for chemical waste properly labelled?	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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"/>	

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		N/A	Yes	No	Photo/Remarks
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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.03	Is construction light oriented away from the sensitive receivers?	<input type="checkbox"/>	<input checked="" 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 checked="" 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	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"/>	<i>Reminder!</i>
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:

Reminder:

1. To establish tree protection zone at HK velodrome Pit N and avoid stockpile of construction materials inside the tree protection zone.

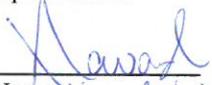
~~Observation~~

As mention by SOR in SSEMC meeting, contaminated waste water/ cement was observed discharge/flow to nearby natural stream, contractor was requested to clear those cement in stream. and provide mitigation measure such as provide sandbags surrounding the grouting area. (Location A)

^
cement

Signatures:

ET
Representative


(Name: Howard Chan)

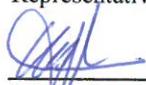
Contractor's
Representative


(Name: Calvin Chik)

WSD's
Representative


(Name: TSE KA CHUN
AWZ/CW)

IEC's
Representative


(Name: Louis Kwam)

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 2022	<ul style="list-style-type: none">- Excavation of trench- Mainlaying of pipe- Backfilling of the trench- Work fronts for open trench- Work fronts for pipe jacking	<ul style="list-style-type: none">- Construction dust- noise generation;- construction waste- impact of water quality	<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- Treatment of water with water treatment facilities before discharge

Appendix N

Impact Monitoring Schedule of Next Reporting Month (Tentative)

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

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

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

Appendix O

Academic Calendar(s)

