

CB(1)1467/06-07(02)

For Information

**Subcommittee on
Sewage Services (Sewage Charge) (Amendment) Regulation 2007,
Sewage Services (Trade Effluent Surcharge) (Amendment) Regulation
2007 and
Technical Memorandum on Procedures and Methods for Sampling and
Analysis of Trade Effluents**

**Information on Issues raised by Members at the Meetings
on 19 April 2007 and 24 April 2007**

Purpose

In response to requests made by Members at the Subcommittee meetings on 19 April 2007 and 24 April 2007, this paper provides further information on the following topics:

- (a) Use of reclaimed effluents under the Total Water Management programme in Hong Kong;
- (b) Government's commitment to improve water quality in Victoria Harbour through commissioning HATS 2A as soon as possible and taking all necessary steps to ensure timely implementation of HATS 2B, including conducting comprehensive site search for building the biological treatment plant under Stage 2B and undertaking ongoing works in addressing the planning, interface and development issues involving the site;
- (c) Government's commitment to shoulder the capital costs of the sewage services amounting to about \$20 billion over the coming ten years, while promoting a scheme to enhance the cost recovery rate of sewage charge from about 54% to about 80% of the operational cost in a decade. While the scheme will realize a sustainable approach in the provision of sewage services based on the polluter-pays principle widely supported by LegCo and the community at large, a mechanism for undertaking regular reviews will be put in place in future taking into account public

affordability and cost-effectiveness of services provision.

Use of Reclaimed Effluents under the Total Water Management Programme in Hong Kong

2. The Government is committed to implementing the Total Water Management programme in which water conservation and water resource protection are enhanced through education and promotion, while examining technologies for recycling and desalination through pilot schemes. In respect of reused effluents, two demonstration schemes have been introduced by the Government since 2005. The Ngong Ping Sewage Treatment Works (NPSTW) came into operation in late 2005. Being the first tertiary treatment plant in Hong Kong, NPSTW makes use of advanced biological, filtering and disinfection processes. The resultant reclaimed water is purified and odourless and is safe for a wide range of non-potable uses. The reclaimed water produced by NPSTW is being used for toilet flushing in nearby public toilets as well as those in the Ngong Ping Cable Car Terminal and related tourism facilities. Part of the reclaimed water is also used inside the treatment works for rearing aquarium fishes and for controlled irrigation. The experience obtained from this pilot scheme will shed light on the feasibility of extending the use of reclaimed water in other parts of the territory.

3. Apart from NPSTW, the Demonstration Scheme on Reclaimed Water Uses in the North District came into operation in October 2006. A small portion of the secondary effluent of the Shek Wu Hui Sewage Treatment Works (SWHSTW) is treated further by a pilot advanced treatment facility installed inside the plant and comprising membrane filtration and disinfection (chlorination). By means of a temporary pipeline or water tankers as appropriate, the reclaimed water is supplied to a number of local designated users including schools, elderly home and village house for uses such as toilet flushing, irrigation and other water features.

4. A monitoring programme has been set up under the scheme with measurements made and samples being collected and analysed for gauging the quality of reclaimed water and the performance of the demonstration advanced treatment facility. Feedback from the users will also be collected for a review to be completed in late 2008. It is hoped that the scheme can demonstrate

economic, environmental and technical feasibility as well as sufficient system reliability of the reclaimed water treatment processes to pave the way for future applications.

Government's commitment on timely implementation of HATS Stage 2

5. Government will spare no efforts in improving water quality in Victoria Harbour. We are committed to commissioning HATS Stage 2A as soon as possible to make further improvements to the water quality in the harbour. Once the proposed SC increment scheme is endorsed, the Government will seek funding for the next Stage 2A-related project so that Stage 2A will be fully commissioned in 2014 as scheduled. The Government has also undertaken to implement HATS Stage 2B in a timely and cost-effective manner.

Site search for the construction of the biological treatment plant under HATS Stage 2B

6. Our commitment to implementing HATS Stage 2B is clearly manifested by, amongst other things, the work undertaken to secure the site for building the future biological treatment plant under HATS 2B. We have conducted studies and trials and concluded that even a very compact plant could not be accommodated within the Stonecutters Island Sewage Treatment Works (SCISTW) site. Separately, we have conducted a comprehensive site search and selection exercise for the plant site under the study "Environmental and Engineering Feasibility Assessment Studies in Relation to the Way Forward of the Harbour Area Treatment Scheme" (EEFS) in 2004.

7. Given that under the scenarios recommended by the International Review Panel for further detailed study and site searches at least 70% of the harbour area sewage would continue to be treated at or adjacent to Stonecutters Island, a total of 25 pieces of land on Stonecutters Island were long-listed after initial screening (Annex A showing some sites which were considered at the initial stage). Thereafter, we first screened out those sites that were both too small and not capable of being used in combination with other sites to achieve the required size for the construction of the sewage treatment works (STW). A total of 22 possible sites were thus identified and evaluated for further short-listing to provide the land needed at Stonecutters Island. At the final

stage, two pieces of land were short-listed for further detailed engineering evaluation: the Government Dockyard and the identified 2B Site (shown in the map in Annex B). With regard to the Dockyard, the study noted that it was only relocated to its current position recently and suitable alternative sites for a dockyard close to Victoria Harbour were unlikely to be available in the foreseeable future, thus posing constraints to development of a STW at the site.

8. After detailed assessment of their relative merits on social and institutional, environmental, engineering and cost grounds, the identified HATS 2B Site was recommended to be the site for constructing the biological treatment plant on Stonecutters Island under Stage 2B.

Planning, interface and development issues involving the HATS 2B site

9. As explained in the paper CB(1)1435/06-07(02) issued on 23 April 2007, we propose that the biological treatment plant under Stage 2B be constructed underground so that container-related uses can be accommodated above it. At present, there are two other bureaux/departments involved in the process of addressing the issue of planning, interface and development of the site.

10. As advised by the Highways Department, under the Railway Development Strategy 2000 promulgated by Government in May 2000, the site concerned has been identified for the Port Rail Terminal of the Port Rail Line (PRL). The PRL will allow direct cross-boundary freight services through Lo Wu to the Kwai Chung ports and support the growth of the port cargo by tapping freight from the deep hinterland of the Mainland, and thus benefiting the economy. Implementation of the PRL will depend on cross-boundary freight build-up. The KCRC is currently exploring whether it would be commercially viable to implement the proposed PRL. Since the proposed co-use development model would not adversely affect the viability of the PRL project, the Highways Department has no objection to the proposed co-use with HATS Stage 2B.

11. On the other hand, the Economic Development and Labour Bureau (EDLB) advised that the site is zoned "Other Specified Uses" annotated "Container Related Uses" on the outline zoning plan (OZP). As such, logistics facilities and port back-up uses such as 'Cargo Handling and

Forwarding Facility', 'Container Storage/Repair Yard' and 'Container Vehicle Park/Container Vehicle Repair Yard' are permitted uses under the existing plan. The site is strategically located in the proximity of container terminals and the above logistics and port back-up uses are essential to the logistics industry and the Hong Kong Port. Under the proposed future co-development, we would endeavour to ensure that uses for these logistics and port back-up facilities will not be adversely affected.

12. We will press ahead with the discussion on the planning, interface and development issues concerned with co-use of the site so that we can proceed with the statutory planning procedures for an amendment of the zoning plan. The target for completion of the above process will be around the latter part of 2010.

Timing for the implementation of HATS Stage 2B

13. The Government has committed to conduct a comprehensive review of the optimal timing of implementing HATS 2B in 2010/11. By then we will be able to take into account the latest progress on dual use of the site and technological advancements relating to biological treatment, as well as additional field data on the planning parameters for Stage 2B. We will set out the scale and timing of the project, and provide an updated estimate of the cost of Stage 2B. In the review, we will also fully take into account public aspirations for a cleaner Victoria Harbour as well as the need to implement the polluter-pays principle in the provision of sewage services.

Mechanism for undertaking regular reviews of the fee levels during the 10-year period

14. In considering the proposed SC increment scheme, we need to bear in mind -

- (a) Government will continue to shoulder the capital costs of sewage services amounting to around \$20 billion over the coming decade to fulfill our commitment to further improve the water environment in Hong Kong;
- (b) The proposed increase in the cost recovery rate for the sewage

charge from about 54% to about 80% in ten years will encourage the community to reduce sewage and facilitate long-term sustainability;

- (c) The increment scheme will ensure that future adjustments will remain modest, gradual, and affordable to the public, while providing certainty to all parties concerned including the trades;
- (d) The scheme will allow sewage treatment infrastructure, including HATS Stage 2A which will bring about further significant improvements to the harbour environment, to proceed in earnest, and the sustainable approach based on the polluter-pays principle to take root in the community. This will provide a solid foundation for us to proceed to higher stages of wastewater treatment when it is needed; and
- (e) That adoption of the proposed increases will clearly demonstrate the enduring commitment of LegCo and the community to supporting long-term policies to sustain continual improvement of the water environment in Hong Kong.

15. At the Subcommittee meeting on 24 April 2007, a number of Members asked about the mechanism for undertaking regular reviews of the fee levels during the 10-year increment period. Given the long projection period, there could be deviations in factors affecting the revenue and expenditure accountable under the SC as compared with the assumptions now used. We have made a public commitment that the Administration will monitor the recovery rate annually and unless the deviations are very substantial and persistent, we do not propose to review and adjust the SC in the coming ten years once our finalized proposals for the increments are endorsed by the legislature. This will provide certainty to all parties concerned.

16. In regard to the provision of sewage services infrastructure, Members of LegCo will continue to play an important and pivotal role. All major sewerage and sewage treatment infrastructure will be subject to the scrutiny and funding approval of the LegCo Public Works Sub-committee and the Finance Committee. Under the Environment Impact Assessment Ordinance (EIAO), sewage treatment works also have to go through the environmental

impact assessment (EIA) process and be subject to public comment and scrutiny.

17. To address Members' concerns about the need to continue to monitor the future economic impact of the SC increments on households and the trades, and to maintain an oversight on the cost-efficiency of the sewage services, we propose that, following the approval of the legislative proposals relating to the adjustment of the sewage charge in accordance with the polluter-pays principle, the following information will be compiled and release to LegCo and the public during the coming mid-term reviews:

- (a) Summary of the Sewage Services Operating Accounts of the previous period and a financial projection of the accounts for the coming period, including actual and projected recovery rates of the operating costs allocated to the sewage charges. Members will be able to compare the actual recovery rates and the projected recovery rates;
- (b) An assessment, in conjunction with Government Economist, of the economic impact of the prevailing and projected SC rates on households and the trades, taking into account the prevailing economic conditions;
- (c) An account of savings and efficiency measures undertaken by the Drainage Services Department over the review period, and the plans for further improvements for the coming period; and
- (d) An account of water quality trends and other relevant planning parameters over the past period, and a projection for the coming period.

Conclusion

18. We are fully aware of the aspirations of the community to see clean seas and clear waters, and will endeavour to implement HATS Stage 2A as soon as possible to bring about early improvements, while undertaking all necessary works to ensure timely and cost-effective implementation of HATS 2B. The proposed SC increment scheme is the key to our efforts to promote a

sustainable approach in the provision of sewage services based on the polluter-pays principle. We will conduct regular mid-term reviews in future to ensure that our sewage services will remain affordable and cost-effective, while continuing to contribute to further improvements in the water environment of Hong Kong.

Environmental Protection Department
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