

**Public Works Subcommittee
Follow-up to meeting on 8 April 2014**

PWSC(2014-15)3

**401DS – Feasibility study on relocation of Sham Tseng sewage
treatment works to caverns**

PWSC(2014-15)4

**402DS – Feasibility study on relocation of Sai Kung sewage treatment
works to caverns**

**Supplementary information on the preliminary assessments of the
relocation projects**

According to the Broad Technical Assessment (BTA) conducted by the Civil Engineering and Development Department (CEDD), the geology of the proposed sites for relocation of Sham Tseng sewage treatment works (STSTW) and Sai Kung sewage treatment works (SKSTW) is considered suitable for rock cavern development.

2. Based on our experience in the Stanley sewage treatment works (an existing sewage treatment works constructed in caverns), there should not be any insurmountable technical problems for implementing the two relocation projects. As the proposed receiving sites are close to the existing sewage treatment works, the projects will require relatively little modification to the upstream and downstream sewerage, thereby minimising the overall costs of the relocation projects. Moreover, a comparison between the Stanley sewage treatment works and the existing SKSTW with a similar sewage treatment capacity suggests that housing sewage treatment works in caverns will not lead to significant increase in the operating cost.

3. Concerning the potential impacts that may be brought by the construction works, the results of the BTA show that the relocation projects will not cause any major adverse impacts in respect of

environment (e.g. air quality, noise and water quality) and traffic in the long term. The proposed feasibility studies will propose appropriate mitigation and control measures for future implementation during the construction stage of the projects.

4. Sewage treatment works are often considered as NIMBY (“not-in-my-backyard”) facilities. The relocation of STSTW and SKSTW to caverns could help improve the environment of the existing sites and their surrounding areas. With most of the sewage treatment facilities housed in caverns, the relocated sewage treatment works will blend in with the surrounding natural landscape, thereby minimising their visual impact. The enhanced odour management brought by housing sewage treatment facilities in caverns will also significantly reduce their odour impacts to the nearby communities.

5. Moreover, the relocation of STSTW and SKSTW will provide opportunities for the Drainage Service Department to explore the option of upgrading the sewage treatment facilities concerned and adopting more advanced sewage treatment technology. This will help reduce the maintenance cost of aging plants and the operating cost of the relocated sewage treatment works.

6. Besides, during the cavern excavation, rock materials will be generated and most of them can be used for construction purpose or delivered to rock quarries for processing into aggregates and other useful construction materials. The proposed feasibility studies will explore how these excavated materials can be most gainfully used.

7. The relocation proposals are expected to release the existing sites of about 1.1 hectares and 2.2 hectares of the STSTW and SKSTW respectively. These sites are located in developed areas with development potential for other beneficial and more compatible uses, such as providing housing land to help meet the long-term demand for housing in Hong Kong. The BTA therefore indicates that detailed feasibility studies for the relocation projects are worthwhile in view of their potential economic and social benefits.

8. At this stage, the financial information provided under the BTA, including the project costs and values of the released land, is considered to be rough estimates only that could vary with different conditions, such as the size of the caverns, means of construction, geological setting, ground water level, economic environment, developable land and social demand, etc. The proposed feasibility studies to be commenced will estimate the project costs and explore land use options for evaluating the potential land values in order to further establish the cost-effectiveness of the two projects.