

MTR Corporation Limited
香港鐵路有限公司
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Your Ref.: CB4/SC/13

21 December 2015

Legislative Council
Legislative Council Complex,
1 Legislative Council Road,
Central,
Hong Kong

By Email (ssylau@legco.gov.hk)
and By Hand

Attention: Ms. Sophie Lau
Clerk to Select Committee

Dear Ms. Lau,

**Select Committee Inquiry - Construction of
the Hong Kong section of the Guangzhou-Shenzhen-Hong Kong
Express Rail Link**

Request for further information

Thank you for your letter to Mr. Lincoln Leong dated 6 November 2015.

As requested, please find enclosed our reply (in English with Chinese translation) to your questions.

Yours sincerely,

A handwritten signature in blue ink that reads 'Gillian Meller'.

Gillian Meller
Legal Director & Secretary

Encl.

(a) The Hong Kong Section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link (“XRL”) Independent Expert Panel recommends in paragraph 7.6 of its report that the project manager (the Corporation or other entity) should develop and maintain an integrated master programme, covering the whole scope of the project, as a baseline for progress monitoring and reporting. The integrated master programme is to show, inter alia, all significant contracts, interfaces, handovers, contract completions, overall project completion and dates when the railway will enter passenger service.

Please advise whether the Corporation has in its possession or custody or under its control of the above-mentioned integrated master programme for the XRL project; if yes, whether the Corporation has provided the integrated master programme to the Government and/or its Monitoring and Verification (“M&V”) Consultant, and if so, when; if not, whether the Government or its M&V Consultant has requested the Corporation to provide them with the integrated master programme before the setting of the project completion date, and if so, when.

1. The Corporation developed and has maintained an integrated project master programme (“**PMP**”) during the construction phase of the project. The PMP was developed based on summarising individual contractors’ master programmes using P6 Primavera format planning software.
2. The Government’s Monitoring and Verification Consultant, Jacobs (China) Limited (“**Jacobs**”), carried out seven separate audits of the PMP relating to process and technical compliance under the 2nd Entrustment Agreement up to 30 April 2014 (“**PMP audits**”). None of the PMP audits necessitated any follow-up action on the part of the Corporation.
3. A copy of the PMP updated to 31 January 2011 was tabled at the first PMP Audit meeting with Jacobs on 23 February 2011. Updated copies of the PMP were tabled at subsequent PMP Audit meetings with Jacobs on 1 December 2011, 24 August 2012, 27 March 2013 and 25 September 2013.
4. Jacobs requested a copy of the PMP via the Railway Development Office (“**RDO**”) on 11 March 2011. After some consideration and a further verbal request from the RDO in or around August 2011, the Corporation provided a copy of the PMP, updated to July 2011, to the RDO on 24 August 2011.
5. The PMP developed by the Corporation and in place at the time of the announcement of the project delay included elements not materially different from the elements of the master programme referred to at paragraph 7.6 of the IEP Report. All major civil and electrical and mechanical contracts are shown, as are key interfaces and handovers, whole of the works dates for individual contracts, testing and commissioning and operational readiness dates for the overall project, and other significant activities including implementation of temporary traffic management schemes and major utility diversions.

6. The Corporation wishes to reiterate that, together with the use by the Corporation of internationally recognized and effective methodology for forecasting the completion of complex railway projects, including the Track-Related Installation Programme, the Corporation has applied effective approaches for monitoring progress across the multiple contracts under the project in accordance with the Corporation's Project Integrated Management System.

中文譯本

(如中文版本與英文版本之間有任何不一致之處，概以英文版本為準。)

1. 港鐵公司在高鐵項目建造期間制定了綜合項目整體時間表（“PMP”），並不時進行更新。此 PMP 是採用 P6 Primavera 規劃軟件，綜合個別合約承建商之施工時間表而成。
2. 截至 2014 年 4 月 30 日，政府的監察和核證顧問嘉科公司就項目在程序及技術上是否遵照第二份委託協議推行，分別進行了七次審核，均未有需要港鐵公司跟進行動之處。
3. 港鐵公司於 2011 年 2 月 23 日與嘉科公司進行第一次 PMP 審核會議，在會議上展示了更新至 2011 年 1 月 31 日的 PMP 副本。隨後於 2011 年 12 月 1 日、2012 年 8 月 24 日、2013 年 3 月 27 日及 2013 年 9 月 25 日的 PMP 審核會議上，亦展示了更新後的 PMP 副本。
4. 嘉科公司曾於 2011 年 3 月 11 日透過路政署鐵路拓展處（“鐵路拓展處”）要求 PMP 的副本。經過考慮及收到鐵路拓展處於大約 2011 年 8 月進一步的口頭要求後，港鐵公司於 2011 年 8 月 24 日向鐵路拓展處提交了更新至 2011 年 7 月的 PMP 副本。
5. 由港鐵公司制定的 PMP，亦即是去年公佈項目延誤時所使用的 PMP，當中包含的成份與獨立專家小組報告第 7.6 段中所指的總綱計劃相若。在此 PMP 中，所有主要土木工程和機電工程合約均有顯示，關鍵的合約交接、個別合約的完工日期、試運行及項目可準備營運的日期、以及其他重要工程活動包括實施臨時交通管理措施和遷移主要公共管線亦有顯示。
6. 港鐵公司希望重申，結合了國際認可及行之有效的方法（包括使用 Track-Related Installation Programme (TRIP)）預測複雜的鐵路項目之竣工日期，港鐵公司已按其項目綜合管理系統，運用有效的方式監察項目多份合約的進度。

(b) The amount of the resources used, including manpower and money, by the Corporation for conducting the site investigation, in particular the West Kowloon Terminus, for the XRL project.

1. The Corporation has detailed processes in place under its Project Integrated Management System (“**PIMS**”) for the planning and control of Ground Investigation (“**GI**”) works carried out during the design, pre-construction and construction phases of railway development projects.
2. Under the 1st Entrustment Agreement entered into with Government dated 24 November 2008 and in accordance with the PIMS, the Corporation engaged Preliminary and Detailed Design Consultants (“**Design Consultants**”) to collect and study existing GI information at and adjacent to WKT and the alignment of the XRL to the boundary with the Mainland of China.
3. The GI information was obtained from various sources, including the Geotechnical Engineering Office of the Government’s Civil Engineering and Development Department and from the Corporation’s own records. Material which became available subsequently during the design phase was also taken into consideration.
4. The Design Consultants designed GI plans after reviewing the existing GI information. The plans were then reviewed by the Corporation before onward submission to the Buildings Department for approval or information in accordance with statutory requirements.
5. Thereafter the Corporation appointed a third party contractor to perform the GI works (“**GI Contractor**”). These works were supervised by a third party consultant (“**Supervising Consultant**”), again in accordance with statutory requirements. The works included:
 - (i) digging of trial pits and utilities trenches;
 - (ii) vertical and inclined drillholes;
 - (iii) horizontal directional drillholes;
 - (iv) soil and rock laboratory testing;
 - (v) field testing for soil and rock in trial pits and drillholes; and
 - (vi) detection of foundations and other obstructions.
6. All GI works were designed and carried out according to applicable Hong Kong standards, including the Building (Construction) Regulations, Code of Practice for Site Supervision and the Guide to Site Investigation issued by the Geotechnical Engineering Office (also known as Geoguide 2).
7. Based on all existing and project-specific GI results, the Detailed Design Consultants prepared preliminary Geotechnical Engineering Reports among other reports and design recommendations.

8. Once all relevant information had been obtained, the Corporation issued a Geotechnical Baseline Report (“GBR”) prepared by the Detailed Design Consultants for each of the main tunnel and WKT civil engineering contracts. The Geotechnical Baselines within the GBR were made available to each contractor tendering for the relevant contracts as a contractual statement of the geotechnical and geological conditions anticipated to be encountered during construction of underground and subsurface works.
9. In particular at WKT, ground investigation was carried out in various stages starting from April 2008, initially by the GI Contractor and then under the foundation works Contracts 803A, B, C and D and Contract 811B.
10. At WKT, information from over 600 drillholes was obtained and samples collected at an average spacing of 14.4 metres, consistent with Government guidelines and representing a closer spacing than the industry norm.
11. The consent of the Government is required to release of information concerning manpower and costs relating to the contracts entered into with the GI Contractor and Supervising Consultant. The Corporation will discuss with the Government accordingly.

中文譯本

(如中文版本與英文版本之間有任何不一致之處，概以英文版本為準。)

1. 港鐵公司的項目綜合管理系統中已有詳細流程，規劃及監控在新鐵路發展項目於設計、施工前及施工階段所進行的土質勘測工作。
2. 根據與政府於 2008 年 11 月 24 日簽訂的第一份委託協議及按照港鐵公司的項目綜合管理系統，港鐵公司委聘了前期及詳細設計顧問（“設計顧問”）收集及研究當時存在於西九龍總站及其附近，以及遠至中國大陸邊界的高鐵香港段沿綫的土質勘測資料。
3. 土質勘測資料是由多方面收集而來，包括土木工程拓展署土力工程處及港鐵公司本身所擁有的紀錄，亦顧及了隨後在設計階段可取得的資料。
4. 設計顧問檢討當時存在的土質勘測資料後設計了土質勘測方案。港鐵公司在審視有關方案後，按照法定要求提交方案予屋宇署審批或參考。
5. 其後，港鐵公司委聘第三方承建商進行土質勘測工作，並按法定要求由第三方顧問監督其工作，這些工作包括：
 - (i) 挖探坑及管線溝槽；
 - (ii) 垂直及傾斜鑽孔；
 - (iii) 水平定向鑽孔；

- (iv) 土壤及岩石的實驗室測試；
 - (v) 探坑及鑽孔土壤和岩石的現場測試；及
 - (vi) 探測地基及地下障礙物。
6. 所有土質勘測工作的設計及執行，都是按適用的香港標準，包括建築物（建造）規例、地盤監督作業守則及由土力工程處所發出之 **Guide to Site Investigation**（亦稱 **Geoguide 2**）。
 7. 根據所有當時存在及特別為項目而做的土質勘測結果，詳細設計顧問撰寫了初步的土力工程報告，以及其他報告和設計建議。
 8. 當取得所有相關資料後，港鐵公司發出由詳細設計顧問為每條主要隧道及西九龍總站土木工程合約而撰寫的土力工程基準報告。該報告內之土力工程基準會給予每個有意就相關合約進行投標的承建商，以作為其中的合約表述有關進行地底及地面建造工程時可能預見的土力工程及地質情況。
 9. 尤其是在西九龍總站，土質勘測自 2008 年分不同階段進行，由土質勘測承建商開始，一直到地基工程的合約 803A、B、C 及 D，以及合約 811B。
 10. 在西九龍總站，通過超過 600 個平均距離 14.4 米的鑽孔所收集到的樣本所取得的資料，符合政府指引，密度亦較業界的慣常距離為高。
 11. 有關與土質勘測承建商及監督顧問合約相關的人力資源及成本資料，需取得政府的同意後才能公開。港鐵公司將就此與政府商議。

(c) Copies of the minutes of a typical meeting of the Project Control Group of the Corporation held before April 2014 and related paper(s) and document(s) showing the implications of the delay recovery measures on costs of the project.

Minutes and papers of the Project Control Group (“PCG”) are confidential documents containing sensitive commercial information. Copies of these documents are available in the Data Room. In response to the Select Committee’s specific request, the Corporation has prepared copies of relevant PCG minutes and papers related to delay recovery measures in the Data Room for reference by members of the Select Committee upon the terms of use of the Data Room. Alternatively, the Corporation is prepared to provide the relevant documents on a confidential basis, i.e. the relevant documents are to be provided in confidence for use by the Select Committee members at closed hearings.

中文譯本

(如中文版本與英文版本之間有任何不一致之處，概以英文版本為準。)

項目監控小組的會議記錄及文件均為載有商業敏感資料的機密文件，這些文件的副本已存放於資料室。為回應專責委員會的具體要求，港鐵公司已於資料室準備了與追回進度措施有關的項目監控小組會議記錄及文件之副本，供專責委員會各委員在遵守使用資料室守則的條款下參閱。港鐵公司亦可在基於保密原則下提供相關文件，即是以保密形式提供相關文件讓專責委員會委員在閉門研訊下使用。

(d) Whether the Corporation has issued any letter, including any warning letter, to any of its contractors from January 2010 to April 2014 reminding them of the need to complete the XRL project according to the completion date provided for in the individual contract.

1. The Corporation has detailed processes in place to monitor and report the progress and quality of railway projects. Project programme and progress of work are in particular covered in regular meetings between representatives of the Corporation and relevant contractors.
2. Weekly site meetings and monthly progress meetings are held between the Corporation and each of the XRL civil works contractors to review programme and progress. The Corporation also writes formally to any contractor as and when necessary to record delaying events, to advise the contractor to comply with its contractual responsibilities and to seek the contractor's proposals to mitigate any delay and to expedite progress.
3. As a responsible project manager, the Corporation has written to our contractors reminding them of the need to complete the XRL project according to the completion date provided for in the individual contracts. Communications between the Corporation and its contractors contain commercially sensitive information. In response to the Select Committee's specific request, the Corporation has made available a number of examples of reminder letters to contractors regarding completion progress in the Data Room for reference by members of the Select Committee upon the terms of use of the Data Room. Alternatively, the Corporation is prepared to provide the relevant documents on a confidential basis, i.e. the relevant documents are to be provided in confidence for use by the Select Committee members at closed hearings.

中文譯本

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1. 港鐵公司有詳細的程序以監管及匯報鐵路項目的進度和品質。在港鐵公司與相關承建商之代表進行的定期會議中，都有特別討論項目時間表及工程進度。
2. 港鐵公司與高鐵項目各土木工程承建商於每周的工地會議及每月的工程進度會議中，均會檢視工程時間表及進度。當有需要記錄滯後的情況時，港鐵公司亦會正式致函相關承建商，敦促承建商履行其合約責任，以及要求承建商提交緩解措施以加快進度。
3. 作為負責任的項目管理人，港鐵公司已致函提醒承建商需按個別合約的完工期完成項目。有關港鐵公司與相關承建商之間的通訊包含商業敏感資料。為回應專責委員會之具體要求，港鐵公司已將公司就竣工進度向承建商發

出的提醒函件之一些樣本存放於資料室，供專責委員會各委員在遵守使用資料室守則的條款下參閱。港鐵公司亦可在基於保密原則下提供相關文件，即是以保密形式提供相關文件讓專責委員會委員在閉門研訊下使用。

(e) Whether the Corporation has required the contractor(s) of Contract 823A (Construction of Tse Uk Tsuen to Tai Kong Po Tunnels) to provide floodgate(s) as a flood prevention measure at the work site; if yes, whether the contractor(s) concerned has/have provided the floodgate(s) as required, and how the Corporation monitors whether the contractor(s) has/have fulfilled the requirements.

Flood protection plans for XRL project work sites are constantly revised to suit each particular construction stage. The flood plan at the 823A work site prior to the black rainstorm on the night of 30 March 2014 was implemented accordingly. The principle of the flood plan was to have a surface flood wall built around the cut-and-cover tunnel to channel surface water away from the tunnel. A drainage system and multi-tier flood protection measures are in place within the site boundary and have protected the site during past periods of typhoons and rainstorms. The flood on 30 March 2014 was caused by a collapsed slope, which was built in compliance with government requirements but could not withstand the exceptionally heavy rain, blocking the site drainage system and the resultant flood damaging part of the flood wall in that area, allowing water to enter the tunnel.

中文譯本

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高鐵項目工地的防洪計劃會因應個別施工階段而有所修訂。823A 工地的防洪計劃，早於 2014 年 3 月 30 日晚的黑色暴雨前已經實施。防洪計劃的原則是於明挖回填隧道周邊地面建設堤圍，防止洪水流入隧道。工地範圍內設有臨時渠道及多層防洪措施，於過往颱風及暴雨期間亦一直發揮作用。2014 年 3 月 30 日的水浸，因為按相關政府要求建造的斜坡，未能承受異常的暴雨而被沖毀，堵塞工地渠道，而洪水帶來的沉積物亦沖毀附近部分堤圍，從而令雨水流入隧道。