

**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 June 2016)**

**Introduction**

This paper reports to Members on the progress of the main construction works of the Shatin to Central Link (“SCL”) as at 30 June 2016.

**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. SCL will have ten stations. Apart from bringing improvements to the existing Tai Wai Station, the SCL project will involve construction of new stations or extension of existing stations at Hin Keng, Diamond Hill, Kai Tak, To Kwa Wan, Ma Tau Wai, 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 SCL and South Island Line (East)(“SIL(E)”), as well as passengers of SCL and Kwun Tong Line Extension (“KTE”) respectively.

4. The Approved Project Estimate for the entire SCL project is \$79,800 million<sup>1</sup> (in money-of-the-day prices) and the project is funded by the Government under the “concession approach”. On 18 February 2011, the Finance Committee of the Legislative Council approved the funding applications for “63TR – Shatin to Central Link – advance works – remaining 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 the MTR Corporation Limited (“MTRCL”) entered into an agreement for entrusting to the latter the advance works of SCL at the expanded Admiralty Station and Homantin Station while implementing SIL(E) and KTE respectively. The advance works commenced in May 2011.

5. Subsequently, on 11 May 2012, the Finance Committee of the Legislative Council approved the funding applications 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. 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. Upon expansion, Admiralty Station will become an integrated station serving passengers of SCL and SIL(E). Hence, except for the construction cost (about \$300 million in money-of-the-day prices) of the overrun tunnel of SCL which would be fully absorbed by the SCL project, the construction cost of the expansion works of Admiralty Station will be apportioned between SCL and SIL(E) projects at a ratio of 70:30 in accordance with the estimated patronage at peak hours at the station. According to the cost estimate in 2011, SCL project has to share about \$2,700 million (in money-of-the-day prices) for the costs of building works, building services works, electrical and mechanical (E&M) works

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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 \$7,700 million (in money-of-the-day prices); and (iii) Main Works (**61TR** and **62TR**) of about \$71,400 million (in money-of-the-day prices).

for the portion of SCL at Admiralty Station. Besides, the SCL project has to share about \$350 million (in money-of-the-day prices) for the construction costs of the portion of ventilation facilities at Admiralty Station for SCL. Hence, the SCL will have to share an overall cost of about \$3,350 million (in money-of-the-day prices) for the advance works at Admiralty Station. MTRCL advised the Highways Department (“HyD”) on 12 August 2015 that the completed cost estimate review of the expansion works of Admiralty Station of SIL(E) indicated an upward adjustment of the relevant cost of expansion works of Admiralty Station to be shared by SCL. According to the apportionment ratio of 70:30 above, the cost shared by the advance works of SCL has to be adjusted upward from about \$3,350 million to about \$4,650 million with an increase of about \$1,300 million. HyD has provided comments and raised questions on the information provided by MTRCL. MTRCL has provided further information for the examination of HyD, with the assistance of its monitoring and verification consultant.

7. Ho Man Tin Station is also an integrated station serving passengers of both SCL and KTE. The construction cost of Ho Man Tin Station is also apportioned between SCL and KTE projects at a ratio of about 74:26 in accordance with the estimated patronage at peak hours at the station. According to the cost estimate in 2011, the SCL project has to share about \$2,900 million (in money-of-the-day prices) for the costs of building works, building services works, E&M works for the advance works of SCL at Ho Man Tin Station. According to the information provided by MTRCL to HyD on 12 August 2015, the relevant construction cost of Ho Man Tin Station shared by SCL would remain within the budget.

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

8. The progress report of the SCL project as at 30 June 2016 submitted by MTRCL is at **Annex 2**. The analysis and supplement made by HyD on the progress report are provided below.

## Tai Wai to Hung Hom Section

### Shatin Section (Section of Railway between Tai Wai Station and Ma Chai Hang, Wong Tai Sin, including Hin Keng Station and Modification of Station Platforms of Ma On Shan Line)

9. The progress of Hin Keng Station, the associated connecting elevated and at-grade track works and the modification of station platforms of Ma On Shan Line are generally in line with the planned programme. The Automatic Platform Gates (“APG”) at Tai Wai Station have been in operation since February 2016, while the installation works for the APG at other stations of Ma On Shan Line continue. Building services works, E&M works and track laying works for Hin Keng Station and the connecting tunnel are still in progress.

10. Water-proofing system installation works and tunnel lining construction inside the Hin Keng to Ma Chai Hang tunnel were completed. Preparation works for the track laying works have commenced since August 2016.

### Wong Tai Sin Section (Section of Railway between Ma Chai Hang, Wong Tai Sin and Kai Tak Station, including Diamond Hill Station)

11. The excavation of the two sections of tunnels from Kai Tak Station to Diamond Hill Station and from Diamond Hill Station to Ma Chai Hang was completed. Track laying works and the required preparation works have commenced since August 2016.

12. The construction of the main structure of Diamond Hill Station was substantially completed. Building services works, E&M works and track laying works for the station are still in progress. Besides, the construction of emergency access point at the junction of Wong Tai Sin Road and Sha Tin Pass Road continues. The construction of the Public Transport Terminus adjacent to the emergency access point continues, and the progress is generally in line with the planned programme. It is anticipated that the structure works would be completed in 2016. The drill and blast works for the ventilation tunnel starting from the works site at Ma Chai Hang Recreation Ground were completed, and tunnel lining construction is still in progress in September 2016.

13. Regarding the improvement works of the pedestrian connecting facilities between Tsz Wan Shan area and Diamond Hill Station of SCL (the layout plan of the pedestrian connecting facilities at **Annex 3**), 6 out of the 15 items of facilities have already been opened for public use since January 2016. Another 7 items are anticipated to be opened to public in the fourth quarter of 2016, including the lift tower at Ching Hong House of Tsz Ching Estate, the footbridge at Yuk Wah Street, the lift tower next to Tsz Lok Estate Ancillary Facilities Block, the two covered walkways at Po Kong Village Road, the additional lift towers at Po Kong Village Road and Fung Tak Road footbridge, as well as the lift tower at Lung Poon Street. Regarding the remaining two items, i.e. the footbridges along Wan Wah Street and Yuk Wah Street, it is anticipated that they would be completed in the third quarter of 2017.

*Kowloon City Section (Section of Railway between Kai Tak Station to Ho Man Tin Station, including To Kwa Wan Station and Ma Tau Wai Station)*

*Kai Tak Station*

14. Kai Tak Station is located inside the Kai Tak Development Area. The construction of the main structure of the station, and the tunnel structures between Kai Tak Station and To Kwa Wan Station were completed. The fitting-out works, E&M works and track laying works in the station and tunnels are in progress. The fitting-out works of the entrances are also underway.

*To Kwa Wan Station*

15. Under the close supervision of the Antiquities and Monuments Office (“AMO”), the independent archaeologist team completed the archaeological excavation at the end of September 2014. The Antiquities Authority (i.e. the Secretary for Development), after considering the views of the Antiquities Advisory Board, the Legislative Council and the Kowloon City District Council, decided on the conservation options on 8 December 2014 with most of the archaeological discoveries preserved in-situ. The archaeological remnants to be preserved in-situ have to be protected by backfilling of protective materials. Under the close supervision of AMO, the protective works for the remnants to be preserved in-situ were completed in May 2015. Regarding Well J2 and the water channel, they were removed piece by piece by hand in March 2015 after detailed

recording and under the close supervision of AMO. The components are stored properly for future reinstatement.

16. Moreover, as we stated in the papers submitted to the LegCo Subcommittee on Matters Relating to Railways (“RSC”) and Panel on Development in November 2014, due to the preservation in-situ of the remnants at and in the vicinity of Adit C connecting the station and Pak Tai Street (i.e. items 6 to 10 of the archaeological features at **Annex 4**), the entire alignment of the adit would be seriously affected. It would be necessary to find a suitable alternative alignment for the construction of the adit. Since the area around the adit has been designated as a temporary works site for the construction of the station and the railway tunnel. It is anticipated that the area can be made available for further investigation by the relevant department when the respective works are completed in the second half of 2017. In other words, Adit C connecting the station and Pak Tai Street would not be completed at the same time as To Kwa Wan Station. A temporary access at grade would be required to connect the station entrance. In case no suitable alternative alignment could be identified eventually as a result of further archaeological discoveries or other site constraints, residents in the vicinity of Pak Tai Street might need to use the existing pedestrian crossing facilities at Ma Tau Chung Road to gain access to To Kwa Wan Station. MTRCL is exploring the feasibility of adding an at-grade crossing at a suitable location of Song Wong Toi Road (see **Annex 5**) for reducing the walking distance between Pak Tai Street and the station entrance.

17. The construction works of To Kwa Wan Station fully resumed in March 2015. The excavation of the station was substantially completed in December 2015. MTRCL is carrying out the structural works of the station in full swing. The TBM works for the down-track tunnel from To Kwa Wan Station to Ho Man Tin Station were completed in April 2016. On the other hand, the TBM works for the up-track tunnel from To Kwa Wan Station to Ho Man Tin Station was completed in August 2016. As at 30 June 2016, MTRCL estimated that the archaeological works would result in a delay of at least 11 months and a minimum additional cost of about \$4.1 billion to the “Tai Wai to Hung Hom Section” of SCL. However, the ultimate implication is subject to the final assessment of MTRCL and the verification of HyD.

### *Ma Tau Wai Station*

18. Ma Tau Wai Station is an underground station beneath Ma Tau Wai Road. The station is being constructed by a top-down method. To cater for the construction of the station, the traffic diversion scheme implemented at a section of Ma Tau Wai Road between Chi Kiang Street and Sheung Heung Road continues. Two southbound traffic lanes and a single northbound lane would be maintained. MTRCL is carrying out the excavation and structural works of the station in full swing. Construction of the station concourse and upper platform was completed in November 2015 and March 2016 respectively. It is anticipated that the excavation and construction of the station lower platform would be completed by the first quarter of 2017. The progress is generally on schedule.

### *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)*

19. As the tunnelling works of SCL to the north of Hung Hom Station have to be carried out on a very busy road and along the operating East Rail Line, it is necessary to exercise due care to prevent the construction from affecting the busy road sections nearby. Temporary traffic diversions along Chatham Road North for the tunnelling works were fully implemented at the end of 2014. So far, the traffic has been generally smooth. For the construction work of the section between Ho Man Tin Station and Hung Hom Station, construction of tunnel structural work has been substantially completed. For the section near Oi Sen Path south of Princess Margaret Road southbound, installation of noise enclosure, and excavation and structural works of the tunnels near Princess Margaret Road connecting the East Rail Line and the new platforms of Hung Hom Station continue. The construction works at Hung Hom Station have to be carried out underneath the existing station podium. The limited space available has rendered the construction highly difficult and the works must be carried out in a prudent manner. The impact of the limited working space has led to a delay of about 4 months. MTRCL and the contractor continue to adjust the work sequences and have also deployed additional machinery and manpower in order to recover some of the delay of the works at Hung Hom Station.

## Hung Hom to Admiralty Section

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

20. The main construction works of the Cross Harbour Section continue. The temporary marine cofferdam at Hung Hom landfall was completed. The contractor is carrying out tunnel excavation works in the temporary marine cofferdam. For the preparation for the future placement of immersed tube tunnel units, the dredging works at the seabed of Victoria Harbour and Causeway Bay Typhoon Shelter (“CBTS”) continue. Also, the construction of the immersed tube tunnel units continues. The current progress is generally on programme.

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

21. The advance works for the Hong Kong Island Section continue. The foundation works for the re-provisioning of Harbour Road Sports Centre were completed and construction of superstructure is in progress. Meanwhile, the modification works for the foundation of flyovers were completed.

22. The advance works for the excavation of railway tunnels, including ground stabilization, diversion of underground utilities, as well as investigation and removal of underground obstructions etc. are underway along the tunnel alignment and at the portal area of the Cross-Harbour Tunnel, Wan Shing Street, Marsh Road and the ex-Wan Chai West Preliminary Treatment Works. The progress is on schedule. The excavation works of the up-track TBM tunnel from CBTS to Exhibition Station were completed in July 2016. The excavation of the down-track tunnel of the same section commenced in August 2016. Besides, the excavation of the launching shaft for the other TBM installations at Fenwick Pier Street work site is still in progress in September 2016.

23. Construction of Exhibition Station at the ex-Wan Chai Ferry Pier Public Transport Interchange continues according to the schedule. The works include construction of diaphragm walls and pipe piling works. To allow flexibility for the construction of convention facilities above Exhibition Station, a certain part of the enabling works for the topside development would be incorporated into the underground structure of Exhibition Station. Based on the currently available information on the geological condition, it is initially estimated that this would result in a delay of at least 5 months for the construction of Exhibition Station and



an increase in construction cost.

24. Regarding the large metal object found on the seabed within the reclamation area under Wan Chai Development Phase II (“WDII”), the Civil Engineering Development Department (“CEDD”) removed it from the reclamation site in June 2015. The reclamation works at the location concerned were completed and associated works are underway. Originally, the reclaimed land would be handed over to the contractor of SCL at the end of December 2016. As the discovery of the metal object had affected the progress of reclamation works there, CEDD indicated that the handover date of part of the works area would still be deferred by 7 months. HyD and MTRCL will continue to liaise with CEDD on the handover arrangement of works areas.

25. In addition, as mentioned in previous progress reports, CEDD estimated that the handover date of the associated critical work sites adjoining the junction of Expo Drive East and Convention Avenue would be deferred by about 6 months. CEDD has been implementing measures to catch up with part of the works progress and most of the work sites could be handed over to MTRCL in accordance with the original schedule. It is estimated that the original delay of 6 months for the handover dates of other critical work sites would also be shortened. For those remaining work sites which could not be handed over as scheduled, HyD and MTRCL will continue to discuss further with CEDD on measures to minimise the risk of delay to SCL as far as possible.

26. Since parts of Exhibition Station are located underneath roads in Wan Chai North where the traffic is busy, the main construction works for the station have become highly complicated and there are risks to the progress of construction. It is anticipated that the overall 6-month delay in the completion of Exhibition Station and the “Hung Hom to Admiralty Section” of SCL will remain. As a result, the commissioning date of the “Hung Hom to Admiralty Section” would be deferred to 2021. Besides, apart from the additional construction cost arising from the enabling works at Exhibition Station, the construction delay as a result of the deferred handover of work sites may also lead to additional construction cost.

## **Conclusion**

27. In view of the above assessments mentioned in paragraphs 9 to 26 and 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 To Kwa Wan Station earlier on, HyD will co-ordinate and oversee the construction of SCL so that MTRCL could try its best to recover some of the delay to the “Tai Wai to Hung Hom Section”, with a view to commissioning the “Tai Wai to Hung Hom Section” in 2019 as far as possible. Due to the impact of site handover arrangement of WDII and to allow flexibility for the construction of new convention facilities above Exhibition Station, the commissioning date of the “Hung Hom to Admiralty Section” will be deferred to 2021.

28. MTRCL is conducting a cost review of the entire SCL in phases, including the additional construction costs for the advance works of SCL at Admiralty Station and Ho Man Tin Station, and the additional costs for the main works of SCL arising from the archaeological and conservation works, the enabling works to cater for the topside development, as well as the deferred site handover. MTRCL advised that as the current contingency of the advance works of SCL will not be sufficient to meet the additional costs of the related advance works (preliminary estimate of MTRCL of about \$1,300 million (see paragraph 6 above)). Hence, upon scrutiny of the additional costs, we will seek additional funding from the Legislative Council as soon as possible in order to meet the payments for the additional costs.

29. Besides, MTRCL advised in June 2016 that due to the complexity of the SCL project, coupled with the fact that the “Hung Hom to Admiralty Section” was just about 30% complete and the remaining 70% of works would still be subject to the impacts of various factors, it could only conduct a more realistic cost review of the main works of SCL in the second half of 2017 in order to come up with a better estimate of the construction cost of the main works. As the current contingency of the main works of SCL will not be sufficient to meet the additional costs of the main works, upon scrutiny of the additional costs, we will seek additional funding from the Legislative Council in due course in order to proceed with the main works.

30. SCL is a major underground infrastructure project of a considerable scale. There are various difficulties and challenges encountered in the course of construction. It is unavoidable that there are deviations from the original plan for individual works contracts. MTRCL has adjusted its works procedures having regard to the actual situation of work sites. Additional manpower and machinery have also been deployed in order to overcome the difficulties. The Government

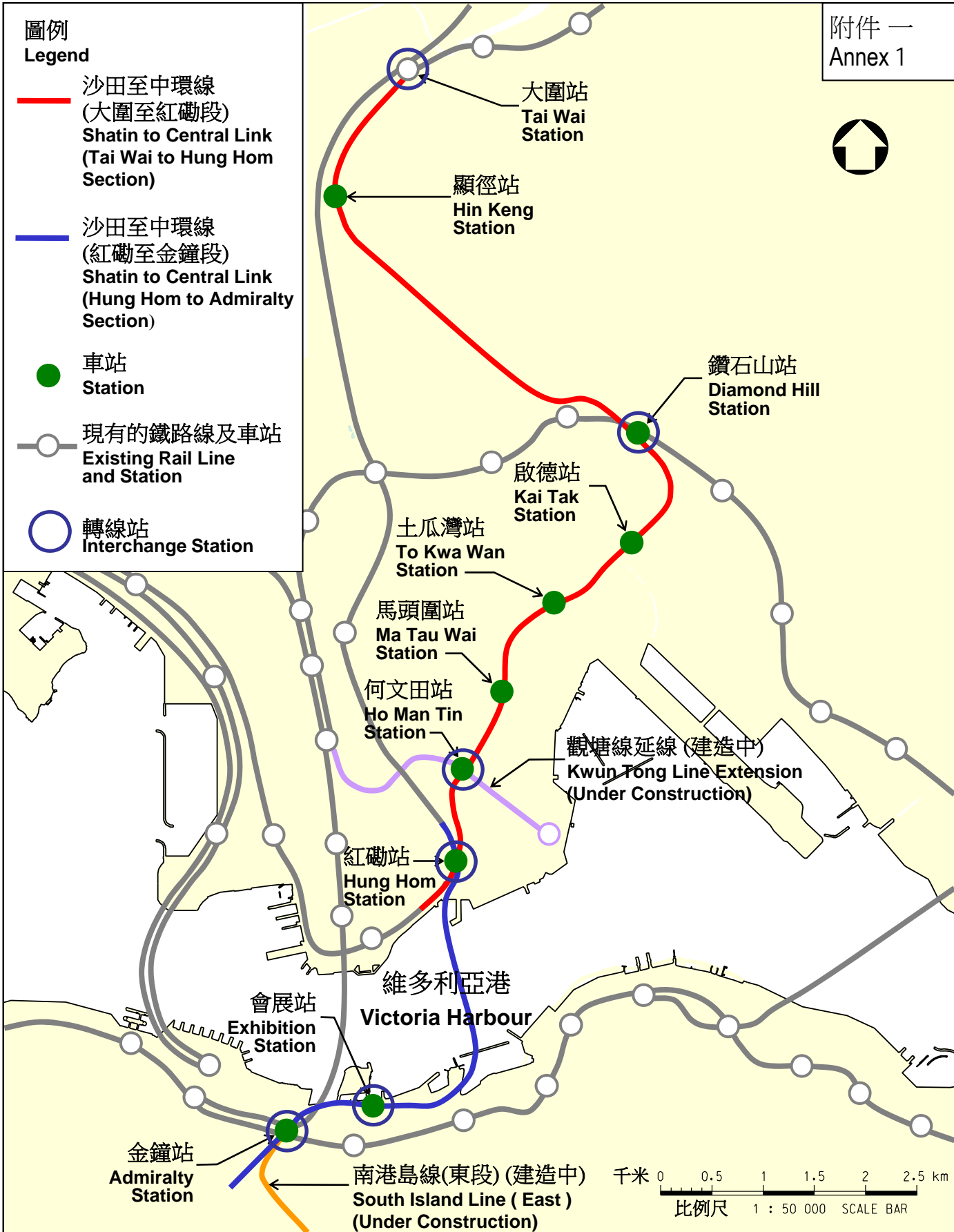
will closely monitor the progress of works and the construction. It will also assist MTRCL to resolve the problems encountered in the course of construction as early as possible and conduct timely reviews of the commissioning programme taking into account the latest situation of the works.

**Transport and Housing Bureau  
Highways Department  
September 2016**



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.

HRWSC003-SK0437

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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  
(As at 30 June 2016)**

**INTRODUCTION**

This report aims to update Subcommittee members on the progress of Shatin to Central Link (“SCL”) as at 30 June 2016.

**OVERVIEW OF THE SCL PROJECT**

Cost and expenditure

2. Since mid-2012, 26 major civil and 28 major electrical & mechanical (“E&M”) contracts<sup>1</sup>, together with other minor contracts, have been awarded with a total sum of \$56.946 billion. The contract sums for civil works and E&M works are about \$43.528 billion and \$13.418 billion respectively (Please refer to Enclosure I).

3. 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. As previously reported, currently the East-West Corridor (“EWC”) and North-South Corridor (“NSC”) are expected to be completed in 2019 and 2021 respectively.

Works progress

*Overall progress*

4. As at 30 June 2016, the overall works for SCL were 59% complete compared to the planned completion rate of 65% against the original project completion target in 2018 for EWC and 2020 for NSC

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<sup>1</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.

respectively (Please refer to Enclosure II for details). The progress below is also measured against the original programme. As reported before, the construction works were affected by various factors, including the archaeological works at To Kwa Wan Station site, late land handover in Wan Chai North, and complicated underground conditions. During this reporting period, construction works are on the right track and in line with the current completion dates for EWC and NSC in 2019 and 2021 respectively.

5. With the continuous efforts of the construction team, around 74% of the works of the EWC have been completed as at 30 June 2016 compared to the originally planned completion rate of 83% (based on the original commissioning date of 2018). As noted, due to the archaeological finds, it is anticipated that EWC will now be completed in 2019. Key progress achievements include:

- a. **The full 11-km EWC tunnel has been bored through in August 2016.** The completion of the tunnel excavation from To Kwa Wan Station to Ho Man Tin Station represents the breakthrough of whole 11-km EWC tunnel from Sha Tin to Hung Hom; and
- b. **The third EWC station topped out.** Diamond Hill Station extension was topped out in June 2016. Fitting-out, E&M and track works are now in full-swing. A new lift and a new escalator in the existing Diamond Hill Station were also opened for public use in June and July 2016 respectively. As the interchange station between the existing Kwun Tong Line and the SCL, Diamond Hill Station will be transformed into a major railway hub of East Kowloon.

6. NSC works are in progress. With a number of works fronts opening up, NSC was 35% complete in overall terms as at 30 June 2016 compared to the originally planned completion rate of 37%. Notable progress has been made during the reporting period:

- a. **Modification works of Hung Hom Station northern concourse commenced.** Following the opening of the southern concourse at the end of March 2016, modification works are now being carried out at the northern concourse and expected to be completed in mid-2017;

- b. **The tunnel boring machine (“TBM”) on Hong Kong Island “Athena” has accomplished its first mission.** In early July, “Athena” completed her first drive to excavate a section of up-track tunnel of around 600-metre-long from Causeway Bay Typhoon Shelter (“CBTS”) to Exhibition Station; and
- c. **The casting of the immersed tube (“IMT”) units is progressing as planned.** All 11 pre-cast units are under construction and are expected to be completed in the first quarter of 2017. The finished IMT units will then be towed from ex-Shek O Quarry to Victoria Harbour for installation from mid-2017 onwards.

7. In addition to the SCL construction works, delivery of new trains, conversion of existing trains and train tests are progressing as planned. New 8-car trains for EWC are being delivered to Hong Kong in batches since June 2016. 8-car train conversion of West Rail Line (“WRL”) is underway. Seven 8-car trains have been put into service and are running smoothly, relieving crowdedness on WRL. At the same time, other improvement works for the operating railway are also underway, including retrofitting of Automatic Platform Gates (“APG”) at the stations of Ma On Shan Line (“MOL”), and platform strengthening works at the stations of East Rail Line (“EAL”). The replacement works of the signalling system of EAL is now in full swing, while installation of signalling equipment and cable laying works for new signalling system are being carried out at the stations and trackside along the EAL during non-service hours. Testing of the new signalling system is being conducted in phases starting from the third quarter of 2016.

*Progress in different sections*

- 8. SCL comprises six sections according to geographical locations -
  - (i) Shatin Section;
  - (ii) Wong Tai Sin Section;
  - (iii) Kowloon City Section;
  - (iv) Hung Hom Section;
  - (v) Cross Harbour Section; and
  - (vi) Hong Kong Island Section.
- (i) Shatin Section (Section of railway between Tai Wai Station and Ma Chai Hang in Wong Tai Sin)

9. Fitting out works for Hin Keng Station are at an advanced stage. Installation works of building services and E&M equipment are being carried out in full swing in the station. Track works have also commenced in the station.



Location map of Hin Keng Station and associated tunnel structures

10. Regarding the viaduct and at-grade tunnel box connecting Hin Keng Station, backfilling and external finishing works are in progress. Track works are being carried out inside the viaduct and at-grade tunnel box concurrently.



Hin Keng Station and part of the viaduct

11. Subsequent to the breaking through of the tunnel section inside Lion Rock constructed by drill and blast method in early November 2015, tunnel lining works have also been completed in mid-May 2016. As previously reported, because of the complicated geological conditions under the Hin Keng portal area of Lion Rock, the progress of tunnelling



works was behind the original schedule. In order to speed up the works programme, a number of mitigation measures were taken, including increase in blasting charge and re-sequencing of the construction process. The mitigation measures successfully recovered some of the delays. As of 30 June 2016, construction of the internal tunnel structures including partition walls and walkways were about 95% complete. Track-laying works will follow.



Tunnel inside Lion Rock

(ii) Wong Tai Sin Section (Section of railway between Ma Chai Hang and Kai Tak Station)

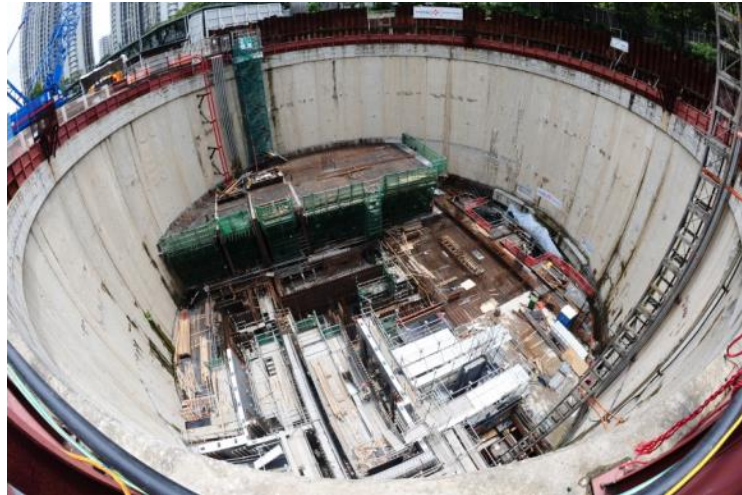
12. The down-track tunnel from Ma Chai Hang to Diamond Hill was broken through in April 2016. Internal structural works are in progress to prepare for track laying.



Internal structural works at down-track tunnel from Diamond Hill to Ma Chai Hang

13. At Ma Chai Hang, excavation for the ventilation shaft and the ventilation tunnel has been completed. Structural works for the

ventilation shaft and tunnel lining works for the ventilation tunnel are now underway.



Structural works for the ventilation shaft at Ma Chai Hang



Tunnel lining works for the ventilation tunnel at Ma Chai Hang

14. Construction of the Fung Tak Emergency Access Point at the junction of Wong Tai Sin Road and Sha Tin Pass Road is in progress and is expected to be completed by the first quarter of 2017. Structural works for the adjacent Public Transport Terminus are underway and are expected to be completed by 2016. E&M and building service works will follow.

15. After the topping out of the Diamond Hill Station extension in early June, fitting-out, E&M and track works are in full-swing. The construction of a new entrance adjacent to the existing Entrance B has also commenced. Part of the site area has been handed-over to Housing Authority for carrying out advance works for the future public housing development over the previous Tai Hom Village site.



Expansion works for Diamond Hill Station

16. Modification works continue at the existing Diamond Hill Station to transform it into an interchange station of the existing Kwun Tong Line and SCL. The external lift at Entrance A1 was open for public use in end-June 2016 while another new escalator in the existing station was open in July 2016. The first stage construction works of the two pedestrian subways connecting the existing Diamond Hill Station and its extended part were completed in November 2015. To facilitate the construction of the remaining pedestrian subways works, the temporary traffic diversion is on-going at Lung Cheung Road while the final stage of the diversion has been implemented in late August 2016. The number of traffic lanes at Lung Cheung Road remains unchanged.

17. Excavation works of the cross passage between the up-track and down-track TBM tunnels from Kai Tak to Diamond Hill have been completed.

18. As part of the SCL, certain improvement works related to improving the connectivity of pedestrian facilities to Diamond Hill Station have been entrusted to the Corporation by the Government. This includes the provision of footbridges, covered walkways, lifts and escalators in Tsz Wan Shan area. Tsz Wan Shan is a densely populated area and works site are close to residential blocks. Some of the facilities and the related temporary traffic management schemes have been revised in order to minimise the potential impacts on the residents. Some works have encountered unexpected and complicated geological condition, as well as complications caused by underground utilities. As a result, the original programme was affected. The contractor is striving to carry out works at different locations in parallel to catch up on the programme.

The facilities are being opened progressively for public use starting from 2015. The facilities already opened for public in use include the covered walkways at Fung Tak Road and Tsz Hong Estate, the footbridge across Yuk Wah Street, and the lifts at Tsz Hong Estate, Tsz Lok Estate and Tsz Man Estate. Other facilities including the covered walkways and lifts at Po Kong Village Road, the lifts at Lung Poon Street and Tsz Wan Shan Road, and the staircase and escalator at Tsz Lok Estate are expected to be available for public use in the second half of 2016. Completion of the remaining two facilities at Wan Wah Street and Yuk Wah Street is expected in the third quarter of 2017.

(iii) Kowloon City Section (Section of railway between Kai Tak Station and Ho Man Tin Station)

19. Fitting out, E&M and track works are ongoing at Kai Tak Station. Meanwhile, the structural works for the two station entrances have been substantially completed and fitting out works are in progress. The cut-and-cover tunnels between Kai Tak Station and To Kwa Wan Station have been completed.



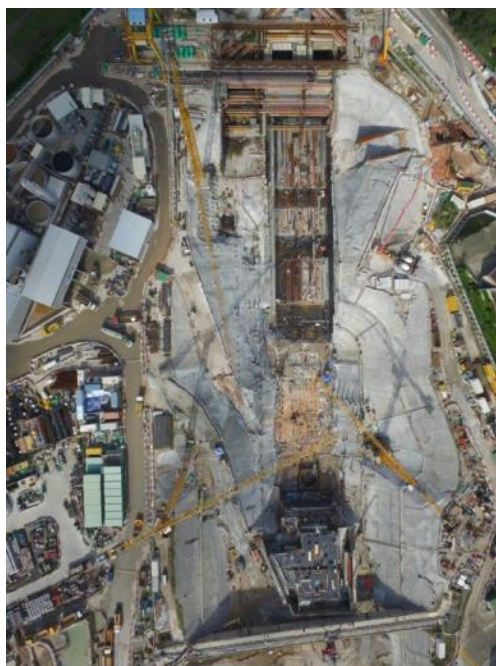
Entrance D and Ventilation Shaft Building at Kai Tak Station

20. As previously reported, the archaeological works at To Kwa Wan Station have caused a delay of at least 11 months to the original programme of the Tai Wai to Hung Hom Section. The delay recovery measures planned for To Kwa Wan Station, Ma Tau Wai Station and the associated tunnels have been implemented in order to mitigate some of the delay caused by the archaeological works.

21. Structural works for To Kwa Wan Station are on-going with over 40% of the base slab having been completed. The excavation and



structural works for the adit connecting with the entrance at Nam Kok Road were 70% complete.



Structural works for To Kwa Wan Station

22. The TBM “Princess Iron Fan” has completed the last part of her drive for the up-track tunnel from To Kwa Wan Station to Ho Man Tin Station in August 2016.

23. Shaft excavation of the emergency access for the railway tunnels near Tam Kung Road is in progress and was 90% complete. Excavation of the adit connecting the shaft to the railway tunnels was 80% complete.

24. At Ma Tau Wai Station, excavation and structural works are ongoing underneath the station roof slab. Excavation has progressed down to the lower platform level. The excavation and structural works for the lower platform are expected to be completed by the first quarter of 2017. To facilitate the construction of the station, temporary traffic management arrangement was implemented in June 2016 to shift the works area to the middle of Ma Tau Wai Road. The traffic arrangement at Ma Tau Wai Road will continue with public access being maintained for two southbound and one northbound traffic lanes.

25. Excavation and structural works for the four station entrances, which are located at Lok Shan Road, Kiang Su Street, Ma Tau Wai Road (outside To Kwa Wan Market) and the junction between Chi Kiang Street and Ma Tau Wai Road, are in progress. Excavation for the ventilation

shaft in front of To Kwa Wan Market is on-going. At Chi Kiang Street, excavation of the emergency access shaft was about 70% complete.



Construction site of Ma Tau Wai Station

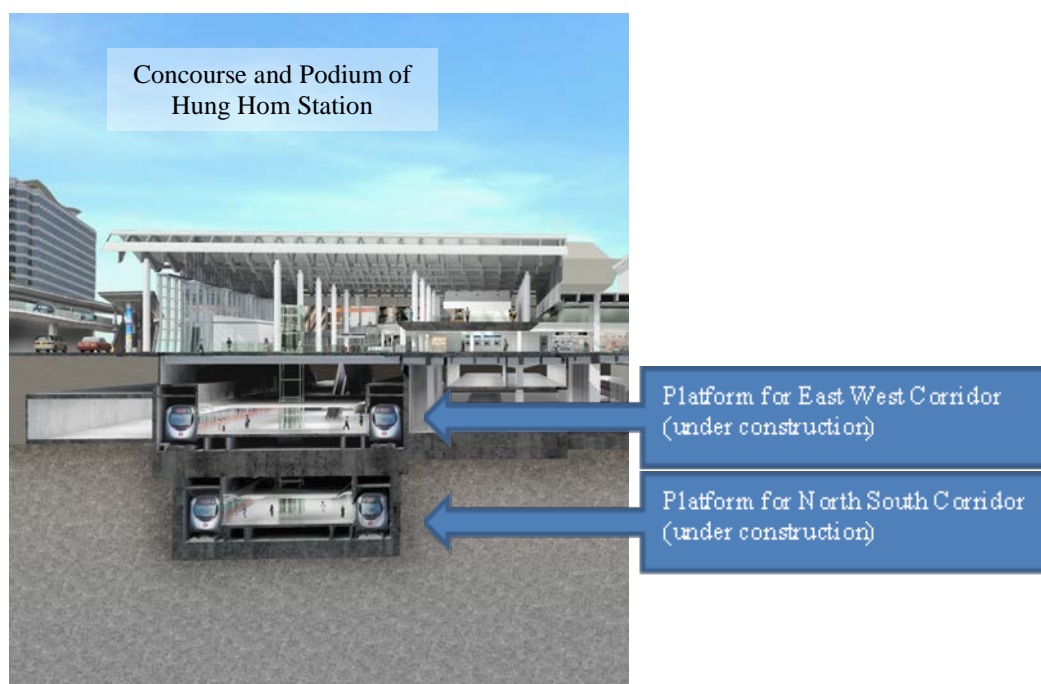
(iv) Hung Hom Section (Section of railway between Ho Man Tin Station and Hung Hom Station)

26. Under SCL, two railway tunnels are being constructed north of Hung Hom Station to connect the existing EAL and WRL to form the NSC and EWC respectively. For the future connection from Ho Man Tin Station to Hung Hom Station and the existing WRL, structural works of the tunnel have been completed. For the tunnel connecting with the existing EAL to form NSC, excavation works for tunnels and construction of new tracks near Oi Sen Path south of Princess Margaret Road are now underway.



Tunnel excavation under Chatham Road North and near Winslow Street

27. To facilitate the future railway operation, noise enclosures will be built along the new section of tracks near Oi Sen Path. Lifting and installation works of the noise enclosures are now underway and are expected to be completed by the end of 2016. As the construction site is in the vicinity of EAL, the construction team will carry out the works in a prudent manner and review the construction method and the works sequence from time to time to avoid disruption of the existing railway service, as well as minimise any impact on the existing foundations and underground utilities.



28. Hung Hom Station will become the interchange station of EWC and NSC of the SCL. To cater for the future railway services, two levels of new platforms designated for EWC and NSC are now being built under the existing station podium. To prepare for the future arrangements, modification works are now being carried out at the northern concourse until mid-2017.

29. The construction works of the new platforms in Hung Hom Station for EWC and NSC are in progress. Excavation for the new platforms has been completed and structural works are now underway. As previously reported, the works were about four months behind the original schedule due to the complicated geological conditions under the station podium, as well as limited space and headroom available for construction works. The contractor has deployed additional manpower and re-sequenced the works in order to catch up with the progress. We will ensure that the

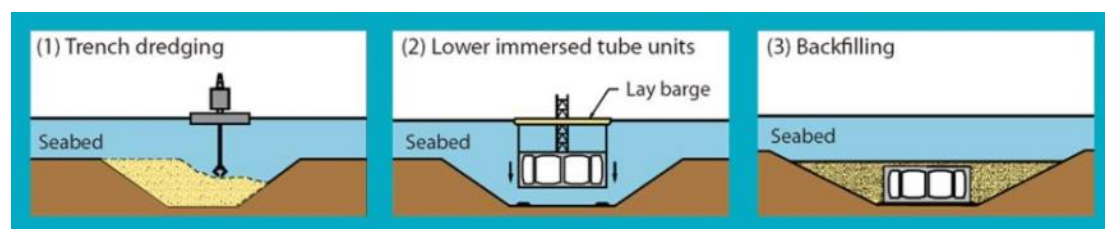
structural safety of the station and adjoining buildings will be maintained throughout the works.

30. To facilitate future railway operations, stabling sidings for EWC trains are now under construction at the former Hung Hom Freight Yard. Structural works, building services and E&M works are now underway.

(v) Cross Harbour Section (Section of railway across Victoria Harbour)

31. To extend the existing EAL across the Harbour to Hong Kong Island, a new cross-harbour rail tunnel will be built under the SCL project. A section of the cross-harbour rail tunnel near the seashore at Hung Hom will be constructed by cut-and-cover method within a temporary cofferdam. The construction of the temporary cofferdam has been completed although during construction unforeseen obstructions to pile-piling and sheet-piling have been encountered, requiring extra effort by the contractor to go through these obstructions. Water inside the cofferdam has been pumped out and the tunnel excavation works have also commenced in the third quarter of 2016.

32. The section of the cross-harbour rail tunnel between Hung Hom and Causeway Bay Typhoon Shelter (CBTS) will be constructed by IMT method (See the diagram below).



Construction Method of IMT

33. The fabrication of all IMT pre-cast units is progressing as planned. A total of 11 IMT pre-cast units are being fabricated in the casting yard located at the ex-Shek O Quarry and are expected to be completed in the first quarter of 2017. As at 30 June 2016, about 60% of the fabrication works was completed. The finished IMT units will be stored in the basin and then towed to Victoria Harbour for installation in mid-2017 onwards.





Casting yard of IMT pre-cast units

34. The trench dredging works for the section of IMT in Victoria Harbour continue. The dredging works are being carried out in phases in Victoria Harbour until 2017 to prepare for the placing of the gravel bed within the trench for the installation of the IMT units. Backfilling will be carried out after IMT installation.

35. To prepare for the installation of the IMT units inside CBTS, moorings within CBTS were adjusted in early June 2016 to vacate spaces for pipe piling and dredging works. Pipe piling and dredging works have commenced in the third quarter of 2016 to form the temporary breakwater facilitating the tow-in and installation of IMT units.

(vi) Hong Kong Island Section (Section of railway on Hong Kong Island ending at Admiralty Station)

36. The tunnels on Hong Kong Island are excavated by two TBMs, namely “Athena” and “Zhi-nu”. In late March 2016, “Athena” commenced its drive from the temporarily reclaimed land at CBTS to Exhibition Station to deliver the around 600-metre-long up-track tunnel. The tunneling works have been completed in early July 2016. “Zhi-nu” was successfully delivered to the temporarily reclaimed land at CBTS in June 2016 for assembly and has started the construction of the down-track tunnel heading towards Exhibition Station in August 2016.



Excavation of the up-track tunnel between CBTS and Exhibition Station was completed

37. At the works site of Fenwick Pier Street, the excavation of the TBM shaft is in progress as scheduled and is expected to be completed in September 2016. “Athena” will be re-assembled at this shaft after finishing her up-track tunnelling works from CBTS to Exhibition Station, and will then head towards Admiralty Station for the around 450-metre-long up-track tunnel in the second quarter of 2017.

38. To ensure smooth operation of the TBM, any known underground obstructions along the excavated tunnel have to be removed as part of the preparatory works including the removal of underground piles, diversions of underground utilities, as well as bridge underpinning, while ground stabilisation works have to be carried out along the tunnel alignment between CBTS and Admiralty Station. Pile extraction at Wan Shing Street was substantially completed in June 2016. Associated ground treatment works are scheduled to be completed in the third quarter of 2016. Additional unforeseen obstructions at Marsh Road were recently identified which also require removal prior to the TBM reaching this area.

39. At the former Police Officers’ Club (“the Club”) in Causeway Bay, foundations works for the ventilation facilities for the SCL cross-harbour tunnel were completed and excavation of the ventilation shaft has commenced in the third quarter of 2016. The area is also used to support the TBM works at the temporarily reclaimed land at CBTS.

40. In the Wan Chai North area, the Exhibition Station will be located under the former Public Transport Interchange (“PTI”), and, the former Wan Chai Swimming Pool and the Harbour Road Sports Centre. Construction works for the diaphragm walls of Exhibition Station and relevant railway facilities are underway. Due to limited works areas in

Wan Chai North, the carriageways of the Convention Avenue westbound were relocated into the site area in May 2016 as planned to create additional works areas for the construction of diaphragm walls for the Exhibition Station and relevant railway facilities. Tonnochy Road was shifted eastward slightly in late July 2016. Different stages of temporary traffic management arrangements along Convention Avenue, Fleming Road and Expo Drive East will be carried out progressively. Traffic lanes of the abovementioned roads will be diverted in phases while the number of traffic lanes will remain unchanged at peak hours.



Carriageways of the Convention Avenue westbound were relocated

41. The construction of the temporary footbridge connecting Great Eagle Centre / Harbour Centre with the ex-Wan Chai Ferry Pier was opened to public in mid-June 2016. The old footbridge was demolished in July 2016 to facilitate the construction of Exhibition Station.

42. Regarding the large metal object found on the seabed within the reclamation area under the Wan Chai Development Phase II (“WDII”) project, the Civil Engineering and Development Department (“CEDD”) removed it from the reclamation site in June 2015 to allow resumption of the reclamation works and relevant works. Originally, the reclaimed land will be handed over to the contractor of SCL at the end of December 2016. As the discovery of the metal object has affected the progress of reclamation works there, CEDD indicates that the handover date of part of the works areas would be deferred by seven months. Any further delay in site hand-over will result in corresponding delay to the completion of NSC. The Highways Department (“HyD”) and the Corporation will maintain liaison with CEDD on the handover arrangement of works areas.



Exhibition Station Construction Site

43. As previously reported, CEDD estimated that the handover date of the associated critical works sites adjoining the junction of Expo Drive East and Convention Avenue would be deferred for about six months. Since then, CEDD continues to implement measures with a view to catching up with part of the works progress in order to hand over the other works sites to SCL in accordance with the original schedule. Further discussion will be held among HyD, CEDD and the Corporation regarding the remaining work sites.

44. According to the latest information on the site handover schedules provided by CEDD, together with the progress of additional works incorporated into the underground structure of Exhibition Station to allow flexibility for future construction works above the station, the Corporation has explored possible measures to improve the progress, and will continue to maintain close communication with relevant government departments. We will closely monitor the latest situation regarding the timing of handing over works sites and strive to minimise the risks of delay. It is anticipated that the delay of six months in the completion of Exhibition Station will bring the completion of NSC to 2021.

45. To facilitate the construction of Exhibition Station, the current Harbour Road Sports Centre needs to be reprovisioned. Upon completion of the reprovisioning works of the swimming pool in October 2015, the construction of the new Sports Centre and Exhibition Station have commenced at the former swimming pool area. As at 30 June 2016, the foundation works and sub-structure works including the installation of underground utilities of the new Sports Centre have been completed. Major structural works are now underway.



## NEW TRAINS

46. New trains for NSC are being delivered to Hong Kong in batches. Stringent testing and commissioning for the delivered new trains are underway at Ho Tung Lau Depot. From December 2015 onwards, dynamic testing is also underway at the existing EAL during non-service hours. New trains are equipped with new design features including dynamic route map and gangway end display system.



New trains of NSC

47. New trains for EWC are being delivered to Hong Kong in batches. Stringent testing and commissioning for the delivered new trains are underway at Pat Heung Depot. Dynamic test is also underway at the existing WRL during non-service hours. Apart from the procurement of new trains, the existing WRL trains are being gradually converted into 8-car trains to facilitate the 8-car train operation in EWC. A total of seven 8-car trains have been put into service on WRL. The conversion of the 28 WRL trains will last for 30 months and is expected to be completed in 2018. When all 8-car trains are in service in 2018, the overall capacity on the WRL will be enhanced by about 14%.

48. Trains on MOL currently at 4-car train formation will be converted into 8-car train formation to facilitate the EWC operation. By making reference to the conversion process of WRL's 8-car train operation, the Corporation is now formulating a conversion plan for MOL. For better preparation for conversion, 8-car trains are undergoing dynamic tests during non-service hours.



New trains of EWC

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

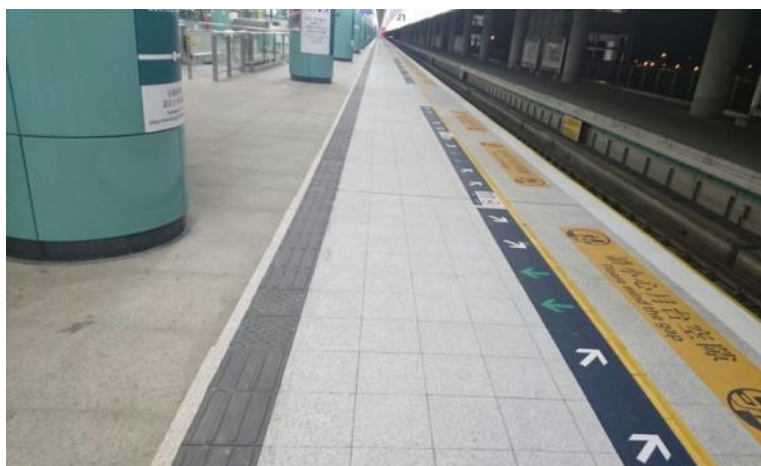
49. Extension of platforms and roofs along MOL has been substantially completed. E&M and fitting out works are expected to be completed by the end of 2016. The retrofitting works of APGs at Tai Wai Station have been completed, and retrofitting works are on-going at other stations. The Corporation is committed to completing the retrofitting works of APGs in the stations of MOL in 2017, one year earlier than originally scheduled.



Retrofitting works of APGs

50. The retrofitting of APGs will also be carried out for EAL. Before the commencement of the retrofitting works, platforms have to be strengthened in advance and equipment rooms for the relevant signalling

system and facilities have to be constructed. To avoid interrupting normal train services, most of the works can only be carried out overnight after normal train service hours. Platform strengthening works from Lok Ma Chau Station to Tai Wai Station have been substantially completed. Works are underway in phases in the remaining stations of EAL as planned. Construction of equipment rooms for the signalling and communication systems are expected to be completed in phases by the third quarter of 2016.



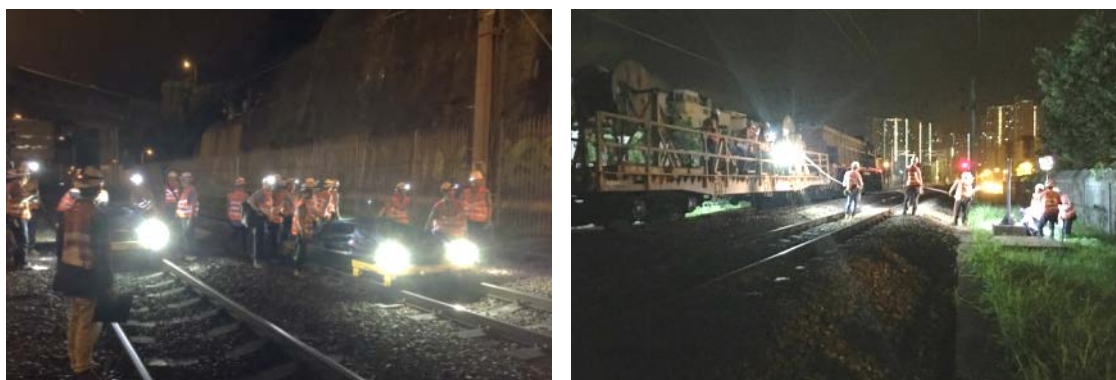
Platform strengthening works along EAL

51. To facilitate the future operation of new trains and APGs, the existing signalling system of EAL has to be upgraded. The upgrading works are being implemented progressively in phases while installation of equipment compatible with the new signalling system at trains and trackside are underway. Installation of equipment at the trackside along Fo Tan Station, Racecourse Station and University Station has been substantially completed. The installation works are underway at the trackside along Tai Po Market Station, Tai Wo Station and Fanling Station. Testing of new signalling system with EAL trains will be conducted within the track sections between University Station and Fo Tan Station in phases during non-service hours starting from the fourth quarter of this year.

52. As the signalling system involves tens of thousands of electronic components, the replacement of signalling systems involves risks which cannot be totally eliminated. In general, during the works period, major signalling system upgrades may lead to unstable system performance and the railway service may be more vulnerable to service delay and interruption. Teething problems are experienced in signalling upgrade on replacement projects in railways elsewhere especially during the initial

changeover periods. Overseas experience shows that some railways would suspend their services for signalling upgrade to minimise such risks. While EAL services are essential for passengers, suspension of EAL service in Hong Kong is infeasible. During the replacement works of signalling system, we would seek to avoid suspension of EAL service. This poses significant challenges to the works team and the railway operations given the complexity of the works and the limited time available outside traffic hours to implement the replacement works.

53. Since railway safety remains the top priority, the Corporation has appointed independent experts to offer advice to ensure that international safety standards are met. The comprehensive risk assessment of the upgrade of the signalling system is being conducted. The possible risks and contingency measures are being carefully examined having regard to the existing contingency mechanism for handling railway service disruptions. Contingency plan on railway service disruption is subject to the agreement of the Transport Department. While every precaution has been taken to avoid impact on the operating railway, teething problems during the replacement works may occur. The projects team and railway operation team will closely monitor the situation to ensure that any hiccups will be tackled in a timely manner and safety will be upheld at all times.



Signalling upgrade along EAL

## **STAKEHOLDER COMMUNICATION AND ENGAGEMENT**

54. Most of the SCL works sites are in urban areas and close to local communities. We attach great importance to close communication and engagement with the local communities and relevant stakeholders, in order to keep them informed of the works progress and to listen to their views.



55. Apart from the regular progress updates to the Subcommittee members and respective District Councils (“DC”), another major channel for communicating with the local communities is the Community Liaison Groups (“CLGs”), which have been set up across districts to provide regular updates on possible impacts of works relating to the SCL. Members of the CLGs include representatives of local District Councils, residents, schools, local organisations, etc. Representatives from government departments sitting in the CLGs include the Highways Department, Hong Kong Police Force, Transport Department, Lands Department and Home Affairs Department. Newsletters, leaflets and notices are also distributed to the local communities to provide updated information about the SCL. Dedicated MTR and Contractors’ Hotlines are also available for handling any enquiries and complaints in relating to the project; while the SCL Information Centre in To Kwa Wan has also handled around 1,000 enquiries since October 2012.

56. In April and May 2016, a number of visits to the new NSC train were arranged for the members of the Subcommittee and the District Councils. During the visits, they were briefed on the design and features of new train, as well as the works progress and challenges.



Visits for Subcommittee and DC members

## **EMPLOYMENT OPPORTUNITIES**

57. As at 30 June 2016, about 7,337 construction workers and technical/ professional staff members are employed for the SCL project. Labour shortage continues to pose challenges to the project. To attract new blood to join the construction industry, the Corporation has initiated the “SCL Contractors Cooperative Training Scheme” in 2012. Under the Scheme, all SCL civil works contracts require contractors to recruit a specified amount of trainees. Training and internship programmes are

provided to the trainees by the contractors of SCL and the Construction Industry Council. After passing relevant trade tests, the graduates would be offered a minimum 12-month employment contracts on the SCL. So far, the scheme has provided training to 648 trainees with 426 having completed the trade test and continuing their careers in the field.

## **CONCLUSION**

58. Taking into account the continuing difficulties and challenges, including those described above, the Corporation considers it is likely that the cost estimate for the SCL will need to be revised upwards significantly to include the additional HK\$4,100 million that was previously reported as a result of the archaeological finds in the To Kwa Wan area, the late handover of construction site at Exhibition Station, the previously unbudgeted foundation works for top-side development at Exhibition Station and other factors such as the lower availability of labour in the Hong Kong's construction sector. The Corporation has advised the Government that it will therefore conduct a detailed review of the project cost estimate for the project as a whole. Given the complexity of the project works, the continuing uncertainties associated with some of the issues highlighted above and the fact that the NSC is currently only 35% complete, this detailed review will only be completed in the second half of 2017 after which the Corporation will formally report the findings to the Government.

59. Members are invited to note the above information.

**MTR Corporation Limited**  
**September 2016**

### Expenditure report as at 30 June 2016

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	43,527.8	27,868.3	1,898.4
E&M works	13,417.7	2,429.7	145.1
<b>Total</b>	<b>56,945.5</b>	<b>30,298.0</b>	<b>2,043.5</b>

\* The estimated amount of unresolved claim: Amount claimed  
(\$2,627.3 million) – Interim award (\$583.8 million) =  
\$2,043.5 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	21	83.2	41.6	317	2,482.2	583.8
E&M works	6*	0	0	39	145.1	0
<b>Total</b>	<b>27</b>	<b>83.2</b>	<b>41.6</b>	<b>356</b>	<b>2,627.3</b>	<b>583.8</b>

\* The claims only involved extension of time without cost implication.

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 June 2016, the Corporation received 383 substantiated claims and the amount claimed in total was about \$2,710.5 million, representing 4.8% of the awarded contract sum

for the contracts. The Corporation has been discussing the details of the claims with the contractors concerned, and would thoroughly assess the amount claimed. The Corporation would process each claim in a prudent manner, and the contractors would have to provide sufficient justifications and information. As at 30 June 2016, 27 cases were resolved and about \$41.6 million was awarded, representing about 0.07% of the awarded contract sum for the contracts. Having regard to the needs of individual works and progress of the relevant assessment and discussion, interim award amounting to about \$583.8 million was made for some cases.

### Overall works progress of the SCL as at 30 June 2016

Overall works completed : 59%

Percentage completed as originally planned <sup>(1)</sup>: 65%

(A) Culminated progress of 25<sup>(2)</sup> major civil contracts awarded :

<b>Contract No.</b>	<b>Contract Name</b>	<b>Percentage completed</b>
1101	Modification of Ma On Shan Line	99%
1102	Hin Keng Station and Approach Structures	94%
1103	Hin Keng to Diamond Hill Tunnels and Fung Tak Public Transport Interchange	89%
1106	Diamond Hill Station Extension	79%
1107	Diamond Hill to Kai Tak Tunnels	100%
1108	Kai Tak Station and Associated Tunnels	95%
1108A	Kai Tak Barging Point Facilities	99%
1109	Stations and Tunnels of Kowloon City Section	70%
1111	Hung Hom North Approach Tunnels	84%
1112	Hung Hom Station and Stabling Sidings	81%
1113	Reprovisioning of New Territories South Animal Management Centre and Shatin Plant Quarantine Station	100%
1114	Pedestrian Links at Tsz Wan Shan	76%
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	39%
1121	North South Line (NSL) Cross Harbour Tunnels	46%
1122	Admiralty South Overrun Tunnel	Less than 1% <sup>(3)</sup>
1123	Exhibition Station and Western Approach Tunnel	18%
1124	Admiralty SCL Related Works	Less than 1% <sup>(4)</sup>
1125	Police Sports and Recreation Club Enhancement Works	100%

1126	Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool	76%
1128	South Ventilation Building to Admiralty Tunnels	39%
1129	SCL - Advance Works for NSL	100%
11209	Platform Modification and Associated Works at East Rail Line	80%
11227	Advance Works for NSL Cross Harbour Tunnels	100%

Note:

- (1) The original programme is to commission the Tai Wai to Hung Hom Section and the Hung Hom to Admiralty Section in December 2018 and December 2020 respectively.
- (2) The 26 awarded major civil contracts as mentioned in Paragraph 2 of this report include Contract 11230, which is a tenancy agreement for the Joint Site Office for Contracts 1123 and 1128. This contract is part of the project cost for Contracts 1123 and 1128. As it involves no civil construction works, it is not included in the table above.
- (3) Civil Contract 1122 was awarded on 19 October 2015.
- (4) Civil Contract 1124 was awarded on 10 March 2016.

(B) Culminated progress of 28 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	61%
1141B	New Rolling Stock for SCL Phase 2	28%
1151	Rolling Stock Modification and New Train Cars for SCL Phase 1	49%
1152	Signalling System for SCL Phase 1 & Signalling System Modification for MOL and WRL	65%
1152B	Signalling System for SCL Phase 2	49%
1153	Tunnel ECS for SCL Phase 1	40%
1153B	Tunnel ECS for SCL Phase 2	16%
1154	Platform Screen Doors for SCL Phase 1 & APG Retrofit for MOL	61%
1154B	Platform Screen Doors for SCL Phase 2 & APG Retrofit for EAL	Less than 1 % <sup>(5)</sup>
1155	Power Supply System and Trackside Auxiliaries for SCL Phase 1	57%
1155B	Power Supply System and Trackside Auxiliaries for SCL Phase 2	14%
1159	Lifts for SCL Phase 1	40%
1162	TETRA System for SCL Phases 1 & 2	71%
1162B	Radio Distribution Network System for SCL Phases 1 & 2	26%
1163	AFC System and SAM System for SCL Phases 1 & 2	18%
1164	Building Services for Diamond Hill Station	35%
1165	Building Services for Hin Keng Station, Ma Chai Hang Ventilation Building and Fung Tak Emergency Access	59%
1166	Main Control System for SCL Phase 1	75%
1166B	Main Control System for SCL Phase 2	18%
1169	Communications System for SCL Phase 1	65%
1172	Escalators for SCL Phase 1	37%
1172B	Lift and Escalators for SCL Phase 2	Less than 1 % <sup>(6)</sup>



1173	Building Services for Hung Hom Station and Hung Hom Stabling Sidings	48%
1175	Building Services for Kai Tak Station	78%
1176	Building Services for To Kwa Wan Station and Ancillary Building	27%
1177	Building Services for Ma Tau Wai Station and Ancillary Building	25%
1183	EAL Signalling System Modification for SCL	100%
1191	Floodgate System for SCL Phase 2	Less than 1 % <sup>(7)</sup>

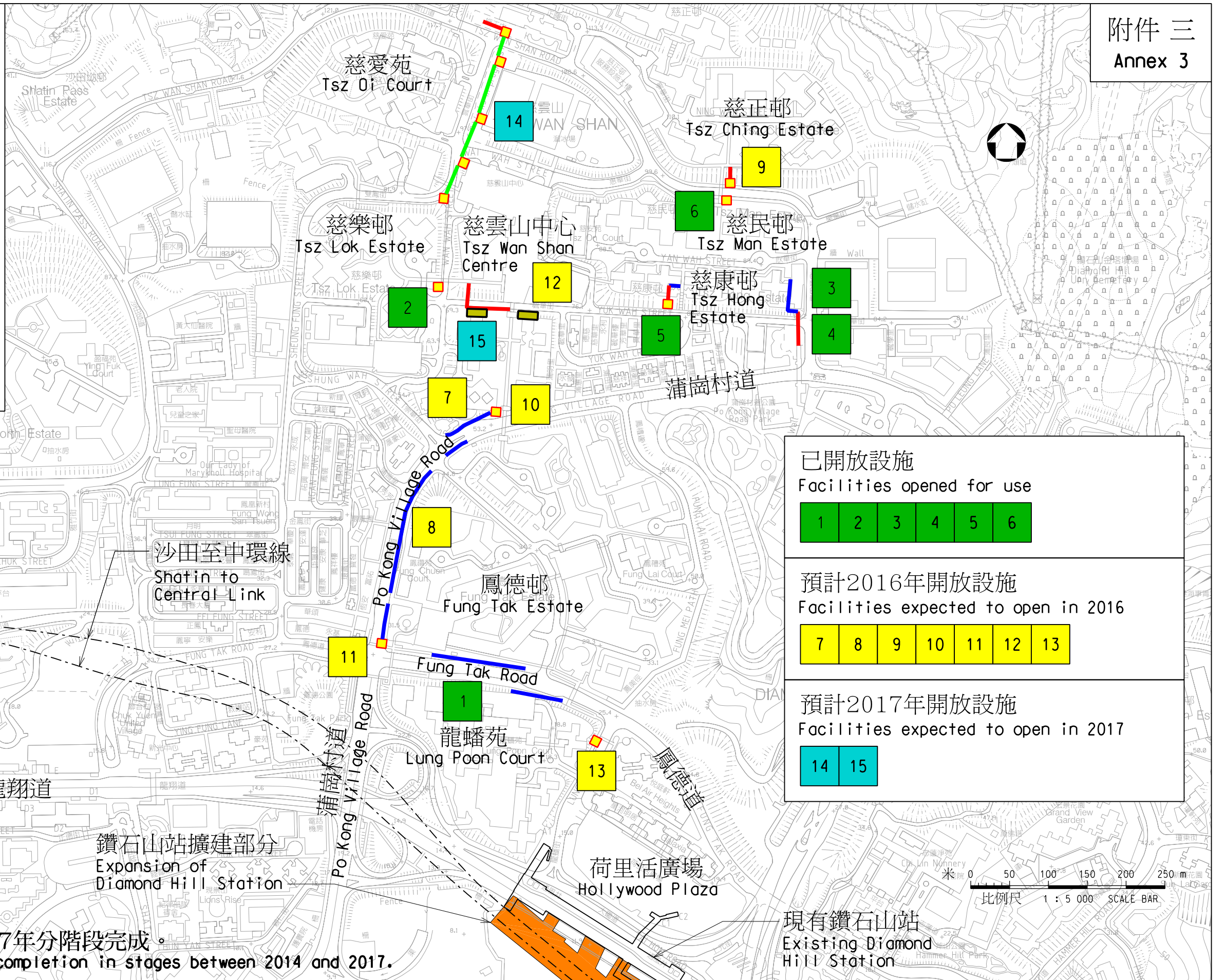
Note:

(5) E&M Contract 1154B was awarded on 16 May 2016.

(6) E&M Contract 1172B was awarded on 10 May 2016.

(7) E&M Contract 1191 was awarded on 8 January 2016.

- 圖例：  
Legend:
- 行人天橋  
Footbridge
  - 有蓋行人通道  
Covered Walkway
  - 行人天橋  
(連自動行人道/扶手電梯)  
Footbridge  
(Including Moving Walkway / Escalator)
  - 升降機  
Lift
  - 扶手電梯  
Escalator



已開放設施 Facilities opened for use	1	2	3	4	5	6	
預計2016年開放設施 Facilities expected to open in 2016	7	8	9	10	11	12	13
預計2017年開放設施 Facilities expected to open in 2017	14	15					

有關設施預計在2014年至2017年分階段完成。  
The facilities are scheduled for completion in stages between 2014 and 2017.

圖則名稱 drawing title

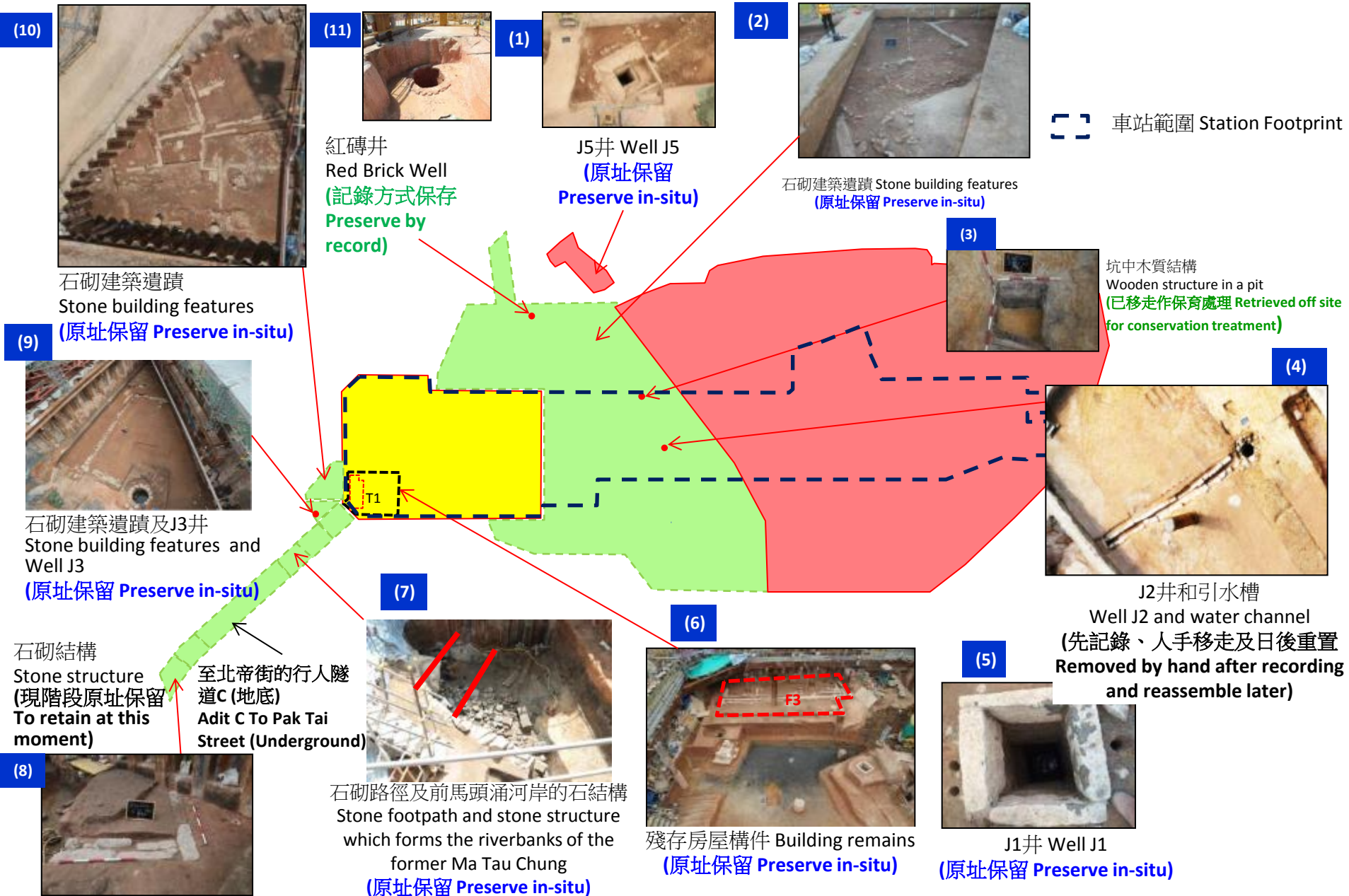
沙田至中環線 - 慈雲山區與沙田至中環線鑽石山站的行人接駁設施

Shatin to Central Link - Pedestrian connecting facilities between Tsz Wan Shan Area and Diamond Hill Station of Shatin to Central Link

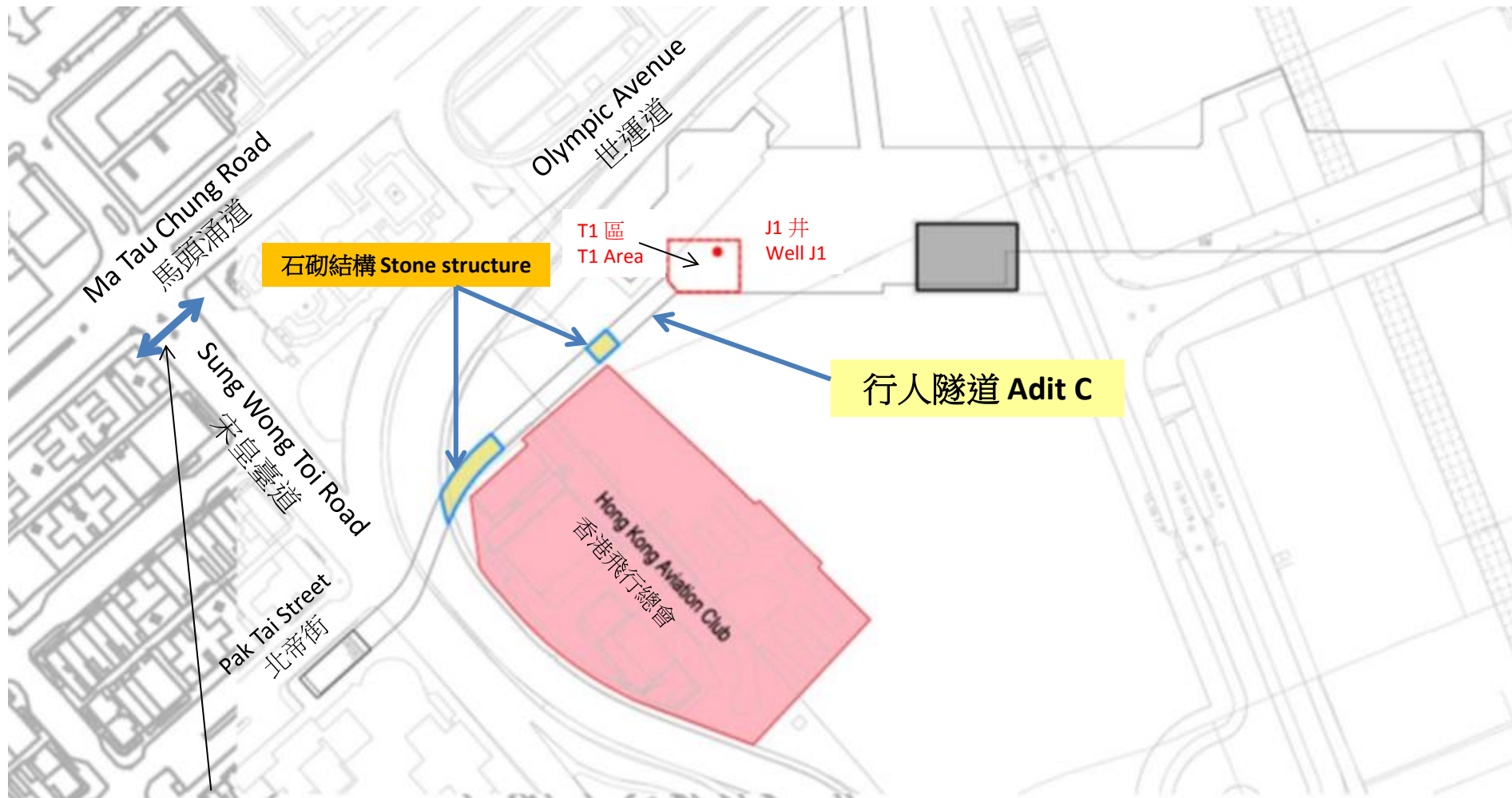


# 土瓜灣站工地考古文物保育方案

## Conservation Options for Archaeological Features Discovered at To Kwa Wan Station



# 行人隧道 C 的走線 Alignment of Adit C



Existing pedestrian crossing  
原有行人過路處