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ACE Paper 12/2005

For advice

Report on the 92nd Environmental Impact Assessment Subcommittee Meeting

Introduction

At its meeting held on 23 May 2005, the Environmental Impact Assessment (EIA) Subcommittee considered the EIA report on Development of an EcoPark in Tuen Mun Area 38.

Advice Sought

2. Members are requested to advise whether the EIA report on Development of an EcoPark in Tuen Mun Area 38 should be endorsed without condition.

Views of the EIA Subcommittee

EIA report on Development of an EcoPark in Tuen Mun Area 38 (ACE-EIA Paper 3/2005)

Need for the project

3. The long-term availability of affordable land with basic infrastructure would help promote the growth of waste recycling industry in Hong Kong. Thus, the Government proposes to construct and operate an EcoPark in Tuen Mun Area 38 for environmental and recycling industry. With mitigation measures in place, the potential environmental problems arising from the recycling activities to the nearby sensitive receivers would be controlled to within the established standards.

Description of the project

4. The EcoPark is located on a piece of reclaimed land (about 20 ha) in Tuen Mun Area 38. It will be developed in two phases, with Phase I (8.4 ha) scheduled for commissioning in late 2006 and Phase II (about 11 ha) in late 2009. The project comprises the following key items of works:

- (i) provision of infrastructure including marine loading/unloading areas, roads, drains, sewers and utilities;
- (ii) construction of buildings and facilities for accommodating office and recycling operations;
- (iii) provision of on-site wastewater treatment facility to treat industrial wastewater prior to discharging to the public sewer;
- (iv) allocation of sites for waste recyclers for construction of recycling facilities;
- (v) delivery and unloading of recyclable materials; and
- (vi) recycling operations and loading and transportation of finished products by road and sea.

Members' views

5. Members noted that the project was unique in that the future scope of operation of EcoPark could not be determined at this stage and the initial mix of tenants and corresponding recycling processes would not remain static but would change in response to market demands. An "Umbrella Approach" had been adopted to include as wide a range of processes as possible based on the best available information and a "Design Audit Approach" had been adopted to allow for inclusion within EcoPark any future processes not specified by the present EIA study. The Environmental Monitoring and Audit programme would be very important in the future monitoring and auditing process. The meeting agreed to focus the discussion mainly on the scope of operation, wastewater control, land contamination, visual impact and risk assessment of workers' health.

6. Members noted the replies provided by the project proponent before the meeting in response to the questions on wastewater treatment and land contamination raised by some Members.

Scope of Operation

7. On the scope of operation, the project proponent team explained that some recycling activities were excluded mainly because of their environmental unacceptability which would have serious impact on the environment as well as other potential tenants. While it was the Government's policy to promote local environmental and recycling industry, the scope of operation in EcoPark was limited by a number of constraints, including land supply and infrastructural capacity. As local recycling industry was largely small and medium enterprises, the rationale

behind the conceptual design of EcoPark was based on flexibility in order to allow a wide range of tenants to achieve synergy in the site. As a start, it would be important for the EcoPark to provide incentives to attract the investment of a variety of operators to establish higher end industries. With the experience of the first EcoPark, consideration would be given to the development of recycling activities outside the proposed scope of operation. Members noted that composting and recycling of organic food waste was not excluded though further examination would be conducted on the potential impact such as odour of some food waste.

8. Members noted that the list of material type shown in the EIA report indicated the typical material types only. Material types and/or processes not included in the list could also be accepted through the Design Audit process if the environmental impacts/risks from proposed processes were not greater than those assessed in the EIA. The project proponent team explained that construction and demolition (C&D) waste was not excluded in the project. Most of the material types in the list were materials sorted from municipal solid waste. C&D waste recycling processes that could satisfy the Design Audit would be accepted. As the EcoPark would be instrumental in promoting and championing the use of recycled products, recycled construction materials would be used in the construction phase as far as practicable.

Wastewater Control

9. On the wastewater control, the project proponent team explained that the on-site Wastewater Treatment Facility (WTF) would be a shared facility which would be able to treat a range of effluents, but within specified limits of each parameter, to the standard required for discharging into the sewerage systems. This range would be based on the anticipated types of effluents but it was not intended to treat all possible types of effluents. Where the effluent from a particular process or tenant could not be treated by the WTF, the tenant would be required to install process-specific pre-treatment facilities within his lot, such that the pre-treated effluent would fall within the influent range that could be treated at the WTF. The project proponent team noted Members' concern on the diverse nature of industrial wastewater generated from recycling activities and the unique environmental impacts generated by certain recycling processes.

10. The project proponent team agreed to consider Members' suggestion to set a specific standard for influent entering the WTF to ensure satisfactory operation of the WTF and minimal adverse water quality impact. The project proponent team would also take into account Members' views on the design and cost of the WTF to avoid tenants with low pollution loading sharing the high maintenance cost of the WTF. The project proponent team shared Members' views that this would be in line with the polluter-pays principle and expressed that their objective was to ensure costs would be kept to the minimum to make EcoPark more financially attractive to local environmental and recycling industry.

Land contamination

11. On the potential problem of land contamination, the project proponent team explained that the initial idea would be to provide impermeable hard surface, which would minimize the impact of liquid contamination, to all tenants' lots in Phase I to attract more potential tenants. Moreover, grease traps and petrol/oil interceptors would be provided in the surface water drainage to ensure that no contaminated surface water, including accidental spills, would be discharged off-site. Recycling processes were required to be performed under cover in most circumstances to minimize land contamination problem.

Visual impact

12. On the visual impact, the project proponent team highlighted that it would be important for the EcoPark to provide a pleasing environment for the business community. There would be extensive use of landscaping in the site and emphasis would be put on the design of common facilities such as the administration building. For individual lots, the initial idea for Phase I would be to provide a hardcore surface and individual tenants would only need to build basic structures and covers for their plants and facilities. There would be basic requirements in the design such as colour theme and material used to ensure a favourable overall visual image. Members noted that open storage of recycling materials would not be allowed except C&D waste with suitable drain-off facilities installed. Details of the storage requirements would be included in the tenancies with individual tenants.

Risk assessment of workers' health

13. On the risk assessment of workers' health, the project proponent team pointed out that fatality risk assessment in the EIA report referred to those for off-site populations that would result from the operation of the project and risk assessment for workers in the site was not within the purview of an EIA. Nevertheless, the project proponent team noted Members' concern on the potential problem of cross contamination between workers in the site having regard to the wide range of recycling materials and processes operating in close proximity. The team explained that one of the major responsibilities of the Management Contractor (the Operator) would be to provide shared training facilities and opportunities for the tenants and their workers, in particular on environmental health and safety as well as emergency management. Moreover, consideration would be given by the Operator and EPD in allocating lots to individual tenants in order to segregate processes which should not be too close to minimize potential risk, including risk to workers' health.

14. The project proponent team noted Members' concern on workers' health and safety in handling e-waste as toxic materials such as dust containing toxic flame-retardants would spread in the air. The team explained that most of the more dangerous processes, such as crushing of computer monitors, were usually machine

operated in enclosed equipment which would minimize impacts on both the environment and the workers. They would take into account Members' concern in facilitating the safety and health training, and liaising with relevant departments like Labour Department to address the potential problem.

15. Members noted that Indoor Air Quality (IAQ) standard was currently used as a reference for commercial buildings and public facilities in Hong Kong. Under EIA Ordinance, the authority was not empowered to set an IAQ standard for the workplace from the workers' safety point of view.

16. In view of Members' concern about the workers' safety and health due to potential impacts of the recycling materials and processes, the project proponent team agreed to consider Members' suggestion of consulting Labour Department in the Process Review mechanism on relevant provisions with a view to encouraging good management practices and minimizing health hazards to workers in EcoPark.

Other issues

17. On Members' concern about the residual impacts left by outgoing tenants before leaving the lots, the project proponent team explained that the Operator would be responsible for implementing the environmental measures set out in the Environmental Permit and by implementing a site-wide environmental management system, the Operator had to monitor and audit the environmental performance of individual tenants. Moreover, EPD and the Independent Environmental Checker employed by EPD would also conduct regular site checking and auditing.

18. Members agreed that EcoPark would be a showcase for public education on environmental and recycling industry and noted that there would be facilities like visitor and education centre as well as information center in the administration building. The project proponent team noted Members' concern about the safety of visitors and would take care of this aspect in the detailed planning stage.

19. Members noted that the Process Review, to be conducted by the Environmental Team, mainly focused on environmental impact assessment of recycling processes. Other departments would not be involved in the process. Nevertheless, relevant departments would be involved outside the context of Process Review as the Operator and tenants were required to comply with relevant statutory requirements.

20. The project proponent team noted Members' concern that the series of restrictions and requirements imposed by the EcoPark might discourage potential tenants. The team explained that they understood quite a number of enterprises were willing to invest in the waste recycling industry even on sites under short-term tenancies. They envisaged that the incentives of more permanent land with basic infrastructure and management services in EcoPark would be more attractive. The

requirements set would be basic ones to facilitate their running of business and compliance with relevant statutory requirements. They would be mindful not to impose unnecessary restrictions.

21. Members agreed that the development of an EcoPark would help the relocation of some temporary recycling operations scattered over the territory which would in turn reduce many sources of pollution and waste and improve the environment as a whole. Members noted in the EIA report that much emphasis was placed in continuous public involvement and hoped that transparency of the project would continue to be enhanced.

Conclusion

22. Having regard to the findings and recommendations of the EIA report, the meeting agreed to recommend the report to the Council for endorsement without condition. The meeting suggested the project proponent to consider consulting Labour Department in the Process Review mechanism on relevant provisions with a view to encouraging good management practices and minimizing health hazards to workers in EcoPark. The Subcommittee would like to receive updates on the project for future reference.

**EIA Subcommittee Secretariat
May 2005**