

**For discussion  
On 25 April 2017**

**LEGISLATIVE COUNCIL  
PANEL ON DEVELOPMENT**

**Public Works Programme Item No. 786CL –  
Tung Chung New Town Extension**

**Reclamation and Advance Works**

**PURPOSE**

This paper briefs Members on the proposal to upgrade part of Public Works Programme Item No. **786CL** – “Tung Chung New Town Extension” to Category (Cat) A at an estimated cost of \$20,568.9 million in money-of-the-day (MOD) prices for the reclamation works at Tung Chung East (TCE) and advance works for the Tung Chung New Town Extension (TCNTE).

**PROJECT SCOPE AND NATURE**

2. The part of **786CL** (the proposed works) which we propose to upgrade to Cat A comprises –

- (a) reclamation of the seabed by non-dredged method<sup>1</sup> at TCE to form a total of about 130 hectares (ha) of land;
- (b) construction of about 4.9 kilometres (km) of seawalls, with eco-shoreline<sup>2</sup>, three drainage box culvert outfalls, three circulation drains and a seawater intake;
- (c) construction of a 470-metre (m) long multi-cell drainage box culvert (Box Culvert No.1) at TCE; and
- (d) provision of infrastructure for Tung Chung Area 58, including construction of a single two-lane road with footpath of about 270 m in length and associated utility works.

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<sup>1</sup> Non-dredged method is a reclamation method which does not involve dredging of marine sediment.

<sup>2</sup> An eco-shoreline is a shoreline which provides beneficial function to the local ecosystem and coastal protection.

3. Three layout plans showing the proposed works are at **Enclosures 1 to 3**.

4. Subject to funding approval of the Finance Committee (FC), we plan to commence the proposed works in end-2017 for completion in end-2023. To achieve this programme, the Civil Engineering and Development Department would invite tenders for the proposed works in late May or early June 2017 tentatively so as to meet the first population intake target in 2023.

5. We would retain the remainder of **786CL** in Cat B, for which funding would be sought in phases in accordance with the implementation programme of the TCNTE project. The scope of the remainder mainly covers the site formation works at Tung Chung West (TCW), the remaining engineering and supporting infrastructure works at TCE and TCW, and the associated construction supervision cost.

## **JUSTIFICATION**

6. To meet the housing and other development needs of the community, the Government adopts a multi-pronged strategy to increase land supply in the short, medium and long term. As set out in the Policy Addresses in 2014 to 2017, the TCNTE is one of the major initiatives to increase land supply in the medium and long term, capable of providing some 49 400 flats and 877 000 square meters of commercial floor area, to accommodate an additional population of 144 400.

7. Among the 130 ha of land to be formed at TCE, about 121 ha of land will be provided for development of about 40 800 subsidised and private housing flats for a planned population of about 118 900 as well as for other uses, including commercial uses, government, institution and community (G/IC) facilities, open space, amenity areas, etc. Subject to availability of resources and necessary funding approval from the Finance Committee, the remaining 9 ha of land will be provided for construction of a primary distributor road, Road P1 under the subsequent phases of the development to connect the development area at TCE to the North Lantau Highway at Tai Ho. In order to hand over the land to the Housing Department in time for foundation and building works, and to meet the first population intake targeted for 2023, the works under the TCNTE project will be implemented in phases, with the reclamation works at TCE targeted for commencement in end-2017.

8. In accordance with the Environmental Permit (EP) for the project to adopt a non-dredged method, we will reclaim the seabed at TCE without removing the marine mud which is weak in nature. To strengthen the weak marine mud, we will adopt the deep cement mixing (DCM) method to stabilise the seabed before the construction of the seawall foundation.

9. To comply with the conditions set out in the EP for the project, we will provide an eco-shoreline along the proposed seawall at TCE to enhance the ecological

functions and facilitate the growth of general marine water habitat.

10. To facilitate the construction of drainage box culverts in subsequent phases of the development, three box culvert outfalls will be constructed at the new seawall. As Box Culvert No. 1 at the western end of TCE will run across the housing sites earmarked for population intakes in 2023, it is necessary to construct this box culvert under the proposed works, which is the first phase of the development.

11. To facilitate the construction of a seawater intake culvert of the new salt water pumping station in subsequent phases of the development, a seawater intake will be constructed at the new seawall.

12. To continue to facilitate water circulation to Tai Ho Wan, three existing circulation drains will be extended for about 50 m to 150 m to the new shoreline during the reclamation for Road P1.

13. Tung Chung Area 58 is reserved for G/IC uses. As developments at TCW proposed under the TCNTE project would involve acquisition of land which is currently used for G/IC purposes, it is necessary to make available the concerned part of Tung Chung Area 58 for G/IC uses in a timely manner, in order to minimise any adverse impact on the provision of G/IC uses in Tung Chung as a whole. To this end, some supporting infrastructure works within Tung Chung Area 58, including construction of an access road and the associated utility works, will be required as part of the proposed works.

## **FINANCIAL IMPLICATIONS**

14. We estimate the capital cost of the proposed works to be \$20,568.9 million in MOD prices.

## **PUBLIC CONSULTATION**

15. From 2012 to 2014, we conducted under the “Planning and Engineering Study on the Remaining Development in Tung Chung – Feasibility Study” (the P&E Study) a three-stage public engagement exercise on the development proposal of TCNTE. The Legislative Council (LegCo) Panel on Development was consulted during the process. The development proposal was generally supported<sup>3</sup>, with calls urging for early implementation of the TCNTE to meet the housing, economic and social needs.

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<sup>3</sup> While LegCo members generally supported the proposal of TCNTE, some raised concerns about environmental issues, the capacity of the MTR Tung Chung Line and local employment. To address such concerns, the Government submitted to LegCo additional information in July 2015 vide CB(1)1132/14-15(01), which can be accessed at <http://www.legco.gov.hk/yr14-15/english/panels/dev/papers/dev20141203cb1-1132-1-e.pdf>.

16. We briefed the Islands District Council (IsDC) on 7 September 2015 on the progress of the P&E Study, the major public views collected through the Stage 3 Public Engagement and the implementation plan for the TCNTE. The IsDC supported implementation of TCNTE. On 24 October 2016, we updated the IsDC on the progress of the detailed design of TCNTE project, including the infrastructure works at Tung Chung Area 58. The IsDC reaffirmed their support for early implementation of TCNTE.

17. The draft Tung Chung Extension Area Outline Zoning Plan (OZP) was gazetted under the Town Planning Ordinance (Cap. 131) (TPO) in tandem with the gazettal of the reclamation required under the Foreshore and Sea-bed (Reclamations) Ordinance (Cap. 127) (FS(R)O) in January 2016. During the respective statutory plan exhibition period and the objection period, representations and comments on the draft OZP and objections to the proposed reclamation works were received, concerning mainly the possible impacts on the environment, ecology and traffic. In respect of the representations and comments received, the Town Planning Board decided not to propose any amendment to the draft OZP upon its deliberation on 18 November 2016. In respect of the objections to the proposed reclamation works, despite our effort in resolving them, they remained unresolved.

18. Having considered the representations and comments on the draft OZP and the unresolved objections to the proposed reclamation works, the Chief Executive-in-Council approved the OZP under TPO and authorised the reclamation works without modification under the FS(R)O on 7 February 2017. The notices of approval of the OZP and authorisation for the reclamation works were gazetted on 17 February 2017 and 24 February 2017 respectively.

## **ENVIRONMENTAL IMPLICATIONS**

19. The reclamation works at TCE is a designated project (DP) under Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499). The environmental implications of the reclamation works together with other items of the proposed works, except the infrastructure works at Tung Chung Area 58, were studied and included in the Environmental Impact Assessment (EIA) report for TCNTE development that was approved in April 2016. The EIA report concluded that with the implementation of the recommended mitigation measures, these works would not cause adverse environmental impacts. An EP was issued in August 2016 covering, among other things, the reclamation works at TCE. The infrastructure works at Tung Chung Area 58, which is not a DP under Schedule 2 of the EIAO, are small in scale and of nature having very little potential for adverse environmental impacts. We will undertake to implement the standard pollution control measures as promulgated by the Director of Environmental Protection.

20. We will implement the mitigation measures and an Environmental Monitoring and Audit (EM&A) programme as recommended in the EIA report and

other standard pollution control measures. The recommended mitigation measures include construction of eco-shoreline along the proposed seawalls at TCE. For short term impacts caused by the reclamation, we will adopt a non-dredged method (i.e. by DCM) in carrying out the reclamation works and deploy silt curtains at the filling areas to mitigate any adverse impact on water quality. We will also limit the number of trips of works vessels on daily and hourly basis to minimise their impact on marine ecology. In addition, we will control construction dust and noise by mitigation measures including frequent cleaning and watering of site, provision of wheel-washing facilities and use of quiet powered mechanical equipment and lining or shields for roadworks. We have included the cost of implementing the environmental mitigation measures and EM&A programme in the overall estimate of the proposed works.

21. We have considered all the works for the TCNTE project and their construction sequence to reduce the generation of construction waste where possible. In addition, we will require the contractors to reuse inert construction waste (e.g. excavated materials) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste at public fill reception facilities<sup>4</sup>. We will encourage the contractors to maximise the use of recycled or recyclable inert construction waste, and the use of non-timber formwork to further reduce generation of construction waste.

22. We will require the contractors 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 contractors 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 at public fill reception facilities and landfills respectively through a trip-ticket system. With the adoption of a non-dredged method in reclamation works, no dumping of marine mud at designated dumping ground is required. We estimate that the project will generate in total 1 066 000 tonnes of construction waste. Of these, we will deliver 1 060 000 tonnes (99%) of inert construction waste to public fill reception facilities for subsequent reuse. We will dispose of the remaining 6 000 tonnes (1%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be \$76.46 million for this project (based on a unit charge rate of \$71 per tonne for disposal at public fill reception facilities and \$200 per tonne at landfills).

23. We will use in total about 26 340 000 tonnes of public fill from the Tseung Kwan O and/or Tuen Mun Fill Banks for reclamation.

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<sup>4</sup> Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste at public fill reception facilities requires a license issued by the Director of Civil Engineering and Development.

## **HERITAGE IMPLICATIONS**

24. The proposed works will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites and buildings, sites of archaeological interest and government historic sites identified by the Antiquities and Monuments Office. A marine archaeological investigation was conducted under the EIA which concluded that adverse impact on marine archaeology was not anticipated.

## **TRAFFIC IMPLICATIONS**

25. In respect of traffic impact during the construction stage, the proposed works above will not cause any significant impact to land traffic as the majority of the works will be carried out by marine plants. Notwithstanding this, temporary traffic arrangements will be implemented to facilitate the construction works. We will display publicity boards on site giving details of the temporary traffic arrangements, and the anticipated completion dates of individual sections of works. In addition, we will set up a telephone hotline to respond to public enquiries or complaints.

26. For marine traffic, we have conducted a marine traffic impact assessment which concluded that, with the implementation of risk mitigation measures, including the installation of additional marker buoys and deployment of guard boats to assist marine traffic control, the proposed works in concern will not cause any significant marine traffic impact. We will also arrange interface and coordination meetings among stakeholders to ensure effective communication.

## **LAND ACQUISITION**

27. The proposed works do not require any land resumption or clearance.

## **BACKGROUND INFORMATION**

28. On 8 July 2011, the FC approved the upgrading of **712CL** “Planning and Engineering Study on the Remaining Development in Tung Chung” to Cat A at an approved project estimate of \$44 million in MOD prices for engaging consultants to undertake the P&E Study. The P&E Study was completed in 2016.

29. We upgraded **786CL** to Cat B in September 2014.

30. On 27 May 2016, the FC approved the upgrading of part of **786CL** to Cat A as **799CL** “Tung Chung New Town Extension – Detailed Design and Site Investigation” at an approved project estimate of \$729.5 million in MOD prices for engaging consultants to undertake the detailed design and site investigation works for the TCNTE project.

31. Of the 326 trees within the site boundary of the proposed works, 97 trees will be preserved. The remaining 229 trees will have to be felled. All the trees to be felled are not important trees<sup>5</sup>. We will incorporate planting proposals as part of the works for the TCNTE project, including 229 trees as compensatory planting and 35 050 m<sup>2</sup> of green area.

## **WAY FORWARD**

32. We plan to seek support from the Public Works Subcommittee for upgrading part of **786CL** to Cat A in the second quarter of 2017 before seeking approval from the FC.





**Development Bureau  
Civil Engineering and Development Department  
April 2017**

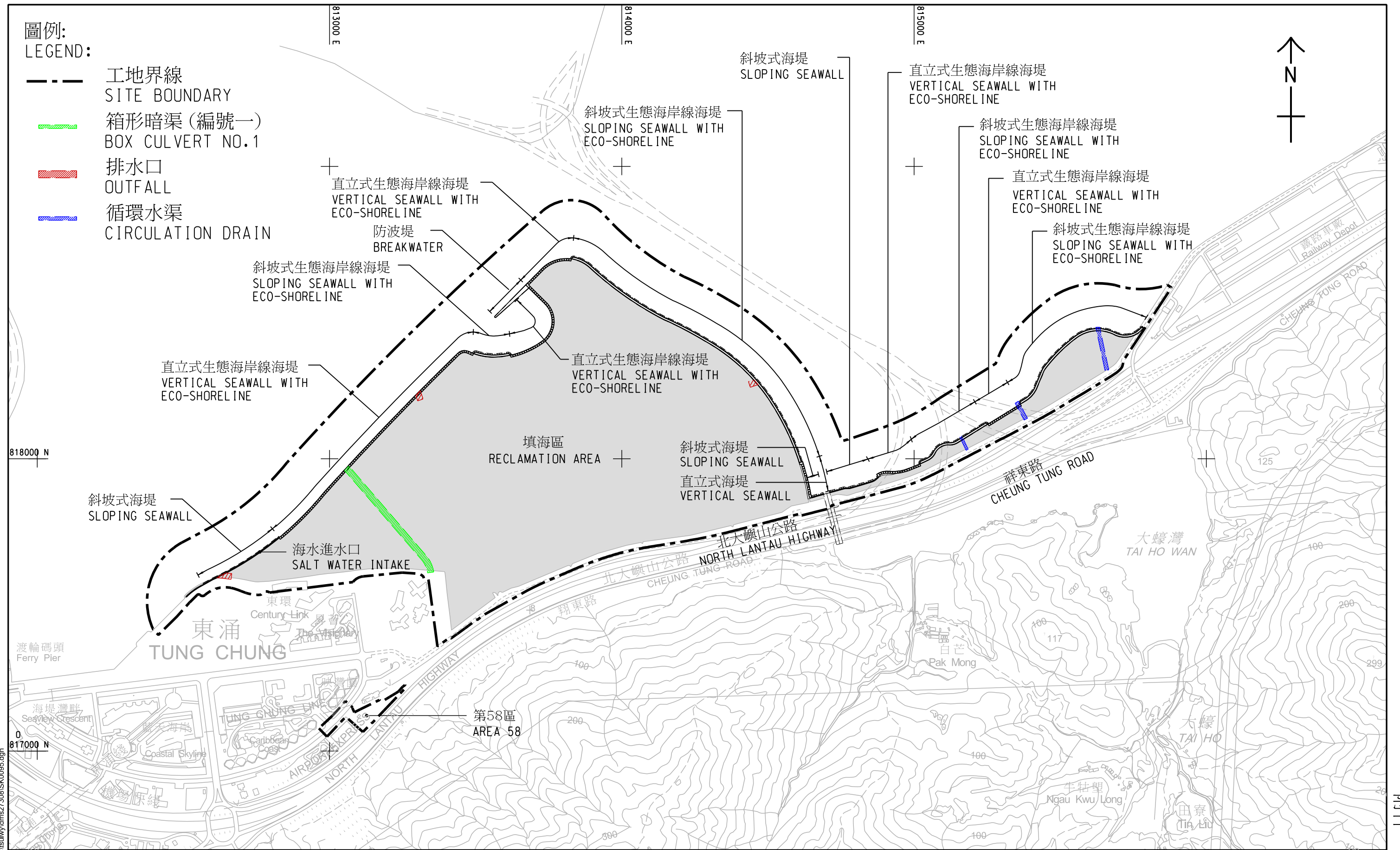
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<sup>5</sup> “Important trees” refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

- (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 or canopy spread equal to or exceeding 25 m.

圖例:  
LEGEND:

-  工地界線  
SITE BOUNDARY
-  箱形暗渠 (編號一)  
BOX CULVERT NO.1
-  排水口  
OUTFALL
-  循環水渠  
CIRCULATION DRAIN



818000 N

817000 N

813000 E

814000 E

815000 E

圖則名稱 drawing title

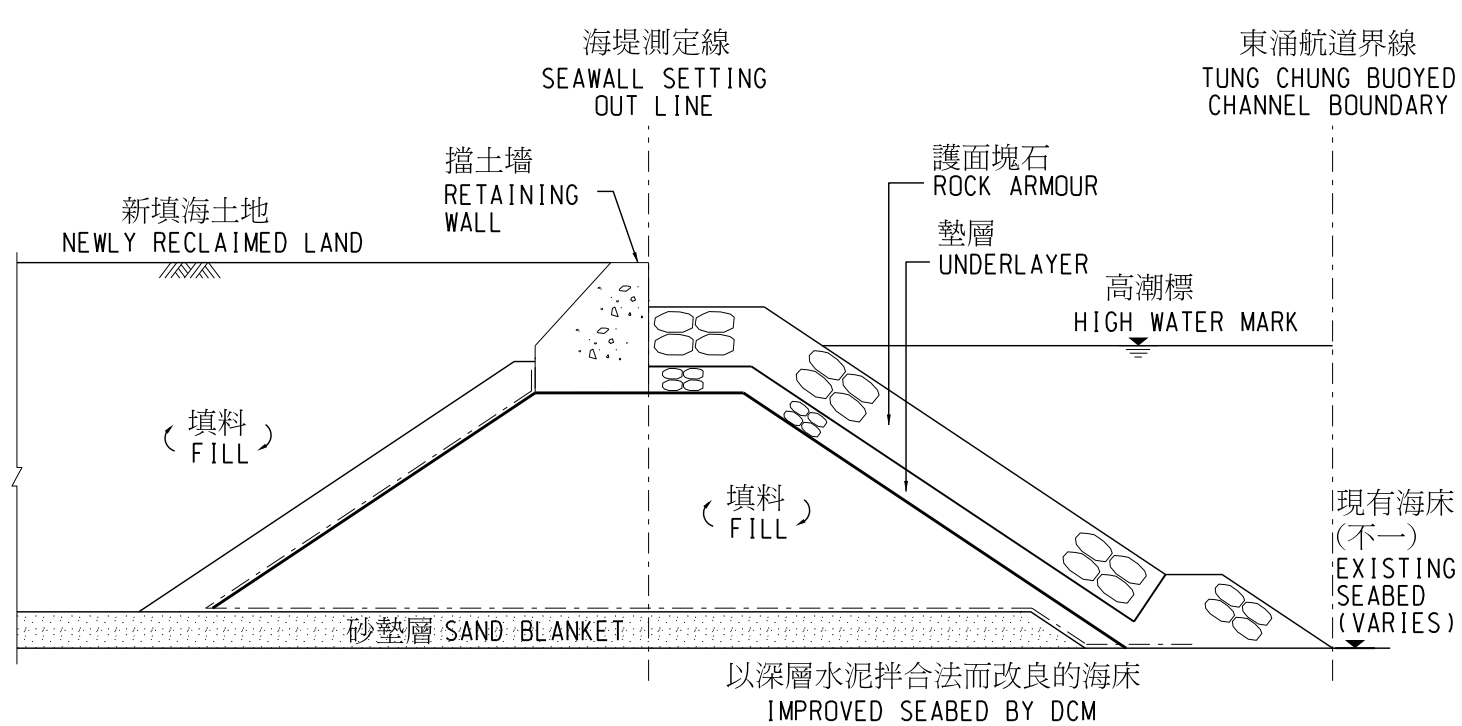
工程項目平面圖 - 東涌新市鎮擴展 - 填海及前期工程  
PROJECT LAYOUT PLAN - TUNG CHUNG NEW TOWN EXTENSION -  
RECLAMATION AND ADVANCED WORKS

附件一 ENCLASURE 1

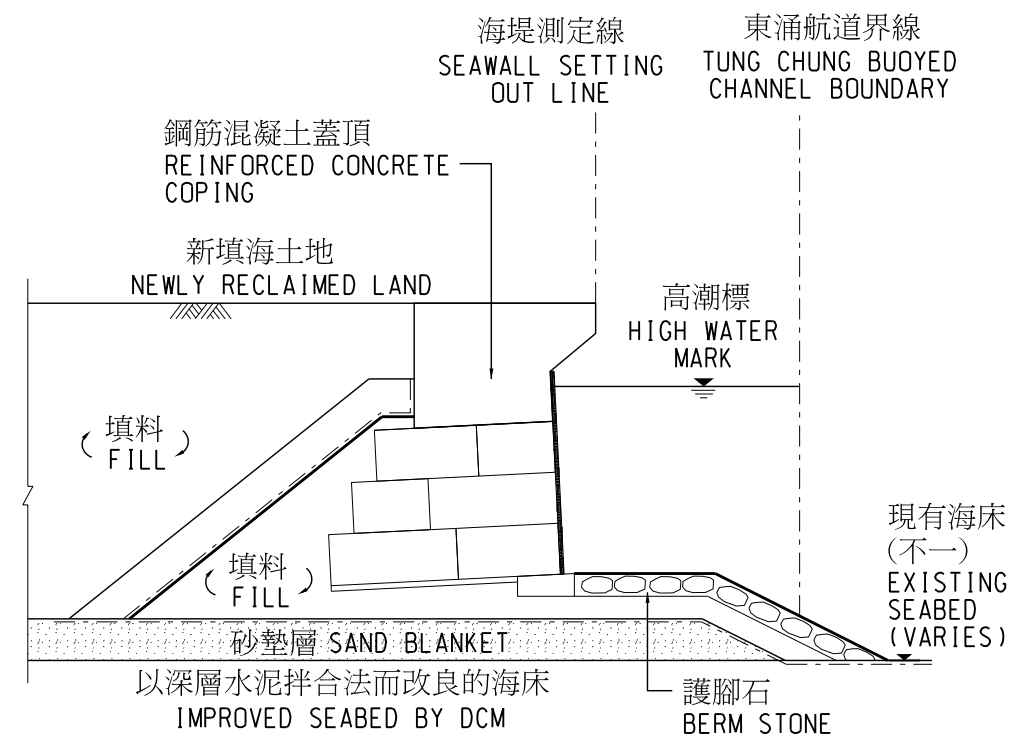
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斜坡式海堤典型切面圖  
TYPICAL SECTION OF SLOPING SEAWALL





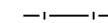



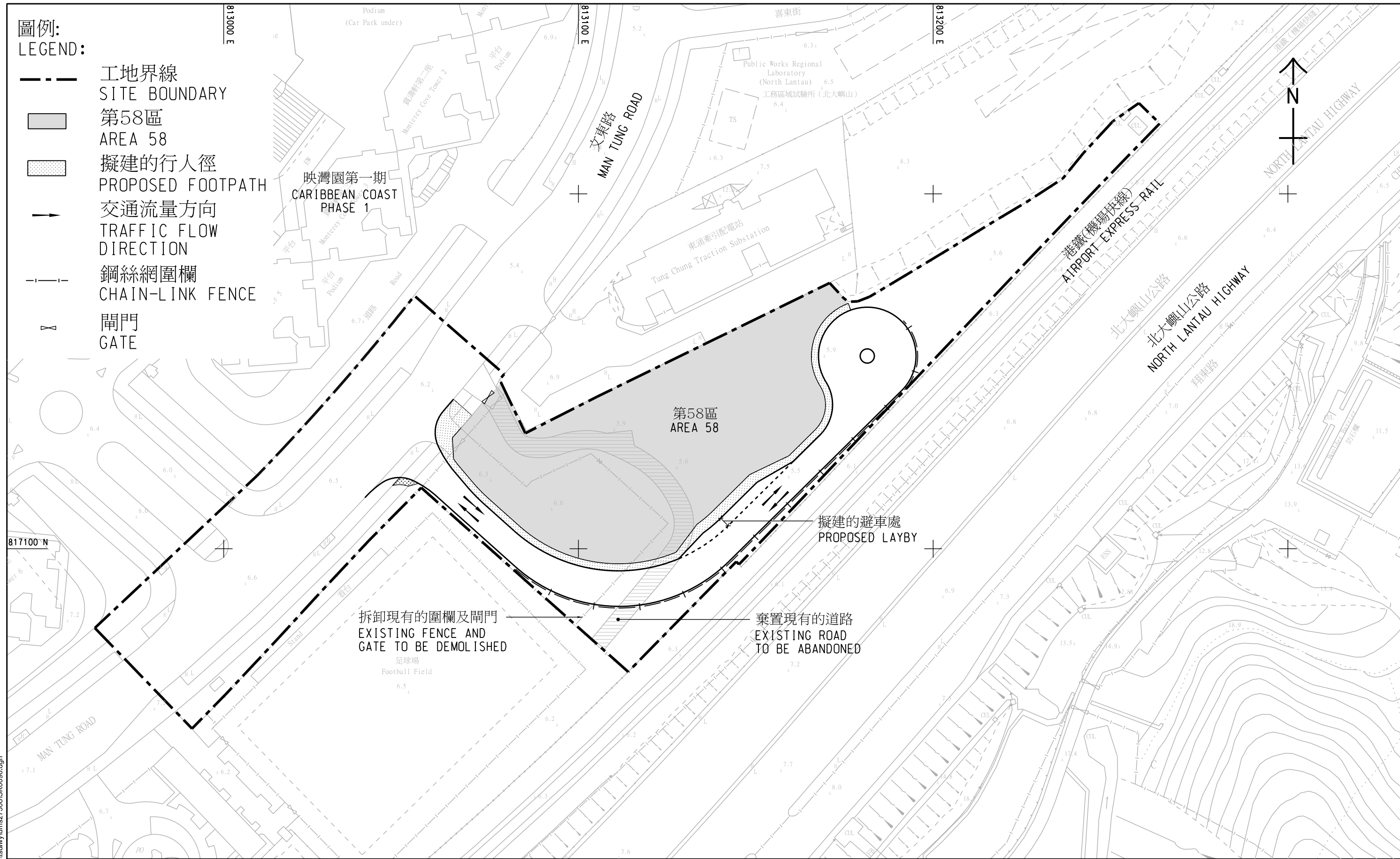
直立式海堤典型切面圖  
TYPICAL SECTION OF VERTICAL SEAWALL

海堤典型切面圖  
TYPICAL SECTION OF SEAWALL

圖則名稱 drawing title

圖例:  
LEGEND:

-  工地界線  
SITE BOUNDARY
-  第58區  
AREA 58
-  擬建的行人徑  
PROPOSED FOOTPATH
-  交通流量方向  
TRAFFIC FLOW DIRECTION
-  鋼絲網圍欄  
CHAIN-LINK FENCE
-  閘門  
GATE



圖則名稱 drawing title

### 東涌新市鎮擴展工程項目平面圖 - 於東涌第58區的擬議前期工程

### TUNG CHUNG NEW TOWN EXTENSION PROJECT LAYOUT PLAN - PROPOSED ADVANCED WORKS IN TUNG CHUNG AREA 58

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