

MTR Corporation Limited

HONG KONG SECTION OF GUANGZHOU –
SHENZHEN – HONG KONG EXPRESS RAIL LINK
(No. EP-349/2009/A)

Baseline Monitoring Report (Part 12)

Verified by: 
Position: Independent Environmental Checker
Date: 30 September 2010

MTR Corporation Limited

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SHENZHEN - HONG KONG EXPRESS RAIL LINK
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Baseline Monitoring Report (Part 12)

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29 SEP 2010

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EXECUTIVE SUMMARY

The environmental baseline monitoring for the Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link, hereinafter referred to “the XRL” was conducted at 6 noise and 3 air quality monitoring locations in the vicinity of Works Area B, C and F (Figure 1). Noise measurements were taken in terms of Leq with L10 and L90 as reference. Air quality was measured in terms of 1-hour and 24-hour average Total Suspended Particulates (TSP).

Monitoring of 1-hour and 24-hr TSP level were conducted at Yau Tam Mei Village House No. 350 (AM 2), Kong Tai Road Village House (AM3) and No. 306, Sheung Tsuen San Tsuen Village House (AM 8). The average 1-hour TSP levels were 109.0 $\mu\text{g}/\text{m}^3$ at AM 2, 79.8 $\mu\text{g}/\text{m}^3$ at AM 3 and 85.0 $\mu\text{g}/\text{m}^3$ at AM 8 respectively. The average 24-hour TSP levels were 76.0 $\mu\text{g}/\text{m}^3$ at AM 2, 38.0 $\mu\text{g}/\text{m}^3$ at AM 3 and 43.3 $\mu\text{g}/\text{m}^3$ at AM 8 respectively.

The Action Levels at the monitoring locations were derived based on the baseline monitoring results. The Action Level of 1-hour TSP levels were 320.9 $\mu\text{g}/\text{m}^3$ at AM 2, 301.9 $\mu\text{g}/\text{m}^3$ at AM 3 and 305.2 $\mu\text{g}/\text{m}^3$ at AM 8 respectively while the Action Level of 24-hour TSP levels were 179.4 $\mu\text{g}/\text{m}^3$ at AM 2, 154.7 $\mu\text{g}/\text{m}^3$ at AM 3 and 158.2 $\mu\text{g}/\text{m}^3$ at AM 8 respectively.

Baseline noise monitoring was conducted at Yau Tam Mei Village Houses (CN 3&4), Kong Tai Road Village Houses (CN 5&6), No. 305B Sheung Tsuen San Tsuen Village House (CN 15) and DD 114 LOT 1405 Sheung Tsuen (CN 16). Baseline noise monitoring was conducted during daytime (0700-1900 hours), evening time (1900-2300 hours) and night-time (2300-0700 hours) on all day during the above-mentioned period. In this report, the measured noise levels on weekdays were presented separately from general holidays and Sundays for easy of reference. The monitoring result reveals that the daytime baseline noise levels at all of the six monitoring locations (CN 3, 4, 5, 6, 15 and 16) were below the Limit Level of 75 dB(A) for residential premises.

1. INTRODUCTION

1.1 Background

Further to the Government's decision made in April 2008, MTR Corporation (MTR) commenced to plan and design the Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link (hereinafter referred to "the XRL" or "the Project"), which is a committed cross boundary transport infrastructure project.

The XRL will provide high speed rail services between Hong Kong and Guangzhou, and a connection to the national high-speed passenger rail network serving major mainland cities outside of Guangdong province. The Hong Kong section of the XRL is about 26km from new terminus located in West Kowloon (i.e. West Kowloon Terminus (WKT)) to the boundary at Huang gang. Along the railway corridor, there will be a total of eight ventilation buildings/ emergency access point (EAP), stabling sidings and a maintenance facility at Shek Kong (SSS) and an Emergency Rescue Station (ERS) next to SSS serving the operation of the XRL.

1.2 Purpose of the report

In accordance with the Environmental Monitoring and Audit (EM&A) Manual, environmental baseline monitoring was carried out for dust and noise. This Baseline Monitoring Report (Part 12) contains baseline monitoring findings in the vicinity of Works Areas B, C and F (Figure 1). The purpose of this report is to summarize the findings of this baseline monitoring and to establish the compliance levels for the subsequent environmental impact monitoring during construction stage.

2. AIR QUALITY

2.1 Monitoring Methodology

Monitoring was undertaken to establish baseline levels for both 1-hour and 24-hour Total Suspended Particulates (TSP) at AM 2, AM 3 and AM 8 located in the vicinity of the works areas B, C and F. This provides data against which any environmental impacts due to construction activities can be compared.

During the construction period impact monitoring will only be conducted for 24-hour TSP, although 1-hour TSP monitoring may also be conducted and used in following up on complaints or exceedances, in order to provide a more rapid indication of the source of the problem at hand.

Baseline monitoring was conducted for both 1-hour and 24-hour TSP using a direct reading meter (MIE Data-RAM Portable Real Time Aerosol Monitor) and a high volume sampler (HVS) according to Part 50 Chapter 1 Appendix B, Title 40 of the Code of Federal Regulations of the USEPA.

2.2 Monitoring Frequency

Three separate 1-hour TSP measurements daily for a period of at least 14 days were made at the monitoring station to establish the ambient 1-hour TSP levels. For 24-hour TSP, monitoring was carried out continuously over a period of at least 14 days at the monitoring stations to establish the ambient 24-hour TSP levels. The monitoring frequency for baseline monitoring of 1-hour and 24-hour TSP is summarized in the table below:

Sampling Parameter	Frequency	Duration
1 hour TSP	• 3 times per day	Consecutive days of at least 2 weeks before commencement of construction works
Continuous 24-hour TSP	• Daily	

Table 2.1: Monitoring frequency for baseline monitoring of 1-hour and 24-hour TSP

2.3 Monitoring location

Based on the site visit observation, it was revealed that the original location of AM 2 in the EM&A Manual (Yau Tam Mei Village House) was located on slope which is inaccessible. As such, the monitoring location was re-located to Yau Tam Mei Village House No. 350 which is located close to the original AM 2 and Works Area B. In addition, since no access was obtained at the original location of AM 3 in the EM&A Manual (Kong Tai Road Village House), the monitoring location was re-located to the village house adjacent to the original one and is located close to the Works Area. Given that no access was obtained for installation at the original location of AM 8 (No. 305 Sheung Tsuen San Tsuen Village House), the monitoring location was re-located to the adjacent No. 306 Sheung Tsuen San Tsuen Village House.

According to the EM&A Manual, baseline air quality monitoring was carried out during the period shown in Table 2.2 to determine the ambient levels of both 1-hour and 24-hour TSP levels respectively at Yau Tam Mei Village House No. 350 (AM 2), Kong Tai Road Village House (AM 3) and No. 306, Sheung Tsuen San Tsuen Village House (AM 8) in the vicinity of Works Area B, C and F. Monitoring of 1-hour and 24-hour at AM 2 on 22/3 and 23/3 was interrupted due to high background dust level. The locations of the works area and the respective ASR are shown in Figures 1 and 2 respectively. The information of the ASR where baseline air monitoring had been conducted is summarized in the table below:

Monitoring Station ID	Air Quality Monitoring Location	Monitoring period
AM 2	Yau Tam Mei Village House No. 350	19/3/2010 – 3/4/2010 ¹ (1hr and 24-hr)
AM 3	Kong Tai Road Village House	29/6/2010 – 12/7/2010 (1-hr and 24-hr)

Monitoring Station ID	Air Quality Monitoring Location	Monitoring period
AM 8	No. 306, Sheung Tsuen San Tsuen Village House	31/7/2010 – 13/8/2010 (1-hr and 24-hr)

Table 2.2: Information of Air Sensitive Receiver where dust monitoring was conducted

Note1: Monitoring on 22/3 and 23/3 was excluded due to high background dust level.

2.4 Calibration requirements

The flow rate of the high volume sampler with mass flow controller was calibrated using an orifice calibrator. Initial calibration (five points) was conducted upon installation and prior to commissioning. Calibration was carried out every six months. Calibration certificate is attached in Appendix C. Calibration of the MIE by certified laboratory or manufacturer was carried out every two years and properly documented. Calibration certificates at AM 2, AM 3 and AM 8 are attached in Appendix C.

The samplers shall be properly maintained. Prior to dust monitoring commencing, appropriate checks shall be made to ensure that all equipment and necessary power supply are in good working condition.

2.5 Monitoring Procedures

1-Hour TSP Levels Monitoring

TSP is sampled by drawing air into the MIE where particulate concentrations are measured instantaneously with an in-built detector sensing light scattered by the particles in the sampled air (optical sensing stage). Continuous TSP levels are indicated on the MIE along with a 'Time Weighted Average' value.

24-Hour TSP Levels Monitoring

The sampling procedure follows to that described Part 50 Chapter 1 Appendix B, Title 40 of the Code of Federal Regulations of the USEPA. TSP is sampled by drawing air through a conditioned, pre-weighed filter paper inside the high volume sampler at a controlled rate. After 24-hour sampling the filter paper with retained particles shall be

collected and returned to HOKLAS accredited laboratory (ALS Technichem (HK) Pty Ltd) for drying in a desiccators followed by accurate weighing. TSP levels are calculated from the ratio of the mass of particulate retained on the filter paper to the total volume of air sampled.

2.6 Monitoring Results

During the monitoring period, the weather was mostly fine with occasional rainy days. Monitoring on 22/3 and 23/3 was excluded due to high background dust level. The major source of dust in the vicinity was observed to originate mainly from the traffic on nearby road.

Monitoring results of 1-hour and 24-hour TSP at AM 2, AM 3 and AM 8 are summarised in Table 2.3 and 2.4. The detailed monitoring data of 1-hour and 24-hour of AM 2, AM 3 and AM 8 is shown in Appendix A.

Monitoring Location	Average 1-hr TSP Concentration, $\mu\text{g}/\text{m}^3$ (Range)
Yau Tam Mei Village House No. 350 (AM 2)	109.0 (43.0-221.0)
Kong Tai Road Village House (AM 3)	79.8 (45.2-169.8)
No. 306, Sheung Tsuen San Tsuen Village House (AM 8)	85.0 (62.8-121.4)

Table 2.3: Summary of baseline 1-hour TSP level

Monitoring Location	Average 24-TSP Concentration, $\mu\text{g}/\text{m}^3$ (Range)
Yau Tam Mei Village House No. 350 (AM 2)	76.0 (39.9-153.4)
Kong Tai Road Village House (AM 3)	38.0 (18.1-75.9)
No. 306, Sheung Tsuen San Tsuen Village House (AM 8)	43.3 (13.8-139.1)

Table 2.4: Summary of baseline 24-hour TSP level

2.7 Action and Limit Levels

In accordance with the EM&A Manual, the baseline TSP levels form the basis for derivation of the Action Levels for subsequent impact monitoring, which is summarised in the table below:

Parameter	Action Level ⁽¹⁾	Limit Level
TSP (24 hour average)	• $BL \leq 200 \mu\text{g m}^{-3}$, $AL = (BL * 1.3 + LL)/2$ • $BL > 200 \mu\text{g m}^{-3}$, $AL = LL$	$260 \mu\text{g m}^{-3}$
TSP (1 hour average)	• $BL \leq 384 \mu\text{g m}^{-3}$, $AL = (BL * 1.3 + LL)/2$ • $BL > 384 \mu\text{g m}^{-3}$, $AL = LL$	$500 \mu\text{g m}^{-3}$

(1) BL = Baseline level, AL = Action level, LL = Limit Level.

Table 2.5: Basis for establishing the Action and Limit Levels for Air Quality

In accordance with Table 2.3 and 2.4 regarding results from baseline monitoring, the Action Level for air quality impact monitoring are calculated and presented below:

Location	Parameter	Action Level	Limit Level
Yau Tam Mei Village House No. 350 (AM 2)	TSP (24-hour average)	$179.4 \mu\text{g m}^{-3}$	$260 \mu\text{g m}^{-3}$
	TSP (1-hour average)	$320.9 \mu\text{g m}^{-3}$	$500 \mu\text{g m}^{-3}$
Kong Tai Road Village House (AM 3)	TSP (24-hour average)	$154.7 \mu\text{g m}^{-3}$	$260 \mu\text{g m}^{-3}$
	TSP (1-hour average)	$301.9 \mu\text{g m}^{-3}$	$500 \mu\text{g m}^{-3}$
No. 306, Sheung Tsuen San Tsuen Village House (AM 8)	TSP (24-hour average)	$158.2 \mu\text{g m}^{-3}$	$260 \mu\text{g m}^{-3}$
	TSP (1-hour average)	$305.2 \mu\text{g m}^{-3}$	$500 \mu\text{g m}^{-3}$

Table 2.6: Action and Limit Levels for Air Quality Impact Monitoring

3. AIRBORNE CONSTRUCTION NOISE

3.1 Monitoring Methodology

Consecutive noise measurements were undertaken over a period of at least 14 days to establish the ambient noise levels at representative nearest sensitive receivers. Continuous 5 minute A-weighted noise levels were recorded throughout the daytime, evening and night-time on weekdays (Monday to Saturday) and also on Sundays.

As referred to the Technical Memorandum (TM) issued under the NCO, sound level meters in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications shall be used for carrying out the noise monitoring. In this baseline monitoring, B&K 2250 sound level meter, which complies with the above-mentioned specifications, was used.

There should not be any construction activities in the vicinity of the monitoring stations during the baseline monitoring. Any non-project related construction activities in the vicinity of the monitoring stations during the baseline monitoring should be noted and the source and location of such activities should be recorded. Façade correction of +3 dB (A) is applied to the free-field monitoring locations.

3.2 Monitoring Frequency

The baseline monitoring was measured daily for a continuous period of at least 14 consecutive days at a minimum logging interval of 30 minutes for daytime (between 0700 and 1900 hours of normal weekdays) and 15 minutes (as three consecutive Leq, (5 minutes) readings) for evening time (between 1900 and 2300 hours of normal weekdays), general holidays including Sundays (between 0700 and 2300 hours) and night-time (between 2300 and 0700 of all days). The Leq, L10 and L90 were recorded at the specified interval.

3.3 Monitoring location

Baseline noise monitoring was carried out at CN 3, 4, 5, 6, 15 and 16 located in the vicinity of Works Area B, C and F. The location of the NSR is shown in Figure 3. Monitoring was carried out at the following stations in accordance with the EM&A

Manual:

Monitoring Station ID	Noise Monitoring Location	Monitoring period
CN 3	Yau Tam Mei Village House	3/8/2010 to 21/8/2010 ¹
CN 4	Yau Tam Mei Village House	6/8/2010 to 25/8/2010 ²
CN 5	Kong Tai Road Village House	23/7/2010 to 9/8/2010 ³
CN 6	Kong Tai Road Village House	23/7/2010 to 9/8/2010 ³
CN 15	No. 305B - Sheung Tsuen San Tsuen Village House	21/8/2010 to 14/9/2010 ⁴
CN 16	DD 114 LOT 1405 Sheung Tsuen	21/8/2010 to 14/9/2010 ⁴

Note 1: Monitoring on 5/8, 7/8, 11/8, 19/8 and 20/8 was interrupted due to rainfall

2: Monitoring on 7/8, 11/8, 19/8 and 20/8, 23/8 and 24/8 was interrupted due to rainfall

3: Monitoring on 27/7, 28/7, 5/8 and 7/8 was interrupted due to rainfall

4: Monitoring on 23/8, 24/8, 28/8, 3/9 – 5/9 and 8/9 – 12/9 was interrupted due to rainfall

Table 3.1: Information of Noise Monitoring Stations

3.4 Calibration Requirements

B&K 2250 sound level meters which complied with the International Electrotechnical Commission Publication 651:1979 (Type 1) and 804:1985 (Type 1), specification as referred to in the Technical Memoranda to the NCO were used for the baseline monitoring at CN 3, 4, 5, 6, 15 and 16. The sound level meters and calibrator are verified by the certified laboratory or manufacturer once every year to ensure they perform to the same level of accuracy as stated in the manufacturer's specifications. Calibration certificates of the sound level meters and calibrator at CN 3, 4, 5, 6, 15 and 16 are attached in Appendix C.

Immediately prior to and following each noise measurement the accuracy of the sound

level meter should be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the difference between calibration levels obtained before and after the noise measurement is less than 1.0 dB.

3.5 Action and Limit Levels

The Action and Limit Levels defined in the EM&A Manual for airborne construction noise is presented below for reference.

Time Period	Action	Limit
0700-1900 hours on normal weekdays	When one documented complaint is received	75 dB(A) for residential premises
		70 dB(A) for school and 65 dB(A) during examination period

Table 3.2: Action and Limit Levels for Airborne Construction Noise

3.6 Monitoring Results

Baseline noise monitoring was conducted during the period shown in Table 3.3 at CN 3, 4, 5, 6, 15 and 16. The weather condition was generally fine with occasional rainfall events during the monitoring period. The major noise sources at respective monitoring locations are summarized at the table below:

Monitoring location ID	Monitoring location	Major noise source
CN 3	Yau Tam Mei Village House	Domestic noise, dog bark and noise from insects at night
CN 4	Yau Tam Mei Village House	Dog bark and noise from insects at night
CN 5	Kong Tai Road Village House	Traffic Noise, domestic noise and noise from insects at night
CN 6	Kong Tai Road Village House	Domestic noise, dog bark and noise from insects at night

Monitoring location ID	Monitoring location	Major noise source
CN 15	No. 305B - Sheung Tsuen San Tsuen Village House	Traffic noise
CN 16	DD 114 LOT 1405 Sheung Tsuen	Domestic noise and noise from insects at night

Table 3.3: Major noise source at noise monitoring locations

Baseline noise monitoring results at CN 3, 4, 5, 6, 15 and 16 are summarised in Table 3.3 over the monitoring periods. Detailed monitoring data at CN 3, 4, 5, 6, 15 and 16 is contained in Appendix B. Graphical presentations of the monitoring results at CN 3, 4, 5, 6, 15 and 16 are shown in Appendix B.

Period	Monitoring Station	L_{eq}(30min) – dB(A) (Range)	L₁₀(30min) – dB(A) (Range)	L₉₀(30min) – dB(A) (Range)
<i>Monitoring result at CN 3</i>				
0700 – 1900 (Daytime, Normal weekday)	CN 3	56 (52 - 63)	61 (56 - 66)	48 (42 - 59)
0700 – 2300 (General Holiday including Sunday)	CN 3	54 (41 - 66)	59 (42 - 70)	48 (37 - 63)
1900 – 2300 (Evening, Normal weekday)	CN 3	57 (52 - 62)	59 (53 - 65)	56 (50 - 61)
2300 – 0700 (Night-time, all days)	CN 3	55 (50 - 59)	57 (51 - 62)	54 (49 - 57)
<i>Monitoring result at CN 4</i>				
0700 – 1900 (Daytime, Normal weekday)	CN 4	53 (52 - 55)	57 (55 - 60)	50 (48 - 52)
0700 – 2300 (General Holiday including Sunday)	CN 4	51 (45 - 58)	55 (47 - 65)	48 (43 - 53)
1900 – 2300 (Evening, Normal weekday)	CN 4	62 (52 - 65)	63 (53 - 66)	60 (50 - 64)
2300 – 0700 (Night-time, all days)	CN 4	65 (51 - 70)	66 (53 - 71)	64 (50 - 69)

Period	Monitoring Station	L_{eq}(30min) – dB(A) (Range)	L₁₀(30min) – dB(A) (Range)	L₉₀(30min) – dB(A) (Range)
<i>Monitoring result at CN 5</i>				
0700 – 1900 (Daytime, Normal weekday)	CN 5	57 (55 - 61)	60 (57 - 64)	52 (50 - 54)
0700 – 2300 (General Holiday including Sunday)	CN 5	57 (50 - 66)	60 (52 - 68)	52 (49 - 56)
1900 – 2300 (Evening, Normal weekday)	CN 5	58 (55 - 64)	61 (57 - 67)	53 (51 - 58)
2300 – 0700 (Night-time, all days)	CN 5	56 (53 - 58)	58 (54 - 61)	53 (51 - 54)
<i>Monitoring result at CN 6</i>				
0700 – 1900 (Daytime, Normal weekday)	CN 6	56 (50 - 59)	59 (52 - 63)	49 (47 - 52)
0700 – 2300 (General Holiday including Sunday)	CN 6	55 (46 - 66)	58 (48 - 69)	48 (43 - 53)
1900 – 2300 (Evening, Normal weekday)	CN 6	59 (54 - 63)	62 (57 - 67)	53 (49 - 57)
2300 – 0700 (Night-time, all days)	CN 6	53 (49 - 60)	56 (51 - 65)	50 (47 - 55)
<i>Monitoring result at CN 15</i>				

Period	Monitoring Station	L_{eq}(30min) – dB(A) (Range)	L₁₀(30min) – dB(A) (Range)	L₉₀(30min) – dB(A) (Range)
0700 – 1900 (Daytime, Normal weekday)	CN 15	66 (65 - 68)	70 (69 - 71)	53 (48 - 59)
0700 – 2300 (General Holiday including Sunday)	CN 15	62 (57 - 69)	63 (57 - 72)	59 (56 - 68)
1900 – 2300 (Evening, Normal weekday)	CN 15	64 (63 - 66)	68 (67 - 70)	52 (50 - 54)
2300 – 0700 (Night-time, all days)	CN 15	60 (54 - 64)	64 (56 - 68)	48 (43 - 52)
<i>Monitoring result at CN 16</i>				
0700 – 1900 (Daytime, Normal weekday)	CN 16	51 (49 - 53)	54 (52 - 57)	43 (42 - 46)
0700 – 2300 (General Holiday including Sunday)	CN 16	51 (45 - 57)	54 (46 - 61)	44 (40 - 48)
1900 – 2300 (Evening, Normal weekday)	CN 16	53 (50 - 56)	55 (52 - 58)	49 (44 - 53)
2300 – 0700 (Night-time, all days)	CN 16	50 (45 - 55)	53 (46 - 59)	44 (42 - 49)

Table 3.4: Baseline noise monitoring results

As revealed from the monitoring results, baseline noise levels for daytime (0700-1900) during normal weekdays at the CN 3, 4 in Works Area B range from 53 to 56 dB(A), CN 5, 6 in Works Area C range from 56 to 57 dB(A), while CN 15, 16 in Works Area F range from 51 to 66 dB(A). It was noted from the monitoring results that the daytime baseline noise levels at CN 3, 4, 5, 6, 15 and 16 were all below the Limit Level of 75 dB(A) for residential premises.

4. CONCLUSION

4.1 Air

1-hour TSP

Baseline 1-hour TSP monitoring was conducted at AM 2, AM 3 and AM 8 during the period 19/3/2010 – 3/4/2010, 29/6/2010 – 12/7/2010 and 31/7/2010 – 13/8/2010 respectively. Monitoring was interrupted on 22/3/2010 and 23/3/2010 due to high background dust levels. The weather condition was mostly fine with occasional rainy days.

Baseline 1-hour TSP monitoring at AM 2, AM 3 and AM 8 were found in the range of 43.0 to 221.0 $\mu\text{g}/\text{m}^3$, 45.2 to 169.8 $\mu\text{g}/\text{m}^3$ and 62.8 to 121.4 respectively. The average 1-hour TSP level at AM 2, AM 3 and AM 8 were recorded to be 109.0 $\mu\text{g}/\text{m}^3$, 79.8 $\mu\text{g}/\text{m}^3$ and 85.0 $\mu\text{g}/\text{m}^3$ respectively.

24-hour TSP

Baseline 24-hour TSP monitoring was conducted at AM 2, AM 3 and AM 8 during the period 19/3/2010 – 3/4/2010, 29/6/2010 – 12/7/2010 and 31/7/2010 – 13/8/2010 respectively. Monitoring was interrupted on 22/3/2010 and 23/3/2010 due to high background dust levels. Baseline 24-hour TSP monitoring at AM 2, AM 3 and AM 8 were found in the range of 39.9 to 153.4 $\mu\text{g}/\text{m}^3$, 18.1 to 75.9 $\mu\text{g}/\text{m}^3$ and 13.8 to 139.1 $\mu\text{g}/\text{m}^3$ respectively. The average 24-hour TSP level at AM 2, AM 3 and AM 8 were recorded to be 76.0 $\mu\text{g}/\text{m}^3$, 38.0 $\mu\text{g}/\text{m}^3$ and 43.3 $\mu\text{g}/\text{m}^3$ respectively.

1-hr and 24-hour Action Levels

The Action Levels at the monitoring locations were derived based on the baseline monitoring results. The Action Level of 1-hour average TSP levels at AM 2, AM 3 and AM 8 were 320.9 $\mu\text{g}/\text{m}^3$, 301.9 $\mu\text{g}/\text{m}^3$ and 305.2 $\mu\text{g}/\text{m}^3$ respectively. The Action Levels of 24-hour average TSP levels at AM 2, AM 3 and AM 8 was 179.4 $\mu\text{g}/\text{m}^3$, 154.7 $\mu\text{g}/\text{m}^3$ and 158.2 $\mu\text{g}/\text{m}^3$ respectively.

4.2 Airborne Construction Noise

Baseline noise monitoring was carried at the monitoring station during July – September at all six monitoring locations (CN 3, 4, 5, 6, 15 and 16). The weather during the baseline monitoring period was generally fine with occasional rainfall

events.

As revealed from the monitoring results, baseline noise levels for daytime (0700-1900) during normal weekdays at the CN 3, 4 in Works Area B range from 53 to 56 dB(A), CN 5, 6 in Works Area C range from 56 to 57 dB(A), while CN 15, 16 in Works Area F range from 51 to 66 dB(A). It was noted from the monitoring results that the daytime baseline noise levels at CN 3, 4, 5, 6, 15 and 16 were all below the Limit Level of 75 dB(A) for residential premises.

Appendix A

Baseline air quality (1-hr and 24-hr TSP) monitoring data

Details of 1-hour TSP Level monitoring at AM 2

Month	Date	Receptor		Time periods		Weather condition	Site condition	Temp. (°C)	Pressure (mmHg)	1-hour TSP Level (ug/m ³)	Remarks
		No.	Set No.	Start	Finish						
Mar-10	19-Mar-10	AM2	1	10:27	11:27	Fine	Normal	21.0	762.0	221.0	
Mar-10	19-Mar-10	AM2	2	11:27	12:27	Fine	Normal	21.0	762.0	164.7	
Mar-10	19-Mar-10	AM2	3	12:27	13:27	Fine	Normal	21.0	762.0	123.4	
Mar-10	20-Mar-10	AM2	1	8:23	9:23	Cloudy	Normal	22.0	760.0	143.1	
Mar-10	20-Mar-10	AM2	2	9:23	10:23	Cloudy	Normal	22.0	760.0	133.6	
Mar-10	20-Mar-10	AM2	3	10:23	11:23	Cloudy	Normal	22.0	760.0	116.1	
Mar-10	21-Mar-10	AM2	1	8:03	9:03	Cloudy	Normal	23.0	761.0	200.2	
Mar-10	21-Mar-10	AM2	2	9:03	10:03	Cloudy	Normal	23.0	761.0	184.3	
Mar-10	21-Mar-10	AM2	3	10:03	11:03	Cloudy	Normal	23.0	761.0	177.2	
Mar-10	24-Mar-10	AM2	1	9:54	10:54	Cloudy	Normal	24.0	758.0	72.8	
Mar-10	24-Mar-10	AM2	2	10:54	11:54	Cloudy	Normal	24.0	758.0	81.9	
Mar-10	24-Mar-10	AM2	3	11:54	12:54	Cloudy	Normal	24.0	758.0	76.8	
Mar-10	25-Mar-10	AM2	1	9:49	10:49	Rainy	Normal	18.0	759.0	44.6	
Mar-10	25-Mar-10	AM2	2	10:49	11:49	Rainy	Normal	18.0	759.0	43.0	
Mar-10	25-Mar-10	AM2	3	11:49	12:49	Rainy	Normal	18.0	759.0	45.5	
Mar-10	26-Mar-10	AM2	1	14:44	15:44	Fine	Normal	18.0	766.0	70.4	
Mar-10	26-Mar-10	AM2	2	15:44	16:44	Fine	Normal	18.0	766.0	72.5	

Month	Date	Receptor		Time periods		Weather condition	Site condition	Temp. (°C)	Pressure (mmHg)	1-hour TSP Level (ug/m ³)	Remarks
		No.	Set No.	Start	Finish						
Mar-10	26-Mar-10	AM2	3	16:44	17:44	Fine	Normal	18.0	766.0	74.3	
Mar-10	27-Mar-10	AM2	1	13:06	14:06	Fine	Normal	18.0	766.0	133.8	
Mar-10	27-Mar-10	AM2	2	14:06	15:06	Fine	Normal	18.0	766.0	127.8	
Mar-10	27-Mar-10	AM2	3	15:06	16:06	Fine	Normal	18.0	766.0	136.1	
Mar-10	28-Mar-10	AM2	1	12:46	13:46	Fine	Normal	20.0	766.0	120.6	
Mar-10	28-Mar-10	AM2	2	13:46	14:46	Fine	Normal	20.0	766.0	104.5	
Mar-10	28-Mar-10	AM2	3	14:46	15:46	Fine	Normal	20.0	766.0	108.8	
Mar-10	29-Mar-10	AM2	1	13:46	14:46	Fine	Normal	19.0	765.0	61.5	
Mar-10	29-Mar-10	AM2	2	14:46	15:46	Fine	Normal	19.0	765.0	55.8	
Mar-10	29-Mar-10	AM2	3	15:46	16:46	Fine	Normal	19.0	765.0	61.9	
Mar-10	30-Mar-10	AM2	1	14:57	15:57	Cloudy	Normal	19.0	764.0	127.6	
Mar-10	30-Mar-10	AM2	2	15:57	16:57	Cloudy	Normal	19.0	764.0	133.6	
Mar-10	30-Mar-10	AM2	3	16:57	17:57	Cloudy	Normal	19.0	764.0	142.7	
Mar-10	31-Mar-10	AM2	1	15:08	16:08	Cloudy	Normal	22.0	762.0	87.0	
Mar-10	31-Mar-10	AM2	2	16:08	17:08	Cloudy	Normal	22.0	762.0	82.3	
Mar-10	31-Mar-10	AM2	3	17:08	18:08	Cloudy	Normal	22.0	762.0	89.2	
Apr-10	01-Apr-10	AM2	1	14:46	15:46	Cloudy	Normal	23.0	761.0	110.9	
Apr-10	01-Apr-10	AM2	2	15:46	16:46	Cloudy	Normal	23.0	761.0	84.3	
Apr-10	01-Apr-10	AM2	3	16:46	17:46	Cloudy	Normal	23.0	761.0	84.8	

Month	Date	Receptor		Time periods		Weather condition	Site condition	Temp. (°C)	Pressure (mmHg)	1-hour TSP Level (ug/m ³)	Remarks
		No.	Set No.	Start	Finish						
Apr-10	02-Apr-10	AM2	1	13:58	14:58	Cloudy	Normal	21.0	761.0	124.8	
Apr-10	02-Apr-10	AM2	2	14:58	15:58	Cloudy	Normal	21.0	761.0	95.5	
Apr-10	02-Apr-10	AM2	3	15:58	16:58	Cloudy	Normal	21.0	761.0	103.8	
Apr-10	03-Apr-10	AM2	1	13:13	14:13	Cloudy	Normal	18.0	764.0	115.7	
Apr-10	03-Apr-10	AM2	2	14:13	15:13	Cloudy	Normal	18.0	764.0	122.3	
Apr-10	03-Apr-10	AM2	3	15:13	16:13	Cloudy	Normal	18.0	764.0	118.8	
									Average	109.0	
									Max	221.0	
									Min	43.0	
									Action Level	320.9	
									Limit Level	500.0	

Details of 1-hour TSP Level monitoring at AM 3

Month	Date	Receptor No.	Set No.	Time periods		Weather condition	Site condition	Temp. (°C)	Pressure (mmHg)	1-hour TSP Level (ug/m ³)	Remarks
				Start	Finish						
Jun-10	29-Jun-10	AM3	1	8:04	9:04	Cloudy	Normal	27.0	757.0	72.4	
Jun-10	29-Jun-10	AM3	2	9:04	10:04	Cloudy	Normal	27.0	757.0	54.1	
Jun-10	29-Jun-10	AM3	3	10:59	11:59	Cloudy	Normal	27.0	757.0	56.3	
Jun-10	30-Jun-10	AM3	1	8:04	9:04	Fine	Normal	29.0	756.0	169.8	
Jun-10	30-Jun-10	AM3	2	9:04	10:04	Fine	Normal	29.0	756.0	62.5	
Jun-10	30-Jun-10	AM3	3	14:04	15:04	Fine	Normal	29.0	756.0	63.3	
Jul-10	01-Jul-10	AM3	1	11:25	12:25	Fine	Normal	30.0	756.0	122.4	
Jul-10	01-Jul-10	AM3	2	12:25	13:25	Fine	Normal	30.0	756.0	74.8	
Jul-10	01-Jul-10	AM3	3	17:00	18:00	Fine	Normal	30.0	756.0	93.9	
Jul-10	02-Jul-10	AM3	1	10:05	11:05	Fine	Normal	30.0	756.0	54.4	
Jul-10	02-Jul-10	AM3	2	11:35	12:35	Fine	Normal	30.0	756.0	56.9	
Jul-10	02-Jul-10	AM3	3	12:55	13:55	Fine	Normal	30.0	756.0	55.4	
Jul-10	03-Jul-10	AM3	1	8:05	9:05	Fine	Normal	30.0	756.0	45.2	
Jul-10	03-Jul-10	AM3	2	9:40	10:40	Fine	Normal	30.0	756.0	45.8	
Jul-10	03-Jul-10	AM3	3	11:50	12:50	Fine	Normal	30.0	756.0	46.3	
Jul-10	04-Jul-10	AM3	1	14:30	15:30	Fine	Normal	30.0	756.0	53.5	
Jul-10	04-Jul-10	AM3	2	15:30	16:30	Fine	Normal	30.0	756.0	107.2	

Month	Date	Receptor No.	Set No.	Time periods		Weather condition	Site condition	Temp. (°C)	Pressure (mmHg)	1-hour TSP Level (ug/m ³)	Remarks
				Start	Finish						
Jul-10	04-Jul-10	AM3	3	16:30	17:30	Fine	Normal	30.0	756.0	83.8	
Jul-10	05-Jul-10	AM3	1	9:03	10:03	Fine	Normal	30.0	755.0	86.8	
Jul-10	05-Jul-10	AM3	2	11:58	12:58	Fine	Normal	30.0	755.0	62.2	
Jul-10	05-Jul-10	AM3	3	13:08	14:08	Fine	Normal	30.0	755.0	62.7	
Jul-10	06-Jul-10	AM3	1	9:35	10:35	Fine	Normal	30.0	756.0	58.2	
Jul-10	06-Jul-10	AM3	2	15:55	16:55	Fine	Normal	30.0	756.0	53.5	
Jul-10	06-Jul-10	AM3	3	16:55	17:55	Fine	Normal	30.0	756.0	54.0	
Jul-10	07-Jul-10	AM3	1	12:15	13:15	Fine	Normal	30.0	756.0	54.3	
Jul-10	07-Jul-10	AM3	2	14:25	15:25	Fine	Normal	30.0	756.0	74.6	
Jul-10	07-Jul-10	AM3	3	16:20	17:20	Fine	Normal	30.0	756.0	70.3	
Jul-10	08-Jul-10	AM3	1	9:00	10:00	Fine	Normal	31.0	756.0	100.0	
Jul-10	08-Jul-10	AM3	2	10:00	11:00	Fine	Normal	31.0	756.0	85.6	
Jul-10	08-Jul-10	AM3	3	11:00	12:00	Fine	Normal	31.0	756.0	65.6	
Jul-10	09-Jul-10	AM3	1	10:35	11:35	Fine	Normal	30.0	756.0	130.4	
Jul-10	09-Jul-10	AM3	2	11:50	12:50	Fine	Normal	30.0	756.0	154.7	
Jul-10	09-Jul-10	AM3	3	13:30	14:30	Fine	Normal	30.0	756.0	100.4	
Jul-10	10-Jul-10	AM3	1	11:49	12:49	Fine	Normal	30.0	757.0	90.9	
Jul-10	10-Jul-10	AM3	2	14:24	15:24	Fine	Normal	30.0	757.0	105.4	
Jul-10	10-Jul-10	AM3	3	16:59	17:59	Fine	Normal	30.0	757.0	85.1	

Month	Date	Receptor No.	Set No.	Time periods		Weather condition	Site condition	Temp. (°C)	Pressure (mmHg)	1-hour TSP Level (ug/m ³)	Remarks
				Start	Finish						
Jul-10	11-Jul-10	AM3	1	11:44	12:44	Fine	Normal	30.0	757.0	67.6	
Jul-10	11-Jul-10	AM3	2	14:19	15:19	Fine	Normal	30.0	757.0	69.7	
Jul-10	11-Jul-10	AM3	3	15:19	16:19	Fine	Normal	30.0	757.0	61.3	
Jul-10	12-Jul-10	AM3	1	10:29	11:29	Fine	Normal	30.0	756.0	124.6	
Jul-10	12-Jul-10	AM3	2	12:29	13:29	Fine	Normal	30.0	756.0	97.1	
Jul-10	12-Jul-10	AM3	3	13:34	14:34	Fine	Normal	30.0	756.0	119.3	
									Average	79.8	
									Max	169.8	
									Min	45.2	
									Action Level	301.9	
									Limit Level	500.0	

Details of 1-hour TSP Level monitoring at AM 8

Month	Date	Receptor No.	Set No.	Time periods		Weather condition	Site condition	Temp. (°C)	Pressure (mmHg)	1-hour TSP Level (ug/m ³)	Remarks
				Start	Finish						
Jul-10	31-Jul-10	AM8	1	9:25	10:25	Fine	Normal	30.0	754.0	82.3	
Jul-10	31-Jul-10	AM8	2	10:25	11:25	Fine	Normal	30.0	754.0	82.0	
Jul-10	31-Jul-10	AM8	3	15:30	16:30	Fine	Normal	30.0	754.0	82.7	
Aug-10	01-Aug-10	AM8	1	11:40	12:40	Fine	Normal	30.0	755.0	98.2	
Aug-10	01-Aug-10	AM8	2	12:40	13:40	Fine	Normal	30.0	755.0	83.3	
Aug-10	01-Aug-10	AM8	3	14:20	15:20	Fine	Normal	30.0	755.0	79.3	
Aug-10	02-Aug-10	AM8	1	11:45	12:45	Fine	Normal	29.0	754.0	92.1	
Aug-10	02-Aug-10	AM8	2	12:45	13:45	Fine	Normal	29.0	754.0	94.2	
Aug-10	02-Aug-10	AM8	3	15:20	16:20	Fine	Normal	29.0	754.0	91.5	
Aug-10	03-Aug-10	AM8	1	13:58	14:58	Fine	Normal	29.0	754.0	75.7	
Aug-10	03-Aug-10	AM8	2	14:58	15:58	Fine	Normal	29.0	754.0	78.4	
Aug-10	03-Aug-10	AM8	3	15:58	16:58	Fine	Normal	29.0	754.0	81.2	
Aug-10	04-Aug-10	AM8	1	8:03	9:03	Fine	Normal	30.0	755.0	88.0	
Aug-10	04-Aug-10	AM8	2	9:03	10:03	Fine	Normal	30.0	755.0	89.6	
Aug-10	04-Aug-10	AM8	3	10:03	11:03	Fine	Normal	30.0	755.0	77.2	
Aug-10	05-Aug-10	AM8	1	8:03	9:03	Fine	Normal	29.0	756.0	87.3	
Aug-10	05-Aug-10	AM8	2	12:58	13:58	Fine	Normal	29.0	756.0	83.3	

Month	Date	Receptor No.	Set No.	Time periods		Weather condition	Site condition	Temp. (°C)	Pressure (mmHg)	1-hour TSP Level (ug/m ³)	Remarks
				Start	Finish						
Aug-10	05-Aug-10	AM8	3	14:03	15:03	Fine	Normal	29.0	756.0	62.8	
Aug-10	06-Aug-10	AM8	1	9:03	10:03	Fine	Normal	28.0	756.0	75.2	
Aug-10	06-Aug-10	AM8	2	10:03	11:03	Fine	Normal	28.0	756.0	74.8	
Aug-10	06-Aug-10	AM8	3	15:08	16:08	Fine	Normal	28.0	756.0	69.0	
Aug-10	07-Aug-10	AM8	1	11:01	12:01	Fine	Normal	29.0	756.0	89.3	
Aug-10	07-Aug-10	AM8	2	12:36	13:36	Fine	Normal	29.0	756.0	91.8	
Aug-10	07-Aug-10	AM8	3	16:56	17:56	Fine	Normal	29.0	756.0	121.4	
Aug-10	08-Aug-10	AM8	1	8:06	9:06	Fine	Normal	29.0	755.0	84.3	
Aug-10	08-Aug-10	AM8	2	9:06	10:06	Fine	Normal	29.0	755.0	83.6	
Aug-10	08-Aug-10	AM8	3	13:46	14:46	Fine	Normal	29.0	755.0	88.9	
Aug-10	09-Aug-10	AM8	1	13:41	14:41	Rainy	Normal	30.0	755.0	84.0	
Aug-10	09-Aug-10	AM8	2	14:41	15:41	Rainy	Normal	30.0	755.0	88.0	
Aug-10	09-Aug-10	AM8	3	15:41	16:41	Rainy	Normal	30.0	755.0	88.5	
Aug-10	10-Aug-10	AM8	1	9:26	10:26	Fine	Normal	30.0	755.0	89.4	
Aug-10	10-Aug-10	AM8	2	10:26	11:26	Fine	Normal	30.0	755.0	89.3	
Aug-10	10-Aug-10	AM8	3	11:26	12:26	Fine	Normal	30.0	755.0	90.5	
Aug-10	11-Aug-10	AM8	1	14:31	15:31	Fine	Normal	28.0	757.0	81.7	
Aug-10	11-Aug-10	AM8	2	15:31	16:31	Fine	Normal	28.0	757.0	79.5	
Aug-10	11-Aug-10	AM8	3	16:46	17:46	Fine	Normal	28.0	757.0	79.7	

Month	Date	Receptor No.	Set No.	Time periods		Weather condition	Site condition	Temp. (°C)	Pressure (mmHg)	1-hour TSP Level (ug/m ³)	Remarks
				Start	Finish						
Aug-10	12-Aug-10	AM8	1	8:01	9:01	Cloudy	Normal	29.0	758.0	78.9	
Aug-10	12-Aug-10	AM8	2	11:56	12:56	Cloudy	Normal	29.0	758.0	74.3	
Aug-10	12-Aug-10	AM8	3	15:06	16:06	Cloudy	Normal	29.0	758.0	87.1	
Aug-10	13-Aug-10	AM8	1	12:31	13:31	Cloudy	Normal	30.0	757.0	95.1	
Aug-10	13-Aug-10	AM8	2	13:31	14:31	Cloudy	Normal	30.0	757.0	84.3	
Aug-10	13-Aug-10	AM8	3	15:26	16:26	Cloudy	Normal	30.0	757.0	91.1	
									Average	85.0	
									Max	121.4	
									Min	62.8	
									Action Level	305.2	
									Limit Level	500.0	

Details of 24-hour TSP Level monitoring at AM 2

Filter No.	Date	Time periods		Weather condition	Site condition	Filter Weight (g)		TSP weight (g)	Flow Rate (m³/min)		Average Flow Rate (m³/min)	Elapse Time		Sampling Time (mins.)	Total vol. (m³)	24-hour TSP Level (ug/m³)
		Start	Finish			Initial	Final		Initial	Final		Start	Finish			
100931	19-Mar-10	12:15	12:15	Fine	Normal Operation	2.7882	2.9869	0.1987	1.1783	1.2527	1.2155	4970.80	4994.80	1440.00	1750.32	113.5
100930	20-Mar-10	12:20	12:20	Cloudy	Normal Operation	2.8354	2.9816	0.1462	1.1733	1.1716	1.1725	4994.80	5018.80	1440.00	1688.33	86.6
100933	21-Mar-10	12:30	12:30	Cloudy	Normal Operation	2.8403	2.9203	0.0800	1.2509	1.2527	1.2518	5018.80	5042.80	1440.00	1802.59	44.4
100943	24-Mar-10	14:08	14:08	Cloudy	Normal Operation	2.8080	2.9375	0.1295	1.2840	1.3034	1.2937	5090.80	5114.80	1440.00	1862.93	69.5
100935	25-Mar-10	14:14	14:14	Rainy	Normal Operation	2.8069	2.9970	0.1901	1.2635	1.2315	1.2475	5114.80	5138.80	1440.00	1796.40	105.8
100942	26-Mar-10	14:18	14:18	Fine	Normal Operation	2.7425	3.0189	0.2764	1.2716	1.2315	1.2516	5138.80	5162.80	1440.00	1802.23	153.4
100697	27-Mar-10	14:22	14:22	Fine	Normal Operation	2.8686	2.9578	0.0892	1.2716	1.3055	1.2886	5162.80	5186.80	1440.00	1855.51	48.1
100896	28-Mar-10	14:30	14:30	Fine	Normal Operation	2.8441	2.9413	0.0972	1.2655	1.2673	1.2664	5186.80	5210.80	1440.00	1823.62	53.3
100920	29-Mar-10	14:35	14:35	Fine	Normal Operation	2.8380	3.0222	0.1842	1.2673	1.2662	1.2668	5210.80	5234.80	1440.00	1824.12	101.0
100917	30-Mar-10	14:39	14:39	Cloudy	Normal Operation	2.8130	2.8855	0.0725	1.2662	1.2549	1.2606	5234.80	5258.80	1440.00	1815.19	39.9
100689	31-Mar-10	14:44	14:44	Cloudy	Normal Operation	2.8380	2.9197	0.0817	1.2549	1.2112	1.2331	5258.80	5282.80	1440.00	1775.59	46.0
100770	01-Apr-10	14:50	14:50	Cloudy	Normal Operation	2.7835	2.9729	0.1894	1.2112	1.2170	1.2141	5282.80	5306.80	1440.00	1748.30	108.3
100903	02-Apr-10	14:54	14:54	Cloudy	Normal Operation	2.7880	2.8631	0.0751	1.2568	1.2293	1.2431	5306.80	5330.80	1440.00	1789.99	42.0
100769	03-Apr-10	15:00	15:00	Cloudy	Normal Operation	2.8226	2.9172	0.0946	1.2693	1.2228	1.2461	5330.80	5354.80	1440.00	1794.31	52.7
															Average	76.0
															Max	153.4

Min	39.9
Action Level	179.4
Limit Level	260.0

Details of 24-hour TSP Level monitoring at AM 3

Filter No.	Date	Time periods		Weather condition	Site condition	Filter Weight (g)		TSP weight (g)	Flow Rate (m³/min)		Average Flow Rate (m³/min)	Elapse Time		Sampling Time (mins.)	Total vol. (m³)	24-hour TSP Level (ug/m³)
		Start	Finish			Initial	Final		Initial	Final		Start	Finish			
120076	29-Jun-10	9:00	9:00	Cloudy	Normal Operation	2.7680	2.8005	0.0325	1.2639	1.2331	1.2485	9644.37	9668.37	1440.00	1797.84	18.1
120077	30-Jun-10	13:00	13:00	Fine	Normal Operation	2.7710	2.8263	0.0553	1.2871	1.2843	1.2857	9668.37	9692.37	1440.00	1851.41	29.9
120078	01-Jul-10	13:15	13:15	Fine	Normal Operation	2.7776	2.8386	0.0610	1.2304	1.2304	1.2304	9692.37	9716.37	1440.00	1771.78	34.4
120079	02-Jul-10	13:20	13:20	Fine	Normal Operation	2.7775	2.8274	0.0499	1.2843	1.2843	1.2843	9716.37	9740.37	1440.00	1849.39	27.0
120080	03-Jul-10	14:22	14:22	Fine	Normal Operation	2.7750	2.8311	0.0561	1.2304	1.2304	1.2304	9740.37	9764.37	1440.00	1771.78	31.7
120081	04-Jul-10	14:28	14:28	Fine	Normal Operation	2.7760	2.8480	0.0720	1.2573	1.2566	1.2570	9764.37	9788.37	1440.00	1810.01	39.8
120083	05-Jul-10	14:34	14:34	Fine	Normal Operation	2.7960	2.8477	0.0517	1.2296	1.2304	1.2300	9788.37	9812.37	1440.00	1771.20	29.2
120084	06-Jul-10	14:40	14:40	Fine	Normal Operation	2.7876	2.8506	0.0630	1.2843	1.3113	1.2978	9812.37	9836.37	1440.00	1868.83	33.7
120085	07-Jul-10	14:45	14:45	Fine	Normal Operation	2.7850	2.8653	0.0803	1.2304	1.2285	1.2295	9836.37	9860.37	1440.00	1770.41	45.4
120086	08-Jul-10	14:49	14:49	Fine	Normal Operation	2.7850	2.8493	0.0643	1.2555	1.2573	1.2564	9860.37	9884.37	1440.00	1809.22	35.5
120087	09-Jul-10	14:53	14:53	Fine	Normal Operation	2.7836	2.8819	0.0983	1.2843	1.2851	1.2847	9884.37	9908.37	1440.00	1849.97	53.1
120088	10-Jul-10	14:59	14:59	Fine	Normal Operation	2.7868	2.9272	0.1404	1.2851	1.2851	1.2851	9908.37	9932.37	1440.00	1850.54	75.9
120127	11-Jul-10	15:00	15:00	Fine	Normal Operation	2.7551	2.8321	0.0770	1.2312	1.2304	1.2308	9932.37	9956.37	1440.00	1772.35	43.4
120128	12-Jul-10	15:05	15:05	Fine	Normal Operation	2.7571	2.8188	0.0617	1.2304	1.2312	1.2308	9956.37	9980.37	1440.00	1772.35	34.8
															Average	38.0
															Max	75.9

Min	18.1
Action Level	154.7
Limit Level	260.0

Details of 24-hour TSP Level monitoring at AM 8

Filter No.	Date	Time periods		Weather condition	Site condition	Filter Weight (g)		TSP weight (g)	Flow Rate (m³/min)		Average Flow Rate (m³/min)	Elapse Time		Sampling Time (mins.)	Total vol. (m³)	24-hour TSP Level (ug/m³)
		Start	Finish			Initial	Final		Initial	Final		Start	Finish			
120215	31-Jul-10	11:40	11:40	Fine	Normal Operation	2.7713	2.8540	0.0827	1.2223	1.2550	1.2387	5524.48	5548.48	1440.00	1783.66	46.4
120216	01-Aug-10	11:43	11:43	Fine	Normal Operation	2.7646	2.7896	0.0250	1.2550	1.2564	1.2557	5548.48	5572.48	1440.00	1808.21	13.8
120217	02-Aug-10	11:45	11:45	Fine	Normal Operation	2.7631	2.8031	0.0400	1.2246	1.2564	1.2405	5572.48	5596.48	1440.00	1786.32	22.4
120218	03-Aug-10	11:50	11:50	Fine	Normal Operation	2.7534	2.7893	0.0359	1.2246	1.2550	1.2398	5596.48	5620.48	1440.00	1785.31	20.1
120219	04-Aug-10	11:55	11:55	Fine	Normal Operation	2.7584	3.0069	0.2485	1.2232	1.2583	1.2408	5620.48	5644.48	1440.00	1786.68	139.1
120220	05-Aug-10	12:00	12:00	Fine	Normal Operation	2.7530	2.8540	0.1010	1.2264	1.2286	1.2275	5644.48	5668.48	1440.00	1767.60	57.1
120221	06-Aug-10	12:02	12:02	Fine	Normal Operation	2.7446	2.8770	0.1324	1.2606	1.2902	1.2754	5668.48	5692.48	1440.00	1836.58	72.1
120222	07-Aug-10	12:15	12:15	Fine	Normal Operation	2.7467	2.8103	0.0636	1.2583	1.2892	1.2738	5692.48	5716.48	1440.00	1834.20	34.7
120223	08-Aug-10	12:18	12:18	Fine	Normal Operation	2.7423	2.8327	0.0904	1.2574	1.2550	1.2562	5716.48	5740.48	1440.00	1808.93	50.0
120224	09-Aug-10	12:20	12:20	Rainy	Normal Operation	2.7473	2.8068	0.0595	1.2550	1.2868	1.2709	5740.48	5764.48	1440.00	1830.10	32.5
120225	10-Aug-10	12:22	12:22	Fine	Normal Operation	2.7644	2.8118	0.0474	1.2232	1.2615	1.2424	5764.48	5788.48	1440.00	1788.98	26.5
120226	11-Aug-10	12:24	12:24	Fine	Normal Operation	2.7528	2.8139	0.0611	1.2615	1.2921	1.2768	5788.48	5812.48	1440.00	1838.59	33.2
120227	12-Aug-10	12:25	12:25	Cloudy	Normal Operation	2.7589	2.8185	0.0596	1.2283	1.2569	1.2426	5812.48	5836.48	1440.00	1789.34	33.3
120228	13-Aug-10	12:30	12:30	Cloudy	Normal Operation	2.7654	2.8110	0.0456	1.2569	1.2593	1.2581	5836.48	5860.48	1440.00	1811.66	25.2
Average																43.3
Max																139.1

Min	13.8
Action Level	158.2
Limit Level	260.0

Appendix B

Baseline noise monitoring data

Baseline Noise Monitoring Result

Location: CN 3 Yau Tam Mei Village House

Baseline monitoring period: 3/8/2010 to 21/8/2010

Parameter: Leq

Time Slot Averaged Baselines

1) Weekdays Daytime Noise Level, dB(A)

Time slot	Leq, 30 min	L10	L90
07:00-07:30	53.9	57.0	50.1
07:30-08:00	54.4	58.2	49.1
08:00-08:30	52.2	56.1	47.8
08:30-09:00	53.7	58.6	47.0
09:00-09:30	55.6	61.5	46.6
09:30-10:00	52.6	58.1	45.3
10:00-10:30	54.4	60.4	44.9
10:30-11:00	55.1	61.5	44.6
11:00-11:30	52.8	58.9	43.7
11:30-12:00	56.0	61.7	47.6
12:00-12:30	52.7	58.7	42.4
12:30-13:00	52.3	58.5	41.5
13:00-13:30	56.1	61.5	43.9
13:30-14:00	63.3	66.1	58.8
14:00-14:30	54.7	60.1	47.4
14:30-15:00	54.8	62.0	42.9
15:00-15:30	58.2	62.8	42.7
15:30-16:00	54.1	61.1	42.6
16:00-16:30	54.1	60.7	42.7
16:30-17:00	51.9	57.0	42.0
17:00-17:30	54.3	60.5	41.9
17:30-18:00	53.2	59.2	42.1
18:00-18:30	56.1	62.6	43.9
18:30-19:00	59.2	64.8	51.1
Average	55.8	61.0	48.4
Max	63.3	66.1	58.8
Min	51.9	56.1	41.5

Noise Control Period Averaged Baselines

2) Weekdays Evening Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
19:00-19:15	62.0	65.1	58.3
	60.9	61.7	59.0
	60.2	60.9	59.5
19:15-19:30	60.2	60.9	59.6
	60.4	61.2	59.6
	61.5	62.4	60.5
19:30-19:45	61.9	62.5	61.1
	59.8	60.6	58.8
	58.8	59.4	58.1
19:45-20:00	58.8	59.4	58.1
	58.1	59.2	57.0
	57.3	58.4	56.1
20:00-20:15	57.0	57.9	55.8
	58.0	59.3	56.5
	57.8	58.5	56.3
20:15-20:30	54.2	55.5	52.8
	57.1	58.0	55.7
	54.4	55.5	52.9
20:30-20:45	54.0	55.4	52.3
	51.6	53.2	50.4
	53.4	55.0	50.4
20:45-21:00	54.7	55.8	53.3
	55.3	56.6	54.1
	56.2	58.2	53.6
21:00-21:15	55.0	55.9	53.8
	55.1	55.8	54.2
	54.8	55.8	53.7
21:15-21:30	55.0	55.8	54.2
	53.4	54.5	52.3
	54.4	55.3	53.3
21:30-21:45	55.0	56.6	53.3

Time Slot	Leq, 5min	L10	L90
	54.9	56.4	53.5
	53.8	55.9	51.3
21:45-22:00	53.5	54.4	52.1
	56.3	59.9	51.8
	56.5	60.7	51.7
22:00-22:15	56.9	60.8	52.9
	56.8	60.1	53.6
	56.0	58.4	53.1
22:15-22:30	56.3	57.8	54.0
	54.8	55.9	53.4
	53.9	55.9	51.8
22:30-22:45	54.9	55.7	54.0
	55.1	56.1	53.9
	54.2	55.2	53.1
22:45-23:00	54.6	55.7	53.5
	56.0	56.8	55.2
	55.8	57.0	54.6
Average	57.2	58.6	55.7
Max	62.0	65.1	61.1
Min	51.6	53.2	50.4

3) General Holidays (including Sundays) (0700-2300) Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
0700-07:15	52.7	53.6	51.6
	53.2	54.3	51.8
	52.7	53.4	51.5
07:15-07:30	51.5	52.2	50.6
	53.6	55.1	51.1
	51.5	52.6	50.1
07:30-07:45	53.0	55.5	50.0
	51.8	52.5	49.9
	52.5	54.2	48.9
07:45-08:00	58.2	60.3	48.2
	62.6	64.1	48.8

Time Slot	Leq, 5min	L10	L90
	50.4	52.3	48.5
08:00-08:15	50.3	51.4	48.0
	48.2	50.2	45.3
	48.8	51.0	46.3
08:15-08:30	51.1	53.3	46.8
	54.0	60.0	46.5
	49.7	50.9	46.2
08:30-08:45	49.1	50.6	46.3
	49.0	50.0	47.3
	47.8	49.1	45.8
08:45-09:00	59.1	66.9	46.4
	48.8	50.1	46.0
	48.7	50.1	46.4
09:00-09:15	53.1	60.2	45.2
	47.8	49.2	45.8
	49.0	51.2	45.8
09:15-09:30	49.7	53.9	44.5
	53.3	60.4	45.4
	48.3	50.5	45.2
09:30-09:45	48.5	50.9	45.0
	52.7	59.4	44.7
	46.9	48.7	44.6
09:45-10:00	59.8	66.7	44.9
	53.8	56.2	45.4
	49.0	50.2	47.4
10:00-10:15	48.4	49.6	46.9
	45.9	47.2	43.9
	47.4	50.5	43.7
10:15-10:30	59.4	66.7	48.1
	57.2	59.0	52.0
	62.1	67.4	56.0
10:30-10:45	65.6	67.1	63.1
	65.8	69.7	60.9
	62.9	65.5	56.7
10:45-11:00	51.5	53.9	46.9
	47.4	49.7	44.7

Time Slot	Leq, 5min	L10	L90
	47.0	49.9	43.5
11:00-11:15	56.7	63.7	42.6
	47.9	50.5	42.0
	46.6	49.1	42.6
11:15-11:30	45.4	46.9	42.3
	58.2	65.8	41.4
	46.2	49.3	41.5
11:30-11:45	45.7	48.4	42.1
	46.1	48.8	42.0
	45.9	48.7	41.6
11:45-12:00	44.6	47.5	40.7
	45.4	48.4	41.3
	45.7	47.0	42.2
12:00-12:15	45.1	47.7	40.6
	47.5	48.7	41.6
	54.6	61.7	41.6
12:15-12:30	46.3	49.8	42.0
	61.3	69.1	41.5
	47.8	50.3	44.1
12:30-12:45	48.3	50.2	42.5
	49.5	52.0	43.9
	45.0	46.8	41.4
12:45-13:00	46.6	49.6	40.9
	43.9	45.4	41.2
	45.3	48.8	41.4
13:00-13:15	54.9	62.4	40.0
	46.2	48.1	40.2
	53.2	58.2	41.4
13:15-13:30	51.1	55.2	41.6
	56.1	62.7	41.5
	55.2	62.3	41.6
13:30-13:45	57.9	65.9	41.2
	55.3	62.3	43.6
	52.8	56.2	40.4
13:45-14:00	46.5	49.4	43.0
	48.1	53.7	41.5

Time Slot	Leq, 5min	L10	L90
	45.7	47.9	40.2
14:00-14:15	61.7	68.3	41.6
	47.7	50.7	42.4
	45.4	47.7	41.9
14:15-14:30	56.3	63.2	41.6
	46.7	49.2	42.5
	54.9	62.5	40.9
14:30-14:45	44.3	46.7	41.2
	57.5	63.4	42.4
	47.4	50.7	42.6
14:45-15:00	49.2	53.3	43.4
	48.0	51.1	42.8
	47.8	50.3	43.4
15:00-15:15	55.2	62.0	43.3
	59.3	66.6	42.7
	45.8	48.5	39.9
15:15-15:30	48.0	50.2	39.6
	57.7	65.7	40.8
	43.5	46.2	40.3
15:30-15:45	55.6	62.6	40.6
	57.9	65.7	41.0
	48.3	51.0	42.4
15:45-16:00	46.3	49.1	42.2
	46.4	48.6	41.2
	56.9	63.3	41.5
16:00-16:15	40.8	42.7	38.5
	45.8	49.7	39.9
	59.0	65.7	41.3
16:15-16:30	45.1	46.8	42.1
	46.3	49.0	42.6
	48.1	50.0	43.9
16:30-16:45	56.9	62.1	43.7
	47.6	50.1	44.4
	57.3	64.9	43.6
16:45-17:00	48.0	49.8	45.6
	54.8	58.7	38.4

Time Slot	Leq, 5min	L10	L90
	44.1	46.2	41.3
17:00-17:15	45.1	46.6	42.2
	46.4	48.0	43.3
	47.4	48.6	41.4
17:15-17:30	56.3	62.8	43.6
	47.5	48.6	37.4
	40.8	42.7	37.3
17:30-17:45	50.2	54.7	40.6
	46.5	49.7	41.5
	58.6	65.6	41.0
17:45-18:00	43.0	45.4	40.3
	45.9	48.2	40.6
	45.8	46.6	40.3
18:00-18:15	52.5	59.7	38.1
	52.1	57.6	40.5
	44.8	47.4	40.8
18:15-18:30	55.7	62.9	41.5
	45.9	47.8	42.6
	56.1	58.4	40.5
18:30-18:45	50.4	56.0	40.6
	55.4	60.0	40.2
	47.0	51.2	42.4
18:45-19:00	60.4	67.1	44.0
	55.5	60.7	43.7
	52.7	55.8	43.9
19:00-19:15	58.7	64.9	43.2
	61.0	63.1	43.4
	41.3	42.4	39.4
19:15-19:30	46.9	49.4	44.4
	47.6	49.5	44.8
	51.4	53.7	47.8
19:30-19:45	48.7	50.0	47.4
	49.3	51.4	46.4
	47.9	48.8	46.8
19:45-20:00	51.6	51.8	47.1
	47.7	48.4	46.4

Time Slot	Leq, 5min	L10	L90
	48.4	49.7	47.1
20:00-20:15	48.6	49.3	46.0
	49.2	50.4	45.2
	52.5	55.0	47.5
20:15-20:30	48.5	50.6	46.7
	47.8	48.9	46.7
	48.3	49.2	47.3
20:30-20:45	48.4	50.2	46.7
	47.4	48.3	45.2
	46.1	46.7	45.0
20:45-21:00	46.8	47.5	45.7
	47.0	48.3	45.5
	47.5	48.0	46.3
21:00-21:15	47.7	48.7	46.3
	48.3	49.1	46.6
	47.0	47.4	44.6
21:15-21:30	48.3	50.5	46.1
	48.9	49.9	46.5
	48.7	50.7	46.4
21:30-21:45	48.3	49.2	47.0
	48.6	49.5	47.3
	48.5	49.6	47.4
21:45-22:00	49.2	50.3	47.8
	48.6	49.3	47.8
	49.8	50.6	49.0
22:00-22:15	49.8	50.8	48.3
	49.2	51.6	45.9
	50.6	53.6	46.3
22:15-22:30	51.0	51.8	50.0
	53.3	54.1	52.5
	50.6	51.6	49.7
22:30-22:45	52.5	53.5	51.4
	51.9	53.7	49.9
	51.3	52.2	50.2
22:45-23:00	51.0	51.9	50.1
	51.1	51.7	50.2

Time Slot	Leq, 5min	L10	L90
	50.9	51.6	50.0
Average	54.0	59.0	47.6
Max	65.8	69.7	63.1
Min	40.8	42.4	37.3

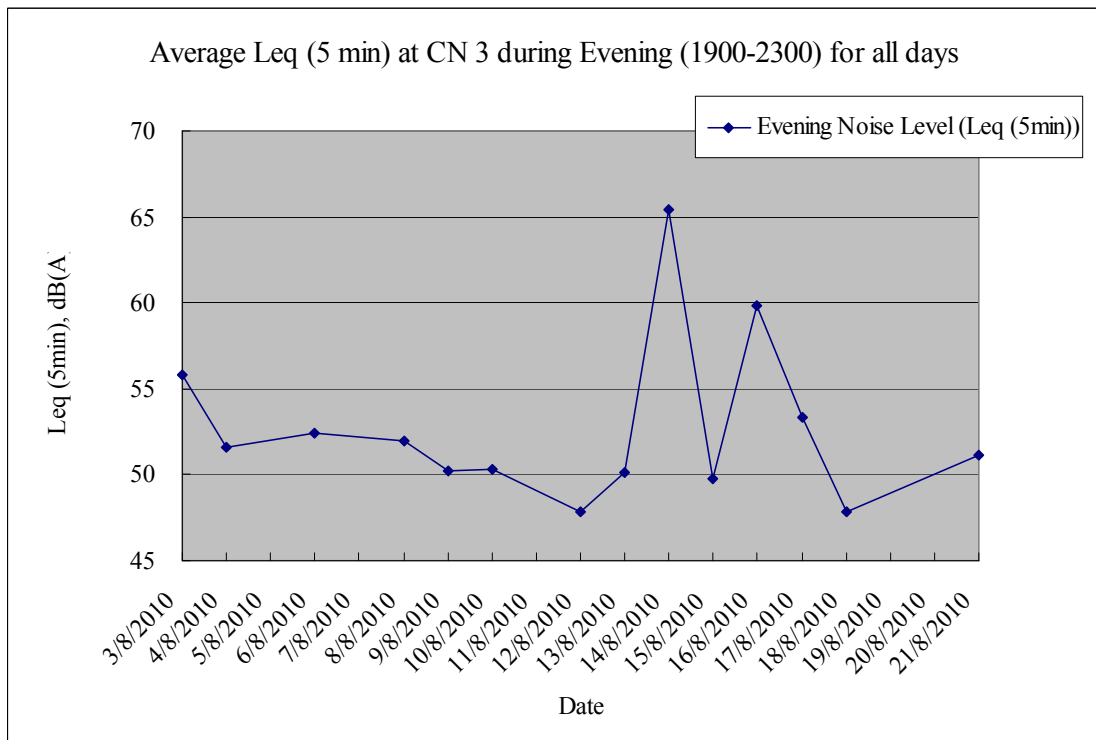
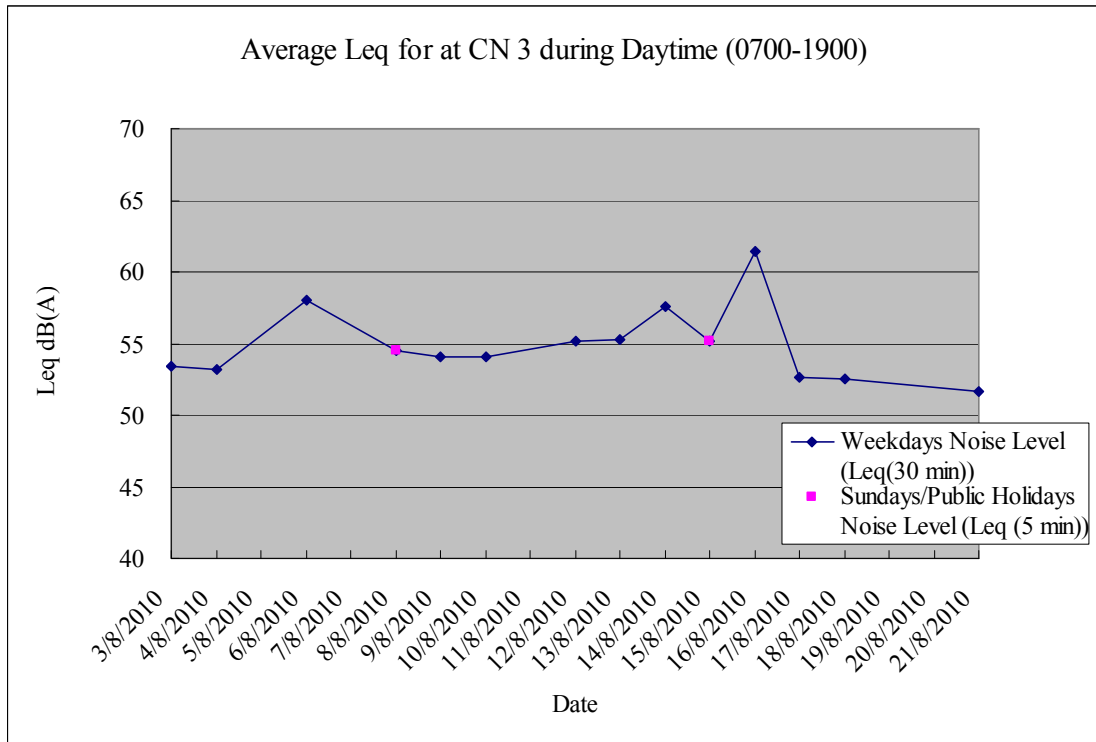
4) Night-time (for all days) Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
23:00-23:15	54.4	55.4	52.8
	53.0	54.7	51.6
	54.5	55.5	53.2
23:15-23:30	54.0	55.2	52.4
	53.8	55.0	52.3
	52.9	54.1	51.7
23:30-23:45	52.7	55.4	50.0
	51.9	53.2	50.2
	51.6	53.0	49.6
23:45-00:00	52.3	54.5	50.0
	52.6	53.9	49.8
	51.7	52.9	50.3
00:00-00:15	52.0	55.4	50.4
	52.9	55.1	50.0
	54.3	56.5	50.3
00:15-00:30	52.7	55.7	49.9
	53.0	55.7	49.4
	54.1	55.7	52.2
00:30-00:45	54.2	55.2	51.9
	54.9	56.8	52.3
	52.6	54.3	50.5
00:45:01:00	54.0	55.7	51.7
	53.1	55.0	51.4
	52.2	53.8	50.8
01:00-01:15	51.8	53.0	50.7
	52.0	53.4	50.6
	52.0	53.5	50.3
01:15-01:30	52.2	53.6	50.4

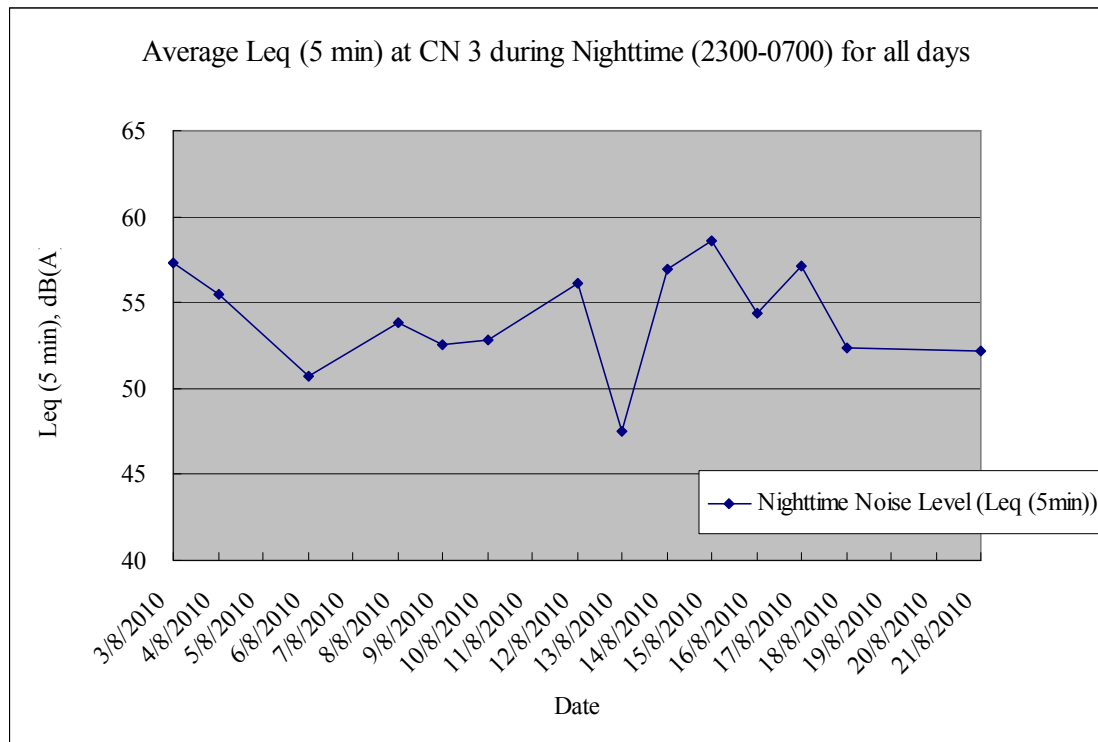
Time Slot	Leq, 5min	L10	L90
	52.7	54.0	50.8
	51.9	53.7	49.2
01:30-01:45	53.7	56.0	49.2
	50.4	51.4	48.9
	51.2	52.8	49.0
01:45-02:00	51.5	52.6	50.1
	51.8	53.3	50.1
	53.1	55.5	51.0
02:00-02:15	52.6	53.8	51.0
	54.0	55.5	52.3
	55.3	57.7	53.1
02:15-02:30	57.1	60.0	53.3
	55.3	56.4	54.1
	55.4	56.3	54.4
02:30-02:45	55.9	56.8	54.9
	56.2	57.1	55.3
	56.2	57.1	55.2
02:45-03:00	56.6	57.7	55.5
	57.7	58.6	56.6
	58.0	58.9	57.1
03:00-03:15	58.0	58.9	57.2
	58.5	60.2	57.2
	57.7	58.9	56.3
03:15-03:30	57.1	58.0	56.1
	57.3	58.9	56.0
	56.9	57.7	56.0
03:30-03:45	57.5	58.3	56.6
	57.2	58.7	56.1
	57.3	58.2	56.1
03:45-04:00	57.8	58.8	56.7
	57.6	58.6	56.5
	57.3	58.1	56.2
04:00-04:15	57.2	58.9	56.0
	57.1	57.7	56.1
	57.7	58.7	56.7
04:15-04:30	58.0	59.0	57.0

Time Slot	Leq, 5min	L10	L90
	58.0	58.7	57.0
	58.0	58.8	57.0
04:30-04:45	57.7	58.9	56.2
	56.8	57.9	55.6
	56.8	57.7	55.4
04:45-05:00	56.4	57.3	55.4
	56.6	57.8	55.3
	54.9	56.2	53.4
05:00-05:15	55.4	57.2	53.7
	54.9	56.5	53.2
	55.9	57.3	54.4
05:15-05:30	56.1	57.6	54.4
	55.8	57.2	53.2
	54.1	55.5	52.1
05:30-05:45	52.3	53.6	50.7
	54.4	55.7	52.9
	54.2	55.2	52.7
05:45-06:00	54.6	55.4	53.5
	56.7	58.8	53.1
	55.9	58.0	53.8
06:00-06:15	55.5	57.5	53.1
	56.1	58.2	53.7
	54.7	55.6	53.3
06:15-06:30	57.0	59.6	53.3
	58.1	61.8	52.7
	56.4	59.4	52.7
06:30-06:45	54.5	55.3	52.2
	55.3	56.5	52.2
	54.3	55.7	52.3
06:45-07:00	53.7	55.0	51.5
	53.4	54.6	51.4
	54.8	56.4	51.3
Average	55.4	56.9	53.7
Max	58.5	61.8	57.2
Min	50.4	51.4	48.9

Log average was used.



Note: Monitoring on 5/8, 7/8, 11/8, 19/8 and 20/8 was interrupted due to rainfall



Note: Monitoring on 5/8, 7/8, 11/8, 19/8 and 20/8 was interrupted due to rainfall

Location: CN 4 Yau Tam Mei Village House

Baseline monitoring period: 6/8/2010 to 25/8/2010

Parameter: Leq

Time Slot Averaged Baselines

1) Weekdays Daytime Noise Level, dB(A)

Time slot	Leq, 30 min	L10	L90
07:00-07:30	54.1	56.1	51.7
07:30-08:00	52.8	55.1	50.9
08:00-08:30	53.0	56.6	50.1
08:30-09:00	53.2	56.8	50.3
09:00-09:30	54.2	58.4	50.6
09:30-10:00	53.4	57.1	50.5
10:00-10:30	53.0	56.0	50.6
10:30-11:00	53.3	57.1	50.5
11:00-11:30	54.0	58.4	50.2
11:30-12:00	53.0	56.0	50.4
12:00-12:30	52.4	55.5	49.8
12:30-13:00	52.5	55.6	49.4
13:00-13:30	52.2	56.1	48.9
13:30-14:00	52.6	57.4	48.7
14:00-14:30	55.3	57.2	52.2
14:30-15:00	52.7	56.9	49.5
15:00-15:30	53.3	57.6	49.4
15:30-16:00	52.5	55.9	49.6
16:00-16:30	53.3	57.4	49.5
16:30-17:00	52.4	55.8	49.1
17:00-17:30	53.4	57.0	49.0
17:30-18:00	52.4	57.2	48.3
18:00-18:30	52.3	57.0	48.4
18:30-19:00	54.4	59.9	49.1
Average	53.2	57.0	50.0
Max	55.3	59.9	52.2
Min	52.2	55.1	48.3

Noise Control Period Averaged Baselines

2) Weekdays Evening Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
19:00-19:15	52.7	56.8	49.5
	52.2	54.0	49.9
	52.2	53.6	50.8
19:15-19:30	57.9	59.7	55.8
	59.8	61.2	58.2
	63.1	64.3	61.3
19:30-19:45	64.1	64.8	63.4
	64.7	65.5	63.8
	64.7	65.5	63.7
19:45-20:00	64.6	65.3	63.7
	63.3	64.9	59.2
	62.0	63.1	60.8
20:00-20:15	60.7	62.6	58.5
	60.0	61.2	58.4
	59.9	61.1	58.4
20:15-20:30	58.7	60.4	55.1
	59.5	61.2	57.8
	59.3	60.2	57.9
20:30-20:45	60.1	61.1	58.9
	58.9	60.7	54.8
	54.4	56.1	52.4
20:45-21:00	53.7	54.9	52.3
	55.2	59.3	51.2
	61.1	62.1	59.9
21:00-21:15	61.6	62.2	61.0
	63.1	63.9	61.8
	63.8	64.7	63.0
21:15-21:30	63.7	64.4	63.0
	63.5	64.1	62.8
	63.6	64.3	62.9
21:30-21:45	63.7	64.3	63.0
	63.6	64.2	63.0
	63.0	64.0	62.2

Time Slot	Leq, 5min	L10	L90
21:45-22:00	63.1	63.6	62.5
	62.6	63.3	62.0
	62.6	63.1	62.0
22:00-22:15	62.7	63.2	62.1
	62.8	63.4	62.1
	62.1	63.3	57.9
22:15-22:30	62.1	62.9	61.3
	62.1	62.8	61.4
	62.2	62.8	61.7
22:30-22:45	61.8	62.7	60.7
	61.1	62.1	59.9
	55.9	61.5	50.9
22:45-23:00	52.1	53.3	50.8
	51.8	53.1	50.3
	52.0	53.3	50.5
Average	61.5	62.5	60.4
Max	64.7	65.5	63.8
Min	51.8	53.1	49.5

3) General Holidays (including Sundays) (0700-2300) Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
0700-07:15	54.8	56.1	52.7
	54.3	55.4	52.0
	52.5	53.5	51.4
07:15-07:30	53.3	54.7	51.6
	52.8	53.8	51.3
	52.6	53.4	51.3
07:30-07:45	52.4	53.1	51.1
	54.1	56.0	51.3
	51.6	52.4	50.4
07:45-08:00	51.8	53.9	50.2
	52.2	52.8	50.2
	50.3	51.2	49.3
08:00-08:15	53.3	55.6	49.8

Time Slot	Leq, 5min	L10	L90
	51.3	52.1	49.8
	51.0	52.4	49.4
08:15-08:30	51.4	52.2	49.0
	50.2	51.7	48.6
	50.9	52.0	48.7
08:30-08:45	50.9	53.4	48.5
	51.0	53.6	48.7
	53.9	56.8	49.0
08:45-09:00	51.7	53.6	48.8
	50.3	51.3	48.2
	54.1	60.2	47.7
09:00-09:15	50.1	51.4	48.1
	50.9	53.5	48.3
	51.6	53.1	48.6
09:15-09:30	56.6	62.2	48.9
	55.1	58.7	49.1
	56.3	60.3	49.4
09:30-09:45	55.9	59.7	49.3
	55.9	61.0	49.2
	51.4	53.9	48.2
09:45-10:00	53.8	59.7	48.6
	50.6	53.9	48.0
	50.7	52.9	48.0
10:00-10:15	53.4	56.3	49.4
	51.3	53.9	48.4
	50.4	53.2	48.0
10:15-10:30	51.8	53.6	49.5
	50.0	51.5	46.4
	50.8	52.8	47.2
10:30-10:45	51.9	54.9	47.1
	49.4	50.9	46.9
	47.8	49.0	46.3
10:45-11:00	50.7	54.9	46.0
	49.4	51.5	47.1
	48.6	50.1	46.9
11:00-11:15	51.6	53.6	46.9

Time Slot	Leq, 5min	L10	L90
	49.9	53.2	47.1
	50.0	51.6	47.1
11:15-11:30	51.1	54.5	47.0
	50.1	53.0	47.0
	50.4	53.0	47.2
11:30-11:45	48.5	49.7	47.1
	48.5	49.5	47.2
	48.7	49.8	47.2
11:45-12:00	48.4	50.0	46.7
	50.5	53.7	47.5
	49.5	50.9	46.7
12:00-12:15	51.4	52.2	48.2
	49.7	51.2	47.4
	51.8	55.6	47.1
12:15-12:30	50.2	51.8	48.0
	48.3	49.7	46.5
	50.9	53.8	47.4
12:30-12:45	51.2	52.9	47.5
	50.1	50.8	47.8
	48.9	50.3	47.0
12:45-13:00	48.2	49.5	46.7
	45.8	47.2	43.9
	45.7	47.1	44.2
13:00-13:15	51.3	58.9	45.8
	48.5	50.6	46.5
	49.2	53.3	46.0
13:15-13:30	49.1	50.5	46.2
	52.2	59.2	45.7
	49.7	53.0	46.4
13:30-13:45	56.1	63.0	46.1
	48.9	51.6	46.0
	56.6	63.3	45.9
13:45-14:00	48.7	51.6	46.5
	47.8	49.0	46.5
	52.8	59.7	46.2
14:00-14:15	55.1	62.7	46.3

Time Slot	Leq, 5min	L10	L90
	50.5	53.7	46.2
	54.0	59.9	46.6
14:15-14:30	48.9	50.0	46.8
	53.3	59.7	46.8
	49.7	51.8	47.1
14:30-14:45	48.7	50.1	46.9
	52.8	59.1	46.7
	48.1	49.4	46.6
14:45-15:00	53.1	59.6	46.6
	52.9	59.6	46.1
	47.7	49.0	46.2
15:00-15:15	53.8	60.2	46.8
	52.8	59.2	46.3
	48.4	49.8	46.5
15:15-15:30	50.6	52.3	46.0
	48.1	49.7	46.2
	48.7	50.1	46.7
15:30-15:45	53.0	59.0	46.3
	55.1	61.1	46.3
	49.1	51.5	46.4
15:45-16:00	48.7	50.1	46.3
	47.5	48.6	46.2
	57.8	64.8	46.5
16:00-16:15	49.0	50.0	47.6
	48.3	50.1	46.2
	48.4	50.8	46.0
16:15-16:30	48.7	52.0	45.9
	47.3	48.6	46.0
	53.3	59.6	46.1
16:30-16:45	47.9	49.6	46.3
	47.4	48.8	46.1
	50.9	55.0	46.2
16:45-17:00	51.8	54.5	45.9
	48.6	50.4	46.3
	49.6	53.8	45.3
17:00-17:15	46.5	47.5	44.8

Time Slot	Leq, 5min	L10	L90
	47.0	48.4	45.3
	52.8	59.2	44.9
17:15-17:30	48.0	50.8	44.9
	46.8	48.7	44.4
	45.9	47.6	44.1
17:30-17:45	48.4	53.6	43.6
	51.0	58.4	43.8
	45.2	46.9	43.2
17:45-18:00	46.5	48.2	44.4
	49.0	51.1	45.3
	52.9	58.9	44.5
18:00-18:15	49.5	53.5	45.3
	46.9	48.5	45.0
	48.1	49.6	44.9
18:15-18:30	53.4	59.7	45.2
	47.5	49.5	45.1
	55.8	62.7	45.0
18:30-18:45	52.0	58.7	45.5
	50.4	54.8	45.9
	54.6	60.3	45.6
18:45-19:00	49.3	54.5	43.3
	54.3	59.6	44.3
	48.9	50.4	45.0
19:00-19:15	49.7	51.7	44.7
	47.4	49.6	44.3
	46.3	47.5	44.3
19:15-19:30	47.7	50.4	44.7
	47.9	50.4	45.3
	48.8	51.2	46.1
19:30-19:45	49.7	51.7	47.8
	50.5	52.4	48.4
	50.9	52.5	49.2
19:45-20:00	51.0	52.4	49.6
	50.6	51.7	49.4
	51.6	53.0	50.2
20:00-20:15	50.3	51.5	48.9

Time Slot	Leq, 5min	L10	L90
	50.7	52.1	49.3
	50.4	51.6	49.1
20:15-20:30	50.3	51.7	48.8
	49.9	51.3	48.5
	49.7	51.0	48.3
20:30-20:45	49.5	50.8	48.2
	50.0	51.5	48.4
	50.1	52.0	48.4
20:45-21:00	50.0	51.9	47.9
	50.6	52.7	48.4
	49.9	51.3	48.2
21:00-21:15	50.6	52.3	48.2
	52.5	54.0	50.9
	53.4	54.8	51.5
21:15-21:30	50.1	51.5	48.5
	50.0	51.3	48.3
	49.8	51.0	48.4
21:30-21:45	50.2	51.3	48.8
	49.8	50.9	48.4
	50.2	51.3	48.8
21:45-22:00	50.7	51.8	49.1
	50.2	51.3	49.0
	50.2	51.4	48.6
22:00-22:15	50.0	51.3	48.2
	50.3	51.3	49.1
	50.9	52.0	49.4
22:15-22:30	51.2	52.1	50.2
	51.3	52.3	50.1
	51.3	52.4	50.0
22:30-22:45	51.0	52.3	49.3
	50.4	51.6	48.6
	51.7	54.2	49.2
22:45-23:00	49.0	50.4	47.5
	49.0	49.9	47.8
	49.1	50.1	48.0
Average	51.3	55.2	47.8

Time Slot	Leq, 5min	L10	L90
Max	57.8	64.8	52.7
Min	45.2	46.9	43.2

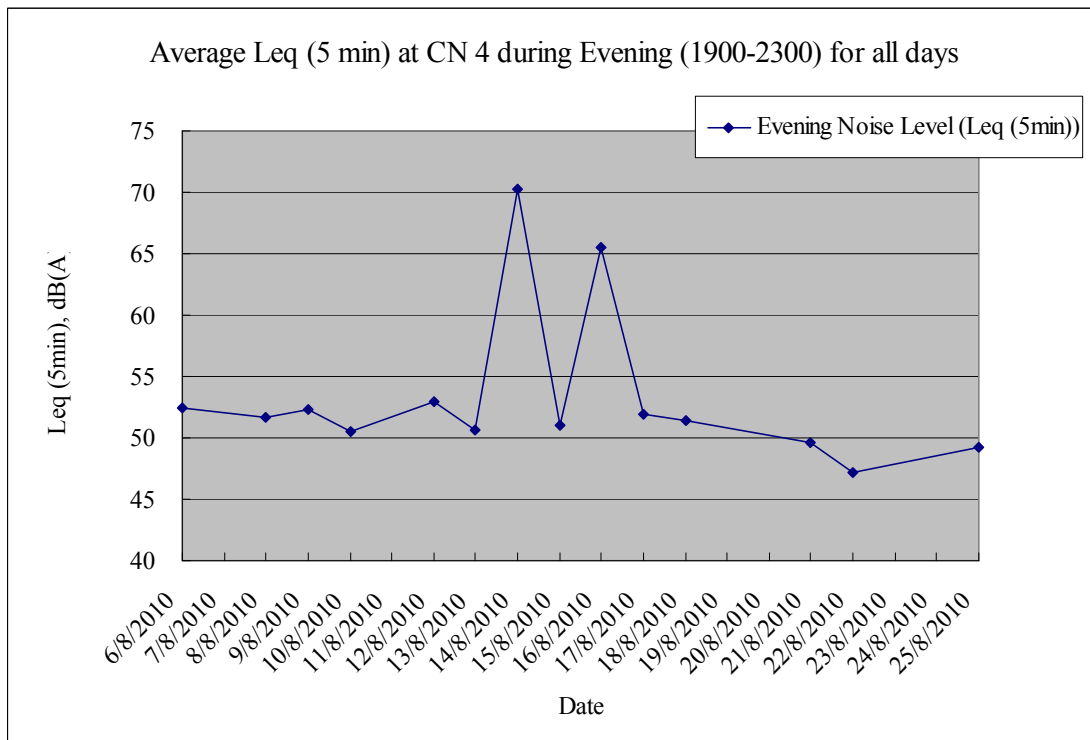
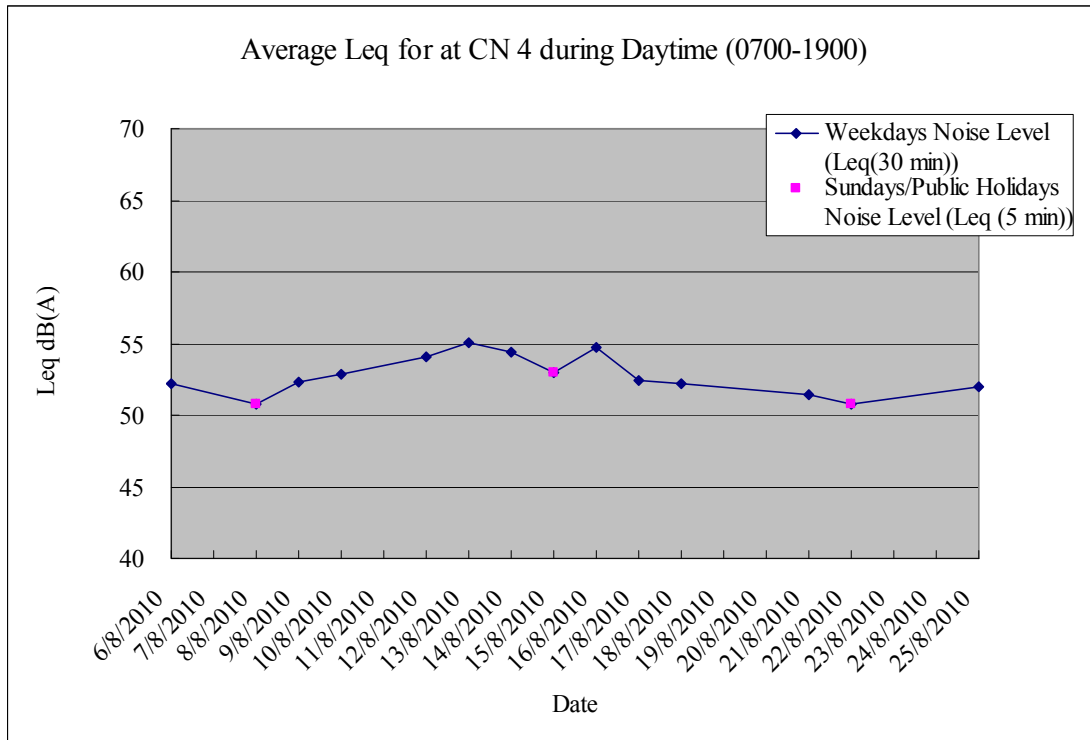
4) Night-time (for all days) Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
23:00-23:15	51.6	52.6	50.3
	52.2	53.4	50.9
	52.4	53.6	51.2
23:15-23:30	52.1	53.3	50.3
	52.0	53.1	50.7
	51.9	53.0	50.6
23:30-23:45	52.0	53.8	50.1
	51.4	52.7	49.6
	51.4	52.6	49.9
23:45-00:00	51.5	52.7	50.1
	51.5	52.5	50.3
	51.7	52.9	50.3
00:00-00:15	63.1	63.8	62.4
	63.1	63.8	62.3
	62.9	64.0	61.5
00:15-00:30	63.0	64.7	59.8
	63.8	64.6	62.8
	63.8	64.5	63.0
00:30-00:45	63.3	64.3	61.6
	64.1	65.3	62.0
	64.1	65.1	63.0
00:45:01:00	64.3	65.5	62.5
	65.2	67.0	62.7
	64.7	66.2	62.7
01:00-01:15	64.2	65.6	63.0
	64.9	65.9	63.3
	65.2	66.3	64.1
01:15-01:30	65.9	66.9	64.9
	66.6	67.5	65.5
	66.5	67.3	65.6

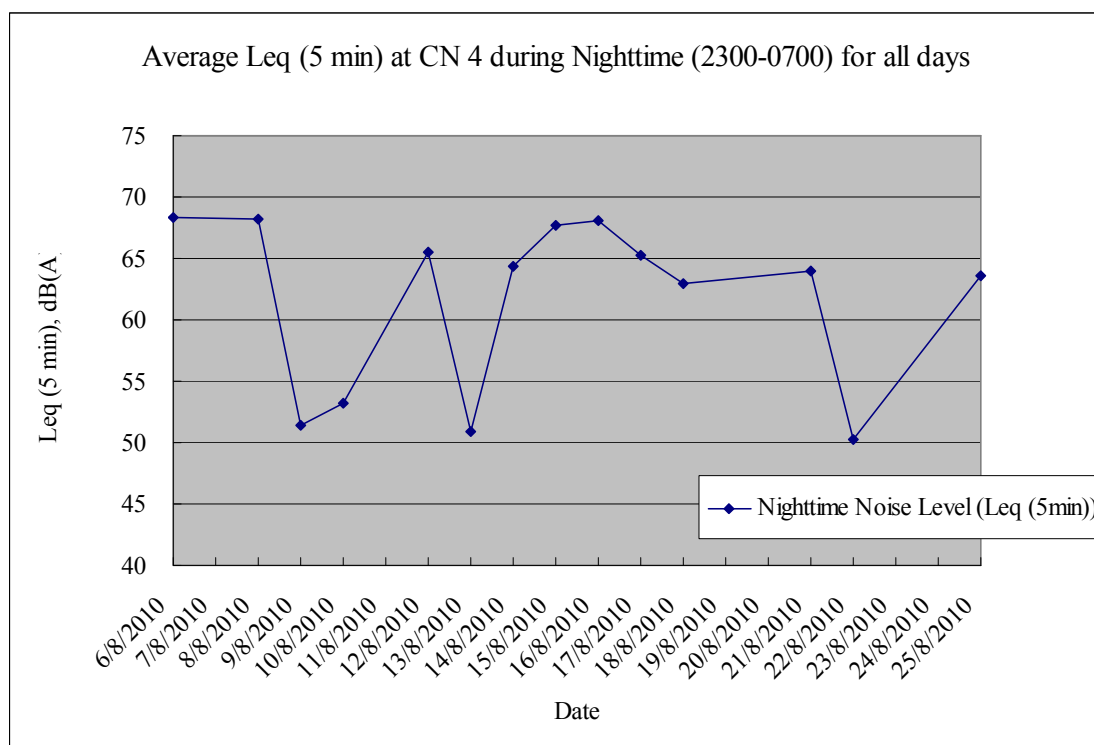
Time Slot	Leq, 5min	L10	L90
01:30-01:45	66.6	68.0	64.5
	66.3	67.2	65.3
	66.5	67.2	65.7
01:45-02:00	66.4	67.1	65.7
	66.6	67.5	65.3
	66.9	67.9	65.8
02:00-02:15	66.7	67.5	65.6
	66.6	67.4	65.6
	67.0	68.3	65.7
02:15-02:30	68.0	68.9	67.0
	68.7	69.4	67.9
	68.8	69.5	68.0
02:30-02:45	68.6	69.3	67.6
	68.6	69.3	67.9
	68.4	69.3	67.5
02:45-03:00	68.0	69.3	66.8
	68.4	69.0	67.7
	68.5	69.5	67.2
03:00-03:15	68.9	69.6	68.1
	68.9	69.7	68.0
	68.5	69.6	67.2
03:15-03:30	68.8	69.9	67.7
	69.7	70.6	68.4
	70.3	71.3	68.9
03:30-03:45	70.2	71.2	69.0
	69.6	70.4	68.6
	69.5	70.4	68.4
03:45-04:00	68.7	69.7	67.5
	67.5	69.1	65.5
	65.8	67.4	63.6
04:00-04:15	65.9	66.7	64.9
	65.6	66.6	64.5
	63.5	65.5	62.0
04:15-04:30	63.4	64.5	62.0
	63.6	64.6	61.8
	64.3	65.6	61.2

Time Slot	Leq, 5min	L10	L90
04:30-04:45	63.4	64.8	60.5
	62.5	63.6	60.7
	61.6	62.4	60.8
04:45-05:00	62.5	63.5	61.5
	62.4	63.8	60.0
	62.9	64.3	61.4
05:00-05:15	61.0	62.6	59.7
	60.6	61.4	59.9
	60.2	61.1	59.2
05:15-05:30	59.9	61.0	58.9
	60.0	61.0	58.5
	59.6	60.6	58.2
05:30-05:45	57.5	60.8	55.1
	55.8	56.6	54.4
	55.3	56.1	54.4
05:45-06:00	55.2	56.0	54.2
	55.6	57.1	54.4
	56.2	57.8	54.3
06:00-06:15	56.0	57.7	54.4
	55.7	56.8	54.3
	55.6	56.9	54.2
06:15-06:30	56.4	58.4	54.0
	56.1	57.5	53.9
	55.5	57.1	53.5
06:30-06:45	55.1	56.5	53.4
	55.6	57.0	53.5
	55.7	57.1	53.4
06:45-07:00	54.7	55.9	52.9
	54.2	54.9	52.7
	55.1	56.3	52.5
Average	64.9	65.9	63.6
Max	70.3	71.3	69.0
Min	51.4	52.5	49.6

Log average was used.



Note: Monitoring on 7/8, 11/8, 19/8 and 20/8, 23/8 and 24/8 was interrupted due to rainfall



Note: Monitoring on 7/8, 11/8, 19/8 and 20/8, 23/8 and 24/8 was interrupted due to rainfall

Location: CN 5 Yau Tam Mei Village House

Baseline monitoring period: 6/8/2010 to 25/8/2010

Parameter: Leq

Time Slot Averaged Baselines

1) Weekdays Daytime Noise Level, dB(A)

Time slot	Leq, 30 min	L10	L90
07:00-07:30	55.9	59.0	51.8
07:30-08:00	55.0	56.9	51.9
08:00-08:30	56.2	58.7	52.0
08:30-09:00	58.2	60.8	52.0
09:00-09:30	55.3	57.4	51.9
09:30-10:00	56.2	58.5	52.2
10:00-10:30	56.1	58.2	52.2
10:30-11:00	58.1	60.5	52.0
11:00-11:30	57.2	60.6	51.5
11:30-12:00	57.3	59.8	50.7
12:00-12:30	57.4	59.2	50.2
12:30-13:00	57.3	60.3	52.8
13:00-13:30	57.0	58.7	52.8
13:30-14:00	58.3	60.6	52.0
14:00-14:30	56.8	59.3	51.8
14:30-15:00	55.4	57.8	52.0
15:00-15:30	57.4	59.3	52.4
15:30-16:00	57.0	60.3	51.7
16:00-16:30	57.7	61.0	51.9
16:30-17:00	56.8	59.4	51.6
17:00-17:30	55.4	58.0	51.3
17:30-18:00	55.6	57.7	51.0
18:00-18:30	55.1	57.2	50.8
18:30-19:00	61.2	64.2	53.9
Average	57.1	59.6	51.9
Max	61.2	64.2	53.9
Min	55.0	56.9	50.2

Noise Control Period Averaged Baselines

2) Weekdays Evening Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
19:00-19:15	61.0	63.1	53.0
	60.9	65.6	52.2
	59.6	62.6	51.4
19:15-19:30	63.8	66.6	58.1
	62.3	64.9	57.2
	60.1	63.5	53.7
19:30-19:45	60.0	63.3	52.0
	58.3	61.3	51.1
	57.6	61.2	51.8
19:45-20:00	58.5	61.5	51.9
	59.6	63.6	52.4
	61.9	64.7	53.1
20:00-20:15	56.2	59.2	52.3
	59.2	63.3	53.6
	57.8	60.2	53.8
20:15-20:30	59.3	62.0	53.1
	59.3	63.4	53.8
	59.2	62.3	53.3
20:30-20:45	60.0	62.5	53.6
	59.5	62.9	54.1
	59.7	61.1	54.1
20:45-21:00	60.0	62.8	54.0
	57.8	61.0	53.4
	56.8	59.3	53.8
21:00-21:15	56.9	59.1	54.0
	56.4	58.9	53.4
	56.4	58.6	53.6
21:15-21:30	56.7	58.7	53.3
	58.0	60.5	53.3
	57.2	59.3	53.5
21:30-21:45	56.4	58.7	53.6
	56.9	59.2	53.9
	56.1	58.7	53.1

Time Slot	Leq, 5min	L10	L90
21:45-22:00	56.5	59.2	53.3
	56.5	59.2	53.4
	56.6	59.2	53.3
22:00-22:15	56.0	58.8	53.1
	55.7	58.3	52.8
	56.1	58.8	53.2
22:15-22:30	56.3	58.9	53.0
	56.8	59.5	52.9
	56.6	59.4	53.1
22:30-22:45	57.9	60.7	52.9
	56.4	59.2	52.7
	55.2	57.4	52.5
22:45-23:00	55.3	57.4	52.6
	55.4	57.9	52.5
	56.0	58.5	52.7
Average	58.5	61.4	53.4
Max	63.8	66.6	58.1
Min	55.2	57.4	51.1

3) General Holidays (including Sundays) (0700-2300) Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
0700-07:15	55.3	58.0	51.0
	54.2	56.3	50.9
	53.9	56.4	51.0
07:15-07:30	53.2	55.0	50.8
	52.1	53.6	50.7
	53.3	54.9	50.7
07:30-07:45	53.3	54.9	50.9
	53.9	55.4	51.0
	55.4	58.4	50.9
07:45-08:00	54.0	56.4	50.8
	53.7	55.6	51.2
	52.8	54.3	50.8
08:00-08:15	53.5	54.7	50.1

Time Slot	Leq, 5min	L10	L90
	54.0	55.8	50.8
	54.6	56.5	50.7
08:15-08:30	53.6	55.6	50.9
	55.7	59.2	51.4
	57.7	61.6	51.0
08:30-08:45	53.2	55.5	50.6
	52.7	54.2	50.8
	55.7	58.7	51.6
08:45-09:00	53.7	55.9	50.8
	53.4	55.4	51.0
	55.3	58.2	50.9
09:00-09:15	53.0	54.1	50.8
	60.7	63.5	52.9
	59.3	62.4	52.1
09:15-09:30	62.0	64.8	53.5
	60.7	63.3	52.2
	58.6	61.6	52.2
09:30-09:45	59.8	63.3	52.2
	61.9	64.1	54.8
	59.1	61.3	53.5
09:45-10:00	60.3	63.7	52.5
	59.0	61.7	52.5
	59.2	61.9	52.3
10:00-10:15	58.9	61.7	51.6
	59.3	62.2	52.2
	55.9	58.8	50.5
10:15-10:30	57.2	61.1	50.3
	56.9	60.2	51.3
	56.9	58.9	51.5
10:30-10:45	57.0	59.3	52.0
	55.6	58.3	51.3
	53.9	55.7	51.3
10:45-11:00	53.4	54.8	51.3
	54.9	58.0	51.0
	55.7	58.3	51.8
11:00-11:15	55.3	58.5	50.4

Time Slot	Leq, 5min	L10	L90
	55.3	58.0	51.2
	54.5	56.9	51.3
11:15-11:30	57.0	60.3	50.0
	53.2	56.1	49.7
	54.3	57.5	50.0
11:30-11:45	54.2	57.1	50.0
	54.3	57.1	50.4
	53.3	55.1	50.5
11:45-12:00	56.4	58.4	49.7
	55.7	58.6	50.3
	54.9	56.6	50.4
12:00-12:15	56.7	59.1	49.9
	52.6	54.0	50.4
	56.4	57.0	55.8
12:15-12:30	63.6	67.1	50.5
	55.9	59.7	50.7
	61.0	64.7	51.1
12:30-12:45	56.5	60.3	51.2
	59.3	62.0	50.1
	61.0	62.6	50.3
12:45-13:00	53.8	55.5	50.9
	54.6	56.5	50.8
	55.3	58.2	51.1
13:00-13:15	57.2	61.2	50.6
	57.6	61.4	51.0
	61.4	66.0	51.1
13:15-13:30	57.0	60.6	50.8
	55.0	58.3	50.5
	58.7	60.5	50.7
13:30-13:45	56.1	59.3	50.8
	50.4	52.3	48.8
	54.0	54.7	51.1
13:45-14:00	57.3	58.7	51.5
	55.2	59.6	49.2
	57.0	59.4	50.7
14:00-14:15	53.4	55.2	50.4

Time Slot	Leq, 5min	L10	L90
	57.4	60.7	50.6
	52.5	54.2	50.3
14:15-14:30	52.5	54.2	50.2
	54.5	57.3	50.8
	54.5	56.4	50.3
14:30-14:45	65.8	67.9	50.3
	57.2	58.3	50.4
	55.9	58.7	50.7
14:45-15:00	58.0	60.7	50.8
	56.2	60.0	50.6
	57.6	60.6	50.8
15:00-15:15	55.4	58.8	50.7
	56.7	59.3	51.1
	53.0	53.9	50.7
15:15-15:30	54.2	56.0	50.4
	54.2	56.6	50.8
	53.4	54.4	50.5
15:30-15:45	57.0	60.3	51.1
	54.3	56.5	50.9
	55.5	57.3	51.2
15:45-16:00	54.5	56.4	51.3
	56.7	58.9	52.0
	57.6	60.8	51.6
16:00-16:15	54.9	57.4	51.2
	56.7	59.4	51.8
	59.7	61.1	51.9
16:15-16:30	59.3	59.9	51.3
	56.6	58.6	51.4
	54.0	56.6	50.8
16:30-16:45	52.8	54.2	50.2
	52.1	52.9	51.1
	54.5	55.3	52.2
16:45-17:00	56.1	58.1	51.4
	56.1	57.8	51.9
	55.5	57.2	51.9
17:00-17:15	57.7	60.2	51.8

Time Slot	Leq, 5min	L10	L90
	56.9	59.5	51.4
	54.3	57.4	50.8
17:15-17:30	56.1	58.3	52.0
	53.3	54.9	50.8
	57.4	60.9	50.9
17:30-17:45	55.9	58.5	51.6
	58.3	61.7	52.1
	60.2	62.7	52.6
17:45-18:00	60.3	63.6	51.7
	55.0	58.1	51.3
	56.5	59.1	51.8
18:00-18:15	56.0	58.7	51.8
	55.2	56.6	51.5
	54.1	56.0	51.6
18:15-18:30	52.1	53.5	50.4
	54.3	56.5	51.4
	56.2	57.2	51.3
18:30-18:45	57.7	60.7	52.2
	54.0	54.3	51.9
	53.7	55.2	51.6
18:45-19:00	54.1	55.4	52.3
	52.3	55.9	48.5
	60.6	62.7	51.9
19:00-19:15	57.2	59.8	52.0
	55.6	58.7	51.7
	58.5	61.2	51.6
19:15-19:30	55.2	58.2	51.4
	61.5	64.3	51.2
	59.6	63.5	51.6
19:30-19:45	55.0	57.0	50.7
	54.5	56.9	51.0
	55.2	56.6	51.4
19:45-20:00	53.3	54.2	51.7
	55.0	57.1	52.0
	55.5	57.4	53.2
20:00-20:15	54.0	55.6	51.8

Time Slot	Leq, 5min	L10	L90
	53.3	53.8	52.6
	57.3	60.4	54.2
20:15-20:30	59.6	61.5	53.1
	56.6	59.0	53.7
	55.6	57.8	53.1
20:30-20:45	54.2	55.9	52.1
	55.8	58.0	53.5
	55.2	57.4	52.4
20:45-21:00	56.5	58.9	53.5
	59.5	61.3	54.8
	56.5	58.8	53.6
21:00-21:15	56.8	59.3	53.4
	56.8	59.5	53.7
	56.5	59.1	53.5
21:15-21:30	56.8	59.8	53.5
	57.4	60.7	53.2
	58.7	62.5	53.0
21:30-21:45	58.8	62.4	53.4
	57.4	60.2	53.7
	57.8	60.8	53.6
21:45-22:00	60.0	61.9	53.5
	56.8	59.7	53.7
	56.9	60.0	53.7
22:00-22:15	56.8	60.0	52.7
	56.5	59.9	52.9
	56.3	59.3	53.4
22:15-22:30	58.5	60.2	53.1
	55.2	57.4	52.8
	56.5	59.8	52.7
22:30-22:45	56.2	59.0	53.4
	57.8	60.9	54.0
	57.2	60.8	53.0
22:45-23:00	55.8	58.5	53.0
	56.6	60.0	53.2
	57.1	60.9	53.0
Average	56.9	59.6	51.7

Time Slot	Leq, 5min	L10	L90
Max	65.8	67.9	55.8
Min	50.4	52.3	48.5

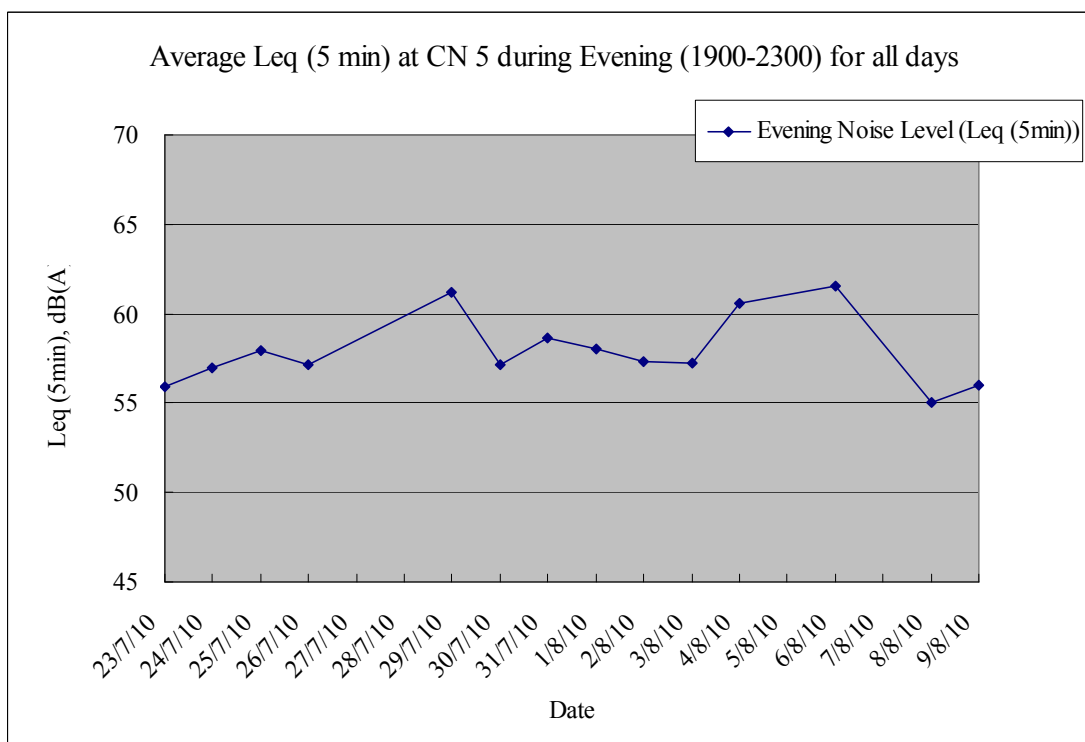
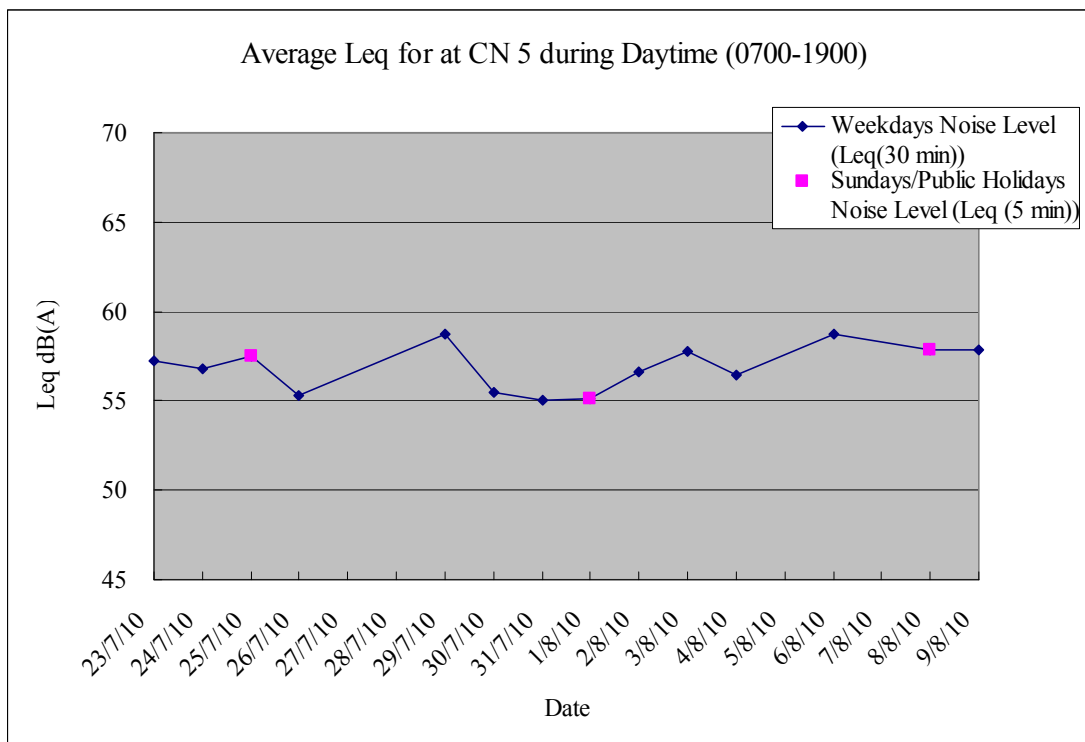
4) Night-time (for all days) Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
23:00-23:15	57.2	59.8	52.9
	56.1	59.1	52.9
	56.0	58.7	52.8
23:15-23:30	55.8	58.4	53.1
	55.7	58.3	52.7
	56.3	59.0	52.9
23:30-23:45	56.2	58.9	53.3
	56.0	58.5	52.9
	55.8	58.3	53.0
23:45-00:00	56.0	58.6	53.3
	55.9	58.7	52.8
	55.9	58.8	52.5
00:00-00:15	55.7	58.1	52.8
	56.2	58.4	53.6
	57.1	58.8	53.2
00:15-00:30	56.9	58.8	53.5
	56.1	58.3	53.1
	55.7	58.2	53.0
00:30-00:45	56.0	58.5	53.3
	56.1	58.4	53.3
	56.5	59.0	53.4
00:45:01:00	56.2	58.3	53.5
	55.6	57.4	53.7
	55.6	57.4	53.3
01:00-01:15	56.0	58.2	53.1
	55.9	57.7	53.7
	57.0	58.6	53.6
01:15-01:30	55.4	57.6	53.2
	55.3	57.3	53.4
	55.3	57.2	53.4

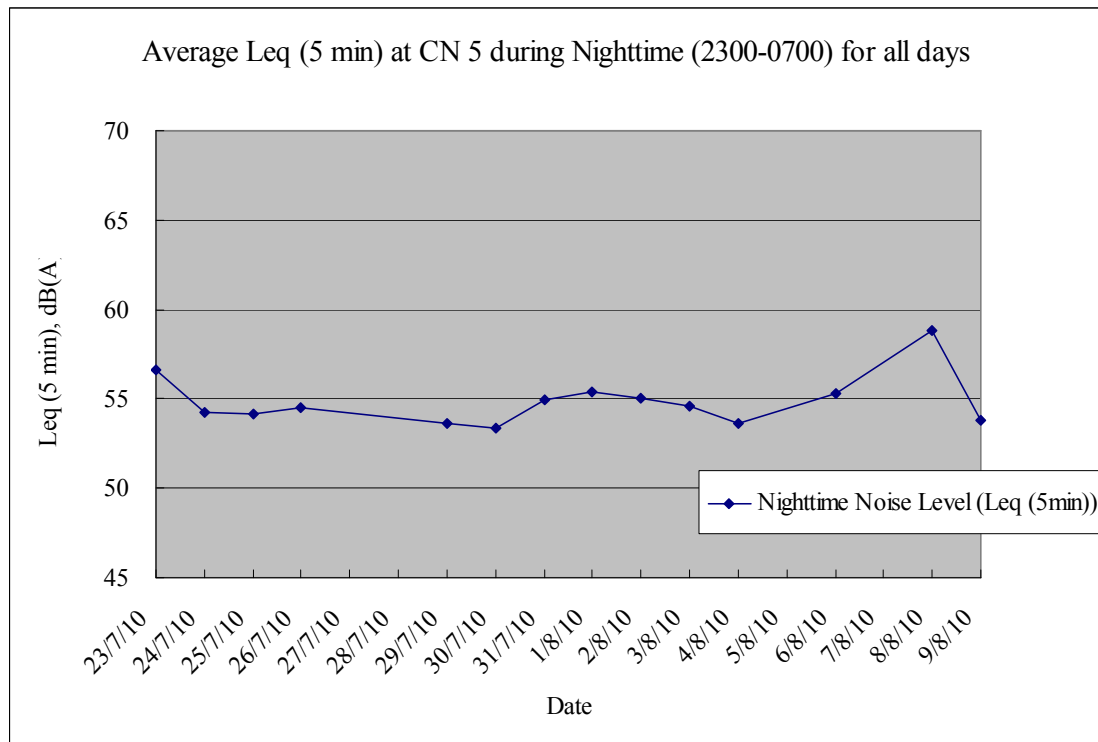
Time Slot	Leq, 5min	L10	L90
01:30-01:45	56.2	58.0	54.0
	56.1	58.0	53.8
	55.5	57.3	53.3
01:45-02:00	55.5	57.3	53.6
	56.0	57.9	54.0
	56.2	58.9	53.6
02:00-02:15	56.4	58.2	53.4
	56.1	58.3	53.3
	56.2	58.3	53.5
02:15-02:30	56.2	58.5	53.0
	55.7	57.5	53.2
	55.1	56.7	53.3
02:30-02:45	55.3	57.1	53.3
	55.4	56.9	53.3
	57.3	58.3	53.1
02:45-03:00	55.9	57.8	53.4
	56.4	57.9	53.6
	57.9	59.9	53.4
03:00-03:15	55.6	56.8	53.7
	56.7	57.7	53.6
	57.9	60.8	53.7
03:15-03:30	56.7	59.1	53.6
	56.7	58.1	53.4
	57.0	59.0	53.3
03:30-03:45	56.2	58.2	52.9
	56.6	58.1	53.0
	55.1	56.7	53.1
03:45-04:00	55.0	56.6	53.1
	54.1	55.4	52.8
	54.6	55.5	53.4
04:00-04:15	54.5	55.9	53.1
	54.7	55.8	53.2
	54.3	54.9	53.3
04:15-04:30	54.3	55.3	53.1
	53.9	54.6	52.8
	54.1	54.9	53.1

Time Slot	Leq, 5min	L10	L90
04:30-04:45	54.7	57.0	53.0
	54.8	57.0	53.0
	54.2	55.5	52.8
04:45-05:00	53.8	54.5	52.8
	53.2	53.9	52.4
	53.4	54.2	52.5
05:00-05:15	53.1	53.7	52.3
	54.1	56.0	52.4
	53.5	55.0	52.3
05:15-05:30	53.1	53.6	52.3
	53.3	53.9	52.5
	53.5	54.5	52.1
05:30-05:45	54.0	55.8	52.1
	56.2	58.6	52.2
	56.5	59.0	52.4
05:45-06:00	57.3	60.9	52.4
	56.6	59.2	52.2
	56.1	58.1	52.3
06:00-06:15	56.0	58.4	52.4
	57.5	60.6	52.6
	56.9	59.9	52.4
06:15-06:30	55.6	57.7	52.5
	56.4	57.8	52.3
	55.3	57.6	52.0
06:30-06:45	55.5	57.8	51.5
	55.0	57.3	51.4
	55.6	58.2	51.5
06:45-07:00	54.2	56.3	51.4
	54.2	56.0	51.3
	54.8	57.0	51.4
Average	55.7	57.8	53.0
Max	57.9	60.9	54.0
Min	53.1	53.6	51.3

Log average was used.



Note: Monitoring on 27/7, 28/7, 5/8 and 7/8 was interrupted due to rainfall



Note: Monitoring on 27/7, 28/7, 5/8 and 7/8 was interrupted due to rainfall

Location: CN 6 Yau Tam Mei Village House

Baseline monitoring period: 23/7/2010 to 9/8/2010

Parameter: Leq

Time Slot Averaged Baselines

1) Weekdays Daytime Noise Level, dB(A)

Time slot	Leq, 30 min	L10	L90
07:00-07:30	53.2	56.0	47.7
07:30-08:00	50.2	52.2	47.3
08:00-08:30	52.6	56.2	47.3
08:30-09:00	53.8	56.7	48.5
09:00-09:30	56.8	59.3	51.2
09:30-10:00	57.4	60.6	50.1
10:00-10:30	55.9	58.9	50.1
10:30-11:00	55.5	58.9	49.1
11:00-11:30	53.5	56.7	48.0
11:30-12:00	54.7	56.9	48.3
12:00-12:30	53.6	56.8	47.7
12:30-13:00	53.3	56.4	46.9
13:00-13:30	56.3	59.2	51.5
13:30-14:00	53.7	56.4	49.7
14:00-14:30	54.1	56.8	49.6
14:30-15:00	56.0	59.1	51.2
15:00-15:30	56.9	59.7	50.7
15:30-16:00	56.4	59.7	50.5
16:00-16:30	56.1	59.2	48.9
16:30-17:00	54.7	57.4	48.4
17:00-17:30	56.5	60.3	48.3
17:30-18:00	56.5	60.5	48.0
18:00-18:30	57.1	60.3	47.8
18:30-19:00	59.1	62.8	50.2
Average	55.6	58.7	49.3
Max	59.1	62.8	51.5
Min	50.2	52.2	46.9

Noise Control Period Averaged Baselines

2) Weekdays Evening Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
19:00-19:15	57.6	59.9	50.0
	60.2	64.1	50.0
	60.2	62.3	55.6
19:15-19:30	62.1	64.3	56.4
	60.4	62.2	51.5
	58.9	62.4	49.4
19:30-19:45	60.0	62.7	49.4
	57.3	60.0	48.8
	58.3	63.1	49.6
19:45-20:00	59.9	64.3	51.0
	60.1	64.3	51.2
	59.7	63.8	51.7
20:00-20:15	60.2	64.0	52.5
	61.9	65.8	53.8
	59.0	61.2	55.3
20:15-20:30	59.1	61.9	54.7
	61.2	63.7	57.1
	60.9	63.2	56.6
20:30-20:45	62.3	66.1	56.4
	62.7	66.8	56.7
	62.0	64.9	56.8
20:45-21:00	60.5	64.9	52.8
	58.0	59.6	55.9
	60.5	63.6	52.8
21:00-21:15	57.3	59.1	52.0
	59.6	61.1	57.1
	56.4	58.9	51.4
21:15-21:30	60.0	64.0	54.8
	57.1	58.7	54.9
	56.6	58.5	53.7
21:30-21:45	57.9	59.7	50.8
	55.0	57.8	51.0

Time Slot	Leq, 5min	L10	L90
	56.7	59.5	52.0
21:45-22:00	57.2	59.4	52.0
	56.4	59.4	50.9
	56.3	58.4	52.3
22:00-22:15	54.3	56.8	51.2
	56.3	58.5	52.8
	55.5	58.1	50.8
22:15-22:30	57.8	60.6	52.4
	58.7	61.3	53.5
	56.3	58.6	51.1
22:30-22:45	56.6	58.8	53.3
	56.9	58.9	51.9
	56.6	59.5	51.0
22:45-23:00	58.0	59.7	52.6
	60.5	64.4	52.7
	58.7	61.6	50.2
Average	59.1	62.2	53.4
Max	62.7	66.8	57.1
Min	54.3	56.8	48.8

3) General Holidays (including Sundays) (0700-2300) Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
0700-07:15	49.8	51.4	45.8
	51.0	53.8	47.4
	48.5	50.3	46.1
07:15-07:30	49.5	51.8	46.5
	50.7	54.2	46.6
	49.4	50.4	47.9
07:30-07:45	48.9	50.1	47.4
	49.2	50.8	46.9
	49.5	50.8	45.7
07:45-08:00	49.2	50.9	45.9
	48.5	51.2	45.2
	49.5	51.4	45.7

Time Slot	Leq, 5min	L10	L90
08:00-08:15	49.2	51.4	45.4
	48.6	50.6	46.0
	51.0	54.5	46.9
08:15-08:30	52.5	55.4	49.4
	51.1	53.2	48.4
	50.0	52.4	46.9
08:30-08:45	50.7	52.9	48.5
	49.7	50.9	48.3
	53.0	54.4	48.2
08:45-09:00	52.7	56.1	47.1
	53.3	56.6	48.9
	49.4	51.9	46.4
09:00-09:15	51.3	54.1	46.9
	51.4	53.6	47.8
	50.6	53.4	46.5
09:15-09:30	51.5	53.0	47.0
	53.1	53.6	46.9
	51.1	53.8	47.4
09:30-09:45	54.4	57.0	51.0
	52.8	55.0	48.4
	51.7	54.5	47.9
09:45-10:00	54.8	57.0	47.8
	52.1	55.6	47.8
	54.2	57.7	49.1
10:00-10:15	51.7	54.4	48.2
	50.2	52.2	47.2
	52.6	55.4	48.6
10:15-10:30	56.8	58.5	48.0
	55.2	56.0	46.5
	52.2	55.9	47.6
10:30-10:45	50.4	53.2	46.9
	50.6	54.2	45.1
	48.3	50.5	45.3
10:45-11:00	50.5	54.2	46.3
	50.9	52.9	46.5
	52.1	55.1	45.4

Time Slot	Leq, 5min	L10	L90
11:00-11:15	50.6	52.7	44.9
	50.9	53.5	45.2
	52.1	54.6	45.6
11:15-11:30	55.0	59.7	46.3
	53.0	56.3	47.1
	52.2	54.5	48.3
11:30-11:45	51.9	54.5	47.8
	52.2	55.6	48.3
	50.7	53.6	46.1
11:45-12:00	50.9	54.6	45.2
	50.1	53.2	45.7
	52.7	55.9	45.6
12:00-12:15	51.1	53.6	47.0
	45.9	48.1	42.7
	49.1	51.9	44.3
12:15-12:30	52.0	54.9	44.8
	50.8	53.3	44.8
	55.3	58.6	47.9
12:30-12:45	51.3	54.4	45.2
	56.5	59.6	45.2
	51.9	54.7	44.7
12:45-13:00	50.5	53.2	45.2
	48.8	51.7	45.2
	50.3	53.8	44.5
13:00-13:15	52.0	54.9	46.6
	57.2	59.9	47.3
	50.9	53.8	46.2
13:15-13:30	50.2	53.5	45.8
	52.5	54.9	46.3
	55.7	58.8	48.4
13:30-13:45	51.8	55.1	46.4
	53.4	56.6	46.1
	54.9	59.5	46.1
13:45-14:00	54.0	57.3	46.4
	54.7	57.8	47.2
	54.5	57.4	47.7

Time Slot	Leq, 5min	L10	L90
14:00-14:15	51.8	54.1	47.6
	52.9	54.8	47.9
	54.0	57.0	47.3
14:15-14:30	52.0	55.0	47.3
	53.1	57.0	47.3
	52.1	54.9	47.0
14:30-14:45	53.5	56.7	47.4
	54.7	59.2	48.5
	52.1	54.7	47.4
14:45-15:00	53.2	55.4	47.5
	52.4	55.4	46.7
	51.9	55.0	46.1
15:00-15:15	51.9	53.8	47.4
	53.9	56.8	47.0
	51.9	53.7	47.2
15:15-15:30	51.3	53.1	46.5
	53.4	56.6	48.4
	57.5	58.8	48.3
15:30-15:45	58.7	62.7	49.5
	58.1	61.1	49.7
	55.9	57.8	47.5
15:45-16:00	57.0	60.4	47.7
	50.8	53.5	47.1
	55.9	59.3	46.6
16:00-16:15	57.9	62.8	46.7
	56.2	59.6	47.1
	57.8	60.3	46.4
16:15-16:30	51.6	54.2	47.1
	51.6	54.4	47.2
	51.1	53.7	47.0
16:30-16:45	51.5	53.8	47.1
	51.4	53.5	47.6
	52.3	54.7	47.7
16:45-17:00	55.3	59.2	46.5
	50.3	52.5	46.5
	51.5	54.4	46.9

Time Slot	Leq, 5min	L10	L90
17:00-17:15	55.7	59.3	49.4
	56.1	59.2	46.6
	50.7	53.5	46.4
17:15-17:30	53.9	56.4	49.7
	53.9	57.1	48.5
	58.4	61.8	47.5
17:30-17:45	54.8	59.0	47.9
	54.7	58.7	47.6
	57.1	59.4	49.3
17:45-18:00	58.1	61.1	49.7
	54.1	56.6	48.2
	54.1	57.0	48.9
18:00-18:15	52.5	54.5	46.2
	49.6	51.9	45.9
	50.2	52.9	46.4
18:15-18:30	51.2	55.6	46.3
	51.1	51.9	45.9
	52.2	55.8	45.3
18:30-18:45	49.8	53.0	45.7
	48.0	49.6	45.3
	50.3	55.0	45.7
18:45-19:00	50.9	53.3	46.1
	49.0	51.7	45.4
	59.6	63.4	50.4
19:00-19:15	61.9	65.6	53.2
	59.8	63.3	51.3
	61.1	64.1	53.2
19:15-19:30	59.8	63.0	52.6
	63.5	67.3	52.2
	61.7	66.1	51.9
19:30-19:45	64.4	66.4	53.4
	63.9	66.0	51.0
	62.5	64.1	51.6
19:45-20:00	65.8	69.3	52.7
	57.3	60.3	50.7
	55.0	57.6	50.9

Time Slot	Leq, 5min	L10	L90
20:00-20:15	56.7	59.9	51.7
	55.4	59.0	49.7
	57.0	59.2	51.3
20:15-20:30	55.9	59.5	51.6
	56.1	59.6	51.9
	54.7	57.0	51.8
20:30-20:45	52.9	53.8	50.9
	53.8	56.0	50.3
	58.7	59.7	51.9
20:45-21:00	56.5	60.0	51.7
	54.6	57.0	50.8
	53.0	54.7	49.9
21:00-21:15	53.4	54.7	50.6
	54.0	56.9	50.0
	53.3	54.8	50.0
21:15-21:30	54.0	56.1	50.5
	54.6	57.9	50.3
	54.3	57.1	50.2
21:30-21:45	56.5	59.0	51.6
	55.3	58.9	51.0
	55.0	58.2	51.4
21:45-22:00	56.4	59.9	50.8
	61.2	66.0	49.8
	56.1	56.9	49.9
22:00-22:15	58.7	60.2	50.3
	54.8	56.2	49.3
	59.3	63.1	49.4
22:15-22:30	52.7	54.4	50.2
	55.1	56.6	50.0
	56.7	58.3	50.7
22:30-22:45	62.7	63.9	49.5
	50.5	51.8	49.1
	50.5	52.1	48.8
22:45-23:00	51.2	52.2	49.5
	50.6	51.8	49.1
	49.8	50.6	48.5

Time Slot	Leq, 5min	L10	L90
Average	55.3	58.2	48.5
Max	65.8	69.3	53.4
Min	45.9	48.1	42.7

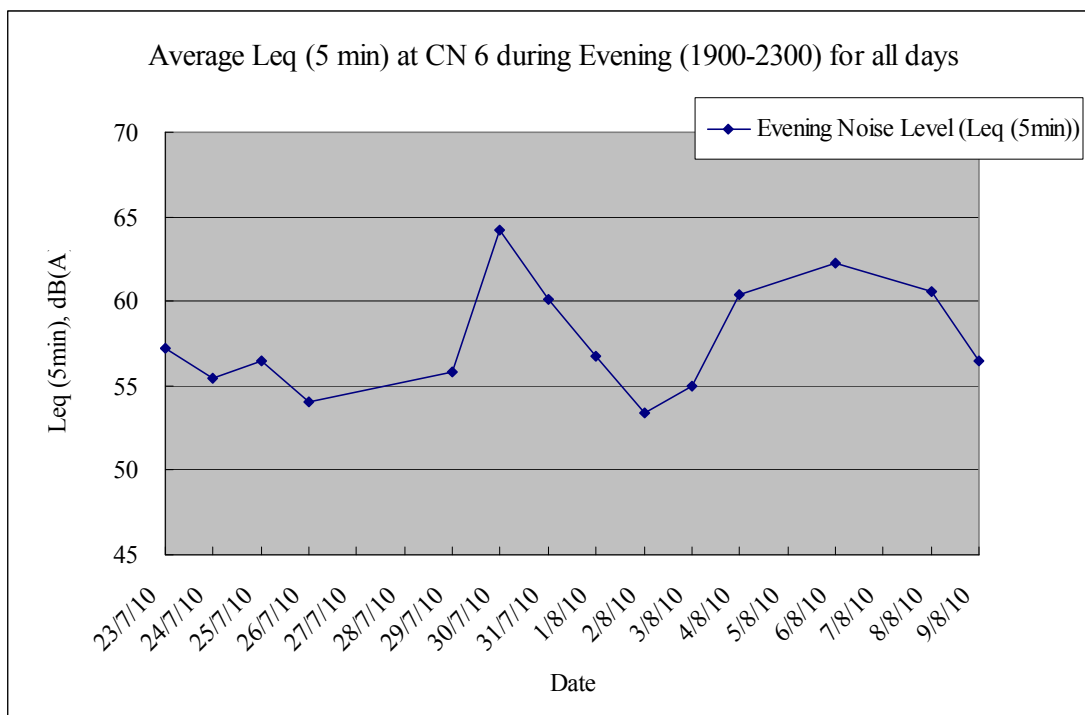
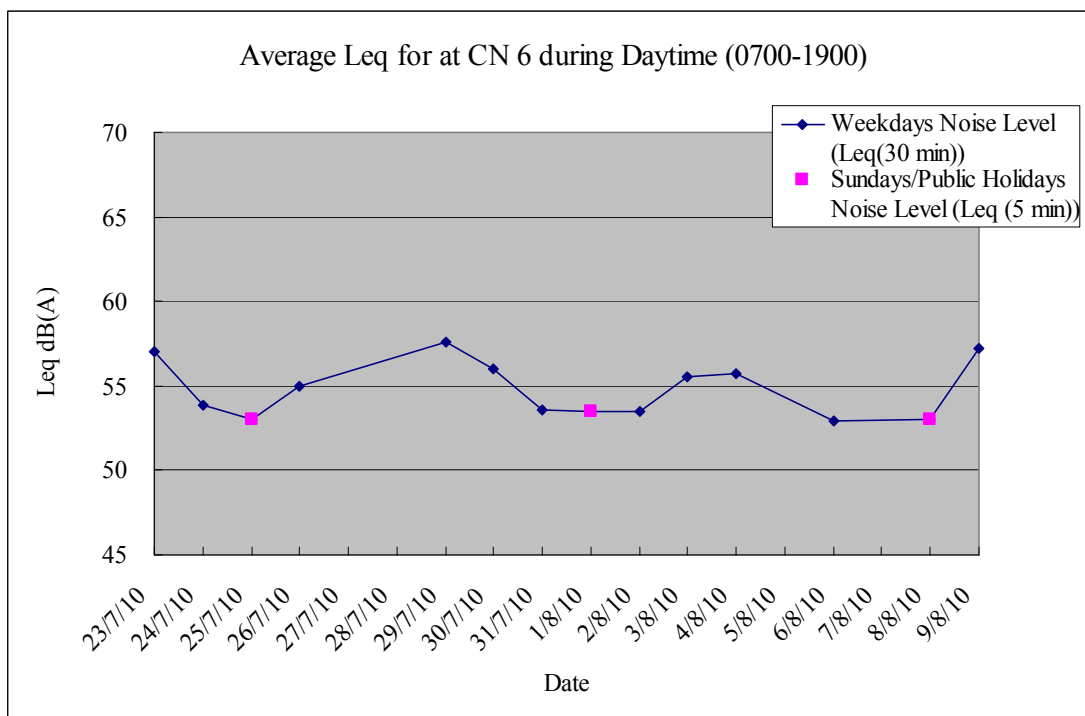
4) Night-time (for all days) Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
23:00-23:15	60.1	64.7	51.2
	58.5	62.7	51.1
	56.5	58.7	52.6
23:15-23:30	57.3	59.7	52.3
	58.3	60.9	53.2
	55.5	58.1	51.2
23:30-23:45	57.3	60.1	51.9
	55.6	58.1	50.4
	57.9	60.1	54.6
23:45-00:00	56.9	59.3	49.5
	56.5	59.2	52.9
	52.3	54.6	49.7
00:00-00:15	57.2	59.1	51.6
	55.8	58.2	49.4
	55.0	57.9	51.0
00:15-00:30	53.8	56.8	49.3
	52.8	55.6	48.8
	53.8	56.7	49.5
00:30-00:45	53.7	56.4	49.8
	53.5	56.6	49.8
	54.6	57.8	49.5
00:45:01:00	55.3	57.5	50.1
	51.9	54.6	49.4
	51.8	54.0	48.3
01:00-01:15	54.5	56.4	50.9
	53.8	55.9	50.0
	54.6	56.3	50.5
01:15-01:30	54.5	56.7	49.1
	51.6	54.2	49.0

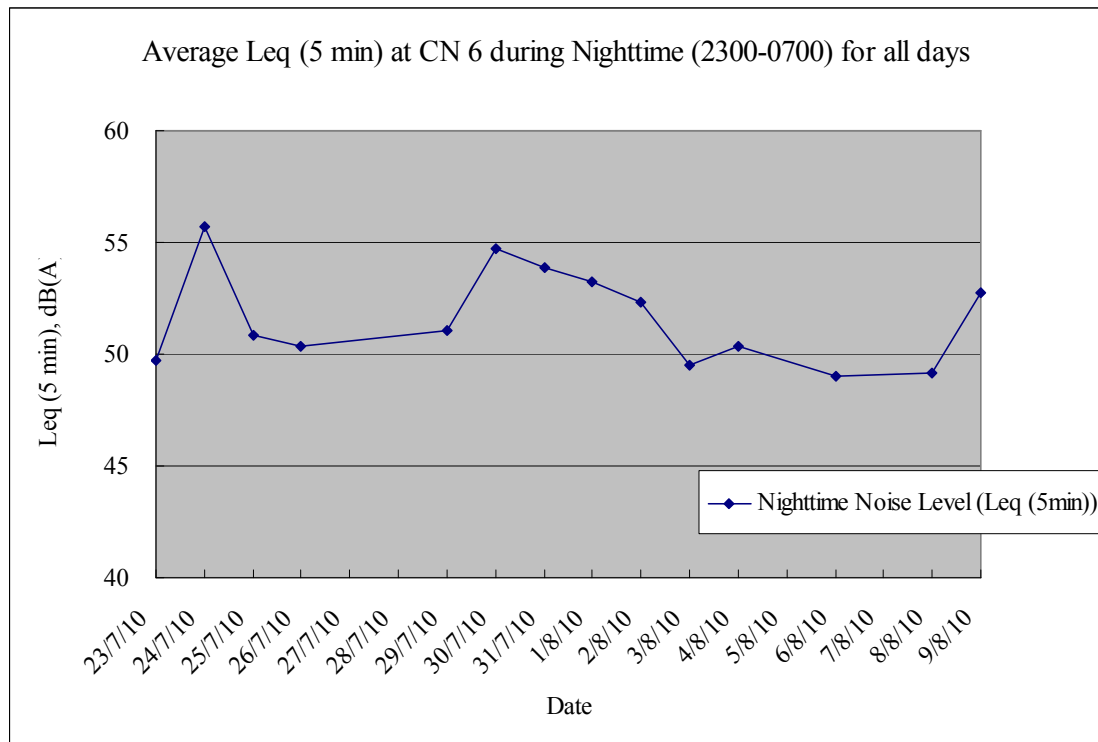
Time Slot	Leq, 5min	L10	L90
	51.1	53.9	48.0
01:30-01:45	53.7	56.8	49.3
	51.5	53.5	49.0
	52.5	54.5	49.7
01:45-02:00	49.4	51.1	47.7
	51.0	52.2	48.9
	51.3	54.3	48.2
02:00-02:15	51.6	53.5	49.7
	50.3	52.1	48.3
	53.1	55.7	50.2
02:15-02:30	53.5	56.3	50.2
	52.3	54.8	50.0
	52.9	56.2	49.9
02:30-02:45	51.4	54.5	48.6
	50.6	51.9	49.4
	50.8	51.7	49.8
02:45-03:00	51.4	52.4	50.2
	49.9	51.2	48.5
	51.3	52.3	49.8
03:00-03:15	51.5	53.0	50.1
	51.7	53.0	50.2
	54.0	57.1	49.4
03:15-03:30	54.3	57.5	49.9
	50.1	51.0	48.8
	50.2	51.4	48.9
03:30-03:45	51.1	52.2	50.0
	51.7	53.0	50.4
	51.6	52.9	50.3
03:45-04:00	52.2	54.0	50.4
	50.6	51.5	49.5
	50.4	51.3	49.3
04:00-04:15	50.5	51.6	49.2
	51.9	53.1	50.7
	50.9	52.4	49.3
04:15-04:30	51.8	53.2	50.4
	50.9	52.3	49.5

Time Slot	Leq, 5min	L10	L90
	51.7	53.1	50.4
04:30-04:45	50.7	52.1	49.3
	50.8	52.2	49.3
	51.7	53.3	50.4
04:45-05:00	50.8	51.9	49.6
	50.7	51.7	49.5
	50.8	52.1	49.3
05:00-05:15	50.5	51.6	49.2
	51.5	52.7	50.2
	50.1	51.1	49.0
05:15-05:30	50.2	51.3	48.8
	49.8	50.7	48.4
	51.5	52.7	49.4
05:30-05:45	52.1	53.5	49.8
	53.1	54.3	51.6
	54.3	55.4	52.7
05:45-06:00	52.0	52.9	50.0
	52.8	54.2	50.6
	52.5	53.9	49.9
06:00-06:15	52.7	54.1	49.9
	51.9	53.5	49.6
	52.4	53.8	49.7
06:15-06:30	51.8	53.7	49.3
	55.9	60.3	49.4
	51.3	52.6	48.9
06:30-06:45	51.8	53.7	49.1
	50.3	52.8	47.5
	51.2	52.6	48.9
06:45-07:00	51.6	54.2	48.4
	50.6	53.4	47.4
	51.9	53.9	49.0
Average	53.4	55.8	50.0
Max	60.1	64.7	54.6
Min	49.4	50.7	47.4

Log average was used.



Note: Monitoring on 27/7, 28/7, 5/8 and 7/8 was interrupted due to rainfall



Note: Monitoring on 27/7, 28/7, 5/8 and 7/8 was interrupted due to rainfall

Location: CN 15 No. 305B - Sheung Tsuen San Tsuen Village
House

Baseline monitoring period: 21/8/2010 to 14/9/2010

Parameter: Leq

Time Slot Averaged Baselines

1) Weekdays Daytime Noise Level, dB(A)

Time slot	Leq, 30 min	L10	L90
07:00-07:30	64.8	69.1	49.0
07:30-08:00	65.6	69.6	49.6
08:00-08:30	66.0	70.0	48.9
08:30-09:00	66.2	70.2	49.6
09:00-09:30	66.1	70.2	49.7
09:30-10:00	66.0	70.1	53.0
10:00-10:30	66.5	70.6	52.7
10:30-11:00	66.1	70.0	50.4
11:00-11:30	66.5	70.0	52.7
11:30-12:00	66.0	69.9	52.8
12:00-12:30	65.1	69.3	48.8
12:30-13:00	65.2	69.3	48.1
13:00-13:30	65.4	69.5	52.2
13:30-14:00	67.0	70.6	56.8
14:00-14:30	65.6	69.7	52.8
14:30-15:00	65.8	69.7	54.2
15:00-15:30	65.9	69.9	52.4
15:30-16:00	66.1	70.2	51.7
16:00-16:30	66.8	70.9	51.1
16:30-17:00	66.7	70.7	51.1
17:00-17:30	66.8	70.6	58.2
17:30-18:00	67.5	70.9	58.8
18:00-18:30	66.3	70.2	51.5
18:30-19:00	66.0	70.1	50.2
Average	66.1	70.1	53.0
Max	67.5	70.9	58.8
Min	64.8	69.1	48.1

Noise Control Period Averaged Baselines

2) Weekdays Evening Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
19:00-19:15	65.3	69.2	49.9
	66.0	70.1	50.9
	64.8	68.9	51.5
19:15-19:30	64.9	68.7	51.3
	64.9	68.4	51.9
	64.6	68.7	50.3
19:30-19:45	64.4	68.5	50.8
	64.9	68.9	51.7
	65.0	69.3	51.6
19:45-20:00	65.5	69.8	51.9
	64.5	68.5	51.9
	65.7	69.7	53.8
20:00-20:15	64.4	68.5	53.8
	64.7	69.0	51.1
	64.4	68.2	53.2
20:15-20:30	65.8	69.0	52.9
	63.9	68.1	53.0
	64.5	68.8	53.4
20:30-20:45	63.3	67.5	52.9
	63.5	67.8	52.9
	63.6	68.0	52.8
20:45-21:00	63.7	68.1	52.8
	62.9	66.6	51.0
	63.0	67.4	52.4
21:00-21:15	63.6	68.0	52.2
	63.4	67.9	52.6
	63.9	67.8	52.7
21:15-21:30	63.8	67.8	53.1
	64.1	68.2	53.3
	64.0	68.4	53.5
21:30-21:45	63.8	68.2	53.2
	63.6	67.7	51.2

Time Slot	Leq, 5min	L10	L90
	64.5	68.7	53.4
21:45-22:00	63.7	68.2	53.4
	63.1	67.2	52.9
	63.2	67.3	52.6
22:00-22:15	62.9	67.1	52.4
	63.4	67.0	52.2
	62.8	66.8	52.3
22:15-22:30	63.6	67.9	52.3
	62.9	67.4	50.2
	63.2	67.6	51.6
22:30-22:45	64.1	67.7	51.8
	63.0	67.4	52.1
	63.4	67.3	52.2
22:45-23:00	62.5	66.5	51.5
	63.6	67.1	51.6
	62.8	67.3	51.7
Average	64.1	68.2	52.3
Max	66.0	70.1	53.8
Min	62.5	66.5	49.9

3) General Holidays (including Sundays) (0700-2300) Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
0700-07:15	58.6	59.9	57.4
	58.6	59.8	57.4
	57.8	58.4	57.1
07:15-07:30	57.8	58.5	57.2
	57.8	58.4	57.1
	57.6	58.2	56.9
07:30-07:45	57.5	58.0	56.9
	57.4	57.8	56.8
	57.5	57.9	56.8
07:45-08:00	57.3	57.6	56.8
	57.3	57.9	56.8
	57.2	57.6	56.7

Time Slot	Leq, 5min	L10	L90
08:00-08:15	57.3	57.8	56.8
	57.3	57.9	56.7
	57.7	58.8	56.8
08:15-08:30	58.3	59.8	56.9
	57.7	58.7	56.8
	57.3	57.9	56.7
08:30-08:45	57.5	58.3	56.7
	57.5	58.1	56.9
	57.7	58.5	56.9
08:45-09:00	57.4	58.1	56.8
	57.5	58.1	56.9
	57.5	57.9	56.8
09:00-09:15	57.6	58.3	56.9
	58.7	59.7	56.9
	59.1	60.1	56.9
09:15-09:30	60.3	61.8	57.0
	60.1	61.3	57.0
	61.2	63.2	57.0
09:30-09:45	61.6	64.1	57.0
	62.8	65.9	57.2
	61.0	63.3	57.0
09:45-10:00	59.9	60.7	56.9
	60.2	61.3	57.6
	58.5	58.7	55.9
10:00-10:15	63.4	69.0	57.9
	58.0	58.7	57.4
	61.7	63.4	59.4
10:15-10:30	66.1	67.7	61.6
	60.0	61.5	57.3
	68.5	72.1	64.5
10:30-10:45	62.9	63.8	60.3
	61.0	61.9	60.0
	60.3	60.9	59.6
10:45-11:00	60.7	61.1	60.0
	61.2	61.6	60.7
	63.9	65.3	61.5

Time Slot	Leq, 5min	L10	L90
11:00-11:15	65.6	66.0	65.3
	68.8	69.1	68.2
	66.8	67.9	65.5
11:15-11:30	66.0	66.4	65.3
	66.3	67.7	65.2
	65.9	66.9	65.1
11:30-11:45	65.2	65.5	64.8
	57.6	58.0	57.1
	65.5	66.3	64.7
11:45-12:00	65.6	66.0	64.3
	66.0	66.5	64.2
	64.9	65.4	63.6
12:00-12:15	59.0	60.8	55.8
	60.2	61.7	56.6
	56.9	57.4	56.5
12:15-12:30	57.0	57.4	56.5
	64.8	65.4	64.3
	57.7	58.5	57.0
12:30-12:45	68.4	69.2	63.8
	66.3	67.0	61.5
	59.1	60.9	56.2
12:45-13:00	62.1	64.4	57.0
	58.7	60.6	56.7
	68.0	68.4	62.9
13:00-13:15	63.8	64.1	62.8
	63.4	63.8	62.5
	63.2	63.6	62.1
13:15-13:30	61.6	62.4	60.1
	62.5	64.6	60.0
	60.6	60.8	57.0
13:30-13:45	65.3	69.0	61.2
	57.2	57.6	56.7
	61.4	62.7	59.4
13:45-14:00	56.6	57.1	56.1
	60.6	62.4	56.6
	60.3	63.3	56.3

Time Slot	Leq, 5min	L10	L90
14:00-14:15	61.1	61.5	58.8
	56.9	57.5	56.4
	60.4	61.5	58.7
14:15-14:30	62.6	64.6	59.4
	61.6	63.4	58.4
	60.8	61.1	56.4
14:30-14:45	61.6	64.5	58.2
	60.5	64.2	56.0
	62.4	63.2	58.1
14:45-15:00	61.5	63.5	58.2
	63.2	67.4	56.9
	58.6	59.8	56.0
15:00-15:15	61.6	63.6	57.8
	60.7	63.7	56.1
	59.1	60.0	56.2
15:15-15:30	64.9	68.8	58.0
	62.7	65.8	57.7
	63.1	65.3	58.8
15:30-15:45	62.3	63.8	57.7
	61.8	64.2	57.7
	62.0	65.0	57.6
15:45-16:00	68.4	70.4	58.2
	62.8	66.2	58.2
	62.5	65.7	57.6
16:00-16:15	63.4	67.0	57.8
	62.6	65.5	58.0
	62.1	64.8	57.6
16:15-16:30	62.7	65.9	58.4
	58.0	58.5	57.4
	60.8	64.6	57.6
16:30-16:45	59.7	60.7	58.6
	61.2	64.7	57.8
	61.3	62.5	57.9
16:45-17:00	61.6	63.0	57.8
	62.8	65.0	57.9
	62.1	64.0	57.9

Time Slot	Leq, 5min	L10	L90
17:00-17:15	61.2	62.8	57.5
	62.3	65.4	57.5
	62.2	64.1	57.4
17:15-17:30	61.4	64.3	57.4
	59.6	60.9	57.2
	60.1	62.6	57.1
17:30-17:45	59.4	60.8	57.0
	60.3	63.6	57.1
	58.2	58.6	56.9
17:45-18:00	59.8	61.3	57.0
	59.7	61.3	57.2
	59.6	61.0	58.0
18:00-18:15	58.5	59.7	57.3
	59.4	60.7	57.5
	60.9	61.7	57.4
18:15-18:30	58.7	60.2	57.2
	58.3	59.4	57.1
	58.0	58.9	56.9
18:30-18:45	58.7	60.1	57.0
	59.0	60.3	57.6
	58.6	59.8	57.1
18:45-19:00	57.4	58.1	56.5
	57.2	57.6	56.6
	67.6	69.4	56.7
19:00-19:15	60.0	62.0	56.8
	57.3	57.9	56.8
	57.3	57.8	56.8
19:15-19:30	57.1	57.8	56.4
	64.9	65.4	56.5
	57.6	58.0	57.1
19:30-19:45	64.7	66.2	56.9
	57.6	58.0	57.0
	63.7	64.8	57.7
19:45-20:00	61.4	63.2	58.6
	60.2	62.5	58.2
	58.8	59.2	58.3

Time Slot	Leq, 5min	L10	L90
20:00-20:15	59.2	59.6	58.6
	58.7	59.1	58.4
	59.6	60.1	59.2
20:15-20:30	65.6	67.2	59.6
	60.1	60.4	59.7
	59.5	60.3	58.2
20:30-20:45	58.2	58.7	57.7
	58.4	58.8	57.9
	58.3	58.6	57.9
20:45-21:00	58.0	58.4	57.6
	57.9	58.3	57.5
	57.7	58.1	57.3
21:00-21:15	57.5	57.9	57.1
	57.4	57.8	56.8
	57.7	58.1	57.0
21:15-21:30	58.1	58.9	57.3
	59.0	59.4	58.6
	58.4	59.0	57.7
21:30-21:45	58.9	59.2	58.5
	58.6	59.0	58.3
	58.9	59.2	58.5
21:45-22:00	59.0	59.4	58.6
	59.2	59.6	58.8
	59.2	59.6	58.8
22:00-22:15	59.2	59.6	58.8
	59.2	59.6	58.8
	59.2	59.5	58.8
22:15-22:30	59.1	59.5	58.7
	59.4	59.8	59.1
	59.1	59.5	58.7
22:30-22:45	59.0	59.3	58.5
	60.2	61.1	58.6
	58.9	59.3	58.5
22:45-23:00	58.9	59.3	58.5
	58.8	59.1	58.4
	58.6	59.0	58.3

Time Slot	Leq, 5min	L10	L90
Average	61.6	63.2	59.2
Max	68.8	72.1	68.2
Min	56.6	57.1	55.8

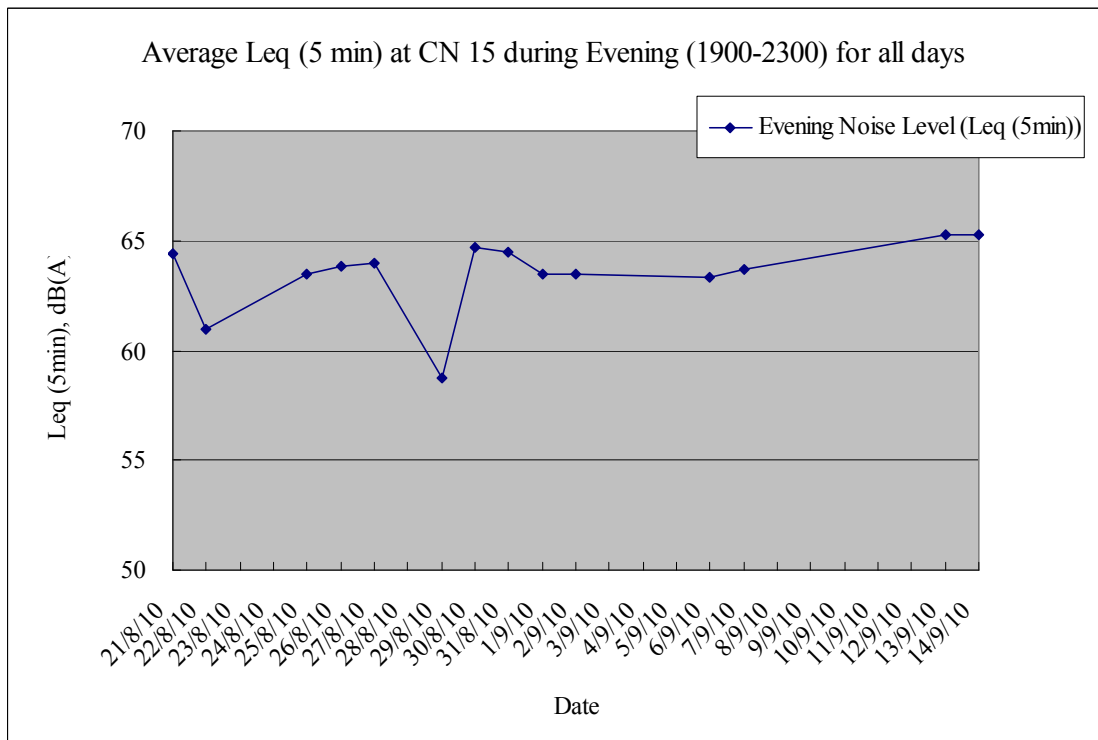
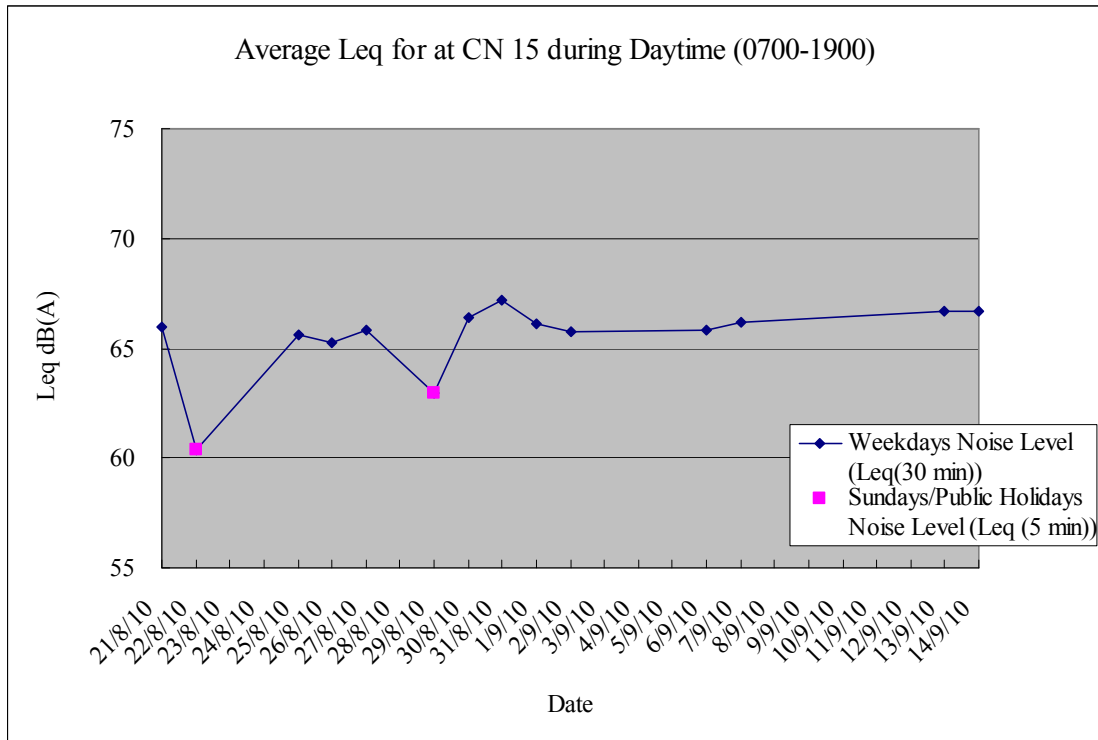
4) Night-time (for all days) Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
23:00-23:15	63.1	67.6	51.5
	63.7	67.7	50.7
	62.7	66.7	50.3
23:15-23:30	62.9	67.3	50.7
	63.6	66.9	50.5
	63.0	66.9	50.4
23:30-23:45	62.2	66.5	50.3
	63.0	67.5	50.5
	62.7	66.6	50.1
23:45-00:00	61.6	65.4	50.3
	62.0	66.5	49.6
	62.6	66.8	50.6
00:00-00:15	61.9	66.0	50.4
	61.8	65.6	50.7
	61.7	66.0	51.0
00:15-00:30	62.0	65.8	50.9
	61.2	64.9	51.5
	61.0	64.5	50.0
00:30-00:45	61.4	64.0	51.4
	61.1	64.0	51.6
	60.2	64.2	50.8
00:45:01:00	60.1	63.5	50.5
	60.0	63.7	49.3
	59.2	62.4	50.0
01:00-01:15	58.7	62.1	49.8
	60.2	63.6	50.4
	60.3	63.6	48.6
01:15-01:30	61.7	65.1	48.8
	61.5	64.5	48.8

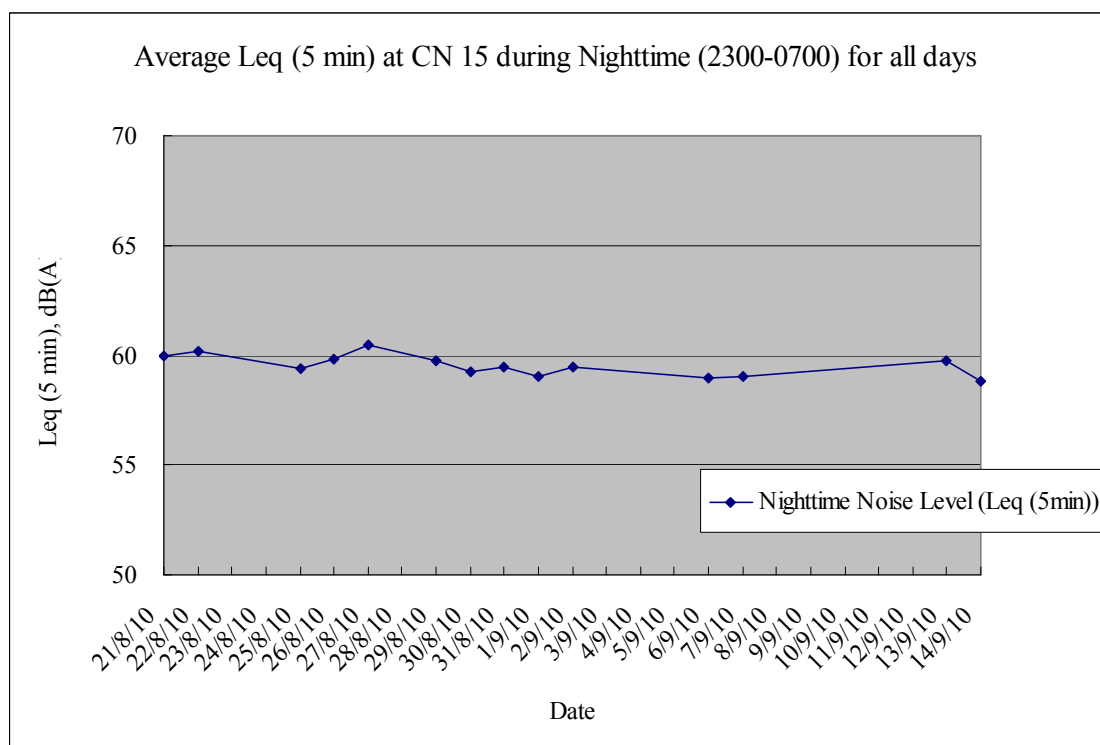
Time Slot	Leq, 5min	L10	L90
	59.4	63.4	48.6
01:30-01:45	59.9	63.2	50.0
	58.9	61.6	49.0
	57.7	60.8	48.3
01:45-02:00	58.1	61.0	49.5
	58.0	60.7	49.2
	60.6	63.2	47.9
02:00-02:15	60.3	62.6	49.2
	60.1	62.2	49.3
	58.0	61.6	47.2
02:15-02:30	57.9	60.3	46.3
	58.1	62.6	48.2
	56.7	58.8	47.2
02:30-02:45	57.5	61.7	48.4
	55.3	57.9	48.3
	56.5	60.0	46.9
02:45-03:00	57.4	59.5	47.0
	57.3	60.5	48.2
	57.6	61.2	47.7
03:00-03:15	58.4	60.5	47.4
	58.5	62.1	47.5
	57.6	60.5	48.2
03:15-03:30	57.3	58.9	45.6
	54.0	56.4	45.9
	54.7	56.1	47.4
03:30-03:45	57.3	60.4	47.7
	59.0	61.4	49.0
	57.3	59.2	46.5
03:45-04:00	54.5	56.8	45.2
	58.4	61.5	48.1
	59.2	61.0	47.6
04:00-04:15	55.3	59.0	43.9
	54.4	56.2	46.4
	55.9	56.5	42.9
04:15-04:30	54.5	56.4	44.8
	57.2	60.5	46.2

Time Slot	Leq, 5min	L10	L90
	56.1	57.0	43.7
04:30-04:45	58.9	60.2	46.7
	57.7	60.0	45.6
	57.7	61.4	44.6
04:45-05:00	59.0	62.5	44.8
	57.4	61.1	47.2
	57.7	62.1	44.7
05:00-05:15	54.6	57.5	47.1
	58.1	61.4	46.5
	58.6	61.4	46.0
05:15-05:30	59.3	62.5	46.8
	59.8	63.9	47.3
	58.9	62.6	47.6
05:30-05:45	58.2	61.6	47.2
	56.7	59.6	47.6
	60.8	63.5	45.5
05:45-06:00	60.2	64.5	45.6
	58.6	62.5	45.3
	59.0	62.2	44.8
06:00-06:15	60.5	63.9	44.7
	60.5	64.2	45.6
	61.3	65.4	45.7
06:15-06:30	60.7	64.5	45.7
	62.5	66.8	46.5
	62.0	66.8	47.3
06:30-06:45	61.2	65.3	45.8
	61.9	66.3	45.9
	62.7	66.9	46.6
06:45-07:00	62.7	67.4	46.8
	61.5	65.4	46.7
	63.9	67.9	46.9
Average	60.1	63.7	48.4
Max	63.9	67.9	51.6
Min	54.0	56.1	42.9

Log average was used.



Note: Monitoring on 23/8, 24/8, 28/8, 3/9 – 5/9 and 8/9 – 12/9 was interrupted due to rainfall



Note: Monitoring on 23/8, 24/8, 28/8, 3/9 – 5/9 and 8/9 – 12/9 was interrupted due to rainfall

Location: CN 16 DD 114 LOT 1405 Sheung Tsuen
Baseline monitoring period: 21/8/2010 to 14/9/2010

Parameter: Leq

Time Slot Averaged Baselines

1) Weekdays Daytime Noise Level, dB(A)

Time slot	Leq, 30 min	L10	L90
07:00-07:30	49.4	52.5	43.4
07:30-08:00	48.8	51.8	43.3
08:00-08:30	48.8	52.3	42.6
08:30-09:00	49.0	52.3	42.8
09:00-09:30	49.0	52.1	43.3
09:30-10:00	50.6	53.6	43.0
10:00-10:30	50.2	53.4	43.3
10:30-11:00	52.7	56.7	43.2
11:00-11:30	51.4	54.0	43.1
11:30-12:00	51.5	55.7	42.3
12:00-12:30	50.1	53.7	41.7
12:30-13:00	50.5	53.5	42.2
13:00-13:30	51.9	55.3	43.5
13:30-14:00	52.0	55.2	46.4
14:00-14:30	50.5	53.2	45.8
14:30-15:00	50.6	53.7	43.2
15:00-15:30	51.2	54.7	43.2
15:30-16:00	51.1	54.3	43.1
16:00-16:30	50.8	54.1	44.0
16:30-17:00	51.2	54.8	43.0
17:00-17:30	51.1	54.4	42.6
17:30-18:00	48.7	51.7	43.4
18:00-18:30	50.7	54.7	42.3
18:30-19:00	49.6	54.8	41.6
Average	50.6	54.0	43.3
Max	52.7	56.7	46.4
Min	48.7	51.7	41.6

Noise Control Period Averaged Baselines

2) Weekdays Evening Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
19:00-19:15	49.7	52.4	45.6
	50.3	53.8	43.7
	53.6	57.7	47.2
19:15-19:30	50.4	52.2	47.6
	50.6	52.2	47.9
	50.6	52.3	48.3
19:30-19:45	51.4	52.9	49.3
	52.5	54.2	50.0
	53.5	55.4	50.2
19:45-20:00	50.4	53.6	46.8
	52.9	54.8	49.5
	50.6	53.2	46.9
20:00-20:15	53.6	56.0	49.5
	52.8	55.0	48.4
	51.7	53.6	49.0
20:15-20:30	53.2	55.1	50.1
	53.0	55.5	49.0
	49.7	52.2	46.4
20:30-20:45	52.8	54.9	49.6
	50.7	52.9	47.6
	53.1	55.0	49.7
20:45-21:00	53.7	56.0	50.0
	53.7	55.7	50.8
	52.8	55.2	49.2
21:00-21:15	54.6	56.4	49.2
	53.6	55.6	50.4
	54.1	56.0	51.0
21:15-21:30	53.1	55.0	50.6
	55.7	57.3	53.4
	53.1	54.9	48.9
21:30-21:45	54.7	57.0	50.0
	53.0	55.2	49.2
	53.5	55.4	50.5

Time Slot	Leq, 5min	L10	L90
21:45-22:00	53.7	55.7	50.7
	53.4	55.6	49.9
	53.2	55.4	49.1
22:00-22:15	53.7	55.8	50.2
	52.4	54.2	50.0
	53.4	55.3	50.6
22:15-22:30	53.0	55.4	47.6
	52.0	54.7	47.6
	51.7	54.1	48.0
22:30-22:45	52.0	54.5	47.9
	51.3	53.7	47.2
	51.5	54.2	46.8
22:45-23:00	50.7	53.2	46.8
	50.7	53.3	46.6
	51.5	53.9	48.0
Average	52.7	54.9	49.1
Max	55.7	57.7	53.4
Min	49.7	52.2	43.7

3) General Holidays (including Sundays) (0700-2300) Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
0700-07:15	48.6	51.4	43.5
	47.2	48.9	44.6
	49.0	52.0	44.3
07:15-07:30	53.2	54.8	45.2
	48.3	50.3	45.4
	50.1	52.9	45.1
07:30-07:45	51.8	55.2	45.3
	53.2	55.8	46.2
	50.4	53.0	45.9
07:45-08:00	48.8	51.4	44.7
	48.1	50.2	44.0
	47.6	49.5	44.5
08:00-08:15	47.8	50.4	43.6

Time Slot	Leq, 5min	L10	L90
	47.8	50.0	42.9
	49.1	52.2	43.8
08:15-08:30	48.1	50.1	42.6
	48.3	51.4	43.0
	50.2	53.1	45.8
08:30-08:45	50.3	53.0	45.0
	51.0	54.5	44.9
	48.6	51.6	44.0
08:45-09:00	50.7	53.1	47.4
	49.1	51.2	46.2
	45.4	47.3	42.6
09:00-09:15	49.8	54.3	43.4
	47.6	51.2	42.7
	52.7	57.0	43.3
09:15-09:30	53.4	56.7	43.6
	53.3	57.8	43.6
	48.3	51.6	42.8
09:30-09:45	50.6	54.5	43.1
	53.3	57.9	43.6
	52.3	56.0	43.1
09:45-10:00	52.9	56.6	43.8
	53.4	57.2	45.8
	55.2	58.9	46.2
10:00-10:15	51.6	54.9	43.9
	52.4	55.7	44.0
	53.4	57.5	43.2
10:15-10:30	50.7	52.5	42.0
	55.1	59.3	43.6
	48.8	52.4	42.6
10:30-10:45	47.3	50.2	42.1
	49.1	51.6	42.9
	50.9	54.1	43.3
10:45-11:00	50.8	54.0	43.2
	51.9	55.5	45.0
	53.5	58.1	43.4
11:00-11:15	50.3	54.4	42.4

Time Slot	Leq, 5min	L10	L90
	55.9	58.8	43.6
	51.6	54.7	42.3
11:15-11:30	53.4	57.3	43.7
	54.9	57.9	43.5
	48.3	52.1	42.6
11:30-11:45	47.8	50.9	43.1
	48.2	50.8	43.0
	48.5	52.6	41.9
11:45-12:00	47.3	50.0	41.8
	46.6	48.7	41.7
	49.4	52.6	42.5
12:00-12:15	48.0	51.8	41.6
	51.3	55.8	43.0
	49.4	50.9	43.0
12:15-12:30	49.9	52.1	41.3
	49.1	52.2	41.7
	48.9	51.9	41.9
12:30-12:45	45.2	47.6	40.9
	49.1	53.1	43.9
	50.9	54.7	43.5
12:45-13:00	50.7	54.4	43.0
	53.0	54.9	42.7
	48.1	52.0	41.2
13:00-13:15	49.2	53.2	42.9
	45.5	49.5	40.3
	47.5	51.3	41.1
13:15-13:30	54.9	59.3	43.0
	48.4	52.5	41.6
	46.0	48.4	40.3
13:30-13:45	50.0	54.0	40.7
	46.4	49.6	41.0
	53.6	58.2	44.3
13:45-14:00	49.2	51.7	43.7
	48.0	50.6	42.4
	55.7	59.8	43.2
14:00-14:15	52.1	53.7	40.9

Time Slot	Leq, 5min	L10	L90
	51.9	55.2	42.7
	49.8	54.0	42.8
14:15-14:30	54.7	58.2	43.1
	52.1	55.9	42.5
	47.8	51.1	41.7
14:30-14:45	49.4	52.8	42.4
	51.0	54.2	42.2
	49.9	54.1	43.9
14:45-15:00	54.6	56.7	42.1
	52.6	56.0	43.1
	47.2	50.3	41.8
15:00-15:15	54.8	58.5	44.7
	51.9	56.8	42.5
	49.7	52.1	41.7
15:15-15:30	48.2	51.2	42.1
	51.9	55.5	43.6
	51.9	55.0	43.5
15:30-15:45	49.9	52.9	42.6
	52.3	55.3	43.0
	52.5	56.1	44.7
15:45-16:00	55.4	58.7	43.7
	50.1	54.1	41.6
	56.7	61.2	41.8
16:00-16:15	45.4	48.3	41.2
	50.5	52.8	43.0
	49.1	50.5	42.4
16:15-16:30	50.0	52.3	42.2
	50.3	53.1	43.5
	52.8	55.5	43.9
16:30-16:45	51.4	54.8	44.7
	52.3	56.9	41.8
	52.7	57.2	44.2
16:45-17:00	48.0	51.0	42.1
	56.3	60.6	43.5
	54.5	56.5	45.3
17:00-17:15	52.7	55.6	43.5

Time Slot	Leq, 5min	L10	L90
	50.9	54.6	43.6
	49.5	52.9	43.4
17:15-17:30	52.7	55.0	44.7
	49.3	52.2	43.7
	47.7	49.7	44.6
17:30-17:45	49.8	52.5	45.4
	50.1	51.6	45.2
	47.5	49.5	44.4
17:45-18:00	46.7	50.2	42.8
	49.9	52.4	44.5
	48.9	51.4	44.3
18:00-18:15	48.3	51.5	43.9
	46.4	48.5	43.4
	47.7	51.7	43.2
18:15-18:30	45.7	47.5	43.1
	46.7	49.5	43.1
	48.1	51.8	43.2
18:30-18:45	49.6	55.6	42.6
	49.1	52.6	42.0
	50.2	55.2	42.6
18:45-19:00	47.1	50.5	41.7
	46.3	48.9	42.3
	45.4	47.7	42.1
19:00-19:15	44.6	46.4	42.0
	44.7	46.9	42.0
	51.8	54.9	43.3
19:15-19:30	46.5	49.6	43.2
	56.7	60.0	48.0
	56.8	59.8	47.6
19:30-19:45	51.2	54.4	45.9
	49.7	52.1	46.3
	48.5	50.6	45.6
19:45-20:00	48.5	50.2	46.0
	48.9	51.0	46.0
	48.6	51.1	45.3
20:00-20:15	49.3	51.5	46.2

Time Slot	Leq, 5min	L10	L90
	48.0	49.8	44.8
	47.0	49.1	44.5
20:15-20:30	49.6	52.2	45.6
	48.8	50.8	45.9
	48.3	50.7	45.0
20:30-20:45	48.2	50.3	45.6
	48.1	50.0	45.4
	48.9	50.9	46.3
20:45-21:00	48.1	50.3	44.8
	49.3	51.7	45.0
	48.6	50.3	46.1
21:00-21:15	48.6	51.1	45.5
	48.6	50.5	45.8
	52.1	55.6	46.9
21:15-21:30	49.0	50.8	45.2
	48.5	50.4	45.2
	49.6	51.1	47.2
21:30-21:45	50.2	52.1	47.9
	48.2	50.2	45.2
	50.5	52.3	45.8
21:45-22:00	51.6	54.8	47.2
	49.7	51.1	48.1
	50.4	51.7	48.3
22:00-22:15	51.4	53.9	47.8
	48.3	50.5	45.5
	47.3	49.3	44.9
22:15-22:30	48.5	50.4	45.9
	48.5	50.1	46.7
	50.9	54.1	45.9
22:30-22:45	48.8	50.7	46.0
	48.7	50.5	45.9
	45.5	47.5	43.5
22:45-23:00	50.8	54.2	46.4
	51.3	54.5	45.8
	51.7	53.1	46.4
Average	50.8	54.1	44.2

Time Slot	Leq, 5min	L10	L90
Max	56.8	61.2	48.3
Min	44.6	46.4	40.3

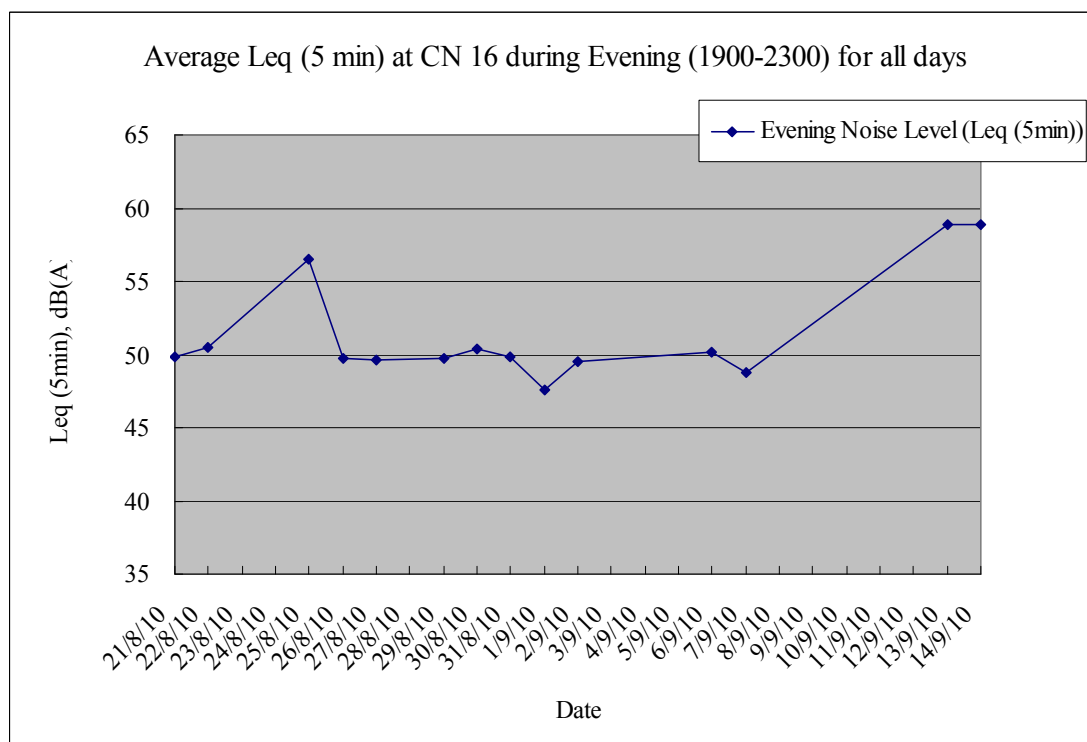
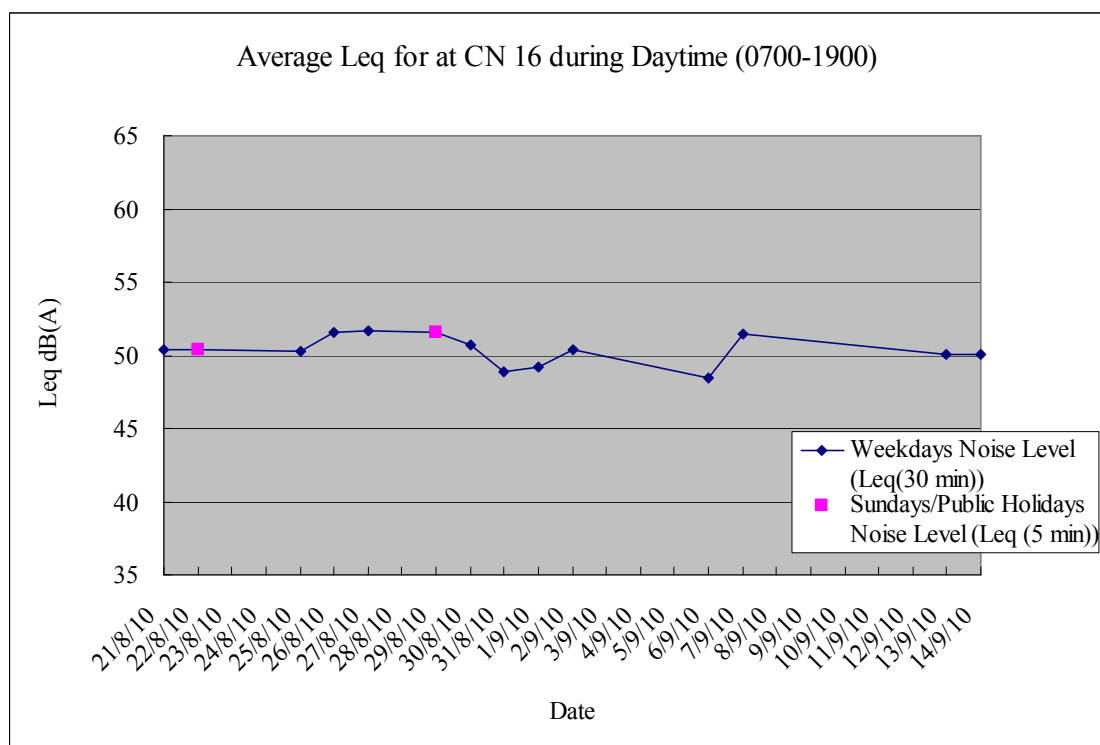
4) Night-time (for all days) Noise Level, dB(A)

Time Slot	Leq, 5min	L10	L90
23:00-23:15	51.2	54.5	46.7
	49.4	51.8	46.2
	49.2	51.7	44.8
23:15-23:30	48.6	50.8	45.2
	49.1	51.3	45.7
	49.4	52.7	45.4
23:30-23:45	50.7	53.9	45.6
	49.7	52.4	46.1
	48.6	51.2	45.0
23:45-00:00	50.6	54.4	45.1
	47.9	50.8	44.0
	47.1	49.8	43.5
00:00-00:15	51.1	53.4	48.0
	50.6	53.5	45.7
	52.3	54.7	48.6
00:15-00:30	52.1	55.4	44.3
	50.9	53.7	45.8
	50.1	54.8	43.2
00:30-00:45	50.7	54.6	43.9
	47.7	50.6	43.3
	54.7	58.4	43.8
00:45:01:00	54.8	59.2	43.9
	51.5	55.8	44.4
	47.7	50.7	43.6
01:00-01:15	49.6	54.3	43.0
	50.8	55.5	43.4
	51.7	56.5	43.0
01:15-01:30	47.2	50.5	42.7
	51.0	56.1	43.0
	50.9	54.9	43.2

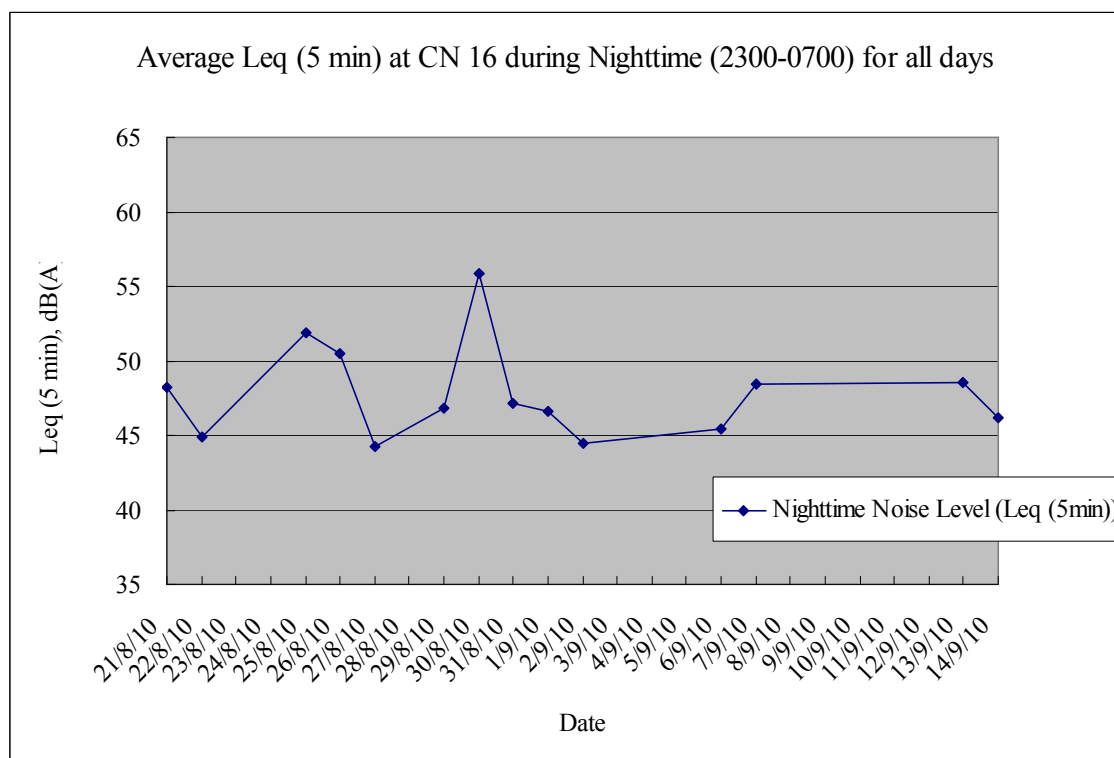
Time Slot	Leq, 5min	L10	L90
01:30-01:45	53.2	57.8	43.0
	52.8	56.7	42.7
	49.0	51.8	44.4
01:45-02:00	52.1	56.1	44.2
	49.9	54.9	43.1
	49.3	53.4	43.3
02:00-02:15	50.9	56.2	43.1
	47.3	50.4	43.2
	50.4	55.6	43.5
02:15-02:30	47.8	51.0	42.2
	50.7	56.5	42.1
	50.8	56.4	43.1
02:30-02:45	51.1	56.6	43.5
	47.8	51.3	43.2
	49.1	52.4	43.7
02:45-03:00	51.0	56.4	43.1
	48.7	52.0	44.6
	50.9	55.5	45.4
03:00-03:15	49.2	52.0	45.6
	51.0	55.0	43.5
	49.7	54.0	43.5
03:15-03:30	51.2	55.5	44.3
	49.1	51.8	45.6
	51.9	55.5	46.4
03:30-03:45	49.8	52.5	46.0
	49.3	52.3	43.6
	48.7	52.0	43.3
03:45-04:00	49.5	52.4	44.4
	49.8	52.6	44.8
	50.1	55.0	42.9
04:00-04:15	49.1	52.1	44.0
	49.5	53.6	43.5
	48.1	51.5	43.7
04:15-04:30	48.4	51.2	45.2
	48.5	51.2	45.3
	47.9	50.5	44.0

Time Slot	Leq, 5min	L10	L90
04:30-04:45	46.3	49.7	42.4
	46.0	48.5	42.2
	44.6	47.0	42.0
04:45-05:00	45.4	48.0	42.3
	45.5	47.5	42.6
	44.8	47.0	42.5
05:00-05:15	45.0	47.2	42.5
	44.7	46.7	42.4
	45.3	47.3	42.8
05:15-05:30	45.0	46.9	42.8
	44.6	46.2	42.3
	44.7	46.3	42.5
05:30-05:45	44.9	46.5	42.7
	45.4	47.5	42.6
	45.0	46.8	42.7
05:45-06:00	45.0	46.8	42.9
	45.6	47.8	42.8
	46.8	49.4	43.2
06:00-06:15	46.4	48.9	43.1
	47.8	50.6	43.0
	47.8	50.5	43.1
06:15-06:30	48.3	51.5	43.1
	47.7	50.2	43.3
	46.0	48.4	42.8
06:30-06:45	48.4	51.8	42.7
	49.1	52.1	43.7
	47.9	50.5	43.1
06:45-07:00	48.2	50.9	43.3
	49.5	52.5	43.3
	49.8	53.2	43.4
Average	49.5	53.2	44.0
Max	54.8	59.2	48.6
Min	44.6	46.2	42.0

Log average was used.



Note: Monitoring on 23/8, 24/8, 28/8, 3/9 – 5/9 and 8/9 – 12/9 was interrupted due to rainfall



Note: Monitoring on 23/8, 24/8, 28/8, 3/9 – 5/9 and 8/9 – 12/9 was interrupted due to rainfall

Appendix C

Calibration Certificates for Monitoring Equipments



輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C101749

Certificate of Calibration

This is to certify that the equipment

Description : Sound Level Calibrator

Manufacturer : ---

Model No. : ND9

Serial No. : N435849

*has been calibrated for the specific items and ranges.
The results are shown in the Calibration Report No. C101749.*

The equipment is supplied by

Co. Name : EDMS Tech Ltd.

*Address : Room 1009, 10/F., World Wide House,
19 Des Voeux Road Central, Hong Kong*

Date of Issue : 30 March 2010

Certified by :

K C Lee

The test equipment used for calibration are traceable to the National Standards as specified in this report.
This report shall not be reproduced except in full and with prior written approval from this laboratory.

Calibration and Testing Laboratory of Sun Creation Engineering Limited

c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong

Tel: 2927 2606

Fax: 2744 8986

E-mail: callab@suncreation.com

Website: www.suncreation.com



輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Report No. : C101749

Calibration Report

ITEM TESTED

DESCRIPTION : Sound Level Calibrator
MANUFACTURER : ---
MODEL NO. : ND9
SERIAL NO. : N435849

TEST CONDITIONS

AMBIENT TEMPERATURE : $(23 \pm 2)^{\circ}\text{C}$
LINE VOLTAGE : ---

RELATIVE HUMIDITY : $(55 \pm 20)\%$

TEST SPECIFICATIONS

Calibration

DATE OF TEST : 30 March 2010

JOB NO. : IC10-0777

TEST RESULTS

The results apply to the particular unit-under-test only.
All results are within manufacturer's specification. (after adjustment)
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies, USA
- Fluke Everett Service Center, USA
- Rohde & Schwarz Laboratory, Germany

Tested by :


L L Cheung

Date : 30 March 2010

The test equipment used for calibration are traceable to the National Standards as specified in this report.
This report shall not be reproduced except in full and with prior written approval from this laboratory.

Calibration and Testing Laboratory of Sun Creation Engineering Limited

c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
Tel: 2927 2606 Fax: 2744 8986 E-mail: callab@suncreation.com Website: www.suncreation.com

Page 1 of 2

Calibration Report

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours before the commencement of the test.
2. The results presented are the mean of 3 measurements at each calibration point.
3. Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C093122
CL281	Multifunction Acoustic Calibrator	DC090052
TST150A	Measuring Amplifier	C101008

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)		Mfr's Spec. (dB)	Uncertainty of Measured Value (dB)
	Before Adj.	After Adj.		
94 dB, 1 kHz	* 95.1	94.0	± 0.3	± 0.2
114 dB, 1 kHz	* 115.3	114.1		± 0.3

* Out of Mfr's Spec.

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)		Mfr's Spec.	Uncertainty of Measured Value (Hz)
	Before Adj.	After Adj.		
1	1.000	1.000	1 kHz ± 0.1 %	± 0.1

Remark : - The uncertainties are for a confidence probability of not less than 95 %.

Note :

The values given in this Calibration Report only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.



CERTIFICATE OF CALIBRATION

Certificate No. : 2KS100612-14

Page 1 of 2

Calibration of :

Description :	Sound Level Meter	,	Microphone
Manufacture :	Brüel & Kjær		
Type No. :	2250	,	4950
Serial No. :	2718893		2698653

Client :

EDMS Tech Ltd
1009, 10/F World Wide House
19 Des Douex Road, Central
Hong Kong

Calibration Conditions :

Air Temperature :	23	°C
Air Pressure :	101.9	kPa
Relative Humidity :	62	%

Test Specifications :

The Sound Level Meter has been calibrated in accordance with the requirements as specified in IEC 60651 and IEC 60804 type 1, and vendor specific procedures.

The measurements has been performed with the assistance of :
Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999
The standard(s) and instrument(s) used in the calibration are traceable to international standard and are calibrated on a schedule which is adjusted to maintain the required accuracy level.

Test Result :

A list of the performed (sub) tests is stated on page 2 of this certificate. Actual Measurement are documented on worksheet.

Date of Calibration : 21 June, 2010
Calibrated By :

Certificate issued : 22 June, 2010
Approved signatory :

Dai Bin

Jacky Leung

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CERTIFICATE OF CALIBRATION

Certificate No. : 2KS100612-14

Page 2 **of** 2

Results :

List of performed (sub) test with test status:

"OK" Means the result of the (sub)test is Inside the tolerances stated in the test specifications.

" - " Means the result of the (sub)test is Outside these tolerances.

Test :	Subtest :	Status :
Noise	A	OK
Noise	C	OK
Noise	Lin	OK
Frequency Weighting	A	OK
Frequency Weighting	C	OK
Frequency Weighting	Lin	OK
Level Range Control	1000 Hz	OK
Linearity Range	SPL 10dB 4000 Hz	OK
Linearity Range	SPL 1dB 1000 Hz	OK
Linearity Range	Leq	OK
Linearity Range	SEL	OK
RMS Detector	CF 3	OK
RMS Detector	CF 5	OK
RMS Detector	CF 10	OK
RMS Detector	Symmetry	OK
Time Weighting	Difference Indication	OK
Time Weighting	Single Burst FAST	OK
Time Weighting	Single Burst SLOW	OK
Time Weighting	Single Burst IMPULSE	OK
Time Weighting	Repetitive Burst	OK
Time Weighting	Peak	OK
Time Averaging		OK
Pulse Range		OK
Overload	SPL	OK
Overload	SEL	OK
Acoustic Response	A	OK
Acoustic Response	Lin	OK

Calibration Equipment :

Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999				
Description :	Make & Model :	Serial No. :	Last Cal. Date :	Traceable to:
Digital Multi-meter	Datron 1281	27361	30 Sept, 2009	HKSL (HOKLAS)
Sine/Noise Generator	B&K 1049	1314978	Test	B&K Conformance
Test Waveform Generator	B&K 5918	1482949	Test	B&K Conformance
Acoustical Calibrator	B&K 4226	1843103	11 Aug 2009	NPL via B&K (DANAK)

 Calibrated By : *Dan Bin*
 Date : 21 June 2010

 Checked By : *Janly*
 Date : 22 June, 2010

CERTIFICATE OF CALIBRATION**Certificate No. :** 2KS100612-8**Page** 1 **of** 2**Calibration of :**

Description :	Sound Level Meter	,	Microphone
Manufacture :	Brüel & Kjær		
Type No. :	2250	,	4950
Serial No. :	2718887		2698647

Client :

EDMS Tech Ltd
1009, 10/F World Wide House
19 Des Douex Road, Central
Hong Kong

Calibration Conditions :

Air Temperature :	23	°C
Air Pressure :	101.9	kPa
Relative Humidity :	62	%

Test Specifications :

The Sound Level Meter has been calibrated in accordance with the requirements as specified in IEC 60651 and IEC 60804 type 1, and vendor specific procedures.

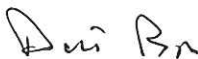
The measurements has been performed with the assistance of :

Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999

The standard(s) and instrument(s) used in the calibration are traceable to international standard and are calibrated on a schedule which is adjusted to maintain the required accuracy level.

Test Result :

A list of the performed (sub) tests is stated on page 2 of this certificate. Actual Measurement are documented on worksheet.

Date of Calibration : 21 June, 2010**Calibrated By :****Certificate issued :** 22 June, 2010**Approved signatory :**
Dai Bin
Jacky Leung

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CERTIFICATE OF CALIBRATION

Certificate No. : 2KS100612-8

Page 2 **of** 2

Results :

List of performed (sub) test with test status:

"OK" Means the result of the (sub)test is Inside the tolerances stated in the test specifications.

" - " Means the result of the (sub)test is Outside these tolerances.

Test :	Subtest :	Status :
Noise	A	OK
Noise	C	OK
Noise	Lin	OK
Frequency Weighting	A	OK
Frequency Weighting	C	OK
Frequency Weighting	Lin	OK
Level Range Control	1000 Hz	OK
Linearity Range	SPL 10dB 4000 Hz	OK
Linearity Range	SPL 1dB 1000 Hz	OK
Linearity Range	Leq	OK
Linearity Range	SEL	OK
RMS Detector	CF 3	OK
RMS Detector	CF 5	OK
RMS Detector	CF 10	OK
RMS Detector	Symmetry	OK
Time Weighting	Difference Indication	OK
Time Weighting	Single Burst FAST	OK
Time Weighting	Single Burst SLOW	OK
Time Weighting	Single Burst IMPULSE	OK
Time Weighting	Repetitive Burst	OK
Time Weighting	Peak	OK
Time Averaging		OK
Pulse Range		OK
Overload	SPL	OK
Overload	SEL	OK
Acoustic Response	A	OK
Acoustic Response	Lin	OK

Calibration Equipment :

Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999				
Description :	Make & Model :	Serial No. :	Last Cal. Date :	Traceable to:
Digital Multi-meter	Datron 1281	27361	30 Sept, 2009	HKSL (HOKLAS)
Sine/Noise Generator	B&K 1049	1314978	Test	B&K Conformance
Test Waveform Generator	B&K 5918	1482949	Test	B&K Conformance
Acoustical Calibrator	B&K 4226	1843103	11 Aug 2009	NPL via B&K (DANAK)

 Calibrated By : *Don Bm*
 Date : 21 June 2010

 Checked By : *Andy*
 Date : 22 June, 2010

CERTIFICATE OF CALIBRATION**Certificate No. :** 2KS100612-16**Page** 1 **of** 2**Calibration of :**

Description :	Sound Level Meter	,	Microphone
Manufacture :	Brüel & Kjær		
Type No. :	2250	,	4950
Serial No. :	2718895		2698655

Client :

EDMS Tech Ltd
1009, 10/F World Wide House
19 Des Douex Road, Central
Hong Kong

Calibration Conditions :

Air Temperature :	23	°C
Air Pressure :	101.9	kPa
Relative Humidity :	62	%

Test Specifications :

The Sound Level Meter has been calibrated in accordance with the requirements as specified in IEC 60651 and IEC 60804 type 1, and vendor specific procedures.

The measurements has been performed with the assistance of :
Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999
The standard(s) and instrument(s) used in the calibration are traceable to international standard and are calibrated on a schedule which is adjusted to maintain the required accuracy level.

Test Result :

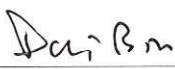
A list of the performed (sub) tests is stated on page 2 of this certificate. Actual Measurement are documented on worksheet.

Date of Calibration : 21 June, 2010

Certificate issued : 22 June, 2010

Calibrated By :

Approved signatory :


Dai Bin
Jacky Leung

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CERTIFICATE OF CALIBRATION

Certificate No. : 2KS100612-16

Page 2 **of** 2

Results :

List of performed (sub) test with test status:

"OK" Means the result of the (sub)test is Inside the tolerances stated in the test specifications.

" - " Means the result of the (sub)test is Outside these tolerances.

Test :	Subtest :	Status :
Noise	A	OK
Noise	C	OK
Noise	Lin	OK
Frequency Weighting	A	OK
Frequency Weighting	C	OK
Frequency Weighting	Lin	OK
Level Range Control	1000 Hz	OK
Linearity Range	SPL 10dB 4000 Hz	OK
Linearity Range	SPL 1dB 1000 Hz	OK
Linearity Range	Leq	OK
Linearity Range	SEL	OK
RMS Detector	CF 3	OK
RMS Detector	CF 5	OK
RMS Detector	CF 10	OK
RMS Detector	Symmetry	OK
Time Weighting	Difference Indication	OK
Time Weighting	Single Burst FAST	OK
Time Weighting	Single Burst SLOW	OK
Time Weighting	Single Burst IMPULSE	OK
Time Weighting	Repetitive Burst	OK
Time Weighting	Peak	OK
Time Averaging		OK
Pulse Range		OK
Overload	SPL	OK
Overload	SEL	OK
Acoustic Response	A	OK
Acoustic Response	Lin	OK

Calibration Equipment :

Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999				
Description :	Make & Model :	Serial No. :	Last Cal. Date :	Traceable to:
Digital Multi-meter	Datron 1281	27361	30 Sept, 2009	HKSL (HOKLAS)
Sine/Noise Generator	B&K 1049	1314978	Test	B&K Conformance
Test Waveform Generator	B&K 5918	1482949	Test	B&K Conformance
Acoustical Calibrator	B&K 4226	1843103	11 Aug 2009	NPL via B&K (DANAK)

 Calibrated By : *Dai Bm*
 Date : 21 June 2010

 Checked By : *July*
 Date : 22 June, 2010

CERTIFICATE OF CALIBRATION**Certificate No. :** 2KS100612-1**Page** 1 **of** 2**Calibration of :**

Description :	Sound Level Meter	,	Microphone
Manufacture :	Brüel & Kjær		
Type No. :	2250	,	4950
Serial No. :	2718879		2698677

Client :

EDMS Tech Ltd
1009, 10/F World Wide House
19 Des Douex Road, Central
Hong Kong

Calibration Conditions :

Air Temperature :	23	°C
Air Pressure :	101.9	kPa
Relative Humidity :	62	%

Test Specifications :

The Sound Level Meter has been calibrated in accordance with the requirements as specified in IEC 60651 and IEC 60804 type 1, and vendor specific procedures.

The measurements has been performed with the assistance of :
Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999
The standard(s) and instrument(s) used in the calibration are traceable to international standard and are calibrated on a schedule which is adjusted to maintain the required accuracy level.

Test Result :

A list of the performed (sub) tests is stated on page 2 of this certificate. Actual Measurement are documented on worksheet.

Date of Calibration : 21 June, 2010

Calibrated By :



Dai Bin

Certificate issued : 22 June, 2010

Approved signatory :



Jacky Leung

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CERTIFICATE OF CALIBRATION

Certificate No. : 2KS100612-1

Page 2 **of** 2

Results :

List of performed (sub) test with test status:

"OK" Means the result of the (sub)test is Inside the tolerances stated in the test specifications.

" - " Means the result of the (sub)test is Outside these tolerances.

Test :	Subtest :	Status :
Noise	A	OK
Noise	C	OK
Noise	Lin	OK
Frequency Weighting	A	OK
Frequency Weighting	C	OK
Frequency Weighting	Lin	OK
Level Range Control	1000 Hz	OK
Linearity Range	SPL 10dB 4000 Hz	OK
Linearity Range	SPL 1dB 1000 Hz	OK
Linearity Range	Leq	OK
Linearity Range	SEL	OK
RMS Detector	CF 3	OK
RMS Detector	CF 5	OK
RMS Detector	CF 10	OK
RMS Detector	Symmetry	OK
Time Weighting	Difference Indication	OK
Time Weighting	Single Burst FAST	OK
Time Weighting	Single Burst SLOW	OK
Time Weighting	Single Burst IMPULSE	OK
Time Weighting	Repetitive Burst	OK
Time Weighting	Peak	OK
Time Averaging		OK
Pulse Range		OK
Overload	SPL	OK
Overload	SEL	OK
Acoustic Response	A	OK
Acoustic Response	Lin	OK

Calibration Equipment :

Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999				
Description :	Make & Model :	Serial No. :	Last Cal. Date :	Traceable to:
Digital Multi-meter	Datron 1281	27361	30 Sept, 2009	HKSC (HOKLAS)
Sine/Noise Generator	B&K 1049	1314978	Test	B&K Conformance
Test Waveform Generator	B&K 5918	1482949	Test	B&K Conformance
Acoustical Calibrator	B&K 4226	1843103	11 Aug 2009	NPL via B&K (DANAK)

 Calibrated By : *Dan Bon*
 Date : 21 June 2010

 Checked By : *Janey*
 Date : 22 June, 2010



CERTIFICATE OF CALIBRATION

Certificate No. : 2KS100612-6

Page 1 of 2

Calibration of :

Description :	Sound Level Meter	,	Microphone
Manufacture :	Brüel & Kjær		
Type No. :	2250	,	4950
Serial No. :	2718885		2698645

Client :

EDMS Tech Ltd
1009, 10/F World Wide House
19 Des Douex Road, Central
Hong Kong

Calibration Conditions :

Air Temperature :	23	°C
Air Pressure :	101.9	kPa
Relative Humidity :	62	%

Test Specifications :

The Sound Level Meter has been calibrated in accordance with the requirements as specified in IEC 60651 and IEC 60804 type 1, and vendor specific procedures.

The measurements has been performed with the assistance of :
Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999
The standard(s) and instrument(s) used in the calibration are traceable to international standard and are calibrated on a schedule which is adjusted to maintain the required accuracy level.

Test Result :

A list of the performed (sub) tests is stated on page 2 of this certificate. Actual Measurement are documented on worksheet.

Date of Calibration : 21 June, 2010

Calibrated By :

Certificate issued : 22 June, 2010

Approved signatory :

Dai Bin

Dai Bin

Jacky Leung

Jacky Leung

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CERTIFICATE OF CALIBRATION

Certificate No. : 2KS100612-6

Page 2 **of** 2

Results :

List of performed (sub) test with test status:

"OK" Means the result of the (sub)test is Inside the tolerances stated in the test specifications.

" - " Means the result of the (sub)test is Outside these tolerances.

Test :	Subtest :	Status :
Noise	A	OK
Noise	C	OK
Noise	Lin	OK
Frequency Weighting	A	OK
Frequency Weighting	C	OK
Frequency Weighting	Lin	OK
Level Range Control	1000 Hz	OK
Linearity Range	SPL 10dB 4000 Hz	OK
Linearity Range	SPL 1dB 1000 Hz	OK
Linearity Range	Leq	OK
Linearity Range	SEL	OK
RMS Detector	CF 3	OK
RMS Detector	CF 5	OK
RMS Detector	CF 10	OK
RMS Detector	Symmetry	OK
Time Weighting	Difference Indication	OK
Time Weighting	Single Burst FAST	OK
Time Weighting	Single Burst SLOW	OK
Time Weighting	Single Burst IMPULSE	OK
Time Weighting	Repetitive Burst	OK
Time Weighting	Peak	OK
Time Averaging		OK
Pulse Range		OK
Overload	SPL	OK
Overload	SEL	OK
Acoustic Response	A	OK
Acoustic Response	Lin	OK

Calibration Equipment :

Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999

Description :	Make & Model :	Serial No. :	Last Cal. Date :	Traceable to:
Digital Multi-meter	Datron 1281	27361	30 Sept, 2009	HKSCS (HOKLAS)
Sine/Noise Generator	B&K 1049	1314978	Test	B&K Conformance
Test Waveform Generator	B&K 5918	1482949	Test	B&K Conformance
Acoustical Calibrator	B&K 4226	1843103	11 Aug 2009	NPL via B&K (DANAK)

 Calibrated By : *Don B, m*
 Date : 21 June 2010

 Checked By : *Janly*
 Date : 22 June, 2010

CERTIFICATE OF CALIBRATION**Certificate No. :** 2KS100612-9**Page** 1 **of** 2**Calibration of :**

Description :	Sound Level Meter	,	Microphone
Manufacture :	Brüel & Kjær		
Type No. :	2250	,	4950
Serial No. :	2718888		2698648

Client :

EDMS Tech Ltd
1009, 10/F World Wide House
19 Des Douex Road, Central
Hong Kong

Calibration Conditions :

Air Temperature :	23	°C
Air Pressure :	101.9	kPa
Relative Humidity :	62	%

Test Specifications :

The Sound Level Meter has been calibrated in accordance with the requirements as specified in IEC 60651 and IEC 60804 type 1, and vendor specific procedures.

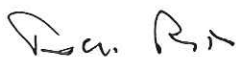
The measurements has been performed with the assistance of :
Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999
The standard(s) and instrument(s) used in the calibration are traceable to international standard and are calibrated on a schedule which is adjusted to maintain the required accuracy level.

Test Result :

A list of the performed (sub) tests is stated on page 2 of this certificate. Actual Measurement are documented on worksheet.

Date of Calibration : 21 June, 2010

Calibrated By :



Dai Bin

Certificate issued : 22 June, 2010

Approved signatory :



Jacky Leung

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CERTIFICATE OF CALIBRATION

Certificate No. : 2KS100612-9

Page 2 **of** 2

Results :

List of performed (sub) test with test status:

"OK" Means the result of the (sub)test is Inside the tolerances stated in the test specifications.

" - " Means the result of the (sub)test is Outside these tolerances.

Test :	Subtest :	Status :
Noise	A	OK
Noise	C	OK
Noise	Lin	OK
Frequency Weighting	A	OK
Frequency Weighting	C	OK
Frequency Weighting	Lin	OK
Level Range Control	1000 Hz	OK
Linearity Range	SPL 10dB 4000 Hz	OK
Linearity Range	SPL 1dB 1000 Hz	OK
Linearity Range	Leq	OK
Linearity Range	SEL	OK
RMS Detector	CF 3	OK
RMS Detector	CF 5	OK
RMS Detector	CF 10	OK
RMS Detector	Symmetry	OK
Time Weighting	Difference Indication	OK
Time Weighting	Single Burst FAST	OK
Time Weighting	Single Burst SLOW	OK
Time Weighting	Single Burst IMPULSE	OK
Time Weighting	Repetitive Burst	OK
Time Weighting	Peak	OK
Time Averaging		OK
Pulse Range		OK
Overload	SPL	OK
Overload	SEL	OK
Acoustic Response	A	OK
Acoustic Response	Lin	OK

Calibration Equipment :

Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999				
Description :	Make & Model :	Serial No. :	Last Cal. Date :	Traceable to:
Digital Multi-meter	Datron 1281	27361	30 Sept, 2009	HKSL (HOKLAS)
Sine/Noise Generator	B&K 1049	1314978	Test	B&K Conformance
Test Waveform Generator	B&K 5918	1482949	Test	B&K Conformance
Acoustical Calibrator	B&K 4226	1843103	11 Aug 2009	NPL via B&K (DANAK)

 Calibrated By : 
 Date : 21 June 2010

 Checked By : 
 Date : 22 June, 2010

ThermoFisher
SCIENTIFIC
27 FORGE PARKWAY
FRANKLIN MA 02038
TOLL FREE: 866-282-0430
TEL: 508-553-6949
FAX: 508-541-8366
www.thermofisher.com

PDR1000 CALIBRATION CERTIFICATE

This calibration is traceable to the National Institute of Standards and Testing

<u>SERIAL NUMBER:</u>	<u>3893</u>	
<u>CALIBRATION RATIO:</u>	<u>1.007</u>	
<u>AVG. PDR CONCENTRATION:</u>	<u>2.25</u>	<u>mg/m3</u>
<u>MASTER AVG CONCENTRATION:</u>	<u>2.05</u>	<u>mg/m3</u>
<u>PDR BACKGROUND CONCENTRATION:</u>	<u>0.172</u>	<u>mg/m3</u>
<u>PDR BKGRND PRIOR TO CLEANING:</u>	<u>0.379</u>	<u>mg/m3</u>

<u>TEMPERATURE:</u>	<u>69</u>	<u>F</u>
<u>RH:</u>	<u>15</u>	<u>%</u>

CALIBRATION MASTER:	<u>D325</u>
LAST CALIBRATED:	<u>12/8/2009</u>

TECHNICIAN: DMC

DATE: 12/18/2009

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PDR1000 CALIBRATION CERTIFICATE

This calibration is traceable to the National Institute of Standards and Testing

<u>SERIAL NUMBER:</u>	<u>4239</u>	
<u>CALIBRATION RATIO:</u>	<u>1.003</u>	
<u>AVG. PDR CONCENTRATION:</u>	<u>1.28</u>	<u>mg/m3</u>
<u>MASTER AVG CONCENTRATION:</u>	<u>1.03</u>	<u>mg/m3</u>
<u>PDR BACKGROUND CONCENTRATION:</u>	<u>0.216</u>	<u>mg/m3</u>

<u>TEMPERATURE:</u>	<u>72</u>	<u>F</u>
<u>RH:</u>	<u>39</u>	<u>%</u>

CALIBRATION MASTER:	<u>D325</u>
LAST CALIBRATED:	<u>29/7/2008</u>

TECHNICIAN: R.A.

DATE: 26/8/2008



TISCH ENVIRONMENTAL, INC.
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 877.263.7610 TOLL FREE
 513.467.9009 FAX
 WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Mar 03, 2010 Rootsmeter S/N 9833620 Ta (K) - 292
 Operator Tisch Orifice I.D. - 1378 Pa (mm) - 749.3

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.4040	3.2	2.00
2	NA	NA	1.00	0.9880	6.4	4.00
3	NA	NA	1.00	0.8840	8.0	5.00
4	NA	NA	1.00	0.8420	8.8	5.50
5	NA	NA	1.00	0.6950	12.8	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
1.0019	0.7136	1.4186	0.9957	0.7092	0.8828
0.9976	1.0097	2.0062	0.9915	1.0035	1.2485
0.9953	1.1260	2.2430	0.9892	1.1190	1.3959
0.9943	1.1809	2.3524	0.9882	1.1737	1.4640
0.9890	1.4230	2.8372	0.9829	1.4142	1.7657
Qstd slope (m) = 2.00078			Qa slope (m) = 1.25285		
intercept (b) = -0.01075			intercept (b) = -0.00669		
coefficient (r) = 0.99999			coefficient (r) = 0.99999		
y axis = SQRT[H2O(Pa/760) (298/Ta)]			y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

$$Vstd = \text{Diff. Vol}[(Pa - \text{Diff. Hg})/760] (298/Ta)$$

$$Qstd = Vstd/\text{Time}$$

$$Va = \text{Diff Vol} [(Pa - \text{Diff Hg})/Pa]$$

$$Qa = Va/\text{Time}$$

For subsequent flow rate calculations:

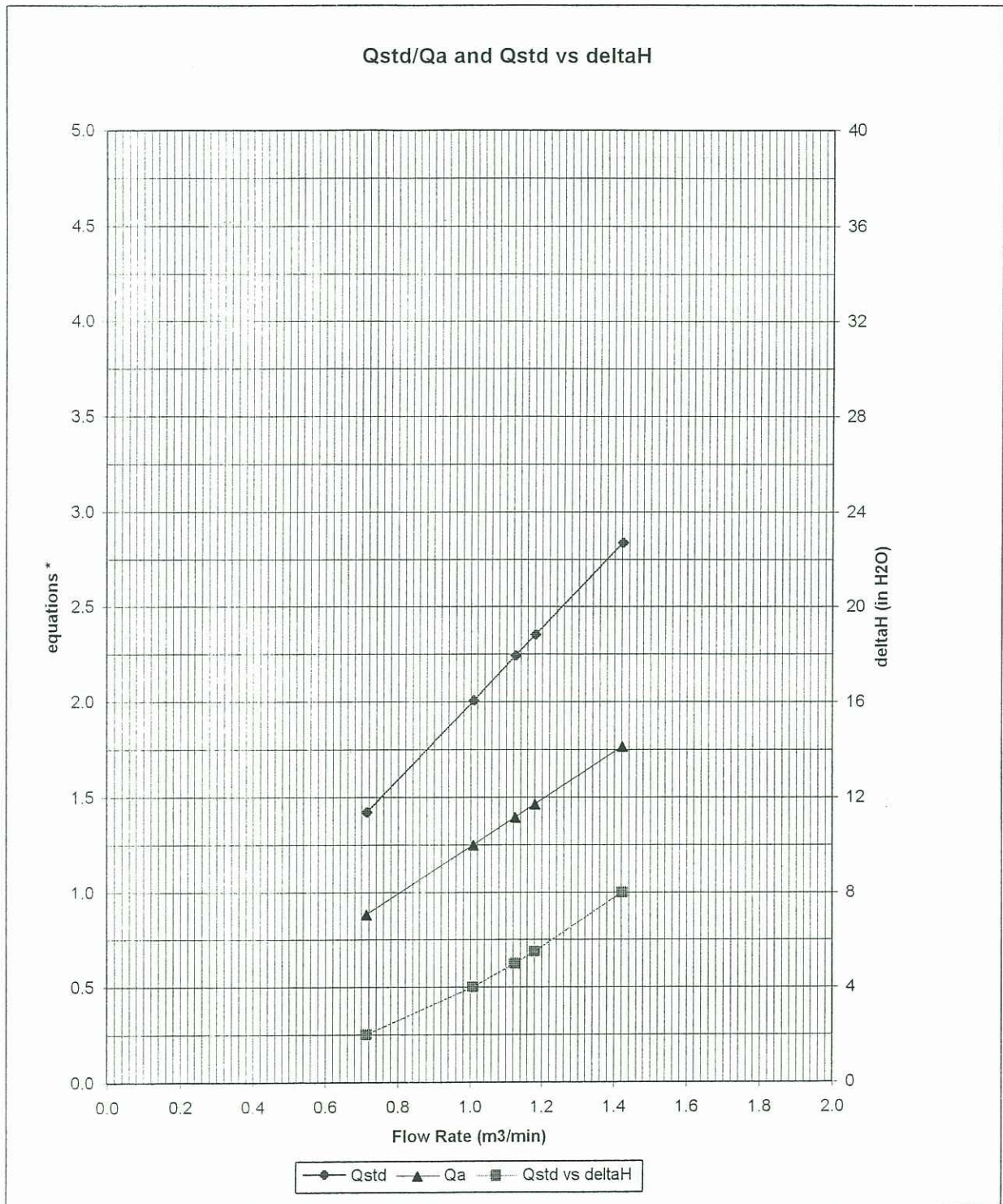
$$Qstd = 1/m\{[\text{SQRT}(H2O(Pa/760) (298/Ta))] - b\}$$

$$Qa = 1/m\{[\text{SQRT } H2O(Ta/Pa)] - b\}$$



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AIR POLLUTION MONITORING EQUIPMENT



* y-axis equations:

Qstd series:
$$\sqrt{\Delta H \left(\frac{P_a}{P_{std}} \right) \left(\frac{T_{std}}{T_a} \right)}$$

Qa series:
$$\sqrt{(\Delta H (T_a / P_a))}$$

#1378

Ove Arup Partners (Hong Kong) Limited

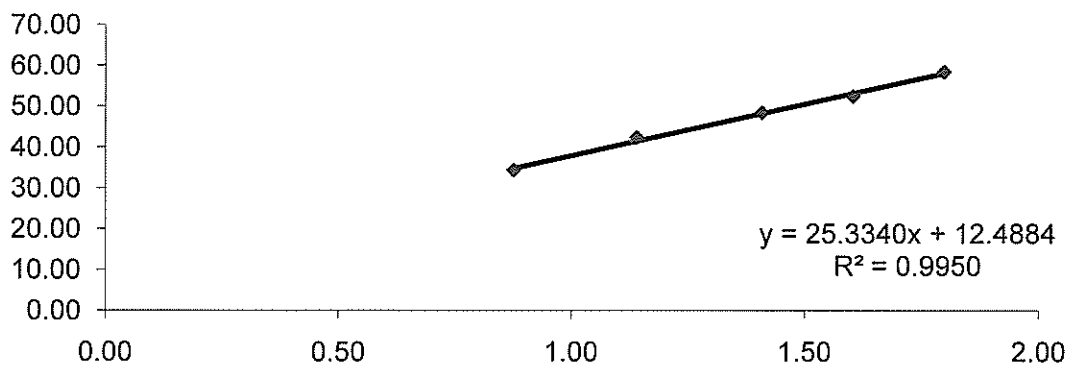
High Volume Air Sampler Calibration Worksheet

Calibration date	19-Mar-10	Barometric pressure	764 mm Hg
Next Calibration date	15-Sep-10	Temperature (°C)	23 °C
Sampler location	AM2 Yau Tam Mei Village House	Temperature (K)	296 K
Sampler model	TE-5170	P _{std}	760 mm Hg
Sampler serial number	468	T _{std}	298 K

Calibrator model	GMW-2535
Calibrator serial number	1378
Slope of the standard curve, m _s	2.00078
Intercept of the standard curve, b _s	-0.01075

Resistance Plate No.	Manometer Reading (inch H ₂ O)	Flow Recorder Reading (CFM)	Calculated Q _{std} (m ³ /min)	Continuous Flow Recorder Reading IC (CFM)
5	3.00	34.00	0.88	34.20
7	5.10	42.00	1.14	42.25
10	7.80	48.00	1.41	48.29
13	10.10	52.00	1.60	52.31
18	12.70	58.00	1.80	58.35

Calibration Curve



Linear Regression

Sampler slope (m) : **25.3340**
 Sampler intercept (b) : **12.4884**
 Correlation coefficient (R²) : **0.9950**

Correlation coefficient is greater than 0.9900 and the calibration result is accepted.

Performed by: _____

Date: 19-3-10

Checked by: _____

Date: 19-03-10

Approved by: _____

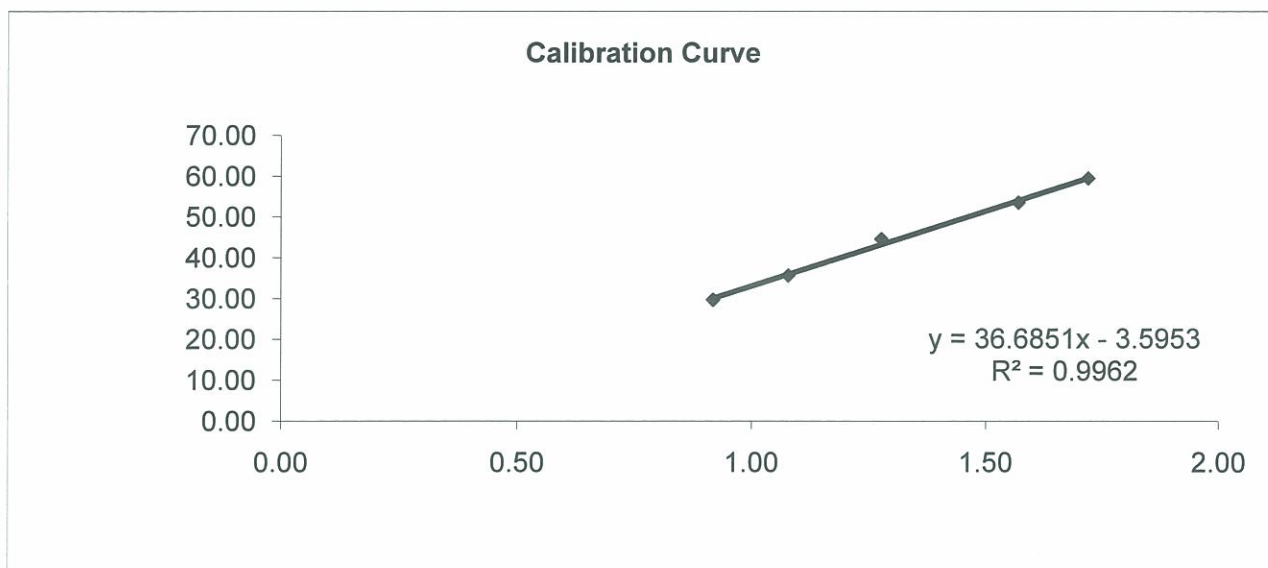
Date: 22/03/10

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High Volume Air Sampler Calibration Worksheet

Calibration date	24-Jun-10	Barometric pressure	753.8 mm Hg
Next Calibration date	21-Dec-10	Temperature (°C)	28.5 °C
Sampler location	AM3 Kong Tai Road Village House	Temperature (K)	301.5 K
Sampler model	TE-5170	P _{std}	760 mm Hg
Sampler serial number	510	T _{std}	298 K
Calibrator model	GMW-2535		
Calibrator serial number	1378		
Slope of the standard curve, m _s	2.00078		
Intercept of the standard curve, b _s	-0.01075		

Resistance Plate No.	Manometer Reading (inch H ₂ O)	Flow Recorder Reading (CFM)	Calculated Q _{std} (m ³ /min)	Continuous Flow Recorder Reading IC (CFM)
5	3.40	30.00	0.92	29.70
7	4.70	36.00	1.08	35.64
10	6.60	45.00	1.28	44.56
13	10.00	54.00	1.57	53.47
18	12.00	60.00	1.72	59.41



Linear Regression

Sampler slope (m) : **36.6851**
 Sampler intercept (b) : **-3.5953**
 Correlation coefficient (R²) : **0.9962**

Correlation coefficient is greater than 0.9900 and the calibration result is accepted.

Performed by: _____

Date: 24-6-10

Checked by: _____

Date: 24-06-10

Approved by: _____

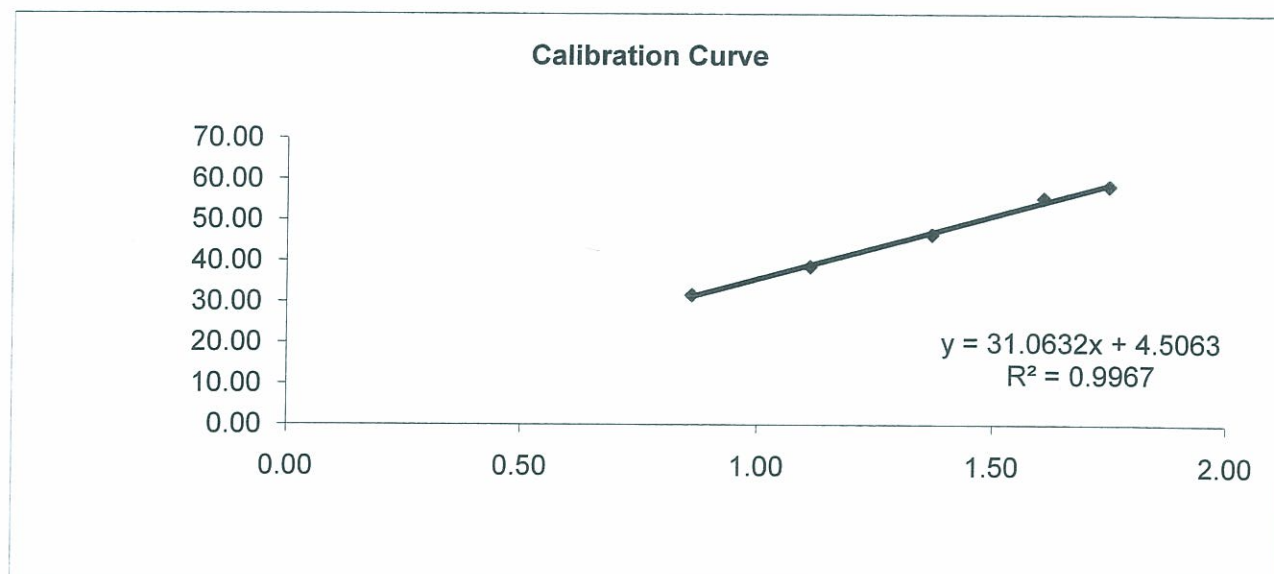
Date: 29/06/10

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High Volume Air Sampler Calibration Worksheet

Calibration date	30-Jul-10	Barometric pressure	753 mm Hg
Next Calibration date	26-Jan-11	Temperature (°C)	28.5 °C
	AM8 - No. 306, Sheung Tsuen San		
Sampler location	Tsuen Village House	Temperature (K)	301.5 K
Sampler model	TE-5170	P _{std}	760 mm Hg
Sampler serial number	527	T _{std}	298 K
Calibrator model	GMW-2535		
Calibrator serial number	1378		
Slope of the standard curve, m _s	2.00078		
Intercept of the standard curve, b _s	-0.01075		

Resistance Plate No.	Manometer Reading (inch H ₂ O)	Flow Recorder Reading (CFM)	Calculated Q _{std} (m ³ /min)	Continuous Flow Recorder Reading IC (CFM)
5	3.00	32.00	0.86	31.67
7	5.00	39.00	1.11	38.59
10	7.60	47.00	1.37	46.51
13	10.50	56.00	1.61	55.42
18	12.40	59.00	1.75	58.39



Linear Regression

Sampler slope (m) : **31.0632**
 Sampler intercept (b) : **4.5063**
 Correlation coefficient (R²) : **0.9967**

Correlation coefficient is greater than 0.9900 and the calibration result is accepted.

Performed by: _____

Date: 30-Jul-2010

Checked by: _____

Date: 30th July 2010

Approved by: _____

Date: 30 July 2010

Appendix D

Figures

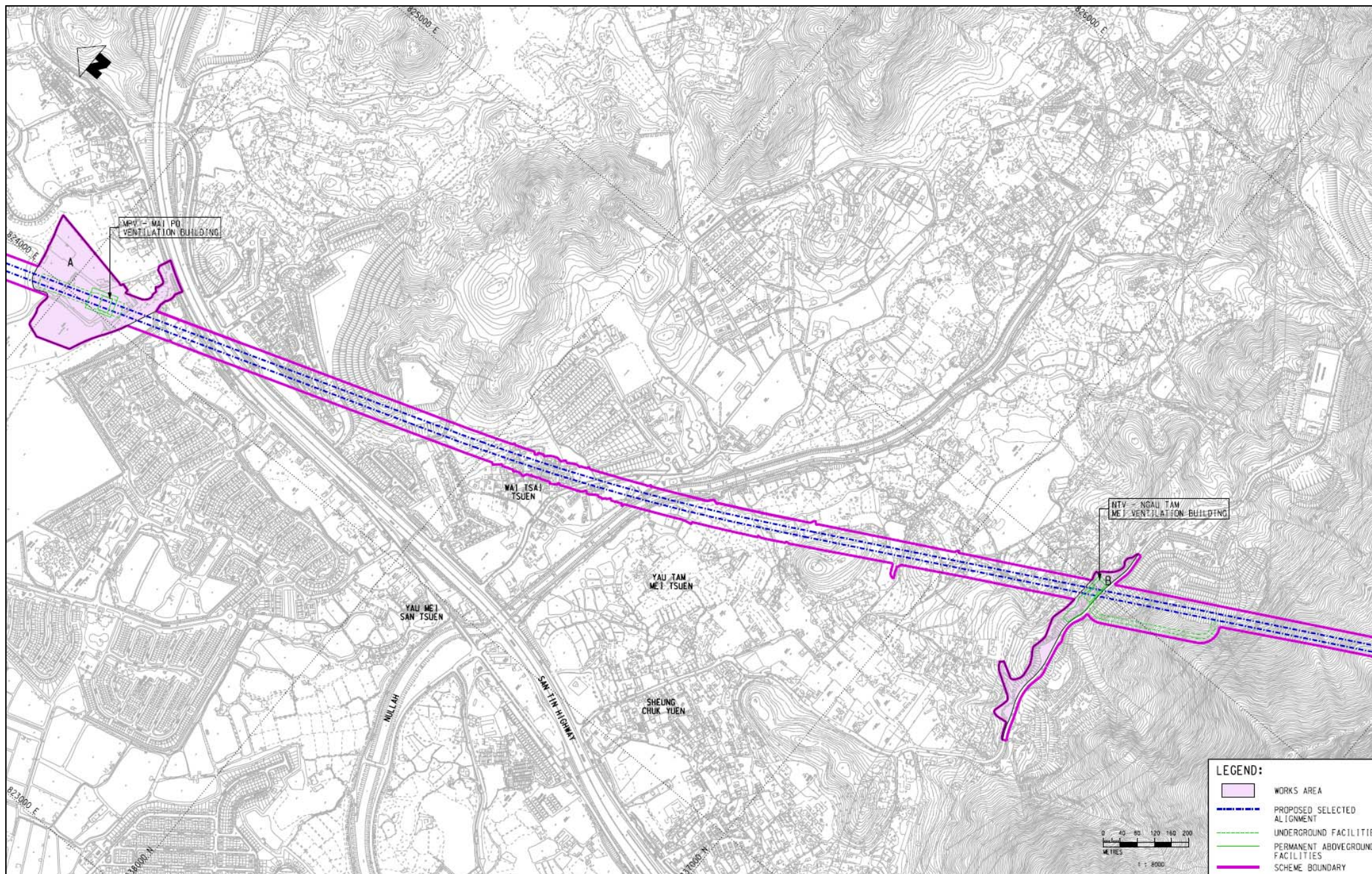


Figure 1 – Works Area B

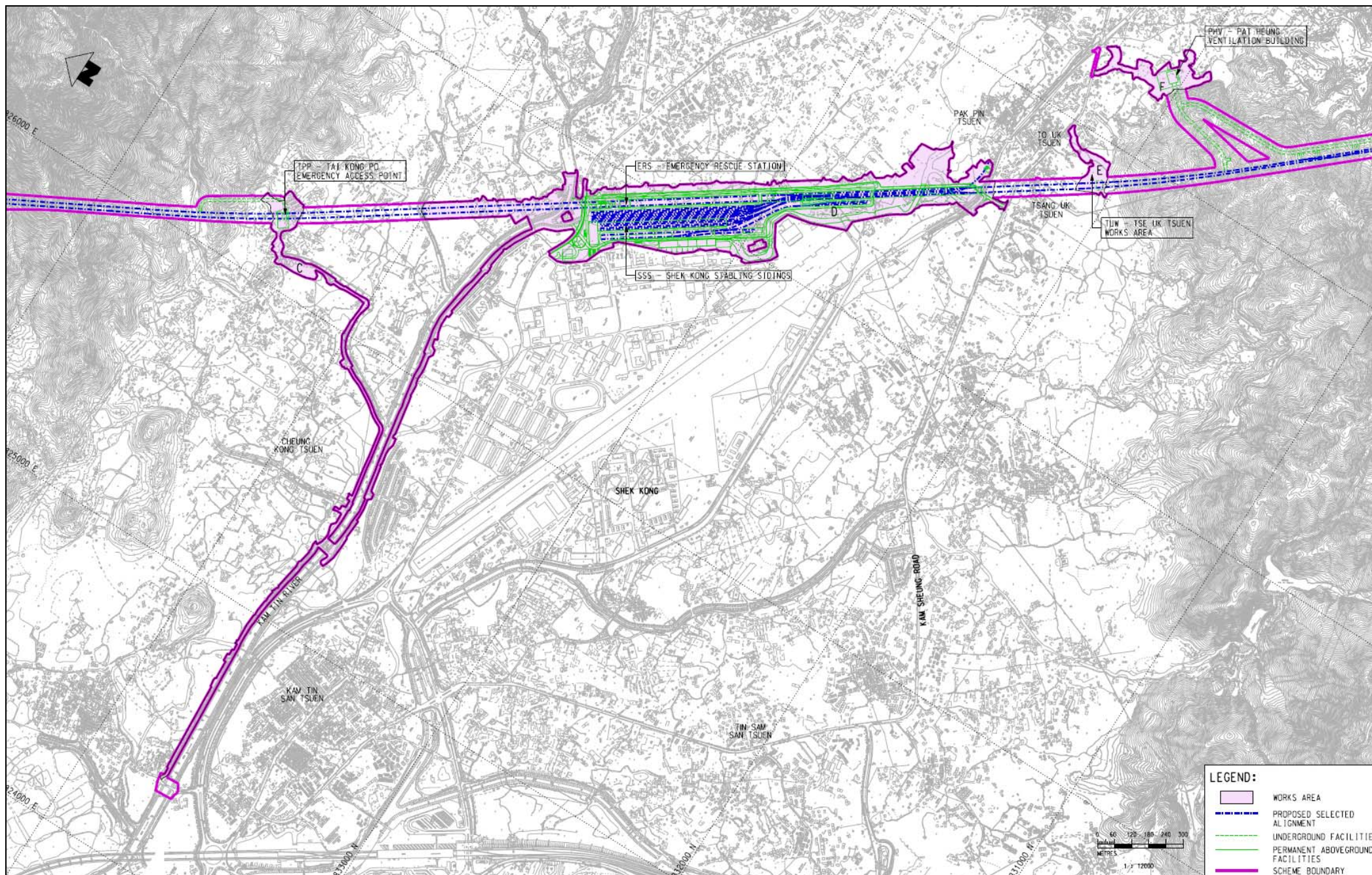


Figure 1 – Works Area C and F

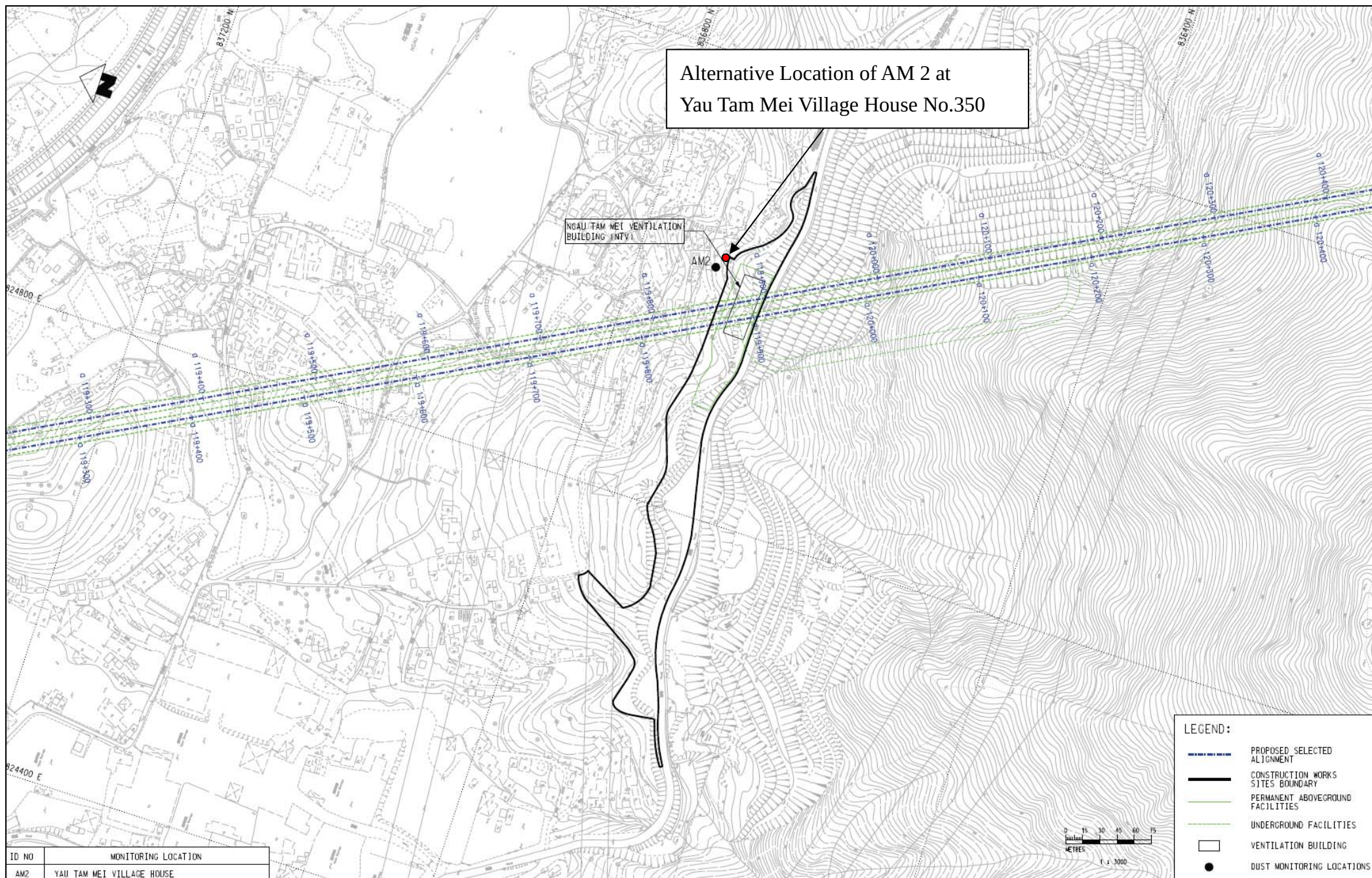


Figure 2 – Dust Monitoring Location

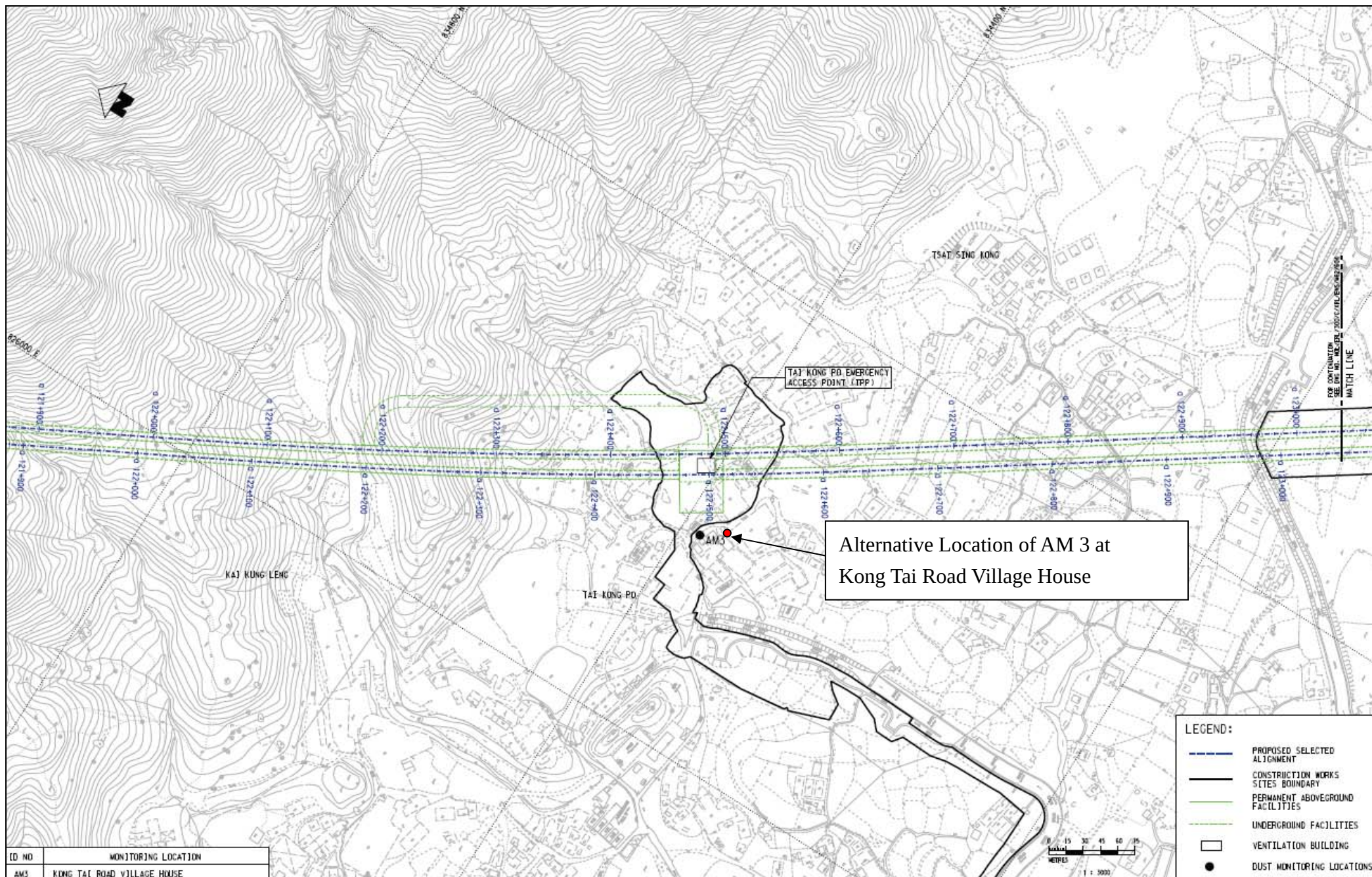


Figure 2 – Dust Monitoring Location

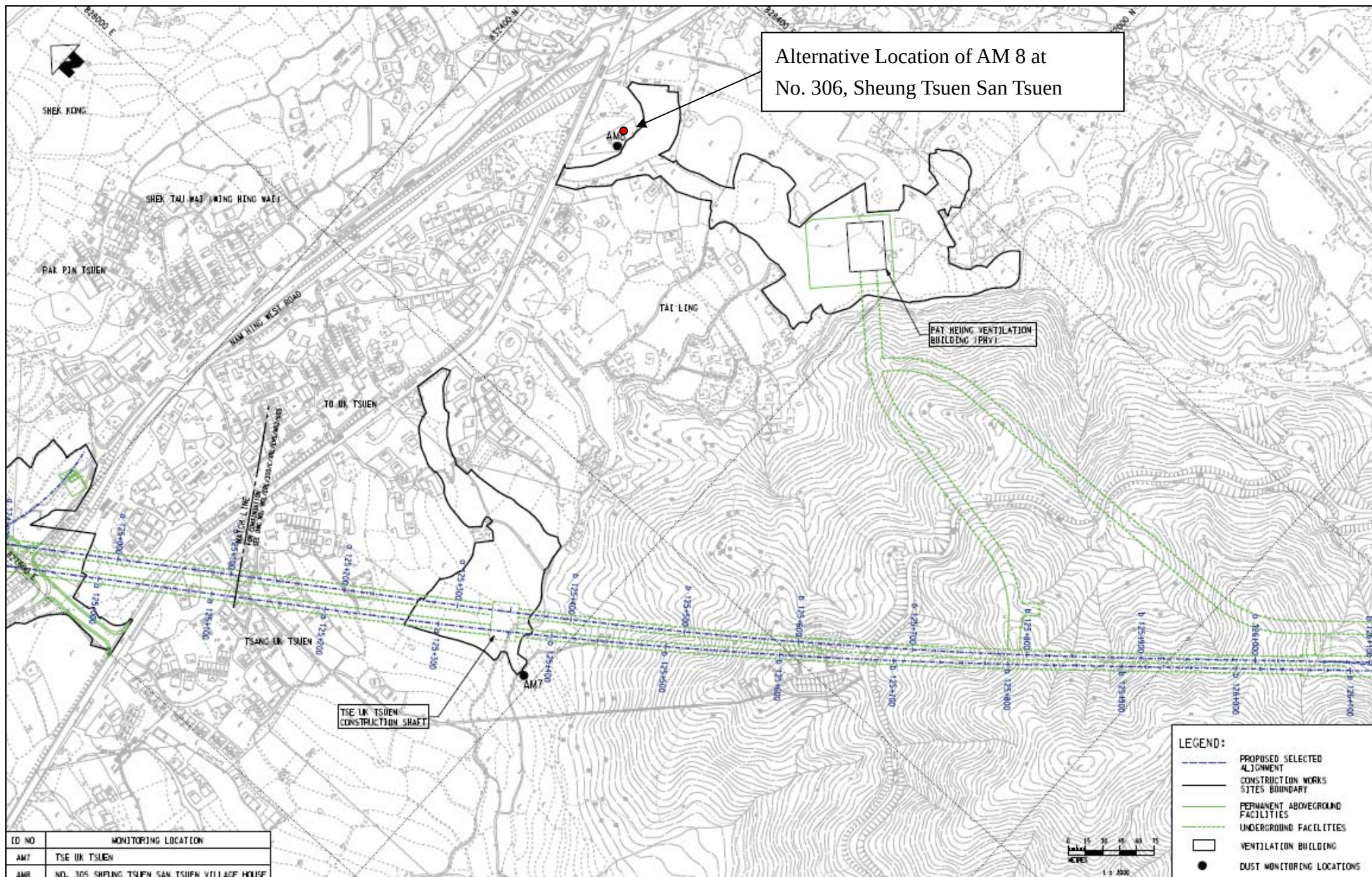


Figure 2 – Dust Monitoring Location

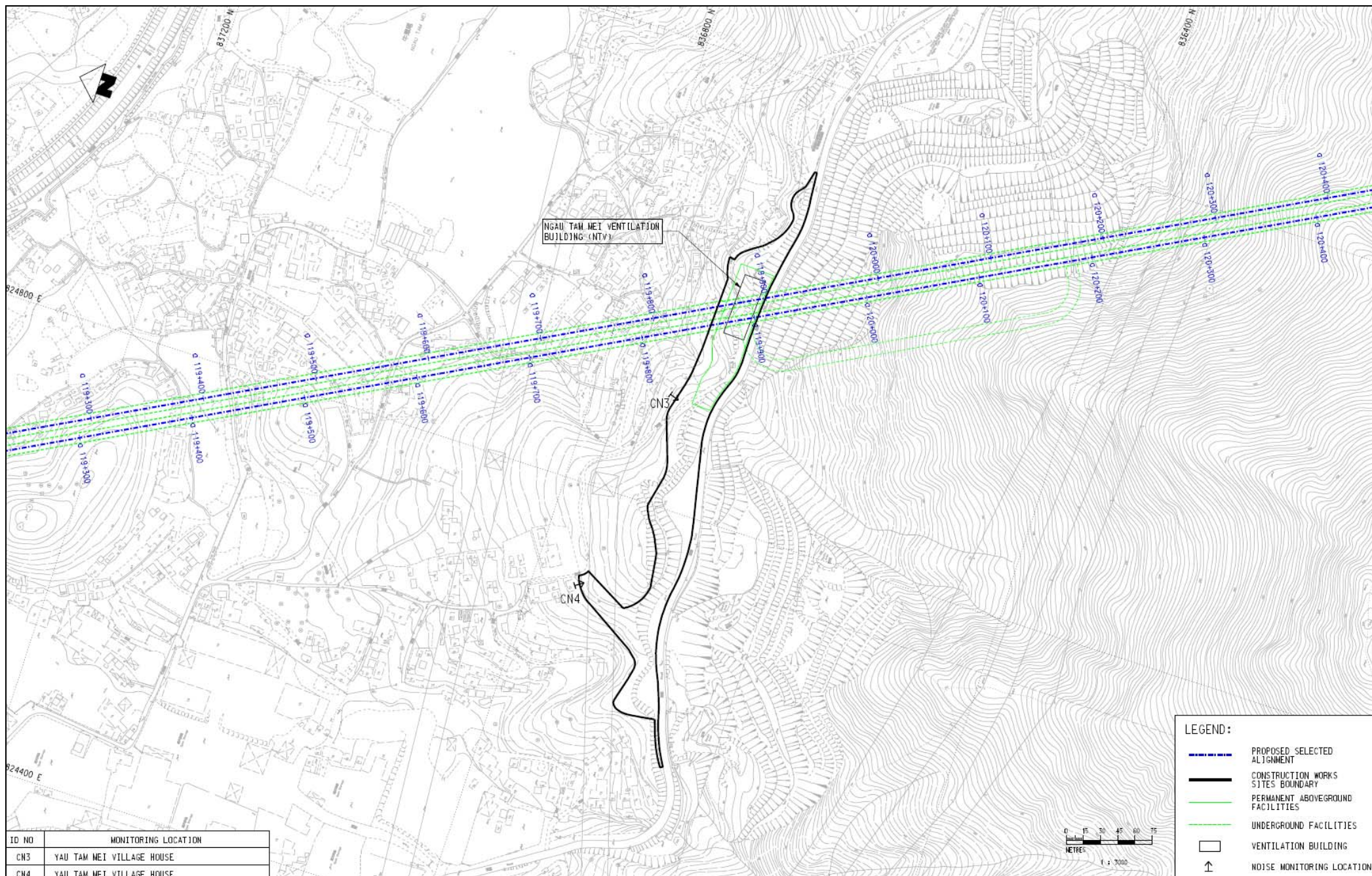


Figure 3 – Noise Monitoring Location

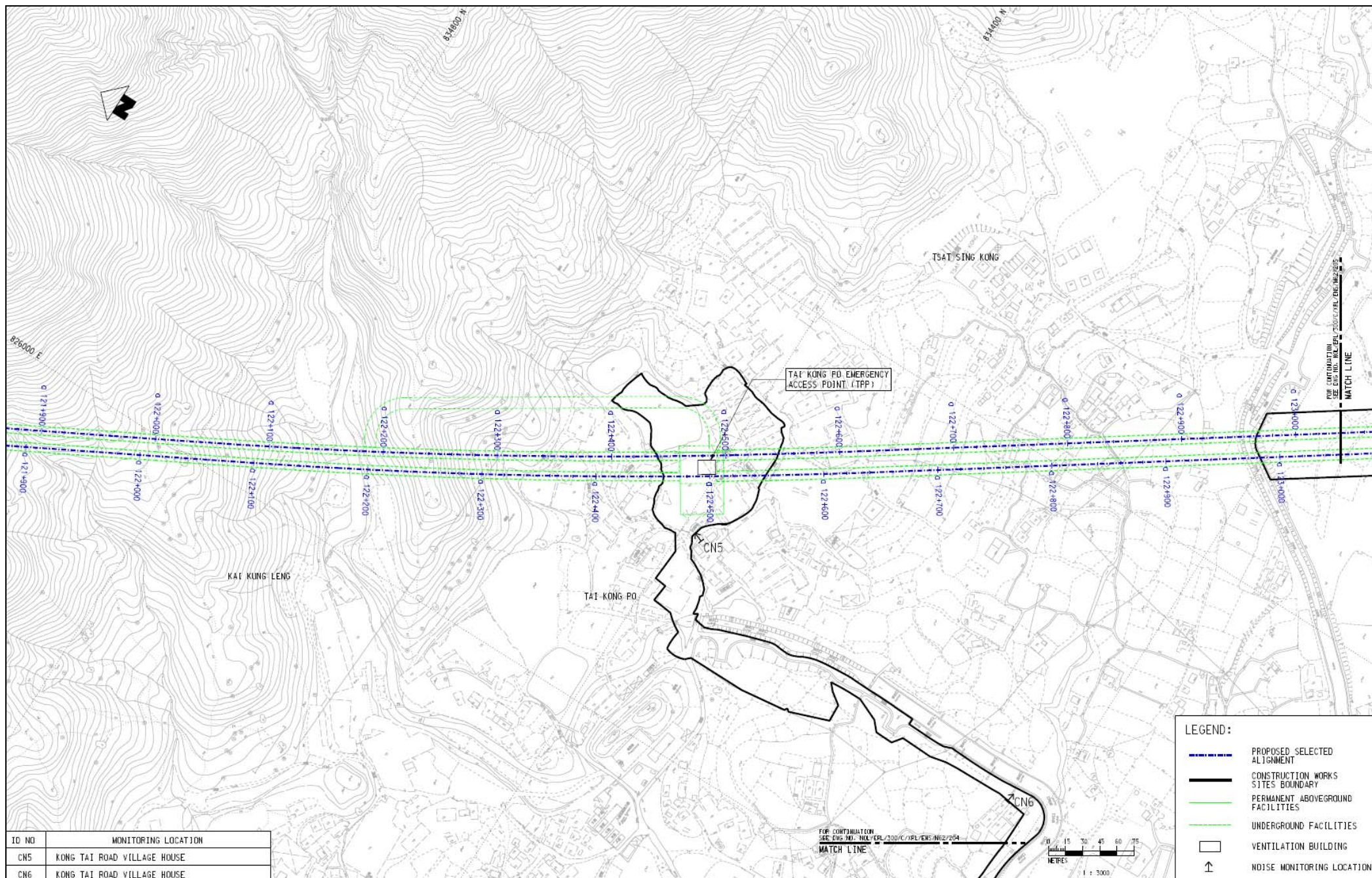


Figure 3 – Noise Monitoring Location

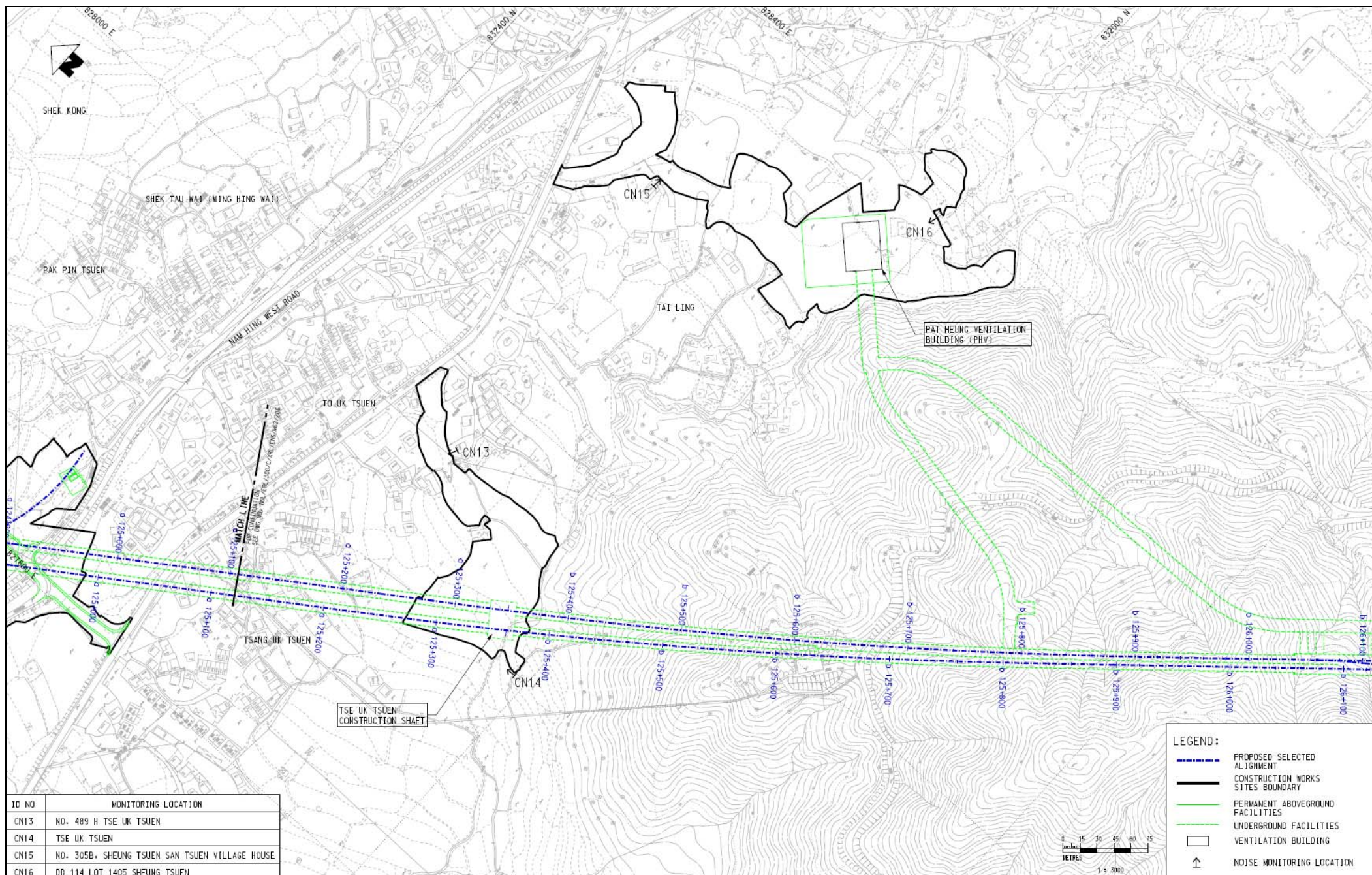


Figure 3 – Noise Monitoring Location