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# MTR CORPORATION LIMITED 香港鐵路有限公司

(the 'Company') (Incorporated in Hong Kong with limited liability) (Stock Code: 66)

#### **VOLUNTARY ANNOUNCEMENT**

# Second Report by the Independent Board Committee regarding the Hong Kong Section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link Project

The Company announces that the Committee of Independent Non-executive Directors (the "**IBC**") established by the Board in April 2014 has issued its second report regarding the XRL (the "**Second Independent Board Committee Report**").

## The Second Independent Board Committee Report

The IBC was established by authority from the Board on 29 April 2014 to:

- (A) review the background of and reasons for the revised schedule for the Project;
- (B) looking forward, advise on the manner in which the Company can deliver the Project in a transparent and timely manner and in accordance with the Company's responsibilities under the entrustment agreements between the Company and Government dated 24 November 2008 and 26 January 2010; and
- (C) report to the Board on the matters set out above within the timeframe set by the Board.

On 16 July 2014, the IBC presented the First Independent Board Committee Report to the Board. The First Independent Board Committee Report included the IBC's findings, conclusions and recommendations in respect of (A) above. In the First Independent Board Committee Report, the IBC stated its intention to produce a second report in respect of (B) above.

# The Expert Report

As stated in the First Independent Board Committee Report, the IBC appointed Independent Experts who have specific expertise in relation to management of projects of this type to assist it in the preparation of the Second Independent Board Committee Report.

As described in the First Independent Board Committee Report, the Independent Experts selected were:

- (1) Professor Tsung-Chung Kao. Professor Kao is Research Professor and Director High Speed Rail System, at the University of Illinois at Urbana-Champaign. He is also a Professor of the Railway Technology Research Center in the Civil Engineering Department at National Taiwan University; and
- (2) Professor Bent Flyvbjerg. Professor Flyvbjerg is currently BT Professor and Founding Chair of Major Programme Management at Oxford University, the first person to hold this role.

Professors Kao and Flyvbjerg were assisted by Dr. Alexander Budzier of the Saïd Business School at Oxford University.

The IBC requested the Independent Experts to prepare their own independent Expert Report to cover the matters described in (B) above. As confirmed by the Independent Experts in their Expert Report, the Expert Report is an independent report by the Independent Experts which has been submitted to the IBC for its review in order to prepare the Second Independent Board Committee Report. The findings, conclusions and recommendations of the Independent Experts in their Expert Report are their own. They do not necessarily reflect the view of the IBC, except as stated in the Second Independent Board Committee Report, or the Company.

A meeting of the Board was held today to consider the Second Independent Board Committee Report and the Board has adopted in full the IBC's recommendations in the Second Independent Board Committee Report. A summary of such recommendations is set out below.

In addition, a summary of the IBC's findings and conclusions in the Second Independent Board Committee Report is set out in the <u>Appendix</u> to this announcement.

A copy of the Second Independent Board Committee Report and the Expert Report will be made available on the Company's website (www.mtr.com.hk).

## Summary of Recommendations of the IBC

### Recommendations of the Independent Experts

The IBC accepted the recommendations of the Independent Experts as set out in Part II of the Second Independent Board Committee Report and made its own recommendations summarised below as to how a number of the recommendations of the Independent Experts may be implemented.

# **Recommendations for Board oversight**

The IBC recommends that the PjT and Procurement, under the oversight of the CWC should review the enhancements to project reporting and management systems and processes recommended by the Independent Experts.

In addition, the IBC recommends that:

- (A) the CWC adopts the schedule of key milestones set out at Schedule 3 of the Second Independent Board Committee Report. The CWC should require the PjT to include in its reports to the CWC progress against each of those milestones. The PjT should also report when each milestone is achieved;
- (B) in turn, the CWC reports to the Board at the next available meeting of the Board if progress to achieve any of the key milestones set out at Schedule 3 of the Second Independent Board Committee Report has been delayed; and
- (C) the CWC separately requires the PjT and Procurement to report on a regular basis their assessments of the probability of achieving respectively the delivery of the Project by the end of 2017 and of achieving the current projected outturn cost for the Project.

## Recommendations for engagement by senior management

The IBC attaches significant importance to the recommendations of the Independent Experts regarding engagement of senior officers of the Company, contractors and, for example, TBM manufacturers to ensure that work identified as being on the critical path is progressed as expeditiously as possible in order to assure the 2017 delivery deadline.

The IBC recommends that senior management of the Company, under the oversight of the Chairman and Acting CEO, engages with senior management of such key stakeholders to ensure a demonstrable commitment at the highest level of those involved in the Project to completion by 2017.

## Recommendations for engagement with Government

In light of the findings and recommendations of the Independent Experts that there are a number of critical items which may still affect the delivery of the Project on time which are, in part at least, in the hands of Government, the IBC recommends that the Company engages even more actively with Government to try to resolve these issues. They include:

- (A) the arrangements for the co-location of CIQ at WKT. These should be confirmed as soon as possible. The status of the arrangements directly affects the design of WKT and therefore the time at which the designs for the building works for WKT can be finalised;
- (B) the Service Concession Agreement. This agreement should be signed as soon as possible. Until Government signs the Service Concession Agreement for XRL, the Company (assuming the Company is selected to operate train services on XRL) cannot commission operator-to-operator communications between Hong Kong and the Mainland; and
- (C) the urgency that should now be attached to establishing the right level of budget contingency and then funding any shortfall. Certainty of funding is required in order to assure all parties that funds will be available to meet the current estimated outturn cost and the agreed contingency. This is to ensure that the Project's PTC is not affected by uncertainty of funds.

#### **Definitions**

In this announcement, the following expressions have the meanings set out below:

"Acting CEO" means the Acting Chief Executive Officer of the Company;

"Board" means the board of directors of the Company;

"Chairman" means the Chairman of the Board:

"CIQ" means Customs, Immigration and Quarantine facilities;

"CWC" means Capital Works Committee of the Company (a recently established committee of the Board);

"E&M" means Electrical and Mechanical:

"Expert Report" means the report of the Independent Experts;

"First Independent Board Committee Report" means the first report of the IBC presented to the Board and published on 16 July 2014;

"Government" means Government of the Hong Kong Special Administrative Region;

"HSR" means High-speed rail;

"Independent Experts" means the independent experts appointed by the IBC (being Professor Tsung-Chung Kao and Professor Bent Flyvbjerg);

"KCRC" means the Kowloon-Canton Railway Corporation;

"KPI" means Key Performance Indicator, an indicator to measure the performance of a contract;

"Outturn cost" refers, in the Second Independent Board Committee Report, to the cost for the Project to completion as currently estimated by the Company, including amounts payable to third parties, project management costs payable to the Company, and costs of miscellaneous works;

"PIMS" means Project Integrated Management System;

"**PjT**" means the Company's project team for the XRL. The PjT is within the Projects Division of the Company:

"Procurement" means the Procurement & Contracts Department of the Company;

"Project" means the XRL project;

"PTC" means the programme to completion;

"Service Concession Agreement" means the anticipated arrangement with Government for the operation of the XRL, including running passenger services, after completion of the Project;

"TBM" means the tunnel boring machine used in the construction of the XRL;

"WKT" means the West Kowloon Terminus; and

"XRL" means the Hong Kong section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link.

By Order of the Board Gillian Elizabeth Meller Company Secretary

Hong Kong, 28 October 2014

As at the date of this announcement:

Members of the Board: Dr. Raymond Ch'ien Kuo-fung (Chairman)\*\*, Pamela Chan Wong Shui\*, Dr. Dorothy Chan Yuen Tak-fai\*, Vincent Cheng Hoi-chuen\*, Christine Fang Meng-sang\*, Edward Ho Sing-tin\*, Kwan Yuk-choi\*, Lucia Li Li Ka-lai\*, Professor Frederick Ma Si-hang\*, Alasdair George Morrison\*, Ng Leung-sing\*, Abraham Shek Lai-him\*, T. Brian Stevenson\*, Benjamin Tang Kwok-bun\*, Professor Chan Ka-keung, Ceajer (Secretary for Financial Services and the Treasury)\*\*, Secretary for Transport and Housing (Professor Anthony Cheung Bing-leung)\*\*, Permanent Secretary for Development (Works) (Wai Chi-sing)\*\* and Commissioner for Transport (Ingrid Yeung Ho Poi-yan)\*\*

Members of the Executive Directorate: Lincoln Leong Kwok-kuen (Acting Chief Executive Officer), Morris Cheung Siu-wa, Jacob Kam Chak-pui, Stephen Law Cheuk-kin, Gillian Elizabeth Meller, David Tang Chi-fai, Philco Wong Nai-keung and Jeny Yeung Mei-chun

- \* independent non-executive Director
- \*\* non-executive Director

This announcement is made in English and Chinese. In case of any inconsistency, the English version shall prevail.

# Appendix - Summary of findings and conclusions of the IBC

Set out below is a summary of the IBC's findings and conclusions in the Second Independent Board Committee Report.

## **Validation of the First Independent Board Committee Report**

The Independent Experts were asked by the IBC to review the First Independent Board Committee Report and assess and verify the findings of the IBC in that report to the extent such findings relate or refer to technical matters or project management procedures and processes regarding the Project.

The Independent Experts have not identified any factual error in the IBC's reporting of technical matters and the project management procedures and processes regarding the Project in the First Independent Board Committee Report.

In their analysis of the causes of delay, the Independent Experts have expanded significantly upon the technical review conducted in the First Independent Board Committee Report. Nevertheless, the Independent Experts agree with the IBC's overall conclusion in the First Independent Board Committee Report that they also have seen no evidence that the PjT has not followed the systems and procedures of the PIMS.

However, it is the view of the Independent Experts that the negative impact of unforeseen events on the schedule was not so much caused by any flaw in engineering or project management as by a lack of an adequate schedule contingency for critical contracts. A longer schedule contingency would have allowed the Project timetable to absorb unforeseen events as they occurred.

At the outset of the Project, the Independent Experts believe that there was an expectation that the Company could achieve a relatively short schedule for the Project (5.8 years) because it had successfully completed previous construction projects within relatively short schedules. However, site possession and design issues at the start of the Project meant that WKT would have to be completed in a very short construction schedule (3.8 years) if the Project was to be completed in 2015. WKT is the largest excavated underground HSR station in the world. In the view of the Independent Experts, it is the most complicated and challenging contract to construct in the Project.

## Timely delivery

The Independent Experts were asked by the IBC to:

- (A) consider whether, on the basis of the information currently available, they believe that the projected completion date of the Project by the end of 2017 is reasonable;
- (B) describe key risks that may affect completion in 2017 or completion of the Project on a timely basis and how mitigation for such risks is being implemented (or what additional mitigation measures may be appropriate); and

(C) identify and recommend key reporting milestones (technical, engineering, E&M, works etc.) in the future project programme for reports to the Board to facilitate monitoring of the progress of the Project towards completion in 2017.

The Independent Experts' review is not intended to answer the question whether the Project will be completed in 2017 on a yes/no basis. They reviewed the Project's PTC through a top-down and bottom-up verification to assess the probability that the Project will be completed on time and to identify key risks to the critical path.

The top-down verification seeks to benchmark the performance of the Project against a large sample of comparable international construction projects, projects completed by the Company (and KCRC) and other ongoing projects of the Company.

Applying their top-down benchmarking analysis, the Independent Experts have concluded that the likelihood of the current Project schedule being met is 69%, leaving a 31% risk of delay beyond 2017. Under its current programming, the PjT has assessed that the likelihood that the schedule for the Project will be met is 90%, leaving a 10% risk of delay beyond the end of 2017.

The Independent Experts' bottom-up verification assessed the risks along the Project's critical paths. In this regard, the Independent Experts found that currently the critical path comprises: the construction programmes for contracts 810A (WKT) and 823A; track-laying and E&M installation; and testing and commissioning and trial operations.

The IBC has confirmed that both the Independent Experts and the PjT agree on the key risks to the critical path of the Project's PTC. They also agree on what the key milestones in the PTC are for the Project to be delivered on a timely basis.

However, the Independent Experts also highlight that start of revenue operations for XRL in 2017 depends on resolving a list of critical issues with external organisations and outside of the Company's control. The most urgent of these issues are: (a) the co-location of CIQ at WKT and (b) signing the Service Concession Agreement with Government (i.e. the agreement to operate train services on XRL). The Independent Experts urge that all parties' efforts to resolve these issues should not be relaxed due to the change of the opening date to 2017. The CIQ arrangements affect the finalisation of the interior design in WKT. The Service Concession Agreement needs to be agreed with Government as early as possible (assuming the Company is selected to operate train services on XRL) to enable the Company to commission operator-to-operator communications between Hong Kong and the Mainland. The IBC emphasises that the importance of resolving these issues with external parties should not be overlooked as a result of the focus within the Company being on achieving the Project's PTC.

Due to its importance, the Independent Experts have also made some specific recommendations in relation to contract 810A at WKT.

#### The budget for XRL

The Independent Experts were asked by the IBC to:

(A) consider whether, on the basis of the information currently available, they believe that the anticipated outturn cost for the completion of the Project is reasonable; and

(B) describe key risks that may arise between now and the completion of the Project which may affect completion of the Project on a cost effective basis and how mitigation for such risks is being implemented (or what additional mitigation measures may be appropriate).

The Company's most recent estimate for the Project's outturn cost submitted to Government is just over HK\$71.5 billion. This estimate is currently being reviewed by Government with the Company. On the basis of its current assumptions, Procurement's confidence in meeting the risk assessment portion of the currently projected outturn cost is 90%.

In order to assess the projected outturn cost for the Project to completion, the Independent Experts again performed top-down and bottom-up verification exercises against the Project.

For the purposes of the top-down verification exercise, the Independent Experts performed a very similar benchmarking exercise to the exercise performed to verify the work programme. The Independent Experts developed a large sample of comparable international construction projects, projects completed by the Company (and the KCRC) and ongoing projects of the Company in order to benchmark the performance of the Project.

The criteria applied by the Independent Experts to compare the Project to these other infrastructure projects are described more fully in the Expert Report. The IBC finds that the benchmarking exercise provides a useful tool for assessing the Project's likely outturn cost.

The Independent Experts' top-down assessment of the current estimate of just over HK\$71.5 billion for the Project indicates that further cost increases are likely. According to their analysis using this top-down approach, the current estimate for the outturn cost of the Project carries a 67% risk of being exceeded.

In order to verify their top-down assessment of the current anticipated outturn cost, the Independent Experts analysed as a bottom-up assessment the Project's contingency draw down. The Independent Experts then forecast the rate of future contingency draw down assuming that the Project performs as it has in the past. This approach indicates that if the current trend of contingency draw down continues the remaining contingency will be exhausted significantly before 2017. If the contingency is exhausted before the Project is completed, the outturn cost is likely to exceed the current estimate.

The IBC believes that the assessments performed by the Independent Experts and the approach to forecasting the outturn cost performed by the Company should not, however, be compared on a like-for-like basis. The assessments performed by the Independent Experts are based on an external view of the Project using two sets of comparative data: comparable projects and projected contingency utilisation. The process performed by Procurement to reach its assessment of the projected outturn cost for the Project takes a very different approach. Procurement has identified likely risks in relation to the PTC and assessed their quantum values. Procurement has informed the IBC that the estimate for the outturn cost is subject to a six-monthly process of re-evaluation.

The IBC is not in a position to conclude which of the Independent Experts' or Procurement's assessments of the estimated outturn cost for the Project is the more likely outcome. All the assessments make certain assumptions regarding the future performance of the Project which are impossible to verify at this time.

The IBC understands the importance of maintaining a tight budget, and appreciates the effort that has been made by management to achieve that end. However, as a result of the findings of the Independent Experts, the IBC believes that the risk of having too low a contingency in place going forward should be elevated as a real risk to the timely completion of the Project. The IBC recognises that under the concession approach, Government bears the cost risk for the Project. The Company's management at the most senior levels should therefore be considering now, carefully and in consultation with Government, whether there is adequate contingency in the current estimated outturn cost for the Project. The Company and Government will then have to work closely together to determine the amount of contingency to be allocated to the Project.

In order to enhance management of the cost risk associated with the draw down of contingencies, the Independent Experts recommend introducing probability based KPI to track how likely the Project is to stay on budget.

The Independent Experts also recommend that the current estimate for the Project outturn cost submitted to Government for review, of just over HK\$71.5 billion, needs to be re-evaluated in the light of their verification exercise.

#### **Enhancing the reporting process**

The Independent Experts recommend strengthening project reporting through tailoring the traffic light criteria, using indicators that show the probability of achieving project targets. They also suggest that the Company should establish an independent channel or strengthen the project audits to escalate issues to top management. This could be achieved by enlarging the remit of the project audits and providing guidelines for issues to be escalated.

Associated with their recommendation for enhancing reporting, the Independent Experts also recommend establishing clear accountability for recovering delays as part of project reporting: red lights in a project need to be linked to a clear plan of actions with clear accountabilities and deadlines for bringing project performance back on track.

The IBC agrees with these proposals. The purpose of the proposals is not to attach blame should delays become irrecoverable, but to ensure that responsibilities for the tasks required to recover delays are appropriately allocated as soon as possible when the risk of irrecoverable delays is alerted.

The key milestones for the Project and KPIs, as reproduced in the Expert Report, should be closely monitored. The IBC, in its own recommendations, will propose that oversight of the monitoring of these milestones and KPIs is elevated to the CWC and Board.