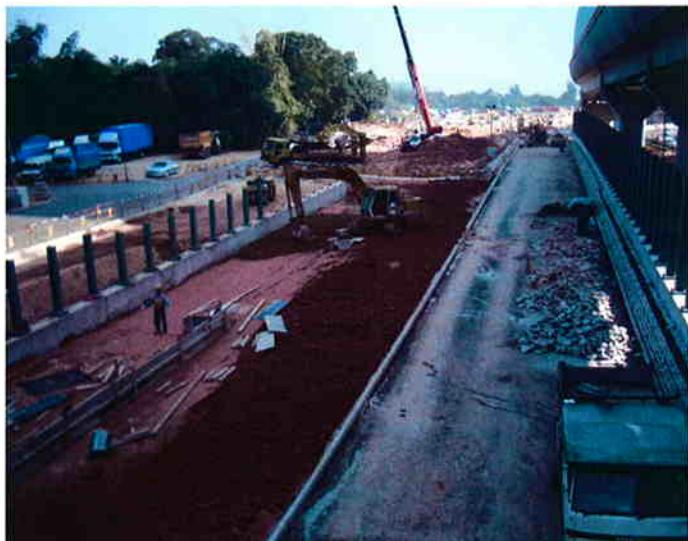




**BARBICAN CONSTRUCTION  
CO., LTD**

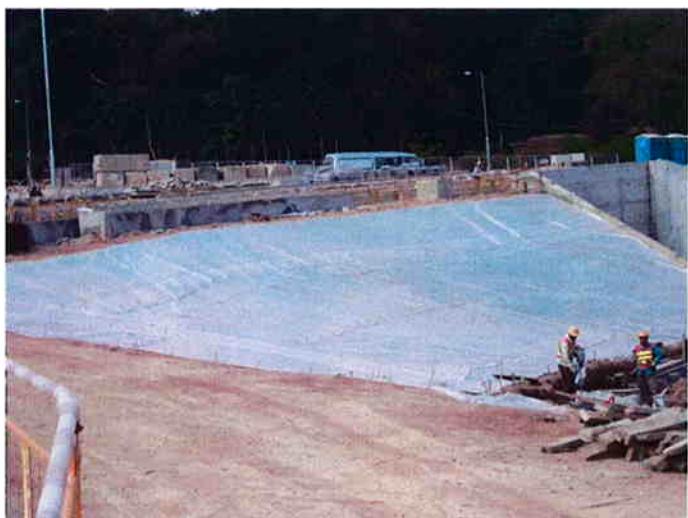
**Contract No. HY/2001/18  
Sai Sha Road Widening  
between Kam Ying Road and  
Future Trunk Road T7 Junction**

**OPERATION MONITORING REPORT**



Document No. R/2563/057 Issue 3

September 2008



Submitted by/ Prepared by

**Jacobs China Limited**

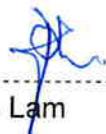
15th Floor Cornwall House, Taikoo Place  
979 King's Road, Quarry Bay, Hong Kong, China

**Barbican Construction Co., Ltd.**  
**HY/2001/18**

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

### **Operation Monitoring Report**

Approved for Issue by:



-----  
Tony L S Lam

Position: Environmental Team Leader

Date: 22-9-08

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**APPENDICES****Appendix A Locations of construction noise monitoring****Appendix B Predicted Noise Level from EIA Report****Appendix C Data of Noise Monitoring****Appendix D Supplementary Information for Traffic Flow Analysis****Appendix E Data of Traffic Flow Census****Appendix F Raw Data****Appendix G Predicted Traffic Condition from EIA Report****Appendix H Normalization of Measured Noise Level**

## 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". Jacobs China Limited (formerly Babtie Asia Ltd) was employed by the Contractor as the Environmental Team under this project.

Noise generation is a critical issue in the construction and the thereafter operation period. This report is prepared to present the results of the noise monitoring carried out during the Operation Period as required by the Environmental Permit.

According to Clause 5 of the EP, the purpose of Monitoring during the operation of the project is to assess the accuracy of traffic noise predictions by comparing the project noise impact predictions with the actual impacts.

This report mainly presents the noise monitoring result and the traffic flow census from 25 January 2007 to 29 January 2007.

## 2.0 NOISE MONITORING

### 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 assess point are selected based on the distance from the newly constructed road and the orientation of the location, and the most affected façade are picked for this monitoring assignment.

The monitoring locations for both noise measurement events are:

- (1) Wu Kai Sha New Village(N102)
- (2) Lee Wing House 15 -17(N405) Floor 15 & 25
- (3) Lung Yiu House 7(N320) Floor 20 & 25

Locations of construction noise monitoring stations are shown in Appendix A.

### 2.2. Monitoring Schedule

Traffic travelling along Sai Sha Road has the potential to general noise impacts at nearby residential properties. Potential impacts are likely to be greatest during the peak hourly flow, therefore only the peak hour is considered in this assessment. As refer to the "The Annual Traffic Census 2004", the Sai Sha Road peak hour is 7:00am -10:00am and 4:00pm – 7:00pm.

The schedule for the noise monitoring event is described below.

(i) Wu Kai Sha New Village (N102)

Date: 29 January 2007

Time: 7:30am –8:30am, 6:30pm – 7:00pm

(ii) Lee Wing House 15 -17 Floor 15 (N405a) & Floor 25 (N405b)

Date: 26 January 2007

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 Floor 20 (N320a) & Floor 25 (N320b)

Date: 25 January 2007

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

Floor 25: Time: 9:15am – 9:45am, 5:15pm – 6:15pm

### 2.3. Methodology of comparison with the limit and predicted levels

Referring to section 3.6 of Environmental Impact Assessment (EIA) Study for Sai Sha Road Widening, a noise limit level of 70dB( $L_{A10}$ ) is recommended for residential areas.

Therefore, the measured noise levels are compared with this noise limit levels in section 2.4 of this report for assessing the noise impact imposed on the concerned area. Corresponding predicted noise levels in the vicinity of the widened road for future years has been extracted from Annex B of the Environmental Impact Assessment (EIA) Study Report for this project. The predicted mitigated and unmitigated noise levels for the five proposed noise measurement stations are highlighted and enclosed in Appendix B for information. The measured noise level ( $L_{A10}$ ) were normalized with appropriated corrections according to the methodology in the UK Development of Transport's Calculation of Road Traffic Noise (CRTN) for comparison under the predicted traffic flow conditions. The normalized noise level ( $L_{A10}$ ) are then compared with the predicted noise level in section 2.5 and 2.6 of this report for assessing the traffic noise impact to the nearby NSRs. The predicted traffic condition in the EIA report and the calculation example for normalization are shown in Appendix G and Appendix H respectively.

#### **2.4. Compare with the Noise Limit Level $L_{A10}$**

The measured noise levels are compared with this noise limit level for assessing the noise impact imposed on the each NSR. The data for noise monitoring is presented in Appendix C.

For N102, the results show that during the monitoring period, the noise level  $L_{A10}$  is 60.7 dB(A) which is below the noise limit level 70.0 dB(A).

For N405a, the results show that during the monitoring period, the noise level  $L_{A10}$  is 62.9 dB(A) which is below the noise limit level 70.0 dB(A).

For N405b, the results show that during the monitoring period, the noise level  $L_{A10}$  is 61.9 dB(A) which is below the noise limit level 70.0 dB(A).

For N320a, the results show that during the monitoring period, the noise level  $L_{A10}$  is 56.1 dB(A), which is below the noise limit level 70.0 dB(A).

For N320b, the results show that during the monitoring period, the noise level  $L_{A10}$  is 53.7 dB(A), which is below the noise limit level 70.0 dB(A).

#### **2.5. Compare with the Predicted Unmitigated Noise Level $L_{A10}$**

According to the Environmental Operation Monitoring Plan (No. R/2563/056 Issue 2) on October 2006, the measured noise level shall be corrected based on the predicted traffic condition in the Final EIA Report of this project for comparing the predicted unmitigated noise level.

For N102, the results show that during the monitoring period, the noise level  $L_{A10}$  is 66.7 dB(A) which is similar to the predicted noise level 66 dB(A).

For N405a, the results show that during the monitoring period, the noise level  $L_{A10}$  is 68.9 dB(A) which is below than the predicted noise level 73 dB(A) since the predicted value did not consider the mitigation measure .

For N405b, the results show that during the monitoring period, the noise level  $L_{A10}$  is 67.9 dB(A) which is below the predicted noise level 72 dB(A) since the predicted value did not consider the mitigation measure.

For N320a, the results show that during the monitoring period, the noise level  $L_{A10}$  is 61.4 dB(A), which is similar to the predicted noise level 62 dB(A).

For N320b, the results show that during the monitoring period, the noise level  $L_{A10}$  is 59.7 dB(A) which is similar to the predicted noise level 60 dB(A).

## 2.6. Compare with the Predicted mitigated Noise Level $L_{A10}$

According to the Environmental Operation Monitoring Plan (No. R/2563/056 Issue 2) on October 2006, the measured noise level shall be corrected based on the predicted traffic condition in the Final EIA Report of this project for comparing the predicted mitigated noise level.

For N102, the results show that, the noise level  $L_{A10}$  is 66.7 dB(A) which is similar to the predicted noise level 66 dB(A).

For N405a, the results show that, the noise level  $L_{A10}$  is 68.9 dB(A) which is similar to the predicted noise level 68 dB(A).

For N405b, the results show that, the noise level  $L_{A10}$  is 67.9 dB(A) which is similar to the predicted noise level 70 dB(A).

For N320a, the results show that, the noise level  $L_{A10}$  is 61.4 dB(A), which is similar to the predicted noise level 62 dB(A).

For N320b, the results show that, the noise level  $L_{A10}$  is 59.7 dB(A) which is similar to the predicted noise level 60 dB(A) .

## 2.7. Discussion of the Noise Monitoring Result

The noise monitoring has been carried out in accordance with the requirement as stated in the Operation Monitoring Plan. As shown by the comparison, the measured noise levels at all five monitoring stations are below the limit noise level and similar to the predicted noise level. The small difference between the normalized noise level and the predicted noise level might be caused by the future change of road networks (opening of Trunk Road T7), addition noise level measured by the other road section nearby during the monitoring and nearby residential noise.

## 3.0 TRAFFIC FLOW CENSUS

In conjunction with the noise measurement, a traffic assessment covering the traffic flow census, percentage of heavy vehicle and the estimated average vehicle speed shall be measured as per the Appendix I of the Particular Specification.

### 3.1. Monitoring Location and Schedule

Following is the monitoring location and schedule for the traffic census assessment.

At Junctions (Sai Sha Road and Kam Ying Road)

Date: 25 January 2007

Time: 8:00am – 10:00am, 6:00pm - 8:00pm

### 3.2. Traffic Flow Analysis & Result

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 were referred to CRTN which considered that all vehicles with an unladen weight exceeding 1525kg are heavy vehicles.

The traffic count was recorded once in every 15-minute interval during the whole traffic census monitoring time period. The summary of traffic flow census is enclosed in Appendix E.

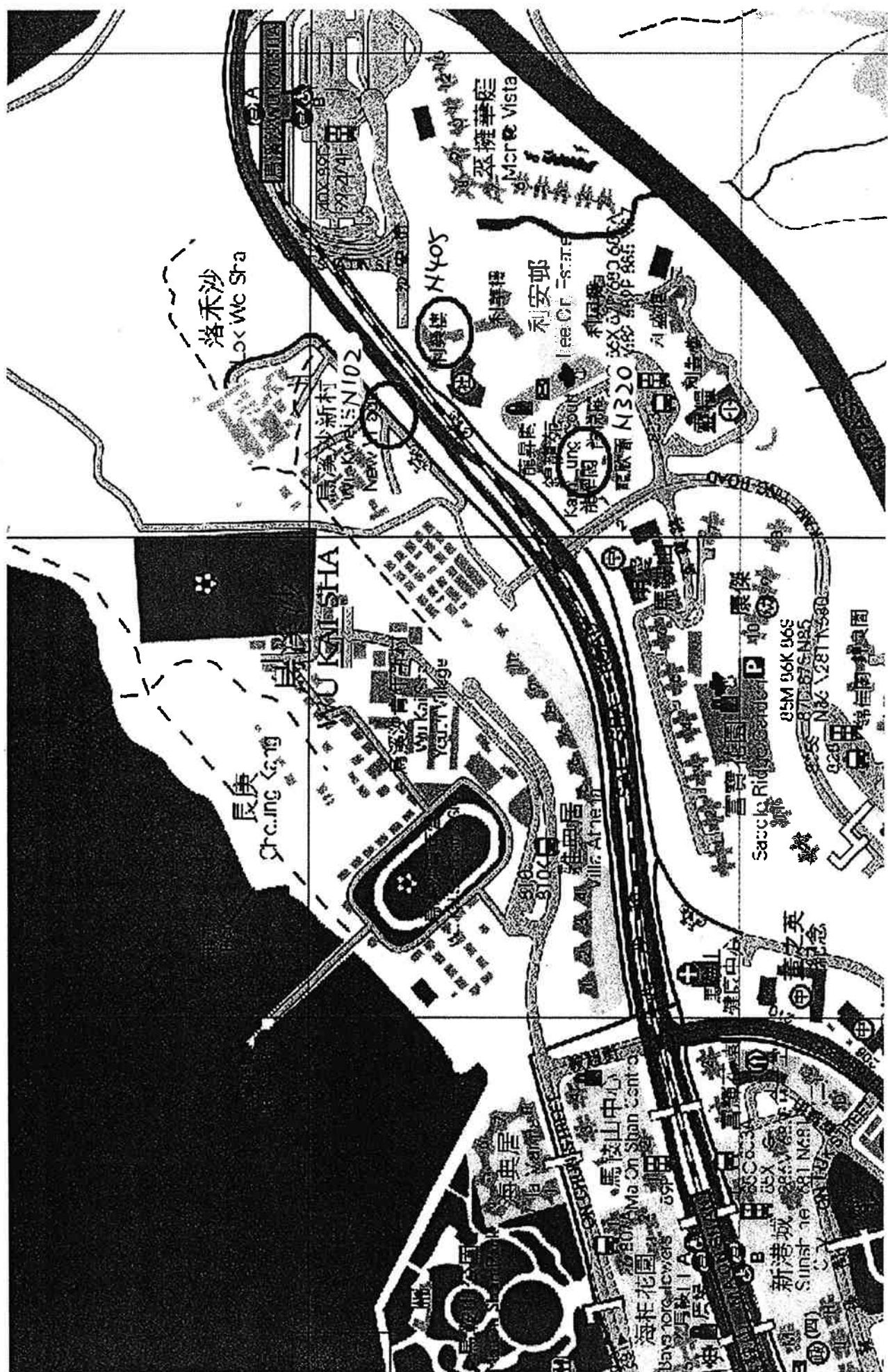
The average vehicle speed is 50km/h for both periods in the 8:00am – 10:00am and 4:00pm - 6:00pm.

The total number of vehicles for both direction on Sai Sha Road in the A.M Peak is 562.

The percentage heavy vehicles for both direction on Sai Sha Road in the A.M. Peak is 38%.

## **Appendix A**

### **Location of Noise Monitoring Point**



## **Appendix B**

### **Predicted Noise Level Extracted from EIA Report**

Table B1 - Mitigated Traffic Noise Levels,  $L_{A10}(\text{mit})$ , dB

80

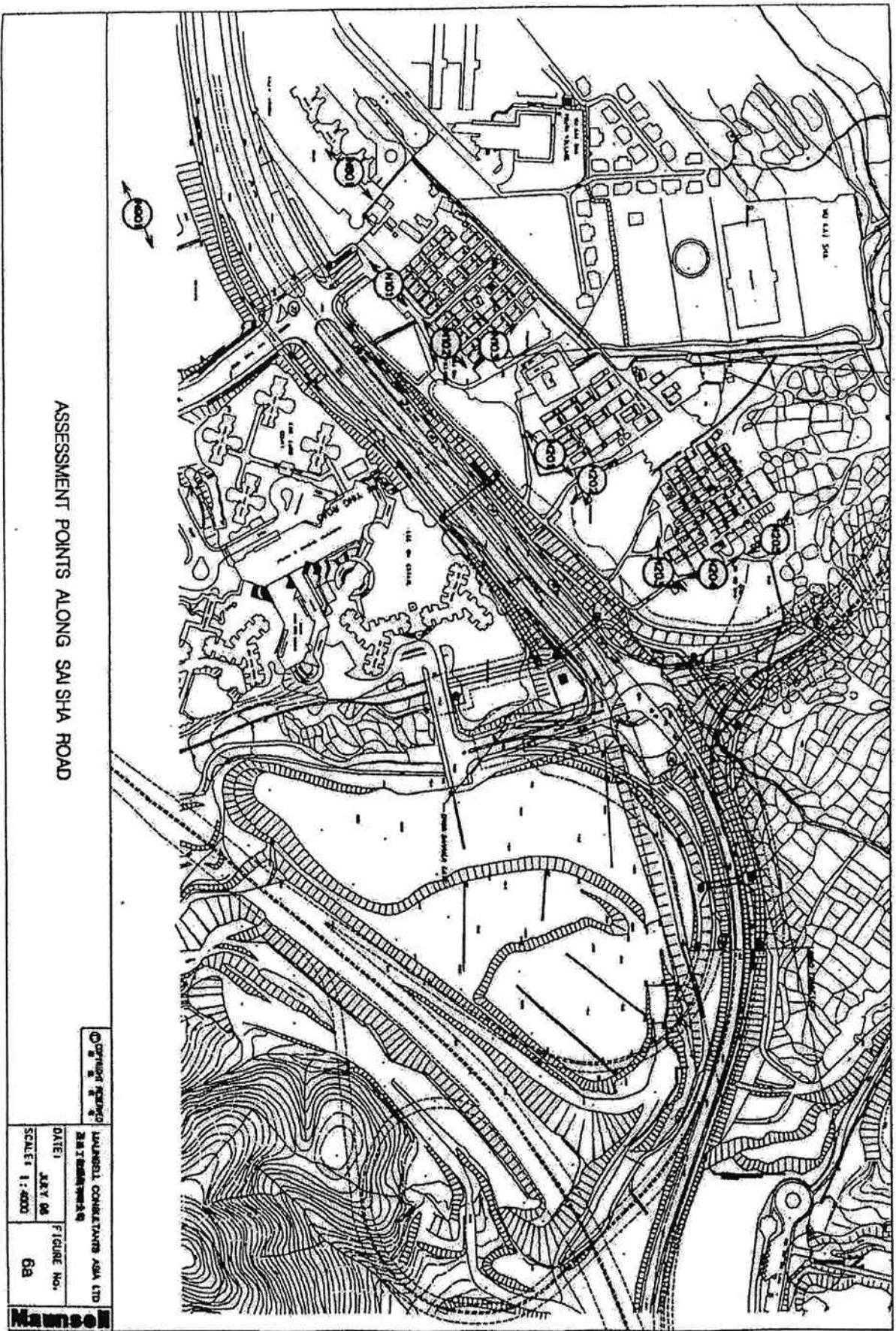
- (1) For NBSA 1 and 2, the column shows the numbers of dwellings represented by three APs on each floor. The numbers in the row are the numbers of floors represented.
  - (2) Dwelling produced are those which will be protected from EIAZ/TEA or a reduction in 1 AP/A.
  - (3) Dwelling produced are those which will be protected as a result of the proposed mitigation.

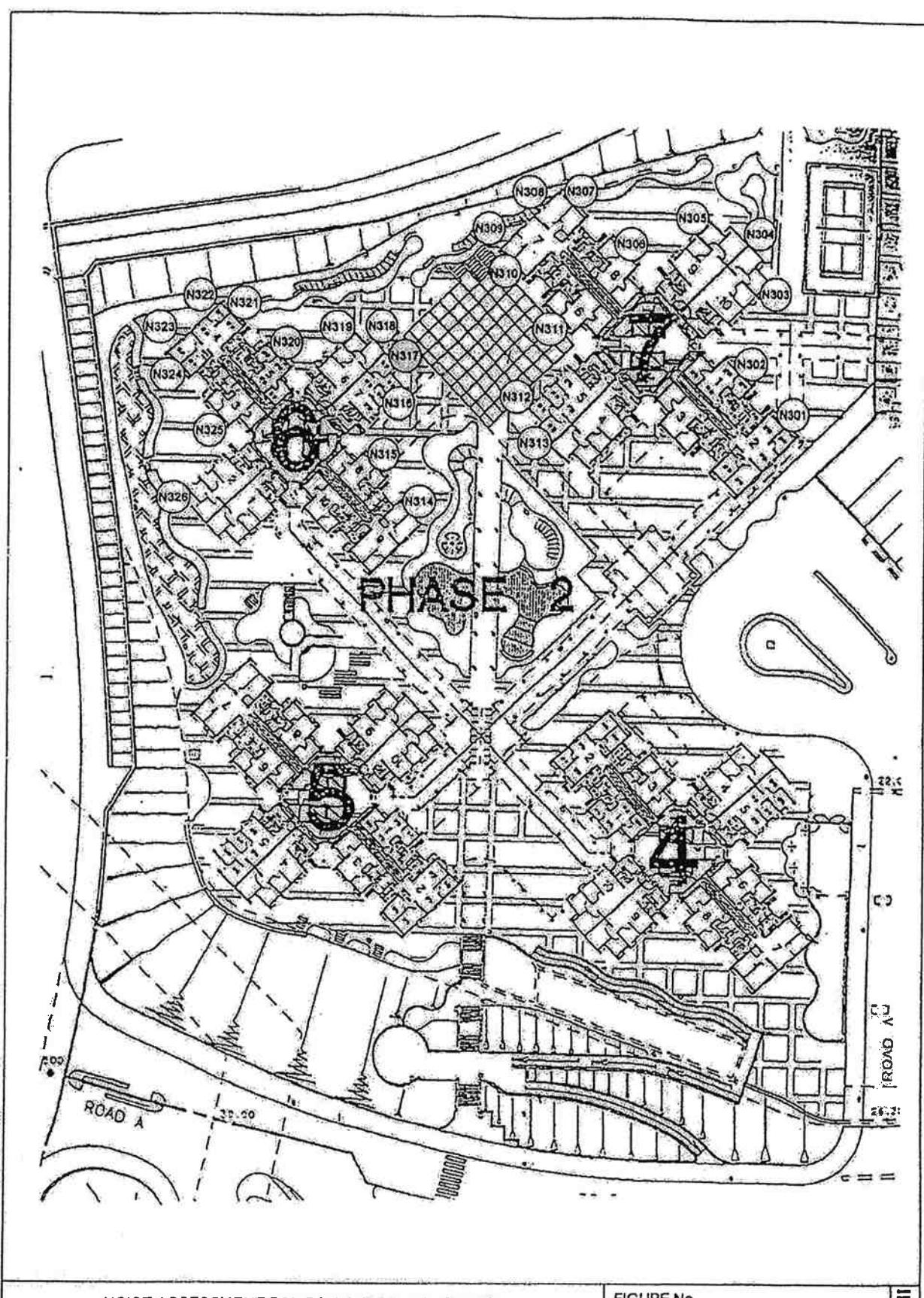
Table B2 - Unmitigated Traffic Noise Levels, LA<sub>WEIGHTED</sub>, dB

E1725 - Gai Sha Road Widening

(2) For NSRa 1 and 2, the predicted noise levels shown in Table 1 were used, and the noise levels at ground floor, 1st floor and 2nd floor were calculated. The numbers in the new row are the numbers of floors represented.

(2) For NSRa 1 and 2, the predicted noise levels shown in Table 10 were used, and the noise levels at ground floor level were taken from the new data. The numbers in the new data represent the number of floors represented.





NOISE ASSESSMENT POINTS AT KAM LUNG COURT

FILE: C1735/C1735e2  
DATE: 27/07/98

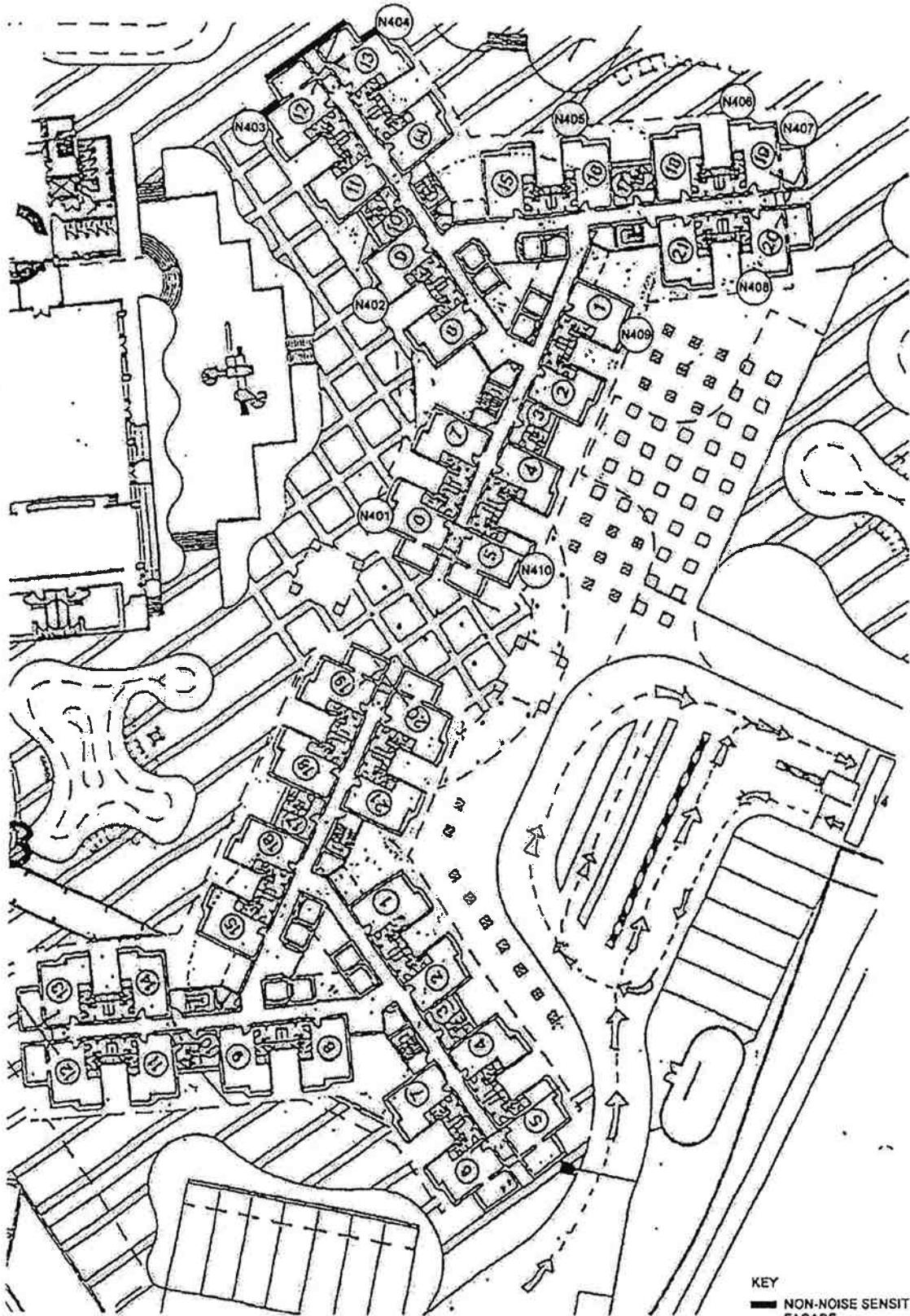
FIGURE No.

6c

SCALE:

DATE:  
JULY 98

Mansell



NOISE ASSESSMENT POINTS AT LEE ON ESTATE

FIGURE No.

6b

SCALE:

DATE:  
JULY 98

FILE: C1735/C1735e1  
DATE: 27/07/98

**Maunsell**

## **Appendix C**

### **Data of Noise Monitoring**

**Contract No. HY/2001/18**  
**Sai Sha Road Widening between Kam Ying Road and Future Trunk Road T7 Junction**  
**Monitoring Location: Wu Kwai Sha New Village (N102)**  
**Time Period: 07:00-19:00**

Date	Start Time	Duration (min)	Measurement Results			$L_{eq}(dB(A))$ (30 mins)	Normalized Noise Level dB (A)	Remark
			$L_{eq}(dB(A))$	$L_{10}(dB(A))$	$L_{10}(dB(A))$ (5 mins)			
01/29/07	08:34 - 09:04	30	50.3	62.2	59.1	60.9	60.1	60.7
01/29/07	09:05 - 09:35	30	48.0	60.7	57.5	54.7	57.1	59.2
01/29/07	09:35 - 10:05	30	48.6	60.7	58.3	64.8	62.0	57.8
01/29/07	12:44 - 13:14	30	46.8	59.8	65.7	53.3	55.2	54.1
01/29/07	13:14 - 13:44	30	49.8	60.7	58.7	60.0	59.3	58.3
01/29/07	13:44 - 14:14	30	51.3	60.0	57.8	54.8	56.4	55.4
01/29/07	14:14 - 14:44	30	49.1	61.1	59.4	60.0	57.0	59.3
01/29/07	14:44 - 15:14	30	49.6	63.2	59.6	57.9	57.8	56.7
01/29/07	15:15 - 15:45	30	55.1	64.6	61.0	61.7	61.1	60.4

$L_{eq}(dB(A))$  was affected by other source of noise( Nearby residential noise since the monitoring point located in residence house).

Value used in the report since the following reasons :  
 1. Applicable for comparing the predicted A.M. peak noise level in the EIA report.  
 2. Conservative value for comparison

Measured noise level was affected by other source of noise( Nearby residential noise since the monitoring point located in residence house).

67.9  
66.0

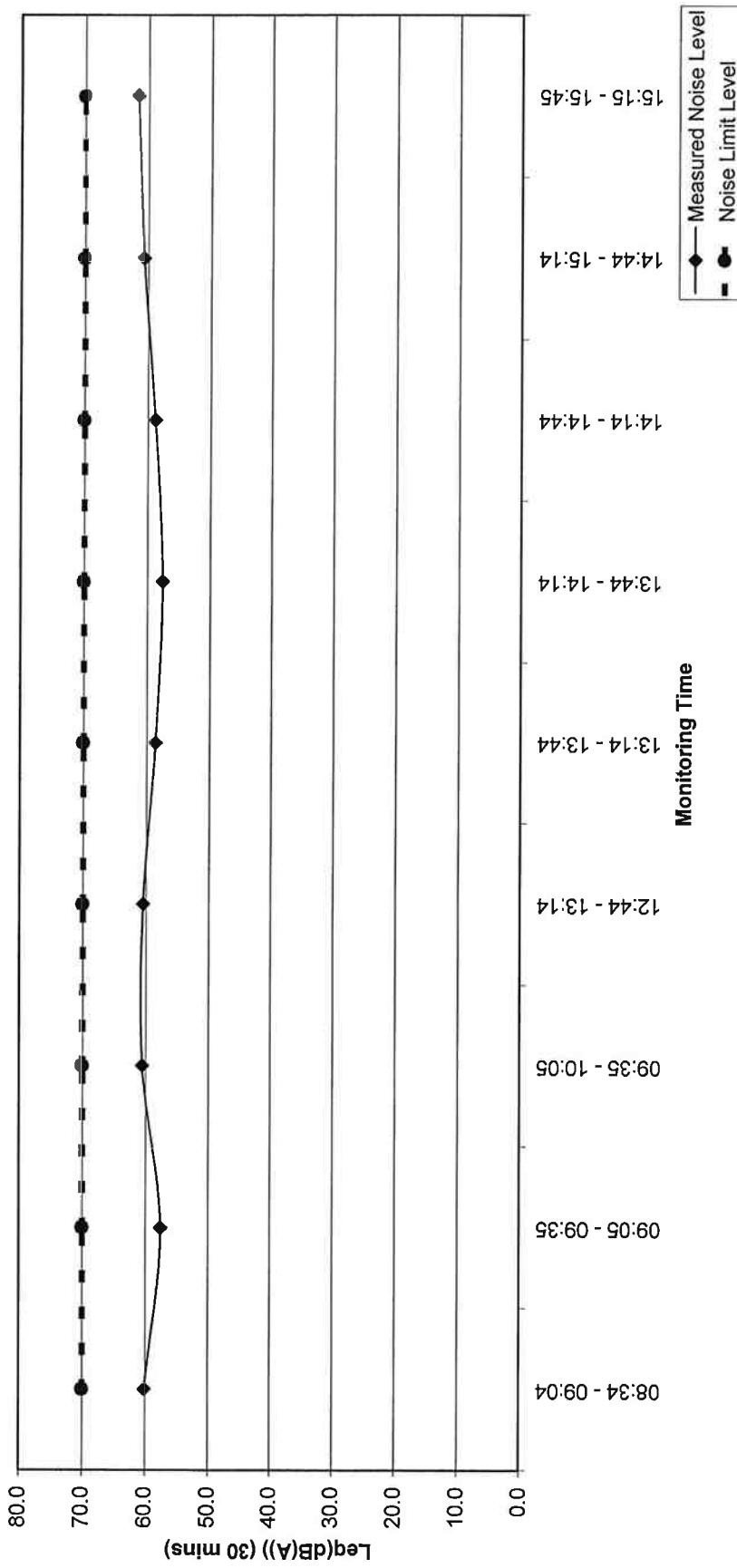
66.7

65.5

67.6

69.3

## Noise Monitoring Result



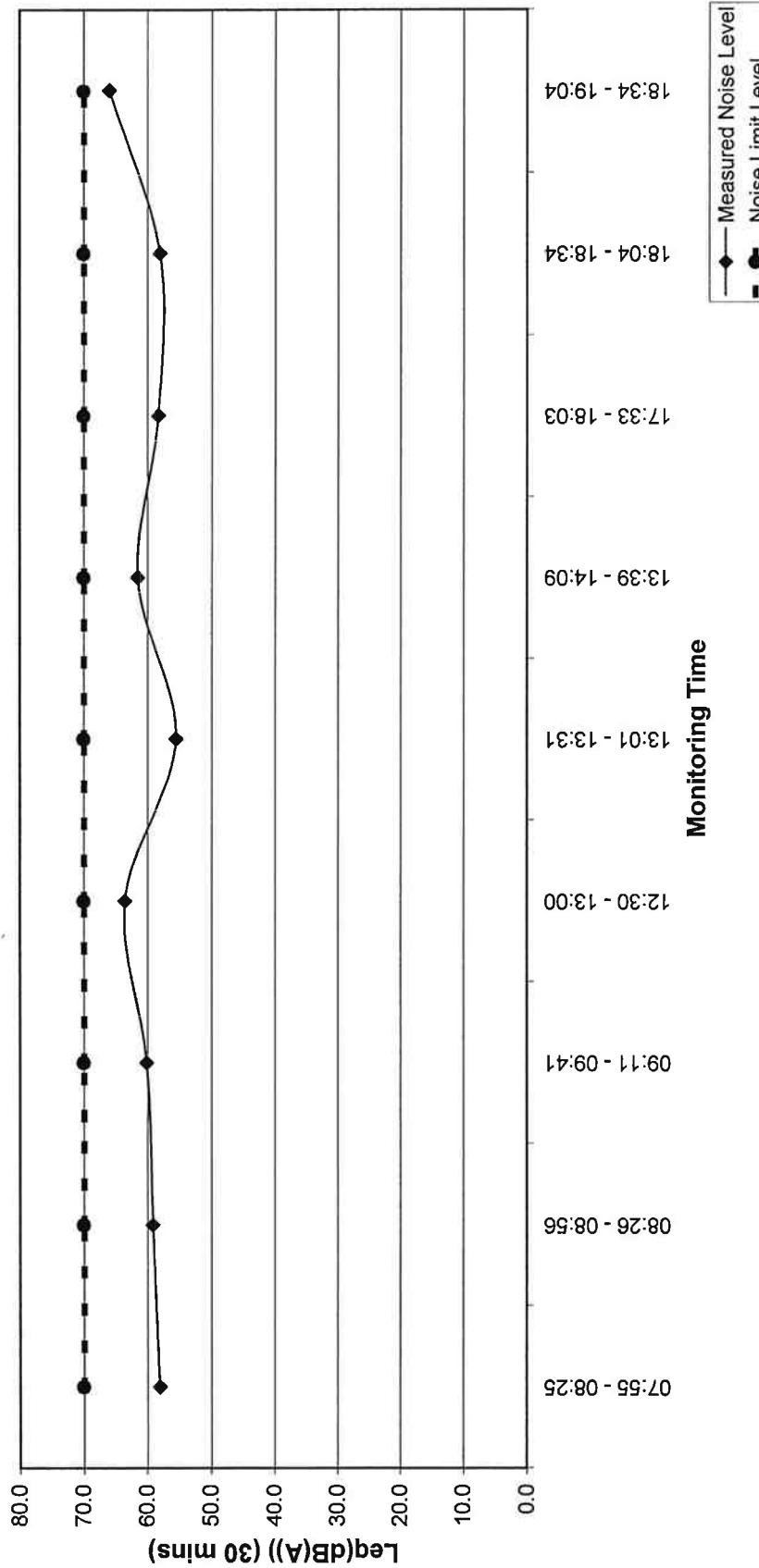
**Contract No. HY/2001/18**  
**Sai Sha Road Widening between Kam Ying Road and Future Trunk Road T7 Junction**

**Monitoring Location: Lee Wing House (Floor 15) (N405a)**  
**Time Period: 07:00-19:00**

Date	Start Time	Duration (min)	Measurement Results					Normalized Noise Level dB (A)	Remark
			L <sub>90</sub> (dB(A))	L <sub>10</sub> (dB(A))	L <sub>eq</sub> (dB(A)) (5 mins)	L <sub>eq</sub> (dB(A)) (30 mins)			
01/26/07	07:55 - 08:25	30	50.5	60.6	56.1	58.1	56.7	56.1	56.8
01/26/07	08:26 - 08:56	30	52.4	61.0	56.9	58.9	58.8	58.5	58.6
01/26/07	09:11 - 09:41	30	54.3	62.9	61.3	60.5	59.5	60.0	60.7
01/26/07	12:30 - 13:00	30	56.5	66.8	65.2	62.2	62.5	64.1	63.0
01/26/07	13:01 - 13:31	30	48.8	58.7	55.9	56.3	55.6	55.5	55.9
01/26/07	13:39 - 14:09	30	54.3	64.5	63.8	62.4	60.8	59.1	61.4
01/26/07	17:33 - 18:03	30	52.2	61.2	58.2	59.8	57.6	58.1	56.5
01/26/07	18:04 - 18:34	30	47.0	59.6	58.0	56.2	53.5	56.4	54.9
01/26/07	18:34 - 19:04	30	57.8	69.2	60.7	62.3	67	65.8	66.4

Value used in the report since the following reasons :  
 1. Applicable for comparing the predicted A.M. peak noise level in the EIA report;  
 2. Conservative value for comparison

## Noise Monitoring Result



**Contract No. HY/2001/18**  
**Sai Sha Road Widening between Kam Ying Road and Future Trunk Road T7 Junction**  
**Monitoring Location: Lee Wing House (Floor 25) (N405b)**  
**Time Period: 07:00-19:00**

Date	Start Time	Duration (min)	Measurement Results					Normalized Noise Level dB (A)	Remark
			L <sub>90</sub> (dB(A))	L <sub>10</sub> (dB(A))	L <sub>50</sub> (dB(A))	L <sub>eq</sub> (dB(A)) (5 mins)	L <sub>eq</sub> (dB(A)) (30 mins)		
01/26/07	09:45 - 10:15	30	52.2	61.2	58.3	59.8	57.6	56.5	58.3
01/26/07	10:15 - 10:45	30	54.3	61.9	60.7	58.9	57.4	57.6	59.1
01/26/07	10:46 - 11:16	30	55.3	66.6	63.4	62.2	62.5	64.1	63.0
01/26/07	14:15 - 14:45	30	52.5	61.2	58.5	60.4	60.5	56.8	57.6
01/26/07	14:46 - 15:16	30	57.4	66.5	70.6	63.5	62.4	62.2	61.4
01/26/07	15:17 - 15:47	30	53.2	62.9	63.9	59.5	57.9	58.9	57.9
01/26/07	15:50 - 16:20	30	52.4	64.3	60.0	59.1	68.5	60.4	62.3
01/26/07	16:21 - 16:51	30	53.2	62.9	63.9	59.5	57.9	58.9	57.9
01/26/07	16:54 - 17:24	30	54.9	64.3	60.7	59.3	59.1	60.0	62.6
									64.7
									61.5
									69.0

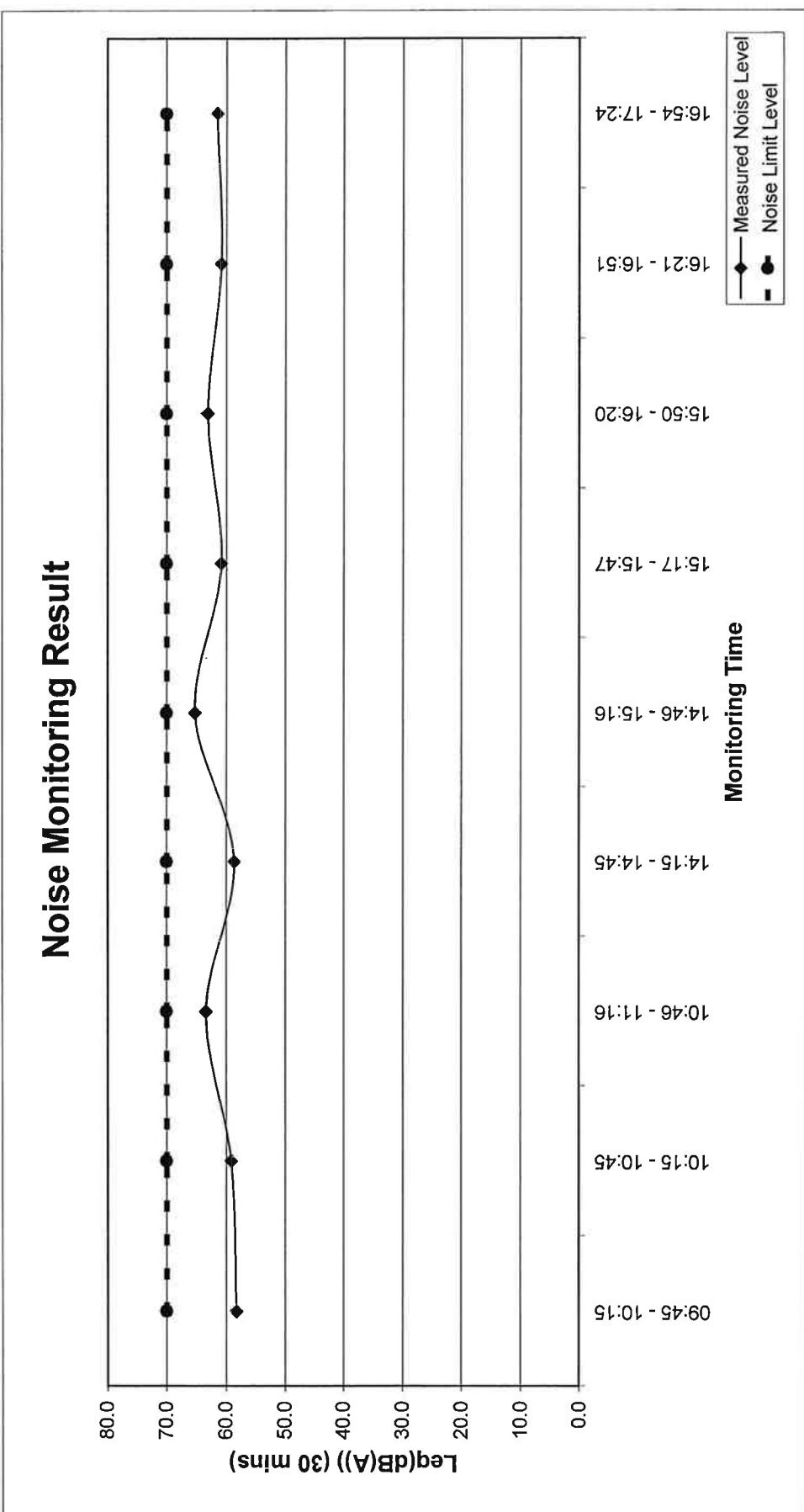
Value used in the report since the following reasons:  
 1. Applicable for comparing the predicted A.M. peak noise level in the EIA report,  
 2. Conservative value for comparison

Measured noise level was affected by other source of noise( Nearby residential noise since the monitoring point located in residence house).

Predicted maximum traffic flow is A.M. peak.

Therefore, noise levels at PM peak are not applicable for comparation.

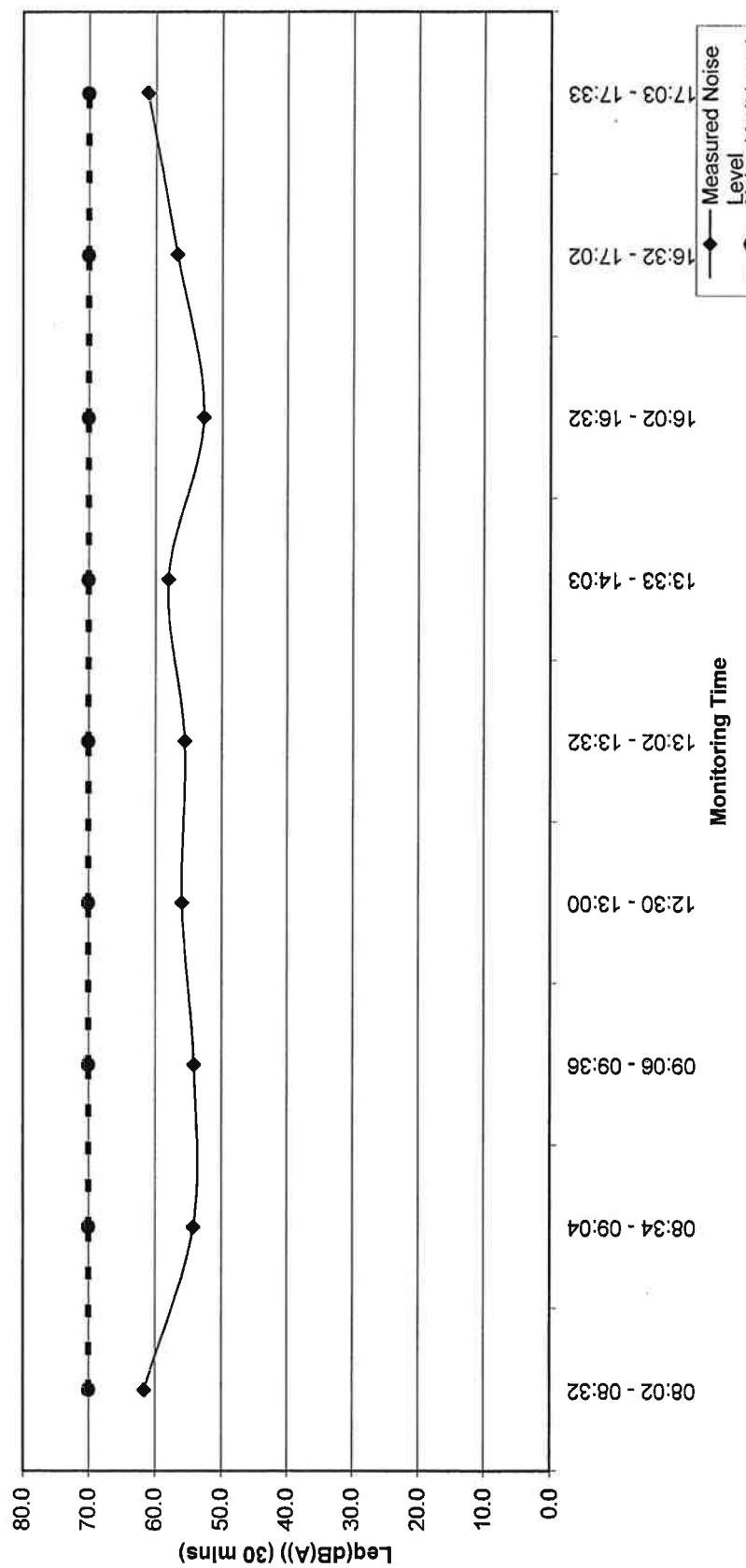
## Noise Monitoring Result



**Contract No. HY/2001/18**  
**Sai Sha Road Widening between Kam Ying Road and Future Trunk Road T7 Junction**  
**Monitoring Location: Lung Yiu House (Floor 20) (N320a)**  
**Time Period: 07:00-19:00**

Date	Start Time	Duration (min)	Measurement Results					Normalized Noise Level dB (A)	Remark
			$L_{d0}$ (dB(A))	$L_{10}$ (dB(A))	$L_{eq}$ (dB(A)) (5 mins)	$L_{eq}$ (dB(A)) (30 mins)			
01/25/07	08:02 - 08:32	30	56.9	64.6	61.6	61.6	60.5	61.5	61.6 Measured noise level was affected by other source of noise! Additional traffic noise from Kam Ying Road and nearby residential noise since the monitoring point located in residence house).
01/25/07	08:34 - 09:04	30	48.5	56.1	56.9	54.3	53.6	51.4	52.4 Value used in the report since the following reasons : 1. Applicable for comparing the predicted A.M. peak noise level in the EIA report; 2. Conservative value for comparison
01/25/07	09:06 - 09:36	30	46.8	55.0	52.3	50.4	51.7	51.6	52.0 61.4
01/25/07	12:30 - 13:00	30	48.3	56.4	59.9	54.8	52.2	54.5	55 62.4
01/25/07	13:02 - 13:32	30	48.8	58.7	55.9	55.3	55.6	55.5	54.6 Predicted maximum traffic flow is A.M. peak.
01/25/07	13:33 - 14:03	30	49.3	59.2	61.6	53.8	57.6	55.5	55.9 Therefore, noise levels at PM peak are not applicable for comparation.
01/25/07	16:02 - 16:32	30	48.0	54.9	51.9	50.7	51.4	50.7	53.2 59.3
01/25/07	16:32 - 17:02	30	49.1	58.9	58.6	55.4	51.5	60.4	54.0 63.3
01/25/07	17:03 - 17:33	30	49.5	61.3	59.8	62.9	64.1	61.4	55.7 66.0
								56.9	61.1

## Noise Monitoring Result



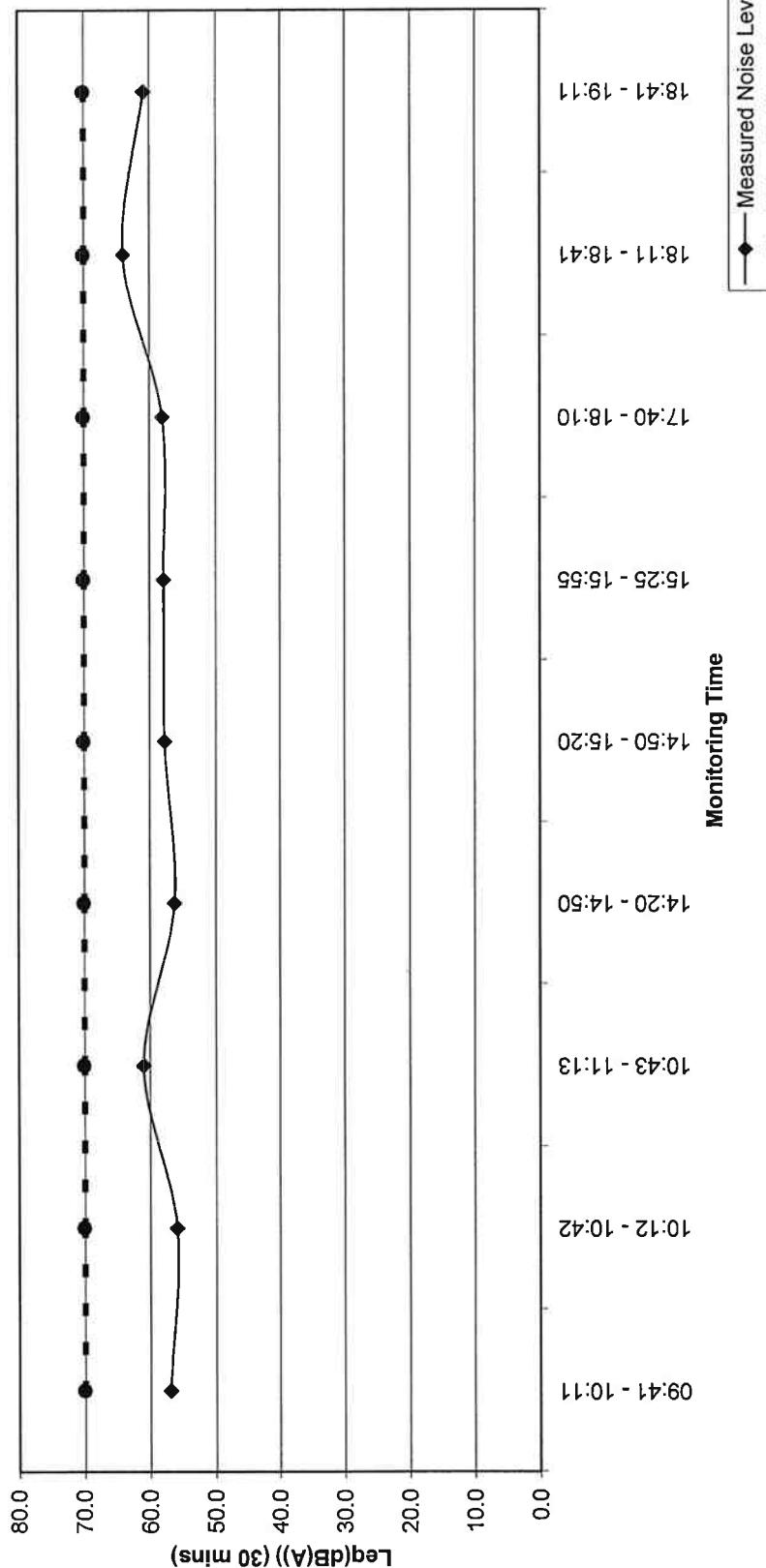
**Contract No. HY/2001/18**  
**Sai Sha Road Widening between Kam Ying Road and Future Trunk Road T7 Junction**  
**Monitoring Location: Lung Yiu House (Floor 25) (N320b)**  
**Time Period: 07:00-19:00**

Date	Start Time	Duration (min)	Measurement Results					Normalized Noise Level dB (A)	Remark			
			L <sub>50</sub> (dB(A))	L <sub>10</sub> (dB(A))	L <sub>eq</sub> (dB(A)) (5 mins)		L <sub>eq</sub> (dB(A)) (30 mins)					
01/25/07	09:41 - 10:11	30	47.6	53.7	54.7	51.6	63.3	51.5	50.8	51.7	56.9	59.7
01/25/07	10:12 - 10:42	30	48.3	56.4	59.9	54.8	52.2	54.5	55.0	54.4	55.9	62.4
01/25/07	10:43 - 11:13	30	51.2	63.0	65.5	62.0	57.9	58.3	56.0	57.1	60.9	69.0
01/25/07	14:20 - 14:50	30	49.0	58.3	57.3	56.3	57.9	54.8	54.9	54.9	56.2	64.3
01/25/07	14:50 - 15:20	30	49.4	58.5	52.9	56.1	60.0	59.1	56.0	58.8	57.7	64.5
01/25/07	15:25 - 15:55	30	47.9	55.3	57.4	63.0	58.4	50.6	51.6	50.8	57.8	61.3
01/25/07	17:40 - 18:10	30	50.5	60.6	56.1	58.1	56.7	56.1	56.6	61.5	58.0	65.0
01/25/07	18:11 - 18:41	30	53.9	54.9	67.5	64.1	61.2	63.2	60.5	63.1	63.9	59.3
01/25/07	18:41 - 19:11	30	53.2	62.9	63.9	5.5	57.9	58.9	57.9	62.8	60.8	67.6

Value used in the report since the following reasons :  
 1. Applicable for comparing the predicted A.M. peak noise level in the EIA report;  
 2. Conservative value for comparison

Measured noise level was affected by other source of noise/ Additional traffic noise from Kam Ying Road and nearby residential noise since the monitoring point located in residence house).

## Noise Monitoring Result



## **Appendix D**

### **Supplementary Information for Traffic Flow Analysis**

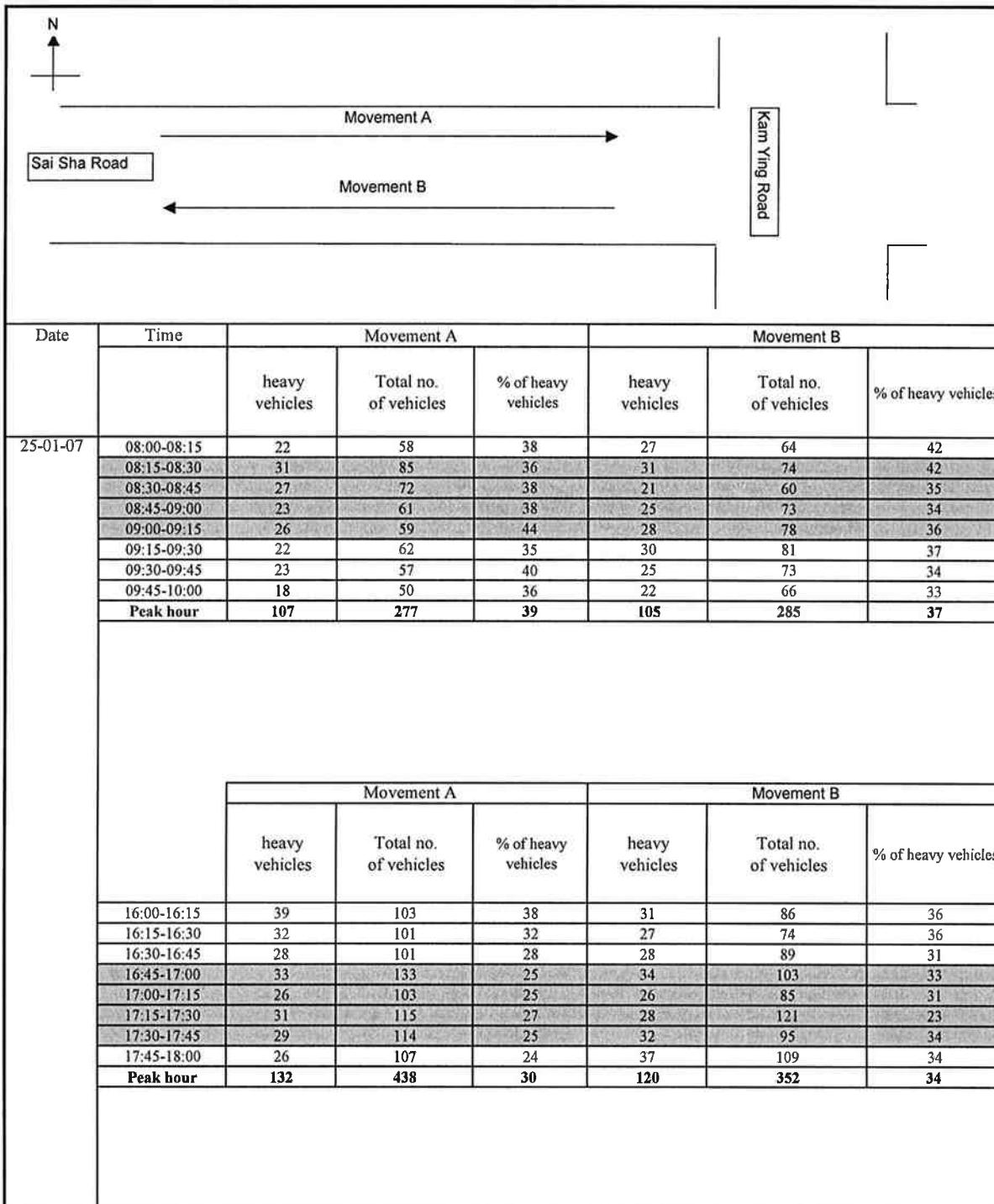
Date		Observed by		
Job No.		Checked by		
Location		Time		

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 E**

**Data of Traffic Flow Census**

Sai Sha Road Measured Traffic Flow Summary



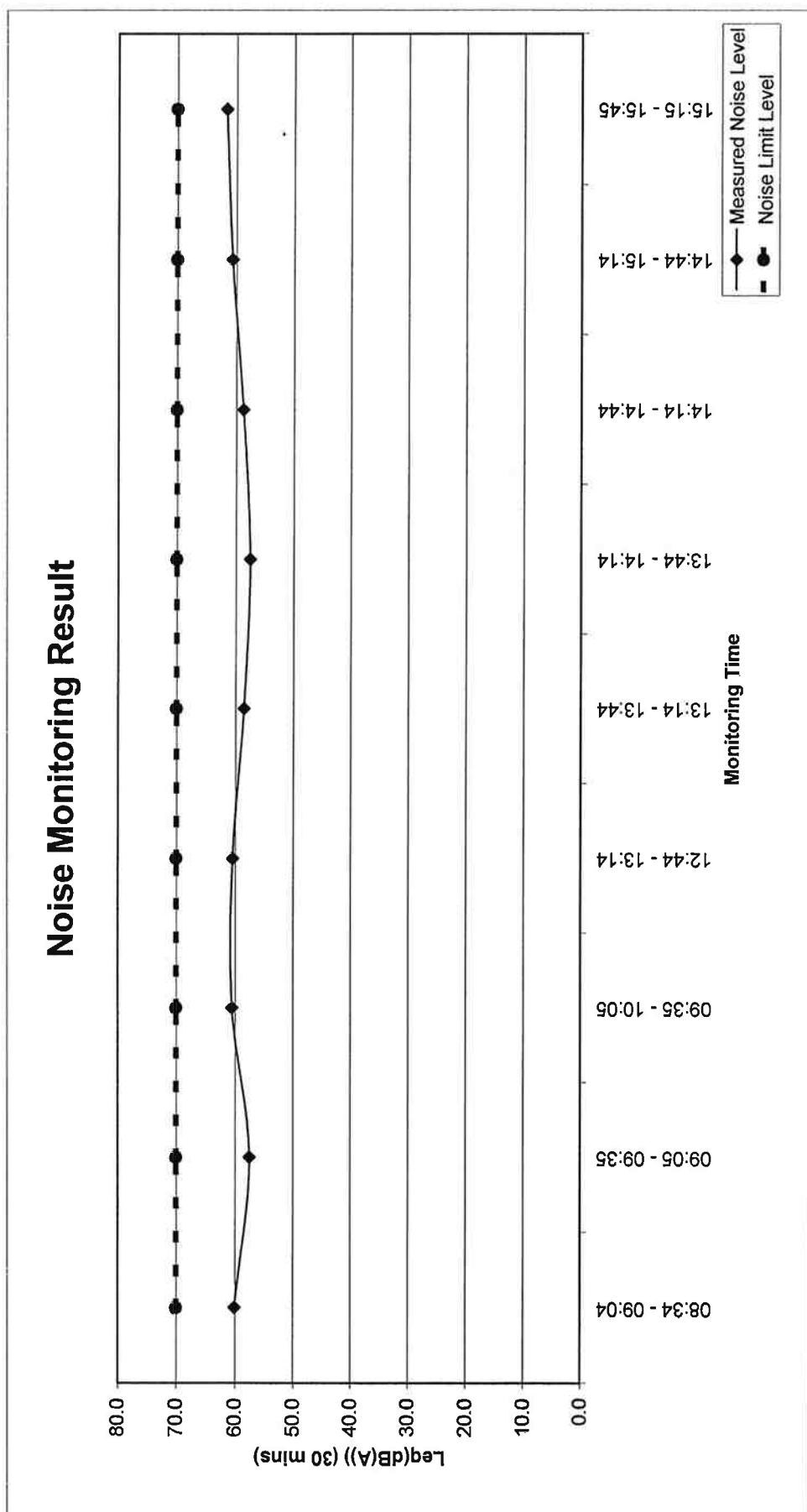
## **Appendix F**

### **Raw Data**

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

Date	Start Time	Duration (min)	Measurement Results					Normalized Noise Level dB (A)	Remark		
			L <sub>80</sub> (dB(A))	L <sub>10</sub> (dB(A))	L <sub>eq</sub> (dB(A)) (5 mins)		L <sub>eq</sub> (dB(A)) (30 mins)				
01/29/07	08:34 - 09:04	30	50.3	62.2	59.1	60.9	60.1	60.7	58.8	60.1	67.9
01/29/07	09:05 - 09:35	30	48.0	60.7	57.5	54.7	57.1	59.2	56.7	58.5	67.0
01/29/07	09:35 - 10:05	30	48.6	60.7	58.3	64.8	62.0	57.8	57.6	54.7	60.5
01/29/07	12:44 - 13:14	30	46.8	59.8	65.7	53.3	55.2	54.1	62.8	53.5	60.4
01/29/07	13:14 - 13:44	30	49.8	60.7	58.7	60.0	59.3	58.3	56.1	58.6	58.5
01/29/07	13:44 - 14:14	30	51.3	60.0	57.8	54.8	56.4	55.4	60.2	58.4	57.5
01/29/07	14:14 - 14:44	30	49.1	61.1	59.4	60.0	57.0	59.3	59.3	55.4	58.7
01/29/07	14:44 - 15:14	30	49.6	63.2	59.6	57.9	57.8	56.7	57.5	65.9	60.6
01/29/07	15:15 - 15:45	30	55.1	64.6	61.0	61.7	61.1	60.4	61.3	63.4	61.6

## Noise Monitoring Result



**Operational Noise Monitoring Field Record Sheet**

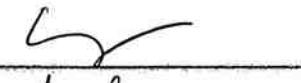
Monitoring Location		N102
Description of Location (inc floor level)		Wu Kwai Sha New Village
Date of Monitoring		29 Jan 2007
Measurement Start Time (hh:mm)		0834
Measurement Duration (min.)		30
Weather Conditions		Fine
Noise Meter Model/Identification		Cesva SC20e
Calibrator Model/Identification		Cesva CR5
Measurement Results	$L_{90}$ (dB(A))	50.3
	$L_{10}$ (dB(A))	62.2
	Leq (dB(A))	62.1
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

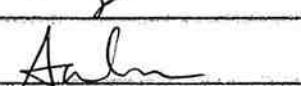
Signature

Date

Recorded By : Law Wai Kin

  
Law

Checked By : Andrew Chau

  
Andrew

**Operational Noise Monitoring Field Record Sheet**

Monitoring Location	N102	
Description of Location (inc floor level)	Wu Kwai Sha New Village	
Date of Monitoring	29 Jan 2007	
Measurement Start Time (hh:mm)	0905	
Measurement Duration (min.)	30	
Weather Conditions	Fine	
Noise Meter Model/Identification	Cesva SC20e	
Calibrator Model/Identification	Cesva SB3	
Measurement Results	L <sub>90</sub> (dB(A))	48.0
	L <sub>10</sub> (dB(A))	60.7
	Leq (dB(A))	57.5
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 : Law Wai Kin

52

Checked By : Angela Chan

Angela

**Operational Noise Monitoring Field Record Sheet**

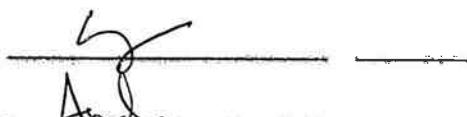
Monitoring Location		N102
Description of Location (inc floor level)		Wai Kuan Sha New Village
Date of Monitoring		29 Jan 2007
Measurement Start Time (hh:mm)		0935
Measurement Duration (min.)		30
Weather Conditions		Fine
Noise Meter Model/Identification		Cesva SC20e
Calibrator Model/Identification		Cesva CBS
Measurement Results	$L_{90}$ (dB(A))	48.6
	$L_{10}$ (dB(A))	60.7
	$L_{eq}$ (dB(A))	60.5
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

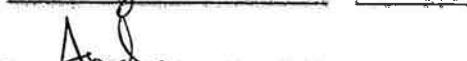
Signature

Date

Recorded By : Law Wai Kin



Checked By : Andree Chow



**Operational Noise Monitoring Field Record Sheet**

Monitoring Location		N102
Description of Location (inc floor level)		Wu Kung She New Village
Date of Monitoring		29 Jan 2007
Measurement Start Time (hh:mm)		1244
Measurement Duration (min.)		30
Weather Conditions		Fine
Noise Meter Model/Identification		Cesva SC20e
Calibrator Model/Identification		Cesva CB5
Measurement Results	$L_{90}$ (dB(A))	46.8
	$L_{10}$ (dB(A))	59.8
	Leq (dB(A))	60.2
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 : Law Wai Kin



Checked By : Andrew Chau



**Operational Noise Monitoring Field Record Sheet**

Monitoring Location		N102
Description of Location (inc floor level)		Wu Kwai She New Village
Date of Monitoring		29 Jan 2007
Measurement Start Time (hh:mm)		1314
Measurement Duration (min.)		30
Weather Conditions		Fine
Noise Meter Model/Identification		Cesva SC 20e
Calibrator Model/Identification		Cesva CR5
Measurement Results	$L_{90}$ (dB(A))	49.8
	$L_{10}$ (dB(A))	60.7
	Leq (dB(A))	58.5
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 : Law Wai Kin

LY

Checked By : Andrea Chow

Andrea

**Operational Noise Monitoring Field Record Sheet**

Monitoring Location		N102
Description of Location (inc floor level)		Wu Kiui Shu New Village
Date of Monitoring		29 Jan 2007
Measurement Start Time (hh:mm)		1344
Measurement Duration (min.)		30
Weather Conditions		Fine
Noise Meter Model/Identification		Cesva SC20e
Calibrator Model/Identification		Cesva CBS
Measurement Results	L <sub>90</sub> (dB(A))	51.3
	L <sub>10</sub> (dB(A))	60.6
	L <sub>eq</sub> (dB(A))	57.5
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 : Law Wai Kin

6

Checked By : Andrew Chan

Aldrin

**Operational Noise Monitoring Field Record Sheet**

Monitoring Location	N102	
Description of Location (inc floor level)	Wu Kui Sha New Village	
Date of Monitoring	29 Jan 2007	
Measurement Start Time (hh:mm)	1414	
Measurement Duration (min.)	30	
Weather Conditions	Fine	
Noise Meter Model/Identification	Cesva SC 20e	
Calibrator Model/Identification	Cesva CR5	
Measurement Results	$L_{90}$ (dB(A))	49.1
	$L_{10}$ (dB(A))	61.1
	Leq (dB(A))	58.7
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 : Law Wai Kin

W

Checked By : Andrew Chow

Andrew

**Operational Noise Monitoring Field Record Sheet**

Monitoring Location		N102
Description of Location (inc floor level)		Wu Kwai Sha New Village
Date of Monitoring		29 Jan 2007
Measurement Start Time (hh:mm)		1444
Measurement Duration (min.)		30
Weather Conditions		Fine
Noise Meter Model/Identification		Cesva SC20e
Calibrator Model/Identification		Cesva CB 5
Measurement Results	$L_{90}$ (dB(A))	49.6
	$L_{10}$ (dB(A))	63.2
	Leq (dB(A))	60.6
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 : Law Wai Kin

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Checked By : Andrew Chow

Andy

**Operational Noise Monitoring Field Record Sheet**

Monitoring Location		W102
Description of Location (inc floor level)		Wu Kuan Sha Neat Village
Date of Monitoring		29 Jan 2007
Measurement Start Time (hh:mm)		15:15
Measurement Duration (min.)		30
Weather Conditions		Fine
Noise Meter Model/Identification		Cesva SC20e
Calibrator Model/Identification		Cesva CR5
Measurement Results	L <sub>90</sub> (dB(A))	55.1
	L <sub>10</sub> (dB(A))	64.6
	Leq (dB(A))	61.6
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

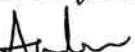
Signature

Date

Recorded By : Law Wai Kin



Checked By : Andrew Chan



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

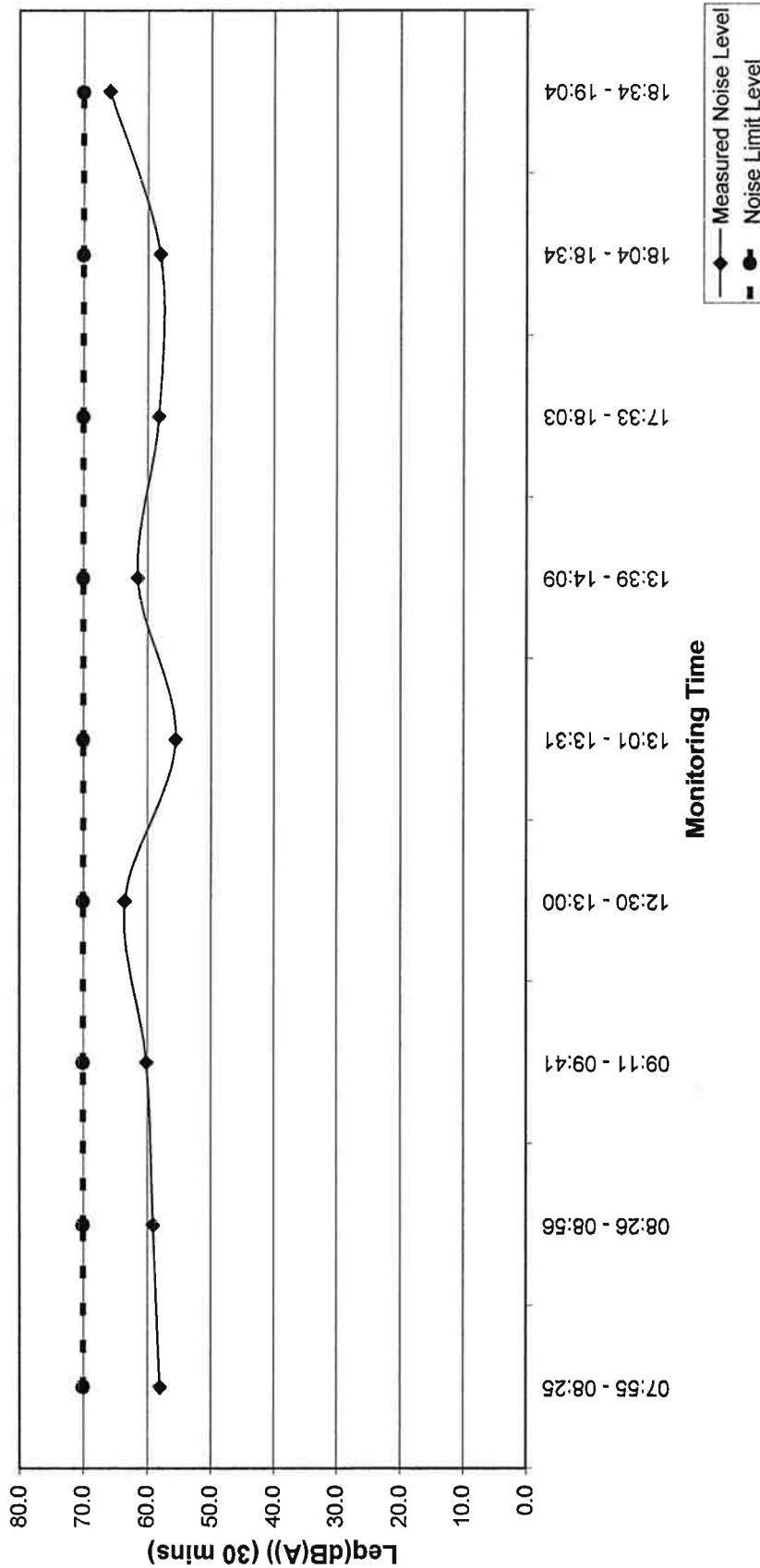
**Monitoring Location: Lee Wing House (Floor 15) (N405a)**  
**Time Period: 07:00-19:00**

Date	Start Time	Duration (min)	Measurement Results						Normalized Noise Level dB (A)	Remark
			L <sub>eq</sub> (dB(A))	L <sub>10</sub> (dB(A))	L <sub>90</sub> (dB(A))	L <sub>eq</sub> (dB(A)) (5 mins)	L <sub>eq</sub> (dB(A)) (30 mins)	L <sub>10</sub> (dB(A)) (5 mins)		
01/26/07	07:55 - 08:25	30	50.5	60.6	56.1	58.1	56.7	56.1	61.5	58.0
01/26/07	08:26 - 08:56	30	52.4	61.0	56.9	58.9	58.8	58.5	61.6	59.1
01/26/07	09:11 - 09:41	30	54.3	62.9	61.3	60.5	59.5	60.0	60.7	60.1
01/26/07	12:30 - 13:00	30	56.5	66.8	65.2	62.2	62.5	64.1	63.0	64.7
01/26/07	13:01 - 13:31	30	48.8	58.7	55.9	56.3	55.6	55.5	55.9	54.6
01/26/07	13:39 - 14:09	30	54.3	64.5	63.8	62.4	60.8	59.1	61.4	60.4
01/26/07	17:33 - 18:03	30	52.2	61.2	58.2	59.8	57.6	58.1	56.5	58.3
01/26/07	18:04 - 18:34	30	47.0	59.6	58.0	55.2	53.5	56.4	54.9	62.8
01/26/07	18:34 - 19:04	30	57.8	69.2	60.7	62.3	67	65.8	66.4	68.6
									65.9	73.9

Value used in the report since the following reasons :  
 1. Applicable for comparing the predicted A.M. peak noise level in the EIA report.  
 2. Conservative value for comparison

Predicted maximum traffic flow is A.M. peak.  
 Therefore, noise levels at PM peak are not applicable for comparison.

## Noise Monitoring Result



**Operational Noise Monitoring Field Record Sheet**

Monitoring Location	AK105cn	
Description of Location (inc floor level)	Lee Wing House (13th floor)	
Date of Monitoring	26 Jan 2007	
Measurement Start Time (hh:mm)	0755	
Measurement Duration (min.)	30	
Weather Conditions	Fine	
Noise Meter Model/Identification	Cesva SC20e	
Calibrator Model/Identification	Cesva CB5	
Measurement Results	$L_{90}$ (dB(A))	50.5
	$L_{10}$ (dB(A))	60.6
	$L_{eq}$ (dB(A))	58.0
Hourly Traffic Flow during Monitoring		
% HGVs of Hourly Traffic		
Estimate of Average Vehicle Speed (Kph)		
Mitigation Measures in Place		
Measurement Location	Noise Barrier	
Other Noise Source(s) During Monitoring		
Remarks		

Name & Designation

Signature

Date

Recorded By : Law Wai Kin

67

Checked By : Andrew Chow

Andy