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[English Translation]

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30 May 2018

Fax No. : 2840 0716
Council Business Division
Legislative Council Secretariat
Legislative Council Complex
1 Legislative Council Road
Central, Hong Kong
(Attn: Ms Joyce CHING)

Dear Ms CHING,

Subcommittee on Matters Relating to Railways

Enquiry on the Works at Hung Hom North Approach Tunnels of the Shatin to Central Link

We refer to the letter from the Legislative Council Secretariat dated 21 March 2018 relaying the views of the Hon. Claudia MO on the captioned matter. Our reply is set out below.

The Shatin to Central Link (“SCL”) project is funded by the Hong Kong Government under the “concession approach”. The MTR Corporation Limited (“MTRCL”) is entrusted by the Government to carry out the design, construction, testing and commissioning of the SCL. According to the Entrustment Agreements on the SCL project signed between the MTRCL and the Government, the MTRCL shall ensure that the Entrustment Activities are carried out with the skill and supervisory level reasonably to be expected of a professional, including the requirement to ensure that the quality of works meets the required standards. In this connection, the MTRCL shall act in accordance with its management systems and procedures while the Highways Department (HyD) (with the assistance of its “monitoring and verification (M&V) consultant”) shall

verify whether the MTRCL has complied with its obligations under the Entrustment Agreements.

Regarding the possible construction problem at a section of the tunnel tube of the North-South Corridor near Hung Hom Public Funeral Parlour under SCL Contract No. 1112, the MTRCL informed the HyD and indicated that it had requested the contractor to carry out remedial works. The MTRCL's response to the incident is attached at **Annex**.

The MTRCL stated that the incident would not have impact on the construction programme of the SCL project. It also stated that as the incident is related to construction quality, the MTRCL would follow up and handle the related claims with the contractor in accordance with the relevant contract procedures. To ensure that the SCL project will be completed on schedule, the HyD will continue to follow up this matter with its M&V consultant and closely monitor the remedial works carried out by the MTRCL and the contractor.

The works under SCL Contract No. 1112 are still underway. Upon completion of the relevant works, the MTRCL shall submit relevant documents and completion reports to the Government. In addition, the HyD, in collaboration with its M&V consultant and the relevant government departments, will attend pre-handover inspections before the relevant works are handed over to the Government.

Yours sincerely,

[Chinese version signed]

(K. Y. KAM)
for Secretary for Transport and Housing

C.C.

Highways Department (Attn: Mr. Jimmy CHAN) (Fax. No, 27145297)
MTR Corporation Limited (Attn: Ms. Prudence CHAN) (Fax. No. 27959991)

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

**MTR's response on the construction issue of
the SCL Hung Hom North Approach Tunnels**

The alignments of the Tai Wai to Hung Hom Section and the Hung Hom to Admiralty Section of the Shatin to Central Link (SCL) intersect at the North Approach Tunnels north of the future SCL platforms at Hung Hom Station (i.e. adjacent to the section of existing East Rail Line near Cheong Tung Road). The Tai Wai to Hung Hom Section is at an open section, while the Hung Hom to Admiralty Section is located underground beneath. Please refer to Enclosure I and Enclosure II for the exact location.

2. The Corporation attaches great importance to the monitoring and quality control of railway projects. A robust project management framework and a set of stringent procedures for inspection, supervision and monitoring of contractors' works standard and safety are in place.

3. The 17-kilometre long SCL project consisted of construction of two railway corridors. The works are complex, during which the operating railway lines (including East Rail Line, West Rail Line, Ma On Shan Line, Kwun Tong Line and Tsuen Wan Line) and the major trunk roads, etc, could not be affected. As such, the project team must take various factors into account prior to works commencement, including geographical location, technical feasibility, impact on traffic and works sequence, so to adopt the most appropriate construction method.

4. To ensure the materials used in new railway projects meet the specified requirements, an automated "Material Testing System" was

developed by the Corporation to handle extensive testing of concrete cubes and reinforcement bars. All test results are automatically captured and transferred by computers, eliminating the chance of manual manipulation and ensuring accurate results. This proven system has been used in a number of new railway projects, including the SCL.

5. Besides, project teams from both the Corporation and Contractors also conduct inspections on site, monitoring works progress, materials, works sequence and quality control, etc.

6. The concerned works for the section of SCL Hung Hom North Approach Tunnels are under Contract 1112, which is undertaken by Leighton Contractors (Asia) Limited for the construction of Hung Hom Station and Stabling Sidings.

7. The Hung Hom North Approach Tunnels are divided into two levels. The Contractor has to build the tunnel of the Hung Hom to Admiralty Section at the lower level first, followed by the open section of the Tai Wai to Hung Hom above. As the construction of the tunnels needs to follow the railway alignments to tie in with the track curvature, connection joints between bays of reinforced concrete are pre-determined taking works sequences into consideration. The connection joints concerned are where the reinforcement bars on both sides are coupled together.

8. According to the works records, structural works of the Hung Hom to Admiralty tunnel section were completed in December 2016 and the Tai Wai to Hung Hom open section in January 2017. In August 2017, MTR engineering staff identified water seepage at the newly completed two-metre concrete connection joints of the Hung Hom to Admiralty Section tunnel during a routine site inspection. A number of mitigation measures were applied in the following months to control the water seepage, including repeated epoxy injection and grouting, but

the situation did not improve.

9. Further detailed inspections were carried out in February of this year, during which a portion of the concrete on the surface of the tunnel was removed, revealing that the workmanship of the reinforced concrete, including the connection of steel bars, did not meet the required standard. Engineering staff inspected other similar concrete connection joints at the same works site and identified similar issues at two other locations within the 135-metre-long North Approach Tunnels.

10. The Corporation is very concerned about the matter and immediately instructed the Contractor to take remedial measures at the concerned locations, including demolishing the reinforced concrete and the concerned connection joints, followed by full reinstatement works. To facilitate the works, a 10-metre section of tracks for the Tai Wai to Hung Hom Section north of Hung Hom Station had to be temporarily removed.

11. The Corporation is very concerned about this defective workmanship, which was identified during an inspection by its engineering staff, and has instructed the contractor to urgently follow up and complete the remedial works.

12. Apart from the required follow-up works at the above-mentioned connection joints, inspections of similar connection joints at the South Approach Tunnel at the other end of Hung Hom Station and other locations in the SCL tunnels have also been arranged. The inspections confirmed that there is no similar quality issue.

13. As regards potential claims relating to the case which involve workmanship issues, the Corporation has informed the contractor that the issues will be handled in accordance with the established procedures set out in the contract.

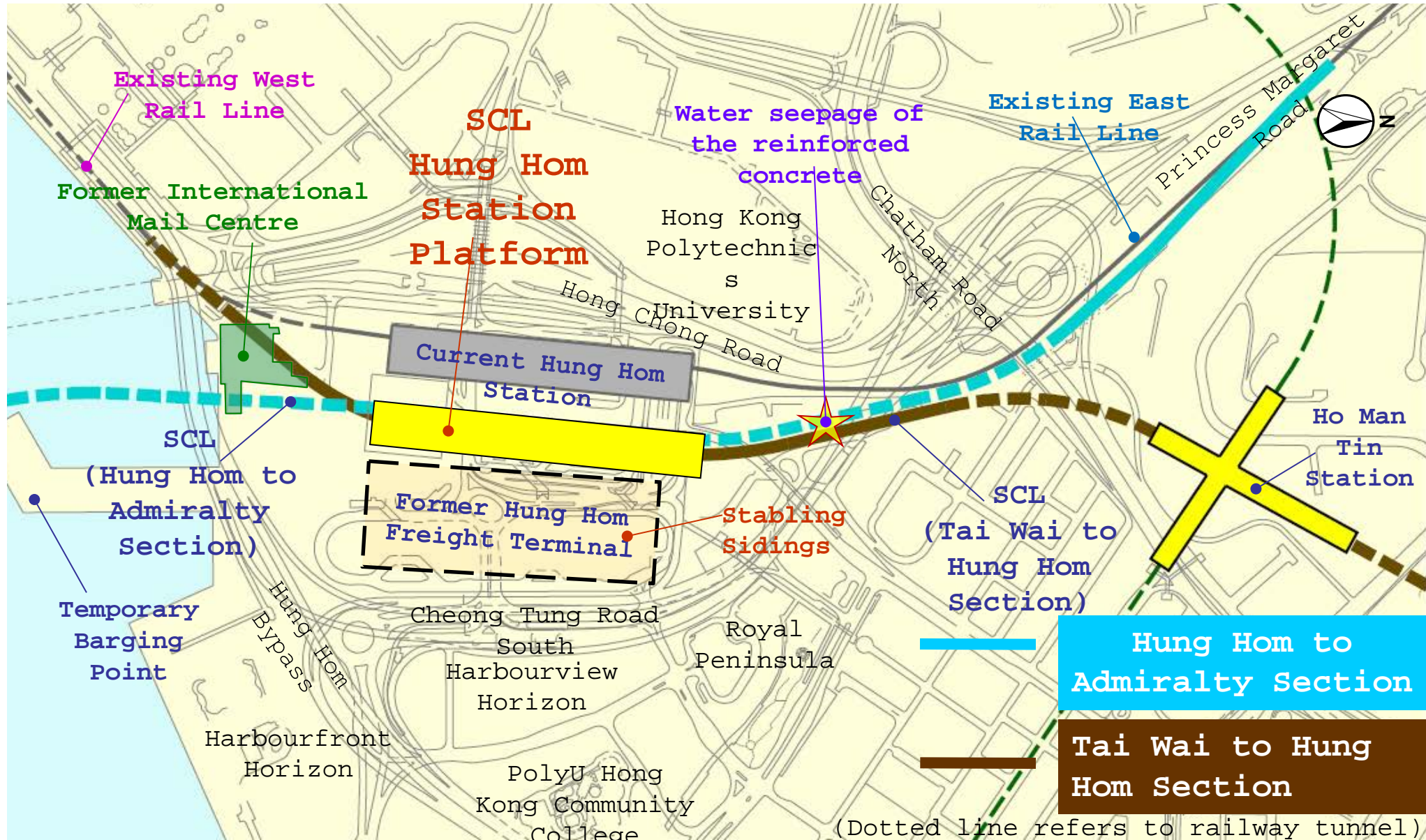
14. The Corporation has done a careful assessment and confirms that the defective workmanship does not impact on the overall structural integrity and safety of the tunnels. The incident does not affect the overall programme or cost of the project. The SCL Tai Wai to Hung Hom Section is expected to be completed in mid-2019 and the Hung Hom to Admiralty Section is expected to be completed in 2021.

MTR Corporation Limited

May 2018

SCL Hung Hom North Approach Tunnels

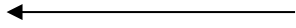
Enclosure I



SCL Hung Hom North Approach Tunnels - Cross Section

Enclosure II

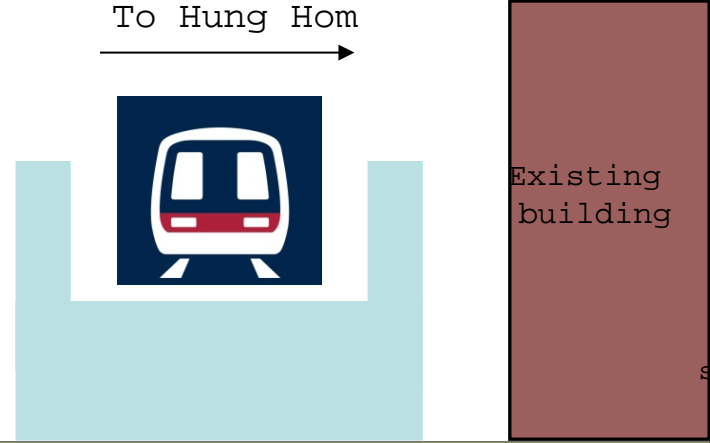
To Hong Kong PolyU



To Hung Hom



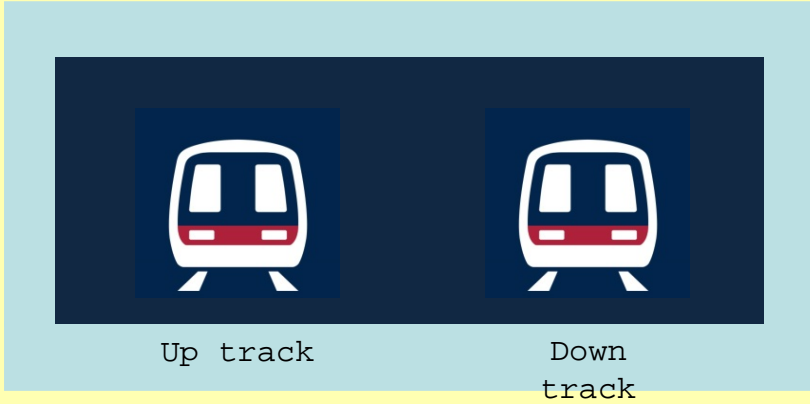
SCL Tai Wai to Hung Hom Section



Shunt track

Existing building

Cheong Tung Road surface



SCL Hung Hom to Admiralty Section

Cross-section