

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

**Funding Application for an
Increase in the Approved Project Estimate for
the Main Works of Shatin to Central Link**

(Translation)

Purpose

This paper aims to brief Members on the proposal to increase the funding for the main works of Shatin to Central Link (SCL), including to increase the Approved Project Estimate (APE) of **61TR** by \$8,696.8 million from \$65,433.3 million to \$74,130.1 million (in money-of-the-day (MOD) prices), and to increase the APE of **62TR** by \$1,367 million from \$5,983.1 million to \$7,350.1 million (in MOD prices).

Background

2. SCL, with a total length of 17 kilometres (km), 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. The whole rail line from Wu Kai Sha Station to Tuen Mun Station is named Tuen Ma Line (TML); and
- (b) Hung Hom to Admiralty Section: this is an extension of the East Rail Line (ERL) from Hung Hom across the Victoria Harbour to Wan Chai North and Admiralty.

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 Toi¹, To Kwa Wan², Ho Man Tin, Hung Hom, Exhibition Centre, and Admiralty. The alignment layout of SCL is at Annex 1.

¹ Sung Wong Toi Station was formerly named To Kwa Wan Station.

² To Kwa Wan Station was formerly named Ma Tau Wai Station.

3. On 5 December 2017, the MTR Corporation Limited (MTRCL) notified the Government that the entrustment cost of the main construction works of the SCL would be raised from \$70,827³ million to \$87,328 million, with an increase of about \$16,500 million over the original entrustment cost. The Highways Department (HyD), in collaboration with its monitoring and verification consultant (M&V consultant), had held numerous meetings with MTRCL. In order to ascertain whether there were sufficient justifications for the cost estimate, HyD had critically examined the information provided by MTRCL, as well as the underlying assumptions and the basis of the estimate.

4. After taking into account the views of HyD, MTRCL confirmed with the Government on 21 February 2020 that the entrustment cost estimate for the main construction works of the SCL should be revised to \$82,999.3 million. However, the Government considers that the justification submitted by MTRCL for the proposed additional project management cost (about \$1,371 million) insufficient⁴ as there has been no material modifications to the scope of works, the entrustment activities and/or the entrustment programme of the entrustment agreement, and thus disagrees to any additional project management cost. For the above reason, the Government has adjusted the revised entrustment cost estimate to \$81,628.3 million, which is an increase of \$10,801.1 million over the original entrustment cost, and in other words a reduction of about \$5,700 million compared with the estimate in 2017. After taking into account the original project reserve, expenses funded by other works projects, as well as the M&V consultancy fee and other Government expenses, it is necessary for the Government to increase the APE for **61TR** and **62TR** by about \$10,063.8 million⁵ in order to take forward the remaining works of

³ Among the \$70,827 million entrustment cost, about \$246.5 million are funded by other projects, including the works entrusted by Civil Engineering and Development Department (CEDD) for the construction of a section of Road P2 and its associated road facilities at Wan Chai North area.

⁴ In accordance with the relevant clauses in the entrustment agreement concerning the increase or decrease of project management cost, if there is material modification to the scope of the works, the entrustment activities or the entrustment programme annexed to the entrustment agreement, or if there is any change in law, regulations or directions in respect of the works or the method of construction, and in the reasonable opinion of MTRCL or Government that such modification result in a material increase or decrease in the project management responsibility or costs of MTRCL, MTRCL and the Government shall negotiate in good faith to agree an increase or decrease in the project management cost.

⁵ Among the \$10,801.1 million increase in entrustment cost, about \$254.5 million was the sum of works entrusted by the other projects, including primarily CEDD's entrusted drainage works for the reconstruction and enhancement of the former Kai Tak Airport North Apron area, and the construction of a section of Road P2 and its associated road facilities at Wan Chai North area. As such, the sum to be borne by **61TR** and **62TR** is about \$10,546.6 million. This amount, plus the additional M&V consultancy fee of about \$44 million and expenses payable to other projects of about \$60 million, and minus the original project contingencies of about \$586.8 million, is the required increase in APE for **61TR** and **62TR**, totalling about \$10,063.8 million.

the SCL project. The Government considers that the revised entrustment cost estimate could serve as a basis for the funding application for the remaining works. MTRCL should continue to manage payments to contractors, etc. in accordance with the terms of the contracts. The Government would rigorously monitor the process.

5. The Government considers that MTRCL should be responsible for the expenses in relation to the Hung Hom Station Extension incidents⁶, and therefore has not included the expenses in the revised entrustment cost estimate.

SCL Project

6. The construction of SCL consists of two protection works items, two advance works items and two main works items, of which the funding applications were submitted to and approved by the Legislative Council (LegCo) at various stages of implementation –

	Description	APE (\$million) (in MOD prices)	Date of approval of funding application by the Finance Committee (FC) of the LegCo	Commence- ment date of the works	Actual / anticipated completion date
(1)	<u>Protection works</u> 59TR Protection Works in Wan Chai Development Phase II	695 153	 Jul 2010	 Aug 2010	 Nov 2012

⁶ The Government pointed out on 18 July 2019 that the expenses in relation to the Hung Hom Station Extension incidents, including the expenses in relation to partial commissioning of Tuen Ma Line, will be borne by MTRCL. The concerned expenses are estimated to be about \$2,000 million.

	58TR Protection Works at Causeway Bay Typhoon Shelter (CBTS)	542	Jun 2011	Sep 2011	Jun 2014
(2)	<u>Advance works</u>	8,551			
	63TR Construction of Railway Works – Advance Works	6,255	Feb 2011	May 2011	Dec 2016
	Additional funding	848	Jun 2017		
	64TR Construction of Non-railway Works – Advance Works	1,448	Feb 2011	Jul 2011	Mar 2018
(3)	<u>Main works</u>	71,416			
	61TR Construction of Railway Works – Remaining Works (application for additional funding stated herein)	65,433	May 2012	Aug 2012	Dec 2021

62TR Construction of Non-railway Works – Remaining Works (application for additional funding stated herein)	5,983	May 2012	Jul 2012	Dec 2021
Total APE	80,662			

7. The information on funding application, project scope and progress of 58TR, 59TR, 63TR and 64TR are at Annex 2.

8. On 11 May 2012, FC of LegCo approved the funding applications for “**61TR** – Shatin to Central Link – construction of railway works – remaining works” (LC Paper No. PWSC(2012-13)1) and “**62TR** – Shatin to Central Link – construction of non-railway works – remaining works” (LC Paper No. PWSC(2012-13)2) with a total of about \$71,416.4 million (in MOD prices), including part of the entrustment cost for the entrustment agreement between the Government and MTRCL (i.e. \$70,580.5 million (the entire entrustment cost is \$70,827 million, with the remaining \$246.5 million funded by other projects)), the cost for independent monitoring and verification of MTRCL’s work (i.e. \$249.1 million) and project contingencies (i.e. \$586.8 million). Under the entrustment agreement, MTRCL is responsible for the construction, testing and commissioning of the SCL project, as well as the provision of construction management and supervision services. The main works commenced in July 2012.

9. On 20 August 2012, HyD appointed "Pypun-KD & Associates Limited" as the M&V consultant to assist in the monitoring and regular verification work.

Project Scope, Progress and Revised Completion Schedule

10. **61TR** and **62TR** involve railway construction works and non-railway construction works of SCL respectively. Most of the contracts have been awarded. As at 31 December 2019, the overall progress of the works was 92%. According to the entrustment agreement, the original target commissioning date for the Tai

Wai to Hung Hom Section was December 2018 and that for the Hung Hom to Admiralty Section was December 2020.

11. In view of the archaeological works, archaeological discoveries and conservation options for the archaeological features at Sung Wong Toi Station between 2012 and 2014, a delay of about 11 months to the Tai Wai to Hung Hom Section was anticipated, postponing the commissioning of Tai Wai to Hung Hom Section to the end of 2019. With the implementation of delay recovery measures, it was originally anticipated that the commissioning of the Tai Wai to Hung Hom Section could be advanced to mid-2019. However, due to the occurrence of a series of incidents related to the quality of works of the Hung Hom Station Extension in May 2018, MTRCL is required to follow up on the relevant investigation work and the implementation of recommended suitable measures. MTRCL anticipates the target commissioning date of Tai Wai to Hung Hom section will be deferred to the end of 2021.

12. To ensure the public enjoyment of the new railway as soon as possible, three new stations, namely Hin Keng Station, Diamond Hill Station Extension and Kai Tak Station was commissioned on 14 February 2020. Passengers on the Ma On Shan Line are able to 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 named “Tuen Ma Line Phase 1”

13. As for the target commission date of the Hung Hom to Admiralty Section, due to the site handover arrangement under the Wan Chai Development Phase II project and to allow for flexibility for future construction of a convention centre on top of the Exhibition Centre Station, it was initially anticipated that the commissioning of the Hung Hom to Admiralty Section would be deferred to 2021. However, taking into account the complicated ground conditions below the Exhibition Centre Station and the suspension of excavation works at the Exhibition Centre Station due to ground settlement, whether the target of commissioning the Hung Hom to Admiralty Section in 2021 could be achieved would depend on the progress of the suitable measures being implemented at the Hung Hom Station Extension. At the same time, since October 2019, there have been multiple damages to the facilities of East Rail Line 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 the new EAL signaling system as scheduled, the subsequent conversion works for the 9-car trains, and the track bifurcation works. MTRCL estimates that the commissioning of the Hung Hom to Admiralty Section will be postponed to the first quarter of 2022. In

addition, MTRCL reported to HyD that 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 was also severely damaged. After conducting preliminary inspections, MTRCL indicated that the damaged signaling system and equipment included at least 80 sets of trackside cables (involving a total length of cables around 70 kilometres, about 35 kilometres of which would require replacement based on preliminary inspections) and a number of sets of trackside signaling facilities. The extent being affected exceeded 4 kilometres. Since the facilities have been severely damaged, unrepairable, and have to be re-purchased, replaced and re-tested, MTRCL is still assessing comprehensively the impact of the above incident. MTRCL would also consider the knock-on impact arising from insufficient non-traffic hour for the SCL project due to the other reinstatement works for the EAL. Considering that more time would be required for completing the remaining works in the North South Corridor, HyD and MTRCL are reviewing the construction schedule and exploring the feasibility of accelerating key activities. We will continue coordinating and overseeing the works for commissioning the project as soon as possible.

Monitoring Work by the Government

14. The revised entrustment cost estimate mainly includes expenses for items such as submitted and planned claims, risks of the remaining works, anticipated changes and contingencies. The revised estimate has already reflected the comments given by HyD and the M&V consultant. The revised entrustment cost estimate does not include any additional project management fee payable to MTRCL. Furthermore, the revised entrustment cost estimate does not include any related expenses incurred in connection with the Hung Hom Station Extension incidents.

15. In addition, due to the change in the works schedule for SCL, the M&V consultancy fee has to be increased by \$44 million to continue with the monitoring and verification work.

16. Taking into account the original project contingencies, works entrusted and funded by other projects, as well as the M&V consultancy fee and other government expenses, it is necessary for the Government to increase the APEs for **61TR** and **62TR** by a sum of about \$10,063.8 million in order to take forward the remaining works of the SCL project. The cost breakdown for the railway works

and the non-railway works is at Annex 3 and Annex 4 respectively.

17. With respect to the revised entrustment cost estimate, it is necessary to increase the APE for **61TR** by \$8,696.8 million from \$65,433.3 million to \$74,130.1 million; and for **62TR** by \$1,367 million from \$5,983.1 million to \$7,350.1 million. Overall speaking, if the above application for additional funding of \$10,063.8 million is approved, the APE for the construction works of the entire SCL project will be increased from about \$80,662 million to about \$90,675.8 million. As the contingencies for the railway works and the non-railway works of the SCL project under **61TR** and **62TR** are not sufficient to cover the additional expenditures for the main works, we need to seek additional funding from the LegCo in order to continue taking forward the remaining works of the SCL project.

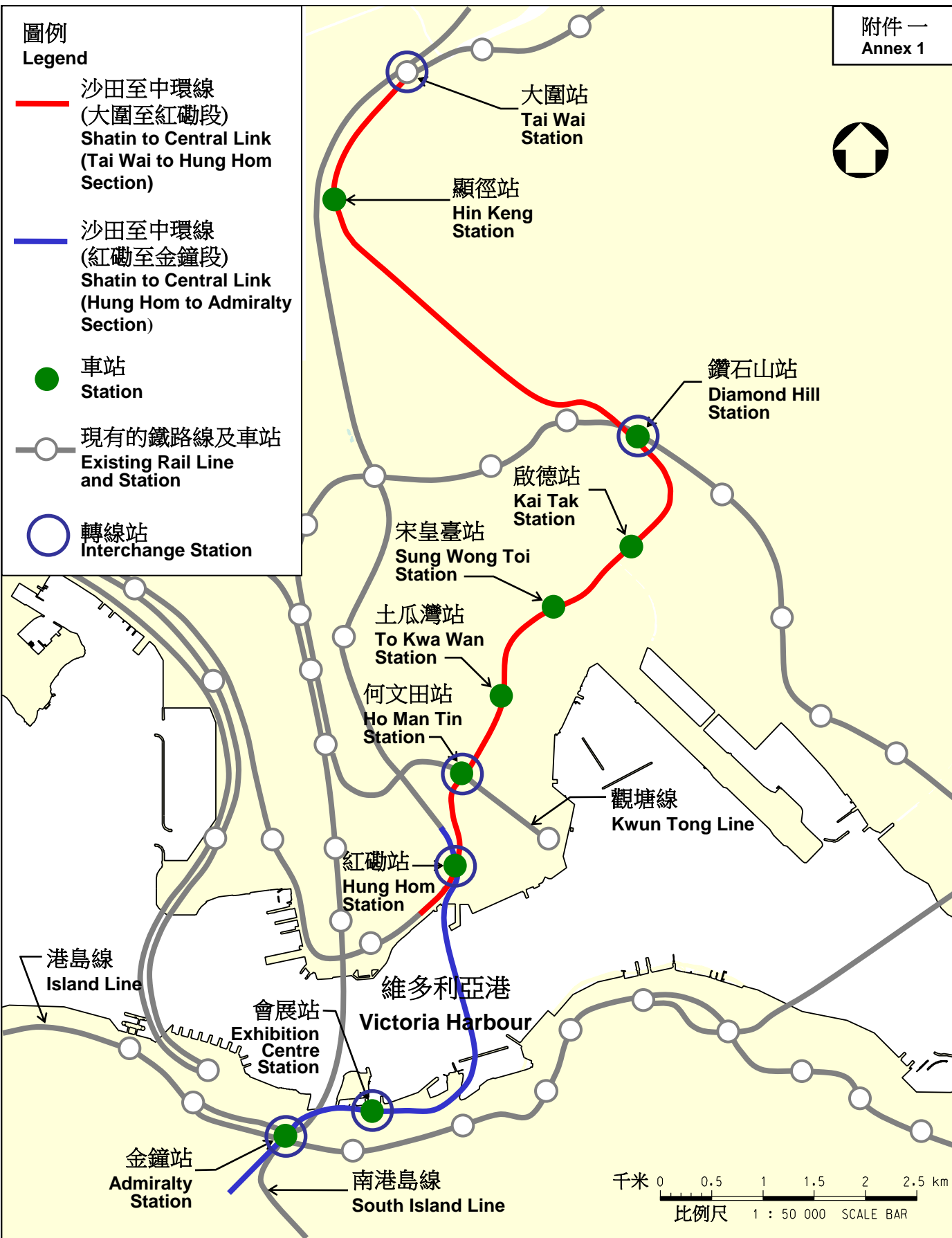
Next Step

18. We plan to consult Members at the meeting of the Public Works Subcommittee to be held in the first half of 2020 and then seek the funding approval of the Finance Committee.

Transport and Housing Bureau
Highways Department
February 2020

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.

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鐵路拓展處 RAILWAY DEVELOPMENT OFFICE



路政署
HIGHWAYS DEPARTMENT

**58TR – Shatin to Central Link –
Protection Works at Causeway Bay Typhoon Shelter (CBTS);
59TR – Shatin to Central Link –
Protection Works in Wan Chai Development Phase II;
63TR – Shatin to Central Link –
Construction of Railway Works – Advance Works; and
64TR – Shatin to Central Link –
Construction of Non-railway Works – Advance Works**

Information on Previous Funding Application, Project Scope and Progress

On 2 July 2010 and 24 June 2011, Finance Committee (FC) of Legislative Council (LegCo) approved the funding applications for “59TR – Shatin to Central Link – construction of railway works – protection works in Wan Chai Development Phase II” (LC Paper No. PWSC(2010-11)11) and “58TR – Shatin to Central Link – construction of railway works – protection works” (LC Paper No. PWSC(2011-12)12) respectively with a total of about \$700 million (in Money-Of-the-Day (MOD) prices). For the details of the above two items of protection works, please refer to paragraphs 4 and 5 below.

2. On 18 February 2011, FC of LegCo approved the funding applications for “63TR – Shatin to Central Link – construction of railway works – advance works” (LC Paper No. PWSC(2010-11)34) and “64TR – Shatin to Central Link – construction of non-railway works – advance works” (LC Paper No. PWSC(2010-11)35) with a total of about \$7,700 million (in MOD prices). For the details of the above two items of advance works, please refer to paragraphs 6 and 7 below. Thereafter, the Government and MTRCL entered into an agreement for entrusting to the latter the implementation of the advance works of SCL at the expanded Admiralty Station and Homantin Station while implementing South Island Line (East) (SIL(E)) and Kung Tong Line Extension (KTE) respectively.

3. On 17 June 2017, FC of LegCo approved the additional funding application for “63TR – Shatin to Central Link – construction of railway works – advance works” (LegCo Paper No. PWSC(2016-17)43) by \$847.7 million from \$6,254.9 million to \$7,126 million (in MOD prices).

Project Scope and Progress

4. **58TR** involved the protection works of the SCL at the Causeway Bay Typhoon Shelter (CBTS). The works comprised the construction of a concrete tunnel box during the construction of the Central-Wan Chai Bypass (CWB) project at the location where the SCL and the CWB project overlaps, so as to facilitate the future railway tunnelling works to be carried out under the SCL main works; the construction and removal of the temporary seawall and temporary reclaimed land; the dredging in an area of about one hectare at the southeast corner of the CBTS to provide a temporary anchorage area; and the construction of a temporary jetty for the Royal Hong Kong Yacht Club and subsequent reinstatement of the affected facilities after completion of the protection works. These works were conducted to ensure a well-coordinated interface between the SCL and the CWB project. The works under 58TR were completed and with final account settled. The final cost of the works was \$429.86 million which was within the APE of this item.

5. **59TR** involved the protection works of the SCL at Convention Avenue in Wan Chai. The works comprised the construction of two rows of diaphragm walls with an underground top slab alongside Convention Avenue. This was to facilitate the laying of the cross-harbour fresh water mains and cooling water mains above the top slab under the Wan Chai Development Phase II project, and the carrying out of the railway tunnelling works underneath the top slab under the SCL main works, thereby ensuring a well-coordinated interface between the two projects. The protection works were completed. It is anticipated that the final cost will be within the APE of this item.

6. **63TR** involved the advance railway works of the SCL. The works comprised the expansion of Admiralty Station to accommodate the SCL railway facilities (including an overrun tunnel of approximately 200 metres long) and the provision of ventilation facilities for the station, as well as the construction of the portion of Ho Man Tin Station for the SCL. The expanded portion of Admiralty Station would be connected with the existing Admiralty Station to form an integrated station. Works for certain parts of Admiralty Station for the SCL and the SIL(E) facilities should be constructed concurrently, so as to reduce the overall size of the station, reduce construction costs and time required, and minimise disruption to the public during construction. As such, the portion of Admiralty Station for the SCL had to be constructed together with the SIL(E), and in advance of the other SCL main works in order to tie in with the programme of the SIL(E) which commenced in May 2011. The advance works for the SCL at Admiralty Station was substantially completed and the remaining works mainly involve the

construction of a supplementary emergency entrance for the rail line. On the other hand, Ho Man Tin Station is a newly constructed integrated station serving both the SCL and KTE, providing a convenient interchange for passengers between these two rail lines. Ho Man Tin Station is designed as an integrated station to reduce the overall size of the station, reduce construction costs and time required, and minimise disruption to the public during construction. Similar to the expanded Admiralty Station, Ho Man Tin Station had to be constructed in advance of the other SCL main works to tie in with the programme of the KTE which commenced in May 2011. The advance works for the SCL at Ho Man Tin Station were completed. It is anticipated that the final cost will be within the increased APE of this item approved on June 2017.

7. **64TR** involves the advance non-railway works for SCL. The works comprised the re-provisioning works for the International Mail Centre in Hung Hom, as well as the re-provisioning works for Harcourt Garden and Hong Kong Park. The re-provisioning works were required to commence before the commencement of the main works, so as to vacate the sites for the works of the SCL and the SIL(E). The new mail centre was completed and handed over to Hongkong Post for operation in 2014. The works for the re-provisioning of Harcourt Garden and Hong Kong Park were largely completed in 2018. It is anticipated that the final cost will be within the APE of this item.

61TR— Shatin to Central Link – construction of railway works – remaining works

ADDITIONAL EXPENSES

PROJECT SCOPE AND NATURE

In May 2012, the Finance Committee (FC) of the Legislative Council (LegCo) approved the upgrading of **61TR**, i.e. “Shatin to Central Link – construction of railway works – remaining works” to Category (Cat) A, at an estimated cost of \$65,433.3 million in Money-of-the-Day (MOD) prices.

2. The approved project scope of **61TR** comprises –
- (a) construction of the main railway works of the SCL, which includes –
 - (i) an 11 km railway line extending the Ma On Shan Line from the existing Tai Wai Station to Hung Hom where it will join the West Rail Line;
 - (ii) a 6 km railway line extending the East Rail Line from Hung Hom across the Victoria Harbour to Admiralty;
 - (iii) construction of new stations/expansion of existing stations, along the two railway lines described in (i) and (ii) above, at Hin Keng, Diamond Hill, Kai Tak, Sung Wong Toi, To Kwa Wan, Hung Hom and the Exhibition Centre;
 - (iv) associated railway facilities at the new/expanded stations in (iii) above including station concourses, passenger waiting areas, platforms, etc.;
 - (v) stabling sidings including modification of the existing Hung Hom railway freight yard which has ceased operation to provide stabling sidings and associated approach/departure tracks and additional siding tracks at the Pat Heung depot;
 - (vi) bifurcation from the existing East Rail Line from Ho Man Tin to Hung Hom to form an underground section, to match with the vertical alignment of the SCL harbour-crossing section;

(vii) associated ventilation facilities and emergency accesses for the railway tunnels;

(viii) building services works;

(ix) ancillary construction works (details of the relevant items are given in Enclosure 1);

(x) modification of existing railway facilities to cater for the operation of the SCL (details of the relevant items are given in Enclosure 2); and

(b) procurement of rolling stock, railway systems, as well as operation and maintenance equipment (details of the relevant items are shown in Enclosure 3).

ADDITIONAL EXPENSES

3. Following a detailed review of the financial position, we consider it necessary to increase the Approved Project Estimate (APE) of **61TR** by \$8,696.8 million from \$65,433.3 million to \$74,130.1 million (in MOD prices), to cover the additional expenses arising from the following –

- (a) additional archaeological work at Sung Wong Toi Station;
- (b) additional measures to address site constraints;
- (c) coordination work with other projects at Wan Chai North;
- (d) revision to the construction plan to fulfil the latest safety and technical requirements;
- (e) modifications in response to the feedbacks and requirements of stakeholders and railway operator;
- (f) additional works for topside developments above railway stations;
- (g) adjustment to fees for the monitoring and verification (M&V) consultant; and
- (h) contingencies reserved for the remaining works.

Details of the increase in APE of the project are set out in paragraphs 4 to 31 below.

Additional archaeological work at Sung Wong Toi Station

4. We made regular reports to the Subcommittee on Matters relating to Railways (RSC) of the LegCo regarding the archaeological work at the site of Sung Wong Toi Station, and reported about the archaeological discoveries, conservation and interpretation options, the relevant station design and construction modification, and the impact on the SCL project progress and cost to the Panel on Development on 25 November 2014 (LegCo Paper No. CB(1)241/14-15(07)).

5. The archaeological investigation and excavation work at Sung Wong Toi Station of the SCL were carried out by an independent archaeologist engaged by the contractor of the project. The archaeological fieldwork and excavation commenced in end-2012, with the survey area expanded twice in December 2013 and April 2014 respectively from the initial archaeological work site to the whole station work site. The archaeological fieldwork was completed in September 2014. Subsequently, the archaeologist was required to preserve the archaeological features unearthed, including ceramic potteries and sherds, in order to organise, study and analyse these unearthed archaeological features, and prepare the final archaeological report according to the guidelines of the Antiquities and Monuments Office (AMO). The report was submitted to AMO in end-June 2017 and was accepted.

6. Meanwhile, on 8 December 2014, the Antiquities Authority (i.e. the Secretary for Development) decided to preserve in-situ most of the archaeological discoveries at Sung Wong Toi Station, and backfill with protective materials. The in-situ protection work was completed.

7. The Highways Department (HyD), in collaboration with the MTR Corporation Limited (MTRCL), had been exploring measures on adjusting work sequence, revising construction methods, and modifying station design scheme, with a view to preserving archaeological discoveries and minimising the impact on the project brought about by the archaeological and conservation work. Furthermore, the contractor was required to implement additional measures to minimise disturbance to the archaeological remains during construction. For example, due to the discovery of archaeological remains within the launching shaft of the tunnel boring machine (TBM), the contractor was required to complete the protection works for the archaeological remains at the launching shaft area first before the excavation could continue to proceed. Since the whole railway station was within the boundary of archaeological survey and the archaeological remains needed to be preserved in-situ, it was required to make several modifications to the design and construction of Sung Wong Toi Station, including the design and construction of Adit C with an alternative route.

8. The archaeological work and conservation options also led to an estimated delay of 11 months for the “Tai Wai to Hung Hom Section”. The delay not only

affected the civil engineering contract of Sung Wong Toi Station, but also other relevant SCL civil engineering contracts and electrical and mechanical (E&M) contracts. Some other contracts that were not directly affected by the archaeological work were also required to cope with the delay in the commissioning of “Tai Wai to Hung Hom Section”.

9. Since the complete resumption of construction works at Sung Wong Toi Station in March 2015, HyD has agreed to a number of delay recovery measures proposed by MTRCL, such as increasing resources and rearranging construction sequences with a view to expediting construction progress. Furthermore, MTRCL implemented additional noise mitigation measures at Sung Wong Toi Station and To Kwa Wan Station to enable the installation of track-side facilities during night time and to expedite the overall progress. Through the implementation of these measures, MTRCL succeeded in recovering 6 months of delay for the “Tai Wai to Hung Hom Section” of the SCL.

10. Given the factors mentioned in paragraphs 4 to 9 above, including expanding archaeological work, adopting conservation arrangements and implementing delay recovery measures, we estimate that the archaeological discoveries on site at Sung Wong Toi Station has contributed to a total cost increase of about \$2,993.6 million.

Additional measures to address site constraints

11. With a total length of 17 km, the SCL involved a huge amount of underground excavation and construction works at various locations of Hong Kong, Kowloon and the New Territories, and through areas such as urban areas with high-rises, the Victoria Harbour, and country parks, which involved conditions with complicated strata, geology, and ground water levels. During the design stage, MTRCL engaged a specialist contractor on ground investigation to conduct a detailed survey (i.e. PWP Item No. **51TR**), and conducted professional assessment on the strata and geological conditions along the SCL. Nevertheless, MTRCL had to modify the engineering design and implement additional measures in the following situations:

- (a) The actual geological conditions encountered during construction were substantially different from the survey results obtained during the investigation stage: For example, during the tunnel construction of Ma Chai Hang to Diamond Hill Section, stratum with unexpectedly high clay-content encountered in Wong Tai Sin area affected the normal operation of the cutter head of the TBM. The contractor had to increase the frequencies of maintenance and replacement of cutter head component for the TBM, and to undergo complicated pressurisation and depressurisation procedures to ensure the safety of construction workers. Although the

contractor had modified the design of the drill bits to cater for the actual geological conditions and succeeded in recovering part of the delay before the commencement of another section of tunneling works, the progress was seriously affected. Apart from the above example, there were similar situations in other sections of the SCL, including the foundation and station construction works at Hung Hom Station, To Kwa Wan Station, Sung Wong Toi Station, Diamond Hill Station and Kai Tak Station.

- (b) The ground investigation area was very limited or not extensive enough to cover all relevant locations: This included many railway sections and facilities located beneath existing roads, public facilities and buildings, for example the Exhibition Centre Station to be located beneath the ex-Wan Chai North Public Transport Interchange, the ex-Wan Chai Swimming Pool and ex-Harbour Road Sports Centre. As these facilities should be remain open for public use during the investigation stage, the extent of ground investigation works prior to construction was limited. The contractor could only conduct detailed investigation after the relocation and demolition of the existing facilities; and could then ascertain that the actual rock head level and soil conditions were different from that anticipated. This had prompted necessary revision to the relevant foundation design and deepening of foundation, resulting in additional construction cost. There were other similar cases for other sections of the SCL apart from the above example.

12. Furthermore, the SCL passes through Diamond Hill, To Kwa Wan, Hung Hom, and Wan Chai, which are developed districts with complicated underground facilities. During construction, the contractors were required to conduct additional works to cope with underground situations unanticipated during the design stage, such as the presence of underground utilities abandoned or more than expectation, thus adding construction difficulties and causing more expenses.

13. MTRCL unearthed three unexploded ordnances during the excavation works for Exhibition Centre Station in January and May 2018. To identify underground metallic objects, the contractor took immediate precautionary measures, such as “monitored excavation” and supplementary metal detection. To ensure the safety of

the public and construction staff, MTRCL hired an overseas expert to re-examine the risk at construction site, conduct survey at high risk locations, and provide expert advice to identify underground metallic objects. However, as “monitored excavation” was more time consuming than normal excavation, the overall work progress as well as the commencement of the subsequent E&M works, track laying works and building services works were affected.

14. Given the additional measures for mitigating site constraints mentioned in paragraphs 11 to 13 above, the total cost of construction was increased by about \$4,043.5 million.

Coordination work with other projects at Wan Chai North

15. During construction of the SCL, there were various large scale infrastructure projects carried out concurrently in Wan Chai North area. Some of the work sites could only be handed over to the SCL project after the completion of the other projects.

16. Government departments and MTRCL maintained close liaison during project delivery in a coordinated manner to cope with the latest situations and to reduce the risk of delay. Nevertheless, unforeseen situations would inevitably occur and these would impede works progress and site handover. Examples included the discovery of a large metal object in the reclamation zone of Wan Chai Development Phase II and the difficulties in the removal of a steel left-in pile near Fenwick Pier Street. To enable actual site handover, MTRCL had to revise part of the design, adopt alternative options or implement additional works in order to continue with the works at Exhibition Centre Station and associated tunnels.

17. Furthermore, HyD and MTRCL had to regularly review and formulate delay recovery measures, such as installation of temporary road decks to expedite excavation; extension to working hours for conducting night works; reschedule, prioritisation and simplification of certain parts of the works. According to current estimation, these delay recovery measures in relation to the site handover at Wan Chai North could reduce the delay to the commissioning of “Hung Hom to Admiralty Section” from 9 months to 6 months.

18. Given the measures taken in relation to delay to the site handover at Wan Chai North and the consequential increase in construction cost due to the 6-month delay mentioned in paragraphs 15 to 17 above, the total cost of construction was increased by about \$1,215 million.

Revision to the construction plan to fulfil the latest safety and technical requirements

19. SCL is a mega project with construction period spanning about 10 years. During this period, some of the safety, technical and other requirements had been

enhanced in comparison to those in the design stage. MTRCL had to modify the engineering design during construction to keep abreast of the requirements to avoid demolition and refurbishment upon completion of the works and generation of unnecessary construction waste. These design modifications could be categorised as follows:

- (a) Design modifications to comply with MTRCL's enhanced technical requirements for fire services, E&M, building services and operations: These included a revision to the design for Sung Wong Toi Station, To Kwa Wan Station, Exhibition Centre Station and Admiralty Station; enhancement of the alignment of the platform for ERL; improvement to the design of station escalators for the avoidance of serious accident; addition of emergency egress points in the railway tunnels; installation of new vehicle-mounted track inspection equipment on certain new trains for Tuen Ma Line (TML) and ERL to conduct real-time monitoring of the quality of the tracks, with a design intent to facilitate future train operations; enhance the service level of station facilities; and further ensure the safety of passengers and the public.
- (b) Design modifications to comply with the enhanced safety and technical codes or standards: These included the upgrading of the ventilation facilities in the Lion Rock Railway Tunnel and the dust-proofing component of the rock cutters to meet the new environment regulations on dust prevention put in place after the award of the construction contracts.
- (c) Additional measures that cater for actual situations to improve the safety of surrounding buildings and facilities: These included the additional measures at To Kwa Wan Station; such as modifying the design depth of the railway tunnel; enhancing construction sequence; monitoring vibrations and conducting building condition survey; and improving ground conditions by grouting to strengthen the subsoil stratum near buildings; and strengthening the monitoring work at the surrounding facilities at Diamond Hill Station. Apart from

the above examples, there are similar cases in other parts of the works.

20. Given the revision to the construction plan mentioned above, the total cost was increased by about \$2,774.9 million.

Modifications in response to the feedbacks and requirements of stakeholders and railway operator

21. The railway sections under this project, which would be proximate to residents, not only covered construction of facilities and stations at the new railway, but also expansion or modification works at the existing ERL, WRL, MOSL, Kwun Tong Line, Tsuen Wan Line and Island Line.

22. During the investigation and design stages, the Government and MTRCL conducted extensive consultation, which since 2008 had included briefing the 11 District Councils (DC) along the SCL on the project; reporting progress; organising district consultation activities; providing various information to the public through different channels, such as setting up a website, printing brochures, leaflets, notices and newsletters for public perusal; conducting on-site inspections; arranging roving exhibitions; conducting public forums; arranging school lectures in order to explain the project proposal to the local groups and the public and to collect their views for the betterment of the project proposal.

23. During construction, HyD and MTRCL have attended to the views of different stakeholders. Since 2012, HyD and MTRCL have participated in more than 120 meetings of DCs, their sub-committees and working groups, and organised more than 100 Community Liaison Group meetings to collate the views of different parties. MTRCL carried out additional works and mitigation measures to take forward the suggestions of the locals, and incorporated construction modifications to minimise the impact on the operation of the existing rail services during construction.

- (a) Given the latest development in the Northwest New Territories in recent years, there has been a growing demand for railway services in the area to and from urban areas. In order to alleviate the congestion of the WRL during the weekday morning peak hours, MTRCL has already, through the SCL project, replaced the 7-car trains on the TML with 8-car trains, and deployed more trains, in order to enhance the carrying capacity of the entire TML.
- (b) During construction, MTRCL has been reviewing the demands for facilities at different stations to meet the needs

of the public and fulfil the requirements of MTRCL as the railway operator, including the installation of additional lifts to the ground level and baby caring rooms at a number of new stations, the enhancement of new train-car design, such as the inclusion of dynamic route map and the enhancement of hand-rail design, and the enhancement of station facilities, such as ticket selling system, to meet the latest MTR station design requirement. There were other similar cases apart from the above examples.

- (c) In response to the views of the locals, MTRCL carried out a number of additional works and mitigation measures to reduce the impact on the communities during construction. For example, after considering the views of the DCs and the public, there were additional works at the Ma Chai Hang site, including modifying the entrance of the Ma Chai Han site, constructing and dismantling the temporary footbridge, etc. in order to provide more convenient pedestrian facilities for surrounding residents; improving the arrangement for relocating vessels at Causeway Bay Typhoon Shelter; carrying out additional works at Wan Chai North to reduce impact on nearby residents and existing facilities; and during the implementation of large-scale temporary traffic management measures at Ma Tau Wai Road, deploying additional care ambassadors and traffic supervisors to assist residents in adapting to the traffic diversion. There were other similar cases apart from the above examples.

24. Given the additional expenses due to the amendments made in response to the suggestions and requests made by stakeholders mentioned above, the total cost was increased by about \$2,225.8 million.

Additional works for topside developments above railway stations

25. In order to allow for flexibility for the development on top of Exhibition Centre Station, MTRCL constructed additional foundations and provided additional facilities at the station, which increased the complexity of the construction works at Exhibition Station and increased the construction cost. These mainly include –

- (a) revising part of the vertical diaphragm wall and station structure, as well as constructing additional piles, in order to provide support for part of the load from future topside development;
- (b) revising the structure of the ventilation shaft at Exhibition Centre Station in order to allow flexibility for extending the height of the ventilation shaft in future topside development; and
- (c) upgrading the design of the ventilation system in order to meet the station ventilation requirement after future ventilation shaft extension.

26. Furthermore, additional works were carried out at the Diamond Hill Station Expansion to facilitate the Diamond Hill Comprehensive Development at the topside of the station.

27. Given the additional works for the above topside developments, the total cost of construction was increased by about \$582.9 million.

Apportionment arrangement for the difference between the actual contract prices and the original estimate

28. The main works of the SCL comprised **61TR** and **62TR**, which involved 58 main works contracts and a large number of minor works contracts. Expenditures for these contracts are being paid for under these two items according to the scope and nature of contract. If a contract involves both railway and non-railway works, the expenses are to be jointly paid for by the two items. This is particularly common in civil engineering contracts on the SCL.

29. The actual price of each contract was different from MTRCL's original estimate of 2012. Based on the actual tendered prices for each contract, the sum of all contract prices for the entire SCL project (i.e. considering both **61TR** and **62TR** together) was slightly lower than the pre-tender estimate assessed by MTRCL in 2012, with a net saving of \$289 million, which upon apportionment, consists of a saving of \$797.3 million for **61TR** and an additional cost of \$583 million for **62TR**. No additional works are involved in the apportioned arrangement.

Adjustment to fees for the M&V consultant

30. Due to the change in the work schedule of the SCL and the need to follow up

the recommendations given in the Interim Report of the the Commission of Inquiry into the Construction Works at and near the Hung Hom Station Extension submitted to the Chief Executive in February 2019, HyD has stepped up the work of the M&V consultant. As such, the consultancy fee needs to be increased in order to continue with the monitoring and verification work. The total additional consultancy fee required is about \$44 million, of which about \$41 million is to be shared by **61TR**. The remaining \$3 million is to be shared by **62TR**.

Contingencies reserved for the remaining works

31. The contingencies in the original APE (i.e. around \$5,869.1 million) were fully utilised to pay part of the additional expenses mentioned above. In view of the possible ongoing challenges brought about by the past and future risks, in order to meet the additional payment that may be required for the contractors' claims after they are established, it is proposed to make a provision of contingencies of \$1,500 million for **61TR**, that is, about 10% of the estimates for the remaining works for **61TR**.

SUMMARY OF FINANCIAL POSITION

32. All in all, a breakdown of the proposed increase of \$8,646.8 million is as follows –

Factors	Proposed increased amount/savings in MOD prices (\$ million)	Percentage of the increased amount/savings (%)
Increase due to –		
(a) additional archaeological work on site at Sung Wong Toi Station	2,993.6	19.5
(b) additional measures to address site constraints	4,043.5	26.3
(c) coordination work with other projects at Wan Chai North	1,201.5	7.8
(d) revision to the construction plan to fulfil the latest safety and technical requirements	2,774.9	18.1

Factors	Proposed increased amount/savings in MOD prices (\$ million)	Percentage of the increased amount/savings (%)
(e) modifications in response to the feedbacks and requirements of stakeholders and railway operator	2,225.8	14.4
(f) additional works for topside developments above railway stations	582.9	3.8
(g) adjustment to fees for the M&V consultant	41.0	0.3
(h) contingencies reserved for the remaining works	1,500.0	9.8
(i) Total increase (i) = (a) + (b) + (c) + (d) + (e) + (f) + (g) + (h)	15,363.2	100.0
Partly Offset by –		
(j) apportionment arrangement for the difference between the actual contract prices and the original estimate	797.3	11.9
(k) amount paid by contingencies	5,869.1	88.1
(l) Total savings (l) = (j) + (k)	6,666.4	100.0
(m) Proposed increase (m) = (i) – (l)	8,696.8	

**61TR – Shatin to Central Link – construction of railway works –
remaining works**

Ancillary Works for the Construction of the Shatin to Central Link

1. Setting up of temporary barging points at Kai Tak Development Area, Hung Hom and Wanchai.
2. Construction of a temporary casting yard for submerged tube tunnel and a concrete batching plant at Shek O.
3. Setting up of a temporary magazine site at Tseung Kwan O.

**61TR – Shatin to Central Link – construction of railway works –
remaining works**

Modification of Existing Railway Facilities

1. Modification of station platforms of the East Rail Line to cater for the operation of the SCL.
2. Modification of station platforms of the Ma On Shan Line to cater for the operation of the SCL.
3. Modification of control and communication systems of the operations control centres and the stations of East Rail Line, Ma On Shan Line and West Rail Line.
4. Modification of Pat Heung Depot to cater for the operation of the SCL.
5. Modification of Lo Wu Marshalling Yard, Ho Tung Lau Depot, Mong Kok Freight Terminal, Homantin siding and Hung Hom North track area to facilitate the setting up of railway facilities.
6. Modification of existing tracks at Tai Wai and Hung Hom for connection with the new railway sections.
7. Modification of the signalling systems of the West Rail Line and Ma On Shan Line.
8. Modification of the existing ticketing system and passenger information system.

**61TR – Shatin to Central Link – construction of railway works –
remaining works**

**Procurement of
Rolling Stock, Railway Systems, Operation and Maintenance Equipment**

1. Procurement of new rolling stock for deployment at the proposed “East West Corridor” and “North South Corridor”.
2. Provision of signalling system for the new railway sections.
3. Procurement of equipment for the new railway systems, including:-
 - (a) station facilities;
 - (b) environment control systems;
 - (c) track works;
 - (d) auxiliary siding facilities;
 - (e) power supply systems; and
 - (f) control and communication systems.
4. Procurement of new service vehicles and depot facilities to cater for the operation and maintenance of the SCL.

62TR – Shatin to Central Link – construction of non-railway works – remaining works

ADDITIONAL EXPENSES

PROJECT SCOPE AND NATURE

In May 2012, the Finance Committee (FC) of the Legislative Council (LegCo) approved the upgrading of the **62TR**, i.e. “Shatin to Central Link — construction of non-railway works – remaining works” to Category (Cat) A at an estimated cost of \$5,983.1 million in Money-of-the-Day (MOD) prices.

2. The approved project scope of **62TR** comprises –
 - (a) construction of essential public infrastructure works (EPIW), including –
 - (I) Fung Tak pedestrian walkway system;
 - (II) pedestrian walkway system at Yuk Wah Street;
 - (III) pedestrian walkway system near Tsz Wan Shan Estate Central Playground;
 - (IV) covered walkway between To Kwa Wan Station and the Kai Tak Development Area;
 - (b) construction of reprovisioning, remedial and improvement works (RRIW), including –
 - (I) roads and related facilities;
 - (II) government facilities –
 - (i) sports facilities;
 - (ii) recreational facilities;
 - (iii) conservation works;
 - (iv) other government facilities;
 - (III) other facilities; and
 - (c) construction of enabling works.

— The lists of EPIW and RRIW under the non-railway works of the SCL as well as their location plans and other relevant plans are at Enclosures 1 and 2 respectively.

ADDITIONAL EXPENSES

3. Following a detailed review of the financial position, we consider it necessary to increase the Approved Project Estimate (APE) of **62TR** by \$1,367 million from \$5,983.1 million to \$7,350.1 million (in MOD prices), to cover the additional expenses arising from the followings –

- (a) additional measures to address site constraints;
- (b) revision to the construction plan to fulfil the latest safety and technical requirements;
- (c) modifications in response to the feedbacks and requirements of stakeholders;
- (d) enabling works along the existing rail line;
- (e) apportionment arrangement for the difference between the actual contract prices and the original estimate;
- (f) adjustment to fees for the monitoring and verification (M&V) consultant; and
- (g) contingencies reserved for the remaining works.

Details of the increase in APE of the project are set out in paragraphs 4 to 16 below.

Additional measures to address site constraints

4. With a total length of 17 km, the SCL involved a huge amount of underground excavation and construction works at various locations of Hong Kong, Kowloon and the New Territories, and through areas such as urban areas with high-rises, the Victoria Harbour, and country parks, which involved conditions with complicated strata, geology, and ground water levels. During the design stage, MTRCL engaged a specialist contractor on ground investigation to conduct a detailed survey (i.e. PWP Item No. **51TR**), and conducted professional assessment on the strata and geological conditions along the SCL. However, the actual geological conditions

encountered during construction could be different from the survey results obtained during the investigation stage, and MTRCL had to modify the engineering design and implement additional measures, for example, deepening of piles at the pedestrian link facilities in the Tsz Wan Shan area, resulting in additional construction expenses.

5. Furthermore, the SCL passes through Diamond Hill, To Kwa Wan, Hung Hom, and Wan Chai, which are developed districts with complicated underground facilities. During construction, the contractors were required to conduct additional works to cope with underground situations unanticipated during the design stage, such as the presence of underground utilities abandoned or more than expectation, thus adding construction difficulties and causing more expenses.

6. The additional measures for addressing site constraints resulted in an increase in expenditure of about \$235.8 million.

Revision to the construction plan to fulfil the latest safety and technical requirements

7. SCL is a mega project with construction period spanning about 10 years. During this period, some of the safety, technical and other requirements had been enhanced in comparison to those in the design stage. MTRCL had to modify the engineering design during construction to keep abreast of the requirements to avoid demolition and refurbishment upon completion of the works and generation of unnecessary construction waste. For example, in response to the collapse of a roof greening incident in 2016, MTRCL carried out comprehensive review on the related facilities. The structural standard of the green roof of the Harbour Road Sports Centre was enhanced and light weight material was used to reduce the self-weight in order to improve the structural safety of the Sports Centre.

8. Revision to the construction plan to meet the latest safety requirements resulted in an increase in expenditure of about \$10.1 million.

Modifications in response to the feedbacks and requirements of stakeholders

9. During the investigation and design stages, the Government and MTRCL conducted extensive consultation, which since 2008 had included briefing the 11 District Councils (DC) along the SCL on the project; reporting progress; organising district consultation activities; providing various information to the public through different channels, such as setting up a website, printing brochures, leaflets, notices and newsletters for public perusal; conducting on-site inspections; arranging roving exhibitions; conducting public forums; arranging school lectures in order to explain the project proposal to the local groups and the public and to collect their views for the

betterment of the project proposal.

10. During construction, HyD and MTRCL have attended to the views of different stakeholders. Since 2012, HyD and MTRCL have participated in more than 120 meetings of DCs, their sub-committees and working groups, and organised more than 100 Community Liaison Group meetings to collate the views of different parties. MTRCL carried out additional works and mitigation measures to take forward the suggestions of the locals. Examples were as follows:

- (a) During the construction of the Fung Tak Public Transport Interchange (now known as the Wong Tai Sin Public Transport Terminus (WTSPTT)), in response to the views of the DC, the public and relevant stakeholders, MTRCL increased the numbers of lifts and public toilets, improved the arrangements for parking spaces and entrances of the WTSPTT, and further widened and enhanced the roads connecting Wong Tai Sin Road and Wong Tai Sin Temple.
- (b) In response to the requests of the DC and residents of Tsz Wan Shan, MTRCL implemented additional measures at the Tsz Wan Shan pedestrian link facilities, such as providing an additional lift and a barrier-free ramp for the disabled, extending and amending the covered walkways, providing additional hand-rail facilities, widening the pedestrian connectivity, and amending the temporary traffic arrangements.
- (c) Part of the land and recreational facilities of the Ma Chai Hang Playground have been alienated since March 2013 for the construction of the SCL facilities, such as tunnel, ventilation facilities and emergency access. The affected facilities, including an 11-a-side soccer pitch and a two-floor indoor game hall, would be re-provided upon completion of the construction works. In response to the views of the DC and locals on the re-provisioning arrangement, the indoor game hall would be upgraded to three-floors with an additional multi-purpose room. The recreational facilities would also be enhanced to meet the actual needs of the public.
- (d) During the construction of the temporary Wan Chai Public Transport

Interchange (WCPTI) and the relocation of the Wan Chai Swimming Pool (WCSP) and the Harbour Road Sports Centre (HRSC), MTRCL was required to modify the design of the facilities to enhance the standard of facilities and ensure the safety of users, such as modifying the designs of the temporary WCPTI and its associated traffic signals in response to the local public concerns, and upgrading the fire, electrical and mechanical, and building services facilities of the WCSP and the HRSC to meet the operational needs.

11. There were other similar cases on top of the above examples. The above modifications made in response to the feedbacks and requirements of stakeholders resulted in an increase in expenditure of about \$888.7 million.

Enabling works along the existing rail line

12. To facilitate the development of the Diamond Hill Comprehensive Development Area, MTRCL had to carry out additional enabling works in Diamond Hill Station and a section of the railway tunnel in the Diamond Hill Comprehensive Development Area, including the construction of additional piles and the modification of the structural walls of Diamond Hill Station, etc. The additional cost was about \$78 million.

Apportionment arrangement for the difference between the actual contract prices and the original estimate

13. The main works of the SCL comprised **61TR** and **62TR**, which involved 58 main works contracts and a large number of minor works contracts. Expenditures for these contracts are being paid for under these two items according to the scope and nature of contract. If a contract involves both railway and non-railway works, the expenses are to be jointly paid for by the two items. This is particularly common in civil engineering contracts on the SCL.

14. The actual price of each contract was different from MTRCL's original estimate of 2012. Based on the actual tendered prices for each contract, the sum of all contract prices for the entire SCL project (i.e. considering both **61TR** and **62TR** together) was slightly lower than the pre-tender estimate assessed by MTRCL in 2012, with a net saving of \$289 million, which upon apportionment, consists of a saving of \$797.3 million for **61TR** and an additional cost of \$583 million for **62TR**. No additional works are involved in the apportioned arrangement.

Adjustment to fees for the M&V consultant

15. Due to the change in the work schedule of the SCL and the need to follow up the recommendations given in the Interim Report of the the Commission of Inquiry into the Construction Works at and near the Hung Hom Station Extension submitted to the Chief Executive in February 2019, HyD has stepped up the work of the M&V consultant. As such, the consultancy fee needs to be increased in order to continue with the monitoring and verification work. The total additional consultancy fee required is about \$44 million, of which about \$3 million is to be shared by **62TR**. The remaining \$41 million is to be shared by **61TR**.

Contingencies reserved for the remaining works

16. The contingencies in the original APE (i.e. around \$530.6 million) were fully utilised to pay part of the additional expenses mentioned above. In view of the possible ongoing challenges brought about by the past and future risks, in order to meet the additional payment that may be required for the contractors' claims after they are established, it is proposed to make a provision of contingencies of \$200 million for **62TR**, that is, about 10% of the estimates for the remaining works for **62TR**.

SUMMARY OF FINANCIAL POSITION

17. All in all, a breakdown of the proposed increase of \$1,367 million is as follows –

Factors	Proposed increased amount/savings in MOD prices (\$ million)	Percentage of the increased amount/savings (%)
Increase due to –		
(a) additional measures to address site constraints	235.8	12.3
(b) revision to the construction plan to fulfil the latest safety and technical requirements	10.1	0.5
(c) modifications in response to the feedbacks and requirements of stakeholders	888.7	46.2

(d) enabling works along the existing rail line	78.0	4.1
(e) apportionment arrangement for the difference between the actual contract prices and the original estimate	508.3	26.4
(f) adjustment to fees for the M&V consultant	3.0	0.2
(g) contingencies reserved for remaining works	200.0	10.3
(h) Total increase (h) = (a) + (b) + (c) + (d) + (e) + (f) + (g)	1,923.9	100

Factors	Proposed increased amount/savings in MOD prices (\$ million)	Percentage of the increased amount/savings (%)
Partly Offset by –		
(i) amount paid by contingencies	530.6	95.2
(j) savings from other works items	26.3	4.8
(k) Total savings (k) = (i) + (j)	556.9	100.0
(l) Proposed increase (l) = (h) - (k)	1,367.0	

**62TR – Shatin to Central Link – Construction of Non-railway Works –
Remaining Works**

List of Essential Public Infrastructure Works

No.	Item
1.	Fung Tak pedestrian walkway system
2.	Pedestrian walkway system at Yuk Wah Street
3.	Pedestrian walkway system near Tsz Wan Shan Estate Central Playground
4.	Proposed Covered Walkway between To Kwa Wan Station and Kai Tak Development Area

62TR – Shatin to Central Link – Construction of Non-railway Works – Remaining Works

List of Re provisioning, Remedial and Improvement Works

(I) Road and Related Facilities

(i) PTIs

No.	Item
1.	Re provisioning of Public Transport Interchange at Wan Chai North
2.	Proposed Public Transport Interchange at Fung Tak

(ii) Re provisioning and Enhancement of Pedestrian Facilities and Flyovers

No.	Item
3.	Re provisioning of Portion of Cheong Wan Road Flyover
4.	Re provisioning of Road Facilities at Chatham Road North
5.	Re provisioning of Road Facilities around Kowloon City and Ma Tau Wai
6.	Re provisioning of Road Facilities at Lung Cheung Road near Diamond Hill Station
7.	Re provisioning of Portion of Wan Shing Street Footbridge
8.	Re provisioning of Portion of Percival Street Footbridge
9.	Improvement to Subways at Olympic Garden
10.	Re provisioning of Wan Chai Ferry Pier Footbridge
11.	Re provisioning of Hong Wan Path
12.	Re provisioning of Fender Piles of Hung Hom Bypass
13.	Underpinning Works of the Following Flyovers Kowloon North East Corridor Piers

No.	Item
14.	East Kowloon Corridor Piers
15.	Hung Hom Bypass Pier
16.	Canal Road Flyover
17.	Hung Hing Road Flyover

(iii) Reprovisioning of Culverts and Slope Stabilisation

No.	Item
	Reprovisioning of the Following Culverts
18.	Culvert at Hung Hom Station and Proposed Hung Hom Stabling Sidings
19.	Culvert at North Fan Area of Hung Hom Station
20.	Culvert at Canal Road
21.	Culvert at Lung King Street
22.	Culvert at Fleming Road
23.	Sewers and Cooling Mains near Hung Hom Railway Station
24.	Slope Improvement Works near Oi Sen Path

(II) Government Facilities

(i) Sports Facilities

No.	Item
25.	Reprovisioning of Portion of Wan Chai Sports Ground
26.	Reprovisioning of Wan Chai Swimming Pool and Harbour Road Sports Centre
27.	Strengthening of Hong Kong Coliseum Podium

(ii) *Recreational Facilities*

No.	Item
28.	Reprovisioning of Portion of Ma Chai Hang Recreation Ground and Proposed Indoor Games Hall
29.	Reprovisioning and Improvement of Sung Wong Toi Playground
30.	Reprovisioning and Improvement of Olympic Garden
31.	Improvement to Hin Tin Playground and Proposed Hin Kwai Lane Sitting Out Area and Proposed Shek Mun Garden
32.	Reprovisioning and Improvement of Ma Tau Wai Road/To Kwa Wan Road Garden
33.	Reprovisioning and Improvement of Ma Tau Wai Road/Chi Kiang Street Amenity Area
34.	Reprovisioning and Improvement of Ma Tau Wai Road/Chatham Road North Amenity Area
35.	Reprovisioning and Improvement of Ma Tau Chung Road/Tam Kung Road Amenity Area
36.	Reprovisioning and Improvement of Ma Tau Wai Road/Ma Hang Chung Road Rest Garden
37.	Reprovisioning and Improvement of Lok Shan Road Playground and To Kwa Wan Complex Playground
38.	Reprovisioning and Improvement of Tsz Wan Shan Estate Central Playground and Tsz Wan Shan Road Rest Garden
39.	Reprovisioning and Improvement of Winslow Street Playground and Amenity Area
40.	Reprovisioning and Improvement of Chatham Road Interchange Rest Garden
41.	Reprovisioning and Improvement of Playground at Junction of Fenwick Pier Street and Convention Avenue
42.	Reprovisioning and Improvement of Tunnel Approach Rest Garden

We also need to provide small scale temporary local recreational facilities.

(iii) *Conservation Works*

No.	Item
43.	Preservation of Old Pillbox and Former Royal Airforce Hangar at ex-Tai Hom Village

(iv) *Other Government Facilities*

No.	Item
44.	Reprovisioning of New Territories South Animal Management Centre and Sha Tin Plant Quarantine Station
45.	Reprovisioning of Police Facilities near Causeway Bay Typhoon Shelter and Improvement to Police Sports and Recreation Club at Boundary Street
46.	Reprovisioning of Wan Chai Ferry Concourse Public Toilet

(III) Other Facilities

No.	Item
47.	Reprovisioning of Hin Keng Estate Refuse Collection Point
48.	Reprovisioning Works at Fleet Arcade at Fenwick Pier Street
49.	Reprovisioning of Staircases and Grease Trap in Hong Kong Convention and Exhibition Centre