



香港政府路政署
**HONG KONG GOVERNMENT
HIGHWAYS DEPARTMENT**

**AGREEMENT NO.CE/38/95
IMPROVEMENT TO KAM TIN ROAD,STAGE 1
ENVIRONMENTAL IMPACT ASSESSMENT AND
DRAINAGE IMPACT ASSESSMENT STUDIES**

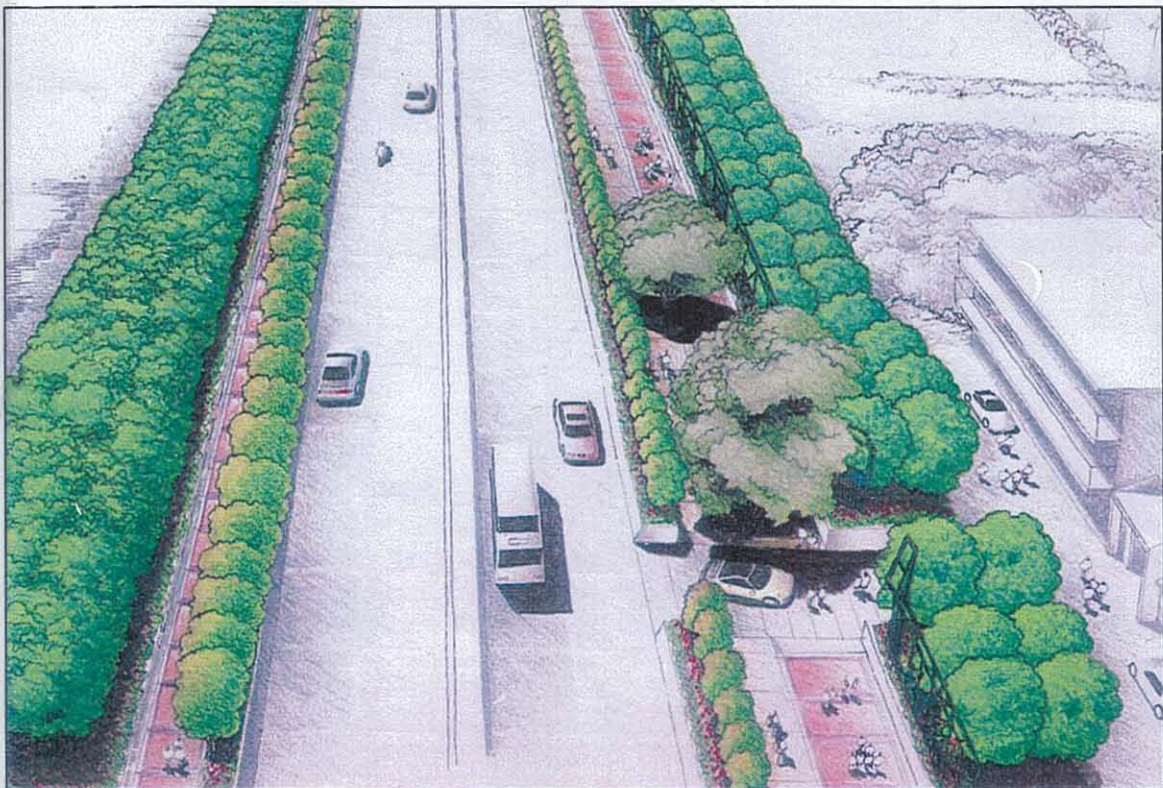
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錦田公路改善計劃第一階段
環境及排水影響評估

**ENVIRONMENTAL IMPACT ASSESSMENT
EXECUTIVE SUMMARY**
環境影響評估工作概要

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Highways Department
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Battie BMT (Hong Kong) Ltd.
Ho Tin & Associates Consulting Engineers Ltd.
寶萬通工程顧問有限公司
何田顧問工程師有限公司

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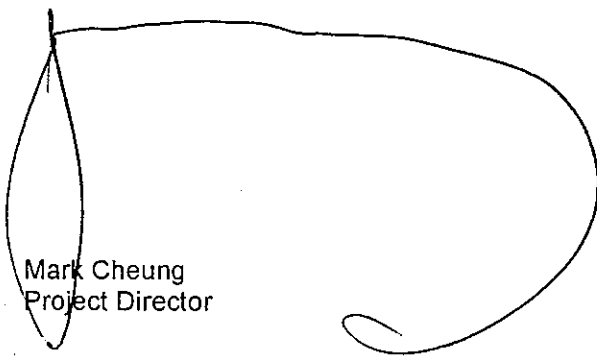
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Dear Sirs,

**Agreement No. CE 38/95
Improvement to Kam Tin Road, Stage I
Environmental Impact Assessment and
Drainage Impact Assessment Studies
Environmental Impact Assessment
Final EIA Report, EM&A Manual and Executive Summary**

We enclose one set of the Final EIA Report, EM&A Manual and the Executive Summary for your retention and record.

Yours faithfully,
For and on behalf of
**Babtie BMT (Hong Kong) Ltd. and
Ho Tin & Associates Consulting Engineers Ltd.**


Mark Cheung
Project Director

cc Ho Tin - Mr. Kelvin Lau (w/o)
Enpac - Mr. Derek Lam (w/e)
Urbis - Mr. Matthew Pryor (W/e)

in/D415/96010.854



Babtie BMT

寶萬通(香港)工程顧問有限公司
香港九龍柯士甸路廿一號太古貿易大廈七樓

Babtie BMT (Hong Kong) Ltd

7th Floor, Swire & Maclaine House
21 Austin Avenue, Kowloon
Hong Kong
Tel: (852) 2369 0175
Fax: (852) 2739 6648
email: babtibmt@hk.linkage.net

Directors
Roger Colton, David Fawcett,
Peter French, David Goodrich,
Henry Leung
Associate Directors
Mark Cheung, Y.W.Yeung.

Incorporating Babtie Oakervee Limited
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EXECUTIVE SUMMARY

工作概要

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EXECUTIVE SUMMARY

1. INTRODUCTION

The current Kam Tin Road is a single 2-lane carriageway linking Castle Peak Road at Au Tau Roundabout to Route Twist. To cater for the future development and increased traffic demand over the North West New Territories Area, there is an urgent need to upgrade the existing Kam Tin Road which is currently approaching its capacity. The situation will be further worsened by the opening of Route 3 (Country Park Section).

The whole improvement project is divided into two stages. Stage 1 starts from Au Tau Roundabout and ends at the western end of Kam Tin Bypass. In stage 1, the 1.1 km long Kam Tin Road section between Au Tau Roundabout and Kam Tin River will be upgraded to a dual 2-lane carriageway road. The location of the Kam Tin Road which will be included in the stage 1 improvement is shown on Figure 1.

A Preliminary Project Feasibility Study (PPFS) for the Project was carried out by HyD in early 1995. As part of the PPFS, an Environmental Review (ER) was conducted by Environmental Protection Department (EPD). Given the fairly limited works associated with the Project, impacts related to waste disposal and water quality are unlikely be significant. With regard to the potential effect on air quality brought about by traffic emissions, it is anticipated that the sensitive receivers will unlikely be subject to adverse impact as adequate buffer distances (over 10m) are maintained between the receivers and Kam Tin Road. As such, it was concluded in the ER that these environmental aspects will not be major issues and no detailed impact assessments on air quality, waste disposal and water quality are required. Site surveys on the environmental conditions of the Project area and review on the proposed engineering works during the course of the EIA have concurred the above findings by the ER.

It was concluded in the ER that detailed assessments on the potential noise and ecological impacts associated with the implementation of the Project are required. The purpose of this Environmental Impact Assessment (EIA) Study is to provide information on the nature and extent of impacts on noise, ecology, visual and landscape arising from the construction and operation of the proposed Project and all related activities taking place concurrently.

2. PROJECT CHARACTERISTICS

The current Kam Tin Road is a single 2-lane carriageway road with provision of narrow footpath at discrete locations. To cope with the future traffic demand, the Stage 1 improvement works will widen the existing 1.1km length of Kam Tin Road between Au Tau Roundabout and Kam Tin River from a single carriageway road to a dual 2-lane carriageway with central reserves, lay-bys for buses and general loading/unloading activities, footpaths and cycle track. The proposed road follows roughly the alignment of the existing Kam Tin Road with widening works on either side of the existing road and is mainly found on earth embankment. It will also link with the future slip roads I and J of the Route 3 (Country Park Section). The existing proper run-ins will be reprovisioned. A typical road section is shown on Figure 2. The construction works are programmed to start in February 99 and complete in August 2001.

3. NOISE IMPACT ASSESSMENT

3.1 Identification of Noise Sensitive Receivers

Site surveys undertaken in November 1995 and January 1996 reveal that existing noise sensitive receivers (NSRs) in the vicinity of the Project site are likely to be adversely affected by the proposed road works. The identified NSRs in the Study Area are mainly low-rise developments, including village houses, villas, residential blocks, three educational institutions and a church :

- Isolated village houses at Au Tau roundabout.
- School and church adjacent to Castle Peak Road - Yuen Long.
- Village houses at Ko Po San Tsuen.
- Villas at "Kam Fung Terrace".
- Village houses at Ko Po Tsuen.
- Schools and low-rise residential developments at Kam Tin Shi.

Information on planned sensitive uses has been obtained from the latest Outline Zoning Plans prepared by the Planning Department. Two areas within the Study Area have also been zoned for residential uses: (a) Village Type Development in and around Ko Po Tsuen, and (b) Village Type Development and Residential Group C at Kam Tin Shi.

For the purpose of this assessment, 23 representative existing and planned NSRs have been selected for construction and operational noise impact assessments, as indicated in Figures 3 and 4.

3.2 Construction Noise Impact and Mitigation

3.2.1 Construction Noise impact

During the construction period, the operation of powered mechanical equipment will impose noise impacts on noise sensitive receivers in daytime. No night works and use of percussive piling are anticipated in this project. The noise levels of the worst case scenario have been found in excess of the construction noise criteria at most of the representative NSRs. Mitigation measures are required to control and reduce construction noise.

3.2.2 Construction Noise Mitigation.

It has been demonstrated that the construction noise levels at all affected NSRs can be reduced to or below the 75 dB(A) criterion by installation of temporary noise barriers.

In addition, appropriate noise amelioration measures may include :

- selecting silenced equipment
- using mufflers, silencers or acoustic enclosure
- implementing good house keeping practices

Noise control requirements should be incorporated in the tender/contract documents including specific noise standards to be met and requirements for noise monitoring to be undertaken on the site. Details of environmental monitoring and audit (EM&A) requirements are also contained in the EM&A Manual.

The establishment of good community relations can be of great assistance to both the contractor and local communities. Residents should be notified in advance of planned operations and informed of progress. If necessary, a liaison body can be established to bring together representatives of the affected communities, the government and the contractor.

3.3 Operational Noise Impact and Mitigation

3.3.1 Operational Noise Impact

Increased traffic from the improved Kam Tin Road as well as other major roads such as Kam Sheung Road, Castle Peak Road, the Country Park Section of Route 3(CPS) (which is under construction) and the planned Kam Tin Bypass has been predicted to significantly raise the traffic noise levels at the NSRs.

According to the noise modelling results, current traffic noise levels already exceed the HKPSG maxima at 11 NSRs resided close to Kam Tin Road. Based on the traffic flow predictions for the designed year 2011, all the representative existing NSRs except KTS-1 along the Project alignment will be subject to adverse operational noise impacts ranging from 70 to 84 dB(A). With regard to the planned NSRs, the predicted traffic noise levels will be 75 and 84 dB(A). As such, appropriate noise mitigation measures should be provided to remedy the adverse noise environment.

3.3.2 Operational Noise Mitigation

Various traffic noise mitigation options including application of friction course surfacing and the use of earth bunds have been reviewed.

Taking into considerations of source-receiver configurations, existing environment and extent of noise impacts, a mitigation scheme comprising 3 m barrier(120m length) and 5.7m inverted -L barrier (360m length) is recommended to protect NSRs at Ko Po Tsuen and Kam Fung Terrace. (see Figure 5)

With regard to NSRs at Ko Po San Tsuen and near Au Tau Roundabout, the noise levels are dominated by Route 3(Country Park Section) and Castle Peak Road. Therefore it renders the mitigation provisions on Kam Tin Road ineffective and impractical, and indirect mitigation should be considered.

For the planned receivers near Ko Po Tsuen and Kam Tin Shi, it is recommended that careful consideration should be given to the orientation of the sensitive facades and setback distances to alleviate the residual impacts.

With the provision of recommended mitigation scheme, the noise levels at about 63 number of dwellings still exceed the HKPSG noise criteria, and thus indirect technical remedies should be considered.

3.3.3 Residual Impacts and Indirect Mitigation

In accordance with the ExCo Memorandum, Equitable redress for Persons Exposed to Increased Noise Resulting from the Use of New Roads, direct technical remedies should be applied wherever practicable. Where there is no practical direct technical remedies, indirect technical remedies in the form of noise insulation should be provided to institutional buildings which are used for noise sensitive uses. Indirect technical remedies for residential premises should be considered on the merits of each case. In this connection, the three eligibility criteria set down in the CRTN (with the HKPSG noise standard adopted) have been used to identify those dwellings eligible for insulation for ExCo consideration.

In the light of no further scope of applying direct measures, about 63 number of dwellings should be tested for indirect mitigation. However, results of the eligibility assessment shows that only about 33 number of dwellings are eligible for consideration for indirect technical remedies.

Pending for Exco approval, a further study will be carried out to identify the exact extent of eligible premises and detailed scope of noise insulation works for indirect technical remedies.

4. ECOLOGICAL IMPACT ASSESSMENT

4.1 Ecological Survey

Ecological survey were conducted in January 1996 to record the flora and fauna within the study area. Four different habitat types (based on vegetation) have been identified within the study area, namely, disturbed area, woodland, fresh water marsh and fish pond.

A total of 145 species of higher plants, 50 species of birds, 3 species of insectivorous bats and 2 species of reptiles were recorded in the study area. No signs of mammals and amphibians were found. Most of the species found are widespread and/or common in the territory. No rare and endangered species were recorded within the proposed works area.

4.2 Ecological Impact and Mitigation

Most of the vegetation, including some large roadside trees, present along Kam Tin Road within the project boundary will be removed due to the road improvement works. As most of these trees are exotic species and scattered, and the vegetation is patchy and heavily disturbed, they are unlikely important habitat for wildlife. This impact can thus be mitigated by planting suitable tree species (e.g. *Albizia lebbek*, *Bauhinia blakeana*, *Cassia surattensis*, *Delonix regia* and *Eucalyptus citriodora*) along the widened Kam Tin Road.

The construction work of the proposed project may pollute the soil and the marshes next to Kam Tin Road, if the Contractor's housing-keeping procedures are not executed properly. Therefore, measures must be taken to prevent water carrying sediment and oil from flowing to surrounding areas outside the works boundary. In addition, dust arising from the construction works may be blown by wind and cover the foliage of plants. This may eventually choke and kill the plants. Measures must also be taken to minimize the emission of dust during construction. The existence of freshwater marshes depends on the hydrology of the area. Precautions must be taken to make sure that the construction of the proposed project would not alter the hydrology of the area.

5. VISUAL AND LANDSCAPE IMPACT ASSESSMENT

The existing character of the landscape/townscape of the study area is run-down and derelict. With the completion of Route 3(Country Park Section) by July/August 1998 before the commencement of this project, the landscape character will be slightly improved due to the extensive areas of landscape planting associated with this project. The future landscape character in this study area will be dominated by the Western Corridor Railway and Route 3(Country Park Section). Hence, the widening scheme will have negligible adverse impacts on the landscape character both during the construction and operational phases.

Notwithstanding the above, mitigation measures such as tree planting, reducing the apparent height of noise barriers and provision of visually attractive and well landscaped structure for the noise barriers and the amenity areas will be provided. These measures would be a significant environmental improvement for the whole area and would reduce visual and landscape impacts to acceptable levels and minimal residual impacts are predicted as a result of the scheme.

6. ENVIRONMENTAL MONITORING AND AUDIT

As an integral part of this assessment, environmental monitoring and audit (EM&A) requirements have also been determined and specified, as contained in a standalone EM&A Manual, in order to:

- Ensure that adverse environmental impacts arising from the construction and operation of the Project are kept to acceptable levels.
- Establish procedures for checking the effectiveness of the proposed mitigation measures.
- Provide the means by which compliance may be checked, exceedance documented, and corrective actions taken and recorded.

The environmental monitoring programme will be subject to environmental audit to determine satisfactory compliance with the legislative requirements, ensure that no annoyance is caused to sensitive receivers and initiate the remedial action plan when required. An event/action plan comprising of a set of trigger, action and target parameters has been prepared to facilitate the implementation of the audit programme.

7 CONCLUSIONS

The operation and construction of the project would lead to adverse noise impacts on the noise sensitive receivers identified in the study area. These impacts have been carefully studied and assessed based on current practices and guidelines and mitigation measures have been proposed to mitigate the impacts due to this project to within the established standards and guidelines.

Due to the relatively small scale of the construction works and the highly disturbed roadside environment, no adverse ecological impacts and visual and landscape impacts are anticipated after the recommended mitigation measures are implemented.

8 RECOMMENDATIONS

The following recommendations are made :

- Inclusion of pollution control contract clauses to control construction noise, dust, and solid and liquid waste from the improvement works.
- Provision of the recommended Noise Mitigation Scheme to protect the NSRs at Ko Po Tsuen and Kam Fung Terrace in the Study Area.
- Consideration for indirect technical measures to redress the residual impact. Pending on Exco approval, further study to identify the exact extent of eligible premises and detailed scope of noise insulation works for indirect technical remedies.
- Implementation of compensatory and landscape tree planting.
- Implementation of an environmental monitoring and audit programme.

工作概要

1. 引言

現時的錦田公路是一條單線雙程行車的公路，一端連接荃錦公路，而另一端在凹頭迴旋處連接青山公路。為應付未來新界西北部的發展及將會增加的交通需求，並且現時的錦田公路的交通流量已飽和，而當三號幹線(郊野公園段)啓用後，交通擠塞的情況將更加惡劣，因此有需要去擴闊現時的路面。

整項改善工程將分兩階段進行。第一階段由凹頭迴旋處起至錦田繞道以西的起點。第一階段全長 1.1 千米，將擴闊由凹頭迴旋處至錦田河的一段錦田公路至雙線雙程行車的規格，整段的第一階段工程位置，可參照圖一。

路政署在一九九五年初已就有關的擴闊工程進行了初步的可行性研究，而環境保護署則負責此研究的初步環境評估部份。由於是項擴闊工程的規模比較小，廢料排放及水質變化將不會帶來顯著的影響。再者錦田公路將會與各個對空氣污染感應強的地點保持十米以上的緩衝距離，所以由交通引起的空氣污染並不嚴重。因此初步的研究結果顯示沒有需要就空氣質素，廢料排放，以及水質進行進一步的詳細評估。而最近在詳細的環境影響評估中進行的工地考察亦得出同樣的結果。

基於初步環境評估的結果，是項工程須就噪音及對生態的影響進行詳細的評估。此項評估的目的是研究是項工程在施工及啓用後連同所有同期出現的因素對噪音、生態、外觀及景觀的影響性質及範圍。

2. 工程概述

現時錦田公路是單線雙程行車的公路，沿途只設有間斷及狹窄的行人路。為配合未來的交通需求，第一階段的擴闊工程將擴闊在凹頭迴旋處與錦田河之間的一段約 1.1 千米的路面至雙線程行車規格並設有中間分隔區，巴士站、避車處、行人路及單車徑。擬建的公路將依據現時的路線，在公路兩旁進行擴闊工程。而大部份路面將會設置在填土坡上。將來，此段錦田公路亦會與三號幹線(郊野公園段)的接駁公路“I”與“J”連接。現時公路兩旁的出入口亦會重鋪。典型的道路橫截面圖可參照圖二。整項工程將於一九九九年二月施工，並於二零零一年八月完成。

3. 噪音影響評估

3.1 噪音感應強的地方

根據實地觀察所得的資料顯示，工程計劃附近一帶現有的噪音感應強的地方將會受到一定程度負面影響。這些受噪音影響的地方主要是低層建築物，其中包括村屋、別墅、低層數住宅樓宇、三間學校及一間教堂：

- 凹頭迴旋處附近散落的村屋
- 青山公路元朗段旁的學校及教堂
- 高埔新村
- 錦豐臺
- 高埔村
- 錦田市的低層住宅和學校

有關未來噪音感應強的地方的資料是參考規劃署編製的分區計劃大綱圖。根據大綱圖，高埔村和錦田市附近已被劃作為住宅(丙類)和鄉村的發展用途。評估報告中，共有廿三個具代表性的現有和未來噪音感應強的地方被選定為建築和交通噪音評估對象。(見圖三和圖四)

3.2 建築噪音評估及改善措施

3.2.1 建築噪音評估

建築期間所使用的地盤機動設備將產生噪音。故此大部份噪音感應強的地方在日間將會受到一定程度的建築噪音影響，並且當預計的最壞情況出現時，大多數感應強的地方將受到超出現時建築噪音水平上限的噪音影響。因此有需要執行改善措施控制及減低噪音。預料此工程不會進行晚間建築活動和涉及撞擊性打樁。

3.2.2 改善措施

評估結果顯示，建築臨時隔音屏障能夠有效地將所有噪音感應強的地方的噪音降至七十五分貝或以下。

此外，其他合適的改善措施包括：

- 選用寧靜的機動設備
- 裝置消滅噪音輔件和隔音屏障
- 執行良好的地盤工作守則

噪音標準及所需的噪音監察規格應該列入投標合約文件。關於環境監察及審查規格的詳細資料已包括在環境監察及審查手冊內。

良好的社區關係對承建商和社區有莫大幫助。工程動工前，應知會附近居民及報告工程進度。如有需要的話，政府部門，承建商和受影響居民可派出代表商討有關事宜。

3.3 道路交通噪音評估及改善措施

3.3.1 道路交通噪音評估

錦田公路擴闊後會帶來更高的交通流量，加上附近的錦上路，青山公路，正在興建的三號幹線(郊野公園段)和錦田繞道，預料將會引致較大的行車噪音。

根據評估結果顯示，現時的行車噪音水平在其中十一個鄰近錦田公路及噪音感應強的地方已超過「香港規劃標準與準則」內的上限標準。至於在二零一一年，除錦田市外，現有的噪音感應強的地方將會受到介乎七十至八十四分貝的噪音聲級影響，而未來的噪音感應強的地方亦會面對七十五至八十四分貝的噪音聲級。故此，需要提供適當的改善措施來改善惡劣的噪音環境。而未來的噪音感應強的地方亦會面對七十五至八十四分貝的噪音聲級。

3.3.2 改善措施

報告曾就鋪設低噪音路面和土丘的可行性作出評估。

經考慮道路與噪音感應強的地方之間的空間，實際環境和噪音影響的程度，顧問公司建議興建 120 米長 3 米高和 360 米長 5.7 米高倒 L 形的隔音屏障來保護在高埔村和錦豐臺的噪音感應強的地方。(見圖五)

至於高埔新村和凹頭迴旋處一帶的噪音感應強的地方，由於噪音主要源自三號幹線(郊野公園段)和青山公路，以致在錦田公路上興建隔音屏障未能有效地實行和減低噪音水平。故此，顧問公司認為有需要提供間接技術補救措施。

在高埔村和錦田市附近的未來的噪音感應強的地方，顧問公司建議增加噪音感應強的地方與道路之間的距離及小心考慮窗門的位置方向，以減低剩餘噪音的影響。

在建議的改善措施下，大約有六十三個住戶仍然面對超過「香港規劃標準與準則」內的噪音水平，故此有需要考慮為這些住戶提供間接技術補救措施。(如提供隔音裝置給某些住宅來補償因道路改善工程所增加的交通噪音的影響)

3.3.3 剩餘的噪音影響及間接技術補救措施

根據行政局指引，在可行情況下，應該提供直接技術補救措施來減低交通噪音。如直接技術補救措施未能有效地實行，間接技術補救措施應以隔音裝置提供予噪音感應強，並且其用途是對噪音感應敏感的樓宇。至於住宅方面，應該就個別情況來決定是否提供此補救措施。有見及此，「公路交通噪音計算」內的三項準則(以「香港規劃標準與準則」內的噪音水平為準)，將會用來評估那些住戶才有資格接受間接技術補救措施。

顧問公司曾就約六十三個受影響住戶進行評審，結果顯示大約有三十三個住戶符合資格獲得間接技術補救措施。

經行政局通過後，當局將會進一步研究決定符合三項準則的居所的確實數目及隔音裝置的範圍。

4. 生態影響評估

4.1 生態研究

一九九六年一月期間曾進行生態研究，研究範圍內發現四類動植物的棲息地，包括有：(一)受影響地區，(二)林地，(三)沼澤地，(四)魚塘。

研究範圍內，共記得 145 類高生植物品種，50 類魚類品種，3 類蝙蝠品種和 2 類爬行動物品種，並無發現哺乳類動物和水陸兩棲類動物。大部份樹木都是香港常見的品種，亦無記錄到受保護或稀有品種。

4.2 生態影響及改善措施

由於工程影響，地盤範圍內路旁的樹木包括一些大樹將會被移走。不過大部份樹木分佈散落及已受嚴重影響，並不適宜野生動物棲身，故此影響並不嚴重。可採納沿錦田公路兩旁種植合適的樹木品種的方法以減低此影響。

工程活動或許會污染土壤和附近的沼澤地，故此必須採取適當措施來防止含沉積物和油污的水流入工程範圍以外的地方。此外，承建商必須採取措施來減低建築塵埃的產生，以免影響附近的植物。建築期間，承建商必須採取預防措施，避免影響該區的水文。

5. 風景及外觀的影響

現時在研究範圍內的景觀，其郊外風景特質正日漸減縮及荒廢。在此工程動工前，三號幹線(郊野公園段)已在一九九八年七至八月間完成。屆時由於有三號幹線(郊野公園段)連帶的大規模園林種植，此區的風景特質將會略為改善。並且將來的三號幹線(郊野公園段)及西北鐵將會成為此區的主要風景特質，因此是項擴闊路面計劃在施工及啓用後只會對此區的風景構成些微的不利影響。

雖然如此，此項工程將會採納一些紓緩措施如植樹，減低隔音屏障的視覺高度及於隔音屏障和市容地帶安裝一些外觀吸引及良好的園林結構。這些設施將會對此區的環境帶來顯著的改善，亦同時減低此工程對風景及外觀的影響至可接受水平。而整個計劃對風景及外觀的剩餘影響並不顯著。

6. 環境監察及審查

環境監察及審查計劃能夠確保建築及道路交通帶來的環境影響受到控制及合乎標準，亦能確保所建議的改善措施能夠有效地執行。

環境監察計劃與環境審查息息相關，藉著環境審查來確保工程計劃符合法例要求，並確保受影響地方不受滋擾。如有需要，便會執行補救措施。一套包括周詳規範指引的策略會輔助環境審查計劃的執行。

7. 結論

此項工程，無論在施工以至到啓用將會對那些對噪音感應強的地方帶來不利的影響。顧問公司已對這些影響進行詳細的研究及以現行的準則和指引作出評估，而且亦已提出紓緩措施去減低這些由此項工程帶來的影響至已確立的標準及指引水平。

由於此項工程的規模比較小，同時現時公路兩旁的原有環境亦已受影響，所以當建議的紓緩措施執行後，預計此區的生態、風景及外觀將不會受到不利的影響。

8. 建議

顧問公司提出以下的建議：

- 在工程合約內列入一些控制污染的條文去控制工程帶來的建築噪音、塵埃及固體和液體廢料。
- 設置建議的隔音屏障去保護在研究區域內的高埔村及錦豐臺。
- 爲了減低剩餘的影響，應考慮其他間接的技術補救措施，當行政局批准後，將會進行進一步的評估以確認用隔音方法來補償受影響的合格住戶及隔音措施範圍。
- 執行補償種植及園林種植
- 執行環境監察及審查的程序

Figures

Figure 1 Site Location Plan

Figure 2 Typical Road Cross Section

Figure 3 Noise Sensitive Receivers and Representative Sensitive Facades (Sheet 1 of 2)

Figure 4 Noise Sensitive Receivers and Representative Sensitive Facades (Sheet 2 of 2)

Figure 5 Recommended Noise Mitigation Scheme

附圖

- 圖一 : 工地位置平面圖
- 圖二 : 典型橫截面圖
- 圖三 : 具代表性噪音感應強的地點 (二頁之一)
- 圖四 : 具代表性噪音感應強的地點 (二頁之二)
- 圖五 : 建議的噪音紓緩計劃

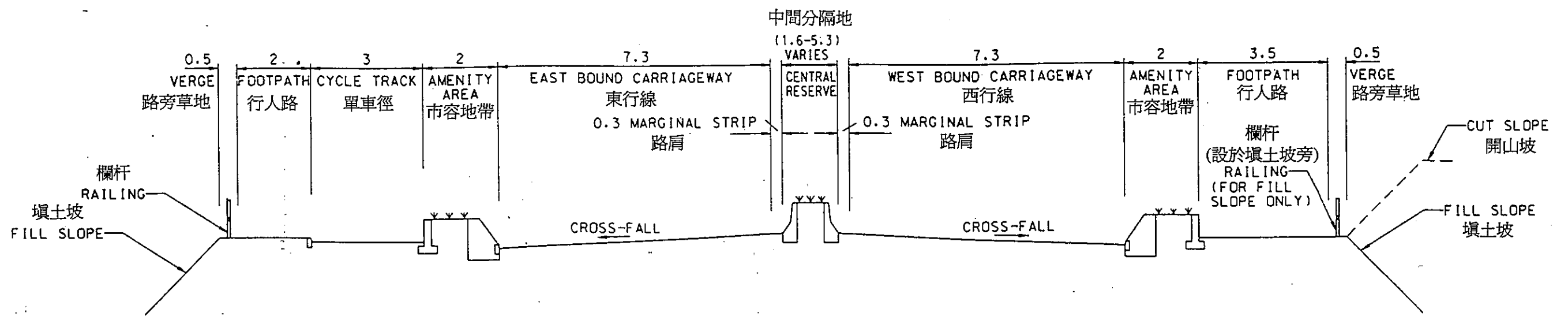


FIGURE I
圖一

SITE LOCATION PLAN
工地位置平面圖

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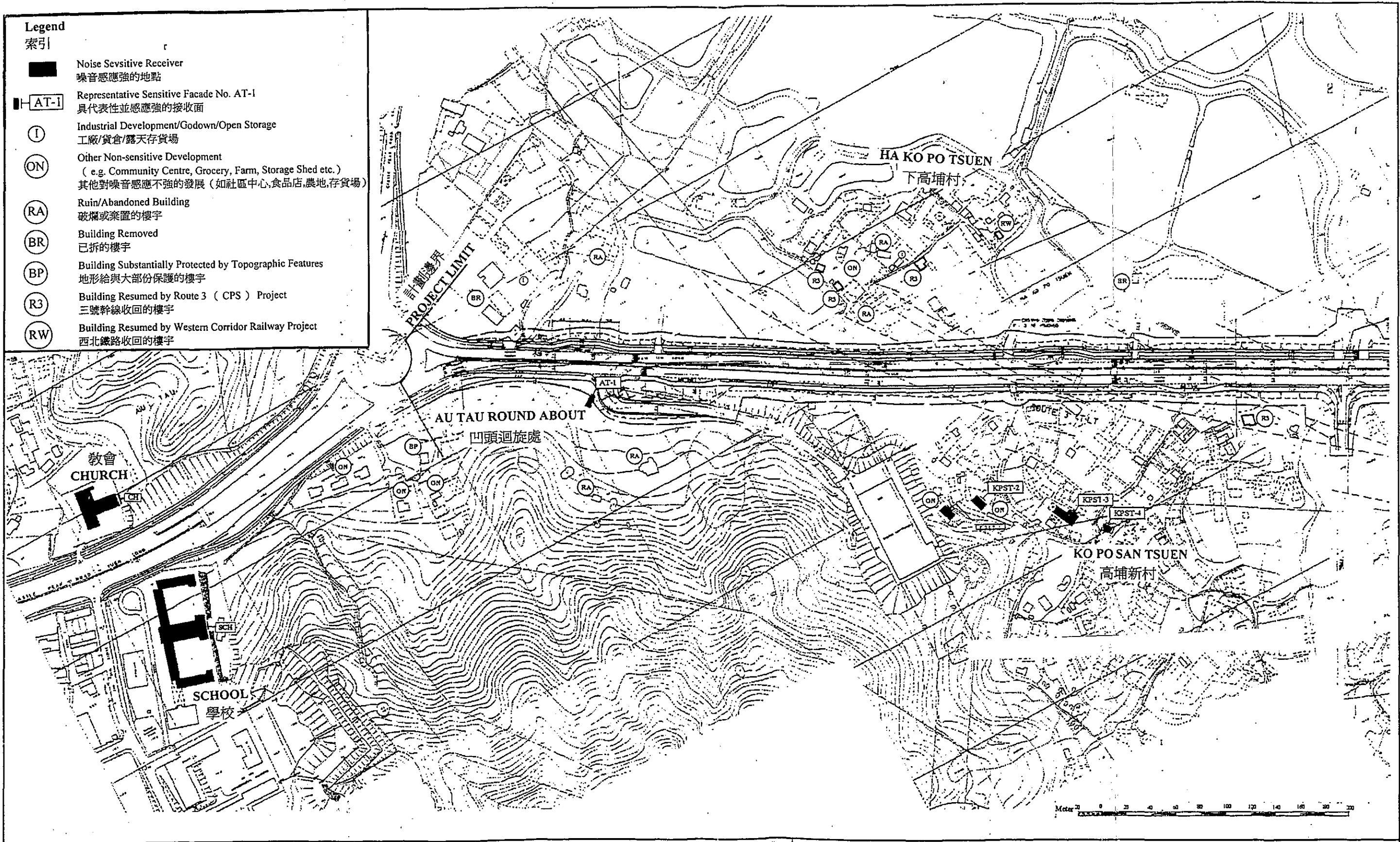
TYPICAL ROAD CROSS-SECTION
 典型橫截面圖

SCALE 1:125

FIGURE 2
 圖二

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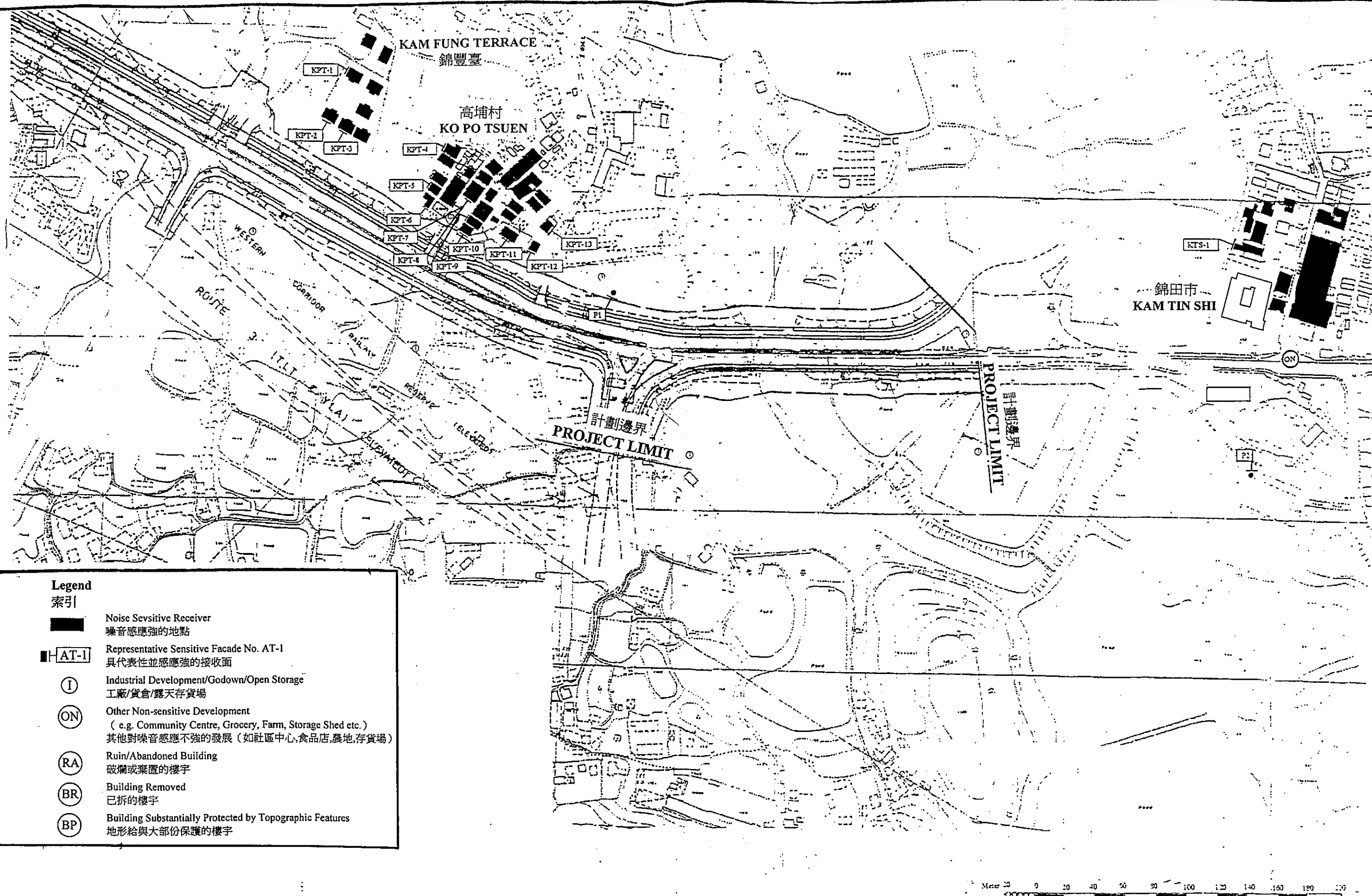
NOISE SENSITIVE RECEIVER AND REPRESENTATIVE SENSITIVE FACADES
(SHEET 1 OF 2)

具代表性的噪音感應強的地點 (二頁之一)

FIGURE 3
圖三

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Legend

索引

- Noise Sensitive Receiver
 噪音感應強的地點
- AT-1
 Representative Sensitive Facade No. AT-1
 具代表性並感應強的接收面
- I
 Industrial Development/Godown/Open Storage
 工廠/貨倉/露天存貨場
- ON
 Other Non-sensitive Development
 (e.g. Community Centre, Grocery, Farm, Storage Shed etc.)
 其他對噪音感應不強的發展 (如社區中心, 食品店, 農地, 存貨場)
- RA
 Ruin/Abandoned Building
 破爛或棄置的樓宇
- BR
 Building Removed
 已拆的樓宇
- BP
 Building Substantially Protected by Topographic Features
 地形給與大部份保護的樓宇

**NOISE SENSITIVE RECEIVER AND REPRESENTATIVE SENSITIVE FACADES
(SHEET 2 OF 2)**

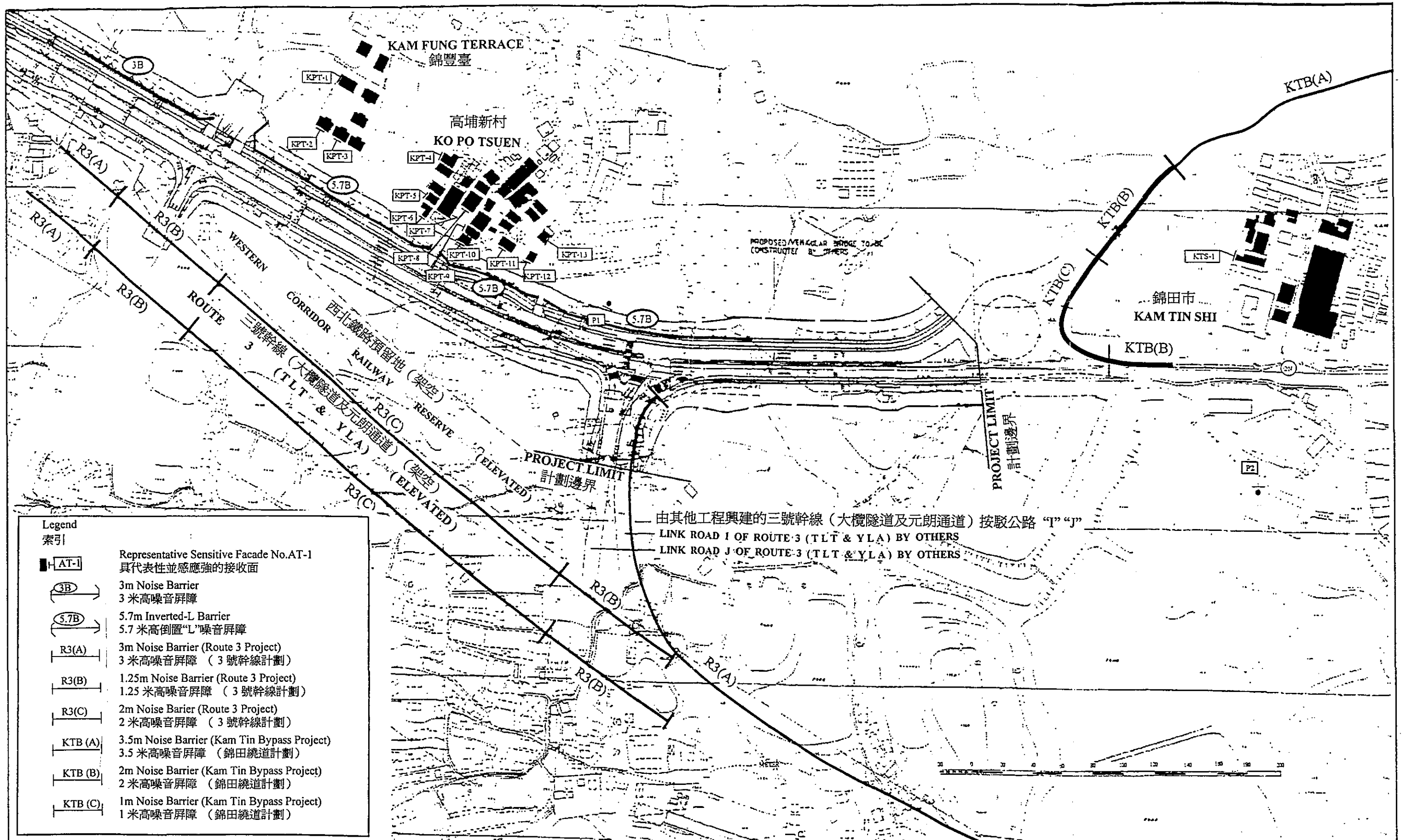
具代表性的噪音感應強的地點 (二頁之二)

FIGURE 4

圖四

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Legend 索引	
	Representative Sensitive Facade No.AT-1 具代表性並感應強的接收面
	3m Noise Barrier 3米高噪音屏障
	5.7m Inverted-L Barrier 5.7米高倒置“L”噪音屏障
	3m Noise Barrier (Route 3 Project) 3米高噪音屏障 (3號幹線計劃)
	1.25m Noise Barrier (Route 3 Project) 1.25米高噪音屏障 (3號幹線計劃)
	2m Noise Barrier (Route 3 Project) 2米高噪音屏障 (3號幹線計劃)
	3.5m Noise Barrier (Kam Tin Bypass Project) 3.5米高噪音屏障 (錦田繞道計劃)
	2m Noise Barrier (Kam Tin Bypass Project) 2米高噪音屏障 (錦田繞道計劃)
	1m Noise Barrier (Kam Tin Bypass Project) 1米高噪音屏障 (錦田繞道計劃)

RECOMMENDED NOISE MITIGATION SCHEME

建議的噪音紓緩計劃

FIGURE 5
圖五

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