

Legislative Council Public Works Subcommittee

PWP Item No. 716CL

**Tseung Kwan O further development – infrastructure works for
Tseung Kwan O Stage 1 landfill site**

Follow-up to meeting on 27 November 2019

At the meeting on 27 November 2019, the Public Works Subcommittee discussed the proposal in the Legislative Council (LegCo) Paper No. PWSC(2019-20)22. Members requested the Government to provide supplementary information on the proposed footbridge across Eastern Channel at Tseung Kwan O (TKO) South (Southern Bridge). Our reply is set out below:

- (a) **At the request of the Chairperson, Hon WU Chi-wai, Dr Hon KWOK Ka-ki and Hon Alvin YEUNG, the Government shall provide supplementary information on:**
- (i) **the considerations in deciding whether to provide cycle tracks or designated cycle lanes on the proposed Southern Bridge, and**
 - (ii) **the details and progress of the current pilot project of implementing shared-use paths for pedestrians and cyclists.**

On item (i) above, regarding the provision of cycle tracks or designated cycle lanes on the proposed Southern Bridge, the main design considerations adopted by the Government include the holistic plan of cycle tracks in TKO district, the function and cost effectiveness of the proposed Southern Bridge, and the local views, as briefly set out below:

According to the current development plan of TKO South, the Government will provide a 5 kilometres (km) long cycle track loop via the promenade of TKO Area 68 and TKO Town Centre South, the existing Northern Bridge across the Eastern Channel, the promenade of TKO Area 77 and Area 86, and the Cross Bay Link under construction, facilitating the public to cycle within the areas for commuting and leisure purposes. The planned layout

of the cycle track loop at TKO South can be referred to Figure 1.

For the proposed Southern Bridge connecting TKO Area 68 and Area 77 across the Eastern Channel, its primary function is to facilitate pedestrians a convenient access between the two Areas, and enhance the connectivity and walkability of the promenade on both sides of the Eastern Channel, so as to cope with the recreational development at Area 77. Given that the proposed Southern Bridge and the existing Northern Bridge is merely about 450m apart, cyclists at the proposed Southern Bridge would only take a 3-minute ride to cross the Eastern Channel via the existing cycle track at the Northern Bridge. Accordingly, it is functionally unnecessary to provide a cycle track on the proposed Southern Bridge. If a standard cycle track were provided on the proposed Southern Bridge, the clear width of the bridge deck would require an increase from 4.5m to 8.5m, the associated ramps would also require widening and the bridge foundation would need an expansion, resulting in a surge in construction cost which is not cost effective.

During the design stage of the proposed Southern Bridge, the Civil Engineering and Development Department (CEDD) consulted the Traffic and Transport Committee (T&TC) of Sai Kung District Council (SKDC) on 23 May 2013 and 29 May 2014. After deliberation and due consideration of the function of the proposed Southern Bridge and the local context, the T&TC agreed to adopt the design theme of “Serenity Footbridge” for the proposed Southern Bridge, which, without any cycle track thereon, would allow the pedestrians to enjoy the scenery and walk serenely on the footbridge. On 6 November 2018 when the CEDD reported the progress of the project to SKDC, the council expressed support to the bridge design and requested early commencement of the construction works.

To conclude, from the perspectives of the planning, function and cost effectiveness of the proposed Southern Bridge and local views, provision of cycle track on the proposed Southern Bridge is not necessary.

On item (ii), the Government is planning to implement “GreenWay” in the Kai Tak Development (KTD), which is a path for shared-use of pedestrians and cyclists that links up the promenade and open spaces in the area, aiming to better utilize the open spaces and promenade, integrate the cycling tracks

with its surrounding, enhance the linkage of the open spaces, and strengthen the connectivity in KTD.

Differing from traditional separation between cycle tracks and footways, GreenWay is a new concept in Hong Kong and the public may have concern on its operation and safety. In view of this, the CEDD and the Leisure and Cultural Services Department conducted in July 2018 a 6-month pilot scheme at the Kwun Tong Promenade in KTD allowing the public to experience the shared use of common path by pedestrians and cyclists, and, at the same time, collecting data and opinions for building up experience in the management and development of GreenWay, which would be useful to the planning and implementation of GreenWay in KTD. The pilot scheme was smoothly completed in early 2019 and the users' feedback was generally satisfactory.

The proposed Greenway network in KTD, which is about 13 km long in total and has a recommended width of about 6m to 10m, will be completed in phases to dovetail with the implementation programmes of the infrastructure and open space development projects in KTD. The first phase of about 7.5 km is scheduled for commissioning since 2023, and the second phase of about 5.5 km is expected to be completed beyond 2025. The CEDD is planning to commission a study on the design and implementation of GreenWay by early 2021, to review the relevant design standards, implementation details of the GreenWay network and ancillary facilities, modes of management and operation; and to explore the feasibility of adopting and procuring smart measures, such as automatic bike renting system, real-time incident detection on the GreenWay, and route guidance by Augmented Reality via mobile applications, in order to enhance the management and operation on Greenway in KTD in future.

(b) **At the request of Hon Alvin YEUNG, the Government shall provide supplementary information on why the construction cost of the ramps of the proposed Southern Bridge stood as high as \$52.1 million (and provide the cost information of other similar ramps of footbridges for members' reference). Moreover, at the request of Chairperson, the Government shall review the possibility of adding stairs to the ramp connecting the proposed Southern Bridge to TKO Area 68.**

(i) Construction cost of ramps of the proposed Southern Bridge

Generally speaking, the construction cost of footbridge and its ramps depends on a host of factors, including the complexity of works, conditions and surrounding environment of the site, underground geology and foundation conditions, the economic situation at the time of tendering, the tendering strategy of individual tenderers, etc. Therefore, when comparing the costs of similar works in different projects, the usual practice is to compare projects with similarities in various aspects, as such comparison would offer higher reference value. The table below lists out the estimated cost of the ramps of the proposed Southern Bridge and the contract price of ramp in another bridge project in TKO for reference. It shows that the unit cost per square meter of bridge ramps in these two projects are comparable.

PWP Item No. (date upgraded to Category A)	Ramp Location Area, Structural Material, and Foundation	Estimated Cost (in money-of-the day prices)	Estimated Cost (in Sept 2018 prices¹)	
		Overall (\$million)	Overall (\$million)	Per m² (\$million)
716CL (upgrading is currently sought from Finance Committee)	Ramps of the proposed Southern Bridge in TKO Area: about 1224m ² Structural Material: Concrete Foundation: Piling	52.1	44.3	0.036

¹ For ease of comparison, the prices were adjusted to September 2018 price level, making reference to the Government's statistics on the trend rate of change in the prices of public sector building and construction output during the relevant periods.

PWP Item No. (date upgraded to Category A)	Ramp Location Area, Structural Material, and Foundation	Estimated Cost (in money-of-the day prices)	Estimated Cost (in Sept 2018 prices ¹)	
		Overall (\$million)	Overall (\$million)	Per m ² (\$million)
822TH (June 2018)	Cross Bay Link, TKO – Ramp at Road D9 Area: about 861m ² Structural Material: Concrete Foundation: Piling	33.9 (contract price)	28.9	0.034

- (ii) Review the possibility of adding stairs to the ramp connecting the proposed Southern Bridge to TKO Area 68

At the western end of the proposed Southern Bridge connecting to TKO Area 68, the left and the right sides of the bridge deck are each connecting to the existing TKO Waterfront Park via a 40m long up-ramp and the viewing platform under the bridge deck via a 40m long down-ramp (Figure 2). According to the design, functionally, the up-ramps on both sides at the western end will form part of the emergency access of the TKO Waterfront Park for the passage of ambulance when needed. Therefore, adding staircases to the up-ramps is not suitable. Upon reviewing the connection between the bridge deck and the viewing platform underneath, the CEDD propose to link them up with an additional staircase, so as to provide people with a convenient access (Figures 3 & 4).

Development Bureau
Civil Engineering and Development Department
December 2020



工務計劃第716CL號 - 將軍澳進一步發展 - 將軍澳第一期堆填區基礎設施

圖1 - 將軍澳南環迴單車徑

PWP ITEM NO. 716 CL - TSEUNG KWAN O FURTHER DEVELOPMENT - TSEUNG KWAN O STAGE 1 LANDFILL SITE

FIGURE 1 - CYCLE TRACK LOOP AT TSEUNG KWAN O SOUTH

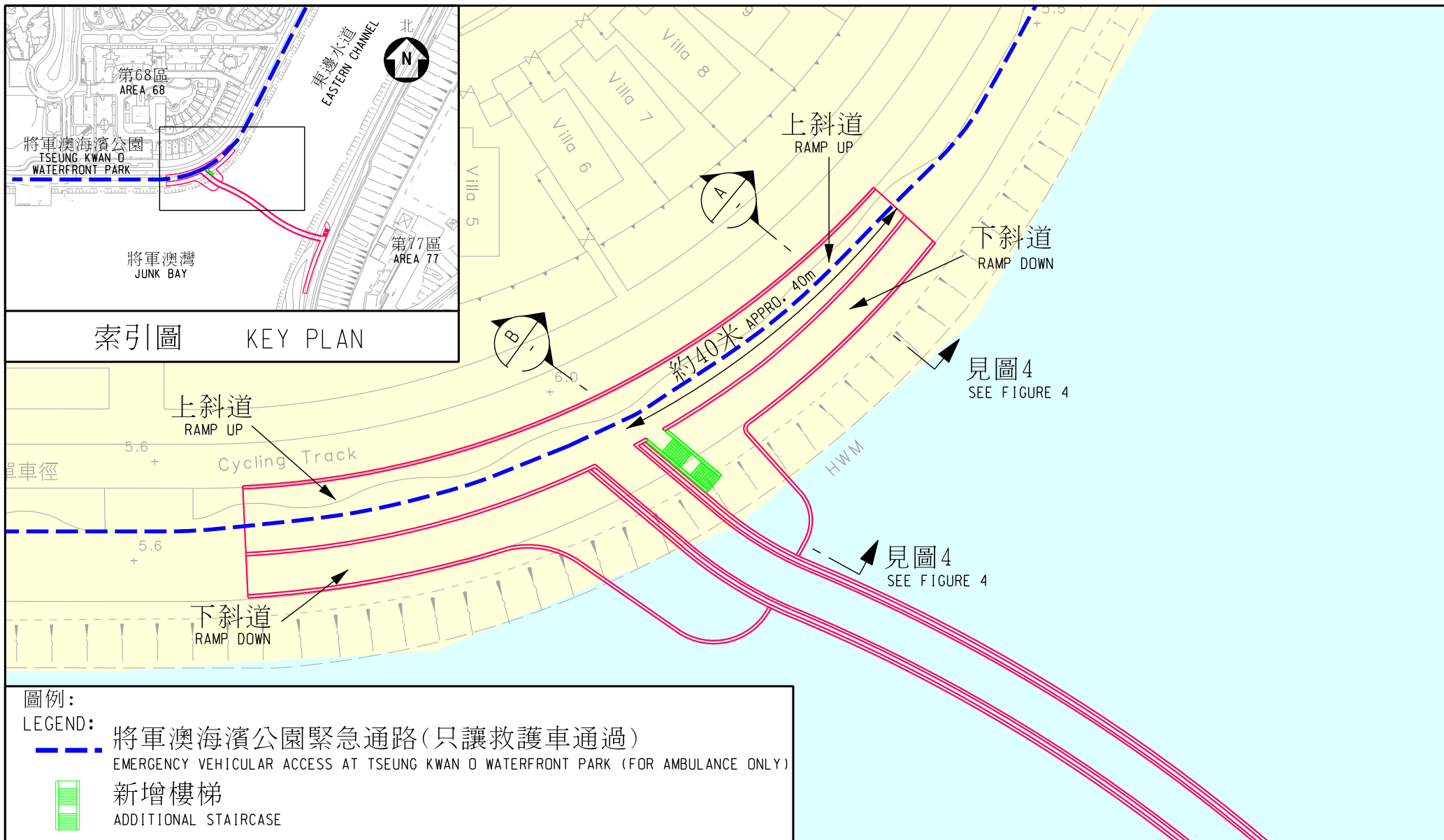


圖則名稱 drawing title

工務計劃第716CL號 - 將軍澳進一步發展 - 將軍澳第一期堆填區基礎設施

圖2 - 擬建南橋西邊橋面的行人路線

PWP ITEM NO. 716 CL - TSEUNG KWAN O FURTHER DEVELOPMENT - TSEUNG KWAN O STAGE 1 LANDFILL SITE
FIGURE 2 - PEDESTRIAN ROUTES AT WESTERN END OF PROPOSED SOUTHERN BRIDGE



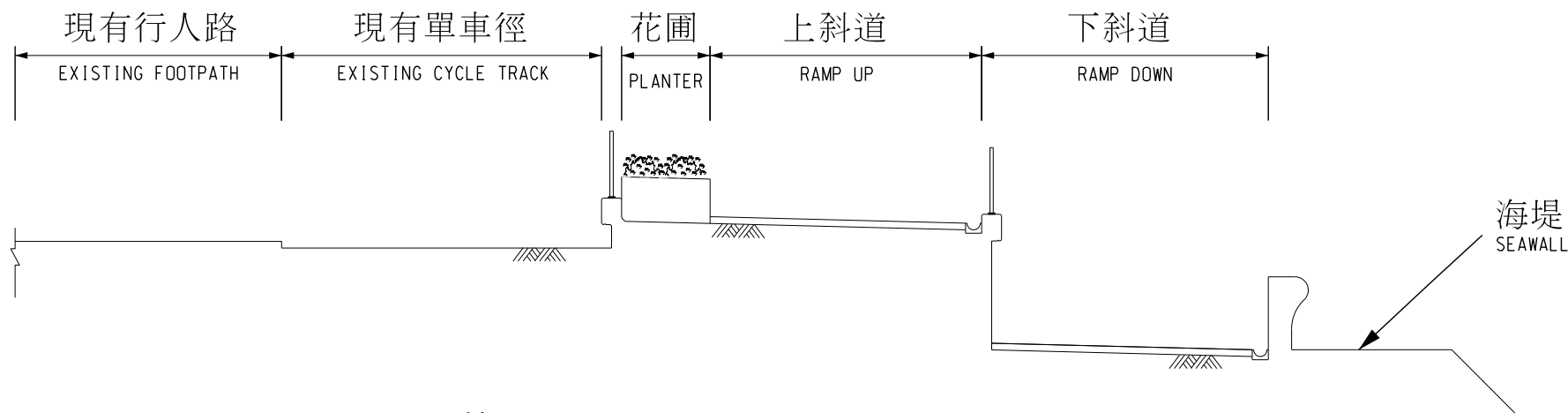
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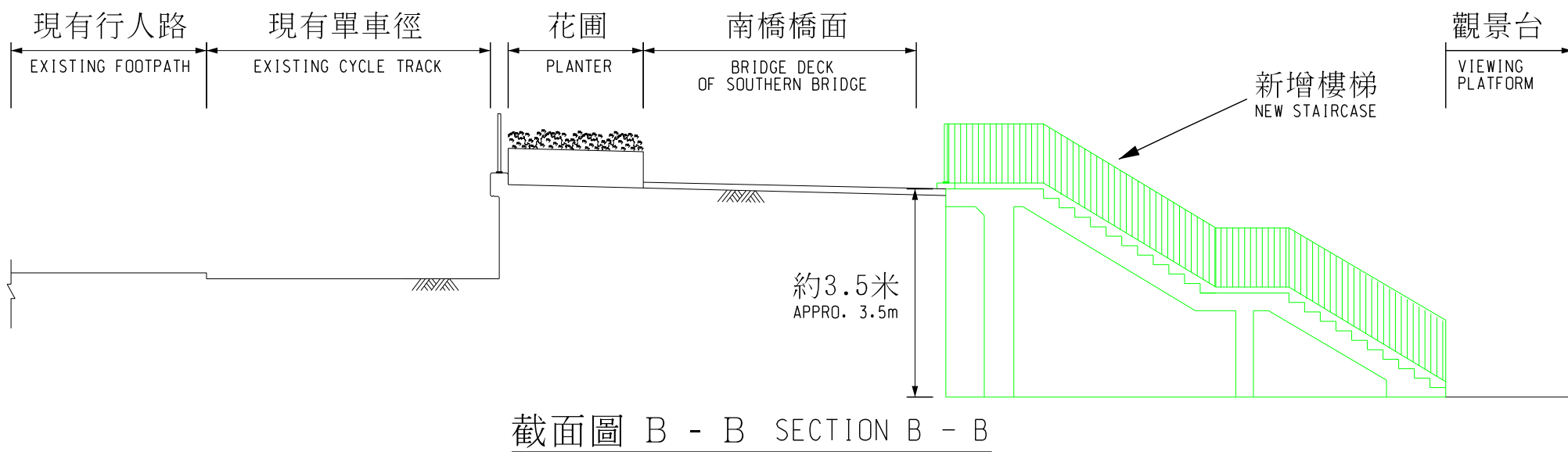
圖3 - 西邊斜道總平面圖

PWP ITEM NO. 716CL - TSEUNG KWAN O FURTHER DEVELOPMENT - TSEUNG KWAN O STAGE 1 LANDFILL SITE

FIGURE 3 - GENERAL LAYOUT PLAN OF WESTERN RAMPS



截面圖 A - A SECTION A - A



截面圖 B - B SECTION B - B

圖則名稱 drawing title

工務計劃第716CL號 - 將軍澳進一步發展 - 將軍澳第一期堆填區基礎設施

圖4 - 截面圖

PWP ITEM NO. 716 CL - TSEUNG KWAN O FURTHER DEVELOPMENT - TSEUNG KWAN O STAGE 1 LANDFILL SITE
FIGURE 4 - SECTION PLANS