Highways Department

Agreement No. CE22/2005 (HY) Traffic Improvements to Tuen Mun Road Town Centre Section

Baseline Monitoring Report

Revision 4

Contents

Appendix H

Event and Action Plan

Executive Summary

In accordance with the EM&A Manual of the Project, environmental baseline monitoring should be carried out prior to the commencement of any construction activities. The baseline monitoring was conducted from 17 June to 6 July 2010 which included air quality monitoring, noise monitoring as well as landscape and visual monitoring.

Air quality was recorded in terms of 1-hr TSP and 24-hr TSP, and noise was measured in terms of L_{eq} dB(A) with L_{10} and L_{90} measurements as reference. **Tables E1** and **E2** summarise the air quality and noise monitoring results respectively with the Action and Limit Levels.

Table E1 1-hr TSP and 24-hr TSP monitoring results as well as Action and Limit level

Location	Measurement Result (μg/m³)		Action Level (μg/m³)		Limit Level (μg/m³)	
	1-hour	24-hour	1-hour	24-hour	1-hour	24-hour
Chung Sing Benevolent Society Mrs. Aw Boon Haw Secondary School (AM1)	22 - 111	15 – 45	290	146	500	260
Tung Wah Group of Hospitals Tai Tung Pui Social Service Building (AM2)	3 - 143	16 – 49	291	151	500	260
Shun Tak Fraternal Association Wu Siu Kui Memorial Primary School (AM3)	20 – 111	14 – 56	287	150	500	260
The Chinese Manufacturers' Association Of Hong Kong Choi Cheung Kok Secondary School (AM4)	14 – 127	14 – 41	292	150	500	260
Tuen Mun Town Hall (AM5)	11 – 116	10 – 41	286	146	500	260
Yan Oi Tong Jockey Club Community and Sports Centre (AM6)	14 - 153	13 - 40	294	147	500	260

Table E2 Action and Limit level of construction noise

Location	Time Period	Action Level	Limit Level dB(A) (Note 1)
• Kam Fai Garden (N1); • Tung Wah Group of Hospitals Tai Tung Pui Social Service Building (N2); and • Tuen King Building (N5)	0700 - 1900 hours on normal weekdays	When one documented complaint is received	75
	0700 - 2300 hours on holiday; and 1900 – 2300 hours on all other days		-
	2300 – 0700 hours of next day		-
• Po Leung Kuk The Hong Kong Taoist Association Yuen Yuen Primary School (N3); • Shun Tak Fraternal Association Wu Siu Kui Memorial Primary School (N4); and • The Chinese Manufacturers' Association Of Hong Kong Choi Cheung Kok Secondary School (N6)	0700 - 1900 hours on normal weekdays	When one documented complaint is received	70/65 (Note 2)
	0700 - 2300 hours on holiday; and 1900 – 2300 hours on all other days		-
	2300 – 0700 hours of next day		-

Notes:

(1) For normal day-time period, noise criteria are 70 and 65 dB(A) for normal teaching & examination periods respectively.

(2) During restricted hours, conditions stipulated in CNP issued by the Noise Control Authority have to be followed.

Regarding the landscape and visual baseline condition, no significant change in terms of landscape resource, landscape character area and view from visual sensitive receivers in respect of the EIA Report was recorded. Hence, no revision of landscape and visual mitigation measures is considered required for both construction phase and operation phase proposed in Section 10.7 of the EIA Report.

1 Background Information

Ove Arup & Partners Hong Kong Limited (Arup) was appointed by Highways Department (HyD) as the Environmental Team (ET) for *Agreement No. CE22/2005 (HY) Supplementary Agreement 1 Traffic Improvements to Tuen Mun Road Town Centre Section* (the Project). Environmental parameters including air quality, noise and landscape and visual are required for baseline monitoring prior to the commencement of the Project. The major construction period of the Project is planned to be commenced from August 2010 to January 2014.

1.1 Project background

The Scope of Traffic Improvements to Tuen Mun Road Town Centre Section (the Project) comprises:

(a) Widening of the Tuen Mun Road Town Centre Section (TMRTCS) between Yan Oi Town Square and Wong Chu Road of approximately 1.5km long from a dual two-lane carriage to a dual three-lane carriage;

(b) Resurfacing of existing section of the Tuen Mun Road (TMR);

(c) Construction of a single-lane flyover of approximately 450m long, which extends from Tuen Hing Road and runs along Tsing Hoi Circuit to merge eventually with the TMR Kowloon-bound carriage;

(d) Reconstruction of the slip road of the existing Wong Chu Road of approximately 80m long to facilitate proper merge with the new flyover mentioned in paragraph (c) above;

(e) Demolition and reconstruction of four existing footbridges and provision of two temporary footbridges during the construction period;

(f) Improvement of three existing traffic light signal-controlled junctions along Castle Peak Road (CPR) between Tuen Hing Road and Hoi Wing Road;

(g) Installation of the following along the carriageway:

  i. Vertical noise barriers;

  ii. Cantilevered noise barriers;

  iii. Semi-enclosures; and

  iv. Full-enclosures;

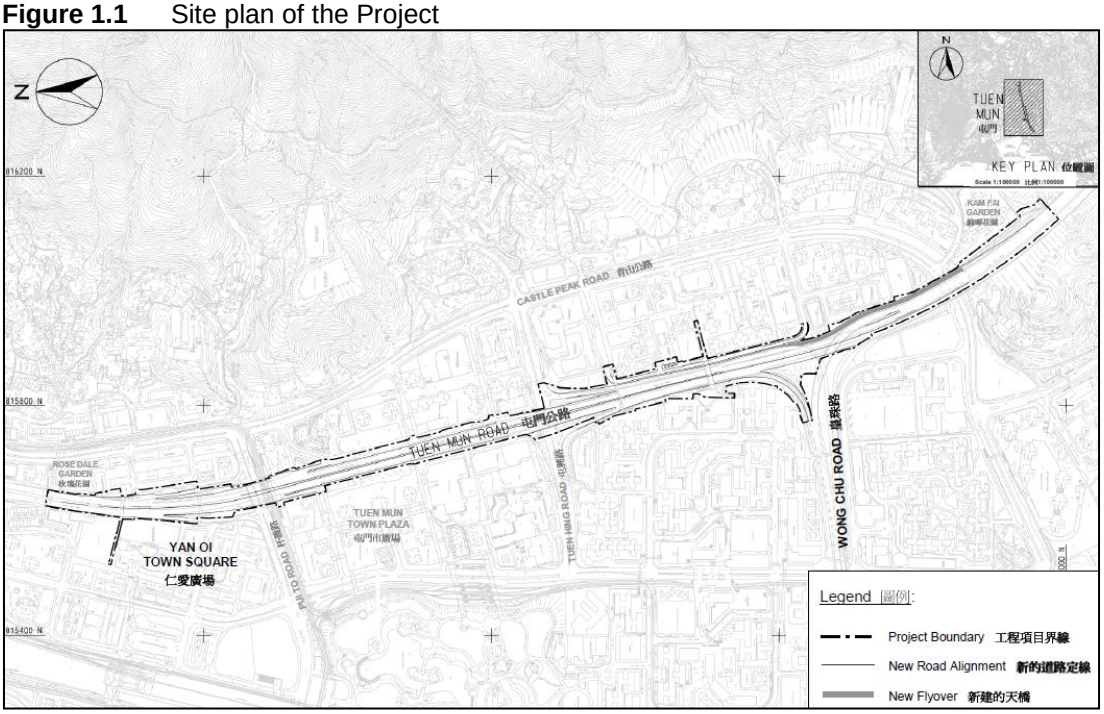
(h) Provision of a traffic control and surveillance system (TCSS); and

(i) Associated civil, structural, landscaping, geotechnical works, and works on reprovisioning of existing facilities, environmental mitigation, drainage, road lighting, water mains and traffic aids.

The Project is a designated project under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). Environmental Monitoring and Audit (EM&A) work is required in accordance with the conditions stipulated in the Environmental Permit (EP) (EP-342/2009/A) and the EM&A Manual of the Project.

The site plan of the Project is shown in **Figure 1.1**.

Figure 1.1 Site plan of the Project



1.2 Baseline EM&A Requirement

The baseline environmental monitoring included the following works prior to the commencement of any construction activities:

(i) Air quality monitoring (both 1-hour and 24-hour TSP);

(ii) Noise monitoring; and

(iii) Landscape and visual monitoring.

Air quality of 24-hour TSP should be carried out at least 14 consecutive days, while 1-hour TSP sampling should be sampled at least 3 times per day.

Noise monitoring should be carried out daily for a period of at least two weeks at a minimum logging interval 30 minutes (as 6 consecutive L_{Aeq}, 5min readings) for daytime and 5 minutes (L_{Aeq}, 5min readings) for evening time and night time. As supplementary information for data auditing, statistical results such as L_{10} and L_{90} shall also be obtained for reference.

Baseline Landscape and visual review in terms of landscape resource, landscape character area and view from visual sensitive receivers in respect of the EIA Report should be conducted.

1.3 Purpose of the Report

The purpose of the baseline environmental monitoring, as described in Section 10.2 of the EM&A Manual, is to establish ambient conditions prior to the commencement of the works and to demonstrate the suitability of the monitoring stations.

2 Monitoring Methodology

The baseline monitoring was conducted from 17 June to 6 July 2010 for a period of 20 days prior to the commencement of any construction works, while details of the monitoring schedule are attached in **Appendix A**. Following sections describe the methodology adopted for the monitoring.

2.1 Air Quality

2.1.1 Monitoring Parameters and Frequency

Baseline air quality monitoring for 24-hour Total Suspended Particulates (TSP) was undertaken during the monitoring period. 1-hour TSP measurement was carried out 3 times per day during the same period.

General meteorological conditions (wind speed, direction and precipitation) and notes regarding any significant adjacent dust producing sources shall also be recorded throughout the baseline monitoring period.

2.1.2 Monitoring Equipment

Baseline monitoring was conducted for both 1-hour and 24-hour TSP using a direct reading meter (MIE personalDataRAM 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. **Table 2.1** shows the equipment used for baseline air quality monitoring.

Table 2.1 Air quality equipment list for baseline air quality monitoring

Equipment	Manufacturer & Model No.	Measurement Parameter	Quantity	Serial No.
High Volume Sampler	Thermo Anderson / TE-5170	24-hour TSP	6	521, 522, 505, 1278, 516 & 510
Fibreglass Filter	G810		84	--
HVS Calibration Kit	GMW-2535		1	1378
Potable Dust Monitor	MIE *personal* DataRAM *p*DR-1000	1-hour TSP	3	3893, 4239 & 4243

2.1.3 Maintenance and Calibration

2.1.3.1 24-hour TSP monitoring

The HVSs and their accessories were frequently checked and maintained in accordance with the manufacturer's operation and maintenance manual. The maintenance included checking of supporting screen and gasket, as well as routine replacement of motor carbon brushes for the blower motor. The power cords and power supply were checked each time before sampling to ensure proper operation.

The HVSs were calibrated at 2-month intervals using GMW-2535 calibration kit which is re-calibrated by the manufacturer after one year of use. The calibration spreadsheets of the HVS and calibration certificate of the calibration kit are provided in **Appendix B**.

2.1.3.2 1-hour TSP monitoring

The portable dust monitors were frequently checked and maintained in accordance with the manufacturer's instruction manual. The power supply and zeroing of the instrument were checked each time before sampling to ensure proper operation.

The portable dust monitor were calibrated at 2-year intervals by certified laboratory or manufacturer and properly documented. The calibration certificates of the portable dust monitor are provided in **Appendix B**.

2.1.4 Monitoring Procedures

2.1.4.1 24-hr TSP monitoring

Specifications of the HVS are as follows:

- 0.6 – 1.7 m^3/min (20 – 60SCFM);
- Equipped with a timing/control device with +/- 5 minutes accuracy for 24 hours operation;
- Installed with elapsed time meter with +/- 2 minutes accuracy for 24 hours operation;
- Capable of providing a minimum exposed area of 406 cm^2 (63in^2);
- Flow control accuracy: +/-2.5% deviation over 24-hr TSP sampling period;
- Equipped with a shelter to protect the filter and sampler;
- Incorporated with an electronic mass flow rate controller or other equivalent devices;
- Equipped with a flow recorder for continuous monitoring;
- Provided with a peaked roof inlet;
- Incorporated with a manometer;
- Able to hold and seal the filter paper to the sampler housing at horizontal position;
- Easy to change the filter; and
- Capable of operating continuously for 24-hr period.

The HVSs were equipped with an electronic mass flow controller and calibrated against a traceable standard at regular intervals. All equipment, calibration kit and filter papers were clearly labelled.

The relevant data including temperature, pressure, weather conditions, elapsed-time meter reading for the start and stop of the sampler, identification and weight of the filter paper, and other special phenomena observed and work progress of the concerned site were recorded.

A HOKLAS accredited laboratory (ALS Technichem (HK) Pty Ltd (HOKLAS no.: 066) with constant temperature and humidity control, and equipped with necessary measuring and conditioning instruments, to handle the 24-hr TSP samples, was employed for sample analysis, and equipment calibration and maintenance. Filter papers of size 8"x10" were labelled before sampling. They were inspected clean with no pin holes and conditioned in a humidity controlled chamber for over 24-hr and be pre-weighed before use for the sampling.

The 24-hour TSP levels were measured by following the standard High Volume Method for Total Suspended Particulates as set out in the *Title 40 of the United States Code of Federal Regulations, Chapter 1 (Part 50), Appendix B*. TSP was sampled by drawing air through a conditioned, pre-weighted filter paper inside the HVS at a controlled air flow rate. After 24-hr sampling, the filter papers loaded with dust were kept in a clean and tightly sealed plastic bag, and then returned to the laboratory for reconditioning in the humidity controlled chamber followed by accurate weighing by an electronic balance with a readout down to 0.1 mg. All the collected samples shall be kept in a good condition for 6 months before disposal.

2.1.4.2 1-hr TSP monitoring

The 1-hr TSP measurement followed manufacturer's instruction manual. Before initiating a measurement, zeroing the portable dust monitor was carried out to ensure maximum accuracy of concentration measurements.

The 1-hr TSP was sampled by drawing air into the portable dust monitor where particular concentrations are measured instantaneously with an in-built silicon detector sensing light scattered by the particulates in the sampled air. Continuous TSP levels are indicated and

logged by a built-in data logger compatible with Windows based program to facilitate data collection, analysis and reporting.

2.1.5 Monitoring Location

In accordance with the EM&A Manual, six air quality monitoring locations were required for the 1-hr and 24-hr TSP monitoring, namely:

(i) Far East Consortium Tuen Mun Central Building (FEC);

(ii) Tuen Mun Town Plaza (TMTP);

(iii) Waldorf Garden (WG);

(iv) Chi Lok Fa Yuen (CLFY);

(v) Tung Wah Group of Hospitals Tai Tung Pui Social Service Building (TTP); and

(vi) Kam Fai Garden (KFG).

Liaisons with the premise owners or management office of the above premises were conducted. The premises owner of Tung Wah Group of Hospitals Tai Tung Pui Social Service Building (TTP) agreed to allow access and installation of monitoring equipment.

Due to the lacking of reply or request of access and installation of the monitoring rejected by the representatives of the remaining locations, liaisons with the premises which are in the vicinity of the Project boundary were undertaken. Five alternative air quality monitoring locations were selected in accordance with the selection criteria as stipulated in the Section 3.6.4 of the EM&A Manual. Finalised air quality monitoring stations of the Project were summarised in **Table 2.2**. **Photos 2.1 to 2.6** show the installed HVS at proposed baseline monitoring locations and **Figure 2.1** shows their locations.

Table 2.2 Finalised air quality monitoring stations

Station	Monitoring ID	Monitoring Location
ABH(d)	AM1	Chung Sing Benevolent Society Mrs. Aw Boon Haw Secondary School
TTP	AM2	Tung Wah Group of Hospitals Tai Tung Pui Social Service Building
WSK(d)	AM3	Shun Tak Fraternal Association Wu Siu Kui Memorial Primary School
CCK(d)	AM4	The Chinese Manufacturers' Association Of Hong Kong Choi Cheung Kok Secondary School
TMTH(d)	AM5	Tuen Mun Town Hall
YOT(d)	AM6	Yan Oi Tong Jockey Club Community and Sports Centre

Remarks: Symbol '(d)' is denoted for the relocated location IDs to differentiate from the designated locations in EM&A Manual for ease of reference.

Photo 2.1 HVS installed at Chung Sing Benevolent Society Mrs. Aw Boon Haw Secondary School (AM1)

Photo 2.2 HVS installed at Tung Wah Group of Hospitals Tai Tung Pui Social Service Building (AM2)

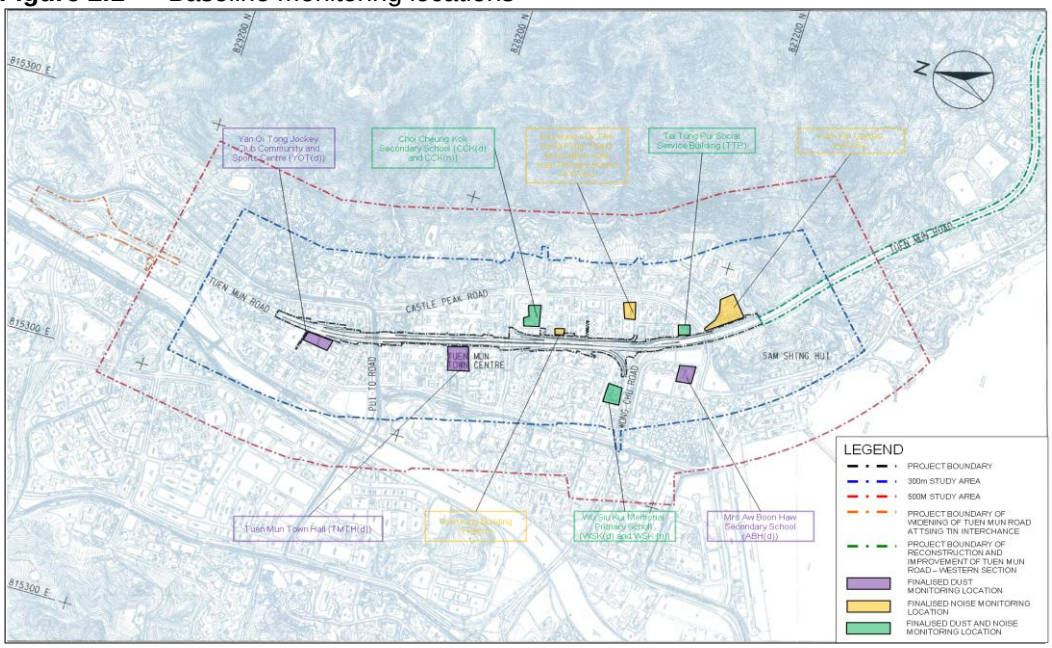
Photo 2.3 HVS installed at Shun Tak Fraternal Association Wu Siu Kui Memorial Primary School (AM3)

Photo 2.4 HVS installed at The Chinese Manufacturers' Association Of Hong Kong Choi Cheung Kok Secondary School (AM4)

Photo 2.5 HVS installed at Tuen Mun Town Hall (AM5)

Photo 2.6 HVS installed at Yan Oi Tong Jockey Club Community and Sports Centre (AM6)

Figure 2.1 Baseline monitoring locations



Proposal of the alternative monitoring locations had been already agreed by the ER and the IEC and submitted to EPD prior to the commencement of baseline monitoring in accordance with Section 3.6.2 of the EM&A Manual.

2.2 Noise

2.2.1 Monitoring Parameters and Frequency

Baseline noise monitoring for daytime (0700-1900) was undertaken continuously during the monitoring period. The measurement parameters were $L_{Aeq(30mins)}$ (as 6 consecutive $L_{Aeq(5mins)}$ readings), L_{10} and L_{90}. Monitoring at restricted hours (i.e. 1900-2300, 2300-0700 and Sundays) was taken in 5-minute intervals during each respective period. The measurement parameters were $L_{Aeq(5mins)}$, L_{10} and L_{90}.

2.2.2 Monitoring Equipments

Baseline noise level was measured by a Sound Level Meter (SLM) in terms of A-weighted equivalent continuous sound pressure level (L_{eq}). L_{10} and L_{90} were recorded as supplementary information for data auditing. **Table 2.4** shows the equipment list of the baseline noise monitoring.

Table 2.3 Noise equipment list for baseline noise monitoring

Equipment	Manufacturer & Model No.	Serial No.	Precision Grade	Qty.
Integrated SLM	Brüel & Kjær 2238	2320694, 2320696, 2320707, 2562763, 2654435 & 2654436	IEC 651 Type 1 IEC 804 Type 1	6
½" free-field microphone	Brüel & Kjær 4188	2641132, 2630749, 2630746, 2658599, 2658546 & 2658547		6
Windshield	Brüel & Kjær UA0237	--		6
Sound level calibrator	Rion NC-74	34304660	IEC 942 Type 1	1

2.2.3 Maintenance and Calibration

The SLM and calibrator in compliance with the International Electrotechnical Commission (IEC) Publication 651:1979 (Type 1) specifications as referenced in the Technical Memorandum on Noise from Construction Work other than Percussive Piling (GW-TM) was used.

SLM complying with the standards of IEC 651 (Fast, Slow, Impulse rms detector tests) and IEC 804 (L_{eq} functions) and acoustical calibrator complying with IEC 942 were adopted for the noise measurement. Both equipment are calibrated annually in-house using Brüel & Kjær (B&K) calibrator model no 4226. The calibrator 4226 is annually calibrated by the National Physical Laboratory in Teddington, London, which is accredited by National Measurement Accreditation Service (NAMAS). All in-house calibrations that have been undertaken can be traced back to the National Physical Laboratory. The calibration certificates for the noise equipment are given in **Appendix C**.

2.2.4 Monitoring Procedures

- The SLM and battery were checked to ensure that they are in proper condition. The SLM was set on a tripod at 1.2m above ground and at least 1m from the exterior of the building façade;
- Before conducting the measurement, the SLM was calibrated by an acoustical calibrator;
- Measurement parameter was set to A-weighted sound pressure level. The time weighting was set in fast response and the time period of measurement at 30 minutes;
- Wind speed was checked during noise monitoring to ensure the steady wind speed does not exceed 5m/s, or wind with gusts does not exceed 10m/s;
- Any abnormal conditions that generated intrusive noise during the measurement was recorded on the field record sheet;

- After each measurement, the equivalent continuous sound pressure level (L_{eq}), L_{10} and L_{90} were recorded on the field record sheet;
- After conducting the measurement, the SLM was calibrated by an acoustical calibrator; and
- The SLM was re-calibrated by the acoustical calibrator to confirm that there is no significant drift of reading. Measurements shall be accepted as valid only if the calibration levels before and after the noise measurement agree to within 1.0 dB.

2.2.5 Monitoring Location

In accordance with the EM&A Manual, six noise monitoring locations were required, namely:

(i) Far East Consortium Tuen Mun Central Building (FEC);

(ii) Tuen Mun Town Plaza (TMTP1);

(iii) Waldorf Garden (WG2);

(iv) Chi Lok Fa Yuen (CLFY1);

(v) Tung Wah Group of Hospitals Tai Tung Pui Social Service Building (TTP); and

(vi) Kam Fai Garden (KFG3D).

Liaisons with the premise owners or management office of the above premises were conducted. The premises owners of Tung Wah Group of Hospitals Tai Tung Pui Social Service Building (TTP) and Kam Fai Garden (KFG3D) agreed to allow access and installation of monitoring equipment.

Due to the lacking of reply or request of access and installation of the monitoring rejected by the representatives of the remaining locations, liaisons with the premises which are in the vicinity of the Project boundary were undertaken. Four alternative noise monitoring locations were selected in accordance with the selection criteria as stipulated in the Section 2.4.3 of the EM&A Manual. Finalised noise monitoring stations of the Project were summarised in **Table 2.4**. **Photos 2.7 to 2.12** show the installed HVS at proposed baseline monitoring locations and **Figure 2.1** shows their locations.

and **Figure 2.1** shows their locations.

Table 2.4 Finalised noise monitoring stations

Station	Monitoring ID	Monitoring Location
KFG3D	N1	Kam Fai Garden
TTP	N2	Tung Wah Group of Hospitals Tai Tung Pui Social Service Building
YYP(n)	N3	Po Leung Kuk The Hong Kong Taoist Association Yuen Yuen Primary School
WSK(n)	N4	Shun Tak Fraternal Association Wu Siu Kui Memorial Primary School
TKB(n)	N5	Tuen King Building
CCK(n)	N6	The Chinese Manufacturers' Association Of Hong Kong Choi Cheung Kok Secondary School

Remarks: Symbol '(n)' is denoted for the relocated location IDs to differentiate from the designated locations in EM&A Manual for ease of reference.

Photo 2.7 Noise meter installed at Kam Fai Garden (N1)

Photo 2.8 Noise meter installed at Tung Wah Group of Hospitals Tai Tung Pui Social Service Building (N2)

Photo 2.9 Noise meter installed at Po Leung Kuk The Hong Kong Taoist Association Yuen Yuen Primary School (N3)

Photo 2.10 Noise meter installed at Shun Tak Fraternal Association Wu Siu Kui Memorial Primary School (N4)

Photo 2.11 Noise meter installed at Tuen King Building (N5)

Photo 2.12 Noise meter installed at The Chinese Manufacturers' Association Of Hong Kong Choi Cheung Kok Secondary School (N6)

Proposal of the alternative monitoring locations had been already agreed by the ER and the IEC and submitted to EPD prior to the commencement of baseline monitoring in accordance with Section 2.4.2 of the EM&A Manual.

2.3 Landscape and Visual Impact

2.3.1 Monitoring Parameters

Baseline site survey was undertaken on 6 July 2010 to review the landscape and visual conditions of the site and its vicinity with regard to parameters assessed in the EIA Report,

including landscape resource (LR), landscape character area (LCA) and view condition of visual sensitive receiver (VSR). The components of each assessed parameter of LR, LCA and VSR are summarised in **Table 2.5**.

Table 2.5 Parameters of landscape resources, landscape character areas and landscape sensitive receivers assessed during baseline site survey

ID No.	Names
Landscape Resources	
LR1	Tsing Sin Playground
LR2	Roadside Planting along Tuen Mun Road Adjacent to Kam Fai Garden
LR3	Street trees along Castle Peak Road – Castle Peak Bay
LR4	Street trees along Tuen Mun Road west of Chi Lok Fa Yuen and east of On Ting Estate
LR5	Street trees along Tuen Mun Road west of Waldorf Garden and CMA Choi Cheung Kok Prevocational School
LR6	Street trees along Tuen Mun Road near Tuen Mun Town Plaza
LR7	Street trees along Tuen Mun Road east of Yan Oi Tong
LR8	Trees at roadside planting areas near Yan Oi Tong Circuit
LR9	Trees at planting area near Tuen Mun Town Plaza
LR10	Trees at planting area near New Town Mansion
LR11	Trees at planting area near On Ting Estate
LR12	Tsing Hoi Playground
Landscape Character Areas	
LZ1	Tuen Mun Residential Urban Landscape
LZ2	Tuen Mun Mixed Modern Comprehensive Urban Development Landscape
LZ3	Tuen Mun ‘Hui’ Urban Landscape
Visual Sensitive Receivers	
C/R1	Tuen Mun Town Plaza, Waldorf Garden
C/R2	Tuen Cultural Centre, Tuen Mun Town Plaza
C/R3	Chelsea Height
GIC1	Tuen Mun Church and Tuen Mun Tseng Choi Street Joint-user Complex
GIC2	Sin Hing Tong Temple
GIC3	Semple Memorial Secondary School and Chung Shing Benevolent Society Mrs. Aw Boon Haw Secondary School
GIC4	Car park (Open)
GIC5	Yan Oi Tong Community & Sports Centre
GIC6	Tuen Mun Government Secondary School, Choi Cheung Kok Secondary School
GIC7	Madam Lau Wong Fat Primary School, Lui Cheung Kwong College, Leung Kau Kui College, Lui Cheung Kwong Primary School, Wu Siu Kui Primary School
GIC8	Sam Shing Temple
O1	San Hui Playground

ID No.	Names
O2	Tsing Sin Playground
O3	Siu Lun Sports Ground
O4	Hoi Sin Playground
R1	Residential Area of Tuen Mun San Hui
R2	Residential Area along Yan Oi Tong Circuit
R3	On Ting Estate and Siu On Court
R4	Residential Area along Tsing Hoi Circuit
R5	Handsome Court, Alpine Garden, Hoi Tak Garden and Harvest Garden, Kam Fai Garden
R6	Siu Lun Court
R7	Goodview Garden and Tsui Ning Garden
R8	Sam Shing Estate
R9	Hanford Garden
T1	Tuen Mun Road – Vehicular and Pedestrian

2.3.2 Monitoring Procedures and Locations

In accordance with the EM&A Manual, site survey was conducted to check and record any changes of the landscape and visual baseline conditions in respect of the EIA Report. The monitoring procedures and criteria as described in the EIA Report were adopted for the baseline landscape and visual assessment.

LRs, LCAs, as well as VSRs within the zone of visual influence, were checked against Section 8 of the EIA Report through desktop study followed by on site verification.

The location of monitored LRs, LCAs and VSRs can be referred to the Figures 8.2A to 8.2C, 8.3A to 8.3B and 8.4 of the EIA Report respectively.

3 Baseline Monitoring Results

3.1 Weather conditions

During baseline monitoring period, it was observed that the major activities surrounding the monitoring locations were road traffic along Tuen Mun Road. Adverse weather condition was recorded on 22, 23, 26, 27 and 28 June 2010. No other specific factors which may affect the results were observed.

The weather was mainly sunny with occasionally cloudy throughout the remaining baseline monitoring dates. Meteorological data including wind speed, direction and precipitation was recorded and attached in **Appendix E**.

3.2 Air Quality Monitoring Results

Throughout baseline monitoring period, general weather conditions, temperature, pressure were recorded in **Appendix E**, while wind speed and wind direction were recorded and attached in **Appendix E**.

Adverse weather condition was recorded on 22, 23, 26, 27 and 28 June 2010 and might influence the measurement results. Air quality monitoring results on the above dates were therefore discarded during the data manipulation.

The baseline air monitoring results of 1-hour TSP and 24-hour TSP are summarised in **Table 3.1** and **Table 3.2** respectively and the details are attached in **Appendix F**. Graphical presentations of 1-hour TSP and 24-hour TSP for six air quality monitoring stations are shown in **Figures 3.1** to **3.10** respectively.

Table 3.1: Baseline 1-hour TSP monitoring results

Air Monitoring Station	Mean, $\mu g/m^3$	Minimum, $\mu g/m^3$ (date)	Maximum, $\mu g/m^3$ (date)
AM1	60.8	21.7 (20 Jun 10)	111.3 (24 Jun 10)
AM2	63.6	2.6 (1 Jul 10)	143.1 (6 Jul 10)
AM3	56.2	20.4 (1 Jul 10)	110.8 (2 Jul 10)
AM4	64.0	13.7 (1 Jul 10)	126.6 (17 Jun 10)
AM5	56.1	10.7 (2 Jul 10)	116.0 (29 Jun 10)
AM6	68.4	14.0 (1 Jul 10)	153.3 (3 Jul 10)

Table 3.2: Baseline 24-hour TSP monitoring results

Air Monitoring Station	Mean ($\mu g/m^3$)	Minimum, $\mu g/m^3$ (date)	Maximum, $\mu g/m^3$ (date)
AM1	25.2	14.8 (6 Jul 10)	45.2 (3 Jul 10)
AM2	32.0	15.9 (6 Jul 10)	48.9 (25 Jun 10)
AM3	31.2	14.1 (6 Jul 10)	56.1 (24 Jun 10)
AM4	30.3	13.9 (6 Jul 10)	41.0 (2 Jul 10)
AM5	24.4	9.7 (5 Jul 10)	41.1 (17 Jun 10)
AM6	26.9	12.8 (21 Jun 10)	39.7 (17 Jun 10)

3.3 Noise Monitoring Results

During the monitoring period, it was observed that the major activity surrounding the monitoring location were mainly road traffic along the Tuen Mun Road.

Adverse weather condition was recorded on 22, 23, 26, 27 and 28 June 2010 and might influence the measurement results. Noise monitoring results on the above dates were therefore discarded during the data manipulation.

The baseline noise monitoring results in respect of day-time (0700-1900), evening-time (1900-2300) and night-time (2300-0700) are summarised in **Table 3.3 to 3.5**, while details of the results are attached in **Appendix G**. Graphical presentations are shown in **Appendix G.**

Table 3.3 Baseline noise monitoring results during day-time (0700-1900)

Monitoring Station	$L_{eq(30min)}$, dB(A) Mean (*Range*)	$L_{10(5min)}$, dB(A) Mean (*Range*)	$L_{90(5min)}$, dB(A) Mean (*Range*)
N1	76 (76 – 77)	79 (77 – 80)	73 (73 – 74)
N2	78 (77 – 79)	80 (79 – 80)	76 (75 – 76)
N3	69 (68 – 69)	70 (69 – 70)	67 (66 – 67)
N4	67 (66 – 68)	68 (67 – 70)	65 (64 – 66)
N5	70 (70 – 71)	72 (71 – 73)	68 (67 – 69)
N6	69 (68 – 70)	71 (70 – 71)	67 (66 – 68)

Table 3.4 Baseline noise monitoring results during evening-time (1900-2300)

Monitoring Station	$L_{eq(5min)}$, dB(A) Mean (*Range*)	$L_{10(5min)}$, dB(A) Mean (*Range*)	$L_{90(5min)}$, dB(A) Mean (*Range*)
N1	72 (71 – 73)	75 (74 – 76)	69 (68 – 70)
N2	75 (74 – 76)	77 (76 – 78)	72 (71 – 73)
N3	66 (65 – 67)	68 (67 – 68)	64 (63 – 65)
N4	65 (62 – 67)	66 (64 – 68)	62 (60 – 65)
N5	68 (66 – 69)	70 (68 – 71)	65 (63 – 66)
N6	67 (66 – 68)	68 (67 – 70)	65 (63 – 66)

Table 3.5 Baseline noise monitoring results during night-time (2300-0700)

Monitoring Station	$L_{eq(5min)}$, dB(A) Mean (*Range*)	$L_{10(5min)}$, dB(A) Mean (*Range*)	$L_{90(5min)}$, dB(A) Mean (*Range*)
N1	68 (67 – 70)	71 (70 – 73)	65 (64 – 67)
N2	71 (70 – 74)	74 (73 – 76)	67 (65 – 70)
N3	62 (61 – 64)	64 (63 – 66)	59 (58 – 61)
N4	61 (59 – 63)	63 (61 – 64)	58 (56 – 60)
N5	65 (63 – 67)	67 (66 – 69)	61 (59 – 64)

Monitoring Station	$L_{eq(5min)}$, dB(A) Mean (*Range*)	$L_{10(5min)}$, dB(A) Mean (*Range*)	$L_{90(5min)}$, dB(A) Mean (*Range*)
N6	64 (62 – *65*)	66 (64 – 67)	60 (58 – 61)

3.4 Landscape and Visual Monitoring Results

3.4.1 Landscape Resource

Based on the survey findings, no substantial change in the baseline condition of LR was noted except minor change of street trees along Castle Peak Road – Castle Peak Bay (LR3). A summary of the baseline condition of LR recorded in the survey is given in **Table 3.5** and details are given in **Figures D1 to D2** in **Appendix D**.

Table 3.5 Baseline condition of LR

LR	EIA Report	Baseline Review
LR1	Tsing Sin Playground	Same as the EIA Report
LR2	Roadside Planting along Tuen Mun Road Adjacent to Kam Fai Garden	
LR3	Street trees along Castle Peak Road – Castle Peak Bay	Minor change: Part of the street trees in the vicinity of Sam Shing Bridge were removed by other construction activities.
LR4	Street trees along Tuen Mun Road west of Chi Lok Fa Yuen and east of On Ting Estate	Same as the EIA Report
LR5	Street trees along Tuen Mun Road west of Waldorf Garden and CMA Choi Cheung Kok Prevocational School	
LR6	Street trees along Tuen Mun Road near Tuen Mun Town Plaza	
LR7	Street trees along Tuen Mun Road east of Yan Oi Tong	
LR8	Trees at roadside planting areas near Yan Oi Tong Circuit	
LR9	Trees at planting area near Tuen Mun Town Plaza	
LR10	Trees at planting area near New Town Mansion	
LR11	Trees at planting area near On Ting Estate	
LR12	Tsing Hoi Playground	

3.4.1 Landscape Character Area (LCA)

Based on the survey findings, no substantial change in the baseline condition of LCA was noted. A summary of the baseline condition of LCA recorded in the recent review is given in **Table 3.6**.

Table 3.6 Baseline condition of LCA

LCA	EIA Report	Baseline Review
LZ1	Tuen Mun Residential Urban Landscape	Same as the EIA Report

LCA	EIA Report	Baseline Review
LZ2	Tuen Mun Mixed Modern Comprehensive Urban Development Landscape	
LZ3	Tuen Mun 'Hui' Urban Landscape	

3.4.2 Visual Sensitive Receiver (VSR)

Based on the survey findings, no substantial change in the baseline condition of VSR was noted. A summary of the baseline condition of VSR recorded in the recent review is given in **Table 3.7** and details are given in **Figures D3 to D6** in **Appendix D**.

Table 3.7 Baseline condition of VSR

VSR	EIA Report	Baseline Review
C/R1	Tuen Mun Town Plaza, Waldorf Garden	Same as the EIA Report
C/R2	Tuen Cultural Centre, Tuen Mun Town Plaza	
C/R3	Chelsea Height	
GIC1	Tuen Mun Church and Tuen Mun Tseng Choi Street Joint-user Complex	
GIC2	Sin Hing Tong Temple	
GIC3	Semple Memorial Secondary School and Chung Shing Benevolent Society Mrs. Aw Boon Haw Secondary School	
GIC4	Car park (Open)	
GIC5	Yan Oi Tong Community & Sports Centre	
GIC6	Tuen Mun Government Secondary School, Choi Cheung Kok Secondary School	
GIC7	Madam Lau Wong Fat Primary School, Lui Cheung Kwong College, Leung Kau Kui College, Lui Cheung Kwong Primary School, Wu Siu Kui Primary School	
GIC8	Sam Shing Temple	
O1	San Hui Playground	
O2	Tsing Sin Playground	
O3	Siu Lun Sports Ground	
O4	Hoi Sin Playground	
R1	Residential Area of Tuen Mun San Hui	
R2	Residential Area along Yan Oi Tong Circuit	
R3	On Ting Estate and Siu On Court	
R4	Residential Area along Tsing Hoi Circuit	
R5	Handsome Court, Alpine Garden, Hoi Tak Garden and Harvest Garden, Kam Fai Garden	
R6	Siu Lun Court	
R7	Goodview Garden and Tsui Ning Garden	
R8	Sam Shing Estate	

VSR	EIA Report	Baseline Review
R9	Hanford Garden	
T1	Tuen Mun Road – Vehicular and Pedestrian	

No significant change in baseline condition from the EIA Report was recorded for landscape resource, LCA and view from VSR. All findings suggested that they are comparable to those given in the EIA report (Figure 8.2.1, 8.4.1, 8.4.2 and 8.4.3). Nonetheless, no revision of landscape and visual mitigation measures is considered required for both construction and operation phases as proposed in Tables 8.8 and 8.9 of EIA Report.

4 Derivation of Action and Limit Level

The Action and Limit (A/L) Levels are defined levels of impact recorded by the environmental monitoring activities. They represent levels at which a prescribed response will be required. These levels are quantitatively defined in the subsequent sections of this Report and EM&A Manual.

Action Level

The levels beyond which there is an indication of a deteriorating ambient environmental quality. Appropriate remedial actions may be necessary to prevent the environmental quality from going beyond the limit levels, which would be unacceptable.

Limit Level

The levels stipulated in relevant pollution control ordinances, Hong Kong Planning Standards and Guidelines (HKPSG), or Environmental Quality Objectives established by EPD. If these are exceeded, works shall not proceed without appropriate remedial action, including a critical review of plant and work methods.

4.1 Air Quality Event and Action Plan

The baseline monitoring results form the basis for the derivation of the A/L Levels for the air quality impact monitoring. **Table 4.1** shows the criteria to be used and **Table 4.2 and 4.3** shows the derived A/L Levels of 1-hr and 24 hr TSP levels for the Project respectively. In accordance with Table 3.2 of the EM&A manual, only 24-hr TSP monitoring will be carried out during impact monitoring. In case of the complaint is received, 1-hr TSP monitoring will be undertaken accordingly. Furthermore, if the air quality monitoring criteria are breached, the Event and Action Plan as shown in **Appendix H** should be followed immediately.

Table 4.1 Criteria of Action and Limit Level for air quality monitoring

Parameters	Action	Limit
1-hour TSP Level, μg/m³	• For Baseline Level ≤ 384μg/m³, Action Level = (Baseline * 1.3 + Limit Level) / 2; • For Baseline Level > 384μg/m³, Action Level = Limit Level	500
24-hour TSP Level, μg/m³	• For Baseline Level ≤ 200μg/m3, Action Level = (Baseline * 1.3 + Limit Level) / 2; • For Baseline Level > 200μg/m3, Action Level = Limit Level	260

Table 4.2 Action and Limit Level for air quality monitoring of 1-hr TSP Level

Level	Air Monitoring Stations					
	AM1	AM2	AM3	AM4	AM5	AM6
Action Level, μg/m³	290	291	287	292	286	294
Limit Level, μg/m³	500					

Table 4.3 Action and Limit Level for air quality monitoring of 24-hr TSP Level

Level	Air Monitoring Stations					
	AM1	AM2	AM3	AM4	AM5	AM6
Action Level, μg/m³	146	151	150	150	146	147
Limit Level, μg/m³	260					

4.2 Construction Noise Event and Action Plan

The A/L levels for construction noise are defined in **Table 4.4**. In case of the exceedance of limit level occur during impact monitoring, the measured noise level will be corrected with the baseline noise level to calculate the real construction noise. The Notification of Exceedance (NOE) will be issued only if the exceedance of limit level is still occurrence after correction. Furthermore, if the noise monitoring criteria are breached, the Event and Action Plan as shown in **Appendix H** should be followed immediately.

Table 4.4 Action and Limit Levels of construction noise

Location	Time Period	Action Level	Limit Level dB(A) (Note 1)
N1, N2 & N5	0700 - 1900 hours on normal weekdays	When one documented complaint is received	75
	0700 - 2300 hours on holiday; and 1900 – 2300 hours on all other days		-
	2300 – 0700 hours of next day		-
N3, N4 & N6	0700 - 1900 hours on normal weekdays	When one documented complaint is received	70/65 (Note 2)
	0700 - 2300 hours on holiday; and 1900 – 2300 hours on all other days		-
	2300 – 0700 hours of next day		-

Notes:

(1) For normal day-time working hours, the noise criteria are 70 dB(A) and 65 dB(A) for normal reaching periods and examination period respectively.

(2) If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be follows.

5 Landscape and Visual Mitigation Measures

No significant change in baseline condition from the EIA Report was recorded for landscape resource, LCA and view from VSR. Hence, no revision of landscape and visual mitigation measures is considered required for both construction and operation phase proposed in Table 8.8 & 8.9 of EIA Report.

Nevertheless, the design, implementation and maintenance of landscape and visual mitigation measures would be checked bi-weekly to ensure that they are fully realised. Any potential conflicts between the proposed landscape measures and any other project works or operational requirements shall also be recorded for the Contractor to resolve in early stage, without compromising the intention of the mitigation measures.

6 Revisions for Inclusion in the EM&A Manual

The baseline environmental monitoring was conducted according to the Environmental Monitoring and Audit Manual (EM&A Manual) for air quality, noise as well as landscape and visual impact.

The monitoring methodology, parameters and monitoring locations are in line with the EM&A Manual except that there were some changes in monitoring stations.

For the air quality monitoring locations, one station namely (TTP) is designated in the EM&A Manual. Due to the lacking of reply or request of access and installation of the monitoring equipments rejected by the representatives of the remaining stations namely (KFG), (CLFY), (WG), (TMTP) and (FEC). Five alternative locations namely (ABH), (WSK), (CCK), (TMTH), and (YOT) were selected in accordance with the selection criteria as stipulated in the Section 3.6.4 of the EM&A Manual.

For the noise monitoring locations, two stations namely (KFG3D) and (TTP) are designated in the EM&A Manual. Due to the lacking of reply or request of access and installation of the monitoring equipments rejected by the representatives of the remaining stations namely (CLFY1), (WG2), (TMTP1) and (FEC). Four alternative locations namely (YYP), (WSK), (TKB) and (CCK) were selected in accordance with the selection criteria as stipulated in the Section 3.6.4 of the EM&A Manual.

7 Comments and Conclusions

The environmental baseline monitoring was carried out between 17 June and 6 July 2010 which included air quality monitoring, noise monitoring as well as landscape and visual monitoring.

Air quality was recorded in terms of 1-hr TSP and 24-hr TSP, and noise was measured in terms of L_{eq} dB(A) with L_{10} and L_{90} measurements as reference. Owing to the adverse weather condition was recorded on 22, 23, 26, 27 and 28 June 2010 and might influence the measurement results. Air quality and noise monitoring results on the above dates were therefore discarded.

Baseline air quality monitoring was conducted at the six designated locations. During the monitoring, no construction work or dust generating activities were undertaken in the vicinity of the monitoring stations. The baseline air quality monitoring results are considered representative to the ambient air quality conditions of the respective sensitive receivers.

Baseline noise monitoring was conducted at the six designated locations. The major noise sources identified at the monitoring station were mainly road traffic along Tuen Mun Road. The noise measurement data was reviewed and processed. The baseline noise monitoring results are considered representative to the ambient noise level of the respective sensitive receivers.

The baseline landscape and visual site survey was undertaken on 6 July 2010 including Landscape Resource (LR), Landscape Character Area (LCA) and view from Visual Sensitive Receiver (VSR). No significant change in baseline condition from the EIA report was recorded during baseline site survey.

The Action and Limit Levels were derived based on the baseline monitoring results. Impact monitoring will be conducted, and the Event and Action Plan will be triggered based on the established A/L level.

Appendix A

Baseline Monitoring Schedule

Agreement No. CE22/2005 (HY) Supplementary Agreement 1
Traffic Improvements to Tuen Mun Road Town Centre Section
Tentative Baseline Monitoring Schedule - Revision 2

Date		Air Quality		Noise
		1-hour TSP	24-hours TSP	L_{Aeq}, 30 min
17-Jun-10	Thu			
18-Jun-10	Fri			
19-Jun-10	Sat			
20-Jun-10	Sun			
21-Jun-10	Mon			
22-Jun-10	Tue			
23-Jun-10	Wed			
24-Jun-10	Thu			
25-Jun-10	Fri			
26-Jun-10	Sat			
27-Jun-10	Sun			
28-Jun-10	Mon			
29-Jun-10	Tue			
30-Jun-10	Wed			
1-Jul-10	Thu			
2-Jul-10	Fri			
3-Jul-10	Sat			
4-Jul-10	Sun			
5-Jul-10	Mon			
6-Jul-10	Tue			

	Public Holiday
	Monitoring Day

Appendix B

Calibration Certificates and Spreadsheets of Air Monitoring Equipments

TISCH ENVIROMENTAL, INC.
145 SOUTH MIAMI AVE.
VILLAGE OF CLEVES, OH 45002
513.467.9000
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 = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]
Qa = Va/Time

For subsequent flow rate calculations:

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

TISCH ENVIROMENTAL, INC.
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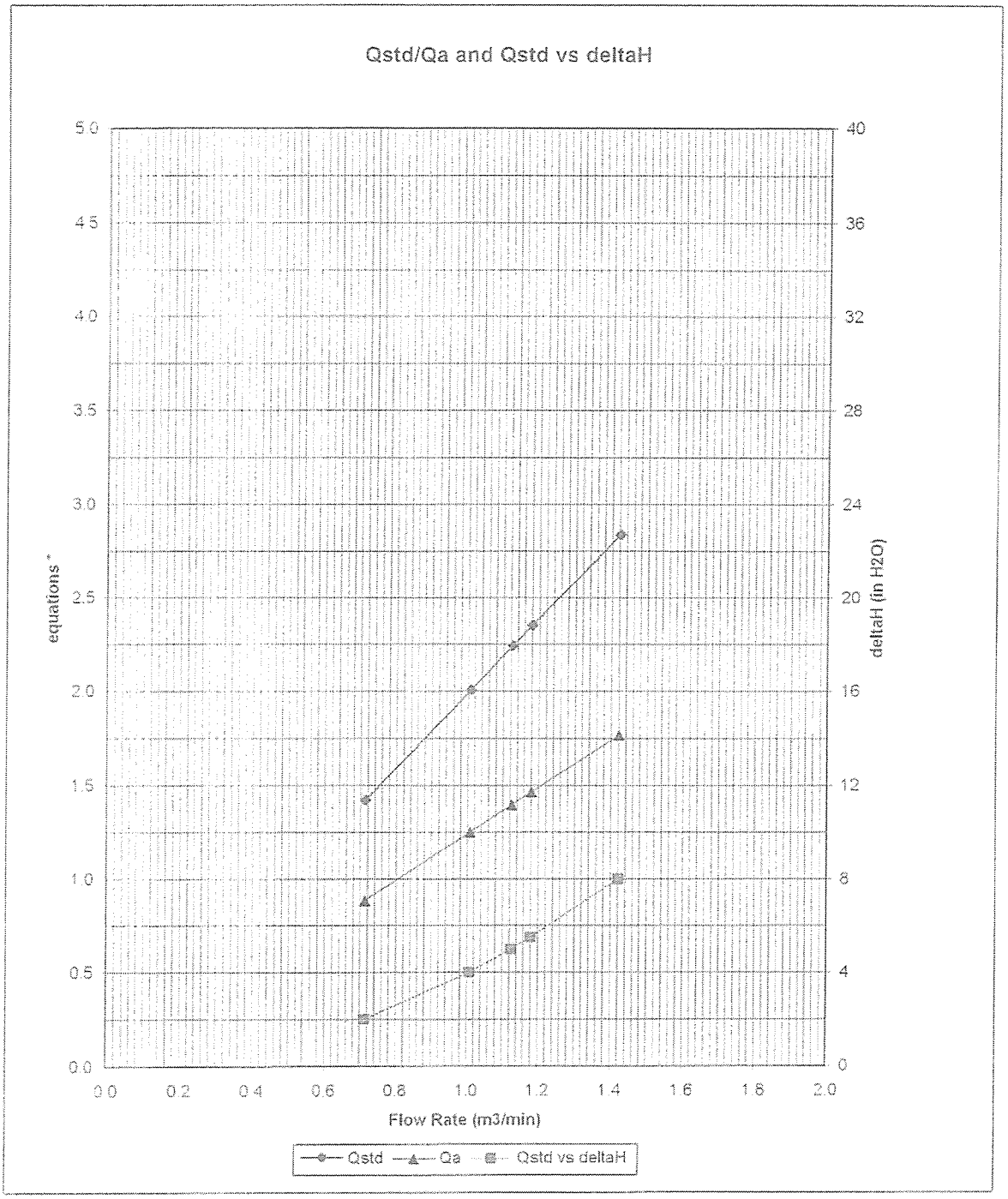
WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT



* y-axis equations:

Qstd series: $\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$

Qa series: $\sqrt{(\Delta H\ (Ta\ /\ Pa))}$

#1378

Ove Arup Partners Hong Kong Limited

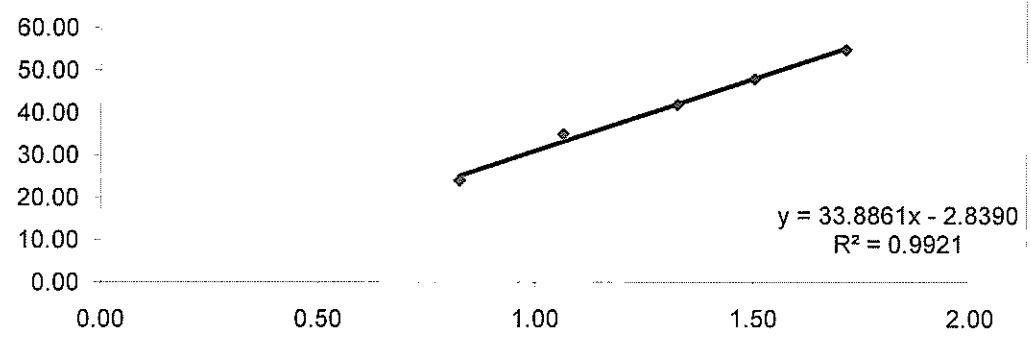
High Volume Air Sampler Calibration Worksheet

Calibration date	7-Jun-10	**Barometric pressure**	765 mm Hg
Next Calibration date	6-Aug-10	**Tempature (°C)**	28 °C
Sampler location	AW Boon Haw Secondary School	**Tempature (K)**	301 K
Sampler model	TE-5170	**P_{std}**	760 mm Hg
Sampler serial number	521	**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_2O)	Flow Recorder Reading (CFM)	Calculated Q_{std} (m^3/min)	Continuous Flow Recorder Reading IC (CFM)
5	2.70	24.00	0.83	23.96
7	4.50	35.00	1.06	34.94
10	7.00	42.00	1.33	41.93
13	9.00	48.00	1.50	47.92
18	11.70	55.00	1.71	54.90

Calibration Curve



Linear Regression

Sampler slope (m) :	**33.8861**
Sampler intercept (b) :	**-2.8390**
Correlation coefficient (R^2) :	**0.9921**

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

Performed by: _____ Date: 7/6/10

Checked by: _____ Date: 7/6/10

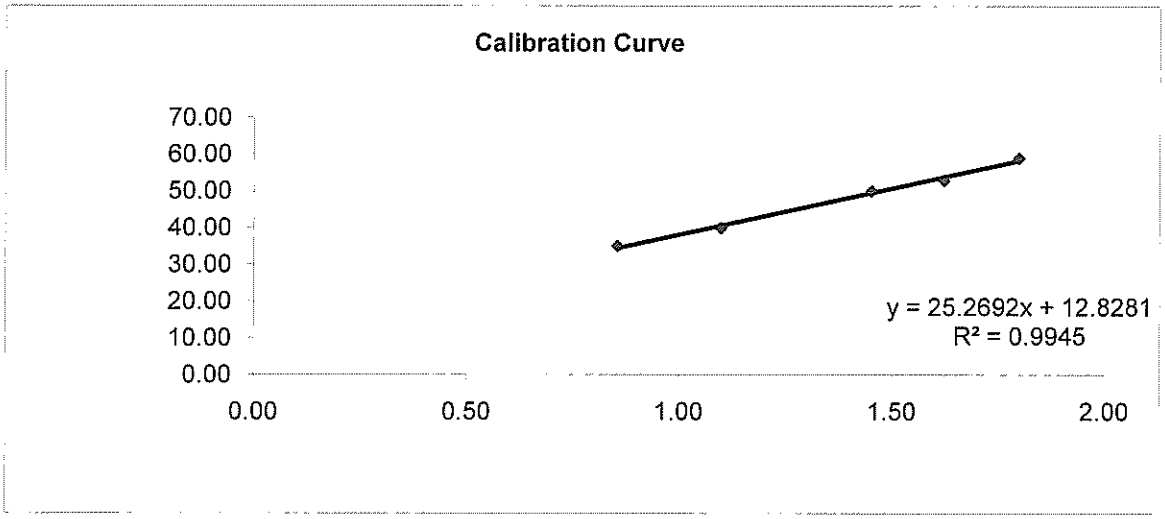
Ove Arup Partners Hong Kong Limited

High Volume Air Sampler Calibration Worksheet

Calibration date	7-Jun-10	**Barometric pressure**	765 mm Hg
Next Calibration date	6-Aug-10	**Tempature (°C)**	28 °C
Sampler location	Tai Tung Pui Social Service	**Tempature (K)**	301 K
Sampler model	TE-5170	**P_{std}**	760 mm Hg
Sampler serial number	522	**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_2O)	Flow Recorder Reading (CFM)	Calculated Q_{std} (m^3/min)	Continuous Flow Recorder Reading IC (CFM)
5	2.90	35.00	0.86	34.94
7	4.80	40.00	1.10	39.93
10	8.40	50.00	1.45	49.91
13	10.50	53.00	1.62	52.91
18	12.90	59.00	1.80	58.90



Linear Regression

Sampler slope (m) :	**25.2692**
Sampler intercept (b) :	**12.8281**
Correlation coefficient (R^2) :	**0.9945**

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

Performed by: _____ Date: 7/6/10

Checked by: _____ Date: 7/6/10

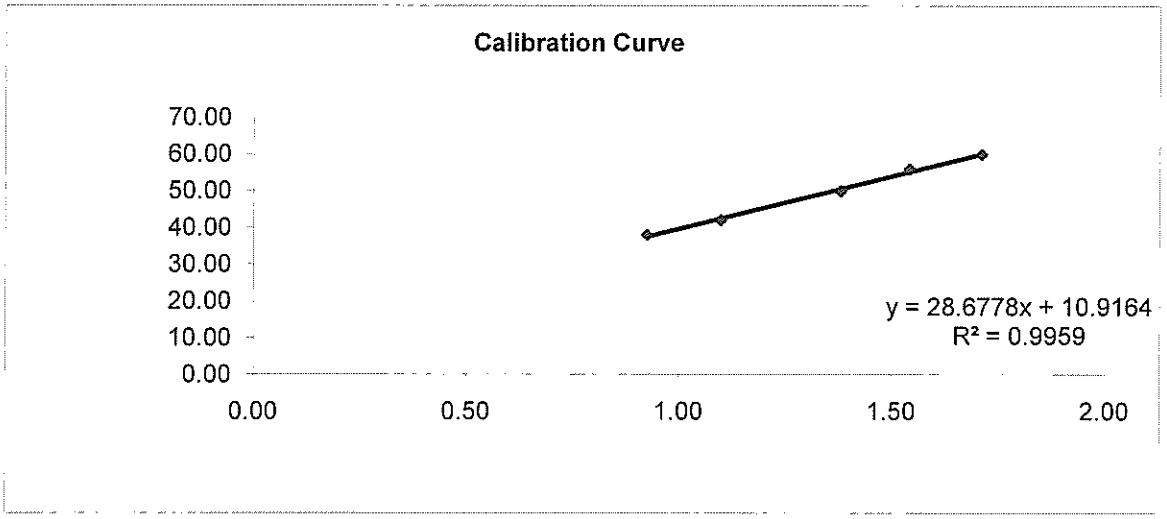
Ove Arup Partners Hong Kong Limited

High Volume Air Sampler Calibration Worksheet

Calibration date	7-Jun-10	**Barometric pressure**	765 mm Hg
Next Calibration date	6-Aug-10	**Tempature (°C)**	28 °C
Sampler location	Wu Siu Kui Primary School	**Tempature (K)**	301 K
Sampler model	TE-5170	**P_{std}**	760 mm Hg
Sampler serial number	505	**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_2O)	Flow Recorder Reading (CFM)	Calculated Q_{std} (m^3/min)	Continuous Flow Recorder Reading IC (CFM)
5	3.40	38.00	0.93	37.93
7	4.80	42.00	1.10	41.93
10	7.60	50.00	1.38	49.91
13	9.50	56.00	1.54	55.90
18	11.70	60.00	1.71	59.90



Linear Regression

Sampler slope (m) :	**28.6778**
Sampler intercept (b) :	**10.9164**
Correlation coefficient (R^2) :	**0.9959**

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

Performed by: _____ Date: 7/6/10

Checked by: _____ Date: 7/6/10

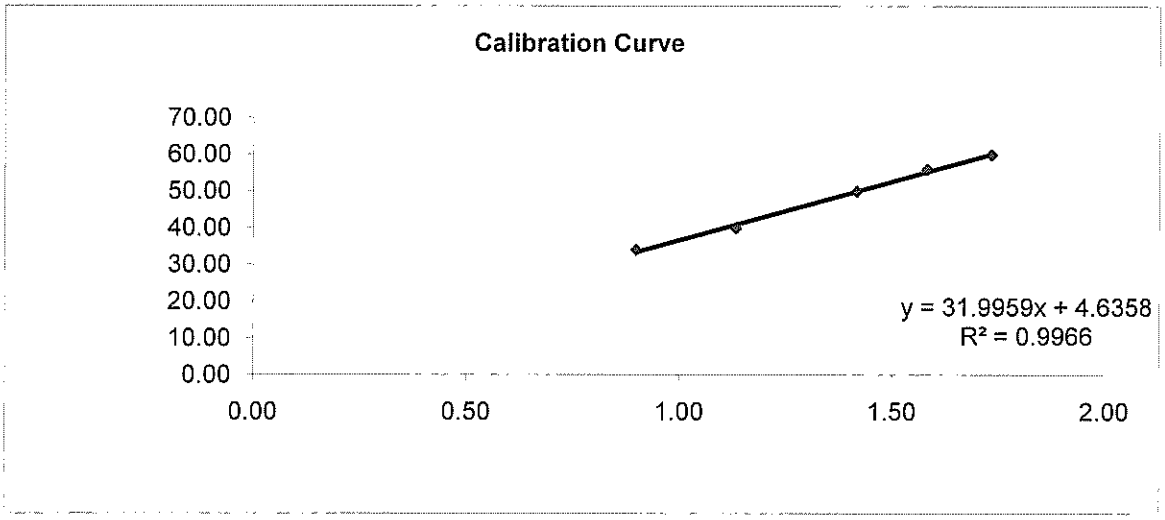
Ove Arup Partners Hong Kong Limited

High Volume Air Sampler Calibration Worksheet

Calibration date	7-Jun-10	**Barometric pressure**	765 mm Hg
Next Calibration date	6-Aug-10	**Tempature (°C)**	28 °C
Sampler location	Choi Cheung Kok Secondary	**Tempature (K)**	301 K
Sampler model	Thermo Anderson	**P_{std}**	760 mm Hg
Sampler serial number	1278	**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_2O)	Flow Recorder Reading (CFM)	Calculated Q_{std} (m^3/min)	Continuous Flow Recorder Reading IC (CFM)
5	3.20	34.00	0.90	33.94
7	5.10	40.00	1.13	39.93
10	8.00	50.00	1.42	49.91
13	10.00	56.00	1.58	55.90
18	12.00	60.00	1.73	59.90



Linear Regression

Sampler slope (m) :	**31.9959**
Sampler intercept (b) :	**4.6358**
Correlation coefficient (R^2) :	**0.9966**

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

Performed by: _____ Date: 7/6/10

Checked by: _____ Date: 7/6/10

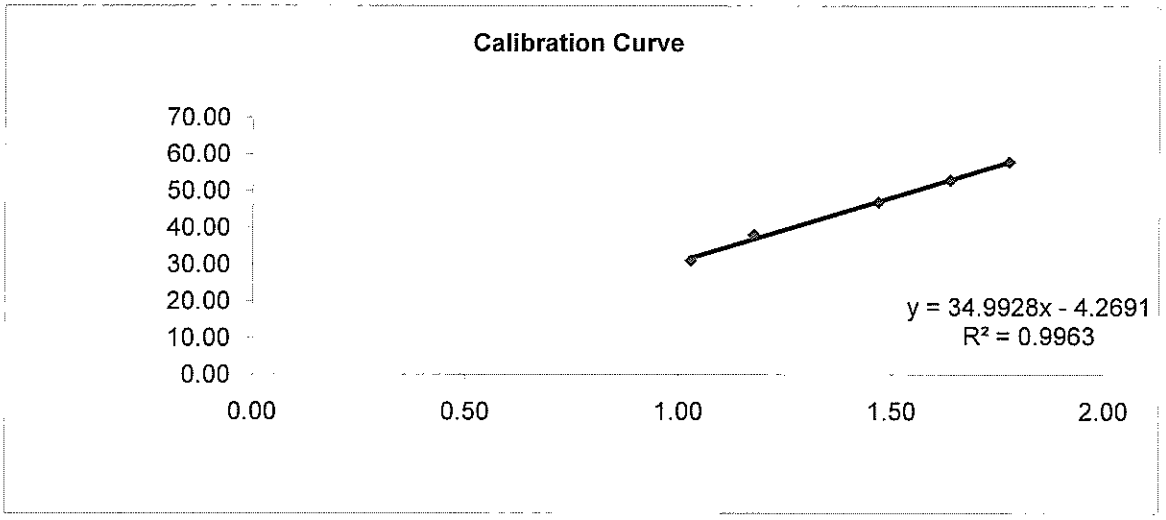
Ove Arup Partners Hong Kong Limited

High Volume Air Sampler Calibration Worksheet

Calibration date	7-Jun-10	**Barometric pressure**	765 mm Hg
Next Calibration date	6-Aug-10	**Tempature (°C)**	28 °C
Sampler location	Tuen Mun Town Hall	**Tempature (K)**	301 K
Sampler model	TE-5170	**P_{std}**	760 mm Hg
Sampler serial number	516	**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_2O)	Flow Recorder Reading (CFM)	Calculated Q_{std} (m^3/min)	Continuous Flow Recorder Reading IC (CFM)
5	4.20	31.00	1.03	30.95
7	5.50	38.00	1.18	37.93
10	8.60	47.00	1.47	46.92
13	10.70	53.00	1.64	52.91
18	12.60	58.00	1.78	57.90



Linear Regression

Sampler slope (m) :	**34.9928**
Sampler intercept (b) :	**-4.2691**
Correlation coefficient (R^2) :	**0.9963**

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

Performed by: _____ Date: 7/6/10

Checked by: _____ Date: 7/6/10

Ove Arup Partners Hong Kong Limited

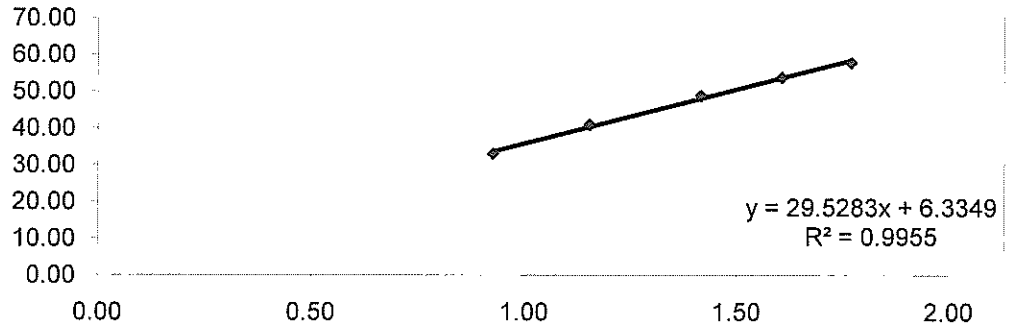
High Volume Air Sampler Calibration Worksheet

Calibration date	7-Jun-10	**Barometric pressure**	765 mm Hg
Next Calibration date	6-Aug-10	**Tempature (°C)**	28 °C
Sampler location	Yan Oi Tong	**Tempature (K)**	301 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_2O)	Flow Recorder Reading (CFM)	Calculated Q_{std} (m^3/min)	Continuous Flow Recorder Reading IC (CFM)
5	3.40	33.00	0.93	32.94
7	5.30	41.00	1.15	40.93
10	8.00	49.00	1.42	48.92
13	10.30	54.00	1.61	53.91
18	12.50	58.00	1.77	57.90

Calibration Curve



Linear Regression

Sampler slope (m) :	**29.5283**
Sampler intercept (b) :	**6.3349**
Correlation coefficient (R^2) :	**0.9955**

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

Performed by: _____ Date: 7/6/10

Checked by: _____ Date: 7/6/10

ThermoFisher
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FRANKLIN MA 02038
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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

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

TEMPERATURE:	69	F
RH:	15	%

CALIBRATION MASTER:	D325
LAST CALIBRATED:	12/8/2009

TECHNICIAN: DMC DATE: 12/18/2009

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

SERIAL NUMBER:	4239	
CALIBRATION RATIO:	1.003	
AVG. PDR CONCENTRATION:	1.28	mg/m3
MASTER AVG CONCENTRATION:	1.03	mg/m3
PDR BACKROUND CONCENTRATION:	0.216	mg/m3

TEMPERATURE:	72	F
RH:	39	%

CALIBRATION MASTER:	D325
LAST CALIBRATED:	29/7/2008

TECHNICIAN: R.A. DATE: 26/8/2008

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

SERIAL NUMBER:	4243	
CALIBRATION RATIO:	1	
AVG. PDR CONCENTRATION:	1.29	mg/m3
MASTER AVG CONCENTRATION:	1.03	mg/m3
PDR BACKROUND CONCENTRATION:	0.239	mg/m3

TEMPERATURE:	72	F
RH:	39	%

CALIBRATION MASTER:	D325
LAST CALIBRATED:	29/7/2008

TECHNICIAN: R.A. DATE: 26/8/2008

Appendix C

Calibration Certificates of Noise Monitoring Equipments

ArupAcoustics

ARUP

Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong, Kowloon
HONG KONG

Tel: +852 2268 3216 Fax: +852 2268 3950

AAc Certificate No. 2009003

CERTIFICATE OF CONFORMITY

Description of Test Instrument	Type No	Serial No
Brüel & Kjær Sound Level Meter Kit	2238	2320694
Brüel & Kjær ½ " Microphone Kit	4188	2641132

Date of Test: 05 August 2009

Carried out by: Mitch Law

Signature:

Approved by: William Ng

Signature:

Ambient Conditions During Test	
Atmospheric Pressure:	1KPa
Air Temperature:	21°C
Relative Humidity:	60%

This document is to certify that the above Test Instrumentation did conform to the manufacturer's original specification on the date of the test. Any adjustments that were required to bring the instrumentation back into specification are duly noted in this document. The tests were carried out using the reference calibrator described below.

Description of Reference Calibrator	Type No	Serial No
Brüel & Kjær Multi Frequency Calibrator	4226	1531372
Brüel & Kjær Coupler	UA0915	1531372

Certificate of Calibration Serial No.	U4212, U4213
By Campbell Associates Ltd Calibration Date:	20 August 2008
NAMAS Accredited Calibration Laboratory No.	0789

The reference calibrator, Type 4226, has traceable calibration back to National Measurement Standards. As such it is used as Arup Acoustics own 'Primary Standard' and is used only for controlled laboratory calibration tests on all sound measuring equipment owned by Arup Acoustics.

ArupAcoustics

ARUP

Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong, Kowloon
HONG KONG

Tel: +852 2268 3216 Fax: +852 2268 3950

AAc Certificate No. 2009004

CERTIFICATE OF CONFORMITY

Description of Test Instrument	Type No	Serial No
Brüel & Kjær Sound Level Meter Kit	2238	2320696
Brüel & Kjær ½ " Microphone Kit	4188	2630749

Date of Test: 05 August 2009

Carried out by: Mitch Law

Signature:

Approved by: William Ng

Signature:

Ambient Conditions During Test	
Atmospheric Pressure:	1KPa
Air Temperature:	21°C
Relative Humidity:	60%

This document is to certify that the above Test Instrumentation did conform to the manufacturer's original specification on the date of the test. Any adjustments that were required to bring the instrumentation back into specification are duly noted in this document. The tests were carried out using the reference calibrator described below.

Description of Reference Calibrator	Type No	Serial No
Brüel & Kjær Multi Frequency Calibrator	4226	1531372
Brüel & Kjær Coupler	UA0915	1531372

Certificate of Calibration Serial No.	U4212, U4213
By Campbell Associates Ltd Calibration Date:	20 August 2008
NAMAS Accredited Calibration Laboratory No.	0789

The reference calibrator, Type 4226, has traceable calibration back to National Measurement Standards. As such it is used as Arup Acoustics own 'Primary Standard' and is used only for controlled laboratory calibration tests on all sound measuring equipment owned by Arup Acoustics.

ArupAcoustics

ARUP

Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong, Kowloon
HONG KONG

Tel: +852 2268 3216 Fax: +852 2268 3950

AAc Certificate No. 2009005

CERTIFICATE OF CONFORMITY

Description of Test Instrument	Type No	Serial No
Brüel & Kjær Sound Level Meter Kit	2238	2320707
Brüel & Kjær ½ " Microphone Kit	4188	2630746

Date of Test: 05 August 2009

Carried out by: Mitch Law

Signature:

Approved by: William Ng

Signature:

Ambient Conditions During Test	
Atmospheric Pressure:	1KPa
Air Temperature:	21°C
Relative Humidity:	60%

This document is to certify that the above Test Instrumentation did conform to the manufacturer's original specification on the date of the test. Any adjustments that were required to bring the instrumentation back into specification are duly noted in this document. The tests were carried out using the reference calibrator described below.

Description of Reference Calibrator	Type No	Serial No
Brüel & Kjær Multi Frequency Calibrator	4226	1531372
Brüel & Kjær Coupler	UA0915	1531372

Certificate of Calibration Serial No.	U4212, U4213
By Campbell Associates Ltd Calibration Date:	20 August 2008
NAMAS Accredited Calibration Laboratory No.	0789

The reference calibrator, Type 4226, has traceable calibration back to National Measurement Standards. As such it is used as Arup Acoustics own 'Primary Standard' and is used only for controlled laboratory calibration tests on all sound measuring equipment owned by Arup Acoustics.

ArupAcoustics

ARUP

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80 Tat Chee Avenue
Kowloon Tong, Kowloon
HONG KONG

Tel: +852 2268 3216 Fax: +852 2268 3950

AAc Certificate No. 2009006

CERTIFICATE OF CONFORMITY

Description of Test Instrument	Type No	Serial No
Brüel & Kjær Sound Level Meter Kit	2238	2562763
Brüel & Kjær ½ " Microphone Kit	4188	2658599

Date of Test: 05 August 2009

Carried out by: Mitch Law

Signature:

Approved by: William Ng

Signature:

Ambient Conditions During Test	
Atmospheric Pressure:	1KPa
Air Temperature:	21°C
Relative Humidity:	60%

This document is to certify that the above Test Instrumentation did conform to the manufacturer's original specification on the date of the test. Any adjustments that were required to bring the instrumentation back into specification are duly noted in this document. The tests were carried out using the reference calibrator described below.

Description of Reference Calibrator	Type No	Serial No
Brüel & Kjær Multi Frequency Calibrator	4226	1531372
Brüel & Kjær Coupler	UA0915	1531372

Certificate of Calibration Serial No.	U4212, U4213
By Campbell Associates Ltd Calibration Date:	20 August 2008
NAMAS Accredited Calibration Laboratory No.	0789

The reference calibrator, Type 4226, has traceable calibration back to National Measurement Standards. As such it is used as Arup Acoustics own 'Primary Standard' and is used only for controlled laboratory calibration tests on all sound measuring equipment owned by Arup Acoustics.

ArupAcoustics

ARUP

Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong, Kowloon
HONG KONG

Tel: +852 2268 3216 Fax: +852 2268 3950

AAc Certificate No. 2009008

CERTIFICATE OF CONFORMITY

Description of Test Instrument	Type No	Serial No
Brüel & Kjær Sound Level Meter Kit	2238	2654436
Brüel & Kjær ½ " Microphone Kit	4188	2658547

Date of Test: 05 August 2009

Carried out by: Mitch Law Approved by: William Ng

Signature: Signature:

Ambient Conditions During Test	
Atmospheric Pressure:	1KPa
Air Temperature:	21°C
Relative Humidity:	60%

This document is to certify that the above Test Instrumentation did conform to the manufacturer's original specification on the date of the test. Any adjustments that were required to bring the instrumentation back into specification are duly noted in this document. The tests were carried out using the reference calibrator described below.

Description of Reference Calibrator	Type No	Serial No
Brüel & Kjær Multi Frequency Calibrator	4226	1531372
Brüel & Kjær Coupler	UA0915	1531372

Certificate of Calibration Serial No.	U4212, U4213
By Campbell Associates Ltd Calibration Date:	20 August 2008
NAMAS Accredited Calibration Laboratory No.	0789

The reference calibrator, Type 4226, has traceable calibration back to National Measurement Standards. As such it is used as Arup Acoustics own 'Primary Standard' and is used only for controlled laboratory calibration tests on all sound measuring equipment owned by Arup Acoustics.

ArupAcoustics

ARUP

Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong, Kowloon
HONG KONG

Tel: +852 2268 3216 Fax: +852 2268 3950

AAc Certificate No. 2009007

CERTIFICATE OF CONFORMITY

Description of Test Instrument	Type No	Serial No
Brüel & Kjær Sound Level Meter Kit	2238	2654435
Brüel & Kjær ½ " Microphone Kit	4188	2658546

Date of Test: 05 August 2009

Carried out by: Mitch Law

Approved by: William Ng

Signature:

Signature:

Ambient Conditions During Test	
Atmospheric Pressure:	1KPa
Air Temperature:	21°C
Relative Humidity:	60%

This document is to certify that the above Test Instrumentation did conform to the manufacturer's original specification on the date of the test. Any adjustments that were required to bring the instrumentation back into specification are duly noted in this document. The tests were carried out using the reference calibrator described below.

Description of Reference Calibrator	Type No	Serial No
Brüel & Kjær Multi Frequency Calibrator	4226	1531372
Brüel & Kjær Coupler	UA0915	1531372

Certificate of Calibration Serial No.	U4212, U4213
By Campbell Associates Ltd. Calibration Date:	20 August 2008
NAMAS Accredited Calibration Laboratory No.	0789

The reference calibrator, Type 4226, has traceable calibration back to National Measurement Standards. As such it is used as Arup Acoustics own 'Primary Standard' and is used only for controlled laboratory calibration tests on all sound measuring equipment owned by Arup Acoustics.

RION CO., LTD.

3-20-41 Higashimotomachi Kokubunji Tokyo 185-8533
Phone:042(359)7888, Facsimile:042(359)7442

Certificate of Calibration

Name : **Sound level calibrator**

Model : **NC-74**

S/No. : **34304660**

Date of Calibration : **April, 07, 2010**

We hereby certify that the above product was tested and calibrated according to the prescribed Rion procedures, and that it fulfills specification requirements.
The measuring equipment and reference devices used for testing and calibrating this unit are managed under the Rion traceability system and are traceable according to official Japanese standards and official standards of countries belonging to the International Committee of Weights and Measures.

RION CO., LTD.

Manager, Quality Control Department

Appendix D

Baseline Landscape and Visual Monitoring Results

Photo A01 LR1 Tsing Tin Playground

Photo A02 Tsing Sin Playground

Photo A03 LR2 Street trees along Tuen Mun Road south of Kam Fai Garden

Photo A04 LR3 Street trees along Castle Peak Road – Castle Peak Bay

Photo A05 LR3 Street trees along Castle Peak Road – Castle Peak Bay

Photo A06 LR4 Street trees along Tuen Mun Road west of Chi Lok Fa Yuen and east of On Ting Estate

Photo A07 LR4 Street trees along Tuen Mun Road west of Chi Lok Fa Yuen and east of On Ting Estate

Photo A08 LR4 Street trees along Tuen Mun Road west of Chi Lok Fa Yuen and east of On Ting Estate

Photo A09 LR5 Street trees along Tuen Mun Road west of Waldorf Garden and CMA Choi Cheung Kok Prevocational School

ARUP

Agreement No. CE22/2005 (HY) Traffic Improvements to Tuen Mun Road Town Centre Section
Landscape Resource Photos

SCALE		DATE	
CHECK	CN	DRAWN	CL
JOB No.	211710	**Figure D1**	

Photo A10 LR6 Street trees along Tuen Mun Road near Tuen Mun Town Plaza

Photo A11 LR7 Street trees along Tuen Mun Road east of Yan Oi Tong

Photo A12 LR7 Street trees along Tuen Mun Road east of Yan Oi Tong

Photo C01 CR1 Tuen Mun Town Plaza, Waldorf Garden

Photo C02 CR1 Tuen Mun Town Plaza, Waldorf Garden

Photo C03 CR2 Tuen Cultural Centre, Tuen Mun Town Plaza

Photo C04 CR2 Tuen Cultural Centre, Tuen Mun Town Plaza

Photo C05 GIC1 Tuen Mun Church and Tuen Mun Tseng Choi Street Joint-user Complex

Photo C06 GIC2 Sin Hing Tong Temple

Photo C07 GIC3 Semple Memorial Secondary School and Chung Shing Benevolent Society Mrs. Aw Boon Haw Secondary School

Photo C08 O3 Siu Lun Sport Ground

Photo C09 GIC8 Sam Shing Temple

ARUP

Agreement No. CE22/2005 (HY) Traffic Improvements to Tuen Mun Road Town Centre Section
Visual Sensitive Receivers Photos

SCALE		DATE	
CHECK	CN	DRAWN	CL
JOB No.	211710	**Figure D3**	

Photo C10 O1 San Hui Playground

Photo C11 O2 Tsing Sin Playground

Photo C12 R9 Hanford Garden

Photo C13 R1 Residential Area of Tuen Mun San Hui

Photo C14 R1 Residential Area of Tuen Mun San Hui

Photo C15 R2 Residential Area along Yan Oi Tong Circuit

Photo C16 R3 On Ting Estate and Siu On Court, GIC17 Madam Lau Wong Fat Primary School, Lui Cheung Kwong College, Leung Kau Kui College, Lui Cheung Kwong Primary School, Wu Siu Kui Primary School

Photo C17 R3 On Ting Estate and Siu On Court

Photo C18 R4 Residential Area along Tsing Hoi Circuit

Photo C19 R4 Residential Area along Tsing Hoi Circuit

Photo C20 R3 Residential Area along Yan Oi Tong Circuit

Photo C21 R5 Handsome Court, Alpine Garden, Hoi Tak Garden and Harvest Garden, Kam Fai Garden

Photo C22 R5 Handsome Court, Alpine Garden, Hoi Tak Garden and Harvest Garden, Kam Fai Garden

Photo C23 R6 Siu Lun Court

Photo C24 R7 Goodview Garden and Tsui Ning Garden

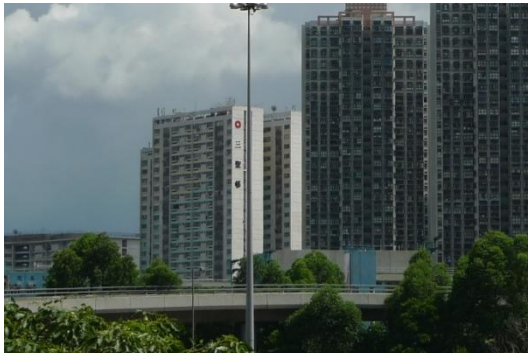


Photo C25 R8 Sam Shing Estate

Photo C26 CR3 Chelsea Heights

Photo C27 T1 Tuen Mun Road – vehicular and Pedestrian

Photo C28 T1 Tuen Mun Road – Vehicular and Pedestrian

Photo C29 T1 Tuen Mun Road – Vehicular and Pedestrian

Photo C30 T1 Tuen Mun Road – Vehicular and Pedestrian

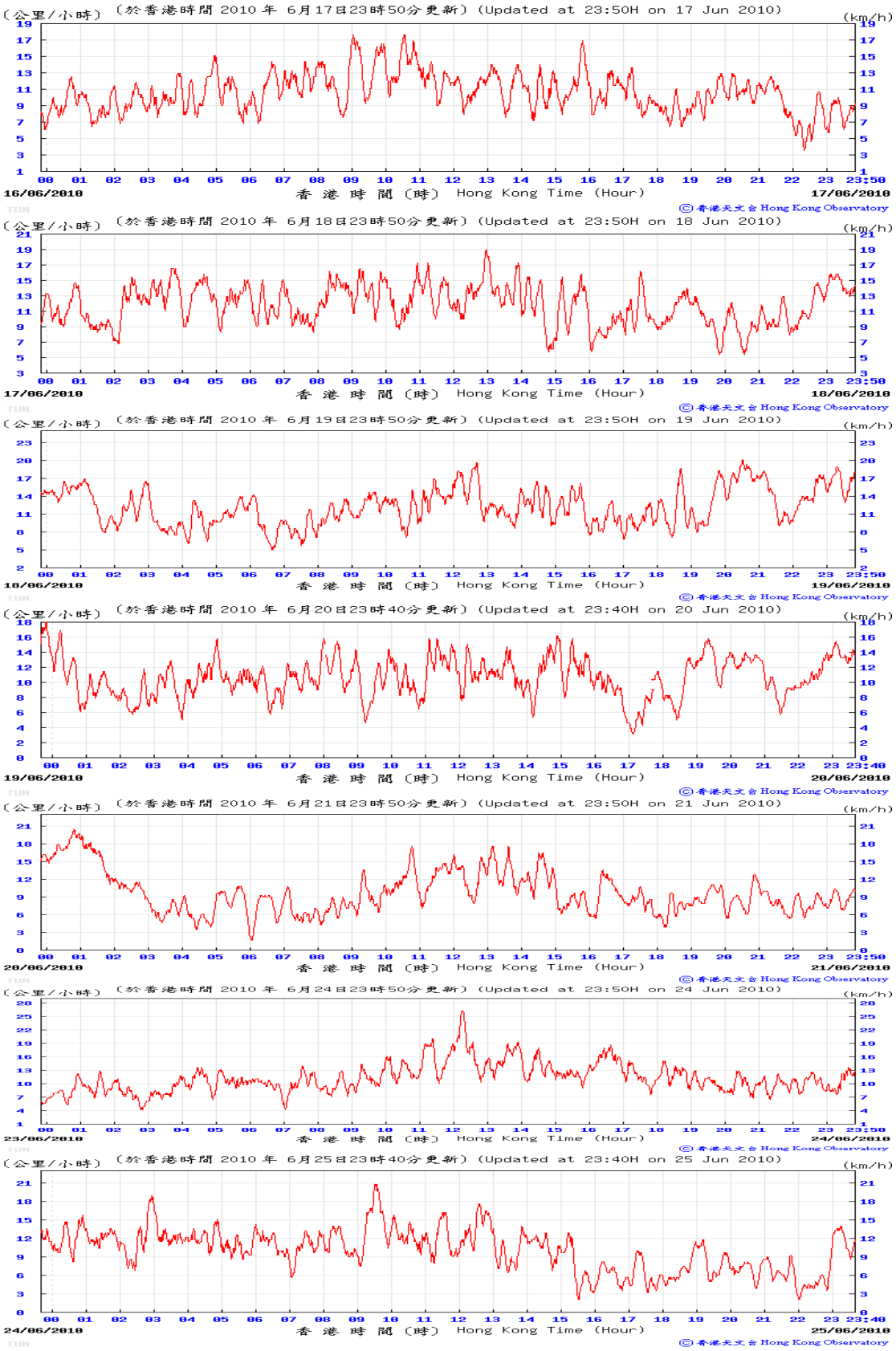
Appendix E

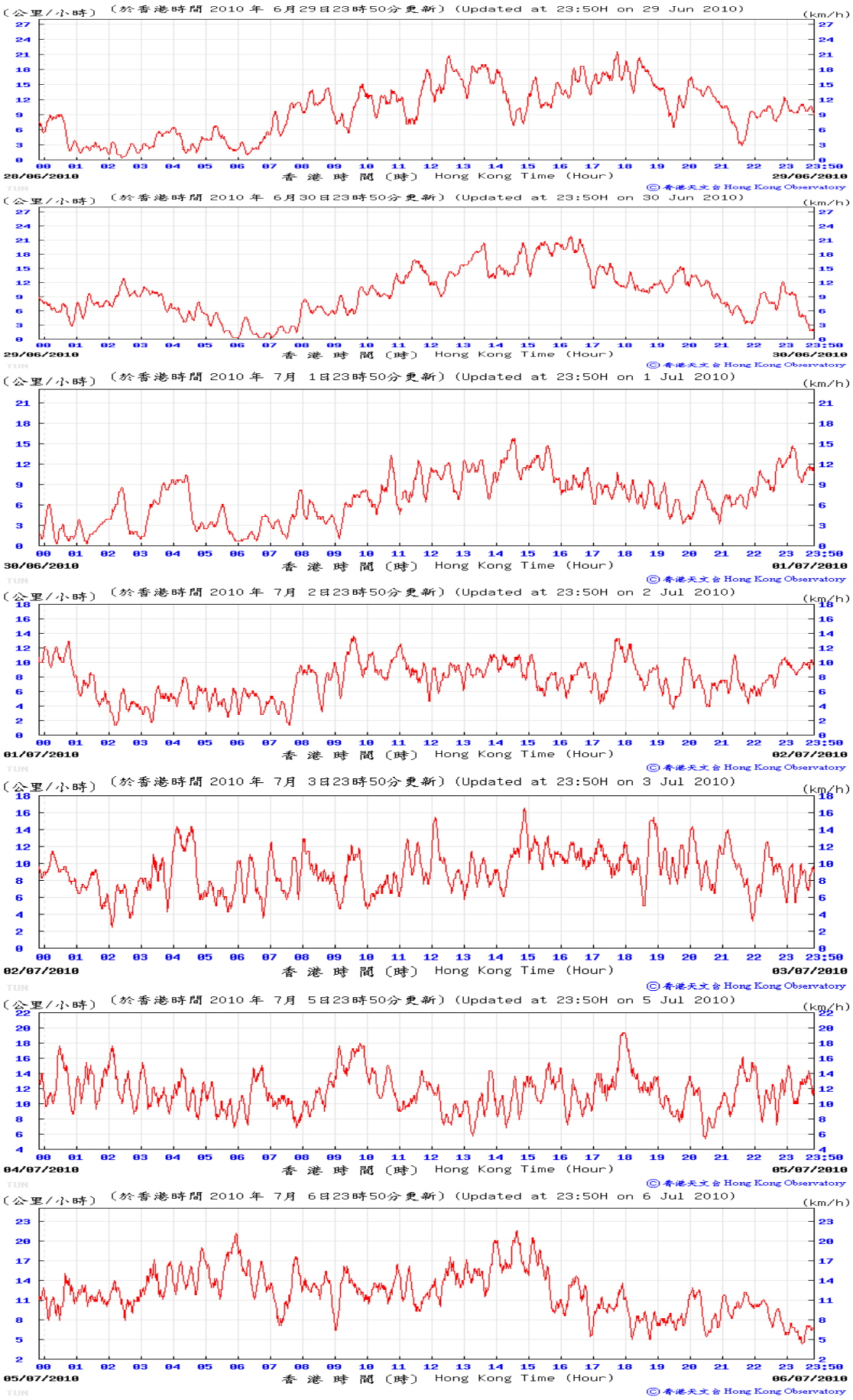
Wind Data

Wind Monitoring Data – Wind Speed recorded at Tuen Mun of Hong Kong Observatory during Baseline Monitoring Period

Elevation of anemometer station: 63m above mean sea level

Elevation of Anemometer: 69m above mean sea level

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05/07/2010 香港時間(時) Hong Kong Time (Hour) 06/07/2010
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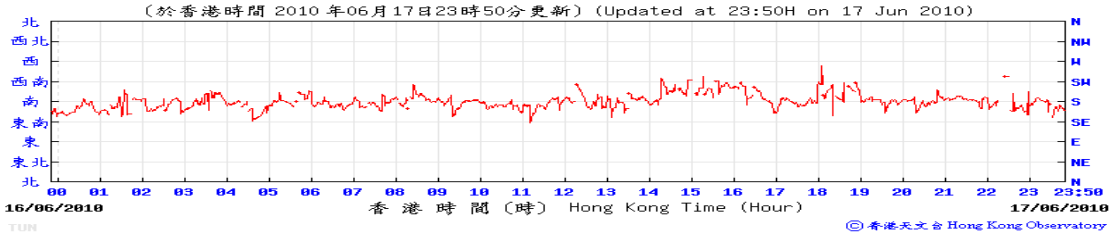
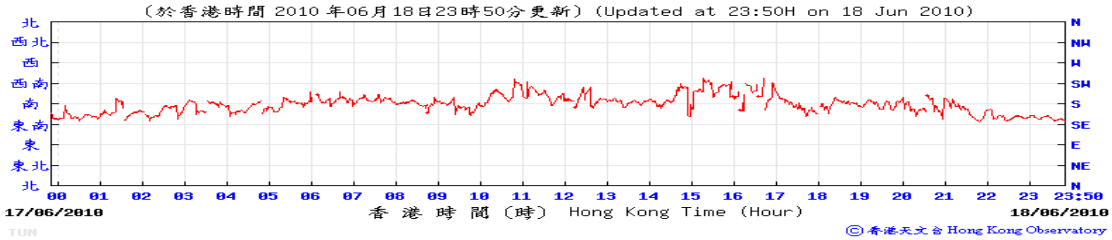
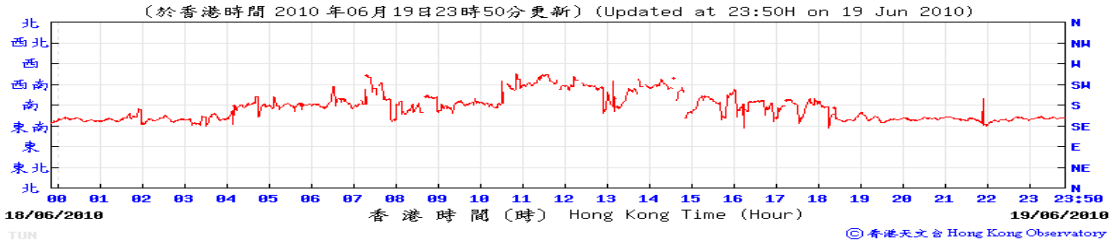
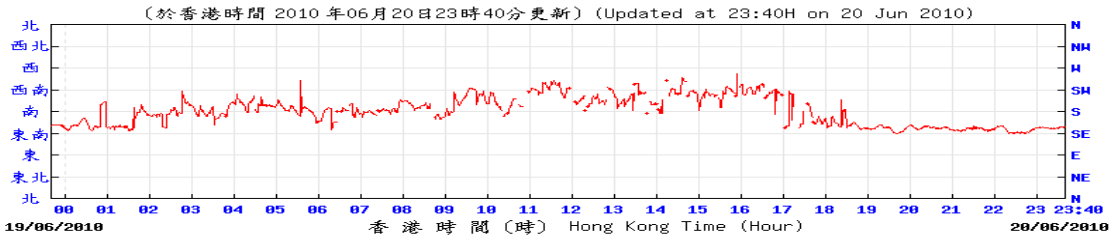
Wind Monitoring Data – Wind Direction recorded at Tuen Mun of Hong Kong Observatory during Baseline Monitoring Period

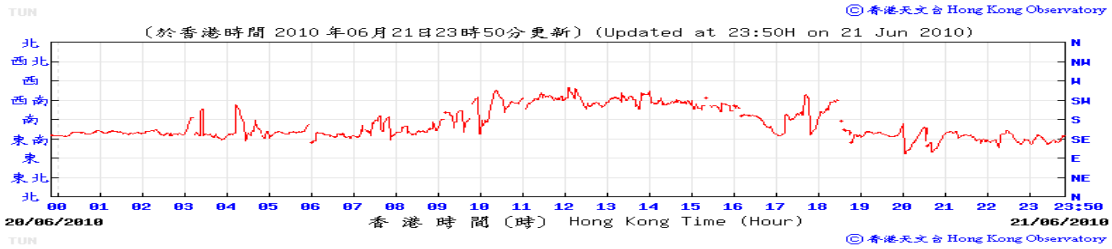
Elevation of anemometer station: 63m above mean sea level
Elevation of Anemometer: 69m above mean sea level

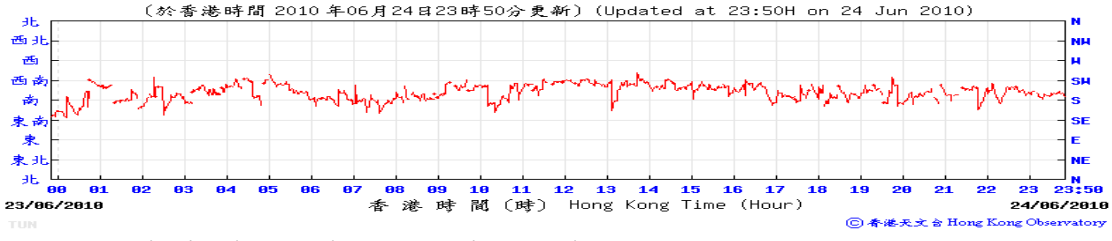


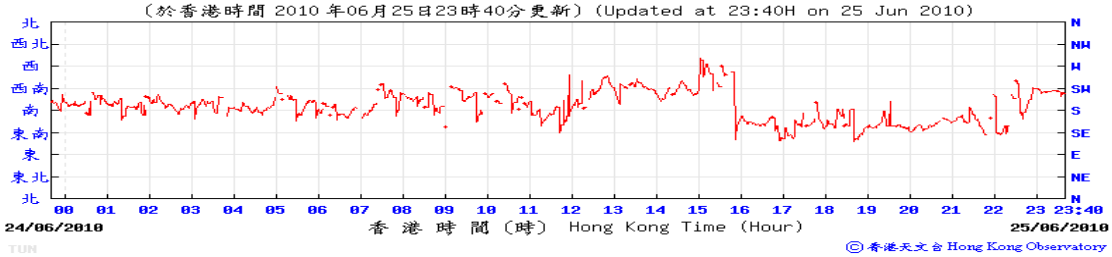


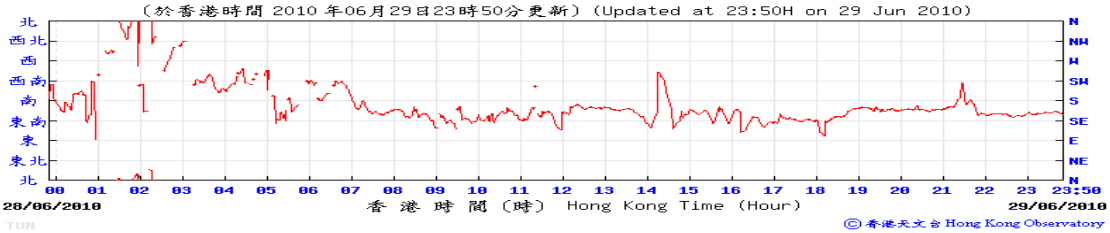








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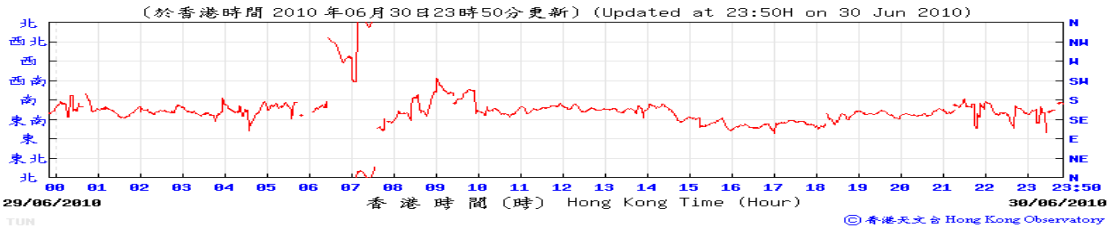
© 香港天文台 Hong Kong Observatory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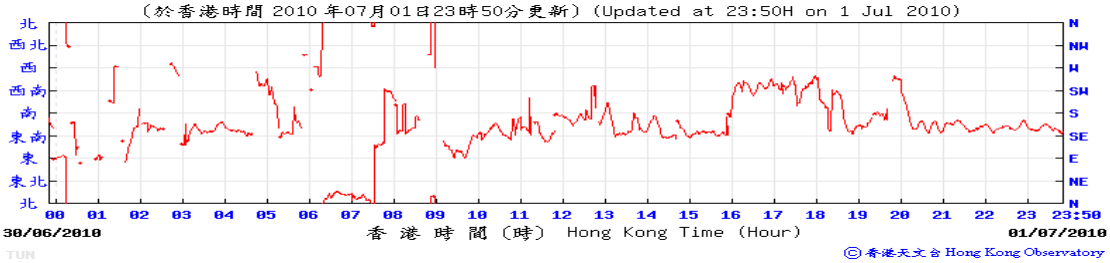
© 香港天文台 Hong Kong Observatory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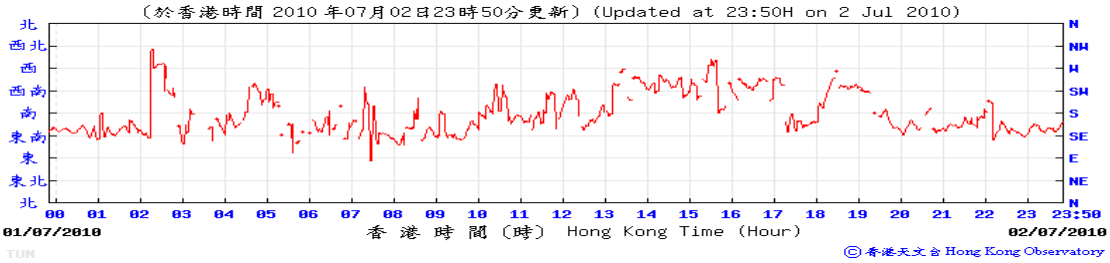
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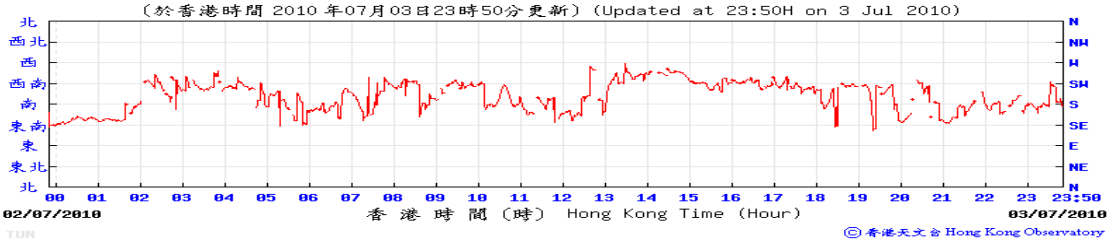
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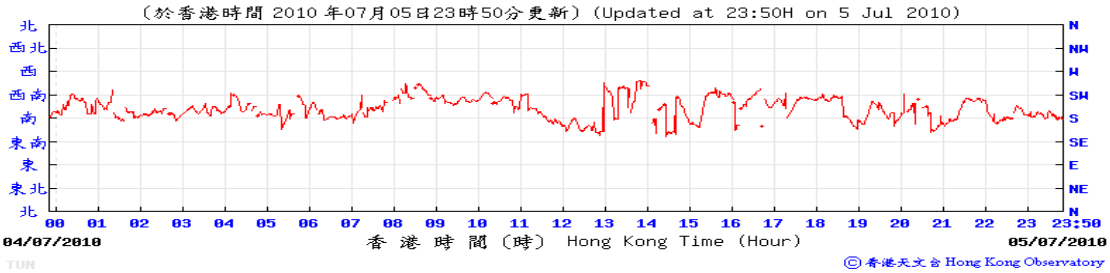
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香 港 時 間 (時) Hong Kong Time (Hour)
05/07/2010
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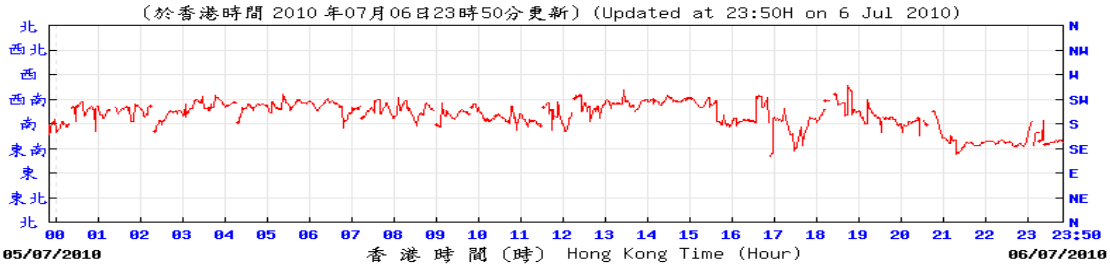
（於香港時間 2010 年07月06日23時50分更新）(Updated at 23:50H on 6 Jul 2010)
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Appendix F

Baseline Air Quality Monitoring Results

Agreement No. CE 22/2005 (HY) Supplementary Agreement No.1 Traffic Improvement to Tuen Mun Road Town Centre Section
Baseline Air Quality Monitoring Result at Mrs Aw Boon Haw Secondary School (AM1) - 1 hour TSP

Date	Receptor No.	Set No.	Weather condition	Site condition	Time period		Pressure (mmHg)		Temperature (oC)		1-hr TSP (ug/m^3)
					Start	Finish	Initial	Final	Initial	Final	AM1
17-Jun-10	AM1	1	Fine	Normal Operation	9:44	10:44	755.0	756.0	28.0	28.0	52.8
17-Jun-10	AM1	2	Fine	Normal Operation	10:44	11:44	755.0	756.0	28.0	28.0	86.0
17-Jun-10	AM1	3	Fine	Normal Operation	11:44	12:44	755.0	756.0	28.0	28.0	56.2
18-Jun-10	AM1	1	Fine	Normal Operation	8:24	9:24	756.0	756.0	29.0	29.0	67.5
18-Jun-10	AM1	2	Fine	Normal Operation	9:24	10:24	756.0	756.0	29.0	29.0	67.8
18-Jun-10	AM1	3	Fine	Normal Operation	10:24	11:24	756.0	756.0	29.0	29.0	71.9
19-Jun-10	AM1	1	Fine	Normal Operation	8:38	9:38	756.0	755.0	28.0	28.0	88.0
19-Jun-10	AM1	2	Fine	Normal Operation	9:38	10:38	756.0	755.0	28.0	28.0	90.0
19-Jun-10	AM1	3	Fine	Normal Operation	10:38	11:38	756.0	755.0	28.0	28.0	91.7
20-Jun-10	AM1	1	Fine	Normal Operation	8:35	9:35	755.0	755.0	29.0	29.0	21.7
20-Jun-10	AM1	2	Fine	Normal Operation	9:35	10:35	755.0	755.0	29.0	29.0	25.0
20-Jun-10	AM1	3	Fine	Normal Operation	10:35	11:35	755.0	755.0	29.0	29.0	26.4
21-Jun-10	AM1	1	Fine	Normal Operation	7:59	8:59	755.0	756.0	30.0	30.0	71.0
21-Jun-10	AM1	2	Fine	Normal Operation	8:59	9:59	755.0	756.0	30.0	30.0	66.4
21-Jun-10	AM1	3	Fine	Normal Operation	9:59	10:59	755.0	756.0	30.0	30.0	70.1
24-Jun-10	AM1	1	Fine	Normal Operation	7:51	8:51	756.0	755.0	29.0	29.0	108.1
24-Jun-10	AM1	2	Fine	Normal Operation	8:51	9:51	756.0	755.0	29.0	29.0	111.3
24-Jun-10	AM1	3	Fine	Normal Operation	9:51	10:51	756.0	755.0	29.0	29.0	104.9
25-Jun-10	AM1	1	Cloudy	Normal Operation	8:18	9:18	755.0	753.0	30.0	30.0	30.0
25-Jun-10	AM1	2	Cloudy	Normal Operation	9:18	10:18	755.0	753.0	30.0	30.0	23.9
25-Jun-10	AM1	3	Cloudy	Normal Operation	10:18	11:18	755.0	753.0	30.0	30.0	24.8
29-Jun-10	AM1	1	Cloudy	Normal Operation	8:17	9:17	753.0	751.0	28.0	28.0	52.9
29-Jun-10	AM1	2	Cloudy	Normal Operation	9:17	10:17	753.0	751.0	28.0	28.0	47.1
29-Jun-10	AM1	3	Cloudy	Normal Operation	10:17	11:17	753.0	751.0	28.0	28.0	83.9
30-Jun-10	AM1	1	Fine	Normal Operation	8:15	9:15	751.0	753.0	29.0	29.0	36.9
30-Jun-10	AM1	2	Fine	Normal Operation	9:15	10:15	751.0	753.0	29.0	29.0	33.5
30-Jun-10	AM1	3	Fine	Normal Operation	10:15	11:15	751.0	753.0	29.0	29.0	29.7
1-Jul-10	AM1	1	Cloudy	Normal Operation	7:46	8:46	753.0	755.0	26.0	27.0	54.5
1-Jul-10	AM1	2	Cloudy	Normal Operation	8:46	9:46	753.0	755.0	26.0	27.0	51.4
1-Jul-10	AM1	3	Cloudy	Normal Operation	9:46	10:46	753.0	755.0	26.0	27.0	48.8
2-Jul-10	AM1	1	Cloudy	Normal Operation	8:18	9:18	755.0	755.0	28.0	28.0	77.7
2-Jul-10	AM1	2	Cloudy	Normal Operation	9:18	10:18	755.0	755.0	28.0	28.0	61.9
2-Jul-10	AM1	3	Cloudy	Normal Operation	10:18	11:18	755.0	755.0	28.0	28.0	48.4
3-Jul-10	AM1	1	Cloudy	Normal Operation	8:41	9:41	755.0	756.0	29.0	29.0	39.4
3-Jul-10	AM1	2	Cloudy	Normal Operation	9:41	10:41	755.0	756.0	29.0	29.0	45.3
3-Jul-10	AM1	3	Cloudy	Normal Operation	10:41	11:41	755.0	756.0	29.0	29.0	48.4
5-Jul-10	AM1	1	Sunny	Normal Operation	8:36	9:36	756.0	756.0	30.0	30.0	92.1
5-Jul-10	AM1	2	Sunny	Normal Operation	9:36	10:36	756.0	756.0	30.0	30.0	104.8
5-Jul-10	AM1	3	Sunny	Normal Operation	10:36	11:36	756.0	756.0	30.0	30.0	60.5
6-Jul-10	AM1	1	Sunny	Normal Operation	9:04	10:04	756.0	756.0	31.0	31.0	61.4
6-Jul-10	AM1	2	Sunny	Normal Operation	10:04	11:04	756.0	756.0	31.0	31.0	57.3
6-Jul-10	AM1	3	Sunny	Normal Operation	11:04	12:04	756.0	756.0	31.0	31.0	60.3

Average (ug/m^3)	60.8
Max (ug/m^3)	111.3
Min (ug/m^3)	21.7

Action Level (ug/m^3)	290
Limit Level (ug/m^3)	500

Agreement No. CE 22/2005 (HY) Supplementary Agreement No.1 Traffic Improvement to Tuen Mun Road Town Centre Section
Baseline Air Quality Monitoring Result at Tai Tung Pui Social Service Building (AM2) - 1 hour TSP

Date	Receptor No.	Set No.	Weather condition	Site condition	Time period		Pressure (mmHg)		Temperature (oC)		1-hr TSP (ug/m^3)
					Start	Finish	Initial	Final	Initial	Final	AM2
17-Jun-10	AM2	1	Fine	Normal Operation	8:19	9:19	755.0	756.0	28.0	28.0	69.8
17-Jun-10	AM2	2	Fine	Normal Operation	9:19	10:19	755.0	756.0	28.0	28.0	36.7
17-Jun-10	AM2	3	Fine	Normal Operation	10:19	11:19	755.0	756.0	28.0	28.0	29.8
18-Jun-10	AM2	1	Fine	Normal Operation	8:55	9:55	756.0	756.0	29.0	29.0	107.4
18-Jun-10	AM2	2	Fine	Normal Operation	9:55	10:55	756.0	756.0	29.0	29.0	91.4
18-Jun-10	AM2	3	Fine	Normal Operation	10:55	11:55	756.0	756.0	29.0	29.0	92.4
19-Jun-10	AM2	1	Fine	Normal Operation	8:50	9:50	756.0	755.0	28.0	28.0	47.5
19-Jun-10	AM2	2	Fine	Normal Operation	9:50	10:50	756.0	755.0	28.0	28.0	33.3
19-Jun-10	AM2	3	Fine	Normal Operation	10:50	11:50	756.0	755.0	28.0	28.0	55.8
20-Jun-10	AM2	1	Fine	Normal Operation	8:25	9:25	755.0	755.0	29.0	29.0	49.3
20-Jun-10	AM2	2	Fine	Normal Operation	9:25	10:25	755.0	755.0	29.0	29.0	48.1
20-Jun-10	AM2	3	Fine	Normal Operation	10:25	11:25	755.0	755.0	29.0	29.0	78.9
21-Jun-10	AM2	1	Fine	Normal Operation	8:30	9:30	755.0	756.0	30.0	30.0	68.7
21-Jun-10	AM2	2	Fine	Normal Operation	9:30	10:30	755.0	756.0	30.0	30.0	55.3
21-Jun-10	AM2	3	Fine	Normal Operation	10:30	11:30	755.0	756.0	30.0	30.0	48.5
24-Jun-10	AM2	1	Fine	Normal Operation	8:45	9:45	756.0	755.0	29.0	29.0	89.0
24-Jun-10	AM2	2	Fine	Normal Operation	9:45	10:45	756.0	755.0	29.0	29.0	83.2
24-Jun-10	AM2	3	Fine	Normal Operation	10:45	11:45	756.0	755.0	29.0	29.0	67.8
25-Jun-10	AM2	1	Cloudy	Normal Operation	8:51	9:51	755.0	753.0	30.0	30.0	77.0
25-Jun-10	AM2	2	Cloudy	Normal Operation	9:51	10:51	755.0	753.0	30.0	30.0	67.3
25-Jun-10	AM2	3	Cloudy	Normal Operation	10:51	11:51	755.0	753.0	30.0	30.0	75.8
29-Jun-10	AM2	1	Cloudy	Normal Operation	8:44	9:44	753.0	751.0	28.0	28.0	36.8
29-Jun-10	AM2	2	Cloudy	Normal Operation	9:44	10:44	753.0	751.0	28.0	28.0	36.3
29-Jun-10	AM2	3	Cloudy	Normal Operation	10:44	11:44	753.0	751.0	28.0	28.0	65.8
30-Jun-10	AM2	1	Fine	Normal Operation	8:49	9:49	751.0	753.0	29.0	29.0	40.4
30-Jun-10	AM2	2	Fine	Normal Operation	9:49	10:49	751.0	753.0	29.0	29.0	40.1
30-Jun-10	AM2	3	Fine	Normal Operation	10:49	11:49	751.0	753.0	29.0	29.0	47.1
1-Jul-10	AM2	1	Cloudy	Normal Operation	9:29	10:29	753.0	755.0	26.0	27.0	17.2
1-Jul-10	AM2	2	Cloudy	Normal Operation	10:29	11:29	753.0	755.0	26.0	27.0	7.5
1-Jul-10	AM2	3	Cloudy	Normal Operation	11:29	12:29	753.0	755.0	26.0	27.0	2.6
2-Jul-10	AM2	1	Cloudy	Normal Operation	9:05	10:05	755.0	755.0	28.0	28.0	66.5
2-Jul-10	AM2	2	Cloudy	Normal Operation	10:05	11:05	755.0	755.0	28.0	28.0	59.6
2-Jul-10	AM2	3	Cloudy	Normal Operation	11:05	12:05	755.0	755.0	28.0	28.0	62.8
3-Jul-10	AM2	1	Cloudy	Normal Operation	8:53	9:53	755.0	756.0	29.0	29.0	37.8
3-Jul-10	AM2	2	Cloudy	Normal Operation	9:53	10:53	755.0	756.0	29.0	29.0	44.2
3-Jul-10	AM2	3	Cloudy	Normal Operation	10:53	11:53	755.0	756.0	29.0	29.0	49.9
5-Jul-10	AM2	1	Sunny	Normal Operation	8:51	9:51	756.0	756.0	30.0	30.0	80.5
5-Jul-10	AM2	2	Sunny	Normal Operation	9:51	10:51	756.0	756.0	30.0	30.0	91.8
5-Jul-10	AM2	3	Sunny	Normal Operation	10:51	11:51	756.0	756.0	30.0	30.0	101.9
6-Jul-10	AM2	1	Sunny	Normal Operation	8:38	9:38	756.0	756.0	31.0	31.0	130.9
6-Jul-10	AM2	2	Sunny	Normal Operation	9:38	10:38	756.0	756.0	31.0	31.0	137.6
6-Jul-10	AM2	3	Sunny	Normal Operation	10:38	11:38	756.0	756.0	31.0	31.0	143.1

Average (ug/m^3)	63.6
Max (ug/m^3)	143.1
Min (ug/m^3)	2.6

Action Level (ug/m^3)	291
Limit Level (ug/m^3)	500

Agreement No. CE 22/2005 (HY) Supplementary Agreement No.1 Traffic Improvement to Tuen Mun Road Town Centre Section
Baseline Air Quality Monitoring Result at Wu Siu Kui Primary School (AM3) - 1 hour TSP

Date	Receptor No.	Set No.	Weather condition	Site condition	Time period		Pressure (mmHg)		Temperature (oC)		1-hr TSP (ug/m^3)
					Start	Finish	Initial	Final	Initial	Final	AM3
17-Jun-10	AM3	1	Fine	Normal Operation	9:21	10:21	755.0	756.0	28.0	28.0	32.8
17-Jun-10	AM3	2	Fine	Normal Operation	10:21	11:21	755.0	756.0	28.0	28.0	26.1
17-Jun-10	AM3	3	Fine	Normal Operation	11:21	12:21	755.0	756.0	28.0	28.0	23.9
18-Jun-10	AM3	1	Fine	Normal Operation	8:39	9:39	756.0	756.0	29.0	29.0	53.3
18-Jun-10	AM3	2	Fine	Normal Operation	9:39	10:39	756.0	756.0	29.0	29.0	54.2
18-Jun-10	AM3	3	Fine	Normal Operation	10:39	11:39	756.0	756.0	29.0	29.0	64.9
19-Jun-10	AM3	1	Fine	Normal Operation	8:48	9:48	756.0	755.0	28.0	28.0	89.5
19-Jun-10	AM3	2	Fine	Normal Operation	9:48	10:48	756.0	755.0	28.0	28.0	54.3
19-Jun-10	AM3	3	Fine	Normal Operation	10:48	11:48	756.0	755.0	28.0	28.0	63.2
20-Jun-10	AM3	1	Fine	Normal Operation	8:45	9:45	755.0	755.0	29.0	29.0	77.6
20-Jun-10	AM3	2	Fine	Normal Operation	9:45	10:45	755.0	755.0	29.0	29.0	52.5
20-Jun-10	AM3	3	Fine	Normal Operation	10:45	11:45	755.0	755.0	29.0	29.0	68.6
21-Jun-10	AM3	1	Fine	Normal Operation	8:24	9:24	755.0	756.0	30.0	30.0	53.3
21-Jun-10	AM3	2	Fine	Normal Operation	9:24	10:24	755.0	756.0	30.0	30.0	54.2
21-Jun-10	AM3	3	Fine	Normal Operation	10:24	11:24	755.0	756.0	30.0	30.0	64.9
24-Jun-10	AM3	1	Fine	Normal Operation	9:21	10:21	756.0	755.0	29.0	29.0	49.1
24-Jun-10	AM3	2	Fine	Normal Operation	10:21	11:21	756.0	755.0	29.0	29.0	56.3
24-Jun-10	AM3	3	Fine	Normal Operation	11:21	12:21	756.0	755.0	29.0	29.0	58.8
25-Jun-10	AM3	1	Cloudy	Normal Operation	9:02	10:02	755.0	753.0	30.0	30.0	83.5
25-Jun-10	AM3	2	Cloudy	Normal Operation	10:02	11:02	755.0	753.0	30.0	30.0	85.3
25-Jun-10	AM3	3	Cloudy	Normal Operation	11:02	12:02	755.0	753.0	30.0	30.0	79.1
29-Jun-10	AM3	1	Cloudy	Normal Operation	8:30	9:30	753.0	751.0	28.0	28.0	38.0
29-Jun-10	AM3	2	Cloudy	Normal Operation	9:30	10:30	753.0	751.0	28.0	28.0	29.8
29-Jun-10	AM3	3	Cloudy	Normal Operation	10:30	11:30	753.0	751.0	28.0	28.0	29.4
30-Jun-10	AM3	1	Fine	Normal Operation	8:55	9:55	751.0	753.0	29.0	29.0	58.8
30-Jun-10	AM3	2	Fine	Normal Operation	9:55	10:55	751.0	753.0	29.0	29.0	59.6
30-Jun-10	AM3	3	Fine	Normal Operation	10:55	11:55	751.0	753.0	29.0	29.0	59.3
1-Jul-10	AM3	1	Cloudy	Normal Operation	8:30	9:30	753.0	755.0	26.0	27.0	22.2
1-Jul-10	AM3	2	Cloudy	Normal Operation	9:30	10:30	753.0	755.0	26.0	27.0	43.8
1-Jul-10	AM3	3	Cloudy	Normal Operation	10:30	11:30	753.0	755.0	26.0	27.0	20.4
2-Jul-10	AM3	1	Cloudy	Normal Operation	8:30	9:30	755.0	755.0	28.0	28.0	77.6
2-Jul-10	AM3	2	Cloudy	Normal Operation	9:30	10:30	755.0	755.0	28.0	28.0	52.5
2-Jul-10	AM3	3	Cloudy	Normal Operation	10:30	11:30	755.0	755.0	28.0	28.0	110.8
3-Jul-10	AM3	1	Cloudy	Normal Operation	9:21	10:21	755.0	756.0	29.0	29.0	27.5
3-Jul-10	AM3	2	Cloudy	Normal Operation	10:21	11:21	755.0	756.0	29.0	29.0	56.3
3-Jul-10	AM3	3	Cloudy	Normal Operation	11:21	12:21	755.0	756.0	29.0	29.0	58.8
5-Jul-10	AM3	1	Sunny	Normal Operation	9:04	10:04	756.0	756.0	30.0	30.0	97.6
5-Jul-10	AM3	2	Sunny	Normal Operation	10:04	11:04	756.0	756.0	30.0	30.0	90.9
5-Jul-10	AM3	3	Sunny	Normal Operation	11:04	12:04	756.0	756.0	30.0	30.0	37.2
6-Jul-10	AM3	1	Sunny	Normal Operation	10:45	11:45	756.0	756.0	31.0	31.0	48.8
6-Jul-10	AM3	2	Sunny	Normal Operation	11:45	12:45	756.0	756.0	31.0	31.0	46.5
6-Jul-10	AM3	3	Sunny	Normal Operation	12:45	13:45	756.0	756.0	31.0	31.0	50.3

Average (ug/m^3)	56.2
Max (ug/m^3)	110.8
Min (ug/m^3)	20.4

Action Level (ug/m^3)	287
Limit Level (ug/m^3)	500

Agreement No. CE 22/2005 (HY) Supplementary Agreement No.1 Traffic Improvement to Tuen Mun Road Town Centre Section

Baseline Air Quality Monitoring Result at Choi Cheung Kok Secondary School (AM4) - 1 hour TSP

Date	Receptor No.	Set No.	Weather condition	Site condition	Time period		Pressure (mmHg)		Temperature (oC)		1-hr TSP (ug/m^3)
					Start	Finish	Initial	Final	Initial	Final	AM4
17-Jun-10	AM4	1	Fine	Normal Operation	14:02	15:02	755.0	756.0	28.0	28.0	126.6
17-Jun-10	AM4	2	Fine	Normal Operation	15:02	16:02	755.0	756.0	28.0	28.0	96.5
17-Jun-10	AM4	3	Fine	Normal Operation	16:02	17:02	755.0	756.0	28.0	28.0	108.4
18-Jun-10	AM4	1	Fine	Normal Operation	12:42	13:42	756.0	756.0	29.0	29.0	95.3
18-Jun-10	AM4	2	Fine	Normal Operation	13:42	14:42	756.0	756.0	29.0	29.0	90.8
18-Jun-10	AM4	3	Fine	Normal Operation	14:42	15:42	756.0	756.0	29.0	29.0	59.9
19-Jun-10	AM4	1	Fine	Normal Operation	13:10	14:10	756.0	755.0	28.0	28.0	25.3
19-Jun-10	AM4	2	Fine	Normal Operation	14:10	15:10	756.0	755.0	28.0	28.0	26.0
19-Jun-10	AM4	3	Fine	Normal Operation	15:10	16:10	756.0	755.0	28.0	28.0	26.1
20-Jun-10	AM4	1	Fine	Normal Operation	14:28	15:28	755.0	755.0	29.0	29.0	36.4
20-Jun-10	AM4	2	Fine	Normal Operation	15:28	16:28	755.0	755.0	29.0	29.0	43.9
20-Jun-10	AM4	3	Fine	Normal Operation	16:28	17:28	755.0	755.0	29.0	29.0	47.3
21-Jun-10	AM4	1	Fine	Normal Operation	14:03	15:03	755.0	756.0	30.0	30.0	59.5
21-Jun-10	AM4	2	Fine	Normal Operation	15:03	16:03	755.0	756.0	30.0	30.0	51.7
21-Jun-10	AM4	3	Fine	Normal Operation	16:03	17:03	755.0	756.0	30.0	30.0	49.8
24-Jun-10	AM4	1	Fine	Normal Operation	12:48	13:48	756.0	755.0	29.0	29.0	70.8
24-Jun-10	AM4	2	Fine	Normal Operation	13:48	14:48	756.0	755.0	29.0	29.0	79.1
24-Jun-10	AM4	3	Fine	Normal Operation	14:48	15:48	756.0	755.0	29.0	29.0	83.6
25-Jun-10	AM4	1	Cloudy	Normal Operation	13:17	14:17	755.0	753.0	30.0	30.0	71.0
25-Jun-10	AM4	2	Cloudy	Normal Operation	14:17	15:17	755.0	753.0	30.0	30.0	85.8
25-Jun-10	AM4	3	Cloudy	Normal Operation	15:17	16:17	755.0	753.0	30.0	30.0	92.3
29-Jun-10	AM4	1	Cloudy	Normal Operation	13:13	14:13	753.0	751.0	28.0	28.0	85.9
29-Jun-10	AM4	2	Cloudy	Normal Operation	14:13	15:13	753.0	751.0	28.0	28.0	92.3
29-Jun-10	AM4	3	Cloudy	Normal Operation	15:13	16:13	753.0	751.0	28.0	28.0	81.5
30-Jun-10	AM4	1	Fine	Normal Operation	13:18	14:18	751.0	753.0	29.0	29.0	55.9
30-Jun-10	AM4	2	Fine	Normal Operation	14:18	15:18	751.0	753.0	29.0	29.0	49.1
30-Jun-10	AM4	3	Fine	Normal Operation	15:18	16:18	751.0	753.0	29.0	29.0	61.3
1-Jul-10	AM4	1	Cloudy	Normal Operation	12:08	13:08	753.0	755.0	26.0	27.0	19.4
1-Jul-10	AM4	2	Cloudy	Normal Operation	13:08	14:08	753.0	755.0	26.0	27.0	13.7
1-Jul-10	AM4	3	Cloudy	Normal Operation	14:08	15:08	753.0	755.0	26.0	27.0	20.4
2-Jul-10	AM4	1	Cloudy	Normal Operation	13:20	14:20	755.0	755.0	28.0	28.0	56.9
2-Jul-10	AM4	2	Cloudy	Normal Operation	14:20	15:20	755.0	755.0	28.0	28.0	51.2
2-Jul-10	AM4	3	Cloudy	Normal Operation	15:20	16:20	755.0	755.0	28.0	28.0	43.8
3-Jul-10	AM4	1	Cloudy	Normal Operation	12:16	13:16	755.0	756.0	29.0	29.0	70.9
3-Jul-10	AM4	2	Cloudy	Normal Operation	13:16	14:16	755.0	756.0	29.0	29.0	67.4
3-Jul-10	AM4	3	Cloudy	Normal Operation	14:16	15:16	755.0	756.0	29.0	29.0	70.0
5-Jul-10	AM4	1	Sunny	Normal Operation	13:08	14:08	756.0	756.0	30.0	30.0	78.0
5-Jul-10	AM4	2	Sunny	Normal Operation	14:08	15:08	756.0	756.0	30.0	30.0	81.8
5-Jul-10	AM4	3	Sunny	Normal Operation	15:08	16:08	756.0	756.0	30.0	30.0	72.6
6-Jul-10	AM4	1	Sunny	Normal Operation	12:01	13:01	756.0	756.0	31.0	31.0	68.8
6-Jul-10	AM4	2	Sunny	Normal Operation	13:01	14:01	756.0	756.0	31.0	31.0	52.8
6-Jul-10	AM4	3	Sunny	Normal Operation	14:01	15:01	756.0	756.0	31.0	31.0	66.8

Average (ug/m^3)	64.0
Max (ug/m^3)	126.6
Min (ug/m^3)	13.7

Action Level (ug/m^3)	292
Limit Level (ug/m^3)	500

Agreement No. CE 22/2005 (HY) Supplementary Agreement No.1 Traffic Improvement to Tuen Mun Road Town Centre Section
Baseline Air Quality Monitoring Result at Tuen Mun Town Hall (AM5) - 1 hour TSP

Date	Receptor No.	Set No.	Weather condition	Site condition	Time period		Pressure (mmHg)		Temperature (oC)		1-hr TSP (ug/m^3)
					Start	Finish	Initial	Final	Initial	Final	AM5
17-Jun-10	AM5	1	Fine	Normal Operation	11:55	12:55	755.0	756.0	28.0	28.0	55.5
17-Jun-10	AM5	2	Fine	Normal Operation	12:55	13:55	755.0	756.0	28.0	28.0	50.3
17-Jun-10	AM5	3	Fine	Normal Operation	13:55	14:55	755.0	756.0	28.0	28.0	42.7
18-Jun-10	AM5	1	Fine	Normal Operation	12:57	13:57	756.0	756.0	29.0	29.0	57.2
18-Jun-10	AM5	2	Fine	Normal Operation	13:57	14:57	756.0	756.0	29.0	29.0	96.3
18-Jun-10	AM5	3	Fine	Normal Operation	14:57	15:57	756.0	756.0	29.0	29.0	55.7
19-Jun-10	AM5	1	Fine	Normal Operation	12:35	13:35	756.0	755.0	28.0	28.0	53.3
19-Jun-10	AM5	2	Fine	Normal Operation	13:35	14:35	756.0	755.0	28.0	28.0	54.6
19-Jun-10	AM5	3	Fine	Normal Operation	14:35	15:35	756.0	755.0	28.0	28.0	88.5
20-Jun-10	AM5	1	Fine	Normal Operation	12:13	13:13	755.0	755.0	29.0	29.0	44.4
20-Jun-10	AM5	2	Fine	Normal Operation	13:13	14:13	755.0	755.0	29.0	29.0	38.2
20-Jun-10	AM5	3	Fine	Normal Operation	14:13	15:13	755.0	755.0	29.0	29.0	22.3
21-Jun-10	AM5	1	Fine	Normal Operation	14:43	15:43	755.0	756.0	30.0	30.0	39.4
21-Jun-10	AM5	2	Fine	Normal Operation	15:43	16:43	755.0	756.0	30.0	30.0	37.8
21-Jun-10	AM5	3	Fine	Normal Operation	16:43	17:43	755.0	756.0	30.0	30.0	50.5
24-Jun-10	AM5	1	Fine	Normal Operation	12:58	13:58	756.0	755.0	29.0	29.0	65.6
24-Jun-10	AM5	2	Fine	Normal Operation	13:58	14:58	756.0	755.0	29.0	29.0	112.2
24-Jun-10	AM5	3	Fine	Normal Operation	14:58	15:58	756.0	755.0	29.0	29.0	103.1
25-Jun-10	AM5	1	Cloudy	Normal Operation	13:32	14:32	755.0	753.0	30.0	30.0	53.3
25-Jun-10	AM5	2	Cloudy	Normal Operation	14:32	15:32	755.0	753.0	30.0	30.0	52.0
25-Jun-10	AM5	3	Cloudy	Normal Operation	15:32	16:32	755.0	753.0	30.0	30.0	53.6
29-Jun-10	AM5	1	Cloudy	Normal Operation	13:06	14:06	753.0	751.0	28.0	28.0	83.3
29-Jun-10	AM5	2	Cloudy	Normal Operation	14:06	15:06	753.0	751.0	28.0	28.0	116.0
29-Jun-10	AM5	3	Cloudy	Normal Operation	15:06	16:06	753.0	751.0	28.0	28.0	114.4
30-Jun-10	AM5	1	Fine	Normal Operation	13:42	14:42	751.0	753.0	29.0	29.0	71.3
30-Jun-10	AM5	2	Fine	Normal Operation	14:42	15:42	751.0	753.0	29.0	29.0	69.8
30-Jun-10	AM5	3	Fine	Normal Operation	15:42	16:42	751.0	753.0	29.0	29.0	78.5
1-Jul-10	AM5	1	Cloudy	Normal Operation	12:50	13:50	753.0	755.0	26.0	27.0	26.7
1-Jul-10	AM5	2	Cloudy	Normal Operation	13:50	14:50	753.0	755.0	26.0	27.0	21.2
1-Jul-10	AM5	3	Cloudy	Normal Operation	14:50	15:50	753.0	755.0	26.0	27.0	13.5
2-Jul-10	AM5	1	Cloudy	Normal Operation	13:45	14:45	755.0	755.0	28.0	28.0	24.3
2-Jul-10	AM5	2	Cloudy	Normal Operation	14:45	15:45	755.0	755.0	28.0	28.0	10.7
2-Jul-10	AM5	3	Cloudy	Normal Operation	15:45	16:45	755.0	755.0	28.0	28.0	15.1
3-Jul-10	AM5	1	Cloudy	Normal Operation	12:19	13:19	755.0	756.0	29.0	29.0	76.0
3-Jul-10	AM5	2	Cloudy	Normal Operation	13:19	14:19	755.0	756.0	29.0	29.0	66.8
3-Jul-10	AM5	3	Cloudy	Normal Operation	14:19	15:19	755.0	756.0	29.0	29.0	63.9
5-Jul-10	AM5	1	Sunny	Normal Operation	11:35	12:35	756.0	756.0	30.0	30.0	38.1
5-Jul-10	AM5	2	Sunny	Normal Operation	12:35	13:35	756.0	756.0	30.0	30.0	37.0
5-Jul-10	AM5	3	Sunny	Normal Operation	13:35	14:35	756.0	756.0	30.0	30.0	40.9
6-Jul-10	AM5	1	Sunny	Normal Operation	12:33	13:33	756.0	756.0	31.0	31.0	48.5
6-Jul-10	AM5	2	Sunny	Normal Operation	13:33	14:33	756.0	756.0	31.0	31.0	62.2
6-Jul-10	AM5	3	Sunny	Normal Operation	14:33	15:33	756.0	756.0	31.0	31.0	51.0

Average (ug/m^3)	56.1
Max (ug/m^3)	116.0
Min (ug/m^3)	10.7

Action Level (ug/m^3)	286
Limit Level (ug/m^3)	500

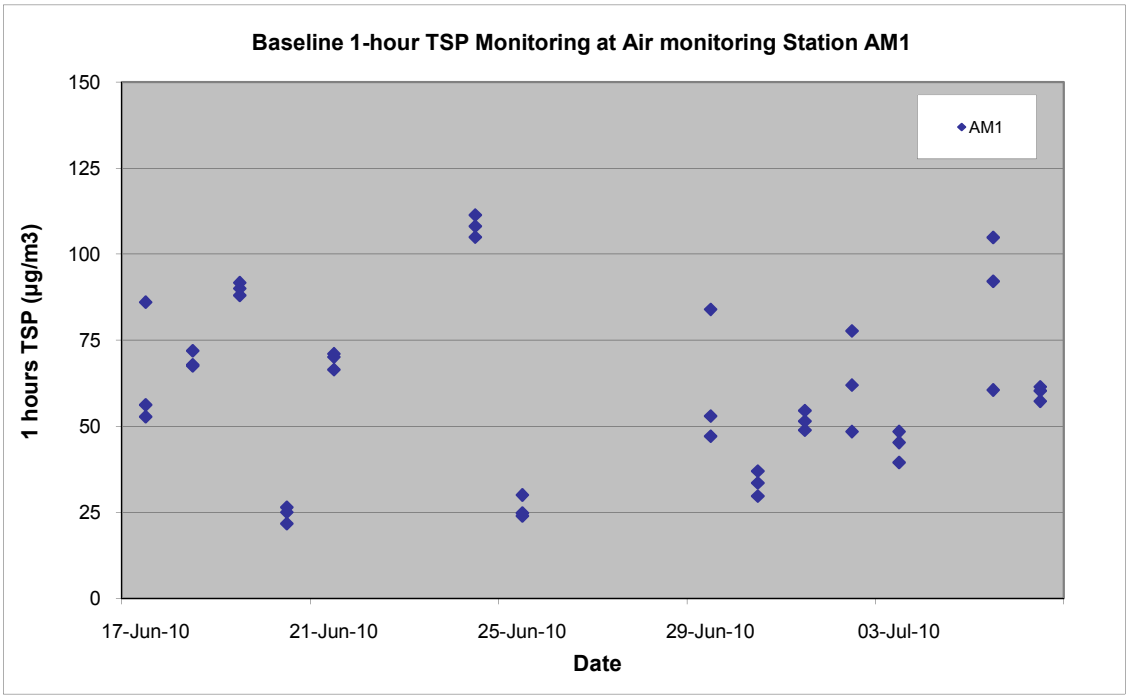
Agreement No. CE 22/2005 (HY) Supplementary Agreement No.1 Traffic Improvement to Tuen Mun Road Town Centre Section

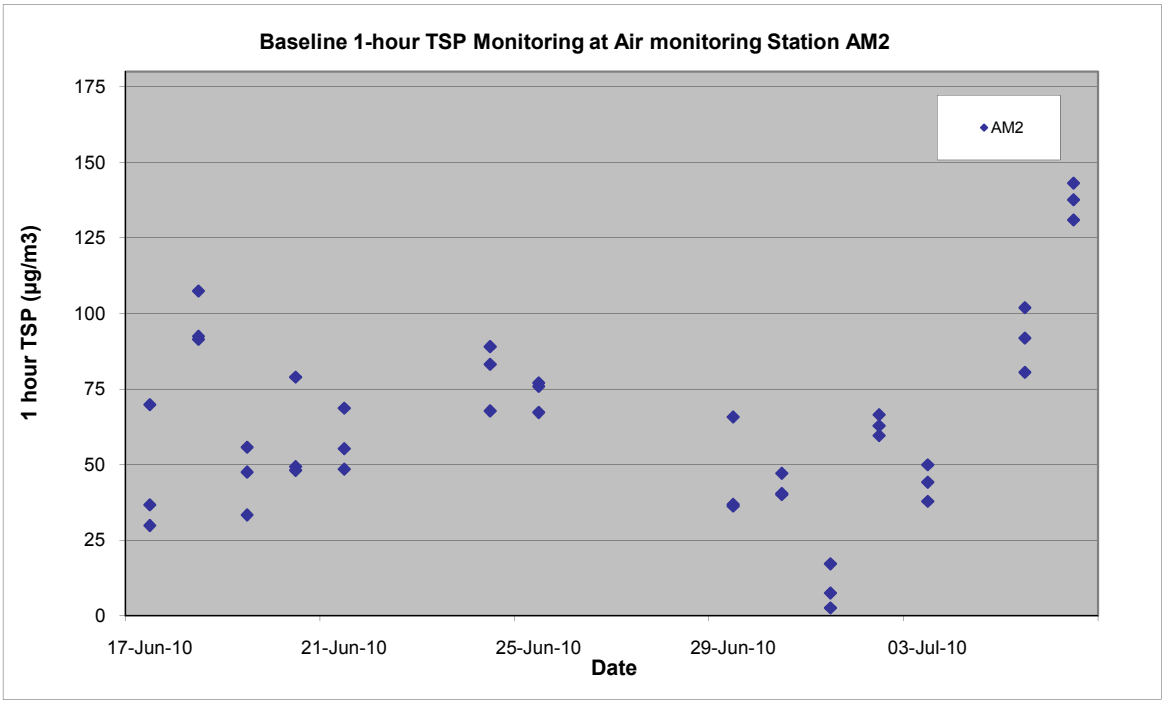
Baseline Air Quality Monitoring Result at Yan Oi Tong Community and Sports Centre (AM6) - 1 hour TSP

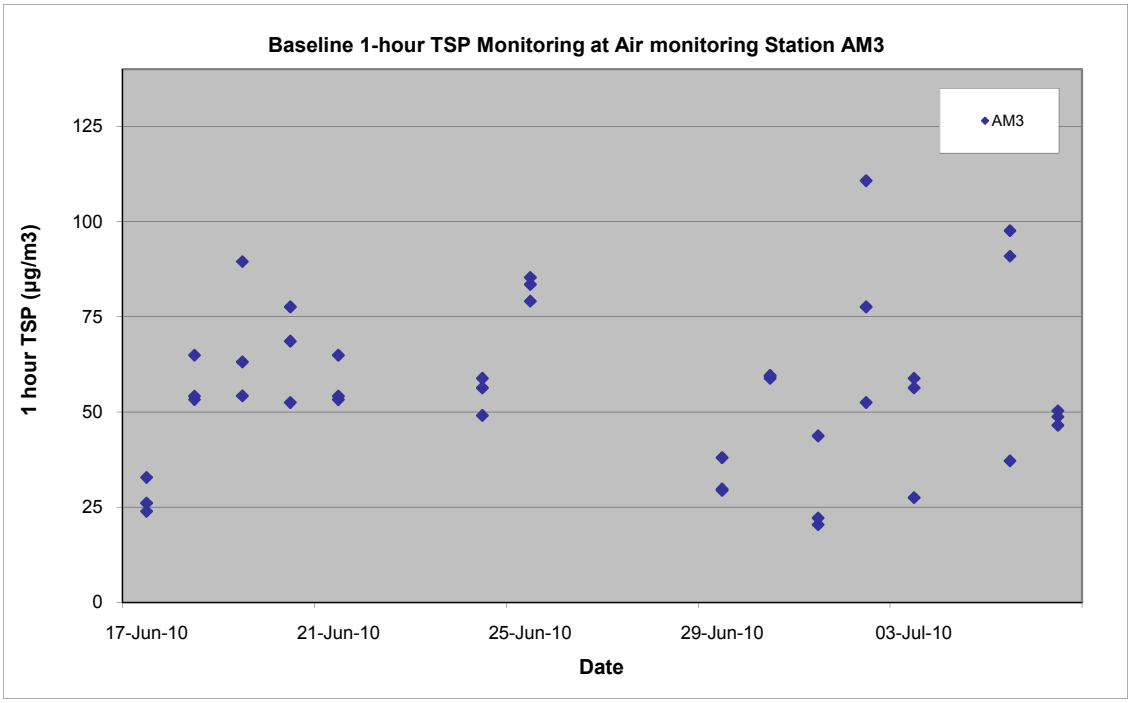
Date	Receptor No.	Set No.	Weather condition	Site condition	Time period		Pressure (mmHg)		Temperature (oC)		1-hr TSP (ug/m^3)
					Start	Finish	Initial	Final	Initial	Final	AM6
17-Jun-10	AM6	1	Fine	Normal Operation	12:53	13:53	755.0	756.0	28.0	28.0	49.7
17-Jun-10	AM6	2	Fine	Normal Operation	13:53	14:53	755.0	756.0	28.0	28.0	60.0
17-Jun-10	AM6	3	Fine	Normal Operation	14:53	15:53	755.0	756.0	28.0	28.0	59.4
18-Jun-10	AM6	1	Fine	Normal Operation	12:42	13:42	756.0	756.0	29.0	29.0	103.8
18-Jun-10	AM6	2	Fine	Normal Operation	13:42	14:42	756.0	756.0	29.0	29.0	89.0
18-Jun-10	AM6	3	Fine	Normal Operation	14:42	15:42	756.0	756.0	29.0	29.0	79.0
19-Jun-10	AM6	1	Fine	Normal Operation	12:43	13:43	756.0	755.0	28.0	28.0	69.6
19-Jun-10	AM6	2	Fine	Normal Operation	13:43	14:43	756.0	755.0	28.0	28.0	90.3
19-Jun-10	AM6	3	Fine	Normal Operation	14:43	15:43	756.0	755.0	28.0	28.0	65.7
20-Jun-10	AM6	1	Fine	Normal Operation	12:45	13:45	755.0	755.0	29.0	29.0	48.5
20-Jun-10	AM6	2	Fine	Normal Operation	13:45	14:45	755.0	755.0	29.0	29.0	51.3
20-Jun-10	AM6	3	Fine	Normal Operation	14:45	15:45	755.0	755.0	29.0	29.0	58.0
21-Jun-10	AM6	1	Fine	Normal Operation	12:31	13:31	755.0	756.0	30.0	30.0	58.1
21-Jun-10	AM6	2	Fine	Normal Operation	13:31	14:31	755.0	756.0	30.0	30.0	68.0
21-Jun-10	AM6	3	Fine	Normal Operation	14:31	15:31	755.0	756.0	30.0	30.0	65.3
24-Jun-10	AM6	1	Fine	Normal Operation	12:31	13:31	756.0	755.0	29.0	29.0	70.8
24-Jun-10	AM6	2	Fine	Normal Operation	13:31	14:31	756.0	755.0	29.0	29.0	70.3
24-Jun-10	AM6	3	Fine	Normal Operation	14:31	15:31	756.0	755.0	29.0	29.0	81.8
25-Jun-10	AM6	1	Cloudy	Normal Operation	13:22	14:22	755.0	753.0	30.0	30.0	66.6
25-Jun-10	AM6	2	Cloudy	Normal Operation	14:22	15:22	755.0	753.0	30.0	30.0	66.5
25-Jun-10	AM6	3	Cloudy	Normal Operation	15:22	16:22	755.0	753.0	30.0	30.0	65.3
29-Jun-10	AM6	1	Cloudy	Normal Operation	12:51	13:51	753.0	751.0	28.0	28.0	40.3
29-Jun-10	AM6	2	Cloudy	Normal Operation	13:51	14:51	753.0	751.0	28.0	28.0	80.7
29-Jun-10	AM6	3	Cloudy	Normal Operation	14:51	15:51	753.0	751.0	28.0	28.0	63.6
30-Jun-10	AM6	1	Fine	Normal Operation	12:52	13:52	751.0	753.0	29.0	29.0	49.2
30-Jun-10	AM6	2	Fine	Normal Operation	13:52	14:52	751.0	753.0	29.0	29.0	67.2
30-Jun-10	AM6	3	Fine	Normal Operation	14:52	15:52	751.0	753.0	29.0	29.0	67.0
1-Jul-10	AM6	1	Cloudy	Normal Operation	12:36	13:36	753.0	755.0	26.0	27.0	14.7
1-Jul-10	AM6	2	Cloudy	Normal Operation	13:36	14:36	753.0	755.0	26.0	27.0	18.5
1-Jul-10	AM6	3	Cloudy	Normal Operation	14:36	15:36	753.0	755.0	26.0	27.0	14.0
2-Jul-10	AM6	1	Cloudy	Normal Operation	12:53	13:53	755.0	755.0	28.0	28.0	49.7
2-Jul-10	AM6	2	Cloudy	Normal Operation	13:53	14:53	755.0	755.0	28.0	28.0	60.0
2-Jul-10	AM6	3	Cloudy	Normal Operation	14:53	15:53	755.0	755.0	28.0	28.0	59.4
3-Jul-10	AM6	1	Cloudy	Normal Operation	12:33	13:33	755.0	756.0	29.0	29.0	153.3
3-Jul-10	AM6	2	Cloudy	Normal Operation	13:33	14:33	755.0	756.0	29.0	29.0	143.8
3-Jul-10	AM6	3	Cloudy	Normal Operation	14:33	15:33	755.0	756.0	29.0	29.0	54.1
5-Jul-10	AM6	1	Sunny	Normal Operation	12:36	13:36	756.0	756.0	30.0	30.0	58.1
5-Jul-10	AM6	2	Sunny	Normal Operation	13:36	14:36	756.0	756.0	30.0	30.0	68.0
5-Jul-10	AM6	3	Sunny	Normal Operation	14:36	15:36	756.0	756.0	30.0	30.0	65.3
6-Jul-10	AM6	1	Sunny	Normal Operation	12:31	13:31	756.0	756.0	31.0	31.0	116.3
6-Jul-10	AM6	2	Sunny	Normal Operation	13:31	14:31	756.0	756.0	31.0	31.0	93.0
6-Jul-10	AM6	3	Sunny	Normal Operation	14:31	15:31	756.0	756.0	31.0	31.0	101.8

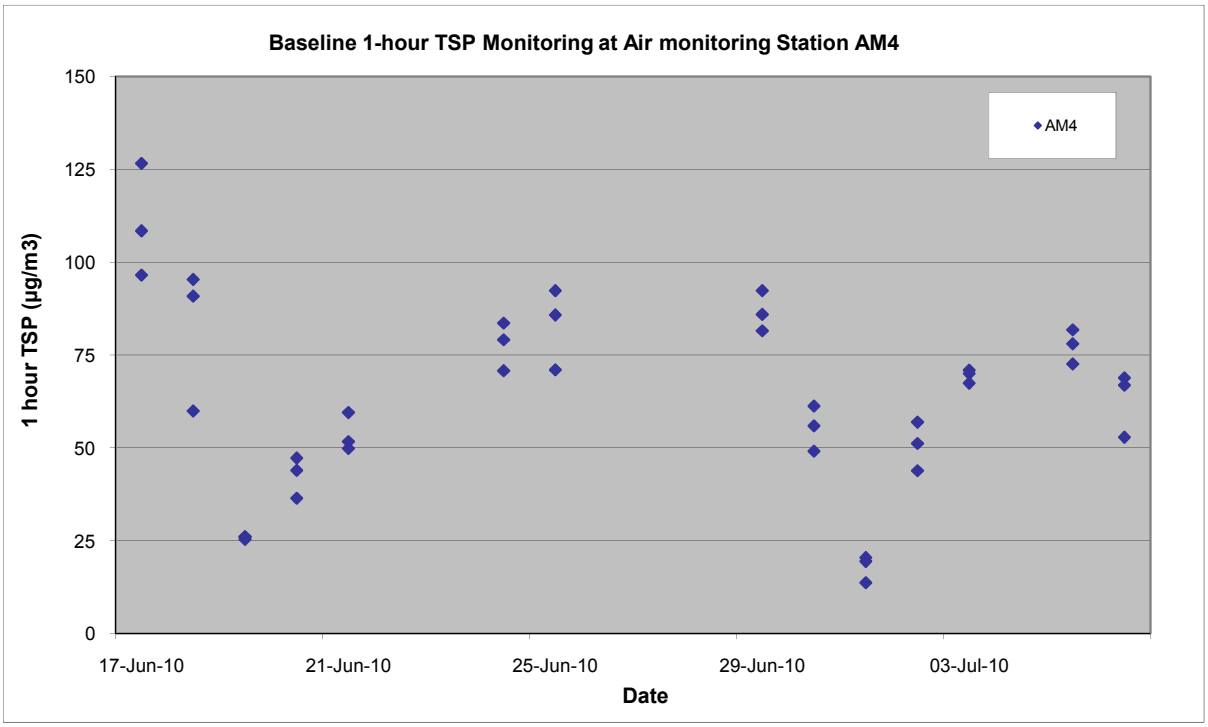
Average (ug/m^3)	68.4
Max (ug/m^3)	153.3
Min (ug/m^3)	14.0

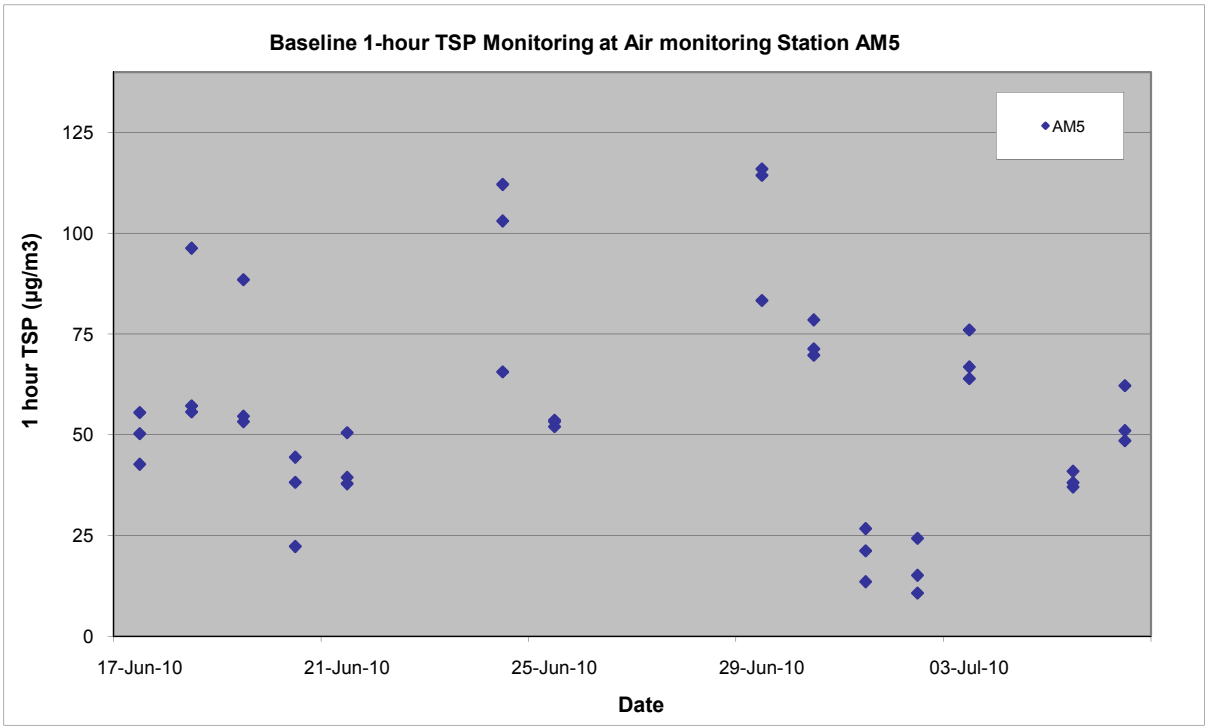
Action Level (ug/m^3)	294
Limit Level (ug/m^3)	500

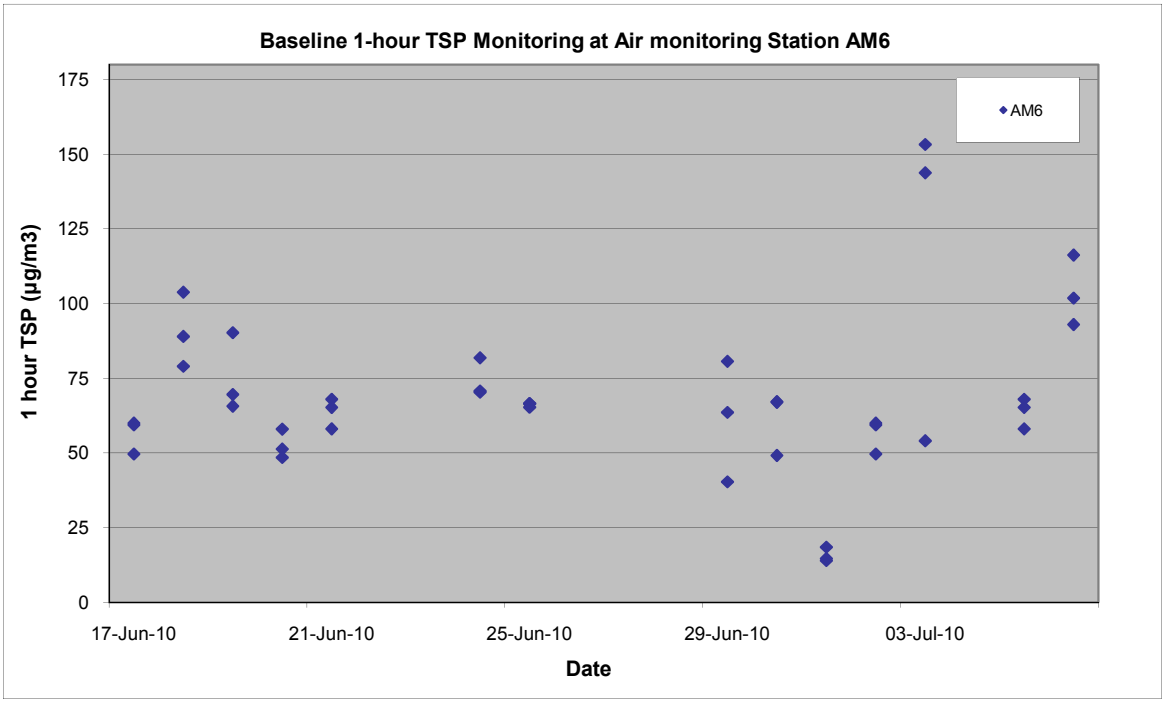

Baseline 1-hour TSP Monitoring at Air monitoring Station AM1
1 hours TSP (µg/m3)
150
125
100
75
50
25
0
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
03-Jul-10
Date
AM1


Baseline 1-hour TSP Monitoring at Air monitoring Station AM2
1 hour TSP (µg/m3)
175
150
125
100
75
50
25
0
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
03-Jul-10
Date
AM2


Baseline 1-hour TSP Monitoring at Air monitoring Station AM3
AM3
125
100
75
50
25
0
1 hour TSP (µg/m3)
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
03-Jul-10
Date


Baseline 1-hour TSP Monitoring at Air monitoring Station AM4
150
125
100
75
50
25
0
1 hour TSP (µg/m3)
AM4
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
03-Jul-10
Date


Baseline 1-hour TSP Monitoring at Air monitoring Station AM5
AM5
1 hour TSP (µg/m3)
125
100
75
50
25
0
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
03-Jul-10
Date


Baseline 1-hour TSP Monitoring at Air monitoring Station AM6
1 hour TSP (µg/m3)
175
150
125
100
75
50
25
0
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
03-Jul-10
Date
AM6

Agreement No. CE 22/2005 (HY) Supplementary Agreement No.1 Traffic Improvement to Tuen Mun Road Town Centre Section
Baseline Air Quality Monitoring Result at Mrs Aw Boon Haw Secondary School (AM1) - 24 hours TSP

Filter No.	Month	Date	Receptor No.	Weather condition	Site condition	Pressure (mmHg)		Temperature (oC)		Flow Recorder Reading (CFM)		Filter Weight (g)		TSP weight (g)	Flow Rate (m^3/min)		Average Flow Rate (m^3/min)	Elapse Time		Sampling Time	Total vol. (m^3)	AM1
						Initial	Final	Initial	Final	Initial	Final	Initial	Final		Initial	Final		Start	Finish			
101282	Jun-10	17-Jun-10	AM1	Fine	Normal Operation	755.0	756.0	28.0	28.0	40.0	40.0	2.8479	2.8859	0.0380	1.2544	1.2552	1.2548	9649.30	9673.30	1440.00	1806.91	21.0
101291	Jun-10	18-Jun-10	AM1	Fine	Normal Operation	756.0	756.0	29.0	29.0	40.0	40.0	2.8492	2.9000	0.0508	1.2533	1.2533	1.2533	9673.30	9697.30	1440.00	1804.75	28.1
101295	Jun-10	19-Jun-10	AM1	Fine	Normal Operation	756.0	755.0	28.0	28.0	40.0	40.0	2.8180	2.8589	0.0409	1.2552	1.2544	1.2548	9697.30	9721.30	1440.00	1806.91	22.6
101301	Jun-10	20-Jun-10	AM1	Fine	Normal Operation	755.0	755.0	29.0	29.0	40.0	40.0	2.7201	2.7626	0.0425	1.2525	1.2525	1.2525	9721.30	9745.30	1440.00	1803.60	23.6
101309	Jun-10	21-Jun-10	AM1	Fine	Normal Operation	755.0	756.0	30.0	30.0	40.0	40.0	2.7487	2.8070	0.0583	1.2506	1.2513	1.2510	9745.30	9769.30	1440.00	1801.37	32.4
101325	Jun-10	24-Jun-10	AM1	Fine	Normal Operation	756.0	755.0	29.0	29.0	40.0	40.0	2.7780	2.8341	0.0561	1.2533	1.2525	1.2529	9769.30	9793.30	1440.00	1804.18	31.1
101335	Jun-10	25-Jun-10	AM1	Cloudy	Normal Operation	755.0	753.0	30.0	30.0	40.0	40.0	2.7864	2.8208	0.0344	1.2506	1.2490	1.2498	9793.30	9817.30	1440.00	1799.71	19.1
101352	Jun-10	29-Jun-10	AM1	Cloudy	Normal Operation	753.0	751.0	28.0	28.0	40.0	40.0	2.7951	2.8484	0.0533	1.2529	1.2513	1.2521	9817.30	9841.30	1440.00	1803.02	29.6
101367	Jun-10	30-Jun-10	AM1	Fine	Normal Operation	751.0	753.0	29.0	29.0	40.0	40.0	2.7785	2.8203	0.0418	1.2495	1.2510	1.2503	9841.30	9865.30	1440.00	1800.36	23.2
101348	Jul-10	1-Jul-10	AM1	Cloudy	Normal Operation	753.0	755.0	26.0	27.0	40.0	40.0	2.7902	2.8350	0.0448	1.2568	1.2564	1.2566	9865.30	9889.30	1440.00	1809.50	24.8
101169	Jul-10	2-Jul-10	AM1	Cloudy	Normal Operation	755.0	755.0	28.0	28.0	40.0	40.0	2.8801	2.9144	0.0343	1.2544	1.2544	1.2544	9889.30	9913.30	1440.00	1806.34	19.0
101314	Jul-10	3-Jul-10	AM1	Cloudy	Normal Operation	755.0	756.0	29.0	29.0	40.0	40.0	2.7474	2.8290	0.0816	1.2525	1.2533	1.2529	9913.30	9937.30	1440.00	1804.18	45.2
101340	Jul-10	5-Jul-10	AM1	Sunny	Normal Operation	756.0	756.0	30.0	30.0	40.0	40.0	2.8091	2.8432	0.0341	1.2513	1.2513	1.2513	9937.30	9961.30	1440.00	1801.87	18.9
101359	Jul-10	6-Jul-10	AM1	Sunny	Normal Operation	756.0	756.0	31.0	31.0	40.0	40.0	2.8064	2.8331	0.0267	1.2494	1.2494	1.2494	9961.30	9985.30	1440.00	1799.14	14.8

Average (ug/m^3)	25.2
Max (ug/m^3)	45.2
Min (ug/m^3)	14.8

Action Level (ug/m^3)	146
Limit Level (ug/m^3)	260

Agreement No. CE 22/2005 (HY) Supplementary Agreement No.1 Traffic Improvement to Tuen Mun Road Town Centre Section
Baseline Air Quality Monitoring Result at Tai Tung Pui Social Service Building (AM2) - 24 hours TSP

Filter No.	Month	Date	Receptor No.	Weather condition	Site condition	Pressure (mmHg)		Temperature (oC)		Flow Recorder Reading (CFM)		Filter Weight (g)		TSP weight (g)	Flow Rate (m^3/min)		Average Flow Rate (m^3/min)	Elapse Time		Sampling Time	Total vol. (m^3)	AM2
						Initial	Final	Initial	Final	Initial	Final	Initial	Final		Initial	Final		Start	Finish			
101283	Jun-10	17-Jun-10	AM2	Fine	Normal Operation	755.0	756.0	28.0	28.0	40.0	40.0	2.8155	2.8834	0.0679	1.0622	1.0632	1.0627	3803.10	3827.10	1440.00	1530.29	44.4
101292	Jun-10	18-Jun-10	AM2	Fine	Normal Operation	756.0	756.0	29.0	29.0	40.0	40.0	2.8513	2.8824	0.0311	1.0606	1.0606	1.0606	3827.10	3851.10	1440.00	1527.26	20.4
101294	Jun-10	19-Jun-10	AM2	Fine	Normal Operation	756.0	755.0	28.0	28.0	40.0	40.0	2.8337	2.8906	0.0569	1.0632	1.0622	1.0627	3851.10	3875.10	1440.00	1530.29	37.2
101300	Jun-10	20-Jun-10	AM2	Fine	Normal Operation	755.0	755.0	29.0	29.0	40.0	40.0	2.8106	2.8643	0.0537	1.0596	1.0596	1.0596	3875.10	3899.10	1440.00	1525.82	35.2
101310	Jun-10	21-Jun-10	AM2	Fine	Normal Operation	755.0	756.0	30.0	30.0	40.0	40.0	2.7562	2.8108	0.0546	1.0570	1.0580	1.0575	3899.10	3923.10	1440.00	1522.80	35.9
101323	Jun-10	24-Jun-10	AM2	Fine	Normal Operation	756.0	755.0	29.0	29.0	40.0	40.0	2.7473	2.8092	0.0619	1.0606	1.0596	1.0601	3923.10	3947.10	1440.00	1526.54	40.5
101329	Jun-10	25-Jun-10	AM2	Cloudy	Normal Operation	755.0	753.0	30.0	30.0	40.0	40.0	2.7671	2.8414	0.0743	1.0570	1.0549	1.0560	3947.10	3971.10	1440.00	1520.57	48.9
101354	Jun-10	29-Jun-10	AM2	Cloudy	Normal Operation	753.0	751.0	28.0	28.0	40.0	40.0	2.7959	2.8422	0.0463	1.0601	1.0580	1.0591	3971.10	3995.10	1440.00	1525.03	30.4
101369	Jun-10	30-Jun-10	AM2	Fine	Normal Operation	751.0	753.0	29.0	29.0	40.0	40.0	2.7743	2.8095	0.0352	1.0555	1.0576	1.0566	3995.10	4019.10	1440.00	1521.43	23.1
101355	Jul-10	1-Jul-10	AM2	Cloudy	Normal Operation	753.0	755.0	26.0	27.0	40.0	40.0	2.7938	2.8446	0.0508	1.0654	1.0648	1.0651	4019.10	4043.10	1440.00	1533.74	33.1
101170	Jul-10	2-Jul-10	AM2	Cloudy	Normal Operation	755.0	755.0	28.0	28.0	40.0	40.0	2.8688	2.9244	0.0556	1.0622	1.0622	1.0622	4043.10	4067.10	1440.00	1529.57	36.4
101089	Jul-10	3-Jul-10	AM2	Cloudy	Normal Operation	755.0	756.0	29.0	29.0	40.0	40.0	2.8331	2.8635	0.0304	1.0596	1.0606	1.0601	4067.10	4091.10	1440.00	1526.54	19.9
101342	Jul-10	5-Jul-10	AM2	Sunny	Normal Operation	756.0	756.0	30.0	30.0	40.0	40.0	2.8096	2.8507	0.0411	1.0580	1.0580	1.0580	4091.10	4115.10	1440.00	1523.52	27.0
101361	Jul-10	6-Jul-10	AM2	Sunny	Normal Operation	756.0	756.0	31.0	31.0	40.0	40.0	2.7892	2.8133	0.0241	1.0555	1.0555	1.0555	4115.10	4139.10	1440.00	1519.92	15.9

Average (ug/m^3)	32.0
Max (ug/m^3)	48.9
Min (ug/m^3)	15.9

Action Level (ug/m^3)	151
Limit Level (ug/m^3)	260

Agreement No. CE 22/2005 (HY) Supplementary Agreement No.1 Traffic Improvement to Tuen Mun Road Town Centre Section
Baseline Air Quality Monitoring Result at Wu Siu Kui Primary School (AM3) - 24 hours TSP

Filter No.	Month	Date	Receptor No.	Weather condition	Site condition	Pressure (mmHg)		Temperature (oC)		Flow Recorder Reading (CFM)		Filter Weight (g)		TSP weight (g)	Flow Rate (m^3/min)		Average Flow Rate (m^3/min)	Elapse Time		Sampling Time	Total vol. (m^3)	AM3
						Initial	Final	Initial	Final	Initial	Final	Initial	Final		Initial	Final		Start	Finish			
101284	Jun-10	17-Jun-10	AM3	Fine	Normal Operation	755.0	756.0	28.0	28.0	40.0	40.0	2.8594	2.9191	0.0597	1.0026	1.0035	1.0031	7968.39	7992.39	1440.00	1444.39	41.3
101293	Jun-10	18-Jun-10	AM3	Fine	Normal Operation	756.0	756.0	29.0	29.0	40.0	40.0	2.8235	2.8552	0.0317	1.0012	1.0012	1.0012	7992.39	8016.39	1440.00	1441.73	22.0
101296	Jun-10	19-Jun-10	AM3	Fine	Normal Operation	756.0	755.0	28.0	28.0	40.0	40.0	2.8092	2.8564	0.0472	1.0035	1.0026	1.0031	8016.39	8040.39	1440.00	1444.39	32.7
101302	Jun-10	20-Jun-10	AM3	Fine	Normal Operation	755.0	755.0	29.0	29.0	40.0	40.0	2.7222	2.7701	0.0479	1.0003	1.0003	1.0003	8040.39	8064.39	1440.00	1440.43	33.3
101311	Jun-10	21-Jun-10	AM3	Fine	Normal Operation	755.0	756.0	30.0	30.0	40.0	40.0	2.7627	2.8178	0.0551	0.9980	0.9989	0.9985	8064.39	8088.39	1440.00	1437.77	38.3
101324	Jun-10	24-Jun-10	AM3	Fine	Normal Operation	756.0	755.0	29.0	29.0	40.0	40.0	2.7328	2.8137	0.0809	1.0012	1.0003	1.0008	8088.39	8112.39	1440.00	1441.08	56.1
101334	Jun-10	25-Jun-10	AM3	Cloudy	Normal Operation	755.0	753.0	30.0	30.0	40.0	40.0	2.7774	2.8233	0.0459	0.9980	0.9962	0.9971	8112.39	8136.39	1440.00	1435.82	32.0
101353	Jun-10	29-Jun-10	AM3	Cloudy	Normal Operation	753.0	751.0	28.0	28.0	40.0	40.0	2.8001	2.8365	0.0364	1.0008	0.9989	0.9999	8136.39	8160.39	1440.00	1439.78	25.3
101368	Jun-10	30-Jun-10	AM3	Fine	Normal Operation	751.0	753.0	29.0	29.0	40.0	40.0	2.7815	2.8251	0.0436	0.9967	0.9985	0.9976	8160.39	8184.39	1440.00	1436.54	30.4
101349	Jul-10	1-Jul-10	AM3	Cloudy	Normal Operation	753.0	755.0	26.0	27.0	40.0	40.0	2.7826	2.8211	0.0385	1.0054	1.0049	1.0052	8184.39	8208.39	1440.00	1447.42	26.6
101373	Jul-10	2-Jul-10	AM3	Cloudy	Normal Operation	755.0	755.0	28.0	28.0	40.0	40.0	2.7763	2.8255	0.0492	1.0026	1.0026	1.0026	8209.39	8233.39	1440.00	1443.74	34.1
101313	Jul-10	3-Jul-10	AM3	Cloudy	Normal Operation	755.0	756.0	29.0	29.0	40.0	40.0	2.7602	2.7885	0.0283	1.0003	1.0012	1.0008	8233.39	8257.39	1440.00	1441.08	19.6
101341	Jul-10	5-Jul-10	AM3	Sunny	Normal Operation	756.0	756.0	30.0	30.0	40.0	40.0	2.8045	2.8481	0.0436	0.9989	0.9989	0.9989	8257.39	8281.39	1440.00	1438.42	30.3
101360	Jul-10	6-Jul-10	AM3	Sunny	Normal Operation	756.0	756.0	31.0	31.0	40.0	40.0	2.7781	2.7984	0.0203	0.9967	0.9967	0.9967	8281.39	8305.39	1440.00	1435.25	14.1

Average (ug/m^3)	31.2
Max (ug/m^3)	56.1
Min (ug/m^3)	14.1

Action Level (ug/m^3)	150
Limit Level (ug/m^3)	260

Agreement No. CE 22/2005 (HY) Supplementary Agreement No.1 Traffic Improvement to Tuen Mun Road Town Centre Section

Baseline Air Quality Monitoring Result at Choi Cheung Kok Secondary School (AM4) - 24 hours TSP

Filter No.	Month	Date	Receptor No.	Weather condition	Site condition	Pressure (mmHg)		Temperature (oC)		Flow Recorder Reading (CFM)		Filter Weight (g)		TSP weight (g)	Flow Rate (m^3/min)		Average Flow Rate (m^3/min)	Elapse Time		Sampling Time	Total vol. (m^3)	AM4
						Initial	Final	Initial	Final	Initial	Final	Initial	Final		Initial	Final		Start	Finish			
101285	Jun-10	17-Jun-10	AM4	Fine	Normal Operation	755.0	756.0	28.0	28.0	40.0	40.0	2.8417	2.9033	0.0616	1.0949	1.0957	1.0953	8851.12	8875.12	1440.00	1577.23	39.1
101288	Jun-10	18-Jun-10	AM4	Fine	Normal Operation	756.0	756.0	29.0	29.0	40.0	40.0	2.8353	2.8773	0.0420	1.0937	1.0937	1.0937	8875.12	8899.12	1440.00	1574.93	26.7
101297	Jun-10	19-Jun-10	AM4	Fine	Normal Operation	756.0	755.0	28.0	28.0	40.0	40.0	2.7876	2.8334	0.0458	1.0957	1.0949	1.0953	8899.12	8923.12	1440.00	1577.23	29.0
101305	Jun-10	20-Jun-10	AM4	Fine	Normal Operation	755.0	755.0	29.0	29.0	40.0	40.0	2.7648	2.8183	0.0535	1.0929	1.0929	1.0929	8923.12	8947.12	1440.00	1573.78	34.0
101306	Jun-10	21-Jun-10	AM4	Fine	Normal Operation	755.0	756.0	30.0	30.0	40.0	40.0	2.7599	2.8053	0.0454	1.0908	1.0916	1.0912	8947.12	8971.12	1440.00	1571.33	28.9
101328	Jun-10	24-Jun-10	AM4	Fine	Normal Operation	756.0	755.0	29.0	29.0	40.0	40.0	2.7694	2.8219	0.0525	1.0937	1.0929	1.0933	8971.12	8995.12	1440.00	1574.35	33.3
101338	Jun-10	25-Jun-10	AM4	Cloudy	Normal Operation	755.0	753.0	30.0	30.0	40.0	40.0	2.7813	2.8225	0.0412	1.0908	1.0892	1.0900	8995.12	9019.12	1440.00	1569.6	26.2
101351	Jun-10	29-Jun-10	AM4	Cloudy	Normal Operation	753.0	751.0	28.0	28.0	40.0	40.0	2.7819	2.8341	0.0522	1.0933	1.0916	1.0925	9019.12	9043.12	1440.00	1573.13	33.2
101365	Jun-10	30-Jun-10	AM4	Fine	Normal Operation	751.0	753.0	29.0	29.0	40.0	40.0	2.7707	2.8247	0.0540	1.0896	1.0913	1.0905	9043.12	9067.12	1440.00	1570.25	34.4
101347	Jul-10	1-Jul-10	AM4	Cloudy	Normal Operation	753.0	755.0	26.0	27.0	40.0	40.0	2.8043	2.8475	0.0432	1.0975	1.0970	1.0973	9067.12	9091.12	1440.00	1580.04	27.3
101374	Jul-10	2-Jul-10	AM4	Cloudy	Normal Operation	755.0	755.0	28.0	28.0	40.0	40.0	2.7665	2.8312	0.0647	1.0949	1.0949	1.0949	9091.12	9115.12	1440.00	1576.66	41.0
101317	Jul-10	3-Jul-10	AM4	Cloudy	Normal Operation	755.0	756.0	29.0	29.0	40.0	40.0	2.7774	2.8370	0.0596	1.0929	1.0937	1.0933	9115.12	9139.12	1440.00	1574.35	37.9
101339	Jul-10	5-Jul-10	AM4	Sunny	Normal Operation	756.0	756.0	30.0	30.0	40.0	40.0	2.7861	2.8172	0.0311	1.0916	1.0916	1.0916	9139.12	9163.12	1440.00	1571.9	19.8
101358	Jul-10	6-Jul-10	AM4	Sunny	Normal Operation	756.0	756.0	31.0	31.0	40.0	40.0	2.8083	2.8301	0.0218	1.0896	1.0896	1.0896	9163.12	9187.12	1440.00	1569.02	13.9

Average (ug/m^3)	30.3
Max (ug/m^3)	41.0
Min (ug/m^3)	13.9

Action Level (ug/m^3)	150
Limit Level (ug/m^3)	260

Agreement No. CE 22/2005 (HY) Supplementary Agreement No.1 Traffic Improvement to Tuen Mun Road Town Centre Section
Baseline Air Quality Monitoring Result at Tuen Mun Town Hall (AM5) - 24 hours TSP

Filter No.	Month	Date	Receptor No.	Weather condition	Site condition	Pressure (mmHg)		Temperature (oC)		Flow Recorder Reading (CFM)		Filter Weight (g)		TSP weight (g)	Flow Rate (m^3/min)		Average Flow Rate (m^3/min)	Elapse Time		Sampling Time	Total vol. (m^3)	AM5
						Initial	Final	Initial	Final	Initial	Final	Initial	Final		Initial	Final		Start	Finish			
101286	Jun-10	17-Jun-10	AM5	Fine	Normal Operation	755.0	756.0	28.0	28.0	40.0	40.0	2.8402	2.9146	0.0744	1.2556	1.2563	1.2560	8637.27	8661.27	1440.00	1808.57	41.1
101290	Jun-10	18-Jun-10	AM5	Fine	Normal Operation	756.0	756.0	29.0	29.0	40.0	40.0	2.8096	2.8527	0.0431	1.2545	1.2545	1.2545	8661.27	8685.27	1440.00	1806.48	23.9
101299	Jun-10	19-Jun-10	AM5	Fine	Normal Operation	756.0	755.0	28.0	28.0	40.0	40.0	2.8571	2.9008	0.0437	1.2563	1.2556	1.2560	8685.27	8709.27	1440.00	1808.57	24.2
101304	Jun-10	20-Jun-10	AM5	Fine	Normal Operation	755.0	755.0	29.0	29.0	40.0	40.0	2.7273	2.7727	0.0454	1.2538	1.2538	1.2538	8709.27	8733.27	1440.00	1805.47	25.1
101308	Jun-10	21-Jun-10	AM5	Fine	Normal Operation	755.0	756.0	30.0	30.0	40.0	40.0	2.7551	2.8162	0.0611	1.2519	1.2526	1.2523	8733.27	8757.27	1440.00	1803.24	33.9
101326	Jun-10	24-Jun-10	AM5	Fine	Normal Operation	756.0	755.0	29.0	29.0	40.0	40.0	2.7812	2.8364	0.0552	1.2545	1.2538	1.2542	8757.27	8781.27	1440.00	1805.98	30.6
101336	Jun-10	25-Jun-10	AM5	Cloudy	Normal Operation	755.0	753.0	30.0	30.0	40.0	40.0	2.7922	2.8286	0.0364	1.2519	1.2504	1.2512	8781.27	8805.27	1440.00	1801.66	20.2
101346	Jun-10	29-Jun-10	AM5	Cloudy	Normal Operation	753.0	751.0	28.0	28.0	40.0	40.0	2.8093	2.8480	0.0387	1.2541	1.2526	1.2534	8805.27	8829.27	1440.00	1804.82	21.4
101343	Jun-10	30-Jun-10	AM5	Fine	Normal Operation	751.0	753.0	29.0	29.0	40.0	40.0	2.7908	2.8291	0.0383	1.2508	1.2523	1.2516	8829.27	8853.27	1440.00	1802.23	21.3
101333	Jul-10	1-Jul-10	AM5	Cloudy	Normal Operation	753.0	755.0	26.0	27.0	40.0	40.0	2.7730	2.8080	0.0350	1.2579	1.2575	1.2577	8853.27	8877.27	1440.00	1811.09	19.3
101171	Jul-10	2-Jul-10	AM5	Cloudy	Normal Operation	755.0	755.0	28.0	28.0	40.0	40.0	2.8617	2.9034	0.0417	1.2556	1.2556	1.2556	8877.27	8901.27	1440.00	1808.06	23.1
101316	Jul-10	3-Jul-10	AM5	Cloudy	Normal Operation	755.0	756.0	29.0	29.0	40.0	40.0	2.7606	2.8136	0.0530	1.2538	1.2545	1.2542	8901.27	8925.27	1440.00	1805.98	29.3
101344	Jul-10	5-Jul-10	AM5	Sunny	Normal Operation	756.0	756.0	30.0	30.0	40.0	40.0	2.8010	2.8185	0.0175	1.2526	1.2526	1.2526	8925.27	8949.27	1440.00	1803.74	9.7
101356	Jul-10	6-Jul-10	AM5	Sunny	Normal Operation	756.0	756.0	31.0	31.0	40.0	40.0	2.7905	2.8225	0.0320	1.2508	1.2508	1.2508	8949.27	8973.27	1440.00	1801.15	17.8

Average (ug/m^3)	24.4
Max (ug/m^3)	41.1
Min (ug/m^3)	9.7

Action Level (ug/m^3)	146
Limit Level (ug/m^3)	260

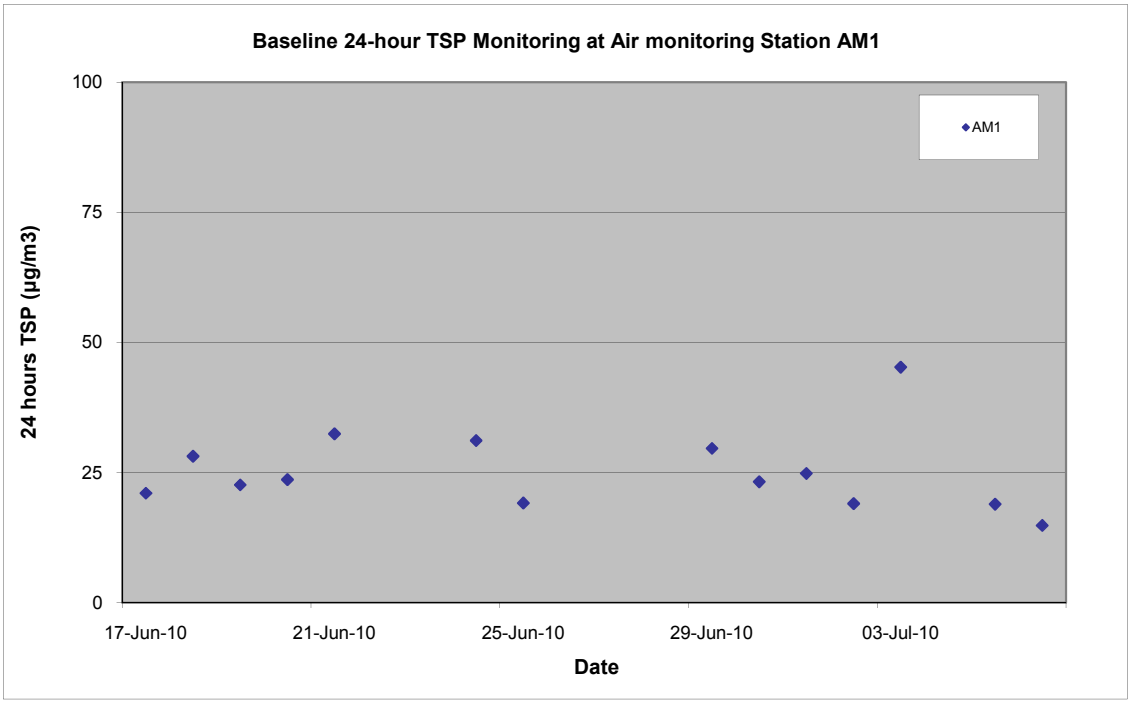
Agreement No. CE 22/2005 (HY) Supplementary Agreement No.1 Traffic Improvement to Tuen Mun Road Town Centre Section

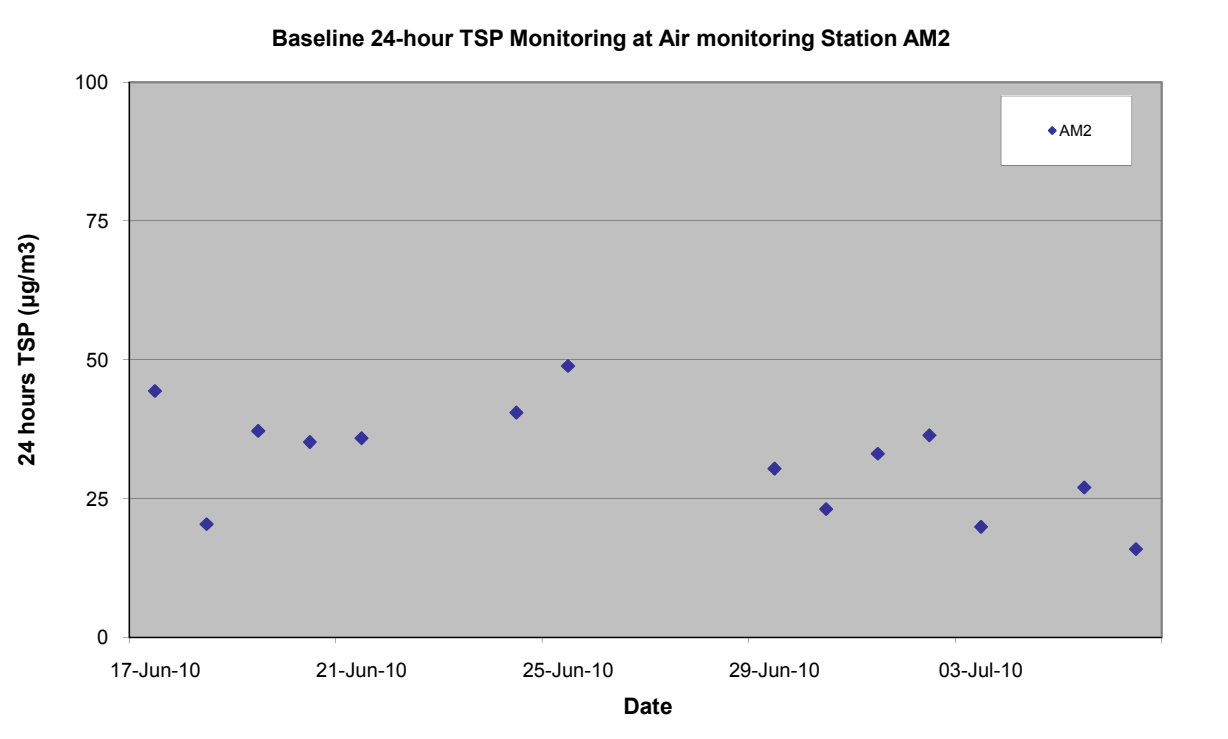
Baseline Air Quality Monitoring Result at Yan Oi Tong Community and Sports Centre (AM6) - 24 hours TSP

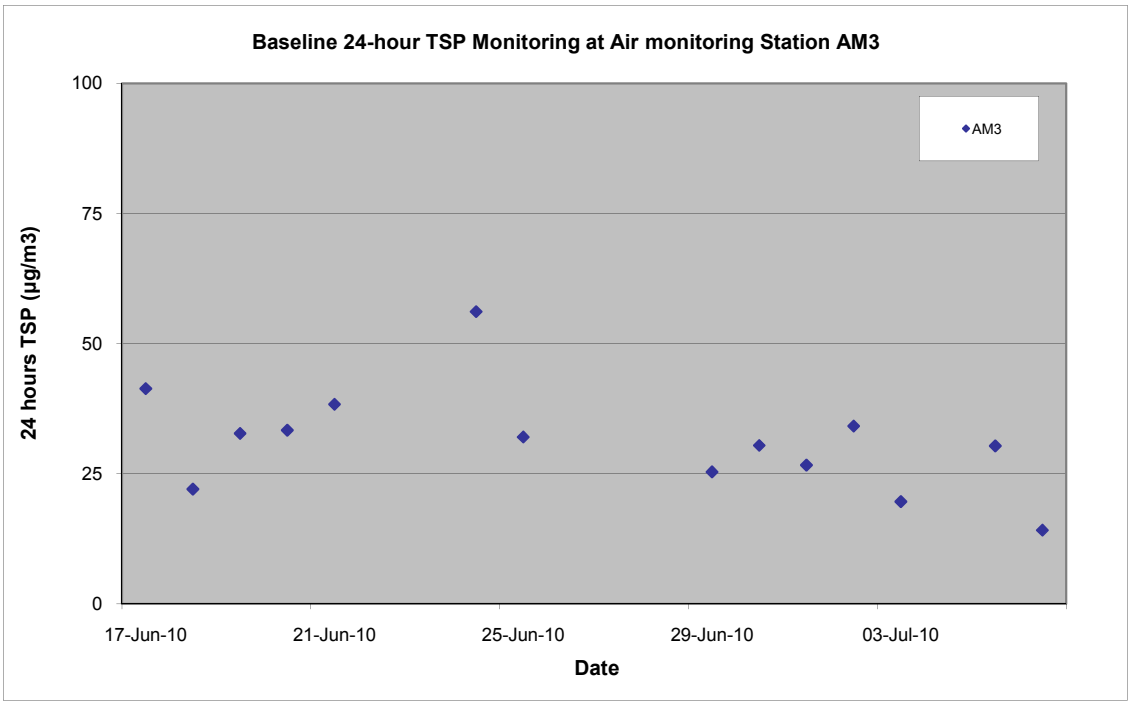
Filter No.	Month	Date	Receptor No.	Weather condition	Site condition	Pressure (mmHg)		Temperature (oC)		Flow Recorder Reading (CFM)		Filter Weight (g)		TSP weight (g)	Flow Rate (m^3/min)		Average Flow Rate (m^3/min)	Elapse Time		Sampling Time	Total vol. (m^3)	AM6
						Initial	Final	Initial	Final	Initial	Final	Initial	Final		Initial	Final		Start	Finish			
101287	Jun-10	17-Jun-10	AM6	Fine	Normal Operation	755.0	756.0	28.0	28.0	40.0	40.0	2.8282	2.8928	0.0646	1.1289	1.1297	1.1293	4970.80	4994.80	1440.00	1626.19	39.7
101289	Jun-10	18-Jun-10	AM6	Fine	Normal Operation	756.0	756.0	29.0	29.0	40.0	40.0	2.8416	2.8891	0.0475	1.1276	1.1276	1.1276	4994.80	5018.80	1440.00	1623.74	29.3
101298	Jun-10	19-Jun-10	AM6	Fine	Normal Operation	756.0	755.0	28.0	28.0	40.0	40.0	2.8751	2.9171	0.0420	1.1297	1.1289	1.1293	5018.80	5042.80	1440.00	1626.19	25.8
101303	Jun-10	20-Jun-10	AM6	Fine	Normal Operation	755.0	755.0	29.0	29.0	40.0	40.0	2.7428	2.7959	0.0531	1.1267	1.1267	1.1267	5042.80	5066.80	1440.00	1622.45	32.7
101307	Jun-10	21-Jun-10	AM6	Fine	Normal Operation	755.0	756.0	30.0	30.0	40.0	40.0	2.7449	2.7656	0.0207	1.1244	1.1253	1.1249	5066.80	5090.80	1440.00	1619.78	12.8
101327	Jun-10	24-Jun-10	AM6	Fine	Normal Operation	756.0	755.0	29.0	29.0	40.0	40.0	2.7720	2.8272	0.0552	1.1276	1.1267	1.1272	5090.80	5114.80	1440.00	1623.1	34.0
101337	Jun-10	25-Jun-10	AM6	Cloudy	Normal Operation	755.0	753.0	30.0	30.0	40.0	40.0	2.8104	2.8476	0.0372	1.1244	1.1227	1.1236	5114.80	5138.80	1440.00	1617.91	23.0
101350	Jun-10	29-Jun-10	AM6	Cloudy	Normal Operation	753.0	751.0	28.0	28.0	40.0	40.0	2.7770	2.8029	0.0259	1.1271	1.1253	1.1262	5138.80	5162.80	1440.00	1621.73	16.0
101364	Jun-10	30-Jun-10	AM6	Fine	Normal Operation	751.0	753.0	29.0	29.0	40.0	40.0	2.7904	2.8210	0.0306	1.1232	1.1249	1.1241	5162.80	5186.80	1440.00	1618.63	18.9
101345	Jul-10	1-Jul-10	AM6	Cloudy	Normal Operation	753.0	755.0	26.0	27.0	40.0	40.0	2.7990	2.8338	0.0348	1.1316	1.1311	1.1314	5186.80	5210.80	1440.00	1629.14	21.4
101137	Jul-10	2-Jul-10	AM6	Cloudy	Normal Operation	755.0	755.0	28.0	28.0	40.0	40.0	2.8278	2.8918	0.0640	1.1289	1.1289	1.1289	5210.80	5234.80	1440.00	1625.62	39.4
101315	Jul-10	3-Jul-10	AM6	Cloudy	Normal Operation	755.0	756.0	29.0	29.0	40.0	40.0	2.7562	2.8178	0.0616	1.1267	1.1276	1.1272	5234.80	5258.80	1440.00	1623.1	38.0
101332	Jul-10	5-Jul-10	AM6	Sunny	Normal Operation	756.0	756.0	30.0	30.0	40.0	40.0	2.7688	2.8105	0.0417	1.1253	1.1253	1.1253	5258.80	5282.80	1440.00	1620.43	25.7
101357	Jul-10	6-Jul-10	AM6	Sunny	Normal Operation	756.0	756.0	31.0	31.0	40.0	40.0	2.7814	2.8134	0.0320	1.1231	1.1231	1.1231	5282.80	5306.80	1440.00	1617.26	19.8

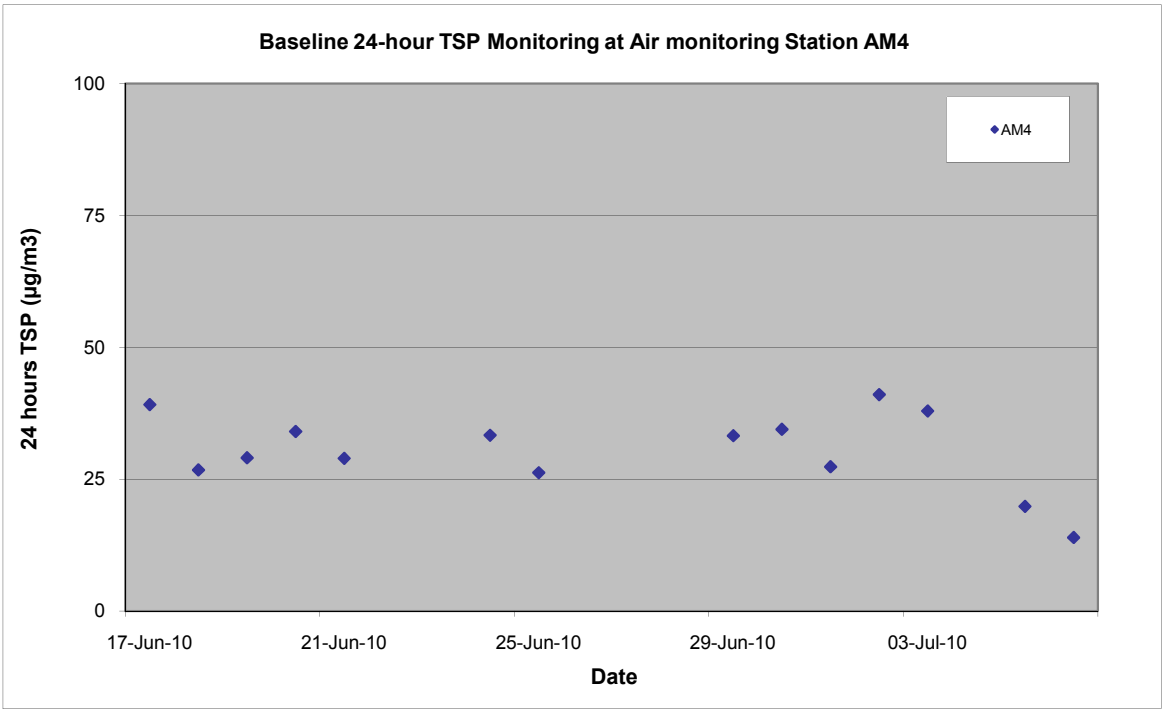
Average (ug/m^3)	26.9
Max (ug/m^3)	39.7
Min (ug/m^3)	12.8

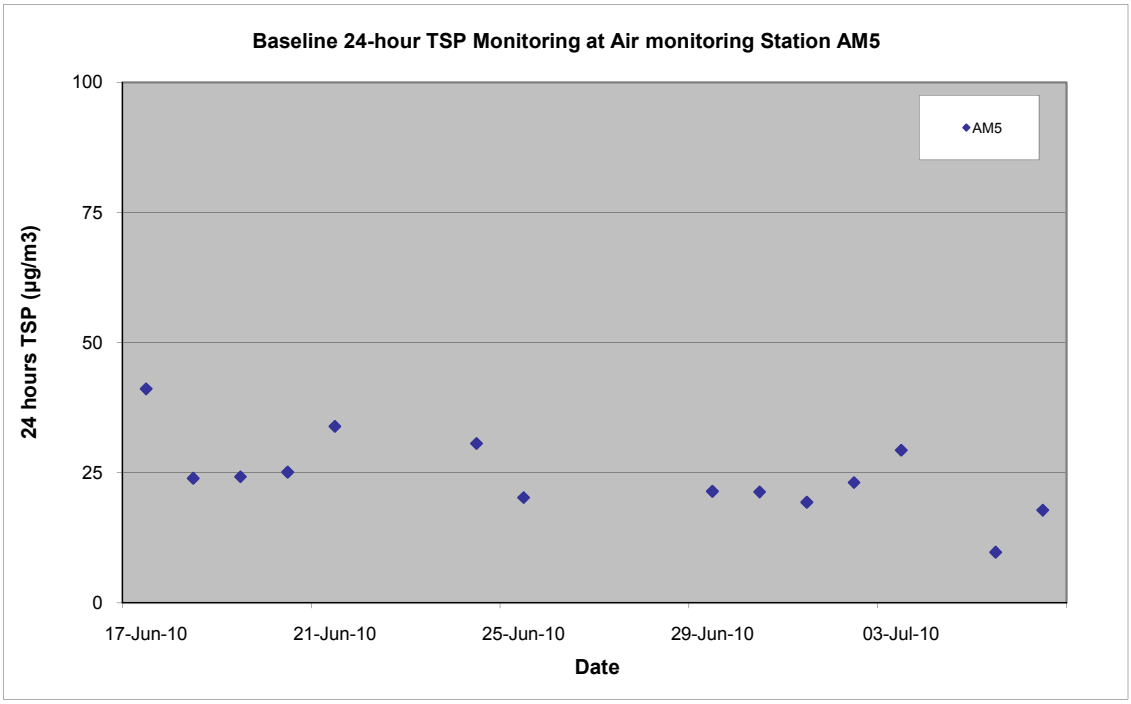
Action Level (ug/m^3)	147
Limit Level (ug/m^3)	260

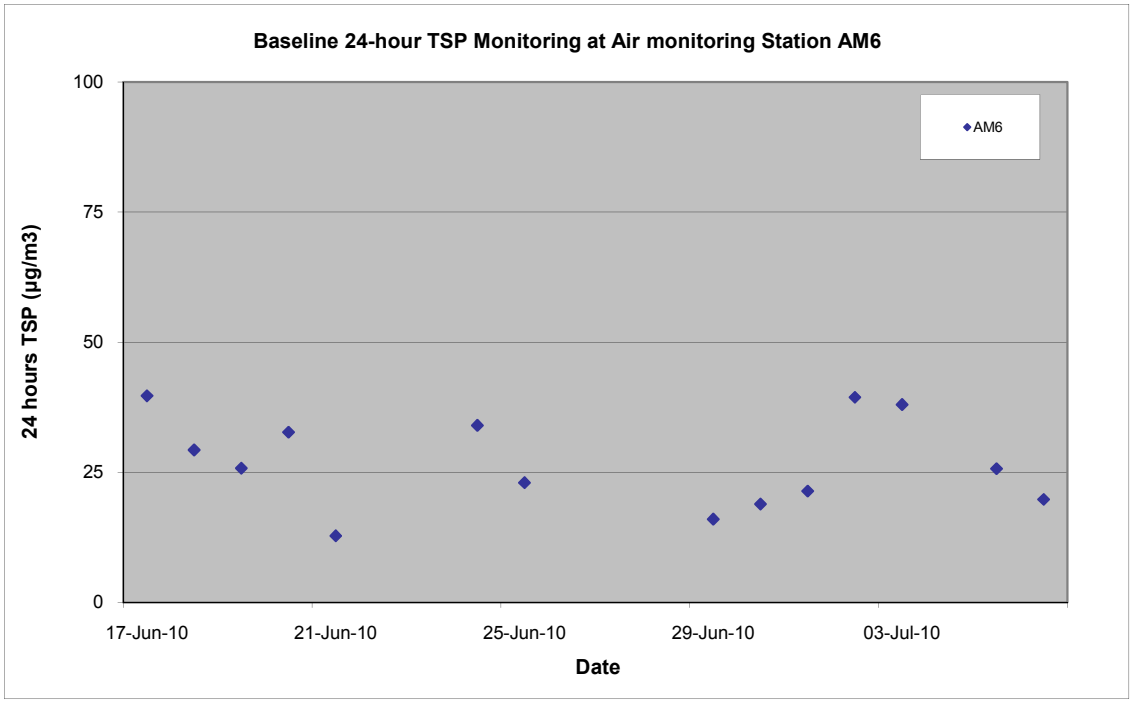

Baseline 24-hour TSP Monitoring at Air monitoring Station AM1
24 hours TSP (µg/m3)
100
75
50
25
0
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
03-Jul-10
Date
AM1


Baseline 24-hour TSP Monitoring at Air monitoring Station AM2
100
75
50
25
0
24 hours TSP (µg/m3)
AM2
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
03-Jul-10
Date


Baseline 24-hour TSP Monitoring at Air monitoring Station AM3
100
75
50
25
0
24 hours TSP (µg/m3)
AM3
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
03-Jul-10
Date


Baseline 24-hour TSP Monitoring at Air monitoring Station AM4
100
75
50
25
0
24 hours TSP (µg/m3)
AM4
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
03-Jul-10
Date


Baseline 24-hour TSP Monitoring at Air monitoring Station AM5
24 hours TSP (µg/m3)
100
75
50
25
0
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
03-Jul-10
Date
AM5


Baseline 24-hour TSP Monitoring at Air monitoring Station AM6
100
75
50
25
0
24 hours TSP (µg/m3)
AM6
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
03-Jul-10
Date

Appendix G

Baseline Noise Monitoring Results

Agreement No. CE 22/2005 (HY) Traffic Improvements to Tuen Mun Road Town Centre Section
Baseline Noise Monitoring Results at Kam Fai Garden (N1)

		Day-time (0700-1900) Noise Level, dB(A)			Day-time (0700-1900) Noise Level, dB(A)			Evening-time (1900-2300) Noise Level, dB(A)			Night-time (2300-0700 next day) Noise Level, dB(A)		
	Date	L_{Aeq},30min	L10	L90	L_{Aeq},5min	L10	L90	L_{Aeq},5min	L10	L90	L_{Aeq},5min	L10	L90
Thu	17-Jun-10	76.4	78.0	73.9				72.0	73.7	69.1	68.1	70.4	63.6
Fri	18-Jun-10	75.9	77.3	73.9				72.2	73.8	69.5	68.1	70.4	63.7
Sat	19-Jun-10	75.8	77.3	73.5				71.9	73.5	69.2	67.6	69.9	64.7
Sun	20-Jun-10				71.9	74.5	68.8	71.1	74.3	69.0	67.8	70.7	64.7
Mon	21-Jun-10	75.9	78.8	72.8				72.0	75.5	68.6	69.5	72.5	66.8
Thu	24-Jun-10	75.9	78.9	72.9				72.3	75.3	69.4	68.3	71.3	65.4
Fri	25-Jun-10	75.7	78.7	72.8				72.2	75.2	69.3	69.6	72.6	66.7
Tue	29-Jun-10	75.9	78.9	72.9				72.3	75.3	69.3	68.1	71.1	65.1
Wed	30-Jun-10	76.4	79.4	73.4				72.5	75.5	69.5	67.6	70.5	64.5
Thu	1-Jul-10				71.5	74.4	68.4	70.6	73.5	67.5	68.2	71.2	65.2
Fri	2-Jul-10	75.9	78.9	72.9				72.6	75.6	69.6	68.5	71.5	65.5
Sat	3-Jul-10	75.5	78.5	72.5				72.1	75.1	69.1	67.8	70.8	64.8
Sun	4-Jul-10				72.0	75.0	69.0	70.8	73.8	67.8	67.2	70.2	64.2
Mon	5-Jul-10	76.2	79.2	73.2				72.1	75.1	69.1	67.9	70.9	64.9
Tue	6-Jul-10	76.7	79.7	73.7				N/A	N/A	N/A	N/A	N/A	N/A
Maximum		76.7	79.7	73.9				72.6	75.6	69.6	69.6	72.6	66.8
Minimum		75.5	77.3	72.5				70.6	73.5	67.5	67.2	69.9	63.6
Average (including Sunday and Public Holidays)					71.8	74.7	68.8	71.9	74.7	69.0	68.2	71.1	65.1
Average (excluding Sunday and Public Holidays)		76.0	78.7	73.2				72.2	74.9	69.3	68.3	71.2	65.2

Agreement No. CE 22/2005 (HY) Traffic Improvements to Tuen Mun Road Town Centre Section
Baseline Noise Monitoring Results at Tai Tung Pui Social Service Building (N2)

		Day-time (0700-1900) Noise Level, dB(A)			Day-time (0700-1900) Noise Level, dB(A)			Evening-time (1900-2300) Noise Level, dB(A)			Night-time (2300-0700 next day) Noise Level, dB(A)		
	Date	L_{Aeq},30min	L10	L90	L_{Aeq},5min	L10	L90	L_{Aeq},5min	L10	L90	L_{Aeq},5min	L10	L90
Thu	17-Jun-10	78.5	80.0	75.8				74.9	76.8	71.6	70.9	73.5	65.5
Fri	18-Jun-10	78.1	79.6	75.3				75.0	76.7	71.9	71.0	73.6	65.9
Sat	19-Jun-10	78.1	79.7	75.4				74.8	76.6	71.5	70.5	73.1	64.9
Sun	20-Jun-10				75.2	77.2	71.5	74.5	76.4	71.0	70.9	73.5	65.5
Mon	21-Jun-10	78.0	79.6	75.3				74.7	76.6	71.3	72.3	74.5	68.3
Thu	24-Jun-10	78.5	80.0	75.8				75.7	77.4	72.5	71.2	73.7	66.0
Fri	25-Jun-10	78.3	79.8	75.5				75.6	77.4	72.3	73.6	75.8	69.6
Tue	29-Jun-10	78.4	80.0	75.7				75.7	77.5	72.6	71.3	73.9	66.1
Wed	30-Jun-10	77.4	79.0	74.5				75.0	76.9	71.7	70.6	73.6	64.8
Thu	1-Jul-10				75.4	77.7	72.0	74.7	76.7	71.4	71.1	73.9	65.8
Fri	2-Jul-10	78.3	79.8	75.6				75.9	77.6	72.7	71.6	74.0	66.6
Sat	3-Jul-10	78.2	79.7	75.4				75.3	77.1	72.0	71.0	73.5	65.7
Sun	4-Jul-10				75.4	77.5	71.7	73.8	75.8	70.7	70.1	72.8	64.7
Mon	5-Jul-10	78.1	79.6	75.4				75.4	77.3	72.2	71.1	73.6	65.9
Tue	6-Jul-10	78.4	80.0	75.8				N/A	N/A	N/A	N/A	N/A	N/A
Maximum		78.5	80.0	75.8				75.9	77.6	72.7	73.6	75.8	69.6
Minimum		77.4	79.0	74.5				73.8	75.8	70.7	70.1	72.8	64.7
Average (including Sunday and Public Holidays)					75.4	77.5	71.8	75.1	76.9	71.8	71.3	73.8	66.3
Average (excluding Sunday and Public Holidays)		78.2	79.8	75.5				75.3	77.1	72.0	71.4	73.9	66.5

Agreement No. CE 22/2005 (HY) Traffic Improvements to Tuen Mun Road Town Centre Section
Baseline Noise Monitoring Results at Yuen Yuen Primary School (N3)

		Day-time (0700-1900) Noise Level, dB(A)			Day-time (0700-1900) Noise Level, dB(A)			Evening-time (1900-2300) Noise Level, dB(A)			Night-time (2300-0700 next day) Noise Level, dB(A)		
	Date	L_{Aeq},30min	L10	L90	L_{Aeq},5min	L10	L90	L_{Aeq},5min	L10	L90	L_{Aeq},5min	L10	L90
Thu	17-Jun-10	68.6	69.7	66.7				65.9	67.3	63.5	62.4	64.5	58.9
Fri	18-Jun-10	68.8	70.0	66.9				66.5	67.9	64.0	62.4	64.3	58.9
Sat	19-Jun-10	68.6	69.8	66.7				66.4	67.8	64.1	61.9	63.8	58.3
Sun	20-Jun-10				66.0	67.5	63.6	65.5	66.9	62.8	61.3	63.4	57.7
Mon	21-Jun-10	68.6	69.7	66.7				66.4	67.9	63.9	63.5	65.2	60.5
Thu	24-Jun-10	68.8	70.0	67.0				66.7	68.1	64.4	62.0	64.1	58.4
Fri	25-Jun-10	69.0	70.1	67.2				66.9	68.3	64.7	64.4	66.1	61.0
Tue	29-Jun-10	68.7	69.8	66.8				66.4	67.8	64.2	61.7	63.7	58.2
Wed	30-Jun-10	69.0	70.1	67.2				66.5	67.9	64.2	61.7	63.7	57.9
Thu	1-Jul-10				66.5	68.1	63.8	65.1	68.1	63.2	62.5	65.0	58.4
Fri	2-Jul-10	68.5	69.6	66.7				66.2	67.6	64.0	62.0	64.0	58.7
Sat	3-Jul-10	68.4	69.5	66.5				66.0	67.5	63.7	61.7	63.5	58.1
Sun	4-Jul-10				66.1	67.7	63.6	65.5	67.0	63.0	60.9	63.0	57.5
Mon	5-Jul-10	68.1	69.3	66.2				66.5	67.8	64.1	61.7	63.8	58.2
Tue	6-Jul-10	68.6	69.8	66.9				N/A	N/A	N/A	N/A	N/A	N/A
Maximum		69.0	70.1	67.2				66.9	68.3	64.7	64.4	66.1	61.0
Minimum		68.1	69.3	66.2				65.1	66.9	62.8	60.9	63.0	57.5
Average (including Sunday and Public Holidays)					66.2	67.7	63.7	66.2	67.7	63.9	62.2	64.2	58.7
Average (excluding Sunday and Public Holidays)		68.6	69.8	66.8				66.4	67.8	64.1	62.4	64.3	58.9

Agreement No. CE 22/2005 (HY) Traffic Improvements to Tuen Mun Road Town Centre Section
Baseline Noise Monitoring Results at Wu Siu Kui Primary School (N4)

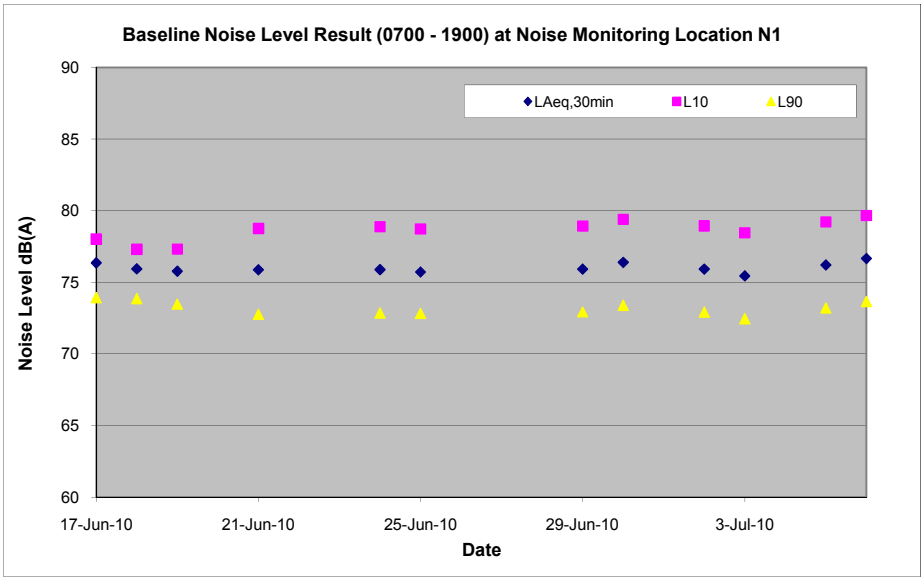
		Day-time (0700-1900) Noise Level, dB(A)			Day-time (0700-1900) Noise Level, dB(A)			Evening-time (1900-2300) Noise Level, dB(A)			Night-time (2300-0700 next day) Noise Level, dB(A)		
	Date	L_{Aeq},30min	L10	L90	L_{Aeq},5min	L10	L90	L_{Aeq},5min	L10	L90	L_{Aeq},5min	L10	L90
Thu	17-Jun-10	68.2	69.4	66.3				66.9	68.4	64.5	62.4	64.3	59.3
Fri	18-Jun-10	68.2	69.5	66.2				66.4	68.0	63.9	61.7	63.7	58.5
Sat	19-Jun-10	67.7	68.9	65.8				65.0	66.3	63.1	60.1	61.7	57.5
Sun	20-Jun-10				65.7	66.8	63.9	63.5	64.9	61.6	60.0	61.6	57.6
Mon	21-Jun-10	66.3	67.4	64.7				64.0	65.3	62.0	62.6	63.9	60.0
Thu	24-Jun-10	66.3	67.4	64.7				63.5	64.9	61.6	59.7	61.5	56.9
Fri	25-Jun-10	66.5	67.4	64.7				64.3	65.7	62.4	62.6	64.1	60.0
Tue	29-Jun-10	66.3	67.5	64.6				63.5	64.9	61.5	60.7	62.8	57.4
Wed	30-Jun-10	66.7	67.5	64.8				63.9	65.3	61.9	59.6	61.4	57.0
Thu	1-Jul-10				63.4	64.9	61.2	62.7	64.2	60.4	59.4	61.1	56.7
Fri	2-Jul-10	66.1	67.2	64.4				63.8	65.2	61.7	59.8	61.4	57.1
Sat	3-Jul-10	65.8	67.0	64.2				63.0	64.3	61.0	59.4	60.9	56.4
Sun	4-Jul-10				63.3	64.9	61.1	62.4	64.0	60.0	58.6	60.5	55.9
Mon	5-Jul-10	65.9	67.1	64.3				63.7	65.0	61.6	59.2	61.0	56.5
Tue	6-Jul-10	66.5	67.5	64.9				N/A	N/A	N/A	N/A	N/A	N/A
Maximum		68.2	69.5	66.3				66.9	68.4	64.5	62.6	64.3	60.0
Minimum		65.8	67.0	64.2				62.4	64.0	60.0	58.6	60.5	55.9
Average (including Sunday and Public Holidays)					64.3	65.6	62.3	64.2	65.7	62.1	60.6	62.3	57.8
Average (excluding Sunday and Public Holidays)		66.8	67.9	65.0				64.5	65.9	62.4	60.9	62.6	58.1

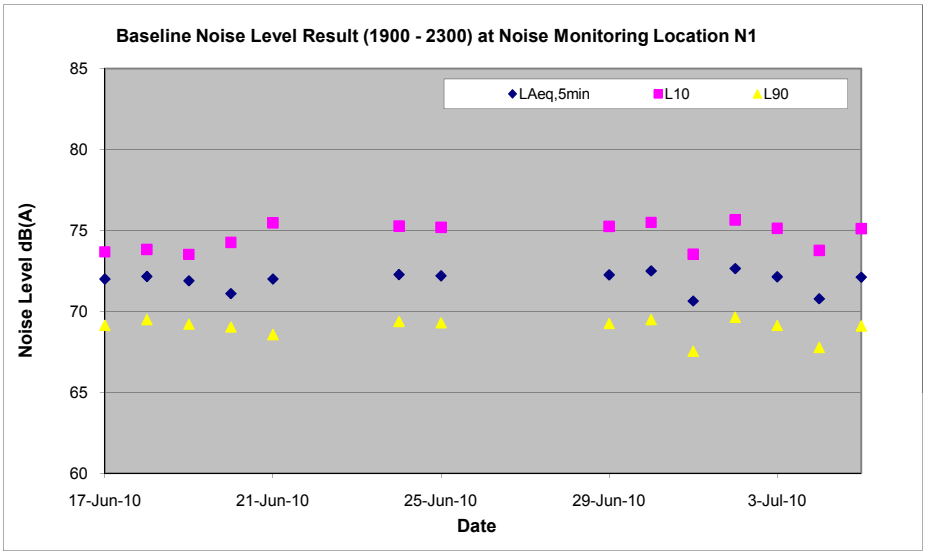
Agreement No. CE 22/2005 (HY) Traffic Improvements to Tuen Mun Road Town Centre Section
Baseline Noise Monitoring Results at Tuen King Building (N5)

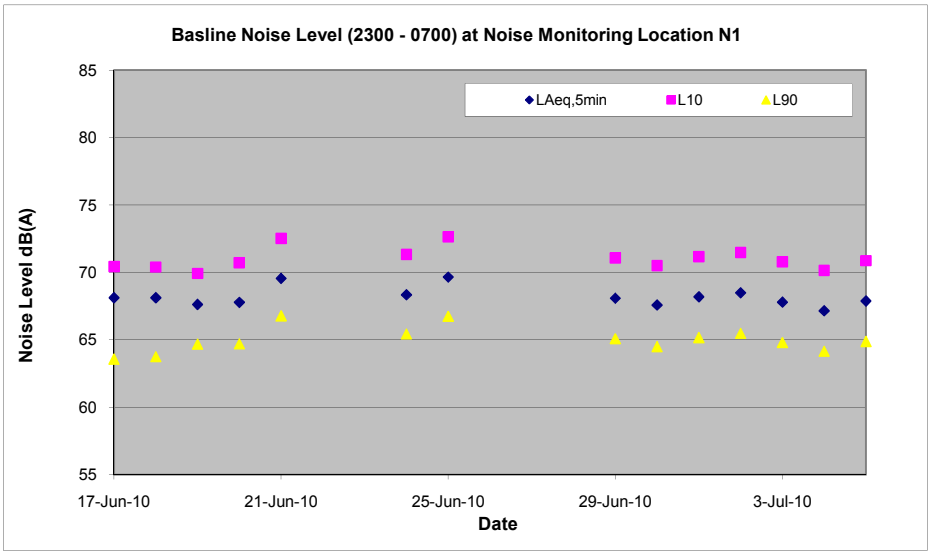
		Day-time (0700-1900) Noise Level, dB(A)			Day-time (0700-1900) Noise Level, dB(A)			Evening-time (1900-2300) Noise Level, dB(A)			Night-time (2300-0700 next day) Noise Level, dB(A)		
	Date	L_{Aeq},30min	L10	L90	L_{Aeq},5min	L10	L90	L_{Aeq},5min	L10	L90	L_{Aeq},5min	L10	L90
Thu	17-Jun-10	70.2	71.5	68.0				68.0	69.5	65.1	63.6	65.9	59.2
Fri	18-Jun-10	70.3	71.6	68.1				68.2	69.8	65.5	64.1	66.5	60.0
Sat	19-Jun-10	70.3	71.6	68.1				66.4	68.3	63.4	63.7	66.1	59.2
Sun	20-Jun-10				68.6	70.9	66.6	67.8	69.4	65.0	64.1	65.9	61.3
Mon	21-Jun-10	70.3	71.6	68.0				68.1	69.7	65.1	66.8	68.7	63.6
Thu	24-Jun-10	70.8	72.1	68.7				69.0	70.9	66.0	64.3	66.6	59.9
Fri	25-Jun-10	70.5	71.8	68.2				68.1	69.6	65.3	65.3	67.3	61.3
Tue	29-Jun-10	69.9	71.2	67.7				68.8	70.4	66.1	63.8	66.2	59.4
Wed	30-Jun-10	70.3	71.5	68.1				68.1	69.6	65.4	65.2	67.6	61.1
Thu	1-Jul-10				68.8	71.6	66.3	66.6	68.3	63.2	66.2	68.8	61.5
Fri	2-Jul-10	70.4	72.9	67.8				69.1	70.7	66.4	64.3	66.5	60.0
Sat	3-Jul-10	70.1	71.9	67.2				67.4	68.8	64.3	64.6	66.7	60.9
Sun	4-Jul-10				69.0	70.8	67.0	66.8	68.4	64.2	63.4	65.7	58.9
Mon	5-Jul-10	70.2	71.9	67.5				67.8	69.5	64.5	64.6	66.8	60.4
Tue	6-Jul-10	69.9	71.2	67.4				N/A	N/A	N/A	N/A	N/A	N/A
Maximum		70.8	72.9	68.7				69.1	70.9	66.4	66.8	68.8	63.6
Minimum		69.9	71.2	67.2				66.4	68.3	63.2	63.4	65.7	58.9
Average (including Sunday and Public Holidays)					68.8	71.1	66.6	67.9	69.6	65.1	64.7	66.9	60.7
Average (excluding Sunday and Public Holidays)		70.3	71.8	67.9				68.1	69.8	65.3	64.7	66.9	60.7

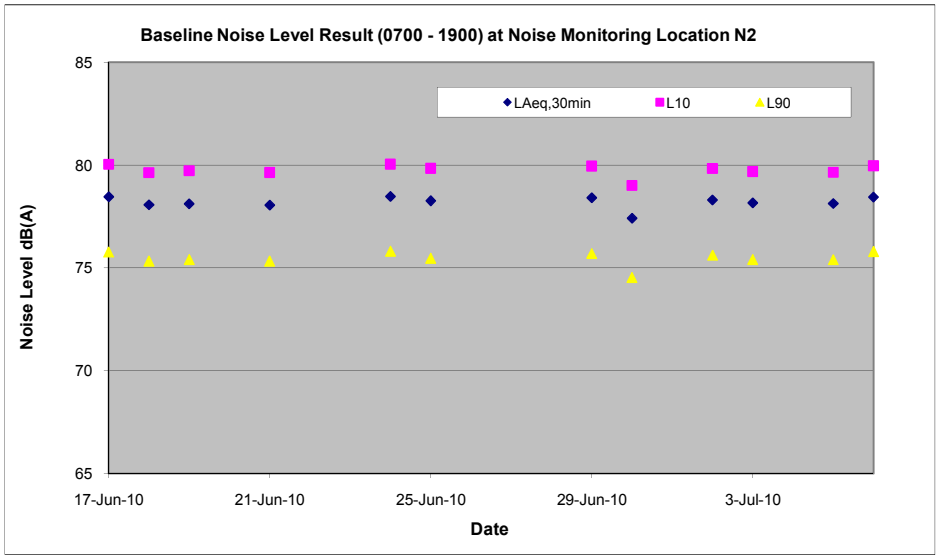
Agreement No. CE 22/2005 (HY) Traffic Improvements to Tuen Mun Road Town Centre Section
Baseline Noise Monitoring Results at Choi Cheung Kok Secondary School (N6)

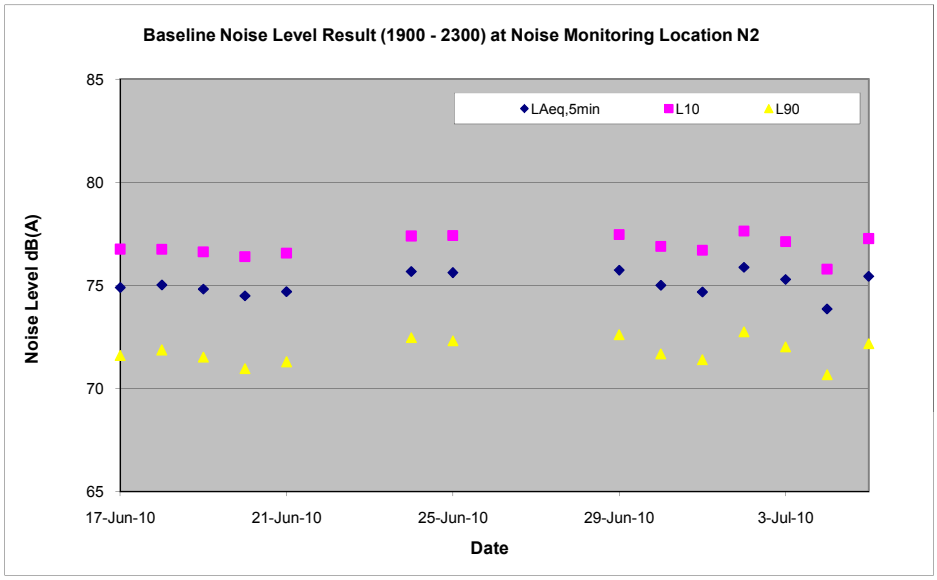
		Day-time (0700-1900) Noise Level, dB(A)			Day-time (0700-1900) Noise Level, dB(A)			Evening-time (1900-2300) Noise Level, dB(A)			Night-time (2300-0700 next day) Noise Level, dB(A)		
	Date	L_{Aeq},30min	L10	L90	L_{Aeq},5min	L10	L90	L_{Aeq},5min	L10	L90	L_{Aeq},5min	L10	L90
Thu	17-Jun-10	69.4	70.7	67.4				67.4	68.9	65.0	63.1	65.5	58.9
Fri	18-Jun-10	69.3	70.6	67.3				67.1	68.6	64.7	63.5	65.9	59.3
Sat	19-Jun-10	69.2	70.5	67.2				66.9	68.5	64.5	63.1	65.2	59.2
Sun	20-Jun-10				68.0	69.3	65.8	66.3	67.8	63.8	63.3	65.5	59.2
Mon	21-Jun-10	69.4	70.7	67.5				67.0	68.7	64.5	64.5	66.6	61.0
Thu	24-Jun-10	69.3	70.5	67.4				66.5	67.9	64.1	62.6	64.6	59.2
Fri	25-Jun-10	69.4	70.7	67.4				66.6	68.1	64.2	64.6	66.4	61.3
Tue	29-Jun-10	70.2	71.4	68.2				68.3	69.8	65.7	63.9	66.3	59.5
Wed	30-Jun-10	69.6	70.9	67.6				67.2	68.7	64.7	63.3	65.7	59.1
Thu	1-Jul-10				68.3	70.9	66.0	65.9	67.3	63.5	61.9	64.1	58.2
Fri	2-Jul-10	68.4	69.6	66.4				66.2	67.5	63.9	63.6	65.6	60.2
Sat	3-Jul-10	68.9	70.1	67.1				67.0	68.4	64.8	61.9	63.8	58.2
Sun	4-Jul-10				66.7	68.3	64.2	65.6	67.1	63.2	61.8	64.2	57.6
Mon	5-Jul-10	69.7	70.9	67.7				67.7	69.2	65.3	63.9	66.3	59.6
Tue	6-Jul-10	69.8	71.1	67.8				N/A	N/A	N/A	N/A	N/A	N/A
Maximum		70.2	71.4	68.2				68.3	69.8	65.7	64.6	66.6	61.3
Minimum		68.4	69.6	66.4				65.6	67.1	63.2	61.8	63.8	57.6
Average (including Sunday and Public Holidays)					67.7	69.7	65.4	66.9	68.4	64.5	63.3	65.5	59.4
Average (excluding Sunday and Public Holidays)		69.4	70.7	67.4				67.1	68.6	64.7	63.5	65.7	59.7

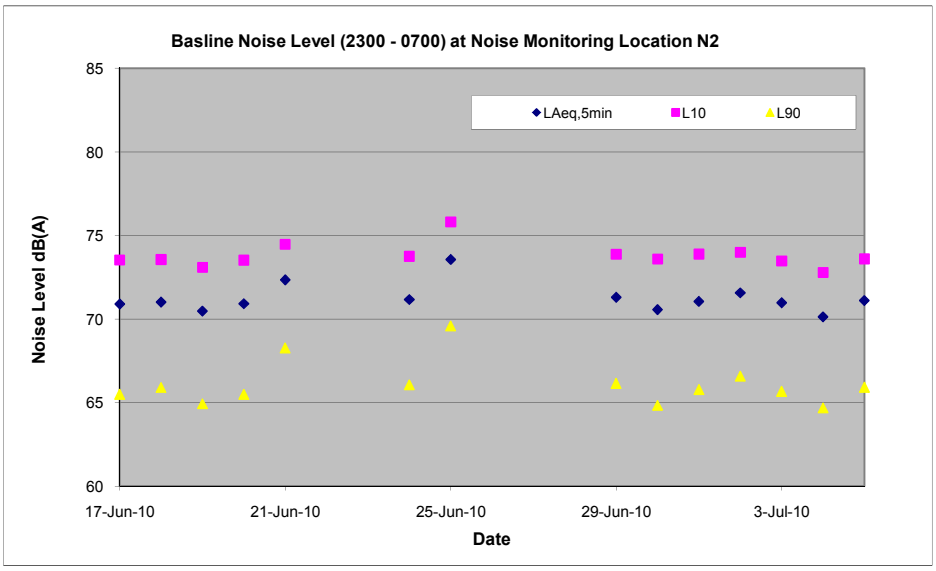

Baseline Noise Level Result (0700 - 1900) at Noise Monitoring Location N1
LAeq,30min
L10
L90
Noise Level dB(A)
90
85
80
75
70
65
60
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date

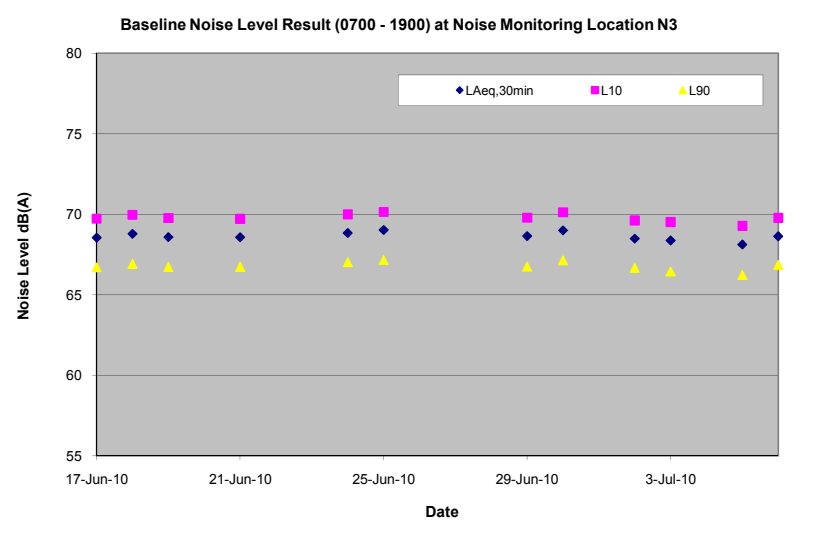

Baseline Noise Level Result (1900 - 2300) at Noise Monitoring Location N1
LAeq,5min
L10
L90
Noise Level dB(A)
85
80
75
70
65
60
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date

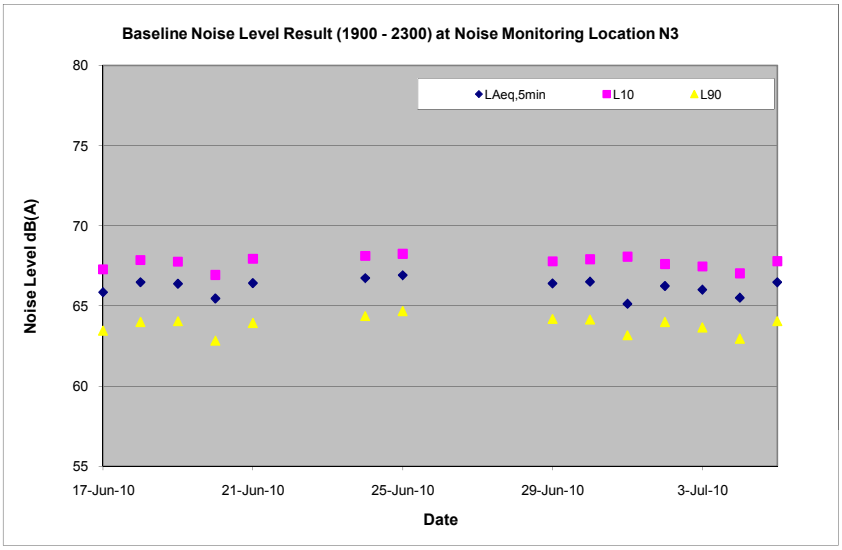

Basline Noise Level (2300 - 0700) at Noise Monitoring Location N1
LAeq,5min
L10
L90
Noise Level dB(A)
85
80
75
70
65
60
55
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date

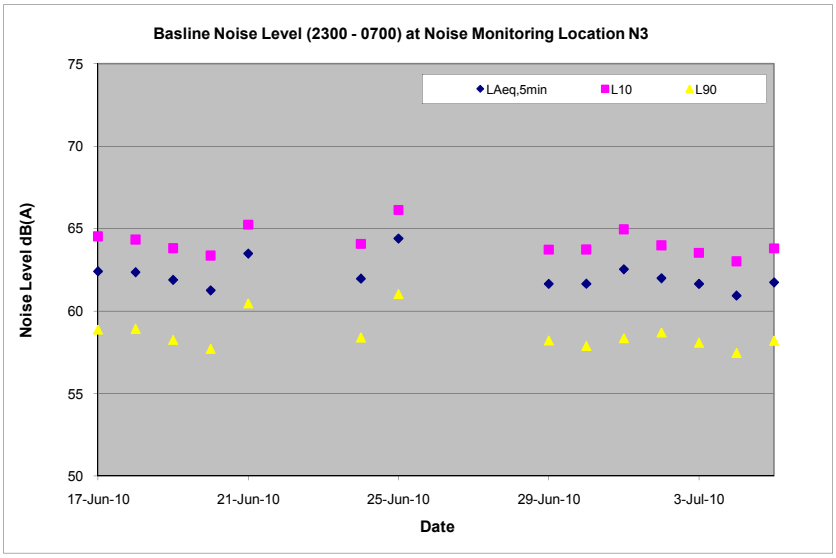

Baseline Noise Level Result (0700 - 1900) at Noise Monitoring Location N2
LAeq,30min
L10
L90
Noise Level dB(A)
85
80
75
70
65
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date

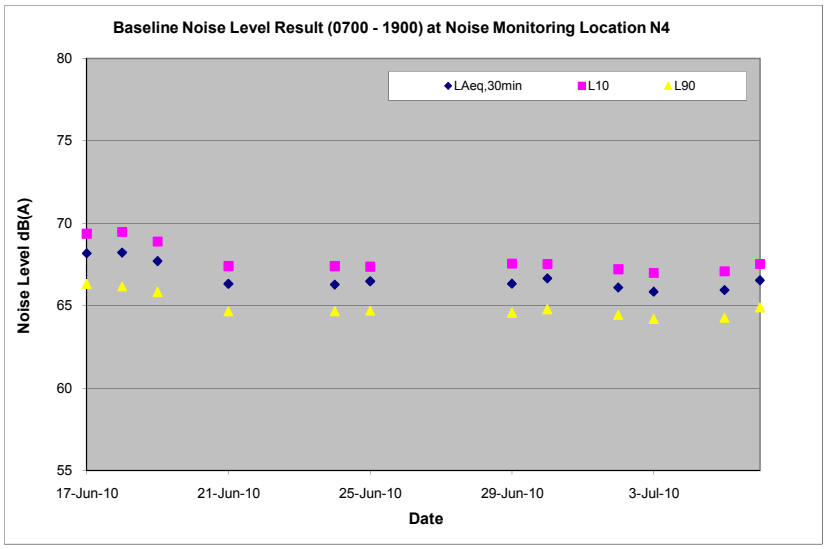

Baseline Noise Level Result (1900 - 2300) at Noise Monitoring Location N2
LAeq,5min
L10
L90
Noise Level dB(A)
85
80
75
70
65
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date

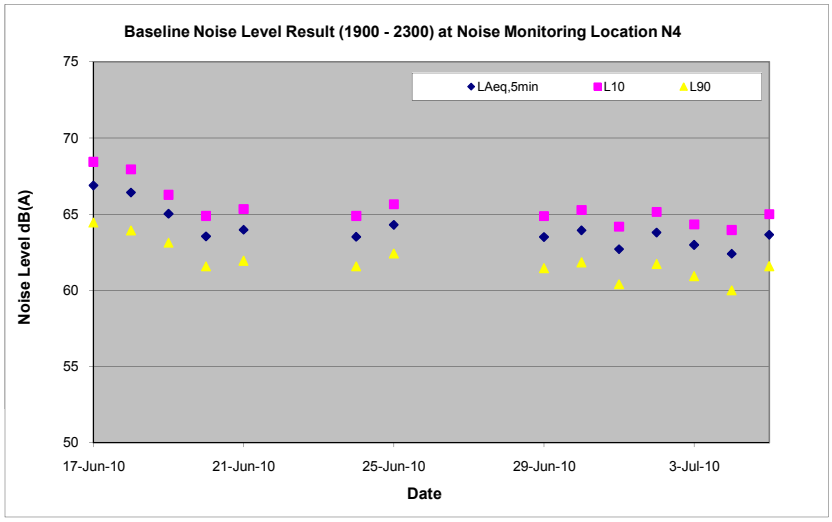

Basline Noise Level (2300 - 0700) at Noise Monitoring Location N2
LAeq,5min
L10
L90
Noise Level dB(A)
85
80
75
70
65
60
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date

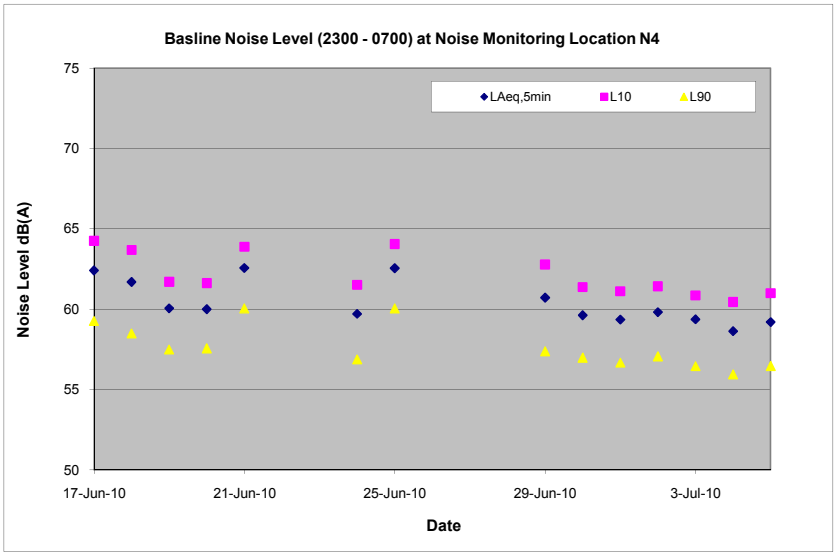

Baseline Noise Level Result (0700 - 1900) at Noise Monitoring Location N3
LAeq,30min
L10
L90
Noise Level dB(A)
80
75
70
65
60
55
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date

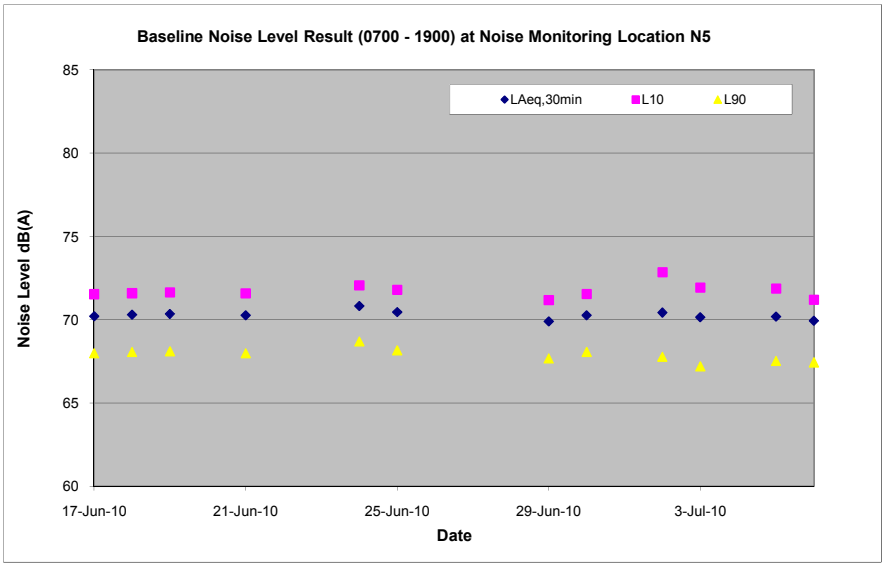

Baseline Noise Level Result (1900 - 2300) at Noise Monitoring Location N3
LAeq,5min
L10
L90
Noise Level dB(A)
80
75
70
65
60
55
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date

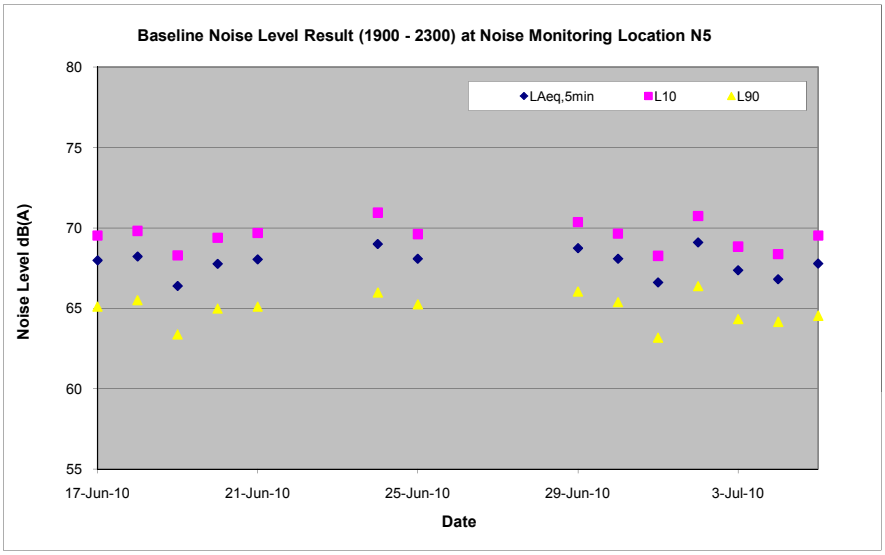

Basline Noise Level (2300 - 0700) at Noise Monitoring Location N3
LAeq,5min
L10
L90
Noise Level dB(A)
75
70
65
60
55
50
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date

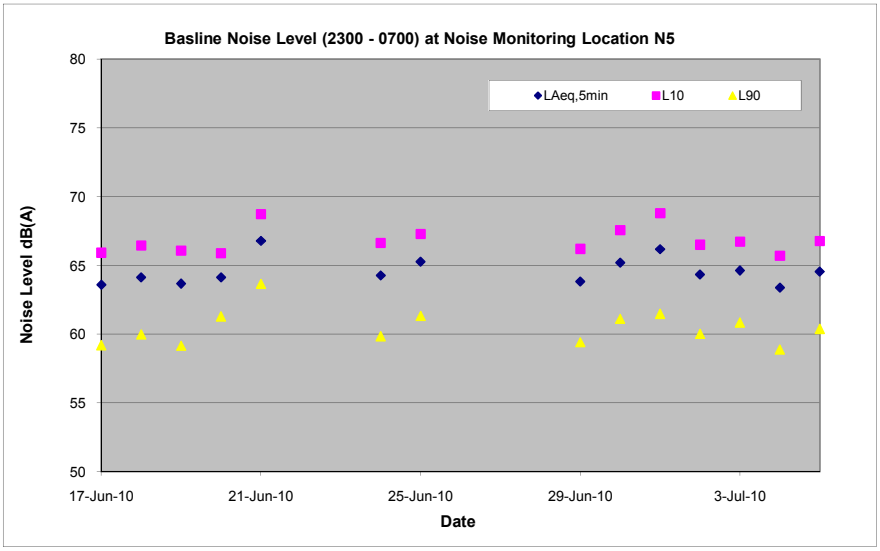

Baseline Noise Level Result (0700 - 1900) at Noise Monitoring Location N4
LAeq,30min
L10
L90
Noise Level dB(A)
80
75
70
65
60
55
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date

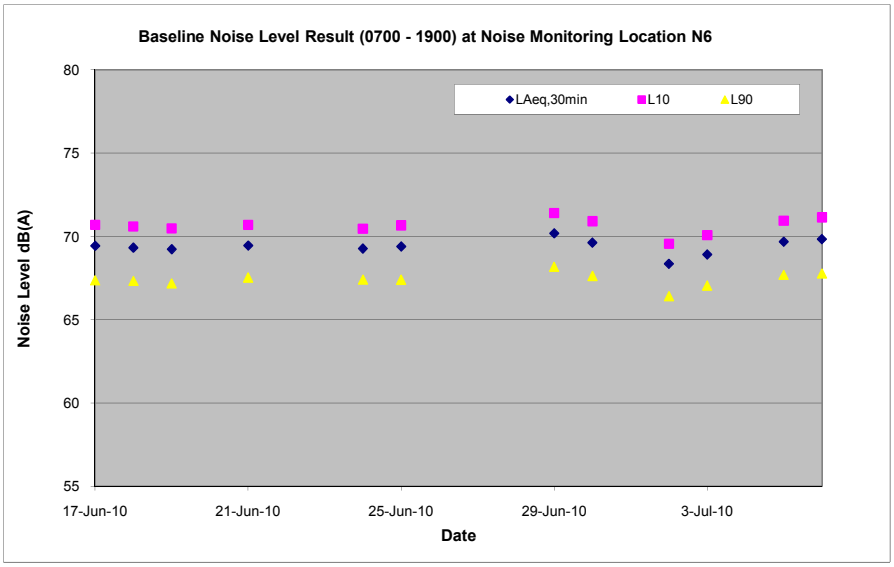

Baseline Noise Level Result (1900 - 2300) at Noise Monitoring Location N4
LAeq,5min
L10
L90
Noise Level dB(A)
75
70
65
60
55
50
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date

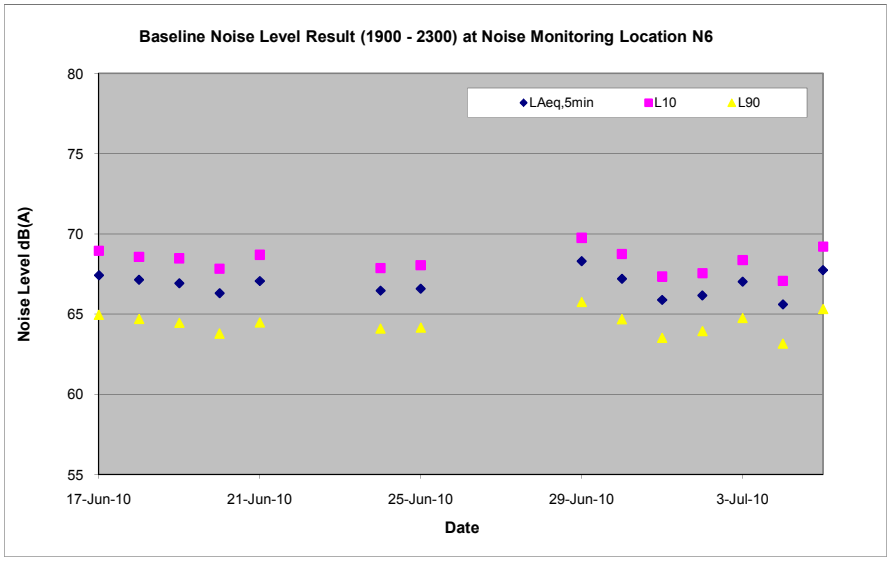

Basline Noise Level (2300 - 0700) at Noise Monitoring Location N4
LAeq,5min
L10
L90
Noise Level dB(A)
75
70
65
60
55
50
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date

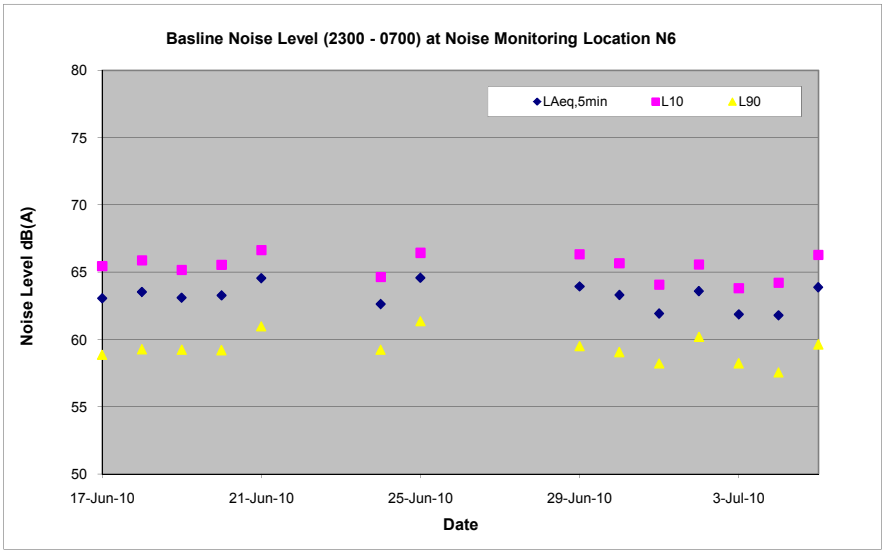

Baseline Noise Level Result (0700 - 1900) at Noise Monitoring Location N5
LAeq,30min
L10
L90
Noise Level dB(A)
85
80
75
70
65
60
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date


Baseline Noise Level Result (1900 - 2300) at Noise Monitoring Location N5
LAeq,5min
L10
L90
Noise Level dB(A)
80
75
70
65
60
55
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date


Basline Noise Level (2300 - 0700) at Noise Monitoring Location N5
LAeq,5min
L10
L90
Noise Level dB(A)
80
75
70
65
60
55
50
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date


Baseline Noise Level Result (0700 - 1900) at Noise Monitoring Location N6
LAeq,30min
L10
L90
Noise Level dB(A)
80
75
70
65
60
55
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date


Baseline Noise Level Result (1900 - 2300) at Noise Monitoring Location N6
LAeq,5min
L10
L90
Noise Level dB(A)
80
75
70
65
60
55
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date


Basline Noise Level (2300 - 0700) at Noise Monitoring Location N6
LAeq,5min
L10
L90
Noise Level dB(A)
80
75
70
65
60
55
50
17-Jun-10
21-Jun-10
25-Jun-10
29-Jun-10
3-Jul-10
Date

Appendix H

Event and Action plan

Event/ Action Plan for Construction Noise

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level being exceeded	1. Notify ER, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Advise the ER on the effectiveness of the proposed remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures.	1. Submit noise mitigation proposals to ET and ER; 2. Implement noise mitigation proposals.
Limit Level being exceeded	1. Inform IEC, ER, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and ER on remedial measures required; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to ET and ER within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the ER until the exceedance is abated.

Event and Action Plan for Air Quality (Dust)

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action level being exceeded by one sampling	1. Identify source and investigate the causes of exceedance; 2. Inform Contactor, IEC and ER; 3. Repeat measurement to confirm finding.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
Action level being exceeded by two or more consecutive sampling	1. Identify source and investigate the causes of exceedance; 2. Inform Contractor, IEC and ER; 3. Increase monitoring frequency to daily; 4. Discuss with IEC and Contractor on remedial actions required; 5. Assess the effectiveness of Contractor's remedial actions; 6. If exceedance continues, arrange meeting with IEC and ER; 7. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures;	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise implementation of remedial measures; 5. Conduct meeting with ET and IEC if exceedance continues.	1. Discuss with ET and IEC on proper remedial actions; 2. Submit proposals for remedial actions to ER and IEC within three working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
Limit level being exceeded by one sampling	1. Identify source and investigate the causes of exceedance; 2. Inform Contractor, IEC, ER, and EPD; 3. Repeat measurement to confirm finding; 5. Assess effectiveness of Contractor's remedial actions and keep EPD, IEC and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise implementation of remedial measures; 5. Conduct meeting with ET and IEC if exceedance continues.	1. Take immediate action to avoid further exceedance; 2. Discuss with ET and IEC on proper remedial actions; 3. Submit proposals for remedial actions to ER and IEC within three working days of notification; 4. Implement the agreed proposals.
Limit level being exceeded by two or more consecutive sampling	1. Notify IEC, ER, Contractor and EPD; 2. Repeat measurement to confirm findings; 3. Carry out analysis of Contractor's working procedures to identify source and investigate the causes of exceedance; 4. Increase monitoring frequency to daily;	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst ER, ET, and Contractor on the potential	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;	1. Take immediate action to avoid further exceedance; 2. Discuss with ET, ER and IEC on proper remedial actions; 3. Submit proposals for remedial actions to IEC within three

Event and Action Plan for Air Quality (Dust)

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	5. Arrange meeting with IEC, ER and Contractor to discuss the remedial actions to be taken; 6. Assess effectiveness of Contractor's remedial actions and keep EPD, IEC and ER informed of the results; 7. If exceedance stops, cease additional monitoring.	remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.	4. Supervise implementation of remedial measures 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.	working days of notification; 4. Implement the agreed proposals; 5. Submit further remedial actions if problem still not under control; 6. Stop the relevant portion of works as instructed by the ER until the exceedance is abated.