

Serco Guardian JV

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EcoPark Operation EM&A

Quarterly Report #5



May 2008 - July 2008

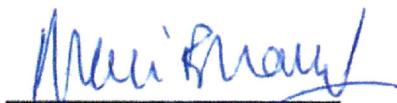
Report no: 01464R071


Hyder
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EcoPark Operation EM&A Quarterly Report #5

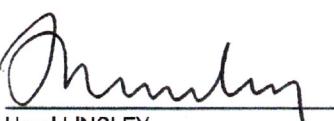
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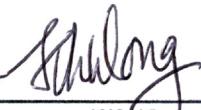
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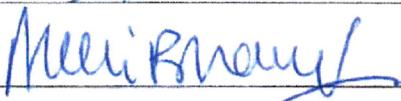
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Report no: 01464R071

Date: 14 August 2008

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1 Executive Summary

EcoPark is a key element in Government's waste management policy that aims to promote the local recycling industry and jump-start a circular economy to provide a sustainable solution to our waste problems. EcoPark is being developed in two phases at a site in Tuen Mun Area 38 (see **Figure 1-1**). In November 2006, the seven-year contract for the operation of EcoPark – *EP/SP/53/06 Provision of Management Services for EcoPark in Tuen Mun Area 38* – was awarded to Serco Guardian JV (SGJV) by the Environmental Protection Department (EPD). SGJV, the “Operator” of EcoPark have engaged Hyder Consulting as their Environmental Team (ET) to carry out the Environmental Monitoring and Audit (EM&A) required by the EM&A Manual in accordance with the conditions of the Environmental Permit.

This is the fifth quarterly EM&A report prepared for the operation phase of EcoPark and covers May 2008 to July 2008. To-date there have been no complaints received; no notifications of summons; and no successful prosecutions.

In terms of monitoring, only quarterly monitoring of landfill gas (LFG) is required during operation phase EM&A and “following construction”. As construction has not yet been completed, operation phase LFG monitoring is not yet required.

In terms of auditing, all of the tenants’ recycling activities are to be audited on a monthly basis, and the results are to be summarised in this report. At present, however, EcoPark is still under construction and while a number of tenants have already signed their tenancy agreements, none are carrying out recycling activities within their lots (although three lots are currently being prepared by incumbent tenants).

As such, no recycling activities are being carried out and to there is nothing to report at this time. Notwithstanding, the ET have made monthly site inspections and some general observations have been made.

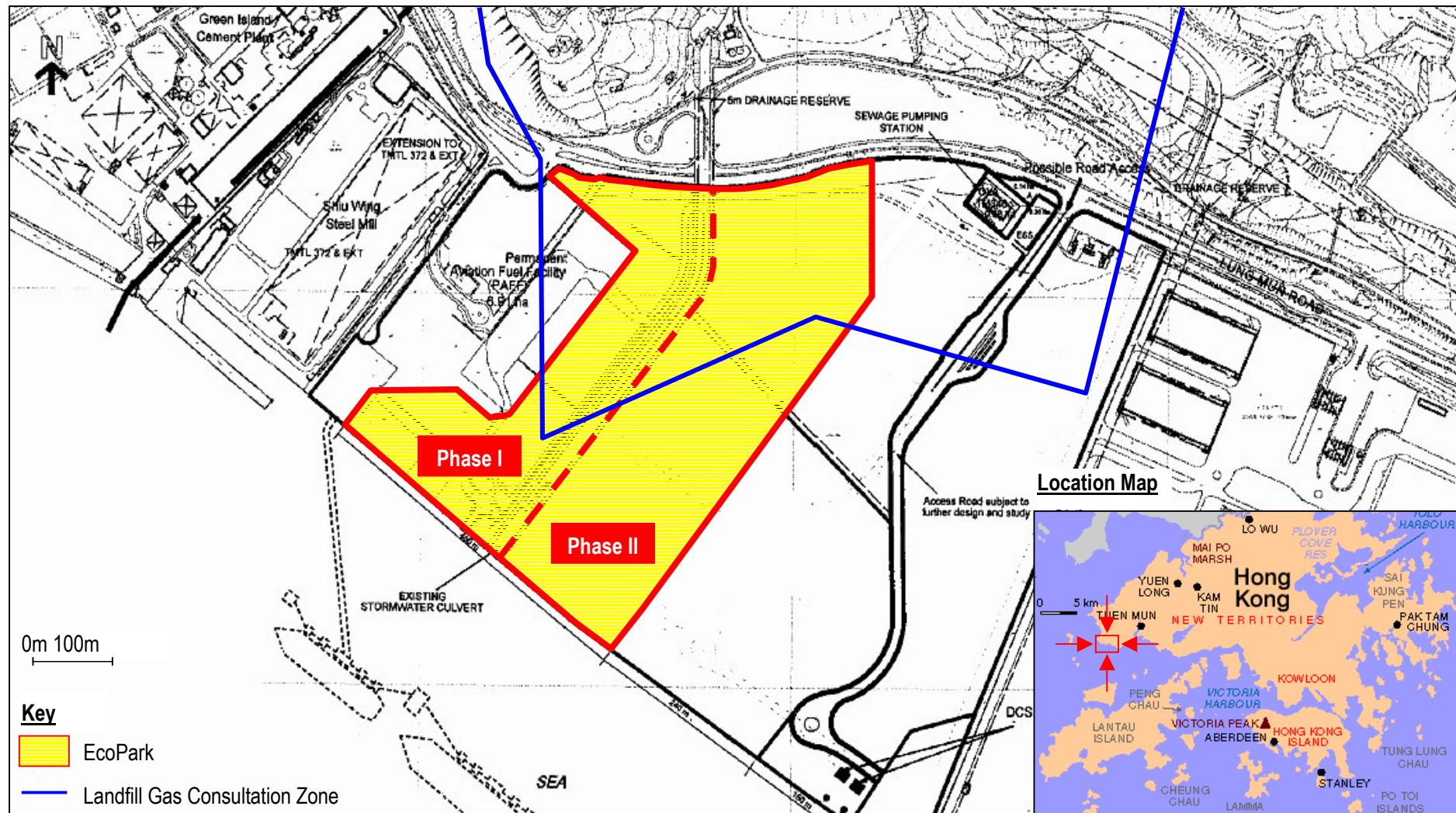


Figure 1-1 Location of EcoPark in Tuen Mun Area 38

2 Basic Project Information

2.1 Overview

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. To this end, EcoPark is a key element that aims to promote the local recycling industry and jump-start a circular economy to provide a sustainable solution to our waste problems. By encouraging and promoting the reuse, recovery and recycling of our waste resources and returning them to the consumption loop, EcoPark will help realize the full potential of the local recycling industry and alleviate the heavy reliance on the export of recyclable materials recovered from Hong Kong.

EcoPark is to be developed in two phases at a site in Tuen Mun Area 38 (see **Figure 1-1**). The construction contract for EcoPark – *EP/SP/52/06 Development of EcoPark in Tuen Mun Area 38* – was awarded to Kaden Construction in June 2006 by the Environmental Protection Department (EPD). This contract covers development of Phase I (ongoing) and extends to Phase II, anticipated to be developed in 2009.

In November 2006, the seven-year contract for the operation of EcoPark – *EP/SP/53/06 Provision of Management Services for EcoPark in Tuen Mun Area 38* – was awarded to Serco Guardian JV (SGJV) by EPD. SGJV, the “Operator” of EcoPark have engaged Hyder Consulting as their Environmental Team (ET) to carry out the Environmental Monitoring and Audit (EM&A) required by the EM&A Manual in accordance with the conditions of the Environmental Permit.

2.2 SGJV Organisation

Organisation of SGJV is shown in **Figure 2-1**, below.

2.3 Operation Programme

As end of July 2008, no tenants have yet commenced recycling activities within their lots and so there is no operation programme to report at this time. Three tenants, Hong Kong Hung Wai Wooden Board Company, Champway Technology Limited and Li Tong Group, have commenced preparatory works within their lots but have not yet commenced recycling activities.

2.4 EM&A Organisation

The EM&A is carried out predominantly by the ET, but SGJV and the Independent Environmental Checker (IEC) are also involved. **Figure 2-2**, below, illustrates the current EM&A organisation:

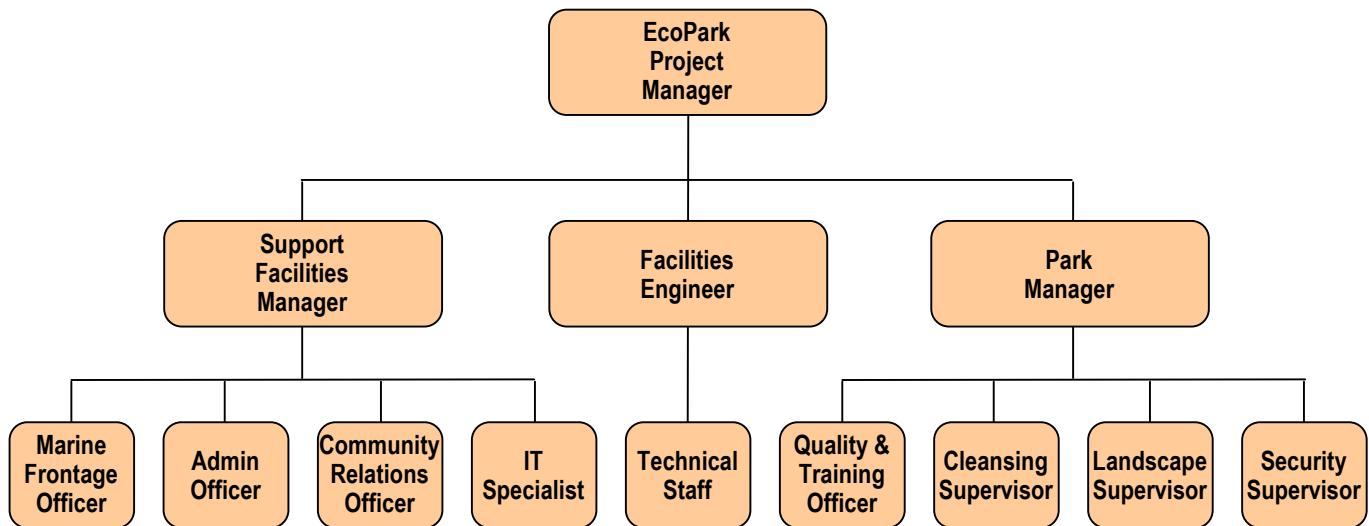


Figure 2-1 SGJV Organisation

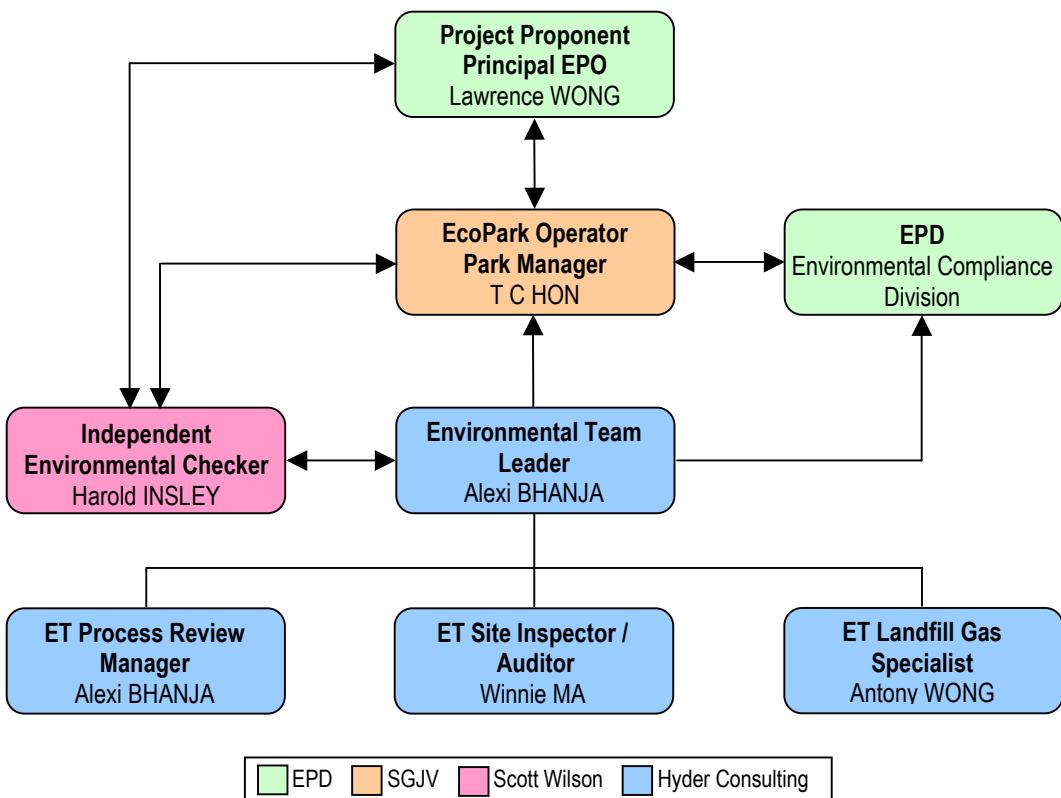


Figure 2-2 EM&A Organisation

3 Summary of EM&A Requirements

3.1 Monitoring Parameters

The following parameters are required to be monitored as part of the operation phase EM&A programme:

- **Landfill Gas (LFG).** Following construction, routine monitoring is required at service voids and utility boxes (locations to be agreed). Routine monitoring shall be carried out on a quarterly basis, however, should EPD alert the Operator that high LFG levels had been detected during monthly monitoring under the Siu Lang Shui Landfill restoration contract, then the Operator may be required to increase LFG monitoring to monthly until such time as EPD inform the Operator that quarterly monitoring can be resumed.

Since operation phase LFG monitoring is required “following construction” and construction has not yet been completed, operation phase LFG monitoring is not yet required to be carried out. It should be noted that construction phase LFG monitoring is ongoing and is reported in the Monthly EM&A Reports prepared by the construction contractor’s ET. These reports can be downloaded from:

http://www.epd.gov.hk/eia/english/register/index8/vep2212006_content.html

3.2 Environmental Quality Performance Limits and EAP

The Action/Limit Levels and Event Action Plan (EAP) for LFG are shown below in **Table 3-1**, below. These refer to LFG detected in excavations, utilities and any enclosed on-site areas.

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%

Table 3-1 Action Levels, Limit Levels and Event and Action Plan for LFG

No other A/L Levels or EAPs are specified in the EM&A Manual for operation phase EM&A.

3.3 Environmental Audit of Non-monitored Parameters

Site inspections provide a direct means to trigger and enforce the environmental protection and pollution control measures specified in the EIA Report and are undertaken routinely by the ET to inspect operational practice.

Regular site inspections are carried out by the ET once per month, and the ET is accompanied by the IEC once per quarter. *Ad hoc* site inspections are also carried out if significant environmental problems are identified. Inspections may also be required subsequent to receipt of an environmental complaint, or as part of the investigation work, as specified in the EAP. The following parameters are required to be audited as part of the operation phase EM&A programme:

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

3.4 Environmental Mitigation Measures

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

3.5 Environmental Requirements in Tenancy Agreements

Environmental requirements specified in tenancy agreements are summarised in **Appendix 2**.

4 Operation Status

Figure 4-1 shows the location of the lots within EcoPark, the tenancy numbers and the names of the tenants.

4.1 Tenants and Processes

4.1.1 Tenancy EP06-034

- Lot Size: Approx. 5,000m²
- Activity: Recycling of Waste Wood
- Tenant: Hong Kong Hung Wai Wooden Board Company

The tenant has commenced preparatory works within their lot but have not yet commenced recycling activities. The tenant re-submitted building plans to Buildings Department (BD) in July 2008 as the submitted building plans submitted in May 2008 were rejected by Fire Services Department.

4.1.2 Tenancy EP07-02

- Lot Size: Approx. 6,500m²
- Activity: Recycling of WEEE
- Tenant: Li Tong Group

The tenant has commenced preparatory works within their lot but have not yet commenced recycling activities. Construction of a temporary site office was completed in July 2008. Li Tong had submitted the first building plan to BD on 30 April 2008. Additional information had been submitted to BD in July 2008 for the approval of building plan.

4.1.3 Tenancy EP07-03

- Lot Size: Approx. 6,000m²
- Activity: Recycling of Organic Waste (Waste Cooking Oil)
- Tenant: Champway Technology Limited

The tenant has commenced preparatory works within their lot but have not yet commenced recycling activities. As this process was not assessed in the original EIA Report, a Design Audit was endorsed on 9 May 2008. The endorsed Process Review Checklist is shown in **Appendix 3**.

Construction of a temporary site office has been completed and preparation of BD submissions is underway. The temporary site office contains basic research and development facilities. Site survey is currently in progress.

4.1.4 Tenancy EP08-01

- Lot Size: Approx. 5,000m²
- Activity: Recycling of Waste Plastics
- Tenant: Hong Kong Telford Envirotech Group Limited

Notice of Award of Contract was issued and the tenant has already taken over the lot on 30 June 2008. The tenancy agreement provides for the possession of the lot to be given to the tenant within three months and that the tenant shall commence waste recovery and/or recycling and/or reprocessing within their lot within twelve months from the date on which possession of the lot was given.

4.2 Throughput Statistics

As advised by the Operator, four truck loads of waste wood (approximately 28 tonnes of waste wood) were delivered to Hung Wai's site in the reporting quarter.

However, as of 31 July 2008, no tenants have yet commenced actual recycling activities within their lots.

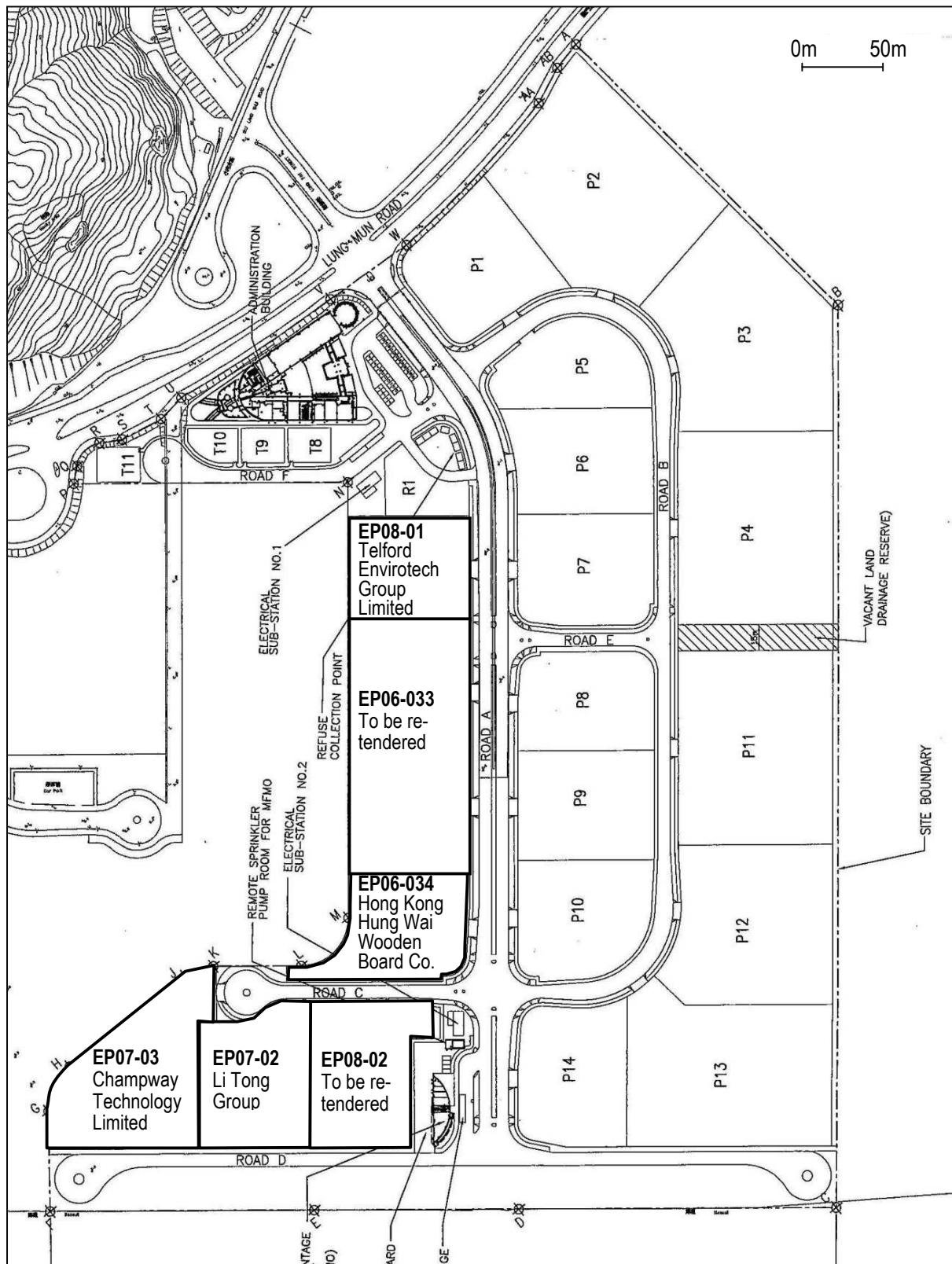


Figure 4-1 Current Lot Usage Within EcoPark

5 Implementation Status of Environmental Protection Measures

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**.

As of 31 July 2008, no tenants have yet commenced recycling activities within their lots and so no environmental protection measures need to be implemented.

6 Monitoring Results

Only LFG is required to be monitored on a quarterly basis. However, since operation phase LFG monitoring is only required “following construction” and construction is not yet completed, operation phase LFG monitoring is not yet required to be carried out.

7 Waste Generation Statistics

As of 31 July 2008, no tenants have commenced recycling activities within their lots and so there are no waste generation statistics to be reported at this time.

8 Summary of Environmental Audit

8.1 May 2008

The environmental audit was carried out by the ET on 23 May 2008. At this time, construction of EcoPark Phase I was ongoing and no tenants were yet carrying out recycling activities. As such, there were no processes to be audited.

Photograph 8-1 shows the Administration Building and landscaping.



Photograph 8-1 Administration Building and Landscaping

8.1.1 Tenancy EP06-034

Foundation works for the temporary site office have started. **Photograph 8-2** shows the status of the lot.



Photograph 8-2 Tenancy EP06-034

8.1.2 Tenancy EP07-02

The tenant is constructing temporary site offices, as shown in **Photograph 8-3**.



Photograph 8-3 Tenancy EP07-02

8.1.3 Tenancy EP07-03

The tenant has completed construction of temporary site offices and has commenced laying of asphalt, as shown in **Photograph 8-4**.



Photograph 8-4 Tenancy EP07-03

8.2 June 2008

The environmental audit was carried out by the ET on 26 June 2008. At this time, construction of EcoPark Phase I was ongoing. No major environmental deficiencies were observed. Provision of drip trays were observed to prevent land contamination due to leakage from oil drums; however provision of proper coverage (e.g. tarpaulin sheet) was recommended to prevent water accumulation inside drip tray.

8.3 July 2008

The environmental audit was carried out by the ET and IEC on 29 July 2008. At this time, construction of EcoPark Phase I was ongoing and no tenants were yet carrying out recycling activities within EcoPark. As such, there were no processes to be audited. No significant observations were made.

9 Complaints

As of 31 July 2008, no tenants have yet commenced recycling activities within their lots and no complaints have been received related to recycling activities.

10 Conclusions

As of 31 July 2008, no tenants have yet commenced recycling activities within their lots and so there are no conclusions to draw relating to the operation of the operation phase EM&A programme at this time.

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
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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	

Air Quality

13.2		The Operator shall ensure that the 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
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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 and 6 of IMO Code of Practice for the Safe Loading and 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	

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
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	
	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 landfill sites and the 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 any 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
	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	

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
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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	<p>During operation, the greatest risk of land contamination will come from the storage of chemical wastes, therefore the following measures should be followed :</p> <ul style="list-style-type: none"> ▪ 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. ▪ Management of chemical waste is implemented through the control of waste storage, labelling of waste, transportation and treatment of chemical waste at an appropriate facility. ▪ 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	<p>Waste Disposal (Chemical Waste) (General) Regulation</p> <p>Code of Practice on the Packaging, Labelling and Storage of Chem Wastes</p> <p>Chemical Waste (General) Regulation</p>
	5.3.3	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	

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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
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Landfill Gas

8.7.10 & 8.7.11	6.1.2	<ul style="list-style-type: none"> ▪ 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
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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	
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Appendix 2

Environmental Requirements in Tenancy Agreements

GENERAL ENVIRONMENTAL RESPONSIBILITIES

- 9.1 The Tenant shall at its own cost(s) comply with and shall ensure that the Premises is used, designed, constructed, operated and maintained in accordance with:-
- (a) All relevant Ordinances, by-laws, regulations, statutory technical memorandums, codes of practice, rules, non-statutory guidance notes, schemes and abatement notices for the time being in force in Hong Kong including those relating to the environment and governing the control of any form of pollution (see specific Ordinances mentioned hereinbelow) and licensing requirements under relevant Ordinances and regulations.
 - (b) All information, mitigation measures, prohibitions, restrictions, recommendations and requirements under the Environmental Impact Assessment Report for Development of an EcoPark in Tuen Mun Area 38 with Appendices, i.e. the EIA Report (Register No.: AEIAR-086/2005) dated April 2005, the Final EM&A Manual dated April 2005, the application documents including all attachments (Application No. AEP-226/2005) and other relevant documents in the Register (or in any other places, any internet websites or by any other means as specified by the Director), including the prohibitions and mitigation measures for processes in Table 14.1 and the material throughputs, processes and remarks in Table B.1 of the EIA Report (in so far as applicable).
 - (c) All information, conditions, submissions, mitigation measures, orders, notices, requirements, prohibitions, restrictions and time limits under the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit – Application No. VEP-221/2006 (including updated information about the Permit, any amended permit and any further permit) and all mitigation measures recommended and to be recommended in submissions that shall be deposited with or approved by the Director as a result of permit conditions contained in the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit – Application No. VEP-221/2006 (including updated information about the Permit, any amended permit and any further permit). The Tenant shall refer to, inter alia, Conditions 4.1 to 4.14 (and Annexes A and B) and Conditions 3.7 and 3.8 (and Figures 2 and 3) of the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit – Application No. VEP-221/2006 regarding measures to mitigate air quality impact, measures to mitigate hazard to life impact, measures to prevent land contamination, measures to mitigate landfill gas hazard, maintenance of landscape and visual measures (see also hereinbelow regarding Condition 5 of the Environmental Permit and specified Ordinances).
 - (d) All information, conditions, submissions, mitigation measures, orders, notices and requirements under on going surveillance and monitoring activities during all stages of the Project and during the tenancy under the Tenancy Agreement (e.g. any additional mitigation measures recommended and to be recommended under the Process Review and Design Audit (carried out and to be carried out in accordance with the EM&A Manual) for various environmental impacts including, but not limited to, noise pollution, air quality, hazard to life, landfill gas hazard, landscape and visual measures, waste management and land contamination).

- (e) All recommendations referred to in the documents of the EIAO Register which are not expressly referred to in Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit – Application No. VEP-221/2006 and any amended Environmental Permit (unless expressly excluded or impliedly amended in the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit – Application No. VEP-221/2006 and any amended Environmental Permit).
- 9.2 Further to Condition Nos. 6 and 8 hereinabove, the Tenant shall at its own cost provide relevant environmental monitoring data, information, documents and assistance to the Director and/or the Environmental Protection Department and shall permit authorised representatives of the Environmental Protection Department to access, inspect, take samples and monitor the Premises and operations for the Process Review and the Design Audit carried out and/or to be carried out pursuant to Conditions 4.1 and 5 of the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit – Application No. VEP-221/2006 (and any updated Permit, amended permit and further permit).
- 9.3 If the Tenant's operations (i.e. activities and facilities for recovery and/or recycling and/or reprocessing) are not covered by the EIA Report and/or deviate from the development parameters mentioned in inter alia the EIA Report, the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit – Application No. VEP-221/2006 (including the parameters at Annex A) and/or any environmental licence (e.g. the Water Treatment Facility ("WTF") Discharge Licence), and if additional mitigation measures are not available or are not effective in the opinion of the Director, to ensure compliance with the EIA Report, the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit – Application No. VEP-221/2006 (including any updated Permit, amended permit and further permit) and the relevant environmental licence(s), the Tenant shall comply with any modified parameters and/or the Tenant shall immediately modify its operations in such a way that the findings and requirements of the EIA Report, the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit – Application No. VEP-221/2006 (including any updated Permit, amended permit and further permit) and the environmental licence(s) are complied with and shall immediately cease to continue the offending part of the operations or activity in question.
- 9.4 The Tenant shall at its own cost(s) apply for, obtain, renew, maintain and comply with all the relevant licences related to compliance with all relevant Ordinances, by-laws, regulations, statutory technical memorandums, codes of practice, rules, non-statutory guidance notes, schemes, abatement notices and the environmental permits for the time being in force in Hong Kong (including those relating to the environment and governing the control of any form of pollution). The Tenant shall obtain, renew and comply with all the said licences within the relevant time limits (in any event, within one (1) calendar month of the date of signing and/or execution of the Tenancy Agreement), shall comply with all abatement notices, orders, directions and requests of the relevant authorities and public officers and shall be responsible for paying all relevant fees, costs, fines and penalties.
- 9.5 The Tenant shall not do anything or omit to do anything which would cause, contribute to or involve a breach or potential breach by the Director relating to any of the matters mentioned in Conditions 9.1 to 9.4 hereinabove (and other Conditions hereinbelow).

- 9.6 The Tenant shall fully indemnify the Government and/or the Director for any fees, costs, damages, expenses, fines, penalties, losses and claims arising (a) out of any breach of any of the matters mentioned in inter alia Conditions 9.1 to 9.4 hereinabove (and other Conditions hereinbelow) or (b) from the use of the Premises or (c) out of any works carried out at any time during the term to or at the Premises or (d) out of anything now or during the term attached to or projecting from the Premises or (e) from any neglect or default by the Tenant or by its respective servants or agents or by any express licensee of the Tenant.

SPECIFIC ENVIRONMENTAL RESPONSIBILITIES

Air Pollution

10. Save with an appropriate exemption under the Air Pollution Control Ordinance (Cap. 311 of the Laws of Hong Kong) 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 of the Laws of Hong Kong)), which exists or which is imminent, without the prior written approval of the Director.
11. No alteration to the installation and method of manufacture shall be made without the prior written consent of the Director. In any event, the Tenant shall at its own cost(s) comply with, inter alia, Conditions 4.2 to 4.7 and Annex A of the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit – Application No. VEP-221/2006 regarding design, installation and operation of chimney, location of fresh air intakes and use of ultra-low sulphur or other cleaner fuel(s) as agreed by the Director (and the conditions of any updated Permit, amended permit and further permit regarding measures to mitigate air quality impact), good practices and relevant provisions of the EIA Report and Final EM&A Manual.

Noise Pollution

12. The Tenant shall take all necessary measures as may be required by and to the satisfaction of 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 of the Laws of Hong Kong) any regulations made thereunder and any amending legislation.
13. The decision of 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.

Waste Management

14. 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 waste arising from recycling activities, chemical waste arising from maintenance of plant and equipment, sewage sludge (from WTF) 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 Director.
15. In any event, the Tenant shall at its own cost(s) comply with, inter alia, Conditions 4.11 and 4.12 of the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit – Application No. VEP-221/2006 regarding paving all areas of the Premises with concrete/using concrete hardstanding and siting all fuel tanks and chemical storage areas on the specified sealed areas, respectively (and comply with the conditions of any updated Permit, amended permit and further permit regarding measures to prevent land contamination). The Tenant shall at its own cost(s) comply with relevant provisions of the Waste Disposal Ordinance (Cap.354 of the Laws of Hong Kong) good practices and relevant provisions of the EIA Report and Final EM&A Manual.

Water Pollution

16. 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 of the Laws of Hong Kong) any regulations made thereunder and any amending legislation, and is not covered by a WTF Discharge Licence issued under the Water Pollution Control Ordinance (Cap. 358 of the Laws of Hong Kong) the Tenant shall apply to the Director for a licence and comply with the terms and conditions stipulated in the licence and the WTF Discharge 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 and WTF Discharge Licence, the Tenant shall at its own cost(s) separate, collect, discharge and send all process or industrial wastewater to the WTF for treatment to 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.
17. 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 influent limits / exceeds the maximum influent criteria of the WTF (in accordance with paragraph 7.2.9 of the Final E&MA Manual). 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.

18. 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 of the Laws of Hong Kong) good practices and relevant provisions of the EIA Report and Final EM&A Manual.

Hazard to Life Impact

19. 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 as amended by the Variation of Environmental Permit – Application No. VEP-221/2006 (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 as amended by the Variation of Environmental Permit – Application No. VEP-221/2006 (including any updated Permit, amended permit and further permit).

Landfill Gas Hazard

20. 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 as amended by the Variation of Environmental Permit – Application No. VEP-221/2006 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).

Landscape and Visual Impacts

21. 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 as amended by the Variation of Environmental Permit – Application No. VEP-221/2006 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).

Appendix 3

Endorsed Process Review Checklists

EcoPark Process Review Checklist

General Details	<p>PRC No. <u>002</u> (PRC <u>2</u> of <u>2</u>)</p> <p>Tenant Ref. No. _____</p> <p>Tenant Name <u>Champway Technology Limited</u></p> <p>EcoPark Lot No. <u>EP07-03</u></p> <p>Related Processes PRC _____</p>																		
Process Overview and Throughput	<p>Material Type <u>Organic waste</u></p> <p>Process Name <u>Waste cooking oil recycling into biodiesel</u></p> <p>Process Specifics <u>Raw material extraction, neutralization, separation and distillation</u></p> <p>Details Attached <input checked="" type="checkbox"/> Yes (attached) <input type="checkbox"/> No, not required</p> <p>Associated Material Throughput (incl. DGs, if any)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Material</th> <th style="text-align: left;">In/Out</th> <th style="text-align: left;">Throughput (tonnes/yr)</th> </tr> </thead> <tbody> <tr> <td>Organic waste (waste cooking oil and grease trap waste)</td> <td>In</td> <td>40000</td> </tr> <tr> <td>Alcohol</td> <td>In</td> <td>7600</td> </tr> <tr> <td>Biodiesel</td> <td>Out</td> <td>37240-37620</td> </tr> <tr> <td>Glycerin</td> <td>Out</td> <td>3920-3960</td> </tr> <tr> <td>Inorganic waste</td> <td>Out</td> <td>640-920</td> </tr> </tbody> </table> <p>Throughput < EIA Limit? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, exceeds by _____</p> <p>Risk Assessment <input checked="" type="checkbox"/> Yes (attached) <input type="checkbox"/> No, not required</p>	Material	In/Out	Throughput (tonnes/yr)	Organic waste (waste cooking oil and grease trap waste)	In	40000	Alcohol	In	7600	Biodiesel	Out	37240-37620	Glycerin	Out	3920-3960	Inorganic waste	Out	640-920
Material	In/Out	Throughput (tonnes/yr)																	
Organic waste (waste cooking oil and grease trap waste)	In	40000																	
Alcohol	In	7600																	
Biodiesel	Out	37240-37620																	
Glycerin	Out	3920-3960																	
Inorganic waste	Out	640-920																	
Impact Assessment	<p><input type="checkbox"/> Process has already been assessed in the EIA (from EIA Table 14.1): _____</p> <p>Impacts to:</p> <p>AQ <input type="checkbox"/> Yes <input type="checkbox"/> No _____</p> <p>WQ <input type="checkbox"/> Yes <input type="checkbox"/> No _____</p> <p>WM <input type="checkbox"/> Yes <input type="checkbox"/> No _____</p> <p>CL <input type="checkbox"/> Yes <input type="checkbox"/> No _____</p>																		

Note : AQ=Air Quality | WQ = Water Quality | WM = Waste Management | CL=Contaminated Land

EcoPark Process Review Checklist

Impact Assessment (continued)

Summary

Sign-off Requirements

Proposed Mitigation The tenant has proposed to use a pump truck to minimise odour emission, install air extraction system for collection of odorous gases and jacket pipes for minimization of fugitive dust emission. Byproduct and packaging would be reused. Sulphur-free biodiesel would be used as operation fuel, or induction heating from CLP. No wastewater treatment proposed.

Includes Chimney ? Yes No

If Yes, Complies with EIA Table 13.1? Yes No Pending Confirmation

- Process has not been assessed in the EIA, Design Audit is attached.
 - Process has not been assessed in the EIA but is unlikely to warrant a full Design Audit because:
-
-
-

- Process meets EP Conditions
- ① Process meets EIA requirements or passes Design Audit (see above).
- ② Process is unlikely to warrant a full Design Audit (see above)
- No unacceptable environmental impacts – allow process to operate
- ③ Unacceptable/undetermined environmental impacts – do not allow process to operate until Design Audit has been completed and approved

Note : ①, ② and ③ relate to the process review flowchart, EIA Report Figure 12.1

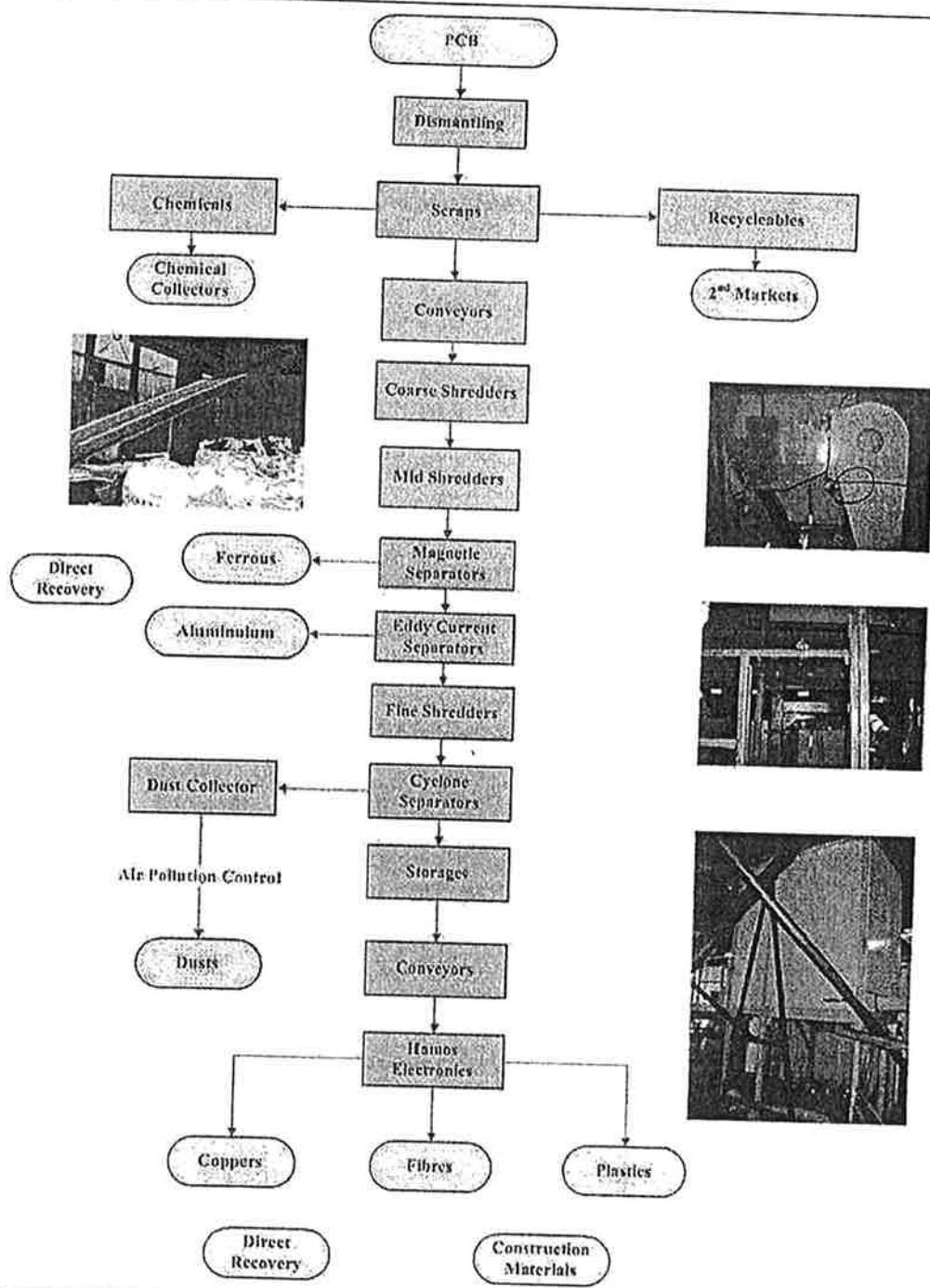
	ET	IEC	EPD	Operator
Name	Hyder Consulting	Scott Wilson	Waste Reduction & EcoPark Group	Serco Guardian Joint Venture
Sign-off	Certified	Verified	Approved	Tenant Advised
Date		14-05-2008	15.5.2008	16.5.2008
Signed	Alexi BHANJA	Mike BAINS	Lawrence WONG	T C HON
Role	ET Leader	IEC	Principal EPO	Park Manager
Signature				



Recycling of PCB/ PCBA

Li Tong's Electrostatic Separator hamos KWS (Hamos) , which is the unique recycling plant in Hong Kong, shall separate the metals and non-metals thought mechanical and electromagnetic means. The work flows of the Hamos are as follows:

Work Flow of Electrostatic Separator hamos KWS



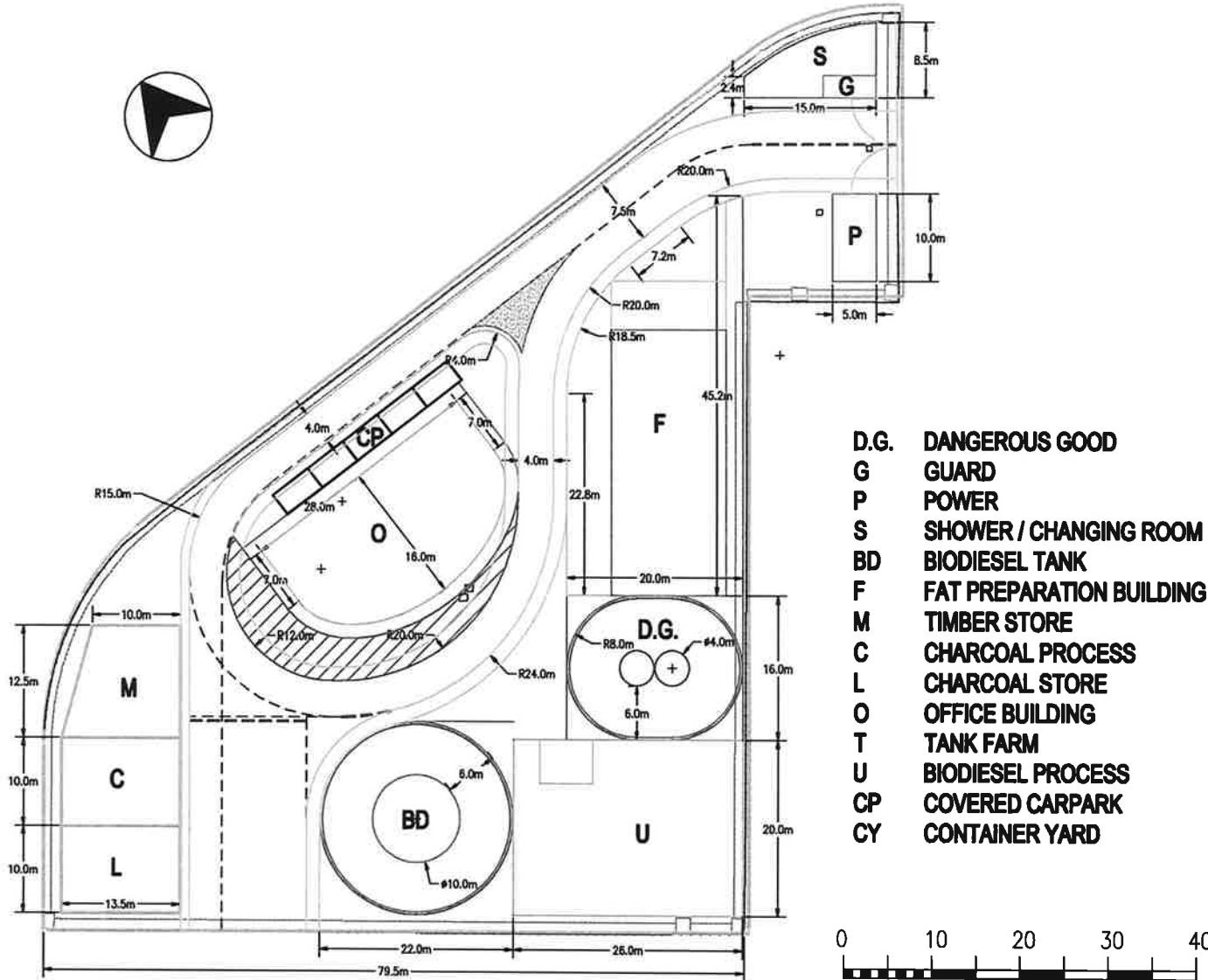


Table 1 - Schedule of Environmental Aspects and Impacts

Supply Chain	Supplier/Purchasing	Producing	Delivering	Sales	Customer
Life Cycle	Material acquisition	Manufacturing	Transport	Storage & Packaging	Utilization
Relevant Operation(s) (i.e. environmental aspects)	<ul style="list-style-type: none"> Collection of organic waste such as waste cooking oil/waste lipid/grease trap waste Procurement of reagents such as methanol and mineral acid 	<ul style="list-style-type: none"> Fat preparation Reaction process Separation/recovery process Neutralization Storage and transfer of products & reagents 	<ul style="list-style-type: none"> Delivery of biodiesel and heavy fraction of biodiesel as industrial grade Delivery of by-product such as inorganic salt 	<ul style="list-style-type: none"> Packaging of biodiesel and other by-products 	<ul style="list-style-type: none"> Use of biodiesel and other by-products
Environmental Impacts (including air, noise and water pollution as well as waste generation and material consumption)	<ul style="list-style-type: none"> Odour emission from collection operation Fugitive emission from procurement of reagents Accidental spillage of organic waste and reagents Noise and air emission from collection fleet exhaust Packaging waste arising from collection of organic waste and procurement of reagents 	<ul style="list-style-type: none"> Odour emission from fat preparation Fugitive emission from storage and transfer of reagents Wastewater arising from fat preparation Accidental spillage of organic waste, reagents and products/by-products Noise and air emission from plant/equipment exhaust By-products such as inorganic salt and glycerin generated from separation/recovery process Consumption of reagents 	<ul style="list-style-type: none"> Air and noise emission from delivery fleet exhaust Accidental spillage of products/by-products 	<ul style="list-style-type: none"> Accidental spillage of products/by-products Packaging waste such as containers 	<ul style="list-style-type: none"> Improper maintenance of vehicle/fleet/plant/equipment leads to higher noise and air emission and fuel consumption (energy inefficient) Disposal of by-products leads to waste generation Accidental spillage of products/by-products