Improvement to Pok Oi Interchange

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

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HKSAR Government
Highways Department / Works Division
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Kowloon

Improvement to Pok Oi Interchange

PROJECT PROFILE

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DRAWINGS:

Drawing No. HWDYL051A-PD0001
Drawing No. HWDYL051A-PD0002

1. BASIC INFORMATION

1.1 Project Title

Improvement to Pok Oi Interchange

1.2 Purpose and Nature of Project

At present, traffic queues are already observed on the northern and southern approaches of Pok Oi Roundabout (POR) at the evening peak period. The situation will likely deteriorate further when the nearby developments are completed. The tailback of traffic onto the southbound carriageway on the northern approach to POR may block the through traffic from Tai Lam Tunnel / NT North to Tuen Mun / Tin Shui Wai / the future Hong Kong – Shenzhen Western Corridor. It is envisaged that POR will become saturated progressively with the increasing population intake in the nearby area.

The project includes the construction of a flyover, slip roads, a segregated left-turn lane, and other associated works at the Pok Oi Interchange. The objective of this project is to relieve the traffic pressure and traffic queues of the existing POR so that its design flow / capacity (DFC) ratio can be maintained at a reasonable value accepted by Transport Department.

The project is a designated project under the Environmental Impact Assessment (EIA) Ordinance (Cap.499). An EIA report is required to be prepared to meet the requirements under the EIAO and for an Environmental Permit to be obtained for the construction and operation of the project.

1.3 Name of Project Proponent

Highways Department, HKSAR Government.

1.4 Location and Scale of Project

The subject site is located at the interchange of Yuen Long Highway and Castle Peak Road – Yuen Long at the Pok Oi Roundabout (Please refer to Drawing No. HWDYL051A-PD0001), and is in vicinity of the Pok Oi Hospital and the YOHO Town Development.

The scope of the project includes the following;

(i) provision of a single lane flyover adjacent to the northbound carriageway of Pok Oi Flyover (POF);

(ii) construction of a slip road connecting the northbound carriageway of the ground level road of Yuen Long Highway (YLH) on the southern arm of POR to the proposed flyover;

(iii) construction of a slip road connecting the proposed flyover to the northbound carriageway of the ground level section of Yuen Long Highway (YLH) on the northern arm of POR;

(iv) construction of a slip road connecting the southbound carriageway of POF to the southbound carriageway of the ground level section of YLH on the southern arm of POR;

(v) widening of a stretch of the southbound carriageway of the ground level section of YLH on the northern arm of POR from 3-lane to 4-lane carriageway;

(vi) widening of a stretch of the northbound carriageway of the ground level section of YLH on the northern arm of POR;

(vii) construction of a segregated left-turn lane at the northern arm of POR; and

(viii) associated ancillary works.

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

The project profile only covers the project "Improvement to Pok Oi Interchange". The project is classified as a Designated Project under Schedule 2, Part 1, A.1 & A.8 of the Environmental Impact Assessment (EIA) Ordinance. An environmental permit is required for the project.

1.6 Name and Telephone Number of Contact Persons

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1.7 Implication on Previous EIA Studies

The project will have implications on previous EIA studies for "Route 3" and also "Highway between Shap Pat Heung Interchange and Pok Oi Interchange – Remaining Works" as some noise barriers erected under those projects will be affected by the proposed road widening works.

2 OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

2.1 Planning and Implementation

A study by consultants is currently in progress for the Traffic Impact Assessment and Alignment Design of the project. The detailed designs of the proposed works are to be carried out in-house by Highways Department.

2.2 Project Timetable

A tentative implementation programme is as follows:

Investigation and Preliminary Design	Sep 2006	-	May 2007
Detailed Design	Sep 2006	-	Sep 2008
Tendering	Oct 2008	-	Feb 2009
Construction	Feb 2009	-	Oct 2010

2.3 Interaction with other Projects

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

a) Widening of Yuen Long Highway;

b) Hong Kong – Shenzhen Western Corridor;

c) Deep Bay Link; and

d) Nearby residential and commercial developments.

The above list of projects is not exhaustive and will be reviewed during the EIA study.

3. POSSIBLE IMPACT ON THE ENVIRONMENT

3.1 Potential Environmental Impacts

The potential environmental impacts arising from the construction and operation of the proposed flyover, slip roads and road widening works are identified as follows:

3.2 Air Quality

During construction, dust is the potential air quality impact which would be generated from construction activities such as material handling, excavation, vehicle movement and erosion of unpaved area and stockpiles. The potential air quality impact however is anticipated to be short–term and be controlled through appropriate design and good site practice outlined in Section 5.1.

In the operational phase, air quality impact may arise from vehicular emission of the traffic on the proposed roads. This is required to be reviewed in the EIA stage and mitigation measures will be provided if necessary.

3.3 Noise Impact

During construction, the source of noise nuisance is primarily from the use of Powered Mechanical Equipment (PME) on site and the temporary increase of road traffic due to construction vehicles. The construction activities for the project involve the use of plant for piling, excavation, concreting etc. and the traffic traveling to and from the sites. Construction noise impact is anticipated to be short-term and can be

reduced to an acceptable level with the implementation of the mitigation measures outlined in Section 5.1.

For the noise impact on the adjacent NSR's due to the road traffic at the operational stage, the details and extent of noise mitigation measures will be subject to review in the later EIA Stage and mitigation measures provided as appropriate.

3.4 Water Quality

Site runoff is expected to be the only water quality impact from construction sites for this land-based project. The potential sources of site runoff may include water from dust suppression sprays and wastewater from erosion of embankments and temporary stockpile by rainfall. Water quality impact however would be readily mitigated with the adoption of good site management practices outlined in Section 5.1.

3.5 Waste Disposal

C&D waste would be generated from the construction activities, vehicle and plant maintenance etc. Waste generation will first be avoided and reduced prior to reusing materials on-site in order to minimise the off-site waste disposal as far as practicable. With proper waste management, adverse impact from this project is unlikely.

3.6 Landscape and Visual

Potential landscape and visual impacts are anticipated from construction activities and plant, however the impacts would be short-term and can be minimized by appropriate mitigation measures.

In the operational phase, landscape and visual impacts may arise from the viaduct structures, retaining walls and any proposed noise barriers/ enclosures. Landscape and visual impacts will be evaluated in the EIA stage.

4. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

Existing and planned sensitive receivers which may be affected by the project include the following and are as shown on Drawing No. HWDYL051A-PD0002:

(1) Pok Oi Hospital
(2) YOHO Town
(3) Small Traders New Village
(4) Wong Uk Tsuen Village
(5) Kwong Ming Ying Loi School
(6) Sheung Yau Tin Tsuen
(7) Chuk San Tsuen
(8) Yeung Uk Tsuen
(9) Proposed CDA Site Area 12 Yuen Long
(10) Proposed CDA Site Area 15 Yuen Long
(11) Tai Wai Tsuen

5. ENVIRONMENTAL PROTECTION MEASURES AND ENVIRONMENTAL IMPLICATIONS

5.1 Construction Phase

(a) Air Quality Protection Measures

Practicable and cost-effective dust mitigation measures shall be formulated during the detailed design stage of the project for implementation through incorporation into contract documents. The requirements of the Air Pollution Control (Construction Dust) Regulation will apply to the construction phase. Protective measures may include the following:

- Vehicle wheel and body washing facilities at site exits;
- Reduction of vehicular speed on site roads;
- Regular wetting of the site to reduce dust; and
- Careful planning of earthmoving activities including transportation to and from site.

(b) Noise Mitigation Measures

Practicable and effective noise mitigation measures to reduce construction noise impact will be explored in the EIA study including:

- Application of properly designed silencers, mufflers, acoustically dampened panels and acoustic sheds or shields, etc.;
- Erection of noise enclosures around noisy plant;
- Noisy emitting plant shall be placed at maximum distance from noise sensitive receivers;
- Utilisation of construction noise specification and clauses;
- Use of appropriately powered equipment; and
- Regular maintenance of site plant/ equipment.

The effectiveness and continuous implementation of the noise mitigation measures would be checked through a noise monitoring and audit programme.

(c) Water Quality Mitigation Measures

Good site management practice together with the possible mitigation measures are outlined as follows:

- collection and treatment of potentially contaminated water to appropriate standards.
- stormwater runoff from the site area during construction should be routed through oil/ grit separator and/ or sediment basin/ trap where applicable before discharging to the nearby receiving waters; and
- storm catch-basins/inlets, if any, receiving storm runoff from construction areas should be covered with wire mesh filter on top of which should be placed with crushed stone on top in order to prevent sediment from entering the inlet structure and to reduce potential sediment loading to the receiving waters.

(d) Environmental Protection Measures for Construction Waste

Chemical and oily wastes generated from the construction activities, vehicle and plant maintenance and oil interceptors should be disposed of as chemical waste in strict compliance with the Waste Disposal (Chemical Waste) (General) Regulations.

5.2 Operational Phase

(a) Noise Mitigation Measures

The details and extent of noise mitigation measures required to ameliorate the noise impact generated by the road traffic will be subject to review in the later EIA Stage.

(b) Air Quality Measures

The details and extent of air quality mitigation measures will be subject to review in the later EIA Stage.

(c) Mitigation Measures for Landscape and Visual Impacts

The details of mitigation measures for landscape and visual impacts will be addressed in the later EIA stage. Measures may include:

- Compensatory planting;
- Aesthetic design of elevated structures, retaining walls and noise mitigation measures; and
- Integration with existing highway structures.

5.3 Environmental Monitoring and Audit

The Project Profile has outlined the potential environmental impacts which would arise from the construction and operation of the proposed roadworks and has introduced briefly some possible environmental mitigation measures that can be incorporated into the Project. An environmental monitoring and audit programme, for the construction and/or operational phase of the project, will be developed in the later EIA.

5.4 Possible Severity, Distribution and Duration of Environmental Effects

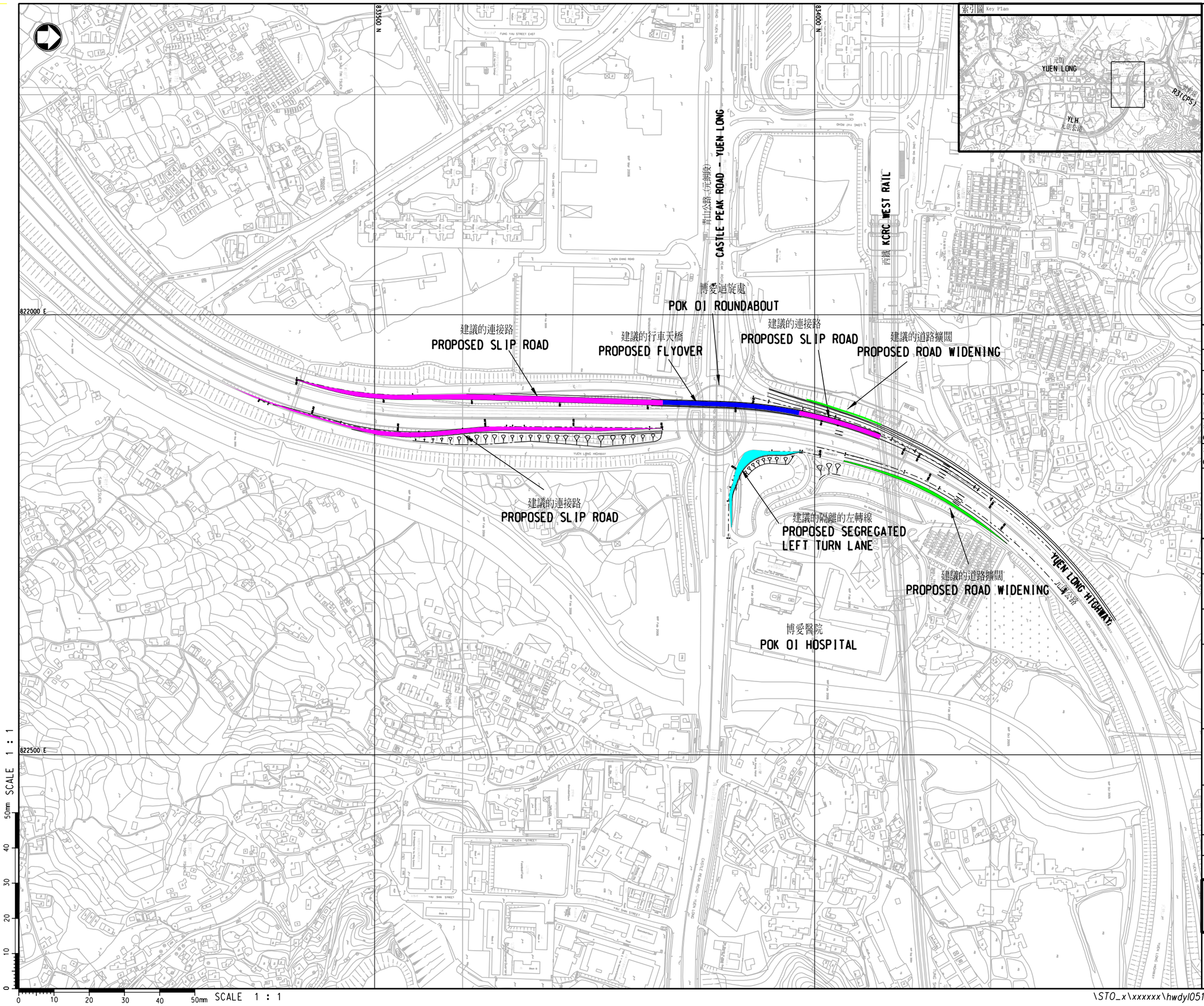
All construction impacts are short-term effects. Air and noise pollution will be the main environmental concerns. Appropriate control measures and a monitoring programme will be developed in the EIA study to ensure compliance with the established standards. All recommendations will be fully implemented on site to address the pollution due to construction activities.

Operational impacts are long-term effects. The EIA study will determine the traffic noise impact in detail and the required mitigation measures. The EIA study will also address the air quality, visual and landscape impacts and assess the requirement for mitigation measures.

It is envisaged that with proper implementation and monitoring of the mitigation measures, adverse environmental effects shall be minimised during the construction and operational phases.

6. USE OF PREVIOUSLY APPROVED EIA REPORTS

No previously approved EIA reports have been referred to in the preparation of this Project Profile.



註NOTES :

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1. ALL DIMENSIONS AND CHAINAGES ARE IN METRES UNLESS OTHERWISE STATED.

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Y.S. CHAN 15.5.07

Senior Engineer / HK2 date

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工程名稱 project title

博愛交匯處改善工程

IMPROVEMENT TO POK OI INTERCHANGE

圖則名稱 drawing title

工地位置圖

SITE LOCATION PLAN

圖則編號 drawing no.

HWDYL051A-PD0001

比例 scale 1 : 4000

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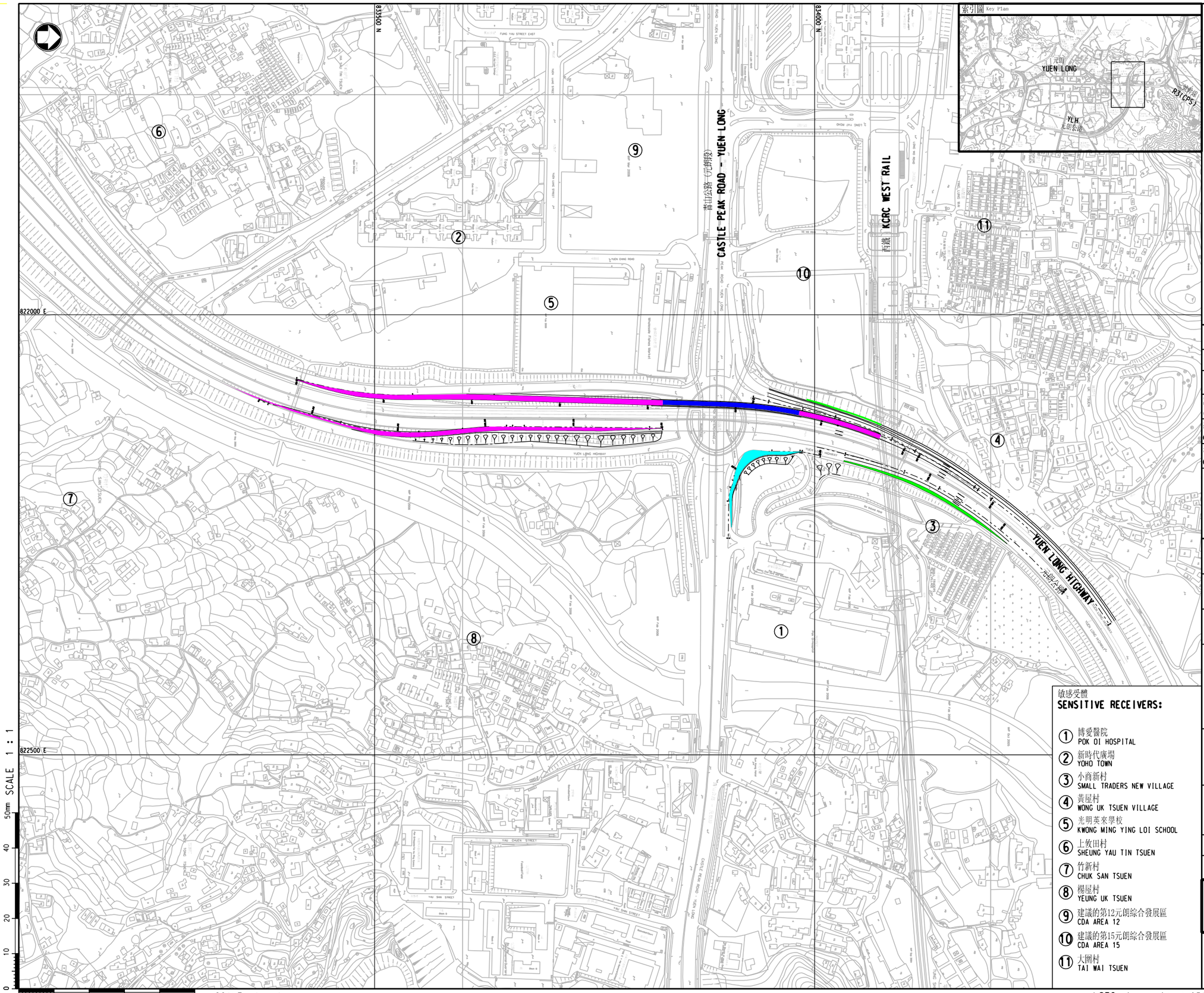

敏感受體
SENSITIVE RECEIVERS:

1. 博愛醫院 POK OI HOSPITAL
2. 新時代廣場 YOHO TOWN
3. 小商新村 SMALL TRADERS NEW VILLAGE
4. 黃屋村 WONG UK TSUEN VILLAGE
5. 光明英來學校 KWONG MING YING LOI SCHOOL
6. 上敎田村 SHEUNG YAU TIN TSUEN
7. 竹新村 CHUK SAN TSUEN
8. 楊屋村 YEUNG UK TSUEN
9. 建議的第12元朗綜合發展區 CDA AREA 12
10. 建議的第15元朗綜合發展區 CDA AREA 15
11. 大圍村 TAI WAI TSUEN

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博愛交匯處改善工程
IMPROVEMENT TO POK OI INTERCHANGE

圖則名稱 drawing title
敏感受體位置圖
LOCATION OF SENSITIVE RECEIVERS

圖則編號 drawing no.
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