

**ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE
(CAP 499) S.5(1)(a)**

PROJECT PROFILE FOR KOWLOON SOUTHERN LINK

1. BASIC INFORMATION

1.1 Project Title

Kowloon Southern Link (KSL)

1.2 Purpose and Nature of the Project

To expand the KCRC rail network in order to meet projected population growth and rail ridership demands.

1.3 Name of Project Proponent

The Kowloon-Canton Railway Corporation (KCRC)

1.4 Location and Scale of Project and History of Site

1.4.1 Location and Scale of Project

The alignment of the KSL follows the proposed corridor from East Tsim Sha Tsui Station (ETS) overrun tunnel in Salisbury Road via Canton Road and West Kowloon to the overrun tunnel south of Nam Cheong Station (NAC). The KSL will be operated as an extension of the West Rail System with two new stations, West Kowloon (WKN) and Canton Road (CAR). When the KSL is fully connected from NAC to ETS, the West Rail train service will run from Tuen Mun Station (TUM) all the way through to a new terminus in Hung Hom (HUH). West Rail passengers will be able to interchange to either the East Rail or the Shatin to Central Link (SCL) at the future Mass Transportation Centre (MTC) at Hung Hom Station.

The alignment length is about 3.7km and the railway will be mainly underground with 150m of at-grade railway within an enclosed structure. Commencing from ETS Station overrun tunnels the route runs westwards along Salisbury Road, then turns northwards at the junction with Kowloon Park Drive to pass underneath the site of the former Marine Police Headquarters and into the Canton Road corridor. Canton Road Station will be roughly centred on the junction of Canton Road and Haiphong Road. North of the station the tunnels

pass beneath the Kowloon Park Drive Flyover and then turn to the northwest at the Tsim Sha Tsui Fire Station in Canton Road into the West Kowloon Reclamation Area.

A subway linkage between Tsim Sha Tsui station of the MTRC and the proposed Canton Road Station will be constructed. Options of the subway locations are along Haiphong and Peking Road.

1.4.2 History of Site

The majority of the proposed alignment and stations is to be developed on land in the heart of Kowloon Peninsula which has primarily been heavily developed for commercial use, or recently reclaimed land developed primarily for commercial and residential uses. There were industrial facilities along the waterfront of Canton Road in 1963. These facilities were later removed and the area was reclaimed and developed for commercial use some 35 years ago.

1.5 Background and History of the Proposed Alignment

Prior to the selection of the proposed Canton Road Alignment, three possible alternative alignments were investigated, namely:

- i) Kowloon Park Drive Alignment;
- ii) Kowloon Point Alignment; and
- iii) Harbour City Alignment.

Figure 1 shows the indicative alternative alignments of the project.

Kowloon Park Drive Alignment

Whilst the Kowloon Park Drive scheme would avoid passing underneath the former Marine Headquarters site it would require resumption of the YMCA Building on the corner of Salisbury Road and Kowloon Park Drive. The KCRC has been advised that there is no possible replacement site in Tsim Sha Tsui for relocation of the YMCA building. As the alignment will pass underneath or close to a number of existing structures, such as Haiphong Road Overpass, Hong Kong Museum of History, Lai Chack Middle School, Canton Road Government Primary School and the Peninsula Hotel, underpinning will be required at the foundations of these structures.

The proposed Kowloon Park Station will encroach onto the Kowloon Park and occupy the existing Kowloon Park Drive Children's Playground and Haiphong Road Temporary Market resulting in disruption to these facilities during

construction. In addition, this alignment would require a sharp curve at the location of the YMCA building at a sub-standard operating radius of 180m in order to make the turn from Salisbury Road into Kowloon Park Drive. The Kowloon Park Drive alignment is therefore considered to be unacceptable in terms of land resumption and operational limitations.

Kowloon Point Alignment

The Kowloon Point Alignment was predicated on the basis that the Kowloon Point Reclamation may go forward and includes the provision of a new station on the planned reclamation. However, there is little chance that the Kowloon Point Reclamation will go ahead, and this will certainly not happen during the time scale proposed for the KSL. As a result, the intention to provide a station to serve west Tsim Sha Tsui cannot be achieved.

In addition, the construction of the submerged tunnels in the sea will involve marine dredging which will cause major environmental and harbour protection issues. There is also strong likelihood of marine sediment contamination. This alignment will also require extensive underpinning of the Ocean Terminal, with considerable risks to its structures given that foundation works was completed in late 1960s. The operation of the Star Ferry and the associated bus terminus will be significantly disrupted during construction of the alignment.

The Kowloon Point Alignment is therefore considered to be unacceptable in term of impaired serviceability to west Tsim Sha Tsui area, potential risk to the foundation of Ocean Terminal and environmental concerns associated with dredging.

Harbour City Alignment

The Harbour City Alignment requires resumption of Star House and extensive underpinning of Ocean Terminal, Omni Hong Kong and the existing piers. There would be also disturbances to marine activities, drainage outfalls and cooling water intakes. Preliminary assessment of previous studies indicated that that there was presence of contaminated marine sediment in the seabed and dredging would give rise to the disposal of this contaminated material. Among all these constraints, the resumption of Star House is considered to be the most significant problem as the building is currently held by multiple owners.

For this alignment the proposed new station would need to be built along the waterfront of Harbour City but direct connection to the MTR Tsim Sha Tsui station is not feasible. From a passenger's point of view, it would be difficult to get to and from Canton Road from the station. On the basis of the amount of

resumption involved and the extensive impacts on marine ferry operations, and the inaccessibility of the station, this alignment is considered to be unacceptable.

1.6 Number and Types of Designated Projects to be covered by the Project Profile

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

1.7 Name and Telephone Number of Contact Person(s)

2. OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

2.1 Planning and Implementation

The whole project will be planned and implemented by KCRC's in-house departments together with external consultants and contractors. Construction of the project will be carried out by contractors, under the construction management control of the KCRC.

2.2 Project Programme

The current programme identifies the commencement of the EIA consultancy works early 2002 with completion planned in 2003. The construction works will commence in second quarter of 2004, and take approximately four years. The KSL will be operational from NAC to WKN in 2007 and will provide a connection from NAC to HUH in 2008, initially without CAR Station. Full commissioning of the KSL is planned to be in mid/end 2008.

2.3 Project Interfaces

By the time the KSL construction works commence, major construction activities in the vicinity including ETS Station, Salisbury Road Underpass, and MTRC Tsim Sha Tsui Station Modification, will have been completed. The

proposed KSL project will not have a significant effect on any existing or planned major project in the area.

3. POSSIBLE IMPACT ON THE ENVIRONMENT

3.1 Outline of Process Involved

3.1.1 Overview

The alignment will be constructed using a combination of cut & cover, drill & blast or mechanical excavation, and tunnel boring machine (TBM) construction methods. Two options are being proposed for construction of the running tunnels along Canton Road and the Canton Road Station (CAR) (i.e. the section of the project between the former Marine Police Headquarters site (MPHQ) and Tsim Sha Tsui Fire Station). The two options are: Option 1 – Cut & Cover construction, and Option 2 – Bored Tunnel construction. The major difference between the two options is that the cut & cover option does not require resumption of two buildings namely Hanley House and Imperial Building but would involve more disturbance at ground level along Canton Road.

The various proposed methods of construction for KSL are summarised in Figure 3a and Figure 3b.

3.1.2 The Two Construction Options

Option 1 involves Cut & Cover tunnel along Canton Road. The different types of construction to be used for this option include:

- i) Stacked drill & blast tunnels under the former MPHQ site;
- ii) Stacked cut & cover tunnels between No.1 Peking Road and CAR Station;
- iii) Cut & cover station box for CAR Station;
- iv) Cut & cover tunnel box for the upper track between CAR station and Tsim Sha Tsui Fire Station;
- v) Drill & blast tunnel for the lower track between CAR Station and Tsim Sha Tsui Fire Station.

Option 2 is a Bored Tunnel option along Canton Road with tunnel enlargements to form the Station platform. The different types of construction to be used in Canton Road include:

- i) Stacked drill & blast OR bored tunnels under the former MPHQ site;
- ii) Stacked bored tunnels between No.1 Peking Road and CAR Station;

- iii) CAR station formed by enlargement of two stacked bored tunnels;
- iv) Stacked bored tunnels between CAR station and the Tsim Sha Tsui Fire Station.

3.2 Potential Environmental Impacts – Construction Phase

3.2.1 Air Quality

Dust is likely to be generated from excavation, cutting, filling, stockpiling and construction vehicle movements associated with the construction of the KSL. Potential air quality impacts may arise from ventilation of tunnels, and the operation of construction plant and vehicles.

3.2.2 Noise

Airborne and ground-borne noise is likely to be generated during construction of KSL. Airborne noise will be generated from cut-and-cover activities, excavation, backfilling, road reinstatement and construction of above ground structures. The dominant noise sources include breakers, piling rigs, lorry-mounted cranes, bulldozers, mobile cranes etc. Ground-borne noise may be generated from TBM operation and drill & blast activities.

Noise sensitive receivers including the residential premises to the north of Canton Road, Canton Road Government School, Lai Chack Middle School, and Man Cheong Estate which face the proposed cut-and cover section and CAR station are predicted to be affected.

3.2.3 Water Quality

Potential sources of water contamination include construction runoff, and effluents from dewatering operations of tunnels, foundation and spoil. These effluents are likely to contain high loading of suspended solids (SS) and small amount of oil from vehicles, construction equipment and storage areas.

Other potential sources of water contamination include sewage generated by the construction workforce and oily runoff from machinery and storage areas.

3.2.4 Waste

Wastes that will be generated during construction of KSL can be divided into the following categories:

- i) Inert excavated materials from tunneling works;

- ii) Construction and Demolition (C&D) material from demolition of existing structures;
- iii) Chemical waste of residual oil and lubricating fluids from construction plants and machinery;
- iv) General Refuse;
- v) Contaminated soils if any from potential contaminated sites; and
- vi) Marine sediments underneath the formerly reclaimed area along the alignment.

It is envisaged that a total of 700,000 m³ of spoil will need to be disposed of from the project. Inert excavated materials and construction and demolition materials will be properly segregated and will either be reused on site, or disposed of at a public filling area in accordance with the approved Waste Management Plan and as agreed with the Civil Engineering Department (CED).

3.2.5 Historical and Cultural Heritage

There are potential impacts to the two historical sites, namely the former MPHQ and the three former Fire Station buildings at Salisbury Road. The former MPHQ compound is a monument declared by Antiquities and Monuments Office (AMO) and the former Fire Station buildings are listed buildings.

No direct impacts are expected at the Peninsula Hotel and any indirect impacts could be readily mitigated.

3.2.6 Land Contamination

Land contamination is not likely to be a critical issue and would not pose any constraints to the KSL project. In the vicinity of the KSL alignment, a vehicle maintenance area of the Tsim Sha Tsui Fire Station, a petrol filling station and a factory building may have potential contamination issue.

3.2.7 Ecology

The current demarcation of work area at the Kowloon Park Drive Children's Playground will have impacts on three Champion trees along Haiphong Road and a protected tree species located within the Playground.

3.2.8 Hazard

Tunnelling works may have impacts on the underground gas pipes.

3.2.9 Landscape and Visual

The proposed development would create various degrees of impacts on the physical landscape and landscape character due to loss of trees, especially the protected and high valuation species. The cut & cover tunnel construction and excavation, temporary noise barriers for work sites and illumination within the construction sites may create short-term adverse visual impacts.

3.3 Potential Environmental Impacts - Operation Phase

3.3.1 Air Quality

Trains are to be electrically powered and thus there will be no adverse air quality impacts of dust and gaseous emissions.

3.3.2 Noise

The passage of trains in the tunnel may generate ground-borne noise and vibration. Other potential noise sources include train noise emanating from tunnel ventilation shafts, tunnel ventilation fans, smoke extraction fans and environmental control systems.

3.3.3 Water Quality

The key sources of water pollution include rainwater runoff from above ground structures and the sewage generated from station staff and patrons.

3.3.4 Waste

Municipal waste, including litter, foodstuffs, plastics, wood, office waste and small amount of oil from the oil interceptors, will be generated during the operation of the proposed railway.

3.3.5 Cultural Heritage

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

3.3.6 Land Contamination

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

3.3.7 Ecology

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

3.3.8 Hazard

No potential hazard is anticipated during the operation of the proposed railway.

3.3.9 Landscape and Visual

Potential landscape impacts would result from permanent loss of trees.

Potential visual impacts would arise from the above ground station entrances, the station and tunnel related ventilation shaft structures and plant rooms.

4. SURROUNDING ENVIRONMENT

4.1 Existing and planned sensitive receivers

4.1.1 Noise

Potential Noise Sensitive Receivers (NSRs) have been identified under EIA-TM. Representative NSRs include:

- i) Residential premises (e.g. Tsim Sha Tsui Fire Station Staff Quarters, Man Cheong Estate, premises to the north of Canton Road and those near Nam Cheong Estate);
- ii) Schools (e.g. Canton Road Government Primary School, Lai Chack Middle School);
- iii) Future Government/Institution/Community (G/IC) sites; and
- iv) Performance venues (e.g. HKCC, Space Museum);
- v) Residential property development on east side of Lin Cheung Road.

4.1.2 Air Quality

Potential Air Sensitive Receivers (ASRs) have been identified under EIA-TM. Representative ASRs include:

- i) Residential premises (e.g. Tsim Sha Tsui Fire Station Staff Quarters, Man Cheong Estate, premises to the north of Canton Road and those near Nam Cheong Estate);

- ii) Schools (e.g. Canton Road Government Primary School, Lai Chack Middle School);
- iii) Future G/IC sites and performance venues (e.g. HKCC, Space Museum); and
- iv) Hotels and offices (e.g. Peninsula Hotel)

4.1.3 Water Quality

Potential Water Sensitive Receivers (WSR) have been identified under EIA-TM, as follows:

- i) Yau Ma Tei typhoon shelter
- ii) Cooling water inlet points for the Canton Road commercial buildings.

There are no marine biological sensitive receivers such as mariculture zones, commercial fisheries or shell fisheries in the vicinity of the proposed alignment.

4.1.4 Cultural Heritage

Major historical and cultural heritage in the vicinity of the alignment include:

- i) Former Marine Police Headquarter (MPHQ) and the Air Raid Precautionary Tunnels underneath
- ii) Former Fire Station Buildings
- iii) Peninsula Hotel

4.1.5 Landscape and Visual

The following key visual sensitive receivers (VSRs) have been identified in the vicinity of the alignment:

- i) VSRs along Salisbury Road, a key tourist area with hotels, shopping and cultural facilities;
- ii) VSRs along Canton Road, a key tourist area with hotels and shopping facilities;
- iii) VSRs in the sitting out area adjacent to Haiphong Road Temporary Market; and
- iv) VSRs along the cut & cover tunnel excavation in West Kowloon.

4.2 Major Elements of the Surrounding Environment and Existing and/or Past Land Users on Site which might Affect the Area in which the Project is Located

The background noise in the vicinity of the alignment is dominated by traffic on heavily trafficked roads including Salisbury Road, Canton Road, Kowloon Park Drive, and West Kowloon Highway.

At north of the Yau Ma Tei Interchange, the KSL alignment passes very close to the MTR Lantau and Airport Railway (LAR).

A number of industrial facilities were located along the waterfront of Canton Road before the site was changed to commercial use 35 years ago. The alignment also passes near a fire station, petrol filling station and a factory building.

5. ENVIRONMENTAL PROTECTION MEASURES AND ANY FURTHER ENVIRONMENTAL IMPLICATIONS

5.1 Potential Measures to Minimise Environmental Impacts

Various mitigation measures are proposed to minimise environmental impacts, as outlined below. It should be noted that these measures may be further refined during later stages of the EIA process.

5.1.1 Construction Phase

5.1.1.1 Air Quality

Standard dust suppression techniques, as set out in the Air Pollution Control (Construction Dust) Regulations, should be sufficient to control the dust impacts on the nearby ASRs. These measures include:

- i) On-site vehicle speed restrictions and vehicle washing before leaving the site;
- ii) Careful handling the containment or damping of dusty materials; and
- iii) Frequent watering or covering of exposed areas of ground and prompt site restoration.

These measures will be used as general good practice on all construction sites to ensure that potential dust emissions are controlled and impacts upon sensitive receivers are minimised.

5.1.1.2 Noise

A package of mitigation measures has been designed to control construction noise impacts. Whilst not sufficient to fully resolve the predicted noise impacts, general good site practices will help to control the residual impacts. These include:

- i) Care in the placement and orientation of noisy plant away from sensitive receivers;
- ii) The use and correct fitting of silencers, mufflers and acoustic shields; and
- iii) Regular maintenance of plant and equipment.

A series of further mitigation measures have been identified, including the use of quiet plant, noise barriers and reducing the number of plant in use at one time which should be sufficient to control day-time noise impacts to within the established limit at most NSRs. At the NSRs where residual noise exceedances remain, impacts can be brought to within acceptable levels through refinement of the construction programme, use of noise enclosures and further restrictions on plant numbers and schedule.

Ground-borne noise impacts from TBM operations would also be minimised by the use of noise minimising TBM technology as used on the West Rail. Noise and vibration from drill & blast activities will be instantaneous and its impacts to the nearby receivers can be minimised by careful scheduling of the construction programme.

5.1.1.3 Water Quality

Water impact mitigation measures will include installation of appropriate drainage facilities to control site runoff, proper management on-site to prevent debris and harmful materials from reaching drainage facilities of water bodies, provision of adequate toilet facilities and proper disposal of sewage by a recognised waste disposal company, and provision of treatment facilities with adequate capacity to treat process water from tunnel construction activities prior to discharge.

5.1.1.4 Waste Management

In order to control waste issue, mitigation measures will include:

- i) General good housekeeping practices;
- ii) Sorting and segregation of wastes for reuse and disposal;

- iii) Observing the requirements of the disposal permits; and
- iv) Meeting the requirements of the Waste Disposal Ordinance.

In addition, both on-site and off-site re-use of excavated inert materials will be considered. Useful materials in the C&D waste will be recycled where practicable. Waste disposal at public filling areas will be considered as a last resort. Waste Management Hierarchy will be implemented to minimise waste generation and maximise waste recovery and recycling. The use of barges for delivery of excavated materials to off-site disposal sites will be further investigated.

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

5.1.1.5 Cultural Heritage

Vibration monitoring will be conducted during the construction process to ensure that no adverse impact occurs on the nearby buildings of historical and cultural value.

5.1.1.6 Land Contamination

Appropriate measures will be taken to remediate any contaminated land or to ensure disposal of contaminated materials to a suitable site.

Potential exposure to contaminated materials can be limited by minimising construction workers' direct contact with soils, wearing of protective clothing, providing adequate hygiene and washing facilities and preventing smoking and eating during soil interface activities.

Only licensed waste hauliers will be used to collect and transport contaminated materials for disposal and vehicles will be suitably covered to limit dust emissions or contaminated wastewater run-off, and truck bodies and tailgates sealed to prevent any discharge during transport or during wet conditions.

5.1.1.7 Ecology

The access to these work sites will respect the locations of the trees and minimise the associated impacts. The highly valuable Champion trees and protected tree species at Kowloon Park Drive's Playground shall be transplanted/ preserved as far as practicable.

5.1.1.8 Hazard

Provision will be allowed for the advanced diversion of the existing gas pipelines, especially for those interfacing with the cut & cover section and the grouting process for TBM operation.

5.1.1.9 Landscape and Visual Impact

Recommended landscape and visual impact mitigation measures include:

- i) Avoidance of impacts on adjacent landscape by minimising temporary works areas, appropriate design of works areas and selection of locations for works areas;
- ii) Avoidance of impacts on existing mature trees;
- iii) Temporary re-provision of open space for any public open spaces affected by construction works;
- iv) Control of night-time lighting; and
- v) Erection of decorative screen hoarding.

5.1.2 Operation Phase

5.1.2.1 Air Quality

No specific mitigation measures are required.

5.1.2.2 Noise

Mitigation of ground-borne noise is by means of appropriate track design including the use of floating slab track. For airborne noise, adequate noise control treatment such as silencer, acoustic louvre, quiet plant and increase in the plantroom wall thickness will be adopted.

5.1.2.3 Water Quality

The runoff will be diverted through silt and oil traps to remove oil and lubricating fluids before discharging into the existing sewerage system. In addition, oil interceptors will be provided at the stations to treat potentially contaminated runoff. As any operational discharges will be required to comply with Water Pollution Control Ordinance, no adverse impacts will occur.

5.1.2.4 Waste Management

Chemical waste generated during operation phase will be handled according to EPD's guidelines. In case temporary storage becomes necessary for chemical wastes, 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.

5.1.2.5 Cultural Heritage

Vibration impacts on the nearby historical and cultural resources will be mitigated by proper track design and incorporation of floating slab track.

5.1.2.6 Landscape and Visual

Landscape impact mitigation measures which will be incorporated within the permanent landscape design include the following:

- i) Reinstatement of cut or disturbed slopes, disturbance to planted slopes will be avoided where possible;
- ii) Compensatory tree planting will be incorporated along all roadside, public open spaces, amenity areas affected by the construction works;
- iii) Permanent off-site re-provision of open space will be considered for any permanent loss of public open space; and
- iv) Sensitive architectural design of all visible structures such as ventilation buildings plant buildings and station entrances.

5.2 Potential Severity, Distribution and Duration of Environmental Effects

It is anticipated that the construction work will commence in 2004 with completion targeted for 2008. Air, noise and vibration, water, waste, ecology, cultural heritage, and landscape and visual impacts will be an issue for the duration of construction. Their severity and distribution is outlined in Sections 3 and 4.

Air quality impacts will be most severe during earthworks and excavation activities. Noise and vibration impacts will be most severe during excavation, piling, concreting and tunnelling. Water quality impacts will be most severe during excavation and drilling.

Cumulative effects could potentially arise from the proposed underground carpark construction works underneath Peninsula Hotel, the proposed Central Kowloon Route, the possible development of MTRC Olympic Station Site D Development, the planned restoration and improvement works to the former MPHQ, and the TDD Road Contract WK30, if any of these works were to be conducted concurrently with the KSL.

5.3 Further Implications

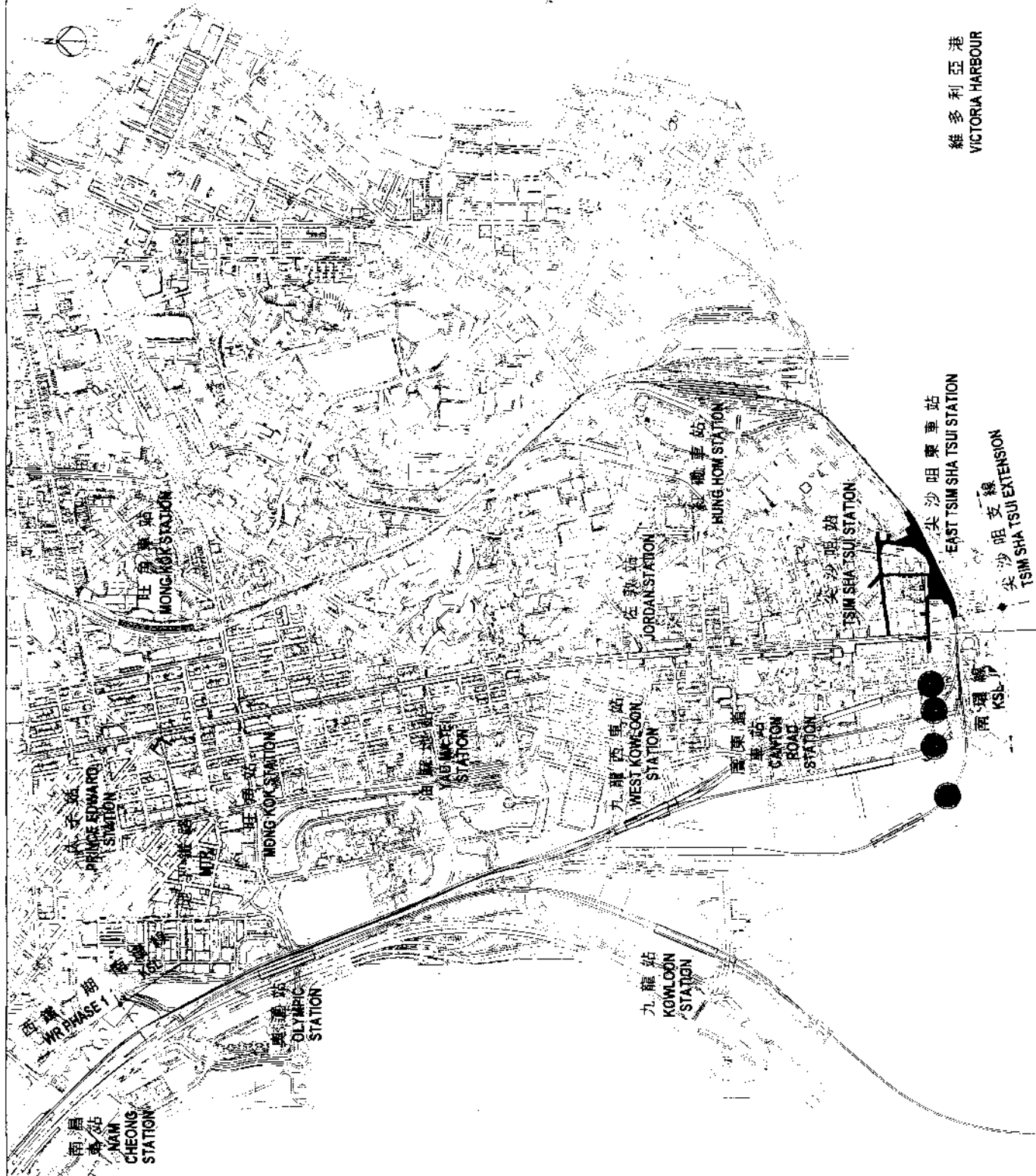
Public interest in the project is likely to be moderate in view of the fact that the alignment will be passing through such a major commercial district, with temporary disruption caused to various business and residential properties in the area including the former MPHQ, the Hong Kong Cultural Centre and the Hong Kong Space Museum, and temporary loss of open space and existing mature trees at the Kowloon Park Drive Children's Playground. The railway, however, is for the benefit of the public and will potentially create job opportunities and promote business prospects for restaurants, shops and hotels in the vicinity.

6. USE OF PREVIOUSLY APPROVED EIA REPORTS

References will be made to the following EIA reports for the proposed KSL project in the aspects of railway construction & operation, and site location:

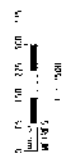
- KCRC East Rail Extension - Hung Hom to Tsim Sha Tsui - Environmental Impact Assessment.
- KCRC West Rail EIA Final Assessment Report – West Kowloon to Tuen Mun Centre.
- Modifications to MTRC Tsim Sha Tsui Station.
- Salisbury Road Underpass and Associated Road Improvement Works, including Middle Road Circulation System.

Reference may also be made to the Planning Study: Study on the Development Opportunities of the Former Marine Police Headquarters Site in Tsim Sha Tsui.



其他定線
ALTERNATIVE ALIGNMENT:

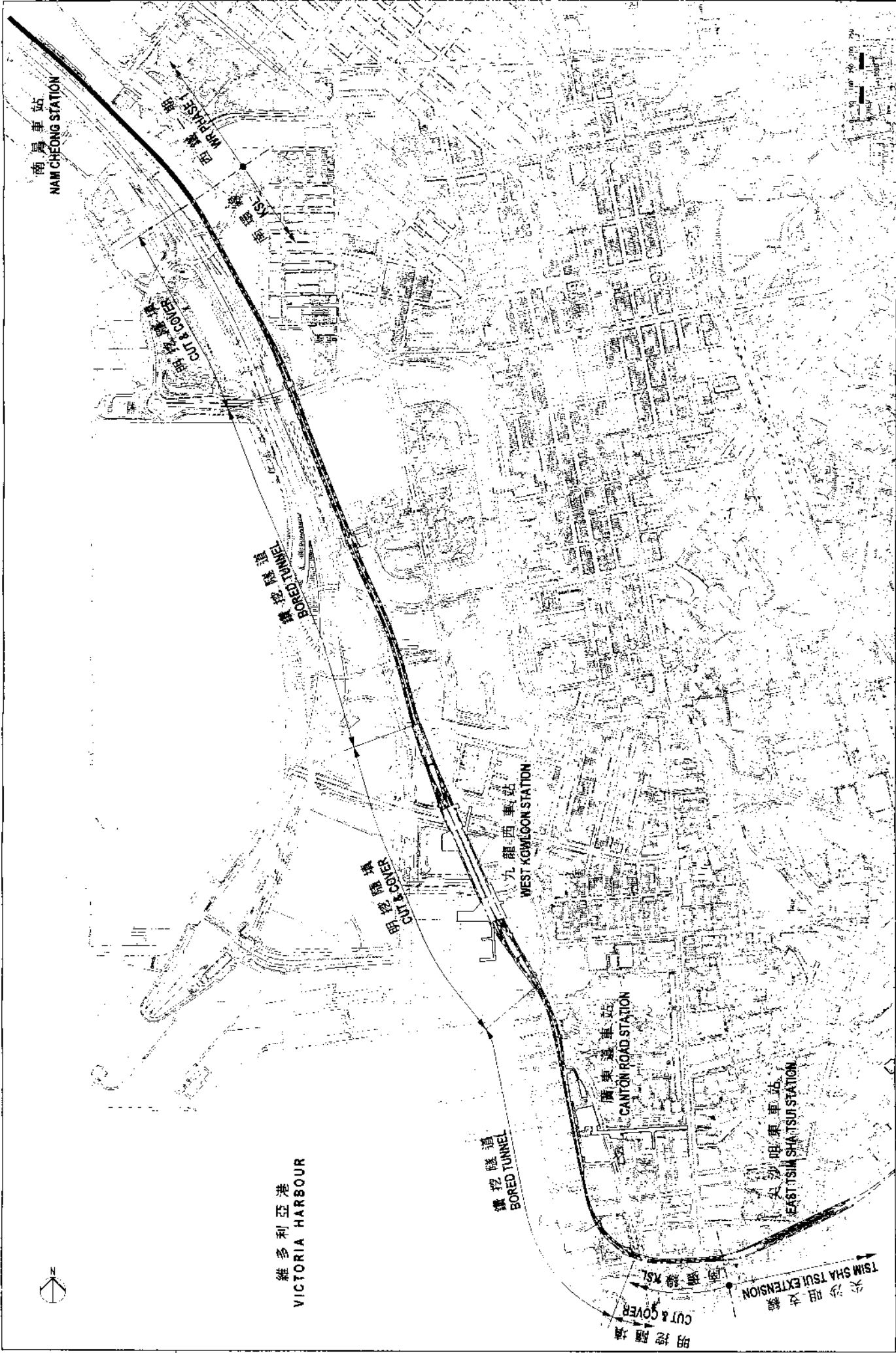
- 廣東道定線
CANTON ROAD ALIGNMENT
- 九龍公園徑定線
KOWLOON PARK DRIVE ALIGNMENT
- 九龍角定線
KOWLOON POINT ALIGNMENT
- 海港城定線
HARBOUR CITY ALIGNMENT



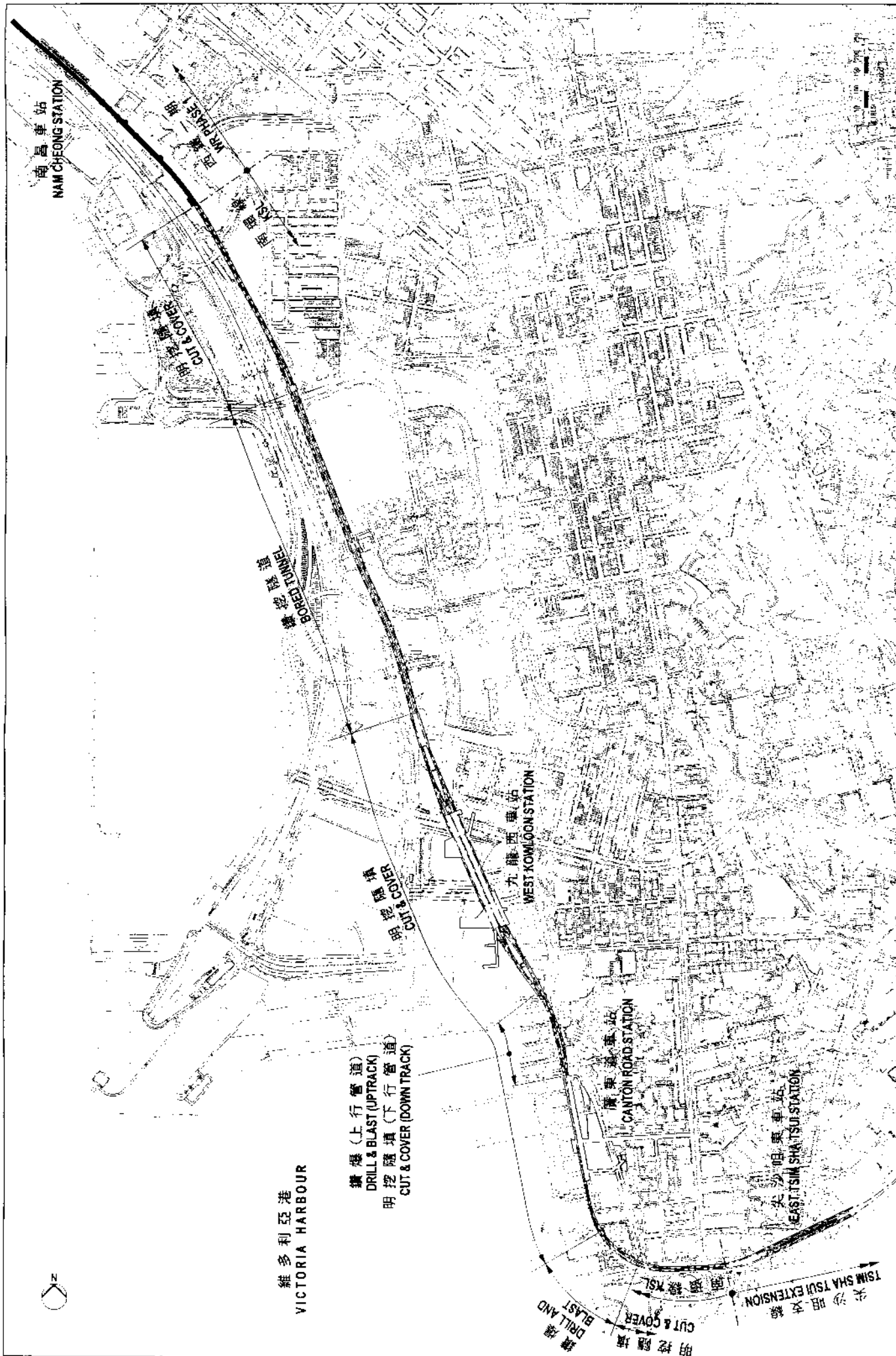
圖例
KOWLOON SOUTHERN LINK
■ 1: 其他定線方案
FIG. 1:
ALTERNATIVE ALIGNMENT OPTION

KCR 新鐵路策劃
New Railway Projects

PROJECT NO.	100
DATE	11/11/2008
SCALE	1:1000
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PROJECT NO.	100
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<p>南港線 KOWLOON SOUTHERN LINK 廣東通定線 CANTON ROAD ALIGNMENT ■ 3A : 鑽挖隧道工法 FIG. 3A : BORED TUNNEL CONSTRUCTION METHOD</p>		<p>新鐵路計劃 KCR 新鐵路計劃 New Railway Projects</p>		<p>DATE: 11/11/2007 SCALE: 1:1000 DRAWN BY: J. CHEN CHECKED BY: J. CHEN IN CHARGE: J. CHEN DATE: 11/11/2007</p>	
<p>南港線 KOWLOON SOUTHERN LINK 廣東通定線 CANTON ROAD ALIGNMENT ■ 3A : 鑽挖隧道工法 FIG. 3A : BORED TUNNEL CONSTRUCTION METHOD</p>		<p>新鐵路計劃 KCR 新鐵路計劃 New Railway Projects</p>		<p>DATE: 11/11/2007 SCALE: 1:1000 DRAWN BY: J. CHEN CHECKED BY: J. CHEN IN CHARGE: J. CHEN DATE: 11/11/2007</p>	



新鐵路策劃 New Railway Projects		南港線 KOWLOON SOUTHERN LINK 南港線 CANTON ROAD AT LONMANT ■ 節：明挖覆蓋施工法 FIG. 3B : CUT AND COVER CONSTRUCTION SECTION	
DRAWN BY L. CHING CHECKED BY W. CHANG	DATE 11/11/03	SCALE 1:1000	PROJECT NO. 20030001
DATE 11/11/03	DRAWN BY L. CHING	CHECKED BY W. CHANG	PROJECT NO. 20030001