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

(Ref No. 3.12/050/2006)

May 2008

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

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

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EXECUTIVE SUMMARY

This is the forty-eighth 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 2, 8, 15, 22 and 27 May 2008. This report therefore documents the impact environmental monitoring and audit work for the former Marine Police Headquarter development for May 2008.

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

Approval was received to shift the air quality monitoring at A3 to A3a to suite site development and this was implemented on 21 May 2008.

Superstructure furnishing was the major activity with small scale excavation carried out within the project site in the reporting month. No exceedance on TSP was recorded.

There were three limit level exceedances for noise monitoring recorded in the reporting month. Investigation showed that the exceedances were due to other activities not carried out within the project site as there was no noisy operation carried out on site during the period when the limit level exceedances were recorded.

No notifications of summons, prosecutions or non-compliances was received. The site was generally satisfactory and there were a few improvement measures for further pursuit. These include keeping the compressor door closed during operation, removal of water poundings found within site, proper cover and storage of general refuse, enhancement of water spraying for dust suppression, use of drip tray for all oily containers and continual protection of the preserved monument structure and closer monitoring of trees. The site opening should also be kept under review in case heavy noisy activities may resume within the site. As a section of the site has been handed over to the contractor for Kowloon Southern Link Project, it is necessary to ensure that the Kowloon Southern Link contractor will comply with present environmental protection requirements.

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 May 2008 and is the forty-eighth 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. On 18 April 2008, Mr Alex Chan was appointed as the new Independent Environmental Checker ["IEC"] and the appointment was also accepted by EPD on 24 April 2008.
- 2.3. 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

Party	Company	Contact Person	Phone
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.	Mr. Alex Chan	3105 8686
Environmental Team ["ET"] Leader	Nature & Technologies (HK) Ltd.	Ir Dr Gabriel C K Lam	2877 3122

- 2.4. Superstructure furnishing was the main activity carried out within the project site in May 2008. There was also small scaled excavation.
- 2.5. The construction programme with milestones of environmental protection/mitigation activities annotated is given in Appendix A.
- 2.6. 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.

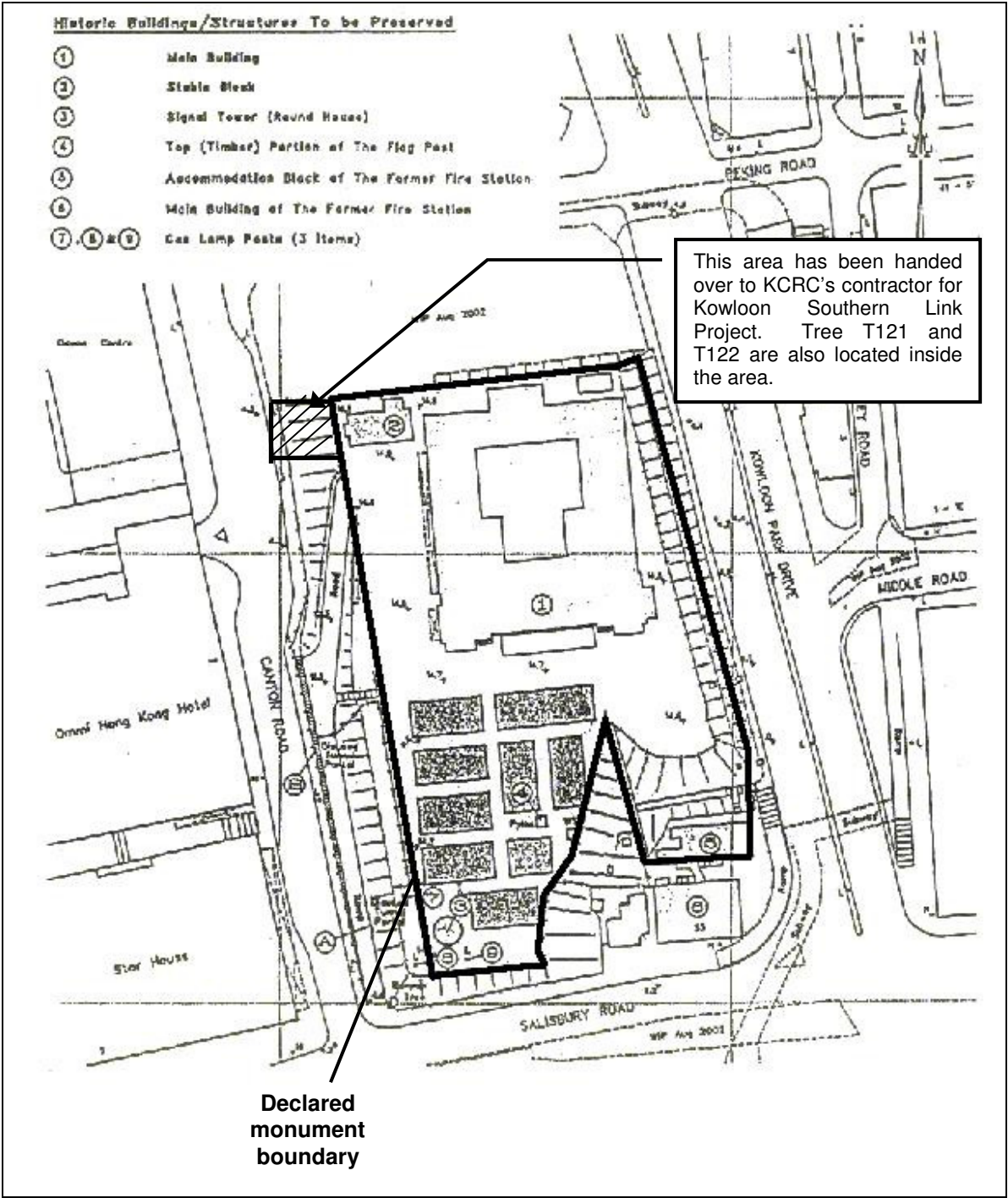


Figure 2.1 Location, site layout with the location of site where it was handed over to KCRC's Contractor for KSL Project, historic buildings and structures to be preserved Scale: N.T.S

Implementation Status

- 2.7. 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.
- 2.8. 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.
- 2.9. 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 2, 8, 15, 22 and 27 May 2008. These site audit checklist reports and recommendations are given in Appendix C.
- 2.10. It is noted that the various environmental protection measures have been implemented on site. The following are also noted for May 2008 required for further improvement:
- Keeping the compressor door closed during operation.
 - Removal of water poundings found within site.
 - Proper cover and storage of general refuse.
 - Enhancement of water spraying for dust suppression.
 - Use of drip tray for all oily containers.
 - Continual protection and closer monitoring of the trees and historical buildings.
- 2.11. The site opening was changed from the eastern boundary to the western boundary to suit construction works. Review of the site openings may be needed should there be heavy noisy activities within the site.
- 2.12. 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.
- 2.13. 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 May 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 May 2008

Item No.	Description	Submission Date to EPD
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

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	394	500
A3a	389	500
A4	384	500

Table 3.2 AL levels for 24-hour TSP

Location	Action	Limit
A1	191	260
A2a	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"> 1. Identify source; 2. Inform IEC and AR; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method. 	<ol style="list-style-type: none"> 1. Notify Contractor. 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
Action Level being exceeded for two or more consecutive samples	<ol style="list-style-type: none"> 1. Identify source; 2. Inform IEC and AR; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency to daily; 5. Discuss with IEC and Contractor on remedial actions required; 6. If exceedance continues, arrange meeting with IEC and AR; 7. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the AR on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Submit proposals for remedial actions to IEC within 3 working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.
Limit Level being exceeded for one sample	<ol style="list-style-type: none"> 1. Identify source; 2. Inform IEC, AR and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions; 6. Keep EPD and AR informed of the results. 	<ol style="list-style-type: none"> 1. Checking monitoring data submitted by ET and Contractor's method; 2. Discuss with Contractor on the possible mitigation measures; 3. Advise AR on the effectiveness of mitigation measures and supervise their implementation. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Check monitoring data and Contractor's working methods; 4. Discuss with IEC, ET and Contractor potential remedial actions; 5. Ensure remedial actions properly implemented. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to AR within 3 working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
Limit Level being exceeded for two or more consecutive samples	<ol style="list-style-type: none"> 1. Identify source; 2. Inform AR and EPD the causes & actions taken for the exceedances; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Investigate the causes of exceedance 6. Arrange meeting with EPD and AR to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep EPD and AR informed of the results; 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Checking monitoring data submitted by ET and Contractor's method; 2. Discuss with Contractor on the possible mitigation measures; 3. Review the proposed mitigation measures submitted by Contractor and advise the AR accordingly; 4. Supervise the implementation of mitigation measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 4. Discuss amongst IEC, ET and the Contractor potential remedial actions; 5. Review Contractor's remedial actions whenever necessary to assure their effectiveness; 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. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to AR within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not resolved; 5. Stop the relevant portion of works as determined by the AR until the exceedance is abated.

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.
- 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 May 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, 9, 15, 21 and 27)/5/2008	(5, 9, 15, 21 and 27)/5/2008
A2a	(5, 9, 15, 21 and 27)/5/2008	(5, 9, 15, 21 and 27)/5/2008
A3a	(21 and 27)/5/2008	(21 and 27)/5/2008
A4	(5, 9, 15, 21 and 27)/5/2008	(5, 9, 15, 21 and 27)/5/2008

Monitoring Equipment

3.6. 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, A2a, 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

- 3.7. 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.
- 3.8. 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*.
- 3.9. Initial calibration of the HVSSs was performed prior to the commencement of the air monitoring.
- 3.10. The flow rate of the HVS was set to about 1.1 m³/min – 1.7 m³/min prior to commencement of the dust sampling in accordance with the manufacturer's instruction.
- 3.11. 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.
- 3.12. 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.
- 3.13. 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

- 3.14. Impact air quality monitoring was conducted at A1, A2a, 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	136
A2a	156
A3a	166
A4	155

Table 3.7 Summary of 24-hour TSP monitoring results

Location	Average 24-hour TSP concentration ($\mu\text{g}/\text{m}^3$)
A1	72
A2a	78
A3a	88
A4	76

Observations

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

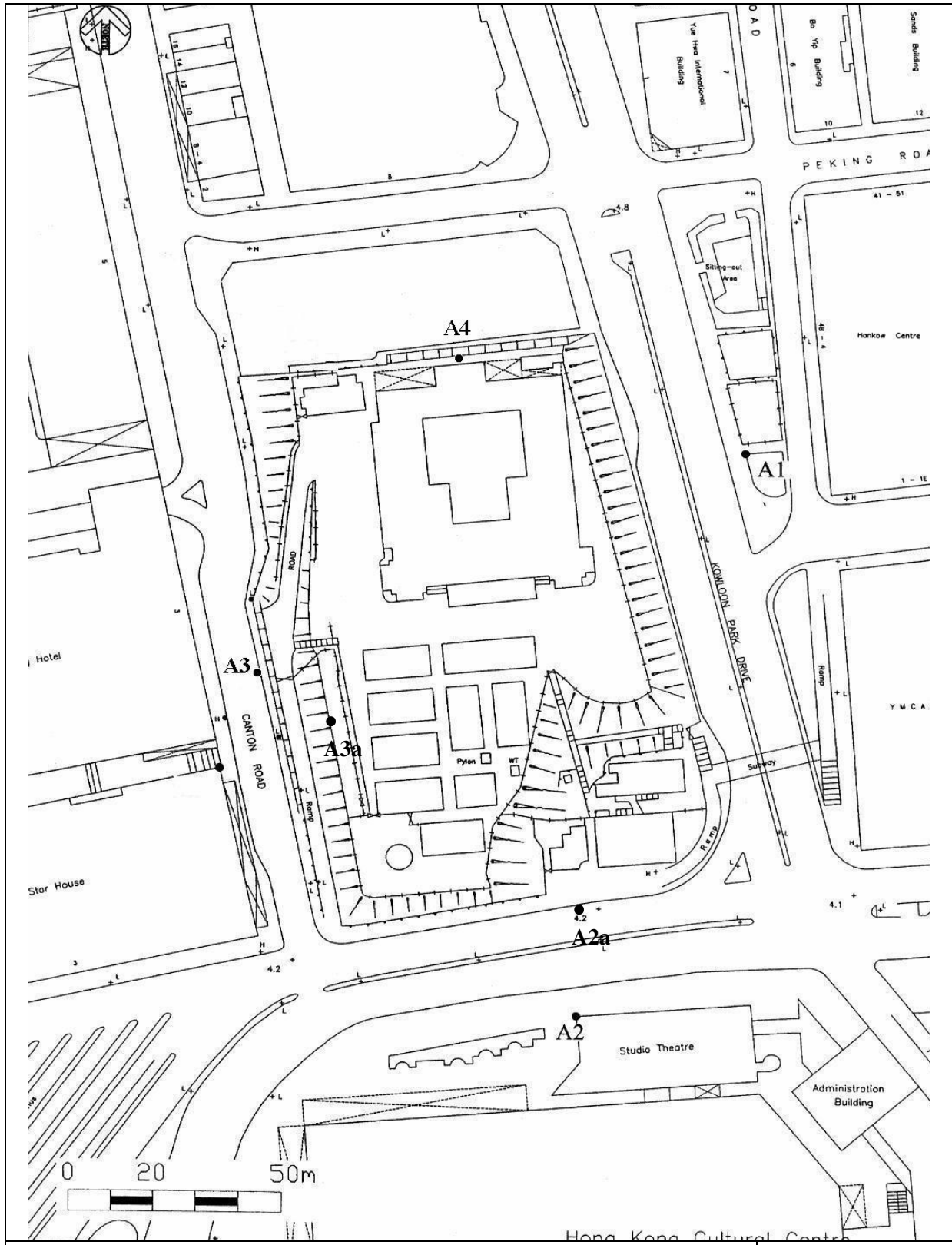


Figure 3.1 Dust Monitoring Locations (A1 is on building rooftop about 11m above ground, A2, on podium level about 5m above ground, A2a, A3a and A4 on hoarding top about 6m, 6m and 13m above ground respectively)

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

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 May 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, 15, 21 and 27)/5/2008
CN2a	(5, 15, 21 and 27)/5/2008

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	71.8	69.8	73.7
CN2a	75.4	73.2	77.3

Observations

- 4.18. There were three Limit Level exceedances in May 2008. The limit level exceedances were all found at CN2a and were not due to the site construction works as there was no noisy construction activity during the period of measurements.

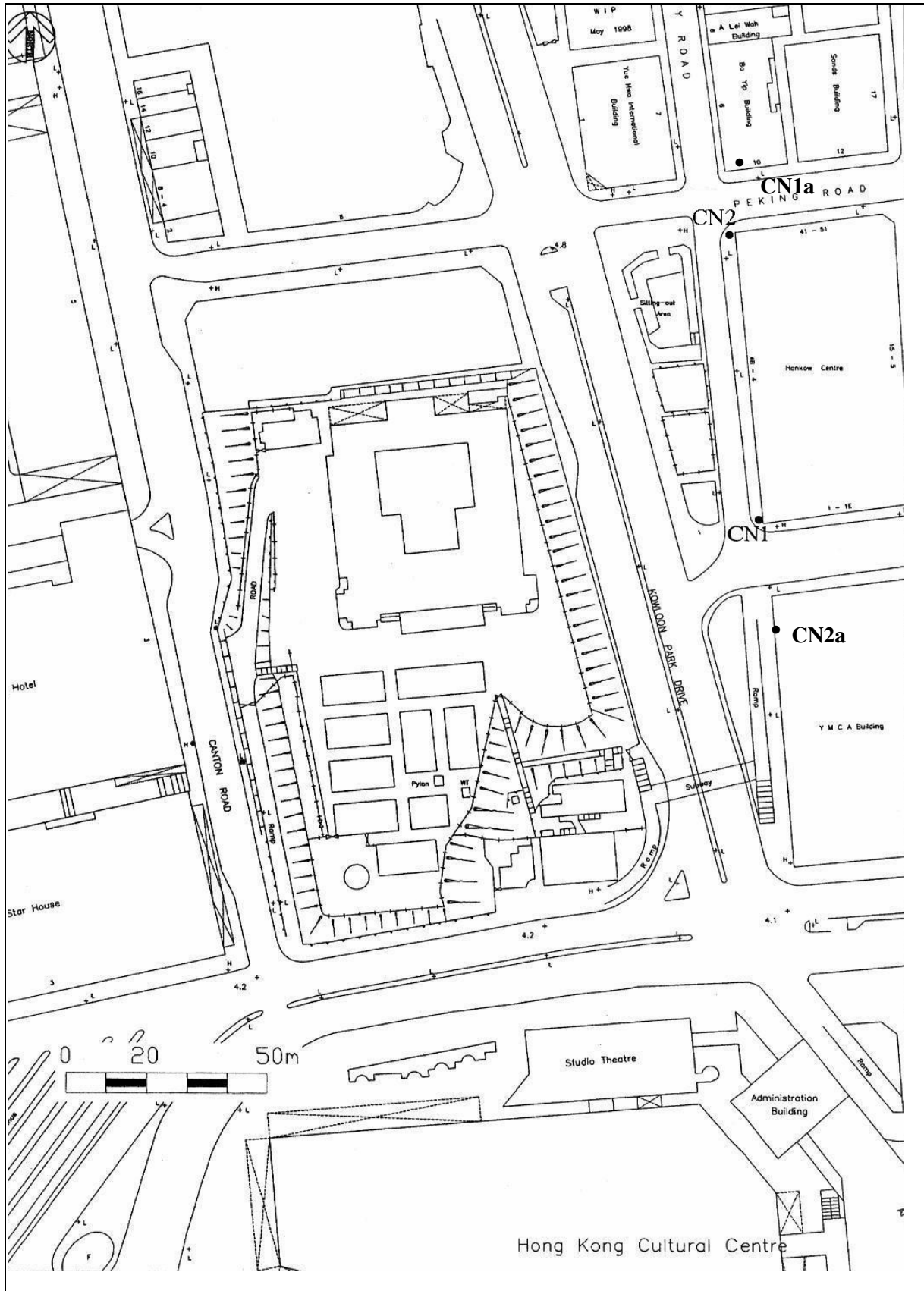


Figure 4.1 Proposed Noise Monitoring Stations (CN1 and CN2 are at podium level, about 15m above ground). Alternative measurement stations (CN1a and CN2a are about 33m and 11m above ground respectively).

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 May 2008 To 31 May 2008	Soil	354.7	TKO
	Sorting Facility	136.9	TKO
	General Refuse	51.7	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. Proper covering and storage of general refuse should be carried out.

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 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. Tree canopy for T10 have been recovered after the insecticide treatment.
- 6.7. 80% of canopy recovered on T54 as observed during tree inspection on 27 March 2008.
- 6.8. Insecticide treatment similar to T10 has carried out to T66, T67. Works near to T66 and T67 were closely monitored to prevent damage to trees.
- 6.9. Construction works being carried out near T96. Contractor has been reminded to avoid any damage made to the tree.
- 6.10. Tree canopy fully recovered as observed during tree inspection on 29 April 2008 for T120, T121 and T122.
- 6.11. Close monitoring will be continued on T10, T54, T66, T67, T96, T120, T121 and T122.
- 6.12. 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. Three Limit Level exceedances on noise were found in the reporting month. As there was no noisy operation carried out during the monitoring period, the exceedances were not genuinely due to the site construction works as discussed in paragraph 4.18.
- 7.2. No exceedance was recorded for 1-Hr and 24-Hr TSP monitoring in the reporting month.
- 7.3. No environmental prosecution was received in the reporting month.
- 7.4. Construction noise permit for concrete vibrator has been granted on 31 May 2007. 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:

Description	Permit / License No.	Status	Permit Holder
Environmental Permit	EP-184/2004	Remain valid since 9 February 2004	Flying Snow Ltd.
Construction Noise Permit	GW-RE5095-07 GW-RE5096-07	Valid until 2 September 2007	Hien Lee Engineering Co., 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

- 7.5. Construction dust notification pursuant to Air Pollution Control (Construction Dust) Regulation has also been submitted and acknowledged by EPD in May 2007.
- 7.6. 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. Sampling of the wastewater has been carried out in April 2008 and the results showed compliance with the Discharge Licence requirements. Wastewater was thus allowed to discharge at the designated discharge point specified in the License after treatment.
- 8.4. 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 May 2008 has been successfully completed. Three limit level exceedances were found.
- 9.2. Three limit level exceedances on noise level were recorded. The exceedances were due to other activities not related to the site construction works.
- 9.3. There was no notification of summons and prosecutions in the reporting month.
- 9.4. Monitoring of the trees were 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
- 9.5. 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:
 - Keeping the compressor door closed during operation.
 - Removal of water poundings found within site.
 - Proper cover and storage of general refuse.
 - Enhancement of water spraying for dust suppression.
 - Use of drip tray for all oily containers.
 - Continual protection and closer monitoring of the trees and historical buildings.

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

Updated Construction Programme

Phase	Description	2004	2005												2006	2007												2008													
		6 ...	1	2	3	4	5	6	7	8	9	10	11	12	1	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12		
1	Site Formation																																								
1.1	Site Formation - Tree Retaining, Underpinning & Tree Column																																								
1.2	Site Formation - Retaining wall for Main Building																																								
1.3	Site Formation - Open Cut Excavation																																								
1.4	Site Formation - Remaining Excavation																																								
2	Building Foundation																																								
3	Superstructure & Furnishing																																								

General Mitigation Measures

7/6/2004: All mitigation measures in place except wheel washing pond & barrier mat.

25/6/2004: Sound barrier mat ready.

9/7/2004: Wheel washing pond provided.

May 2007: setup of scaffolding supported noise screen.

Wastewater Discharge

June 2004: Zero discharge from site

9/7/2004: Discharge Licence approval

7/5/2007: Application of WPCO Discharge Licence.

22/6/2007: Discharge Licence approval

Construction Noise Permit

19/10/2005: Construction Noise Permit ["CNP"] for submersible pumps.

22/2/2006: CNP renewed.

26/7/2006: CNP renewed.

9/2/2007: CNP Expired.

April 2007: Application of CNP by HL.

Chemical Waste

2/8/2007: Registration of Waste Producer completed

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
	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

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 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
	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

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
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
4.2.1.1.1	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 ²), 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 ²) (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
4.2.1.1.2	<p>To implement good site practice and noise management</p> <ul style="list-style-type: none"> ▪ 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 ▪ To allow only well-maintained plants to operate on-site; ▪ To service the plants regularly during the construction program; ▪ To shut down or throttle down machines that may be in intermittent use to a minimum between work periods; ▪ To utilize and maintain silencer and mufflers on construction equipment during the construction program; ▪ 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); ▪ To site noisy equipment such as emergency generators as far away as possible from NSRs; ▪ To site mobile plants as far away from NSRs as possible; and ▪ To utilize material stockpiles and other structures as noise barrier, where practicable. 	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
	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.]	Site	Site Formation Contractor & Superstructure Contractor	Construction Phase	WPCO	To comply with the Water Pollution Control Ordinance and its subsidiary regulation.
	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.
4.6.2.1 1	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 tees identified for transplantation.</p>	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.
	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, 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.
	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, 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.
	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, 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
	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.
	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.
	Operational Phase Landscape and Visual Impact					
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 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
4.6.3.5	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, LMTPP & WBTC No. 14/2002	Long term measures deigned to ensure creation of a high quality urban landscape
	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, LMTPP & 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, LMTPP & 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

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
	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
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
	Cultural Heritage Impact					
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
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





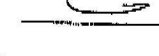
NATURE & TECHNOLOGIES (HK) LIMITED
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Development at Former Marine Police
Headquarters KIL 11161 (EP-184/2004)

Environmental Site Inspection, Deficiency and Remedial Action Report

Date of Issue:	5-5-2008	# Pages:	
To:	Hien Lee Engineering Co., Ltd. Attn: Mr. Howard Lui Project Manager	Cc:	Ms Connie Wong - IEC CH2M HILL Hong Kong Ltd.
Fax No.:	2366 2980		2507 2293

Inspection date: 2-5-2008 Inspected ET's Representative: 
 Time: 16:30-17:00 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: 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"/>		
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?		✓		Temporary open to Canton Road (No Noisy work anticipated)
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?		✓		Ditto
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?		✓		Records Needs Enhancement
EM&A 2.32	Is there any vehicle wheel washing facilities including high pressure water jets provided at designated vehicle exit points?		✓		Wheel washing facility needs improvement
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?	✓			Unloading in progress
EM&A 2.32	Are the demolished items covered by impervious sheeting or placed in area sheltered on the top and the three sides?	✓			Ditto
EM&A 2.32	Are all dusty material sprayed with water prior to loading, unloading or transfer?	✓			No dusty material unloading
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
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?		✓		

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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 ²) 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 ³) (vertical and cantilevered types) or other possible noise mitigation measures adopted?	✓			Ditto
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?	✓			Ditto
EP Annex I 38; EM&A 3.26	Is proper acoustic barrier/enclosure for the noisy facilities installed?	✓			Ditto
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?		✓		
	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?		✓		
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?		✓		

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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?		✓		Emergency storage to be considered
	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?		✓		
	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 used

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?	✓			No chemical waste observed
WMP Table 4.3	Is asbestos waste in suitable handling, storage and disposal?	✓			No asbestos found
WMP Table 4.4	Are all stockpiled spoils covered with tarpaulin or other appropriate fabric?	✓			Stockpiled spoils are located to trucks as soon as possible
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?		✓		

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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:

Waste storage is

Follow Up Actions to Previous Site Inspection:

Waste storage cleaning observed

Signatures

ET's Representative

Contractor's Representative

Architect's Representative

[Signature]
(Signature)

[Signature]
(Signature)

(Signature)

Wan Ting
(Name in Block Letter)

(Name in Block Letter)

(Name in Block Letter)



NATURE & TECHNOLOGIES (HK) LIMITED
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**Development at Former Marine Police
 Headquarters KIL 11161 (EP-184/2004)**

Environmental Site Inspection, Deficiency and Remedial Action Report

Date of Issue:	9 MAY 2008	# Pages:	6
To:	Hien Lee Engineering Co., Ltd. Attn: Mr. Howard Lui Project Manager	Cc:	Mr. Alex Chan - IEC CH2M HILL Hong Kong Ltd.
Fax No.:	2366 2980		2507 2293

Inspection date: 8-5-08 Inspected ET's Representative: _____
 Time: 16:30 - 17:00 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: 25 °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?		✓		
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?		✓		

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?		✓		
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?		✓		
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?		✓		Records Needs Enhancement
EM&A 2.32	Is there any vehicle wheel washing facilities including high pressure water jets provided at designated vehicle exit points?		✓		Wheel washing facility needs improvement
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?	✓			Unloading in progress
EM&A 2.32	Are the demolished items covered by impervious sheeting or placed in area sheltered on the top and the three sides?	✓			Ditto
EM&A 2.32	Are all dusty material sprayed with water prior to loading, unloading or transfer?	✓			No dusty material unloading
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
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?		✓		

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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 ²) as noise barrier or other possible noise mitigation measures provided?	✓			Temporary site entrance opened at western site boundary
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 ³) (vertical and cantilevered types) or other possible noise mitigation measures adopted?	✓			Ditto
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?	✓			Ditto
EP Annex I 38; EM&A 3.26	Is proper acoustic barrier/enclosure for the noisy facilities installed?	✓			Ditto
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?		✓		
	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?		✓		
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?		✓		

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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?		✓		
	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 used

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?	✓			No chemical waste observed
WMP Table 4.3	Is asbestos waste in suitable handling, storage and disposal?	✓			No asbestos found
WMP Table 4.4	Are all stockpiled spoils covered with tarpaulin or other appropriate fabric?	✓			Stockpiled spoils are located to trucks as soon as possible
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?		✓		

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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:

Water ponding observed at site entrance

Waste observed ~~not~~ stored at waste storage area

Follow Up Actions to Previous Site Inspection:

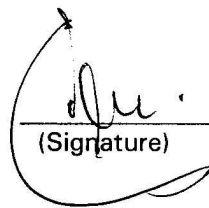
Signatures

ET's Representative

Contractor's Representative

Architect's Representative


(Signature)

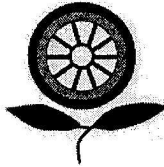

(Signature)

(Signature)

Ivan Ting
(Name in Block Letter)

(Name in Block Letter)

(Name in Block Letter)




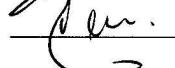
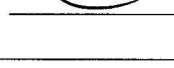
NATURE & TECHNOLOGIES (HK) LIMITED
科技環保(香港)有限公司

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:	16/5/2008	# Pages:	6
To:	Hien Lee Engineering Co., Ltd. Attn: Mr. Howard Lui Project Manager	Cc:	Mr. Alex Chan – IEC CH2M HILL Hong Kong Ltd.
Fax No.:	2366 2980		2507 2293

Inspection date: 15-5-08 Inspected ET's Representative: 
Time: 18:15-16:45 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: 25 °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"/>		
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?		✓		
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?	✓			Ditto
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 spraying needs Enhancement
EM&A 2.32	Is there any vehicle wheel washing facilities including high pressure water jets provided at designated vehicle exit points?			✓	Wheel washing facility needs reinstatement
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?			✓	Water spraying needed
EM&A 2.32	Are the demolished items covered by impervious sheeting or placed in area sheltered on the top and the three sides?			✓	Ditto
EM&A 2.32	Are all dusty material sprayed with water prior to loading, unloading or transfer?			✓	Ditto
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?			✓	Not observed on site
	Are all machinery and equipments well maintained e.g. without black smoke emission?		✓		

NOISE

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?		✓		

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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 ²) 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 ³) (vertical and cantilevered types) or other possible noise mitigation measures adopted?	✓			Ditto
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?	✓			Ditto
EP Annex I 38; EM&A 3.26	Is proper acoustic barrier/enclosure for the noisy facilities installed?	✓			Ditto
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?		✓		
	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?		✓		
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?		✓		

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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?		✓		
	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 used

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?	✓			No chemical waste observed
WMP Table 4.3	Is asbestos waste in suitable handling, storage and disposal?	✓			No asbestos found
WMP Table 4.4	Are all stockpiled spoils covered with tarpaulin or other appropriate fabric?	✓			Stockpiled spoils are located to trucks as soon as possible
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?		✓		

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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:

Water spraying need enhancement
Water ponding
Waste storage area need better enclosure

Follow Up Actions to Previous Site Inspection:

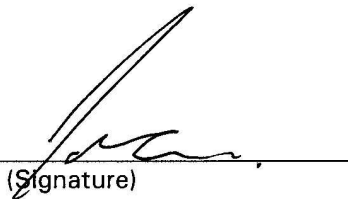
Water pondings generally removed

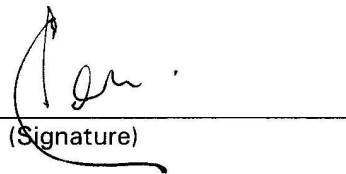
Signatures

ET's Representative

Contractor's Representative

Architect's Representative


(Signature)

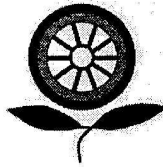

(Signature)

(Signature)

Ivan Ting
(Name in Block Letter)

(Name in Block Letter)

(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:	23-5-2008	# Pages:	6
To:	Hien Lee Engineering Co., Ltd. Attn: Mr. Howard Lui Project Manager	Cc:	Mr. Alex Chan - IEC CH2M HILL Hong Kong Ltd.
Fax No.:	2366 2980		2507 2293

Inspection date: 22-5-08 Inspected ET's Representative: _____
 Time: 16:30-17:00 Contractor's Representative: [Signature]
 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: 25 °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"/>		
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?		✓		
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?	✓			Ditto
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?		✓		Record needs Enhancement
EM&A 2.32	Is there any vehicle wheel washing facilities including high pressure water jets provided at designated vehicle exit points?		✓		Wheel washing facility needs improvement
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?	✓			Ditto
EM&A 2.32	Are all dusty material sprayed with water prior to loading, unloading or transfer?	✓			Ditto
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?			✓	An excavator needs maintenance

NOISE

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?		✓		

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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 ²) as noise barrier or other possible noise mitigation measures provided?	✓			Temporary site entrance opened at western boundry
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 ³) (vertical and cantilevered types) or other possible noise mitigation measures adopted?	✓			Ditto
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?	✓			Ditto
EP Annex I 38; EM&A 3.26	Is proper acoustic barrier/enclosure for the noisy facilities installed?	✓			Ditto
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?		✓		
	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?		✓		
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?		✓		

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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?		✓		
	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 used

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?	✓			No chemical waste observed
WMP Table 4.3	Is asbestos waste in suitable handling, storage and disposal?	✓			No asbestos found
WMP Table 4.4	Are all stockpiled spoils covered with tarpaulin or other appropriate fabric?	✓			Stockpiled spoils are located to trucks as soon as possible
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?		✓		

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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:

Drip tray is needed for all oily containers
Water pondings needed to be cleared

Follow Up Actions to Previous Site Inspection:

General Refuse are cleared


Signatures

ET's Representative

Contractor's Representative

Architect's Representative


(Signature)


(Signature)

(Signature)

Ivan Ting
(Name in Block Letter)

OTENGE SUI YAN
(Name in Block Letter)

(Name in Block Letter)




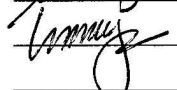

NATURE & TECHNOLOGIES (HK) LIMITED
科技環保(香港)有限公司

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:	28-5-08	# Pages:	6
To:	Hien Lee Engineering Co., Ltd. Attn: Mr. Howard Lui Project Manager	Cc:	Mr. Alex Chan – IEC CH2M HILL Hong Kong Ltd.
Fax No.:	2366 2980		2507 2293

Inspection date: 27-5-08 Inspected ET's Representative: 
 Time: 10:00-16:45 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: 25 °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?		✓		
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?		✓		

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?		✓		
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?	✓			Ditto
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?		✓		Record needs Enhancement
EM&A 2.32	Is there any vehicle wheel washing facilities including high pressure water jets provided at designated vehicle exit points?		✓		Wheel washing facility needs improvement
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?	✓			Ditto
EM&A 2.32	Are all dusty material sprayed with water prior to loading, unloading or transfer?	✓			Ditto
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?	✓			Ditto
	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
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?		✓		

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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 ²) 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 ³) (vertical and cantilevered types) or other possible noise mitigation measures adopted?	✓			Ditto
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?	✓			Ditto
EP Annex I 38; EM&A 3.26	Is proper acoustic barrier/enclosure for the noisy facilities installed?	✓			Ditto
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?		✓		
	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?		✓		
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?		✓		

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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?		✓		
	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 used

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?	✓			No chemical waste observed
WMP Table 4.3	Is asbestos waste in suitable handling, storage and disposal?	✓			No asbestos found
WMP Table 4.4	Are all stockpiled spoils covered with tarpaulin or other appropriate fabric?	✓			Stockpiled spoils are located to trucks as soon as possible
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?		✓		

Ref.	Checklist Conditions	N/A	Yes	No	Remarks
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:

Compressor observed operating with door Open
Water pondings observed

Follow Up Actions to Previous Site Inspection:

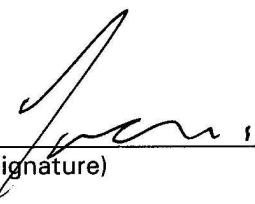
Oil containers were not observed

Signatures

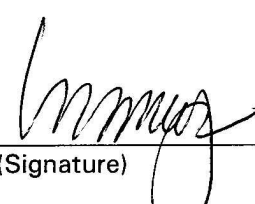
ET's Representative

Contractor's Representative

Architect's Representative


(Signature)

Wong Tsing
(Name in Block Letter)


(Signature)

CHANG SUI EN
(Name in Block Letter)

(Signature)

(Name in Block Letter)

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

High-Volume TSP Sampler

1-Point Calibration Record

Location : A1
Calibrated by : P.F.Yeung
Date : 22/4/08

Sampler

Model : GMWS-2310 ACCU-VOL
Serial Number : S/N 0814

Calibration Orifice 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) : 298

IC (Indicated flow) : 36 cfm

Actual flow : 1.39 m³/min

Checked by: Magnum Fan Date: 25/04/08

High-Volume TSP Sampler

1-Point Calibration Record

Location : A2a
Calibrated by : P.F.Yeung
Date : 22/04/08

Sampler

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

Calibration Orifice 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) : 298

IC (Indicated flow) : 36 cfm

Actual flow : 1.35 m³/min

Checked by: Magnum Fan Date: 25/04/08

High-Volume TSP Sampler
1-Point Calibration Record

Location : A3a
Calibrated by : P.F.Yeung
Date : 22/04/08

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) : 298

IC (Indicated flow) : 38 cfm

Actual flow : 1.24 m³/min

Checked by: Magnum Fan Date: 25/04/08

High-Volume TSP Sampler

I-Point Calibration Record

Location : A4
Calibrated by : P.F.Yeung
Date : 22/04/08

Sampler

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

Calibration Orifice 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) : 298

IC (Indicated flow) : 36 cfm

Actual flow : 1.32 m³/min

Checked by: Magnum Fan Date: 25/04/08

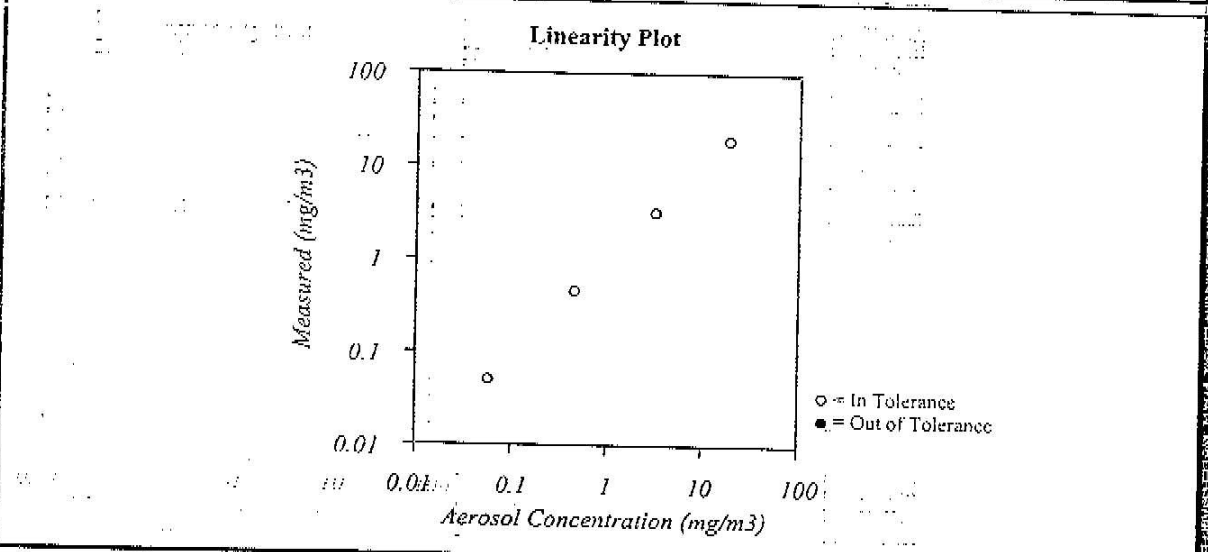


CERTIFICATE OF CALIBRATION AND TESTING

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)	mHg (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^3	○ ○ ○ ○ ○ : mg/m^3	○ ○ ○ ○ ○ : mg/m^3	160 hrs.

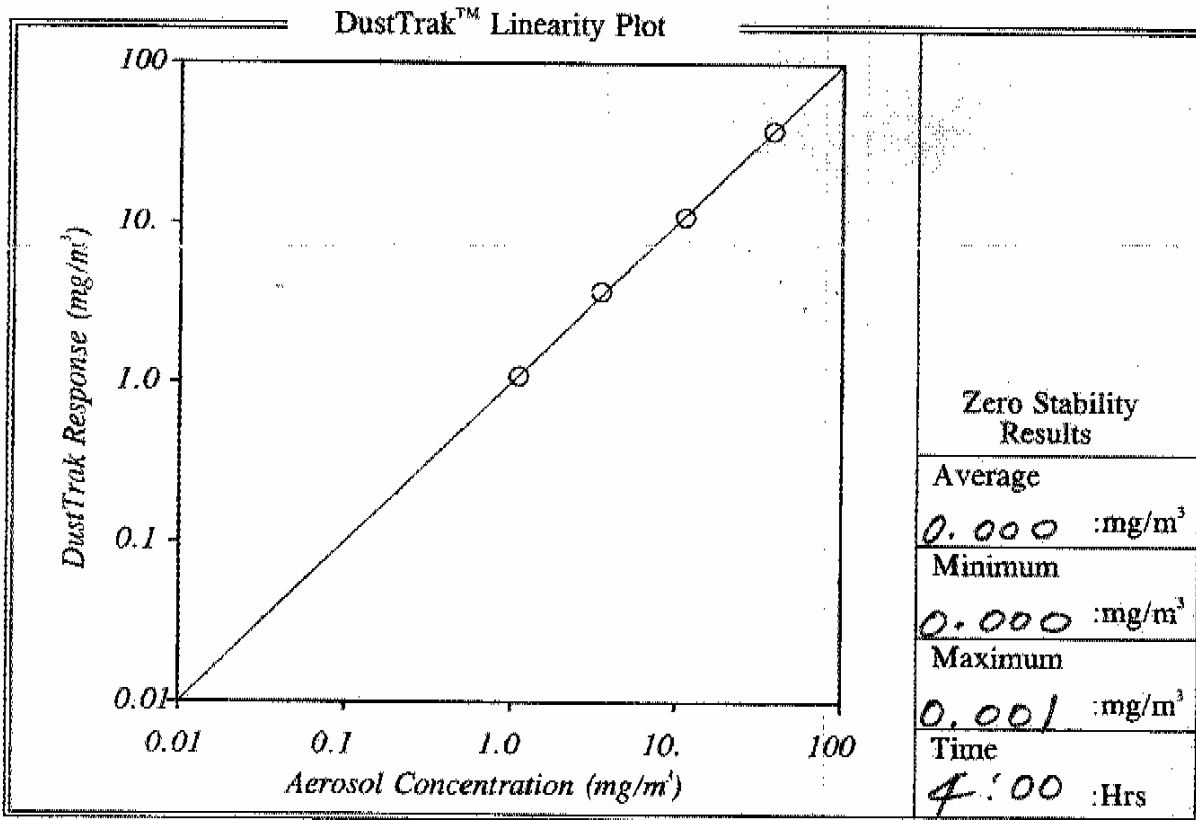
TSI Incorporated does hereby certify that all materials, components, and workmanship used in the manufacture of this equipment are in strict accordance with the applicable specifications agreed upon by TSI and the customer and with all published specifications. All performance and acceptance tests required 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	<input checked="" type="checkbox"/> Final Function Check	_____ Date September 28, 2007
-------------------------	--	-------------------------------------

TSI CERTIFICATE OF CALIBRATION AND TESTING

TSI Model 8520 DustTrak™ TSI Serial No. 22397
 Description Aerosol Monitor



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 aerosol and has been nominally adjusted to respirable mass of standard ISO 12103-1, A1 test dust (Arizona test dust.) Our calibration ratio is greater than 1.2:1.

Final
 Calibrated by [Signature] Function Check Calibration Date JUN 19, 2007

TSI Incorporated
 Health & Safety
 Instruments Division

Mailing Address: P.O. Box 64394 St. Paul, MN 55164 USA
 Shipping Address: 500 Cardigan Road St. Paul, MN 55126 USA
 Phone: (800) 926-8378 or (651) 490-2760 Fax: (651) 490-2704

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-May-08	9:10	10:10	11:10	116	118	129
09-May-08	9:00	10:00	11:00	122	139	140
15-May-08	9:10	10:10	11:10	140	148	162
21-May-08	9:10	10:10	11:10	120	138	125
27-May-08	9:10	10:10	11:10	136	144	159

The Summary of 1-hr TSP Concentration ($\mu\text{g}/\text{m}^3$) at A2a

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-May-08	9:00	10:00	11:00	124	150	138
09-May-08	8:50	9:50	10:50	148	172	165
15-May-08	9:00	10:00	11:00	171	162	184
21-May-08	9:00	10:00	11:00	118	175	154
27-May-08	9:00	10:00	11:00	150	165	159

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)
				$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$
21-May-08	12:30	13:30	14:30	159	162	148
27-May-08	12:20	13:20	14:20	171	169	184

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-May-08	12:20	13:20	14:20	171	154	150
09-May-08	12:10	13:10	14:10	128	134	150
15-May-08	12:25	13:25	14:25	159	172	177
21-May-08	12:40	13:40	14:40	139	144	160
27-May-08	12:40	13:40	14:40	140	166	175

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)	(m^3/min)	(m^3/min)	(m^3/min)	(m^3)	(g)	(g)	$\mu\text{g}/\text{m}^3$
05-May-08	10:00	Fine	1440	1.35	1.35	1.35	1944	2.7655	2.8967	67
09-May-08	10:00	Sunny	1440	1.35	1.35	1.35	1944	2.7610	2.9140	79
15-May-08	10:00	Sunny	1440	1.35	1.35	1.35	1944	2.8098	2.9474	71
21-May-08	10:00	Cloudy	1440	1.35	1.35	1.35	1944	2.7792	2.9077	66
27-May-08	10:00	Cloudy	1440	1.35	1.35	1.35	1944	2.7924	2.9379	75

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The Summary of 24-hr TSP Concentration ($\mu\text{g}/\text{m}^3$) at A2a

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)	(m^3/min)	(m^3/min)	(m^3/min)	(m^3)	(g)	(g)	$\mu\text{g}/\text{m}^3$
05-May-08	10:00	Fine	1440	1.31	1.31	1.31	1886.4	2.7680	2.9091	75
09-May-08	10:00	Sunny	1440	1.31	1.31	1.31	1886.4	2.7659	2.9179	81
15-May-08	10:00	Sunny	1440	1.31	1.31	1.31	1886.4	2.7319	2.8779	77
21-May-08	10:00	Cloudy	1440	1.31	1.31	1.31	1886.4	2.7806	2.9195	74
27-May-08	10:00	Cloudy	1440	1.31	1.31	1.31	1886.4	2.7970	2.9565	85

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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)	(m^3/min)	(m^3/min)	(m^3/min)	(m^3)	(g)	(g)	$\mu\text{g}/\text{m}^3$
21-May-08	10:00	Cloudy	1440	1.29	1.29	1.29	1857.6	2.7798	2.9288	80
27-May-08	10:00	Cloudy	1440	1.29	1.29	1.29	1857.6	2.7806	2.9583	96

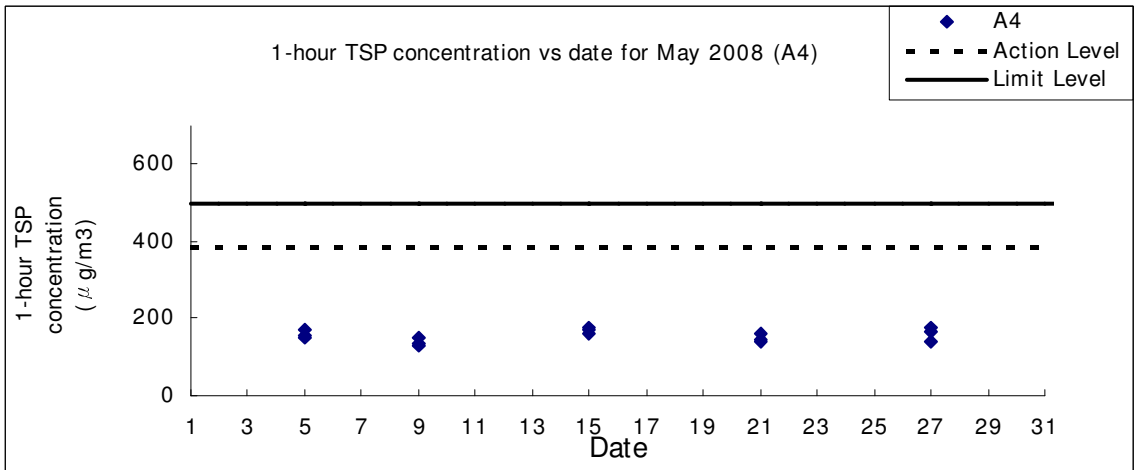
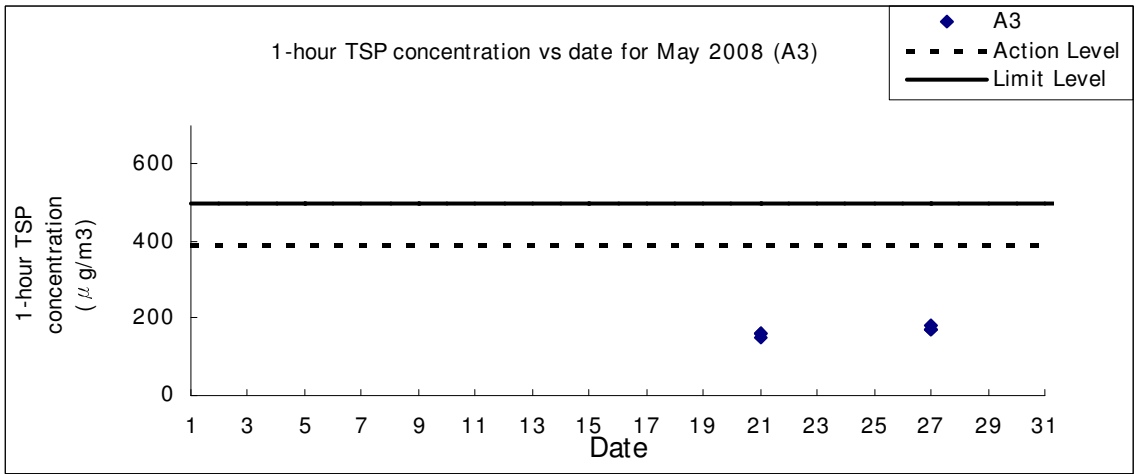
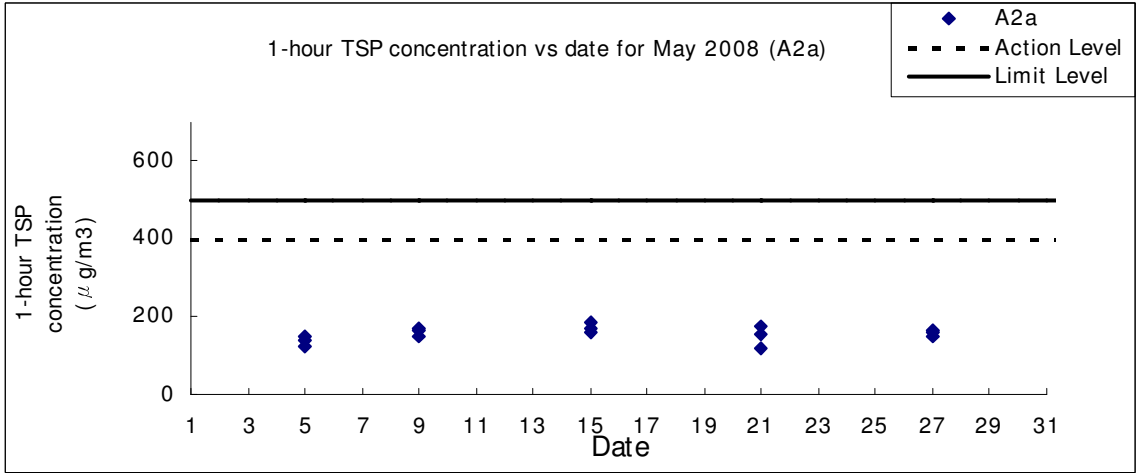
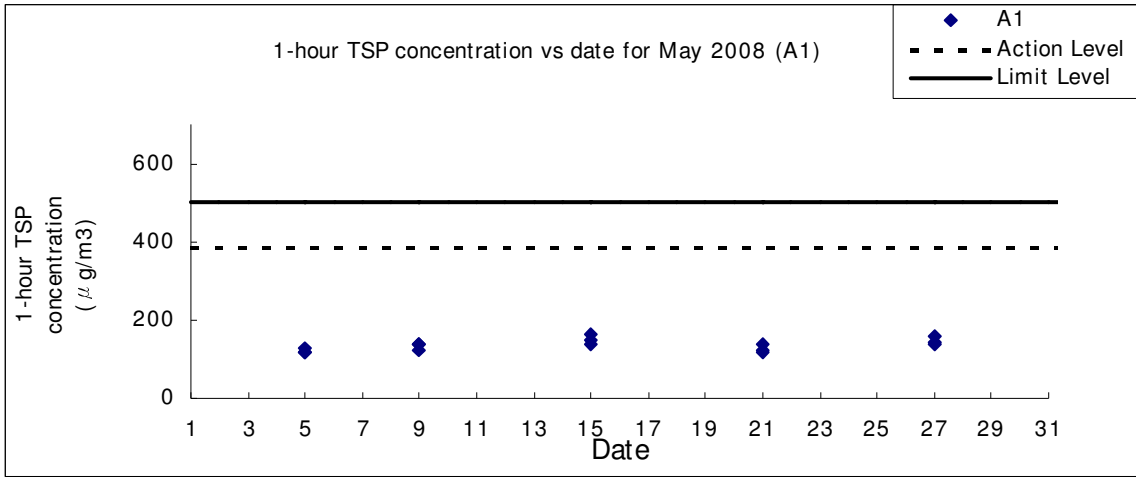
AVE 88

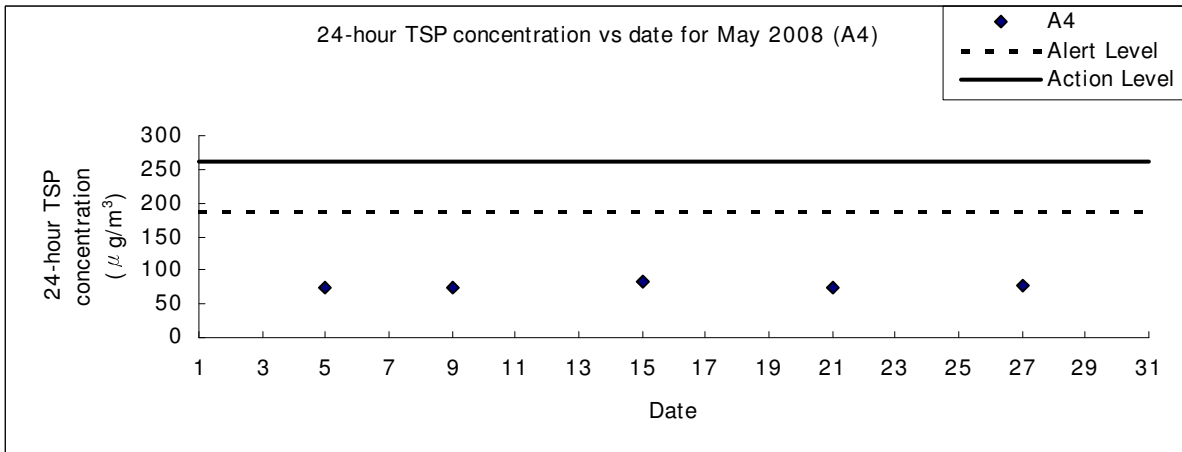
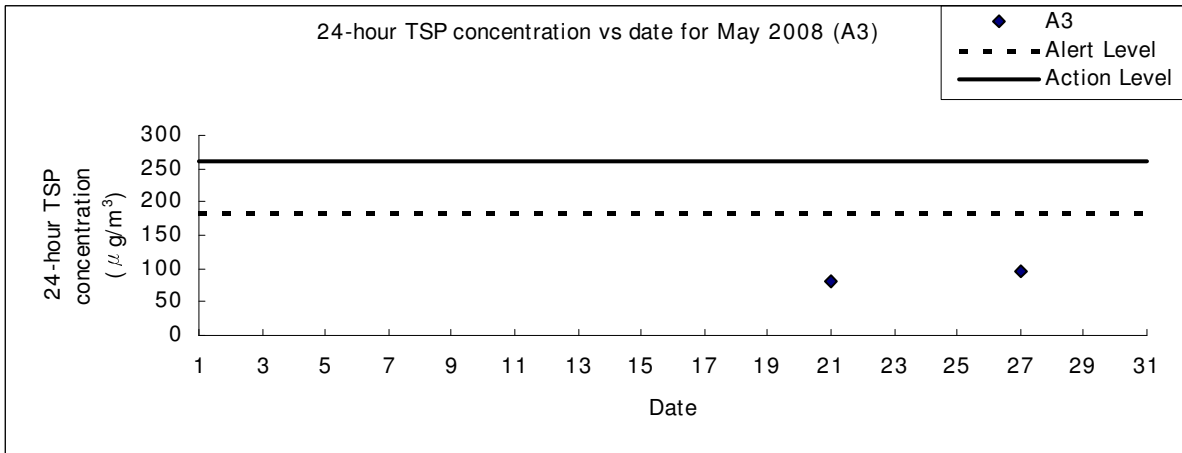
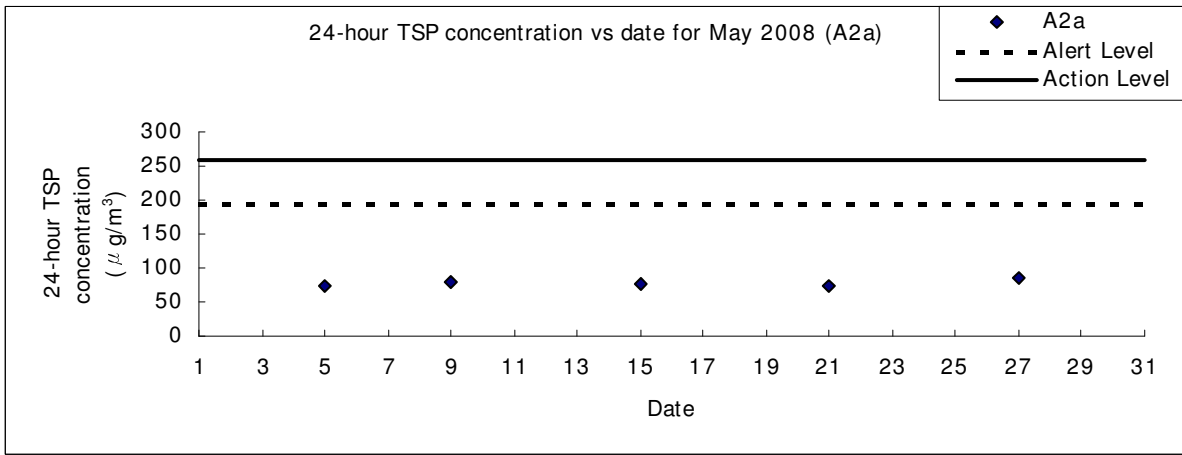
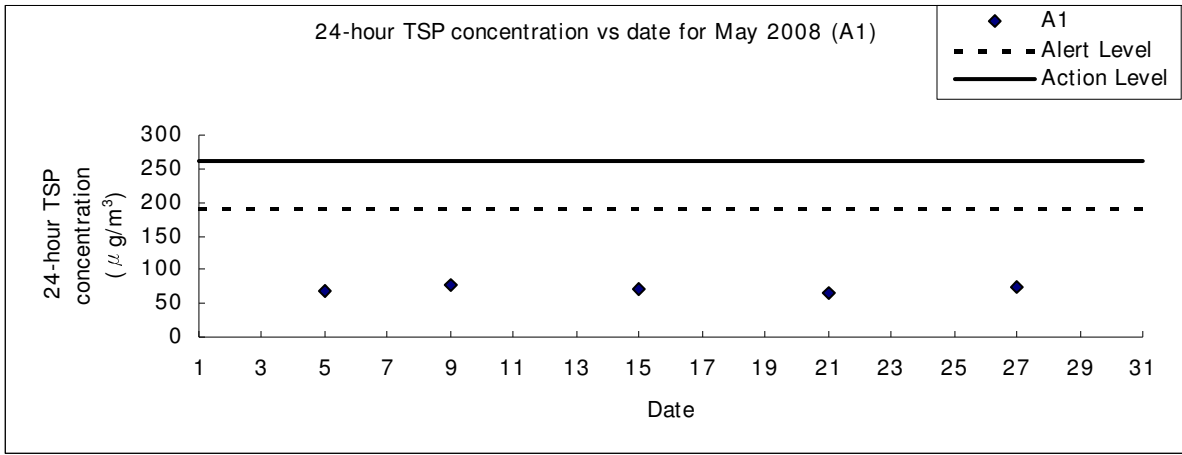
The Summary of 24-hr TSP Concentration ($\mu\text{g}/\text{m}^3$) at A4

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)	(m^3/min)	(m^3/min)	(m^3/min)	(m^3)	(g)	(g)	$\mu\text{g}/\text{m}^3$
05-May-08	10:00	Fine	1440	1.32	1.32	1.32	1900.8	2.7728	2.9144	74
09-May-08	10:00	Sunny	1440	1.32	1.32	1.32	1900.8	2.7491	2.8915	75
15-May-08	10:00	Sunny	1440	1.32	1.32	1.32	1900.8	2.6882	2.8440	82
21-May-08	10:00	Cloudy	1440	1.32	1.32	1.32	1900.8	2.7910	2.9307	73
27-May-08	10:00	Cloudy	1440	1.32	1.32	1.32	1900.8	2.7795	2.9248	76

AVE 76

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	01/5/2008 – 31/5/2008	0	0
	A2a	01/5/2008 – 31/5/2008	0	0
	A3a	01/5/2008 – 31/5/2008	0	0
	A4	01/5/2008 – 31/5/2008	0	0
Air (24-hour TSP)	A1	01/5/2008 – 31/5/2008	0	0
	A2a	01/5/2008 – 31/5/2008	0	0
	A3a	21/5/2008 – 31/5/2008	0	0
	A4	01/5/2008 – 31/5/2008	0	0
Noise	CN1a	01/5/2008 – 31/5/2008	0	0
	CN2a	01/5/2008 – 31/5/2008	0	3
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. : C073059

Certificate of Calibration

This is to certify that the equipment

Description : Sound Level Calibrator

Manufacturer : Rion

Model No. : NC-73

Serial No. : 10786708

*has been calibrated for the specific items and ranges.
The results are shown in the Calibration Report No. C073059.*

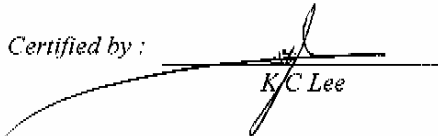
The equipment is supplied by

Co. Name : Envirotech Services Co.

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

Date of Issue : 25 June 2007

Certified by :



K/C Lee

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

Calibration and Testing Laboratory of Sun Creation Engineering Limited


c/o 4E, Tsing Shun Wai Exchange Building, 1 Hong On Lane, Tuen Mun, New Territories, Hong Kong

Tel: 2927 2606

Fax: 2744 8986

E-mail: callabi@suncreation.com

Website: www.suncreation.com



輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C072764

Certificate of Calibration

This is to certify that the equipment

Description : Sound Level Meter

Manufacturer : Rion

Model No. : NL-31

Serial No. : 00320533

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

The equipment is supplied by

Co. Name : Envirotech Services Co.

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

Date of Issue : 7 June 2007

Certified by :

K. Lee

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

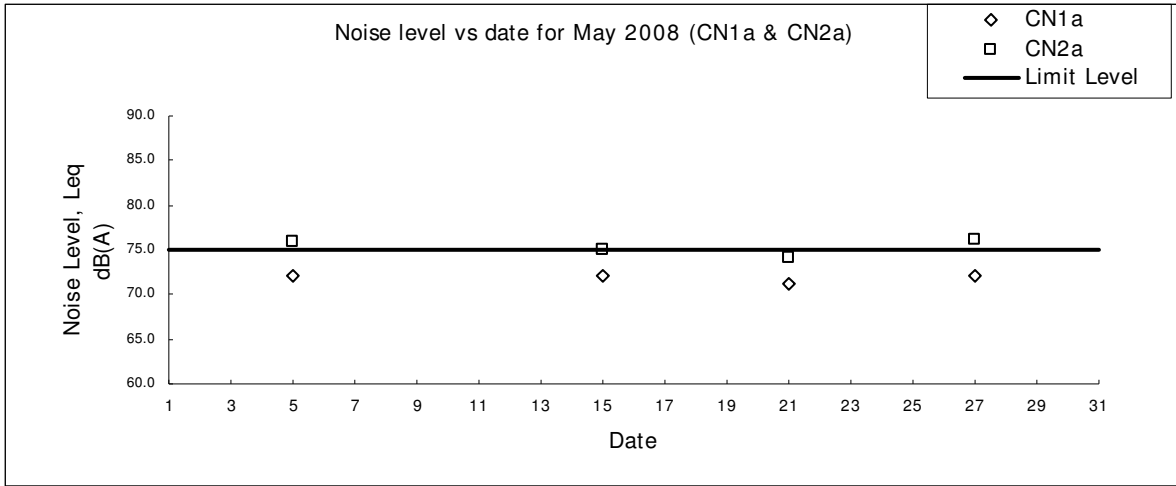
c/o 4/F, Tsing Shan Wai Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
Tel: 2927 2606 Fax: 2744 8986 E-mail: callab@suncreation.com Website: www.suncreation.com

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

Date	Time	Weather	CN1a (Po Yip)		
			Noise Level, dB(A)		
			L _{eq}	L ₉₀	L ₁₀
05-May-08	10:05	Sunny	72.1	70.2	73.9
15-May-08	10:05	Sunny	72.0	70.2	73.9
21-May-08	10:05	Cloudy	71.1	68.2	72.9
27-May-08	10:05	Cloudy	72.1	70.2	73.9

Date	Time	Weather	CN2a (YMCA)		
			Noise Level, dB(A)		
			L _{eq}	L ₉₀	L ₁₀
05-May-08	11:10	Sunny	76.0	74.1	78.1
15-May-08	11:10	Sunny	75.1	72.1	76.0
21-May-08	11:05	Cloudy	74.2	72.0	76.9
27-May-08	11:05	Cloudy	76.2	74.0	78.0

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 (May 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	---
T10	✓		2	Yes	Tree canopy recovered after the insecticide treatment carried out on 10 Feb 2007. Close monitoring
T14		✓	1	No	---
T17(R)		✓	1	No	Replaced T17
T32		✓	1	No	---
T34		✓	1	No	---
T35		✓	1	No	---
T54	✓		2	Yes	More new leaves grown observed and recovered 80% of canopy during tree inspection on 27 March 2008. Close monitoring
T55		✓	1	No	---
T65	✓		1	No	---
T66	✓		1	Yes	Tree treated with insecticide similar to tree T10. Works near T66 and T67 closely monitored to prevent damage to trees
T67	✓		1	Yes	
T73		✓	3	Yes	To be replaced
T75		✓	1	No	---
T79		✓	1	No	---
T80		✓	1	No	---
T96	✓		1	Yes	Works near T96. Close Monitoring
T98(R)		✓	1	No	Replaced T98
T99		✓	1	No	---
T100(R)		✓	1	No	Replaced T100
T102		✓	1	No	---
T104		✓	1	No	---
T107		✓	1	No	---
T111		✓	1	No	---
T120	✓		2	Yes	Tree canopy fully recovered due to seasonal change observed during tree inspection on 29 April 2008. Close monitoring
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	No	---
T132	✓		1	No	---
T134	✓		1	No	---
TA1	✓		1	No	---
TA2	✓		1	No	---
TA66		✓	1	No	---

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 (22 May 2008)



T10 (22 May 2008)



T65 (22 May 2008)



T96 (22 May 2008)



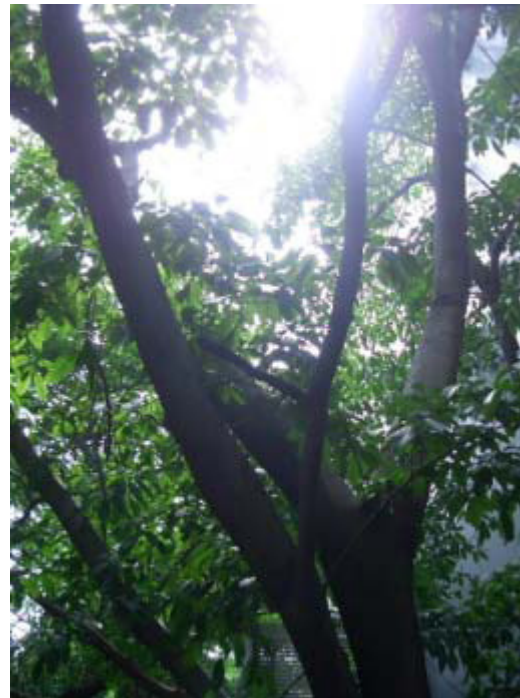
T66/67 (22 May 2008)



TA1 (22 May 2008)



T6 / T8 (22 May 2008)



T131 (22 May 2008)



T132 (22 May 2008)



T121 / T122 (22 May 2008)



T134 (22 May 2008)



T124 (22 May 2008)



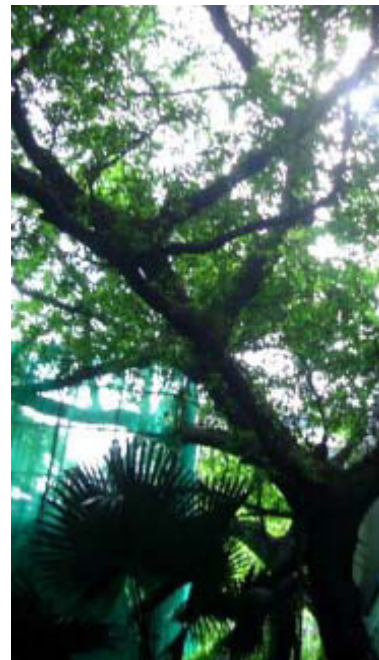
T125 (22 May 2008)



T126 (22 May 2008)



T127 (22 May 2008)



T128 (22 May 2008)



T129 (22 May 2008)



T120 (22 May 2008)



TA2 (22 May 2008)



T1 / T3 (22 May 2008)