

**The Government of the Hong Kong Special Administrative Region**  
**Civil Engineering and Development Department**

**PROJECT PROFILE**  
**FOR**  
**WAN CHAI DEVELOPMENT PHASE II and**  
**CENTRAL-WAN CHAI BYPASS**

**Maunsell Consultants Asia Ltd**

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**FIGURE**

Figure 1      Wan Chai Development Phase II and Central-Wan Chai Bypass

## 1. BASIC INFORMATION

### Project Title

- 1.1 Wan Chai Development Phase II (WDII) and Central-Wan Chai Bypass (the Trunk Road) (hereinafter referred to as the Project).

### Background, Purpose and Nature of the Project

- 1.2 The overall objective of the WDII is to make provision for the construction of a section of the Trunk Road which runs along the Wan Chai shoreline in tunnel and connects to the existing elevated Island Eastern Corridor (IEC) in North Point and slip roads for connection to the Trunk Road and Road P2 connecting the ground level road from Central to the realigned Hung Hing Road. At the same time, any land formed for this transport infrastructure will be developed into an attractive waterfront promenade for the enjoyment of the public.
- 1.3 The Government commissioned a comprehensive feasibility study for the WDII project (the "WDIICFS") in June 1999, which was completed in August 2001. An Environmental Impact Assessment (EIA) Report on the WDII, which contained the environmental assessment of the proposed works, was approved under the Environmental Impact Assessment Ordinance (EIAO) in 2001 (Application No. EIA-058/2001).
- 1.4 In parallel with the WDIICFS, Government also commissioned a Project Review Study of the Trunk Road, which was completed in July 2001. An EIA Report on the Central-Wan Chai Bypass and Island Eastern Corridor Link, which contained the environmental assessment of the proposed works, was approved under the Environmental Impact Assessment Ordinance (EIAO) in 2001 (Application No. EIA-057/2001).
- 1.5 The Trunk Road and the associated land use proposals for the WDII project were incorporated in a draft Wan Chai North Outline Zoning Plan (OZP) which was submitted to the Town Planning Board (TPB) in April 2002 for gazettal under the Town Planning Ordinance (TPO). Objections to the draft Wan Chai North OZP were received and, in February 2003, the Society for the Protection of Harbour Limited sought a judicial review of the decisions of the TPB in connection with the draft Wan Chai North OZP. Following the judgement of the High Court, whereby the decision of the TPB in respect of the draft OZP was quashed, and an appeal by the TPB directly to the Court of Final Appeal (CFA), in January 2004 the CFA handed down its judgement on the appeal.
- 1.6 The CFA ruled that the presumption against reclamation in the Protection of the Harbour Ordinance (PHO) can only be rebutted by establishing an overriding public need for reclamation, and that there must be cogent and convincing materials available to enable the decision-maker to be satisfied that the overriding public need test is fulfilled for rebutting the presumption against reclamation.
- 1.7 In the light of the CFA ruling, Civil Engineering and Development Department commissioned Maunsell Consultants Asia Limited (MCAL) to conduct a planning and engineering review of WDII (the WDII Review) to ensure full compliance with the PHO and the judgment of the CFA. The WDII Review commenced in March 2004.
- 1.8 Under the WDII Review, a Preferred Scheme has been derived, with minimum reclamation necessary to meet the overriding need, in conformance with the Protection of the Harbour Ordinance.

**Name of Project Proponent**

- 1.9 Hong Kong Island and Islands Development Office, Civil Engineering and Development Department

**Location and Scale of Project and History of Site**

- 1.10 The Project is located in Wan Chai North and is demarcated by Gloucester Road and Victoria Park Road to the south, Fenwick Pier Street to the west and Tong Shui Road Interchange to the east, as shown in **Figure 1**.
- 1.11 Within the study area there are existing developments on existing reclaimed land along the Wan Chai, Causeway Bay and North Point shorelines. Major land uses include the Hong Kong Convention & Exhibition Centre (HKCEC) Extension, the Wan Chai Ferry Pier, the ex-Wan Chai Public Cargo Working Area (ex-PCWA), the Royal Hong Kong Yacht Club (RHKYC), the Police Officers' Club, the Causeway Bay Typhoon Shelter (CBTS) and residential developments.
- 1.12 Under the Preferred Scheme, permanent reclaimed land will be formed along the existing Wan Chai and North Point shorelines, for the construction of the Trunk Road and other key transport infrastructure. At the same time, an attractive waterfront with a new public promenade will be provided. A total reclamation area of some 15 ha is envisaged, with the newly reclaimed land forming a narrow strip of land along the existing Wan Chai shoreline from the interface with the Central Reclamation Phase III (CRIII) project west of the HKCEC Extension, along the Wan Chai shoreline up to the west of the ex-PCWA, and along the North Point shoreline from the east of the CBTS to the west of City Garden (**Figure 1**). The Project will also include roads, pedestrian links including footbridges and landscape decks to the waterfront, a new cross-harbour water mains from Wan Chai to Tsim Sha Tsui and a new sewage outfall from the Wan Chai East Sewage Screening Plant, reprovisioning of affected facilities including drainage outfalls, cooling water intakes, WSD's salt water pumping station, ferry pier, helipad, etc, and waterfront promenade landscaping. During the Trunk Road construction, temporary reclamation will be required in the ex-PCWA basin and the CBTS to facilitate cut-and-cover tunnel construction of the Trunk Road. Existing moorings in the CBTS will need to be relocated to a temporary typhoon shelter outside the CBTS. After construction of the Trunk Road, the temporary reclamation will be removed and the ex-PCWA basin and the CBTS will be reinstated.
- 1.13 In reviewing the change of scope and extent of the elements of the Project from what was originally proposed, and which was covered by the approved EIA Reports under the EIAO in 2001, the changes are confined to the nature and extent of the Trunk Road and associated ground level roads, Road P2, and the extent of reclamation. This Project Profile is confined to those elements of the Project that have changed significantly from the scheme as presented in the approved EIA Reports. As the original schemes for the cross-harbour water mains and the sewage outfall have not changed, the related EIA assessments of the approved EIA Report on the WDII for these works therefore remain valid.
- 1.14 The extent of the Trunk Road covered by the approved EIA Report on the Central-Wan Chai Bypass and Island Eastern Corridor Link includes the Central Interchange in Central Reclamation Phase I (CRI), the Trunk Road tunnel that runs through CRIII and partly through WDII (extending to the location of the ex-PCWA basin), and the IECL through WDII connecting the Trunk Road tunnel to the IEC at the eastern end of the CBTS. It should be noted that it is only the section of the Trunk Road through WDII that is subject to change under the WDII Review. As the original scheme for the Trunk Road through CRI and CRIII has not changed, the EIA assessments of the approved EIA Report and the Environmental Permit (EP-122/2002) issued for the construction of the Trunk Road within the CRIII area remain valid. This Project Profile is confined to the elements that have changed significantly from the scheme as presented in the approved EIA Report, viz. the Trunk Road tunnel through WDII and its connection to the existing IEC (**Figure 1**).

**Number and Types of Designated Projects Covered by the Project Profile**

- 1.15 The Project falls within item 1 under Schedule 3 of the Environmental Impact Assessment Ordinance (EIAO), i.e. engineering feasibility study of an urban development project with a study area covering more than 20 ha. It is a major Designated Project (DP) requiring an EIA report.
- 1.16 The Project includes five Schedule 2 DPs that, under the EIAO, require Environmental Permits (EPs) to be granted by the Director of Environmental Protection (DEP) before they may be either constructed or operated. The five DPs include:
1. Reclamation works including associated dredging works, being considered as a DP under Schedule 2, Part I, C.1 of the EIAO - reclamation more than 5 ha in size;
  2. WDII roads including Road P2, being considered as a DP under Schedule 2, Part I, A.1 of the EIAO - primary/district distributor roads;
  3. Central-Wanchai Bypass, being considered as a DP under Schedule 2 Part I, A.1 of the EIAO - trunk road and Schedule 2 Part I, A.7 of the EIAO - road tunnel more than 800 m in length;
  4. Temporary typhoon shelter, being considered as a DP under Schedule 2 Part I, C.5 of the EIAO - a typhoon shelter designed to provide moorings for not less than 30 vessels;
  5. Wan Chai East Sewage Outfall, being considered as a DP under Schedule 2 Part I, F.5 of the EIAO - submarine sewage pipeline with a diameter more than 1,200 mm and Schedule 2 Part I, F.6 of the EIAO - sewage outfall; and
  6. Cross-harbour Water Mains from Wan Chai to Tsim Sha Tsui, being considered as a DP under Schedule 2 Part I, C.12 of the EIAO - a dredging operation which is less than 100m from a seawater intake point.
- 1.17 This Project Profile only covers the DPs in Items 1 to 4. Since the original schemes for the DPs in Item 5 (Wan Chai East Sewage Outfall) and Item 6 (Cross-Harbour Water Mains) have not changed, the EIA assessments of the approved EIA Report on the WDII in 2001 (Application No. EIA-058/2001) for these 2 DPs remain valid. These two items are not covered by this Project Profile.

**Name and Telephone Number of Contact Person**

- 1.18 All queries regarding the Project can be addressed to:
- Name: Mr LAM Sing-Kwok (Chief Engineer/HK2)  
Department: Hong Kong Island and Islands Development Office  
Civil Engineering and Development Department  
Phone No.: 2231 4443

## **2. OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME**

### **Project Implementation and Timetable**

- 2.1 The Project is being reviewed under Supplemental Agreement No. 1 to Agreement No. CE 54/2001 (CE) starting on 11 March 2004 and a Preferred Scheme has been developed. An Environmental Impact Assessment will be carried out accordingly. The commencement of construction is tentatively scheduled to be in 2008 for completion by 2015.

### **Interactions with Other Projects**

- 2.2 There are likely interactions with the following projects:
- Central Reclamation Phase III
  - Hong Kong Convention and Exhibition Centre, Atrium Link Extension

### 3. POSSIBLE IMPACT ON THE ENVIRONMENT

- 3.1 Based on the nature and location of the Project, potential environmental impacts associated with the construction and operation of the Project have been identified, as presented below.

#### **Air Quality**

##### Construction Phase

- 3.2 Possible air quality impacts during construction phase of the Project include:
- fugitive dust arising from any reclamation, demolition and construction of structures, movement of construction traffic over the site area, and wind erosion of open sites and stockpiling areas;
  - cumulative impact of fugitive dust resulting from any adjacent construction works.
- 3.3 Air sensitive receivers (ASRs) such as residential premises, offices, shopping centres, active open spaces in the vicinity of the work sites may be impacted. Nevertheless, the impact is expected to be temporary and can be mitigated with the implementation of proper dust control and suppression measures as stipulated in the Air Pollution Control (Construction Dust) Regulation.

##### Operation Phase

- 3.4 Operation phase air quality impact arising from the Project would be vehicle emissions of nitrogen dioxide (NO<sub>2</sub>) and respirable suspended particulates (RSP) from traffic on the proposed roads including at-grade local roads and Road P2. Cumulative air quality impact from tunnel portal and ventilation building emissions from the proposed Trunk Road and the existing Cross Harbour Tunnel could have adverse impact on the nearby ASRs and mitigation measures may need to be considered.
- 3.5 Odour from the CBTS is an existing problem that would have an adverse effect on any sensitive land uses that may be proposed for the Causeway Bay promenade. Should any land uses be proposed under WDII that may be sensitive to odour, practicable measures to mitigate the existing odour from the CBTS should be incorporated in the implementation of the Project.

#### **Noise**

##### Construction Phase

- 3.6 Noise impacts during the construction phase may result from various phases of construction activities, neighbouring concurrent construction works, the use of powered mechanical equipment and traffic along site access roads. Construction noise impact is expected to be temporary and can be minimized with implementation of appropriate noise mitigation measures.

##### Operation Phase

- 3.7 Adverse impact from the tunnel section of the Trunk Road is not anticipated. The key noise impact on nearby residential areas would be operation phase traffic noise arising from the proposed new roads in Wan Chai and the open section of the Trunk Road (including the associated slip roads and the connection and associated modification to existing elevated IEC). Noise mitigation measures such as noise barriers may be required.
- 3.8 Fixed plant noise impact from the ventilation buildings would likely be a concern and appropriate mitigation measures may be required.

## **Water Quality**

### Construction Phase

- 3.9 Dredging and reclamation works (including permanent and temporary reclamation) would be the key water quality impact associated with the construction of the Project. During dredging and reclamation activities, there could be temporary elevation in concentrations of suspended solids (SS) and generation of sediment plumes, possible release of organic and inorganic contaminants and nutrients as well as creation of potential embayment, which may affect the water quality of Victoria Harbour. Appropriate mitigation measures may need to be recommended.
- 3.10 For the land-based construction works, site runoff is expected to be the major source of water quality impact. However, the water quality impact would be readily mitigated with the adoption of good site management practices.

### Operation Phase

- 3.11 The permanent reclamation required for the Project would not cause any embayment and, whilst the influence of the change in coastline configuration on the hydrodynamic and water quality conditions of the Harbour will need to be assessed, no major impacts are expected.
- 3.12 Water quality impact during the operation phase of the proposed road infrastructure is considered negligible, as the impact would be confined to the road surface runoff.

## **Waste Management**

### Construction Phase

- 3.13 Wastes generated by the construction works are likely to include site wastes, chemical wastes, construction wastes and dredged sediment. The possible presence of contaminated sediments that may require dredging and disposal will need to be determined.

### Operation Phase

- 3.14 Wastes generated during the operation phase would be limited, comprising some domestic and commercial wastes. All the future municipal solid wastes will be collected and recycled or directed to landfill as appropriate. Adverse environmental impacts are not expected to arise from the operation of the Project.

## **Ecology**

### Construction Phase

- 3.15 There are no ecological sensitive receivers, such as Sites of Special Scientific Interest (SSSIs), Fish Culture Zones and Marine Parks and/or Reserves and other areas of ecological importance or conservation interest, within or in the immediate vicinity of the site area.
- 3.16 The terrestrial ecological resources within the study area mainly consist of man-made terrestrial habitat with vegetation of low ecological value and associated bird community. Loss of this terrestrial habitat due to landtake for construction and indirect impact on the bird community due to increased background noise are not expected to cause unacceptable terrestrial ecological impact.
- 3.17 Based on the previously approved EIA Report on the WDII, the inter-tidal habitats and soft benthic habitats within the study area were considered to be of low ecological value. The soft

bottom marine environment in the Victoria Harbour was polluted and lacked a macro-invertebrate community. The study area consists of mainly man-made coastline, except the natural coastline on Kellett Island. The previous survey indicated that the inter-tidal species found on the natural coastline were all common species and no rare species nor species of conservation value were recorded. Hence, unacceptable marine ecological impact due to the Project is not expected.

#### Operation Phase

- 3.18 Unacceptable ecological impacts are not expected.

### **Land Contamination**

#### Construction Phase

- 3.19 According to the previous approved EIA Report on the WDII, RHKYC and A King Shipyard were identified to be potential sites of land contamination. Based on the current Preferred Scheme, part of the Trunk Road tunnel alignment will pass through the RHKYC site and part of the proposed harbour-front enhancement works may encroach upon the A King Shipyard site. Land contamination would be an issue during construction phase of the Project. Potential land contamination impacts should be assessed and remedial measures should be provided if necessary to ensure the health and safety of workers during construction on site.

#### Operation Phase

- 3.20 No land contamination issue is expected.

### **Landscape and Visual**

#### Construction Phase

- 3.21 Landscape and visual impacts are expected from construction works such as reclamation, road construction, laying of utilities, site cabins, construction plant, etc. Nevertheless, the impacts would be temporary and can be minimized by appropriate mitigation measures.

#### Operation Phase

- 3.22 During operation phase, potential landscape impacts may arise from disturbance of landscape resource (e.g. trees) and potential visual impacts from the new coastline and above ground structures such as roads, viaducts, and ventilation buildings. These potential impacts will need to be addressed.

#### **4. ENVIRONMENTAL PROTECTION MEASURES TO BE INCORPORATED**

##### **Air Quality Impact**

- 4.1 Construction dust would not be an issue with the implementation of proper dust control and suppression measures as stipulated in the Air Pollution Control (Construction Dust) Regulation.
- 4.2 For operation phase air quality impact, reference will be made to the Air Pollution Control Ordinance (APCO) (Cap. 311) and the guiding Hong Kong Air Quality Objectives (AQOs) for the accepted levels of pollution for the sensitive receivers. Mitigation measures will be developed in concept to address any exceedance found and the necessary performance and implementation of these will be documented in the EIA study.

##### **Noise Impact**

- 4.3 With the application of mitigation in the form of quieter alternative mechanical plant, installation of movable noise barriers, reduction in number of plant and on-time percentage powered mechanical equipment, etc, construction noise criteria would normally be complied with and no adverse residual impacts would be expected during construction phase.
- 4.4 Operational traffic noise arising from the new roads would be minimised with the implementation of noise mitigation measures such as provision of noise barriers, enclosures, low noise road surfacing, etc.

##### **Water Quality Impact**

- 4.5 Mitigation measures during any necessary dredging and filling operations would include:
- installation of silt curtains during dredging works;
  - construction of the leading edges of seawalls in the early stages of the reclamation to effectively confine sediment release during dredging and filling;
  - reduction of the dredging rate, use of tightly closed grabs, and control of grab descending speed to minimise disturbance to the seabed and sediment loss during dredging.
- 4.6 For land-based construction activities, water quality impact would be readily mitigated with the adoption of good site arrangement and management practices.

##### **Waste Management Implications**

- 4.7 Standard waste management measures and good site practices in waste handling, disposal and transportation would be implemented.
- 4.8 The requirements and procedures for dredged mud disposal under the Environment, Transport and Works Bureau Technical Circular No. 34/2002 would be followed.

##### **Ecological Impact**

- 4.9 Compensatory planting of native trees would mitigate tree loss. To reduce impact on the marine environment, closed-grab dredger and silt curtains would be deployed to minimise impacts on the benthos, and other organisms.

**Land Contamination Impact**

- 4.10 Remedial measures should be provided if necessary to ensure the health and safety of workers during construction on site.

**Landscape and Visual Impact**

- 4.11 The following mitigation measures should be implemented:

Construction Phase

- Avoid or minimize disturbance to significant landscape resources;
- Mitigate unavoidable landscape impacts through compensatory planting or transplantation; and
- Use decorative screen hoarding and control night time lighting.

Operation Phase

- Landscape planting for the Project and reinstatement of planted areas; and
- Aesthetic architectural design including colour and finishes of any visible structure.

## 5. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

- 5.1 The major existing and planned sensitive receivers and sensitive parts of the natural environment that might be affected by the proposed project are highlighted in Table 5.1.

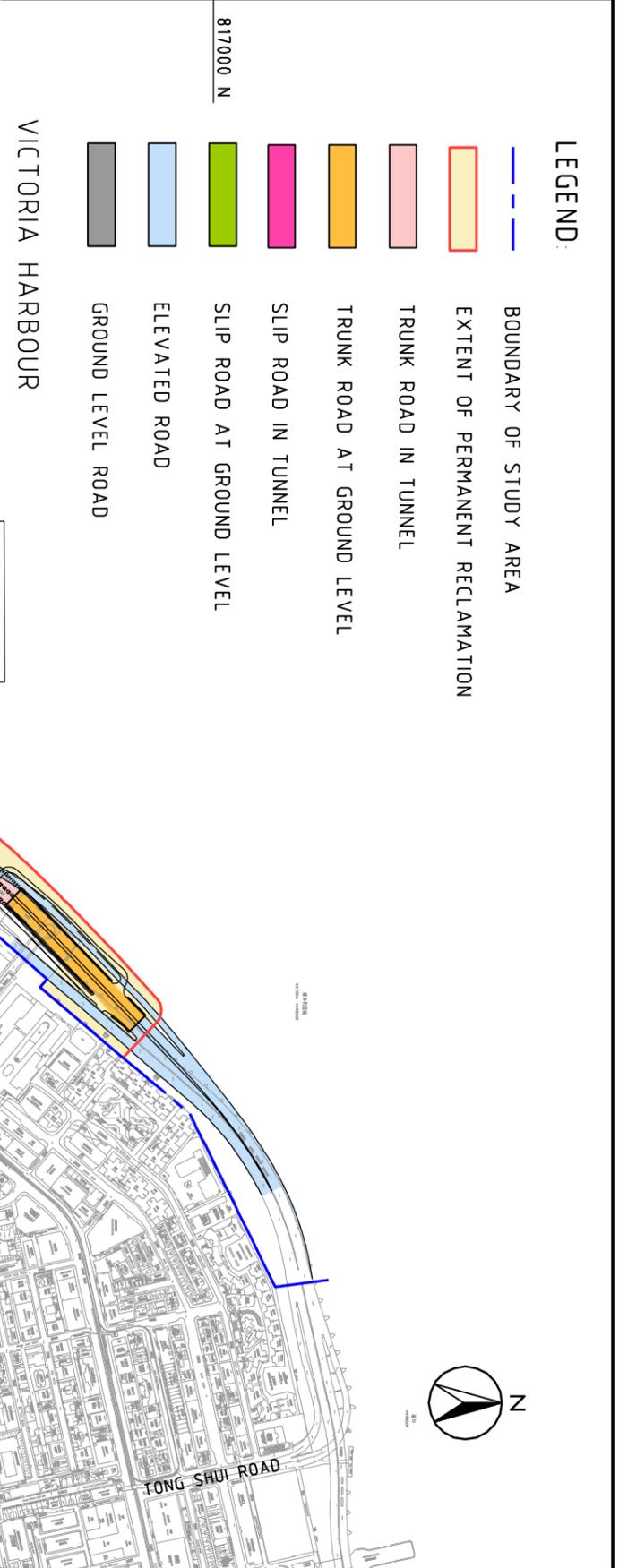
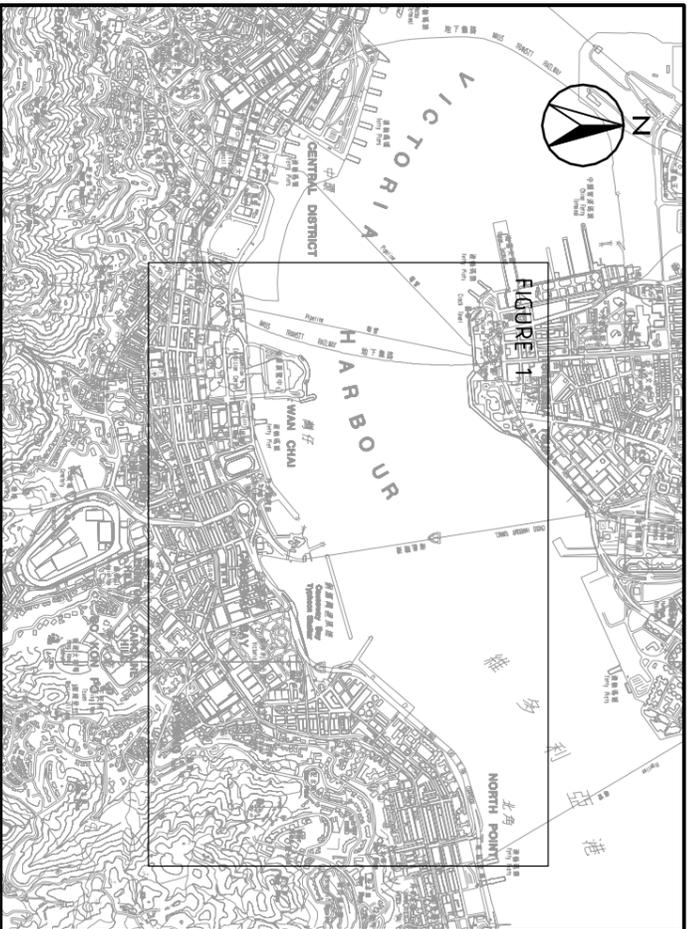
**Table 5.1 Major Sensitive Receivers**

Type of Sensitive Uses	Sensitive Receivers/Sensitive Parts of Natural Environment
Residential Development	Causeway Bay Centre, Gloucester Road 169-170, Elizabeth House, Riviera Mansion, Marco Polo Mansion, Mayson Garden Building, Belle House, Victoria Centre, Viking Garden, Gorden House, Hoi Tao Building, Harbour Heights, City Garden, Comprehensive Development Area (CDA) near Oil Street
Educational Institutions	Victoria Park School for the Deaf, Hong Kong Baptist Church Henrietta Secondary School, PLK Yu Lee Mo Fan Memorial School
Water Bodies	Victoria Harbour
Places of High Visual Value	Harcourt Garden, Wan Chai Sports Ground, Victoria Park
Government / Community Facilities	WSD salt water intakes including Wan Chai, Central, Sheung Wan, Kennedy Town, Quarry Bay, Sai Wan Ho, Siu Sai Wan, Tai Wan, Cha Kwo Ling, Yau Tong, Kowloon South. Cooling water intakes including Windsor House, Excelsior Hotel and World Trade Centre, Sun Hung Kai Centre, Great Eagle Centre/ China Resources Building, Wan Chai Tower/ Revenue Tower/ Immigration Tower, HK Convention and Exhibition Centre, Telecom House/ Hong Kong Academy for Performing Arts/ Shun On Centre

## **6. USE OF PREVIOUS APPROVED EIA REPORTS**

6.1 The following approved EIA reports are referenced for the preparation of this Project Profile:

- EIA Report on Wan Chai Development Phase II, Territory Development Department, 2001 (EIA-058/2001);
- EIA Report on Central – Wan Chai Bypass and Island Eastern Corridor Link, Highways Department, 2001 (EIA-057/2001);
- EIA Report on Central Reclamation Phase III - Studies, Site Investigation, Design and Construction, Territory Development Department, 2001 (EIA-055/2001); and
- EIA Report on Hong Kong Convention and Exhibition Centre, Atrium Link Extension, Hong Kong Trade Development Council, 2006 (EIA-120/2006).



- LEGEND:**
- BOUNDARY OF STUDY AREA
  - EXTENT OF PERMANENT RECLAMATION
  - TRUNK ROAD IN TUNNEL
  - TRUNK ROAD AT GROUND LEVEL
  - SLIP ROAD IN TUNNEL
  - SLIP ROAD AT GROUND LEVEL
  - ELEVATED ROAD
  - GROUND LEVEL ROAD

