

**Legislative Council Panel on Transport**  
**Subcommittee on Matters Relating to Railways**  
**Progress Update of the Construction of the**  
**West Island Line, South Island Line (East) and Kwun Tong Line Extension**

## **Introduction**

This paper reports to Members on the progress of the main construction works of the West Island Line (“WIL”), South Island Line (East) (“SIL(E)”) (as at 31 December 2014) and Kwun Tong Line Extension (“KTE”) (as at 31 December 2014).

## **Background**

### WIL

2. WIL is an approximately three-kilometre long railway extension of the existing Island Line running from Sheung Wan Station to Kennedy Town Station with two intermediate stations at Sai Ying Pun and the University of Hong Kong (the alignment is at **Annex 1**). In 2009, the estimated capital cost of WIL was \$15,400 million (in December 2008 prices). According to the estimation of the MTR Corporation Limited (“MTRCL”) in November 2014, the latest capital cost of WIL is \$18,500 million (in money-of-the-day prices).

### SIL(E)

3. SIL(E) is a new railway corridor running from South to North of Hong Kong Island. It starts from South Horizons on Ap Lei Chau to Admiralty via Lei Tung, Wong Chuk Hang and Ocean Park with a total length of about seven kilometres (the alignment is at **Annex 2**). SIL(E) will connect the MTR Island Line, Tsuen Wan Line and the future Shatin to Central Link (“SCL”) at Admiralty Station. The existing Admiralty Station will be expanded to form an integrated station for the four lines to provide seamless interchanges for passengers. In 2011, the estimated capital cost of SIL(E) was \$12,400 million (in December 2009 prices). MTRCL advised in November 2014 that the cost had increased to \$15,200 million (in money-of-the-day prices).

## KTE

4. KTE is an approximately 2.6-kilometre long railway extension of the existing MTR Kwun Tong Line running from the Yau Ma Tei Station to the new Ho Man Tin Station and Whampoa Station (the alignment is at **Annex 3**). In 2011, the estimated capital cost of KTE was \$5,300 million (in December 2009 prices). According to MTRCL, no adjustments are needed for the capital cost.

## **Project Implementation and Funding Mode**

5. WIL, SIL(E) and KTE, being the extensions of the existing railway networks owned by MTRCL, are ‘ownership’ projects. Under the ‘ownership’ approach, MTRCL will be responsible for the financing, design, construction, operation and maintenance of these railway projects, and will own the railways. The Government and MTRCL signed the Project Agreement for WIL in July 2009, and Project Agreements for SIL(E) and KTE in May 2011. The target commissioning dates are August 2014 for WIL, and December and August 2015 for SIL(E) and KTE respectively.

6. The construction cost of the railways is such an enormous amount that WIL, SIL(E) and KTE are not considered financially viable based on their fare and non-fare revenues alone. Funding support to MTRCL is needed from the Government to bridge the funding gap<sup>1</sup> of the projects.

7. To implement SIL(E) and KTE projects, the Government granted the property development rights under ‘the Rail-plus-Property Model’ to bridge the funding gaps of the projects with caution that the land to be granted to MTRCL should not be more than what is required to bridge the funding gaps. As such, the Government granted in 2011 the topside property development rights at Wong Chuk Hang Depot and Ho Man Tin Station for the implementation of SIL(E) and KTE projects respectively.

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<sup>1</sup> A railway is considered not financially viable if the present value of all its projected revenues net of projected expenditures falls short of the expected return on capital. During the initial public offering (‘IPO’) of MTRCL in 2000, the Government acknowledged to investors through the IPO Prospectus that the return required by MTRCL for any new railway project would ordinarily be between 1% and 3% above Weighted Average of Cost of Capital (WACC). This shortfall is known as the funding gap.

8. Being granted the property development rights, MTRCL is responsible for all of the costs of the property development as well as the construction and operating costs of the railway projects. In addition, it has to bear long term risks in financing the projects, operating the railways, and market fluctuations in rail and property developments. The design philosophy of the ‘Rail-plus-Property Model’ is to strike a fair balance of risks and benefits between the Government and MTRCL.

9. For WIL, due to the lack of suitable sites for property development along or adjacent to the alignment, the Government decided in 2009 to provide a non-recurrent capital grant of \$12,700 million (Net Present Value in June 2009) as the ceiling of the funding support to bridge the funding gap of the project.

### **Essential Infrastructure Works related to Railway Projects**

10. In order to cope with the commissioning of WIL, SIL(E) and KTE, the Government also entrusted the implementation of the associated ‘Essential Public Infrastructure Works’ (“EPIW”) to MTRCL. They include construction and improvement of the pedestrian and linking facilities for providing convenient access to railway stations so that the consequential social and economic benefits of the railways can be fully realised. EPIW, which are constructed in parallel with the railway works, include:-

#### *EPIW of WIL*

- (i) a covered pedestrian link at Sands Street, including a lift at the junction of Sands Street and Rock Hill Street with two sections of single-way escalators;
- (ii) a footbridge across Pok Fu Lam Road for connecting to the University of Hong Kong Centennial Campus; and
- (iii) a boarding and alighting area for green minibuses (“GMBs”) at the Kennedy Town Station.

#### *EPIW of SIL(E)*

- (i) construction of a public transport interchange underneath Wong Chuk Hang Station; improvement of the road network in the vicinity of Ocean Park Station and Wong Chuk Hang Station;

- (ii) modification of a section of Wong Chuk Hang Nullah between Ocean Park Road and Nam Long Shan Road;
- (iii) construction of a covered footbridge connecting Wong Chuk Hang Station with the adjacent industrial area and a covered footbridge linking the western part of Ap Lei Chau Estate to Yi Nam Road near Precious Blood Primary School; and
- (iv) construction of a pedestrian link to Aberdeen Channel Promenade and improvement of the road junctions of Ap Lei Chau Drive and Ap Lei Chau Bridge Road.

#### *EPIW of KTE*

- (i) construction of a pedestrian link system connecting Ho Man Tin Station to Ho Man Tin Estate, Oi Man Estate and the Hung Hom area south of Chatham Road North, which includes covered footbridges, covered walkways and subways;
- (ii) construction of a footbridge integrating with the existing footbridge across Chatham Road North and connecting Ho Man Tin Station to Wuhu Street; and
- (iii) construction of a public transport facility at Chung Hau Street near Ho Man Tin Station.

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

11. MTRCL has submitted progress reports on WIL, SIL(E) (as at 31 December 2014) and KTE (as at 31 December 2014) at **Annex 4** to **Annex 6** respectively. The analysis and supplement made by HyD on these progress reports are provided below.

#### WIL

12. WIL, together with HKU Station and Kennedy Town Station, was commissioned on 28 December 2014. EPIW related to WIL, including the footbridge across Pok Fu Lam Road for connecting to the University of Hong Kong Centennial Campus and the boarding and alighting area for GMBs at Kennedy Town Station, also opened to the public on the same day. The Sands Street pedestrian link opened to the public at the end of December 2012.

13. Owing to the impact of earlier construction works, the Ki Ling Lane entrance and First Street/Second Street entrance of Sai Ying Pun (SYP) Station could not be completed at the end of 2014. For the consideration of passenger safety, SYP Station was not opened at the time when HKU Station and Kennedy Town Station were opened to public use. At the moment, the structural works, the electrical and mechanical (E&M) works and relevant statutory inspections of SYP Station and its five entrances (except Ki Ling Lane entrance) have been substantially completed. After passing the statutory inspections, the station will become operational. MTRCL anticipates that the SYP Station (except Ki Ling Lane Entrance) can be opened to the public in March 2015.

14. The ground freezing works for the passenger adit between Ki Ling Lane entrance and First Street/Second Street entrance are ongoing. The contractor of MTRCL is installing freezing pipes within the adit for subsequent ground freezing and stabilization. Excavation for the remaining 20-meter(m) passenger adit may commence upon the completion of the ground freezing works. Meanwhile, the structural works of the station entrance are being carried out. MTRCL estimates that Ki Ling Lane entrance can be opened to the public in the fourth quarter of 2015.

#### SIL(E)

15. The expansion work at the Admiralty Station for SIL(E) involves the addition of three underground levels below Harcourt Garden east of the existing station and the construction of a 200 m long overrun tunnel for SCL. The additional three underground levels include one level for interchange and two levels for train platforms. The platforms at the upper level are reserved for the use of SCL while the platforms for SIL(E) are at the lowest level. The expanded Admiralty Station will become an interchange station serving passengers from SCL and SIL(E). Hence, its construction cost will be apportioned between the two projects.

16. MTRCL carried out excavation work for the expansion at Harcourt Garden site with the cut-and-cover method before the commencement of the structural work for the station. As safety is accorded the highest priority, it is a big challenge to carry out the excavation underground where the existing train station, tunnels in use and foundations of many buildings are situated. In the process of excavation, it is found that the actual spacing of joints in rock is less than the estimation from ground investigation reports. In other words, the level

of weathering of the rock is less than that estimated. This in effect makes the excavation more difficult. Furthermore, in order to connect the expansion part with the platforms of SIL(E) and SCL, the underpinning works for the existing tunnel of the Island Line have to be carried out for excavation underneath.

17. Currently, the excavation for the underpinning works beneath the Island Line tunnel is still ongoing. The use of mechanical excavation method in early stages has resulted in poor speed and efficiency of excavation. To improve the speed of excavation, the contractor has changed the design of the temporary support for the works to provide more space in the excavation area. Although the speed of excavation has improved significantly since December 2014, it has not been able to catch up with the progress. MTRCL has adopted blasting to assist the mechanical excavation since the end of January 2015 to speed up the excavation. HyD is waiting for MTRCL to provide further information to confirm the effects of blasting and the revised works programme. Moreover, the delay in the underpinning works for the tunnel of the Island Line also affects the progress of the structural works of the station extension to be carried out.

18. MTRCL has revised the target commissioning date of SIL(E) to the end of 2016. In order to achieve the revised target, MTRCL has to improve the efficiency of every aspect of the expansion at Admiralty Station and expedite the remaining works. HyD will keep close monitoring of the progress of MTRCL on such works.

19. For the Nam Fung Tunnel, which connects Admiralty Station and Ocean Park Station, and other railway facilities at Wong Chuk Hang and Ap Lei Chau, although there are different degrees of delay, they are not as severe as the expansion work at Admiralty Station. MTRCL expressed at the beginning of this year that the shaft work for Lei Tung Estate entrance of Lei Tung Station located deep underground had been affected by the complicated geological condition. This, in addition to the shortage of construction workers, has rendered the progress slower than expected. Taking into account the experience drawn from the construction of the entrance of HKU Station on WIL, which is also deep underground, MTRCL estimates that it will take a longer time than originally expected for the construction of Lei Tung Estate entrance. Nevertheless, MTRCL estimates that although the construction work of Lei Tung Estate entrance has to be extended from the second half of 2015 to the first half of 2016, it can still tie in with the target commissioning of SIL(E). HyD will closely monitor the work progress of the entrance and has requested MTRCL to submit

detailed information of the work progress. Regarding the EPIW entrusted by the Government to MTRCL, the pedestrian footbridge connecting the footway outside Precious Blood Primary School and Ap Lei Chau Estate has been substantially completed. The new slip road connecting Ap Lei Chau Drive from Ap Lei Chau Bridge Road is expected to be operational by the second quarter of 2015, which is half year later than the completion date stated in the entrustment agreement. The progress of this new slip road will not affect the commissioning date of SIL(E).

20. The closure of roads surrounding the work site of Harcourt Road Garden between September and mid-December 2014 had affected construction traffic of the site. The ingresses and egresses of the works site of Harcourt Road resumed normal operation a day after the traffic condition on Harcourt Road and Rodney Street returned to normal on 11 December 2014. MTRCL is still assessing the impacts of road closure on the construction works. It considers that the brief closure of roads only has limited impacts on the overall progress of the project. The underpinning works for the Island Line are still the most critical to the progress of SIL(E).

21. HyD has repeatedly expressed its grave concerns at progress meetings and through letters to MTRCL about the slow progress of excavation for the underpinning works beneath the Island Line. It has also requested MTRCL to submit progress reports and proposals for recovering the delay of the excavation works. According to the report submitted by MTRCL at the end of December 2014, although the excavation progress of the underpinning works has significant improvement since December 2014, it could not catch up with the progress. Furthermore, the progress of the structural works for the extension in Admiralty, being affected by the delay of the underpinning works, has been unsatisfactory. HyD has requested MTRCL to advise measures to mitigate the delay. HyD has also repeatedly requested MTRCL to explain and supplement the method statements and contents of the progress reports on the remaining construction works. HyD will keep close monitoring of the progress of the works.

### KTE

22. Since the excavation works at Ho Man Tin Station of KTE was carried out by open blasting, and the blasting was in close proximity to the main roads and residential blocks, the protection setup for open blasting works was more complicated than the traditional one, thereby leading to delay to the excavation works. The structural works of Ho Man Tin Station commenced immediately

after the end of the blasting works for Station in April 2014 for completion in April 2015. The structural works of the west cavern of the station also commenced soon after the completion of blasting in December 2014 and is expected to be completed in June 2015. Currently, MTRCL is engaging in the structural works and associated electrical and mechanical (E&M) works of Ho Man Tin Station in full swing by improving the works sequence, increasing manpower and machinery, and adjusting the E&M and fitting-out works. The structural works of the tunnel and track laying works are also in progress.

23. The excavation works at the East and West Concourses of Whampoa Station were generally completed in the end of 2014. The excavation for the platform tunnel between the two Concourses is ongoing and is expected to be completed in the second quarter of this year. Other remaining works such as tunnel lining, track laying, cable installation will then commence.

24. The delay in the construction of Ho Man Tin Station has affected the progress of part of the EPIW connecting to Ho Man Tin Station, including the two pedestrian subways for crossing Fat Kwong Street and Chung Hau Street, as well as the public transport interchange at Chung Hau Street in the vicinity of Ho Man Tin Station. Besides, the excavation works for the above two pedestrian subways have encountered complicated geological conditions and are experiencing slight delays. MTRCL has adjusted the works sequence, increased manpower and machinery to improve the situation. The above EPIW are expected to be available for public use at the same time as the commissioning of KTE. Regarding the other EPIW that are not affected by the progress of the works of Ho Man Tin Station, including the footbridges and covered walkways crossing Chatham Road North, Chung Yee Street, Sheung Lok Street and Fat Kwong Street, it is expected that the works can be completed within 2015 as scheduled.

25. HyD keeps in view of the progress of various items through regular progress meetings with MTRCL and site visits. It also discusses with MRTCL and co-ordinates with related government departments to help MTRCL resolve problems encountered in the course of works. Through progress meetings and letters to MTRCL, HyD has repeatedly expressed its concern about the persistent delay of the works at Whampoa Station, and requested MTRCL to review the target commissioning programme of KTE and provide progress briefings and detailed works programmes on the major construction activities in order to clarify and supplement on how to carry out the remaining works in the construction programme.



26. MTRCL has set the target commissioning date of KTE in mid-2016. According to the information available to HyD, KTE should be able to start operation in mid-2016 provided that the platform tunnel between the East and West Concourses of Whampoa Station can be completed in the second quarter of 2015. However, as the excavation works of the platform tunnel between the East and West Concourses of Whampoa Station are yet to be completed, MTRCL must keep reviewing the progress of the works and update the target commissioning date when necessary. HyD will keep a close monitoring of the progress of the works.

## **Conclusion**

27. We will continue to closely monitor the progress of the remaining works and system testing of SYP Station and its Ki Ling Lane Entrance of WIL for their commissioning in March and the fourth quarter of 2015 respectively. Regarding SIL(E), although the excavation of the underpinning works beneath the Island Line at Admiralty Station has speeded up, the delay has still not been recovered. In addition, there is a delay in the structural works for the station extension. MTRCL is needed to expedite the remaining works with a view to achieving the target commissioning by the end of 2016. Based on the current assessment, there are still risks to achieve the target commissioning in the end of 2016. For KTE, as the excavation works for the platform tunnel between the East and West Concourses of the Whampoa Station are still ongoing and in view of the uncertainties arising from the complex geological conditions, there are also risks to achieve the target of commissioning in mid-2016. Nonetheless, these railways are ownership projects and MTRCL will bear the additional expenditure arising from the delay of the railway works.

28. The above railway works are major underground infrastructure projects 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 sequence having regard to the actual situation of work sites. Additional manpower and machinery have also been deployed to particular construction activities in order to overcome the difficulties. The Government will closely monitor the progress of works and the state of construction. It will also assist MTRCL to resolve problems encountered in the construction works as early as possible and

conduct timely reviews of the commissioning programme taking into account the latest situation of the project.

**Transport and Housing Bureau**  
**Highways Department**  
**March 2015**

圖例

LEGEND

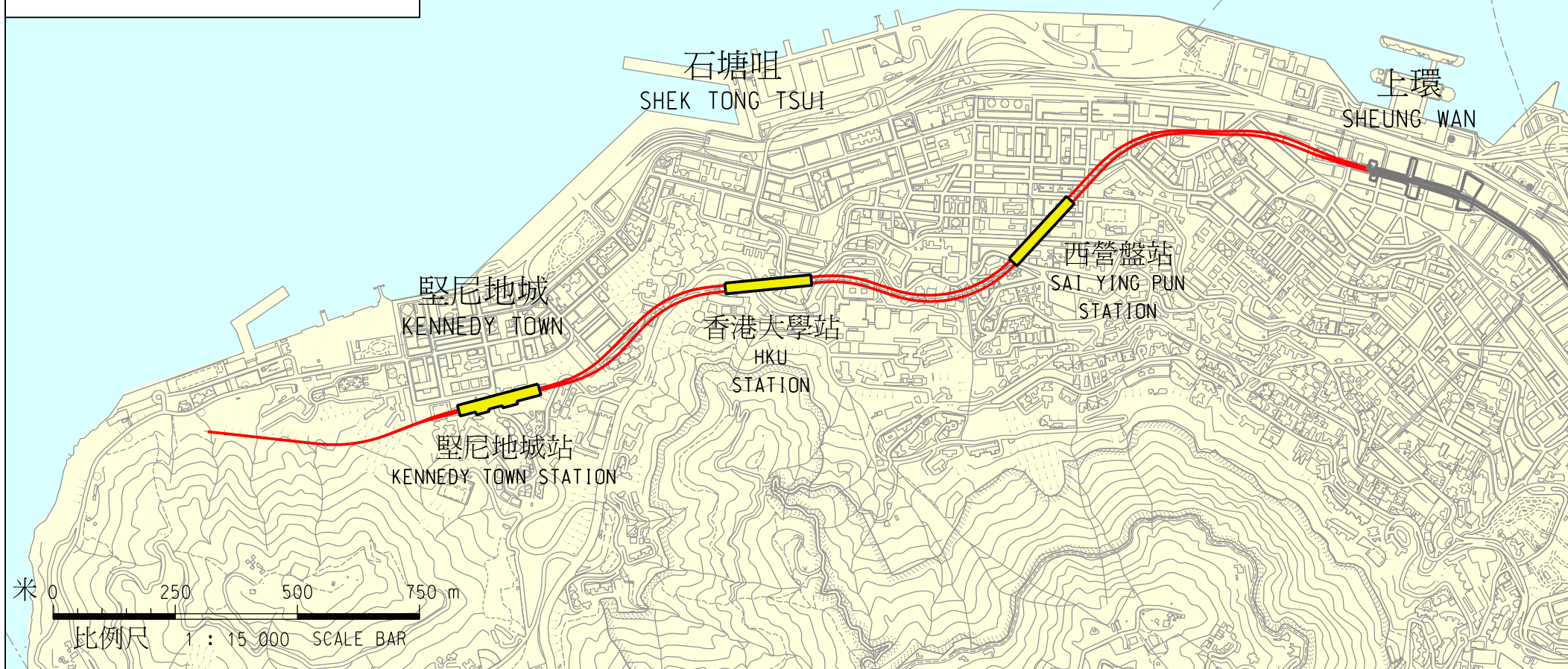
— 現有鐵路路線  
EXISTING RAIL LINE

— 西港島線  
WEST ISLAND LINE

附件一  
ANNEX 1



維多利亞港  
VICTORIA HARBOUR



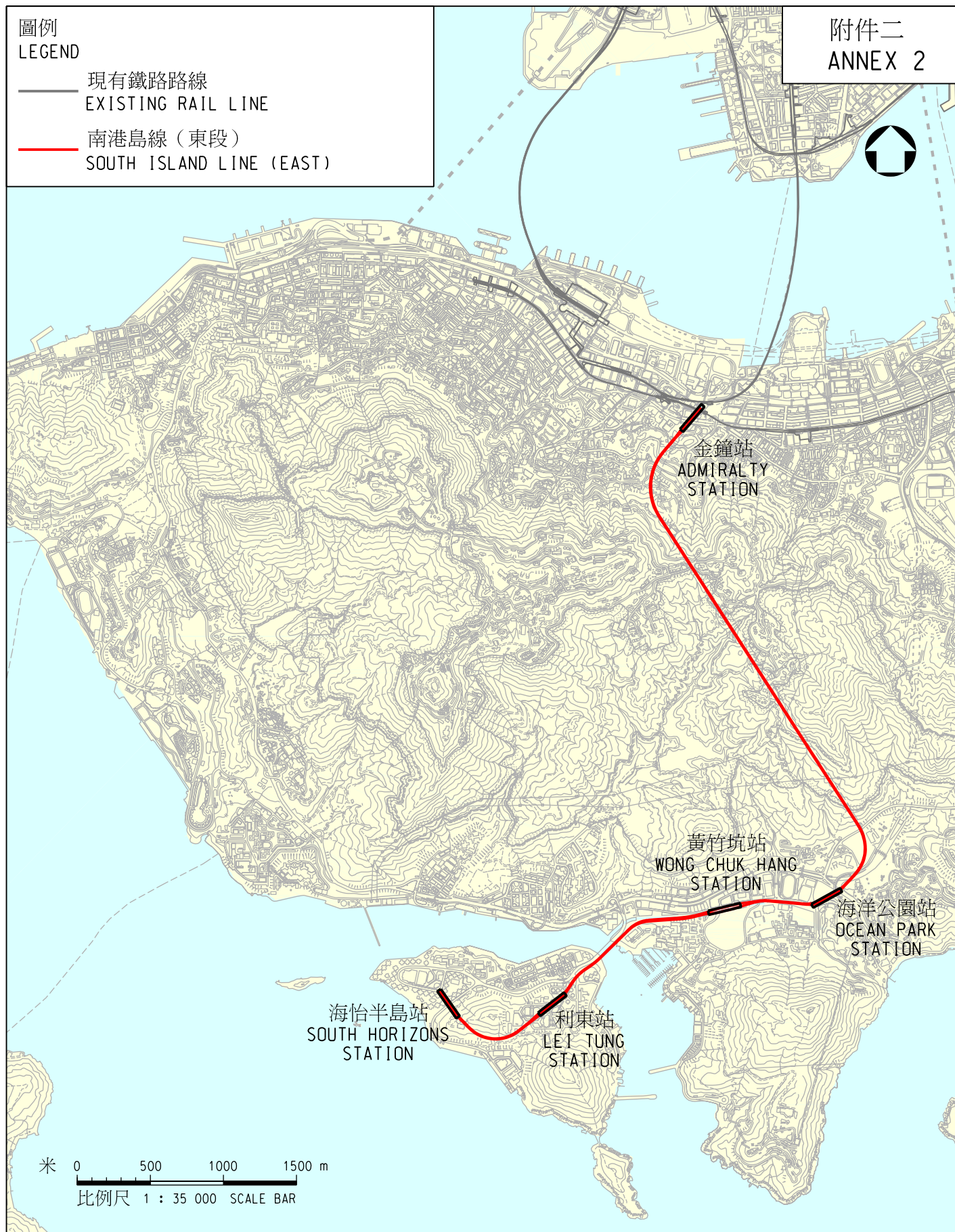
西港島線  
WEST ISLAND LINE



圖例  
LEGEND

- 現有鐵路路線  
EXISTING RAIL LINE
- 南港島線（東段）  
SOUTH ISLAND LINE (EAST)

附件二  
ANNEX 2



南港島線（東段）  
SOUTH ISLAND LINE (SIL) (EAST)





何文田  
HO MAN TIN

何文田站  
HO MAN TIN STATION

紅磡  
HUNG HOM

黃埔站  
WHAMPOA STATION

尖沙咀  
TSIM SHA TSUI

維多利亞港  
VICTORIA HARBOUR

圖例  
LEGEND

- 現有鐵路路線  
EXISTING RAIL LINE
- 觀塘線延線  
KWUN TONG LINE EXTENSION
- 沙田至中環線  
SHATIN TO CENTRAL LINK

米 0 250 500 750 m  
比例尺 1 : 15 000 SCALE BAR

## 觀塘線延線 KWUN TONG LINE EXTENSION

**Legislative Council Panel on Transport**  
**Subcommittee on Matters Relating to Railways**  
**Progress Update and Opening Arrangement of the West Island Line**

This paper briefs Members on the latest progress and opening arrangement of Sai Ying Pun Station (SYP) of West Island Line (“WIL”), which is expected to open for passenger service in March 2015<sup>1</sup>.

**Background**

2. WIL is a 3-kilometres long extension of the existing Island Line stretching from Sheung Wan Station to Kennedy Town Station (KET) with two intermediate stations, SYP and HKU Station (HKU). It offers a seamless railway service with a journey time from Sheung Wan to KET of about 7 minutes. Both HKU and KET commenced public service on 28 December 2014 whilst SYP is targeted to open in March 2015.

**Latest Progress of the Project**

3. As at February 2015, the electrical and mechanical (E&M) and building services installation works at SYP (except Ki Ling Lane entrance) have been completed. The installation of the Passenger Information Display Systems, ticket machines, entry/exit gates and Customer Service Centre at the station concourse has been completed. The testing of the E&M systems, including fire services equipment, computer, CCTV and public announcement system, as well as the lifts and escalators has been completed. Relevant government departments have completed the safety inspections for the facilities of SYP and the confirmation process is underway.

4. The structural works at the work site for the Ki Ling Lane entrance of SYP continue. The installation of freezing tubes is proceeding for the remaining 20-metre passenger adit that connects to the First Street and Second Street entrances. Ki Ling Lane entrance is targeted to open in the fourth quarter of 2015.

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<sup>1</sup> Ki Ling Lane entrance of SYP is targeted to open in the fourth quarter of 2015.

## **Operational Readiness**

5. Operating a safe railway is the top priority of the Corporation. In this regard, drills and exercises are being held to train staff on how to handle different situations and to coordinate with relevant government departments.
6. To ensure smooth operation of SYP, a series of trial operations are being conducted to minimise possible teething problems after opening.
7. To ensure smooth passenger arrangements in the event of disruptions of train service, contingency plans, including the provision of free MTR shuttle buses and pick-up/drop-off points, station crowd management plans, and dissemination of the most updated information of train service via station and train broadcasts, station information panels and the Traffic News information platform of the MTR Mobile App, have been put in place.
8. The railway operation procedures, contingency plans and service procedures for SYP will be the same as that of the existing Island Line. Same as HKU, fire evacuation procedures for SYP's lift-only entrances with the aid of dedicated lifts for evacuation, station broadcasts and signage have been tailor-made.

## **Train Service**

9. Upon commencement of service of SYP, the train frequency between KET and Chai Wan Station will remain the same as the current arrangement, that is, about 2 minutes a train during peak hours and about 4 minutes a train during weekday non-peak hours. The departure time of the first train and last train will be the same as the current arrangement.

## **Publicity and Promotion**

10. Publicity and promotional programmes are underway to provide updates of the project and to familiarise the community and passengers with the new station facilities and entrances of SYP. These programmes include ongoing communication with the Central & Western District Council and local stakeholders, public announcements through media, regular updates through social media and cartoon banner in local

newspapers, station visits for local community and an advertising campaign.

**MTR Corporation Limited**  
**March 2015**



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

**Progress Update of the South Island Line (East)  
(As at 31 December 2014)**

This paper aims to provide the works progress of the South Island Line (East) (“SIL(E)”) as at 31 December 2014.

**Background**

2. At the meeting on 2 January 2015, the Subcommittee discussed the progress of the construction works of the SIL(E) project as at the end of September 2014. The Corporation now provides an update of the latest progress as at the end of December 2014.

3. SIL(E) is a 7-kilometre, medium-capacity railway that connects Southern District with the existing railway network in Hong Kong through tunnels and viaducts extending from Admiralty to Southern District via Ocean Park, Wong Chuk Hang, Lei Tung and South Horizons. A maintenance depot for trains is located in Wong Chuk Hang.

4. To enhance convenience for the residents of Southern District, the project also includes the construction of a number of essential public infrastructure works in addition to the railway. These include the construction of a public transport interchange under Wong Chuk Hang Station; improvement of the existing road network in the vicinity of Ocean Park Station and Wong Chuk Hang Station; the construction of a covered footbridge connecting Wong Chuk Hang Station with the adjacent industrial area, a covered footbridge crossing Ap Lei Chau Bridge Road and linking the western part of Ap Lei Chau Estate with Yi Nam Road near the Precious Blood Primary School; and the construction of a pedestrian link to Aberdeen Channel Promenade, etc.

5. The construction of SIL(E) commenced in 2011. Upon commissioning, it will provide convenient and fast railway service for the approximately 350,000 residential and working population in the Southern District. The journey time from Admiralty to Ocean Park Station will be reduced from the current about 25 to 45 minutes to 4 minutes. The train ride from Admiralty to South Horizons will take approximately 11 minutes. The frequency of train service will be about 3 minutes during peak hours.

## **Project Progress**

6. As at the end of December 2014, the overall works for SIL(E) are about 82% completed whereas the completed percentage should be 92% as planned based on the original target opening at the end of 2015. The excavation works for Nam Fung Tunnel have been completed and the civil construction works for Ap Lei Chau Tunnel have been substantially completed. The construction works for the viaduct and noise barriers of Wong Chuk Hang section have also been substantially completed.

7. With the exception of the entrance at Lei Tung Estate of Lei Tung Station, the construction of the four new stations and their entrances in the Southern District including Ocean Park, Wong Chuk Hang, Lei Tung and South Horizons is generally in line with the original programme. At Lei Tung Estate entrance of Lei Tung Station, the works at the shaft are taking longer time than anticipated due to the ground conditions at formation level and labour resource issues. These works will be deferred from the second half of 2015 to the first half of 2016. Meanwhile, the challenges remain for the extension works of Admiralty Station but the target commissioning of SIL(E) is still at the end of 2016. The updated SIL(E) programme would be more certain when the underpinning works for the Island Line tunnel at Admiralty Station are completed.

## **Track and Train-related Works**

8. The extension works of Admiralty Station as part of the SIL(E) project includes the construction of platforms for the SIL(E) and Shatin to Central Link (“SCL”) at Harcourt Garden as well as an approximate 200-metre long overrun tunnel for SCL. The excavation for the platforms and tunnels of SIL(E) has been completed and the excavation of the tunnel of SCL is expected to be completed in the second quarter of 2015. Meanwhile, the cut-and-cover excavation continues for the station box of the Admiralty Station extension

(details in paragraphs 13 and 14). The blasting works of the shaft at the works site of Hong Kong Park have been completed and the construction of the ventilation building at Hong Kong Park is in progress.

9. The blasting works for Nam Fung Tunnel have been completed. The tunnel lining works and the construction of the transition structure that connects to the viaduct section are substantially completed. As geological challenges had to be overcome during the blasting works for Nam Fung Tunnel, the expected completion date of the structural works of Nam Fung Tunnel will be slightly deferred from the first quarter of 2015 to the second quarter of 2015.



Nam Fung Tunnel permanent lining works

10. All track-laying works from Ocean Park Station to South Horizons Station have been completed and the installation of overhead lines and trackside auxiliaries is in progress. The installation of noise barriers for the viaduct section is substantially completed. With the exception of Admiralty Station, all track-laying works for SIL(E) are expected to be completed by the third quarter of 2015.

11. The first of the 10 new trains of SIL(E) was transported to Wong Chuk Hang Depot from Siu Ho Wan Depot in December 2014. The remaining trains will follow for testing and commissioning on the tracks of SIL(E) later this year.



The first train of SIL(E) has been transported to Wong Chuk Hang Depot

## **Structural Works of Station**

12. Admiralty Station is undergoing expansion to become an interchange station for four railway lines including the Island Line, Tsuen Wan Line, SIL(E) and SCL. There are three levels at the existing Admiralty Station including one concourse level and two platform levels serving passengers on the Tsuen Wan Line and Island Line. The extension works of Admiralty Station are being carried out under Harcourt Garden, east of Admiralty Station, with three additional levels being constructed below the existing station. The cut-and-cover excavation and construction of the station structures are now progressing at the works site of Harcourt Garden. With the exception of the Island Line underpinning zone, most parts of the excavation have reached the foundation level of the extended Admiralty Station with construction of the station structure in progress.

13. The underpinning works of the tunnel structure of the existing Island Line continue. They require the installation of temporary steel beams and columns to support the tunnel structure of the existing Island Line while the in-situ rock is excavated incrementally from beneath the structure. As pointed out in the paper to the Subcommittee in November 2014, these works are being carried out beneath the operating railway and great care is needed to maintain the safety of the railway tunnel structure and ensure that there is no impact on the train services of Island Line. The construction team continues to face significant challenges related to access constraints, tight working space, and at some locations geological features that have required more temporary support works.

These issues have contributed to the delay to this part of the critical works. The construction team is making its utmost effort to overcome these difficulties. The excavation progress has achieved the target production rate since November 2014, although the previous delay could not be recovered. The updated programme of SIL(E) can only be confirmed after the completion of the underpinning works.



Underpinning works for Island Line tunnel at Admiralty Station

14. The excavation and blasting for the cavern at the southern part of the Admiralty Station extension and platform tunnels of SIL(E) have been substantially completed and structural works are in progress.

15. The closure of roads in the Admiralty area from late September to mid-December 2014 affected the access for works vehicles in and out of the works site of Harcourt Garden. Following the clearance of the roads around the works site, all the site accesses resumed to normal operation in mid-December 2014. The construction team will continue to strive to push the works forward.

16. The structural works for Ocean Park Station and Wong Chuk Hang Station have been completed and fitting-out and E&M works are in progress. The structural works for Wong Chuk Hang Depot have also been completed with the fitting-out works and E&M works also in progress. The majority of the track area inside the Depot has been energised for the testing of the trains of SIL(E).



17. For Lei Tung Station, the construction of the station structure at the concourse level is in progress. At the entrance at Main Street, Ap Lei Chau of Lei Tung Station, the structural works of the station entrance and the pedestrian adit have been substantially completed. The blasting works for the shaft of the entrance at Lei Tung Estate and the associated pedestrian adit have been completed. The construction of the shaft structure and the lining works for the pedestrian adit are in progress. Due to the unforeseen adverse ground conditions encountered at the shaft formation level, the lining works of the shaft commenced late and the progress is also being hampered by the availability of labour resources. As a result, the construction of the shaft structure of the entrance at Lei Tung Estate has fallen behind that of the entrance at Main Street, Ap Lei Chau and other structures of the station. The works will have to be carried out until the first half of 2016 but Lei Tung Station can still be completed before the current target of commissioning SIL(E) by end of 2016.



Structural works of the entrance at Lei Tung Estate of Lei Tung Station

18. At South Horizons Station, the excavation works have been completed and the construction of the station box and entrance structure under the temporary traffic deck is in progress. The construction of the superstructure for the footbridge connecting Ap Lei Chau Estate has been completed. The structural works for the End Plant Building at Yuk Kwai Shan and the ventilation building at Lee Wing Street are in progress.



Station structural works in progress under the temporary traffic deck at South Horizons

## **SUMMARY AND WAY FORWARD**

19. As pointed out in the report to the Subcommittee in November 2014, the progress of excavation of the underpinning works at Admiralty Station was behind schedule and not satisfactory. During this reporting period, the excavation progress has achieved the target production rate but the previous delay has not been recovered. Whilst the SIL(E) project is targeted for commissioning at the end of 2016, the Corporation would have more certainty on the commissioning arrangement upon further progress in the excavation and underpinning works at Admiralty Station. The construction team will continue to implement the railway projects with safety as the top priority, and strive to complete the SIL(E) project and deliver railway services as soon as possible. The Corporation will also continue to update members of the public and the Legislative Council of the project progress.

**MTR Corporation Limited**  
**March 2015**

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

**Progress Update of the Kwun Tong Line Extension  
(As at 31 December 2014)**

Background

1. Kwun Tong Line Extension (KTE) project is a 2.6-kilometre underground extension of the existing Kwun Tong Line from Yau Ma Tei Station to Whampoa Station, with an intermediate station at Ho Man Tin. Ho Man Tin Station being constructed under KTE will be an interchange station with the future Shatin to Central Link (SCL). Construction of the KTE project commenced in 2011.
2. To facilitate convenient access to railway service for local commuters, essential public infrastructure works are being constructed in addition to the railway works. These include a series of walkway connections between Ho Man Tin Station, Ho Man Tin Estate and Oi Man Estate, a covered footbridge across Chatham Road North, and public transport facilities at Chung Hau Street.

Project Progress

3. As at 31 December 2014, the overall works for KTE are 72% completed compared to the originally planned completion rate of 74%. With a view to expediting the construction progress of Whampoa Station, additional manpower and equipment have been deployed at various work fronts in Whampoa Station. Several types of heavy machinery, including drilling Jumbo, 20-tonne breakers and bigger backhoe, have been used to enhance works efficiency. Currently, the target commissioning date of KTE is mid-2016.

Railway Tunnelling and Track Works

4. The lining works of the railway tunnel from Yau Ma Tei to Whampoa are completed, while the tunnel internal structures are progressing with 85% completed. The track-laying between Yau Ma Tei and Wylie Road Ancillary Building has been completed and the track



installation works are underway in the tunnels beneath Wuhu Street with 26% completed.



Tunnel between Yau Ma Tei and Ho Man Tin Station

### Ho Man Tin Station and Essential Public Infrastructure Works

5. Ho Man Tin Station will serve as the future interchange station between KTE and SCL. The structural works of the station are now in full swing and are expected to be completed in mid-2015, to be followed by E&M installation and architectural fitting out works.



Ho Man Tin Station construction site

6. Civil works for the railway project have been progressing steadily together with the E&M equipment fabrication, building services and system modification works. The installation of E&M equipment in Ho Man Tin Station has commenced with chiller plant installed in place. Although the structural works of Ho Man Tin Station and Wylie Road Ancillary Building are making good progress, the underground structural works and equipment installation works are being affected by the limited

working space for delivery of construction materials. The construction team is striving to speed up the track laying works so as to provide an additional access for material and plant delivery to underground working areas.

7. The pedestrian linkage system for Ho Man Tin Station is 70% completed. The covered footbridge across Chatham Road North would be partially opened for public use and the existing footbridge would be removed in mid-January as planned. The walkway connection between Oi Man Estate and Sheung Lok Street as well as the covered footbridge to Wuhu Street are expected to be completed in mid-2015. The deck structure of the public transport facilities at Chung Hau Street has been substantially completed and the construction of the subways beneath Fat Kwong Street and Chung Hau Street is now in progress.

#### Whampoa Station and Tunnelling Works

8. The excavation of the platform tunnel between the East and West Concourses commenced in November 2014 and it remains the key to the project at this moment. The variable mixed ground condition and heavy support for the ground are very challenging as expected. The construction team is making every effort to speed up the excavation works as far as possible, whilst engineering control is needed to ensure safe advancement. The excavation works are being carried out from both concourses in parallel with the station works. This section of tunnel is expected to be completed in the second quarter of 2015.

9. The excavation of the East and West Concourses of Whampoa Station was substantially completed in end 2014 and the structural works of the station are in progress. The construction sequence of Whampoa Station has been adjusted by carrying out more parallel working activities and using precast elements with a view to mitigating earlier slippages during the excavation stage. The progress and resources are being closely monitored to meet with the tight construction schedule.



West Concourse of Whampoa Station

10. In the meantime, additional works fronts and extended working hours are being introduced to expedite the platform tunnel construction and station works. Mitigation measures will also be implemented to minimise any impacts to the residents nearby.

11. The construction of the platform tunnel in Whampoa Station remains the most challenging and critical part in the completion of the KTE project. The highly variable ground condition and tight working space need to be handled before improvement is made on the progress and production output. The construction team is striving to expedite site progress whilst minimising impacts to nearby residents. In parallel, detailed planning for the reinstatement works is in progress where complicated traffic staging with utility works is required. Whilst the KTE project is targeted for commissioning in mid-2016, it would be more certain for the Corporation to work out the commissioning arrangement upon further progress of the platform tunnel excavation.

**MTR Corporation Limited**  
**March 2015**