

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

**PWSC(2014-15)5**

**195WC – Feasibility study on relocation of Diamond Hill fresh water  
and salt water service reservoirs to caverns**

**Supplementary information on the preliminary assessment of the  
relocation project**

According to the Broad Technical Assessment (BTA) conducted by the Civil Engineering and Development Department (CEDD), the geology of the proposed site for relocation of Diamond Hill fresh water and salt water service reservoirs (DHSRs) is considered suitable for rock cavern development.

2. Based on Hong Kong's past experience of constructing a service reservoir inside caverns, there should not be any insurmountable technical difficulties for implementing the relocation project. As the proposed site is near the existing DHSRs, the project will have relatively little impact on the upstream and downstream water supply systems and will not require substantial pipe connection works. Hence, the overall cost of relocation can be minimised. Moreover, since the service reservoirs are essentially unmanned facilities, the operation of service reservoirs in caverns only requires the enhancement of lighting, ventilation and alarm systems. We therefore anticipate that the relocation of DHSRs 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 project 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 study will propose appropriate mitigation and control measures for future implementation during the construction stage of the project.

4. The project will also provide an opportunity for the Water Supplies Department to investigate the option of relocating the service reservoirs at a lower altitude, with a view to reducing the water pressure of the water supply network, which could in turn minimise the possibility of premature aging or bursting of water mains due to high water pressure. This will help lower the costs for pumping water to high altitudes and the risk of water leakage.

5. 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 study will explore how these excavated materials can be most gainfully used.

6. The project is expected to release a relatively large site of about 3 hectares, which is located in the urban area with convenient transport and development potential. The BTA suggests that should the released site be used for private housing development, its market value could cover the cost of relocation project; should the released site be used for public housing development, it will help meet the long-term demand for housing in Hong Kong. The BTA therefore indicates that a detailed feasibility study for the relocation project is worthwhile in view of its potential economic and social benefits.

7. Nevertheless, at this stage, the financial information provided under the BTA, including the project costs and value 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, groundwater level, economic environment, developable land and social demand, etc. The proposed feasibility study to be commenced will estimate the project costs and explore land use options for evaluating the potential land values in more detail in order to further establish the cost-effectiveness of the project.