

## **LEGISLATIVE COUNCIL BRIEF**

### **SHATIN TO CENTRAL LINK AND MTR KWUN TONG LINE EXTENSION**

#### **INTRODUCTION**

At the meeting of the Executive Council on 11 March 2008, the Council ADVISED and the Acting Chief Executive ORDERED that

- (a) the MTR Corporation Limited (MTRCL) should be asked to proceed with the further planning and design of the SCL based on the scheme jointly developed by the Kowloon-Canton Railway Corporation (KCRC) and the MTRCL (the M-Scheme);
- (b) further discussion should be carried out with the MTRCL on the implementation details of the M-Scheme based on the concession approach to fund the project;
- (c) the MTRCL should be asked to proceed with the further planning and preliminary design of the Kwun Tong Line Extension, which will serve Homantin and Whampoa; and
- (d) further discussion should be carried out with the MTRCL on the implementation details of the Kwun Tong Line Extension based on the ownership approach to fund the project.

#### **JUSTIFICATIONS**

##### **(A) Shatin to Central Link**

###### *Objectives*

2. The SCL is one of the priority railways recommended for implementation in the Railway Development Strategy 2000<sup>1</sup>.
3. The SCL is intended to comprise –
  - (a) the Tai Wai to Diamond Hill Link connecting Tai Wai with Diamond Hill;

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<sup>1</sup> The Railway Development Strategy 2000 maps out the preferred railway network expansion plan for Hong Kong up to 2016.

- (b) the East Kowloon Line extending the rail from Diamond Hill to Hung Hom; and
- (c) the Fourth Rail Harbour Crossing extending the rail from Hung Hom to Hong Kong Island.

### *Benefits of SCL*

4. As a strategic railway expanding the catchment<sup>2</sup> of the railway network in Hong Kong, the SCL will serve a wide catchment of 300 000 residential and 283 000 employment population. The SCL will -

- (a) help redistribute railway passenger flows to relieve the existing railway lines in urban Kowloon and on Hong Kong Island;
- (b) be an important component of the Kai Tak Development providing public transport service not only to the proposed new commercial and residential developments in the area, but also the Multi-Purpose Stadium Complex and other leisure facilities planned at Kai Tak;
- (c) help relieve the reliance on road-based public transport in the existing developed areas, and alleviate the traffic congestion and environmental nuisance on existing road networks, including the demand on the Hung Hom Cross Harbour Tunnel; and
- (d) stimulate the redevelopment of the To Kwa Wan and Kowloon City areas.

5. The SCL will carry about one million railway passengers per day and generate annual transport benefits of \$4.1 billion in terms of time saving to travellers in 2021. It will yield a high Economic Internal Rate of Return of 10% measured in real terms. The new railway will also help improve the local employment situation by providing 11 000 employment opportunities during construction and another 9 600 employment opportunities during its operation.

### *SCL Scheme*

6. We recommend that the M-Scheme, i.e. the proposal, jointly submitted by the then MTRCL and KCRC to Government in 2005, be adopted as the core scheme for the SCL project for further planning. This core SCL scheme will comprise nine stations, namely Tai Wai, Diamond Hill, Kai Tak, To Kwa Wan, Ma Tau Wai, Homantin, Hung Hom, Exhibition,

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<sup>2</sup> The area within the 500m radius of a railway station is defined as the catchment of the railway.

and Admiralty, as well as a depot at Diamond Hill. The alignment of M-Scheme is shown at **Annex A**.

7. The M-Scheme has the following features -
- (a) fully integrated stations with inter-platform interchange will be provided at Diamond Hill, Homantin, Exhibition and Admiralty;
  - (b) the construction of the Central South Station will be deferred until there is a clearer and better option for its location and in the light of the undecided future use of the existing Central Government Offices site;
  - (c) the Causeway Bay North Station previously proposed by the KCRC will be deleted;
  - (d) there will be two stations, namely To Kwa Wan Station and Ma Tau Wai Station serving the Kai Tak and To Kwa Wan areas;
  - (e) the Exhibition Station will be located at the existing public transport interchange site in Wan Chai North;
  - (f) the Tsz Wan Shan Automated People Mover system previously proposed by the KCRC will be deleted; and
  - (g) the Whampoa Automated People Mover system previously proposed by the KCRC will be deleted, to be replaced by extending the MTR Kwun Tong Line to Whampoa.

8. The justifications for the above features are at **Annex B**. There are other key issues in the M-scheme, discussed below -

#### SCL Depot at Diamond Hill

9. A depot in the urban area is essential for the operation of the SCL. The depot was originally planned at the ex-Kai Tak Airport Terminal building site. As the site at Kai Tak is close to the waterfront of Kowloon Bay and the water table is high, it is not feasible to mitigate the noise impact by depressing the depot underground, and we asked the railway corporation to explore the feasibility of locating the depot at the former Tai Hom Village at Diamond Hill.

10. The railway corporation's study indicates that the proposed depot at Diamond Hill would be technically feasible. Since the SCL will be a designated project under the Environmental Impact Assessment Ordinance, further studies would be carried out to assess its environmental impact on

the nearby developments and facilities. Suitable mitigation measures, if necessary, will be proposed. Furthermore, the topographical conditions at the site will enable a 'semi-depressed' design for the depot. This will further alleviate its impact on the surroundings.

11. There are also historical structures in the site, including the Old Pillbox (listed as Grade II), the Stone House (Grade III) and the Former Royal Airforce Hangar (Grade III). We will discuss with the Development Bureau the requirements of the Heritage Impact Assessment and how these structures are to be preserved.

12. Currently, the proposed Diamond Hill site for the depot is zoned as a Comprehensive Development Area on the statutory Outline Zoning Plan, which is planned for public rental housing, schools, open space and commercial uses. The future developments above the depot have yet to be firmed up. Planning Department is starting to work on a planning brief for the site. We shall work closely with Planning Department and Lands Department to capture the synergy of better interface with the depot and maximise development potential of the site.

#### Traffic Improvement in Tsz Wan Shan

13. The KCRC's proposal for the SCL in 2002 included a station in Tsz Wan Shan. Further site investigation by the KCRC concluded that such station is technically not advisable. Also, the Automated People Mover system proposed by the KCRC in 2004, which will connect the Diamond Hill Station with the lower levels of Tsz Wan Shan with no intermediate station, is not considered cost effective, not to mention its noise and visual impact. This is analysed in **Annex B**.

B

14. In view of the foregoing and to improve the traffic condition in Tsz Wan Shan and its connection with the SCL, we are looking at the provision of additional pedestrian facilities, which, together with the existing footbridge and lift network in Tsz Wan Shan, will provide a better connection with the Diamond Hill Station. This arrangement will be more cost-effective and avoid duplication of resources. We will also look into possible enhancement of green mini-bus services upon the commissioning of the SCL. The additional pedestrian facilities together with the enhanced green mini-bus services will improve the traffic condition and connectivity of Tsz Wan Shan with the railway stations.

15. We will continue to discuss with the local community and explaining to them the pros and cons of the options for connecting Tsz Wan Shan with the SCL.

## Hin Keng Station

16. There have been local views suggesting a station for Hin Keng. The current estimated patronage does not fully justify a station there. We shall keep in close view the demand for rail service, the traffic conditions in Hin Keng and Tai Wai and the conditions in the Tai wai Station in order to ascertain the need of the Hin Keng Station. In the mean time, the MTRCL has made provision in the track design of the SCL to cater for a station at Hin Keng in future.

## *Implementation Timetable*

17. The Tai Wai to Hung Hom section<sup>3</sup> of the SCL is required to relieve the anticipated congestion at the Beacon Hill Tunnel section of East Rail Line and the whole SCL can bring about various benefits to the community. From the technical point of view, the construction of the Tai Wai to Hung Hom section is less complicated than the cross harbour section<sup>4</sup>. Hence, it can be completed earlier. Taking into account the time required to complete all the statutory procedures under the Environmental Impact Assessment Ordinance and the Railways Ordinance, and the outstanding design works, we estimate that the Tai Wai to Hung Hom section can be completed in or around 2015. For the cross harbour section, in view of the complexity in constructing the cross harbour tunnels and the programme interfaces with the construction of the Wan Chai Development Phase II reclamation and the Central-Wan Chai Bypass, the completion may be around 2019.

## *Other Relevant Considerations*

### Funding Approach for SCL

18. After the implementation of the rail merger, there are two approaches for implementing the SCL, namely the ownership approach and the concession approach. We have followed a set of the criteria listed out at **Annex C** for selecting the funding model for the project.

C

19. Under the ownership approach, which is essentially identical to the funding arrangement to finance the construction of the MTR railway lines, the MTRCL will be responsible for the funding, design, construction, operation and maintenance of the SCL, and ultimately own the railway. According to the MTRCL's latest projections, the SCL, like most other railway projects, is not financially viable. Funding support of about

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<sup>3</sup> The Tai Wai to Hung Hom section of the SCL comprises the Tai Wai to Diamond Hill Link and the East Kowloon Line from Diamond Hill to Hung Hom.

<sup>4</sup> The cross harbour section of the SCL comprises the Fourth Rail Harbour Crossing from Hung Hom to Admiralty.

\$24.1 billion<sup>5</sup> would be required from the Government to bridge the funding gap if the ownership approach is to be adopted.

20. By taking the ownership approach, the Government does not need to bear the risks associated with the construction and operation of SCL. However, since the ownership of SCL rests with MTRCL, the Government would not share any financial returns of this project, other than in the form of dividends distributed by the MTRCL to its shareholders if the operation of the SCL is profitable to the MTRCL.

21. In the context of the rail merger, the Government, KCRC and MTRCL agreed that the concession approach can be adopted for new railway projects. Under this framework, either the Government or the KCRC will be responsible for providing, at its cost, the necessary railway infrastructure of the SCL. Upon completion of the railway, the MTRCL will be granted a service concession and pay the Government/KCRC service concession payments for the right to operate the railway.

22. Given the much reduced financial management capability of the post-merger KCRC, which now maintains a small direct management team with most of its functions out-sourced, it is not feasible for KCRC to manage the design and construction of SCL. The Government has decided to provide the funding for the capital cost under the Capital Works Reserve Fund, similar to other Government-funded public works projects. Upon completion of the railway, the Government may vest the SCL in or lease it to the KCRC for a nominal amount. The KCRC will in turn include the SCL into the service concession granted to the MTRCL and receive service concession payments in accordance with the agreed mechanism and established system with the MTRCL for sharing revenue generated by its existing railway assets under the rail merger. The Government, as the sole shareholder of KCRC, will benefit from these payments.

23. The SCL will comprise extensions of the existing Ma On Shan Line, West Rail Line and East Rail Line of the KCR system. It has been agreed under the rail merger that the KCRC will grant to the MTRCL the right to access, use and operate all these existing railways under the concession approach. Therefore, there would be merit in implementing the SCL under the same approach for its operation. At the end of the 50-year service concession period for the existing KCR network, we have to negotiate the extension of the service concession with either the MTRCL or a new operator. The ownership of the SCL by the Government will facilitate the negotiation with the MTRCL. Furthermore, under this arrangement, the KCRC will retain beneficial ownership of the SCL and the MTRCL will need

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<sup>5</sup> Net Present Value at 2010.

to return an operating SCL as part of the whole KCR system to the KCRC upon the expiry or termination of the service concession.

24. As to financial consideration, the total concession payment, which is dependent on the SCL fare prices, actual patronage and non-fare revenues after the SCL has come into operation, is estimated to be about \$91.8 billion (in MOD terms). Upon the end, expiry or termination of the service concession period, MTRCL will have to return an operating railway to KCRC or Government as appropriate. The residual value of the railway should be quite substantial. The estimated financial internal rate of return (FIRR) of the project to Government is about 3.2%.

25. The funding of SCL should be considered pragmatically from various angles including, inter-alia, the financial and non-financial commitments of Government to the project in different funding models, and whether the funding model will pose any complication to the smooth implementation of the railway networks. On balance, we recommend that the concession approach should, in principle, be adopted for SCL.

26. As the MTRCL will be asked to proceed with the further planning and design of the SCL based on the concession approach, we will seek approval for the capital funding from the Finance Committee for the design and construction works separately. If necessary, we will proceed with the funding applications for the reprovisioning works, such as the International Mail Centre, and the protection works associated with Wan Chai Development Phase II and Central-Wan Chai Bypass projects.

27. Since 2002, the SCL scheme has undergone a considerable number of changes due to the interfaces with other major infrastructure and planning/development along its alignment. The M-Scheme will also require substantial modifications to the MTR system for the provision of the integrated interchange stations. These major changes to the SCL scheme have resulted in a substantial increase in capital and operating costs of the SCL. Furthermore, the reduction of the population projection for Kai Tak, a major catchment area of the SCL, the removal of the second boarding charge and the rail fare reduction after the rail merger will lead to a substantial reduction in the SCL fare revenue. Moreover, the existing MTR passengers diverted to the SCL after its commissioning will no longer be considered as new patronage of the SCL. In light of the above changes, the SCL has become financially not viable.

### Projects affecting SCL Design

28. The Wan Chai Development Phase II and the Central-Wan Chai Bypass projects together with the other major infrastructure and development plans including the Kai Tak Development, the development at the proposed depot site at Diamond Hill, the ex-Valley Road Estate Redevelopment where the Homantin Station will be located, and the North Hong Kong Island Line, may affect the design of the SCL. Subject to further study, protection/enabling works may be required to ensure that the structural integrity of the structures put in place before the SCL and the feasibility of the projects to be implemented after the SCL would not be affected, as well as to avoid prolonged disruption to the areas affected by these projects.

29. Furthermore, some of the existing government facilities will be affected by the SCL. Their reprovisioning would be required. The key facilities include the International Mail Centre at Hung Hom, the Police Officers' Club at Causeway Bay, the Wan Chai North Public Transport Interchange, and the Indoor Games Hall & Training Pool at Wan Chai.

30. We are considering if and how the reprovisioning works and the protection works are to be taken forward and will continue to monitor the progress of the above interface projects and discuss with the relevant bureaux/departments to see how the interface issues should be coordinated and resolved.

### Cost of SCL

31. The current estimated capital costs for the SCL and the associated Essential Public Infrastructure Works are about \$37.4 billion and \$770 million<sup>6</sup> respectively. During the detailed design stage, when more information related to the railway scheme is available, Highways Department will appoint independent consultants to assess the reasonableness of the estimated cost of the project.

### Impact on Other Modes of Public Transport

32. We anticipate that some passengers from road-based public transport modes would be diverted to use the SCL when the railway commences operation. The situation would be more obvious for the corridors between North East New Territories and urban Kowloon, and across the harbour. As the existing road-based public transport modes will suffer some loss of patronage, we will work out different levels of service rationalisation that would be required if the overall efficiency of the public transport provision is to be achieved and wasteful duplication of

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<sup>6</sup> In April 2007 prices.



resources is to be minimized. We will consult the relevant District Councils as well as the road-based public transport trades affected on our assessment and the possible reorganization plans in due course.

## **(B) Railway Service for Whampoa Area**

### *Transport Need*

33. The Whampoa area has in recent years developed into a major residential, entertainment and shopping centre attracting heavy traffic. Railway service will provide a quicker and more convenient alternative to commuters who are now relying mainly on road-based transport. At present, traffic congestion from the Cross Harbour Tunnel seriously affects access to and from Hung Hom at peak periods with traffic queues tailing back from the Cross Harbour Tunnel to the road networks in Hung Hom and Yau Ma Tei. A railway providing an alternative choice for passengers for Homantin, Hung Hom and Whampoa is well justified on transport grounds.

34. We recommend the implementation of the Kwun Tong Line Extension, which will be an extension of the MTR Kwun Tong Line, running from Yau Ma Tei Station to a new station in Whampoa Garden and with an interchange with the SCL at the proposed Homantin Station. The whole Extension will be underground. Its schematic layout is at **Annex D**.

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35. The Kwun Tong Line Extension will serve the 146 000 people living in Whampoa and Homantin and the estimated daily patronage in 2016 is 180 000. The estimated costs of the Extension and its associated Essential Public Infrastructure Works are about \$4.2 billion and \$120 million respectively<sup>7</sup>. The 2016 annual transport benefit is about \$0.4 billion. Unlike the Automated People Mover system previously proposed by the KCRC, the Kwun Tong Line Extension will attract more patronage. At present, travelling by road-based transport between Whampoa and Mong Kok takes more than 25 minutes during rush hours. With the Extension, passengers from Whampoa and Homantin will be able to reach Mong Kok within 5 minutes. Hence, the Extension would have a high Economic Internal Rate of Return at about 8% per annum measured in real terms. As the Extension will be wholly underground, it will be more environmentally friendly than the Automated People Mover system with much less noise and visual impact. It will not take up much-needed road space either.

### *Community Demand*

36. The local community of Kowloon City and the Kowloon City

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<sup>7</sup> In April 2007 prices.

District Council have long been demanding railway service for Whampoa. Local residents generally prefer the Kwun Tong Line Extension to the Automated People Mover system.

#### *Other Relevant Considerations*

37. We have also considered the following related issues -

#### Financial Arrangement for Kwun Tong Line Extension

38. The Kwun Tong Line Extension will be an extension of the existing MTR network. It will be implemented as a MTR project under the ownership approach. Since the Financial Internal Rate of Return of the project is lower than its target Internal Rate of Return, the MTRCL estimated that the funding gap would be about \$2.2 billion<sup>8</sup>. We will discuss with the MTRCL how the funding gap should be bridged. There may be a suitable site (the ex-Valley Road Estate) for the rail plus property model at the proposed Homantin Station. However, in view of the site being currently planned for public rental housing development, suitable and adequate replacement sites should be identified if the site is to be developed for private housing by the MTRCL.

#### Implementation Timetable

39. Taking into account the time required to complete all the statutory procedures under the Environmental Impact Assessment Ordinance and the Railways Ordinance, and the remaining planning and design works, we estimate that the Kwun Tong Line Extension could be completed in 2015.

#### Interface with Other Projects

40. The major interface issues relating to the Kwun Tong Line Extension will be the development of the Ex-Valley Road Estate Redevelopment site and the proposed widening of Gascoigne Road Flyover. Enabling works may be required to be incorporated into the Extension project. We will discuss with the relevant bureaux/departments to resolve the interface issues.

#### Impact on Road-based Public Transport Modes

41. The Kwun Tong Line Extension will form part of the overall railway system and will compete directly with some existing road-based public transport modes along the same corridor. We will work out different levels of service rationalisation that would be required if the

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<sup>8</sup> Net Present Value at 2011.

overall efficiency of the public transport provision is to be achieved and wasteful duplication of resources is to be minimized. We will consult the relevant District Councils as well as the road-based public transport trades affected on our assessment and the possible reorganization plans in due course.

## **IMPLICATIONS OF THE PROPOSAL**

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42. The proposals have economic, environmental and sustainability implications as set out at **Annex E**. The proposals are in conformity with the Basic Law, including the provisions concerning human rights. They have no productivity implications.

## **PUBLIC CONSULTATION**

43. We have been in dialogue with the Legislative Council, various District Councils such as Wong Tai Sin, Kowloon City, Sha Tin, Central and Western, Wan Chai, Northern, Eastern, and Yau Tsim Mong, and the concerned local communities on the SCL and related issues. Further consultation with the concerned statutory and consultative bodies, the local communities and other relevant parties including affected public transport trades/operators will continue.

44. In taking forward the SCL and the Kwun Tong Line Extension, we will follow the Environmental Impact Assessment Ordinance and the Railways Ordinance, under which the public will have the statutory right to express their views on the Environmental Impact Assessment report and the railway schemes respectively.

## **PUBLICITY**

45. We will issue a press release explaining clearly the considerations behind the recommendations. A press conference will be conducted. We will brief the various District Councils and other relevant consultative bodies on the latest development. Lines-to-take will be prepared and a spokesman will be available to handle media enquiries.

## **BACKGROUND**

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46. Background information on the SCL and the Kwun Tong Line Extension is set out at **Annex F**.

**SUBJECT OFFICER**

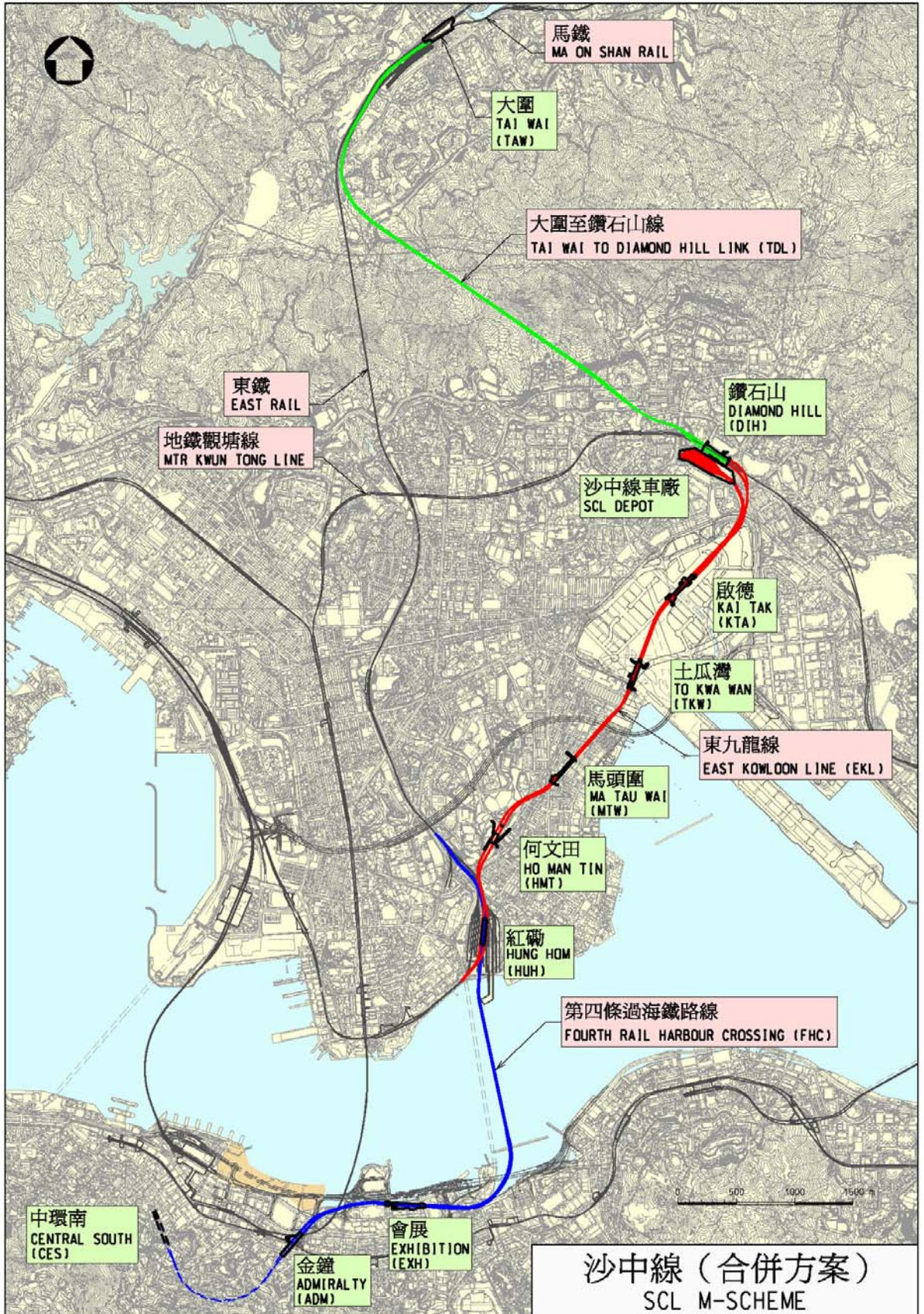
47. The subject officer is Mr Henry CHAN, Principal Assistant Secretary for Transport and Housing (Transport) (Tel. 2189 2187).

**Transport and Housing Bureau  
11 March 2008**

# **ANNEXES**

## **SHATIN TO CENTRAL LINK AND MTR KWUN TONG LINE EXTENSION**

- Annex A - The alignment of M-Scheme
- Annex B - Justifications of Adopting M-Scheme
- Annex C - Criteria for Selecting Funding Approach for Implementing the SCL
- Annex D - The alignment of Kwun Tong Line Extension
- Annex E - Implications of SCL and Kwun Tong Line Extension
- Annex F - Background of SCL and Kwun Tong Line Extension



Notes: CES station needs to be reviewed (中環南站需作檢討)

## **Justifications of Adopting M-Scheme**

### **Deferral of Central South Station**

The Central South Station as proposed by the KCRC is to be located between Upper Albert Road and Lower Albert Road. It is not well positioned to serve any major residential or employment centres other than the existing Central Government Offices, which will be relocated to Tamar. Geotechnical investigation carried out by the KCRC indicates that the ground conditions of the area to the west of Wyndham Street are not suitable for construction of the railway tunnel or station as it would entail high risks to the existing buildings in the area which are found on shallow foundations. Hence, the provision of the Central South Station should be reviewed when there is a decision on the future use of the existing Central Government Offices site. As an interim measure, SCL passengers can interchange at Admiralty Station conveniently with the MTR Island Line to access Central and later to the West Island Line now under planning. With the rail merger already in force, they are not required to pay any second boarding charge.

### **Deletion of Causeway Bay North Station**

2. The construction of the Causeway Bay North Station under Victoria Park Road will require substantial traffic diversion, hence creating serious traffic congestion in Gloucester Road and the Island Eastern Corridor during the construction stage. Furthermore, the provision of the station will add only limited marginal patronage to the whole railway network, as the existing MTR Causeway Bay Station is already serving the area adequately. The Causeway Bay North Station proposal should not be taken forward.

### **Provision of To Kwa Wan Station**

3. The Railway Development Strategy 2000 has proposed the To Kwa Wan Station at the boundary of To Kwa Wan and Kai Tak areas in light of more intensive development proposed in the previous Kai Tak Development. The Ma Tau Wai Station together with the To Kwa Wan Station will serve Ma Tau Wai and To Kwa Wan. The KCRC proposed a single Ma Tau Kok Station to replace the To Kwa Wan Station and the Ma Tau Wai Station in view of the substantial reduction in the planned population from 260 000 to 87 000 in Kai Tak and for some technical problems. However, there are requests from the public for SCL stations to be near the old districts, including Kowloon City and To Kwa Wan.

4. We agree to reinstate the To Kwa Wan Station given its benefits to Kowloon City. In principle, we would also like the Station to serve the Multi-purpose Stadium Complex under the Kai Tak Development, although there are concerns over the crowd management issues associated with operation of the proposed Multi-purpose Stadium Complex.

5. The layout and the positioning of the Multi-purpose Stadium Complex have already been subject to various constraints (such as the existing Kai Tak Tunnel, the proposed SCL tunnel and facilities, the proposed Central Kowloon Route and Road D2), leaving not much usable space for an additional railway station and buffer area. As such, the MTRCL should be asked to carefully consider the location of the To Kwa Wan Station and maintain close liaison with concerned bureaux/departments.

### **Relocation of Exhibition Station**

6. The relocation of the Exhibition Station from Harbour Road to the existing Public Transport Interchange site in Wanchai North would better serve both the Hong Kong Convention and Exhibition Centre, and the developments/facilities in Wanchai North. The new location also allows the station to be constructed as an integrated one for the SCL and the North Hong Kong Island Line providing a very convenient interchange between the two in future. We agree with the proposed relocation of the Exhibition Station. However, the site is now being used as an existing Indoor Game Hall and Training Pool, and the Wan Chai North Public Transport Interchange. For the construction of the Exhibition Station, both facilities have to be re-provisioned elsewhere. The current proposal is to re-provision them insitu, but this construction plan will be dependent on the availability of land that may be reclaimed under Wan Chai Development Phase II for temporary re-provisioning of the Wan Chai North Public Transport Interchange. If the reclaimed land does not materialise in the end, appropriate arrangements will be made for accommodating the current public transport services and loading/unloading activities.

### **Deletion of Tsz Wan Shan Station and Automated People Mover System**

7. The background to the Tsz Wan Shan Automated People Mover system is that, in the course of developing the KCRC SCL Scheme, the KCRC had, in its 2002 proposal, proposed to re-route the railway alignment to pass through Tsz Wan Shan district and build a station there. Owing to alignment design, the station would have to be located at some 80m below ground. Thereafter, the KCRC conducted detailed site investigations in the area and found that the geological stratum is highly variable with soft and hard layers and fault zones have been in existence. The construction of the station would entail high risks. The embedment of the station deep inside the slope mass would also make the formulation of a strategy for emergency evacuation for railway operation extremely difficult. The KCRC then suggested providing an elevated Automated People Mover system as an alternative to serve Tsz Wan Shan.



8. However, there are also issues with the Automated People Mover system. Due to the steep topography of the area and the limitation of the system to climb at a gradient of not more than 7%, only one station could be provided at southern Tsz Wan Shan. Residents distant from the system would still need to take feeder services or walk some distance to the Automated People Mover system. As a result, the majority of the residents in Tsz Wan Shan would have difficulty in using the Automated People Mover directly. Moreover, the system may create visual intrusion and other environmental impacts, especially the noise generated by trains in the evening during its construction and operation.

9. There is already a network of green mini-buses and franchised buses providing convenient feeder services between Tsz Wan Shan and the MTR Wong Tai Sin and Diamond Hill Stations. Road-based public transport operators have expressed concerns that the Automated People Mover system will affect the viability of the feeder service market. Because of the substantial construction costs and the associated environmental impact, we do not recommend the Automated People Mover system.

#### **Deletion of Whampoa Automated People Mover system**

10. As regards how the transport needs of the Whampoa area should be met with the deletion of the Whampoa Automated People Mover system, the issue is discussed in detail in the main text of this submission.

**Criteria for Selecting Funding Approach  
for Implementing the SCL**

In choosing between the ownership or concession approach as the funding model for the SCL, the following should be considered -

- (a) whether Government should take a longer term view on investment in railway infrastructure and would like to retain the ownership of the railway, thereby retaining the residual value of the railway;
- (b) whether Government would be prepared to input more resources, including staff and cash outlay, to implement the railway under the concession approach;
- (c) whether Government would be prepared to bear the construction risks and operating risks under the concession approach, e.g. lower revenue as a result of patronage being lower than anticipated;
- (d) the financial implications for Government;
- (e) whether the selected approach would allow the MTRCL to effectively co-ordinate the planning and implementation of the railway and the above station/depot property development; and
- (f) whether the ownership of the new railway by the Government will facilitate the smooth implementation of the railway networks.



## **Implications of SCL and Kwun Tong Line Extension**

### **Economic Implications**

Implementing the SCL will expand the overall capacity and catchment of railway network to meet the growing passenger transport needs in line with population growth and economic development. It will improve accessibility of residents along the route of the SCL. The strongly defined east-west and north-south integrated railway network will lead to more effective use of the railway network.

2. The cross harbour section of the SCL will also boost the economic ties with the Mainland because upon its completion, passengers can travel direct between Lo Wu/Lok Ma Chau and the business district on Hong Kong Island without having to change trains. For the closer integration between Hong Kong and the Mainland following the implementation of the Mainland and Hong Kong Closer Economic Partnership Arrangement, the demand for cross-boundary traffic is expected to increase in coming years. The improved East Rail Line service and the direct link between Lo Wu/Lok Ma Chau and Hong Kong Island will definitely benefit the long-term development of Hong Kong.

3. The SCL will create some 11 000 job opportunities at the construction stage. Over time, the project upon full development to maturity are likely to spin off even more employment opportunities generally, reflecting the broader benefits of enhanced efficiency, and higher growth and development potential through better connectivity both domestically and across the boundary with the Mainland. The Economic Internal Rate of Return is estimated at around 10% in real terms. As regards the Kwun Tong Line Extension, the project will create 1 000 job opportunities at the construction stage. The Economic Internal Rate of Return is estimated at around 8% in real terms.

4. The SCL and Kwun Tong Line Extension will reinforce the railway network as backbone of the Hong Kong's public transport system. While relieving reliance on road-based public transport, the SCL will complement the development at Kai Tak, and at the same time stimulate redevelopment at To Kwa Wan and Kowloon City through enhanced accessibility to these areas. The Kwun Tong Line Extension will serve effectively a wide catchment population in urban Kowloon, in particular Whampoa and Homantin area. The improvement in interchange arrangements within the railway network will enhance railway patronage. Hong Kong's economy will benefit in terms of enhanced population mobility, savings in time cost and environmental improvement.

5. The implementation of the SCL and the Kwun Tong Line Extension will impact on other public transport operators including franchised buses, taxis and minibuses. A detailed study will be carried out to ascertain the level of the impact in the course of further planning of the two projects. Notwithstanding the results of the assessments, it should be possible to mitigate the impact on road-based public transport modes through reorganisation of the public transport network within the railway catchment areas.

### **Environmental Implications**

6. A Strategic Environmental Assessment for the Second Railway Development Study completed in 2000 concluded that overall speaking, railway is a more environmentally friendly form of mass transportation than road based alternatives and the promotion of railway would assist in achieving a sustainable transportation system.

7. The SCL and the Kwun Tong Line Extension will be designated projects under Schedule 2 of the Environmental Impact Assessment Ordinance and an environmental permit is required for the construction and operation of the projects. The Environmental Impact Assessment study to be conducted under the Environmental Impact Assessment Ordinance will address various environmental issues including, inter alia, the operational and construction noise, land contamination, waste management, landscape impacts, hazard issues, and impacts on cultural heritage. The MTRCL will carry out a detailed Environmental Impact Assessment study on the SCL and the Kwun Tong Line Extension projects to identify potential environmental impacts and devise mitigation measures in accordance with the Environmental Impact Assessment Ordinance. Consideration will be given to refining the alignments and designs, best practicable construction methods and suitable mitigation measures to avoid the adverse impact to the maximum practicable extent. The cumulative impacts of SCL and other major infrastructure projects would be carefully considered and addressed, especially during the construction stage. Under the Environmental Impact Assessment Ordinance, the public and the Advisory Council on the Environment will be consulted on the findings of the Environmental Impact Assessment study.

### **Sustainability Implications**

8. The proposed SCL and the Kwun Tong Line Extension should enable more commuters to switch from road transport to railway, and help improve mobility and air quality in the long term. The implementation of the railway links would contribute positively to the sustainable development of Hong Kong by providing a reliable and efficient public transport system. The identified potential problems, including the noise from construction and

operation, air and water pollution from works sites, and loss of open space will be addressed carefully at the detailed planning stage in consultation with the relevant departments. In line with the relevant strategic objectives set out in the First Sustainable Development Strategy for Hong Kong, the waste generated from tunnel excavation will be re-used as far as practicable before final disposal.

## **Background of SCL and Kwun Tong Line Extension**

The SCL is one of the railway projects recommended for implementation in Railway Development Strategy 2000. It comprises three railway links, namely the Tai Wai to Diamond Hill Link, the East Kowloon Line and the Fourth Rail Harbour Crossing. The suggested completion window of the SCL in Railway Development Strategy 2000 is between 2008 and 2011.

2. On 9 January 2001, the Chief Executive in Council decided that the KCRC and MTRCL should be invited to submit proposals for the SCL project according to the terms and conditions as set out in the SCL bid package. Upon our invitation in January 2001, the two railway corporations separately submitted their proposals to Government in July 2001. We assessed the proposals and came to a view that their proposals were technically comparable, but the KCRC's proposal was financially better than the MTRCL's proposal. Subsequently on 25 June 2002, the Chief Executive in Council ordered that the KCRC should be awarded with the SCL project based on its Conforming Proposal.

3. After the award, we invited the KCRC to study whether and how the SCL could be extended to serve Hin Keng, Tsz Wan Shan and Whampoa areas, with the view to further enhancing the effectiveness of the SCL. In September 2002, the KCRC proposed to provide a station at Tsz Wan Shan, an Automated People Mover system at Whampoa and to make a reserve for a future station at Hin Keng.

4. In December 2002, the MTRCL offered to extend its Kwun Tong Line to Homantin and Whampoa with a view to replacing the KCRC's proposed Whampoa Automated People Mover.

5. Apart from the proposals mentioned in paragraph 3 above, the KCRC further developed the SCL scheme taking into account the latest planning parameters and the interfacing issues with other developments in the vicinity of the SCL. In September 2003, the KCRC submitted a preferred SCL scheme to Government. The preferred SCL scheme would make use of the East Rail Line crossing the harbour to form the Fourth Rail Harbour Crossing. Moreover, it would comprise an Automated People Mover system at Tsz Wan Shan for replacing the previously proposed Tsz Wan Shan Station, Causeway Bay North Station, and Ma Tau Kok Station for replacing the To Kwa Wan Station and Ma Tau Wai Station in the Conforming Proposal.

6. In November 2003, having considered the MTRCL's proposal on Kwun Tong Line Extension, Government invited the MTRCL to further review the Kwun Tong Line Extension scheme to improve its performance. In February 2004, the MTRCL submitted a revised Kwun Tong Line Extension proposal to Government.

7. On 24 February 2004, the Executive Council gave approval for inviting the KCRC and the MTRCL to commence negotiation on a possible rail merger on the basis of a set of parameters including the early resolution of interchange arrangement for new rail projects under planning, notably the SCL. The MTRCL and KCRC completed their discussion and reported the outcome of their discussion to Government in September 2004, which includes an SCL scheme to be implemented under the rail merger scenario.

8. Based on the SCL preferred scheme and with some further refinements, the KCRC, on 21 September 2004, submitted a draft Final Proposal on the KCRC SCL scheme to Government. The MTRCL and KCRC also submitted a Technical and Financial Report on the M-Scheme and the Kwun Tong Line Extension to Government in July 2005.

9. On 11 April 2006, the Chief Executive in Council agreed that the proposed Memorandum of Understanding for the proposed rail merger could be executed and the consultation with LegCo should proceed. The relevant legislative process for the rail merger has been completed on 11 July 2007. The implementation of the rail merger commenced on 2 December 2007.