

**SHATIN TO CENTRAL LINK -
CROSS HARBOUR SECTION
(PHASE II – HUNG HOM TO ADMIRALTY)
PROJECT PROFILE
JUNE 2008**

ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE (CAP499)S.5(1)(A)
PROJECT PROFILE FOR SHATIN TO CENTRAL LINK - CROSS HARBOUR SECTION
(PHASE II – HUNG HOM TO ADMIRALTY)

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1 BASIC INFORMATION

1.1 PROJECT TITLE

Shatin to Central Link - Cross Harbour Section (Phase II – Hung Hom to Admiralty).

1.2 PURPOSE AND NATURE OF THE PROJECT

The Shatin to Central Link (SCL) is one of the ten large-scale infrastructure projects announced by the Chief Executive in his 2007-2008 Policy Address. Executive Council has recently endorsed the SCL scheme and requested the Corporation to proceed with further planning and design for this line.

SCL is to form a strategic rail corridor from Shatin to Central, which will bring about various benefits to the community, including:

- Redistribution of railway passenger flows to relieve the existing railway lines in urban Kowloon and on Hong Kong Island;
- Forming an importance component of the Kai Tak Development to provide public transport service;
- Relieving of road-based public transport in the existing developed areas, and alleviation of the traffic congestion and environmental nuisance on existing road networks, including the demand on the Hung Hom Cross Harbour Tunnel; and
- Stimulation of the redevelopment of the To Kwa Wan and Kowloon City area.

There are two sections in the SCL, the Tai Wai to Hung Hom Section and the Cross Harbour Section. The Cross Harbour Section will be implemented in two phases. The first phase will include the realignment work for the existing East Rail Line tracks from Mong Kok East (MKE) to the new Hung Hom Station. The second phase will include the section across the harbour from Hung Hom to Admiralty.

This project profile will cover the second phase alignment from Hung Hom to Admiralty only (hereinafter, the Project).

1.3 NAME OF THE PROJECT PROPONENT

MTR Corporation Limited

1.4 LOCATION AND SCALE OF PROJECT AND HISTORY OF THE SITE

General

The Project is an approximately 6 km extension of the East Rail Line from a new Hung Hom station (HUH) across the harbour to new stations at Exhibition (EXH) and Admiralty (ADM).

HUH, EXH and ADM will become integrated interchange stations with existing and planned lines. Modifications to the East Rail Line will also require changing the current 12-car to 9-car configurations.

ADM will be extended and become an integrated station for the existing urban lines, the future SCL and South Island Line (SIL). However, the design and construction of the ADM station including the parts for SCL will be carried out by the SIL Project.

The locations of the alignment are shown in Figure 1.

Alignment

The tunnels at Hung Hom area will generally be built by cut-and-cover methods. The existing MTRC Freight Operations Building at south of Hung Hom Station will need to be demolished to facilitate the tunnel construction.

The cross-harbour tunnels will either be constructed using immersed tube or by Tunnel Boring Machines (TBM) and the section of tunnels within the Causeway Bay Typhoon Shelter will either be constructed by cut and cover method involving temporary reclamation or by TBM. EXH Station will be constructed by cut-and-cover method.

Tunnels from the Causeway Bay Typhoon Shelter to ADM will be constructed using TBM with a section of cut-and-cover at the sea channel between Hong Kong Convention and Exhibition Centre, which will be reclaimed under the Wanchai Development Phase II project.

Hard rock sections of the alignment beyond Admiralty Station will either be constructed using drill-and-blast or TBM.

1.5 NUMBER AND TYPES OF DESIGNATED PROJECTS

The proposed Project is a single project comprising a railway and its associated stations as defined under Schedule 2, Part I, Categories A.2 and A.7 of the Environmental Impact Assessment Ordinance.

1.6 NAME AND TELEPHONE NUMBER OF CONTACT PERSONS

Dr. Glenn Frommer
MTR Corporation Limited
Head of Sustainability Development
Tel: 2163 6357

2 OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

2.1 PROJECT PLANNING AND IMPLEMENTATION

The whole project will be planned and implemented by MTR Corporation Limited in-house departments together with external consultants and contractors.

2.2 PROJECT PROGRAMME

The construction works is tentatively scheduled to commence in 2012 and complete by 2019.

2.3 PROJECT INTERFACE

The railway alignment will be constructed predominantly in tunnel together with some above ground structures such as ventilation buildings and station entrances. Major committed and planned projects that may interface with the project are listed in the table below.

Location	Potential Interfacing Projects
Hung Hom	<ul style="list-style-type: none">• Shatin to Central Link - Tai Wai to Hung Hom Section• Shatin to Central Link - Cross Harbour section (Phase I – Mong Kok East to Hung Hom)• Hong Kong Polytechnic University (Phase 8 Development)• Re-provisioning of existing International Mail Centre (IMC)
Causeway Bay, Wan Chai	<ul style="list-style-type: none">• Central to Wanchai Bypass (CWB)
Wan Chai	<ul style="list-style-type: none">• Wan Chai Development Plan II reclamation (WDII)• North Island Line

3 POSSIBLE IMPACTS ON THE ENVIRONMENT

3.1 POTENTIAL ENVIRONMENTAL IMPACTS: CONSTRUCTION PHASE

The following sections describe the potential environmental impacts during the construction phase, which will be alleviated by effective and pragmatic mitigation measures designed according to the assessed levels of impact.

3.1.1 Air Quality

Potential air quality impacts may arise from fugitive dust emissions generated by construction activities such as excavation, cutting, filling, rock crushing, stockpiling and construction vehicle movements etc.

3.1.2 Noise

A considerable amount of above ground construction works will be necessary to construct the Project. Activities such as ventilation building construction, cut and cover station construction, excavation, backfilling and road reinstatement etc, will potentially generate airborne construction noise.

Construction of bored tunnel by TBM will potentially generate groundborne noise. However, as insignificant impacts were noted from the TBM operations during the construction of Kowloon Southern Link, it is anticipated that the use of TBM for the SCL construction will not have significant impact on nearby receivers. Assessment methodology will be used accordingly.

3.1.3 Water Quality

Water quality impacts may arise due to the following potential sources during construction of the Project:

- Run off due to erosion of exposed surfaces, accidental spillage from plant maintenance etc, materials handling and other works areas;
- Construction of the Fourth Rail Harbour Crossing;
- Groundwater extracted during underground construction; and
- Construction workforce sewage

3.1.4 Waste Management

Construction activities will generate a variety of surplus materials including excavated materials, construction and demolition (C&D) materials and wastes, site clearance wastes, chemical wastes of residual oil and lubricating fluid, and general refuse from workers. Environmental impact arising will be assessed and opportunities for reuse and potential disposal outlets will be studied.

3.1.5 Hazard

The proposed railway will not run into any consultation zone of Potentially Hazardous Installations. Explosives may be required for the possible drill and blast tunnel sections. The use of explosive will be controlled by the Mines Division of the Civil Engineering and Development Department. A risk assessment will be conducted to assess the risk due to the transport and storage of explosives.

3.1.6 Ecology

Generally the ecological impacts associated with this project will be minimal given that the majority of the alignment is in the urban area and will be built underground.

3.1.7 Historical and Cultural Heritage Impacts

Potential impacts on historical and cultural heritage resources during the construction phase may arise due to activities associated with plant operation, temporary and permanent landtake, excavation, change of the setting of the site and potential vibration impact.

Whilst it is not expected any declared monument will be affected by the Project, some sites of historical and cultural heritage significance, such as the Noonday Gun at Causeway Bay Typhoon Shelter, are located in close proximity to the proposed alignment.

3.1.8 Contamination

A site survey and desktop review have identified land uses within the Project scheme with the potential to give rise to land contamination. Such land uses include Hung Hom freight yard.

Marine sediment may be encountered underlying the reclaimed area in Hung Hom. Dredging for the construction of IMT will also recover marine sediments.

3.1.9 Landscape and Visual Impact

The proposed route alignment involves construction through a well-developed urban environment. The cut and cover tunnel construction and excavation, temporary noise barriers for the works sites and illumination within the construction sites may create short-term visual impacts.

3.2 POTENTIAL ENVIRONMENTAL IMPACTS: OPERATIONAL PHASE

3.2.1 Air Quality

Trains to be operated on the Project will be electrically powered so there will be minimal dust and gaseous emissions. Tunnel ventilation exhausts and smoke extraction facilities will be carefully positioned to avoid adverse air quality impacts. Air quality impact during the operational phase of the proposed railway is envisaged to be insignificant.

3.2.2 Noise

Operational rail noise is not anticipated during the operational stage, as there is no aboveground alignment. However, there maybe potential stationary noise sources include tunnel ventilation buildings and environmental control systems.

Apart from potential stationary noise source, the passage of trains in tunnel may give rise to potential groundborne noise. Operational noise assessment will be carried out to assess the potential impacts from railway operation and to identify the mitigation measures required. With the implementation of mitigation measures, no adverse impact is expected. Assessment methodology will be adopted appropriately.

3.2.3 Water Quality

Run off from tracks may contain oil and grease as well as suspended solids. At locations where elevated levels of silt and oil are expected, surface runoff will be diverted through sedimentation basins and oil interceptors before final discharge.

Wastewater discharge from air conditioning systems and sewage generated from stations will be discharged into the communal foul sewerage system where connections can be made. These impacts will be dealt with in accordance with the WPCO requirements.

3.2.4 Waste Management

Municipal waste, including litter, foodstuffs, plastics, wood, office waste and cleaning materials, will be generated during the operation of the proposed railway.

3.2.5 Hazard

As the proposed railway will not run into any consultation zones of Potentially Hazardous Installations, hazard is not anticipated during the operational stage.

3.2.6 Ecology

No ecological impacts are anticipated during operation of the proposed railway.

3.2.7 Historical and Cultural Heritage Impacts

No historical and cultural impacts are expected during operation of the proposed railway.

3.2.8 Contamination

No land contamination impacts are expected during the operation of the proposed railway.

3.2.9 Landscape and Visual

Whilst the majority of the proposed alignment will be underground, there will be some aboveground structures including the ventilation buildings. Various station entrances and adits as well as station ventilation shafts, which may impact the physical landscape and visual amenity of surrounding areas. Appropriate public consultation will continue as needed.

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4 MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

The major sensitive receivers and sensitive parts of the natural environment, which might be affected by the Project, are listed below. The list of sensitive receivers is not exhaustive and will be reviewed during the EIA stage.

Types	Sensitive Receivers
Residential Developments	Hotel Nikko HK, residential properties along Metropolis Drive, Gloucester Road, Excelsior Hotel, Elizabeth House, Causeway Centre, Renaissance Hotel, JW Marriot Hotel
Educational Institutions	Schools along Borrett Road
Performance Venues	Hong Kong Coliseum and Hong Kong Academy for Performing Arts
Water Courses	Victoria Harbour, Causeway Bay Typhoon Shelter, WSD Saltwater Pumping Stations
Site of Cultural Heritage	The Noonday Gun situated at the coast near the Causeway Bay Typhoon Shelter, Wanchai Police Station, Kellett Island Archaeological Site, Royal Hong Kong Yacht Club, Police Officers' Club to the west of Causeway Bay Typhoon Shelter, Old Victoria Barracks (former Explosives Magazine)

The major elements of the surrounding environment which might affect the project area are listed below. The list is not exhaustive and will be reviewed during the EIA.

Types	Location
Potential Land Contamination Sites	Hung Hom freight yard

5 ENVIRONMENTAL PROTECTION MEASURES AND IMPLICATIONS

5.1 POTENTIAL MEASURES TO MINIMIZE ENVIRONMENTAL IMPACTS

Potential measures are outlined below to minimise environmental impacts. These measures will be further reviewed during the EIA process.

5.1.1 Construction Phase

Air Quality

Good site practices and relevant dust control measures set out in the Air Pollution Control (Construction Dust) Regulations will be implemented to control the dust impacts on the nearby sensitive receivers. With the mitigation measures in place, it is expected that the construction dust impact will be minimized to acceptable levels.

Noise

A package of mitigation measures will be designed to control construction noise impacts. General good site practices will help to control noise impacts. These include:

- i) Care in the placement and orientation of noisy plant away from sensitive receivers;
- ii) Careful planning of construction sequence; and
- iii) Regular maintenance of plant and equipment.

Further mitigation measures such as the use of quiet plant and noise barriers would be devised during the EIA process to help controlling daytime noise impacts to within the stipulated construction noise criterion.

Water Quality

Water quality impact mitigation measures such as drainage facilities to control site runoff, wheel washing facilities, proper toilet facilities and comprehensive waste management procedures, will be implemented in accordance with the Practice Note for Professional Persons on Construction Site Drainage (ProPECC PN 1/94).

Waste Management

Mitigation measures to control waste will include adoption of general good housekeeping practices, sorting and segregation of wastes for reuse and disposal. Potential disposal outlets and opportunities for re-use for the excavated materials will be studied in details.

Hazard

Potential hazards associated with the use of explosives for the drill and blast tunnels will be assessed and taken into consideration. Necessary mitigation measures will be proposed during EIA process.

Historical and Cultural Heritage

Historical and cultural heritage resources will be avoided or preserved in-situ as far as practicable. If avoidance is not possible, mitigation measures such as physical relocation or a rescue programme will be undertaken.

Contamination

The extent of special handling and treatment required prior to disposal will be based on the results of appropriate investigation available during the EIA stage. Licensed waste haulers will be used to collect and transport contaminated materials for disposal, and vehicles will be suitably covered to limit dust emissions, and truck bodies and tailgates sealed to prevent any spillage.

Landscape and Visual Impact

Landscape mitigation measures may include avoidance of disturbance to planted slopes and avoidance of mature trees and transplantation will only be recommended where unavoidable. Tree felling will be undertaken as a last resort.

Visual mitigation measures may include minimizing temporary works areas, control of night-time lighting and erection of decorative screen hoarding.

5.1.2 Operational Phase

Noise

Mitigation of ground borne noise will be by means of appropriate trackform design. For fixed plant noise, adequate noise control treatment such as silencers, acoustic louvers and quiet plant will be adopted.

Water Quality

At locations where elevated levels of silt and oil are expected, surface runoff will be diverted through sedimentation basins and oil interceptors before being discharged into the stormwater drainage system. Effluent arising from the operational phase will be discharged into the communal foul sewerage system where connections can be made.

Waste Management

Chemical waste generated during the operational phase will be handled according to EPD's guidelines. In case temporary storage becomes necessary for chemical waste, it will be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Waste.

Implementation of good housekeeping practices and the observation of the requirements of the Waste Disposal Ordinance will prevent adverse impacts.

Landscape and Visual

Landscape impact mitigation measures to be incorporated within the permanent landscape design may include compensatory tree planting, reprovision of open space and landscape planting.

Visual impacts due to aboveground ancillary structures along the alignment will be minimized as far as practicable by planting and sensitive architectural design.

5.2 POTENTIAL SEVERITY, DISTRIBUTION AND DURATION OF ENVIRONMENTAL EFFECTS

It is anticipated that the construction work will commence in 2012 and complete by 2019. Noise, water, waste, land contamination and landscape and visual impacts are potential issues for the duration of construction. It is expected that proven means of mitigation in most instances will be sufficient to control adverse environmental impacts. Further assessment will be required to determine the severity of the potential impacts.

5.3 ENVIRONMENTAL BENEFITS

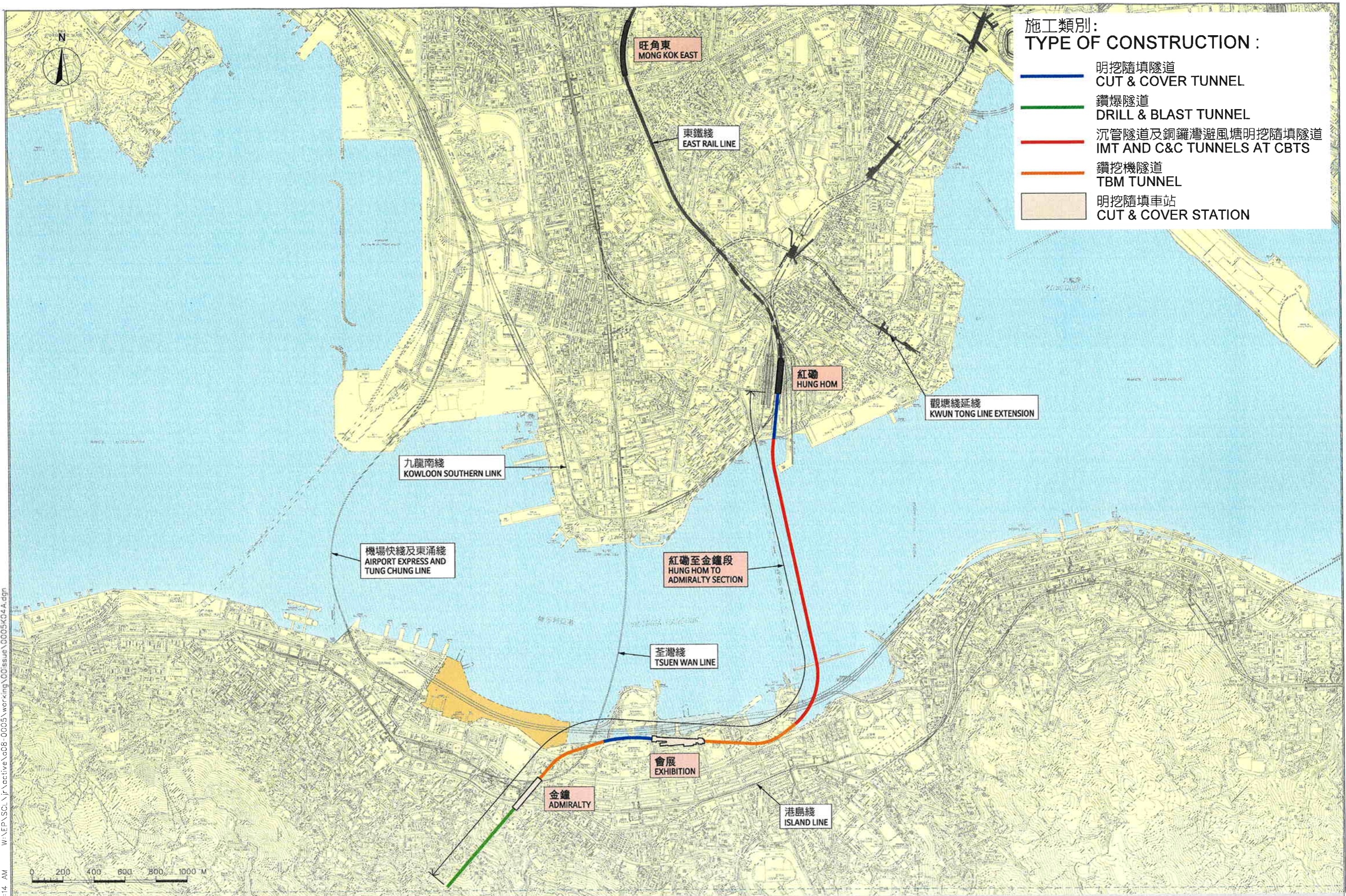
The Project will provide a fast, reliable and convenient mode of transport between New Territories and Hong Kong Island. Since railways will be emission free as they are powered electrically and the planning of railway will require compliance with the Noise Control Ordinance, the Project will result in reductions in road traffic, which will lead to improvements in air quality, noise pollution, on-road safety and living quality at large.

Furthermore, the Project will be socially and economically beneficial. It will relieve the bottlenecks at the Beacon Hill Tunnel section of the East Rail Line, the Shek Kip Mei to Prince Edward section of Kwun Tong Line and the Nathan Road / Cross Harbour section of Tsuen Wan Line.

6 USE OF PREVIOUSLY APPROVED EIA REPORTS

No previously approved EIA report exists for the proposed project. However, reference may be made within the study area from KCRC East Rail Extension – Hung Hom to Tsim Sha Tsui which has been approved with conditions by the EPD.

Reference will also be made to the approved EIA reports on the EIAO register for other developments that potentially interface with the Project.



施工類別：
TYPE OF CONSTRUCTION :

- 明挖隨填隧道
CUT & COVER TUNNEL
- 鑽爆隧道
DRILL & BLAST TUNNEL
- 沉管隧道及銅鑼灣避風塘明挖隨填隧道
IMT AND C&C TUNNELS AT CBTS
- 鑽挖機隧道
TBM TUNNEL
- 明挖隨填車站
CUT & COVER STATION

沙田至中環綫 - 過海段(第二期)
紅磡至金鐘

SHATIN TO CENTRAL LINK - CROSS HARBOUR SECTION (PHASE II)
HUNG HOM TO ADMIRALTY

圖 1
FIGURE 1



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