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Water Supplies Department

Contract No. 13/WSD/16

Mainlaying in Tseung Kwan O

Monthly EM&A Report No. 47
(Period from 1 to 30 June 2022)

July 2022
(Rev. 0)

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Date:	27 July 2022	27 July 2022

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ANEWR

Water Supplies Department
New Works Branch
Construction Division
11 Tai Yip Lane
Kowloon Bay
Kowloon
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Your reference:

Our reference: HKWSD201/50/108136

Date: 28 July 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.47

We refer to emails of 8 and 27 July 2022 attaching Monthly EM&A Report No.47 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/lsmt

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Rev.	DESCRIPTION OF MODIFICATION	DATE
0	1st Submission	8 July 2022
1	2nd Submission	27 July 2022

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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 47th 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 June to 30 June 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	Works in Reporting Month
Portion H of the Project Site	
TKO 137 Pit A	• Pipe installation works inside Pit 137B to Pit 137C
TKO 137 Pit B	
TKO 137 Pit C	
Portion J of the Project Site	
Wan Po Rd – Workfront 4	• Pipe trench excavation and pipe laying
Wan Po Rd – Workfront 5	
Wan Po Rd – Pit A	• Setup Platform for Handshield.
Wan Po Road – Pit A1 to Pit B Planter	• Trench excavation and pipe laying.
Wan Po Road – Pit B to Pit C Planter	• Trench excavation and pipe laying.
Shek Kok Road – Wing Wall Hand-shield	• Construction of wing wall • Setup for Hand-shield pipe jacking
Pet Garden's Road	• Trench excavation and pipe laying
Pung Loi Road – Pit WPR1	• MTBM pipe jacking
Creative school	• Trench excavation and pipe laying works concrete surround
Velodrome – Pit K	• Pipe laying
Velodrome – Pit L to Pit M	• Set up for Pressure testing of water pipeline
Velodrome – Pit M	• Pipe installation

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Velodrome – Pit N	• Pipe installation
Ling Hong Road – Control Site 108	• Valve installation for DN900 S.V. chamber
Po Lam Road South	• Road reinstatement Work.
Po Lam Road - Pit X	• Trench excavation and pipe laying
Po Lam Road (B3)	
TKO Primary Service Reservoir	
Tsui Lam Road	• Steel cage installation and grouting for mini pile.

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 1, 7, 18, 24 and 30 June 2022 as construction works were conducted within 300m to the noise sensitive receiver. No Action and Limit Level exceedance 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**.

A10. Landfill gas monitoring was carried out by the Registered Safety Officer of the Contractor at the excavation locations and within the consultation zones for 750 times. All the measured results were presented in **Appendix J** and were within the Action and Limit Levels.

Complaint Handling and Prosecution

A11. No environmental complaint, notifications of summons and prosecution was received in the reporting month.

Reporting Change

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

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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	Forecast Works in Next Reporting Month
Portion J of the Project Site	
TKO 137 Pit A	• Mainlaying from pit A to WPR.
TKO 137 Pit B	• Construction of combined chamber in 137 pit B
TKO 137 Pit C	• Construction of washout chamber and excavation from 137 Pit C to 900 chamber.
Portion J of the Project Site	
Wan Po Rd – Workfront 1	• Mainlaying from pit 1 to pit 2
Wan Po Rd – Workfront 2	• Mainlaying from pit 2 to pit 1
Wan Po Rd – Workfront 3	• SRT and Pavement carriageway
Wan Po Rd – Workfront 4	• Pipe trench excavation and pipe laying. • Pipe installation inside sleeve pipe between WF4A & WF4B
Wan Po Rd – Workfront 5	• Pipe trench excavation and pipe laying
Wan Po Rd – Pit A	• Setup platform for Hand-shield
Wan Po Road – Pit A1 to Pit B Planter	• Trench excavation and pipe laying • Reinstatement works
Wan Po Road – Pit B to Pit C Planter	• Trench excavation and pipe laying
Shek Kok Road – Wing Wall - Hand-shield	• Construction of wing wall • Setup for hand shield pipe jacking
Pet Garden's Road	• Reinstatement works
Creative school	• Trench excavation and pipe laying works concrete surround.
Pung Loi Road – Pit WPR1	• MTMB pipe jacking
Velodrome – Pit K	• Construction of concrete thrust block
Velodrome – Pit M	• Set up for Pressure testing of water pipeline and pipe laying
Velodrome – Pit N	• Set up for Pressure testing of water pipeline
Ling Hong Road – Control Site 108	• Ladder installation for DN900 S.V. chamber
Po Lam Road South	• Trench excavation and pipe laying
Po Lam Road – Pit X	
Po Lam Road (B3)	
Tsui Lam Road	• Removal of bamboo scaffold
TKO Primary Service Reservoir	• Trench excavation and pipe laying

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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.

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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 47th Monthly EM&A Report for the Project which summarizes the key findings of the EM&A programme during the reporting period from 1 June to 30 June 2022.

1.3 Project Organization

The Project Organization structure for Construction Phase is presented in **Figure 1.1** and the Contact details of the key personnel are presented in **Table 1.1**.

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

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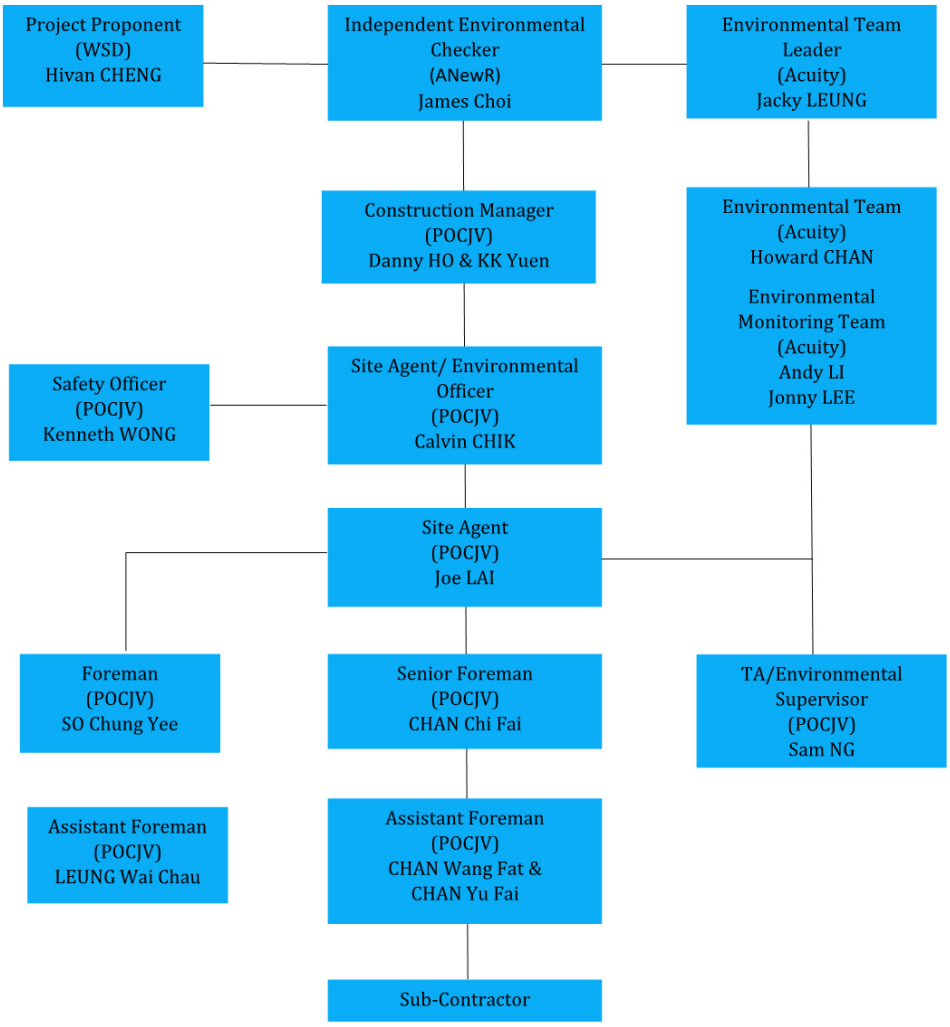

Figure 1.1 Project Organization Chart

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 in the Reporting Month

Location	Works in Reporting Month
Portion H of the Project Site	
TKO 137 Pit A	• Pipe installation works inside Pit 137B to Pit 137C
TKO 137 Pit B	
TKO 137 Pit C	
Portion J of the Project Site	
Wan Po Rd – Workfront 4	• Pipe trench excavation and pipe laying
Wan Po Rd – Workfront 5	
Wan Po Rd – Pit A	• Setup Platform for Handshield.
Wan Po Road – Pit A1 to Pit B Planter	• Trench excavation and pipe laying.
Wan Po Road – Pit B to Pit C Planter	• Trench excavation and pipe laying.

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Shek Kok Road – Wing Wall Hand-shield	• Construction of wing wall • Setup for Hand-shield pipe jacking
Pet Garden's Road	• Trench excavation and pipe laying
Pung Loi Road – Pit WPR1	• MTBM pipe jacking
Creative school	• Trench excavation and pipe laying works concrete surround
Velodrome – Pit K	• Pipe laying
Velodrome – Pit L to Pit M	• Set up for Pressure testing of water pipeline
Velodrome – Pit M	• Pipe installation
Velodrome – Pit N	• Pipe installation
Ling Hong Road – Control Site 108	• Valve installation for DN900 S.V. chamber
Po Lam Road South	• Road reinstatement Work.
Po Lam Road - Pit X	• Trench excavation and pipe laying
Po Lam Road (B3)	
TKO Primary Service Reservoir	
Tsui Lam Road	• Steel cage installation and grouting for mini pile.

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 Environmental Licence, Notification, Permit

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 Kwon O, N.T.)	GW-RE0353-22	Until 1 October 2022

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

Table 1.4 Summary of 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**.

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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 Leq, 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 1, 7, 18, 24 and 30 June 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 (LAeq). $L_{eq\ 30min}$ 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}, L_{10} & L_{90}

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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

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Figure 2.2 NSR24 PLK Laws Foundation College

Figure 2.3 NSR31 School of Continuing and Professional Studies - CUHK

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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	• 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**.

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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 1, 7, 18, 24 and 30 June 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.

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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 '000m³)	Chemical Waste (in '000kg)	Non-inert C&D Materials			
			Others, e.g. General Refuse disposed at Landfill (in '000m³)	Recycled materials		
				Paper/card board (in '000kg)	Plastics (in '000kg)	Metals (in '000kg)
June 2022	1.710	0.000	0.007	0.056	0.000	0.000

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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**.

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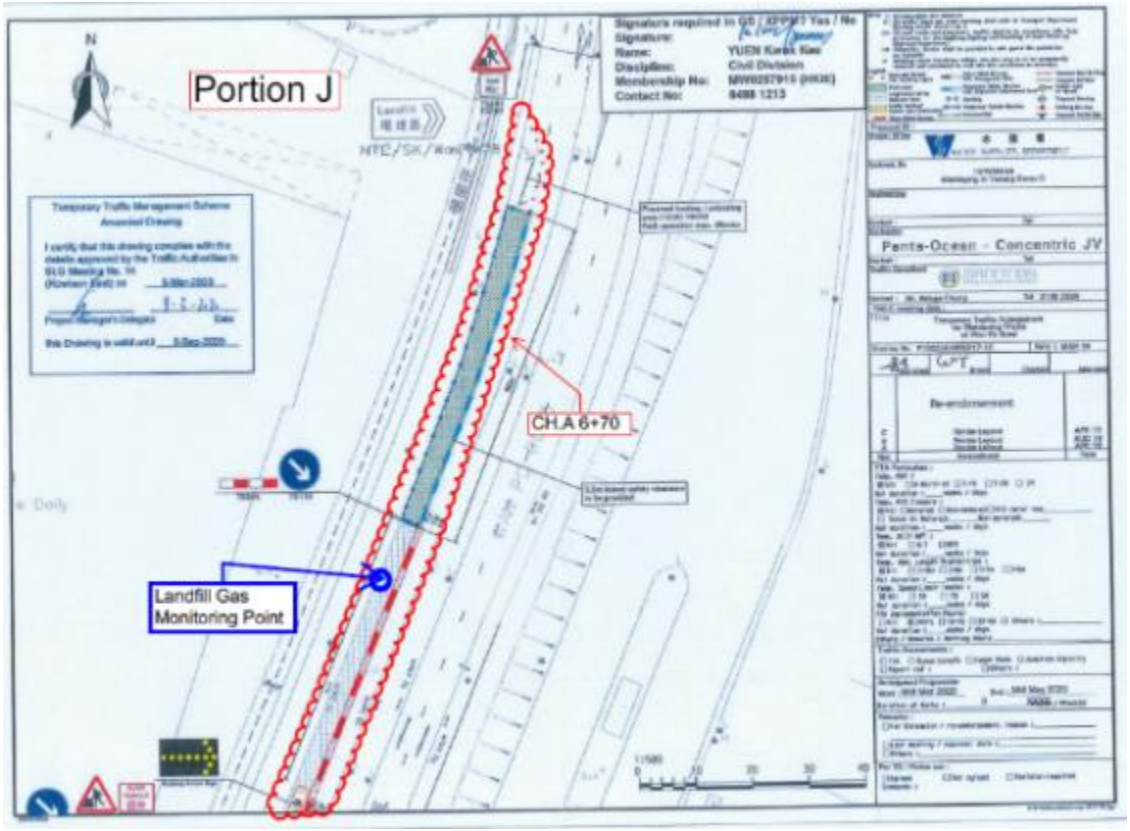

Figure 4.1 Monitoring Location - CH.A 6+70

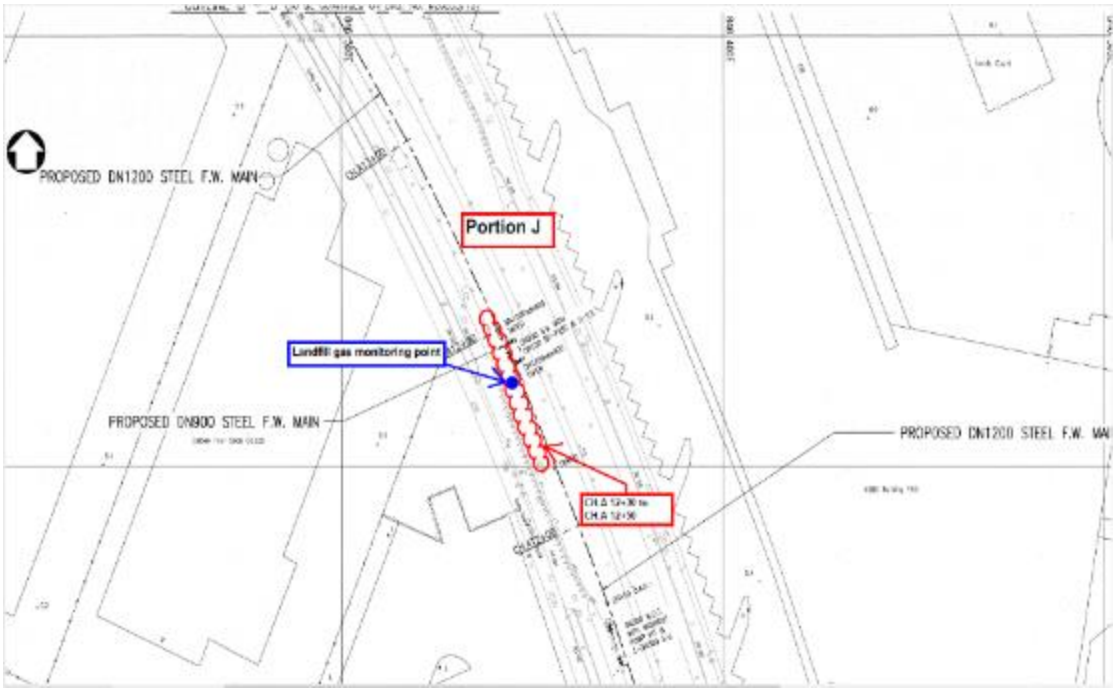

Figure 4.2 Monitoring Location – CH.A 12+30 ~ 12+50

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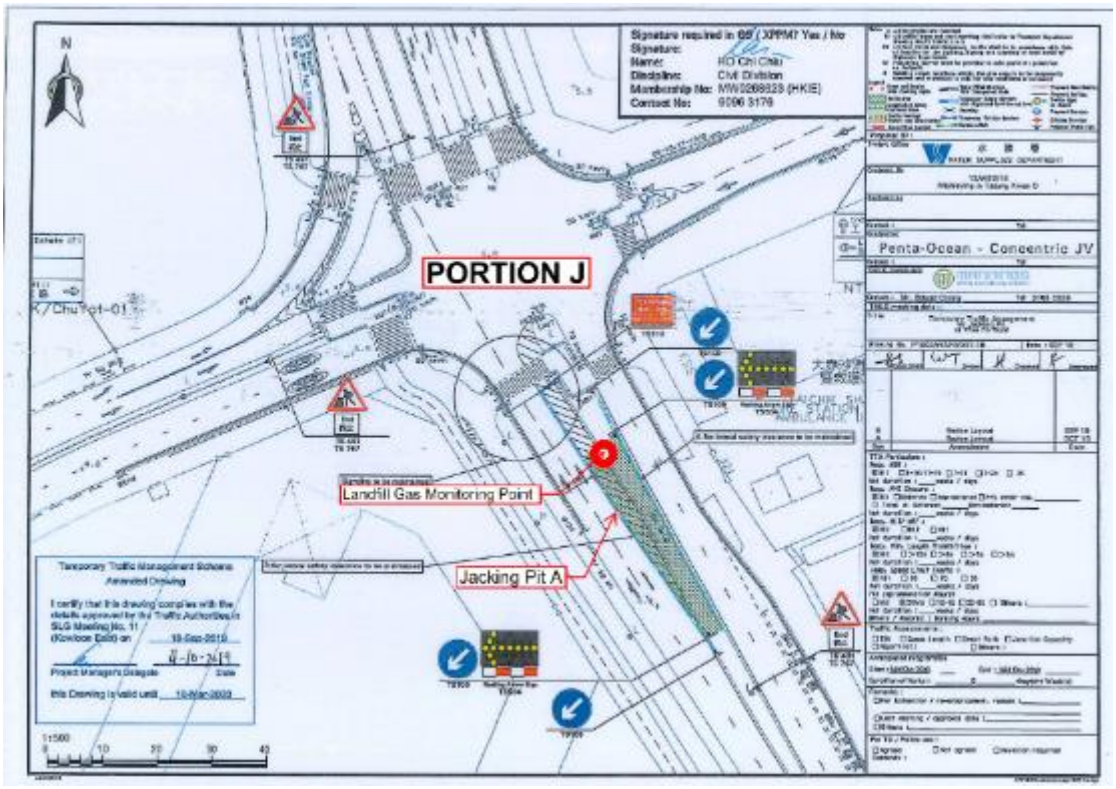

Figure 4.3 Monitoring Location – CH.A 13+50 ~ 14+00 (Pit A)

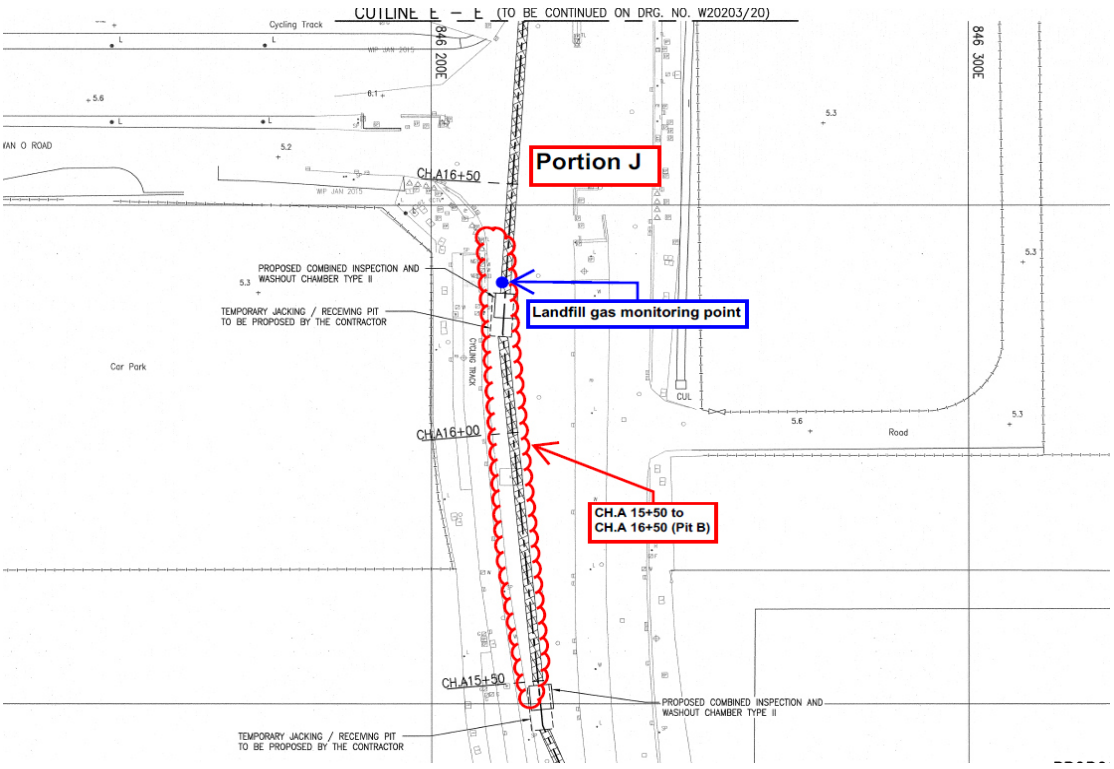

Figure 4.4 Monitoring Location – CH.A 15+50 ~16+50 (Jacking Pit B)

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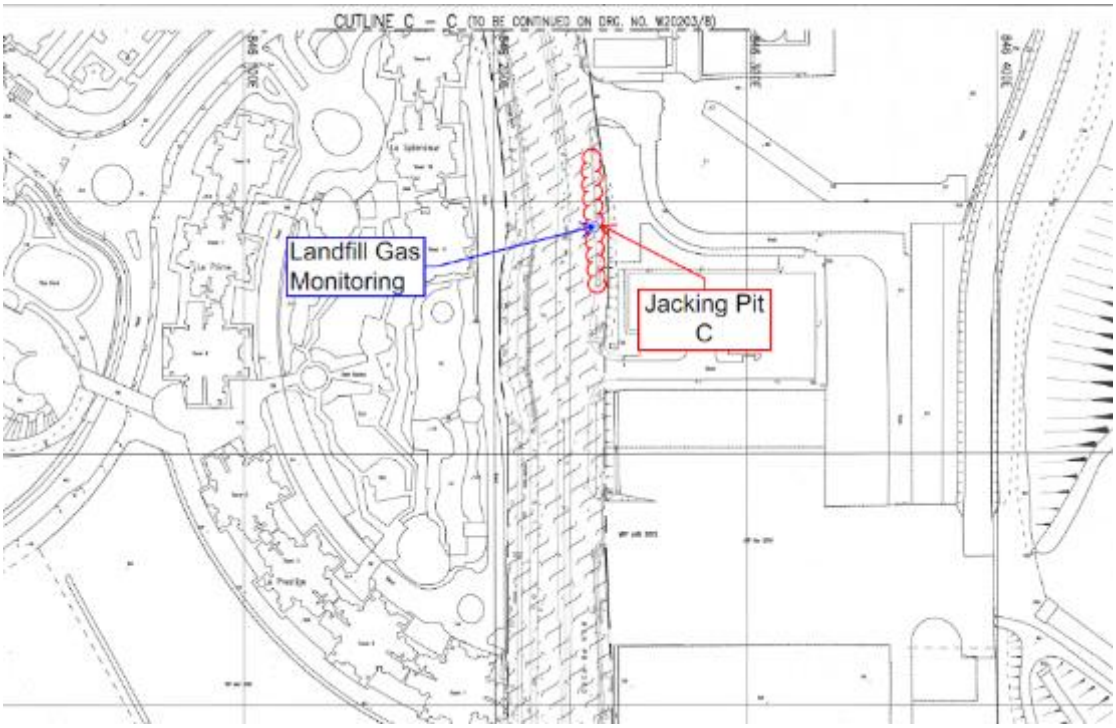

Figure 4.5 Monitoring Location – CH.A 19+15 ~19+50 (Pit C)

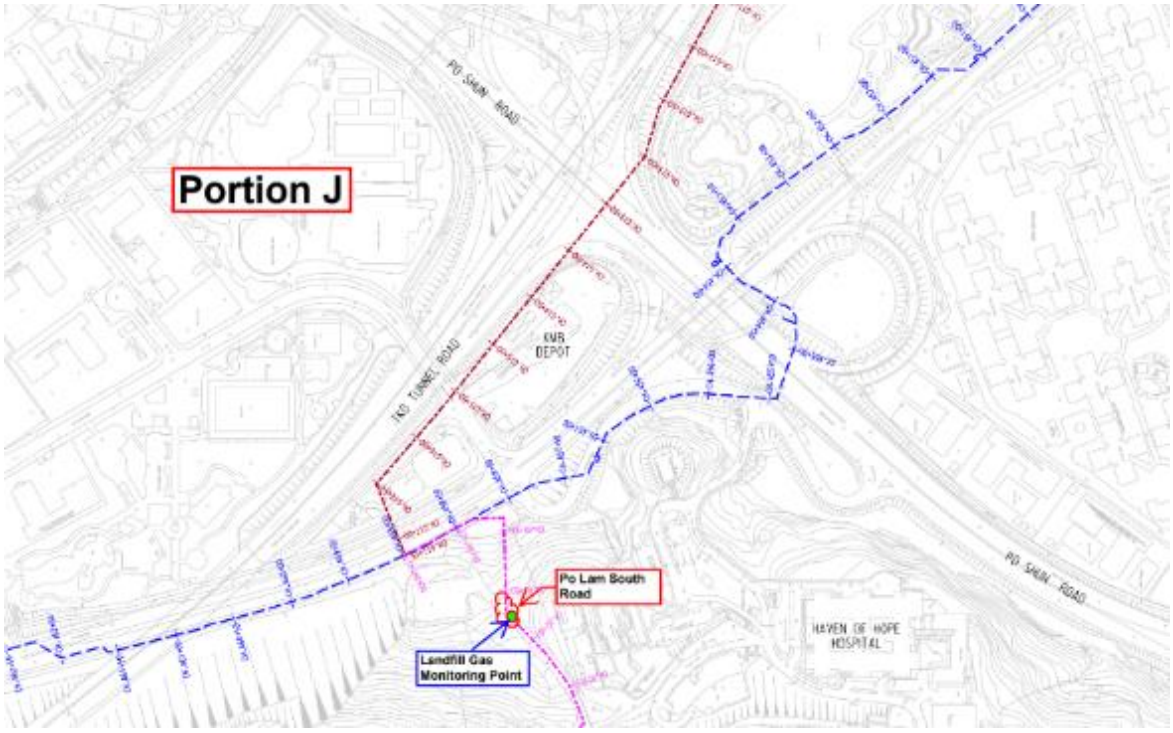

Figure 4.6a Monitoring Location – Mau Wu Tsai 1

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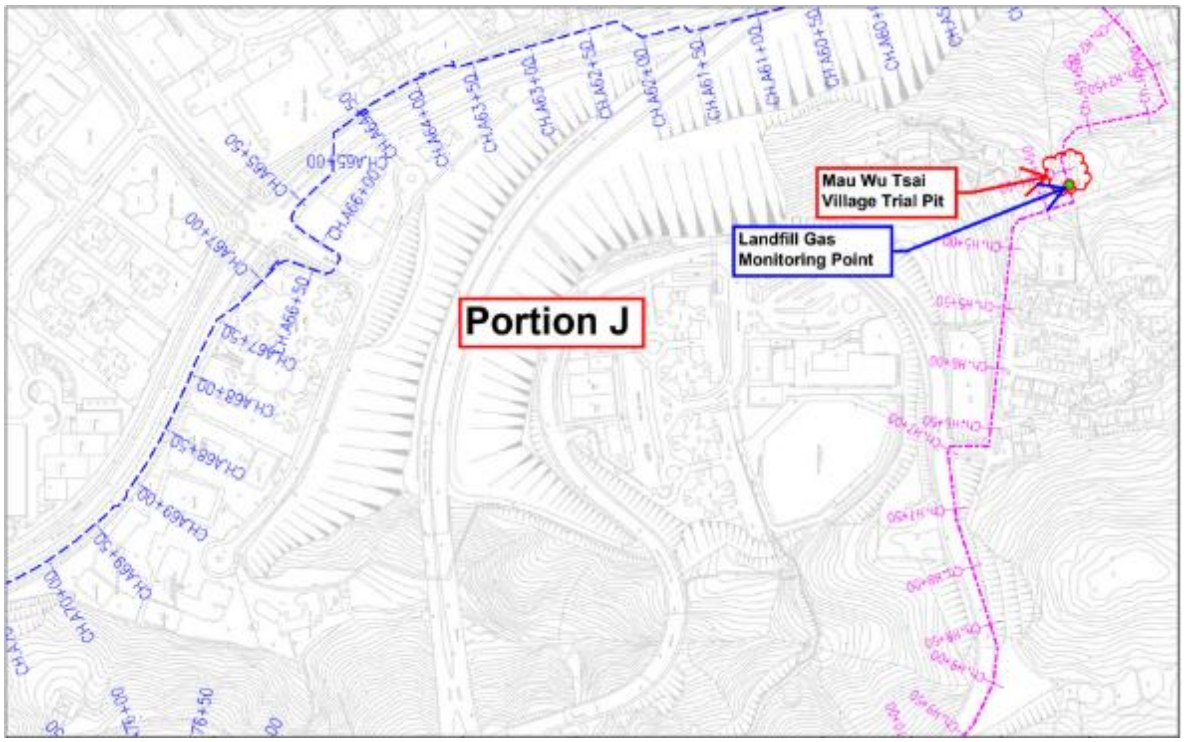

Figure 4.6b Monitoring Location – Mau Wu Tsai 2

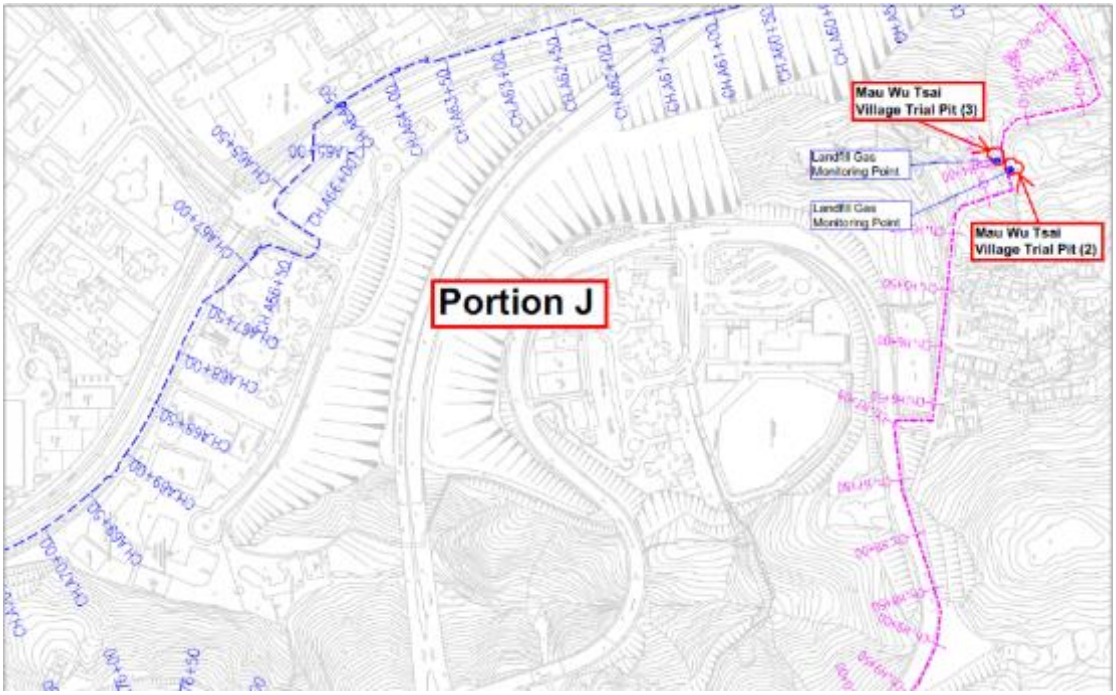

Figure 4.6c Monitoring Location – Mau Wu Tsai 3

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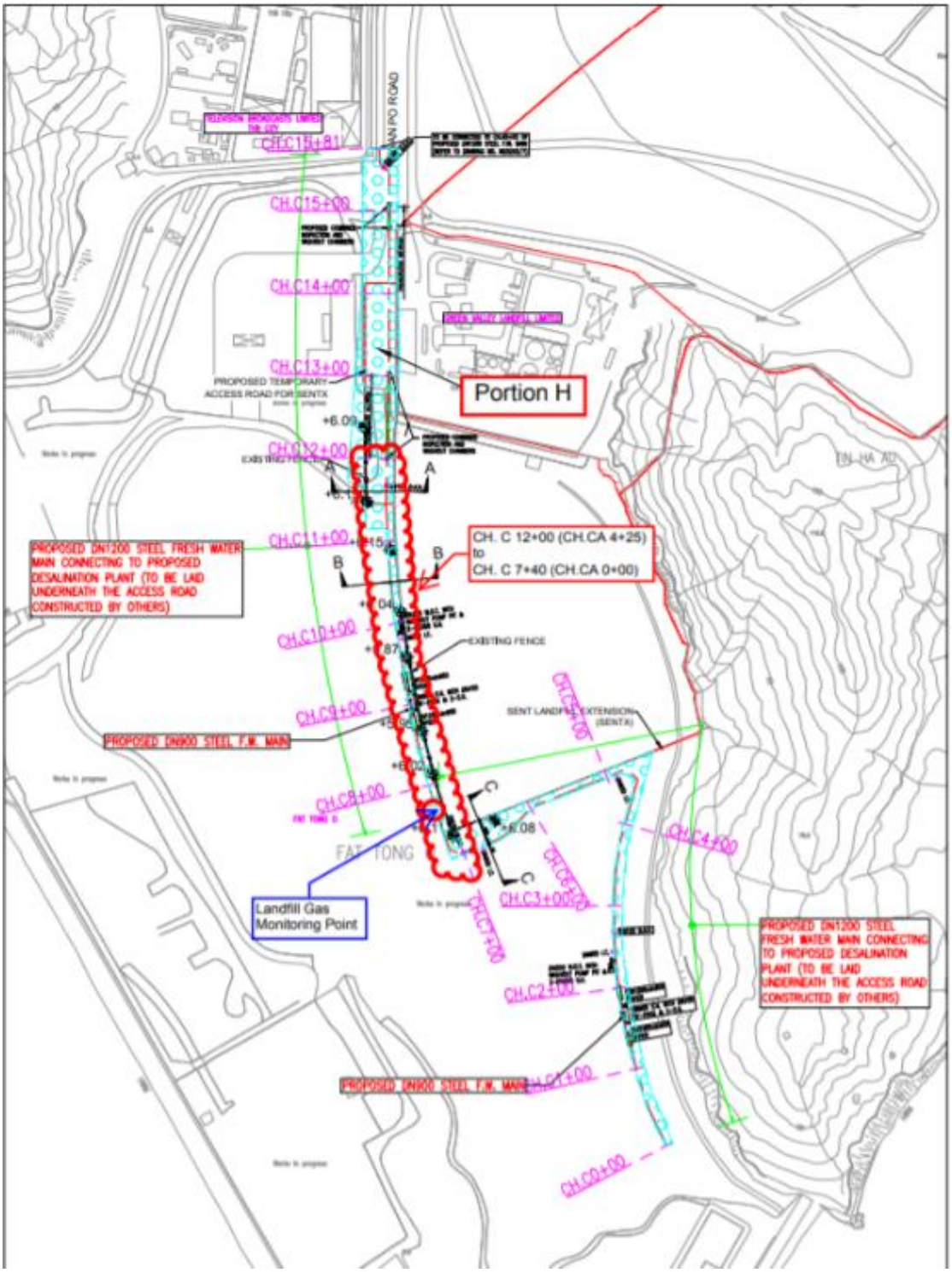

Figure 4.7 Monitoring Location –CH.CA 0+00 to CH.CA 04+25 (CH.C 7+40 ~ 12+00)

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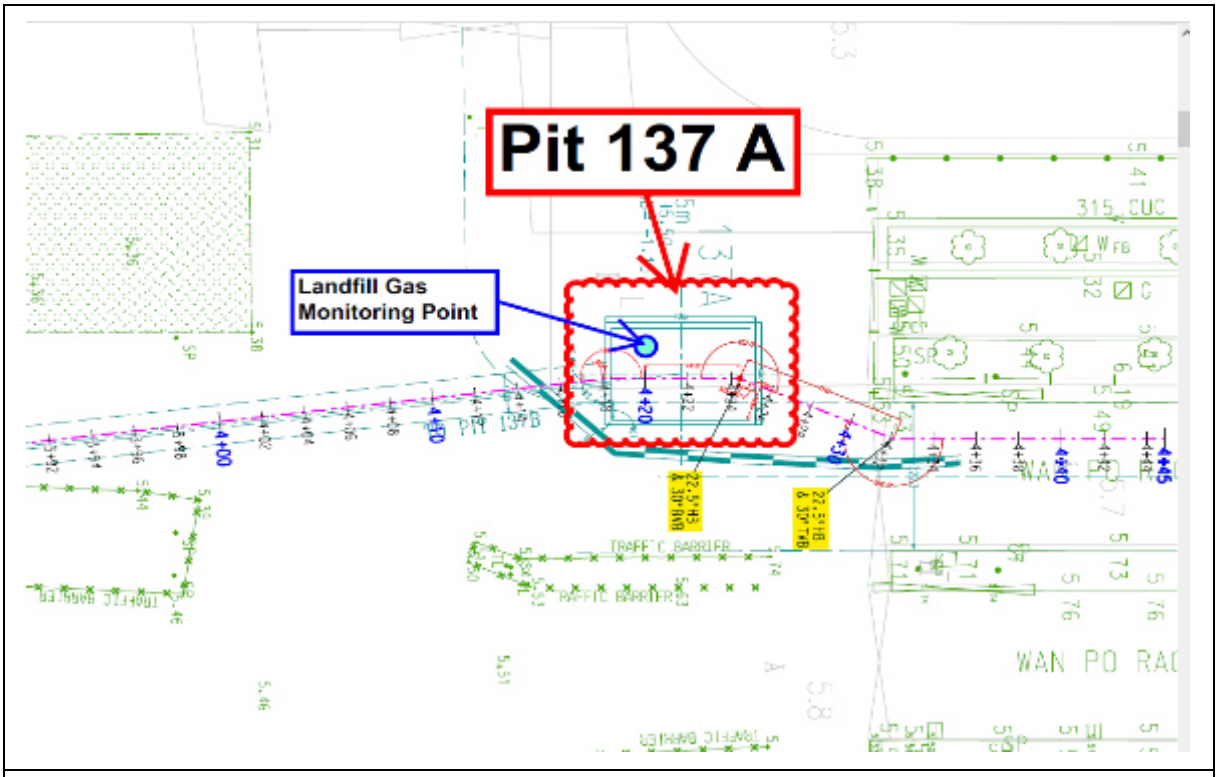

Figure 4.8a Monitoring Location – Pit 137A (137 Pit A)

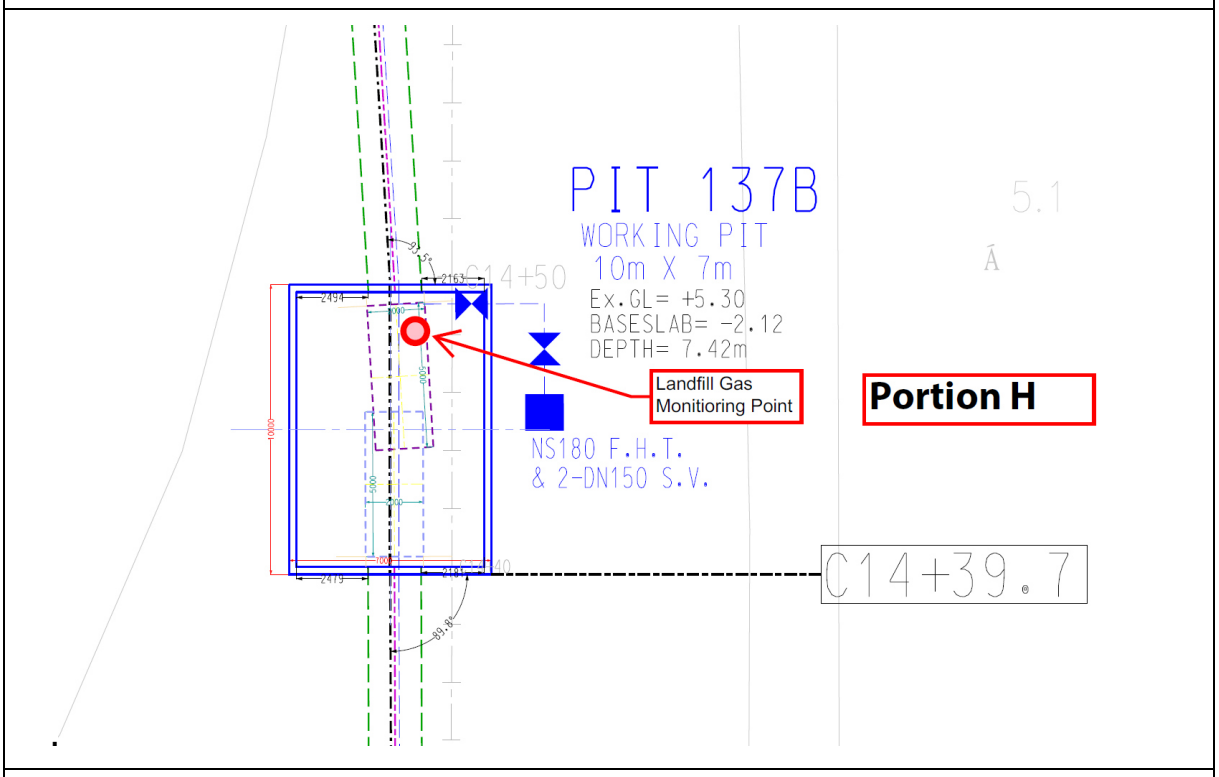

Figure 4.8b Monitoring Location – Pit 137B (137 Pit B)

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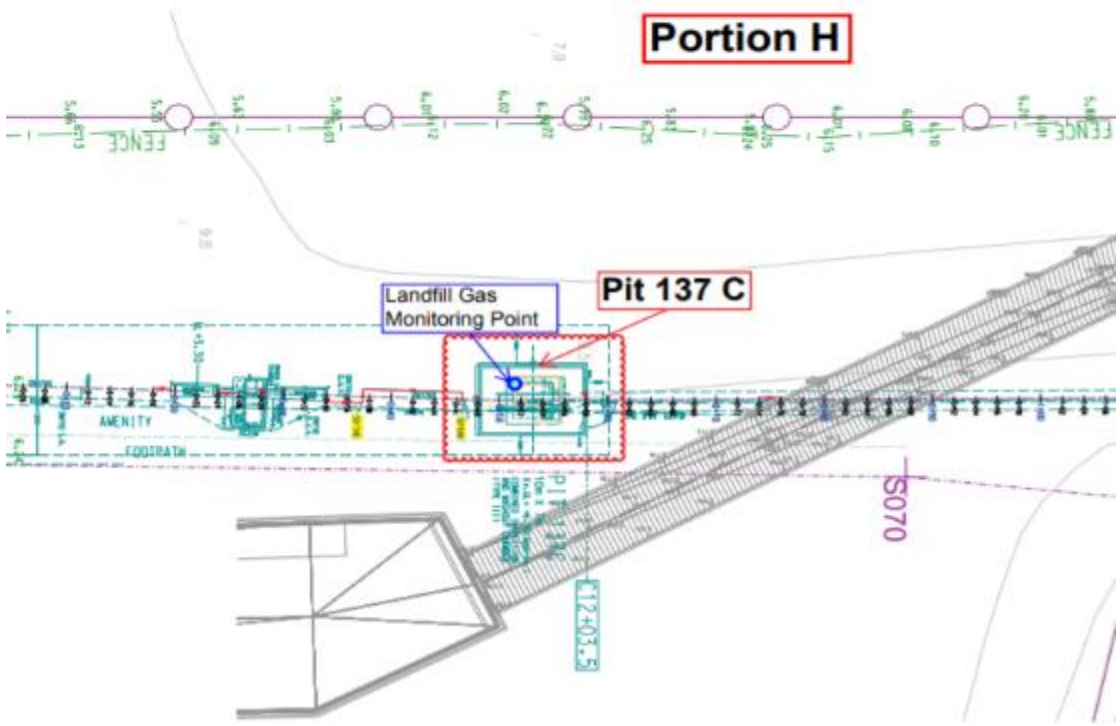

Figure 4.8c Monitoring Location – Pit 137C (137 Pit C)

Figure 4.9 Monitoring Location – Jacking Pit F

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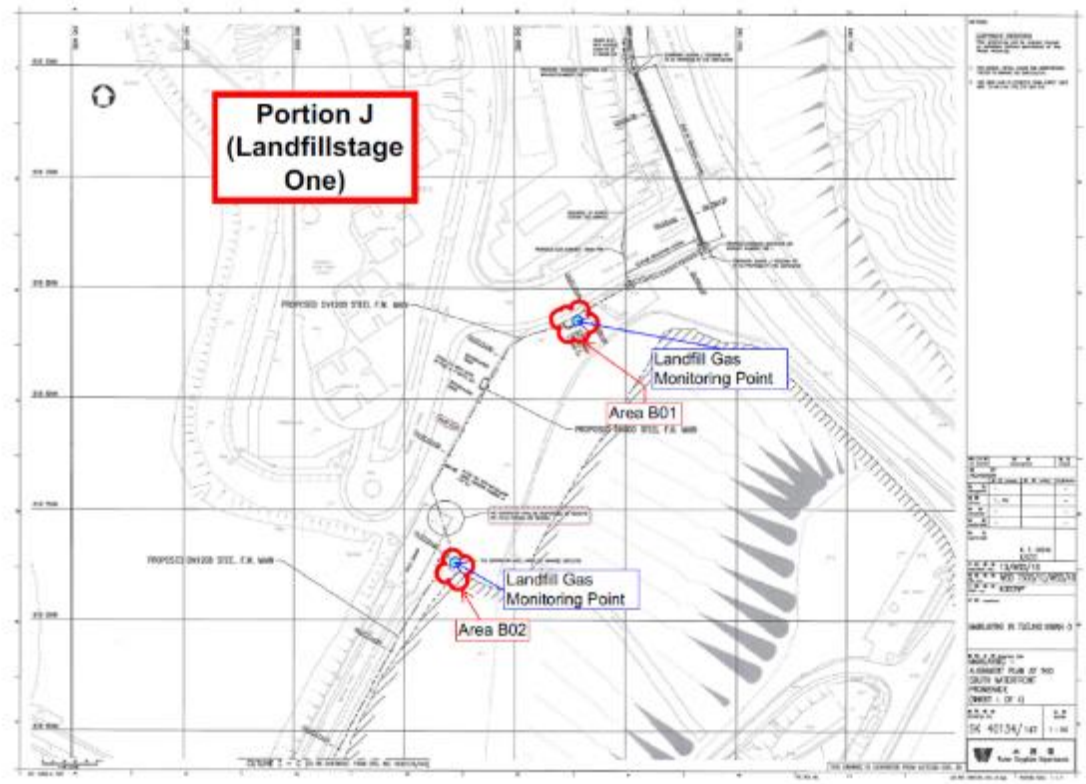

Figure 4.10a Monitoring Location – Landfill Stage 1 (Area B01-B02)

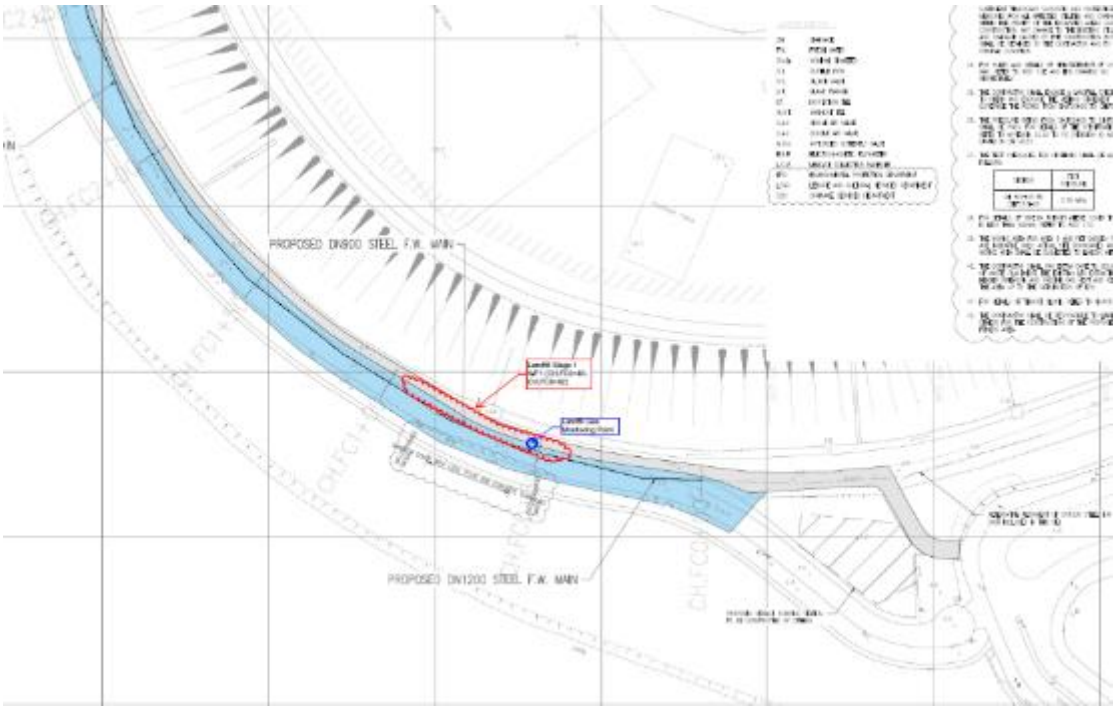

Figure 4.10b Monitoring Location – Landfill Stage 1 (FC0+64-FC0+92)

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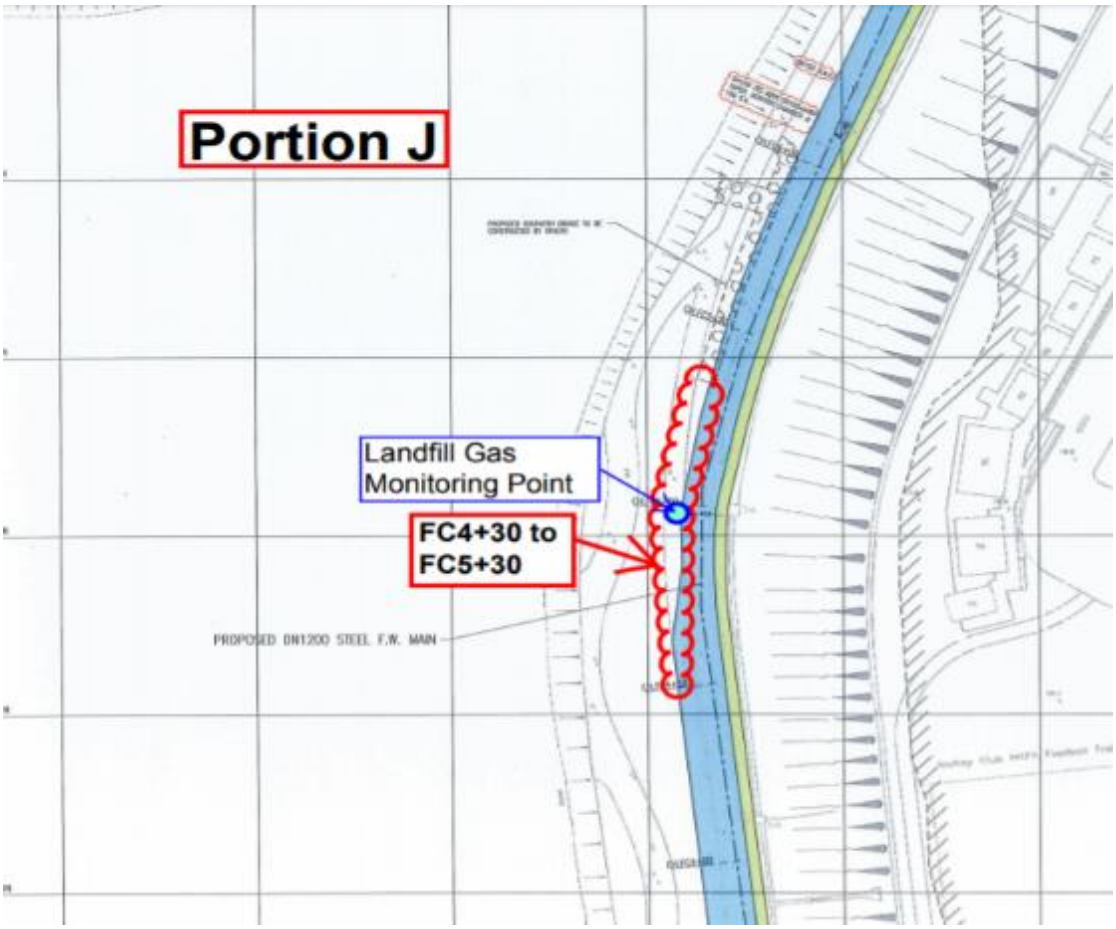

Figure 4.10c Monitoring Location – Landfill Stage 1 (FC4+30-FC5+30)

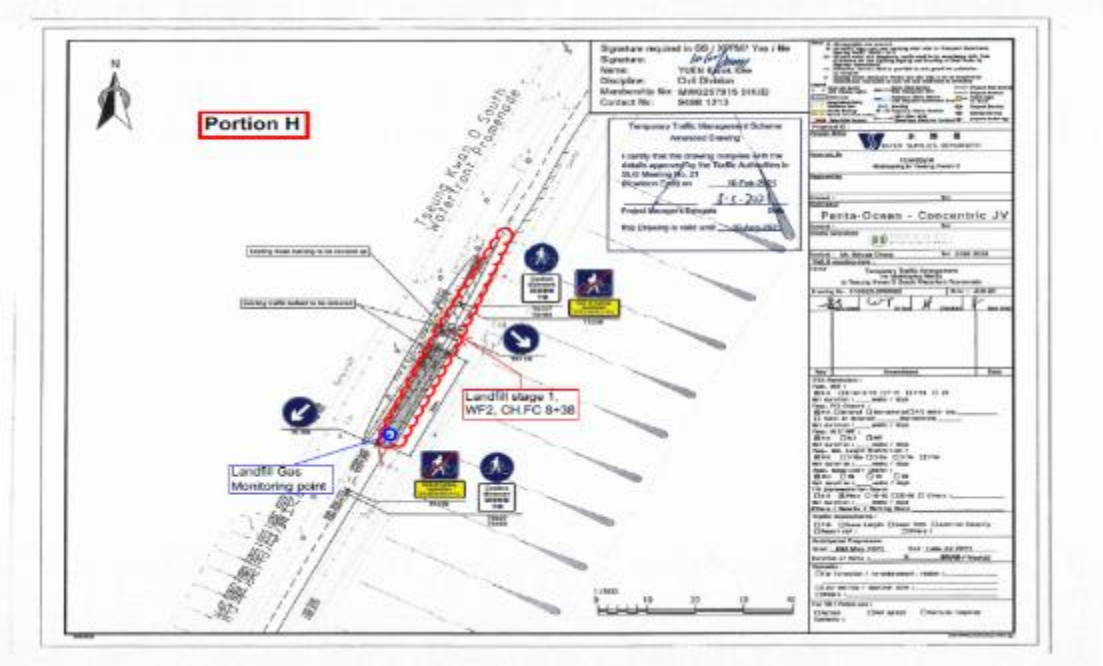

Figure 4.10d Monitoring Location – Landfill Stage 1 (FC8+38)

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

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

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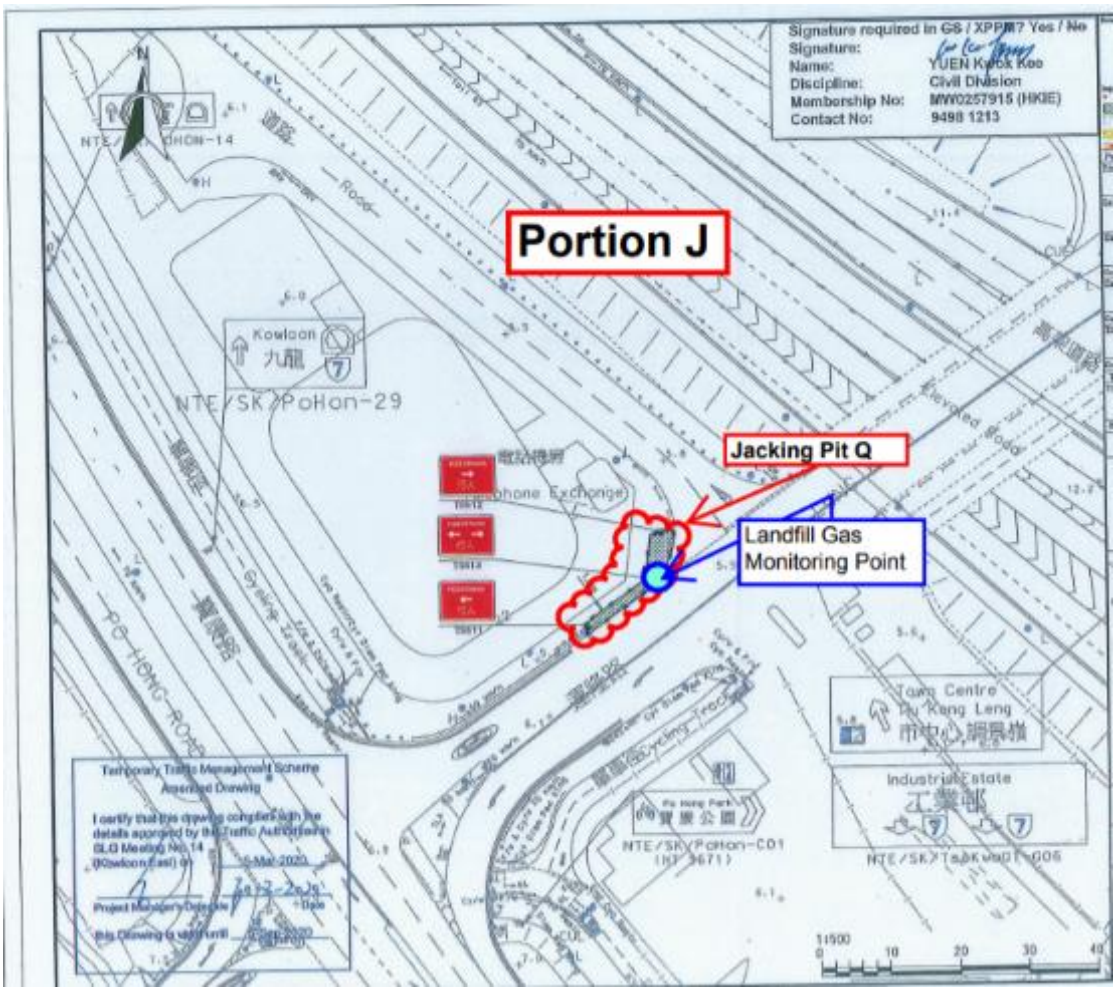

Figure 4.11c Monitoring Location – Pit Q

Figure 4.12 Po Lam South Road

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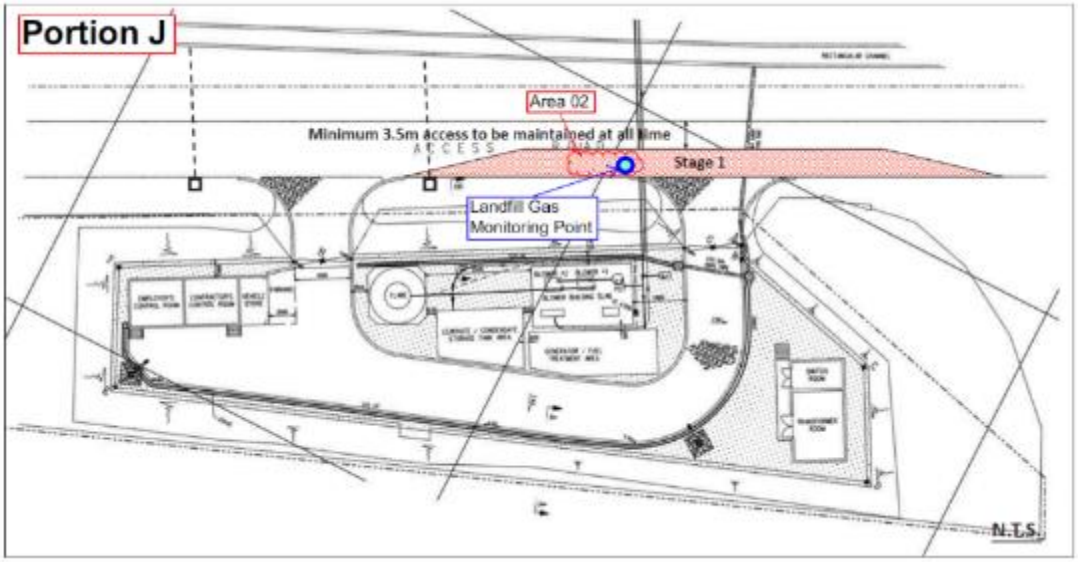

Figure 4.13 Monitoring Location – Area A02

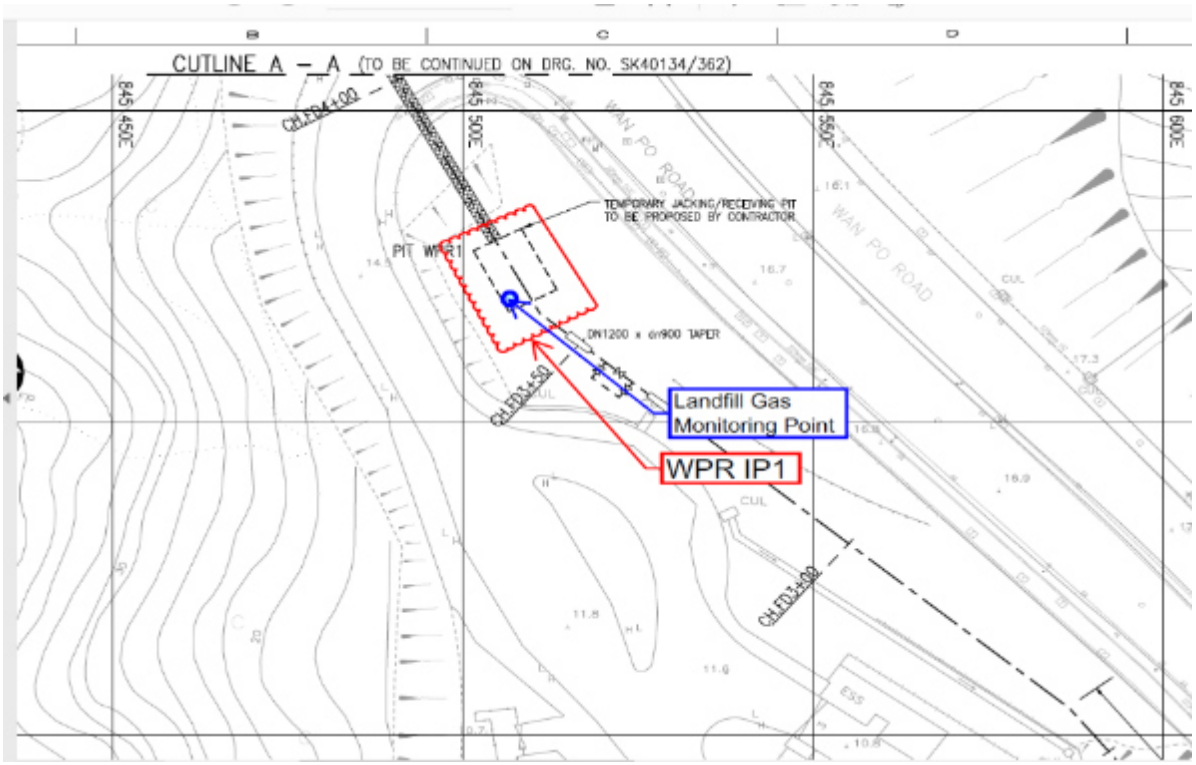

Figure 4.14 Monitoring Location – WPR IP1

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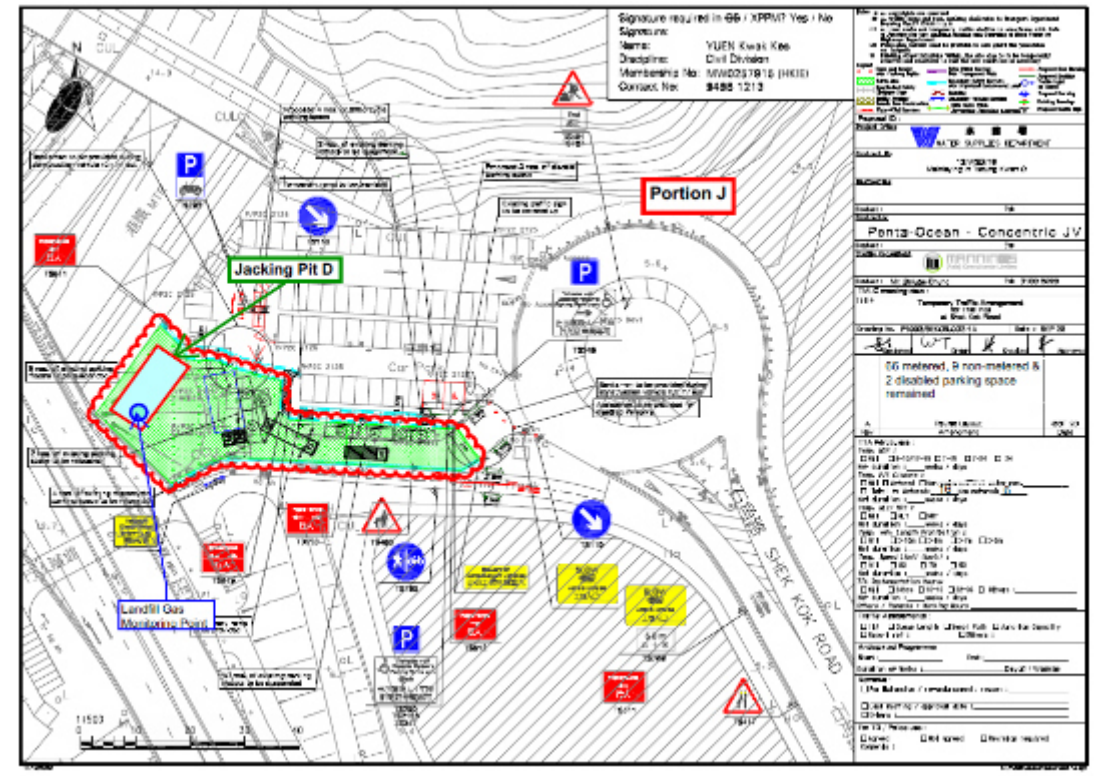

Figure 4.15 Monitoring Location – Jacking Pit D

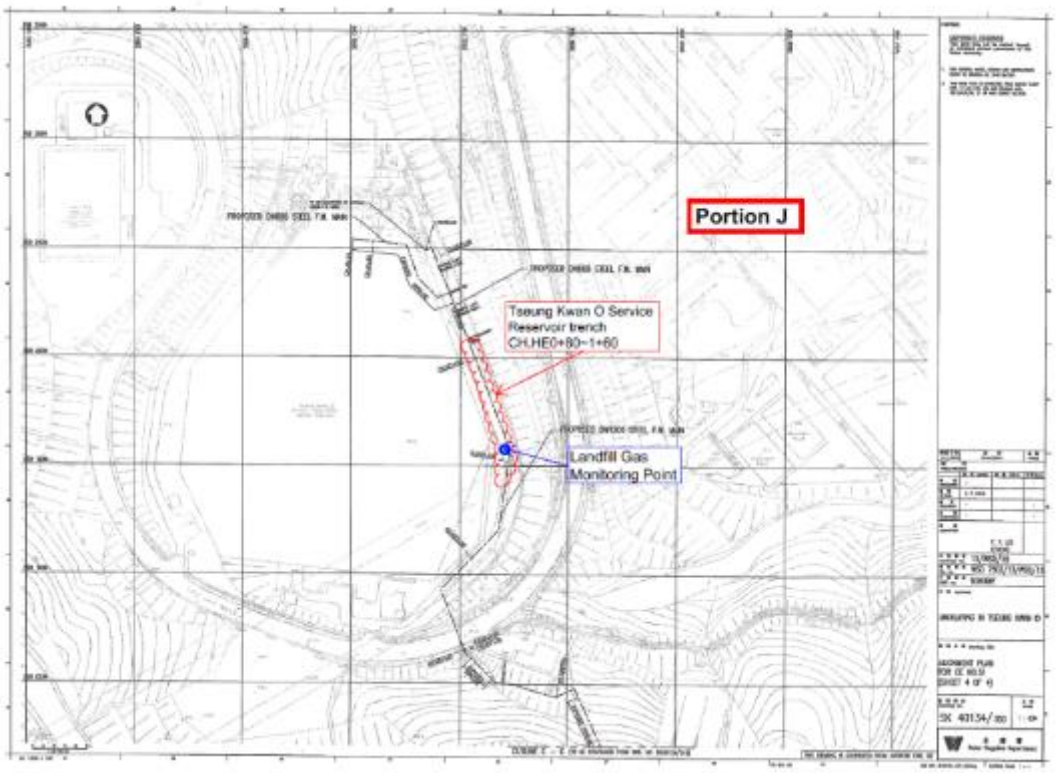

Figure 4.16 Monitoring Location – CH.HE0+80-1+60

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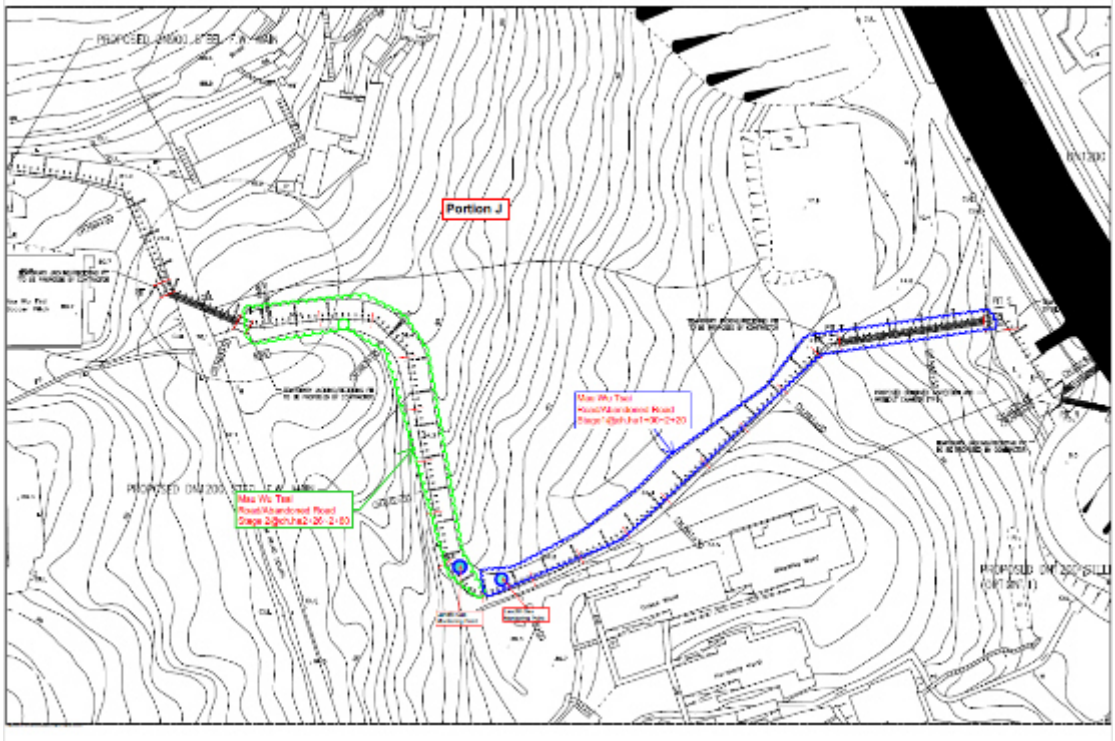

Figure 4.17 Monitoring Location – Mau Wu Tsai Abandoned Road

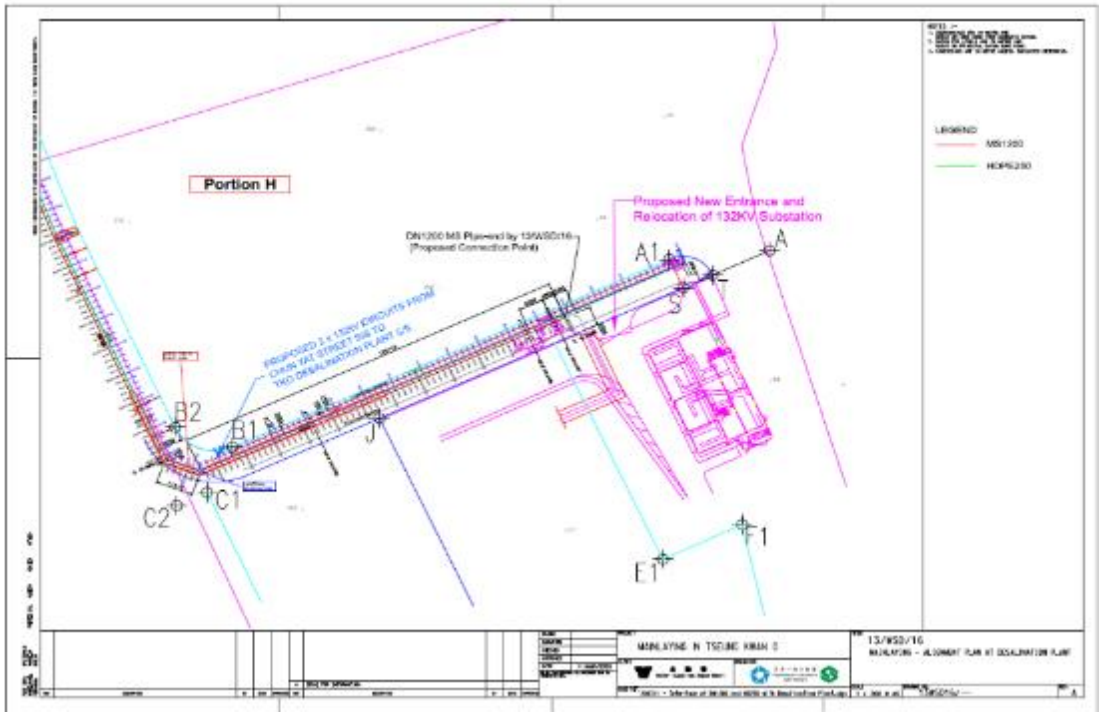

Figure 4.18a Monitoring Location - CH.CT 0+07 ~ 2+58

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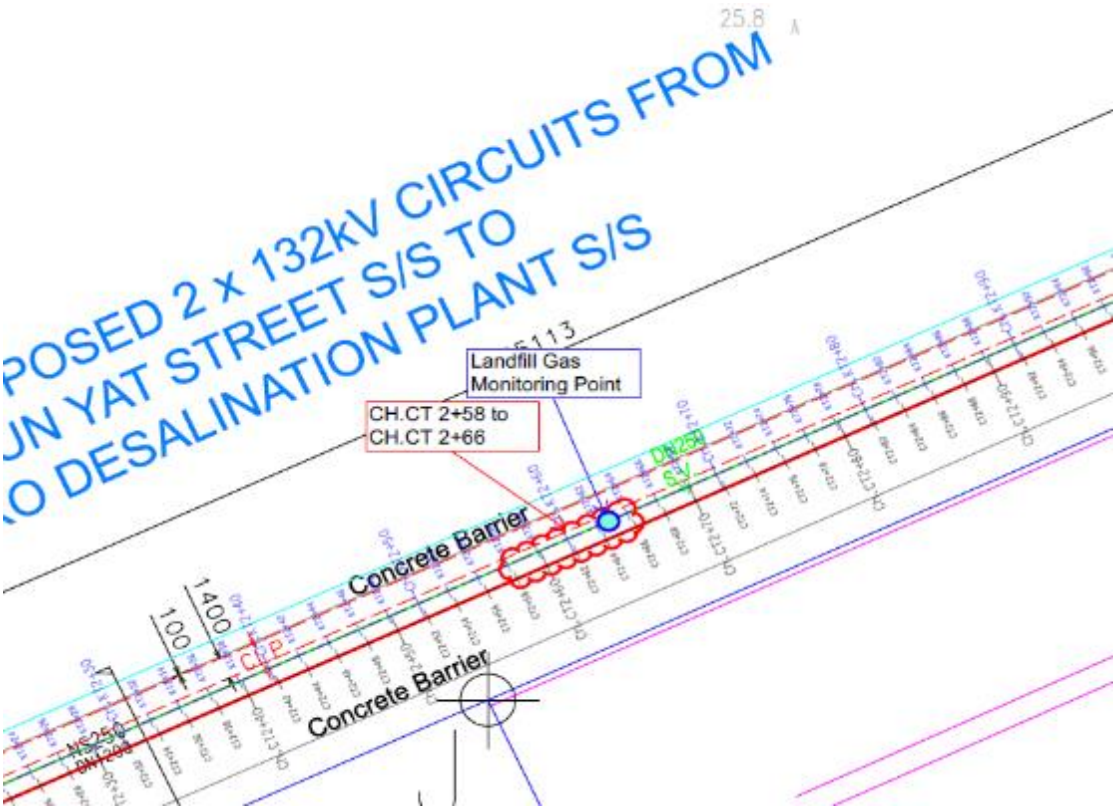

Figure 4.18b Monitoring Location - CH.CT 2+58 ~ 2+66

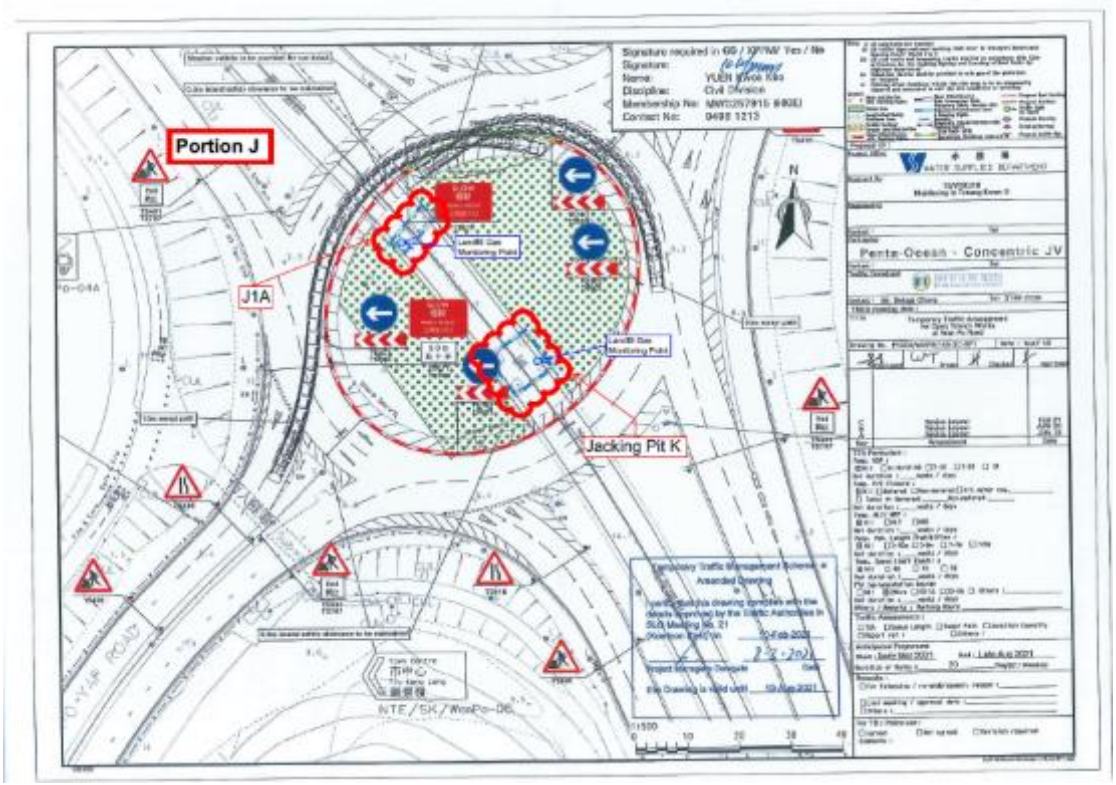

Figure 4.19 Monitoring Location – Pit K

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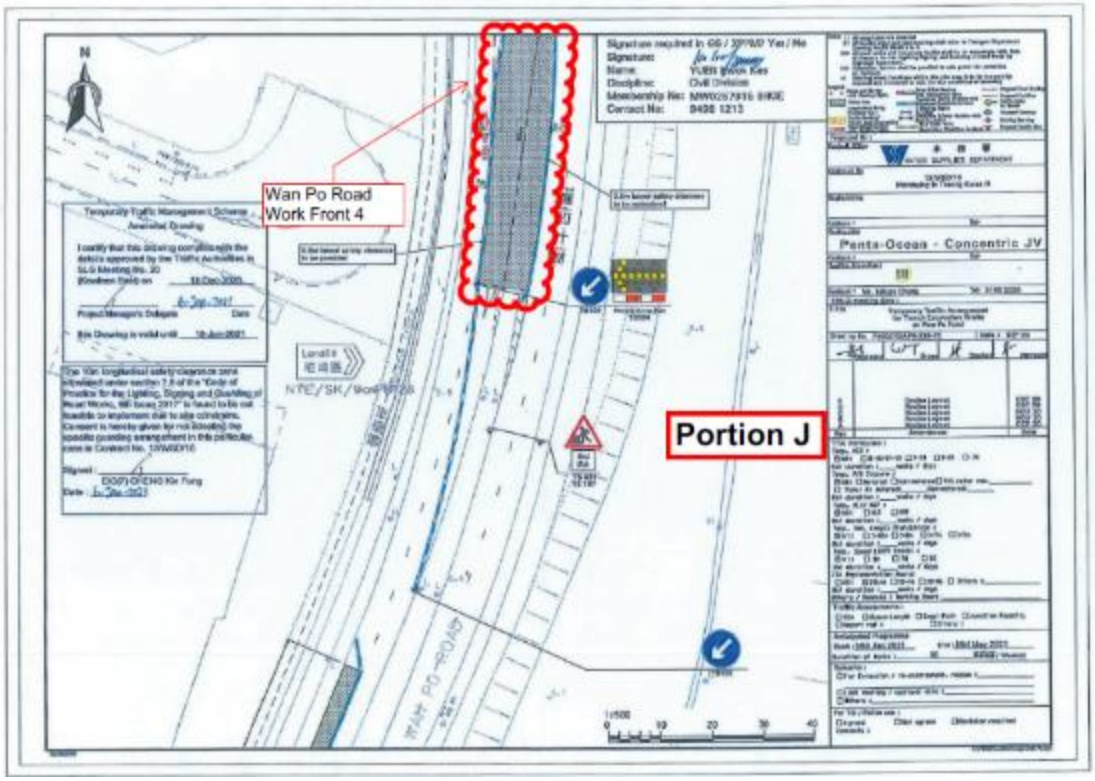

Figure 4.20a Monitoring Location – Wan Po Road 4

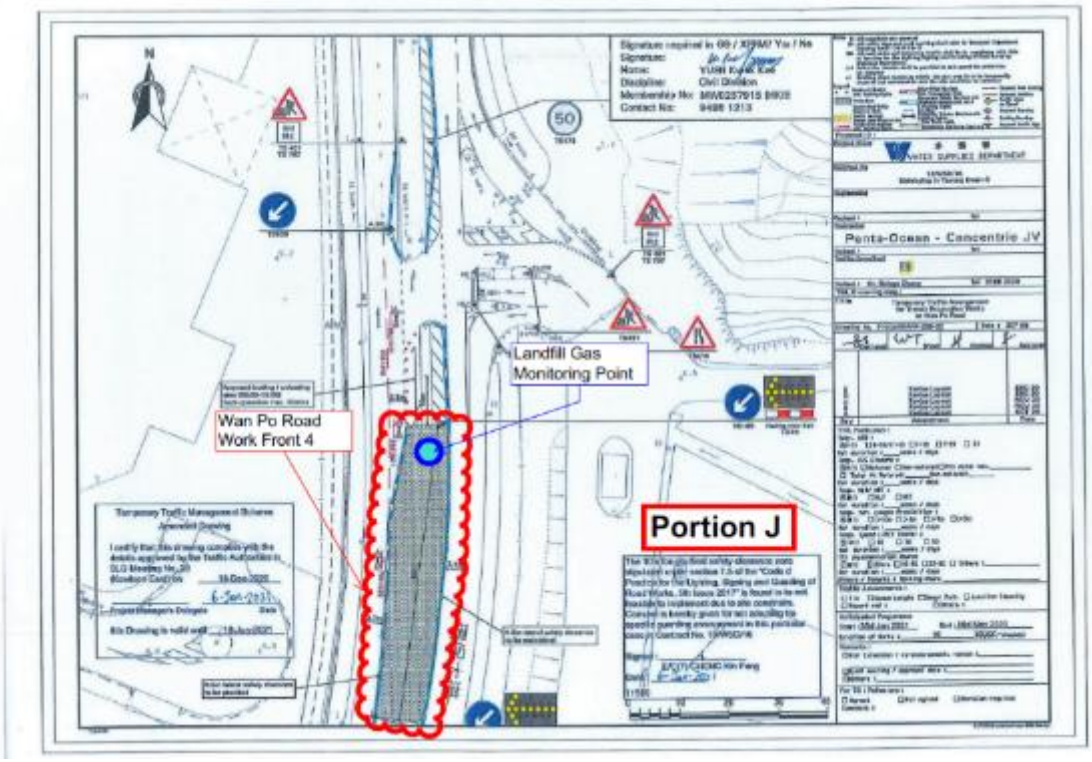

Figure 4.20b Monitoring Location – Wan Po Road 4

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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)

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

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

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

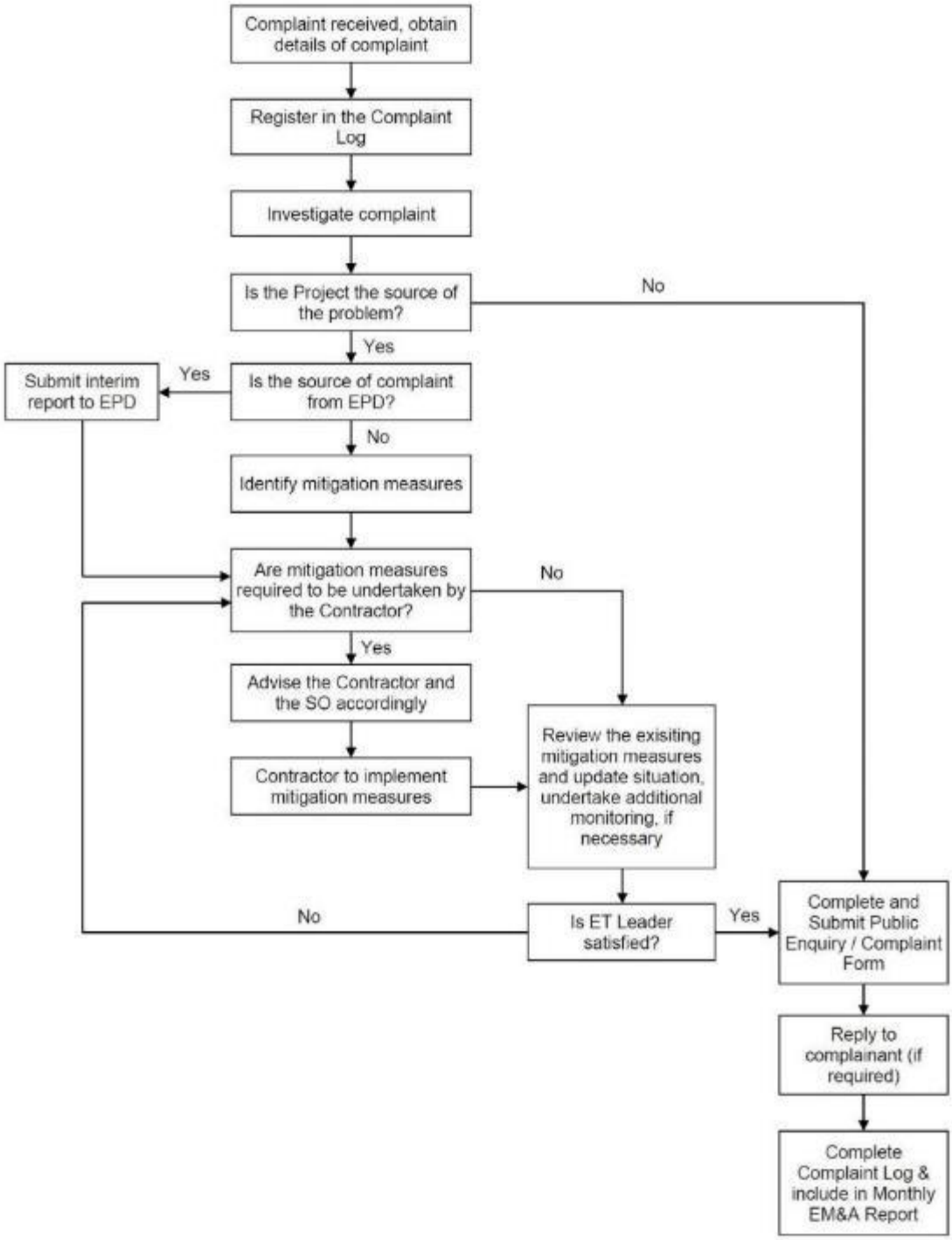

Figure 5.1 Environmental Complaint Handling Procedure

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Impact monitoring for noise impact was scheduled in the reporting month for NSR4 – Creative Secondary School on 1, 7, 18, 24 and 30 June 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 750 times. All the measured results were presented in **Appendix J** and were within the Action and Limit Levels.

No Action and Limit Level exceedance was recorded during the reporting period.

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

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

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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 1, 9, 17, 24 and 27 June 2022 at the site portions list in **Table 6.1** below.

Table 6.1 Site Inspection Record

Date	Inspected Site Portion	Time
1 June 2022	Portion J	09:30 – 10:00
9 June 2022	Portion J	10:30 – 11:30
17 June 2022	Portion J	15:30 – 16:30
24 June 2022	Portion J	09:30 – 11:00
27 June 2022	Portion J	14:00 – 14:45

One joint site inspection with IEC was carried out on 27 June 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
1 June 2022	No major observation were recorded on the reporting day.	Nil
9 June 2022	1. Drip tray should be provided for chemical storage (HK Velodrome Park Pit O). 2. Empty chemical container should be stored at a designated area (HK Velodrome Park Pit O).	1. Drip tray was provided for chemical storage. 2. Empty chemical containers were stored in the chemical waste container.
17 June 2022	1. Drip tray should be provided for chemical storage (HK Velodrome Park Pit O).	1. Drip tray was provided for chemical storage.
24 June 2022	No major observation were recorded on the reporting day.	Nil
27 June 2022	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**.

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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	Forecast Works in Next Reporting Month
Portion J of the Project Site	
TKO 137 Pit A	• Mainlaying from pit A to WPR.
TKO 137 Pit B	• Construction of combined chamber in 137 pit B
TKO 137 Pit C	• Construction of washout chamber and excavation from 137 Pit C to 900 chamber.
Portion J of the Project Site	
Wan Po Rd – Workfront 1	• Mainlaying from pit 1 to pit 2
Wan Po Rd – Workfront 2	• Mainlaying from pit 2 to pit 1
Wan Po Rd – Workfront 3	• SRT and Pavement carriageway
Wan Po Rd – Workfront 4	• Pipe trench excavation and pipe laying. • Pipe installation inside sleeve pipe between WF4A & WF4B
Wan Po Rd – Workfront 5	• Pipe trench excavation and pipe laying
Wan Po Rd – Pit A	• Setup platform for Hand-shield
Wan Po Road – Pit A1 to Pit B Planter	• Trench excavation and pipe laying • Reinstatement works
Wan Po Road – Pit B to Pit C Planter	• Trench excavation and pipe laying
Shek Kok Road – Wing Wall - Hand-shield	• Construction of wing wall • Setup for hand shield pipe jacking
Pet Garden's Road	• Reinstatement works
Creative school	• Trench excavation and pipe laying works concrete surround.
Pung Loi Road – Pit WPR1	• MTMB pipe jacking
Velodrome – Pit K	• Construction of concrete thrust block
Velodrome – Pit M	• Set up for Pressure testing of water pipeline and pipe laying
Velodrome – Pit N	• Set up for Pressure testing of water pipeline
Ling Hong Road – Control Site 108	• Ladder installation for DN900 S.V. chamber
Po Lam Road South	• Trench excavation and pipe laying
Po Lam Road – Pit X	
Po Lam Road (B3)	
Tsui Lam Road	• Removal of bamboo scaffold
TKO Primary Service Reservoir	• Trench excavation and pipe laying

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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**.

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8. CONCLUSION AND RECOMMENDATIONS

This is the 47th monthly Environmental Monitoring and Audit (EM&A) Report presenting the EM&A works undertaken during the period from 1 June to 30 June 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 1, 7, 18, 24 and 30 June 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 750 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, notification of summons and prosecution was received in the reporting month.

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

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Appendix A

Construction Programme

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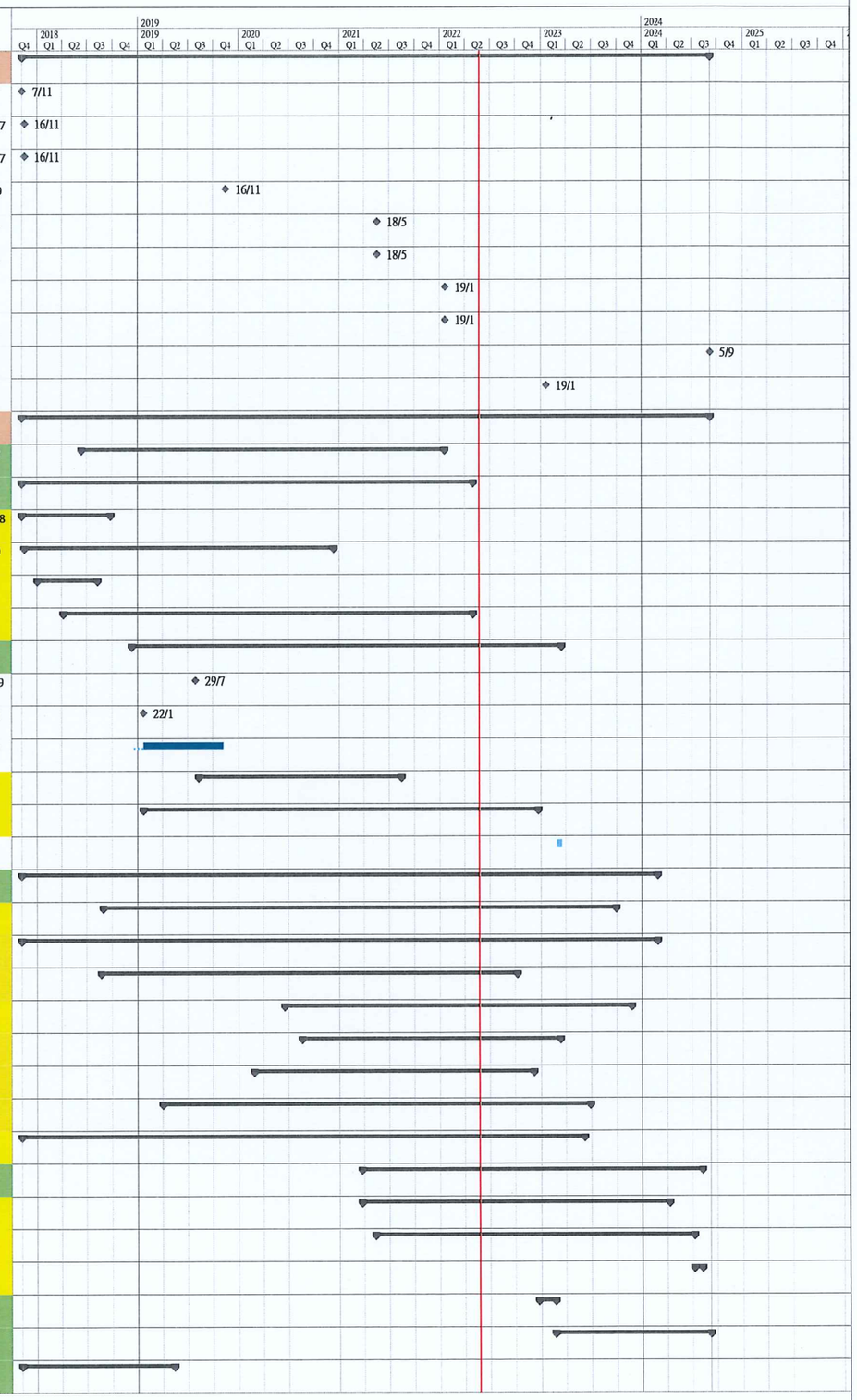
Project: Mainlaying in Tseung Kwan O

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



Working Programme No. 15
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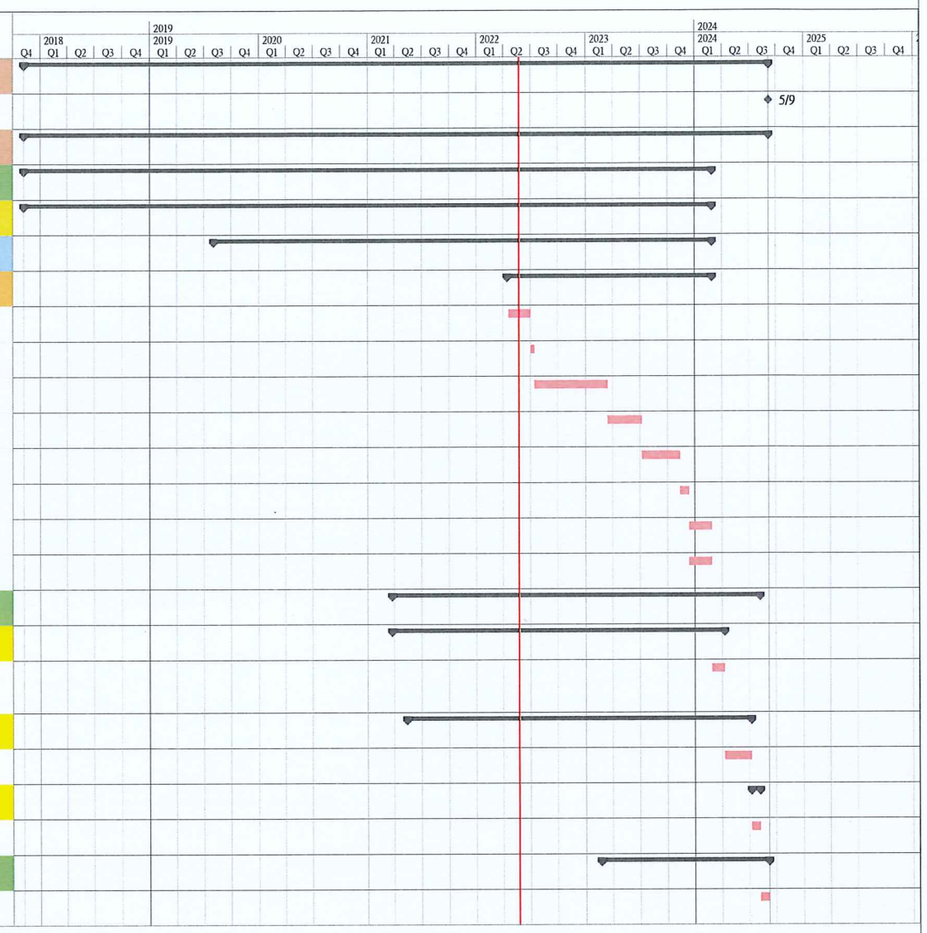
Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

Project: Mainlaying in Tseung Kwan O

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



Working Programme No. 15
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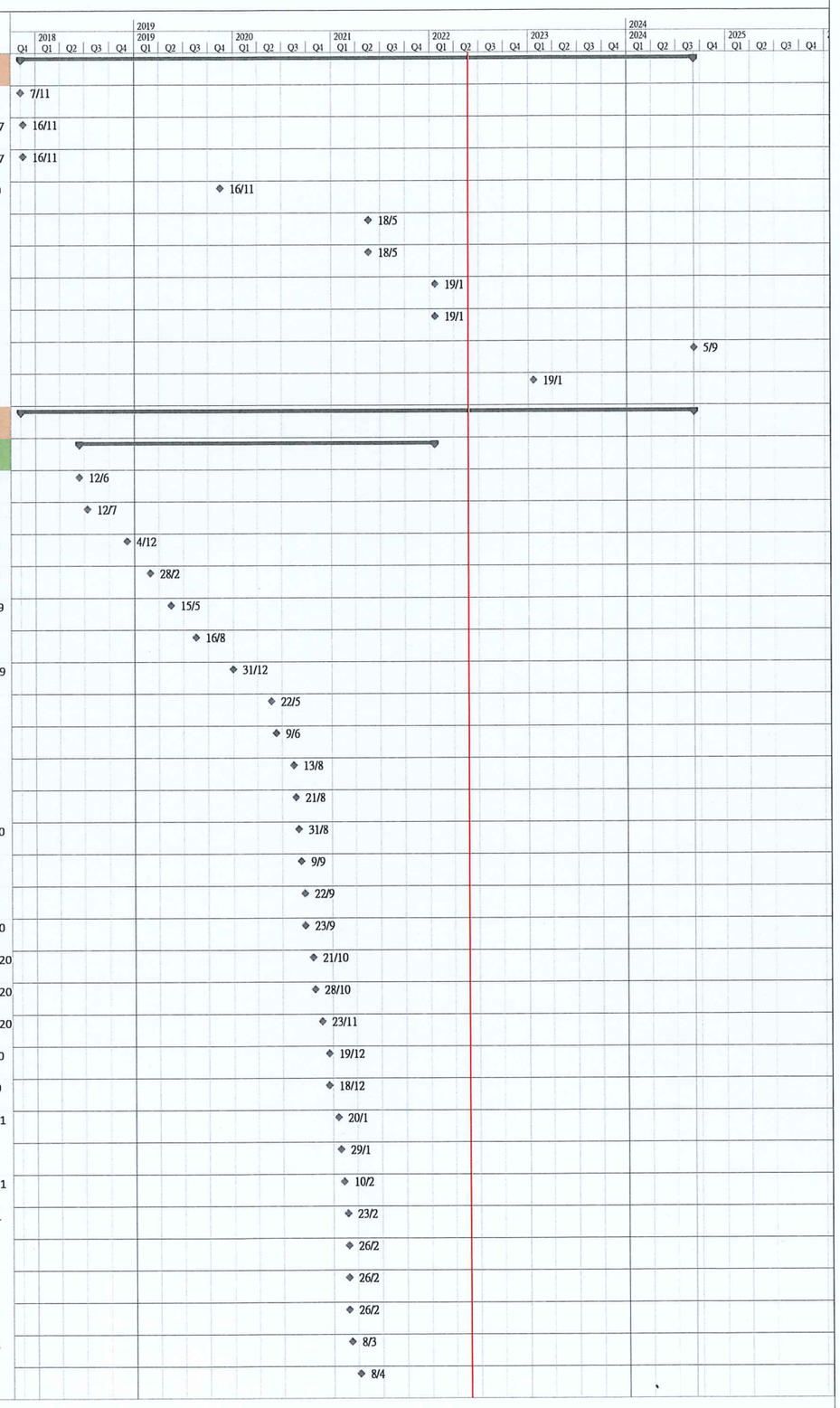
Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

Project: Mainlaying in Tseung Kwan O

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



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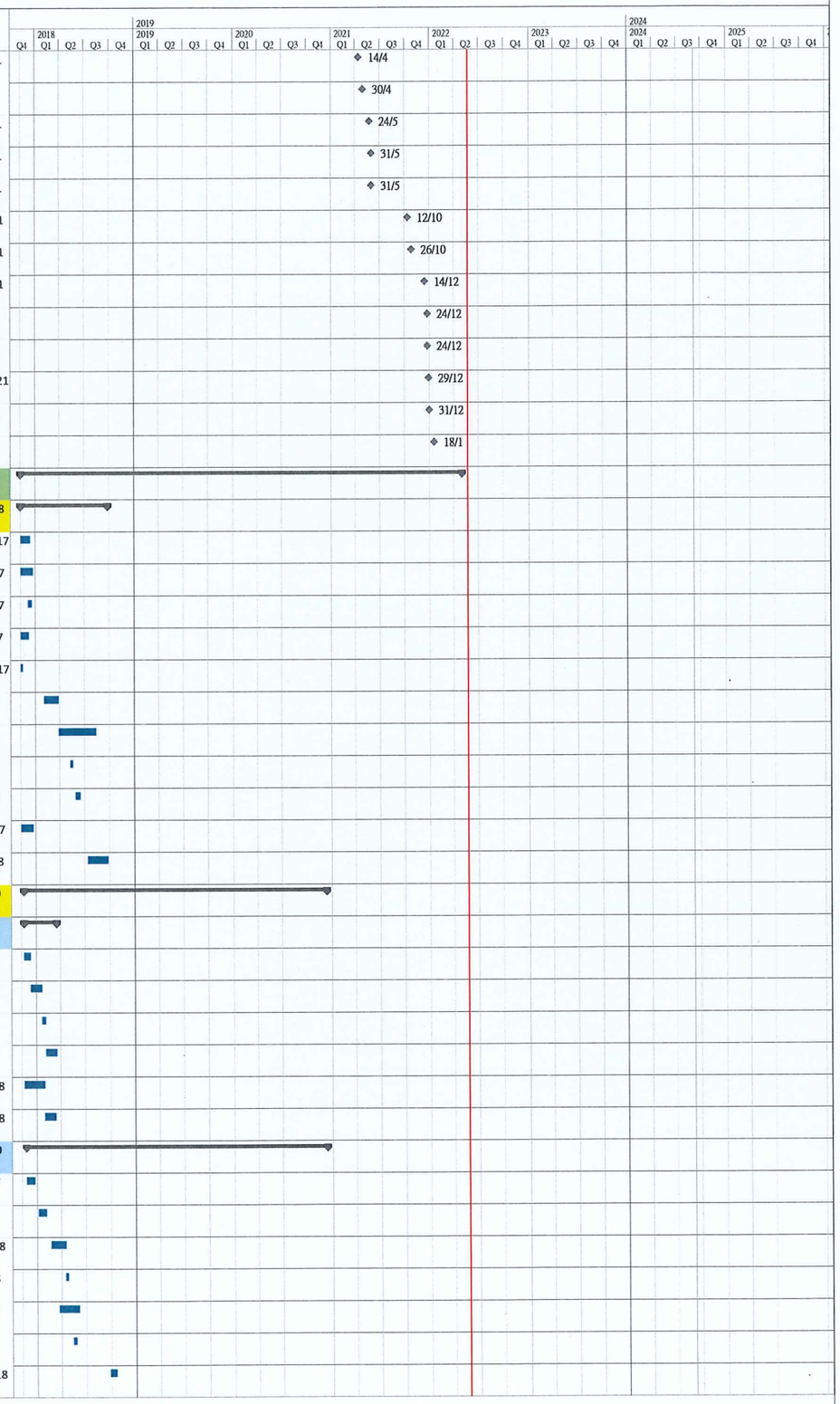
Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
43	Issue CE No. 112 - Works Delayed in Portion H due to COVID-19	0 days	Wed 14/4/21	Wed 14/4/21	Calendar Day			100%	Wed 14/4/21	Wed 14/4/21
44	Issue CE No. 113 - Special Cleaning of Workfronts from CH.A0+00 to CH.A13+70 at Wan Po Road	0 days	Fri 30/4/21	Fri 30/4/21	Calendar Day			100%	Fri 30/4/21	Fri 30/4/21
45	Issue CE No. 116 - Special Mosquito and Biting Midges Prevention Measures from CH.FB0+00 to Ch.FB5+34 and Ch.FC0+0 0to FC13+26 along TKO South Waterfront	0 days	Mon 24/5/21	Mon 24/5/21	Calendar Day			100%	Mon 24/5/21	Mon 24/5/21
46	Issue CE No. 119 - Professional Indemnity Insurance for the Conforming Designs unde CE No.55, 62 and 77	0 days	Mon 31/5/21	Mon 31/5/21	Calendar Day			100%	Mon 31/5/21	Mon 31/5/21
47	Issue CE No. 120 - Left-in Sheet Pile for Manual Excavation in Po Lam Road at CH.HA6+55	0 days	Mon 31/5/21	Mon 31/5/21	Calendar Day			100%	Mon 31/5/21	Mon 31/5/21
48	Issue CE No. 127 - Manual Excavation under Unexpectedly long and contonuous extent of UU obstruction in Wan Po Road at CH. A0+88	0 days	Tue 12/10/21	Tue 12/10/21	Calendar Day			100%	Tue 12/10/21	Tue 12/10/21
49	Issue CE No. 129 - Special Cleaning of Workfronts from CH.HA0+00 to CH.A13+70 at Wan po Road in Sep 2021	0 days	Tue 26/10/21	Tue 26/10/21	Calendar Day			100%	Tue 26/10/21	Tue 26/10/21
50	Issue CE No. 100 - Additional Mainlaying Works at Ling Hong Road and HK Velodrome	0 days	Tue 14/12/21	Tue 14/12/21	Calendar Day			100%	Tue 14/12/21	Tue 14/12/21
51	Issue CE No. 131 - Additional Traffic Court and Analysis for TTA Application	0 days	Fri 24/12/21	Fri 24/12/21	Calendar Day			100%	Fri 24/12/21	Fri 24/12/21
52	Issue CE No. 138 - Additional Inspection Pits for Realignment of DN800 Water Main in TKOFWPSR	0 days	Fri 24/12/21	Fri 24/12/21	Calendar Day			100%	Fri 24/12/21	Fri 24/12/21
53	Issue CE No. 141 - Provision of Suitable land Transport for Site Supervision in Tseung Kwan O Area 137 (Dec 2021 - Sept 2022)	0 days	Wed 29/12/21	Wed 29/12/21	Calendar Day			100%	Wed 29/12/21	Wed 29/12/21
54	Issue CE No. 136 - Additional Resurfacing Works at Wan Po Road Near TKO Area 137	0 days	Fri 31/12/21	Fri 31/12/21	Calendar Day			100%	Fri 31/12/21	Fri 31/12/21
55	Issue CE No. 57 - Realignment of Water Main by Trenchless Method in SENTX Portion in TKO Area 137	0 days	Tue 18/1/22	Tue 18/1/22	Calendar Day		125FF	100%	Tue 18/1/22	Tue 18/1/22
56	**Preliminaries**	**1636 days**	**Tue 7/11/17**	**Sat 30/4/22**	**Calendar Day**			**100%**	**Tue 7/11/17**	**Sat 30/4/22**
57	**Submission and Permit Application**	**322 days**	**Tue 7/11/17**	**Mon 24/9/18**	**Calendar Day**			**100%**	**Tue 7/11/17**	**Mon 24/9/18**
58	Submission of Safety Plan	35 days	Tue 7/11/17	Mon 11/12/17	Calendar Day	2		100%	Tue 7/11/17	Mon 11/12/17
59	Submission of Site Management Plan and Trip Ticket	45 days	Tue 7/11/17	Thu 21/12/17	Calendar Day	2		100%	Tue 7/11/17	Thu 21/12/17
60	Submission of Key People	14 days	Mon 4/12/17	Sun 17/12/17	Calendar Day	2FS+27 days		100%	Mon 4/12/17	Sun 17/12/17
61	Submission of Subcontractor Management Plan	30 days	Tue 7/11/17	Wed 6/12/17	Calendar Day	2		100%	Tue 7/11/17	Wed 6/12/17
62	Submission of First Programme	7 days	Tue 7/11/17	Mon 13/11/17	Calendar Day	2		100%	Tue 7/11/17	Mon 13/11/17
63	Submission of Pipe Material (PN16)	54 days	Thu 1/2/18	Tue 27/3/18	Calendar Day	4	64	100%	Thu 1/2/18	Tue 27/3/18
64	Approval of Pipe material submission (PN16)	137 days	Wed 28/3/18	Sat 11/8/18	Calendar Day	63	92SS+7 days	100%	Wed 28/3/18	Sat 11/8/18
65	Appointment of Environmental Team	10 days	Wed 9/5/18	Fri 18/5/18	Calendar Day	81	66	100%	Wed 9/5/18	Fri 18/5/18
66	Environmental Baseline Monitoring	17 days	Tue 29/5/18	Thu 14/6/18	Calendar Day	65		100%	Tue 29/5/18	Thu 14/6/18
67	Submission of Environmental Management Plan	45 days	Tue 7/11/17	Thu 21/12/17	Calendar Day	2		100%	Tue 7/11/17	Thu 21/12/17
68	Submission & Approval of CE01 Pipe Material PN25	75 days	Thu 12/7/18	Mon 24/9/18	Calendar Day	14,15	96	100%	Thu 12/7/18	Mon 24/9/18
69	**Subcontracting**	**1122 days**	**Thu 16/11/17**	**Fri 11/12/20**	**Calendar Day**			**100%**	**Thu 16/11/17**	**Fri 11/12/20**
70	**Submission and Approval**	**122 days**	**Thu 16/11/17**	**Sat 17/3/18**	**Calendar Day**			**100%**	**Thu 16/11/17**	**Sat 17/3/18**
71	Submission of sub-contractor selection procedure	24 days	Thu 16/11/17	Sat 9/12/17	Calendar Day	4	72	100%	Thu 16/11/17	Sat 9/12/17
72	Approval of sub-contractor selection procedure	42 days	Sun 10/12/17	Sat 20/1/18	Calendar Day	71	87,82,83FS+10 days,86	100%	Sun 10/12/17	Sat 20/1/18
73	Submission of Sub-contractor Condition	14 days	Sun 21/1/18	Sat 3/2/18	Calendar Day	4	74	100%	Sun 21/1/18	Sat 3/2/18
74	Approval of Sub-contractor Condition	42 days	Sun 4/2/18	Sat 17/3/18	Calendar Day	73	87,82,83FS+10 days,86	100%	Sun 4/2/18	Sat 17/3/18
75	Submission of Supplier Selection Procedure	75 days	Thu 16/11/17	Mon 29/1/18	Calendar Day	4	76	100%	Thu 16/11/17	Mon 29/1/18
76	Approval of Supplier Selection Procedure	42 days	Tue 30/1/18	Mon 12/3/18	Calendar Day	75	92	100%	Tue 30/1/18	Mon 12/3/18
77	**Subcontractor Selection and Subcontracting**	**1115 days**	**Thu 23/11/17**	**Fri 11/12/20**	**Calendar Day**			**100%**	**Thu 23/11/17**	**Fri 11/12/20**
78	Traffic Consultant for Investigation Works	30 days	Thu 23/11/17	Fri 22/12/17	Calendar Day	4		100%	Thu 23/11/17	Fri 22/12/17
79	Consultancy: Landscape for Investigation works	30 days	Fri 5/1/18	Sat 3/2/18	Calendar Day	4	250	100%	Fri 5/1/18	Sat 3/2/18
80	Consultancy: Traffic consultant	55 days	Wed 21/2/18	Mon 16/4/18	Calendar Day			100%	Wed 21/2/18	Mon 16/4/18
81	Environmental Team	9 days	Mon 16/4/18	Tue 24/4/18	Calendar Day		65	100%	Mon 16/4/18	Tue 24/4/18
82	Temporary site office, hoarding & project sign board	75 days	Thu 22/3/18	Mon 4/6/18	Calendar Day	74,72	89FS+13 days	100%	Thu 22/3/18	Mon 4/6/18
83	Consultancy: Independent Checking Engineer	12 days	Mon 14/5/18	Fri 25/5/18	Calendar Day	72FS+10 days,74FS+10 days		100%	Mon 14/5/18	Fri 25/5/18
84	Survey Services	23 days	Wed 26/9/18	Thu 18/10/18	Calendar Day			100%	Wed 26/9/18	Thu 18/10/18



Working Programme No. 15
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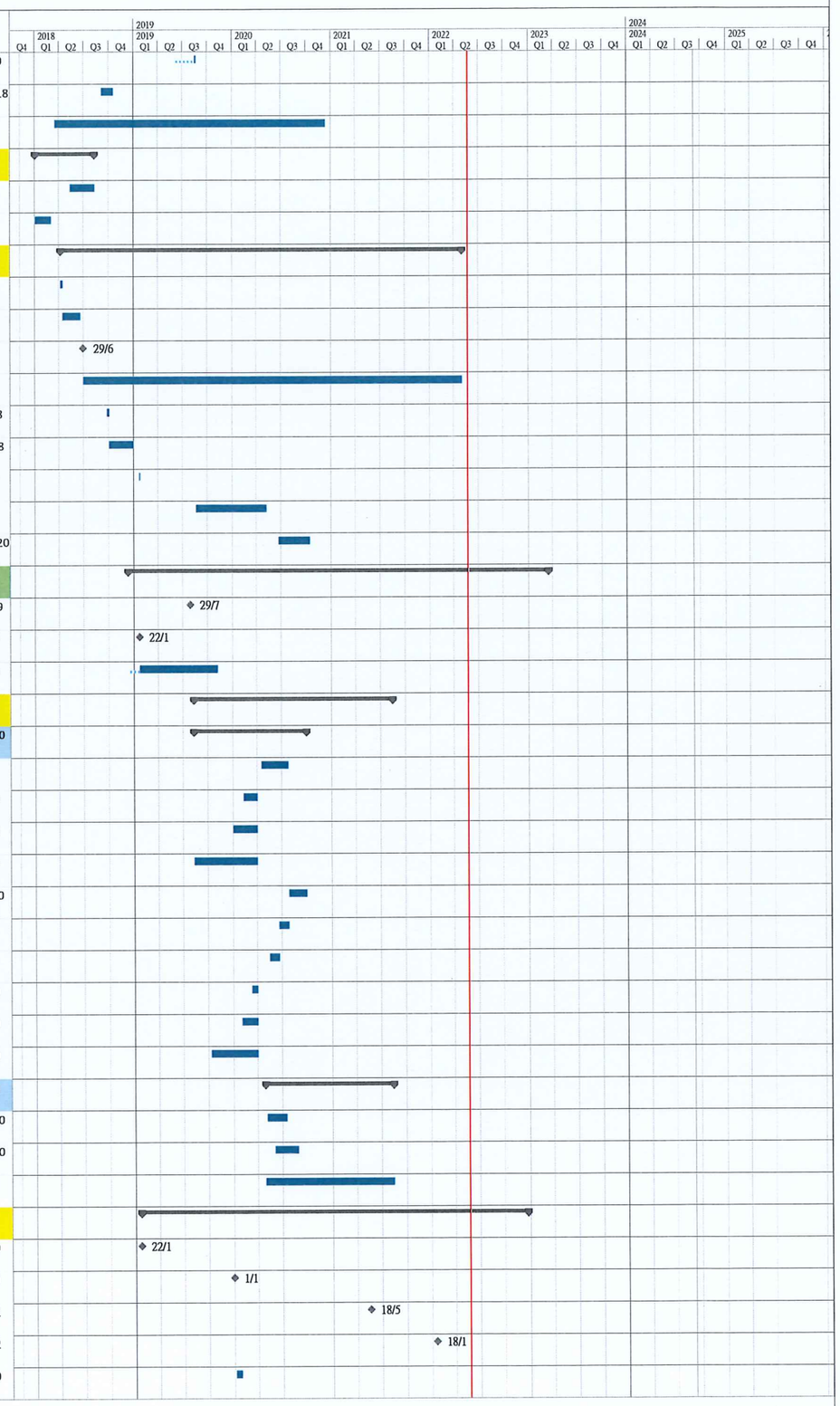
Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
85	Sacrificial Anode Cathodic Protection (SACP)	82 days	Thu 30/5/19	Mon 19/8/19	Calendar Day	19	99	100%	Thu 30/5/19	Mon 19/8/19
86	Landscaping Works	42 days	Thu 6/9/18	Wed 17/10/18	Calendar Day	72,74		100%	Thu 6/9/18	Wed 17/10/18
87	Miscellaneous	1000 days	Sun 18/3/18	Fri 11/12/20	Calendar Day	74,72		100%	Sun 18/3/18	Fri 11/12/20
88	**Site Establishment**	**220 days**	**Tue 2/1/18**	**Thu 9/8/18**	**Calendar Day**			**100%**	**Tue 2/1/18**	**Thu 9/8/18**
89	Setting up PM's and Contractor Accommodation	90 days	Sat 12/5/18	Thu 9/8/18	Calendar Day	82FS+13 days		100%	Sat 12/5/18	Thu 9/8/18
90	Initial Survey of the Site	60 days	Tue 2/1/18	Fri 2/3/18	Calendar Day	4		100%	Tue 2/1/18	Fri 2/3/18
91	**Procurement of Major Material**	**1485 days**	**Sat 7/4/18**	**Sat 30/4/22**	**Calendar Day**			**100%**	**Sat 7/4/18**	**Sat 30/4/22**
92	Preparation of Purchase Order	7 days	Sat 7/4/18	Fri 13/4/18	Calendar Day	64SS+7 days,76	93	100%	Sat 7/4/18	Fri 13/4/18
93	1st Batch of Material Delivery	65 days	Sat 14/4/18	Sun 17/6/18	Calendar Day	92	94	100%	Sat 14/4/18	Sun 17/6/18
94	1st Batch of Material Delivery on site	0 days	Fri 29/6/18	Fri 29/6/18	Calendar Day	93	95	100%	Fri 29/6/18	Fri 29/6/18
95	Material Delivery by Batches	1401 days	Sat 30/6/18	Sat 30/4/22	Calendar Day	94		100%	Sat 30/6/18	Sat 30/4/22
96	Preparation of CE01 Purchase Order	7 days	Tue 25/9/18	Mon 1/10/18	Calendar Day	68	97	100%	Tue 25/9/18	Mon 1/10/18
97	1st Batch of CE01 Material Delivery	90 days	Tue 2/10/18	Sun 30/12/18	Calendar Day	96	98	100%	Tue 2/10/18	Sun 30/12/18
98	1st Batch of CE01 Material Delivery on site	1 day	Tue 22/1/19	Tue 22/1/19	Calendar Day	97		100%	Tue 22/1/19	Tue 22/1/19
99	SCAP Material Submission and Approval	261 days	Tue 20/8/19	Wed 6/5/20	Calendar Day	85	100	100%	Tue 20/8/19	Wed 6/5/20
100	SCAP Purchase Order & Material Delivery	115 days	Mon 22/6/20	Wed 14/10/20	Calendar Day	99		100%	Mon 22/6/20	Wed 14/10/20
101	**Mainlaying in Tseung Kwan O Area 137 (Portion H)**	**1260 days**	**Tue 11/12/18**	**Wed 15/3/23**	**HK Working Day**			**92%**	**Tue 11/12/18**	**NA**
102	Early Possession of Portion H	0 days	Mon 29/7/19	Mon 29/7/19	Calendar Day			100%	Mon 29/7/19	Mon 29/7/19
103	Issue Date of CE No. 07 -Water Supply to No. TKO Desalination Plant at Portion H (NS250 HDPE Pipe)	0 days	Tue 22/1/19	Tue 22/1/19	Calendar Day		104	100%	Tue 22/1/19	Tue 22/1/19
104	Material Procurement and Delivery in Batches	330 days	Tue 11/12/18	Tue 5/11/19	Calendar Day	103		100%	Tue 11/12/18	Tue 5/11/19
105	**Open Cut Excavation, Pipe Laying and Reinstatement at TKO Area 137**	**597 days**	**Sat 10/8/19**	**Sat 14/8/21**	**HK Working Day**		**761**	**100%**	**Sat 10/8/19**	**Sat 14/8/21**
106	**DN1200 MS PIPE + NS250 HDPE PIPE - Open Cut**	**341 days**	**Sat 10/8/19**	**Wed 30/9/20**	**HK Working Day**			**100%**	**Sat 10/8/19**	**Wed 30/9/20**
107	CH.CT1+51 - CH.265 DN1200 MS Pipe OC	82 days	Thu 16/4/20	Fri 24/7/20	None			100%	Thu 16/4/20	Fri 24/7/20
108	CH.CT0+51 - CH.1+51 DN1200 MS Pipe OC	44 days	Mon 10/2/20	Tue 31/3/20	HK Working Day			100%	Mon 10/2/20	Tue 31/3/20
109	CH.CT0+00 - CH.0+51 DN1200 MS Pipe OC	74 days	Thu 2/1/20	Tue 31/3/20	HK Working Day			100%	Thu 2/1/20	Tue 31/3/20
110	CH.CA0+00 - CH.4+00 DN1200 MS Pipe OC	192 days	Sat 10/8/19	Tue 31/3/20	HK Working Day	5		100%	Sat 10/8/19	Tue 31/3/20
111	CH.KT2+80 - CH.3+60 NS250 HDPE Pipe OC with additional Tees and fire Hydrant	56 days	Tue 28/7/20	Wed 30/9/20	HK Working Day			100%	Tue 28/7/20	Wed 30/9/20
112	CH.KT2+23 - CH.2+80 NS250 HDPE Pipe OC	29 days	Sat 20/6/20	Sat 25/7/20	HK Working Day			100%	Sat 20/6/20	Sat 25/7/20
113	CH.KT1+51 - CH.2+23 NS250 HDPE Pipe OC	31 days	Sat 16/5/20	Sat 20/6/20	HK Working Day			100%	Sat 16/5/20	Sat 20/6/20
114	CH.KT0+51 - CH.1+51 NS250 HDPE Pipe OC	19 days	Tue 10/3/20	Tue 31/3/20	HK Working Day			100%	Tue 10/3/20	Tue 31/3/20
115	CH.KT0+00 - CH.0+51 NS250 HDPE Pipe OC	50 days	Sun 2/2/20	Tue 31/3/20	HK Working Day			100%	Sun 2/2/20	Tue 31/3/20
116	CH.KA0+00 - CH.4+00 NS250 HDPE Pipe OC	143 days	Thu 10/10/19	Tue 31/3/20	HK Working Day			100%	Thu 10/10/19	Tue 31/3/20
117	**Construction of Chambers**	**385 days**	**Wed 29/4/20**	**Sat 14/8/21**	**HK Working Day**			**100%**	**Wed 29/4/20**	**Sat 14/8/21**
118	Combined DAV & IT Chamber for DN1200 MS pipe at CH.CT2+47	60 days	Tue 5/5/20	Wed 15/7/20	HK Working Day			100%	Tue 5/5/20	Wed 15/7/20
119	Combined Washout Pump Pit for DN1200 MS pipe and NS250 HDPE pipe at CH.CT2+43	71 days	Wed 3/6/20	Wed 26/8/20	HK Working Day			100%	Wed 3/6/20	Wed 26/8/20
120	DN900 Valve Chamber with by-pass pipes at CH.CA4+24	385 days	Wed 29/4/20	Sat 14/8/21	HK Working Day			100%	Wed 29/4/20	Sat 14/8/21
121	**Trenchless Works (DN1200 MS PIPE + NS250 HDPE PIPE) at TKO Area 137**	**1162 days**	**Tue 22/1/19**	**Thu 22/12/22**	**HK Working Day**		**784,762**	**83%**	**Tue 22/1/19**	**NA**
122	Issue CE No. 07 - Water Supply to Tseung Kwan O Desalination Plant at Portion 'H'	0 days	Tue 22/1/19	Tue 22/1/19	Calendar Day			100%	Tue 22/1/19	Tue 22/1/19
123	Issue CE No. 17 - Realignment of Water Main by Trenchless Method in TKO Area 137	0 days	Wed 1/1/20	Wed 1/1/20	Calendar Day			100%	Wed 1/1/20	Wed 1/1/20
124	Issue CE No. 118 - Non-destructive Void detection survey in Tseung Kwan O Area 137 between 137 Pit A and 137 Pit B	0 days	Tue 18/5/21	Tue 18/5/21	Calendar Day			100%	Tue 18/5/21	Tue 18/5/21
125	Issue CE No. 57 - Realignment of Water Main by Trenchless Method in SENTX Portion in TKO Area 137	0 days	Tue 18/1/22	Tue 18/1/22	Calendar Day	55FF	129	100%	Tue 18/1/22	Tue 18/1/22
126	Tendering & Approval	21 days	Mon 6/1/20	Sun 26/1/20	Calendar Day			100%	Mon 6/1/20	Sun 26/1/20



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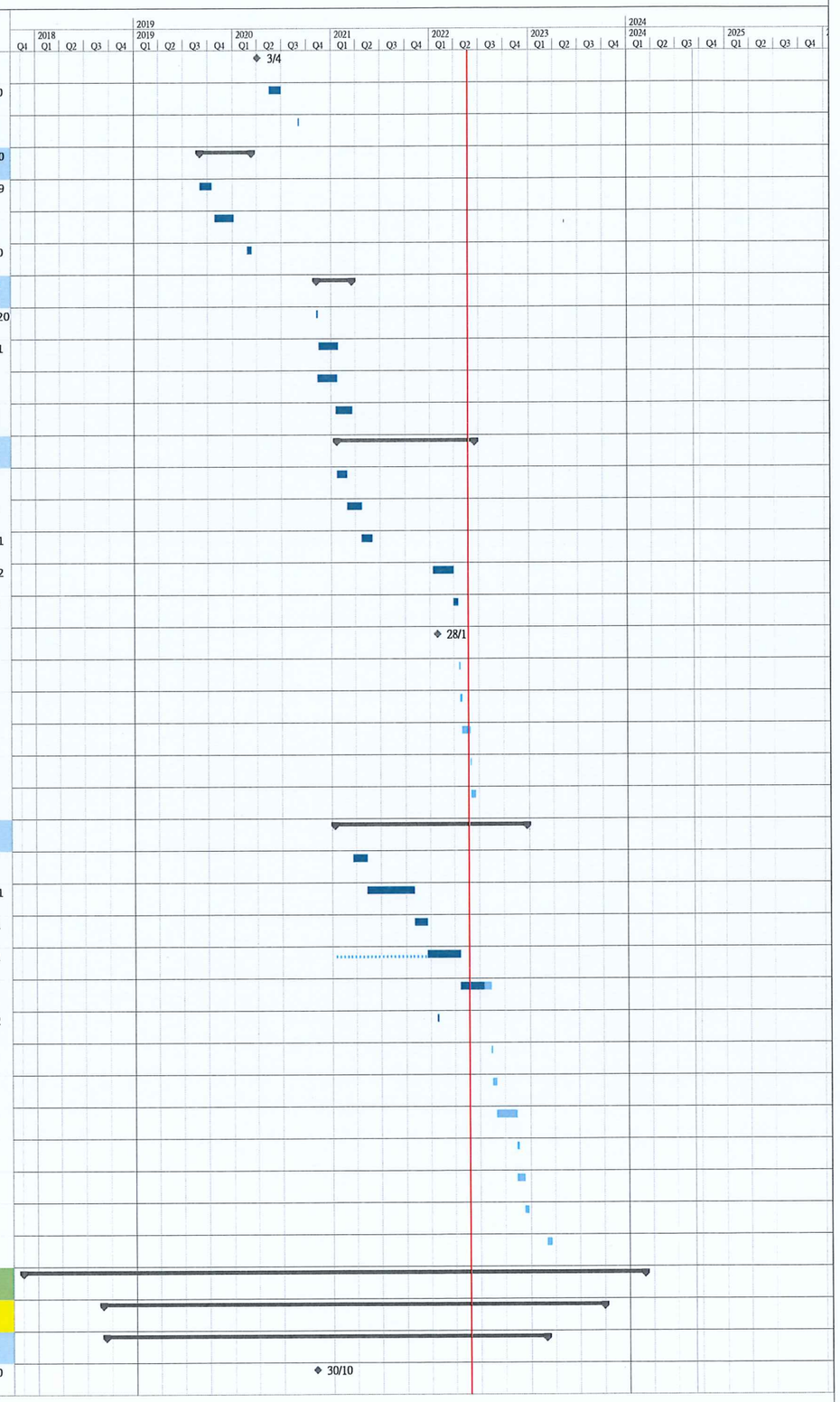
Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual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

Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
127	WSD instructed to retender	0 days	Fri 3/4/20	Fri 3/4/20	Calendar Day		128	100%	Fri 3/4/20	Fri 3/4/20
128	Retendering, Review & Approval	43 days	Mon 18/5/20	Mon 29/6/20	Calendar Day	127	129	100%	Mon 18/5/20	Mon 29/6/20
129	Issue LOA	1 day	Thu 3/9/20	Thu 3/9/20	Calendar Day	128,125	135	100%	Thu 3/9/20	Thu 3/9/20
130	**Trial Pit Excavation for Trenchless Works at TKO Area 137**	**156 days**	**Mon 2/9/19**	**Wed 11/3/20**	**HK Working Day**			**100%**	**Mon 2/9/19**	**Wed 11/3/20**
131	Pit 137A	35 days	Mon 2/9/19	Tue 15/10/19	HK Working Day			100%	Mon 2/9/19	Tue 15/10/19
132	Pit 137B	57 days	Mon 28/10/19	Sat 4/1/20	HK Working Day			100%	Mon 28/10/19	Sat 4/1/20
133	Pit 137C	14 days	Tue 25/2/20	Wed 11/3/20	HK Working Day			100%	Tue 25/2/20	Wed 11/3/20
134	**Construction of jacking / Receiving Pits**	**106 days**	**Mon 9/11/20**	**Thu 18/3/21**	**HK Working Day**			**100%**	**Mon 9/11/20**	**Thu 18/3/21**
135	Mobilization and Setup & Preliminary Works	3 days	Mon 9/11/20	Wed 11/11/20	Calendar Day	129	136,137,138	100%	Mon 9/11/20	Wed 11/11/20
136	Receiving Pit 137A (Renopipe)	58 days	Mon 16/11/20	Mon 25/1/21	HK Working Day	135	141FF-30 days	100%	Mon 16/11/20	Mon 25/1/21
137	Jacking Pit 137B (Renopipe)	59 days	Thu 12/11/20	Fri 22/1/21	HK Working Day	135	140	100%	Thu 12/11/20	Fri 22/1/21
138	Receiving Pit 137C (Renopipe)	49 days	Mon 18/1/21	Thu 18/3/21	HK Working Day	135	152	100%	Mon 18/1/21	Thu 18/3/21
139	**TBM Pipe Jacking From Pit 137B to Pit 137A**	**410 days**	**Fri 22/1/21**	**Wed 15/6/22**	**HK Working Day**		**170**	**79%**	**Fri 22/1/21**	**NA**
140	Establishment at Pit 137B	29 days	Fri 22/1/21	Sat 27/2/21	HK Working Day	137	141	100%	Fri 22/1/21	Sat 27/2/21
141	O WPR920 Steel Sleeve Pipe for both DN1200 & NS250 (Pit 137B - Pit 137A) (CH.CC0+10 to CH.CC.1+24) in Soil mixed with rubbish (114m; 3m/day)	42 days	Mon 1/3/21	Thu 22/4/21	HK Working Day	140,136FF-30 days	142	100%	Mon 1/3/21	Thu 22/4/21
142	Grouting and Remove setup at Pit 137A & Pit 137B	31 days	Fri 23/4/21	Mon 31/5/21	HK Working Day	141	143	100%	Fri 23/4/21	Mon 31/5/21
143	Setup for Pipe Laying inside jacking Pits 137B to Pit 137A	62 days	Wed 12/1/22	Mon 28/3/22	HK Working Day	154,142	145	100%	Wed 12/1/22	Mon 28/3/22
144	DN1200 MS Pipe Laying inside jacking pipe (114m) (8m per 3 day)	14 days	Tue 29/3/22	Thu 14/4/22	HK Working Day	145	146	100%	Tue 29/3/22	Thu 14/4/22
145	NS250 HDPE Pipe Laying inside jacking pipe (114m) (8m per day)	0 days	Fri 28/1/22	Fri 28/1/22	HK Working Day	143	144	100%	Fri 28/1/22	Fri 28/1/22
146	Formwork & Setup for Grouting the gap between pipe and Sleeve	3 days	Tue 19/4/22	Thu 21/4/22	HK Working Day	144	147	0%	NA	NA
147	Grouting Works (20 meter/day)	6 days	Fri 22/4/22	Thu 28/4/22	HK Working Day	146	148	0%	NA	NA
148	Pipe Laying (HB, BVB, Short Pipe), Thrust Block & backfilling inside Pit 137A	24 days	Fri 29/4/22	Sat 28/5/22	HK Working Day	147	149	0%	NA	NA
149	Remove ELS and Extract Sheetpile at Pit 137A	2 days	Mon 30/5/22	Tue 31/5/22	HK Working Day	148	150	0%	NA	NA
150	Pipe Laying (DN1200 MS Pipe & NS250 HDPE Pipe) From Pit 137A to CH.CC1+38 & KC1+38	12 days	Wed 1/6/22	Wed 15/6/22	HK Working Day	149		0%	NA	NA
151	**TBM Pipe Jacking From Pit 137B to Pit 137C**	**578 days**	**Tue 12/1/21**	**Thu 22/12/22**	**HK Working Day**			**74%**	**Tue 12/1/21**	**NA**
152	Revised Establishment at Pit 137B	39 days	Fri 19/3/21	Sat 8/5/21	HK Working Day	138	153	100%	Fri 19/3/21	Sat 8/5/21
153	O WPR920 Steel Sleeve Pipe for both DN1200 & NS250 (Pit 137C - Pit 137B) (CH.CB0+00 to CH.CB.2+46) in Soil mixed rubbish (246m; 1.5m/day) include 49 days	144 days	Sun 9/5/21	Sat 30/10/21	HK Working Day	152	154	100%	Sun 9/5/21	Sat 30/10/21
154	Grouting, Remove setup at Pit 137C and Pit 137B	41 days	Mon 1/11/21	Fri 17/12/21	HK Working Day	153	155,143	100%	Mon 1/11/21	Fri 17/12/21
155	Setup for Pipe Laying inside jacking Pit 137B to Pit 137C	95 days	Tue 12/1/21	Tue 19/4/22	HK Working Day	154	157	100%	Tue 12/1/21	Tue 19/4/22
156	DN1200 MS Pipe Laying inside jacking pipe (246m) (3 days per 8m)	93 days	Wed 20/4/22	Wed 10/8/22	HK Working Day	157	158	75%	Wed 20/4/22	NA
157	NS250 HDPE Pipe Laying inside jacking pipe (246m) (8m per day)	4 days	Sat 22/1/22	Thu 27/1/22	HK Working Day	155	156	100%	Sat 22/1/22	Thu 27/1/22
158	Formwork & Setup for Grouting the gap between pipe and Sleeve	3 days	Thu 11/8/22	Sat 13/8/22	HK Working Day	156	159	0%	NA	NA
159	Grouting Works (20 meter/day)	13 days	Mon 15/8/22	Mon 29/8/22	HK Working Day	158	160	0%	NA	NA
160	Construction of Combined Inspection and Washout Chamber (Type III) at Pit 137C	60 days	Tue 30/8/22	Thu 10/11/22	HK Working Day	159	162,161	0%	NA	NA
161	Pipe Connection Inside Pit 137C	6 days	Fri 11/11/22	Thu 17/11/22	HK Working Day	160		0%	NA	NA
162	Pipe Laying (HB, BVB, Short Pipe), Thrust Block & backfilling inside Pit 137C	24 days	Fri 11/11/22	Thu 8/12/22	HK Working Day	160	163	0%	NA	NA
163	Remove ELS and Remove ELS and Extract Sheetpile at Pit 137C	12 days	Fri 9/12/22	Thu 22/12/22	HK Working Day	162		0%	NA	NA
164	Final Connection of NS250 HDPE Pipe to Existing at Wan Po Road	14 days	Tue 28/2/23	Wed 15/3/23	HK Working Day	788		0%	NA	NA
165	**Mainlaying From Boundary of Tseung Kwan O Area 137 to TKO Fresh Water Service Reservoir (Portion I)**	**1866 days**	**Tue 7/11/17**	**Mon 26/2/24**	**HK Working Day**			**74%**	**Tue 7/11/17**	**NA**
166	**Open Cut Excavation, Pipe Laying and Reinstatement at Wan Po Road**	**1506 days**	**Thu 30/8/18**	**Thu 28/9/23**	**HK Working Day**			**81%**	**Thu 30/8/18**	**NA**
167	**Open Cut CH.A0+00 to CH.A3+62 (Pit 1)**	**1321 days**	**Mon 10/9/18**	**Sat 25/2/23**	**HK Working Day**		**762**	**88%**	**Mon 10/9/18**	**NA**
168	Issue CE No. 76 - Unchartered Drain Pipe in Wan Po Road between CH.A1+12 and CH.A1+14	0 days	Fri 30/10/20	Fri 30/10/20	Calendar Day			100%	Fri 30/10/20	Fri 30/10/20



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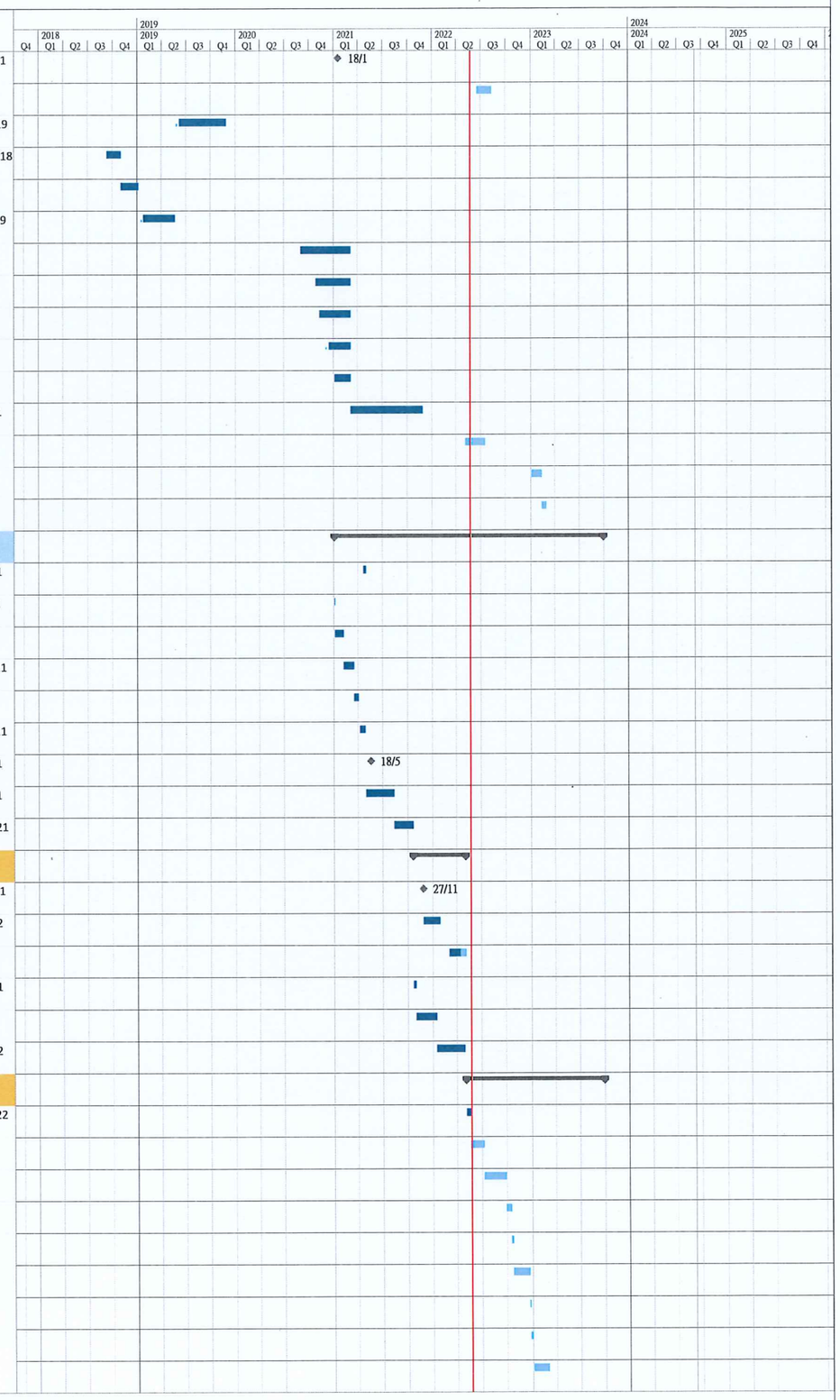
Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
169	Issue CE No. 96 - Diversion of Uncharged Irrigation pipe at CH.A2+34 at Wan Po Road	0 days	Mon 18/1/21	Mon 18/1/21	Calendar Day			100%	Mon 18/1/21	Mon 18/1/21
170	CH.A0+00 - CH.A0+14 OC	45 days	Thu 16/6/22	Mon 8/8/22	HK Working Day	139		0%	NA	NA
171	CH.A0+14 - CH.A0+50 OC	156 days	Thu 23/5/19	Tue 26/11/19	HK Working Day			100%	Thu 23/5/19	Tue 26/11/19
172	CH.A0+50 - CH.A1+50 OC	42 days	Mon 10/9/18	Wed 31/10/18	HK Working Day			100%	Mon 10/9/18	Wed 31/10/18
173	CH.A1+50 - CH.A1+60 OC	53 days	Thu 1/11/18	Fri 4/1/19	HK Working Day			100%	Thu 1/11/18	Fri 4/1/19
174	CH.A1+60 - CH.A2+14 OC	107 days	Sat 5/1/19	Mon 20/5/19	HK Working Day			100%	Sat 5/1/19	Mon 20/5/19
175	CH.A2+14 - CH.A2+30 OC	150 days	Tue 1/9/20	Thu 4/3/21	HK Working Day			100%	Tue 1/9/20	Thu 4/3/21
176	CH.A2+30 - CH.A2+46 OC	105 days	Tue 27/10/20	Thu 4/3/21	HK Working Day			100%	Tue 27/10/20	Thu 4/3/21
177	CH.A2+46 - CH.A2+70 OC	93 days	Tue 10/11/20	Thu 4/3/21	HK Working Day		178	100%	Tue 10/11/20	Thu 4/3/21
178	CH.A2+70 - CH.A2+86 OC	74 days	Wed 2/12/20	Thu 4/3/21	HK Working Day	177		100%	Wed 2/12/20	Thu 4/3/21
179	CH.A2+86 - CH.A2+94 OC	48 days	Tue 5/1/21	Thu 4/3/21	HK Working Day		180	100%	Tue 5/1/21	Thu 4/3/21
180	CH.A2+94 - CH.A3+34.5 OC (Excluding Road reinstatement	218 days	Fri 5/3/21	Fri 26/11/21	HK Working Day	179	195	100%	Fri 5/3/21	Fri 26/11/21
181	CH.A3+34.5 - CH.A3+60 OC with DN150 DAV	60 days	Wed 4/5/22	Fri 15/7/22	HK Working Day	197	182	0%	NA	NA
182	CH.A3+60 and connecting to Pit 1	30 days	Tue 3/1/23	Thu 9/2/23	HK Working Day	209,181	211,183	0%	NA	NA
183	Road reinstatement CH.A2+94 - CH.3+60	14 days	Fri 10/2/23	Sat 25/2/23	HK Working Day	182		0%	NA	NA
184	**Trenchless Works (Pit 1 to Pit 2)**	**811 days**	**Mon 4/1/21**	**Thu 28/9/23**	**HK Working Day**		**762**	**61%**	**Mon 4/1/21**	**NA**
185	Ground Investigation & Drilling Bored Hole at Receiving Pit 1	9 days	Tue 20/4/21	Thu 29/4/21	HK Working Day		192	100%	Tue 20/4/21	Thu 29/4/21
186	Setting out the inspection Pit for Jacking Pit 2	1 day	Mon 4/1/21	Mon 4/1/21	HK Working Day		187	100%	Mon 4/1/21	Mon 4/1/21
187	Mobilization and Excavation of Inspection Pit at Pit 2	28 days	Tue 5/1/21	Fri 5/2/21	HK Working Day	186	188	100%	Tue 5/1/21	Fri 5/2/21
188	Review alternative location for Pit 2 by WSD	29 days	Sat 6/2/21	Mon 15/3/21	HK Working Day	187	189	100%	Sat 6/2/21	Mon 15/3/21
189	Mobilization and excavation of Inspection Pit 2 after relocation	15 days	Tue 16/3/21	Thu 1/4/21	HK Working Day	188	190	100%	Tue 16/3/21	Thu 1/4/21
190	Mobilization; Ground Investigation & Drilling Bored Hole at Receiving Pit 2	17 days	Wed 7/4/21	Mon 26/4/21	HK Working Day	189	192	100%	Wed 7/4/21	Mon 26/4/21
191	Issue EWN no. 405	0 days	Tue 18/5/21	Tue 18/5/21	HK Working Day			100%	Tue 18/5/21	Tue 18/5/21
192	Subletting and Re-Design for Pit 1 & Pit 2 (Changing from conventional sheet piling method to pipe pilling method	84 days	Fri 30/4/21	Tue 10/8/21	HK Working Day	185,190	193	100%	Fri 30/4/21	Tue 10/8/21
193	Tendering, Subletting and Award for Constructing Pit 1 & Pit 2 (Pipe Pilling Method)	57 days	Wed 11/8/21	Tue 19/10/21	HK Working Day	192	198,196	100%	Wed 11/8/21	Tue 19/10/21
194	**Construction of Jacking / Receiving Pits**	**157 days**	**Wed 20/10/21**	**Tue 3/5/22**	**HK Working Day**			**94%**	**Wed 20/10/21**	**NA**
195	Renopipe Release the working area for Luen Hing at Pit 1	0 days	Sat 27/11/21	Sat 27/11/21	HK Working Day	180	196	100%	Sat 27/11/21	Sat 27/11/21
196	Set up and Driving Pipe Piles and Grouting for Pit 1	50 days	Sat 27/11/21	Thu 27/1/22	HK Working Day	195,193	197	100%	Sat 27/11/21	Thu 27/1/22
197	Excavation and ELS installation for Pit 1	48 days	Thu 3/3/22	Tue 3/5/22	HK Working Day	196	208,181	70%	Thu 3/3/22	NA
198	Renopipe Release the working area for Luen Hing TTA Implement at Pit 2	9 days	Wed 20/10/21	Fri 29/10/21	HK Working Day	193	199	100%	Wed 20/10/21	Fri 29/10/21
199	Mobilization, Establishment, Driving Pipe Piles and Grouting for Pit 2	63 days	Sat 30/10/21	Fri 14/1/22	HK Working Day	198	200	100%	Sat 30/10/21	Fri 14/1/22
200	Excavation and ELS installation for Pit 2	82 days	Sat 15/1/22	Thu 28/4/22	HK Working Day	199	203	100%	Sat 15/1/22	Thu 28/4/22
201	**TMB Pipe Jacking Pit 1- Pit 2**	**420 days**	**Wed 4/5/22**	**Thu 28/9/23**	**HK Working Day**			**4%**	**Wed 4/5/22**	**NA**
202	Additional GI Works beside Pit 2	12 days	Wed 4/5/22	Wed 18/5/22	HK Working Day		203	100%	Wed 4/5/22	Wed 18/5/22
203	Mobilization & setup at Pit 2	40 days	Thu 19/5/22	Wed 6/7/22	HK Working Day	200,202	204	0%	NA	NA
204	TBM Jacking Sleeve Pipe (L=138m, 2m/day)	69 days	Thu 7/7/22	Mon 26/9/22	HK Working Day	203	205	0%	NA	NA
205	Grouting and Remove Setup including Thrust Wall	14 days	Tue 27/9/22	Fri 14/10/22	HK Working Day	204	206	0%	NA	NA
206	Setup Guard Rail	6 days	Sat 15/10/22	Fri 21/10/22	HK Working Day	205	207	0%	NA	NA
207	Pipe Laying inside Sleeve Pipe (8m pipe, 3 days per Joint)	51 days	Sat 22/10/22	Tue 20/12/22	HK Working Day	206	208	0%	NA	NA
208	Formwork & Setup for Grouting the Gap between Pipe and Sleeve	3 days	Wed 21/12/22	Fri 23/12/22	HK Working Day	207,197	209	0%	NA	NA
209	Grouting Works (30m/day)	5 days	Sat 24/12/22	Sat 31/12/22	HK Working Day	208	210,182	0%	NA	NA
210	Construction of Combined Inspection and Washout Chamber Type I at Pit 2	45 days	Tue 3/1/23	Mon 27/2/23	HK Working Day	209	217,218,220	0%	NA	NA



Working Programme No. 15
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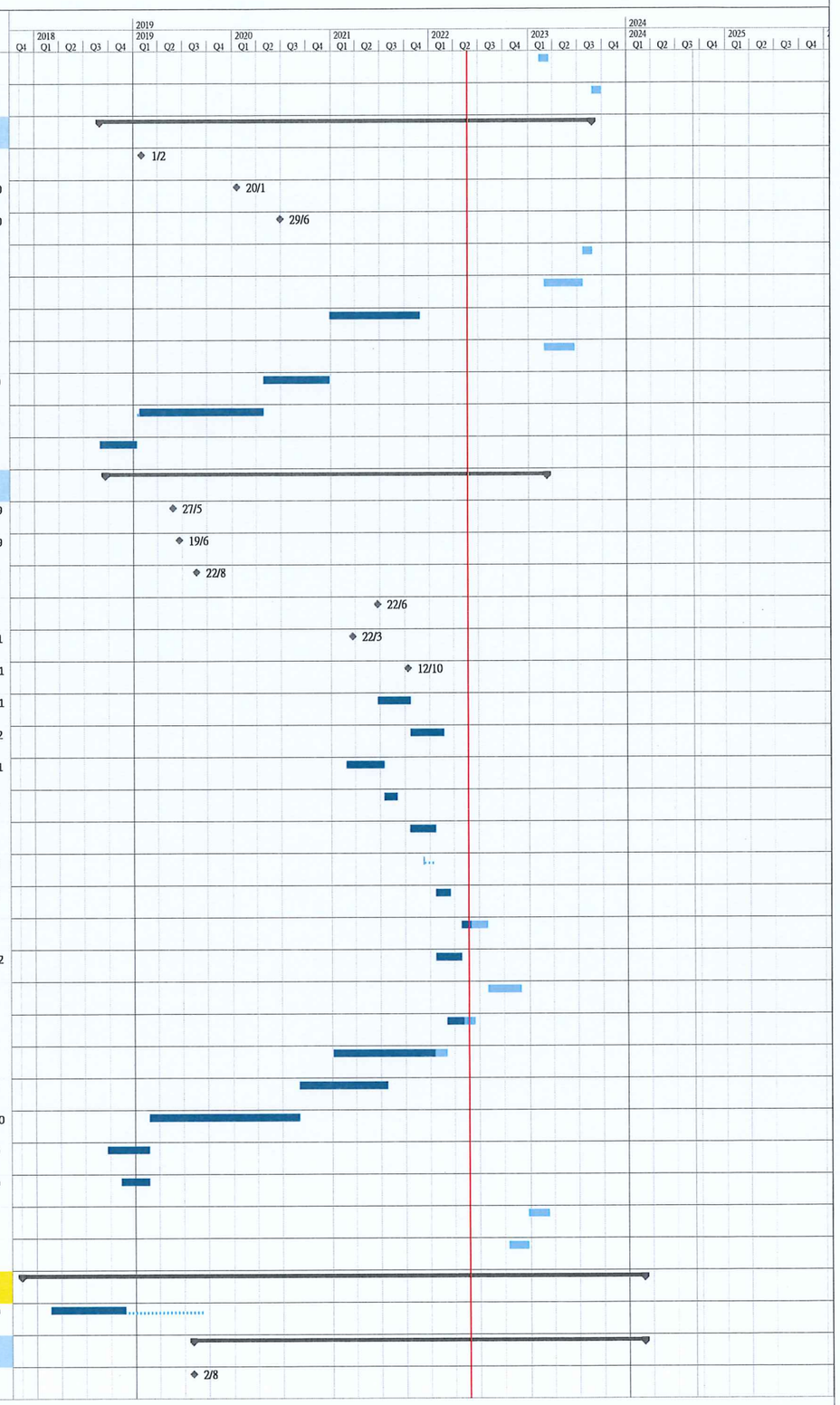
Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
211	Backfill, Remove ELS and Road Reinstatement at Pit 1	30 days	Fri 10/2/23	Thu 16/3/23	HK Working Day	182		0%	NA	NA
212	Backfill, Remove ELS and Road Reinstatement at Pit 2	30 days	Fri 25/8/23	Thu 28/9/23	HK Working Day	217		0%	NA	NA
213	**Open Cut CH.A5+29.5 (Pit 2) to CH.A7+12**	**1476 days**	**Thu 30/8/18**	**Thu 24/8/23**	**HK Working Day**		**762**	**80%**	**Thu 30/8/18**	**NA**
214	Issue CE No. 06 - Unforeseen Underground Condition during Trench Excavation for Mainlaying at Wan Po Road between CH.A6+90 and CH.A7+10	0 days	Fri 1/2/19	Fri 1/2/19	Calendar Day			100%	Fri 1/2/19	Fri 1/2/19
215	Issue CE No. 22 - Instruction to change in Mainlayign Method at Wan Po Road between CH.A6+54 and A6+61	0 days	Mon 20/1/20	Mon 20/1/20	Calendar Day			100%	Mon 20/1/20	Mon 20/1/20
216	Issue CE No. 25 - Unforeseen Underground Conditions during Trench Excavation at Wan Po Road between CH.A6+68 and CH.A6+88	0 days	Mon 29/6/20	Mon 29/6/20	Calendar Day			100%	Mon 29/6/20	Mon 29/6/20
217	CH.A5+16 and Connecting to Pit 2	30 days	Fri 21/7/23	Thu 24/8/23	HK Working Day	210,218	212	0%	NA	NA
218	CH.A5+16 - CH.A5+27 OC with DN900 Valve Chamber	115 days	Tue 28/2/23	Thu 20/7/23	HK Working Day	219,210	217	0%	NA	NA
219	CH.A6+54 - CH.A5+27 OC with SACP (CH.A6+00 - CH.A6+20)	272 days	Mon 28/12/20	Fri 26/11/21	HK Working Day	221	218,220	100%	Mon 28/12/20	Fri 26/11/21
220	Construction of Tee Branch and Monitoting Chamber at CH.A5+35	90 days	Tue 28/2/23	Mon 19/6/23	HK Working Day	210,219		0%	NA	NA
221	CH.A6+20 - CH.A6+54 OC	205 days	Wed 22/4/20	Sat 26/12/20	HK Working Day	222	219	100%	Wed 22/4/20	Sat 26/12/20
222	CH.A6+54 - CH.A6+70 OC + Handshield	378 days	Mon 14/1/19	Sun 26/4/20	HK Working Day		221	100%	Mon 14/1/19	Sun 26/4/20
223	CH.A6+70 - CH.A7+12 OC	111 days	Thu 30/8/18	Sat 12/1/19	HK Working Day		233	100%	Thu 30/8/18	Sat 12/1/19
224	**Open Cut CH.A7+12 to CH.A13+79.5**	**1323 days**	**Wed 19/9/18**	**Thu 9/3/23**	**HK Working Day**		**762,763**	**85%**	**Wed 19/9/18**	**NA**
225	Issue CE No. 18 - Unforeseen Ground Condition at open trench of Mainlaying at Wan Po Road between CH/A12+89 and Ch.A13+04	0 days	Mon 27/5/19	Mon 27/5/19	Calendar Day			100%	Mon 27/5/19	Mon 27/5/19
226	Issue CE No. 20 - Traffic Count and Preliminary Traffic Analysis in Po Lam Road and Tsui Lam Road	0 days	Wed 19/6/19	Wed 19/6/19	Calendar Day			100%	Wed 19/6/19	Wed 19/6/19
227	Issue CE No. 19 - Change in Design of Gate Valve Chamber at Wan Po Road near CH.A12+40	0 days	Thu 22/8/19	Thu 22/8/19	Calendar Day			100%	Thu 22/8/19	Thu 22/8/19
228	Issue CE No. 84 - Realignment of Water main in Wan Po Road Between CH.A7+35 - CH.ACH,A8+30	0 days	Tue 22/6/21	Tue 22/6/21	Calendar Day		231	100%	Tue 22/6/21	Tue 22/6/21
229	Issue CE No. 109 - Manual Excavation under Unexpectedly Long and Continuous Extend of UU obstruction in Wan Po Road at CH.A11+80	0 days	Mon 22/3/21	Mon 22/3/21	Calendar Day			100%	Mon 22/3/21	Mon 22/3/21
230	Issue CE No. 127 - Manual Excavation under Unexpectedly long and contonuous extent of UU obstruction in Wan Po Road at CH. A0+88	0 days	Tue 12/10/21	Tue 12/10/21	Calendar Day			100%	Tue 12/10/21	Tue 12/10/21
231	Tendering, Subletting and Award for Trenchless Works (CE No. 84)	99 days	Tue 22/6/21	Tue 19/10/21	HK Working Day	228	232	100%	Tue 22/6/21	Tue 19/10/21
232	Submission and approval of Method Statement of Hand shield for CE No. 84	101 days	Wed 20/10/21	Mon 21/2/22	HK Working Day	231		100%	Wed 20/10/21	Mon 21/2/22
233	CH.A7+12 - CH.A7+30 OC	111 days	Fri 26/2/21	Wed 14/7/21	HK Working Day	223	234	100%	Fri 26/2/21	Wed 14/7/21
234	CH.A7+30 - CH.A7+34 OC	41 days	Thu 15/7/21	Tue 31/8/21	HK Working Day	233	235	100%	Thu 15/7/21	Tue 31/8/21
235	CH.A7+34 - CH.A7+50 OC	80 days	Mon 18/10/21	Fri 21/1/22	HK Working Day	234	236,239	100%	Mon 18/10/21	Fri 21/1/22
236	CH.A7+50 - CH.A7+58 OC	36 days	Tue 7/12/21	Thu 20/1/22	HK Working Day	235	240,237	100%	Tue 7/12/21	Thu 20/1/22
237	CH.A7+58 - CH.A7+82 OC	43 days	Fri 21/1/22	Tue 15/3/22	HK Working Day	236	240,238	100%	Fri 21/1/22	Tue 15/3/22
238	CH.A7+82 - CH.A8+23 Trenchless (Mobilization, Setup and Handshield)	85 days	Tue 19/4/22	Sat 30/7/22	HK Working Day	237,239	240	35%	Tue 19/4/22	NA
239	CH.A8+23 - CH.A8+63 OC	74 days	Fri 21/1/22	Mon 25/4/22	HK Working Day	235	238,240	100%	Fri 21/1/22	Mon 25/4/22
240	CH.A8+63 - CH.A9+37 OC	100 days	Mon 1/8/22	Mon 28/11/22	HK Working Day	236,238,237,239		0%	NA	NA
241	CH.A9+37 - CH.A10+18 OC	81 days	Thu 3/3/22	Mon 13/6/22	HK Working Day			60%	Thu 3/3/22	NA
242	CH.A10+18 - CH.A11+51 OC	340 days	Tue 5/1/21	Mon 28/2/22	HK Working Day			90%	Tue 5/1/21	NA
243	CH.A11+51 - CH.A12+12 OC with DN600 IT & DN300 Washout Chamber at CH.A12+00	263 days	Tue 1/9/20	Fri 23/7/21	HK Working Day	244		100%	Tue 1/9/20	Fri 23/7/21
244	CH.A12+12 - CH.A12+50 OC With DN900 Valve Chamber	451 days	Sat 23/2/19	Mon 31/8/20	HK Working Day	245,246	243	100%	Sat 23/2/19	Mon 31/8/20
245	CH.A12+50 - CH.A12+95 OC	125 days	Wed 19/9/18	Thu 21/2/19	HK Working Day		244	100%	Wed 19/9/18	Thu 21/2/19
246	CH.A12+95 - CH.A13+13 OC	84 days	Fri 9/11/18	Thu 21/2/19	HK Working Day		244	100%	Fri 9/11/18	Thu 21/2/19
247	CH.A13+13 - CH.A13+40 OC + DN150 DAV	60 days	Fri 23/12/22	Thu 9/3/23	HK Working Day	248		0%	NA	NA
248	CH.A13+40 -CH.A 13+80 OC from Open Cut Trench to Jacking Pit A	60 days	Fri 14/10/22	Thu 22/12/22	HK Working Day	280	247,293	0%	NA	NA
249	**Trenchless Work at Wan Po Road From Pit A to Pit F**	**1866 days**	**Tue 7/11/17**	**Mon 26/2/24**	**HK Working Day**			**56%**	**Tue 7/11/17**	**NA**
250	Trial Pit Excavation for Pit 1 to Pit 20	462 days	Tue 20/2/18	Tue 10/9/19	HK Working Day	79		100%	Tue 20/2/18	Tue 10/9/19
251	**Trenchless Works (Pit A to Pit D)**	**1354 days**	**Fri 2/8/19**	**Mon 26/2/24**	**HK Working Day**		**763**	**51%**	**Fri 2/8/19**	**NA**
252	Issue CE No. 27 - Underground Utilities Detection Survey for Working Pit D (CH. A22+75)	0 days	Fri 2/8/19	Fri 2/8/19	Calendar Day			100%	Fri 2/8/19	Fri 2/8/19



Working Programme No. 15
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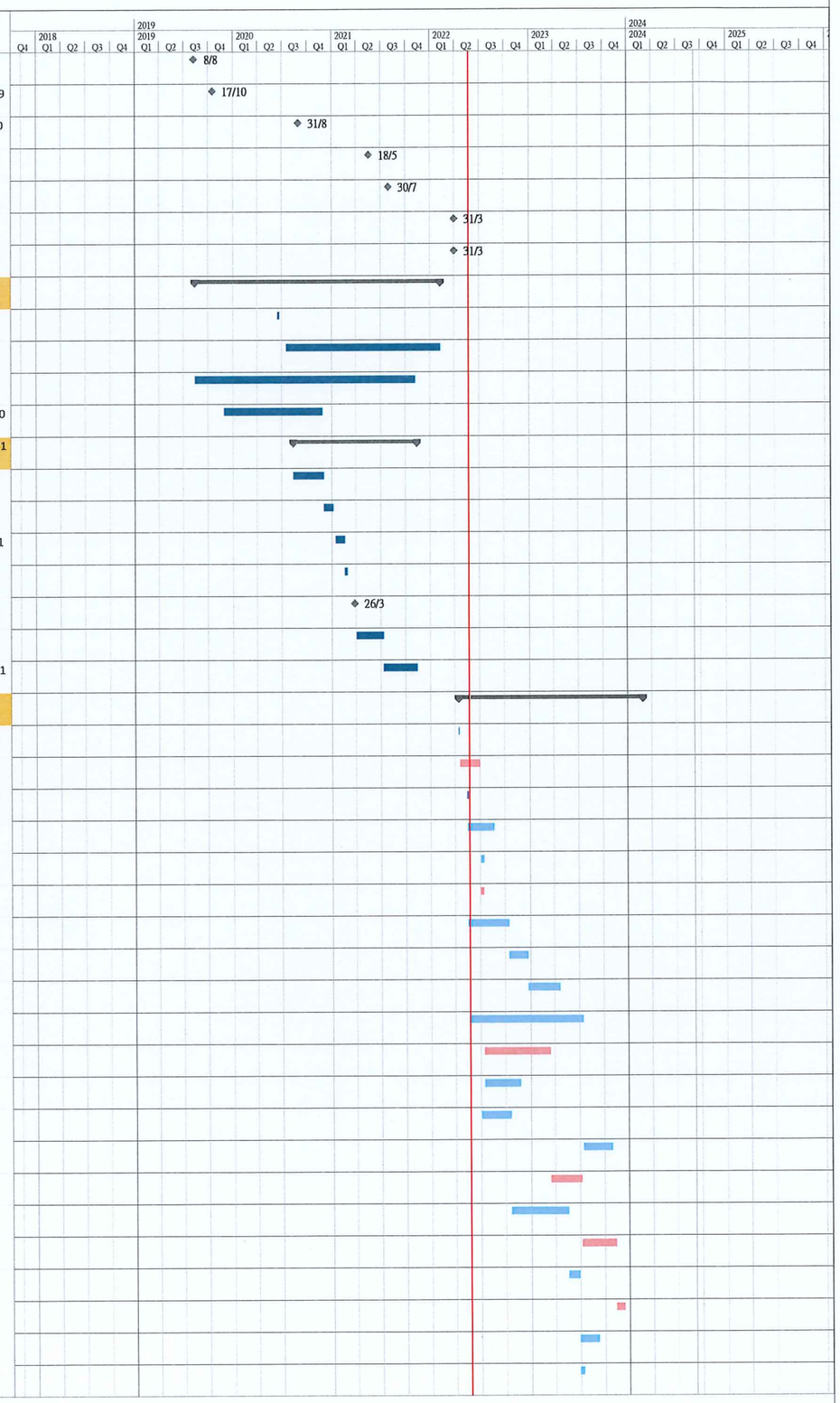
Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
253	Issue CE No. 21 - Temporary Diversion of Uncharted Underground Utilities near Wan O Road at CH. A16+00 (Pit B)	0 days	Thu 8/8/19	Thu 8/8/19	Calendar Day			100%	Thu 8/8/19	Thu 8/8/19
254	Issue CE No. 29 - Tree Transplant Works near CHA13+70	0 days	Thu 17/10/19	Thu 17/10/19	Calendar Day			100%	Thu 17/10/19	Thu 17/10/19
255	Issue CE No. 32 - Additional grouting Treatment works at Pit B in Wan Po Road near Wan O Road	0 days	Mon 31/8/20	Mon 31/8/20	Calendar Day			100%	Mon 31/8/20	Mon 31/8/20
256	Issue CE No. 118 - Non-destructive Void Detection Survey in TKO Area 137 between 137Pit A and 137Pit B	0 days	Tue 18/5/21	Tue 18/5/21	Calendar Day			100%	Tue 18/5/21	Tue 18/5/21
257	Issue CE No. 123 - Void Detection Survey in Wan Po Road between Pit A to Pit C	0 days	Fri 30/7/21	Fri 30/7/21	Calendar Day			100%	Fri 30/7/21	Fri 30/7/21
258	Expected CE No. 52 - Relocation of Working pits for Trenchless Works in Wan Po Road (Pit B to Pit D)	0 days	Thu 31/3/22	Thu 31/3/22	Calendar Day		259	0%	NA	NA
259	Expected CE No. 58 - Relocation of Working pits for Trenchless Works in Wan Po Road (Pit A to Pit B)	0 days	Thu 31/3/22	Thu 31/3/22	Calendar Day	258		0%	NA	NA
260	Construction of Jacking / Receiving Pit A, B & C	737 days	Mon 12/8/19	Sun 6/2/22	HK Working Day			100%	Mon 12/8/19	Sun 6/2/22
261	Removal of Existing Planter for Jacking Pit A	6 days	Mon 15/6/20	Sat 20/6/20	HK Working Day		262	100%	Mon 15/6/20	Sat 20/6/20
262	Jacking Pit A with additional ground grouting works	462 days	Fri 17/7/20	Sun 6/2/22	HK Working Day	261		100%	Fri 17/7/20	Sun 6/2/22
263	Jacking / Receiving Pit B with additional ground grouting works	664 days	Mon 12/8/19	Fri 5/11/21	HK Working Day		299	100%	Mon 12/8/19	Fri 5/11/21
264	Receiving Pit C with additional ground grouting works	295 days	Fri 29/11/19	Thu 26/11/20	HK Working Day			100%	Fri 29/11/19	Thu 26/11/20
265	Construction of Jacking pit D	372 days	Wed 12/8/20	Thu 11/11/21	HK Working Day			100%	Wed 12/8/20	Thu 11/11/21
266	TTA submission and Approval , Suspension of Parking Meters and TTA Implement for Jacking Pit D	112 days	Wed 12/8/20	Tue 1/12/20	Calendar Day		267	100%	Wed 12/8/20	Tue 1/12/20
267	Inspection Pits & GI Works for Jacking Pit D	27 days	Wed 2/12/20	Tue 5/1/21	HK Working Day	266	317,268	100%	Wed 2/12/20	Tue 5/1/21
268	Design Submission with ICE Certificate for Jacking Pit D	26 days	Fri 15/1/21	Wed 17/2/21	HK Working Day	267	269,270	100%	Fri 15/1/21	Wed 17/2/21
269	Approval of Design of Jacking Pit D	8 days	Thu 18/2/21	Fri 26/2/21	HK Working Day	268	271	100%	Thu 18/2/21	Fri 26/2/21
270	Approval Existing Sub-contractor to carry out Construction of Jacking Pit D	0 days	Fri 26/3/21	Fri 26/3/21	HK Working Day	268	271	100%	Fri 26/3/21	Fri 26/3/21
271	Mobilization and Pipe Pile Wall Construction for Jacking Pit D	78 days	Thu 1/4/21	Fri 9/7/21	HK Working Day	270,269	272	100%	Thu 1/4/21	Fri 9/7/21
272	Construction of Jacking Pit D at Car Park	104 days	Sat 10/7/21	Thu 11/11/21	HK Working Day	271	303	100%	Sat 10/7/21	Thu 11/11/21
273	New Routing From Pit A to Pit D)	553 days	Thu 14/4/22	Mon 26/2/24	HK Working Day			0%	Thu 14/4/22	NA
274	Verbal Instructed to Change Pit A to Pit D by Trenchless Method to Open Cut Method & Handshield	1 day	Thu 14/4/22	Thu 14/4/22	HK Working Day		275	100%	Thu 14/4/22	Thu 14/4/22
275	XP Application for WPR, SKR and Open Trench at Shek Kok Road	60 days	Tue 19/4/22	Thu 30/6/22	HK Working Day	274	278,279,286	0%	NA	NA
276	Trial Pit Excavation at Pit A1	3 days	Sat 14/5/22	Tue 17/5/22	HK Working Day			100%	Sat 14/5/22	Tue 17/5/22
277	Remove Central Divider between Wan O Road amd Shek Kok Road	81 days	Mon 16/5/22	Fri 19/8/22	HK Working Day			0%	Mon 16/5/22	NA
278	Trial Pit Excavation at Pit WPR	10 days	Sat 2/7/22	Wed 13/7/22	HK Working Day	275	287	0%	NA	NA
279	Trial Pit Excavation at Pit SKR	10 days	Sat 2/7/22	Wed 13/7/22	HK Working Day	275	288,285,284	0%	NA	NA
280	Pipe Laying (OC) from Pit A1 towward KLN (124m)	124 days	Tue 17/5/22	Thu 13/10/22	HK Working Day		281,248	0%	Tue 17/5/22	NA
281	Pipe Laying (OC) from WPR (N/B)(the 1st Lane to the 3rd lane) (30m)	60 days	Fri 14/10/22	Thu 22/12/22	HK Working Day	280	282	0%	NA	NA
282	Pipe Laying (OC) crossing WPR Junction with Wan O Road to Central Divider (73m)	90 days	Fri 23/12/22	Tue 18/4/23	HK Working Day	281		0%	NA	NA
283	Pipe Laying (OC) along Central Divider to Pit WPR (340m)	340 days	Fri 20/5/22	Wed 12/7/23	HK Working Day		295,287	0%	Fri 20/5/22	NA
284	Pipe Laying (OC) from Pit SKR to Pit D (1st 200m)	200 days	Thu 14/7/22	Tue 14/3/23	HK Working Day	279	288	0%	NA	NA
285	Pipe Laying (OC) from Pit SKR to Pit D (Remaining 110m)	110 days	Thu 14/7/22	Tue 22/11/22	HK Working Day	279	297	0%	NA	NA
286	Construction of Pit A1	90 days	Sat 2/7/22	Tue 18/10/22	HK Working Day	275	289	0%	NA	NA
287	Construction of Pit WPR	90 days	Thu 13/7/23	Sat 28/10/23	HK Working Day	278,283		0%	NA	NA
288	Construction of Pit SKR	90 days	Wed 15/3/23	Thu 6/7/23	HK Working Day	279,284	290	0%	NA	NA
289	Headshield Tunneling fom Pit A to Pit A1 (102m)	170 days	Wed 19/10/22	Wed 17/5/23	HK Working Day	286	291	0%	NA	NA
290	Headshield Tunneling fom Pit SKR to Pit WPR (64m)	107 days	Fri 7/7/23	Sat 11/11/23	HK Working Day	288	292	0%	NA	NA
291	MS Pipe Laying in Segment from Pit A to Pit A1	40 days	Thu 18/5/23	Mon 26/6/23	Calendar Day	289	293,294	0%	NA	NA
292	MS Pipe Laying in Segment from Pit SKR to Pit WPR	30 days	Sun 12/11/23	Mon 11/12/23	Calendar Day	290	295,296	0%	NA	NA
293	Pipe Connection works & Construction Special Combined Insepction and Washout Chamber at Pit A	60 days	Tue 27/6/23	Tue 5/9/23	HK Working Day	291,248		0%	NA	NA
294	Pipe Connection works at Pit A1	12 days	Tue 27/6/23	Tue 11/7/23	HK Working Day	291		0%	NA	NA



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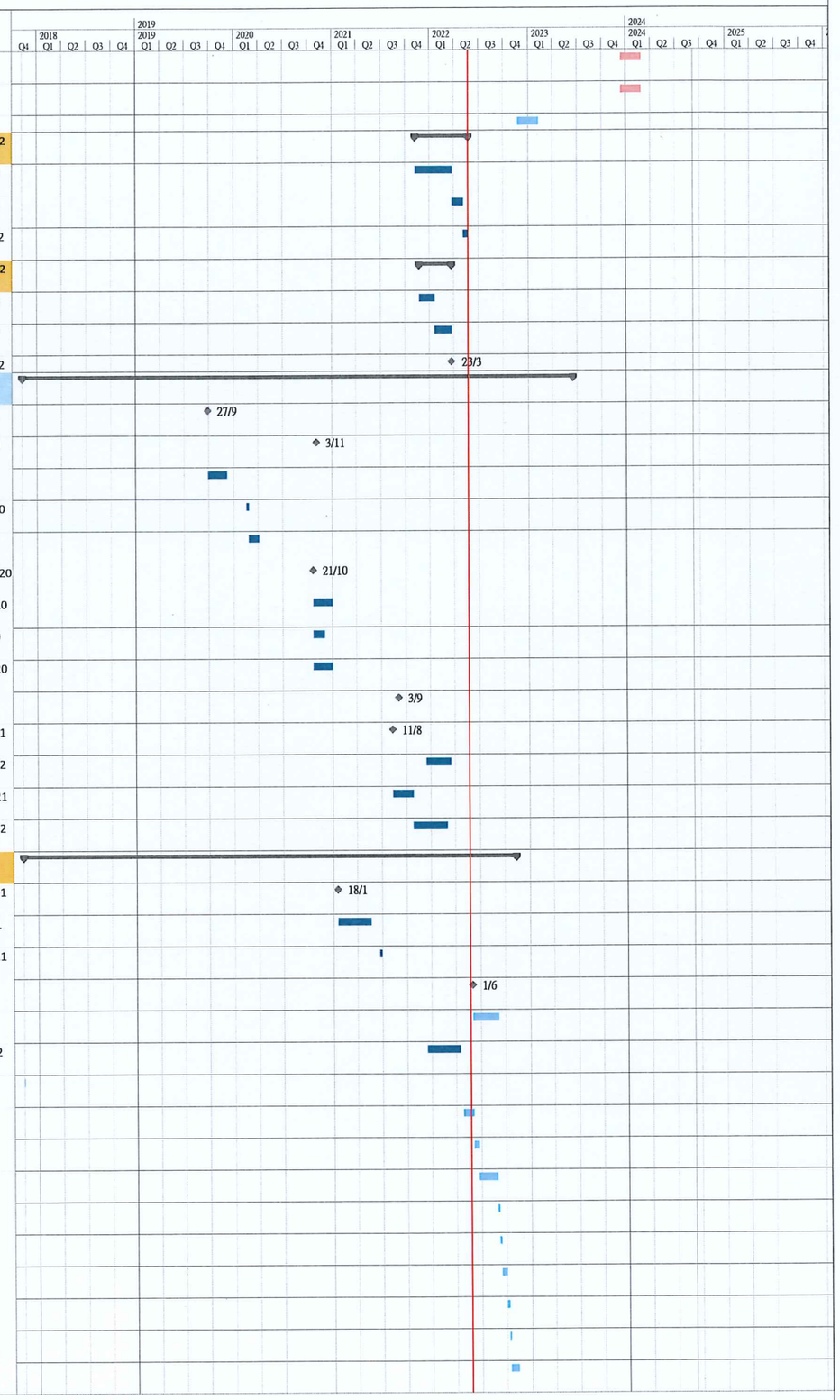
Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
295	Pipe Connection Works and construction of Inspoection Chamber at Pit WPR	60 days	Tue 12/12/23	Mon 26/2/24	HK Working Day	292,283		0%	NA	NA
296	Pipe Connection Works and construction of Washout Chamber at Pit SKR	60 days	Tue 12/12/23	Mon 26/2/24	HK Working Day	292		0%	NA	NA
297	Pipe Connection Works and construction of Washout Chamber at Pit D	60 days	Wed 23/11/22	Tue 7/2/23	HK Working Day	285		0%	NA	NA
298	**TBM Pipe Jacking (Pit B to Pit C)**	**157 days**	**Mon 8/11/21**	**Mon 23/5/22**	**HK Working Day**			**100%**	**Mon 8/11/21**	**Mon 23/5/22**
299	Establishment at Pit B with additional ground treatment for stopping water ingress	112 days	Mon 8/11/21	Thu 24/3/22	HK Working Day	263	300	100%	Mon 8/11/21	Thu 24/3/22
300	Jacking DN1600 Precast Concrete Sleeve Pipe From Pit B to Pit C (L=326m; 2.5m/day)	30 days	Thu 24/3/22	Wed 4/5/22	HK Working Day	299	301	100%	Thu 24/3/22	Wed 4/5/22
301	Extracting TBM and remove TBM from Pit B	15 days	Thu 5/5/22	Mon 23/5/22	HK Working Day	300		100%	Thu 5/5/22	Mon 23/5/22
302	**TBM Pipe Jacking (Pit D to Pit C)**	**98 days**	**Mon 22/11/21**	**Wed 23/3/22**	**HK Working Day**			**100%**	**Mon 22/11/21**	**Wed 23/3/22**
303	Establishment at Pit D	47 days	Mon 22/11/21	Tue 18/1/22	HK Working Day	272	304	100%	Mon 22/11/21	Tue 18/1/22
304	DN1920 Steel Jacked Pipe (Pit D - Pit C) (CH.A19+26 to CH.A22+80) in Soil (370m; 2.5m/day)	51 days	Wed 19/1/22	Tue 22/3/22	HK Working Day	303		100%	Wed 19/1/22	Tue 22/3/22
305	Pipe Jacking stopped on 23/3/2022	0 days	Wed 23/3/22	Wed 23/3/22	HK Working Day			100%	Wed 23/3/22	Wed 23/3/22
306	**Form Pit D Crossing Wan Po Road and Lohas Park Road to TKO Landfill Stage I (Area A)**	**2046 days**	**Tue 7/11/17**	**Wed 14/6/23**	**Calendar Day**		**763**	**55%**	**Tue 7/11/17**	**NA**
307	Issue CE No. 24 - Ground Investigation for Working Pit E, F and Trenchless Works across MT Tunnel	0 days	Fri 27/9/19	Fri 27/9/19	Calendar Day		309	100%	Fri 27/9/19	Fri 27/9/19
308	Issue CE No. 80 - Site Clearance for Crossing Lohas Road Junction (Option 5)	0 days	Tue 3/11/20	Tue 3/11/20	Calendar Day			100%	Tue 3/11/20	Tue 3/11/20
309	Tender & Subletting	71 days	Fri 27/9/19	Fri 6/12/19	Calendar Day	307		100%	Fri 27/9/19	Fri 6/12/19
310	Mobilization and Establishment of GI equipment	7 days	Mon 17/2/20	Mon 24/2/20	HK Working Day		311	100%	Mon 17/2/20	Mon 24/2/20
311	Ground Investigation GI No. 3	33 days	Tue 25/2/20	Thu 2/4/20	HK Working Day	310		100%	Tue 25/2/20	Thu 2/4/20
312	Issue CE No. 77 - Design of Water Main Structure and Modification Works to the Affected Geotechnical Features in Wan Po Road and Lohas Park Road	0 days	Wed 21/10/20	Wed 21/10/20	Calendar Day		313,314,315	100%	Wed 21/10/20	Wed 21/10/20
313	Quotation Submission and Acceptant for CE No. 77	72 days	Wed 21/10/20	Thu 31/12/20	Calendar Day	312		100%	Wed 21/10/20	Thu 31/12/20
314	CE No. 77 - Submission of Geotechnical Assessment Repot	42 days	Wed 21/10/20	Tue 1/12/20	Calendar Day	312		100%	Wed 21/10/20	Tue 1/12/20
315	CE No. 77 - Design Submission	72 days	Wed 21/10/20	Thu 31/12/20	Calendar Day	312	316,317	100%	Wed 21/10/20	Thu 31/12/20
316	CE No. 77 - Approval of Design Submission	0 days	Fri 3/9/21	Fri 3/9/21	Calendar Day	315		100%	Fri 3/9/21	Fri 3/9/21
317	Issue CE No. 67 - Realignment of Water Main near Wan Po Road and Lohas Park Road	0 days	Wed 11/8/21	Wed 11/8/21	Calendar Day	267,315	319	100%	Wed 11/8/21	Wed 11/8/21
318	Obtain MTR's approval on the alignment and construction method about MTR's tunnels	91 days	Mon 13/12/21	Mon 14/3/22	Calendar Day	320FF	348,347	100%	Mon 13/12/21	Mon 14/3/22
319	Tender Process and Tender Award for CE No. 67	77 days	Wed 11/8/21	Tue 26/10/21	Calendar Day	317	320,363	100%	Wed 11/8/21	Tue 26/10/21
320	TTA approval and Implement for CE No. 67	125 days	Wed 27/10/21	Mon 28/2/22	Calendar Day	319	348,318FF,347	100%	Wed 27/10/21	Mon 28/2/22
321	**Handshield Crossing Wan Po Road (CH.FA0+15 to CH.FA0+50)**	**1484 days**	**Tue 7/11/17**	**Thu 10/11/22**	**HK Working Day**			**48%**	**Tue 7/11/17**	**NA**
322	Issue CE No. 98 - Tree Felling at Lohas Park Road	0 days	Mon 18/1/21	Mon 18/1/21	Calendar Day		323	100%	Mon 18/1/21	Mon 18/1/21
323	TPRP Submission and Approval for Tree at Slope Feature 12SW-A/FR102	121 days	Mon 18/1/21	Tue 18/5/21	Calendar Day	322	324	100%	Mon 18/1/21	Tue 18/5/21
324	Tree Felling and Tree Works at Slope Feature 12SW-A/FR102	7 days	Mon 21/6/21	Mon 28/6/21	HK Working Day	323		100%	Mon 21/6/21	Mon 28/6/21
325	Approval TTA for Loading and Unloading at R27	0 days	Wed 1/6/22	Wed 1/6/22	HK Working Day		326	0%	NA	NA
326	Strengthen Works at Feature 12SW-A/R27	80 days	Wed 1/6/22	Sat 3/9/22	HK Working Day	325		0%	NA	NA
327	Strengthen Works at Feature 12SW-A/R28	98 days	Tue 14/12/21	Thu 14/4/22	HK Working Day		329	100%	Tue 14/12/21	Thu 14/4/22
328	Concrete coring and breaking opening on Retaining Wall (R27)	1 day	Tue 7/11/17	Tue 7/11/17	None		335	0%	NA	NA
329	Concrete coring and breaking opening on Retaining Wall (R28)	30 days	Wed 27/4/22	Thu 2/6/22	HK Working Day	327	330	3%	Wed 27/4/22	NA
330	Handshield Establishment	14 days	Sat 4/6/22	Mon 20/6/22	HK Working Day	329	331	0%	NA	NA
331	Mild Steel Sleeve Pipe in Soil Mix (35m; 0.6m/day)	58 days	Tue 21/6/22	Sat 27/8/22	HK Working Day	330	332	0%	NA	NA
332	Remove establishment	6 days	Mon 29/8/22	Sat 3/9/22	HK Working Day	331	333	0%	NA	NA
333	Setup for Pipe Laying inside jacking	6 days	Mon 5/9/22	Sat 10/9/22	HK Working Day	332	334	0%	NA	NA
334	DN900 MS Pipe Laying inside jacking pipe (35m) (say 3 days per 8m)	15 days	Tue 13/9/22	Thu 29/9/22	HK Working Day	333	335	0%	NA	NA
335	Formwork & Setup for Grouting the gap between pipe and Sleeve	6 days	Fri 30/9/22	Sat 8/10/22	HK Working Day	334,328	336	0%	NA	NA
336	Grouting Works (30 meter/day)	4 days	Mon 10/10/22	Thu 13/10/22	HK Working Day	335	337	0%	NA	NA
337	Pipe laying Works From Pit D to CH.FA0+15	24 days	Fri 14/10/22	Thu 10/11/22	HK Working Day	336	339	0%	NA	NA



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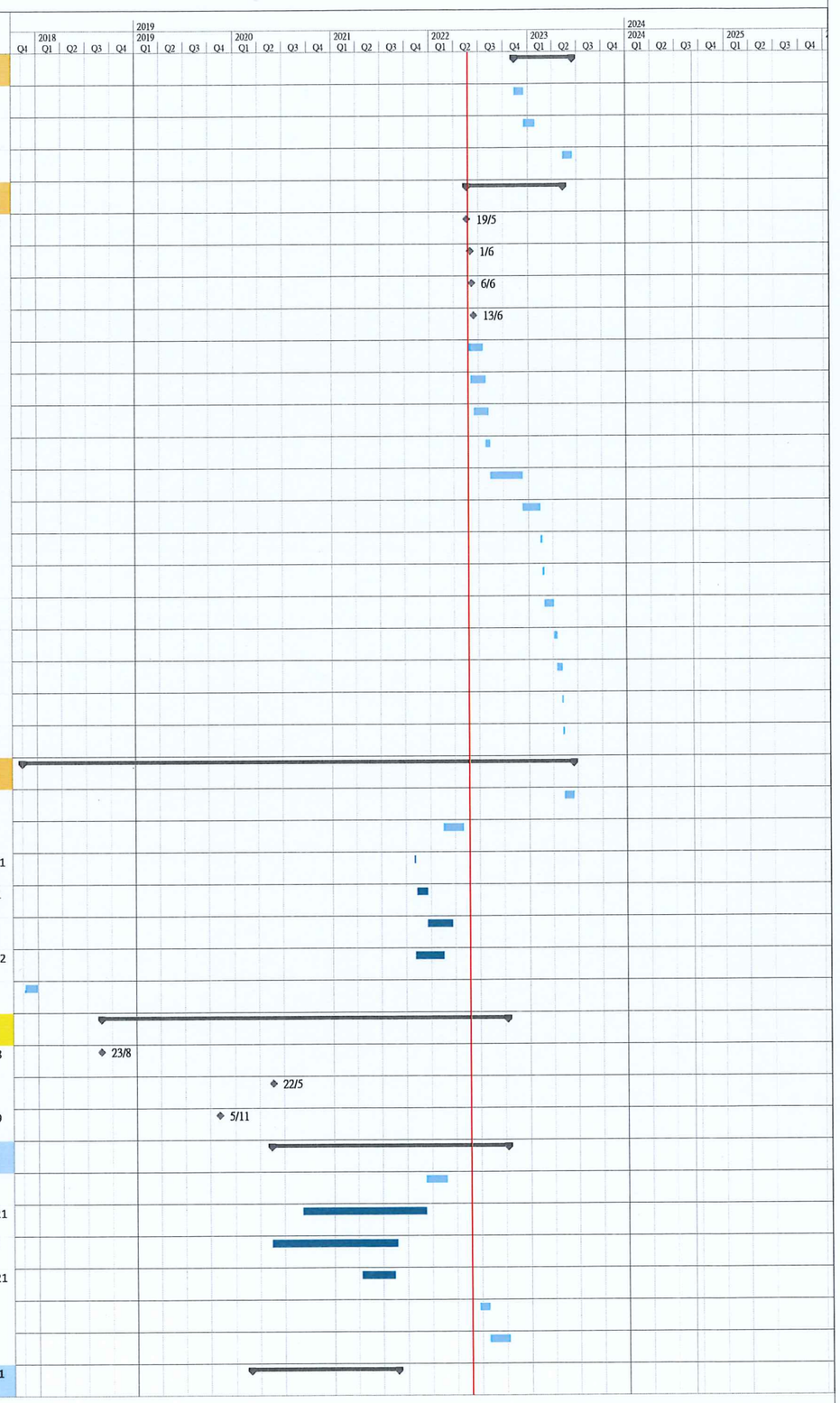
Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual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

Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
338	**Vertical Pipes, Exposed Pipes & Burned Pipes above MTR Tunnels (CH.FA0+50 to CH.FA0+85)**	**173 days**	**Fri 11/11/22**	**Wed 14/6/23**	**HK Working Day**			**0%**	**NA**	**NA**
339	Vertical pipes with Concrete Surround	30 days	Fri 11/11/22	Thu 15/12/22	HK Working Day	337	340	0%	NA	NA
340	Exposed pipes with concrete surround	30 days	Fri 16/12/22	Thu 26/1/23	HK Working Day	339	341	0%	NA	NA
341	Open cut pipe laying with concrete surround	30 days	Wed 10/5/23	Wed 14/6/23	HK Working Day	359,340		0%	NA	NA
342	**Hand Shield Pipe Jacking crossing Lohas Park Road**	**289 days**	**Thu 19/5/22**	**Tue 9/5/23**	**HK Working Day**			**0%**	**Thu 19/5/22**	**NA**
343	MTR's Consent for Construction of Pit E	0 days	Thu 19/5/22	Thu 19/5/22	HK Working Day		347	100%	Thu 19/5/22	Thu 19/5/22
344	MTR's Consent for Construction of Pit F	0 days	Wed 1/6/22	Wed 1/6/22	HK Working Day		348	99%	Wed 1/6/22	NA
345	MTR's Consent for Construction of Pit G	0 days	Mon 6/6/22	Mon 6/6/22	HK Working Day		349	99%	Mon 6/6/22	NA
346	Loading & Unloading TTA for Pit G	0 days	Mon 13/6/22	Mon 13/6/22	HK Working Day		349	99%	Mon 13/6/22	NA
347	Construction of Receiving Pit E	45 days	Mon 23/5/22	Fri 15/7/22	HK Working Day	318,320,343		0%	Mon 23/5/22	NA
348	Construction of Jacking Pit F	45 days	Wed 1/6/22	Mon 25/7/22	HK Working Day	320,318,344	350	0%	NA	NA
349	Construction of Receiving Pit G	45 days	Mon 13/6/22	Thu 4/8/22	HK Working Day	345,346		0%	NA	NA
350	Establishment at Pit F	14 days	Tue 26/7/22	Wed 10/8/22	HK Working Day	348	351	0%	NA	NA
351	Mild Steel Sleeve Pipe (Pit F - Pit E) in Soil Mix (40m; 0.4m/day)	100 days	Thu 11/8/22	Thu 8/12/22	HK Working Day	350	352	0%	NA	NA
352	Mild Steel Sleeve Pipe (Pit F - Pit G) in Soil Mix (20m; 0.4m/day)	50 days	Fri 9/12/22	Sat 11/2/23	HK Working Day	351	353	0%	NA	NA
353	Remove setup Including Thrust Wall at Pit F	6 days	Mon 13/2/23	Sat 18/2/23	HK Working Day	352	354	0%	NA	NA
354	Setup for Pipe Laying inside jacking Pit F	6 days	Mon 20/2/23	Sat 25/2/23	HK Working Day	353	355	0%	NA	NA
355	DN900 MS Pipe Laying from Pit F to Pit E (40m) (say 3 days per 4m)	30 days	Mon 27/2/23	Sat 1/4/23	HK Working Day	354	356	0%	NA	NA
356	Modify Setup for Pipe Laying inside jacking Pit F	6 days	Mon 3/4/23	Thu 13/4/23	HK Working Day	355	357	0%	NA	NA
357	DN900 MS Pipe Laying from Pit F to Pit G (20m) (say 3 days per 4m)	15 days	Fri 14/4/23	Tue 2/5/23	HK Working Day	356	358	0%	NA	NA
358	Formwork & Setup for Grouting the gap between pipe and Sleeve	3 days	Wed 3/5/23	Fri 5/5/23	HK Working Day	357	359	0%	NA	NA
359	Grouting Works (30 meter/day)	3 days	Sat 6/5/23	Tue 9/5/23	HK Working Day	358	341,361	0%	NA	NA
360	**Vertical Pipes, Exposed Pipes & Burned Pipes above MTR Tunnels (CH.FA1+50 to CH.FA2+17)**	**1657 days**	**Tue 7/11/17**	**Wed 14/6/23**	**HK Working Day**			**59%**	**Tue 7/11/17**	**NA**
361	Vertical pipes with Concrete Surround	30 days	Wed 10/5/23	Wed 14/6/23	HK Working Day	359		0%	NA	NA
362	Exposed pipes with concrete surround	60 days	Tue 15/2/22	Fri 29/4/22	HK Working Day	366		0%	NA	NA
363	Site Clearance at Storage Yard	3 days	Mon 1/11/21	Wed 3/11/21	HK Working Day	319	366	100%	Mon 1/11/21	Wed 3/11/21
364	Plate Load Tests for Tower P2	34 days	Tue 9/11/21	Fri 17/12/21	HK Working Day			100%	Tue 9/11/21	Fri 17/12/21
365	Construction footing of Tower P2 at CH.FA1+76	72 days	Sat 18/12/21	Fri 18/3/22	HK Working Day			100%	Sat 18/12/21	Fri 18/3/22
366	Open cut pipe laying with concrete surround (CH.FA1+76 to CH.FA2+04)	82 days	Thu 4/11/21	Mon 14/2/22	HK Working Day	363	362	100%	Thu 4/11/21	Mon 14/2/22
367	Open cut pipe laying from CH.FA2+04 to CH.FB0+03 & Connect to DN900SV Chamber	42 days	Tue 7/11/17	Wed 27/12/17	HK Working Day			0%	NA	NA
368	**Open Cut Excavation, Pipe Laying and Reinstatement at TKO Landfill Stage 1 and TKO South Waterfront Promenade**	**1221 days**	**Thu 23/8/18**	**Fri 7/10/22**	**HK Working Day**			**91%**	**Thu 23/8/18**	**NA**
369	Issue CE No. 05 - Feasibility Studey Realignment of pipline at Tseung Kwan O Stage I Landfill	0 days	Thu 23/8/18	Thu 23/8/18	Calendar Day			100%	Thu 23/8/18	Thu 23/8/18
370	Issue CE No. 36 - Realignment of Watermain along the Bituminous Road adjacent to Lohas Park Road	0 days	Fri 22/5/20	Fri 22/5/20	Calendar Day			100%	Fri 22/5/20	Fri 22/5/20
371	Issue CE No. 34 - Realignment of Watermain along TKO Stage I Landfill	0 days	Tue 5/11/19	Tue 5/11/19	Calendar Day			100%	Tue 5/11/19	Tue 5/11/19
372	**TKO Landfill Stage I Area A (CH.FB0+00 to CH.FB5+34)**	**712 days**	**Fri 15/5/20**	**Fri 7/10/22**	**HK Working Day**		**764**	**85%**	**Fri 15/5/20**	**NA**
373	CH.FB0+00 DN300 Washout Chamber	60 days	Tue 7/12/21	Mon 21/2/22	HK Working Day	374		0%	NA	NA
374	CH.FB0+00 - CH.FB 1+66 OC with DN900 Valve Chamber with DN150 by-pass	372 days	Sat 5/9/20	Mon 6/12/21	HK Working Day		373	100%	Sat 5/9/20	Mon 6/12/21
375	CH.FB1+66 - CH.FB 5+39 OC	379 days	Fri 15/5/20	Sat 21/8/21	HK Working Day			100%	Fri 15/5/20	Sat 21/8/21
376	CH.FB5+34 - CH.FC 0+00 OC	101 days	Mon 12/4/21	Wed 11/8/21	HK Working Day	394	381	100%	Mon 12/4/21	Wed 11/8/21
377	CH.FB 5+34 DN300 DN600 IT Chamber	30 days	Tue 21/6/22	Tue 26/7/22	HK Working Day	411	378	0%	NA	NA
378	CH.FB 5+34 DN300 Washout Chamber	60 days	Wed 27/7/22	Fri 7/10/22	HK Working Day	377		0%	NA	NA
379	**TKO South Waterfront Promenade (CH.FC0+00 - CH.FC 4+87)**	**443 days**	**Wed 26/2/20**	**Tue 24/8/21**	**HK Working Day**			**100%**	**Wed 26/2/20**	**Tue 24/8/21**



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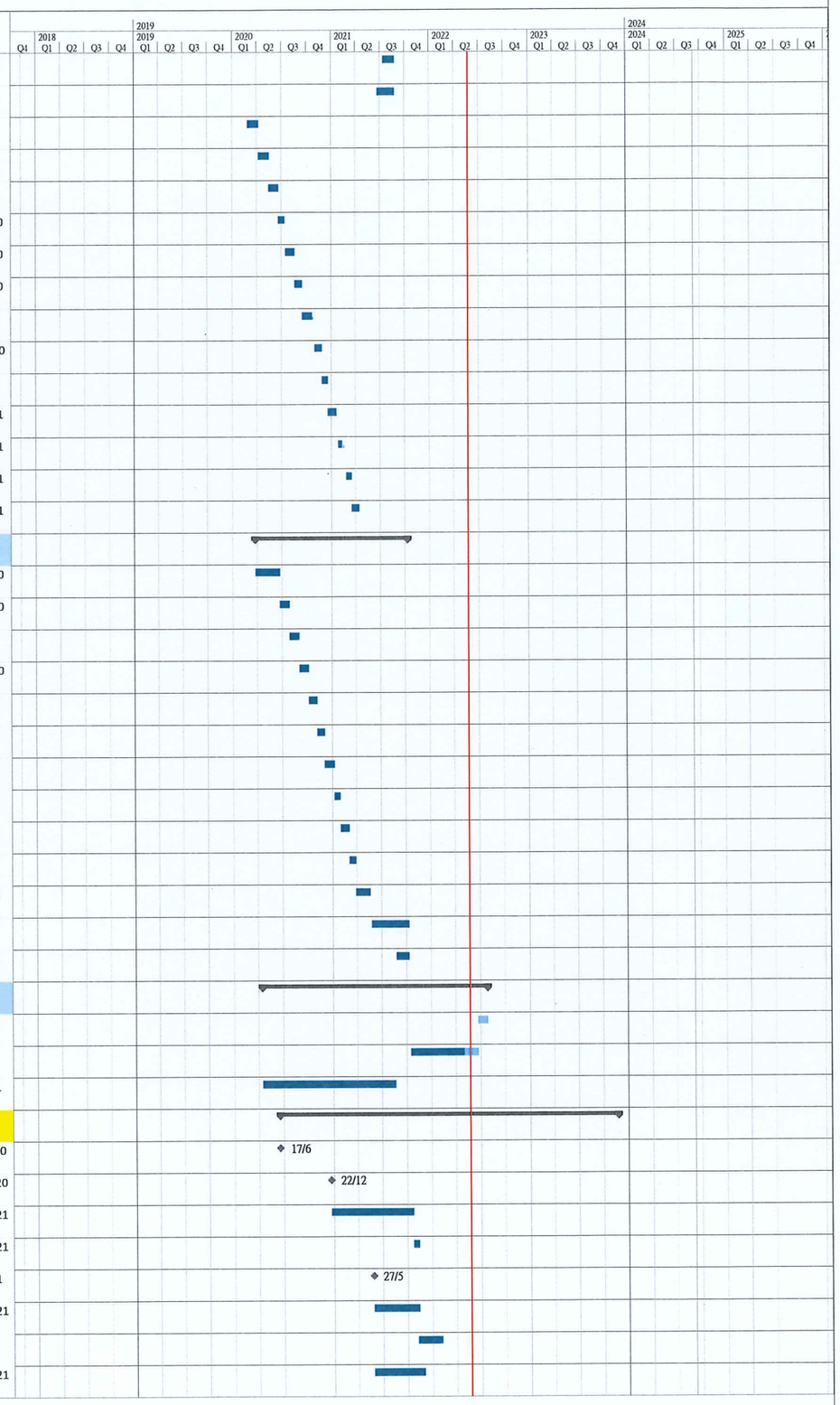
Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual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

Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
380	CH.FC 0+00 - CH.FC 0+29 OC	38 days	Mon 12/7/21	Tue 24/8/21	HK Working Day	381		100%	Mon 12/7/21	Tue 24/8/21
381	CH.FC 0+29 - CH.FC 0+65 OC	56 days	Sat 19/6/21	Tue 24/8/21	HK Working Day	382,376	380	100%	Sat 19/6/21	Tue 24/8/21
382	CH.FC 0+65 - CH.FC 0+95 OC	34 days	Wed 26/2/20	Mon 6/4/20	HK Working Day		383,381	100%	Wed 26/2/20	Mon 6/4/20
383	CH.FC 0+95 - CH.FC 1+27 OC	30 days	Mon 6/4/20	Fri 15/5/20	HK Working Day	382	384	100%	Mon 6/4/20	Fri 15/5/20
384	CH.FC 1+27 - CH.FC 1+59 OC	31 days	Fri 15/5/20	Fri 19/6/20	HK Working Day	383	385	100%	Fri 15/5/20	Fri 19/6/20
385	CH.FC 1+59 - CH.FC 1+91 OC	21 days	Fri 19/6/20	Wed 15/7/20	HK Working Day	384	386	100%	Fri 19/6/20	Wed 15/7/20
386	CH.FC 1+91 - CH.FC 2+23 OC	29 days	Wed 15/7/20	Mon 17/8/20	HK Working Day	385	387	100%	Wed 15/7/20	Mon 17/8/20
387	CH.FC 2+23 - CH.FC 2+55 OC	25 days	Mon 17/8/20	Mon 14/9/20	HK Working Day	386	388	100%	Mon 17/8/20	Mon 14/9/20
388	CH.FC 2+55 - CH.FC 2+87 OC	38 days	Mon 14/9/20	Fri 30/10/20	HK Working Day	387	389	100%	Mon 14/9/20	Fri 30/10/20
389	CH.FC 2+87 - CH.FC 3+19 OC	24 days	Fri 30/10/20	Thu 26/11/20	HK Working Day	388	390	100%	Fri 30/10/20	Thu 26/11/20
390	CH.FC 3+19 - CH.FC 3+51 OC	20 days	Thu 26/11/20	Fri 18/12/20	HK Working Day	389	391	100%	Thu 26/11/20	Fri 18/12/20
391	CH.FC 3+51 - CH.FC 3+83 OC	30 days	Fri 18/12/20	Mon 25/1/21	HK Working Day	390	392	100%	Fri 18/12/20	Mon 25/1/21
392	CH.FC 3+83 - CH.FC 4+15 OC	24 days	Mon 25/1/21	Wed 24/2/21	HK Working Day	391	393	100%	Mon 25/1/21	Wed 24/2/21
393	CH.FC 4+15 - CH.FC 4+47 OC	17 days	Wed 24/2/21	Mon 15/3/21	HK Working Day	392	394	100%	Wed 24/2/21	Mon 15/3/21
394	CH.FC 4+47 - CH.FC 4+89 C	21 days	Mon 15/3/21	Mon 12/4/21	HK Working Day	393	376	100%	Mon 15/3/21	Mon 12/4/21
395	**TKO South Waterfront Promenade (CH.FC4+87 - CH.FC 8+71)**	**458 days**	**Tue 24/3/20**	**Sat 9/10/21**	**HK Working Day**			**100%**	**Tue 24/3/20**	**Sat 9/10/21**
396	CH.FC 4+89 - CH.FC 5+19 OC with DN600 IT	72 days	Tue 24/3/20	Mon 22/6/20	HK Working Day		397	100%	Tue 24/3/20	Mon 22/6/20
397	CH.FC 5+19 - CH.FC 5+51 OC	29 days	Mon 22/6/20	Mon 27/7/20	HK Working Day	396	398	100%	Mon 22/6/20	Mon 27/7/20
398	CH.FC 5+51 - CH.FC 5+83 OC	32 days	Mon 27/7/20	Tue 1/9/20	HK Working Day	397	399	100%	Mon 27/7/20	Tue 1/9/20
399	CH.FC 5+83 - CH.FC 6+15 OC	28 days	Tue 1/9/20	Mon 5/10/20	HK Working Day	398	400	100%	Tue 1/9/20	Mon 5/10/20
400	CH.FC 6+15 - CH.FC 6+47 OC	27 days	Mon 5/10/20	Thu 5/11/20	HK Working Day	399	401	100%	Mon 5/10/20	Thu 5/11/20
401	CH.FC 6+47 - CH.FC 6+79 OC	25 days	Thu 5/11/20	Thu 3/12/20	HK Working Day	400	402	100%	Thu 5/11/20	Thu 3/12/20
402	CH.FC 6+79 - CH.FC 7+11 OC	29 days	Thu 3/12/20	Fri 8/1/21	HK Working Day	401	403	100%	Thu 3/12/20	Fri 8/1/21
403	CH.FC 7+11 - CH.FC 7+43 OC	19 days	Fri 8/1/21	Fri 29/1/21	HK Working Day	402	404	100%	Fri 8/1/21	Fri 29/1/21
404	CH.FC 7+43 - CH.FC 7+75 OC	25 days	Sat 30/1/21	Wed 3/3/21	HK Working Day	403	405	100%	Sat 30/1/21	Wed 3/3/21
405	CH.FC 7+75 - CH.FC 8+07 OC	22 days	Wed 3/3/21	Sat 27/3/21	HK Working Day	404	406	100%	Wed 3/3/21	Sat 27/3/21
406	CH.FC 8+07 - CH.FC 8+39 OC	40 days	Sat 27/3/21	Tue 18/5/21	HK Working Day	405	407	100%	Sat 27/3/21	Tue 18/5/21
407	CH.FC 8+39 - CH.FC 8+43 OC	116 days	Mon 24/5/21	Sat 9/10/21	HK Working Day	406		100%	Mon 24/5/21	Sat 9/10/21
408	CH.FC 8+43 - CH.FC 8+59 OC	39 days	Tue 24/8/21	Sat 9/10/21	HK Working Day		411	100%	Tue 24/8/21	Sat 9/10/21
409	**TKO Landfill Stage I Area B (CH.FC 8+59 - CH.FC 13+26)**	**677 days**	**Tue 14/4/20**	**Tue 26/7/22**	**HK Working Day**			**89%**	**Tue 14/4/20**	**NA**
410	Construct DN150 DAV Chamber at CH.FC 9+83	30 days	Tue 21/6/22	Tue 26/7/22	HK Working Day	411		0%	NA	NA
411	CH.FC 8+59 - CH.FC 9+83 OC	200 days	Fri 15/10/21	Mon 20/6/22	HK Working Day	412,408	423,377,410	80%	Fri 15/10/21	NA
412	CH.FC 9+83 - CH.FC 13+26 OC with Monitoring Chamber	402 days	Tue 14/4/20	Thu 19/8/21	HK Working Day		411	100%	Tue 14/4/20	Thu 19/8/21
413	**Water Mains Near Pung Loi Road (CH.FD0+00 - CH.A3+51)**	**1020 days**	**Wed 17/6/20**	**Thu 23/11/23**	**HK Working Day**			**60%**	**Wed 17/6/20**	**NA**
414	Issue CE No. 65 - Landscaping Survey near Po Yap and Pung Loi Road	0 days	Wed 17/6/20	Wed 17/6/20	Calendar Day			100%	Wed 17/6/20	Wed 17/6/20
415	Issue CE No. 87 - Affected Trees near Pung Loi Road, Po Yap Road and Wan Po Road	0 days	Tue 22/12/20	Tue 22/12/20	Calendar Day		416	100%	Tue 22/12/20	Tue 22/12/20
416	TPRP Submission and Approval	304 days	Tue 22/12/20	Thu 21/10/21	Calendar Day	415,614	417	100%	Tue 22/12/20	Thu 21/10/21
417	Site Possession and Tree Removal Works	21 days	Fri 22/10/21	Thu 11/11/21	Calendar Day	416	427	100%	Fri 22/10/21	Thu 11/11/21
418	Issue CE No. 60 - Realignment of Water Main near Pung Loi Road	0 days	Thu 27/5/21	Thu 27/5/21	Calendar Day		419,421	100%	Thu 27/5/21	Thu 27/5/21
419	Tender Process and Tender Award for CE No. 60	169 days	Thu 27/5/21	Thu 11/11/21	Calendar Day	418	420	100%	Thu 27/5/21	Thu 11/11/21
420	Design & Method Statement Submission and Approval ; Preparation Works for CE No. 60	90 days	Sun 7/11/21	Fri 4/2/22	Calendar Day	419	424	100%	Sun 7/11/21	Fri 4/2/22
421	TTA preparation, SLG meetings and obtain RA	188 days	Thu 27/5/21	Tue 30/11/21	Calendar Day	418	427,429	100%	Thu 27/5/21	Tue 30/11/21



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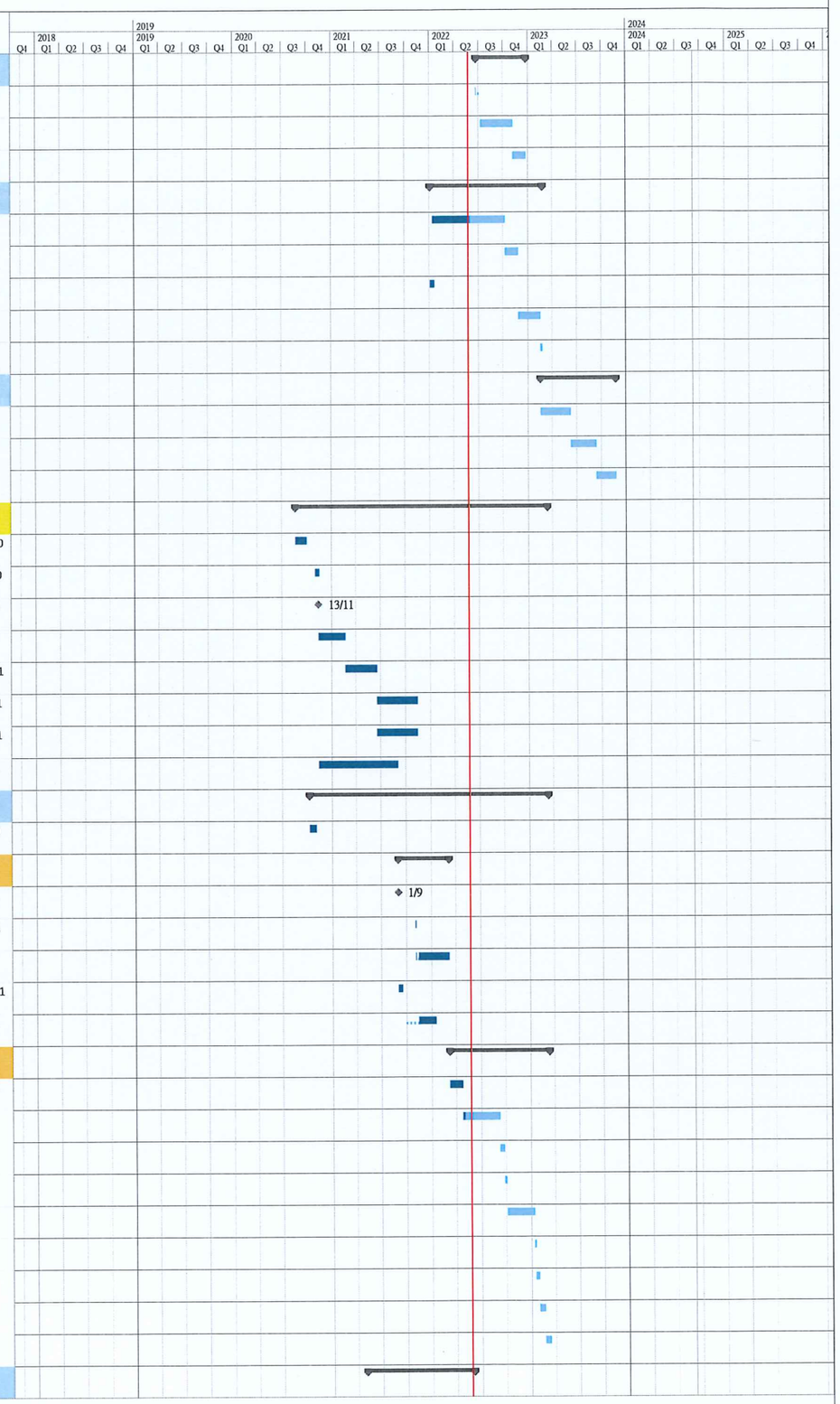
Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
422	**Open Trench Crossing Pung Loi Avenue**	**156 days**	**Mon 20/6/22**	**Fri 23/12/22**	**HK Working Day**			**0%**	**NA**	**NA**
423	Obtain Access from EPD (TKO Landfill Stage I Area B)	14 days	Mon 20/6/22	Thu 7/7/22	HK Working Day	411	424	0%	NA	NA
424	CH.FD0+00 - CH.FD0+65 OC	100 days	Fri 8/7/22	Fri 4/11/22	HK Working Day	420,423	425	0%	NA	NA
425	Construction DN900 SV Chamber at CH.FD0+25	42 days	Sat 5/11/22	Fri 23/12/22	HK Working Day	424		0%	NA	NA
426	**Exposed Pipe From CH.FDD0+65 to FDSKR+00**	**337 days**	**Mon 3/1/22**	**Wed 22/2/23**	**HK Working Day**			**36%**	**Mon 3/1/22**	**NA**
427	Excavation In Slope Toe; Construction of Flooding Protecxtion Wall with U-Channel, Length = 135m, @12m @18days	216 days	Wed 12/1/22	Thu 6/10/22	HK Working Day	421,417	428	50%	Wed 12/1/22	NA
428	Exposed Pipe, Length = 173m, with concrete saddle Supports	42 days	Fri 7/10/22	Thu 24/11/22	HK Working Day	427	430	0%	NA	NA
429	3 nos. Trial Pit Exacavtion under existing Flyover	14 days	Mon 3/1/22	Tue 18/1/22	HK Working Day	421		100%	Mon 3/1/22	Tue 18/1/22
430	DN1200 Pipe Laying on Concrete Support with Concrete Hunching	65 days	Fri 25/11/22	Wed 15/2/23	HK Working Day	428	431,433	0%	NA	NA
431	Apply top coating of aliphatic polyurethane on site	6 days	Thu 16/2/23	Wed 22/2/23	HK Working Day	430	435	0%	NA	NA
432	**Open Trench Connecting Trenchless and Exposed Pipe**	**230 days**	**Thu 16/2/23**	**Thu 23/11/23**	**HK Working Day**			**0%**	**NA**	**NA**
433	CH.FSKR+00 to CH.FD3+15 OC	90 days	Thu 16/2/23	Wed 7/6/23	HK Working Day	430	435,434	0%	NA	NA
434	CH.FDD3+15 to CH.FDD3+51 OC with DN900 Valve Chamber and By-pass Pipe and Connection to Pit WPR1	80 days	Thu 8/6/23	Mon 11/9/23	HK Working Day	433	435,764,765	0%	NA	NA
435	Make Good Slope Toe and Landscape Work	60 days	Tue 12/9/23	Thu 23/11/23	HK Working Day	433,434,431		0%	NA	NA
436	**Water Mains near Pung Loi Road and Po Yap Road (CH.FE0+00 - CH.A3+58)**	**758 days**	**Thu 20/8/20**	**Sat 11/3/23**	**HK Working Day**		**765**	**78%**	**Thu 20/8/20**	**NA**
437	Trial Pit at Working Pit WPR1	36 days	Thu 20/8/20	Wed 30/9/20	HK Working Day			100%	Thu 20/8/20	Wed 30/9/20
438	Trial Pit at Working Pit G1A	12 days	Sun 1/11/20	Sat 14/11/20	HK Working Day			100%	Sun 1/11/20	Sat 14/11/20
439	Issue CE No. 59 - Realignment of Water Main near Pung Loi Road and Po Yap Round Roundabout	0 days	Fri 13/11/20	Fri 13/11/20	Calendar Day		440,444	100%	Fri 13/11/20	Fri 13/11/20
440	Tender Process and Tender Award for CE No. 59	99 days	Fri 13/11/20	Fri 19/2/21	Calendar Day	439	441	100%	Fri 13/11/20	Fri 19/2/21
441	Design & Method Statement Submission and Approval ; Preparation Works for Pit J1A	93 days	Sat 20/2/21	Wed 16/6/21	HK Working Day	440	465,442,443	100%	Sat 20/2/21	Wed 16/6/21
442	Design & Method Statement Submission and Approval ; Preparation Works for Pit G1A	125 days	Thu 17/6/21	Sat 13/11/21	HK Working Day	441	452	100%	Thu 17/6/21	Sat 13/11/21
443	Design & Method Statement Submission and Approval ; Preparation Works for Pit WPR1	125 days	Thu 17/6/21	Sat 13/11/21	HK Working Day	441	450	100%	Thu 17/6/21	Sat 13/11/21
444	TTA preparation, SLG meetings and obtain RA	293 days	Fri 13/11/20	Wed 1/9/21	Calendar Day	439	448	100%	Fri 13/11/20	Wed 1/9/21
445	**Trenchless Crossing MTR Tunnels (Pit WPR1 to Pit G1A)**	**717 days**	**Fri 9/10/20**	**Sat 11/3/23**	**HK Working Day**			**50%**	**Fri 9/10/20**	**NA**
446	Inspection Pit at Location of Pit G1A	19 days	Fri 9/10/20	Sun 1/11/20	HK Working Day			100%	Fri 9/10/20	Sun 1/11/20
447	**Construction of Jacking Pit / Receiving Pit (TBM)**	**151 days**	**Wed 1/9/21**	**Sat 5/3/22**	**HK Working Day**			**100%**	**Wed 1/9/21**	**Sat 5/3/22**
448	Obtain consent for vehicular access construction for WPR1	0 days	Wed 1/9/21	Wed 1/9/21	HK Working Day	444		100%	Wed 1/9/21	Wed 1/9/21
449	Tree Truning at WPR1	2 days	Wed 3/11/21	Thu 4/11/21	HK Working Day		450	100%	Wed 3/11/21	Thu 4/11/21
450	Jacking Pit WPR1 (Near Pung Loi Road)	91.2 days	Fri 5/11/21	Sat 5/3/22	HK Working Day	449,443	454	100%	Fri 5/11/21	Sat 5/3/22
451	Planter Removal and Access Formation to pit G1A	13 days	Wed 1/9/21	Wed 15/9/21	HK Working Day		452	100%	Wed 1/9/21	Wed 15/9/21
452	Receiving Pit G1A (Near Po Yap Road)	91 days	Mon 27/9/21	Sat 15/1/22	HK Working Day	451,442	470,454	100%	Mon 27/9/21	Sat 15/1/22
453	**TBM Pipe Jacking (WPR1 to J1A)**	**301 days**	**Mon 7/3/22**	**Sat 11/3/23**	**HK Working Day**			**14%**	**Mon 7/3/22**	**NA**
454	TBM Establishment at Pit WPR1	38 days	Mon 7/3/22	Sat 23/4/22	HK Working Day	450,452	455	100%	Mon 7/3/22	Sat 23/4/22
455	Jacking DN1600 Precast Concrete Sleeve Pipe (224m; 2.0m/day)	112 days	Sun 24/4/22	Tue 6/9/22	HK Working Day	454	456	5%	Sun 24/4/22	NA
456	Remove setup including Thrust Wall at Pit WPR1	14 days	Wed 7/9/22	Fri 23/9/22	HK Working Day	455	457	0%	NA	NA
457	Setup for Pipe Laying inside Jacking Pit WPR1	6 days	Sat 24/9/22	Fri 30/9/22	HK Working Day	456	458	0%	NA	NA
458	DN1200 MS Pipe Laying inside Jacking Pipe (224m) (3 days per 8m)	84 days	Mon 3/10/22	Thu 12/1/23	HK Working Day	457	459	0%	NA	NA
459	Formwork & Setup for Grouting the gap between pipe and Sleeve	3 days	Fri 13/1/23	Mon 16/1/23	HK Working Day	458	460	0%	NA	NA
460	Grouting Works (30m per day)	8 days	Tue 17/1/23	Sat 28/1/23	HK Working Day	459	461	0%	NA	NA
461	Pipe Connection inside Working Pit WPR1	18 days	Mon 30/1/23	Sat 18/2/23	HK Working Day	460	462	0%	NA	NA
462	Remove ELS including extracting sheet piles at Pit WPR1; Reinstatement	18 days	Mon 20/2/23	Sat 11/3/23	HK Working Day	461		0%	NA	NA
463	**Trenchless Works (Pit G1A or Pit J1A)**	**320 days**	**Mon 3/5/21**	**Tue 31/5/22**	**HK Working Day**			**97%**	**Mon 3/5/21**	**NA**



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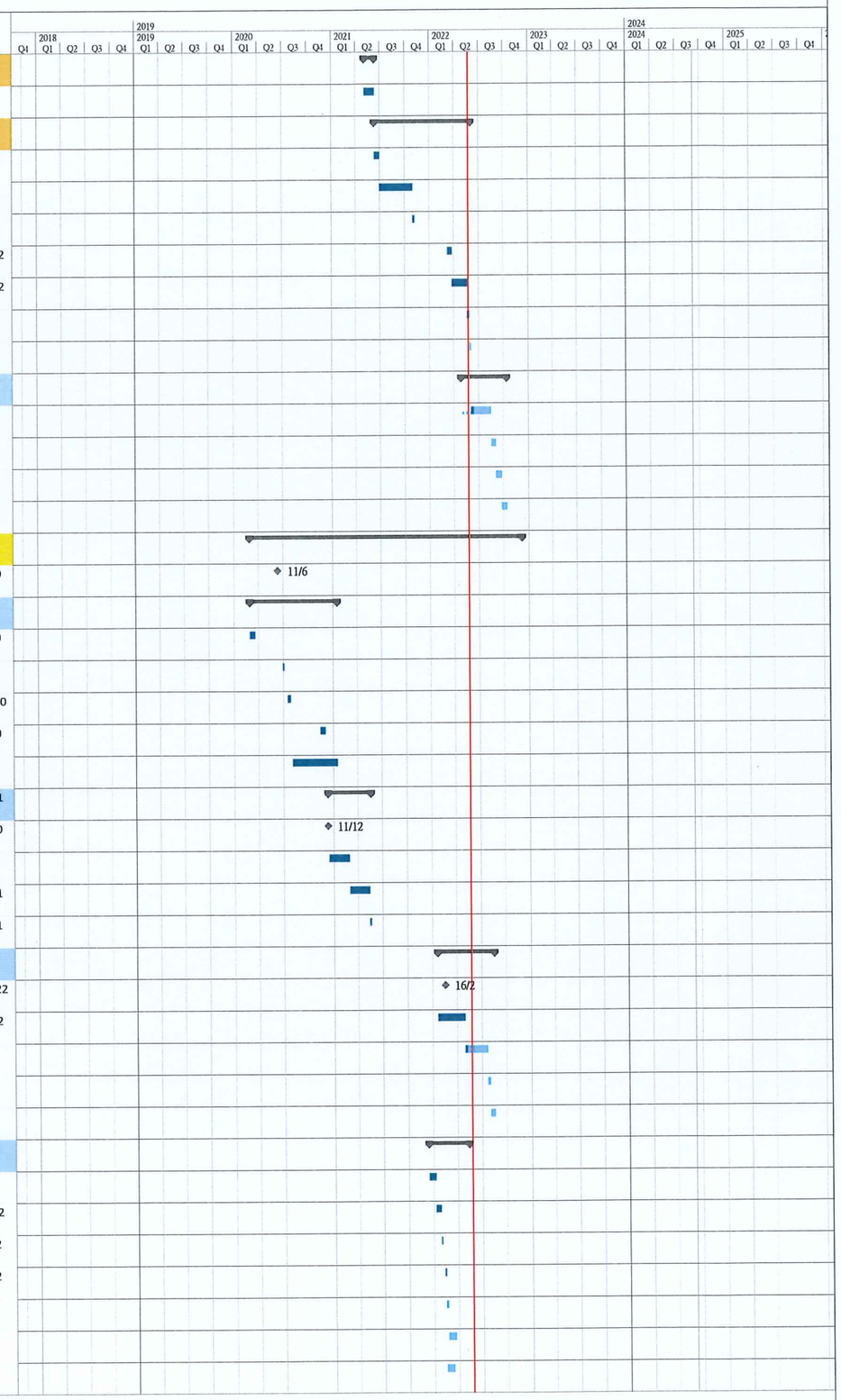
Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual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

Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
464	**Construction of Jacking Pit J1A (Hand Shield)**	**32 days**	**Mon 3/5/21**	**Wed 9/6/21**	**HK Working Day**			**100%**	**Mon 3/5/21**	**Wed 9/6/21**
465	Construction of Jacking Pit J1A	32 days	Mon 3/5/21	Wed 9/6/21	HK Working Day	441	467	100%	Mon 3/5/21	Wed 9/6/21
466	**Handshield Pipe Jacking (Pit G1A to Pit J1A)**	**288 days**	**Thu 10/6/21**	**Tue 31/5/22**	**HK Working Day**			**96%**	**Thu 10/6/21**	**NA**
467	Establishment at Pit J1A	16 days	Thu 10/6/21	Tue 29/6/21	HK Working Day	465	468	100%	Thu 10/6/21	Tue 29/6/21
468	Hand shield pipe jacking (I.D. 1600 segment pipe), 0.65m/day	101 days	Wed 30/6/21	Fri 29/10/21	HK Working Day	467	469	100%	Wed 30/6/21	Fri 29/10/21
469	Remove Setup at Pit J1A	6 days	Sat 30/10/21	Fri 5/11/21	HK Working Day	468	470	100%	Sat 30/10/21	Fri 5/11/21
470	Setup for Pipe Laying inside jacking Pit J1A	14 days	Tue 8/3/22	Wed 23/3/22	HK Working Day	469,452	471	100%	Tue 8/3/22	Wed 23/3/22
471	DN1200 MS Pipe Laying inside jacking pipe (~70m) (3 days per 4m)	42 days	Thu 24/3/22	Wed 18/5/22	HK Working Day	470	472	100%	Thu 24/3/22	Wed 18/5/22
472	Formwork & Setup for Grouting the gap between pipe and Sleeve	8 days	Thu 19/5/22	Fri 27/5/22	HK Working Day	471	473	50%	Thu 19/5/22	NA
473	Grouting Works (30 meter/day)	3 days	Sat 28/5/22	Tue 31/5/22	HK Working Day	472	475	0%	NA	NA
474	**Open Trench between Pit K and J1A**	**138 days**	**Tue 26/4/22**	**Tue 11/10/22**	**HK Working Day**			**7%**	**Tue 26/4/22**	**NA**
475	Pipe Laying From Pit K to Pit J1A (OC) (48m)	62 days	Tue 26/4/22	Sat 13/8/22	HK Working Day	473	476	13%	Tue 26/4/22	NA
476	Construction of Thrust Block from Pit K to Pit J1A	15 days	Mon 15/8/22	Wed 31/8/22	HK Working Day	475	477	0%	NA	NA
477	Backfill Trench and Remove ELS	18 days	Thu 1/9/22	Thu 22/9/22	HK Working Day	476	478	0%	NA	NA
478	Reinstatement of Plant and Shrubs in Roundabout	14 days	Fri 23/9/22	Tue 11/10/22	HK Working Day	477		0%	NA	NA
479	**Trenchless Work from Po Yap Road Roundabout to KMB Depot (Pit K to Pit L) (Pit O to Pit P)**	**822 days**	**Fri 28/2/20**	**Mon 5/12/22**	**HK Working Day**		**765**	**55%**	**Fri 28/2/20**	**NA**
480	Issue CE No. 50 - Realignment of Watermain at the Junction of Wan Po Road and Po Yap Road and the Junction of Po Hong Road and Po Shun Road.	0 days	Thu 11/6/20	Thu 11/6/20	Calendar Day			100%	Thu 11/6/20	Thu 11/6/20
481	**Construction of Jacking Pit K & Pit P**	**263 days**	**Fri 28/2/20**	**Fri 15/1/21**	**HK Working Day**			**100%**	**Fri 28/2/20**	**Fri 15/1/21**
482	Inspection Pit Excavation at Pit K	16 days	Fri 28/2/20	Tue 17/3/20	HK Working Day			100%	Fri 28/2/20	Tue 17/3/20
483	Inspection Pit Excavation at Pit P	3 days	Mon 29/6/20	Thu 2/7/20	HK Working Day			100%	Mon 29/6/20	Thu 2/7/20
484	Forming temporary Vehicle Access for Pit P	10 days	Thu 16/7/20	Mon 27/7/20	HK Working Day		486	100%	Thu 16/7/20	Mon 27/7/20
485	Jacking Pit K	15 days	Sat 14/11/20	Tue 1/12/20	HK Working Day		489	100%	Sat 14/11/20	Tue 1/12/20
486	Jacking Pit P + additional Grouting	137 days	Mon 3/8/20	Fri 15/1/21	HK Working Day	484		100%	Mon 3/8/20	Fri 15/1/21
487	**Hand Shield Jacking (Pit K to Pit L)**	**125 days**	**Fri 11/12/20**	**Tue 18/5/21**	**HK Working Day**			**100%**	**Fri 11/12/20**	**Tue 18/5/21**
488	MTR'S Consent Obtained	0 days	Fri 11/12/20	Fri 11/12/20	HK Working Day			100%	Fri 11/12/20	Fri 11/12/20
489	Establishment at Pit K	59 days	Mon 14/12/20	Fri 26/2/21	HK Working Day	485,531	490	100%	Mon 14/12/20	Fri 26/2/21
490	Segment @400mm Sleeve Pipe (Pit L to Pit K)(~ 56m) in Soil (0.8m/day)	59 days	Mon 1/3/21	Thu 13/5/21	HK Working Day	489	491	100%	Mon 1/3/21	Thu 13/5/21
491	Remove setup at Pit K	4 days	Thu 13/5/21	Tue 18/5/21	HK Working Day	490	499	100%	Thu 13/5/21	Tue 18/5/21
492	**TBM Pipe Jacking (Pit O to Pit P)**	**169 days**	**Wed 19/1/22**	**Tue 16/8/22**	**HK Working Day**			**50%**	**Wed 19/1/22**	**NA**
493	WSD accepted to change Sub-Contractor from Wellcon to VTEC	0 days	Wed 16/2/22	Wed 16/2/22	HK Working Day	555		100%	Wed 16/2/22	Wed 16/2/22
494	TBM Establishment at Pit O	79 days	Wed 19/1/22	Thu 28/4/22	HK Working Day		495	100%	Wed 19/1/22	Thu 28/4/22
495	Jacking DN1600 Precast Concrete Sleeve Pipe (200m; 3.0m/day)	67 days	Fri 29/4/22	Wed 20/7/22	HK Working Day	494	496	8%	Fri 29/4/22	NA
496	Grouting around sleeve pipes	9 days	Thu 21/7/22	Sat 30/7/22	HK Working Day	495	508,497	0%	NA	NA
497	Remove Pit setup at Pit P	14 days	Mon 1/8/22	Tue 16/8/22	HK Working Day	496	508	0%	NA	NA
498	**DN1200 Pipelaying (Pit K to Pit L)**	**116 days**	**Tue 14/12/21**	**Wed 11/5/22**	**HK Working Day**			**22%**	**Tue 14/12/21**	**NA**
499	Setup for Pipe Laying inside jacking Pit K	6 days	Tue 14/12/21	Fri 7/1/22	HK Working Day	491,545	500	100%	Tue 14/12/21	Fri 7/1/22
500	DN1200 MS Pipe Laying inside jacking pipe (53m) (3 days per 4m) (Only Internal Coating)	15 days	Sat 8/1/22	Tue 25/1/22	HK Working Day	499	501	100%	Sat 8/1/22	Tue 25/1/22
501	Formwork & Setup for Grouting the gap between pipe and Sleeve	2 days	Wed 26/1/22	Sat 29/1/22	HK Working Day	500	502	100%	Wed 26/1/22	Sat 29/1/22
502	Grouting Works (30 meter/day)	4 days	Wed 9/2/22	Sat 12/2/22	HK Working Day	501	503,505	100%	Wed 9/2/22	Sat 12/2/22
503	Pipe Connection at Pit L	9 days	Thu 10/2/22	Sat 19/2/22	HK Working Day	502	504	10%	Thu 10/2/22	NA
504	Remove ELS at Pit L	24 days	Mon 21/2/22	Sat 19/3/22	HK Working Day	503		0%	NA	NA
505	Remove ELS at Pit K	24 days	Mon 14/2/22	Sat 12/3/22	HK Working Day	502	506	0%	NA	NA



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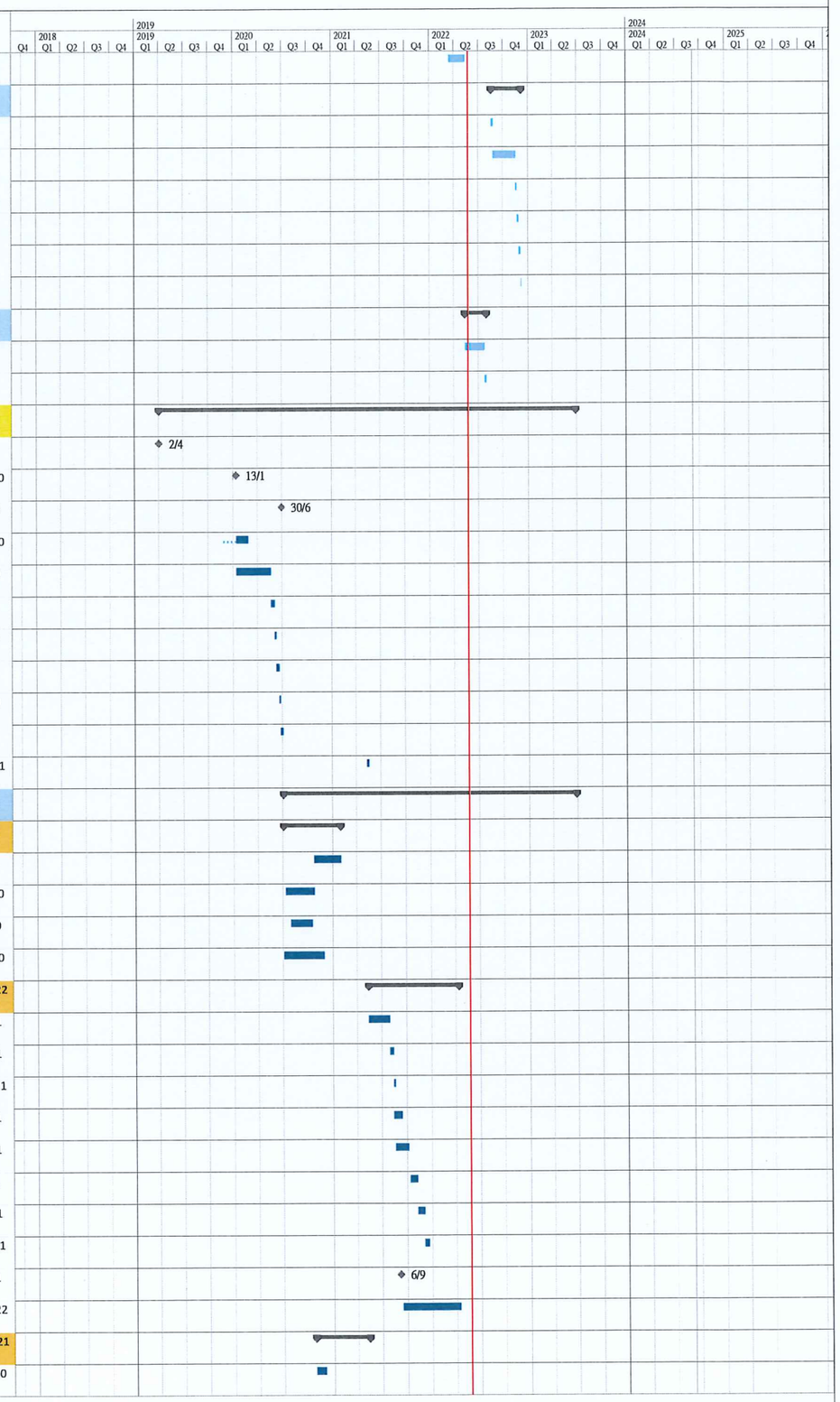
Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
506	Construction of DN900 Valve Chamber and DN150 By-pass Pipe & Valves Near Pit K	45 days	Mon 14/3/22	Wed 11/5/22	HK Working Day	505	515	0%	NA	NA
507	**DN1200 Pipelaying (Pit P to Pit O)**	**92 days**	**Wed 17/8/22**	**Mon 5/12/22**	**HK Working Day**			**0%**	**NA**	**NA**
508	Setup for Pipe Laying inside jacking Pit O	6 days	Wed 17/8/22	Tue 23/8/22	HK Working Day	496,497	509	0%	NA	NA
509	DN1200 MS Pipe Laying inside jacking pipe (187m) (3 days per 8m)(Only Internal Coating)	70 days	Wed 24/8/22	Wed 16/11/22	HK Working Day	508	510	0%	NA	NA
510	Formwork & Setup for Grouting the gap between pipe and Sleeve	3 days	Thu 17/11/22	Sat 19/11/22	HK Working Day	509	511	0%	NA	NA
511	Grouting Works (30 meter/day)	6 days	Mon 21/11/22	Sat 26/11/22	HK Working Day	510	577,512,610	0%	NA	NA
512	Pipe Connection at Pit O	6 days	Mon 28/11/22	Sat 3/12/22	HK Working Day	511	513	0%	NA	NA
513	Remove ELS at Pit O	1 day	Mon 5/12/22	Mon 5/12/22	HK Working Day	512		0%	NA	NA
514	**Reinstatement of Po Yap Road Roundabout**	**66 days**	**Thu 12/5/22**	**Fri 29/7/22**	**HK Working Day**			**0%**	**NA**	**NA**
515	Reinstatement Works	60 days	Thu 12/5/22	Fri 22/7/22	HK Working Day	506	516	0%	NA	NA
516	Handover Inspection with LCSD	6 days	Sat 23/7/22	Fri 29/7/22	HK Working Day	515		0%	NA	NA
517	**Trenchless Work from Po Yap Road Roundabout (Hong Kong Velodrome)**	**1251 days**	**Tue 2/4/19**	**Mon 26/6/23**	**HK Working Day**		**765**	**80%**	**Tue 2/4/19**	**NA**
518	Issue CE No. 14 - Manhole inspection of existing drain/Outfall near Hong Kong Velodrome and TKO stage 1 Landfill and CCTV survey of existing Drain at Cycle Track	0 days	Tue 2/4/19	Tue 2/4/19	Calendar Day		521,522	100%	Tue 2/4/19	Tue 2/4/19
519	Issue CE No. 28 - Realignment of Water Mains along Po Yap Road and Po Hong Road	0 days	Mon 13/1/20	Mon 13/1/20	Calendar Day		521,522	100%	Mon 13/1/20	Mon 13/1/20
520	Issue CE No. 28A - Affected Trees along Cycle Track next to Hong Kong Velodrome and Tseung Kwan O Sport Ground	0 days	Tue 30/6/20	Tue 30/6/20	Calendar Day			100%	Tue 30/6/20	Tue 30/6/20
521	Tender and Subletting for CE No. 28	99 days	Mon 18/11/19	Mon 24/2/20	Calendar Day	519,518		100%	Mon 18/11/19	Mon 24/2/20
522	TTA preparation, SLG meetings, obtain RA and TPRP Approval for Temporary Vehicular Access at HK Velodrome	128 days	Mon 13/1/20	Tue 19/5/20	Calendar Day	519,518	523	100%	Mon 13/1/20	Tue 19/5/20
523	Coordination with LCSD and Notification to District Councilors	14 days	Wed 20/5/20	Tue 2/6/20	Calendar Day	522	524	100%	Wed 20/5/20	Tue 2/6/20
524	Form Temporary Vehicle Access at TKO Sport Ground	5 days	Mon 1/6/20	Mon 8/6/20	HK Working Day	523	525	100%	Mon 1/6/20	Mon 8/6/20
525	Tree Transplanting Working & Tree Removal Works at TKO Sport Ground (CE No. 28)	10 days	Tue 9/6/20	Fri 19/6/20	HK Working Day	524	526	100%	Tue 9/6/20	Fri 19/6/20
526	Tree Pruning Working for driving Sheetpile at Pit M, Pit N & Pit O	3 days	Sat 20/6/20	Tue 23/6/20	HK Working Day	525	527	100%	Sat 20/6/20	Tue 23/6/20
527	Mobilization of Sheet-piles and Driving Machines	7 days	Wed 24/6/20	Fri 3/7/20	HK Working Day	526	534,532	100%	Wed 24/6/20	Fri 3/7/20
528	Works suspended by closure of vehicular access at Velodrome	8 days	Mon 10/5/21	Mon 17/5/21	Calendar Day			100%	Mon 10/5/21	Mon 17/5/21
529	**Trenchless Works (Pit L to Pit O)**	**882 days**	**Sat 4/7/20**	**Mon 26/6/23**	**HK Working Day**			**77%**	**Sat 4/7/20**	**NA**
530	**Construction of Jacking Pit & Receiving Pit**	**175 days**	**Sat 4/7/20**	**Sat 30/1/21**	**HK Working Day**			**100%**	**Sat 4/7/20**	**Sat 30/1/21**
531	Receiving Pit L	81 days	Sat 24/10/20	Sat 30/1/21	HK Working Day	532	489	100%	Sat 24/10/20	Sat 30/1/21
532	Jacking Pit M	89 days	Sat 11/7/20	Sat 24/10/20	HK Working Day	527	531,547	100%	Sat 11/7/20	Sat 24/10/20
533	Receiving Pit N	66 days	Thu 30/7/20	Fri 16/10/20	HK Working Day			100%	Thu 30/7/20	Fri 16/10/20
534	Jacking / Receiving Pit O + additional Grouting	124 days	Sat 4/7/20	Sat 28/11/20	HK Working Day	527	551	100%	Sat 4/7/20	Sat 28/11/20
535	**TBM Pipe Jacking (Pit M to Pit L)**	**273 days**	**Thu 13/5/21**	**Mon 11/4/22**	**HK Working Day**			**100%**	**Thu 13/5/21**	**Mon 11/4/22**
536	Re-establishment at Pit M for changing jacking direction	64 days	Thu 13/5/21	Thu 29/7/21	HK Working Day	549	537	100%	Thu 13/5/21	Thu 29/7/21
537	DN1600 Precast Concrete Sleeve Pipe (Pit M - Pit L) approx. 10m	12 days	Fri 30/7/21	Thu 12/8/21	HK Working Day	536	538,539	100%	Fri 30/7/21	Thu 12/8/21
538	TBM suspended, review for Rescue pit construction	5 days	Fri 13/8/21	Wed 18/8/21	HK Working Day	537	540	100%	Fri 13/8/21	Wed 18/8/21
539	Review and study the alternative construction method (Open Cut in normal condition)	26 days	Fri 13/8/21	Sun 12/9/21	HK Working Day	537	544	100%	Fri 13/8/21	Sun 12/9/21
540	Rescue Pit Construction & Retrieval of TBM	39 days	Thu 19/8/21	Tue 5/10/21	HK Working Day	538	541	100%	Thu 19/8/21	Tue 5/10/21
541	Set up working platform and lifting grantry at Rescue Pit for Handshield; Forming Entrance	23 days	Mon 11/10/21	Sat 6/11/21	HK Working Day	540	542	100%	Mon 11/10/21	Sat 6/11/21
542	Hand dig tunnel between Pit M and Rescue Pit	22 days	Mon 8/11/21	Thu 2/12/21	HK Working Day	541	543	100%	Mon 8/11/21	Thu 2/12/21
543	Remove setup & removal of Thrust wall	14 days	Fri 3/12/21	Sat 18/12/21	HK Working Day	542	560	100%	Fri 3/12/21	Sat 18/12/21
544	WSD accepted Alternative Scheme from Pit O to Pit L	0 days	Mon 6/9/21	Mon 6/9/21	HK Working Day	539	545	100%	Mon 6/9/21	Mon 6/9/21
545	Water mains by Open Cut Method (West Portion - 143m)	171 days	Mon 13/9/21	Mon 11/4/22	HK Working Day	544	560,499	100%	Mon 13/9/21	Mon 11/4/22
546	**TBM Pipe Jacking (Pit M to Pit N)**	**159 days**	**Mon 26/10/20**	**Wed 12/5/21**	**HK Working Day**			**100%**	**Mon 26/10/20**	**Wed 12/5/21**
547	Establishment at Pit M	29 days	Mon 26/10/20	Sat 28/11/20	HK Working Day	532	548	100%	Mon 26/10/20	Sat 28/11/20



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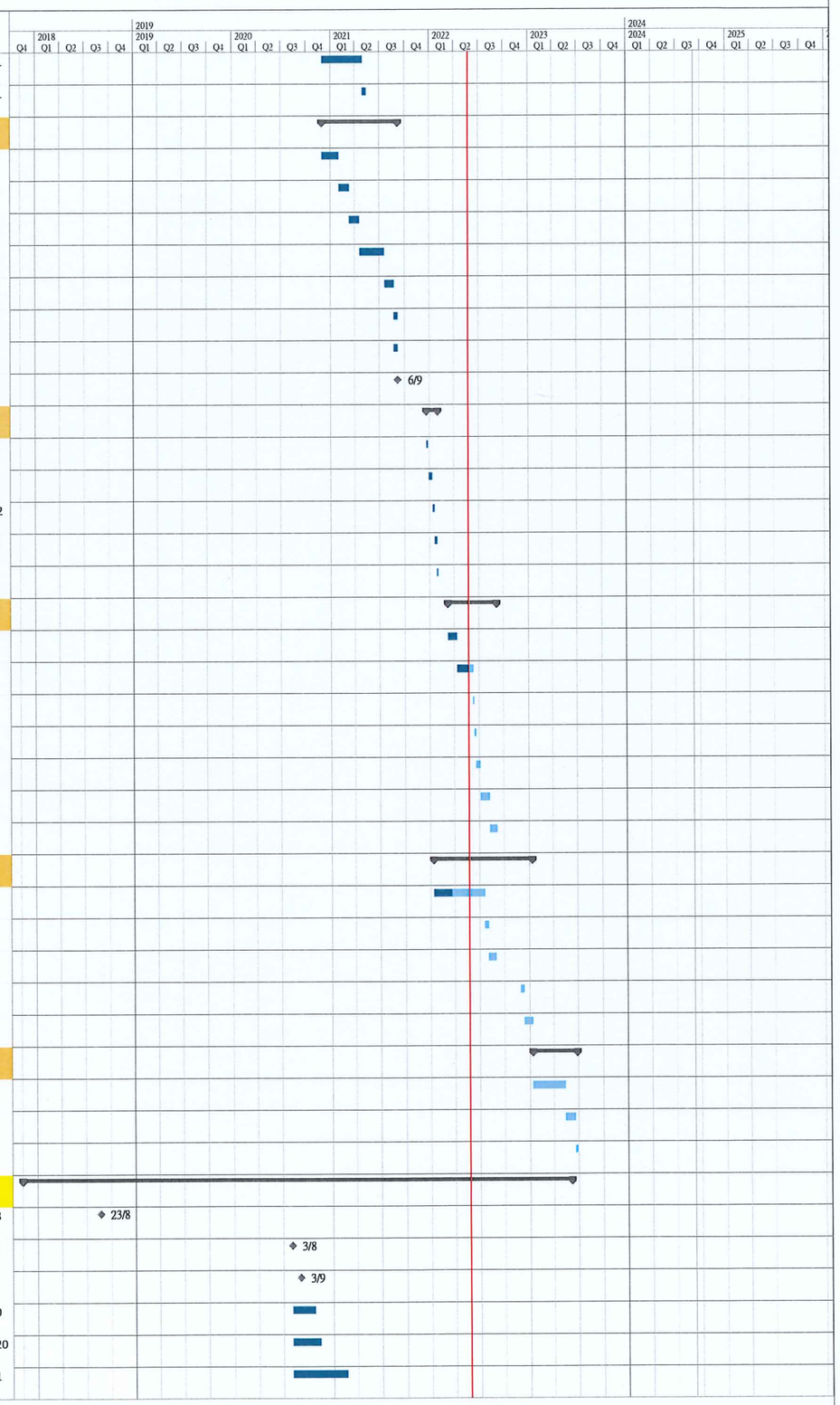
Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual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

Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
548	DN1600 Precast Concrete Sleeve Pipe (Pit M - Pit N) (CH.GA1+86 to CH.GA3+20) in Soil (134m; 3.5m/day)	119 days	Mon 30/11/20	Wed 28/4/21	HK Working Day	547	549	100%	Mon 30/11/20	Wed 28/4/21
549	Grouting around sleeve pipe	11 days	Thu 29/4/21	Wed 12/5/21	HK Working Day	548	536	100%	Thu 29/4/21	Wed 12/5/21
550	**TBM Pipe Jacking (Pit O to Pit N)**	**226 days**	**Mon 30/11/20**	**Mon 6/9/21**	**HK Working Day**			**100%**	**Mon 30/11/20**	**Mon 6/9/21**
551	Establishment at Pit O	51 days	Mon 30/11/20	Sat 30/1/21	HK Working Day	534	552	100%	Mon 30/11/20	Sat 30/1/21
552	DN1600 Precast Concrete Sleeve Pipe (Pit O - Pit N) Suspended due to water ingress and obstruction at 8m away from Pit O	31 days	Mon 1/2/21	Thu 11/3/21	HK Working Day	551	553	100%	Mon 1/2/21	Thu 11/3/21
553	Retraction of Sleeve pipe	28 days	Fri 12/3/21	Sat 17/4/21	HK Working Day	552	554	100%	Fri 12/3/21	Sat 17/4/21
554	Rescue Pit for TBM	74 days	Mon 19/4/21	Sat 17/7/21	HK Working Day	553	555	100%	Mon 19/4/21	Sat 17/7/21
555	Remove TBM from Rescue Pit; Detail Inspection ad Trial operation on ground	30 days	Mon 19/7/21	Sat 21/8/21	HK Working Day	554	556,557,493	100%	Mon 19/7/21	Sat 21/8/21
556	Dismantle and remove set up at Pit O	12 days	Mon 23/8/21	Sat 4/9/21	HK Working Day	555		100%	Mon 23/8/21	Sat 4/9/21
557	Review and study the alternative construction method (Open Cut in wet condition)	12 days	Mon 23/8/21	Sat 4/9/21	HK Working Day	555	558	100%	Mon 23/8/21	Sat 4/9/21
558	WSD accepted Alternative Scheme from Pit O to Pit L	0 days	Mon 6/9/21	Mon 6/9/21	HK Working Day	557	574	100%	Mon 6/9/21	Mon 6/9/21
559	**DN1200 Pipelaying in side Hang Dig Tunnel (Pit M to Pit L)**	**33 days**	**Mon 20/12/21**	**Sat 29/1/22**	**HK Working Day**			**100%**	**Mon 20/12/21**	**Sat 29/1/22**
560	setup for pipe laying inside hand dig tunnel	5 days	Mon 20/12/21	Fri 24/12/21	HK Working Day	543,545	561	100%	Mon 20/12/21	Fri 24/12/21
561	DN1200 MS Pipe Laying inside Hand dig tunnel	10 days	Tue 28/12/21	Sat 8/1/22	HK Working Day	560	562	100%	Tue 28/12/21	Sat 8/1/22
562	Formwork & Setup for Grouting the gap between pipe and Sleeve	5 days	Wed 12/1/22	Mon 17/1/22	HK Working Day	561	563	100%	Wed 12/1/22	Mon 17/1/22
563	Grouting Works (30 meter/day)	8 days	Wed 19/1/22	Thu 27/1/22	HK Working Day	562	564	100%	Wed 19/1/22	Thu 27/1/22
564	Remove Pit setup	2 days	Fri 28/1/22	Sat 29/1/22	HK Working Day	563	570,566,580	100%	Fri 28/1/22	Sat 29/1/22
565	**DN1200 Pipelaying in Sleeve pipe (Pit M to Pit N)**	**147 days**	**Tue 8/3/22**	**Sat 3/9/22**	**HK Working Day**			**42%**	**Tue 8/3/22**	**NA**
566	Setup for Pipe Laying inside jacking Pit N	28 days	Tue 8/3/22	Sat 9/4/22	HK Working Day	564	567	100%	Tue 8/3/22	Sat 9/4/22
567	DN1200 MS Pipe Laying inside jacking pipe (134m) (3 days per 8m)(Only Internal Coating)	45 days	Mon 11/4/22	Wed 8/6/22	HK Working Day	566	568	75%	Mon 11/4/22	NA
568	Formwork & Setup for Grouting the gap between pipe and Sleeve	3 days	Thu 9/6/22	Sat 11/6/22	HK Working Day	567	569	0%	NA	NA
569	Grouting Works (30 meter/day)	5 days	Mon 13/6/22	Fri 17/6/22	HK Working Day	568	570,575	0%	NA	NA
570	Pipe Connection Inside Pit M	12 days	Sat 18/6/22	Sat 2/7/22	HK Working Day	569,564	571	0%	NA	NA
571	Construction of IT Chamber at Pit M	30 days	Mon 4/7/22	Sat 6/8/22	HK Working Day	570	572	0%	NA	NA
572	Remove ELS including extracting sheet piles at Pit M & Pit N	24 days	Mon 8/8/22	Sat 3/9/22	HK Working Day	571	580	0%	NA	NA
573	**DN1200 Pipelaying (Pit O to Pit N)**	**296 days**	**Wed 12/1/22**	**Wed 11/1/23**	**HK Working Day**			**24%**	**Wed 12/1/22**	**NA**
574	Water mains by Open Cut Method (West Portion - 177m)	150 days	Wed 12/1/22	Mon 18/7/22	HK Working Day	558	575	36%	Wed 12/1/22	NA
575	Pipe Connection Inside Pit N	12 days	Tue 19/7/22	Mon 1/8/22	HK Working Day	569,574	576	0%	NA	NA
576	Remove ELS including extracting sheet piles at Pit N	24 days	Tue 2/8/22	Mon 29/8/22	HK Working Day	575	580	0%	NA	NA
577	Pipe Connection in side Pit O	12 days	Mon 28/11/22	Sat 10/12/22	HK Working Day	511	578	0%	NA	NA
578	Remove ELS including extracting sheet piles at Pit O	24 days	Mon 12/12/22	Wed 11/1/23	HK Working Day	577	580	0%	NA	NA
579	**Reinstallation of Cycle track Pavement and Planter**	**132 days**	**Thu 12/1/23**	**Mon 26/6/23**	**HK Working Day**			**0%**	**NA**	**NA**
580	Reinstalment Works	96 days	Thu 12/1/23	Fri 12/5/23	HK Working Day	576,578,572,564	581	0%	NA	NA
581	Compensation Tree Planting	30 days	Sat 13/5/23	Sat 17/6/23	HK Working Day	580	582	0%	NA	NA
582	Handover Inspection with LCSD and HyD	6 days	Mon 19/6/23	Mon 26/6/23	HK Working Day	581		0%	NA	NA
583	**Water Mains from KMB Depot to TKO Fresh Water Preliminary Service Reservoir**	**1649 days**	**Tue 7/11/17**	**Mon 5/6/23**	**HK Working Day**			**80%**	**Tue 7/11/17**	**NA**
584	Issue CE No. 04 - Feasibility Study of Realignment of Pipeline between Po Hung Road and TKO Freshwater PSR	0 days	Thu 23/8/18	Thu 23/8/18	Calendar Day			100%	Thu 23/8/18	Thu 23/8/18
585	Issue CE No. 51 - Realignment of Water Main in Tsui Lam Section	0 days	Mon 3/8/20	Mon 3/8/20	Calendar Day		590,587,736,588,589	100%	Mon 3/8/20	Mon 3/8/20
586	Issue WSD Letter Ref.: (4) in WSD/M/7503/13/WSD/16/M15/300/51 for additional works to CE No. 51	0 days	Thu 3/9/20	Thu 3/9/20	Calendar Day			100%	Thu 3/9/20	Thu 3/9/20
587	Tendering Process, Tender Award for CE No. 51 (Batch No, 1)	82 days	Mon 3/8/20	Fri 23/10/20	Calendar Day	585		100%	Mon 3/8/20	Fri 23/10/20
588	Tendering Process, Tender Award for CE No. 51 (Batch No. 2)	102 days	Mon 3/8/20	Thu 12/11/20	Calendar Day	585		100%	Mon 3/8/20	Thu 12/11/20
589	Tendering Process, Tender Award for CE No. 51 (Batch No. 3))	200 days	Mon 3/8/20	Thu 18/2/21	Calendar Day	585	735,737	100%	Mon 3/8/20	Thu 18/2/21



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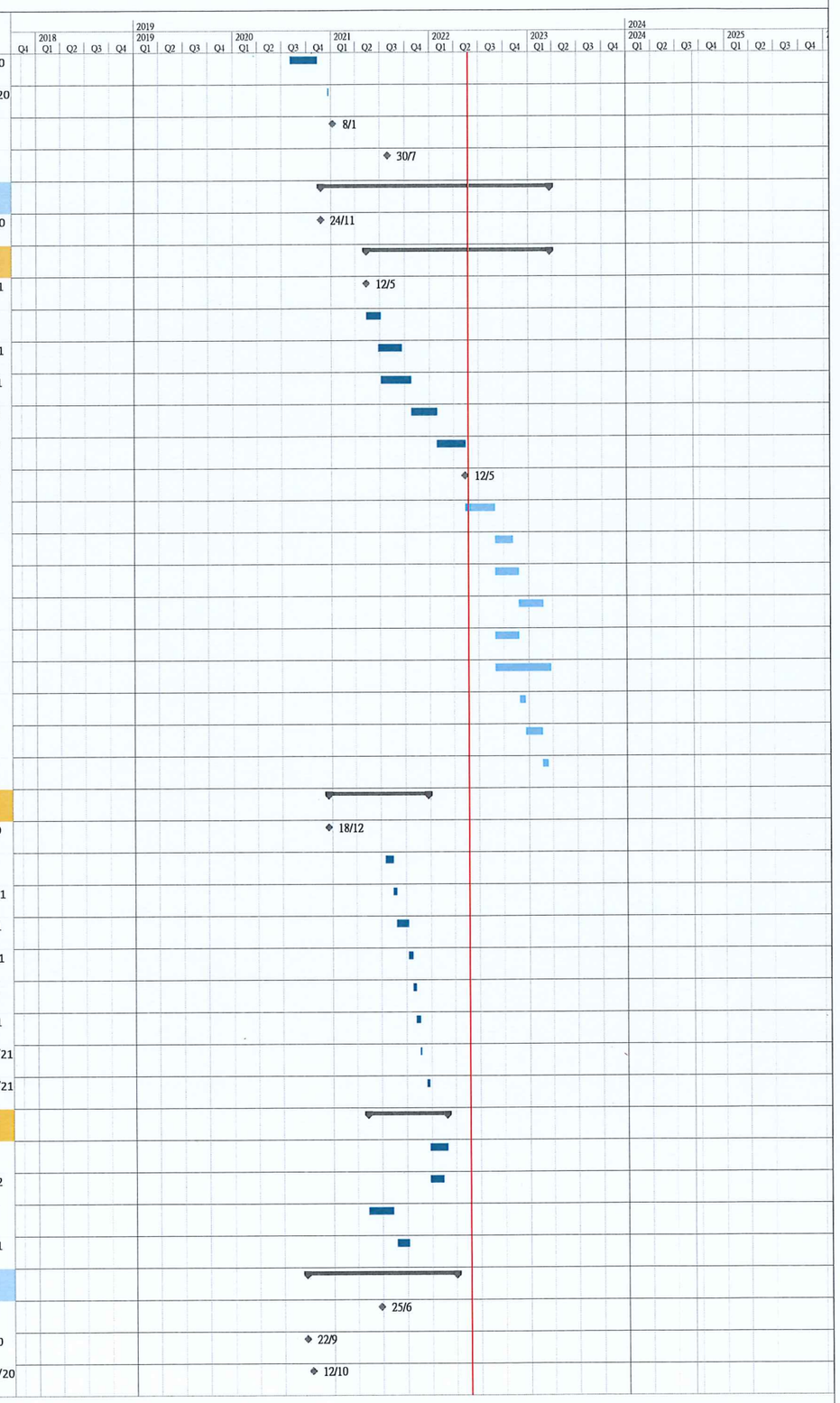
Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual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

Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
590	TTA preparation, SLG meetings, obtain RA and implement Advanced Works	100 days	Mon 3/8/20	Tue 10/11/20	Calendar Day	585		100%	Mon 3/8/20	Tue 10/11/20
591	Ground Investigation at Pit R	1 day	Mon 21/12/20	Mon 21/12/20	HK Working Day			100%	Mon 21/12/20	Mon 21/12/20
592	Issue EWN No.. 269 - Unexpected High Rockhead Level Encountered at Working Pit R	0 days	Fri 8/1/21	Fri 8/1/21	HK Working Day			100%	Fri 8/1/21	Fri 8/1/21
593	Receiving of Drawing No. SK40134-517 for Changing Construction Method and Alignment from Pit P to Pit T	0 days	Fri 30/7/21	Fri 30/7/21	HK Working Day			100%	Fri 30/7/21	Fri 30/7/21
594	**Trenchless Works from Pit P to Mau Wu Tsai Abandon Road**	**688 days**	**Tue 24/11/20**	**Wed 22/3/23**	**HK Working Day**		**765**	**54%**	**Tue 24/11/20**	**NA**
595	Issue EWN No. 241 for Tree Issue for Changing Trenchless (Pit S to Pit T) to Open Cut at Control Site (CS-108)	0 days	Tue 24/11/20	Tue 24/11/20	HK Working Day		626	100%	Tue 24/11/20	Tue 24/11/20
596	**TBM Pipe Jacking (Pit P to Pit Y)**	**554 days**	**Wed 12/5/21**	**Wed 22/3/23**	**HK Working Day**			**39%**	**Wed 12/5/21**	**NA**
597	WSD agreed to carry out Horizontal grout from Pit P to Pit Y (45m)	0 days	Wed 12/5/21	Wed 12/5/21	HK Working Day		598	100%	Wed 12/5/21	Wed 12/5/21
598	Mobilization and Carry out Horizontal grouting	43 days	Wed 12/5/21	Sat 3/7/21	HK Working Day	597	600	100%	Wed 12/5/21	Sat 3/7/21
599	Receiving Pit Y	74 days	Fri 25/6/21	Mon 20/9/21	HK Working Day			100%	Fri 25/6/21	Mon 20/9/21
600	Establishment and Set up for pipe jacking at Pit P	93 days	Mon 5/7/21	Sat 23/10/21	HK Working Day	598	601	100%	Mon 5/7/21	Sat 23/10/21
601	Jacking DN1600 Precast Concrete Sleeve Pipe	79 days	Mon 25/10/21	Thu 27/1/22	HK Working Day	600		100%	Mon 25/10/21	Thu 27/1/22
602	Stop Works due to incident at KMB deport	106 days	Thu 27/1/22	Thu 12/5/22	Calendar Day		603FF	100%	Thu 27/1/22	Thu 12/5/22
603	WSD obtained approval from TD, KMD and HyD	0 days	Thu 12/5/22	Thu 12/5/22	Calendar Day	602FF	604	100%	Thu 12/5/22	Thu 12/5/22
604	Constuction of Rescure Pit at KMB Depot and Remove TBM	90 days	Fri 13/5/22	Sat 27/8/22	HK Working Day	603	606,608,609,605	1%	Fri 13/5/22	NA
605	Pipe Laying from Pit P to Rescure Pit at KMB Depot	54 days	Mon 29/8/22	Wed 2/11/22	HK Working Day	604	610	0%	NA	NA
606	Open Cut at KMB Depot Stage 1	72 days	Mon 29/8/22	Wed 23/11/22	HK Working Day	604	607	0%	NA	NA
607	Open Cut at KMB Depot Stage 2	72 days	Thu 24/11/22	Wed 22/2/23	HK Working Day	606		0%	NA	NA
608	Open Cut outside at KMB Depot along Po Hong Road Green Area	72 days	Mon 29/8/22	Wed 23/11/22	HK Working Day	604		0%	NA	NA
609	Open Cut Across Po Hong Road (Lane by Lane, 42 W.D. per lanes; 4 Stage)	168 days	Mon 29/8/22	Wed 22/3/23	HK Working Day	604		0%	NA	NA
610	Pipe Connection inside Working Pit P	18 days	Mon 28/11/22	Sat 17/12/22	HK Working Day	605,511	611	0%	NA	NA
611	Construction of Combined chamber at Pit P	48 days	Mon 19/12/22	Sat 18/2/23	HK Working Day	610	612	0%	NA	NA
612	Remove ELS including extracting sheet piles at Pit P; Reinstatement	18 days	Mon 20/2/23	Sat 11/3/23	HK Working Day	611		0%	NA	NA
613	**Hand Shield Pipe Jacking from Pit R to Pit Y**	**300 days**	**Fri 18/12/20**	**Wed 22/12/21**	**HK Working Day**			**100%**	**Fri 18/12/20**	**Wed 22/12/21**
614	Issue CE No. 94 - Site Clearance of Affected Trees and Plants for Mainlaying works near Po Hong Road and Ling Hong Road	0 days	Fri 18/12/20	Fri 18/12/20	Calendar Day		416	100%	Fri 18/12/20	Fri 18/12/20
615	Jacking / Receiving Pit R	25 days	Fri 16/7/21	Fri 13/8/21	HK Working Day		616	100%	Fri 16/7/21	Fri 13/8/21
616	Establishment at Pit R	10 days	Sat 14/8/21	Wed 25/8/21	HK Working Day	615	617	100%	Sat 14/8/21	Wed 25/8/21
617	Mild Steel Sleeve Pipe in Mix of Soil (26m)(0.8m/day)	35 days	Thu 26/8/21	Thu 7/10/21	HK Working Day	616	618	100%	Thu 26/8/21	Thu 7/10/21
618	Remove Setup at Pit R	13 days	Fri 8/10/21	Sat 23/10/21	HK Working Day	617	619	100%	Fri 8/10/21	Sat 23/10/21
619	Setup for Pipe Laying inside Jacking Pit R	12 days	Mon 25/10/21	Sat 6/11/21	HK Working Day	618	620	100%	Mon 25/10/21	Sat 6/11/21
620	DN1200 MS Pipe Laying inside Jacking Pipe (3 days per 4m)(Only Internal Coating)	13 days	Fri 5/11/21	Fri 19/11/21	HK Working Day	619	621	100%	Fri 5/11/21	Fri 19/11/21
621	Formwork & Setup for Grouting the gap between pipe and Sleeve	2 days	Sat 20/11/21	Mon 22/11/21	HK Working Day	620	622	100%	Sat 20/11/21	Mon 22/11/21
622	Grouting Works	9 days	Mon 13/12/21	Wed 22/12/21	HK Working Day	621	624	100%	Mon 13/12/21	Wed 22/12/21
623	**Open Cut Excavation from Pit R to Mau Wu Tsai Abandon Road**	**239 days**	**Mon 10/5/21**	**Fri 25/2/22**	**HK Working Day**		**767**	**100%**	**Mon 10/5/21**	**Fri 25/2/22**
624	Open Cut, CH.HA0+28 - CH.HA0+48 with DAV Chamber (Connecting to Pit R)	49 days	Fri 24/12/21	Fri 25/2/22	HK Working Day	622,627	625	100%	Fri 24/12/21	Fri 25/2/22
625	Construction of DN900 Valve Chamber with by-pass at CH.HA0+44	36 days	Fri 24/12/21	Thu 10/2/22	HK Working Day	624		100%	Fri 24/12/21	Thu 10/2/22
626	Open Cut, CH.HA0+48 - CH.HA 1+20 OC with DN600 IT Chamber (Connecting Original CH.HA0+80)	75 days	Mon 10/5/21	Sun 8/8/21	HK Working Day	635,595	627	100%	Mon 10/5/21	Sun 8/8/21
627	Construction of Wash Out Chamber & Reserved Tee at CH.HA0+49	36 days	Mon 23/8/21	Tue 5/10/21	HK Working Day	626	624	100%	Mon 23/8/21	Tue 5/10/21
628	**Open Trench Pipe laying at Abandoned Road**	**451 days**	**Tue 22/9/20**	**Thu 31/3/22**	**HK Working Day**		**767**	**91%**	**Tue 22/9/20**	**NA**
629	Issue CE No. 121 - Non-explosive agent in Abandoned Road Near Mau Wu Tsai Village	0 days	Fri 25/6/21	Fri 25/6/21	HK Working Day			100%	Fri 25/6/21	Fri 25/6/21
630	Issue CE No. 70 - Landscaping Survey near Mau Wu Tsai Village	0 days	Tue 22/9/20	Tue 22/9/20	HK Working Day			100%	Tue 22/9/20	Tue 22/9/20
631	Issue CE No. 86 - Tree Affected in Mainlaying Works near Mau Wu Tsai Village	0 days	Mon 12/10/20	Mon 12/10/20	HK Working Day		632	100%	Mon 12/10/20	Mon 12/10/20



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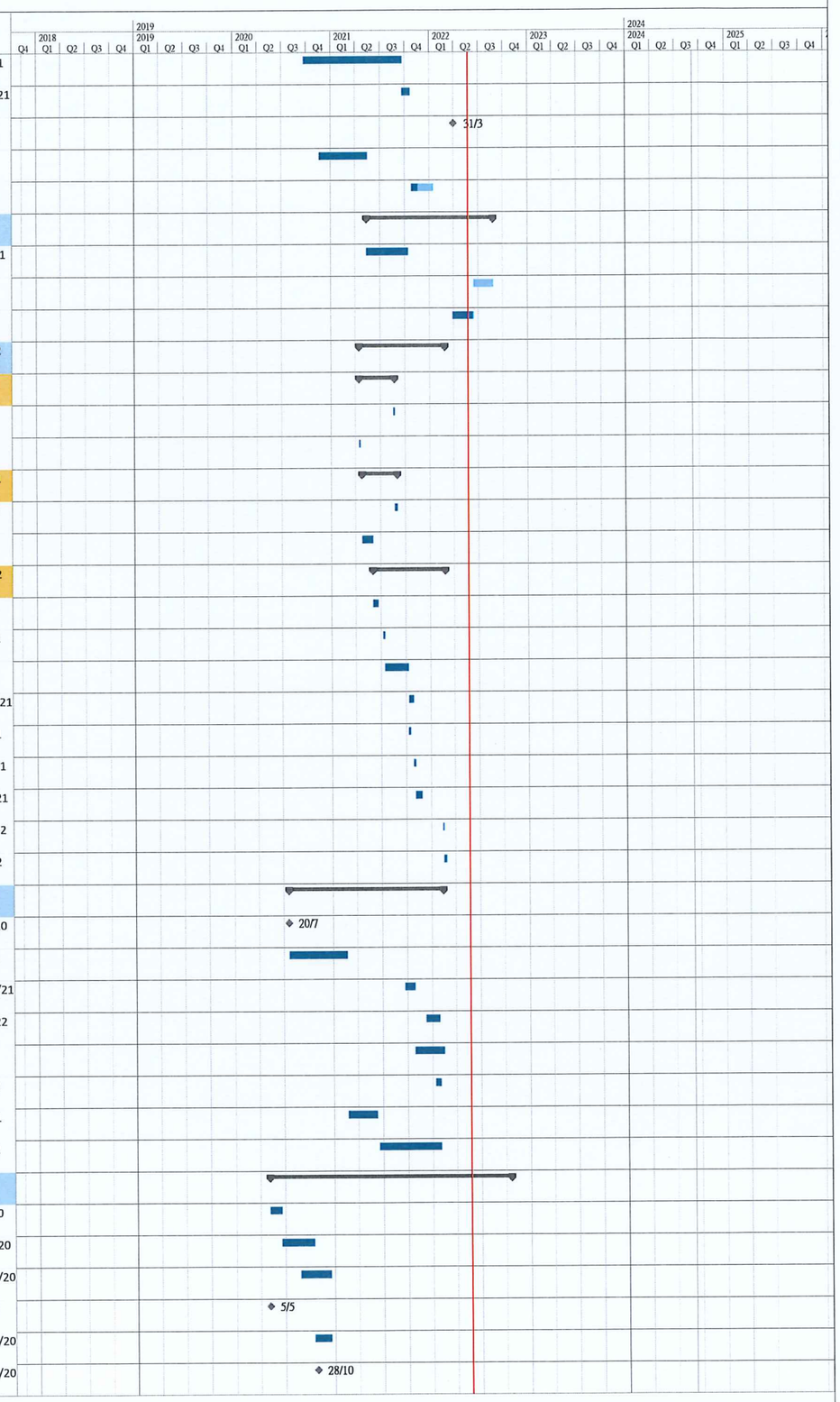
Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual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

Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
632	Tree survey, TPRP Submission and Receiving TPRP approval	295 days	Tue 22/9/20	Mon 20/9/21	HK Working Day	631	661,633	100%	Tue 22/9/20	Mon 20/9/21
633	Mobilization and Tree Removal	23 days	Tue 21/9/21	Wed 20/10/21	HK Working Day	632	663,636	100%	Tue 21/9/21	Wed 20/10/21
634	Issue CE No. XXX - Change Trenchless (Pit U - Pit V) to Open Cut and Revised the Alignment	0 days	Thu 31/3/22	Thu 31/3/22	HK Working Day			0%	NA	NA
635	Open Cut, CH.HA0+80 - CH.HA3+17	141 days	Thu 19/11/20	Fri 14/5/21	HK Working Day		626	100%	Thu 19/11/20	Fri 14/5/21
636	Open Cut, CH.HA3+17 - CH.HA3+79	66 days	Tue 26/10/21	Thu 13/1/22	HK Working Day	633		30%	Tue 26/10/21	NA
637	**Open Trench Pipe Laying at Po Lam Road South (Mau Wu Tsai Village)**	**382 days**	**Wed 12/5/21**	**Tue 23/8/22**	**HK Working Day**			**74%**	**Wed 12/5/21**	**NA**
638	Open Cut, CH.HA3+79 - CH.HA4+68 with SACP	127 days	Wed 12/5/21	Tue 12/10/21	HK Working Day		639	100%	Wed 12/5/21	Tue 12/10/21
639	Open Cut, CH.HA4+68 - CH.HA5+21	60 days	Tue 14/6/22	Tue 23/8/22	HK Working Day	638,640		0%	NA	NA
640	Open Cut, CH.HA5+21 - CH.HA5+55 (Pit W)	60 days	Mon 28/3/22	Mon 13/6/22	HK Working Day		639	95%	Mon 28/3/22	NA
641	**Trenchless Work at Po Lam Road South**	**259 days**	**Wed 14/4/21**	**Thu 24/2/22**	**HK Working Day**			**100%**	**Wed 14/4/21**	**Thu 24/2/22**
642	**Inspection Pit Excavation**	**108 days**	**Wed 14/4/21**	**Sat 21/8/21**	**HK Working Day**			**100%**	**Wed 14/4/21**	**Sat 21/8/21**
643	Inspection Pit Excavation at Pit W	4 days	Wed 18/8/21	Sat 21/8/21	HK Working Day		646	100%	Wed 18/8/21	Sat 21/8/21
644	Inspection Pit Excavation at Pit X	3 days	Wed 14/4/21	Fri 16/4/21	HK Working Day		647	100%	Wed 14/4/21	Fri 16/4/21
645	**Construction of Jacking / Receiving Pits**	**107 days**	**Sat 24/4/21**	**Tue 31/8/21**	**HK Working Day**			**100%**	**Sat 24/4/21**	**Tue 31/8/21**
646	Receiving Pit W	8 days	Mon 23/8/21	Tue 31/8/21	HK Working Day	643		100%	Mon 23/8/21	Tue 31/8/21
647	Jacking Pit X	31 days	Sat 24/4/21	Tue 1/6/21	HK Working Day	644	649	100%	Sat 24/4/21	Tue 1/6/21
648	**Hand Shield Pipe Jacking from Pit W to Pit X (~85m)**	**219 days**	**Wed 2/6/21**	**Thu 24/2/22**	**HK Working Day**			**100%**	**Wed 2/6/21**	**Thu 24/2/22**
649	Establishment at Pit X	15 days	Wed 2/6/21	Sat 19/6/21	HK Working Day	647	650	100%	Wed 2/6/21	Sat 19/6/21
650	Form Entrance Opening at pit X	5 days	Thu 8/7/21	Tue 13/7/21	HK Working Day	649	651	100%	Thu 8/7/21	Tue 13/7/21
651	Mild Steel Sleeve Pipe in Mix of Soil (46m) (0.6m / day)	73 days	Wed 14/7/21	Fri 8/10/21	HK Working Day	650	652,653	100%	Wed 14/7/21	Fri 8/10/21
652	Rearrangement Wailing and Form Exit Opening at Pit W	14 days	Mon 11/10/21	Wed 27/10/21	HK Working Day	651	654	100%	Mon 11/10/21	Wed 27/10/21
653	Remove Setup it Pi X	5 days	Sat 9/10/21	Fri 15/10/21	HK Working Day	651	654	100%	Sat 9/10/21	Fri 15/10/21
654	Setup for Pipe Laying inside Jacking Pit X	6 days	Thu 28/10/21	Wed 3/11/21	HK Working Day	653,652	655	100%	Thu 28/10/21	Wed 3/11/21
655	DN900 MS Pipe Laying inside Jacking Pipe (3 days per 4m)(Only Internal)	19 days	Thu 4/11/21	Thu 25/11/21	HK Working Day	654	656	100%	Thu 4/11/21	Thu 25/11/21
656	Formwork & Setup for Grouting the gap between pipe and Sleeve	2 days	Sat 12/2/22	Mon 14/2/22	HK Working Day	655	657	100%	Sat 12/2/22	Mon 14/2/22
657	Grouting Works (30m per day)	9 days	Tue 15/2/22	Thu 24/2/22	HK Working Day	656		100%	Tue 15/2/22	Thu 24/2/22
658	**Open Trench Pipe Laying at Po Lam Road (West Bound)**	**465 days**	**Mon 20/7/20**	**Fri 11/2/22**	**HK Working Day**		**767,768**	**100%**	**Mon 20/7/20**	**Fri 11/2/22**
659	Issue CE No. 68 - TIA for TTA at Po Lam Road	0 days	Mon 20/7/20	Mon 20/7/20	HK Working Day		660	100%	Mon 20/7/20	Mon 20/7/20
660	Traffic Survey and Revise TIA, revised TTA Drawings, Obtain RA	177 days	Mon 20/7/20	Sat 20/2/21	HK Working Day	659	665	100%	Mon 20/7/20	Sat 20/2/21
661	Mobilization and Tree Removal	29 days	Tue 21/9/21	Wed 27/10/21	HK Working Day	632	663,664,662	100%	Tue 21/9/21	Wed 27/10/21
662	Construction of DAV Chamber at Pit X	41 days	Tue 7/12/21	Wed 26/1/22	HK Working Day	661		100%	Tue 7/12/21	Wed 26/1/22
663	Open Cut, fromt Pit X, CH.HA6+00 - CH.HA6+54	86 days	Thu 28/10/21	Fri 11/2/22	HK Working Day	661,665,633		100%	Thu 28/10/21	Fri 11/2/22
664	Construction of DN900 Valve Chamber and By Pass Pipes	17 days	Tue 11/1/22	Sat 29/1/22	HK Working Day	661		100%	Tue 11/1/22	Sat 29/1/22
665	Open Cut, CH.HA6+54 to CH.HA7+24 (Portion SKR) with SACP	85 days	Mon 22/2/21	Mon 7/6/21	HK Working Day	660	666,663	100%	Mon 22/2/21	Mon 7/6/21
666	Open Cut, CH.HA7+24 - CH.HA7+61/CH.HB0+00 Excavation in Rock	189 days	Wed 16/6/21	Sat 29/1/22	HK Working Day	665		100%	Wed 16/6/21	Sat 29/1/22
667	**Water Main Structure and Associated Pipe Support across the Natural Stream Course (Location A) (CH.HB0+00 ~ CH.HB0+ CE)**	**730 days**	**Tue 5/5/20**	**Tue 18/10/22**	**HK Working Day**		**768**	**93%**	**Tue 5/5/20**	**NA**
668	Design Submission (CE No. 55) for Water Main Structure and Associated Pipe Support across the Natural Stream Course	37 days	Tue 5/5/20	Tue 16/6/20	HK Working Day		669	100%	Tue 5/5/20	Tue 16/6/20
669	WSD & GEO Review and Approve	121 days	Wed 17/6/20	Thu 15/10/20	Calendar Day	668	672	100%	Wed 17/6/20	Thu 15/10/20
670	Tendering Process, Tender Award for CE No. 51 (Location A Mini-pile Works)	113 days	Wed 26/8/20	Wed 16/12/20	Calendar Day			100%	Wed 26/8/20	Wed 16/12/20
671	Issue CE No. 55 - Design of the Water Mains Structure and Associated Pipe Support across the Natural Stream Course for Alternative Alignment in Tsui Lam	0 days	Tue 5/5/20	Tue 5/5/20	Calendar Day			100%	Tue 5/5/20	Tue 5/5/20
672	Tender and Subletting (Mini-Pile)	62 days	Fri 16/10/20	Wed 16/12/20	Calendar Day	669		100%	Fri 16/10/20	Wed 16/12/20
673	Issue CE No. 85 - Affected Trees across the Natural Stream Course at Tsui Lam (Location A)	0 days	Wed 28/10/20	Wed 28/10/20	Calendar Day			100%	Wed 28/10/20	Wed 28/10/20



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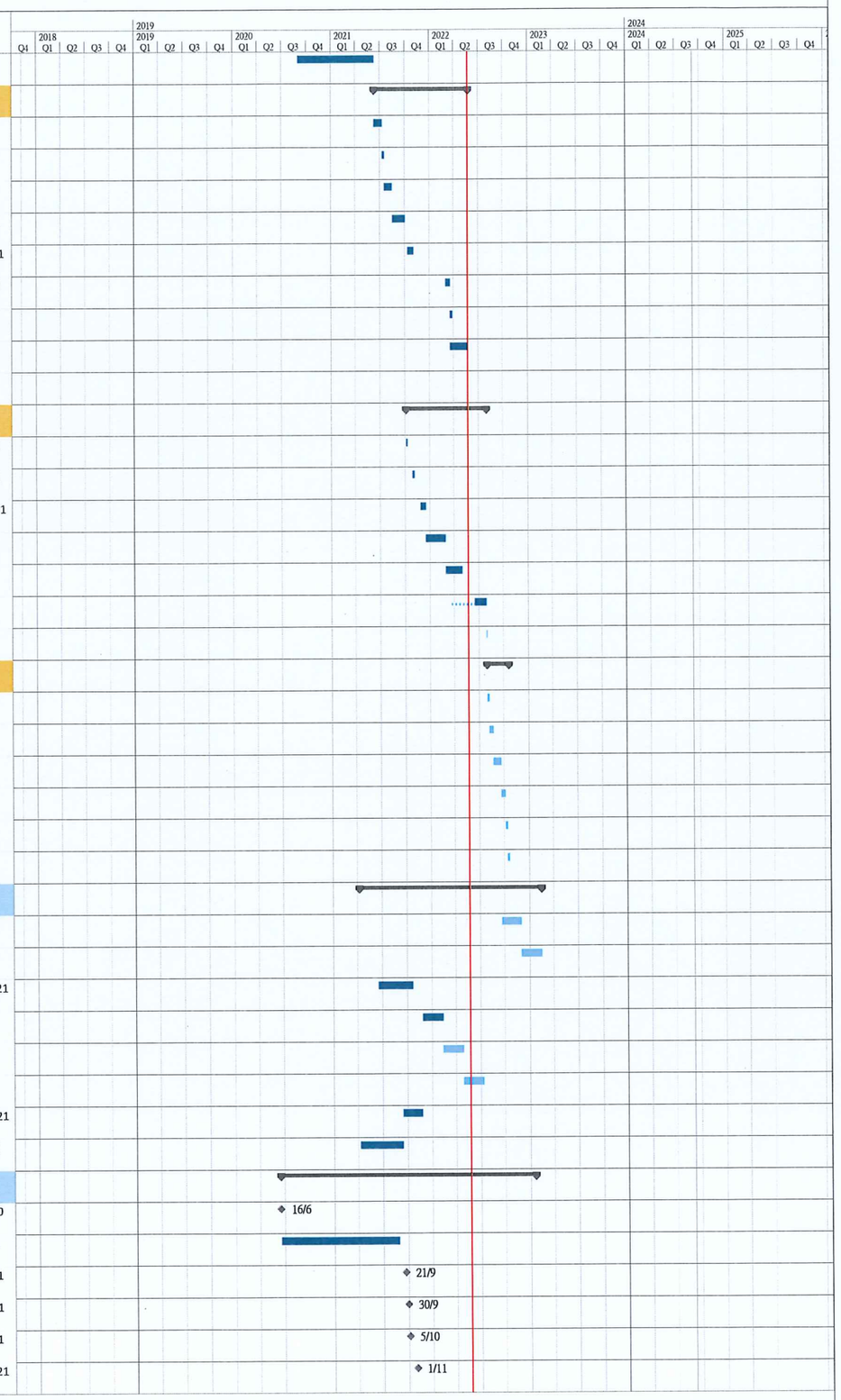
Project: Mainlaying in Tseung Kwan O

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

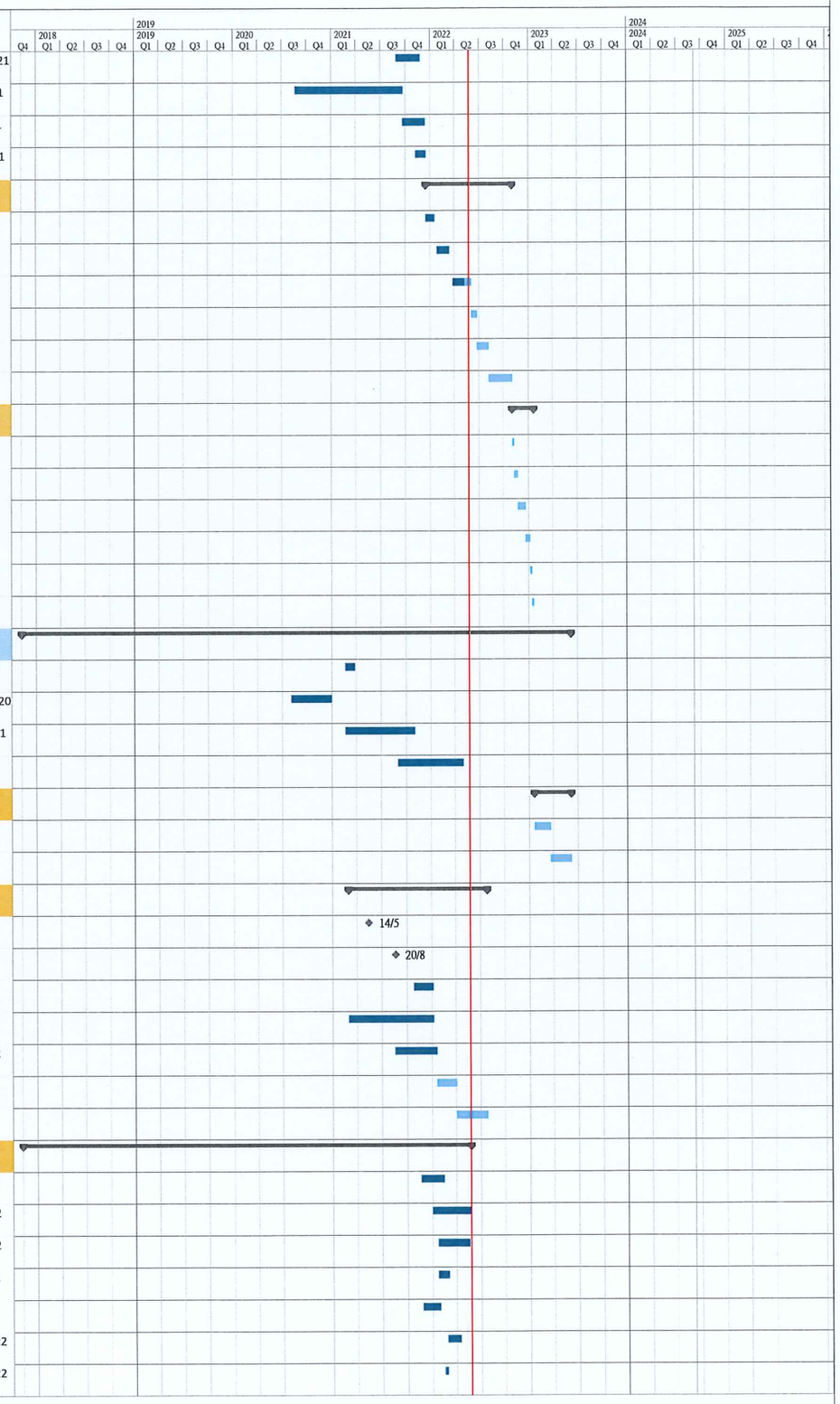


Working Programme No. 15
Data Date : 24 May 2022

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

Project: Mainlaying in Tseung Kwan O

ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
716	Tender and sublett Mini-pile works at Location B to current Sub-contractor	73 days	Fri 27/8/21	Mon 22/11/21	HK Working Day	712	721	100%	Fri 27/8/21	Mon 22/11/21
717	Tree survey, TPRP Submission and Receiving TPRP approval (HyD)	322 days	Fri 21/8/20	Mon 20/9/21	HK Working Day		718	100%	Fri 21/8/20	Mon 20/9/21
718	Mobilization, Tree Removal Works & Site Clearance	69 days	Mon 20/9/21	Sat 11/12/21	HK Working Day	717	719	100%	Mon 20/9/21	Sat 11/12/21
719	Obtain RA for TTA implement	38 days	Sun 7/11/21	Tue 14/12/21	Calendar Day	713,718	721	100%	Sun 7/11/21	Tue 14/12/21
720	**Mini-pile Foundation Works**	**258 days**	**Wed 15/12/21**	**Mon 31/10/22**	**HK Working Day**			**39%**	**Wed 15/12/21**	**NA**
721	Erect Temporary Timber Platform for Piling Works	25 days	Wed 15/12/21	Sat 15/1/22	HK Working Day	719,716	722	100%	Wed 15/12/21	Sat 15/1/22
722	Pre-drilling works & confirmation of rock head and depth of mini-pile	36 days	Wed 26/1/22	Fri 11/3/22	HK Working Day	721	723	100%	Wed 26/1/22	Fri 11/3/22
723	Mobilization and Driving Dia. 273mm steel Casting (18 nos)	51 days	Sat 26/3/22	Tue 31/5/22	HK Working Day	722	724	61%	Sat 26/3/22	NA
724	Cleaning, Insert T50 reinforcement and Grouting	18 days	Wed 1/6/22	Wed 22/6/22	HK Working Day	723	725	0%	NA	NA
725	Setup and Loading Test of Mini-Pile	36 days	Thu 23/6/22	Thu 4/8/22	HK Working Day	724	726	0%	NA	NA
726	Construction Pile Caps (PC-C, PC-P1, PC-P2, PC-P3 & PC-T) and Piers (P1, P2 & P3)	72 days	Fri 5/8/22	Mon 31/10/22	HK Working Day	725	728	0%	NA	NA
727	**Pipelaying on Mini-pile Foundation**	**66 days**	**Tue 1/11/22**	**Thu 19/1/23**	**HK Working Day**			**0%**	**NA**	**NA**
728	Temporary Working Platform for Pipe Installation	6 days	Tue 1/11/22	Mon 7/11/22	HK Working Day	726	729	0%	NA	NA
729	Cut Temporary casting and Bend the T50 to designated position	12 days	Tue 8/11/22	Mon 21/11/22	HK Working Day	728	730	0%	NA	NA
730	Pipe Installation / Welding / Testing / Painting (~115m)	24 days	Tue 22/11/22	Mon 19/12/22	HK Working Day	737,729	731	0%	NA	NA
731	Concrete Hunching	12 days	Tue 20/12/22	Thu 5/1/23	HK Working Day	730	732	0%	NA	NA
732	Apply top coating of aliphatic polyurethane on site	6 days	Fri 6/1/23	Thu 12/1/23	HK Working Day	731	733	0%	NA	NA
733	Remove Temporary Working Platform	6 days	Fri 13/1/23	Thu 19/1/23	HK Working Day	732	740	0%	NA	NA
734	**From Tsui Lam Road to TKO Freshwater PSR (CH.HE.0+00 ~ CH.HE2+11) & (CH.HF0+00 CH.HF3+11)**	**1649 days**	**Tue 7/11/17**	**Mon 5/6/23**	**HK Working Day**		**768**	**81%**	**Tue 7/11/17**	**NA**
735	Batch No 3 - Temporary Works Design and Preliminary Works	30 days	Fri 19/2/21	Thu 25/3/21	HK Working Day	589		100%	Fri 19/2/21	Thu 25/3/21
736	TTA preparation, SLG meetings, obtain RA	150 days	Mon 3/8/20	Wed 30/12/20	Calendar Day	585		100%	Mon 3/8/20	Wed 30/12/20
737	Material procurement (DN800 MS PIPE) (360m)	255 days	Fri 19/2/21	Sun 31/10/21	Calendar Day	589	730,751,755,753	100%	Fri 19/2/21	Sun 31/10/21
738	Material procurement (Butterfly Valves)	244 days	Mon 30/8/21	Sat 30/4/22	Calendar Day			100%	Mon 30/8/21	Sat 30/4/22
739	**Water Mains CH.HE0+00 - CH.HE0+27)**	**108 days**	**Fri 20/1/23**	**Mon 5/6/23**	**HK Working Day**			**0%**	**NA**	**NA**
740	Open Cut across Tsui Lam Road (CH.HE0+00 to 0+06)	48 days	Fri 20/1/23	Mon 20/3/23	HK Working Day	733	741	0%	NA	NA
741	Open Cut across Tsui Lam Road (CH.HE0+06 to 0+20)	60 days	Tue 21/3/23	Mon 5/6/23	HK Working Day	740		0%	NA	NA
742	**Water Mains CH.HE0+27 - CH.HE2+11**	**414 days**	**Mon 1/3/21**	**Mon 25/7/22**	**HK Working Day**		**769**	**75%**	**Mon 1/3/21**	**NA**
743	Issue CE No. 114 - Non-explosive agent near TKO Freshwater Preliminary Service Reservoir	0 days	Fri 14/5/21	Fri 14/5/21	HK Working Day			100%	Fri 14/5/21	Fri 14/5/21
744	Receiving of Drawing No. SK40134/525 for Proposed Alternative Alignment at TKOFWSR	0 days	Fri 20/8/21	Fri 20/8/21	HK Working Day			100%	Fri 20/8/21	Fri 20/8/21
745	Open Cut, CH.HE0+20 -CH.HE0+27 (Excavation in Rock)	59 days	Mon 25/10/21	Tue 4/1/22	HK Working Day			100%	Mon 25/10/21	Tue 4/1/22
746	Open Cut, CH.HE0+27 -CH.HE1+98(Excavation in Rock)	254 days	Mon 1/3/21	Thu 6/1/22	HK Working Day			100%	Mon 1/3/21	Thu 6/1/22
747	Construction of Combined EMF and MBV Chamber at CH.HE1+90	128 days	Mon 16/8/21	Tue 18/1/22	HK Working Day		748	100%	Mon 16/8/21	Tue 18/1/22
748	Open Cut CH.1+98 & connecting to the existing DN800 F.W. Main at CH.HE2+11	60 days	Wed 19/1/22	Fri 1/4/22	HK Working Day	747	749	0%	NA	NA
749	Construction of flowmeter kiosks and GI cable ducts for Combined EMF and MBV Chamber at CH.HE1+90	90 days	Sat 2/4/22	Mon 25/7/22	HK Working Day	748		0%	NA	NA
750	**Water Mains CH.HF0+00 - CH.HF3+10 (Inlet A)**	**1343 days**	**Tue 7/11/17**	**Tue 24/5/22**	**HK Working Day**		**770**	**82%**	**Tue 7/11/17**	**NA**
751	Open Cut CH.HF0+00 - CH.HF0+19	67 days	Sat 20/11/21	Sat 12/2/22	HK Working Day	737		100%	Sat 20/11/21	Sat 12/2/22
752	Open Cut CH.HF0+19 - CH.HF1+30	114 days	Fri 31/12/21	Tue 24/5/22	HK Working Day			100%	Fri 31/12/21	Tue 24/5/22
753	Construction of Combined EMF and MBV Chamber at CH.HF1+30	90 days	Sat 22/1/22	Tue 17/5/22	HK Working Day	737		100%	Sat 22/1/22	Tue 17/5/22
754	Open Cut CH.HF1+30 - CH.HF1+36	31 days	Sat 22/1/22	Wed 2/3/22	HK Working Day			100%	Sat 22/1/22	Wed 2/3/22
755	Exposed Pipe CH.HF1+36 - CH.HF2+85	53 days	Thu 25/11/21	Fri 28/1/22	HK Working Day	737	757	100%	Thu 25/11/21	Fri 28/1/22
756	Exposed Pipe to the side wall of TKOFWSR	41 days	Thu 24/2/22	Wed 13/4/22	HK Working Day	757		100%	Thu 24/2/22	Wed 13/4/22
757	Form Opening and Cast-in short pipe at TKOFWSR	9 days	Mon 14/2/22	Wed 23/2/22	HK Working Day	755	756	100%	Mon 14/2/22	Wed 23/2/22

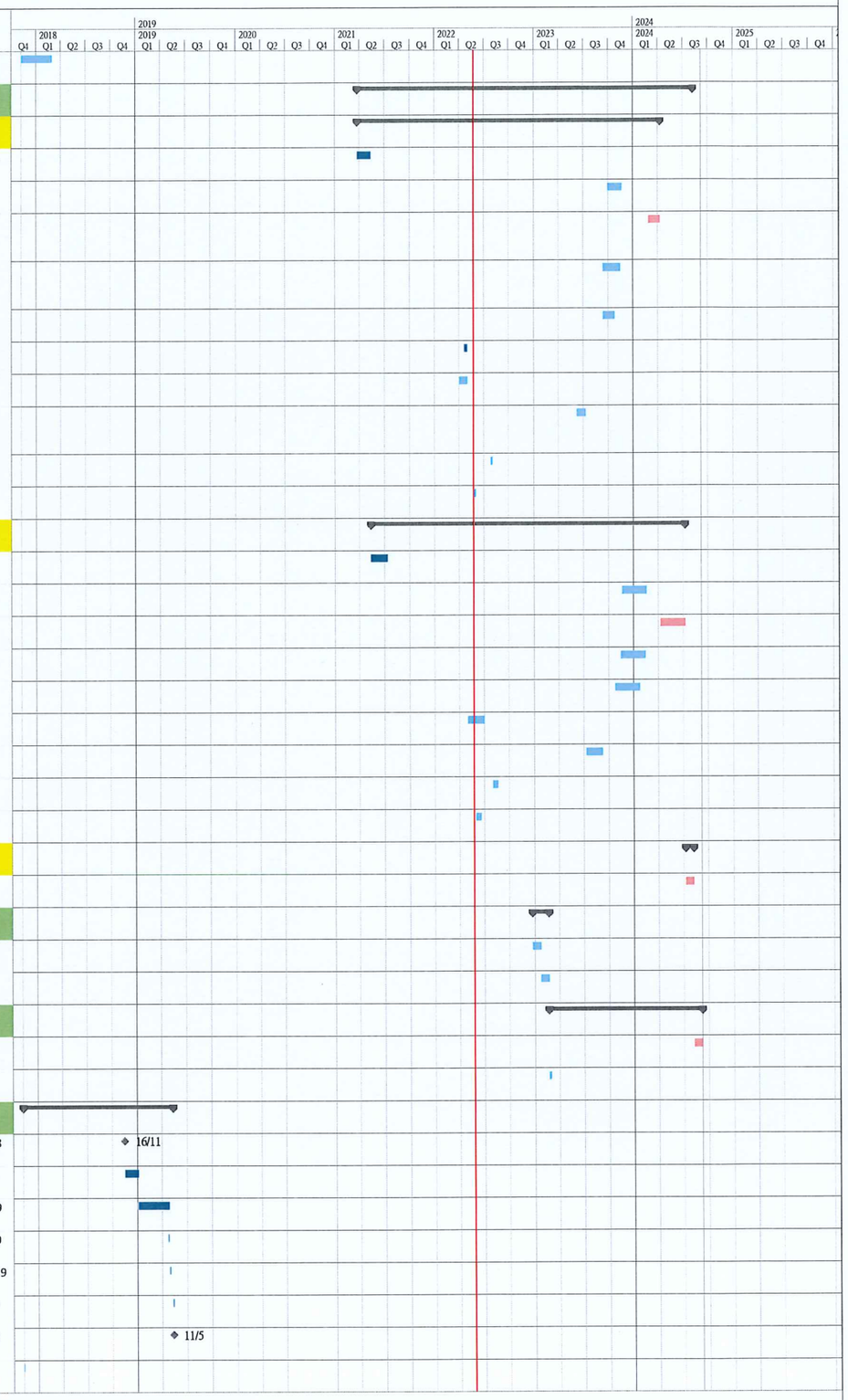


Working Programme No. 15
Data Date : 24 May 2022

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

Project: Mainlaying in Tseung Kwan O

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



Working Programme No. 15
Data Date : 24 May 2022

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

Appendix B

Overview of Mainlaying in Tseung Kwan O

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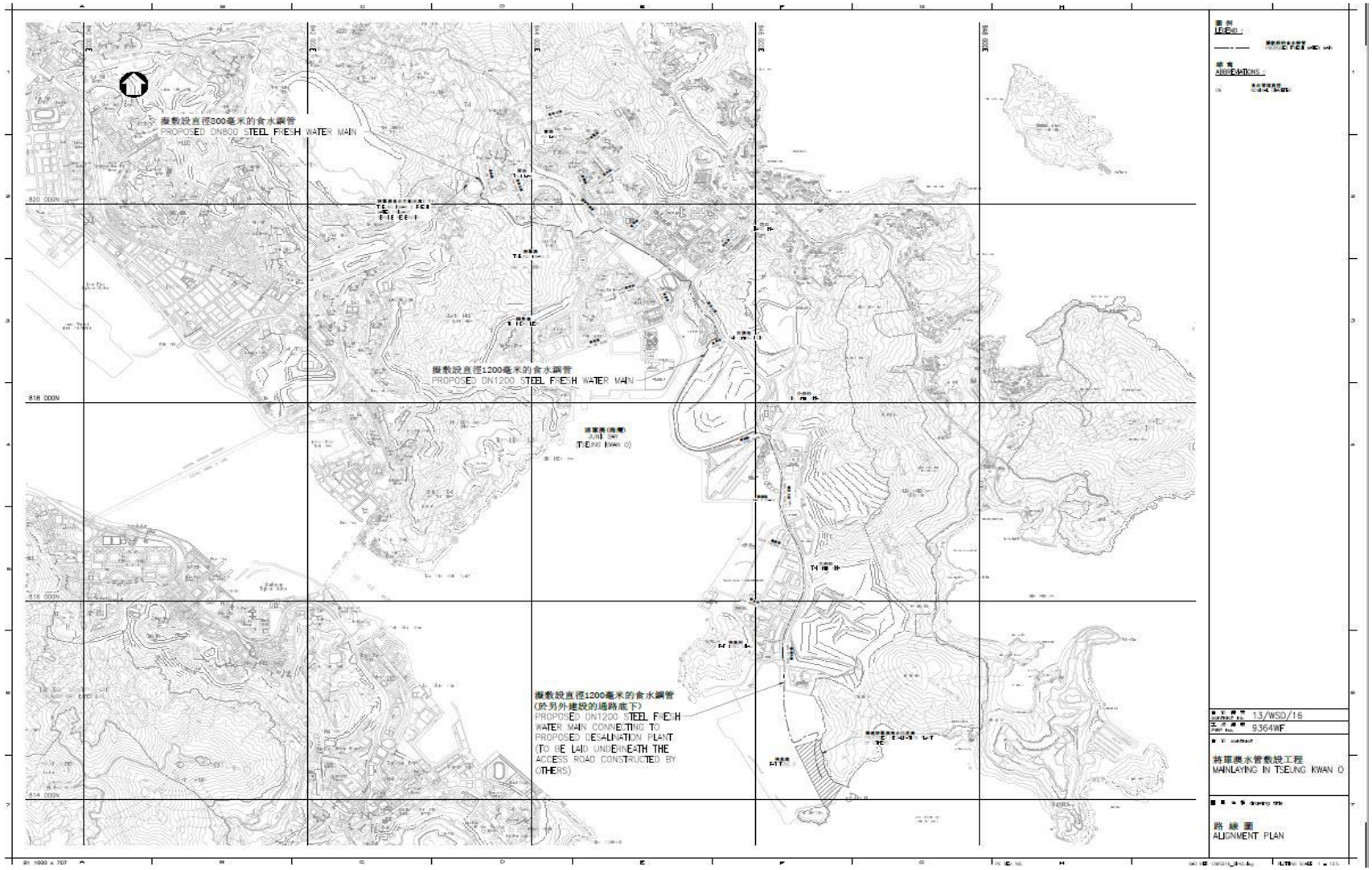

Figure B1. Overview of Mainlaying in TKO

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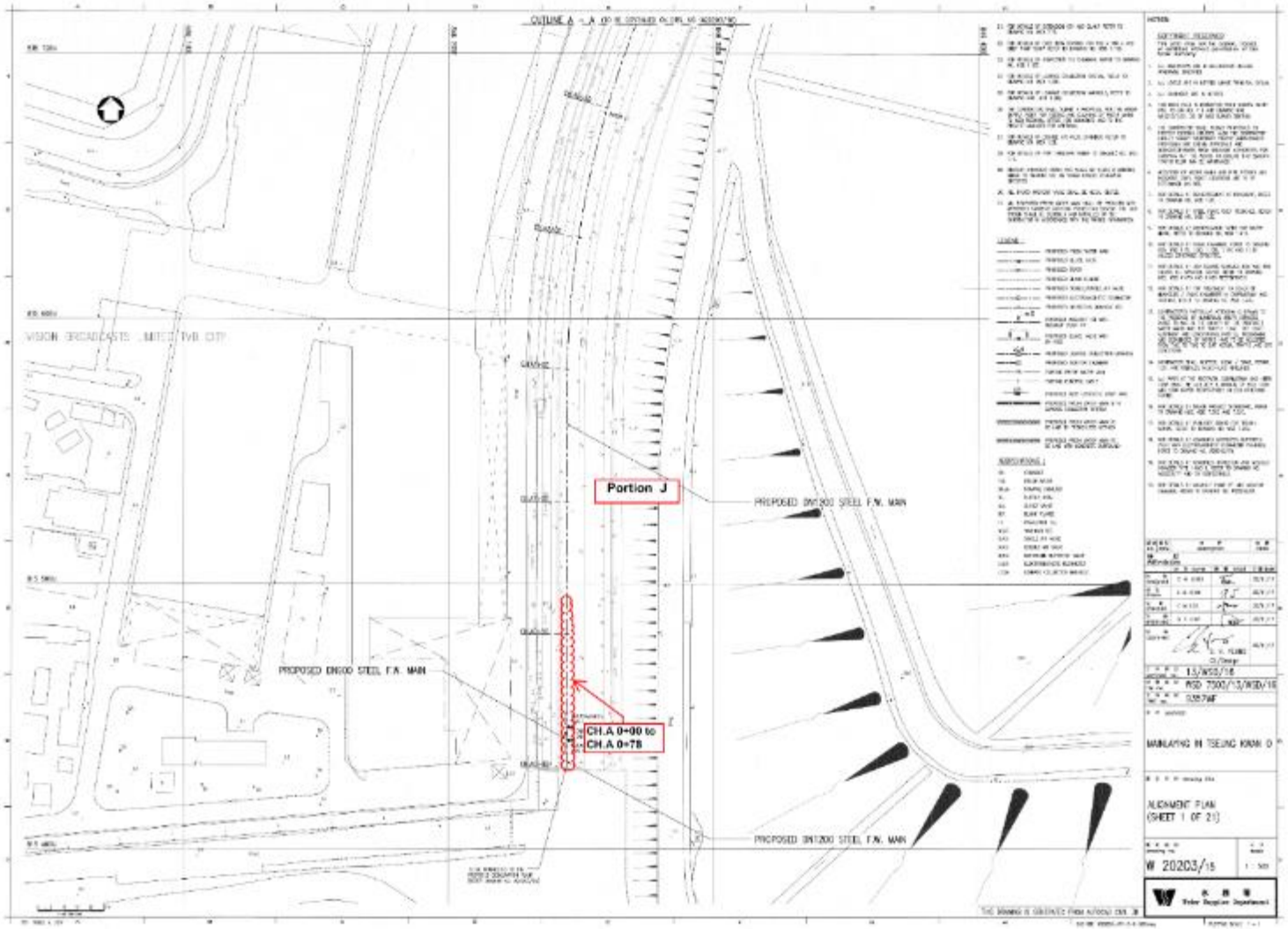

Figure B2. Location Plan for Portion J - CH.A 0+00 to CH.A 0+78

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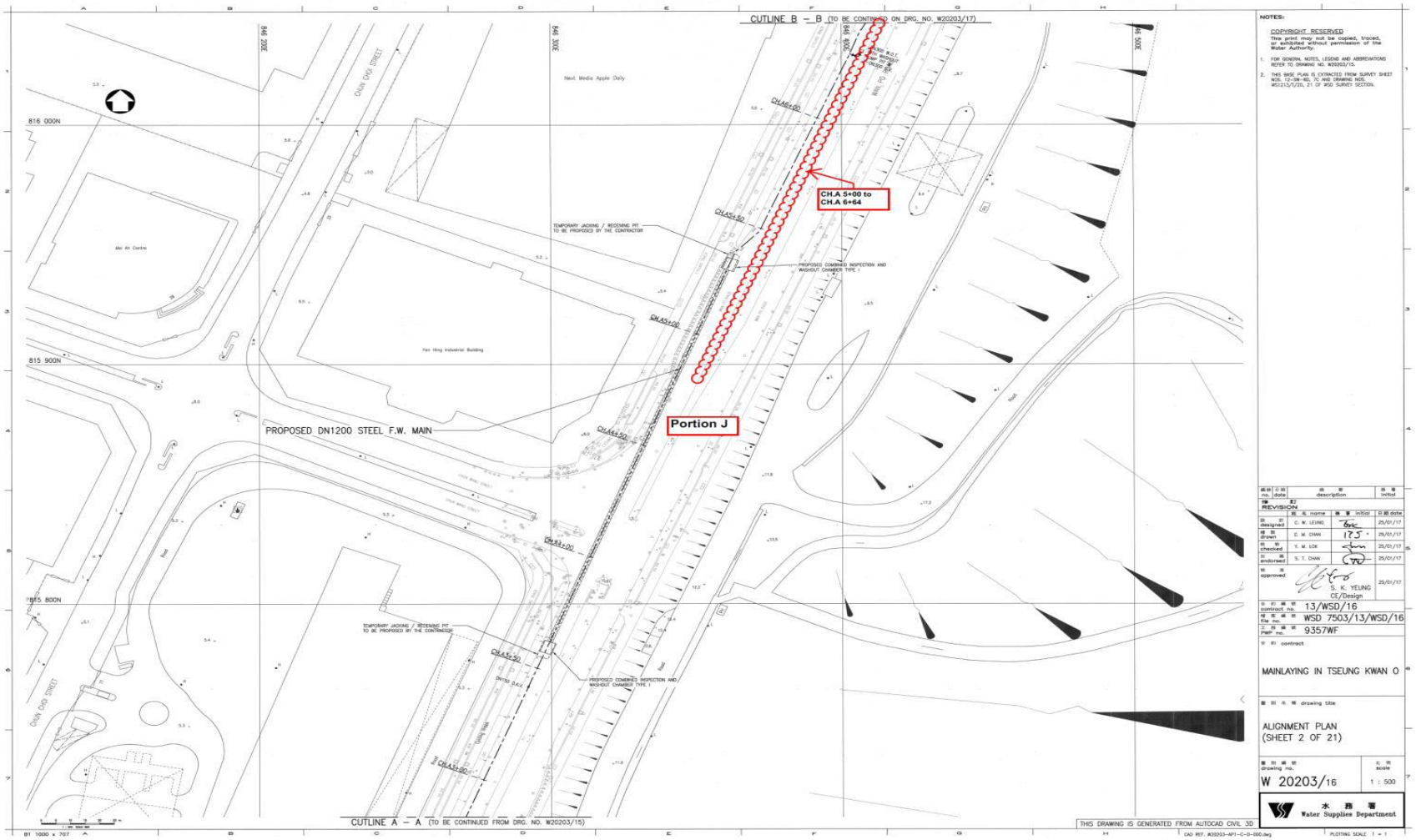

Figure B3a. Location Plan for Portion J - CH.A 5+00 to CH.A 6+64

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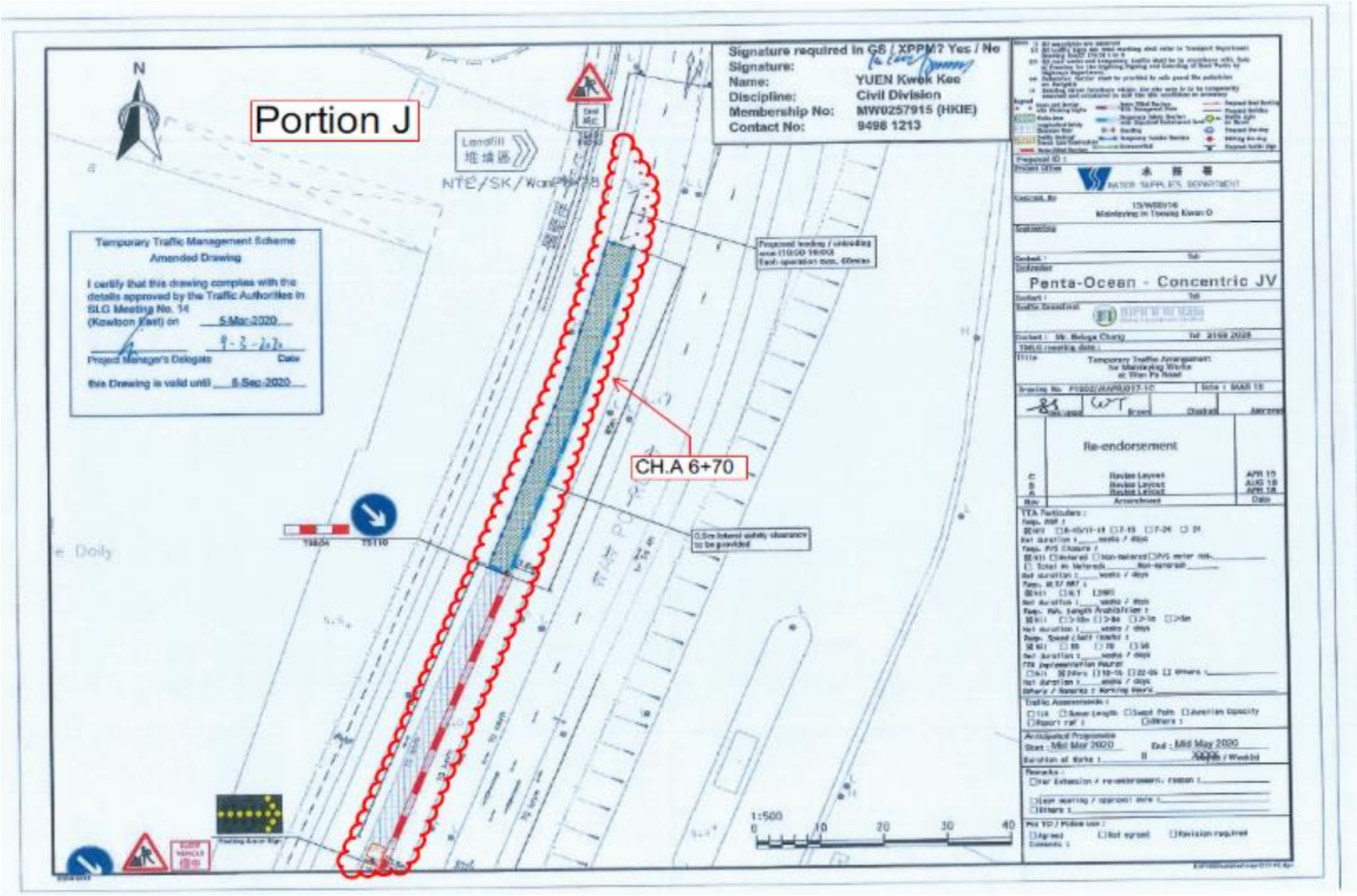

Figure B3b(i). Location Plan for Portion J - CH.A 6+70

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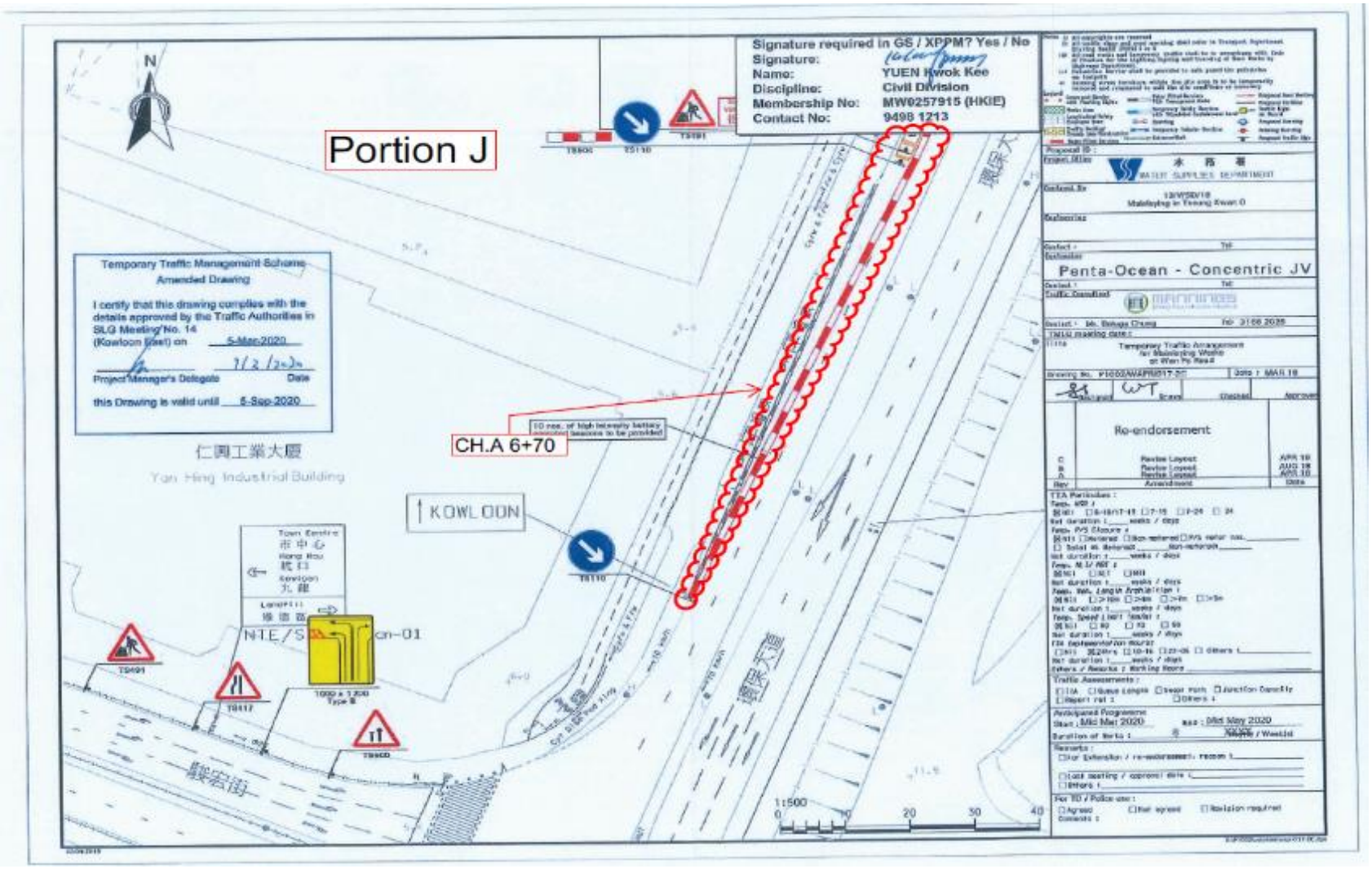

Figure B3b(ii). Location Plan for Portion J - CH.A 6+70

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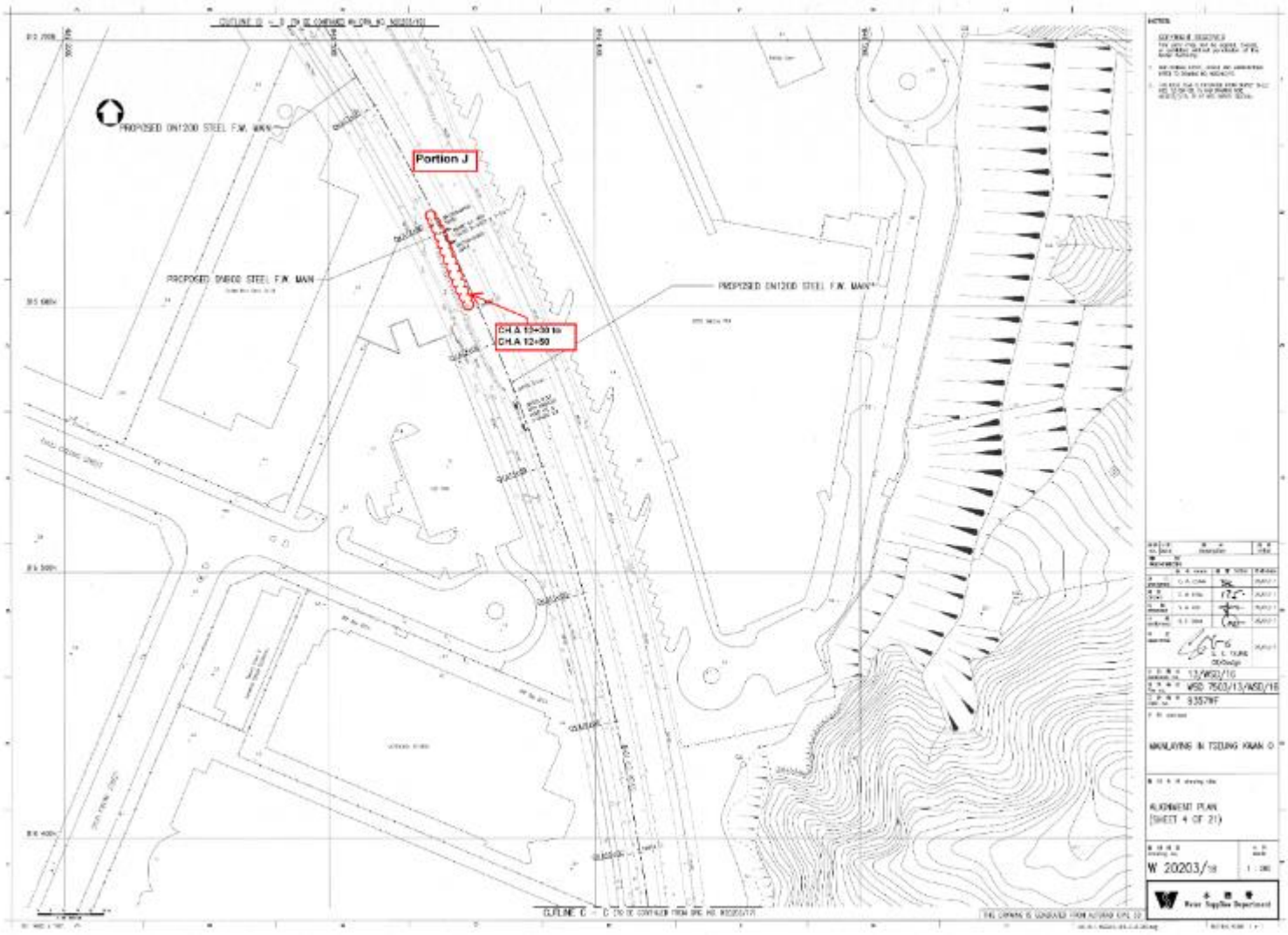

Figure B4. Location Plan for Portion J - CH.A 12+30 to CH.A 12+50

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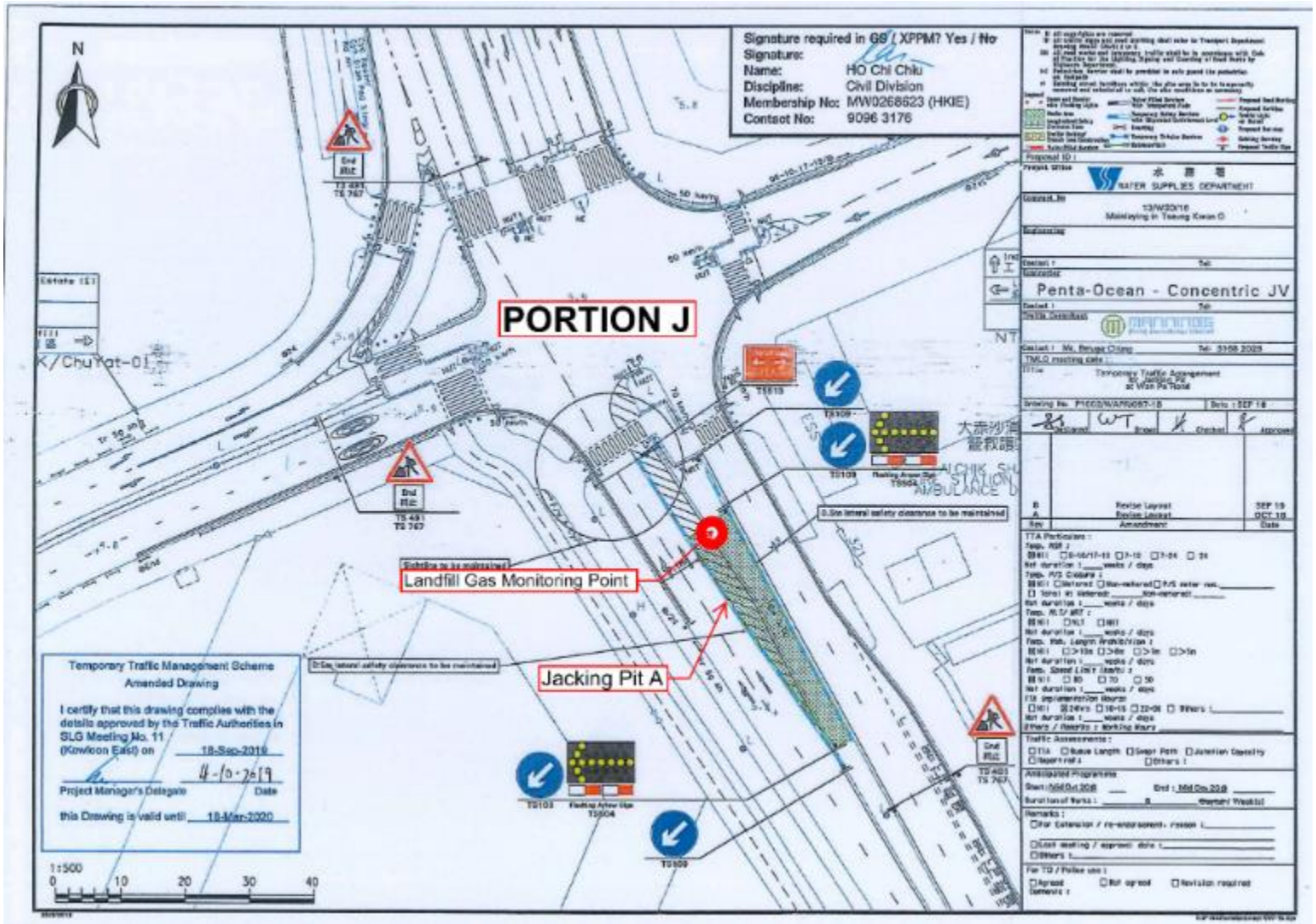

Figure B5. Location Plan for Portion J – CH. A13+50 to CH.A 14+00 (Pit A)

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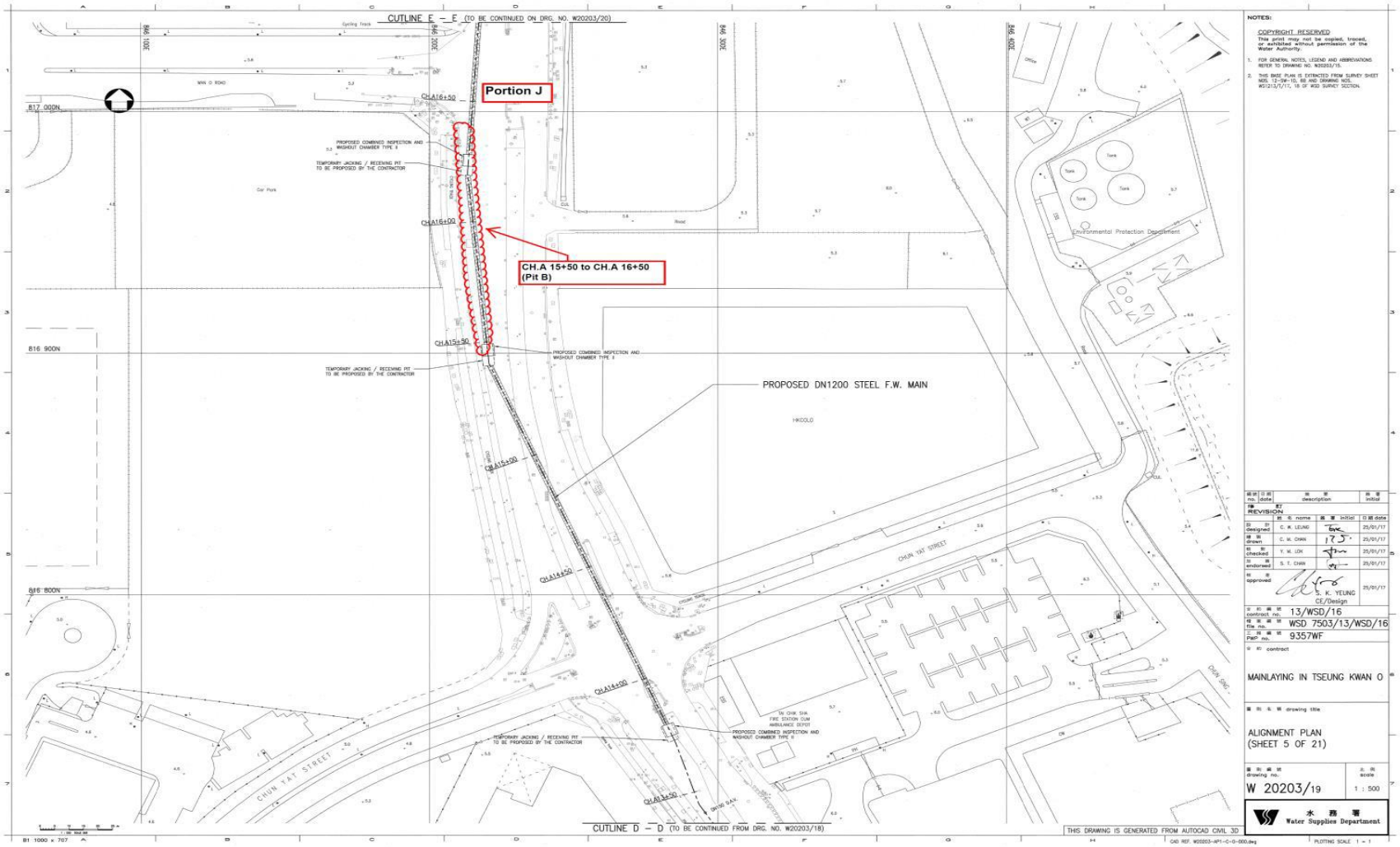

Figure B6. Location Plan for Portion J – CH. A15+50 to CH.A 16+50 (Pit B)

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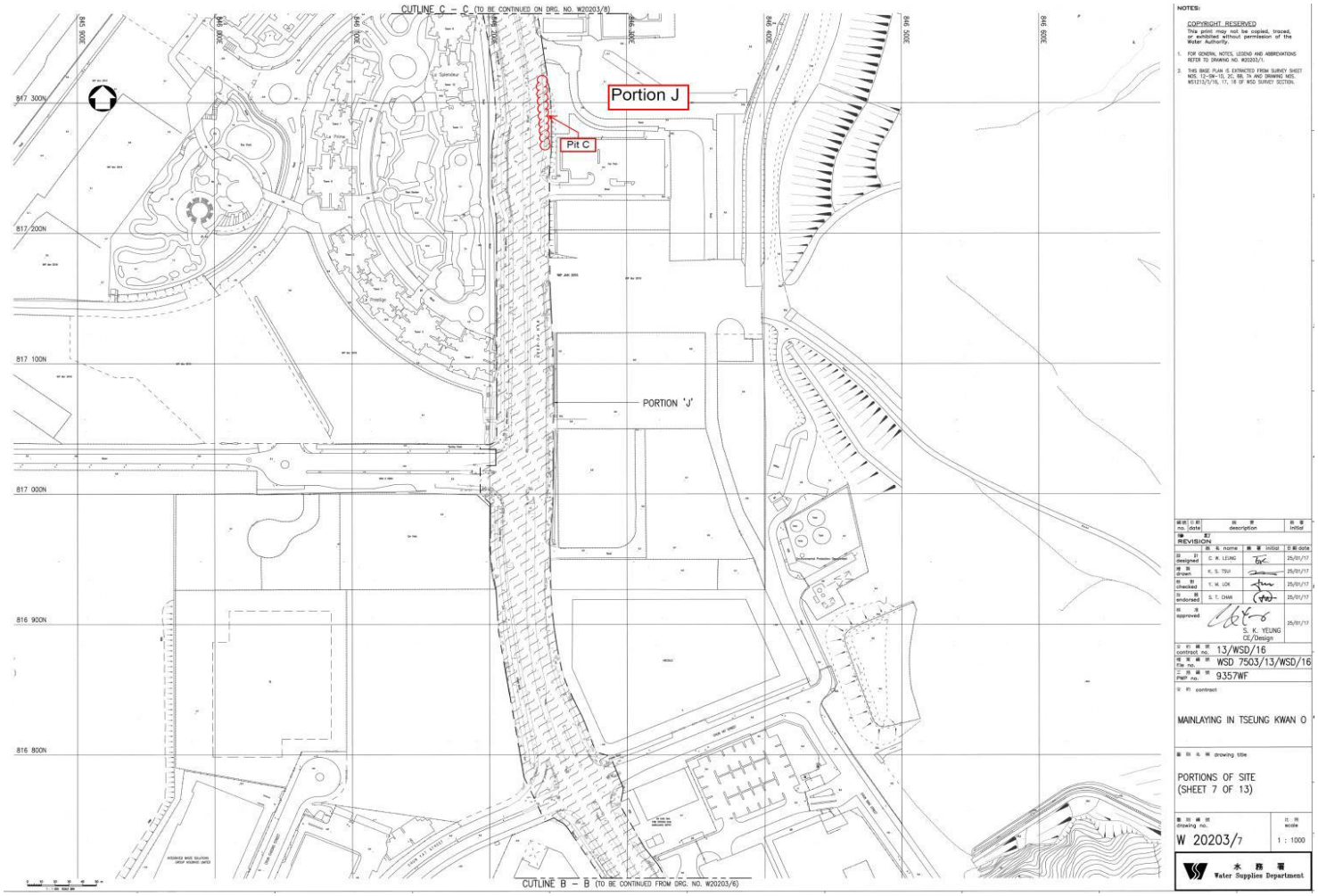

Figure B7. Location Plan for Portion J – CH.A 19+15 to CH.A 19+50 (Pit C)

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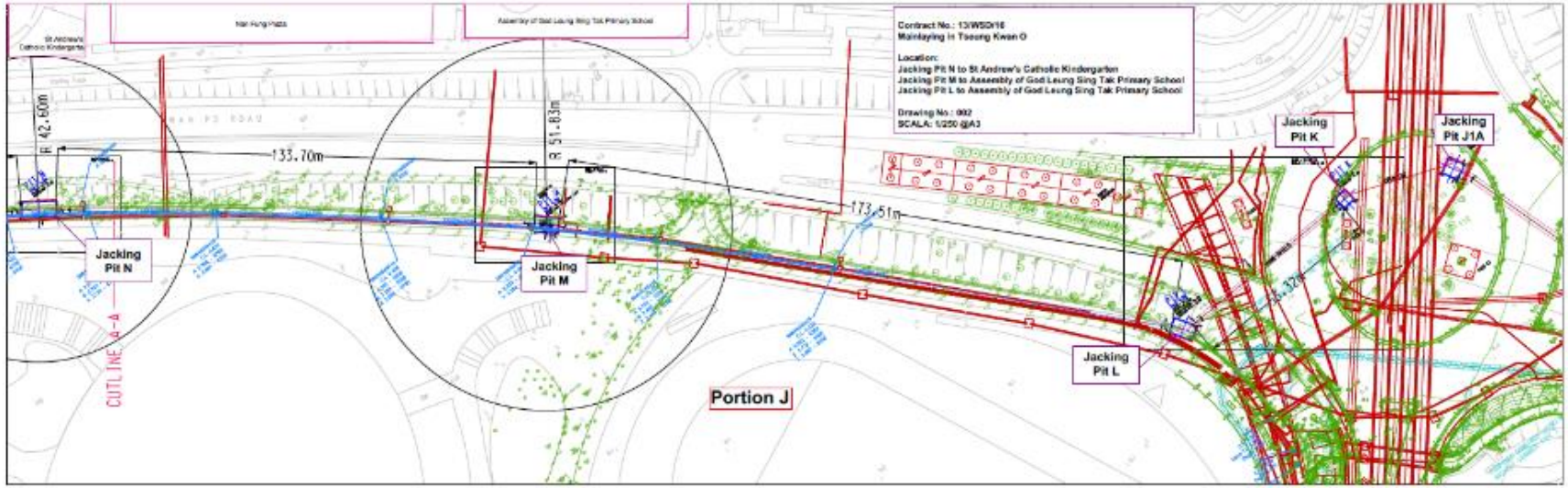

Figure B8a. Location Plan for Portion J – Pit L-M-N, K, J1A

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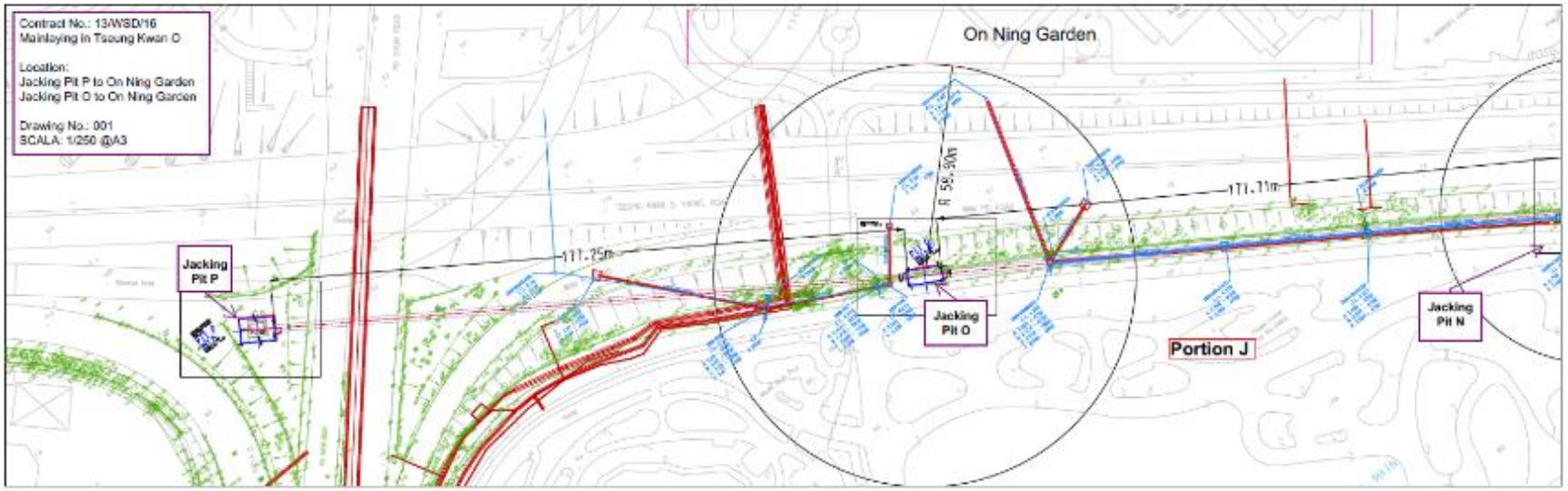

Figure B8b. Location Plan for Portion J – Pit N-O-P

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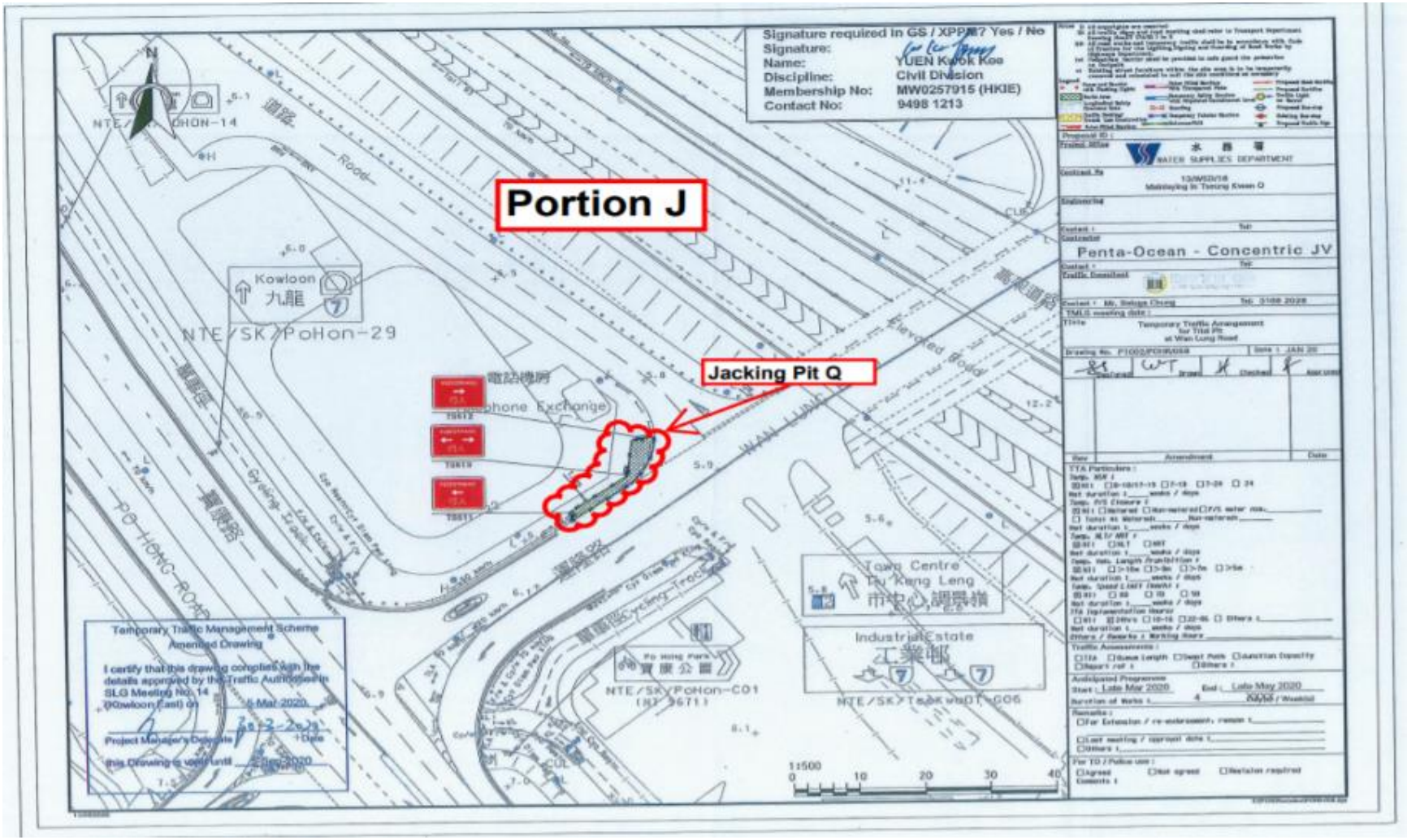

Figure B8c. Location Plan for Portion J – Pit Q

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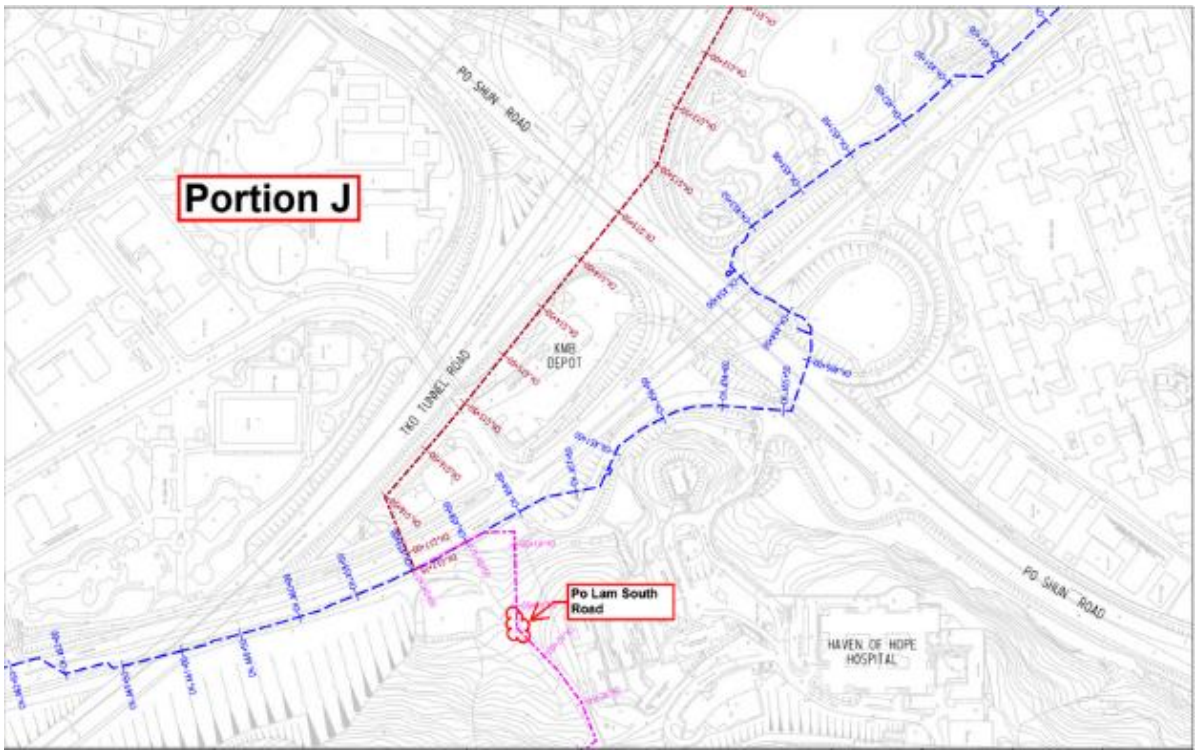

Figure B9a. Location Plan for Mau Wu Tsai 1

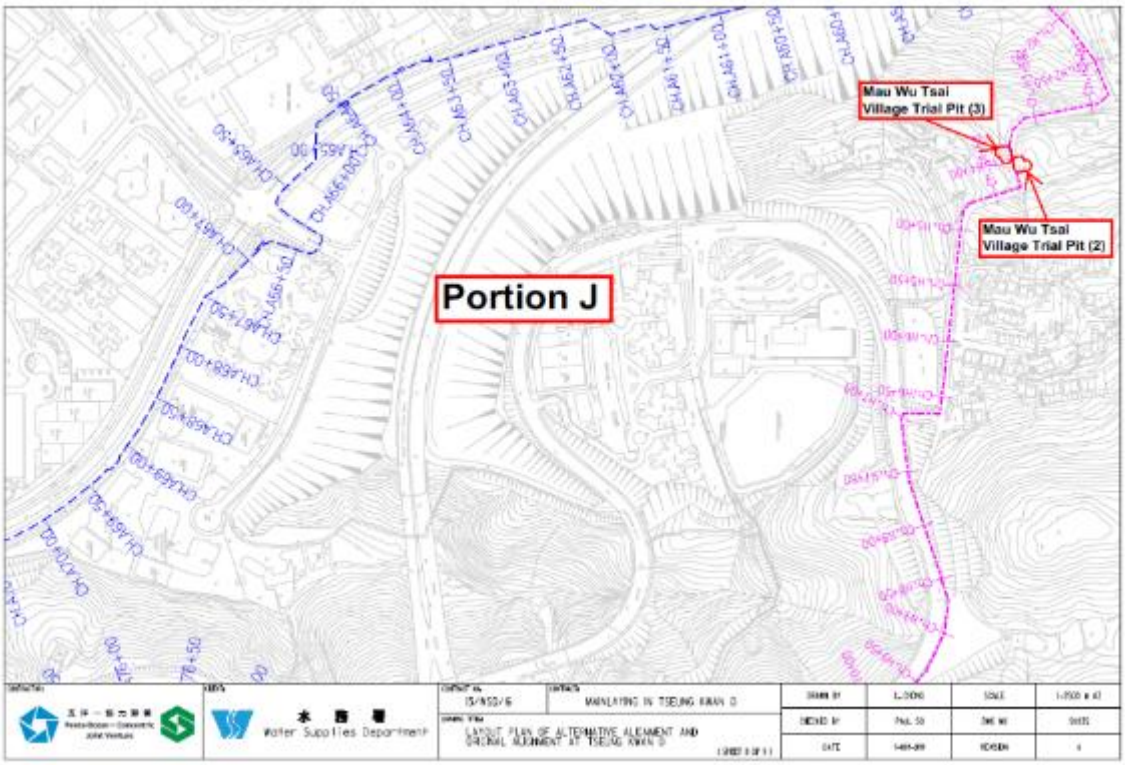

Figure B9b. Location Plan for Mau Wu Tsai 2 & 3

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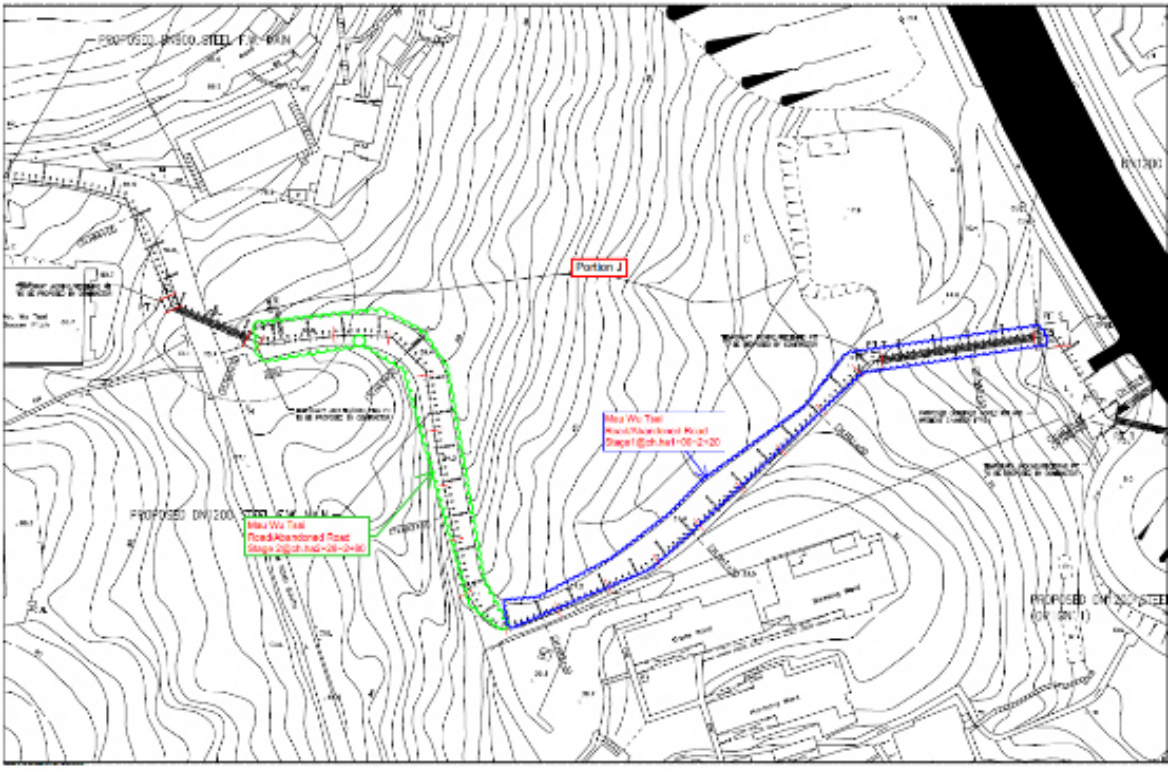

Figure B9c. Abandoned Mau Wu Tsai Road

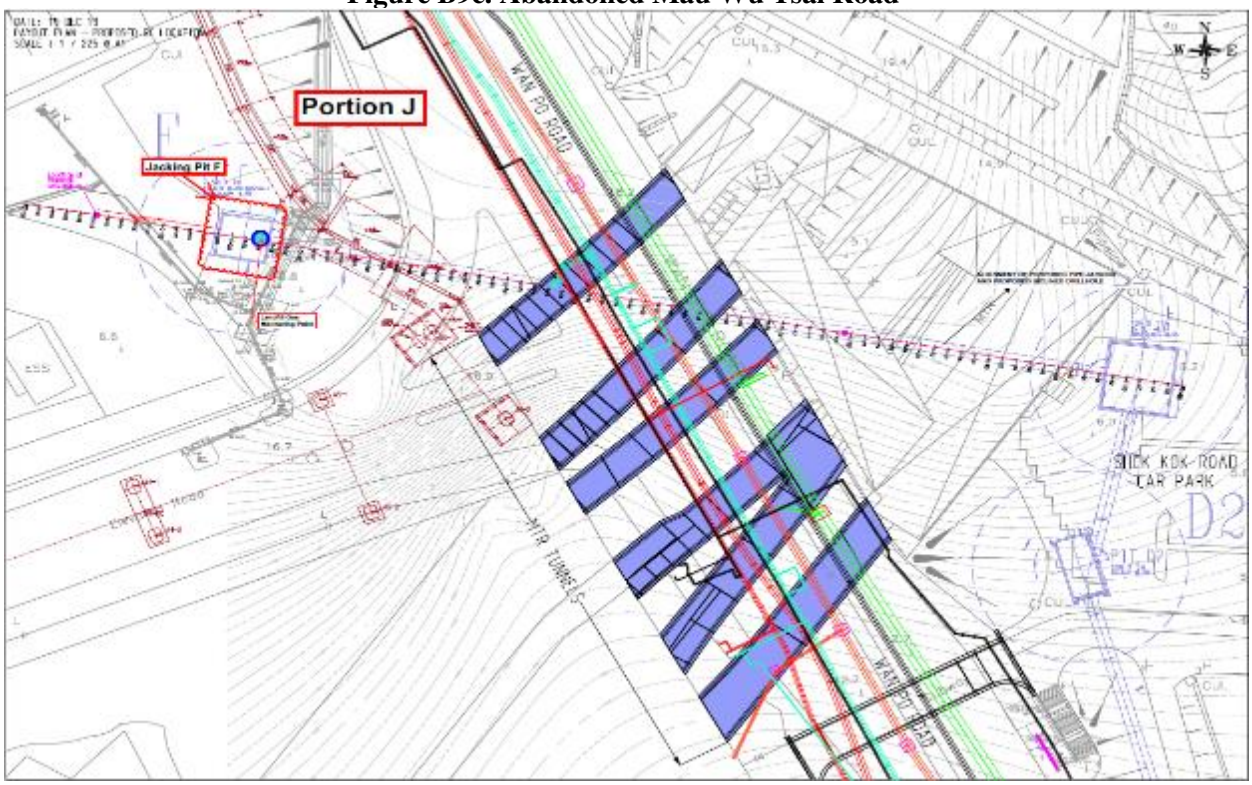

Figure B10. Location Plan for Jacking Pit F

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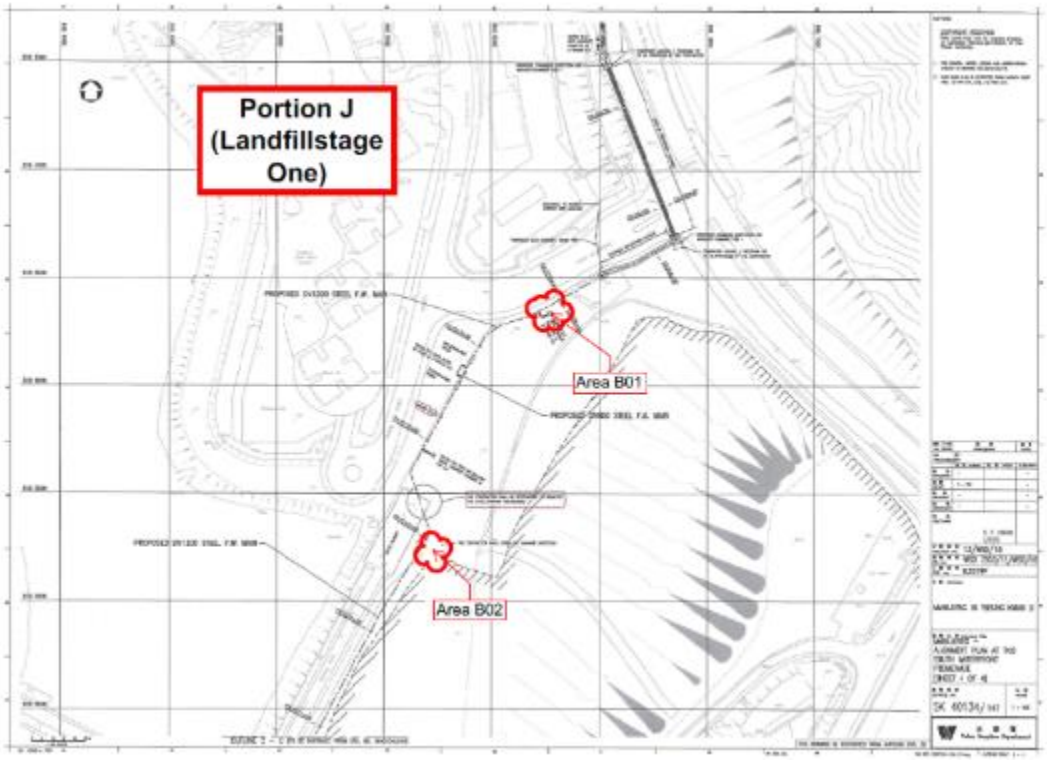

Figure B11a. Location Plan – Landfill Stage 1 (Area B01-B02)

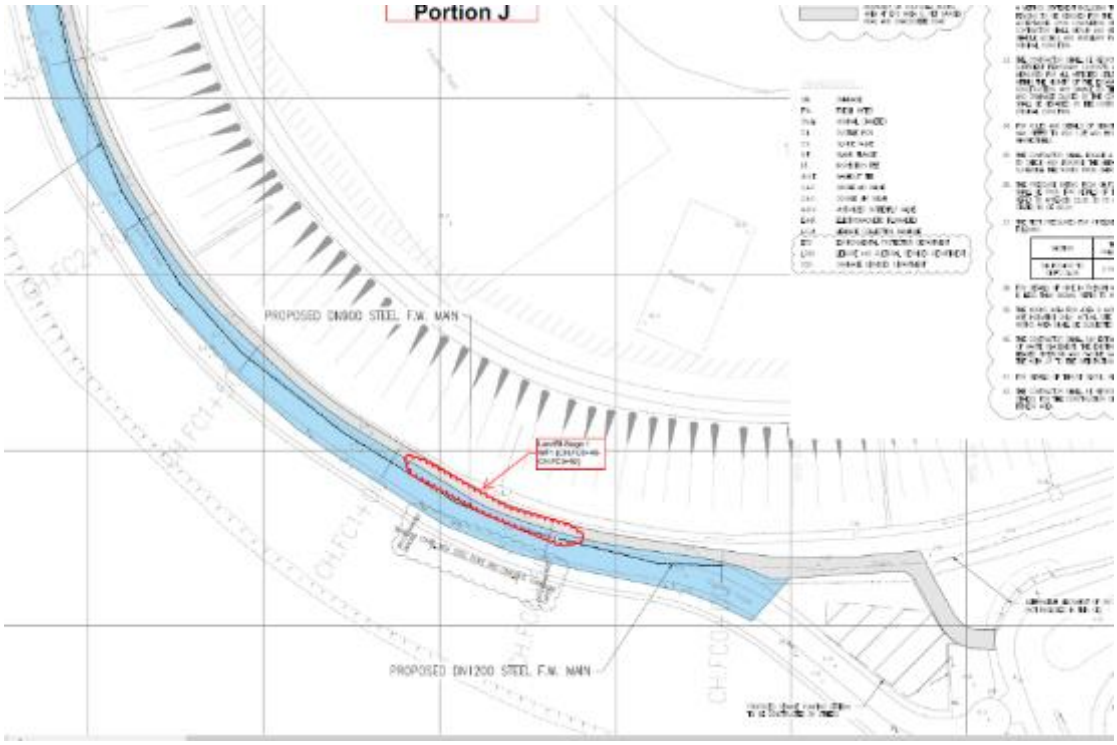

Figure B11b. Location Plan – Landfill Stage 1 (Area FC0+42 -FC0+92)

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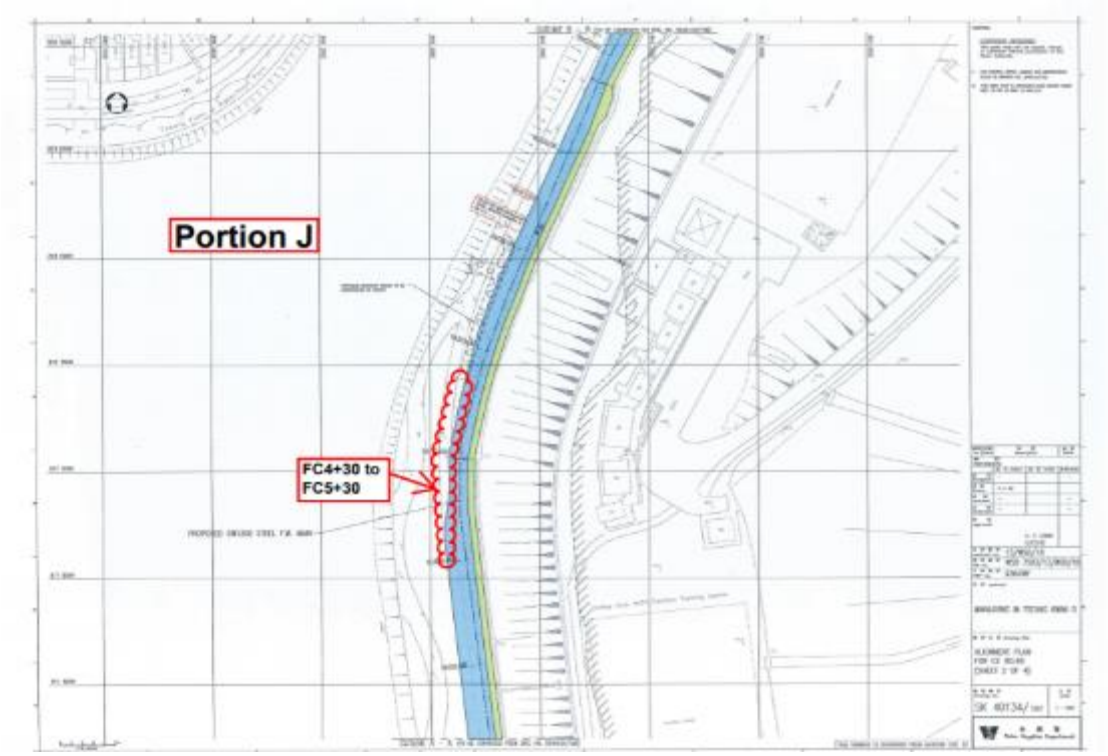

Figure B11c. Location Plan – Landfill Stage 1 (Area FC4+30 -FC5+30)

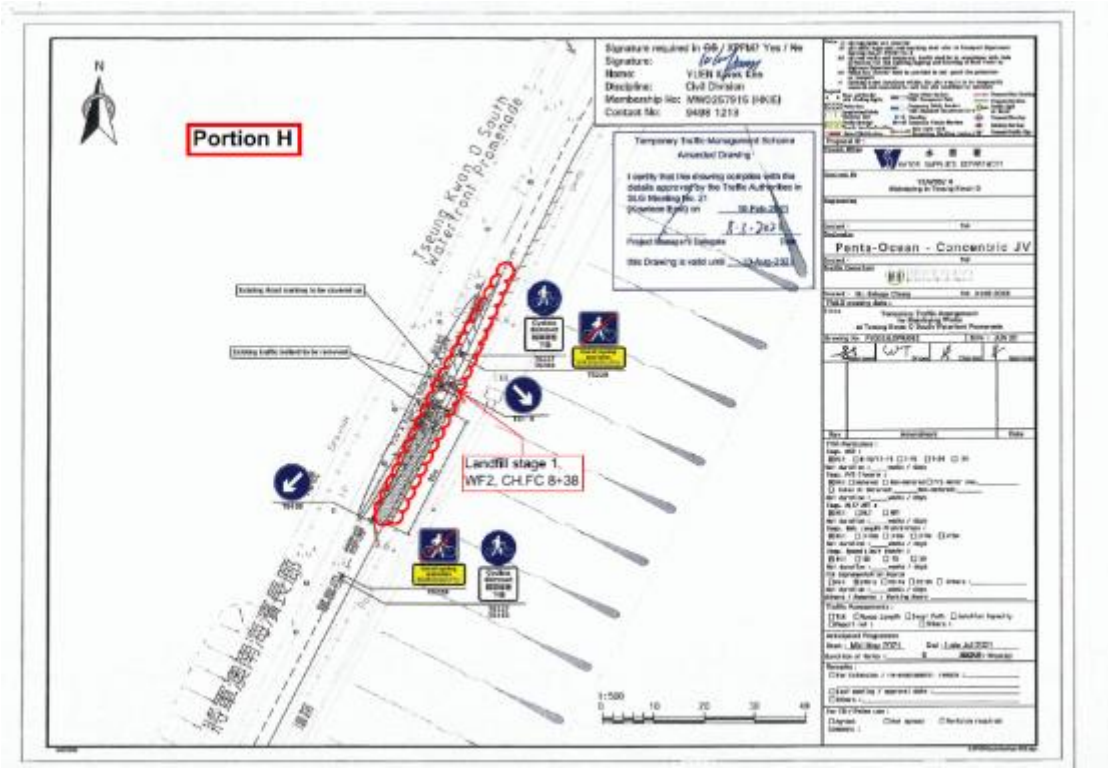

Figure B11d. Location Plan – Landfill Stage 1 (Area FC8+38)

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Figure B12. Monitoring Location – Po Lam South Road

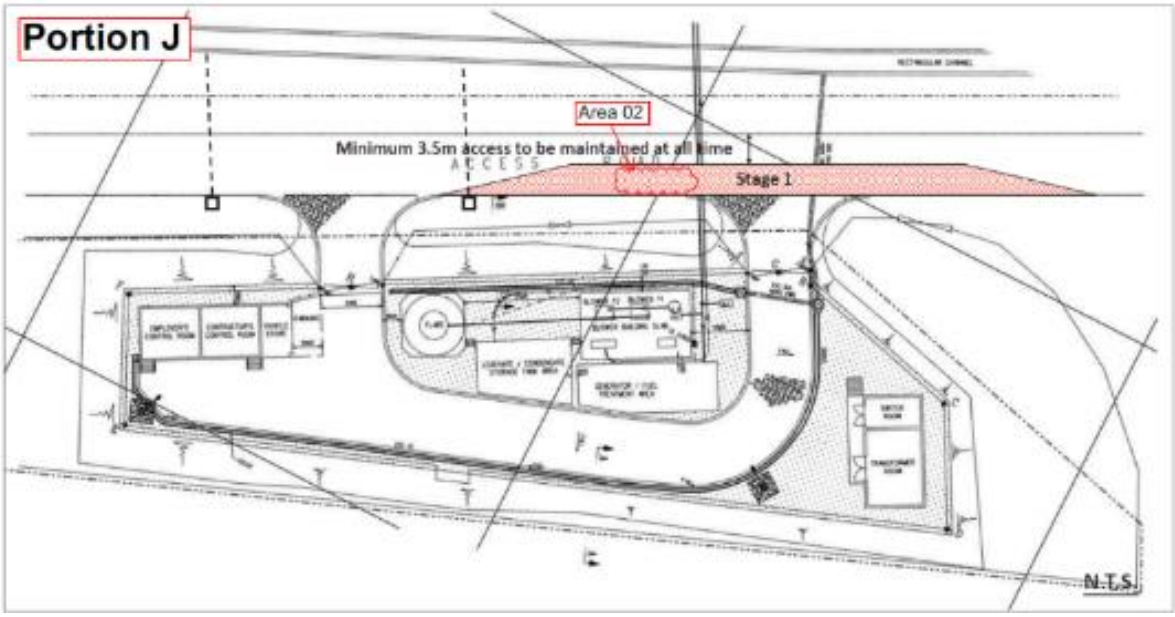

Figure B13. Monitoring Location – Area A02

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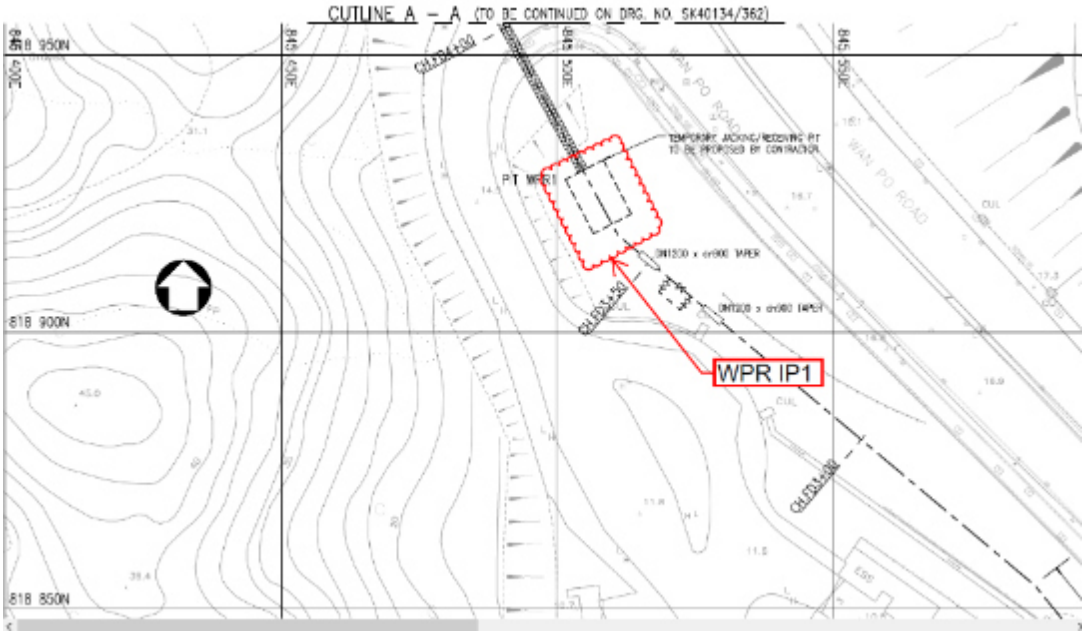

Figure B14. Location Plan for WPR IP1

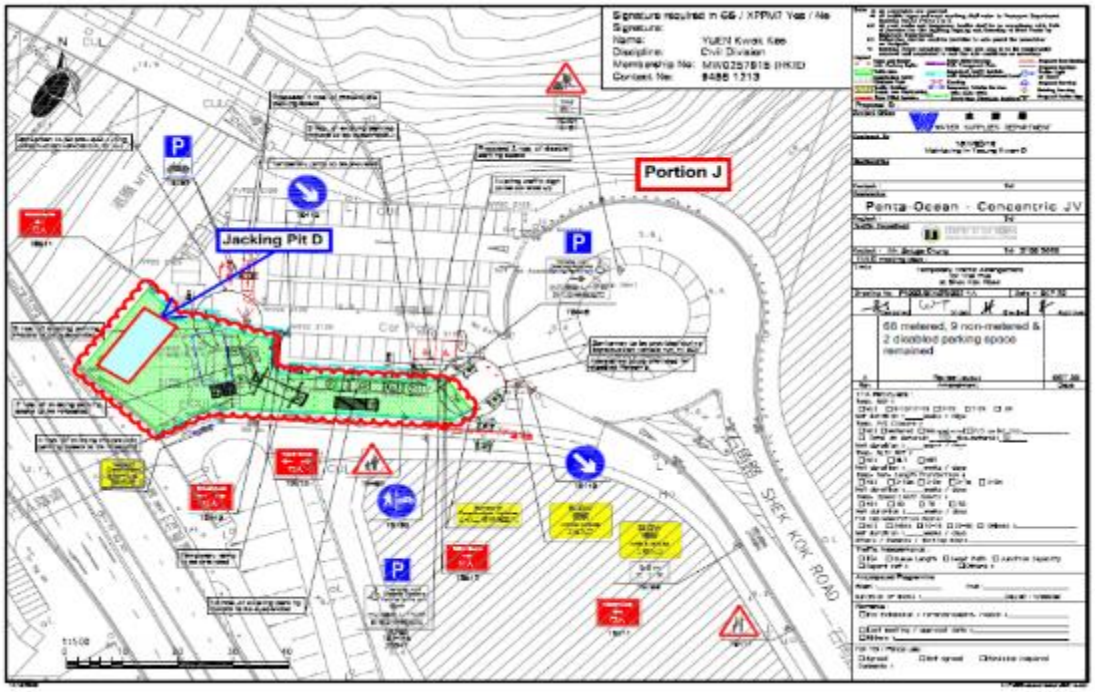

Figure B15. Location Plan for Jacking Pit D

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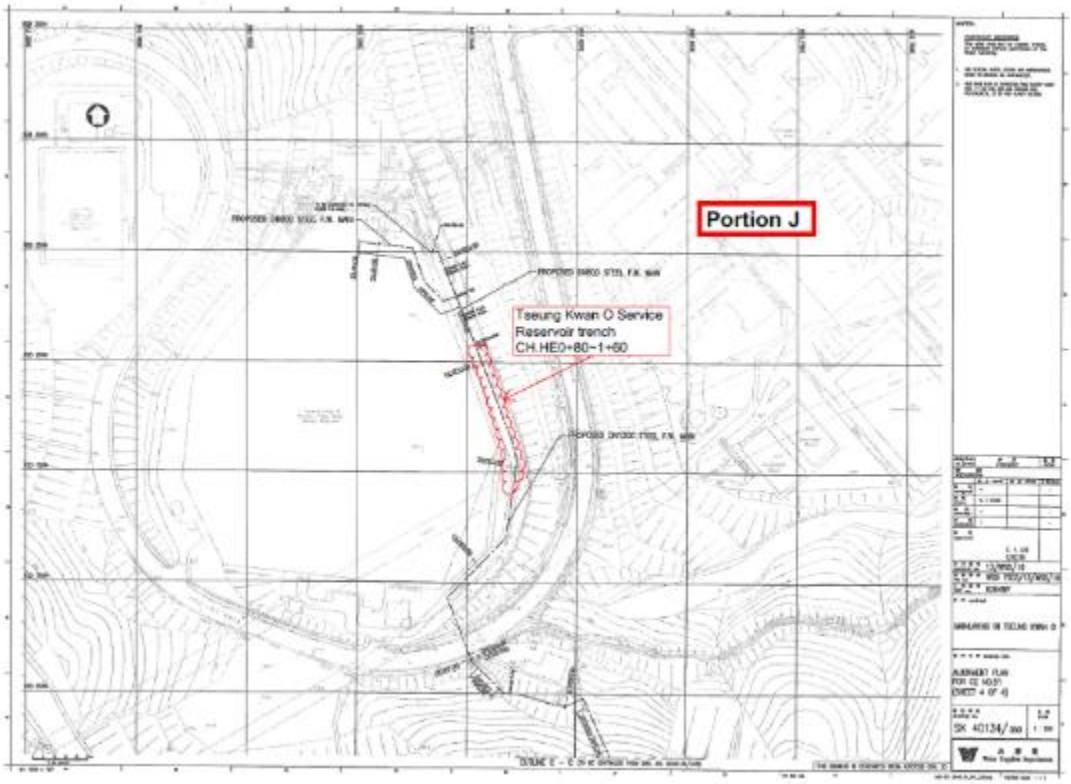

Figure B16. Location Plan for CH.HE0+80-1+60

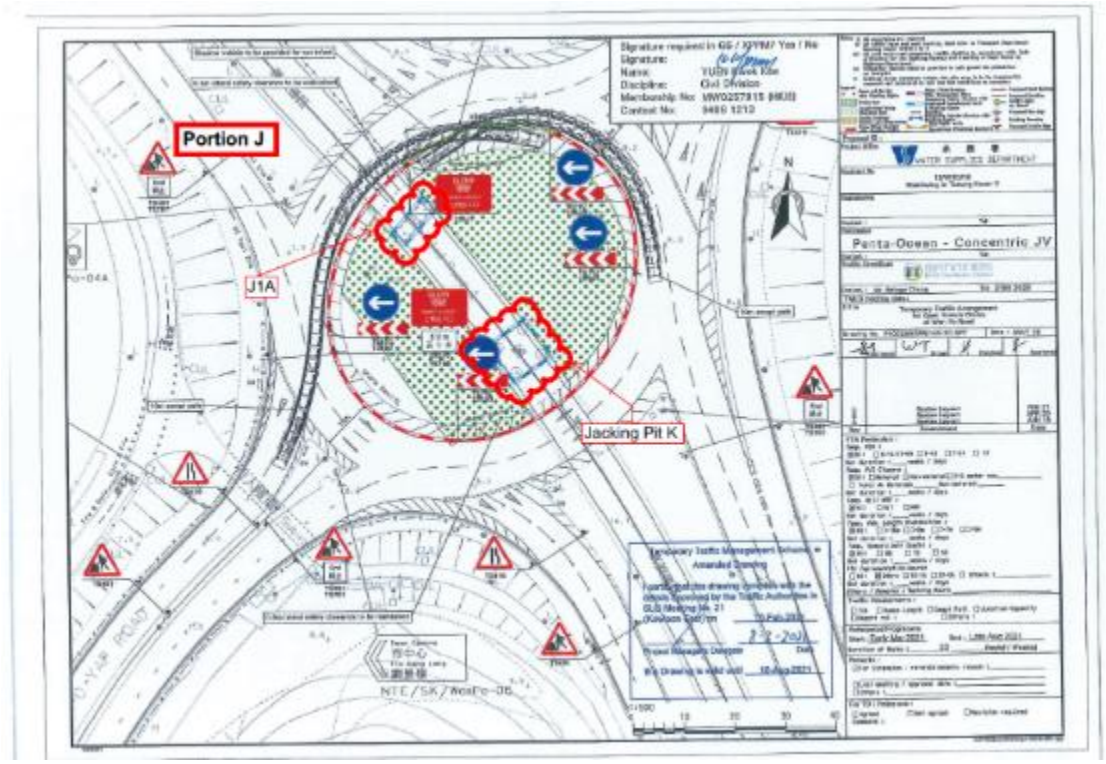

Figure B17. Location Plan for Pit K

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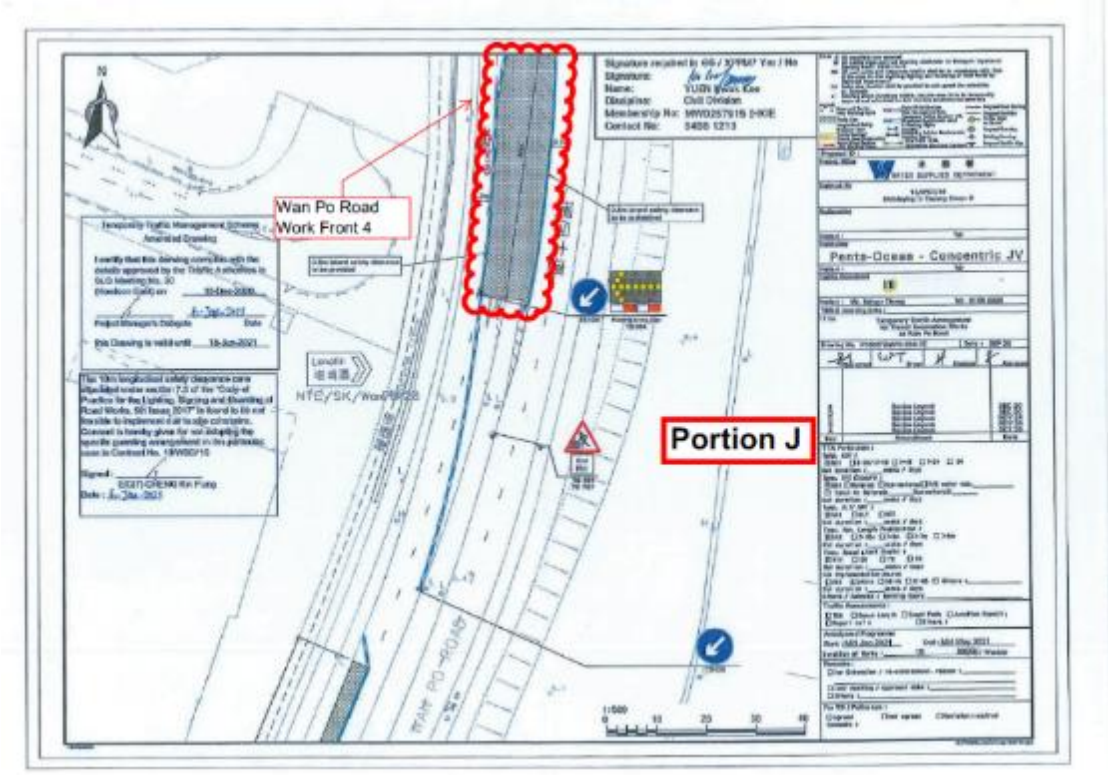

Figure B18a. Location Plan for Wan Po Road 4

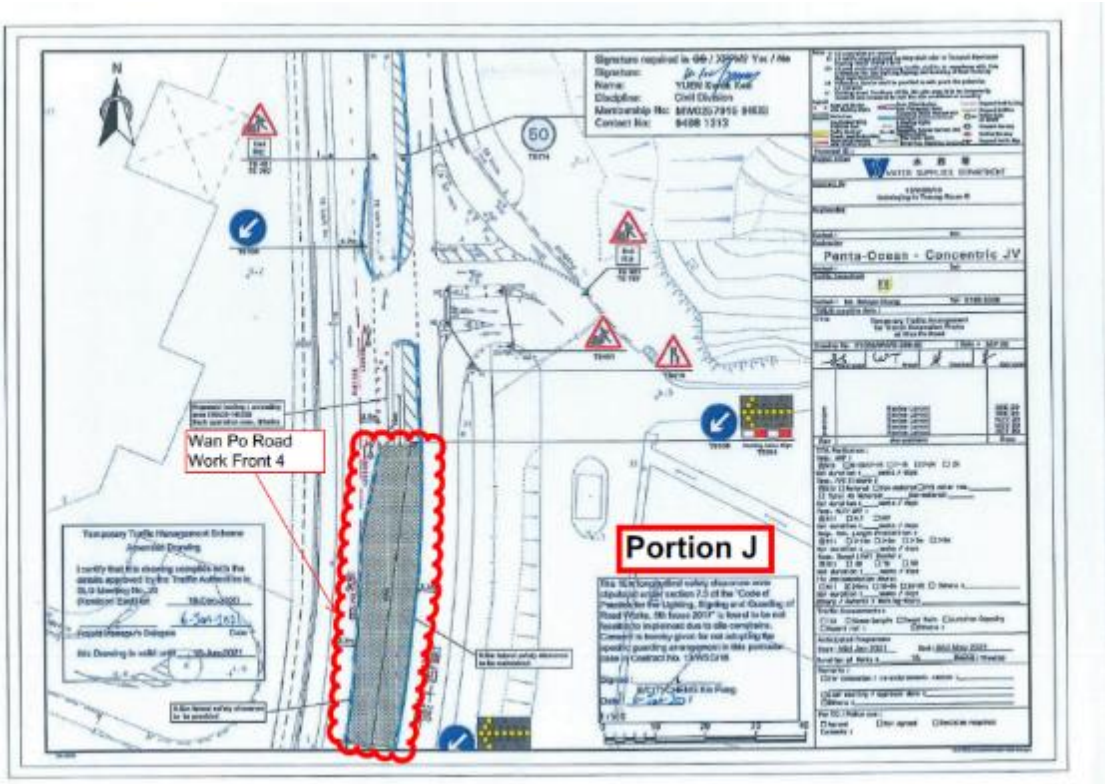

Figure B18b. Location Plan for Wan Po Road 4

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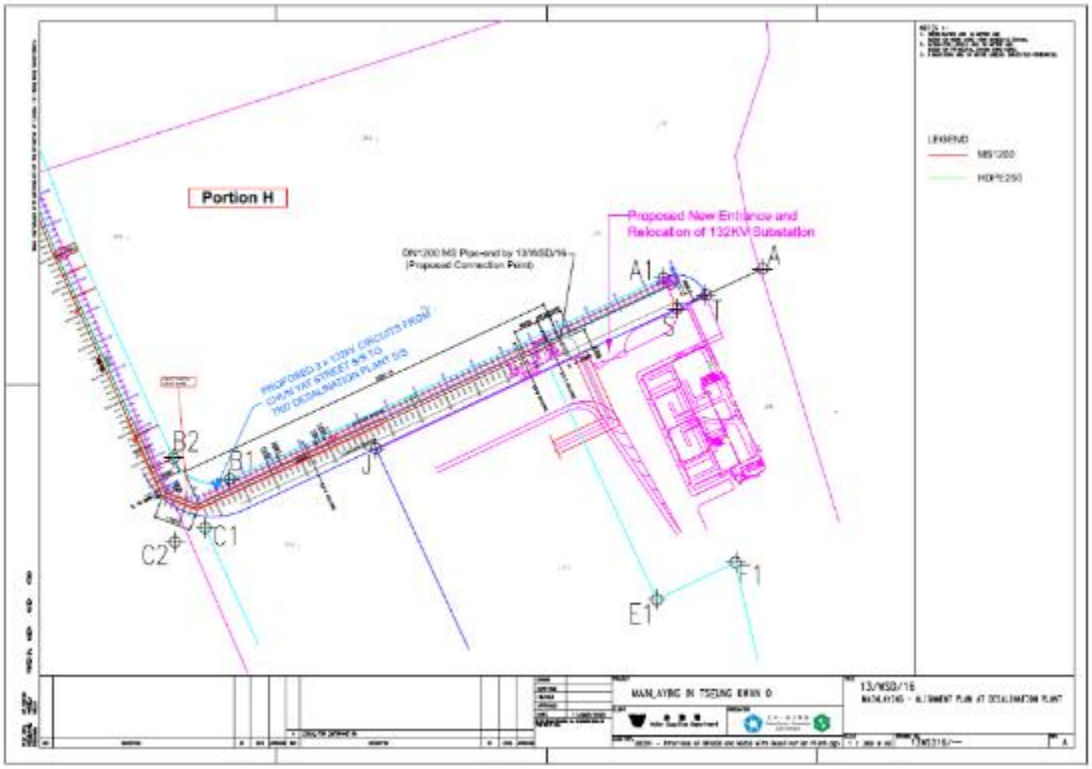

Figure B19a. Location Plan for CH.CT 0+07 – 2+58

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

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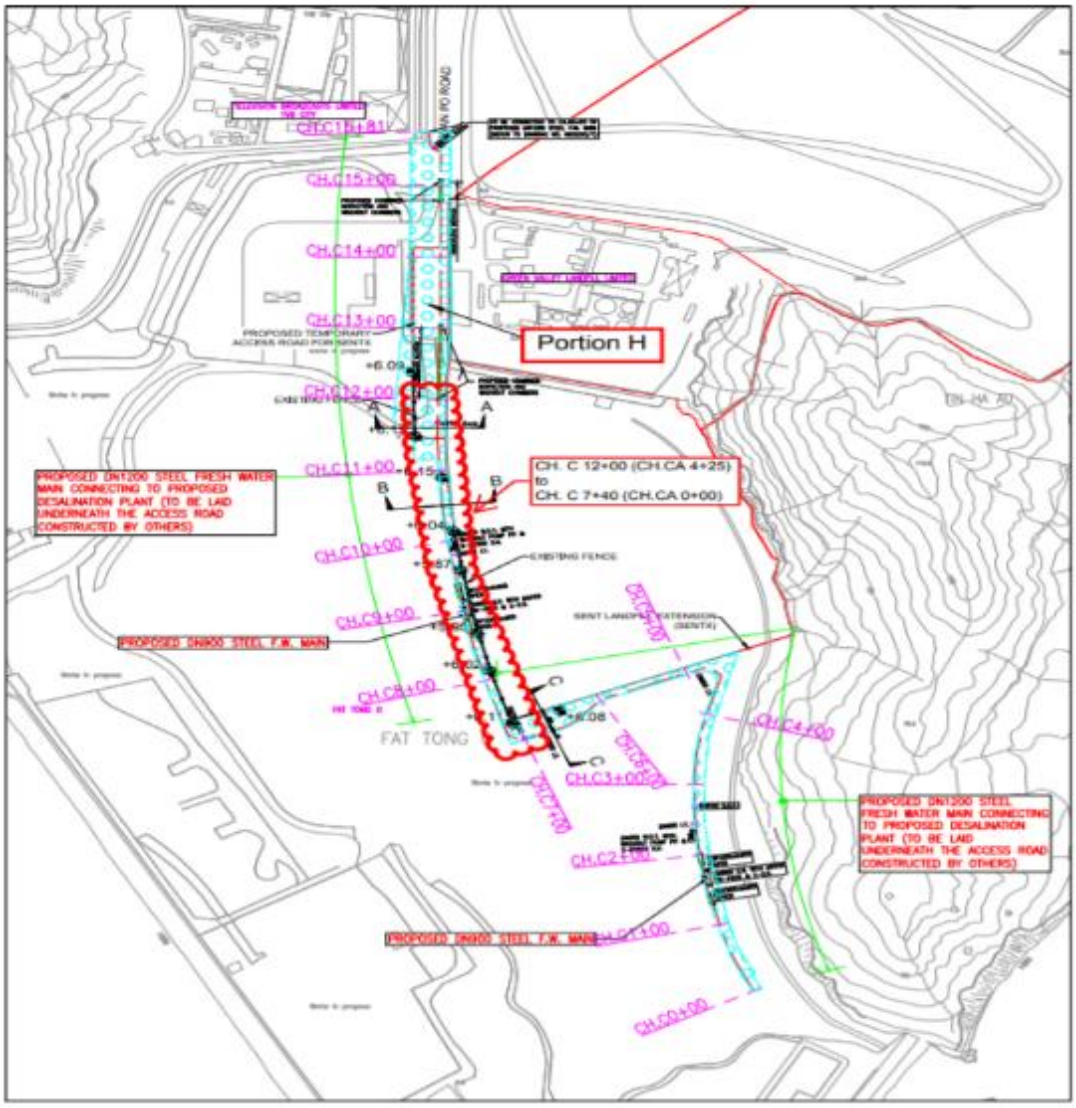

Figure B20. Location Plan for Portion H– CH.C 7+40~CH.C 12+00 (CH.CA 0+00 ~ CH.CA4+25)

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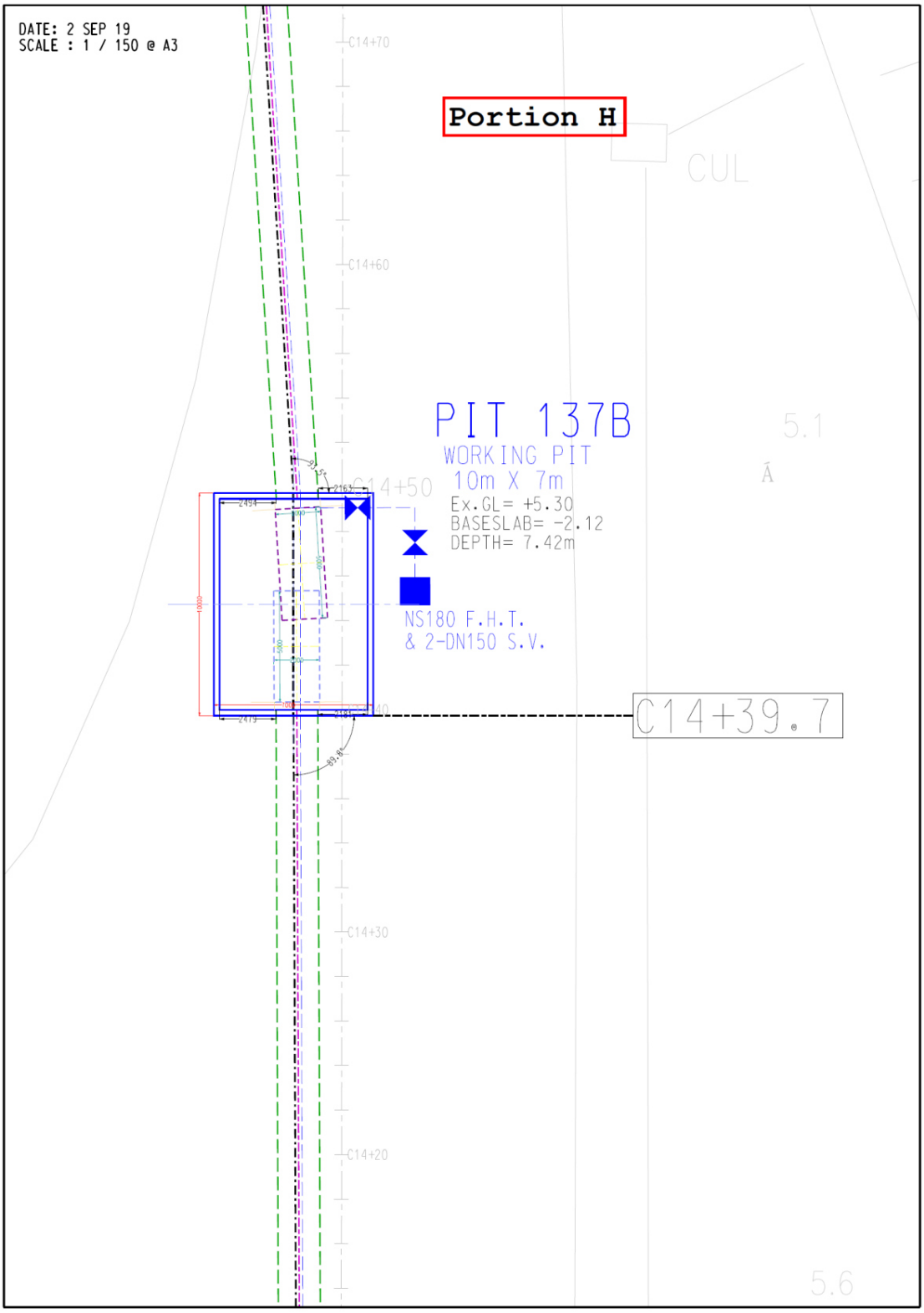

Figure B21a. Location Plan for Portion H– Pit 137B

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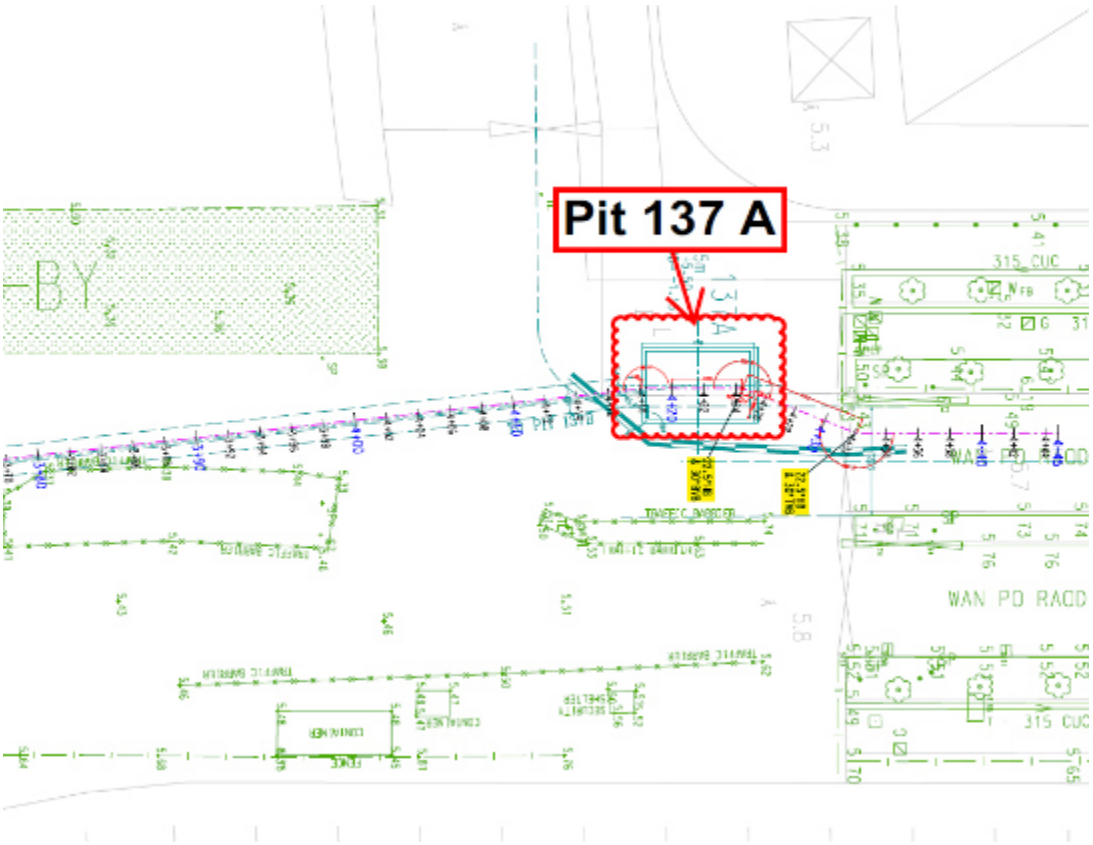

Figure B21b. Location Plan for Portion H– Pit 137A

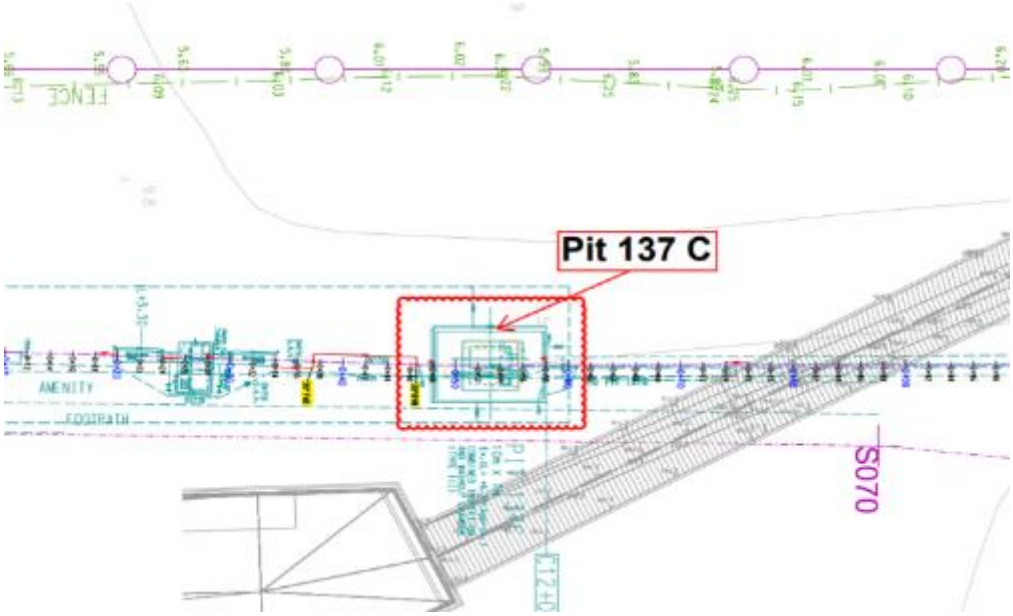

Figure B21c. Location Plan for Portion H– Pit 137C

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Appendix C

Summary of Implementation Status of Environmental Mitigation

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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		
Air Quality								
S4.8.1	Impervious dust screen or sheeting will be provided to enclose scaffolding from the ground floor level of building for construction of superstructure of the new buildings.	Land site/ During Construction	Contractor(s)		✓		N/A	Air Pollution Control (Construction Dust)
S4.8.1	Impervious sheet will be provided for skip hoist for material transport.	Land site/ During Construction, particularly dry season	Contractor(s)		✓		N/A	
S4.8.1	The area where dusty work takes place should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after dusty activities as far as practicable.	Land site/ During Construction	Contractor(s)		✓		Implemented	
S4.8.1	All dusty materials should be sprayed with water or a dust suppression chemical immediately prior to any loading, unloading or transfer operation.	Land site/ During Construction	Contractor(s)		✓		Implemented	
S4.8.1	Dropping heights for excavated materials should be controlled to a practical height to minimize the fugitive dust arising from unloading.	Land site/ During Construction	Contractor(s)		✓		Implemented	
S4.8.1	During transportation by truck, materials should not be loaded to a level higher than the side and tail boards, and should be dampened or covered before transport.	Land site/ During Construction	Contractor(s)		✓		Implemented	
S4.8.1	Wheel washing device should be provided at the exits of the work sites. Immediately before leaving a construction site, every vehicle shall be washed to remove any dusty material from its body and wheels as far as practicable.	Land site/ During Construction	Contractor(s)		✓		Implemented	
S4.8.1	Road sections between vehicle-wash areas and vehicular entrance will be paved.	Land site/ During Construction	Contractor(s)		✓		N/A	
S4.8.1	Hoarding of not less than 2.4m high from ground level will be provided along the length of the Project Site boundary.	Land site/ During construction	Contractor(s)	✓	✓		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		
S4.8.1	Haul roads will be kept clear of dusty materials and will be sprayed with water so as to maintain the entire road surface wet at all times.	Land site/ During construction	Contractor(s)		✓		Implemented	
S4.8.1	Temporary stockpiles of dusty materials will be either covered entirely by impervious sheets or sprayed with water to maintain the entire surface wet all the time.	Land site/ During construction	Contractor(s)		✓		Implemented reminder issued	Air Pollution Control (Construction Dust)
S4.8.1	Stockpiles of more than 20 bags of cement, dry pulverised fuel ash and dusty construction materials will be covered entirely by impervious sheeting sheltered on top and 3-sides.	Land site/ During construction	Contractor(s)		✓		Implemented	
S4.8.1	All exposed areas will be kept wet always to minimise dust emission.	Land site/ During construction	Contractor(s)		✓		Implemented 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	-

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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		
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	-

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

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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		
	hours in order to reduce impact to the educational institutions.							
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	-

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

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				D	C	O		
Water Quality								
S6.9	Silt removal facilities such as silt traps or sedimentation facilities will be provided to remove silt particles from runoff to meet the requirements of the TM standard under the WPCO. The design of silt removal facilities will be based on the guidelines provided in ProPECC PN 1/94. All drainage facilities and erosion and sediment control structures will be inspected on a regular basis and maintained to confirm proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit will be removed regularly.	Land site & drainage/ During construction	Contractor(s)		✓		Implmented	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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				D	C	O		
S6.9	Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers over the construction site to prevent direct disposal of sewage into the water environment.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	-
S6.9 and S6.12	The sterilization water should be dechlorinated with total residual chlorine (TRC) level below 1 mg/L before discharge to public sewer. In situ testing of TRC should also be conducted for the discharge of chlorinated water for pipeline disinfection to ensure sufficient dechlorination before discharge to public sewer.	Sterilization of water mains prior to commissioning	Contractor(s)		✓	✓	N/A	Technical Memorandum for Effluents Discharged into Drainage and Sewerage Systems Inland and Coastal Waters
S6.9	The cleaning and flushing water should also be treated and desilted to the relevant discharge requirement stipulated in TM-DSS before discharging.	Sterilization of water mains prior to commissioning	Contractor(s)		✓	✓	N/A	
S6.9	Site drainage should be well maintained and good construction practices should be observed to ensure that oil, fuels, solvents and other chemicals are managed, stored and handled properly and do not enter the nearby water streams.	Land site & drainage/ During construction/ During operation	Contractor(s)		✓	✓	Implemented	-
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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				D	C	O		
Waste Management								
S8.5	Nomination of approved personnel to be responsible for standard site practices, arrangements for collection and effective disposal to an appropriate facility of all wastes generated at the site.	Contract mobilization/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Training of site personnel in proper waste management and chemical handling procedures. Training will be provided to workers on the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling at the beginning of the construction works.	Contract mobilization/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Provision of sufficient waste disposal points and regular collection for disposal.	All area/ During construction/ During operation	Contractor(s)		✓	✓	Implemented	DEVB TC(W) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness.
S8.5	Appropriate measures to reduce windblown litter and dust transportation of waste by either covering trucks or by transporting wastes in enclosed containers.	All area/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness.
S8.5	A waste management plan (WMP) as stated in the "*ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites*" for the amount of waste generated, recycled and disposed of (including the disposal sites) will be established and implemented during the construction phase as part of the Environmental Management Plan (EMP). The Contractor will be required to prepare the EMP and submits it to the Architect/ Engineer under the Contract for approval prior to implementation.	All area/ During construction	Contractor(s)		✓		Implemented	ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites
S8.5	Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Centre at Tsing Yi.	All area/ During construction	Contractor(s)		✓		N/A.	Chapters 2 & 3 Code of Practice on the Packaging, Labelling & Storage of Chemical Wastes published under the Waste Disposal Ordinance (Cap 354), Section 35

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				D	C	O		
S8.5	Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.	Land site/ During construction	Contractor(s)		✓		Implemented	Waste Disposal Ordinance (Cap 354)
S8.5	A recording system for the amount of wastes generated/ recycled and disposal sites. The trip- ticket system will be included as one of the contractual requirements and implemented by the contractor(s).	Land site/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S8.5	Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of material and their proper disposal.	Land site/ During construction/ During operation	Contractor(s)		✓		Implemented	WBTC 32/92, The Use of Tropical Hard Wood on Construction Site
S8.5	Encourage collection of aluminium cans and 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	The management of dredged/ excavated sediment management requirement from ETWB TC(W) No. 34/2002 will be incorporated in the Specification of the Contract Documents.	Marine works/ During construction	WSD/ Contractor(s)		✓		Implemented	ETWB TC(W) No. 34/2002 and Dumping at Sea Ordinance (DASO)

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

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				D	C	O		
S8.5	Chemical waste container shall be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Observed issued, rectified after observation	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Chemical waste container shall have a capacity of less than 450 L unless the specifications have been approved by the EPD.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	A label in English and Chinese shall be displayed on the chemical container in accordance with instructions prescribed in Schedule 2 of the Regulations.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	Storage areas for chemical waste shall be enclosed on at least 3 sides.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	Storage areas for chemical waste shall have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	Storage areas for chemical waste shall have adequate ventilation.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	Storage areas for chemical waste shall be covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary).	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	Storage areas for chemical waste shall be arranged so that incompatible materials are appropriately separated.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	
S8.5	General refuse will be stored in enclosed bins or compaction units separately from construction and chemical wastes.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Reminder issued	
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.

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

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

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

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				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	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	

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	calibrated and capable of measuring the concentrations of methane. carbon dioxide and oxygen.							
S12.7	Monitoring frequency and areas to be monitored should be specified prior to commencement of groundwork, either by the Safety Officer, or by an appropriately qualified person. All measurements should be recorded and documented.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	Proceed drilling with adequate care and precautions against the potential hazards which may be encountered.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	Prior to the commencement of the site works, the drilling contractor should devise a 'method-of- working' statement covering all normal and emergency procedures (including but not limited to number of operatives, experience and special skills of operatives, normal method of operations, emergency procedures, supervisors' responsibilities, storage and use of safety equipment, safety procedures and signs, barriers and guarding). The site supervisor and all operatives must be familiar with this statement.	All area/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	Where below ground service entries are necessary to the Incoming Switchgear Room, 132 kV Substation and Chlorine Store (I) and (II), the entry point should be sealed to prevent gas entry. In addition, any below grade cable trenches entering the Incoming Switchgear Room and 132 kV Substation can become the pathway for landfill gas and hence 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	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	

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	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.							
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

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

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

Appendix E

Noise Monitoring Equipment Calibration Certificate

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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

ACOUSTICS AND AIR TESTING LABORATORY CO LTD (A+A) *L

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong
Tel: (852) 2668 3423 Fax:(852) 2668 6946
Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com

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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Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com

ACOUSTICS AND AIR TESTING LABORATORY CO. LTD. (A+A)*L

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	Fast	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	Fast	94	31.5	54.9	-39.4 ±2.0
				63	68.0	-26.2 ±1.5
				125	78.0	-16.1 ±1.5
				250	85.4	-8.6 ±1.4
				500	90.8	-3.2 ±1.4
				1000	94.0	Ref
				2000	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	Fast	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

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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
	4000 Hz	± 0.05
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

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

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong
Tel: (852) 2668 3423 Fax:(852) 2668 6946
Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com

ACOUSTICS AND AIR TESTING LABORATORY CO. LTD. (A+A) *L

MAXLAB

CALIBRATION CERTIFICATE

Certificate Information

Date of Issue	7-Aug-2021	**Certificate Number**	MLCN212053S

Customer Information

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

Equipment-under-Test (EUT)

Description	Acoustic Calibrator
Manufacturer	Pulsar
Model Number	105
Serial Number	63705
Equipment Number	--

Calibration Particular

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.		

Approved By & Date

K.O. Lo 7-Aug-2021

Statements

* 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.

萬儀校正中心有限公司
MaxLab Calibration Centre Limited
香港新界葵涌華星街 16-18 號保盈工業大廈 9 樓 B 室
Unit B, 9/F., Boldwin Industrial Bldg., 16-18 Wah Sing Street, Kwai Chung, N.T., Hong Kong Tel: (852) 2116 1380 Fax: (852) 2264 6480 Email: info@maxlab.com.hk

MAXLAB

Certificate No. MLCN212053S

Calibration Data				
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

萬儀校正中心有限公司
MaxLab Calibration Centre Limited
香港新界葵涌華星街 16-18 號保盈工業大廈 9 樓 B 室
Unit B, 9/F., Boldwin Industrial Bldg., 16-18 Wah Sing Street, Kwai Chung, N.T., Hong Kong Tel: (852) 2116 1380 Fax: (852) 2264 6480 Email: info@maxlab.com.hk

Kestrel®

Kestrel Weather Meters
Model Numbers 1000-3500

NK VERIFIED

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 warrantied 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 ±1.04% within the airspeed range 711.4 to 3930 fpm (3.61 to 19.96 m/s), and ±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 ± 0.04C.

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 ±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 ± 0.3hPa.

Approved By:

Michael Naughton
Chief Product Officer, Nielsen-Kellerman

© 2020. The enclosed Kestrel Weather Meter was manufactured by Nielsen-Kellerman Co. at its facilities located at 21 Creek Circle, Boothwyn, PA 19061 USA.

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% @ 5º off axis; -2% @ 10º; -3% @ 15º. 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 insolation 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

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Event and Action Plan for Construction Noise Monitoring

Event	Action			
	ET	IEC	ER	Contractor
Action Level	1. Carry out investigation to identify the source and cause of the complaint/ exceedance(s) 2. Notify IEC, ER, and Contractor and report the results of investigation to the Contractor, ER and the IEC 3. Discuss with the Contractor and IEC for remedial measures required 4. 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	1. Review the analyzed results submitted by the ET 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly 3. Supervise the implementation of remedial measures	1. Confirm receipt of Notification of Exceedance in writing 2. Require Contractor to propose remedial measures for the analysed noise problem 3. Ensure remedial measures are properly implemented	1. Submit noise mitigation proposals, if required, to the IEC and ER 2. Implement noise mitigation proposals.
Limit Level	1. Notify IEC, ER, EPD and Contractor 2. 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. 3. Repeat measurement to confirm findings 4. Increase monitoring frequency 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented. 6. inform IEC, ER and EPD the cause & actions taken for the exceedances 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions 2. Review Contractor's remedial actions to assure their effectiveness and advise the ER &ET accordingly 3.Supervise the implementation of the remedial measures	1. Confirm receipt of notification of exceedance in writing 2. Notify Contractor 3. Require Contractor to propose remedial measures for the analyzed noise problem 4. Ensure remedial measures are properly implemented 5. 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	1. Take immediate action to avoid further exceedance 2. Identify practicable measures to minimize the noise impact. Submit proposals for remedial actions to ER within three working days of notification 3. Implement the agreed proposals 4. Resubmit proposal if problem still not under control 5. 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

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Table G 1 Summary of Noise Monitoring Result

Date	Time	Weather	$L_{eq\text{-}5min}$, dB(A)						$L_{eq\text{-}30min}$, dB(A)	$L_{10\text{-}30mins}$, dB(A)	$L_{90\text{-}30mins}$ dB(A)	Limit Level, dB(A)*	Noise Meter
			Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)					
01/06/2022	11:00 - 11:30	Sunny	68.4	63.1	67.9	70.9	69.8	70.8	69.1	71.3	59.8	70.0	Svantek 971
07/06/2022	10:01 - 10:31	Cloudy	67.0	62.7	69.0	67.7	67.0	68.9	67.5	70.2	63.4	70.0	Svantek 971
18/06/2022	11:20 - 11:50	Sunny	68.3	68.0	69.0	67.3	68.3	68.9	68.3	71.7	58.4	70.0	Svantek 971
24/06/2022	11:27 - 11:57	Cloudy	69.0	69.2	70.0	67.6	68.1	68.9	68.9	72.1	59.8	70.0	Svantek 971
30/06/2022	10:57 - 11:27	Cloudy	70.4	69.3	68.7	69.1	69.4	68.5	69.3	72.2	60.4	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**.

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Appendix H

Waste Flow Table

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

Contract No.: 13/WSD/16

Monthly Summary Waste Flow Table for 1 June 2022 to 30 June 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 '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m³)
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	1.008	0.036	0.528	--	0.480	0.737	--	0.057	--	--	0.000
Jun 22	1.710	0.200	0.398	--	1.312	0.639	--	0.056			0.007
Sub-total	9.368	0.661	1.21	--	7.501	3.644	--	0.345	--	--	0.019
Jul 22				--			--		--	--	
Aug 22				--			--		--	--	
Sep 22				--			--		--	--	
Oct 22				--			--		--	--	
Nov 22				--			--		--		
Dec 22				--			--		--		
Total	9.368	0.661	1.21	--	7.501	3.644	--	0.345	--	--	0.019

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. Soil: 638.5 m³ (319.3 tonnes / 30 car)

ii. Subase: 20.2 m³ (10.1 tonnes / 1 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

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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

PROMAT
Your Solution To Testing Instrument

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

PROMAT (HK) LIMITED 寶時(香港)有限公司

Mr. Eric Lee / Product Manager

Appendix J

Landfill Gas Monitoring Data

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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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	1/6/2022	0830	Fine / ~~Rain~~	O	O	O	20.9	28/1009	5.5
	〃	1330	Fine / ~~Rain~~	O	O	O	20.9	29/1009	5.5
	〃	1700	Fine / ~~Rain~~	O	O	O	20.9	29/1010.	5.5
Area B	〃	0845	Fine / ~~Rain~~	O	O	O	20.9	27/1012	2.5
	〃	1345	Fine / ~~Rain~~	O	O	O	20.9	29/1011	2.5
	〃	1645	Fine / ~~Rain~~	O	O	O	20.9	28/1010.	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])		1/6/2022
Laboratory Staff:			
Checked by:			1/6/2022

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	21/6/2022	0830	Fine / ~~Rain~~	O	O	O	20.9	27/1010.	5.5
	〃	1330	Fine / ~~Rain~~	O	O	O	20.9	29/1010.	5.5
	〃	1700	Fine / ~~Rain~~	O	O	O	20.9	28/1011	5.5
Area B	〃	0845	Fine / ~~Rain~~	O	O	O	20.9	26/1009.	2.5
	〃	1345	Fine / ~~Rain~~	O	O	O	20.9	28/1010	2.5
	〃	1645	Fine / ~~Rain~~	O	O	O	20.9	27/1009.	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])		21/6/2022.
Laboratory Staff:			21/6/2022
Checked by:			

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

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	4/6/2022	0830	Fine / ~~Rain~~	O	O	O	20.9	29/1010.	5.5
	〃	1330	Fine / ~~Rain~~	O	O	O	20.9	30/1011	5.5
	〃	1700	Fine / ~~Rain~~	O	O	O	20.9	30/1011	5.5
Area B	〃	0845	Fine / ~~Rain~~	O	O	O	20.9	29/1011	2.5
	〃	1345	Fine / ~~Rain~~	O	O	O	20.9	31/1012.	2.5
	〃	1645	Fine / ~~Rain~~	O	O	O	20.9	30/1012.	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])		4/6/2022.
Laboratory Staff:			4/6/2022
Checked by:			

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

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	6/6/2022	0830	Fine / ~~Rain~~	0	0	0	20.9	28/1010	5.5
	"	1330	Fine / ~~Rain~~	0	0	0	20.9	29/1011	5.5
	"	1700	Fine / ~~Rain~~	0	0	0	20.9	29/1011	5.5
Area B	"	0845	Fine / ~~Rain~~	0	0	0	20.9	29/1009	2.5
	"	1345	Fine / ~~Rain~~	0	0	0	20.9	30/1010	2.5
	"	1645	Fine / ~~Rain~~	0	0	0	20.9	30/1010	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])		6/6/2022
Laboratory Staff:			6/6/22
Checked by:	~~[illegible]~~ ~ Raiv		

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	7/6/2022	0830	Fine / ~~Rain~~	O	O	O	20.9	28/1010	5.5
	〃	1330	Fine / ~~Rain~~	O	O	O	20.9	27/1011	5.5
	〃	1700	Fine / ~~Rain~~	O	O	O	20.9	26/1010.	5.5
Area B	〃	0845	Fine / ~~Rain~~	O	O	O	20.9	26/1011	2.5
	〃	1345	Fine / ~~Rain~~	O	O	O	20.9	27/1011	2.5
	〃	1645	Fine / ~~Rain~~	O	O	O	20.9	26/1010.	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])		7/6/2022.
Laboratory Staff:			7/6/2022
Checked by:			

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

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	8/6/2022	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	27/1010	5.5
Area B	〃	0845	Fine / ~~Rain~~	0	0	0	20.9	26/1010	2.5
	〃	1345	Fine / ~~Rain~~	0	0	0	20.9	27/1010	2.5
	〃	1645	Fine / ~~Rain~~	0	0	0	20.9	26/1009	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])		8/6/2022
Laboratory Staff:			8/6/2022
Checked by:			

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

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	9/6/2022	0830	Fine / ~~Rain~~	O	O	O	20.9	25/1009	5.5
	〃	1330	Fine / ~~Rain~~	O	O	O	20.9	26/1010	5.5
	〃	1700	Fine / ~~Rain~~	O	O	O	20.9	26/1010	5.5
Area B	〃	0845	Fine / ~~Rain~~	O	O	O	20.9	25/1010	2.5
	〃	1345	Fine / ~~Rain~~	O	O	O	20.9	27/1011	2.5
	〃	1645	Fine / ~~Rain~~	O	O	O	20.9	26/1010	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])		9/6/2022
Laboratory Staff:			9/6/2022
Checked by:			

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

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	10/6/2022	0830	~~Fine~~ / Rain	O	O	O	20.9	25/1009	5.5
	〃	1330	Fine / ~~Rain~~	O	O	O	20.9	26/1009	5.5
	〃	1700	Fine / ~~Rain~~	O	O	O	20.9	26/1010.	5.5
Area B	〃	0845	~~Fine~~ / Rain	O	O	O	20.9	26/1010.	2.5
	〃	1345	Fine / ~~Rain~~	O	O	O	20.9	26/1010	2.5
	〃	1645	Fine / ~~Rain~~	O	O	O	20.9	25/1009.	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])		10/6/2022.
Laboratory Staff:			10/6/2022
Checked by:	W.F. 6/6/22		

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	11/6/2022	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	26/1009	5.5
Area B	〃	0845	~~Fine~~ / Rain	0	0	0	20.9	26/1010	2.5
	〃	1345	Fine / ~~Rain~~	0	0	0	20.9	27/1011	2.5
	〃	1645	Fine / ~~Rain~~	0	0	0	20.9	27/1011	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])		11/6/2022
Laboratory Staff:			11/6/22
Checked by:			

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

Sampling equipment used:	Dates calibrated
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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	13/6/2022	0830	Fine / ~~Rain~~	0	0	0	20.9	28/1009	5.5
	〃	1330	Fine / ~~Rain~~	0	0	0	20.9	29/1010	5.5
	〃	1700	Fine / ~~Rain~~	0	0	0	20.9	29/1010	5.5
Area B	〃	0845	Fine / ~~Rain~~	0	0	0	20.9	29/1011	2.5
	〃	1345	Fine / ~~Rain~~	0	0	0	20.9	29/1010.	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])	[illegible]	13/6/2022
Laboratory Staff:		[illegible]	13/6/2022
Checked by:	[illegible]		

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	14/6/2022	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	27/1010.	5.5
Area B	〃	0845	Fine / ~~Rain~~	0	0	0	20.9	26/1010.	2.5
	〃	1345	Fine / ~~Rain~~	0	0	0	20.9	27/1011	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])		14/6/2022
Laboratory Staff:			14/6/2022
Checked by:			

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

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	15/6/2022	0830	Fine / ~~Rain~~	0	0	0	20.9	25/1009	5.5
	〃	1330	Fine / ~~Rain~~	0	0	0	20.9	26/1009	5.5
	〃	1700	Fine / ~~Rain~~	0	0	0	20.9	27/1010.	5.5
Area B	〃	0845	Fine / ~~Rain~~	0	0	0	20.9	26/1009.	2.5
	〃	1345	Fine / ~~Rain~~	0	0	0	20.9	27/1010	2.5
	〃	1645	Fine / ~~Rain~~	0	0	0	20.9	27/1009.	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])		15/6/2022.
Laboratory Staff:			15/6/2022
Checked by:	[illegible]		

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	16/6/2022	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	26/1009	5.5
Area B	〃	0845	Fine / ~~Rain~~	0	0	0	20.9	25/1009	2.5
	〃	1345	Fine / ~~Rain~~	0	0	0	20.9	28/1011	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])		16/6/2022.
Laboratory Staff:			16/6/2022
Checked by:	W. P Chan		

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	17/6/2022	0830	Fine / ~~Rain~~	0	0	0	20.9	28 / 1009	5.5
	〃	1330	Fine / ~~Rain~~	0	0	0	20.9	29 / 1010.	5.5
	〃	1700	Fine / ~~Rain~~	0	0	0	20.9	29 / 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	29 / 1011.	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])		17/6/2022.
Laboratory Staff:			17/6/22
Checked by:			

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

Sampling equipment used:	Dates calibrated
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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	18/6/2022	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	28/1009.	5.5
Area B	〃	0845	Fine / ~~Rain~~	0	0	0	20.9	28/1010.	2.5
	〃	1345	Fine / ~~Rain~~	0	0	0	20.9	29/1011	2.5
	〃	1645	Fine / ~~Rain~~	0	0	0	20.9	28/1011.	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])	[illegible]	18/6/2022.
Laboratory Staff:		[illegible]	18/6/22
Checked by:	[illegible]		

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	20/6/2022	0830	Fine / ~~Rain~~	0	0	0	20.9	27/1008	5.5
	〃	1330	Fine / ~~Rain~~	0	0	0	20.9	29/1010	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	29/1010	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])		20/6/2022
Laboratory Staff:			20/6/22
Checked by:	W. P. CMW		

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	21/6/2022	0830	Fine / ~~Rain~~	0	0	0	20.9	28/1009	5.5
	〃	1330	Fine / ~~Rain~~	0	0	0	20.9	28/1009	5.5
	〃	1700	Fine / ~~Rain~~	0	0	0	20.9	29/1010.	5.5
Area B	〃	0845	Fine / ~~Rain~~	0	0	0	20.9	29/1010.	2.5
	〃	1345	Fine / ~~Rain~~	0	0	0	20.9	29/1010	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])		21/6/2022.
Laboratory Staff:			21/6/22
Checked by:			

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

Sampling equipment used:	Dates calibrated
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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	22/6/2022	0830	Fine / ~~Rain~~	0	0	0	20.9	28/1009	5.5
	〃	1330	Fine / ~~Rain~~	0	0	0	20.9	28/1009	5.5
	〃	1700	Fine / ~~Rain~~	0	0	0	20.9	29/1010.	5.5
Area B	〃	0845	Fine / ~~Rain~~	0	0	0	20.9	28/1010.	2.5
	〃	1345	Fine / ~~Rain~~	0	0	0	20.9	29/1009	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])		22/6/2022.
Laboratory Staff:		~~22/6/2022~~	22/6/2022
Checked by:	W.P. Au		

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	23/6/2022	0830	Fine / Rain	O	O	O	20.9	28/1009.	5.5
	〃	1330	Fine / Rain	O	O	O	20.9	30/1010.	5.5
	〃	1700	Fine / Rain	O	O	O	20.9	30/1010.	5.5
Area B	〃	0845	Fine / Rain	O	O	O	20.9	29/1010.	2.5
	〃	1345	Fine / Rain	O	O	O	20.9	31/1011	2.5
	〃	1645	Fine / Rain	O	O	O	20.9	31/1010.	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])		23/6/2022.
Laboratory Staff:			23/6/2022
Checked by:			

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

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	24/6/2022	0830	Fine / ~~Rain~~	0	0	0	20.9	29/1010.	5.5
	〃	1330	Fine / ~~Rain~~	0	0	0	20.9	31/1011	5.5
	〃	1700	Fine / ~~Rain~~	0	0	0	20.9	20/1011	5.5
Area B	〃	0845	Fine / ~~Rain~~	0	0	0	20.9	28/1008.	2.5
	〃	1345	Fine / ~~Rain~~	0	0	0	20.9	31/1011	2.5
	〃	1645	Fine / ~~Rain~~	0	0	0	20.9	30/1010.	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])		24/6/2022.
Laboratory Staff:			24/6/2022
Checked by:			

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

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	25/6/2022	0830	Fine / ~~Rain~~	0	0	0	20.9	28/1010.	5.5
	〃	1330	Fine / ~~Rain~~	0	0	0	20.9	31/1011	5.5
	〃	1700	Fine / ~~Rain~~	0	0	0	20.9	30/1010.	5.5
Area B	〃	0845	Fine / ~~Rain~~	0	0	0	20.9	28/1009.	2.5
	〃	1345	Fine / ~~Rain~~	0	0	0	20.9	30/1010.	2.5
	〃	1645	Fine / ~~Rain~~	0	0	0	20.9	30/1010.	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])	Y	25/6/2022.
Laboratory Staff:		凡	25/6/2022
Checked by:	W. F. Ann		

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	27/6/2022	0830	Fine / ~~Rain~~	0	0	0	20.9	28/1009	5.5
	〃	1330	Fine / ~~Rain~~	0	0	0	20.9	30/1010	5.5
	〃	1700	Fine / ~~Rain~~	0	0	0	20.9	30/1010	5.5
Area B	〃	0845	Fine / ~~Rain~~	0	0	0	20.9	29/1010	2.5
	〃	1345	Fine / ~~Rain~~	0	0	0	20.9	32/1011	2.5
	〃	1645	Fine / ~~Rain~~	0	0	0	20.9	31/1011	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])	[illegible]	27/6/2022
Laboratory Staff:		[illegible]	27/6/22
Checked by:	[illegible]		

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	28/6/2022	0830	Fine / ~~Rain~~	0	0	0	20.9	29/1008	5.5
	"	1330	Fine / ~~Rain~~	0	0	0	20.9	32/1011	5.5
	"	1700	Fine / ~~Rain~~	0	0	0	20.9	31/1011	5.5
Area B	"	0845	Fine / ~~Rain~~	0	0	0	20.9	30/1008	2.5
	"	1345	Fine / ~~Rain~~	0	0	0	20.9	32/1010	2.5
	"	1645	Fine / ~~Rain~~	0	0	0	20.9	31/1010	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])		28/6/2022
Laboratory Staff:			28/6/22
Checked by:			

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

Sampling equipment used:	Dates calibrated
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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	29/6/2022	0830	Fine / ~~Rain~~	O	O	O	20.9	29/1010.	5.5
	〃	1330	Fine / ~~Rain~~	O	O	O	20.9	31/1011	5.5
	〃	1700	Fine / ~~Rain~~	O	O	O	20.9	30/1011	5.5
Area B	〃	0845	Fine / ~~Rain~~	O	O	O	20.9	30/1009	2.5
	〃	1345	Fine / ~~Rain~~	O	O	O	20.9	32/1010.	2.5
	〃	1645	Fine / ~~Rain~~	O	O	O	20.9	32/1009.	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])		29/6/2022.
Laboratory Staff:			29/6/2022
Checked by:	[illegible]		

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 (methame %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	30/6/2022	0830	Fine / ~~Rain~~	O	O	O	20.9	27/1009	5.5
	〃	1330	Fine / ~~Rain~~	O	O	O	20.9	28/1010	5.5
	〃	1700	Fine / ~~Rain~~	O	O	O	20.9	28/1010	5.5
Area B	〃	0845	Fine / ~~Rain~~	O	O	O	20.9	26/1008	2.5
	〃	1345	Fine / ~~Rain~~	O	O	O	20.9	28/1010	2.5
	〃	1645	Fine / ~~Rain~~	O	O	O	20.9	27/1010	2.5

	Name & Designation	Signature	Date
Field Operator:	Jock Lee (Competent Person [CO-310218])		30/6/2022
Laboratory Staff:			30/6/2022
Checked by:	W. Pelm		

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 Carbon Dioxide (%)	Remark
Area A	1/6/2022	8:30	0.0414	
		13:30	0.0418	
		15:30	0.0413	
Area B	1/6/2022	8:45	0.0413	
		13:45	0.0414	
		15:45	0.042	
137 Pit C	1/6/2022	9:15	0.0412	
		14:15	0.041	
		16:15	0.0416	
137 Pit B	1/6/2022	9:00	0.042	
		14:00	0.042	
		16:00	0.0418	
137 Pit A	1/6/2022	9:20	0.0412	
		14:20	0.041	
		16:20	0.0414	
WPR WF5	1/6/2022	9:45	0.0411	
		14:45	0.0416	
		16:45	0.0415	

	Name & Designation	Signature	Date
Field Operator:			1/6/2022
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 (%)	
WRP WF4	1/6/2022	9:30	0.0414	
		14:30	0.0417	
		16:30	0.0412	
Pit A	1/6/2022	10:00	0.0418	
		15:00	0.0419	
		17:00	0.0417	
Pit B	1/6/2022	10:15	0.0417	
		15:15	0.0419	
		17:15	0.042	
Pit D	1/6/2022	10:15	0.0419	
		15:15	0.0414	
		17:15	0.041	

	Name & Designation	Signature	Date
Field Operator:			1/6/2022
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 Carbon Dioxide (%)	Remark
Area A	2/6/2022	8:30	0.0418	
		13:30	0.0412	
		15:30	0.042	
Area B	2/6/2022	8:45	0.0411	
		13:45	0.0411	
		15:45	0.042	
137 Pit C	2/6/2022	9:15	0.041	
		14:15	0.042	
		16:15	0.0412	
137 Pit B	2/6/2022	9:00	0.0416	
		14:00	0.0418	
		16:00	0.0412	
137 Pit A	2/6/2022	9:20	0.0415	
		14:20	0.0415	
		16:20	0.0415	
WPR WF5	2/6/2022	9:45	0.0417	
		14:45	0.0419	
		16:45	0.0413	

	Name & Designation	Signature	Date
Field Operator:			2/6/2022
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 Carbon Dioxide (%)	Remark
WRP WF4	2/6/2022	9:30	0.0414	
		14:30	0.042	
		16:30	0.042	
Pit A	2/6/2022	10:00	0.041	
		15:00	0.0413	
		17:00	0.0416	
Pit B	2/6/2022	10:15	0.041	
		15:15	0.0413	
		17:15	0.0414	
Pit D	2/6/2022	10:15	0.041	
		15:15	0.0411	
		17:15	0.0411	

	Name & Designation	Signature	Date
Field Operator:			2/6/2022
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	4/6/2022	8:30	0.0419	
		13:30	0.0411	
		15:30	0.0412	
Area B	4/6/2022	8:45	0.0414	
		13:45	0.0415	
		15:45	0.0414	
137 Pit C	4/6/2022	9:15	0.0416	
		14:15	0.0413	
		16:15	0.0416	
137 Pit B	4/6/2022	9:00	0.0415	
		14:00	0.0416	
		16:00	0.0415	
137 Pit A	4/6/2022	9:20	0.0415	
		14:20	0.041	
		16:20	0.0411	
WPR WF5	4/6/2022	9:45	0.0411	
		14:45	0.0417	
		16:45	0.042	

	Name & Designation	Signature	Date
Field Operator:			4/6/2022
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 (%)	
WRP WF4	4/6/2022	9:30	0.041	
		14:30	0.0413	
		16:30	0.0412	
Pit A	4/6/2022	10:00	0.0411	
		15:00	0.0417	
		17:00	0.0419	
Pit B	4/6/2022	10:15	0.0419	
		15:15	0.0414	
		17:15	0.0414	
Pit D	4/6/2022	10:15	0.0415	
		15:15	0.041	
		17:15	0.0414	

	Name & Designation	Signature	Date
Field Operator:			4/6/2022
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 Carbon Dioxide (%)	Remark
Area A	6/6/2022	8:30	0.0414	
		13:30	0.0419	
		15:30	0.041	
Area B	6/6/2022	8:45	0.042	
		13:45	0.0419	
		15:45	0.0414	
137 Pit C	6/6/2022	9:15	0.0418	
		14:15	0.0419	
		16:15	0.0415	
137 Pit B	6/6/2022	9:00	0.0411	
		14:00	0.041	
		16:00	0.042	
137 Pit A	6/6/2022	9:20	0.041	
		14:20	0.0417	
		16:20	0.041	
WPR WF5	6/6/2022	9:45	0.0414	
		14:45	0.041	
		16:45	0.0411	

	Name & Designation	Signature	Date
Field Operator:			6/6/2022
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 (%)	
WRP WF4	6/6/2022	9:30	0.0413	
		14:30	0.0416	
		16:30	0.0417	
Pit A	6/6/2022	10:00	0.0417	
		15:00	0.0418	
		17:00	0.0412	
Pit B	6/6/2022	10:15	0.0412	
		15:15	0.0415	
		17:15	0.0417	
Pit D	6/6/2022	10:15	0.042	
		15:15	0.0417	
		17:15	0.0415	

	Name & Designation	Signature	Date
Field Operator:			6/6/2022
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	7/6/2022	8:30	0.0412	
		13:30	0.0413	
		15:30	0.0418	
Area B	7/6/2022	8:45	0.0418	
		13:45	0.041	
		15:45	0.0414	
137 Pit C	7/6/2022	9:15	0.0413	
		14:15	0.0414	
		16:15	0.0413	
137 Pit B	7/6/2022	9:00	0.0419	
		14:00	0.0418	
		16:00	0.0419	
137 Pit A	7/6/2022	9:20	0.0413	
		14:20	0.0416	
		16:20	0.0414	
WPR WF5	7/6/2022	9:45	0.0413	
		14:45	0.0413	
		16:45	0.0419	

	Name & Designation	Signature	Date
Field Operator:			7/6/2022
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 (%)	
WRP WF4	7/6/2022	9:30	0.042	
		14:30	0.0412	
		16:30	0.0416	
Pit A	7/6/2022	10:00	0.041	
		15:00	0.042	
		17:00	0.0411	
Pit B	7/6/2022	10:15	0.0417	
		15:15	0.041	
		17:15	0.0413	
Pit D	7/6/2022	10:15	0.042	
		15:15	0.0415	
		17:15	0.0419	

	Name & Designation	Signature	Date
Field Operator:			7/6/2022
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	8/6/2022	8:30	0.0418	
		13:30	0.0417	
		15:30	0.0416	
Area B	8/6/2022	8:45	0.0419	
		13:45	0.0416	
		15:45	0.0415	
137 Pit C	8/6/2022	9:15	0.0411	
		14:15	0.0411	
		16:15	0.0411	
137 Pit B	8/6/2022	9:00	0.0419	
		14:00	0.0417	
		16:00	0.041	
137 Pit A	8/6/2022	9:20	0.0417	
		14:20	0.0412	
		16:20	0.0411	
WPR WF5	8/6/2022	9:45	0.0412	
		14:45	0.0419	
		16:45	0.0415	

	Name & Designation	Signature	Date
Field Operator:			8/6/2022
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 Carbon Dioxide (%)	Remark
WRP WF4	8/6/2022	9:30	0.0413	
		14:30	0.0415	
		16:30	0.0419	
Pit A	8/6/2022	10:00	0.0418	
		15:00	0.041	
		17:00	0.0419	
Pit B	8/6/2022	10:15	0.0416	
		15:15	0.042	
		17:15	0.0417	
Pit D	8/6/2022	10:15	0.042	
		15:15	0.041	
		17:15	0.0412	

	Name & Designation	Signature	Date
Field Operator:			8/6/2022
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 Carbon Dioxide (%)	Remark
Area A	9/6/2022	8:30	0.0418	
		13:30	0.041	
		15:30	0.0411	
Area B	9/6/2022	8:45	0.0419	
		13:45	0.0414	
		15:45	0.042	
137 Pit C	9/6/2022	9:15	0.042	
		14:15	0.0416	
		16:15	0.0419	
137 Pit B	9/6/2022	9:00	0.0419	
		14:00	0.0416	
		16:00	0.0411	
137 Pit A	9/6/2022	9:20	0.0419	
		14:20	0.0418	
		16:20	0.0414	
WPR WF5	9/6/2022	9:45	0.0413	
		14:45	0.0416	
		16:45	0.0419	

	Name & Designation	Signature	Date
Field Operator:			9/6/2022
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 (%)	
WRP WF4	9/6/2022	9:30	0.0411	
		14:30	0.0412	
		16:30	0.0415	
Pit A	9/6/2022	10:00	0.0412	
		15:00	0.0415	
		17:00	0.0414	
Pit B	9/6/2022	10:15	0.0419	
		15:15	0.042	
		17:15	0.0412	
Pit D	9/6/2022	10:15	0.0419	
		15:15	0.0414	
		17:15	0.0411	

	Name & Designation	Signature	Date
Field Operator:			9/6/2022
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 Carbon Dioxide (%)	Remark
Area A	10/6/2022	8:30	0.041	
		13:30	0.0413	
		15:30	0.0414	
Area B	10/6/2022	8:45	0.041	
		13:45	0.042	
		15:45	0.041	
137 Pit C	10/6/2022	9:15	0.0413	
		14:15	0.0417	
		16:15	0.042	
137 Pit B	10/6/2022	9:00	0.042	
		14:00	0.0412	
		16:00	0.0413	
137 Pit A	10/6/2022	9:20	0.0415	
		14:20	0.0416	
		16:20	0.0414	
WPR WF5	10/6/2022	9:45	0.0412	
		14:45	0.042	
		16:45	0.0418	

	Name & Designation	Signature	Date
Field Operator:			10/6/2022
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 (%)	
WRP WF4	10/6/2022	9:30	0.0414	
		14:30	0.042	
		16:30	0.0418	
Pit A	10/6/2022	10:00	0.0411	
		15:00	0.0413	
		17:00	0.0412	
Pit B	10/6/2022	10:15	0.0413	
		15:15	0.0417	
		17:15	0.0418	
Pit D	10/6/2022	10:15	0.0417	
		15:15	0.0411	
		17:15	0.0416	

	Name & Designation	Signature	Date
Field Operator:			10/6/2022
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 Carbon Dioxide (%)	Remark
Area A	11/6/2022	8:30	0.0416	
		13:30	0.042	
		15:30	0.0415	
Area B	11/6/2022	8:45	0.0412	
		13:45	0.0418	
		15:45	0.0411	
137 Pit C	11/6/2022	9:15	0.042	
		14:15	0.041	
		16:15	0.0414	
137 Pit B	11/6/2022	9:00	0.0412	
		14:00	0.0418	
		16:00	0.0418	
137 Pit A	11/6/2022	9:20	0.0412	
		14:20	0.0413	
		16:20	0.0415	
WPR WF5	11/6/2022	9:45	0.0417	
		14:45	0.0418	
		16:45	0.041	

	Name & Designation	Signature	Date
Field Operator:			11/6/2022
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 Carbon Dioxide (%)	Remark
WRP WF4	11/6/2022	9:30	0.0411	
		14:30	0.0413	
		16:30	0.0419	
Pit A	11/6/2022	10:00	0.042	
		15:00	0.0413	
		17:00	0.0414	
Pit B	11/6/2022	10:15	0.0414	
		15:15	0.0412	
		17:15	0.0413	
Pit D	11/6/2022	10:15	0.041	
		15:15	0.0413	
		17:15	0.0418	

	Name & Designation	Signature	Date
Field Operator:			11/6/2022
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	13/6/2022	8:30	0.0417	
		13:30	0.0411	
		15:30	0.0415	
Area B	13/6/2022	8:45	0.0418	
		13:45	0.0417	
		15:45	0.0417	
137 Pit C	13/6/2022	9:15	0.0417	
		14:15	0.0412	
		16:15	0.0414	
137 Pit B	13/6/2022	9:00	0.041	
		14:00	0.0413	
		16:00	0.0414	
137 Pit A	13/6/2022	9:20	0.0415	
		14:20	0.0414	
		16:20	0.0414	
WPR WF5	13/6/2022	9:45	0.0419	
		14:45	0.0418	
		16:45	0.0416	

	Name & Designation	Signature	Date
Field Operator:			13/6/2022
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 Carbon Dioxide (%)	Remark
WRP WF4	13/6/2022	9:30	0.041	
		14:30	0.0411	
		16:30	0.0419	
Pit A	13/6/2022	10:00	0.0416	
		15:00	0.0412	
		17:00	0.0412	
Pit B	13/6/2022	10:15	0.0411	
		15:15	0.0418	
		17:15	0.0413	
Pit D	13/6/2022	10:15	0.0416	
		15:15	0.0413	
		17:15	0.0411	

	Name & Designation	Signature	Date
Field Operator:			13/6/2022
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 Carbon Dioxide (%)	Remark
Area A	14/6/2022	8:30	0.0416	
		13:30	0.0418	
		15:30	0.0411	
Area B	14/6/2022	8:45	0.0418	
		13:45	0.0413	
		15:45	0.0417	
137 Pit C	14/6/2022	9:15	0.042	
		14:15	0.0414	
		16:15	0.0412	
137 Pit B	14/6/2022	9:00	0.0414	
		14:00	0.0418	
		16:00	0.0414	
137 Pit A	14/6/2022	9:20	0.0414	
		14:20	0.042	
		16:20	0.0416	
WPR WF5	14/6/2022	9:45	0.0413	
		14:45	0.0419	
		16:45	0.0411	

	Name & Designation	Signature	Date
Field Operator:			14/6/2022
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 Carbon Dioxide (%)	Remark
WRP WF4	14/6/2022	9:30	0.0411	
		14:30	0.042	
		16:30	0.0411	
Pit A	14/6/2022	10:00	0.042	
		15:00	0.0413	
		17:00	0.0417	
Pit B	14/6/2022	10:15	0.0415	
		15:15	0.0417	
		17:15	0.0417	
Pit D	14/6/2022	10:15	0.0418	
		15:15	0.042	
		17:15	0.0416	

	Name & Designation	Signature	Date
Field Operator:			14/6/2022
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	15/6/2022	8:30	0.0416	
		13:30	0.0415	
		15:30	0.0416	
Area B	15/6/2022	8:45	0.0411	
		13:45	0.0413	
		15:45	0.0417	
137 Pit C	15/6/2022	9:15	0.042	
		14:15	0.041	
		16:15	0.041	
137 Pit B	15/6/2022	9:00	0.0414	
		14:00	0.0415	
		16:00	0.0419	
137 Pit A	15/6/2022	9:20	0.0412	
		14:20	0.0418	
		16:20	0.041	
WPR WF5	15/6/2022	9:45	0.0417	
		14:45	0.0417	
		16:45	0.0417	

	Name & Designation	Signature	Date
Field Operator:			15/6/2022
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 Carbon Dioxide (%)	Remark
WRP WF4	15/6/2022	9:30	0.0415	
		14:30	0.0415	
		16:30	0.0415	
Pit A	15/6/2022	10:00	0.041	
		15:00	0.042	
		17:00	0.0413	
Pit B	15/6/2022	10:15	0.0414	
		15:15	0.0417	
		17:15	0.0414	
Pit D	15/6/2022	10:15	0.0413	
		15:15	0.0417	
		17:15	0.0414	

	Name & Designation	Signature	Date
Field Operator:			15/6/2022
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 Carbon Dioxide (%)	Remark
Area A	16/6/2022	8:30	0.0411	
		13:30	0.041	
		15:30	0.042	
Area B	16/6/2022	8:45	0.0411	
		13:45	0.0419	
		15:45	0.0419	
137 Pit C	16/6/2022	9:15	0.0415	
		14:15	0.0416	
		16:15	0.0419	
137 Pit B	16/6/2022	9:00	0.0412	
		14:00	0.0411	
		16:00	0.0412	
137 Pit A	16/6/2022	9:20	0.0417	
		14:20	0.0416	
		16:20	0.0414	
WPR WF5	16/6/2022	9:45	0.0412	
		14:45	0.0417	
		16:45	0.0419	

	Name & Designation	Signature	Date
Field Operator:			16/6/2022
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 Carbon Dioxide (%)	Remark
WRP WF4	16/6/2022	9:30	0.0418	
		14:30	0.0415	
		16:30	0.0416	
Pit A	16/6/2022	10:00	0.0416	
		15:00	0.0414	
		17:00	0.0416	
Pit B	16/6/2022	10:15	0.0413	
		15:15	0.0411	
		17:15	0.0413	
Pit D	16/6/2022	10:15	0.0416	
		15:15	0.0418	
		17:15	0.0412	

	Name & Designation	Signature	Date
Field Operator:			16/6/2022
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 Carbon Dioxide (%)	Remark
Area A	17/6/2022	8:30	0.0413	
		13:30	0.0417	
		15:30	0.0412	
Area B	17/6/2022	8:45	0.0419	
		13:45	0.0411	
		15:45	0.041	
137 Pit C	17/6/2022	9:15	0.0414	
		14:15	0.0412	
		16:15	0.0414	
137 Pit B	17/6/2022	9:00	0.0413	
		14:00	0.0419	
		16:00	0.041	
137 Pit A	17/6/2022	9:20	0.0414	
		14:20	0.0416	
		16:20	0.0416	
WPR WF5	17/6/2022	9:45	0.041	
		14:45	0.0417	
		16:45	0.041	

	Name & Designation	Signature	Date
Field Operator:			17/6/2022
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 Carbon Dioxide (%)	Remark
WRP WF4	17/6/2022	9:30	0.042	
		14:30	0.0416	
		16:30	0.0411	
Pit A	17/6/2022	10:00	0.0417	
		15:00	0.0412	
		17:00	0.0416	
Pit B	17/6/2022	10:15	0.0411	
		15:15	0.0418	
		17:15	0.0414	
Pit D	17/6/2022	10:15	0.0413	
		15:15	0.0417	
		17:15	0.0415	

	Name & Designation	Signature	Date
Field Operator:			17/6/2022
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 Carbon Dioxide (%)	Remark
Area A	18/6/2022	8:30	0.0414	
		13:30	0.0413	
		15:30	0.0419	
Area B	18/6/2022	8:45	0.041	
		13:45	0.0415	
		15:45	0.042	
137 Pit C	18/6/2022	9:15	0.0415	
		14:15	0.0414	
		16:15	0.0414	
137 Pit B	18/6/2022	9:00	0.0414	
		14:00	0.0412	
		16:00	0.0415	
137 Pit A	18/6/2022	9:20	0.041	
		14:20	0.042	
		16:20	0.0419	
WPR WF5	18/6/2022	9:45	0.0417	
		14:45	0.0414	
		16:45	0.0419	

	Name & Designation	Signature	Date
Field Operator:			18/6/2022
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 (%)	
WRP WF4	18/6/2022	9:30	0.0417	
		14:30	0.0412	
		16:30	0.042	
Pit A	18/6/2022	10:00	0.0418	
		15:00	0.0411	
		17:00	0.0413	
Pit B	18/6/2022	10:15	0.041	
		15:15	0.041	
		17:15	0.042	
Pit D	18/6/2022	10:15	0.0413	
		15:15	0.0416	
		17:15	0.0415	

	Name & Designation	Signature	Date
Field Operator:			18/6/2022
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 Carbon Dioxide (%)	Remark
Area A	20/6/2022	8:30	0.0416	
		13:30	0.0418	
		15:30	0.0416	
Area B	20/6/2022	8:45	0.042	
		13:45	0.0411	
		15:45	0.042	
137 Pit C	20/6/2022	9:15	0.0412	
		14:15	0.0411	
		16:15	0.0414	
137 Pit B	20/6/2022	9:00	0.0414	
		14:00	0.0411	
		16:00	0.0413	
137 Pit A	20/6/2022	9:20	0.0412	
		14:20	0.0417	
		16:20	0.0413	
WPR WF5	20/6/2022	9:45	0.0419	
		14:45	0.0417	
		16:45	0.0419	

	Name & Designation	Signature	Date
Field Operator:			20/6/2022
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 (%)	
WRP WF4	20/6/2022	9:30	0.0417	
		14:30	0.0418	
		16:30	0.0413	
Pit A	20/6/2022	10:00	0.041	
		15:00	0.0414	
		17:00	0.0413	
Pit B	20/6/2022	10:15	0.041	
		15:15	0.0415	
		17:15	0.0413	
Pit D	20/6/2022	10:15	0.0412	
		15:15	0.041	
		17:15	0.041	

	Name & Designation	Signature	Date
Field Operator:			20/6/2022
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 Carbon Dioxide (%)	Remark
Area A	21/6/2022	8:30	0.0417	
		13:30	0.0416	
		15:30	0.0415	
Area B	21/6/2022	8:45	0.0418	
		13:45	0.0416	
		15:45	0.0419	
137 Pit C	21/6/2022	9:15	0.042	
		14:15	0.0413	
		16:15	0.0415	
137 Pit B	21/6/2022	9:00	0.0415	
		14:00	0.0411	
		16:00	0.0412	
137 Pit A	21/6/2022	9:20	0.041	
		14:20	0.0414	
		16:20	0.0413	
WPR WF5	21/6/2022	9:45	0.0416	
		14:45	0.042	
		16:45	0.0415	

	Name & Designation	Signature	Date
Field Operator:			21/6/2022
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 (%)	
WRP WF4	21/6/2022	9:30	0.0417	
		14:30	0.0411	
		16:30	0.0412	
Pit A	21/6/2022	10:00	0.0414	
		15:00	0.042	
		17:00	0.0418	
Pit B	21/6/2022	10:15	0.042	
		15:15	0.0414	
		17:15	0.0418	
Pit D	21/6/2022	10:15	0.0415	
		15:15	0.0418	
		17:15	0.0412	

	Name & Designation	Signature	Date
Field Operator:			21/6/2022
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 Carbon Dioxide (%)	Remark
Area A	22/6/2022	8:30	0.042	
		13:30	0.0412	
		15:30	0.0419	
Area B	22/6/2022	8:45	0.0414	
		13:45	0.0419	
		15:45	0.0411	
137 Pit C	22/6/2022	9:15	0.0417	
		14:15	0.0412	
		16:15	0.0414	
137 Pit B	22/6/2022	9:00	0.0414	
		14:00	0.0412	
		16:00	0.0413	
137 Pit A	22/6/2022	9:20	0.0411	
		14:20	0.0413	
		16:20	0.0415	
WPR WF5	22/6/2022	9:45	0.041	
		14:45	0.0411	
		16:45	0.0417	

	Name & Designation	Signature	Date
Field Operator:			22/6/2022
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 (%)	
WRP WF4	22/6/2022	9:30	0.0416	
		14:30	0.0415	
		16:30	0.0419	
Pit A	22/6/2022	10:00	0.0412	
		15:00	0.0418	
		17:00	0.0416	
Pit B	22/6/2022	10:15	0.0416	
		15:15	0.0411	
		17:15	0.0411	
Pit D	22/6/2022	10:15	0.0414	
		15:15	0.0416	
		17:15	0.0414	

	Name & Designation	Signature	Date
Field Operator:			22/6/2022
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 Carbon Dioxide (%)	Remark
Area A	23/6/2022	8:30	0.0418	
		13:30	0.0414	
		15:30	0.0418	
Area B	23/6/2022	8:45	0.0417	
		13:45	0.042	
		15:45	0.0413	
137 Pit C	23/6/2022	9:15	0.0413	
		14:15	0.0416	
		16:15	0.0412	
137 Pit B	23/6/2022	9:00	0.0411	
		14:00	0.0418	
		16:00	0.041	
137 Pit A	23/6/2022	9:20	0.0417	
		14:20	0.0416	
		16:20	0.0411	
WPR WF5	23/6/2022	9:45	0.0419	
		14:45	0.042	
		16:45	0.0417	

	Name & Designation	Signature	Date
Field Operator:			23/6/2022
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 Carbon Dioxide (%)	Remark
WRP WF4	23/6/2022	9:30	0.0416	
		14:30	0.0419	
		16:30	0.0417	
Pit A	23/6/2022	10:00	0.0414	
		15:00	0.0411	
		17:00	0.0413	
Pit B	23/6/2022	10:15	0.0413	
		15:15	0.0415	
		17:15	0.0413	
Pit D	23/6/2022	10:15	0.0414	
		15:15	0.0418	
		17:15	0.0416	

	Name & Designation	Signature	Date
Field Operator:			23/6/2022
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 Carbon Dioxide (%)	Remark
Area A	24/6/2022	8:30	0.041	
		13:30	0.0412	
		15:30	0.0417	
Area B	24/6/2022	8:45	0.0415	
		13:45	0.0416	
		15:45	0.0412	
137 Pit C	24/6/2022	9:15	0.0413	
		14:15	0.0416	
		16:15	0.0417	
137 Pit B	24/6/2022	9:00	0.0419	
		14:00	0.0414	
		16:00	0.041	
137 Pit A	24/6/2022	9:20	0.0418	
		14:20	0.042	
		16:20	0.0414	
WPR WF5	24/6/2022	9:45	0.0411	
		14:45	0.041	
		16:45	0.0415	

	Name & Designation	Signature	Date
Field Operator:			24/6/2022
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 (%)	
WRP WF4	24/6/2022	9:30	0.0413	
		14:30	0.0413	
		16:30	0.0412	
Pit A	24/6/2022	10:00	0.0418	
		15:00	0.0416	
		17:00	0.0415	
Pit B	24/6/2022	10:15	0.0412	
		15:15	0.042	
		17:15	0.0418	
Pit D	24/6/2022	10:15	0.0415	
		15:15	0.0412	
		17:15	0.0412	

	Name & Designation	Signature	Date
Field Operator:			24/6/2022
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 Carbon Dioxide (%)	Remark
Area A	25/6/2022	8:30	0.041	
		13:30	0.042	
		15:30	0.0419	
Area B	25/6/2022	8:45	0.0418	
		13:45	0.042	
		15:45	0.0419	
137 Pit C	25/6/2022	9:15	0.0413	
		14:15	0.0417	
		16:15	0.0419	
137 Pit B	25/6/2022	9:00	0.0417	
		14:00	0.0414	
		16:00	0.0416	
137 Pit A	25/6/2022	9:20	0.042	
		14:20	0.0414	
		16:20	0.0416	
WPR WF5	25/6/2022	9:45	0.0418	
		14:45	0.042	
		16:45	0.0419	

	Name & Designation	Signature	Date
Field Operator:			25/6/2022
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 Carbon Dioxide (%)	Remark
WRP WF4	25/6/2022	9:30	0.042	
		14:30	0.0415	
		16:30	0.0412	
Pit A	25/6/2022	10:00	0.0417	
		15:00	0.0412	
		17:00	0.042	
Pit B	25/6/2022	10:15	0.041	
		15:15	0.041	
		17:15	0.0416	
Pit D	25/6/2022	10:15	0.0417	
		15:15	0.042	
		17:15	0.0417	

	Name & Designation	Signature	Date
Field Operator:			25/6/2022
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 Carbon Dioxide (%)	Remark
Area A	27/6/2022	8:30	0.041	
		13:30	0.042	
		15:30	0.0412	
Area B	27/6/2022	8:45	0.0416	
		13:45	0.0419	
		15:45	0.0419	
137 Pit C	27/6/2022	9:15	0.0419	
		14:15	0.041	
		16:15	0.0412	
137 Pit B	27/6/2022	9:00	0.0413	
		14:00	0.0418	
		16:00	0.0411	
137 Pit A	27/6/2022	9:20	0.0414	
		14:20	0.0411	
		16:20	0.0416	
WPR WF5	27/6/2022	9:45	0.0417	
		14:45	0.0411	
		16:45	0.0412	

	Name & Designation	Signature	Date
Field Operator:			27/6/2022
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 (%)	
WRP WF4	27/6/2022	9:30	0.0419	
		14:30	0.0418	
		16:30	0.0411	
Pit A	27/6/2022	10:00	0.042	
		15:00	0.0419	
		17:00	0.0415	
Pit B	27/6/2022	10:15	0.0411	
		15:15	0.0413	
		17:15	0.0415	
Pit D	27/6/2022	10:15	0.0414	
		15:15	0.0413	
		17:15	0.0411	

	Name & Designation	Signature	Date
Field Operator:			27/6/2022
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 Carbon Dioxide (%)	Remark
Area A	28/6/2022	8:30	0.0416	
		13:30	0.0417	
		15:30	0.0414	
Area B	28/6/2022	8:45	0.041	
		13:45	0.0416	
		15:45	0.041	
137 Pit C	28/6/2022	9:15	0.0414	
		14:15	0.0417	
		16:15	0.0413	
137 Pit B	28/6/2022	9:00	0.0417	
		14:00	0.0415	
		16:00	0.0417	
137 Pit A	28/6/2022	9:20	0.0414	
		14:20	0.041	
		16:20	0.0411	
WPR WF5	28/6/2022	9:45	0.042	
		14:45	0.041	
		16:45	0.0416	

	Name & Designation	Signature	Date
Field Operator:			28/6/2022
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 Carbon Dioxide (%)	Remark
WRP WF4	28/6/2022	9:30	0.0411	
		14:30	0.0418	
		16:30	0.0414	
Pit A	28/6/2022	10:00	0.0412	
		15:00	0.0413	
		17:00	0.0411	
Pit B	28/6/2022	10:15	0.0416	
		15:15	0.0415	
		17:15	0.0418	
Pit D	28/6/2022	10:15	0.0413	
		15:15	0.0413	
		17:15	0.0417	

	Name & Designation	Signature	Date
Field Operator:			28/6/2022
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 Carbon Dioxide (%)	Remark
Area A	29/6/2022	8:30	0.0414	
		13:30	0.0415	
		15:30	0.041	
Area B	29/6/2022	8:45	0.0413	
		13:45	0.0413	
		15:45	0.0416	
137 Pit C	29/6/2022	9:15	0.0417	
		14:15	0.0419	
		16:15	0.0417	
137 Pit B	29/6/2022	9:00	0.0411	
		14:00	0.042	
		16:00	0.0418	
137 Pit A	29/6/2022	9:20	0.0415	
		14:20	0.042	
		16:20	0.0419	
WPR WF5	29/6/2022	9:45	0.0415	
		14:45	0.0415	
		16:45	0.042	

	Name & Designation	Signature	Date
Field Operator:			29/6/2022
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 (%)	
WRP WF4	29/6/2022	9:30	0.0413	
		14:30	0.0414	
		16:30	0.0419	
Pit A	29/6/2022	10:00	0.0412	
		15:00	0.0414	
		17:00	0.0413	
Pit B	29/6/2022	10:15	0.0418	
		15:15	0.0413	
		17:15	0.0418	
Pit D	29/6/2022	10:15	0.0414	
		15:15	0.041	
		17:15	0.041	

	Name & Designation	Signature	Date
Field Operator:			29/6/2022
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 Carbon Dioxide (%)	Remark
Area A	30/6/2022	8:30	0.0415	
		13:30	0.0416	
		15:30	0.0411	
Area B	30/6/2022	8:45	0.0417	
		13:45	0.042	
		15:45	0.0412	
137 Pit C	30/6/2022	9:15	0.0413	
		14:15	0.0412	
		16:15	0.041	
137 Pit B	30/6/2022	9:00	0.0415	
		14:00	0.0416	
		16:00	0.042	
137 Pit A	30/6/2022	9:20	0.0417	
		14:20	0.0418	
		16:20	0.0417	
WPR WF5	30/6/2022	9:45	0.042	
		14:45	0.041	
		16:45	0.0412	

	Name & Designation	Signature	Date
Field Operator:			30/6/2022
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 Carbon Dioxide (%)	Remark
WRP WF4	30/6/2022	9:30	0.041	
		14:30	0.0411	
		16:30	0.0419	
Pit A	30/6/2022	10:00	0.0416	
		15:00	0.0413	
		17:00	0.0414	
Pit B	30/6/2022	10:15	0.0412	
		15:15	0.0417	
		17:15	0.0416	
Pit D	30/6/2022	10:15	0.0413	
		15:15	0.041	
		17:15	0.0419	

	Name & Designation	Signature	Date
Field Operator:			30/6/2022
Laboratory Staff:			
Checked by:			

Appendix K

Complaint Log and Regulatory Compliance Proforma

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Table K-1 Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 – 30 June 2022	0	3	N/A

Table K-2 Statistical Summary of Environmental Summons

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

Table K-3 Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
1 – 30 June 2022	0	0	N/A

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Appendix L

Site Inspection Proforma

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

WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

Inspection Date: 1/6/2022 **Inspected by:** ET: Howard Chan Contractor: Sam Ng WSD: K.F. Tsang IEC:

Inspection Time: 09:30 - 10:00

Weather							
Condition	☑ Sunny	☐ Fine	☐ Overcast	☐ Drizzle	☐ Rain	☐ Storm	☐ Hazy
Temperature	30 °C		**Humidity**	☐ High	☑ Moderate	☐ Low	
Wind	☑ Calm	☐ Light	☐ Breeze	☐ 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?	☐	☑	☐	
0.02	Is ET Leader's log-book kept readily available for inspections?	☐	☑	☐	
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?	☐	☑	☐	Reminder 1
1.02	Are screenings, enclosures, water spraying or vacuum cleaning devices provided to dusty construction works for dust suppression?	☑	☑	☐	Reminder 2
1.03	Are fumes or smoke emitting plants or construction activities shielded by a screen?	☑	☐	☐	
1.04	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	☑	☐	☐	
1.05	Is wheel-washing provided to all vehicles leaving the site?	☑	☐	☐	
1.06	Are road section near the site exit free from dusty material?	☐	☑	☐	
1.07	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	☑	☐	☐	
1.08	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	☑	☐	☐	
1.09	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	☑	☐	☐	
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?	☑	☐	☐	
1.11	Is exposed earth properly treated within six months after the last construction activity on site?	☑	☐	☐	
1.12	Does the operation of plants on site free form dark smoke emission?	☐	☑	☐	
1.13	Are vehicles travelling at speed not exceeding 15km/hr within the site?	☑	☐	☐	
1.14	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top and 3 sides?	☑	☐	☐	

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

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

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

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

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

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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:

Remarks.

1. Stockpile of dusty materials should be covered properly to prevent dust emission/generation. (Area A)

2. Contractor was reminded to ~~place~~ provide dust screen ~~screen~~ materials at the site boundary. (Pit E)

3. General refuse should be disposed of properly (COVID-19 Test Kit) at Pit E.

Signatures:

ET Representative	Contractor's Representative	WSD's Representative	IEC's Representative
(Name: Howard Chan)	(Name: Sam Ng.)	(Name: TSANG Kin Fai)	(Name:)

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

9/6/2022 WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

Inspection Date: ~~[illegible]~~ **Inspected by:** ET: Howard Chan WSD: A.W. Tak
Contractor: Sam Ng IEC:
Inspection Time: 10:30 - 11:30

Weather							
Condition	☐ Sunny	☐ Fine	☐ Overcast	☐ Drizzle	☑ Rain	☐ Storm	☐ Hazy
Temperature	26 °C		**Humidity**	☑ High	☐ Moderate	☐ Low	
Wind	☐ Calm	☑ Light	☐ Breeze	☐ 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?	☐	☑	☐	
0.02	Is ET Leader's log-book kept readily available for inspections?	☐	☑	☐	
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?	☑	☐	☐	
1.02	Are screenings, enclosures, water spraying or vacuum cleaning devices provided to dusty construction works for dust suppression?	☑	☐	☐	
1.03	Are fumes or smoke emitting plants or construction activities shielded by a screen?	☐	☑	☐	
1.04	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	☑	☐	☐	
1.05	Is wheel-washing provided to all vehicles leaving the site?	☑	☐	☐	
1.06	Are road section near the site exit free from dusty material?	☐	☑	☐	
1.07	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	☑	☐	☐	
1.08	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	☑	☐	☐	
1.09	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	☑	☐	☐	
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?	☑	☐	☐	
1.11	Is exposed earth properly treated within six months after the last construction activity on site?	☑	☐	☐	
1.12	Does the operation of plants on site free form dark smoke emission?	☐	☑	☐	
1.13	Are vehicles travelling at speed not exceeding 15km/hr within the site?	☑	☐	☐	
1.14	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top and 3 sides?	☑	☐	☐	

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

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

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

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

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		N/A	Yes	No	Photo/Remarks
4.06	Are all containers for chemical waste properly labelled?		✓		
4.07	Is drip tray provided for chemical storage?				Obs 1
4.08	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?		✓		
4.09	Are incompatible chemical wastes stored in different areas?	✓			
4.10	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?				Obs 2
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?		✓		
4.12	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	✓			
4.13	Are sufficient general refuse disposal/collection points provided on site?		✓		
4.14	Is general refuse disposed of properly and regularly?		✓		
4.15	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?		✓		
4.16	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?		✓		
4.17	Are C&D wastes sorted on site?		✓		
4.18	Are C&D waste disposed of properly?		✓		Reminder 1
4.19	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	✓			
4.20	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?		✓		
4.21	Are the construction materials stored properly to minimize the potential for damage or contamination?	✓			
4.22	Is a dumping license obtained to deliver public fill to public filling areas?		✓		
5.00	**Landscape and Visual**				
5.01	Are Is site hoarding provided?	✓			
5.02	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?		✓		
5.03	Is construction light oriented away from the sensitive receivers?	✓			
5.04	Is grass hydroseeding provided to slopes as soon as the completion of works?	✓			

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

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

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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 Park Pit 0)
2. ~~Ep~~ Empty chemical container should be stored at a designated area ~~and~~ (HK Velodrome Park Pit 0)

Reminder:

1. Construction materials should be disposed of properly. (HK Velodrome Park Pit ~~4~~ N)

Signatures:

ET Representative	Contractor's Representative	WSD's Representative	IEC's Representative
(Name: Howard Chan)	(Name: Sam Ng.)	(Name: Au Wai Mk)	(Name:)

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

WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

Inspection Date: ~~16~~ 17 - 6 - 2022 **Inspected by:** ET: Howard Chan Contractor: Sam Ng WSD: K.F. Tsang IEC:

Inspection Time: 15:30 - 16:30

Weather							
Condition	☐ Sunny	☑ Fine	☐ Overcast	☐ Drizzle	☐ Rain	☐ Storm	☐ Hazy
Temperature	30 °C		**Humidity**	☑ High	☐ Moderate	☐ Low	
Wind	☐ Calm	☑ Light	☐ Breeze	☐ 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?	☐	☑	☐	
0.02	Is ET Leader's log-book kept readily available for inspections?	☐	☑	☐	
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?	☑	☐	☐	
1.02	Are screenings, enclosures, water spraying or vacuum cleaning devices provided to dusty construction works for dust suppression?	☑	☐	☐	
1.03	Are fumes or smoke emitting plants or construction activities shielded by a screen?	☐	☑	☐	
1.04	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	☑	☐	☐	
1.05	Is wheel-washing provided to all vehicles leaving the site?	☑	☐	☐	
1.06	Are road section near the site exit free from dusty material?	☐	☑	☐	
1.07	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	☑	☐	☐	
1.08	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	☑	☐	☐	
1.09	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	☑	☐	☐	
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?	☑	☐	☐	
1.11	Is exposed earth properly treated within six months after the last construction activity on site?	☑	☐	☐	
1.12	Does the operation of plants on site free form dark smoke emission?	☐	☑	☐	
1.13	Are vehicles travelling at speed not exceeding 15km/hr within the site?	☑	☐	☐	
1.14	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top and 3 sides?	☑	☐	☐	

Acuity Sustainability Consulting Limited
Unit C, 11/F., Ford Glory Plaza, No. 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon
T: 2333-6823 | F: 2333-1316 | E: genera@acuityhk.com | www.acuityhk.com

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

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

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

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

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

		N/A	Yes	No	Photo/Remarks
4.06	Are all containers for chemical waste properly labelled?		✓		
4.07	Is drip tray provided for chemical storage?				bbs 1
4.08	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?		✓		
4.09	Are incompatible chemical wastes stored in different areas?	✓			
4.10	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?		✓		
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?		✓		
4.12	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	✓			
4.13	Are sufficient general refuse disposal/collection points provided on site?		✓		
4.14	Is general refuse disposed of properly and regularly?		✓		
4.15	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?		✓		
4.16	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?		✓		
4.17	Are C&D wastes sorted on site?		✓		
4.18	Are C&D waste disposed of properly?		✓		
4.19	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	✓			
4.20	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?	✓			
4.21	Are the construction materials stored properly to minimize the potential for damage or contamination?		✓		
4.22	Is a dumping license obtained to deliver public fill to public filling areas?		✓		
5.00	**Landscape and Visual**				
5.01	Are Is site hoarding provided?	✓			
5.02	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	✓			
5.03	Is construction light oriented away from the sensitive receivers?	✓			
5.04	Is grass hydroseeding provided to slopes as soon as the completion of works?	✓			

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

		N/A	Yes	No	Photo/Remarks
5.05	Are damages to trees outside site boundary due construction works avoided?		✓		
5.06	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	✓			
5.07	Are the retained and transplanted tree(s) properly protected and in good conditions?		✓		Reminder 2
5.08	Are surgery works carried out for damaged trees?	✓			
6.00	**Ecology**				
6.01	Is site runoff properly treated to prevent any silly runoff?		✓		
6.02	Are silt trap installed and well-maintained?	✓			
6.03	Are stockpiles properly covered to avoid generating silty runoff?	✓			
6.04	Are construction works restricted to works area which are clearly defined?		✓		
7.00	**Overall**				
7.01	Is the EM&A properly implemented in general?		✓		

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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 Park Pt 0)

Remender:

1. ~~Strag~~ Stagnant water should be cleaned after rainfall. (HK Velodrome Park Pt M)
2. Avoid stockpile construction materials ~~neare~~ near the ~~rent~~ retained trees. (HK Velodrome Park Pt N)

Signatures:

ET Representative	Contractor's Representative	WSD's Representative	IEC's Representative
(Name: Howard Chan)	(Name: Sam Ng.)	(Name: TANG Kin Fai)	(Name:)

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

WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

Inspection Date: 24/6/2022 **Inspected by:** ET: Howard Chan WSD: W.T. Au
Inspection Time: 09:30 - 11:00 Contractor: Sin Ng IEC:

Weather							
Condition	☑ Sunny	☐ Fine	☐ Overcast	☐ Drizzle	☐ Rain	☐ Storm	☐ Hazy
Temperature	31 C		**Humidity**	☐ High	☑ Moderate	☐ Low	
Wind	☑ Calm	☐ Light	☐ Breeze	☐ 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?	☐	☑	☐	
0.02	Is ET Leader's log-book kept readily available for inspections?	☐	☑	☐	
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?	☑	☐	☐	
1.02	Are screenings, enclosures, water spraying or vacuum cleaning devices provided to dusty construction works for dust suppression?	☑	☐	☐	
1.03	Are fumes or smoke emitting plants or construction activities shielded by a screen?	☐	☑	☐	
1.04	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	☑	☐	☐	
1.05	Is wheel-washing provided to all vehicles leaving the site?	☑	☐	☐	
1.06	Are road section near the site exit free from dusty material?	☐	☑	☐	
1.07	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	☑	☐	☐	
1.08	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	☑	☐	☐	
1.09	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	☑	☐	☐	
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?	☑	☐	☐	
1.11	Is exposed earth properly treated within six months after the last construction activity on site?	☑	☐	☐	
1.12	Does the operation of plants on site free form dark smoke emission?	☐	☑	☐	
1.13	Are vehicles travelling at speed not exceeding 15km/hr within the site?	☑	☐	☐	
1.14	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top and 3 sides?	☑	☐	☐	

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

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

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		N/A	Yes	No	Photo/Remarks
4.06	Are all containers for chemical waste properly labelled?		✓		
4.07	Is drip tray provided for chemical storage?		✓		
4.08	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?		✓		
4.09	Are incompatible chemical wastes stored in different areas?	✓			
4.10	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?		✓		
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?		✓		
4.12	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?	✓			
4.13	Are sufficient general refuse disposal/collection points provided on site?		✓		
4.14	Is general refuse disposed of properly and regularly?		✓		
4.15	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?		✓		
4.16	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?		✓		
4.17	Are C&D wastes sorted on site?		✓		
4.18	Are C&D waste disposed of properly?		✓		Reminder 1
4.19	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	✓			
4.20	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?	✓			
4.21	Are the construction materials stored properly to minimize the potential for damage or contamination?		✓		
4.22	Is a dumping license obtained to deliver public fill to public filling areas?		✓		
5.00	**Landscape and Visual**				
5.01	Are Is site hoarding provided?	✓			
5.02	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	✓			
5.03	Is construction light oriented away from the sensitive receivers?	✓			
5.04	Is grass hydroseeding provided to slopes as soon as the completion of works?	✓			

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

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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. General housekeeping was reminded. (Control Site 08)

Signatures:

ET Representative	Contractor's Representative	WSD's Representative	IEC's Representative
(Name: Howard Chan)	(Name: Sam Ng)	(Name: Au Wai Ah)	(Name:)

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

WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

Inspection Date: 27/6/2022 **Inspected by:** ET: Howard Chan WSD: Alex Wan
Contractor: Sam Ng IEC: Louis Kwan
Inspection Time: 14:00 - 14:45

Weather							
Condition	☑ Sunny	☐ Fine	☐ Overcast	☐ Drizzle	☐ Rain	☐ Storm	☐ Hazy
Temperature	33 °C		**Humidity**	☐ High	☑ Moderate	☐ Low	
Wind	☑ Calm	☐ Light	☐ Breeze	☐ 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?	☐	☑	☐	
0.02	Is ET Leader's log-book kept readily available for inspections?	☐	☑	☐	
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?	☐	☑	☐	Reminder 2
1.02	Are screenings, enclosures, water spraying or vacuum cleaning devices provided to dusty construction works for dust suppression?	☑	☐	☐	
1.03	Are fumes or smoke emitting plants or construction activities shielded by a screen?	☑	☐	☐	
1.04	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	☐	☑	☐	
1.05	Is wheel-washing provided to all vehicles leaving the site?	☐	☑	☐	
1.06	Are road section near the site exit free from dusty material?	☐	☑	☐	
1.07	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	☑	☐	☐	
1.08	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	☑	☐	☐	
1.09	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	☐	☑	☐	
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?	☑	☐	☐	
1.11	Is exposed earth properly treated within six months after the last construction activity on site?	☑	☐	☐	
1.12	Does the operation of plants on site free form dark smoke emission?	☐	☑	☐	
1.13	Are vehicles travelling at speed not exceeding 15km/hr within the site?	☐	☑	☐	
1.14	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top and 3 sides?	☑	☐	☐	

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

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

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

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

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		N/A	Yes	No	Photo/Remarks
5.05	Are damages to trees outside site boundary due construction works avoided?		✓		
5.06	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?	✓			
5.07	Are the retained and transplanted tree(s) properly protected and in good conditions?		✓		Reminder 1
5.08	Are surgery works carried out for damaged trees?	✓			
6.00	**Ecology**				
6.01	Is site runoff properly treated to prevent any silly runoff?		✓		
6.02	Are silt trap installed and well-maintained?	✓			
6.03	Are stockpiles properly covered to avoid generating silty runoff?	✓			
6.04	Are construction works restricted to works area which are clearly defined?		✓		
7.00	**Overall**				
7.01	Is the EM&A properly implemented in general?		✓		

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

Reminder:

1. Contractor was reminded to establish tree protect zone for the retained trees at location B.

2. Contractor was reminded to spray water at the exposed surface to minimize dust emission at TKO Primary Fresh Water Service Reservoir.

Signatures:

ET Representative	Contractor's Representative	WSD's Representative	IEC's Representative
(Name: Howard Chan)	(Name: Sam Ng)	(Name: Alex KWAN)	(Name: Louis Kwan)

Appendix M

Proactive Environmental Protection Proforma

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Proactive Environmental Protection for the Next Reporting Month

Reporting Period	Activity	Major Environmental Impact	Environmental Mitigation Measure
1 – 31 July 2022	- Excavation of trench - Mainlaying of pipe - Backfilling of the trench - Work fronts for open trench - Work fronts for pipe jacking	- Construction dust - Noise generation; - Construction waste - Impact of water quality	- 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

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Appendix N

Impact Monitoring Schedule of Next Reporting Month

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

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

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

Appendix O

Academic Calendar (s)

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CREATIVE SECONDARY SCHOOL CALENDAR 2021-2022

	Su	Mo	Tu	We	Th	Fr	Sa	
August	15	16	17	18	19	20	21	19-20 Orientation Day
	22	23	24	25	26	27	28	23/08 First School Day
	29	30	31					
September				1	2	3	4	
	5	6	7	8	9	10	11	
	12	13	14	15	16	17	18	17/9 Swimming Gala
	19	20	21	22	23	24	25	22/9 The following Day of Mid-Autumn Festival
	26	27	28	29	30			25/9 School Open Day 30/9 1st PD day
October						1	2	1/10 National Day of the People's Republic of China
	3	4	5	6	7	8	9	
	10	11	12	13	14	15	16	14/10 Chung Yeung Festival
	17	18	19	20	21	22	23	15-23/10 Term break
	24	25	26	27	28	29	30	
	31							
November		1	2	3	4	5	6	4/11 University Fair
	7	8	9	10	11	12	13	
	14	15	16	17	18	19	20	15/11 2nd PD Day, 19/11 Sports Day
	21	22	23	24	25	26	27	
	28	29	30					
December				1	2	3	4	
	5	6	7	8	9	10	11	11/12 Musical Performance
	12	13	14	15	16	17	18	17/12 Creative Christmas Festival
	19	20	21	22	23	24	25	25/12 Christmas Holiday. 20/12-3/1 Christmas & New Year Holiday
	26	27	28	29	30	31		27/12 The first weekday after Christmas Day
January							1	1/1 New Year's Day
	2	3	4	5	6	7	8	
	9	10	11	12	13	14	15	
	16	17	18	19	20	21	22	
	23	24	25	26	27	28	29	28/1 Creative Chinese Festival
	30	31						
February			1	2	3	4	5	1-3/2 Chinese Lunar New Year
	6	7	8	9	10	11	12	31/1-9/2 Chinese Lunar New Year Holiday
	13	14	15	16	17	18	19	
	20	21	22	23	24	25	26	
	27	28						
March			1	2	3	4	5	
	6	7	8	9	10	11	12	
	13	14	15	16	17	18	19	12-19/3 Creative Week
	20	21	22	23	24	25	26	
	27	28	29	30	31			
April						1	2	
	3	4	5	6	7	8	9	5/4 Ching Ming Festival
	10	11	12	13	14	15	16	15/4 Good Friday. 16/4 Holy Saturday
	17	18	19	20	21	22	23	18/4 Easter Monday.15/4-22/4 Easter Holiday.
	24	25	26	27	28	29	30	25/4-03/05 HKDSE Core subjects Exam
May	1	2	3	4	5	6	7	2/5 Labour Day
	8	9	10	11	12	13	14	9/5 Buddha's Birthday
	15	16	17	18	19	20	21	
	22	23	24	25	26	27	28	25/5 School Self-Evaluation Day.
	29	30	31					
				1	2	3	4	3/6 Tuen Ng Festival. 2/6 Graduation
June	5	6	7	8	9	10	11	
	12	13	14	15	16	17	18	
	19	20	21	22	23	24	25	
	26	27	28	29	30			30/6 Achievement Celebration
						1	2	01/07 HKSAR Establishment Day
July	3	4	5	6	7	8	9	4/7-14/8 Summer Holiday
	10	11	12	13	14	15	16	
	17	18	19	20	21	22	23	
	24	25	26	27	28	29	30	
	31							
August		1	2	3	4	5	6	
	7	8	9	10	11	12	13	12/08 New Staff Meeting
	14	15	16	17	18	19	20	16-17/08 Staff Meeting
	21	22	23	24	25	26	27	
	28	30	31					

School Holiday

Public Holiday

Staff Development Day