

**For information**  
**4 November 2010**

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

**Progress of the Shatin to Central Link**

**Introduction**

This paper briefs Members on the progress of the Shatin to Central Link (SCL).

**Background**

2. In March 2008, the Executive Council decided to proceed with the implementation of the SCL project using the “concession approach”. The Government will be responsible for the construction costs of the SCL and the MTR Corporation (MTRCL) will be entrusted with the planning and design of the project. The design and site investigation works of the SCL commenced upon approval by the Finance Committee of the Legislative Council (LegCo) in May 2008.

**Shatin to Central Link Railway Scheme**

(I) Strategic Railway Scheme

3. The 17-kilometre SCL is a territory-wide strategic railway project with ten stations<sup>1</sup> (See **Annex 1**). The project is linked with a number of existing railways, forming two strategic railway corridors, namely the “East West Corridor” and the “North South Corridor” (See **Annex 2**):

- (a) The “East West Corridor”, which extends Tai Wai Station of the Ma On Shan Line towards Kowloon to connect with Hung Hom Station of the West Rail Line, will allow passengers to travel from Wu Kai Sha Station to Hung Hom, East Kowloon, New Territories West and Tuen Mun without interchanging, providing a more direct and convenient railway service for passengers who travel between New Territories East and New Territories West.

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<sup>1</sup> The ten stations of the SCL are: Tai Wai, Hin Keng, Diamond Hill, Kai Tak, To Kwa Wan, Ma Tau Wai, Ho Man Tin, Hung Hom, Exhibition and Admiralty.

- (b) The “North South Corridor”, which extends the existing East Rail Line from Hung Hom Station across the harbour to Admiralty Station, will allow passengers (using the East Rail Line) from Lo Wu and Huanggang (using the Lok Ma Chau Line) to reach the heart of Hong Kong Island directly.

4. The SCL will significantly reduce the journey time for passengers who travel between East Kowloon, East New Territories and Hong Kong Island. It will also increase the capacity of the railways that carry passengers from Shatin to Kowloon and across the harbour, as well as relieve the congestion on the existing railway lines.

(II) Interchange Stations

5. The SCL will have new stations in six districts serving a wide catchment across Hong Kong Island, Kowloon and the New Territories. The SCL will be linked to a number of existing and future railway lines<sup>2</sup> at six interchange stations and further enhance the railway service in Hong Kong. The six interchange stations are:

- (a) Tai Wai Station – interchange station for “East West Corridor” and “North South Corridor”;
- (b) Diamond Hill Station – interchange station for Kwun Tong Line and SCL;
- (c) Ho Man Tin Station – interchange station for Kwun Tong Line Extension and SCL;
- (d) Hung Hom Station – interchange station for “East West Corridor” and “North South Corridor”
- (e) Exhibition Station – interchange station for the SCL and the future North Island Line; and
- (f) Admiralty Station – interchange station for the SCL, Tsuen Wan Line, Island Line and the proposed South Island Line (East).

Details of the six interchange stations and interchange arrangement are shown in **Annex 3**.

(III) Other Major Works

6. Apart from the six interchange stations, other major works include:

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<sup>2</sup> The six interchange stations of the SCL will link up the East Rail Line, the West Rail Line, the Ma On Shan Line, the Tsuen Wan Line, the Kwun Tong Line, the Kwun Tong Line Extension, the Island Line, the South Island Line (East) and the future North Island Line.

(a) Ma On Shan Line (MOL) Station Improvement Works

Upon the completion of the SCL “Tai Wai to Hung Hom Section”, the MOL will form part of the “East West Corridor”. Station improvement works will be required to suit the future operation of 8-car trains from the current 4-car configuration. Space has been provided in the existing MOL stations to accommodate the extension of platforms.

(b) East Rail Line (EAL) Modification Works

Upon completion of the SCL “Hung Hom to Admiralty Section”, the EAL will form part of the “North South Corridor”. Modification of the existing EAL will be required to cope with the future signaling system and service demands of the SCL:

- (i) The SCL passing through Exhibition to reach Admiralty will face the same space constraint in the built up urban areas. After detailed studies, the stations can only accommodate nine-car train platforms. Therefore, unlike the EAL which is currently using 12-car trains, the entire “North South Corridor” will operate with 9-car configuration;
- (ii) Modification works of the EAL trains and station will be made to meet the 9-car train operation; and
- (iii) The current EAL signaling system will not be able to support the more frequent train service of the SCL, and thus will need to be upgraded.

(c) Diamond Hill Stabling Sidings (DHS)

The Diamond Hill Stabling Sidings will be built at the former Tai Hom Village site to allow the timely train deployment in the morning to meet the passenger flow during morning peak hours. Apart from stabling of trains in non-service hours, the DHS will also be used for routine inspection and cleansing.

(d) Tsz Wan Shan Pedestrian Facilities Improvement Works

To improve the connectivity between Tsz Wan Shan and the SCL Diamond Hill Station, pedestrian links in the district will be improved by connecting existing footbridges and retrofitting lifts to facilitate barrier-free access for pedestrians.

## **Public Consultation**

7. Since mid 2008, the Government and the MTRCL have undertaken public consultation on the SCL. Apart from consulting District Councils, community consultation activities, including roving exhibitions and public forums, have been held. Various channels have also been utilized to brief local groups and residents on the railway scheme as well as to gather their views.

8. Representatives of the Government and the MTRCL have attended 30 District Council meetings of Sha Tin, Wong Tai Sin, Kowloon City, Yau Tsim Mong, Eastern, Wan Chai, Central and Western, North, Kwun Tong, Sai Kung and Southern Districts to introduce the project and brief District Council Members on the progress of the SCL and to listen to their views.

9. The MTRCL has also proactively organized numerous activities to introduce the relevant local communities and residents to the railway scheme of the SCL. These activities include 20 public forums, school talks, youth engagement programme, student briefing sessions and visits to railway facilities. The MTRCL also attended resident meetings organized by local stakeholders to provide briefings on the SCL scheme and listen to their views. Leaflets, brochures, digests and newsletters were published to collect public opinions on the scheme as well as the new railway service. During the consultation, the general public, concern groups and professional groups expressed their support for the commencement of the SCL project as soon as possible.

10. To gauge the effectiveness of the SCL public consultation activities, an independent research agency was commissioned to carry out a study in July 2010. Over 1,500 street intercept face-to-face interviews were conducted in various districts. More than 90 per cent of the respondents supported the construction of the SCL, while 70 per cent supported its construction as early as possible. The study also identified news reports, publications and exhibitions as effective means in enabling the general public to understand the railway scheme and its impact on local communities. It also revealed that only around twenty per cent of the respondents were aware of the relevant information from the website. In response, an extensive roving exhibition was launched again in MTR stations and shopping malls across the territory in August and September this year. A dedicated website for the SCL has been produced and launched to provide a convenient platform for the general public to obtain details of

the SCL project.

## **Public Views**

11. The main purpose of railway infrastructure is to serve the general public. Public engagement in the railway planning stage is crucial to the further refinement of the detailed design of a new railway. During the consultation, many people expressed support for the SCL and its early implementation. Some local stakeholders and residents voiced their opinions and concerns about the alignment, service and facilities of the SCL, such as location of station entrances/exits, connection facilities, location of ventilation shafts, location of works sites, as well as impact on local traffic and the environment during the construction period.

### **(I) Alignment**

12. As the reclamation proposal in the Southeast Kowloon Development Plan was dropped, the MTRCL in 2009 suggested amendments to the SCL Kowloon City Section by moving the alignment from To Kwa Wan Road to Ma Tau Chung Road and Ma Tau Wai Road. The revised alignment will serve more population in To Kwa Wan, Kowloon City and Kai Tak Development Area, and enable the majority of the residential properties, schools, industrial and commercial buildings to fall within the 500-metre walking distance of station entrances/exits.

13. The Government and the MTRCL have met with the Kowloon City District Council a number of times and carried out local consultation activities to brief the District Council and the general public on the revised alignment proposal and to consult their opinions. We have listened to the concerns of the local stakeholders and have reviewed the feasibility of different alignment options and have explained to the District Council and local stakeholders why the options suggested by the public would not be feasible. The District Council understands the constraints on the choice of alignment and hopes the pedestrian facilities can be improved. We will maintain close communication with the District Council in this regard.

14. During the public consultation, a number of options were suggested to make slight changes to the alignment of the SCL Wong Tai Sin Section in order to avoid the use of Ma Chai Hang Recreational Ground as a temporary works site and the construction of an emergency access and ventilation building. We have studied the various alignment options in detail and note that there are various constraints and associated risks. We have explained to the District Council and the locals why we

have not adopted their suggested alignment options. We are working with the District Council and local community on ways to reduce the works area land take at Ma Chai Hang Recreational Ground and to enhance the design of the ventilation building. We will continue to listen to their views.

(II) Stations

15. During the consultation, additional stations were suggested at Hin Keng, Chuk Yuen and Tsz Wan Shan. After detailed study, the Government and the MTRCL have arrived at the following conclusion:

- (a) Hin Keng Station: We agree to incorporate Hin Keng Station in the proposed railway scheme to alleviate the congestion in Tai Wai Station and to provide railway service to the residents in Hin Keng;
- (b) Chuk Yuen: The area is currently served by three MTR stations in the vicinity, namely Lok Fu, Wong Tai Sin and Diamond Hill. These stations should be able to meet the current and future passenger demands; and
- (c) Tsz Wan Shan Station: Detailed site investigations in the area have found that the geological stratum is highly variable. Despite the station would be located at some 80 metres below ground, it could not reach the rock layer. Construction of the station may also affect the structural integrity of the nearby buildings and cause uneven settlement. Extremely high risks would be entailed. The proposal of building Tsz Wan Shan Station has to be dropped. After rounds of local consultation, we, together with local stakeholders, have agreed to carry out large-scale improvement works for the pedestrian facilities in Tsz Wan Shan.

(III) Ventilation Building & Emergency Access

16. The construction of a ventilation shaft and an emergency access at appropriate locations of a railway tunnel is essential for the air ventilation and the safe operation of a long railway tunnel. In case of emergency, passengers can be evacuated from the tunnel to the ground level, and firefighters can enter the tunnel to carry out rescue and relief work. In determining the location of the proposed ventilation building and emergency access, we have taken various factors into account, such as disturbance to residents, visual impact, technical feasibility and risks to nearby buildings.

17. During the public consultation of the SCL, local stakeholders expressed concerns over the construction of the proposed ventilation building and emergency access at Ma Chai Hang Recreational Ground. We understand Ma Chai Hang Recreational Ground is an important recreational spot for people in the district, and the proposed ventilation building and emergency access will occupy the precious space. The MTRCL has therefore revised the original design and enhanced the appearance of these facilities to blend in with the surrounding environment. The footprint and height of these facilities have also been reduced in order to minimize the space occupied and the visual impact on residents nearby. We understand that there are still concerns over the current design and arrangement, and are thus closely negotiating the arrangement and enhancement measures with local stakeholders through Wong Tai Sin District Council and its committees.

(IV) Works Sites

18. To reduce the impact on local traffic during the construction period, tunnel boring machines are proposed to be used wherever possible for the construction of the tunnel sections between stations. Access shafts will have to be built at both ends of the proposed railway tunnel to allow boring machines to enter and exit the tunnel. The areas will also serve as temporary works areas. To address public concerns and minimize the impact on residents, we have reduced the area of the works sites. We will continue to maintain close communication with local groups and stakeholders to gather their views on works sites. We will maintain part of the recreational facilities as far as possible during construction, while trying to accommodate the reprovisioned facilities to the demands of the community and residents.

(V) Diamond Hill Stabling Sidings (DHS) & Topside Development

19. As the Pat Heung Depot is far away from the stations of the SCL “Tai Wai to Hung Hom Section”, and there is space constraint in the Tai Wai Depot to accommodate trains other than existing MOL trains, neither of the depots will be able to meet the requirement for timely train deployment of the SCL during morning peak hours. After taking into consideration the location of existing railway depots, direction of train deployment and distance from the SCL stations, the stabling sidings are proposed to be located at the former Tai Hom Village site in Diamond Hill.

20. In response to community concerns raised during public consultation over the potential environmental impact posed by the stabling sidings, the MTRCL has conducted studies and suggested the stabling sidings be built with semi-depressed configuration and be covered. The roof of the stabling sidings will also be lowered

so that it will be at the same level as Lung Cheung Road. This will serve to minimize environmental, traffic and visual impact. To address the concerns expressed by the community, the MTRCL has made adjustments to the orientation, arrangement and number of tracks and reduced the size of the stabling sidings by one quarter. As such, the Kai Tak River to the west of former Tai Hom Village will be preserved, and there will be more space available between the stabling sidings and Choi Hung Road for greenery and the use of different development options.

21. Three historical structures that are now situated in the future works site of the proposed stabling sidings, namely the Old Pillbox, the Former Royal Airforce Hangar and the Stone House<sup>3</sup>, will need to be temporarily relocated during construction. We understand the public's aspiration for the preservation of the above three historical structures. Therefore, in formulating the development scheme for the topside development, we will make accommodation to any possible preservation options, so that the three historical structures can be put back within the site of the former Tai Hom Village. The public will be further consulted about the overall restoration arrangements after the Government determines the land use and planning blueprint of the topside development and formulates a development scheme.

22. There are diverse views on the topside development above the DHS. The topside development, however, is not part of the SCL project. In response to the views of the community, the current design of the DHS by the MTRCL has taken into account different possible development schemes. The Planning Department is reviewing the land use and restrictions on building height and development density in the district, as well as studying and assessing different topside development schemes. Upon completion of the review, we will consult the Wong Tai Sin District Council, and will follow the procedures as stipulated under the Town Planning Ordinance.

### **Protection Works, Advance Works & Major Reprovisioning Works**

23. The SCL is a territory-wide strategic railway project. The project will interface with existing railway lines, existing public facilities and other public infrastructure projects, or take place concurrently with other projects. To reduce the impact on the local community and ensure the timely completion of the project, the implementation of the SCL will involve substantial modification to existing railways, railway protection works in other public infrastructure projects, reprovisioning of

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<sup>3</sup> On 31 August 2010, the Old Pillbox and the Former Royal Airforce Hangar were given a Grade 2 and Grade 3 respectively by the Antiquities Advisory Board, while the Stone House was given no grading.

affected public facilities, and provision of new essential public infrastructure as shown below:

- (a) Protection Works under Wan Chai Development Phase II (WDII) Project  
The SCL will run underneath the reclamation to be constructed under the WDII project. The proposed SCL tunnels will be located underneath a number of large water mains and cooling water mains. These water mains will put into use prior to the commencement of the SCL construction. To avoid the diversion of the water mains after the construction of the SCL commences, the WDII has been entrusted to carry out protection works for the SCL. In July 2010, LegCo Finance Committee approved the funding for the protection works.
  
- (b) Protection Works under Central – Wan Chai Bypass (CWB) Project  
The SCL will cross above the Central – Wan Chai Bypass (CWB) inside the Causeway Bay Typhoon Shelter (CBTS), where temporary reclamation will be required for both projects. To minimize the extent of temporary reclamation in accordance with the requirements of the Protection of the Harbour Ordinance, the construction of a 160-metre long section of the SCL tunnel will be entrusted to the CWB project. This will minimize the impact on the vessel owners in the CBTS. All temporary reclamation within the CBTS will be removed after the completion of the SCL. We have commenced the statutory procedure required in this regard.
  
- (c) Advance Works at Admiralty Station (ADM)  
Both the SCL and the South Island Line (East) (SIL(E)) will terminate at the extension of the Admiralty Station (ADM). To minimize the disturbance to the surrounding environment, the community and passengers, the entire extension of ADM incorporating the SCL advance works will be built in one go under the SIL(E) project.
  
- (d) Advance Works at Ho Man Tin Station (HOM)  
Ho Man Tin Station will be the interchange station for the future SCL and the Kwun Tong Line Extension (KTE). To minimize the disturbance to the district and passengers, the entire station, incorporating the SCL advance works at HOM, will be built under the KTE project.
  
- (e) International Mail Centre (IMC)

The SCL alignment will pass through the foundations of the International Mail Centre (IMC) located to the south of Hung Hom Station. The IMC will thus need to be demolished and is proposed to be reprovisioned at a vacant site at Wang Chin Street in Kowloon Bay. To ensure the postal operation will not be suspended and to meet the SCL construction schedule, the reprovisioning of the IMC will have to commence prior to the construction of the SCL.

### **Resumption of Land or Underground Strata**

24. The SCL traverses many districts across the territory, some of which are among the most densely developed urban areas. It is inevitable for the railway line to pass under some private lots. In designing the SCL alignment, we have tried to minimize the need for land resumption. The current proposed alignment will only involve the resumption of underground strata but will not require the resumption of any private buildings so as to minimize the impact on the public.

### **Cost Estimate**

25. There are still a number of uncertain factors in working out the estimate of the SCL project. In March 2008, we announced that the MTRCL would be requested to proceed with the further planning and design of the SCL project based on the proposal jointly submitted by the MTRCL and the then Kowloon-Canton Railway Corporation in 2005. The total project cost was estimated to be about \$38.17 billion in April 2007 prices, comprising the SCL works (about \$37.4 billion) and the associated essential public infrastructure works (about \$0.77 billion).

26. The construction cost of the SCL works (including railway works and non-railway works) has increased by about 30% between 2007 and 2009, mainly due to significant increase in construction material prices. In addition, we will, having regard to the actual situation, consider incorporating suggestions and requests raised by certain stakeholders during the public consultation, concerning the design and proposed facilities of the SCL project. These design changes may further increase the cost of the project. The addition of Hin King Station, omitting the barging point near Hoi Sham Park in To Kwa Wan, further improving the pedestrian links at Tsz Wan Shan, relocating the International Mail Centre from Hung Hom to Kowloon Bay, etc. are a few examples. The estimated cost for these additional works is about \$5 billion. Furthermore, in the course of the preliminary design, MTRCL has to revise

the design to cope with actual site conditions and technical requirements. Large scale traffic diversions would also need to be implemented in different areas during the construction stage. The estimated cost for these changes is about \$7 billion. Based on the current assessment, the estimated cost for the entire SCL project (including railway works and non-railway works) will be over \$60 billion.

27. Nonetheless, there are still a number of uncertainties that may increase the cost of the works leading to an upward adjustment to the aforesaid estimate. For example, MTRCL may have to further adjust the design in the course of detailed design and further site investigations. Such adjustments in the design will affect the cost estimate. Furthermore, the project involves a number of issues of public concern, such as the arrangements for using the Ma Chai Hang Recreation Ground for temporary works area, ventilation building and emergency exit, the design of Diamond Hill stabling sidings, the design of pedestrian links in Kowloon City, the arrangements for temporary works area and construction facilities within the Kai Tak Development, etc. All these may add to the project cost. We can only work out a more accurate cost estimate when we have a better picture of the options.

### **Project Programme**

28. The Government and the MTRCL are working on the detailed design of the SCL which will take into consideration the views collected from public consultation activities. Based on the current progress, we expect to gazette the SCL project by the end of 2010 at the earliest, with a view to commencing works in 2012.

29. The SCL project will have to interface with many other infrastructure projects, such as the South Island Line (East), Kwun Tong Line Extension, Central – Wan Chai Bypass Project and Wan Chai Development Phase II Project, as well as major reprovisioning works. The funding application for certain protection works, advance works and reprovisioning works will be carried out in 2011.

### **Advice Sought**

30. Members are invited to note the content of this paper.

**Transport and Housing Bureau**  
**November 2010**

附件一  
Annex 1

沙中線走線  
Shatin to Central Link Alignment



大圍至紅磡段  
Tai Wai to Hung Hom Section

紅磡至金鐘段  
Hung Hom to Admiralty Section

轉線站 Interchange Stations



附件二  
東西走廊及南北走廊

Annex 2  
East West Corridor and  
North South Corridor

**Six Interchange Stations of SCL**

- (a) **Tai Wai Station** – interchange station for “East West Corridor” and “North South Corridor”

Ma On Shan Line passengers will be able to switch to the East Rail Line here, while passengers from New Territories North will be able to change trains for destinations in East Kowloon. Modifications to Tai Wai Station including the upgrading of station facilities, will be made to accommodate its interchange function.

- (b) **Diamond Hill Station** – interchange station for Kwun Tong Line and SCL

As the interchange station for the Kwun Tong Line and the SCL, Diamond Hill Station will become the railway hub in East Kowloon. Passengers travelling from Ma On Shan to East Kowloon will be able to change trains for the Kwun Tong Line at Diamond Hill Station, while Kwun Tong Line passengers will be able to change over to the SCL for destinations in the New Territories or Hong Kong Island. A new station concourse, platforms and rail tracks will be constructed to the south of the existing Diamond Hill Station. The new and the old stations will be interlinked by pedestrian walkways.

- (c) **Ho Man Tin Station** – interchange station for Kwun Tong Line Extension and SCL

Passengers will be able to change for the KTE at Ho Man Tin Station to reach Whampoa. Passengers from Whampoa will be able to switch over to the SCL at Ho Man Tin Station to reach East Kowloon, or travel to Hung Hom Station to reach Hong Kong Island or the New Territories. The proposed eight-storey Ho Man Tin Station will provide two levels of platforms for Kwun Tong Line Extension and the SCL, and two storeys of interchange concourses.

- (d) **Hung Hom Station** – interchange station for “East West Corridor” and “North South Corridor”

Hung Hom Station will become an important railway hub of Hong Kong serving passengers travelling along the “East West Corridor” and the “North South Corridor” to reach destinations in the New Territories, Kowloon and Hong Kong Island. To prepare the “North South Corridor” of the SCL for

crossing the harbour, large-scale extension works will be carried out at Hung Hom Station. Substantial modification will be made to the existing station concourse to make it more convenient for passengers to interchange between railway lines.

- (e) **Exhibition Station** – interchange station for the SCL and the future North Island Line

Passengers from the New Territories or East Kowloon will be able to switch to the future North Island Line at Exhibition Station to reach the Eastern District on Hong Kong Island.

- (f) **Admiralty Station** – interchange station for the SCL, Tsuen Wan Line, Island Line and the proposed South Island Line (East)

Admiralty Station will become the transport hub on Hong Kong Island that serves as an interchange for the Island Line, the Tsuen Wan Line, the future South Island Line (East) and the SCL. The existing Admiralty Station will be expanded eastwards below Harcourt Garden to accommodate the new train platforms and interchange concourses.