

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

**Progress Update of the Construction of the Shatin to Central Link  
(As at 30 September 2020)**

(Translation)

**Introduction**

This paper reports to Members on the progress of the main construction works of the Shatin to Central Link (“SCL”) as at 30 September 2020.

**Background**

2. SCL, with a total length of 17 kilometres, consists of the following two sections –

- (a) Tai Wai to Hung Hom Section: this is an extension of the Ma On Shan Line from Tai Wai via Southeast Kowloon to Hung Hom where it will join the West Rail Line; and
- (b) Hung Hom to Admiralty Section: this is an extension of the East Rail Line from Hung Hom across the Victoria Harbour to Wan Chai North and Admiralty.

3. There are ten stations in SCL. Apart from bringing improvements to the existing Tai Wai Station, the SCL project involves construction of new stations or extension of existing stations at Hin Keng, Diamond Hill, Kai Tak, Sung Wong Toi, To Kwa Wan, Ho Man Tin, Hung Hom, the Hong Kong Convention and Exhibition Centre, and Admiralty. It is a territory-wide strategic railway project (alignment layout at **Annex 1**). Admiralty Station and Ho Man Tin Station will become integrated stations providing interchange service to passengers of East Rail Line, Tsuen Wan Line, Island Line and South Island Line (East) (“SIL(E)”), as well as passengers of Tuen Ma Line and Kwun Tong Line Extension (“KTE”) respectively.

4. The entire SCL project is funded by the Government under the “concession approach”. The MTR Corporation Limited (“MTRCL”) is entrusted by the Government to carry out the construction of the project. On 18 February 2011, the

Finance Committee of the Legislative Council approved the funding applications for “**63TR** – Shatin to Central Link – construction of railway works – advance works” and “**64TR** – Shatin to Central Link – construction of non-railway works – advance works” with a total of about **\$7,700 million** (in money-of-the-day prices). Thereafter, the Government and MTRCL entered into an agreement for entrusting to the latter the advance works of SCL at the expanded Admiralty Station and Ho Man Tin Station while implementing SIL(E) and KTE respectively. The advance works commenced in May 2011.

5. Regarding the main works of SCL, the Finance Committee of the Legislative Council approved the funding applications on 11 May 2012 for “**61TR** – Shatin to Central Link – construction of railway works – remaining works” and “**62TR** – Shatin to Central Link – construction of non-railway works – remaining works” with a total of about **\$71,400 million** (in money-of-the-day prices). Thereafter, the Government and MTRCL entered into an agreement for entrusting construction, testing and commissioning of the main works of SCL to the latter. The entrustment cost concerned is about \$70.8 billion. MTRCL has been entrusted to provide management and monitoring service to the SCL project. The main works commenced in July 2012. According to the agreement for the main works of SCL, the original target commissioning date for the “Tai Wai to Hung Hom Section” is December 2018 and the original target commissioning date for the “Hung Hom to Admiralty Section” is December 2020.

6. The Finance Committee of the Legislative Council approved the funding application for increasing the Approved Project Estimate (APE) of **63TR** by \$847.7 million from \$6,254.9 million to \$7,102.6 million at its meeting on 17 June 2017. On 12 June 2020, the Finance Committee of the Legislative Council approved additional funding application for the remaining works of SCL, by increasing the APE of **61TR** from \$65,433.3 million to \$74,130.1 million and increasing the APE of **62TR** from \$5,983.1 million to \$7,350.1 million. After the above two funding applications, the Approved Project Estimate for the entire SCL project is adjusted upward from the original estimate of \$79,800 million to **\$90,730 million**<sup>1</sup> (in money-of-the-day prices).

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<sup>1</sup> The Approved Project Estimate for the entire SCL project comprises (i) Protection Works (**58TR** Shatin to Central Link – construction of railway works – protection works and **59TR** Shatin to Central Link – construction of railway works – protection works in Wan Chai Development Phase II) of about \$700 million (in money-of-the-day prices); (ii) Advance Works (**63TR** and **64TR**) of about \$8,550 million (in money-of-the-day prices); and (iii) Main Works (**61TR** and **62TR**) of about \$81,480 million (in money-of-the-day prices). The total is about \$90,730 million.

## **Latest Progress of the Main Works**

7. The progress report of the SCL project as at 30 September 2020 submitted by MTRCL is at **Annex 2**. Our analysis and supplement on the progress report are provided below.

### **Tai Wai to Hung Hom Section**

#### *Tuen Ma Line Phase 1*

8. The “Tuen Ma Line Phase 1” consisting of railway from Wu Kai Sha Station to Kai Tak Station was put into service on 14 February 2020.

#### *Kowloon City Section (Section of Railway between Kai Tak Station to Ho Man Tin Station, including Sung Wong Toi Station (formerly named as To Kwa Wan Station) and To Kwa Wan Station (formerly named as Ma Tau Wai Station))*

#### *Sung Wong Toi Station*

9. The part of the works at Sung Wong Toi Station relevant to the commissioning of Tuen Ma Line was completed.

10. Due to the in-situ preservation of the remnants at and in the vicinity of the original Adit C (connecting Sung Wong Toi Station and Pak Tai Street) (i.e. items 6 to 10 of the archaeological features at **Annex 3**), MTRCL commenced a works contract in July 2018 for amending the adit alignment and progressing relevant archaeological investigation work. Archaeological remnants had been discovered progressively at the archaeological site located between Sung Wong Toi Station and Hong Kong Aviation Club since March 2020, including a small stone well and other stone structures assessed to be dated to Song-Yuan Dynasties. The licensed archaeologist engaged by MTRCL submitted a conservation proposal to the Antiquities and Monuments Office in end-July 2020. The relevant archaeological discoveries has not affected the target date for the full commissioning of Tuen Ma Line.

11. We understand local residents would like to have a pedestrian passage connecting Pak Tai Street and Sung Wong Toi Station to be provided by the MTRCL as soon as possible. In light of the recent archaeological discoveries, MTRCL is exploring other pedestrian passage options, with less impact on the

archaeological remains, in order to provide a pedestrian passage sooner. MTRCL is consulting the local stakeholders on the options. Upon completion of the preliminary study on the relevant pedestrian passage option, MTRCL will consult the Kowloon City district council and relevant local community about the relevant result of the preliminary study. If eventually it is unable to construct a suitable and cost-effective alternative route due to further archaeological discoveries or site constraints, residents near Pak Tai Street could still use the existing pedestrian crossing at Sung Wong Toi Road to gain access to Sung Wong Toi Station (see **Annex 4**). The additional at-grade crossing at Tam Kung Road for the reduction of the walking distance between Pak Tai Street area and the station entrance/exit is substantially completed for public use to tie in with the full commissioning of Tuen Ma Line.

12. For the purpose of archeological investigation, shallow excavation at the land south of Sung Wong Toi Station was being carried out. MTRCL is carrying out monitoring at relevant settlement monitoring points. The settlement recorded so far is extremely small, and has not exceeded the existing preset trigger levels.

#### *To Kwa Wan Station*

13. The works of To Kwa Wan Station was completed. The original traffic arrangement for the section of Ma Tau Wai Road between Chi Kiang Street and Sheung Heung Road was fully restored in July 2020..

#### *Hung Hom Section (Section of Railway between Ho Man Tin Station and Hung Hom Station, including the modification works of Hung Hom Station and associated tunnelling works)*

14. E&M installation works adjacent to the railway track in the tunnel of the section from Ho Man Tin Station to Hung Hom Station were completed. For the tunnel section near Princess Margaret Road connecting the East Rail Line and the new platforms of Hung Hom Station, track laying works and E&M installation works adjacent to the railway track were substantially completed. Regarding the bifurcation works on East Rail Line near Hung Hom Station, MTRCL announced the commencement of part of the works before the new signaling system was put to service, and would complete the remaining works thereafter.

15. In addition, MTRCL submitted the technical proposal and its details for the monitoring scheme for Hung Hom Station Extension, North Approach Tunnels,

South Approach Tunnels and Hung Hom Stabling Siding in a period from July to October 2020. HyD, in collaboration with relevant government departments, was reviewing the proposal and requested MTRCL to supplement details of the scheme.

## **Hung Hom to Admiralty Section**

### *Cross Harbour Section (Section of the tunnel across Victoria Harbour)*

16. The overall progress of the cross harbour tunnel section is generally on schedule. The E&M installation works adjacent to the railway track inside the cross harbour tunnel is substantially completed.

17. Upon completion of the phased seabed improvement works in the Causeway Bay Typhoon Shelter (CBTS), MTRCL had gradually started re-arranging the permanent mooring of vessels affected by the previous works. MTRCL would continue communicating with relevant government departments and stakeholders within CBTS.

### *Hong Kong Island Section (Section of Railway between Wan Chai North and Admiralty Station, including Exhibition Centre Station)*

18. The major ongoing construction activities at the Hong Kong Island Section comprise the structural works, building services and E&M works at the Exhibition Centre Station and Western Approach Tunnels, foundation works for the re-provisioning of Wan Chai Sports Ground and the construction of above ground structure for the West Ventilation Building located at Fleming Road.

19. To facilitate the remaining construction works of the Exhibition Centre Station, it is necessary to continue the temporary traffic management measures in stages at Wan Chai North. MTRCL commissioned the permanent footbridge at Convention Avenue connecting to Wan Chai Ferry Pier in November 2020 and demolished the associated temporary footbridge.

20. The details about the settlement monitoring points in Wan Chai North were presented at the special meeting of Subcommittee on Matters Relating to Railways on 31 August 2018 as well as the subsequent quarterly progress update. According to MTRCL's monitoring data, the cumulative settlement of the affected facilities near Exhibition Centre Station, including buildings, public utilities and roads, does not exceed the pre-set or updated trigger levels. During the period from 1 July to

30 November 2020, no revision to the pre-set trigger levels was made.

21. The structural works at Admiralty Station and the south overrun tunnel were completed. Building services works and electrical and mechanical (E&M) works at the station and overrun tunnel are underway.

### Impact of COVID-19 Pandemic on Construction Works

22. According to the information provided by MTRCL, as of end December 2020, the COVID-19 pandemic had impacted the progress of some individual contracts. However, given the continuous change in epidemics, it is still uncertain whether eventually there would be significant impact on the SCL project. MTRCL will continue monitoring closely the overall construction works progress.

### **Conclusion**

23. In view of the assessments as mentioned in paragraphs 7 to 22 above, taking into account the delay of about 11 months to the “Tai Wai to Hung Hom Section” of SCL arising from the archaeological works, archaeological discoveries and conservation options for archaeological features at Sung Wong Toi Station from 2012 to 2014, the commissioning date of “Tai Wai to Hung Hom Section” was deferred to end 2019. With the implementation of delay recovery measures, the target commissioning date of the “Tai Wai to Hung Hom Section” could originally be advanced to mid-2019. However, due to the series of incidents related to the quality of works of the Hung Hom Station Extension revealed in May 2018, it is required to carry out associated investigation works and implement the suitable measures. The target commissioning date of the “Tai Wai to Hung Hom Section” had to be deferred to the end of 2021.

24. To ensure the public enjoyment of the new railway as soon as possible, the Government accepted the proposal from MTRCL to duly commission of three new stations, namely Hin Keng Station, Diamond Hill Station Extension and Kai Tak Station. Passengers of former Ma On Shan Line could commute directly to the three new stations via Tai Wai Station and the entire railway from Wu Kai Sha Station to Kai Tak Station is officially named as “Tuen Ma Line Phase 1”, which was put into service on 14 February 2020.

25. The works for Tuen Ma Line was on schedule. The associated architectural builder’s works and finishes, electrical and mechanical systems and

fire services installation, track and overhead line were completed. The system tests and trial run would follow. Safety is the prime consideration for railway operation. The target commission of the “Kai Tak to Hung Hom Section” remains as the third quarter of 2021.

26. As regards the “Hung Hom to Admiralty Section” of the SCL project, given the impact of site handover arrangement under the Wan Chai Development Phase II project, complicated ground conditions below Exhibition Centre Station, settlement causing a suspension of the excavation works at the Exhibition Centre Station, as well as the allowance of flexibility for the development atop Exhibition Centre Station, the target commissioning date had previously been revised to 2021. Since the “Hung Hom to Admiralty Section” will connect to East Rail Line (EAL), the upgrading of signaling system of EAL was carried out under the SCL Project. During the fourth quarter of 2019, there had been multiple damages to the EAL facilities necessitating emergency inspections, maintenance and cancellation of works originally planned during non-traffic hours. The project team was thus unable to carry out the train test of new EAL signaling system, subsequent conversion works for the 9-car trains, and track bifurcation works as scheduled. In addition, there were serious damages to the facilities at the University Station of EAL and adjacent railway section in November 2019. The newly installed facilities for the signaling and E&M systems under the North South Corridor were also severely damaged. The extent being affected exceeded 4 kilometres. After several months of repairs, the MTRCL replaced the damaged facilities and completed the re-installation works.

27. On 11 May 2020, MTRCL conducted a test for the new signaling system of EAL, during which there were abnormal situations about system reliability that might lead to trains entering incorrect route. The Government was aware of the abovementioned issue on 10 September 2020, and requested the MTRCL to suspend the commissioning of new EAL signaling system, submit detailed report on the incident, and further review the signaling system with more detailed testings. The Government contended that after further ascertaining system reliability, it could consider whether the new EAL signaling system should be put into service.

28. In response to the incident, MTRCL announced on 13 September 2020 the establishment of an Investigation Panel to investigate the suspension of the commissioning of new EAL signaling system, including whether the reporting mechanism for government departments has been operated in a timely and effective manner. MTRCL announced on 10 December 2020 that it has received the Report

from the Investigation Panel and further testings on technical investigation part are being conducted during non-traffic hours. The Investigation Panel report will be submitted to the government departments for vetting and public announcement will be made in due course.

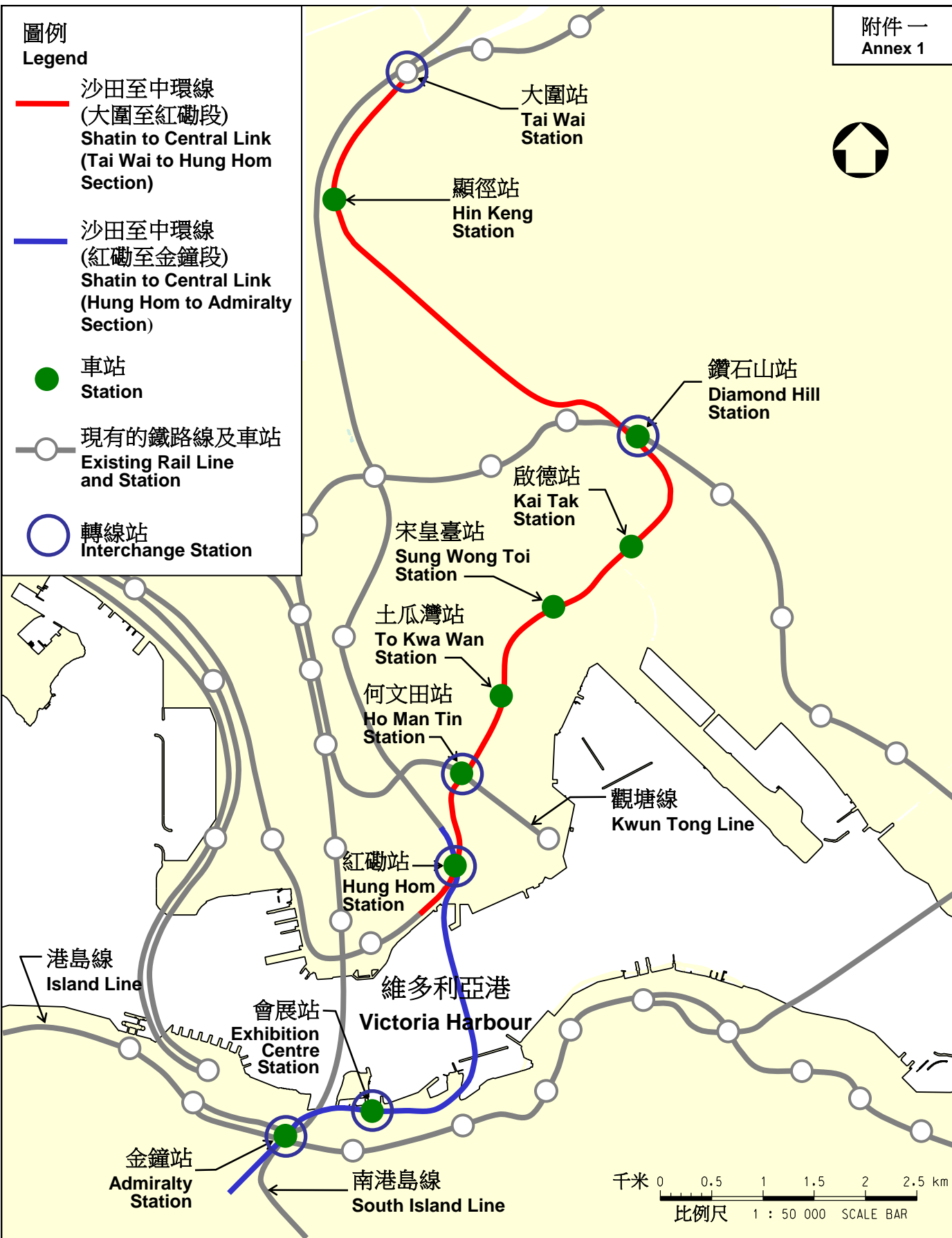
29. As to whether the target commissioning date for “Hung Hom to Admiralty Section” could be maintained as the first quarter of 2022, the progress of the rectification of the new EAL signaling system and the effectiveness of progress recovery measures are most critical. The HyD and the MTRCL are assessing the implication of the suspension of new EAL signaling system on the commissioning date for “Hung Hom to Admiralty Section”.

**Transport and Housing Bureau  
Highways Department  
January 2021**



圖例  
Legend

- 沙田至中環線  
(大圍至紅磡段)  
Shatin to Central Link  
(Tai Wai to Hung Hom Section)
- 沙田至中環線  
(紅磡至金鐘段)  
Shatin to Central Link  
(Hung Hom to Admiralty Section)
- 車站  
Station
- 現有的鐵路線及車站  
Existing Rail Line and Station
- 轉線站  
Interchange Station



圖則名稱 drawing title

# 沙田至中環線的走線

## Alignment of the Shatin to Central Link

圖號 drawing no.

HRWSCLO03-SK0465

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鐵路拓展處 RAILWAY DEVELOPMENT OFFICE



路政署  
HIGHWAYS DEPARTMENT

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

**Progress Update of the Shatin to Central Link  
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**INTRODUCTION**

This report updates Subcommittee members on the progress of Shatin to Central Link (“SCL”) as at 30 September 2020.

**OVERVIEW OF THE SCL PROJECT**

Works progress

2. As at 30 September 2020, the overall works for SCL were 95% (96%)<sup>1</sup> complete. The progress of the Tai Wai to Hung Hom Section is 99.98% (99.99%)<sup>2</sup> complete whilst the Hung Hom to Admiralty Section is 88.9% (90.6%)<sup>3</sup> complete.

3. Following the commissioning of the Tuen Ma Line (“TML”) Phase 1 in early 2020, covering two new stations at Hin Keng and Kai Tak and an extension at Diamond Hill Station, works for the full opening of the TML have progressed well. Dynamic train testing for the signalling system commenced in August 2020. Testing and statutory inspections have been extended to cover the full line of TML starting from December 2020 to ensure full integration of the railway systems with the existing lines and smooth operation before commencement of passenger service expected to be in the third quarter of 2021.

4. The railway system and building services works previously modified to allow for the commissioning of TML Phase 1 were reinstated in December 2020 for final inspection before the commencement of trial operation on the full line of TML in the first quarter of 2021.

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<sup>1</sup> Update as at 30 November 2020

<sup>2</sup> Ditto.

<sup>3</sup> Ditto.

5. In preparation for extending the East Rail Line (“EAL”) across the harbour to Admiralty Station, critical works on EAL are being carried out progressively. These include preparations for the commissioning of the new signalling system, gradual introduction of new 9-car trains on EAL to replace the existing 12-car EAL trains and the track bifurcation works at the north of Hung Hom Station, i.e., realignment of the EAL tracks to bring trains to the new Hung Hom platforms and cross-harbour rail tunnel. After these works full line dynamic train testing and reliability testing will be conducted, followed by trial operations and finally commencement of passenger service.

6. As announced earlier, service commencement of the new EAL signalling system and introduction of new 9-car trains planned for 12 September 2020 was put on hold after discussion with the relevant government departments. A final review of the system readiness is being conducted by the Corporation, prior to commissioning. Please refer to Paragraph 50 for details.

7. On Hong Kong Island, Exhibition Centre Station (“EXC”) was topped out in November 2020. Installation of the railway systems and architectural finishes at the station is well underway. Following delays previously reported at EXC, delay recovery measures continue to be implemented, including the deployment of additional resources and extended working hours within the allowable period. These are having some beneficial effect with all critical plant rooms handed over to the building services contractor in December 2020, but recovery is still a challenge given access constraints and difficult logistics on site. The programme for EXC is close to being critical and its progress is being closely monitored.

8. Construction progress continues to be impacted by challenges arising from the constraints facing the supply chain and overseas support amid the volatile COVID-19 pandemic situation. A number of measures have been implemented to minimise the impact, including utilisation of local support, identifying alternative suppliers of materials and the use of technology to facilitate remote inspections.

9. Taking account of the matters referred to above, the targeted commencement of passenger services on the Hung Hom to Admiralty Section (East Rail Line extending to Admiralty Station) in the first quarter of 2022 remains a major challenge. Following the postponement of the commencement of the EAL new signalling system and introduction of 9-

car trains, we are now re-assessing the programme and exploring possible recovery measures to recoup the delay as much as practicable.

#### Outstanding non-railway works under TML Phase 1

10. For the Wong Tai Sin Public Transport Terminus (“PTT”), the coach parking area at the upper deck was handed over to the relevant government department and opened for public use. Design and preparation works for the modification of Shatin Pass Road and construction of the ingress and egress points of the lower deck of the PTT are now underway. Construction works are expected to commence in the third quarter of 2021, and corresponding temporary traffic management schemes will be implemented in phases.

11. To facilitate SCL works, part of the Ma Chai Hang Recreation Ground was demolished to make way for the ventilation building and emergency vehicular access between Hin Keng and Ma Chai Hang railway tunnels. Detailed design of the reprovisioned Ma Chai Hang Recreation Ground commenced in September 2020, construction is expected to start in the third quarter of 2022.

#### Progress in other sections of SCL

##### (i) Sung Wong Toi and To Kwa Wan stations

12. Statutory inspections and all external finishing works at the entrances for Sung Wong Toi and To Kwa Wan stations are complete.

13. Due to archaeological discoveries in the area of Sung Wong Toi Station, the proposed subway adit connecting Pak Tai Street cannot be constructed according to the original plan. An alternative option of a footbridge is being explored with the relevant stakeholders and Government departments.

14. As at September 2020, archaeological remains including a square shape stone well and stone structures probably dating back to Song/Yuan Dynasty were discovered at the location between Sung Wong Toi Station Entrance D and the Hong Kong Aviation Club. The relevant draft conservation proposal was submitted to the Antiquities and Monuments Office (“AMO”) for their review. Throughout the process, all archaeological finds and archives are being handled according to the AMO’s Guidelines for Handling of Archaeological Finds and Archives.

15. To provide an interim connection to Sung Wong Toi Station upon the full opening of the TML, a temporary at-grade crossing at Sung Wong Toi Road near Tam Kung Road is being constructed. It will be opened to the public along with the full opening of the TML.

16. For works related to To Kwa Wan Station, permanent reinstatement at Ma Tau Wai Road is substantially complete. Reinstatement of amenity facilities previously occupied for SCL works are all complete and already open for public use.

(ii) Hung Hom Section (Section of railway between Ho Man Tin Station and Hung Hom Station)

17. Statutory inspections for the tunnel connecting Ho Man Tin and Hung Hom stations including the at-grade approach section connected into Hung Hom Station are complete. For the mainline tunnel connecting the existing EAL to the extension of Hung Hom Station to form the cross-harbour EAL, structural works, track works and electrical & mechanical (“E&M”) installation are substantially complete. Statutory inspections are in progress.

18. The suitable measures and related reinstatement works at Hung Hom Station Extension and the adjacent stabling sidings are complete.

19. E&M works, building services and fitting out works for the future TML platforms built under the existing Hung Hom Station podium are generally complete, while testing and commissioning are in progress. Modification works in the existing station to accommodate future station re-arrangements, including architectural builders works and finishes, building services, and new escalators and lifts are substantially complete.

20. New platforms at the lower level under the existing Hung Hom Station podium have been constructed to facilitate the EAL extension across Victoria Harbour to Hong Kong Island. To connect the existing railway section south of Mong Kok East to the new railway north of Hung Hom Station Extension, track realignment, also known as bifurcation works, is required. The bifurcation works are necessary to bring the EAL trains to the new Hung Hom platforms, cross-harbour rail tunnel and Admiralty. The critical and more complex bifurcation works commenced in January 2021. Please refer to paragraph 56 for details.

(iii) Hung Hom to Admiralty Section

*Tunnels and stations*

21. The EAL will be extended across Victoria Harbour from Hung Hom to Admiralty, via the newly built fourth cross-harbour rail tunnel, with an intermediate station named Exhibition Centre (“EXC”) in Wan Chai North. Track laying works, and installation of overhead line and major E&M systems for the railway tunnels of Hung Hom to Admiralty Section are complete.

22. Construction works for the 3-level underground EXC and the relevant railway facilities are on-going in the Wan Chai North area. The EXC was topped out in November 2020, while architectural builder's works and finishes, E&M and building services installation works are progressing in full swing.

23. The remaining foundation works including piling works are being carried out progressively at the EXC works site. As unexploded bombs were discovered during excavation in the works sites previously, the project team is working cautiously to ensure safety and minimise risk. Piling works to facilitate the station entrances are complete, while pile extraction works for nearby facilities has commenced.

24. To facilitate SCL construction and the road improvement works entrusted to the SCL project by the Government, temporary traffic management schemes continue to be implemented in stages.

25. As reported previously, construction works have been affected by various factors, including the initially delayed handover of critical works areas under the Wan Chai Development Phase II (“WDII”) project in Wan Chai North, the need to allow flexibility for the planned topside development above EXC, the requirement for which was introduced after the commencement of the Project, and the section of diaphragm wall cofferdam entrusted to WDII not being fully completed in accordance with the design. Progress was also affected by the discovery of three wartime bombs within the site and the subsequent temporary suspension of excavation, and additional controls being introduced for excavation works. The COVID-19 pandemic has also caused localized delay. We continue to implement delay recovery measures, including the deployment of additional resources and extended working hours within the allowable period, whilst adopting suitable pandemic management measures. These are having some beneficial effect, but recovery is still a challenge. The

effectiveness of the delay recovery measures is being closely monitored and further measures will be considered if necessary.

26. At the extended Admiralty Station, architectural finishing works, building services, and E&M works including escalator installations are all progressing steadily. Testing and commissioning for the railway systems and facilities such as station control system, fire services system and escalators has commenced. Installation of the skylight at the new station Entrance E at Rodney Street is complete.

#### *Other railway facilities*

27. At Hung Hom, construction of the North Ventilation Building is complete and commissioning of fire services and building inspections is in hand.

28. At the South Ventilation Building works site near Causeway Bay Typhoon Shelter (“CBTS”), construction of the super-structure of the ventilation building and associated facilities below the re-provisioned Police Officers’ Club is complete, while fitting-out, E&M and building services installation works are progressing. Testing of fire services system of the ventilation building is underway.

29. Structural works for the EXC West Ventilation Building located at Fleming Road are substantially complete.

30. Statutory inspections for the ventilation building at Hong Kong Park are being carried out progressively.

#### *Reinstatement works*

31. Marine works in the CBTS for SCL has been completed. To suit the schedule of the seabed improvement works in CBTS by the adjacent Government infrastructure project, moorings in CBTS will be reinstated in phases. Currently, the Phase 1 reinstatement of mooring arrangements for the Royal Hong Kong Yacht Club is on-going. The Corporation continues to liaise with the Marine Department and relevant stakeholders to ensure the mooring arrangements are coordinated to minimise any impact.

32. At the reinstated Tunnel Approach Rest Garden near CBTS, hard landscaping works and installation of the sitting-out and recreational facilities, including the model car play area and children’s play equipment are substantially complete. The areas will be handed back to the relevant

Government departments. Upon the opening of the new Garden, the temporary model car play area at Gloucester Road Garden will cease operation.

33. The re-provisioned footbridge across Convention Avenue was opened for public use in early November 2020. Further fitting-out works continue on the footbridge as part of the final finishes. Upon the opening of the new footbridge, the temporary footbridge was dismantled to facilitate construction of the EXC structures at the ground level.

34. Following the completion of reinstatement works at the Hong Kong Park works site in Admiralty, the site has been handed-over to the relevant Government department.

## **QUALITY AND SAFETY OF SCL CONSTRUCTION WORKS**

### Verification of the remaining new stations

35. As previously reported, the Corporation completed an independent audit of key documentation for the remaining new stations. Audit results show that over 90% of the structure related RISC forms for the five TML new stations, including Sung Wong Toi and To Kwa Wan stations, are available, while further supplementary evidence, such as record photographs and site diaries, has been identified to demonstrate the completed works on site were adequately supervised.

36. At EXC, independent audits of key documentations have been conducted. Audit results show that about 90% of the structure related inspection (RISC) forms are available. A digital RISC form system has been implemented since February 2019; ongoing audits demonstrate that RISC forms for EXC and other contracts since the introduction of the digital system are 100% available and are in order.

### Commission of Inquiry (“CoI”) into the Construction Works at and near the Hung Hom Station Extension

37. The final report of the CoI released by the Government on 12 May 2020 concluded that the relevant structures at and near Hung Hom Station Extension are safe and fit for purpose with the completion of the suitable measures. With regard to the recommendations made on the Corporation’s



project management practices, the Corporation continues to refine and improve a number of its project management practices, with many of these already being incorporated into the Corporation's standard practices. Improvements already forming part of the Corporation's project management approach include an enhanced quality management process and organisational structure, the use of a digital reporting and supervision system, including the Request for Inspection and Survey Check ("RISC"), Non-conformance Report ("NCR") process, site diaries and photographic records, to improve the inspection process and monitoring, and enhanced staff training. Further improvements are being developed, including new techniques the Corporation will use to manage future projects, examples being the use of Building Information Modelling ("BIM") and adoption of the New Engineering Contract Version 4 ("NEC4"). Both of these are already being adopted in the design consultancies for the new Tung Chung Line Extension, Tuen Mun South Extension and the Ma Chai Hang Recreation Ground.

38. The Corporation has also been working with the Government to further foster collaboration with improvements in communication at site and management levels.

39. The Corporation notes the Commission also found that elements of the construction works were not executed in accordance with the contract. These issues will be resolved in accordance with the terms of the relevant contracts.

40. The independent audit panel appointed by the Government completed an independent follow-up audit on the implementation progress of the various recommended measures in the CoI's interim report. In its audit report released on 3 June 2020, regarding the full implementation of 58 recommendations made in the CoI's interim report, the Panel is of the view that 14 have been completed and 42 are making satisfactory progress, whereas the remaining two have also made some progress.

#### Measures taken to address the settlement issue adjacent to SCL stations

41. The Government announced in September 2018 a notification mechanism for the monitoring of structures and public facilities in the vicinity of the SCL works, with a view to providing timely information to the public when the monitoring data in relation to the relevant structures and public facilities reaches or exceeds the pre-set trigger levels for the

temporary suspension of works. The Corporation continues to work closely with the Government in accordance with the mechanism.

42. During the period from July to September 2020, no monitoring readings have reached or exceeded the pre-set trigger levels for temporary suspension of works, and no pre-set trigger levels have been updated.

43. Since the resumption of excavation works for Exhibition Centre Station in September 2018, no monitoring readings have reached or exceeded the pre-set trigger levels. Bulk excavation works were completed in June 2019 and the temporary supports are progressively being removed. Monitoring will continue for some time until the settlement readings have become stable after completion of the underground structure and backfilling works, providing assurance to the safety of nearby buildings, structures and facilities.

44. For To Kwa Wan Station, Registered Structural Engineers were deployed to assess the safety conditions of nearby buildings which were alleged to be affected by the settlement near the station works sites. The concerned buildings are confirmed to be safe.

## **IMPROVEMENT WORKS FOR THE OPERATING RAILWAY FACILITIES**

### Tuen Ma Line

45. To facilitate the 8-car train operation for TML, new 8-car trains have been procured and all 17 sets of new trains were delivered to Hong Kong by November 2018. In addition to the new trains, some of the existing train cars on former Ma On Shan Line (“MOL”), West Rail Line (“WRL”) and EAL are being modified to form the 8-car train fleet for TML.

46. All former 4-car MOL trains and 7-car WRL trains were upgraded and converted to 8-car trains by December 2017 and May 2018 respectively to prepare for 8-car train fleet for TML. Subsequent to the commissioning of TML Phase 1 in February 2020, three sets of TML new trains have been introduced into passenger service on WRL since March 2020 to facilitate the future 8-car train fleet operation.

47. The retrofitting of a total of 720 pairs of Automatic Platform Gates (“APG”) at all 9 stations of the former MOL is also complete.

## East Rail Line

48. In preparation for extending the EAL across Victoria Harbour to Admiralty Station, critical works will be carried out on EAL progressively, including the commissioning of the new signalling system, gradual introduction of new 9-car trains on EAL to replace the existing 12-car trains, and the bifurcation works, i.e. track realignment north of Hung Hom Station.

49. Upon the completion of all necessary testing and drills of the new signalling system and trains, as well as obtaining approval from the relevant Government departments in August 2020, the Corporation planned to commence the new signalling system and 9-car and 12-car Mixed Fleet Operations (“MFO”) on the EAL on 12 September 2020.

50. However, it was decided to postpone the introduction of the new signalling system and MFO. The Corporation took note that a performance issue with the route setting was observed during the non-traffic hours testing back on 11 May 2020. The relevant teams of the Corporation immediately worked closely with the contractor to confirm, analyse and follow-up the issue to formulate appropriate rectification options. During the analysis, computer simulations showed that the unsatisfactory performance of the route setting could possibly lead to a scenario of a train travelling to a destination that is different from its planned route, although this was considered unlikely. It is worth noting that even if the scenario happened, the Automatic Train Protection System would remain fully functioning and would safeguard train operations. The teams considered implementing operational procedures to manage and correct the issue. However, during the final review, the Corporation concluded that the adoption of operational procedures to manage and correct the route setting errors was not the best approach. It was decided that technical solutions should be formulated and deployed to eliminate the issue.

51. The Corporation attaches great importance to this matter and set up an independent Investigation Panel on 13 September 2020 to look into the following matters:

- To ascertain how the potential “route setting function” issue in the new signalling system was identified, confirmed, analysed and followed-up;

- To review whether the internal communication and reporting mechanism of the Corporation is robust and being timely and properly implemented during the above-mentioned process;
- To investigate the reporting by the Corporation to the relevant Government departments and whether or not this was timely and properly implemented.

52. The Corporation received in early December 2020 the Report from the Panel. At the same time, the Corporation has been conducting tests to verify the technical solution identified by the technical investigation team looking into the root cause of the issue leading to the postponement of the commissioning of the new signalling system. The Panel Report will be submitted in due course to the Government for review after the completion of the tests to ensure the effectiveness of the technical solution.

53. The Panel and the technical investigation team both recognised that the issue has no impact on railway safety. The EAL new signalling system will be put into service upon confirmation of its technical and service reliability, and approval from the relevant Government departments.

54. To accommodate the space constraints of the new platform layouts on Hong Kong Island, 37 sets of new 9-car trains have been procured and are being delivered to Hong Kong progressively. The new trains, with a wider body and newly designed handrails as well as a LED lighting system, provide a more spacious and comfortable travelling environment. They are also equipped with dynamic route maps and gangway-end displays which provide more information to passengers during their journeys. The locations of the doors of the new trains are also improved, being evenly spaced along the trains, bringing more convenience to passengers when alighting and boarding.

55. The new 9-car trains will gradually replace the existing 12-car trains over an 18-month period. During this period, there will be a mix of new and existing trains running on the EAL, hence this conversion operation is also known as mixed fleet operations or MFO. Measures will be introduced in stations during MFO to facilitate passenger familiarisation with the new boarding and alighting arrangements, including prominent blue and green signs on platforms, information display panels, clear public announcements and additional customer service staff in stations to assist passengers.

56. As mentioned in Paragraph 20, trackwork realignment, also known as bifurcation works, will take place north of Hung Hom Station to connect

the existing EAL to the new SCL platforms at Hung Hom Station Extension and the newly built cross-harbour rail tunnel. Whilst the majority of the bifurcation works are planned to be carried out during the non-traffic hours, the more complex and critical works will be conducted on ten selected Sundays between January to October 2021 when the EAL service between Mong Kok East and Hung Hom Stations is to be suspended. Passengers are advised to use other railway lines or the shuttle service between Hung Hom and Kowloon Tong stations during these Sundays.

57. Once the new 9-car trains have replaced the 12-car trains, attention will turn to the fitting of APGs at all EAL stations. Installation of the new APGs can only commence when the train fleet of the EAL is fully replaced by the new 9-car trains due to the different door locations on the new trains. Before fitting the APGs, platforms need to be strengthened and equipment rooms for the relevant signalling system and facilities constructed. These preparatory works are substantially complete and some early preparation for APGs fitting is underway.

## **COSTS**

### Cost and expenditure

58. Since mid-2012, 28 major civil and 30 major E&M contracts<sup>4</sup>, together with other minor contracts, have been awarded with a total sum of \$57.837 billion. The contract sums for civil works and E&M works are about \$43.935 billion and \$13.902 billion respectively (Please refer to **Enclosure I**).

59. Under the Entrustment Agreement for the SCL, the Government of the Hong Kong Special Administrative Region (“the Government”) is responsible for funding the construction of the SCL.

### Cost control mechanism

60. The Corporation attaches great importance to the monitoring and cost control of railway projects. The Corporation has a robust governance framework and a set of stringent procedures governing procurement,

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<sup>4</sup> Major civil contract/E&M contract refers to any individual contract with value above \$50 million, and includes Contract 11227 with a value of \$49.8 million.

contract administration and cost control of its projects, be it an ownership project or a concession project.

61. Under the Entrustment Agreements for concession projects, the Corporation is obliged to use the same management system and procedures that are applicable to all other MTR projects. For concession projects like the SCL project, an independent monitoring and verification system is conducted by the concerned Government authority and its consultants in addition to the Corporation's contract management and control procedure.

62. To enhance the control of expenditure, the Corporation has its Project Control Group ("PCG") as a gatekeeper, to scrutinise the assessments of variations and claims arising from consultancies and works contracts under the SCL project. Representatives from the Railways Development Office of Highways Department attend the PCG meetings.

63. Where the progress of works has been delayed, the Corporation considers implementing delay recovery measures as appropriate. Proposals for delay recovery measures including the cost and benefits implications are reviewed and approved by PCG prior to implementation. The Government is consulted on all such matters.

#### Latest estimate of Cost to Complete ("CTC")

64. In February 2020, the Corporation completed its further review and revalidation of the CTC of the SCL Project and notified the Government of the Corporation's latest estimate of CTC, being \$82,999.3 million, including additional Project Management Cost ("PMC") of \$1,371 million but excluding all costs related to the Hung Hom Extension Construction Incident for which the Corporation has already made a provision of \$2 billion (as detailed in Paragraph 67 below).

65. This represents an increase of \$12,172.3 million from the original estimate of \$70,827 million, which is less than the previously estimated increase of \$16,501 million which the Corporation announced in December 2017.

66. The Corporation notes that the Government considers there has been no material modification in respect of the SCL project and therefore disagrees to the inclusion of any additional PMC in the CTC. The additional funding sought by the Government and subsequently approved by the Legislative Council on 12 June 2020 did not include any additional amount of PMC for the Corporation. The Corporation will follow up with

the Government for a resolution of this matter according to the terms and conditions of the Entrustment Agreement. The Corporation will, in the interim, continue to comply with its project management obligations under the Entrustment Agreement and meet the costs thereof, to allow the SCL project to progress in accordance with the latest programme. The Corporation continues to exercise rigorous cost control with the objective of ensuring that construction costs are properly managed.

67. As previously announced in July 2019, to facilitate the phased opening of the TML, the Corporation agreed to fund, on an interim and without prejudice basis, the costs associated with the verification and assurance exercises and implementation of the suitable measures at the Hung Hom Station Extension and adjacent structures, as well as the costs for the preparation and implementation of TML phased opening, estimated to be around \$2 billion. Apportionment of the actual cost will be dealt with in accordance with the relevant SCL contracts.

## **STAKEHOLDER COMMUNICATION AND ENGAGEMENT**

68. Most of the SCL works sites are in urban areas and close to local communities. We attach great importance to maintaining close communication and engagement with the local communities and the relevant stakeholders, in order to keep them informed of the works progress and to listen to their views. Apart from the regular progress updates to the Subcommittee members and respective District Councils, Community Liaison Groups, which have been set up across districts, is another major communication channel with the local communities where regular updates about SCL are provided. Newsletters, leaflets and notices about the works are distributed to the local communities. Dedicated MTR and Contractors' Hotlines are also available for handling enquiries and complaints in relating to the project.

## **EMPLOYMENT OPPORTUNITIES**

69. About 2,460 construction workers and technical / professional staff members are employed for the SCL project as at 30 September 2020, which in general could meet the labour requirement. This is lower than the number employed when the project was in its construction peak. Moreover, 764 trainees have been recruited and provided with trainings and internship programmes by the contractors of the SCL project and the Construction

Industry Council through the Corporation's "SCL Contractors Cooperative Training Scheme". 520 of the trainees have completed the trade test and proceeded to continue their careers in the field.

## **CONCLUSION**

70. Members are invited to note the above information.

**MTR Corporation Limited**  
**January 2021**



## Expenditure report as at 30 September 2020

Table 1 – Situation of expenditure

	<b>Awarded contract sum for the contracts  ( \$ million )</b>	<b>Cumulative expenditure of awarded contracts  ( \$ million )</b>	<b>Estimated amount of unresolved claims*  ( \$ million )</b>
Civil works	43,934.8	47,035.9	1,194.4
E&M works	13,902.5	7,743.9	1,011.8
<b>Total</b>	<b>57,837.3</b>	<b>54,779.8</b>	<b>2,206.2</b>

\* The estimated amount of unresolved claim: Amount claimed (\$3,277.9 million) – Interim award (\$1,071.7 million) = \$2,206.2 million (See Table 2)

Table 2 – Situation of substantiated claims

	Claims resolved			Claims unresolved		
	Number	Amount claimed ( \$ million )	Amount awarded (\$ million)	Number	Amount claimed (\$ million)	Interim award (\$ million)
Civil works	432	4,273.0	2,193.3	490	1,880.4	686.0
E&M works	51	333.9	131.3	134	1,397.5	385.7
<b>Total</b>	<b>483</b>	<b>4,606.9</b>	<b>2,324.6</b>	<b>624</b>	<b>3,277.9</b>	<b>1,071.7</b>

1. The Government and the Corporation conducted risk assessment at the planning and budgeting stages of the project to minimise claims arising from the works. Nevertheless, there were often unforeseeable situations in the course of works. For instance, the foundation or excavation works might come across a larger amount of or more complicated obstructions than expected. As this would add difficulties to the works, the contractors might have to use more machines or switch to other machines that were more suitable and employ more staff to cope with these situations. The contractors would submit claims in accordance with the contract terms to cover the additional expenditures. Upon receipt of claims from contractors, the Corporation would examine such claims and assess the amount concerned based on the relevant contract terms, justifications, documents, records, etc.

2. As at 30 September 2020, the Corporation has received 1,107 substantiated claims and the amount claimed in total was about \$7,884.8 million, representing 13.6% of the awarded contract sum for the contracts. The Corporation has been discussing the details of the claims with the contractors concerned, and thoroughly assesses the amount claimed. The Corporation processes each claim in

accordance with the provisions of the relevant contracts, and the contractors have to provide sufficient justifications and information. As at 30 September 2020, 483 cases were resolved and about \$2,324.6 million was awarded, representing about 4.02% of the awarded contract sum for the contracts. Having regard to the progress of the relevant assessment and discussion, interim awards amounting to about \$1,071.7 million have been made for some cases.

**Overall works progress of the SCL as at 30 September 2020**

Overall works completed : 95%

(A) Cumulative progress of 28<sup>(1)</sup> major civil contracts awarded :

<b>Contract No.</b>	<b>Contract Name</b>	<b>Percentage completed</b>
1101	Modification of Ma On Shan Line	100%
1102	Hin Keng Station and Approach Structures	100%
1103	Hin Keng to Diamond Hill Tunnels and Fung Tak Public Transport Interchange	100%
1106	Diamond Hill Station Extension	100%
1107	Diamond Hill to Kai Tak Tunnels	100%
1108	Kai Tak Station and Associated Tunnels	100%
1108A	Kai Tak Barging Point Facilities	100%
1109	Stations and Tunnels of Sung Wong Toi and To Kwa Wan stations	100%
1111	Hung Hom North Approach Tunnels	100%
1112	Hung Hom Station and Stabling Sidings	99%
1113	Reprovisioning of New Territories South Animal Management Centre and Shatin Plant Quarantine Station	100%
1114	Pedestrian Links at Tsz Wan Shan	100%
1117	Pat Heung Depot Modification Works	100%
1119	Trackwork and Overhead Line Modification Works at Lo Wu and PHD	100%
1120	Trackwork and Overhead Line for SCL Phase 1	100%
1120B	Trackwork and Overhead Line for SCL Phase 2	93%
1121	EAL Cross Harbour Tunnels	99%
1122	Admiralty South Overrun Tunnel	100%
1123	Exhibition Centre Station and Western Approach Tunnel	90%
1124	Admiralty SCL Related Works	92%

1125	Police Sports and Recreation Club Enhancement Works	100%
1126	Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool	100%
1128	South Ventilation Building to Admiralty Tunnels	95%
1129	SCL - Advance Works for Cross-harbour EAL	100%
11209	Platform Modification and Associated Works at EAL	100%
11227	Advance Works for EAL Cross Harbour Tunnels	100%

Note:

- (1) The 28 awarded major civil contracts as mentioned in Paragraph 58 of this report include Contracts 11230 and 11241. Contract 11230 is a tenancy agreement for the Joint Site Office for Contracts 1123 and 1128, and it is part of the project cost for Contracts 1123 and 1128. Contractor 11241 is the archaeological survey for connection to Pak Tai Street. As these two contracts involve no civil construction works, they are not included in the table above.

(B) Cumulative progress of 30 major E&M contracts awarded :

<b>Contract No.</b>	<b>Contract Name</b>	<b>Percentage completed</b>
1141A	New Rolling Stock for SCL Phase 1	100%
1141B	New Rolling Stock for SCL Phase 2	70%
1151	Rolling Stock Modification and New Train Cars for SCL Phase 1	100%
1152	Signalling System for SCL Phase 1 & Signalling System Modification for MOL and WRL	99%
1152B	Signalling System for SCL Phase 2	87%
1153	Tunnel ECS for SCL Phase 1	100%
1153B	Tunnel ECS for SCL Phase 2	66%
1154	Platform Screen Doors for SCL Phase 1 & APG Retrofit for MOL	100%
1154B	Platform Screen Doors for SCL Phase 2 & APG Retrofit for EAL	53%
1155	Power Supply System and Trackside Auxiliaries for SCL Phase 1	100%
1155B	Power Supply System and Trackside Auxiliaries for SCL Phase 2	96%
1159	Lifts for SCL Phase 1	100%
1162	TETRA System for SCL Phases 1 & 2	99%
1162B	Radio Distribution Network System for SCL Phases 1 & 2	93%
1163	AFC System and SAM System for SCL Phases 1 & 2	85%
1164	Building Services for Diamond Hill Station	100%
1164B	Building Services for SCL Hong Kong Island Section	53%
1165	Building Services for Hin Keng Station, Ma Chai Hang Ventilation Building and Fung Tak Emergency Access	100%
1166	Main Control System for SCL Phase 1	100%
1166B	Main Control System for SCL Phase 2	84%
1169	Communications System for SCL Phase 1	100%
1169B	Communications System for SCL Phase 2	66%

1172	Escalators for SCL Phase 1	100%
1172B	Lift and Escalators for SCL Phase 2	56%
1173	Building Services for Hung Hom Station and Hung Hom Stabling Sidings	99%
1175	Building Services for Kai Tak Station	100%
1176	Building Services for Sung Wong Toi Station and Ancillary Building	100%
1177	Building Services for To Kwa Wan Station and Ancillary Building	100%
1183	EAL Signalling System Modification	100%
1191	Floodgate System for SCL Phase 2	98%

# 宋皇臺 站工地考古文物保育方案

## 附件三 Annex 3

### Conservation Options for Archaeological Features Discovered at Sung Wong Toi Station





# 行人隧道 C 的走線 Alignment of Adit C

附件四 Annex 4



Existing pedestrian crossing  
原有行人過路處