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Panel on Development

Meeting on 25 March 2014

**Background brief on relocation of
Sha Tin Sewage Treatment Works to caverns**

Purpose

This paper provides background information on the proposed relocation of Sha Tin Sewage Treatment Works ("STSTW") to caverns and summarizes the views and concerns expressed by Members during past discussions on the subject at the meetings of the Panel on Development ("DEV Panel") and the Public Works Subcommittee ("PWSC").

Background

2. The Civil Engineering and Development Department commissioned a strategic planning and technical study on "Enhanced Use of Underground Space in Hong Kong" in March 2010 to explore the opportunities to enhance the effective use of land resources in Hong Kong from a new perspective through the planned development of underground space. The study was completed in March 2011. One of the key findings of the study is that about 64% of Hong Kong's land area, underlain by strong granitic and volcanic rocks, is potentially suitable for cavern development¹. The study has also broadly demonstrated from technical and financial viability standpoints that a cavern scheme could be implemented to house STSTW to release about 28 hectares of land for other beneficial and compatible land uses.

¹ The Administration briefed the DEV Panel on the findings of the study on 24 May 2011. The discussion paper is LC Paper No. CB(1)2205/10-11(06).

Feasibility study

3. The Administration consulted the DEV Panel and PWSC on 27 March 2012 and 18 April 2012 respectively on the proposal to carry out a feasibility study on the relocation of STSTW to the caverns of Nui Po Shan, Sha Tin, at an estimated cost of \$57.9 million. The funding proposal was subsequently approved by the Finance Committee on 11 May 2011. The scope of the feasibility study comprised --

- (a) detailed engineering feasibility study on relocation of STSTW to caverns and associated works, including relevant preliminary technical and impact assessments, preparation of outline design for the engineering works and formulation of implementation strategies and programmes;
- (b) planning review with broad technical assessment of the future land use of the existing STSTW site for the purpose of establishing a business case for relocating STSTW to caverns;
- (c) public engagement and consultation exercises with relevant stakeholders; and
- (d) associated ground investigation works and site supervision.

The feasibility study, which commenced in May 2012, was scheduled for completion in mid-2014.

Impact of the relocation on residents in the vicinity of Nui Po Shan

4. At the meetings of the DEV Panel and PWSC, members relayed the opposition of the residents of a property development in the vicinity of Nui Po Shan, namely Chevalier Garden, against the STSTW relocation proposal. They had grave concerns about the possible problems of air pollution, odour emission, traffic congestion, blasting works associated with cavern development works, safety in transporting explosives along the narrow roads in the district, the arrangements for the relocation exercise and future operation of the new STSTW at Nui Po Shan. Members requested the Administration to propose measures to address these concerns.

5. The Administration advised that briefing sessions had been held for the residents in the vicinity of the proposed relocation sites on the proposed relocation project. Relevant information of the feasibility study had been circulated to the residents to address their concerns. The Administration

stressed that the feasibility study, which included a two-stage public engagement exercise with relevant stakeholders, would cover the formulation of effective odour management, traffic improvement measures and impact assessment on the blasting operations, and confirm the viability of the relocation proposal. There would be an ongoing dialogue with all stakeholders and the Administration would share the results of the feasibility study, including the proposed mitigation measures, to address various concerns, with the residents of Chevalier Garden and other stakeholders.

6. On the odour problem, the Administration clarified that the relocated STSTW would be situated inside the caverns of Nui Po Shan, which would function as a natural barrier. The odourous air inside the caverns would be filtered by deodourizing facilities before it was discharged. The ventilation shaft for discharging filtered gases from STSTW would be small and located at a high level. There would be insignificant impact on the residents living in the vicinity, including residents of Chevalier Garden. As regards the concerns about the distance between the relocated STSTW and nearby residential developments, the Administration advised that the Stanley sewage treatment works, which was situated in caverns, was only 100 metres from a primary school but there had been no complaints about any odour or traffic nuisances since the commissioning of the facility in 1995. The Administration has arranged residents of Chevalier Garden to visit STSTW and the Stanley sewage treatment works. According to the Administration, the residents could sense neither smell nor noise at a point 100 metres away from the Stanley sewage treatment works.

Policy guidelines and cost-effectiveness of development of caverns

7. Some members considered that the Administration should first formulate a territory-wide strategic plan for cavern development and work out a holistic approach before implementing individual projects. If the public had a comprehensive picture about the criteria for selecting suitable caverns for development, the facilities to be relocated and the benefits of such relocations, this would facilitate building consensus and support for individual projects. As the "Study on Long-term Strategy for Cavern Development" was scheduled for completion in 2015, and in view of the rising construction costs, some members expressed concerns about the cost-effectiveness of the STSTW relocation project.

8. The Administration advised that a stock taking exercise, as part of the study on "Enhanced Use of Underground Space in Hong Kong", had identified over 400 existing Government facilities which had potentials for relocating to caverns. As shown by a ranking system highlighting the relative merits of

relocating individual facilities, some facilities, including STSTW, had high potentials for relocation to caverns in terms of cost-effectiveness and technical feasibility, subject to detailed planning and engineering studies. According to the preliminary programme, relocation of STSTW would be completed in 2027. By then, the first phase of the existing STSTW would have been in service for more than 40 years. The feasibility study should start early to avoid any delay. As the estimated cost for the relocation project would be more than \$10 billion, the feasibility study would also examine the financial viability of the relocation exercise, taking into account the benefits from releasing the existing STSTW site for housing and community uses.

Use of the vacated site

9. As to a member's suggestion of setting aside a portion of the site released after the relocation for the provision of community facilities and housing developments affordable to the general public, the Administration advised that the scope of the feasibility study included a planning review with broad technical assessment of the future land use of the released site for establishing justifications for the relocation of STSTW to caverns.

Recent development

10. The Administration will seek the Panel's support for upgrading part of PWP Item No. 399DS (relocation of STSTW to caverns) to Category A for carrying out investigation and detailed design of the relocation project at the Panel meeting on 25 March 2014.

Relevant papers

11. A list of relevant papers with their hyperlinks is in the **Appendix**.

Relocation of Sha Tin Sewage Treatment Works to caverns

List of relevant papers

Council/Committee	Date of meeting	Paper
Panel on Development	24 May 2011	<p>Information paper on "Increasing Land Supply by Reclamation and Rock Cavern Development" provided by the Administration (LC Paper No. CB(1)2205/10-11(05)) http://www.legco.gov.hk/yr10-11/english/panels/dev/papers/dev0524cb1-2205-5-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)265/11-12) http://www.legco.gov.hk/yr10-11/english/panels/dev/minutes/dev20110524.pdf</p>
Panel on Development	27 March 2012	<p>Information paper on "379DS -- Feasibility Study on Relocation of Sha Tin Sewage Treatment Works to Caverns" provided by the Administration (LC Paper No. CB(1)1342/11-12(03)) http://www.legco.gov.hk/yr11-12/english/panels/dev/papers/dev0327cb1-1342-3-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)2208/11-12) http://www.legco.gov.hk/yr11-12/english/panels/dev/minutes/dev20120327.pdf</p>
Public Works Subcommittee	18 April 2012	<p>Information paper on "379DS -- Feasibility study on relocation of Sha Tin sewage treatment works to caverns" provided by the Administration (LC Paper No. PWSC(2012-13)7) http://www.legco.gov.hk/yr11-12/english/fc/pwsc/papers/p12-07e.pdf</p>

Council/Committee	Date of meeting	Paper
		<p>Follow-up paper provided by the Administration (LC Paper No. PWSC54/11-12) http://www.legco.gov.hk/yr11-12/english/fc/pwsc/papers/pwsc0418pwsc-54-e.pdf</p> <p>Minutes of meeting (LC Paper No. PWSC57/11-12) http://www.legco.gov.hk/yr11-12/english/fc/pwsc/minutes/pwsc20120418.pdf</p>
Finance Committee	April 2013	<p>Controlling Officer's Reply to Initial Written Questions in the Examination of Estimates of Expenditure 2013-14 (Reply Serial No. DEVB(W)203) http://www.legco.gov.hk/yr12-13/english/fc/fc/w_q/devb-w-e.pdf</p>