

CAPITAL 基本工程WORKS

- 更換 / 修復水管工程
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 - 規畫及設計中的大型工程
 - 施工中的大型工程
 - 大型工程的價值管理
- Mains Replacement / Rehabilitation Project
 - Major Projects under Planning and Design
 - Major Projects under Construction
 - Value Management for Major Projects
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為了提供持續可靠的供水服務，我們需要進行基本工程，適時擴展及更新供水基礎設施，以配合本港各項新發展的步伐。現時，所有基本工程項目均由政府的基本工程儲備基金撥款興建。年內，許多大型工程正進行規劃及施工，而我們亦已致力確保這些工程均能在預算內如期完成。



實地測試水平定向鑽控技術。
Trial test of horizontal directional drilling technique.

更換 / 修復水管工程

根據地下資產管理計劃，我們要在20年內更換或修復超過3 000公里水管，這項龐大工程的第一階段已於二零零零年十二月展開。更換或修復首350公里水管的工程，預計於二零零八年完竣。此外，本署正著手勘察研究於二零零四年至零九年期間為另外250公里水管進行同類工程。至於擬在二零一零年前多更換700公里水管的工程，仍在初步規劃中。

為盡量減少更換或修復水管工程對交通和市民造成的影響，本署計劃盡可能採用無開掘方法施工。現正考慮的方法計有內喉緊貼法、原位內擡喉管法、喉管爆破法、喉管推頂法/喉管撞擊法、水平定向鑽控法和微型隧洞掘進法。

規劃及設計中的大型工程

沙田濾水廠是全港最大型的濾水廠，六十年代起已投入服務。為回復昔日的濾水量及提高可靠性和效能，我們會分期重建沙田濾水廠，並採用先進濾水科技，預期工程會在二零二零年完成。

為應付「大嶼山吊車系統」旅遊發展項目的用水需求，我們正為昂坪設計一項新的供水計劃。這項工程將於二零零三年六月施工，預計二零零五年完成，造價為8,900萬元。

規劃中的大型工程包括改善灣仔供水系統，以及敷設從西九龍至西區的海底水管及連接至西營盤的地面水管。

施工中的大型工程

造價35億元的大埔濾水廠及相關的輸水管道及配水庫建造工程即將完成。這是施工中規模最大的項目，可望於二零零三年投入服務。濾水廠會分階段興建，初期日產量為25萬立方米，最終可增至120萬立方米。

With a view to providing a continuous and reliable water supply, we need to undertake capital works projects to expand and renew the water supply infrastructure in time to keep pace with the new developments in Hong Kong. All capital works projects are funded by the government's Capital Works Reserve Fund. During the year, many major projects were under planning and construction and great effort has been made to ensure the delivery of the projects is on time and within budget.

MAINS REPLACEMENT/REHABILITATION PROJECT

Stage One of the massive project for replacement or rehabilitation of some 3 000 kilometres of water mains in 20 years under the Underground Asset Management Plan commenced in December 2000. Work for the first 350 kilometres of water mains is expected to be completed by 2008. Investigation studies are being conducted for similar work on a further 250 kilometres of water mains to be implemented between 2004 and 2009. Initial planning is also underway for replacement of 700 more kilometres of water mains by 2010.

To minimize the traffic interruptions and impacts on the public arising from mains replacement or rehabilitation work, we plan to adopt trenchless methods as far as practicable. The methods under consideration include close fit lining, cure-in-place, pipe bursting, pipe jacking/pipe ramming, horizontal directional drilling and micro-tunneling.

MAJOR PROJECTS UNDER PLANNING AND DESIGN

Sha Tin Water Treatment Works is the largest water treatment works in Hong Kong and has been in operation since the 1960s. To restore the treatment capacity and improve its reliability and efficiency, work will be carried out in re-provisioning of the Sha Tin Water Treatment Works with the latest technologies. The work will be done in phases for completion in 2020.

To cope with the water demand arising from the tourism project "Cable Car System on Lantau Island", a new water supply project for Ngong Ping is being designed. Construction work of this project will begin in June 2003 for completion in 2005 at a cost of \$89 million.

Major projects being planned include upgrading of the Wan Chai water supply system, laying of Western cross harbour mains and associated land mains from West Kowloon to Sai Ying Pun.

為配合油塘及茶果嶺重建計劃而展開的供水基礎設施建造工程，現正全力進行。同時，為供水予大嶼山竹篙灣香港迪士尼樂園所進行的陰澳配水庫興建工程已經展開。至於在火炭、大埔、上水及元朗的水管更換工程，亦已動工。

現正進行的其他大型項目，還有深水埗、旺角及何文田幹管敷設工程(造價5億元)、元朗及屯門食水供應系統連接計劃(造價2.3億元)，以及東九龍供水系統擴展工程(造價3億元)等等。



用以承托配水庫上蓋的支柱在建造中。
Columns for supporting the cover of service reservoir being constructed.

大型工程的價值管理

年內，本署曾為8項大型工程計劃進行價值管理研究，以便在該等工程的初期確定最具成本效益的方案，亦會將價值管理技術應用於中型水務設施工程計劃。



工作人員正檢查大埔濾水廠的水管。
Staff conducting inspection on pipework in Tai Po Water Treatment Works.



興建中的大埔濾水廠。
Tai Po Water Treatment Works under construction.

MAJOR PROJECTS UNDER CONSTRUCTION

Construction of the \$3.5 billion Tai Po Water Treatment Works and related aqueduct and service reservoirs is nearing completion. It is the largest project under construction and will be put into service in 2003. The water treatment works with an ultimate daily capacity of 1.2 million cubic metres is being built in stages and will have an initial output of 250 000 cubic metres a day.

Construction of the water supply infrastructure to match the redevelopment of Yau Tong and Cha Kwo Ling is in full swing. Meanwhile work has begun on the construction of Yam O Tuk Fresh Water Service Reservoir to supply the Hong Kong Disneyland at Penny's Bay on Lantau Island. Work has also started in the replacement works on water mains at Fo Tan, Tai Po, Sheung Shui and Yuen Long.

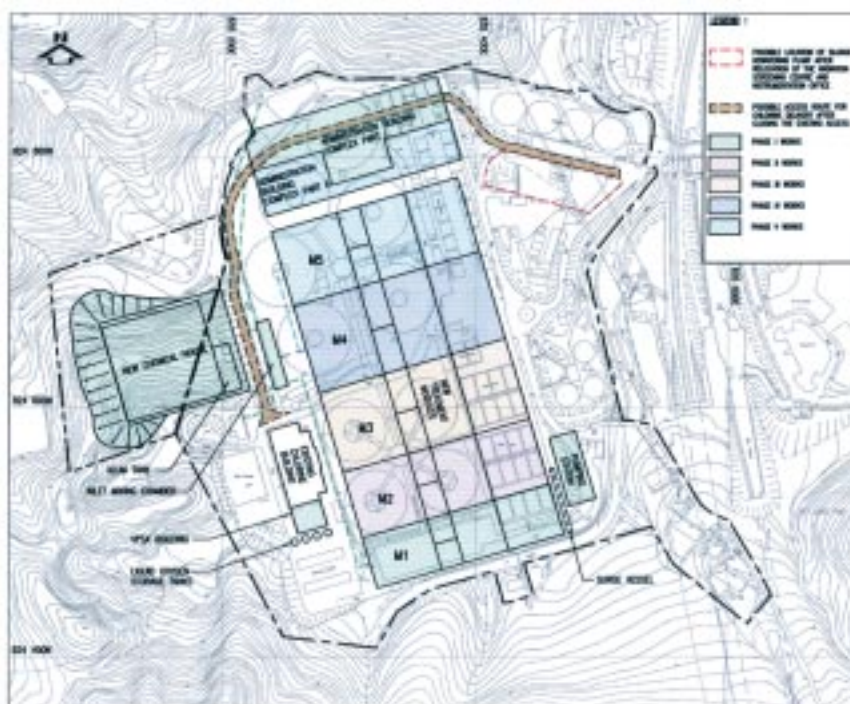
Other major projects in progress include a \$500 million project of laying trunk mains in Sham Shui Po, Mong Kok and Ho Man Tin; a \$230 million scheme to link up the fresh water supply systems of Yuen Long and Tuen Mun, and a \$300 million project of expanding the water supply system in the Kowloon East area.



興建中的食水配水庫。
Fresh water service reservoir under construction.

VALUE MANAGEMENT FOR MAJOR PROJECTS

Value management studies were conducted for 8 major projects during the year to determine cost-effective solutions at the inception stage of the projects. Application of value management techniques will be extended to medium-size water works projects.



重建沙田濾水廠的初步計劃。
Preliminary plan of reprovisioning of Sha Tin Water Treatment Works.