SHATIN TO CENTRAL LINK -
TAI WAI TO HUNG HOM SECTION
PROJECT PROFILE
JUNE 2008

Page

1 BASIC INFORMATION

1.1 PROJECT TITLE

Shatin to Central Link - Tai Wai to Hung Hom Section.

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;
- Provide public transport service for Kai Tak Development;
- 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. This project profile covers the Tai Wai to Hung Hom section 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

The Project is an approximately 11km extension of the Ma On Shan Line (MOL) from Tai Wai through new stations at Diamond Hill (DIH), Kai Tak (KTA), To Kwa Wan (TKW), Ma Tau Wai (MTW), Ho Man Tin (HMT) and connects the West Rail Line (WRL) at Hung Hom (HUH). DIH, HMT and HUH will become integrated interchange stations with the existing Kwun Tong Line, the proposed Kwun Tong Line Extension (KTE) and the future Cross Harbour Section of the SCL, respectively.

A new depot will be located at the Diamond Hill CDA site (ex-Tai Hom Village). Provisions will be made for future construction of a new station at Hin Keng.

The locations of the alignment are shown in Figure 1.

Alignment

The Project will pass through the developed urban areas with the majority of the alignment located below ground. The intention is to minimise the use of cut-and-cover construction by optimising the use of tunnel boring machines (TBM) and drill-and-blast tunnelling techniques. This arrangement will reduce the construction impact to the local community.

For the hard rock sections of the alignment at the north of Diamond Hill and Ho Man Tin stations area, drill-and-blast construction method has been assumed, but the use of tunnel boring method may also be adopted. Cut-and-cover construction will be adopted for all the mixed-ground stations, at the north and south approaches to Kai Tak Station. The proposed depot in the Diamond Hill CDA site will adopt 'semi-depressed' design with an aim to alleviate its impact to the surroundings.

1.5 NUMBER AND TYPES OF DESIGNATED PROJECTS

The proposed project is a single project comprising a railway and its associated stations and depots as defined under Schedule 2, Part I, Categories A.2, A.4, A.7 and A.8 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 IMPLEMENTATON 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 2010 and complete by 2015.

2.3 PROJECT INTERFACE

Major committed and planned projects that may interface with the project are listed in the table below.

Location	**Potential Interfacing Projects**
Diamond Hill	• Diamond Hill Comprehensive Development Area (CDA) at the former Tai Hom Village site
Kai Tak, To Kwa Wan	• Kai Tak Development project
To Kwa Wan, Ma Tau Wai	• Central Kowloon Route
Ho Man Tin	• Ex-Valley Road Estate Development • Kwun Tong Line Extension
Hung Hom	• Shatin to Central Link (Cross Harbour Section – Phase I, Mong Kok East to Hung Hom) • Shatin to Central Link (Cross Harbour Section – Phase II, Hung Hom to Admiralty) • Hong Kong Polytechnic University (Phase 8 Development)

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 cut and cover tunnel construction, diaphragm wall construction, excavation, backfilling, road reinstatement and construction of above ground structures etc, will potentially generate airborne construction noise.

Construction of bored tunnel by TBM will potentially generate groundborne noise. 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:

- Construction site run-off and drainage from works areas;
- Wastewater due to diaphragm wall construction;
- 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, 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

Potential hazard may be generated during construction work within the consultation zones of the Shatin Water Treatment Works and the Ma Tau Kok Gas Production Plant and its associated gas facilities, which are classified as Potentially Hazardous Installations (PHIs).

Explosives will be required for the 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.

Other facilities are of relatively less hazardous potential and include the Beacon Hill Gas Off take Station and a Towngas pipeline at To Kwa Wan.

3.1.6 Ecology

The Project will be constructed in areas that are highly disturbed with relatively low ecological value. Ecological impact associated with this project is likely confined to the Hin Keng tunnel portal work sites due to potential disturbance of secondary woodland and other plantation and a lower section of Tei Lung Hau freshwater stream.

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.

3.1.8 Land Contamination

A site survey and desktop review have identified the existing land uses within the Project scheme may give rise to land contamination. Such land uses include petrol filling stations, car repair and maintenance sites, the gas production plant in Ma Tau Kok, fuel storage and aircraft maintenance workshops at the former Kai Tak Airport, former flatted factories at Tai Hom Village, and the Hung Hom freight yard. Marine sediment may be encountered underlying the reclaimed area between KTA and Hung Hom area.

3.1.9 Landscape and Visual Impact

The proposed route alignment involves construction through a well-developed urban environment. Potential landscape impacts may result from the permanent loss of trees. 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 no 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 may give rise to potential impacts at sensitive receivers adjacent to the above ground section. Potential stationary noise sources include stabling and casual maintenance at the depot, tunnel ventilation shafts, tunnel ventilation fans and environmental control systems.

Apart from airborne noise, 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, adverse impact will be minimised. 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

Potential hazard may be generated by railway operation within the consultation zones of the Shatin Water Treatment Works and the Ma Tau Kok Gas Production Plant, which are classified as PHIs.

The train operation will increase the transient population within the consultation zones, which may impact on current societal levels of risk. Risk assessments will be undertaken during the EIA stage to evaluate the risk of the Project development for compliance with the Government's Risk Assessment Guidelines.

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 Land Contamination

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

3.2.9 Landscape and Visual

Potential landscape impacts will result from the permanent loss of trees arising from the construction phase. Whilst majority of the proposed alignment will be underground, there will be some above ground structures including the Hin Keng viaduct, various station entrances and adits, ventilation shafts as well as the depot at Diamond Hill, which may impact the physical landscape and visual amenity of surrounding areas. Appropriate public consultation will continue as needed.

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	Hin Keng Estate, village houses along Keng Hau Road, Lung Poon Court, Tropicana Garden, Galaxia Tower, Rhythm Garden, Choi Hung Estate, Residential buildings along Prince Edward Road East and Prince Edward Road West, future residential developments in Kai Tak Development project, residential buildings along both sides of To Kwa Wan Road and , residential buildings along Ko Shan Road, Shun Yung Street, Valley Road and Chung Hau Street and future property development at Ex-Valley Road Development Site
Educational Institutions	Cognitio College, Schools along Prince Edward Road East and Prince Edward Road West and Hong Kong Polytechnics University
Health Care Facilities	The Hong Kong Society for Blind Factory and Hostel
Place of Worship	Wong Tai Sin Temple, Church in Sung Wong Toi Road, Chi Lin Nunnery, Kwun Yum Temple.
Performance Venues	Ko Shan Theatre and Hong Kong Coliseum
Water Courses	Tei Lung Hau freshwater stream at Hin Keng and drainage around the proposed alignment and work sites
Areas of conservation value	Secondary woodland and plantation and a lower section of Tei Lung Hau freshwater stream near Hin Keng Portal
Site of Cultural Heritage	Ex-KCR Beacon Hill Tunnel, Royal Air Force Aircraft Hangar, World War II Pill Box near DIH, Stone House and Archaeological interest area at the former Tai Hom Village

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	Car repair and maintenance sites, gas production plant in Ma Tau Kok, fuel storage and aircraft maintenance workshops at former Kai Tak Airport, former factories at Tai Hom Village and Hung Hom freight yard
Potential Hazardous Installations	Shatin Water Treatment Works, Ma Tau Kok Gas Production Plant and Towngas north offtake station

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 will 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 and construction within the consultation zone of the PHIs will be assessed and taken into consideration. Necessary mitigation measures will be proposed during EIA process.

Ecology

Ecological impacts will be avoided as far as practicable. Appropriate mitigation measures will be developed and implemented to mitigate the construction phase impacts.

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.

Land 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

Airborne train noise from the above ground section at Tai Wai is expected to comply with the stipulated noise criteria after provision of noise barriers and enclosures. 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.

Hazard

Potential hazard for the operation of the Project will be assessed in detail during the EIA stage and necessary mitigation measures will be proposed during EIA process.

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 alignment section at Hin Keng and north of Hung Hom station, as well as for the 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 2010 and complete by 2015. Noise, waste, cultural heritage, hazard, land contamination and landscape and visual impacts are potential issues for the duration of construction. Their severity and distribution are outlined in Sections 3 and 4.

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 Eastern, Western and Northern 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. It will also accelerate the redevelopment of To Kwa Wan Kowloon City and the Kai Tak site.

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 following reports:

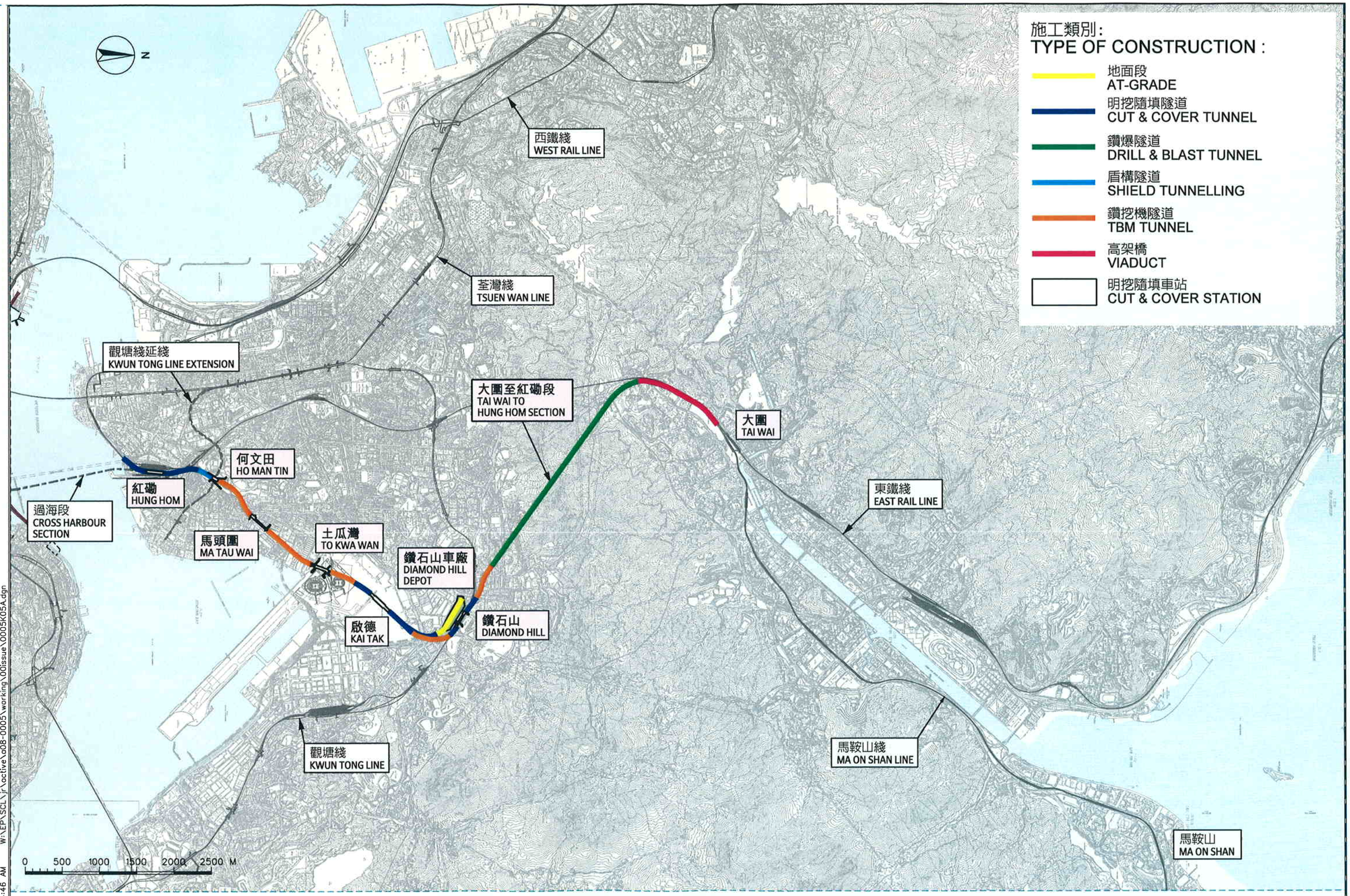
i) West Rail - Final Assessment Report West Kowloon to Tuen Mun Centre - Environmental Impact Assessment (EIA-149/BC)

ii) East Rail Extensions - Tai Wai to Ma On Shan EIA Report (EIA-027/1999)

iii) East Rail - Extension - Hung Hom To Tsim Sha Tsui - Environmental Impact Assessment (EIA-036/1999)

iv) Kowloon Southern Link EIA Report (EIA-098/2004)

v) Other approved EIA reports on the EIAO register for other developments that potentially interface with the Project.



PRINTED BY : qd50658
17/06/08 9:34:46 AM
W:\EP\SCL\jr\active\a08-0005\working\00issue\0005K05A.dgn

MTR

沙田至中環綫 - 大圍至紅磡段
SHATIN TO CENTRAL LINK - TAI WAI TO HUNG HOM SECTION

圖 1
FIGURE 1