

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

Our reference: HKWSD201/50/106712

Date: 19 August 2020

Attention: Mr Y M Chan

BY POST

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.24

We refer to email of 17 August 2020 attaching Monthly EM&A Report No.24 for the captioned project prepared by the ET.

We have no comment and hereby verify the Monthly EM&A Report No.24 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 Francis Lau on 2618 2831.

Yours faithfully ANEWR CONSULTING LIMITED

James Choi Independent Environmental Checker

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Contract No. 13/WSD/16

Mainlaying in Tseung Kwan O

Monthly EM&A Report No. 24 (Period from 1 to 31 July 2020)

August 2020 (Rev. 0)

	Prepared by: Certified by:	
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Date:	17/08/2020	17/08/2020



Revision History

0	1 st Submission	17 Aug 2020
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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 24th 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 July 2020 to 31 July 2020.
- 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 Conducted in the reporting month		
Portion H of the Project Site	 Pipes had been laid from CH.CA4+24 to CH.CA 0+01 & CH.CT0+07~CH.CT2+64. Rebar fixing for wall and top slab of DN900 HSV chamber at CH.CA4+30 was in-progress. Construction of washout chamber and DAV/IT combined chamber was in-progress at CH.KT2+30 and CH.KT2+47 respectively. 		
Portion J of the Project Site	 Backfilling and road reinstatement work were inprogress at CHA12+45. Trial driving work of sheetpiles at the four corners in this pit was completed in July 2020. Sheetpiling work in pit A was commenced and in-progress. The second grouting work at the three pit corners was in-progress for prevention of underground ingress at pit B. Pipes were laid between CH.FB1+98 to CH.FB2+60 and was in progress between CH.FB2+60 to CH.FB2+94 at Area A. Trench excavation and pipe mainlaying works were completed at CH.FC5+49 1st work front at the cycle track. 		



Location	Works Conducted in the reporting month	
	 Trench excavation work was in-progress at CH.FC5+17 2nd work front. Pipes were laid between CH.FC13+26 and Ch.FC12+05 in Area B. Backfilling work and reinstatement of existing geotextile of these trenches were in-progress. Grouting work for working pit C for preventing ingress of underground water was in-progress. Excavation to 9mBG and installation of 5th layer of waling and strut were completed. Sheet pilling works were in-progress at Pit N. 	

- A6. The major environmental impacts brought by the above construction works include:
 - Construction dust and noise generation saw cutting of concrete surface, mainlaying of pipes, sheet pilling, grouting, trial pit and installation works.
 - Waste generation from the construction activities
- A7. The key environmental mitigation measures implemented for the Project in this reporting period associated with the above construction works include:
 - Dust suppression by regular wetting and water spraying for trial pits works and mainlaying of pipes and saw cutting of the concrete surfaces
 - Reduction of noise from equipment and machinery on-site
 - Sorting and storage of general refuse and construction waste

Summary of Exceedance & Investigation & Follow-up

A8. No noise monitoring was conducted in the reporting month due to the overly distant monitoring station from the works location. No project-related exceedance of the Action Level was recorded during the reporting period.

Complaint Handling and Prosecution

- A9. No project-related environmental complaint was received during the reporting period.
- A10. Neither notifications of summons nor prosecution was received for the Project.

Reporting Change

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



Summary of Upcoming Key Issues and Key Mitigation Measures

A12. Key works in August 2020 (the next reporting month) for the Project will include the followings:

Location Works Conducting in the next reporting month		
Portion H of the Project Site	 Construction of DN900 HSV chamber near SENTX (SENT Landfill Extension) Entrance Gate including rebar fixing, formwork erection and concrete pouring for wall and top soffit of this chamber will be continued. Preparation work for the construction of 137PitA, 137PitB and 137pitC near SENTX Entrance Gate will be continued. Preparation work for the water pressure test of DN1200 MS pipe in Area 137 will be continued. Construction of DAV/IT chamber and washout chamber will be continued. Pipe Mainlaying works will be continued at the proposed location of the desalination plant. 	
Portion J of the Project Site	 2 nos. of work fronts implemented as scheduled for the open-trench between CH. A 06+53 to 13+70 will be continued. Pipe jacking at working Pit A, Pit B and Pit C will be continued at CH.A 13+70, CH.A 16+00 and CH.A 19+26. Trial driving work of sheet piles in Pit A at Wan Po Road will be commenced. Grouting and following excavation works in Pit B at Wan Po Road will be continued. Excavation work and installation of temporary shoring system in working Pit C in Wan Po Road will be continued. Mainlaying work at Landfill Stage 1's cycle track will be continued between CH.FC1+84 and CH.FC5+49. Mainlaying works in Area A and B in Landfill Stage 1 will be continued. Excavation work in Pit O near HK Velodrome will be commenced. Sheet pilling works will be continued at Pit N. Inspection pit excavation at uphill lane of Po Lam South Road will be commenced. 	



- A13. The major environmental impacts brought by the above construction works will include:
 - Construction dust and noise generation from inspection pit excavation works, pipes mainlaying, grouting, sheet pile driving and open-trench works
 - Waste generation from construction activities
- A14. The key environmental mitigation measures for the Project in the coming reporting period associated with the above construction works will include:
 - Dust suppression by regular wetting and water spraying for inspection pit excavation works, pipes mainlaying, grouting, sheet pile driving and open-trench works
 - Reduction of noise from equipment and machinery on-site
 - Sorting and storage of general refuse and construction waste



1. BASIC PROJECT INFORMATION

- 1.1 Background
- 1.1.1 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.
- 1.1.2 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.
- 1.1.3 The scope of the Contract may be considered in brief, to consist of the laying of about 10km long 1200mm 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
- 1.2.1 This is the 24th Monthly EM&A Report for the Project which summarizes the key findings of the EM&A programme during the reporting period from 1 July 2020 to 31 July 2020.
- 1.3 Project Organization
- 1.3.1 The Project Organization structure for Construction Phase is presented in **Figure 1.1**.



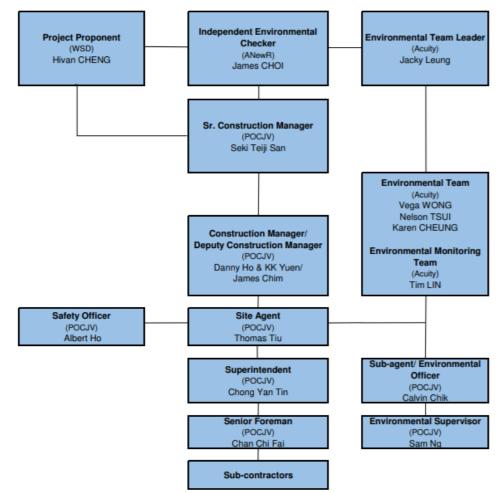


Figure 1.1 Project Organization Chart

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

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



- 1.4 Summary of Construction Works
- 1.4.1 Details of the major construction works undertaken in this reporting period are shown in Table 1.2 and the construction works locations are shown in Appendix B. The construction programme is presented in Appendix A.

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

Location of Construction works undertaken works		Remarks constraints constraint	on
	 Pipes had been laid from CH.CA4+24 to CH.CA 0+01 & CH.CT0+07~CH.CT2+64. 	Completed	
Portion H of the Project Site	 Rebar fixing for wall and top slab of DN900 HSV chamber at CH.CA4+30 was in-progress. Construction of washout chamber and DAV/IT combined chamber was in-progress at CH.KT2+30 and CH.KT2+47 respectively. 	In progress	
Portion J of the Project Site	 Pipes were laid between CH.FB1+98 to CH.FB2+60 and was in progress between CH.FB2+60 to CH.FB2+94 at Area A. Trench excavation and pipe mainlaying works were completed at CH.FC5+49 1st work front at the cycle track. 	Completed	



Location of works	Construction works undertaken	Remarks progress	on
	 Backfilling and road reinstatement work was in- progress at CHA12+45. Trial driving work of sheetpiles at the four corners in this pit were completed in July 2020. Sheetpiling work in pit A was commenced and in-progress. The second grouting work at the three pit corners was in- progress for prevention of underground ingress at pit B Trench excavation work was in- progress at CH.FC5+17 2nd work front. Pipes were laid between CH.FC13+26 and Ch.FC12+05 in Area B. Backfilling work and reinstatement of existing geotextile of these trenches were in-progress. Grouting work for working pit C for preventing ingress of underground water was in- progress. Excavation to 9mBG and installation of 5th layer of waling and strut were completed. Sheet pilling works were in- progress at Pit N. 	In progress	

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



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

Permit/ Licences/ Notification	Reference	Validity Period	Remarks
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	GW-RE0563-20	Until 28 Sep 2020	-
Construction Noise Permit (Hong Kong Velodrome)	GW-RE0364-20	Until 17 Nov 2020	-

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

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

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

- 1.5.3 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.
- 1.5.4 The EM&A programme has been implemented in accordance with the recommendations presented in the approved EIA Report and the EM&A Manual. A summary of implementation status of the environmental mitigation measures for the construction phase of the Project during the reporting period is provided in **Appendix C**.



2. NOISE MONITORING

- 2.1 Monitoring Requirements
- 2.1.1 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.
- 2.1.2 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.
- 2.1.3 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.
- 2.1.4 No impact monitoring for noise impact was conducted in the reporting month due to the overly distant monitoring station from the works location, where they were farther than 1 km from the closet monitoring station NSR4 to the works location.
- 2.2 Noise Monitoring Parameters, Time, Frequency
- 2.2.1 Impact noise monitoring will be conducted weekly in the reporting period between 0700-1900 on normal weekdays. No construction works were carried out during 1900-0700 in all days or any time on Sundays or general holidays during the reporting period.
- 2.2.2 Construction noise level measured in terms of the A-weighted equivalent continuous sound pressure level (LAeq). Leq _{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, Fre	equency and Duration
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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

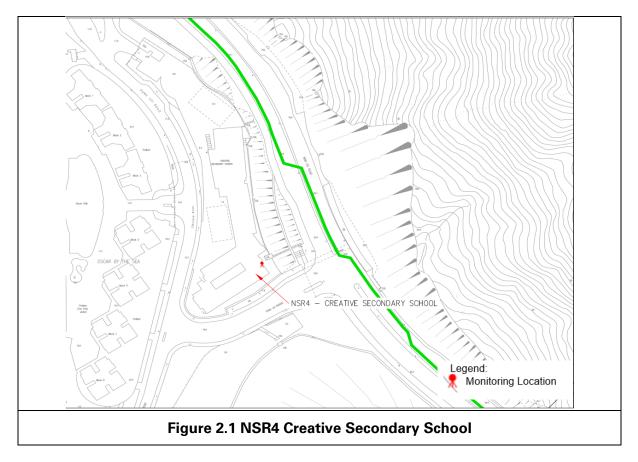


- 2.3 Noise Monitoring Locations
- 2.3.1 The monitoring locations should normally be made at a point 1m from the exterior of the NSRs building façade and be at a position 1.2m above the ground. A correction of +3dB(A) should be made to the free-field measurements.
- 2.3.2 According to the environmental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

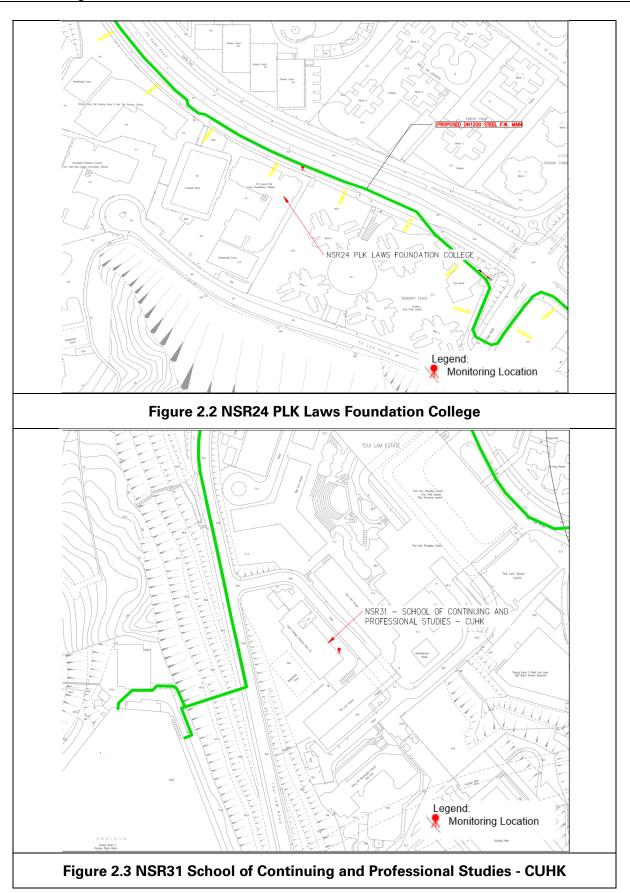
Table 2.2 Noise Monitoring Location

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

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









- 2.4 Impact Monitoring Methodology
- 2.4.1 Integrated sound level meter shall be used for the noise monitoring. The meter shall be 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 meter shall be 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. Appendix E is intentionally left blank since no impact monitoring equipment was used in the reporting month.
- 2.4.2 Noise measurements shall not be 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 shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

Equipment	Brand and Model	Detection Limit
Sound Level Meter	Nti XL2	30-130 dB(A)
Sound Level Meter Calibrator	Rion NC-74	Nil
Pocket Wind Meter	Kestrel 1000 Wind	Nil
Anemometer	Meter	

Table 2.3 Impact Noise Monitoring Equipment

2.5 Action and Limit Levels

2.5.1 The Action/Limit Levels 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	Limit (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.			

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



- 2.6 Monitoring Results and Observations
- 2.6.1 Referring to EM&A manual Section 4.1.2, no impact monitoring for noise impact was conducted in the reporting period.
- 2.6.2 Detailed monitoring results are presented in **Appendix G**. **Appendix G** is intentionally left blank since there is no impact monitoring for noise impact in the reporting month.

3. WASTE MANAGEMENT

3.1 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 the 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.

	Quantity					
			Νοι	n-inert C&D Mater	ials	
Reporting period	Inert C&D Materials (in '000m3)	Chemical Waste (in '000kg)				
			disposed at Landfill (in '000m3)	Paper/card board (in '000kg)	Plastics (in ′000kg)	Metals (in '000kg)
July-20	0.464	0.000	0.001	0.050	0.000	0.000

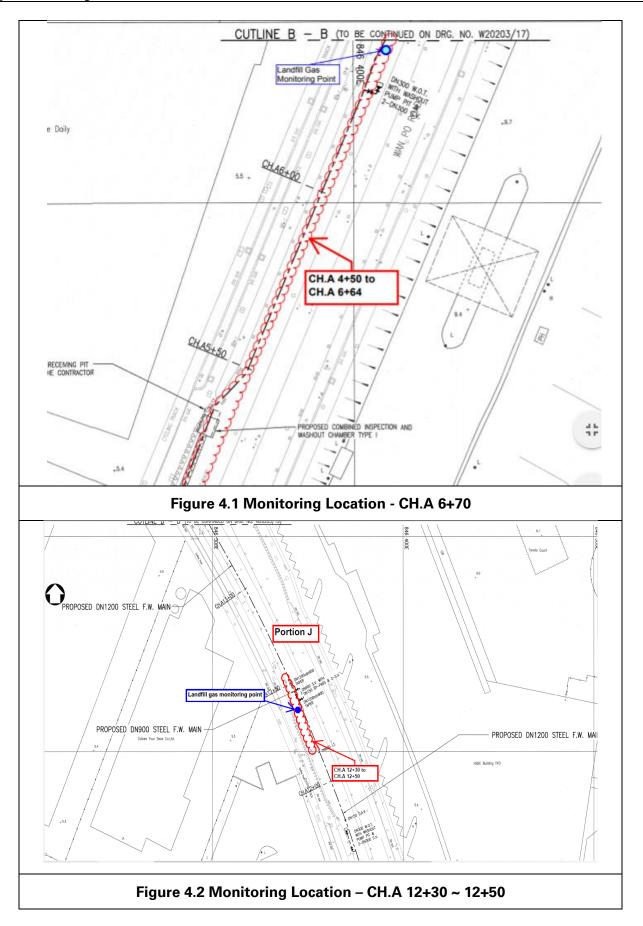
Table 3.1 Quantities of waste generated from the Project



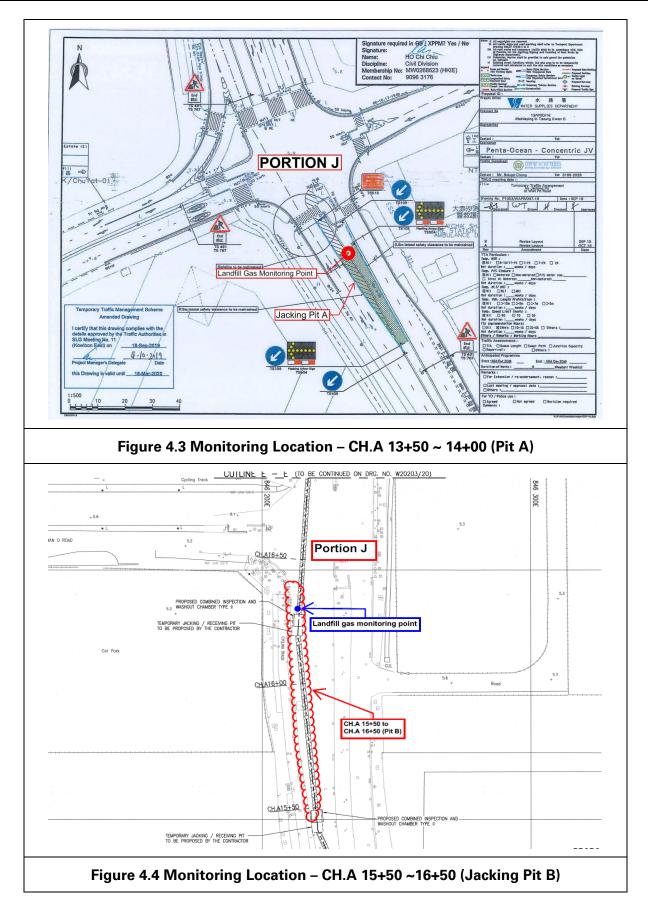
4. LANDFILL GAS MONITORING

- 4.1 Monitoring Requirement
- 4.1.1 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
- 4.2.1 Monitoring of oxygen, methane, carbon dioxide and barometric pressure was performed for excavations at 1m depth or more within the consultation Zone. In this reporting period, 678 times of monitoring was recorded.
- 4.2.2 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 the excavation remains open; and
 - Periodically through the working day whilst workers are in the excavation.
- 4.2.3 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.
- 4.2.4 The area required to be monitored for landfill gas in the reporting period are shown in **Figure 4.1** to **Figure 4.14**.

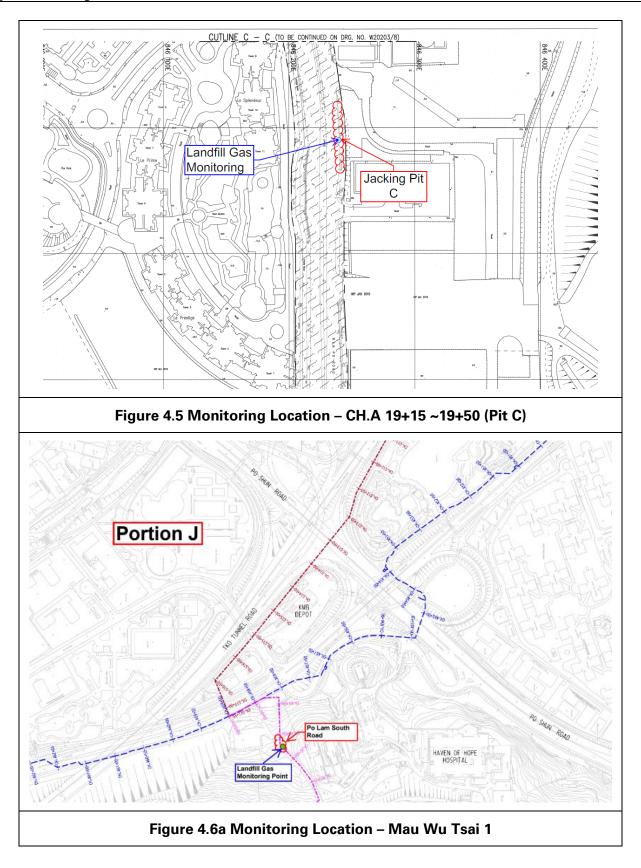




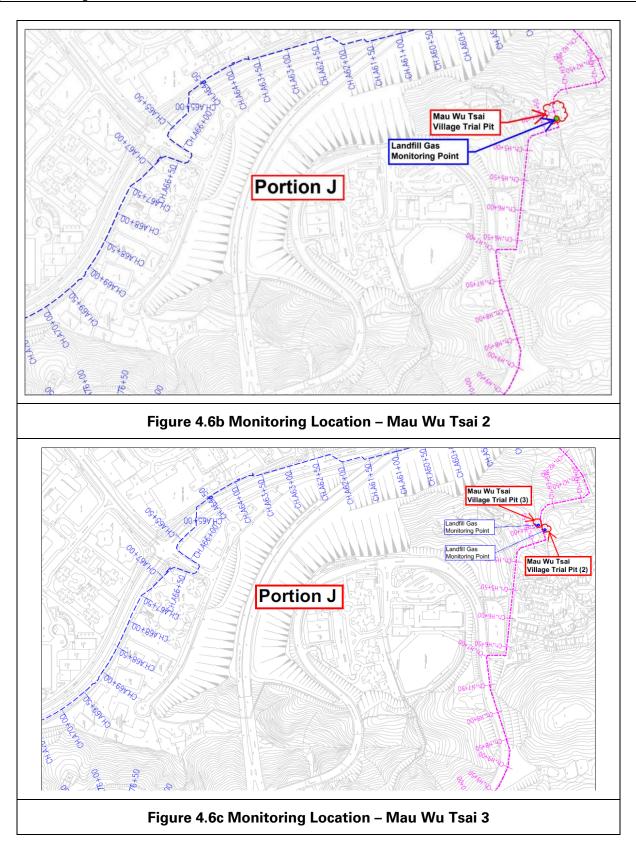




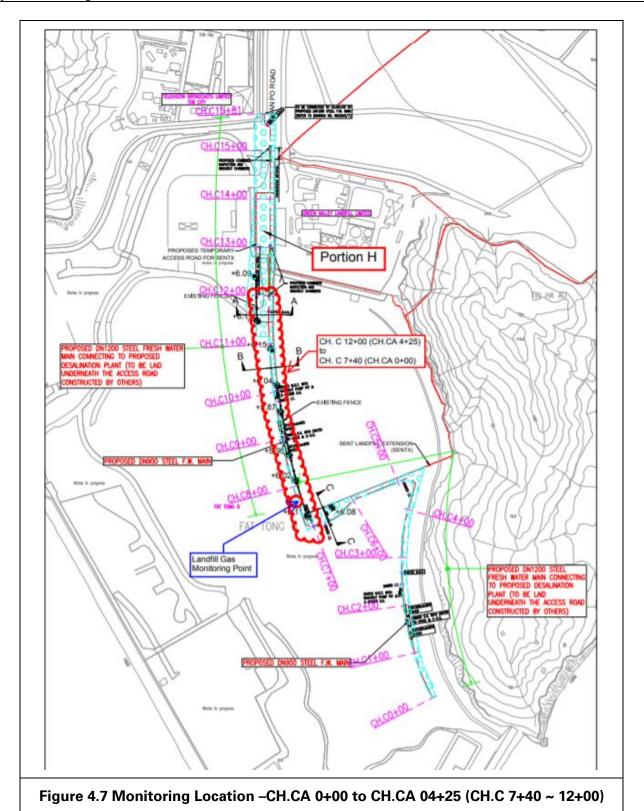




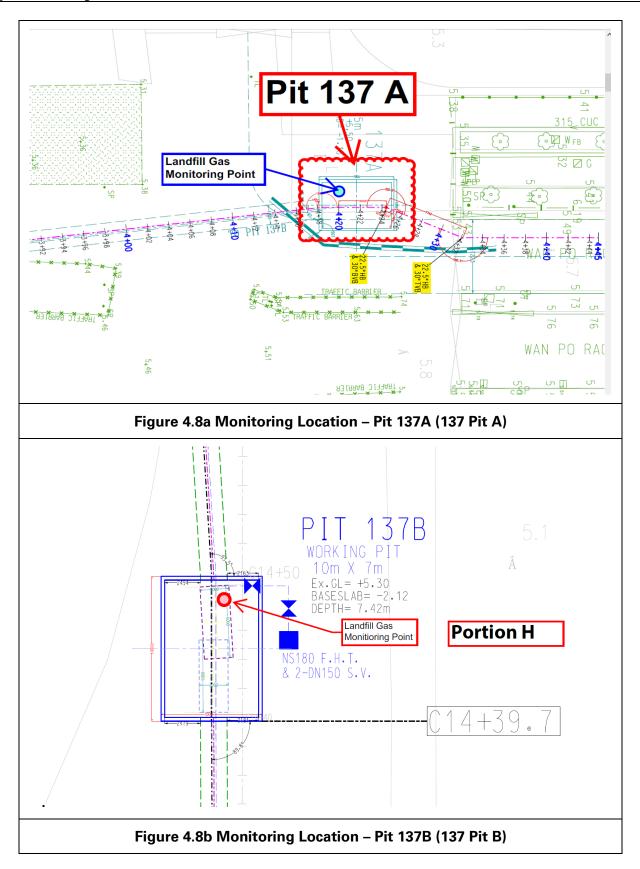




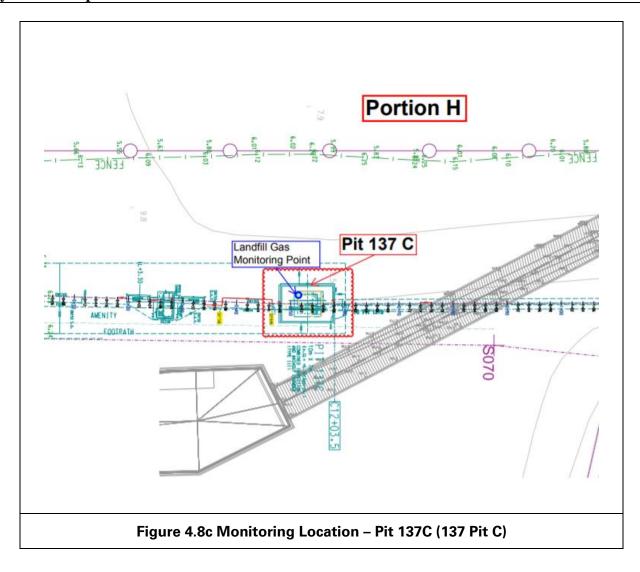




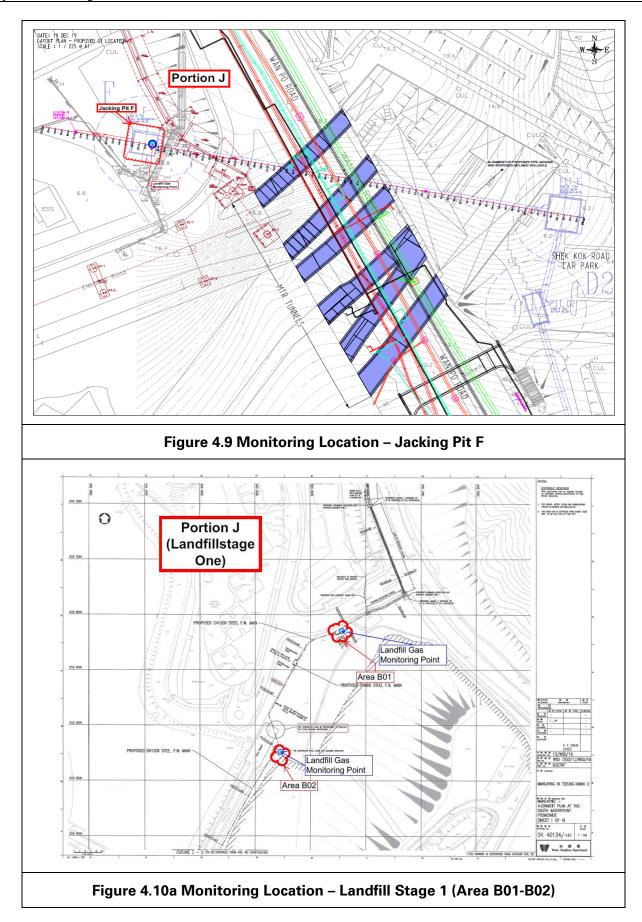




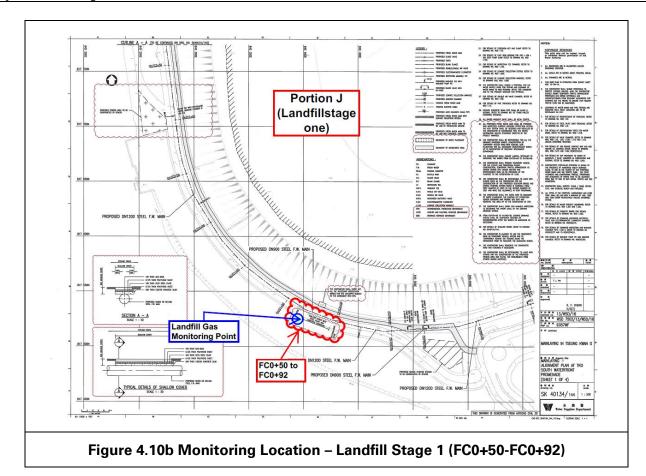




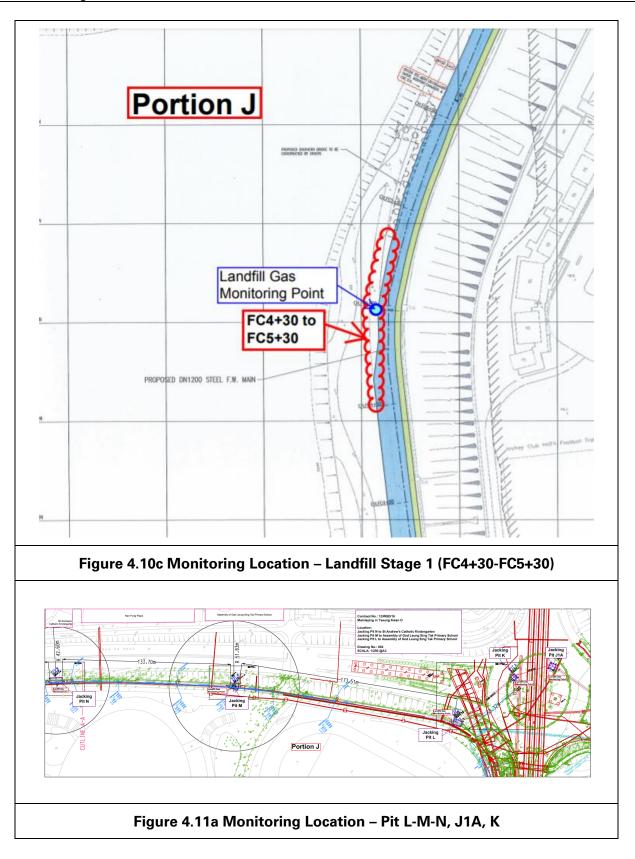




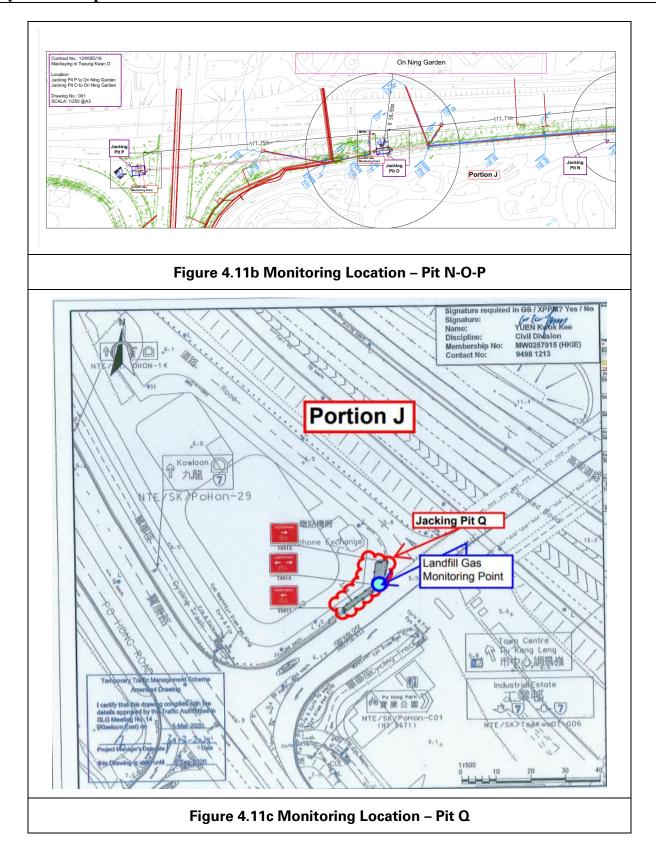




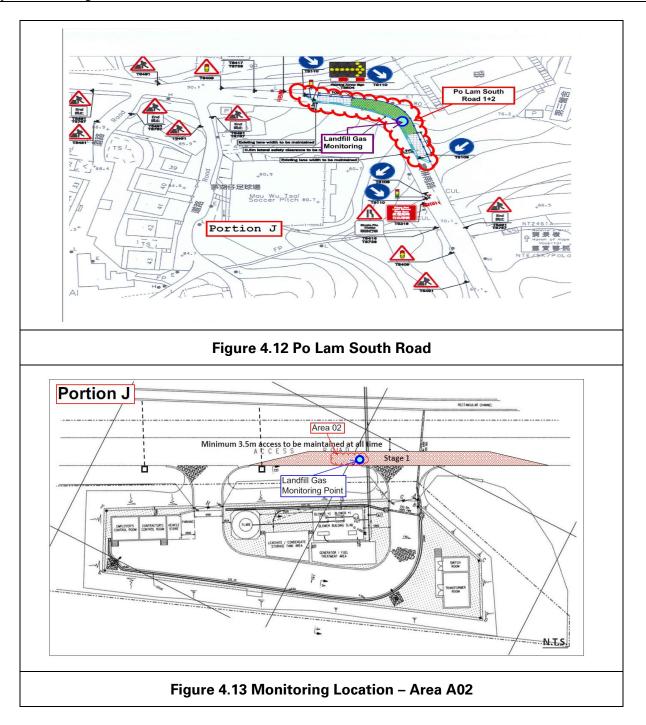




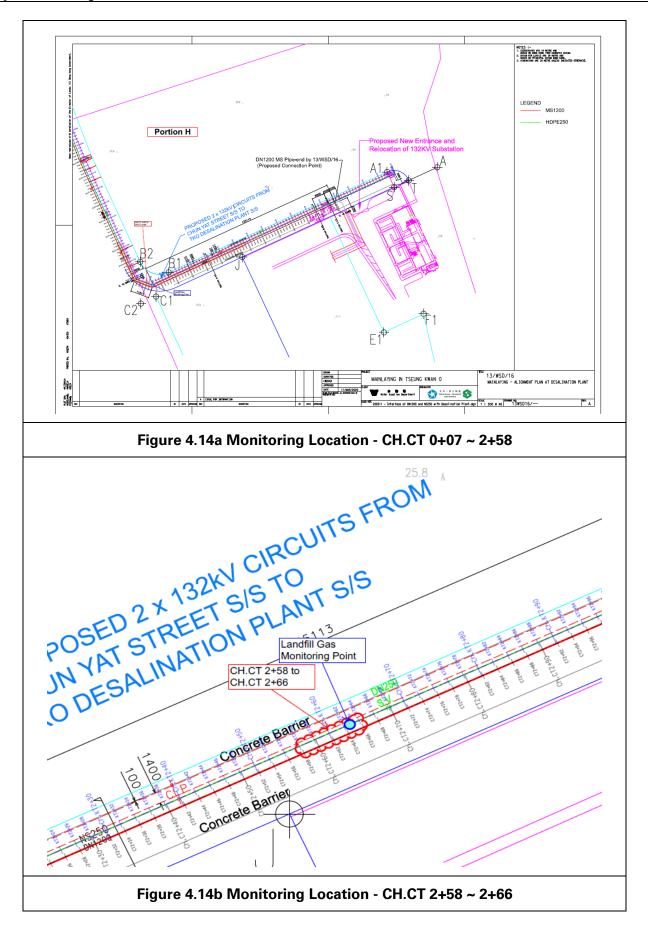














4.3 Monitoring Parameters

- 4.3.1 LFG 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.
- 4.3.2 The following parameters were monitored:
 - Methane.
 - Oxygen.
 - Carbon Dioxide.
 - Barometric Pressure.
- 4.4 Action and Limit Level
- 4.4.1 Action and Limit Level is provided in **Table 4.1**.

Table 4.1 Action and Limit Level for Landfill Gas Monitoring Equipment

Parameters	Action Level	Limit Level
Oxygen (O2)	<19% O2	<19% O2
Methane (CH4)	>10% LEL	>80% LEL
Carbon Dioxide (CO2)	>0.5% CO2	>1.5% CO2

4.5 Monitoring Equipment

- 4.5.1 Landfill Gas monitoring was carried out using intrinsically-safe, portable multi-gas monitoring instruments. The gas monitoring equipment is:
 - Comply with the Landfill Gas Hazard Assessment Guidance Note as intrinsically safe;
 - Capable of continuous barometric pressure and gas pressure measurements;
 - Normally operate in diffusion mode unless required for spot sampling, when it should be capable of operating by means of an aspirator or pump;
 - Have low battery, fault and over range indication incorporated;
 - Store monitoring data, and shall be capable of being down-loaded directly;



• Measure in the following ranges:

methane	4.5.2 0-100% Lower Explosion Limit (LEL) and 0-100% v/v;	
oxygen	4.5.3 0-25% v/v;	
carbon dioxide	0-100% v/v; and	
barometric pressure	mBar (absolute)	

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

methane	4.5.4 >10% LEL;
oxygen	4.5.5 >0.5% by volume; and
carbon dioxide	<19% by volume
barometric pressure	mBar (absolute)

4.5.2 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 II	28 August 2020

4.6 Monitoring Results

4.6.1 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 by the Contractor at the excavation locations for 678 times. All the measured results were presented in **Appendix J** and within the Action and Limit Levels.



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

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

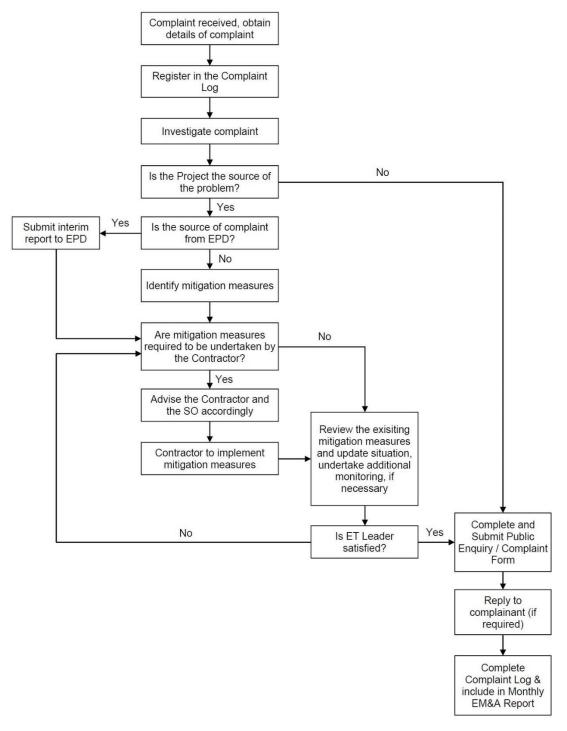


Figure 5.1 Environmental Complaint Handling Procedure



- 5.2 No noise monitoring was conducted during the reporting period since there are no project-related construction activities undertaken within a radius of 300m from the monitoring locations.
- 5.3 No project-related exceedance of the Action Level was recorded during the reporting period.
- 5.4 No notification of summons and prosecution was received in the reporting period.
- 5.5 Statistics on complaints and regulatory compliance are summarized in **Appendix K**.

6. EM&A SITE INSPECTION

6.1 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 2, 9, 16 and 23 and 27 at the site portions list in **Table 6.1** below.

Date	Inspected Site Portion	Time
02 July 2020	Portion J	9:50am – 11:50am
09 July 2020	Portion J, F and H	14:30am – 17:00pm
16 July 2020	Portion J	9:30am – 11:50am
23 July 2020	Portion F, H and J	14:30am – 16:50pm
27 July 2020	Portion J	9:25am – 12:00pm

Table 6.1 Site Inspection Record

- 6.2 One joint site inspection with IEC was carried out on 27 July 2020.
- 6.3 Minor deficiencies were observed during weekly site inspection. Key observations during the site inspections are summarized in **Table 6.2**.

Table 6.2 Site Observations

Date	Environmental Observations	Follow-up Status
02 July 2020	 Construction boundary was not being fully protected by sandbags at Pit C. Construction exit was observed with dusty materials at CHA12+50. Chemicals were not placed inside the drip tray at Landfill Stage 1. 	 Construction boundary was fully protected by sandbags. Construction exit was cleaned. Chemicals were removed.
09 July 2020	1. Chemicals were not placed inside a drip tray at Pit C, 137 Pit C and CHA6+64.	 Chemicals were removed. Drainage system was cleaned.



Date	Environmental Observations	Follow-up Status
	 Drainage system was observed with general waste at Portion F. Environmental Permit was not observed at the vehicle exit/entrance at 137 Pit C. Construction exit was not free from dusty materials at CHA12+50. 	 Environmental Permit was added. Construction exit was cleaned.
16 July 2020	 Geotexile was observed damaged at CHA6+64. Chemical statins were observed at Pit B. Chemicals were not placed inside a drip tray at Landfill Stage 1 Area A. 	 Geotexile sheet was replaced. Chemical stains were cleaned. Chemicals were removed.
23 July 2020	 Wastes were observed in the gully at Portion F. Chemicals were not placed inside a drip tray at Pit C, 137 Pit C, CH.FC0+62 and CH.FC 4+50. Dusty materials were found directly next to the water barriers. It should be cleaned to prevent it from escaping the construction site at CHA12+50. 	 Wastes were cleaned from the gully. Chemicals were removed. Dusty materials were cleaned from the construction site.
27July 2020		observed on the reporting day.

- 6.4 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**.
- 6.5 Site inspection proforma of the reporting period is provided in **Appendix L**.



7. FUTURE KEY ISSUES

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

Location	Works Conducting in the next reporting month
Portion H of the Project Site	 Construction of DN900 HSV chamber near SENTX (SENT Landfill Extension) Entrance Gate including rebar fixing, formwork erection and concrete pouring for wall and top soffit of this chamber will be continued. Preparation work for the construction of 137PitA, 137PitB and 137pitC near SENTX Entrance Gate will be continued. Preparation work for the water pressure test of DN1200 MS pipe in Area 137 will be continued. Construction of DAV/IT chamber and washout chamber will be continued. Pipe Mainlaying works will be continued at the proposed location of the desalination plant.
Portion J of the Project Site	 2 nos. of work fronts implemented as scheduled for the open-trench between CH. A 06+53 to 13+70 will be continued. Pipe jacking at working Pit A, Pit B and Pit C will be continued at CH.A 13+70, CH.A 16+00 and CH.A 19+26. Trial driving work of sheet piles in Pit A at Wan Po Road will be commenced. Grouting and following excavation works in Pit B at Wan Po Road will be continued. Excavation work and installation of temporary shoring system in working Pit C in Wan Po Road will be continued. Mainlaying work at Landfill Stage 1's cycle track will be continued between CH.FC1+84 and CH.FC5+49. Mainlaying works in Area A and B in Landfill Stage 1 will be continued. Excavation work in Pit O near HK Velodrome will be commenced. Sheet pilling works will be continued at Pit N. Inspection pit excavation at uphill lane of Po Lam South Road will be commenced. Sheet Pilling Works in Pit P near Po Shun Road will be commenced.

Table 7.1. Key works for the next reporting month



- 7.2 The major environmental impacts brought by the above construction works will include:
 - Construction dust and noise generation from inspection pit excavation works, pipes mainlaying, grouting, sheet pile driving and open-trench works
 - Waste generation from construction activities
- 7.3 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 inspection pit excavation works, pipes mainlaying, grouting, sheet pile driving and open-trench works
 - Reduction of noise from equipment and machinery on-site
 - Sorting and storage of general refuse and construction waste
- 7.4 The proactive environmental protection proforma for the next reporting month is listed in **Appendix M**.
- 7.5 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.
- 7.6 The impact monitoring schedule for the next reporting month is attached in **Appendix N**. **Appendix N** is intentionally left blank since no impact monitoring will be conducted in the next reporting month.



8. CONCLUSION AND RECOMMENDATIONS

- 8.1 This is the 24th monthly Environmental Monitoring and Audit (EM&A) Report presenting the EM&A works undertaken during the period from 1 July 2020 to 31 July 2020, in accordance with the EM&A Manual and the requirement under EP-503/2015/A.
- 8.2 No noise monitoring was conducted in the reporting period due to the overly distant monitoring station from the works location.
- 8.3 No project-related exceedance of the Action Level was recorded during the reporting period.
- 8.4 Weekly environmental site inspection was conducted during the reporting period. Minor deficiencies were observed during site inspection and were rectified. The environmental performance of the project was therefore considered satisfactory.
- 8.5 According to the environmental site inspections performed in the reporting month, the contractor is reminded to pay attention on maintaining site tidiness, dust suppression mitigations and proper materials storage.
- 8.6 No environmental complaint was received in the reporting period.
- 8.7 No notification of summons or prosecution was received since commencement of the Contract.
- 8.8 The ET will keep track on the construction works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.



Appendix A

Construction Programme



13/WSD/16 - Mainlaying in Tseung Kwan O

Outline Construction Programme (As on 31 Aug 2018)

YEAR		LOCATION						20	18							2	2019				Τ				2020)							20	021			
MONTH	PJ-ID	ROAD	FROM	то	1 2	3	4 5	6	7	8 9	10	11 12	2 1	2 3	4	5 6	7	8 9	9 10	11 1	2 1	2	3 4	5	6	7 8	9	10 1	1 12	1 2	3	4	5 6	7	8 9	10	1 12
																																		\square	+	\square	\square
Section A (TKO137 to Wan Po Road)																																		\square	1	\square	\square
Section A1 (Open-trench)	-	Wan Po Road	0	362																																	\square
Section A2 (Pipe-Jacking)	А	Wan Po Road	362	530																																	
Section A3 (Open-trench)	-	Wan Po Road	530	1379						#																								\square			\square
Section A4 (Pipe-Jacking)	в	Wan Po Road	1379	2268																																	\square
Section A5 (Open-trench)	-	Wan Po Road	2268	4113																																	\square
Section B (Po Yap Road to Po Hong Road)																																					
Section B1 (Pipe-Jacking)	С	Po Yap Road	4113	4200																																	
Section B2 (Open-trench)	-	Po Yap & Po Hong Rd	4200	5500																																	
Section B3 (Pipe-Jacking)	D1 & D2	Po Hong & Ling Hong Rd	5500	5600																																	
Section B4 (Open-trench)	-	Ling Hong Road	5600	5799																																	
Section B5 (Pipe-Jacking)	Е	Po Hong Road	5799	5838																																	
Section B6 (Open-trench)	-	Po Hong Road	5838	6254																																	
Section B7 (Pipe-Jacking)	F	Po Hong Road	6254	6368																																	
Section B8 (Open-trench)	-	Po Hong Road	6368	7250																																	
Section C (Po Lam Road to Tsui Lam to TKOFWPSR*)																																					
Section C1 (Open-trench)	-	Po Lam Road	7250	7740																																	
Section C2 (Pipe-Jacking)	G	Tsui Lam Road	7740	7770																																	
Section C3 (Open-trench)	-	Tsui Lam Road	7770	8300																																	
Section C4 (Slope)	-	TKOFWPSR	8300	8376																																	

Commencement of works at CH.A 720 on 30 Aug 2018.

*TKOFWPSR - Tseung Kwan O Fresh Water Primiary Service Reservoir

**Remaining 1581m within TKO137 with site possession from Nov 2019



Appendix B

Overview of Mainlaying in Tseung Kwan O



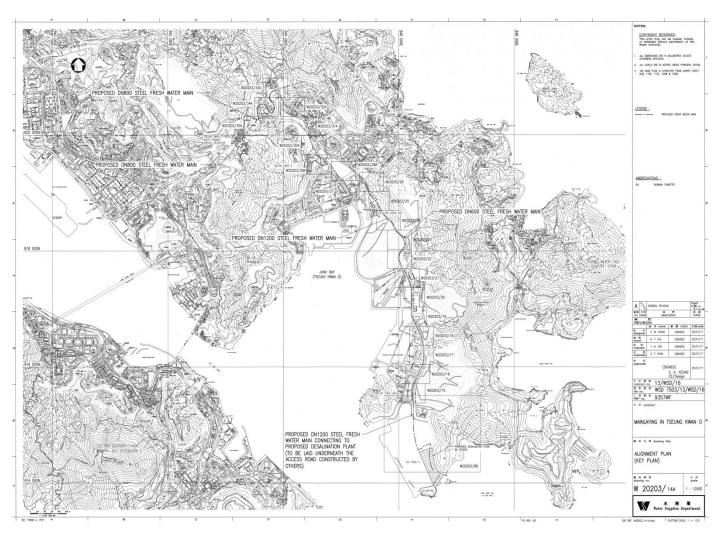


Figure B1. Overview of Mainlaying in TKO



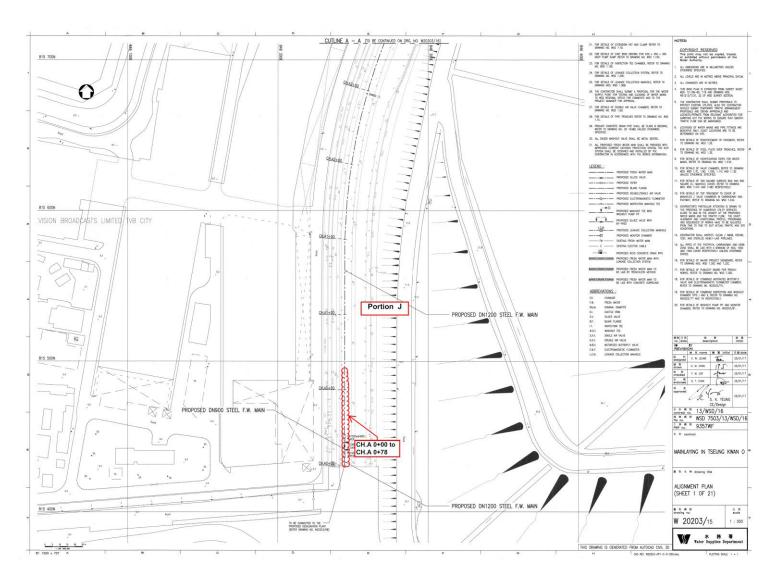


Figure B2. Location Plan for Portion J - CH.A 0+00 to CH.A 0+78



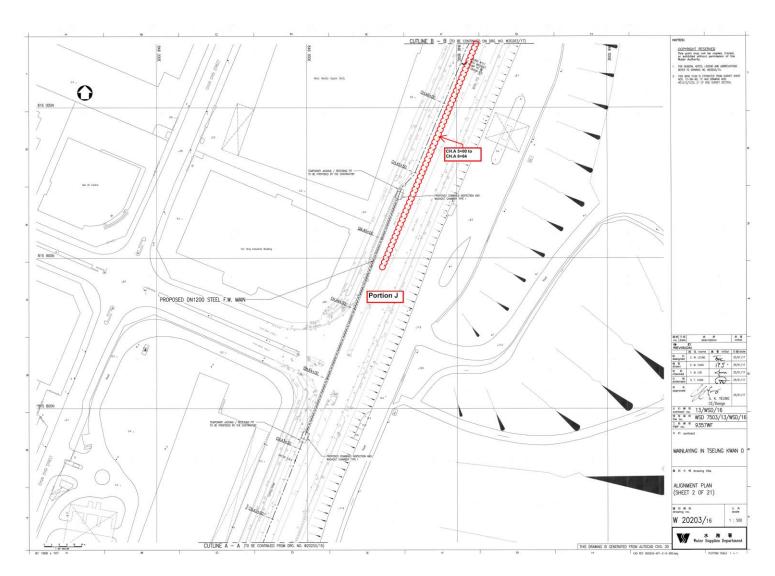


Figure B3a. Location Plan for Portion J - CH.A 5+00 to CH.A 6+70



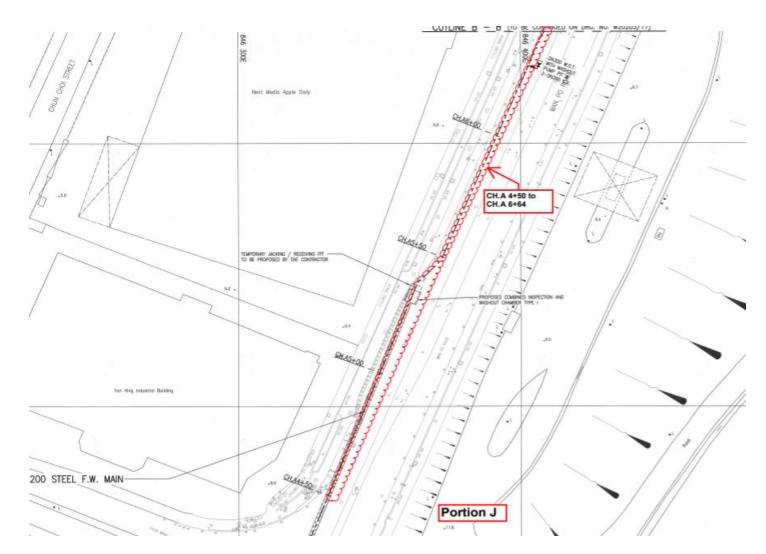


Figure B3b. Location Plan for Portion J - CH.A 4+50 to CH.A 6+70



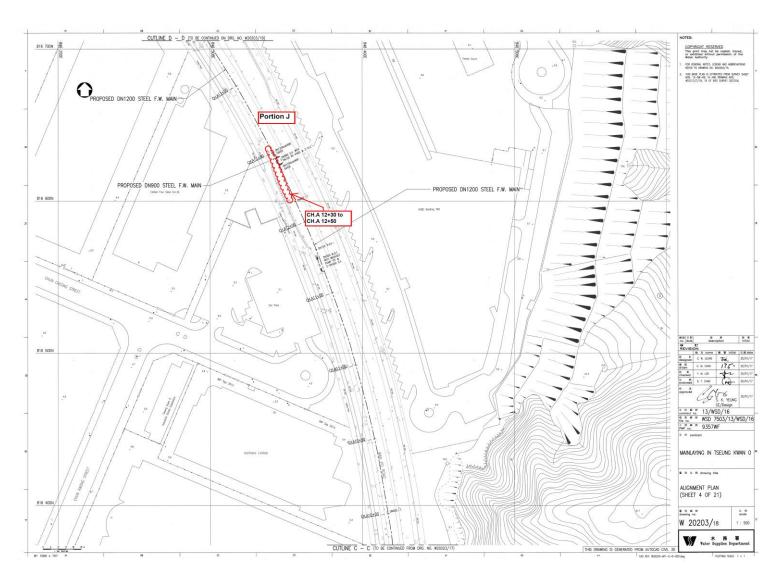


Figure B4. Location Plan for Portion J - CH.A 12+30 to CH.A 12+50



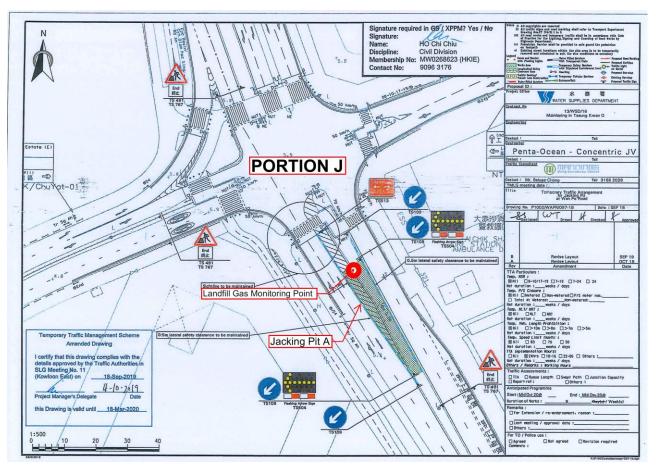


Figure B5. Location Plan for Portion J – CH. A13+50 to CH.A 14+00 (Pit A)



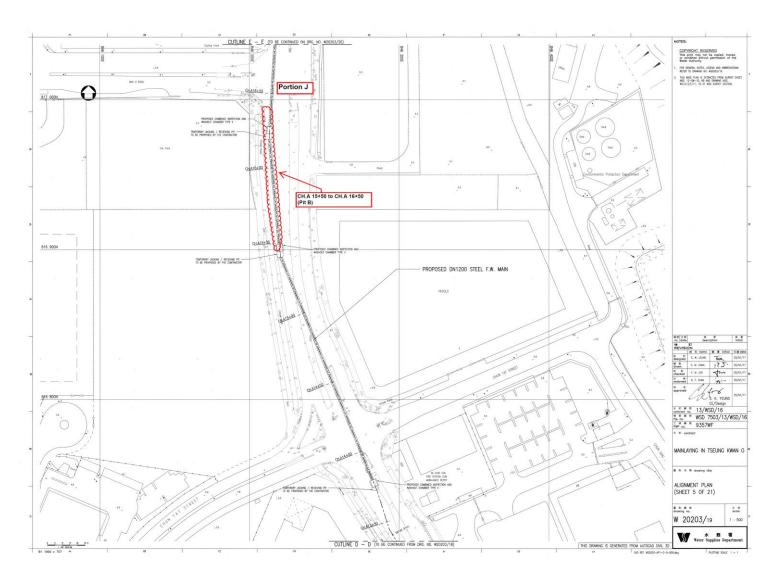


Figure B6. Location Plan for Portion J – CH. A15+50 to CH.A 16+50 (Pit B)



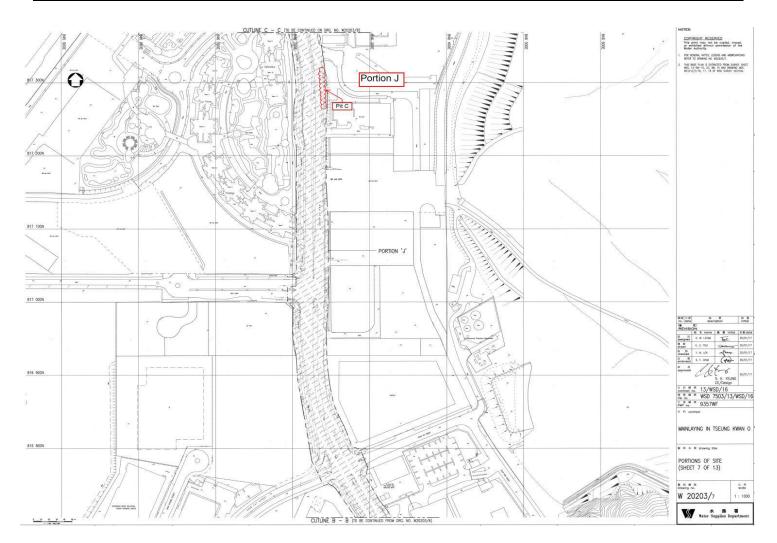


Figure B7. Location Plan for Portion J – CH.A 19+15 to CH.A 19+50 (Pit C)



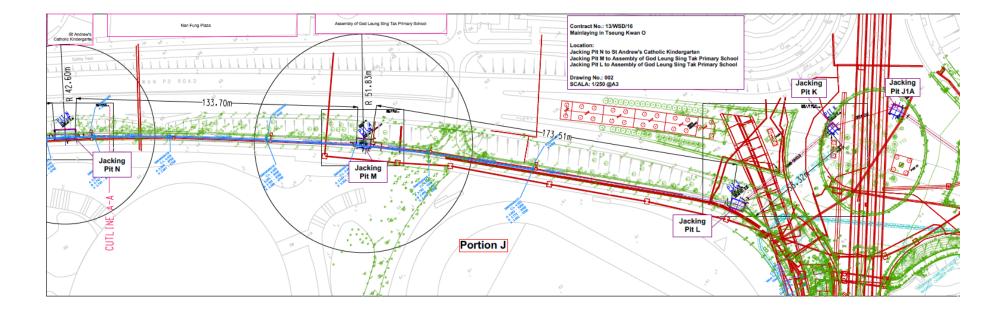


Figure B8a. Location Plan for Portion J – Pit L-M-N, K, J1A



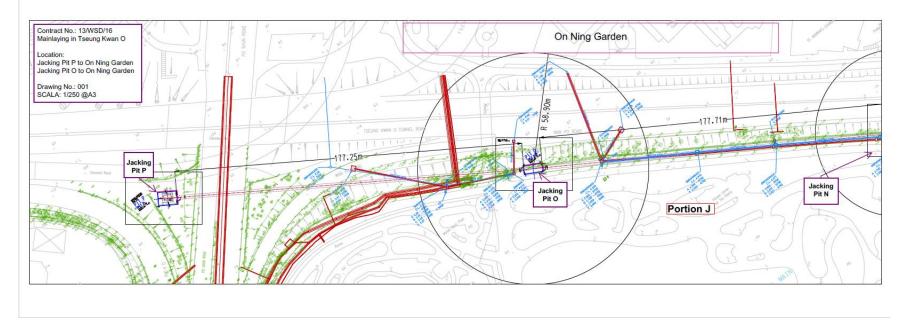


Figure B8b. Location Plan for Portion J – Pit N-O-P



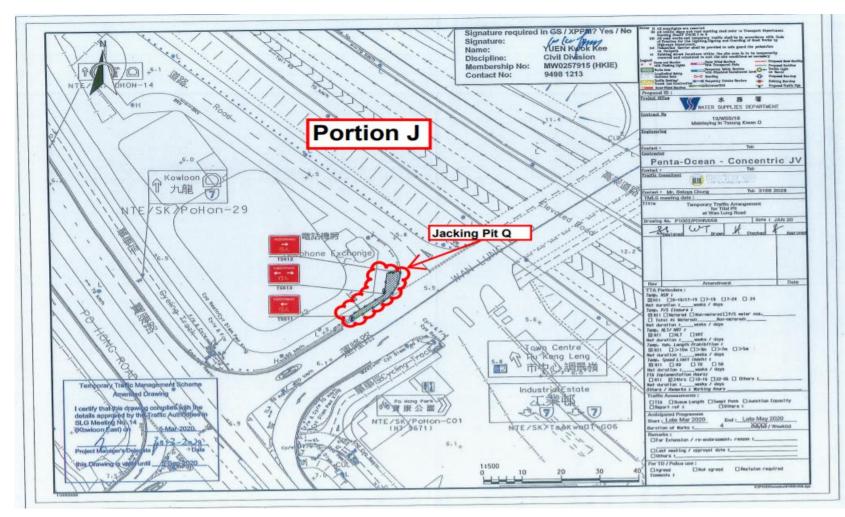


Figure B8c. Location Plan for Portion J – Pit Q



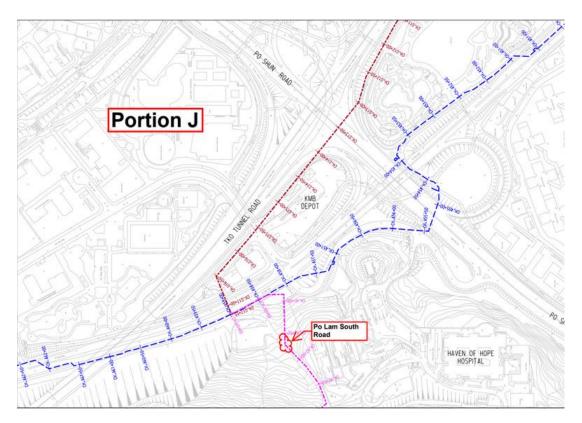


Figure B9a. Location Plan for Mau Wu Tsai 1

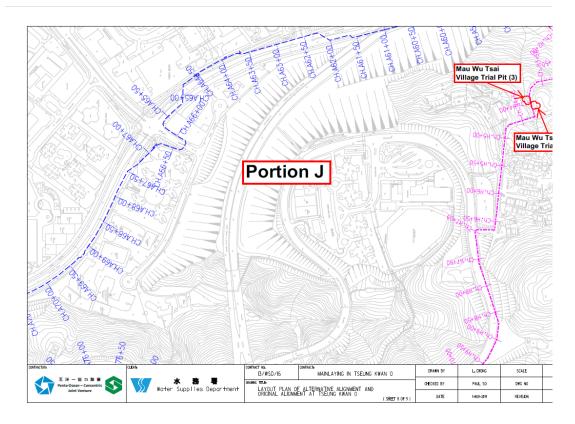


Figure B9b. Location Plan for Mau Wu Tsai 2 & 3



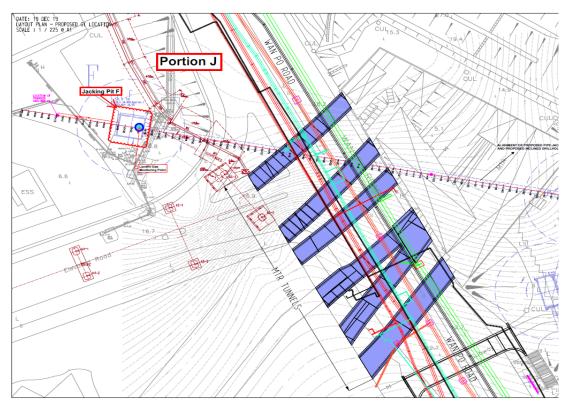


Figure B10. Location Plan for Jacking Pit F

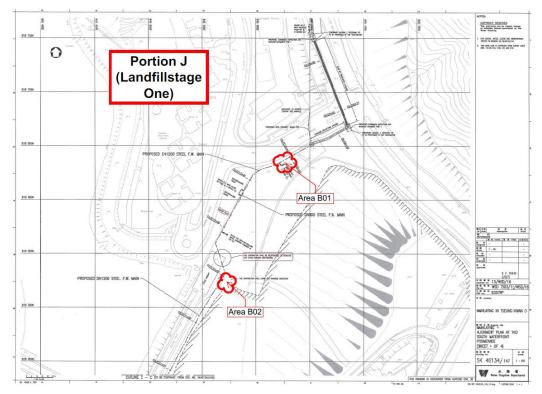


Figure B11a. Location Plan – Landfill Stage 1 (Area B01-B02)



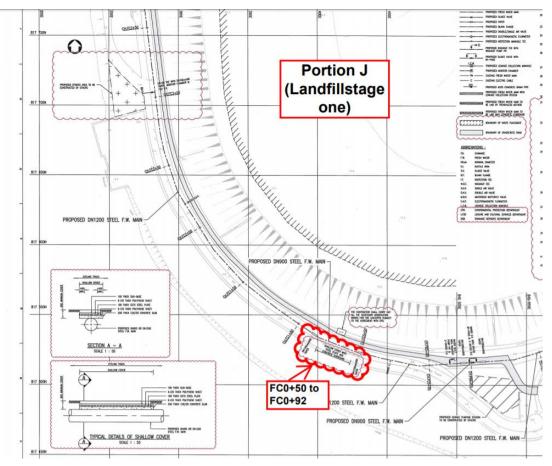


Figure B11b. Location Plan – Landfill Stage 1 (Area FC0+50 -FC0+92)

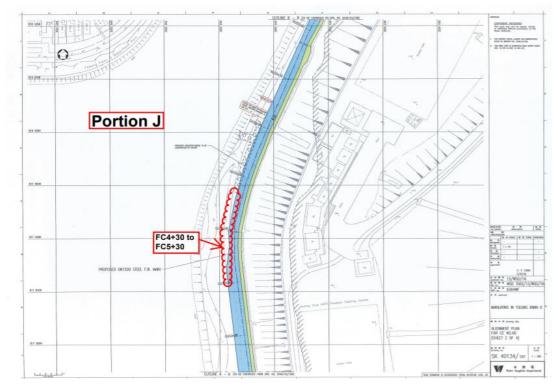


Figure B11c. Location Plan – Landfill Stage 1 (Area FC4+30 -FC5+30)





Figure B12. Monitoring Location – Po Lam South Road

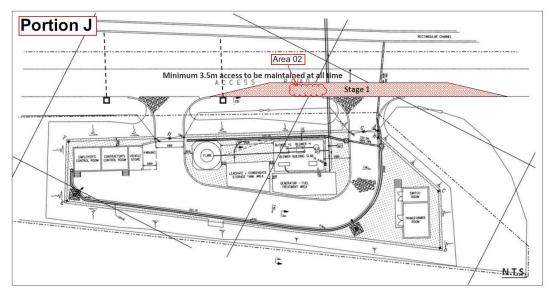


Figure B13. Monitoring Location – Area A02



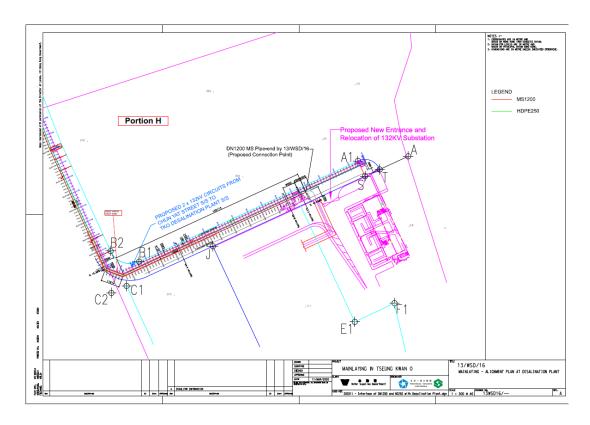


Figure B14a. Location Plan for CH.CT 0+07 – 2+58

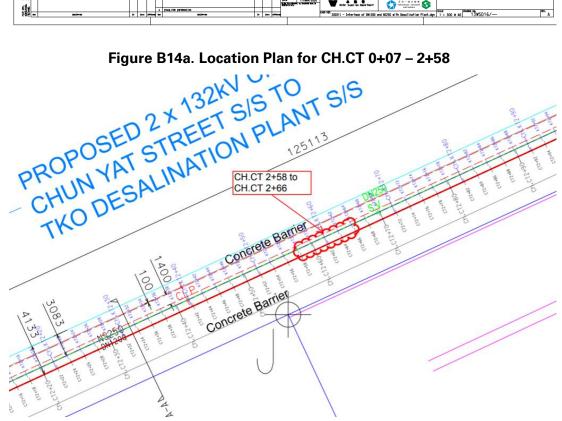


Figure B14b. Location Plan for CH.CT 2+58 - 2+66



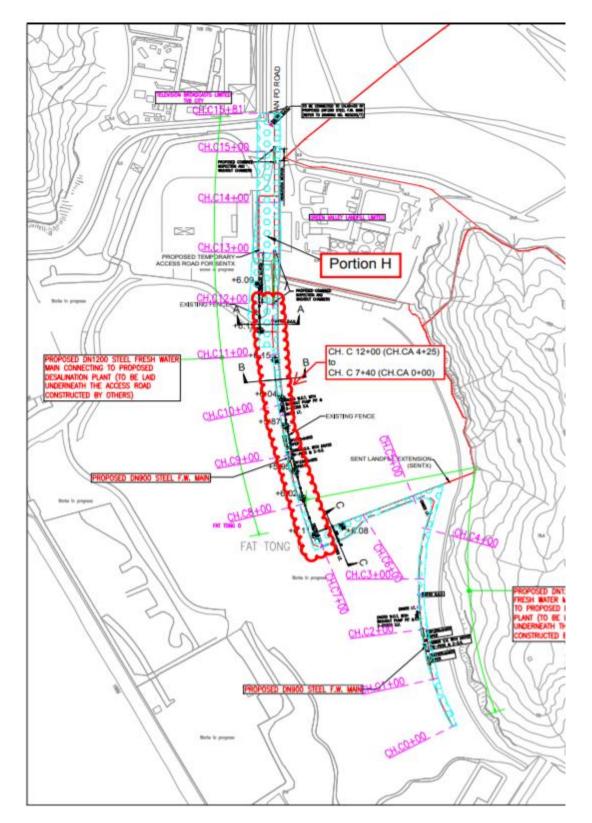


Figure B15. Location Plan for Portion H– CH.C 7+40~CH.C 12+00 (CH.CA 0+00 ~ CH.CA4+25)



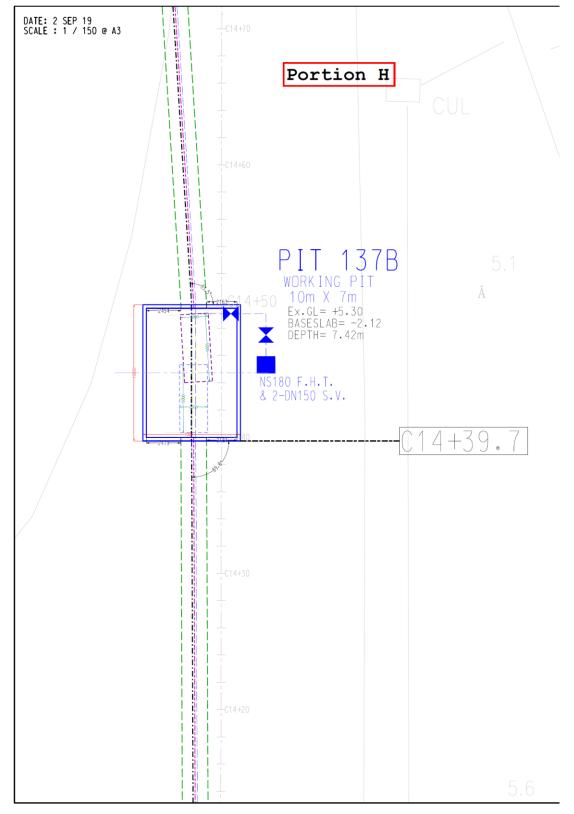


Figure B16a. Location Plan for Portion H– Pit 137B



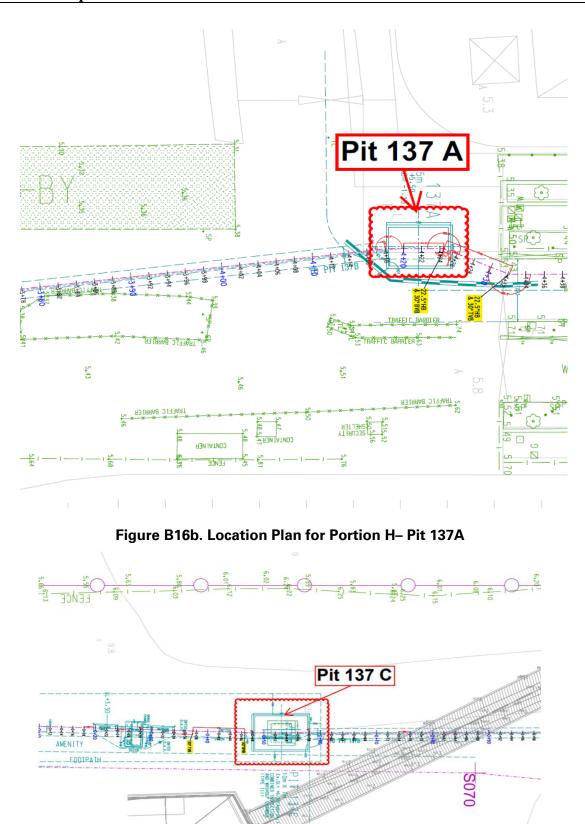


Figure B16c. Location Plan for Portion H– Pit 137C



Appendix C

Summary of Implementation Status of Environmental Mitigation



EIA Reference	Recommended Environmental Protection	Objectives of the recommended measures	Implementation	Impler Stage	nentat	tion	Implementation	Relevant Legislation & Guidelines
	Measures/ Mitigation Measures	& main concerns to address	Agent	D	С	0	status	
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)		~		NA	
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 minimise the fugitive dust arising from unloading.	Land site/ During Construction	Contractor(s)		•		N/A	
S4.8.1	During transportation by truck, materials should not be loaded to a level higher than the side and tail boards, and should be dampened or covered before transport.	Land site/ During Construction	Contractor(s)		-		Implemented	
S4.8.1	Wheel washing device should be provided at the exits of the work sites. Immediately before leaving a construction site, every vehicle shall be washed to remove any dusty material from its body and wheels as far as practicable.	Land site/ During Construction	Contractor(s)		•		N/A	



EIA Reference	Recommended Environmental Protection	Objectives of the recommended measures	Implementation	Imple Stage	mentat	ion	Implementation	Relevant Legislation & Guidelines
EIA Reference	Measures/ Mitigation Measures	& main concerns to address	Agent	D	С	0	status	
S4.8.1	Road sections between vehicle-wash areas and vehicular entrance will be paved.	Land site/ During Construction	Contractor(s)		~		Implemented	
S4.8.1	Hoarding of not less than 2.4m high from ground level will be provided along the length of the Project Site boundary.	Land site/ During construction	Contractor(s)	~	-		N/A	
S4.8.1	Haul roads will be kept clear of dusty materials and will be sprayed with water so as to maintain the entire road surface wet at all times.	Land site/ During construction	Contractor(s)		•		Implemented.	
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, rectified after observation	
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)		•		N/A	
S4.8.1	All exposed areas will be kept wet always to minimise dust emission.	Land site/ During construction	Contractor(s)		•		Implemented	
S4.8.1	Ultra-low-sulphur diesel (ULSD) will be used for all construction plant on-site, as defined as diesel fuel containing not more than 0.005% sulphur by weight) as stipulated in Environment, Transport and Works Bureau Technical Circular (ETWB-TC(W)) No 19/2005 on Environmental Management on Construction Sites.	Land site/ During construction/ During Operation	Contractor(s)			~	Implemented	Environment, Transport and Works Bureau Technical Circular (ETWB- TC(W)) No 19/2005 on Environmental Management on Construction Sites



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures	Implementation	Impler Stage		ion	Implementation	Relevant Legislation & Guidelines
LIA Reference		& main concerns to address	Agent	D	C	0	status	
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	Land site/ During construction	Contractor(s)		•		N/A	Guidance Note on a Best
S4.8.1	Regular maintenance of construction equipment deployed on-site will be conducted to prevent black smoke emission.	Land site/ During construction	Contractor(s)		•		Implemented	
S4.10	To ensure proper implementation of the recommended dust mitigation measures and good construction site practices during the construction phase, environmental site audits on weekly basis is recommended throughout the construction period.	Land site/ During construction	Contractor(s)/ Environmenta I Team (ET) & Independent Environmenta I Checker (IEC)		•		Implemented	

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



EIA Reference	Recommended Environmental Protection		Implementation	Impler Stage	nentat	ion	Implementation status	Relevant Legislation &
	Measures/ Mitigation Measures	main concerns to address	Agent	D	С	0		Guidelines
Noise								
S5.7	Only well-maintained plant will be operated on-site and plant will be serviced regularly during the construction phase.	All area/ During construction	Contractor(s)		•		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Silencers or mufflers on construction equipment will be utilised and will be properly maintained during the construction phase.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Mobile plant, if any, will be sited as far away from NSRs as possible.	Noise control/ During construction	Contractor(s)		•		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Machines and plant (such as trucks) that may be in intermittent use will be shut down between work periods or will be throttled down to a minimum.	Noise control/ During construction	Contractor(s)		•		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Plants known to emit noise strongly in one direction will, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.	Noise control/ During construction	Contractor(s)		•		N/A	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Material stockpiles and other structures will be effectively utilised, wherever practicable, in screening noise from on-site construction activities.	Noise control/ During construction	Contractor(s)		•		N/A	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Use of Quite Powered Mechanical Equipment (QPME).	Noise control/ During construction	Contractor(s)		•		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Movable noise barriers of 3m in height with skid footing should be used and located within a few metres of stationary plant and mobile plant such that the line of sight to the NSR is blocked by the barriers. The length of the barrier should be at least five times greater	Noise control/ During construction	Contractor(s)		•		N/A	A Practical Guide for the Reduction of Noise from Construction Works,



EIA Reference	Recommended Environmental Protection	Objectives of the recommended measures &	Implementation	Impleı Stage	mentat	ion	Implementation status	Relevant Legislation &
	Measures/ Mitigation Measures	main concerns to address	Agent	D	С	0		Guidelines
	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.							
S5.7	The noise insulating sheet should be deployed such that there would be no opening or gaps on the joints.	Noise control/ During construction	Contractor(s)		√		N/A	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Construction activities (e.g. excavation/shoring, reinstatement (asphalt), and pipe jacking) will be planned and carried out in sequence, such that items of PME proposed for these activities will not be operated simultaneously.	Noise control/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	PMEs will not be used at the works areas near educational institutions with residual impact (ie the "influence area" within a radius of 40m) during school hours in order to reduce impact to the educational institutions.	Noise control / During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works
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)	-	√		N/A	



EIA Reference	Recommended Environmental Protection	Objectives of the recommended measures &	Implementation	Impleı Stage	mentat	ion	Implementation status	Relevant Legislation & Guidelines
	Measures/ Mitigation Measures	main concerns to address	Agent	D	С	0		Guidelines
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 (eg 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)	~	•		N/A	
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)		•		N/A	
S5.10	The effectiveness of on-site control measures could also be evaluated through the regular site audits.	All facilities/ During construction	Contractor(s)/ Environment al Team (ET) & Independent Environment al Checker (IEC)				Implemented	-

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



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures &	Implementati on Agent	Implen Stage	Stage		Implementation status	Relevant Legislation & Guidelines
		main concerns to address	on Agent	D	С	0		Guideimes
Water Quality		1		1		1	ſ	
S6.9	Dredged marine sediment will be disposed of in a gazetted marine disposal area in accordance with marine dumping permit conditions of the Dumping at Sea Ordinance (DASO).	Marine Dredging/ During construction	Contractor(s)		V		N/A	Dumping at Sea Ordinance (DASO)
S6.9	Disposal vessels will be fitted with tight bottom seals in order to prevent leakage of material during transport.	Marine Dredging/ During construction	Contractor(s)		~		N/A	-
S6.9	Barges will be filled to a level, which ensures that material does not spill over during transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action.	Marine Dredging/ During construction	Contractor(s)		~		N/A	-
S6.9	After dredging, any excess materials will be cleaned from decks and exposed fittings before the vessel is moved from the dredging area.	Marine Dredging/ During construction	Contractor(s)		*		N/A	-
S6.9	All vessels should be well maintained and inspected before use to limit any potential discharges to the marine environment.	Marine Dredging/ During construction	Contractor(s)		•		N/A	-
S6.9	All vessels must have a clean ballast system.	Marine Dredging/ During construction	Contractor(s)		1		N/A	-
S6.9	No discharge of sewage/grey wastewater should be allowed. Waste water from potentially contaminated area on working vessels should be minimized and collected. These kinds of wastewater should be brought back to port and discharged at appropriate collection and treatment system.	Marine Dredging/ During construction	Contractor(s)		~		N/A	-
S6.9	No soil waste is allowed to be disposed overboard.	Marine Dredging/ During construction	Contractor(s)		~		N/A	-



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures &	Implementati	Impler Stage	nentat	status		Relevant Legislation & Guidelines
	weasures/ witigation weasures	main concerns to address	on Agent	D	С	0	-	Guidelines
S6.9	Silt removal facilities such as silt traps or sedimentation facilities will be provided to remove silt particles from runoff to meet the requirements of the TM standard under the WPCO. The design of silt removal facilities will be based on the guidelines provided in ProPECC PN 1/94. All drainage facilities and erosion and sediment control structures will be inspected on a regular basis and maintained to confirm proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit will be removed regularly.	Land site & drainage/ During construction	Contractor(s)		×		Implemented, rectified after observation	ProPECC PN 1/94 TM Standard under the WPCO
S6.9	Earthworks to form the final surfaces will be followed up with surface protection and drainage works to prevent erosion caused by rainstorms.	Land site & drainage/ During construction	Contractor(s)		•		Implemented	-
S6.9	Appropriate surface drainage will be designed and provided where necessary.	Land site & drainage/ During construction	Contractor(s)		1		N/A	-
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)		•		Implemented	-
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	-



EIA Reference	Recommended Environmental Protection	Objectives of the recommended measures &	Implementati		Implementation Stage		Implementation status	Relevant Legislation &
	Measures/ Mitigation Measures	main concerns to address	on Agent	D	С	0		Guidelines
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	-
S6.9	Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers over the construction site to prevent direct disposal of sewage into the water environment.	Land site & drainage/ During construction	Contractor(s)		-		Implemented	-
S6.9 and S6.12	The sterilization water should be dechlorinated with total residual chlorine (TRC) level below 1 mg/L before discharge to public sewer. In situ testing of TRC should also be conducted for the discharge of chlorinated water for pipeline disinfection to ensure sufficient dechlorination before discharge to public sewer.	Sterilization of water mains prior to commissioning	Contractor(s)		•	•	N/A	Technical Memorandum for Effluents Discharged into Drainage and Sewerage Systems Inland and Coastal Waters
S6.9	The cleaning and flushing water should also be treated and desilted to the relevant discharge requirement stipulated in TM-DSS before discharging.	Sterilization of water mains prior to commissioning	Contractor(s)		•	~	N/A	Technical Memorandum for Effluents Discharged into Drainage and Sewerage Systems Inland and Coastal Waters
S6.9	Site drainage should be well maintained and good construction practices should be observed to ensure that oil, fuels, solvents and other chemicals are managed, stored and handled properly and do not enter the nearby water streams.	Land site & drainage/ During construction/ During operation	Contractor(s)		•	v	Implemented, rectified after observation	-



FIA Rotoronco	Recommended Environmental Protection Measures/ Mitigation Measures	recommended measures &	Implementati	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
			on Agent	D	С	0		Guidennes
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)/ Environment al Team (ET) & Independent Environment al Checker (IEC)		~		Implemented	-

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



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures &	Implementation Agent	Imple Stage	mentat	tion	Implementation Status	Relevant Legislation & Guidelines
	, , , , , , , , , , , , , , , , , , ,	main concerns to address	Agent	D	С	0		Guideimes
Waste Manage								
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 mobilisation/ During construction	Contractor(s)		√		Implemented	-
\$8.5	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 mobilisation/ 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	n Contractor(s)		•		N/A	Chapters 2 & 3 Code of Practice on the Packagir Labelling & Storage of



EIA Reference	Recommended Environmental Protection	Objectives of the recommended measures &	Implementation	Impler Stage	nentat	ion	Implementation Status	Relevant Legislation & Guidelines
	Measures/ Mitigation Measures	main concerns to address	Agent	D	С	0		
								Chemical Wastes published under the Waste Disposal Ordinanc (Cap 354), Section 35
S8.5	Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.	Land site/ During construction	Contractor(s)		~		Implemented, rectified after observation	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)		•		Implemented, rectified after observation	-



EIA Reference	Recommended Environmental Protection	Objectives of the recommended measures &	Implementation	Imple Stage	mentat	ion	Implementation Status	Relevant Legislation & Guidelines
	Measures/ Mitigation Measures	main concerns to address	Agent	D	С	0		
S8.5	Plan and stock construction materials carefully to reduce amount of waste generated and avoid unnecessary generation of waste.	All areas/ During construction	Contractor(s)		√		Implemented	-
S8.5	A Sediment Quality Report (SQR) for sampling and chemical testing of the sediment will be prepared and submitted to the EPD for approval. The approved detailed sampling and chemical testing will be carried out prior to the commencement of the dredging activities to confirm the sediment disposal method.	Marine works/ During construction	Contractor(s)		✓		N/A	ETWB TC(W) No. 34/2002 and Dumping at Sea Ordinance (DASO)
S8.5	The management of dredged/ excavated sediment management requirement from <i>ETWB TC(W) No.</i> <i>34/2002</i> will be incorporated in the Specification of the Contract Documents.	Marine works/ During construction	WSD/ Contractor(s)		•		Implemented	ETWB TC(W) No. 34/2002 and Dumping at Sea Ordinance (DASO)
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
\$8.5	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)/ Environmen tal Team (ET) & Independent Environmen tal Checker (IEC)		✓		Implemented	ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites



EIA Reference	Recommended Environmental Protection	Objectives of the recommended measures &	Implementation	Impler Stage		ion	Implementation Status	Relevant Legislation & Guidelines
	Measures/ Mitigation Measures	main concerns to address	Agent	D	С	0		
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)		1		N/A	-
S8.5	Public fill and construction waste shall be segregated and stored in different containers or skips to facilitate reuse or recycling of materials and their proper disposal.	All area/ During construction	Contractor(s)		•		Implemented	-
S8.5	Specific areas of the work site will be designated for such segregation and storage if immediate use is not practicable.	All area/ During construction	Contractor(s)		-		Implemented	-
S8.5	To reduce the potential dust and water quality impacts of site formation works, C&D materials will be wetted as quickly as possible to the extent practice after filling.	All area/ During construction	Contractor(s)		-		Implemented	Air Pollution Control (Construction Dust) Regulation (Cap 311R); WPCO (Cap 358)
S8.5	Open stockpiles of excavated/ fill materials or construction wastes on-site should be covered with tarpaulin or similar fabric.	Land site/ During Construction, particularly dry season	Contractor(s)		•		Implemented	Air Pollution Control (Construction Dust) Regulation (Cap 311R)
\$8.5	Chemical waste container shall be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed.	All area/ During construction/ During operation	Contractor(s)/ WSD		-	•	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Chemical waste container shall have a capacity of less than 450 L unless the specifications have been approved by the EPD.	All area/ During construction/ During operation	Contractor(s)/ WSD		•	•	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation	Impler Stage	nentat	ion	Implementation Status	Relevant Legislation & Guidelines
			Agent	D	С	0		
S8.5	A label in English and Chinese shall be displayed on the chemical container in accordance with instructions prescribed in Schedule 2 of the Regulations.	All area/ During construction/ During operation	Contractor(s)/ WSD		•	•	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Storage areas for chemical waste shall be enclosed on at least 3 sides.	All area/ During construction/ During operation	Contractor(s)/ WSD		•	✓	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Storage areas for chemical waste shall have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest.	All area/ During construction/ During operation	Contractor(s)/ WSD		•	✓	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Storage areas for chemical waste shall have adequate ventilation.	All area/ During construction/ During operation	Contractor(s)/ WSD		•	•	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
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		•	v	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Storage areas for chemical waste shall be	All area/ During	Contractor(s)/		✓	✓	Implemented	Waste Disposal



EIA Reference	Recommended Environmental Protection		Implementation	Imple: Stage	mentat	ion	Implementation Status	Relevant Legislation & Guidelines
			Agent	D	С	0	_	
	arranged so that incompatible materials are appropriately separated.	construction/ During operation	WSD					(Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	General refuse will be stored in enclosed bins or compaction units separately from construction and chemical wastes.	All area/ During construction/ During operation	Contractor(s)/ WSD		•	✓	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Adequate number of waste containers will be provided to avoid over-spillage of waste.	All area/ During construction/ During operation	Contractor(s)/ WSD		√	~	Implemented	DEVB TC(W) No. 8/2010 Enhanced Specification for Site Cleanliness and Tidiness.
S8.5	A reputable waste collector will be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimise odour, pest and litter impacts.	All area/ During construction/ During operation	Contractor(s)/ WSD		√	•	N/A	-
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	All facilities/ During construction	ET/ IEC		•		Implemented	-



E	IA Reference	Recommended Environmental Protection	Objectives of the recommended measures &	Implementation	Implen Stage	nentati		Implementation Status	Relevant Legislation & Guidelines
		Measures/ Milligation Measures	main concerns to address	Agent	D	С	0		Guidennes
		programme will be implemented throughout							
		the construction phase.							

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



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures &	Implementation	Impler Stage	nentat	tion		Relevant Legislation & Guidelines
	weasures/ witigation weasures	main concerns to address	Agent	D	С	0		Guidennes
	Ecology							
S9.7	For slope mitigation works within the Clear Water Bay Country Park, to avoid tree felling and damages to trees, the exact locations of the flexible barrier foundation plates, soil nails and rock dowels can be adjusted during detailed design, and a setback distance from existing trees is recommended to be maintained as far as practical. A detailed specification describing the exact locations of the flexible barrier foundation plates, soil nails and rock dowels will be prepared to illustrate how the setback distance from existing trees would be implemented for tree avoidance.	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)	-	-		Implemented	-
S9.7	Pruning of tree canopies along the alignment of the flexible barriers shall be limited to a minimum.	Slope mitigation works area/ During construction	Contractor(s)		~		Implemented	
S9.7	The alignment of flexible barriers shall be optimized to preserve all species of conservation interest and minimize the impact to the existing vegetation as far as practicable. All individuals of <i>Marsdenia lachnostoma</i> within the slope mitigation areas shall be retained <i>in- situ</i> , by positioning the alignment of flexible barrier at a minimum 1.5m in a radius away from these individuals.	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)	 Image: A start of the start of	*		N/A	-
S9.7 and 9.10	At the detailed design stage prior to the commencement of the slope mitigation works, a vegetation survey shall be carried out at the slope mitigation areas within the Clear Water Bay Country Park to assess the condition and identify the location of each individual of <i>Marsdenia lachnostoma</i> and other flora species of conservation interest that may be directly affected by the construction works.	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)		•		N/A	-
S9.7	Temporary fencing will be installed to fence off	Slope mitigation works	Contractor(s)	1	✓	1	N/A	-



EIA Reference	Recommended Environmental Protection	recommended measures &	Implementation Agent	Impler Stage	nentat	ion	Implementation Status	Relevant Legislation & Guidelines
		main concerns to address	Agent	D	С	0		
	the concerned species either in groups of individually within the works area and in the close proximity to prevent from being damaged and disturbed during construction. A sign identifying the site shall be attached to the fence and flagging tape shall be attached to the individuals to visualize their locations.	area/ During construction						
S9.7 and S9.10	A specification for fencing and demarcating individuals of <i>Marsdenai lachnostoma</i> (or other flora species of conservation interest, if found) adjacent to the proposed alignment of the flexible barriers will be prepared to protect the species.	Slope mitigation works area/ During construction	Contractor(s)		1		N/A	-
S9.7	Induction training shall also be provided to all site personnel in order to brief them on this flora of conservation interest including the locations and their importance.	Slope mitigation works area/ During construction	Contractor(s)		•		N/A	-
S9.7	The resident site supervisory staff will closely monitor the conditions of concerned individuals during construction of flexible barriers in the close proximity.	Slope mitigation works area/ During construction	Contractor(s)		•		N/A	-
S9.7	Erect fences along the boundary of the works area before the commencement of works to prevent vehicle movements and encroachment of personnel onto adjacent areas.	All area/ During construction	Contractor(s)		•		Implemented	-
S9.7	Regularly check the work site boundaries to ensure that they are not breached and that damage does not occur to surrounding areas.	All area/ During construction	Contractor(s)/ Environmental Team (ET)		•		Implemented	-
S9.7	Avoid any damage and disturbance, particularly those caused by filling and illegal dumping, to the surrounding habitats through proper management of waste disposal.	All area/ During construction	Contractor(s)		-		Implemented	-



EIA Reference	Recommended Environmental Protection	main concerns to address	Implementation	Implementation Stage			Implementation Status	Relevant Legislation & Guidelines
				D	С	0		Guidennes
S9.7	Reinstate temporarily affected areas, particularly the habitats of plantation and shrubland-grassland immediately after completion of construction works, through on- site tree/shrub planting. The tree/shrub species will be chosen with reference to those in the surrounding area.	All area/ During construction	Contractor(s)		•		N/A	-
S9.7	Affected habitats within the Clear Water Bay Country Bay shall be reinstated by hydro-seeding and planting of climbers and native shrub seedlings where practical upon completion of the slope mitigation works.		Contractor(s)		•		N/A	-

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



EIA Reference	Recommended Environmental Protection	Objectives of the recommended measures &	Implementation	Imple Stage	mentat	ion		ⁿ Relevant Legislation & Guidelines
	Measures/ Mitigation Measures	main concerns to address	Agent	D	С	0		
	Landscape & Visual	•						
S11.10 & 11.11	The construction area and area allowed for temporary structures, such as the contractor's office, will be minimized to a practical minimum. (MM1)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	•	•	~	Implemented	-
S11.10 & 11.11	At the detailed design stage, the design team will seek to minimize the landscape footprint of the Project and above ground facilities, while satisfying all other requirements. (MM2)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	√	√	Implemented	-
S11.10 & 11.11	Design principles will be adopted to take into account the surrounding area, particularly Clear Water Bay Country Park behind and the nearby waterfront, with due consideration given to: - green roofs where practical (ie without equipment on the roof); - roadside planting; - aesthetic treatment of all structures; - vertical greening; screen planting along application site; and - landscape enhancement with amenity planting where practical including planting along the edge (site boundary) fence with native shrubs where feasible, - to reduce their visual impact and blend them into the surrounding landscape. (MM3)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	×	×	•	Implemented	-
S11.10 & 11.11	All trees within the Project Site or the potential slope mitigation works area will be carefully protected during construction according to DEVB TCW No. 10/2013 – Tree Preservation (MM4)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	•	✓	✓ 	Implemented	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	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	▲	•		Implemented	DEVB TC(W) No. 10/2013



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures &	Implementation	Imple Stage	mentat	ion		Relevant Legislation &
		main concerns to address	Agent ss	D	С	0		Guidelines
	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)							
S11.10 & 11.11	Any slope mitigation works necessary to address natural terrain hazards, will be minimized to minimize any potential environmental impact to the Country Park e.g. soil nailing and rock stabilization will aim to avoid existing trees e.g. should any restoration of vegetation be necessary, the best planting matrix with native species will be established, with the aim of resembling the existing vegetation. (MM6)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	•		-	N/A	
S11.10 & 11.11	Dredging works for the installation of intake structures and outfall diffusers should be minimized to avoid or reduce any potential environmental impacts to as low as reasonably practicable (ALARP). The intake and outfall structures (e.g. intake openings and diffuser heads) will be prefabricated and transferred to site for installation. (MM7)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)				N/A	
S11.10 & 11.11	All night-time lighting will be reduced to a practical minimum both in terms of number of level and will be hooded and directional. (MM8)units and lux level and will be hooded and directional. (MM8)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	•	•	-	Implemented	-

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



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures &	Implementation	Impler Stage	nentat	tion		Relevant Legislation &
		main concerns to address	Agent	D	С	0		Guidelines
	Landfill Gas Hazard					<u> </u>	-	
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	



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address All area/ Detailed design/ During construction/ During operation	Implementation	Imple: Stage	mentat	ion	Implementation Status	Relevant Legislation & Guidelines
			Agent	D	С	0		
S12.7	Monitoring for landfill gas should be undertaken in all excavations, manholes, chambers (particularly during pipe jacking) and any confined spaces through the use of an intrinsically safe portable instrument, appropriately calibrated and capable of measuring the concentrations of methane. carbon dioxide and oxygen.		Contractor(s)	•	•	~	Implemented	
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	All area/ Detailed design/ During construction/ During operation	Contractor(s)	•	•		N/A	



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures &	Implementation	Imple Stage	mentat	ion	Implementation Status	Relevant Legislation & Guidelines
		main concerns to address	Agent	D	С	0		Guideilnes
	pathway for landfill gas and hence grilled metal covers should be used.							
S12.7	It is recommended regular landfill gas monitoring should be carried out at the Incoming Switchgear Room, 132 kV Substation and Chlorine Store (I) and (II). The monitoring frequency will be monthly for the first year of operation. If the monitoring results show no sign of landfill gas migration, reduce the monitoring frequency to once every six months.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	~	~		N/A	
S12.7	The manholes and utility pits within the Project Site and along the fresh water mains. Each manhole/ utility pit should be monitored with two measurements (at mid depth and base). Each measurement should be monitored for a minimum of 10 minutes. A steady reading and peak reading should be recorded at each manhole/ utility pit and for each measurement. The need for venting the manhole/ utility pit and further monitoring will be reviewed after the initial monitoring.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	•	·		Implemented	
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	

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



Appendix D

Impact Monitoring Schedule of the Reporting Month



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Appendix E

Noise Monitoring Equipment Calibration Certificate



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Appendix F

Event/Action Plan for Noise Exceedance



Event and Action Plan for Construction Noise Monitoring

Event	Action									
	ET		IEC		ER		Со	ntractor		
Action Level	1.	Carry out investigation to identify the source and cause of the	1.	Review the analyzed results submitted by the ET	1.	Confirm receipt of Notification of Exceedance in writing	1.	Submit noise mitigation proposals if required, to the IEC and ER		
		complaint/ exceedance(s)	2.	Review the proposed remedial	2.	Require Contractor to propose	2.	Implement noise mitigation		
	2.	Notify IEC, ER, and Contractor and report the results of investigation		measures by the Contractor and advise the ER accordingly		remedial measures for the analysed noise problem		proposals.		
		to the Contractor, ER and the IEC	3.	Supervise the implementation of	3.	Ensure remedial measures are				
	3.	Discuss with the Contractor and IEC for remedial measures required		remedial measures		properly implemented				
	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								



Appendix G

Noise Monitoring Data



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Appendix H

Waste Flow Table



Monthly Summary Waste Flow TableName of Department:WSDContract No. / Works Order No.:13/WSD/16Monthly Summary Waste Flow Table for July 2020

		Actual Quantities of <u>Inert</u> Construction Waste Generated Monthly										
Month	Total Quantity Generated (see Note 4)	Hard Rock and Large Broken Concrete (see Note 3)	Reused in the Contract	Reused in other Projects	Disposed of as Public Fill	Imported Fill (see Note 1)						
	(in '000m ³)	(in '000m ³)	(in '000m ³) (in '000m ³)		(in '000m ³)	(in '000m ³)						
2018	1.157	0.063	0.000	0.000	1.157	0.518						
2019	5.178	0.043	2.211	0.000	2.520	3.200						
Jan 2020	0.151	0.003	0.000	0.000	0.151	0.077						
Feb 2020	0.185	0.000	0.000	0.000	0.185	0.170						
Mar 2020	0.278	0.000	0.000	0.000	0.278	0.201						
Apr 2020	0.492	0.000	0.000	0.000	0.492	0.069						
May 2020	1.294	0.000	0.291	0.000	1.003	0.030						
Sub-total	2.400	0.003	0.291	0.000	2.109	0.547						
Jun 2020	0.945	0.000	0.000	0.000	0.945	0.200						
Jul-2020	0.464	0.006	0.000	0.000	0.464	0.075						
Total for 2020	3.809	0.009	0.291	0.000	3.518	0.822						



	Actual Quantities of <u>Non-inert</u> Construction Waste Generated Monthly									
Month	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. General Refuse disposed at Landfill					
	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)					
2018	0.000	0.417	0.000	0.000	0.139					
2019	0.000	0.062	0.000	0.000	0.102					
Jan 2020	0.000	0.055	0.000	0.000	0.002					
Feb 2020	0.000	0.050	0.000	0.000	0.001					
Mar 2020	0.000	0.052	0.000	0.000	0.001					
April 2020	0.000	0.043	0.000	0.000	0.002					
May 2020	0.000	0.058	0.000	0.000	0.020					
Sub-total	0.000	0.258	0.000	0.000	0.026					
Jun-2020	0.000	0.057	0.000	0.000	0.003					
Jul-2020	0.000	0.050	0.000	0.000	0.001					
ļ ļ										
Total for 2020	0.000	0.365	0.000	0.000	0.030					

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. Plastic refer to plastic bottles/containers, plastic sheets/foam from packaging materials.

3. Broken concrete for recycling into aggregate.



- 4. "Total Quantity Generated" only refers to the actual quantities of inert C&D materials generated monthly excluding those that will be recycled (Hard Rock and Large Broken Concrete, Reused in the Contract, Reused in other Projects). Imported fill will not be included in "Total Quantity Generated" as those C&D materials are not generated from this project.
- 5. C&D materials in tonnes are converted to meter cube (m^3) on a scale of 0.5.
- 6. Source and types of Imported Fill in the reporting month
 - i. K. Wah Quarry Company Limited: (Soil) 50.435 m³ (100.87 tonnes/4 cars)
 - ii. K. Wah Quarry Company Limited: (Sub-base) 25.31 m³ (50.62 tonnes/2 cars)

7.	The amount of Hard Rock and Large	Broken Concrete are disp	posed to public fill, the brea	akdown of C&D materials disp	oosed to public fill is shown as below:

Type of C&D Materials	Description of C&D Materials	C&D Waste Disp osed (Volume) (m ³)
	Bentonite	
	Broken Concrete	5.9
	Broken Rock	
	Mixed Construction Waste (>50% inert)	373.25
In out	Building Debris	
Inert	Mixed Rock and Soil	
	Reclaimed Asphalt Pavement	75.35
	Slurry	
	Soil	9.75
	TOTAL =	464.25
Non-inert		1.30



Appendix I

Landfill Gas Equipment Certificate

Monitoring Calibration





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

		_		
Customer: Penta-Ocear	1 Construction Co., Ltd	Serial # : 181-14		QRAE II
		Firmware : V3.5		LEL/02/CO/H2S
		Cal date : 29-Aug-	2019 Inspected:	Teddy
SENSOR DATA :		1	-2	
				1
Calibration dates:	LEL sensor (ME)	O2 sensor	CO sensor (Tox1)	H2S sensor (Tox2)
After Calibration levels	29-Aug-2019 50%	29-Aug-2019	29-Aug-2019	29-Aug-2019
larm levels (Low):	10.00%	18.00%	50 ppm	10.2 ppm
larm levels (High):	20.00%		35 ppm	10 ppm
WA Level:	20.00%	23.50%	200 ppm	20 ppm
STEL Level :			35 ppm	10 ppm
		== J	100 ppm	15 ppm
Status;				80 Be
ump Speed	Low	Back Light	Manual	1
lock	Yes	Measure	Average	1
				1
EL Gas Selection				
LEL Calibration Gas	Methane	LEL measurement Gas	Methane	1
	LEL_custom_gas	LEL Custom Factor	1.0	4
EL Custom Gas				

Notes:

The unit was calibrated and checked under good working condition

**Next calibration due on or before 28 August 2020

Serviced by Rotter stornate al Ltd



Appendix J

Landfill Gas Monitoring Data



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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019
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Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Area A	2-7-2020	0830	Fire	0	0	Ŭ	20.9	29/1006	2.5	
	2-7-2020	1330		0	Ð	0	20.9	31/1005	2.5	
	2-7-2020	1700	Fine	0	Û	ŋ	20.9	30/1004	2.5	
Area B	2-7-2020	0星47	Fine	0	C	J)	20.9	29/1006	2.5	
	2-7-2020	1345	Fine	0	C	0	20.9	31/ 1005	2.5	
	2-7-2020	1645	Fine	Û	C	0	20.9	30/ 1004	2.5	
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Name & Designation <u>Signature</u>

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

<u>Date</u>

2-7-2020

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Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

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ENVIRONMENTAL PROTECTION DEPARTMENT



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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
CH.FC 4450	2/7/2020	D82Z	Fine	0	0	0	20.9	を/(の約	2.5	
	2/7/2020	1335	Fire	0	0	ð	20.9	32/1005	2.5	
CH.FC 0790	2/7/2020	09.00	Find	3	0	0	20.4	27/1006	2.5	
	2/7/2020	14 00	E.V.	0	ð	0	20A	- 74 / loos	2.5	
Pitc	2/7/2020	0915	Fire	0	0	0	20.g	27/ 505	2.5	
	2/7/2020	1415	Fire	0	0	0	20.4	32/1005	Z. 5	
197 CHCT 2+66	2/7/2020	0935	Fial	9	0	0	20.9	27/1006	3.\	
	2/7/2020	1435	Fire	e	0	0	20.9	22/ 1004	7.1	
137 Pitc	Z/7/2020	0945	Fiel	3	0	0	20.9	27/1006	3.5	
	2/7/2020	1445	Figt .	0	0	0	20.9	32/ 1004	3.5	
137 173 13	2/7/2020	09,22	Fine	0	0	0	20.9	27/ 1006	i	
	2/7/2020	1425	Fil	0	0	ð	20.4	32/1054	1	
CHA 6+70	2/7/2020	1005	Find	Û	จ	0	20.4	27/1006	3.5	
	217/2020	1202	Fire	0	3	0	20.9	32/ (004	3.5	

Name & Designation Signature Date

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

2/7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

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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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time								
				Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Dopth (m)
CHA 12+50	2/7/2020	1012	1 Ere	9	3	0	20.4	27/1006	0.4	
	2/7/2020	1212	Fire	0	0	0	20.5	31/1004	0.4	
Pit B	2/7/2020	1025	Flax	0	0	. 0	20.4	28/126	6	
	2/7/2020	1525	Enl	0	0	0	2.0.9	3/ 1004	6	
Pit P	2/7/2020	1045	Fire	0	0	C	20.9	29/1005	1.2	
	2/7/2020	1242	Fire	0	6	0	7.0. Å	32/1054	1.2	
								/		
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Name & Designation <u>Signature</u>

Field Operator:

Date 2/7/2020

Eric Mar. (Sub-Agent [RenoPipe])

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Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT

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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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

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Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Area A	3-7-2020	0330	Fine	C	0	0	20.9	28/1008	2.5	
	2-7-2020	1330	Fine	5	0	e	20.5	32/1003	2.5	
	3-7-2020	1700	Fire	J	0	Ð	20.3	28/1007	2.5	
Area B	3-7-2020	0845	Fine	0	0	C	20.9	28/1003	2.5	
	3-7-2020	1345	Fine	0	Q	ð	209	32/1008	2.5	
	3-7-2020	1645	Fire	Ð	0	C	20.9	28/1007	2.S	
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Name & Designation

Field Operator:

<u>Signature</u>

<u>Date</u>

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Eric Man (Sub-Agent [RenoPipe])

3-7-2020 tra

Laboratory Staff:

Checked by:

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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

Name of sile: 13/WSD/16 - Mainiaying in Tseung Kwan O Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
CH.FC 4750	3/7/2020	D822	Fine	0	0	0	20.9	29 / 1003	2.5	
	3/7/2020	1355	Fini	0	0	0	20.9	32/ 1003	2.5	
CH.FC 0+90	3/7/2020	09.00	Fina	0	0	Ð	20.9	23/ 1008	2.5	
	3/7/2020	1400	Fice	0	Ŵ	0	20.9	32 / loez	2, 5	
Pitc	3/7/2020	0915	Eve	Ð	0	0	20,4	28/ 1008	25	
	3/7/2020	1415	Fine	0	0	C	20.9	31/ long	2.5	
157 CHCT 2466	3/7/2020	0935	F.al	0	0	0	20.9	28/ 1003	5.1	
	3/7/2020	1435	Fine	0	J	0	20.4	2Q/ 100à	5.1	
137 Pitc	3/7/2020	0945	Finl	0	0	0	20.9	28 / 100%	5.5	
	3/7/2020	1445	tive	C	0	0	203	29 / 1003	3.5	
137 Pt B	3/7/2020	09,22	trui	0	0	0	20.9	28/ 1009	1	
	3/7/2020	1455	Fine	e	0	0	20.9	30/ 1003	1	
CHA 6+70	3/7/2020	1002	Ene	C	0	0	20.9	23/1009	3.3	
	317/2020	1262	Fine	0	0	0	20.9	30/1008	3.5	

Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

ure Date

Field Operator:

3/7/2020

Laboratory Staff:

Checked by:

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ENVIRONMENTAL PROTECTION DEPARTMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
CHA 12+50	3/7/2020	10/2	Fire	0	J	0	20.4	21/1009	0.4	
	3/7/2020	1212	Fill	ŋ	C	è	209	29/1008	0.4	
Pit B	3/7/2020	1025	Fice	0	0	0	22.9	27/1019	6	
	3/7/2020	1525	Flag	0	0	0	20.9	27 / 1008	6	
Pit P	3/7/2020	1045	Fish	Û	0	0	2.0.4	27/1009	1.2	
•	3/7/2020	1545	Fire	0	C	0	20.4	27/1008	1.2	
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Name & Designation

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<u>Date</u>

Field Operator:

Eric Man (Sub-Agent [RenoPipe])

3/7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT

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Signature



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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
				Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	4-7-2020	0830	Fire	C	0	0	20.9	29/1010	2.5	
	4-7-2020	1330	Fine	0	0	c	22.9	51/1009	2.5	
	4-7-2020	1700	Fige	Ø	0	ð	2.0-9	30/1007	2.5	
ARAB	4-7-2020	0345	Fire	Ð	0	0	20.9	29/1010	2.5	
,	4-7-2020	1345	Fine	0	0	û	7û. Ŷ	31/1009	2.5	
	4-7-2020	1645	Fine	0	D	0	2-0-9	30/1007	2.5	
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Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

4-7-2020

Field Operator:

Date

13

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
CH.FC 4450	4/7/2020	2280	Fine	0	0	0	209	29/1010	2.5	
	4/7/2020	1355	FILE	0	0	0	21.9	32/ 1009	2.5	
CH. FC 0+90	4/7/2020	0900	Fil	0	0	0	20.9	29/1010	2.5	
	4/7/2020	1400	Fige	0	0	9	209	32/1002	2.5	
Pit c	4/7/2020	0915	Field	0	0	0	20.9	29/1010	2.5	
	4/7/2020	1415	ELAR	0	0	0	209	32/ look	2.5	
137 CHCT 2466	4/7/2020	0935	Fine	0	Ű	0	20.9	30 / 1010	3.	
	4/7/2020	1435	Fire	Ũ	C	0	29.9	-52 / loog	5.1	
137 Pite	4/7/2020	0945	Fine	Q	C	0	20.9	30/1009	7. Y	
	4/7/2020	1445	Fiar	0	0	Ð	20.9	32/1002	3.5	
137 欣日	4/7/2020	0922	Fine	G	0	0	20.9	30/1009	\	
	417/2010	1455	Fine	3	0	Ô	229	31/ 008	1	
CHA 6+70	4/7/2020	1002	Fire	0	Q	0	20.9	31 / 1009	7 .3	
	4/7/2020	1202	Figh	0	0	0	20.9	51/1008	3.5	

Name & Designation <u>Signature</u>

<u>Date</u> 4/7/2020

Field Operator: Eric Man (Sub-Agent [RenoPipe])

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time			Monitoring v	vells / Surface C	las Emission		
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
CHA 12+50	4/7/2020	1012	File	0	0	C	20.9	31/1009	0.4
	4/7/2020	1212	Fiaz	0	0	0	2.0.9	15/1008	0.4
Pit B	4/7/2020	1025	Flas	0	0	Û	2.14	31/1009	6
	4/7/2020	525	Fise	0	C	0	20.ÿ	28 / 100%	6
Pit P	4/7/2020	1045	Finl	0	Ĉ	0	22.5	71/1004	1.2
	417/2020	1242	Fial	00	0	c	20.9	28/ 1008	1.2
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Name & Designation

Field Operator:

Eric Man (Sub-Agent [RenoPipe])

<u>Date</u> 4 / 7 / 2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESCURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT

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Signature

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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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

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Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
AreaA	6-7-2020	0230	Fine	0	0	0	20.9	30/1008	Z.¥	
	6-7-2020	1330	Fine	0	0	Ð	20.9	32/107	2.5	
	6 - 7 - 2020		Fial	0	0	٥ ٥	20.9	31/1006	2.5	
ATEN B	6 - 7 - 2020	0845	Fine	ð	0	0	20.9	30 / 1002	2.5	
	6 - 7 - 2020	1345	Fine	0	. 0	0	2.3	22/1007	2.5	
	6-7-2020	1645	Finl	0	Q	0	20.9	31/1006	2.5	
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								<u> </u>		

Name & Designation

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

<u>Signature</u> <u>Date</u>

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6-7-2020

Laboratory Staff:

Checked by:

ÉNVIRONMENTAL RESOURCES MANAGEMENT

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019
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ENVIRONMENTAL FROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
(H.FC 4+50	6/7/2020	0822	Fine	0	C	0	202	30/1008	2.5	
	6/7/2020	1355	Fink	0	c	0	2.9,6	32/1057	2.5	
CH.FC 0790	6/7/2020	09.00	Flax	ð	0	0	20.9	30 / 1003	2.5	
	6/7/2020	1400	Flat	0	0	. 0	20.4	32/1007	2.5	
Pit c	6/7/2020	0915	Fine	0	0	0	20.9	30 / 1008	4	
	6/7/2020	1415	Fink	Û	0	0	209	32/ 1007	4	
137 CHCT 2+66	6/7/2020	0935	Fiz	0	0	0	20.3	29 / (00)	3.1	
	6/7/2020	1435	Fas	0	: 0	0	2e.Ŷ	32/1007	3.1	
137 Pitc	6/7/2020	0995	Fiak	0	. C	0	20.3	29 / 1008	3. Y	
	6/7/2020	1445	Eak	0	0	3	20.9	31/1007	3.5	
137 196 13	6/7/2020	0935	Fire	0	0	0	20.9	24 / 1005		
	617/200	1455	Fill	9	0	0	20.9	31 / 1007	1	
CHA 6+70	6/7/2020	2001	Fiae	: 0	c	0	20.9	30 / 1008	7 Y	
	617/2020	1202	Fine	: 0	0	0	20.9	29/1007	3.5	

Name & Designation Signature

Field Operator: Eric Man (Sub-Agent [RenoPipe])

<u>Date</u> 6/7/2020

rivid operator.

Laboratory Staff:

Checked by:

Invironmental Resources Management

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time			Monitoring w	vells / Surface G	as Emission		
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
CHA 12+50	6/7/2020	1012	File	¢	0	0	22.9	70 / 100%	0.4
_	6/7/2020	1212	Fire	0	Ø	0	20.3	30/1001	0.4
Pit B	6/7/2020	1025	Flat	0	0	0	20.9	50 / 100g	6
	6/7/2020	(225	Fise	C	3	0	20.9	30 / 1001	6
Pit P	6/7/2020	1045	7:2	C	0	0	20.9	30 / 100%	1.2
	61712020	1242	Fire	Ĵ	¢	0	20.9	31/1007	1.2
				· · · · · · · · · · · · · · · · · · ·				1	
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Signature

Name & Designation

Field Operator:

Date

Eric Man (Sub-Agent [RenoPipe])

617/2020

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Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
		Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
7-7-2020	0 2 70	Fine	0	0	0	20.9	30/1010	2.×
7-7-2920	1330	Fine	Ð	0	0	20.9	32/ (204	2.3
7-7-020	1700	Fine	0	0	0	20.9	30 / 1008	Z.Y
7-7-2020	0845	Fine	0	0	0	20.9	30 / (010	2.5
7-7-2020	1348	Fire	0	Э	9	20.9	32/1004	Z.S
ערשב- ד- ד	1645	_ Fine	<u>م</u>	0	0	229	30/ (00 <u>%</u>	Z.Y
						-	/	
		<u></u>					/	
			-				1	
-	-7-2020 2202-7-7 2202-7-7 2020 7-7-2020	$7 - 7 - 2020 \qquad 0 & 3c \\ 7 - 7 - 2020 \qquad 1.350 \\ 7 - 7 - 2020 \qquad 1.700 \\ 7 - 7 - 2020 \qquad 0 & 84x \\ 7 - 7 - 2020 \qquad 0 & 84x \\ 7 - 7 - 2020 \qquad 1.34x \\ 7 - 7 - 2020 \qquad $	Weather condition $7 - 7 - 2020$ 0 & 30 $7 - 7 - 2020$ 1 350 $7 - 7 - 2020$ 1 350 $7 - 7 - 2020$ 1 350 $7 - 7 - 2020$ 1 350 $7 - 7 - 2020$ 1 360 $7 - 7 - 2020$ 0 847 $7 - 7 - 2020$ 1 344	Weather condition Balance gas (%) $7 - 7 - 2920$ 0 \$ \$ 30 Fine 0 $7 - 7 - 2920$ 1 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Weather condition Balance gas (%) Flammable gas (methane %) Carbon monxide(%) $7 - 7 - 2920$ 0 \$30 Fine 0 0 0 $7 - 7 - 2920$ 1350 Fine 0 0 0 $7 - 7 - 2920$ 1350 Fine 0 0 0 $7 - 7 - 2920$ 0 \$847 Fine 0 0 0 $7 - 7 - 2920$ 0 \$847 Fine 0 0 0 $7 - 7 - 2920$ 0 \$847 Fine 0 0 0 $7 - 7 - 2920$ 1747 Fine 0 0 0 $7 - 7 - 2920$ 1545 Fine 0 0 0 $7 - 7 - 2920$ 1545 Fine 0 0 0 $7 - 7 - 2920$ 1545 Fine 0 0 0	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Weather condition Balance gas (%) Flammable gas (methane %) Carbon monoxide(%) Oxygen (%) Temp (*C) / Pressure (mbar) $7 - 7 - 2^{020}$ 0 \$ 30 Fine 0 0 0 20.4 30 / 1010 $7 - 7 - 2^{020}$ 1350 Fine 0 0 0 20.4 30 / 1020 $7 - 7 - 2^{020}$ 1350 Fine 0 0 0 22.4 31 / 1020 $7 - 7 - 2^{020}$ 1350 Fine 0 0 0 22.4 32 / 1020 $7 - 7 - 2^{020}$ 1342 0 0 0 22.4 32 / 1020 $7 - 7 - 2^{020}$ 1344 Fine 0 0 22.4 32 / 1020 $7 - 7 - 2^{020}$ 1344 Fine 0 0 22.4 32 / 1020 $7 - 7 - 2^{020}$ 1344 Fine 0 0 0 22.4 32 / 1020 $7 - 7 - 2^{020}$ 1344 Fine 0 0 0 22.4 32 / 1020 $7 - $

Name & Designation <u>Signature</u>

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

Date

7-7-2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

13



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
(H.FC 4+50	7/7/2020	0855	Fine	0	0	0	20.3	31/ (010	2.5	
	2/7/2020	1335	Fire	0	Ù	0	22.9	32/ 1004	2.5	
CH FC 0790	7/7/2020	04.00	FILL	0	0	0	20.9	31 / 1010	2.5	
	7/7/2020	1400	Fike	0	Q	0	20.9	32/1059	2.5	
Pit C	7/7/2020	0915	Fine	0	0	0	20.9	31/1010	4	
	7/7/2020	1415	Fine	0	0	0	20.9	29/1009	4	
137 CHCT 2466	7/7/2020	0935	Fran	c	0	0	20.9	31/1010	2)	
	7/7/2020	1435	Fiak	0	0	¢	204	30 / 1009	3.1	
137 Pitc	7/7/2020	0995	Figl	9	0	0	204	31/1010	7.Y	
	7/7/2020	1445	Fine	0	0	0	20.9	30 / 1008	4 y	
137 Pt B	7/7/2020	2290	Figz	0	ĉ	0	20.9	31/100	1	
	7/7/2020	1455	Fiaz	0	0	0	20.9	30/1002	í (
CHA 6+70	7/7/2020	2001	File	0	0	c	22.9	31/1010	4.5	
	7/7/2020	1202	Fine	0	0	0	20.9	30/1003	3.5	

Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

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Field Operator:

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
CHA 12+50	7/7/2020	1012	Finz	0	0	0	20.9	31/1010	0.4	
	7/7/2020	1212	Fine	0	0	0	20.3	30/ 1008	0.4	
Pit B	2/17/2020	1025	FILZ	0	0	0	20.9	31/1010	6	
	7/7/2020	1252	Fire	0	0	0	20.9	30/1008	6	
Pit P	000/7/1	045	Fine	0	ß	4	Z.a.q	31/1010	1.2	
	000 TTT	1242	Fine	8	9	0	20.4	20/1008	1.2	
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Name & Designation Signature

Field Operator:

Eric Man (Sub-Agent [RenoPipe])

<u>Date</u> 7/7/2020

Laboratory Staff:

Checked by:

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ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019
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Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Area A	8-7-2020	0230	Fine	0	0	0	20.3	29/1008	2.5	
	8-7-200	1330	Fine	0	0	v	20.3	31/1007	2.5	
	x - 1 - zivi	00 (7)	Fine	0	0	0	20.9	30/ 1005	2.5	
Area B	8-7-2020	0245	Fine	0	0	0	20.2	24 / 1008	2.5	
	8 - 7 - 2022	745	Fine	0	0	0	20.9	31/1007	2.5	
	3-7-200	1645	E'ne	0	0	0	20.9	30/1005	2.5	
				-				<u> </u>		
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Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

Date

8-7-2020

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Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

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

Sampling equipment used:	Dates calibrated				
PGM-2400P (QRAE II)	29 Aug 2019				

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
(H.FC 4+50	8/7/2020	2280	Fire	0	0	0	22.9	30/ 100%	2.5	
	8/7/2020	1355	Fine	C	0	0	203	31/ 1007	2.5	
CH FC 0790	8/7/2020	09.00	Finl	с	0	0	209	30/1008	2.5	
	3/7/2020	1900	Fine	0	0	0	20-9	31/1007	2.5	
Pitc	8/7/2020	0915	たい	Ð	0	0	20.9	30/1008	4	
	8/7/2020	1415	Flad	0	0	0	229	30/ 1006	4	
137 CHCT 2766	\$/7/2020	0935	Fire	ú	0	Ð	20.9	30 / 1008	3.1	
	8/7/2020	1435	File	0	0	0	204	31/1006	5,1	
137 PitC	3/7/2020	0995	Fine	0	Ð	0	22.9	30 / 1028	3.5	
	\$/7/2020	1445	1 Fre	0	0	จ	20-3	51/1006	3.X	
137 Pt B	817/2020	0922	Fine	¢	0	0	204	30/ 1008	1	
	8/7/2020	1455	Fire	0	0	0	20.4	71/1006	1	
CHA 6+70	8/7/2020	1005	Fine	0	0	0	209	30/1008	4 N	
	3/7/2020	1202	Fine	5	0	a	20.9	71/1000	3.5	

Name & Designation Signature

Field Operator: Eric Man (Sub-Agent [RenoPipe]) <u>Date</u> 8/7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

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Name of site:

Date of measurement:



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

13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
		Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
8/7/2020	1012	Fine	0	0	0	20.9	30/1002	0.4	
3/7/2020	1212	Find	t	0	0	209		0.4	
3/7/2020	1025	Fill	0	0	3	20.9	30/1002	6	
	1222	Fil	0	0	0	20.9	71/1006	6	
	1045	Fine	0	0	Ū.	20.9	30/ 00%	1.2	
317/2020	1242	Find	0	0	<u>э</u>	70.9	31/ 1006	1.2	
							/		
							/		
	<u> </u>								
	measurement <u> §/7/2019 </u> <u> §/7/2019 </u> <u> §/7/2010</u>	measurement time \$/7/2020 10 5 \$/7/2020 1515 \$/7/2020 1025 \$/7/2020 1525 \$/7/2020 1525 \$/7/2020 1045	measurement time Weather condition §/7/2020 1015 F:w §/7/2020 1515 F:w §/7/2020 1515 F:w §/7/2020 1525 F:w §/7/2020 1525 F:w §/7/2020 1525 F:w §/7/2020 1525 F:w	measurement time Weather condition Balance gas (%) $\$/7/2020$ 1015 $F:nt$ 0 $\$/7/2020$ 1515 $F:nt$ 0 $\$/7/2020$ 1515 $F:nt$ 0 $\$/7/2020$ 1525 $F:nt$ 0 $\$/7/2020$ 1525 $F:nt$ 0 $\$/7/2020$ 1525 $F:nt$ 0	measurementtimeWeather conditionBalance gas (%)Flammable gas (methane %) $\$/7/2010$ $10 $$ $F:$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$	measurement time Weather condition Balance gas (%) Flammable gas (methane %) Carbon monoxide(%) $\$/7/2020$ 1015 Frak 0 <td>measurement time Weather condition Balance gas (%) Flammable gas (methane %) Carbon monoxide(%) Oxygen (%) $\\$/7/2020$ 1015 F:$*$ 0 0 0 22.9 $\\$/7/2020$ 1015 F:$*$ 0 0 0 22.9 $\\$/7/2020$ 1015 F:$*$ 0 0 0 22.9 $\$\$/7/2020$ 1025 F:$*$ 0 0 0 22.9</td> <td>$\begin{array}{c c c c c c c c c c c c c c c c c c c$</td>	measurement time Weather condition Balance gas (%) Flammable gas (methane %) Carbon monoxide(%) Oxygen (%) $\$/7/2020$ 1015 F: $*$ 0 0 0 22.9 $\$/7/2020$ 1015 F: $*$ 0 0 0 22.9 $\$/7/2020$ 1015 F: $*$ 0 0 0 22.9 $$$/7/2020$ 1025 F: $*$ 0 0 0 22.9	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	

Name & Designation

gnation <u>Signature</u>

Eric Man (Sub-Agent [RenoPipe])

8/7/2020

Date

Field Operator: Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

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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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)		
ATEA A	9-7-2020	0830	Fire	0	Û	0	20.9	30/1004	2.5	
	9-7-2020	1330	Fine	0	0	0	20.9	31/1003	2.5	
	9-7-2020	1700	Fine	0	0	0	20.9	30/1003	2.5	
Atea B	9-7-2620	0845	File	0	0	0	20.3	30 / 1004	2.5	
	9-7-2020	1345	Fine	0	0	0	29.9	31/1003	2.5	
	9-7-22	<u> 64</u> Y	Fine	0	0	0	20.3	30/ 1003	2.5	
			}					<u> </u>		
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Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

Date

9-7-2020

13

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



Dates calibrated

ENVIRONMENTAL PROTECTION DEPARTMENT

29 Aug 2019

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:
Date of measurement:	PGM-2400P (QRAE II)

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
(H.FC 4+50	9/7/2020	0822	Ene	0	C	ů	20.9	30/1004	2.5	
	9/7/2020	1355	Fine	0	0	C	209	31/1003	2.5	
CH. FC 0+90	9/7/2020	09.00	Fine	0	0	0	20.9	30 / 1004	2,5	
	9/7/2020	1400	Fire	0	0	0	20.9	37 / 1003	2.5	
Pit C	9/7/2020	0915	Fire	0	0	0	20.9	30/1204	4	
	9/7/2020	1415	Fire	0	0	0	20.9	51/1003	Ľų.	
137 CHCT 2466		0935	Figh	0	0	0	20.9	30/1004	3.1	
	9/7/2020	1435	Fire	0	0	0	20.9	31/1205	3, \	
137 Pit (9/7/2020	0995	Fire	0	Û	0	20.9	30/1004	Z-Y	
	9/7/2020	1445	Fiel	0	0	0	20.9	31/1005	3.5	
137 Pt B	9/7/2020	2260	Five	0	0	0	20.9	30/1004		
	9171-2020	1455		0	C	Ċ	209	31/1004	1	
CHA 6+70	9/7/2020	2001	Fig2	0	0	0	20.9	30 / 1004	<i>3.</i> r	
	91712020	1202	Enc	0	0	0	20.9	31/1004	3.5	

Name & Designation Signature

Field Operator: Eric Man (Sub-Agent [RenoPipe]) Date 9/7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-240CP (QRAE !!)	29 Aug 2019

Sample location	Date of measurement	Sampling time			Monitoring w	vells / Surface C	as Emission		
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
CHÀ 12+50	9/7/2020	1015	Fine	0	0	0	20.3	30/1004	0.4
	9/7/2020	1212	Fire	0	3	0	20.3	30/1007	0.4
Pit B	917/2020	1025	Fine	Ó	0	0	20.9	30/1004	6
	9/7/2020	1525	ENS	0	0	0	20.9	30 / 1003	6
Pit P	9/7/2020	1045	F.NC	Ŷ	6	0	209	30 / 1004	1.2
	917/2020	1242	Fire	0	0	C	20.4	30/1003	1.2
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<u> </u>								- /	
			~					/	
	-							. <i> </i>	
								///////////////////////////////////////	- <u></u>

Name & Designation

Signature <u>Date</u>

Field Operator:

Eric Man (Sub-Agent [RenoPipe])

917/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Acre A	10-7-2020	0 830	Fine	6	0	0	22.9	29/1006	2.Y	
	10-7-2020	1530	Fine	0	D	0	20.9	31/1007	2.5	
	10-7-2020		Fire	0	D	0	22.9	30/1005	2.8	
Atea B	10-7-2020	0845	Fine	Ð	Ů	0	20.9	29/1006	25	
	10-7-2020	1345	Fine	0	0	ব	20.3	31/1007	2.5	
	10 -7 - 2020	1645	Fine	0	0	0	20.4	30/1005	2.5	
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Name & Designation

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

Signature <u>Date</u>

10-7-2020 te-

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission								
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
(H.Fi 4+50	10/7/2020	0855	Fine	0	0	0	20.9	2/1006	2.5		
	10/7/2020	1355	Fine	0	0	Ð	20.9	31/1007	25		
CH FC 0490	10/7/2020	09.00	Fire	0	0	0	209	27/10:6	2.5		
	10/7/2020	1400	Eive	0	0	0	20.9	51/1007	2.5		
Pit C	10/7/2020	0915	Fine) 0	0	0	20.9	29 / 1006	4		
	10/7/2020	1415	Fine	D I	0	0	20.0	31/1006	4		
137 CHCT 2466	10/7/2020	0935	ting	ð	0	0	20.9	24/1006	3.1		
	10/7/2020	1435	1 Line	0	0	0	20.9	71/1000	3.1		
137 Pitc	10/7/2020	<i>ወ</i> ባትኝ	Fine	0	0	Û	20.9	30/1006	3.5		
	10/7/2020	1445	Fine	Û	0	C	20.4	31/1000	7.5		
137 Pt B	10/7/2020	09,22	Fine	G	0	0	20.9	30 / 1006	1		
	10/7/2020	1422	Fire	0	0	0	20.9	31/100	1		
CHA 6+70	10/7/2020	1005	Fire	0	0	0	20.9	30 / 1006	<u>ኡ</u> γ		
	10/7/2020	1202	Fine	L O	0	0	20.9	31/1006	3.5		

Name & Designation Signature

Eric Man (Sub-Agent [RenoFipe])

ure Date

Field Operator:

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Laboratory Staff:

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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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
CHA 12+50	10/7/2020	1012	Fire	0	0	0	20.8	30 / 1006	0.4	
	10/7/2020	1212	Fine	Û	0	0	20.9	30 / 1006	p.4	
Pit B	10/7/2020	1025	Fire	0	0	O	20.9	30 / 100%	6	
	10/7/2020	1525	Find	0	0	0	22.9	30 / 1006	6	
Pit P	10/7/2020	1045	Fial	Û	0	. 0	22.9	30/1006	1.2	
	10/7/2020	1242	Fine	0	0	0	20.9	30/1006	1.2	
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Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

<u>Date</u> 10/7/2020

Field Operator:

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	
Area A	11-7-2020	0830	Fine	0	0	0	20.9	30/ 1083	2.5
	11-7-2020	1330	Fine	0	9	0	20.9	31/ 1007	2.5
	11-7-2020	1700	Fine	0	0	0	20.9	30/ 1000	2.5
ARA B	11-7-2020	0847	Fine	0	0	Ũ	20.9	30/ 1008	2.5
	11-7-2020	1345	Fine	0	0	Û	20.9	51/1007	2.5
	11-7-2020	1645	Fine	00	0	3	20.9	30/ 1005	2.5
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Name & Designation Signature

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Eric Man (Sub-Agent [RenoPipe])

Field Operator:

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Laboratory Staff:

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ENVIRONMENTAL RESOURCES MANAGEMENT

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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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
CH.FC 4+50	11/7/2020	0822	FIRE	0	0	C	20.9	32 / 1008	2.5
	11/7/2020	1355	Fiat	0	0	0	2.0.5	30/1007	2.5
CH.FC 0+90	11/7/2020	09.00	Fire	0	0	0	20.4	30 / 100%	2.5
	11/7/2020	14 ov	Fick	0	Û	0	25-9	30/1007	2.5
Pitc	11/7/2020	0915	Fixe	0	0	0	20.3	30/1008	4
	11/7/2020	1415	Fin	Û	0	Ø	23.1	30 / 1007	ų
137 CHCT 2466	11/7/2020	0935	Fiel	0	0	3	20.9	30 / 202	3.1
	11/7/2020	1435	Fine	0	0	0	20.9	30/1006	3.1
137 PitC	11/7/2020	0995	Fine	0	0	0	22.9	31/1003	<u> </u>
	11/7/2020	1445	Fine	Û	0	0	20.9	30/1006	5.5
137 Pt B	11/7/2020	00/22	Fige	0	Q	0	20.3	31/100×	1
	1171-2020	1455	Fine	0	Û	0	20-9	30/ 1005	!
CHA 6+70	11/7/2020	2001	tine_	C	0	0	20.9	31/1003	3.5
	117/2020	1202	Finz	0	0	0	20.9	30/1006	3.8

Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

<u>Date</u>

11/7/2020

Laboratory Staff:

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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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission								
	,	t t	Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
CHA 12+50	11/7/2020	1012	Fire	0	0	0	20.5	31/1008	0.4		
	11/7/2020	1212	Fine	0	0	0	20-9	30/1006	0.4		
Pit B	11/7/2020	1025	Flax	C	C	0	20.9	31/1008	6		
	11/7/2020	1525	Fiai	0	D	0	20.9	31/1006	6		
Pit P	11/7/2020	1045	Fine	0	0	0	20.9	31/ 1008	1.2		
	11/7/2020	1242	Fine	0	3	0	25-9	30/ 1006	1.2		
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Name & Designation

Field Operator:

<u>Date</u>

Eric Man (Sub-Agent [RenoPipe])

11/7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT

13

Signature



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Aces A	13-7-2020	0 370	Fine	0	c	0	20.2	30 / 1000	2-x	
-+:X82N.1:	15-7-2010	1330	FINE	0	0	0	20.9	32-/ 1007	2.5	
	15-7-2020	170.0	Fine	0	0	0	20.9	32/1006	2.5	
Area B	13-7-2020	0345	Fire	0	0	3	20.9	30/1008	2.5	
	13-7-2020	1245	Fire	0	0	0	20.9	32/100-1	2.5	
	13-7-2020	1645	Fine	0	0	0	20.9	32/1000	2.5	
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Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

Date

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13-7-2020

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Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission								
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
CH.FC 4+50	13/7/2020	0855	Fine	0	0	0	20.3	30/1002	25		
	13/7/2020	1355	Fiae	0	0	0	229	32/1007	2.5		
CH.FC 0790	13/7/2020	09.00	Fink	Û	0	0	20.9	30/ 200	2.5		
	15/7/2020	1400	. Fiv	0	0	0	20.9	32/1007	2.5		
Pitc	13/7/2020	0915	Fine	0	0	0	20.4	30/1008	6		
	13/7 (2020	1415	Fal	ð	0	Û	209	32/1007	6		
137 CHCT 2466	13/7/2020	0935	Fire	0))	0	20.5	30/1008	3.1		
	13/7/2020	1435	Fini	0	0	0	22.4	32/1007	5.1		
137 Pitc	13/7/2020	0945	Fill	0	G	G	2.0.9	31/1008	3.Y		
	15/7/2020	1445	Fac	0	0	D	20.9	32/001	3.5		
137 Pt B	13/7/2020	09.82	Fire	C	Û	0	20.9	1/ 1008	1		
	17/7/2020	1435	Five	Q	0	0	20.4	32/1007	11		
CHA 6+70	13/7/2020	2001	File	0	0	0	20.9	31/1008	7. Y		
	13/7/2020	1202	Eige	0	0	0	20.4	32/001	3.5		

Name & Designation Signature

nature Date

Field Operator: Eric Man (Sub-Agent [RenoFipe])

13/7/2020

Laboratory Staff:

Checked by:

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Name of site: 13/WSD//.6 - Mainlaying in Tseung Kwan O Date of measurement:

Sampling equipment used:	Dates calibrated
FGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
CHA 12+50	13/7/2020	1015	Fire	0	0	0	22.9	31/1008	0.4	
	13/7/2020	1212	Fine	0	0	0	22.9	32/ 1007	0.4	
Pit B	13/7/2020	1025	Fine	Ð	0	C	20-9	31/1008	6	
	13/7/2020	(525	Fine	0	0	Û	22.9	32/ 1007	6	
Pit P	13/7/2020	1045	Ene	0	3	0	20.3	31/1008	1.2	
	17/7/2020	1242	Fiai	0	¢	0	20.9	32/ 1007	1.2	
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Name & Designation

Signature

Field Operator:

Eric Man (Sub-Agent [RenoPipe])

<u>Date</u> 13/7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	
HERA A	14-7-2020	0830	Fine	0	ð	0	20.9	30 / 100 2	2.8
	14-7-202	1330	Finh	0	0	0	20.3	33/1026	2.5
	14-7-2020	1700	Fise	0	0	0	20.9	32/1004	2.5
ALPA B	14 -7 - 200	०६५४	Fine	0	0	J	20.9	20 / 1013	2.5
	14-7-2020	1345	Fine	Û	0	0	20.9	33/1006	2.5
	14-7-2220	1645	Fire	0	0	0	20.4	32/1004	2.5
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Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

<u>Date</u>

14-7-2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
(H.FC 4+50	14/7/2020	5280	Finz	0	0	3	20.9	30/1003	2.5	
-	14/7/2020	1355	Fire	0	0	0	20.3	33/ 1006	2.5	
CH FC 0790	14/7/2020	09.00	Fine	0	0	0	20.4	30/ 1003	2.5	
	14/7/2026	1400	End	Ċ	0	U	22.4	35 / (DOX	z. S	
Pitc	14/7/2020	0915	Fine	ş	0	0	20.4	30/1003	6	
	14/7/2020	1415	Find	C	0	Q	20.9	37/ 205	6	
137 CHCT 2466	14/7/2020	0935	1 tine	0	c	0	20.9	30 / 1008	7,1	
	14/7/2020	1435	F:ac	Q	0	0	20.4	35/ 1003	51	
137 PitC	14/7/2020	0995	Fal	٥.	0	0	20.4	30/1003	35	
	14/7/2020	1445	Fine	0	0	0	22.9	33/ 1205	2.5	
137 院日	14/7/2020	0922	Far	0	0	0	20.9	31/ 1008	1	
	14/7/2000	1455	Eak	0	0	Q	20.9	35/ 100X	1	
CHA 6470	14/7/2020	1002	Fine	0	0	0	229	51/1008	3.5	
	14/7/2020	1202	Fine	0	C	0	24.9	37/1005	3.5	

Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe]) Field Operator:

<u>Date</u> 14/7/2020

Laboratory Staff:

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time			Monitoring w	vells / Surface G	as Emission	·	
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
CHA 12+50	14/7/2020	10 5	Fine	0	0	0	20.9	31/1008	0.4
	14/7/2020	1212	Fink	0	0	0	20.9	34/ (005	0.4
Pit B	14/7/2020	1025	FILL	0	0	0	20.3	31/ 1003	6
	14/7/2020	1222	Fine	٥	0	0	22.9	33/ 1004	6
_Pit P	14/7/2020	1045	Fine	0	0	0	2.09	31/ 1002	1.2
	14/7/2020	[242]	Fige	0	0	0	20.4	33/ 1004	1.2
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Name & Designation

Signature

Field Operator:

Eric Man (Sub-Agent [RenoPipe])

<u>Date</u> 14/7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT



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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019
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Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxidc(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Area A	15-1-201	0230	FIRE	0	0	0	20.9	30/:007	2.5	
	15-7-202	1340	FIRE	6	0	0	20.4	32/ 1025	<u>2.</u> x	
	15-7-2020	1700	Fire	0	0	Û	20.9	30/ 1004	2.5	
Aria B	15-7-2020		Fire	C	-j	0	20.9	30/1007	2.5	
	15-7-200	1241	Fine	0	c	0	20.9	32/100%	2.5	
	15-7-2020	1645	Finl	0	0	0	20-9	30/1004	2.5	
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Name & Designation <u>Signature</u>

Field Operator:

Date

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15-7-2020

Eric Man (Sub-Agent [RenoPipe])

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

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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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
(H.FC 4+50	15/7/2020	0855	Fine	0	0	C	20.9	20 / 1007	1. x	
	15/7/2020	1335	Fire	0	C	0	20.9	32/ 1008	25	
CH. FC 0790	15/7/2020	0900	F!~L	C	0	0	26.9	30 / 1001	2,5	
	15/7/2020	400	Fige	0	0	0	20.7	32/1007	2.5	
Pitc	15/7/2020	0915	Fire	C	Ŷ	0	20.9	30 / 1001	6	
	15/7/2020	1415	Fine	6	0	Û	20.9	32/ 1005	6	
137 CHCT 2+66	15/7/2020	0935	FIAL	0	0	G	20.2	31/1001	3.1	
	15/7/2020	1435	Fin	C	0	0	20.9	22/ 1005	3.1	
137 PitC	15/7/2020	0945	Fish	C	0	Ø	20.3	31/1007	7.5	
	15/7/2020	1445	Fine	.0	0	0	20.9	32/100×	3.5	
137 Pt B	15/7/2020	0925	Fick	C	C	-0	20.9	31/1007	1	
	1×17/2020	1455	F.or	0	0	0	20,4	22/1005	1	
CHA 6770	15/7/2020	1002	Fire	0	0	0	20.9	31/1051	<u> </u>	
	1517/2020	1202	Fine	0	0	0	22.7	×001/24	3.5	

Name & Designation Signature

ire Date

Field Operator: Eric Man (Sub-Agent [RenoPipe])

15/7/2020

Laboratory Staff:

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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

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

Sampling equipment used:	Dates calibrated
PGM-240CP (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time			Monitoring w	ells / Surface G	as Emission		
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Prossure (mbar)	Remark Depth (m)
CHA 12+50	18/7/2020	1012	Fire	0	0	٥	20.9	51 / 1001	0.4
	18/7/2020	1212	Fing	0	Ð	0	20.9	32/1004	0.4
Pit B	15/7/2020	1025	Fine	0	0	0	20.4	31/1007	6
	15/7/2020	1222	Fise	Q	Ċ	0	22.9	32/ 1005	6
Pit P	15/7/2020	1045	Fine	8	0	Ð	20.4	51/1007	1.2
	15/7/2020	1242	Fink	0	0	۰ ۱	20.9	52/ 1024	1.2
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Name & Designation

Signature Date

Field Operator:

Eric Man (Sub-Agent [RenoPipe])

15/7/2020

Laboratory Staff:

Checked by:

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ENVIRONMENTAL PROTECTION DEPARTMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019
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Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	
Arealt	16-1-20-0	0330	Fine	0	0	0	20.3	24/1007	2.¥
	10-7-20-2	1340	FIRE	0	0	0	20.9	32/1000	2.5
	16-7-2020	1700	Find	0	0	Q	209	32/100%	2.5
Areas	16-7-2020	5845	Fine	0	3	C	20.9	129/1007	2.5
	16-7-2020	1345	Firk	0	C	٥	70.9	32/1005	2.5
	16-7-2020	1645	E M	0	C	O	26.9	32/1005	2.8
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					- <u> </u>			1	1

Name & Designation

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

Date Signature

16-7-2020

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Laboratory Staff:

Checked by:

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ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-24COP (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
(H.FC 4+50	16/7/2020	D822	Fine	0	0	0	20.9	29/1007	2.5	
	10/7/2020	1355	Fins	0	0	0	2 <i>9</i> .9	32/ 1016	2.5	
CH. FC 0790	16/7/2020	09.00	Fine	0	0	C	20.4	24/1007	2.5	
	16/7/2020	1900	Fine	0	0	0	20.9	32/1006	2.5	
Pitc	16/7/2020	0915	Fw	0	0	0	20.9	30/ 1007	b	
	16/7/2020	1415	File	0	0	3	20_9	32/1906	6	
137 CHCT 2466	16/7/2020	0935	Fire	0	Û	0	20.9	30 / 1007	3.1	
	16/7/2020	1435	Fine	0	0	Ó	20.9	32/1006	3.1	
137 PHC	16/7/2020	0995	Fire	J	Û	C	20.3	30 / 1007	7. S	
	16/7/2020	1445	Fine	0	0	0	20.9	32/105b	<i>3.</i> Y	
137 173 137 173 137 173 137 137 137 137	16/7/2020	0922	Fine	ð	0	Ċ	20.9	30 / 1007		
	16/7/2010	1455	Fine	0	0	Ø	20.9	32/1006)	
CHA 6+70	16/7/2020	1005	Eine	0	0	Ð	20.9	30/1007	3.5	
	16/7/2020	1202	Fial	0	C	0	20.4	32/1006	7.Y	

Name & Designation Signature

tor: Eric Man (Sub-Agent [RenoPipe])

<u>Date</u>

Field Operator:

16/7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time			Monitoring w	ells / Surface G	as Emission		
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
CHA 12750	10/7/2020	1015	Five	0	C	0	20.9	31/1007	0.4
	16/7/2020	1212	Fice	0	0	0	20.5	32/ 1006	0.4
Pit B	1617/2020	1025	Fille	0	Ð	0	20.9	31/ 1007	6
	16/7/2020	(222	Fine	0	0	٥	20.9	32/ 100%	6
Pit P	16/7/2020	1045	Fick	0	3	3	20.4	71/1007	1.2
	16/7/2020	1242	Figl	3	0	<u>ŋ</u>	20.9	32/ 1305	1.2
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Name & Designation

nator Er

Eric Man (Sub-Agent [RenoPipe])

<u>Date</u> 16/7/2020

Field Operator:

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT

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Signature



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time	ing Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pier A	17-1-2020	0 230	Fine	. 0	0	0	22.9	29/1039	2.5
	17-7-2026	1340	Fine	0	G	2	20.9	32/1208	2.5
	17 - 7 - 22		Fine	0	0	0	70.3	32/1007	Z, S
Adea B	17-7-220	0245	FINL	0	0	0	20.7	29/1209	2.5
	17 - 7 - 2020		Fine	0	ů	0	229	32/1002	Z.N
	17-7-2020		Ene	0	. 0	0	20.9	32/1007	2,5
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						1		1	

Name & Designation <u>Signature</u>

Eric Man (Sub-Agent [RencPipe])

Field Operator:

Date

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17-7-2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated			
PGM-2400P (QRAE II)	29 Aug 2019			

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Dopth (m)
CH.FC 4450	17/2020	D822	Fire	c	0	0	20.9	24/1009	2.5
	11/7/2020	1335	Fire	0	0	0	20.9	32/ 1003	2.5
CH.FC 0790	17/7/2020	୦୯୦୦	F!v.	0	0	0	20.9	24/1000	2.5
	17/2020	1400	Fire	0	0	0	20.9	32/1003	2.5
Pitc	17/7/2020	0915	Fine	0	0	0	203	24/1004	6
	17/2020	1415	F-Q	0	0	0	20.9	32/ 1001	6
137 CHCT 2466	17/7/2020	0935	Fine	0	0	0	20.9	29/1009	7.1
	17/7/2020	1435	Fire	0	0	0	20.9	32/1007	7.)
137 Pite	2020/1/7/2020	0995	∇_{ijk}	0	0	0	20.9	24/1005	3.5
	17/7/2020	1445	Fish	Q	0	0	20.9	32/1207	3.5
137 院日	17/7/2020	0922	Pint	3	0	C	20.9	29/1009	<u> </u>
	17/7/2020	1422	Fire	0	0	0	20.9	32/ 1007	1
CHA 6+70	17/7/2020	1002	F.V.	0	0	0	209	28/1009	7.Y
	17/7/2020	1202	Fink	0	0	0	205	32/1001	7.γ

Name & Designation Signature Date

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

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17/7/2020



13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
CHA 12+50	17/7/2020	1012	Fine	0	0	0	20.9	29/1000	0.4	
	17/2020	1212	Fire	3	0	0	20.9	32/1007	0.4	
Pit B	17/7/2020	1025	Fire	ð	e	. Q	20.9	30/ 1009	6	
	17/7/2020	1225	Fink	6	C	3	20.4	32/ 257	6	
Pit P	17/2020	1048	Fire	0	0	0	20-9	32/ 1009	1.2	
	17/7/2020	1242	Fine	0	3	0	Z0.4	32/1007	1.2	
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Name & Designation

Field Operator:

Eric Man (Sub-Agent [RenoPipe])

17/7/2020

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Enc Man (Suc-Agent

Date

Laboratory Staff:

Checked by:

Name of site:

Date of measurement:

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT

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Signature



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	18-7-202	0870	Fine	0	0	0	20.5	38/1009	2.3
	18-7-000	1330	Fine	c	¢	c	20.4	32/1008	2.5
	18-7-2020	1700	Fine	0	0	9	20.9	22/1007	2.5
Area B	18-7-2220	0845	Fire	0	0	Q	20.9	30/1009	1.8
	18-7-200		Fini	Ũ	Û	0	20. 7	32/1008	2.N
	13-7-2020	1645	Fine	0	0	0	20.9	32/1007	2.5
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Name & Designation: Eric Man (Sub-Agent [RenoPipe])

Field Operator:

Signature Date 18-7-2020 the

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Landfill Gas Monitoring –Field Measurement Recording Sheet

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	1 4								
			Weather condition	Balance gas (%)	Flammable gas (methanc %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
(H.FC 4750	18/7/2020	D822	Ene	0	0	0	209	32/1004	2.7		
	18/7/2020	1355	Fine	0	0	0	20.3	32/ 190%	2.5		
CH FC 0790	18/7/2020	09.00	Fini	0	0	0	20.9	30/1009	2.5		
	18/7/2020	1400	Fiae	C	0	0	22.7	32/1057	2.5		
Pitc	13/7/2020	0915	Fini	0	0	C	20.9	30/1004	é		
	18/7/2020	1415	Fire	0	C	0	20.3	32/1007	6		
137 CHCT 2+66	18/7/2020	0935	Fine	0	0	0	20.9	30/1009	3.1		
	18/7/2020	1435	Fire	Û	Q	ŝ	20.3	32/1001	3.1		
137 Pitc	18/7/2020	0945	Fink	0	0	Ŭ	20.9	30/1009	7 .Y		
	18/7/2020	1445	Fine	0	0	Ċ	20.7	32/1001	7.5		
137 Pt B	18/7/2020	09ZZ	Hiv	0	Û	0	20.9	3ª / 100 G	1		
	18/7/2020	1455	Fai	0	0	0	20.9	32/1007	<u> </u>		
CHA 6770	18/7/2020	2001	Fire	0	0	0	20.9	30/1009	3. Y		
	18/7/2020	1202	Fine	3	0	0	20.9	32/1007	3.5		

Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

Date

Field Operator:

18/7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-240CP (QRAE I')	29 Aug 2019
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Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
CHA 12+50	13/7/2020	1012	Fiae	0	0	0	20.9	30/1004	0.4	
	18/7/2020	1212	- Ene	0	¢.	U U	209	32/1007	0.4	
Pit B	18/7/2020	1025	قو ت	0	0	C	20.9	30/1004	6	
	18/7/2020	1525	Eins	ŝ	0	0	20.9	32/1001	6	
Pit P	18/7/2020	1045	Fine	0	0	0	20.4	71/1004	1.2	
	18/7/2020	1242	Fin	0	C	0	20.3	34 1007	1.2	
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Name & Designation

Signature

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Field Operator:

Eric Man (Sub-Agent [RenoPipe])

<u>Date</u> 18/7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESCORCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT

Acuity Sustainability Consulting Limited 147



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Rcmark Depth (m)
Area A	20-7-2020	0 8 30	Fine	Û	U	0	20.9	30/1010	2.5
	20 -7 -2020	1730	Fire	0	0	0	20.9	31/1004	2.5
	20 - 7 - 2020	1700	Fine	0	0	9	20.4	51/1002	2.5
Aren B	20-7-202	0845	Fine	Ó	0	0	20.4	3=/1010	2.5
	20-7-2020		Fine	0	0	0	20.9	31/1024	2.S
	20-7-2020	1645	Fine	0	0	0	Z.D. 4	51/1008	2.5
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Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

20 -7- 2020

Field Operator:

Date

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
		1	Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxido(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
(H.FC 4+50	20/7/2020	0835	Fine	0	0	0	203	30/1012	2.5
	20/7/2020	1355	Five	0	C	0	2.2.3	31/1009	2.5
CH FC 0+90	20/7/2020	09.00	Fins	0	0	0	20.9	30 / 1010	2.5
	20/7/2020	1400	Fine	0	0	C	20.9	31/1029	2.5
Pitc	2017/2020	0915	Ehe	0	C	0	20.3	30 / 1010	8
	20/7/2020	1415	Fine	0	0	0	20.9	41/ 1000	<u>š</u>
137 CHCT 2466	20/7/2020	0935	Fine	0	0	-0	20.2	30/10/0	3
	20/7/2020	1435	Ene	0	0	Û	20.9	71/ 1006	Z, \
137 Pitc	20/7/2020	0945	Fine	0	0	0	20.9	30/1010	2.5
	20/7/2020	1445	Fice	0	0	0	20.9	7i/ (209	7.Y
137 院 B	2017/2020	00/22	Fine	0	0	0	20.9	30/1010	1
	2017/2020	1455	File	0	0	0	20.9	31/ 1009	1
CHA 6+70	20/7/2020	2001	Fine	0	0	ð	20.9	30/ (00	፟፟፝፝፝፝፝፝፟፝፝
	2017/2020	1202	Fire	N N	0	0	20.9	51/1009	35

Name & Designation Signature

Signature Date

Field Operator: Eric Man (Sub-Agent [RenoPipe])

20/7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Prossure (mbar)	Remark Depth (m)	
CHA 12+50	20/7/2020	1012	Fink	0	0	0	20.9	30/1012	0.4	
	20/7/2020	1212	FINE	0	0	0	203	51/ 1008	D.4	
Pit B	2017/2020	1025	FIAR	c	0	0	20.9	30/ 1010	6	
	20/7/2020	1525		D	0	3	20-Ŷ	31/1008	6	
Pit P	2020/7/2020	ો૦વઝ		0	0	C	20.9	30/100	1.2	
· · · · · · · · · · · · · · · · · · ·	20/7/2020	1242	Fire	0	0	0	20.9	2001/1005	1, Z_	
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Name & Designation Signature

Field Operator:

Eric Man (Sub-Agent [RenoPipe])

<u>Date</u> 20 [7/2020

Laboratory Staff:

Name of site:

Date of measurement:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
100001011	include control in		Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	21-7-2020	0830	Fine	0	0	0	20 9	30 / 1011	2.5
	21-7-2020	1370	Fink	0	0	0	2.0.9	32/1011	2.5
	21 -7 -2020	1700	Fine	C	0	0	20.3	32/1009	2.5
AreaB	121-7-2020	0845	Fire	0	0	0	20.9	30 / 1011	2.5
	21-7-2020	1345	Fine	0	Ũ	0	22.9	32/1011	2.5
	21-7-2020	1645	Fine	0	Û	0	20.9	32/1009	2.5
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Name & Designation

Eric Man (Sub-Agent [RenoPipe])

<u>Date</u> <u>Signature</u>

Field Operator:

21-7-2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
		:	Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
(H.FC 4+50	21/7/2020	0822	Fire	0	0	0	22.9	38/1012	2.5	
	21/7/2020	1335	Fine	Ø	0	Ð	20.3	32/ 1010	2.5	
CH.FC 0+90	21/7/2020	09.00	Fire	Q	0	Û	20.9	30 / 1012	2.5	
	21/7/2020	1400	E.s.	C	0	0	229	51/1010	2.5	
Pitc	21/7/2020	0915	Find	0	ð	0	20.9	30/1012	8	
	21/7/2020	1415	Fire	Ø	0	đ	20.9	31/1010	8	
137 CHCT 2766	21/7/2020	0935	Fine	ð	0	C	20.9	30 / 101L	7.1	
	21/7/2020	1435	Fine	é	0	C	20.9	31/1010	2,1	
137 Pitc	21/7/2020	0995	Fink	Ð	0	J	205	30 / 1012		
	21/7/2020	1445	Fire	0	0	U	25.9	31/100	3.5	
137 193 13	21/7/2020	0922	Fal	D	Ð	0	20.9	31/1012	1	
	21/7/2020	1455	Fine	ð	0	0	224	32/ 1010	1	
CHA 6770	21/7/2020	1005	Fine	0	0	0	20.9	51/1012	<u>7,</u> Y	
	21/7/2020	1202	Fire	0	0	0	20.9	32/ 101:	3.5	

Name & Designation Signature

Field Operator: Eric Man (Sub-Agent [RenoPipe])

21/7/2020

<u>Date</u>

Laboratory Staff:

Checked by:

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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (CRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
CHA 12750	21/7/2020	10 5	Fire	0	Ð	0	20.9	31/1012	0.4	
	21/7/2020	1212	Fire	6	0	0	2.0.4	3/2/ 1909	0.4	
Pit B	21/7/2020	1025	Fine	0	0	0	2.0.9	31/ 012	6	
	21/7/2020	525	Fire	0	0	G	20-9	22/ 10:9	6	
Pit P	21/7/2020	10495	Fine	0	0	0	20.4	31/ 1012	1.2	
,	21/7/2020	1242	Fine	0	0	0	2-0.9	72/ 1009	1.2	
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Name & Designation

Signature Date

Field Operator:

Eric Man (Sub-Agent [RenoPipe])

21/7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE 1)	29 Aug 2019

Sample location	Date of measurement	Sampling Monitoring wells / Surface Gas Emission time							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Arealt	22-7-2020	0830	Fire	C	0	0	20.9	24/1010	2.5
	22 -7-2020	1330	Fine	0	0	0	20.3	31/ 1004	2.5
	22-7-2020	1700	Fire	0	C	0	20.9	31/1007	2.5
Areas	22-7-2020	0845	Fire	0	0	0	20.9	201/ 1010	2.5
	22-7-2020	13445	Fint	C	0	C	20.9	21/ 1009	2.5
	22-7-2020	1645	Fine	0	0	.0	20.9	31/ 1027	2.5
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Name & Designation

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

Signature <u>Date</u>

22-7-2020

13

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Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT



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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission								
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
(H.FC 4+50	22/7/2020	2280	Fire	0	0	0	20.9	21/1010	2.5		
	22/7/2020	1355	Fine	0	0	Û	20.5	51/1009	2.5		
CH.FC 0790	22/7/2020	09.00	Fini	0	0	0	20.9	27/1010	2.5		
	22/7/2020	1400	Fine	0	0	0	2.0.7	31/1028	2.5		
Pitc	22/7/2020	0915	Fine	0	0	0	20.9	27/1010	3		
	22/7/2020	1415	Fine	c	D	0	20.4	31/1008	<u>š</u>		
157 CHCT 2766	22/7/2020	0935	Fiak	0	0	0	20.9	21/100	3.1		
	22/7/2020	1435	Fine	0	0	0	209	7/1008	7.1		
137 Pitc	22/7/2020	0995	Fine	0	0	0	20.9	21/1010	7.Y		
	22/7/2020	1445	Fine	0	O	0	20.9	31/1008	3.5		
137 17日	22/7/2020	2290	Fal	0	0	0	20,9	21/1010	<u> </u>		
	22/7/2020	1455	Fire	0	0	9	20.9	31/ 100§	<u> </u>		
CHA 6+70	22/7/2020	2001] Fine	0	0	0	20.9	27/1010	43		
	22/7/2020	1202	Fire	0	0	0	20.9	51/10:8	3.5		

Name & Designation Signature

Signature Date

Field Operator: Eric Man (Sub-Agent [RenoPipe])

22/7/2020

Laboratory Staff:

Checked by:

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE !!)	29 Aug 2019

ÉNVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
CHA 12+50	22/7/2020	1012	EAV	0	0	0	20.9	27/1010	0.4	
	22/7/2020	1212	Ene	0	¢	0	20.9	71/1008	0.4	
Pit B	22/7/2020	1025	Fine	3	ŵ	C	20.9	22/10/2	6	
	22/7/2020	1325	Fine	0	c	0	20.9	31/1008	6	
Pit P	22/7/2020	1045	Fine	¢	9	0	20.9	28/10/0	1.2	
	22 17/2020	1242	Fine		0	0	20.9	31/ 1008	1.2	
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Signature

Name & Designation

Field Operator: Eric Mar

Eric Mar. (Sub-Agent [RenoPipe])

<u>Date</u> 22 (7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressurc (mbar)	Remark Depth (m)	
Aren A	23-7-2020	08.70	Fine	0	0	0	20.9	30/1010	2.5	
	23-7-2625		Fine	C	0	0	29.9	33/ 1008	2.5	
	23-7-2020	· · · · · · · · · · · · · · · · · · ·	Fine	0	0	0	20.4	75 / 1007	2.5	
Area B	23-7-2020		Fine	0	0	0	20.9	30/1010	2.5	
	23-7-2020		Fine	0	6	0	20.9	33/1008	2.5	
	29-7-2020		Fine	0	0	C	20.9	33/ 1007	2.5	
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Name & Designation Eric Man (Sub-Agent [RenoPipe])

Field Operator:

Date Signature

23-7-2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (GRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

-		Sampling time	Monitoring wells / Surface Gas Emission								
		Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)			
(H.FC 4+50	23/7/2020	2280	Fire	p	0	0	20.9	30/1010	2.5		
	23/7/2020	1335	Fine	Û	0	0	229	34/ 408	2.5		
CH.FC 0+90	23/7/2020	୦୩ ୦୦	Fire	0	0	0	20.9	30/ 1010	7.5		
	23/7/2020	1400	Fire	0	Û	0	20.9	33/ 1008	2.5		
Pitc	23/7/2020	0915	Fire	0	0	3	20.9	30/10/0	Ś		
	23/7/2020	415	Fire	0	0	0	22.9	74/ 1008	Š		
137 CHCT 2766	23/7/2020	0935	Fisi	Ũ	0	0	20.9	30/1010	3.		
	23/7/2020	1435	Fine	Û	0	0	20.9	33/1028	3,1		
137 Pitc	23/7/2020	0995	Fine	0	0	C	20.9	30/1010	3.Y		
	23/7/2020	<u>। संस</u> र	Figh	0	0	0	20.9	39/ 1208	3.5		
137 Pt. B	23/7/2020	2200	Fine	0	0	0	20.9	30 / 1010	1		
	23/7/2020	1455	Fine	0	0	0	20.9	33/ 1003	1		
CHA 6470	23/7/2020	1002	Flan	0	0	0	20.9	30/1010	<u> </u>		
	23/7/2020	1202	Fat	Û	Ċ	3	20.9	53/100B	55		

Name & Designation Signature

Field Operator: Eric Man (Sub-Agent [RenoPipe])

<u>Date</u>

23/7/2020

Laboratory Staff:

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ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used.	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time			Monitoring w	vells / Surface G	as Emission		
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
TPOI	23/7/2020	1010	Finz	0	0	0	20.9	30/1010	1
	23/7/2020	1210	Fine	0	0	0	229	33/ 100%	1
CHA 12+50	23/7/2020	1015	Fine	9	0	0	20.9	30/ (2)0	0.4
	23/7/2020	1212	Fire	0	0	0	70.9	99/ 1028	0.4
PHB	23/7/2020	1025	Fire	0	0	0	20.9	30/ 1010	6
	27/7/2020	1525	Fine	0	0	0	20.9	33/ 1208	6
Pit P	23/7/2020	1043	Fire	Q	۵.	3	20.9	30/10(0	1,2
	23/7/2020	1545	Eine	0	0		20.9	33/ 1002	i.2
				:	· · · · · · · · · · · · · · · · · · ·			/ /	
						I			<u> </u>

Name & Designation Signature

Field Operator: Eric Man (Sub-Agent [RenoPipe]) Date

23/7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE 1)	29 Aug 2019

Sample location	Date of measurement	Sampling time									
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
Area A	24-7-2020	0 230	Fine	0	0	Û	2.0.9	30/1010	2. S		
	24 -7 - 2020	1330	Fine	0	0	0	20.2	33/1003	2.8		
	24-7-202	17100	Fine	0	0	0	22.9	32/1000	2.5		
Area B	24-7-220	0845	Fine	Û	0	0	20.9	30/ 1010	2.5		
	24-7-2020	1748	Fine	9	0	0	20.9	25/ 1008	2,5		
	24-7-2020	1645	Fine	ô	0	0	20.9	32/ 1006	2.5		
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Name & Designation

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

Signature Date

24 -7- 2020

13

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission								
			Weather condition	Balance gas (%)	Flammable gas (methanc %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m) 2.5 2.5 2.5 2.5 2.5 2.5 2.5 3 3 3 5 1 3 5 1 5,5 5 5		
CH.FC 4+50	24/7/2020	0835	Fiel	0	0	0	20,8	30 / 1010	2.5		
	24/7/2020	1385	Fine	C	0	C	20.9	37/1007	25		
CH.FC 0790		09.00	Fink	0	2	9	20.3	30/1010	2.5		
	24/7/2020	1400	Fiak	Ç	0	C	20.9	34/1007	2.5		
Pitc	24/7/2020	0915	Fine	0	0	0	20.9	30 / 1010	3		
	24/7/2020	1415	Fish	0	0	0	20.3	33/ 001	8		
137 (407 2766	24/7/2020	0935	Fine	0	0	¢	20.9	30 / 1010			
	24/7/2020	1435	Fine	C	0	0	20.9	33/ 1007	31		
137 Rit C	24/7/2020	0945	Fiac	0	¢	ð	20.3	32/1010	3.5		
	24/7/2020	1445	First	0	0	Û	20.9	73/1027	3.5		
137 Pt B	24/7/2020	09,22	Fire	0	C	0	229	30/1010	}		
	24/7/2010	1455	Fine	Q	0	0	20.5	35/ 1007	1		
CHA 6470	29/7/2020	1002	Fine	Û	τ	0	20.9	30 /1010	3.5		
	24/7/2020	1202	Fine	0	0	0	20.9	37/1007	35		

Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

<u>Date</u>

Field Operator:

24/7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



Dates calibrated 29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

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:
Date of measurement:		PGM-2400P (QRAE II)
		-

measurement	Sampling time	Monitoring wells / Surface Gas Emission								
		Weather condition	Balance gas (%)		Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
24/7/2020	1010	Eas	0	0	0	203	71/100	1		
24/7/2020	1510		0	: 0	0	20.1	33/ (007	1		
24/7/2020	1015		. 0	. 0	0	20.9	31/1012	0.4		
24/7/2020	1212		0	5	0	2.2.9	37/ (2)7	0.4		
24/7/2020	1025	Fix	3	0	0	2.0.1		6		
24/7/2020	1525	Figu	0	0	0	20.3		6		
24/7/2020	1047	Fin	0	0	0	209	31/1010	1.2		
24/7/2020	×7X	Fink	0	0	0	20.9	37/1006	1.2		
				·			1			
	24/7/2020 24/7/2020 24/7/2020 24/7/2020 24/7/2020 24/7/2020	24/7/2020 (S10 24/7/2020 1018 24/7/2020 1018 24/7/2020 1028 24/7/2020 1828 24/7/2020 1828 24/7/2020 1029	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $		

Name & Designation Sig

<u>Signature</u> <u>Date</u> 24/7/2020

Field Operator:

Eric Man (Sub-Agent [RenoPipe])

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-24C0P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	asurement time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Area A	25-7-2020	0 2%	Fire	0	2	0	22.2	30/1003	2.3	
	25-1-2020	1340	Finh	D	0	0	20.9	33/1006	2.5	
	25-7-2020		Fire	0	0	0	20.9	51/1005	2.5	
Area B	25-7-2020	2450	Fine	Û	0	0	20.9	30/1002	2.5	
	25-7-200	1341	Fire	3	0	Q	22 9	33/1006	2.Y	
	25-7-2020	1645	Fink	e.	0	0	20.9	31/1005	2.5	
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Name & Designation

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

Signature <u>Date</u>

25-7-2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission								
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
(H.FC 4750	25/7/2020	D855	Fire	0	c	0	2.2.9	39/1008	2.5		
	25/7/2020	1335	Fine	0	0	0	2.0.9	37/1006	2.5		
CH.FC 0790	25/7/2020	09.00	Fiel	0	0	C	20.9	30/1008	2.5		
	25/7/2020	1400	Fal	Ū	0	0	20.9	33/1206	2.5		
Pitc	23/7/2020	0915	Fink	0	0	٥	2.0.9	31/1028	8		
	25/7/2020	1415	Fine	0	0	0	2.0.9	33/ 1006	3		
137CHCT 2766	25/7/2020	0935	Fire	0	0	0	20.9	71/1008	31		
	25/7/2020	1435	Fire	0	. o	0	20.9	73/10=6	3.[
137 Pitc	25/7/2020	0995	Fink	0	0	0	20.7	31/m&	7 Y		
	25/7/2020	1445	Finz	0	0	0	20.3	37/1006	3.5		
137 Pt B	25/7/2020	0922	Fine	0	0	0	20.3	31/1002			
	25/7/2020	1455	Fine	0	0	3	20.9	34/ 1006	1		
CHA 6+70	25/7/2020	1005	Fine	1 0	C	2	20.9	31/ 10.03	$\overline{\zeta}$		
	25/7/2020	1202	Fire	0	9	0	203	37/1026	3.5		

Name & Designation Signature

Date 25/7/2020

Field Operator:

Eric Man (Sub-Agent [RenoPipe])

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
TPOI	25/7/2020	1010	Ene	0	0	0	20.9	31/ 008	1	
	28/7/2020	1210	Fine	0	0	0	2.2.9	34/ 100%	1	
CHA 12+50	28/7/2020	1015	Fire	. 0	0	0	209	51/ 208	0.4	
	25/7/2020	1212	Pine	0	C	0	209	73/ 1005	0.4	
PitB	25/7/2020	1025	Fine	0	0	0	20.9	31/1008	6	
	25/7/2020	1525	Fire	0	0	0	20.9	35/ 1005	6	
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								1		
								1		
								4	 	

Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

2×17/2020

Field Operator:

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

13

Date



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Area A	27-7-2020		Fine	0	0	о	20.9	29/1007	2.¥ 2.x	
+	27-7-2020	1230	Five	a	C	J	20.9	32/1001	2.5	
	27 - 7 - 2026	1700	Fire	0	a	0	20-1	37/1005	Z.N	
ATEA B	27-7-2020	0843	Fire	0	0	Q	20.9	24/1007	Z.X	
1	27-7-2020	1745	Firi	0	0	Э	202	32/1006	Z. 5	
	21-7-2020	1643	Filme	C	0	0	20.9	33/1005	2.5	
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Name & Designation

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

Signature <u>Date</u>

27-7-2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission								
				Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
(H.FC 4450	27/7/2020	D82Z	Fine	0	0	0	203	30/1007	25		
	27/7/2020	1335	Fal	0	0	0	209	31/1006	2.5		
CHFC 0790	27/7/2020	09.00	File	0	0	0	209	30/1007	2.5		
	27/7/2020	1400	Fine	5	0	0	20.9	31/1006	25		
Pitc	27/7/2020	0915	Fal	0	Ĵ,	0	20.9	30/1007	<u>&</u>		
	27/7/2020	1415	Fine	0	: 0	0	2.0.9	32/ (026	¥		
137 CHCT 2766	27/7/2020	0935	Fine	0	0	0	20.9	30/1007	7.1		
	27/7/2020	1435	Finl	0	Û	0	209	32/1006	31		
137 Pitc	27/7/2020	0995	Fix	0	Ó	0	229	30/1007	<u> 3</u> Y		
	27/7/2020	1445	Fire	0	Ç	0	20.9	72/100h	<u>7.)</u>		
137 Pt B	27/7/2020	2290	Fine	0	0	0	20.9	30 / 1007	<u> </u>		
	27/7/2020	1455	Fine	Û	0	0	2.09	32/100%	1		
CHA 6+70	27/7/2020	2001	Fine	0	Û	Û	20.9	30/1007	3.5		
	27/7/2020	1202	Fink	0	0	0	20.9	32/1006	3.5		

Name & Designation Signature

Eric Man (Sub-Agent [RencPipe])

<u>Signature Date</u> 27/7/2020

Field Operator:

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
TPOI	27/7/2020	1010	Fire	0	0	Ð	20.9	31/10/1		
·····	27/7/2020	1210	Fire	0	0	0	20.9	32/1005		
CHA 12+50	27/7/2020	1015	Fire	0	0	0	20.9	31/1057	0.4	
	21/7/2020	1212	Fire	0	0	0	Z0.9	32/1005	0.4	
Pit B	27/7/2020	1025	File	0	0	0	20.9	31/1001	6	
	27/7/2020	1525	Fine	0	0	0	20.9	32/1055	6	
			_					· · · / · · · · ·	[]	
								<u> </u>		
			1			1				

Name & Designation Signature

Field Operator:

Eric Man (Sub-Agent [RenoPipe])

<u>Date</u>

27/7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANACEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROFECTION DEPARTMENT

Sample location	Date of measurement	Sampling time								
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Area A	28-7-2020	0830	Fine	î	0	0	20.9	30/ 1008	2.×	
(114/11)	28 - 7 - 2020	1530	Fine	0	Ø	0	209	33/ 1007	2.5	
	28-7-2020	1700	Fire	0	0	0	20.9	79/ 1006	2.5	
Arth B	28 -7-202	0345	First	Û	0	0	20.9	30/ 1008	2.3	
	28-7-222	1345	Fial	N	C	Û	20.3	35/ 1007	2.5	
	2 <u>8</u> - 7 - 2020	1645	Fine	<u>0</u>	0	0	20.9	33/ (006	2.5	
								/		
								/		
				····		1	l			

Name & Designation

Eric Man (Sub-Agent [RenoPipe])

Field Operator:

<u>Signature</u> <u>Date</u>

28-7-2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission								
	5 3 4 1 1 1		Weather condition	Baiance gas (%)	Flammable gas (methane %)	Carbon monoxidc(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
(H.FC 4750	28/7/2020	0835	Find	Ð	0	0	20.9	70 / 1003	2.5		
	23/7/2020	1335	Fine	0	0	0	202	32/ 1076	2.5		
CH.FC 0790	28/7/2020	09,00	Fige	0	Û	0	2,09	30 / 10ak	2.5		
	28/7/2020	1400	Fine	0	0	0	203	32/1006	2.5		
Pit C	28/7/2020	0915	Fine	0	0	0	20.9	31/1008	8		
	28/7/2020	1415	Fine	0	0	0	20.9	32/1006	8		
137 CHCT 2766	28/7/2020	0935	Fine	ð	0	0	20.9	31/ 1025	7.1		
	28/7/2020	1435	Five	÷	0	0	20.9	34/ 1000	3.1		
137 Pitc	23/7/2020	0995	Fine	0	0	0	20.9	32/100 <u>1</u>	<u>3.</u> Y		
	23/7/2020	1445	Fine	0	0	0	20.9	32/ 1006	3.8		
137 Pt B	13/7/2020	2290	Fire	0	. 0	0	20.9	32/1002	1		
	28/7/2020	1455	Fine	0	: 0	0	20.9	32/ 25	1		
CHA 6+70	28/7/2020	2001	Fire	0	0	0	20.9	32/001	7 .¥		
	28/7/2020	1202	Fin	3	đ	0	20.9	32/1000	3.5		

Name & Designation Signature

Field Operator: Eric Man (Sub-Agent [RenoPipe])

28/7/2020

<u>Date</u>

Laboratory Staff:

Checked by:

Environmental Resources Management



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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)		Temp (°C) / Pressure (mbar)	Remark Depth (m)	
(HA12+50	28/7/2020	1018	Fine	0	0	0	22.9	32/10:18	0.4	
<u></u>	23/7/2020	1715	Flax	0	0	C	20.9	32/1006	0.4	
PitB	28/7/2020	1025	Flat	0	0	0	20.9	32/1008	6	
	28/7/2020	1525	Fine	0	0	ै	20.9	32/1006	6	
			······					1		
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		-						/		
		1						T /		

Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

28/7/2020

Field Operator:

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

13

Acuity Sustainability Consulting Limited 171



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

Sample Date of Samplin location measurement time		Sampling time	Monitoring wells / Surface Gas Emission							
		Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
Arez A	29-7-2020	0830	Fire	0	0	0	20.9	30/1008	2.5	
	24 -7 -2020		Fire	0	0	0	20.7	32/1006	2.5	
	29-7-2020	1700	Fine	0	0	o	20.3	31/1005	2.5	
Area B	29-7-2020	0845	Fine	0	0	0	224	30 / 1098	z·S	
	21-7-2020		Fine	¢	0	0	20.9	32/1006	Z- 5	
	24-7-2020	1645	Fine	C	0	0	20.9	31/ 1005	2.5	
								1		
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								1		
								/		
				· ·		+		1 /		

Name & Designation

Field Operator:

Signature

<u>Date</u>

13

29-7-2020

Eric Man (Sub-Agent [RenoPipe])

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT

Acuity Sustainability Consulting Limited 172



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
(H.Fi 4+50	29/7/2020	2280	Fixe	0	C	0	20.9	30/1008	2.5
	29/7/2020	1355	F.nc	0	0	0	24.9	32/1006	2.5
CH.FC 0+90	29/7/2020	09.00	Fine	0	0	0	20.9	70/1008	2.5
	29/7/2020	400	Fin	0	. 0	0	20.3	32/1006	2.5
Pitc	29/7/2020	0915	F:~~	ů	C C	0	20.9	31/125	8
	29/7/2020	1415	Fine	Û	0	0	20.9	32/1006	ž
137 CHCT 2766	29/7/2020	0935	Fire	0	0	0	20.9	31/1008	3.1
	29/7/2020	1435	Fine	0	3	0	20.9	32 / 1006	3.1
137 846	21/7/2020	0995	Find	0	0	0	20.9	31/1002	3.5
	29/7/2020	1445	Fre.	0	0	<u> </u>	20.9	32 / 1006	35
137 Pt B	29/7/2020	0922	Fine	0	0	0	209	31/1008	<u> </u>
	29/7/2020	1455	Fire	O	C	0	20.9	32/1056	1
CHA 6+70	25/7/2020	2001	Fire	Q	0	0	20.9	31/1008	3.5
	29/7/2020	1202	Finl	0	0	0	20.9	2,2/1006	3.5

Name & Designation Signature

Eric Man (Sub-Agent [RencPipe])

Date

Field Operator:

29/7/2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

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

Sampling equipment used:	Dates calibrated
PGM-2400F (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
	2		Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
CHA 12+50	29/7/2020	1015	Fine	0	0	C	20.9	31/1088	0.4	
	29/7/2020	1212	First	a a	0	C	20.9	31/1006	0.4	
Pit B	23/7/2020	1025	Fine	0	c	0	20-9	31/1008	6	
	29/7/2020	1525	Fine	0	0	c	20.9	51/1006	6	
PLRIP3	29/7/2020	1105	Fire	Û	ð	0	20.9	31/1002	0.7	
	29/7/2020	1602	Fine	0	0	0	26.9	31/ 1005	0.7	
								/		
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								1		
								/		

Name & Designation Signat

Eric Man (Sub-Agent [RenoPipe])

Signature <u>Date</u> 29/7/2020

Field Operator:

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission								
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
AreaA	30-7-2010	0\$30	Fine	C	0	0	20.9	29/1007	2.5		
	30 -7 - 2020	1350	Fine	0	0	0	2 <i>₽</i> ∙ŋ	71/1007	2.5		
	30-7-2020	1700	Fire	0	0	C	20.9	30/1005	2.5		
Area B	70-7-2020	0345	Ene	0	Q	0	Z# 4	24/1007	2.5		
	10-7-2020	1345	Fine	۵	C	0	20.9	51/1007	25		
	30-7-2026	1645	Fine	0	0	D	20.9	30/1005	2.5		
					1						
								1			
	-							···· / _{//} ········	<u> </u>		

Name & Designation

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Field Operator:

Signature <u>Date</u>

Eric Man (Sub-Agent [RenoPipe])

70- 7 - 2020

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVERONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission								
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
(H.FC 4+50	30/7/2020	D82Z	Fire	0	0	-0	20.9	70/1007	2.5		
	30/7/2020	1355	Fint	0	0	0	209	32/1000	2.5		
CH.FC 0+90	30/7/2020	0900	Fine	0	0	0	20.9	30/ 207	2.5		
·	30/7/2020	14 00	Fire	0	C	Ŭ	22.9	32/ 1006	2.5		
Pitc	30/7/2020	0915	Fine	Ũ	0	0	20-9	31/1207	S		
	30/7/2020	1415	Fine	0	0	0	20.9	30/ 1000	8		
137CHCT 2466	30/7/2020	0935	Fine	0	0	0	20.8	31/1207	77		
	30/7/2020	1435	Fine	0	0	Û	20.9	30/ (206	3.]		
137 Pitc	30/7/2020	0995	Fine	0	0	0	20.3	31 / 1297	73. S		
	30/7/2020	445	First	0	0	0	20.9	30 / 1006	ζY		
137 Pt B	301712020	2200	Five	0	Û	0	20.9	31/1007	1		
	30/7/2020	1455	Fine	0	0	Û	20.9	30/ (225	<u> </u>		
CHA 6+70	30/7/2020	1005	Fiaz	0	0	· 0	204	31/1007	<u>ζ</u> γ		
	30/7/2020	1202	Find	0	0	0	20,9	30/1005	7.5		

Name & Designation Signature

rator: Eric Man (Sub-Agent [RenoPipe])

<u>Date</u> 30 / ד / 2020

Field Operator:

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time									
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
CHA 12+50	30/7/2020	1012	Fine	0	0	0	20.2	31/1007	0.4		
	30 /7/2010	1212	Fire	C	0	0	20.9	30/ 1005	0.4		
Pit B	30/7/2020	025	Fizz	C	0	C	229	31/1227	6		
	30/7/2020	1525	Fige	0	3	0	25.4	50 / 100x	6		
PLRIP 3	30/7/2020	1 los	Fine	0	0	0	2.0.9	31/1007	0.7		
	30/7/2020	ک د فا	Fink	0	0	0	20.9	30/ 1005	0.3		
								/			
								/			
							<u>}</u> .				
								· / ····-			

Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

1<u>ature Date</u> 30/7/2020

Field Operator:

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE 1)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission								
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
Area A	31-7-2020	0830	Rain	Û	Ð	0	209	26/1005	2.4		
<u></u>	31-7-2025	1330	Rain	0	0	9	20.9	26/1004	2.8		
	31-7-2020	1700	Rain	0	Ĵ	0	29.9	26/1007	Z.X		
Area B	31-7-2020	0845	Rain	0	0	0	209	26/1005	2.7		
	31-7-2020	1345	Zain	0	C	0	20.9	26/1004	2.5		
	31-7-2020	1645	Rain	0	0	0	20.3	26/1003	2.5		
		<u> </u>						1			
			<u> </u>	-							
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	1					1		1			

Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

Date

31-7-2020

Field Operator:

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission								
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
(H.FC 4+50	31/7/2020	0822	Rain	0	0	0	20.9	26/1005	2.5		
	31/7/2020	1355	lin	0	0	Û	20.9	27/1003	2.5		
CH.FC 0790	31/7/2020	09.00	Lin	0	Û	J	20.4	26/1005	2.5		
	31/7/2020	1400	Rain	0	0	0	20.9	27/1003	2.5		
Pitc	31/7/2020	0915	Kaig	0	0	0	20.8	26 / 1005	8		
	31/7/2020	1415	Kain	0	0	0	2.0.9	27/ 1003	8		
137 CHCT 2766	31/7/2020	0935	Rig	0	0	0	20.9	26/1005	7.1		
	31/7/2020	1435	Kain	Ū	0	0	20.3	27/1003	3.1		
137 PitC	3/7/2020	0945	Rain	0	0	0	209	26/1005	7.Y 3.Y		
	31/7/2020	1445	Fain	0	0	0	20.8	27/1003	3.5		
137 Pt B	31/7/2020	2290	Rain	0	0	Ð	20.4	26/1008	1		
	31/7/2020	1455	Rojin	ů	3	2	-20.4	21/1093	1		
CHA 6+70	31/7/2020	2001	Roin	0	0	Ð	20.4	26/1005	7.5		
	31/7/2020	1202	Ra. 7	0	0	0	20.9	27/1003	3.5		

Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

<u>Date</u> 31/7/2020

Field Operator:

Laboratory Staff:

Checked by:

ENVIRONMENTAL RESOURCES MANAGEMENT



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

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

Sampling equipment used:	Dates calibrated
PGM-2400P (QRAE II)	29 Aug 2019

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	Sampling time			Monitoring w	vells / Surface G	as Emission		
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
CHA 12+50	31/7/2020	1015	Rain	D	0	0	20.3	26/1005	0.4
	31/7/2020	1212	Ran	0	0	0	229	27/1003	0.4
Pit B	31/7/2020	1025	Rain	Э	0	0	20.9	26/1005	6
	31/7/2020	1525	Rain	v	0	0	20.9	27/1003	6
PLR IP 3	31/7/2020	1107	Rain	0	0	e	20.9	20/1005	0.3
	3171-2020	1602	Ràin	1 0	0	0	20.9	27/10:3	0.3
								/	
								I,	

Name & Designation Signature

Eric Man (Sub-Agent [RenoPipe])

<u>ure Date</u> 31/7/2020

Field Operator:

Laboratory Staff:

Checked by:

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Appendix K

Complaint Log and Regulatory Compliance Proforma



Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complain	t Statistics	
	Frequency	Cumulative	Complaint Nature
01 July 2020 - 31 July 2020	0	0	N/A

Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics					
	Frequency	Cumulative	Details			
01 July 2020 - 31 July 2020	0	0	N/A			

Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics				
	Frequency	Cumulative	Details		
01 July 2020 - 31 July 2020	0	0	N/A		



Appendix L

Site Inspection Proforma



	Unit 1908, Nos. 301-	bility Consulting Limited 305 Castle Peak Road, Kwai Chung, N.T. ral@acuityhk.com www.acuityhk.com
	Contract no. 13/WSD/16 Mainlaying in Te	seung kwan O
	WEEKLY ENVIRONMENTAL INSPECTION	
	on Date: 02/07/2020 Inspecied by: ET Chânder La on Time: 09:50 - (1:50 Contractor: Jam Ng.	U WSD O.K. CHONG
Weath Condit		Storm
Tempe	rature 31 C Humidity High Medera	te
Wind	Calm Light Breeze Strong	
		N/A Yes No Photo/Remai
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?	
	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?	Sweining
1.02	Are fumes or smoke emitting plants or construction activities shielded by a screen?	
1.03	Are turnes or smoke emitting plants or construction activities smelled 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?	
1.00		
1.06	Are road section near the site exit free from dusty material?	0 losc 2
1.07	Are all main haul roads inside the site paved or sprayed with water to minimize dust	
1.08	emission during vehicle movement? 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	
1.10	eaving the site? 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?	

Page 1 of 6





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

	Contract no. 13/WSD/16 Mainlaying in Ts	eung Kwa	in O		
		N/A	Yes	No	Photo/Remarks
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?		V		
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		_	_	
1.10	accessible by the public?				
1.17	Is open burning prohibited?				
2.00	Construction Noise (Airborne)				
2.01	Are quiet plants adopted on site?		V		<u>.</u>
2.02	Are the PMEs operating on site well-maintained to minimize the generation of excessive				
	niose?		\checkmark		
2.03	Are plants throttled down or turned off when not in use?				
2.03	are plants unouted down of turned off when not in use?				
2.04	Are the plants known to emit noise strongly in one direction oriented to face away from				2. No neerby
	NSRs?				(NSR itsd
2.05	Are moveable barriers provided to screen NSRs from plant or noisy operations?	\square) dengheres
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?	\checkmark	\Box		
2.09	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to				
	nearby sensitive receivers?		V		
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?	7			
2.12	Are all construction noise permit(s) applied for percussive piling work?		F		
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?		1		
3.00	Water Quality				-
3.01	Is effluent discharge license obtained for wastewater discharge from site?		\square		
3.02	Is effluent discharged according to the effluent discharge license?				
			Ľ		
3.03	Is wastewater discharge from site properly treated prior to discharge?				

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

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

3.04 Are perimeter channels provided to intercept somm runoff from outside the sure?			N/A	Yes	No	Photo/Remarks
remove sandsilt particles from runoff? Image: surface runoff diverted to sedimentation facilities? 3.06 is surface runoff diverted to sedimentation facilities? Image: surface runoff diverted to sedimentation facilities? 3.07 is the drainage system properly maintained? Image: surface runoff diverted to sedimentation facilities? 3.08 Are construction works carefully programmed to minimize soil excavation works during rainy sessons? Image: surface runoff diverted by runsing as soon as possible to reduce the potential of soil crossion? 3.09 Are exposed soil surface protected by runshed gravel? Image: surface runoff diverted by runshed gravel? 3.10 Are temporary access roads protected? Image: surface runoff diverted diverted diverted? 3.11 Are exposed slope surface properly protected? Image: surface runoff diverted diverted diverted? 3.12 Is trench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation? Image: surface runoff diverted diverted? 3.13 Are open stockplise of construction materials on site covered by tarpaulin or similar fabric diverted? Image: surface runoff diverted? 3.14 Is runoff from wheel-washing facilities avoided? Image: surface runoff diverted diverted? Image: surface runoff diverted diverted diverted diverted diverted diverted diverted din diverted din divered diverted diverted diverted diverted diverte	3.04	Are perimeter channels provided to intercept storm runoff from outside the site?		1		obsing
3.07 Is the drainage system properly maintained?	3.05					
3.08 Are construction works carefully programmed to minimize soil excavation works during rainy seasons? 3.09 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 erossion? 3.10 Are temporary access roads protected by erushed gravel? 3.11 Are exposed slope surface properly protected? 3.12 Bt rench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation? 3.12 Bt rench 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 Bs runoff from wheel-washing facilities avoided? 3.15 B 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 soid them entering the streams? 3.20 Are tarks, containers, storage areas provided with locks and be sited on sealed areas, within buads of capacity cqual to 110% of the storage c	3.06	Is surface runoff diverted to sedimentation facilities?				
ainy seasons? Image: Construction of the protected by paving as soon as possible to reduce the potential of soil crossion? 3.09 Are temporary access roads protected by crushed gravel? Image: Construction of the potential of the potentia	3.07	Is the drainage system properly maintained?				
soil erosion? Image: Construction of the property protected? 3.10 Are temporary access roads protected by erushed gravel? 3.11 Are exposed slope surface property protected? 3.11 Are exposed slope surface property 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 there any measures to prevent the release of oil and grease into the storm drainage system? 3.18 Are debris and rubbish generated on site collected, handled and disposed of property to avoid them entering the streams? 3.18 Are debris and rubbish generated on site collected, handled and disposed of property to avoid them entering the streams? 3.19 Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and storage area bunded and the locations locked as far as possible from the sensitive watercourse and storage area bunded and the locations locked as far as possible from the licensed contractors? 3.20 Are	3.08	-		\checkmark		
3.11 Are exposed slope surface property protected? 3.11 Are exposed slope surface property 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 ranoff 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 eabris 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 sufficient chemical toilets provided and the locations locked as far as possible from the sensitive waterourse 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? 3.22 Are sufficient chemical toilets provided on site to handle sewage? 3.23 Ix containers; storage area bunded and the portable chemical to	3.09			\checkmark		
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 stockpilles 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 tocked as far as possible from the sensitive watercourse and stormwater drains? 3.21 Are sandice contractors? 3.22 Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors? 3.22 Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors? 3.21 Are set Management 4.01 Is a trip-ticket system implemented to monitor the disposal of C&D and soild wastes at public <td>3.10</td> <td>Are temporary access roads protected by crushed gravel?</td> <td></td> <td>1</td> <td></td> <td></td>	3.10	Are temporary access roads protected by crushed gravel?		1		
backfilled in short sections after excavation? Image: Construction after excavation? 3.13 Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction? Image: Construction? 3.14 Is runoff from wheel-washing facilities avoided? Image: Construction? 3.14 Is runoff from wheel-washing facilities avoided? Image: Construction? 3.15 Is oil leakage or spillage prevented? Image: Construction? 3.16 Are there any measures to prevent the release of oil and grease into the storm drainage system? Image: Construction? 3.17 Are the oil interceptors/ grease traps properly maintained? Image: Construction? 3.18 Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams? Image: Construction? 3.19 Are all fuel tarks 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 tark? Image: Construction? 3.20 Are tarks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains? Image: Construction? 3.21 Are sufficient chemical toilets provided on site to handle sewage from construction work force? Image: Constructors? 3.22 Are sewage disposal and to	3.11	Are exposed slope surface properly protected?				
during construction? Image: Construction in the element of the portable chemical toilets provided by the licensed contractors? 3.14 Is runoff from wheel-washing facilities avoided? Image: Construction in the element of the portable chemical toilets provided by the licensed contractors? 3.15 Is contractors? Image: Contractors? 3.16 Are there any measures to prevent the release of oil and grease into the storm drainage system? Image: Contractors in the element of the portable chemical toilets provided on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank? Image: Contractors in the storage areas provided with locks and be sided on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank? Image: Contractors in the storage areas provided on site to handle sewage from construction work inforce? 3.20 Are the functional toilets provided on site to handle sewage from construction work inforce? Image: Contractors inforce	3.12	5 WORKED (MO 2007) NO 55 24 CON 040		\square		
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? 3.16 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 sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors? 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	3.13					7 <u></u>
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	3.14	Is runoff from wheel-washing facilities avoided?	\checkmark			2
system? Image: Construction of the storage capacity of the largest tank? 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	3.15	Is oil leakage or spillage prevented?		Ø,		0
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 swage 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	3.16					obs (3)
avoid them entering the streams? Image: Construction of 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? Image: Construction of the storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains? 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 drsposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors? 3.22 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	3.17	Are the oil interceptors/ grease traps properly maintained?				7
within bunds of capacity equal to 110% of the storage capacity of the largest tank? Image: Comparison of Comparison of C&D and solid wastes at public 3.20 Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains? Image: Comparison of Comparison of Comparison of C&D and solid wastes at public 3.21 Are sufficient chemical toilets provided on site to handle sewage from construction work force? Image: Comparison of the portable chemical toilets provided by the licensed contractors? 3.22 Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors? Image: Comparison of Comparison	3.18			\checkmark		
the sensitive watercourse and stormwater drains?	3.19					u
force? Image: Constraint on 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	3.20					
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	3.21					
4.00 Waste Management 4.01 Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public	3.22					
4.01 Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public						
		Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public				

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

	Contract no. 13/WSD/16 Mainlaying in Ts	eung Kwa	n O		
		N/A	Yes	No	Photo/Remarks
4.02	is a recording system implemented to record the amount of wastes generated, recycled and disposed of?		5		
4.03	is the Contractor registered as a chemical waste producer?				
4.04	Are chemical waste separated from other waste and collected by a licensed chemical waste collector?				
4.05	Are trip tickets for chemical waste disposal available for inspection?				
4.06	is chemical waste reused and recycled on site as far as practicable?	\checkmark			
4.07	Are all containers for chemical waste properly labelled?		4		
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?	\checkmark			
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?		V.		
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?		\sim		
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?		đ		
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		

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

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

		N/A	Yes	No	Photo/Remarks
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?				<u>.</u>
5.04	is grass hydroseeding provided to slopes as seon as the completion of works?				×
5.05	Are damages to trees outside site boundary due construction works avoided?		\square		
5.06	is excavation works carried out manually instead of machinery operation within 2.5m vicinity of my 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 runofl?		\square		
6.02	Are silt trap installed and well-maintained?				
6.03	Are stockpiles properly covered to avoid generating silty runof??				
6.04	Are construction works restricted to works area which are clearly defined?				
7.00	Overall		1		
7.01	Is the EM&A properly implemented in general?				

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	Acuity Sustainability Consulting Limited
Acuity	Unit 1908, Nos. 301-305 Castle Peak Road, Kwai Chung, N.T. O: 2333-6823 F: 2333-1316 E: general@acuityhk.com www.acuityhk.com
Sustainacuity	
	Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O
mark / Follow up of Observa	tion(s) and Non-compliance(s) of Last Weekly Site Inspection:
Pit c - o court	6+64. > CHATIZESO - Pit B. > Landlin Anet
Observativius	
1 + 12:0-	boundary was not being being protected by somethings
(1) (Un (typoti	on exit was observed with durty wetchials at CHAR2 450.
es chanicale	were not absend in the drop frag (Landlill slegel)
()) chemicals	
Kenneder	See la
	for was numinoled that water sedimentation fante
cis in onin	nor was remember town the should be placed in an (General)
or other We	on sites to de ter meland
(2) continution CAUA6+6	on sites. meterials should had be placed on the planter rackar
Signatures:	t.
	Contractor's WSD's IEC's Representative Representative
to	for Jon NIA
(Name: Charlene Lan	(Name: Som No) (Name: F.K. CHONG (Name: N/A))

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Acuity		oility Consulting Limited 305 Castle Peak Road, Kwai Chung, N.T. al@acuityhk.com www.acuityhk.com
Sustainability		
C	ontract no. 13/WSD/16 Mainlaying in Ts	
W	EEKLY ENVIRONMENTAL INSPECTION	N CHECKLIST
nspection Date: 0910712020 nspection Time: 14:30 - 17:00	ETChavlene Lo ContractorSam_ Ng	M wsp Tsay kin Fai IEC NA
Weather	/	
Condition Sunny	Fine Overçast Drizzle Rain	Storm Hazy
Temperature 3 C	Humidity High Moderate	e Low
Wind Calm	Light Breeze Strong	
A STREET STREET AND		N/A Yes No Photo/Remarks
		N/A Yes No Photo/Remarks
0.00 General		
	t displayed conspicuously at all vehicle site	045(3)
entrances/exits for public's information		
0.02 Is ET Leader's log-book kept readi	ly available for inspections?	
	and the same and the same	
1.00 Construction Dust		Vwater
1.01 Are dusty materials, such as excav	ated materials, building debris and construction be properly covered to prevent dust emission?	V
	spraying or vacuum cleaning devices provided to dusty	
construction works for dust suppre-		
have a hadrened by the		
1.03 Are fumes or smoke emitting plan	ts or construction activities shielded by a screen?	
	i de det all site avite?	
1.04 Are wheel-washing facilities with	high-pressure water jets provided at all site exits?	
1.05 Is wheel-washing provided to all v	ehicles leaving the site?	
and the second sec	A SHARE A MARK AND A MARK AND A MARK	
1.06 Are road section near the site exit	free from dusty material?	V obsily
1.07 Are all main haul roads inside the	site paved or sprayed with water to minimize dust	
emission during vehicle movemen	t?	
1.08 Are water spraying provided imme	diately prior to any loading or transfer of dusty	
materials?	to service dusty materials when entering and	
	ucks carrying dusty materials when entering and	
leaving the site?	g of trees, shrubs, or vegetation or the removal of	
boulders poles pillars spraved wi	h water to maintain the entire surface wet?	
1.11 Is exposed earth properly treated v	vithin six months after the last construction activity on	
site?		
1.12 Does the operation of plants on sit		

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	Acuity Unit 1908, Nos. 301	ability Consulting Limited L-305 Castle Peak Road, Kwai Chung, N.T. eral@acultyhk.com www.acultyhk.com
	0.2555-0025 [1.2555-1510 [L. Bell	
	Contract no. 13/WSD/16 Mainlaying in	
		N/A Yes No Photo/Remarks
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 sides?	
	5565	
1.15	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?	
1.16	in cust	
	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?	
-	the saming promoted?	
2.00	Construction Noise (Airborne)	
2.01		
2.02		
	Are the PMEs operating on site well-maintained to minimize the generation of excessive niose?	
2.03	Are plants throttled down or turned off when not in use?	
	A Manager and a second s	
2.04	Are the plants known to emit noise strongly in one direction oriented to face away from	
05	NSIXS:	
.05	Are moveable barriers provided to screen NSRs from plant or noisy operations?	
.06	Are silenears multi	
	Are silencers, mufilers and enclosures provided to plants?	
.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?	
	and the state of the	
2.13	Are construction noise permit(s) applied for general construction works during restricted	
2.14	hours?	
. 14	Are valid construction noise permit(s) displayed at all vehicular exits?	
.00	Water Quality	
.01	Is effluent discharge license obtained for wastewater discharge from site?	
3.02	Is effluent discharged according to the effluent discharge license?	
	and a second and to the entruent disenting encenses	1 2 wo dischar
3.03	Is wastewater discharge from site properly treated prior to discharge?	

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	Acuity Unit 1908, Nos. 301-3 Sustainability O: 2333-6823 F: 2333-1316 E: generi	al@acuityh	k.com w	, kwai Ci /ww.acu	ityhk.com
	Contract no. 13/WSD/16 Mainlaying in Ts				
1	contract no. 15/ W5D/10 Mainaying in 15	N/A	Yes	No	Photo/Remarks
-					
3.04	Are perimeter channels provided to intercept storm runoff from outside the site?				
	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided to remove sand/silt particles from runoff?		1		_
.06	is surface runoff diverted to sedimentation facilities?				
.07	Is the drainage system properly maintained?				045(2)
	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?				
	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?		1		61-11-1
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, packfilled in short sections after excavation?				
3.13	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?		\checkmark		10. 10 Mar 1
3.14	Is runoff from wheel-washing facilities avoided?				N.
3.15	5 Is oil leakage or spillage prevented?		F		
3.16	Are there any measures to prevent the release of oil and grease into the storm drainage system?		7		obs (1)
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			1		<u>n</u>
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?		V		
3.23	Is concrete washing water properly collected and treated prior to discharge?	1			
4.00	Waste Management				the first state

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	Content Unit 1908, Nos. 301-30 Acuity O: 2333-6823 F: 2333-1316 E: general)5 Castle P I@acuityh	eak Road k.com v	r, Kwar Ci vww.acu	hung, N.T. ityhk.com
	Contract no. 13/WSD/16 Mainlaying in Tse	ung Kwa	in O		
		N/A	Yes	No	Photo/Remarks
4.02	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?				
4.03	Is the Contractor registered as a chemical waste producer?				
4.04	Are chemical waste separated from other waste and collected by a licensed chemical waste collector?				
-	Are trip tickets for chemical waste disposal available for inspection?	1			
	Is chemical waste reused and recycled on site as far as practicable?	\checkmark			
-	Are all containers for chemical waste properly labelled?				
4.08	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?				
	Are incompatible chemical wastes stored in different areas?				
	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?				
	Is an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the argest container or of 20% by volume of the chemical waste stored in that area, whichever is the preatest, provide?				1.1.1
	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?		Í.		
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?		1		
4.19					-
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?				

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	Contract no. 13/WSD/16 Mainlaying in Ts	eung Kwa	an O		
		N/A	Yes	No	Photo/Remarks
.00	Landscape and Visual		-		8- YA 6- 4
5.01	Are Is site hoarding provided?	\square			
5.02	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?		\checkmark		
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?				
5.05	Are damages to trees outside site boundary due construction works avoided?		1		k
5.06	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?				(12)
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?				
6.0	0 Ecology		,		
6.0	1 Is site runoff properly treated to prevent any silly runoff?			A	
6.0	22 Are silt trap installed and well-maintained?		-		1
6.0	3 Are stockpiles properly covered to avoid generating silty runoff?		I,		
6.0	4 Are construction works restricted to works area which are clearly defined?		7		

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Acuity Sustainability	0:2333-6	823 F: 2333-1316 E: gen	eral@acuitynk.com www.acuity	nk.com
	Contract no. 13/	WSD/16 Mainlaying in	Tseung Kwan O	
nark / Follow up of Observ	vation(s) and Non-compli	ance(s) of Last Weekly Site	Inspection:	1
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	contractor's	WSD's	IEC's	vehid a sime
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ניס אסטא Signatures: ET	Contractor's Representative	WSD's	IEC's Representative	vehad ~ ome
LID HOUS Signatures: ET Representative MMM	Contractor's Representative	WSD's Representative HAW	IEC's Representative MA	vehiclesome
LID HOUS Signatures: ET Representative MMM	Contractor's Representative	WSD's Representative HAW	IEC's Representative MA	vehad ~ me
LID HOUS Signatures: ET Representative MMM	Contractor's Representative	WSD's Representative HAW	IEC's Representative MA	vehiclesome
LID HOUS Signatures: ET Representative MMM	Contractor's Representative	WSD's Representative HAW	IEC's Representative MA	vehad ~ me
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LID HOUS Signatures: ET Representative MMM	Contractor's Representative	WSD's Representative HAW	IEC's Representative MA	vehadome
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		Acuity Sustainal	bility Consulting Limited					
		Acony	805 Castle Peak Road, Kwai Chung, N.T. al@acuityhk.com www.acuityhk.com					
		Sustainability 0: 2333-6823 F: 2333-1316 E: gener Contract no. 13/WSD/16 Mainlaying in Ts						
		WEEKLY ENVIRONMENTAL INSPECTION						
	Inspecti	on Date: 16/07(2020 Inspected by: ET: Charley La	WSD C. E. CHONG					
	Inspecti	on Time: 9-30 - 11:50 Contractor: Sam Ng						
	Weath		Storm					
	Condit							
	Tempe		e Low					
	Wind	Calm Light Breeze Strong						
			N/A Yes No Photo/Remarks					
		General						
~	0.01	Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?						
C	0.02	Is ET Leader's log-book kept readily available for inspections?						
		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?	Smeening					
	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							
0	1.05	Is wheel-washing provided to all vehicles leaving the site?						
C	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						
	1.09	materials? 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						
	1.11	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?						

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

		N/A	Yes	No	Photo/Remarks
					Thete Tennand
.13	Are vehicles travelling at speed not exceeding 15km/hr within the site?			· 	
	an each an tha tha each ann an a tha ann an tha ann an tha ann ann ann ann ann ann ann ann ann a				
14	Arc stock of more than 20 bags of cement or day PFA covered or sheltered on top and 3	-h			
	sides?	V			
.15	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered				
	arcas?				
16	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas				
	accessible by the public?	Y	Ш,		
.17	Is open burning prohibited?				
.00	Construction Noise (Airborne)				
.01	Are quiet plants adopted on site?				
.02	Are the PMEs operating on site well-maintained to minimize the generation of excessive				
	niose?		V		
0.0					
.03	Are plants throttled down or turned off when not in use?				
.04	Are the plants known to emit noise strongly in one direction oriented to face away from		_	=) the sector
	NSRs?	V			4 No wavery
.05	Are moveable barriers provided to screen NSRs from plant or noisy operations?				1 1020
	in the more than the provided to bettern it to be notify plant of notify operations.	~)
.06	Are silencers, mufilers and enclosures provided to plants?				
.07	Are the hoods, cover panels and inspection hatches of PMEs closed during operation?		7	<u> </u>	
.07	Are the noods, cover panels and inspection natches of PMES closed during operation?				
.08	Are purposely-built site hoarding construction with appropriate materials provided along				
	the site boundary?	V			
.09	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to				
	nearby sensitive receivers?				<u></u>
.10	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?				
.11	Are valid noise emission label(s) affixed to all air compressors operating on site?				
		V	,		
.12	Are all construction noise permit(s) applied for percussive piling work?				
.13	Are construction noise permit(s) applied for general construction works during restricted				
	hours?				
.14	Are valid construction noise permit(s) displayed at all vehicular exits?		1		
.00	Water Quality				
	Is effluent discharge license obtained for wastewater discharge from site?		1		
3.02	Is effluent discharged according to the effluent discharge license?				2 NO WATER
		V/			1 discharge
8.03	Is wastewater discharge from site properly treated prior to discharge?				Inus oner

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

Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O No Photo/Remarks N/A Yes 3.04 Are perimeter channels provided to intercept storm runoff from outside the site? V 3.05 Are sand/silt removal facilities such as sand/silt traps and sediment basins provided to emove sand/silt particles from runoff? 3.06 Is surface runoff diverted to sedimentation facilities? V 3.07 Is the drainage system properly maintained? V obill 3.08 Are construction works carefully programmed to minimize soil excavation works during / ainv seasons? 3.09 Are exposed soil surface protected by paving as soon as possible to reduce the potential of V soil erosion? 3.10 Are temporary access roads protected by crushed gravel? V 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, V ackfilled 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? 1 ab((2) 3.15 Is oil leakage or spillage prevented? 1 V dvir tray 3.16 Are there any measures to prevent the release of oil and grease into the storm drainage \checkmark 015 (3) system? 3.17 Are the oil interceptors/ grease traps properly maintained? V 3.18 Are debris and rubbish generated on site collected, handled and disposed of properly to ~ woid them entering the streams? 3.19 Are all fuel tanks and storage areas provided with locks and be sited on sealed areas, V 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 \checkmark he sensitive watercourse and stormwater drains? 3.21 Are sufficient chemical toilets provided on site to handle sewage from construction work V orce? 3.22 Are sewage disposal and toilet maintenance of the portable chemical toilets provided by 1 the licensed contractors? 3.23 Is concrete washing water properly collected and treated prior to discharge? V 4.00 Waste Management 4.01 Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at publi 1 illing facilities and landfills?

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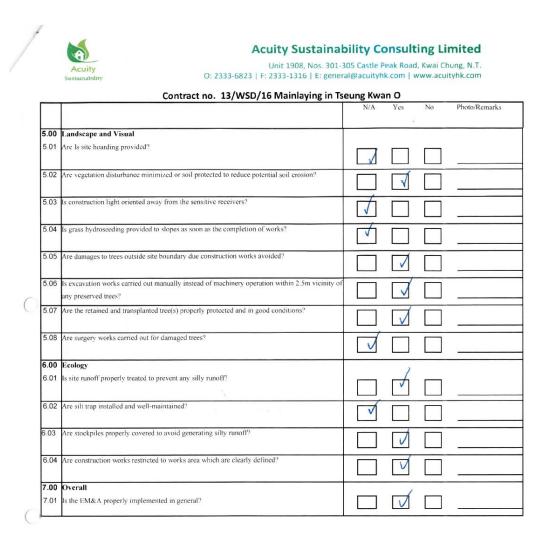
Unit 1908, Nos. 301-305 Castle Peak Road, Kwai Chung, N.T. O: 2333-6823 | F: 2333-1316 | E: general@acuityhk.com | www.acuityhk.com

		N/A	Yes	No	Photo/Remarks
02	Is a recording system implemented to record the amount of wastes generated, recycled and disposed of?				
03	Is the Contractor registered as a chemical waste producer?		1		1
04	Are chemical waste separated from other waste and collected by a licensed chemical waste collector?				
05	Are trip tickets for chemical waste disposal available for inspection?	\checkmark			
06	Is chemical waste reused and recycled on site as far as practicable?				
07	Are all containers for chemical waste properly labelled?		1		
80	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?				
09	Are incompatible chemical wastes stored in different areas?				
10	Is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?				
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?				
12	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?		\checkmark		
13	Are sufficient general refuse disposal/collection points provided on site?		1		
14	Is general refuse disposed of property and regularly?				
15	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?		1		
16	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?				
17	Are C&D wastes sorted on site?				
18	Are C&D waste disposed of properly?		1		
19	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?				
20	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?		\checkmark		
21	Are the construction materials stored properly to minimize the potential for damage or contamination?				3
22	Is a dumping license obtained to deliver public fill to public filling areas?		V		

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	Acuity Sustair	nability Consulting Limited
Acuity		01-305 Castle Peak Road, Kwai Chung, N.T. eneral@acuityhk.com www.acuityhk.com
Sustainability	ontract no. 13/WSD/16 Mainlaying in	
rk / Follow up of Observation(s) and Non-compliance(s) of Last Weekly Sit	te Inspection: Pitc - a ctill (thy -> (2000
observation(8)		Landfinstage 1 < Pit & el
1) Gooteville Mas l	Deserved damaged at 000765	64. Area 14.
(3) Chemican wer	re storest not pland Ms	such a drive they at Area A Claudifich
stage 1)		
leminder 19	notenter should be protected	tuly by sudleys at
(!) construction of GterA Pitc		3 0 1
	is frapped in the generate 1	Randel be cleared at
(2) WSong Maron	avail at CHA12 150.	
		the distance
piuntur vou	remircled not to place Construe at Lavolli Fease 1 Area 1	A.
Signatures:		
	ractor's WSD's resentative Representative	IEC's Representative
11	0	NIA
W	5-1-7	1.1.1

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Acuity Sustainability Consulting Limited Unit 1908, Nos. 301-305 Castle Peak Road, Kwai Chung, N.T. 0: 2333-6823 F: 2333-1316 E: general@acuityhk.com www.acuityhk.com Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O						
Inspection Date: >3) 57/2020 Inspection Date: >3) 57/2020 Inspection Time: 14-30 - 16:50						
Weather Condition Fine Dvercast Drizzle Rain Storm Hazy Temperature 240 C Humidity High Moderate Low Wind Calm Light Breeze Storng						
		N/A Yes No Photo/Remarks				
	General 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?					
	Construction Dust 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?	Simering				
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?	D D paved				
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 eaving 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?					

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

	Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O							
		N/A	Yes	No	Photo/Remarks			
1.13	Are vehicles travelling at speed not exceeding 15km/hr within the site?	1						
1.14	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top and 3 sides?							
1.15	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?							
	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?	1			. <u></u>			
1.17	Is open burning prohibited?							
2.00	Construction Noise (Airborne)							
	Are quiet plants adopted on site?		1					
2.02	Are the PMEs operating on site well-maintained to minimize the generation of excessive niose?		\checkmark					
2.03	Are plants throttled down or turned off when not in use?		\checkmark					
2.04	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?				2 No nearby			
2.05	Are moveable barriers provided to screen NSRs from plant or noisy operations?				J			
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?		1					
2.08	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?		<i></i>		8 			
2.09	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to							
	nearby sensitive receivers?		\checkmark		() <u></u>			
	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?							
	Are valid noise emission label(s) affixed to all air compressors operating on site?							
	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?		1					
2.14	Are valid construction noise permit(s) displayed at all vehicular exits?		1					
3.00	Water Quality		1					
	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?		1		3			

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

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

		N/A	Yes	No	Photo/Remarks
3.04	Are perimeter channels provided to intercept storm runoff from outside the site?		1	•	
3.05	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided to				
	remove sand/silt particles from runoff?		V		
3.06	Is surface runoff diverted to sedimentation facilities?		1		
3.07	Is the drainage system properly maintained?				025(1)
3.08	Are construction works carefully programmed to minimize soil exeavation works during rainy seasons?		1		
3.09	Are exposed soil surface protected by paving as soon as possible to reduce the potential of				
	soil erosion?		V		-
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?		V		
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?		1		065(2)
3.17	Are the oil interceptors/ grease traps properly maintained?		1		
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?		1		
3.20	Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?		V		
3.21	Are sufficient chemical toilets provided on site to handle sewage from construction work force?			\square	
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?				
	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?		1		

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

	Contract no. 13/WSD/16 Mainlaying in Ts	eung Kwa	n 0		
		N/A	Yes	No	Photo/Remarks
4.02	is a recording system implemented to record the amount of wastes generated, recycled and disposed of?				
4.03	is the Contractor registered as a chemical waste producer?		1		
4.04	Are chemical waste separated from other waste and collected by a licensed chemical waste collector?				1
4.05	Are trip tickets for chemical waste disposal available for inspection?				
4.06	is chemical waste reused and recycled on site as far as practicable?	\checkmark			
4.07	Are all containers for chemical waste properly labelled?		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?				ē
4.10	is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?		J		·
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?				2
4.13	Are sufficient general refuse disposal/collection points provided on site?				3
4.14	is general refuse disposed of properly and regularly?		\checkmark		
4.15	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?		1		
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?	\square			
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?		\checkmark		
4.22	is a dumping license obtained to deliver public fill to public filling areas?		7		

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

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

		N/A	Yes	No	Photo/Remarks
5.00	Landscape and Visual				
5.01	Are Is site hoarding provided?	1			
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?	\checkmark			
5.05	Are damages to trees outside site boundary due construction works avoided?				. <u></u>
5.06	is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?		1		
5.07	Are the retained and transplanted tree(s) properly protected and in good conditions?				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?				P
6.03	Are stockpiles properly covered to avoid generating silty runoff?		1		S
6.04	Are construction works restricted to works area which are clearly defined?		1		
7.00	Overall		1		
7.01	Is the EM&A properly implemented in general?		\checkmark		

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Acuity	Acuity Sustainability Consulting Limited Unit 1908, Nos. 301-305 Castle Peak Road, Kwai Chung, N.T. 0: 2333-6823 F: 2333-1316 E: general@acuityhk.com www.acuityhk.com
	Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O
	tion(s) and Non-compliance(s) of Last Weekly Site Inspection:
Purtion E Fit	C > 137 Pitc - (HUT = 1215, - Pitra - Landling a stope (Area A
observation(s)	011. HC 4.4.50 CH. FC 04621
IN Mastes Were	exerved in the grung at partian #:
(2) chemical way (3) busto mett	arcened in the gruy at pertion f. s not placed inside the desip tray, at Pitc, 157 Pirc chans were found directly with to the water bennieur. cleand to provent if from excepting the construction site ts: CHECD+62 & 4450
at chair	+5%. CHECO262 & 4+50
remmeter (1) con 4mil Savalbagn	lian boundants Quould be producted lung by at UNA6664 & RTA (jaking)
Signatures:	
	Contractor's WSD's IEC's Representative Representative Representative
-	to For NUA
(Name: 101' how lene)	(Name: Security) (Name: N/A) (Name: N/A)

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	Acuity Unit 1908, Nos. 301-	N CHECKLIST
Weath Condi Tempo Wind		Storm Hazy te Low
		N/A Yes No Photo/Remarks
	General Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	Remindles (1)
0.02	Is ET Leader's log-book kept readily available for inspections?	
	Construction Dust 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?	noteverying.
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?	A Downed
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?	

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

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

		N/A	Yes	. N0	Photo/Remarks
1.13	Are vehicles travelling at speed not exceeding 15km/hr within the site?	\checkmark			8
1.14	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top and 3 sides?	1			
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)				
	Are quiet plants adopted on site?		1		
2.02	Are the PMEs operating on site well-maintained to minimize the generation of excessive niose?		\checkmark		
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?		\checkmark		
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?				4
2.10	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?				
	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?		1		·
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	1	m	-	
3.01	is effluent discharge license obtained for wastewater discharge from site?	in the			
3.02	Is effluent discharged according to the effluent discharge license?				I vio dicharge
3.03	Is wastewater discharge from site properly treated prior to discharge?				renveryday

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		N/A	Yes	No .	Photo/Remarks
3.04	Are perimeter channels provided to intercept storm runoff from outside the site?	\checkmark			
3.05	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided to remove sand/silt particles from runoff?				2 no dischige
3.06	Is surface runoff diverted to sedimentation facilities?)
3.07	Is the drainage system properly maintained?		\checkmark		
3.08	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?		1		
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?		6		
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?	1			
3.15	Is oil leakage or spillage prevented?		\checkmark		4 or drip trug
3.16	Are there any measures to prevent the release of oil and grease into the storm drainage system?		4		
3.17	Are the oil interceptors/ grease traps properly maintained?				J
3.18	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?		V		
3.19	Are all fuel tanks and storage areas provided with locks and be sited on scaled areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?				5
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?		\checkmark		
3.22	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?	\Box	1		
3.23	Is concrete washing water properly collected and treated prior to discharge?				
4.01	Waste Management Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?		1		

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		N/A	Yes	. No	Photo/Remarks
4.02	is a recording system implemented to record the amount of wastes generated, recycled and disposed of?		1		
4.03	Is the Contractor registered as a chemical waste producer?		1		
4.04	Are chemical waste separated from other waste and collected by a licensed chemical waste collector?	\checkmark			
4.05	Are trip tickets for chemical waste disposal available for inspection?	1			
4.06	Is chemical waste reused and recycled on site as far as practicable?				
4.07	Are all containers for chemical waste properly labelled?		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?		1		
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?		1		
4.13	Are sufficient general refuse disposal/collection points provided on site?		1		
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?				<u>,</u>
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?				V nood.
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?				

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

		18/74	res	NO .	Photo/Remarks
5.00	Landscape and Visual				
5.01	Are Is site hoarding provided?				
	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?		\checkmark		
5.03	is construction light oriented away from the sensitive receivers?				
5.05	Are damages to trees outside site boundary due construction works avoided?				
	Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?				
	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				
	Is site runoff properly treated to prevent any silly runoff?		•		po_discherge
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?		1		
7.00	Overall		1		
7.01	Is the EM&A properly implemented in general?		Í		4

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	Contract no. 1	3/WSD/16 Mainlaying	in Tseung Kwan O	
rk / Follow up of Observ. Remunder (()	ation(s) and Non-com	npliance(s) of Last Weekly S # # \$\$7740	Site Inspection:	
(1) Environmental	permit show	ld be displayed at	the vehicle Potrame/exit a	2¥
H.K. Velod	rowl		0	
4				
Signatures:				
ET	Contractor's	WSD's Representative	IEC's Representative	
Representative	Representative	Representative	Representative	
d -	45	Kew	tun	

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Appendix M

Proactive Environmental Protection Proforma



Proactive Environmental Protection for the Next Reporting Month

Reporting Period	Activity	Major Environmental Impact	Environmental Mitigation Measure
1 August 2020 - 31 August 2020	 Excavation of trench Mainlaying of pipe Backfilling of the trench Work fronts for open trench Work fronts for pipe jacking Trial pits works Pile sheet driving works Grouting works 	Construction dust and noise generation; constriction wastes	 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



Appendix N

Impact Monitoring Schedule of Next Reporting Month



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