

Cross Bay Link, Tseung Kwan O

Project Profile

Civil Engineering and Development Department

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DRAWINGS

TKZ0570	-	CROSS BAY LINK, TSEUNG KWAN O – LAYOUT PLAN
TKZ0571	-	MAJOR EXISTING AND PLANNED SENSITIVE RECEIVERS - LOCATION PLAN

1. BASIC INFORMATION

1.1 Project Title

1.1.1 Cross Bay Link, Tseung Kwan O

1.2 Purpose and Nature of Project

1.2.1 The proposed Cross Bak Link (CBL) is an approximately 1.8 kilometres (km) long dual two-lane road with a cycle track and a footpath across the Junk Bay mainly on viaduct. The CBL will connect the Tseung Kwan O – Lam Tin Tunnel (TKO-LT Tunnel) to Wan Po Road near Area 86 of Tseung Kwan O (TKO) so that traffic to and from the southeastern areas of TKO will be able to by-pass the TKO town centre and avoid overloading the roads in TKO town centre. The CBL together with the TKO-LT Tunnel will form a new external road link which is required to be provided around 2016 to meet the anticipated traffic flow generated from the further population intake and developments in TKO.

1.3 Name of Project Proponent

1.3.1 New Territories East Development Office of Civil Engineering and Development Department, Hong Kong Special Administrative Region Government.

1.4 Background, Location and Scale of Project

1.4.1 In July 2002, the Civil Engineering and Development Department (CEDD) commissioned the Feasibility Study for Further Development of Tseung Kwan O (the TKO Study) to formulate a comprehensive plan for further development of TKO and improvement of its overall design with a view to building TKO into a new town that can boast of its convenience, vibrancy, distinctive urban design and quality living environment. As an integral part of the TKO Study, the

long-term transport need of TKO had been examined.

- 1.4.2 The TKO Study was substantially completed in 2005. The TKO Study identified that the TKO Tunnel (the existing main connection between TKO and other areas in the territory) would have insufficient capacity to cater for the projected traffic flow as a result of further population intake and development. It recommended that a new external road network comprising the CBL and TKO-LT Tunnel should be provided around 2016 to meet the anticipated traffic flow.
- 1.4.3 In the TKO Study, the proposed CBL is a dual-two lane road. In response to public demand, a cycle track and a footpath will be included in the CBL.
- 1.4.4 A plan showing the location of the CBL project (Drawing no. TKZ0570) is attached.
- 1.4.5 The scope of the CBL project includes:
- (a) construction of an approximately 1.8 km long dual two-lane road mainly on viaduct with a footpath and a cycle track;
 - (b) construction of a 900mm diameter salt water main to link up the trunk salt water supply system along Wan Po Road to those in TKO Town Centre and Tiu Keng Leng (the alignment of the salt water main is subject to investigation); and
 - (c) the associated civil, structural, marine, electrical and mechanical, landscaping, and environmental protection and mitigation works.

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

- 1.5.1 This project profile covers the following DP under Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO):
- (a) Cross Bay Link, being a district distributor road, is considered as a DP under Schedule 2, Part I, A.1 and A.8 of the EIAO

1.6 Name and Telephone Number of Contact Person

1.6.1 All enquiries regarding the project can be addressed to:

Mr LI Tin Sang	Senior Engineer/Tseung Kwan O(1)
	NTE DevO, CEDD
	Tel. No.: 2301 1367
	Fax No.: 2721 8630

2. OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

2.1 Project Planning and Implementation

2.1.1 The Project Proponent will engage consultants to undertake investigation, environmental impact assessment (EIA) study, design and supervision of construction of the project.

2.2 Project Timetable

2.2.1 The tentative implementation programme is as follows:

Investigation and Preliminary Design	Early 2009	-	Late 2011
Detailed Design and Tendering	Late 2011	-	Early 2013
Construction	Early 2013	-	End 2016

2.3 Interaction with Other Projects

2.3.1 The project may have interaction with the other projects including, but not limited to the following:

- (a) TKO-LT Tunnel; and
- (b) Tseung Kwan O Area 86 Development.

3. POSSIBLE IMPACT ON THE ENVIRONMENT

The potential environmental impacts of the proposed works that may arise during both construction and operational phases are described below:

3.1 Air Quality

Construction Phase

3.1.1 Possible air quality impacts during construction phase include:

- fugitive dust arising from excavation, demolition and construction of structures, movement of construction traffic over the site area, and wind erosion of open sites; and
- cumulative impact of fugitive dust resulting from any adjacent construction works.

3.1.2 Air sensitive receivers (ASRs) such as residential premises, offices, shopping centers, and active open spaces in the vicinity of the work sites may be impacted.

Operation Phase

3.1.3 Operation phase air quality impact arising would be vehicle emissions of nitrogen dioxide and respirable suspended particulates from traffic on the proposed roads. Cumulative air quality impact taking into account emissions of TKO-LT tunnel ventilation buildings and the existing roads may have impact on the nearby ASRs.

3.2 Noise

Construction Phase

3.2.1 During the construction phase, powered mechanical equipment which are expected to generate noise include: breakers (both portable and excavator-mounted), power units for various types of plant, including air compressors, excavators, ready mixed concrete lorries and poker vibrators,

drilling machines and cranes. Moreover, major noisy activities include breaking road surface, excavation, piling, concreting, and road surfacing and handling of earth materials.

- 3.2.2 Noise sensitive receivers (NSRs) such as residential premises and schools in the vicinity of the work sites may be impacted.

Operation Phase

- 3.2.3 During the operational phase, traffic noise from the new road may have impact to the NSRs.

3.3 Water Quality

Construction Phase

- 3.3.1 Construction of marine bore piles and pile caps would be the key water quality impact associated with the construction works.
- 3.3.2 During construction of marine bore piles and pile caps, there could be temporary elevation in concentrations of suspended solids and generation of sediment plumes, leakage of concrete, possible release of organic and inorganic contaminants and nutrients as well as creation of potential embayment, which may affect the water quality of Junk Bay.
- 3.3.3 For the land-based construction works, site runoff would be the major source of water quality impact.

Operation Phase

- 3.3.4 Water quality impact during the operation phase of the CBL is considered negligible, as the impact would be confined to the road surface runoff.

3.4 Ecological and Fisheries

Construction Phase

- 3.4.1 Marine bore piling works may impact isolated small colonies of corals located in Junk Bay and fisheries in the area. However, apart from an area of corals of significance close to the Lei Yue Mun Gap, the marine ecology in Junk Bay is considered to be of low conservation interest.

Operation Phase

- 3.4.2 The potential impacts on marine ecology may include small loss of seabed of low ecological value due to bored piling works of the CBL. On the other hand, the bridge piles will provide compensatory surface area to support coral growth. The loss of potential fishing ground is considered to be of little effect on fisheries production of Hong Kong as a whole.

3.5 Waste Management

Construction Phase

- 3.5.1 Wastes generated by the construction works are likely to include excavated spoil, construction wastes, used products and dredged sediment. The possible presence of contaminated sediments that may require dredging and disposal will need to be assessed.

Operation Phase

- 3.5.2 There would be no waste during the operation phase.

3.6 Landscape and Visual

Construction Phase

- 3.6.1 Landscape and visual impacts are expected from construction works such as marine piling, road construction, construction plant, etc. The impacts would be temporary.

Operation Phase

- 3.6.2 The landscape character area of Junk Bay will be impacted by the CBL which will change the open character of the bay permanently and irreversibly, but the design of the main span as a feature bridge will create a slight positive overall impact .

3.7 Cultural Heritage

Marine Archaeology

- 3.7.1 In the EIA of the TKO Study, four surface anomalies and two buried anomalies were identified. During construction and operation phases, impact upon areas of marine archaeological potential (if any) would be avoided as far as practicable. This would be subject to the findings of a visual diver survey which includes a series of transect dives along the western shore and circular searches on the seabed surface anomaly.

4. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

4.1 The major existing and planned sensitive receivers that may be affected by the proposed project are summarized as follows. The locations of these receivers are shown in the attached drawing no. TKZ0571.

Ref	Sensitive Receiver	Type	Status
1	Ocean Shores	Residential	Existing
2	Lohas Park	Residential	Planned
3	Junk Bay	Water Bodies	Existing
4	Tseung Kwan O Industrial Estate	Industrial	Existing
5	G/IC Facilities	G/IC	Planned
6	Area 85 Developments	Residential	Planned

5. ENVIRONMENTAL PROTECTION MEASURES AND ANY FURTHER ENVIRONMENTAL IMPLICATIONS

5.1 Measures to Minimize Environmental Impacts

Air Quality

5.1.1 The following dust control measures to minimize the dust nuisance during the construction phase should be considered:

- vehicle wheel and body washing facilities at site exits
- reduction of vehicular speed
- reduction of unpaved roads
- regular wetting of the site (using browsers, sprays or vapor mists) to reduce dust
- the earthmoving activities must be carefully and well planned. Such planning shall include the transportation routes as well as protective measures such as the employment of water-spraying and tarpaulin sheets to suppress the dust generated during and after excavation

5.1.2 Dust, which is predominantly associated with construction, is not expected to be an issue during the operational phase. Exhaust gaseous emission by vehicles should be considered in the air quality assessment under the EIA Study.

Noise

5.1.3 To mitigate the construction noise impacts, the following measures should be considered:

- use of silenced equipment

- use of mufflers, silencers and acoustic linings for noisy mechanical equipment
- employment of alternative concrete breaking techniques
- siting of equipment
- careful scheduling of work, especially near the educational institution where examination periods shall be taken into consideration
- use of temporary acoustic barriers
- proper maintenance of equipment
- use of construction noise specification and clauses
- adequate site supervision to ensure that every practical means is adopted to minimize the noise impacts

5.1.4 To reduce traffic noise during the operational phase, the following measures should be considered:

- low-noise road surfacing materials
- noise enclosure and/or barrier
- air-conditioning and appropriate glazed windows, if needed

Water Quality

5.1.5 Temporary drainage systems, with interceptor manholes and appropriate sediment settlement measures, will be required to trap oil pollutants and debris initiating from within the site, and to separate pollutants prior to discharging into the drainage system. The following mitigation measures should also be considered:

- before commencement of demolition works, sewer and drainage connections

should be sealed to prevent debris entering the public sewers/drain

- stockpiles should be covered to avoid erosion and washing of solid waste into the drainage system
- for backfilling using public fill, the maximum fine content of fills should not exceed 5%
- installation of silt curtain during bored piling works

5.1.6 During the operation phase, the following mitigation measures should be considered to reduce impact on water quality:

- provision of silt traps to reduce the concentration of silt/sediments in storm water runoff
- regular inspection and maintenance of the drainage system to ensure that pollutant removal facilities are in good working order

Ecology

5.1.7 Mitigation measures to minimize the ecological impacts may include but not limited to:

- compensatory planting to mitigate any felling of existing trees
- bridge piles to serve as hard substrata for colonization of corals

Waste Management

5.1.8 The main source of solid waste during the construction phase will be excavated spoil and sediment. Other materials including surplus construction materials, used products and municipal type waste will also be generated. To minimize impacts, the following mitigation measures should be taken into consideration:

- waste management in the way of avoiding, minimizing, reusing, and recycling should be adopted to reduce waste generation
- solid waste shall be removed from the site and taken to a designated disposal site
- contaminated sediment will, subject to its detailed classification by a forthcoming site investigation, be properly disposed of to relevant designated dumping ground

Landscape and Visual

5.1.9 Mitigation measures to minimize the landscape and visual impacts may include but not limited to:

- compensatory planting
- aesthetic design of elevated structures, retaining walls and noise mitigation measures

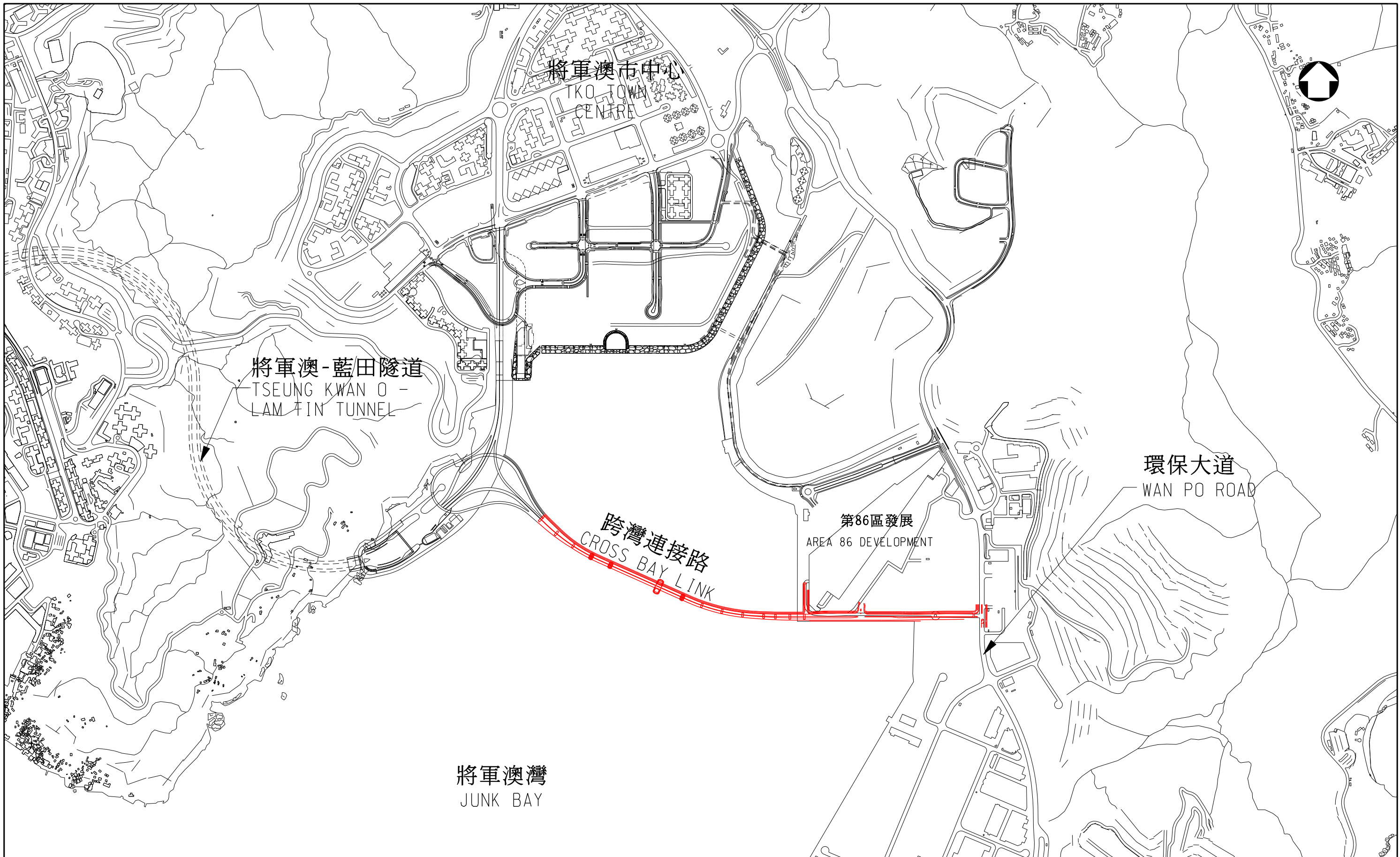
Cultural Heritage

5.1.10 Impacts to sites of cultural heritage or archaeological resources (if any) that are affected by the project should be assessed and mitigation measures may include but not limited to:

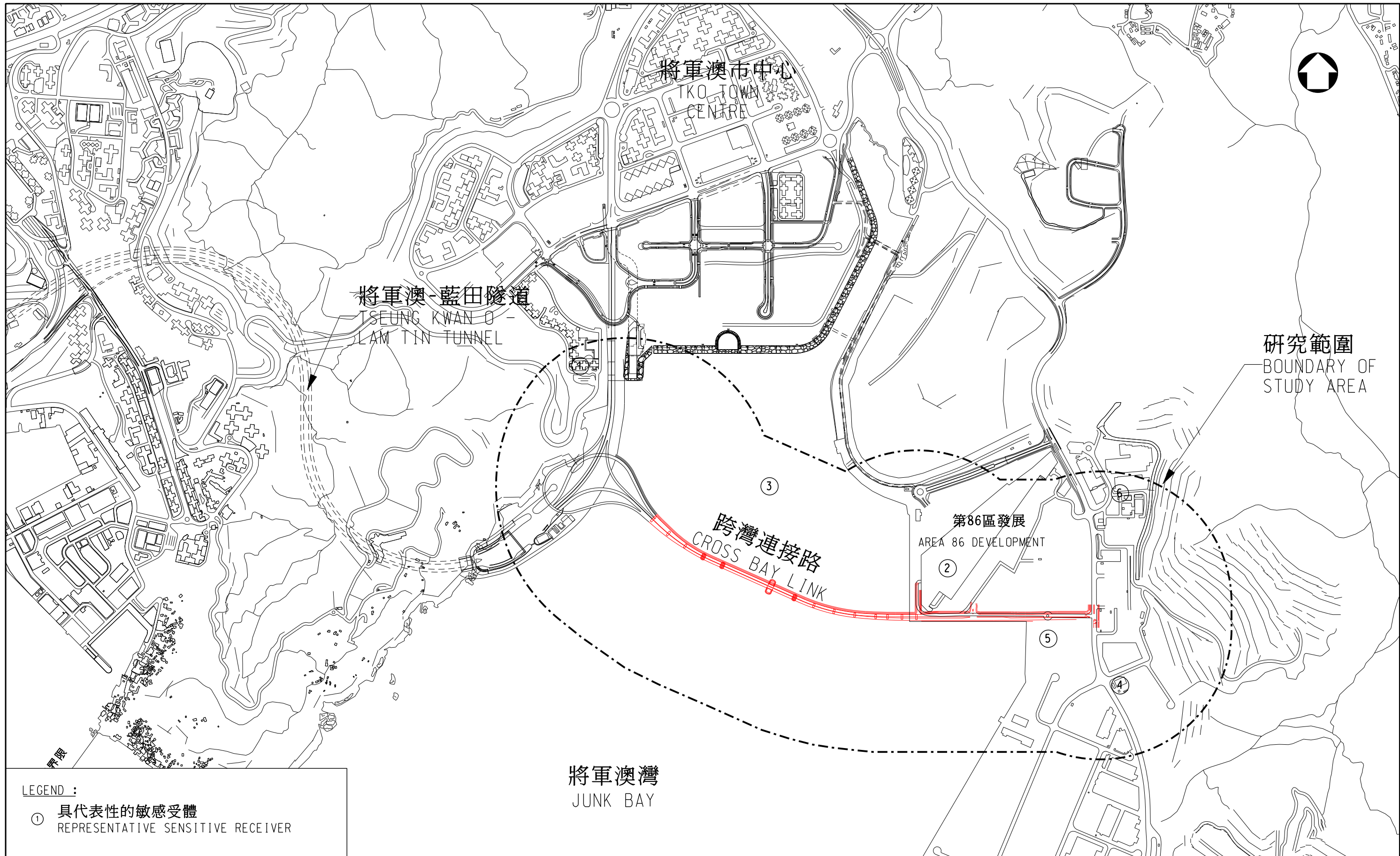
- preservation in whole or in part
- rescue excavation
- temporarily fenced off buffer zone
- monitoring of vibration impacts

6. USE OF PREVIOUSLY APPROVED EIA REPORT


- 6.1 The proposed CBL is one of the Designated Projects (DPs) included in the Environmental Impact Assessment (EIA) Report of the Feasibility Study for Further Development of Tseung Kwan O which was approved on 8 Dec 2005 under Schedule 3 of the EIAO with Register No. AEIAR-092/2005. This approved EIA Report has assessed the cumulative impacts of the proposed projects in TKO, including Cross Bay Link, TKO-LT Tunnel and other developments in TKO. It will be referred to in the present study.



圖則名稱 drawing title 將軍澳跨灣連接路 - 位置圖 CROSS BAY LINK, TSEUNG KWAN O - LAYOUT PLAN	繪圖 drawn	簽署 initial	日期 date	項目編號 item no.	辦事處 office 新界東拓展處 NEW TERRITORIES EAST DEVELOPMENT OFFICE
	Y W LO	SIGNED	15.7.08	822TH	
	核對 checked	簽署 initial	日期 date	比例 scale	圖則編號 drawing no. TKZ0570
C K LUK	SIGNED	15.7.08	1 : 13 500		
核准 approved	簽署 initial	日期 date			
T S LI	SIGNED	15.7.08			



LEGEND :
 ① 具代表性的敏感受體
 REPRESENTATIVE SENSITIVE RECEIVER

圖則名稱 drawing title 現有和計劃的主要敏感受體-位置圖 MAJOR EXISTING AND PLANNED SENSITIVE RECEIVERS - LOCATION PLAN	繪圖 drawn	簽署 initial	日期 date	項目編號 item no.	辦事處 office 新界東拓展處 NEW TERRITORIES EAST DEVELOPMENT OFFICE
	Y W LO	SIGNED	15.7.08	822TH	
	核對 checked	簽署 initial	日期 date	比例 scale	 土木工程拓展署 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
C K LUK	SIGNED	15.7.08	1 : 13 500		
核准 approved	簽署 initial	日期 date	圖則編號 drawing no.		
T S LI	SIGNED	15.7.08	TKZ0571		