



**BARBICAN CONSTRUCTION
CO., LTD**

Contract No. HY/2001/18

**Sai Sha Road Widening
between Kam Ying Road and
Future Trunk Road T7 Junction**



**ENVIRONMENTAL
OPERATION MONITORING PLAN**




**No. R/2563/056 Issue 2
October 2006**

Submitted by/ Prepared by


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**Contract No. HY/2001/18
Sai Sha Road Widening between Kam Ying Road and
Proposed Road T7 Junction**

Operation Monitoring Plan

Approved for Issue by:	
	

Mr Tony Lam (Babtie Asia Ltd.)	
Position:	Environmental Team Leader
Date:	October 2006

Verified by:	
	

Ms. Lyn Ip (BMT Asia Pacific Limited)	
Position:	Independent Environmental Checker
Date:	1 November 2006

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Monitoring Plan for Noise Monitoring

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1.0 Introduction

Barbican Construction Co. Ltd was commissioned by the Highways Departments to execute the project "Contract No. HY/2001/18 Sai Sha Road Widening between Kam Ying Road and Future Trunk Road T7 Junction". Babtie Asia Ltd was employed by the Contractor as the Environmental Team under this project.

According to 5.1 of the EP, the purpose of Monitoring Plan is to assess the accuracy of traffic noise predictions by comparing the project noise impact predictions with the actual impacts.

Noise generation is a critical issue in the construction and the thereafter operation period, and this monitoring plan presents the schedule, methodology for the noise monitoring and audit that will be carried out during the Operation Period as required in Clause 5 of the Environmental Permit. The Environmental Permit is enclosed in Appendix A.

2.0 Noise Monitoring

The traffic noise level shall be measured within the first year of the road opening. Each measurement shall be made in terms of the A-weighted L_{A10} over 3 half hour periods during traffic hour (at least one period in morning peak hour and one in afternoon peak hour) at five measurement points specified in section 2.1 below. At least 3 sets of measurements at each monitoring point are required within the first year of operation of the project. A traffic census including traffic flow and the percentage of heavy vehicles shall also be conducted during the measurement period and the average speed of vehicles estimated. A sample data record sheet is shown in Appendix C.

2.1 Monitoring Locations

Noise data will be taken from three monitoring locations for assessing the nuisance generated during the maintenance period to the Noise Sensitive Receivers (NSRs).

The monitoring locations for both noise measurement events are:

- (1) Wu Kwai Sha New Village(N102)
- (2) Lee Wing House 15 -17(N405) Floor 15 & 25
- (3) Lung Yiu House 7(N317) Floor 20 & 25

2.2 Monitoring Schedule

As refer to in the "The Annual Traffic Census 2004", the Sai Sha Road peak hour is 7:00am -10:00am and 4:00pm – 7:00pm. The related census are enclosed in Appendix B

The proposed schedule for the first noise monitoring event is described below.

(i) Wu Kwai Sha New Village

Date: to be confirmed

Time: 7:30am –8:30am, 6:30pm – 7:00pm

(ii) Lee Wing House 15 -17(N405) Floor 15 & 25

Date: to be confirmed

Floor 15: Time: 8:45am –9:15am, 4:00pm –5:00pm

Floor 25: Time: 9:30am –10:00am, 5:15pm –6:15pm

iii) Lung Yiu House 7(N317) Floor 20 & 35

Date: to be confirmed

Floor 20: Time: 8:30am –9:00am, 4:00pm –5:00pm

Floor 35: Time: 9:15am –9:45am, 5:15pm –6:15pm

2.3 Methodology of Noise Monitoring

The operation noise monitoring will be carried out by using a Sound Level Meter to ensure that exceedance in noise levels could be readily identified and timely action taken to reduce the noise levels within allowable limits.

For the operation noise monitoring, the microphone location shall be at a distance of 1 meter from the openable window and not less than 1.2 meter above the ground level of the noise sensitive receivers.

Noise monitoring will be cancelled in the presence of fog, rain and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s.

At the end of the monitoring period, the L_{eq} , L_{10} and L_{90} are recorded. The site conditions and noise sources are recorded on a standard record sheet.

2.4 Comparison with the Predicted levels

The measurement noise levels should be compared with predicted noise levels by applying appropriate conversion corrections to section 3 for the traffic conditions at the time of noise measurement.

The Predicted Noise Level for the design year are enclosed in Appendix C.

3.0 Traffic Flow Census and Monitoring Locations

In conjunction with the noise measurement, a traffic assessment covering the traffic flow census, percentage of heavy vehicle and the estimated average vehicle speed will be conducted.

For the purpose of comparison with the predicted noise levels, a concurrent census of traffic flow and percentage heavy vehicles for each noise measurement shall be obtained for far-side and near side of the road and the existing road network in the vicinity of each measuring point. The traffic flow monitoring locations should be close to the corresponding noise monitoring points.

The recode sheet for operation noise monitoring is enclosed in Appendix C.

3.1 Traffic Flow Analysis

The Traffic Flow Census includes the statistical analysis of the traffic flow at every concerned junction in terms of different class of vehicles and the percentage of heavy vehicles. The definition of heavy vehicles should be referred to CRTN which considered that all vehicles with an unladen weight exceeding 1525kg are heavy vehicles.

The census will take place during the mentioned time period with the traffic count recorded once in every 15-minute interval during the whole traffic census monitoring time period. The traffic flow survey form is enclosed in Appendix B for information.

The average vehicle speed will be also be measured and reported. Particular landmarks, e.g. lamp-post, are pre-selected for the purpose of assessing the vehicle speed, the distance in between land marks shall be determined at the start of the traffic census. During the Traffic Census, time required for vehicles traveling through the landmarks are recorded, thus, the average vehicle speed can be found.

4.0 Further action

The measured noise level, with corrections as appropriate, shall be compared with the predicted results under the predicted traffic flow conditions. In case discrepancies are observed, explanation should be given to justify the discrepancies.

5.0 Monitoring Equipment

As referred to in the Technical Memorandum on Noise From Construction Work other than Percussive Piling (GW-TM) issued under the Noise Control Ordinance (NCO), sound level meters in compliance with the International Electrotechnical Commission Publications 651:1979 (Type 1) specifications shall be used for carrying out the noise monitoring. Immediately prior to and following each noise measurement the accuracy of the sound level meter shall be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements will be accepted as valid only if the calibration level from before and after the noise measurement agree to within 1.0dB(A).

Appendix A

Environmental Permit

ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE
(CHAPTER 499)
Sections 10 & 13

環境影響評估條例
(第499章)
第10及13條

ENVIRONMENTAL PERMIT TO CONSTRUCT AND OPERATE
A DESIGNATED PROJECT

建造及營辦指定工程項目的環境許可證

PART A (MAIN PERMIT)
A部 (許可證主要部分)

Pursuant to Section 10 of the Environmental Impact Assessment Ordinance (the Ordinance), the Director of Environmental Protection (the Director) granted the Environmental Permit No. EP-119/2002 to the HIGHWAYS DEPARTMENT (hereinafter referred to as the "Permit Holder") on 11 February 2002. Pursuant to Section 13 of the Ordinance, the Director amends the Environmental Permit No. EP-119/2002 based on the Application No. VEP-134/2004. The amendments, described below, are incorporated into this Environmental Permit No. EP-119/2002/A. This Environmental Permit as amended is for the construction and operation of the designated project described in Part B of this Permit subject to the conditions specified in and attached to Part C of this Permit.

根據環境影響評估條例(條例)第10條的規定,環境保護署署長(署長)於2002年2月11日將環境許可證編號EP-119/2002 批予路政署(下稱"許可證持有人")。根據條例第13條的規定,署長因應更改環境許可證的申請編號VEP-134/2004修訂環境許可證編號EP-119/2002。以下修訂已包含在本環境許可證編號EP-119/2002/A內。本經修訂的環境許可證,只適用於建造及營辦本許可證B部所說明的指定工程項目,並須遵守本許可證C部所說明及附載的條件。

This environmental permit is based on the documents, approvals and permissions described below :
 本環境許可證乃依據下列的文件、批准及許可條件而簽發：

Documents in the Register : 登記冊上的文件	<p>(1) Sai Sha Road Widening between Kam Ying Road and Proposed Road T7 Junction - Investigation Assignment (Register No. : AEIAR-014/1999)</p> <ul style="list-style-type: none"> - Environmental Impact Assessment Report - Environmental Monitoring and Audit Manual <p>Hereinafter referred as the "EIA Report" (介乎錦英路與建議的 T7 路連接處之間一段西沙路的擴闊工程勘探研究) (登記冊編號 : AEIAR-014/1999)</p> <ul style="list-style-type: none"> - 環境影響評估報告 - 環境監察及審核手冊 <p>[下稱「環評報告」]</p> <p>(2) The Director's letter of approval of the EIA Report dated 19 October 1999 referenced (1) in Ax (1) to EP2/N1/A/30 Pt.II 環境保護署署長於 1999 年 10 月 19 日簽發的批准環評報告的信件檔案編號(1) in Ax (1) to EP2/N1/A/30 Pt.II</p> <p>(3) Application for Environmental Permit dated 21 January 2002 (Application No. AEP-119/2002) and attached documents submitted by the Permit Holder 許可證持有人於 2002 年 1 月 21 日提交的環境許可證申請文件(申請書編號 AEP-119/2002) 和附件</p> <p>(4) Environmental Permit No. EP-119/2002 issued on 11 February 2002 於 2002 年 2 月 11 日簽發的環境許可證編號 EP-119/2002</p> <p>(5) Application for Variation of an Environmental Permit No. VEP-134/2004 and attached documents submitted by the Permit Holder on 3 February 2004 許可證持有人於 2004 年 2 月 3 日提交的更改環境許可證的申請編號 VEP-134/2004 和附件</p>
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Application No. 申請書編號	Date of Application 申請日期	List of Amendments Incorporated into this Environmental Permit 已包含在本環境許可證內的修訂項目	Date of Amendment 修訂日期
VEP-134/2004	3 February 2004 2004年2月3日	Amend conditions 1.7; 3.1 and 4.1 更改項目 1.7、3.1 和 4.1 Replace Figures 2 and 3 更換圖 2 和 圖 3	1 March 2004 2004年3月1日

1 March 2004

Date
日期

 (Mr. Elvis W. K. AU)

Assistant Director of Environmental Protection
 (Environmental Assessment and Noise)
 for Director of Environmental Protection
 環境保護署署長

助理環境保護署署長(環境評估及噪音)區偉光代行

PART B (DESCRIPTIONS OF DESIGNATED PROJECT)
B 部 (指定工程項目的說明)

Hereunder is the description of the designated project mentioned in Part A of this environmental permit (hereinafter referred to as the "Permit"):
 下列為本環境許可證(下稱 "許可證") A 部所描述的指定工程項目的說明 :

<p>Title of Designated Project 指定工程項目的名稱</p>	<p>Sai Sha Road Widening between Kam Ying Road and Future Trunk Road T7 Junction [This designated project is hereinafter referred to as "the Project"]. 介乎錦英路與未來 T7 主幹路連接處之間一段西沙路的擴闊工程 [本指定工程項目下稱「工程項目」]</p>
<p>Nature of Designated Project 指定工程項目的性質</p>	<p>Road widening and associated works. 道路擴闊及相關工程。</p>
<p>Location of Designated Project 指定工程項目的地點</p>	<p>The section of Sai Sha Road between Kam Ying Road and the junction with the future Trunk Road T7. The location of the Project is shown in Figure 1 attached to this Permit. 介乎錦英路與未來 T7 主幹路連接處之間的一段西沙路。工程項目的地點載於本許可證圖 1。</p>
<p>Scale and Scope of Designated Project 指定工程項目的規模和範圍</p>	<p>(a) widening of the section of Sai Sha Road between Kam Ying Road and its junction with the future Trunk Road T7 to dual two lanes, which stretches over about 650m in length; 把介乎錦英路與未來 T7 主幹路連接處之間的一段西沙路擴闊為雙程雙線分隔道路，全長約 650 米；</p> <p>(b) construction of a roundabout at the junction between Sai Sha Road and Sha On Street; 在西沙路與沙安街的連接處建造一個迴旋處；</p> <p>(c) construction of a 4-lane carriageway of about 100m in length with associated footpaths connecting to the future access road with Whitehead; 建造約長 100 米的四線分隔車道及相關的行人徑，連接未來的白石蓮道；</p> <p>(d) construction of two covered footbridges; 建造兩條有蓋行人天橋；</p> <p>(e) construction of two pedestrian/cyclist subways; 建造兩條行人道/單車隧道；</p> <p>(f) modification of the existing junction of Sai Sha Road and Kam Ying Road including provision of a ramp and a staircase to an existing subway across Sai Sha Road; 修改西沙路及錦英路現有的連接處，包括在貫穿西沙路的現有隧道設置斜路及樓梯；</p> <p>(g) reconstruction of the existing footpaths, cycle track and village access road; and 重建現有行人徑、單車徑及鄉村通道；</p> <p>(h) erection of noise barriers along Sai Sha Road; and 沿西沙路豎設隔音屏障；以及</p> <p>(i) ancillary works including electrical and mechanical, drainage, slope and landscaping works, construction of embankments, retaining walls and cycle parks. 進行附屬工程，包括機電、渠務、斜坡及景觀美化工程，路堤、擋土牆及單車停放處建造工程。</p>



PART C (PERMIT CONDITIONS)**C 部 (許可證條件)****1. General Conditions**
一般條件

- 1.1 The Permit Holder shall ensure full compliance with all conditions of this environmental permit. Any non-compliance may constitute a contravention of the Environmental Impact Assessment Ordinance (Cap. 499) and may become subject of appropriate action being taken under the Ordinance.

許可證持有人必須確保完全符合本環境許可證的全部條件。凡有不符合本許可證的情況，則可能構成違反環境影響評估條例(第 499 章)的規定，而當局可根據條例對其採取適當行動。

- 1.2 The Permit Holder shall ensure full compliance with all legislation from time to time in force including but without limitation to the Noise Control Ordinance (Cap. 400), Air Pollution Control Ordinance (Cap. 311), Water Pollution Control Ordinance (Cap. 358), Dumping at Sea Ordinance (Cap. 466) and Waste Disposal Ordinance (Cap. 354). This Permit does not of itself constitute any ground of defense against any proceedings instituted under any legislation.

許可證持有人須確保經常完全符合現行法例的規定，包括(但並不只限於)噪音管制條例(第 400 章)、空氣污染管制條例(第 311 章)、水污染管制條例(第 358 章)、海上傾倒物料條例(第 466 章)及廢物處置條例(第 354 章)。本許可證本身對於依據任何法例而作出的訴訟並不構成任何抗辯的理據。

- 1.3 The Permit Holder shall make copies of this Permit together with all documents referred to in this Permit or the documents referred to in Part A of the Permit readily available at all times for inspection by the Director or his authorized officers at all sites/offices covered by this Permit. Any reference to the Permit shall include all documents referred to in the Permit and also the relevant documents in the Register.

許可證持有人須覆印本許可證及本許可證所述的所有文件或本許可證 A 部所述的文件，以供署長或其授權人員在本許可證所涵蓋的所有工地/辦事處隨時查閱。凡提及本許可證，即包括本許可證所述的所有文件和登記冊內的相關文件。

- 1.4 The Permit Holder shall give a copy of this Permit to the person(s) in charge of the site(s) and ensure that such person(s) fully understands all conditions and all requirements incorporated by the Permit.

許可證持有人須把本許可證的一份副本交予有關工地的負責人，並確保這些人士完全明白本許可證內載的所有條件與規定。

- 1.5 The Permit Holder shall display conspicuously a copy of this Permit on the construction site(s) at all vehicular site entrances/exits or at a convenient location for the public's information at all times. The Permit Holder shall ensure that the most updated information about the Permit, including any amended permit, is displayed at such locations. If the Permit Holder surrenders a part or the whole of the Permit, the notice he sends to the Director shall also be displayed at the same locations as the original Permit. The suspended, varied or cancelled Permit shall be removed from the display at the construction site(s).



許可證持有人須在有關建造工地的所有車輛進出口或一處方便地點，顯眼地展示本許可證的副本，以供公眾在任何時間內閱覽。許可證持有人須確保有關本許可證的最新資料，包括經修訂的許可證，在這些地點展示。如果許可證持有人交回許可證的部分或全部，其送交署長的通知書，亦須在展示原有許可證的相同地點展示，遭暫時吊銷、更改或取消的許可證必須從工地除下移走。

- 1.6 The Permit Holder shall construct and operate the Project as described in Part B of this Permit.

許可證持有人須依據本許可證 B 部的說明建造及營辦工程項目。

- 1.7 The Permit Holder shall ensure that the Project is designed, constructed and operated in accordance with the information and all recommendations described in the EIA Report (Register No. ABIAR-014/1999), the information contained in the Applications (No. AEP-119/2002 and VEP-134/2004) and the documents attached to the Applications, and the information or mitigation measures described in this Permit, and mitigation measures to be recommended in the submissions that shall be deposited with or approved by the Director as a result of the permit conditions contained in this Permit, and mitigation measures to be recommended under on going surveillance and monitoring activities during all stages of the Project. Where recommendations referred to in the documents of the Register are not expressly referred to in this Permit, such recommendations are nevertheless to be implemented unless expressly excluded or impliedly amended in this Permit.

許可證持有人須確保本工程項目的設計、建造及營辦符合環評報告(登記冊編號：ABIAR-014/1999)所列載的資料和各項建議；申請書(編號：AEP-119/2002 和 VEP-134/2004)及所附夾文件內載的資料；本許可證所述的資料和緩解措施；和因應本許可證內列的條件而送交署長存放或批可的文件內所建議的緩解措施；以及在工程項目各階段進行持續監察和監測工作期間所建議的緩解措施。即使登記冊文件所述的建議沒有在本許可證內明確引述，這些建議仍須實施，除非在本許可證內明確地表示除或默示已修訂。

- 1.8 All deposited submissions, as required under this Permit, shall be rectified and resubmitted in accordance with the comments, if any, made by the Director within one month of the receipt of the Director's comments or otherwise as specified by the Director.

所有按本許可證規定而存放的文件，如署長給予意見，文件須在一個月內根據署長的意見完成修正並再提交署長，或依照署長另行指示。

- 1.9 All submissions approved by the Director, all submissions deposited without comments by the Director, and all submissions rectified in accordance with comments by the Director under this Permit shall be construed as part of the Permit conditions described in Part C of this Permit. Any variation of the submissions shall be approved by the Director in writing or as prescribed in the relevant permit conditions. Any non-compliance with the submissions may constitute a contravention of the Environmental Impact Assessment Ordinance (Cap.499). All submissions or any variation of the submissions shall be verified by the Independent Environmental Checker (IEC) referred to in Condition 2.1 below, before submitting to the Director under this Permit.

所有提交署長並獲批可的文件、所有提交署長存放而沒有收到署長意見的文件、和根據本許可證提交並已依照署長的意見作出修訂的所有文件，將詮釋為本許可證 C 部所說的許可證條件的一部分。對提交文件所作的任何修訂，均須獲得署長的書面批准，或符合有關許可證條件所述。凡與所提交的文件有不合的情況，均可能構成違反環境影響評估條例(第 499 章)。所有提交文件或對提交文件所作的任何修訂，在根據本許可證規定送交署長前，均須經下文條件第 2.1 項所述的獨立環境查核人核實。



- 1.10 The Permit Holder shall release all finalized submissions, as required under this Permit, to the public by depositing copies in the Environmental Impact Assessment Ordinance Register Office, or in any other places, or any internet websites as specified by the Director, or by any other means as specified by the Director, for public inspection. For this purpose, the Permit Holder shall provide sufficient copies of the submissions.

許可證持有人須把所有根據本許可證規定而提交的文件定稿向公眾發放，方法是把上述文件的副本放置在環境影響評估條例登記冊辦事處，或署長指定的任何其他地方或互聯網網站，或依照署長指定的任何其他方法，供公眾查閱。為此，許可證持有人須提供足夠數量的副本。

- 1.11 The Permit Holder shall notify the Director in writing the commencement date of construction of the Project no later than 2 weeks prior to commencement of construction of the Project. The Permit Holder shall notify the Director in writing immediately if there is a change of the commencement date of the construction.

許可證持有人須在工程項目施工前至少兩個星期，以書面通知署長施工開始的日期。如開始施工的日期有任何更改，許可證持有人必須立即以書面通知署長。

- 1.12 All submissions to the Director required under this Permit shall be delivered either in person or by registered mail to the Environmental Impact Assessment Ordinance Register Office (currently at 27/F of Southorn Centre, 130 Hennessy Road, Wanchai, Hong Kong).

按本許可證的規定向署長提交的所有文件，須親身送交或以掛號方式郵寄至環境影響評估條例登記冊辦事處（現址為：香港灣仔軒尼詩道 130 號修頓中心 27 樓）。

2. Measures and Submissions before Commencement of the Project 在工程項目施工前須提交的文件或採取的措施

- 2.1 An Independent Environmental Checker (IEC) shall be employed no later than 2 months before commencement of construction of the Project. The IEC shall have at least 7 years of experience in environmental monitoring and audit (EM&A) or environmental management. The IEC shall audit the overall EM&A programme, including the implementation of all environmental mitigation measures, submissions relating to the EM&A, and any other submissions required under this Permit. In addition, the IEC shall be responsible for verifying the environmental acceptability of permanent and temporary works, relevant design plans and submissions under this Permit.

在工程項目施工開始前至少兩個月，便要聘用一名獨立環境查核人。獨立環境查核人須在環境監察及審核或環境管理方面至少有 7 年的經驗。獨立環境查核人將審核整體環境監察及審核計劃，包括所有環境緩解措施的施行、提交有關環境監察及審核的文件，以及提交本許可證所要求的其他文件。此外，獨立環境查核人亦須負責核實永久及臨時工作的環境可接受性、相關的設計圖則和根據本許可證而提交的文件。

- 2.2 An Environmental Team (ET) shall be established no later than 2 months before commencement of construction of the Project. The ET shall be headed by an ET leader who has at least 7 years of experience in environmental monitoring and auditing (EM&A) or environmental management. The ET and ET Leader shall be responsible for the implementation of the EM&A programme in accordance with the EM&A requirements as contained in the EM&A Manual attached to the Application (No. AEP-119/2002).



在工程項目施工開始前至少兩個月，便須成立一個環境小組。環境小組將由一名在環境監察及審核或環境管理方面有至少 7 年經驗的環境小組組長領導。環境小組及環境小組組長將負責依照申請書(編號：AEP-119/2002)附夾的環境監察及審核計劃內載的規定實施。

- 2.3 The Permit Holder shall, within 4 weeks after commencement of construction of the Project, inform the Director in writing of the management organization of the main construction companies and/or any form of joint ventures associated with the construction of the Project. The submitted information shall include at least an organization chart, names of responsible persons and their contact details.

許可證持有人須在工程項目施工開始後的 4 個星期內，以書面通知署長與本工程項目相關的主要建造公司及 / 或以任何形式合作的管理架構。提交的資料須包括至少一份組織圖、負責人的姓名及聯絡資料。

- 2.4 The Permit Holder shall, at least 4 weeks before commencement of construction of the Project, deposit with the Director 3 sets of landscape proposal, including a tree preservation plan indicating the location of trees to be preserved and transplanted, for the Project during construction and operation stages with explanatory statement, design drawings and layout plans of the scale 1 to 1000 or other scale as agreed by the Director. The submission shall include an implementation programme for the landscaped areas, with clear identification of the responsibility for funding, implementation, management and maintenance of the landscaped areas. The submission shall be verified by the IEC as conforming to the information and recommendations contained in the EIA report (No. AEIAR-014/1999), the Application (No. AEP-119/2002) and the attached Environmental Review Report and EM&A Manual attached to the Application. The Permit Holder shall make available additional copies to the Director upon his request.

許可證持有人須在工程項目的建造工程展開前至少 4 個星期，向署長存放在工程項目建造及營辦階段的景觀美化建議書 3 份，內裏包括樹木保存計劃，計劃內須列出要受保存和移植的樹木的位置，並連同解釋說明、設計圖則，以及比例 1:1000 或署長所同意的其他比例的設計圖則。所提交文件須包括景觀美化範圍的實施計劃，並清楚界定景觀美化範圍的資源、實施、管理及維修保養的責任。所提交文件須經獨立環境查核人核實是符合環評報告(編號：AEIAR-014/1999)、申請書(編號：AEP-119/2002)、環境檢討報告及申請書附夾的環監手冊內所載的資料和建議。如署長要求，許可證持有人須向署長提供額外的副本。

3. Measures for Construction and Operation of the Project 建造及營辦工程項目須採取的措施

- 3.1 To mitigate the traffic noise impact arising from the Project, construction of the proposed noise barriers in accordance with the details as shown in Figures 2 and 3 attached to this Permit shall be completed before operation of the Project except the Noise Barrier (Type V) (Figure 2 refers) designed for protection of the planned residential development in DD206 (Figure 1 refers). Construction of this Noise Barrier (Type V) shall be completed before occupation of the residential development in DD206. Each noise barrier shall be a continuous structure with no gaps or openings.

為減少工程項目所造成的交通噪音影響，建議的隔音屏障須依足本許可證圖2及3所示的詳情，在營辦本工程項目前建成，為保護位處第206約(見圖1)已規劃的住宅發展而設計的一道隔音屏障(第V類)(見圖2)則除外。這道隔音屏障(第V類)須在第206約的住宅發展入伙前建成。每道隔音屏障須是一道連接而沒有間隙或開口的結構。



- 3.2 All measures recommended in the deposited landscape proposal shall be fully implemented in accordance with the details and time frames set out in the submission under condition 2.4.

在所存放的景觀美化建議書內的所有建議措施，必須依足在條件 2.4 下所提交的文件內所載的詳情及時間表實施。

4. Environmental Monitoring and Audit Requirements during Construction of the Project
工程項目建造期間須執行的環境監察及審核規定

- 4.1 The EM&A programme shall be implemented as set out in the EM&A Manual attached to the Application (No. AEP-119/2002). Any change to the programme shall be justified by the ET leader and verified by the IEC as conforming to the information and requirements contained in the EIA Report (No. AEIAR-014/1999), the Applications (No. AEP-119/2002 and VEP-134/2004) and the attached Environmental Review Reports and EM&A Manual before submission to the Director for approval.

環境監察及審核計劃須依照申請書(編號:AEP-119/2002)內附夾的環監手冊所載規定實施。凡對計劃作出任何更改，在提交署長批准前，須由環境小組組長提出理據及經獨立環境查核人核實，以確定符合環評報告(編號:AEIAR-014/1999)、申請書(編號:AEP-119/2002 和 VEP-134/2004)和夾附的環境檢討報告和環監手冊內所載的全部資料和規定。

- 4.2 Samples and measurements shall be taken in accordance with the requirements of the EM&A Manual attached to the Application (No. AEP-119/2002) in conducting the baseline monitoring and impact monitoring.

在進行基線監測及影響監測，抽取樣板及測量須依照申請書(編號:AEP-119/2002)附夾的環監手冊內所載規定。

- 4.3 The remedial actions described in the Event/Action Plans of the EM&A Manual attached to the Application (No. AEP-119/2002) shall be fully and properly carried out in accordance with the time frames set out in the Event/Action Plans, or as agreed by the Director.

申請書(編號:AEP-119/2002)附夾的環監手冊內的事件/行動計劃所說明的補救行動，須依照事件/行動計劃所訂明的時限或如署長所同意，徹底及妥善執行。

- 4.4 Records of measurements and actions taken under conditions 4.2 and 4.3 respectively of this Permit shall be logged and kept, within 3 working days of the collection of data or completion of action, for the purpose of preparing and submitting the EM&A reports and making the information available for inspection on site.

根據本許可證條件第 4.2 及 4.3 項所作的測量數據及行動，須在數據收集或行動完成的 3 個工作天內，予以記錄和保存，以作擬寫所要提交的環境監察及審核報告，及為準備有關資料以便在工地查閱之用。

- 4.5 Two hard copies and one electronic copy of the Baseline Monitoring Report shall be submitted to the Director at least 2 weeks before commencement of construction of the Project. The submission shall be verified by the IEC. Additional copies of the submission shall be made available to the Director upon his request.



在工程項目施工前至少 2 個星期，向署長提交基線監測報告的兩份副本和一份電子版本。所提交的文件須經獨立環境查核人核實。如署長要求，許可證持有人須向署長提供文件的額外副本。

- 4.6 One hard copy and one soft copy of monthly EM&A Report shall be submitted to the Director within 2 weeks after the end of the reporting month. The EM&A Reports shall include a summary of all noncompliance (exceedances) of the environmental quality performance limits (Action and Limit Levels). The submissions shall be verified by the IEC. Additional copies of the submission shall be provided to the Director upon request by the Director.

在規定提交報告的月份結束後 2 個星期內，許可證持有人須向署長提交環境監察及審核月報的副本和電子版本各一份。環境監察及審核報告內須包括一份記錄所有不符合(超出)環境質素成效規限(行動及規限級別)的摘要。所提交的文件須經獨立環境查核人核實。如署長要求，須向署長提供文件的額外副本。

- 4.7 All environmental monitoring and audit data submitted under this Permit shall be true, valid and correct.

根據本許可證提交的所有環境監察及審核數據，均須真實無誤。

5. Environmental Monitoring and Audit Requirements during Operation of the Project
工程項目營辦期間須執行的環境監察及審核規定

- 5.1 The Permit Holder shall, at least 6 months before the operation of the project, deposit with the Director a monitoring plan for the purpose of assessing the accuracy of traffic noise predictions, by comparing the project noise impact predictions with the actual impacts. The monitoring plan shall contain monitoring locations, monitoring schedules, methodology of noise monitoring including noise measurement procedures, traffic counts and speed checks, and methodology of comparison with the predicted levels. At least one monitoring location at the noise sensitive receivers protected by noise mitigation measures shall be proposed. At least three sets of measurements shall be conducted and the monitoring shall be done within the first year of operation of the project. Monitoring shall be conducted in accordance with the deposited monitoring plan unless with prior justification. Monitoring details and results, including the comparison between the measured noise levels and the predicted levels, shall be recorded in a report. The report shall be certified by the Permit Holder before deposited with the Director, within one month after the completion of the monitoring.

許可證持有人須在營辦工程項目前至少 6 個月向署長存放一份監測計劃，透過工程項目的噪音影響預測與實際影響的比較，評估交通噪音預測的準確度。監測計劃須載有監測位置、監測時間表、噪音監測的方法，包括噪音測量程序、交通流量統計及速度檢查，以及預測水平的比較方法。在受噪音緩解措施保護的噪音感應強地方，許可證持有人須建議至少一個監測位置。在營辦工程項目的首年內須進行監測，並至少有三套測量數據。監測工作須依據已存放的監測計劃進行，除非事先提出充分理由。監測的詳情及結果，包括測量的噪音水平與預測水平的比較，須記錄在報告內。在監測工作完成後的一個月內，許可證持有人須核證這報告，才向署長存放。

- 5.2 The Permit Holder shall deposit with the Director 3 copies of an audit report, certified by the ET Leader and verified by the IEC, demonstrating the satisfactory completion of the measures recommended in the landscape proposal as described in conditions 2.4 and 3.2 of this Permit. The audit report shall be deposited within 3 weeks after completion of the mitigation measures.



許可證持有人須向署長存放 3 份經環境小組組長核證並由獨立環境查核人核實的審核報告，並須證示本許可證條件第 2.4 及 3.2 項所規定存放的景觀美化計劃文書內所建議的措施已完成並達致滿意的程度。審核報告須在緩解措施完成後的 3 個星期內向署長存放。

- 5.3 The Permit Holder shall deposit with the Director 3 copies of audit report, certified by the ET leader and verified by the IBC, demonstrating the satisfactory completion of the noise measures described in condition 3.1 of this Permit. The audit report shall be deposited within 3 weeks after completion of the mitigation measures.

許可證持有人須向署長存放經由環境小組組長核證和獨立環境查核人核實的審核報告 3 份，並須證示本許可證條件第 3.1 項所述的措施已完成並達致滿意的程度。審核報告須在緩解措施完成後 3 個星期內向署長存放。

6. Electronic Reporting of EM&A Information 環境監察及審核資料的電子匯報

- 6.1 To facilitate public inspection of the Baseline Monitoring Report and monthly EM&A Reports via the EIAO Internet Website and at the EIAO Register Office, electronic copies of these Reports shall be prepared in Hyper Text Markup Language (HTML) (version 4.0 or later) and in Portable Document Format (PDF version 4.0 or later), unless otherwise agreed by the Director and shall be submitted at the same time as the hardcopies as described in Conditions 4 and 5 of this Permit. For the HTML version, a content page capable of providing hyperlink to each section and sub-section of these Reports shall be included in the beginning of the document. Hyperlinks to all figures, drawings and tables in these Reports shall be provided in the main text from where the respective references are made. All graphics in these Reports shall be in interlaced GIF format unless otherwise agreed by the Director. The content of the electronic copies of these Reports must be the same as the hardcopies.

為方便公眾透過環評條例互聯網網站和在環境影響評估條例登記冊辦事處查閱基線監測報告及每月環境監察及審核報告，須以超文本標示語言(HTML)(第 4.0 或較後版本)和便攜式文件格式(PDF)(第 4.0 或較後版本)製作報告的電子版本，除非另獲署長同意，並與本許可證條件第 4 及 5 項所說明的副本同時提交。關於 HTML 的版本方面，可與報告各節及小節作出超文本連結的目錄須放置在文件的開首。報告內各類圖表須在載有相關資料的正文內作出超文本連結，除非另獲署長同意，報告內所有圖形均須以交錯存取的 GIF 格式制定。報告的電子版本內容，必須與副本的內容一致。

Notes : 註：

1. This Permit consists of three parts, namely, PART A (Main Permit), PART B (Description of Designated Project) and PART C (Permit Conditions). Any person relying on this Permit should obtain independent legal advice on the legal implications under the Ordinance, and that the following notes are for general information only.

本許可證共有 3 部，即：A 部（許可證主要部分）；B 部（指定工程項目的說明）；及 C 部（許可證條件）。任何援引本許可證的人士須就條例的法律含意徵詢獨立法律意見，下述註解只供一般參考用。



2. The Permit Holder may apply under section 13 of the Ordinance to the Director for a variation of the conditions of this environmental permit. The Permit Holder shall replace the original Permit displayed on the construction site by the amended Permit.

許可證持有人可根據條例第 13 條的規定向署長申請更改本許可證的條件。許可證持有人須把經修改的許可證，替換在建造工地內展示的原有許可證。

3. A person who assumes the responsibility for the whole or a part of the designated project may, before he assumes responsibility of the designated project, apply under section 12 of the Ordinance to the Director for a further environmental permit.

承擔指定工程項目的整項或部分工程的責任的人，在承擔責任之前，可根據條例第 12 條的規定向署長申請新的環境許可證。

4. Under section 14 of the Ordinance, the Director may with the consent of the Secretary for the Environment, Transport and Works suspend, vary or cancel this environmental permit. The suspended, varied or cancelled Permit shall be removed from the display on the construction site.

根據條例第 14 條的規定，署長可在環境運輸及工務局局長的同意下暫時吊銷、更改或取消環境許可證。遭暫時吊銷、更改或取消的許可證必須從建造工地除下，不再展示。

5. If this Permit is cancelled or surrendered during the construction or operation, another environmental permit must be obtained under the Ordinance before the construction or operation of the project could be continued. It is an offence under section 26(1) of the Ordinance to construct or operate a designated project listed in Part I of Schedule 2 of the Ordinance without a valid environmental permit.

如果本許可證在工程項目建造或營辦期間被取消或交回，則在繼續進行工程項目之前，必須先根據條例規定取得另一份環境許可證。根據條例第 26(1)條的規定，任何人在沒有有效環境許可證的情況下建造或營辦條例附表 2 第 I 部所列明的指定工程項目，即屬犯罪。

6. Any person who constructs or operates the designated project contrary to the conditions in this Permit, and is convicted of an offence under the Ordinance, is liable –

如任何人在違反本許可證的條件下建造或營辦工程項目，根據環評條例，即屬犯罪—

- (i) on a first conviction on indictment to a fine of \$ 2 million and to imprisonment for 6 months;

—經循公訴程序首次定罪，可處罰款 200 萬元及監禁 6 個月；

- (ii) on a second or subsequent conviction on indictment to a fine of \$ 5 million and to imprisonment for 2 years;

—經循公訴程序第二次或其後每次定罪，可處罰款 500 萬元及監禁 2 年；

- (iii) on a first summary conviction to a fine at level 6 and to imprisonment for 6 months;

—經循簡易程序首次定罪，可處第 6 級罰款及監禁 6 個月；



- (iv) on a second or subsequent summary conviction to a fine of \$1 million and to imprisonment for 1 year; and

一經循簡易程序第二次或其後每次定罪，可處罰款 100 萬元及監禁 1 年；及

- (v) in any case where the offence is of a continuing nature, the court or magistrate may impose a fine of \$ 10,000 for each day on which he is satisfied the offence continued.

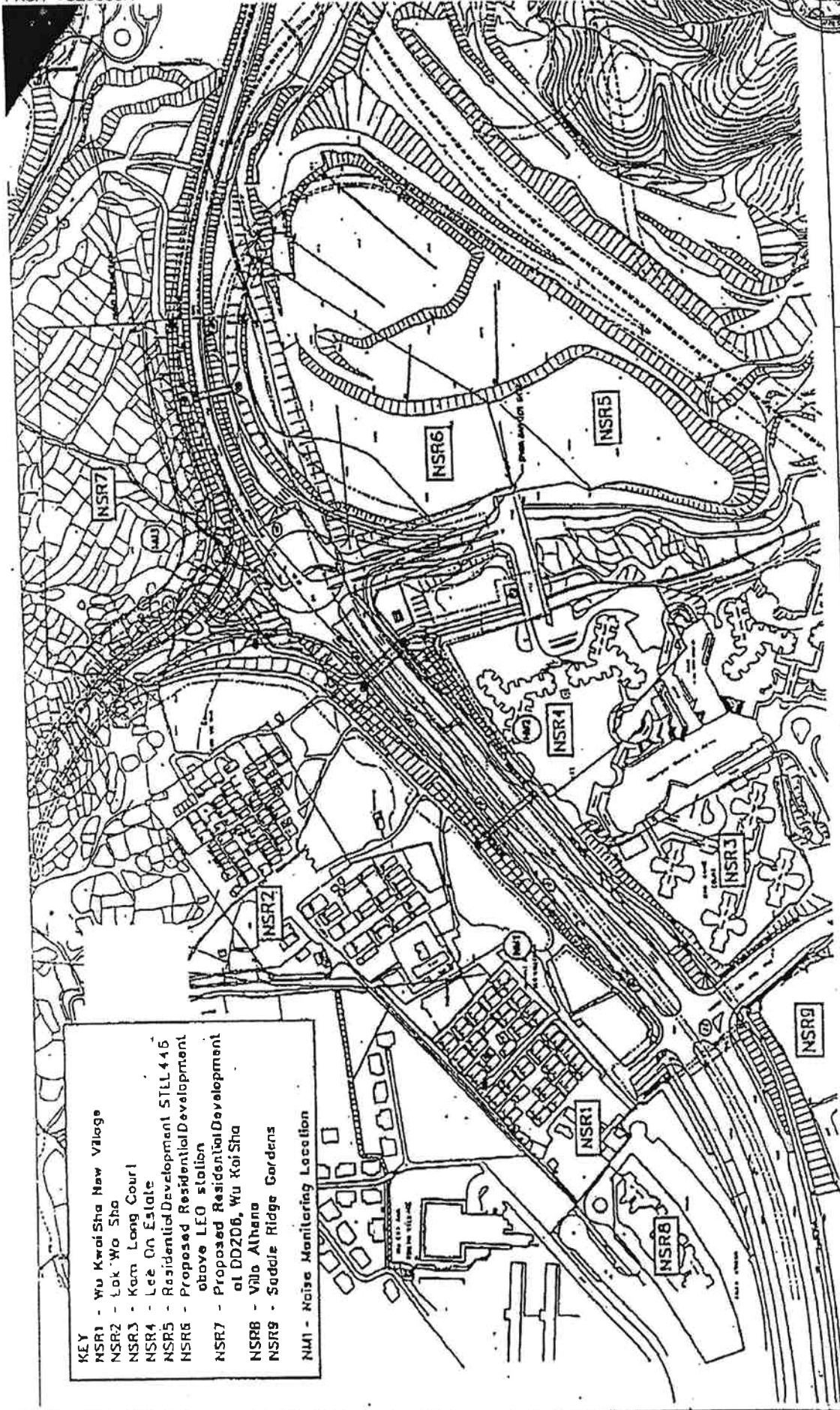
在任何情況下如該罪行屬持續性質，則法院或裁判官可就其信納該罪行持續的每天另處罰款 10,000 元。

7. The Permit Holder may appeal against any condition of this Permit under Section 17 of the Ordinance within 30 days of receipt of this Permit.

許可證持有人在接獲本許可證後 30 天內，可根據條例第 17 條就本許可證的任何條件提出上訴。

Environmental Permit No. EP-119/2002/A
環境許可證編號





- KEY**
- NSR1 - Wu Kwai Sha New Village
 - NSR2 - Lok Wo Sha
 - NSR3 - Kam Long Court
 - NSR4 - Lee On Estate
 - NSR5 - Residential Development STILL 446
 - NSR6 - Proposed Residential Development above LEO station
 - NSR7 - Proposed Residential Development at DD206, Wu Koi Sha
 - NSR8 - Villa Athana
 - NSR9 - Saddle Ridge Gardens
 - NMI - Noise Monitoring Location

Figure 1
圖 1

Environmental Permit No. EP-119/2002/A
環境許可證編號

Project Title : Sai Sha Road Widening Between Kam Ying Road and Future Trunk Road T7 Junction

Project Site and Boundary

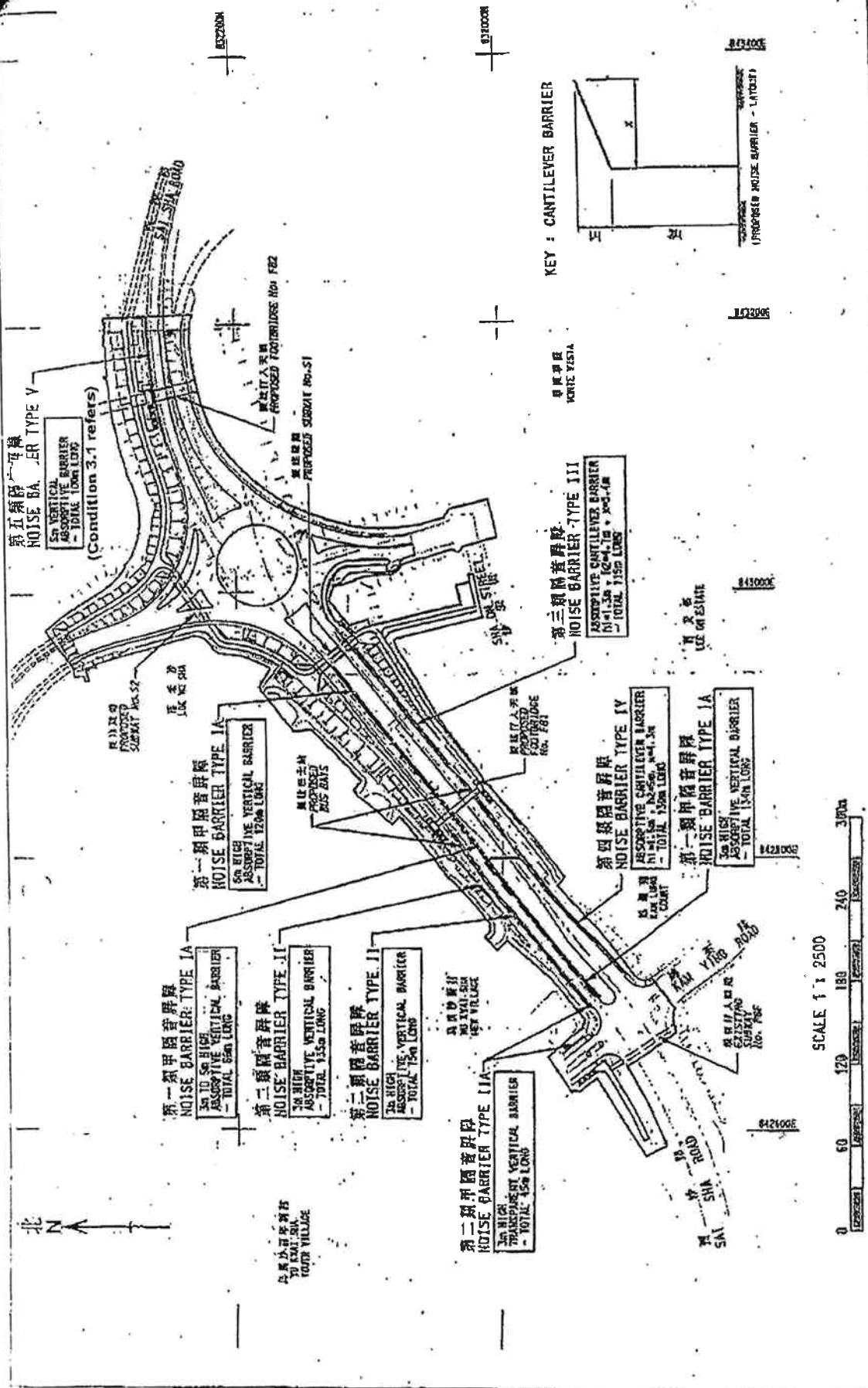


Figure 2
圖 2
Environmental Permit No. EP-119/2002/A
環境許可證編號

Project Title : Sai Sha Road Widening Between Kam Ying Road and Future Trunk Road T7 Junction
 項目名稱 : 介乎錦英路與未來 T7 主幹路連接處之間一段西沙路的擴闊工程
 Operational Noise Mitigation Measures
 運作期間噪音緩解措施

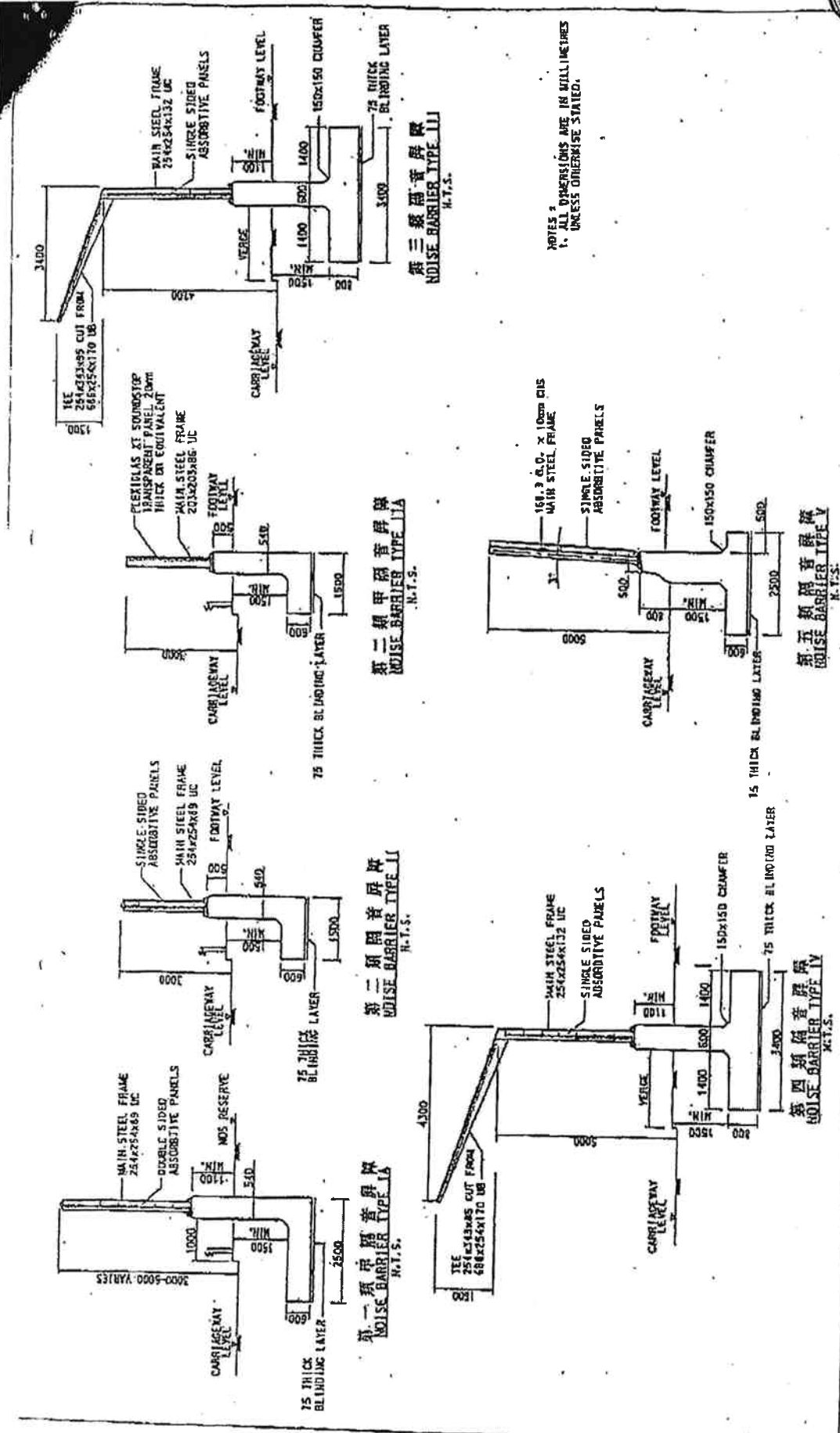


Figure 3
圖 3

Project Title : Sai Sha Road Widening Between Kam Ying Road and Future Trunk Road T7 Junction
項目名稱 : 介乎錦英路與未來 T7 主幹路連接處之間一段西沙路的擴闊工程

Proposed Noise Barriers - Sectional Plan
建議的隔音屏障 - 切面圖

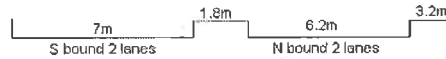
Environmental Permit No. EP-119/2002/A
 環境許可證編號

Appendix B

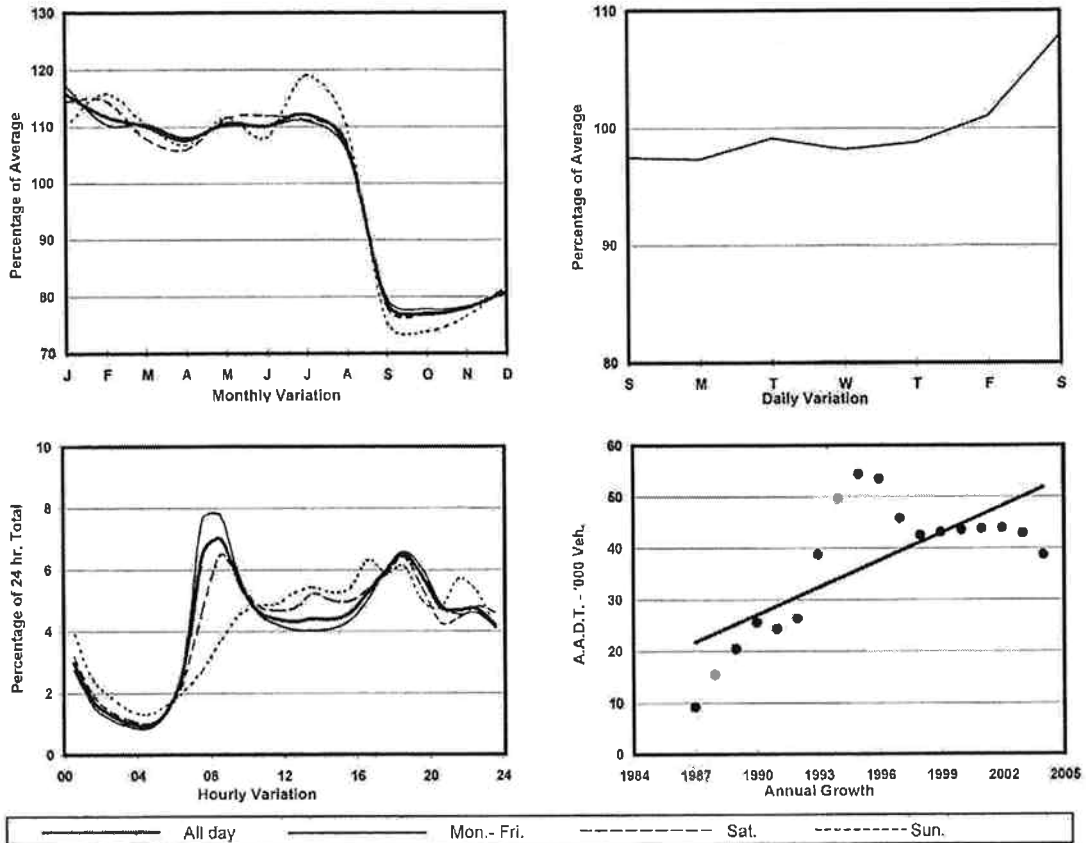
Supplementary Information for Traffic Flow Analysis

YEAR 2004
 CORE STATION 5005
 ROAD NETWORK MAJOR
 ROAD TYPE PRIMARY DISTRIBUTOR

LINK MA ON SHAN RD (from HANG SHUN ST to HANG HONG ST RA)



1. TRAFFIC FLOW VARIATION AND GROWTH



2. TRAFFIC CHARACTERISTICS (BY DIRECTION)

Parameter	All - Day	Mon. - Fri.	Sat.	Sun.
SOUTH BOUND				
A.A.D.T.	17370	17300	18680	16620
R 12 / 24 - %	68.1	69.2	67.3	62.8
R 16 / 24 - %	84.3	84.8	83.8	81.9
AM Peak Hour	0800-0900	0700-0800	0800-0900	0900-1000
One-way flow at AM peak hour	1580	1790	1640	860
T - % (AM)	-	-	-	-
PM Peak Hour	1700-1800	1700-1800	1800-1900	1800-1900
One-way flow at PM peak hour	1010	1000	1130	1080
T - % (PM)	-	-	-	-
Prop.of commercial vehicles - 16 hr.	-	-	-	-
NORTH BOUND				
A.A.D.T.	21320	21000	23190	21280
R 12 / 24 - %	59.7	59.7	61.1	58.6
R 16 / 24 - %	82.9	83.5	82	80.6
AM Peak Hour	0800-0900	0800-0900	0800-0900	0900-1000
One-way flow at AM peak hour	1130	1220	1080	870
T - % (AM)	-	-	-	-
PM Peak Hour	1800-1900	1800-1900	1800-1900	1600-1700
One-way flow at PM peak hour	1540	1600	1550	1470
T - % (PM)	-	-	-	-
Prop.of commercial vehicles - 16 hr.	-	-	-	-

3. OTHER INFORMATION AND COMMENT

T7 Road was opened in August 2004

Date		Observed by		
Job No.		Checked by		
Location		Time		

Vehicle Type	Movement			
Motorcycle 電單車				
Taxi ,Car, LGV, Police car, Fire engine, Ambulance 私家車,的士, 輕型貨車,警車, 消防車,救護車				
MGV, HGV 中型貨車, 重型貨車				
PLB 公共小巴				
Bus & Coach 巴士及旅遊巴士				
Remarks				

Appendix C

Supplementary Information for Noise Monitoring

Operational Noise Monitoring Field Record Sheet

Monitoring Location		
Description of Location (inc floor level)		
Date of Monitoring		
Measurement Start Time (hh:mm)		
Measurement Duration (min.)		
Weather Conditions		
Noise Meter Model/Identification		
Calibrator Model/Identification		
Measurement Results	L ₉₀ (dB(A))	
	L ₁₀ (dB(A))	
	Leq (dB(A))	
Hourly Traffic Flow during Monitoring		
% HGVs of Hourly Traffic		
Estimate of Average Vehicle Speed (Kph)		
Mitigation Measures in Place Measurement Location		
Other Noise Source(s) During Monitoring		
Remarks		

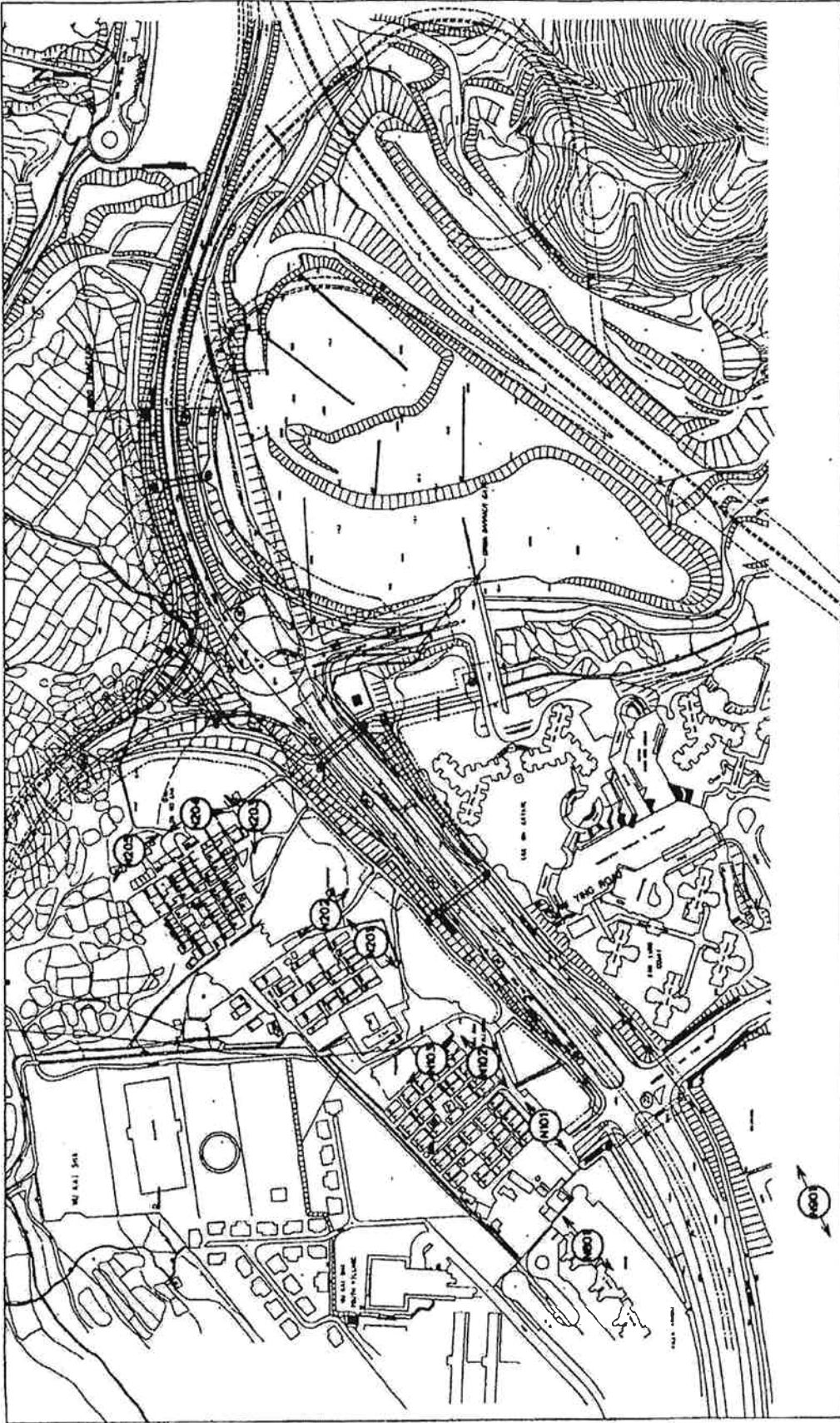
Name & Designation

Signature

Date

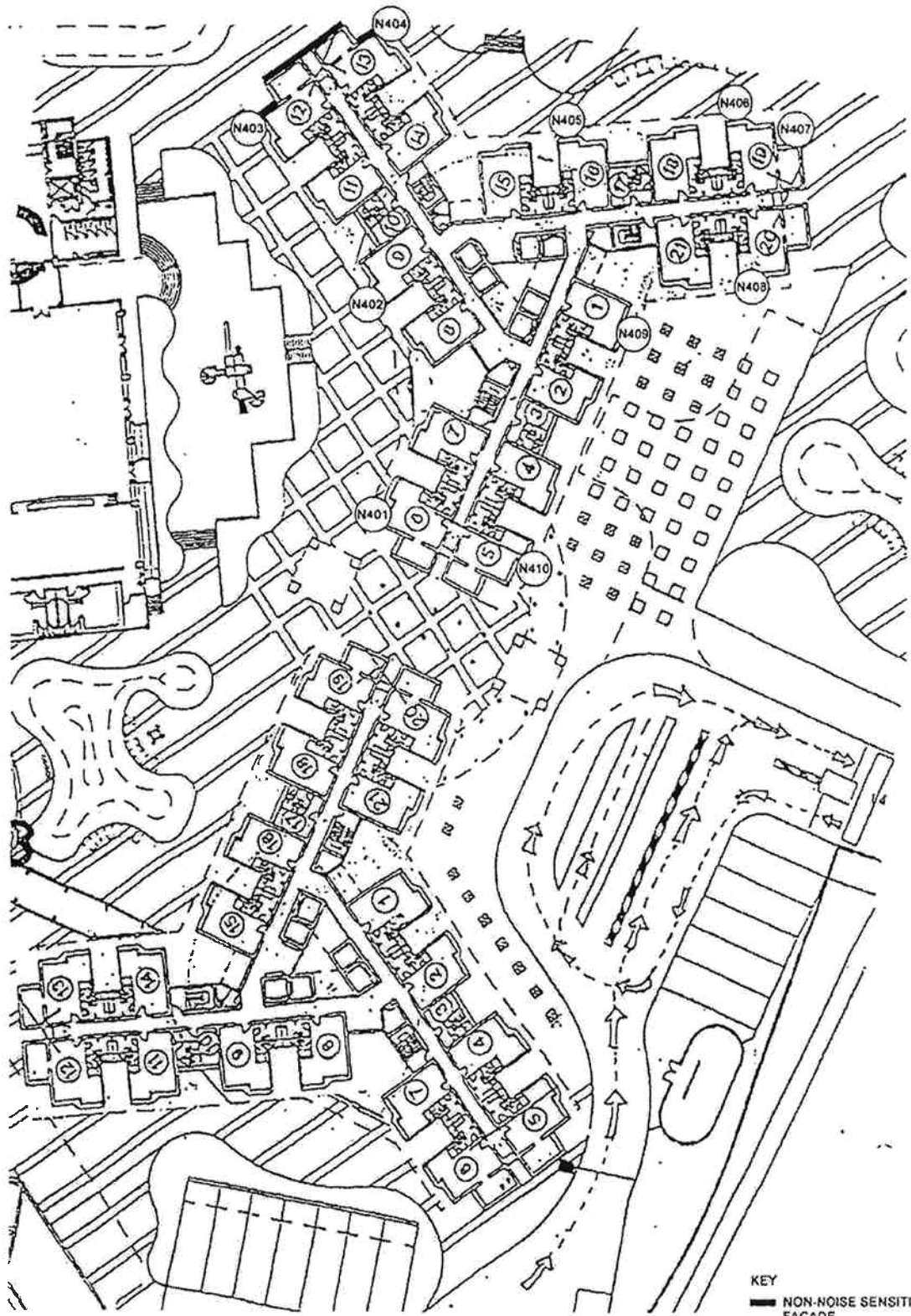
Recorded By : _____

Checked By : _____



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	DATE: JULY 96	FIGURE NO. 6A
	SCALE: 1:4000	

ASSESSMENT POINTS ALONG SAI SHA ROAD



NOISE ASSESSMENT POINTS AT LEE ON ESTATE

FIGURE No.

6b

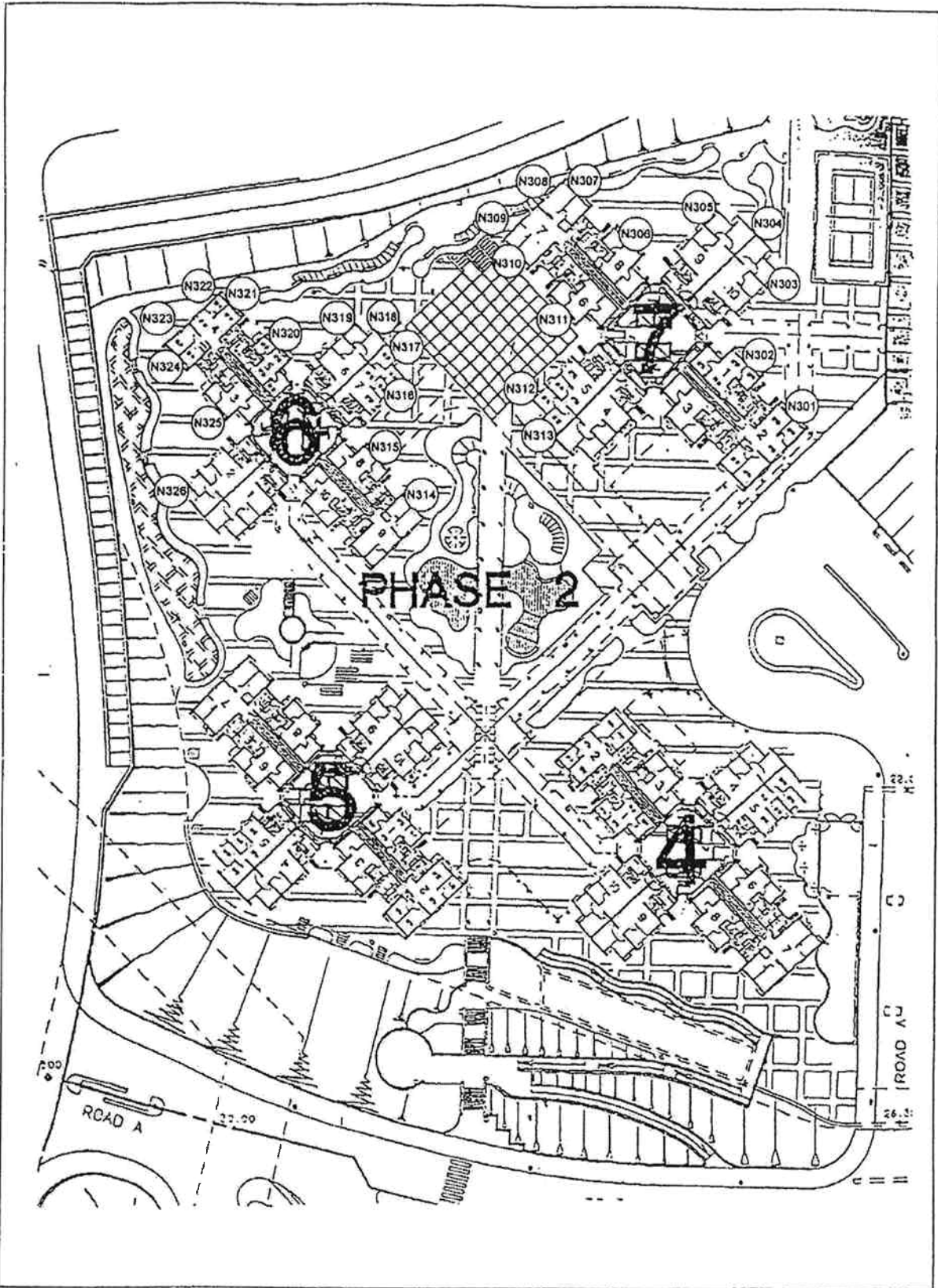
SCALE:

DATE:

JULY 98

F.I.E. C1735/C173541
DATE: 27/07/98

Maunsell



NOISE ASSESSMENT POINTS AT KAM LUNG COURT

FIGURE No.

6c

SCALE:

DATE:

JULY 98

FILE: C1735/C1735e2
DATE: 27.07/98

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