

ADVISORY COUNCIL ON THE ENVIRONMENT

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for information

PROGRESS ON DEVELOPMENT OF SOLID WASTE MANAGEMENT FACILITIES

PURPOSE

1. This paper outlines the recent progress on the development of solid waste management facilities and our plans in reviewing the waste management strategy in order to reduce waste generation and disposal requirements.

PROGRESS TO DATE

2. Since the publication of the Waste Disposal Plan in December 1989, significant progress has been made in implementing the programme of new facilities for solid waste disposal (shown in Figure 1). The status of these facilities are summarised at the Annex.

3. The development of strategic landfills and refuse transfer stations enables progressive phasing out of substandard facilities in the urban area. To date, Jordan Valley Landfill, Lai Chi Kok Incinerator, Chai Wan pulverisation plant and Kennedy Town Incinerator have been decommissioned. Their closure has brought about considerable improvements in the quality of the environment in their respective districts.

4. It is expected that by next year all three strategic landfills will be operational, each handling solid waste generated from their respective sub-region as well as waste transferred in bulk containers from the urban areas of Kowloon and Hong Kong Island. This new generation of landfills, which are designed as full containment sites, have elaborate measures for collection and treatment of both leachate and gaseous emissions. Extensive monitoring systems are also installed around the landfill to monitor site conditions and to detect any potential problems. The existing landfills at Shuen Wan, Tseung Kwan O and Pillar Point Valley will be closed progressively and the sites restored for recreational uses.

5. The operation of the first two refuse transfer stations, the Kowloon Bay road transfer station and the Island East marine transfer station at Chai Wan, has helped achieve a much higher standard of waste transportation in Hong Kong. Apart from providing an efficient and cost-effective system for bulk transport of waste to the remote landfills in the New Territories, their operation brings about significant environmental benefits, for example in reducing the number, and shortening the trips, of refuse collection vehicles and thus the pollution nuisance caused by such vehicles.

6. The third transfer station, at Sha Tin, is scheduled for completion in November this year. Another five projects are at an advanced stage of planning, and these facilities are all expected to be operational by early 1997. It is worth noting that the Island West Transfer Station will be built inside a cavern at Mt. Davis at Kennedy Town to avoid conflict with adjacent developments of the facility. The West Kowloon Transfer Station, with a capacity of 2,500 tonnes per day, will be the largest of the transfer station to be developed and will serve West Kowloon, Kwai Tsing and Tsuen Wan areas. The North Lantau Transfer Station and Outlying Islands Transfer Facilities, both identified after the publication of 1989 Plan, are essential facilities for serving the new airport and future developments on Lantau and the main outlying islands.

7. All the projects are implemented under a turnkey design-build-operate form of contract specifically developed for ensuring a high standard of operational and environmental performance. This arrangement, whereby a single waste management contractor is responsible for the design, construction, operation and post-closure restoration for the facility, enables definition of clear contractual responsibility and performance requirements of the operator throughout the very long life of each facility. The provisions for linking contract payments to performance standards also give incentives for timely completion and good performance by the operator. The advantages of this arrangement are now fully realised in the operational facilities such as the Kowloon Bay and Island East transfer stations and West New Territories Landfill.

REVIEW OF WASTE MANAGEMENT STRATEGY

8. We recognise fully the importance of planning further ahead beyond the provision of facilities for waste disposal. There is an urgent need to explore opportunities for reduction of waste quantities, to develop a practical waste prevention, recovery and recycling programme in order to extend, as far as possible, the limited life of the strategic landfills.

9. EPD has commissioned a consultancy study on solid waste reduction in February 1994. The main objective of the study is to develop long-term targets and plans for achieving waste reduction in Hong Kong. Waste reduction initiatives are expected to cover various means for achieving prevention, minimization, reuse, recovery, recycling of waste as well as bulk reduction in waste volume.

10. The study comprises the following stages:-

- (a) Surveys and Investigations - on current waste management practices, waste recovery and recycling activities, waste generation pattern and likely future trends. Existing and potential barriers to waste reduction and recycling will also be identified.

- (b) Examination of measures - to develop suitable measures for achieving waste reduction in Hong Kong. The applicability of institutional, policy, economic and legislative measures will be examined, taking into account the experiences in other countries as well as the local situation.
- (c) Evaluation of technologies - to assess potential technologies for reducing the volume of waste sent to landfills. Processes, including sorting, materials recovery and reprocessing, incineration and others, will be evaluated with regard to the local environmental, siting, costs and operational considerations.
- (d) Development of an implementation plan - to determine realistic waste reduction targets for Hong Kong and develop an integrated plan for implementation.

11. We see the importance of participation by all sectors of the community in the introduction of waste reduction measures. During the course of the study, we intend to seek views and comments from concerned parties including industry and trade organisations, environmental interest groups, educational sector, municipal councils, relevant public bodies and government departments. Arrangements are being made for establishing appropriate channels for canvassing their views on key aspects of the study. Initial findings and recommendations for a waste reduction plan will also be presented for their early comment. We envisage that the recommendations of the study will provide a firm basis for the next statutory Waste Disposal Plan.

12. Whilst we aim to reduce the amount of waste to be landfilled and to further reduce waste generation in the long term, there remains a substantial burden on waste disposal, both present and in the foreseeable future. Thus, there is still an urgent need to complete the programme of waste facilities in the 1989 Plan in order to adequately deal with the types and quantities of wastes generated in the territory. On commissioning of the strategic landfills and the network of transfer stations, Hong Kong will have a modern and efficient solid waste management system with full operational flexibility for taking on new initiatives on waste reduction in the future.