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Clerk to Subcommittee

Subcommittee on Matters Relating to Railways

Panel on Transport

Legislative Council Secretariat

Legislative Council Complex

1 Legislative Council Road

Central, Hong Kong

(Attn: Ms Joanne MAK)

Dear Ms MAK,

**Panel on Transport
Subcommittee on Matters Relating to Railways
Matters Arising from the Meeting on 2 March 2012**

Progress of the Shatin to Central Link

I refer to the questions raised by the members regarding the Shatin to Central Link (SCL) at the meeting of the Subcommittee on Matters Relating to Railways held on 2 March 2012 and would like to provide the following supplementary information.

Impact on Tsuen Wan Line prior to the Commissioning of the SCL Hung Hom to Admiralty Section

The SCL is the second railway corridor that connects Shatin with Kowloon, and also a railway bypass between Kowloon East and Kowloon West. It will effectively relieve the congestion on the existing railway network (such as the Tai Wai – Kowloon Tong section of the East Rail Line).

At present, the Admiralty – Tsim Sha Tsui section of the Tsuen Wan Line is heavily used. In particular during the peak period, passengers may have to wait for more than a train before they are able to board the train. Now, trains are running at a frequency of about 2 minutes and eight seconds on the Tsuen Wan Line during peak hours. The MTR Corporation Limited (MTRCL) has increased its train fleet size through procurement of new trains recently. After their delivery to Hong Kong from 2011 in phases, these new trains will be ready for service after testing. The MTRCL will deploy more trains to the Tsuen Wan Line strengthening the service there. This will help relieve the congestion during the morning and evening peak hours as well as some of the non-peak hours. This will also effectively relieve the current congestion in the Admiralty station.

As there is still room in the existing signalling system of the Tsuen Wan Line to accommodate a higher train frequency thus increasing the capacity by more than 10%, it is capable to meet the growing passenger demand at the Tsim Sha Tsui – Admiralty section from now to 2020. The MTRCL will closely monitor the passenger growth at the Tsuen Wan Line and increase train frequency to meet the demand of passengers.

Regarding the congestion on the platforms of the Admiralty station, we have incorporated expansion for the Admiralty station in the South Island Line (East) and the advanced works of the SCL. The expanded station is at a scale that can cope with the long term passenger growth and the interchange demands upon the commissioning of the South Island Line (East) and the SCL. Upon the completion of the works at the Admiralty station in 2015, the waiting areas of the existing platforms for the Tsuen Wan Line and Island Line will also be increased, improving the waiting environment for passengers and satisfying the future needs.

Utilisation of the Tai Wai Station

The SCL Tai Wai to Hung Hom section is an extension of the Ma On Shan Line from Tai Wai station to Diamond Hill, Kai Tak, To Kwa Wan, Kowloon City, Ho Man Tin of Kowloon East and Hung Hom. Upon the commissioning of the SCL, we estimate that about 23% (74 000 passengers per day) southbound passengers from the New Territories (including the East Rail Line and Ma On Shan Line) will change to the SCL for Kowloon East and Hong Kong Island. This will help relieve the loading of the southbound passengers of the East Rail Line during peak hours, in particular relieving the bottleneck at the Tai Wai – Kowloon Tong section of the East Rail Line.

From the perspective of the Ma On Shan Line alone, upon the commissioning of the SCL, some passengers from Ma On Shan going to Kowloon East or Hong Kong Island may choose to board the SCL trains for their destinations rather than interchanging at the Tai Wai station. We estimate that about 30% (6 000 passengers per hour) of the southbound passengers of the Ma On Shan Line will ride on the SCL for the urban area during peak hours. This will help relieve the passenger loading of

the East Rail Line. From the perspective of the East Rail Line, some East Rail Line passengers for the Kowloon East will interchange to the SCL at the Tai Wai station after the commissioning of the SCL. It will further relieve the loading of the East Rail Line. However, we estimate that the total interchange passenger flow at the Tai Wai station will be increased by about 25%.

Although the total interchange passenger flow at the Tai Wai station will increase after the commissioning of the SCL, the interchange facilities at the Tai Wai station are sufficient to accommodate the demand of passengers in view of the passenger diversion after the opening of the SCL. At present, passengers to and from the urban area using the Ma On Shan Line have to change to the East Rail Line at the Tai Wai station which is the terminus of the Ma On Shan Line. During the morning peak hours, a large number of passengers from the Ma On Shan Line change to the East Rail Line for the urban area. This passenger interchange flow during the morning peak hours is a single flow towards the East Rail Line southbound platform, thus resulting in a high utilization of that platform.

After the opening of the SCL, while there will be an overall increase in the total interchange passenger volume, the passenger flow to the East Rail Line for the urban area will reduce. The passenger flow is no longer a single flow concentrating at the southbound platform of the East Rail Line. A significant number of the East Rail Line passengers will change to the southbound platform of the SCL. As mentioned in the previous paragraph, the SCL helps divert East Rail Line passengers to and from Kowloon East and Hong Kong Island, thereby relieving the congestion in train compartments on the East Rail Line during peak hours. The waiting time of interchange passengers for the East Rail Line at the Tai Wai station will also be reduced. This would substantially improve the congestion of the southbound platform of the East Rail Line at the Tai Wai station during peak hours. Therefore, the interchange facilities at the Tai Wai Station are sufficient to accommodate the demand of passengers.

Park and Ride Arrangements

The Park & Ride (P&R) scheme aims to provide incentives to motorists living in remote areas to drive to and park at car parks near railway stations where they could board the trains heading towards their destinations rather than driving direct to and from the urban areas. This helps reduce both the road traffic and the demand for urban parking spaces. It is also in line with the overall transport policy of using railways as the backbone of our transport system. At present, the P&R scheme has been implemented at the MTR stations near the urban fringe, both entrances of the Cross Harbour Tunnel, connecting to the airport and cross-boundary services, including the Sheung Shui station, Kam Sheung Road station, Kowloon station, Hong Kong station and Hung Hom station. Concessionary parking fares are offered by the MTRCL and carpark operators to attract motorists to use their P&R facilities and interchange services. From the perspective of reducing traffic loading and

environmental protection, we do not encourage people living in the urban area to drive to the vicinity of railway stations for interchanging with railways.

The alignment of the SCL passes through densely populated urban areas and the stations are strategically located in areas where the pedestrian flows are heavy in order to serve more people. The entrances and exits of the stations as well the pedestrian links are designed to make it convenient for pedestrians to walk to the stations. For residential developments or offices located over 500 metres from railway stations, we will carefully plan to provide short distance feeder services to facilitate people to make use of public transport to interchange with the SCL.

Among the ten stations along the SCL, Tai Wai station and Hin Keng station are located outside the urban areas. Diamond Hill station is near the entrance of the Tate's Cairn Tunnel. Only these three SCL stations have the potential need for the P&R service. Operationally, implementation of the P&R scheme does not necessarily mean the need to provide designated parking facilities. Existing parking facilities near railway stations can well serve the purpose. Ample parking spaces are available in the existing public car parks near these three stations. Upon the commissioning of the SCL, the MTRCL will closely monitor the mode of interchange for passengers and conduct timely studies of the provision of P&R services to facilitate passengers to make use of the railway service.

Affected Trees by District

Among the 7 144 trees covered by the main construction works of the SCL, 2 679 trees will be preserved, 678 trees will be transplanted and the remaining 3 787 trees will have to be felled. All trees to be transplanted or felled are not "precious" trees. Meanwhile, about 3 860 trees will be planted and about 3.3 hectares of grassed area will be provided during the implementation of the SCL project as compensation. The distribution of trees by district within the project area is as follows: –

District	Number of trees within the works area	Number of trees to be preserved	Number of trees to be transplanted	Number of trees to be felled	New trees and grassed land to be provided
New Territories	2 439	721	247	1 471	Distribution to be confirmed with relevant departments
Kowloon	3 462	1 652	193	1 617	
Hong Kong Island	1 243	306	238	699	
Total	7 144	2 679	678	3 787	3 860 trees and 3.3 hectares

					of grassed area to be provided
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Cultural and Art Programmes at SCL Stations

The art design of SCL stations will adopt the “Art in MTR” concept. Art elements will be incorporated into the design of SCL stations to not only provide a more comfortable and pleasant travelling environment for passengers but also showcase the historical and cultural features of local communities and promote community art. Preparation work for the art design of SCL stations will involve community participation and open call for artworks to enhance the ties with local communities and promote the participation of local artists.

The MTRCL has started to work on the art design of SCL stations. It has approached a number of local arts groups to explore the artistic concepts for SCL stations and the possibility of co-operation. The MTRCL will also organise community activities to enhance its preparation work for the art design of SCL stations.

While the themes to be adopted for the art design of SCL stations are still at the budding stage, the focus will be on showcasing local culture and characteristics. For instance, the preliminary design for the artworks at the Ma Tau Wai station will show a comparison of the traditional Chinese tenement buildings with the new developments and changes in the district. As Kai Tak is the former site of the old airport, the preliminary design for the artworks at the Kai Tak station will reflect Hong Kong people’s collective memories of the Kai Tak Airport. The history of Sung Wong Toi will be a main theme for the artworks at the To Kwa Wan station.

In addition to the physical environment, spatial constraints and technical feasibility of a station, the prerequisite for determining the type, size and location of an artwork to be displayed at an SCL station is that the normal operation of the station should not be affected. It is usual that artworks like sculptures and mural display are displayed at railway stations for a long period of time. The MTRCL’s objective is to have one unique art piece displayed at each SCL station for a long period of time. As regards artworks that will be displayed on a short-term basis, the MTRCL will consider setting up “community art galleries” in SCL stations to display artworks of students from schools nearby and non-profit-making groups.

The MTRCL will engage local communities in working out the art design of SCL stations to incorporate local culture and characteristics into the station design through open competitions and co-operation with arts groups or local artists in the production of artworks for SCL stations. The MTRCL has started discussions with organisations such as the Hong Kong Youth Arts Foundation in respect of themes and details of the related community art programmes. It will also work out the detailed

arrangements for the open call for artworks with various local arts groups. Some of the artworks to be displayed at SCL stations will be selected through open competitions. The MTRCL will invite local artists to form independent adjudicating panels for the selection of suitable art pieces for display at SCL stations.

Facilities on SCL Allowing Passengers to Receive Radio or Digital Audio Broadcasting (DAB)

The complexity of the design of a signal system providing radio coverage for railway tunnels and stations is much higher than that for ordinary road tunnels. Road tunnels consist of basically two linear tubes and to provide radio coverage inside the tunnel tubes involves a simpler and more straightforward design. As regards the provision of radio coverage inside railway tunnels for passengers, it is necessary to consider the impact of the crowded environment inside a train compartment and the structure of the compartments on the attenuation of signals.

The architectural design of railway stations is even more complicated. Most railway stations are multi-levelled structures that consist of many long passages and exits. For radio signals to reach every corner of a station, the source signals will have to be split many times for onward transmission, resulting in substantial signal attenuation during the process. This is similar to the case of radio signals turning weak when a radio-listener enters a building. As DAB requires very strong signals and hence high power input, further in-depth study of its technical requirements and impacts on the transmission line system is required.

Subsequent to the discussions with the relevant service operators, the MTRCL conducted on-site tests within the railway network in March 2011. The results of the tests revealed that DAB signals could only be received inside the station concourses. For locations (such as the platforms) far away from the signal sources at the concourses, reception level was less than satisfactory while no signal could be received inside railway tunnels. Further feasibility study will be required if DAB system is to be installed in the MTR network.

As regards the FM broadcasting system, not only technical problems relating to the reception of signals within the MTR network have to be resolved but also complex planning will be required for the allocation of frequency as different frequencies are adopted in different districts of Hong Kong. A new frequency may have to be dedicated to the MTR network to avoid interferences to terrestrial broadcasting signals. Otherwise, MTR passengers will have to keep re-tuning the radio channels when the trains travel through different districts.

To provide better services for passengers, the MTRCL has introduced 3G telecommunication services in the MTR system. Passengers may use smartphones to receive radio channels and the latest news information. In addition, Wi-Fi service is available in 42 stations on the Island Line, Tsuen Wan Line, Kwun Tong Line, Airport

Express, Tung Chung Line and Tseung Kwan O Line, providing passengers with access to the Internet, radio channels and television programmes. Passengers may also call 2272 0000 with their mobile phones to listen to the radio programmes of the Radio Television Hong Kong.

Provision of FM radio broadcasting or DAB services in subway systems is uncommon worldwide. The MTRCL has approached a number of overseas subway operators and has not found any subway system which provides such services.

Timeframe for SCL Non-railway Works

We expect that the construction of non-railway works of the SCL will commence in mid-2012. The actual commencement dates for the various works items will have to tie in with the contractors' works programmes as well as the progress of the SCL railway works. As the tendering exercise has just begun, the actual commencement dates for the various works items are not available at this stage. When we are informed of the contractors' works programmes, we will consult the relevant District Councils and local communities with a view to minimising the impact of the works on the local communities. We will then be able to confirm the specific works schedule.

In a nutshell, among the various non-railway works items, we will require the contractors to complete as early as possible those reprovisioning works involving demolition of existing facilities for the implementation of SCL railway works. Examples include the reprovisioning of the Wan Chai Swimming Pool, Harbour Road Sports Centre and portions of the facilities of the Wan Chai Sports Ground. When the reprovisioning works are underway, the existing facilities will remain open to the public. They will be demolished only upon operation of the new re-provisioned facilities to ensure that members of the public who use these facilities will not be affected by the reprovisioning works. Early completion of these reprovisioning works will also ensure the timely implementation of the SCL project.

Regarding the acquisition of open space for use as temporary work sites of the SCL project, we will commence reprovisioning of the affected recreation facilities as soon as the relevant works are completed to minimise the duration of such acquisition. We are aware of the public's expectation for temporary open space during the construction period. As most of the SCL works are carried out in areas with intensive developments, it is not easy to identify suitable vacant sites for use as temporary open space. We are still discussing this issue with the local communities and will work with the relevant departments to provide temporary recreation facilities as far as possible. We will provide such facilities as soon as possible after suitable site has been identified.

In addition, the non-railway works also include the construction of new complementary facilities to make it convenient for the public to travel on the SCL.

For those facilities that are not directly connected to the station facilities of the SCL and are not under the constraints of the SCL works, we plan to complete the relevant works as soon as possible so that the public can enjoy the earlier use of the facilities. For facilities that are connected to SCL stations or are under the constraints of the SCL works, such as covered walkways or pedestrian subways and footbridges adjacent to SCL stations, the relevant works will be completed in tandem with the SCL works.

The works schedule for some non-railway works items to be completed earlier is set out at the **Appendix**. We expect that the remaining non-railway works items will be completed broadly in tandem with the SCL works.

Yours sincerely,



(S H LAM)

for Secretary for Transport and Housing

c.c. Railway Development Office, Highways Department
 MTR Corporation Limited

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Appendix

Table 1: Items expected to be completed before the commissioning of the Tai Wai to Hung Hom Section of the Shatin to Central Link

1.	Reprovisioning of portions of the facilities of the Wan Chai Sports Ground (temporary reprovisioning expected to be completed in 2015)
2.	Reprovisioning of the Wai Chai Swimming Pool and Harbour Road Sports Centre (expected to be completed in 2017)
3.	Proposed walkway systems at Fung Tak, Yuk Wah Street and near Tsz Wan Shan Estate Central Playground (expected to be completed in phases between 2014 and 2016)
4.	Preservation of the Old Pillbox and former Royal Airforce Hangar at the former Tai Hom Village (expected to be completed in 2013)
5.	Reprovisioning of the New Territories South Animal Management Centre and Sha Tin Plant Quarantine Station (expected to be completed in 2014)
6.	Improvements to the Police Sports and Recreation Club at Boundary Street (expected to be completed in 2015)
7.	Reprovisioning of portions of the Cheong Wan Road Flyover (expected to be completed in 2015)
8.	Proposed Hin Kwai Lane Playground and Shek Mun Playground (expected to be completed in 2013 and 2014)

Table 2: Reprovisioning/Strengthening works to be completed before commencement of tunnel and station works

(Actual schedule to be worked out upon consultation with District Councils and local communities after confirmation of contractors' works programmes)

9.	Foundation underpinning for flyovers
10.	Reprovisioning of culverts
11.	Underpinning for base columns of the podium of the Hong Kong Coliseum