

**For discussion
on 25 February 2015**

**Legislative Council
Panel on Environmental Affairs**

**5183DR – Refurbishment and Upgrading of Sha Tin
Transfer Station**

PUROPOSE

This paper seeks Members' support for the Administration's proposal to upgrade **5183DR** – Refurbishment and Upgrading of Sha Tin Transfer Station (STTS) to Category A at an estimated cost of \$137.5 million in money-of-the-day (MOD) prices, prior to submission to the Public Works Subcommittee (PWSC) for consideration with a view to seeking Finance Committee (FC)'s funding approval subsequently.

PROPOSAL AND JUSTIFICATION

2. Since early 1990's, a network of refuse transfer stations (RTSs) and facilities was developed for bulk transfer of municipal solid waste (MSW) from the main areas 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 containerised 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 on the road network.

3. At present, about 1,100 tonnes per day of MSW collected from Sha Tin, Kwun Tong, Sai Kung and part of Tai Po is delivered to the STTS located at Shek Mun, Sha Tin, for compaction and containerisation followed by road

transfer to the Northeast New Territories Landfill (NENT) for disposal ^[1]. The location plan of STTS is at **Annex**. It was originally built under “5038DR – Sha Tin Refuse Transfer Station”, with an approved project estimate of \$222 million in MOD prices. Since its commissioning in October 1994, the STTS has been facilitating bulk transfer of MSW in an environmentally acceptable manner and greatly reduced the traffic and environmental impact. Upon the expiry of the original contract for the operation of the STTS in October 2009, a follow-on operation contract was awarded. As this current follow-on contract will expire on 28 October 2015, a feasibility study was commissioned in June 2014 to review the operation of the STTS and formulate the plan for the second follow-on contract. The study confirmed that continual operation of the STTS was necessary and crucial for efficient transfer of MSW arising from the north-eastern part of the New Territories and eastern part of Kowloon to the disposal facility.

4. To enable the STTS to continue with its effective waste transfer service after 21 years of operation, some refurbishment and replacement works are currently necessary to maintain its operational efficiency ^[2]. Opportunity is also taken to enhance the environmental performance of the station.

5. We also propose addition of a bulky waste treatment facility with mechanical equipment for shredding bulky waste including furniture items and wooden pallets and recovering useful materials, such as metals and wood chips, to be delivered to the recycling trade through an appropriate arrangement.

6. The scope of the project comprises design and construction of the following works:

- (a) improvement works for station buildings and access roads;
- (b) improvement and enhancement of ventilation and air-scrubbing system;
- (c) improvement and enhancement of vehicle washing facility and wastewater treatment facility;

¹ As the Southeast New Territories (SENT) Landfill and its extension will be designated to accept only construction waste in the near future, we are now implementing a waste diversion plan to ensure the MSW now delivered to the landfill from various districts will be smoothly taken up by the RTS network. There will be a change in the waste catchment of the STTS, but it will continue to serve as the major outlet of MSW arising from Sha Tin and operate within its handling capacity.

² Some minor refurbishment and modification works were carried out in 2009-2010 at a cost of \$12 million funded under block allocation Subhead 5101DX “Environmental works, studies and investigations for items in Category D of the Public Works Programme”

- (d) replacement and refurbishment of mechanical waste compactors;
- (e) replacement and refurbishment of mobile plants;
- (f) replacement and refurbishment of tractors, trailers, containers and a road sweeper;
- (g) refurbishment and modification of station electrical and mechanical equipment;
- (h) installation of a bulky waste treatment facility as mentioned in paragraph 5 above; and
- (i) landscaping works.

The proposed works are to be carried out at the STTS. Subject to approval of the FC, we plan to commence the proposed works in October 2015 and complete them by mid-2017. During implementation of the proposed works, provision of waste transfer service at the STTS will be maintained.

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

FINANCIAL IMPLICATIONS

8. We estimate the capital cost of the proposed works to be \$137.5 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. The annual expenditure for operating the STTS, which is currently about \$40 million, is to be paid by the provision under Subhead 297.

11. We estimate that the proposed works will create 30 jobs (24 for labourers and another 6 professional/technical staff) providing a total employment of 560 man-months.

PUBLIC CONSULTATION

12. We consulted the Health and Environment Committee (Committee) of the Sha Tin District Council on 8 January 2015. Members in general have no objection to the project. Nonetheless, the Committee passed a motion to request the Government to implement mitigation measures to further minimise STTS's impact on environment and traffic to the neighbourhood and report to the Committee regularly. We have replied to the Committee on 21 January 2015 agreeing to take on board the requests.

ENVIRONMENTAL IMPLICATIONS

13. The existing STTS, which has been in operation before 1 April 1998, is an exempted designated project under the Environmental Impact Assessment Ordinance (Cap.499). For the proposed refurbishment and upgrading works, we completed an environmental review (ER) in January 2015. The ER concluded that the proposed works, with implementation of appropriate design and mitigation measures, will not result in adverse environmental impacts.

14. Under this project, we will improve the station facilities to enhance the environmental and operational performance of the STTS. These include installation of air curtains at the entrance of the tipping hall to enhance prevention of odour spreading, modification of the air-scrubbing system to improve the odour removal efficiency, enhancement of the wastewater treatment facility to ensure all wastewater generated is properly treated and improvement of the vehicle washing facility to ensure all vehicles are adequately cleaned before leaving the station. The extent of street cleansing will be extended. We will also increase the frequency of environmental monitoring and audit to ensure the environmental performance of the STTS is in full compliance with the statutory requirements. 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 will 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. 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.

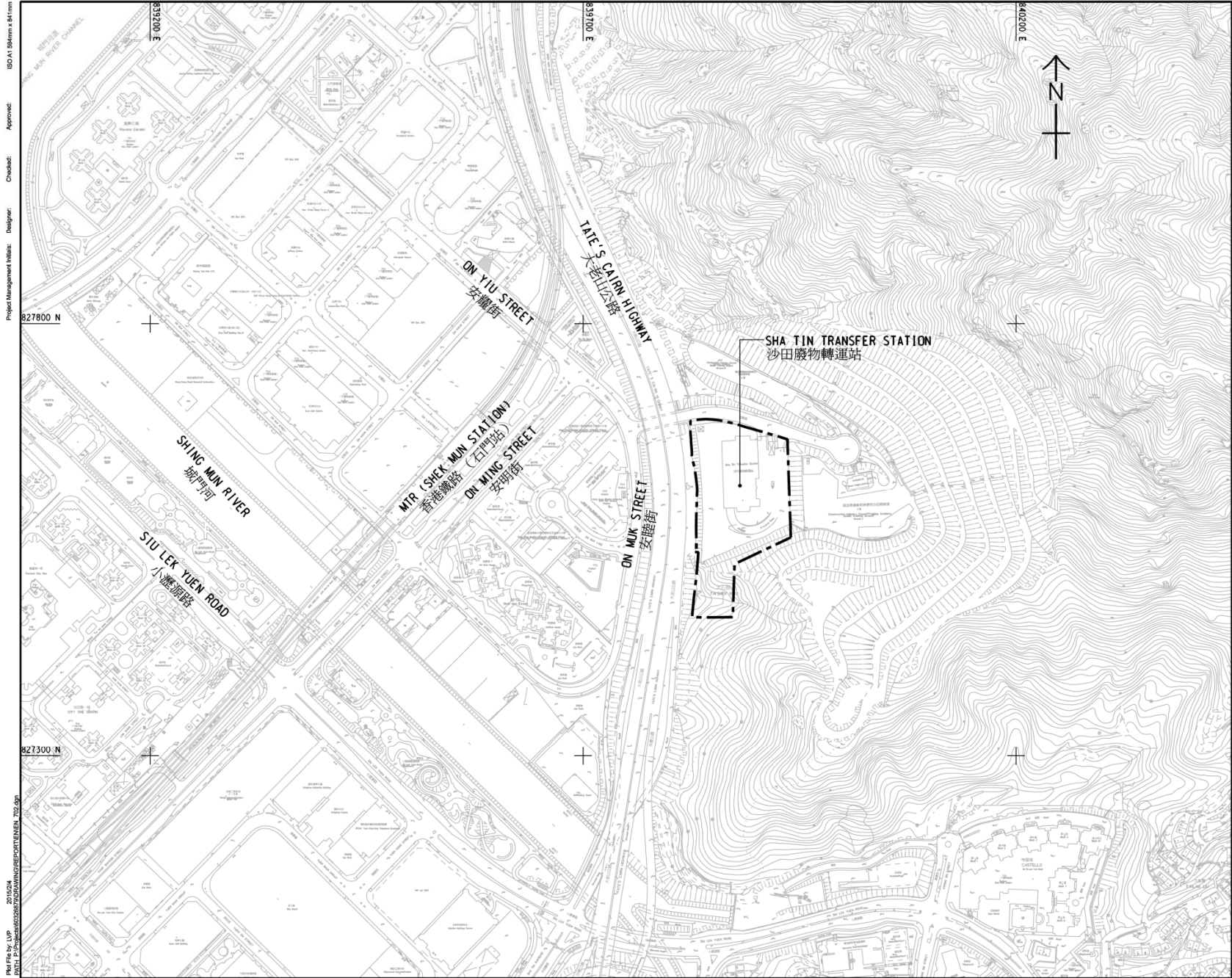
16. At the construction stage, we will require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply 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 180 tonnes of construction waste. Of this we will reuse about 15 tonnes (8%) of inert construction waste on site and dispose of the remaining 165 tonnes (92%) of non-inert construction waste at landfill. The total cost for accommodating the non-inert construction waste at landfill sites is estimated to be \$20,625 for this project (based on a unit charge rate of \$125 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation).

Advice Sought

18. Members are invited to support the Administration's proposal to upgrade **5183DR** to Category A at an estimated cost of \$137.5 million in MOD prices for consideration by the PWSC with a view to seeking funding approval by the FC subsequently.


Environmental Protection Department
February 2015



Project Management Initials: Designer: Checklist: Approved: IBD A1 584mm x 841mm
 2017/05/24
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 Prepared by: LUP
 Checked by: LUP
 Drawn by: LUP
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AECOM

PROJECT
 REFURBISHMENT AND UPGRADING OF SHA TIN TRANSFER STATION - FEASIBILITY STUDY

CLIENT

 Environmental Protection Department

CONSULTANT
 AECOM Asia Company Ltd.
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SUB-CONSULTANTS

ISSUE/REVISION

| NO. | DATE | DESCRIPTION | CHK. |
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STATUS

SCALE **DIMENSION UNIT**
 A1 1 : 2000 METRES

KEY PLAN

PROJECT NO. **CONTRACT NO.**
 60326879 CE 15/2013(EP)

SHEET TITLE
 沙田廢物轉運站位置
 LOCATION OF SHA TIN TRANSFER STATION

SHEET NUMBER
 60326879/EN/FIGURE 2