

For Discussion  
on 26 March 2007

**Legislative Council Panel on Environmental Affairs**  
**Waste Disposal (Designated Waste Disposal Facility)**  
**(Amendment) Regulation 2004 and**  
**Waste Disposal (Charges for Disposal of Construction Waste) Regulation**  
**Progress Report on**  
**Construction Waste Disposal Charging Scheme**

**PURPOSE**

This paper presents an update on the progress in implementing the Construction Waste Disposal Charging Scheme (the scheme) and reports the findings from a review of the scheme since the charges for disposal of construction waste were levied on 20 January 2006.

**BACKGROUND**

2. The enabling legislation, Waste Disposal (Amendment) Ordinance 2004, for the introduction of the scheme was passed by the Legislative Council on 2 July 2004 and its two subsidiary regulations were passed on 5 January 2005. The scheme was implemented on 1 December 2005 and the levying of disposal charges commenced on 20 January 2006.

3. To recap, the scheme comprises the following features: -

- (a) to allow different designated waste disposal facilities, i.e. landfills, sorting facilities and public fill reception facilities, to accept various types of construction waste at different charge rates as follows:

<b>Designated Waste Disposal Facilities</b>	<b>Type of construction waste accepted</b>	<b>Charge per tonne<sup>1</sup></b>
Landfills <sup>2</sup>	Containing not more than 50% by weight of inert construction waste <sup>3</sup>	\$125
Sorting facilities	Containing more than 50% by weight of inert construction waste	\$100
Public fill reception facilities	Consisting entirely of inert construction waste	\$27
Outlying Islands Transfer Facilities <sup>2</sup>	Containing any percentage of inert construction waste	\$125

- (b) to require major waste producers, i.e. construction contractors undertaking construction works under contracts with value of \$1 million or above, to open dedicated billing accounts for the contracts and pay waste disposal charges direct to the Government;
- (c) to require other waste producers, including construction contracts with value less than \$1 million and for general construction waste disposal arrangement, to open general billing accounts and pay waste disposal charges direct to the Government; and
- (d) to exempt all construction contracts that were awarded or tenders of which were closed before the commencement of the scheme, i.e. before 1 December 2005.

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<sup>1</sup> Except for the Outlying Islands Transfer Facilities, the minimum charge load is 1 tonne, i.e. if a load of waste weighs 1 tonne or less, it will be charged as 1 tonne. A load of waste weighing more than 1 tonne will be charged at 0.1 tonne increment. For Outlying Islands Transfer Facilities, the charge is \$12.5 per 0.1 tonne and the minimum charge load is 0.1 tonne.

<sup>2</sup> If a load of waste contains construction waste and other waste, that load will be regarded as consisting entirely of construction waste for the purpose of calculating the applicable charge.

<sup>3</sup> Inert construction waste means rock, rubble, boulder, earth, soil, sand, concrete, asphalt, brick, tile, masonry or used bentonite.

4. A Tripartite Working Group (TWG)<sup>4</sup> was established for close liaison with the trade in enabling better understanding of the scheme as well as to discuss and work out the operational details during its implementation. A total of 14 meetings were held from September 2004 to late 2006.

## LATEST PROGRESS

5. The scheme is a waste reduction measure based on the “polluter pays” principle. Through the scheme, an economic disincentive is introduced to encourage the construction waste producers to reduce, sort, recycle and reuse construction waste. With the collaboration of the trade, the scheme was successfully launched on 1 December 2005 and it has been running smoothly since we started to levy the charges on 20 January 2006. Up to end 2006, the combined average amount of construction waste disposed of at landfills, sorting facilities and public fill reception facilities was 21,800 tonnes per day (tpd), which represented an overall reduction of around 25% when compared to the average figure of 29,100 tpd in 2005. The average quantity of construction waste disposed of at the 3 landfills was reduced from 6,600 tpd to 4,000 tpd, representing a reduction of almost 40%. The breakdown is given in **Annex 1**.

6. In order to strengthen our efforts in managing construction waste generated from the public sector, the Government introduced a new requirement in December 2005 requiring contractors of all public works contracts to prepare and implement an Environmental Management Plan (EMP). Under the EMP, arrangement for and conducting on-site sorting of construction waste is mandatory under the relevant contractual provision and payment item. In addition, discussion was made with the construction trade<sup>5</sup> to introduce appropriate waste management measures to the private sector. These efforts also contributed to the above reduction of construction waste disposed of at the waste disposal facilities.

7. The handling and processing of account applications have been

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<sup>4</sup> Members of TWG include representatives from the construction trade and waste haulers, covering The Real Estate Developers Association of Hong Kong (REDA), The Hong Kong Construction Association (HKCA), The Hong Kong General Building Contractors Association, Contractor’s Authorized Signatory Association Limited, The Hong Kong Construction Sub-Contractors Association, Hong Kong Kowloon and N.T. Grab-mounted Lorries Association Limited, Hong Kong Dumper Truck Drivers Association, Hong Kong Waste Disposal Industry Association, Hong Kong Kowloon Taxi & Lorry Owners’ Association Limited, Motor Transport Workers General Union and Environmental Contractors Management Association.

<sup>5</sup> Discussion with the trade through a Task Force under the former Provisional Construction Industry Co-ordination Board [PCICB, now established as Construction Industry Council (CIC)].

managed in a smooth and effective manner. By the end of 2006, the Environmental Protection Department (EPD) received more than 12,500 applications for opening accounts, including about 9,100 applications (73%) for exemption accounts; 1,100 applications (9%) for billing accounts for construction work contracts with a value of \$1 million or above; and 2,300 applications (18%) for construction work contracts with a value less than \$1 million and general construction waste disposal arrangement. The revenue collected up to the end of December 2006 amounted to \$55 million.

8. With the implementation of the scheme, EPD has also stepped up enforcement control action against illegal disposal of construction waste. Between January and December 2006, EPD conducted about 5,000 regular inspections and ambushes at blackspots known for such activities. In connection with the fly-tipping of construction waste, a total of 8 convictions were made in accordance with the Waste Disposal Ordinance and 6 fixed penalty notices were issued. In addition, we have been liaising closely with Government departments and the private sector, including the property management sector, to implement measures to prevent illegal dumping. Although there was a significant increase in complaint cases on fly-tipping activities in 2006, from 365 cases in 2005 to 1,587 in 2006 (1,546 cases from 20 January to 31 December 2006), we noted that most of the complaint cases were small scale roadside dumping activities. The daily average of fly-tipped construction waste handled by various Government departments<sup>6</sup> was about 35 tpd in 2006, which represented around 0.2% of the total construction waste disposed of at the designated waste disposal facilities per day. There was no indication of increase in large scale fly-tipping activities in rural or remote areas.

9. Moreover, in order to send a strong message to the trade that the Hong Kong community is also keeping a close eye, EPD is developing a pilot construction waste fly-tipping spotter scheme. Certain districts will be selected for trial, such as those with high number of fly-tipping complaints. The programme will be publicized and spotters will be recruited from the selected districts. It is envisaged that this pilot spotter scheme will be launched later in 2007.

10. The Government has prepared a set of guidelines for undertaking enforcement actions to guard against malpractices in the disposal of construction

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<sup>6</sup> The Government departments concerned include Highways Department, Food and Environmental Hygiene Department, Agriculture, Fisheries and Conservation Department, Lands Department, and Civil Engineering and Development Department.

waste at designated waste disposal facilities. In particular, regular inspection checks are carried out to identify any malpractice of disguising construction waste as municipal solid waste (MSW) for disposal at landfills. Up to December 2006, some 350 vehicle loads of MSW were identified to be carrying construction waste. This represented about 0.14% of the total construction waste loads received during the same period. These vehicles were rejected for entry to the landfills. EPD had issued a total of 26 written warnings and 104 verbal warnings during the checking operations at landfills; whereas CEDD had also issued 6 warning letters to users delivering mixed construction waste to public fill reception facilities. We will continue to maintain vigilant control against such malpractices.

11. Overall speaking, the scheme has been successfully introduced and is considered to be an effective measure in the reduction of construction waste.

## **REVIEW ON ISSUES CONCERNING THE TRADE**

12. After the scheme had been operated for 6 months, the Government in collaboration with the trade conducted a review on various items that the trade had concerns with before or during the implementation of the scheme, including:

- Waste Acceptance Criteria;
- Definition of Construction Waste;
- Handling of Account Applications and Issuance of Chit <sup>7</sup>
- Merging of Chit and Disposal Delivery Form <sup>8</sup>
- Level of Deposits;
- Public Fill Delivery by Vessels;
- Additional Sorting Facility in north-east New Territories area; and
- Opening Hours of Tseung Kwan O Sorting Facility

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<sup>7</sup> For the purpose of implementing the scheme, the EPD has set up a Chit System under the Waste Disposal (Charges for Disposal of Construction Waste) Regulation and each registered account holder is issued with books of chits by EPD. Each vehicle load should bear a valid chit for disposal of construction waste at the Designated Waste Disposal Facilities.

<sup>8</sup> For the purpose of fly-tipping control, an internal technical circular [ETWB(Works) 31/2004] was issued by the Government in setting up a Trip Ticket System (TTS) to ensure that every vehicle load of construction waste arising from a public works contract will be delivered to a disposal facility assigned by the Engineer Representative (ER) of the contract. The TTS is operated through the Disposal Delivery Form (DDF) issued by the ER.

13. In general, the review concluded that the scheme had been operated in an effective and efficient manner. We have also consulted the trade through the TWG on the review results. The review findings and areas for improvement to enhance the overall efficiency of the operation of the scheme are summarized below.

### **Waste Acceptance Criteria**

14. In accordance with Section 3A(3) of the Waste Disposal (Designated Waste Disposal Facility)(Amendment) Regulation, the Government gazetted the acceptance criteria through the Gazette Notice GN6395 issued on 5 December 2005. The criteria are primarily based on the percentage of Net Weight over Permitted Gross Vehicle Weight [% Nt Wt/PGVW] for different types of vehicles. The review findings indicated that these criteria are generally pragmatic. The trade is now accustomed to the criteria and consider that they are acceptable. It was therefore concluded that the existing acceptance criteria should continue to be adopted.

15. However, there were special cases of vehicles carrying a full load of non-inert materials such as bamboos, wood and timber that would meet the above acceptance criteria for disposal at sorting facilities. As such materials could not be sorted, the disposal of these materials at the sorting facilities would adversely affect their operational efficiency. The review concluded that the gazette notice could be amended to allow those vehicles carrying full loads of non-inert materials to dispose of those wastes at landfills.

### **Definition of Construction Waste**

16. The trade has gained experience in understanding the definition of construction waste under the scheme and is accustomed to the definition for managing and disposing of their waste. There was no specific concern on the definition during the review. The only exception was as to whether waste concrete from concrete batching plants should fall into the definition of construction waste. The legal advice was that such waste might not be regarded as construction waste as defined in the relevant ordinance and regulations. The Government is now working with the trade to receive such waste as non construction waste. In the long term, the Government would consider a revision of the definition under the ordinance/regulations to include such waste.

## Handling of Account Applications and Issuance of Chit

17. We had conducted a comprehensive review on the procedures in processing and handling the account applications and issuance of chits as well as the design of various application forms and the chit. In conclusion, we considered that the procedures were adequate. Some areas for enhancement were identified in the review such as the provision of guidance leaflet and checklist of supporting documents to be included in the applications, minor amendment of the application form, streamlining the procedure for replenishment of chits when the payment has been settled at the time of applying for chit replenishment, etc.

## Merging of Chit and Disposal Delivery Form

18. The formats of the chit and the disposal delivery form are very similar although they are derived from two different waste management systems for different purposes. There were demands from the trade to merge these two systems in order to streamline the handling effort by the client and contractor site staff as well as the haulers. The Government is now taking steps to work out the details and arrangements for merging these two systems. The trade will be consulted further on the operational arrangements once they are available.

## Level of Deposits

19. We had reviewed the operation of the two-tier system<sup>9</sup> for billing account deposits and the feasibility of applying a flat rate of deposit for all billing accounts. The review indicated that, based on the average waste load per vehicle received at the waste disposal facilities, the average disposal charge would be about \$450 for each chit<sup>10</sup>, which is higher than the deposit we are

<sup>9</sup> The deposit for construction contract with a value of \$1 million or above is charged at a minimum of \$15,000 for 200 chits. If additional chits are required, additional deposit is charged on a pro-rata basis. For construction contract with a value less than \$1 million and general construction waste disposal arrangement, a deposit of \$300 for each chit is required.

<sup>10</sup> The breakdown is given in the following table:

Designated Waste Disposal Facilities (DWDF)	No. of loads received at the DWDF	Total chargeable weight (in tonnes)	Average chargeable weight per load (in tonnes)	Average charge per load (\$ / load)
Outlying Islands Transfer Facilities	44,663	40,684.60 <sup>b</sup>	0.91	114
Landfills	327,403	1,371,970.90 <sup>c</sup>	4.19	524
Sorting Facilities	168,233	1,462,149.40 <sup>d</sup>	8.69	869
Public Filling Reception Facilities	524,372	6,063,172.40 <sup>e</sup>	11.56	312
Overall	1,064,671 <sup>a</sup>	8,937,977.30	8.40	457 <sup>f</sup>

[As of end Dec 2006]

[f = [(b x \$125) + (c x \$125) + (d x \$100) + (e x \$27)] divided by a]

applying at present. Consideration could be given to increase the deposit level in order to safeguard the revenue received by the Government. However, in view of the very low bad debt encountered<sup>11</sup>, we considered that the current level of deposits was still adequate to cover the risk of bad debt. In addition, the two-tier system has been operating in a satisfactory manner and the trade has not requested for a flat rate to be applied for all billing accounts. We therefore concluded that the current two-tier system and level of deposits should continue.

### **Public Fill Delivery by Vessels**

20. We also reviewed the procedures for delivery of inert construction waste to public fill reception facilities by vessels. During the review, we noted that the procedures were carried out in an effective and efficient manner. The trade had no comment on the established procedures.

### **Additional Sorting Facility in north-east New Territories area**

21. At present, there are 2 sorting facilities established at Tsung Kwan O and Tuen Mun. However, the waste haulers had demanded to establish an additional sorting facility in the north-east New Territories area, preferably near the Northeast New Territories Landfill at Ta Kwu Ling, to meet the demand of disposal of construction waste requiring sorting. The Government had conducted an analysis to evaluate this demand. The review findings indicated that the amount of construction waste from the north-east New Territories area requiring disposal at the two sorting facilities was very small, with an average of some 25 loads per day (or around 200 tonnes per day) and the handling capacity of the two existing sorting facilities was sufficient to meet this demand. The cost-effectiveness of setting up an additional facility was highly questionable. The Government concluded that the need of an additional facility was not justified.

### **Opening Hours of Tseung Kwan O Sorting Facility**

22. The opening hours of Tseung Kwan O Sorting Facility (TKOSF) were from 8:00 am to 9:00 pm. The closing time was temporarily extended to 11:00 pm by a contract variation to tie in with the opening hours of the adjacent Southeast New Territories (SENT) Landfill. However, it was noted that the usage rate of TKOSF from 9:00 pm to 11:00 pm had been very low, with an

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<sup>11</sup> Up to end December 2006, there were 3 outstanding cases of bad debt amounting to \$15,000.

average of only less than 10 loads during this 2-hour period. While the Government considered that the cost-effectiveness of the extended hours was very low but in view of the demand from the trade, we would continue to monitor the usage rate from 9:00 pm to 11:00 pm and review the situation in due course.

### **ADVICE SOUGHT**

23. Members are invited to note the above latest progress as well as the review results.

Environmental Protection Department  
March 2007

**Annex 1**

**Breakdown of construction waste disposed of daily  
at various Designated Waste Disposal Facilities  
before and after the implementation of  
the Construction Waste Disposal Charging Scheme  
[up to 31 Dec 2006]**

<b>Designated Waste Disposal Facilities</b>	<b>Before Charging (1 Jan – 31 Dec 05) [a]</b>	<b>After charging (20 Jan - 31 Dec 06) [b]</b>	<b>% reduction [c] = {[a] - [b]}/[a]</b>
Landfills	6,600 tpd	1,200 tpd (after excluding 2,800 tpd from two Sorting Facilities)	<b>~40%</b> (after including the sorted construction waste from two Sorting Facilities)
Sorting Facilities	N/A	4,200 tpd <sup>12</sup>	
Public Fill Reception Facilities	22,500 tpd	16,400 tpd (after excluding 1,200 tpd from two Sorting Facilities)	
<b>Overall</b>	<b>29,100 tpd</b>	<b>21,800 tpd</b>	<b>~25%</b>

<sup>12</sup> The remaining amount of construction waste is reused or temporarily stored on site at the sorting facilities.