

Annex

**Meeting of Public Works Subcommittee held on 8 April 2014
Supplementary Information Requested by Members**

172DR – Organic waste treatment facilities phase 1

Purpose

At the Public Works Subcommittee meeting held on 8 April 2014, members requested the Administration to provide supplementary information on the proposed organic waste treatment facilities (OWTF) phase 1. This paper provides the information requested.

Breakdown of Estimated Annual Recurrent Expenditure

(Item 1 of the list of issues requiring follow-up actions by the Administration)

2. We estimate that the annual recurrent expenditure arising from the proposed works to be about \$72.4 million, comprising the costs of

- (i) operating, maintaining and repairing the OWTF phase 1 facilities;
- (ii) receiving, treating and recycling 200 tonnes of food waste per day into biogas and compost;
- (iii) utilizing the biogas to generate electricity to run the facilities;
- (iv) exporting the surplus electricity; and
- (v) engaging civil servants to supervise and manage the operation of the OWTF and other departmental expenses.

Recycled Resources

(Item 2 of the list of issues requiring follow-up actions by the Administration)

3. OWTF phase 1 recycles food waste and produces two products: biogas and compost.

4. Compost is an organic fertilizer and could be used in planting, landscaping and agriculture activities. Compost can also be used for

improving soil structure, enhancing water retention ability and reducing soil erosion rate. According to the experience learned from the pilot food waste composting plant at Kowloon Bay, the food waste-turned-compost is good in quality and there is a market demand on compost products in Hong Kong. Users of the pilot plant compost include local organic farms, schools, Leisure and Cultural Services Department, Housing Department, and Agriculture, Fisheries and Conservation Department. Feedback from the users has been very positive.

5. The OWTF phase 1 will produce about 7,000 tonnes of compost per year. We estimate that the demand of compost / fertilizer in Hong Kong of around 20,000 tonnes per annum should be able to fully absorb the compost produced from the OWTF.

6. The biogas produced from the OWTF is a renewable energy and can be used to generate electricity. Apart from the OWTF's internal use, we estimate that about 14 million kWh of surplus electricity can be exported each year upon full operation. We have studied and confirmed the technical feasibility and cost effectiveness of electricity export in the detailed feasibility study. We have also explored with a power company the viability of connecting OWTF Phase 1 to the existing grid and found it feasible for the Government to pursue this matter further. We plan to export the surplus electricity to the nearby government facilities including Drainage Services Department's Siu Ho Wan Sewage Treatment Works and Water Services Department's Siu Ho Wan Water Treatment Works, and the existing power grid of a power company.

Traffic Impacts

(Item 3 of the list of issues requiring follow-up actions by the Administration)

7. We assessed the cumulative traffic impact due to the proposed project under the detailed feasibility study. The proposed OWTF site is served by a local road network comprising Cheung Tung Road and Sham Fung Road adjacent to the North Lantau Highway, and vehicular access point will be provided at Sham Fung Road. During operation, we estimate that about 50 food waste collection vehicles will enter and leave the OWTF each day. The impact of the additional traffic generated from the project to the existing road

network in Lantau is minimal and the resulting cumulative traffic at major road junctions would be less than 10% of the design traffic flow capacity. The traffic impact assessment has indicated that the traffic impact due to the proposed project is insignificant.

Environment Bureau
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April 2014