Issue No.: Issue 1
Issue Date: January 2025
Project No.: 2075

EcoPark Operation

Annual Environmental Monitoring & Audit Report 2024

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Allied Environmental Consultants Limited

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EXECUTIVE SUMMARY

General

EcoPark is a key element in the Government's waste management policy that aims at promoting the local recycling industry by providing long-term land at affordable rents, thereby encouraging investment in advanced technology and value-added recycling processes. EcoPark is being developed in two phases at site in Tuen Mun Area 38 as shown in ***Figure 1-1***. The contract for the management of EcoPark – Contract No. *EP/SP/218/21 Provision of Management Services for EcoPark 2022* was awarded to Urban Property Management Limited (UPML) by Environmental Protection Department (EPD) effective from 30th October 2022.

UPML, the "Operator" of EcoPark, have appointed Allied Environmental Consultants Ltd. (AEC) as the Environmental Team (ET) to carry out the Environmental Monitoring and Audit (EM&A) works for the operation of EcoPark as required by the EM&A Manual and in accordance with the conditions of the Environmental Permit (EP) (EP-226/2005/G).

This is the eighteenth (18th) annual EM&A report prepared for the operation phase of EcoPark and covers the calendar year of 2024.

In the reporting year, there were twelve tenants and five operators in EcoPark Phase 1 and Phase 2. One operator (Jardine Engineering Corporation Ltd.) at biochar production plant in Lots T8-T11 of EcoPark Phase 1, one operator (ALBA Integrated Waste Solutions (Hong Kong) Ltd.) located at WEEE.PARK in Lots P2-P4 of EcoPark Phase 2, one operator (Organic Tech Ltd.) at bioconversion of organic waste plant in Lot P12b of EcoPark Phase 2, one operator (The Hong Kong Polytechnic University) of biochar-enhanced construction materials plant at Lot P12a of EcoPark Phase 2 and one operator Ming Hing – AEL JV of wood waste recycling in Berth D, E, F and Drainage reserve area of EcoPark Phase 2.

The operator of Lot P12b (Organic Tech Ltd.) was ceased operation on 3 August 2024. The lots operated by Chun Yang International (HK) Company Limited (i.e., Lots T2-T3), Allied Success Technology Development Limited (i.e., Lot T7), Zhou Ji (i.e., Lots P1, P5-P7), PolyU (i.e., Lot P12a) and Ming Hing – AEL JV (i.e., Berth D, E, F and Drainage reserve area) were under preparatory works without any operation during the reporting year.

In the reporting year, two new PRCs and DAs were approved. One of the PRC and DA was approved for the bioconversion of organic waste recycling process by the Organic Tech Limited in the Lot P12b and One of the PRC and DA was approved for the Pilot Biochar Production Plant (PBPP) in the Lot T8 – T11. Full set of the completed PRCs and DAs are submitted separately to relevant authorities in EPD.

Throughout the reporting year, monthly site inspections and monthly random site inspections were conducted by the ET and the IEC respectively, while quarterly joint site inspections were carried out by the Operator, the IEC and the ET. Observations and recommendations were made during site inspections.

Throughput of Materials / Waste Generated

The throughputs of WEEE.PARK, Organic Tech Ltd., PBPP and the nine active tenants in the reporting year are summarised below. Please note that product output plus waste disposal does not necessarily equal the waste input, due to material losses during processing and material retained within the lots.

Material Type	Waste Input (tonnes)	Product Output [4] (tonnes)	Waste Disposed [4] (tonnes)
Waste Organic Food	40,072	12,092	14,442
Waste Ferrous Metals	100,966	100,941	605
Waste Wood	2,492	2,040	n/a
Waste Electronics[5]	22,193	18,952	3,155
Waste Plastics	8,492	7,339	747
Construction Waste	39,780	88,892	99
Waste Glass[6]	6,932		
Waste Rubber Tyres	2,082	1,912	n/a
Waste Battery	967	609	n/a

Notes:

1) The throughput data presented above is the best available data, which updated as month and cover the whole year and it has been rounded off to the nearest whole tonne for presentation.
2) The total product output may not be the same as the waste input due to the processing of materials that were received before the reporting quarter and were stored within the lots.
3) Waste disposal refers to the disposal of general refuse (i.e., packaging) and/or chemical waste.
4) Since the recycling of waste glass and construction waste is combined to produce concrete blocks at K. Wah, the product output and waste disposal from both processes are combined.
5) Including the "Regulatory WEEE" and "Non-regulatory WEEE".
6) The "Waste Glass" in here which means "Glass Shard".
7) "-" in the column of waste disposal denotes zero quantity; while "n/a" denotes unavailable information at the time of report preparation.
8) The data is updated as at which month if it doesn't cover the whole year.

Exceedances of Any Measured Action / Limit Levels

The northern part of EcoPark is located within the 250m Landfill Gas (LFG) Consultation Zone of Siu Lang Shui Landfill. LFG monitoring was carried out quarterly at five locations (three in Phase 1 and two in Phase 2) in the reporting year. The LFG monitoring in Phase 1 (EP 1-1 to EP 1-3) was commenced in December 2008 and the Phase 2 (EP2-1 and EP2-2) was commenced in January 2011.

In the reporting year, LFG monitoring was undertaken on 23rd February 2024, 20th May 2024, 16th September 2024, 21st November 2024 at five locations (three in Phase 1 and two in Phase 2). No exceedance of any parameter was recorded.

Summary of Complaints, Summons and Prosecutions

No complaints, notification of summons and successful prosecution related to recycling activities was received in the reporting year.

Reporting Changes

There is no change in the reporting year.

Future Key Issues

No key issues are anticipated in the next reporting year.

Conclusions of Annual Review

In terms of interpretation of EM&A data, the outcome of quarterly monitoring is considered as sufficient and effective according to *Section 8.7.11* of the EIA Report and *Section 6.4.4* of the EM&A Manual.

In terms of the environmental acceptability of EcoPark, no critical environmental deficiencies were identified at various tenants' lots in EcoPark in the reporting year. Therefore, the operation of EcoPark in environmental terms is considered as acceptable in general.

In terms of the practicality and effectiveness of the EIA process and the EM&A programme, the mitigation measures proposed in the EIA Study are effective and efficient. The use of the Process Review mechanism to assess incoming processes, processes not assessed in the EIA, or processes with greater throughputs than EIA assumption, is considered to work well and is fully in accordance with the EP conditions, the recommendations of EIA and the requirements of the EM&A programme.

1 PROJECT BACKGROUND

1.1 Project Overview

1.1.1 In the document "A Policy Framework for the Management of Municipal Solid Waste (2005 –2014)", the government set out a comprehensive policy to support the recycling industry. This included allocating suitable land, encouraging research and development, introducing environmental legislation and providing effective support measures. In May 2013, the Environment Bureau launched "Hong Kong Blueprint for Sustainable Use of Resources 2013 – 2022", which promised continuing support for the recycling industry.

1.1.2 EcoPark was developed to support the local recycling industry by providing long-term land at affordable rents, thereby encouraging investment in advanced technology and value-added recycling processes.

1.1.3 EcoPark, as shown in ***Figure 1-1***, has been developed in Tuen Mun Area 38 in two phases (Phase 1 and Phase 2) under Contract *EP/SP/52/06 Development of EcoPark in Tuen Mun Area 38*, which was awarded to Kaden Construction Ltd by the Environmental Protection Department (EPD) in June 2006. Phase 1 construction was completed in July 2009 and Phase 2 construction was completed in November 2010.

1.1.4 The contract for the management of EcoPark – Contract No. *EP/SP/218/21 Provision of Management Services for Eco Park 2022* was awarded to Urban Property Management Limited (UPML) by EPD effective from 30th October 2022.

1.1.5 UPML, the "Operator" of EcoPark, has appointed Allied Environmental Consultants Ltd. (AEC) as the Environmental Team (ET) to carry out the Environmental Monitoring and Audit (EM&A) works for the operation of EcoPark as required by the EM&A Manual and in accordance with the conditions of the Environmental Permit.

1.1.6 AECOM Asia Company Limited (AECOM) has been appointed by the EPD as the Independent Environmental Checker (IEC) starting on 30th October 2022.

1.1.7 The ET and the IEC carry out the EM&A works for EcoPark as required by the EM&A Manual and in accordance with the conditions of the Environmental Permit (EP).

1.2 Operation Programme

1.2.1 By the end of the reporting year, there were nine tenants in EcoPark and two operators were active in EcoPark Phase 1 and Phase 2 comprising:

- Nine active tenants (Champway, HK Biomass, HP Telford, Chung Yue, K. Wah, E. Tech, On Fat Lung, HKBRC and Baguio) and two active operators (ALBA Integrated Waste Solutions (Hong Kong) Ltd. and Jardine Engineering Corporation Ltd.) who have carried out full recycling operations.
- #Organic Tech Ltd. (OTL) for bioconversion of organic waste plant operation was recycled until July 2024 and the operation was ceased since 3 August 2024.

- *Biochar-enhanced construction materials plant operated by The Hong Kong Polytechnic University (PolyU) was under site preparation during the reporting year.
- #Allied Success Technology Development Limited for plastic recycling was under site preparation works during the reporting year.
- #Hong Kong Zhou Ji Paper Industrial Limited (Zhou Ji) was under preparation work during the reporting year.
- #Chun Yang International (HK) Company Limited for the Waste EV Rechargeable Batteries recycling was under site preparation works during the reporting year.
- *Ming Hing – AEL JV for the waste wood recycling was under site preparation works during the reporting year.

Notes: "*" is the operator of EcoPark; "#" is the tenant of EcoPark

1.3 Project Organization and Contact Personnel

1.3.1 Key personnel and contact particulars are summarised in ***Table 1.1***.

Table 1.1 EM&A Personnel Contact Details

Position	Name	Email Address	Phone No.
Project Proponent – EPD			
Organic Waste Facilities Development Manager	Mr. K. F. TANG	kinfaitang@epd.gov.hk	3741 1799
Operator – UPML			
Project Manager	Ms. Raindy YIP	raindy.py.yip@urban.com.hk	2212 5900
Park Manager	Ms. Y. H. WONG	eunice.yh.wong@emo.urban.com.hk	2212 5920
IEC – AECOM			
IEC	Mr. Jackel C. H. LAW	Jackel.law@aecom.com	3856 5312
ET – AEC			
ET Leader	Ms. Grace. M. H. KWOK	gk@aechk.com	2815 7028

1.3.2 The organisational structure and lines of communication for the operation of EcoPark with respect to environmental management is given in ***Figure 1-2*** and ***Figure 1-3***, respectively.

Figure 1-1 Location of EcoPark in Tuen Mun Area 38

Figure 1-2 Organisation Chart of UPML

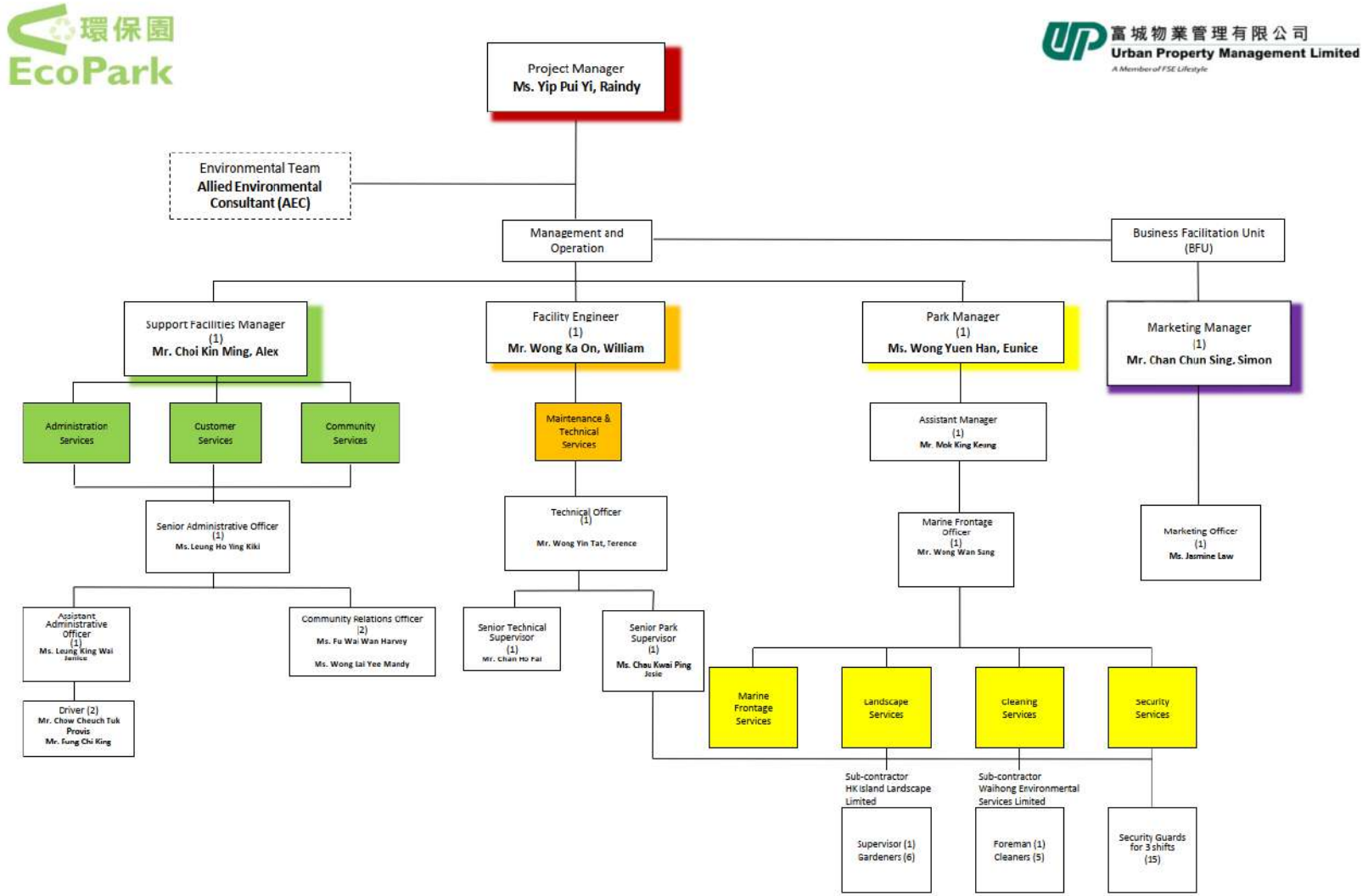
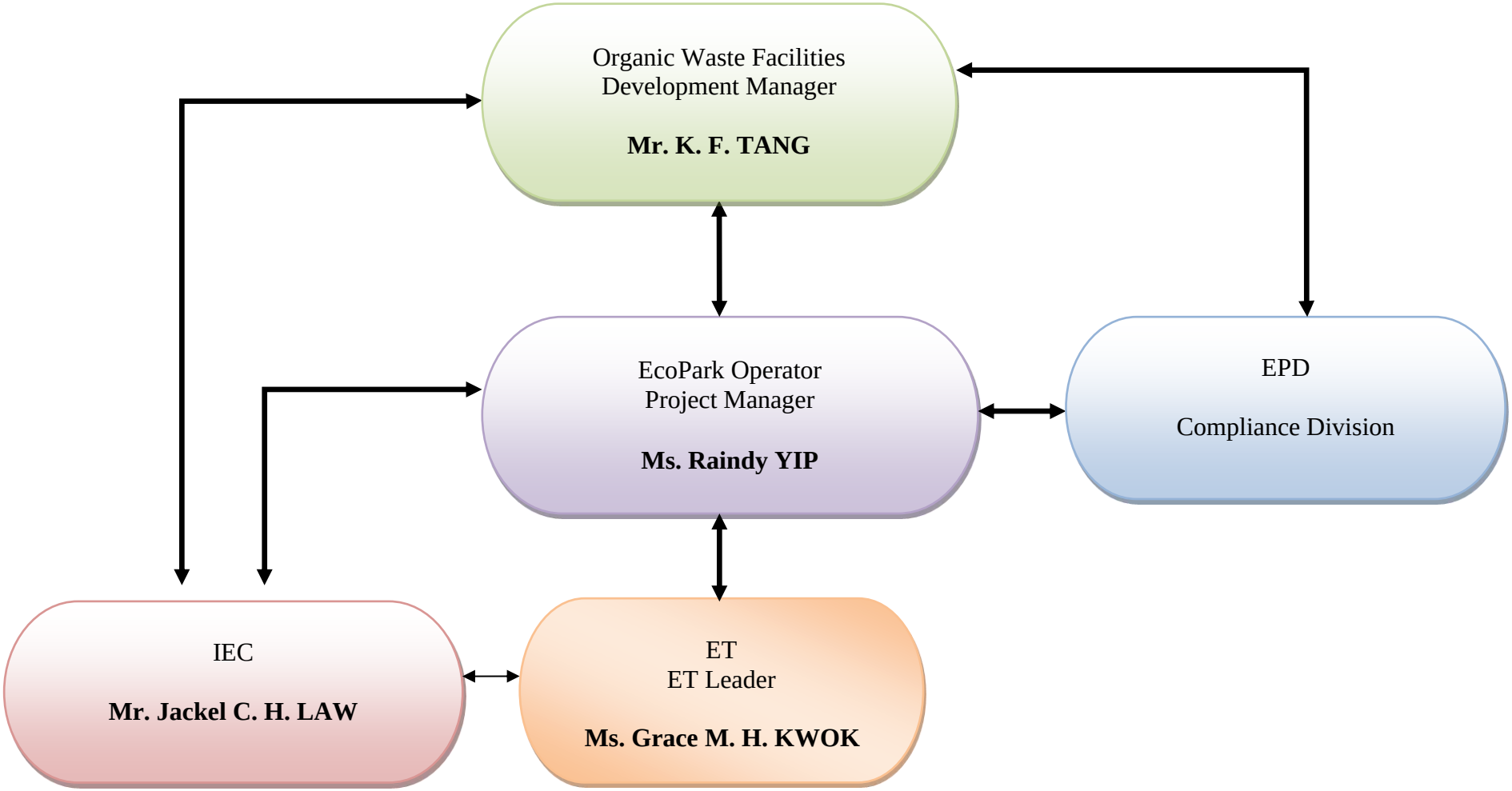


Figure 1-3 Organisation Chart of EM&A Works (Operation)



2 SUMMARY OF EM&A REQUIREMENT

2.1 Monitoring Parameters

2.1.1 Landfill Gas (LFG) is required to be monitored quarterly at service voids and utility boxes within EcoPark because the northern part of EcoPark lies within the 250m LFG Consultation Zone for Siu Lang Shui Landfill, which is located to the north of EcoPark.

2.1.2 Operational LFG monitoring has been carried out in Phase 1 after completion of construction in July 2009, commencing in the August to October 2009 quarter. In Phase 2, monitoring has been carried out after completion of construction in November 2010, commencing in the November 2010 to January 2011 quarter.

2.1.3 The location for LFG monitoring was not specified in the EM&A Manual since the final design of EcoPark was not available when the EM&A Manual was approved. Therefore, during a joint site inspection on 27th July 2009, three monitoring locations were identified and agreed as suitable monitoring locations by the former ET (SMEC Asia Ltd.), IEC (Atkins China Ltd.) and the Operator (Serco Guardian Joint Venture). Subsequently, two more monitoring locations in Phase 2 were proposed by the former ET Leader and agreed by the IEC and Operator via email in January 2011. These five monitoring locations are listed in ***Table 2.1*** and shown in ***Figure 2-1***.

Table 2.1 Operation Phase LFG Monitoring Locations in EcoPark

Monitoring Station ID	Type	Locations
EP1-1	LFG vent pipe	Inside the landscaping area of Administration Building
EP1-2	Service void	PCCW below-ground chamber outside Lot T1
EP1-3	Service void	HGC Broadband below-ground chamber outside Lot T3
EP2-1	Service void	HGC Broadband below-ground chamber outside Lot P1
EP2-2	Service void	HGC Broadband below-ground chamber outside Lot P3

2.1.4 Routine LFG monitoring has been carried out on a quarterly basis. Should EPD alert the Operator that high LFG levels have been detected during monthly monitoring under the Siu Lang Shui Landfill restoration contract, the Operator may be required to increase LFG monitoring to monthly until such time EPD informs the Operator that quarterly monitoring can be resumed. To-date, no detection of high LFG levels under Siu Lang Shui Landfill restoration contract was received from EPD.

2.2 Environmental Quality Performance Limits and EAP

2.2.1 The Action/Limit Levels and Event Action Plan (EAP) for LFG are shown ***Table 2.2*** below. These refer to LFG detected in excavations, utilities and any enclosed on-site areas. No other A/L Levels or EAPs are specified in the EM&A Manual for the operation phase EM&A.

Table 2.2 Action Levels, Limit Levels and Event and Action Plan for LFG

Parameter	Level	Action
Oxygen (O_2)	Action Level <19% O_2	• Ventilate trench/void to restore O_2 to >19%
	Limit Level <18% O_2	• Stop works • Evacuate personnel/prohibit entry • Increase ventilation to restore O_2 to >19%
Methane (CH_4)	Action Level >10% LEL	• Post "No Smoking" signs • Prohibit hot works • Increase ventilation to restore CH_4 to <10% LEL
	Limit Level >20% LEL	• Stop works • Evacuate personnel/prohibit entry • Increase ventilation to restore CH_4 to <10% LEL
Carbon Dioxide (CO_2)	Action Level >0.5% CO_2	• Ventilate to restore CO_2 to <0.5%
	Limit Level >1.5% CO_2	• Stop works • Evacuate personnel/prohibit entry • Increase ventilation to restore CO_2 to <0.5%

2.3 Environmental Audit of Non-Monitored Parameters

2.3.1 Site inspections provide a direct means to trigger and enforce the environmental protection and pollution control measures specified in the Environmental Impact Assessment (EIA) Report. To examine operational practice, site inspections are to be undertaken by the ET once per month. The monthly inspection shall join with the random site inspection by the IEC where possible. A joint inspection by ET and IEC will be carried out at least once per quarter. Ad hoc site inspections are also carried out if significant environmental problems are identified. In addition, inspections may be required subsequent to receipt of environmental complaint, or as part of the investigation work, as specified in the EAP.

2.3.2 The following parameters are required to be audited as part of the operation phase EM&A program:

- Air Quality
- Water Quality
- Waste Management
- Land Contamination

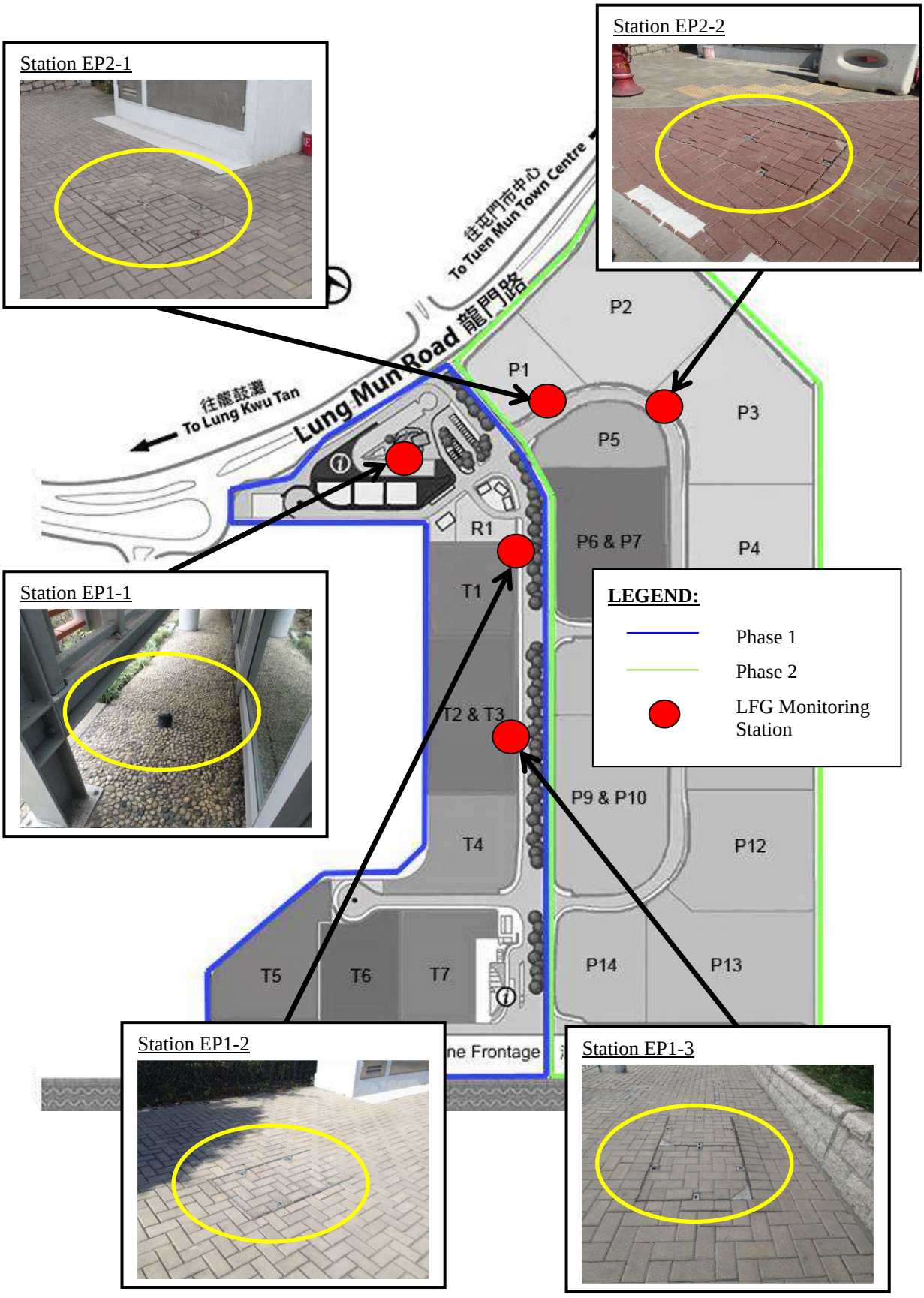
2.4 Environmental Mitigation Measures

2.4.1 Environmental mitigation measures applicable to the operation phase EM&A as stated in the Implementation Schedule are summarised in ***Appendix 1.***

2.5 Environmental Requirements in Tenancy Agreements

2.5.1 Environmental requirements specified in tenancy agreements are provided in ***Appendix 2.***

Figure 2-1 LFG Monitoring Locations within EcoPark



3 OPERATION STATUS

3.1 General

3.1.1 The location of lots within EcoPark, the tenancy numbers and tenant names are shown in ***Figure 3-1.*** A summary of waste throughputs is provided in *Section 3.12***.** Brief descriptions of the active tenants and operators during the reporting year are provided from *Section 3.2* to *3.13*.

3.1.2 In the reporting year:

- The tenant of Lots P1, P5- P7 (Zhou Ji), Lot T7 (Allied Success Technology Development) and Lots T2-T3 (Chun Yang International (HK) Company Limited) were under preparatory works without any site operation.
- The operator of Lot P12a (PolyU), and the Berth D, E, F and Drainage reserve area (Ming Hing – AEL JV) were under preparatory works without any site operation.

3.2 Champway Technology Limited

- **Lot No.:** T5 (Phase 1)
- **Lot Size:** Approx. 6,000m^2
- **Activity:** Recycling of Organic Waste (Waste Cooking Oil)
- **Recycling Process:** Turn waste cooking oil into biodiesel by extraction, neutralisation, separation and distillation

3.2.1 In this reporting year, waste cooking oil was recycled. Bi-monthly samplings for effluent arising from producing biodiesel have been conducted to comply with the requirement of effluent discharge licence.

3.3 Hong Kong Biomass (Wood) Collect and Recycle Company Limited

- **Lot No.:** T4 (Phase 1)
- **Lot Size:** Approx. 5,000m^2
- **Activity:** Recycling of Waste Woods
- **Recycling Process:** Recycle waste woods to wood fuel pellets. Ferrous metals will be separated by magnets.

3.3.1 In this reporting year, fallen trees, pallet and wooden board were recycled.

3.4 HP Telford Envirotech Group Limited

- **Lot No.:** T1 (Phase 1)
- **Lot Size:** Approx. 5,000m^2
- **Activity:** Recycling of Waste Plastics
- **Recycling Process:** Produce PET packing strap and PE wax.

3.4.1 Sorting, shredding and baling of waste plastic were carried out in the reporting year.

3.5 Chung Yue Steel Group Company Limited

- **Lot No.:** P13 (Phase 2)
- **Lot Size:** Approx. 10,000m^2
- **Activity:** Recycling of Waste Metals
- **Recycling Process:** Turn waste metals into non-ferrous scrap, light ferrous scrap and heavy ferrous scrap by sorting, baling and shearing.

3.5.1 Recycling of waste metals was carried out in the reporting year.

3.6 K. Wah Construction Products Ltd.

- **Lot No. :** P11 (Phase 2)
- **Lot Size:** Approx. 10,000m^2
- **Activity:** Recycling of Waste Construction Materials/Waste Glass
- **Recycling Process:** Waste construction materials and waste glass will be crushed and delivered to the concrete mixing plant for blending and poured into block machine for casting. The blocks will then be cured, washed and packaged

3.6.1 Recycling of waste construction materials and waste glasses were carried out in the reporting year.

3.7 WEEE.PARK

- **Lot No.:** P2, P3, P4 (Phase 2)
- **Lot Size:** Approx. 30,000 m^2
- **Activity:** Recycling of WEEE
- **Recycling Process:** Four major types of WEEE (i.e. refrigerators and freezers, tumble dryers, dehumidifiers, washing machine, air conditioners) will be recycled. The recycling processes include separation of insulation/backlighting/plastics/various metals, recovery of screen/monitor stand/refrigerant/oil/hazardous materials, and shredding of casing.

3.7.1 WEEE recycling was carried out in the reporting year.

3.8 On Fat Lung Innovative Resources Ltd.

- **Lot No.:** P8 (Phase 2)
- **Lot Size:** Approx. 4,400 m^2
- **Activity:** Recycling of Waste Rubber Tyres and WEEE
- **Recycling Process:** Waste rubber tyres will be shredded into rubber powder and processed to form rubber bricks. WEEE will be dismantled/shredded and recovered for reusable components.

3.8.1 Recycling of waste rubber tyres and WEEE were carried out in the reporting year.

3.9 E. Tech Management (HK) Limited

- **Lot No.:** P14 (Phase 2)
- **Lot Size:** Approx. 5,000 m^2
- **Activity:** Recycling of WEEE
- **Recycling Process:** CRT, computer/electronics, white goods and florescent lamps will be recycled. The recycling processes include testing and dismantling of components, repair of refurbished equipment, sorting for reusable components and shredding for scrap.

3.9.1 Recycling of WEEE was carried out in this reporting year.

3.10 Hong Kong Battery Recycling Centre (HKBRC) Limited

- **Lot No.:** P9 & P10 (Phase 2)
- **Lot Size:** Approx. 10,000m^2
- **Activity:** Waste Lead Acid Batteries
- **Recycling Process:** The recycling process involves extraction of lead from spent batteries, secondary lead smelting and refining to produce lead ingots as the end product.

3.10.1 Waste Lead Acid Batteries were shredded and separated into different components, the lead grid was melted to produce lead paste in this reporting year.

3.11 Baguio Waste Management & Recycling Limited

- **Lot No.:** T6 (Phase 1)
- **Lot Size:** Approx. 6,500m^2
- **Activity:** Recycling of Waste Plastics
- **Recycling Process:** Sorting, shredding, washing and extrusion

3.11.1 Recycling of waste plastics was carried out in this reporting year.

3.12 Organic Tech Limited (OTL)

- **Lot No.:** P12b (Phase 2)
- **Lot Size:** Approx. 3,200m^2
- **Activity:** Bioconversion of Organic Waste
- **Recycling Process:** Waste inspection, grinding of chicken manure, breeding of Black Soldier Fly (BSF) larvae, fermentation of insect frass, and drying of mature fresh larvae.

3.12.1 In this reporting year, organic waste was recycled until July 2024 and the operation was ceased since 3 August 2024.

3.13 Pilot Biochar Production Plant (PBPP)

- **Lot No.:** T8, T9, T10, T11 (Phase 1)
- **Lot Size:** Approx. 2,000m^2
- **Activity:** Recycling of Waste Wood
- **Recycling Process:** Converting Organic Woody Materials to Biochar

3.13.1 In this reporting year, waste wood was recycled.

3.14 Throughput Statistics

3.14.1 For the active recyclers, most of the incoming waste materials and outgoing products were delivered by land transportation, except for the metals from Chung Yue and biodiesel from Champway were delivered by both marine and land transportation.

3.14.2 The throughputs of WEEE.PARK, OTL, PBPP and nine active tenants in the reporting year are summarised in ***Table 3.1***. Please note that product output plus waste disposal does not necessarily equal the waste input, due to material losses during processing and material retained within the lot.

Table 3.1 Throughput Statistics for the Reporting Year

Material Type	Waste Input (tonne)	Product Output [4] (tonne)	Waste Disposed [4] (tonne)
Waste Organic Food	40,072	12,092	14,442
Waste Ferrous Metals	100,966	100,941	605
Waste Wood	2,492	2,040	n/a
Waste Electronics[6]	22,193	18,952	3,155
Waste Plastics	8,492	7,339	747
Construction Waste	39,780	88,892	99
Waste Glass [7]	6,932		
Waste Rubber Tyres	2,082	1,912	n/a
Waste Battery	967	609	n/a

Notes:

1) The throughput data presented above is the best available data, which updated as month and cover the whole year and it has been rounded off to the nearest whole tonne for presentation.
2) The total product output may not be the same as the waste input due to the processing of materials that were received before the reporting quarter and were stored within the lots.
3) Waste disposal refers to the disposal of general refuse (i.e., packaging) and/or chemical waste.
4) Since the recycling of waste glass (glass shard) and construction waste is combined to produce concrete blocks at K. Wah, the product output and waste disposal from both processes are combined.
5) "-" in the column of waste disposal denotes zero quantity; while "n/a" denotes unavailable information at the time of report preparation.
6) Including the "Regulatory WEEE" and "Non-regulatory WEEE".
7) The "Waste Glass" in here which means "Glass Shard".

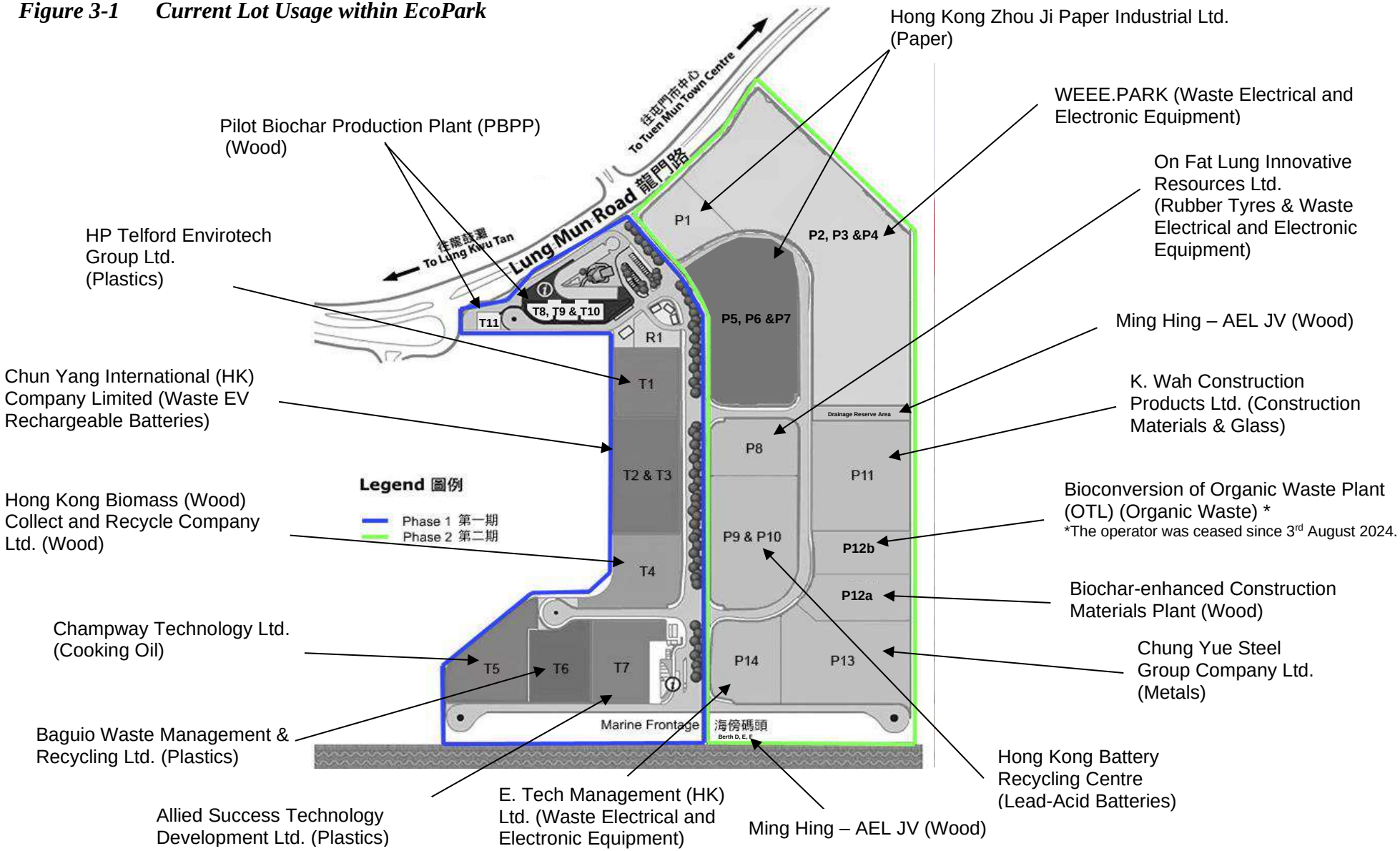
Detailed throughput figures of the reporting year are provided in ***Appendix 3.1.***Updated throughput figures of the previous year are provided in ***Appendix 3.2.***

3.15 Process Review

3.15.1 Process Review, and maybe Design Audit (DA) where required, had been conducted for each recycling process to be operated within EcoPark to confirm its compliance with the findings and recommendations of the EIA report and the conditions of the EP.

3.15.2 Since 2008, thirty process reviews and seven DAs had been approved. Among those, seventeen process reviews and three DAs are related to the current recycling processes in EcoPark as of December 2024. In the reporting year, two new PRC and DA were approved for the bioconversion of organic waste recycling process by the Organic Tech Limited in the Lot P12b and the Pilot Biochar Production Plant (PBPP) in the Lot T8 – T11.

Figure 3-1 Current Lot Usage within EcoPark



4 IMPLEMENTATION STATUS OF ENVIRONMENTAL PROTECTION MEASURES

4.1.1 Environmental mitigation measures applicable to the operation phase EM&A as stated in the implementation schedule are summarised in ***Appendix 1.*** Environmental requirements specified in tenancy agreements are summarised in ***Appendix 2.***

4.1.2 By the end of the reporting year, WEEE.PARK, PBPP and nine active tenants (Champway, HK Biomass, HP Telford, K. Wah, E. Tech, Chung Yue, On Fat Lung, HKBRC and Baguio) are under full operation.

4.1.3 Appropriate environmental protection measures are in place at all lots.

5 MONITORING RESULTS

5.1 Monitoring Date, Time, Frequency and Duration

As described in *Section 2.1*, operational LFG monitoring is conducted quarterly at five monitoring locations, three in Phase 1 and two in Phase 2. LFG monitoring was carried out on 23rd February 2024, 20th May 2024, 16th September 2024, 21st November 2024 in this reporting year. Monitoring details are shown ***Table 5.1***.

Table 5.1 Sampling Schedule for LFG Monitoring

Station ID	Sampling Date	Time	Duration	Ambient Air Temp. (ºC)	Weather
EP1-1	23rd February 2024	09:30 – 09:32	2 minutes	18ºC	Overcast
EP1-2		09:40 – 09:42	2 minutes	18ºC	Overcast
EP1-3		09:50 – 09:52	2 minutes	18ºC	Overcast
EP2-1		10:00 – 10:02	2 minutes	18ºC	Overcast
EP2-2		10:10 – 10:12	2 minutes	18ºC	Overcast
EP1-1	20th May 2024	14:20 – 14:22	2 minutes	25ºC	Overcast
EP1-2		14:35 –14:37	2 minutes	25ºC	Overcast
EP1-3		14:40 – 14:42	2 minutes	25ºC	Overcast
EP2-1		14:25 – 14:27	2 minutes	25ºC	Overcast
EP2-2		14:30 – 14:32	2 minutes	25ºC	Overcast
EP1-1	16th September 2024	15:10 – 15:12	2 minutes	33ºC	Sunny
EP1-2		15:15 – 15:17	2 minutes	33ºC	Sunny
EP1-3		15:20 – 15:22	2 minutes	33ºC	Sunny
EP2-1		15:25 – 15:27	2 minutes	33ºC	Sunny
EP2-2		15:30 – 15:32	2 minutes	33ºC	Sunny
EP1-1	21st November 2024	14:15 – 14:17	2 minutes	19ºC	Sunny
EP1-2		14:20 –14:22	2 minutes	19ºC	Sunny
EP1-3		14:35 – 14:37	2 minutes	19ºC	Sunny
EP2-1		14:25 – 14:27	2 minutes	19ºC	Sunny
EP2-2		14:30 – 14:32	2 minutes	19ºC	Sunny

5.2 Monitoring Methodology, Parameters and Equipment

5.2.1 The LFG monitoring requirement and methodology are stipulated in *Section 6* of the EM&A Manual. The LFG monitoring parameters and their measurement ranges are detailed in ***Table 5.2*** below.

Table 5.2 Parameters and Measurement Ranges for LFG Monitoring

Parameters	**Measurement Ranges**
Methane (CH_4)	0 – 100% LEL & 0-100% v/v
Oxygen (O_2)	0 – 25% v/v
Carbon Dioxide (CO_2)	0 – 100% v/v
Barometric Pressure	mBar (absolute)

5.2.2 LFG monitoring shall be carried out using intrinsically-safe, portable multi-gas monitoring instruments. The gas monitoring equipment shall:

1. Where possible, comply with BS 6020 and be approved by BASEEFA as intrinsically safe, suitable for use in a Zone 2 area to BS 5345;
2. Be capable of continuous monitoring of methane, oxygen and carbon dioxide;
3. Be capable of continuous barometric pressure and gas pressure measurements;
4. Normally operate in diffusion mode unless required for spot sampling, when it should be capable of operating by means of an aspirator or pump;
5. Have low battery, fault and over range indication incorporated;
6. Store monitoring data, and shall be capable of being down-loaded directly to a PC; and
7. Measure in the following ranges:
   - Methane 0 – 100% LEL & 0 - 100% v/v
   - Oxygen 0 – 25% v/v
   - Carbon dioxide 0 – 100% v/v
   - Barometric pressure mBar (absolute)

5.2.3 The monitoring equipment shall alarm (both audibly and visually) in the event that the concentrations of the following are exceeded:

1. Methane: rise to 10% LEL;
2. Oxygen: fall to 18% by volume; and
3. Carbon monoxide: maximum short term (1-hour) exposure of 300ppm with long term average (8-hours) not to exceed 50ppm.

5.3 Results and Graphical Plots of Monitoring Parameters

5.3.1 The EAGLE 2 Multi Gas Detector (serial number E2F694) and CNEX X-4 3.7VDC Gas Detector (serial number 20231140923) was used for LFG measurements. The gas analyser is calibrated every year. The calibration records of the monitoring equipment are provided in ***Appendix 4***.

5.3.2 LFG monitoring results are summarized in ***Table 5.3*** and compared with the Action and Limit Levels tabulated in ***Table 2.2*** Graphical plots of the monitoring results are also provided in ***Appendix 5***.

5.3.3 No exceedances of Action level were recorded in the reporting year at any of the stations.

Table 5.3 ***LFG Monitoring Results***

Station ID	Sampling Date	Monitoring Results				
		CH_4 (% v/v)	CH_4 (% LEL)	O_2 (% v/v)	CO_2 (% v/v)	Barometric Pressure (mBar)
EP1-1	23rd February 2024	0.0	0.0	20.9	0.1	1021
EP1-2		0.0	0.0	20.9	0.0	1021
EP1-3		0.0	0.0	20.9	0.0	1021
EP2-1		0.0	0.0	20.9	0.0	1021
EP2-2		0.0	0.0	20.9	0.0	1021
EP1-1	20th May 2024	0.0	0.0	20.9	0.0	1006
EP1-2		0.0	0.0	20.9	0.0	1006
EP1-3		0.0	0.0	20.9	0.0	1006
EP2-1		0.0	0.0	20.9	0.0	1006
EP2-2		0.0	0.0	20.9	0.0	1006
EP1-1	16th September 2024	0.0	0.0	20.9	0.0	1004
EP1-2		0.0	0.0	20.9	0.0	1004
EP1-3		0.0	0.0	20.9	0.0	1004
EP2-1		0.0	0.0	20.9	0.0	1004
EP2-2		0.0	0.0	20.9	0.0	1004
EP1-1	21st November 2024	0.0	0.0	20.9	0.0	1017
EP1-2		0.0	0.0	20.9	0.0	1017
EP1-3		0.0	0.0	20.9	0.0	1017
EP2-1		0.0	0.0	20.9	0.0	1017
EP2-2		0.0	0.0	20.9	0.0	1017

6 SUMMARY OF ENVIROMENTAL AUDIT

6.1 General

6.1.1 In the reporting year, WEEE.PARK, OTL, PBPP and nine active tenants were under full operation.

6.1.2 Environmental audits were conducted on a monthly basis based on the approved site inspection checklist. The completed audit checklists were provided in the quarterly EM&A Reports.

6.1.3 In the "status" column of the following tables, an observation will be indicated as "Closed" if it was resolved during the reporting period and no further follow-up is needed. If the observation is not resolved in the reporting period and would be followed-up in the next reporting period, it will be indicated as "Outstanding".

6.2 Outstanding Observations recorded in 2023

6.2.1 Outstanding audit observations are summarized in ***Table 6.1***.

Table 6.1 ***Environmental Audit Findings in 2023***

Tenant	Item	Status
Champway	Oil grease was observed near the site boundary in the oil pressure process area. The tenant has been required to remove the oil grease and review the surface run-off control measures.	During the site inspection on 15th December 2023 and 19th January 2024, oil grease was still observed near the site boundary in the oil pressure process area. As observed on 23rd February 2024, no oil grease was observed, and the tenant temporarily placed the sandbags as the surface run-off control measures. For a long-term arrangement, the tenant was required to replace the sandbags with concrete blocks before the wet season. **(CLOSED)**
K.Wah	The 24-hour RSP level were reached exceeds the action level as stipulated in the SP license (i.e. 100 μg/m^3).	During the site inspection on 15th December 2023, the 24-hour RSP level were reached 107 μg/m^3 and 138 μg/m^3 on 15th November 2023 and 28th November 2023, which exceeds the action level for 24-hour RSP monitoring, as stipulated in the SP license (i.e. 100 μg/m^3).

		The tenant installed an additional set of dust suppression systems for the storage area. Besides that, the tenant has also been requested to strengthen further mitigation measures such as increasing the frequency of water spraying to minimize dust emissions. As observed on the 19th of January 2024, 23rd February 2024 and 22nd March 2024, there have been no further exceedances were recorded for the 24-hour RSP monitoring. The 24-hour RSP level generally fell below 100 μg/m^3 as stipulated in the SP license since January 2024. **(CLOSED)**

6.3 January 2024

6.3.1 Environmental audits of WEEE.PARK, active tenants and general EcoPark condition were carried out by the ET and the Operator on 19th January 2024. IEC random site audit was also carried out on 19th January 2024. Audit observations are summarised in ***Table 6.2***.

Table 6.2 Environmental Audit Findings in January 2024

Tenant	Item	Status
No new critical issue was identified.		

6.4 February 2024

6.4.1 Joint environmental audits of WEEE.PARK, the active tenants and general EcoPark condition were carried out by the ET, the Operator and the IEC on 23rd February 2024. Audit observations are summarised in ***Table 6.3***.

Table 6.3 Environmental Audit Findings in February 2024

Tenant	Item	Status
Champway	Stagnant water mixed with oil grease was observed in the storage tanks area near the oil sorting area.	As observed on 22nd March 2024, the tenant has been removed the stagnant water in the storage tanks area near the oil sorting area. **(CLOSED)**

Tenant	Item	Status
	Oil grease was observed in the drainage manhole near the site boundary of the grease sorting area.	As observed on 22nd March 2024, oil grease was still observed in the drainage manhole near the site boundary of the grease sorting area. As observed on 19th April 2024, the oil grease in the drainage manhole near the site boundary of the grease sorting area was removed. **(CLOSED)**

6.5 March 2024

6.5.1 Environmental audits of WEEE.PARK, the active tenants and general EcoPark condition were carried out by the ET and the Operator on 22nd March 2024. IEC random site audit was also carried out on 22nd March 2024. Audit observation is summarised in ***Table 6.4.***

Table 6.4 Environmental Audit Findings in March 2024

Tenant	Item	Status
No new critical issue was identified.		

6.6 April 2024

6.6.1 Environmental audits of WEEE.PARK, the active tenants and general EcoPark condition were carried out by the ET and the Operator on 19th April 2024. IEC random site audit was also carried out on 19th April 2024. Audit observations are summarised in ***Table 6.5.***

Table 6.5 Environmental Audit Findings in April 2024

Tenant	Item	Status
Champway	Large-scale stagnant water was observed near the oil sorting area	During the site inspection on 20th May 2024 and 20th June 2024, large-scale stagnant water was observed near the oil sorting area, the tenant is required to remove the stagnant water after the rainstorm. As observed on 24th July 2024 and 22nd August 2024, stagnant water was still observed near the oil sorting area, the tenant has been required to review surface run-off control measures in place and adequately maintain the surface run-off control measure. As observed on 16th September 2024, it was observed that the tenant had removed stagnant water near the oil sorting area. **(CLOSED)**
Champway	Stagnant water was observed near the temporary office building	During the site inspection on 20th May 2024 and 20th June 2024, stagnant water was still observed near the office building, the tenant is required to remove the stagnant water after the rainstorm. As observed on 24th July 2024, the oil grease was removed near the office building. **(CLOSED)**

Tenant	Item	Status
K. Wah	As observed on 19th April, the 24-hour RSP levels on 21st March 2024 and 27th March 2024 were observed to reach 148 μg/m^3 and 113 μg/m^3, which exceedance the action level for the 24-hour RSP monitoring, as stipulated in the SP license (i.e. 100 μg/m^3).	The 24-hour RSP level on the 2nd April 2024, and 14th May 2024 was observed to reach 147 μg/m^3, 126 μg/m^3. As observed on 24th July 2024, the RSP monitoring record for June 2024 has shown that there have been no further exceedances. **(CLOSED)**

6.7 May 2024

6.7.1 Joint environmental audits of WEEE.PARK, the active tenants and general EcoPark condition were carried out by the ET, Operator and IEC on 20th May 2024. Audit observations are summarised in ***Table 6.6.***

Table 6.6 Environmental Audit Findings in May 2024

Tenant	Item	Status
Champway	Oil grease was observed spillage from two oil drip trays in the temporary office area.	During the site inspection on 20th June 2024, oil grease was still observed spillage from two oil drip trays in the temporary office area. As observed on 24th July 2024, oil grease was removed from the area near the oil drip trays in the temporary office area. The tenant has been reminded to regularly clear-up the oil drip trays. **(CLOSED)**

6.8 June 2024

6.8.1 Environmental audits of WEEE.PARK, the active tenants and general EcoPark condition were carried out by the ET and the Operator on 20th June 2024. IEC random site audit was also carried out on 20th June 2024. Audit observations are summarised in ***Table 6.7***.

Table 6.7 Environmental Audit Findings in June 2024

Tenant	Item	Status
Champway	Oil grease was observed in the drainage manhole near the site boundary of the grease sorting area.	As observed on 24th July 2024, with the tenant wastewater management mitigation measure, no further oil grease and stagnant water were observed near the site boundary of the grease sorting area. As observed on 24th July 2024, oil grease was removed from the drainage manhole near the site boundary of the grease sorting area. **(CLOSED)**

6.9 July 2024

6.9.1 Environmental audits of WEEE.PARK, OTL, the active tenants and general EcoPark condition were carried out by the ET and the Operator on 24th July 2024. IEC random site audit was also carried out on 24th July 2024. Audit observations are summarised in ***Table 6.8.***

Table 6.8 Environmental Audit Findings in July 2024

Tenant	Item	Status
No new critical issue was identified.		

6.10 August 2024

6.10.1 Joint environmental audits of WEEE.PARK, the active tenants and general EcoPark condition were carried out by the ET, Operator and IEC on 22nd August 2024. Audit observations are summarised in **Table 6.9**.

Table 6.9 Environmental Audit Findings in August 2024

Tenant	Item	Status
No new critical issue was identified.		

6.11 September 2024

6.11.1 Environmental audits of WEEE.PARK, active tenants and general EcoPark condition were carried out by the ET and the Operator on 16th September 2024. IEC random site audit was also carried out on 16th September 2024. Audit observations are summarised in ***Table 6.10.***

Table 6.10 Environmental Audit Findings in September 2024

Tenant	Item	Status
No new critical issue was identified.		

6.12 October 2024

6.12.1 Environmental audits of WEEE.PARK, active tenants and general EcoPark condition were carried out by the ET and Operator on 21st October 2024. IEC random site audit was also carried out on 21st October 2024 Audit observations are summarised in ***Table 6.11.***

Table 6.11 Environmental Audit Findings in October 2024

Tenant	Item	Status
No new critical issue was identified.		

6.13 November 2024

6.13.1 Joint environmental audits of WEEE.PARK, active tenants and general EcoPark condition were carried out by the ET, Operator and IEC on 21st November 2024. Audit observations are summarised in ***Table 6.12***.

Table 6.12 Environmental Audit Findings in November 2024

Tenant	Item	Status
K. Wah	As observed on 21st November 2024, the 24-hour RSP levels on 29st October 2024 was observed to reached 103 μg/m^3, which exceedance the action level for the 24-hour RSP monitoring, as stipulated in the SP license (i.e. 100 μg/m^3).	As observed on 19th December 2024, the RSP monitoring record for 4th November 2024 was reached 115 μg/m^3, which exceedance the action level for the 24-hour RSP monitoring, as stipulated in the SP license (i.e. 100 μg/m^3). Meanwhile, it is noted that the Tuen Mun fill bank is observed to remain at a high level which may have contributed to the high 24-hour RSP level.

Tenant	Item	Status
		The tenant has been reminded to strengthen further mitigation measures such as increasing the frequency of water spraying to minimize dust emissions This item will be inspected during the next site inspection. **(OUTSTANDING)**

6.14 December 2024

6.14.1 Environmental audits of WEEE.PARK, PBPP, active tenants and general EcoPark condition were carried out by the ET and Operator on 19th December 2024. IEC random site audit was also carried out on 19th December 2024. Audit observations are summarised in ***Table 6.13***.

Table 6.13 Environmental Audit Findings in December 2024

Tenant	Item	Status
No new critical issue was identified.		

7 ENVIRONMENTAL COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTION

7.1 Summary of complaints, Summons and Prosecutions

7.1.1 No complaints, summons and prosecutions related to recycling activities was received in the reporting year.

8 ANNUAL REVIEW

8.1 Interpretation of EM&A Data

8.1.1 Landfill gas (LFG) is the only parameter that is required to be monitored in the operation phase EM&A programme. Quarterly LFG monitoring has been carried out by the ET since 2009 following the completion of Phase 1 construction of EcoPark. No exceedance of CO_2 and methane was recorded at any monitoring location and there was no indication of the migration of LFG from SLSL. Therefore, the EM&A data is consistent with the assessment result in the EIA Report that the potential risk associated with LFG hazard remains low.

8.2 Environmental Acceptability of EcoPark

8.2.1 In the reporting year, WEEE.PARK, PBPP and nine active tenants (Champway, HK Biomass, HP Telford, Chung Yue, K. Wah, E. Tech, On Fat Lung, HKBRC and Baguio) have carried out recycling activities. With reference to *Section 6*, no critical environmental impacts were continuously identified at tenants' lots in EcoPark in the reporting year. The operation of EcoPark in environmental terms is therefore considered as acceptable in general.

8.3 Monitoring Methodology

8.3.1 Quarterly LFG monitoring has been carried out since October 2009. Exceedance of action level was not recorded in the reporting year. The monitoring methodology is considered as effective to detect the change of potential LFG hazard and trigger associated actions. The frequency of LFG monitoring may increase upon detection of high LFG levels under the Siu Lang Shui Landfill restoration contract in accordance with *Section 8.7.11* of the EIA Report and *Section 6.4.4* of the EM&A Manual.

8.4 Practicality and Effectiveness of EIA Process and EM&A Programme

8.4.1 The use of Process Review mechanism to assess incoming processes, processes not assessed in the EIA, or processes with greater throughputs than assumed in the EIA, is considered to work well and is in accordance with the recommendations of the EIA, the requirements of the EM&A programme and the EP conditions.

8.4.2 The EM&A programme has been fully utilised throughout the reporting year and is practical and effective to monitor the operation status of tenants. The mitigation measures proposed in the EIA Study are effective and efficient.

9 CONCLUSIONS

9.1.1 This is the eighteenth (18th) annual EM&A report prepared for the operation phase of EcoPark and covers the calendar year of 2024. The tenants' recycling activities are audited on a monthly basis and the results are summarised in this report.

9.1.2 In the reporting year, there were twelve tenants and five operators in EcoPark Phase 1 and Phase 2. One operator (Jardine Engineering Corporation Ltd.) at biochar production plant in Lots T8-T11 of EcoPark Phase 1, one operator (ALBA Integrated Waste Solutions (Hong Kong) Ltd.) located at WEEE.PARK in Lots P2-P4 of EcoPark Phase 2, one operator (Organic Tech Ltd.) at bioconversion of organic waste plant in Lot P12b of EcoPark Phase 2, one operator (The Hong Kong Polytechnic University) of biochar-enhanced construction materials plant at Lot P12a of EcoPark Phase 2 and one operator Ming Hing – AEL JV of wood waste recycling in Berth D, E, F and Drainage reserve area of EcoPark Phase 2.

9.1.3 The lots operated by Chun Yang International (HK) Company Limited (i.e., Lots T2-T3), Allied Success Technology Development Limited (i.e., Lot T7), Zhou Ji (i.e., Lots P1, P5-P7), PolyU (i.e., Lot P12a) and Ming Hing – AEL JV (i.e., Berth D, E, F and Drainage reserve area) were under preparatory works without any operation during the reporting year.

9.1.4 The operator of Lot P12b (Organic Tech) ceased on 3 August 2024 in the reporting year.

9.1.5 In the reporting year, two new PRCs and DAs were approved in the reporting period. One of the PRC and DA was approved for the bioconversion of organic waste recycling process by the Organic Tech Limited in the Lot P12b and One of the PRC and DA was approved for the Pilot Biochar Production Plant (PBPP) in the Lot T8 – T11. Full set of the completed PRCs and DAs are submitted separately to relevant authorities in EPD.

9.1.6 The throughputs of WEEE.PARK, OTL, PBPP and nine active tenants in the reporting year are summarised in ***Table 9.1***. Please note that product output plus waste disposal do not necessarily equal the waste input, due to material losses during processing and material retained within the lots.

Table 9.1 Throughput Statistics for the Reporting Year

Material Type	Waste Input (tonnes)	Product Output [4] (tonnes)	Waste Disposed [4] (tonnes)
Waste Organic Food	40,072	12,092	14,442
Waste Ferrous Metals	100,966	100,941	605
Waste Wood	2,492	2,040	n/a
Waste Electronics [6]	22,193	18,952	3,155
Waste Plastics	8,492	7,339	747
Construction Waste	39,780	88,892	99
Waste Glass [7]	6,932		
Waste Battery	2,082	1,912	n/a
Waste Rubber Tyres	967	609	n/a

Notes:

1) The throughput data presented above is the best available data, which updated as month and cover the whole year and it has been rounded off to the nearest whole tonne for presentation.

2) The total product output may not be the same as the waste input due to the processing of materials that were received before the reporting quarter and were stored within the lots.

3) Waste disposal refers to the disposal of general refuse (i.e., packaging) and/or chemical waste.
4) Since the recycling of waste glass (glass shard) and construction waste is combined to produce concrete blocks at K. Wah, the product output and waste disposal from both processes are combined.
5) "-" in the column of waste disposal denotes zero quantity; while "n/a" denotes unavailable information at the time of report preparation.
6) Including the "Regulatory WEEE" and "Non-regulatory WEEE".
7) The "Waste Glass" in here which means "Glass Shard".

9.1.7 In the reporting year, LFG monitoring was undertaken on 23rd February 2024, 20th May 2024, 16th September 2024, 21st November 2024 at five locations (three in Phase 1 and two in Phase 2). No exceedance of any parameter was recorded.

9.1.8 The quarterly monitoring of LFG is considered as sufficient and effective in accordance with *Section 6.4.4* of the EM&A Manual.

9.1.9 No summons, complaint and successful prosecution related to recycling activities was received in the reporting year.

9.1.10 The EM&A programme has been fully utilised throughout the reporting year and is practical and effective to monitor the operation status of tenants. The mitigation measures proposed in the EIA Study are effective and efficient.

Appendix 1

Environmental Mitigation Measures
(from the Implementation Schedule)

EIA Ref.	EM&A Ref.	Environmental Protection Measures Identified in the Implementation Schedule that are Applicable to the Operation Phase of EcoPark	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Relevant Legislation and Guidelines	Implementation Status (✓ – Implemented; X – Not Implemented; / - To Be Implemented)
General						
5.5.23 to 5.5.25, 10.2.24 & 10.2.37	4.2.5 to 4.2.8	The Operator shall develop and implement an Emergency Response Plan (ERP) that lists the procedures to be followed in case of fire, fuel or chemical spillage or other emergency within the EcoPark.	Throughout the duration of the operation.	Operator		✓
12.2	7.2	No process shall be allowed to operate within EcoPark without approval from WFBU. Approval will be based on the ten-step Process Review, which may include a Design Audit if deemed to be necessary.	Throughout the duration of the operation.	ET IEC Project Proponent		✓
	8.1.2	All reports (including Process Review Checklists and any Design Audits) shall be prepared and certified by the ET, verified by the IEC and approved by the Project Proponent.	Throughout the duration of construction works until construction is substantially completed. Throughout the duration of the operation.	ET IEC Project Proponent		✓
12.3	7.3	The Operator shall prepare and implement an Environmental Management Plan (EMP) to define mechanisms for achieving the environmental requirements specified in the EIA, EP and in statutory regulations.	Throughout the duration of the operation.	Operator		✓

EIA Ref.	EM&A Ref.	Environmental Protection Measures Identified in the Implementation Schedule that are Applicable to the Operation Phase of EcoPark	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Relevant Legislation and Guidelines	Implementation Status (✓ – Implemented; X – Not Implemented; / - To Be Implemented)
Air Quality						
13.2		The Operator shall ensure that EcoPark "base case" assumptions for air quality shown in Table 13.1 of the Final EIA Report are met by tenants, as a whole.	Throughout the duration of the operation.	Operator	Table 13.1 of the Final EIA Report	✓
Water Quality						
5.4.11 & 5.6.7		To minimise the chance of accidental spillage during loading and unloading, and thereby reduce marine water quality impacts, well established cargo handling guidelines should be followed.	Adjacent to EcoPark marine frontage when loading or unloading goods.	Operator Operators of bulk carriers	*Sections 5* & *6* of IMO Code of Practice for the Safe Loading/ Unloading of Bulk Carriers	✓
5.5.19		Contaminated water collected in the surface drainage systems shall be treated at the WTF or other appropriate treatment facility.	Within EcoPark throughout the life of the facility.	Operator		✓
5.5.23 to 5.5.25	4.2.5 to 4.2.7	An Emergency Response Plan (ERP) will be formulated to address various accident scenarios. The ERP will be certified by the Environmental Team (ET) and verified by the Independent Environmental Checker (IEC) under the operation EM&A programme.	Within EcoPark throughout the life of the facility.	Operator		✓
5.6.4		For uncovered areas where recovery process identified as causing potentially high level of contamination are located, stop-logs will be installed in the perimeter drainage system to isolate contamination.	Within EcoPark throughout the life of the facility.	Operator		✓

EIA Ref.	EM&A Ref.	Environmental Protection Measures Identified in the Implementation Schedule that are Applicable to the Operation Phase of EcoPark	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Relevant Legislation and Guidelines	Implementation Status (✓ – Implemented; X – Not Implemented; / - To Be Implemented)
	4.2.2	The ET should develop an audit checklist, with the agreement of the IEC, to ensure that each mitigation measure is implemented when appropriate and operated correctly when implemented.	Within EcoPark throughout the life of the facility.	ET with IEC		✓
Waste Management						
6.8.7	5.2.4	The Operator should register with EPD as a chemical waste producer.	Within EcoPark throughout the life of the facility.	Operator	Waste Disposal (Chemical Waste) (General) Regulation	✓
6.8.16		The dust collected by any air pollution control equipment installed by tenants must be tested to ensure compliance for landfill disposal.	Within EcoPark throughout the life of the facility.	Operator	Practice Note for disposal of dusty waste at landfills & Admission Ticket System	✓
6.8.18 & 6.8.22	5.2.4	Sludge will be disposed of at WENT landfill, or at any future dedicated sludge treatment facility. Sludge will be collected by a Licensed collector at regular intervals, as determined by the operation of the WTF.	Within EcoPark throughout the life of the facility.	Operator		✓
6.8.21	5.2.4	Chemical wastes shall be stored in appropriate containers in a covered area. “No Smoking” signs will be clearly displayed to prevent accidental ignition of flammable materials. Drip trays capable of storing 110% of the volume of the largest container will be used to mitigate possible leakage.	Within EcoPark throughout the life of the facility.	Operator	Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes	✓

EIA Ref.	EM&A Ref.	Environmental Protection Measures Identified in the Implementation Schedule that are Applicable to the Operation Phase of EcoPark	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Relevant Legislation and Guidelines	Implementation Status (✓ – Implemented; X – Not Implemented; / - To Be Implemented)
	5.2.3 & 5.2.5	The ET should develop an audit checklist, with the agreement of the IEC, to ensure that each mitigation measure is implemented when appropriate and operated correctly when implemented.	Within EcoPark throughout the life of the facility.	ET with IEC		✓
6.8.7	5.2.4	The Operator should register with EPD as a chemical waste producer.	Within EcoPark throughout the life of the facility.	Operator	Waste Disposal (Chemical Waste) (General) Regulation	✓
Prevention of Contaminated Land						
7.3.1	5.3.2	Any spillages of contaminating material shall be cleaned up immediately through the use of an absorbent. Any such used material should then be considered chemical waste and disposed of appropriately.	Within EcoPark throughout the life of the facility.	Operator		/
7.3.3		Any areas within the lot to be used for recycling processes shall be concrete paved before recycling activities commence.	Within EcoPark throughout the life of the facility.	Operator		✓

7.3.5	5.3.2	During operation, the greatest risk of land contamination will come from storage of chemical wastes, therefore the measures should be followed : • All chemical storage areas shall be provided with locks and be sited on sealed areas. The storage areas shall be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled oil and chemicals from contaminating the ground. • Chemical wastes will be collected, stored and disposed of in accordance with the Regulation. Disposal of other construction waste will be undertaken by licensed contractors in accordance with applicable statutory requirements in the WDO. • Chemical wastes shall be handled according to the relevant code of practice. Spent chemicals shall be stored and collected by an approved operator for disposal at a licensed facility in accordance with the relevant regulation.	Within EcoPark throughout the life of the facility.	Operator		✓ ✓ ✓

EIA Ref.	EM&A Ref.	Environmental Protection Measures Identified in the Implementation Schedule that are Applicable to the Operation Phase of EcoPark	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Relevant Legislation and Guidelines	Implementation Status (✓ – Implemented; X – Not Implemented; / - To Be Implemented)
Landfill Gas						
8.7.10 & 8.7.11	6.1.2	• Alert workers and visitors of possible LFG hazards • Prohibit smoking and open fires on site • Conduct regular (quarterly) LFG monitoring at mobile offices, equipment stores, etc.	Within EcoPark throughout the life of the facility.	Operator		✓
	6.4.3	Following construction, routine monthly monitoring may be required at service voids and utility boxes. The monitoring requirement and specific locations of monitoring points shall be established based on the findings of the monitoring carried out during construction (i.e. if no LFG is detected during construction then no routine monitoring is required). The need for continued monitoring shall, however, be reviewed through discussion with EPD.	Within EcoPark throughout the life of the facility.	Operator		✓
Hazard to Life						
10.4.3		Building height limit within EcoPark shall be applied to structures within which people may work at elevated levels.	Within EcoPark throughout the life of the facility.	Operator	EIA Report Table 10.2	✓
Landscape and Visual						
9.4.4		It recommended that this commonality be promoted throughout EcoPark by the Operator and adopted by tenants, if practicable.	Within EcoPark throughout the life of the facility.	Operator		✓

Appendix 2

Environmental Requirements in Tenancy Agreements

Compliance of Environmental Legislation

5. The Tenant shall comply with and observe all Ordinances, by-laws, regulations and rules for the time being in force in Hong Kong governing the control of any form of pollution, including air, noise, water and waste pollution, and for the protection of the environment.

Air Pollution

6. Save with an appropriate exemption under the Air Pollution Control Ordinance (Cap. 311) any regulations made thereunder and any amending legislation, the Tenant shall not install or permit or suffer to be installed upon the Premises or any part thereof or any building(s) or structure(s) or part of any building(s) or structure(s) erected or to be erected thereon any furnace, oven, chimney or flue or any other combustion equipment or use or permit or suffer to be used any fuel or any method or process of manufacture or treatment that might in any circumstance result in, cause or contribute to the discharge or emission of any pollutant or any noxious, harmful or corrosive matter, whether it be in the form of gas, smoke, liquid, solid or otherwise (including but not limited to air pollutant as defined in Section 2 of the Air Pollution Control Ordinance

(Cap. 311), which exists or which is imminent, without the prior written approval of the Director.

Water Pollution

7. (a) In the event that the Tenant produces, generates, permits, causes, allows or suffers any discharge which is subject to control under the Water Pollution Control Ordinance (Cap. 358) any regulations made thereunder and any amending legislation, the Tenant shall apply to the Director for a licence and comply with the terms and conditions stipulated in the licence at the Tenant's own cost(s). Otherwise, the Tenant is not allowed to discharge directly or indirectly or to produce, generate, permit, cause, allow or suffer any discharge into any public sewer, storm-water drain, channel, stream-course, sea or any area inside or outside the Premises any trade effluent or foul or contaminated water or cooling or hot water. Subject to the said licence from the Director, the Tenant shall at its own cost(s) separate, collect, and discharge all process or industrial wastewater which comply with the standard required for discharge into a sewer leading to the sewage treatment works at Pillar Point or other treatment works specified in the licence.

(b) Subject to obtaining advance written approval of the Director, the Tenant shall at its own cost(s) provide, install, operate and maintain its own waste water pre-treatment plants within the Premises if such process or industrial wastewater could not meet the standard required for discharge into a sewer leading to the sewage treatment works at Pillar Point or other treatment works specified in the licence. The Tenant shall at its own cost(s) separate, collect, discharge and send all domestic wastewater (i.e. other than process or industrial wastewater) to the Pillar Point Sewage Treatment Works directly for treatment or other treatment works specified in the licence.

(c) In any event, the Tenant shall prevent any spilled materials from entering the surface water drainage system and prevent contamination of the sea at its own cost(s) by, inter alia, providing, installing, operating and maintaining stop-logs or interceptors in the surface water drainage system and at the marine frontage area, respectively, or as required by the licence. The Tenant shall at its own cost comply with relevant provisions of the Dumping at Sea Ordinance (Cap. 466) good practices and relevant provisions of the EIA Report and Final EM&A Manual.

Waste Management

8. (a) The Tenant shall at its own cost(s) comply with relevant provisions of the Waste Disposal Ordinance (Cap. 354).

(b) The Tenant shall not permit, allow or suffer any fuel or chemical and any sewage, waste water or effluent containing sand, cement, silt or any suspended or dissolved material to flow, escape or run from the Premises onto any adjoining land or allow any waste matter which does not form part of the recovery and/or recycling and/or reprocessing operation or is not part of the final product of such operation to be deposited, kept, held or stored anywhere within the Premises and other areas of EcoPark. The Tenant shall at its own cost(s) have all such matters and all materials arising from recycling activities, chemical materials arising from maintenance of plant and equipment, sewage sludge (from wastewater treatment facilities, if any) and general daily waste from the operation removed from the Premises or any building(s) or structure(s) or any part of any building(s) or structure(s) erected or to be erected thereon in a proper manner to the satisfaction of the Landlord and/or the Director.

Noise Pollution

9. (a) The Tenant shall take all necessary measures as may be required by and to the satisfaction of the Landlord and/or the Director to ensure that the operation of all plant and equipment, installed or used on the Premises or in any building(s) or structure(s) or any part of any building(s) or structure(s) erected or to be erected thereon, will not result, not cause and/or will not contribute any noise (which exists or which is imminent) which disturbs or annoys the residents or occupiers of any adjoining or neighbouring lot or lots or premises, or causes and/or contributes to disturbance to the general public under the Noise Control Ordinance (Cap. 400) any regulations made thereunder and any amending legislation.

(b) The decision of the Landlord or the Director as to whether any such plant and equipment are causing disturbance or annoyance as aforesaid shall be final and binding on the Tenant.

Landfill Gas Hazard

10. To mitigate landfill gas hazard, the Tenant shall at its own cost(s) comply with, inter alia, Condition 4.13 of the Environmental Permit No. EP-226/2005/A regarding raising clear of the ground all buildings and enclosed structures as specified in inter alia

Condition 3.7 (and comply with the conditions of any updated Permit, amended permit and further permit regarding measures to mitigate hazard to life impact).

EcoPark Being Within the 250m Consultation Zone of Siu Lang Shui Landfill

11. (a) The Tenant acknowledges that the EcoPark is within the 250m Consultation Zone of the Siu Lang Shui Landfill and that the Premises may be affected by problems associated with migrating landfill gas and undertakes to provide suitable precautionary or protection measures at his own expense to control these potential hazards.

(b) The Tenant shall ensure all personnel entering the Premises and all visitors to the Premises are aware of the potential hazards of the landfill gas by posting suitable warning notices of the potential hazards at his own expense.

(c) All buildings and enclosed structures, including temporary offices, temporary stores and the administration building, within the 250m Consultation Zone of the Siu Lang Shui Landfill shall be provided with the following measure(s):

(i) buildings shall be raised clear of the ground with a clear separation distance (as measured from the highest point on the ground surface to the underside of the lowest floor joist) of at least 500mm; or

(ii) a low-gas permeability membrane shall be applied to the surface of any wall or floor slab that rests on or is below ground. A gravel-fill vent system shall be provided such that passive venting is achieved around the perimeter of the structure. In addition, other building materials, such as dense well-compacted concrete or steel shuttering which provide a measure of resistance to gas permeation, shall be used to achieve gas protection.

(d) The Tenant shall ensure that the electrical equipment used on the Premises shall be intrinsically safe. Welding, flame-cutting or other hot works shall be confined to the open areas of the Premises and shall be at least 15m away from any ground-level confined space.

(e) No drilling, trenching and excavation shall be allowed on the Premises. During any construction work, the Tenant shall observe the guidelines recommended in Chapter 8 of the "Landfill Gas Hazard Assessment Guidance Note" published by the Department of Environmental Protection. In particular, no smoking, naked

flames and all other sources of ignition shall be allowed within 15m of any ground-level confined space.

Hazard to Life Impact

12. To mitigate hazard to life impact, the Tenant shall comply with, inter alia, Conditions 4.8 to 4.10 of the Environmental Permit No. EP-226/2005/A (and comply with the conditions of any updated Permit, amended permit and further permit regarding measures to mitigate hazard to life impact) and shall not:-

    (a) bring, keep, store or transport chlorine within the Premises and other areas of EcoPark;

    (b) bring, keep, store, locate or transport dangerous goods, substances and fuels supporting combustion including oxygen, acetylene, hydrogen peroxide, rubber tyres and diesel within 10 metres from the boundary of the site of EcoPark; and

    (c) exceed the building height restrictions for buildings on the Premises which are on/near the western boundary of the site of EcoPark as mentioned in Annex B to the Environmental Permit No. EP-226/2005/A (including any updated Permit, amended permit and further permit).

Landscape and Visual Impacts

13. To mitigate landscape and visual impacts, the Tenant shall at its own cost(s) comply with, inter alia, Condition 4.14 of the Environmental Permit No. EP-226/2005/A regarding maintaining landscape, planting, treatment and mitigation measures as specified in inter alia Condition 3.8 and Figure 3 (and comply with the conditions of any updated Permit, amended permit and further permit regarding measures to mitigate landscape and visual impacts).

Environmental Permits Relating to EcoPark

14. The Tenant hereby declares, confirms and acknowledges that it is fully aware that, pursuant to the Environmental Impact Assessment Ordinance (Cap.499), the Director has the right to grant, amend or revoke environmental permit(s) or to grant further or amended environmental permit(s) relating to the lots comprising the EcoPark and any other lots but that such right may be challenged by third parties on justifiable grounds. The Tenant hereby undertakes to waive all its rights and remedies for any loss, damages, cost and expenses whatsoever which it may sustain and/or incur directly or

indirectly as a result of the grant, amendment or revocation of the environmental permit(s) or the consequential grant of further or amended environmental permit(s), including but not limited to any right to terminate this Lease and/or to make any claim against the Landlord and/or the Director for any compensation whatsoever.

Appendix 3

Material and Waste Throughputs

Appendix 3.1

Material and Waste Throughputs of the Reporting Year

Table A3.1-1 Recycling of Waste Organic Food

Date	Waste Input (tonnes)	Product Output (tonnes)	Waste Disposal (tonnes)
January 2024	3,967	1,021	1,401
February 2024	3,801	908	1,384
March 2024	4,060	1,125	1,485
April 2024	3,489	1,202	1,266
May 2024	3,597	1,055	1,302
June 2024	3,396	1,100	1,210
July 2024	3,973	1,371	1,424
August 2024	3,365	1,055	1,212
September 2024	3,143	1,022	1,131
October 2024	3,850	1,166	1,384
November 2024	3,433	1,068	1,244
December 2024	n/a	n/a	n/a
Total	40,072	12,092	14,442

Table A3.1-2 Recycling of Waste Ferrous Metal

Date	Waste Input (tonnes)	Product Output (tonnes)	Waste Disposal (tonnes)
January 2024	10,016	13,077	60
February 2024	9,125	5,648	53
March 2024	10,114	9,859	60
April 2024	9,644	9,289	61
May 2024	8,915	10,366	55
June 2024	8,870	10,013	58
July 2024	10,385	9,070	67
August 2024	10,765	9,287	69
September 2024	8,236	11,766	51
October 2024	7,976	7,764	43
November 2024	6,920	4,801	27
December 2024	n/a	n/a	n/a
Total	100,966	100,941	605

Table A3.1-3 Recycling of Waste Wood

Date	Waste Input (tonnes)	Product Output (tonnes)	Waste Disposal (tonnes)
January 2024	202	113	-
February 2024	116	110	-
March 2024	320	238	-
April 2024	217	203	-
May 2024	205	201	-
June 2024	208	201	-
July 2024	206	225	-
August 2024	305	214	-
September 2024	309	231	-
October 2024	405	304	-
November 2024	n/a	n/a	n/a
December 2024	n/a	n/a	n/a
Total	2,492	2,040	n/a

Table A3.1-4 Recycling of Waste Electronics*

Date	Waste Input (tonnes)	Product Output (tonnes)	Waste Disposal (tonnes)
January 2024	2,257	1,945	319
February 2024	1,905	1,549	275
March 2024	1,982	1,782	288
April 2024	2,105	1,785	284
May 2024	2,079	1,835	302
June 2024	1,944	1,543	272
July 2024	2,145	1,881	303
August 2024	2,160	1,915	324
September 2024	2,005	1,616	292
October 2024	1,907	1,654	270
November 2024	1,704	1,445	226
December 2024	n/a	n/a	n/a
Total	22,193	18,952	3,155

*Remark: The reporting data is Including the “Regulatory WEEE” and “Non-regulatory WEEE”.

Table A3.1-5 Recycling of Waste Plastic

Date	Waste Input (tonnes)	Product Output (tonnes)	Waste Disposal (tonnes)
January 2024	705	636	34
February 2024	649	587	53
March 2024	791	659	56
April 2024	795	759	83
May 2024	837	776	71
June 2024	864	714	78
July 2024	997	841	76
August 2024	996	882	96
September 2024	908	779	106
October 2024	950	707	95
November 2024	n/a	n/a	n/a
December 2024	n/a	n/a	n/a
Total	8,492	7,339	747

Table A3.1-6 Recycling of Waste Glass and Construction Waste

Date	Waste Input (tonnes)		Product Output (tonnes)	Waste Disposal (tonnes)
	Construction Waste	Glass*		
January 2024	5,126	741	9,345	14
February 2024	3,183	487	6,487	7
March 2024	4,651	638	8,521	9
April 2024	4,015	612	7,854	5
May 2024	3,375	597	8,080	7
June 2024	2,086	614	6,574	14
July 2024	4,134	710	9,114	8
August 2024	3,650	602	8,732	7
September 2024	3,168	625	8,080	5
October 2024	2,939	703	9,145	7
November 2024	3,453	603	6,960	15
December 2024	n/a	n/a	n/a	n/a
Total	39,780	6,932	88,892	99

* Remark: The reporting “Waste Glass” in here which means “Glass Shard”.

Table A3.1-7 Recycling of Waste Rubber Tyres

Date	Waste Input (tonnes)	Product Output (tonnes)	Waste Disposal (tonnes)
January 2024	175	6	-
February 2024	118	118	-
March 2024	166	166	-
April 2024	237	237	-
May 2024	220	220	-
June 2024	231	231	-
July 2024	229	229	-
August 2024	224	224	-
September 2024	237	237	-
October 2024	243	243	-
November 2024	n/a	n/a	n/a
December 2024	n/a	n/a	n/a
Total	2,082	1,912	n/a

Table A3.1-8 Recycling of Waste Battery

Date	Waste Input (tonnes)	Product Output (tonnes)	Waste Disposal (tonnes)
January 2024	133	-	-
February 2024	27	-	-
March 2024	59	24	-
April 2024	102	26	-
May 2024	39	19	-
June 2024	77	-	-
July 2024	105	264	-
August 2024	60	-	-
September 2024	123	98	-
October 2024	125	54	-
November 2024	117	124	-
December 2024	n/a	n/a	n/a
Total	967	609	-

Notes:

1) The throughput data presented in ***Tables A3.1-1*** to ***A3.1-8*** has been rounded off to the nearest whole tonne for presentation. Unavailable data will be reported in the next EM&A report.
2) The total product output may not be the same as the waste input due to processing of materials that were received before the reporting year and were stored within the lots.
3) Waste disposal refers to the disposal of general refuse (i.e. packaging) and/or chemical waste.
4) Since the recycling of waste glass and construction waste is combined to produce concrete block at K.Wah, the product output and waste disposal from both processes are combined in ***Table A3.1-6***.
5) "-" in the column of waste disposal denotes zero quantity; while "n/a" denotes unavailable information.

Appendix 3.2

Updates of Material and Waste Throughputs of the Previous Reporting Year

Table A3.2-1 Recycling of Waste Organic Food

Date	Waste Input (tonnes)	Product Output (tonnes)	Waste Disposal (tonnes)
January 2023	3,571	852	1,306
February 2023	3,229	983	1,164
March 2023	3,644	1,077	1,312
April 2023	3,529	943	1,284
May 2023	3,282	552	1,170
June 2023	3,137	711	1,131
July 2023	3,913	1,332	1,457
August 2023	3,483	1,269	1,257
September 2023	3,146	1,125	1,146
October 2023	3,528	1,071	1,279
November 2023	4,096	1,205	1,471
December 2023	3,963	956	1,454

Table A3.2-2 Recycling of Waste Ferrous Metal

Date	Waste Input (tonnes)	Product Output (tonnes)	Waste Disposal (tonnes)
January 2023	6,636	7,300	39
February 2023	7,005	6,464	38
March 2023	7,911	7,382	41
April 2023	5,804	6,010	36
May 2023	7,989	10,608	39
June 2023	10,902	7,994	62
July 2023	9,102	10,218	57
August 2023	9,459	10,792	53
September 2023	9,533	10,567	53
October 2023	10,353	9,687	52
November 2023	11,150	13,595	55
December 2023	10,919	7,721	60

Table A3.2-3 Recycling of Waste Wood

Date	Waste Input (tonnes)	Product Output (tonnes)	Waste Disposal (tonnes)
January 2023	62	94	-
February 2023	54	57	-
March 2023	70	52	-
April 2023	75	58	-
May 2023	76	45	-
June 2023	87	89	-
July 2023	89	55	-
August 2023	75	52	-
September 2023	100	100	-
October 2023	130	101	-
November 2023	187	103	-
December 2023	230	133	-

*Table A3.2-4 Recycling of Waste Electronics**

Date	Waste Input (tonnes)	Product Output (tonnes)	Waste Disposal (tonnes)
January 2023	2,082	1,519	234
February 2023	2,022	1,855	268
March 2023	1,944	1,801	272
April 2023	1,954	1,530	228
May 2023	2,105	1,963	305
June 2023	2,058	1,847	250
July 2023	2,114	1,880	267
August 2023	2,134	1,864	266
September 2023	1,939	1,640	219
October 2023	1,904	1,671	259
November 2023	1,937	1,747	277
December 2023	2,052	1,610	252

* Remark: The reporting data is Including the “Regulatory WEEE” and “Non-regulatory WEEE”.

Table A3.2-5 Recycling of Waste Plastic

Date	Waste Input (tonnes)	Product Output (tonnes)	Waste Disposal (tonnes)
January 2023	477	322	90
February 2023	567	404	103
March 2023	596	449	95
April 2023	154	161	13
May 2023	392	372	-
June 2023	416	421	-
July 2023	405	398	-
August 2023	423	426	-
September 2023	573	563	-
October 2023	573	503	-
November 2023	551	511	10
December 2023	565	542	39

Table A3.2-6 Recycling of Waste Glass & Construction Waste

Date	Waste Input (tonnes)		Product Output (tonnes)	Waste Disposal (tonnes)
	Construction Waste	Glass*		
January 2023	2,804	641	7,124	19
February 2023	2,097	560	5,241	19
March 2023	3,680	441	5,501	13
April 2023	3,002	455	5,931	6
May 2023	3,075	261	4,009	6
June 2023	3,187	568	6,542	6
July 2023	3,157	693	8,279	13
August 2023	4,026	732	8,940	19
September 2023	2,318	436	6,405	13
October 2023	3,675	527	7,209	12
November 2023	3,438	563	6,562	19
December 2023	2,724	733	7,347	6

*Remark: The reporting “Waste Glass” in here which means “Glass Shard”.

Table A3.2-7 Recycling of Waste Rubber Tyres

Date	Waste Input (tonnes)	Product Output (tonnes)	Waste Disposal (tonnes)
January 2023	100	100	-
February 2023	92	92	-
March 2023	76	76	-
April 2023	65	-	-
May 2023	73	-	-
June 2023	335	355	-
July 2023	421	421	-
August 2023	253	253	-
September 2023	298	298	-
October 2023	312	312	-
November 2023	242	242	-
December 2023	257	257	-

Table A3.2-8 Recycling of Waste Battery

Date	Waste Input (tonnes)	Product Output (tonnes)	Waste Disposal (tonnes)
January 2023	110	-	-
February 2023	73	-	-
March 2023	89	-	-
April 2023	57	-	-
May 2023	55	-	-
June 2023	75	-	-
July 2023	65	-	-
August 2023	98	-	-
September 2023	28	-	-
October 2023	72	-	-
November 2023	74	-	-
December 2023	57	-	-

Notes:

1) The throughput data in ***Tables A3.2-1*** to ***A3.2-8*** supersede the same batch of the throughput data in previous Annual Environmental Monitoring & Audit Report. The presented data is the best available data and has been rounded off to the nearest whole tonne for presentation. Unavailable data will be reported in the next EM&A report.
2) The total product output may not be the same as the waste input due to processing of materials that were received before the reporting quarter and were stored within the lots.
3) Waste disposal refers to the disposal of general refuse (i.e. packaging) and/or chemical waste.
4) Since the recycling of waste glass and construction waste is combined to produce concrete block at K.Wah, the product output and waste disposal from both processes are combined.
5) "-" in the column of waste disposal denotes zero quantity; while "n/a" denotes unavailable information.

Appendix 4

Calibration Certificate of Infrared Gas Analyser

東業德勤測試顧問有限公司
ETS-TESTCONSULT LTD.™

8/F Block B,
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TEST REPORT

Calibration Certificate

Information Provided by Customer

Customer : ETS – TESTCONSULT LIMITED

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

Information of Unit-under test (UUT)

Description	:	Gas Detector	Equipment I.D. No	:	ET/EA/005/01
Manufacturer	:	RKI Instruments EAGLE 2	Serial No.	:	E2F694
Type of gas	:	CO_2, O_2, CH_4			

Laboratory Information

Procedure	:	In-house method	Data of Receipt	:	21-Jun-2023
Data of Calibration	:	24-Jun-2023	Calibration Location	:	Environmental Laboratory
Data of issue	:	24-Jun-2023			

Calibration Condition

Ambient Temperature	:	(20 ± 3) ℃	Relative Humidity	:	(50 ± 20)%
Stabilizing Time	:	30 minutes	Warm-up Time	:	30 minutes

Reference Equipment

- Reference Gas Detector, ET/EA/005/02

Calibration Specification

- To perform the calibration of gas below:
- CO_2 at 0, 3000 and 5000ppm
- O_2 at 10, 20 & 30vol%
- CH_4 at 0, 5 & 10%LEL

Calibration Result (CO_2)

Calibration Range (ppm)	Reference Equipment Reading (ppm)	*Corrected Value (ppm)	UUT Reading (ppm)	Deviation (ppm)
0	0.0	0.0	0.0	0.0
3000	3129.0	3066.4	3091.2	24.8
5000	5012.0	4911.8	4896.7	-15.1

Remark: 1. 2% indicator error of reference equipment is applied.

Measurement Result (CO_2)

Items	Results
Indication Error (%)	0.3
Repeatability (%)	0.6

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TEST REPORT

Calibration Result (O_2)

Calibration Range (%vol)	Reference Equipment Reading (%vol)	*Corrected Value (%vol)	UUT Reading (%vol)	Deviation (%vol)
10	10.5	10.4	10.4	0.0
20	20.3	20.1	20.4	0.3
30	32.6	32.3	32.1	-0.2

Remark: 1. 1.0% indicator error of reference equipment is applied.

Measurement Result (O_2)

Items	Results
Indication Error (%)	0.3
Repeatability (%)	0.8

Calibration Result (CH_4)

Calibration Range (%LEL)	Reference Equipment Reading (%LEL)	*Corrected Value (%LEL)	UUT Reading (%LEL)	Deviation (%LEL)
0	0.0	0.0	0.0	0
5	5.0	5.1	5.0	-0.1
10	10.0	10.2	10.3	0.1

Remark: 1. -2% indicator error of reference equipment is applied.

Measurement Result (CH_4)

Items	Results
Indication Error (%)	-1.0
Repeatability (%)	4.7

Note: (*) Corrected Value = Reference Equipment Reading x Indicator Error of Reference Equipment

Remarks:

- The calibration results apply to the particular unit-under-test only.

Calibrated By: _____
(Assistant Supervisor)

Approved Signatory: _____

東業德勤測試顧問有限公司
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TEST REPORT

Calibration Certificate

Information Provided by Customer

Customer : ETS – TESTCONSULT LIMITED

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

Information of Unit-under test (UUT)

Description	:	Gas Detector	Equipment I.D. No	:	**ET/EA/005/03**
Manufacturer	:	**CNEX X-4 3.7VDC**	Serial No.	:	**20231140923**
Type of gas	:	CO_2, O_2, CH_4			

Laboratory Information

Procedure	:	In-house method	Data of Receipt	:	21-Nov-2023
Data of Calibration	:	21-Nov-2023	Calibration Location	:	Environmental Laboratory
Data of issue	:	22-Nov-2023			

Calibration Condition

Ambient Temperature	:	(20 ± 3) ℃	Relative Humidity	:	(50 ± 20)%
Stabilizing Time	:	30 minutes	Warm-up Time	:	30 minutes

Reference Equipment

- Reference Gas Detector, ET/EA/005/02

Calibration Specification

- To perform the calibration of gas below:
- CO_2 at 0, 3000 and 5000ppm
- O_2 at 10, 20 & 30%vol
- CH_4 at 0, 5 & 10%LEL

Calibration Result (CO_2)

Calibration Range (ppm)	Reference Equipment Reading (ppm)	*Corrected Value (ppm)	UUT Reading (ppm)	Deviation (ppm)
0	0.0	0.0	0.0	0.0
3000	3034.7	2974.0	3010.0	36.0
5000	5015.2	4914.9	4990.0	75.1

Remark: 1. 2% indicator error of reference equipment is applied.

Measurement Result (CO_2)

Items	Results
Indication Error (%)	1.4
Repeatability (%)	0.3

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Calibration Result (O_2)

Calibration Range (%vol)	Reference Equipment Reading (%vol)	*Corrected Value (%vol)	UUT Reading (%vol)	Deviation (%vol)
10	10.2	10.1	10.1	0.0
20	20.2	20.0	20.2	0.2
30	30.6	30.3	30.2	-0.1

Remark: 1. 1% indicator error of reference equipment is applied.

Measurement Result (O_2)

Items	Results
Indication Error (%)	0.3
Repeatability (%)	0.9

Calibration Result (CH_4)

Calibration Range (%LEL)	Reference Equipment Reading (%LEL)	*Corrected Value (%LEL)	UUT Reading (%LEL)	Deviation (%LEL)
0	0	0	0	0
5	5	5	5	0
10	10	10	10	0

Remark: 1. 2% indicator error of reference equipment is applied.

Measurement Result (CH_4)

Items	Results
Indication Error (%)	0
Repeatability (%)	4.7

Note: (*) Corrected Value = Reference Equipment Reading x Indicator Error of Reference Equipment

Remarks:

- The calibration results apply to the particular unit-under-test only.

Calibrated By: Toby
(Technician)

Approved Signatory:

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Calibration Certificate

Information Provided by Customer

Customer : ETS – TESTCONSULT LIMITED

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

Information of Unit-under test (UUT)

Description	:	Gas Detector	Equipment I.D. No	:	ET/EA/005/03
Manufacturer	:	CNEX X-4 3.7VDC	Serial No.	:	20231140923
Type of gas	:	CO_2, O_2, CH_4			

Laboratory Information

Procedure	:	In-house method	Data of Receipt	:	19-Nov-2024
Data of Calibration	:	20-Nov-2024	Calibration Location	:	Environmental Laboratory
Data of issue	:	21-Nov-2024			

Calibration Condition

Ambient Temperature	:	(20 ± 3) ℃	Relative Humidity	:	(50 ± 20)%
Stabilizing Time	:	30 minutes	Warm-up Time	:	30 minutes

Reference Equipment

- Reference Gas Detector, ET/EA/005/02

Calibration Specification

- To perform the calibration of gas below:
- CO_2 at 0, 3000 and 5000ppm
- O_2 at 10, 20 & 30vol%
- CH_4 at 0, 5 & 10%LEL

Calibration Result (CO_2)

Calibration Range (ppm)	Reference Equipment Reading (ppm)	*Corrected Value (ppm)	UUT Reading (ppm)	Deviation (ppm)
0	0.0	0.0	0.0	0.0
3000	3047.5	3010.9	3025.3	14.4
5000	5023.2	4962.9	5008.4	45.5

Remark: 1. 2% indicator error of reference equipment is applied.

Measurement Result (CO_2)

Items	Results
Indication Error (%)	0.7
Repeatability (%)	0.1

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Calibration Result (O_2)

Calibration Range (%vol)	Reference Equipment Reading (%vol)	*Corrected Value (%vol)	UUT Reading (%vol)	Deviation (%vol)
10	10.3	10.2	10.3	0.1
20	20.2	20.1	20.1	0.0
30	30.4	30.1	30.3	0.2

Remark: 1. 1.0% indicator error of reference equipment is applied.

Measurement Result (O_2)

Items	Results
Indication Error (%)	0.6
Repeatability (%)	0.7

Calibration Result (CH_4)

Calibration Range (%LEL)	Reference Equipment Reading (%LEL)	*Corrected Value (%LEL)	UUT Reading (%LEL)	Deviation (%LEL)
0	0	0	0	0
5	5	5	5	0
10	11	11	11	0

Remark: 1. 0% indicator error of reference equipment is applied.

Measurement Result (CH_4)

Items	Results
Indication Error (%)	0
Repeatability (%)	0.0

Note: (*) Corrected Value = Reference Equipment Reading x Indicator Error of Reference Equipment

Remarks:

- The calibration results apply to the particular unit-under-test only.

Calibrated By: Toby
(Technician)

Approved Signatory:

Appendix 5

Graphical Plots of LFG Monitoring

Landfill Gas Monitoring Results

Monitoring Station ID	Monitoring Locations	Weather Conditions	Temperature (°C)	Start Time	End Time	Measurement Results					Action Level			Limit Level			Remarks
						Methane		Oxygen	Carbon Dioxide	Barometric Pressure	Methane	Oxygen	Carbon Dioxide	Methane	Oxygen	Carbon Dioxide	
						% v/v	% LEL	% v/v	% v/v	mBar (absolute)	% LEL	% v/v	% v/v	% LEL	% v/v	% v/v	
23/2/2024																	
EP1-1	Inside the landscaping area of Administration Building	Overcast	18	09:30	09:32	0.0	0.0	20.9	0.1	1021	> 10	< 19	> 0.5	> 20	< 18	> 1.5	Nil
EP1-2	PCCW below-ground chamber outside Lot T1		18	09:40	09:42	0.0	0.0	20.9	0.0	1021							Nil
EP1-3	HGC Broadband below-ground chamber outside Lot T3		18	09:50	09:52	0.0	0.0	20.9	0.0	1021							Nil
EP2-1	HGC Broadband below-ground chamber outside Lot P1		18	10:00	10:02	0.0	0.0	20.9	0.0	1021							Nil
EP2-2	HGC Broadband below-ground chamber outside Lot P3		18	10:10	10:12	0.0	0.0	20.9	0.0	1021							Nil
20/5/2024																	
EP1-1	Inside the landscaping area of Administration Building	Overcast	25	14:20	14:22	0.0	0.0	20.9	0.0	1006	> 10	< 19	> 0.5	> 20	< 18	> 1.5	Nil
EP1-2	PCCW below-ground chamber outside Lot T1		25	14:35	14:37	0.0	0.0	20.9	0.0	1006							Nil
EP1-3	HGC Broadband below-ground chamber outside Lot T3		25	14:40	14:42	0.0	0.0	20.9	0.0	1006							Nil
EP2-1	HGC Broadband below-ground chamber outside Lot P1		25	14:25	14:27	0.0	0.0	20.9	0.0	1006							Nil
EP2-2	HGC Broadband below-ground chamber outside Lot P3		25	14:30	14:32	0.0	0.0	20.9	0.0	1006							Nil
16/9/2024																	
EP1-1	Inside the landscaping area of Administration Building	Sunny	33	15:10	15:12	0.0	0.0	20.9	0.0	1004	> 10	< 19	> 0.5	> 20	< 18	> 1.5	Nil
EP1-2	PCCW below-ground chamber outside Lot T1		33	15:15	15:17	0.0	0.0	20.9	0.0	1004							Nil
EP1-3	HGC Broadband below-ground chamber outside Lot T3		33	15:20	15:22	0.0	0.0	20.9	0.0	1004							Nil
EP2-1	HGC Broadband below-ground chamber outside Lot P1		33	15:25	15:27	0.0	0.0	20.9	0.0	1004							Nil
EP2-2	HGC Broadband below-ground chamber outside Lot P3		33	15:30	15:32	0.0	0.0	20.9	0.0	1004							Nil
21/11/2024																	
EP1-1	Inside the landscaping area of Administration Building	Sunny	19	14:15	14:17	0.0	0.0	20.9	0.0	1017	> 10	< 19	> 0.5	> 20	< 18	> 1.5	Nil
EP1-2	PCCW below-ground chamber outside Lot T1		19	14:20	14:22	0.0	0.0	20.9	0.0	1017							Nil
EP1-3	HGC Broadband below-ground chamber outside Lot T3		19	14:35	14:37	0.0	0.0	20.9	0.0	1017							Nil
EP2-1	HGC Broadband below-ground chamber outside Lot P1		19	14:25	14:27	0.0	0.0	20.9	0.0	1017							Nil
EP2-2	HGC Broadband below-ground chamber outside Lot P3		19	14:30	14:32	0.0	0.0	20.9	0.0	1017							Nil

Notes:

(1) Underlined figure indicates an exceedance of Action Level

(2) Shaded area indicates an exceedance of Limit Level

EP1-1

Date	Methane (% LEL)			Oxygen (% v/v)			Carbon Dioxide (% v/v)			Barometric Pressure (mBar)
	Measurement	Action Level	Limit Level	Measurement	Action Level	Limit Level	Measurement	Action Level	Limit Level	Measurement
23/2/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1021
20/5/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1006
16/9/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1004
21/11/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1017

EP1-2

Date	Methane (% LEL)			Oxygen (% v/v)			Carbon Dioxide (% v/v)			Barometric Pressure (mBar)
	Measurement	Action Level	Limit Level	Measurement	Action Level	Limit Level	Measurement	Action Level	Limit Level	Measurement
23/2/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1021
20/5/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1006
16/9/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1004
21/11/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1017

EP1-3

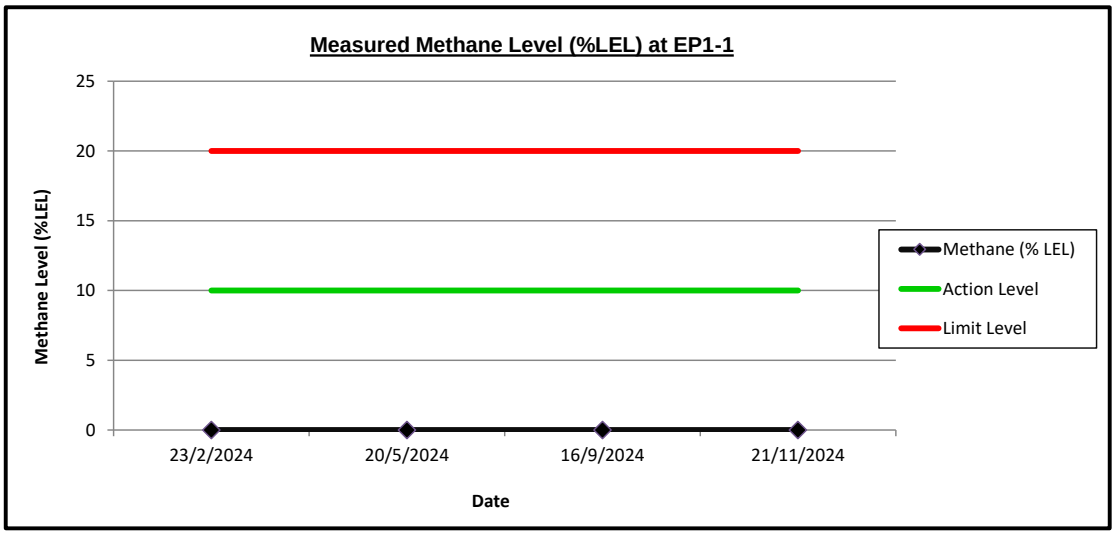
Date	Methane (% LEL)			Oxygen (% v/v)			Carbon Dioxide (% v/v)			Barometric Pressure (mBar)
	Measurement	Action Level	Limit Level	Measurement	Action Level	Limit Level	Measurement	Action Level	Limit Level	Measurement
23/2/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1021
20/5/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1006
16/9/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1004
21/11/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1017

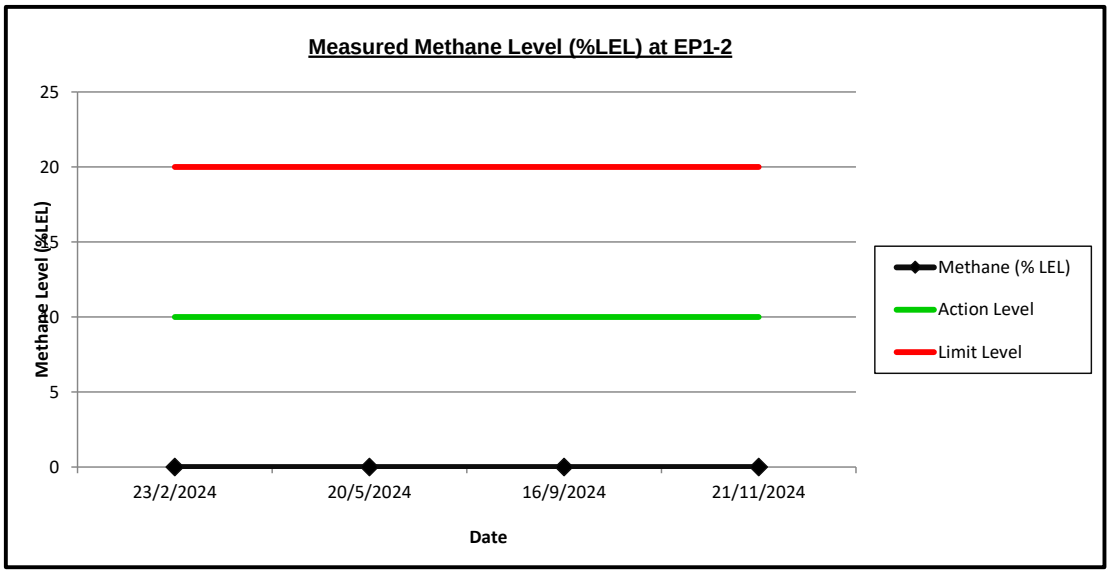
EP2-1

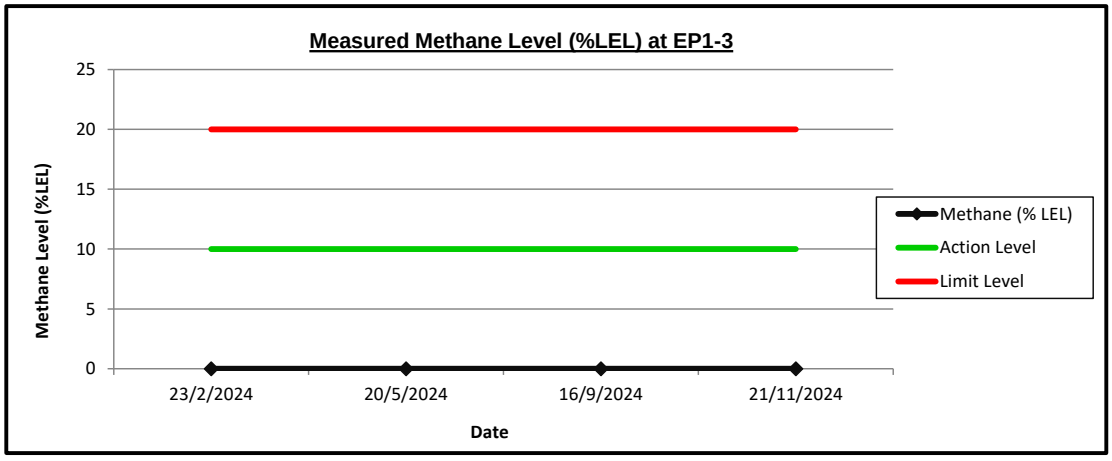
Date	Methane (% LEL)			Oxygen (% v/v)			Carbon Dioxide (% v/v)			Barometric Pressure (mBar)
	Measurement	Action Level	Limit Level	Measurement	Action Level	Limit Level	Measurement	Action Level	Limit Level	Measurement
23/2/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1021
20/5/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1006
16/9/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1004
21/11/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1017

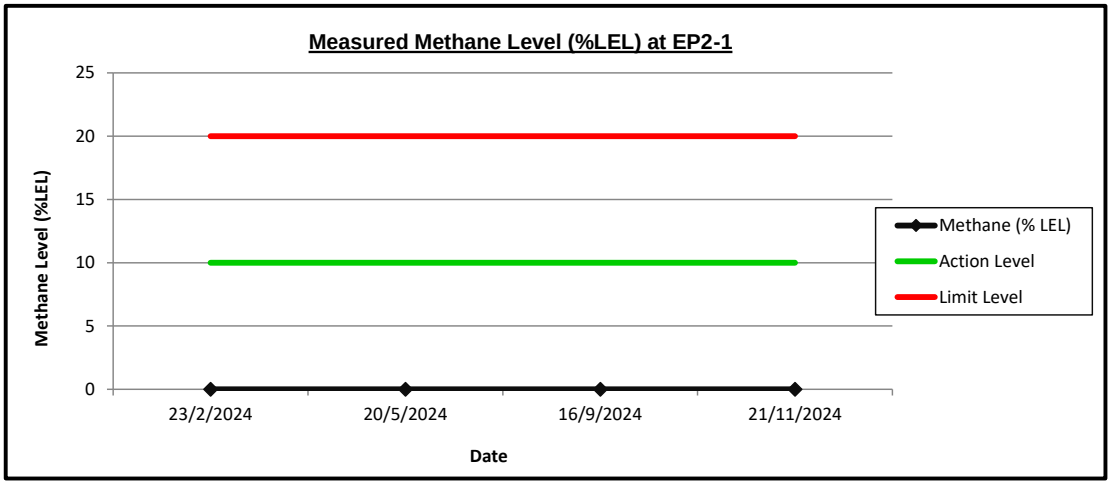
EP2-2

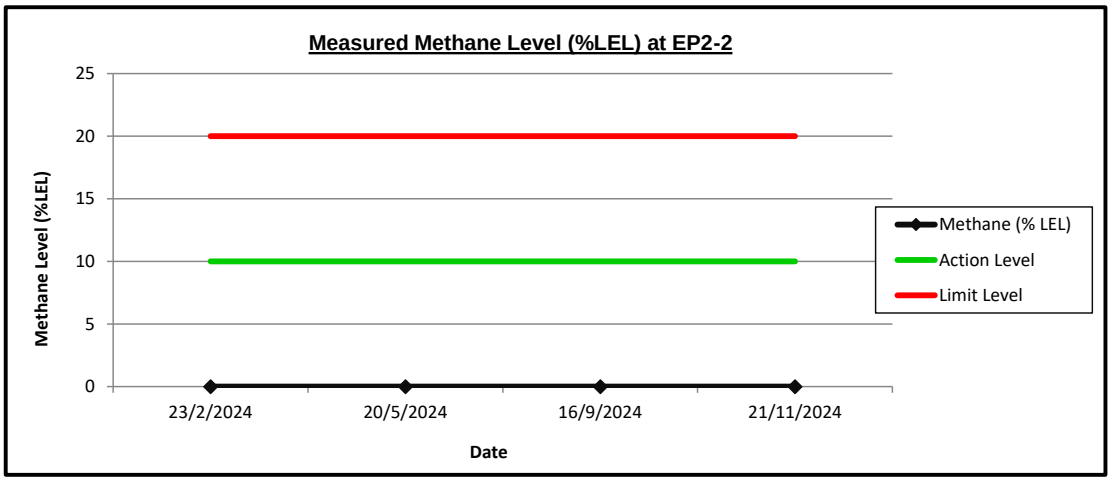
Date	Methane (% LEL)			Oxygen (% v/v)			Carbon Dioxide (% v/v)			Barometric Pressure (mBar)
	Measurement	Action Level	Limit Level	Measurement	Action Level	Limit Level	Measurement	Action Level	Limit Level	Measurement
23/2/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1021
20/5/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1006
16/9/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1004
21/11/2024	0	10	20	20.9	19	18	0.0	0.5	1.5	1017

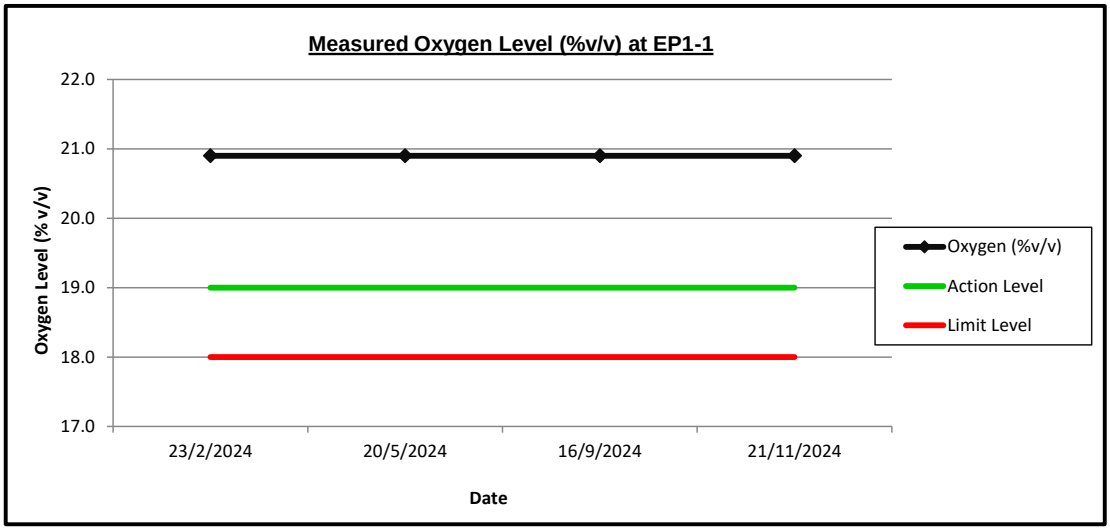

Measured Methane Level (%LEL) at EP1-1
Methane Level (%LEL)
25
20
15
10
5
0
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Methane (% LEL)
Action Level
Limit Level

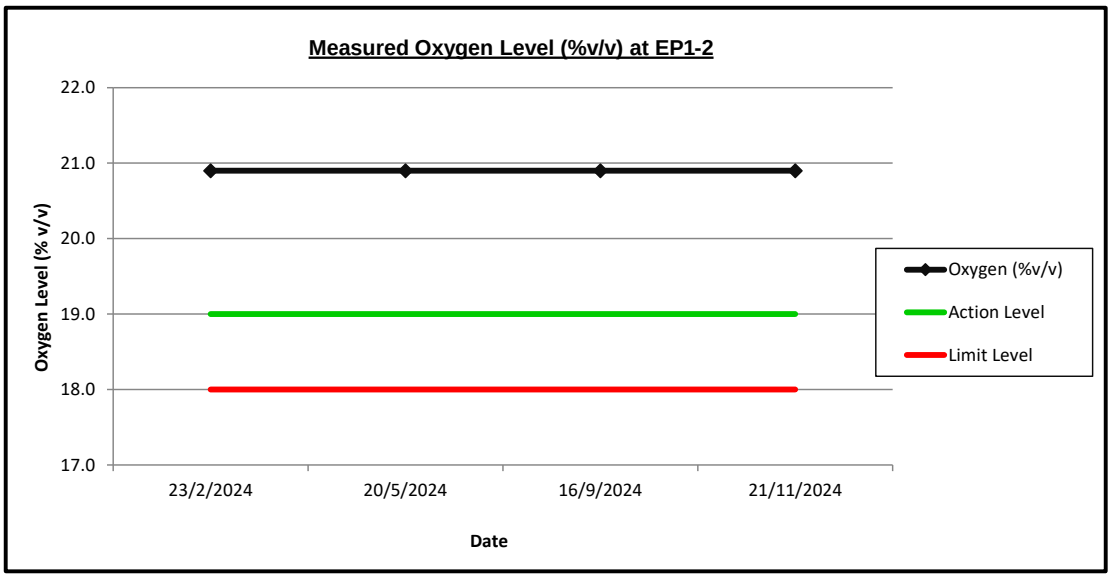

Measured Methane Level (%LEL) at EP1-2
Methane Level (%LEL)
25
20
5
0
5
0
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Methane (% LEL)
Action Level
Limit Level

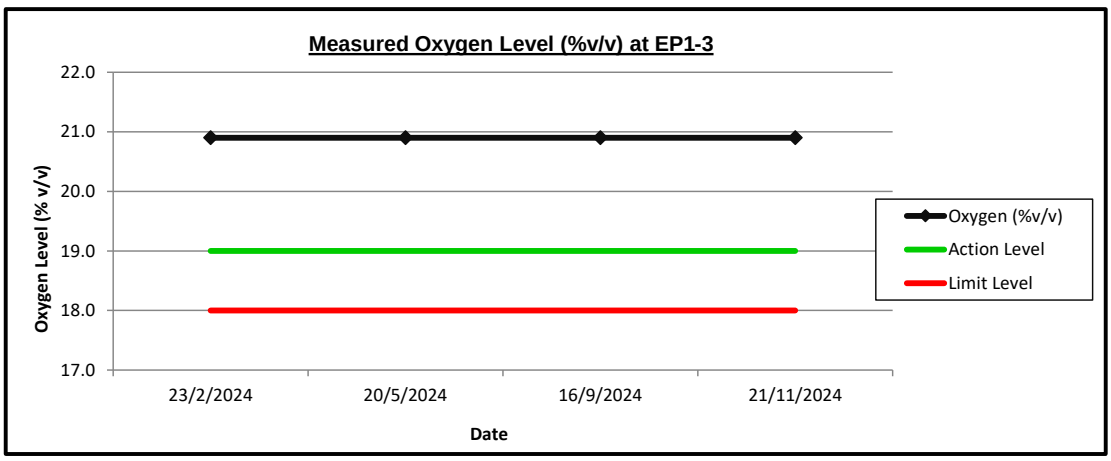

Measured Methane Level (%LEL) at EP1-3
Methane Level (%LEL)
25
20
15
10
5
0
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Methane (% LEL)
Action Level
Limit Level

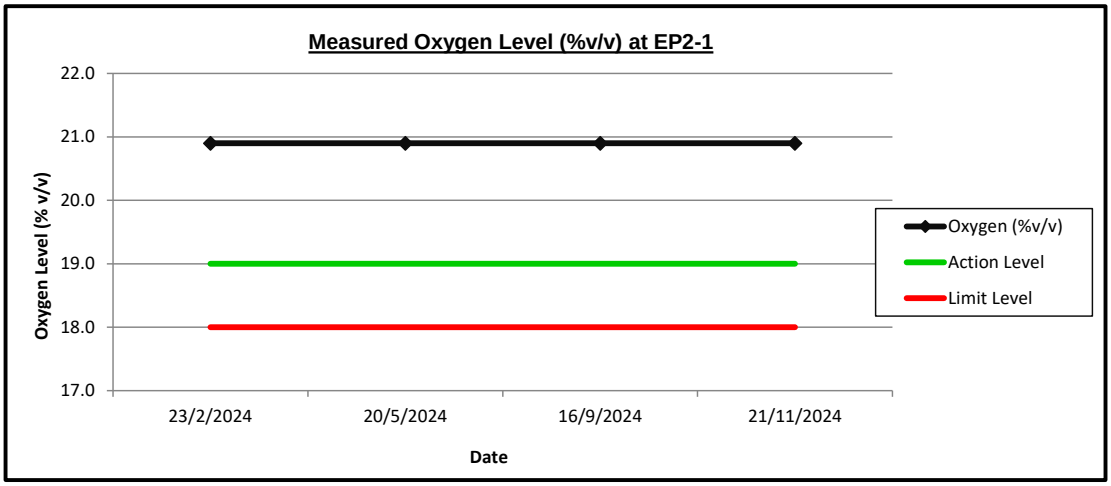

Measured Methane Level (%LEL) at EP2-1
Methane Level (%LEL)
25
20
15
10
5
0
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Methane (% LEL)
Action Level
Limit Level

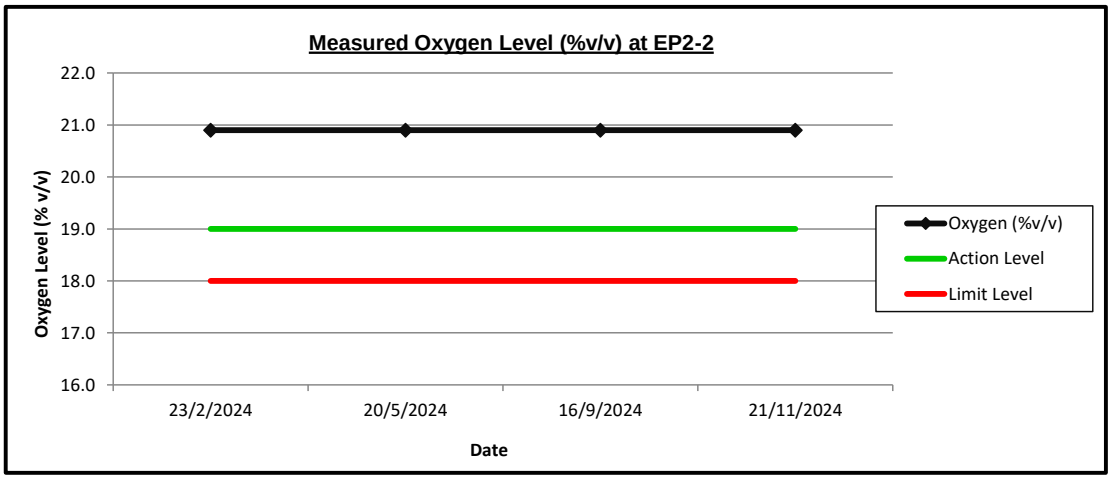

Measured Methane Level (%LEL) at EP2-2
Methane Level (%LEL)
25
20
15
10
5
0
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Methane (% LEL)
Action Level
Limit Level

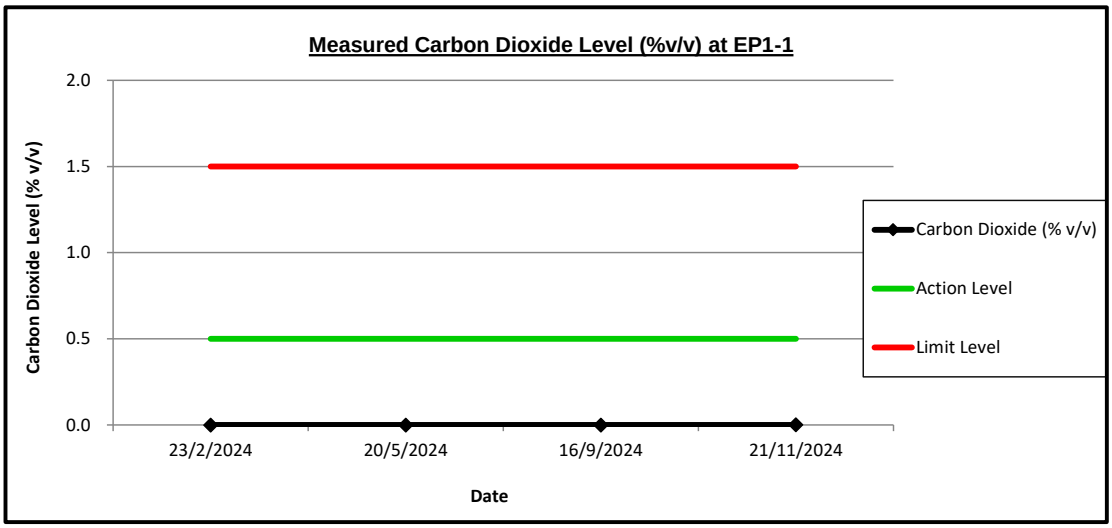

Measured Oxygen Level (%v/v) at EP1-1
22.0
21.0
20.0
19.0
18.0
17.0
Oxygen Level (% v/v)
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Oxygen (%v/v)
Action Level
Limit Level

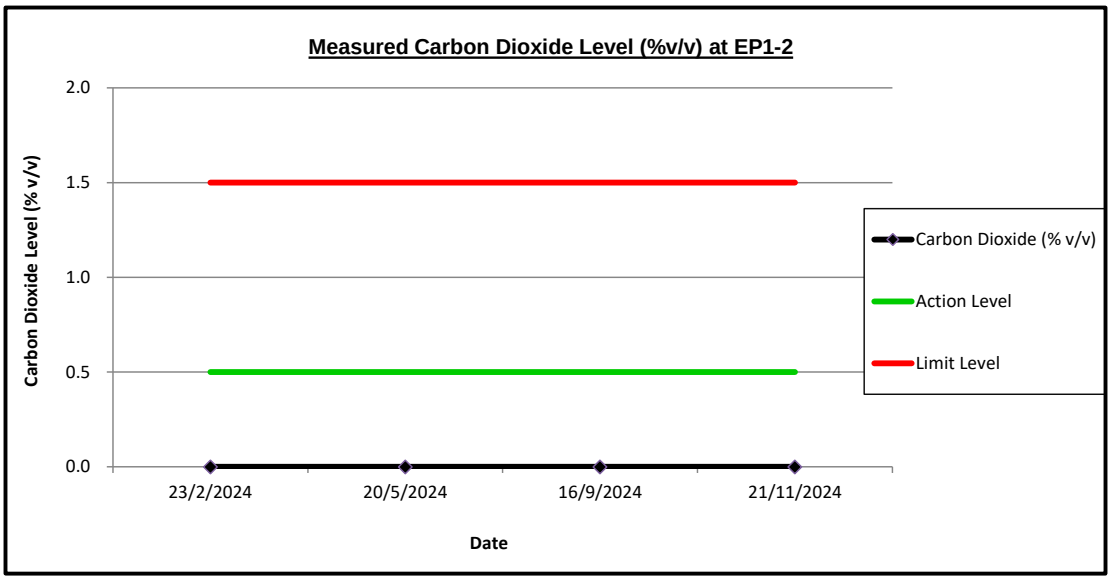

Measured Oxygen Level (%v/v) at EP1-2
22.0
21.0
20.0
19.0
18.0
17.0
Oxygen Level (% v/v)
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Oxygen (%v/v)
Action Level
Limit Level

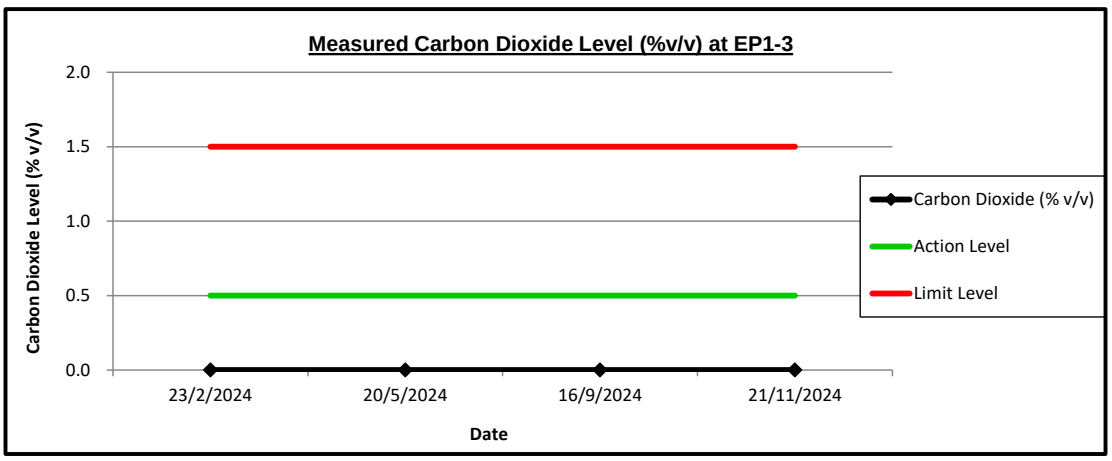

Measured Oxygen Level (%v/v) at EP1-3
22.0
21.0
20.0
19.0
18.0
17.0
Oxygen Level (% v/v)
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Oxygen (%v/v)
Action Level
Limit Level

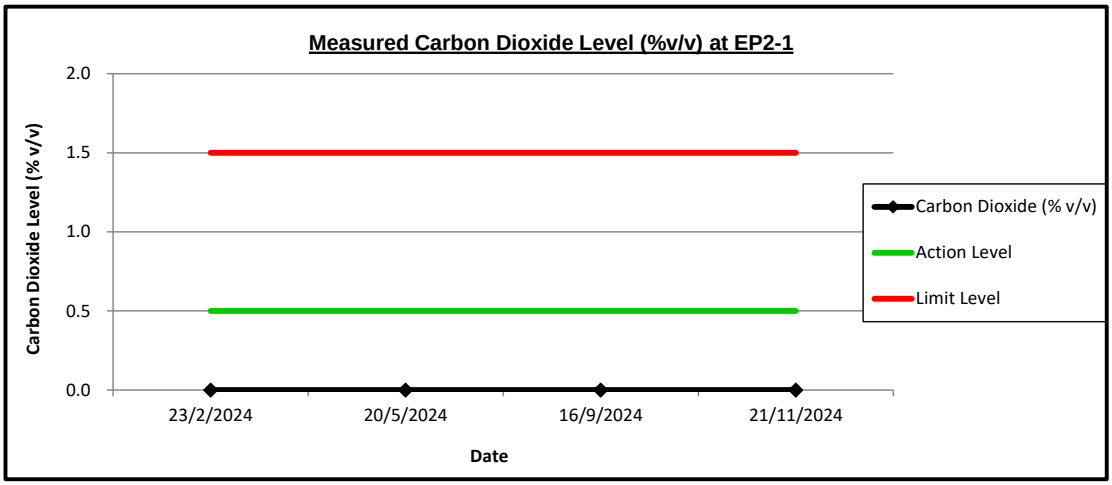

Measured Oxygen Level (%v/v) at EP2-1
22.0
21.0
20.0
19.0
18.0
17.0
Oxygen Level (% v/v)
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Oxygen (%v/v)
Action Level
Limit Level

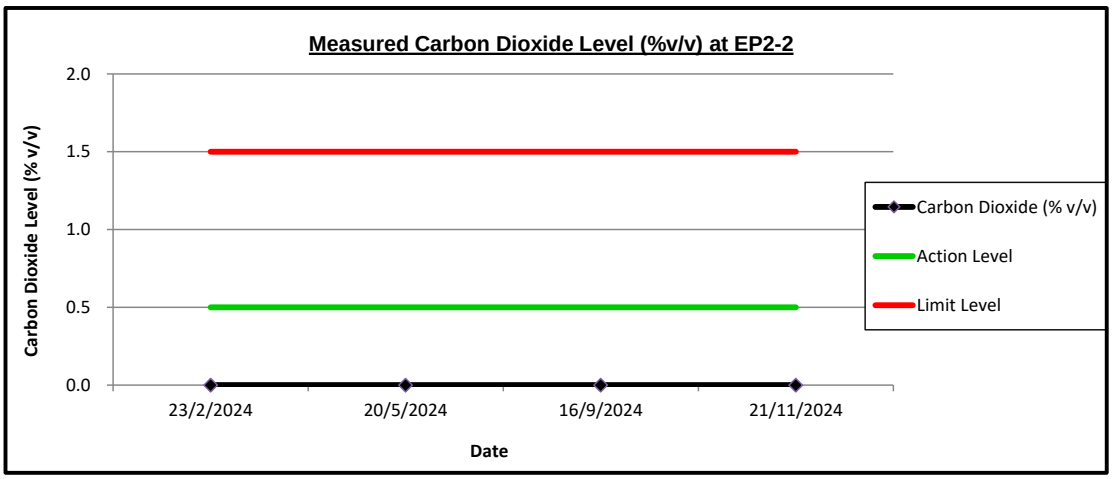

Measured Oxygen Level (%v/v) at EP2-2
22.0
21.0
20.0
19.0
18.0
17.0
16.0
Oxygen Level (% v/v)
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Oxygen (%v/v)
Action Level
Limit Level


Measured Carbon Dioxide Level (%v/v) at EP1-1
Carbon Dioxide Level (% v/v)
2.0
1.5
1.0
0.5
0.0
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Carbon Dioxide (% v/v)
Action Level
Limit Level

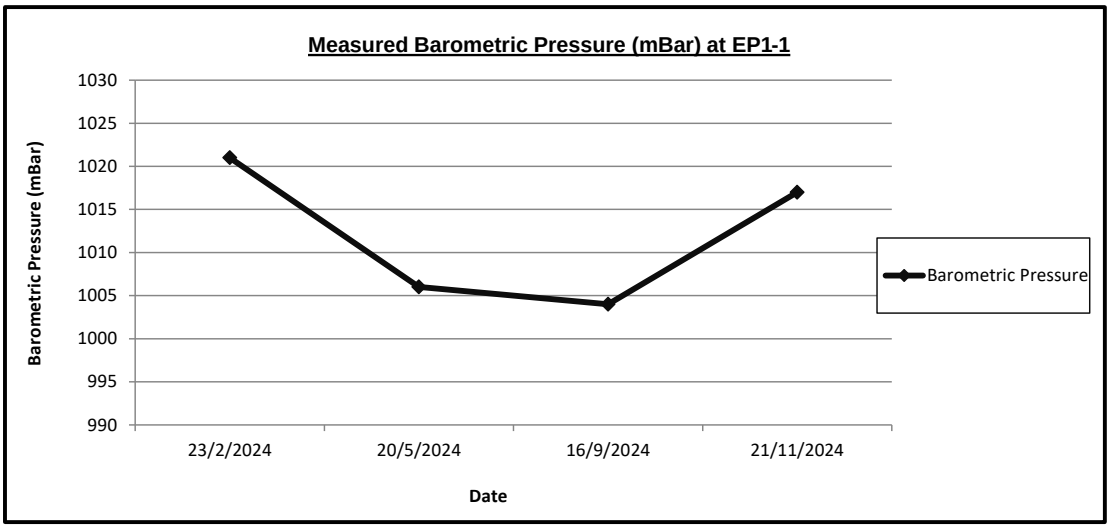

Measured Carbon Dioxide Level (%v/v) at EP1-2
Carbon Dioxide Level (% v/v)
2.0
1.5
1.0
0.5
0.0
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Carbon Dioxide (% v/v)
Action Level
Limit Level

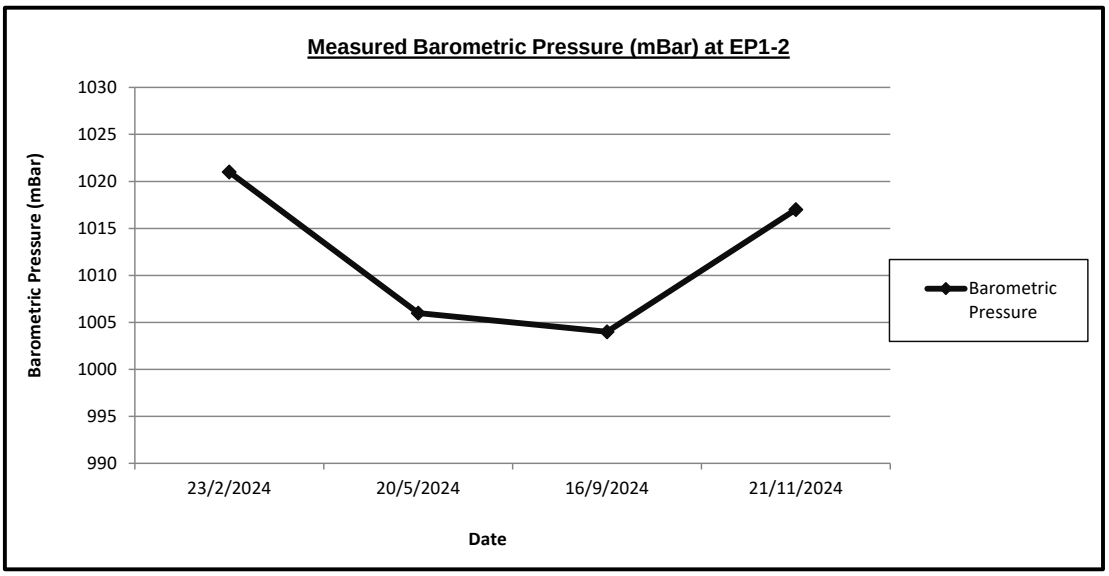

Measured Carbon Dioxide Level (%v/v) at EP1-3
Carbon Dioxide Level (% v/v)
2.0
1.5
1.0
0.5
0.0
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Carbon Dioxide (% v/v)
Action Level
Limit Level

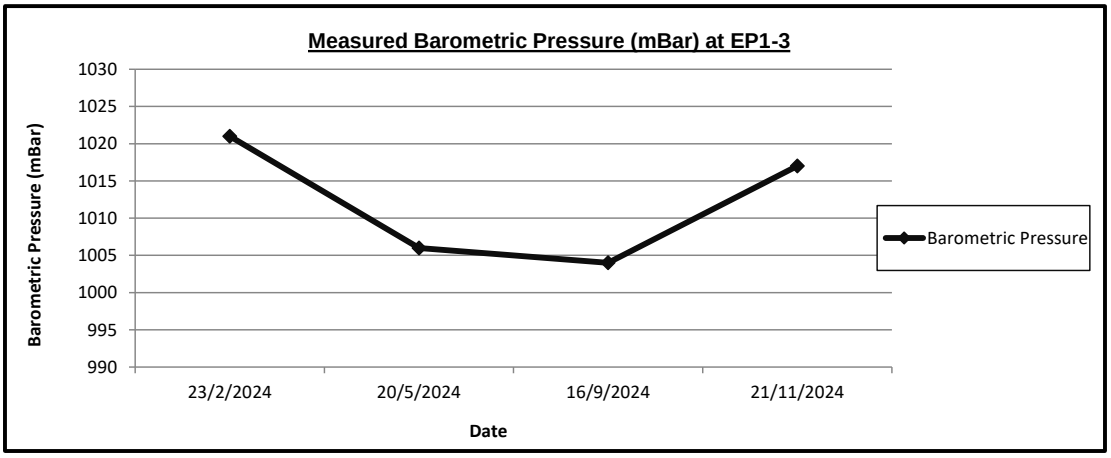


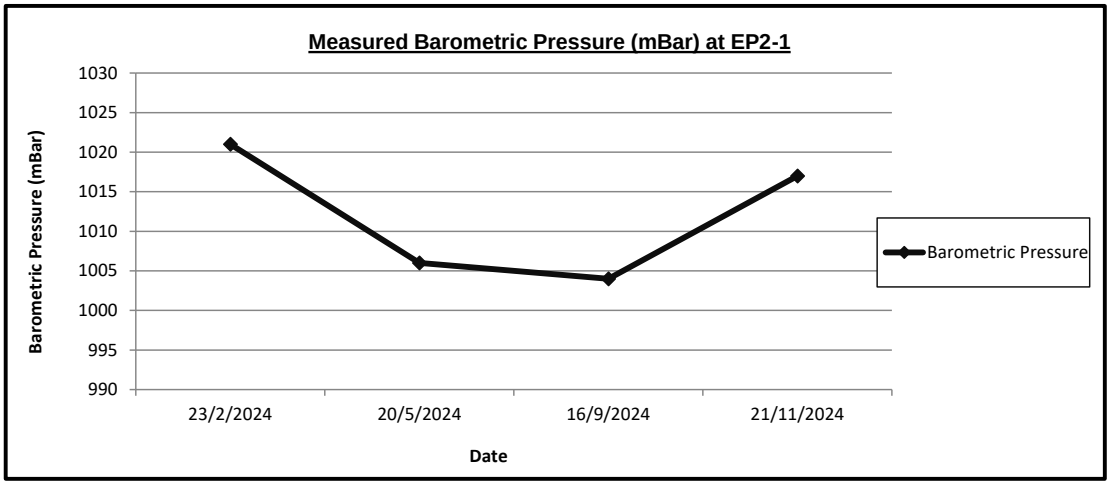


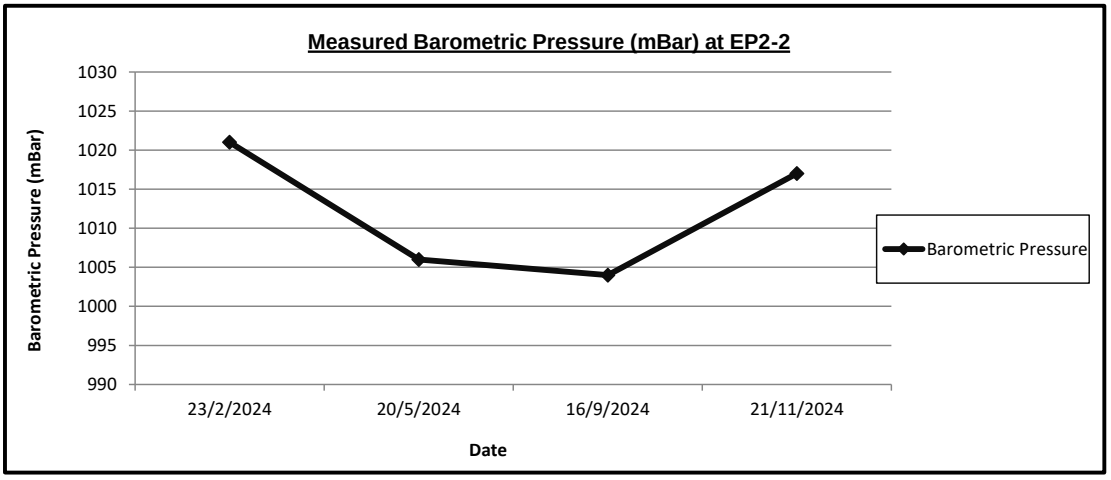
Remark: All <0.1%v/v for carbon dioxide is regarded as 0.0%v/v in graphical presentation


Measured Barometric Pressure (mBar) at EP1-1
Barometric Pressure (mBar)
1030
1025
1020
1015
1010
1005
1000
995
990
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Barometric Pressure


Measured Barometric Pressure (mBar) at EP1-2
Barometric Pressure (mBar)
1030
1025
1020
1015
1010
1005
1000
995
990
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Barometric Pressure


Measured Barometric Pressure (mBar) at EP1-3
Barometric Pressure (mBar)
1030
1025
1020
1015
1010
1005
1000
995
990
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Barometric Pressure


Measured Barometric Pressure (mBar) at EP2-1
Barometric Pressure (mBar)
1030
1025
1020
1015
1010
1005
1000
995
990
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Barometric Pressure


Measured Barometric Pressure (mBar) at EP2-2
Barometric Pressure (mBar)
1030
1025
1020
1015
1010
1005
1000
995
990
23/2/2024
20/5/2024
16/9/2024
21/11/2024
Date
Barometric Pressure

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TEST REPORT

Test Report of Landfill Gas Monitoring

Report No. : ENA41314
Date of Issue : 27 February 2024

Information Provided by Customer

Customer Name : Allied Enviornmental Consultants Ltd.
Customer Address : 27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
Sample Source : Landfill Gas Monitoring at Eco Park, Tuen Mun
Sampling Location : EP1-1 Inside the Landscaping area of Administration Building
EP1-2 PCCW underground chamber outside Lot T1
EP1-3 HGC Broadband underground chamber outside Lot T3
EP2-1 HGC Broadband underground chamber outside Lot P1
EP2-2 HGC Broadband underground chamber outside Lot P3
Date of Test : 23 February 2024
Method : To carry out landfill gas monitoring by gas detector

Equipment

Reference Number : ET/EA/005/01
Manufacturer : RKI Instruments EAGLE 2
Serial Number : E2F694

Result

Sampling Location	Sampling Time	Barometric Pressure, mBar	Methane		Carbon Dioxide, %v/v	Oxygen, %v/v
			%v/v	%LEL		
EP1-1	09:30	1021	0	0	0.1	20.9
EP1-2	09:40	1021	0	0	0.0	20.9
EP1-3	09:50	1021	0	0	0.0	20.9
EP2-1	10:00	1021	0	0	0.0	20.9
EP2-2	10:10	1021	0	0	0.0	20.9

Approved Signatory :
LAU, Chi Leung

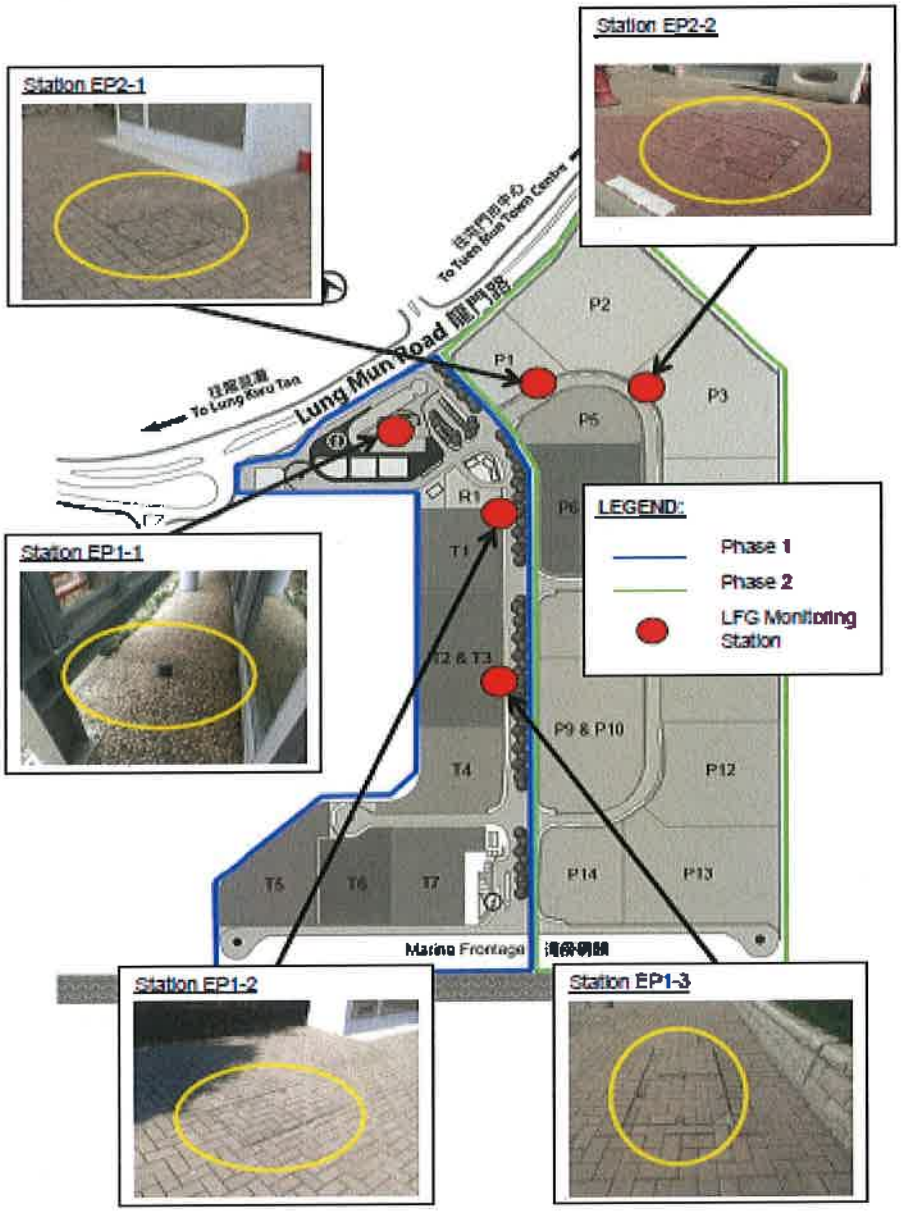
- END OF REPORT -

Appendix of Test Report

Report No. : ENA41314
Date of Issue : 27 February 2024
Page No. : 2 of 2

Location Plan

Landfill Gas Monitoring Stations



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TEST REPORT

Test Report of Landfill Gas Monitoring

Report No. : ENA43209
Date of Issue : 21 May 2024

Information Provided by Customer

Customer Name : Allied Enviornmental Consultants Ltd.
Customer Address : 27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
Sample Source : Landfill Gas Monitoring at Eco Park, Tuen Mun
Sampling Location : EP1-1 Inside the Landscaping area of Administration Building
EP1-2 PCCW underground chamber outside Lot T1
EP1-3 HGC Broadband underground chamber outside Lot T3
EP2-1 HGC Broadband underground chamber outside Lot P1
EP2-2 HGC Broadband underground chamber outside Lot P3
Date of Test : 20 May 2024
Method : To carry out landfill gas monitoring by gas detector

Equipment

Reference Number : ET/EA/005/03
Manufacturer : CNEX X-4 3.7VDC
Serial Number : 20231140923

Result

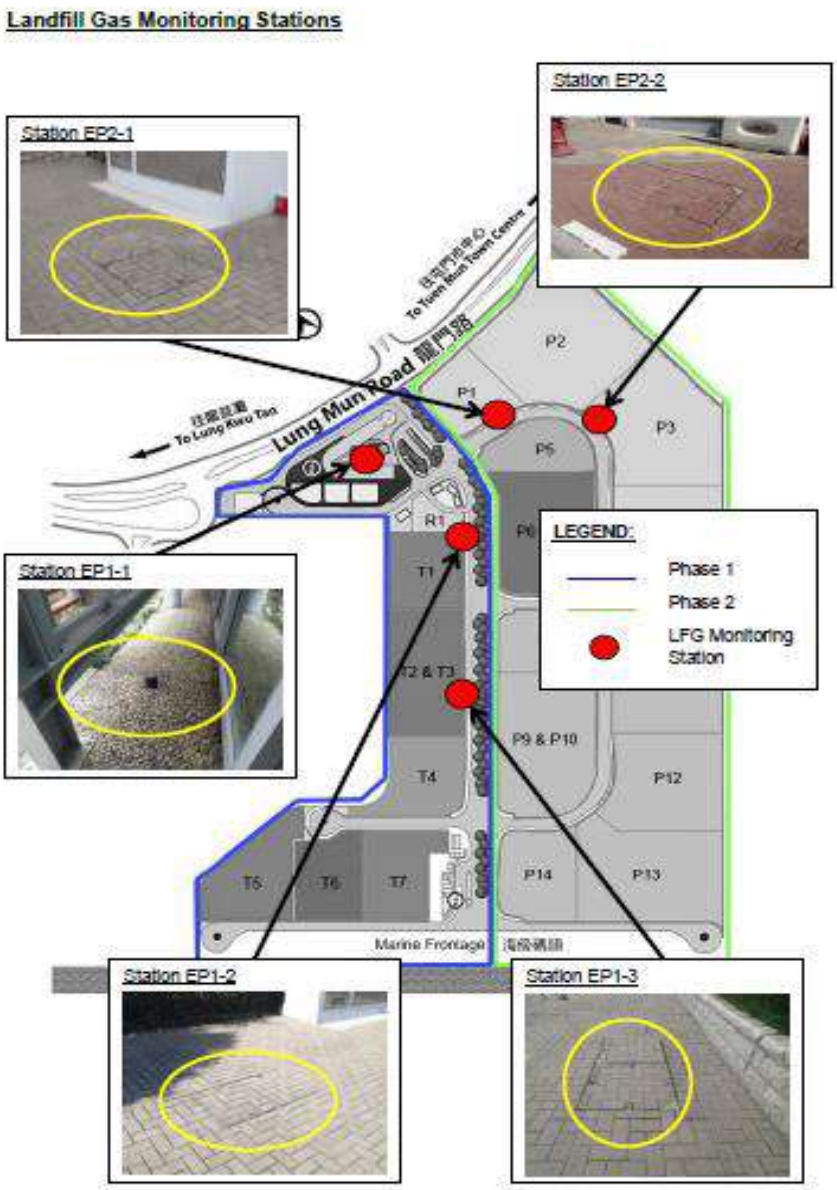
Sampling Location	Sampling Time	Barometric Pressure, mBar	Methane		Carbon Dioxide, %v/v	Oxygen, %v/v
			%v/v	%LEL		
EP1-1	14:20	1006	0	0	0.0	20.9
EP1-2	14:35	1006	0	0	0.0	20.9
EP1-3	14:40	1006	0	0	0.0	20.9
EP2-1	14:25	1006	0	0	0.0	20.9
EP2-2	14:30	1006	0	0	0.0	20.9

Approved Signatory : _____
LAU, Chi Leung

- END OF REPORT -

Appendix of Test Report

Location Plan



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TEST REPORT

Test Report of Landfill Gas Monitoring

Report No. : ENA45777
Date of Issue : 24 September 2024

Information Provided by Customer

Customer Name : Allied Enviornmental Consultants Ltd.
Customer Address : 27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
Sample Source : Landfill Gas Monitoring at Eco Park, Tuen Mun
Sampling Location : EP1-1 Inside the Landscaping area of Administration Building
EP1-2 PCCW underground chamber outside Lot T1
EP1-3 HGC Broadband underground chamber outside Lot T3
EP2-1 HGC Broadband underground chamber outside Lot P1
EP2-2 HGC Broadband underground chamber outside Lot P3
Date of Test : 16 September 2024
Method : To carry out landfill gas monitoring by gas detector

Equipment

Reference Number : ET/EA/005/03
Manufacturer : CNEX X-4 3.7VDC
Serial Number : 20231140923

Result

Sampling Location	Sampling Time	Barometric Pressure, mBar	Methane		Carbon Dioxide, %v/v	Oxygen, %v/v
			%v/v	%LEL		
EP1-1	15:10	1004	0	0	0.0	20.9
EP1-2	15:15	1004	0	0	0.0	20.9
EP1-3	15:20	1004	0	0	0.0	20.9
EP2-1	15:25	1004	0	0	0.0	20.9
EP2-2	15:30	1004	0	0	0.0	20.9

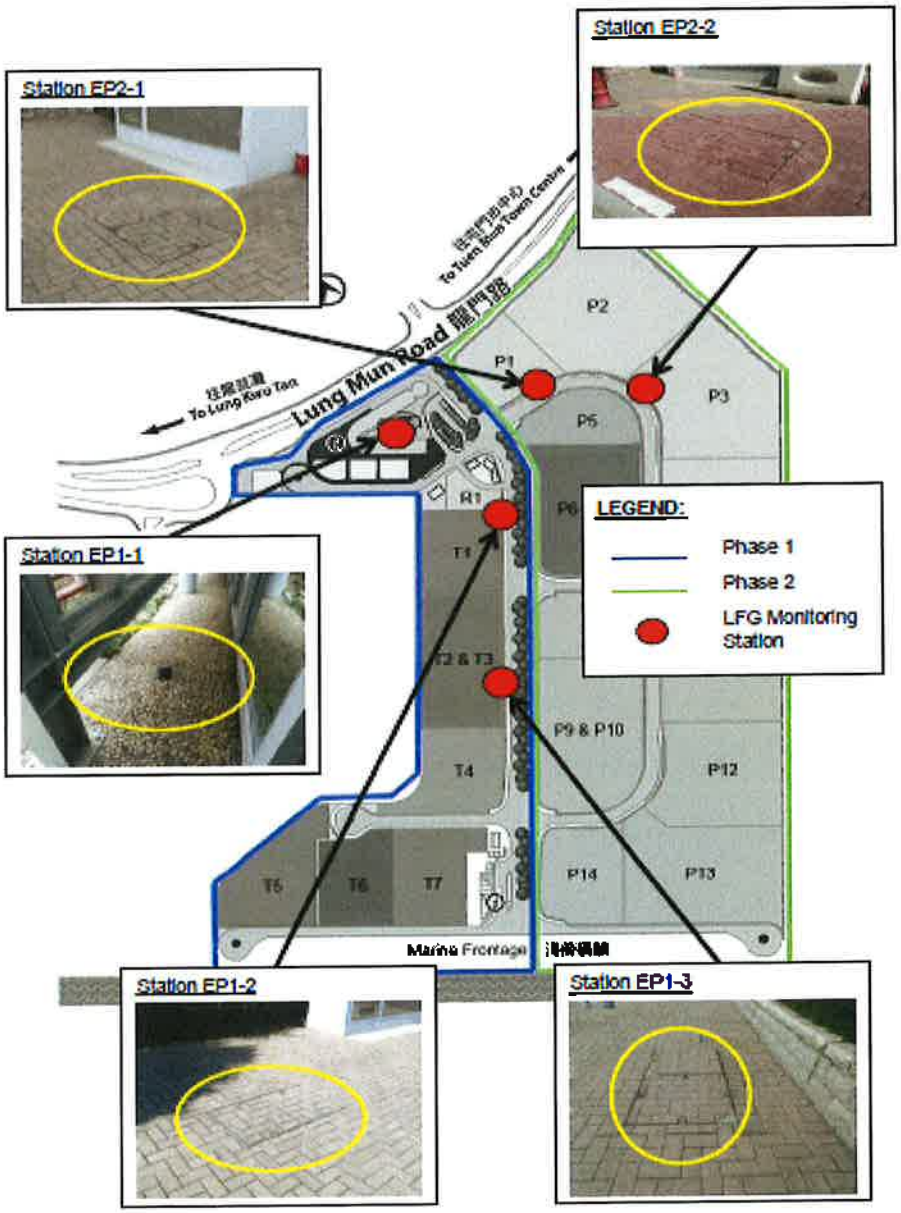
Approved Signatory :
LAU, Chi Leung

- END OF REPORT -

Appendix of Test Report

Location Plan

Landfill Gas Monitoring Stations



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TEST REPORT

Test Report of Landfill Gas Monitoring

Report No. : ENA46755
Date of Issue : 25 November 2024

Information Provided by Customer

Customer Name : Allied Enviornmental Consultants Ltd.
Customer Address : 27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
Sample Source : Landfill Gas Monitoring at Eco Park, Tuen Mun
Sampling Location : EP1-1 Inside the Landscaping area of Administration Building
EP1-2 PCCW underground chamber outside Lot T1
EP1-3 HGC Broadband underground chamber outside Lot T3
EP2-1 HGC Broadband underground chamber outside Lot P1
EP2-2 HGC Broadband underground chamber outside Lot P3
Date of Test : 21 November 2024
Method : To carry out landfill gas monitoring by gas detector

Equipment

Reference Number : ET/EA/005/03
Manufacturer : CNEX X-4 3.7VDC
Serial Number : 20231140923

Result

Sampling Location	Sampling Time	Barometric Pressure, mBar	Methane		Carbon Dioxide, %v/v	Oxygen, %v/v
			%v/v	%LEL		
EP1-1	14:15	1017	0	0	0.0	20.9
EP1-2	14:20	1017	0	0	0.0	20.9
EP1-3	14:35	1017	0	0	0.0	20.9
EP2-1	14:25	1017	0	0	0.0	20.9
EP2-2	14:30	1017	0	0	0.0	20.9

Approved Signatory :
LAU, Chi Leung

- END OF REPORT -

Appendix of Test Report

Report No. : ENA46755
Date of Issue : 25 November 2024

Location Plan

Landfill Gas Monitoring Stations