

立法會

Legislative Council

LC Paper No. CB(1)1018/2024(04)

Ref: CB1/PL/DEV

Panel on Development

Meeting on 15 July 2024

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

Purpose

This paper provides background information on the relocation of Sha Tin Sewage Treatment Works (“STSTW”) to caverns and summarizes the major views and concerns expressed by Members on the subject since the 2017-2018 session.

Background

2. According to the Administration, the relocation of suitable government facilities to caverns can on one hand release the existing sites for housing and other uses to meet community needs, and on the other hand relocate facilities that are incompatible with the land uses nearby for improvement of the urban layout.

3. In December 2017, the Development Bureau (“DEVB”) promulgated the policy guidelines in relation to cavern development for enhancing land supply, including a Cavern Master Plan and associated planning and technical guidelines. The relocation of STSTW to caverns is one of the projects being taken forward by DEVB for relocating government facilities to caverns.¹ It is the largest on-going cavern development project in Hong Kong and is being implemented in stages, i.e. Stage 1 Works, Stage 2 Works, Stage 3 Works and the remaining works.

¹ The progress of cavern development was given in the Administration’s written reply to [Council question no. 19 of the Council meeting of 1 June 2022](#) on cavern development.

4. Details of the funding applications in relation to the project approved by the Finance Committee (“FC”) between 2014 and 2023 are as follows:

	Major scope of studies/works	Estimated cost in money-of-the-day prices (million)	Date approved by FC²
Consultants’ fee and investigation	Investigation studies, design and ground investigation	\$637.7	11 July 2014
Stage 1 Works	Site preparation works, construction of the main access tunnel and the access road, and ancillary works	\$2,077.5	26 October 2018
Stage 2 Works	Main caverns complex construction and upstream sewerage works	\$14,076.5	8 January 2021
Stage 3 Works	Buildings, cavern ventilation system and associated works	\$3,123.8	14 July 2023

5. In addition, the Administration submitted a staffing proposal for creating a supernumerary Chief Engineer post (D1) in the Drainage Services Department for five years, for leading a new Cavern Projects Division to mainly implement the relocation of STSTW to caverns and plan cavern

² The funding proposal for consultants’ fee and investigation (i.e. [PWSC\(2014-15\)2](#)) was discussed by the Panel on Development (“DEV Panel”) on 25 March 2014 and endorsed by the Public Works Subcommittee (“PWSC”) on 8 April 2014. The funding proposal for the Stage 1 Works (i.e. [PWSC\(2018-19\)26](#)) was discussed by the DEV Panel on 27 March 2018 and endorsed by the PWSC on 25 June 2018. The funding proposal for the Stage 2 Works (i.e. [PWSC\(2020-21\)19](#)) was discussed by DEV Panel on 27 October 2020 and endorsed by PWSC on 9 December 2020, whereas the funding proposal for the Stage 3 Works (i.e. [PWSC\(2023-24\)19](#)) was discussed by DEV Panel on 23 May 2023 and endorsed by PWSC on 21 June 2023.

projects for relocation/accommodation of other suitable sewage treatment facilities, which was approved by FC on 30 April 2021.³

6. According to the Administration, the Stage 1 Works were completed in April 2022. The construction of the main caverns under the Stage 2 Works have commenced in July 2021 for substantial completion in 2026 to accommodate the sewage treatment facilities, while the Stage 3 Works have also commenced in August 2023. The Administration's target is to commission the cavern sewage treatment works in 2029, and release the existing site of STSTW of about 28 hectares ("ha") in 2031 mainly for innovation and technology development.

Major views and concerns expressed by Members

7. The major views and concerns expressed by Members on the relocation of STSTW to caverns during the relevant discussions of the Panel on Development ("the Panel") and the Public Works Subcommittee are summarized in the ensuing paragraphs.

Project cost and implementation

8. According to the Administration's estimation, the cost of the first three stages of the STSTW relocation project was already close to \$20 billion. Members were concerned about the high construction cost and the possibility of cost overrun. Some Members considered the project not cost-effective as only 28 ha of land could be released and suggested that the Administration should seek the opinions of independent consultants on the project to examine if the cost could be reduced. Members also enquired whether new technologies had been applied in the design and construction of the project to reduce the project cost.

9. The Administration advised that apart from drawing reference from and assessing the costs of previous public works projects of a similar nature by project consultants and professionals, the Administration would submit the public works projects to the Project Strategy and Governance Office of DEVB for cost vetting to enhance cost monitoring and project control, including the use of new technologies to lower the cost of construction. Under the relocation project of STSTW, contractors would actively apply innovative engineering technologies such as off-site prefabrication

³ The Administration consulted DEV Panel on a proposal for creating a permanent post of Chief Engineer (D1) on 27 October 2020, and subsequently revised the original proposal to the creation of a supernumerary Chief Engineer post for five years. The revised staffing proposal (i.e. [EC\(2020-21\)13](#)) was endorsed by the Establishment Subcommittee on 31 March 2021.

techniques and the “Drilling Jumbo”. The design of the cavern ventilation system had also combined the ventilation ducts of the fire services extraction and the daily ventilation systems. It was believed that the above measures would help improve the quality of the project and save costs.

10. In response to Members’ enquiry about the timetable for releasing the site of the existing STSTW for other uses upon its relocation to caverns, the Administration advised that the construction of sewage treatment works in caverns at Nui Po Shan would complete in 2029 and the demolition of the existing STSTW would complete in 2031, with the site concerned released then. The Administration would endeavour to shorten the construction period of the entire project, in a bid to expedite the relocation of STSTW as far as practicable.

11. The Administration added that the relocation of STSTW to caverns and construction of sewage treatment works facilities therein would also provide an opportunity for STSTW to adopt more advanced technologies and upgrade the sewerage facilities comprehensively while continuing operation, thereby enhancing its operational effectiveness and service quality for the local population.

Environmental implications

12. Addressing the concerns expressed by Members about the odour impact of the proposed relocated STSTW on the surrounding communities, the Administration explained that cavern, as a natural barrier, could fully enclose the sewage treatment works. At the same time, negative pressure would be maintained inside cavern to avoid leakage of odour from the tunnels. Odour emission sources would be pre-treated by deodourizing units before discharging through a proposed ventilation shaft situated at a remote location in Nui Po Shan that was far away from the residential area.

Public education

13. Members enquired about the feasibility of using the planned area of the administration cum ventilation building of the proposed cavern STSTW for other uses under the “single site, multiple use” model, such as setting up an education and resource centre to enhance the public’s understanding of sewage treatment, the design capacity and operational efficiency of the proposed cavern STSTW. The Administration advised that public exhibitions could be held at the outdoor area and inside the administration building of the proposed cavern STSTW, and guided tours would be arranged to enable the public to gain a better understanding of the operation of the cavern STSTW.

Council questions

14. Several questions on cavern development were raised at the Council meetings in recent years. The hyperlinks to the questions and the Administration's replies are provided in the **Appendix**.

Latest development

15. At the Panel meeting to be held on 15 July 2024, the Administration will brief members on the proposal to upgrade the remainder of PWP Item No. 399DS to Category A, which mainly comprise the construction and installation of sewage treatment facilities in the newly constructed main caverns complex of the Sha Tin Cavern Sewage Treatment Works, and the demolition of the existing STSTW.

Relevant papers

16. A list of relevant papers on the Legislative Council website is in the **Appendix**.

Council Business Divisions
Legislative Council Secretariat
11 July 2024

Appendix

Relocation of Sha Tin Sewage Treatment Works to caverns

List of relevant papers

Committee	Date of meeting	Paper
Panel on Development	27 March 2018	Agenda item V : PWP Item No. 399DS (Part) — Relocation of Sha Tin Sewage Treatment Works to caverns — Site preparation and access tunnel construction Minutes of meeting
Public Works Subcommittee	25 June 2018	Agenda item 2 : Head 704 — Drainage — 399DS — Relocation of Sha Tin Sewage Treatment Works to caverns Minutes of meeting
Finance Committee	26 October 2018	Agenda item 1 : Recommendation of the Public Works Subcommittee made on 25 June 2018 Minutes of meeting
Panel on Development	27 October 2020	Agenda item V : Proposed creation of one permanent post of Chief Engineer in the Drainage Services Department for cavern development projects, and PWP Item No. 399DS — Relocation of Sha Tin Sewage Treatment Works to caverns Minutes of meeting
Public Works Subcommittee	9 December 2020	Agenda item 2 : Head 704 — Drainage — 399DS — Relocation of Sha Tin Sewage Treatment Works to caverns Minutes of meeting
Finance Committee	8 January 2021	Agenda item 2 : Recommendation of the Public Works Subcommittee made on 9 December 2020 Minutes of meeting

Committee	Date of meeting	Paper
Establishment Subcommittee	31 March 2021	Agenda item 2 : Proposed creation of one supernumerary post of Chief Engineer (D1) in the Drainage Services Department with immediate effect upon approval of the Finance Committee up to 31 March 2026 to lead a new Cavern Projects Division to mainly implement the ‘Relocation of Sha Tin Sewage Treatment Works to caverns’ and plan cavern projects for relocation/accommodation of other suitable sewage treatment facilities Minutes of meeting
Finance Committee	30 April 2021	Agenda item 1 : Recommendation of the Establishment Subcommittee made on 31 March 2021 Minutes of meeting
Panel on Development	23 May 2023	Agenda item V : PWP Item No. 399DS — Relocation of Sha Tin Sewage Treatment Works to caverns Minutes of meeting
Public Works Subcommittee	21 June 2023	Agenda item 2 : 399DS — Relocation of Sha Tin Sewage Treatment Works to caverns Minutes of meeting
Finance Committee	14 July 2023	Agenda item 2 : item 2: 399DS — Relocation of Sha Tin Sewage Treatment Works to caverns Minutes of meeting

Council meeting	Paper
1 June 2022	Question no. 19 : Cavern development

Council meeting	Paper
17 May 2023	Question no. 2 : Implementation of public works projects
14 June 2023	Question no. 20 : Project Strategy and Governance Office