Highways Department

Hong Kong – Zhuhai – Macao Bridge
Hong Kong Boundary Crossing Facilities

Project Profile

CONTENTS

1. BASIC INFORMATION

1.1 Project Title

Hong Kong - Zhuhai - Macao Bridge (HZMB) Hong Kong Boundary Crossing Facilities (HKBCF).

1.2 Purpose and Nature of the Project

In February 2004, the governments of the Hong Kong Special Administrative Region (HKSAR), Guangdong Province and the Macao Special Administrative Region (Macao SAR) appointed a consultant to conduct a feasibility study for the HZMB.

At the Expert Panel Meeting on the HZMB Alignment organized by the National Development and Reform Commission and held in Zhuhai in April 2005, the Expert Panel Meeting recommended the Northern bridge-cum-tunnel alignment as preferred option with landing points at San Shek Wan in Northwest Lantau of the HKSAR, Gongbei in Zhuhai and A Pérola in the Macao SAR. Subsequently, the Northern bridge-cum-tunnel alignment was further refined including shifting it northwards to minimize its impacts on the navigation and anchorage areas.

As announced after the Ninth Plenary of the Hong Kong - Guangdong Cooperation Joint Conference held on 2 August 2006, the three governments (i.e. Guangdong Province, HKSAR and Macao SAR Governments) agreed to adopt the concept of "separate locations of BCF mode" rather than "co-location of boundary crossing facilities (BCF) mode" for the BCF of HZMB. A supplementary study on "separate locations of BCF" mode under the feasibility study of the HZMB project was then conducted.

Subsequently, in May 2007, the government of HKSAR appointed another consultant to conduct a site selection study for HKBCF, including a Preliminary Environmental Review (PER), to further investigate the suitable site location within the Hong Kong territory. A number of site locations along the northwest Lantau and the Hong Kong International Airport (the Airport) were considered and assessed. From the numerous site options considered, a reclamation option located close to the north-eastern corner of the Airport Island has emerged as the one most promising in view of its advantages.

The HKBCF project is to provide the boundary crossing facilities for HZMB within Hong Kong territory under the "separate locations of BCF" mode to tie in with the commissioning of HZMB. Such facilities should provide adequate capacity to handle the cargo as well as passenger traffic that are projected to flow through the HZMB in both directions in the short and long term future.

1.3 Name of Project Proponent

Highways Department, HKSAR Government

1.4 Location and Scale of the Project

The tentative site location of the HKBCF project is shown on the attached drawing no. HZMN07001-SK0025. The location, shape and layout of HKBCF shown in the attached drawing is one of the tentative HKBCF site options at the north east of the Airport, which would be further developed and refined.

The scope of the HKBCF project comprises, but not limited to, the following:

(i) reclamation to provide land for the development of the HKBCF and the required reprovisioning of the Airport's affected facilities (such as the affected Marine Cargo Terminal), and to cater for the synergy with the Airport (such as extension of the Automated People Mover (APM), a railway, from the Airport to the HKBCF) and integration with Tuen Mun – Chek Lap Kok Link;

(ii) cargo processing facilities including kiosks for clearance of goods vehicles, customs inspection platforms, X-ray buildings, etc;

(iii) passenger related facilities including processing kiosks and examination facilities for private cars and coaches, passenger clearance building and halls, etc;

(iv) accommodation for and facilities of the frontline departments (such as Immigration Department, Customs and Excise Department, Hong Kong Police Force, Fire Services Department, Department of Health, Agriculture, Fisheries and Conservation Department, Food and Environmental Hygiene Department, etc.), a police operational base with an observation tower at high level overseeing the whole BCF area, a police inspection post equipped with enhanced under vehicle surveillance systems, fire station cum ambulance depots and supporting facilities such as staff canteen, changing and amenity facilities, dog kennel, emergency overnight accommodation facilities, maintenance workshop/depots, etc;

(v) provision of public transport interchange, and transport drop-off and pick-up areas;

(vi) other peripheral structures and supporting facilities such as vehicle holding areas, passenger queuing areas, road networks, footbridges, fencing, sewage and drainage systems, water supply system, utilities, electronic system, and traffic control and information system, etc; and

(vii) provision of road access for connection to the HZMB Hong Kong Link Road, Tuen Mun – Chek Lap Kok Link and the Airport.

Although the park-and-ride facilities have not yet been decided to be provided in the HKBCF, the scope of the HKBCF project should cater for such provision if needed.

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

Under the proposed HKBCF project, there are the following Designated Projects in accordance with Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) as below:

- A railway, for the APM extension, and its associated stations (Item A.2 of Schedule 2 of EIAO);
- A railway tunnel, for the APM extension, more than 800 m in length between portals (Item A.7 of Schedule 2 of EIAO);
- Road bridges more than 100 m in length between abutments (Item A.8 of Schedule 2 of EIAO);
- Reclamation works (including associated dredging works) more than 5 ha in size (Item C.1 of Schedule 2 of EIAO); and
- A dredging operation exceeding 500,000m^3 (Item C.12 of Schedule 2 of EIAO).

1.6 Contact Person

Name : Mr. K. MA

Post : Senior Engineer 3/Hong Kong-Zhuhai-Macao Bridge
Tel : 2762 3450
Fax : 3188 6614
Address : 4th Floor, Ho Man Tin Government Offices, 88 Chung Hau Street, Ho Man Tin, Kowloon

2. OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

2.1 Project Planning and Implementation

It is proposed to implement the project by employing consultants to undertake the investigation study, preliminary design, detailed design, tender and supervision of the construction phase of the project.

2.2 Project Programme

The HKBCF will be completed as soon as possible to tie in with the commissioning of HZMB.

2.3 Interfacing with other Projects

Potential projects that would interface with HKBCF have been identified and are listed below. This list should be re-visited during the EIA stage to ensure all the latest projects available from the respective stakeholders are incorporated.

Phase	Other Projects in the Vicinity
Construction	Proposed Hong Kong–Zhuhai-Macao Bridge Hong Kong Link Road
	Proposed Tuen Mun - Chek Lap Kok Link
	Existing mud disposal facilities at East of Sha Chau
	Proposed New Contaminated Mud Marine Disposal Facility at Airport East / East Sha Chau Area
	Proposed Lantau Logistics Park
	Tung Chung East and West Future Development
	Proposed Road P1
	Proposed CLP 132kV Submarine Cables
Operation	Proposed Hong Kong–Zhuhai-Macao Bridge Hong Kong Link Road
	Proposed Tuen Mun - Chek Lap Kok Link
	Existing mud disposal facilities at East of Sha Chau
	Proposed New Contaminated Mud Marine Disposal Facility at Airport East / East Sha Chau Area
	Proposed Lantau Logistics Park
	Tung Chung East and West Future Developments
	Proposed Road P1

3. POSSIBLE IMPACT ON THE ENVIRONMENT

3.1 Outline of Process Involved

Based on the preliminary study, the HKBCF project would conceptually be made up of the following elements:

- Reclamation;
- Passenger Clearance Building;
- Kiosks and customs inspection platforms and X-ray buildings for clearance of goods vehicles;
- Kiosks and examination facilities for coaches and private cars;
- Coaches and shuttle buses loading and unloading zone;
- Government buildings and facilities;
- Public transport interchange;
- Reprovisioning of the Airport's affected facilities such as Marine Cargo Terminal;
- Automated People Mover (a railway) extension from the Airport;
- Replacement of the existing artificial reef at the north east corner of the Airport; and
- Others (e.g. roads, EVA, greening/amenities, utilities, outfall, etc.).

Depending on further design development, the HKBCF reclamation may need to be adjusted to merge with the toll plaza, southern tunnel portal, approach roads and ventilation buildings of the Tuen Mun-Chek Lap Kok Link.

Reclamations of HKBCF will be designed with optimal dredging of marine mud. The layouts and construction methods will be examined under the next detailed investigation assignment of this project. Considerations would be given in the site location and the design to avoid and/or minimize the environmental impacts to the neighbouring sensitive receivers.

3.2 Existing Available Data

In 2007, Highways Department engaged a consultant to undertake a Preliminary Environmental Review (PER) for site selection of HKBCF. A large number of areas in North Lantau water were examined and assessed based on environment criteria such as air quality, noise, water quality, ecology, fishery, landscape and visual, cultural heritage and waste management.

Several studies have already been conducted near the tentative site location, including Agriculture, Fisheries & Conservation Department's study on marine benthic communities and the Port Survey. These studies provide up-to-date information on the benthic fauna and on fisheries production and fishing operation of Hong Kong, and will be very useful to the study for evaluating the possible impact on the environment.

Studies on Chinese White Dolphins (Indo-Pacific Hump-backed Dolphin) have also been carried out extensively in the North Lantau waters. Dolphin distribution patterns and recent data relating to dolphins in the waters of the tentative site location are available for this study.

3.3 Construction and Operational Environmental Impact

It is anticipated that surrounding sensitive receivers could be affected by air quality, noise, water quality, ecological, fishery, landscape and visual, cultural heritage, hazardous to life and waste management impacts during the construction and operational stages.

3.3.1 Air Quality

During construction phase, construction dust will be potentially generated from reclamation, excavation works, backfilling, wind erosion of exposed area, temporary storage of spoil on site, transportation and handling of spoil etc.

During operational phase, air pollution sources will be associated with emissions from the traffic running / idling on the HKBCF. Cumulative air quality impact would need to take into account neighbouring roads / portals / ventilation building and other sources (e.g. the Hong Kong International Airport, Tuen Mun – Chek Lap Kok Link, Castle Peak and Black Point Power Plants etc.). Cross boundary emissions may need to be considered as well.

3.3.2 Noise

During construction phase, potential noise impacts on noise sensitive receivers will be associated with construction activities and powered mechanical equipment. The key construction activities which would create noise impacts will be reclamation, excavation and concreting etc. The impact for any night time work would need to be considered as well.

During operational phase, noise sources will be associated with the traffic using the roads within the HKBCF. The cumulative noise impact of neighbouring roads and other fixed noise sources would need to be considered.

3.3.3 Water Quality

During construction phase, potential major sources of water quality impacts may arise from sediment release from reclamation, construction runoff and sewage generated by workforce.

During operational phase, local flow pattern may be affected in the vicinity of reclamation area. Other potential water pollution source would include the surface runoff from the reclaimed land and accidental chemical spillage. Cumulative water quality impact due to other concurrent projects would need to be considered.

3.3.4 Ecology

During construction phase, major potential impacts on ecology will be marine habitat loss due to reclamation, disturbance to Chinese White Dolphin and other marine life due to reclamation activities/related vessel traffic. There may also be a potential risk of accidental chemical spillage to the surrounding water during offshore and coastal construction, which may affect the ecological system.

During operational phase, potential ecological impacts include the change in water flow due to reclamation and disturbance impacts to marine habitat and associated wildlife.

3.3.5 Fishery

During construction phase, reclamation may lead to fishing ground and spawning ground loss and disturbance on fishing operation. There may also be a potential risk of accidental chemical spillage to the surrounding water during offshore and coastal construction, which may affect fishing operations.

During operational phase, the reclamation will change the water flow, and may affect spawning ground.

3.3.6 Landscape and Visual

The HKBCF might cause impact on surrounding inshore water landscape and visual impact to the existing / planned receivers on the Airport Island and Tung Chung. Construction works may cause a blockage of seaview to the existing / planned receivers at Tung Chung / Airport.

3.3.7 Cultural Heritages

The area of archaeological interest and potential offshore marine deposits, which have not been investigated and/or adequately studied previously, may be affected.

3.3.8 Waste Management

Activities during construction phase may result in the generation of a variety of waste generally comprising excavated materials, marine sediment, chemical waste, construction waste and general refuse. Sediment handling will depend on the pollution levels.

3.3.9 Hazardous to Life

The proposed HKBCF is not close to the fuel tank farm on the Airport Island and the Siu Ho Wan Water Treatment work. Hence, issues on hazardous to life is not anticipated.

4. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

4.1 Existing and Planned Sensitive Receivers

The existing and planned sensitive receivers are discussed below. Any other planned sensitive receivers identified during the study will also be considered. Detailed investigation and surveys will be carried out under the project to assess the impact.

4.1.1 Air Quality

Potential air sensitive receivers are located at:

- Offices, hotel, AsiaWorld Expo and workshops at Airport Island, and offices and workshops at the proposed Lantau Logistics Park;
- Tung Chung New Town, Tung Chung East and West Future Developments; and
- Villages houses (e.g. Pak Mong) and other facilities near Tai Ho Wan (e.g. Mass Transit Railway (MTR) Siu Ho Wan Depot).

4.1.2 Noise

Potential noise sensitive receivers are located at:

- Tung Chung New Town, the proposed Tung Chung East and West Developments; and
- Village houses in Tai Ho Wan (e.g. Pak Mong).

4.1.3 Water Quality

Potential water sensitive receivers would be:

- Gazetted and non-gazetted beaches in Tuen Mun;
- Existing and planned seawater water intakes in Tuen Mun and Tung Chung;
- Seawater / cooling water intakes at the Hong Kong International Airport;
- Sha Chau and Lung Kwu Chau Marine Park;

- Chinese White Dolphin Habitat;
- Fish cultural zones;
- Tai Ho Stream Site of Special Scientific Interest (SSSI), San Tau SSSI; and
- Other ecological sensitive receivers (mangroves, seagrass, horseshoe crabs nursery sites within the Airport Channel).

4.1.4 Ecology

Potential ecological sensitive receivers would be:

Marine

- Sha Chau and Lung Kwu Chau Marine Park;
- Tai Ho Stream SSSI and San Tau SSSI;
- Habitat for Chinese White Dolphins;
- Artificial Reefs in the Chek Lap Kok Marine Exclusion Zone 3 and inside Sha Chau and Lung Kwu Chau Marine Park;
- Mangroves, seagrass, horseshoe crabs nursery sites within the Airport Channel; and
- Coral to the east of the Airport.

Terrestrial

- Scenic Hill in Airport Island.

4.1.5 Fisheries

Fishing areas in the vicinity of the study area would be:

- Fishing Grounds in North Lantau Waters;
- Spawning Grounds of Commercial Fisheries Species in North Lantau waters;
- Artificial Reefs in the Chek Lap Kok Marine Exclusion Zone 3, and inside Sha Chau and Lung Kwu Chau Marine Park; and
- Ma Wan Fish Culture Zone.

4.1.6 Landscape and Visual

Potential landscape and visual sensitive receivers would be:

Landscape Sensitive Receivers

- Inshore water landscape between Tuen Mun and Hong Kong International Airport; and
- Island landscape at Tai Mo To.

Visual Sensitive Receivers

- Workers and visitors on northeast part of Hong Kong International Airport;
- Residents in Tung Chung New Town;
- Villages in Tai Ho;
- Users and workers of the proposed Lantau Logistics Park, MTR Siu Ho Wan Railway Depot and North Lantau Highway; and

- Hikers in Tai Ho.

4.1.7 Cultural Heritage

Cultural and heritage resources in the vicinity of the study area would be:

- Ha Law Wan archaeological site in Airport Island.

4.2 Major Elements of Surrounding Environment and Land Uses

The area along the east coast of the Airport Island has generally been developed as either commercial area or highway infrastructure. The existing Tung Chung New Town is mainly characterised by residential areas. To the north of the existing Tung Chung New Town is the Tung Chung East Future Development which, subject to separate studies by the respective project proponent, could comprise of residential / commercial / entertainment uses. To the east at Siu Ho Wan where the existing landuse includes train depot, maintenance depot, water treatment work, sewage treatment work etc. However, the area at Tai Ho, in between Tung Chung and Siu Ho Wan, is characterised by Tai Ho Wan where is an ecologically sensitive area.

5. ENVIRONMENTAL MITIGATION MEASURES

Based upon the potential impacts as a result of the construction and operation of the project, it is anticipated that mitigation measures will be required. Potential measures to be further studied are highlighted below.

5.1 Measures to Minimize Environmental Impacts

5.1.1 Air Quality

Appropriate dust mitigation measures as stipulated in the Air Pollution Control (Construction Dust) Regulations will be implemented to control fugitive dust emission. The key measures are:

1. Regular watering on all exposed and unpaved surface, particularly during dry weather;
2. Frequent watering for particularly dusty construction areas and areas close to air sensitive receivers;
3. Covering all excavated or stockpile of dusty material by impervious sheeting or spraying with water to maintain the entire surface wet;
4. Provision of wheel washing facilities at the exit points of the site; and
5. Covering of any dusty materials on a vehicle leaving the site.

Subject to investigation, the following measures will be considered to minimize the air quality impacts during operational period on nearby air sensitive receivers.

1. Provision of buffer area between the sources and the receivers; and
2. Locating the ventilation building and tunnel portal away from the air sensitive receivers.

5.1.2 Noise

Subject to investigation, the following measures will be considered during construction period to minimize construction noise impacts on nearby noise sensitive receivers.

1. Implementing good site practices such as orientating the noisy plant away from the nearby noise sensitive receivers, proper fitting of silencer on the construction equipment and use of quiet plant;
2. Temporary noise barriers are likely to be required along the construction site boundary such that construction equipment and noise are screened;
3. Silencers on construction equipment should be properly fitted and maintained during the construction works; and
4. Mobile plant should be sited as far as away from noise sensitive receivers as possible and practicable.

Subject to investigation, the following measures will be considered to minimize the traffic noise impacts during operational period on nearby noise sensitive receivers.

1. Short noise barriers close to the noise sources (eg vehicle holding areas) may be required for operational noise from vehicles; and
2. Sound attenuators for the ventilation plant for various facilities.

5.1.3 Water Quality

The following mitigation measures will be adopted to control the water quality impact:

1. Good site practice in accordance with the ProPECC PN 1/94 "Construction Site Drainage" and "Recommended Pollution Control Clauses for Construction Contracts" issued by EPD, and the procedures in the Environment, Transport and Works Bureau (ETWB) Technical Circular (Works) (TCW) No. 5/2005 " Protection of Natural Stream / Rivers from adverse impact arising from construction works";
2. All runoffs arising from the construction site should be properly collected and treated to ensure the effluent comply with Water Pollution Control Ordinance. Silt trap and oil interceptor will be provided to remove the oil, lubricants, grease, silt, grit and debris from the wastewater before being pumped to the public stormwater drainage system. The silt traps and oil interceptors will be cleaned and maintained regularly;
3. During dredging and filling works, appropriate construction methods will be selected to control the generation of sediment plumes; and
4. Proper construction techniques will be employed to prevent sediment release during construction. Stringent site sediment control and mitigation measures will be implemented to prevent elevation of suspended solid.

The following measures will be adopted to minimize the water quality impacts during operational period on nearby water sensitive receivers.

1. Stormwater from reclamation should be collected into drainage system via silt traps and oil interceptor to remove silt / grit and oil before discharging; and
2. Develop contingency plan for accidental chemical spillage.

5.1.4 Ecology

Avoidance of any identified sensitive sites will be the preferred mitigation measures. Subject to investigation, the following mitigation measures during construction phase will be considered to minimize the impact.

1. The water quality impact mitigation measures proposed in Section 5.1.3 will be adopted;
2. Construction vessels would be kept at a slow speed in order to avoid dolphin-vessel collision; and

3. Disruption to terrestrial sensitive areas will be avoided as far as possible.

The following mitigation measures will be considered to minimize the impact during operational phase.

1. The water quality impact mitigation measures proposed in Section 5.1.3 will be adopted.

5.1.5 Fishery

Subject to investigation, the following mitigation measures during construction phase will be considered to minimize the impact.

1. The water quality impact mitigation measures proposed in Section 5.1.3 will be adopted.

The following mitigation measures will be considered to minimize the impact during operational phase.

1. The water quality impact mitigation measures proposed in Section 5.1.3 will be adopted.

5.1.6 Cultural Heritage

Archaeological field investigation will be conducted by qualified archaeologists / marine archaeologists to identify any unknown archaeological sites and built heritage in the vicinity of the HKBCF. For land archaeological survey, investigation will include field walking, augering and test trenching. For marine archaeological survey, investigation will include geophysical survey and diver inspection. Mitigation measures for cultural heritage impacts in the first instance will include avoidance of the area of importance and minimisation of direct impacts.

5.1.7 Landscape and Visual

Mitigation measures to minimize environmental impact during both the construction and operational phases should be comprehensively reviewed for both landscape and visual aspects. Possible mitigation measures are as follows:

<u>During construction phase</u>

- Temporary greening treatment on bare soil surface before construction works of structures take place;
- Hoarding to be erected at the interface between the construction site and the existing area; and
- Early formation of the planting area and advance planting of vegetations on the concerned landscape sensitive receivers.

<u>During operation phase</u>

- Aesthetic design of the buildings;
- Tree planting and earth mounds to visually screen and soften the structures;
- Configuration of the reclaimed lands to match the coastline nearby. Curvilinear shape is preferred over rectangular and linear shapes for their relatively more naturalistic appearance. Natural materials for the edge treatment of the coastline are also preferred to blend with the nature; and
- Early formation of the planting area and advance planting of vegetations on the concerned landscape sensitive receivers in operation phase.

5.1.8 Waste Management

The waste management hierarchy is to minimise waste generation. If waste generation cannot be avoided, a material/waste management plan will be established prior to commencement of excavation and construction work to outline the methods that can be incorporated into the project for waste minimization, including reuse, recycle, handling, storage, transportation and disposal of expected waste materials. For handling of dredged sediment, ETWB TCW No. 34 /2002 will be followed.

Waste generated during the operational phase of the HKBCF could be properly handled by good practices to be further developed.

5.2 Severity, Distribution and Duration of Environmental Effects

For HKBCF, ecology, water quality and landscape and visual impacts will be most severe during construction.

The level of archaeological impact will need to be ascertained subject to detailed marine cultural heritage assessments.

Subject to investigation on noise impacts, permanent noise barrier may be required to keep the noise impact to acceptable level.

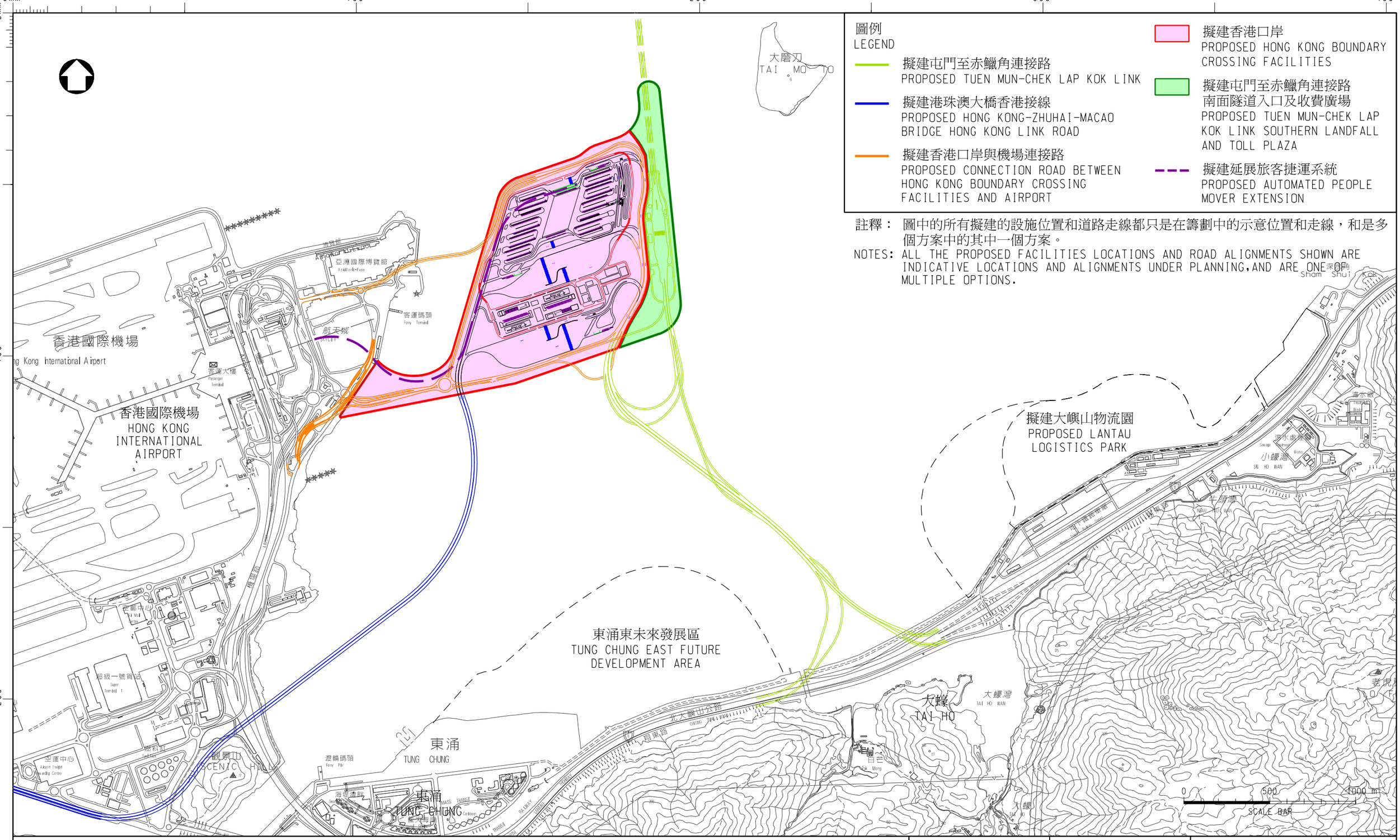
5.3 Further Implication

Public consultation will be arranged once sufficient information is available.

6. USE OF PREVIOUSLY APPROVED EIA REPORTS

No previous approved EIA report exists for the proposed project. However, reference may be made to the following previously approved EIA reports within the study area:

Register No	Title
EIA-006/BC	New Airport Master Plan – Environmental Impact Assessment
EIA-015/BC	EIA of the Proposed 6000MW Thermal Power Station at Black Point: Initial Assessment and Key Issue Assessment
AEIAR-031/2000	Northshore Lantau Development Feasibility Study
AEIAR-066/2002	Construction of Lung Kwu Chau Jetty
AEIAR-089/2005	New Contaminated Mud Marine Disposal Facility at Airport East / East Sha Chau Area
DIR-143/2006	Proposed 132kV Submarine Cable Route for Airport "A" to Castle Peak Power Station Cable Circuit
AEP-257/2006	Liquefied Natural Gas Receiving Terminal and Associated Facilities



圖例
LEGEND

- 擬建屯門至赤鱲角連接路
  PROPOSED TUEN MUN-CHEK LAP KOK LINK
- 擬建港珠澳大橋香港接線
  PROPOSED HONG KONG-ZHUHAI-MACAO BRIDGE HONG KONG LINK ROAD
- 擬建香港口岸與機場連接路
  PROPOSED CONNECTION ROAD BETWEEN HONG KONG BOUNDARY CROSSING FACILITIES AND AIRPORT
- 擬建香港口岸
  PROPOSED HONG KONG BOUNDARY CROSSING FACILITIES
- 擬建屯門至赤鱲角連接路南面隧道入口及收費廣場
  PROPOSED TUEN MUN-CHEK LAP KOK LINK SOUTHERN LANDFALL AND TOLL PLAZA
- 擬建延展旅客捷運系統
  PROPOSED AUTOMATED PEOPLE MOVER EXTENSION

註釋： 圖中的所有擬建的設施位置和道路走線都只是在籌劃中的示意位置和走線，和是多個方案中的其中一個方案。

NOTES: ALL THE PROPOSED FACILITIES LOCATIONS AND ROAD ALIGNMENTS SHOWN ARE INDICATIVE LOCATIONS AND ALIGNMENTS UNDER PLANNING,AND ARE ONE OF MULTIPLE OPTIONS.

圖則名稱 drawing title

港珠澳大橋 - 香港口岸初步選址地點

HONG KONG - ZHUHAI - MACAO BRIDGE HONG KONG BOUNDARY CROSSING FACILITIES - TENTATIVE SITE LOCATION

設計 designed	繪圖 drawn	圖則編號 drawing no.	比例 scale
K Y HO 06/03/08	Y L SHIU 11/03/08	HZMN07001-SK0025	1:20000
覆核 checked	批准 approved		
K MA	H C TAM		

港珠澳大橋香港工程管理處
HONG KONG - ZHUHAI - MACAO BRIDGE HONG KONG PROJECT MANAGEMENT OFFICE

HIGHWAYS DEPARTMENT HONG KONG 香港政府路署

C:\CDMS\HZM\dms00209\HZMN07001-SK0025.dgn

A3 420 x 297