

隧道鑽挖機年內到港

TUNNEL BORING MACHINES ARRIVING IN HONG KONG WITHIN THIS YEAR

T2主幹路及茶果嶺隧道工程將會採用兩部巨型隧道鑽挖機同步建造東西行兩條隧道管道。

隧道鑽挖機是十分複雜和精密的機器，前方裝有旋轉刀盤和刀頭。本項目的隧道鑽挖機採用了先進技術，以應付不同的地質狀況，並發揮多元功能，一方面進行鑽挖，另一方面安裝隧道壁及隧道內部預製組件。以隧道鑽挖機建造隧道，是一項效率高且安全的施工方案。

The Trunk Road T2 and Cha Kwo Ling Tunnel project will be deploying two gigantic tunnel boring machines (TBMs) to construct the eastbound and the westbound tubes concurrently.

TBMs are complex machines with rotating cutterheads and cutters. The TBMs of this project are equipped with state-of-the-art technologies to cater for different geological conditions, and to fulfil multiple functions – excavation, as well as installing precast tunnel lining and tunnel internal components. TBM tunnelling is a safe and efficient construction method.

3架
雙層巴士
3 DOUBLE
DECKER
BUSES

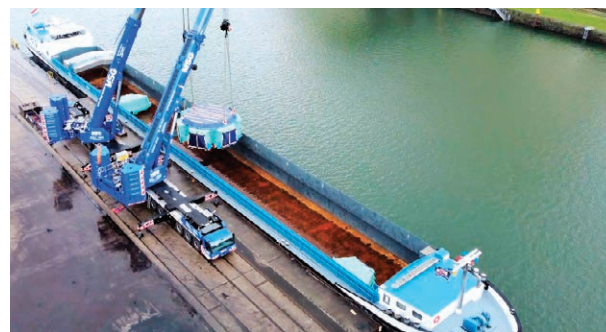


14米 m



6個地鐵車卡 6 MTR TRAIN CARS

120米 m



隧道鑽挖機的主要組件(相片中藍色圓形部件)今年較早前在德國完成裝嵌後，已運往中國內地廠房進行下一步組裝及測試。當相關的測試完成，便會經由海路運送到香港，預計於今年年底前，隧道鑽挖機會在啟動豎井內完成安裝，準備開展隧道鑽挖工作。

The core components of the two TBMs have been completed initial assembly in Germany earlier this year and were transported to a TBM plant in Mainland China for further assembly and testing. Upon completion of these, they will be shipped to Hong Kong. Installation inside the TBM launching shaft is expected to be completed before the end of this year ready for tunnelling to start.

隧道壁

TUNNEL LINING



隧道管道的結構，由約一千個隧道壁環相連組成，而每個環又以九件預製混凝土組件拼接而成。每件組件的質量與尺寸精準度，對確保隧道的結構與穩固性均非常重要。

配合稍後的隧道鑽挖機啟動及挖掘工序，隧道壁預製組件自2020年底在內地廠房進行生產，並會於今年年底開始陸續運送到香港。



The structure of a tunnel tube is constituted by some one thousand contiguous tunnel lining rings, each one in turn composed of nine pieces of precast concrete segments. Quality and dimensional precision of the segments are of great importance to ensuring strength and stability of the tunnel.

To tie in with the upcoming Tunnel Boring Machine launching and start of tunnelling works, fabrication of tunnel lining has commenced in end 2020 in a precasting yard in Mainland China. The segments will be shipped to Hong Kong progressively starting from the end of this year.

如欲查閱更多有關T2主幹路及茶果嶺隧道的資料，請瀏覽網站：

Please visit the Trunk Road T2 and Cha Kwo Ling Tunnel project website for more project information:

www.trunkroadt2.hk 6130 8155

感謝閣下瀏覽《進程》。若對我們工程有任何意見，請將意見電郵至：

Welcome to our newsletter Track. If you have any views on our project, please email us at:

enquiry@trunkroadt2.com



茶果嶺社區聯絡中心 - 現已啟用

COMMUNITY LIAISON CENTRE - CHA KWO LING - NOW OPEN



社區聯絡中心一般開放時間為週一至週六免費開放；惟鑑於2019冠狀病毒病疫情，訪客宜事先致電6130 8155聯絡我們，查詢最新安排。

The CLC is open free of charge from Monday to Saturday generally. Nevertheless, in view of the COVID-19 situation, visitors are advised to contact us at 6130 8155 in advance for the latest arrangement.

香港特別行政區政府 土木工程拓展署
Civil Engineering and Development Department
The Government of the Hong Kong Special Administrative Region



全力準備迎接 隧道鑽挖機啟動
All-out effort for Tunnel Boring Machine Launching

2021

1月 JAN

隧道鑽挖機部件由德國運至中國內地進行組裝。
Delivery of Tunnel Boring Machine Parts from Germany to Mainland China for Assembly.

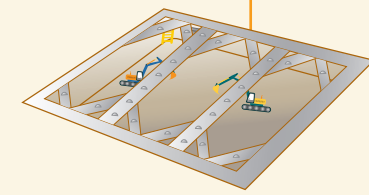
5月 MAY

隧道鑽挖機廠內驗收測試展開。
Tunnel Boring Machine Factory Acceptance Test commenced.

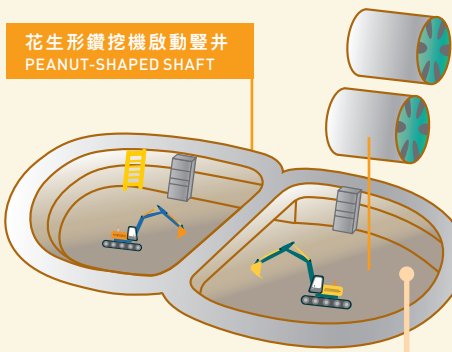
隧道鑽挖機啟動豎井

TUNNEL BORING MACHINE LAUNCHING SHAFT

傳統方形鑽挖機啟動豎井
TRADITIONAL RECTANGULAR SHAFT



花生形鑽挖機啟動豎井
PEANUT-SHAPED SHAFT



在鑽挖工作開始前，我們需要在啟德工地上建造一個巨型的隧道鑽挖機啟動豎井，以便在地下日後隧道的位置架設隧道鑽挖機。由於體積龐大，每部鑽挖機需分為數個部份逐一吊進豎井組合。豎井深度為35米（相等於地下12層樓），呈花生形，有別於傳統的長方形。

Before tunnelling works can commence, a sizeable TBM launching shaft needs to be constructed on the Kai Tak site to install the two TBMs underground on the future tunnel alignment. Owing to its mammoth size, each TBM is split into several parts for hoisting into the shaft and re-assembly. The shaft is 35 m deep (equivalent to 12 storeys underground) and peanut-shaped, distinct from the traditional rectangular shaft.

花生形豎井設計具備以下優點：

A Peanut-shaped Shaft has following advantages:

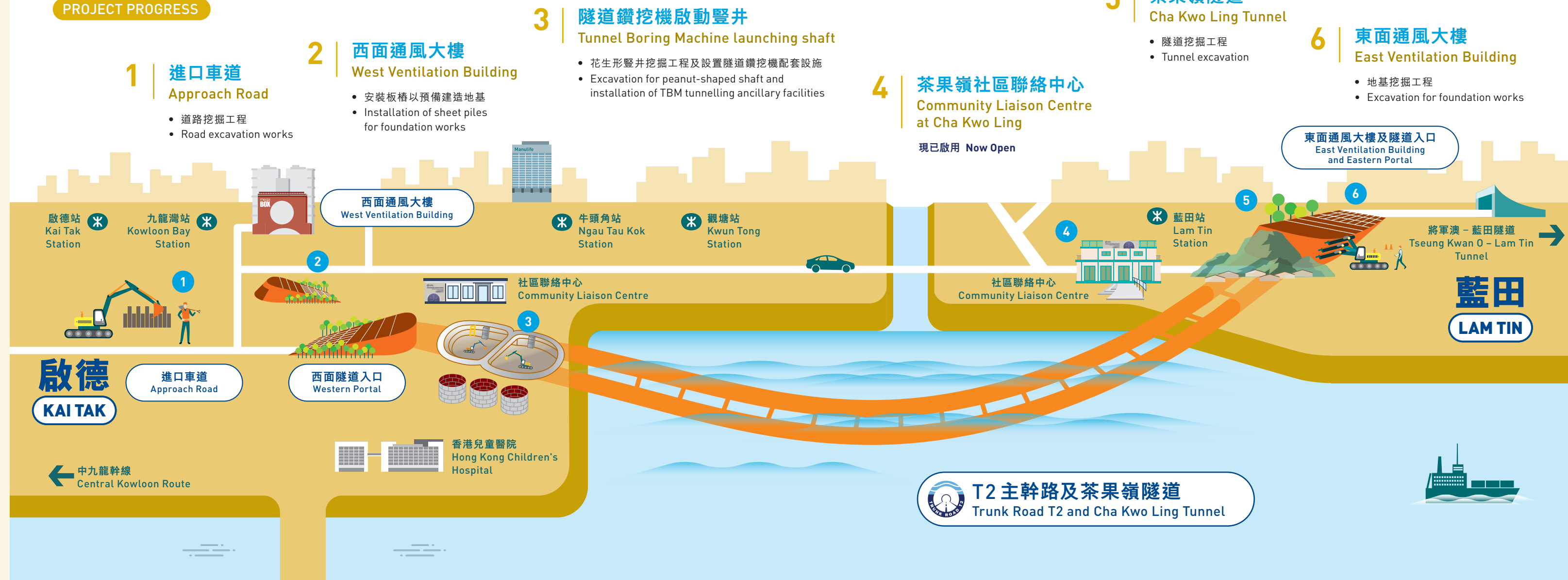
- 無需安裝支撐架，增加施工空間及減少安全風險；
- 更靈活配合工地的空間限制，加快豎井挖掘及隧道鑽挖機組裝過程；及
- 減少對鄰近結構和環境的影響。
- Enhance construction flexibility by eliminating strutting;
- Shorten the time for shaft excavation and TBM assembly by suiting space constraints of the site flexibly; and
- Reduce impacts on adjacent structures and environment.



豎井立體影像
3D Shaft Image

工程進度

PROJECT PROGRESS



1 進口車道 Approach Road

- 道路挖掘工程
- Road excavation works

2 西面通風大樓 West Ventilation Building

- 安裝板樁以預備建造地基
- Installation of sheet piles for foundation works

3 隧道鑽挖機啟動豎井 Tunnel Boring Machine launching shaft

- 花生形豎井挖掘工程及設置隧道鑽挖機配套設施
- Excavation for peanut-shaped shaft and installation of TBM tunnelling ancillary facilities

4 茶果嶺社區聯絡中心 Community Liaison Centre at Cha Kwo Ling

現已啟用 Now Open

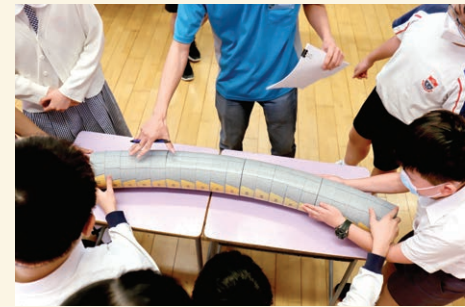
5 茶果嶺隧道 Cha Kwo Ling Tunnel

- 隧道挖掘工程
- Tunnel excavation

6 東面通風大樓 East Ventilation Building

- 地基挖掘工程
- Excavation for foundation works

外展教育啟發新一代



Inspiring the Next Generation through Outreach Education Activities

With a view to arousing students' interest and potential in engineering, the Project Team visited the nearby schools and introduced the Project to the students. Through interactive games and activities, students gained an understanding on how the scientific principles they learned in school were applied in the operation of a TBM.



為了鼓勵年輕一代認識身邊的工程，工程團隊走進校園，向同學們介紹本工程項目，並透過各種活動和遊戲，引領同學了解課堂中的科學原理在隧道鑽挖機的應用，啟發他們對工程的興趣及潛能。



隧道鑽挖機命名比賽 Tunnel Boring Machine Naming Competition

按照傳統，隧道鑽挖機必須在啟動前配備一個女性名字，藉此祝願工程順利。我們現正舉辦隧道鑽挖機命名比賽，邀請中小學生為兩部隧道鑽挖機命名。大獎獎金為港幣2000元，我們亦將邀請得獎者參加「T2工程探索之旅」。如欲了解比賽詳情，請瀏覽本工程網站 www.trunkroadt2.hk。

It is a convention to christen a TBM with a woman's name before tunnelling works commences, for good wishes and smooth works execution. For this, we are organizing a Naming Competition open to primary and secondary school students. The grand prize is HK\$2,000 and an invitation to "T2 Project Adventures". For more details of the competition, please visit the project website www.trunkroadt2.hk.

截止日期
Deadline: 2021.7.16

