

**For discussion
on 20 April 2011**

**Legislative Council
Panel on Environmental Affairs**

**5174DR – Refurbishment and modification of Island West
transfer station**

PURPOSE

This paper seeks Members' support for the Administration's proposal to upgrade **5174DR** - Refurbishment and modification of Island West transfer station (IWTS) to Category A at an estimated cost of \$99.7 million in money-of-the-day (MOD) prices, prior to submission to the Public Works Subcommittee (PWSC) in May 2011 for consideration with a view to seeking Finance Committee (FC)'s funding approval in June 2011.

PROPOSAL AND JUSTIFICATION

2. Based on the Waste Disposal Plan for Hong Kong formulated in 1989, a network of refuse transfer stations (RTSs) and facilities were developed for bulk transfer of municipal solid waste (MSW) from the main centres of waste arisings to the strategic landfills in the New Territories. Currently, there are six RTSs serving the urban areas and new towns and seven small refuse transfer facilities serving the outlying islands. MSW collected by refuse collection vehicles (RCVs) is delivered to the RTSs where it is compacted and containerized and then transferred to the three strategic landfills by either marine or land transport. This method of transporting waste in bulk from RTSs to landfills or other waste treatment facilities is an efficient, environmentally friendly and cost effective mode of waste transfer. It greatly reduces the traffic and environmental impact associated with large number of RCVs moving in the road network.

3. At present, the IWTS at Kennedy Town and the Island East transfer station (IETS) at Chai Wan are serving as the waste reception facilities on Hong Kong Island. About 520 tonnes per day of MSW collected from the Central and Western district and part of Southern district are delivered to the IWTS for compaction and containerization, followed by

marine transfer to the West New Territories Landfill for disposal. The IWTS was originally built under “**5060DR** - Island West refuse transfer station”, with an approved project estimate of \$789.42 million in MOD prices. The waste handling facilities of the IWTS were specially designed to be housed inside a cavern to minimize impact to the surroundings. Since its commissioning in May 1997, the IWTS has been facilitating bulk transfer of MSW in an environmentally acceptable manner and greatly reduced the traffic and environmental impact. As the existing 15-year contract for the operation of the IWTS will expire on 30 April 2012, a feasibility study was commissioned in March 2010 to review the operation of the IWTS and to formulate the follow-on contract arrangements. The study confirmed that continual operation of the IWTS was necessary and crucial for efficient transfer of MSW arising from Hong Kong Island to the disposal facilities.

4. To enable the IWTS to continue with its waste transfer service after 15 years of operation, some refurbishment and modification works are required to maintain its operational efficiency. Opportunity is also taken to enhance the environmental performance of the station. The proposed works include improvement works to the cavern and access roads; enhancement and upgrading of the wastewater treatment, ventilation and air-scrubbing systems for improving their performance standards; replacement of mechanical waste compactors and refurbishment and modification of electrical and mechanical equipment required for station operation. We also propose some modification and landscaping works for improving the external appearance of the station.

5. The scope of the project comprises design and construction of the following works -

- (a) improvement works for the cavern, access roads and building façade;
- (b) enhancement and upgrading of wastewater treatment system;
- (c) enhancement and upgrading of ventilation and air-scrubbing systems;
- (d) replacement of mechanical waste compactors;
- (e) refurbishment and modification of electrical and mechanical equipment; and

- (f) landscaping works.

The proposed works are to be carried out at the IWTS and its location plan is at **Annex**. Subject to approval of Finance Committee, we plan to commence the proposed works by May 2012. Except for the mechanical waste compactors which are planned for replacement in 2018-2019, the other proposed works are planned for completion in mid-2013. During the implementation of the proposed works, the provision of waste transfer service at the IWTS will be maintained.

6. We plan to implement the proposed works and the follow-on operation under a Design-Build-and-Operate contract arrangement. The contractual operation period will be 10 years¹.

7. To support waste recovery projects and measures and to reduce waste disposal at landfills, we will make arrangements within the IWTS to facilitate the collection of certain source-separated recyclables, such as waste electrical and electronic equipment (WEEE), generated in Hong Kong Island for centralized delivery to other recycling outlets.

FINANCIAL IMPLICATIONS

8. We estimate the capital cost of the proposed works to be \$99.7 million in MOD prices.

9. The proposed works will not give rise to additional recurrent expenditure.

10. The contract management, supervision and environmental monitoring during the operation stage will be undertaken by the existing staff of the Environmental Protection Department. No additional staff and other recurrent costs will be required.

11. We estimate that the proposed works at IWTS will create 45 jobs (38 labourers and 7 professional/technical staff) providing a total employment of 490 man-months during the design and construction stage.

¹ In the paper submitted to the Panel on Environmental Affairs on 26 February 2007 on “PWP Item 5168DR – Refurbishment and Modification of Island East Transfer Station”, we have expressed the intention to consider the contract arrangements of the two transfer stations on Hong Kong Island together. For more efficient resource and contract management as well as to facilitate better synergy in the transfer of waste to the treatment facilities, we plan to operate the IWTS and IETS under a combined follow-on contract upon expiry of their existing contracts on 30 April 2012 and 31 August 2013 respectively.

PUBLIC CONSULTATION

12. We consulted the Food, Environment, Hygiene and Works Committee of the Central and Western District Council on 17 March 2011. The Committee expressed support for the project, although some members requested the concerned departments to follow up on the hygienic conditions of RCVs jointly with the trades.

ENVIRONMENTAL IMPLICATIONS

13. The existing IWTS, which commenced operation before April 1998, is an exempted designated project under the Environmental Impact Assessment Ordinance (Cap.499). For the proposed refurbishment and modification works, we completed an environmental review (ER) in March 2011. The ER concluded that the proposed works, with implementation of appropriate design and mitigation measures, would unlikely result in adverse environmental impacts.

14. Under this project, we will improve the station facilities to enhance the environmental and operational performance of the IWTS. These include installation of air curtains at appropriate locations to prevent spreading of odour, enhancement of air-scrubbing devices to further reduce odour emission, improvement of the vehicle washing facilities to ensure cleanliness of RCVs leaving the station and efficiency of the wastewater treatment plant. We will increase the frequency of cleaning on-site operational areas and nearby roads and also the frequency of environmental monitoring and audit to ensure the environmental performance of the IWTS is in full compliance with the contract and statutory requirements. We will also implement additional landscaping works to improve the external appearance of the station. During the design and construction stages, we will require the contractor to appoint an independent assessor to ensure that the environmental performance of the works comply with the contract requirements. We would include in the contract appropriate provisions to enable us to withhold payment to the contractor if there is any non-compliance with the environmental performance requirements throughout the contract period.

15. At the design stage, we will require the contractor to take measures to reduce the generation of construction waste where possible, such as avoiding the removal of existing building wall finishes as far as possible

during the façade improvement works. In addition, we will require the contractor to reuse inert construction waste (e.g. demolished concrete) on site or in other suitable construction sites as far as possible, in order to minimize the disposal of inert construction waste at public fill reception facilities. We will encourage the contractor to maximize the use of recycled/recyclable inert construction waste, and the use of non-timber formwork to further reduce the generation of construction waste.

16. At the construction stage, we will require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply with the approved plan. We will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert construction waste and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.

17. We estimate that the project will generate about 27 tonnes of construction waste. Of these, we will reuse about 2 tonnes (7.4%) on site, deliver 23 tonnes (85.2%) of inert construction waste to public fill reception facilities for subsequent reuse and dispose of the remaining 2 tonnes (7.4%) of non-inert construction waste at landfills.

Advice Sought

18. Members are invited to support the Administration's proposal to upgrade **5174DR** to Category A at an estimated cost of \$99.7 million in MOD prices for consideration by the PWSC in May 2011 with a view to seeking funding approval by the FC in June 2011.

Environmental Protection Department
April 2011

