For Information
7 January 2011

Legislative Council Panel on Transport
Subcommittee on Matters Relating to Railways

Funding Application - Advance Works for Shatin to Central Link

Introduction

At the meeting of the Subcommittee on Matters Relating to Railways (Subcommittee) held on 6 December 2010, we sought Members' support for a funding application to be made to the Public Works Subcommittee (PWSC) and the Finance Committee (FC) for the advance railway works and non-railway works of the Shatin to Central Link (SCL). At the meeting, Members requested supplementary information from the Administration. This paper sets out the relevant supplementary information, including the financing arrangement for the SCL project; factors for increase in cost estimate of the SCL and information on individual items; estimation of the on-cost payable to the MTR Corporation Limited (MTRCL); and the draft PWSC papers on funding application.

Financing Arrangement for the SCL

2. The financing arrangement for the SCL has been discussed in the Legislative Council for a number of times. During the Rail Merger consultation, the Administration briefed the Legislative Council on the two financing approaches (i.e. the ownership and concession approaches) of new railway projects. There were detailed discussions on this subject in the Panel on Transport and the Panel on Financial Affairs in April 2006, followed by the discussion at the Bills Committee on the Rail Merger Bill. In June 2007, when the Legislative Council resumed Second Reading debate on the Bill, the concession approach and the reasons for adopting it were explained. Relevant papers were also issued to the Legislative Council for Members' reference (Paper No.: CB(1)1291/05-06(01) and File Ref.: ETWB(T) CR 1/986/00). In 2008, when the Administration reported to the Legislative Council that the administration decided to proceed with the SCL, the Administration had explained in detail the considerations for adopting

concession approach in the implementation of the SCL (Paper no. THB(T)CR10/1016/99).

3. Before the Rail Merger in December 2007, all railway projects were financed under the ownership approach. Under this approach, the railway corporations were responsible for the funding, design, construction, operation and maintenance of the railway, and ultimately own it. Since the two railway corporations were operated on commercial principles, they would not take up financially non-viable railway projects unless some form of financial support was provided by the Government as appropriate. At present, the different forms of financial assistance provided by the Government include the granting of property development rights and provision of a lump sum capital grant. The form of funding support for each railway project is considered on a case-by-case basis.

4. Since the implementation of the Rail Merger, the MTRCL has been granted a service concession by the Kowloon-Canton Railway Corporation (KCRC) to operate the existing and new KCRC railway lines under construction. The MTRCL is now responsible for the operation, maintenance and improvement of the Kowloon-Canton Railway (KCR) system, including the replacement of the concession assets, during the concession period. It exercises control over all the operational arrangements of the KCR network in addition to its own network and is responsible for the performance of the whole system. Upon expiry or termination of the service concession, the MTRCL would be required to return to the KCRC an operating KCR system that meets the prevailing operating standards. In other words, the KCRC is not disposing of the railway system to the MTRCL, and the MTRCL is not acquiring the KCRC's railway assets (except for certain low value items such as spare parts and consumables) under this arrangement.

5. The Administration proposed to Legislative Council in 2008 that the SCL be implemented under service concession approach. The Administration also explained the considerations for adopting this funding approach. The SCL will comprise extensions of the Ma On Shan Line, the West Rail Line and the East Rail Line of the existing 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 merits 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 to return an operating SCL as part of the whole KCR system to the KCRC upon the expiry or termination of the service concession.

5. Under the service concession approach, the Government will provide for the railway facilities of the new railway and the MTRCL will be granted a service concession to operate it. Service concession payments will be paid by the MTRCL to the owner of the railway in exchange for the right to operate it. The service concession payment for the SCL payable by the MTRCL will be calculated according to the mechanism established by the merger agreement. In a nutshell, under the operating agreement made between the Government and the MTRCL, the service concession payment payable by the MTRCL will be 90% of the total revenue from the SCL after deducting the operating cost, capital replacement cost and tax payable. This structure of service concession payment is the same as the charging model stipulated in the service concession agreement for the existing KCR network (including the East Rail Line, Ma On Shan Line and the West Rail Line). In other words, the MTRCL has to make fixed service concession payment and variable service concession payment [1] annually. Since the Government owns KCRC's total shareholding, the Government will benefit from receiving the service concession payments.

7. At its meeting on 6 December 2010, the Subcommittee was also concerned that upon the commissioning of the SCL, passengers could interchange for rail lines of not only the KCR network but also the MTR network, thereby increasing the patronage of the MTRCL rail lines and generating additional fare revenue to be

[1] For the existing KCRC network, the annual fixed service concession payment payable by the MTRCL is $0.75 billion, while the variable service concession payment which is payable from the third year after the Rail Merger (i.e. 2 December 2010) will be based on the annual revenue and calculated according to the progressive percentages listed below:

Fare Revenue of the KCRC Network	Variable Service Concession Payment
First $2.5 billion	0%
$2.5 billion - $5 billion	10%
$5 billion - $7.5 billion	15%
Above $7.5 billion	35%

shared by the MTRCL. In fact, after the Rail Merger, passengers can interchange between the former MTR and KCR networks without going through ticket gates, and the fare revenue of the trips will be shared between the two corporations according to the terms of the operating agreement. The arrangement facilitates interchanges between the rail networks and savings on second boarding charge. It is also a win-win arrangement for both corporations, and enables them to provide more efficient railway services. Upon the commissioning of the SCL, passengers will be able to interchange for various rail lines, benefitting both rail networks, and the fare revenue of the trips will also be shared according to the existing mechanism.

Factors for Increase in Cost Estimate of the SCL

9. At the meeting of the Subcommittee held on 6 December 2010, Members requested for detailed information on reasons for the increase in cost estimate of the SCL and itemised explanations for the additional cost arising from design changes made by the MTRCL to take account of the suggestions and requests made by certain stakeholders, as well as the actual site conditions and technical requirements since the cost estimate in 2007. The relevant supplementary information is at **Annex A**.

On-cost payable to the MTRCL

10. At the meeting of the Subcommittee held on 6 December 2010, Members requested the Administration to provide supplementary information explaining the estimation of the on-cost payable by the Government for entrusting the advance works to the MTRCL. The relevant supplementary information is at **Annex B**.

Draft PWSC Papers

11. At the meeting of the Subcommittee held on 6 December 2010, Members requested the Administration to table the draft PWSC papers on the funding application for the advance works of the SCL. The draft papers concerned are at **Annex C** and **Annex D**.

Way Forward

12. We intend to consult the PWSC about the funding application for the advance works (both railway and non-railway works) on 19 January 2011 and seek

funding approval of the FC in February 2011.

Advice Sought

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

Transport and Housing Bureau

January 2011

Annex A

Factors for Increase in Cost Estimate of the Shatin to Central Link

Preliminary Estimate

In March 2008, based on the proposal jointly submitted by the then MTR Corporation Limited (MTRCL) and the then Kowloon-Canton Railway Corporation in 2005, we estimated that the total project cost of the Shatin to Central Link (SCL) was about $38.17 billion in April 2007 prices. At that time, the SCL project was at the conceptual stage, with its design and site investigation not yet commenced, and no pre- feasibility study had been conducted. Therefore, the estimated cost was just a crude preliminary estimate.

Latest Estimate

2. Over the two years from 2007 to 2009, the construction cost of the SCL works (including railway works and non-railway works) indicated an increase of about 30%, which was resulted from the upsurge in the cost of construction materials. In addition, we have, taking account of the actual situations or needs, incorporated suggestions and requests made by certain stakeholders during the public consultation, concerning the design and proposed facilities of the SCL project. The estimated cost for these engineering changes is about $5 billion. Furthermore, in the course of the preliminary design, the 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 will be over $60 billion, including the cost for railway works, non-railway works, essential public infrastructure works, advance works and protection works.

3. In late 2008, we commenced the design and an extensive public consultation exercise for the project. Having regard to the actual situations or needs, we have incorporated suggestions and requests made by certain stakeholders into the project, and these engineering changes will result in an increase of about $5 billion in the estimated cost for the project. The breakdown and detailed explanations are given below-

(a) Addition of Hin Keng Station (increase in cost about $1.2 billion)

At the strong request of the public, the Hin Keng Station will be added to the SCL project to alleviate the congestion in the Tai Wai Station and facilitate access to railway services by local residents, thereby enhancing the transport and social linkage of the district. The construction cost of this station will be slightly higher than that of a typical above-ground station in general as the station will be built adjacent to a slope at the East Rail Line. During the construction stage, additional support and protection works will be required to ensure that the operation of the East Rail Line will not be affected. Alterations to the turnaround tracks in the existing Tai Wai Depot will also be necessary to tie in with the works.

(b) Further enhancement of the proposed Tsz Wan Shan pedestrian link (increase in cost about $0.7 billion)

During the public consultation, the residents of Tsz Wan Shan have expressed strong demand for additional pedestrian link within the district. Residential developments in Tsz Wan Shan are built on undulated terrain, and it is exhausting for pedestrians, particularly the mobility-handicapped or elderly, to traverse long steep gradients. The aims of the proposed pedestrian link are to improve the traffic condition in the Tsz Wan Shan district, provide safe and barrier-free access linking up the Diamond Hill Station of the SCL with the neighbouring residential developments, and encourage the local community to use the environmental-friendly railway services. The pedestrian link under design covers a large area and is big in scale, comprising covered walkways of about 500m long and footbridges of over 600m long, with the provision of 23 lifts, four escalators and five travellators.

In response to public request, we will start building the pedestrian link once the construction of the SCL project is commenced, so that the link can be completed in phases as early as possible. Based on current assessment, the first phase of the pedestrian link will be completed for use in two to three years after the commencement of the works.

(c) Relocation of the International Mail Centre (IMC) from Hung Hom to Kowloon Bay (increase in cost about $1.2 billion[1])

Relocation of the IMC from Hung Hom to Kowloon Bay was confirmed after the commencement of the design for the SCL in late 2008. As the tunnel of the East West Corridor of the SCL will pass through the site of the existing IMC, it was confirmed after detailed investigation that the existing mail centre had to be demolished and reprovisioned. From the public views collected during public consultation, we fully understand the public hope that the services of the IMC would not be affected. Therefore, we will carefully plan the reprovisioning works, including the facilities for and reprovisioning timetable of the mail centre. The new IMC at Wang Chin Street in Kowloon Bay will comprise six storeys with a usable floor area of about 20 000 square metres. The design and standards of the facilities for the IMC have to meet the requirements of the Hongkong Post. In addition to greening and energy efficient features, the new IMC will have automatic mail sorting and related equipment with a daily handling capacity of 4.5 million items. The existing IMC will not be demolished before completion of the reprovisioning works.

(d) Relocation of the Harbour Road Indoor Games Hall and Wan Chai Training Pool (increase in cost about $0.8 billion)

The need to relocate the recreational facilities at Harbour Road was confirmed after the commencement of the design for the SCL in late 2008. As the Exhibition Station of the SCL will be under the existing Harbour Road Indoor Games Hall and Wan Chai Training Pool, both facilities will have to be relocated to the car park south of the present site. The facilities to be reprovisioned include swimming pool, games hall, gymnasium, multi-purpose rooms, squash courts, table tennis saloons, changing rooms, store rooms, first aid room, electrical and mechanical plant rooms and filtering facility for the swimming pool. We fully understand the public hope that the services of the indoor games hall and training pool at Wan Chai will not be affected. Therefore, we will

[1] $1.2 billion covers the construction cost of $0.893 billion and other expenditures of about $0.3 billion, including the on-cost payable to MTRCL, contingency and provision for price adjustment.

carefully plan the reprovisioning works, including the facilities to be provided and the reprovisioning timetable. The new building will have a floor area of about 16 500 square metres and the reprovisioned facilities will meet the latest standards, in particular, the Wan Chai training pool will be indoor and upgraded to international standard of 50m × 25m for the training of athletes.

(e) Reprovisioning and enhancement of Harcourt Garden (increase in cost about $0.2 billion[2])

Expanding the Admiralty Station to provide an integrated station for the SCL and South Island Line (East) was established during the design of the SCL in late 2008. The proposal is more desirable than the original design of building two separate stations. For the construction of the integrated station, the MTRCL will need to use the Harcourt Garden as works area. The garden will also be converted, elevated and reprovisioned to facilitate the construction of the underground station. In the course of construction, most parts of the garden will be temporarily closed for about four years and the remaining parts will continue to open to the public. We will minimise the area affected by the works and strive for early completion of the garden. The Central and Western District Council has been consulted and we understand the public's concerns about the impact of the works as well as the public's expectation of the reprovisioning works.

The Harcourt Garden will be redesigned and the works will be carried out and completed in tandem with the expansion works of the Admiralty Station. To tie in with the works of the underground station, the garden will be elevated by five to six metres and provide more open space and a landscape deck. The space enjoyed by the public will be increased from the present around 5 000 square metres to around 9 000 square metres. Lifts linking up the station concourse, ground level and the garden will be installed at the entrance to the garden to provide barrier-free access. The Harcourt Garden will be connected to the footbridges linking up the neighbouring commercial buildings to achieve pedestrian and vehicle segregation and provide comfortable and safe links for pedestrians to and

[2] $0.2 billion covers the reprovisioning cost of $0.126 billion and other expenditures of about $0.07 billion, including on-cost payable to MTRCL, contingency and provision for price adjustment.

from the station, Harcourt Garden and the neighbouring commercial buildings.

(f) Additional disposal and import of fill materials due to changes of stockpiling areas and barging point (increase in cost about $ 0.6 billion)

In the past extensive public consultation, we are aware of the public's concern about the excavated materials to be temporarily stored in Kai Tak and hence have substantially reduced the storage area in the latest planning. As a result, it will not be possible to store the one million cubic metres of excavated materials generated from the construction of the SCL tunnels and stations in Diamond Hill and Kowloon City for the subsequent backfilling, leading to a considerable increase in transportation cost. As the barging point at Hoi Sham Park has been cancelled, the excavated materials generated in the vicinity will have to be transported to the barging point at Kai Tak, increasing the cost of transportation and handling of the excavated materials.

(g) Reprovisioning of recreational facilities of the Police Force (increase in cost about $0.3 billion)

The tunnel of the North South Corridor of the SCL will pass through the recreational facilities of the Police Force beside the Causeway Bay Typhoon Shelter. As we have to avoid unnecessary reclamation, it was confirmed after detailed design that the recreational facilities of the Police Force will have to be entirely demolished to make way for the construction of the section of tunnel for the SCL and the ventilation facility above the tunnel. Upon completion of the works, the area of land available for the reprovisioning of the recreational facilities of the Police Force will be reduced, therefore, the facilities will adopt a multi-storey design to provide an area equal to the original facilities, hence resulting in an increase of construction cost.

4. Furthermore, in the course of design, the 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, with breakdown and detailed explanations as shown below-

(a) Changes to the design of stations, e.g. revision of the design of stations to take into account the latest site investigation information (increase in cost about $1.2 billion)

After conducting a series of site investigation along the alignment of the SCL, the MTRCL confirmed it was necessary to revise the design to take account of the information obtained, including-

- additional strengthening works for the external walls of the existing Diamond Hill Station to avoid implications for the safety of the station during the construction of the SCL;
- additional lateral diaphragm walls and related bracing structures to further reduce the impact on the neighbouring buildings during the construction of the Ma Tau Wai Station; apart from this, there is an increase in depth of the diaphragm walls due to the rock stratum in the vicinity of the Ma Tau Wai Station is deeper than expected.
- the large quantity of gravel found at the ex-Tai Hom Village site has to be crushed or removed before building 400 bored piles and 600 m long diaphragm walls at the site; and
- the seawall and disused railway facility found at the old reclamation of the Hung Hom Station have to be removed before construction of the tunnel.

(b) Additional fire service provisions at stations to meet latest fire safety requirements (increase in cost about $0.9 billion)

Fire service equipment for railways is different from that of ordinary buildings, most of which cannot be finalised until the design stage and after deliberations and analysis of risks with the Fire Services Department (FSD). As described in paragraph 1 above, design for SCL had not yet started when the preliminary cost estimate was submitted to LegCo in

March 2008. The rough estimated costs for stations, including fire safety facilities, were based on the typical design of previous stations. Starting from 2010, MTRCL discussed in detail with FSD the detailed design of most stations and the necessary fire safety facilities upon receipt of the detailed design and in view of the incidents in the past few years, the FSD requested for enhancement of the protection for fire service staff entering the scene of the incidents as well as means of escape for the public after receiving the station design from MTRCL. Hence, the SCL will have the following additional facilities-

- additional fire service lifts (nine in total) for the secondary fire service entrances at the stations;
- separate entrance for the underground CLP transformer room, hence an increase in the area of the stations;
- enhancement of the backup fume extracting facilities at the stations, hence an increase in the area of the stations; and
- automatic sprinkler system for the stabling tracks of the stabling siding at Diamond Hill, and automatic sprinkler and fume extracting systems for the sector tracks of the stabling sidings.

(c) Additional emergency access and egress to meet latest fire safety requirements (increase in cost about $0.9 billion)

In early 2010, after MTRCL submitted the detailed design of the emergency access, the FSD requested for enhancement of the ventilation system for railway tunnels longer than 3 km and the protection for fire service staff entering the scene of the incidents and means of escape for the public. The requests were made in view of the incident in Tai Lam Tunnel of the West Rail on 14 February 2007. Hence, the SCL will have the following additional facilities-

- An additional ventilation building and emergency access at Ma Chai Hang Playground;
- an additional emergency access at the open space beside Wong Tai Sin Temple; and
- an additional ventilation ducts for the SCL Lion Rock Tunnel and cross harbour tunnel, hence an increase in the cross-sectional area

of both tunnels.

(d) Additional ground treatment works to enhance safety of buildings near Ma Tau Wai Station (increase in cost about $0.9 billion)

To further safeguard the buildings near Ma Tau Wai Station from the impact of the construction of the station and the railway tunnel along Ma Tau Wai Road, ground treatment works will be carried out in the vicinity of Ma Tau Wai Road and it is estimated that about 80 000 cubic metres of grout will be required; the MTRCL also proposed the setting up a monitoring system to ensure the safety of the neighbouring buildings.

(e) Optimisation of alignment to avoid land acquisition for private buildings and reduce disruption to the operation of the East Rail Line (increase in cost about $1.3 billion)

In the course of design, the MTRCL has adopted the following measures to optimise the alignment of the SCL-

- The configuration of the tunnels at both ends of the Exhibition Station has been revised to allow cross platform interchange with the future North Island Line at the Exhibition Station, leading to an increase in the depth of the Exhibition Station and the SCL tunnel;
- The new alignment of the North South Corridor that bifurcates from the existing East Rail Line north of Hung Hom has been revised and it will not be necessary to build a tunnel under the tracks of the existing East Rail Line, reducing substantially the construction risk and the threat to train safety. However, the section of slope at the East Rail Line has to be upgraded and the affected facilities of the East Rail Line reprovisioned;
- The original alignment affects the foundation of some buildings near Ma Tau Wai Road and acquisition of those building would be required. After optimisation, the alignment will only run near those buildings and no acquisition will be necessary, but additional ground treatment works are required.

(f) Installation of noise mitigation measures at Ma On Shan Line (increase in cost about $0.8 billion)

As the Ma On Shan Line will run on eight car trains instead of four car trains with a higher frequency upon commissioning of the SCL, there is a need to conduct an environmental impact assessment (EIA) to re-evaluate the noise and a sum has been allowed for the necessary noise mitigation measures. The MTRCL is exploring means to mitigate noise and decide on the scale of the measures after completion of the EIA report and detailed design.

(g) Implementation of traffic diversions at Lung Cheung Road, Ma Tau Wai Road and Chatham Road (increase in cost about $1 billion)

In the course of design, the MTRCL has confirmed that the following large-scale traffic diversion measures would need to be implemented during the construction of the SCL-

- The three existing westbound lanes of Lung Cheung Road will be re-routed via the ex-Tai Hom Village site to facilitate the construction of station subways connecting the existing Diamond Hill Station to its extension under the SCL project. The traffic diversion measures will also include the provision of a temporary pedestrian subway across Lung Cheung Road, and the implementation of traffic diversions in phases to tie in with the progress of the works;
- Traffic diversions will be implemented in phases at Nam Kok Road, Olympic Garden Roundabout, Olympic Avenue, Sung Wong Toi Road and Pak Tai Street in Kowloon City to facilitate the construction of two subways connecting the To Kwa Wan Station to Nam Kok Road and Pak Tai Street. The two subways are provided to tie in with the revised To Kwa Wan Station;
- The Cheong Wan Road Flyover will be modified permanently for the construction of the railway tunnel connecting the SCL to the Hung Hom Station; and

- Temporary flyovers will be constructed at Chatham Road North to divert traffic on its existing seven lanes in phases for the construction of the cut-and-cover tunnels of the North South Corridor and the East West Corridor.

Final Estimate of the Cost

5. The MTRCL has completed nearly half of the detailed design of the SCL. The statutory consultation period has just started and will last until early 2012. During this period, we will carefully consider and study the views and suggestions collected and, where appropriate, assess whether to amend the railway scheme. According to this programme, the detailed design of the SCL project is expected to complete in about early 2012. By that time, we will have a more accurate estimate on the cost of the SCL project.

Cost Control

6. The Government intends to entrust the construction works of the SCL to the MTRCL. We will request the MTRCL to comply with its own management systems and procedures. The MTRCL also has the obligation to provide any information concerning any matters relating to the SCL project as requested by the Government. The Government will closely monitor the works of the MTRCL to ensure that the implementation of the project is within the approved project estimate, in compliance with quality requirements and on schedule. The procurement and tender procedures of the SCL project will comply with the relevant requirements of the Agreement on Government Procurement of the World Trade Organization. We will control the construction cost properly, and will engage an independent consultant to review the cost estimate of the SCL project. The review results will be available by early 2012.

On-cost Payable to the MTR Corporation Limited

1. Under the concession approach, the MTR Corporation Limited (MTRCL) will be entrusted with the design and construction of the new projects, subject to the Government's formal approval process, and the MTRCL and the Government agreeing on the fee of such entrustment. In the case of the Shatin to Central Link (SCL), services to be provided by the MTRCL for the management and supervision of the design and construction works of the project will be covered by an on-cost, which includes, but is not limited to, staff cost for the MTRCL's dedicated project management team and the headquarters for providing support for the project; accommodation costs for the dedicated project management team and consultants; and corporation costs (e.g. legal, financial, human resources, public relations, operating support, insurance, corporate governance and other relevant overheads).

2. The on-cost payable to the MTRCL could be settled by pre-determining a certain percentage (known as on-cost rate) of the actual expenditure of the design and construction works undertaken. At present, we are negotiating with the MTRCL the on-cost rate for the design and construction works (including the advance construction works) of the SCL. The determination of a reasonable on-cost rate takes time. We would need to, for example, examine the MTRCL's audited accounts of previous projects and ascertain the actual on-cost apportioned to individual projects, and would also need to further negotiate with the MTRCL. Hence the design on-cost now shown in item (e) of paragraph 22 of the draft paper at Annex C and item (c) of paragraph 23 of the draft paper at Annex D, both for discussion by the Public Works Subcommittee of the Finance Committee, are only indicative figures. For the purpose of providing an estimate, we have adopted a percentage[1] of 16.5% in the cost breakdown. This should not, however, be taken to mean that we would be paying on-cost for advance construction works to the MTRCL on this basis; nor should it be taken as the Government's agreement to adopting the same percentage as the actual on-cost rate for both design and construction works (including the advance construction works). We will seek independent consultancy advice in assessing the reasonableness of the on-cost rate to be proposed by the MTRCL for the SCL project.

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[1] The percentage is adopted with reference to an agreement made in 2003 between the Government and MTRCL, which provides that if MTRCL is entrusted with civil engineering projects, an amount at 16.5% of the project cost will be payable to MTRCL as the on-cost for the design, construction supervision, contract administration and the relevant insurance premium of the project.

DRAFT

For discussion **PWSC(2010-11)XX**
on 19 January 2011

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 706 – HIGHWAYS
Transport – Railways
61TR – Shatin to Central Link – construction of railway works

Members are invited to recommend to Finance Committee –

(a) the upgrading of part of **61TR** entitled "Shatin to Central Link – construction of railway works – advance works", to Category A at an estimated cost of $6,254.9 million in money-of-the-day prices; and

(b) the retention of the remainder of **61TR** in Category B.

PROBLEM

The Shatin to Central Link (SCL) will intersect the South Island Line (East) (SIL(E)) and Kwun Tong Line Extension (KTE) at the to-be-expanded Admiralty Station and the future Ho Man Tin Station respectively. It is necessary to implement under the SIL(E) and KTE projects advance railway works of SCL to ensure better interface among the three projects.

PROPOSAL

2. The Director of Highways, with the support of the Secretary for the Transport and Housing, proposes to upgrade part of **61TR** to Category A at an estimated cost of $6,254.9 million in money-of-the-day (MOD) prices for the

construction of advance railway works of the SCL at the Admiralty Station and Ho Man Tin Station (the Advance Railway Works).

PROJECT SCOPE AND NATURE

3. The SCL, with a total length of 17 kilometres (km), consists of two sections –

(a) Tai Wai to Hung Hom section: this is an extension of the Ma On Shan Line from Tai Wai via Southeast Kowloon to Hung Hom where it will join the West Rail Line. It will increase the Shatin-Kowloon rail capacity and provide railway service to the new developments in Southeast Kowloon; and

(b) Hung Hom to Admiralty section: this is an extension of the East Rail Line from Hung Hom across the Harbour to northern Wan Chai and Admiralty. It will increase the cross-harbour rail capacity and enhance the connectivity between the New Territories and Hong Kong Island.

A plan showing the proposed alignment of the SCL is at Enclosure 1.

4. The part of the project **61TR** we now propose to upgrade to Category A comprises–

(a) expansion of Admiralty Station to accommodate SCL railway facilities including overrun tunnels of approximately 200 metres (m) long and ventilation facilities for the station; and

(b) construction of a portion of Ho Man Tin Station for SCL.

These works form part of the works described in paragraph 5(a)(iii) below. Layout plans of the proposed Advance Railway Works in paragraphs 4(a) and (b) above are at Enclosures 2 and 3 respectively.

5. The scope of **61TR** comprises –

(a) construction of the railway works for the SCL, which include –

(i) an 11 km extension of the Ma On Shan Line from the existing Tai Wai Station to Hung Hom where it will join the West Rail Line;

(ii) a 6 km extension of the East Rail Line from Hung Hom crossing the Victoria Harbour to Admiralty;

(iii) along (i) and (ii) above, construction of new stations including Hin Keng, Diamond Hill, Kai Tak, To Kwa Wan, Mau Tau Wai, Ho Man Tin, Hung Hom, Exhibition and Admiralty;

(iv) associated railway facilities at the new stations in (iii) above including station concourses, passenger waiting areas, platforms, control and signalling systems, etc.;

(v) stabling sidings at Diamond Hill (i.e. the ex-Tai Hom Village site) and associated approach tracks;

(vi) associated ventilation facilities for the railway tunnels;

(vii) modifications of existing stations along the Ma On Shan Line to cater for the future operation of eight-car trains[1];

(viii) modification of existing stations along the East Rail Line to cater for the future operation of nine-car trains[1];

(ix) bifurcation from the existing East Rail Line from Ho Man Tin to Hung Hom to form an underground section, to match with the vertical alignment of the cross harbour tunnel section of the SCL;

(x) electrical and mechanical (E&M) systems for the SCL and modifications to the existing East Rail Line and Ma On Shan Line railway-related E&M systems;

(xi) ancillary construction works and equipment necessary for the operation of the SCL; and

(b) procurement of rolling stock, railway systems, as well as safety, operation and maintenance equipment.

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[1] To cater for difference in patronage forecast for the two lines.

6. We have completed the detailed design and working drawings for the Advance Railway Works. We plan to commence the construction of the Advance Railway Works in 2011 for completion in 2015 in conjunction with the works for the SIL(E) and KTE. Separate funding applications will be made for the construction cost of the advance non-railway works (PWSC(2010-11)xx).

JUSTIFICATION

Strategic Railway

7. The 17-kilometre SCL is a territory-wide strategic railway project with ten stations[2]. 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".

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

(b) The "North South Corridor", which extends the existing East Rail Line from Hung Hom Station across the Victoria 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.

8. The SCL will significantly reduce the journey time for passengers who travel among East Kowloon, the 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. As a strategic railway expanding the catchment of the railway network in Hong Kong, the SCL will serve a wide catchment of 380 000 residential and 260 000 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;

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[2] 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) become an important component of the Kai Tak Development providing a public transport service not only to the proposed new commercial and residential developments in the area, but also to the multi-purpose stadium complex and other leisure and recreation 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 rejuvenation of the To Kwa Wan and Kowloon City areas.

9. The SCL will carry about 1.1 million railway passengers per day and generate annual transport benefits of $4.4 billion in terms of time saving to travellers in 2021. The new railway will also help improve the total employment situation by providing 11 000 employment opportunities during construction and another 9 600 employment opportunities during its operation.

10. The SCL scheme was gazetted under the Railways Ordinance (Cap. 519) on 26 November 2010 and has entered the statutory consultation process. Under the Ordinance, any person may object to the scheme within 60 days after the first publication of the gazette notice. The Administration shall submit the scheme and all objections not withdrawn to the Chief Executive in Council for consideration not later than nine months after the expiry of the 60-day objection period or, where the scheme is amended, three months after the expiry of the 60-day period of lodging objections to the amendments. The Administration and MTR Corporation Limited (MTRCL) will continue to consider public views collected from the consultation with a view to enhancing the detailed design of SCL.

11. We have been conducting extensive public consultation since mid 2008. The concerned local stakeholders, including a total of 11 District Councils, were briefed on the proposed railway scheme. Roving exhibitions, public forums, school talks, and other public consultation activities have also been held to collect views and suggestions from the local communities. We have previously strived to complete the design and statutory consultation process as soon as possible with an aim of commencing construction works in 2010, and expected that the Tai Wai to Hung Hom Section and the Hung Hom to Admiralty Section could be completed in 2015 and 2019 respectively. Since the SCL is large in scale and involves many issues in which a number of local communities are interested, we have taken longer than expected time to consider and follow up on the views and suggestions of the local communities. We have included, where appropriate, the suggestions of the local communities in the railway proposal and expect that the statutory consultation process can be completed by early 2012. After that, we will make a funding application for the railway and non-railway remaining works as soon as possible with a view to commencing construction works in 2012. Since a large

amount of works under the Tai Wai to Hom Hung Section may be required to avoid resumption of buildings, the railway works are expected to take six years and could only be completed in 2018. To dovetail with a series of infrastructural projects such as Wanchai Development Phase II and Central-Wanchai Bypass, the Hung Hom to Admiralty Section is expected to be completed by 2020. While complying with the statutory procedures, we will continue to press ahead with the project for early start of construction and completion.

Expansion of Admiralty Station

12. The Advance Railway Works consist of expansion of the existing Admiralty Station to accommodate SCL railway facilities and construction of a portion of Ho Man Tin Station for accommodating SCL facilities as explained below.

13. The existing Admiralty Station will be expanded eastwards below Harcourt Garden to accommodate railway facilities for the SCL and SIL(E). The expanded Admiralty Station will provide convenient interchange for the passengers interchanging among SCL, SIL(E), as well as the existing Island Line and Tsuen Wan Line. The SCL and SIL(E) railway tunnels have to run underneath those for the Tsuen Wan Line and Island Line to avoid affecting the railway operation of the existing Admiralty Station. As a result, SCL and SIL(E) railway tunnels and platforms will have to be depressed to more than 40 m below ground. Works for expanding the Admiralty Station will be complex and sizable in scale. The expanded Admiralty Station will comprise six levels, including the station entrance at the top level, three levels for interchanging SCL and SIL(E) passengers to other railway lines and accommodating plant rooms, the bottom two levels for the SCL and SIL(E) platforms.

14. The expanded portion of the Admiralty Station will be connected with the existing Admiralty Station to form an integrated station. Works for parts of the Admiralty Station for SCL and SIL(E) facilities must be constructed concurrently, so as to help reduce the overall size of the station, reduce costs and time required, and minimise disruption to the public during construction. As such, the SCL portion of the Admiralty Station has to be constructed in advance of other SCL works in order to tie in with the implementation progamme of the SIL(E), which is scheduled to commence in 2011 for completion in 2015.

15. The Advance Railway Works also include SCL overrun tunnels[3] at the Admiralty Station, which are approximately 200 m long, and an integrated ventilation building for the station adjoining the Hong Kong Park, which will serve both SCL and SIL(E) tunnels. As the SCL overrun tunnels and SIL(E) tunnels are in close proximity with each other, in order to avoid posing risks and affecting the operation of the existing railways, and in the interest of public safety, the SCL overrun tunnels and SIL(E) tunnels have to be constructed concurrently. While part of the ventilation building will operate first to allow SIL(E) to

[3] The overrun tunnels are for SCL trains to change track and turn back.

commission in 2015, installation of ventilation facilities serving SCL will be carried out afterwards to tie in with the commissioning of SCL. It will occupy as less space as possible and its orientation has been so designed to avoid affecting nearby residents. The outlook of ventilation facility will match with surrounding environment.

Construction of the SCL portion at Ho Man Tin Station

16. The proposed Ho Man Tin Station is an integrated station serving both SCL and KTE, providing convenient interchange for passengers between these two railway lines. Owing to hilly terrain, the Ho Man Tin Station has to be constructed at more than 60 m below ground level. The Ho Man Tin Station will have eight levels, including the KTE platforms at the lowest level, the SCL platforms at the sixth level and interchanging concourses and plant rooms at other levels. As the KTE is running roughly perpendicular to SCL, the Ho Man Tin Station will be designed in a cross shape for the two railway lines to interchange. Due to the cross shape design of the Ho Man Tin Station and its construction to be done 60 m below ground, the construction works of Ho Man Tin Station is sizable in scale and complex. Like the expansion of Admiralty Station, the Ho Man Tin Station has to be constructed in advance of other SCL works to tie in with the implementation programme of the KTE, which is scheduled to commence in 2011 for completion in 2015.

17. The Advance Railway Works have been gazetted under the SIL(E) and KTE schemes under the Railways Ordinance (Cap. 519) respectively. The Chief Executive in Council authorised the SIL(E) and KTE schemes respectively on 30 November 2010.

Works to be entrusted to the MTRCL

18. We plan to entrust the Advance Railway Works to the MTRCL for implementation in conjunction with the SIL(E) and KTE projects. Most of the civil construction works for the integrated stations will be completed under SIL(E) and KTE projects. The remaining minor building services and fitting out works serving SCL will be carried out after the SCL scheme has been authorised, and are not included in the Advance Railway Works.

19. Under the principles agreed between Government and the MTRCL for applying to such entrustments, the entrustor (i.e. the Government in the SCL project) will pay the actual construction costs based on prices established from appropriate tendering processes. Services to be provided by the entrustee (i.e. MTRCL in the SCL project) for management and supervision of the project will be covered by an on-cost. We will employ an independent engineering consultant (IEC) to establish checking and control procedure on the capital cost estimate of the whole SCL project, including the on-cost for the design and construction of both railway and non-railway works. The on-cost for the construction of the Advance Railway Works as shown in paragraph 22(e) (being part of the total on-cost payable to MTRCL under the entire SCL project) is only a provisional figure.

We shall aim to agree with MTRCL on the total on-cost payable under the SCL project before we seek this Sub-committee's support for the construction of the remaining railway and non-railway works in 2012.

Vetting by independent engineering consultants

20. In the funding application for design and site investigation of the SCL project (PWSC(2008-09)1), we undertook to employ independent consultants to assess the cost estimate for the SCL project, including the on-cost. We have engaged an IEC to assess the reasonableness of the construction cost.

21. The IEC has reviewed the rates and quantities of the cost items of the Advance Railway Works and checked the same against the latest construction price trends and scope of the Advance Railway Works. In light of such review, the IEC considers the estimated construction costs as presented in paragraph 22 below reasonable. The review regarding the cost apportionment between the KTE and SCL projects in relation to the cost of the Ho Man Tin Station is expected to be completed in the 1st quarter of 2011 and suitable adjustment to the cost apportionment will be made as necessary. Furthermore, under the project entrustment arrangement, the Government will pay for the actual costs of the construction works based on prices established from appropriate tendering processes. We will closely monitor the project expenditure. Moreover, as mentioned in paragraph 19 above, we will engage another IEC to assess the on-cost for the SCL project.

FINANCIAL IMPLICATIONS

22. We estimate the cost of the Advance Railway Works to be $6,254.9 million in MOD prices (please see paragraph 23 below), broken down as follows –

			$ million
(a)	SCL portion at Admiralty Station[4]		1,873.8
	(i) Station building works	1,351.4	
	(ii) Building services works	172.8	
	(iii) E&M works	349.6	

[4] The expanded Admiralty Station will become an integrated station serving passengers for both SCL and SIL(E). The construction cost is therefore apportioned between the two projects. As the floor area of the expanded portion of the Admiralty station, including the associated facilities for passengers, station concourse and platform etc, is proportional to the passenger volume, for cost estimation purpose, a ratio of 7:3 is adopted for the apportionment between SCL and SIL(E) based on a ratio of peak hour line passenger volumes between the two lines. Government will be responsible for the SCL portion of funding and MTRCL will be responsible for the SIL(E) portion. We have employed an IEC to review the apportionment ratio.

				$ million	
(b)	SCL portion of ventilation facility for Admiralty Station[5]			231.7	
	(i)	Building works	206.9		
	(ii)	Building services works	24.8		
(c)	Overrun tunnel at Admiralty Station[6]			199.0	
(d)	SCL portion at Ho Man Tin Station[7]			2,001.3	
	(i)	Station building works	1,496.3		
	(ii)	Building services works	399.5		
	(iii)	E&M works	105.5		
(e)	On-cost payable to MTRCL [8]			710.5	
(f)	Contingencies			501.6	
		Sub-total		5,517.9	(in September 2010 prices)
(g)	Provision for price adjustment			737.0	
		Total		6,254.9	(in MOD prices)

23. Subject to approval, we will phase the expenditure as follows –

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[5] Same as the expansion of Admiralty Station, the cost of the ventilation building at Hong Kong Park is also apportioned between the SCL and SIL(E) projects based on a 7:3 ratio.

[6] As the overrun tunnels will only serve the SCL, the construction cost of the tunnels is therefore entirely budgeted under this project.

[7] The Ho Man Tin Station is an integrated station serving both SCL and KTE. Similar to the arrangement of Admiralty Station, the construction cost is apportioned between the SCL and KTE projects, according to a ratio of 3:1, to be funded by Government and MTRCL respectively. We have employed an IEC to review the apportionment ratio. The review is expected to be completed in the 1st quarter of 2011 and suitable adjustment to the 3:1 ratio and the related cost apportionment will be made as necessary.

[8] The provisional sum of $710.5 million represents an on-cost at 16.5% of the project base cost (i.e. items (a) to (d) of paragraph 22 above) that will be payable to MTRCL for undertaking the technical studies, design and construction supervision of the Advance Railway Works. The actual on-cost rate is expected to be lower than the assumed 16.5% and will be subject to review by an IEC as well as further discussion between the Government and MTRCL.

Year	$ million (September 2010)	Price adjustment factor	$ million (MOD)
2011 – 2012	1,015.4	1.04250	1,058.6
2012 – 2013	1,656.5	1.09463	1,813.3
2013 – 2014	1,399.9	1.14936	1,609.0
2014 – 2015	1,002.0	1.20682	1,209.2
2015 – 2016	444.1	1.27169	564.8
	5,517.9		6,254.9

24. We have derived the MOD estimate on the basis of the Government's latest set of assumptions on the trend rate of change in the prices of public sector building and construction output for the period from 2011 to 2016.

25. The Advance Railway Works in itself will not give rise to any additional recurrent expenditure.

PUBLIC CONSULTATION

26. Since mid 2008, the Government and the MTRCL have undertaken public consultation on the SCL. Apart from consulting District Councils (DC), 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. Representatives of the Government and the MTRCL have attended more than 30 DC 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 DC Members on the progress of the SCL and to listen to their views.

27. We have also conducted a series of consultations with the Central and Western, and Kowloon City DCs on the integrated Admiralty Station and Ho Man Tin Station specifically. When we updated the Central and Western DC in April 2010 and the Kowloon City DC in July 2010 on the latest progress of the SCL project, the DC members gave in-principle support for the SCL works.

28. Generally speaking, the public is supportive and positive about the SCL project. Majority of parties and residents consulted have urged the Government to expedite the implementation of the project. In the coming months, we will continue to consider the views from public consultation with a view to enhancing the detailed design of the SCL.

29. We gazetted the Advance Railway Works at Admiralty Station as part of the railway scheme of the SIL(E) under the Railways Ordinance (Cap. 519) (the Ordinance) on 24 July 2009, and its amendments on 4 June 2010. We received 85 objections to the gazetted scheme and the amendment scheme, among which five objections are related to the Advance Railway Works. The objectors were concerned about underground strata resumption for, environmental impacts of the proposed ventilation facilities and traffic congestion at Admiralty Station.

30. We also gazetted the Advance Railway Works at Ho Man Tin Station as part of the railway scheme of the KTE under the Ordinance on 27 November 2009, and its amendments on 25 June 2010. We received 50 objections to the scheme and its amendments, among which six objections were related to the Advance Railway Works. The objectors were concerned about the proposed location of Ho Man Tin Station and its connectivity with the nearby housing estates.

31. Having considered the unresolved objections and the proposed modifications, the Chief Executive-in-Council authorized the SIL(E) scheme (including the Advance Railway Works at Admiralty Station) and the KTE scheme (including the Advance Railway Works at Ho Man Tin Station) respectively under the Ordinance on 30 November 2010. The notices of authorization were gazetted on 10 December 2010. Details of the unresolved objections are reported in the Legislative Council Briefs on the SIL(E) Authorization of Scheme and the KTE Authorization of Scheme issued on 30 November 2010. We also briefed the Subcommittee of Matters relating to Railways of the Legislative Council Panel on Transport (the Railway Subcommittee) on 16 December 2010 on the SIL(E) and KTE railway schemes.

32. We consulted the Railway Subcommittee on 6 December 2010 and 7 January 2011. *[To be updated after the Railway Subcommittee meeting on 7 January 2011.]*

ENVIRONMENTAL IMPLICATIONS

33. The SCL project is subject to separate study requirements as stipulated in the relevant Environmental Impact Assessment (EIA) study brief. The SIL(E) (including its associated stations, depots and ventilation buildings and provisions for interchanges with the SCL) and the KTE (including Ho Man Tin Station with associated structures and provisions for interchanges with the SCL) are designated projects under Schedule 2 of the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO). Environmental permits (EP) are required for the construction of these works projects.

34. The cumulative construction impacts of the SIL(E) and the SCL Advance Railway Works at Admiralty Station were studied under the EIA for SIL(E) project. The SIL(E) EIA report concludes that the environmental impacts arising from the construction of the SIL(E) and the SCL Advance Railway Works at Admiralty Station can be controlled to within the criteria under EIAO and its Technical Memorandum. Director of Environmental Protection (DEP) issued the

EP for the SIL(E) project on 8 December 2010. The cumulative operational impacts arising from the SIL(E) and the SCL Advance Railway Works at Admiralty Station will be addressed separately under the SCL EIA study.

35. The EIA report on KTE concludes that impacts from KTE (including that of provisions for interchanges with the SCL) are acceptable once the prescribed mitigation measures are applied upon completion of the construction works and throughout operation of the KTE. DEP issued the EP for KTE on 27 September 2010 and the amended EP on 1 December 2010.

36. At the planning and design stages, MTRCL had considered all the proposed works and construction sequences to reduce the generation of construction waste where possible. In addition, MTRCL will require the contractors to reuse inert construction waste (e.g. excavated materials) on site or in other suitable construction sites as far as possible. In order to minimize the disposal of inert construction waste at public fill reception facilities[9], MTRCL will encourage the contractors to maximize the use of recycled / recyclable inert construction waste, and the use of non-timber formwork to further reduce the generation of construction waste.

37. At the construction stage, MTRCL will require the contractors to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. MTRCL will ensure that the day-to-day operations on site comply with the approved plan. MTRCL will require the contractors to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. MTRCL will also control the disposal of inert construction waste and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.

38. MTRCL estimate that the Advance Railway Works will generate in total about 2.53 million tonnes of construction waste. Of these, MTRCL will reuse about 18 000 tonnes (1%) of inert construction waste on site and 0.789 million tonnes (31%) of insert construction waste on other construction sites, and deliver 1.702 million tonnes (67%) of inert construction waste to public fill reception facilities for subsequent reuse. MTRCL will dispose of the remaining 21 000 tonnes (1%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be $48.5 million for this project (based on a unit cost of $27 per tonne for disposal at public fill reception facilities and $125 per tonne[10] at landfills).

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[9] Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste in public reception facilities requires a licence issued by the Director of Civil Engineering and Development.

[10] This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at $90 per m^3), nor the cost to provide new landfills (which is likely to be more expensive) when the existing ones are filled.

HERITAGE IMPLICATIONS

39. The Advance Railway Works will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, sites of archaeological interests and Government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

40. For the expansion of Admiralty Station, about 1.33 hectares of underground strata of land within four private lots is required to be resumed and also rights of temporary occupation of 0.14 hectare of underground strata of land within two private lots will be created under the SIL(E) Scheme. The land acquisition cost is estimated to be nil. The proposed Ho Man Tin Station does not require any land resumption. Crops are found within the scheme area of the Ho Man Tin Station and will have to be cleared. We will charge the clearance cost estimated at $66,000 to **Head 701 – Land Acquisition**. A breakdown of the land resumption and clearance costs is at Enclosure 4.

BACKGROUND INFORMATION

41. We upgraded **51TR** "Shatin to Central Link – design and site investigation" at an estimated cost of $2,407.5 million in MOD prices in May 2008. We entrusted the design and site investigation works to the MTRCL and commenced the preliminary design in November 2008. We have completed the preliminary design for the SCL project. The detailed design is in progress.

42. We upgraded part of **58TR "**Shatin to Central Link – construction of railway works – protection works" as **59TR** "Shatin to Central Link – construction of railway works – protection works in Wan Chai Development Phase II" in July 2010 at an estimated cost of $152.6 million in MOD prices. The construction works are being carried out under the Wan Chai Development Phase II project.

43. We upgraded **61TR** to Category B in September 2010.

44. Of the 1 002 trees within the project boundary of the Advance Railway Works, 871 trees will be felled, 17 trees transplanted and 114 trees preserved. None of these are Registered Old and Valuable Trees. One of them at Ho Man Tin is an important tree[11] that will be well protected during the

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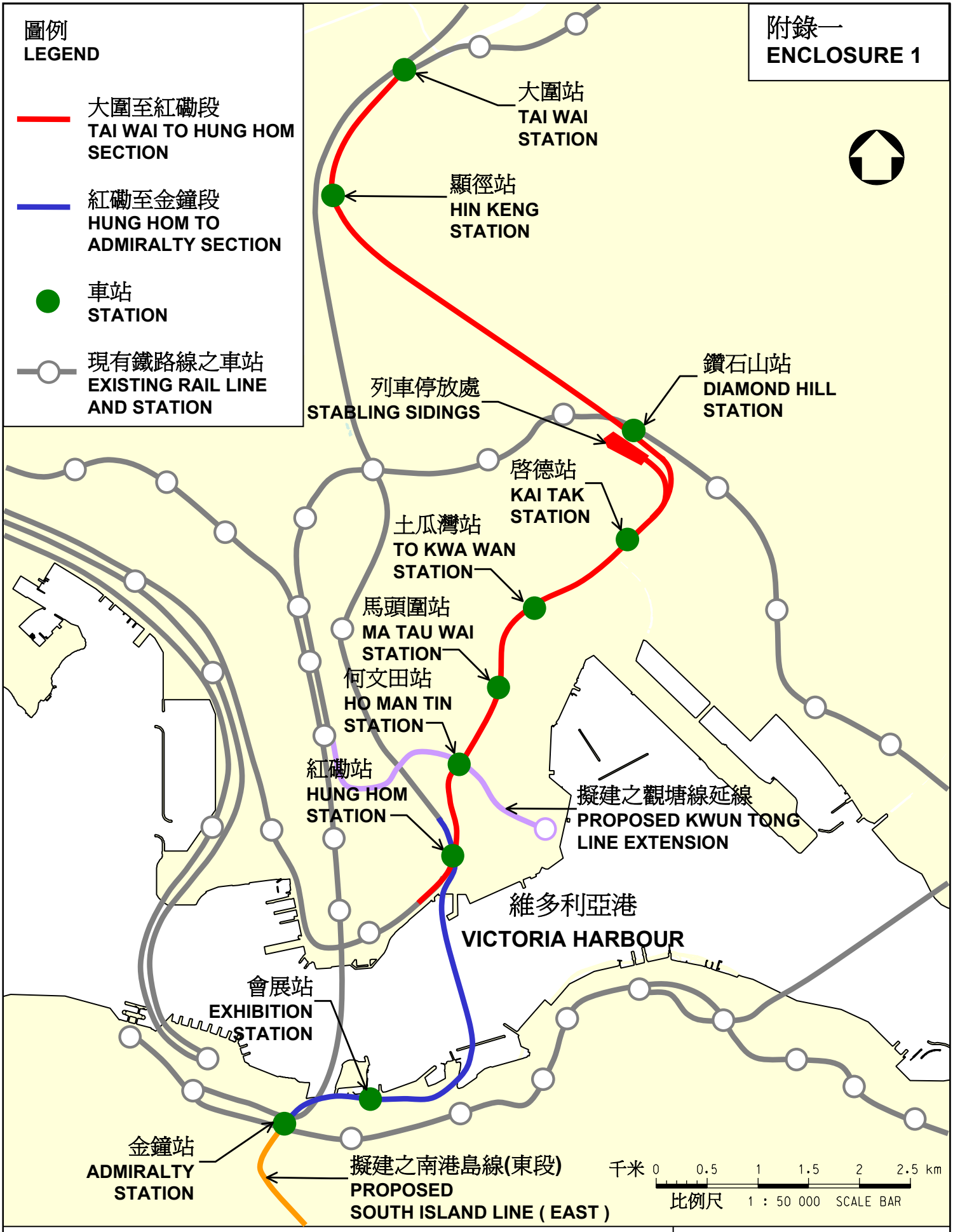
[11] "Important trees" refer to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –
(a) trees of 100 years old or above;
(b) trees of cultural, historical or memorable significance e.g. Fung Shui trees, trees as landmark of monastery or heritage monument and trees in memory of important persons or events;
(c) trees of precious or rare species;
(d) trees of outstanding form (taking account of overall tree size, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or

construction of Ho Man Tin Station. We will incorporate planting proposals as part of the project, including planting no less than 2 390 new trees and around 3 000 square metres of grassed area.

45. We estimate that the works in paragraph 5 will create about 610 jobs comprising 125 professional/technical staff and 485 labourers, providing a total employment of 21 400 man-months.

Transport and Housing Bureau
January 2011

(e) trees with trunk diameter equal or exceeding 1.0 metre (measured at 1.3 metre above ground level), or with height/canopy spread equal or exceeding 25 metres.



圖則名稱 drawing title

擬建之沙田至中環線的走線
PROPOSED ALIGNMENT OF THE SHATIN TO CENTRAL LINK

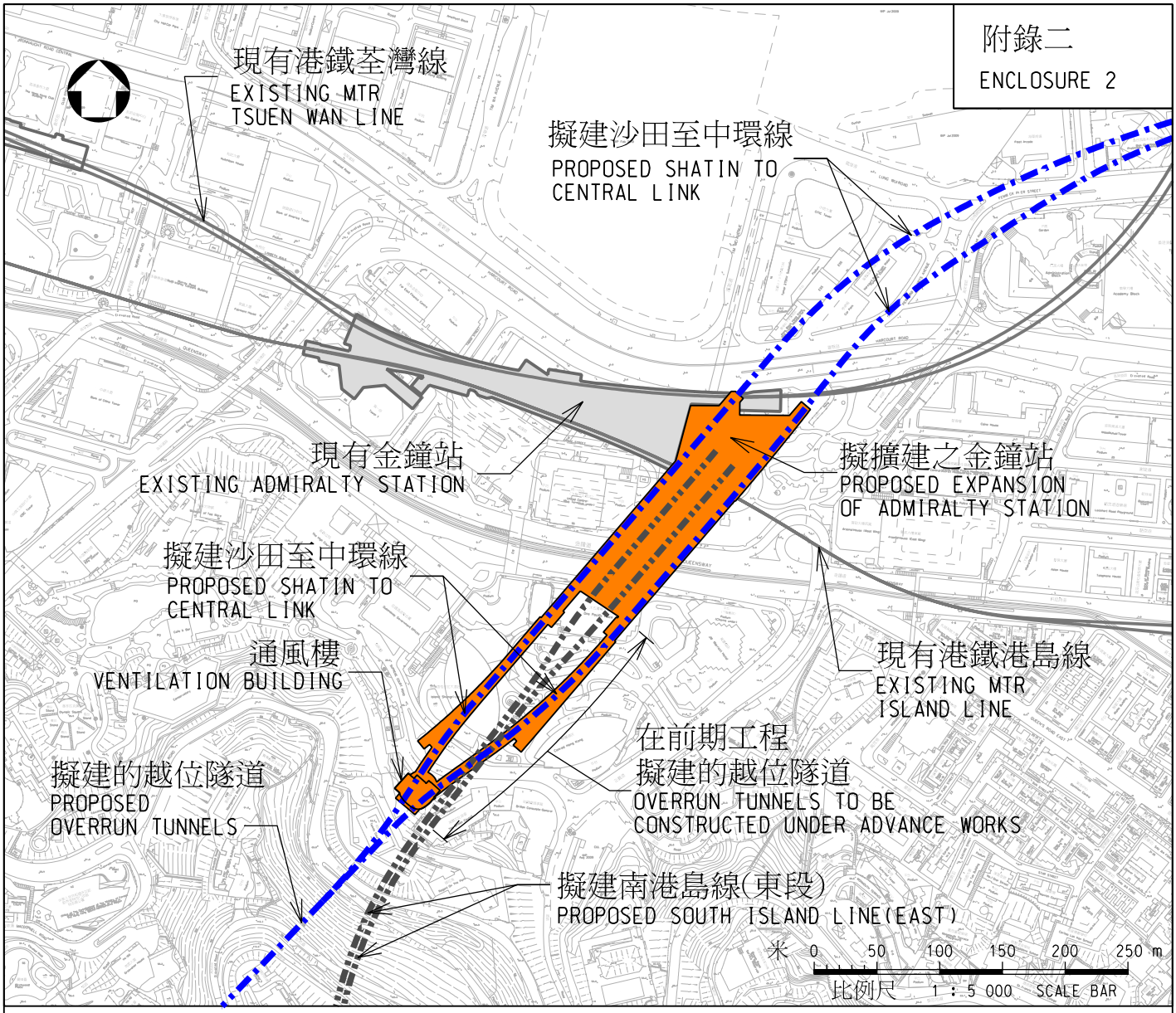
圖號 drawing no.
HRWSCL003-SK0212

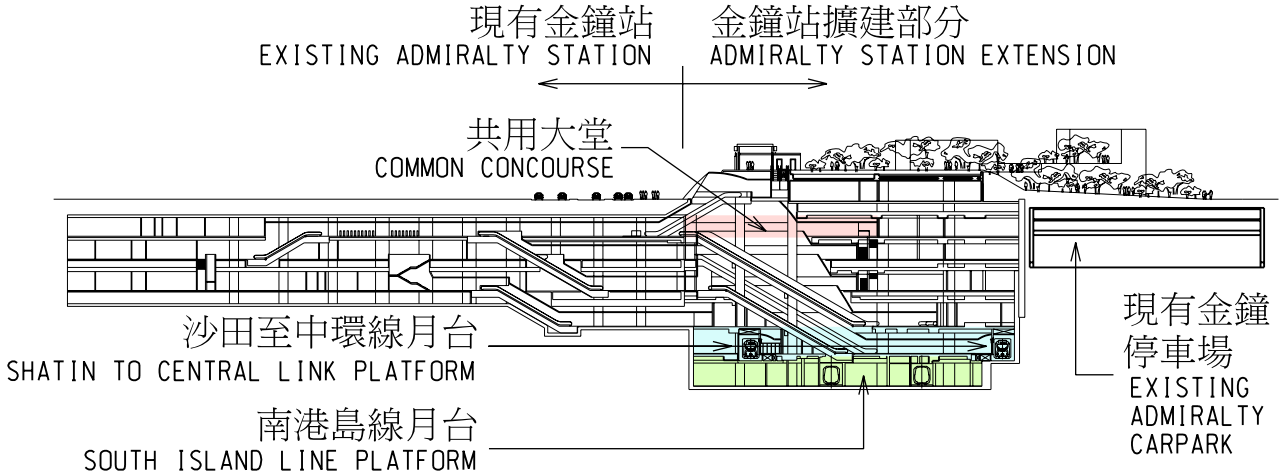
鐵路拓展處 RAILWAY DEVELOPMENT OFFICE

路政署
HIGHWAYS DEPARTMENT

A4 210X297

附錄二
ENCLOSURE 2





典型橫切面示意圖 (不按比例)
TYPICAL CROSS SECTION (N.T.S.)

圖則名稱 drawing title
工務計劃項目第61TR號
沙田至中環線 — 鐵路建造工程 — 前期工程
項目(a) — 金鐘站擴建工程
PWP ITEM NO. 61TR
SHATIN TO CENTRAL LINK - CONSTRUCTION OF RAILWAY WORKS - ADVANCE WORKS
ITEM (a) - EXPANSION OF ADMIRALTY STATION

圖號 drawing no.
HRWSCL003-SK0210

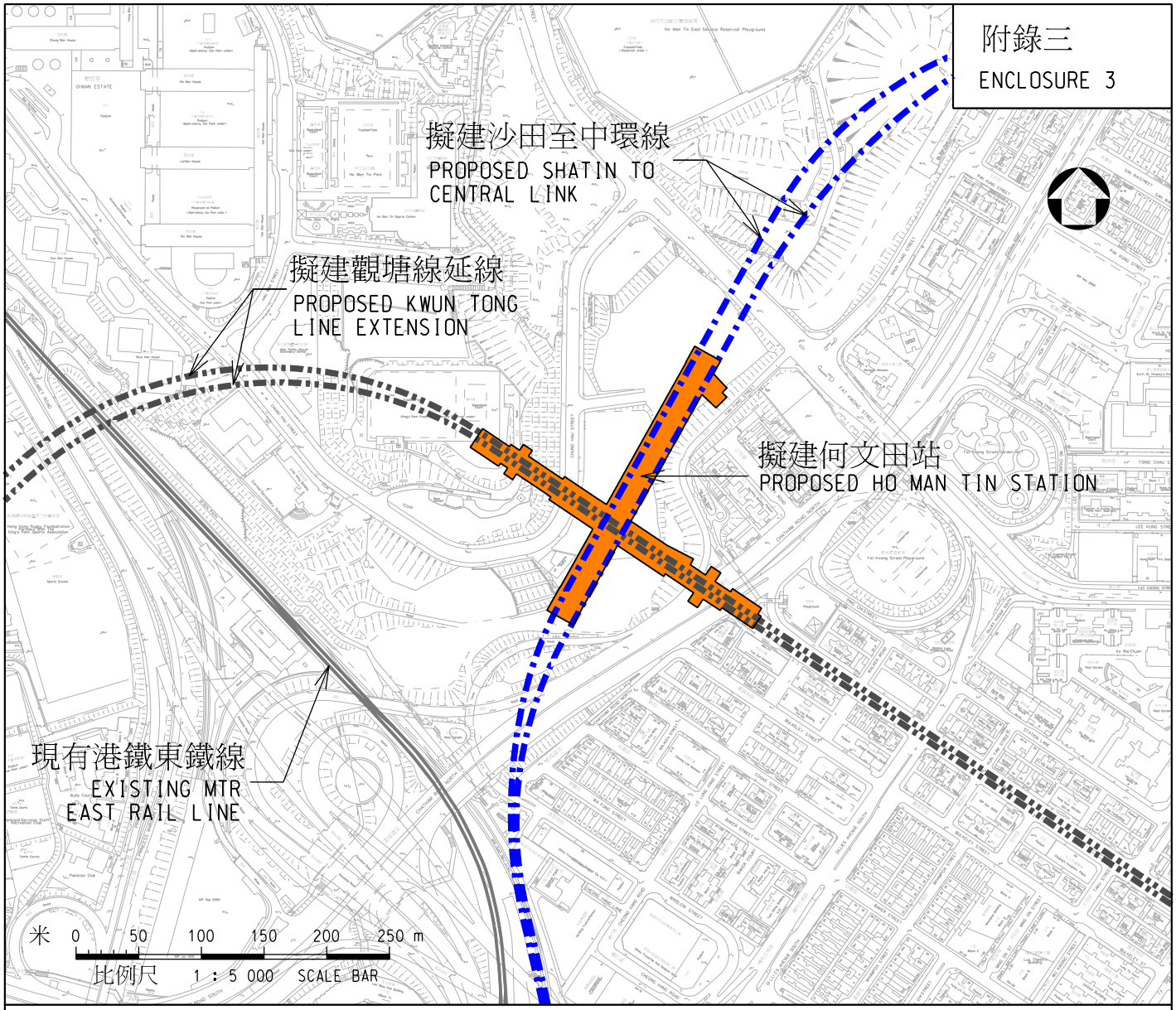
鐵路拓展處 RAILWAY DEVELOPMENT OFFICE

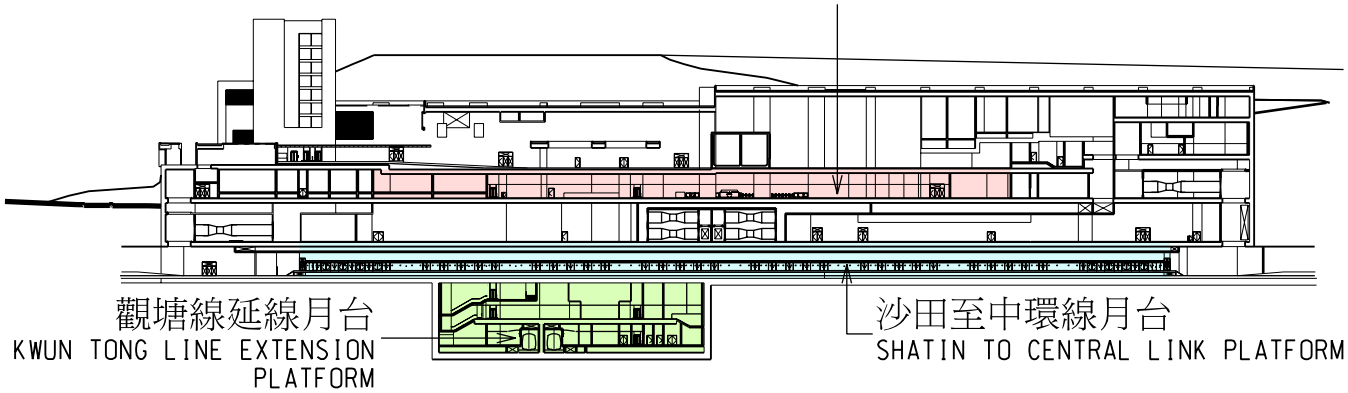
路 政 署
HIGHWAYS DEPARTMENT

A4 210X297

HRWSCL003-SK0210.dgn 28-12-2010

附錄三
ENCLOSURE 3





典型橫切面示意圖 (不按比例)
TYPICAL CROSS SECTION (N.T.S.)

圖則名稱 drawing title
工務計劃項目第61TR號
沙田至中環線 — 鐵路建造工程 — 前期工程
項目(b) — 何文田站建造工程
PWP ITEM NO. 61TR
SHATIN TO CENTRAL LINK - CONSTRUCTION OF RAILWAY WORKS - ADVANCE WORKS
ITEM (b) - CONSTRUCTION OF HO MAN TIN STATION

圖號 drawing no.
HRWSCL003-SK0211

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE
路政署 HIGHWAYS DEPARTMENT

A4 210X297

HRWSCL003-SK0211.dgn 28-12-2010

DRAFT

Enclosure 4 to PWSC(2010-11)XX

HEAD 706 – HIGHWAYS
Transport – Railways
61TR – Shatin to Central Link – construction of railway works

Breakdown of the Estimated Clearance Cost

	$ million
Clearance cost	
- Ex-gratia allowance of crop compensation	0.06[1]
Contingency	0.006
Total Clearance Cost	0.066

[1] The Ho Man Tin Station is an integrated station serving both SCL and KTE. Similar to the arrangement for the construction cost of the Ho Man Tin Station, the clearance cost is apportioned between SCL and KTE projects, according to a ratio of 3:1, to be funded by Government and MTRCL respectively. The above cost is SCL portion of the land clearance cost. We have employed an independent consultant as mentioned in para. 21 of the PWSC paper to review the apportionment ratio.

Annex D

DRAFT

For discussion **PWSC(2010-11)XX**
on 19 January 2011

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 706 – HIGHWAYS
Transport – Railways
62TR – Shatin to Central Link – construction of non-railway works

Members are invited to recommend to Finance Committee

(a) the upgrading of part of **62TR** entitled "Shatin to Central Link – construction of non-railway works – advance works", to Category A at an estimated cost of $1,448.2 million in money-of-the-day prices; and

(b) the retention of the remainder of **62TR** in Category B.

PROBLEM

We need to carry out advance non-railway works of the Shatin to Central Link (SCL), which includes reprovisioning of the International Mail Centre (IMC) at Hung Hom and reprovisioning works at Harcourt Garden and Hong Kong Park, so as to vacate relevant works sites at Hung Hom, Harcourt Garden and Hong Kong Park for the construction of SCL facilities.

PROPOSAL

2. The Director of Highways, with the support of the Secretary for the Transport and Housing, proposes to upgrade part of **62TR** to Category A at an

estimated cost of $1,448.2 million in money-of-the-day (MOD) prices for carrying out advance non-railway works of SCL (the Advance Non-railway Works).

PROJECT SCOPE AND NATURE

3. The SCL, with a total length of 17 kilometres (km), consists of two sections –

(a) Tai Wai to Hung Hom section: this is an extension to Ma On Shan Line from Tai Wai via Southeast Kowloon to Hung Hom via Southeast Kowloon where it will join the West Rail Line. It will increase the Shatin-Kowloon rail capacity and provide railway service to the new developments in Southeast Kowloon; and

(b) Hung Hom to Admiralty section: this is an extension of the existing East Rail Line from Hung Hom across the Harbour to northern Wan Chai and Admiralty. It will increase the cross-harbour rail capacity and enhance the connectivity between the New Territories and Hong Kong Island.

A plan showing the proposed alignment of the SCL is at **Enclosure 1.**

4. The part of the project **62TR** we now propose to upgrade to Category A comprises –

(a) reprovisioning of the International Mail Centre (IMC) at Hung Hom; and

(b) reprovisioning works at Harcourt Garden and Hong Kong Park.

These works form part of the works described in paragraph 5(b) below. Layout plans of the proposed Advance Non-railway Works are at Enclosures 4 to 8.

5. The scope of **62TR** comprises –

(a) construction of essential public infrastructure works (EPIW) for the SCL;

(b) construction of reprovisioning, remedial and improvement works (RRIW) for the SCL; and

(c) construction of enabling works for the topside property developments above the Diamond Hill

stabling sidings, Kai Tak Station and To Kwa Wan Station.

Latest lists of EPIW and RRIW, which are subject to changes as the design and planning of the SCL progress, are at Enclosures 2 and 3.

6. We have completed the detailed design and working drawings for the Advance Non-railway Works. We plan to commence the reprovisioning of IMC in 2011 for completion in 2014. Reprovisioning works at Harcourt Garden and Hong Kong Park will be carried out in conjunction with the works for the South Island Line (East) (SIL(E)) and will be completed in 2015. Separate funding applications will be made for the construction of the advance railway works (PWSC(2010-11)xx).

JUSTIFICATION

Strategic Railway

7. The 17-kilometre SCL is a territory-wide strategic railway project with ten stations[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".

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

(b) The "North South Corridor", which extends the existing East Rail Line from Hung Hom Station across the Victoria 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.

8. The SCL will significantly reduce the journey time for passengers who travel among East Kowloon, the 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

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[1] 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.

existing railway lines. As a strategic railway expanding the catchment of the railway network in Hong Kong, the SCL will serve a wide catchment of 380 000 residential and 260 000 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) become an important component of the Kai Tak Development providing a public transport service not only to the proposed new commercial and residential developments in the area, but also to the multi-purpose stadium complex and other leisure and recreation 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 rejuvenation of the To Kwa Wan and Kowloon City areas.

9. The SCL will carry about 1.1 million railway passengers per day and generate annual transport benefits of $4.4 billion in terms of time saving to travellers in 2021. The new railway will also help improve the total employment situation by providing 11 000 employment opportunities during construction and another 9 600 employment opportunities during its operation.

10. The SCL scheme was gazetted under the Railways Ordinance (Cap. 519) on 26 November 2010 and has entered the statutory consultation process. Under the Ordinance, any person may object to the scheme within 60 days after the first publication of the gazette notice. The Administration shall submit the scheme and all objections not withdrawn to the Chief Executive in Council for consideration not later than nine months after the expiry of the 60-day objection period or, where the scheme is amended, three months after the expiry of the 60-day period of lodging objections to the amendments. The Administration and MTR Corporation Limited (MTRCL) will continue to consider public views collected from the consultation with a view to enhancing the detailed design of SCL.

11. We have been conducting extensive public consultation since mid 2008. The concerned local stakeholders, including a total of 11 District Councils, were briefed on the proposed railway scheme. Roving exhibitions, public forums, school talks, and other public consultation activities have also been held to collect views and suggestions from the local communities. We have previously strived to complete the design and statutory consultation process with an aim of commencing construction works in 2010, and expected that the Tai Wai to Hung Hom Section and the Hung Hom to Admiralty Section could be completed in

2015 and 2019 respectively. Since the SCL is large in scale and involves many issues in which a number of local communities are interested, we have taken longer than expected time to consider and follow up on the views and suggestions of the local communities. We have included, where appropriate, the suggestions of the local communities in the railway proposal and expect that the statutory consultation process can be completed by early 2012. After that, we will make a funding application for the railway and non-railway remaining works as soon as possible with a view to commencing construction works in 2012. Since a large amount of works under the Tai Wai to Hom Hung Section may be required to avoid resumption of buildings, the railway works are expected to take six years and could only be completed in 2018. To dovetail with a series of infrastructural projects such as Wanchai Development Phase II and Central-Wanchai Bypass, the Hung Hom to Admiralty Section is expected to be completed by 2020. While complying with the statutory procedures, we will continue to press ahead with the project for early start of construction and completion.

Reprovisioning of IMC

12. The existing IMC at Hung Hom is located at the south of the existing Hung Hom Station. The SCL alignment will connect to the existing West Rail Line at the south of the Hung Hom Station. Under the SCL scheme gazetted on 26 November 2010, SCL tunnels will pass through and clash with the foundations of the existing IMC. To facilitate the construction of SCL tunnels in future, we recommend demolishing the existing IMC building in Hung Hom and reprovisioning the Post Office's facilities therein to a new IMC building at Wang Chin Street in Kowloon Bay.

13. The new six-storey IMC building at Wang Chin Street in Kowloon Bay will be able to handle 4.5 million letters per day. Various green and energy conservation measures will be implemented at the new IMC building. We understand that the public do not want to see the mailing services of the IMC disrupted. We will carefully plan the reprovisioning programme of the IMC so as to minimise disruption to mailing services of the IMC. We will construct and commission the new IMC at Kowloon Bay before demolishing the existing IMC building at Hung Hom for the construction of SCL tunnels, so as to prevent disrupting mail services to the public. Taking into account the lead time required for the construction of the new IMC, the migration of the mail sorting equipment and services from the existing IMC to the new one, and the demolition of the existing IMC building, we have to commence works for reprovisioning the IMC in 2011 the latest, so the works might be completed in 2014 for releasing the site in Hung Hom for the construction of SCL tunnels in time. Construction of the SCL tunnels at that location must commence by 2014 for the timely commissioning of the Tai Wai to Hung Hom section of the SCL in 2018.

14. As the General Post Office (GPO) at Central will need to be relocated to make way for development in the area as recommended in the Urban Design Study for the New Central Harbourfront, the Hong Kong Post also plans to relocate the sorting facilities of the GPO to the new IMC building. The relocation of the GPO sorting office will pave the way for the eventual vacation of the GPO

site. The new IMC will have a net operation floor area (NOFA) of 21 080 square metres (m^2), which comprise 13 480 m^2 for the reprovisioning of the existing IMC and an expanded area of 7 600 m^2 for accommodating the GPO sorting facilities. The cost for the expanded area will be funded by the Post Office Trading Fund.

Reprovisioning works at Harcourt Garden and Hong Kong Park

15. SIL(E) will intersect with SCL at Admiralty. The existing Admiralty Station will be expanded eastwards below Harcourt Garden to accommodate railway facilities for SCL and SIL(E). Parts of Harcourt Garden and Hong Kong Park will be temporarily occupied for the construction of the future station and associated railway facilities such as ventilation facilities. Some public facilities at Harcourt Garden and Hong Kong Park will therefore be affected and have to be reprovisioned. To meet the implementation programme of SIL(E) and to minimize disruption to the public, we propose that the above reprovisioning works be carried out in conjunction with the works under the SIL(E) project for expanding the Admiralty Station.

16. During construction, most of the Harcourt Garden will be temporarily closed for four years while the remaining part will continue to open to the public. We have consulted the Central and Western District Council and understand that the public is concerned about the temporary closure of the Harcourt Garden. We will try to minimize the area affected by the construction works and strive to complete works as early as possible.

17. The Harcourt Garden will be reprovisioned above the expanded Admiralty station and the future Harcourt Garden will be locate about five to six metres above ground i.e. at the podium level of the Admiralty Station. Reprovisioning works at the Harcourt Garden include a landscaped deck, a covered walkway, a public toilet, escalators, workshops and other ancillary facilities. The reprovisioning works will be implemented and completed together with the proposed expansion to Admiralty station under the SIL(E) project and the advance railway works of the SCL project. Open space in the future Harcourt Garden will increase from approximately 5 500 m^2 to 9 700 m^2. This will provide more recreational space and greenery facilities for the public's enjoyment. Barrier-free access to the station concourse and road level will be provided at the entrance of the future Harcourt Garden. The future Harcourt Garden will provide a level and above ground connection to the adjoining footbridge and commercial buildings so that pedestrians at footbridge/garden level are segregated from the vehicular traffic at road level. This will help provide a safe and comfortable walking environment.

18. Part of the Hong Kong Park near Supreme Court Road will be temporarily occupied as works areas for the construction of the ventilation facilities. Reprovisioning works include a workshop and a refuge collection point.

Works to be entrusted to MTRCL

19. We plan to entrust the Advance Non-railway Works to the MTRCL for implementation, subject to further discussion with MTRCL and other relevant parties.

20. Under the principles agreed between Government and the MTRCL for applying to such entrustments, the entrustor (i.e. the Government in the SCL project) will pay the actual construction costs based on prices established from appropriate tendering processes. Services to be provided by the entrustee (i.e. MTRCL in the SCL project) for management and supervision will be covered by an on-cost. We will employ an independent engineering consultant (IEC) to establish checking and control procedure on the capital cost estimate of the whole SCL project, including the on-cost for the design and construction of both railway and non-railway works. The on-cost for the construction of the Advance Railway Works as shown in paragraph 23(c) (being part of the total on-cost payable to MTRCL under the entire SCL project) is only a provisional figure and is subject to review by the IEC and further discussion between Government and MTRCL. We shall aim to agree with MTRCL on the total on-cost payable under the SCL project before we seek this Sub-committee's support for the construction of the remaining railway and non-railway works in 2012.

Vetting by independent engineering consultants

21. In the funding application for design and site investigation of the SCL project (PWSC(2008-09)1), we undertook to employ independent consultants to assess the cost estimate for the SCL project, including the on-cost. We have engaged an IEC to assess the reasonableness of the construction cost.

22. The IEC has reviewed the rates and quantities of the cost items of the Advance Non-railway Works and checked the same against the latest construction price trends and scope of the Advance Non-railway Works. In light of such review, the IEC considers the estimated construction costs as presented in paragraph 23 below reasonable. Furthermore, under the project entrustment arrangement, the Government will pay for the actual costs of the construction works based on prices established from appropriate tendering processes. We will closely monitor the project expenditure. Moreover, as mentioned in paragraph 20 above, we will engage another IEC to assess the on-cost for the SCL project.

FINANCIAL IMPLICATIONS

23. We estimate the cost of the Advance Non-railway Works to be $1,448.2 million in MOD prices (please see paragraph 24 below), broken down as follows –

	$ million

			$ million	
(a)	Reprovisioning of IMC		893.0	
	(i)	Building works	518.0	
	(ii)	Building services works	191.0	
	(iii)	Electrical and mechanical works	179.0	
	(iv)	Energy conservation measures	5.0	
(b)	Reprovisioning works at Harcourt Garden and Hong Kong Park[2]		126.0	
	(i)	Building works	44.1	
	(ii)	Landscaping works	52.5	
	(iii)	Electrical and mechanical works	29.4	
(c)	On-cost payable to the MTRCL[3]		168.1	
(d)	Contingencies		118.7	
		Sub-total	1,305.8	(in September 2010 prices)
(e)	Provision for price adjustment		142.4	
		Total	1,448.2	(in MOD prices)

[2] The reprovisioning works at Harcourt Garden and Hong Kong Park are required for expanding the Admiralty Station into an integrated station serving both SCL and SIL(E). The cost of the reprovisioning works is therefore apportioned between the two projects. As the floor area of the expanded portion of the Admiralty station, including the associated facilities for passengers, station concourse and platform etc, is proportional to the passenger volume, for cost estimation purpose, a ratio of 7:3 is adopted for the apportionment between SCL and SIL(E) based on a ratio of peak hour line passenger volumes between the two lines. Government will be responsible for the SCL portion of funding and MTRCL will be responsible for the SIL(E) portion. We have employed an IEC to review the apportionment ratio.

[3] We plan to entrust the Advance Non-railway Works to the MTRCL for implementation, subject to further discussion with MTRCL and other relevant parties. The provisional sum of $168.1 million represents an on-cost at 16.5% of the project base cost (i.e. items (a) and (b) of paragraph 22 above) will be payable to MTRCL for undertaking the technical studies, design and construction supervision of the Advance Non-railway Works. The actual on-cost rate is expected to be lower than the assumed 16.5% and will be subject to review by an IEC as well as further discussion between the Government and MTRCL.

24. Subject to approval, we will phase the expenditure as follows –

Year	$ million (September 2010)	Price adjustment factor	$ million (MOD)
2011 – 2012	335.3	1.04250	349.6
2012 – 2013	525.7	1.09463	575.4
2013 – 2014	280.3	1.14936	322.2
2014 – 2015	125.8	1.20682	151.8
2015 – 2016	38.7	1.27169	49.2
	1,305.8		1,448.2

25. We have derived the MOD estimate on the basis of the Government's latest set of assumptions on the trend rate of change in the prices of public sector building and construction output for the period 2011 to 2016.

26. We estimate that the additional annual recurrent expenditure upon completion of the Advance Non-railway Works is about $0.5 million.

PUBLIC CONSULTATION

27. Since mid 2008, the Government and the MTRCL have undertaken public consultation on the SCL. Apart from consulting District Councils (DC), 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. Representatives of the Government and the MTRCL have attended more than 30 DC 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 DC Members on the progress of the SCL and to listen to their views.

28. We consulted Kwun Tong DC on our proposal of the reprovisioning of IMC in July 2009 and responded to DC members' enquiries about the number of mail vehicles going through the IMC and the operation of the future IMC. Kwun Tong DC noted our proposal. We also consulted Central and Western DC on the reprovisioning of Harcourt Garden and Hong Kong Park in conjunction with the SIL(E) project in April 2010 and the DC members gave in-principle support for the SCL works.

29. Generally speaking, the public is supportive and positive about the SCL project. Majority of parties and residents consulted have urged the Government to expedite the implementation of the project. In the coming months, we will continue to consider the views from public consultation with a view to enhancing the detailed design of the SCL.

30. We consulted the Subcommittee of Matters relating to Railways of the Legislative Council Panel on Transport on 6 December 2010 and 7 January 2011. *[To be updated after the Railway Subcommittee meeting on 7 January 2011.]*

ENVIRONMENTAL IMPLICATIONS

31. The reprovisioning of the IMC is a not a designated project under Environmental Impact Assessment Ordinance (EIAO) (Cap. 499), the construction impacts of which will have little potential of giving rise to adverse environmental impacts. MTRCL will implement pollution control measures during their construction to meet all relevant environmental standards and requirements. MTRC have included in the project estimate the cost to implement suitable mitigation measures to control these short-term environmental impacts.

32. The environmental impacts of SCL Advance Non-railway works at Admiralty i.e. reprovisioning works at Harcourt Garden and Hong Kong Park were covered in the SIL(E) Environmental Impact Assessment (EIA) study. The SIL(E) EIA report concludes that the environmental impacts arising from the construction of the SIL(E) project and the SCL Advance Non-railway Works at Admiralty can be controlled to within the criteria under the EIAO and its Technical Memorandum. The cumulative operational impacts arising from the SIL(E) and SCL Advance Non-railway Works at Admiralty will be addressed separately under the SCL EIA study. The SIL(E) railway, including its associated stations, depots and ventilation buildings, is a designated project under Schedule 2 of the EIAO and an environmental permit (EP) is required for the construction and operation of the SIL(E) project. Director of Environmental Protection issued the EP for the SIL(E) project on 8 December 2010.

33. During construction, MTRCL will incorporate into the relevant contracts environmental mitigation measures recommended in the SIL(E) EIA report to control environmental impacts arising from construction and operation of reprovisioning works to within the established standards and guidelines. The key measures include adoption of quieter powered mechanical equipment and use of movable noise barriers to minimize the noise impact; regular water spraying, wheel washing, covering stockpiling area and other dust control measures; good waste management practices and; application of screen hoarding and preservation and transplantation of existing trees where possible to minimize the landscape and visual impact. MTRCL estimate the cost of implementing the environmental mitigation measures to be $1 million. MTRCL have included this cost in the project estimate for the Advance Non-railway Works.

34. At the planning and design stages, MTRCL have considered all the proposed works and construction sequences to reduce the generation of construction waste where possible. In addition, MTRCL will require the contractors to reuse inert construction waste (e.g. excavated materials) on site or in other suitable construction sites as far as possible, in order to minimize the

disposal of inert construction waste at public fill reception facilities[5]. MTRCL will encourage the contractors to maximize the use of recycled / recyclable inert construction waste, and the use of non-timber formwork to further reduce the generation of construction waste.

35. At the construction stage, MTRCL will require the contractors to submit for approval a plan setting out the waste management measure, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. MTRCL will ensure that the day-to-day operations on site comply with the approved plan. MTRCL will require the contractors to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. MTRCL will control the disposal of inert construction waste and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.

36. MTRCL estimate that the Advance Non-railway Works will generate in total about 64 300 tonnes of construction waste. Of these, MTRCL will reuse about 7 600 tonnes (12%) of inert construction waste on site, and deliver 55 900 tonnes (87%) of inert construction waste to public fill reception facilities for subsequent reuse. MTRCL will dispose of the remaining 800 tonnes (1%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be $1.6 million for this project (based on a unit cost of $27 per tonne for disposal at public fill reception facilities and $125 per tonne[6] at landfills).

ENERGY CONSERVATION MEASURES

37. For the new IMC, we have adopted various forms of energy efficient features, including –

(a) low window-to-wall ratio;

(b) double glazing with low emissivity;

(c) chiller and pump with variable speed drive;

(d) higher indoor air temperature set point (25.5^{o}C);

(e) heat recovery device; and

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[5] Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste in public reception facilities requires a licence issued by the Director of Civil Engineering and Development.

[6] This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at $90 per m^3), nor the cost to provide new landfills (which is likely to be more expensive) when the existing ones are filled.

(f) demand control of ventilation in car park area with carbon monoxide and nitrogen dioxide sensor.

38. For greening features, there will be greening area on both street level and rooftop of the new IMC.

39. For recycled features, we will provide facilities for the collection, sorting, storage and disposal of waste and recovered materials at the new IMC.

40. The total estimated additional cost for adoption of the above features is around $5 million (including $4 million for energy efficient features), which has been included in the cost estimate of the project. The energy efficient features will achieve 10% energy savings in the annual energy consumption with a payback period in about five years.

HERITAGE IMPLICATIONS

41. The Advance Non-railway Works will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, sites of archaeological interests and Government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

42. The Advance Non-railway works do not require any land acquisition.

BACKGROUND INFORMATION

43. We upgraded **51TR** "Shatin to Central Link – design and site investigation" at an estimated cost of $2,407.5 million in MOD prices in May 2008. We entrusted the design and site investigation works to MTRCL and commenced the preliminary design in November 2008. We have completed the preliminary design for the SCL project. The detailed design is in progress.

44. We upgraded part of **58TR "**Shatin to Central Link – construction of railway works – protection works" as **59TR** "Shatin to Central Link – construction of railway works – protection works in Wan Chai Development Phase II" in July 2010 at an estimated cost of $152.6 million in MOD prices. The construction works are being carried out under the Wan Chai Development Phase II project.

45. We upgraded **62TR** to Category B in September 2010.

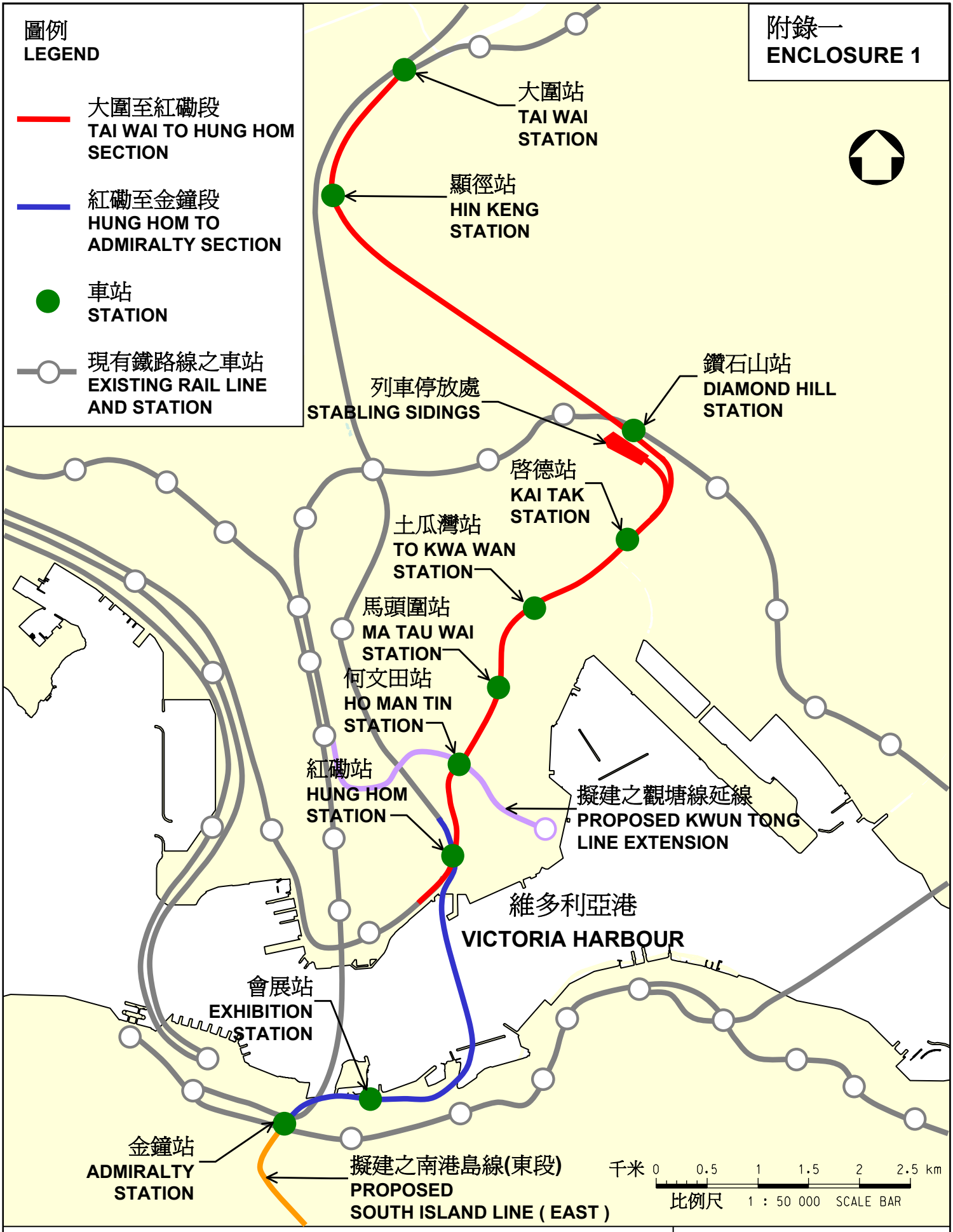
46. Of the 670 trees within the project boundary, 213 trees will be felled, 332 trees transplanted and 125 trees preserved. All of them are not important

trees[4] but there are three Old and Valuable Trees (OVT) to be retained and protected at Hong Kong Park. We will incorporate planting proposals as part of the project, including planting no less than 209 new trees and around 9 855 m^2 of grassed area (including green lawn).

47. We estimate that the works in paragraph 5 will create about 185 jobs comprising 35 professional/technical staff and 150 labourers, providing a total employment of 6 400 man-months.

Transport and Housing Bureau
January 2011

[4] "Important trees" refer to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –
(a) trees of 100 years old or above;
(b) trees of cultural, historical or memorable significance e.g. Fung Shui trees, trees as landmark of monastery or heritage monument and trees in memory of important persons or events;
(c) trees of precious or rare species;
(d) trees of outstanding form (taking account of overall tree size, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
(e) trees with trunk diameter equal or exceeding 1.0 metre (measured at 1.3 metre above ground level), or with height/canopy spread equal or exceeding 25 metres.



圖則名稱 drawing title

擬建之沙田至中環線的走線
PROPOSED ALIGNMENT OF THE SHATIN TO CENTRAL LINK

圖號 drawing no.
HRWSCL003-SK0209

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE

路政署
HIGHWAYS DEPARTMENT

A4 210X297

DRAFT

Enclosure 2 to PWSC(2010-11)XX

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

Preliminary List of the Essential Public Infrastructure Works (EPIW)

1. Walkway system enhancements at Tsz Wan Shan and Diamond Hill Station Entrance extension;
2. Construction of covered walkway from To Kwa Wan Station to Kowloon City; and
3. Road junction modification near Exhibition Station

DRAFT

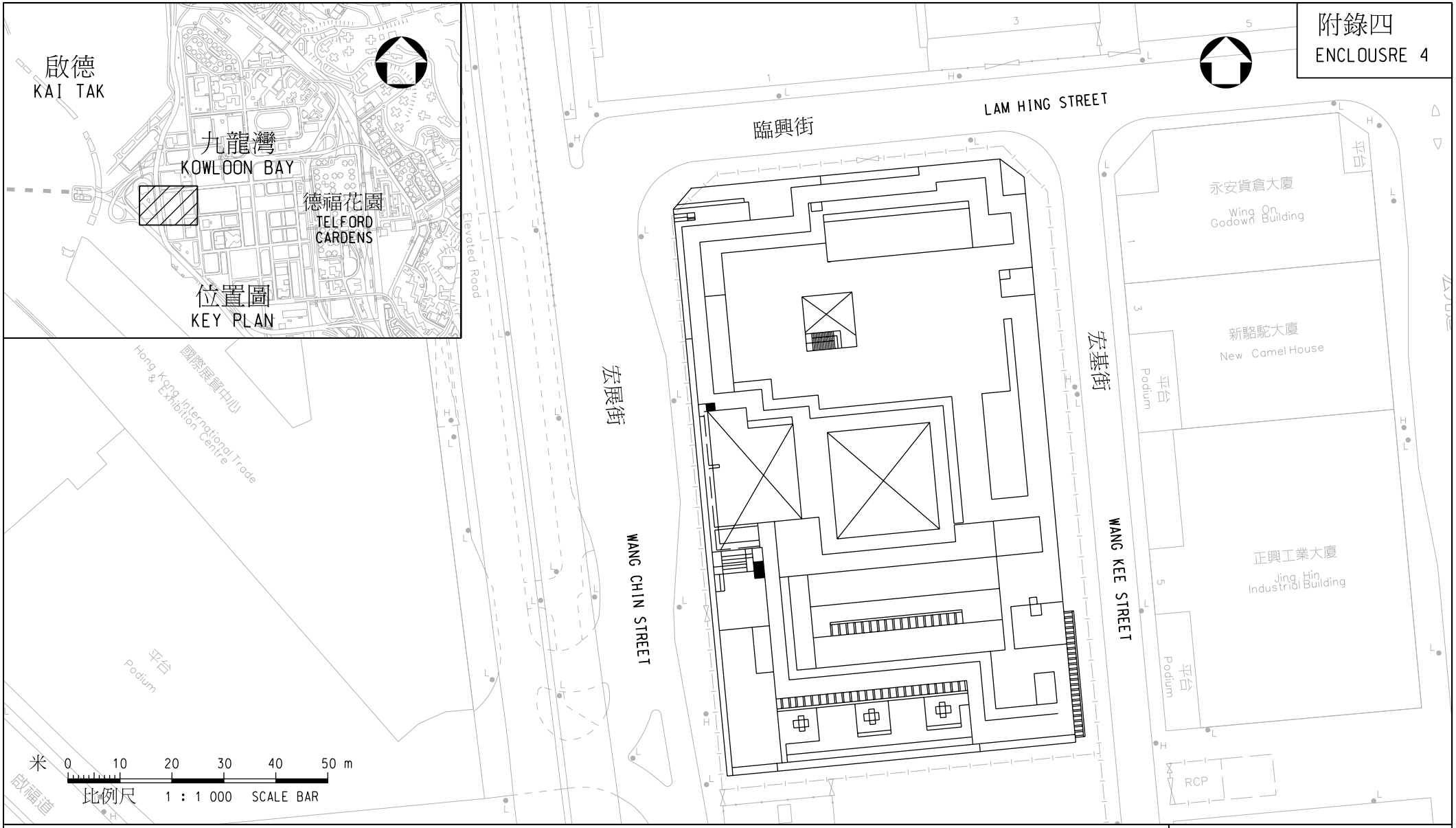
Enclosure 3 to PWSC(2010-11)XX

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

Preliminary List of the Reprovisioning, Remedial and Improvement Works (RRIW)

1. New Territories South Animal Management Centre and Sha Tin Plant Quarantine Station;
2. International Mail Centre (implemented under the proposed advance works);
3. Police Recreation Facilities near Causeway Bay Typhoon Shelter;
4. Police Sports and Recreation Club;
5. Wan Chai Sports Ground;
6. Harbour Road Sports Centre;
7. Wai Chai Swimming Pool;
8. Wan Chai North Public Transport Interchange;
9. Cheong Wan Road Flyover;
10. Part of affected Leisure Cultural Services Department's facilities, including
    - (i) Hin Tin Playground opposite to Hin Tin Estate, at the south of Hin Tin Swimming Pool;
    - (ii) Ma Tau Wai Road / To Kwa Wan Road Garden;
    - (iii) Lok Shan Road Playground;
    - (iv) To Kwa Wan Complex Playground;
    - (v) Rest Garden at Winslow Street;
    - (vi) Tunnel Approach Rest Garden;
    - (vii) Playground at junction of Fenwick Pier Street and Convention Avenue;
    - (viii) Harcourt Garden (implemented under the proposed advance works);
    - (ix) Hong Kong Park (implemented under the proposed advance works) ;
    - (x) Ma Chai Hang Recreation Playground;
    - (xi) Tsz Wan Shan Road Rest Garden;
    - (xii) Olympic Garden; and
    - (xiii) Sung Wong Toi sitting out area.

附錄四
ENCLOUSRE 4



圖則名稱 drawing title

工務計劃項目第62TR號 — 沙田至中環線 — 非鐵路建造工程 — 前期工程
項目(a) — 重置在紅磡的國際郵件中心

PWP ITEM NO. 62TR - SHATIN TO CENTRAL LINK - CONSTRUCTION OF NON-RAILWAY WORKS - ADVANCE WORKS
ITEM (a) - REPROVISIONING OF INTERNATIONAL MAIL CENTRE AT HUNG HOM

圖號 drawing no.
HRWSCL003-SK0204

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE

路 政 署
HIGHWAYS DEPARTMENT

A4 210X297

HRWSCL003-SK0204.dgn 23-12-2010

附錄五
ENCLOSURE 5

立體俯視圖
AXONOMETRIC OVERVIEW

圖則名稱 drawing title

工務計劃項目第**62TR**號 ─ 沙田至中環線 ─ 非鐵路建造工程 ─ 前期工程
項目**(a)** ─ 重置在紅磡的國際郵件中心

PWP ITEM NO. 62TR - SHATIN TO CENTRAL LINK - CONSTRUCTION OF NON-RAILWAY WORKS - ADVANCE WORKS ITEM (a) - REPROVISIONING OF INTERNATIONAL MAIL CENTRE AT HUNG HOM

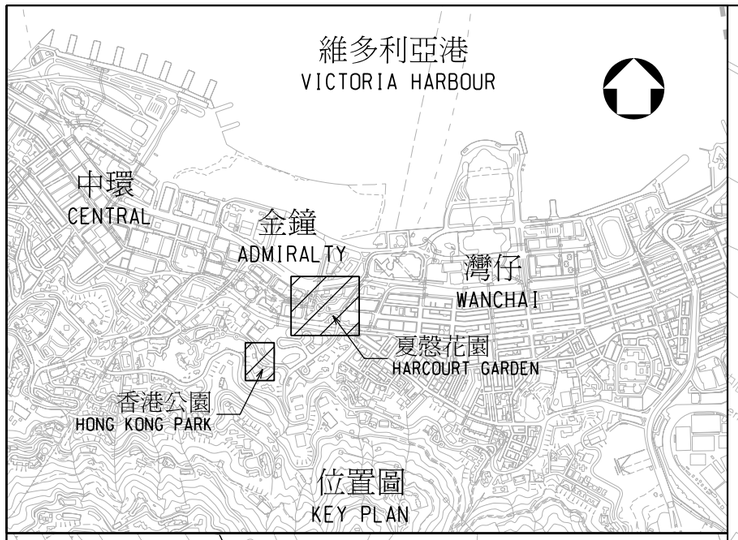
圖號 drawing no.
HRWSCL003-SK0205

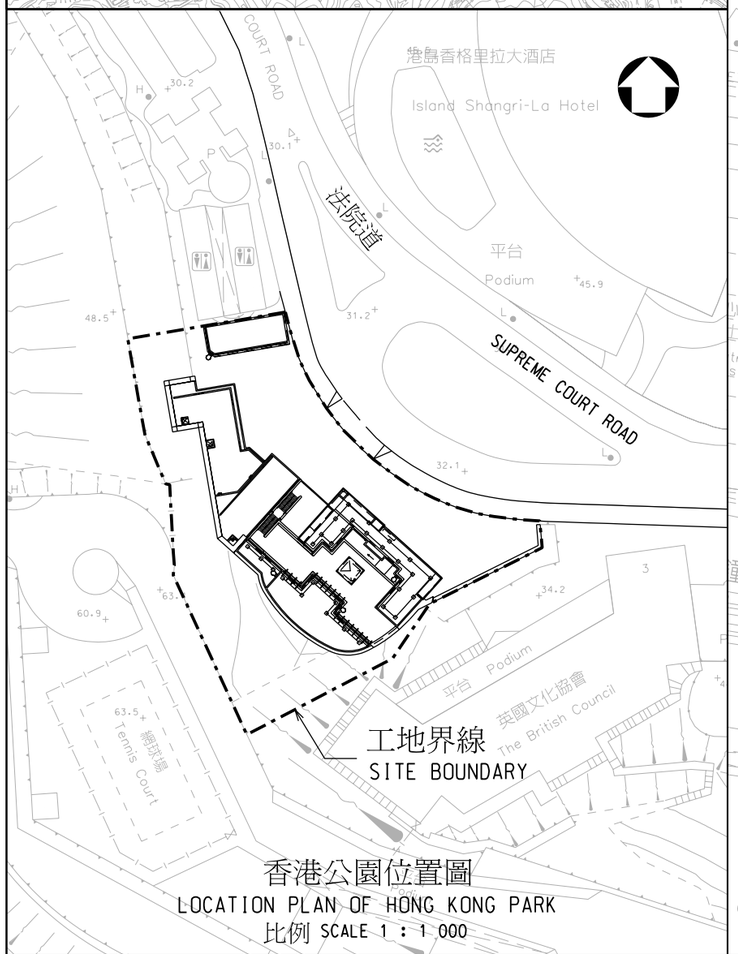
鐵路拓展處 RAILWAY DEVELOPMENT OFFICE

路 政 署
HIGHWAYS DEPARTMENT

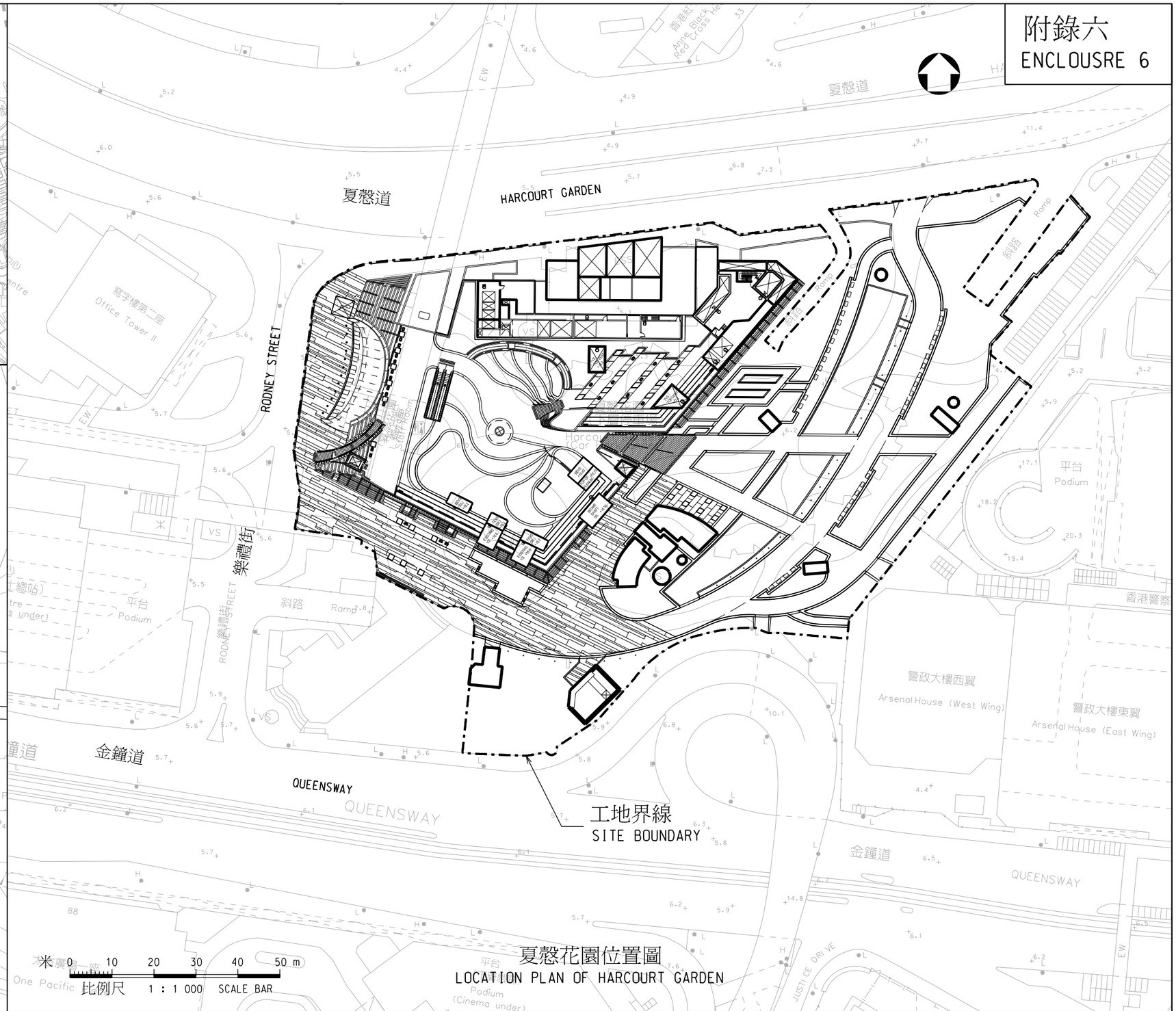
A4 210X297

附錄六
ENCLOUSRE 6





香港公園位置圖
LOCATION PLAN OF HONG KONG PARK
比例 SCALE 1 : 1 000



夏慤花園位置圖
LOCATION PLAN OF HARCOURT GARDEN

圖則名稱 drawing title

工務計劃項目第62TR號 — 沙田至中環線 — 非鐵路建造工程 — 前期工程
項目(b) — 在夏慤花園及香港公園的重置工程

PWP ITEM NO. 62TR - SHATIN TO CENTRAL LINK - CONSTRUCTION OF NON-RAILWAY WORKS - ADVANCE WORKS
ITEM (b) - REPROVISIONING WORKS AT HARCOURT GARDEN AND HONG KONG PARK

圖號 drawing no.
HRWSCL003-SK0206

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE

路政署
HIGHWAYS DEPARTMENT

A3 297X420

HRWSCL003-SK0206.dgn 23-12-2010

附錄七
ENCLOSURE 7

立體俯視圖 (夏慤花園)
AXONOMETRIC OVERVIEW (HARCOURT GARDEN)

圖則名稱 drawing title

工務計劃項目第62TR號 — 沙田至中環線 — 非鐵路建造工程 — 前期工程
項目(b) — 在夏慤花園的重置工程

PWP ITEM NO. 62TR - SHATIN TO CENTRAL LINK - CONSTRUCTION OF NON-RAILWAY WORKS - ADVANCE WORKS ITEM (b) - REPROVISIONING WORKS AT HARCOURT GARDEN

圖號 drawing no.
HRWSCL003-SK0207

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE

路 政 署
HIGHWAYS DEPARTMENT

A4 210X297

附錄八
ENCLOSURE 8

立體俯視圖 (香港公園)
AXONOMETRIC OVERVIEW (HONG KONG PARK)

圖則名稱 drawing title

工務計劃項目第**62TR**號 － 沙田至中環線 － 非鐵路建造工程 － 前期工程
項目**(b)** － 在香港公園的重置工程

PWP ITEM NO. 62TR - SHATIN TO CENTRAL LINK - CONSTRUCTION OF NON-RAILWAY WORKS - ADVANCE WORKS ITEM (b) - REPROVISIONING WORKS AT HONG KONG PARK

圖號 drawing no.
HRWSCL003-SK0208

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE

路 政 署
HIGHWAYS DEPARTMENT

A4 210X297