Hong Kong West Drainage Tunnel

Newsletter Issue 5 *July 2010*

Together We Build the Drainage Tunnel
Together We Alleviate Flooding

To alleviate the flooding problem of Northern Hong Kong Island, we are constructing a drainage tunnel of about 11km long and 34 intakes to intercept stormwater and discharge it directly to sea. For details, please visit the Project website www.dsd.gov.hk/HKWDT.

Progress Updates and Works Schedule

Tunnelling Works

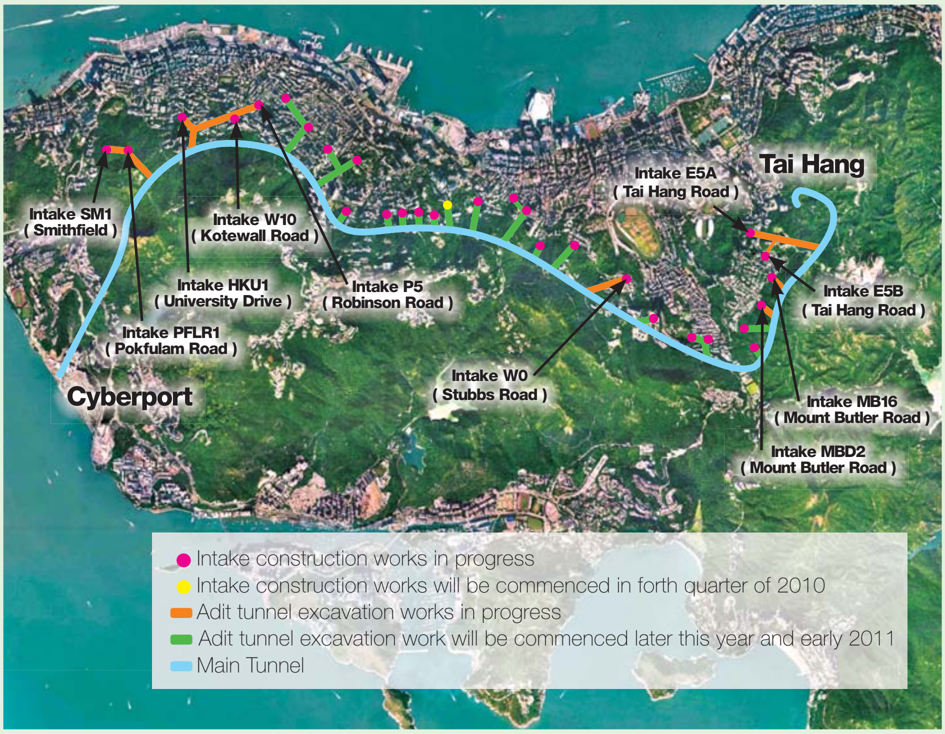
The progress of the tunnelling works is satisfactory. About 80% and 65% of the tunnel excavated for the Eastern and Western Portal respectively have been completed.

Intake Construction and Adit Excavation Works

The Project reaches its peak construction period. As of end June 2010, except for an intake at Bowen Road, all intakes are under construction. The adit excavation works by drill and blast method for 10 intakes including W0, E5A, E5B, MB16, MBD2, SM1, PFLR1, W10, P5 and HKU1 are in progress.

Overall

On target for completion by 2012.



Intake Location Map for the Hong Kong West Drainage Tunnel

We Care We Connect

A talk on flood prevention and implementation of the Project at Lingnan Primary School in early 2010.

i. Reaching Out to Community

With the commencement of intake construction, we keep close contact and communication with representatives from property management offices, schools and residents in the vicinity of intake construction sites. Moreover, we keep the Wan Chai, Central & Western and Southern District Councilors informed of the latest construction progress of this Project regularly.

ii. Sharing With Students

Nowadays, Liberal Studies is a core subject. To broaden the students' knowledge, we arranged talks to schools on flood prevention, our greening works as well as various tunnelling techniques.

Joint Efforts With Public

To arouse students' environmental awareness, a painting event with the theme "save the earth, save the environment", was jointly organized by Drainage Services Department and Dragages-Nishimatsu Joint Venture on 30 January 2010. About 80 students from Marymount Secondary School and Marymount Primary School joined this event. With the support of their principals, teachers and parents, students made their effort to express their ideas in how to protect the environment. In the course of painting, the students fully demonstrated their commitments to save the earth against global warming. The paintings have been mounted on the hoardings of intake (No. E7) site at Blue Pool Road to beautify the living environment and publicise the students' messages.

Principals, teachers, parents and representatives of the project team joined together to support the event.

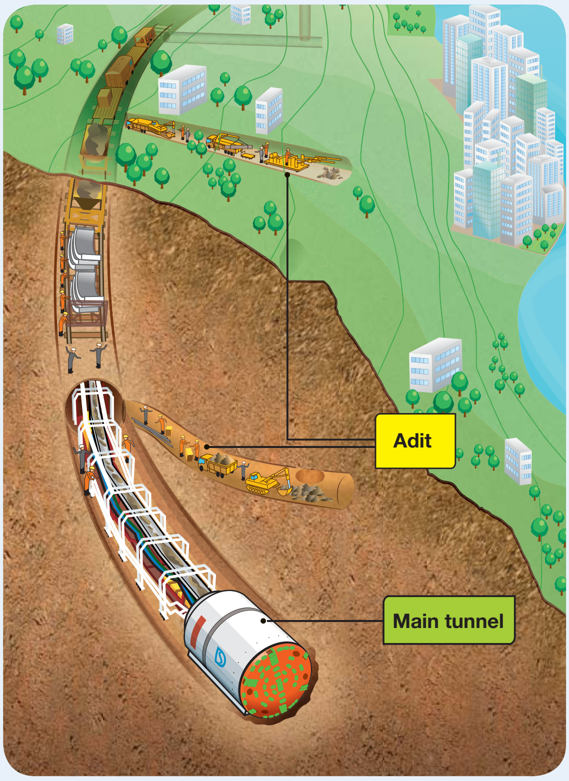
It was encouraging to see the keen response from students. "Everyone shared a fun and meaningful morning, and we were extremely pleased with their work!" said Ms Veronica Ma, the Principal of Marymount Secondary School.

We are having fun!

Challenges in Building a Complex Tunnel System

Building tunnels in urban area is a challenging task that requires detailed study, careful planning and meticulous control. Moreover, the Hong Kong West Drainage Tunnel comprising a total of 32 adits with total length of 8km connecting the intakes to the 11km long main tunnel is a very complex tunnel network. To ensure early completion of the drainage tunnel, two tunnel boring machines are deployed to carry out main tunnel excavation from the two ends concurrently. Excavation of adits from the main tunnel by drill and blast method is also underway. This is an unprecedented challenging attempt in Hong Kong.

Given the size and complexity of the Hong Kong West Drainage Tunnel, the project team has to overcome complicated engineering, logistic and safety issues. At the moment, over hundred of workers are working inside the tunnel. A sophisticated environmental control system including ventilation, temperature control and toxic gas monitoring has been installed to maintain a safe and satisfactory working environment for the workers. A mini railway system has been built inside the tunnel for transportation of workers and construction materials. 2 pairs of tracks are laid to cope with the high demand for train circulation.



Concurrent construction of main tunnel and adits.

Students' creation work on hoarding at Intake E7

Environmental Measures for Green Future

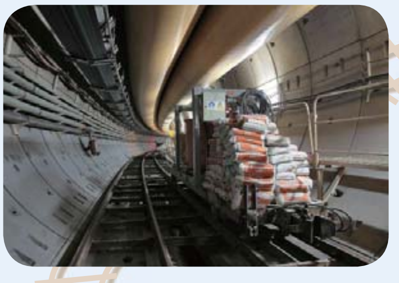
In addition to arranging environmental awareness event, we have adopted various environmentally friendly measures in the course of construction to support sustainable development. Solar energy is used with a view to reducing power consumption. To contribute towards improving air quality, ultra low sulphur diesel is used which emits less suspended particles during combustion. Waste water treatment plant was set up to enable reuse of water for the tunnel boring works and hence significantly reduce consumption of potable water.

Use of ultra low sulphur diesel

Solar panels installed at the roof of the Workshop

Waste water treatment plant at Western Portal

Mini Railway System



Use of trains to deliver construction materials inside the tunnel.

Signage for the trains.

Man car for workers

Environmental Control System

Ventilation pipes to supply fresh air to the tunnel and extract fumes from adits after blasting.

Monitoring of toxic gas such as carbon monoxide.

Chiller to maintain the temperature inside the tunnel.

In Harmony With Community

Workers save doggie trapped in ditch

In a chilly sunny Christmas morning 2009, Ms Constance Hu, a resident living near Mount Butler Road, was strolling along Blue Pool Road with her beloved doggie, Bubbles. While Bubbles was stretching and running around, it accidentally ran into the slope adjacent to an intake construction site and was trapped in a ditch. Despite its frantic efforts, it could not get out from the ditch. The site agent, Mr LUI Hon-wah and the foreman, Mr LEE Sai-wah of the contractor of Hong Kong West Drainage Tunnel project, who were working nearby, went there to check what had happened. On seeing the dog was trapped, they crawled carefully to the ditch without hesitation though the slope was, steep and densely covered with weed. Hurrah! Bubbles was finally saved.

Ms Constance Hu (centre) thanks LUI Hon-wah (left) and LEE Sai-wah (right) for their assistance.

"All I did was to give a helping hand to a lady in need. That's what anyone in my position would do," said Lui Hon-wah, site agent

"I didn't think of the difficulties at all. At that very moment, a dog was trapped, we did whatever we could," Lee Sai-wah, foreman

DATE: . .

Extract of the Thank You Letter from Ms. Hu:

"Messrs Lui & Lee spared no effort and proceeded immediately to the place where my dog was and extricated him very quickly.

I cannot thank them enough for such commendable action and would therefore request if you could relay my sincere thanks to both gentlemen.

In a city like Hong Kong where the act of helping strangers is virtually unheard of, Mr. Lee and Mr. Lui's actions have proven that kindness is possible."

Constance Hu

The slope where Bubbles was trapped.

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

We value your views on the Project. Please feel free to contact us.

Our Contractor	:	Dragages - Nishimatsu Joint Venture
24-hour Enquiry Hotline	:	2671 8600
Fax Number	:	2671 9300
Correspondence Address	:	PO Box 38098, Hing Fat Street Post Office, Causeway Bay, Hong Kong
E-mail Address	:	hkwdp.enquiry@dragageshk.com
Project Website	:	www.dsd.gov.hk/HKWDT