

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

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> Development at Former Marine Police Headquarters KIL 11161 Quarterly Environmental Monitoring & Audit Report for December 2006 – February 2007

> > (Ref No. 3.12/003/2004)

April 2007

Report Certified by the Environmental Team Leader:

Report Verified by the Independent Environmental Checker:

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#### **EXECUTIVE SUMMARY**

This is the eleventh Quarterly Environmental Monitoring & Audit Report prepared by Nature & Technologies (HK) Ltd. for the development of the former Marine Police Headquarter. This report documents the impact environmental monitoring and audit work in the period from December 2006 to February 2007. Site audit inspections were performed by Environmental Team at least once per week and by the Independent Environmental Checker at least once per month.

Piling, excavation Work, welding and metal works were the major construction activities carried out within the Project site for the reporting period.

Air and noise monitoring have been carried out in accordance with the EM&A Manual. Monument settlement measurement data and tree photographic survey are also provided in Appendices of the Monthly EM&A Reports for December 2006 to February 2007.

Ground-borne noise measurements were conducted inside Hong Kong Space Museum but only in January in Hong Kong Cultural Centre as there was no available time slot for noise measurement at HKCC.

Bi-monthly water quality sampling was conducted in December 2006 and February 2007 and result showed compliance of WPCO.

Summary of non-compliance of reporting period is tabulated in Table I.

Table I Summary table for non-compliance recorded from December 2006 to February 2007

|           |              |         | No. of Exc | ceedance(s) |         |          |
|-----------|--------------|---------|------------|-------------|---------|----------|
|           | Action Level |         |            | Limit Level |         |          |
|           | December     | January | February   | December    | January | February |
| 1-hr TSP  | 0            | 0       | 0          | 0           | 0       | 0        |
| 24-hr TSP | 0            | 1       | 0          | 0           | 0       | 0        |
| Noise     | 1            | 2       | 1          | 0           | 0       | 2        |
| Water     | 0            | 0       | 0          | 0           | 0       | 0        |

There were four noise complaints received in these reporting months and two Limit Level exceedances were found as result of one complaint. These were resolved by work scheduling. One Action Level exceedance was also found for 24-hr total dust particulate and the level was quickly returned to normal after improved site management. There were no other notifications of summons, prosecutions or other non-compliance.

Other than the complaints, the site was generally satisfactory and some improvement measures are recommended for further pursuit. These include the improvement of the noise mats, proper record keeping, improvement of general site cleanliness, use of drip tray for oil containers, continuing protection of preserved historical building and trees.

#### 1. Introduction

1.1 Konwall Construction and Engineering Co. Ltd. ["KCE"] is contracted to carry out the site formation work for the development of the Former Marine Police Headquarters ["FMPHA"]. KCE in turn has commissioned Nature & Technologies (HK) Ltd. ["N&T"] to conduct the environmental monitoring and audit ["EM&A"] work for the project.

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- 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 EM&A Manual was approved on 26 July 2004.
- 1.3 This report documents the quarterly EM&A work and summarizes its findings for the quarterly period from December 2006 to February 2007. This is the eleventh quarterly report documenting the EM&A work since the commencement of the construction work.

2. Project Information and Progress

#### **Environmental Status**

2.1 The location, site layout, historic buildings and structures to be preserved of the Project are shown in Figure 2.1.

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2.2 The project organization, management structure and general lines of communication with respect to environmental protection works are shown in Figure 2.2 and the present key contacts 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                       | A+T Design Ltd.                       | Mr Daniel Lin            | 2858 4778 |
| Contractor                              | Konwall Construction & Eng. Co., Ltd. | Mr Eric Kwok             | 2563 1233 |
| Independent<br>Environmental<br>Checker | CH2M HILL Hong Kong<br>Limited        | Mr David Yeung           | 2872 2934 |
| Environmental<br>Team ["ET"] Leader     | Nature & Technologies (HK) Ltd.       | Ir Dr Gabriel C K<br>Lam | 2877 3122 |

## Construction Programme, Works Undertaken & Status

- 2.3 The updated construction programme with milestones of environmental protection / mitigation activities annotated is given in Appendix A.
- 2.4 Piling, excavation Work, welding and metal works were the main activities carried out within the project site in the reporting period.

## **Monitoring Locations**

- Designated air quality and noise monitoring locations were selected for impact monitoring based on the EM&A Manual Section 3.8. They are shown in Figure 2.3. Air quality monitoring locations are 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
- A4 is at the site boundary north of the construction site on top of the existing hoarding, estimated to be about 13m above ground.
- 2.6 The noise monitoring locations, namely CN1a (on the roof of Po Yip Building) & CN2a (on the 4/F YMCA), 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 also shown in Figure 2.3 and are located on the roof of Po Yip Building and 4/F YMCA facing the east of the site.
- 2.7 The other monitoring locations are indoor of Hong Kong Cultural Centre ["HKCC"] (4/F Studio Theatre End Stage, 1/F Concert Hall & 1/F Grand Theatre) and Hong Kong Space Museum ["HKSM"] (G/F Lecture Room, 1/F Recording Studio & 1/F Sky Theatre) for ground-borne noise monitoring purpose.

# Summary of EM&A Requirements

2.8 The environmental monitoring requirements given in this manual can be summarised as follows:

Table 2.2 Environmental Monitoring Summary Requirements

| lable | The state of the s |
|-------|--|
| 1.    | Air monitoring for 24-hour Total Suspended Particulates ["TSP"] with high  |
|       | volume samplers at four locations  |
|       | Baseline – continuously for14 consecutive days   |
|       | <ul> <li>Impact – once every six-days</li> </ul>   |
| 2.    | Air monitoring for 1-hour TSP with portable equipment at four locations  |
|       | Baseline – 3 times per day for 14 days   |
|       | <ul> <li>Impact – 3 times per day, one day for every six-days</li> </ul>   |
| 3.    | Noise measurement at two noise sensitive receiver locations (Leg. 30 min, Leg. 5 min,  |
| i     | L10 and L90)   |
|       | Baseline – daily between 0700-1900 for 2 weeks   |
|       | <ul> <li>Impact – weekly between 0700-1900 hours on a normal weekday</li> </ul>  |
| 4.    | Ground-borne noise measurement inside HKSM and HKCC (Leg,30 min / Leg,5 min)   |
| -     | Baseline – one time before commencement of piling works  |
|       | <ul> <li>Impact – once per month on a normal weekday</li> </ul>  |
| 5.    | Building Settlement Marker   |
|       | Baseline – one time before commencement of piling works  |
|       | <ul> <li>Impact – once per two days on a normal weekday</li> </ul>   |
| 6.    | Ground Settlement Marker   |
|       | Baseline – one time before commencement of piling works  |
|       | <ul> <li>Impact – once per two days on a normal weekday</li> </ul>   |
| 7.    | Crack Monitoring (Tell-Tale Device)  |
|       | Baseline – one time before commencement of piling works  |

Impact - once per two days on a normal weekday

2.9 Site inspection by the ET should be carried out at least once per week and IEC at least once per month to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. Report submissions should include Baseline Monitoring Report, Monthly, Quarterly and Final EM&A Reports. These reports should include photographic records for landscape and tree preservation, and monument structure monitoring records for heritage protection.

## Environmental Quality Performance Limits

2.10 The calculation of the Action and Limit ["AL"] Levels for dust and noise were based on the baseline monitoring results. The AL levels for dust are set in Table 2.3.

Table 2.3 AL levels for 1-hour and 24-hr TSP

| Location | 1-hour TSP |       | 24-hour TSP |       |  |
|----------|------------|-------|-------------|-------|--|
|          | Action     | Limit | Action      | Limit |  |
| A1       | 382        | 500   | 191         | 260   |  |
| A2a      | 394        | 500   | 193         | 260   |  |
| A3       | 389        | 500   | 182         | 260   |  |
| Α4       | 384        | 500   | 187         | 260   |  |

2.11 As per requirements of the EM&A Manual, the AL Levels for noise were established as in Table 2.4 AL levels.

Table 2.4 AL levels for impact noise monitoring locations

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

reduce to 70 dB(A) for schools and 65 dB(A) during school examination periods.

2.12 The corresponding AL levels for ground borne noise indoor of HKCC and HKSM are as per Table 2.5.

Table 2.5 AL levels for HKCC and HKSM

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

2.13 For monitoring of the monument structure during construction works, the AL levels given in Table 2.6 are adopted.

Table 2.6 AL 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                    | mm   | 5      | 8      | 10     |

<sup>\*\*</sup> Based on Area Sensitivity Rating 'B'.

### Implementation Status

- 2.14 The construction and operational phase impacts of the project have been assessed and presented in the Project Profile submitted in November 2003. 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.
- 2.15 Site environmental audits were carried out by ET on a weekly basis and by IEC, at least once per month to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. Site audit checklist reports and recommendations are given in Appendices of the Monthly EM&A Reports for December 2006 to February 2007.
- 2.16 The conditions of the site and the implementation of various environmental protection measures have been generally satisfactory. Piling, Excavation, welding and metal works were the major construction activities in the reporting quarter. The followings were noted for this quarterly period:
  - Noise mats installed on the eastern boundary of the site were found to be insufficient. Local noise screening of noisy equipment and piling works should be provided.
  - Proper record keeping for environmental management have to be enforced.
     For instance, dust suppression water sprays, updated waste disposal records should be readily made available for close monitoring. Waste recycling should be more actively promoted.
  - Drip tray should be used for every oil container on site.
  - Valid noise emission labels for all air compressors must be ensured.
  - Proper storage and cover of refuse should be made.
  - Water poundings found on site should be removed immediately.
  - Continual protection and closer monitoring of the trees and historical buildings.
- 2.17 The summary status of the submission under the EP is given in Table 2.7.

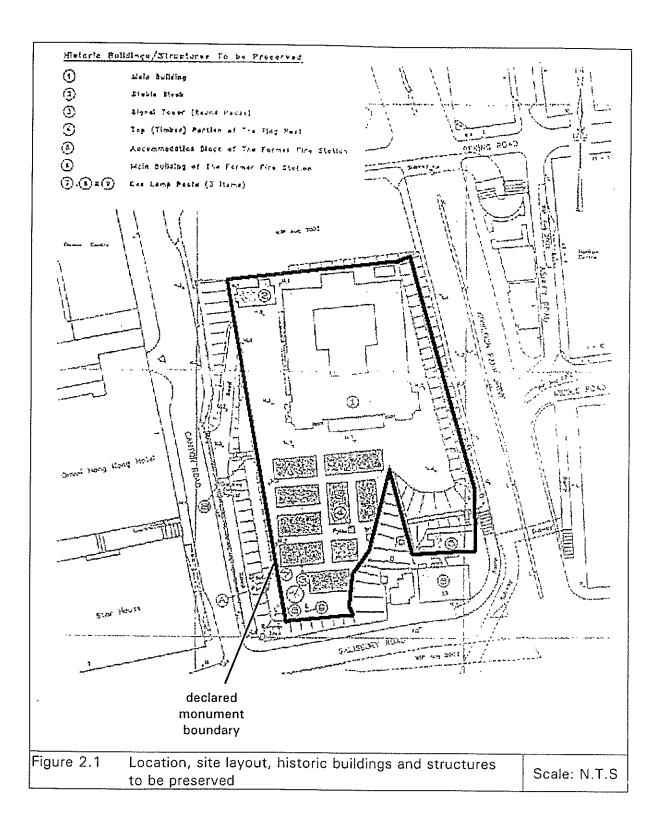
Table 2.7 Status of submission under EP up to 28 February 2007

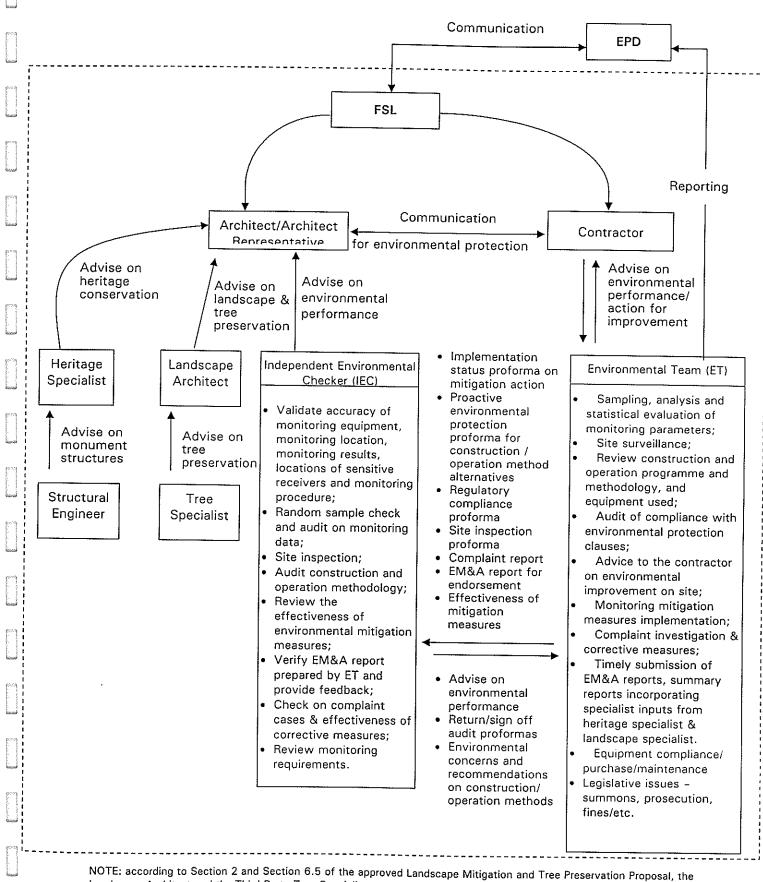
| Item |   | C.          |
|------|---|-------------|
| No.  | Description   | Submission  |
| 1.   | Method Statement detailing the protective measures on declared  | Date to EPD |
|      | monument buildings  | 06/02/2004  |
| 2.   | Landscape Mitigation and Tree Preservation Proposal   | 06/02/2004  |
| 3.   | Draft EM&A Manual   | 29/4/2004   |
| 4.   | Revised Landscape Mitigation and Tree Preservation Proposal   | 15/05/2004  |
| 5.   | Draft Waste Management Plan   | 14/06/2004  |
| 6.   | Final Method Statement detailing the protective measures on declared monument buildings which is approved | 14/06/2004  |
| 7.   | Final Landscape Mitigation and Tree Preservation Proposal   | 21/06/2004  |
| 8.   | Baseline Monitoring Report  | 25/06/2004  |
| 9.   | Monthly EM&A Report for June 2004   | 21/07/2004  |
| 10.  | Revised EM&A Manual (Rev. 1) which is approved  | 26/07/2004  |
| 11.  | Revised Landscape Mitigation and Tree Preservation Proposal which is approved                             | 26/07/2004  |
| 12.  | Revised Waste Management Plan which is approved   | 17/08/2004  |
| 13.  | Monthly EM&A Report for July 2004   | 25/08/2004  |
| 14.  | Revised EM&A Manual (Rev. 2) which is approved  | 06/09/2004  |
| 15.  | Monthly EM&A Report for August 2004   | 21/09/2004  |
| 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  | 20/01/2005  |
| 21.  | Monthly EM&A Report for December 2004   | 28/01/2005  |
| 22.  | Monthly EM&A Report for January 2005  | 18/03/2005  |
| 23.  | Monthly EM&A Report for February 2005   | 04/04/2005  |
| 24.  | Monthly EM&A Report for March 2005  | 10/04/2005  |
| 25.  | Quarterly EM&A Report for December 2004 to February 2005  | 13/04/2005  |
| 26.  | Revised EM&A Manual (April 2005) which is approved  | 11/05/2005  |
| 27.  | Revised Waste Management Plan (April 2005) which is approved  | 11/05/2005  |
| 28.  | Monthly EM&A Report for April 2005  | 13/06/2005  |
| 29.  | Monthly EM&A Report for May 2005  | 09/07/2005  |
| 30.  | Quarterly EM&A Report for March to May 2005   | 29/07/2005  |
| 31   | Monthly EM&A Report for June 2005   | 08/08/2005  |
| 32   | Monthly EM&A Report for July 2005   | 02/09/2005  |
| 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   | 7/1/2006    |
| 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    |
| 47.  | Monthly EM&A Report for May 2006  | 13/7/2006   |

Table 2.7(continued) Status of submission under EP up to 28 February 2007

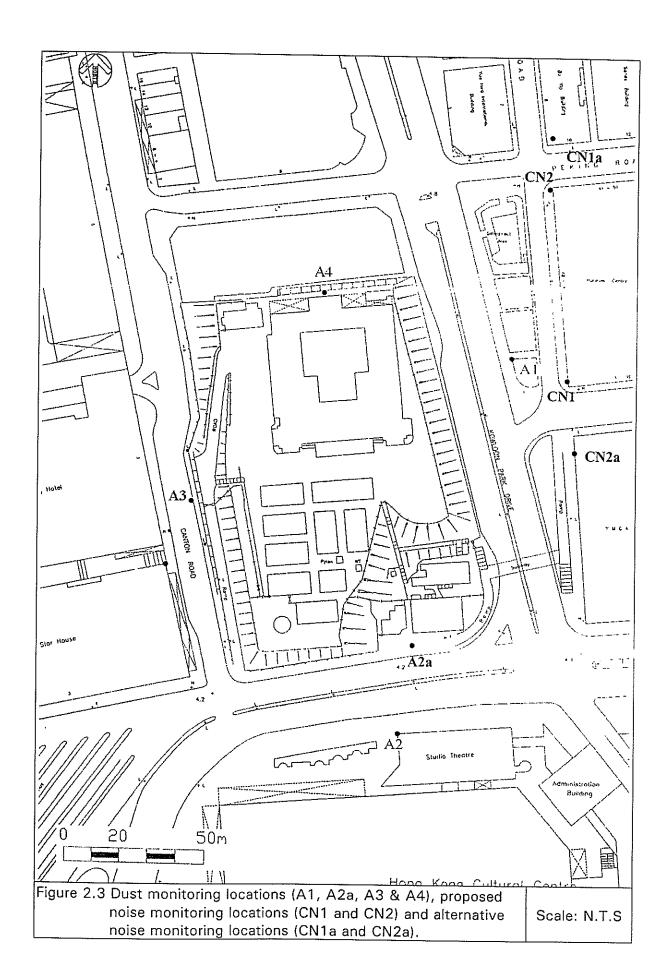
| Item<br>No. | Description  | Submission<br>Date to EPD |
|-------------|--|---------------------------|
| 48.         | Monthly EM&A Report for June 2006                  | 11/8/2006                 |
| 49.         | Quarterly EM&A Report for March 2006 to May 2006   | 11/8/2006                 |
| 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                  |

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Landscape Architect and the Third Party Tree Specialist are responsible to carry out their duties on monitoring landscape and tree preservation aspects for the above project during the construction and the establishment period.



# 3. Monitoring Results

### Weather Condition

3.1 The weather during monitoring sessions varied from sunny to cloudy. The weather conditions for each individual monitoring session were presented in the field record sheets.

#### Air Quality

- 3.2 The monitoring data of 1-hour and 24-hour TSP levels are attached in Appendices of the Monthly EM&A Reports for December 2006 to February 2007. The graphical presentations of the monitoring results are shown in Appendix C.
- 3.3 The summary of the air quality exceedances is attached in Appendix D.
- 3.4 All 1-hour and 24-hour TSP monitoring were conducted as scheduled in this reporting period. No AL Levels exceedance for 1-hour and one Action Levels exceedance for 24-hour TSP was recorded in this reporting period. The TSP level was returned to normal immediately after improved site management.

#### Noise

- 3.5 All noise monitoring for CN1a & CN2a were conducted as scheduled in this reporting period. Noise monitoring data are attached in Appendices of the Monthly EM&A Reports for December 2006 to February 2007. The graphical presentations of the monitoring results are shown in Appendix E. Ground-borne noise measurements were conducted inside Hong Kong Science Museum for the whole reporting period and in Hong Kong Cultural Centre (HKCC) only in January due to unavailability of time slot.
- 3.6 There were four noise complaints constituting to exceedance of the Action Level. Also, two Limit Level exceedence was recorded in February 2007. Summary of the noise exceedances is attached in Appendix D.

#### Water Quality

3.7 Wastewater was treated on-site by a sedimentation system and discharged at the designated discharge point specified in the License. Bi-monthly water quality sampling required by the Wastewater Discharge License was made in October and the result showed compliance with the discharge license requirement.

## Cultural Heritage and Landscape

- 3.8 The monitoring results of monument structure in the period from December 2006 to February 2007 are presented in Appendices of the Monthly EM&A Reports for the corresponding month. No adverse comments on the structural integrity of the protected monuments have been received from the Heritage Specialist.
- 3.9 To avoid affecting high side vehicles on Salisbury Road and Canton Road, approval for limited pruning of T66 and T67 has been granted by DLO (dated

- 18 September 2006 Ref. (24) in LND KW 110/KPA/KW(T) IV). The canopy is to be lifted to a height of approximately 7m from road.
- 3.10 T121/T122 have also been pruned in accordance with the methodology approved by DLO dated 8 November 2006 Ref. (5) in LND KW 110/KPA/KW(T)V. The approved methodology included the pruning of any decayed branches which left it rather open and was carried out by the KCRC contractor for that section of the site. However, it was found that some pruning sites have a hole in the centre suggesting some previous wood decay.
- 3.11 Fertilizer has also been applied to T54. Close monitoring are therefore being carried out for all the trees mentioned.
- 3.12 Leaf drop due to insect infestation was found on T10 during tree inspection on 8 February 2007. Insecticide treatment was carried out on 10 Feb 2007. it was suggested to be the repeat of previous infestation. Closer monitoring will be continued for T10.
- 3.13 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.

- 4. Waste Management
- 4.1 According to the Waste Management Plan, all Construction & Demolition materials were recorded in the period from December 2006 to February 2007.

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4.2 Types, quantities and disposal location of all surplus excavated materials and wastes arising from the site are summarised in Table 4.1 based on information from the Contractor. There were only general refuse and excavated soil disposal in the reporting period.

Table 4.1 Summary of the wastes arising from the site from December 2006 to February 2007

|               | Quanti | ty (tonnes)           | Quantity (tonnes) |                      |  |
|---------------|--------|-----------------------|-------------------|----------------------|--|
| Date          | Soil   | Disposal<br>Location  | General Refuse    | Disposal<br>Location |  |
| December 2006 | 2200   | TKO137<br>Quarry Bay  | 26.3              | TKO137               |  |
| January 2007  | 3880   | TKO137,<br>Quarry Bay | 49.05             | TKO137               |  |
| February 2007 | 4140   | TKO137,<br>Quarry Bay | 49.67             | TKO137               |  |

Note: SENT - South East New Territories Landfill Site

SYP - Public filling barging point at Sai Ying Pun (Public Filling Facility)

TKO - Fill Bank at Tseung Kwan O Area 137 (Public Filling Facility)

QB - Quarry Bay Barging Point

TM - Fill Bank at Tuen Mun Area 38

MW - Ma Wan Development -VDA Phase 3

- 4.3 There is need for the Contractor to obtain disposal records from the Authority as soon as the wastes are disposed at the Public Filling Facility and/or Landfill to check against the estimated quantities removed off site.
- 4.4 There was no timber consumption for the construction activities in this reporting period.
- 4.5 There is need to improve coverage for general refuse together with improvement of general site cleanliness.

- 5. Summary of Non-compliance, Complaints, Notification of Summons and Successful Prosecutions, Environmental Licensing and Permitting
- 5.1 No environmental prosecution was received in the reporting period.
- 5.2 Status of environmental licensing and permitting are summarized as follows:

| Description                  | Permit / Licence No. | Status  | Permit Holder                                      |
|------------------------------|----------------------|---|--|
| Environmental<br>Permit      | EP-184/2004          | Remain valid<br>since 9 February<br>2004  | Flying Snow<br>Ltd.                                |
| Construction Noise<br>Permit | GW-RE5149-05         | Expires on 9<br>February 2007   | Konwall Construction & Engineering Company Limited |
| WPCO Discharge<br>Licence    | EP482/211/0863/I     | Application made<br>on 18 May 2004<br>and licence was<br>granted on 7 July<br>2004 and valid till<br>31 July 2009 | & Engineering Co. Ltd.                             |

- 5.3 A total of four complaints, all on noise were recorded in the reporting period.
- Two noise complaints were from HKCC on 15 December 2006 and 23 January 2007 on disturbance to the matinee performance in their studio. Noise measurements showed that the Limit Level was not exceeded but the ground-borne noise would affect the quality of the performance. It was thus agreed with HKCC that they would give early advice of their sensitive performances so that proper work scheduling can be arranged.
- 5.5 Another noise complaint was received from public on percussive piling on 3 January 2007 and was subsequently resolved as there had not been percussive piling on site.
- Another noise complaint from YMCA on 2 February 2007 on rock excavation affecting their residents. Noise measurements revealed two Limit Level exceedances at YMCA were associated with the noise complaint. The complaint was resolved by reduced excavation and was also later stopped.
- 5.7 For TSP Monitoring, 1 exceedence was recorded on 24-Hr TSP on 19 January 2007. The TSP level was returned to normal immediately after improved site management.

- 6. Conclusion
- 6.1 EM&A work for December 2006 to February 2007 has been successfully completed.
- 6.2 Bi-monthly sampling and analysis of wastewater discharged from wastewater treatment plant had been carried out in December 2006 and February 2007.
- Four noise complaints were recorded in the reporting period. One noise complaint on percussive piling was not genuine as there had never been percussive piling on site. Two noise complaints from HKCC about the "consistent" noise disturbances to their matinee performance at their Studio Theatre were resolved after agreeing to work scheduling with advance notice of sensitive performance from HKCC. One noise complaint from YMCA was also confirmed genuine with two Limit Level exceedances. This was resolved by reduced rock excavation.
- In addition to the two Limit Level exceedances on noise mentioned in paragraph 6.3, one Action Level exceedance was also found for 24-hour TSP. The TSP level was immediately reduced to acceptable level following improved site management.
- 6.5 There were no notification of summons and prosecutions. Proper environmental licence and permits are in place.
- 6.6 Monitoring of the monument structure and trees was also made.
- 6.7 Site audits were carried out by ET on a weekly basis and by IEC at least once per month. The conditions of the site were generally satisfactory. The following improvements are to be further pursued:
  - Noise mats installed on the eastern boundary of the site need improvement.
     Local noise screening of noisy equipment and piling works should also be provided.
  - Proper record keeping for environmental management have to be enforced.
     For instance, dust suppression water sprays, updated waste disposal records should be readily made available for close monitoring. Waste recycling should be more actively promoted.
  - Drip tray should be used for every oil container on site.
  - Valid noise emission labels for all air compressors must be ensured.
  - Proper storage and cover of refuse should be made.
  - Water poundings found on site should be removed immediately.
  - 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  | Year 2004                  | Year 2005  |                          |         | Year 2007           |           |
|-------|--|----------------------------|--|--------------------------|---------|---------------------|-----------|
| ···   | ***  | 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 2 3 4 | 4 5 6 7 8 9 10 11 1 | 2 1 2 3 4 |
| 1     | Site Formation   |                            |  |                          |         |                     |           |
| 1.1   | Site Formation - Tree Retaining,<br>Underpinning & Tree Column |                            | The second secon |                          |         |                     |           |
|       | Site Formation - Retaining wall for Main<br>Building           |                            |  |                          |         |                     |           |
| 1.3   | Site Formation - Open Cut Excavation                           |                            |  |                          |         |                     |           |
| 1.4   | Site Formation - Remaining Excavation                          |                            |  |                          |         |                     |           |
| 2     | Building Foundation  | !                          | To be o  | ا<br>arried out by othe! |         |                     |           |
| 3     | Superstructure & Furnishing                                    |                            | To be o  | ا<br>arried out by othei | s       |                     |           |

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

Sound barrier mat ready (25/6/2004)

Wheel washing pond provided (9/7/2004)

Zero discharge Discharge License approval (9/7/2004) Construction Noise Permit ["CNP"] for submersible pumps (19/10/2005)

From site

CNP renewed (26/7/2006)

Appendix B: Implementation schedule for recommended mitigation measures

# Implementation Schedule Redevelopment of Former Marine Police Headquarters, KIL11161

| Project<br>Profile<br>Ref.: | Recommended Mitigation Measures  | Location of the measure | Who to<br>implement the<br>measure  | When to implement the measures                   | What requirements or standards for the measure to achieve* | Objectives of the Recommended Measure &<br>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<br>boundary) | Site Formation Contractor (for maintenance or improvement as the hoarding was already erected by the Hoarding Contractor earlier) | Construction<br>Phase (prior to<br>construction) | TM-EIA,<br>APC(CD)R &<br>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<br>Contractor  | Construction<br>Phase                            | TM-EIA,<br>APC(CD)R &<br>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<br>Contractor  | Construction<br>Phase                            | TM-EIA,<br>APC(CD)R &<br>AQO in APCO                       | To control fugitive dust emissions in accordance with the requirements of Air Pollution Control (Construction Dust) Regulation in principle; Reduce fugitive emission wherever possible            |
|                             | To use impervious sheeting where practicable for side enclosure and covering of any aggregate or other dusty material storage piles, to place stockpiles in an area sheltered on the top and the three sides, and/or to spray with water | Site                    | Site Formation<br>Contractor  | Construction<br>Phase                            | TM-EIA,<br>APC(CD)R &<br>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<br>Profile<br>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 &<br>Main Concern to address  |
|-----------------------------|--|-------------------------|---|---|--|---|
|                             | 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<br>Contractor                          | Construction<br>Phase                         | TM-EIA,<br>APC(CD)R &<br>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<br>Contractor                          | Construction<br>Phase                         | TM-EIA,<br>APC(CD)R &<br>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<br>Contractor                          | Construction<br>Phase                         | TM-EIA,<br>APC(CD)R &<br>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<br>Contractor                          | Construction<br>Phase                         | TM-EIA,<br>APC(CD)R &<br>AQO in APCO                       | To control fugitive dust emissions in accordance with the requirements of Air Pollution Control (Construction Dust) Regulation in principle; Reduce fugitive emission wherever possible |
| 5.2.1.3                     | To carry out EM&A programme  | Site                    | Site Formation Contractor & Superstructure Contractor | Pre-Construction<br>and Construction<br>Phase | TM-EIA & AQO<br>in APCO                                    | To proactively monitor fugitive dust impact and take necessary action against any unacceptable impact   |

| Project<br>Profile<br>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 &<br>Main Concern to address   |
|-----------------------------|--|-------------------------|--|--------------------------------|--|--|
| - Company                   | 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<br>Phase          | NCO  | To avoid generation of noise during restricted hours under NCO   |
| 4.2.1.11                    | To use quiet PME with lower sound power level  | Site                    | Site Formation Contractor & Superstructure Contractor          | Construction<br>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/m²), 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<br>Contractor &<br>Superstructure<br>Contractor | Construction<br>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/m²) (vertical and cantilevered types)   | Site                    | Site Formation Contractor & Superstructure Contractor          | Construction<br>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<br>Contractor                                   | Construction                   | TM-EIA   | To provide noise shielding to reduce construction noise impact or equivalent measures subject to IEC/ AR's agreement.                        |

| Project<br>Profile<br>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 &<br>Main Concern to address                              |
|-----------------------------|---|-------------------------|--|--------------------------------|--|---|
| 4.2.1.12                    | To implement good site practice and noise management  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<br>Contractor &<br>Superstructure<br>Contractor | Construction<br>Phase          | . NCO & TM-EIA   | To reduce noise generation and its impact in accordance with NCO and its subsidiary regulations |

| Project<br>Profile<br>Ref.: | Recommended Mitigation Measures   | Location of the measure | Who to<br>implement the<br>measure                    | When to implement the measures          | What requirements or standards for the measure to achieve* | Objectives of the Recommended Measure &<br>Main Concern to address   |
|-----------------------------|---|-------------------------|---|---|--|--|
| 4.2.1.23                    | No percussive piling  | Site                    | Site Formation<br>Contractor                          | Construction<br>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<br>Contractor                          | Construction<br>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<br>Contractor                          | Construction<br>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<br>Contractor                          | Construction<br>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<br>Profile<br>Ref.: | Recommended Mitigation Measures  | Location of the<br>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 &<br>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<br>Contractor &<br>Superstructure<br>Contractor | Construction<br>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<br>Contractor &<br>Superstructure<br>Contractor | Construction<br>Phase          | ProPECC PN1/94<br>& 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<br>Phase          | WPCO   | To comply with the Water Pollution Control Ordinance and its subsidiary regulation. |

| Project<br>Profile<br>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 &<br>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<br>Contractor &<br>Superstructure<br>Contractor | Construction<br>Phase          | WPCO   | To comply with the Water Pollution Control Ordinance and its subsidiary regulation. |
|                             | To direct foul water effluent to a foul sewer or<br>to a sewage treatment and disposal facility<br>either directly or indirectly by means of<br>pumping or other means approved by the<br>Engineer if any office, site canteen or toilet<br>facilities is erected  | Site                    | Site Formation<br>Contractor &<br>Superstructure<br>Contractor | Construction<br>Phase          | WPCO   | To comply with the Water Pollution Control Ordinance and its subsidiary regulation. |

| Project<br>Profile<br>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 &<br>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<br>Proponent/Opera<br>tor                              | Design /<br>Operational<br>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<br>Contractor &<br>Superstructure<br>Contractor | Construction<br>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<br>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<br>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<br>Phase             | WDO  | To follow relevant regulations (Waste Disposal Ordinance) in all circumstances.                        |

| Project<br>Profile<br>Ref.: | Recommended Mitigation Measures   | Location of the measure | Who to<br>implement the<br>measure                             | When to implement the measures | What requirements or standards for the measure to achieve*   | Objectives of the Recommended Measure &<br>Main Concern to address  |
|-----------------------------|---|-------------------------|--|--------------------------------|--|---|
|                             | Construction Phase Landscape and Visual<br>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<br>Contractor &<br>Superstructure<br>Contractor | Construction<br>Phase          | A&MO, TM-EIA, Project Profile ["PP"], Landscape Mitigation and Tree Preservation Proposal ["LMTPP"] & WBTC No. 14/2002 | Interim measures designed to ensure acceptable landscape and visual impact on completion. Implementation of the LMTPP to the mature trees during the construction period. |
| 4.6.2.11                    | Creation of precautionary area (Cordon Area) around trees to be retained equal to the spread of the trees canopy diameter. Precautionary area to be fenced. Following the completion of the piling the Cordon Area would be based on the retained rootball. | Site                    | Specialist<br>Landscape<br>Contractor                          | Construction<br>Phase          | A&MO, TM-EIA,<br>PP, LMTPP &<br>WBTC No.<br>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<br>Contractor &<br>Superstructure<br>Contractor | Construction<br>Phase          | A&MO, TM-EIA,<br>PP, LMTPP &<br>WBTC No.<br>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<br>Profile<br>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 &<br>Main Concern to address  |
|-----------------------------|--|-------------------------|---------------------------------------|--------------------------------|--|---|
|                             | 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.  Phased segmental root pruning over a three-month period prior to lifting the tees identified for transplantation. | Site                    | Specialist<br>Landscape<br>Contractor | Construction<br>Phase          | A&MO, TM-EIA,<br>PP, LMTPP &<br>WBTC No.<br>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<br>Landscape<br>Contractor | Construction<br>Phase          | A&MO, TM-EIA,<br>PP, LMTPP &<br>WBTC No.<br>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. |
| 10° A.                      | The watering of existing vegetation particularly during periods of excavation when the water table beneath the existing vegetation is lowered.   | Site                    | Specialist<br>Landscape<br>Contractor | Construction<br>Phase          | A&MO, TM-EIA,<br>PP, LMTPP &<br>WBTC No.<br>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<br>Phase          | A&MO, TM-EIA,<br>PP, LMTPP &<br>WBTC No.<br>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. |
|                             | 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<br>Landscape<br>Contractor | Construction<br>Phase          | A&MO, TM-EIA,<br>PP, LMTPP &<br>WBTC No.<br>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<br>Profile<br>Ref.: | Recommended Mitigation Measures  | Location of the measure | Who to<br>implement the<br>measure    | When to implement the measures                      | What requirements or standards for the measure to achieve* | Objectives of the Recommended Measure &<br>Main Concern to address  |
|-----------------------------|--|-------------------------|---------------------------------------|---|--|---|
|                             | The tree transplanting and planting works should be implemented by approved Landscape Contractors and inspected and approved on site by a qualified Landscape Architect. A tree protection / transplanting specification would be included within the contract documents. Tree preservation proposals and procedures for the protection and preservation of the existing trees to be reviewed by third party Tree Specialist including the provision of an additional level of monitoring during the construction phase. | Site                    | Specialist<br>Landscape<br>Contractor | Construction<br>Phase                               | A&MO, TM-EIA,<br>PP, LMTPP &<br>WBTC No.<br>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. |
|                             | 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<br>Proponent/<br>Operator     | Design, Construction and Operational Phase          | TPO, A&MO,<br>TM-EIA, PP,<br>LMTPP & WBTC<br>No. 14/2002   | Long term measures deigned to ensure creation of a high quality urban landscape   |
| 4.6.3.5                     | To restore the main buildings and to create landscaped gardens in order to beneficially affect the landscape character and quality of the area   | Site                    | Project<br>Proponent/<br>Operator     | Design,<br>Construction<br>and Operational<br>Phase | TPO, A&MO,<br>TM-EIA, PP,<br>LMTPP & WBTC<br>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<br>Proponent/<br>Operator     | Design, Construction and Operational Phase          | TPO, A&MO,<br>TM-EIA, PP,<br>LMTPP & WBTC<br>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<br>Proponent/<br>Operator     | Design,<br>Construction<br>and Operational<br>Phase | TPO, A&MO,<br>TM-EIA, PP,<br>LMTPP & WBTC<br>No. 14/2002   | Long term measures deigned to ensure creation of a high quality urban landscape   |

| Project<br>Profile<br>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 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<br>Proponent/<br>Operator | Design,<br>Construction<br>and Operational<br>Phase | TPO, A&MO,<br>TM-EIA, PP                                   | Long term measures deigned to ensure creation of a high quality urban landscape |
|                             | Detailed landscape and tree preservation proposals will be submitted to the relevant government departments for approval under the lease conditions and in accordance with WBTC No. 14/2002.   | Site                    | Project<br>Proponent/<br>Operator | Design,<br>Construction<br>and Operational<br>Phase | TPO, A&MO,<br>TM-EIA, PP &<br>WBTC No.<br>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<br>Proponent/<br>Operator | Design, Construction and Operational Phase          | TPO, A&MO,<br>TM-EIA, PP &<br>WBTC No.<br>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<br>Proponent/<br>Operator | Design,<br>Construction<br>and Operational<br>Phase | TPO, A&MO,<br>TM-EIA, PP &<br>WBTC No.<br>14/2002          | Long term measures deigned to ensure creation of a high quality urban landscape |

| Project<br>Profile<br>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 &<br>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<br>Proponent   | Design,<br>Construction<br>and Operational<br>Phase | Tender<br>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<br>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<br>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<br>Proponent   | Design,<br>Construction &<br>Operational<br>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<br>Contractor                                   | Construction<br>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<br>Contractor &<br>Superstructure<br>Contractor | Construction<br>Phase                               | A&MO   | To prevent any damage to the historic buildings and structures during the site formation.                                 |

| Project<br>Profile<br>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 &<br>Main Concern to address |
|-----------------------------|--|-------------------------|--|----------------------------------|--|--|
| 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<br>by Project<br>Proponent | Prior to<br>Operational<br>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-<br>up areas to ensure a constant monitoring of building condition is conducted. | Site                    | Agent appointed<br>by Project<br>Proponent | Operational<br>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<br>by Project<br>Proponent | Operational<br>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

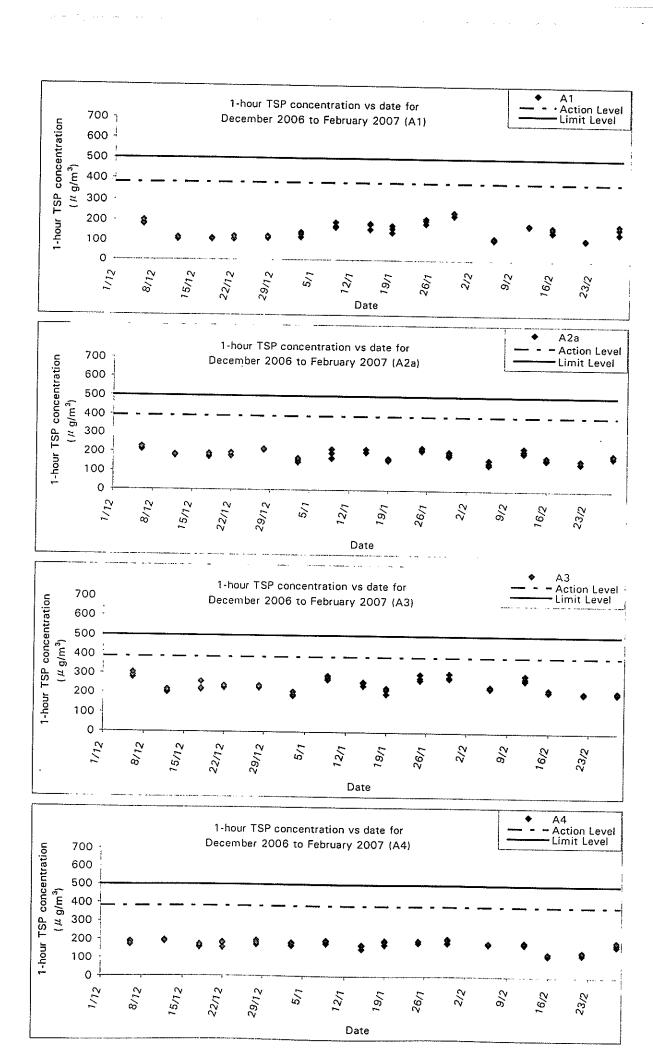
WPCO - Water Pollution Control Ordinance

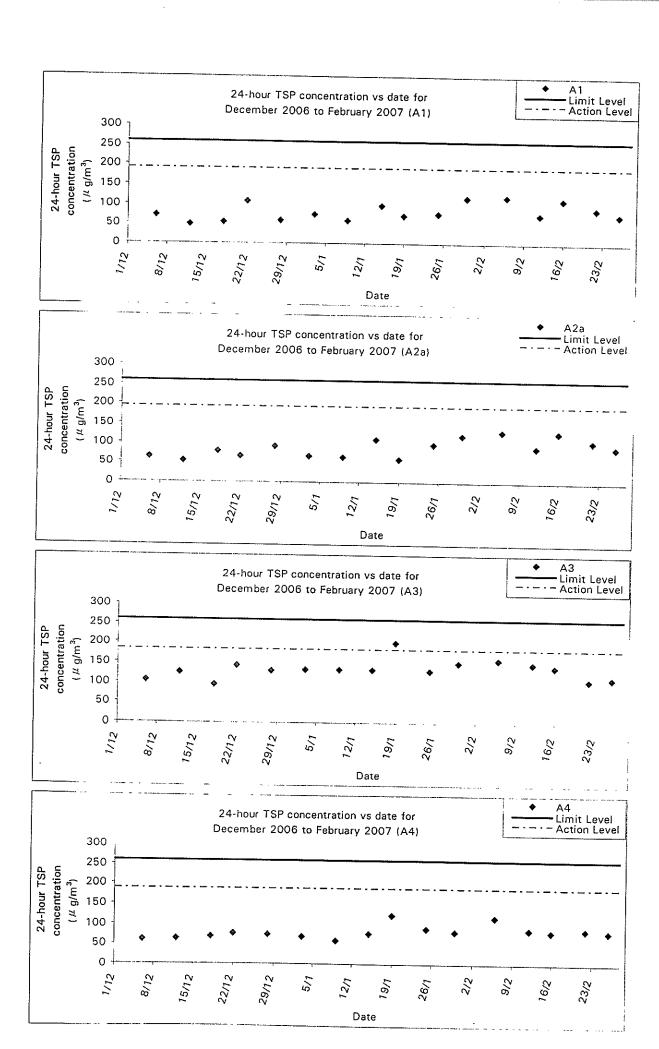
PN1/94 - Professional Persons Environmental Consultative Committee Practice Note (ProPECC PN) 1/94 "Construction Site Drainage"

WDO - Waste Disposal Ordinance

A&MO - Antiquities and Monuments Ordinance

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| Appendix | C: Graphical pres   | entations of | the air impact   | monitoring results |  |
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Appendix D: Summary of exceedances

| Parameter     | Location                           | Monitoring Period       | No. of Exceedance(s) |             |  |
|---------------|------------------------------------|-------------------------|----------------------|-------------|--|
|               |                                    |                         | Action Level         | Limit Level |  |
|               | A1                                 | 01/12/2006 - 28/02/2007 | 0                    | 0           |  |
| Air           | A2a                                | 01/12/2006 - 28/02/2007 | Ō                    | O           |  |
| (1-hour TSP)  | <u> A3</u>                         | 01/12/2006 - 28/02/2007 | 0                    | . 0         |  |
|               | A4                                 | 01/12/2006 - 28/02/2007 | 0                    | 0           |  |
|               | <u>A1</u>                          | 01/12/2006 - 28/02/2007 | 0                    | . 0         |  |
| Air           | A2a                                | 01/12/2006 - 28/02/2007 | 0                    | 0           |  |
| (24-hour TSP) | A3                                 | 01/12/2006 - 28/02/2007 | 1                    | 0           |  |
|               | A4                                 | 01/12/2006 - 28/02/2007 | 0                    | 0           |  |
|               | CN1a                               | 01/12/2006 - 28/02/2007 | 0                    | 0           |  |
|               | CN2a                               | 01/12/2006 - 28/02/2007 | 4                    | 2           |  |
| Noise         | Lecture<br>Room                    | 01/12/2006 - 28/02/2007 | 0                    | 0           |  |
| Noise         | Sky<br>Theatre                     | 01/12/2006 - 28/02/2007 | 0                    | 0           |  |
|               | Recording<br>Studio                | 01/12/2006 - 28/02/2007 | 0                    | 0           |  |
| Water         | Outlet of<br>treatment<br>facility | 01/12/2006 – 28/02/2007 | 0                    | 0           |  |

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