

**For Information
April 2012**

**Legislative Council Panel on Transport
Subcommittee on Matters Relating to Railways**

**Progress and Financial Situation of
the Construction of the Hong Kong Section of
Guangzhou-Shenzhen-Hong Kong Express Rail Link**

(4th Half-yearly Report for the Period ending 31 December 2011)

INTRODUCTION

This is the fourth half-yearly report on the construction of the Hong Kong section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL) project.

BACKGROUND

2. At the meeting of the Legislative Council Panel on Transport Subcommittee on Matters Relating to Railways (the Railways Subcommittee) in April 2010, Members agreed that progress reports on the construction works of the Hong Kong section of the XRL should be submitted at six-month intervals. Members also agreed on the scope and issues to be covered in the half-yearly reports, which should include the progress update of the construction works of the XRL and its financial situation. In September 2011, the Administration submitted the third half-yearly report on the progress of construction and financial situation of the Hong Kong section of the XRL project for the period between 1 January 2011 and 30 June 2011. This paper is the fourth half-yearly report on the progress of construction and financial situation of the XRL project for the period between 1 July 2011 and 31 December 2011.

OVERALL PROGRESS OF THE XRL PROJECT

(I) Major Works

3. As at 31 December 2011, 32 major construction contracts¹ were awarded with a total awarded value of \$41.8 billion. They included contracts for tunnelling works, construction works of the West Kowloon Terminus (WKT) and electrical and mechanical (E&M) contracts, which amounted to about \$22.4 billion, \$14.3 billion and \$5.1 billion respectively.

4. The lists of major contracts awarded in this reporting period and the award schedule for the next reporting period are shown in **Annex 1**.

5. The overall progress of the key areas of works is summarised below –

(a) Railway tunnels – Excavation works for the launching shafts for tunnel boring machines (TBM) are underway as scheduled for all tunnels. The first TBM commenced tunnel boring works at the works site in Mai Po in September 2011 and bored a total distance of 100 metres by the end of 2011. Tunnel drilling and blasting works are underway at works sites in Shek Yam, Kwai Chung and Pat Heung.

(b) WKT – Diaphragm wall works and piling works of the Terminus have been completed. Major excavation works for the Terminus are underway for the construction of the underground station.

(c) E&M works – Procurement of the works contracts is in good progress. Eleven contracts were awarded in this reporting period.

6. Details of the progress of works are set out at **Annex 2**. The Government will continue to monitor closely the progress of the XRL project through the monitoring mechanism.

¹ Major construction contract means individual contract with value above \$50 million.

(II) Pre-construction preparatory work and interface issues

(a) Temporary traffic arrangements

7. The second stage of the Temporary Traffic Management Scheme in West Kowloon has been implemented since 2 January 2011. Instead of bringing adverse impact on the traffic situation, the Scheme has slightly improved the traffic conditions in the area.

8. We will continue to implement minor temporary traffic arrangements according to the progress of the works, and will continue to maintain close liaison with the local communities and relevant District Councils on such arrangements and the related works. Our efforts will include consulting District Councillors and the affected owners on the specific details, arranging for site visits to assess the results of traffic diversions, and proactively listening to relevant views for further improvement. We will publish and distribute publicity leaflets to owners of the relevant housing estates to enhance the residents' understanding of the project. Information of the works concerned is also provided on the dedicated website and newsletters for XRL so that the public could learn about the relevant temporary traffic arrangements.

(b) Condition surveys and community liaison in Tai Kok Tsui (TKT)

9. Representatives of the Government and the MTR Corporation Limited (MTRCL) have continued to keep close dialogue with TKT residents on the progress of the project and residents' concerns over the project. In November 2011, the contractor of the MTRCL re-issued letters to the owners of residential and commercial units in TKT which had not yet undergone the pre-construction condition survey, inviting them to have their units surveyed. Owners accepting the invitation could have their units surveyed between January to March 2012. Upon completion of the survey, we would deliver the survey reports to the owners concerned for record purposes. To address public concerns, we have also held exhibitions in TKT to enhance the residents' understanding of the operation of TBM.

10. In addition, over 160 enquiries were handled by the XRL Information Centre in the second half of 2011. The XRL Community Ambassadors have strived to reach out to the local community. Apart from meeting with the local residents in person, they have also played an active role in community activities, such as participating in major festive events held by local organisations, paying visits to centres for the elderly, and arranging for school talks and meetings with the Community Liaison Group of the XRL project. Details on the liaison with TKT residents are set out in **Annex 3**.

(c) Public engagement and community involvement activities

11. To enhance public awareness of how the XRL would contribute to the future development of Hong Kong, the MTRCL organised the “Tunnel Boring Machine Naming Competition for Express Rail Link Project”. The competition was well supported by local communities and schools, with over 15 000 submission forms received on about 33 500 proposed names. “Zhao-jun”, “Fan-li-hua”, “Iron Lady” and “Seong-ngo” were chosen by the judging panel as the names of the four TBMs used for the construction of the Hong Kong section of the XRL. The prize presentation ceremony of the competition was successfully held on 5 July 2011. In mid-July 2011, an online interactive game named “Fun on Tunnel Boring” was also launched on the dedicated website of the Hong Kong section of the XRL to enhance public engagement.

12. Site hoarding design competitions for the Hong Kong section of the XRL held by the MTRCL in Kwai Tsing, Sham Shui Po, Tsuen Wan and Yau Tsim Mong were completed successfully. The MTRCL liaised with the relevant District Councils, community organisations and schools to co-organise the relevant competitions. The responses were favourable with active participation of the local schools concerned and the public. Award-winning designs were displayed on the sites concerned for public viewing.

13. Since the implementation of the XRL project, the MTRCL has arranged talks for primary and secondary schools across the territory to enhance students’ and local communities’ understanding of the project and high-speed railway. These talks also serve as part of the Liberal Studies to raise students’ social awareness and broaden their horizons. As at the end of the last school

year (i.e. July 2011), these talks had attracted over 16 000 participants. Prior to the commencement of the current school year, the MTRCL has extended written invitations to all primary and secondary schools in Hong Kong on talks on the high-speed railway and XRL project. So far, about 40 primary and secondary schools have replied that they would arrange for such talks within the current school year.

(III) Employment opportunities

14. At the end of December 2011, about 3 200 construction workers and 1 600 technical/professional staff members were employed to work on the XRL project. On 15 and 16 October 2011, the MTRCL held the second Job Fair for the Construction Industry within the same year to attract more young people to join the local construction sector. Eighteen leading contractors in the trade participated in the Fair and offered nearly 1 500 jobs. The Fair drew more than 3 600 visitors and received over 3 200 job applications. The detailed information on job opportunities created by the XRL project as well as the types of jobs involved is set out at **Annex 4**.

15. In addition, the MTRCL held the fourth forum on manpower for the construction industry on 30 November 2011 to discuss with trade members the future challenges faced by the local construction sector in respect of manpower.

UPDATED FINANCIAL SITUATION OF THE XRL PROJECT

16. As at 31 December 2011, the cumulative expenditure for the awarded contracts was \$14.77 billion. All in all, the award of contracts is on schedule and within budget.

17. We will continue to monitor the progress of the project to ensure that it is within the approved budget and will be completed as scheduled with high quality. Details of the financial situation of the XRL project are shown in **Annex 5**.

THE NEXT HALF-YEARLY REPORT

18. The next half-yearly report covering the period from 1 January 2012 to 30 June 2012 will be issued in the third quarter of 2012.

Transport and Housing Bureau
April 2012

**Major contracts awarded in this reporting period and
award schedule for the next reporting period**

Table 1 – List of major contracts awarded in this reporting period

Contract number and title	Date of award	Awarded contract sum (\$ million)
(A) Railway Tunnels		
All contracts were awarded	--	--
(B) West Kowloon Terminus (WKT)		
810A – WKT Station (North)	18 Oct 2011	8,910
Total:		8,910
(C) Electrical and Mechanical (E&M) Works		
830 – Trackwork and Overhead Line System	6 Jul 2011	1,169
846 – Trackside Auxiliaries	10 Aug 2011	295
847 – Lifts	6 Sep 2011	175
848 – Escalators and Moving Walkways	6 Sep 2011	91
849 – Radio Communications System	19 Oct 2011	244
851 – Fixed Communications System	19 Oct 2011	273
853 – Main Control System	8 Nov 2011	66
816A – WKT – Environmental Control System	9 Dec 2011	783
816B – WKT – Building Services Control System	9 Dec 2011	60
816C – WKT – Electrical Installation	9 Dec 2011	550
816D – WKT – Fire Services, Plumbing and Drainage	9 Dec 2011	664
Total:		4,370

Table 2 – Award schedule for major contracts between 1 January 2012 and 30 June 2012

Contract number and title

(A) Railway Tunnels

- All contracts were awarded

(B) WKT

- 815A – Supply of Metal Doors and Frames including Ironmongery

(C) E&M Works

- 840 – Rolling Stock
- 841A – Signalling System – Trackside Equipment
- 841B – Signalling System – Trainborne Equipment
- 852 – Ticketing System
- 861A – Locomotives and Flat Wagons

Detailed half-yearly progress report of works ending 31 December 2011

(I) Progress of works

Tunnels – Assembly of the first tunnel boring machine (TBM)
New “Zhao-jun” for the XRL project started in late June 2011
Territories inside the launching shaft at the Mai Po site. The TBM
Section commenced tunnel boring works for the southbound tunnel
between Mai Po and Ngau Tam Mei in early September 2011
and has bored a distance of about 100 metres (m).

Shaft excavation works are underway at the Ngau Tam Mei site and Tai Kong Po site. With the completion of shafts for the northbound tunnel at the Tai Kong Po site in November 2011, works commenced for the main railway tunnels.

Another TBM will be used to construct part of the tunnels between Tai Kong Po and Tse Uk Tsuen. The TBM has undergone the pre-delivery test in its manufacturing plant in Japan and is expected to be delivered to the works site in early 2012 for assembly. Diaphragm walls for the tunnel shafts to the north of Wang Toi Shan Shan Tsuen Road and in Tse Uk Tsuen have been completed and the excavation works will be commenced shortly.

Construction of underground diaphragm walls and foundation piles at the works site for Shek Kong Emergency Rescue

Siding and Stabling Sidings is in full speed to tie in with the cut-and-cover tunnelling works scheduled for the second quarter of 2012.

At the Sheung Tsuen site in Pat Heung, drilling and blasting works for a 600m-long ventilation tunnel are underway. When the ventilation tunnel reaches the alignment of the main railway tunnels in the second quarter of 2012, it will also be used temporarily as a passage for removing excavated spoil for the construction of the main railway tunnels (the section between Tse Uk Tsuen and Shek Yam).

Excavation works for the Shing Mun ventilation shaft at the junction of Cheung Shan Estate Road West and Cheung Shan Estate Road East were commenced in the fourth quarter of 2011. The contractor has added acoustic facilities at the works site to minimise noise impact on the nearby residents.

The 580m-long ventilation tunnel at the Wing Yip Street/Tai Lin Pai Road site in Kwai Chung has been completed. Drilling and blasting works are underway to connect the ventilation tunnel with the main railway tunnels.

**Tunnels –
Urban Section**

Excavation works for the TBM launching shafts at Nam Cheong have been completed. In November 2011, major components of the first TBM for the Sham Shui Po section were first shipped to the Nam Cheong Barging Point and then transported to the launching shaft at Nam Cheong at night for

assembly. Tunnel boring works are expected to be commenced in the first quarter of 2012.

Implementation of traffic diversion measures continues to facilitate the removal of underground obstructions and grouting works along Sham Mong Road and Hoi Wang Road. Foundation works have been commenced for the reprovisioning of the footbridge at the junction of Hoi Fai Road and Sham Mong Road.

Construction of underground diaphragm walls for the West Kowloon Terminus (WKT) Approach Tunnels has been completed by 80%. Part of the tunnelling works has also been commenced. Temporary reprovisioning of the footbridge at Jordan Road in West Kowloon is being carried out in phases having regard to the requirements of the works. The eastern and western pedestrian ramps and staircases of the footbridge have been closed for demolition.

WKT

Major excavation works for the WKT are underway in full speed. So far, 300 000m³ of excavated spoil (about 10% of the total amount) have been removed by sea via the 4 barging points at the waterfront works site in West Kowloon. The excavation works have had no impact on the local traffic because of the use of sea transportation.

To cater for the needs of the WKT works, the temporary steel bridge serving as a 4-lane dual carriageway for the section of

Austin Road West between Lin Cheung Road and Wui Man Road was open to use in October 2011. The original carriageway has been closed.

Electrical and Mechanical (E&M) Works In this reporting period, 5 E&M works tender documents were issued with 11 contracts awarded. The remaining major works contracts will be awarded in batches in 2012.

For those awarded contracts, the contactors are working on the detailed design of the systems concerned and procurement of the devices required.

(II) Preparatory work and interface issues

Major Temporary Traffic Measures The second stage of the Temporary Traffic Management Scheme (TTMS) in West Kowloon was implemented on 2 January 2011 and remains in effect.

Some minor TTMSs are still effective in West Kowloon area to facilitate construction of the 3-tier depressed road system, as well as a temporary carriageway and a temporary footbridge to prepare for the next stage of TTMS, which involves temporary diversion of the section of Jordan Road between Kowloon Station and Austin Station and a footbridge to the north of the road section. The next stage of TTMS will be implemented in the first quarter of 2012. The third and fourth stages of TTMS are smaller in scale and will only involve minor diversion of existing roads to new roads nearby.

Also, some minor TTMSs are being implemented at various locations along Sham Mong Road and Hoi Wang Road to make room for removal of tunnel obstructions, ground improvement works or diversion of existing utilities.

We will continue our consultation with the relevant District Councils and local communities for the various stages of TTMS.

— **Employment Opportunities** Details are set out at **Annex 4**.

Liaison with Tai Kok Tsui Residents

The Government and the MTR Corporation Limited (MTRCL) have been liaising closely with Tai Kok Tsui (TKT) residents. In the second half of 2011, the Community Liaison Group held meetings to brief representatives of TKT residents and the local community on the progress of the XRL project, and seek their views on the advance works for the project, including the adoption of effective construction methods and mitigation measures to reduce the impact of the works on the local community. Apart from the meetings of the Community Liaison Group, the XRL Information Centre at the New Kowloon Plaza received enquiries made by residents of TKT and other districts about details of the XRL project. The XRL Community Ambassadors and Project Team also explained details of the advance works for the project to the owners concerned direct to enhance residents' understanding of the project. In the second half of 2011, the Information Centre handled over 160 enquiries.

2. We are aware of TKT owners' concern over the resumption of certain underground strata. In addition to discussing posting of notices in the buildings' lobbies with representatives of the owner corporations (OCs) of the affected buildings prior to the service of underground strata resumption orders, the MTRCL published leaflets to brief the affected owners on the arrangements for underground strata resumption and their rights and interests. With the consent of the affected buildings' OCs, the leaflets were delivered to affected owners' mailboxes by the XRL Community Ambassadors on 24 and 25 November 2011. To address public concerns, the MTRCL also held roving exhibitions at various locations in TKT so that residents could have better understanding of the construction methods of the XRL project, operation and benefits of tunnel boring machines and arrangements for underground strata resumption.

3. To maintain close liaison with TKT residents, the MTRCL organised various community activities, including summer courses and visits to homes for the elderly. On 3 December 2011, the MTRCL and Mongkok Kai-fong Association jointly held a carnival to celebrate the Association's 60th Anniversary and the MTR Fun Day. Apart from games booths, exhibition panels were also set up to brief participants on the latest progress of the XRL

project in TKT.

4. Condition surveys are currently in progress to protect the interests of both the owners and the MTRCL. Among the 19 affected buildings, condition surveys for the common areas of 16 buildings have been completed with the relevant reports delivered to the respective owner corporations. As regards individual flat units, condition surveys for some 640 flat units (the engagement ratio is comparable to other railway projects) have been completed as at 31 December 2011.

Detailed information on job opportunities created by the XRL project

Up to the end of December 2011, there were about 3 200 construction workers and 1 600 technical and professional staff employed by contractors of the XRL project. They were mainly engaged in the construction works for the tunnels and the West Kowloon Terminus.

2. In the next reporting period from 1 January 2012 to 30 June 2012, it is anticipated that 4 500 construction workers and 1 700 technical and professional staff will be employed for the XRL project. It is estimated that the total project manpower figure will gradually increase to reach 11 000 during the peak period in 2013, including 9 200 construction workers and 1 800 technical and professional staff.

Half-yearly expenditure report ending 31 December 2011

Table 1 – Situation of expenditure

	Awarded contract sum for the contracts (\$ million)	Cumulative expenditure (\$ million)	Estimated amount* of unresolved claim (\$ million)
Railway Tunnels	22,365	10,020	794
West Kowloon Terminus (WKT)	14,330	4,462	131
Electrical and Mechanical (E&M) Works	5,065	288	0
Total	41,760	14,770	925

* Amount stated in the contractor's detailed claim report.

Table 2 – Situation of substantiated claims

	Claims resolved			Claims unresolved		
	Number	Amount claimed originally* (\$ million)	Amount awarded (\$ million)	Number	Amount claimed* (\$ million)	Interim award (\$ million)
Railway Tunnels	8	46	18	57	794	18
WKT	14	220	170	68	131	19
E&M Works	0	0	0	0	0	0
Total	22	266	188	125	925	37

* Amount stated in the contractor's detailed claim report.

As at 31 December 2011, we received 147 substantiated claims and the amount claimed in total was \$1,191 million, representing 2.85% of the awarded contract sum for the contracts. The MTR Corporation Limited (MTRCL) is discussing the details of the claims with the contractors concerned, and will thoroughly assess the amount claimed. The MTRCL will process each claim in a prudent manner, and the contractors will have to provide sufficient justifications and information. So far, 22 cases have been resolved and \$188 million has been awarded, representing about 0.45% of the awarded contract sum for the contracts. Subject to the needs of individual works and progress of the relevant assessment and discussion, interim award amounting to about \$37 million has been made for some cases. The MTRCL will continue to handle the cases cautiously. We estimate that the amount claimed can be fully covered by the contingencies of the project and will not result in cost overrun.

2. As regards the claims, the Government and the MTRCL have conducted risk assessment at the planning and budgeting stages of the project to minimise claims arising from the public works. Nevertheless, there are often unforeseeable situations in the course of works. For instance, the foundation or excavation works may come across larger amount of or more complicated obstructions than expected. As this will add difficulties to the works, the contractors may have to use more machines or switch to other machines that are more suitable and employ more staff to cope with these situations. The contractors will submit claims in accordance with the contract terms to pay for the additional expenditures.