

荃灣雨水排放隧道 Tsuen Wan Drainage Tunnel



我們的抱負：

提供世界級的污水和雨水處理排放服務，以促進香港的可持續發展

Our Vision:

To provide world-class wastewater and stormwater drainage services enabling the sustainable development of Hong Kong

背景

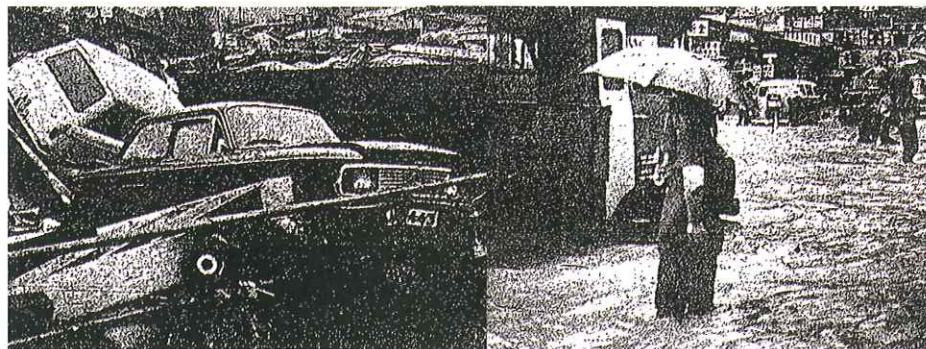
現時荃灣和葵涌市區的雨水排放系統已建成逾三十多年，由於城市不斷發展，徑流增加，超出其設計的排洪能力，以致該區在暴雨期間，經常出現水浸。例如在1997年，連場暴雨引致荃灣和葵涌市區多處地區發生水浸。

有鑑於此，渠務署在1999年7月對荃灣、葵涌及青衣的雨水排放系統進行了整體計劃研究。結果顯示荃灣及葵涌的雨水排放系統未能符合現時的防洪標準。研究報告建議興建荃灣雨水排放隧道，作為改善荃灣及葵涌地區雨水排放整體策略的主要部份。

Background

The existing drainage systems in Tsuen Wan and Kwai Chung were built over 30 years ago. They do not have the spare capacity to handle the additional stormwater arising from the urbanization of the towns resulting in flooding during severe rainstorms. For example, in 1997, several rainstorms caused flooding in many areas of the Tsuen Wan and Kwai Chung districts.

In view of the above, the Drainage Services Department (DSD) carried out the "Stormwater Drainage Master Plan (DMP) Study in Tsuen Wan, Kwai Chung and Tsing Yi". The study was completed in July 1999. It concluded that the drainage systems in Tsuen Wan and Kwai Chung could not meet the current flood protection standard. The Study recommended the construction of the Tsuen Wan Drainage Tunnel as the backbone of the overall drainage improvement strategy in the districts.



大河道水浸情況 Flooding in Tai Ho Road

目標

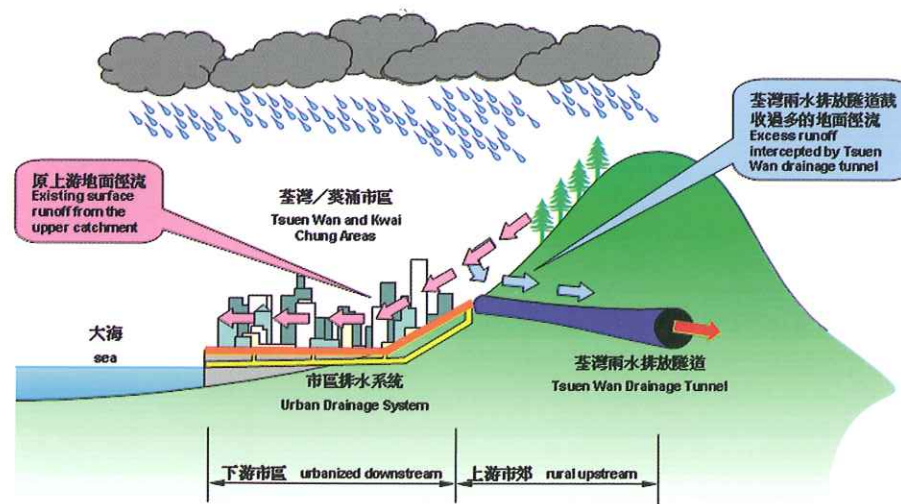
建議中的荃灣雨水排放隧道將截收高地集水區過量的徑流，然後通過隧道帶往排水口排放到大海。此方案有助減輕現行市區排水系統的負荷，從而提升荃灣及葵涌地區的整體排洪能力，達致能應付重現期⁽¹⁾為五十年一遇的暴雨。這方案最大的優點是可避免於荃灣及葵涌的繁忙街道上進行廣泛的開挖路面工程，同時能夠將區內的排洪能力提升。

Objectives

The proposed Tsuen Wan Drainage Tunnel will improve the flood protection level in Tsuen Wan and Kwai Chung by intercepting excess stormwater from the upland catchments for discharge into the sea. It saves the need to implement extensive pipe upgrading works in busy streets but can raise the flood protection standard in the Tsuen Wan and Kwai Chung districts to withstand rainstorms with a return period⁽¹⁾ of 1 in 50 years.

(1) 「重現期」是統計學上用以形容雨勢的一種方法。雨勢越大，其出現的機會越少。降雨重現期是指某程度或更大雨勢的暴雨在某一特定地方預計平均相隔出現的時間。

(1) "Return period" is a statistical means to describe the severity of rainfall. The higher the severity of the rainfall, the less likely will be its recurrence. The rainfall return period is defined as the average period of time expected to elapse between occurrences of rainstorm events at the particular location with the described severity or higher.



隧道設計

擬建之雨水排放隧道的內直徑為6.5米，全長約5.1公里，建造工程包括三個進水口及一個排水口。

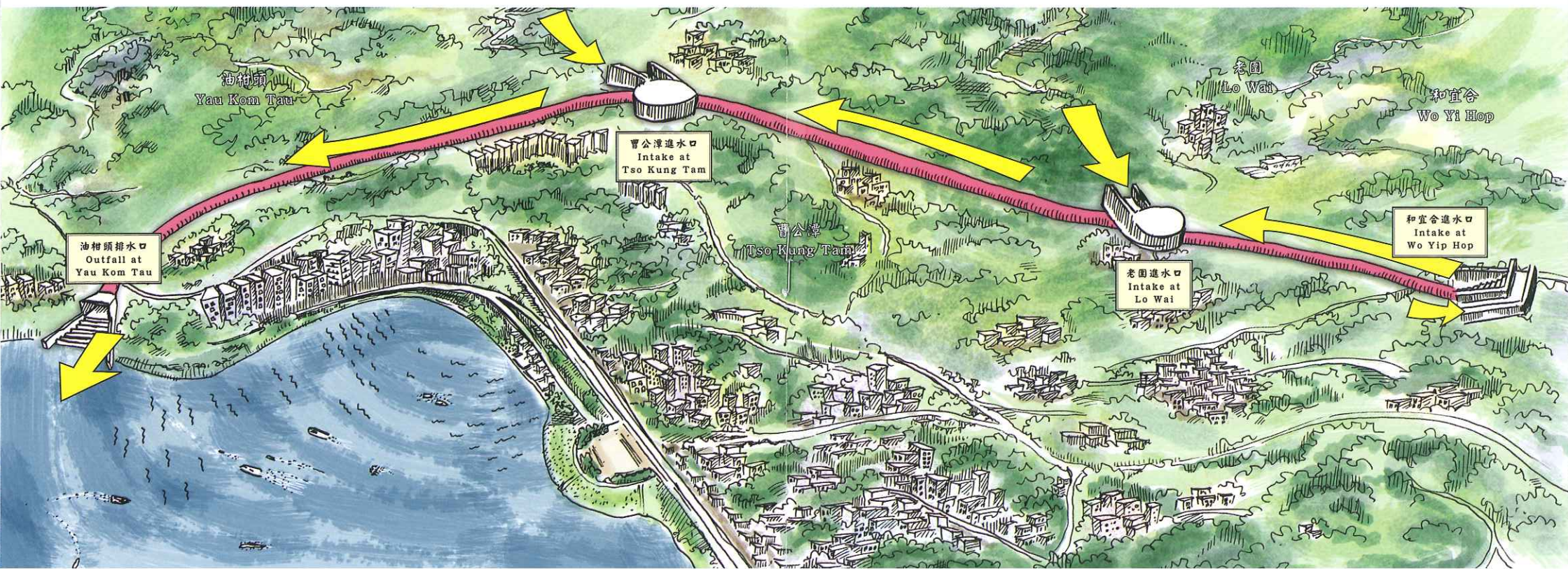
渠務署的顧問公司就隧道選線作出深入及詳細的研究。現時採納的路線為長度最短、對公眾及環境影響最少、建築成本最低及興建時間最短的方案。經深入的土地勘察及分析，雨水排放隧道的建造將不會引致明顯的地下水流失、土地沉降，亦不會對附近的樓宇地基及鄰近的交通構成影響。

Tunnel Design

The proposed main tunnel is about 5.1km long with an internal diameter of 6.5m. It has three intakes and an outfall.

The consultant has assessed the feasibility of different tunnel options. The proposed alignment is the shortest with the least impact to the public and the environment, lowest construction cost and shortest construction time. Based on our findings and ground investigation results, the construction of the proposed works would not cause any adverse impacts to the public in terms of ground settlement, groundwater movement, effects on foundations of existing buildings, existing traffic, etc.

工程鳥瞰圖 Aerial View of the Project



環境影響

根據環境影響評估條例，是項工程被界定為指定工程項目。全面的環境影響評估包括空氣、噪音、水質、廢料、生態、文化遺產、視覺及景觀影響評估已完成。評估結果顯示這工程項目不會導致嚴重的環境影響。在採取緩減措施後，工程帶來的影響將不會超出現有的指引和標準。

Environmental Impact

This project is classified as a Designated Project under the Environmental Impact Assessment Ordinance. A thorough environmental impact assessment (EIA) covering the impacts on air, noise, water, waste, ecology, cultural heritage, visual and landscape has been undertaken. It concludes that this project will not result in unacceptable environmental impacts. The implementation of suitable measures can mitigate the environmental impacts arising from the works to within established standards and guidelines.

隧道鑽挖機 Tunnel Boring Machine



隧道的建造

主隧道將利用隧道鑽挖機在深入地底10米至200米的岩石層內建造，而所有進水口將採用傳統挖掘方法建造。我們將會嚴格規管有關建造工程，並會在工程展開前和建造期間監察鄰近建築物的狀況，以確保工程不會對附近的大廈結構構成任何負面的影響。

雨水排放隧道的工程已於2007年12月展開，預期於2011年底竣工。工程造价約11億元。

Tunnel Construction

Tunnel Boring Machine will be used to construct the tunnel through rock at a depth of some 10m to 200m below ground. The intakes will be constructed by conventional excavation method. We shall closely supervise the tunneling works and carry out all necessary surveys before and during construction to ensure no unacceptable impacts caused to nearby structures.

Works commenced in December 2007 for completion in late 2011. The construction cost is about 1.1 billion.

查詢

如有任何疑問，請致電	
顧問工程師倪崇禮先生	(852) 2828 5757
駐地盤工程師黃瑞縈女士	(852) 2498 5500
渠務署工程師林志權先生	(852) 2594 7291

Enquiry

If you have any queries, please contact:	
Consultant Engineer, Mr. Taj Ishola	(852) 2828 5757
Resident Engineer, Ms. Miranda Wong	(852) 2498 5500
DSD Engineer, Mr. Leo Lam	(852) 2594 7291

網址 Website	www.dsd.gov.hk
渠務熱線 Drainage Hotline	(852) 2300 1110