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20 May 2013

Clerk to Public Works Subcommittee
Legislative Council Secretariat
Legislative Council Complex
1 Legislative Council Road, Central
Hong Kong
(Attn.: Ms Annette LAM)

Dear Ms Lam,

**Legislative Council Finance Committee
Public Works Subcommittee
Meeting on 8 May 2013**

**PWP Item No. 3277LP – Reprovisioning of Yau Ma Tei Police Station
Supplementary Information on Central Kowloon Route**

At the meeting of the Public Works Subcommittee on 8 May 2013, Members discussed the Central Kowloon Route (CKR) Project when vetting the captioned PWP Item. The following supplementary information is provided for Members' reference.

Basic Information about CKR

2. The proposed CKR is an approximately 4.7 km long dual three-lane trunk road, connecting Yau Ma Tei Interchange of West Kowloon Highway with the road network at Kai Tak Development (KTD) and Kowloon Bay in East Kowloon. CKR consists mainly of

tunnels of approximately 3.9 km long (general layout plan at **Enclosure 1**), the majority of which will be constructed deep in rock stratum; thus the foundations of the buildings along the tunnel alignment will not be affected and no demolition of private developments and rehousing will be involved. The historic building of the Yau Ma Tei Police Station (YMTPS) can also be preserved. Temporary reclamation at Kowloon Bay will be required to facilitate the construction of the underwater tunnel section.

3. The proposed CKR will provide an alternative express route, enabling the vehicles to bypass the congested road sections in Central Kowloon, thus reducing journey time significantly. It is estimated that the journey time between Kowloon Bay and Yau Ma Tei via CKR would only take around five minutes at peak hours after commissioning of CKR, thus resulting in a saving of 25 to 30 minutes in comparison to the journey time without CKR. The adjacent areas, including Wong Tai Sin, Ho Man Tin and Kowloon City, will also be benefited by the improved traffic conditions.

Alignment of CKR

4. Since the commencement of planning of CKR in the early 90's, the Administration has been investigating and enhancing the alignment scheme. In the investigation and preliminary design stage of CKR that started in 2007, we have reviewed various alignment options that were formulated under previous CKR studies. We conducted a technical review after extensive public consultation and affirmed that the preferred tunnel option is the most technically feasible and suitable option. We consulted the Kwun Tong, Kowloon City and Yau Tsim Mong District Councils in April 2008 and reported to the Legislative Council Panel on Transport in May 2008 on the alignment. The proposed alignment was generally supported. The main advantages of the proposed alignment are that it has the best performance in environmental protection and it does not involve resumption of private developments and rehousing due to demolition of properties.

5. The Highways Department (HyD) engaged consultants in 2011 to undertake the detailed design for CKR and commenced a three-month

public engagement in December 2012. During the public engagement activities, the public indicated that they generally accepted the need for the construction of CKR and supported the Administration's proposal. HyD also received comments from some residents of King's Park and To Kwa Wan areas along the alignment as well as some District Council members of Kowloon City District Council, requesting the Department to consider refinement of alignment to avoid the buildings within the district as far as possible. HyD is examining their proposal. Nevertheless, the above requests on refinement of alignment will not affect the reprovisioning works for YMTPS and Yau Ma Tei Specialist Clinic (YMTSC) on the western side.

Imminent Need for Reprovisioning Works

6. The proposed tunnels of CKR will pass underneath the existing YMTSC Extension at Battery Street and part of the new wing of the existing YMTPS at the junction of Canton Road and Public Square Street. Underpinning of the foundation of the new wing of the existing YMTPS will also be required

7. As this section of tunnels will be constructed by cut-and-cover method, the YMTSC Extension will need to be demolished about one and a half year after the commencement of the CKR works (around the third quarter of 2016) to facilitate the target to commission the CKR in 2020. The existing YMTSC Extension will be reprovisioned in the new building to be constructed in the Queen Elizabeth Hospital before demolition to ensure that the existing service will not be affected by the works. As it requires about three years for the construction of the new building for YMTSC, we need to seek funding approval from the Finance Committee for the concerned reprovisioning works now so as to commence the reprovisioning works in June for completion of the decantation of the YMTSC in the third quarter of 2016.

8. On the other hand, to facilitate the gradual commencement of the construction of the CKR in 2015, we also need to complete the reprovisioning works of the YMTPS in the first quarter of 2016 so as to vacate the site of the existing YMTPS for the construction of CKR after the commissioning of the new YMTPS.

9. We understand that the public are concerned about the impact on the environment and building safety issues arising from the CKR project. The Administration will continue to endeavour to engage the public and stakeholders to actively address their comments. We will gazette the CKR project under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) in the third quarter of 2013. The public could also raise their objections during the objection period. We will consider and handle the comments received following the statutory procedures.

Impact on Buildings along CKR

10. While the current alignment of CKR will not involve resumption and demolition of private buildings, as the alignment will go through developed areas, parts of the tunnels will have to be constructed in the underground stratum underneath existing buildings. The section of CKR between Shanghai Street and Ma Tau Wai will be constructed deep under rock stratum using drill-and-blast method. Drill-and-blast methods for tunnel construction have been adopted in Hong Kong for more than 40 years. HyD has taken into account such experience and developed appropriate design and construction arrangements for CKR to ensure construction safety to ensure, in particular, that its construction and subsequent operations will not affect the structural integrity and use of buildings along the tunnel alignment.

11. The blasting works will be subject to stringent control of the Mines Division of the Civil Engineering and Development Department. HyD will complete in the planning and design stage the “Blasting Assessment Report” to demonstrate the feasibility of the blasting works and their execution in a safe manner in accordance with relevant standards. Upon the letting of the construction contracts, HyD will apply to the Mines Division for Blasting Permit. The application will include assessment of the impact of the blasting works on adjacent facilities including buildings, public facilities and slopes. The Administration will strictly monitor the construction procedures and employ qualified professionals to execute the works to ensure fulfillment of the relevant legislation.

12. HyD will establish sufficient monitoring points for measurement of parameters, including vibration and settlement, so as to monitor the impact of the works on adjacent structures, and hence ensuring fulfillment of the design and legislative requirements for safety.

Information on “Medium Depth Tunnel” Option Quoted in Provisional Legislative Council Paper in 1998

13. The “medium depth tunnel” option¹ quoted in the information note for the Provisional Legislative Council joint meeting for Panel on Transport and Panel on Planning, Lands and Works held on 13 March 1998 has not been adopted eventually. The current alignment, passing through Ma Tau Wai and Ma Tau Kok, going through Kowloon Bay and then returning to ground level at Kai Tak Development, is at the north of the alignment discussed in 1998 (see **Enclosure 2**). The two alignments pass through different parts of To Kwa Wan and the geological conditions are also different.

14. The alignment discussed in 1998 will go through Chi Kiang Street and Bailey Street in To Kwa Wan and the invert of the tunnel will be about 51 m below ground. As the alignment passes through reclaimed land (as indicated in **Enclosure 2**), the rock stratum is relatively deeper. At this depth, the tunnel is in mixed ground, and such condition will lead to great difficulties during construction and result in greater impact on adjacent buildings. Substantial foundation strengthening works will also be required. Hence, such option is not adopted.

15. The current alignment will not go through Chi Kiang Street and Bailey Street in To Kwa Wan, but will pass through the Kowloon City Ferry Pier Public Transport Interchange at the north to connect to Kowloon Bay. The area to be passed through is within the original coastline of the Kowloon Peninsula (as indicated in **Enclosure 2**). The approximate depths of the rock stratum from ground level range from

¹ The alignment starting in the west from the Yau Ma Tei Interchange, running along Kansu Street entering through Nathan Road into King’s Park and Ho Man Tin and then going through Chi Kiang Street and Bailey Street.

several metres to about 40 metres within this region. The geological conditions are better than those of the “medium depth tunnel” option that was not recommended in 1998. There will be considerable separations between the tunnels and the foundations of the buildings and such condition is suitable for drill and blast methods.

16. Overall speaking, as the majority of the tunnel of the current alignment will be constructed deep in rock stratum, the construction will not affect the structural integrity and normal use of buildings along the tunnel alignment.

Environmental Impact of Western Tunnel Portal

17. The commissioning of CKR could relieve congestion along the existing major east-west corridors and alleviate the pollution resulted from traffic, such as carbon dioxide, nitrogen oxide and respiratory suspended particulates, etc.

18. In addition, the air purification system (APS) of the CKR will direct the exhaust from the vehicles to the ventilation buildings for treatment to minimise the environmental impact near the tunnel portal. Each ventilation building will be equipped with advanced APS that will effectively remove up to 80% of nitrogen dioxide and respirable suspended particulates from the exhaust. Also, silencers will be installed on the exhaust of the buildings to reduce noise levels.

19. In order to minimise the potential air quality and noise impact on nearby residents to be brought about by the west tunnel portal, HyD has conducted further studies at the detailed design stage, and recommended a set of mitigation measures, including the construction of a landscape deck at a section of CKR from Yau Cheung Road to Hoi Wan Road, so that the tunnel portal would be farther away from existing residential areas; and installation of noise enclosures/barriers along the sections of Gascoigne Road Flyover that will be reconstructed or modified due to the construction of CKR, so as to mitigate the noise impact that might be brought about by CKR.

20. According to the findings of the EIA, after installation of the abovementioned noise enclosures/barriers, the traffic noise level at

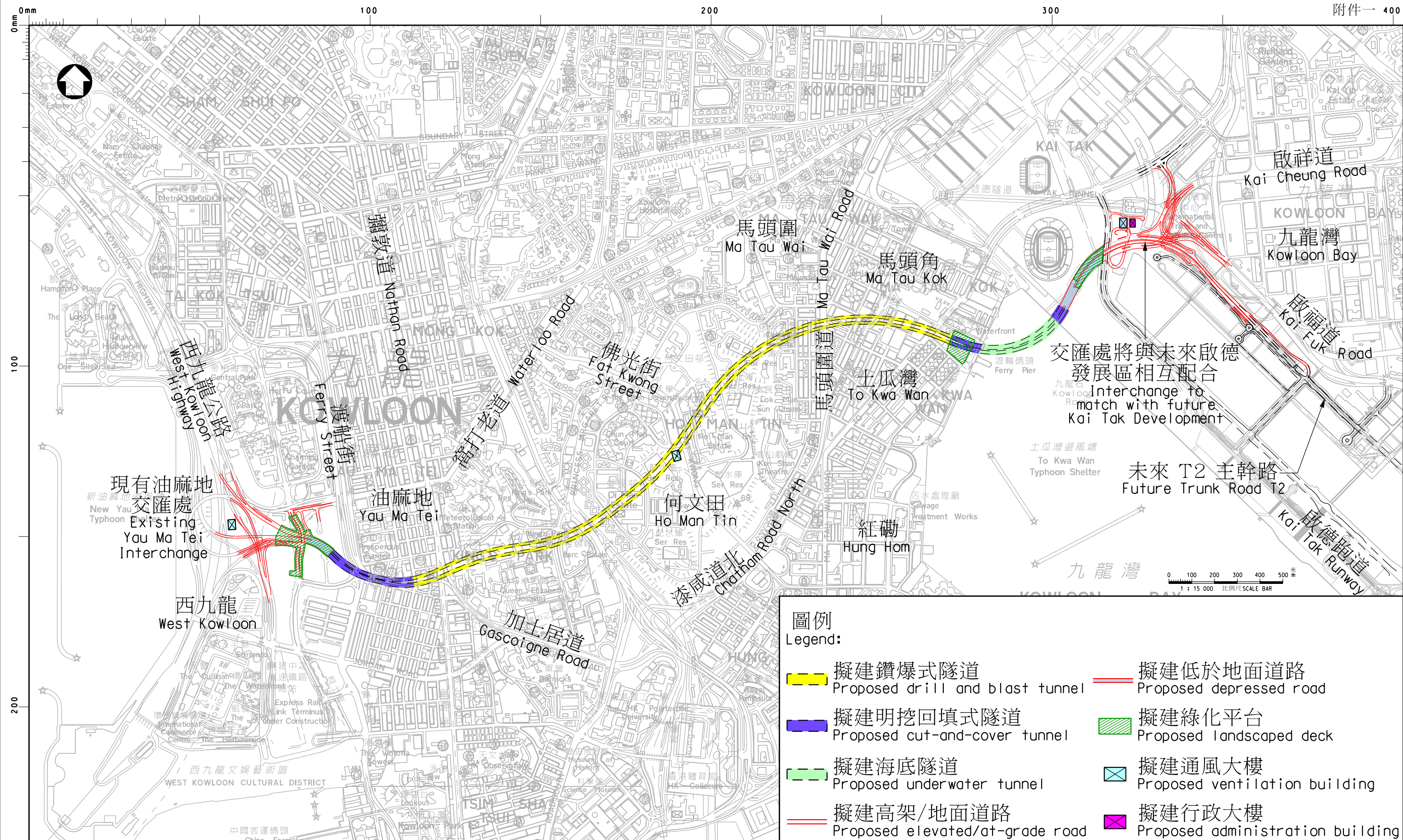
locations adjacent to the western tunnel portal, which are more sensitive to noise, will be significantly reduced.

21. The construction of CKR could alleviate traffic congestion along the existing major east-west corridors and support the traffic need of various developments in Kowloon. HyD will continue to engage relevant stakeholders so as to enhance the design and arrangement of CKR.

Yours sincerely,

(Miss Carrie LEE)
for Secretary for Transport and Housing

c.c. Director of Highways (Attn: Mr K H Tao)



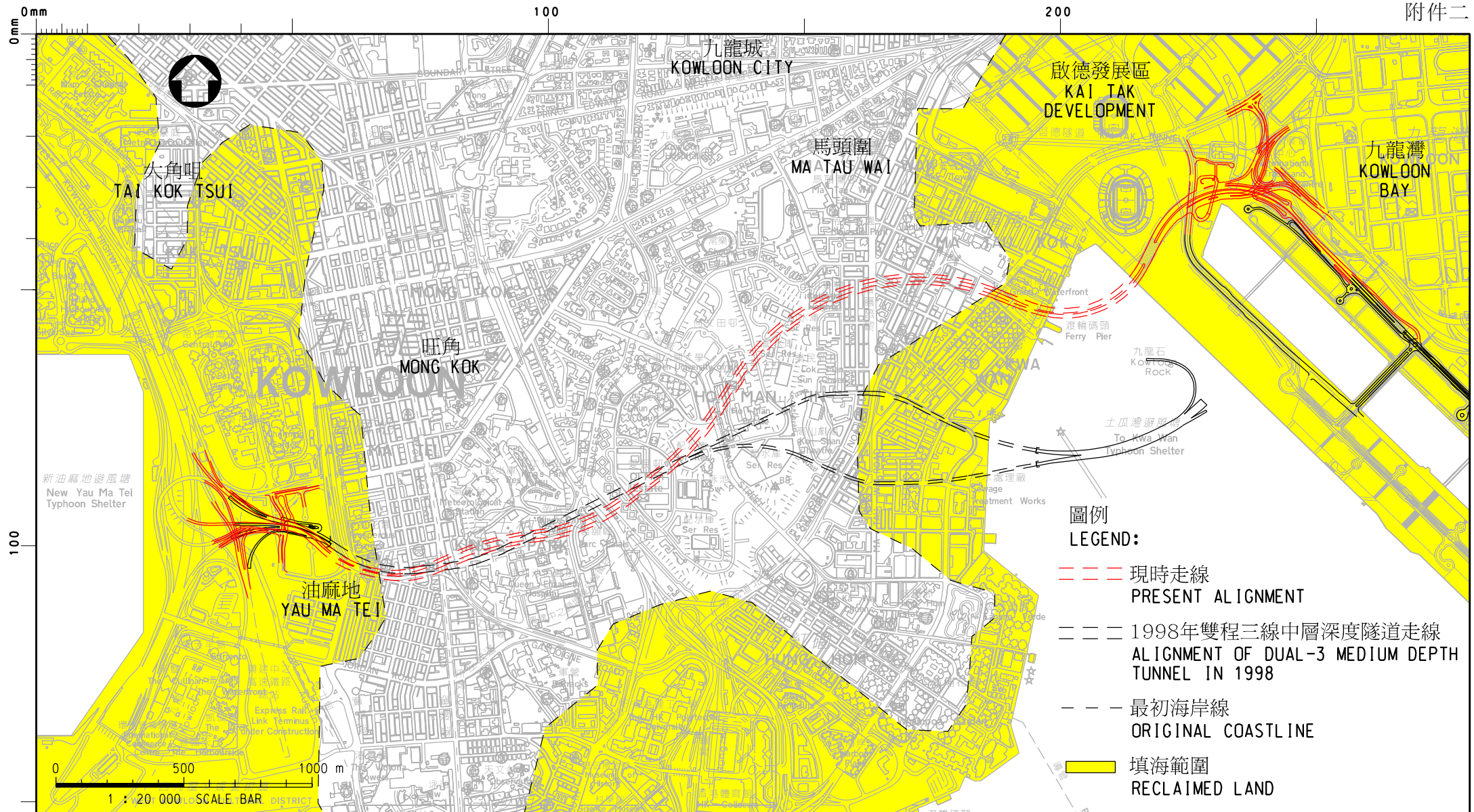
交匯處將與未來啟德發展區相互配合
Interchange to match with future Kai Tak Development

未來 T2 主幹路
Future Trunk Road T2

圖例		Legend:	
	擬建鑽爆式隧道 Proposed drill and blast tunnel		擬建低於地面道路 Proposed depressed road
	擬建明挖回填式隧道 Proposed cut-and-cover tunnel		擬建綠化平台 Proposed landscaped deck
	擬建海底隧道 Proposed underwater tunnel		擬建通風大樓 Proposed ventilation building
	擬建高架/地面道路 Proposed elevated/at-grade road		擬建行政大樓 Proposed administration building

圖則名稱 plan title
中九龍幹線 - 總平面圖
Central Kowloon Route - General layout plan

設計 designed	SIGNED	繪圖 drawn	SIGNED	圖則編號 plan no.	比例 scale
Y.C.FUNG	18/12/12	W.L.LAM	18/12/12	HMW6461TH-SK0399	1:15000
覆核 checked	SIGNED	批准 approved	SIGNED	© 版權所有 COPYRIGHT RESERVED	
Y.C.FUNG	18/12/12	C.L.LEUNG	18/12/12	HIGHWAYS DEPARTMENT HONG KONG 路政署	
主要工程管理處 MAJOR WORKS PROJECT MANAGEMENT OFFICE					



drawing title

中九龍幹線 - 現時走線與1998年雙程三線中層深度隧道走線
CENTRAL KOWLOON ROUTE - PRESENT ALIGNMENT AND ALIGNMENT
OF DUAL-3 MEDIUM DEPTH TUNNEL IN 1998

designed

M.Y.LEE 13/05/13

checked

M.Y.LEE 13/05/13

drawn

W.L.LAM 13/05/13

approved

C.H.LEUNG 13/05/13

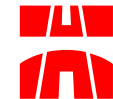
drawing no.

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scale

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