

For Information

Legislative Council Panel on Development

**PWP Item 417RO –
Improvement works at Tai O**

PURPOSE

This paper informs Members of the proposal to upgrade part of **417RO “Improvement works at Tai O”** to Category A at an estimated cost of about \$151.0 million in money-of-the-day (MOD) prices to implement the riverwall and ancillary improvement works at Tai O.

PROJECT SCOPE

2. 417RO was upgraded to Category B in October 2006. Its scope includes the improvement proposals in the Tai O Revitalisation Concept Plan (Concept Plan) that has been prepared on the basis of the design concepts collected through the “Design Competition for the Revitalisation of Tai O” completed in 2008. The vision in the Concept Plan is “Harmonious Enhancement of Tai O”, i.e., revitalising Tai O through nature and heritage conservation for the benefit of the local community. The improvement proposals include infrastructure to improve local connectivity, facilities to help preserve the cultural heritage and enhance visitor appeal of the natural attributes of Tai O, as well as other supporting infrastructure. We briefed Members of this Panel on the Concept Plan on 28 July 2009.

3. To identify the best way forward for planning a better local environment for Tai O while aiming at preserving its local and natural characteristics, we have conducted a series of public consultations to seek the views of the relevant stakeholders, including the residents of Tai O, the Tai O Rural Committee (RC), the Islands District Council (IsDC), professional institutes, green groups and other concern groups, on the Concept Plan. There is general support for Government to proceed as soon as practicable with those improvement proposals that would improve the livelihood of the locals of Tai O, and to undertake other improvements in a gradual and incremental manner. The

most pressing concern expressed is for Government to address the flooding problem at Wing On Street and Tai Ping Street particularly during spring tides.

4. We will implement the Concept Plan by a bottom-up approach and in a phased manner, and will collaborate with the local residents and other stakeholders with the objective of achieving a better local environment for Tai O along the way.

5. Against the above background, we propose to implement the first package of the improvement proposals in the Concept Plan through upgrading the part of 417RO that comprises the following works to Category A -

- (a) construction of a riverwall at Yat Chung and the associated drainage and sewerage improvement works;
- (b) upgrading of the temple garden in front of Kwan Tai Temple; and
- (c) improvement to the signage within the inner-core area of Tai O.

———— A layout plan showing the proposed works is at **Enclosure 1**.

6. We plan to commence the proposed works in July 2010 for completion in December 2012¹.

7. Apart from the Concept Plan, Members may wish to note that there is another project in Tai O in the pipeline. The Old Tai O Police Station will be revitalised into a boutique hotel under the Government's Revitalising Historic Building Through Partnership Scheme. This project would become a new tourist attraction in Tai O, and help create jobs and inject new economic activities into the local community. The hotel is expected to commence operation in the third quarter of 2011.

¹ The construction of the core component of the riverwall is scheduled for completion before December 2011, with another 12 months as the maintenance and establishment period.

JUSTIFICATION

8. The proposed improvement works constitute the first package of the improvement proposals under the Concept Plan. This package, which is referred to as “the project” in the remaining parts of this paper, aims at enhancing the local infrastructure to address the most pressing needs of Tai O residents.

9. Tai O is a low lying fishing village, with the ground level in some areas along Wing On Street and Tai Ping Street lower than the water level of Tai O Creek during high tides. This topographical condition coupled with meteorological effects has rendered the areas prone to flooding, particularly during spring tides. We propose to construct a riverwall with a coping level of +3.30mPD, length of about 220 metres and wall thickness of about 0.6 metre at Yat Chung and to implement ancillary improvement measures at strategic locations along the two streets. Upon completion of these works, the flooding risk at Wing On Street and the area to the south of Tai Ping Street due to high tides under average meteorological conditions will be alleviated. We will provide a stormwater pumping station and drainage system to handle the rain water collected behind the riverwall. We will also landscape the area formed behind the riverwall and upgrade the existing sewerage system at this locality in order to intercept the sewage currently discharging directly into the Creek. The new facilities will help improve the hygienic conditions at Yat Chung.

10. Kwan Tai Temple, being one of the landmarks in Tai O, is situated at Kat Hing Back Street. The temple was built in the Ming Dynasty and is one of the oldest temples in Tai O. Apart from regular worshipers, there is also a high level of tourist patronage. While the existing open space in front has served as the temple forecourt for worshipers, it is also frequently used by local residents as a rest garden. We plan to renovate this area by providing a spacious and enhanced environment for a formal setting for religious and cultural events as well as reinforcing the temple’s cultural presence as a historical temple in Tai O.

11. We plan to set up a systematic and unified signage system in Tai O. The signage will be designed to provide essential information on the historic background and direction to tourists of specific places of interest, and more importantly promote the rich cultural heritage and natural attributes of Tai O as well as enhancing its visitor appeal. The new signage in Tai O will be implemented in phases. We plan to implement first the signage within the inner-core area of Tai O for the part upgrade of 417RO.

12. We have engaged consultants to carry out detailed design of the proposed works. Due to insufficient in-house resources, we propose to engage consultants to undertake contract administration and site supervision of the proposed works.

PUBLIC CONSULTATION

13. We gazetted the proposed riverwall scheme under the Foreshore and Sea-bed (Reclamations) Ordinance (Cap 127) on 31 July 2009. One objection was received and subsequently withdrawn unconditionally upon clarification by Government of the details of the scheme. The proposed riverwall scheme was authorised under section 7 of the Ordinance on 14 December 2009.

14. We consulted the Tai O Rural Committee (TORC) on 3 February 2010 on the project. The TORC supported in general the proposed improvement works and urged the Government to implement them as soon as practicable.

15. We consulted the green groups² on the proposed improvement works by convening a focus group meeting on 3 March 2010. The green groups were generally supportive³ of the proposed improvement works.

16. We convened a Residents Forum on 6 March 2010 to consult the local residents on the proposed improvement works. There was general support and consensus on the implementation of the proposed improvement works. There were also constructive ideas and suggestions on the design options presented for finalising the detailed design.

17. We consulted the Tourism, Agriculture, Fisheries and Environmental Hygienic Committee of the Islands District Council on 15 March 2010 and obtained the Committee's support in taking forward the project.

² The green groups invited to attend the focus group meeting on 3 March 2010 included the Association for Tai O Environment and Development, Green Lantau Association, the Conservancy Association, Kadoorie Farm & Botanic Garden, Green Power (GP), Hong Kong Bird Watching Society (HKBWS) and WWF-Hong Kong. Although GP, HKBWS and WWF were unable to attend the meeting, they indicated in subsequent communication that they had no specific comment or no objection to the proposed improvement works under the project.

³ There was reservation expressed by one of the green groups on the cost-effectiveness of the riverwall proposal. We explained at the meeting that the estimated construction cost of the riverwall had already taken into account the remoteness of the site, the difficult ground conditions due to a thick layer of soft marine mud as well as the site constraints imposed by the existing stilted houses and the village houses.

ENVIRONMENTAL IMPLICATIONS

18. The project is not a Designated Project (DP) under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap 499). We have conducted a Preliminary Environmental Review (PER) for the project under the Feasibility Study. The Director of Environmental Protection agrees with the conclusion of the PER that the project would not have any long term environmental impacts.

19. We will incorporate into the works contract the mitigation measures recommended in the PER to control the environmental impacts arising from the construction works to within established standards and guidelines. These measures include frequent watering of the site, covering of materials on trucks and barges and use of silenced construction plant. We have included \$1.4 million (in September 2009 prices) in the project estimate for the implementation of the environmental mitigation measures.

20. We have considered the design and construction sequence of the proposed improvement works in the planning and design stages to reduce the generation of construction waste where possible. In addition, we will require the contractor to reuse inert construction waste (e.g. excavated soil) on site or in other suitable construction sites as far as possible, in order to minimize the disposal of inert construction waste to public fill reception facilities. We will encourage the contractor to maximize the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to further minimize the generation of construction waste.

21. We will also require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply with the approved plan. We will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert construction waste and non-inert construction waste to public fill reception facilities and landfills respectively through a trip-ticket system.

22. We estimate that the project will generate in total about 280 tonnes of construction waste. Of these, we will reuse about 56 tonnes (20%) of the inert construction waste on site and dispose of 224 tonnes (80%) of non-inert construction waste at landfills. The total cost for accommodating construction

waste at landfill sites is estimated to be \$28,000 for the proposed works (based on a unit cost of \$125/tonne⁴ at landfills)

23. We estimate that the proposed works will generate about 6 100 cubic metres of marine sediment. The marine sediment will be disposed of at a designated site to be allocated by the Marine Fill Committee (MFC) or other disposal sites to be agreed by the MFC and the Environmental Protection Department.

24. Of the 7 trees within the boundary of the proposed improvement works, 2 trees will be preserved and 5 will be removed. All trees to be removed are not important trees⁵. We will incorporate planting proposals as part of the proposed improvement works, including the 7 trees to be planted within the Tai O area under the compensatory planting proposal.

HERITAGE IMPLICATIONS

25. The proposed works may affect the Tai O Archaeological Site and Kwan Tai Temple (a Proposed Grade 2 historic building). A Cultural Heritage Impact Assessment (CHIA) has been conducted during the Feasibility Study. We will implement the mitigation measures recommended in the CHIA Report as well as other mitigation measures as agreed with the Antiquities and Monuments Office to ensure no adverse impact would be posed on these heritage sites during the construction phase.

⁴ This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at \$90/m³), nor the cost to provide new landfills (which is likely to be more expensive) when the existing ones are filled.

⁵ “Important trees” refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

- (a) trees of 100 years old or above;
- (b) trees of cultural, historical or memorable significance, e.g. Fung Shui trees, trees as landmark of monastery or heritage monument, and trees in memory of an important person or event;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking account of the overall tree sizes, shape and any special features), e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- (e) trees with a trunk diameter equal to or exceeding 1.0 m (measured at 1.3 m above ground level), or with a height/canopy spread equal to or exceeding 25 m.

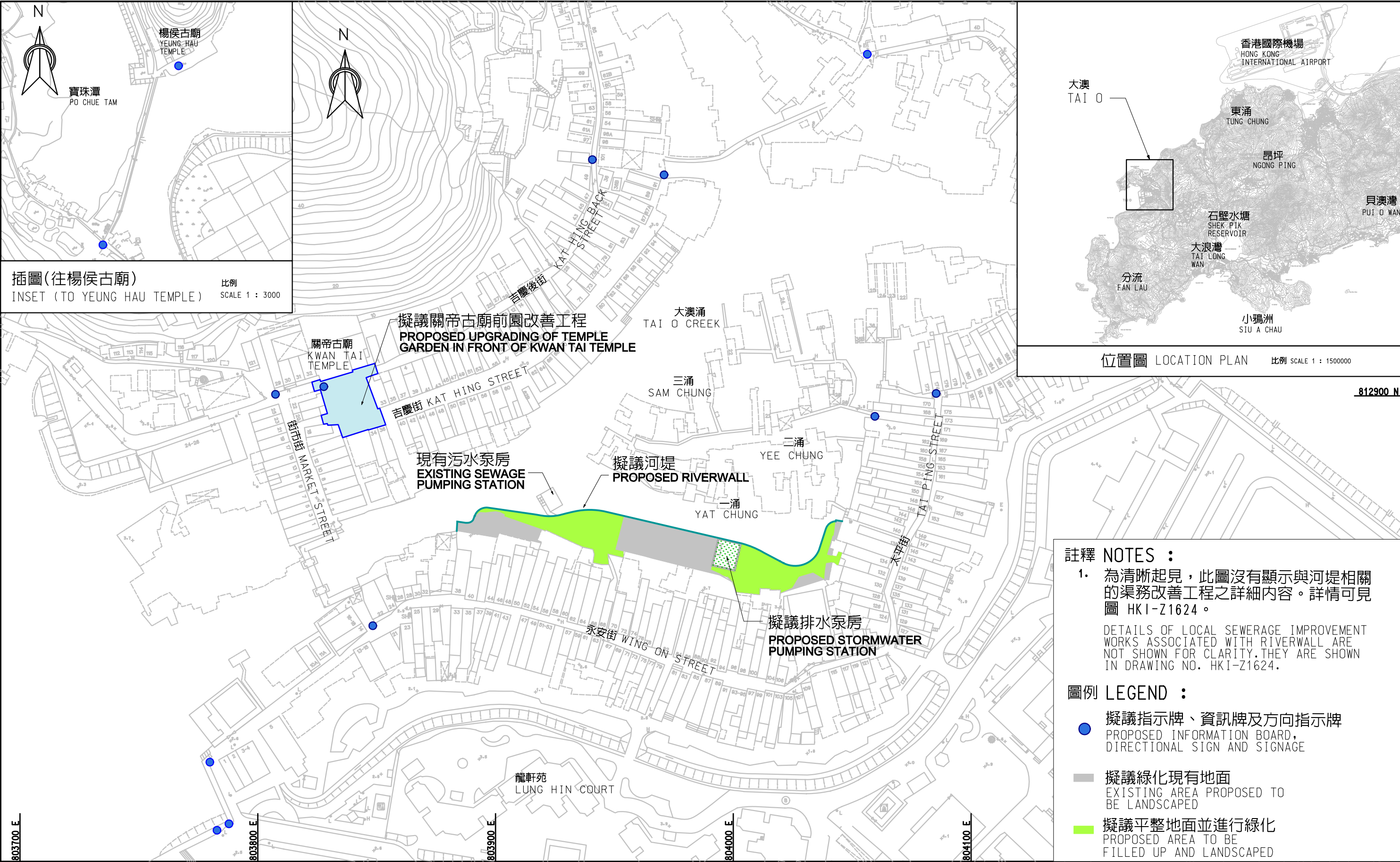
LAND ACQUISITION

26. The project does not require any land acquisition.

WAY FORWARD

27. We plan to seek the Public Works Subcommittee's endorsement on 2 June 2010 for upgrading part of **417RO** to Category A at an estimated cost of about \$151.0 million in money-of-the-day prices, with a view to seeking funding approval from the Finance Committee in June 2010.

Development Bureau
April 2010



插圖(往楊侯古廟)
INSET (TO YEUNG HAU TEMPLE)

比例
SCALE 1 : 3000

註釋 NOTES :

1. 為清晰起見，此圖沒有顯示與河堤相關的渠務改善工程之詳細內容。詳情可見圖 HKI-Z1624。

DETAILS OF LOCAL SEWERAGE IMPROVEMENT WORKS ASSOCIATED WITH RIVERWALL ARE NOT SHOWN FOR CLARITY. THEY ARE SHOWN IN DRAWING NO. HKI-Z1624.

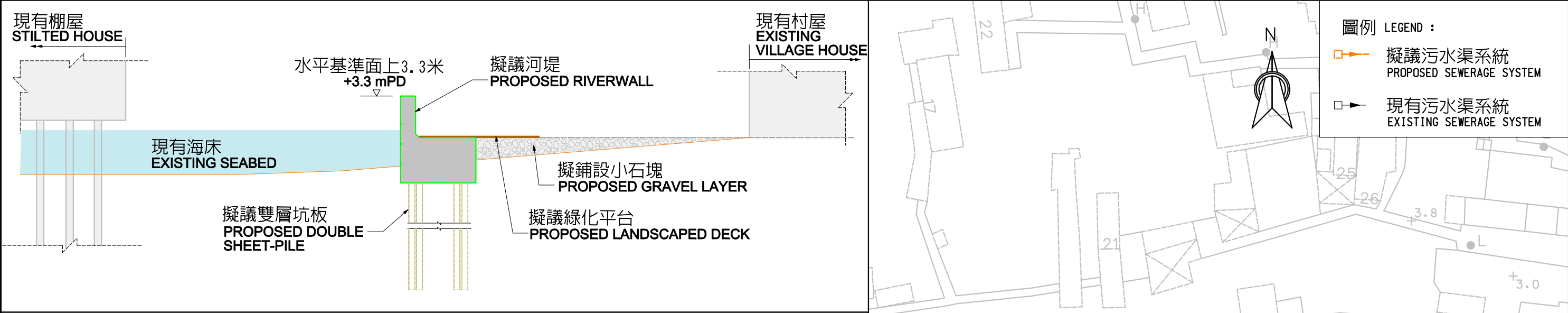
圖例 LEGEND :

● 擬議指示牌、資訊牌及方向指示牌
PROPOSED INFORMATION BOARD, DIRECTIONAL SIGN AND SIGNAGE

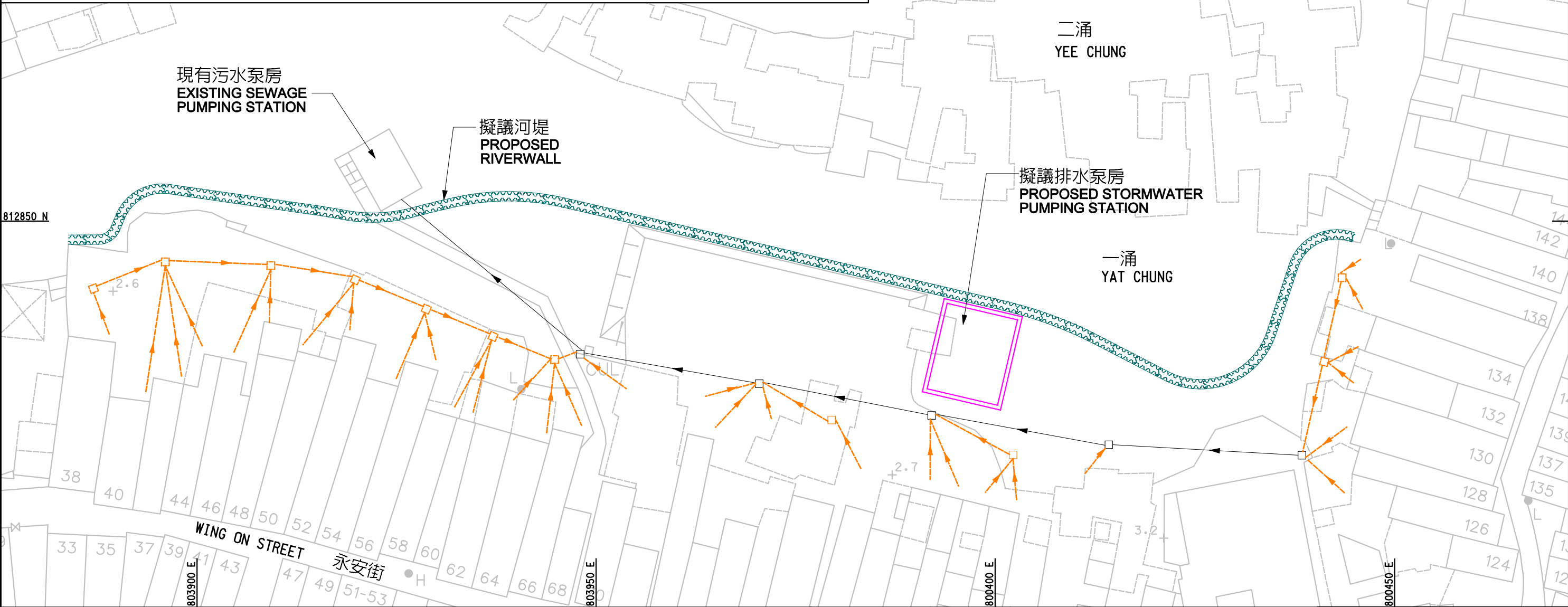
■ 擬議綠化現有地面
EXISTING AREA PROPOSED TO BE LANDSCAPED

■ 擬議平整地面並進行綠化
PROPOSED AREA TO BE FILLED UP AND LANDSCAPED

圖則名稱 drawing title	繪圖 drawn	簽署 initial	日期 date	項目編號 item no.	辦事處 office
	P LAM	PL	25/3/2010	417RO	港島及離島拓展處 HONG KONG ISLAND AND ISLANDS DEVELOPMENT OFFICE
	核對 checked	簽署 initial	日期 date	比例 scale	
417RO (部份) - 大澳改善工程 417RO (PART) - IMPROVEMENT WORKS AT TAI O	J TANG	JT	25/3/2010	1:1500 (IN A3)	
	核准 approved	簽署 initial	日期 date	圖則編號 drawing no.	土木工程拓展署 CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
	W P LEUNG	WPL	25/3/2010	HKI-Z1623	



典型河堤切面 TYPICAL SECTION FOR RIVERWALL



圖則名稱 drawing title 417RO (部份) - 大澳改善工程(河堤典型細節) 417RO (PART) - IMPROVEMENT WORKS AT TAI O (RIVERWALL - TYPICAL DETAILS)	繪圖 drawn P LAM	簽署 initial PL	日期 date 25/3/2010	項目編號 item no. 417RO	辦事處 office 港島及離島拓展處 HONG KONG ISLAND AND ISLANDS DEVELOPMENT OFFICE
	核對 checked J TANG	簽署 initial JT	日期 date 25/3/2010	比例 scale 1 : 500 (IN A3)	
	核准 approved W P LEUNG	簽署 initial WPL	日期 date 25/3/2010	圖則編號 drawing no. HKI-Z1624	土木工程拓展署 CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT