搬遷深井污水處理廠往岩洞

RELOCATION OF SHAM TSENG SEWAGE TREATMENT WORKS TO CAVERNS

可行性研究
FEASIBILITY STUDY

公眾參與摘要
PUBLIC ENGAGEMENT DIGEST

2017年3月至4月
March - April 2017

渠務署
Drainage Services Department

ARUP

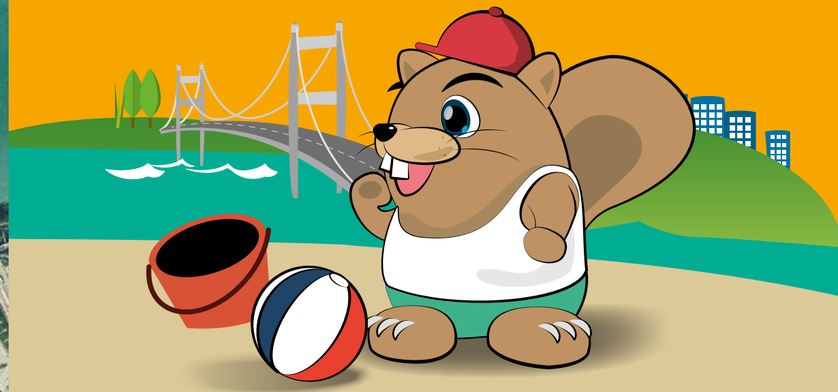
深井
SHAM TSENG

青龍頭
TSENG LUNG TAU

深井污水處理廠
Sham Tseng Sewage
Treatment Works (SmTSTW)

N
0
250 米 M

目錄 CONTENTS



研究背景
STUDY BACKGROUND

《搬遷深井污水處理廠往岩洞 — 可行性研究》為以下兩次探討搬遷現有設施到岩洞的可行性研究的進一步研究。
The "Relocation of Sham Tseng Sewage Treatment Works (SmTSTW) to Caverns – Feasibility Study" is an extension of the following two previous studies that had explored the feasibility of relocating existing facilities into rock caverns.

善用香港地下空間 — 可行性研究
Enhanced Use of Underground Space in Hong Kong – Feasibility Study

土木工程拓展署於2009年展開該研究，探討發展地下空間的機遇。研究於2011年完結時總結全港百分之六十四的土地均適合用作地下發展，並指出約400個政府設施有潛力搬遷入岩洞內。

The Civil Engineering and Development Department (CEDD) launched this study in 2009 to examine the opportunities for underground space development in Hong Kong, and had concluded in 2011 that some 64% of the land area in Hong Kong is suitable for large-scale cavern development, and that some 400 government facilities had potential for relocation to rock caverns.

優化土地供應策略 — 維港以外填海及發展岩洞
Enhancing Land Supply Strategy – Reclamation outside Victoria Harbour and Rock Cavern Development

土木工程拓展署繼而於2011年展開下一輪研究，更把發展岩洞歸納為一組「六管齊下」的土地供應組合中：

- 更改土地用途
- 收地
- 發展岩洞
- 重用前石礦場
- 維港以外填海
- 重建

Subsequently, CEDD launched this study in 2011 and brought forward the findings from the last study and rock cavern development formed part of the "six-pronged approach" to enhance land supply:

- Rezoning Land
- Land Resumption
- Rock Cavern Development
- Reuse of Ex-quarry Sites
- Reclamation outside Victoria Harbour
- Redevelopment

該輪研究於2011年11月至2012年3月進行第一階段公眾參與。公眾意見普遍支持發展岩洞以增加土地供應。根據當時所確立的選址準則，深井污水處理廠被選為三個岩洞發展先導計劃之一。

During the Stage 1 Public Engagement (PE) of this study from November 2011 to March 2012, the public views broadly supported rock cavern development as a way to enhance land supply. Based on the site selection criteria confirmed from the Stage 1 PE, SmTSTW was one of the three sites selected as pilot schemes for rock cavern development.

研究於2013年3月至6月進行了第二階段公眾參與。公眾普遍支持搬遷深井污水處理廠及釋放土地用作發展用途。

At the Stage 2 PE from March 2013 to June 2013, public feedbacks on the relocation of SmTSTW into caverns and the release of land for alternative use were generally supportive.

以下三種土地用途獲得最多公眾支持:

These land uses for the released site received most support from the public:

公眾亦關注以下課題：
Major concerns on the pilot scheme:

搬遷深井污水處理廠往岩洞 — 可行性研究
Relocation of SmTSTW to Caverns Feasibility Study

渠務署於2014年12月展開《搬遷深井污水處理廠往岩洞 — 可行性研究》(本研究)，為相關工程進行詳細工程可行性研究，舉行公眾參與活動，以及研究釋出土地可能的用途。

Drainage Services Department launched the "Relocation of Sham Tseng Sewage Treatment Works to Caverns – Feasibility Study" (this Study) in December 2014. The overall objective is to examine the detailed engineering feasibility of the associated works; carry out public engagement; and study the possible uses of the released site.

研究概覽
STUDY OVERVIEW

公眾參與
Public Engagement

本研究的第一階段公眾參與已於2015年12月至2016年2月進行，並於2017年3月至4月進行第二階段公眾參與。

The Stage 1 Public Engagement of this Study was conducted from December 2015 to February 2016. The Stage 2 Public Engagement will be conducted from March to April 2017.

有關現有深井污水處理廠
About the Existing SmTSTW

位於深慈街的深井污水處理廠自2004年開始投入運作，為沿青山公路近水灣至青龍頭一帶約39,000人提供污水處理服務。

The SmTSTW, located at Sham Tsz Street, Sham Tseng, has been in operation since 2004. It provides sewage treatment services to a population of about 39,000 in the areas from Approach Bay to Tsing Lung Tau along Castle Peak Road.

佔地 Site Footprint	1.1 公頃 Hectare
設計污水處理量 Design Sewage Treatment Capacity	每天 17,000 立方米 m^3 per day
污水處理設施 Sewage Treatment Facility	化學強化一級處理 Chemically Enhanced Primary Treatment

第一階段公眾參與
Stage 1 Public Engagement

本研究的第一階段公眾參與已於2015年12月至2016年2月進行，主要目的是收集區內持份者及公眾對於搬遷深井污水處理廠及釋出土地的初步意見。各持份者可以建基於早前的研究結果及這次研究最新資料提出進一步意見。公眾參與活動包括巡迴展覽、簡介會、焦點小組會議及社區工作坊。

於公眾參與中所收集的意見會協助研究團隊構思釋出土地的初步規劃及完成新污水處理廠的設計大綱。

第二階段公眾參與於2017年3月至4月進行，公眾活動包括巡迴展覽、公眾論壇及焦點小組會議，希望藉此匯報第一階段公眾參與活動所收集的意見、介紹釋出土地的初步規劃方案，以向公眾及有關團體收集進一步的意見。

Stage 1 Public Engagement (PE) was conducted from December 2015 to February 2016, to collect opinions from local stakeholders and the public regarding the relocation of SmTSTW and possible uses of the released site. Stakeholders could further express their views based on the findings of previous study and the latest information available. PE activities included roving exhibitions, briefing sessions and community workshop.

Public views collected in the PE helped study team to envision the preliminary planning of the released site and the outline design of the relocated SmTSTW.

The Stage 2 PE will be conducted from March to April in 2017 with roving exhibitions, public forum and focus group meetings to report the views collected in Stage 1 PE, introduce preliminary planning schemes of the released site and further collect views from the public and relevant groups.

巡迴展覽
Roving Exhibition

社區工作坊
Community Workshop

第一階段公眾參與的主要意見和回應
Major Views and Responses in Stage 1 Public Engagement

工程的需要
The need of the relocation of SmTSTW

- 大致認同將「鄰避設施」搬入岩洞對社區有好處
  General agreement on the benefits of relocating Not-in-my-back-yard facility to cavern
- 污水處理廠運作年期尚短，是否適合搬遷及關注成本效益
  Concern about the appropriateness of relocation and the cost effectiveness, noting that the SmTSTW is relatively new

回應
Response

一般情況下，本港污水廠的機電設施運作15至20年後便需要更換，深井污水處理廠自2004年運作至今已約十三年，預計最快於2026年才完成搬遷，屆時該污水處理廠運作了超過20年，機電設施亦需作更換，憑藉此次契機，搬遷廠房可以優化附近的土地用途。

In general, mechanical facilities in the sewage treatment works in Hong Kong should be replaced after operating for 15 to 20 years. Since 2004, SmTSTW has been operating for about 13 years. While it is anticipated that the relocation will be completed in 2026 the soonest, the SmTSTW will have operated for over 20 years by the time, when replacement of mechanical facilities is necessary. We can therefore take this opportunity to enhance the land use in the surroundings through relocation.

工程的影響
Impact of the construction

- 關注工程期間的交通影響
  Concern about the traffic impact during construction
- 關注工程期間對環境的影響，包括噪音及空氣污染，影響居民健康
  Concern about the environmental impact during construction, such as noise and air pollution, which may affect the health of residents
- 關注爆破工程對附近樓宇的影響
  Concern about the vibration impact to nearby buildings during the explosive blasting

回應
Response

初步交通影響評估顯示工程車出入對附近交通影響輕微。施工方面，建議使用較安靜的機動設備施工以減低噪音影響，並實施粉塵控制和環境監測及評估。施工前亦會進行爆破評估，確保不會對附近建築物及斜坡造成影響。

Preliminary traffic impact assessment reveals that the traffic impact from construction vehicles would be mild. It is suggested to use quieter motorised equipment to reduce potential noise impact and implement proper dust control and environmental monitoring during the construction stage. Blasting assessment will be conducted to ensure the safety of the buildings and slopes nearby.

釋出土地的用途
Land use of the released site

- 希望增加社區設施
  Request for more Government, Institution and Community facilities
- 擔心興建住宅會增加人口，造成交通負擔
  Worry that housing development would cause an increase in population and hence burden on traffic
- 擔心興建住宅會遮擋現時樓宇景觀
  Worry about the visual impact from housing development on existing buildings

回應
Response

著力發展設施使社區受益是該項目的目標之一。初步交通影響評估顯示，關鍵道路及路口仍有能力消化未來發展帶來的行車流量，稍後將進行進一步的交通研究，以確保施工期間對交通的影響減至最小。未來發展的樓宇會採取梯級式設計，配合周邊景觀。

One of the objectives is to develop facilities benefiting the community. Preliminary traffic impact assessment showed that major roads and junctions could handle the traffic flow derived from future development. Further traffic studies will be conducted to minimise the traffic impact during construction. The future development will adopt stepped height profile to integrate with the landscape in the surroundings.

搬遷安排
Relocation Arrangement

考慮到第一階段收集的公眾意見，參與者希望未來發展可提供社區設施，署方已完成進一步探討，建議將深井污水處理廠與毗鄰的中電變電站一併搬遷往岩洞，除了能夠更有效利用岩洞發展，亦可釋出更多土地，增加釋出土地發展設計的靈活性及發展潛力。

建議搬遷的地點座落於青山公路—深井段及屯門公路之間的山坡，擬議的搬遷工程包括挖掘岩洞、於岩洞內興建污水處理廠及中電變電站（如適用）、隧道進出口及緊急通道。

預計新污水處理廠每日能處理約每日二萬四千立方米污水，污水處理級別由一級提升至二級，初步土地勘測及現有的資料顯示，所建議的岩洞位置適合進行岩土工程。更全面的土地勘測將會在下一階段進行。

In the Stage 1 PE, there were comments that any further development should provide community facilities. Upon further study, it is proposed to relocate the SmTSTW together with the adjoining CLP substation to cavern. This can optimise the use of cavern, release more land and hence increase the flexibility and development potential of land use design.

The proposed relocation site is located at the hillside between Castle Peak Road - Sham Tseng and Tuen Mun Road. Works will include excavation of cavern, construction of sewage treatment works and CLP substation (if applicable) within the cavern, access tunnels and emergency access portals.

The new sewage treatment works will be equipped with a sewage treatment capacity of 24,000m^3/day, with waste water treatment level upgraded to Level II. Based on preliminary ground investigation and desk-top research, the proposed relocation site is considered suitable for cavern development. Further study will be conducted in the next stage.

釋出土地的初步規劃方案
Preliminary Planning Schemes of the Released Site

深井污水處理廠及中電變電站（如適用）搬遷往岩洞後，將會釋出土地作其他用途。釋出的土地位於一個已開發的住宅區內，該土地是由填海而成，平坦及已平整，具有發展住宅的潛力，能滿足房屋需求，同時提供社區設施，並包括休憩用地。

After the relocation of SmTSTW and the CLP Substation (if applicable) to cavern, land will be released for other uses. The released site is located on a flat and formed reclaimed land within a well-developed residential neighbourhood. There is a great potential to develop the site for residential development in order to address the territorial housing demand, meanwhile to provide community facilities including open space.

方案一：只搬遷深井污水處理廠

鑑於現時深井污水處理廠的佔地面積有限。釋出的土地可作住宅和政府、機構或社區設施用途，例如提供社區會堂。

Scheme 1: Relocate SmTSTW only

The site covered by exisitng SmTSTW i is relatively small. The released land can be used for residential use and GIC facilities such as community hall.

方案一
Scheme 1

註：mPD（metre above Principal Datum）= 主水平基準以上高度（米）

方案一（只搬遷深井污水處理廠）
Scheme 1 (Relocate SmTSTW only)

住宅地盤面積 Residential Site Area	0.8	公頃 Hectare
最高地積比率 Maximum Plot Ratio	住用 Domestic 6.0	
最高建築物高度 Maximum Building Height （採取梯級式設計） (With stepped-height design)	主水平基準上 120	米 mPD
土地用途的初步建議 Preliminary Land Use Proposal	住宅、15米闊的公眾海濱走廊、社區會堂 Residential, 15m Wide Public Waterfront Promenade, Community Hall	
住宅單位數目 No. of Flats	約 About 730	單位 Units
人口 Population	約 Approx. 2,300	人 People

方案二：綜合佈局重整

考慮到周邊設施佈局，我們建議將中電變電站與深井污水處理廠一併搬遷往岩洞，可以更有效率善用岩洞，釋出更多土地滿足土地需求，回應全港性的房屋需要，並將現有的深慈街遊樂場（包括籃球場）重置在新的海濱長廊內，令休憩用地和康樂設施更歸一，及令海濱長廊有更好的配置，改善整個地段的綜合佈局。

Scheme 2: Integrated rearrangement

Taking into consideration the facilities and land use of adjacent area, it is proposed to relocate the SmTSTW together with the CLP substation to cavern. This makes a better use of the cavern and releases more land to meet the territorial housing demand. The existing Sham Tsz Street Playground including a basketball court will be reprovisioned at the new waterfront promenade to achieve a more aligned arrangement of open space and recreational facilities, a better configuration of the waterfront promenade, and the general layout of the whole area.

方案二
Scheme 2

註：mPD（metre above Principal Datum）= 主水平基準以上高度（米）

方案二（搬遷深井污水處理廠及中電變電站，及重新規劃深慈街遊樂場）
Scheme 2 (Relocation of SmTSTW and CLP Substation, Rearrangement of Sham Tsz Street Playground)

住宅地盤面積 Residential Site Area	1.3	公頃 Hectare
最高地積比率 Maximum Plot Ratio	住用 Domestic 6.0	
最高建築物高度 Maximum Building Height （採取梯級式設計） (With stepped-height design)	主水平基準上 120	米 mPD
土地用途的初步建議 Preliminary Land Use Proposal	住宅、零售設施、15米闊的公眾海濱走廊、社區會堂、長者日間護理中心、安老院 Residential, 15m Wide Public Waterfront Promenade, Community Hall, Day Care Centre for the Elderly and Residential Homes for the Elderly	
住宅單位數目 No. of Flats	約 About 1,200	單位 Units
人口 Population	約 Approx. 3,700	人 People

以上兩個方案皆建基於住用最高地積比率為6.0的條件，若有限度再增加地積比率，應可增加提供社區設施的靈活性及發展潛力，以致這幅珍貴土地可以地盡其用。我們樂意聽取公眾就這方面的意見。

The above schemes are proposed based on the highest domestic plot ratio of 6.0. The flexibility and development potential of community facilities could be enhanced with acceptable increase in plot ratio, to fully utilise this valuable land. We welcome public opinions on this aspect.

發表您的意見 PROVIDE YOUR VIEWS

我們希望聆聽您對搬遷深井污水處理廠及釋出土地可能用途的寶貴意見。

We would like to hear your valuable views on the relocation of Sham Tseng Sewage Treatment Works and the possible uses on the **released site**.

歡迎您在2017年4月20日或之前將您的意見以郵遞、熱線電話、傳真或電郵方式送交我們。

If you have any comments or suggestions, please send them to us by post, hotline, fax or e-mail on or before 20 April 2017.

郵寄地址 Mail Address

香港灣仔告士打道5號稅務大樓42樓 渠務署顧問工程管理部
(請註明「搬遷深井污水處理廠往岩洞－可行性研究」)

Drainage Services Department / Consultants Management Division,
42/F, Revenue Tower, 5 Gloucester Road, Wan Chai, Hong Kong
(Please specify "Relocation of Sham Tseng Sewage Treatment Works to Caverns – Feasibility Study")

熱線電話 Hotline	3142 2256
傳真 Fax	2827 8526
電郵 E-Mail	enquiry@smtstwincaverns.hk
網頁 Website	www.smtstwincaverns.hk

公眾參與 PUBLIC ENGAGEMENT

誠邀您參加我們的公眾參與活動:

You are welcome to join our public engagement activities:

巡迴展覽 Roving Exhibitions

20/3 - 5/4/2017

深井深慈街遊樂場（位於深井污水處理廠旁）
Sham Tsz Street Playground, Sham Tseng
(next to the Sham Tseng Sewage Treatment Works)

6/4 - 20/4/2017

荃灣深井村路深井臨時遊樂場
Sham Tseng Temporary Playground
Sham Tseng Tsuen Road, Tsuen Wan

公眾論壇 Public Forum

9/4/2017 2:30pm - 4:30pm

深井天主教小學
Sham Tseng Catholic Primary School

如欲參與公眾論壇，可透過網頁上的網上報名表格登記，或從網頁下載報名表格，以電郵／傳真／郵寄遞交。截止報名日期為31/3/2017。成功報名人士將會優先安排入座。

To participate in the Public Forum, please register through the online registration form on our website on or before 31 March 2017. Alternatively, you could download the registration form from our website and submit the completed form by e-mail, fax or post. Successful applicants will have priority admittance for seating.

註：活動日期/ 地點或會因需要而更改，請到網頁了解活動詳情。
Note: Date/venue of the events are subject to change, please refer to our website for the latest announcement.

本冊子由奧雅納工程顧問製作 This Booklet is prepared by Ove Arup & Partners Hong Kong Limited