

**For discussion  
on 20 April 2011**

**Legislative Council  
Panel on Environmental Affairs**

**5175DR – Refurbishment and modification of West Kowloon  
transfer station**

**PURPOSE**

This paper seeks Members' support for the Administration's proposal to upgrade **5175DR** - Refurbishment and modification of West Kowloon transfer station (WKTS) to Category A at an estimated cost of \$105.4 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 WKTS located at West Kowloon reclamation area is serving as the waste reception facility for Kowloon, Kwai Tsing and Tsuen Wan. About 2,240 tonnes per day of MSW collected from these areas are delivered to the WKTS for compaction and containerization, followed by marine transfer to the West New Territories Landfill for disposal. Another

470 tonnes per day of grease trap waste from restaurants and food processing establishments are received for treatment whereby the oil and grease recovered could be further processed to produce an alternative energy source (e.g. biodiesel as at present) or as an additive in other manufacturing processes. The WKTS was originally built under **5083DR** “West Kowloon refuse transfer station”, with an approved project estimate (APE) of \$808 million in MOD prices. In 2006, a grease trap waste treatment facility was built within the WKTS under **5167DR** “Provision of grease trap waste treatment facility at a refuse transfer station”, with an APE of \$85.3 million in MOD prices. Since the commissioning of the WKTS in June 1997, it 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 WKTS will expire on 18 June 2012, a feasibility study was commissioned in June 2010 to review the operation of the WKTS and to formulate the follow-on contract arrangements. The study confirmed that continual operation of the WKTS was necessary and crucial for efficient transfer of MSW arising from Kowloon and south-western part of the New Territories to the disposal facilities.

4. To enable the WKTS 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 for station buildings and access roads; enhancement and upgrading of the wastewater treatment system, grease trap waste treatment facility and ventilation and air-scrubbing systems for improving their performance standards; replacement of mechanical waste compactors and shore-based cranes (used for loading and unloading of waste containers) and refurbishment and modification of electrical and mechanical equipment required for station operation.

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

- (a) improvement works for station buildings and access roads;
- (b) enhancement and upgrading of wastewater treatment system and grease trap waste treatment facility;
- (c) enhancement and upgrading of ventilation and air-scrubbing systems;

- (d) replacement of mechanical waste compactors;
- (e) replacement of shore-based cranes;
- (f) refurbishment and modification of electrical and mechanical equipment; and
- (g) landscaping works.

\_\_\_\_\_ The proposed works are to be carried out at the WKTS and its location plan is at **Annex**. Subject to approval of the Finance Committee, we plan to commence the proposed works by June 2012. Except for the mechanical waste compactors and shore-based cranes which are planned for progressive replacement over 4 years from 2012 to 2016, 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 WKTS 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 years.

7. To support waste recovery projects and measures and to reduce waste disposal at landfills, we will allow for separation and storage of wood waste delivered to the WKTS for centralized transfer to other recycling outlets. We will also make arrangements within the WKTS to facilitate the collection of certain source-separated recyclables, such as waste electrical and electronic equipment (WEEE), generated in Kowloon for centralized delivery to other recycling outlets.

## **FINANCIAL IMPLICATIONS**

8. We estimate the capital cost of the proposed works to be \$105.4 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 will create 50 jobs (42 labourers and 8 professional/technical staff) providing a total employment of 540 man-months during the design and construction stage.

## **PUBLIC CONSULTATION**

12. We consulted the Sham Shui Po District Council on 8 March 2011. Members expressed their support for the project.

## **ENVIRONMENTAL IMPLICATIONS**

13. The existing WKTS, 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 WKTS. 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 WKTS 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 such as on-site sorting to reduce the generation of construction waste where possible. 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.

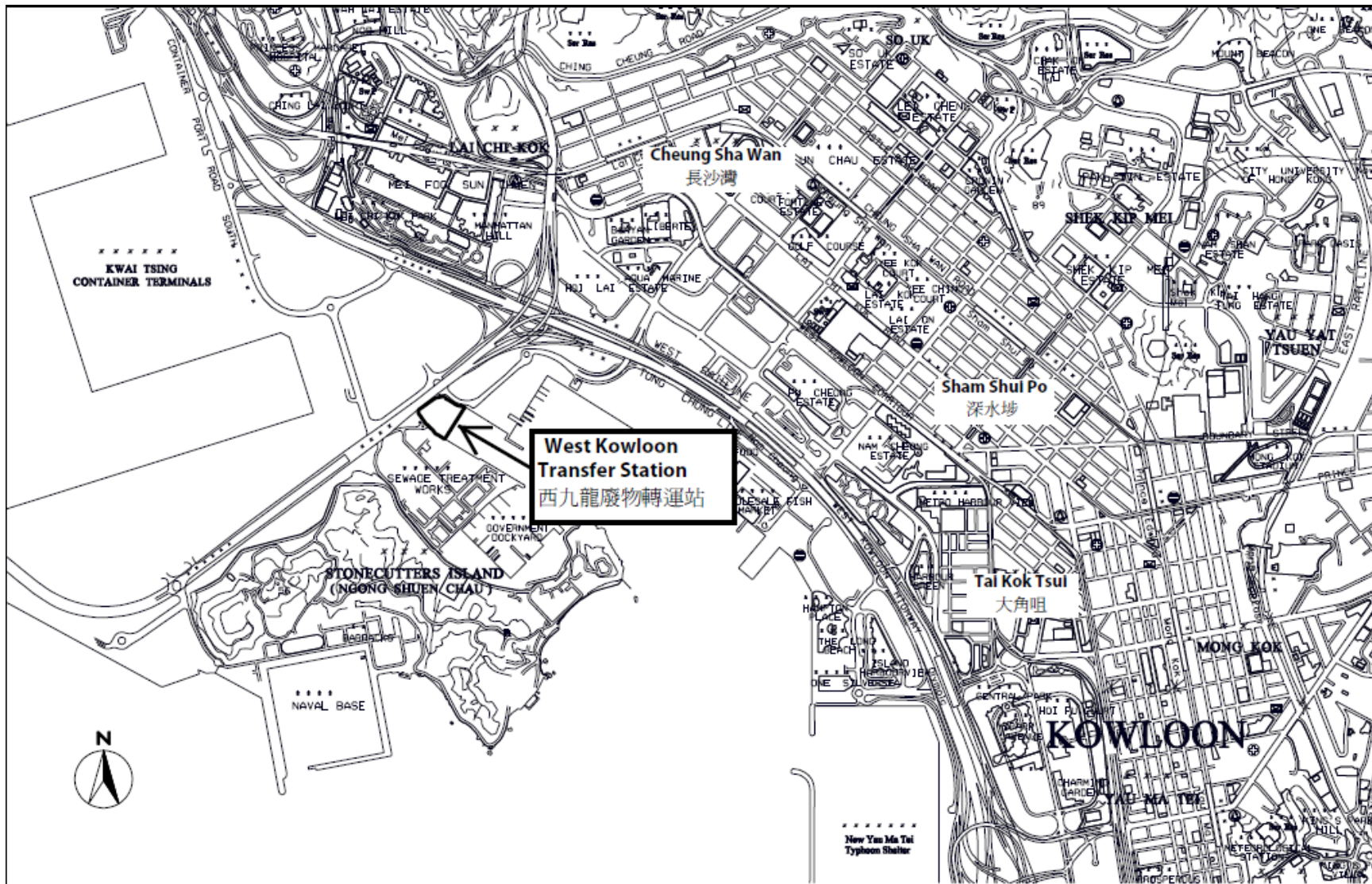
16. At the construction stage, we will require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply 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 243 tonnes of construction waste. Of these, we will reuse about 24 tonnes (10%) on site and dispose of the remaining 219 tonnes (90%) of non-inert construction waste at landfills.

### **Advice Sought**

18. Members are invited to support the Administration's proposal to upgrade **5175DR** to Category A at an estimated cost of \$105.4 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



**AECOM**

Agreement No. CE 45/2009 (EP)  
 Refurbishment and Modification of West Kowloon Transfer Station - Feasibility Study

Location of WKTS 西九龍廢物轉運站位置圖

SCALE	A4 1:20000	DATE	17 FEB 2011
CHECK	VLWK	DRAWN	DNCY
JOB No.	60158952	FIGURE No.	-
		REV	-