

Contract No. : EP/SP/52/06
Development of an EcoPark in Tuen Mun Area 38

ENVIRONMENTAL MONITORING AND AUDIT

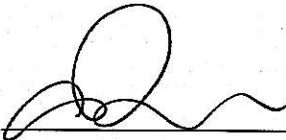
MONTHLY EM&A REPORT for

FEBRUARY 2007


APPROVAL SHEET

DOCUMENT DATE: 28 February 2007

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Date: 19 MAR 2007

Verified by: 
IEC

Date: 19 MAR 2007

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EXECUTIVE SUMMARY

This is the eighth monthly Environmental Monitoring and Audit (EM&A) Report for the Environmental Protection Department Contract No. EP/SP/52/06 entitled "Development of an EcoPark in Tuen Mun Area 38". (Environmental Permit No. EP-226/2005)

This report contains the results and findings of site inspection activities and EM&A works carried out by the Environmental Team (ET) of the Works Contractor as required in the contract during February 2007.

The site activities in the reporting period mainly consisted of site formation, excavation works, and construction of administration building, electrical sub-stations, drainage and sewerage, marine front management office and refuse collection points.

Disposal of inert C&D material was recorded. No substantial noise impact was noted by ET during weekly environmental site walks. Landfill gas monitoring was carried out at site; oxygen measurement results on 01, 07, 14, 23 and 28 February 2007 exceeded Action and Limit Levels in accordance with the EM&A Manual. The Contractor was reminded to carry out the actions suggested in the EM&A Manual correspondingly for mitigation measure and to check and calibrate the instrument as soon as possible.

Insufficient water spraying on Road A and the junction between Road A and Road C was observed. The Contractor was reminded to install sprinkler system to enhance water spraying on these site areas for better dust mitigation.

The site entrance has been relocated to Road F and manual labour was used for wheel washing. As informed by the Engineer's Representative, no adverse comment to wheel washing has been received.

Inadequate treatment capacity of sedimentation tank to treat muddy water accumulated in the trench FMH49 – FMH1012932 was found. Two in-series sedimentation tanks as well as Alum coagulant were used on 07 February 2007. Due to site construction, only one sedimentation tank was used on 14 and 23 February 2007. No discharge of muddy water was found on 28 February 2007. The Contractor was reminded to properly treat

muddy water with adequate sedimentation facilities. Weekly water samples were taken by the ET at the discharge manhole, and some COD test results were not in compliance with WPCO-TM Standard.

On 2 February 2007, ET took water sample for comprehensive chemical analysis of dewatering discharge to determine an appropriate treatment method. However, the results (especially COD) did not exceed the WPCO-TM Standard.

Damage of silt curtain was observed and repair work was underway. The Contractor has to immediately finish the repair work and reinstall silt curtain.

A joint site inspection was held at Chemical Waste Storage Area on 01 February 2007. It was found that the appropriate labels and signs have been added to chemical waste containers and Chemical Waste Storage Area.

Oil was found accumulated at the bottom of cabinets in Oil Storage Area. The Contractor has removed oil from cabinets.

Three empty oil containers placed beside Chemical Waste Storage Area were not properly stored in the designated contained area. The Contractor was reminded to properly store these containers in the designated contained area in order to prevent oil spillage on the ground.

There were no notifications of summons or successful prosecution during February 2007.

The planned activities for March 2007 and April 2007 with regard to development of EcoPark consist of:

- 1) Excavation and Site Formation Works
- 2) Construction of Electrical Sub-stations
- 3) Construction of Drainage and Sewerage
- 4) Construction of Administration Building
- 5) Construction of Marine Front Management Office
- 6) Construction of Refuse Collection Points

1. BASIC PROJECT INFORMATION

1.1 Introduction

This is the eighth monthly Environmental Monitoring and Audit (EM&A) Report for the Environmental Protection Department Contract No. EP/SP/52/06 entitled "Development of an EcoPark in Tuen Mun Area 38". The site layout plan is shown in Appendix 1. The report was prepared by the Environmental Team, Environmental Pioneers & Solutions Limited, of the Works Contractor, Kaden Construction Limited. The report is to be submitted to the Works Contractor, the Engineer and the Environmental Protection Department for the project.

This report presents the results of the environmental monitoring of the project activities conducted during the month of February 2007. This included regular site inspections once per week for verification of implementation of the mitigation measures as recommended in the EM&A Manual and the Contractor's Environmental Management Plan (EMP).

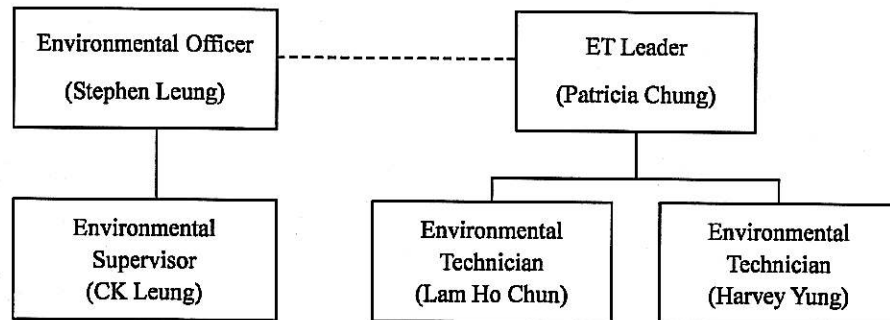
Phase 1 of the construction works has already commenced in July 2006 and is anticipated to complete in June 2007.

The contact person and telephone number of key personnel for the captioned project are shown in Appendix 2.

1.2 Project Organization and Management

The Works Contractor has commissioned Environmental Pioneers & Solutions Limited as the Environmental Team, which comprises the environmental team leader and the environmental technicians to undertake the environmental monitoring and audit work for this project. The project Organization Chart of Environmental Team is shown in Figure 1.1.

Figure 1.1 Organization Chart of Environmental Team



2. SUMMARY OF WORK ACTIVITIES AND CONSTRUCTION STATUS

2.1 Works Undertaken during the Month

A summary of the site installation works in this month, with the information of locations, activities, equipment/materials and dates of occurrence, is provided by the Contractor, as shown in Table 2.1.

Item	Work Activities & Location	Date of Occurrence
1	Site Formation Works, Excavation Works & Roadworks	1 February 2007 – 28 February 2007
2	Construction of Electrical Sub-stations, Administration Building, Refuse Collection Points and Marine Front Management Office	1 February 2007 – 28 February 2007
3	Construction of Drainage & Sewerage	1 February 2007 – 28 February 2007

Machineries		
	Equipment/ Plant	Quantity
1	Mobile Crane	2
2	Excavator	20
3	Generator	8
4	Air Compressor	2
5	Roller	6
6	Loader	2
7	Grab Lorry	2
8	Crane Lorry	3
9	Water Truck	1
10	Dump Truck	5

Remarks:

- As informed by the Contractor, most equipment are mobile at site subject to work progress.
- Refer to Appendix 1 – Site layout plan for location of construction activities.

2.2 Future Key Issues

The Contractor has provided an updated construction program in Table 2.2 to show the planned activities for the coming three months (March 2007 – May 2007). The anticipated environmental issues are summarized as follow:

Item	Works	Anticipated Environmental Issues
1	Site Formation Works, Excavation Works & Roadworks	<ul style="list-style-type: none"> - Generation of C&D Waste; excavated material should be reused as much as practicable - Dust may be generated; the wheel washing machine should be in operation - Haul road should be sprayed regularly, by truck or sprinkler - Stagnant water should be removed - Mosquito mitigation measures should be implemented
2	Construction of Electrical Sub-stations, Administration Building, Refuse Collection Points & Marine Front Management Office	<ul style="list-style-type: none"> - Generation of waste from packaging materials and C&D wastes
3	Construction of Drainage & Sewerage	<ul style="list-style-type: none"> - Generation of C&D Waste; excavated material should be reused as much as practicable - Dust may be generated; the wheel washing machine should be in operation

The site inspection schedule for the next month (March 2007) is designated on 8, 14, 21 and 28 March 2007.

3. STATUS OF ENVIRONMENTAL PROTECTION AND SITE INSPECTIONS**3.1 Environmental Site Inspections**

Environmental site inspections are required to inspect the construction activities of the Development of EcoPark in order to ensure that appropriate environmental protection and pollution control mitigation measures are properly implemented.

Site inspections were conducted on 1, 7, 14, 23 and 28 February 2007.

A detailed checklist of each site inspection together with comments, relevant photos and maps have been filed and kept.

The findings and results of site inspections are provided in Table 3.1:

Date	Observations	Advice from ET	Outcome	Closing Date
01 Feb 07 07 Feb 07	Damage of silt curtain was observed.	To repair and maintain silt curtain properly in order to prevent muddy discharge at sea	Repair of silt curtain was started on 14 February 2007 and should be inspected in the next reporting period	--
01 Feb 07 07 Feb 07	Inadequate water spraying on Road A and the junction between Road A and Road C was observed.	To enhance water spraying on these site areas by installing sprinkler system	Sprinklers were installed at Road A and the junction between Road A and Road C for dust suppression	14 Feb 07
01 Feb 07 07 Feb 07 14 Feb 07 23 Feb 07	Inadequate treatment capacity of sedimentation tank to treat muddy water accumulated in the trench FMH49 – FMH1012932 was found.	To increase treatment capacity by using more sedimentation facilities	Two in-series sedimentation tanks as well as Alum coagulant were used on 07 February 2007. Due to site construction, only one sedimentation tank was used on 14 and 23 February 2007. No discharge of muddy water was found on 28 February 2007.	28 Feb 07

Date	Observations	Advice from ET	Outcome	Closing Date
14 Feb 07 23 Feb 07	Oil was found accumulated at the bottom of cabinets in oil storage area	To regularly remove oil from cabinets in order to prevent spillage	Oil was removed from cabinets in oil storage area	28 Feb 07
14 Feb 07 23 Feb 07 28 Feb 07	Three empty oil containers placed beside chemical waste storage area were not stored in the designated contained area	To properly store the containers in the designated contained area in order to prevent oil spillage on the ground	Storage of the containers should be inspected in the next reporting period	--

3.2 Air Dust

Water spraying by water truck was observed for dust mitigation. However, insufficient water spraying on Road A and the junction between Road A and Road C was observed. The Contractor was reminded to install sprinkler system to enhance water spraying on these site areas for better dust mitigation.

Due to site construction, the wheel washing machine located at site entrance was removed. The new site entrance was relocated to Road F and manual labour was used for wheel washing as temporary measure. As informed by the Engineer's Representative, no adverse comment to wheel washing of the Site has been received. The Contractor was advised to relocate the facility at a suitable location.

3.3 Noise

The major noise source was vehicle movement, machinery and rock excavation in the EcoPark. Since the nearby NSRs were remote, the noise impact was minimal. There was no specific observation noted regarding noise issue. The Construction Noise Permit has expired on 28 February 2007. The Contractor was reminded to reapply the Permit immediately. The Contractor was also reminded that controlled activities specified in the Construction Noise Permit were prohibited until the permit was relicensed.

3.4 Surface Water Quality

Inadequate treatment capacity of sedimentation tank to treat muddy water accumulated in the trench FMH49 – FMH1012932 was found. Two in-series sedimentation tanks as well as alum coagulant were used on 07 February 2007. Due to site construction, only one sedimentation tank was used on 14 and 23 February 2007. No discharge of muddy water was found on 28 February 2007. The Contractor was reminded to properly treat muddy water with adequate sedimentation facilities.

Damage of silt curtain installed at the discharge point at Marine Front was observed. Repairing work of silt curtain was initialized on 14 February 2007. The Contractor has to finish the repair work immediately and reinstall silt curtain in order to prevent muddy discharge at sea.

Chemical toilets (5 nos.) have been provided by a licensed contractor, of which sewage generated is collected every three to five days without causing contamination on surface water. The Effluent Discharge Licence was issued to the Contractor on 20 November 2006.

In February 2007, water sampling and analysis of Chemical Oxygen Demand (COD) was carried out to confirm that dewatering discharge to stormwater drains meets the WPCO-TM Standard. Results are summarized in Table 3.2.

Sampling Location	Sampling Date	Chemical Oxygen Demand (COD) (mg O ₂ /L)	WPCO-TM Standard COD (mg O ₂ /L)
The Manhole near the Launching Shaft	01 Feb 07	110	80
The Manhole near the Trench FMH49 – FMH1012932	01 Feb 07	77	
The Manhole near the Trench FMH49 – FMH1012932	07 Feb 07	580	
The Manhole near the Trench FMH49 – FMH1012932	14 Feb 07	410	
The Manhole near the Trench FMH49 – FMH1012932	23 Feb 07	330	

The results of COD analysis on 01, 07, 14 and 23 February 2007 exceed the WPCO-TM Standard. The Contractor has been reminded to take corrective actions for the outstanding COD issue. Any extracted water that cannot comply with the

WCPO-TM Standard cannot be discharged until appropriate facility is installed.

The ET took water sample from the manhole near the trench FMH49 – FMH1012932 on 02 February 2007 for comprehensive chemical analysis. The result of COD analysis did not exceed the WPCO-TM Standard (80 mg O₂/L). The results of analysis are summarized in Table 3.3.

Parameter / Water Sample	Biochemical Oxygen Demand (mg O ₂ /L)	Chemical Oxygen Demand (mg O ₂ /L)	Nitrite-N (mg/L)	Sulphide (mg/L)	Total Organic Carbon (mg/L)	Total Iron (mg/L)	Total Manganese (mg/L)
Water Sample from the Manhole near the Trench FMH49 – FMH1012932	12	49	0.03	<0.1	6.7	9.2	2.1

3.5 Visual and Landscape Impact

Hoarding was erected at the site egress and aligned along the site boundary along Lung Mun Road. Hoardings were specially designed to be movable for future re-use in other locations.

During site clearance, trees are relocated to be replanted for landscaping in the future in EcoPark.

3.6 Waste / Chemical Waste

A joint site inspection was taken at Chemical Waste Storage Area on 01 February 2007 to investigate the remedial actions taken by the Contractor on the management of chemical waste. It was found that the appropriate labels and signs have been added to chemical waste containers and Chemical Waste Storage Area.

Oil was found accumulated at the bottom of cabinets in Oil Storage Area. The Contractor rectified by removing oil from cabinets in Oil Storage Area. The Contractor was reminded to regularly remove oil in order to prevent spillage.

Three empty oil containers placed beside Chemical Waste Storage Area were not stored in the designated contained area. The Contractor was reminded to properly store these containers in the designated contained area in order to prevent oil spillage on the ground.

The Contractor implemented visual inspection and distributed flyers/ notices to ensure all dump trucks have mechanical covers closed when leaving EcoPark site.

Separate waste collection bins were made available for collecting aluminum cans, waste paper and plastic bottles etc. The Contractor has provided the site layout plan for refuse collection points as shown in Appendix 3.

Two waste dumpers were used for the collection and storage of general waste. Temporary storage areas for waste metals and waste tyres were established.

The Contractor has provided sufficient drip trays for all (8 nos.) temporary electricity generators at site. These drip trays should be covered by tarpaulin sheet to minimize rainfall accumulation.

Excavated materials are reused as back-fill material to balance cut and fill and hence reduce the generation of materials. Surplus materials are returned to stock in centralized area with suitable protective measures. The Contractor was reminded to comply with the requirements and conditions for disposal at public fill facility and all oversized aggregates should be crushed to less than 250mm before delivering to the public fill.

Materials are recycled and re-used at site as much as practicable to minimize waste generation. Timbers are recycled to make temporary tools and access ladders etc. Excavated rocks, concrete and asphalts are stored for future re-use in land formation and structural construction etc.

Registered waste collectors will be arranged to collect and transport the wastes whenever necessary.

Table 3.4 provides a summary table of waste disposal in February 2007. The Contractor has been reminded to keep good record at site in order to have a clear presentation of waste disposal.

Type of Waste	Disposal Site	Quantity	Remarks
General Waste	WENT Landfill	23.17 tonnes	-
Inert C&D Material	Public Fill Facility	5529.4 tonnes	-

3.7 Landfill Gas

Landfill gas (LFG) monitoring was carried out on site at six (6) locations on 01 and 07 February 2007 and five (5) locations on 14, 23 and 28 February 2007, as instructed by the Engineer's Representative. LFG measurements are summarized in Table 3.5, and original field measurement sheets are appended in Appendix 4. Measurement locations are shown in Appendix 5. Oxygen measurement results on 01, 07, 14, 23 and 28 February 2007 exceeded Action and Limit Levels in accordance with the EM&A Manual, as shown in Table 3.6. The Contractor was reminded to conduct the actions suggested in the EM&A Manual correspondingly for mitigation measure and to check and calibrate the instrument as soon as possible.

Sampling Location	Date of Measurement	Sampling Time	Weather Condition	Methane (CH ₄) %LEL	Carbon Dioxide (CO ₂) %LEL	Oxygen (O ₂)
Point A	01 Feb 07	1300	Fine	0.0%	0.0%	17.9%
Point B1	01 Feb 07	1225	Fine	0.0%	0.0%	18.0%
Point B2	01 Feb 07	1230	Fine	0.0%	0.0%	17.8%
Point C1	01 Feb 07	1233	Fine	0.0%	0.0%	17.8%
Point C2	01 Feb 07	1235	Fine	0.0%	0.0%	17.8%
Point D	Not 1 meter deep					
Point A	07 Feb 07	1243	Sunny	0.0%	0.0%	18.1%
Point B1	07 Feb 07	1250	Sunny	0.0%	0.0%	17.8%
Point B2	07 Feb 07	1254	Sunny	0.0%	0.0%	17.7%
Point C1	07 Feb 07	1300	Sunny	0.0%	0.0%	17.6%
Point C2	07 Feb 07	1304	Sunny	0.0%	0.0%	17.7%
Point D	Not 1 meter deep					
Point A	14 Feb 07	1615	Sunny	0.0%	0.0%	18.0%
Point B1	14 Feb 07	1624	Sunny	0.0%	0.0%	17.9%
Point B2	14 Feb 07	1620	Sunny	0.0%	0.0%	18.0%
Point C1	14 Feb 07	1627	Sunny	0.0%	0.0%	17.9%

Sampling Location	Date of Measurement	Sampling Time	Weather Condition	Methane (CH ₄) %LEL	Carbon Dioxide (CO ₂) %LEL	Oxygen (O ₂)
Point D	14 Feb 07	1631	Sunny	0.0%	0.0%	17.8%
Point A	23 Feb 07	0832	Fine	0.0%	0.0%	18.1%
Point B1	23 Feb 07	0836	Fine	0.0%	0.0%	17.9%
Point B2	23 Feb 07	0847	Fine	0.0%	0.0%	18.0%
Point C1	23 Feb 07	0837	Fine	0.0%	0.0%	18.0%
Point D	23 Feb 07	0852	Fine	0.0%	0.0%	17.8%
Point A	28 Feb 07	1510	Fine	0.0%	0.0%	18.0%
Point B1	28 Feb 07	1518	Fine	0.0%	0.0%	17.9%
Point B2	28 Feb 07	1515	Fine	0.0%	0.0%	17.9%
Point C1	28 Feb 07	1522	Fine	0.0%	0.0%	17.9%
Point D	28 Feb 07	1527	Fine	0.0%	0.0%	17.7%

Remark :

LFG measurement at Point C2 was deleted since 14 February 2007 because the pit at Point C2 was backfilled and no longer 1 meter deep.

Table 3.6 Action Levels, Limit Levels and Event and Action Plan for LFG (From EM&A Manual)

Parameter	Level	Action
Oxygen	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%

4. SUMMARY OF ENVIRONMENTAL PERMIT AND LICENCES

ET has checked with the Contractor for the status of all environmental permits and

licenses for this project as at February 2007, which is summarized in Table 4.1. ET will follow the application process of the outstanding permits / licenses and will provide suitable assistance whenever appropriate.

Description	License / Permit No.#	Date of Issue	Date of Expiry	Status/Remarks
Environmental Permit	EP-226/2005	9-Sept-2005	--	Issued
Registration of Waste Producer	5111-421-K2869-02	27-Jul-2006	--	Issued
Construction Noise Permit	GW-RW0471-06	29-Aug-2006	28-Feb-2007	Permit expired and required to reapply
Effluent Discharge Licence	EP760/421/011762/I	20-Nov-2006	1-Dec-2011	Issued

5. CUMULATIVE LOG OF COMPLAINTS AND REMEDIAL ACTION

The cumulative log of complaints is referred in Appendix 6.

6. CUMULATIVE LOG OF NOTIFICATION OF SUMMONS AND PROSECUTIONS

No notification of summons and no prosecutions occurred during February 2007.

7. CONCLUSION

There is no summon nor prosecutions reported during February 2007.

Water spraying by water truck was observed. However, insufficient water spraying on Road A and the junction between Road A and Road C was observed. The Contractor was reminded to install sprinkler system to enhance water spraying on these site areas for better dust mitigation.

Automatic wheel washing machine located at site entrance was removed due to site construction. Manual labour was used for wheel washing at new site entrance at Road F. The Contractor was recommended to install wheel washing machine immediately for better dust suppression. As informed by the Engineer's Representative, no adverse comment to wheel washing has been received.

Inadequate treatment capacity of sedimentation tank to treat muddy water accumulated in the trench FMH49 – FMH1012932 was found. Two in-series sedimentation tanks as well as Alum coagulant were used on 07 February 2007. Due to site construction, only one sedimentation tank was used on 14 and 23 February 2007. No discharge of muddy water was found on 28 February 2007. The Contractor was reminded to properly treat muddy water with adequate sedimentation facilities.

Weekly water samples were taken by the ET at the discharge manhole, and some COD test results were not in compliance with WPCO-TM Standard.

The ET took water sample for comprehensive chemical analysis of dewatering discharge and the results of COD analysis did not exceed the WCPO-TM Standard. ET will continue to monitor the quality of water discharged to manhole at site.

Damage of silt curtain was observed. Repair of silt curtain was underway. The Contractor has to finish the repair work and reinstall silt curtain immediately.

Daily landfill gas monitoring was carried out by the Contractor on site and some results of oxygen measurement exceeded Action and Limit levels in accordance with EM&A Manual. The Contractor was reminded to conduct the actions suggested in the EM&A Manual correspondingly for mitigation measure and to check and calibrate the instrument as soon as possible.

The Contractor has been using the waste management and record system including allocation of waste storage areas and the trip ticket system as proposed in the Environmental Management Plan.

A joint site inspection was held at Chemical Waste Storage Area on 01 February 2007 and it was found that the appropriate labels and signs have been added to chemical waste containers and Chemical Waste Storage Area.

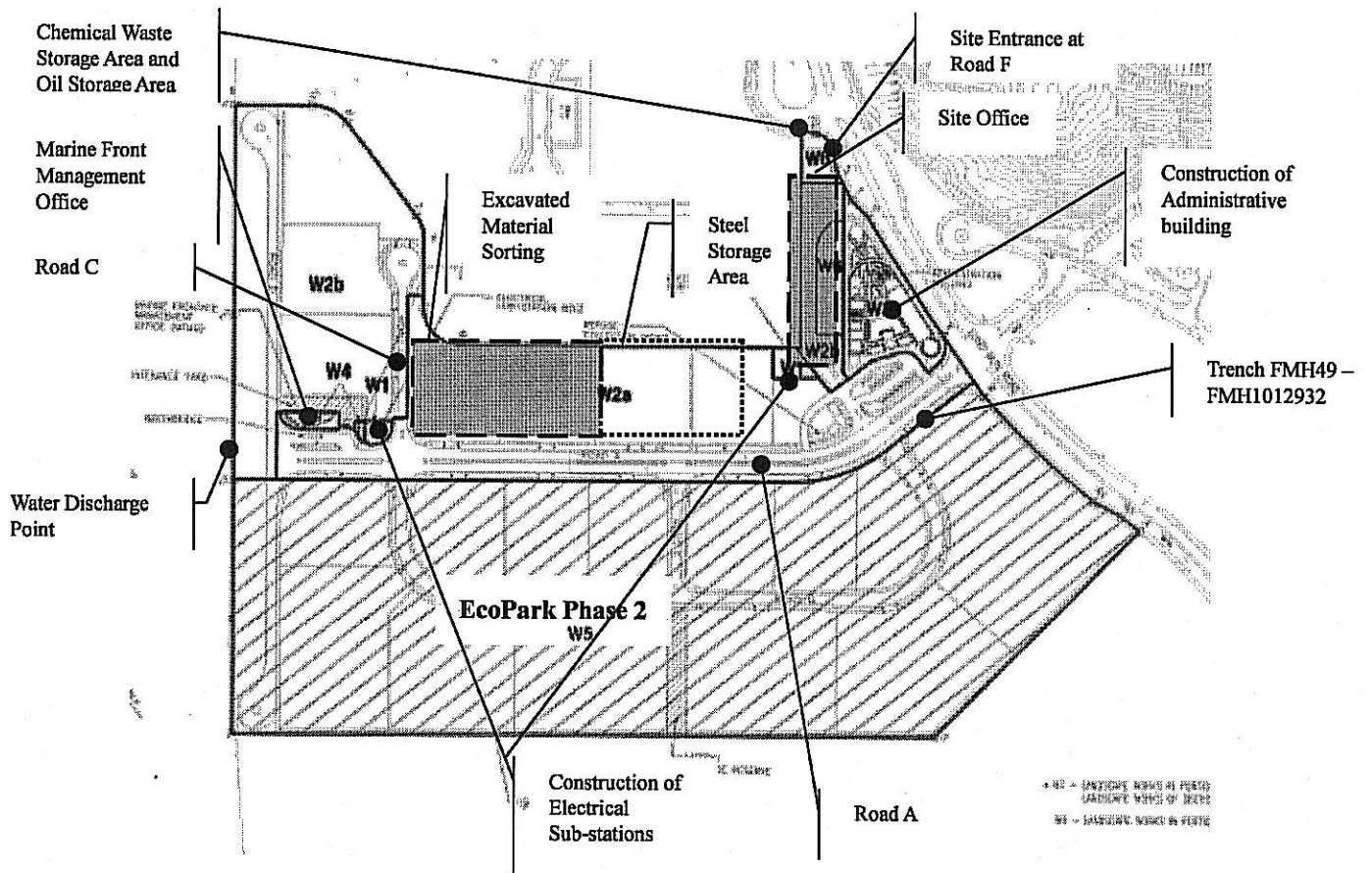
Oil was found accumulated at the bottom of cabinets in Oil Storage Area. The Contractor has removed oil from cabinets.

Three empty oil containers placed beside Chemical Waste Storage Area were not stored

in the designated contained area. The Contractor was reminded to properly store these containers in the designated contained area in order to prevent oil spillage on the ground.

The Contractor was advised to pay more efforts on environmental concerns and awareness such as wastewater discharge, the maintenance of the silt curtain, handling and storage of chemical wastes, and calibration of Landfill gas monitoring equipment.

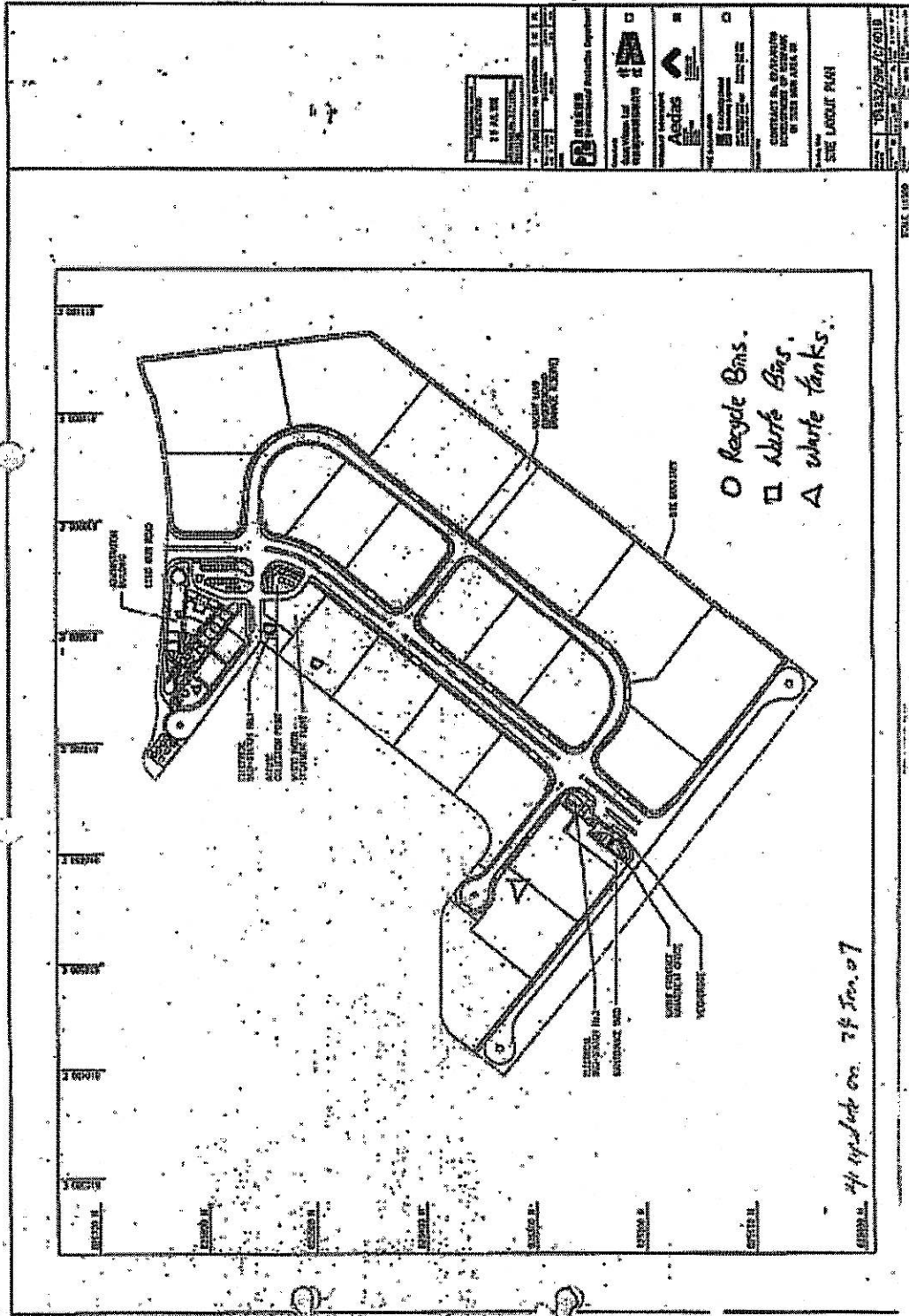
APPENDIX 1 - SITE LAYOUT PLAN




APPENDIX 2 - THE CONTACT PERSONS, TELEPHONE NUMBERS OF KEY PERSONNEL FOR DEVELOPMENT OF AN ECOPARK IN TUEN MUN AREA
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Company/Department	Name	Position	Telephone
Scott Wilson Ltd.	Mike Bains	Independent Environmental Checker	--
Scott Wilson Ltd.	Mr. Michael Lo	Senior Resident Engineer	6290 8860
Scott Wilson Ltd.	Mr. Andy Cheung	Resident Engineer	6111 9703
Scott Wilson Ltd.	Mr. C S Lam	Senior Inspector of Works	9861 8011
Kaden Construction Limited	Mr. K M Book	Project Manager	9193 8680
Kaden Construction Limited	Mr. Stephen Leung	Section Agent	9071 7657
Environmental Pioneers & Solutions Limited	Miss. Patricia Chung	Environmental Team Leader	2185 0123
Environmental Pioneers & Solutions Limited	Mr. Harvey Yung	Environmental Technician	2185 0172
Environmental Pioneers & Solutions Limited	Mr. Lam Ho Chun	Environmental Technician	2185 0154

APPENDIX 3 - SITE LAYOUT PLAN FOR REFUSE COLLECTION POINTS



APPENDIX 4 - ORIGINAL LANDFILL GAS FIELD MEASUREMENT RECORDING SHEETS



Kaden Construction Limited : 堅利建築有限公司

EPD Contract No. EP/SP/52/06 Job No. K0603

環保署合約編號 EP/SP/52/06 工程編號 K0603

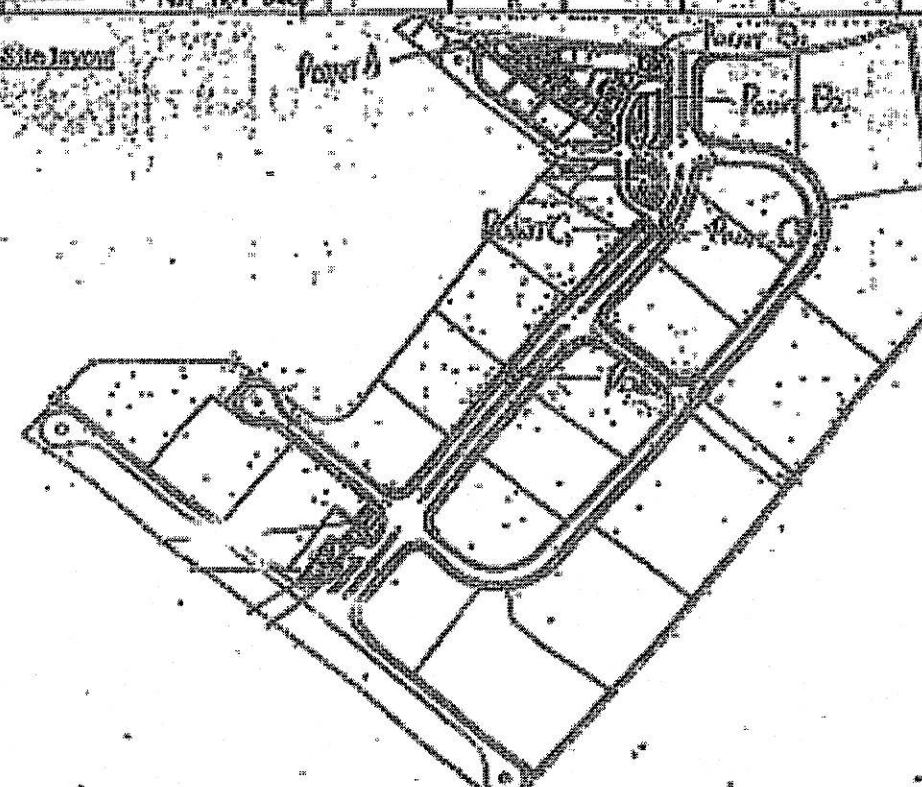
Development of EcoPark in Tuen Mun Area 38中環門38區環保園

Daily Air Monitoring
每日空氣監測記錄

Detector:	Model 型號: GM2000	Last calibration 上次檢測: 01 October 2005
偵測器	S/N 編號: GM-08793	Next calibration 下次檢測: 01 April 2007
Date of Monitor 監測日期: 1-2-07		Performed by: Henry Lam (EP)

Location 位置	Time 時間 (hrs)	Result 結果				
		CH ₄ (%)	CO ₂ (%)	O ₂ (%)	Rel. Gas (%)	Baro. Pressure (mmHg)
Point A	13:00	0	0	17.9	82.0	30.33
Point B1	12:45	0	0	18.0	82.1	30.27
Point B2 (Water retention tank)	12:30	0	0	17.8	82.2	30.28
Point C1 (FM11001)	12:30	0	0	17.8	82.2	30.27
Point C2 (FM11000)	12:45	0	0	17.8	82.2	30.27
Point D	No. 1 km away					

Site layout diagram showing monitoring points A, B1, B2, C1, C2, and D. The diagram includes a grid and various site features.



Kaden		Kaden Construction Limited 凱利建築有限公司				
		EPD Contract No. EP/SP/52/06			Job No. K0603	
		環保署合約編號 EP/SP/52/06			工程編號 K0603	
Development of EcoPark in Tuen Mun Area 38 屯門38區環保園						
Daily Air Monitoring 每日空氣監測記錄						
Detector 測試器	Model 型號 : GEM2039	Last calibration 上次檢定 : 01 October 2006			SN 編號 : GM-08793	
		Next calibration 下次檢定 : 01 April 2007				
Date of Monitor 監測日期 : 7 - 2 - 2007				Performed by: Henry Lam		
Location 位置	Time 時間 (hrs)	Result 結果				
		CO ₂ (%)	CO ₂ (%)	O ₂ (%)	Rel. Gas (%)	Baro. Pressure (Hpa)
Point A	1243	0	0	18.1	81.9	30.08
Point B1	1250	0	0	17.8	82.1	30.08
Point B2 (Rainwater retention tank)	1254	0	0	17.7	82.3	30.08
Point C1 (RMH341)	1300	0	0	17.6	82.3	30.08
Point C2 (RMH340)	1304	0	0	17.7	82.3	30.08
Point D	not in deep					


Site layout

Koden Construction Limited : 科頓建築有限公司
EPD Contract No. EP/SP/52/06 **Job No. K0503**
環保聯合約編號 EP/SP/52/06 **工程編號 K0503**
Development of EcoPark in Tuen Mun Area 38 屯門 38 區環保園

Daily Air Monitoring 每日空氣監測記錄

Detector: 儀器名稱	Model 型號 : GRM 2000	Last calibration 上次檢測:	01 October 2006
	SNY 編號 : QM-08793	Next calibration 下次檢測:	01 April 2007
Date of Monitor 監測日期 : 14 - 2 - 2007		Performed by: Henry Lam (EPD)	

Location 位置	Time 時間 (hh)	Result 結果				
		CH ₄ (%)	CO ₂ (%)	O ₂ (%)	Rel. Gas (%)	Bar. Pressure (kPa)
Point A	1615	0	0	18.0	11.9	29.93
Point B1	1624	0	0	17.9	12.0	29.93
Point B2 (at water retention tank)	1626	0	0	18.0	11.9	29.93
Point C1 (QMR09)	1627	0	0	17.9	12.0	29.93
Point D	1631	0	0	17.9	12.0	29.93



Kaden Construction Limited : 捷利建築有限公司

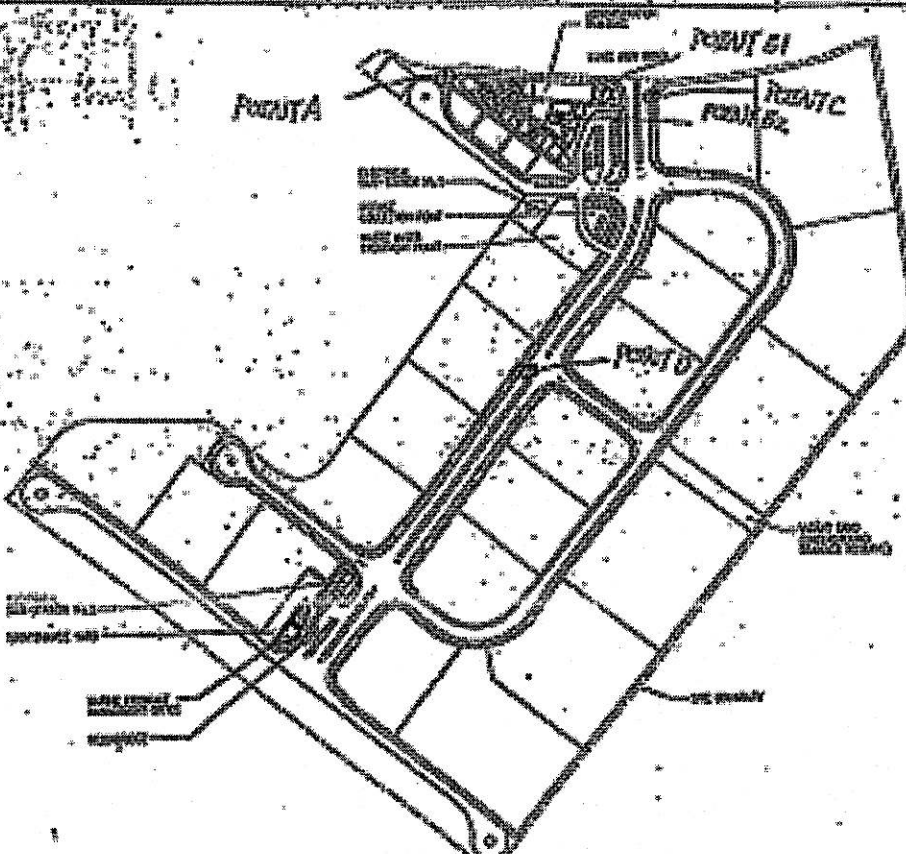
EPD Contract No. EP/SP/52/06 Job No. K0603
環保署合約編號 EP/SP/52/06 工程編號 K0603


Development of EcoPark in Tuen Mun Area 38 屯門38區環保園

Daily Air Monitoring 每日空氣監測記錄

Detector: Model 型號 : GEM2000		Last calibration 上次檢維: 01 October 2006	
S/N 編號 : GM-06793		Next calibration 下次檢維: 01 April 2007	
Date of Monitor 監測日期: 23-02-2007		Performed by: <i>MC J</i>	

Location 位置	Time 時間 (hr)	Result 結果				
		CH ₄ (%)	CO ₂ (%)	O ₂ (%)	Hum. Gaz (%)	Baro. Pressure (hPa)
Point A	15:52	0	0	18.1	81.5	29.95
Point B1	16:36	0	0	17.9	82.0	29.95
Point B2 (Rainwater retention tank)	17:07	0	0	18.0	82.0	29.95
Point C1 (EMEPM)	18:47	0	0	18.0	81.9	29.95
Point D	18:02	0	0	17.8	81.1	29.95





Kaden Construction Limited : 堅利建築有限公司

EPD Contract No. EP/SP/52/06 Job No. K0600

環保署合約編號 EP/SP/52/06 工程編號 K0600

Development of EcoPark in Tuen Mun Area 38 屯門 38 區環保園

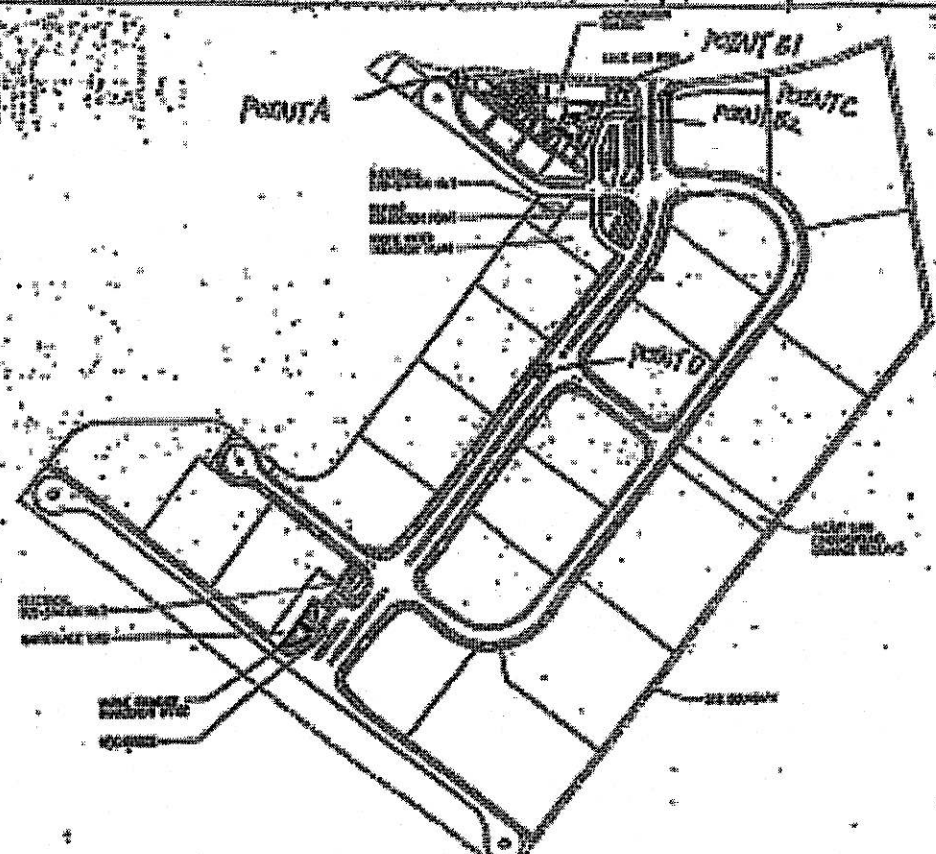
Daily Air Monitoring

每日空氣監測記錄

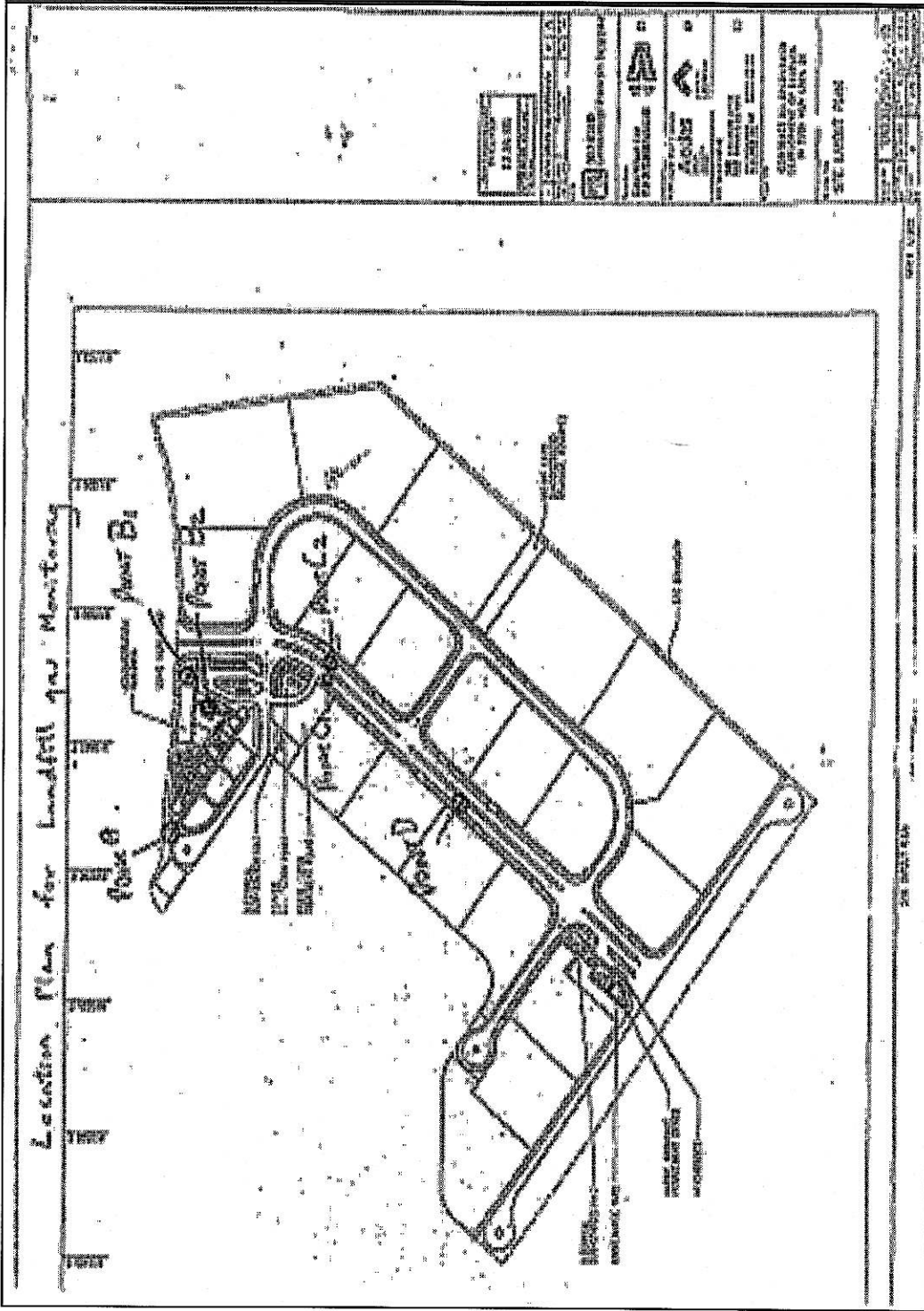
Detector:	Model 型號 : GIM 2010	Last calibration 上次校準 :	01 October 2005
儀器	S/N 編號 : G15-00193	Next calibration 下次校準 :	01 April 2007
Date of Monitor 監測日期 : 11 - 2 - 2007		Performed by: Henry Lam	

Location 位置	Time 時間 (hr)	Result 結果				
		CH ₄ (%)	CO ₂ (%)	O ₂ (%)	Rel. Gas (%)	Baro. Pressure (hPa)
Point A	1510	0	0	18.0	82.0	29.88
Point B1	1511	0	0	17.9	82.1	29.87
Point B2 (rainwater retention tank)	1515	0	0	17.9	82.0	29.88
Point C1 (EMHPT)	1522	0	0	17.9	82.0	29.87
Point D	1527	0	0	17.7	82.2	29.88

Site Layout



APPENDIX 5 - LANDFILL GAS MEASUREMENT LOCATIONS



APPENDIX 6 – CUMULATIVE LOG OF COMPLAINTS**CUMULATIVE LOG OF COMPLAINTS**

Environmental Parameters	No. of Outstanding Complaints	No. of complaints received in February 2007	Cumulative no. of complaints received since the commencement of project
Air	0	0	1
Noise	0	0	0
Water	0	0	0
Waste	0	0	0
Total	0	0	1

DETAILS OF COMPLAINTS AND REMEDIAL ACTIONS

Log Ref.	Date of Complaint received	Location	Complainant /Date	Details of Complaint	Investigation /Mitigation Action	Investigated by/ Date
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