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

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 of 1 in 50 years.

(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 rainfall events at the particular location with the described severity or higher.
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.
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.

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.