

Issue No. : 1  
Issue Date : August 2010  
Project No. : 768

**JOINT USER COMPLEX AND  
WHOLESALE FISH MARKET AT  
AREA 44, TUEN MUN**

**EIGHTH QUARTERLY  
ENVIRONMENTAL MONITORING &  
AUDIT REPORT  
(MAY 2010 – JULY 2010)**

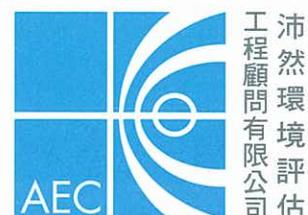
Prepared By:

**ALLIED ENVIRONMENTAL CONSULTANTS LTD.**

**COMMERCIAL-IN-CONFIDENCE**

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## **EXECUTIVE SUMMARY**

Allied Environmental Consultants Limited (AEC) has been appointed to conduct an environmental monitoring and audit (EM&A) program for the proposed Joint User Complex and Wholesale Fish Market at Area 44, Tuen Mun. The construction works was commenced on 31<sup>st</sup> July 2008. This report is the eighth quarterly EM&A report, which summarizes the environmental monitoring and audit results recorded during the period from 1<sup>st</sup> May 2010 to 31<sup>st</sup> July 2010.

Based on the monitoring results, the air quality and construction noise level complied with the environmental requirements in EM&A Manual. There was a non-compliance recorded on 16<sup>th</sup> May 2010 during site inspection of the EPD. No notification of summons or prosecution was received.

Construction activities undertaken in May 2010 include internal & external finishing works, waterproofing works, steel & metal works, construction of underground drainage system, installation of Kalzip roof system, connection & construction of manhole along Wu Shan Road, connection of last manhole, removal of hoarding, fender installation, 1st & 2nd fixing of E&M services and lift installation.

Construction activities undertaken in June 2010 include laying of floor screed at G/F carpark & fish market, internal wall / floor / ceiling finish, laying of floor screed / washed grano at 1/F landscape deck & spectator stand, laying of external floor tile at 2/F, external waterproofing works, installation of aluminium louvre & window, installation of timber door & metal door, installation of general metal works, installation of Kalzip roof system, external wall spray painting, 2nd / final fixing of E&M services, construction of underground drainage works at G/F landscape plaza, dismantling of hoarding, installation of fender, installation of recycle plastic for architecture feature, laying of planter sub-soil drain & aggregate, construction of run-in / out, connection of last manhole.

Construction activities undertaken in July 2010 include internal finishing works, installation of Kalzip Roof, C&J installation works, metal works installation, dismantling of hoarding, last manhole connection works, reinstatement of existing concrete pavement outside site boundary, installation of fender, dismantling of bamboo scaffolding, external landscape works, 2nd or final fixing for E&M services works and T&C for E&M services works.

Potential environmental impacts include dust generation from stockpiles of dusty materials, the superstructure, walls, concrete works, the internal finishes and building services; noise from operation of the equipments; runoff from building services and the storage of various C&D and chemical wastes. The Contractor should properly implement the required environmental mitigation measures as per the implementation schedule in the EM&A manual to ensure no significant adverse environmental impacts to be arisen from the construction works. The Contractor was reminded to maintain good housekeeping throughout the construction phase.

## 1. PROJECT BACKGROUND

A Joint User Complex and Wholesale Fish Market (WFM Complex) at Area 44 in Tuen Mun is proposed to be designed and built by Architectural Services Department on behalf of Agriculture, Fisheries and Conservation Department, Marine Department, and Food and Environmental Hygiene Department of the Hong Kong SAR. The WFM Complex is to provide a permanent site for the relocation of the existing temporary wholesale fish market at Tuen Mun Area 27 and to accommodate a community hall and dragon boat racing spectator stand for public use. The proposed development is a 3-storey complex to accommodate the wholesale fish market at the ground floor, a community hall on the first and second floors, and an extensive landscaped deck on roof level. The proposed Wholesale Fish Market is categorized as a designated project under the Environmental Impact Assessment Ordinance (EIAO) and therefore a detailed Environmental Impact Assessment (EIA-085/2002) has been conducted in year 2002 and an Environmental Permit (EP-296/2007) was issued by Environmental Protection Department in December 2007.

The subject site is located at Castle Peak Bay of Tuen Mun given in Figure 1. The subject site is bounded to the north by a future local open space presently used as a temporary car park, to the east by Castle Peak Bay typhoon shelter, to the south by a future lorry park and to the west by Wu Shan Road. Yuet Wu Villa being the nearest residential establishment is located at around 85m from the site boundary.

### 1.1 Project Organization and Contact Personnel

Key personnel and contact particulars are summarized in Table 1.

*Table 1 Contact Details of Key Personnel*

<b>Role</b>	<b>Department / Company</b>	<b>Names</b>	<b>Contact Number</b>	<b>Fax Number</b>
Lead User Department	Agriculture, Fisheries, and Conservation Department	Mr. K.H. Chan Ms. Louise Li	2150 7092 2150 7104	2314 2866
Environmental Permit Holder	Architecture Services Department	Mr. S.W. Chow Ms. Susana Chan	2867 3716 2867 3706	2523 9622
Architect	P&T Architects and Engineers Ltd.	Ms. Sarah Ng Ms. Vivian Law	2835 3548 2832 3046	2891 3834
Main Contractor	W. Hing Construction Co. Ltd.	Mr. Andy Chan Mr. Jim Lee	9630 7404 6105 4076	8343 9188
Environmental Team Leader	Allied Environmental Consultants Ltd.	Ms. Grace Kwok	2815 7028	2815 5399
Independent Environmental Checker	Cinotech Consultants Ltd.	Dr. Priscilla Choy	2151 2089	3107 1388

## 2. SENSITIVE RECEIVERS

Air Sensitive Receivers (ASRs) within 500m include Yuet Wu Villa, Lawn Bowling Field, Tennis Court, which are less than 100m away from the subject site. Tuen Mun Wu Hong Clinic is located to the west at about 100m to the site boundary. Two secondary schools, namely Ka Chi Secondary School and South Tuen Mun Government Secondary School, are approximately 300m to the south of the site boundary.

Noise Sensitive Receivers (NSRs) within 300m are Yuet Wu Villa, Siu Hei Court, Yan Chai Hospital Low Chan Chor Si Primary School and Wu King Estate. The nearest NSR will be Block 15 of Yuet Wu Villa.

## 3. SUMMARY OF EM&A REQUIREMENT

For regular impact monitoring, the sampling frequency of at least once in every six-days, shall be strictly observed at the monitoring station for 24-hr TSP monitoring. For 1-hr TSP monitoring, the sampling frequency of at least three times in every six-days should be undertaken when the highest dust impact occurs. For noise monitoring, one set of measurement between 0700-1900 hours on normal weekdays.  $Leq_{(30 \text{ min})}$  shall be used as the monitoring parameter.

From baseline monitoring results, the proposed Action and Limit Levels for air quality are summarized in Table 2. The average baseline 1-hr TSP value of  $129\mu\text{g}/\text{m}^3$  and 24-hr TSP value of  $65\mu\text{g}/\text{m}^3$  measured at Block 15, Yuet Wu Villa was used to determine the action and limit level for air quality impact monitoring. The proposed Action and Limit Levels for construction noise are summarized in Table 3.

*Table 2 Action and Limit Level for Air Quality Impact Monitoring at Yuet Wu Villa*

<i>Parameters</i>	<i>Baseline Level (<math>\mu\text{g}/\text{m}^3</math>)</i>	<i>Action Level (<math>\mu\text{g}/\text{m}^3</math>)</i>	<i>Limit Level (<math>\mu\text{g}/\text{m}^3</math>)</i>
24 Hour TSP Level	65	173	260
1 Hour TSP Level	129	334	500

**Table 3 Action and Limit Levels for Construction Noise Impact Monitoring**

<b>Time Period</b>	<b>Action Level</b>	<b>Limit Level</b>
Daytime (0700-1900 hours) on weekdays	When one documented compliant is received	Dwelling 75dB(A) <sup>1</sup> School 70dB(A) <sup>1</sup> (65dB(A) during examinations) <sup>1</sup>
1900-2300 on any day and 0700-2300 on Sunday and general holidays, for use of PME <sup>2</sup>	When one documented compliant is received	65dB(A) <sup>3</sup>
All days during the night-time (2300-0700 hours) <sup>2</sup>	When one documented compliant is received	50dB(A) <sup>3</sup>

*Note: 1. Construction noise criteria stipulated in the TM-EIAO*

*2. A Construction Noise Permit (CNP) shall be required for the carrying out of the construction work during the restricted hours (1900-2300 on any day and 0700-2300 on Sunday and general holidays, for use of PME; and All days during the night-time (2300-0700 hours))*

*3. Area sensitivity rating of the monitoring location is "B".*

Should non-compliance of the above Action and Limit levels occurs, the contractor shall undertake corresponding action in accordance with the proposed Event Action Plan given in EM&A Manual. A summarized general Event Action Plan is given in Table 4. Details should be referred to the Event Action Plan in the EM&A Manual.

**Table 4 Event Action Plan**

<b>Level</b>	<b>Step 1</b>	<b>Step 2</b>	<b>Step 3</b>
Action	<ul style="list-style-type: none"> <li>Identify source</li> <li>Check monitoring data and working methods</li> </ul>	<ul style="list-style-type: none"> <li>Contact project manager to discuss and implement remedial action</li> <li>Rectify any unacceptable practice</li> <li>Amend working methods if appropriate</li> <li>If exceedance continues, commence additional monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Notify client/project manager following correct of the situation</li> <li>Cease additional monitoring if exceedance stops</li> </ul>
Limit	<ul style="list-style-type: none"> <li>Identify source</li> <li>Notify client/project manager</li> <li>Check monitoring data and working methods</li> <li>Repeat measurement to confirm finding</li> <li>Commence additional monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Take immediate action to avoid further exceedance</li> <li>Submit proposal for remedial actions to client/project manager within 3 working days</li> <li>Implement the agreed proposal</li> <li>If exceedance continues, amend and resubmit the proposal</li> </ul>	<ul style="list-style-type: none"> <li>Notify client/project manager following correction of the situation</li> <li>Cease additional monitoring if exceedance stops</li> </ul>

## 4. MONITORING METHODOLOGY

### 4.1 Monitoring Programme

Air quality monitoring and noise monitoring were conducted at Block 15, Yuet Wu Villa on 36<sup>th</sup>, 12<sup>th</sup>, 18<sup>th</sup>, 24<sup>th</sup> and 29<sup>th</sup> May 2010, 4<sup>th</sup>, 10<sup>th</sup>, 15<sup>th</sup>, 21<sup>st</sup> and 26<sup>th</sup> June 2010 and 2<sup>nd</sup>, 8<sup>th</sup>, 14<sup>th</sup>, 20<sup>th</sup>, 26<sup>th</sup> and 31<sup>st</sup> July 2010. Appendix A displayed the detail schedule of the monitoring programme. Air quality monitoring station was set up at the roof top of the residential block and noise monitoring was conducted at 1.2m above ground level in front of the residential block and at the junction of Wu Sau Street and Wu On Street as given in Figure 2 and 3. Figure 4 and 5 show photos taken during monitoring at the two locations.

### 4.2 Air Quality Monitoring

1-hour and 24-hour TSP air quality monitoring was conducted at the designated air quality monitoring location using a High Volume TSP Sampler (Model No: Anderson GMWS-2310 ACCU-VOL) at the designated location. The Calibration Record of the High-Volume TSP Sampler is given in Appendix B. 24-hour TSP samples were taken every six days. 1-hour TSP samples were taken three times a day between 0700-1900 hours.

### 4.3 Noise Monitoring

Noise monitoring was conducted at the designated noise monitoring location between 0700-1900 hours using a sound level meter which complies with the International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1). Noise instrumentation details are given in Table 5 and the Calibration Certificate for the sound level meter and calibrator is given in Appendix C.

*Table 5 Noise Monitoring Equipment*

<i>Manufacturer</i>	<i>Type/Model No.</i>	<i>Equipment</i>
RION	Model NL 31	Precision Sound Level Analyzer with windshield
RION	Model NC 73	Calibrator

Noise levels measurements were recorded in terms of thirty minutes A-weighted equivalent continuous sound pressure level ( $L_{eq(30min)}$ ) on a weekly basis. The sound level meter was calibrated immediately prior to and following each noise measurement. The meter was mounted on a tripod at a height of 1.2m and the microphone was positioned at 1m away the building façade of the noise monitoring station facing the construction site.

Noise measurements were not made in the presence of fog, rain, and wind with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s. The wind speed was checked with a portable anemometer capable of measuring the wind speed in m/s.

## **5. RESULTS**

### **5.1. Air Quality**

No exceedance was recorded in this quarter. Summary and graphical plots of air quality monitoring record of 1-hour TSP levels and 24-hour TSP levels are provided in Appendices D and E. The weighing of the filter paper used in the monitoring will be undertaken by ALS Laboratory Group Environmental Division. (HOKLAS Registration No.: 066)

### **5.2. Noise**

Noise monitoring results in terms of  $L_{eq(30min)}$ ,  $L_{10(30min)}$   $L_{90(30min)}$  were measured at the designated noise monitoring location.  $L_{10}$  and  $L_{90}$  represent sound levels that are exceeded 10% and 90% of the time respectively. Normally,  $L_{10}$  measurements can be considered as the average peak levels, whilst  $L_{90}$  levels can be considered as the average background noise levels.

No exceedance was recorded in this quarter. Summary of noise monitoring record is provided in Appendix F.

### **5.3. Weather Conditions**

Weather data of the monitoring station were obtained from the nearest Hong Kong Observatory (HKO) Tuen Mun automatic weather station located at Tuen Mun Town Park (63 mPD). Table 6 summarizes the wind data during the monitoring dates. Wind record from HKO is shown in Appendix G.

**Table 6** *Summary of Weather Conditions during the Monitoring Period*

<b>Date</b>	<b>Weather</b>	<b>Prevailing Direction</b>	<b>Wind</b>	<b>Daily Average Wind Speed (m/s)</b>
6 <sup>th</sup> May 2010	Cloudy	S		2.22
12 <sup>th</sup> May 2010	Sunny	SE		3.67
18 <sup>th</sup> May 2010	Cloudy	SW		2.33
24 <sup>th</sup> May 2010	Sunny	SE		3.41
29 <sup>th</sup> May 2010	Cloudy	S		2.49
4 <sup>th</sup> June 2010	Cloudy	N		1.82
10 <sup>th</sup> June 2010	Cloudy	W		0.89
15 <sup>th</sup> June 2010	Cloudy	S		3.34
21 <sup>st</sup> June 2010	Cloudy	SE		2.80
26 <sup>th</sup> June 2010	Cloudy	SE		2.38
2 <sup>nd</sup> July 2010	Sunny	S		2.13
8 <sup>th</sup> July 2010	Sunny	S		2.97
14 <sup>th</sup> July 2010	Sunny	SE		2.14
20 <sup>th</sup> July 2010	Sunny	SE		2.74
26 <sup>th</sup> July 2010	Sunny	SE		2.52
31 <sup>st</sup> July 2010	Sunny	SE		3.45

## 6. SITE INSPECTION & AUDIT

Weekly site inspections were carried out by representatives of the ET. Thirteen site inspections were conducted on 7<sup>th</sup>, 14<sup>th</sup>, 20<sup>th</sup> and 28<sup>th</sup> May 2010, 4<sup>th</sup>, 11<sup>th</sup>, 18<sup>th</sup>, 25<sup>th</sup> June 2010, 2<sup>nd</sup>, 9<sup>th</sup>, 16<sup>th</sup>, 23<sup>rd</sup> and 30<sup>th</sup> July 2010. Key findings are summarized in Table 7.

The mitigation measures undertaken by the Contractor are effective in minimizing the environmental impact; however, the Contractor should implement these mitigation measures more effectively in order to prevent causing any adverse environmental impact.

Table 7 Summary of Site Inspections

<b>Date</b>	<b>Observations</b>	<b>Action taken by contractor</b>	<b>Outcome</b>
7 <sup>th</sup> May 2010	No observations during inspection.	Contractor was required to keep up with the mitigation measures.	Nil.
14 <sup>th</sup> May 2010	No observations during inspection.	Contractor was required to keep up with the mitigation measures.	Nil.
20 <sup>th</sup> May 2010	No observations during inspection.	Contractor was required to keep up with the mitigation measures.	Nil.
28 <sup>th</sup> May 2010	Haul road appeared dry.	Contractor was requested to increase the frequency of watering.	Sufficient water spraying was given to dry haul road.
4 <sup>th</sup> June 2010	No observations during inspection.	Contractor was required to keep up with the mitigation measures.	Nil.
11 <sup>th</sup> June 2010	Haul road appeared dry.	Contractor was requested to increase the frequency of watering.	Sufficient water spraying was given to dry haul road.
	Stockpiles of rubbish were not properly covered.	Contractor was requested to provide covering to the demolished materials.	Covering was given to the demolished materials.
18 <sup>th</sup> June 2010	Stockpiles of sand were not properly covered.	Contractor was requested to provide covering.	Covering was given to the stockpiles of sand.
25 <sup>th</sup> June 2010	Stockpiles of sand and rubbish were not properly covered.	Contractor was requested to provide covering.	Covering was given to the stockpiles of sand and rubbish.
2 <sup>nd</sup> July 2010	Stockpiles of sand were not properly covered.	Contractor was requested to provide covering.	Covering was given to the stockpiles of sand.
9 <sup>th</sup> July 2010	Haul road appeared dry.	Contractor was requested to increase the frequency of watering.	Sufficient water spraying was given to dry haul road.
16 <sup>th</sup> July 2010	No observations during inspection.	Contractor was required to keep up with the mitigation measures.	Nil.
23 <sup>rd</sup> July 2010	No observations during inspection.	Contractor was required to keep up with the mitigation measures.	Nil.
30 <sup>th</sup> July 2010	No watering was provided during breaking of road pavement.	Contractor was requested to watering during the progress.	Sufficient water spraying was given.

During site inspections in this quarter, no non-conformance of implementation of environmental mitigation measures was identified. All environmental mitigation measures for construction stages stated in the approved EIA Report, EM&A Manual and Environmental Permit shall be carried out throughout the whole construction period as shown in Appendix H.

## **7. NON-COMPLIANCE, COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS**

In this quarter, there was a non-compliance recorded on 16<sup>th</sup> May 2010 during site inspection of the EPD. The contractor carried out construction works with powered mechanical equipment on 16<sup>th</sup> May 2010 (Sunday) without Construction Noise Permit (CNP). Memorandum from EPD (Ref.: EP/RW/0000/080262 dated 18<sup>th</sup> May 2010) was received notifying the violation of the NCO. As precautionary measures, the contractor had held a verbal briefing session on 17<sup>th</sup> May 2010 to all sub-contractors / foremen that no works / operation using powered mechanical equipments are allowed to be carried out during restricted hours between 1900 and 0700 hours and any time on a general holiday, including Sunday. The second memorandum from EPD (Ref.: EP/RW/0000/080262 dated 8<sup>th</sup> June 2010) was received reminding the main contractor to abide by the NCO and supply to EPD the extract of the contract documents showing the name of the appointed contractor/subcontractor of the site, the project commencement date and the anticipated completion date, site layout plan showing the location and boundary of the site; and site diary of date. The contractor had provided the aforementioned documents to the EPD for their follow-up action. The two memoranda were shown in Appendix I.

No other complaint, inspection notice, notification of summons or prosecution was received

## **8. OTHERS**

3,005.11 tonnes of inert C&D material was disposed at public fill. 467.01 tonnes of waste including general refuse and non-inert C&D waste such as timber and bamboo were disposed to landfill. No chemical waste was transported off site in this quarter.

## **9. RECOMMENDATIONS AND CONCLUSIONS**

### **9.1. Recommendations**

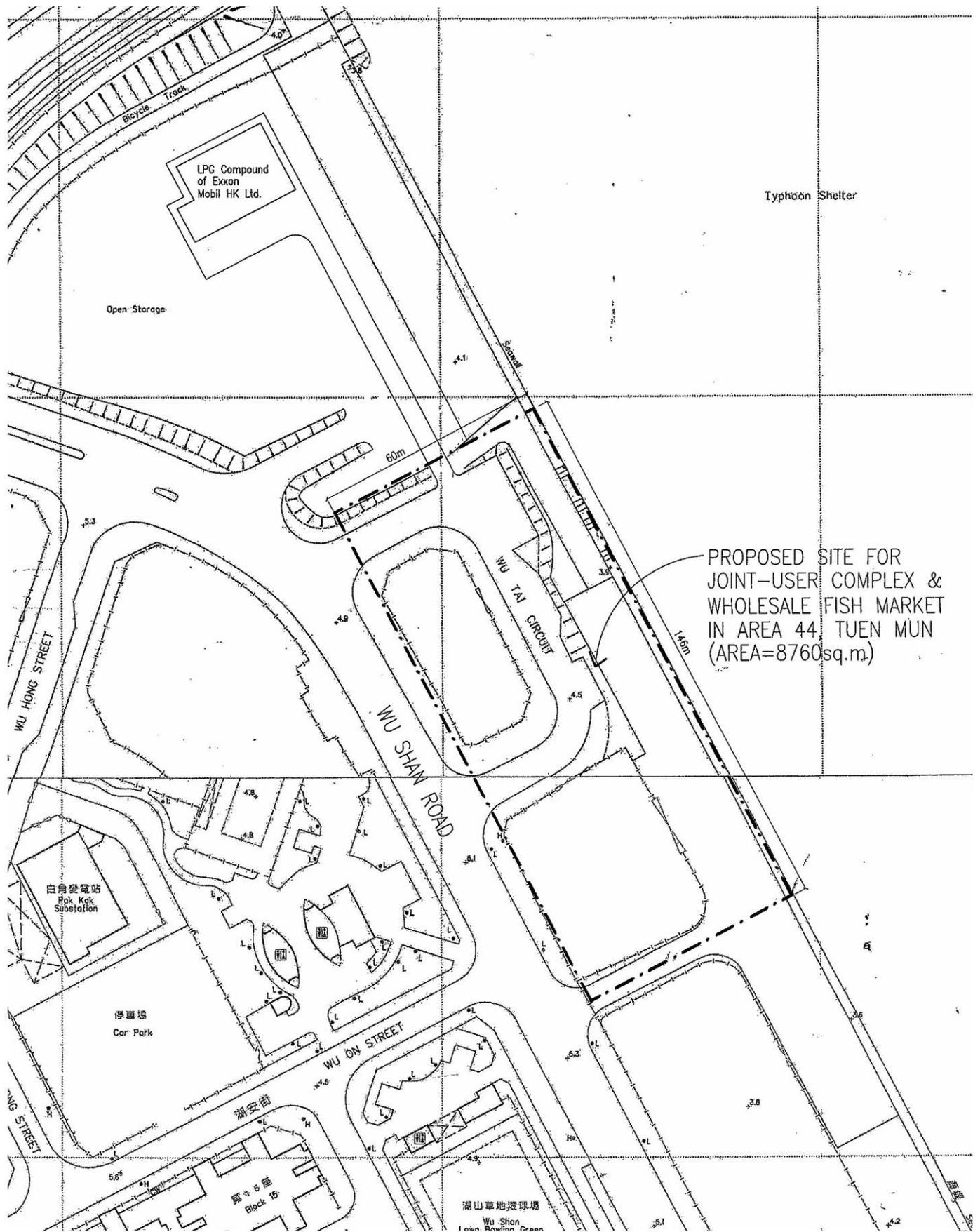
In accordance with the environmental site audits undertaken during the reporting quarter, the following recommendations are made:

- Increase the frequency of watering when the haul road appeared dry.
- Cover any stockpile of dusty material and rubbish properly.

The ET will keep track on the EM&A programme to ensure compliance of environmental requirements and proper implementation of all necessary mitigation measures.

### **9.2. Conclusions**

Environmental monitoring has been carried out for the proposed Joint User Complex and Wholesale Fish Market at Area 44, Tuen Mun. 1-hour and 24-hour TSP air quality monitoring and noise monitoring was conducted at Block 15, Yuet Wu Villa during the period from 1<sup>st</sup> May 2010 to 31<sup>st</sup> July 2010, in accordance with EM&A Manual and the requirement under Environmental Permit (No. EP-296/2007). All monitoring results were checked and reviewed. 48 sets of 1-hour TSP level monitoring, 16 sets of 24-hour TSP level monitoring, and 16 sets of noise monitoring were carried out during the reporting quarter. No exceedance of any of the monitoring data was recorded. There was a non-compliance recorded on 16<sup>th</sup> May 2010 during site inspection of the EPD. No other environmental complaints and notification of summons or prosecution were received during the eighth quarter.

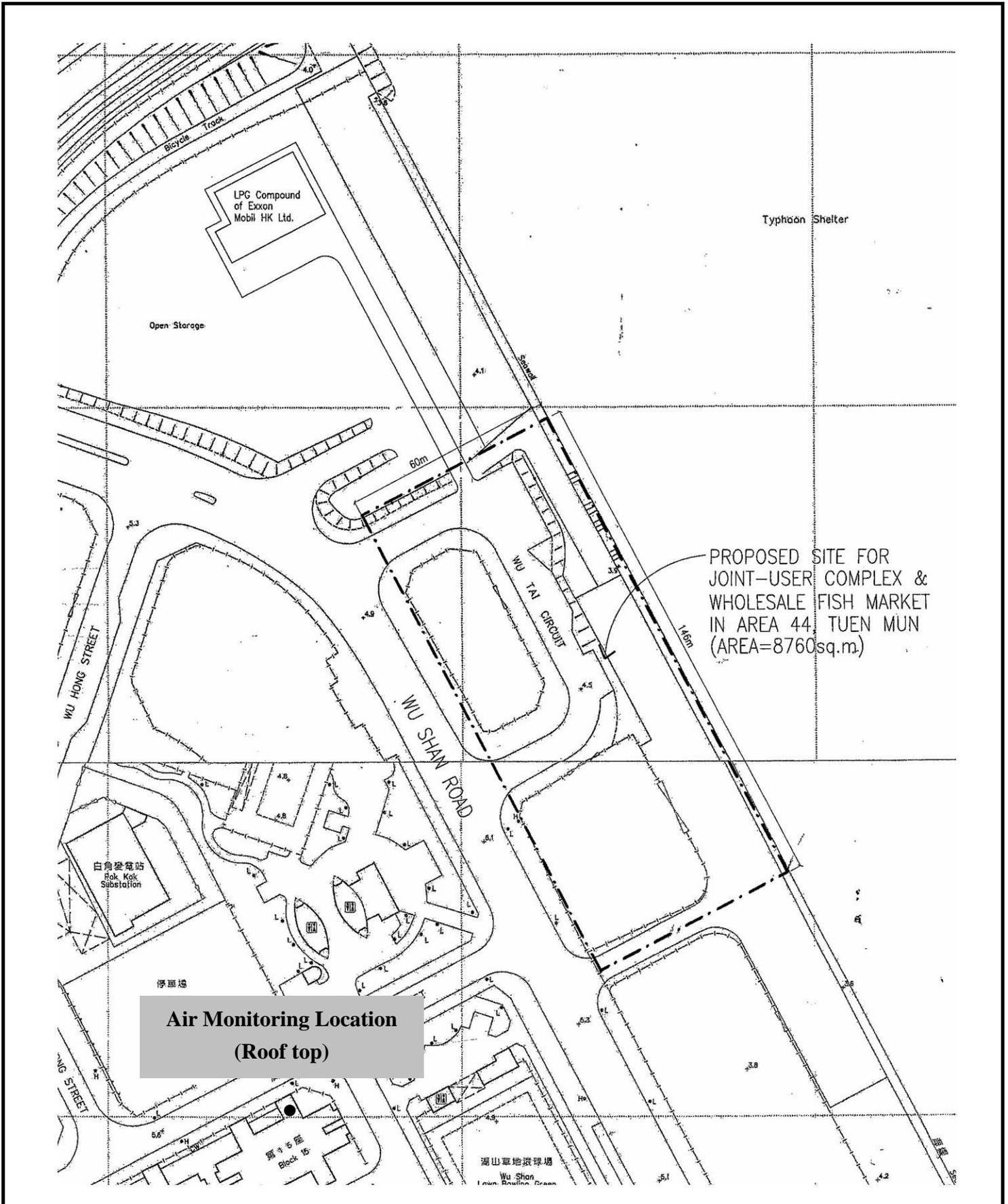


PROPOSED SITE FOR  
JOINT-USER COMPLEX &  
WHOLESALE FISH MARKET  
IN AREA 44, TUEN MUN  
(AREA=8760sq.m)

**JOINT USER COMPLEX AND WHOLESALE FISH MARKET AT AREA 44,  
TUEN MUN  
SITE LOCATION PLAN**

Figure No.	Rev.:
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NTS	8/10



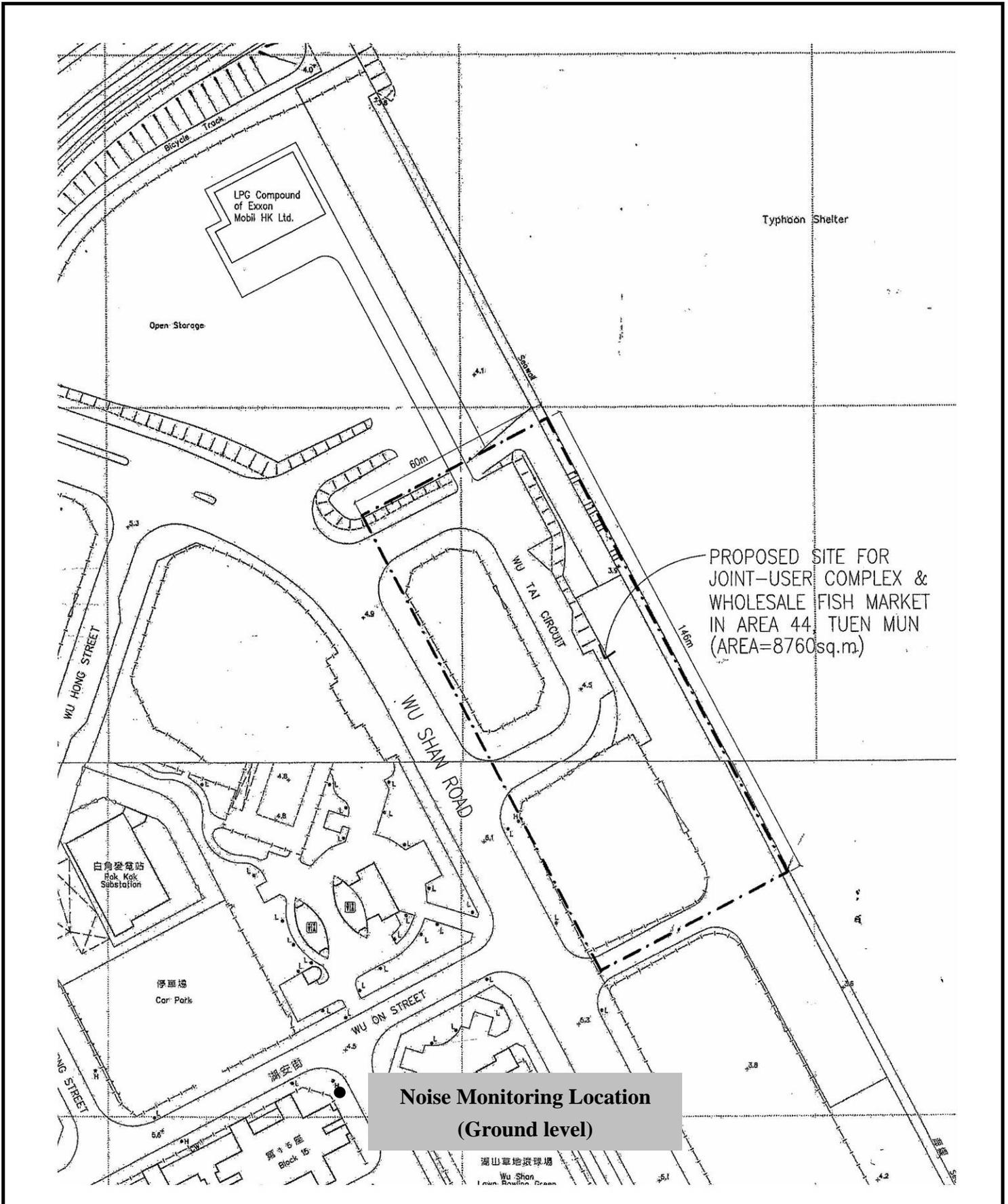


**JOINT USER COMPLEX AND WHOLESALE FISH MARKET AT AREA 44,  
TUEN MUN**

**LOCATION OF AIR QUALITY MONITORING STATION**

Figure No.	2	Rev.:	0
Scale	NTS	Date	8/10





**JOINT USER COMPLEX AND WHOLESALE FISH MARKET AT AREA 44,  
TUEN MUN**

**LOCATION OF NOISE MONITORING STATION**

Figure No.	Rev.:
3	0
Scale	Date
NTS	8/10





*Roof top of Block 15, Yuet Wu Villa*



*High-Volume Dust Sampler*

**JOINT USER COMPLEX AND WHOLESALE FISH MARKET AT AREA 44,  
TUEN MUN  
PHOTOS OF AIR QUALITY MONITORING STATION**

Figure No.

4

Rev.:

0

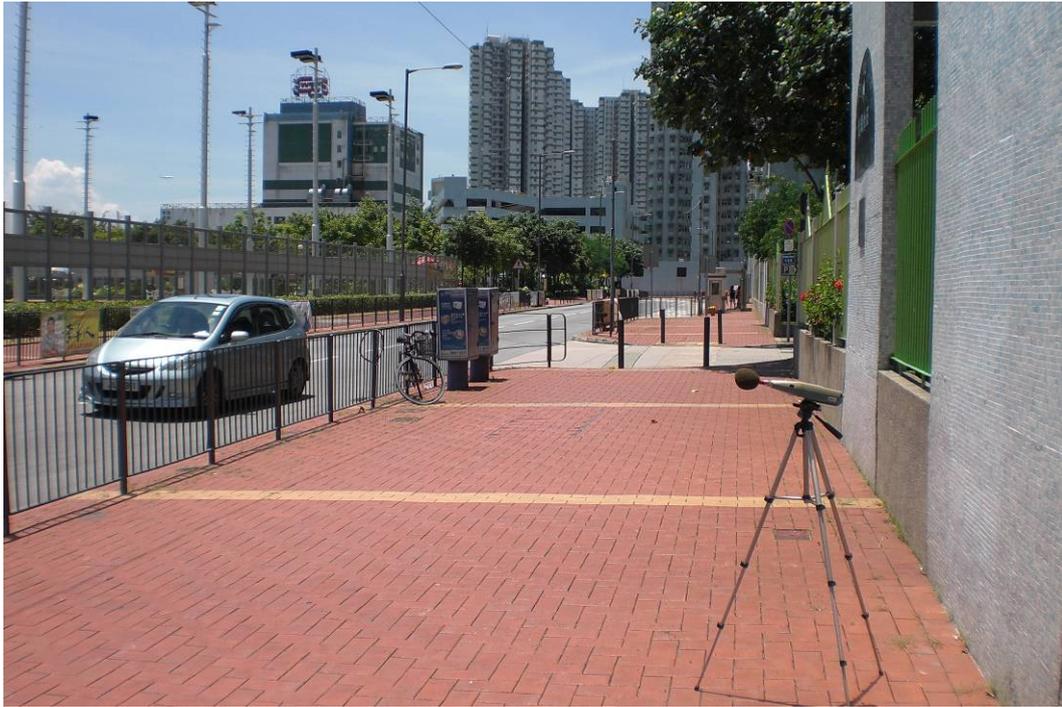
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Date

8/10





*Noise monitoring station*



*View from the noise monitoring station*

**JOINT USER COMPLEX AND WHOLESALE FISH MARKET AT AREA 44,  
TUEN MUN  
PHOTOS OF NOISE MONITORING STATION**

Figure No.

5

Rev.:

0

Scale

NTS

Date

8/10



*Appendix A*

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*Detail Schedule of Monitoring Programme*

Schedule for air and noise monitoring programme of Tuen Mun Wholesale Fish Market

Monitoring schedule for the reporting month

Date	Start Time
6 <sup>th</sup> May 2010	13:00
12 <sup>th</sup> May 2010	13:00
18 <sup>th</sup> May 2010	13:00
24 <sup>th</sup> May 2010	13:00
29 <sup>th</sup> May 2010	13:00
4 <sup>th</sup> June 2010	13:00
10 <sup>th</sup> June 2010	13:00
15 <sup>th</sup> June 2010	13:00
21 <sup>st</sup> June 2010	13:00
26 <sup>th</sup> June 2010	13:00
2 <sup>nd</sup> July 2010	13:00
8 <sup>th</sup> July 2010	13:00
14 <sup>th</sup> July 2010	13:00
20 <sup>th</sup> July 2010	13:00
26 <sup>th</sup> July 2010	13:00
31 <sup>st</sup> July 2010	13:00

Monitoring schedule of the coming month

Date	Time
6 <sup>th</sup> August 2010	To be confirmed
12 <sup>th</sup> August 2010	To be confirmed
18 <sup>th</sup> August 2010	To be confirmed
24 <sup>th</sup> August 2010	To be confirmed
30 <sup>th</sup> August 2010	To be confirmed

*Appendix B*

---

*Calibration Record of High-Volume TSP Sampler*

High-Volume TSP Sampler  
1-Point Calibration Record

Location : A1 (Tuen Mun)  
Calibrated by : P.F.Yeung  
Date : 05/03/2010

Sampler

Model : GMWS-2310 ACCU-VOL  
Serial Number : S/N 0890

Calibration Orifice and Standard Calibration Relationship

Serial Number : 9833620  
Service Date : 18 May 2009  
Slope (m) : 1.97702  
Intercept (b) : -0.00070  
Correlation Coefficient(r) : 0.99992

Standard Condition

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

Calibration Condition

Pa (hpa) : 1018  
Ta(K) : 292

IC (Indicated flow) : 36 cfm

Actual flow : 1.29 m<sup>3</sup>/min

Checked by: Magnum Fan

Date: 06/03/2010

High-Volume TSP Sampler  
5-Point Calibration Record

Location : A1 (Tuen Mun)  
Calibrated by : P.F.Yeung  
Date : 5/5/2010

Sampler

Model : GMWS-2310 ACCU-VOL  
Serial Number : S/N 0890

Calibration Orifice and Standard Calibration Relationship

Serial Number : 9833620  
Service Date : 18 May 2009  
Slope (m) : 1.97702  
Intercept (b) : -0.00070  
Correlation Coefficient(r) : 0.99992

Standard Condition

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

Calibration Condition

Pa (hpa) : 1010  
Ta(K) : 296

Zero Error of Sampler Flow Rate Indication

IO : 0.0

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1   18 holes	10.2	3.197	1.617	60	60.1
2   13 holes	8.0	2.831	1.432	52	52.1
3   10 holes	6.4	2.532	1.281	45	45.0
4   7 holes	4.0	2.002	1.013	33	33.0
5   5 holes	2.5	1.583	0.801	24	24.0

Sampler Calibration Relationship

Slope(m):44.366 Intercept(b): -11.683 Correlation Coefficient(r): 0.9999

Checked by: Magnum Fan

Date: 10/5/2010

High-Volume TSP Sampler  
5-Point Calibration Record

Location : AM1  
Calibrated by : K.T.Ho  
Date : 5/07/2010

Sampler  
Model : GMWS-2310 ACCU-VOL  
Serial Number : S/N 0890

Calibration Orifice and Standard Calibration Relationship

Serial Number : 1785  
Service Date : 10 May 2010  
Slope (m) : 2.01637  
Intercept (b) : -0.02316  
Correlation Coefficient(r) : 0.99996

Standard Condition

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

Calibration Condition

Pa (hpa) : 1006  
Ta(K) : 303

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1   18 holes	10.0	3.128	1.563	60	59.4
2   13 holes	7.6	2.727	1.364	51	50.5
3   10 holes	6.3	2.483	1.243	45	44.5
4   7 holes	3.8	1.928	0.968	32	31.7
5   5 holes	2.3	1.500	0.756	21	20.8

Sampler Calibration Relationship

Slope(m):47.749 Intercept(b): -14.929 Correlation Coefficient(r): 0.9998

Checked by: Magnum Fan

Date: 23/07/2010

*Appendix C*

---

*Calibration Certification of the Sound Level Meters  
and Calibrators*



輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C093733

## Certificate of Calibration

*This is to certify that the equipment*

*Description : Sound Level Meter*

*Manufacturer : Rion*

*Model No. : NL-31*

*Serial No. : 00320533*

*has been calibrated for the specific items and ranges.*

*The results are shown in the Calibration Report No. C093733.*

*The equipment is supplied by*

*Co. Name : Envirotech Services Co.*

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

*Date of Issue : 16 July 2009*

Certified by :   
H.C. Chan

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

Calibration and Testing Laboratory of Sun Creation Engineering Limited

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

**輝創工程有限公司****Sun Creation Engineering Limited Calibration and Testing Laboratory**

Report No. : C093733

## Calibration Report

**ITEM TESTED**

DESCRIPTION : Sound Level Meter  
MANUFACTURER : Rion  
MODEL NO. : NL-31  
SERIAL NO. : 00320533

**TEST CONDITIONS**

AMBIENT TEMPERATURE :  $(23 \pm 2)^{\circ}\text{C}$  RELATIVE HUMIDITY :  $(55 \pm 20)\%$   
LINE VOLTAGE : --

**TEST SPECIFICATIONS**

Calibration check

**DATE OF TEST** : 15 July 2009**JOB NO.** : IC09-1740**TEST RESULTS**

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

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

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

Tested by :

  
K. C. Lee

Date : 16 July 2009

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

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



輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Report No. : C093733

## Calibration Report

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
2. Self-calibration was performed before the test.
3. The results presented are the mean of 3 measurements at each calibration point.
4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C090024
CL281	Multifunction Acoustic Calibrator	DC090052

5. Test procedure : MA101N.

6. Results :

- 6.1 Sound Pressure Level

- 6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 120	L <sub>A</sub>	A	Fast	94.00	1	94.2	± 0.7

- 6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
30 - 120	L <sub>A</sub>	A	Fast	94.00	1	94.2 (Ref.)
				104.00		104.2
				114.00		114.2

IEC 60651 Type 1 Spec. : ± 0.4 dB per 10 dB step and ± 0.7 dB for overall different.

- 6.2 Time Weighting

- 6.2.1 Continuous Signal

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 120	L <sub>A</sub>	A	Fast	94.00	1	94.2	Ref.
			Slow			94.1	

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

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Website: www.suncreation.com



## 輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Report No. : C093733

# Calibration Report

### 6.2.2 Tone Burst Signal (2 kHz)

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Burst Duration		
20 - 110	L <sub>A</sub>	A	Fast	106.00	Continuous	106.0	Ref.
	L <sub>Amax</sub>				200 ms	105.0	-1.0 ± 1.0
	L <sub>A</sub>	Slow	Continuous		106.0	Ref.	
	L <sub>Amax</sub>		500 ms		102.0	-4.1 ± 1.0	

### 6.3 Frequency Weighting

#### 6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L <sub>A</sub>	A	Fast	94.00	31.5 Hz	55.0	-39.4 ± 1.5
					63 Hz	68.3	-26.2 ± 1.5
					125 Hz	78.3	-16.1 ± 1.0
					250 Hz	85.7	-8.6 ± 1.0
					500 Hz	91.0	-3.2 ± 1.0
					1 kHz	94.2	Ref.
					2 kHz	95.2	+1.2 ± 1.0
					4 kHz	94.4	+1.0 ± 1.0
					8 kHz	90.1	-1.1 (+1.5 ; -3.0)
					12.5 kHz	83.9	-4.3 (+3.0 ; -6.0)

#### 6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L <sub>C</sub>	C	Fast	94.00	31.5 Hz	91.4	-3.0 ± 1.5
					63 Hz	93.6	-0.8 ± 1.5
					125 Hz	94.1	-0.2 ± 1.0
					250 Hz	94.3	0.0 ± 1.0
					500 Hz	94.3	0.0 ± 1.0
					1 kHz	94.2	Ref.
					2 kHz	93.9	-0.2 ± 1.0
					4 kHz	92.7	-0.8 ± 1.0
					8 kHz	88.3	-3.0 (+1.5 ; -3.0)
					12.5 kHz	82.1	-6.2 (+3.0 ; -6.0)

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

Calibration and Testing Laboratory of Sun Creation Engineering Limited

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



輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Report No. : C093733

## Calibration Report

### 6.4 Time Averaging

UUT Setting				Applied Value					UUT	IEC 60804	
Range (dB)	Mode	Frequency Weighting	Time Weighting	Freq. (kHz)	Burst Duration (ms)	Burst Duty Factor	Burst Level (dB)	Equivalent Level (dB)	Reading (dB)	Type 1 Spec. (dB)	
20 - 110	L <sub>Aeq</sub>	A	10 sec.	4	1	1/10	110.0	100	100.3	± 0.5	
			60 sec.					1/10 <sup>2</sup>	90	90.3	± 0.5
								1/10 <sup>3</sup>	80	80.3	± 1.0
								1/10 <sup>4</sup>	70	70.3	± 1.0
5 min.											

Remarks : - Mfr's Spec. : IEC 60651 & IEC 60804 Type 1

- Uncertainties of Applied Value : 94 dB : 31.5 Hz - 125 Hz : ± 0.35 dB
- 250 Hz - 500 Hz : ± 0.30 dB
- 1 kHz : ± 0.20 dB
- 2 kHz - 4 kHz : ± 0.35 dB
- 8 kHz : ± 0.45 dB
- 12.5 kHz : ± 0.70 dB
- 104 dB : 1 kHz : ± 0.10 dB (Ref. 94 dB)
- 114 dB : 1 kHz : ± 0.10 dB (Ref. 94 dB)
- Burst equivalent level : ± 0.2 dB (Ref. 110 dB continuous sound level)

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

#### Note :

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

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

Calibration and Testing Laboratory of Sun Creation Engineering Limited

c/o 4/F, Using Shan Wan Exchange Building, 11 Tang On Lane, Tuen Mun, New Territories, Hong Kong

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E-mail: callsh@suncreation.com

Website: www.suncreation.com

Certificate No. : C095683

## *Certificate of Calibration*

*This is to certify that the equipment*

*Description : Sound Level Meter*

*Manufacturer : Rion*

*Model No. : NL-31*

*Serial No. : 00983400*

*has been calibrated for the specific items and ranges.  
The results are shown in the Calibration Report No. C095683.*

*The equipment is supplied by*

*Co. Name : Envirotech Services Co.*

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

*Date of Issue : 23 October 2009*

*Certified by :*

*K C Lee*

The test equipment used for calibration are traceable to the National Standards as specified in this report.  
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輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C093598

## Certificate of Calibration

*This is to certify that the equipment*

*Description : Sound Level Calibrator*

*Manufacturer : Rion*

*Model No. : NC-73*

*Serial No. : 10786708*

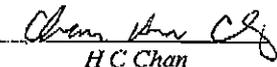
*has been calibrated for the specific items and ranges.  
The results are shown in the Calibration Report No. C093598.*

*The equipment is supplied by*

*C.O. NAME : ENVIROTECH SERVICES CO.*

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

*Date of Issue : 10 July 2009*

*Certified by :   
H.C. Chan*

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

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

Certificate No. : C103765

## *Certificate of Calibration*

*This is to certify that the equipment*

*Description : Sound Level Calibrator*

*Manufacturer : Rion*

*Model No. : NC-73*

*Serial No. : 10997142*

*has been calibrated for the specific items and ranges.  
The results are shown in the Calibration Report No. C103765.*

*The equipment is supplied by*

*Co. Name : Envirotech Services Co.*

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

*Date of Issue : 13 July 2010*

*Certified by :*

*K C Lee*

The test equipment used for calibration are traceable to the National Standards as specified in this report.  
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*Appendix D*

---

*Summary and Graphical Plot of 1-Hour TSP  
Monitoring Record*

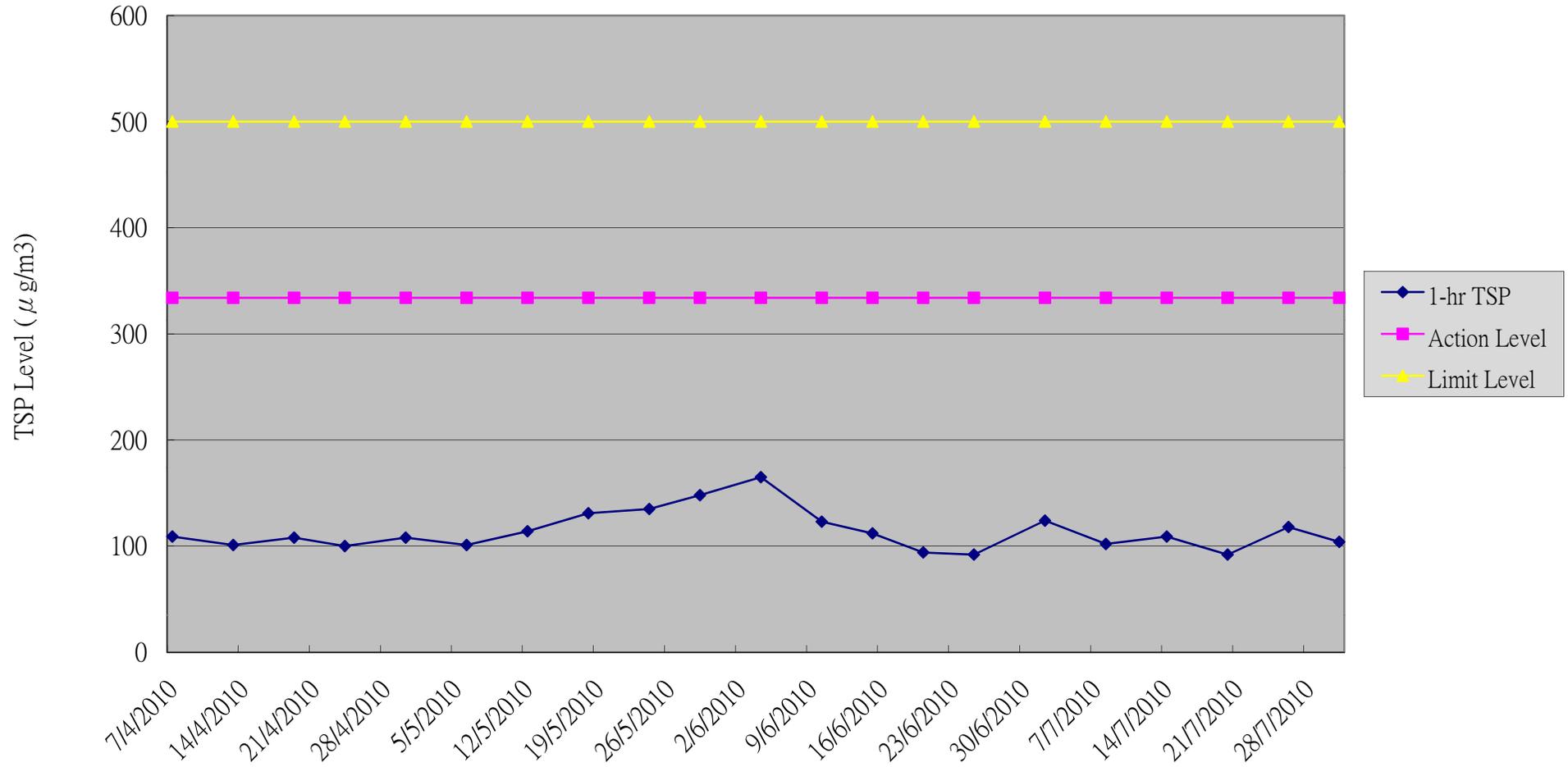
**Impact Monitoring for Fish Market Project in Tuen Mun**

**Air Quality Monitoring: 1-hour TSP**

**Quarter: May 2010 - July 2010**

Date	Time	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )	Average
7-Apr-10	13:00 - 14:00	96	109
	14:00 - 15:00	115	
	15:00 - 16:00	115	
13-Apr-10	13:00 - 14:00	115	101
	14:00 - 15:00	111	
	15:00 - 16:00	77	
19-Apr-10	13:00 - 14:00	112	108
	14:00 - 15:00	97	
	15:00 - 16:00	115	
24-Apr-10	13:00 - 14:00	110	100
	14:00 - 15:00	88	
	15:00 - 16:00	102	
30-Apr-10	13:00 - 14:00	107	108
	14:00 - 15:00	115	
	15:00 - 16:00	103	
6-May-10	13:00-14:00	92	101
	14:00-15:00	101	
	15:00-16:00	111	
12-May-10	13:00-14:00	105	114
	14:00-15:00	115	
	15:00-16:00	123	
18-May-10	13:00-14:00	134	131
	14:00-15:00	139	
	15:00-16:00	121	
24-May-10	13:00-14:00	119	135
	14:00-15:00	141	
	15:00-16:00	144	
29-May-10	13:00-14:00	139	148
	14:00-15:00	151	
	15:00-16:00	155	
4-Jun-10	13:00-14:00	159	165
	14:00-15:00	182	
	15:00-16:00	154	
10-Jun-10	13:00-14:00	128	123
	14:00-15:00	126	
	15:00-16:00	116	
15-Jun-10	13:00-14:00	115	112
	14:00-15:00	106	
	15:00-16:00	115	
21-Jun-10	13:00-14:00	95	94
	14:00-15:00	95	
	15:00-16:00	91	
26-Jun-10	13:00-14:00	82	92
	14:00-15:00	92	
	15:00-16:00	101	
2-Jul-10	13:00 - 14:00	136	124
	14:00 - 15:00	134	
	15:00 - 16:00	101	
8-Jul-10	13:00 - 14:00	92	102
	14:00 - 15:00	106	
	15:00 - 16:00	109	
14-Jul-10	13:00 - 14:00	117	109
	14:00 - 15:00	112	
	15:00 - 16:00	98	
20-Jul-10	13:00 - 14:00	115	92
	14:00 - 15:00	85	
	15:00 - 16:00	75	
26-Jul-10	13:00 - 14:00	117	118
	14:00 - 15:00	122	
	15:00 - 16:00	114	
31-Jul-10	13:00 - 14:00	91	104
	14:00 - 15:00	112	
	15:00 - 16:00	109	

1-hr TSP Levels (Quarter: May2010 - July 2010)



*Appendix E*

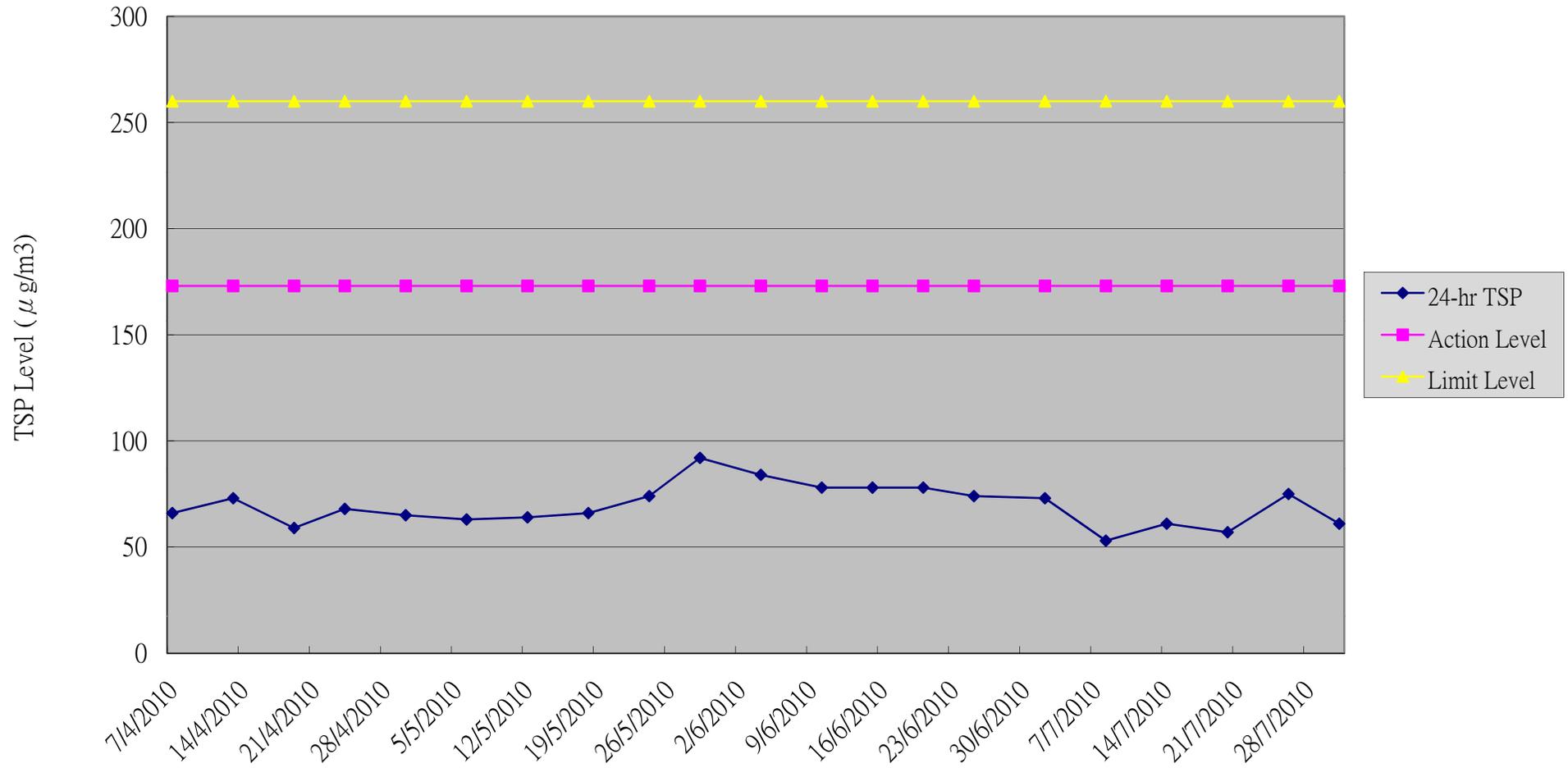
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*Summary and Graphical Plot of 24-Hour TSP  
Monitoring Record*

**Impact Monitoring for Fish Market Project in Tuen Mun****Air Quality Monitoring: 24-hour TSP****Quarter: May 2010 - July 2010**

Date	Start time	24-hr TSP ( $\mu\text{g}/\text{m}^3$ )
7-Apr-10	11:30	66
13-Apr-10	11:30	73
19-Apr-10	11:30	59
24-Apr-10	11:30	68
30-Apr-10	11:30	65
6-May-10	11:30	63
12-May-10	11:30	64
18-May-10	11:30	66
24-May-10	11:30	74
29-May-10	11:30	92
4-Jun-10	16:00	84
10-Jun-10	16:00	78
15-Jun-10	16:00	78
21-Jun-10	16:00	78
26-Jun-10	16:00	74
2-Jul-10	16:00	73
8-Jul-10	16:00	53
14-Jul-10	16:00	61
20-Jul-10	16:00	57
26-Jul-10	16:00	75
31-Jul-10	16:00	61

24-hour TSP Levels (Quarter: May 2010 - July 2010)



*Appendix F*

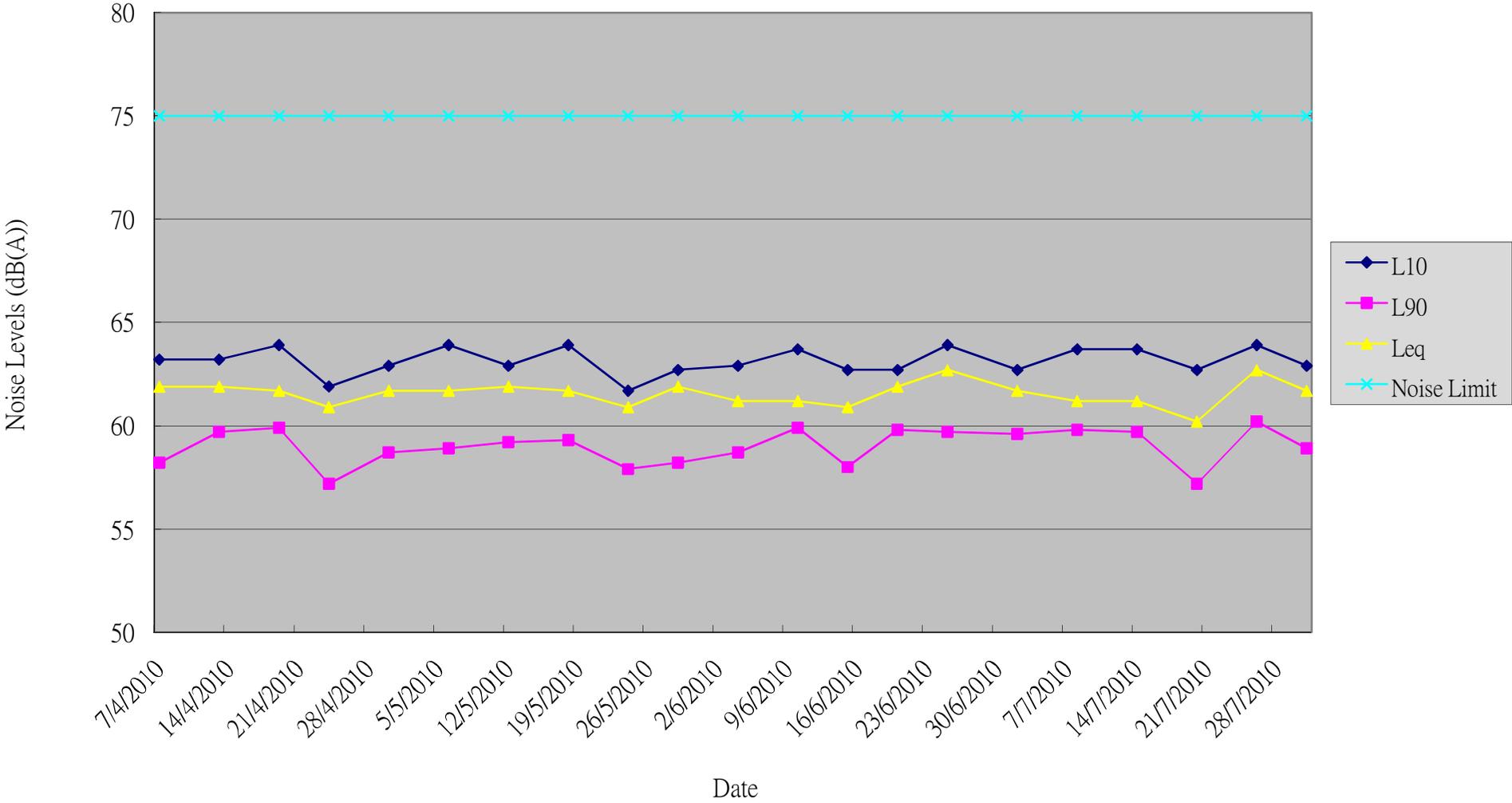
---

*Summary and Graphical Plot of Noise Monitoring  
Record*

**Impact Monitoring for Fish Market Project in Tuen Mun****Noise Monitoring****Quarter: May 2010 - July 2010**

Date	Time	L10(30mins) (dB(A))	L90(30mins) (dB(A))	Leq(30mins) (dB(A))
7-Apr-10	14:08 - 14:38	63.2	58.2	61.9
13-Apr-10	13:08 - 13:38	63.2	59.7	61.9
19-Apr-10	13:05 - 13:35	63.9	59.9	61.7
24-Apr-10	13:08 - 13:38	61.9	57.2	60.9
30-Apr-10	13:10 - 13:40	62.9	58.7	61.7
6-May-10	13:10 - 13:40	63.9	58.9	61.7
12-May-10	13:08 - 13:38	62.9	59.2	61.9
18-May-10	13:10 - 13:40	63.9	59.3	61.7
24-May-10	13:08 - 13:38	61.7	57.9	60.9
29-May-10	13:09 - 13:39	62.7	58.2	61.9
4-Jun-10	13:10 - 13:40	62.9	58.7	61.2
10-Jun-10	13:10 - 13:40	63.7	59.9	61.2
15-Jun-10	13:10 - 13:40	62.7	58.0	60.9
21-Jun-10	13:10 - 13:40	62.7	59.8	61.9
26-Jun-10	14:10 - 14:40	63.9	59.7	62.7
2-Jul-10	13:10 - 13:40	62.7	59.6	61.7
8-Jul-10	13:10 - 13:40	63.7	59.8	61.2
14-Jul-10	13:10 - 13:40	63.7	59.7	61.2
20-Jul-10	13:12 - 13:42	62.7	57.2	60.2
26-Jul-10	13:10 - 13:40	63.9	60.2	62.7
31-Jul-10	13:10 - 13:40	62.9	58.9	61.7

Noise Monitoring Record (Quarter: May 2010- July2010)



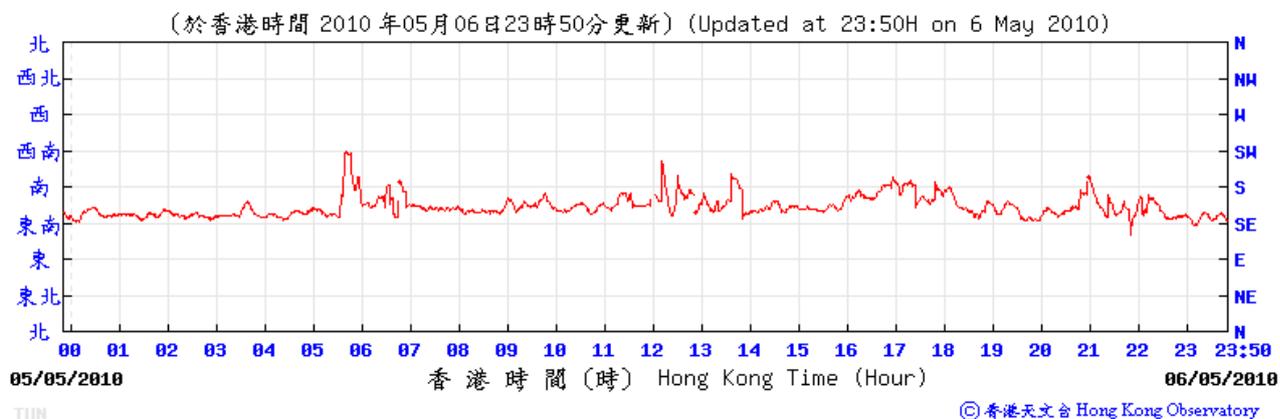
*Appendix G*

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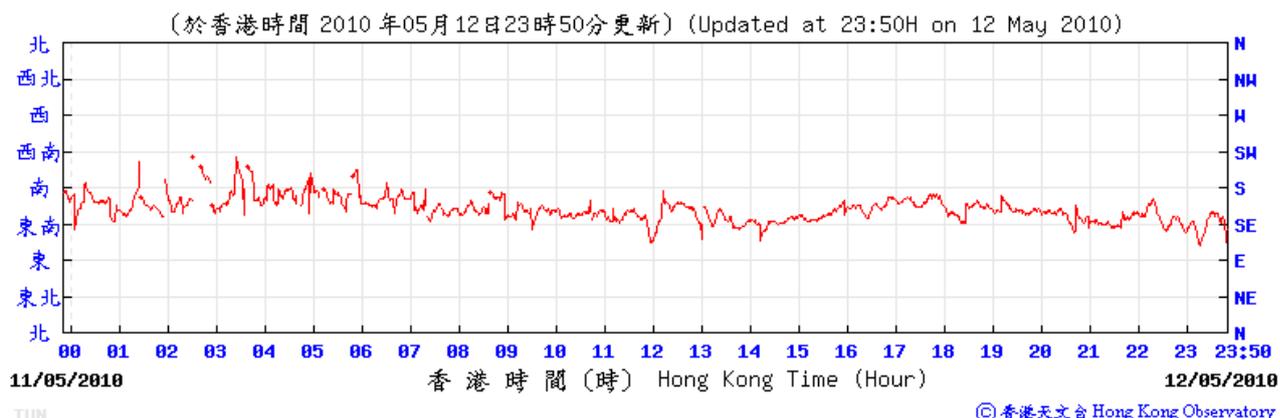
*Wind Record from Hong Kong Observatory*

# Wind direction at Hong Kong Observatory (Tuen Mun Automatic Weather Station)

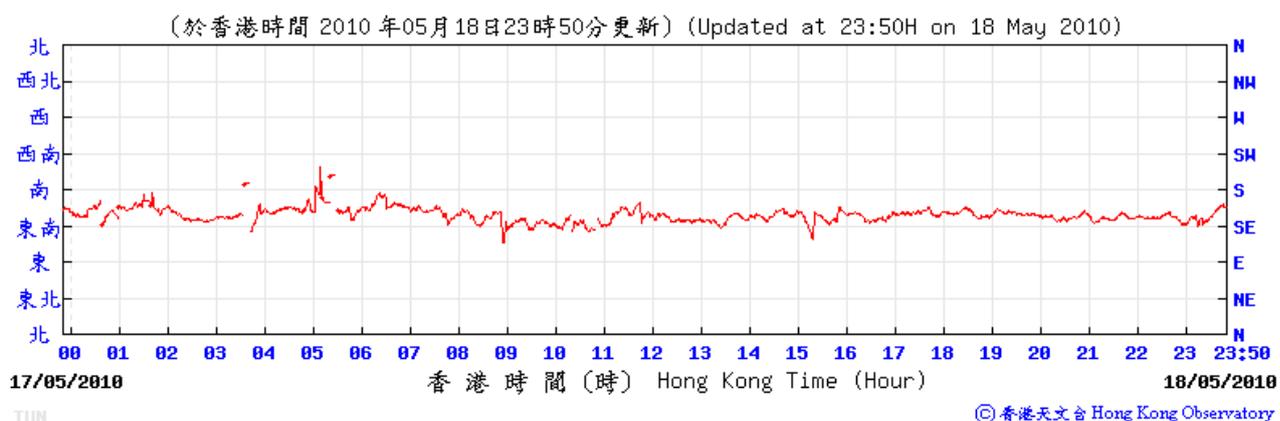
6/5/2010



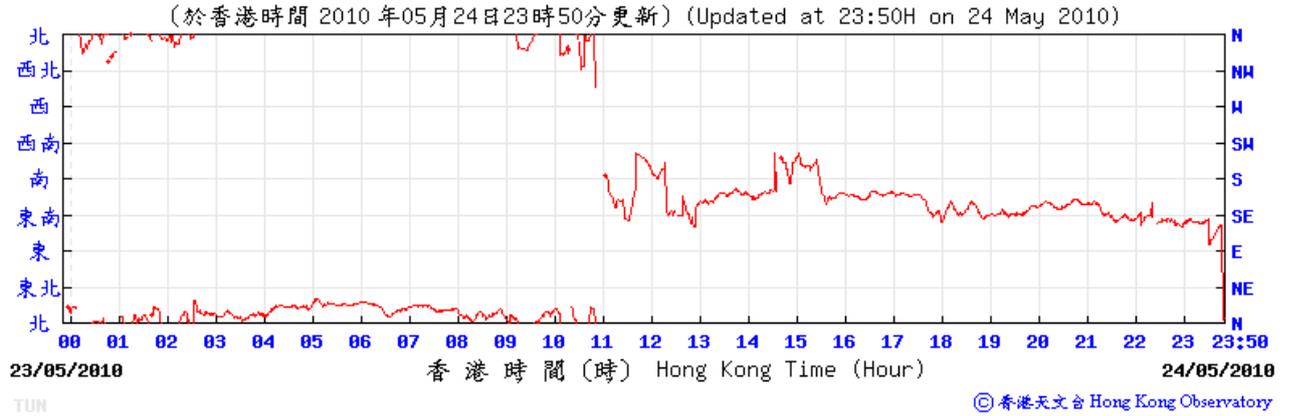
12/5/2010



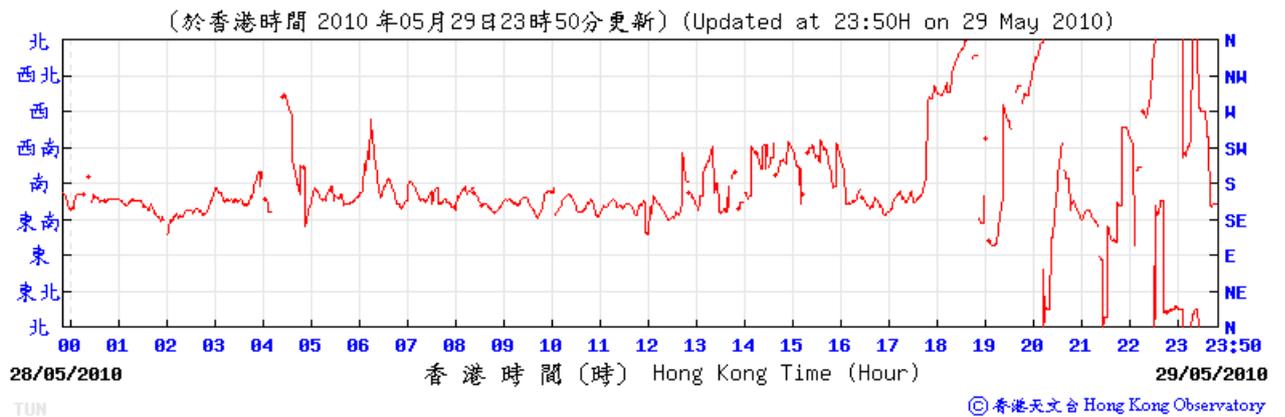
18/5/2010



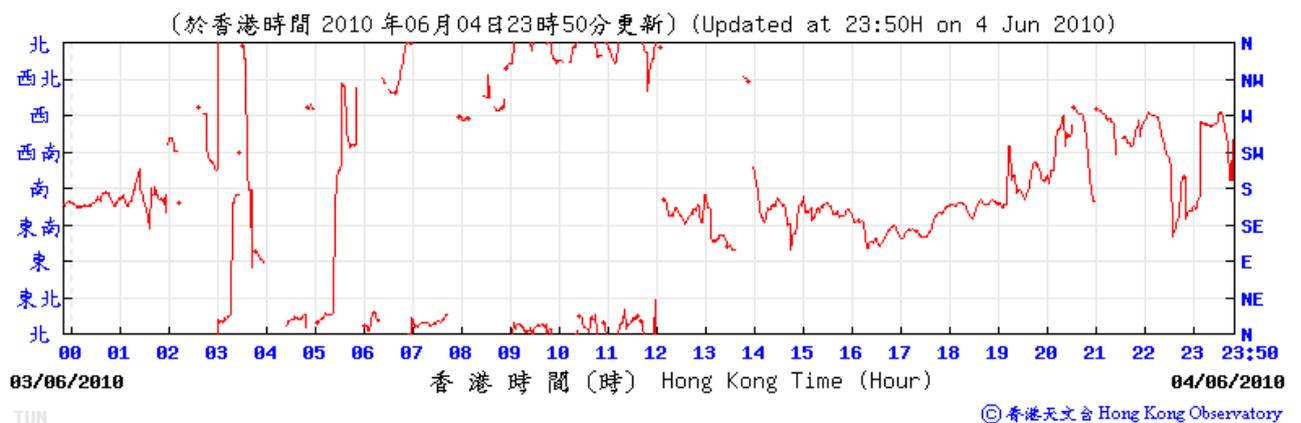
24/5/2010



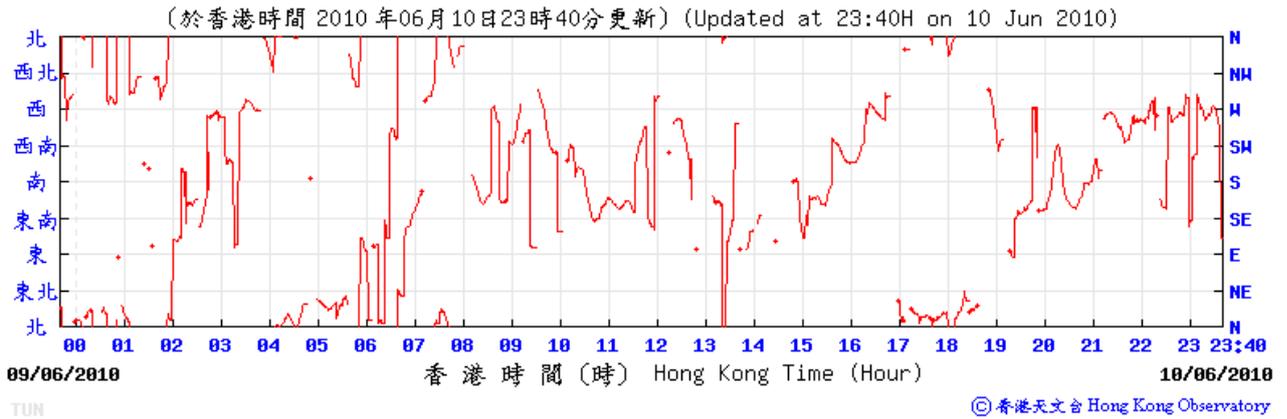
29/5/2010



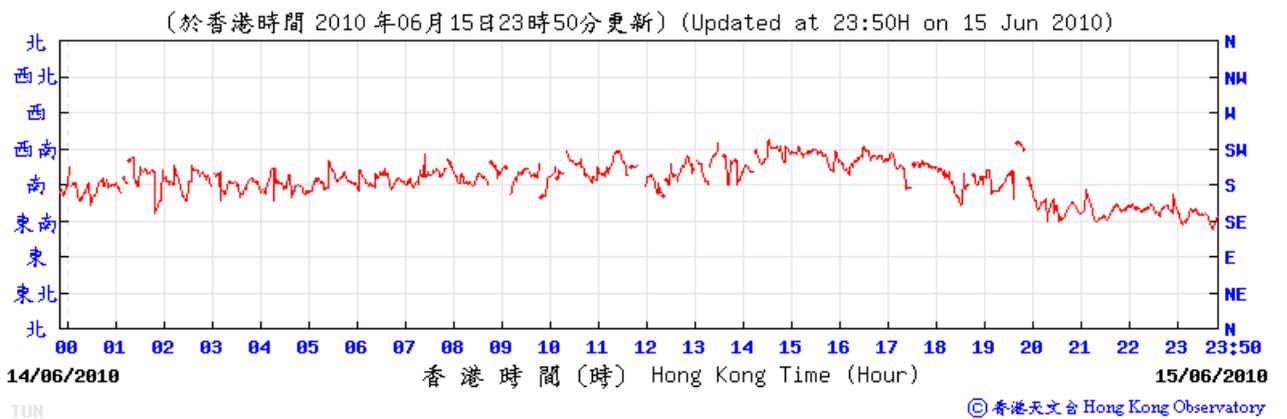
4/6/2010



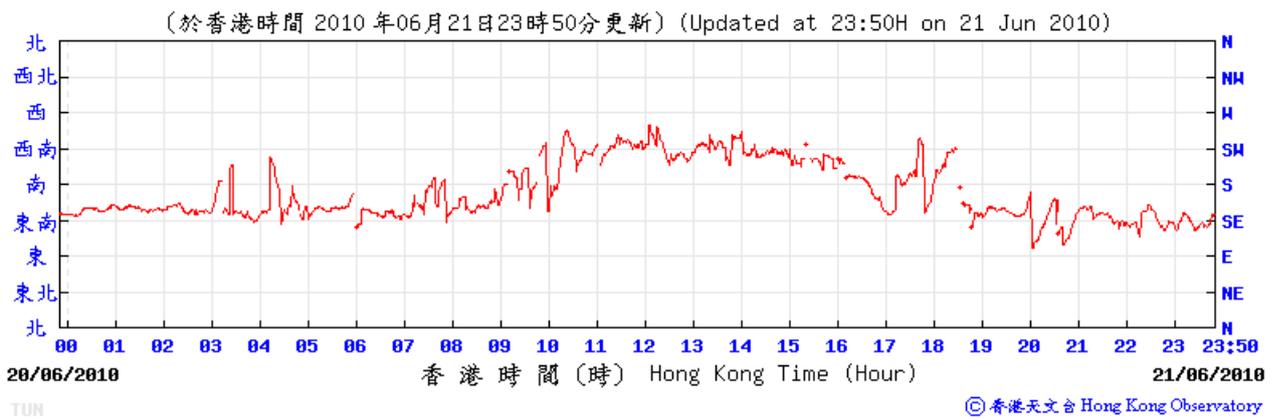
10/6/2010



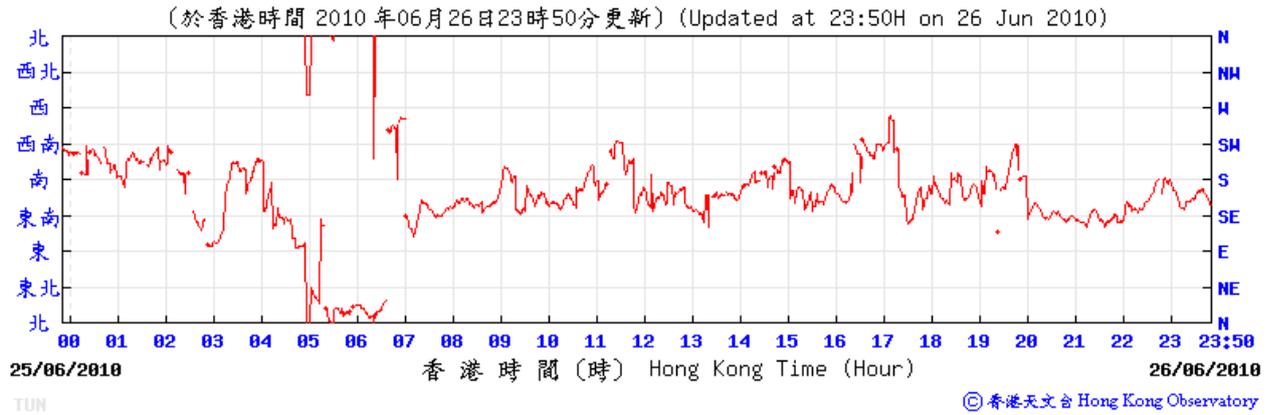
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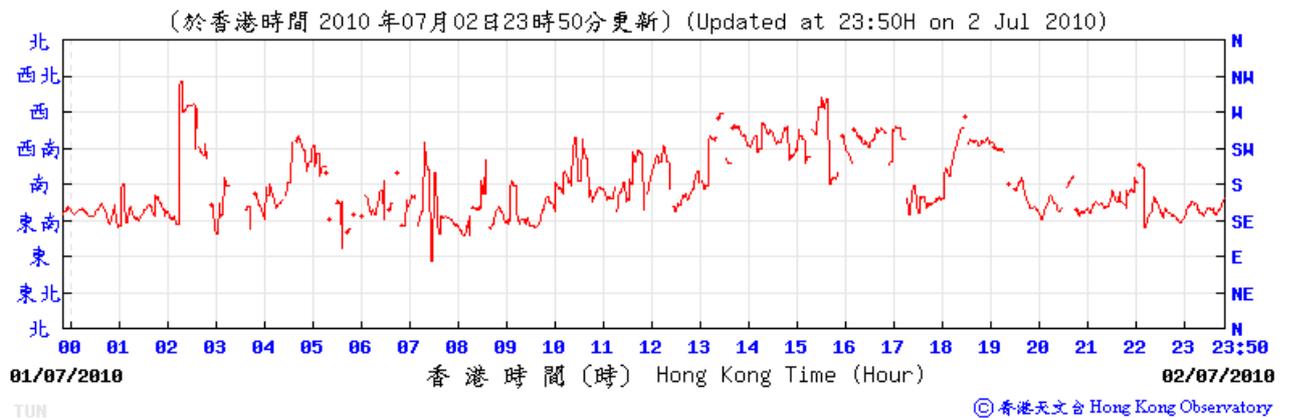
21/6/2010



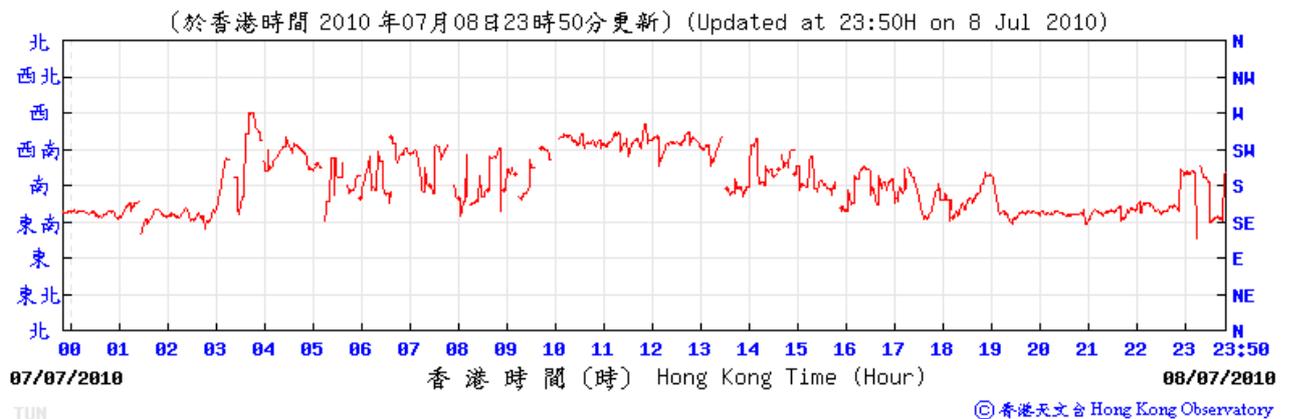
26/6/2010



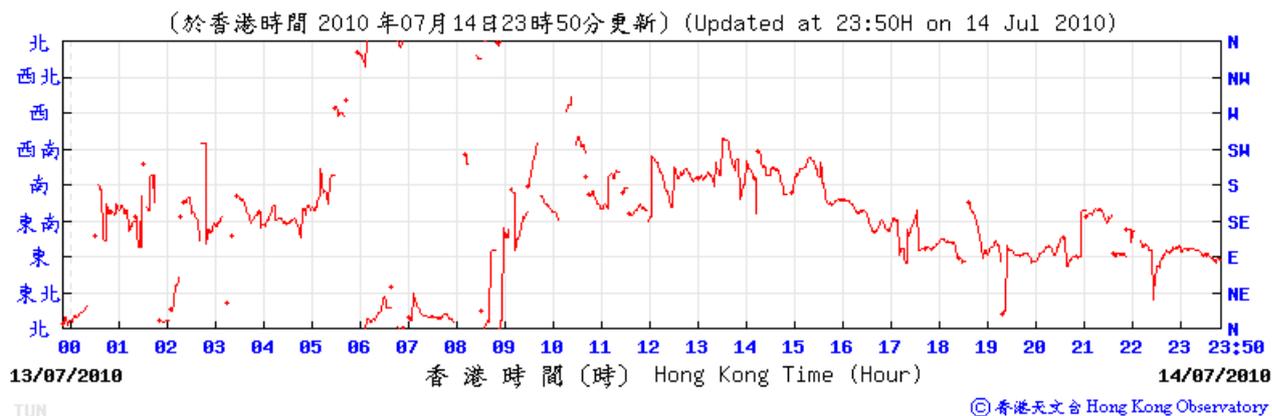
2/7/2010



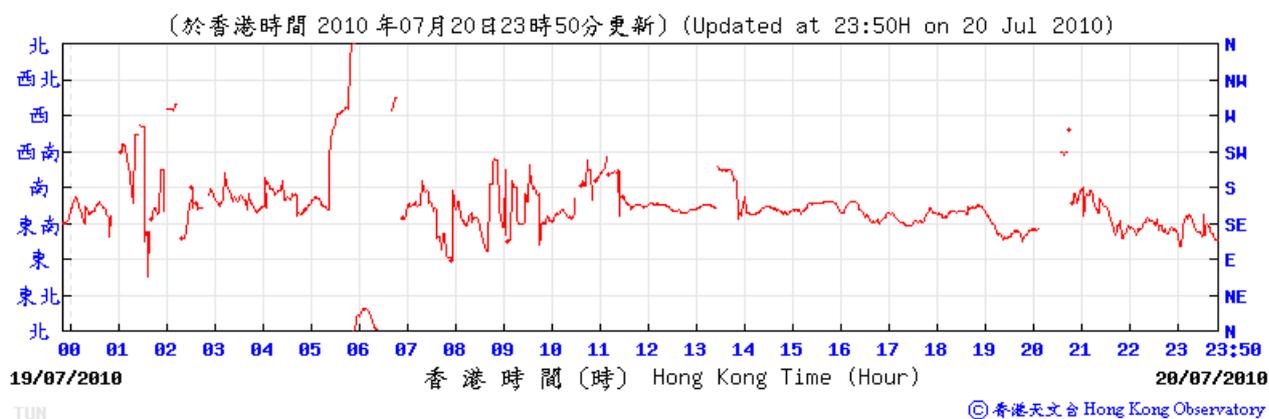
8/7/2010



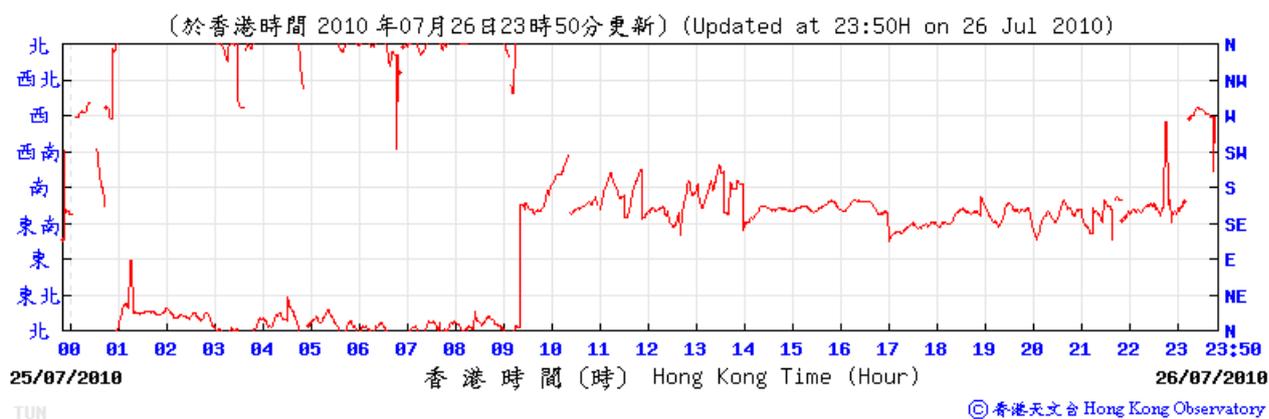
14/7/2010



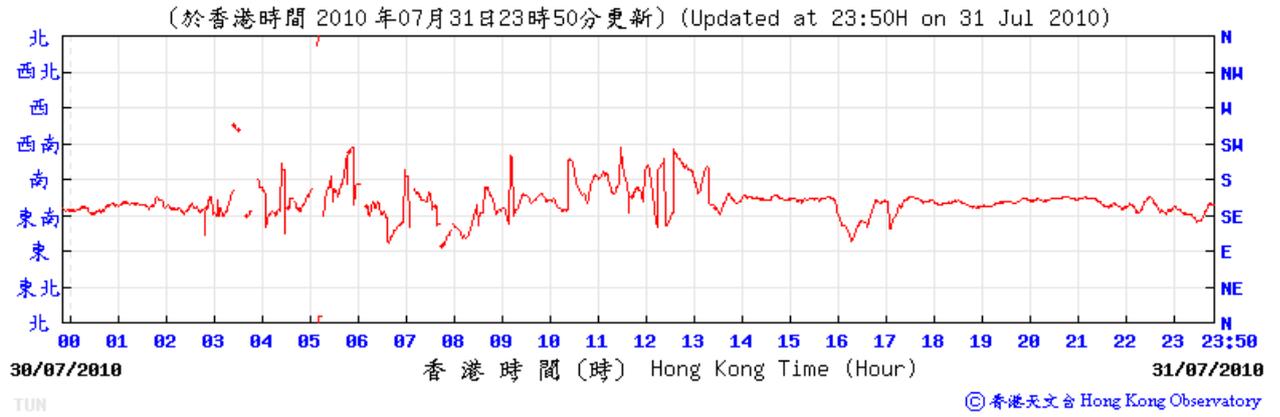
20/7/2010



26/7/2010



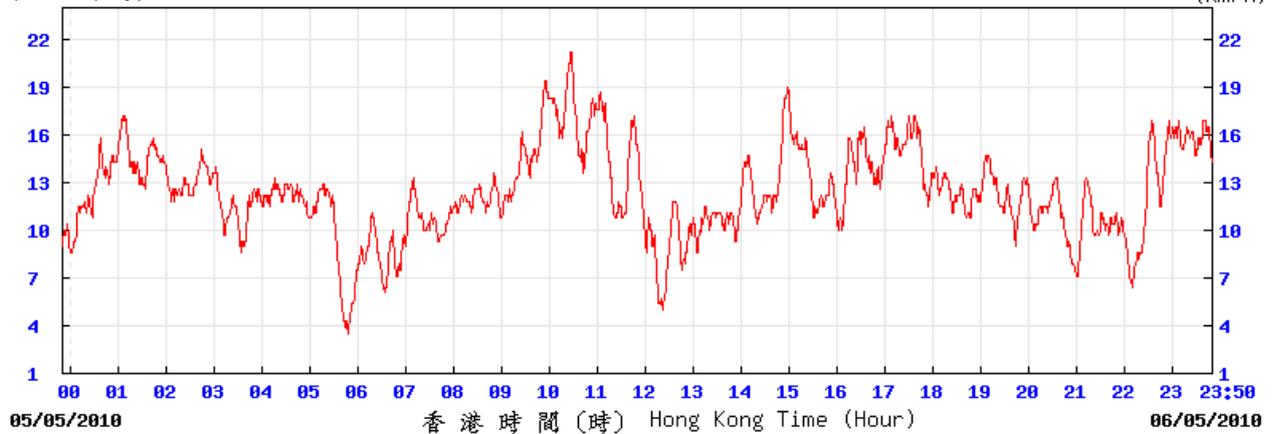
31/7/2010



# Wind speed at Hong Kong Observatory (Tuen Mun Automatic Weather Station)

6/5/2010

(公里/小時) (於香港時間 2010 年 5 月 6 日 23 時 50 分更新) (Updated at 23:50H on 6 May 2010)

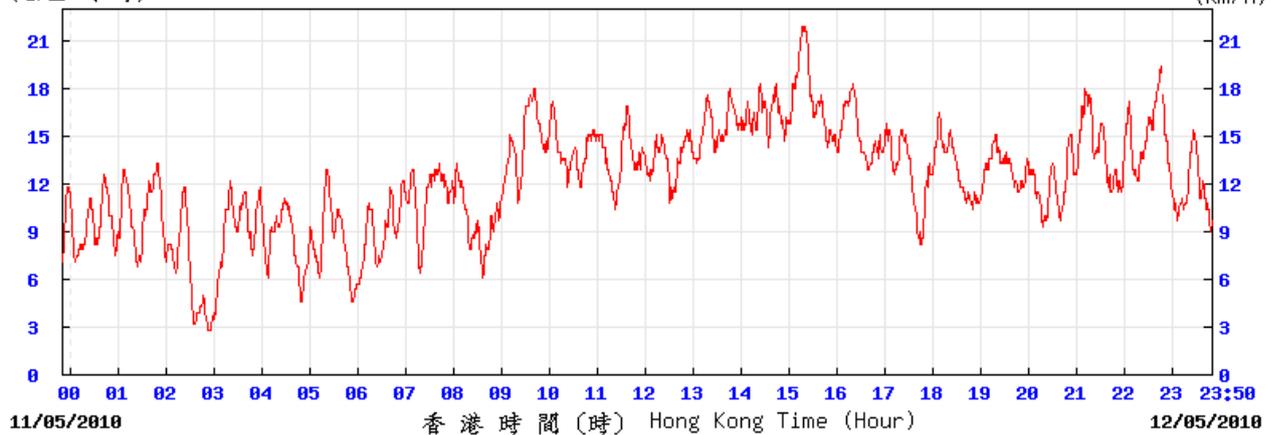


TUN

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12/5/2010

(公里/小時) (於香港時間 2010 年 5 月 12 日 23 時 50 分更新) (Updated at 23:50H on 12 May 2010)

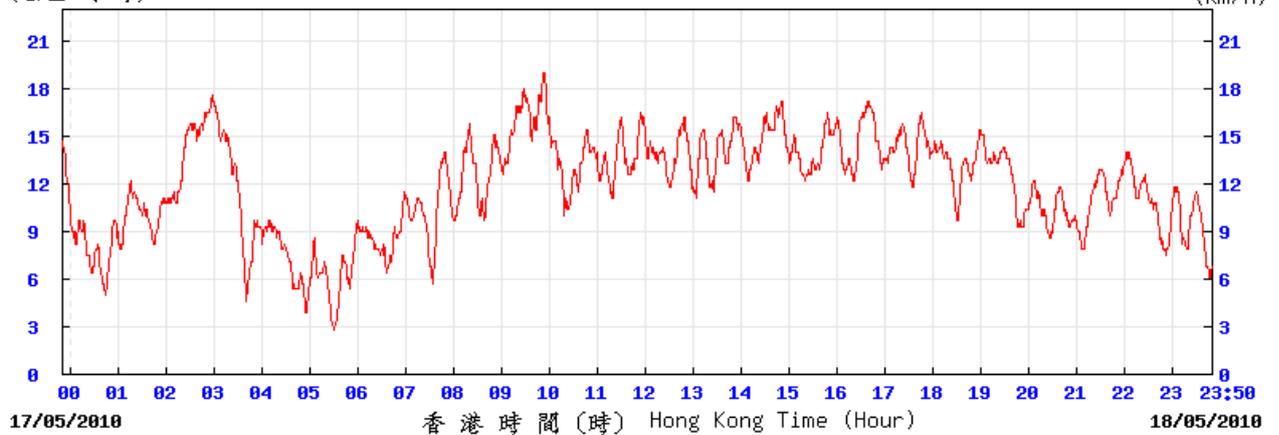


TUN

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18/5/2010

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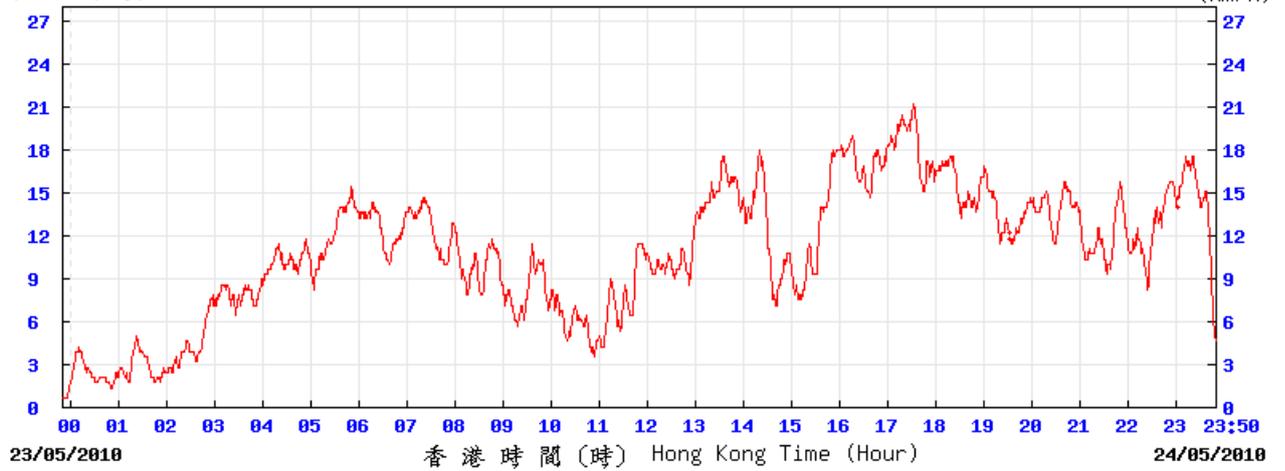


TUN

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24/5/2010

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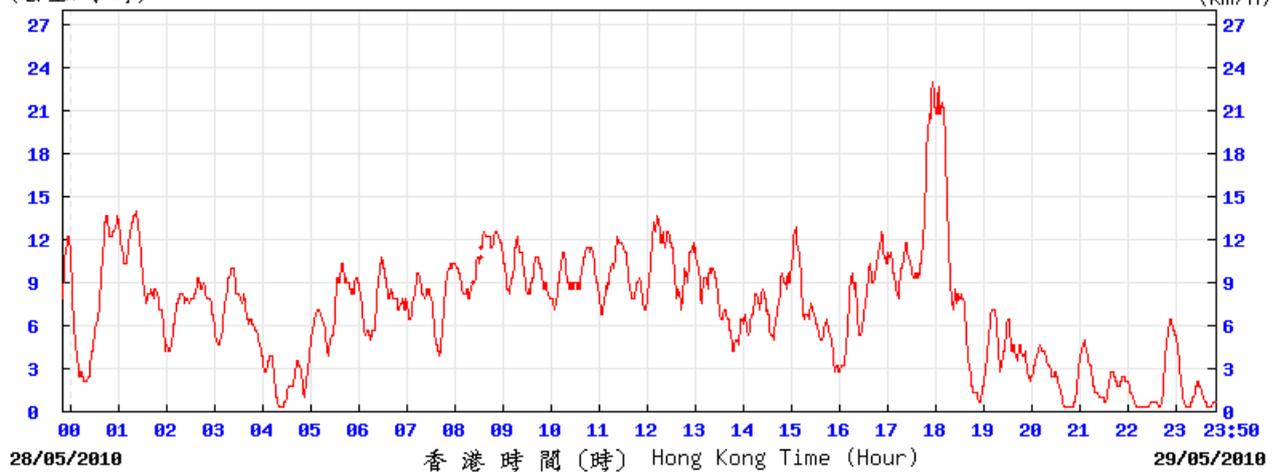


TUN

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29/5/2010

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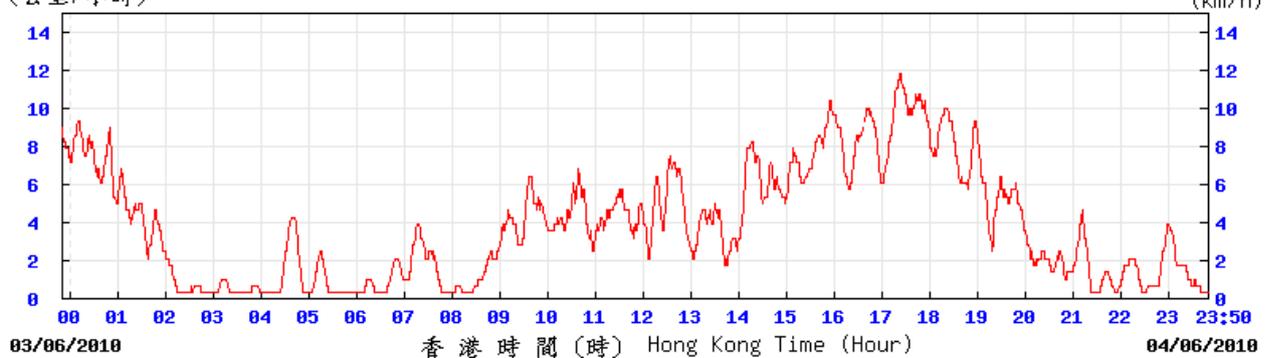


TUN

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4/6/2010

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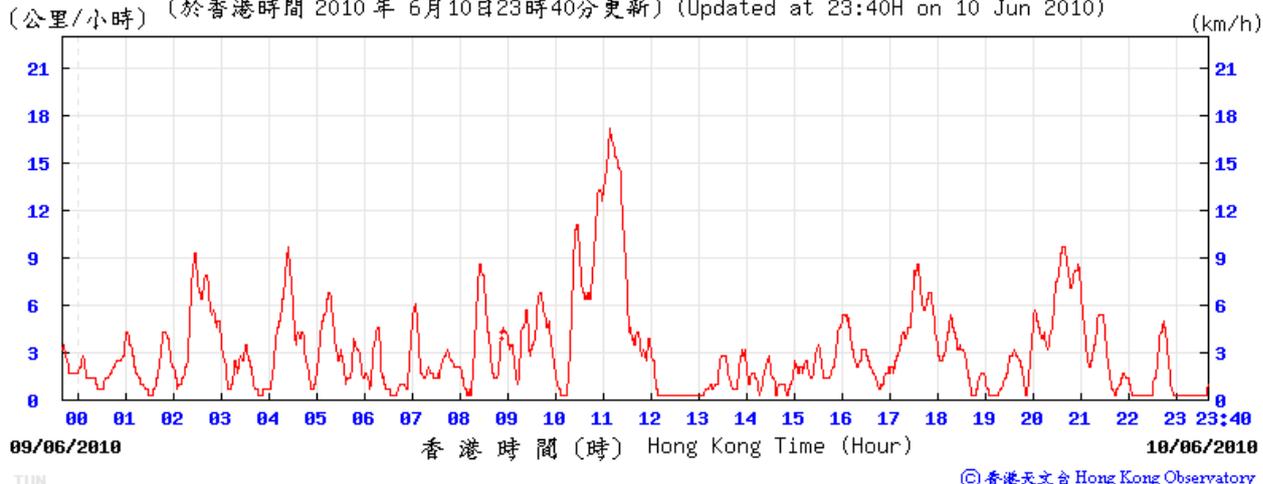


TUN

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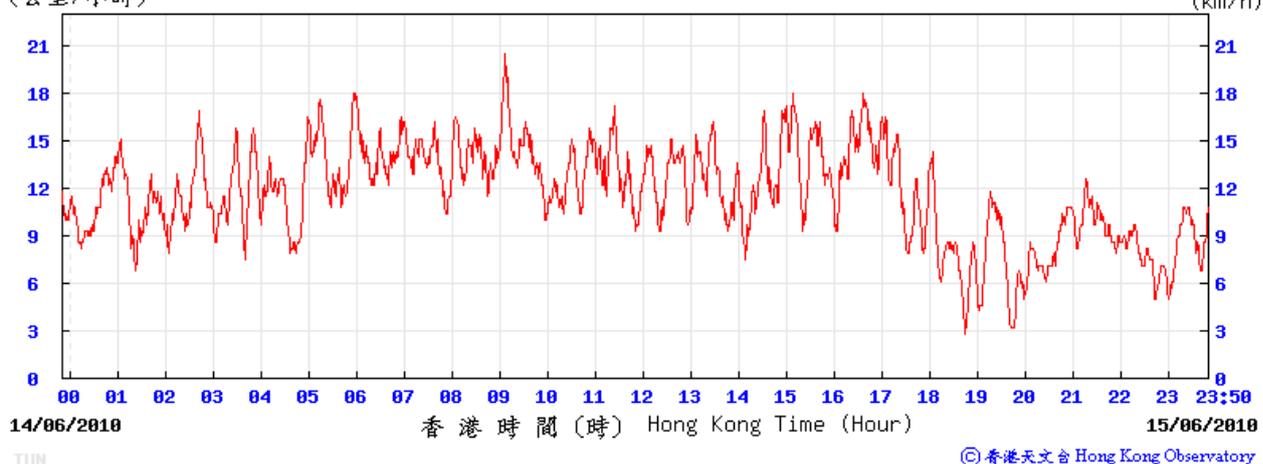
10/6/2010

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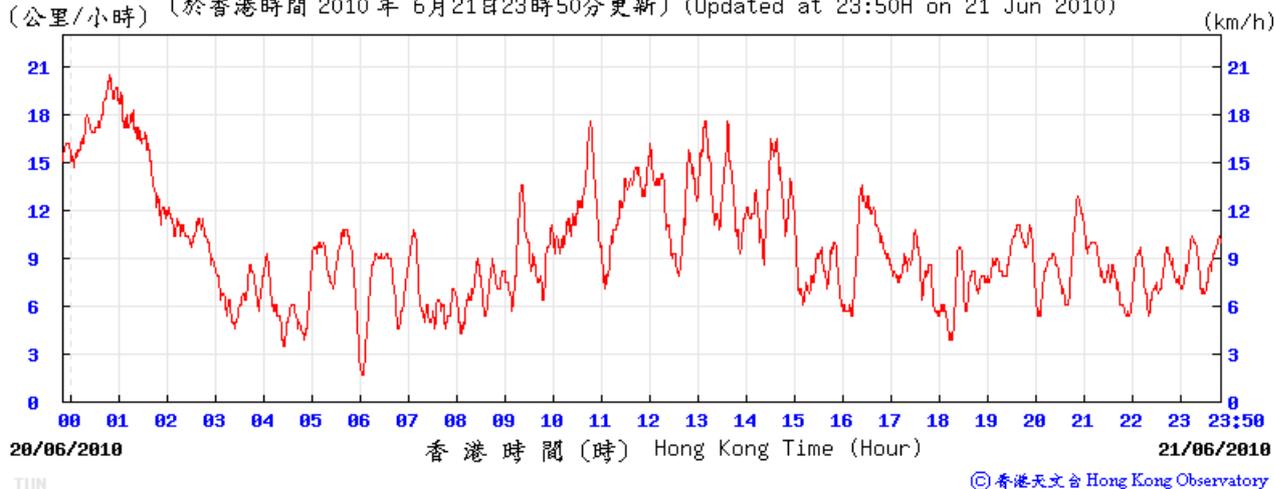
15/6/2010

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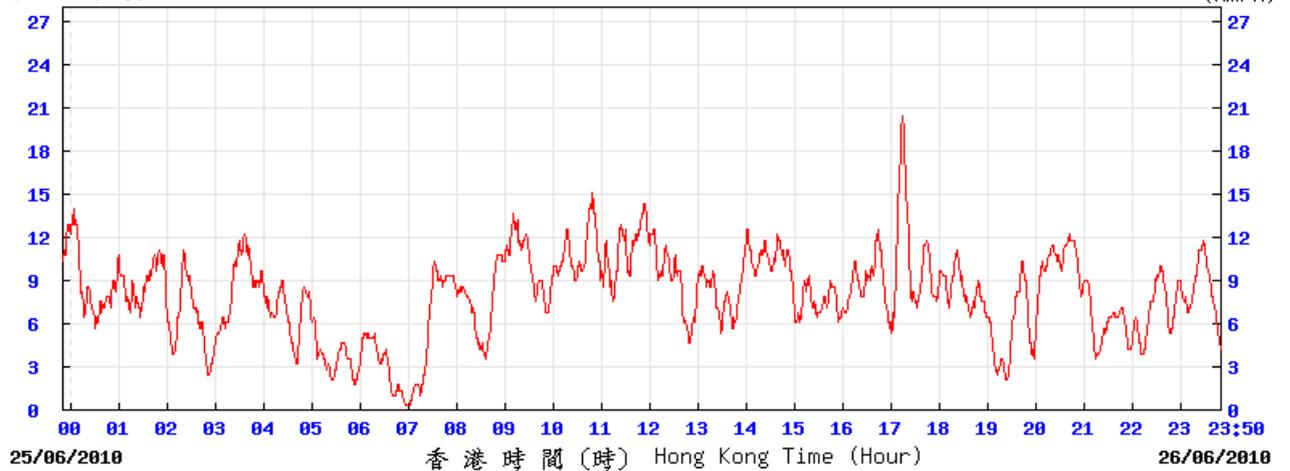
21/6/2010

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26/6/2010

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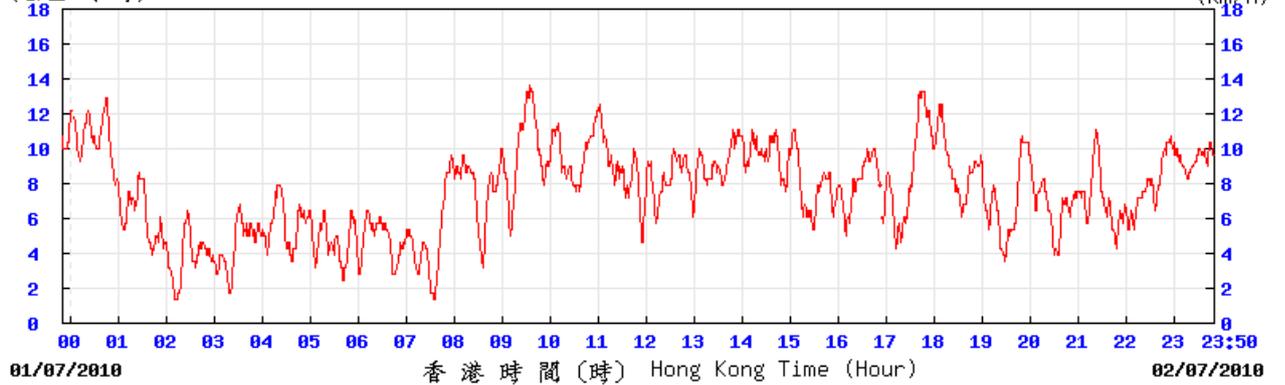


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2/7/2010

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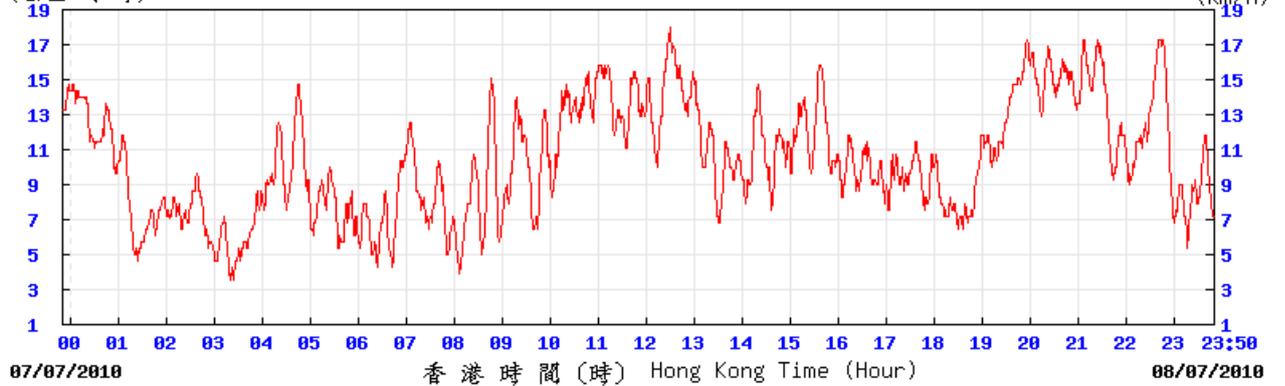


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8/7/2010

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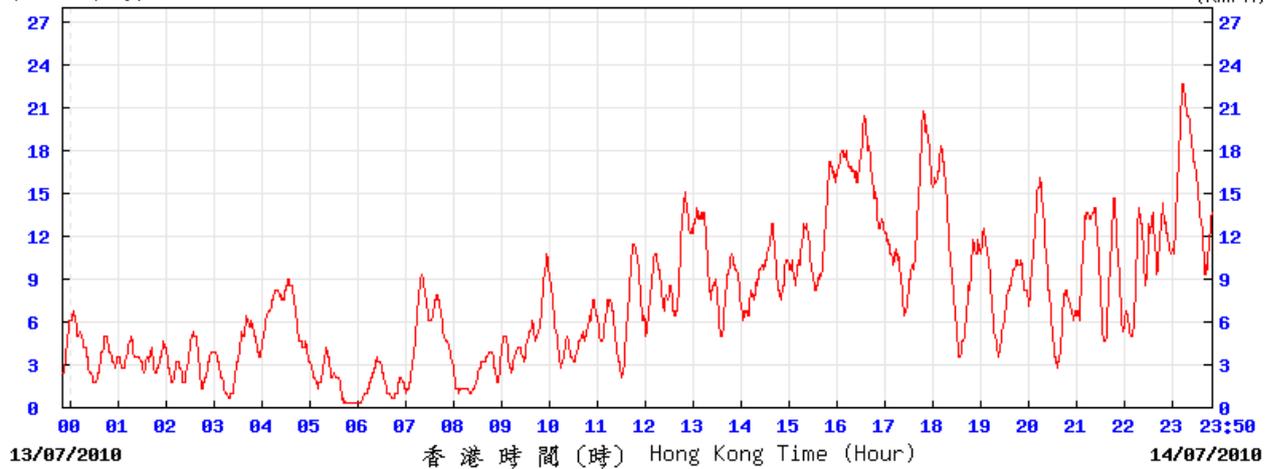


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14/7/2010

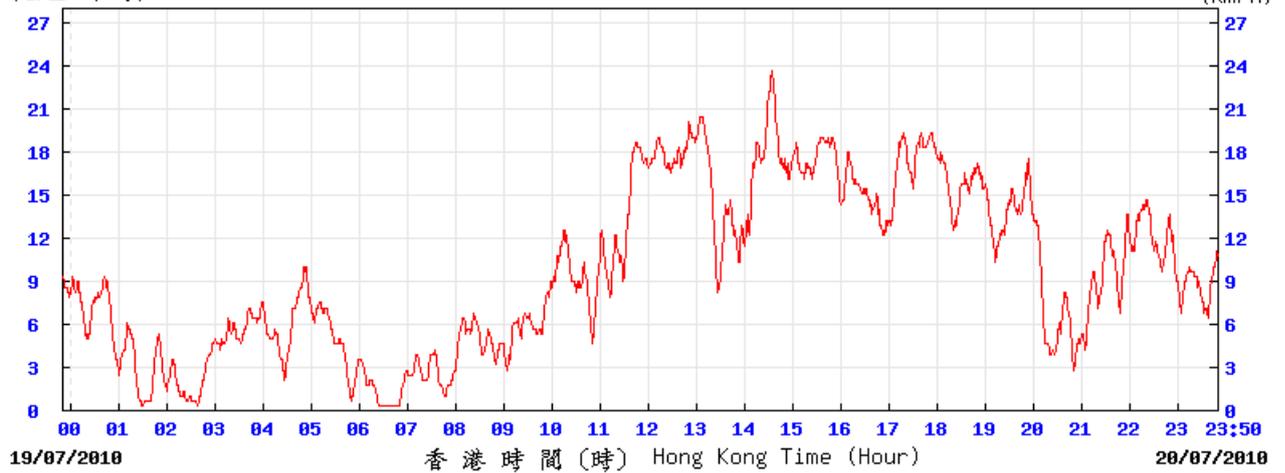
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TUN  
20/7/2010

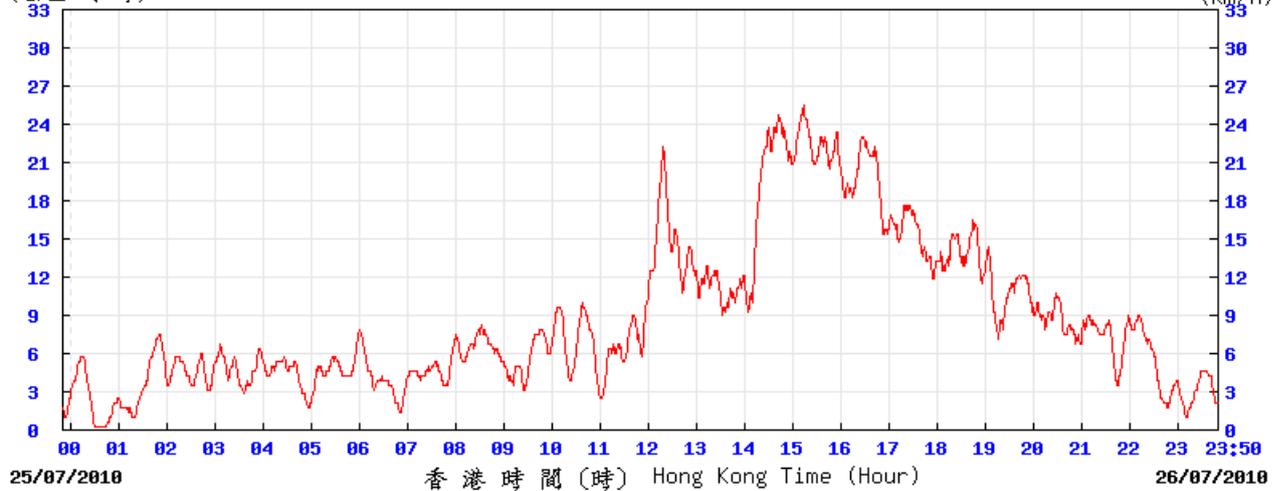
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26/7/2010

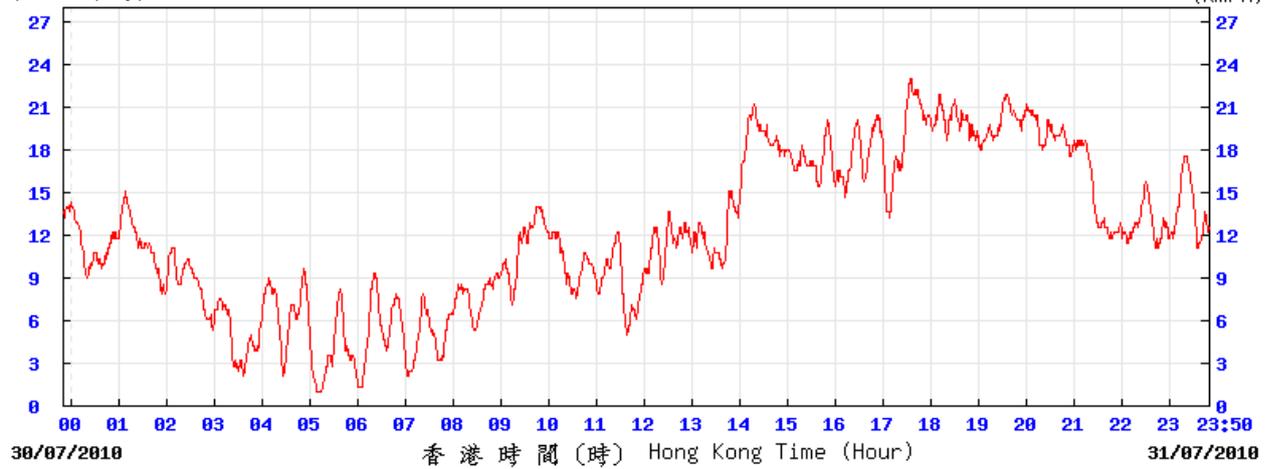
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31/7/2010

(公里/小時) (於香港時間 2010 年 7 月 31 日 23 時 50 分更新) (Updated at 23:50H on 31 Jul 2010)



30/07/2010

香港時間 (時) Hong Kong Time (Hour)

31/07/2010

TUN

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*Appendix H*

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*Mitigation Measures Implementation Schedule for  
Construction Stage*

EIA Ref. Section	EM&A Ref. Section	Environmental Protection Measures	Status
4.7	2.8	<p><b>Air Quality</b></p> <ul style="list-style-type: none"> <li>• Hoarding of not less than 2.4m high shall be provided along the site boundary section adjoins a road, street, service land or other area accessible to the public</li> <li>• Spray water to where excavation to be taken place immediately prior to, during and after excavation</li> <li>• Any stockpile of dusty material shall be either: (a) covered entirely by impervious sheeting; (b) placed in an area sheltered on the top and the three sides; or (c) sprayed with water or a dust suppression chemical so as to maintain the entire surface wet</li> <li>• Cement bags or any other dusty materials collected during the work should be disposed of in totally enclosed containers</li> <li>• All dusty materials should be sprayed with water immediately prior to any loading, unloading or transfer operation so as to minimise the dusty materials wet</li> <li>• Any dusty material remaining after a stockpile of cement or other materials is removed should be wetted and removed from the surface of roads</li> <li>• Where a vehicle leaving the construction site is carrying a load of dusty materials, the load shall be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle</li> <li>• Conveyor belts shall be fitted with windboards, and conveyor transfer points and hopper discharge areas shall be enclosed and fitted with belt cleaners</li> <li>• Skip hoist for the transport of construction wastes should be properly enclosed</li> <li>• Vehicle washing facilities including a high pressure water jet shall be provided at the designated vehicle exit point and every vehicle immediately before leaving the construction site shall be washed to remove any dusty materials from its body and wheels</li> <li>• Every main haul road, vehicle washing areas and the section of road between the washing facilities and the exit point shall be paved with concrete, bituminous materials, hardcore or metal plates and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet</li> <li>• Debris from the construction of the WFM shall be covered entirely by impervious sheeting or stored in a sheltered debris collection area</li> </ul>	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">*</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">N/A</p> <p style="text-align: center;">N/A</p> <p style="text-align: center;">^</p> <p style="text-align: center;">*</p> <p style="text-align: center;">N/A</p>

Remarks: ^ Compliance of mitigation measure;  
N/A Not Applicable at this stage;

X Non-compliance of mitigation measure;  
\* Not satisfactory but rectified by the contractor.

EIA Ref. Section	EM&A Ref. Section	Environmental Protection Measures	Status
5.7	3.7	<p><b>Noise</b></p> <ul style="list-style-type: none"> <li>• Use quiet construction equipment</li> <li>• Use silencers / mufflers, noise barriers / enclosure where practicable</li> <li>• The Contractor is required to determine the number and type of construction equipment taking into account the use of quiet plant while devising a feasible work programme</li> <li>• Only well-maintained plant shall be operated on-site and all equipment shall be routinely checked</li> <li>• Turn off or throttle down idle plant</li> <li>• Plants known to emit noise strongly shall be oriented away from NSRs</li> <li>• Mobile plants shall be sited as far away from NSRs as possible</li> <li>• Stockpiles and other structures shall be effectively utilised as practicable to screen noise from on-site construction activities</li> <li>• Obtain valid noise permits for construction work during restricted hours</li> </ul>	<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>X</p>
6.7	4.1	<p><b>Water Quality</b></p> <ul style="list-style-type: none"> <li>• Site shall be kept clean and tidy to avoid construction materials and waste being washed off from site</li> <li>• Works shall be planned to avoid rainy season so as to minimize the runoff and reduce the amount of soil that can be carried offsite</li> <li>• Surface run-off from the construction site shall be directed to silt traps or sedimentation basin before reuse or discharge with help of channels, earth bunds or sand bag barriers for suspended solids removal prior to its being discharged to storm water drain. Silt trap design shall conform to the guidelines laid down in Appendix A1 of ProPECC PN 1/94</li> <li>• Wastewater likely to be contaminated with oil or grease should be passed through an oil separator or grease trap before entering the site drainage system</li> <li>• Hoarding gaps should be tightly sealed to avoid the seepage of wastewater to the nullah and outside the site</li> <li>• Perimeter channels shall be provide at site boundaries, where necessary, to intercept storm-water runoff from outside the site</li> <li>• Silt traps, sedimentation basins, channels and manholes shall be regularly cleaned to remove the deposited silt and grit</li> <li>• Temporarily exposed slope surfaces and construction material stockpiles shall be covered with tarpaulin or similar fabric to prevent erosion</li> <li>• Wastewater generated from bored-piling shall be re-circulated after sedimentation as practicable. The final discharge of the wastewater shall be via silt removal facilities.</li> <li>• All fuel tanks and chemical storage areas shall be surrounded by bunds with a capacity equal to 110% of the storage capacity</li> </ul>	<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>N/A</p> <p>^</p> <p>^</p>

Remarks: ^ Compliance of mitigation measure;  
N/A Not Applicable at this stage;

X Non-compliance of mitigation measure;  
\* Not satisfactory but rectified by the contractor.

EIA Ref. Section	EM&A Ref. Section	Environmental Protection Measures	Status
		<p>of the largest tank to prevent spilled oil, fuel and chemicals from reaching the receiving waters</p> <ul style="list-style-type: none"> <li>• Obtain valid discharge license for construction site discharges</li> <li>• Chemical toilets shall be provided on site</li> <li>• Monitor the quality of water discharge to ensure compliance of the license condition</li> <li>• Surface drainage channels of operational areas shall be easily cleaned and connected to foul sewerage</li> </ul>	<p>^ ^ ^ ^ ^</p>
7.2	5.1	<p><b>Waste Management</b></p> <ul style="list-style-type: none"> <li>• Reuse of excavated soils for back-filling and landscaping purposes</li> <li>• All reusable and recyclable waste materials shall be segregated and stored in different containers, skips or stockpiled</li> <li>• Separate the inert and non-inert portions of construction material for disposal of public fill and landfill respectively</li> <li>• Employ approved licensed waste collectors to collect the inert construction materials to be disposed of at public fill</li> <li>• Provide a temporary storage areas for storing and stockpiling reusable and recyclable materials.</li> <li>• Contractor should register as chemical waste producer should chemical waste is produced.</li> <li>• Licensed waste collectors shall be employed for collecting chemical wastes for disposal.</li> <li>• Handling and Disposal of chemical waste shall be in accordance with the Code of Practice on the Practice on the Packaging, Labelling and Storage of Chemical Wastes issued under the Waste Disposal Ordinance..</li> <li>• Quantities of waste materials generated on site and disposal record (e.g. trip ticket) shall be kept on site for inspection</li> <li>• A Waste Management Plan (WMP) shall be prepared to set out waste handling and disposal strategy and submitted for the architect's approval</li> <li>• Material being temporary used for construction shall be recyclable as possible</li> <li>• Design and provide an area within the construction site to allow on-site sorting and segregation of waste materials</li> <li>• Training shall be provided to site staff on waste minimisation practices including waste reduction, reuse and recycling</li> <li>• Disposal of C&amp;D material shall be monitored by Trip-Ticket System</li> <li>• In order to minimize the amount of waste disposal, durable and reusable containers should be used, where practicable, instead of plastic bags</li> </ul>	<p>^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^</p>

Remarks: ^ Compliance of mitigation measure;  
N/A Not Applicable at this stage;

X Non-compliance of mitigation measure;  
\* Not satisfactory but rectified by the contractor.

8.7	6.1	<p><b>Hazard to Life</b></p> <ul style="list-style-type: none"> <li>• Cranes shall be located away from the LPG compound and its access as far as possible</li> <li>• Before excavation work is undertaken, the gas company should be contacted to obtain information (drawings, plans) of all gas pipes in the vicinity of the site. Suitable pipe locating devices must be used to locate underground pipes. Hand dug trial holes must then be used to confirm the position of underground pipes. Excavation must be carried out with extreme care following any advice given by the Gas Authority or Gas Company.</li> <li>• Sufficient guidance shall be given to all workers before carrying out excavation in the vicinity of pipelines</li> <li>• Manually operated warning siren shall be installed to instruct people to take timely shelter</li> <li>• Fire drill exercises shall be organized for the users of the WFM.</li> </ul>	<p style="text-align: center;">^</p>
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Remarks:    ^    Compliance of mitigation measure;  
                  N/A    Not Applicable at this stage;

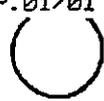
X    Non-compliance of mitigation measure;  
 \*    Not satisfactory but rectified by the contractor.

*Appendix I*

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*Memoranda Notifying the Violation of the  
Noise Control Ordinance*

# BY FAX MEMO



From Director of Environmental Protection  
 Ref. In EP/RW/0000/080262  
 Tel. No. 2417 6139  
 Fax. No. 2411 3073  
 Date 18 May 2010

To Director of Architecture Services  
 (Attn CPM 301 Mr. Patrick/Hau H.F.)  
 Your Ref. In  
 Dated          Fax. No. 2523 9622  
 Total Pages 1

## Proposed Joint User Complex and Wholesale Fish Market at Area 44, Tuen Mun

### Offence on 16 May 2010

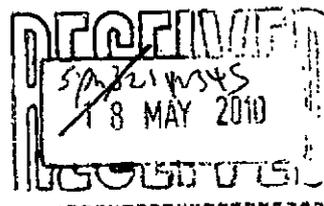
I refer to the construction works of the above premises, which was granted an Environmental Permit EP-296/2007 in December 2007. Please be informed that during our site inspection on 16.5.2010, we noted that the concerned contractor had carried out the construction works with powered mechanical equipment without a Construction Noise Permit (CNP), which violated section 6 of the Noise Control Ordinance.

- 2 While we would consider taking legal action on this case, the subject case is now referred to you for your necessary actions.
3. Thank you for your kind attention.

(Shirley Lam)

Environmental Protection Officer  
for Director of Environmental Protection

*Spence,*  
*your follow up on please*  
*Pat Ha*  
*18/5*



# BY FAX

## MEMO

From Director of Environmental Protection  
 Ref. ( ) in EP/RW/0000/080262  
 Tel. No. 2417 6139  
 Fax. No. 2411 3073  
 Date 8 June 2010

To Director of Architectural Services  
 (Attn.: CPM 301 Mr. Patrick Hau H.F.)  
 Your Ref. 9/6/2010 in  
 dated 9/6/2010 Fax. No. 2523 9622  
 Total Pages 1

**Noise from Construction Activities from Construction Site of  
 Proposed Joint User Complex and Wholesale Fish Market at Area 44, Tuen Mun**

During our inspection to the captioned construction site at around 10:15 a.m. on 16 May 2010, we found that one lathe, pipe threader and one scissor lift were being operated for carrying out construction work at the site without a valid Construction Noise Permit. As such operation breaches sections 6(1)(a) of the Noise Control Ordinance, we are now considering instituting legal proceedings against the main contractor and / or the responsible subcontractor.

2. I should be grateful if you would remind the main contractor to abide by the Noise Control Ordinance and supply us with certified true copy of the followings -

- a) extract of the contract documents showing the name of the appointed contractor/subcontractor(s) of the site, the project commencement date and the anticipated completion date;
- b) site layout plan showing the location and boundary of the site; and
- c) site diary of date.

3. If you have any queries regarding the above, please contact the undersigned at 2417 6139.

*PM348*

*please follow up  
 Y.C.WU  
 9/16/2010*

*PM321  
 your follow-up as please  
 9/16*

*Ally*

CPM 301	CPM 321	CPM 348
SEARCHED	SERIALIZED	INDEXED
FILED		
SEP 16 2010		
HONG KONG		
BU ca	File & Return	

*(Signature)*

(Shirley Lam)  
 Regional Office / West  
 for Director of Environmental Protection