

第十四期 - 二零零八年十一月
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明挖回填式隧道 Cut and Cover Tunnel

通告 Message

在過去的通訊，我們曾提及中九龍幹線將會以三種不同的隧道建築形式興建，分別是深層鑽挖隧道、明挖回填式隧道及沉管式隧道。在今期通訊，我們會提供明挖回填式隧道的資料。

In the previous issues, we have mentioned CKR will consist of 3 different kinds of tunnel construction, namely, bored tunnel, cut-and-cover tunnel and immersed tube tunnel. More detailed information regarding the construction of cut-and-cover tunnel will be discussed in this issue.

(WKH). The construction works near YMTTS will not only affect the marine operations and road networks of WKH, but also breach the Harbour Protection Ordinance.

According to the preliminary results of ground investigation, the layer of underlying rock stratum is more than 20m below the existing ground level at both ends of the CKR. However, in order to meet the safe gradient requirement for a tunnel, the proposed CKR has to be aligned upwards from west of Nathan Road in order to connect the existing viaduct of WKH near Yau Ma Tei at the West end. Similarly, CKR has to be aligned upwards from east of To Kwa Wan Road to connect the existing and proposed road network at Kowloon Bay. Therefore, these 2 sections of CKR will be constructed in the layer of soft material located nearer to the ground level. The deep bored tunnel construction method cannot be applied in soft underground materials which cannot provide adequate structural supporting capacity.

中九龍幹線，其中兩段隧道，將會以明挖回填式的方法興建，即彌敦道以西至海泓道及土瓜灣道以東至九龍城碼頭海旁的兩段隧道。

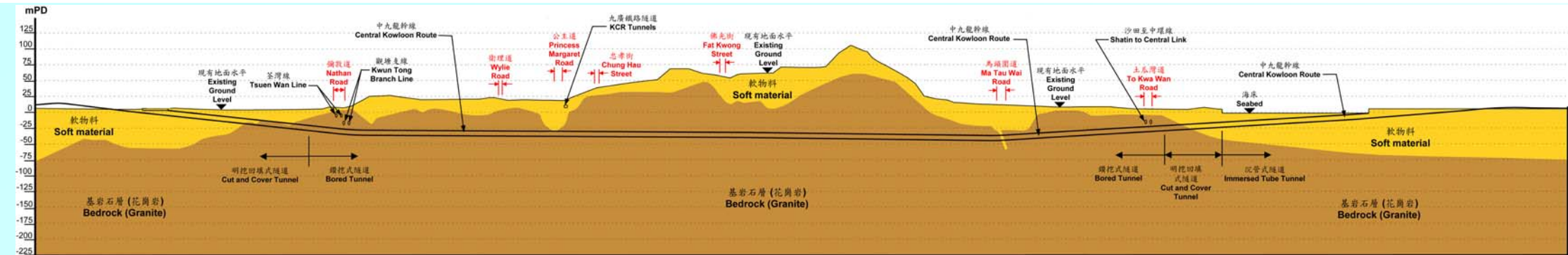
有公眾人士建議彌敦道以西的幹線隧道，繼續維持於地底石層內以便使用深層鑽挖的隧道建築方法。若隧道延遲往地面爬升，則須要在油麻地避風塘進行填海工程，以提供足夠土地興建道路和天橋將仍處於深層的中九龍幹線隧道連接高架段的西九龍快速公路。在避風塘填海再建天橋，會影響現時海上活動的運作及須大幅度改建西九龍快速公路，亦有違「保護海港條例」。

根據初步的地質勘測結果，在中九龍幹線兩端的地區，堅固的地底石層出現在離地面較深的位置，約地下二十多米。為了符合隧道公路的安全斜度規格，中九龍幹線隧道自彌敦道以西便須開始往地面爬升，以便接駁現有西九龍快速公路近油麻地的高架道路。同樣，中九龍幹線隧道自土瓜灣道以東便須開始往地面爬升，以便接駁九龍灣現有及擬建的道路網絡。因此，這兩部份的幹線隧道須要在較接近地面的軟土層內興建。軟土層跟石層性質不同，本身並無足夠結構承托力，故此不適合在內裏以「鑽挖」方法建造管道。

There are 2 sections of cut-and-cover tunnel for the Central Kowloon Route, namely section between west of Nathan Road and Hoi Wan Road and section between east of To Kwa Wan Road and the seaside near Kowloon City Ferry Pier.

There is suggestion from the public that the section of the tunnel at west of Nathan Road should be constructed within the layer of underlying rock stratum where the deep bored tunnel construction method can be used. If the tunnel section at west of Nathan Road is not aligned with upwards gradient, this will require reclamation works to be carried out at Yau Ma Tei Typhoon Shelter (YMTTS) area to provide sufficient land for the construction of roads and viaducts to connect the proposed CKR and the existing West Kowloon Highways





中九龍幹線沿線的地質剖面 Geological Profile along Central Kowloon Route Alignment

中九龍幹線明挖回填式隧道的興建

Cut-and-Cover Tunnel Construction of CKR

爲了減低在施工期對附近環境及交通的影響，路政署正研究採用「由上至下建築方法」建造明挖回填隧道。

「由上至下建築方法」：

先挖掘淺型坑道來建造隧道頂部，待隧道頂部工程完成後，路面將會被即時復修，並重新開放給行人及車輛使用。此方法除了可大大減低對路面交通的影響外，復修的路面還可覆蓋在地下進行的隧道工程。情況類似現時漢口道和梳士巴利道地底工程的做法，雖然港鐵九龍南線和延伸中間道行人隧道涉及大量地底工程，但卻不會對環境及交通造成太大滋擾。

我們會詳細研究以上的初步構思，確認其技術的可行性及安全。此外，在工程施工期間，我們亦會實施嚴謹的環境監控措施，以減低工程對公眾的影響。



漢口道地底工程
Underground construction works in Hankow Road



覆蓋在地下進行的隧道工程
Covering the underground construction works



In order to minimise the impacts on the environment and existing traffic adjacent to the construction site, Highways Department are now studying the construction of the tunnel from top down in the cut-and-cover tunnel works.

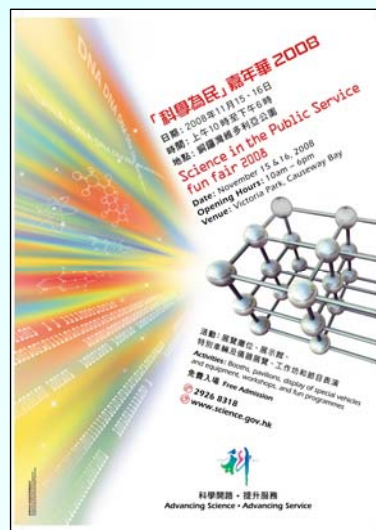
For the top down construction method :

A shallow excavation is made to allow the tunnel roof to be constructed. Once the tunnel roof is completed, the road surface is then reinstated. This not only allows early reinstatement of roadways, so that the disturbance to public will be minimised, but the reinstated roadways also act as a cover for the construction works underground. Similar underground construction works are used in Hankow Road and Salisbury Road for MTR works. Although MTR Kowloon Southern Link and pedestrian subway along Middle Road involve extensive underground works, impact on the environment and existing traffic is not significant.

We will further study the above preliminary concepts and evaluate their technical feasibility and safety. Besides, we will implement stringent environmental control and monitoring measures to minimise the impacts to the public during construction.

「科學爲民」嘉年華2008

Science in the Public Service - Fun Fair 2008



中九龍幹線模型
Central Kowloon Route Model



路政署攤位
Highways Department's Booth

香港天文台在2008年11月14至16日在銅鑼灣維多利亞公園舉辦了「科學爲民」嘉年華2008，活動包括有展覽攤位、展示館、特別車輛、儀器展覽、工作坊和節目表演，目的是讓公眾輕鬆地透過參與有趣的文娛活動，增加了解政府多個局、部門及一些協作機構和大專院校等利用科技所提供的服務。路政署亦有參與此項活動，我們除介紹中九龍幹線工程外，並提供一些不同的行車隧道建造方法資料。

Hong Kong Observatory held the Science in the Public Service - Fun Fair 2008 on 14-16 November 2008 at the Victoria Park, Causeway Bay. The activities included booths, pavilions, display of special vehicles and equipment, workshops and fun programmes. The purpose is to let people know, in a relaxed manner, more about the services of government departments/bureau, collaborating organizations and tertiary institutions' application of science and technology in providing services. Highways Department joined this fun fair. We promoted the Central Kowloon Route project and provided information on different construction techniques of road tunnels.

土地勘測工作 Ground Investigation Works

中九龍幹線的地質勘測工程經已展開，工程的承建商為基翔工程發展股份有限公司。工程的施工期為2008年11至2009年5月。

The Ground Investigation works for CKR has commenced. The Contractor for the contract is Gold Ram Engineering and Development Limited. The contract period will be from November 2008 to May 2009.



報告板 Bulletin Board

•活動 – 我們正籌備於2009年1月10日(星期六)舉行一項公眾參與活動，就「城市設計研究」及「油麻地警署的保育研究」向公眾匯報進展，及收集公眾意見。活動詳情，請留意日後的中九龍幹線通訊及宣傳資料

•Event – We are arranging a public engagement event to be held on 10th January 2009 (Sat) to report progress and gather public views on “Urban Design Study” and “Conservation Study on Yau Ma Tei Police Station”. For event details, please refer to our coming issue of Newsletter and publicity

日期 Date: 2009年1月10日(星期六) 10 January 2009 (Saturday)

時間 Time: 下午2時30分至5時30分 2:30pm to 5:30 pm

地點 Venue: 梁顯利油麻地社區中心 (油麻地眾坊街60號)

Henry G Leong Yau Ma Tei Community Centre
(60 Public Square Street, Yau Ma Tei)

查詢及報名: 請致電2859 0101 或電郵到 ckr@meinhardt.com.hk

For enquiries and enrolment: Please call 2859 0101 or email to ckr@meinhardt.com.hk



我們重視你的意見 We Value Your Comment



「中九龍幹線通訊」是以月刊形式出版。如對本工程有任何疑問及意見，歡迎：

郵寄 香港皇后大道西421號華明中心4樓 或
電郵 ckr@hyd.gov.hk 或 ckr@meinhardt.com.hk 或
致電 2859 0101 或
傳真 2540 1580

“Central Kowloon Route Newsletter” is a monthly publication. Should you have any comments on the project, please
send letter to 4/F Wah Ming Center, 421 Queen’s Road West, Hong Kong
send email to ckr@hyd.gov.hk or ckr@meinhardt.com.hk or
call 2859 0101 or
fax to 2540 1580

我們的網站

Our website : <http://www.central-kowloon-route.com.hk>