



# Hong Kong West Drainage Tunnel

## Newsletter Issue 2 January 2009

**Together We Build the Drainage Tunnel  
Together We Alleviate Flooding**

### Progress Updates and Works Schedule

The construction of Hong Kong West Drainage Tunnel has been making smooth progress since its commencement in late November 2007. The Project is scheduled to complete in 2012 and the latest progress is as follows:

#### Main Drainage Tunnel

The 11km long main drainage tunnel, which extends from Tai Hang to Cyberport, will be constructed by two Tunnel Boring Machines (TBMs). The TBMs, which will start the construction works at either side of the tunnel, are being assembled and tested in Guangzhou. In early 2009, the TBMs will be disassembled into parts and delivered to Hong Kong. After the TBMs have reassembled at the construction site, tunnelling by TBMs will start.

#### Eastern Portal at Tai Hang

- Construction of the launching tunnel by drill and blast method commenced in September 2008 and is scheduled for completion in January 2009. About 60% of the works have been completed.
- To gear up for tunnelling works by TBM at Eastern Portal in the second quarter of 2009, launching tunnel construction is in progress.

#### Western Portal at Cyberport

- Construction of the temporary pier is substantially completed. The pier is to provide a barging point for transporting TBM equipment, precast tunnel lining segments and the excavated materials by sea.



Eastern Portal – Blasting works for launching tunnel



Western Portal – Excavation works for launching tunnel

- To prepare for tunnelling works by TBM at Western Portal in early 2009, construction of launching tunnel and associated works are in progress and are expected to be completed in end February 2009. To mitigate noise impacts, temporary noise barriers at the tunnel portal were installed in early November 2008.

#### Intakes

##### Ground Investigation and Utilities Identification Works

There are 34 intakes in this Project. They are located in Wan Chai and Central and Western Districts. Since mid June 2008, our contractor commenced ground investigation and utility identification at 19 intakes and has completed most of the works.

##### Construction of Intakes

##### Intake No.W0 at Stubbs Road Garden

Intake construction works mainly include advanced works as well as construction of intake structure, shaft and about 465m long adits.

- Advanced works including ground investigation, utility identification and tree transplantation works commenced in early December 2008.
- Intake construction began in end December 2008 for completion in 2011. During construction, part of the Stubbs Road Garden will be temporarily closed.

##### Intake No.SM1 adjacent to Smithfield

- Intake construction will begin in mid January 2009 and completion is scheduled for end 2010.



Locations of Eastern and Western Portals of Main Tunnel and Intakes that will be constructed soon

# Highlights of Our Technology - Tunnel Boring Machines (TBMs)

We introduced the background of this Project in the first issue of the Project Newsletter. In coming issues, we not only will update construction progress, but will also introduce some of the technologies and concepts adopted in this Project to let the public understand more about the Project and related works arrangement.

Two gigantic double shield TBMs are the stars of this issue. They will be delivered to Hong Kong for constructing the eastern and western portions of Hong Kong West Drainage Tunnel. Let us introduce them to you.

## Tunnel Boring Machines of the Hong Kong West Drainage Tunnel Project

Apart from tunnel digging, the TBMs are equipped with multi-functional features, including drilling, excavating, removing soils, mucking out, erecting concrete tunnel precast segments. They can carry out drilling works and install precast segments simultaneously. Compared to conventional construction methods, the construction period can be shortened. In addition, TBMs operate underground so they will cause little nuisance to the public.

### Profile of the TBMs:

Design:	Germany
Manufacture:	Germany and China
Specifications:	The diameters of the cutter head are 7.2m and 8.3m for the construction of the eastern and western portions of the tunnel respectively. The total length is about 170m.

The machinery for TBMs have been delivered to Guangzhou for assembly. After assembly and testing, the TBMs will be disassembled into parts and delivered to Hong Kong in the first quarter of 2009 for reassembly at the construction site. Tunnelling by the first TBM will begin at the Western Portal in the first quarter of 2009 while the works by another TBM will begin at the Eastern Portal in the second quarter of 2009.

## Hong Kong West Drainage Tunnel Project - Tunnel Boring Machine Naming Competition

### Date of Submission

8th January 2009 to 21st February 2009

### Prizes

**One Grand Prize**  
HK\$3000 Book Coupon

**Five Complimentary Prizes**  
HK\$400 Book Coupon Each



Tunnel Boring Machine

Winners will be notified in writing.

Results will be published on the website of the Drainage Services Department between 31st March 2009 and 20th April 2009.

Please complete the entry form on Page 4 of this Newsletter and send it to Ms Ashley Au, Public Relations Officer of our contractor, Dragages - Nishimatsu Joint Venture by post at PO Box 38345, Hing Fat Street Post Office, Causeway Bay, Hong Kong or by fax at 2671 9300. The entry form can also be downloaded from the website of the Drainage Services Department: [www.dsd.gov.hk](http://www.dsd.gov.hk).

## Naming Tradition of Tunnel Boring Machines

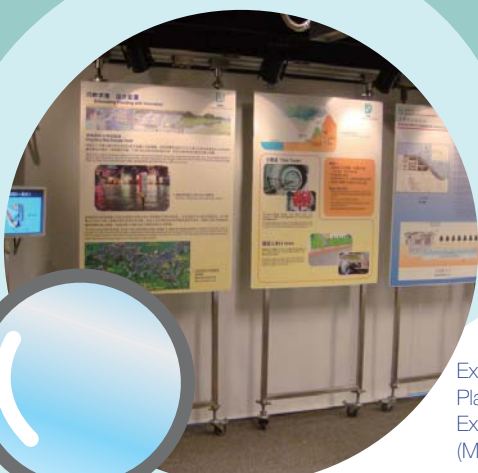
Traditionally, TBMs will be given with female names before construction commences for easy identification. Memorable names that fully represent the mission are preferable. In Hong Kong, names such as "Mulan", "Mu Guiying" and "Liang Hongyu" were given to their "relatives and friends" previously. The first TBM in this Project has already been named. You are cordially invited to join the naming competition for giving a tailor-made name for the second TBM!



## Promotion and Outreach Programmes of the Project

To introduce the Hong Kong West Drainage Tunnel Project, exhibitions will be held from time to time.

In addition, special outreach programmes for schools have been organized for students to give them a better understanding on the background, benefits and construction arrangement of the Project.



Exhibition at Hong Kong Planning and Infrastructure Exhibition Gallery in Central (May to Jul 2008)

Exhibition at Exhibition Gallery in Cyberport (Aug to Sep 2008)



Outreach programme at a secondary school on Hong Kong Island (Oct 2008)



# Environmental Protection Measures



Eastern Portal (Tai Hang Road) – Regular air monitoring



Regular noise monitoring in construction sites



Eastern Portal (Tai Hang Road) – Hoarding has been erected



Western Portal (near Cyberport) – Noise enclosure for launching tunnel



Western Portal (near Cyberport) – Wheel washing facilities



Intake No. TP5 (near May Road) – Noise attenuation measures for advanced works

## Drainage Services Department “Construction Sites Housekeeping Award Scheme”

The Drainage Services Department recognizes the importance of keeping its construction sites clean, tidy and hygienic to protect the well-being of the community. Since 2004, the Department has been organizing the “Construction Sites Housekeeping Award Scheme”. The scheme promotes good housekeeping of DSD’s construction sites by encouraging DSD’s contractors and consultants/ in-house site supervisory staff working under the same contract to work as a team in upholding their effort to keep DSD’s sites clean, tidy and hygienic.

The project team of the Hong Kong West Drainage Tunnel Project has worked meticulously and the Project is currently one of the top scorers in the award scheme. We will continue to try our best to maintain the safety, tidiness and hygiene of our construction sites to minimize construction impacts to the public.



Intake No. MA17 (near May Road) – the contractor has fenced off the site for advanced works to enhance safety

During the construction of the Hong Kong West Drainage Tunnel, we will continue to follow our environmental policy to minimize impacts to the environment as well as daily lives of the public. In the detailed design stage, we have carried out environmental impact assessment (EIA) on noise, air quality, water quality, waste and ecology. In the construction stage, the contractor has implemented various feasible and appropriate mitigation measures recommended by the EIA reports. The contractor will monitor the environment continuously and adopt environmentally friendly methods such as using Tunnel Boring Machines and Raise Boring Machines to construct the main tunnel and most of the intake shaft.

## Staying in Touch

With the support and valuable opinions of government departments concerned, various District Councils and the public, the Hong Kong West Drainage Tunnel Project has been making good progress since its commencement in late November 2007.

Now, the Project is in the construction stage, we will continue to keep close contact with the public. In December 2008, our project team reported the details of the works arrangement and progress in the meetings of the following Area Committees:

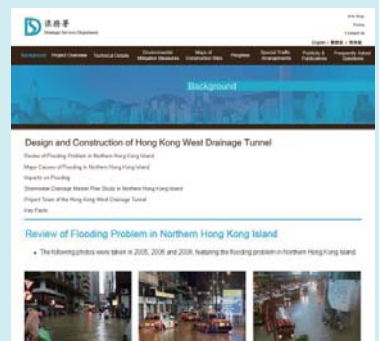
- Central and Mid-Level Area Committee
- Shek Tong Tsui and Kennedy Town Area Committee
- Wan Chai South Area Committee

In addition, notification letters or notices regarding the latest construction arrangement will be distributed in advance to nearby residents, schools and organizations. Consultations are being arranged to understand their views. We believe through regular communication, cooperation and mutual understanding can be developed.

You are welcome to provide with us your comments or views on this newsletter as well as our works. Please contact Ms Ashley Au, Public Relations Officer of our contractor Dragages – Nishimatsu Joint Venture, by mail, email, fax or on our 24-hour enquiry hotline at 2671 8600.

## “Hong Kong West Drainage Tunnel” Website

A website is being developed to give the public a better understanding of the Hong Kong West Drainage Tunnel Project. Major contents include background and overview, technical details, environmental mitigation measures, construction sites map, construction progress, special traffic arrangements and publicity activities, etc. It will be updated regularly to provide the public with the latest progress and construction arrangements of the Project. The website is expected to launch in early 2009. You are most welcome to browse it at [www.dsd.gov.hk](http://www.dsd.gov.hk).



## Key Facts

The Employer	: Drainage Services Department
Consultant	: Ove Arup & Partners Hong Kong Ltd.
Contractor	: Dragages - Nishimatsu Joint Venture
Project Commencement Date	: November 2007
Anticipated Completion Date	: 2012

## Contact Us

Our Contractor	: Dragages - Nishimatsu Joint Venture
24-hour Enquiry Hotline	: 2671 8600
Fax Number	: 2671 9300
Correspondence Address	: PO Box 38345, Hing Fat Street Post Office, Causeway Bay, Hong Kong
E-mail Address	: <a href="mailto:hkwdp.enquiry@dragageshk.com">hkwdp.enquiry@dragageshk.com</a>
Drainage Services Department Website	: <a href="http://www.dsd.gov.hk">www.dsd.gov.hk</a>

# Hong Kong West Drainage Tunnel Project Tunnel Boring Machine Naming Competition Entry Form

The Hong Kong West Drainage Tunnel consists of a main drainage tunnel of about 11km long connecting Tai Hang and Cyberport. To minimize the construction impacts to the traffic and the public in the Northern Hong Kong Island, the main tunnel will be constructed by TBMs. These gigantic TBMs adopt the most advanced technology. They are designed in Germany and manufactured in Germany and China. After the TBMs are manufactured, the machines will be disassembled into parts and delivered to Hong Kong. The parts will then be reassembled at the construction site for the drilling and excavation of the main tunnel in the second quarter of 2009 at Eastern Portal in Tai Hang. Traditionally, the machines will normally be given female names that reflect the nature and the scope of the construction works.

English Name	
Chinese Name	
Reasons (Brief explanation)	

Name of Participant	Surname	Given Name
HKID Number	( ) ( ) _ _ _ _ XX ( )	
Telephone Number		
E-mail Address		
Mailing Address		

## Selection Criteria

- Promote positive image of the TBM and reflect its mission
- Be easy to remember and impressive

## Submission Period

8th January 2009 to 21st February 2009

## Panel

Representatives from Drainage Services Department, Ove Arup & Partners Hong Kong Ltd. and Dragages - Nishimatsu Joint Venture and guests

## Entry Method

Please fill in this entry form or download it from the website of Drainage Services Department. Please send the completed form either:

- by post to Ms Ashley Au, Public Relations Officer of the contractor, Dragages - Nishimatsu Joint Venture at PO Box 38345, Hing Fat Street Post Office, Causeway Bay, Hong Kong; or
- by fax to Ms Ashley Au, Public Relations Officer of the contractor, Dragages - Nishimatsu Joint Venture at 2671 9300.

## Rules and Regulations

- Submission of entries signifies the acceptance of the rules and regulations of the competition.
- Each person can submit one entry only.
- The submission should be either in Chinese or English.
- The submission period is from 8th January 2009 to 21st February 2009 (entries sent by post will be considered according to the date of post chop). Late submission will not be considered.

- When a name is proposed by more than one entrant, only the entry that was received the earliest will be considered.
- The Drainage Services Department reserves the right to modify and publish the awarded names for non-commercial use.
- The entrant must bear all legal liabilities for any copyright infringement and damages to any third parties.
- All personal information shall be kept confidential. Personal information will only be used to identify the applicants, results announcement and other related publicity.
- The Drainage Services Department reserves the right not to use any name submitted by any entrant without giving any reason therefor.
- In case of disputes, the decision of the Drainage Services Department shall be final and conclusive.



For Office Use:

Entry No.:

Date and Time Received:

Remarks:

