



**NATURE & TECHNOLOGIES (HK) LIMITED**  
**科技環保(香港)有限公司**

Unit 2 & 3, 4/F., Wellborne Commercial Centre, 8 Java Road, North Point, Hong Kong.  
香港北角渣華道8號威邦商業中心4樓2及3室 Tel電話 : (852) 2877 3122 Fax傳真 : (852) 2511 0922  
Email電郵: enquiry@nt.com.hk Web page網址 : http://www.nt.com.hk

**Development at Former Marine Police  
Headquarters KIL 11161  
Environmental Monitoring & Audit Report  
for November 2008**

**(Ref No. 3.12/050/2006)**

**December 2008**

**Report Certified by the  
Environmental Team  
Leader:**

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**Report Verified by the  
Independent  
Environmental  
Checker:**

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## **EXECUTIVE SUMMARY**

This is the fifty-fourth Environmental Monitoring & Audit report prepared by Nature & Technologies (HK) Ltd. for the development of the former Marine Police Headquarter. Weekly site audit inspections were performed by the Environmental Team on 6, 13, 20, and 27 November 2008. This report therefore documents the impact environmental monitoring and audit work for the former Marine Police Headquarter development for November 2008.

Air and noise monitoring have been carried out in accordance with the EM&A Manual. Tree photographic survey is also provided.

Superstructure furnishing was the major activity carried out within the project site in the reporting month.

No limit level exceedance on TSP and noise monitoring was recorded in the reporting month. No notification of summons, prosecution or other non-compliance was received in the reporting month. The site was generally satisfactory and there were a few improvement measures for further pursuit. These include proper covering of storage piles and exposed earth, and proper display of Environmental Permit.

## **1. Introduction**

- 1.1. Subsequent to the completion of works by Konwall Construction & Engineering Co. Ltd., Hien Lee Engineering Co. Ltd. ["HL"] took over the next phase for the development of the Former Marine Police Headquarters ["FMPHQ"] commencing May 2007. HL in turn has commissioned Nature & Technologies (HK) Ltd. ["N&T"] to conduct the environmental monitoring and audit ["EM&A"] work for the project.
- 1.2. Pursuant to Clauses 2.3 of the Environmental Permit ["EP"] EP-184/2004 of the project, the draft EM&A Manual was submitted on 29 April 2004 and the revised version was later approved in end July 2004. Due to project changes, the EM&A Manual was revised in May 2006. Further revision of the EM&A Manual to cater for the present phase of the construction works was submitted to EPD and approval was granted on 22 June 2007.
- 1.3. This report documents the EM&A work and its findings for November 2008 and is the fifty-fourth monthly report documenting the EM&A work since the commencement of the construction work.

## 2. Environmental & Implementation Status

### Environmental Status

- 2.1. The location, site layout, historic buildings and structures to be preserved of the Project are shown in Figure 2.1.
- 2.2. The key personnel contact names and telephone numbers with respect to environmental protection works are given in Table 2.1. Environmental Protection Department ["EPD"] is the control authority and may contact any party where necessary for their statutory duties.

Table 2.1 Key Contacts of the Project Team

<b>Party</b>	<b>Company</b>	<b>Contact Person</b>	<b>Phone</b>
Permit Holder	Flying Snow Ltd.	Mr H S Chan	2112 2634
Project Architect ["AR"]	A + T Design Ltd.	Mr Daniel Lin	2858 4778
Contractor	Hien Lee Engineering Co., Ltd	Mr Howard Lui	9108 3955
Independent Environmental Checker ["IEC"]	CH2M HILL Hong Kong Ltd.	Ms. Vivian Chan	2872 2929
Environmental Team ["ET"] Leader	Nature & Technologies (HK) Ltd.	Ir Dr Gabriel C K Lam	2877 3122

- 2.3. Superstructure furnishing was the main activity carried out within the project site in November 2008.
- 2.4. Construction activity is estimated to be further extended to December 2008. The revised construction programme with milestones of environmental protection/mitigation activities annotated is given in Appendix A.
- 2.5. It is noted that a small section of the site enclosing trees T121/T122 has been recently handed over to the contractor for the Kowloon Southern Link Project ["KSL"] as also shown in Figure 2.1. It is understood that this KSL contractor has committed to comply with the requirements of EM&A Manual and EP conditions for the present site.

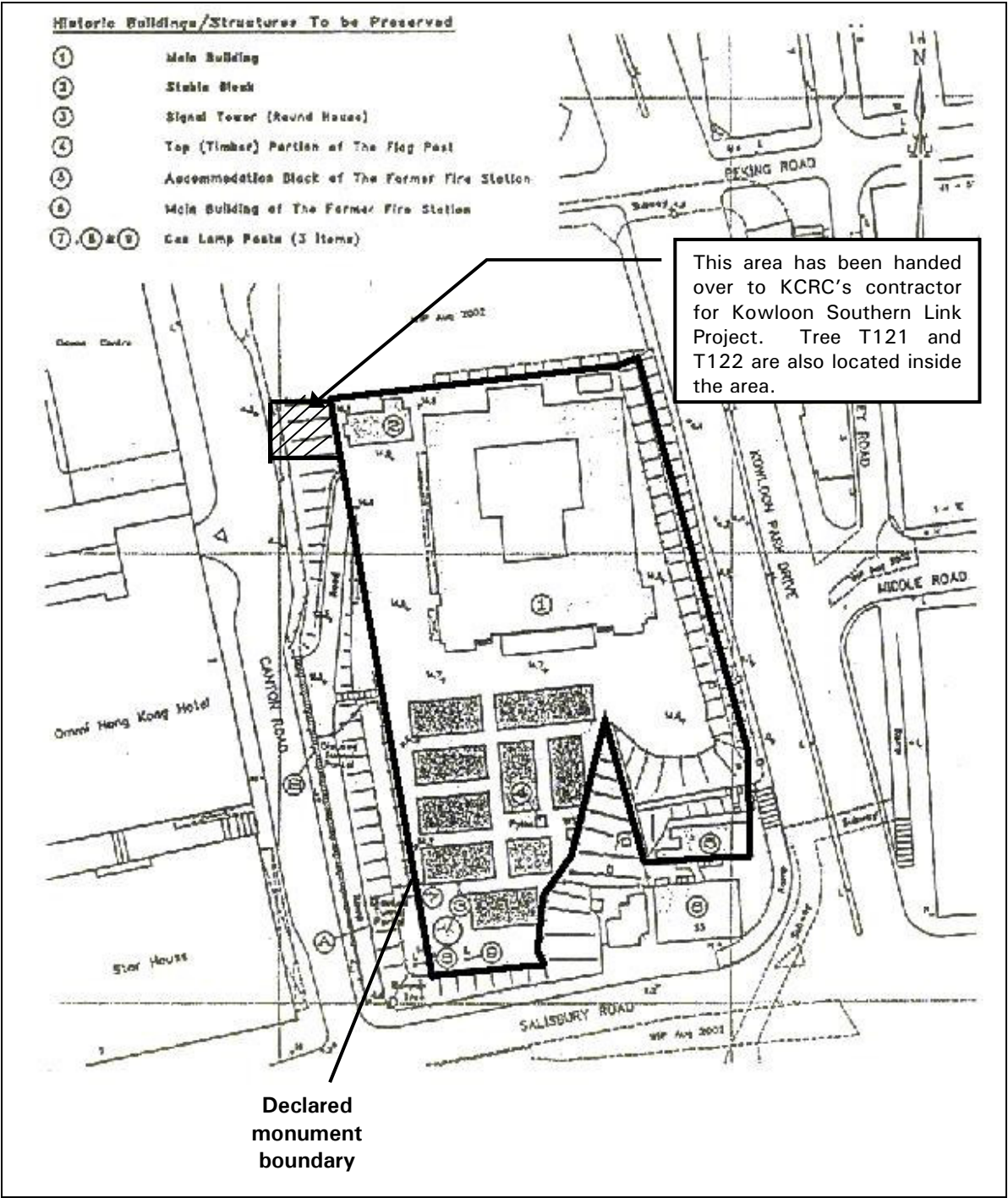


Figure 2.1 Location, site layout with the location of site where it was handed over to KCRC's Contractor for KSL Project, historic buildings and structures to be preserved Scale: N.T.S

## Implementation Status

- 2.6. The construction and operational phase impacts of the project have been assessed and presented in the Project Profile issued in January 2004. The Project Profile also specified the recommended environmental mitigation measures to minimize the potential adverse environmental impacts identified. An implementation schedule of the recommended environmental mitigation measures is prepared as part of the Project Profile is contained in Appendix B.
- 2.7. Similar to the presentation made to the previous contractor on 2 June 2004, a presentation was also made to the construction personnel of the new contractor on 26 April 2007 regarding the environmental protection requirements on the site. Working personnel not present in the presentation should be briefed separately by the Contractor on the requirements for environmental protection.
- 2.8. Site environmental audits were carried out by ET on a weekly basis and IEC at least once per month to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. In this reporting month, site audits were conducted on 6, 13, 20 and 27 November 2008. These site audit checklist reports and recommendations are given in Appendix C.
- 2.9. It is noted that the various environmental protection measures have been implemented on site. The following were also noted for November 2008 required for further improvement:
- Proper covering of storage piles and exposed earth
  - Proper display of the Environmental Permit
  - Water spray for dusty pave
  - Clearance of litter and waste
  - Continual protection and closer monitoring of the trees and historical buildings.
- 2.10. The hoarding was dismantled to cater for the construction progress. Careful consideration has to be carried out to avoid dust emission to the public.
- 2.11. It is also necessary to ensure that the KSL contractor will comply with the requirements of EM&A Manual and EP conditions for the present site for the section of the site already handed over to them.
- 2.12. The summary status of the submission under the EP is given in Table 2.2.

Table 2.2 Status of submission under EP up to September 2008

Item No.	Description	Submission Date to EPD
1.	Method Statement detailing the protective measures on declared monument buildings	06/2/2004
2.	Landscape Mitigation and Tree Preservation Proposal	06/2/2004
3.	Draft EM&A Manual	29/4/2004
4.	Revised Landscape Mitigation and Tree Preservation Proposal	15/5/2004
5.	Draft Waste Management Plan	14/6/2004
6.	Final Method Statement detailing the protective measures on declared monument buildings which is approved	14/6/2004
7.	Final Landscape Mitigation and Tree Preservation Proposal	21/6/2004
8.	Baseline Monitoring Report	25/6/2004
9.	Monthly EM&A Report for June 2004	21/7/2004
10.	Revised EM&A Manual (Rev. 1) which is approved	26/7/2004
11.	Revised Landscape Mitigation and Tree Preservation Proposal which is approved	26/7/2004
12.	Revised Waste Management Plan which is approved	17/8/2004
13.	Monthly EM&A Report for July 2004	25/8/2004
14.	Revised EM&A Manual (Rev. 2) which is approved	06/9/2004
15.	Monthly EM&A Report for August 2004	21/9/2004
16.	Quarterly EM&A Report for June to August 2004	06/10/2004
17.	Monthly EM&A Report for September 2004	27/10/2004
18.	Monthly EM&A Report for October 2004	15/11/2004
19.	Monthly EM&A Report for November 2004	25/12/2004
20.	Quarterly EM&A Report for September to December 2004	20/1/2005
21.	Monthly EM&A Report for December 2004	28/1/2005
22.	Monthly EM&A Report for January 2005	18/3/2005
23.	Monthly EM&A Report for February 2005	04/4/2005
24.	Monthly EM&A Report for March 2005	10/4/2005
25.	Quarterly EM&A Report for December 2004 to February 2005	13/4/2005
26.	Revised EM&A Manual (April 2005) which is approved	11/5/2005
27.	Revised Waste Management Plan (April 2005) which is approved	11/5/2005
28.	Monthly EM&A Report for April 2005	13/6/2005
29.	Monthly EM&A Report for May 2005	09/7/2005
30.	Quarterly EM&A Report for March to May 2005	29/7/2005
31.	Monthly EM&A Report for June 2005	08/8/2005
32.	Monthly EM&A Report for July 2005	02/9/2005
33.	Monthly EM&A Report for August 2005	14/10/2005
34.	Quarterly EM&A Report for June to August 2005	28/10/2005
35.	Monthly EM&A Report for September 2005	04/11/2005
36.	Monthly EM&A Report for October 2005	21/12/2005
37.	Monthly EM&A Report for November 2005	07/1/2006
38.	Quarterly EM&A Report for September to November 2005	12/1/2006
39.	Monthly EM&A Report for December 2005	09/2/2006
40.	Monthly EM&A Report for January 2006	07/3/2006
41.	Monthly EM&A Report for February 2006	31/3/2006
42.	Quarterly EM&A Report for December 2005 to February 2006	6/4/2006
43.	Monthly EM&A Report for March 2006	11/5/2006
44.	Revised EM&A Manual	11/5/2006
45.	Revised Waste Management Plan (WMP)	11/5/2006
46.	Monthly EM&A Report for April 2006	9/6/2006



Table 2.2(continued) Status of submission under EP up to September 2008

<b>Item No.</b>	<b>Description</b>	<b>Submission Date to EPD</b>
47.	Monthly EM&A Report for May 2006	13/7/2006
48.	Monthly EM&A Report for June 2006	11/8/2006
49.	Quarterly EM&A Report for March 2006 to May 2006	11/8/2006
50.	Monthly EM&A Report for July 2006	14/9/2006
51.	Monthly EM&A Report for August 2006	11/10/2006
52.	Quarterly EM&A Report for June 2006 to August 2006	28/10/2006
53.	Monthly EM&A Report for September 2006	6/11/2006
54.	Monthly EM&A Report for October 2006	15/12/2006
55.	Monthly EM&A Report for November 2006	6/1/2007
56.	Monthly EM&A Report for December 2006	2/3/2007
57.	Monthly EM&A Report for January 2007	16/3/2007
58.	Monthly EM&A Report for February 2007	17/4/2007
59.	Monthly EM&A Report for March 2007	4/5/2007
60.	Quarterly EM&A Report for December 2006 to February 2007	4/5/2007
61.	Revised EM&A Manual	12/6/2007
62.	Revised Waste Management Plan (WMP)	12/6/2007
63.	Monthly EM&A Report for April 2007	12/6/2007
64.	Monthly EM&A Report for May 2007	14/7/2007
65.	Quarterly EM&A Report for March 2007 to May 2007	14/7/2007
66.	Monthly EM&A Report for June 2007	14/8/2007
67.	Monthly EM&A Report for July 2007	10/9/2007
68.	Monthly EM&A Report for August 2007	16/10/2007
69.	Quarterly EM&A Report for June 2007 to August 2007	16/10/2007
70.	Monthly EM&A Report for September 2007	28/11/2007
71.	Monthly EM&A Report for October 2007	27/12/2007
72.	Monthly EM&A Report for November 2007	19/1/2008
73.	Quarterly EM&A Report for September 2007 to November 2007	19/1/2008
74.	Monthly EM&A Report for December 2007	15/2/2008
75.	Monthly EM&A Report for January 2008	11/3/2008
76.	Monthly EM&A Report for February 2008	14/4/2008
77.	Quarterly EM&A Report for December 2007 to February 2008	14/4/2008
78.	Monthly EM&A Report for March 2008	24/5/2008
79.	Monthly EM&A Report for April 2008	28/6/2008
80.	Revised EM&A Manual	3/7/2008
81.	Monthly EM&A Report for May 2008	25/7/2008
82.	Monthly EM&A Report for June 2008	30/8/2008
83.	Quarterly EM&A Report for March 2008 to May 2008	30/8/2008
84.	Monthly EM&A Report for July 2008	16/9/2008
85.	Monthly EM&A Report for August 2008	13/10/2008
86.	Monthly EM&A Report for September 2008	19/11/2008
87.	Monthly EM&A Report for October 2008	3/12/2008

### 3. Air Quality

- 3.1. In accordance with the EM&A Manual, 1-hour and 24-hour Total Suspended Particulate ["TSP"] monitoring was conducted to monitor the air quality. For 1-hour TSP monitoring, the sampling frequency was of at least three times in every six-days. For 24-hour TSP monitoring, the sampling frequency was at least once in every six-days.

#### Action and Limit Levels

- 3.2. The calculation of the Action and Limit ["AL"] Levels was based on the baseline monitoring results. The AL levels for dust are set in Table 3.1 and 3.2.

Table 3.1 AL levels for 1-hour TSP

Location	Action	Limit
A1	382	500
A2a/A2b	394	500
A3a	389	500
A4	384	500

Table 3.2 AL levels for 24-hour TSP

Location	Action	Limit
A1	191	260
A2a/A2b	193	260
A3a	182	260
A4	187	260

#### Event and Action Plan for Construction Phase Air Quality

- 3.3. According to the EM&A Manual, the ET Leader, IEC, AR, and Contractor should undertake relevant actions in accordance with the Action Plan stated in Table 3.3 below should non-compliance of the air quality criteria occurs.

Table 3.3 Event/Action Plan for Air Quality (Dust)

EVENT	ACTION (to be taken as immediate as practicable)			
	ET	IEC	AR	CONTRACTOR
Action Level being exceeded for one sample	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC and AR;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Increase monitoring frequency to daily</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Rectify any unacceptable practice;</li> <li>2. Amend working methods if appropriate.</li> </ol>
Action Level being exceeded for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC and AR;</li> <li>3. Repeat measurements to confirm findings'</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Discuss with IEC and Contractor on remedial actions required;</li> <li>6. If exceedance continues, arrange meeting with IEC and AR;</li> <li>7. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> <li>4. Advise the AR on the effectiveness of the proposed remedial measures;</li> <li>5. Supervise implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>2. Implement the agreed proposals;</li> <li>3. Amend proposal if appropriate.</li> </ol>
Limit Level being exceeded for one sample	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC, AR and EPD;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Assess effectiveness of Contractor's remedial actions;</li> <li>6. Keep EPD and AR informed of the results.</li> </ol>	<ol style="list-style-type: none"> <li>1. Checking monitoring data submitted by ET and Contractor's method;</li> <li>2. Discuss with Contractor on the possible mitigation measures;</li> <li>3. Advise AR on the effectiveness of mitigation measures and supervise their implementation.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Check monitoring data and Contractor's working methods;</li> <li>4. Discuss with IEC, ET and Contractor potential remedial actions;</li> <li>5. Ensure remedial actions properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to AR within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Amend proposal if appropriate.</li> </ol>
Limit Level being exceeded for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform AR and EPD the causes &amp; actions taken for the exceedances;</li> <li>3. Repeat measurement to confirm findings;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Investigate the causes of exceedance</li> <li>6. Arrange meeting with EPD and AR to discuss the remedial actions to be taken;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep EPD and AR informed of the results;</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Checking monitoring data submitted by ET and Contractor's method;</li> <li>2. Discuss with Contractor on the possible mitigation measures;</li> <li>3. Review the proposed mitigation measures submitted by Contractor and advise the AR accordingly;</li> <li>4. Supervise the implementation of mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>4. Discuss amongst IEC, ET and the Contractor potential remedial actions;</li> <li>5. Review Contractor's remedial actions whenever necessary to assure their effectiveness;</li> <li>6. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to AR within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Resubmit proposals if problem still not resolved;</li> <li>5. Stop the relevant portion of works as determined by the AR until the exceedance is abated.</li> </ol>

### Monitoring Locations

3.4. Designated air quality monitoring locations were selected for impact monitoring based on the EM&A Manual Section 3.8. They are shown in Figure 3.1 and briefly described below:

- A1 is located on the rooftop of the Consumer Council office east of the construction site, estimated to be about 11m above ground.
- A2 is at the Cultural Centre Studio Theatre podium level south of the construction site, estimated to be about 5m above ground. Monitoring at this location has not yet commenced at the time of preparation of this report as permission to carry out monitoring there has not been received.
- A2a is at south boundary of the construction site facing the Cultural Centre Studio Theatre selected as an alternative location to A2 in consultation with the IEC, estimated to be about 6m above ground. This is needed since permission from the Cultural Centre for monitoring there is not yet received and in order to reduce the delay to the construction programme by the permission.
- A2b is situated just outside of the building at the junction of Salisbury Road and Kowloon Park Drive, about 10m east of the earlier station A2a. The elevation is about the same as the original A2a.
- A3 is at the west site boundary of the construction site on top of the existing hoarding, estimated to be about 5m above ground. This position is slightly different to that originally proposed in the Project Profile due to the inability to obtain permission to gain access to the building at Star House or Marco Polo Hongkong Hotel for measurement and that the present revised position will provide a more conservative measurement for environmental protection
- A3a is situated just outside of the cordon area of the tree T96, positioned as close to Canton Road as possible and is about 20m south-east of the earlier station A3. The replacement of A3 with A3a was required due to the dismantling of west hoardings hence the removal of platform that host the air sampler. Approval for the replacement was granted by EPD on 14 May 2008 and monitoring at A3a was commenced on 21 May 2008 after installation completion.
- A4 is at the site boundary north of the construction site on top of the existing hoarding, estimated to be about 13m above ground.

3.5. Impact air quality monitoring (both 1-hour and 24-hour TSP) was carried out for November 2008. The monitoring dates for each station are summarised in Table 3.4.

Table 3.4 Exact monitoring periods for the impact air monitoring locations

Location	Monitoring period	
	1-hour TSP	24-hour TSP
A1	(5, 11, 17, 21, 27)/11/2008	(5, 11, 17, 21, 27)/11/2008
A2a/A2b	(5, 11, 17, 21, 27)/11/2008	(5, 11, 17, 21, 27)/11/2008
A3a	((5, 11, 17, 21, 27)/11/2008	(5, 11, 17, 21, 27)/11/2008
A4	(5, 11, 17, 21, 27)/11/2008	(5, 11, 17, 21, 27)/11/2008

3.6. Relocation of 24-Hr TSP measurement from A2a to A2b was approved on 30 September 2008. The new monitoring location A2b is located on the second floor of the building located at the junction of Salisbury Road and Kowloon Park Drive. 24-Hr TSP measurement was conducted at A2b in the report month.

### Monitoring Equipment

- 3.7. The 1-hour and continuous 24-hour TSP air quality monitoring were performed using direct reading DustTrak meter and High Volume Sampler [“HVS”] respectively, located at each of the designated monitoring locations A1, A2b, A3a and A4. Table 3.5 summarizes the equipment used in the impact air monitoring. Copies of the calibration records for the HVSs and calibration certificates for the DustTrak meters are attached in Appendix D. After review of the calibration certificate and technical specification of the DustTrak meter, the IEC and AR have approved the dust meter to be suitable in giving direct reading of 1-hour TSP measurement equivalent to HVS.

Table 3.5 Equipment used in the impact air monitoring

Equipment	Model	Qty.
HVS	GMWS-2310 ACCU-VOL	4
Direct reading dust meter	8520 DustTrak	2

### Monitoring Methodology

- 3.8. As mentioned above, 1-hour TSP levels was measured by direct reading methods capable of producing comparable results as that by the high volume sampling method, to indicate short term impacts.
- 3.9. For measurement of 24-hour TSP levels, HVS complete with the appropriate sampling inlets were used. The sampler is composed of a motor, filter holder, flow controller and a sampling inlet and its performance specification complies with the requirement of the EM&A Manual. The standard high volume sampling method as set out in the *Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50), Appendix B*.
- 3.10. Initial calibration of the HVSs was performed prior to the commencement of the air monitoring.
- 3.11. The flow rate of the HVS was set to about 1.1 m<sup>3</sup>/min – 1.7 m<sup>3</sup>/min prior to commencement of the dust sampling in accordance with the manufacturer's instruction.
- 3.12. Fiberglass filter papers were used for 24-hour TSP sampling. The filter papers were equilibrated in the conditioning environment for 24 hours before weighing. The flow indicator reading was recorded and the sampler flow rate was determined. The programmable timer was set and the starting sampling time, weather condition and the filter number was recorded.
- 3.13. At the end of sampling, the filter was transferred from the filter holder of the HVS to a sealable plastic bag and sent to the laboratory for weighing. The elapsed time was also recorded.
- 3.14. The laboratory for the preparation of the filter papers and analysis of the filter papers is SGS Hong Kong Ltd. which is HOKLAS accredited.

### Impact Monitoring Results

- 3.15. Impact air quality monitoring was conducted at A1, A2b, A3a and A4. Detailed impact monitoring data of 1-hour and 24-hour TSP are presented in Appendix E. These are summarized in Tables 3.6 and 3.7 for 1-hour and 24-hour TSP respectively. Graphical presentations of the monitoring results are shown in Appendix F.

Table 3.6 Summary of 1-hour TSP monitoring results

Location	Average 1-hour TSP concentration ( $\mu\text{g}/\text{m}^3$ )
A1	123
A2a/A2b	137
A3a	150
A4	128

Table 3.7 Summary of 24-hour TSP monitoring results

Location	Average 24-hour TSP concentration ( $\mu\text{g}/\text{m}^3$ )
A1	71
A2a/A2b	79
A3a	82
A4	72

#### Observations

- 3.16. No AL level exceedance was recorded during the reporting month as detailed in Appendix G.

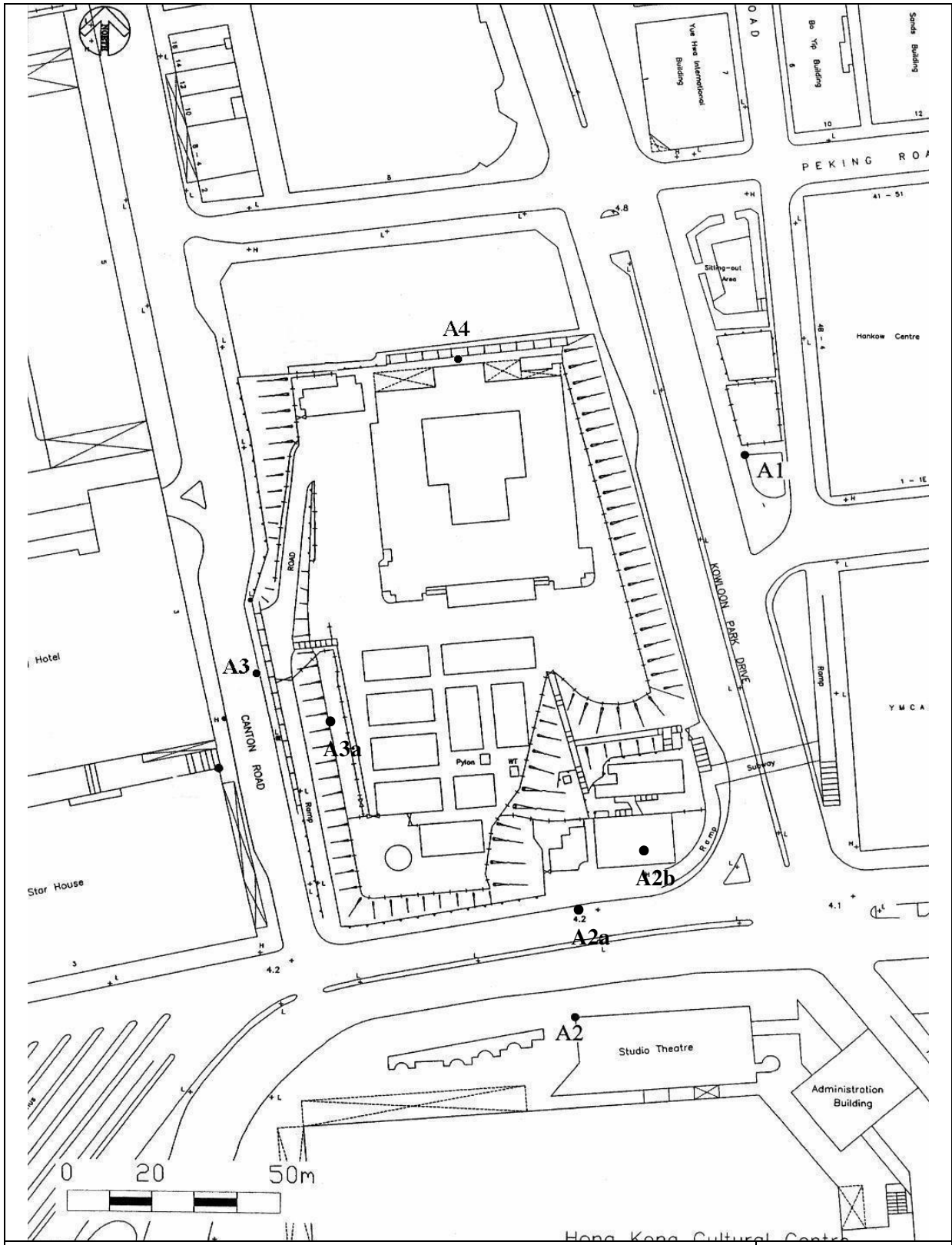


Figure 3.1 Dust Monitoring Locations (A1 is on building rooftop about 11m above ground, A2, on podium level about 5m above ground, A2a, A3a and A4 on hoarding top about 6m, 6m and 13m above ground respectively, A2b is on a building rooftop about 6m above ground)

Scale: N.T.S

#### 4. Noise

- 4.1. In accordance to the EM&A Manual, noise monitoring has to be carried out at two sensitive receiver locations outside the site. According to the EM&A Manual Section 3.15 - 3.18, one set of measurements between 0700 to 1900 hours on normal weekdays was carried out for each location on weekly basis.
- 4.2. Based on the EM&A Manual Section 3.21, impact ground-borne noise measurement has to be carried out inside the Hong Kong Space Museum ["HKSM"] and Hong Kong Cultural Centre ["HKCC"]. It should be conducted on at least monthly basis during the period when the piling works at the FMPHQ.

##### Action and Limit Levels

- 4.3. As per requirements of the EM&A Manual, the AL Levels for noise monitoring locations were established as in Table 4.1 AL levels

Table 4.1 AL levels for impact noise monitoring locations

Time Period	Action	Limit
0700-1900 hrs on normal weekdays	When one documented complaint is received	75* dB(A)
0700-2300 hrs on holidays; and 1900-2300 hrs on all other days		65** dB(A)
2300-0700 hrs of next day		50** dB(A)

\* Reduce to 70 dB(A) for schools and 65 dB(A) during school examination periods.

\*\* Based on Area Sensitivity Rating 'B'.

- 4.4. The corresponding AL levels for ground borne noise indoor of HKCC and HKSM will be as per Table 4.2.

Table 4.2 AL levels for HKCC and HKSM

Location	Action	Limit
HKCC	When one documented complaint is received	60 dB(A)
HKSM Recording Studio (1/F)		60 dB(A)
HKSM Sky Theatre (1/F)		60 dB(A)
HKSM Lecture Room (G/F)		60 dB(A)

##### Event and Action Plan for Noise

- 4.5. Should non-compliance of the criteria occur, action in accordance with the Action Plan in Table 4.3 should be carried out as per requirements of the EM&A Manual.



Table 4.3 Event/Action Plant for Construction Noise

EVENT	ACTION (to be taken as immediate as practicable)			
	ET	IEC	AR	CONTRACTOR
Action level	<ol style="list-style-type: none"> <li>1. Notify IEC and Contractor;</li> <li>2. Carry out investigation;</li> <li>3. Report the results of investigation to the IEC and Contractor;</li> <li>4. Discuss with the Contractor and formulate remedial measures;</li> <li>5. Increase monitoring frequency to check the effectiveness of mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Review the analyzed results submitted by the ET;</li> <li>2. Review the proposed remedial measures by the Contractor and advise the AR accordingly;</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analyzed noise problem;</li> <li>4. Ensure mitigation measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposal to IEC;</li> <li>2. Implement noise mitigation proposals.</li> </ol>
Limit level	<ol style="list-style-type: none"> <li>1. Notify IEC, AR, EPD &amp; Contractor;</li> <li>2. Identify source;</li> <li>3. Repeat measurement to confirm findings;</li> <li>4. Increase monitoring frequency;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Inform IEC, AR and EPD the causes and actions taken for the exceedances;</li> <li>7. Assess the effectiveness of Contractor's remedial actions and keep IEC, EPD and AR informed of the results;</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst AR, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the AR accordingly;</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analyzed noise problem;</li> <li>4. Ensure mitigation measures are properly implemented;</li> <li>5. If exceedances continue, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Undertake immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Resubmit proposals if problem still not under control;</li> <li>5. Stop the relevant portion of works as determined by AR, until the exceedance is abated.</li> </ol>

### Monitoring Locations

- 4.6. The noise monitoring locations, namely CN1a & CN2a, were selected for the impact noise monitoring. These locations are made up for the locations at CN1 & CN2 (podium of Hankow Centre east of the construction site) carried out for the baseline noise monitoring as Hankow Centre no longer permit to enter the premises for noise measurement since 28 May 2004. These locations are shown in Figure 4.1 and are located on the roof of Po Yip Building and 4/F YMCA facing the east of the site.
- 4.7. Ground borne noise measurement was not taken at the HKSM and HKCC in September 2008 as there was no piling.
- 4.8. The monitoring periods for each station are summarised in Table 4.4.

Table 4.4 Exact monitoring periods for the noise monitoring locations

Location	Monitoring period
CN1a	(5, 11, 17, 27)/11/2008
CN2a	(5, 11, 17, 27)/11/2008

### Monitoring Equipment

- 4.9. Integrated sound level meter was used for the noise monitoring. The meter is in compliance with the *International Electrotechnical Commission Publications* 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications. Immediately prior to and following each noise measurement the accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration level from before and after the noise measurement agree to within 1.0dB. The calibration certificates of the sound level meter and calibrator are attached in Appendix H.
- 4.10. Also, a portable wind speed meter capable of measuring the wind speed in m/s was used to monitor the wind speed. Table 4.5 summarized the noise monitoring equipment model being used.

Table 4.5 Equipment used in the baseline air monitoring

Equipment	Model	Qty.
Integrated sound level meter	NL-31	1
Calibrator	NC-73	1
Portable wind speed meter	AZ Instrument Thermo-Anemometer	8908 1

### Monitoring Methodology

- 4.11. Impact noise for the 30 minutes period A-weighted levels  $L_{eq}$ ,  $L_{10}$  and  $L_{90}$  are measured for CN1a and CN2a. Each 30 minutes noise level is usually comprised of six 5-minutes measured data. For HKSM and HKCC, 30 minutes ground-borne measurements would be taken for various points and is to be comprised of six 5-minutes measured data unless there is insufficient allocation of time slots for measurement by the HKSM or HKCC management.

- 4.12. The frequencies and parameters of noise measurement in the reporting month are thus presented in Table 4.6.

Table 4.6 Frequency and parameters of noise monitoring

Location	Frequency	Duration	Parameter
CN1a	Weekly	30 min.	$L_{eq}$ , $L_{10}$ and $L_{90}$
CN2a	Weekly	30 min.	$L_{eq}$ , $L_{10}$ and $L_{90}$

- 4.13. The monitoring location at CN1a was at free field condition. The meter was fixed on a stand with the microphone at position 1.2m above the reflecting ground and hence façade correction of +3dB(A) was applied. The other monitoring location at CN2a was at a point 1m from the exterior of the building façade.
- 4.14. Before and after each noise measurement, the meter was calibrated using the Calibrator for 94 dB at 1000 Hz.
- 4.15. The wind speed was checked with the portable wind speed meter to be within 5m/s during measurement.
- 4.16. Site conditions and possible noise sources affecting the measurement were recorded on the noise monitoring field record sheet. Extraneous noise was avoided as far as possible.

#### Impact Monitoring Results

- 4.17. Impact noise monitoring results for CN1a, CN2a are summarized in Tables 4.7. All detailed impact noise monitoring data and graphical presentations of the monitoring results for CN1a and CN2a are given in Appendix I and Appendix J respectively.

Table 4.7 Summary of noise monitoring results

Measurement point	Mean Noise Level, dB(A)		
	$L_{eq}$	$L_{90}$	$L_{10}$
CN1a	<b>71.5</b>	<b>69.5</b>	<b>73.7</b>
CN2a	<b>74.0</b>	<b>71.2</b>	<b>76.0</b>

#### Observations

- 4.18. No AL level exceedance was recorded during the reporting month as detailed in Appendix G.

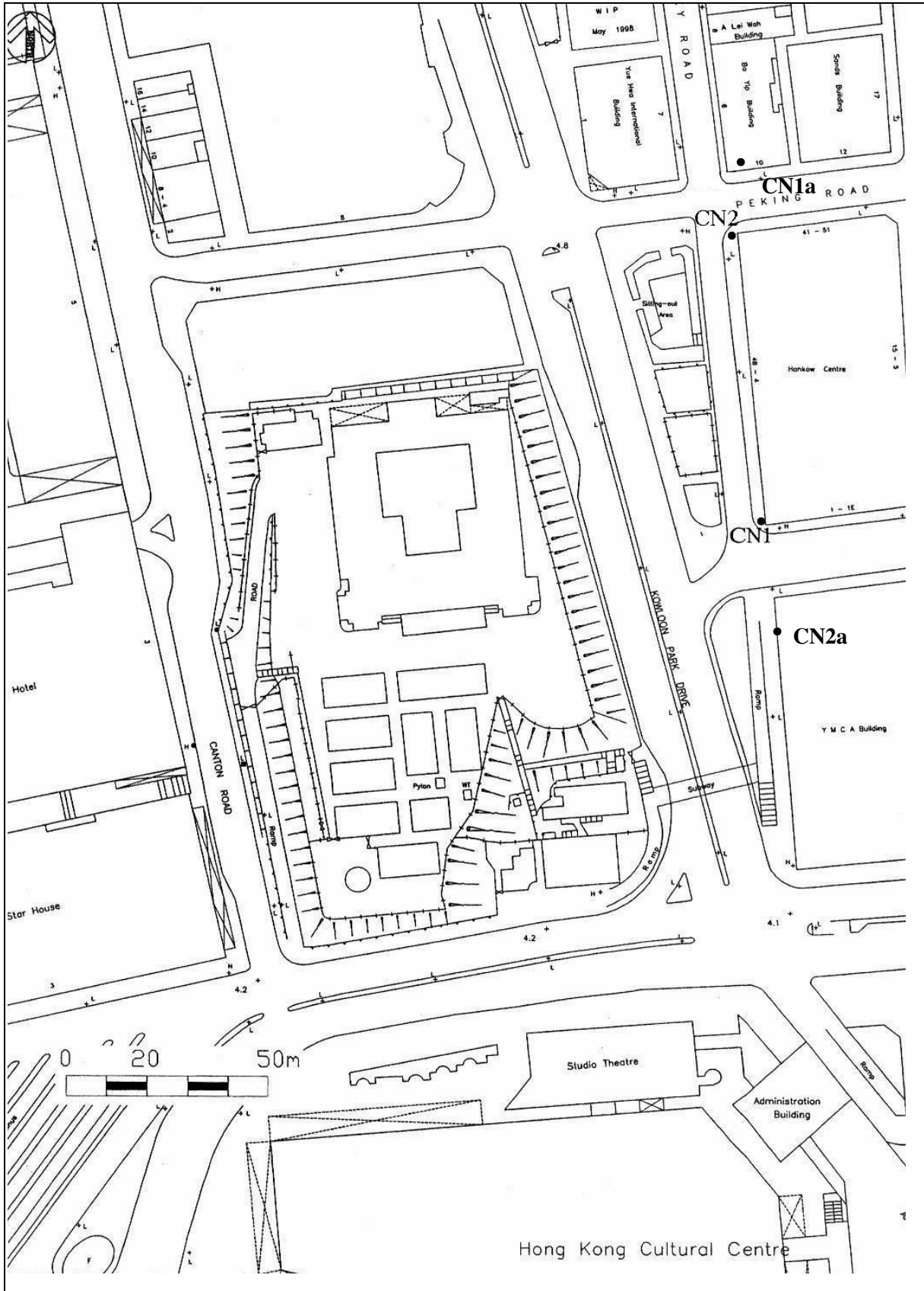


Figure 4.1 Proposed Noise Monitoring Stations (CN1 and CN2 are at podium level, about 15m above ground). Alternative measurement stations (CN1a and CN2a are about 33m and 11m above ground respectively).

Scale: N.T.S

## 5. Waste Management

- 5.1. According to the Waste Management Plan [“WMP”], all Construction & Demolition materials will be recorded for each month.
- 5.2. Further revision of the WMP to cater for the present phase of the construction works was submitted to EPD and approval was granted on 22 June 2007.
- 5.3. Types, quantities and disposal location of all surplus excavated materials and wastes arising from the Project site are summarized in Table 5.1 based on information from the Contractor.

Table 5.1 Summary of the wastes arising from the Project site

Date	Type of Waste	Quantity (tonnes)	Disposal Location
1 November 2008 To 30 November 2008	Soil	9.3	TKO
	Sorting Facility	96.0	TKO
	General Refuse	16.5	TKO
	Chemical Wastes	--	--

Note: SENT – South East New Territories Landfill Site  
TKO – Fill Bank at Tseung Kwan O Area 137 (Public Filling Facility)  
QB – Quarry Bay Barging Point  
MW – Ma Wan Development –VDA Phase 3

- 5.4. Updated records on waste disposal should be made available promptly to allow better monitoring of waste management performance. Waste recycling should be more actively promoted on site. In particular, the Contractor is reminded to maintain proper documentation on the return of chemical containers to suppliers for reuse.
- 5.5. Chemical waste storage area is now removed due to the lack of chemical waste produced. Contractor is reminded to reinstate the proper chemical waste storage area if there is chemical waste produced.
- 5.6. There was no timber consumption for the construction activities in this reporting month. No timber consumption is forecasted after June 2008.

## 6. Cultural Heritage and Landscape

- 6.1. For protection of cultural heritage, a brief structural investigation has been carried out to all the monument structures, i.e. the Main Building, the Stable Block and Signal Tower. It was found that most of them are brickwork foundation and a mixture of reinforced concrete and timber superstructures, which are sensitive to vibration and ground movement possibly generated during site formation works. In order to protect them from damaging during the construction works, a number of monitoring points such as building settlement markers, ground settlement markers and tell-tale devices, were installed both around and inside all the monument structures prior to commencement of works.
- 6.2. Baseline (initial) monitoring was carried out on 31 May 2004. For monitoring of the monument structure during construction works, the Alert, Alarm and Action levels in Table 6.1 are adopted based on a certain percentage of the design value for allowable structure or ground deformation with the following definition:
- Alert Level is set at 50% of the allowable structure or ground deformation. This is the lowest response value and signifies the reading for an instrument. Response is to increase the frequency of monitoring
  - Alarm Level is set at 80% of the allowable structure or ground deformation. Response is to increase the monitoring frequency and improve construction methods in the vicinity of the monitoring area.
  - Action Level is set at 100% of the allowable structure or ground deformation. Response is to suspend all activities and notify the Architect before proceeding with any further construction.

Table 6.1 Alert, Alarm and Action Levels of monument structural monitoring

Instrument	Unit	Alert	Alarm	Action
Ground Settlement Markers	mm	10	15	20
Building Settlement Markers	mm	5	8	10
Building tilting & settlement	-	1:2000	1:1500	1:1000
Tell-tales (crack monitoring)	mm	5	8	10

Remarks: \* The Design or allowable value is specified in the design report and drawings submitted to and approved by Building Department in their letter Ref (85) in BD 6/4023/03 dated 13 February 2004.

- 6.3. The contractor advised that termination of the above monument measurements has been approved and hence no monument measurements are in the reported in the reporting month.
- 6.4. For preservation of trees, a Tree Preservation Proposal was submitted and baseline photographic survey of trees was taken on 24 February 2004 as a baseline prior to the commencement of construction works. These

photographic records are documented in the Baseline environmental monitoring report.

- 6.5. Continuous surveillance showed that the retention, transplantation and felling of trees has been generally in accordance with the recommendations made in the Tree Preservation Proposal. Photographic records of the trees retained on site are given in Appendix K.
- 6.6. Inspection with horticulture specialist for T66/T67 was conducted in late September. Pruning on T66/T67 is suggested.
- 6.7. Close monitoring will be continued on T10, T54, T66, T67, T96, T120, T121 and T122.
- 6.8. A small branch hanging at the canopy was found to be tidied up by landscape specialist for T131.
- 6.9. Detailed on-site and off-site tree matters are being covered in the separate submissions to Planning Department under the approved landscape Mitigation and Tree Preservation Proposal.

**7. Summary of Non-compliance, Complaints, Notification of Summons and Successful Prosecutions, Environmental Licensing and Permitting**

7.1. No exceedance was recorded for noise level, 1-Hr and 24-Hr TSP monitoring in the reporting month.

7.2. No environmental prosecution was received in the reporting month.

7.3. Discharge licence under Water Pollution Control Ordinance ["WPCO"] had been granted on 22 June 2007. Status of the environmental licensing and permitting can be summarized as follows:

<b>Description</b>	<b>Permit / License No.</b>	<b>Status</b>	<b>Permit Holder</b>
Environmental Permit	EP-184/2004	Remain valid since 9 February 2004	Flying Snow Ltd.
WPCO Discharge Licence	RE/0907/211/1	Valid until 30 June 2012	Hien Lee Engineering Co., Ltd
Chemical Waste Producer Registration	5213-111-H2929-14	Remains valid since 2 August 2007	Hien Lee Engineering Co., Ltd

7.4. Construction dust notification pursuant to Air Pollution Control (Construction Dust) Regulation has also been submitted and acknowledged by EPD in May 2007.

7.5. Chemical waste producer registration was submitted on 17 July 2007 and confirmed on 2 August 2007.



## **8. Other Issues**

- 8.1. Hien Lee Engineering Co., Ltd. has taken over the site in May 2007 and be responsible for the next phase of the project which includes remaining excavation, building foundation, superstructure & furnishing. There would then be dust and noise emissions, with noise emission being the major issue.
- 8.2. The ET Leader has briefed the new contractor on the requirements of the EM&A Manual and WMP. The Contractor should continue to ensure all project staffs, irrespective when they joined the project team, are also briefed accordingly by the Project Manager with proper record keeping of the briefing.
- 8.3. Infrastructure furnishing will be the main activity in the coming month. There would be limited dust and noise emissions.

## 9. Conclusion

- 9.1. EM&A work for November 2008 has been successfully completed. No limit level exceedance was found.
- 9.2. There was no notification of summons and prosecutions in the reporting month.
- 9.3. Monitoring of the trees was also made. Monument measurements have not been made in this reporting month as according to the Contractor, approval for termination of the measurement has been received
- 9.4. Site audits were carried out once per week. The conditions of the site were generally satisfactory except that considerable improvements in noise abatement were needed. The following are to be further pursued:
  - Proper covering of storage piles and exposed earth
  - Proper display of the Environmental Permit
  - Water spray for dusty pave
  - Clearance of litter and waste
  - Continual protection and closer monitoring of the trees and historical buildings.

**Appendix A: The construction programme with milestones of environmental protection/mitigation activities**



**Appendix B: Implementation schedule for recommended mitigation measures**

**Implementation Schedule**  
**Redevelopment of Former Marine Police Headquarters, KIL11161**

Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
	Fugitive Dust Impact on the Surrounding Sensitive Uses					
4.1.2.10	To erect site hoarding of at least 2.4m high along the boundaries of the Project Site (particularly along the northern boundary adjacent to No. 1, Peking Road) except at the site entrance/ exit	Site (site boundary)	Site Formation Contractor (for maintenance or improvement as the hoarding was already erected by the Hoarding Contractor earlier)	Construction Phase (prior to construction)	TM-EIA, APC(CD)R & AQO in APCO	To control fugitive dust emissions in accordance with the requirements of Air Pollution Control (Construction Dust) Regulation in principle; Provide shielding against dispersion of fugitive dust
	To control truck speed to within 8 km/hr and that dusty vehicle loads transported to and from the work location should be covered by tarpaulin sheets and should not be overloaded	Site	Site Formation Contractor	Construction Phase	TM-EIA, APC(CD)R & AQO in APCO	To control fugitive dust emissions in accordance with the requirements of Air Pollution Control (Construction Dust) Regulation in principle; Reduce fugitive emission wherever possible

Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
	To provide vehicle wheel washing facilities including high pressure water jets at designated vehicle exit points	Site	Site Formation Contractor	Construction Phase	TM-EIA, APC(CD)R & AQO in APCO	To control fugitive dust emissions in accordance with the requirements of Air Pollution Control (Construction Dust) Regulation in principle; Reduce fugitive emission wherever possible
	To use impervious sheeting where practicable for side enclosure and covering of any aggregate or other dusty material storage piles, to place stockpiles in an area sheltered on the top and the three sides, and/or to spray with water	Site	Site Formation Contractor	Construction Phase	TM-EIA, APC(CD)R & AQO in APCO	To control fugitive dust emissions in accordance with the requirements of Air Pollution Control (Construction Dust) Regulation in principle; Reduce fugitive emission wherever possible
	To cover the demolished items by impervious sheeting or to place in area sheltered on the top and the three sides within a day of demolition.	Site	Site Formation Contractor	Construction Phase	TM-EIA, APC(CD)R & AQO in APCO	To control fugitive dust emissions in accordance with the requirements of Air Pollution Control (Construction Dust) Regulation in principle; Reduce fugitive emission wherever possible
	To spray all dusty material with water prior to loading, unloading or transfer so as to maintain the C&D material wet	Site	Site Formation Contractor	Construction Phase	TM-EIA, APC(CD)R & AQO in APCO	To control fugitive dust emissions in accordance with the requirements of Air Pollution Control (Construction Dust) Regulation in principle; Reduce fugitive emission wherever possible
	To apply wet suppression at least four times per day at the worksites with active dusty operations and to water all dust emission sources when necessary. The frequency shall be increased when the weather is dry	Site	Site Formation Contractor	Construction Phase	TM-EIA, APC(CD)R & AQO in APCO	To control fugitive dust emissions in accordance with the requirements of Air Pollution Control (Construction Dust) Regulation in principle; Reduce fugitive emission wherever possible

Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
	To control the drop height of excavated materials to a minimum to limit fugitive dust generation from unloading as far as practicable	Site	Site Formation Contractor	Construction Phase	TM-EIA, APC(CD)R & AQO in APCO	To control fugitive dust emissions in accordance with the requirements of Air Pollution Control (Construction Dust) Regulation in principle; Reduce fugitive emission wherever possible
5.2.1.3	To carry out EM&A programme	Site	Site Formation Contractor & Superstructure Contractor	Pre-Construction and Construction Phase	TM-EIA & AQO in APCO	To proactively monitor fugitive dust impact and take necessary action against any unacceptable impact



Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
	Construction Noise Impact on the Surrounding Sensitive Uses					
4.2.1.5	To restrict operation to within non-restricted hours only	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	NCO	To avoid generation of noise during restricted hours under NCO
4.2.1.11	To use quiet PME with lower sound power level	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	TM-EIA	To reduce noise generation and in turn the construction noise impact
	To provide site hoarding of 4m to 6m high along the eastern boundary with sufficient surface density (10 to 15 kg/m <sup>2</sup> ), use of noise curtain or other mitigation measures for noise abatement as soon as Action Level is exceeded and confirmed to be due to the construction works	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	TM-EIA	To provide noise shielding or equivalent measures to reduce construction noise impact as per @ or equivalent subject to IEC/ AR's agreement.
	To adopt noise enclosure and temporary noise barriers with sufficient surface density (10 to 15 kg/m <sup>2</sup> ) (vertical and cantilevered types)	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	TM-EIA	To provide noise shielding to reduce construction noise impact or equivalent measures subject to IEC/ AR's agreement.
	To make use of the topography by carrying out excavation from west to east so that the original platform can act as effective noise barrier	Site	Site Formation Contractor	Construction	TM-EIA	To provide noise shielding to reduce construction noise impact or equivalent measures subject to IEC/ AR's agreement.

Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
4.2.1.12	<p>To implement good site practice and noise management</p> <ul style="list-style-type: none"> <li>▪ To submit to the Engineer for approval the method of working, equipment and sound-reducing measures intended to be used at the site before the commencement of any work</li> <li>▪ To allow only well-maintained plants to operate on-site;</li> <li>▪ To service the plants regularly during the construction program;</li> <li>▪ To shut down or throttle down machines that may be in intermittent use to a minimum between work periods;</li> <li>▪ To utilize and maintain silencer and mufflers on construction equipment during the construction program;</li> <li>▪ To schedule noisy activities to minimise exposure of nearby NSRs to high levels of construction noise. For example, noisy activities can be scheduled for midday or at times coinciding with periods of high background noise (such as during peak traffic hours);</li> <li>▪ To site noisy equipment such as emergency generators as far away as possible from NSRs;</li> <li>▪ To site mobile plants as far away from NSRs as possible; and</li> <li>▪ To utilize material stockpiles and other structures as noise barrier, where practicable.</li> </ul>	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	NCO & TM-EIA	To reduce noise generation and its impact in accordance with NCO and its subsidiary regulations

Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
4.2.1.23	No percussive piling	Site	Site Formation Contractor	Construction Phase	TM-EIA & NCO	To eliminate possibility of generating any significant ground borne noise impact
4.2.1.81	To avoid concurrent pipe piles driving near the tree ring and the Main Building when the pipes near the Main Building is about to penetrate the bedrock	Site	Site Formation Contractor	Construction Phase	TM-EIA & NCO	To avoid adverse cumulative ground borne noise impact
	To conduct on-site noise measurement at the HKCC and the HKSM when the works at the FMPH commences to verify the level of transmitted ground-borne noise	Site	Site Formation Contractor	Construction Phase	TM-EIA & NCO	To avoid adverse cumulative ground borne noise impact
	To establish a communication channel with HKCC and HKSM to stagger, if necessary, the ground-borne noise causing construction activities to avoid clashing with hours of performance at both venues	Site	Site Formation Contractor	Construction Phase	TM-EIA & NCO	To avoid adverse cumulative ground borne noise impact
5.2.1.3	To carry out EM&A program	Site	Site Formation Contractor & Superstructure Contractor	Pre-Construction and Construction Phase	TM-EIA	To proactively monitor construction noise impact and take necessary action against any unacceptable impact

Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
	Construction Phase Water Quality Impact					
4.3.1.7	To carry out the Works in such a manner as to minimize adverse impacts on the water quality during execution of the works. In particular he shall arrange his method of working to minimize the effects on the water quality within and outside the Site, on the transport routes and at the loading, dredging and dumping areas.	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	WPCO	To comply with the Water Pollution Control Ordinance and its subsidiary regulation.
	To follow the practices, and be responsible for the design, construction, operation and maintenance of all the mitigation measures as specified in the Professional Persons Environmental Consultative Committee Practice Note (ProPECC PN) 1/94 "Construction Site Drainage" issued by the Director of Environmental Protection. The design of the mitigation measures shall be submitted by the Contractor to the Engineer for approval.	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	ProPECC PN1/94 & WPCO	To comply with the Water Pollution Control Ordinance and its subsidiary regulation.
	To contain within the Site all surface runoff generated from foundation works, dust control and vehicle washing, etc.	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	WPCO	To comply with the Water Pollution Control Ordinance and its subsidiary regulation.

Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
	<p>To avoid discharge directly or indirectly or cause or permit or suffer to be discharged into any public sewer, stormwater drain, channel, stream-course or sea any trade effluent or foul or contaminated water or cooling or hot water without the prior written consent of the Engineer in consultation with the Director of Environmental Protection and Director of Water Supplies, who may as a condition of granting his consent require the Contractor to provide, operate and maintain at the Contractor's own expense to the satisfaction of the Engineer suitable works for the treatment and disposal of such trade effluent or foul or contaminated or cooling or hot water. [The design of such treatment works shall be submitted to the Engineer for approval not less than one month before the commencement of the relevant works.]</p>	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	WPCO	To comply with the Water Pollution Control Ordinance and its subsidiary regulation.

Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
	To direct foul water effluent to a foul sewer or to a sewage treatment and disposal facility either directly or indirectly by means of pumping or other means approved by the Engineer if any office, site canteen or toilet facilities is erected	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	WPCO	To comply with the Water Pollution Control Ordinance and its subsidiary regulation.

Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
	Operational Phase Water Quality Impact					
4.3.2.1	To discharge sewage/wastewater generated from the Project to the nearby public sewers	Site	Project Proponent/Operator	Design / Operational Phase	WPCO	To meet the requirement as stipulated in the Technical Memorandum on Water Pollution Control Ordinance
	Waste Management					
4.5.1.7	To minimize the production of construction waste through careful design, planning, good site management, and control of ordering procedures, segregation and reuse of materials; To arrange for private contractors to collect used formwork materials for reuse.	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	WDO	To follow relevant regulations (Waste Disposal Ordinance) in all circumstances.
4.5.1.8	To dispose of any chemical wastes such as lubricating oil or solvent in strict accordance with the Waste Disposal (Chemical Waste) (General) Regulation	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	WDO	To follow relevant regulations (Waste Disposal Ordinance) in all circumstances.
4.5.1.9	To assign a reliable waste collector to collect general refuse generated from the construction site on a daily basis to minimise the potential odour, pest and litter impacts.	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	WDO	To follow relevant regulations (Waste Disposal Ordinance) in all circumstances.
4.5.2.1	To identify requirements on proper waste management for implementation during the operation of the Project	Site	Operator	Operational Phase	WDO	To follow relevant regulations (Waste Disposal Ordinance) in all circumstances.

Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
	Construction Phase Landscape and Visual Impact					
4.6.2.2	To screen the works area during the construction phase through the use of decorative hoarding along the site boundary with unified edge treatment and interface	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	A&MO, TM-EIA, Project Profile ["PP"], Landscape Mitigation and Tree Preservation Proposal ["LMTPP"] & WBTC No. 14/2002	Interim measures designed to ensure acceptable landscape and visual impact on completion. Implementation of the LMTPP to the mature trees during the construction period.
4.6.2.11	Creation of precautionary area (Cordon Area) around trees to be retained equal to the spread of the trees canopy diameter. Precautionary area to be fenced. Following the completion of the piling the Cordon Area would be based on the retained rootball.	Site	Specialist Landscape Contractor	Construction Phase	A&MO, TM-EIA, PP, LMTPP & WBTC No. 14/2002	Interim measures designed to ensure acceptable landscape and visual impact on completion. Implementation of the LMTPP to the mature trees during the construction period.
	Prohibition of the storage of materials including fuel, the movement of construction vehicles, and the refuelling and washing of equipment including concrete mixers within the Cordon Area.	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	A&MO, TM-EIA, PP, LMTPP & WBTC No. 14/2002	Interim measures designed to ensure acceptable landscape and visual impact on completion. Implementation of the LMTPP to the mature trees during the construction period.



Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
	<p>Phased segmental root pruning for trees to be retained over a six-month period prior to or site formation works, which affect the existing rootball of trees identified for retention. The extent of the pruning shall be based on a minimum half canopy and has been determined on a tree by tree basis.</p> <p>Phased segmental root pruning over a three-month period prior to lifting the trees identified for transplantation.</p>	Site	Specialist Landscape Contractor	Construction Phase	A&MO, TM-EIA, PP, LMTTP & WBTC No. 14/2002	Interim measures designed to ensure acceptable landscape and visual impact on completion. Implementation of the LMTTP to the mature trees during the construction period.
	Pruning of the branches of existing trees identified for transplantation and retention to be based on the principle of crown thinning maintaining their form and amenity value	Site	Specialist Landscape Contractor	Construction Phase	A&MO, TM-EIA, PP, LMTTP & WBTC No. 14/2002	Interim measures designed to ensure acceptable landscape and visual impact on completion. Implementation of the LMTTP to the mature trees during the construction period.
	The watering of existing vegetation particularly during periods of excavation when the water table beneath the existing vegetation is lowered.	Site	Specialist Landscape Contractor	Construction Phase	A&MO, TM-EIA, PP, LMTTP & WBTC No. 14/2002	Interim measures designed to ensure acceptable landscape and visual impact on completion. Implementation of the LMTTP to the mature trees during the construction period.

Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
	The rectification and repair of damaged vegetation following the construction phase to it's original condition prior to the commencement of the works or replacement using specimens of the same species, size and form where appropriate to the design intention of the area affected	Site	Specialist Landscape Contractor	Construction Phase	A&MO, TM-EIA, PP, LMTTP & WBTC No. 14/2002	Interim measures designed to ensure acceptable landscape and visual impact on completion. Implementation of the LMTTP to the mature trees during the construction period.
	All works affecting the trees identified for retention and transplantation will be carefully monitored. This includes the key stages in the preparation of the trees, the implementation of protection measures and health monitoring through out the construction period	Site	Specialist Landscape Contractor	Construction Phase	A&MO, TM-EIA, PP, LMTTP & WBTC No. 14/2002	Interim measures designed to ensure acceptable landscape and visual impact on completion. Implementation of the LMTTP to the mature trees during the construction period.

Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
	The tree transplanting and planting works should be implemented by approved Landscape Contractors and inspected and approved on site by a qualified Landscape Architect. A tree protection / transplanting specification would be included within the contract documents. Tree preservation proposals and procedures for the protection and preservation of the existing trees to be reviewed by third party Tree Specialist including the provision of an additional level of monitoring during the construction phase.	Site	Specialist Landscape Contractor	Construction Phase	A&MO, TM-EIA, PP, LMTTP & WBTC No. 14/2002	Interim measures designed to ensure acceptable landscape and visual impact on completion. Implementation of the LMTTP to the mature trees during the construction period.
	<b>Operational Phase Landscape and Visual Impact</b>					
4.6.3.4	To retain trees that have historic value and contribute most to the landscape and visual amenity of the site and its immediate environs	Site	Project Proponent/ Operator	Design, Construction and Operational Phase	TPO, A&MO, TM-EIA, PP, LMTTP & WBTC No. 14/2002	Long term measures designed to ensure creation of a high quality urban landscape
4.6.3.5	To restore the main buildings and to create landscaped gardens in order to beneficially affect the landscape character and quality of the area	Site	Project Proponent/ Operator	Design, Construction and Operational Phase	TPO, A&MO, TM-EIA, PP, LMTTP & WBTC No. 14/2002	Long term measures designed to ensure creation of a high quality urban landscape

Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
	To create the plaza to the south of the main colonial buildings to increase public access to the site and to open up views of the building façade	Site	Project Proponent/ Operator	Design, Construction and Operational Phase	TPO, A&MO, TM-EIA, PP, LMTTP & WBTC No. 14/2002	Long term measures deigned to ensure creation of a high quality urban landscape
	To provide where conditions allow new street planting along Canton Road, from No. 1 Peking Road to the intersection at Salisbury Road, and along the Salisbury Road frontage in order to create a boulevard type landscape to partially screen the development, and to enhance the green edge effect that is a dominant feature of both the site and its urban context.	Site	Project Proponent/ Operator	Design, Construction and Operational Phase	TPO, A&MO, TM-EIA, PP, LMTTP & WBTC No. 14/2002	Long term measures deigned to ensure creation of a high quality urban landscape
	To conduct new paving works at the street level as a result of the development and the widening of Canton Road which will lead to a significant improvement in the landscape and visual amenity of the streetscape within the study area	Site	Project Proponent/ Operator	Design, Construction and Operational Phase	TPO, A&MO, TM-EIA, PP	Long term measures deigned to ensure creation of a high quality urban landscape
	Detailed landscape and tree preservation proposals will be submitted to the relevant government departments for approval under the lease conditions and in accordance with WBTC No. 14/2002.	Site	Project Proponent/ Operator	Design, Construction and Operational Phase	TPO, A&MO, TM-EIA, PP & WBTC No. 14/2002	Long term measures deigned to ensure creation of a high quality urban landscape

Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
4.6.3.8	All landscape and visual mitigation works will be funded, implemented managed and maintained by the project proponent.	Site	Project Proponent/ Operator	Design, Construction and Operational Phase	TPO, A&MO, TM-EIA, PP & WBTC No. 14/2002	Long term measures deigned to ensure creation of a high quality urban landscape
	A qualified or registered landscape architect will be involved in the design, construction supervision and monitoring, and maintenance period to oversee the implementation of the recommended landscape and visual mitigation measures including the tree preservation and landscape works on site. Tree preservation proposals to be reviewed by third party Tree Specialist including monitoring during the establishment period.	Site	Project Proponent/ Operator	Design, Construction and Operational Phase	TPO, A&MO, TM-EIA, PP & WBTC No. 14/2002	Long term measures deigned to ensure creation of a high quality urban landscape

Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
	<b>Cultural Heritage Impact</b>					
4.7.1.1	All monuments within the site will be preserved to an extent given according to the in the tender requirement	Site	Project Proponent	Design, Construction and Operational Phase	Tender Document	To preserve the monument
4.7.4.1	To prepare and submit a detailed study report comprising the historic archives, measured drawings, photographic records and full bibliography in support of the historic evidence prepared by experts in cultural heritage for their approval under the Antiquities and Monuments Ordinance (Cap. 53)	Site	Project Proponent	Design Phase	A&MO	To observed principles in the Charter of Venice (ICOMOS) and the Burra Charter (ICOMOS Australia) and requirement of A&MO
4.7.4.2	To submit detailed descriptions, plans for building and mitigation works and implementation programme to AMO for their approval and monitoring before commencement of works.	Site	Project Proponent	Design Phase	A&MO	To observed principles in the Charter of Venice (ICOMOS) and the Burra Charter (ICOMOS Australia) and requirement of A&MO
4.7.4.3	To preserve the Historic Buildings to meet international standard. Relevant legislations, standards, Charters and planning guidelines will be observed.	Site	Project Proponent	Design, Construction & Operational Phase	A&MO	To observed principles in the Charter of Venice (ICOMOS) and the Burra Charter (ICOMOS Australia) and requirement of A&MO
4.7.4.4	To allow only alteration or addition works to the Historic Buildings, which are reversible except those, considered to be minor by AMO.	Site	Superstructure Contractor	Construction Phase	A&MO	To observed principles in the Charter of Venice (ICOMOS) and the Burra Charter (ICOMOS Australia) and requirement of A&MO
4.7.4.5	To take necessary precautions during construction and excavation work to prevent any damage to the Historic Buildings. Structural monitoring system will be designed and supervised by a Registered Structural Engineer during the whole of construction works on the site.	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	A&MO	To prevent any damage to the historic buildings and structures during the site formation.
4.7.4.8	A comprehensive management plan including a heritage building maintenance guideline for the operation of FMPHQ would be prepared by conservation experts.	Site	Agent appointed by Project Proponent	Prior to Operational Phase	A&MO	To maintain the historic site and buildings in a proper manner

Project Profile Ref.:	Recommended Mitigation Measures	Location of the measure	Who to implement the measure	When to implement the measures	What requirements or standards for the measure to achieve*	Objectives of the Recommended Measure & Main Concern to address
4.7.4.9	Periodic site inspection to heritage buildings on external areas, interior decoration and covered-up areas to ensure a constant monitoring of building condition is conducted.	Site	Agent appointed by Project Proponent	Operational Phase	A&MO	To maintain the historic site and buildings in a proper manner
4.7.4.10	The Permit on routine maintenance would be applied to AMO under the A & M Ordinance.	Site	Agent appointed by Project Proponent	Operational Phase	A&MO	To maintain the historic site and buildings in a proper manner

\*Abbreviation

TM-EIA – Technical Memorandum on Environmental Impact Assessment Process

AQO – Air Quality Objectives

APCO – Air Pollution Control Ordinance

APC(CD)R - Air Pollution Control (Construction Dust) Regulation

HKPSG – Hong Kong Planning Standards and Guidelines

TPO – Town Planning Ordinance

NCO – Noise Control Ordinance

WPCO – Water Pollution Control Ordinance

PN1/94 – Professional Persons Environmental Consultative Committee Practice Note (ProPECC PN) 1/94 "Construction Site Drainage"

WDO – Waste Disposal Ordinance

A&MO – Antiquities and Monuments Ordinance

**Appendix C: The environmental site inspection, deficiency and remedial action reports**





**NATURE & TECHNOLOGIES (HK) LIMITED**  
**科技環保(香港)有限公司**

Unit 2 & 3, 4/F., Wellborne Commercial Centre, 8 Java Road, North Point, Hong Kong.  
香港北角渣華道8號威邦商業中心4樓2及3室 Tel電話 : (852) 2877 3122 Fax傳真 : (852) 2511 0922  
Email電郵: enquiry@nt.com.hk Web page網址 : http://www.nt.com.hk

**Development at Former Marine Police  
Headquarters KIL 11161 (EP-184/2004)**

**Environmental Site Inspection, Deficiency and Remedial Action Report**

<b>Date of Issue:</b>	<i>Nov 6, 2008</i>	<b># Pages:</b>	<i>6</i>
<b>To:</b>	Hien Lee Engineering Co., Ltd.  Attn: Mr. Howard Lui Project Manager	<b>Cc:</b>	Mr. Alex Chan – IEC CH2M HILL Hong Kong Ltd.
<b>Fax No.:</b>	2366 2980		2507 2293

Inspection date: *Nov 6, 2008* Inspected by ET's Representative: *[Signature]*  
Time: *09:30* Contractor's Representative: *[Signature]*  
Architect's Representative: *[Signature]*  
Site: Former Marine Police Headquarter (Phase 2)

**WEATHER**

Condition:  Sunny  Fine  Overcast  Hazy  Drizzle  Rain  Storm  
Humidity:  High  Moderate  Low  
Wind:  Calm  Light  Breeze  Strong  
Temperature : *29* °C

**GENERAL**

EP 1.3	Is a copy of Environmental Permit together with all documents referred to in the permit kept in all sites/offices covered in the permit?		✓	Keep at site office
EP 1.5	Is a copy of the most updated Environmental Permit displayed at the at all vehicular site entrances/exits or at a convenient location for public information?	✓		All hardcopy moved due to site complete EP keep at site office

AIR QUALITY

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EM&A 2.32	Is the site hoarding of at least 2.4m high erected along the boundaries of the site (particularly along the northern boundary adjacent to No. 1, Peking Road) except at the site entrance/ exit?	✓			Site Hoarding Removed due to Site Completion
EP Annex I 29; EM&A 2.32	Is the truck speed suitably low (within 8 km/hr)?	✓			Not observed on site
EP Annex I 29; EM&A 2.32	Are the dusty vehicle loads transported to and from the work location covered by tarpaulin sheets and not to be overloaded?	✓			Not observed on Site
Annex I 30	Are water suppression applied at least four times a day at the work sites with active dusty operations and to water all dust emission sources when necessary?	✓			Site Completion and Paved
EM&A 2.32	Is there any vehicle wheel washing facilities including high pressure water jets provided at designated vehicle exit points?	✓			Site Completion and Paved
EM&A 2.32	Is there any side enclosure and covering of any aggregate or other dusty material storage piles, placing of stockpiles in an area to be sheltered on the top and the three sides, and sprayed with water?	✓			No storage pile observed
EM&A 2.32	Are the demolished items covered by impervious sheeting or placed in area sheltered on the top and the three sides?	✓			No storage pile observed
EM&A 2.32	Are all dusty material sprayed with water prior to loading, unloading or transfer?	✓			No storage pile observed
EP Annex I 31; EM&A 2.32	Is the drop height of excavated materials controlled to a minimum to limit fugitive dust generation from unloading as far as practicable?	✓			
	Is the area where vehicle washing takes place and the section of the road between the washing facilities and the exit point paved with concrete, bituminous materials or hardcores?		✓		
	Is the public road around the site entrance kept clean and free from dust?		✓		
	Immediately before leaving a construction site, is every vehicle washed to remove any dusty materials from its body and wheels?	✓			Site Completion and Paved
	Are all machinery and equipments well maintained e.g. without black smoke emission?	✓			Not Observed

NOISE

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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Ref.	Checklist Conditions	N/A	Yes	No	Remarks
NCO	Are valid construction noise permits available for inspection?			✓	Due to Office Moving Out
NCO	Are conditions of construction noise permits for the relevant parts of the works implemented accordingly?	✓			
EP Annex I 34; EM&A 3.26	Are the quiet power mechanical equipment with lower sound power level used?	✓			No Mechanical Equipment Observed on Site due to Construction Completion
EP Annex I 35; EM&A 3.26	Is the site hoarding of 4m to 6m high along the eastern boundary with sufficient surface density (10 to 15 kg/m <sup>2</sup> ) as noise barrier or other possible noise mitigation measures provided?	✓			Excavation is completed
EP Annex I 36; EM&A 3.26	Are the noise enclosure and temporary noise barriers with sufficient surface density (10 to 15 kg/m <sup>3</sup> ) (vertical and cantilevered types) or other possible noise mitigation measures adopted?	✓			Excavation is completed
EP Annex I 37; EM&A 3.26	Is the excavation carried out from west to east by making use of the topography so that the original platform can act as effective noise barrier?	✓			Excavation is completed
EP Annex I 38; EM&A 3.26	Is proper acoustic barrier/enclosure for the noisy facilities installed?	✓			Excavation is completed
EP Annex I 38; EM&A 3.26	Are all E&M facilities in a manner to avoid any unacceptable impact on the surrounding noise sensitive uses shielded and housed?		✓		
EP Annex I 38; EM&A 3.26	Are all noisy facilities if practicable or position them near the western side of the site with proper at-source shielding especially on the east side fully enclosed?	✓			Excavation is completed
	Are all air compressors and hand held breakers having valid noise label?	✓			Not Observed
	Are all compressors and generators operating with doors closed?	✓			Not Observed

#### WATER QUALITY

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 39; EM&A 4.2	Are works carried out in such a manner as to minimise adverse impacts on the water quality within and outside the site on the transport routes and at the loading, dredging and dumping areas during execution of the works?		✓		

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 40; EM&A 4.2	Is there any design, construction, operation and maintenance of all the mitigation measures?	✓			
EP Annex I 41; EM&A 4.2	Are all surface runoff generated from foundation works, dust control and vehicle washing, etc. within the site contained?		✓		
EM&A 4.2	Is there any discharge directly or indirectly or cause or permit or suffer to be discharged into any public sewer, stormwater drain, channel, stream-course or sea any trade effluent or foul or contaminated water or cooling or hot water?			✓	
EM&A 4.2	Is there any direct foul water effluent to a foul sewer or to a sewage treatment and disposal facility either directly or indirectly by means of pumping or other means?		✓		
	Has discharge licence applied from EPD for discharging any effluent from the construction site?		✓		Status to be Confirmed
	Is the drainage system adequate and well maintained to prevent flooding and overflow?		✓		
	Are channels, earth bunds or temporary ditches used to divert the surface runoff to the sedimentation tanks prior to discharge?	✓			Drainage System is in Placed
	Do the sedimentation tanks for settling surface runoff prior to discharge have adequate capacity and free from silt and sediment?	✓			
	Are sand and silt settled in the wheel washing bay, ditches and silt removal facilities cleaned and removed regularly (e.g. at least weekly) or as necessary?	✓			
	Are unnecessary water retained in receptacles and standing water avoided to prevent mosquito breeding?		✓		
	Is toilet that connects to foul sewer or chemical toilets provided?		✓		Temporary toilet provided

## WASTE MANAGEMENT

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
WMP Table 4.2	Are all works areas generally cleared of litter and refuse?		✓		
WMP Table 4.2	Are general refuse and litter stored in enclosed bins or compaction units?		✓		
WMP Table 4.2	Are refuse burned at construction site?			✓	
WMP Table 4.2	Are three colour coded bins provided for collection of recyclable materials?		✓		
WMP Table 4.3	Is processing generating chemical waste identified?	✓			No Process with Chemical Waste Observed
WMP Table 4.3	Are chemical wastes handled in suitable packaging, labeling and storage?	✓			No chemical waste observed

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
WMP Table 4.3	Is asbestos waste in suitable handling, storage and disposal?	✓			No asbestos observed
WMP Table 4.4	Are all stockpiled spoils covered with tarpaulin or other appropriate fabric?		✓		
WMP Table 4.4	Are all vehicles transporting wastes properly fitting tail boards and sides and materials securely covered?	✓			Not Observed
WMP Table 4.4	Are all wastes stored in a manner ensuring that they are held securely without loss or leakage?		✓		
WMP Table 4.4	Are all waste storage areas cleaned and maintained?		✓		
WMP Table 4.4	Are disposal permits obtained for each waste category?		✓		
WMP Table 4.4	Is there any record/trip tickets of quantities of chemical wastes generated, recycled and disposal maintained for inspection?		✓		
WMP Table 4.4	Is there any record/trip tickets of the quantities of wastes generated recycled and disposed for inspection?		✓		

#### LANDSCAPE AND VISUAL

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 12; EM&A 6.4	Is the works area screened during the construction phase through the use of decorative hoarding along the site boundary with unified edge treatment and interface?		✓		
EP Annex I 13; EM&A 6.4	Is there any creation of precautionary area (Cordon Area) around trees retained equal to the spread of the trees canopy diameter?		✓		
EP Annex I 13; EM&A 6.4	Is the Cordon Area fenced?		✓		
EP Annex I 14; EM&A 6.4	Is there any storage of materials including fuel, the movement of construction vehicles, and the refuelling and washing of equipment including concrete mixers within the Cordon Area?			✓	

#### CULTURAL HERITAGE

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 1	Are all monuments within the site preserved?		✓		
EP Annex I 4	Are the Historic Buildings preserved?		✓		
EP Annex I 6	Is there any necessary precaution taken during construction and excavation work to prevent any damage to the Historic Buildings?		✓		
EP Annex I 10	Is there any percussive piling carried out?			✓	
EP Annex I 11	Is there any concurrent pipe pile driving near the tree ring and the Main Building of the Former Marine Police Headquarters?			✓	

**Abbreviation**

EP: Environmental Permit (Environmental Permit No. EP-184/2004)  
EM&A: Environmental Monitoring & Audit Manual  
NCO: Noise Control Ordinance  
WMP: Waste Management Plan

**Deficiency/Other Observations/Remedial Action to be Taken:**

Noise Permit to be kept properly on site  
read

**Follow Up Actions to Previous Site Inspection:**

EP is kept properly at site office for easy inspection

**Signatures**


ET's Representative

Contractor's Representative

Architect's Representative

  
(Signature)

TSE, Hin Tung Alfred  
(Name in Block Letter)

  
(Signature)  
CHENG SU YAN

(Name in Block Letter)

(Signature)

(Name in Block Letter)




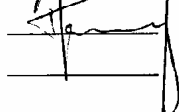
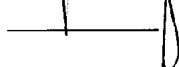
**NATURE & TECHNOLOGIES (HK) LIMITED**  
**科技環保(香港)有限公司**

Unit 2 & 3, 4/F., Wellborne Commercial Centre, 8 Java Road, North Point, Hong Kong.  
香港北角渣華道8號威邦商業中心4樓2及3室 Tel電話 : (852) 2877 3122 Fax傳真 : (852) 2511 0922  
Email電郵: enquiry@nt.com.hk Web page網址 : http://www.nt.com.hk

**Development at Former Marine Police  
Headquarters KIL 11161 (EP-184/2004)**

**Environmental Site Inspection, Deficiency and Remedial Action Report**

<b>Date of Issue:</b>	<i>Nov 14, 08</i>	<b># Pages:</b>	<i>6</i>
<b>To:</b>	Hien Lee Engineering Co., Ltd.  Attn: Mr. Howard Lui Project Manager	<b>Cc:</b>	Mr. Alex Chan – IEC CH2M HILL Hong Kong Ltd.
<b>Fax No.:</b>	2366 2980		2507 2293

**Inspection date:** *Nov 13, 08*      **Inspected**      **ET's Representative:**   
**Time:** *15:45*      **Contractor's Representative:**   
**Architect's Representative:** 

**Site:** Former Marine Police Headquarter (Phase 2)

**WEATHER**

**Condition:**  Sunny     Fine     Overcast     Hazy     Drizzle     Rain     Storm  
**Humidity:**  High     Moderate     Low  
**Wind:**  Calm     Light     Breeze     Strong  
**Temperature:** *28* °C

**GENERAL**

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP 1.3	Is a copy of Environmental Permit together with all documents referred to in the permit kept in all sites/offices covered in the permit?		<input checked="" type="checkbox"/>		Keep at site office
EP 1.5	Is a copy of the most updated Environmental Permit displayed at the at all vehicular site entrances/exits or at a convenient location for public information?	<input checked="" type="checkbox"/>			All hoarding moved due to site complete

AIR QUALITY

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EM&A 2.32	Is the site hoarding of at least 2.4m high erected along the boundaries of the site (particularly along the northern boundary adjacent to No. 1, Peking Road) except at the site entrance/ exit?	✓			Site Hoarding Removed due to Construction Completion
EP Annex I 29; EM&A 2.32	Is the truck speed suitably low (within 8 km/hr)?		✓		
EP Annex I 29; EM&A 2.32	Are the dusty vehicle loads transported to and from the work location covered by tarpaulin sheets and not to be overloaded?	✓			Not observed on site
Annex I 30	Are water suppression applied at least four times a day at the work sites with active dusty operations and to water all dust emission sources when necessary?	✓			Site Completion and Paved
EM&A 2.32	Is there any vehicle wheel washing facilities including high pressure water jets provided at designated vehicle exit points?	✓			Site Completion and Paved
EM&A 2.32	Is there any side enclosure and covering of any aggregate or other dusty material storage piles, placing of stockpiles in an area to be sheltered on the top and the three sides, and sprayed with water?	✓			No Storage Pile Observed
EM&A 2.32	Are the demolished items covered by impervious sheeting or placed in area sheltered on the top and the three sides?		✓		
EM&A 2.32	Are all dusty material sprayed with water prior to loading, unloading or transfer?	✓			
EP Annex I 31; EM&A 2.32	Is the drop height of excavated materials controlled to a minimum to limit fugitive dust generation from unloading as far as practicable?	✓			
	Is the area where vehicle washing takes place and the section of the road between the washing facilities and the exit point paved with concrete, bituminous materials or hardcores?		✓		
	Is the public road around the site entrance kept clean and free from dust?		✓		
	Immediately before leaving a construction site, is every vehicle washed to remove any dusty materials from its body and wheels?	✓			Site Completion and Paved
	Are all machinery and equipments well maintained e.g. without black smoke emission?	✓			Not Observed

NOISE

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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Ref.	Checklist Conditions	N/A	Yes	No	Remarks
NCO	Are valid construction noise permits available for inspection?	✓			
NCO	Are conditions of construction noise permits for the relevant parts of the works implemented accordingly?	✓			
EP Annex I 34; EM&A 3.26	Are the quiet power mechanical equipment with lower sound power level used?	✓			No Mechanical equipment Observed on Site
EP Annex I 35; EM&A 3.26	Is the site hoarding of 4m to 6m high along the eastern boundary with sufficient surface density (10 to 15 kg/m <sup>2</sup> ) as noise barrier or other possible noise mitigation measures provided?	✓			Excavation is completed
EP Annex I 36; EM&A 3.26	Are the noise enclosure and temporary noise barriers with sufficient surface density (10 to 15 kg/m <sup>3</sup> ) (vertical and cantilevered types) or other possible noise mitigation measures adopted?	✓			Excavation is completed
EP Annex I 37; EM&A 3.26	Is the excavation carried out from west to east by making use of the topography so that the original platform can act as effective noise barrier?	✓			Excavation is completed
EP Annex I 38; EM&A 3.26	Is proper acoustic barrier/enclosure for the noisy facilities installed?	✓			Excavation is completed
EP Annex I 38; EM&A 3.26	Are all E&M facilities in a manner to avoid any unacceptable impact on the surrounding noise sensitive uses shielded and housed?		✓		
EP Annex I 38; EM&A 3.26	Are all noisy facilities if practicable or position them near the western side of the site with proper at-source shielding especially on the east side fully enclosed?	✓			Excavation is completed
	Are all air compressors and hand held breakers having valid noise label?	✓			No Air Compressor Observed on Site
	Are all compressors and generators operating with doors closed?	✓			

#### WATER QUALITY

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 39; EM&A 4.2	Are works carried out in such a manner as to minimise adverse impacts on the water quality within and outside the site on the transport routes and at the loading, dredging and dumping areas during execution of the works?	✓			Construction Completed

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 40; EM&A 4.2	Is there any design, construction, operation and maintenance of all the mitigation measures?	✓			
EP Annex I 41; EM&A 4.2	Are all surface runoff generated from foundation works, dust control and vehicle washing, etc. within the site contained?		✓		
EM&A 4.2	Is there any discharge directly or indirectly or cause or permit or suffer to be discharged into any public sewer, stormwater drain, channel, stream-course or sea any trade effluent or foul or contaminated water or cooling or hot water?			✓	
EM&A 4.2	Is there any direct foul water effluent to a foul sewer or to a sewage treatment and disposal facility either directly or indirectly by means of pumping or other means?		✓		
	Has discharge licence applied from EPD for discharging any effluent from the construction site?		✓		Licence Terminated as Advised by Contractor
	Is the drainage system adequate and well maintained to prevent flooding and overflow?		✓		
	Are channels, earth bunds or temporary ditches used to divert the surface runoff to the sedimentation tanks prior to discharge?	✓			Drainage System is in Place
	Do the sedimentation tanks for settling surface runoff prior to discharge have adequate capacity and free from silt and sediment?	✓			
	Are sand and silt settled in the wheel washing bay, ditches and silt removal facilities cleaned and removed regularly (e.g. at least weekly) or as necessary?	✓			
	Are unnecessary water retained in receptacles and standing water avoided to prevent mosquito breeding?		✓		
	Is toilet that connects to foul sewer or chemical toilets provided?		✓		Temporary Toilet Moved to Another Entrance near Canton Road

## WASTE MANAGEMENT

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
WMP Table 4.2	Are all works areas generally cleared of litter and refuse?		✓		
WMP Table 4.2	Are general refuse and litter stored in enclosed bins or compaction units?		✓		
WMP Table 4.2	Are refuse burned at construction site?			✓	
WMP Table 4.2	Are three colour coded bins provided for collection of recyclable materials?			✓	
WMP Table 4.3	Is processing generating chemical waste identified?	✓			

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
WMP Table 4.3	Are chemical wastes handled in suitable packaging, labeling and storage?	✓			No chemical waste observed
WMP Table 4.3	Is asbestos waste in suitable handling, storage and disposal?	✓			No asbestos observed
WMP Table 4.4	Are all stockpiled spoils covered with tarpaulin or other appropriate fabric?		✓		
WMP Table 4.4	Are all vehicles transporting wastes properly fitting tail boards and sides and materials securely covered?	✓			Not Observed
WMP Table 4.4	Are all wastes stored in a manner ensuring that they are held securely without loss or leakage?		✓		
WMP Table 4.4	Are all waste storage areas cleaned and maintained?		✓		
WMP Table 4.4	Are disposal permits obtained for each waste category?		✓		
WMP Table 4.4	Is there any record/trip tickets of quantities of chemical wastes generated, recycled and disposal maintained for inspection?		✓		
WMP Table 4.4	Is there any record/trip tickets of the quantities of wastes generated recycled and disposed for inspection?			✓	Not Observed on Site

#### LANDSCAPE AND VISUAL

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 12; EM&A 6.4	Is the works area screened during the construction phase through the use of decorative hoarding along the site boundary with unified edge treatment and interface?		✓		
EP Annex I 13; EM&A 6.4	Is there any creation of precautionary area (Cordon Area) around trees retained equal to the spread of the trees canopy diameter?		✓		
EP Annex I 13; EM&A 6.4	Is the Cordon Area fenced?		✓		
EP Annex I 14; EM&A 6.4	Is there any storage of materials including fuel, the movement of construction vehicles, and the refuelling and washing of equipment including concrete mixers within the Cordon Area?			✓	

#### CULTURAL HERITAGE

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 1	Are all monuments within the site preserved?		✓		
EP Annex I 4	Are the Historic Buildings preserved?		✓		
EP Annex I 6	Is there any necessary precaution taken during construction and excavation work to prevent any damage to the Historic Buildings?		✓		
EP Annex I 10	Is there any percussive piling carried out?			✓	

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 11	Is there any concurrent pipe pile driving near the tree ring and the Main Building of the Former Marine Police Headquarters?			✓	

**Abbreviation**

EP: Environmental Permit (Environmental Permit No. EP-184/2004)  
EM&A: Environmental Monitoring & Audit Manual  
NCO: Noise Control Ordinance  
WMP: Waste Management Plan

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**Deficiency/Other Observations/Remedial Action to be Taken:**

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**Follow Up Actions to Previous Site Inspection:**

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**Signatures**

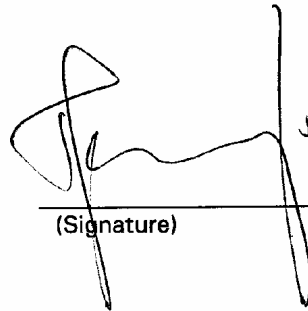
**ET's Representative**

**Contractor's Representative**

**Architect's Representative**

  
\_\_\_\_\_  
(Signature)

DE, Hia Tang Defied  
(Name in Block Letter)

  
\_\_\_\_\_  
(Signature)

LIU YIU WING  
(Name in Block Letter)  
Howard

\_\_\_\_\_  
(Signature)

(Name in Block Letter)



**NATURE & TECHNOLOGIES (HK) LIMITED**  
**科技環保(香港)有限公司**

Unit 2 & 3, 4/F., Wellborne Commercial Centre, 8 Java Road, North Point, Hong Kong.  
香港北角渣華道8號威邦商業中心4樓2及3室 Tel電話: (852) 2877 3122 Fax傳真: (852) 2511 0922  
Email電郵: enquiry@nt.com.hk Web page網址: http://www.nt.com.hk

**Development at Former Marine Police  
Headquarters KIL 11161 (EP-184/2004)**

**Environmental Site Inspection, Deficiency and Remedial Action Report**

<b>Date of Issue:</b>	20/11/2008	<b># Pages:</b>	6
<b>To:</b>	Hien Lee Engineering Co., Ltd.  Attn: Mr. Howard Lui Project Manager	<b>Cc:</b>	Mr. Alex Chan – IEC CH2M HILL Hong Kong Ltd.
<b>Fax No.:</b>	2366 2980		2507 2293

Inspection date: Nov 20, 08  
Time: 10:45

Inspected by ET's Representative: [Signature]  
Contractor's Representative: [Signature]  
Architect's Representative: [Signature]

Site: Former Marine Police Headquarter (Phase 2)

**WEATHER**

Condition:  Sunny  Fine  Overcast  Hazy  Drizzle  Rain  Storm  
Humidity:  High  Moderate  Low  
Wind:  Calm  Light  Breeze  Strong  
Temperature: 18 °C

**GENERAL**

No.	Deficiency	Y/N	Y/N	Remarks
EP 1.3	Is a copy of Environmental Permit together with all documents referred to in the permit kept in all sites/offices covered in the permit?		✓	
EP 1.5	Is a copy of the most updated Environmental Permit displayed at the at all vehicular site entrances/exits or at a convenient location for public information?	✓		All hoarding moved due to site completion

EP keep at site office

AIR QUALITY

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EM&A 2.32	Is the site hoarding of at least 2.4m high erected along the boundaries of the site (particularly along the northern boundary adjacent to No. 1, Peking Road) except at the site entrance/ exit?	✓			Site hoarding removed due to construction completion
EP Annex I 29; EM&A 2.32	Is the truck speed suitably low (within 8 km/hr)?		✓		
EP Annex I 29; EM&A 2.32	Are the dusty vehicle loads transported to and from the work location covered by tarpaulin sheets and not to be overloaded?	✓			Not observed on site
Annex I 30	Are water suppression applied at least four times a day at the work sites with active dusty operations and to water all dust emission sources when necessary?	✓			Site is completely paved
EM&A 2.32	Is there any vehicle wheel washing facilities including high pressure water jets provided at designated vehicle exit points?	✓			Site is completely paved
EM&A 2.32	Is there any side enclosure and covering of any aggregate or other dusty material storage piles, placing of stockpiles in an area to be sheltered on the top and the three sides, and sprayed with water?	✓			No storage pile observed
EM&A 2.32	Are the demolished items covered by impervious sheeting or placed in area sheltered on the top and the three sides?	✓			No storage pile observed
EM&A 2.32	Are all dusty material sprayed with water prior to loading, unloading or transfer?	✓			Site is completely paved
EP Annex I 31; EM&A 2.32	Is the drop height of excavated materials controlled to a minimum to limit fugitive dust generation from unloading as far as practicable?	✓			
	Is the area where vehicle washing takes place and the section of the road between the washing facilities and the exit point paved with concrete, bituminous materials or hardcores?	✓			
	Is the public road around the site entrance kept clean and free from dust?		✓		
	Immediately before leaving a construction site, is every vehicle washed to remove any dusty materials from its body and wheels?	✓			Site is completely paved
	Are all machinery and equipments well maintained e.g. without black smoke emission?	✓			Not observed on site

NOISE

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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Ref.	Checklist Conditions	N/A	Yes	No	Remarks
NCO	Are valid construction noise permits available for inspection?	✓			
NCO	Are conditions of construction noise permits for the relevant parts of the works implemented accordingly?	✓			
EP Annex I 34; EM&A 3.26	Are the quiet power mechanical equipment with lower sound power level used?	✓			No Mechanical Equipment Observed on Site
EP Annex I 35; EM&A 3.26	Is the site hoarding of 4m to 6m high along the eastern boundary with sufficient surface density (10 to 15 kg/m <sup>2</sup> ) as noise barrier or other possible noise mitigation measures provided?	✓			Excavation is completed
EP Annex I 36; EM&A 3.26	Are the noise enclosure and temporary noise barriers with sufficient surface density (10 to 15 kg/m <sup>3</sup> ) (vertical and cantilevered types) or other possible noise mitigation measures adopted?	✓			Excavation is completed
EP Annex I 37; EM&A 3.26	Is the excavation carried out from west to east by making use of the topography so that the original platform can act as effective noise barrier?	✓			Excavation is completed
EP Annex I 38; EM&A 3.26	Is proper acoustic barrier/enclosure for the noisy facilities installed?	✓			Excavation is completed
EP Annex I 38; EM&A 3.26	Are all E&M facilities in a manner to avoid any unacceptable impact on the surrounding noise sensitive uses shielded and housed?		✓		
EP Annex I 38; EM&A 3.26	Are all noisy facilities if practicable or position them near the western side of the site with proper at-source shielding especially on the east side fully enclosed?	✓			Excavation is completed
	Are all air compressors and hand held breakers having valid noise label?	✓			Not observed on site
	Are all compressors and generators operating with doors closed?	✓			Not observed on site

#### WATER QUALITY

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 39; EM&A 4.2	Are works carried out in such a manner as to minimise adverse impacts on the water quality within and outside the site on the transport routes and at the loading, dredging and dumping areas during execution of the works?	✓			Construction is completed



Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 40; EM&A 4.2	Is there any design, construction, operation and maintenance of all the mitigation measures?	✓			
EP Annex I 41; EM&A 4.2	Are all surface runoff generated from foundation works, dust control and vehicle washing, etc. within the site contained?		✓		
EM&A 4.2	Is there any discharge directly or indirectly or cause or permit or suffer to be discharged into any public sewer, stormwater drain, channel, stream-course or sea any trade effluent or foul or contaminated water or cooling or hot water?			✓	
EM&A 4.2	Is there any direct foul water effluent to a foul sewer or to a sewage treatment and disposal facility either directly or indirectly by means of pumping or other means?		✓		
	Has discharge licence applied from EPD for discharging any effluent from the construction site?		✓		Status to be Confirmed
	Is the drainage system adequate and well maintained to prevent flooding and overflow?		✓		
	Are channels, earth bunds or temporary ditches used to divert the surface runoff to the sedimentation tanks prior to discharge?	✓			Drainage system is in place
	Do the sedimentation tanks for settling surface runoff prior to discharge have adequate capacity and free from silt and sediment?	✓			Drainage system is in place
	Are sand and silt settled in the wheel washing bay, ditches and silt removal facilities cleaned and removed regularly (e.g. at least weekly) or as necessary?	✓			Drainage system is in place
	Are unnecessary water retained in receptacles and standing water avoided to prevent mosquito breeding?		✓		
	Is toilet that connects to foul sewer or chemical toilets provided?			✓	Temporary toilet provided

## WASTE MANAGEMENT

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
WMP Table 4.2	Are all works areas generally cleared of litter and refuse?		✓		
WMP Table 4.2	Are general refuse and litter stored in enclosed bins or compaction units?			✓	
WMP Table 4.2	Are refuse burned at construction site?			✓	
WMP Table 4.2	Are three colour coded bins provided for collection of recyclable materials?		✓		
WMP Table 4.3	Is processing generating chemical waste identified?	✓			
WMP Table 4.3	Are chemical wastes handled in suitable packaging, labeling and storage?	✓			
WMP Table 4.3	Is asbestos waste in suitable handling, storage and disposal?	✓			

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
WMP Table 4.4	Are all stockpiled spoils covered with tarpaulin or other appropriate fabric?		✓		Partial Covered
WMP Table 4.4	Are all vehicles transporting wastes properly fitting tail boards and sides and materials securely covered?	✓			
WMP Table 4.4	Are all wastes stored in a manner ensuring that they are held securely without loss or leakage?		✓		
WMP Table 4.4	Are all waste storage areas cleaned and maintained?		✓		
WMP Table 4.4	Are disposal permits obtained for each waste category?		✓		
WMP Table 4.4	Is there any record/trip tickets of quantities of chemical wastes generated, recycled and disposal maintained for inspection?		✓		
WMP Table 4.4	Is there any record/trip tickets of the quantities of wastes generated recycled and disposed for inspection?		✓		

#### LANDSCAPE AND VISUAL

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 12; EM&A 6.4	Is the works area screened during the construction phase through the use of decorative hoarding along the site boundary with unified edge treatment and interface?		✓		
EP Annex I 13; EM&A 6.4	Is there any creation of precautionary area (Cordon Area) around trees retained equal to the spread of the trees canopy diameter?		✓		
EP Annex I 13; EM&A 6.4	Is the Cordon Area fenced?		✓		
EP Annex I 14; EM&A 6.4	Is there any storage of materials including fuel, the movement of construction vehicles, and the refuelling and washing of equipment including concrete mixers within the Cordon Area?			✓	

#### CULTURAL HERITAGE

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 1	Are all monuments within the site preserved?		✓		
EP Annex I 4	Are the Historic Buildings preserved?		✓		
EP Annex I 6	Is there any necessary precaution taken during construction and excavation work to prevent any damage to the Historic Buildings?		✓		
EP Annex I 10	Is there any percussive piling carried out?			✓	
EP Annex I 11	Is there any concurrent pipe pile driving near the tree ring and the Main Building of the Former Marine Police Headquarters?			✓	

**Abbreviation**

EP: Environmental Permit (Environmental Permit No. EP-184/2004)  
EM&A: Environmental Monitoring & Audit Manual  
NCO: Noise Control Ordinance  
WMP: Waste Management Plan

**Deficiency/Other Observations/Remedial Action to be Taken:**

*Stockpile is not covered properly and expose*

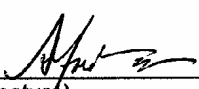
**Follow Up Actions to Previous Site Inspection:**

**Signatures**

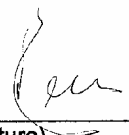
**ET's Representative**

**Contractor's Representative**

**Architect's Representative**

  
(Signature)

*TSE, Hiu Tung Alfred*  
(Name in Block Letter)

  
(Signature)

*Kenneth Poon*  
(Name in Block Letter)

(Signature)

(Name in Block Letter)



**NATURE & TECHNOLOGIES (HK) LIMITED**  
**科技環保(香港)有限公司**

Unit 2 & 3, 4/F., Wellborne Commercial Centre, 8 Java Road, North Point, Hong Kong.  
香港北角渣華道8號威邦商業中心4樓2及3室 Tel電話 : (852) 2877 3122 Fax傳真 : (852) 2511 0922  
Email電郵: enquiry@nt.com.hk Web page網址 : http://www.nt.com.hk

**Development at Former Marine Police  
Headquarters KIL 11161 (EP-184/2004)**

**Environmental Site Inspection, Deficiency and Remedial Action Report**

Date of Issue:	<u>Nov 28, 08</u>	# Pages:	<u>6</u>
To:	Hien Lee Engineering Co., Ltd.  Attn: Mr. Howard Lui Project Manager	Cc:	Ms. Vivian Chan - IEC CH2M HILL Hong Kong Ltd.
Fax No.:	2366 2980		2507 2293

Inspection date: Nov 27, 08  
Time: 14:30

Inspected

ET's Representative:

Contractor's Representative:

Architect's Representative:

*[Handwritten signatures]*

Site: Former Marine Police Headquarter (Phase 2)

**WEATHER**

Condition:  Sunny  Fine  Overcast  Hazy  Drizzle  Rain  Storm  
Humidity:  High  Moderate  Low  
Wind:  Calm  Light  Breeze  Strong  
Temperature: 22 °C

**GENERAL**

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP 1.3	Is a copy of Environmental Permit together with all documents referred to in the permit kept in all sites/offices covered in the permit?		<input checked="" type="checkbox"/>		<i>Keep it site office</i>
EP 1.5	Is a copy of the most updated Environmental Permit displayed at the at all vehicular site entrances/exits or at a convenient location for public information?	<input checked="" type="checkbox"/>			

AIR QUALITY

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EM&A 2.32	Is the site hoarding of at least 2.4m high erected along the boundaries of the site (particularly along the northern boundary adjacent to No. 1, Peking Road) except at the site entrance/ exit?	✓			Hoarding removed due to construction completed
EP Annex I 29; EM&A 2.32	Is the truck speed suitably low (within 8 km/hr)?		✓		
EP Annex I 29; EM&A 2.32	Are the dusty vehicle loads transported to and from the work location covered by tarpaulin sheets and not to be overloaded?	✓			Not observed
Annex I 30	Are water suppression applied at least four times a day at the work sites with active dusty operations and to water all dust emission sources when necessary?			✓	Water Spray is Needed for Dusty Pave
EM&A 2.32	Is there any vehicle wheel washing facilities including high pressure water jets provided at designated vehicle exit points?	✓			
EM&A 2.32	Is there any side enclosure and covering of any aggregate or other dusty material storage piles, placing of stockpiles in an area to be sheltered on the top and the three sides, and sprayed with water?			✓	Demolished Items Needed to be Covered
EM&A 2.32	Are the demolished items covered by impervious sheeting or placed in area sheltered on the top and the three sides?			✓	No storage pile observed
EM&A 2.32	Are all dusty material sprayed with water prior to loading, unloading or transfer?	✓			
EP Annex I 31; EM&A 2.32	Is the drop height of excavated materials controlled to a minimum to limit fugitive dust generation from unloading as far as practicable?	✓			
	Is the area where vehicle washing takes place and the section of the road between the washing facilities and the exit point paved with concrete, bituminous materials or hardcores?	✓			
	Is the public road around the site entrance kept clean and free from dust?		✓		
	Immediately before leaving a construction site, is every vehicle washed to remove any dusty materials from its body and wheels?	✓			
	Are all machinery and equipments well maintained e.g. without black smoke emission?		✓		

NOISE

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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Ref.	Checklist Conditions	N/A	Yes	No	Remarks
NCO	Are valid construction noise permits available for inspection?	✓			
NCO	Are conditions of construction noise permits for the relevant parts of the works implemented accordingly?	✓			
EP Annex I 34; EM&A 3.26	Are the quiet power mechanical equipment with lower sound power level used?	✓			
EP Annex I 35; EM&A 3.26	Is the site hoarding of 4m to 6m high along the eastern boundary with sufficient surface density (10 to 15 kg/m <sup>2</sup> ) as noise barrier or other possible noise mitigation measures provided?	✓			Excavation is completed
EP Annex I 36; EM&A 3.26	Are the noise enclosure and temporary noise barriers with sufficient surface density (10 to 15 kg/m <sup>3</sup> ) (vertical and cantilevered types) or other possible noise mitigation measures adopted?	✓			Excavation is completed
EP Annex I 37; EM&A 3.26	Is the excavation carried out from west to east by making use of the topography so that the original platform can act as effective noise barrier?	✓			Excavation is completed
EP Annex I 38; EM&A 3.26	Is proper acoustic barrier/enclosure for the noisy facilities installed?	✓			Excavation is completed
EP Annex I 38; EM&A 3.26	Are all E&M facilities in a manner to avoid any unacceptable impact on the surrounding noise sensitive uses shielded and housed?		✓		
EP Annex I 38; EM&A 3.26	Are all noisy facilities if practicable or position them near the western side of the site with proper at-source shielding especially on the east side fully enclosed?	✓			
	Are all air compressors and hand held breakers having valid noise label?	✓			Not observed on site
	Are all compressors and generators operating with doors closed?	✓			

#### WATER QUALITY

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 39; EM&A 4.2	Are works carried out in such a manner as to minimise adverse impacts on the water quality within and outside the site on the transport routes and at the loading, dredging and dumping areas during execution of the works?	✓			Construction is completed

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 40; EM&A 4.2	Is there any design, construction, operation and maintenance of all the mitigation measures?	✓			
EP Annex I 41; EM&A 4.2	Are all surface runoff generated from foundation works, dust control and vehicle washing, etc. within the site contained?		✓		
EM&A 4.2	Is there any discharge directly or indirectly or cause or permit or suffer to be discharged into any public sewer, stormwater drain, channel, stream-course or sea any trade effluent or foul or contaminated water or cooling or hot water?	✓			
EM&A 4.2	Is there any direct foul water effluent to a foul sewer or to a sewage treatment and disposal facility either directly or indirectly by means of pumping or other means?			✓	
	Has discharge licence applied from EPD for discharging any effluent from the construction site?		✓		
	Is the drainage system adequate and well maintained to prevent flooding and overflow?		✓		
	Are channels, earth bunds or temporary ditches used to divert the surface runoff to the sedimentation tanks prior to discharge?	✓			Drainage system is in place
	Do the sedimentation tanks for settling surface runoff prior to discharge have adequate capacity and free from silt and sediment?	✓			Drainage system is in place
	Are sand and silt settled in the wheel washing bay, ditches and silt removal facilities cleaned and removed regularly (e.g. at least weekly) or as necessary?	✓			Drainage system is in place
	Are unnecessary water retained in receptacles and standing water avoided to prevent mosquito breeding?		✓		
	Is toilet that connects to foul sewer or chemical toilets provided?		✓		Temporary Toilet Provided

## WASTE MANAGEMENT

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
WMP Table 4.2	Are all works areas generally cleared of litter and refuse?			✓	Litter Should be Removed as soon as possible
WMP Table 4.2	Are general refuse and litter stored in enclosed bins or compaction units?		✓		
WMP Table 4.2	Are refuse burned at construction site?			✓	
WMP Table 4.2	Are three colour coded bins provided for collection of recyclable materials?		✓		
WMP Table 4.3	Is processing generating chemical waste identified?	✓			
WMP Table 4.3	Are chemical wastes handled in suitable packaging, labeling and storage?	✓			

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
WMP Table 4.3	Is asbestos waste in suitable handling, storage and disposal?	✓			
WMP Table 4.4	Are all stockpiled spoils covered with tarpaulin or other appropriate fabric?			✓	Stockpile Exposed
WMP Table 4.4	Are all vehicles transporting wastes properly fitting tail boards and sides and materials securely covered?	✓			Not Observed
WMP Table 4.4	Are all wastes stored in a manner ensuring that they are held securely without loss or leakage?		✓		
WMP Table 4.4	Are all waste storage areas cleaned and maintained?		✓		
WMP Table 4.4	Are disposal permits obtained for each waste category?		✓		
WMP Table 4.4	Is there any record/trip tickets of quantities of chemical wastes generated, recycled and disposal maintained for inspection?	✓			
WMP Table 4.4	Is there any record/trip tickets of the quantities of wastes generated recycled and disposed for inspection?		✓		Keep at Head Office

#### LANDSCAPE AND VISUAL

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 12; EM&A 6.4	Is the works area screened during the construction phase through the use of decorative hoarding along the site boundary with unified edge treatment and interface?		✓		
EP Annex I 13; EM&A 6.4	Is there any creation of precautionary area (Cordon Area) around trees retained equal to the spread of the trees canopy diameter?		✓		
EP Annex I 13; EM&A 6.4	Is the Cordon Area fenced?		✓		
EP Annex I 14; EM&A 6.4	Is there any storage of materials including fuel, the movement of construction vehicles, and the refuelling and washing of equipment including concrete mixers within the Cordon Area?			✓	

#### CULTURAL HERITAGE

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
EP Annex I 1	Are all monuments within the site preserved?		✓		
EP Annex I 4	Are the Historic Buildings preserved?		✓		
EP Annex I 6	Is there any necessary precaution taken during construction and excavation work to prevent any damage to the Historic Buildings?		✓		
EP Annex I 10	Is there any percussive piling carried out?			✓	
EP Annex I 11	Is there any concurrent pipe pile driving near the tree ring and the Main Building of the Former Marine Police Headquarters?			✓	





**Abbreviation**

EP: Environmental Permit (Environmental Permit No. EP-184/2004)  
EM&A: Environmental Monitoring & Audit Manual  
NCO: Noise Control Ordinance  
WMP: Waste Management Plan

**Deficiency/Other Observations/Remedial Action to be Taken:**

- Stockpile is not covered properly
- Water spray is necessary for slurry pave
- Litter and waste should be cleared as soon as possible

**Follow Up Actions to Previous Site Inspection:**

**Signatures**

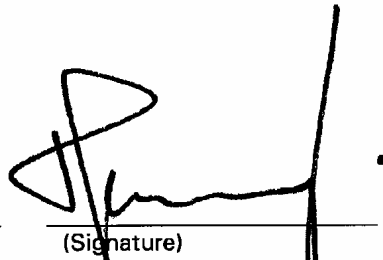
ET's Representative

Contractor's Representative

Architect's Representative

  
(Signature)

TSE Hiu Tung Alfred  
(Name in Block Letter)

  
(Signature)

Howard Kwok Wai Ho  
(Name in Block Letter)

(Signature)

**Appendix D: Calibration records for the HVSs and calibration certificate for the dust meters**

High-Volume TSP Sampler  
5-Point Calibration Record

Location : A1  
 Calibrated by : K.T.Ho  
 Date : 22/08/08  
 Sampler :  
 Model : GMWS-2310 ACCU-VOL  
 Serial Number : S/N 0814

Calibration Office and Standard Calibration Relationship

Serial Number : CM-AIR-43  
 Service Date : 2 July 2007  
 Slope (m) : 0.057452  
 Intercept (b) : -0.026137  
 Correlation Coefficient(r) : 0.999910

Standard Condition

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

Calibration Condition

Pa (hpa) : 1011  
 Ta(K) : 301

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1   18 holes	12.0	3.492	1.765	59	59.5
2   13 holes	9.1	3.041	1.540	48	48.4
3   10 holes	7.2	2.705	1.372	40	40.3
4   7 holes	4.7	2.185	1.112	27	27.2
5   5 holes	2.9	1.717	0.878	15	15.1

Sampler Calibration Relationship

Slope(m): 49.956 Intercept(b): -28.509 Correlation Coefficient(r): 0.9999

Checked by: Magnum Fan

Date: 25/08/08

High-Volume TSP Sampler  
5-Point Calibration Record

Location : A2a  
 Calibrated by : K.T.Ho  
 Date : 22/08/08

Sampler  
 Model : GMWS-2310 ACCU-VOL  
 Serial Number : S/N 1061

Calibration Office and Standard Calibration Relationship

Serial Number : CM-AIR-43  
 Service Date : 2 July 2007  
 Slope (m) : 0.057452  
 Intercept (b) : -0.026137  
 Correlation Coefficient(r) : 0.999910

Standard Condition

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

Calibration Condition

Pa (hpa) : 1011  
 Ta(K) : 301

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (indicated flow)	Y
1 18 holes	12.2	3.496	1.701	56	56.0
2 13 holes	9.7	3.117	1.518	47	47.0
3 10 holes	7.9	2.812	1.371	41	41.0
4 7 holes	5.4	2.326	1.135	31	31.0
5 5 holes	3.6	1.899	0.929	22	22.0

Sampler Calibration Relationship

Slope(m): 43.633 Intercept(b): -8.632 Correlation Coefficient(r): 0.9996

Checked by: Magnum Fan Date: 25/08/08

**High-Volume TSP Sampler  
5-Point Calibration Record**

Location : A3a  
 Calibrated by : K.T.Ho  
 Date : 22/08/08

**Sampler**

Model : GMWS-2310 ACCU-VOL  
 Serial Number : S/N 1254

**Calibration Office and Standard Calibration Relationship**

Serial Number : CM-AIR-43  
 Service Date : 2 July 2007  
 Slope (m) : 0.057452  
 Intercept (b) : -0.026137  
 Correlation Coefficient(r) : 0.999910

**Standard Condition**

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

**Calibration Condition**

Pa (hpa) : 1011  
 Ta(K) : 301

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (indicated flow)	Y
1   18 holes	11.4	3.403	1.719	59	59.4
2   13 holes	8.6	2.953	1.496	50	50.4
3   10 holes	6.7	2.606	1.323	41	41.3
4   7 holes	3.9	1.989	1.014	27	27.2
5   5 holes	2.3	1.527	0.784	17	17.1

**Sampler Calibration Relationship**

Slope(m): 45.770 Intercept(b): -18.924 Correlation Coefficient(r): 0.9995

Checked by: Magnum Fan Date: 25/08/08

High-Volume TSP Sampler  
5-Point Calibration Record

Location : A4  
 Calibrated by : K.T.Ho  
 Date : 22/08/08

Sampler  
 Model : GMWS-2310 ACCU-VOL  
 Serial Number : S/N 0816

Calibration Office and Standard Calibration Relationship

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

Standard Condition

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

Calibration Condition

Pa (hpa) : 1011  
 Ta(K) : 301

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1 18 holes	12.5	3.599	1.751	58	59.0
2 13 holes	9.6	3.154	1.536	46	46.8
3 10 holes	7.9	2.861	1.394	39	39.7
4 7 holes	4.9	2.253	1.100	24	24.4
5 5 holes	3.0	1.763	0.864	12	12.2

Sampler Calibration Relationship

Slope(m): 52,494    Intercept(b): -33,314    Correlation Coefficient(r): 0.9998

Checked by: Magnum Fan

Date: 25/08/08

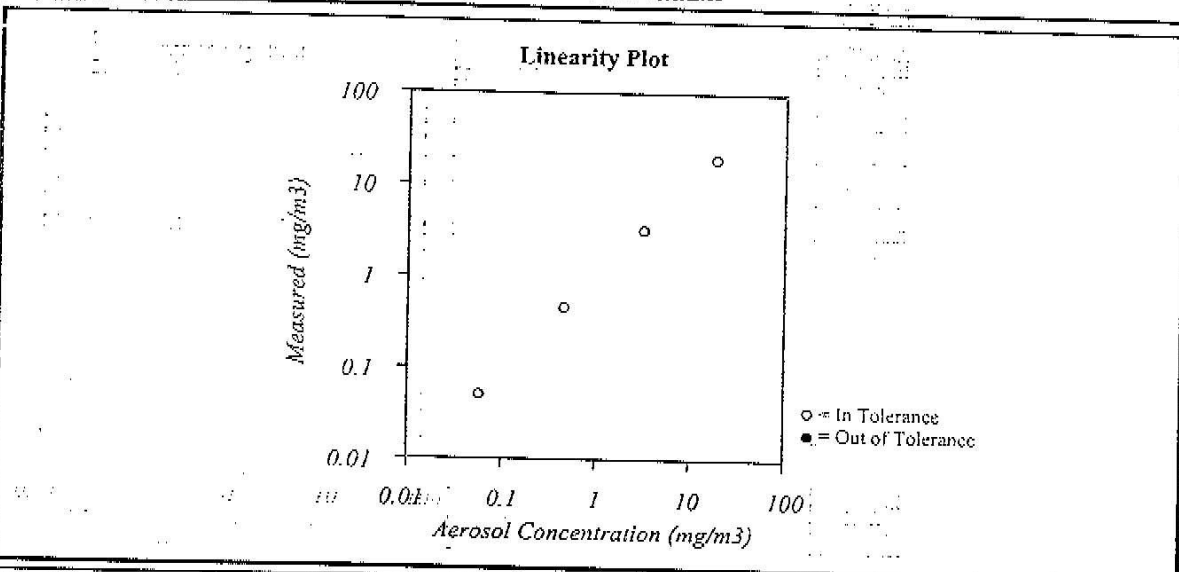


# CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA Tel: 1-800-424-7427 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

Environment Condition			Model	8520
Temperature	69.3 (20.7)	°F (°C)	Serial Number	85202623
Relative Humidity	42	%RH		
Barometric Pressure	28.92 (979.3)	inHg (hPa)		

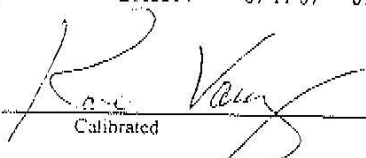
As Left       In Tolerance  
 As Found       Out of Tolerance



Zero Stability Results			
Average:	Minimum:	Maximum:	Time:
0.0000 mg/m <sup>3</sup>	0.0000 mg/m <sup>3</sup>	0.0000 mg/m <sup>3</sup>	160 hrs.

TSI Incorporated does hereby certify that all materials, components, and workmanship used in the manufacture of this equipment are in strict accordance with the applicable specifications agreed upon by TSI and the customer and with all published specifications. All performance and acceptance tests required under this contract were successfully conducted according to required specifications. There is no NIST standard for optical mass measurements. Calibration of this instrument performed by TSI has been done using emery oil and has been nominally adjusted to respirable mass of standard ISO 12103-1, A1 test dust (Arizona dust). Our calibration ratio is greater than 1.2:1

Measurement Variable	System ID	Last Cal.	Cal. Due	Measurement Variable	System ID	Last Cal.	Cal. Due
DC Voltage	E002235	04-05-07	04-05-08	Barometric Pressure	E001329	04-30-07	04-30-08
Temperature	E002873	02-23-07	02-23-08	Humidity	E002873	02-23-07	02-23-08
DC Voltage	E003314	07-11-07	07-11-08	DC Voltage	E003315	07-11-07	07-11-08

\_\_\_\_\_  \_\_\_\_\_  
 Calibrated       Final Function Check      Date: September 28, 2007



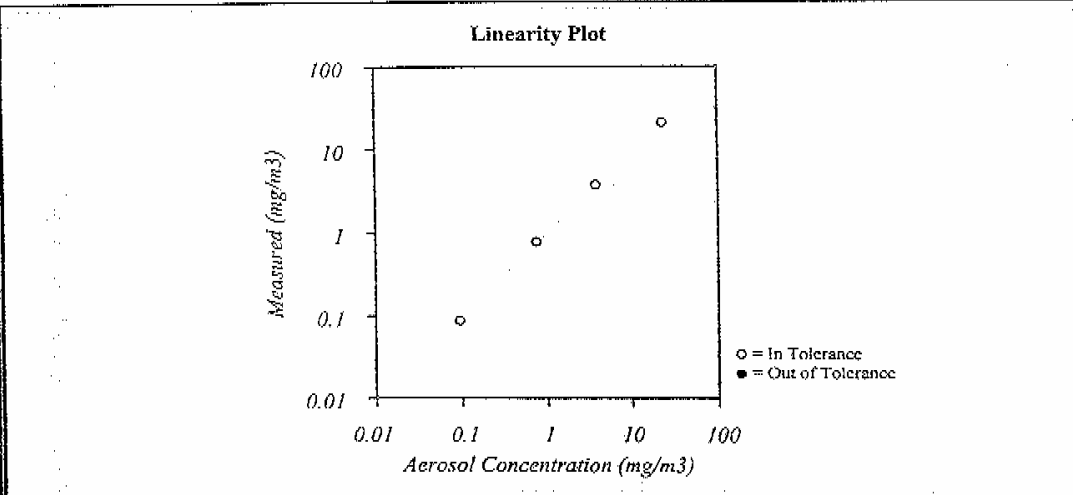


# CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA Tel: 1-800-424-7427 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

Environment Condition			Model	8520
Temperature	75.2 (24.0)	°F (°C)	Serial Number	22605
Relative Humidity	11	%RH		
Barometric Pressure	29.08 (984.8)	inHg (hPa)		

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> As Left | <input checked="" type="checkbox"/> In Tolerance |
| <input type="checkbox"/> As Found           | <input type="checkbox"/> Out of Tolerance        |



Zero Stability Results			
Average:	Minimum:	Maximum:	Time:
:mg/m <sup>3</sup>	:mg/m <sup>3</sup>	:mg/m <sup>3</sup>	:hrs.

*TSI Incorporated does hereby certify that all materials, components, and workmanship used in the manufacture of this equipment are in strict accordance with the applicable specifications agreed upon by TSI and the customer and with all published specifications. All performance and acceptance tests required under this contract were successfully conducted according to required specifications. There is no NIST standard for optical mass measurements. Calibration of this instrument performed by TSI has been done using emery oil and has been nominally adjusted to respirable mass of standard ISO 12103-1, A1 test dust (Arizona dust). Our calibration ratio is greater than 1.2:1*

Measurement Variable	System ID	Last Cal.	Cal. Due	Measurement Variable	System ID	Last Cal.	Cal. Due
Barometric Pressure	E001329	04-30-07	04-30-08	Temperature	E002873	02-25-08	02-25-09
Humidity	E002873	02-25-08	02-25-09	DC Voltage	E003322	10-11-07	12-11-08
DC Voltage	E003323	10-11-07	12-11-08				

Final Function Check
March 4, 2008  
Calibrated
Date

Litro, in U.S.A.

© BQES 346

**Appendix E: Detailed impact monitoring data of 1-hour and 24-hour TSP**

**The Summary of 1-hr TSP Concentration ( $\mu\text{g}/\text{m}^3$ ) at A1**

Date	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1)	Reading (2)	Reading (3)
				$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$
05-Nov-08	9:10	10:10	11:10	102	114	125
11-Nov-08	9:10	10:10	11:10	100	114	109
17-Nov-08	9:10	10:10	11:10	96	104	117
21-Nov-08	9:00	10:00	11:00	162	174	180
27-Nov-08	9:10	10:10	11:10	109	114	128

**The Summary of 1-hr TSP Concentration ( $\mu\text{g}/\text{m}^3$ ) at A2b**

Date	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1)	Reading (2)	Reading (3)
				$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$
05-Nov-08	9:00	10:00	11:00	115	121	130
11-Nov-08	9:00	10:00	11:00	111	121	135
17-Nov-08	9:00	10:00	11:00	114	127	135
21-Nov-08	9:10	10:10	11:10	159	162	188
27-Nov-08	9:00	10:00	11:00	146	139	158

**The Summary of 1-hr TSP Concentration ( $\mu\text{g}/\text{m}^3$ ) at A3a**

Date	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1)	Reading (2)	Reading (3)
				$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$
05-Nov-08	12:30	13:30	14:30	139	140	138
11-Nov-08	12:40	13:40	14:40	147	135	140
17-Nov-08	12:30	13:30	14:30	141	125	166
21-Nov-08	12:20	13:20	14:20	167	168	175
27-Nov-08	12:20	13:20	14:20	156	159	160

**The Summary of 1-hr TSP Concentration ( $\mu\text{g}/\text{m}^3$ ) at A4**

Date	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1)	Reading (2)	Reading (3)
				$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$
05-Nov-08	12:40	13:40	14:40	121	114	115
11-Nov-08	12:50	13:50	14:50	102	114	118
17-Nov-08	12:40	13:40	14:40	116	127	125
21-Nov-08	12:30	13:30	14:30	149	156	159
27-Nov-08	12:30	13:30	14:30	129	138	140

**The Summary of 24-hr TSP Concentration ( $\mu\text{g}/\text{m}^3$ ) at A1**

Date	Sampling Time	Weather	Elapsed Time	Initial Standard Flow Rate	Final Standard Flow Rate	Ave. Standard Flow Rate	Total Standard Volume	Initial Filter Weight	Final Filter Weight	TSP Conc.
			(min)	( $\text{m}^3/\text{min}$ )	( $\text{m}^3/\text{min}$ )	( $\text{m}^3/\text{min}$ )	( $\text{m}^3$ )	(g)	(g)	$\mu\text{g}/\text{m}^3$
05-Nov-08	10:00	Sunny	1440	1.35	1.35	1.35	1944	2.7924	2.9367	74
11-Nov-08	10:00	Sunny	1440	1.35	1.35	1.35	1944	2.7860	2.9248	71
17-Nov-08	10:00	Sunny	1440	1.35	1.35	1.35	1944	2.7842	2.9209	70
21-Nov-08	10:00	Sunny	1440	1.35	1.35	1.35	1944	2.7995	2.9338	69
27-Nov-08	10:00	Sunny	1440	1.35	1.35	1.35	1944	2.7906	2.9309	72

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**The Summary of 24-hr TSP Concentration ( $\mu\text{g}/\text{m}^3$ ) at A2b**

Date	Sampling Time	Weather	Elapsed Time	Initial Standard Flow Rate	Final Standard Flow Rate	Ave. Standard Flow Rate	Total Standard Volume	Initial Filter Weight	Final Filter Weight	TSP Conc.
			(min)	( $\text{m}^3/\text{min}$ )	( $\text{m}^3/\text{min}$ )	( $\text{m}^3/\text{min}$ )	( $\text{m}^3$ )	(g)	(g)	$\mu\text{g}/\text{m}^3$
05-Nov-08	10:00	Sunny	1440	1.31	1.31	1.31	1886.4	2.7911	2.9409	79
11-Nov-08	10:00	Sunny	1440	1.31	1.31	1.31	1886.4	2.7908	2.9358	77
17-Nov-08	10:00	Sunny	1440	1.31	1.31	1.31	1886.4	2.7923	2.9375	77
21-Nov-08	10:00	Sunny	1440	1.31	1.31	1.31	1886.4	2.7906	2.9477	83
27-Nov-08	10:00	Sunny	1440	1.31	1.31	1.31	1886.4	2.7921	2.9411	79

AVE 79

**The Summary of 24-hr TSP Concentration ( $\mu\text{g}/\text{m}^3$ ) at A3a**

Date	Sampling Time	Weather	Elapsed Time	Initial Standard Flow Rate	Final Standard Flow Rate	Ave. Standard Flow Rate	Total Standard Volume	Initial Filter Weight	Final Filter Weight	TSP Conc.
			(min)	( $\text{m}^3/\text{min}$ )	( $\text{m}^3/\text{min}$ )	( $\text{m}^3/\text{min}$ )	( $\text{m}^3$ )	(g)	(g)	$\mu\text{g}/\text{m}^3$
05-Nov-08	10:00	Sunny	1440	1.29	1.29	1.29	1857.6	2.7890	2.9562	90
11-Nov-08	10:00	Sunny	1440	1.29	1.29	1.29	1857.6	2.7843	2.9387	83
17-Nov-08	10:00	Sunny	1440	1.29	1.29	1.29	1857.6	2.7896	2.9381	80
21-Nov-08	10:00	Sunny	1440	1.29	1.29	1.29	1857.6	2.7891	2.9375	80
27-Nov-08	10:00	Sunny	1440	1.29	1.29	1.29	1857.6	2.7940	2.9414	79

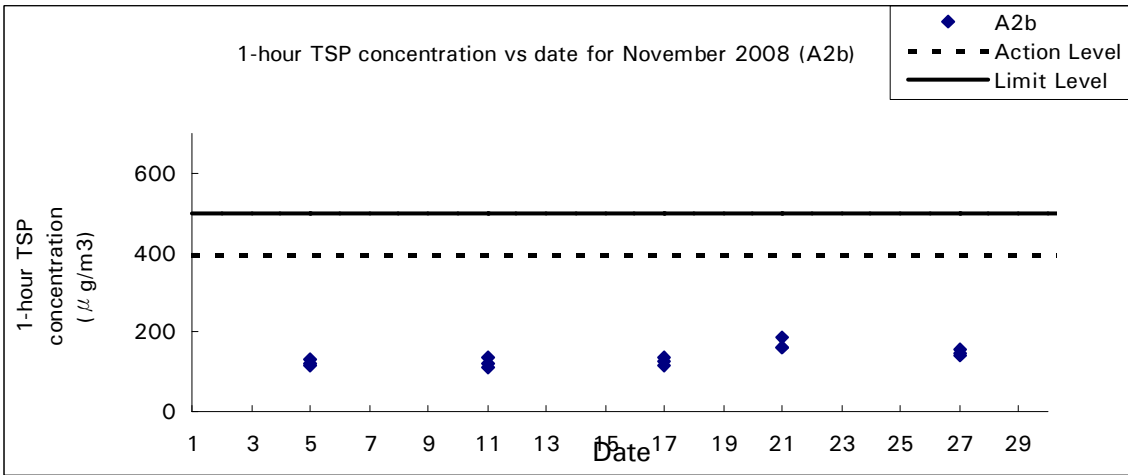
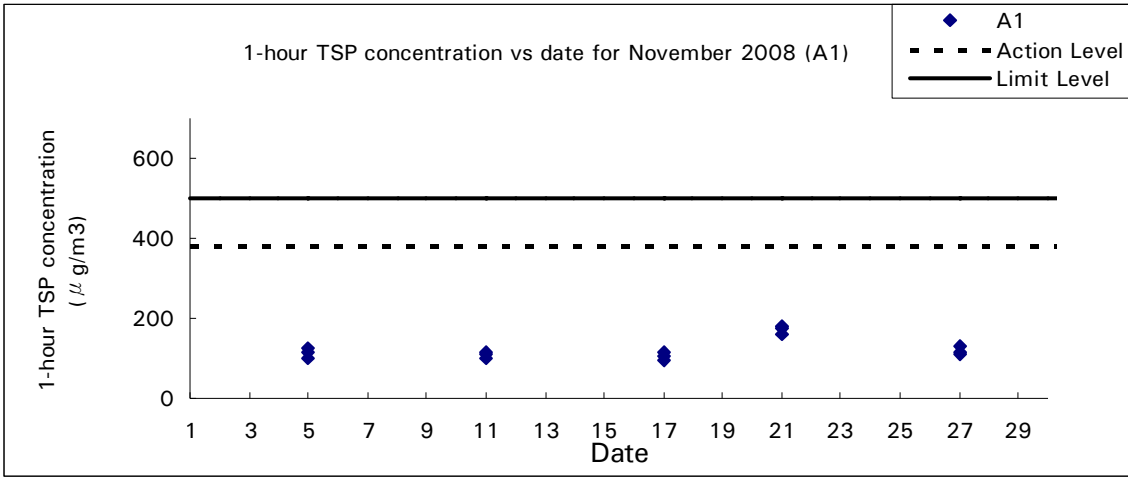
AVE 82

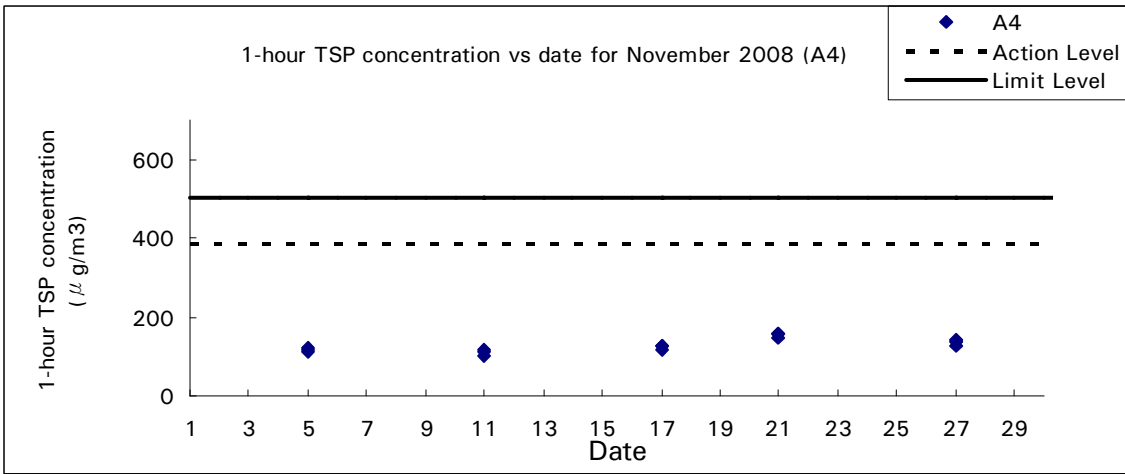
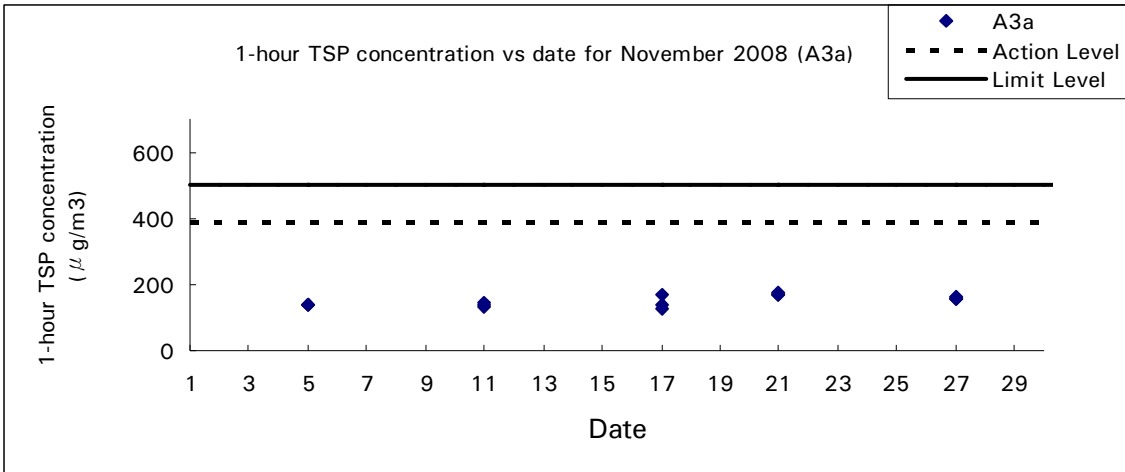
**The Summary of 24-hr TSP Concentration ( $\mu\text{g}/\text{m}^3$ ) at A4**

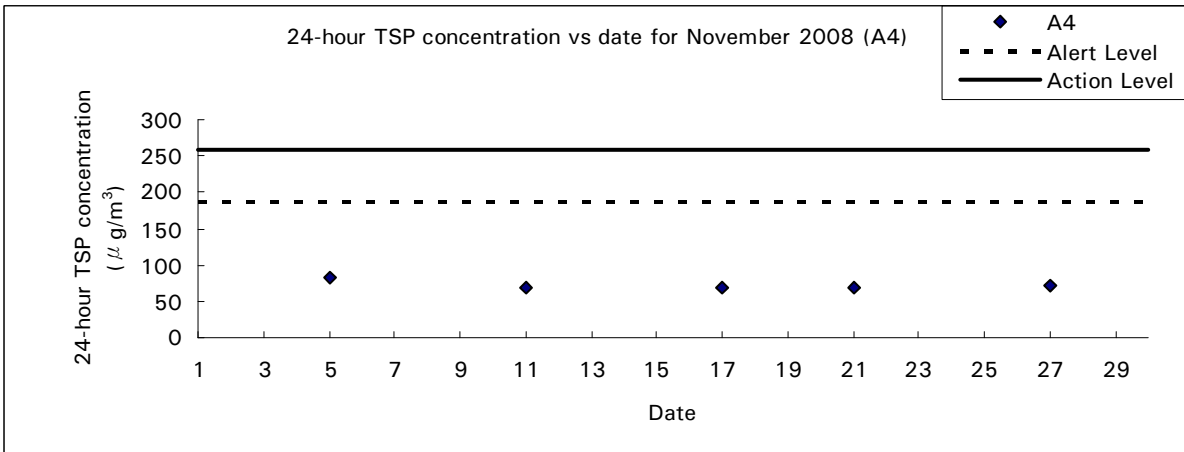
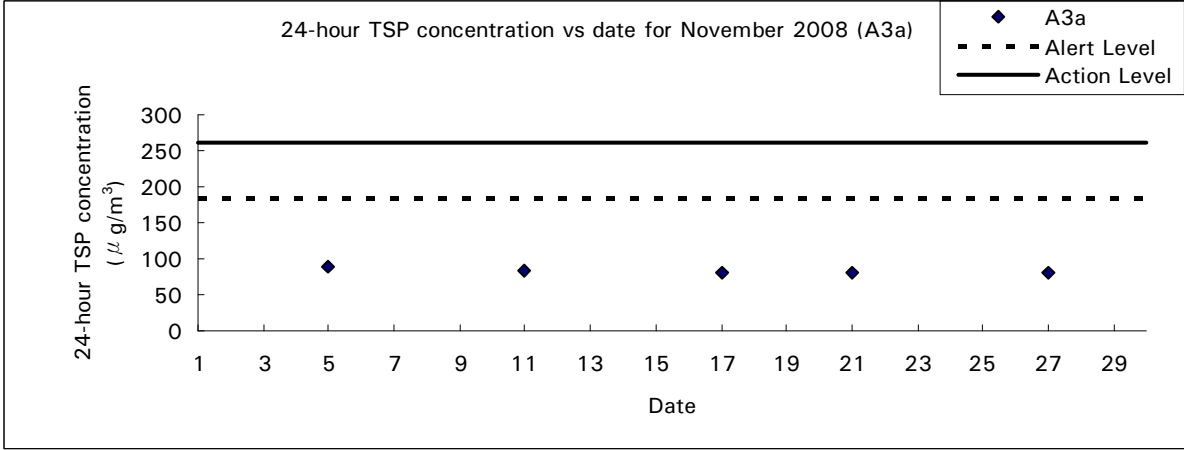
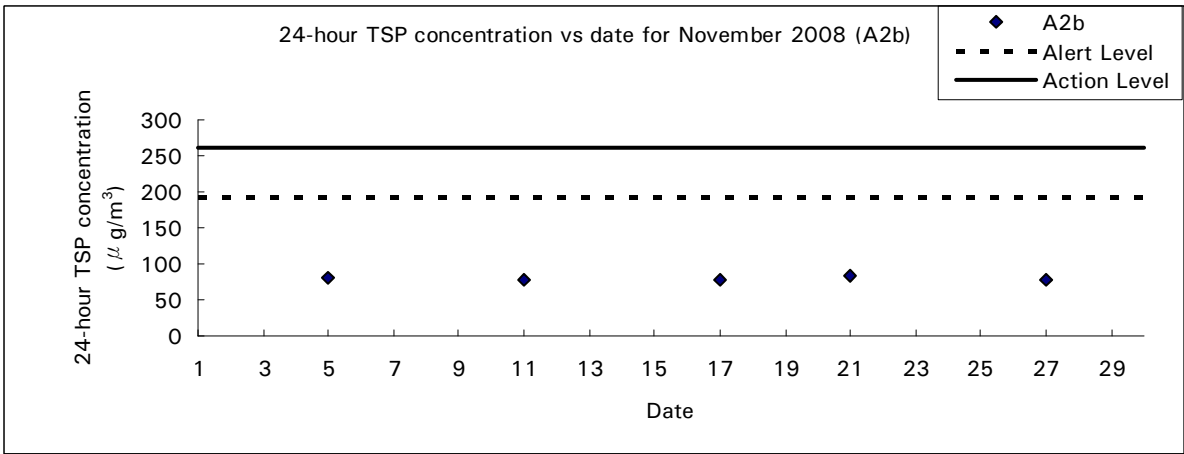
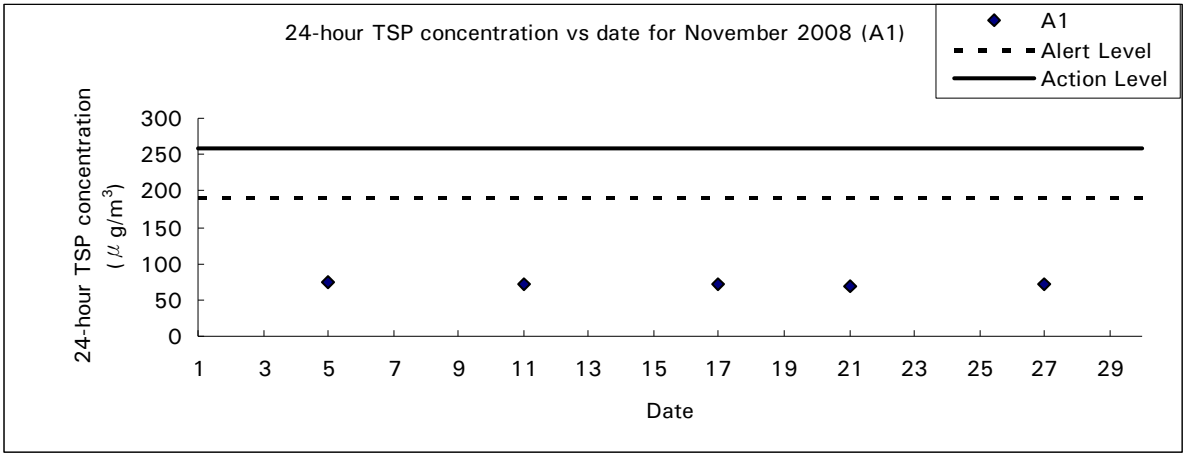
Date	Sampling Time	Weather	Elapsed Time	Initial Standard Flow Rate	Final Standard Flow Rate	Ave. Standard Flow Rate	Total Standard Volume	Initial Filter Weight	Final Filter Weight	TSP Conc.
			(min)	( $\text{m}^3/\text{min}$ )	( $\text{m}^3/\text{min}$ )	( $\text{m}^3/\text{min}$ )	( $\text{m}^3$ )	(g)	(g)	$\mu\text{g}/\text{m}^3$
05-Nov-08	10:00	Sunny	1440	1.32	1.32	1.32	1900.8	2.7936	2.9500	82
11-Nov-08	10:00	Sunny	1440	1.32	1.32	1.32	1900.8	2.7897	2.9215	69
17-Nov-08	10:00	Sunny	1440	1.32	1.32	1.32	1900.8	2.7944	2.9271	70
21-Nov-08	10:00	Sunny	1440	1.32	1.32	1.32	1900.8	2.7922	2.9215	68
27-Nov-08	10:00	Sunny	1440	1.32	1.32	1.32	1900.8	2.7906	2.9260	71

AVE 72

**Appendix F: Graphical presentations of the air impact monitoring results**





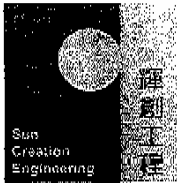




## **Appendix G: Summary of exceedance**

Parameter	Location	Monitoring Period	No. of Exceedance(s)	
			Action Level	Limit Level
Air (1-hour TSP)	A1	01/11/2008 – 30/11/2008	0	0
	A2b	01/11/2008 – 30/11/2008	0	0
	A3a	01/11/2008 – 30/11/2008	0	0
	A4	01/11/2008 – 30/11/2008	0	0
Air (24-hour TSP)	A1	01/11/2008 – 30/11/2008	0	0
	A2b	01/11/2008 – 30/11/2008	0	0
	A3a	01/11/2008 – 30/11/2008	0	0
	A4	01/11/2008 – 30/11/2008	0	0
Noise	CN1a	01/11/2008 – 30/11/2008	0	0
	CN2a	01/11/2008 – 30/11/2008	0	0
Ground-Borne Noise	HKSM	--	0	0
	HKCC	--	0	0

**Appendix H: Calibration certificates of the sound level meter and calibrator**



輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C083194

## 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. C083194.*

*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 : 25 June 2008*

*Certified by :*

*K Q Lee*

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

Calibration and Testing Laboratory of Sun Creation Engineering Limited

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



輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C081909

## Certificate of Calibration

*This is to certify that the equipment*

*Description : Sound Level Meter*

*Manufacturer : Rion*

*Model No. : NL-31*

*Serial No. : 00410224*

*has been calibrated for the specific items and ranges.  
The results are shown in the Calibration Report No. C081909.*

*The equipment is supplied by*

*Co. Name : Envirotech Services Co.*

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

*Date of Issue : 14 April 2008*

*Certified by :*

*K C Lee*

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

6/F, 41, Shing Shun Wai Technology Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong

Tel: 2927 2606

Fax: 2734 8986

E-mail: callab@suncreation.com

Website: www.suncreation.com

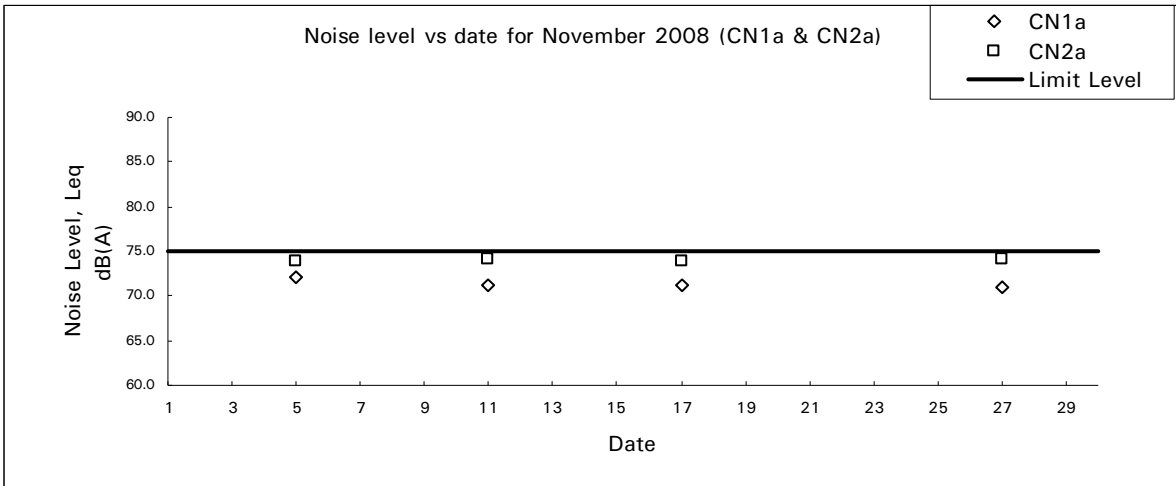
**Appendix I: Detailed impact noise monitoring data for CN1a & CN2a**

Date	Time	Weather	CN1a (Po Yip)		
			Noise Level, dB(A)		
			L <sub>eq</sub>	L <sub>90</sub>	L <sub>10</sub>
05-Nov-08	10:00	Sunny	72.1	70.5	73.9
11-Nov-08	10:10	Sunny	71.2	68.5	73.6
17-Nov-08	10:08	Sunny	71.2	69.2	73.6
27-Nov-08	10:10	Sunny	71.0	69.2	73.5

Date	Time	Weather	CN2a (YMCA)		
			Noise Level, dB(A)		
			L <sub>eq</sub>	L <sub>90</sub>	L <sub>10</sub>
05-Nov-08	10:50	Sunny	73.9	71.1	76.0
11-Nov-08	11:00	Sunny	74.1	72.2	76.2
17-Nov-08	10:50	Sunny	73.9	70.2	75.8
27-Nov-08	11:00	Sunny	74.1	72.1	75.9

**Appendix J: Graphical presentations of the noise impact monitoring results**





**Appendix K: Photographic record of retained trees**

Tree #	Status of Trees		Condition of Trees during the monitoring period (November 2008) (Condition 1, 2 or 3)	Required Action	Remarks
	To be retained	To be transplanted			
T1	✓		1	No	---
T3	✓		1	No	---
T6	✓		1	No	---
T8	✓		1	No	---
T9		✓	1	No	To be transplanted to the site on 4 to 5 December 2008
T10	✓		2	Yes	Tree pruning operation for the dead branches was carried out on 11 June 2008. Close monitoring
T14		✓	1	No	To be transplanted to the site on 4 to 5 December 2008
T17(R)		✓	1	No	Replaced T17. To be transplanted to the site on 4 to 5 December 2008
T32		✓	1	No	To be transplanted to the site on 4 to 5 December 2008
T34		✓	1	No	To be transplanted to the site on 4 to 5 December 2008
T35		✓	1	No	To be transplanted to the site on 4 to 5 December 2008
T54	✓		2	Yes	Tree pruning operation for the dead branches was carried out on 12 June 2008. Close monitoring
T55		✓	1	No	To be transplanted to the site on 4 to 5 December 2008
T65	✓		1	No	---
T66	✓		2	Yes	Some fungi are found on the old wound on a stem of T66. An inspection was conducted with horticulture specialist at late September. It is recommended to prune the infected stem. Works near T66 and T67 closely monitored to prevent damage to trees
T67	✓		2	Yes	
T73R		✓	2	No	Replaced T73. To be transplanted to the site on 4 to 5 December 2008
T75		✓	1	No	To be transplanted to the site on 4 to 5 December 2008
T79		✓	1	No	To be transplanted to the site on 4 to 5 December 2008
T80		✓	1	No	To be transplanted to the site on 4 to 5 December 2008
T96	✓		1	Yes	Works near T96. Tree pruning operation for the dead branches was carried out on 13 June 2008. Close Monitoring
T98(R)		✓	1	No	Replaced T98. To be transplanted to the site on 4 to 5 December 2008
T99		✓	1	No	To be transplanted to the site on 4 to 5 December 2008
T100(R)		✓	1	No	Replaced T100. To be transplanted to the site on 4 to 5 December 2008
T102		✓	1	No	To be transplanted to the site on 4 to 5 December 2008
T104		✓	1	No	To be transplanted to the site on 4 to 5 December 2008
T107		✓	1	No	To be transplanted to the site on 4 to 5 December 2008
T111		✓	1	No	To be transplanted to the site on 4 to 5 December 2008
T120	✓		2	Yes	Tree canopy fully recovered due to seasonal change observed during tree inspection on 29 April 2008.
T121	✓		2	Yes	
T122	✓		2	Yes	
T124	✓		1	No	---
T125	✓		1	No	---
T126	✓		1	No	---
T127	✓		1	No	---
T128	✓		1	No	---
T129	✓		1	No	---
T131	✓		1	Yes	A small branch found hanging at the canopy to be tidied up by landscape specialist.

T132	✓		1	No	---
T134	✓		1	No	---
TA1	✓		1	No	---
TA2	✓		1	No	---
TA66		✓	1	No	To be transplanted to the site on 4 to 5 December 2008

Remark: Please note that although the assessment of the condition of tree T73 indicates a decline in their condition this decline is due to the fact that they were originally located on steeply sloping ground but were selected for transplantation due to the general lack of other suitable candidates. In addition when they were prepared for lifting it was found that their roots were growing in close proximity to a number of boulders (previously buried below the shotcrete on the slope) and the roots were severely constrained by the footings of the adjacent wall at the crest of the slope. Therefore the specialist landscape contractor had extreme difficulty in forming a viable rootball and so even with good horticultural treatment the trees experienced a significant decline in their health following relocation in the temporary holding nursery.

Note: 1 = No adverse comment      2 = Sign of deterioration 3 = Severe decline in condition compared to baseline assessment

Trees identified for Retention



T54 (18 November 2008)



T10 (18 November 2008)



T65 (118 November 2008)



T96 (18 November 2008)



T66/67 (18 November 2008)



TA1 (18 November 2008)



T1 / T3 / T6 / T8 (18 November 2008)



T131 (18 November 2008)





T132 (118 November 2008)



T121 / T122 (18 November 2008)



T134 (18 November 2008)



T124 (18 November 2008)





T125 (18 November 2008)



T126 (18 November 2008)



T127 (18 November 2008)



T128 (118 November 2008)





T129 (18 November 2008)



T120 (18 November 2008)



TA2 (18 November 2008)