

**Harbour-front Enhancement Committee
Sub-committee on Harbour Plan Review**

Proposed Outfall of Tsuen Wan Drainage Tunnel

Purpose

1. This paper is to seek the Sub-committee's advice on the proposed outfall of the Tsuen Wan drainage tunnel. Figure 1 shows the general layout of the whole tunnel.

Background

2. Drainage Services Department completed the "Stormwater Drainage Master Plan Study in Tsuen Wan, Kwai Chung and Tsing Yi" in 1999. The Study recommended constructing a stormwater drainage tunnel at the uphill areas of Tsuen Wan to alleviate flooding problems in the Tsuen Wan and Kwai Chung urban areas. An outfall will be constructed at the end of the tunnel at Yau Kom Tau, which is within Victoria Harbour, for disposal of stormwater.

3. The Environmental Impact Assessment Report of the project was circulated to Sub-committee Members in January 2006. It is now proposed to seek the Sub-committee's advice on the detailed outfall design.

4. It is anticipated that construction works for the outfall will commence in 2009.

Proposed Outfall

5. The proposed outfall mainly consists of a cascade structure, with baffles on-shore and protective concrete blocks placed on sea-bed (Figure 2 shows the general layout of the proposed outfall). A spiral-ramp structure, adjoining the cascade section, will provide vehicular access to facilitate future maintenance of the outfall. The cascade structure is used to dissipate energy and reduce the velocity of the water out-flow. Screen planting will be provided on top of the cascade structure to enhance the visual quality. Baffles are constructed underneath the existing arch bridge, carrying Castle Peak Road westbound carriageway, to allow an effective spread of the water out-flow such that its velocity can be further reduced. The protective concrete blocks are used to form a firm foundation slab, to protect the sea-bed from erosion and

scouring by stormwater discharged through the tunnel. They will be constructed by slightly dredging the existing sea-bed to form a firm foundation and the concrete blocks will then be placed on top. There will be no structure above the existing sea-bed and no reclamation whatsoever is required. Since these concrete blocks will be below the sea level, there will be no visual impact due to this protective layer.

6. A landscape and visual impact assessment has also been carried out for the project, including the outfall cascade and spiral-ramp structure. The relevant information (e.g. photographs and photomontages) has been circulated amongst the relevant Government departments/offices (e.g. Architectural Services Department, Environmental Protection Department, and Planning Department). The landscaping design, in relation to the outfall cascade and spiral-ramp structure, as shown in Figure 3, has incorporated the comments received.

7. The following salient points are elaborated from harbour planning perspective:

- (a) The outfall is to be constructed without affecting the carriageways and footpaths on Castle Peak Road. The construction of the outfall will not cause any obstruction to pedestrians or any access problem for them to enjoy the sea views.
- (b) The height of the spiral-ramp structure has been kept to a minimum so as to provide vehicular access to the cascade only. Apart from a safety handrail on the roof, no other parts will protrude above the spiral-ramp structure.
- (c) The spiral-ramp structure has been sited close to the hillside, instead of the sea front, so as not to block any sea-views currently enjoyed by the residents of the two nearby premises, namely Greenview Terrace and Long Beach Gardens.
- (d) The spiral-ramp structure will be landscaped to optimize greening of the harbour-front areas. Planters and shrubs will be provided around the side wall of the structure and the external finish will match with the surroundings. Grass will be planted on the roof.
- (e) The outfall cascade has also been landscaped to optimize greening of the harbour-front areas. Screen planting will be provided on top of the cascade structure to alleviate the visual impact. Moreover, trees will be planted on the adjacent slopes to enhance the green environment.
- (f) The baffles and side walls of the protective layer will be designed to blend with the existing sloping seawall.

8 In view of the above, it is considered that the construction of the proposed outfall is in line with the Harbour Planning Guidelines promulgated by HEC.

Public Consultation

9. We have started public engagement at an early stage of the project. In 2005, we introduced the project to the relevant committees of the Tsuen Wan District Council (DC) and Kwai Tsing DC. We further consulted the Tsuen Wan DC and Kwai Tsing DC through their relevant committees in November 2006 and December 2006 respectively. Both DCs supported the project. We also consulted the Tsuen Wan West Area Committee (AC), Tsuen Wan Rural AC and Tsuen Wan East AC in December 2006. The three ACs had no objection to the project.

10. Apart from the DCs and ACs, we have consulted the Tsuen Wan Rural Committee, relevant land owners and nearby schools. Recently, we distributed an information paper to Kwai Tsing DC and met the Tsuen Wan DC in February 2008, to update members on the latest development of the project. We have also issued notices to over 7,000 residents in the vicinity of the tunnel alignment informing them of the project information and commencement of the works.

11. Greenview Terrace and Long Beach Gardens are close to the proposed outfall. We consulted the Incorporated Owners of Greenview Terrace in December 2007, April 2008 and May 2008. They were concerned about the maintenance responsibility of a slope adjacent to the spiral ramp structure, the noise and mosquito nuisance possibly caused by the outfall during operation stage and the possible impact on the existing structures during construction stage. We will provide them with more detailed information about the construction of the outfall and to review the outfall design to see if it is feasible to add a cover to the cascade structure. As regards Long Beach Gardens, we have consulted the residents through their management office. They did not have particular comments and advised that meetings with the residents would not be required at this stage.

12. We shall continue to engage the public throughout the construction stage of the project.

Advice Sought

13. Sub-committee Members are welcome to give views on the proposed outfall of the Tsuen Wan drainage tunnel project.

Figures

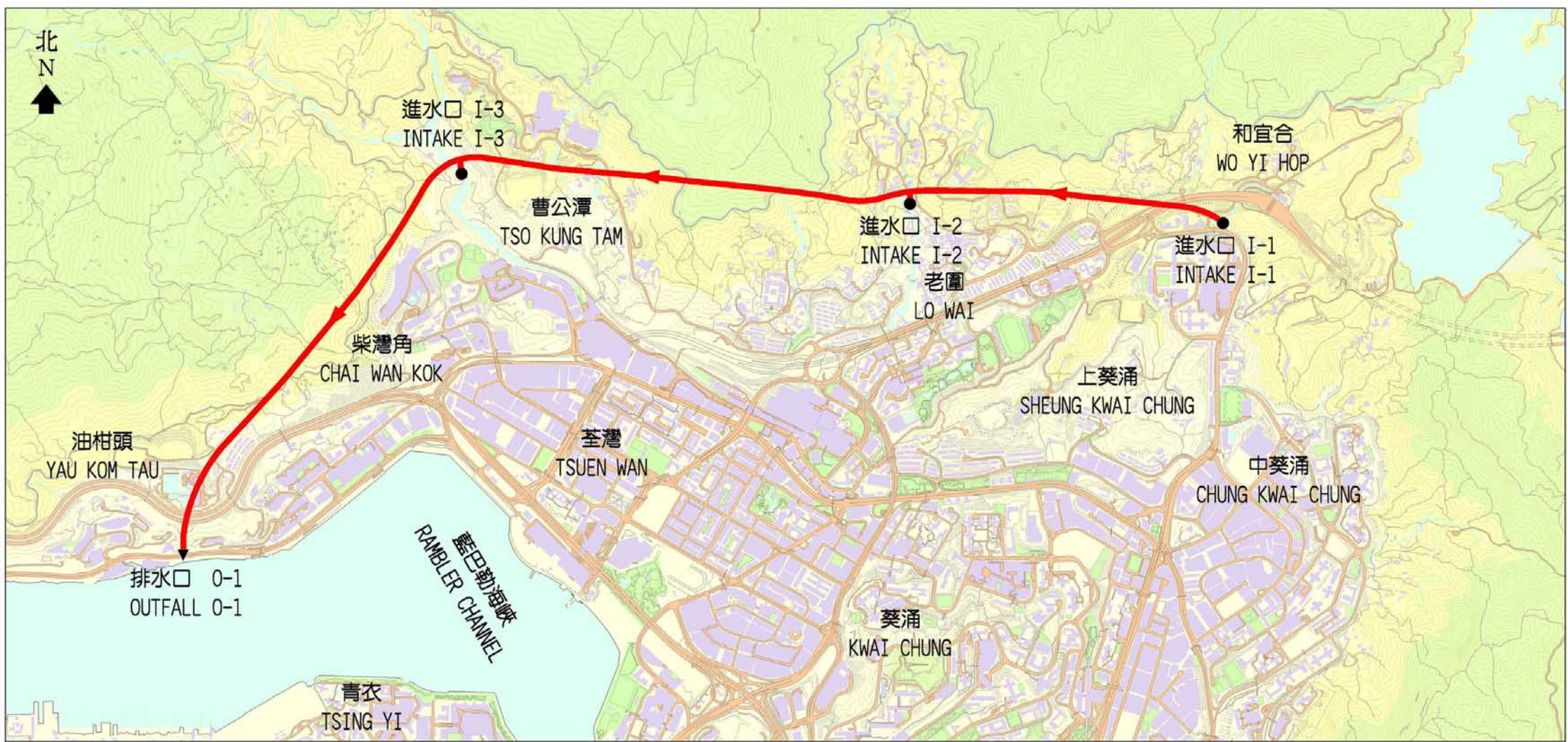
Figure 1 – Location Plan of Tsuen Wan Drainage Tunnel

Figure 2 – Outfall Layout Plan

Figure 3 – Photomontage of Outfall

Drainage Services Department


May 2008

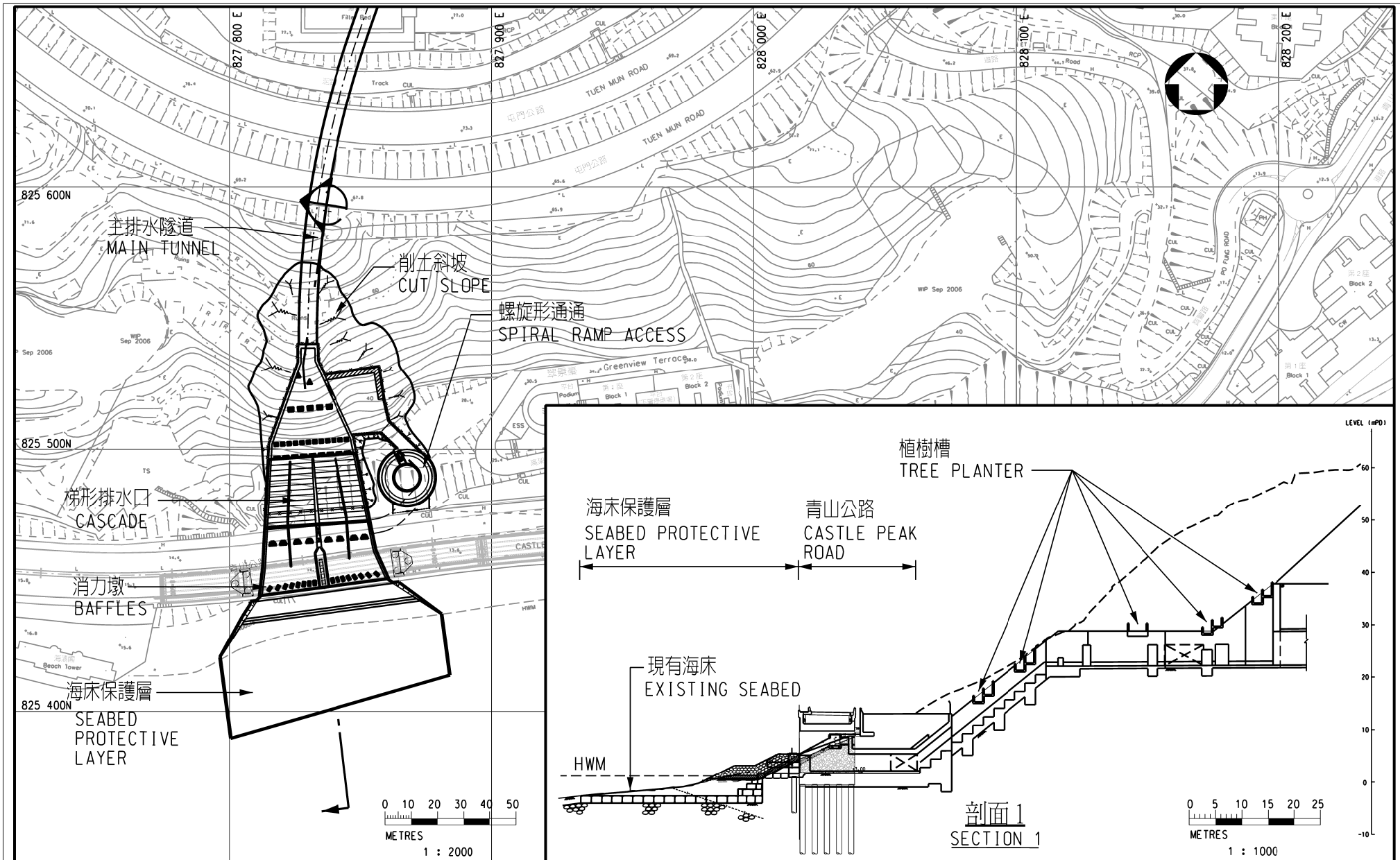


荃灣雨水排放隧道

TSUEN WAN DRAINAGE TUNNEL

圖例
LEGEND :

-  建議之主隧道及連接隧道路線
PROPOSED MAIN TUNNEL AND ADIT ALIGNMENT
-  進水口
INTAKE
-  排水口
OUTFALL



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 渠務署
 The Government of the Hong Kong
 Special Administrative Region
 Drainage Services Department

Consulting Engineers
Mott Connell Ltd.
 顧問工程師
 萬隆工程顧問有限公司

項目
 Project
 荃灣及葵涌雨水排放改善計劃 -
 荃灣雨水排放隧道
 Drainage Improvement in
 Tsuen Wan and Kwai Chung -
 Tsuen Wan Drainage Tunnel

名稱
 Title
 排水口 0-1 總平面圖和剖面圖
**OUTFALL 0-1 LAYOUT
 PLAN AND SECTION**

比例
 Scale
1 : 2000
 圖二
 FIGURE 2



Photomontage of Outfall

Figure 3