

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

**ENVIRONMENTAL MONITORING AND AUDIT**

**MONTHLY EM&A REPORT for**

**January 2009**

**Environmental Pioneers & Solutions Limited**  
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## **APPROVAL SHEET**

DOCUMENT DATE: 31 January 2009

Prepared and Certified by: ET Leader (Environmental Pioneers & Solutions Limited)

Signature: \_\_\_\_\_  
Miss Patricia Chung

Date: \_\_\_\_\_

Verified by: \_\_\_\_\_  
IEC\*

Date: \_\_\_\_\_

\* IEC – Independent Environmental Checker

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## **EXECUTIVE SUMMARY**

This is the thirty-first monthly Environmental Monitoring and Audit (EM&A) Report for the Environmental Protection Department Contract No. EP/SP/52/06 entitled “Development of 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 January 2009.

The site activities in the reporting period mainly consisted of excavation and site formation works and construction of drainage in Phase II construction site.

Several environmental issues, such as dust problem arising from open stockpiles of excavated materials, improper wastewater treatment practices and housekeeping issues, have been identified by ET during weekly site inspections in the reporting month. Contractor has implemented some mitigation measures to address those problems as advised by ET. Some of the measures taken by the contractor were considered as effective to minimize negative impact to the environment. On-going investigation will be carried out to observe performance and effectiveness of those measures. Outstanding environmental items will be inspected in the following month.

LFG monitoring was carried out during the reporting month, on weekly basis, when specified instruments, provided by contractor, were available on site. Oxygen level monitoring works have been suspended for several weeks due to instrument breakdown. The measurement results from ET shown in Table 3.5 were within Action and Limit Levels in accordance with EM&A manual.

There were no notifications of summons or successful prosecution during January 2009.

Planned activities for February 2009 with regard to development of EcoPark consist of:

- 1) Site formation works,
- 2) Excavation works,
- 3) Road formation works and
- 4) Construction of drainage, sewerage & water mains

## **1. BASIC PROJECT INFORMATION**

### **1.1 Introduction**

This is the thirty-first monthly Environmental Monitoring and Audit (EM&A) Report for the Environmental Protection Department Contract No. EP/SP/52/06 entitled “Development of 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 January 2009. 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).

The construction works of Phase I have already commenced in July 2006 and have been completed in November 2008.

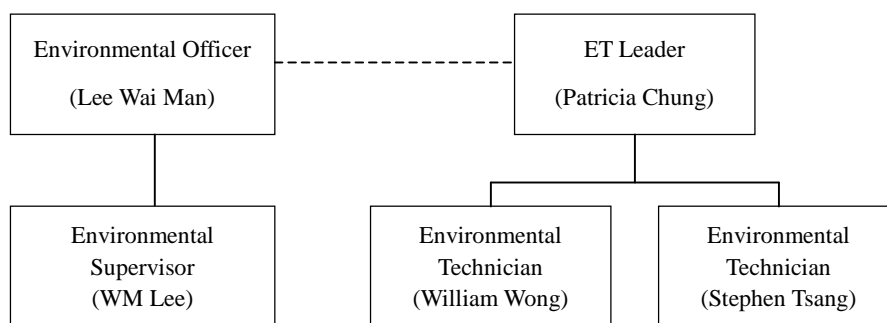
The construction works of Phase II commenced in December 2008 and is anticipated to be completed in December 2009.

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.

Table 2.1 Work Activities for January 2009		
Item	Work Activities & Location	Date of Occurrence
1	Site formation works	1 Jan 2009 – 31 Jan 2009
2	Excavation works	1 Jan 2009 – 31 Jan 2009
3	Road Formation works	1 Jan 2009 – 31 Jan 2009
4	Construction of drainage	1 Jan 2009 – 31 Jan 2009

Machineries		
	Equipment/ Plant	Quantity
1	Mobile Crane	0
2	Excavator	6
3	Generator	2
4	Air Compressor	1
5	Roller	0
6	Loader	1
7	Grab Lorry	0
8	Crane Lorry	1
9	Water Truck	1
10	Dump Truck	1

Remarks:

- As informed by the Contractor, most equipment is 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 month (February 2009). The anticipated environmental issues are summarized as follow:

Table 2.2 Construction Program and Anticipated Environmental Issues		
Item	Works	Anticipated Environmental Issues
1	Site formation works, excavation works & road works	<ul style="list-style-type: none"> <li>- Generation of C&amp;D waste; excavated material should be reused as much as practicable.</li> <li>- Dust may be generated; the wheel washing machine should be in operation.</li> <li>- Haul road should be sprayed regularly, by truck or sprinkler.</li> <li>- Stagnant water should be removed.</li> <li>- Mosquito mitigation measures should be implemented.</li> <li>- Landfill gas monitoring should be carried out.</li> </ul>
2	Construction of drainage, sewerage & water mains	<ul style="list-style-type: none"> <li>- Generation of C&amp;D waste; excavated material should be used as much as practicable</li> <li>- Dust may be generated; the wheel washing machine should be in operation</li> </ul>

The site inspection schedule for the next month (February 2009) is designated on 6, 13, 20, 27 of February 2009.

### **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. Regular site inspections should be carried out by the ET once per week during construction phase.

Outstanding issues at the end of December 2008 includes:

- 1) Several chemical storage tanks without labels and drip pans have been found along Road F of Phase I construction site. Improperly maintained tanks were still observed in Phase I construction site during inspection carried out on 9 January 2009. Contractor was reminded again to better maintain all chemical storage tanks in both Phase I and II construction site.
- 2) Some of the hoardings along the interface of Phase I and II construction site was removed. Hoardings installation has not yet been completed at the end of January 2009. Contractor was reminded to re-install hoardings for dust control.
- 3) Stockpiles of solid waste material were found at the entrance of Phase II construction site. As advised by ET, contractor assigned a designated refuse collection point in Phase II construction site for temporary storage of waste before discharge. Location of the collection point is shown in Appendix 3.

Site inspection of Phase I construction site was conducted on 9 January 2009. Special observations include:

- 1) Drip pan has not yet been provided for the three plastic chemical drums adjacent to the cooling tower in the administration building. Contractor was reminded again to accommodate chemical containers in drip pans.
- 2) Several chemical storage tanks without labels and drip pans have been found along Road F of Phase I construction site. Contractor was reminded again to better maintain all chemical storage tanks in both Phase I and II construction site.

Outstanding issues will be inspected in the next reporting month.

Site inspections for Phase II construction site were conducted on 2, 9, 16, 23 and 31 of January 2009.

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:

Table 3.1 Summary of Site Inspections for Phase II construction site during January 2009				
Date	Observations	Advice from ET	Action taken	Closing Date
Jan 09	Some of the hoardings along the interface of Phase I and II site was removed	Contractor was reminded again to re-install hoardings for dust control	Contractor awaiting material for re-installation. Re-installation is expected to start on February 2009	To be followed in the next reporting month
Jan 09	Domestic and C&D wastes was observed at several locations in Phase II construction site	Contractor was reminded to assign designated refuse collection points at Phase II construction site	A refuse collection point has been assigned at Phase II construction site on 23 Jan 09.	On-going
Jan 09	Well constructed wheel washing bay is not available for wheel washing machine at the entrance of Phase II construction site	ET has been informed by contractor that the existing entrance is of temporary use and they are waiting for approval for construction of a permanent entrance along Lung Mun Road. Contractor was reminded to provide effective wheel washing and washing bay at any newly constructed entrance.	Waiting for approval for construction of a permanent entrance along Lung Mun Road.	To be followed in the next reporting month
Jan 09	Open stockpiles of excavated materials were found in the site. Dust problems existed in windy condition.	Contractor was reminded to install more water sprinklers and spray water on stockpiles more frequently.	Water spraying vehicle has been provided for dust suppression. Water sprinklers have been installed and operated at several locations in Phase II construction site since 16 Jan 09.	On- going

Table 3.1 Summary of Site Inspections for Phase II construction site during January 2009				
Date	Observations	Advice from ET	Action taken	Closing Date
09 Jan 09	Stagnant water was observed at the entrance of Phase II site and near water front	Contractor was reminded to pump out accumulated water and provide properly maintained wastewater treatment facilities before discharge	Action taken as advised. No accumulated water has been observed on 23 Jan 09 site inspection	23 Jan 09
09 Jan 09 16 Jan 09 31 Jan 09	Instrument (GasAlert MicroClip) for oxygen level measurement was broken down and sent for maintenance and calibration. Oxygen monitoring works have been suspended for several weeks. Details refer to table 3.5.	Contractor was reminded to provide specified instrument with valid calibration certificate for weekly oxygen monitoring as soon as possible.	Another oxygen meter (GasAlert Max XT) has been provided by contractor on 23 Jan 2009 for temporary use. However, no meter was available on 31 Jan 09.	To be followed in the next reporting month
09 Jan 09 16 Jan 09	The design of sedimentation tank and accessories at the entrance of Phase II construction site was found to be improper waste water treatment	Contractor was reminded to provide de-silting facilities that are adequate and able to treat wastewater generated on site. No direct discharge is allowed	The sedimentation tank has been modified for proper wastewater treatment on 23 Jan 2009. No direct discharge has been observed.	23 Jan 09

### 3.2 Air Dust

Excavation work commenced in Phase II construction site. Dust problem may be arisen when stockpiles of excavated materials are not enclosed, covered or dampened during dry or windy conditions.

### 3.3 Noise

The major noise source was vehicle movement and machinery in the EcoPark. Since the nearby NSRs were remote, the noise impact was minimal. There was no specific observation noted regarding noise issue. The Contractor has obtained the Construction Noise Permit on 07 August 2007 but it had been expired on 28 Feb 2008. The contractor should renew the permit as necessary.

### 3.4 Surface Water Quality

Since there was no water discharge at manhole, the Contractor removed the silt curtain installed at discharge point on 4 April 2007, as agreed by the Engineer's Representative. No muddy water was observed at discharge point for Phase I construction site. As informed by Engineer's Representative, there was no direct water discharge at manhole in Phase II construction site. No muddy water discharge is expected.

Chemical toilets (1 nos.) have been provided in Phase II construction site by a licensed contractor, of which sewage generated is collected every three to five days without causing contamination on surface water. The Effluent Discharge License was issued to the Contractor on 20 November 2006.

The temporary storage tank was used to store the effluent of aerobic wastewater treatment system and the stored effluent was pumped away regularly. As checked by the ET, there was no effluent discharge into the storm water drain. To avoid any sewage overflow, frequent checking is required after the commencement of Phase II construction works.

### 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. Some of the hoardings have been removed at the interface between Phase I and Phase II construction site and they will be re-installed as long as materials are available.

### 3.6 Waste / Chemical Waste

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 revised site layout plan for refuse collection points as shown in Appendix 3.

Waste dumpers were used for the collection and storage of general waste. Temporary storage areas for waste metals and waste tyres were established in Phase I construction site. For Phase II construction site, a designated refuse collection point has been established and location is shown in Appendix 3.

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.

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

Table 3.4 provides a summary table of waste disposal in January 2009. The Contractor has been reminded to keep good record at site in order to have a clear presentation of waste disposal.

Table 3.4 Summary of Waste Disposal in January 2009			
Type of Waste	Disposal Site	Quantity	Remarks
General Waste	WENT Landfill	5 tonnes	-
Inert C&D Material	Public Fill Facility	0 tonnes	-

### 3.7 Landfill Gas

Landfill gas (LFG) monitoring was carried out in January 2009 when there were excavations of 1m depth or more in Phase II construction site. LFG monitoring was carried out on site at four (4) locations, as instructed by the Engineer's Representative. LFG measurements on 02, 09, 16, 23 and 31 January 2009 are summarized in Table 3.5. Measurement results are within the Action / Limit Levels in accordance with the EM&A Manual, as shown in Table 3.6.

Table 3.5 Summary of LFG Measurement for January 2009						
Sampling Location	Date of Measurement	Sampling Time	Weather Condition	Methane (CH <sub>4</sub> ) %LEL	Carbon Dioxide (CO <sub>2</sub> ) %LEL	Oxygen (O <sub>2</sub> )
FMH 37	02 January 09	10:52	Fine	0.00%	0.00%	20.9%
FMH 35	02 January 09	10:58	Fine	0.00%	0.00%	20.9%
FMH 33 – 34	02 January 09	11:10	Fine	0.00%	0.00%	20.9%
FMH 33	02 January 09	11:20	Fine	0.00%	0.00%	20.9%
FMH 37	09 January 09	12:07	Fine	0.00%	0.00%	N/A*
FMH 35	09 January 09	12:13	Fine	0.00%	0.00%	N/A*
FMH 33 – 34	09 January 09	12:16	Fine	0.00%	0.00%	N/A*
FMH 33	09 January 09	12:18	Fine	0.00%	0.00%	N/A*
FMH 37	16 January 09	10:21	Fine	0.00%	0.00%	N/A**
FMH 35	16 January 09	10:26	Fine	0.00%	0.00%	N/A**
FMH 33 – 34	16 January 09	10:29	Fine	0.00%	0.00%	N/A**
FMH 33	16 January 09	10:31	Fine	0.00%	0.00%	N/A**
FMH 37	23 January 09	10:23	Fine	0.00%	0.00%	20.9%***
FMH 35	23 January 09	11:25	Fine	0.00%	0.00%	20.9%***
FMH 33 – 34	23 January 09	11:28	Fine	0.00%	0.00%	20.9%***
FMH 33	23 January 09	11:30	Fine	0.00%	0.00%	20.9%***
FMH 37	31 January 09	11:40	Fine	0.00%	0.00%	N/A**
FMH 35	31 January 09	11:35	Fine	0.00%	0.00%	N/A**
FMH 33 – 34	31 January 09	11:32	Fine	0.00%	0.00%	N/A**
FMH 33	31 January 09	11:30	Fine	0.00%	0.00%	N/A**

Table 3.5 Summary of LFG Measurement for January 2009

Sampling Location	Date of Measurement	Sampling Time	Weather Condition	Methane (CH <sub>4</sub> ) %LEL	Carbon Dioxide (CO <sub>2</sub> ) %LEL	Oxygen (O <sub>2</sub> )
Remarks:						
1) As agreed by the Engineer's Representative, the landfill gas measurements on January 2009 were carried out with two instruments: one for the measurements of methane and carbon dioxide (GEM 2000 Plus), another for the measurement of oxygen (GasAlert MicroClip).						
* Oxygen level data was unavailable for 09 Jan 2009 due to instrument breakdown.						
** Oxygen level data was unavailable for 16 Jan 2009 and 31 Jan 2009, as instrument has been sent for maintenance and calibration.						
*** Oxygen levels were measured with GasAlert MaxXT.						

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

Parameter	Level	Action
Oxygen	Action Level < 19% O <sub>2</sub>	Ventilate trench/ void to restore O <sub>2</sub> to >
	Limit Level < 18% O <sub>2</sub>	Stop works Evacuate personnel/prohibit entry Increase ventilation to restore O <sub>2</sub> to > 19%
Methane (CH <sub>4</sub> )	Action Level >10% LEL	Post "No Smoking" signs Prohibit hot works Increase ventilation to restore CH <sub>4</sub> to <10% LEL
	Limit Level >20% LEL	Stop works Evacuate personnel/prohibit entry Increase ventilation to restore CH <sub>4</sub> to <10% LEL
Carbon Dioxide (CO <sub>2</sub> )	Action Level >0.5% CO <sub>2</sub>	Ventilate to restore CO <sub>2</sub> to < 0.5%
	Limit Level >1.5% CO <sub>2</sub>	Stop works Evacuate personnel/prohibit entry Increase ventilation to restore CO <sub>2</sub> 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 January 2009, 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.

Table 4.1 Summary of Environmental Permits/ Licences				
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-RW0402-07	07-Aug-2007	28-Feb-2008	Expired
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 5.

#### 6. CUMULATIVE LOG OF NOTIFICATION OF SUMMONS AND PROSECUTIONS

No notification of summons and no prosecutions occurred during January 2009.

#### 7. CONCLUSION

There is no summon nor prosecutions reported during January 2009.

Several environmental issues, such as dust problem arising from open stockpiles of excavated materials, improper wastewater treatment practices and housekeeping issues, have been identified by ET during weekly site inspections in the reporting month. Contractor has implemented some mitigation measures to address those problems as advised by ET. Some of the measures taken by the contractor were considered as effective to minimize negative impact to the environment. On-going investigation will

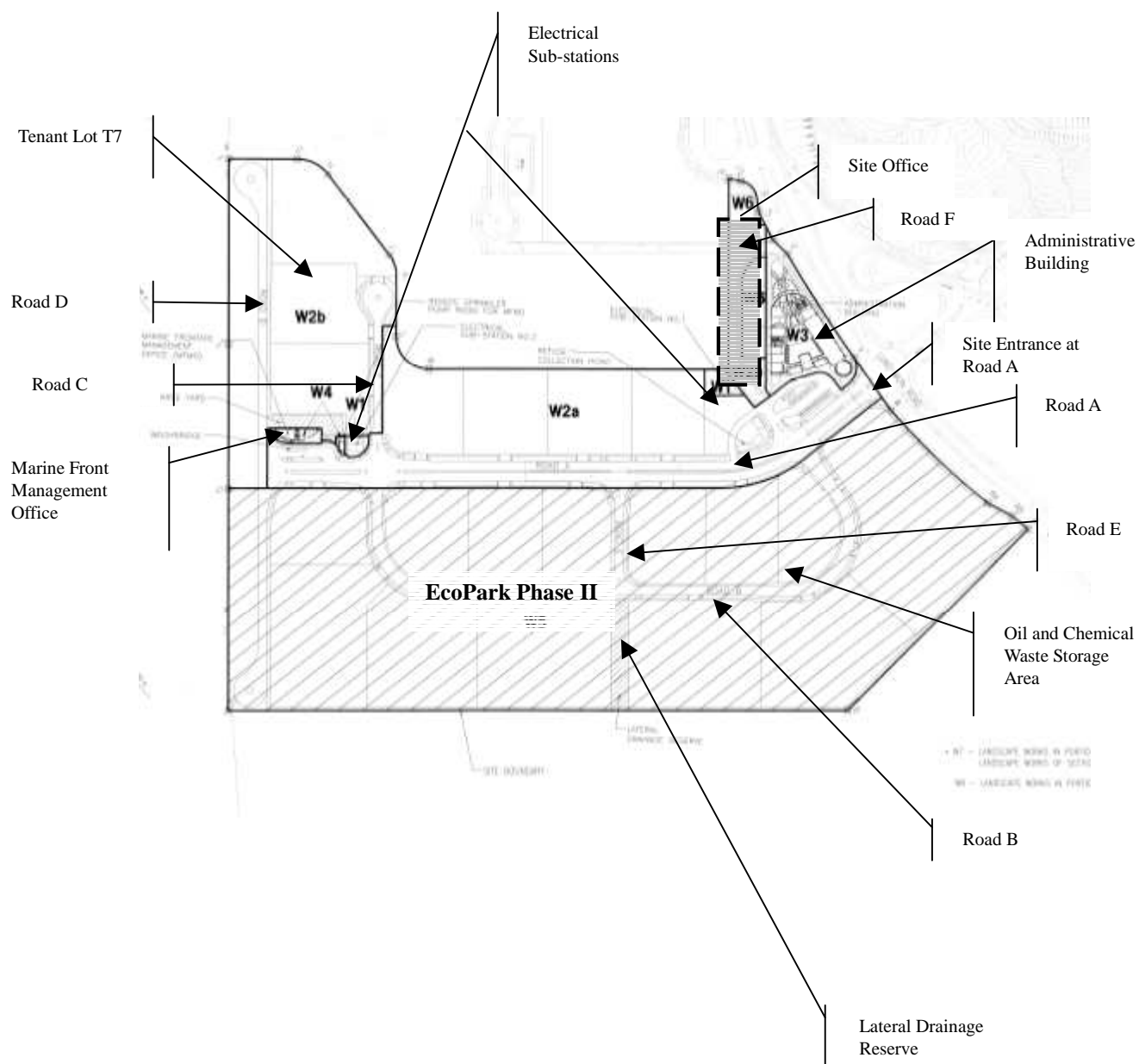
be carried out to observe performance and effectiveness of those measures. Outstanding environmental items will be inspected in the following month.

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.

LFG monitoring was carried out in January, on weekly basis, when instruments were available. The measurement results from ET shown in Table 3.5 were within Action and Limit Levels in accordance with EM&A manual.

The ET will continue to implement the environmental monitoring & audit programme in accordance with the EM&A Manual and Environmental Permit requirement.

## APPENDIX 1 - SITE LAYOUT PLAN



**APPENDIX 2 - THE CONTACT PERSONS, TELEPHONE NUMBERS OF KEY PERSONNEL FOR DEVELOPMENT OF ECOPARK IN TUEN MUN AREA 38**

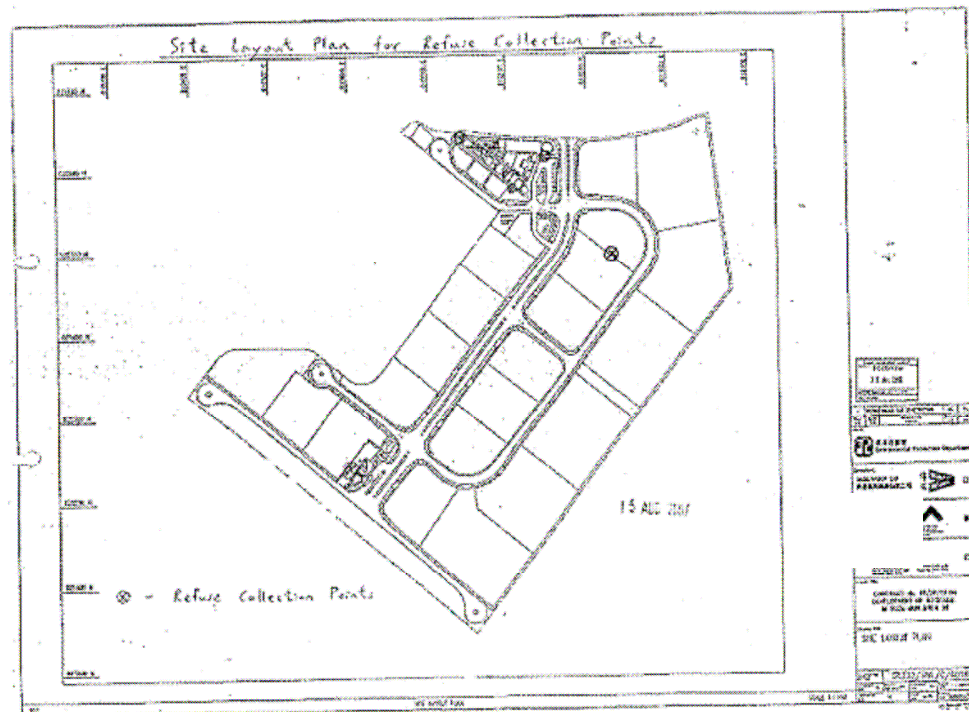
<b>Company/Department</b>	<b>Name</b>	<b>Position</b>	<b>Telephone</b>
Scott Wilson Ltd.	Harold Insley	Independent Environmental Checker	2410 3858
Scott Wilson Ltd.	Mr. Andy Cheung	Resident Engineer	6111 9703
Scott Wilson Ltd.	Mr. T W Wong	Inspector	6111 9705
Kaden Construction Limited	Mr. K M Book	Project 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. William Wong	Environmental Technician	2185 0154
Environmental Pioneers & Solutions Limited	Mr. Stephen Tsang	Environmental Technician	2185 0172

### APPENDIX 3 – REVISED SITE LAYOUT PLAN FOR REFUSE COLLECTION POINTS

Development of EcoPark in Tuen Mun Area 38

Contract No. EP/SP/52/06  
EM&A Report No. 30 (December 2008)

#### APPENDIX 3 – REVISED SITE LAYOUT PLAN FOR REFUSE COLLECTION POINTS



**APPENDIX 4 - ORIGINAL LANDFILL GAS FIELD MEASUREMENT  
RECORDING SHEETS**

Environmental Pioneers and Solutions Limited

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

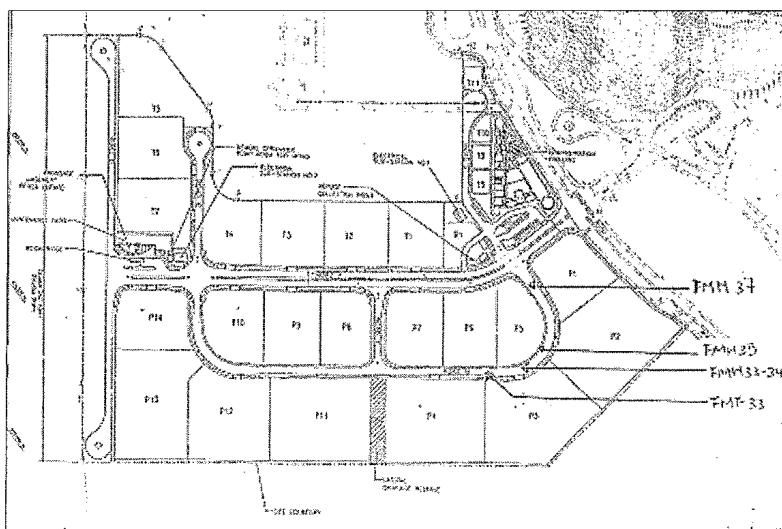
**Landfill Gas Monitoring – Field Measurement Recording Sheet**

Date of Monitoring: 02 Jan 2009  
 Weather condition: Fine  
 Monitoring performed by: William Wong  
 Monitoring instrument:

Instruments	Model: GEM 2000 Plus	Last calibration:	18 Dec 2008
	S/N: GM-08793	Next calibration:	17 Dec 2009

Monitoring results:

Location	Time	Results				
		Methane (CH <sub>4</sub> )	Carbon Dioxide (CO <sub>2</sub> )	Oxygen (O <sub>2</sub> )	Bal. Gas	Baro. Pressure (%)
FMH 33	11:20	0.00%	0.00%	20.9%	84.6%	30.61%
FMH 33 - 34	11:10	0.00%	0.00%	20.9%	84.6%	30.61%
FMH 35	10:58	0.00%	0.00%	20.9%	84.7%	30.61%
FMH 37	10:52	0.00%	0.00%	20.9%	84.6%	30.61%

Instrument for O<sub>2</sub> measurement: GasAlert MicroClip GAMIC-4-DL2 Serial no.: S103-13348

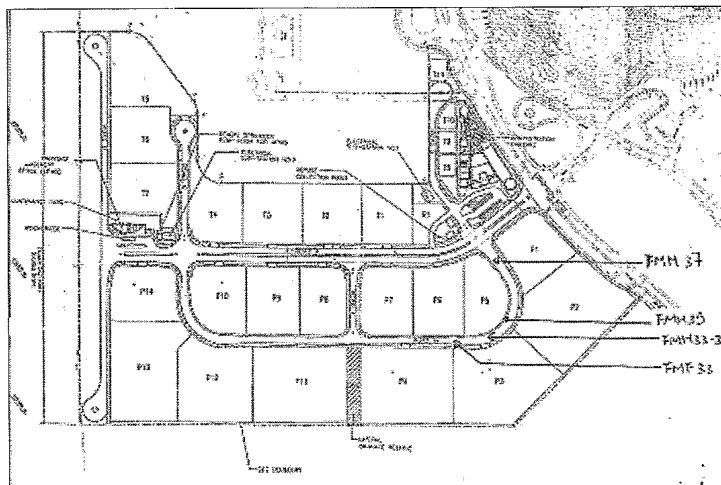
Contract No.: EP/SP/52/06 - Development of EcoPark in Tuen Mun Area 38

Date of Monitoring: 09 Jan 2009  
Weather condition: Sunny  
Monitoring performed by: William Wong  
Monitoring instrument:

Instruments	Model: GEM 2000 Plus	Last calibration:	18 Dec 2008
	S/N: GM-08793	Next calibration:	17 Dec 2009

Location	Time	Results				
		Methane (CH <sub>4</sub> ) %	Carbon Dioxide (CO <sub>2</sub> ) %	Oxygen (O <sub>2</sub> ) %	Bal. Gas %	Baro. Pressure %
FMH 33	12:18	0.00%	0.00%	N.A.	84.5	32.92
FMH 33-34	13:16	0.00%	0.00%	N.A.	84.4	32.92
FMH 35	12:13	0.00%	0.00%	N.A.	84.4	32.92
FMH 37	12:17	0.00%	0.00%	N.A.	84.6	32.92

Instrument for O<sub>2</sub> measurement: GasAlert MicroClip GAMIC-4-DL2 Serial no.:S103-13348  
\* equipment broken



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

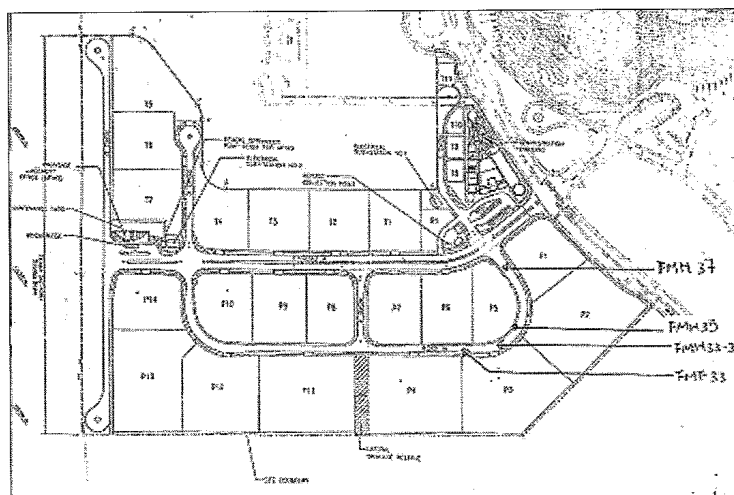
Date of Monitoring: 16 Jan 2009  
Weather condition: Sunny  
Monitoring performed by: William Webb  
Monitoring instrument:

Instruments	Model: GEM 2000 Plus	Last calibration:	18 Dec 2008
	S/N: GM-08793	Next calibration:	17 Dec 2009

Location	Time	Results				
		Methane (CH <sub>4</sub> ) %	Carbon Dioxide (CO <sub>2</sub> ) %	Oxygen (O <sub>2</sub> ) %	Bal. Gas %	Baro. Pressure %
FMH 33	10:31	0.00	0.00	N/A	84.9	30.41
FMH 33 - 34	10:29	0.00	0.00	N/A	85.0	30.4
FMH 35	10:26	0.00	0.00	N/A	84.9	30.41
FMH 37	10:21	0.00	0.00	N/A	84.6	30.41

Instrument for O<sub>2</sub> measurement: GasAlert MicroClip GAMIC-4-DL2 Serial no.:S103-13348

\* Instrument sent out for calibration.





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

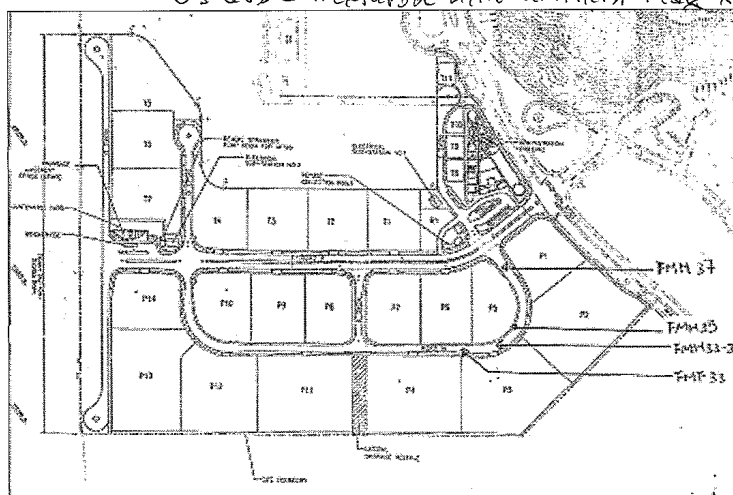
**Landfill Gas Monitoring – Field Measurement Recording Sheet**

Date of Monitoring: 23 Jan 2009  
 Weather condition: Cloudy, Windy  
 Monitoring performed by: William Wong  
 Monitoring instrument:

Instruments	Model: GEM 2000 Plus	Last calibration:	18 Dec 2008
	S/N: GM-08793	Next calibration:	17 Dec 2009

Monitoring results:

Location	Time	Results				
		Methane (CH <sub>4</sub> ) %	Carbon Dioxide (CO <sub>2</sub> ) %	Oxygen (O <sub>2</sub> ) %	Bal. Gas %	Baro. Pressure %
FMH 33	11:30	0.00	0.00	20.9	84.9	30.41
FMH 33 - 34	11:28	0.00	0.00	20.9	85.0	30.41
FMH 35	11:25	0.00	0.00	20.9	85.0	30.41
FMH 37	11:23	0.00	0.00	20.9	84.9	30.41

Instrument for O<sub>2</sub> measurement: GasAlert MicroClip GAMIC-4-DL2 Serial no.:S103-13348\* O<sub>2</sub> level measured with GasAlert Max XT.

Environmental Pioneers and Solutions Limited

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

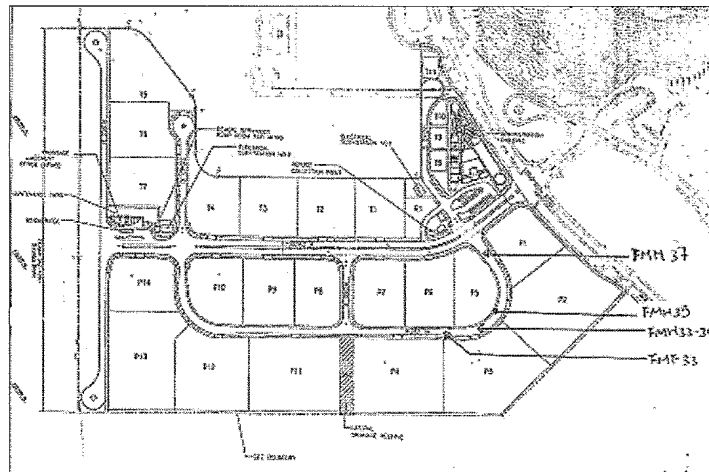
**Landfill Gas Monitoring – Field Measurement Recording Sheet**

Date of Monitoring: 31 Jan 2009  
 Weather condition: Sunny windy  
 Monitoring performed by: Stephen Tsang  
 Monitoring instrument:

Instruments	Model: GEM 2000 Plus	Last calibration:	18 Dec 2008
	S/N: GM-08793	Next calibration:	17 Dec 2009

Monitoring results:

Location	Time	Results				
		Methane (CH <sub>4</sub> ) %	Carbon Dioxide (CO <sub>2</sub> ) %	Oxygen (O <sub>2</sub> ) %	Bal. Gas %	Baro. Pressure %
FMH 33	11:30	0.00	0.00	N/A	85.2	32.62
FMH 33 - 34	11:32	0.00	0.00	N/A	84.8	32.62
FMH 35	11:35	0.00	0.00	N/A	85.0	32.62
FMH 37	11:40	0.00	0.00	N/A	84.9	32.62

Instrument for O<sub>2</sub> measurement: GasAlert MicroClip GAMIC-4-DL2 Serial no.:S103-13348O<sub>2</sub> meter not available due to maintenance

**APPENDIX 5 – CUMULATIVE LOG OF COMPLAINTS****CUMULATIVE LOG OF COMPLAINTS**

<b>Environmental Parameters</b>	<b>No. of Outstanding Complaints</b>	<b>No. of complaints received in January 2009</b>	<b>Cumulative no. of complaints received since the commencement of project</b>
Air	0	0	2
Noise	0	0	0
Water	0	0	0
Waste	0	0	0
Total	0	0	2

**DETAILS OF COMPLAINTS AND REMEDIAL ACTIONS**

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