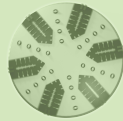


HOW WELL DO YOU KNOW TUNNEL BORING MACHINES



Introduction of Trunk Road T2 and Cha Kwo Ling Tunnel

Trunk Road T2 and Cha Kwo Ling Tunnel (namely Trunk Road T2) comprises a 3.4 km long dual two-lane trunk road connecting Kai Tak and Lam Tin, 3.1 km of which is in the form of tunnels. Trunk Road T2 constitutes the middle section of Route 6, connecting to the Central Kowloon Route on the west and the Tseung Kwan O - Lam Tin Tunnel on the east. Upon completion, Trunk Road T2 will be the major road link connecting central and east Kowloon, effectively improving the traffic conditions in the Kowloon Bay and Kwun Tong areas. The journey time between Kai Tak and Lam Tin during peak hours will be reduced notably from the current 15 minutes to 3 minutes.



What are tunnel boring machines?

Tunnel boring machines (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.

Why does this project use TBMs?

Our project has to build a trunk road passing underneath the seabed in Kwun Tong Typhoon Shelter. Using TBMs with advanced technologies, we can tackle not only the diversified geology from hard rock to soft and mixed grounds, but also the challenges arising from sub-sea tunnelling at depths exceeding 40m below sea level. The use of TBMs in this project minimizes the need for marine construction works in Kwun Tong Typhoon Shelter and the Victoria Harbour.

Furthermore, the construction works by TBMs are always underground. This can effectively minimize the impact to the community and the environment. The TBMs fix concrete segments to the freshly dug-out tunnel, protecting the nearby building structures by effectively controlling the risk of settlement. This giant machine equipping with a real-time monitoring system to collect data during the whole construction process will only need a crew of about a dozen of engineering staff members to operate. This method can highly enhance safety and efficiency.

Kai Tak

Central Kowloon Route
(Under construction)

Trunk Road T2 and Cha Kwo Ling Tunnel

Kwun Tong

Lam Tin

Tseung Kwan O - Lam Tin Tunnel
(Under construction)

Why do TBMs have to be given female names?

It is a convention to christen a TBM with a woman's name before tunnelling works commences, for good wishes and smooth works execution.

Fun Facts of our TBMs

The Trunk Road T2 project will be deploying **two** TBMs to construct the eastbound and westbound tubes concurrently from Kai Tak passing underneath Kwun Tong Typhoon Shelter to Lam Tin.

A TBM is **14 m** in diameter (as tall as three double-decker buses stacked up); weighs **4200 tonnes** (equals to 23 numbers of 747 jumbo jet) and has a total length of **120m** (approximately the length of 6 cars of MTR trains).

The TBMs will move forward at a speed of **5 to 15m daily** at normal geology.

Our TBMs are undergoing every testing task. Upon passing the tests, they will be shipped to Hong Kong for assembly, launching the tunnel construction.



Tunnel Boring Machine Naming Competition

Application Form

Completed application forms should be submitted **by the extended deadline 16 July 2021**:

- by mail or by hand and marked with “Trunk Road T2 and Cha Kwo Ling Tunnel – Tunnel Boring Machine Naming Competition” to “17/F, Two Harbour Square, 180 Wai Yip Street, Kwun Tong, Kowloon”; OR
- by email and titled with “Trunk Road T2 and Cha Kwo Ling Tunnel – Tunnel Boring Machine Naming Competition” to “enquiry@trunkroadt2.com”.

Entries can also be submitted online at the competition webpage www.trunkroadt2.hk/TBMNamingCompetition.

Name : _____

Contact No. : _____

Email Address : _____

Name of School : _____

Class in School : _____

(Remark : All interested secondary and primary students are welcome to submit entries.)

Proposed TBM Name(s) (should be female names, Chinese or English) :

1. _____ (can propose one or two names)
2. _____

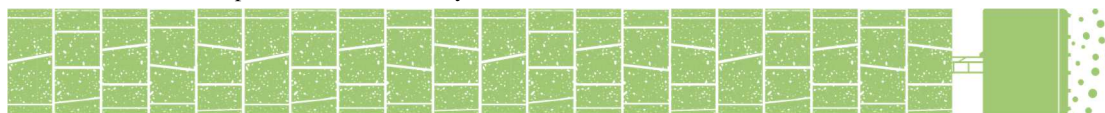
(Remark: In assessing the creativity of the proposed names, the judging panel will take into consideration whether the names have been adopted by other TBMs in Hong Kong. The names that have been adopted include “Mulan (木蘭)”, “Xiao Long Nu or Little Dragon Girl (小龍女)”, “Zhao-jun (昭君)”, “Fan-li-hua (樊梨花)”, “Soeng-ngo (嫦娥)”, “Iron Lady (鐵娘子)”, “Xi-shi (西施)”, “Mu Gui-ying (穆桂英)”, “Nuwa (女媧)”, “Princess Wencheng (文成公主)”, “Princess Iron Fan (鐵扇公主)”, “Athena (雅典娜)”, “Zhi-nu (織女)”, “Yang Yu-huan (楊玉環)”, “Maruko (小丸子)”, “Running Free Dragon (順風龍)”, “Oshin (阿信)”, “Dae Jang Geum (大長今)”, “Nebula (星雲)”, “Qin Liangyu (秦良玉)”, “Gaia (蓋亞)”, “Huang Rong (黃蓉)”, “Princess Xianglong (翔龍公主)”, “Liang Hongyu (梁紅玉)”, “Femanda (菲南達)” and “Sarah (慧詩)”.

Explanation on the concept of the proposed name(s) (not more than 200 words) :

(Remark: Judging criteria:

- Relevance to Trunk Road T2 and Cha Kwo Ling Tunnel (40%)
- Reflecting the characteristics and features of Tunnel Boring Machines (20%)
- Relevance of the Submission Explanation with the proposed name(s) (20%)
- Creativity (20%)

All participants should carefully read and fully understand the Terms and Conditions (available at the competition webpage www.trunkroadt2.hk/TBMNamingCompetition) before joining the competition. By submitting the application, participants will be deemed to have accepted and to be bound by the Terms and Conditions.



Tunnel Boring Machine Naming Competition

Details of Competition

Introduction

The Trunk Road T2 and Cha Kwo Ling Tunnel project will be constructed using two tunnel boring machines (TBMs) deployed concurrently boring from Kai Tak passing underneath Kwun Tong Typhoon Shelter to Lam Tin, one for each tunnel tube. Civil Engineering and Development Department, Harbourfront Commission, the Consultant (Hyder-Meinhardt Joint Venture) and the Contractor (Bouygues Travaux Publics) have co-organized the “Trunk Road T2 and Cha Kwo Ling Tunnel – Tunnel Boring Machine Naming Competition” to call for naming proposals for the two TBMs.

Rules

- All interested secondary and primary school students are welcome to submit entries.
- Each applicant can submit one entry form, with two proposed names at most (Chinese or English).
- Submissions should include a Submission Explanation in not more than 200 words on the concept of the proposed name(s).

Submission method

- Entries should be submitted:
 - online at the competition webpage www.trunkroadt2.hk/TBMNamingCompetition;
OR
 - via sending the completed application forms:
 - ◆ by mail or by hand and marked with “Trunk Road T2 and Cha Kwo Ling Tunnel – Tunnel Boring Machine Naming Competition” to “17/F, Two Harbour Square, 180 Wai Yip Street, Kwun Tong, Kowloon”; OR
 - ◆ by email and titled with “Trunk Road T2 and Cha Kwo Ling Tunnel – Tunnel Boring Machine Naming Competition” to “enquiry@trunkroadt2.com”.
- Application forms can be downloaded from the above competition webpage, or obtained from our Community Liaison Centres (locations can be found at our project website www.trunkroadt2.hk). Applicants may also make photocopies of the application forms.
- Entries should be submitted by the extended deadline **16 July 2021**. Applications received by mail will be dated by the postmark.

Judging

- The judging panel is formed by representatives from Civil Engineering and Development Department, Harbourfront Commission, the Consultant (Hyder-Meinhardt Joint Venture) and



the Contractor (Bouygues Travaux Publics).

- Judging criteria:
 - Relevance to Trunk Road T2 and Cha Kwo Ling Tunnel (40%)
 - Reflecting the characteristics and features of Tunnel Boring Machines (20%)
 - Relevance of the Submission Explanation with the proposed name(s) (20%)
 - Creativity (20%)
- If the selected name is submitted by more than one entrant, the winner will be selected by the Submission Explanation.
- In assessing the creativity of the proposed names, the judging panel will take into consideration whether the names have been adopted by other TBMs in Hong Kong. The names that have been adopted include “Mulan (木蘭)”, “Xiao Long Nu or Little Dragon Girl (小龍女)”, “Zhao-jun (昭君)”, “Fan-li-hua (樊梨花)”, “Soeng-ngo (嫦娥)”, “Iron Lady (鐵娘子)”, “Xi-shi (西施)”, “Mu Gui-ying (穆桂英)”, “Nuwa (女媧)”, “Princess Wencheng (文成公主)”, “Princess Iron Fan (鐵扇公主)”, “Athena (雅典娜)”, “Zhi-nu (織女)”, “Yang Yuhuan (楊玉環)”, “Maruko (小丸子)”, “Running Free Dragon (順風龍)”, “Oshin (阿信)”, “Dae Jang Geum (大長今)”, “Nebula (星雲)”, “Qin Liangyu (秦良玉)”, “Gaia (蓋亞)”, “Huang Rong (黃蓉)”, “Princess Xianglong (翔龍公主)”, “Liang Hongyu (梁紅玉)”, “Femanda (菲南達)” and “Sarah (慧詩)”.

Prize

- Winners (2 prizes): HK\$2,000 cash and a certificate each, and be invited to the “T2 Project Adventures”
- First runners-up (2 prizes): HK\$1,000 cash and a certificate each, and be invited to the “T2 Project Adventures”
- Merits: HK\$500 cash and a certificate each
- Top Participating Schools (1 secondary school and 1 primary school): A TBM model and a certificate each

Results

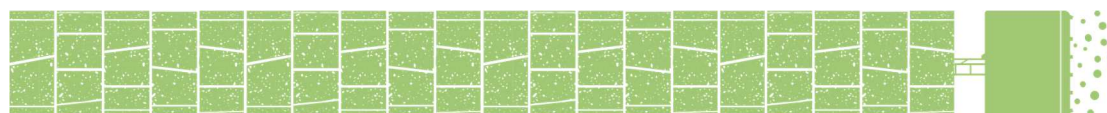
- Awardees and award-winning schools will be individually notified of the results and be invited to the TBM Launching Ceremony to be held in the fourth quarter of 2021 tentatively (subject to the situation of COVID-19).

Terms and Conditions

- Terms and Conditions can be found at the competition webpage www.trunkroadt2.hk/TBMNamingCompetition.

Enquiry

- Please call Trunk Road T2 and Cha Kwo Ling Tunnel project team at 6130 8155.



Tunnel Boring Machine Naming Competition **Terms and Conditions**

- All participants should carefully read and fully understand the following Terms and Conditions before joining the competition. By submitting the application, participants will be deemed to have accepted and to be bound by the Terms and Conditions.
- Applicants aged under 18 shall only enter the competition with the consent of their parents/guardians.
- Entries should not contain any material that is obscene, violent, pornographic, defamatory, indecent, disparaging or content that is controversial and inappropriate.
- No application fee is applied. However, all costs required for submissions shall be borne by the applicant.
- Online entries will be considered failing to submit timely and be ineligible in case of any loss, error or unidentified network arising from computers, smartphones or internet network problems.
- If any of the information provided is unclear or incomplete, resulting in failure by the Organiser to identify or contact the winner, the Organiser reserves the right to disqualify the winner.
- The Organiser shall have the right to cancel, terminate, change or suspend the competition, and to amend the Terms and Conditions of the competition without prior notice.
- Participants shall agree the Organiser to use the proposed name(s) for publicity in any format and by any means.
- The Organiser pledges to use the personal data submitted by the applicant, in complying with the requirements of the Personal Data (Privacy) Ordinance (the “Ordinance”) for the purpose of the competition.
- The Organiser reserves the right to make final decision on the naming of the Tunnel Boring Machines of Trunk Road T2 and Cha Kwo Ling Tunnels project, including not to adopt the winning names or to adopt only one of the proposed names submitted by the winners.
- In case of dispute, the Organiser reserves the right to make final decision.

