

**Footbridge along Yuen Long Town Nullah
between West Rail Long Ping Station and Kau Yuk Road**

**Project Profile
Prepared in accordance with Environmental Impact
Assessment Ordinance (Cap. 499)**

Highways Department

September 2013

Footbridge along Yuen Long Town Nullah between West Rail Long Ping Station and Kau Yuk Road

Project Profile

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1 BASIC INFORMATION

1.1 Project Title

Footbridge along Yuen Long Town Nullah between West Rail Long Ping Station and Kau Yuk Road (hereinafter referred to as “the Project”).

1.2 Purpose and Nature of Project

Over the years, with the completion of major infrastructure improvements including Light Rail Transit in late 80s, the operation of Tai Lam Tunnel in 1998 and the West Rail Service in 2003, Yuen Long has been experiencing substantial changes. Rapid growth in major residential developments and large scale integrated developments in Yuen Long Town and its surrounding areas have been observed in recent years. These new developments and growing population have further exacerbated the congestion problem in Yuen Long Town and have resulted in surging demand for safe and convenient pedestrian facilities.

The purpose of the Project is to construct an elevated pedestrian corridor above Yuen Long Town Nullah linking West Rail Long Ping Station with Yuen Long On Ning Road, Castle Peak Road – Yuen Long Section and Kau Yuk Road with provision for future extension to Yuen Long South areas. After completion of the Project, this will help relieve the pedestrian congestion situation at ground level as well as minimize vehicle-pedestrian conflicts, hence significantly improve the walking environment in the area.

1.3 Name of Project Proponent

The Project Proponent is Highways Department, the Government of Hong Kong Special Administrative Region.

1.4 Location and Scale of Project

The general layout plan of the Project is shown on **Drawing No. HMW6182TB-SK0006** at **Annex A**.

The scope of the Project includes:

- (i) construction of a covered footbridge of about 540 m in length and 6 m clear width with staircases/lifts/escalators along Yuen Long Town Nullah between West Rail Long Ping Station (WRLPS) and Kau Yuk Road (KYR);
- (ii) connection of the footbridge with WRLPS;

- (iii) connection of the footbridge with at-grade footways in Yuen Long On Ning Road (YLONR), Castle Peak Road – Yuen Long Section (CPRYLS) and KYR;
- (iv) connection of the footbridge at the southern end to cater for future extension of footbridge;
- (v) measures for mitigating drainage impact for the sections of Yuen Long Town Nullah underneath the footbridge;
- (vi) landscaping and streetscape works of the footpaths along both sides of Yuen Long Town Nullah; and
- (vii) associated civil, road, drainage, geotechnical, traffic aids, utility diversion, street lighting, landscaping, E&M works and environmental mitigation measures and temporary traffic arrangement during construction stage.

The proposed footbridge will be connected to the footways on both sides of YLONR, CPRYLS and KYR through six pedestrian interchanges to be constructed on the northern and southern sides of these roads along the three existing vehicular bridges supporting the sections of these roads across Yuen Long Town Nullah. Each pedestrian interchange will consist of a box structure supported on pile foundation and will be equipped with staircase, escalator and lift for connection with the deck of the footbridge.

In the two footbridge sections between YLONR and KYR, intermediate crossing coupled with a staircase will be provided near the middle of each footbridge section to connect the footway on both sides of Yuen Long Town Nullah.

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

Referring to Section 1.4 above, the proposed footbridge involves construction of pile foundation piers within the Yuen Long Town Nullah and construction of box culvert structures supporting the proposed pedestrian interchanges and intermediate crossings. As Yuen Long Town Nullah finally discharges into Mai Po Marshes which is designated as a Site of Special Scientific Interest, the Project is classified as a Designated Project under the following category under Part I of Schedule 2 of the Environmental Impact Assessment Ordinance:

- I.1(b) A drainage channel or river training and diversion works which discharges or discharge into an area which is less than 300m from the nearest boundary of an existing or planned:
 - (i) site of special scientific interest;

- (ii) site of cultural heritage;
- (iii) marine park or marine reserve;
- (iv) fish cultural zone;
- (v) wild animal protection area;
- (vi) coastal protection area; or
- (vii) conservation area

1.6 Name and Telephone Number of Contact Person

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2 OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

2.1 Project Planning and Implementation

The Project will be planned and implemented by Major Works Project Management Office of Highways Department together with external consultants and contractors.

2.2 Project Time-table

The construction of the Project is scheduled to commence in mid 2016 for completion in 2020.

2.3 Interaction with Other Projects

Potential other projects that would have interface with the Project have been identified and are listed below. This list will be revisited during the EIA study to ensure all the latest projects available from the respective stakeholders are considered. Any cumulative impacts from these concurrent projects during both construction and operational phases of the Project, including but not limited to the following as shown in **Table 2.1**, would need to be identified and assessed appropriately.

Table 2.1 Concurrent Projects Anticipated During Construction Phase

Name of Project	Anticipated Programme
Improvement of Yuen Long Town Nullah (Town Centre Section)	2014 – 2018 ¹ (subject to resource availability)
West Rail Long Ping Station (North) Property Development	2013 – 2018
West Rail Long Ping Station (South) Property Development	2014 – 2019

¹ Drainage Services Department (2013) – Project profile for Improvement of Yuen Long Town Nullah (Town Centre Section) – PP-482/2013

3 POSSIBLE IMPACT ON THE ENVIRONMENT

3.1 General

Based on a preliminary environmental review of the Project, potential environmental impacts arising from the construction and operation phases of the Project are identified and summarized in the following paragraphs.

3.2 Air Quality

3.2.1 Construction Phase

During construction, construction dust would be generated from construction activities such as material handling and hauling, demolition, excavation, filling, vehicle movement and wind erosion of unpaved areas and stockpiles. Besides, operation of construction plant/equipment and construction vehicles would also produce exhaust emissions to the surrounding environment. However, the potential air quality impact is anticipated to be short term and could be well controlled through appropriate design, adequate mitigation measures and good site management practices.

3.2.2 Operation Phase

There will be no vehicular emission from the proposed footbridge. Hence, the Project is not expected to generate any impact to air quality during the operation phase.

3.3 Noise

3.3.1 Construction Phase

During construction, the major sources of noise nuisance would primarily come from the use of powered mechanical equipments (PMEs) on site and the temporary increase in construction traffic on the roads in the proximity. The construction activities would involve the use of PMEs for piling, excavation, concreting, demolition, footpath upgrade/repaving etc. and additional traffic travelling to and from the site. Although the noise impact is expected to be short term and could be reduced to an acceptable level with the implementation of proper noise mitigation measures, it will be assessed in details in the EIA study.

3.3.2 Operation Phase

No vehicular traffic would be permitted to traverse on the proposed footbridge during the operation phase. Hence, the Project is not expected to generate any noise impact during the operation phase.

3.4 Water Quality

3.4.1 Construction Phase

The potential impact to water quality would primarily result from construction site runoff and effluent from construction workforce. Such runoff may contain considerable amount of suspended solids and contaminants generated from accumulated solid and liquid waste (such as packaging materials), dust suppression sprays, rainwater erosion of stockpiles and spillage of cleaning fluids, lubrication oil, fuel or solvents from construction vehicles. Such runoff and effluent, if discharged in an uncontrolled manner, would pollute the nearby nullah and sea.

However, with proper mitigation measures and good site management practices, the potential impact to water quality described above could be readily abated.

3.4.2 Operation Phase

During the operation phase, the only source of water quality impact would be from the surface runoff. The runoff may contain grit, oil and debris from the road users. Since the drainage system would include silt traps in the gully inlets to remove silt and grit before the runoff enters the public storm water drainage system, it is expected that the impact on water quality would be minimal.

3.5 Waste Management

3.5.1 Construction Phase

Construction activities will generate a variety of wastes that can be divided into distinct categories, based on their composition and ultimate method of disposal, including:

- construction and demolition (C&D) materials from earthworks and site formation, and handling, collection, transportation and disposal of C&D material, including excavated sediment;
- chemical waste from maintenance of mechanical equipment; and
- general refuse.

3.5.2 Operation Phase

In its operation, the proposed footbridge is not expected to generate any solid wastes except those arising from occasional replacement of damaged/wear parts/components during its service life. In view of infrequent maintenance expected, the Project is therefore not expected to generate significant waste.

3.6 Ecology

Construction activities of the Project will mainly be carried out on developed area and concreted drainage channels which are of negligible ecological value. Direct impact to ecology is thus expected to be minimal. No active or inactive fish ponds are found in the vicinity of the Project.

3.7 Cultural Heritage

3.7.1 Construction Phase

Cultural heritage sensitive receivers have been identified. Due to large separation distance of around 100m from the construction works, potential construction impact is not anticipated.

3.7.2 Operation Phase

No adverse impact is anticipated during the operation of the Project.

3.8 Landscape and Visual

3.8.1 Construction Phase

During the construction phase, potential impacts affecting landscape and visual amenity may arise from:

- felling of trees;
- construction works for excavation;
- construction of retaining walls, pile caps, piers, bridge decks, associated structures and facilities;
- temporary stockpiling of C&D materials, storage of construction equipment and plants;
- contractor's temporary works area, such as site accommodation and temporary parking areas; and
- dust during dry weather.

3.8.2 Operation Phase

In the operation phase, landscape and visual impacts could arise from the incompatibility of the appearance of the bridge structure and its supporting facilities with the surrounding environment.

4 MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

4.1 Existing and Planned Sensitive Receivers

The existing and planned sensitive receivers are discussed below. Any planned sensitive receivers identified during the EIA study will be considered. Detailed investigation and surveys will be carried out under the Project to assess the impact. The locations of the existing and planned sensitive receivers are shown on **Drawing No. HMW6182TB-SK0007** at **Annex B**.

4.2 Air Quality

Potential air sensitive receivers are located at:

- Residential buildings including Fook On House (A01), Kim Shing Building (A02), Siu Fung Building (A03), Man Yip Building (A04), Healey Building (A05) and Fung Yue Building (A06);
- Planned residential developments including Tai Kiu comprehensive development area site (A07) and West Rail Long Ping Station (South) Property Development (A08);
- Educational buildings including CCC Chun Kwok Primary School (A09); and
- Outdoor leisure activity participants at Kik Yeung Road 5-a-side football pitch (A10), Tai Pei Tau rest garden (A11) and Chung Sing Path playground (A12).

4.3 Noise

Potential noise sensitive receivers are located at:

- Residential buildings including Fook On House (N01), Kim Shing Building (N02), Siu Fung Building (N03), Man Yip Building (N04), Healey Building (N05) and Fung Yue Building (N06);
- Planned residential developments including Tai Kiu comprehensive development area site (N07) and West Rail Long Ping Station (South) Property Development (N08); and
- Educational buildings including CCC Chun Kwok Primary School (N09).

4.4 Water Quality

Potential water sensitive receiver would be Yuen Long Town Nullah.

4.5 Ecology

Yuen Long Town Nullah is a concreted open channel that runs through Yuen Long Town. Most of the area in the vicinity of the Yuen Long Town Nullah is urbanized and hence the ecological value of urbanized areas is expected to be negligible. No major ecological sensitive receivers are identified.

4.6 Cultural Heritage

Cultural heritage sensitive receivers are located at:

- Entrance tower, Tai Kiu Tsuen, Shap Pat Heung (CH01); and
- No. 21 Tai Kiu Tsuen, Yuen Long (CH02).

Both sensitive receivers are about 100m from the project boundary of the Project. The Director of Leisure and Cultural Services has confirmed in March 2013 that no Heritage Impact Assessment is required for the Project.

4.7 Landscape and Visual

Potential landscape and visual sensitive receivers would be:

Landscape Sensitive Receivers

- Yuen Long Town Nullah (L01);
- Planting along Yuen Long Town Nullah (L02); and
- Park and recreational facilities, e.g. Kik Yeung Road 5-a-side football pitch (L03), Tai Pei Tau rest garden (L04) and Chung Sing Path playground (L05) etc.

Visual Sensitive Receivers

- Residents at Fook On House (V01), Kim Shing Building (V02), Siu Fung Building (V03), Man Yip Building (V04), Healey Building (V05) and Fung Yue Building (V06);
- Planned residential developments including Tai Kiu comprehensive development area site (V07) and West Rail Long Ping Station south residential site (V08);
- Community at CCC Chun Kwong Primary School (V09);
- Outdoor leisure activity participants at Kik Yeung Road 5-a-side football pitch (V10), Tai Pei Tau rest garden (V11) and Chung Sing Path playground (V12); and
- Travellers along Yuen Long On Ning Road, Castle Peak Road – Yuen Long Section, Kau Yuk Road, Ma Tin Road, Yu Wing Path, Chung Sing Path, Cheong Shing Path, Yuen Fat Path, Hi Lee Path and Po Fai Path.

5 ENVIRONMENTAL PROTECTION MEASURES AND ANY FURTHER ENVIRONMENTAL IMPLICATIONS

5.1 General

The environmental impacts (including both cumulative impacts and those solely arising from the Project) will be investigated in the EIA study. Appropriate mitigation measures will then be devised to ensure that the Project would be environmentally acceptable with reference to the relevant legislations and other requirements. Any residual impacts, if exist, would be controlled, via the mitigation measures, within the allowable limits. Environmental monitoring and auditing of the potential impacts arising from the Project would be conducted at appropriate phases. Subject to further detailed assessment in the EIA study, the mitigation measures outlined below are proposed to be implemented for the Project.

5.2 Air Quality

Construction Phase

In order to prevent adverse impacts on air quality, the control measures stipulated in the Air Pollution Control (Construction Dust) Regulation would be implemented wherever applicable to limit the dust emissions from the site. Subject to investigation, the following mitigation measures would be considered to minimize impacts on air quality on nearby air sensitive receivers.

- stockpiles of dusty material would not extend beyond site boundaries;
- in the process of material handling, any material which has the potential to create dust would be treated with water or sprayed with a wetting agent where practicable;
- stockpiles of sand and aggregate would be enclosed on three sides and water sprays will be used to dampen stored materials and when receiving raw material;
- the site would be frequently cleaned and watered to minimise fugitive dust emissions;
- motorised vehicles on the site would be restricted to a maximum speed of 15 km/hr and should be confined to designated haul routes which will be paved or surfaced with hardcore; and
- use of appropriate dust suppression measures.

Operation Phase

There would be no emission from the proposed footbridge and associated facilities during the operation phase. Hence, no mitigation measures are required.

5.3 Noise

Construction Noise

Control and mitigation measures would be implemented, where applicable and practicable, to suppress the construction noise impacts from the Project. These control measures may cover:

- properly designed silencers, mufflers, acoustically dampened panels and acoustic sheds/shields, acoustic machinery enclosures, etc. would be applied to noise sources;
- temporary/movable acoustic barriers would be erected to screen out noise impacts to noise sensitive receivers;
- plants with low noise emission levels would be used;
- noise emitting plants would be located away from noise sensitive receivers;
- noisy construction activities would be properly scheduled to minimize exposure of noise sensitive receivers to construction noise;
- construction noise thresholds/requirements would be devised in contracts;
- site plants/equipments would be regularly maintained; and
- construction traffic on public roads would be properly routed to minimize construction noise impact to noise sensitive receivers.

Operation Phase

No specific mitigation measures would be required during the operation phase.

5.4 Water Quality

Construction Phase

In order to prevent potential adverse water quality impacts, the following general mitigation measures would be put in place:

- Good site practice in accordance with the ProPECC PN 1194 "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) (TC(W)) No. 5/2005 "Protection of Natural Stream/Rivers from adverse impact arising from construction works".
- Runoff from the construction site would be properly collected and treated to ensure that the effluent complies with Water Pollution Control Ordinance. Silt trap and oil

interceptor would be provided to remove oil, lubricants, grease, silt, grit and debris from the wastewater before being pumped to the public storm water drainage system. The silt traps and oil interceptors would be cleaned and maintained regularly.

- Open stockpiles of materials on site would be avoided, or where unavoidable covered with tarpaulin or similar fabric during rainstorms.
- Where possible, works entailing soil excavation would be minimised during the rainy season.
- Oil interceptors would be provided and properly maintained for collecting spillage or leakages from site workshops. The waste oil removed would be collected by licensed collectors.
- Mobile toilets or other appropriate means would be provided to hold sewage before disposal by a licensed collection agent or discharging to the main sewerage system.
- Construction works to be carried out during dry weather flow.

Operation Phase

No specific mitigation measures would be required during the operation phase.

5.5 Waste Management

Construction Phase

The construction works would generate some C&D materials. Other than C&D materials, solid wastes such as C&D waste, chemical waste, general refuse etc would also be generated. The following measures would be considered to reduce the quantity of C&D materials for disposal off site:

- All C&D materials would be sorted and re-used wherever possible.
- Waste hauliers would be required to obtain the necessary registration and licences under the Waste Disposal Ordinance and the Waste Disposal (Chemical Waste) (General) Regulation from the Environmental Protection Department.
- Nomination of an approved person to be responsible for good site practice, arrangements for collection and effective disposal to an appropriate facility, of all waste generated at the site.
- Separation of chemical wastes for special handling and appropriate treatment at a licensed facility.
- A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites).

- In order to monitor the management of C&D materials and disposal of solid wastes at public filling facilities and landfills, a trip-ticket system would be implemented by the Contractor.
- A Waste Management Plan would be prepared in accordance with ETWB TC(W) No. 19/2005 "Environmental Management on Construction Sites".
- Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse of materials and their proper disposal would be arranged where practicable.
- Any unused chemicals or those with remaining functional capacity would be recycled.
- Reusable non-timber formwork would be adopted to reduce the amount of C&D materials.
- Proper storage and site practices would be implemented to minimize the potential damage or contamination of construction materials.

Operation Phase

No specific mitigation measures would be required during the operation phase.

5.6 Ecology

Construction Phase

Trees will be retained as far as possible, and habitats that will be affected by the construction works will be well defined. Any trees identified as affected by the works will be considered for transplantation if the health conditions and species of the tree are appropriate for transplanting. Felling will only be considered as the last resort. Trees to be retained along the alignment will be protected by provision of protective measures (hoarding or fence) to avoid physical damage to the preserved trees. Stockpiling or compacting soil around tree roots will be avoided. Compensatory planting plan will be considered subject to investigation.

Good construction practices and management will minimize construction disturbance to the surrounding habitat and the associated vegetation and fauna. Disturbance to off-site habitats would be minimized by clearly defining the works boundary and fencing off the whole works limit.

Operation Phase

No specific mitigation measures would be required during the operation phase.

5.7 Cultural Heritage

As no potential construction and operational impacts on cultural heritage resources have been identified, no specific mitigation measures would be necessary.

5.8 Landscape and Visual

Construction Phase

During the construction phase, effective mitigation measures such as litter control, prevention of mud on roads, minimizing works site areas, screening of works located near particularly sensitive uses etc. would be adopted to reduce the potential visual impacts of the works.

Operation Phase

Any potential permanent landscape and visual impact would be reduced by appropriate aesthetic design and landscaping works for the improvement of the pedestrian environment. Mitigation measures would be considered further during the EIA study.

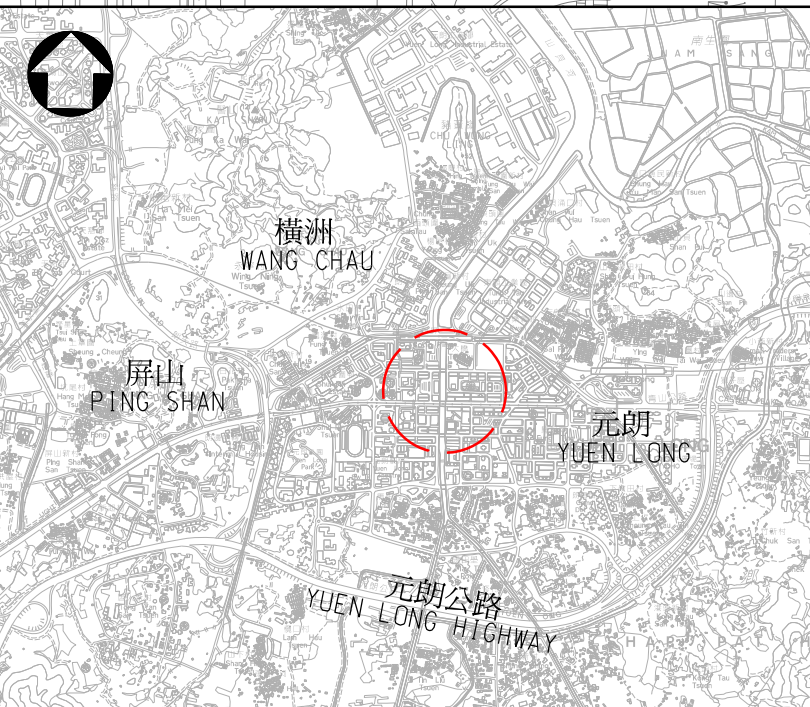
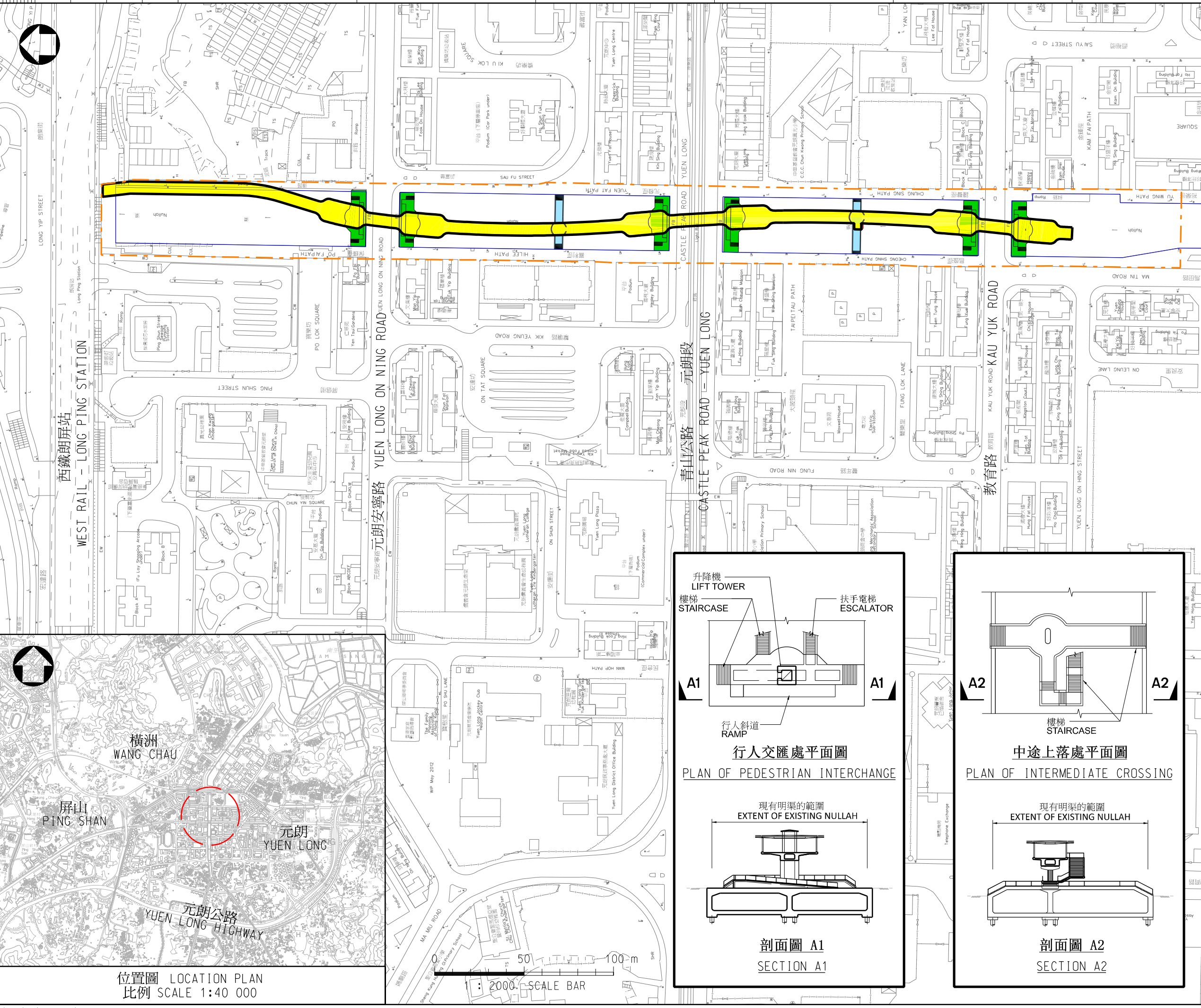
5.9 Possible Severity, Distribution and Duration of Environmental Effects

With the implementation of and monitoring of appropriate mitigation measures, no unacceptable environmental impacts (both short and long term) are expected from the Project.

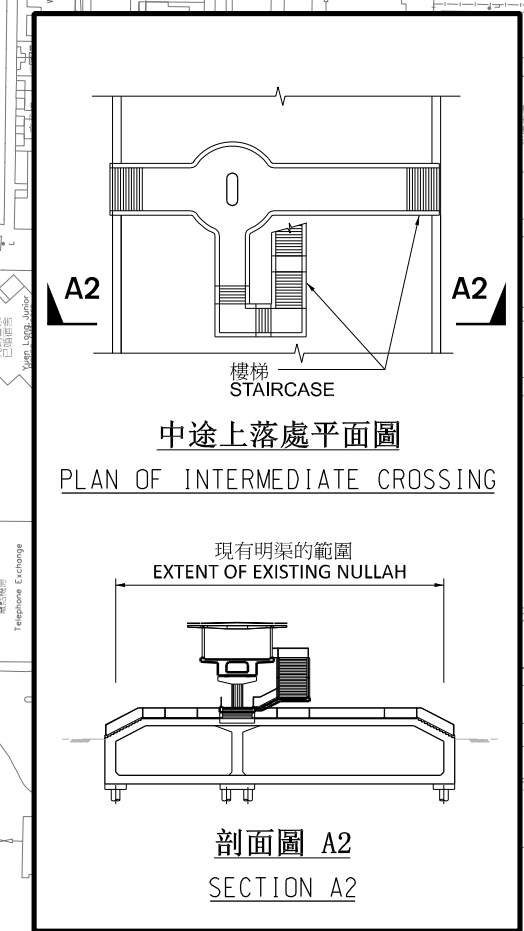
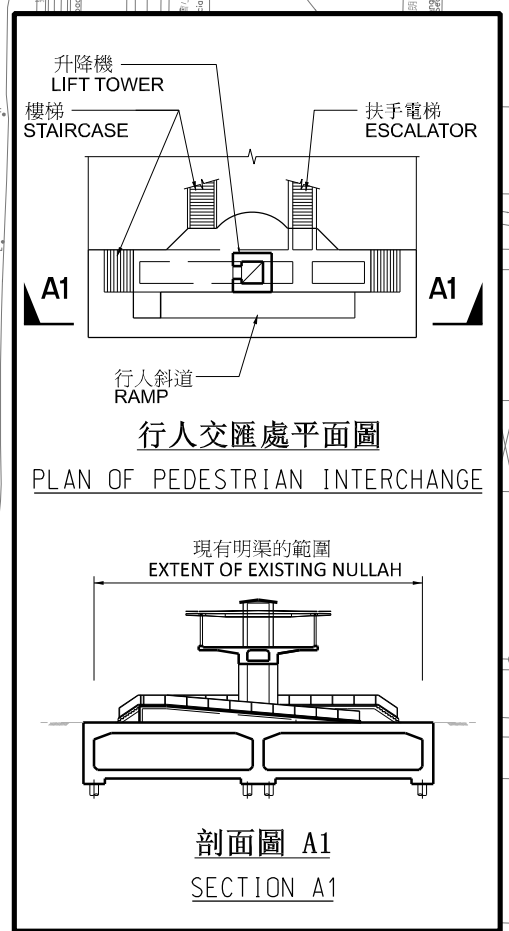
6 USE OF PREVIOUSLY APPROVED EIA REPORTS

No previously approved EIA reports are referred to in the preparation of this project profile.

ANNEX A – GENERAL LAYOUT OF WORKS



位置圖 LOCATION PLAN
比例 SCALE 1:40 000



註釋 NOTES:

- 圖例 LEGEND
- 建議工程界限 PROPOSED SITE BOUNDARY
 - 擬議的行人天橋 PROPOSED FOOTBRIDGE
 - 擬議的行人交匯處 PROPOSED PEDESTRIAN INTERCHANGE
 - 擬議的中途上落處 PROPOSED INTERMEDIATE CROSSING
 - 元朗明渠 YUEN LONG TOWN NULLAH

編號 no.	日期 date	詳情 description	簡簽 initial
修訂 REVISION			
設計 designed		繪圖 drawn	
覆核 checked		批准 approved	

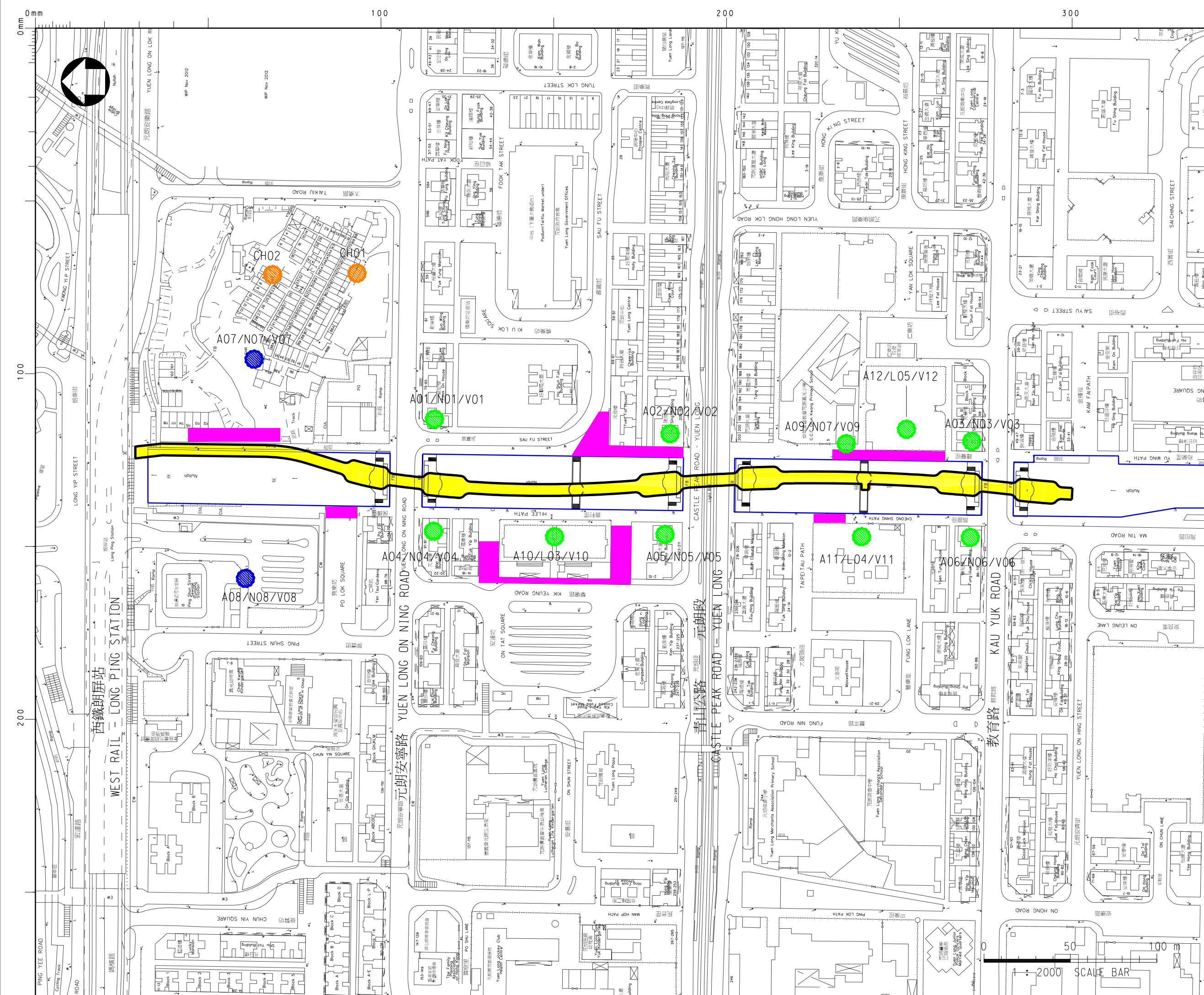
合約編號 contract no.	
檔案編號 file no.	
工程編號 project no.	6182TB
工程 project	沿元朗明渠由西鐵朗屏站至教育路的行人天橋 FOOTBRIDGE ALONG YUEN LONG TOWN NULLAH BETWEEN WEST RAIL LONG PING STATION AND KAU YUK ROAD
圖則名稱 drawing title	總平面圖 GENERAL LAYOUT PLAN
圖則編號 drawing no.	比例 scale
HMW6182TB-SK0006	1:2000 ON A3

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主要工程管理處
MAJOR WORKS
PROJECT MANAGEMENT OFFICE







ANNEX B – LOCATION OF SENSITIVE RECEIVERS



註釋 NOTES:

圖例 LEGEND

-  擬建的行人天橋
PROPOSED FOOTBRIDGE
-  計劃中的敏感受體
PLANNED SENSITIVE RECEIVERS
-  現有敏感受體
EXISTING SENSITIVE RECEIVERS
-  建築文物
BUILT HERITAGE
-  元朗明渠 (W01/L01)
YUEN LONG TOWN NULLAH (W01/L01)
-  沿元朗明渠的種植花木 (L02)
PLANTING ALONG YUEN LONG TOWN NULLAH (L02)

編號 no.	日期 date	詳情 description	簡簽 initial
修訂 REVISION			
設計 designed		繪圖 drawn	
覆核 checked		批准 approved	

合約編號 contract no.

檔案編號 file no.

工程編號 project no. 6182TB

工程 project

沿元朗明渠由西鐵朗屏站至教育路的行人天橋
FOOTBRIDGE ALONG YUEN LONG TOWN NULLAH BETWEEN WEST RAIL LONG PING STATION AND KAU YUK ROAD

圖則名稱 drawing title

敏感受體的位置
LOCATION OF SENSITIVE RECEIVERS

圖則編號 drawing no. HMW6182TB-SK0007

比例 scale 1:2000 ON A3

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主要工程管理處
MAJOR WORKS PROJECT MANAGEMENT OFFICE

HONG KONG DEPARTMENT OF HIGHWAYS 香港路政署

1:2000 SCALE BAR