

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

ENVIRONMENTAL MONITORING AND AUDIT

MONTHLY EM&A REPORT for

AUGUST 2006

Environmental Pioneers & Solutions Limited
8/F, Chaiwan Industrial Centre Building
20 Lee Chung Street, Chaiwan, Hong Kong
Tel: 2889 0569 Fax: 2856 2010

APPROVAL SHEET

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

Signature: _____

Miss Patricia Chung

Date: _____

Verified by: _____

IEC

Date: _____

Approved by: _____

WFBU

Date: _____

* IEC – Independent Environment Checker
WFBU - Waste Facility Business Unit

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EXECUTIVE SUMMARY

This is the second 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 August 2006.

The site activities in the reporting period mainly consisted of site clearance, site formation, excavation works and construction of the site office.

Haul roads were sprayed regularly with water for dust mitigation. Hoarding was erected at the site egress and aligned along the site boundary along Lung Mun Road. Accumulative rainwater is found in some locations at site during the site inspections. Disposal of inert C&D material was recorded. No substantial air or noise impact was noted by ET during weekly environmental site walks.

Environmental Protection Department inspected the Site on 04 August 2006 and found that there was inadequate wastewater treatment provided in the Site to meet the requirement of Water Pollution Control Ordinance.

The majority of work activities and site mitigation measures were in compliance with the environmental protection regulations and contract requirements. Only minor deficiencies were found during the site inspections of August 2006. One complaint was received in August in relation to water pollution control ordinance. There were no notification of summons or successful prosecution during August 2006.

The planned activities for September and October 2006 with regard to development of EcoPark consist of:

- 1) Construction of Site Office
- 2) Excavation and Site Formation Works

- 3) Construction of Electrical Sub-stations
- 4) Construction of Drainage and Sewerage
- 5) Construction of Administration Building

1. BASIC PROJECT INFORMATION

1.1 Introduction

This is the second 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 was 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 August 2006. 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 on June 2007.

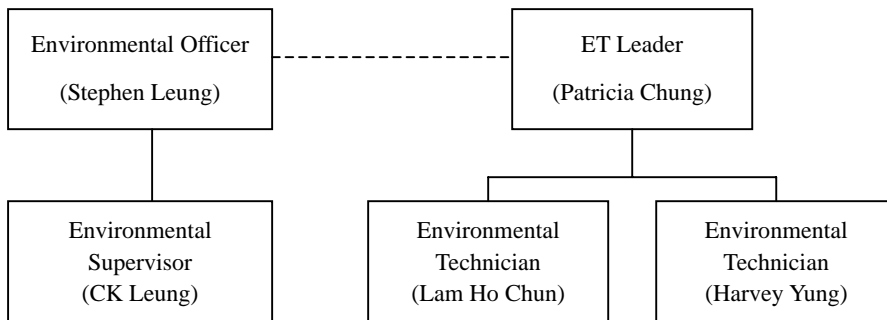
The contact person and telephone number of key personnel for the captioned project are shown in Appendix 2.

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

Environmental Team Organization Chart



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	Construction and fitting-out of site office	1 August – 31 August 2006
2	Excavation and site formation works	1 August – 31 August 2006
3	Construction of Electrical Sub-stations	1 August – 31 August 2006
4	Construction of Drainage & sewerage	1 August – 31 August 2006
5	Construction of Administration Building	1 August – 31 August 2006

Machineries		
	Equipment/ Plant	Quantity
1	Mobile Crane	2
2	Excavator	23
3	Generator	8
4	Air Compressor	2
5	Roller	6
6	Loader	2
7	Grab Lorry	2
8	Crane Lorry	2
9	Water Truck	1
10	Dump Truck	5

P.S. As informed by the Contractor, most equipment are mobile site subject to work progress

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 (September – November 2006). The anticipated environmental issues are summarized as follow:

Table 2.2 Construction Program and Anticipated Environmental Issues		
Item	Works	Anticipated Environmental Issues
1	Construction and fitting-out of site office	- Generation of waste from packaging materials and other domestic/ general wastes - Domestic sewage from site office
2	Excavation and site formation works	- 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 - Stagnant water should be removed - Mosquito mitigation measures should be implemented
3	Construction of Electrical Sub-station	- Generation of waste from packaging materials and C&D wastes
4	Construction of drainage & sewerage	- 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
5	Construction of Administration Building	- Generation of waste from packaging materials and C&D wastes

The site inspection schedule for the next month (September 2006) is designated on 7, 13, 20, 27 September 2006.

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 10, 17, 24 and 31 Aug 2006.

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
4 Aug 06	Silted discharge was observed at the Marine Front due to severe weather conditions	Provide silt removal sand bags and other measures at channels and discharge point to enhance filtering.	Sandbags are provided at drainage channels and silt curtain was installed at discharge point	17 Aug 06
10 Aug 06	Silt deposits in cement channel	Remove the silts regularly	- Removed the silts. - Concrete dike was constructed	24 Aug 06
17 Aug 06	Silt Curtain was broken	Repair and use more durable material for the curtain	Repair work is underway and should be inspected in the next reporting period	--
24 Aug 06	Stagnant water was found in open area at site	Fill the area or remove the stagnant water regularly in uneven surface and pits at site to prevent mosquito breeding.	The Contractor has regularly pumped away the water and spray pesticides weekly for the prevention of mosquito breeding	31 Aug 06
31 Aug 06	Stockpile of excavated material	Cover stockpile of excavated material with tarpaulin sheets for dust suppression	The Contractor has covered stockpile of excavated material with tarpaulin sheets	31 Aug 06

3.2 Air Dust

Water spraying by a water-truck was observed for dust mitigation. One automatic wheel washing facility was installed at the site exit. The Contractor has reminded the drivers to cover the excavated material transported with mechanical devices.

3.3 Noise

The major noise source was vehicle movement, rock excavation and breaking in the EcoPark. Since the nearby NSRs were remote, the noise impact was minimal. There was no specific observation noted regarding noise issue.

3.4 Surface Water Quality

Stagnant water was occasionally found in open area at site. The Contractor was reminded to fill the area or remove the stagnant water regularly in uneven surface and pits at site to prevent mosquito breeding. The said water was directed and discharged at sedimentation channel with coarse silt removal facilities.

Silted discharge was observed at the Marine Front due to severe weather conditions (typhoon). The Contractor has provided silt removal sand bags at channels to enhance filtering of discharge. Silt curtain was installed at the discharge point at Marine Front, as shown in photos in Appendix 3.

Chemical toilets (5 nos.) have been provided by a licensed contractor, of which sewage generated is collected every three to four days without causing contamination on surface water. The contractor is suggested to transfer one (1 no.) of chemical toilet to the steel storage area. The Contractor is currently applying for the Effluent Discharge License.

Environmental Protection Department inspected the Site on 04 August 2006 and found that there was inadequate wastewater treatment provided in the Site to meet the requirement of Water Pollution Control Ordinance. The Contractor is reminded to provide the wastewater treatment system such as sedimentation tank for the treatment of silted water.

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

As advised by the Contractor, there was no disposal of chemical waste in the reporting month. Separate waste collection bins will be made available for collecting aluminum cans, waste paper and plastic bottles etc. when the site office is erected in August 2006.

A waste storage area will be provided for the storage of chemical wastes. 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.

Construction activities that will generate significant amount of C&D wastes include site clearance, site formation, superstructure work and packaging materials.

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.

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

and structural construction etc. Wasted tree branches are collected for recycling in future in processes such as mulching.

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

Table 3.2 provides a summary table of waste disposal in August 2006. 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	851.2 tonnes	-
Inert C&D Material	Public Fill Facility	2694.3 tonnes	-

4 SUMMARY OF ENVIRONMENTAL PERMIT AND LICENSES

ET has checked with the Contractor for the status of all environmental permits and licenses for this project as at August 2006, 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	--	--	--	In Progress
Water Discharge Permit	--	--	--	In Progress

5 CUMULATIVE LOG OF COMPLAINTS AND REMEDIAL ACTION

There was no complaint received in association with site activities during August 2006. The cumulative log of complaints is referred in Appendix 4.

6 CUMULATIVE LOG OF NOTIFICATION OF SUMMONS AND PROSECUTIONS

No notification of summons and no prosecutions occurred during August 2006.

7 CONCLUSION

There is no summon nor prosecutions reported during August 2006.

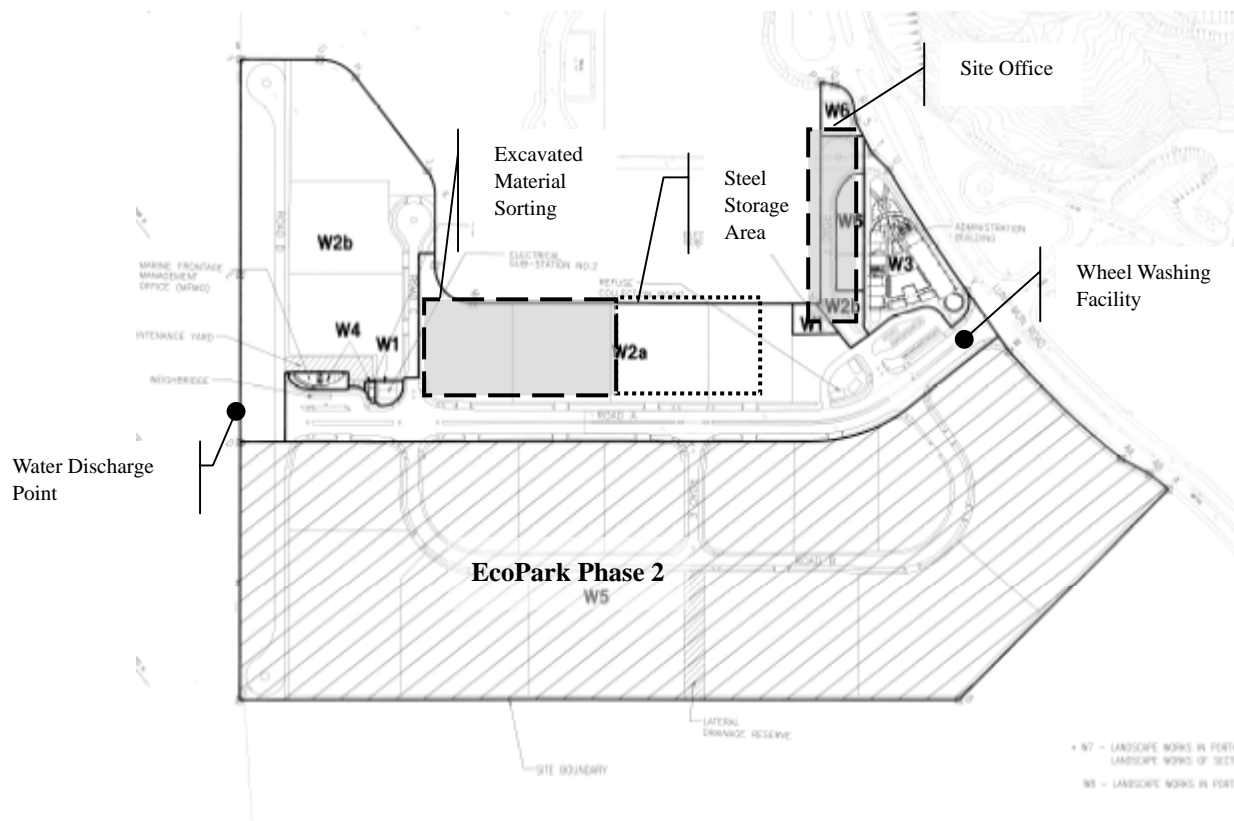
Deficiencies were found that there was inadequate wastewater treatment provided in the Site to meet the requirement of Water Pollution Control Ordinance. The Contractor was reminded to provide the wastewater treatment system for the treatment of silted water.

The contractor was advised to pay more efforts on environmental concerns and awareness such as the accumulated rainwater or stagnant water found at site that could cause the problem of mosquito breeding. The contractor was reminded to regularly spray water to haul road to mitigate dust at site.

The Contractor has established the waste management and record system including allocation of waste storage areas and set-up of trip ticket system as proposed in the Environmental Management Plan.

APPENDIX 1

SITE LAYOUT PLAN



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

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

PHOTOS OF SILT CURTAIN AT DISCHARGE POINT



APPENDIX 4**CUMULATIVE LOG OF COMPLAINTS**

Environmental Parameters	No. of Outstanding Complaints	No. of complaints received in August 2006	Cumulative no. of complaints received since the commencement of project
Air	0	0	0
Noise	0	0	0
Water	0	0	0
Waste	0	0	0
Total	0	0	0

DETAILS OF COMPLAINTS AND REMEDIAL ACTIONS

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