

Special features of the South Island Line project

- No reclamation required
- Medium capacity system with 3 to 6-car train
- Facilitate tourism development such as for Ocean Park, Aberdeen Waterfront, Fish Market and Cyber Centre
- Enhance urban renewal process – Southern HK is a slow development district since 1980s due to insufficient transportation link.
- Funding by granting the rights for property development to MTR

West Island Line

Background

For the over 200,000 population working and living in the Western District of Hong Kong, only buses and mini-buses are served as means of public transport. It is particularly inconvenient for commuters who are suffering from the frequent traffic jam during peak hours. As a result, residents of the Western District, members of the Central & Western District Council and the Legislative Council have urged strongly for the construction of the West Island Line.

In response to this, the Government decided to proceed with detailed planning and preparations for the West Island Line in June 2005. The MTR Corporation submitted an updated proposal for the West Island Line to the Government in August 2006, setting out the detailed scope, cost and implementation program for the project for government's review.

After a detail study of the scheme as well as conducting a number of consultation to incorporate public views, in October 2007, the Government invited MTRC to proceed with further planning and detailed design of the West Island Line.

In May 2009, the Executive Council endorsed the funding arrangement of the MTR West Island Line (WIL) Project. With that endorsement, funding approval was obtained from the Legislative Council on 3 July 2009 which signified the official commencement of this US\$2 billion project.

Highlights of the West Island Line Projects:

Design features

The 3.5km track for the mass transit railway is running underground with 3 buried stations.

The alignment will merge into the existing 15km-Island Line with further provision for future extension to the 12km-South Island Line.

Along the alignment of the line it covers a population of 0.2 million. In order to improve the public flow, a series of pedestrian subway system with an escalator network will be provided especially for users on elevated uphill levels.

In order to acquire very limited land for station entrances and other operation accesses, a number of existing public facilities are to be relocated (including a swimming pool and a community centre). New facilities will be constructed at the same time to replace such existing services before their removal.



MTR West Island Line alignment

The Western District of Hong Kong from satellite map



West Island Line runs across the densely populated areas of Western District on the Hong Kong Island. It is so designed that over 90% of the residents can access to the new railway stations on foot when the line being completed.



—→ Future connection of the South Island Line (at the rear of Victoria Peak)

—→ Existing Island Line

—→ The approximate alignment of the West Island Line

○ The approximate location of the underground stations (from left to right, the connecting station, Sai Ying Pun, University and Kennedy Town stations)



Typical urban environment where the West Island Line cutting through

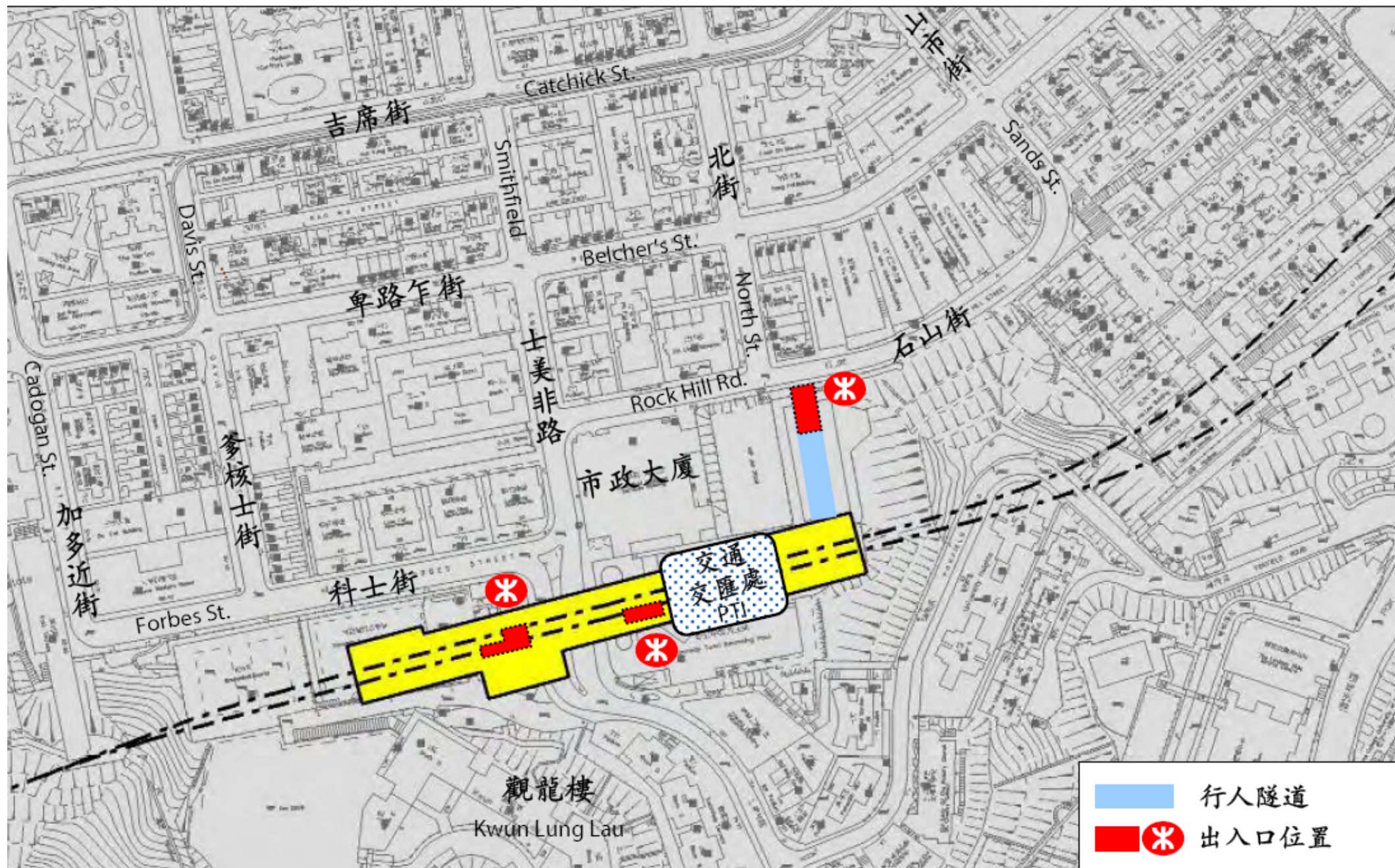


Typical urban environment where the West Island Line cutting through

Urban environment of
HK Western district



Kennedy Town Station





The playground and swimming pool as seen in 2008 before their removal for the construction of the Kennedy Town Station



← Tunnel coming from University Station



Swimming pool being removed and handed over for construction works in early 2011



Previous playground becomes the work site using semi open-cut method to construct the underground station. The working ground is only a deck platform supported by temporary post to maximize disturbance to the neighborhood as well as serving as a work platform

Temporary platform deck



Congested urban
environment in close
proximity of the working site





Overview of the station portion on the previous swimming pool site





Physical constraints of the site includes a significant amount of slope stabilization before the carrying out of work in full scale.

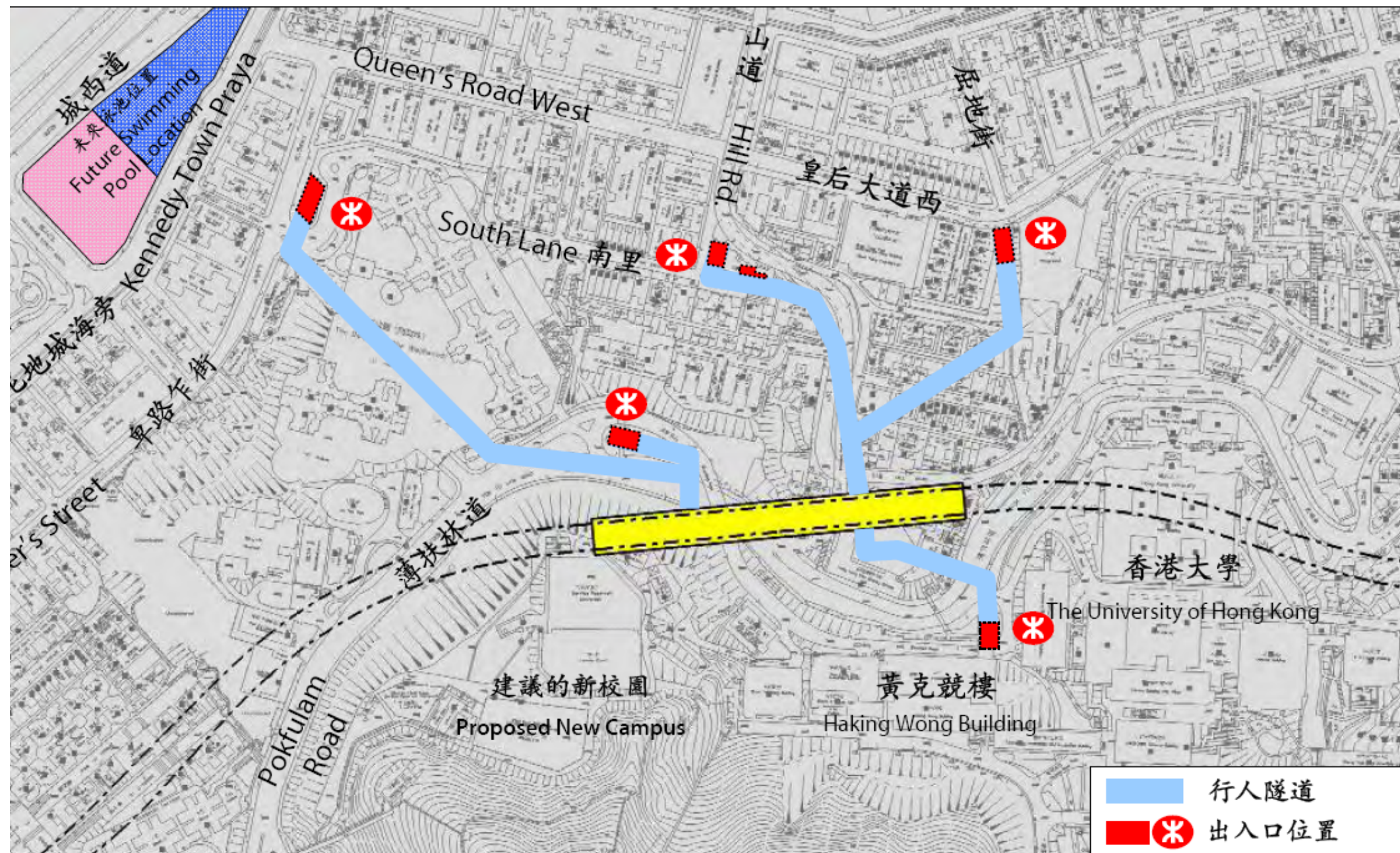


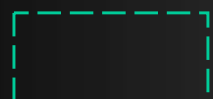


Kennedy Town Station,
early 2012 - View of the
working deck with the
access opening and the
excavation works
underneath in progress

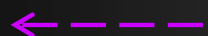


University Station





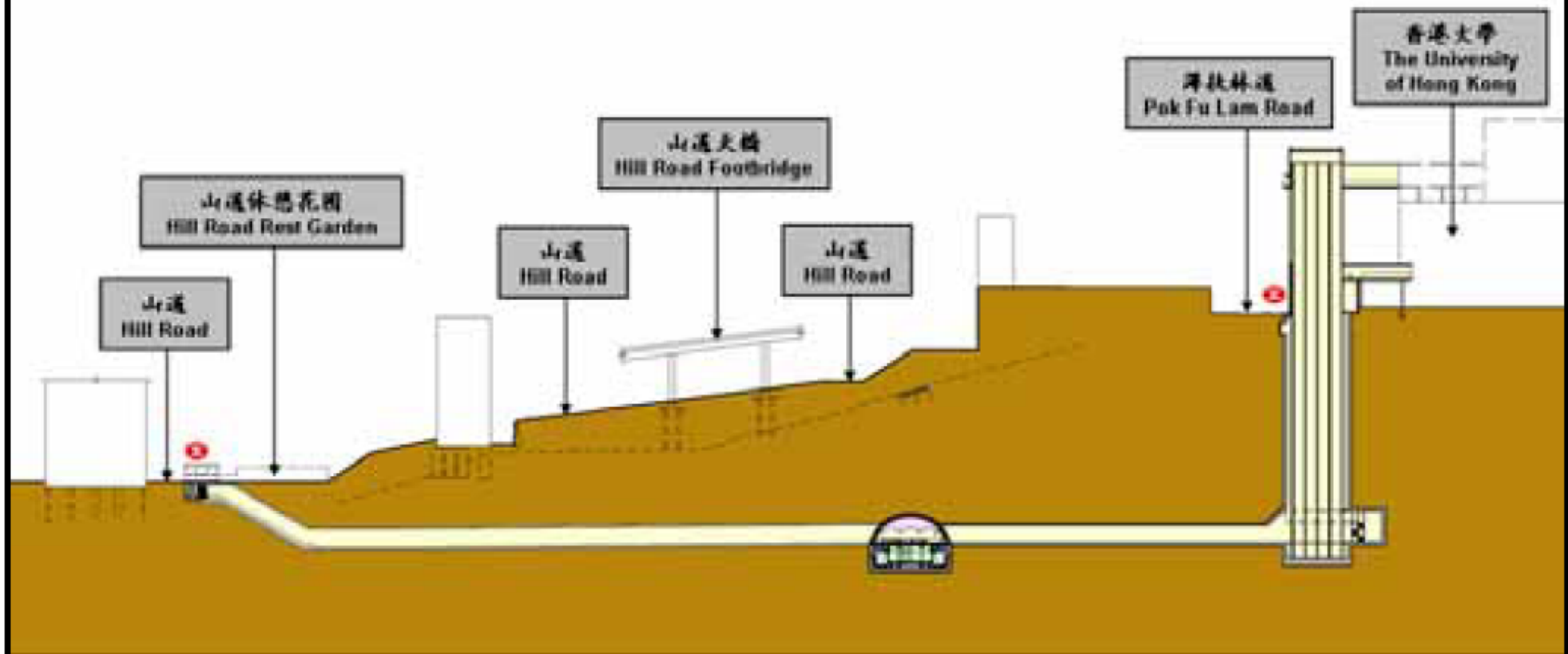
Approx. location of the
University Station

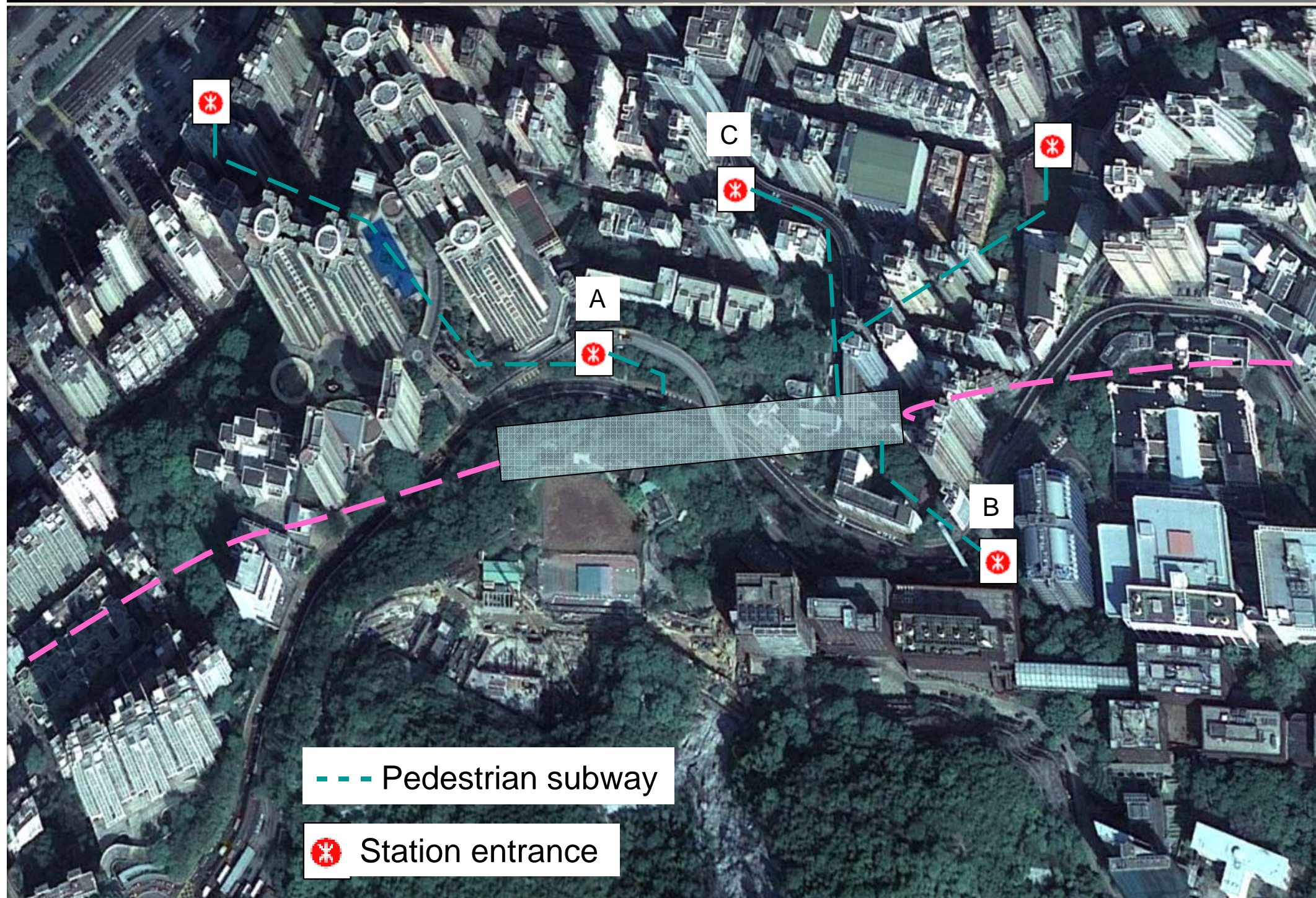


Approx. alignment of the
West Island Line

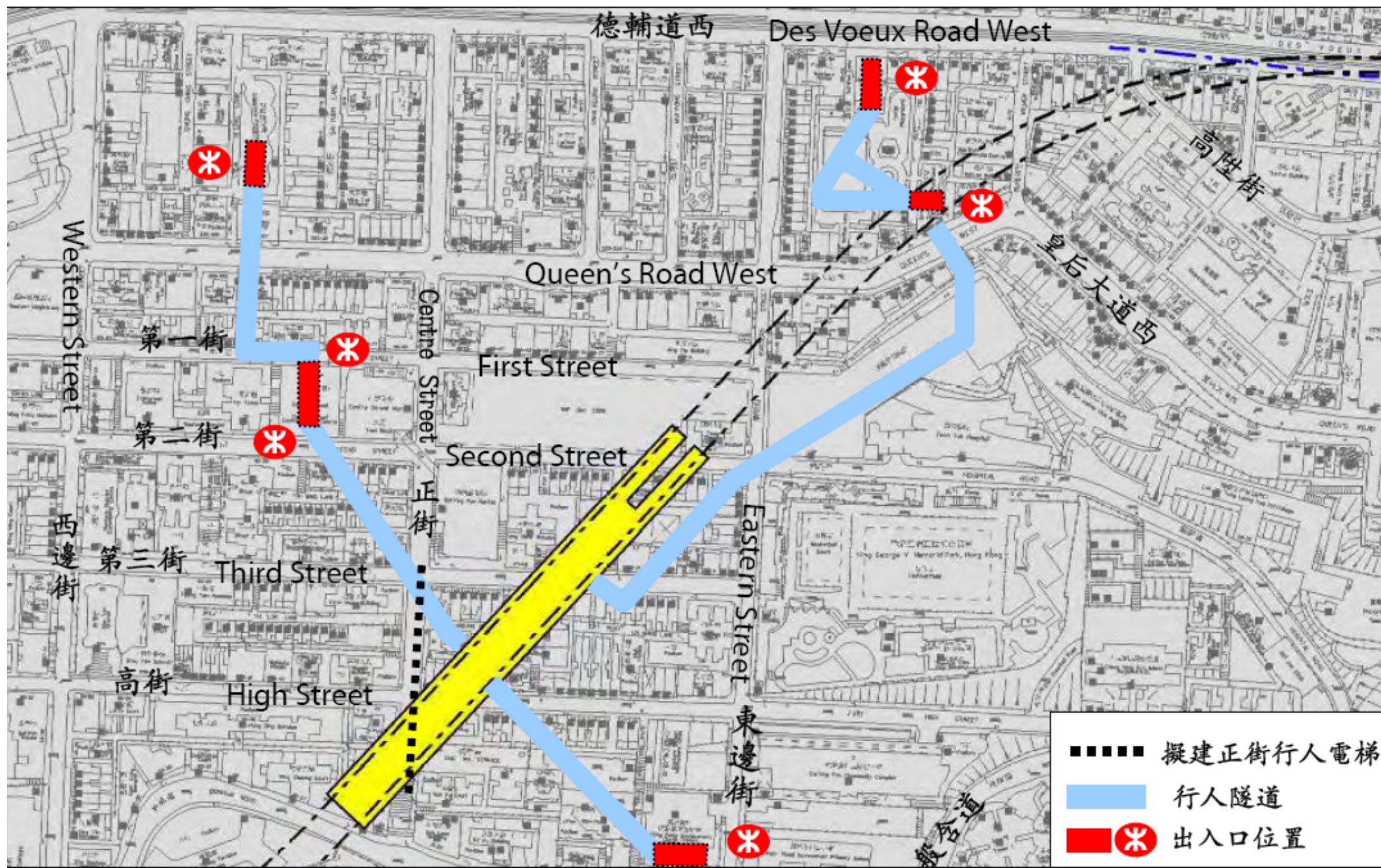
香港大學站之切面圖

Sectional Plan of University Station

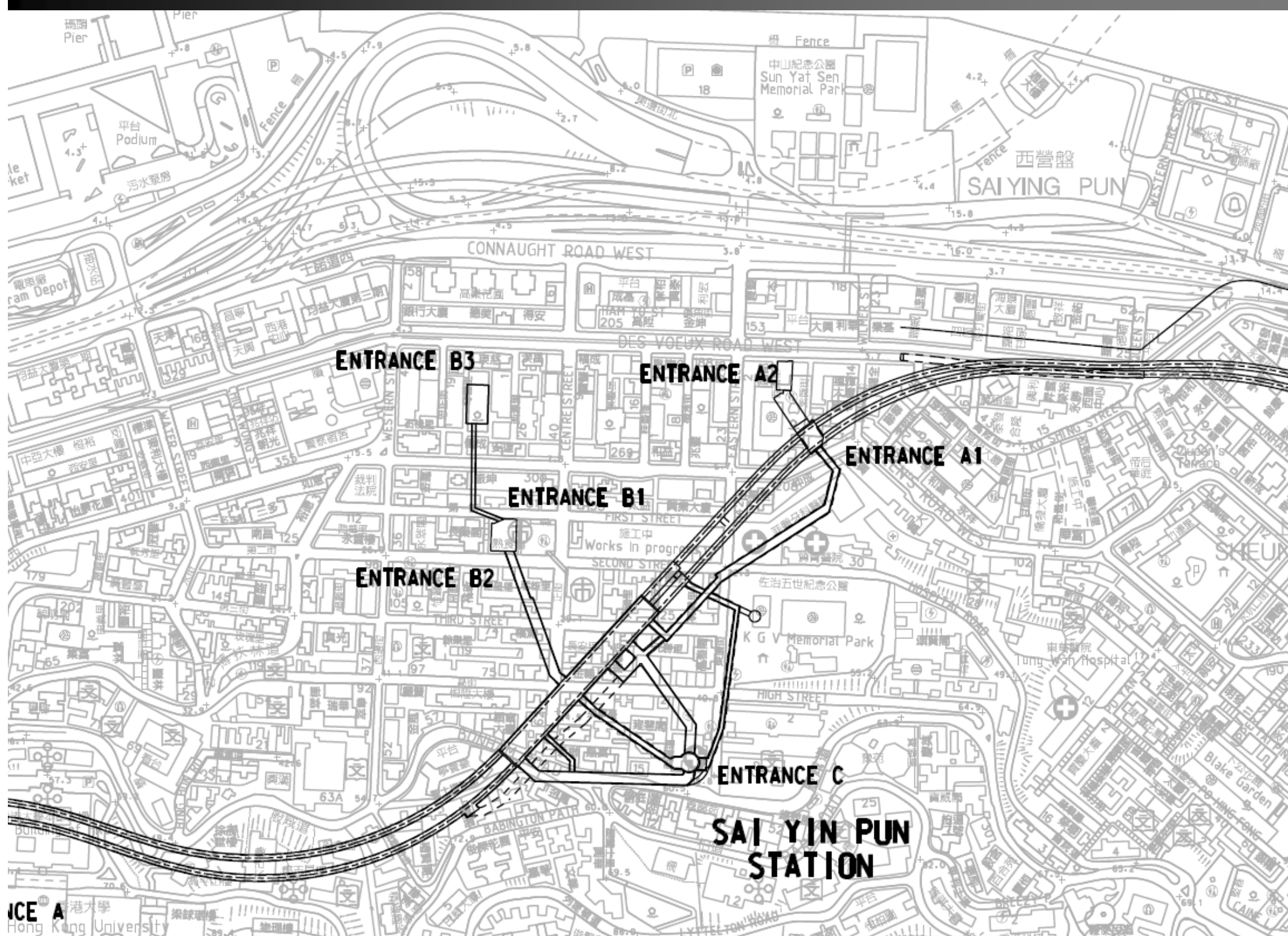


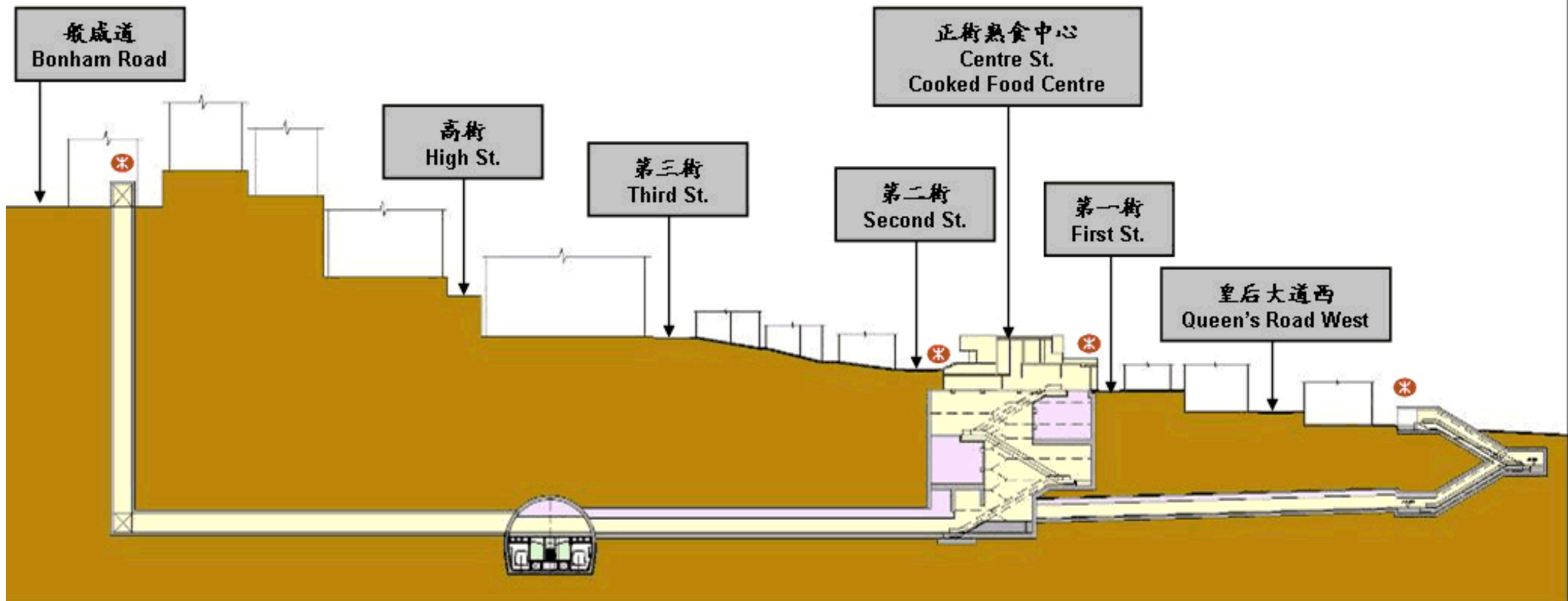


Sai Ying Pun Station









Section of the Sai Ying Pun Station and the relation with the nearby urban environment

Forming an vertical shaft for the station entrance at entrance A. This vacated open area also forms an service access for the launching of a tunnel boring machine.



Early 2011, with the covering hood and work deck erected



End 2010



Forming an vertical shaft for the station access at entrance A of University Station



Semi-underground
storm water
discharge to be
diverted to allow for
the placing of the
pedestrian subway
(near University
Station entrance B)





Forming an vertical shaft for the station entrance at entrance C.





Forming an vertical shaft for the station entrance at entrance C. A covering deck has been erected to minimize public disturbance.



Other safety and environmental provisions inside the tunnel at work, which include the temporary ventilation duct, blast protection gate, dust filter and service pipework etc.



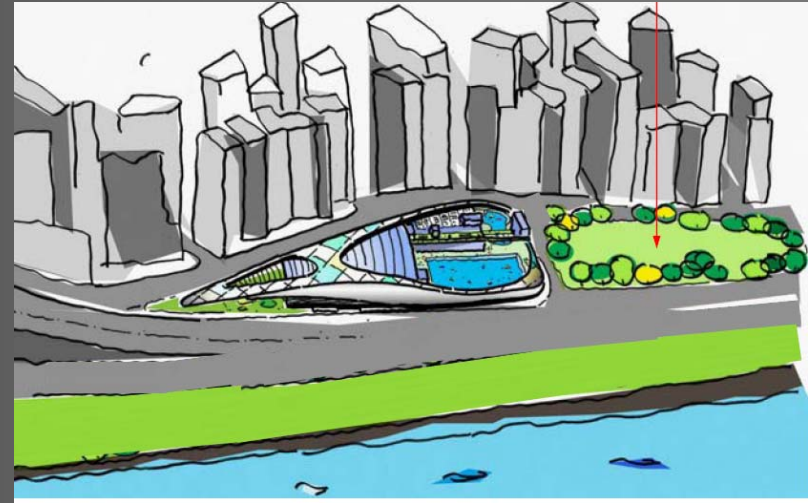
Construction of a new swimming pool to replace the existing one at the new Kennedy Town Station site.

Previous lorry parking area to be used as the new site for the swimming pool

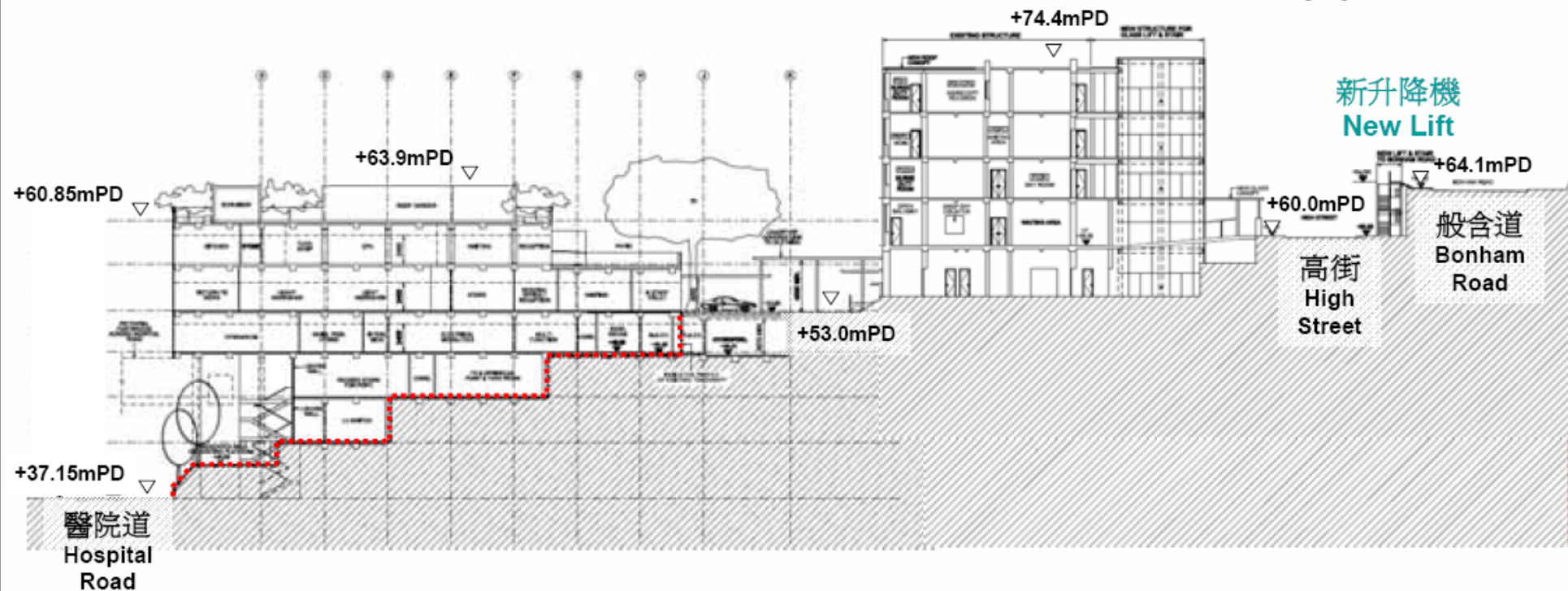




New swimming pool completed for operation in early 2011. Upon the changing over, the one in Kennedy Town started the demolition.



重置戴麟趾康復中心 (2) Relocation of David Trench Rehabilitation Centre (2)



新大樓 NEW Building

前半山警署 OLD Building



The ex upper-level police Station at High Street as viewed before the commencement of conversion work in late 2009.



In order to minimize disturbance to local traffic, temporary barging points are set up at the previous incinerator site and Western District Public Cargo Works Areas for the removal of excavated spoil by sea. Covered conveyor belts are temporary erected to carry the excavated materials directly from the tunnel drilling/excavation points for disposal.





Covered conveyor

Western District Public Cargo Works Area served as a spoil disposal point during the work period





Facilities and set-up for the spoil disposal arrangement

Examples showing the complexity of the West Island Line Projects



Large areas of work locations involving complicated slope cutting and stabilization works





堅尼地城警察宿舍附近斜坡鞏固工程

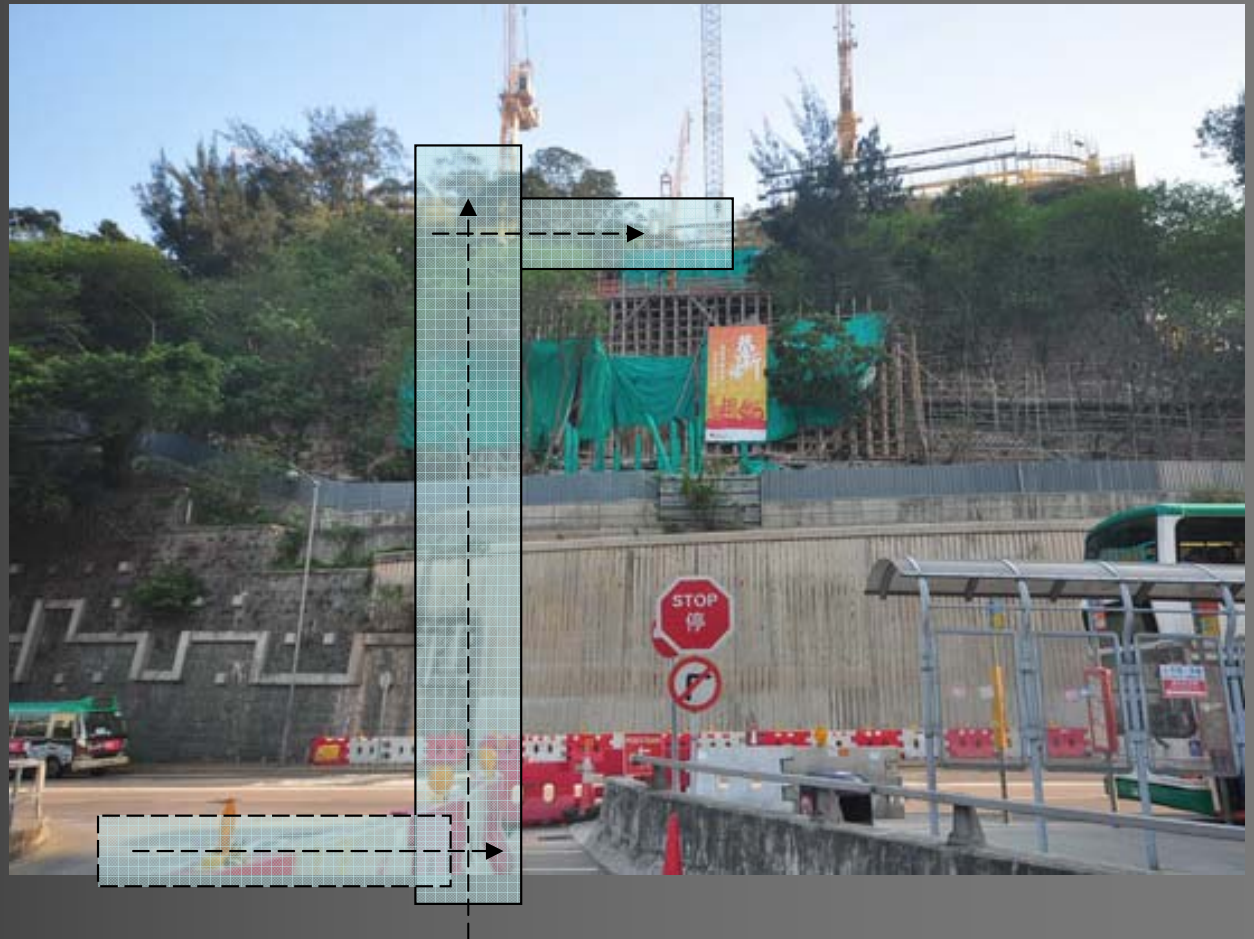


Locations in close proximity of the work areas where land-slide occurred shortly before the commencement of the WIL projects

Examples showing the complexity of the West Island Line Projects



Difficult location for the forming of pedestrian access point



Access to be provided from underground pedestrian subway leading to elevated location (HK University access)



Tunnel construction using
tunnel boring machine (TBM)



The Sha Tin to Central Link

The SCL is one of the strategic railway lines recommended in the Railway Development Strategy 2000. In March 2008, the Executive Council approved the further planning and design of the SCL using a **service concession approach** under which the project will be funded by the Government and the Corporation is entrusted with its planning and design.

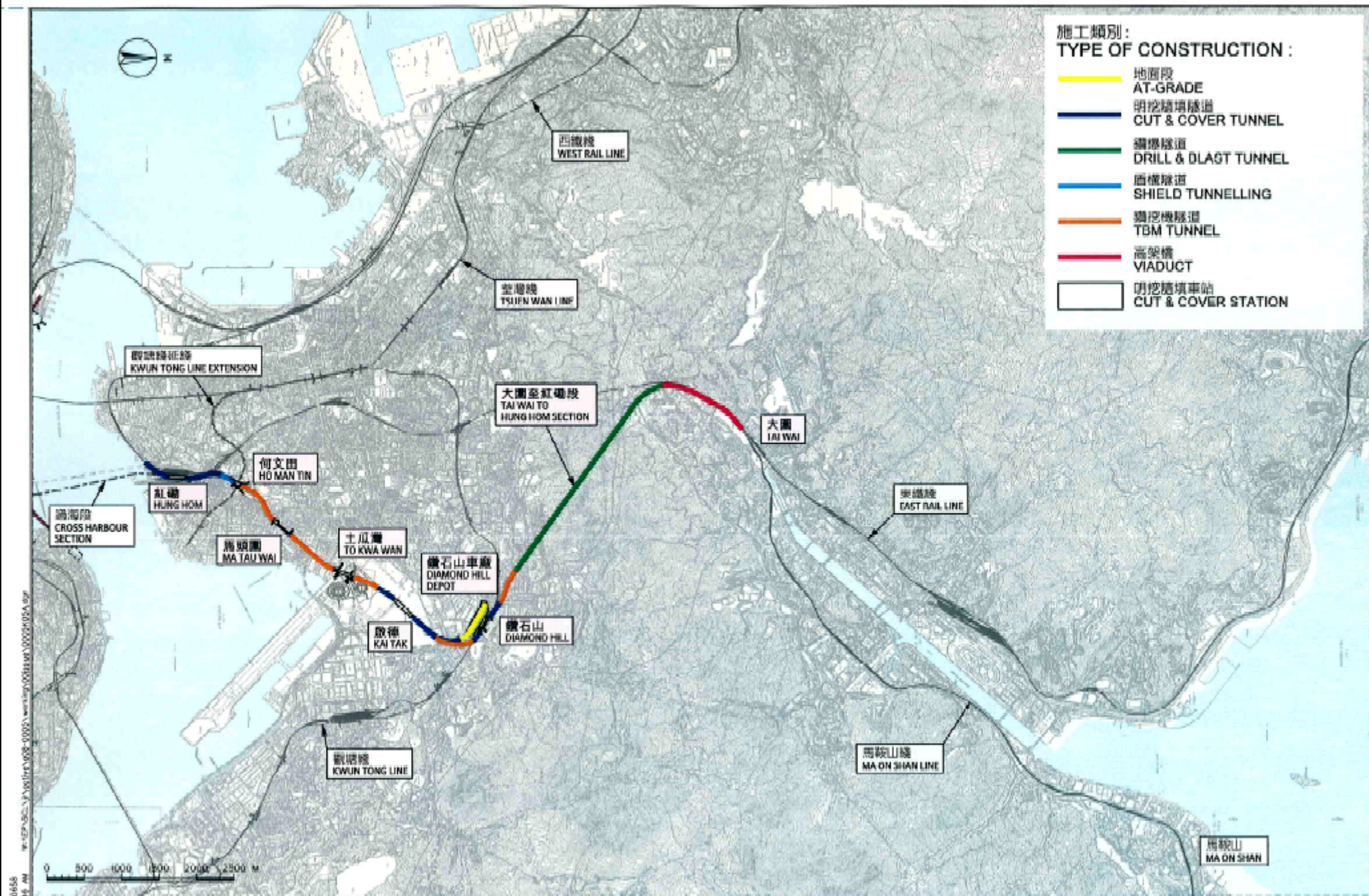
The railway scheme was gazetted on 26 November 2010 under the Railways Ordinance and authorised by the Chief Executive in Council on 27 March 2012. The Finance Committee of the Legislative Council endorsed the funding of the SCL project on 11 May 2012.

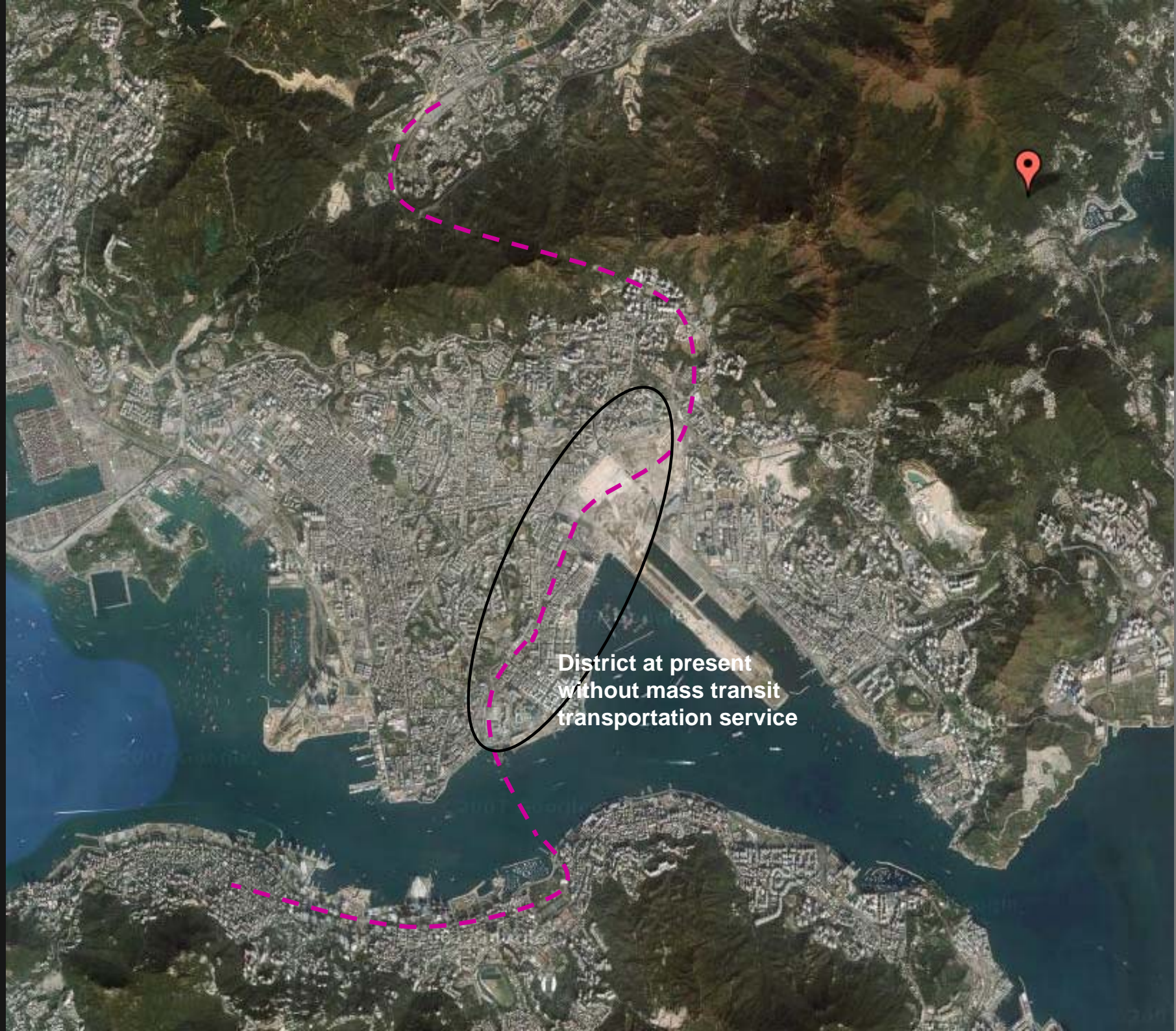
Special features of the Shatin to Central Link

- Total length of the line is about 17 km.
- Majority of the track alignment are constructed underground
- Construction of a 3.5 km tunnel running from Tai Wai to Diamond Hill
- Construction of one 1.5 km harbour-crossing tunnel (using immerse tube method) running from Hung Hom to Causeway Bay
- Kwun Tong Line will also be extended from Yau Ma Tei Station to provide rail service for Whampoa area, with an intermediate station at Homantin.
- Interchanging provisions will be allowed for future connection to East Rail at Tai Wai and Hung Hom; to Kwun Tong Line at Diamond Hill, to the future North Hong Kong Island Line at Causeway Bay and the rail network to the Southeast Kowloon redevelopment (former Kai Tak).
- Expedite urban renewal process for East Kowloon along Hung Hom, To Kwa Wan, Kowloon City and San Po Kong

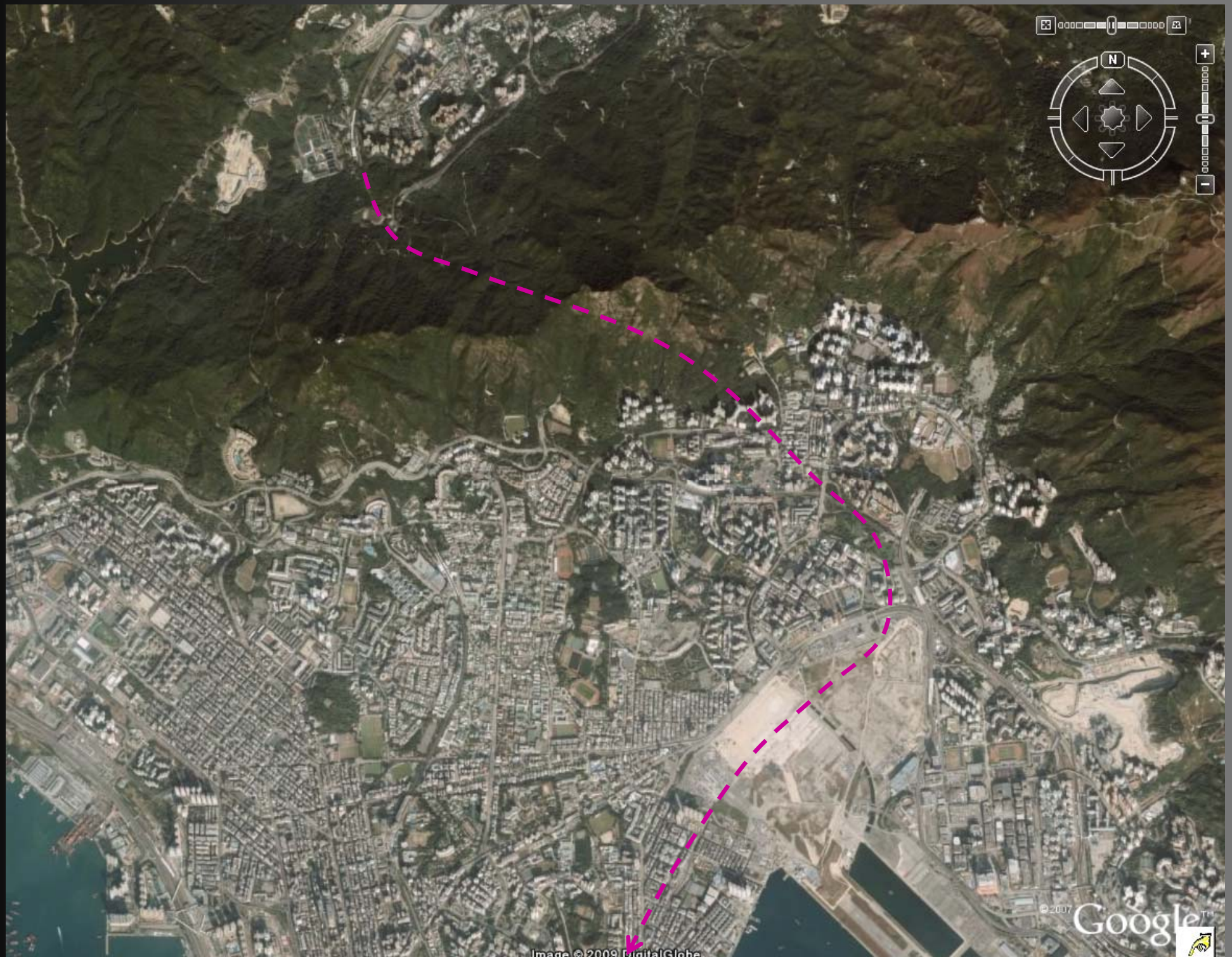
Operation and Schedule

- A 'service concession approach' will be adopted for the funding of construction cost directly and leasing the line to MTR under a 50-year operating concession valued at about HK\$70bn. This allows the government to retain control of the property development rights.
- In the light of future railway service demands, and in consideration of the interfaces between the SCL and the various development plans and infrastructure projects along its alignment, the Government intends to have the SCL completed in phases, with the **Tai Wai to Hung Hom section by 2018 and the cross harbour section by 2020**.
- Due to complicated overlapping with other major infrastructure projects on the Hong Kong side, works at the following locations are entrusted to the Central-Wanchai Bypass/Wanchai Development Phase II projects:
 - a) temporary reclamation, construction of a 160m-long SCL tunnel, as well as dredging at the CB Typhoon Shelter.
 - b) construction of a 70m-long shelf under the water channel between the H K Convention and Exhibition Centre Phases I and II





District at present
without mass transit
transportation service



圖例
LEGEND

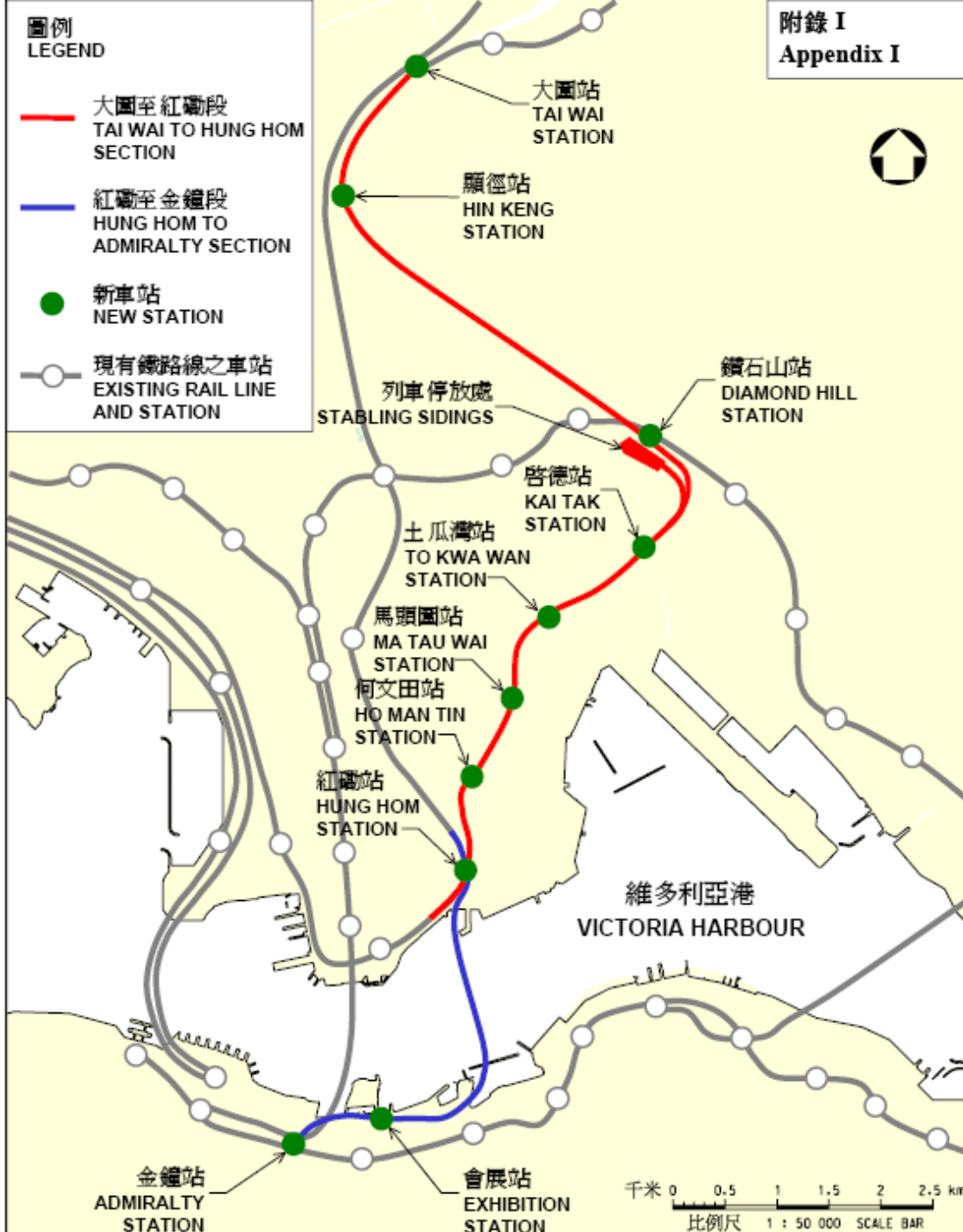
大圍至紅磡段
TAI WAI TO HUNG HOM
SECTION

紅磡至金鐘段
HUNG HOM TO
ADMIRALTY SECTION

新車站
NEW STATION

現有鐵路線之車站
EXISTING RAIL LINE
AND STATION

附錄 I
Appendix I



Final alignment as
approved by
Legislative Council
in 2012

圖則名稱 drawing title

擬建之沙田至中環線的走線
PROPOSED ALIGNMENT OF
THE SHATIN TO CENTRAL LINK

圖號 drawing no.

HRWSCL003-SK0192

版權所有 COPYRIGHT RESERVED

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE



路政署
HIGHWAYS DEPARTMENT

過海段 Cross Harbour Section



臨時填海
Temporary Reclamation

通風井
Ventilation Shaft



圖例
LEGEND:

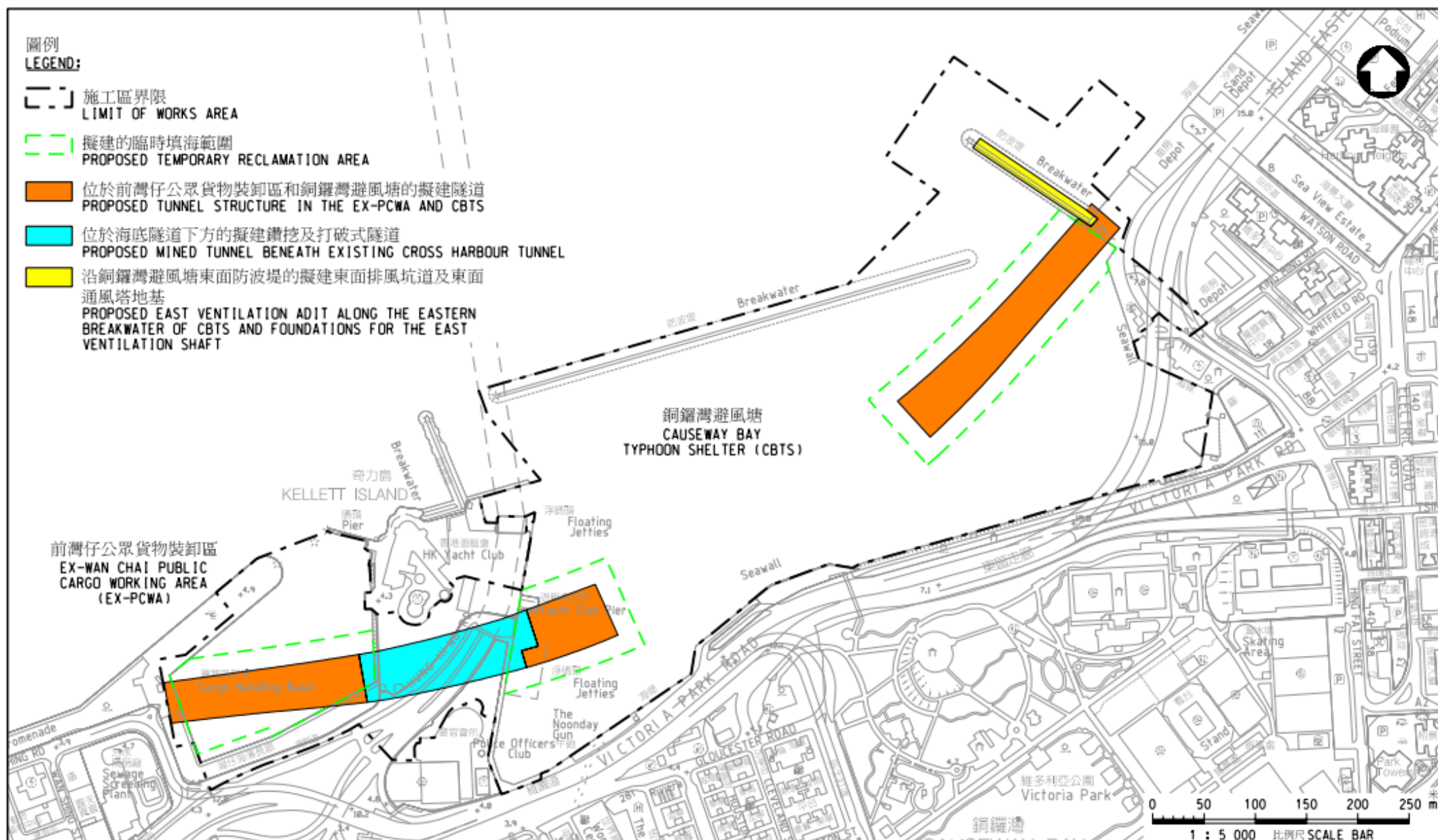
施工區界限
LIMIT OF WORKS AREA

擬建的臨時填海範圍
PROPOSED TEMPORARY RECLAMATION AREA

位於前灣仔公眾貨物裝卸區和銅鑼灣避風塘的擬建隧道
PROPOSED TUNNEL STRUCTURE IN THE EX-PCWA AND CBTS

位於海底隧道下方的擬建鑽挖及打破式隧道
PROPOSED MINED TUNNEL BENEATH EXISTING CROSS HARBOUR TUNNEL

沿銅鑼灣避風塘東面防波堤的擬建東面排風坑道及東面通風塔地基
PROPOSED EAST VENTILATION ADIT ALONG THE EASTERN BREAKWATER OF CBTS AND FOUNDATIONS FOR THE EAST VENTILATION SHAFT



合約編號 HY/2009/15 - 中環灣仔繞道 - 銅鑼灣避風塘段隧道工程

CONTRACT NO. HY/2009/15 - CENTRAL-WAN CHAI BYPASS - TUNNEL (CAUSEWAY BAY TYPHOON SHELTER SECTION)

Temporary reclamation and construction of SCL tunnel in Causeway Typhoon Shelter.





Temporary reclamation and construction of SCL tunnel in Causeway Typhoon Shelter









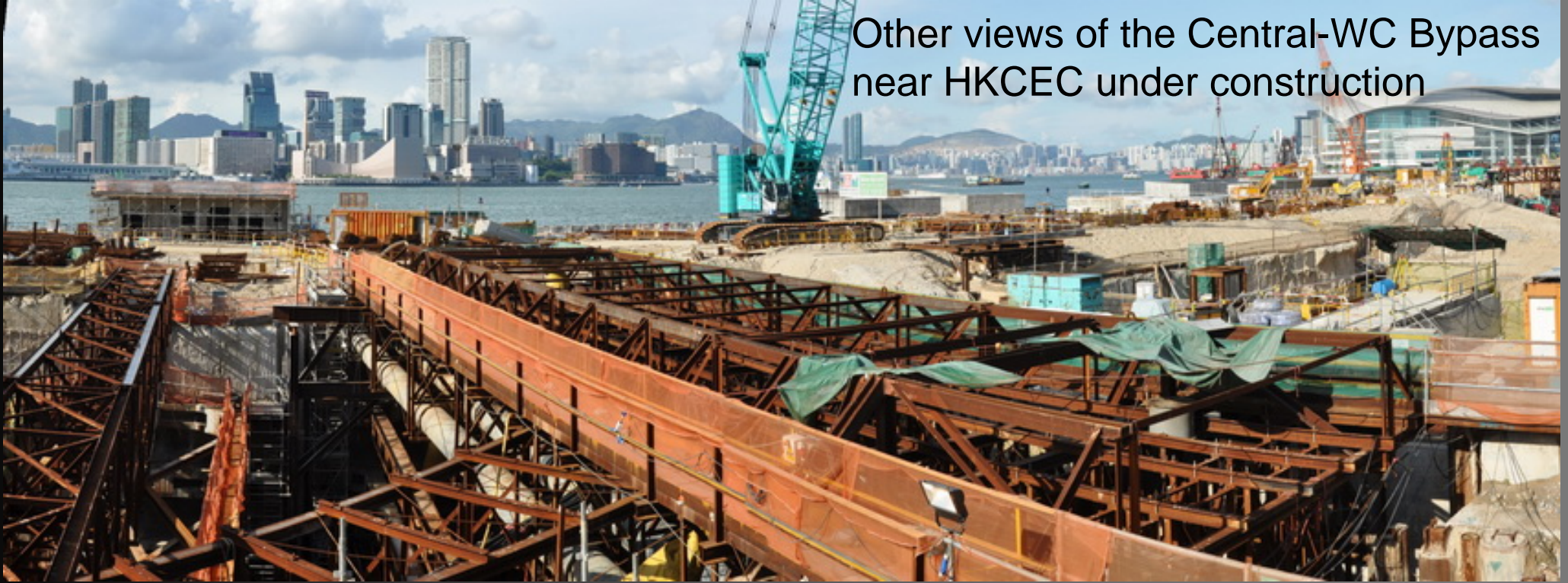


Construction of a shelf for future SCL under the water channel between the HKCEC Phases I and II

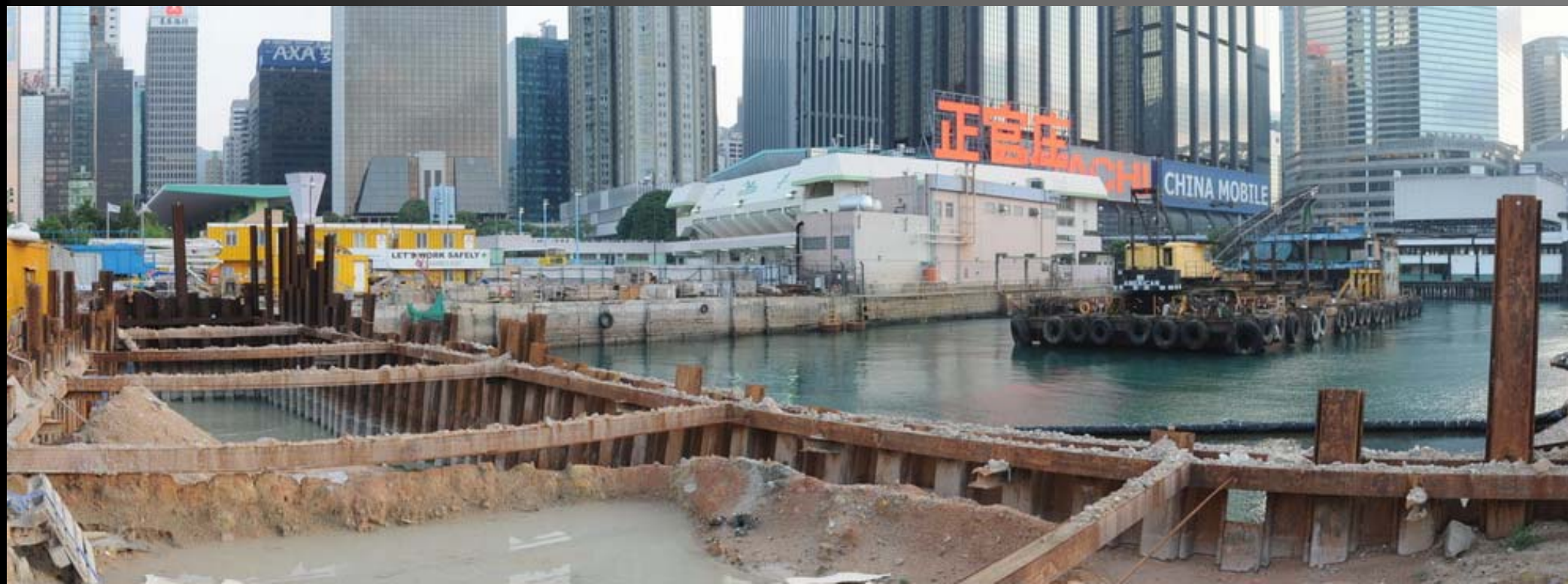




Other views of the Central-WC Bypass
near HKCEC under construction







Railway construction within congested urban area can be very complicated. This series of photos shows the works along the Kowloon Southern Link from Tai Kok Tsui to Jordon in October 2007.





Tunnel construction using cut-and-cover method





Temporary falsework to support the underground servicing pipework to facilitate onward diversion

