

Gammon Construction Limited

Reprovisioning and Upgrading of Salt
Water Service Reservoirs in Western
District for Water Supplies Department:
*Baseline Environmental Monitoring
Report*

July 2006

Environmental Resources Management

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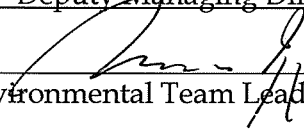
BASELINE ENVIRONMENTAL
MONITORING REPORT

Gammon Construction Limited

Reprovisioning and Upgrading of Salt
Water Service Reservoirs in Western
District for Water Supplies Department:
*Baseline Environmental Monitoring
Report*

5 July 2007

Reference 0067560

For and on behalf of Environmental Resources Management
Approved by: <u>Steve Duckworth</u>
Signed: <u></u>
Position: <u>Deputy Managing Director</u>
Certified by: <u></u> (Environmental Team Leader - Marcus Ip)
Date: <u>5 July 2007</u>

This report has been prepared by Environmental Resources Management the trading name of 'ERM Hong-Kong, Limited', with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

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EXECUTIVE SUMMARY

ERM-Hong Kong, Limited (ERM) was appointed by Gammon Construction Ltd to undertake baseline air quality and noise monitoring prior to the commencement of construction works for the Reprovisioning and Upgrading of Salt Water Service Reservoirs in Western District (the Project).

This Baseline Monitoring Report has been prepared pursuant to Condition 3.2 of the Environmental Permit for the Project (EP-279/2007) and Environmental Monitoring and Audit Manual for the Salt Water Service Reservoirs in Western District.

Baseline Air Quality Monitoring

Baseline ambient air quality monitoring was conducted between 6 and 19 June 2007 at designated monitoring station established for the Project. The weather condition during the baseline monitoring period varied from sunny, cloudy to rainy. No major activities were undertaken during baseline monitoring, and therefore the baseline air quality monitoring data established in this monitoring period are representative of the baseline condition for the Project.

The Action and Limit Levels for 24-hr TSP during impact monitoring established based on monitoring data are 173 and 260 μgm^{-3} respectively.

Baseline Noise Monitoring

Baseline noise monitoring was conducted between 6 and 19 June 2007 at designated monitoring station and alternative monitoring station established for the Project. The weather condition during the baseline monitoring period varied from sunny, cloudy to rainy. No major activities were undertaken during baseline monitoring, and therefore the baseline noise monitoring data is representative of the baseline condition for the Project.

The measured baseline noise levels ($L_{\text{eq}, 30\text{min}}$) between 0700 and 1900 hours are well within 75dB(A), which is daytime construction noise limit under Environmental Impact Assessment Ordinance (EIAO). During impact monitoring, the Action Level will be triggered when one complaint is received, and the daytime construction noise limit under EIAO, ie 75 dB(A) will be adopted as the Limit Level.

1.1

BACKGROUND

The works for the Re-provisioning and Upgrading of Salt Water Service Reservoirs in Western District for Water Supplies Department (the Project) will be constructed in rock beneath the northern hill slopes of Lung Fu Shan immediately adjacent to the present Water Supplies Department (WSD) facilities, south of Pok Fu Lam Road. *Figure 1.1* shows the location of the Project.

The rock cavern will comprise two salt water storage tunnels connected to a common section leading to an access portal. It will be excavated using a non-explosive drill-and-break tunnelling method. The cavern will be lined with concrete and the water storage reservoirs will be constructed from reinforced concrete. Each of the two water storage tunnels of the rock cavern will be approximately 60 m in length and 17 m in span. These storage tunnels will be connected to a common section of approximately 40 m in length and 8 m in span, which will lead to an access portal on the hill slope. The internal tank dimensions of each of the salt water service reservoirs will be 46.8m (L) x 15m (W) x 9m (H) approximately. The two reservoirs are designed to provide a combined saltwater storage capacity of 12,000m³. Construction activities will involve:

- Slope work and portal / access tunnel construction;
- Tunnel excavation for Salt Water Services Reservoirs (SWSR) No. 1;
- SWSR No. 1 Construction;
- Tunnel excavation for SWSR No. 2; and
- SWSR No. 2 Construction

As the Site can be accessed via the access road leading from Pok Fu Lam Road to the existing WSD facilities, formation of new access road and/or haul road will not be required.

The potential environmental impacts of the Project have been presented in the Project Profile (PP) "*Re-provisioning and Upgrading of Salt Water Service Reservoirs in Western District for Water Supplies Department*" (Application No. DIR-150/2007), and an Environmental Permit (EP-279/2007) (EP) for the Project was granted on 4 June 2007. Under the requirements of Condition 3.2 of Environmental Permit EP-279/2007, an EM&A programme as set out in the EM&A Manual is required to be implemented. In accordance with the EM&A Manual, baseline monitoring of air quality and noise is required for the Project.

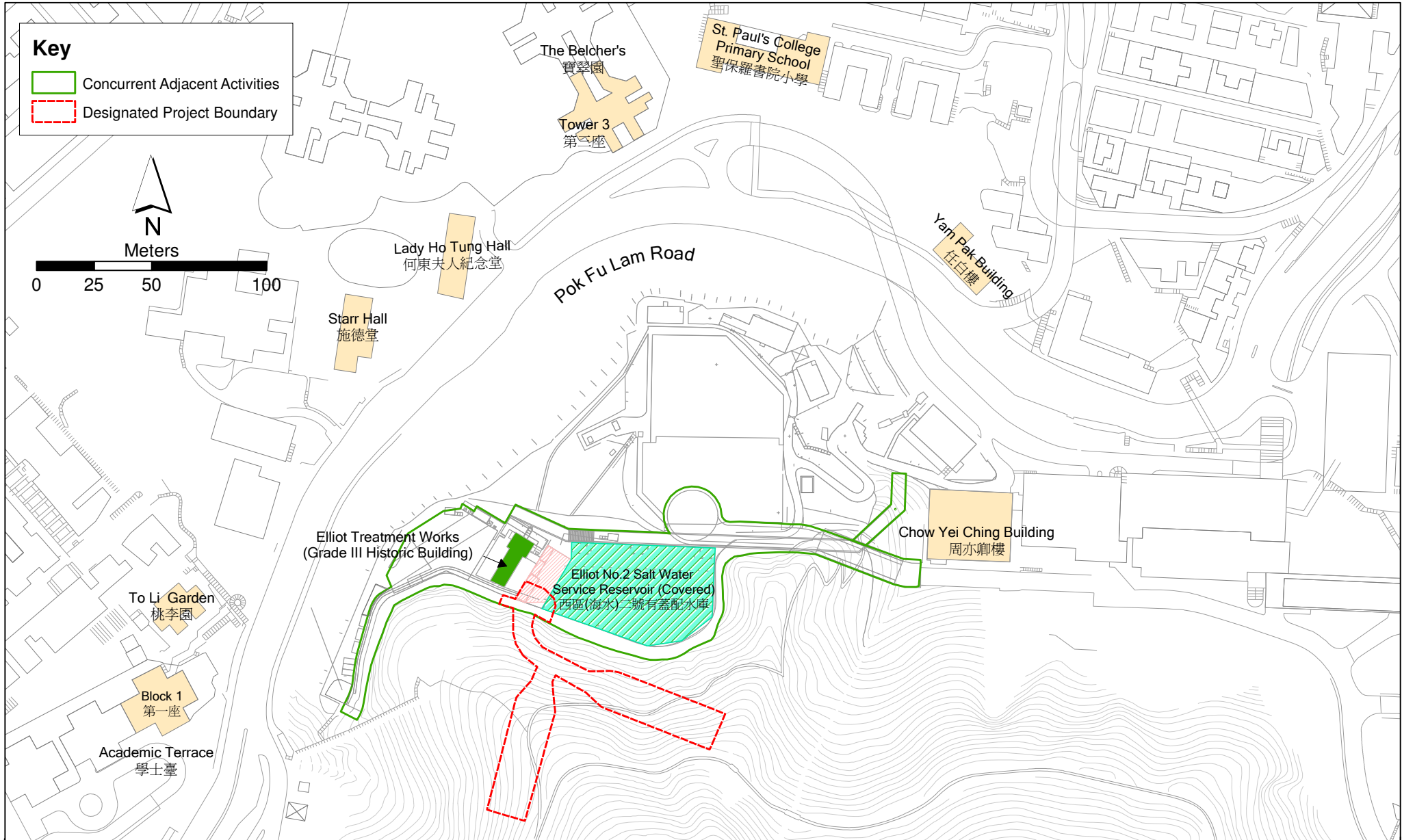


Figure 1.1

Project Location

File: 0067560_2.mxd
Date: 01/06/2007

Environmental
Resources
Management



ERM-Hong Kong, Limited (ERM) was appointed by Gammon Construction Limited as the Environmental Team (ET) to implement the Environmental Monitoring and Audit (EM&A) programme for the Project.

1.2 *PURPOSE OF THE REPORT*

The purpose of this Baseline Monitoring Report is to determine the ambient 24-hour and 1-hour TSP levels, and baseline noise levels at the designated monitoring locations prior to the commencement of the Project works. The ambient TSP levels will be used as the basis for assessing environmental impact and compliance monitoring during the construction of the Project, while the baseline noise levels will be used as a reference of future impact monitoring. This report presents the monitoring requirements, methodologies and results of the baseline ambient air quality and noise measurements at the monitoring locations in accordance with the EM&A Manual.

1.3 *STRUCTURE OF THE REPORT*

The structure of the report is as follows:

Section 1 : Introduction

details the background, purpose and structure of the report.

Section 2 : Air Quality Monitoring

summarizes the air quality monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, monitoring results and establishes the Action and Limit Levels in accordance with the EM&A Manual.

Section 3 : Noise Monitoring

summarizes the noise monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations and monitoring results.

Section 4 : Conclusions

concludes the representativeness of the baseline monitoring results and observations for the Project.

2.1 MONITORING LOCATION

In accordance with the EM&A Manual, monitoring of ambient 24-hour and 1-hour Total Suspended Particulates (TSP) levels was conducted at the monitoring station presented in *Table 2.1* and shown in *Figure 2.1*. Photograph showing the monitoring station are presented in *Annex A*.

Table 2.1 *Air Quality Monitoring Station*

Monitoring Station	Description
AM1	Chow Yei Ching Building, HKU

2.2 MONITORING PARAMETERS, FREQUENCY AND PROGRAMME

Baseline air quality monitoring was conducted between 6 June and 19 June 2006, in accordance with the requirements stipulated in the EM&A Manual (*Table 2.2*). The baseline monitoring schedule is shown in *Annex B*.

Table 2.2 *TSP Monitoring Parameter and Frequency*

Parameter	Frequency
24-hour TSP	Once per day for 14 days
1-hour TSP	3 times per day for 14 days

2.3 MONITORING EQUIPMENT

Continuous 24-hour and 1-hour TSP monitoring were performed using High Volume Samplers (HVS) with appropriate sampling inlets installed, located at the designated monitoring station. The performance specification of HVS complies with the standard method “*Determination of Suspended Particulate Matter in the Atmosphere (High Volume Method)*” as stipulated in *US EPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50 Appendix B)*. *Table 2.3* summarizes the equipment that was used in the 24-hour and 1-hour TSP monitoring.

Table 2.3 *TSP Monitoring Equipment*

Monitoring Station	Equipment	Model (HVS, Calibration Kit)
AM1 (for 24-hr TSP)	HVS, Calibration Kit	GMWS-2310, CM-AIR-43
AM1 (for 1-hr TSP)	HVS, Calibration Kit	GMWS-2310, CM-AIR-43

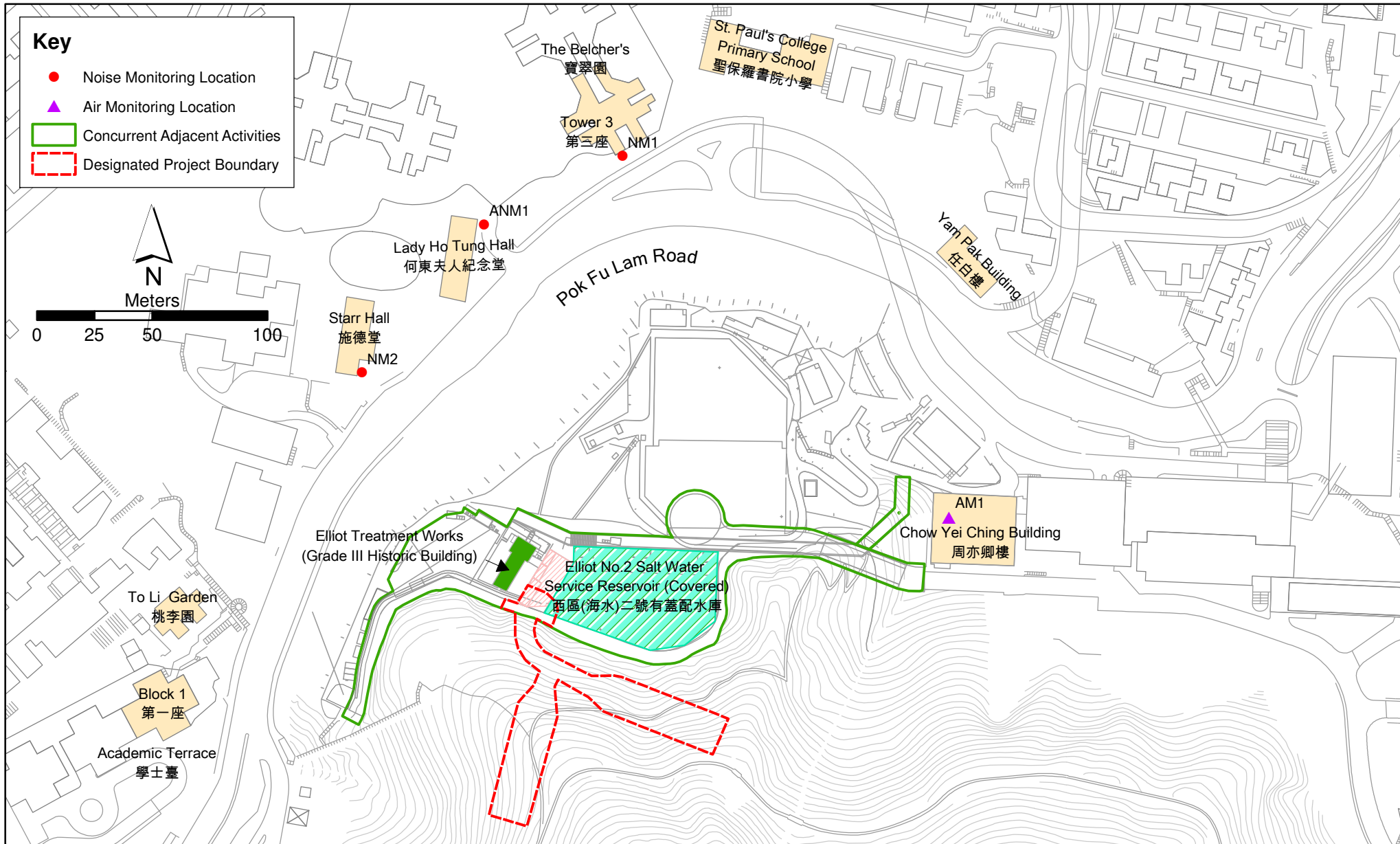


Figure 2.1

Air and Noise Monitoring Locations

Installation

The HVSs at AM1 were placed at the rooftop of Chow Yei Ching Building at about 33 meters above local ground level. All of the HVSs were free-standing with no obstruction.

The following criteria were considered in the installation of the HVSs:

- appropriate support to secure the samplers against gusty wind was provided at AM1;
- a minimum of 2 metres' separation from walls, parapets and penthouses was required for rooftop samplers;
- no furnace or incinerator flues were nearby;
- airflow around the sampler was unrestricted; and
- permission was obtained to set up the samplers and to gain access to the monitoring stations.

Preparation of Filter Papers by SGS Hong Kong Ltd

- glass fibre filters were labelled and sufficient filters that were clean and without pinholes were selected;
- all filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than ± 3 °C; the relative humidity (RH) was 40%; and
- SGS Hong Kong Ltd, a HOKLAS accredited laboratory, implements comprehensive quality assurance and quality control programmes.

Field Monitoring

- the power supply was checked to ensure that the HVSs were working properly;
- the filter holder and the area surrounding the filter were cleaned;
- the filter holder was removed by loosening the fowl bolts and a new filter, with stamped number upward, on a supporting screen was aligned carefully;
- the filter was properly aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter;
- the swing bolts were fastened to hold the filter holder down to the frame. The pressure applied should be sufficient to avoid air leakage at the edges;

- then the shelter lid was closed and secured with the aluminium strip;
- the HVSs were warmed-up for about 5 minutes to establish run-temperature conditions;
- a new flowrate record sheet was set into the flow recorder;
- the flow rate of the HVSs was checked and adjust at around 1.21 m³/min. The range specified in the EM&A Manual was between 0.6 – 1.7 m³/min;
- the programmable timer was set for a sampling period of 24 hours ± 1 hour, and the starting time, weather condition and the filter number were recorded;
- the initial elapsed time was recorded;
- at the end of sampling, the sampled filter was removed carefully and folder in half length so that only surfaces with collected particulate matter were in contact;
- it was then placed in a clean plastic envelope and sealed;
- all monitoring information was recorded on a standard data sheet; and
- filters were sent to SGS Hong Kong Ltd for analysis.

Maintenance and Calibration

- the HVSs and their accessories were maintained in good working condition, such as replacing motor brushes routinely and checking electrical wiring to ensure a continuous power supply; and
- the flow rate of each HVS with mass flow controller were calibrated using an orifice calibrator. Initial calibrations of the dust monitoring equipments were conducted upon installation and prior to commissioning. Five-point calibration was carried out for HVSs using Tisch TE-5025 A Calibration Kit. The calibration records for the HVSs are given in *Annex C*.

Wind Data Monitoring

Average wind data (wind speed and wind direction) during the monitoring period was obtained from King's Park Station of the Hong Kong Observatory (HKO) and is presented in *Annex D*.

2.5

BASELINE MONITORING RESULTS

The baseline air quality monitoring results for AM1 are summarized in *Table 2.4* and the monitoring data together with wind data and graphical presentations are summarized in *Annex D*.

Table 2.4 *Summary of Air Quality Monitoring Results*

Air Monitoring Station	Average 24-hour TSP Concentration, μgm^{-3}	Average 1-hour TSP Concentration, μgm^{-3}
AM1	66	156

The weather condition during the baseline monitoring period varied from sunny, cloudy to rainy. The local impact observed near the monitoring station was mainly vehicle emissions along Pok Fu Lam Road. There were no major construction activities influencing the air quality at AM1. The air quality monitoring results are therefore representative of the baseline condition for the Project.

2.6 *ACTION AND LIMIT LEVELS*

The Action and Limit levels have been established in accordance with the EM&A Manual (Table 2.5) and are presented in Table 2.6.

Table 2.5 *Proposed Action and Limit Levels for Impact Monitoring*

Parameter	Action Level ⁽¹⁾ , μgm^{-3}	Limit Level, μgm^{-3}
24-hour TSP	<ul style="list-style-type: none"> • $\text{BL} \leq 200 \mu\text{g m}^{-3}$, $\text{AL} = (\text{BL} * 1.3 + \text{LL})/2$ • $\text{BL} > 200 \mu\text{g m}^{-3}$, $\text{AL} = \text{LL}$ 	260
Remark:		
(1) BL - Baseline Level, AL - Action Level, LL - Limit Level		

Table 2.6 *Action and Limit Levels for Air Quality*

Parameter	Air Monitoring Station	Action Level, μgm^{-3}	Limit Level, μgm^{-3}
24-hour TSP	AM1	$((66 \times 1.3) + 260)/2 = 173$	260

3 NOISE MONITORING

3.1 MONITORING LOCATION

Starr Hall and Tower 3 of The Belcher's were selected in the EM&A Manual for both baseline and impact noise monitoring. Baseline monitoring however could not be carried out at The Belcher's during the baseline monitoring period owing to accessibility issues, and therefore baseline monitoring was instead carried out at Lady Ho Tung Hall, which is located between Starr Hall and Tower 3 of The Belcher's.

Baseline noise monitoring was conducted at the monitoring stations listed in Table 3.1 and shown in Figure 2.1. Photographs showing the monitoring stations are presented in Annex B.

Table 3.1 Noise Monitoring Station

Monitoring Station	Description
ANM1	Lady Ho Tung Hall
NM2	Starr Hall, HKU

3.2 MONITORING PARAMETERS, FREQUENCY AND PROGRAMME

Baseline noise monitoring was conducted between 6 June and 19 June 2006 at a logging interval of 5 minutes for daytime and evening, holidays and night-time. The baseline monitoring programme is shown in Annex B.

The construction noise levels were measured in terms of A-weighted equivalent continuous sound pressure level (L_{eq}) in decibels dB(A). Supplementary information for data auditing, two statistical sound levels L_{10} and L_{90} ; the levels exceeded for 10 and 90 percent of the time respectively, were also recorded during the monitoring for reference.

3.3 MONITORING EQUIPMENT AND METHODOLOGY

Noise measurements were conducted in accordance with the calibration and measurement procedures as stated in Annex – General Calibration and Measurement Procedures of Technical Memorandum on Noise from Construction Work other than Percussive Piling (GW-TM) issued under the Noise Control Ordinance (NCO) (Cap.400).

The sound level meters and calibrator used for the noise measurement, as listed in Table 3.2, complies with IEC 651: 1979 and 804:1985 (Type 1) specification. The calibration certificates of the sound level meters are given in Annex E.

Table 3.2 *Noise Monitoring Equipment*

Monitoring Station	Monitoring Equipment
ANM1	Rion NL-31
NM2	Rion NL-31

Immediately prior to and following the noise measurements, the accuracy of the measurement equipment was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements were accepted as the calibration level from before and after the noise measurement agree to within 1.0 dB.

3.4 *BASELINE MONITORING RESULTS*

The baseline noise monitoring results are summarized in *Table 3.3* and the monitoring data together with graphical presentations are presented in *Annex F*.

Table 3.3 *Summary of Noise Monitoring Results*

Noise Monitoring Station	Average $L_{eq, 30min}$ dB(A) (0700 - 1900 hours)
ANM1	65.2
NM2	64.5

The measured baseline noise levels ($L_{eq, 30min}$) between 0700 and 1900 hours are well within 75dB(A), which is daytime construction noise limit under Environmental Impact Assessment Ordinance (EIAO). During impact monitoring, the Action Level will be triggered when one complaint is received, and the daytime construction noise limit under EIAO, ie 75 dB(A) will be adopted as the Limit Level.

The weather condition during the baseline monitoring period varied from sunny, cloudy to rainy. The local impacts observed near the monitoring stations were mainly traffic noise from Pok Fu Lam Road. There were no major construction activities influencing the ambient noise levels at ANM1 and NM2. The noise monitoring results will be used as a reference of future impact monitoring period.

At the end of the baseline monitoring period, access to Tower 3 of The Belcher’s was granted and a 4-hour noise monitoring session was undertaken for reviewing the potential difference between noise levels at the monitoring stations (ANM1, NM2 & NM1). Monitoring results are presented in *Annex F* and indicate that noise levels measured at these monitoring stations are of similar magnitude. The monitoring at ANM1 is therefore considered to be representative of the baseline condition at the impact monitoring stations located at Starr Hall and Tower 3 of The Belcher’s.

4 CONCLUSION

4.1 AIR QUALITY

Baseline ambient air quality monitoring was conducted between 6 and 19 June 2007 at the designated monitoring station (AM1) established for the Project. The weather condition during the baseline monitoring period varied from sunny, cloudy to rainy. There was no major construction activity influencing the air quality at AM1. The air quality monitoring results are therefore representative of the baseline condition for the Project.

The monitoring results were used to establish the Action and Limit Levels for 24-hr TSP during impact monitoring throughout construction of the Project.

4.2 NOISE

Baseline ambient air quality monitoring was conducted between 6 and 19 June 2007 at the designated monitoring station (NM2) and alternative monitoring station at Lady Ho Tung Hall (ANM1). The weather condition during the baseline monitoring period varied from sunny, cloudy to rainy. There was no major construction activity influencing the ambient noise at ANM1 and NM2. Monitoring results indicate that the collected noise data is representative of the baseline condition at the impact monitoring locations.

During impact monitoring, the Action Level will be triggered when one complaint is received, and the daytime construction noise limit under EIAO, ie 75 dB(A) will be adopted as the Limit Level.

Annex A

Photographs showing the
Air Quality and Noise
Monitoring Stations



Air Quality Monitoring Station (AM1)



Baseline Noise Monitoring Stations



Alternative Baseline Noise Monitoring Station (NM1)



Baseline Noise Monitoring Station (NM2)

Annex B

Baseline Monitoring Schedule

**Reprovisioning and Upgrading of Salt Water Service Reservoirs in Western District for Water Supplies Department
Baseline Air Quality and Noise Monitoring Schedule - June 2007**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					01-Jun	02-Jun
03-Jun	04-Jun	05-Jun	06-Jun	07-Jun	08-Jun	09-Jun
			Air Monitoring Noise Monitoring	Air Monitoring Noise Monitoring	Air Monitoring Noise Monitoring	Air Monitoring Noise Monitoring
10-Jun	11-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun
Air Monitoring Noise Monitoring	Air Monitoring Noise Monitoring	Air Monitoring Noise Monitoring	Air Monitoring Noise Monitoring	Air Monitoring Noise Monitoring	Air Monitoring Noise Monitoring	Air Monitoring Noise Monitoring
17-Jun	18-Jun	19-Jun	20-Jun	21-Jun	22-Jun	23-Jun
Air Monitoring Noise Monitoring	Air Monitoring Noise Monitoring	Air Monitoring Noise Monitoring				
24-Jun	25-Jun	26-Jun	27-Jun	28-Jun	29-Jun	30-Jun

Annex C

Calibration Reports for HVS

High-Volume TSP Sampler
5-Point Calibration Record

Location : HKU (24-hr)
 Calibrated by : K.T.Ho
 Date : 16/05/07
 Sampler :
 Model : GMWS-2310 ACCU-VOL
 Serial Number : S/N 1060

Calibration Office and Standard Calibration Relationship

Serial Number : CM-AIR-43
 Service Date : 18 May 2006
 Slope (m) : 0.057363
 Intercept (b) : -0.025638
 Correlation Coefficient(r) : 0.999913

Standard Condition

Pstd (hpa) : 1013
 Tstd (K) : 298.18

Calibration Condition

Pa (hpa) : 1010
 Ta(K) : 300

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (indicated flow)	Y
1 18 holes	9.4	3.054	1.546	56	55.8
2 13 holes	7.4	2.710	1.374	48	47.8
3 10 holes	6.0	2.440	1.240	40	39.8
4 7 holes	3.8	1.942	0.991	30	29.9
5 5 holes	2.4	1.543	0.792	22	21.9

Sampler Calibration Relationship

Slope(m): 44.968 Intercept(b): -14.397 Correlation Coefficient(r): 0.9977

Checked by: Magnum Fan

Date: 20/05/07

High-Volume TSP Sampler
5-Point Calibration Record

Location : IKU(1-hr)
Calibrated by : K.T.Ho
Date : 16/05/07

Sampler

Model : GMWS-2310 ACCU-VOL
Serial Number : S/N 0106

Calibration Office and Standard Calibration Relationship

Serial Number : CM-ATR-43
Service Date : 18 May 2006
Slope (m) : 0.057363
Intercept (b) : -0.025638
Correlation Coefficient(r) : 0.999913

Standard Condition

Pstd (hpa) : 1013
Tstd (K) : 298.18

Calibration Condition

Pa (hpa) : 1010
Ta(K) : 300

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1 18 holes	12.4	3.508	1.707	60	59.8
2 13 holes	9.8	3.119	1.518	52	51.8
3 10 holes	8.0	2.818	1.373	46	45.8
4 7 holes	5.0	2.228	0.991	34	33.9
5 5 holes	3.0	1.725	0.792	25	24.9

Sampler Calibration Relationship

Slope(m): 40.622 Intercept(b): -9.880 Correlation Coefficient(r): 0.9996

Checked by: Magnum Fan

Date: 20/05/07

Annex D

24-hour and 1-hour TSP Monitoring Results

Figure D1 - Measured 24-hour TSP Concentration (mgm^{-3}) at AM1

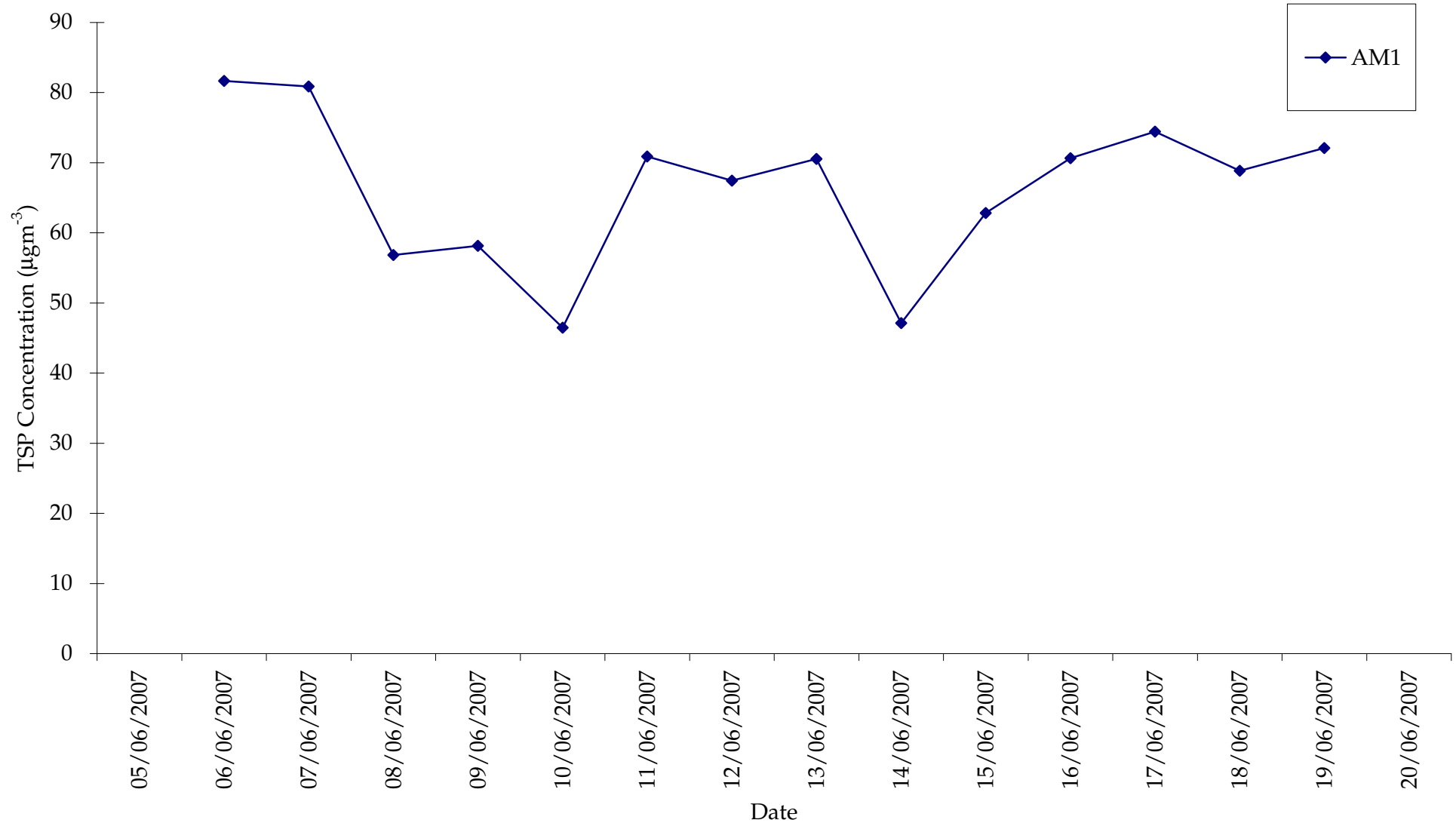
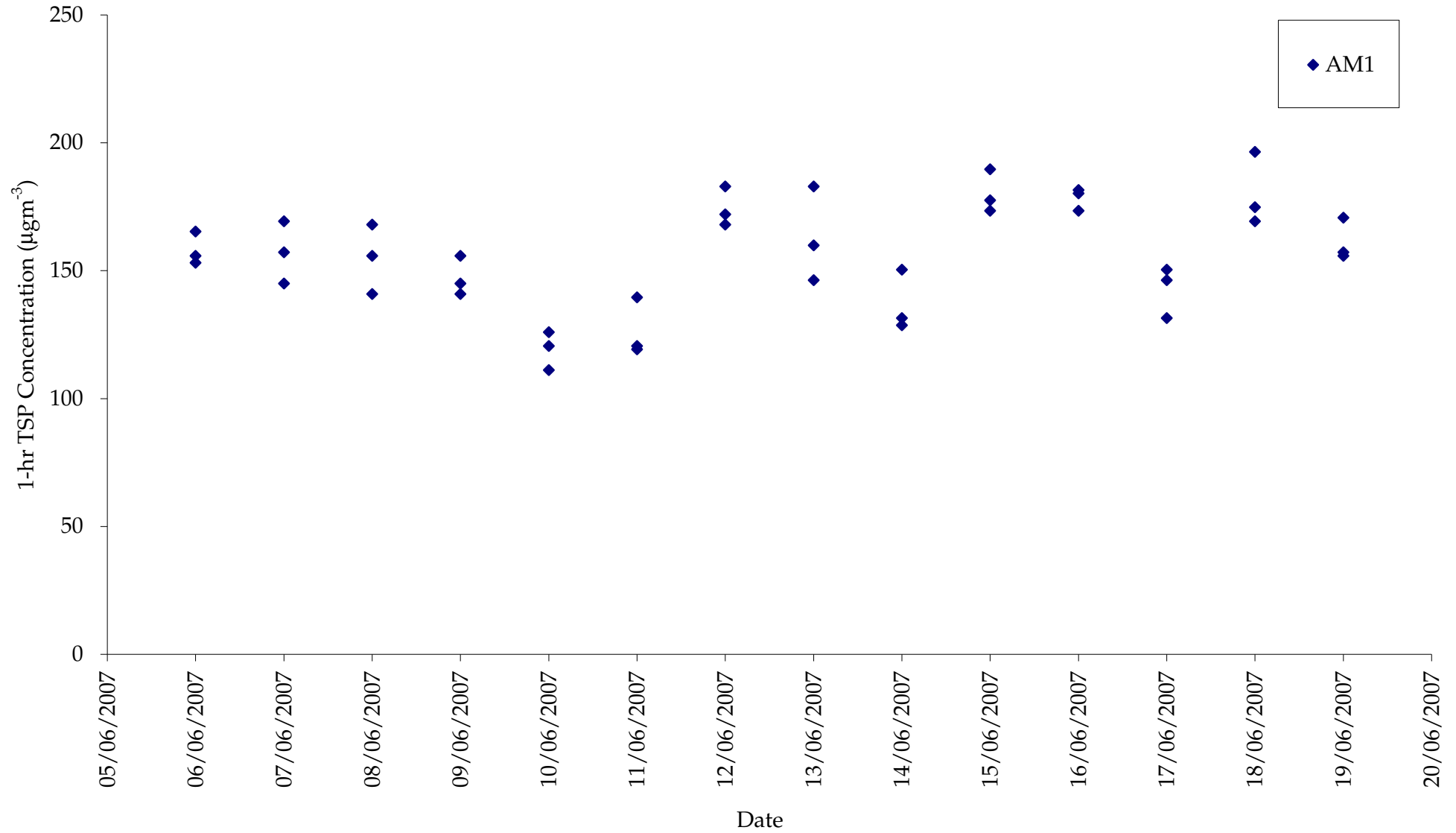


Figure D2 - Measured 1-hour TSP Concentration (mgm^{-3}) at AM1



Annex D1 - Baseline 24-hr TSP Monitoring Results

24-hour TSP Monitoring Results at Station AM1 (Rooftop of Chow Yei Ching Building)

Date	Filter Weight (g)		Flow Rate (m ³ /min.)		Elapse Time		Sampling Time(hrs.)	Conc. (µg/m ³)	Weather Condition	Ave. Air Temp. (°C)	Particulate weight(g)	Av. flow (m ³ /min)	Total vol. (m ³)
	Initial	Final	Initial	Final	Initial	Final							
06-Jun-07	2.9136	3.0559	1.21	1.21	9109.4	9133.4	24.0	82	Cloudy	30.0	0.14	1.21	1742.4
07-Jun-07	2.8714	3.0123	1.21	1.21	9133.4	9157.4	24.0	81	Cloudy	29.0	0.14	1.21	1742.4
08-Jun-07	2.8693	2.9671	1.21	1.21	9157.4	9181.1	23.7	57	Rainy	28.0	0.10	1.21	1720.6
09-Jun-07	2.9059	3.0074	1.21	1.21	9181.1	9205.1	24.0	58	Fine	27.0	0.10	1.21	1745.3
10-Jun-07	2.8796	2.9606	1.21	1.21	9205.1	9229.1	24.0	46	Rainy	28.0	0.08	1.21	1742.4
11-Jun-07	2.8989	3.0224	1.21	1.21	9229.1	9253.1	24.0	71	Fine	29.0	0.12	1.21	1742.4
12-Jun-07	2.8840	3.0015	1.21	1.21	9253.1	9277.1	24.0	67	Cloudy	29.0	0.12	1.21	1742.4
13-Jun-07	2.8746	2.9975	1.21	1.21	9277.1	9301.1	24.0	71	Rainy	28.0	0.12	1.21	1742.4
14-Jun-07	2.8665	2.9486	1.21	1.21	9301.1	9325.1	24.0	47	Rainy	28.0	0.08	1.21	1742.4
15-Jun-07	2.8411	2.9506	1.21	1.21	9325.1	9349.1	24.0	63	Cloudy	30.0	0.11	1.21	1742.4
16-Jun-07	2.8408	2.9639	1.21	1.21	9349.1	9373.1	24.0	71	Fine	31.0	0.12	1.21	1742.4
17-Jun-07	2.8954	3.0251	1.21	1.21	9373.1	9397.1	24.0	74	Fine	31.0	0.13	1.21	1742.4
18-Jun-07	2.8349	2.9549	1.21	1.21	9397.1	9421.1	24.0	69	Fine	31.0	0.12	1.21	1742.4
19-Jun-07	2.8420	2.9676	1.21	1.21	9421.1	9445.1	24.0	72	Sunny	31.0	0.13	1.21	1742.4
								Min	46				
								Max	82				
								Average	66				

Annex D2 - Baseline 1-hr TSP Monitoring Results

1-hour TSP Monitoring Results at Station AM1 (Rooftop of Chow Yei Ching Building)

Date	Filter Weight (g)		Flow Rate (m ³ /min.)		Elapse Time		Sampling Time(hrs.)	Conc. (µg/m ³)	Weather Condition	Ave. Air Temp. (°C)	Particulate weight(g)	Av. flow (m ³ /min)	Total vol. (m ³)
	Initial	Final	Initial	Final	Initial	Final							
06-Jun-07	2.8987	2.9100	1.23	1.23	10870.3	10871.3	1.0	153	Cloudy	30.0	0.01	1.23	73.8
06-Jun-07	2.8851	2.8973	1.23	1.23	10871.3	10872.3	1.0	165	Cloudy	30.0	0.01	1.23	73.8
06-Jun-07	2.8977	2.9092	1.23	1.23	10872.3	10873.3	1.0	156	Cloudy	30.0	0.01	1.23	73.8
07-Jun-07	2.8665	2.8790	1.23	1.23	10873.3	10874.3	1.0	169	Cloudy	30.0	0.01	1.23	73.8
07-Jun-07	2.8959	2.9075	1.23	1.23	10874.3	10875.3	1.0	157	Cloudy	30.0	0.01	1.23	73.8
07-Jun-07	2.8951	2.9058	1.23	1.23	10875.3	10876.3	1.0	145	Cloudy	30.0	0.01	1.23	73.8
08-Jun-07	2.8711	2.8815	1.23	1.23	10876.3	10877.3	1.0	141	Rainy	28.0	0.01	1.23	73.8
08-Jun-07	2.8891	2.9015	1.23	1.23	10877.3	10878.3	1.0	168	Cloudy	28.0	0.01	1.23	73.8
08-Jun-07	2.8825	2.8940	1.23	1.23	10878.3	10879.3	1.0	156	Cloudy	28.0	0.01	1.23	73.8
09-Jun-07	2.8596	2.8700	1.23	1.23	10879.3	10880.3	1.0	141	Fine	29.0	0.01	1.23	73.8
09-Jun-07	2.8869	2.8984	1.23	1.23	10880.3	10881.3	1.0	156	Fine	29.0	0.01	1.23	73.8
09-Jun-07	2.8842	2.8949	1.23	1.23	10881.3	10882.3	1.0	145	Fine	29.0	0.01	1.23	73.8
10-Jun-07	2.8686	2.8779	1.23	1.23	10882.3	10883.3	1.0	126	Rainy	26.0	0.01	1.23	73.8
10-Jun-07	2.8999	2.9088	1.23	1.23	10883.3	10884.3	1.0	121	Rainy	26.0	0.01	1.23	73.8
10-Jun-07	2.8618	2.8700	1.23	1.23	10884.3	10885.3	1.0	111	Rainy	26.0	0.01	1.23	73.8
11-Jun-07	2.8819	2.8922	1.23	1.23	10885.3	10886.3	1.0	140	Fine	29.0	0.01	1.23	73.8
11-Jun-07	2.9118	2.9206	1.23	1.23	10886.3	10887.3	1.0	119	Fine	29.0	0.01	1.23	73.8
11-Jun-07	2.9121	2.9210	1.23	1.23	10887.3	10888.3	1.0	121	Fine	29.0	0.01	1.23	73.8
12-Jun-07	2.8865	2.8992	1.23	1.23	10888.3	10889.3	1.0	172	Fine	29.0	0.01	1.23	73.8
12-Jun-07	2.9076	2.9200	1.23	1.23	10889.3	10890.3	1.0	168	Fine	29.0	0.01	1.23	73.8
12-Jun-07	2.9020	2.9155	1.23	1.23	10890.3	10891.3	1.0	183	Fine	29.0	0.01	1.23	73.8
13-Jun-07	2.8816	2.8934	1.23	1.23	10891.3	10892.3	1.0	160	Cloudy	30.0	0.01	1.23	73.8
13-Jun-07	2.8890	2.8998	1.23	1.23	10892.3	10893.3	1.0	146	Cloudy	30.0	0.01	1.23	73.8
13-Jun-07	2.8865	2.9000	1.23	1.23	10893.3	10894.3	1.0	183	Cloudy	30.0	0.01	1.23	73.8
14-Jun-07	2.8720	2.8817	1.23	1.23	10894.3	10895.3	1.0	131	Rainy	27.0	0.01	1.23	73.8
14-Jun-07	2.8539	2.8650	1.23	1.23	10895.3	10896.3	1.0	150	Rainy	27.0	0.01	1.23	73.8
14-Jun-07	2.8660	2.8755	1.23	1.23	10896.3	10897.3	1.0	129	Rainy	27.0	0.01	1.23	73.8
15-Jun-07	2.8624	2.8755	1.23	1.23	10897.3	10898.3	1.0	178	Cloudy	29.0	0.01	1.23	73.8
15-Jun-07	2.8674	2.8802	1.23	1.23	10898.3	10899.3	1.0	173	Cloudy	29.0	0.01	1.23	73.8
15-Jun-07	2.8800	2.8940	1.23	1.23	10899.3	10900.3	1.0	190	Cloudy	29.0	0.01	1.23	73.8
16-Jun-07	2.9015	2.9143	1.23	1.23	10900.3	10901.3	1.0	173	Fine	31.0	0.01	1.23	73.8
16-Jun-07	2.8624	2.8757	1.23	1.23	10901.3	10902.3	1.0	180	Fine	31.0	0.01	1.23	73.8
16-Jun-07	2.8519	2.8653	1.23	1.23	10902.3	10903.3	1.0	182	Fine	31.0	0.01	1.23	73.8
17-Jun-07	2.8589	2.8700	1.23	1.23	10903.3	10904.3	1.0	150	Fine	31.0	0.01	1.23	73.8
17-Jun-07	2.8973	2.9081	1.23	1.23	10904.3	10905.3	1.0	146	Fine	31.0	0.01	1.23	73.8
17-Jun-07	2.8933	2.9030	1.23	1.23	10905.3	10906.3	1.0	131	Fine	31.0	0.01	1.23	73.8
18-Jun-07	2.8876	2.9001	1.23	1.23	10906.3	10907.3	1.0	169	Fine	30.0	0.01	1.23	73.8
18-Jun-07	2.8711	2.8856	1.23	1.23	10907.3	10908.3	1.0	196	Fine	30.0	0.01	1.23	73.8
18-Jun-07	2.8561	2.8690	1.23	1.23	10908.3	10909.3	1.0	175	Fine	30.0	0.01	1.23	73.8
19-Jun-07	2.8539	2.8655	1.23	1.23	10909.3	10910.3	1.0	157	Sunny	31.0	0.01	1.23	73.8
19-Jun-07	2.8644	2.8759	1.23	1.23	10910.3	10911.3	1.0	156	Sunny	31.0	0.01	1.23	73.8
19-Jun-07	2.8844	2.8970	1.23	1.23	10911.3	10912.3	1.0	171	Sunny	31.0	0.01	1.23	73.8


Min	111
Max	196
Average	156

Annex D - Meteorological Data Extracted from King's Park Station of the Hong Kong Observatory

Date	Weather	King's Park Station				
		Air Temperature Range (°C)	Average Wind Speed (km/h)	Relative Humidity Range (%)	Total Rainfall (mm)	Wind Direction
06-Jun-07	Cloudy	27.5 - 32.0	21.0	69 - 88	1.3	Southwest
07-Jun-07	Rainy	25.3 - 29.7	21.0	78 - 96	41.3	Southwest
08-Jun-07	Rainy	24.7 - 29.4	21.0	74 - 93	14.1	Southwest
09-Jun-07	Fine	27.2 - 30.7	21.0	76 - 90	5.4	Southwest
10-Jun-07	Rainy	22.9 - 28.6	20.0	84 - 99	95.5	Southwest
11-Jun-07	Fine	25.6 - 30.3	21.0	76 - 92	Trace	West
12-Jun-07	Rainy	26.5 - 29.3	21.0	77 - 92	6.8	West
13-Jun-07	Rainy	24.6 - 31.6	20.0	76 - 93	35.3	West & Southwest
14-Jun-07	Rainy	23.6 - 27.1	21.0	81 - 97	29.6	Southwest
15-Jun-07	Cloudy	24.7 - 28.6	22.0	82 - 96	13.1	Southwest
16-Jun-07	Fine	25.5 - 31.7	23.0	64 - 94	Trace	East & West
17-Jun-07	Fine	25.8 - 29.2	23.0	76 - 95	0.5	East & West
18-Jun-07	Fine	25.4 - 30.8	23.0	74 - 90	0.0	East
19-Jun-07	Sunny	26.4 - 32.0	23.0	64 - 91	0.0	East

Annex E

Calibration Certificates of Sound Level Meters



輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C071448

Certificate of Calibration

This is to certify that the equipment

Description : Sound Level Meter

Manufacturer : Rion

Model No. : NL-31

Serial No. : 00410224

*has been calibrated for the specific items and ranges.
The results are shown in the Calibration Report No. C071448.*

The equipment is supplied by

Co. Name : Envirotech Services Co.

*Address : Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road,
Hong Kong*

Date of Issue : 29 March 2007

Certified by :

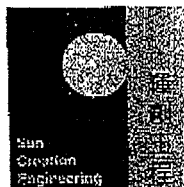


K. Lee

The test equipment used for testing 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 Shau Wai 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

Certificate No. : C072764

Certificate of Calibration

This is to certify that the equipment

Description : Sound Level Meter

Manufacturer : Rion

Model No. : NL-31

Serial No. : 00320533

*has been calibrated for the specific items and ranges.
The results are shown in the Calibration Report No. C072764.*

The equipment is supplied by

Co. Name : Envirotech Services Co.

*Address : Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road,
Hong Kong*

Date of Issue : 7 June 2007

Certified by :

K. Lee

The test equipment used for testing are traceable to the National Standards as specified in this report.
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Calibration and Testing Laboratory of Sun Creation Engineering Limited

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Tel: 2927 2606

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E-mail: callab@suncreation.com

Website: www.suncreation.com

Annex F

Noise Monitoring Results

Figure F1 - Measured Baseline Noise Levels ($L_{Aeq,5min}$) at Designated Monitoring Locations

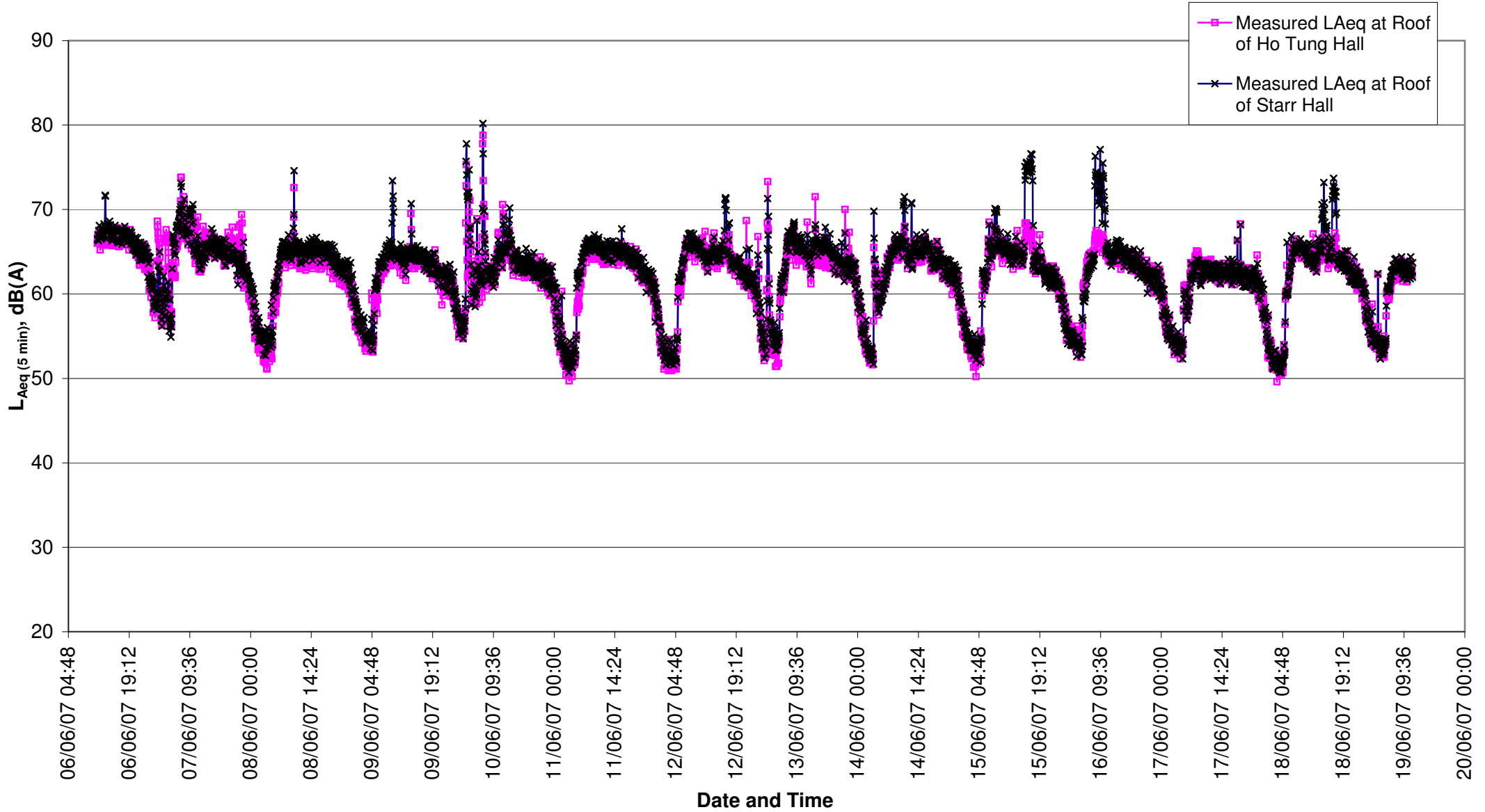


Figure F2 - Measured Baseline Noise Levels ($L_{Aeq, 30min}$) at Monitoring Locations

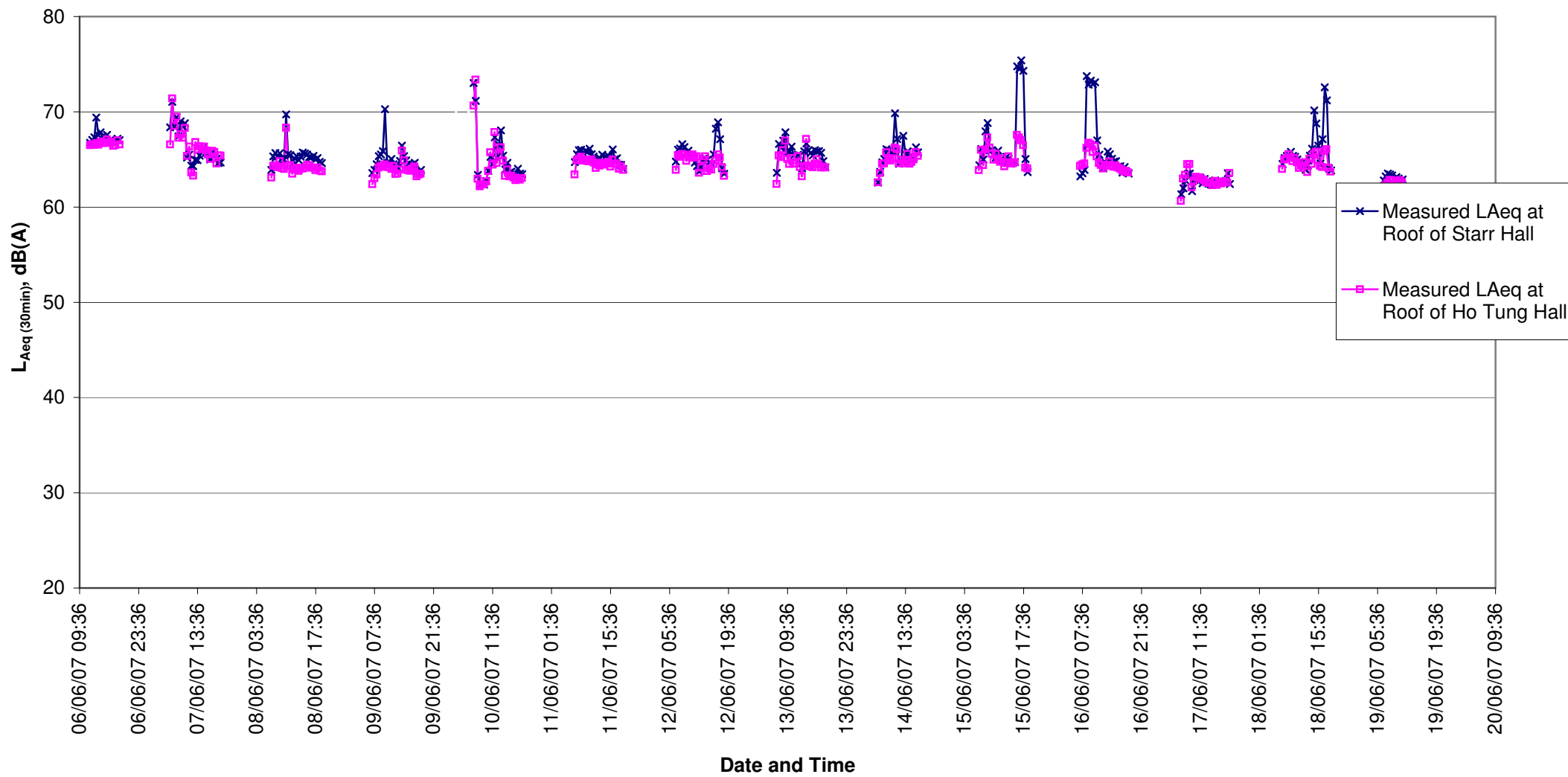
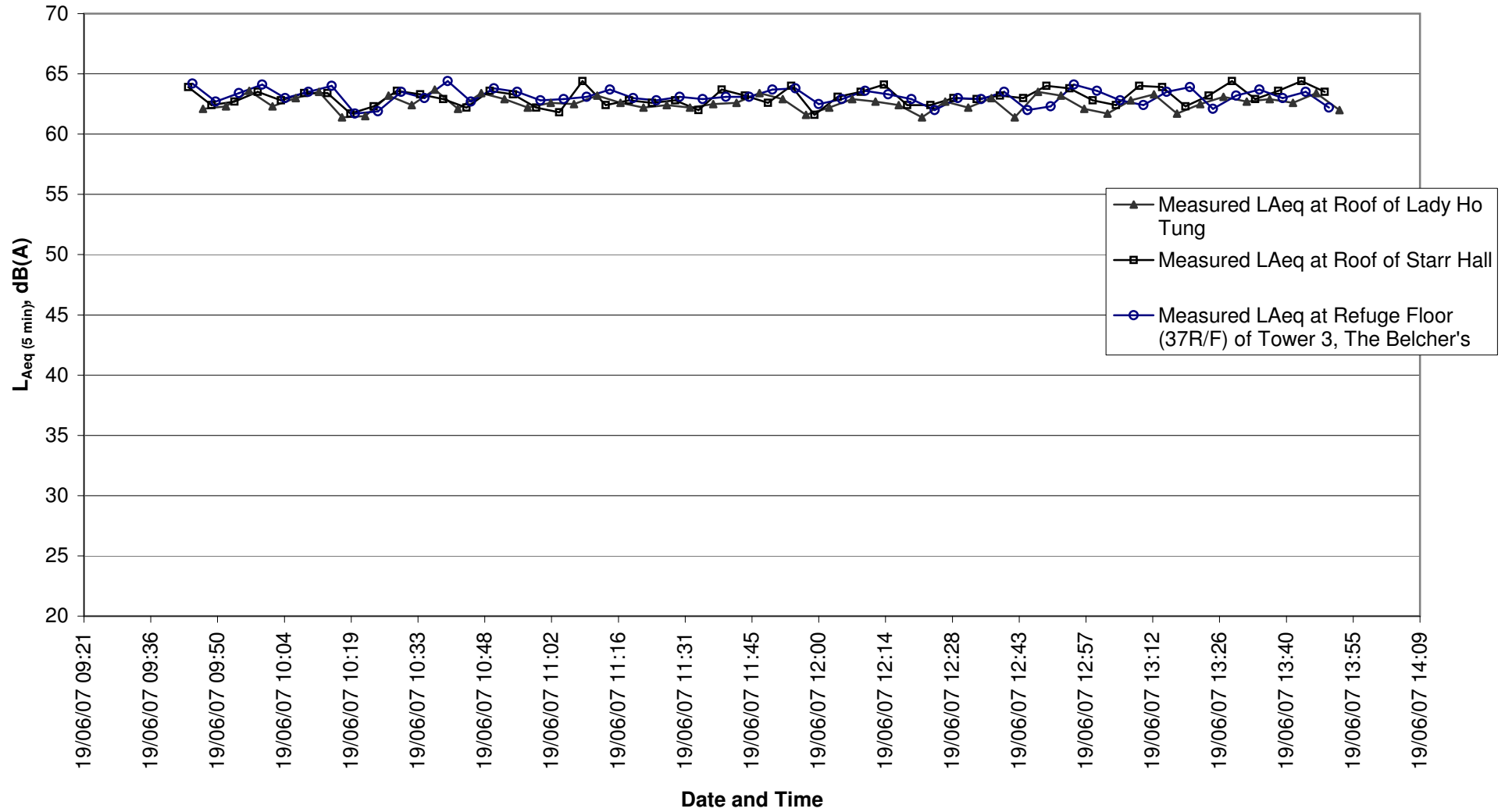


Figure F3 - Measured Baseline Noise Levels ($L_{Aeq,5min}$) at three Monitoring Locations



Baseline Noise Monitoring Results (0700 - 1900 hours)

Date and Time	Measured L _{Aeq} at Roof of Starr Hall	Date and Time	Measured L _{Aeq} at Roof of Ho Tung Hall
06/06/2007 12:05	66.8	06/06/2007 12:05	66.5
06/06/2007 12:35	67.0	06/06/2007 12:35	66.6
06/06/2007 13:05	67.3	06/06/2007 13:05	66.5
06/06/2007 13:35	69.4	06/06/2007 13:35	66.7
06/06/2007 14:05	67.6	06/06/2007 14:05	66.5
06/06/2007 14:35	67.8	06/06/2007 14:35	66.9
06/06/2007 15:05	67.4	06/06/2007 15:05	66.7
06/06/2007 15:35	67.2	06/06/2007 15:35	66.8
06/06/2007 16:05	67.6	06/06/2007 16:05	67.1
06/06/2007 16:35	66.9	06/06/2007 16:35	66.7
06/06/2007 17:05	67.1	06/06/2007 17:05	66.8
06/06/2007 17:35	66.9	06/06/2007 17:35	66.4
06/06/2007 18:05	67.0	06/06/2007 18:05	66.5
06/06/2007 18:35	67.2	06/06/2007 18:35	67.0
06/06/2007 19:05	67.0	06/06/2007 19:05	66.6
07/06/2007 07:05	68.4	07/06/2007 07:05	66.6
07/06/2007 07:35	71.0	07/06/2007 07:35	71.4
07/06/2007 08:05	68.4	07/06/2007 08:05	68.5
07/06/2007 08:35	69.4	07/06/2007 08:35	69.5
07/06/2007 09:05	67.4	07/06/2007 09:05	67.3
07/06/2007 09:35	69.0	07/06/2007 09:35	67.6
07/06/2007 10:05	68.4	07/06/2007 10:05	67.3
07/06/2007 10:35	68.8	07/06/2007 10:35	68.3
07/06/2007 11:05	65.2	07/06/2007 11:05	65.4
07/06/2007 11:35	65.5	07/06/2007 11:35	66.3
07/06/2007 12:05	64.3	07/06/2007 12:05	63.6
07/06/2007 12:35	64.3	07/06/2007 12:35	63.3
07/06/2007 13:05	64.9	07/06/2007 13:05	66.8
07/06/2007 13:35	64.9	07/06/2007 13:35	66.0
07/06/2007 14:05	65.4	07/06/2007 14:05	66.4
07/06/2007 14:35	65.8	07/06/2007 14:35	66.1
07/06/2007 15:05	66.3	07/06/2007 15:05	66.4
07/06/2007 15:35	65.7	07/06/2007 15:35	65.9
07/06/2007 16:05	65.6	07/06/2007 16:05	65.5
07/06/2007 16:35	65.0	07/06/2007 16:35	65.1
07/06/2007 17:05	65.7	07/06/2007 17:05	65.9
07/06/2007 17:35	65.3	07/06/2007 17:35	65.8
07/06/2007 18:05	65.1	07/06/2007 18:05	64.6
07/06/2007 18:35	64.6	07/06/2007 18:35	65.4
07/06/2007 19:05	64.7	07/06/2007 19:05	65.4
08/06/2007 07:05	63.9	08/06/2007 07:05	63.1
08/06/2007 07:35	65.3	08/06/2007 07:35	64.3
08/06/2007 08:05	65.7	08/06/2007 08:05	64.4
08/06/2007 08:35	65.3	08/06/2007 08:35	64.2
08/06/2007 09:05	65.7	08/06/2007 09:05	64.8
08/06/2007 09:35	65.1	08/06/2007 09:35	64.1
08/06/2007 10:05	65.0	08/06/2007 10:05	64.0
08/06/2007 10:35	69.7	08/06/2007 10:35	68.3
08/06/2007 11:05	65.5	08/06/2007 11:05	64.3
08/06/2007 11:35	65.4	08/06/2007 11:35	64.4
08/06/2007 12:05	64.4	08/06/2007 12:05	63.5
08/06/2007 12:35	65.1	08/06/2007 12:35	63.9
08/06/2007 13:05	65.3	08/06/2007 13:05	64.1
08/06/2007 13:35	64.9	08/06/2007 13:35	63.8
08/06/2007 14:05	65.3	08/06/2007 14:05	64.0
08/06/2007 14:35	65.7	08/06/2007 14:35	64.0
08/06/2007 15:05	65.6	08/06/2007 15:05	64.1
08/06/2007 15:35	65.5	08/06/2007 15:35	64.4
08/06/2007 16:05	65.2	08/06/2007 16:05	64.4
08/06/2007 16:35	65.2	08/06/2007 16:35	64.1
08/06/2007 17:05	65.4	08/06/2007 17:05	64.1
08/06/2007 17:35	65.0	08/06/2007 17:35	63.9
08/06/2007 18:05	65.1	08/06/2007 18:05	64.1
08/06/2007 18:35	64.7	08/06/2007 18:35	63.8
08/06/2007 19:05	64.6	08/06/2007 19:05	63.7
09/06/2007 07:05	63.6	09/06/2007 07:05	62.4
09/06/2007 07:35	63.9	09/06/2007 07:35	63.0
09/06/2007 08:05	64.5	09/06/2007 08:05	63.4
09/06/2007 08:35	65.3	09/06/2007 08:35	64.1
09/06/2007 09:05	65.5	09/06/2007 09:05	64.3

Date and Time	Measured L_{Aeq} at Roof of Starr Hall	Date and Time	Measured L_{Aeq} at Roof of Ho Tung Hall
09/06/2007 09:35	65.9	09/06/2007 09:35	64.3
09/06/2007 10:05	70.3	09/06/2007 10:05	64.5
09/06/2007 10:35	64.6	09/06/2007 10:35	64.2
09/06/2007 11:05	64.7	09/06/2007 11:05	64.2
09/06/2007 11:36	65.0	09/06/2007 11:34	64.0
09/06/2007 12:06	64.5	09/06/2007 12:04	64.3
09/06/2007 12:36	64.0	09/06/2007 12:34	63.5
09/06/2007 13:06	64.1	09/06/2007 13:04	63.5
09/06/2007 13:36	64.8	09/06/2007 13:34	63.9
09/06/2007 14:06	66.4	09/06/2007 14:04	65.9
09/06/2007 14:36	65.4	09/06/2007 14:34	64.9
09/06/2007 15:06	64.9	09/06/2007 15:04	63.9
09/06/2007 15:36	64.5	09/06/2007 15:34	63.9
09/06/2007 16:06	64.4	09/06/2007 16:04	63.8
09/06/2007 16:36	64.5	09/06/2007 16:34	64.0
09/06/2007 17:06	64.6	09/06/2007 17:04	64.3
09/06/2007 17:36	63.7	09/06/2007 17:34	63.2
09/06/2007 18:06	63.5	09/06/2007 18:04	63.4
09/06/2007 18:36	63.9	09/06/2007 18:34	63.5
10/06/2007 07:06	73.0	10/06/2007 07:04	70.7
10/06/2007 07:36	71.2	10/06/2007 07:34	73.4
10/06/2007 08:06	63.4	10/06/2007 08:04	63.0
10/06/2007 08:36	62.4	10/06/2007 08:34	62.2
10/06/2007 09:06	62.5	10/06/2007 09:04	62.4
10/06/2007 09:36	62.3	10/06/2007 09:34	62.4
10/06/2007 10:06	62.7	10/06/2007 10:04	62.7
10/06/2007 10:36	63.8	10/06/2007 10:34	63.8
10/06/2007 11:06	65.3	10/06/2007 11:04	65.7
10/06/2007 11:36	64.5	10/06/2007 11:34	64.4
10/06/2007 12:06	67.3	10/06/2007 12:04	67.9
10/06/2007 12:36	65.2	10/06/2007 12:34	64.6
10/06/2007 13:06	66.5	10/06/2007 13:04	65.4
10/06/2007 13:36	68.1	10/06/2007 13:34	66.3
10/06/2007 14:06	65.4	10/06/2007 14:04	64.9
10/06/2007 14:36	64.0	10/06/2007 14:34	63.3
10/06/2007 15:06	64.6	10/06/2007 15:04	64.0
10/06/2007 15:36	63.6	10/06/2007 15:34	63.2
10/06/2007 16:06	63.7	10/06/2007 16:04	63.3
10/06/2007 16:36	63.4	10/06/2007 16:34	63.1
10/06/2007 17:06	63.4	10/06/2007 17:04	62.8
10/06/2007 17:36	64.0	10/06/2007 17:34	63.0
10/06/2007 18:06	63.5	10/06/2007 18:04	62.9
10/06/2007 18:36	63.4	10/06/2007 18:34	63.0
11/06/2007 07:06	64.7	11/06/2007 07:04	63.4
11/06/2007 07:36	65.5	11/06/2007 07:34	64.9
11/06/2007 08:06	66.0	11/06/2007 08:04	65.0
11/06/2007 08:36	66.0	11/06/2007 08:34	65.3
11/06/2007 09:06	65.7	11/06/2007 09:04	64.9
11/06/2007 09:36	65.9	11/06/2007 09:34	65.0
11/06/2007 10:06	65.8	11/06/2007 10:04	64.8
11/06/2007 10:36	66.1	11/06/2007 10:34	64.8
11/06/2007 11:06	65.6	11/06/2007 11:04	65.0
11/06/2007 11:36	65.3	11/06/2007 11:34	64.7
11/06/2007 12:06	64.6	11/06/2007 12:04	64.1
11/06/2007 12:36	65.0	11/06/2007 12:34	64.5
11/06/2007 13:06	65.1	11/06/2007 13:04	64.3
11/06/2007 13:36	65.5	11/06/2007 13:34	64.6
11/06/2007 14:06	65.1	11/06/2007 14:04	64.4
11/06/2007 14:36	65.3	11/06/2007 14:34	64.5
11/06/2007 15:06	65.4	11/06/2007 15:04	64.7
11/06/2007 15:36	64.8	11/06/2007 15:34	64.3
11/06/2007 16:06	66.0	11/06/2007 16:04	65.0
11/06/2007 16:36	65.0	11/06/2007 16:34	64.5
11/06/2007 17:06	65.1	11/06/2007 17:04	64.6
11/06/2007 17:36	64.5	11/06/2007 17:34	64.0
11/06/2007 18:06	64.4	11/06/2007 18:04	64.3
11/06/2007 18:36	64.0	11/06/2007 18:34	63.9
12/06/2007 07:06	64.8	12/06/2007 07:04	63.9
12/06/2007 07:36	66.0	12/06/2007 07:34	65.4
12/06/2007 08:06	66.1	12/06/2007 08:04	65.3
12/06/2007 08:36	66.6	12/06/2007 08:34	65.6
12/06/2007 09:06	66.3	12/06/2007 09:04	65.5

Date and Time	Measured L_{Aeq} at Roof of Starr Hall	Date and Time	Measured L_{Aeq} at Roof of Ho Tung Hall
12/06/2007 09:36	65.7	12/06/2007 09:34	64.8
12/06/2007 10:06	65.9	12/06/2007 10:04	65.2
12/06/2007 10:36	65.4	12/06/2007 10:34	65.3
12/06/2007 11:06	65.2	12/06/2007 11:04	65.5
12/06/2007 11:36	64.7	12/06/2007 11:34	65.2
12/06/2007 12:06	64.3	12/06/2007 12:04	65.3
12/06/2007 12:36	63.7	12/06/2007 12:34	63.6
12/06/2007 13:06	64.2	12/06/2007 13:04	64.1
12/06/2007 13:34	65.1	12/06/2007 13:34	65.0
12/06/2007 14:04	65.1	12/06/2007 14:01	65.3
12/06/2007 14:34	64.9	12/06/2007 14:31	63.8
12/06/2007 15:04	64.7	12/06/2007 15:01	64.0
12/06/2007 15:34	64.5	12/06/2007 15:31	63.9
12/06/2007 16:04	65.5	12/06/2007 16:01	64.5
12/06/2007 16:34	68.2	12/06/2007 16:31	64.9
12/06/2007 17:04	68.9	12/06/2007 17:01	65.5
12/06/2007 17:34	67.1	12/06/2007 17:31	65.2
12/06/2007 18:04	64.1	12/06/2007 18:01	64.2
12/06/2007 18:34	63.5	12/06/2007 18:31	63.3
13/06/2007 07:04	63.6	13/06/2007 07:01	62.4
13/06/2007 07:34	66.6	13/06/2007 07:31	65.4
13/06/2007 08:04	66.2	13/06/2007 08:01	65.2
13/06/2007 08:34	67.0	13/06/2007 08:31	66.0
13/06/2007 09:04	67.8	13/06/2007 09:01	67.0
13/06/2007 09:34	65.8	13/06/2007 09:31	65.1
13/06/2007 10:04	65.8	13/06/2007 10:01	64.5
13/06/2007 10:34	66.3	13/06/2007 10:31	65.2
13/06/2007 11:04	65.4	13/06/2007 11:01	64.5
13/06/2007 11:34	65.2	13/06/2007 11:31	64.6
13/06/2007 12:04	65.5	13/06/2007 12:01	65.3
13/06/2007 12:34	64.5	13/06/2007 12:31	64.2
13/06/2007 13:04	64.1	13/06/2007 13:01	63.2
13/06/2007 13:34	65.9	13/06/2007 13:31	64.3
13/06/2007 14:04	66.7	13/06/2007 14:01	67.1
13/06/2007 14:34	66.0	13/06/2007 14:31	64.3
13/06/2007 15:04	65.7	13/06/2007 15:01	64.3
13/06/2007 15:34	65.4	13/06/2007 15:31	64.2
13/06/2007 16:04	66.0	13/06/2007 16:01	64.6
13/06/2007 16:34	65.8	13/06/2007 16:31	65.0
13/06/2007 17:04	65.9	13/06/2007 17:01	64.5
13/06/2007 17:34	65.7	13/06/2007 17:31	64.1
13/06/2007 18:04	64.8	13/06/2007 18:01	64.2
13/06/2007 18:34	64.2	13/06/2007 18:31	64.1
14/06/2007 07:04	62.6	14/06/2007 07:01	62.6
14/06/2007 07:34	63.7	14/06/2007 07:31	63.6
14/06/2007 08:04	64.7	14/06/2007 08:01	64.5
14/06/2007 08:34	65.0	14/06/2007 08:31	64.6
14/06/2007 09:04	66.1	14/06/2007 09:01	65.7
14/06/2007 09:34	66.0	14/06/2007 09:31	65.0
14/06/2007 10:04	65.8	14/06/2007 10:01	64.9
14/06/2007 10:34	65.8	14/06/2007 10:31	65.1
14/06/2007 11:04	69.9	14/06/2007 11:01	66.2
14/06/2007 11:34	67.1	14/06/2007 11:31	66.1
14/06/2007 12:04	64.5	14/06/2007 12:01	64.6
14/06/2007 12:34	64.8	14/06/2007 12:31	64.9
14/06/2007 13:04	67.5	14/06/2007 13:01	64.6
14/06/2007 13:34	65.5	14/06/2007 13:31	64.8
14/06/2007 14:04	65.8	14/06/2007 14:01	65.6
14/06/2007 14:34	65.3	14/06/2007 14:31	64.6
14/06/2007 15:04	65.0	14/06/2007 15:01	64.7
14/06/2007 15:34	65.2	14/06/2007 15:31	65.0
14/06/2007 16:04	66.3	14/06/2007 16:01	65.8
14/06/2007 16:34	65.7	14/06/2007 16:31	65.4
15/06/2007 07:04	64.4	15/06/2007 07:01	63.9
15/06/2007 07:34	66.1	15/06/2007 07:31	66.0
15/06/2007 08:04	65.0	15/06/2007 08:01	64.4
15/06/2007 08:34	67.9	15/06/2007 08:31	66.1
15/06/2007 09:04	68.8	15/06/2007 09:01	67.3
15/06/2007 09:34	65.9	15/06/2007 09:31	66.2
15/06/2007 10:04	66.0	15/06/2007 10:01	65.6
15/06/2007 10:34	65.5	15/06/2007 10:31	65.0
15/06/2007 11:04	65.2	15/06/2007 11:01	65.6

Date and Time	Measured L_{Aeq} at Roof of Starr Hall	Date and Time	Measured L_{Aeq} at Roof of Ho Tung Hall
15/06/2007 11:34	65.9	15/06/2007 11:31	65.0
15/06/2007 12:04	64.9	15/06/2007 12:01	64.7
15/06/2007 12:34	64.8	15/06/2007 12:31	65.1
15/06/2007 13:04	64.7	15/06/2007 13:01	64.3
15/06/2007 13:34	65.3	15/06/2007 13:31	64.6
15/06/2007 14:04	65.1	15/06/2007 14:01	65.3
15/06/2007 14:34	64.5	15/06/2007 14:31	64.6
15/06/2007 15:04	64.6	15/06/2007 15:01	64.6
15/06/2007 15:34	64.7	15/06/2007 15:31	64.7
15/06/2007 16:04	74.8	15/06/2007 16:01	67.6
15/06/2007 16:34	74.5	15/06/2007 16:31	67.3
15/06/2007 17:04	75.4	15/06/2007 17:01	67.0
15/06/2007 17:34	74.3	15/06/2007 17:31	66.5
15/06/2007 18:04	65.0	15/06/2007 18:01	64.1
15/06/2007 18:34	63.7	15/06/2007 18:31	64.1
16/06/2007 07:04	63.2	16/06/2007 07:01	64.3
16/06/2007 07:34	63.5	16/06/2007 07:31	64.5
16/06/2007 08:04	63.9	16/06/2007 08:01	64.6
16/06/2007 08:34	73.8	16/06/2007 08:31	66.2
16/06/2007 09:04	72.8	16/06/2007 09:01	66.7
16/06/2007 09:34	73.3	16/06/2007 09:31	66.6
16/06/2007 10:04	72.9	16/06/2007 10:01	65.8
16/06/2007 10:34	73.1	16/06/2007 10:31	66.4
16/06/2007 11:04	67.0	16/06/2007 10:57	65.3
16/06/2007 11:34	65.5	16/06/2007 11:27	64.6
16/06/2007 12:04	64.5	16/06/2007 11:57	64.4
16/06/2007 12:34	64.1	16/06/2007 12:27	64.0
16/06/2007 13:04	64.7	16/06/2007 12:57	64.3
16/06/2007 13:34	65.8	16/06/2007 13:27	64.4
16/06/2007 14:04	65.5	16/06/2007 13:57	64.8
16/06/2007 14:34	65.1	16/06/2007 14:27	64.4
16/06/2007 15:04	64.8	16/06/2007 14:57	64.2
16/06/2007 15:34	64.8	16/06/2007 15:27	64.4
16/06/2007 16:04	64.2	16/06/2007 15:57	64.2
16/06/2007 16:34	64.3	16/06/2007 16:27	64.0
16/06/2007 17:04	63.6	16/06/2007 16:57	63.9
16/06/2007 17:34	64.2	16/06/2007 17:27	63.7
16/06/2007 18:04	63.6	16/06/2007 17:57	63.8
16/06/2007 18:34	63.5	16/06/2007 18:27	63.6
17/06/2007 07:04	61.3	17/06/2007 06:57	60.7
17/06/2007 07:34	62.0	17/06/2007 07:27	63.0
17/06/2007 08:04	62.8	17/06/2007 07:57	63.4
17/06/2007 08:34	63.5	17/06/2007 08:27	64.5
17/06/2007 09:04	63.5	17/06/2007 08:57	64.5
17/06/2007 09:34	61.7	17/06/2007 09:27	62.1
17/06/2007 10:04	62.8	17/06/2007 09:57	62.8
17/06/2007 10:34	63.1	17/06/2007 10:27	63.2
17/06/2007 11:04	62.7	17/06/2007 10:57	63.1
17/06/2007 11:34	63.1	17/06/2007 11:27	63.1
17/06/2007 12:04	62.5	17/06/2007 11:57	62.9
17/06/2007 12:34	62.9	17/06/2007 12:27	62.8
17/06/2007 13:04	62.6	17/06/2007 12:57	62.6
17/06/2007 13:34	62.4	17/06/2007 13:27	62.5
17/06/2007 14:04	62.4	17/06/2007 13:57	62.5
17/06/2007 14:34	62.7	17/06/2007 14:27	62.3
17/06/2007 15:04	62.8	17/06/2007 14:57	62.8
17/06/2007 15:34	62.5	17/06/2007 15:27	62.3
17/06/2007 16:04	62.6	17/06/2007 15:57	62.6
17/06/2007 16:34	62.6	17/06/2007 16:27	62.5
17/06/2007 17:04	62.6	17/06/2007 16:57	62.7
17/06/2007 17:34	62.7	17/06/2007 17:27	62.7
17/06/2007 18:04	63.5	17/06/2007 17:57	62.6
17/06/2007 18:34	62.4	17/06/2007 18:27	63.6
18/06/2007 07:04	64.5	18/06/2007 06:57	64.0
18/06/2007 07:34	65.1	18/06/2007 07:27	65.0
18/06/2007 08:04	65.4	18/06/2007 07:57	65.1
18/06/2007 08:34	65.5	18/06/2007 08:27	65.5
18/06/2007 09:04	65.8	18/06/2007 08:57	65.2
18/06/2007 09:34	65.4	18/06/2007 09:27	64.8
18/06/2007 10:04	65.3	18/06/2007 09:57	65.1
18/06/2007 10:34	65.0	18/06/2007 10:27	64.7
18/06/2007 11:04	64.7	18/06/2007 10:57	64.1

Date and Time	Measured L_{Aeq} at Roof of Starr Hall	Date and Time	Measured L_{Aeq} at Roof of Ho Tung Hall
18/06/2007 11:34	64.6	18/06/2007 11:27	64.3
18/06/2007 12:04	64.2	18/06/2007 11:57	64.3
18/06/2007 12:34	63.9	18/06/2007 12:27	64.7
18/06/2007 13:04	64.3	18/06/2007 12:57	63.7
18/06/2007 13:34	65.4	18/06/2007 13:27	65.1
18/06/2007 14:04	66.1	18/06/2007 13:57	64.5
18/06/2007 14:34	70.2	18/06/2007 14:27	65.6
18/06/2007 15:04	68.8	18/06/2007 14:57	65.8
18/06/2007 15:34	66.4	18/06/2007 15:27	64.9
18/06/2007 16:04	64.5	18/06/2007 15:57	64.3
18/06/2007 16:34	67.1	18/06/2007 16:27	64.2
18/06/2007 17:04	72.6	18/06/2007 16:57	65.9
18/06/2007 17:34	71.2	18/06/2007 17:27	66.1
18/06/2007 18:04	64.0	18/06/2007 17:57	64.1
18/06/2007 18:34	63.9	18/06/2007 18:27	63.7
19/06/2007 07:04	62.8	19/06/2007 06:57	61.6
19/06/2007 07:34	63.2	19/06/2007 07:27	62.3
19/06/2007 08:04	63.5	19/06/2007 07:57	62.6
19/06/2007 08:34	63.4	19/06/2007 08:27	62.9
19/06/2007 09:04	63.3	19/06/2007 08:57	62.8
19/06/2007 09:34	62.9	19/06/2007 09:27	62.4
19/06/2007 10:04	63.1	19/06/2007 09:57	62.7
19/06/2007 10:34	63.0	19/06/2007 10:27	62.6
19/06/2007 11:04	62.7	19/06/2007 10:57	62.8
19/06/2007 11:34	62.9	19/06/2007 11:27	62.6
Average	65.2	Average	64.5

Noise Measurement Results at 3 Monitoring Locations

Date and Time	Measured LAeq at Refuge Floor (37R/F) of Tower 3, The Belcher's	Date and Time	Measured LAeq at Roof of Starr Hall	Date and Time	Measured LAeq at Roof of Lady Ho Tung
19/06/2007 09:45	64.2	19/06/2007 09:44	63.9	19/06/2007 09:47	62.1
19/06/2007 09:50	62.7	19/06/2007 09:49	62.4	19/06/2007 09:52	62.3
19/06/2007 09:55	63.4	19/06/2007 09:54	62.7	19/06/2007 09:57	63.6
19/06/2007 10:00	64.1	19/06/2007 09:59	63.5	19/06/2007 10:02	62.3
19/06/2007 10:05	63	19/06/2007 10:04	62.8	19/06/2007 10:07	63
19/06/2007 10:10	63.5	19/06/2007 10:09	63.4	19/06/2007 10:12	63.5
19/06/2007 10:15	64	19/06/2007 10:14	63.4	19/06/2007 10:17	61.4
19/06/2007 10:20	61.7	19/06/2007 10:19	61.7	19/06/2007 10:22	61.5
19/06/2007 10:25	61.9	19/06/2007 10:24	62.3	19/06/2007 10:27	63.2
19/06/2007 10:30	63.5	19/06/2007 10:29	63.6	19/06/2007 10:32	62.4
19/06/2007 10:35	63	19/06/2007 10:34	63.3	19/06/2007 10:37	63.7
19/06/2007 10:40	64.4	19/06/2007 10:39	62.9	19/06/2007 10:42	62.1
19/06/2007 10:45	62.7	19/06/2007 10:44	62.2	19/06/2007 10:47	63.4
19/06/2007 10:50	63.8	19/06/2007 10:49	63.6	19/06/2007 10:52	62.9
19/06/2007 10:55	63.5	19/06/2007 10:54	63.3	19/06/2007 10:57	62.2
19/06/2007 11:00	62.8	19/06/2007 10:59	62.2	19/06/2007 11:02	62.6
19/06/2007 11:05	62.9	19/06/2007 11:04	61.8	19/06/2007 11:07	62.5
19/06/2007 11:10	63.1	19/06/2007 11:09	64.4	19/06/2007 11:12	63.2
19/06/2007 11:15	63.7	19/06/2007 11:14	62.4	19/06/2007 11:17	62.6
19/06/2007 11:20	63	19/06/2007 11:19	62.8	19/06/2007 11:22	62.2
19/06/2007 11:25	62.8	19/06/2007 11:24	62.6	19/06/2007 11:27	62.4
19/06/2007 11:30	63.1	19/06/2007 11:29	62.8	19/06/2007 11:32	62.2
19/06/2007 11:35	62.9	19/06/2007 11:34	62	19/06/2007 11:37	62.5
19/06/2007 11:40	63.1	19/06/2007 11:39	63.7	19/06/2007 11:42	62.6
19/06/2007 11:45	63.1	19/06/2007 11:44	63.2	19/06/2007 11:47	63.4
19/06/2007 11:50	63.7	19/06/2007 11:49	62.6	19/06/2007 11:52	62.9
19/06/2007 11:55	63.8	19/06/2007 11:54	64	19/06/2007 11:57	61.6
19/06/2007 12:00	62.5	19/06/2007 11:59	61.6	19/06/2007 12:02	62.2
19/06/2007 12:05	62.9	19/06/2007 12:04	63.1	19/06/2007 12:07	62.9
19/06/2007 12:10	63.6	19/06/2007 12:09	63.5	19/06/2007 12:12	62.7
19/06/2007 12:15	63.3	19/06/2007 12:14	64.1	19/06/2007 12:17	62.4
19/06/2007 12:20	62.9	19/06/2007 12:19	62.4	19/06/2007 12:22	61.4
19/06/2007 12:25	62	19/06/2007 12:24	62.4	19/06/2007 12:27	62.7
19/06/2007 12:30	63	19/06/2007 12:29	63	19/06/2007 12:32	62.2
19/06/2007 12:35	62.9	19/06/2007 12:34	62.9	19/06/2007 12:37	63
19/06/2007 12:40	63.5	19/06/2007 12:39	63.2	19/06/2007 12:42	61.4
19/06/2007 12:45	62	19/06/2007 12:44	63	19/06/2007 12:47	63.5
19/06/2007 12:50	62.3	19/06/2007 12:49	64	19/06/2007 12:52	63.2
19/06/2007 12:55	64.1	19/06/2007 12:54	63.8	19/06/2007 12:57	62.1
19/06/2007 13:00	63.6	19/06/2007 12:59	62.8	19/06/2007 13:02	61.7
19/06/2007 13:05	62.8	19/06/2007 13:04	62.4	19/06/2007 13:07	62.8
19/06/2007 13:10	62.4	19/06/2007 13:09	64	19/06/2007 13:12	63.3
19/06/2007 13:15	63.5	19/06/2007 13:14	63.9	19/06/2007 13:17	61.7
19/06/2007 13:20	63.9	19/06/2007 13:19	62.3	19/06/2007 13:22	62.5
19/06/2007 13:25	62.1	19/06/2007 13:24	63.2	19/06/2007 13:27	63.1
19/06/2007 13:30	63.2	19/06/2007 13:29	64.4	19/06/2007 13:32	62.7
19/06/2007 13:35	63.7	19/06/2007 13:34	62.9	19/06/2007 13:37	62.9
19/06/2007 13:40	63	19/06/2007 13:39	63.6	19/06/2007 13:42	62.6
19/06/2007 13:45	63.5	19/06/2007 13:44	64.4	19/06/2007 13:47	63.4
19/06/2007 13:50	62.2	19/06/2007 13:49	63.5	19/06/2007 13:52	62
Average =	63.1	Average =	63.1	Average =	62.6