## MONTHLY EM&A REPORT

The Jockey Club CPS Limited

Central Police Station Conservation and Revitalisation Project: *Thirty-first Monthly EM&A Report* (1 May to 31 May 2014)

Issue Date: June 2014

**Environmental Resources Management** 

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Central Police Station Conservation and Revitalisation Project: *Thirty-first Monthly EM&A Report* (From 1 May to 31 May 2014)

Issue Date: June 2014 Reference 0095646

For and on behalf of ERM-Hong Kong, Limited Approved by: Frank Wan Signed: Wachth Frank Wan Signed: Partner Position: Partner Certified by: When Certified by: Cenvironmental Team Leader – Winnie Ko) Date: 11 June 2014

This report has been prepared by ERM-Hong Kong, Limited with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

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Date: 13 June 2014

**By Email and Post** 

ERM-Hong Kong Limited, 16/F DCH Commercial Centre, 25 Westlands Road, Quarry Bay, Hong Kong

Attn: Ms Winnie Ko

Dear Winnie,

## Central Police Station Conservation and Revitalization Project Verification of Monthly EM&A Report No.31

We refer to your letter dated 13 June 2014 regarding the Monthly EM&A Report No.31. Atkins China Ltd. verifies, in the capacity of Independent Environmental Checker, that the report, in principle, conforms the requirements provided in Condition 3.4 of the Environmental Permit (EP-408/2011/B).

Yours sincerely, For Atkins China Ltd.

Sharifah Or Independent Environmental Checker

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## **EXECUTIVE SUMMARY**

The construction works of **Central Police Station Conservation and Revitalisation Project** commenced on 24 October 2011. This is the thirty-first monthly Environmental Monitoring and Audit (EM&A) report presenting the EM&A works carried out during the period from 1 May to 31 May 2014 in accordance with the EM&A Manual.

## Summary of Construction Works undertaken during Reporting Period

The major construction works undertaken during the reporting period include:

- Structural addition and alteration works at Block 2, Block 3, Block 4, Block 9, Block 10, Block 11, Block 12, Block 13, Block 14, Block 15 and Block 17;
- Roof tiling replacement works at Block 9;
- Demolition works at Block 3, Block 14 and Block 15;
- New structure construction at Block 3, Block 8, Block 13, Block 14 and Block 15;
- Permanent steel works erection at Block 8;
- E&M opening, conceal conduit construction and E&M installation at Block 1;
- Construction of passageway from Parade Ground basement to Block 1 corridor;
- Timber doors and windows repair works at Block 1 and Block 9;
- Paint stripping and plaster works at Block 1, Block 6, Block 7, Block 9 and Block 10;
- Metal works repair at Block 11;
- Façade works at Block 1, Block 2, Block 3, Block 6 and Block 12;
- Structural timber floor repair at Block 3 and Block 4;
- Balcony repair at Block 1, Block 6, Block 7 and Block 10;
- Drainage piles and 1<sup>st</sup> layer backfill at upper portion and ELS and manhole construction at middle portion of Pottinger Ramp (L1);
- Carrying out of archaeological watching brief at MP3 (L2);
- Backfill at Prison Yard south (U1);
- Arbuthnot Road East utilities diversion works and carriageway/footpathwork/crossing;
- Strengthening works of existing column and beams trimming at Block 17;
- Pile cap construction and substructure at Arbuthnot Wing;
- External and lateral support works at Old Bailey Wing; and
- R177 upgrading.

## Environmental Monitoring and Audit Progress

A summary of the monitoring activities in this reporting period is listed below:

٠	Construction noise monitoring during normal weekdays at each	
	monitoring station	5 times
٠	Joint environmental site inspection	1 time
٠	Heritage site inspections	20 times
٠	Landscape & visual monitoring	1 time
٠	Tree inspection	1 time
٠	Vibration monitoring for piling works	121 times
٠	Vibration monitoring for other construction works	74 times

## <u>Noise</u>

5 sets of 30-minute construction noise measurements were carried out at each of the monitoring stations (NM2 and NM6) during normal weekdays of the reporting period. No exceedance of Action or Limit Level of construction noise was recorded during the reporting period.

## Cultural Heritage

Vibration monitoring carried out for the trial piling and piling works during the reporting period are listed below:

- 25 vibration monitoring measurements for the basement construction at Parade Ground;
- 24 vibration monitoring measurements at Block 8;
- 24 vibration monitoring measurements at Old Bailey Wing (Block 50);
- 24 vibration monitoring measurements at Block 51; and
- 24 vibration monitoring measurements at Block 17.

Vibration monitoring carried out for other construction works during the reporting period are listed below:

- 25 vibration monitoring measurements for the structural addition and alteration works at Block 1;
- 24 vibration monitoring measurements for the structural addition and alteration works at Block 14.
- 25 vibration monitoring measurements for the structural addition and alteration works at Block 11.

No exceedance of the Alert, Alarm and Action Levels was recorded during the reporting period.

Heritage site audits were conducted on 2, 5, 6, 7, 8, 9, 12, 13, 14, 15, 16, 20, 21, 22, 23, 26, 27, 28, 29 and 30 May 2014 by the Heritage Checker during the reporting period. Major observations and recommendations during the site inspections were listed below:

## 8 May 2014

• Concrete spillage was observed on roof of Block 1 from the tower crane. The Contractor was informed to follow up.

## 9 May 2014

• It was observed that incorrect downpipes were fixed to wall at Block 1 north verandah. The Contractor was informed to follow up.

The Contractor was urged to follow-up the necessary rectification based on the inspection findings.

The follow-up actions recommended in the heritage site audits from the last reporting period (April 2014) have generally been implemented.

## Landscape & Visual

Landscape and visual monitoring has commenced since October 2011 on a monthly basis. Tree inspection was conducted on 2 May 2014 by the arborist during the reporting period. There was no observation or recommendation from the arborist.

## Waste Management

Wastes generated from this Project include inert construction and demolition (C&D) materials and non-inert C&D materials. A total of 3,195.53 tonnes of inert C&D materials were generated during the reporting period. 119.54 tonnes of non-inert C&D materials comprising general refuse were generated and disposed of at the SENT Landfill. 7,000 kg of metal was produced and sent to recyclers for recycling. No plastic waste or paper/cardboard packaging was generated during the reporting period. No chemical waste was produced during the reporting period.

## Environmental Site Inspection

A joint environmental site inspection was carried out by the representatives of the Contractor, the IEC and the ET on 22 May 2014. Observation during the site inspection is listed below:

• The chemical waste store was observed unlocked. The Contractor was reminded to lock the chemical waste store at all times.

# Environmental Exceedance/Non-conformance/Compliant/Summons and Prosecution

No exceedance of Action or Limit Level of construction noise was recorded at designated monitoring stations during the reporting period.

No exceedance of the Alert, Alarm and Action Levels of vibration was recorded during the reporting period.

No enquiry was received during the reporting period.

No non-compliance event was recorded during the reporting period.

No complaint was received during the reporting period.

No summons/prosecution was received during the reporting period.

## Future Key Issues

Works to be undertaken in the next month include:

- Structural addition and alteration works at Block 2, Block 3, Block 4, Block 9, Block 10, Block 11, Block 12, Block 13, Block 14, Block 15 and Block 17;
- Roof repair works at Block 4, Block 9 and Block 10;
- Demolition works to Block 3, Block 4, Block 13 and Block 14;
- Wall opening at Block 1's Corridor to Parade Ground;
- Timber doors and windows repair works at Block 4, Block 7, Block 9, and Block 10;
- E&M installation at Block 1;
- Structural timber floor repair at Block 3, Block 4, Block 6, Block 7, Block 10 and Block 14;
- Façade works at Block 1, Block 2, Block 3, Block 6, Block 7, Block 9, Block 10, Block 11, Block 12 and Block 14;
- Balcony repair at Block 1, Block 6, Block 7, Block 9 and Block 10;
- External and lateral support work at Old Bailey Wing;
- Arbuthnot Wing pile cap construction;
- Laying drainage piles in middle portion of Pottinger Ramp (L1);
- Achaeological Watching Brief at MP3 (L2);
- Works at Arbuthnot Road; and
- R177/R22 upgrading.

Potential environmental impacts arising from the above construction activities are mainly associated with dust, construction noise, site runoff and waste management.

## 1 INTRODUCTION

ERM-Hong Kong, Limited (ERM) was appointed by the Jockey Club CPS Limited (the CPS Ltd) as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) programme for the **Central Police Station Conservation and Revitalisation Project** (the Project).

## 1.1 PURPOSE OF THE REPORT

This is the thirty-first EM&A report which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period from **1 May** to **31 May 2014**.

## **1.2** STRUCTURE OF THE REPORT

The structure of the report is as follows:

## Section 1: Introduction

details the scope and structure of the report.

## Section 2: Project Information

summarises background and scope of the Project, site description, project organization and contact details, construction programme, the construction works undertaken and the status of Environmental Permit(s)/License(s) during the reporting period.

## Section 3: Environmental Monitoring Requirements

summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, Event/Action Plans, environmental mitigation measures as recommended in the EIA report and relevant environmental requirements.

## Section 4 : Implementation Status on Environmental Protection Requirements

summarises the implementation of environmental protection measures during the reporting period.

## Section 5 : Monitoring Results

summarises the monitoring results obtained in the reporting period.

## Section 6: **Environmental Site Inspection** summarises the audit findings of the site inspections undertaken within the reporting period.

## Section 7: Environmental Non-conformance

summarises any monitoring exceedance, environmental complaints and environmental summons within the reporting period.

## Section 8: Future Key Issues

summarises the impact forecast and monitoring schedule for the next reporting month.

Section 9: Conclusions

## 2.1 BACKGROUND

The Chief Executive (CE)'s 2007-2008 Policy Address highlighted revitalisation as the guiding principle of heritage conservation and the Project was one of the specific proposals put forward by the CE in the same Policy Address. At the meeting of the Executive Council (ExCo) on 15 July 2008, the ExCo advised and the CE ordered that Government should enter into a partnership with the Hong Kong Jockey Club (HKJC) in the form of an agreement (or agreements) to take forward the conservation and revitalisation of the CPS project based on various guiding parameters. The Project is now being undertaken in partnership with the Development Bureau of the HKSAR Government. The HKJC has taken on board the decision at the ExCo meeting and further investigated the design and implementation of the Project. The Project is now implemented by the Jockey Club CPS Limited.

## 2.2 SITE DESCRIPTION

The location of the Project Site is shown in *Annex A1*. The Site is bounded by Hollywood Road to the north, Arbuthnot Road to the east, Chancery Lane to the south and Old Bailey Street to the west.

The Site comprises three Declared Monuments designated under the *Antiquities and Monuments Ordinance* in 1995. They are:

- Central Police Station;
- Former Central Magistracy; and
- Victoria Prison Compound.

They are collectively named the Central Police Station (CPS). *Annex A2* shows the location of the Declared Monuments within CPS and the buildings within the CPS.

## 2.3 CONSTRUCTION ACTIVITIES

A summary of the major construction activities undertaken in this reporting period is shown in *Table 2.1* and illustrated in *Annex A3*.

#### **Construction Activities Undertaken**

- Structural addition and alteration works at Block 2, Block 3, Block 4, Block 9, Block 10, Block 11, Block 12, Block 13, Block 14, Block 15 and Block 17;
- Roof tiling replacement works at Block 9;
- Demolition works at Block 3, Block 14 and Block 15;
- New structure construction at Block 3, Block 8, Block 13, Block 14 and Block 15;
- Permanent steel works erection at Block 8;
- E&M opening, conceal conduit construction and E&M installation at Block 1;
- Construction of passageway from Parade Ground basement to Block 1 corridor;
- Timber doors and windows repair works at Block 1 and Block 9;
- Paint stripping and plaster works at Block 1, Block 6, Block 7, Block 9 and Block 10;
- Metal works repair at Block 11;
- Façade works at Block 1, Block 2, Block 3, Block 6 and Block 12;
- Structural timber floor repair at Block 3 and Block 4;
- Balcony repair at Block 1, Block 6, Block 7 and Block 10;
- Drainage piles and 1<sup>st</sup> layer backfill at upper portion and ELS and manhole construction at middle portion of Pottinger Ramp (L1);
- Carrying out of archaeological watching brief at MP3 (L2);
- Backfill at Prison Yard south (U1);
- Arbuthnot Road East utilities diversion works and carriageway/footpathwork/crossing;
- Strengthening works of existing column and beams trimming at Block 17;
- Pile cap construction and substructure at Arbuthnot Wing;
- External and lateral support works at Old Bailey Wing; and
- R177 upgrading.

#### 2.4 **PROJECT ORGANISATION**

The Project organisation chart and contact details are shown in Annex B.

#### 2.5 STATUS OF ENVIRONMENTAL APPROVAL DOCUMENTS

A summary of the relevant permits, licences, and/or notifications on environmental protection for this Project since the granting of the EP in April 2011 is presented in *Table 2.2*.

#### Table 2.2 Summary of Environmental Licensing, Notification and Permit Status

Permit/ Licences/ Notification	Reference	Validity Period	Remarks
Environmental Permit (EP)	EP-408/2011	-	Superseded on 10 January 2012
	EP-408/2011/A	-	Superseded on 22 March 2012
	EP-408/2011/B	Throughout the Contract	Permit granted on 22 March 2012
Notification of	Ref. No. 332920	Throughout the	-

Construction Works as required under Air Pollution Control (Construction Dust) Regulation		Contract	
Registration of Waste Producer under Waste Disposal Ordinance	Waste Producer No.: 5213-122-G2347-25	Throughout the Contract	-
Effluent Discharge License under Water Pollution Control Ordinance	License No. WT00010633-2011	21 Oct 2011 – 31 Oct 2016	-
Notification of Commencement of Asbestos Abatement Work under <i>Air</i> <i>Pollution Control</i> <i>Ordinance</i>	-	Throughout the Contract	EPD's letter (EPD's ref.: (5) in EPAC/A/4/000/23 3 II) dated 2 December 2011 satisfied that the content of the asbestos abatement plan (Report No.: 0210/11/ED/0078A ) is in accordance with the APCO
Approval of Asbestos Abatement Work (Phase 2)	-	Earliest commencement date on 26 January 2012	EPD's letter (EPD's ref:() in EPAC/A/4/000/23 3) dated 18 January 2012.
Construction Noise Permit (CNP)	GW-RS0734-12	11 July 2012 at 0200 hours to 2 August 2012 at 0400 hours	Expired.
	GW-RS0839-12	13 August 2012 at 1900 hours to 31 December 2012 at 0700 hours	Expired.
	GW-RS1162-12	1 December 2012 at 0000 hours to 28 March 2013 at 0600 hours	Expired.
	GW-RS0113-13	1 February 2013 at 0200 hours to 31 May 2013 at 0400 hours	Expired.
	GW-RS1301-12	2 January 2013 at 1900 hours to 29 June 2013 at 2300 hours	Expired.
	GW-RS0084-13	24 January 2013 at 1900 hours to 29 June 2013 at 0700 hours	Expired.
	GW-RS0638-13	16 June 2013 at 0700 hours to 15 September 2013 at 1900 hours	Expired.

GW-RS0901-13	14 August 2013 at 0000 hours to 31 October 2013 at 0600 hours	Expired.
GW-RS0714-13	29 June 2013 at 1900 hours to 28 December 2013 at 2400 hours	Expired.
GW-RS0745-13	5 July 2013 at 1900 hours to 30 December 2013 at 2300 hours	Expired.
GW-RS1110-13	7 October 2013 at 0200 hours to 31 December 2013 at 0400 hours	Expired.
GW-RS1205-13	4 November 2013 at 0000 hours to 30 January 2014 at 2400 hours	Expired.
GW-RS1275-13	13 November 2013 at 0000 hours to 30 April 2014 at 2400 hours	Expired.
GW-RS0062-14	10 February 2014 at 0000 hours to 31 March 2014 at 2400 hours.	Expired.
GW-RS1461-13	29 December 2013 at 0000 hours to 28 June 2014 at 2400 hours.	-
GW-RS0271-14	1 April 2014 at 0100 hours to 30 June 2014 at 0600 hours	-
GW-RS0434-14	8 May 2014 at 0000 hours to 30 September 2014 at 2400 hours	-

## 3.1 NOISE MONITORING

#### 3.1.1 Monitoring Location

The construction noise monitoring locations are listed in *Table 3.1* and are shown in *Annex C*.

## Table 3.1Construction Phase Noise Monitoring Station

Monitoring Location	Proposed Construction Noise Monitoring Station			
	ID in EM&A Manual	ID	Type of Measurement	Remark
Rooftop of Ho Fook Building	N2	NM2	Façade	-
Rooftop of Chancery Mansion		NM6	Façade	Accesses to the original proposed monitoring location in the EM&A Manual, Chancery House (N5), were denied; alternative location of Chancery Mansion (N6), were therefore proposed and approved by the Authorised Person (AP), the Independent Environmental Checker (IEC) and EPD.

The noise sensitive receivers are also shown in *Annex C*.

## 3.1.2 Monitoring Parameters, Frequency and Programme

Weekly construction noise monitoring was conducted in accordance with the requirements stipulated in the EM&A Manual. The monitoring programme for this reporting period is shown in *Annex D*.

The construction noise levels were measured in terms of A-weighted equivalent continuous sound pressure level ( $L_{eq}$ ) in decibels dB(A).  $L_{eq (30min)}$  were used as the monitoring parameter for the time period in between 0700 – 1900 hours on normal weekdays. Supplementary information for data auditing, two statistical sound levels  $L_{10}$  and  $L_{90}$  - the levels exceeded for 10 and 90 percent of the time respectively, were also recorded during the monitoring for reference. The measured noise levels were logged in every 5 minutes throughout the impact monitoring period.

## 3.1.3 Monitoring Equipment and Methodology

Construction noise measurements were conducted in accordance with the calibration and measurement procedures as stated in *Annex – General Calibration and Measurement Procedures* of *Technical Memorandum on Noise from Construction Work other than Percussive Piling (GW-TM)* issued under the *Noise Control Ordinance (NCO)* (Cap 400).

The sound level meters and calibrator used for the noise measurement, as listed in *Table 3.2*, complies with the IEC 651: 1979 and 804:1985 (Type 1) specifications. The calibration certificates of the sound level meters are appended in *Annex E*.

## Table 3.2Noise Monitoring Equipment

Monitoring Stations	Monitoring Equipment (Sound Level Meter and Calibrator)
NM2, NM6	<u>Calibrator</u> Rion NC-73 (S/N 10786708)
	Sound Level Meter
	Rion NL-31 (S/N 00410224)

Immediately prior to and following the noise measurements, the accuracy of the measurement equipment was checked using an acoustic calibrator generating a known sound pressure level at a known frequency.

Measurements were accepted as the calibration level from before and after the noise measurement agree to within 1.0 dB(A).

## 3.1.4 Event / Action Plan

## Table 3.3Action and Limit Levels for Construction Noise Monitoring

	ise Monitoring ation	Action Level	Limit Level, L <sub>eq(30mins), dB(A)</sub>	Remark			
NM	12, NM6	When one documented complaint is received from any one of the sensitive receivers	75 (note)	Applicable during 0700 – 1900 hours on normal weekdays.			
No	Notes:						
a)	a) Acceptable Noise Levels for Area Sensitivity Rating of A/B/C. Limit Level is reduced to 70dB(A) for schools and 65dB(A) during school examination periods.						
b)	) If works are to be carried out during restricted hours, the conditions stipulated in the CNP						

b) If works are to be carried out during restricted hours, the conditions stipulated in the CNP issued by the NCA have to be followed.

The Event / Action Plan (EAP) for noise monitoring is presented in Annex F.

## 3.1.5 *Mitigation Measures*

The mitigation measures in accordance with the EP, EIA and EM&A Manual and their implementation status are presented in *Annex G*.

## 3.2 CULTURAL HERITAGE

## 3.2.1 Vibration Monitoring

In accordance with the EM&A Manual, vibration monitoring is required and the vibration control limits and vibration monitoring proposal are defined by a specialist for AMO's approval.

#### **Baseline Monitoring**

A set of initial readings should be recorded prior to commencement of each stage of demolition works or trial piling works. The baseline vibration monitoring should be conducted for duration of 5 minutes on the measurement day(s) at each vibration monitoring location.

#### Vibration Monitoring for Demolition Works

There are five phases/stages of vibration monitoring to be carried out for demolition works, namely Initial Reading Phase, Monitoring Stage 1, Monitoring Stage 2, Monitoring Stage 3 and Monitoring Stage 4. The vibration monitoring should be conducted for duration of 5 minutes on the days with demolition works at each vibration monitoring location.

#### Vibration Monitoring for Trial Piling and Pipe/Bored Piling Works

Vibration monitoring for trial piling works and pipe/bored piling works is required. The monitoring location is shown in *Annex L*. The vibration monitoring should be conducted for duration of 5 minutes on the days with trial piling works or pipe/bored piling works at each vibration monitoring location.

#### Vibration Monitoring for Other Construction Works

Vibration monitoring for specific construction works other than demolition works, trial piling works and pipe/bored piling works is also required in accordance with Building Department's requirement. The monitoring location is shown in *Annex M*. The number and location of monitoring location will depend on the location of the specific construction works. The vibration monitoring should be conducted for duration of 5 minutes on a daily basis (working day) at each vibration monitoring location.

#### Alert, Alarm and Action Levels

The Alert, Alarm and Action (AAA) Levels are to be implemented during the vibration monitoring and shown in *Table 3.4*.

#### Table 3.4Alert, Alarm and Action (AAA) Levels for Vibration Monitoring

Instrument Type	Item Monitored	Alert Level	Alarm Level	Action Level
Vibration	Horizontal	2.0 mm/s	2.5 mm/s	3.0 mm/s
Monitoring	Movement			

The Event / Action Plan (EAP) for vibration monitoring is shown in Table 3.5.

#### Table 3.5Event and Action Plan for Vibration Monitoring

Events	Action
Exceedance of Alert Level	Notify Management Contractor
Exceedance of Alarm Level	Notify Authorised Person/ Resident Engineer

Events	Action
Exceedance of Action Level	Cease Works and submit mitigation

## 3.2.2 *Mitigation Measures*

Cultural heritage mitigation measures (including those for archaeology) in accordance with the EP, EIA and EM&A Manual were implemented by the Contractor and the implementation status is given in *Annex G*.

## 3.3 LANDSCAPE AND VISUAL MONITORING

In accordance with the EM&A Manual, inspections of affected trees were conducted by an experienced and appropriately trained arborist. All irregularities that deviate from the recommended tree protection measures or could impose deleterious impacts on the protected trees were reported. Besides, implementation of mitigation measures for landscape and visual resources recommended in the EIA Report were also monitored during the site inspection.

## 3.3.1 *Mitigation Measures*

Landscape and visual mitigation measures in accordance with the EP, EIA and EM&A Manual were implemented by the Contractor and the implementation status is given in *Annex G*.

## 3.4 Environmental Requirements in Contract Documents

The environmental requirements as specified in the contract documents were reviewed and were covered in the EIA's requirements.

## IMPLEMENTATION STATUS ON ENVIRONMENTAL PROTECTION REQUIREMENTS

The Contractor has generally implemented the environmental mitigation measures (including those for archaeology) and requirements as stated in the EIA Report, the EP and EM&A Manual and the contract documents. The implementation status during the reporting period is summarized in *Annex G*.

Status of required submissions under the EP during the reporting period is presented in *Table 4.1*.

## Table 4.1Status of Required Submissions

4

Submission		Submission Date
EP Condition		
Condition 3.4	Thirtieth Monthly EM&A Report	14 May 2014

## 5.1 NOISE

A total of 5 sets of 30-minute construction noise measurements were carried out at the monitoring stations (NM2 and NM6) during normal weekdays of the reporting period. The monitoring results together with graphical presentations are presented in *Annex H*. The local impacts observed near the monitoring stations of NM2 and NM6 were summarised below:

- NM2: construction noise from activities in the Project Site and traffic noise from Old Bailey Street.
- NM6: construction noise from activities in the Project Site and traffic noise from Chancery Lane.

No exceedance of Action or Limit Level of construction noise was recorded during the reporting period.

## 5.2 CULTURAL HERITAGE

## 5.2.1 Vibration Monitoring

#### Trial Piling and Piling works

Vibration monitoring carried out for the trial piling and piling works during the reporting period are listed below:

- 25 vibration monitoring measurements for the basement construction at Parade Ground;
- 24 vibration monitoring measurements at Block 8;
- 24 vibration monitoring measurements at Old Bailey Wing (Block 50);
- 24 vibration monitoring measurements at Block 51; and
- 24 vibration monitoring measurements at Block 17.

The monitoring results are presented in *Annex L*.

## Other Construction Works

Vibration monitoring carried out for other construction works during the reporting period are listed below:

• 25 vibration monitoring measurements for the structural addition and alteration works at Block 1;

- 24 vibration monitoring measurements for the structural addition and alteration works at Block 14;
- 25 vibration monitoring measurements for the structural addition and alteration works at Block 11.

The monitoring results are presented in Annex M.

All monitoring results were below the Alert/Alarm/Action Levels.

## 5.2.2 Heritage Site Audit

Heritage site audits were conducted on 2, 5, 6, 7, 8, 9, 12, 13, 14, 15, 16, 20, 21, 22, 23, 26, 27, 28, 29 and 30 May 2014 by the Heritage Checker during the reporting period. Major observations and recommendations during the site inspections were listed below:

## 8 May 2014

• Concrete spillage was observed on roof of Block 1 from the tower crane. The Contractor was informed to follow up.

## 9 May 2014

• It was observed that incorrect downpipes were fixed to wall at Block 1 north verandah. The Contractor was informed to follow up.

The Contractor was urged to follow-up the necessary rectification based on the inspection findings.

The follow-up actions recommended in the heritage site audits from the last reporting period (April 2014) have generally been implemented.

## 5.3 LANDSCAPE AND VISUAL

The tree inspection was conducted by the arborist on 2 May 2014 and major observations and recommendations in the reporting period are summarised in *Table 5.1*. The tree inspection report is contained in *Annex J*.

## Table 5.1Findings of Monthly Tree Inspection in the Reporting Period

Tree No.	Botanical Name	Overall Health Condition	Arborist's Observations / Recommendations
Tree -5	Mangifera indica	Good	• No further action required.
Tree -6	Aleurites moluccana	Fair	• No further action required.
Tree-7	Aleurites moluccana	Fair	• No further action required.
Tree-8	Plumeria rubra	Fair	• No further action required.
Tree-9	Araucaria cunninghamia	Fair	• No further action required.
Tree-11	Dracaena marginata	Fair	• No further action required.

## 5.4 WASTE MANAGEMENT

Wastes generated from this Project include inert construction and demolition (C&D) materials and non-inert C&D materials. Non-inert C&D materials were made up of wastes such as general refuse. With reference to relevant handling records and trip tickets of this Project, the quantities of different types of waste generated in the reporting period are summarised in *Table 5.2*. The non-inert C&D materials and general refuse generated from the Project were disposed of at the SENT Landfill. 7,000 kg of metal was generated and sent to recyclers for recycling. No plastic waste or paper/cardboard packaging was generated during the reporting period. No chemical waste was produced during the reporting period.

Month / Year			Qı	uantity			
	C&D C&D		Chemical Waste		<b>Recycled materials</b>		
	Materials (inert) <sup>(a)</sup>	Materials (non-inert) <sup>(b)</sup>	Solid	Liquid	Paper / cardboard	Plastics	Metals
May 2014	3,195.53	119.54	0 kg	0 L	0 kg	0 kg	7,000 kg
	tonnes	tonnes					

## Table 5.2Quantities of Waste Generated from the Project

Notes:

(a) Inert C&D materials include bricks, concrete, building debris, rubble and excavated soil.

(b) The figure presented under non-inert C&D materials represents quantities of non-recyclable materials such as general refuse which were disposed of at SENT Landfill. Recycled materials are reported separately. Joint environmental site inspection was conducted by the representatives of the Contractor, IEC and the ET in the reporting period on 22 May 2014. There was no non-compliance recorded during the site inspection.

#### Follow-up Actions for the Last Site Audit

• Dusty façade work was not observed at Block 1 during the site inspection.

## Observations and Recommendations of this Reporting Month

• The chemical waste store was observed unlocked. The Contractor was reminded to lock the chemical waste store at all times.

## 7 ENVIRONMENTAL NON-CONFORMANCE

#### 7.1 SUMMARY OF MONITORING EXCEEDANCE

No exceedance of Action or Limit Level of construction noise or Alert, Alarm and Action Levels of vibration was recorded during the reporting period.

## 7.2 SUMMARY OF ENQUIRY

No enquiry was recorded during the reporting period.

## 7.3 SUMMARY OF ENVIRONMENTAL NON-COMPLIANCE

No non-compliance event was recorded during the reporting period.

#### 7.4 SUMMARY OF ENVIRONMENTAL COMPLAINT

No complaint was received during the reporting period.

The cumulative number of complaints is presented in *Annex K*.

7.5 SUMMARY OF ENVIRONMENTAL SUMMONS AND SUCCESSFUL PROSECUTION

No summons was received during the reporting period.

#### 8.1 KEY ISSUES FOR THE COMING MONTH

Works to be undertaken for the coming monitoring period are summarised in *Table 8.1.* 

#### Table 8.1 Construction Works to be Undertaken in the Coming Month

#### Work to be Undertaken

- Structural addition and alteration works at Block 2, Block 3, Block 4, Block 9, Block 10, Block 11, Block 12, Block 13, Block 14, Block 15 and Block 17;
- Roof repair works at Block 4, Block 9 and Block 10;
- Demolition works to Block 3, Block 4, Block 13 and Block 14;
- Wall opening at Block 1's Corridor to Parade Ground;
- Timber doors and windows repair works at Block 4, Block 7, Block 9, and Block 10;
- E&M installation at Block 1;
- Structural timber floor repair at Block 3, Block 4, Block 6, Block 7, Block 10 and Block 14;
- Façade works at Block 1, Block 2, Block 3, Block 6, Block 7, Block 9, Block 10, Block 11, Block 12 and Block 14;
- Balcony repair at Block 1, Block 6, Block 7, Block 9 and Block 10;
- External and lateral support work at Old Bailey Wing;
- Arbuthnot Wing pile cap construction;
- Laying drainage piles in middle portion of Pottinger Ramp (L1);
- Achaeological Watching Brief at MP3 (L2);
- Works at Arbuthnot Road; and
- R177/R22 upgrading.

Potential environmental impacts arising from the above construction activities are mainly associated with dust, construction noise, site runoff and waste management.

#### 8.2 MONITORING SCHEDULE FOR THE NEXT MONTH

The tentative schedule of noise monitoring for the next reporting period is presented in *Annex D*.

#### 8.3 CONSTRUCTION PROGRAMME FOR THE NEXT MONTH

The most updated construction programme for the Project is presented in *Annex I*.

#### 9 CONCLUSIONS

The *Environmental Monitoring and Audit (EM&A) Report* presents the EM&A works undertaken during the period from 1 May to 31 May 2014 in accordance with EM&A Manual and the requirement under EP-408/2011/B.

No exceedance of Action or Limit Level of construction noise was recorded at designated monitoring stations during the reporting period.

No exceedance of Alert, Alarm and Action Levels of vibration was recorded during the reporting period.

No enquiry was received during the reporting period.

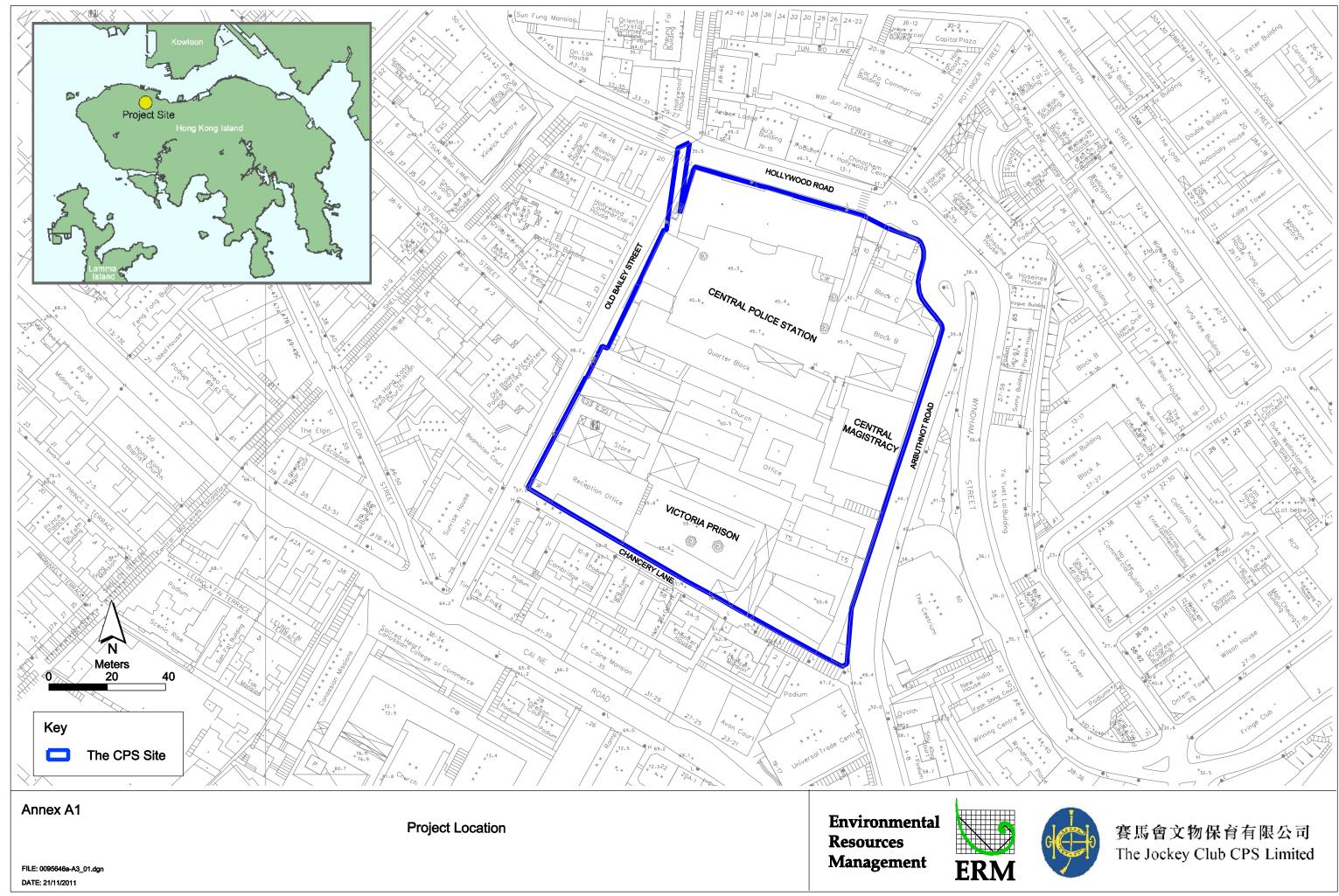
No non-compliance event was recorded during the reporting period.

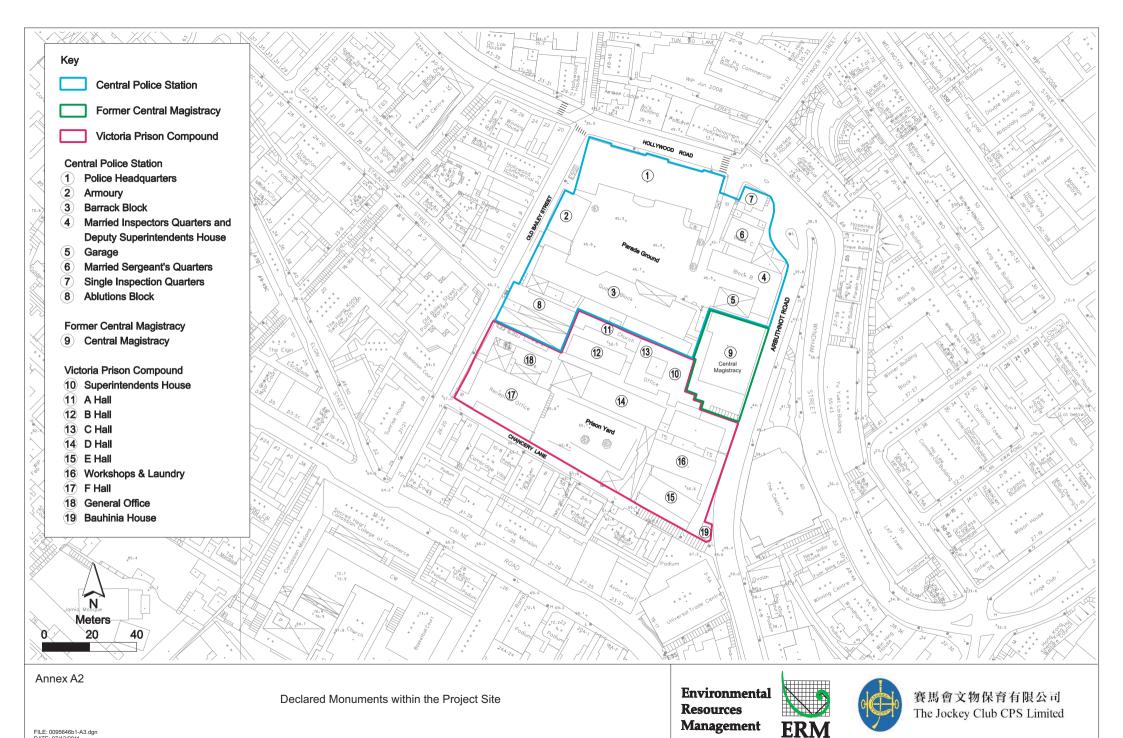
No complaint was received during the reporting period.

No summons/prosecution was received during the reporting period.

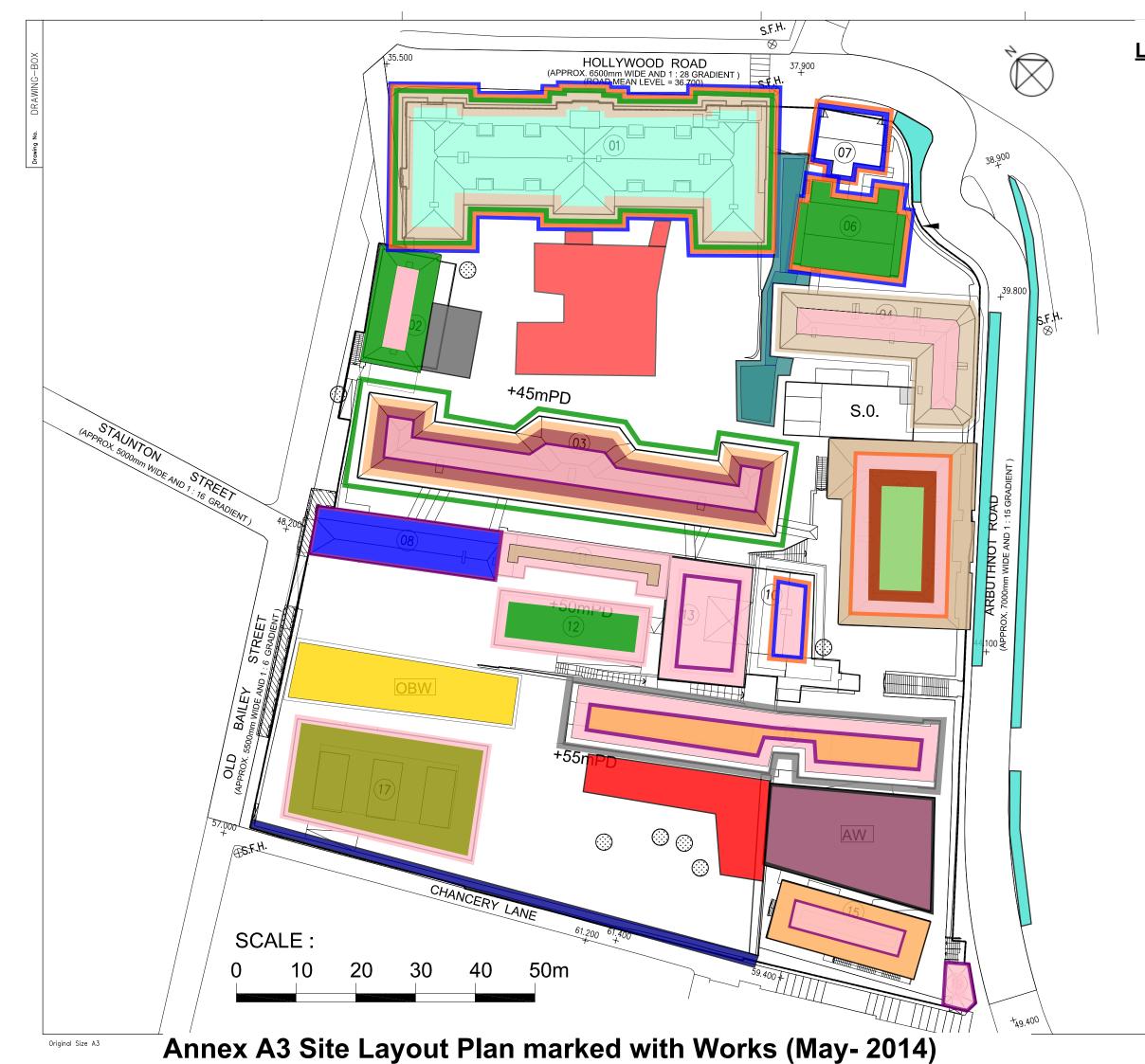
The ET will keep track on the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all necessary mitigation measures. Annex A

Locations of Works Areas and the Surroundings





FILE: 0095646b1-A3.dgn DATE: 07/12/2011



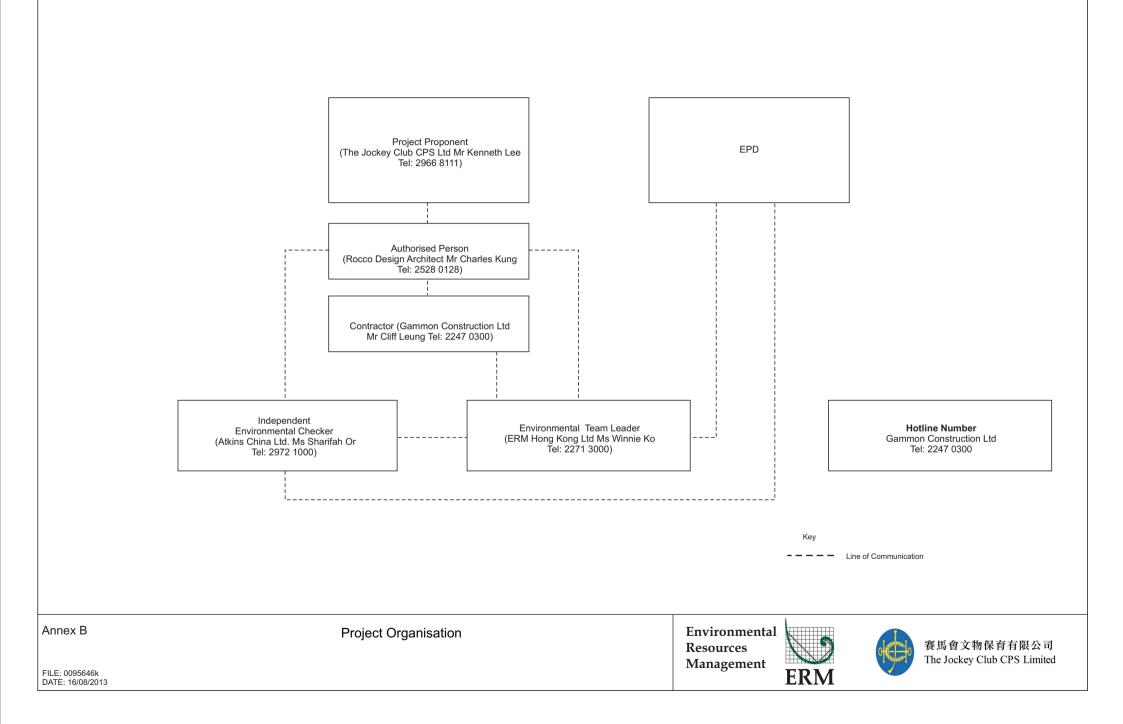


- 1. E&M Installation / Opening / Conduit
- 2. Archaeological Watch Brief Works
- 3. Construction of Passageway
- 4. Underpinning Works
- 5. Upgrading
- 6. Roof Tiles Replacement Works
- 7. ELS Works
- 8. Structure A&A Works
- 9. Repair Works to Timber Window, Door, Structure Floor and Metal Elements
- **10. Demolition Works**
- 11. Facade Cleaning and Repair
- 12. New Structure / Slab Construction
- 13. Balcony Repair
- 14. Strengthening Works of Column
- 15. Backfill
- 16. Utilities Diversion and Footpath Work
- 17. Drainage works and Manhole Cons't
- 18. Permanent Steel Works Erection
- **19. Pile Cap Construction**
- 20. Paint Stripping and Plastering Works

Contractor Gammon				
Drawing Title				
SITE LAYOUT PLAN				
Drawn	Scale N.T.S.			
Designed	Status Marked for Enguiry & Compla	int loa		
Checked	(CPS/E&C/09)			
Approved	Drawing No.			
CAD Ref	_	_		

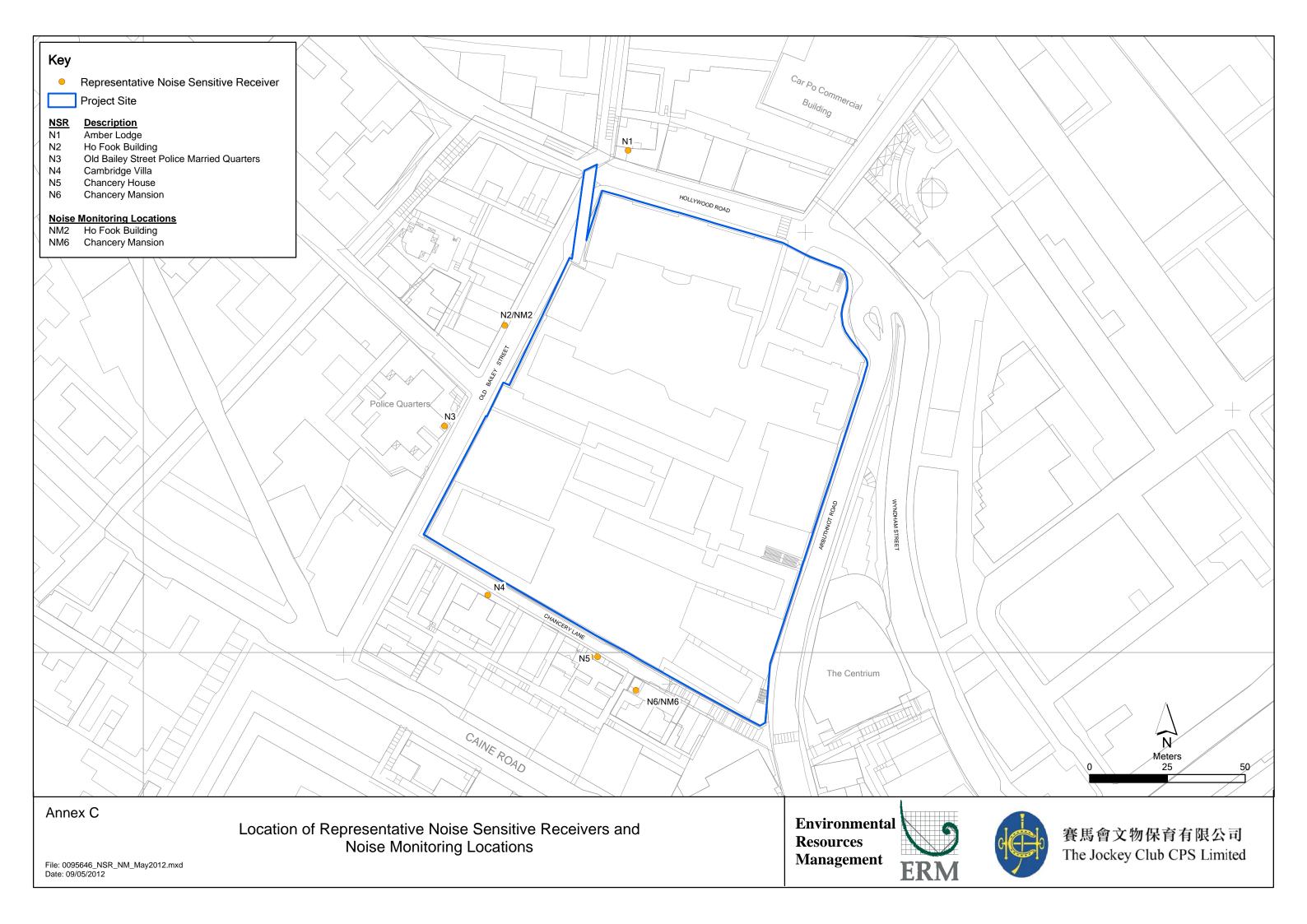
Annex B

Project Organization Chart and Contact Detail



Annex C

Locations of Noise Monitoring Stations and Noise Sensitive Receivers



Annex D

Monitoring Schedule of the Reporting Period and Next Month

# Central Police Station Compound Conservation and Revitalisation (Ho Fook Building - NM2 & Chancery Mansion - NM6) Monitoring Schedule for Reporting Month - May 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				01-May	02-May	03-May
				Public Holiday		
04-May	05-May	06-May	07-May	08-May	09-May	10-May
	Noise Monitoring at NM2 & NM6	Public Holiday				Noise Monitoring at NM2 & NM6
11-May	12-May	13-May	14-May	15-May	16-May	17-May
					Noise Monitoring at NM2 & NM6	
18-May	19-May	20-May	21-May	22-May	23-May	24-May
				Noise Monitoring at NM2 & NM6		
25-May	26-May	27-May	28-May	29-May	30-May	31-May
			Noise Monitoring at NM2 & NM6			

# Central Police Station Compound Conservation and Revitalisation (Ho Fook Building - NM2 & Chancery Mansion - NM6) Monitoring Schedule for Next Reporting Month - June 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Jun	02-Jun	03-Jun	04-Jun	05-Jun	06-Jun	07-Jun
	Public Holiday	Noise Monitoring at NM2 & NM6				
08-Jun	09-Jun	10-Jun	11-Jun	12-Jun	13-Jun	14-Jun
	Noise Monitoring at NM2 & NM6					Noise Monitoring at NM2 & NM6
15-Jun	16-Jun	17-Jun	18-Jun	19-Jun	20-Jun	21-Jun
					Noise Monitoring at NM2 & NM6	
22-Jun	23-Jun	24-Jun	25-Jun	26-Jun	27-Jun	28-Jun
				Noise Monitoring at NM2 & NM6		
29-Jun	30-Jun					

Annex E

Calibration Reports for Calibrators and Sound Level Meters



Certificate No.: C133573 證書編號

ITEM TESTED / 送檢項	目	(Job No. / 序引編號:IC13-1422)
Description / 儀器名稱 :		Sound Level Meter
Manufacturer / 製造商 :		Rion
Model No. / 型號 :		NL-31
Serial No. / 編號 :		00410224
Supplied By / 委託者 :		Envirotech Services Co.
		Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road,
		Hong Kong

# TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Line Voltage / 電壓 : --- Relative Humidity / 相對濕度 : (55 ± 20)%

# TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 14 June 2013

# TEST RESULTS / 測試結果

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

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

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

Tel/電話: 2927 2606 Fax/傳真: 2744 8986

Tested By 測試	:	K C Lee			
Certified By 核證	:	K K Wong	Date of Issue 簽發日期	:	17 June 2013

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

Website/網址: www.suncreation.com

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

E-mail/電郵: callab@suncreation.com

Page 1 of 3



Certificate No. : C133573 證書編號

- 1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- 2. Self-calibration was performed before the test.
- 3. The results presented are the mean of 3 measurements at each calibration point.
- 4. Test equipment :

<u>Equipment ID</u>	<u>Description</u>	<u>Certificate No.</u>
CL280	40 MHz Arbitrary Waveform Generator	C130019
CL281	Multifunction Acoustic Calibrator	DC110233

- 5. Test procedure : MA101N.
- 6. Results :
- 6.1 Sound Pressure Level
- 6.1.1 Reference Sound Pressure Level

	UU	JT Setting		Applied	Value	UUT	IEC 61672 Class 1
Range	Mode	Frequency	Time	Level	Freq.	Reading	Spec.
(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)	(dB)
30 - 120	LA	А	Fast	94.00	1	93.6	± 1.1

## 6.1.2 Linearity

	UU	JT Setting		Applied	l Value	UUT
Range	Mode	Frequency	Time	Level	Freq.	Reading
(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)
30 - 120	L <sub>A</sub>	A	Fast	94.00	1	93.6 (Ref.)
				104.00		103.6
				114.00		113.6

IEC 61672 Class 1 Spec. :  $\pm$  0.6 dB per 10 dB step and  $\pm$  1.1 dB for overall different.

#### 6.2 Time Weighting

	UU	T Setting		Applied	l Value	UUT	IEC 61672 Class 1
Range	Mode	Frequency	Time	Level	Freq.	Reading	Spec.
(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)	(dB)
30 - 120	L <sub>A</sub>	А	Fast	94.00	1	93.6	Ref.
			Slow			93.5	± 0.3

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

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Certificate No. : C133573 證書編號

6.3 Frequency Weighting

# 6.3.1 A-Weighting

A-weighting							
	UU	T Setting		Appl	ied Value	UUT	IEC 61672 Class 1
Range	Mode	Frequency	Time	Level	Freq.	Reading	Spec.
(dB)		Weighting	Weighting	(dB)	-	(dB)	(dB)
30 - 120	L <sub>A</sub>	А	Fast	94.00	63 Hz	67.3	$-26.2 \pm 1.5$
					125 Hz	77.3	$-16.1 \pm 1.5$
					250 Hz	84.9	$-8.6 \pm 1.4$
					500 Hz	90.3	$-3.2 \pm 1.4$
					1 kHz	93.6	Ref.
					2 kHz	94.9	$+1.2 \pm 1.6$
					4 kHz	94.8	$+1.0 \pm 1.6$
					8 kHz	92.6	-1.1 (+2.1;-3.1)
					12.5 kHz	89.7	-4.3 (+3.0 ; -6.0)

#### 6.3.2 C-Weighting

		T Setting		Appl	ied Value	UUT	IEC 61672 Class 1
Range	Mode	Frequency	Time	Level	Freq.	Reading	Spec.
(dB)		Weighting	Weighting	(dB)		(dB)	(dB)
30 - 120	L <sub>C</sub>	С	Fast	94.00	63 Hz	92.7	$-0.8 \pm 1.5$
					125 Hz	93.4	$-0.2 \pm 1.5$
					250 Hz	93.6	$0.0 \pm 1.4$
					500 Hz	93.7	$0.0 \pm 1.4$
					1 kHz	93.7	Ref.
					2 kHz	93.5	$-0.2 \pm 1.6$
					4 kHz	93.0	$-0.8 \pm 1.6$
					8 kHz	90.7	-3.0 (+2.1;-3.1)
					12.5 kHz	87.9	-6.2 (+3.0 ; -6.0)

Remarks : - UUT Microphone Model No. : UC-53A & S/N : 307154

- Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value : 94 dB	: 63 Hz - 125 Hz : ± 0.35 dB 250 Hz - 500 Hz : ± 0.30 dB
	$1 \text{ kHz}$ : $\pm 0.20 \text{ dB}$
	$2 \text{ kHz} - 4 \text{ kHz}$ : $\pm 0.35 \text{ dB}$
	$8 \text{ kHz}$ : $\pm 0.45 \text{ dB}$
	$12.5 \text{ kHz}$ : $\pm 0.70 \text{ dB}$
104 d	B : 1 kHz : $\pm$ 0.10 dB (Ref. 94 dB)
114 d	B : 1 kHz : $\pm 0.10 \text{ dB}$ (Ref. 94 dB)

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

Note :

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

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.



Certificate No. : C134306 證書編號

ITEM TESTED / 送檢項目		(Job No. / 序引編號:IC13-1709)
Description / 儀器名稱	:	Sound Level Calibrator
Manufacturer / 製造商	:	Rion
Model No. / 型號	:	NC-73
Serial No. / 編號	:	10786708
Supplied By / 委託者	:	Envirotech Services Co.
		Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road,
		Hong Kong

## TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Line Voltage / 電壓 : --- Relative Humidity / 相對濕度 : (55 ± 20)%

## TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 12 July 2013

## TEST RESULTS / 測試結果

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

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

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

Tested By 測試	:	K C Lee			
Certified By 核證	(	K M Wu	Date of Issue 簽發日期	:	15 July 2013

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

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Calibration and Testing Laboratory

# Certificate of Calibration 校正證書

Certificate No.: C134306 證書編號

- 1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.
- 2. The results presented are the mean of 3 measurements at each calibration point.
- 3. Test equipment :

Equipment ID CL130 CL281 TST150A <u>Description</u> Universal Counter Multifunction Acoustic Calibrator Measuring Amplifier <u>Certificate No.</u> C133632 DC130171 C120886

- 4. Test procedure : MA100N.
- 5. Results :
- 5.1 Sound Level Accuracy

UUT	Measured Value	Mfr's Spec.	Uncertainty of Measured Value
Nominal Value	(dB)	(dB)	(dB)
94 dB, 1 kHz	93.8	± 0.5	± 0.2

5.2 Frequency Accuracy

UUT Nominal Value	Measured Value	Mfr's	Uncertainty of Measured Value
(kHz)	(kHz)	Spec.	(Hz)
1	0.990	1 kHz ± 2 %	± 1

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

Note :

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

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

Annex F

# Event / Action Plans for Noise

# Annex F Event and Action Plan for Noise

Event				Ac	tion				
	Environmental Team (ET)		Independent Environmental Checker (IEC)		A	Authorised Person (AP)		Contractor	
Action Level	1. 2. 3. 4. 5.	Notify IEC and Contractor; Carry out investigation; Report the results of investigation to the IEC, AP and Contractor; Discuss with the Contractor and formulate remedial measures; Increase monitoring frequency to check mitigation effectiveness.	<ol> <li>1.</li> <li>2.</li> <li>3.</li> </ol>	Review the analysed results submitted by the ET; Review the proposed remedial measures by the Contractor and advise the AP accordingly; Supervise the implementation of remedial measures.	<ol> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> </ol>	Confirm receipt of notification of failure in writing; Notify Contractor; Require Contractor to proposed remedial measures for the analysed noise problem; Ensure remedial measures are properly implemented.	1. 2.	Submit noise mitigation proposals to IEC; Implement noise mitigation proposals.	
Limit Level	<ol> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> <li>7.</li> <li>8.</li> </ol>	Identify source; Inform IEC and AP; Repeat measurements to confirm findings; Increase monitoring frequency; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Inform IEC, AP and EPD the causes and actions taken for the exceedances; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and AP informed of the results; If exceedance stops, cease additional monitoring.		Discuss amongst AP, ET, and Contractor on the potential remedial actions; Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the AP accordingly; Supervise the implementation of remedial measures.	<ol> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> </ol>	Confirm receipt of notification of failure in writing; Notify Contractor; Require Contractor to propose remedial measures for the analysed noise problem; Ensure remedial measures properly implemented; 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> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> </ol>	Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Resubmit proposals if problem still not under control; Stop the relevant portion of works as determined by the AP until the exceedance is abated.	

Annex G

Summary of Implementation Status

# Annex G Implementation Schedule for Environmental Protection Measures

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Location	When to Implement the Measure	Status
Cultur	al Heritag	ge			
S3.9.1	S3.2.6	Subject to the outcome of the archaeological investigation, if archaeological deposits are identified to be impacted by the proposed development, appropriate mitigation measures will be recommended and agreed with AMO.	In accordance with the recommendations in the Archaeological Action Plan (AAP) issued on 21 Dec 11 and approved on 30 Dec 11 by AMO	During detailed design and construction	No field work in the reporting month.
S3.9.2	S3.3.1	<u>Vibration Monitoring</u> A baseline condition survey and baseline vibration impact will be conducted by a specialist for the approval of AMO and Buildings Department prior to commencement of the construction works to define the vibration control limits and recommend a vibration monitoring proposal for the concerned historic buildings and structures in and outside CPS for AMO's prior approval before commencement of the construction works.	Historic buildings and structures in CPS, the granite walls at Old Bailey Street and the proposed Grade 3 historic building (No. 20 Hollywood Road)	During detailed design and construction	V
S3.9.2	S3.3.3	<u>Compliance of the Approved Measures and Auditing</u> Staff training by an experience building conservation expert or relevant competent person(s) in the environmental team of the project should be provided to the on-site staffs, contractors, sub-contractors and workers of the project before commencement of works to ensure their full understanding of the approved protection schedule, restoration proposal and work methodologies related to cultural heritage, and their respective responsibilities in the implementation of the environmental protection measures. Regular site audit for cultural heritage should be carried out in the construction phase by an experience building conservation expert in the environmental team ("the Heritage Checker") to investigate the site practice of the contractors and workers and their compliance of the approved work methodologies with respect of conservation works, mitigations for cultural heritage and any related works. A detailed	Whole site	Prior to and during construction	✓

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Location	When to Implement the Measure	Status
		proposal of the regular audit such as methodology (e.g. performance and monitoring indicators, control tools, frequency of the audit, etc.) and the conservation professionals to be engaged should be agreed with AMO prior to work commencement. The Heritage Checker shall also attend the regular site meetings with AMO and report the compliance and effectiveness of the mitigation measures for cultural heritage.			
53.9.3	S3.3.4	<u>Archival Recording</u> An archival recording should be conducted to provide a detailed reference for the update of the Conservation Management Plan and inventory of historical features of the monuments, the preparation of as- built drawings showing the condition of the historic buildings and structures after the completion of the construction works. These archival records will be a reference source for future maintenance of the character defining elements, conservation of the monuments, interpretation and conservation education of the Site. The archival recording shall include but not limit to the video and photographic recording on the detailed process of the repair trials for different kinds of historical features, conservation works of character defining elements and historic fabrics of the monuments, and a written records of any new changes to the detailed design made in the construction phase illustrate with photos and drawings. A full set of the archives records (including both hard and soft copies) should be submitted to the AMO for approval after the work completion for record purpose. Any new findings related to the conservation of built heritage in the Site identified during the detailed design stage and construction phases shall be properly recorded in details for notification to the AMO and update of the Conservation Management Plan.	Whole Site	During detailed design, construction and prior to operation	N/A – Archival recording will be conducted at later stage.
S3.7.3	-	<u>General Construction Methods</u> Prior to the commencement of the modification/refurbishment works at an existing building or structure (e.g. masonry walls near the Old Bailey Wing), a site survey will be carried out by the design team, and all building dimensions and levels of the building/structure shown will be	Whole site	During construction	$\checkmark$

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Location	When to Implement the Measure	Status
53.7.1 & 3.7.2	-	checked and confirmed by the contractor. Non-percussive piling methods will be adopted for the construction of the foundation for the new buildings. Protective and precaution measures to the existing buildings and structure adjacent to the work area (including the proposed Grade 3 historic building (No. 20 Hollywood road) and the granite boundary walls between the Ablutions Block of the police station (building no. 08) and the General Office of the prison area (building no. 18) which is adjacent to the new construction of the Old Bailey Wing and for an old granite walls at Old Bailey Street within 15m from the new construction) shall be provided to avoid damage to the existing features and to safeguard the structural integrity during the course of construction. Small scale handheld pneumatic tools with minimal vibration impact to the existing buildings / structures are selected so as to have a better logistic and handling at the existing buildings and structures, which usually have only narrow working areas. In cases of the local demolition of structural elements, demountable platforms will be erected to temporarily support the affected area and divert the loading from above to avoid instability and create excessive cracking and settlement of the building/structure. Implementation and update of the Conservation Management Plan (CMP). Any new findings related to the conservation of the built heritage in the site identified during the detailed design and construction stage shall be properly recorded in details for the notification to the AMO and update in the CMP. After the construction, a cartographic and photographic recording on the restored historic buildings, historic features and the site shall be conducted and the following records shall be included into the CMP as appendices for updating and record purpose: • one set of measured drawings and photographic records showing the as-built condition of historic buildings and structures; and • an updated inventory list of the historic features together with the c	Whole site	During detailed design, construction, post- construction and operation	√ - CMP was implemented during the reporting month. There were no updates for the CMP.

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Location	When to Implement the Measure	Status
Landsca	ipe & Visi	ıal			
S4.7.27		<u>In-situ Tree Protection - Cordon Zone (CZ)</u> Cordon off each tree along its drip line (below the crown) with a chain- link fencing of 2.5 m height with padlocked gate, allowing limited access to area only to authorized persons. The base of the perimeter fence will be sealed up to 30 cm height to ensure that no construction drainage water will enter. If grouting is to be conducted less than 5 m from the edge of the CZ, a waterproof membrane will be installed below the ground to a depth of 1.5 m on the outer edge of the CZ to prevent the subsurface lateral movement of contaminated construction wastewater from intruding the soil inside the CZ.	Whole site	During construction	<ul> <li>√ - Part of the cordon zone of Tree-5 has been used as a worker storage room. The Contractor was recommended to pay utmost attention to potential land pollution at the worker storage room at all times.</li> <li>Scaffolding has been set up close to Tree-5 within the cordon zone. The Contractor was reminded to perform proper measures to protect Tree-5 during the carrying out of works within the cordon zone.</li> </ul>
S4.7.2	-	<u>In-situ Tree Protection - Advanced &amp; Phased Root Pruning</u> All edges of the CZ that will be affected by excavation will undergo root pruning by a trained arborist or horticulturist, in advance of the earth work. The entire affected length of the CZ, plus 3 m additional length at both ends, shall be designated as the root pruning segment (RPS). The require trench will be opened manually in the RPS, be 1.5 m deep and 1 m wide, and closed on the same day after pruning with a good soil mix. All roots with a diameter >20 mm encountered in the course of trench opening shall be cut flushed with the inner wall of the trench. If the RPS exceeds one-quarter of the CZ circumference, the root pruning should be conducted in two stages. Each phase will tackle half of the RPS length. After the first phase, the tree will be allowed to recuperate for not less than four months before the second phase root pruning is conducted. The RPS shall be protected by sheet piles along the outer edge. The rig that installs the piles and the associated operations shall not intrude into the CZ or injure the protected tree.	Whole site	During construction	N/A – no root pruning has been conducted yet
S4.7.2	-	<u>In-situ Tree Protection - Foliage cleansing system</u> A sprinkler cleansing system will be installed either in the crown of the tree or at a suitable location on an adjacent building to provide the	Whole site	During construction	$\checkmark$

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Location	When to Implement the Measure	Status
		means to wash the foliage of the accumulated dust when necessary,			
		particularly in the dry season.			
S4.7.2	S4	In-situ Tree Protection - Monthly inspection	Whole site	During construction	$\checkmark$
		Monthly inspection of affected trees by an experienced and appropriately trained arborist or horticulturist using Form 1 – Tree Group Inspection Form and Form 2 – Tree Risk Assessment Form developed by Development Bureau ( <i>http://www.trees.gov.hk/en/doc/TRAGuideline_July2010version_combine.pdf</i> ) or a form designed by a tree expert and approved by Tree Management Office. All irregularities that deviate from the recommended tree protection measures, or could impose deleterious impacts on the protected trees, must be reported to the authorized person or the tree expert within two days.			
S4.7.2	-	<u>Light Control</u> Control of night-time lighting shall be implemented to minimise impact to adjacent VSRs.	Whole site	During construction and operation	$\checkmark$
S4.7.2	S4	<u>Compensatory Tree Planting</u> A new planting site has been identified for compensatory tree planting in the Parade Ground. The planting is to compensate for felling of T10. The existing tree site will be enlarged to become a wide tree strip to accommodate at least six trees. The entire strip of land that accommodates T1 to T4 should be revamped to improve the soil condition for future tree growth. The new tree strip should be 4 m wide and covered by porous unit pavers to permit the entry of rain and irrigation water and air exchange between the soil and the atmosphere. The unit pavers should be supported by small columns to create a vault-like structure so as to avoid compaction of the underlying soil due to pedestrian trampling. The unit pavers will be movable to provide access to the soil underneath so that fertilizers and conditioners could be added on a	At identified compensatory tree planting location at the Parade Ground	During detailed design and construction	N/A – Compensatory Tree Planting will be conducted at later stage.

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Location	When to Implement the Measure	Status
		regular basis. The air conditioner unit currently located near the proposed planting site should also be removed. This new tree planting site should also be provided with proper irrigation.			
		Pursuant to the "Environment, Transport and Works Bureau Technical Circular (Works) No. 3/2006 Tree Preservation", the compensation ratio should preferably be 1:1 according to trunk girth. T10 has a DBH of 20 cm ( <i>Table 4.3</i> ), and it is proposed that six trees of heavy standard size be planted, each with a DBH of around 10 cm and root balls of not less than 0.75 m diameter and 0.75 m depth,. Since the aggregate DBH of the new trees would be 60 cm, the rate of compensation is equivalent to three times the DBH of T10, far beyond the requirements			
		The six replacement trees should be planted in the new tree strip in two staggered rows, maximising distance between each tree to avoid mutual interference in the future. It is recommended that the species selected should have a small final dimension of less than 10 m height given the proximity to built structures such as the retaining wall and buildings. Two each of the outstanding and related flowering tree species connected to local natural history are suggested::			
		<ul> <li>Bauhinia 'Blakeana' a native evergreen species with deep mauve flowers and an exceptionally long flowering period from late autumn to early spring.</li> </ul>			
		<ul> <li>Bauhinia purpure, a native evergreen with lighter purple flowers from late autumn to early winter.</li> </ul>			
		<ul> <li>Bauhinia variegata, an exotic deciduous species, with pale pinkish flowers in spring to early summer often when the tree has little or no leaves.</li> </ul>			
S4.7.2	S4	Vertical Greening	Inner Southern Wall	During detailed design and construction	N/A – No vertical greening was conducted during the reporting month.
		Within the limitations of the conservation of the CPS character, greening of vertical structures should be provided where possible.		construction	
		As such it is recommended that the inner southern wall of the Site be planted as a green wall. The plantings should be inserted in between each of the large protruding piers and an offset be made from both the			

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Location	When to Implement the Measure	Status
		top and bottom edge so that old and new are equally visible. An independent frame should be strategically positioned in order to ensure minimal disturbance to the original wall, and provide the main structural support and planting surface for the green wall. The frame on to which the new green will be planted should contain its own irrigation system so that moisture for the plants will remain mainly on the planting surface and not the exiting wall behind. The planting chosen should be appropriate to the Hong Kong climate, requiring relatively little maintenance to sustain the quality of both plants and wall.			
S4.7.2	-	<i>New Custom Paving</i> New, Patterned, High Quality, Concrete Custom Pavers should replace most of the existing paving in the open spaces.	Whole site	During detailed design and construction	N/A – No custom paving was conducted during the reporting month.
S4.7.2	S4	<u>In-situ Tree Protection - Quarterly inspection</u> Quarterly Inspection of affected and newly planted trees by an experienced and appropriately trained arborist or horticulturist using Form 1 – Tree Group Inspection Form and Form 2 – Tree Risk Assessment Form developed by Development Bureau (http://www.trees.gov.hk/en/doc/TRAGuideline_July2010version_combine.pdf) or a form designed by a tree expert and approved by Tree Management Office for a period of 12 months after construction.	Whole site	During post construction and operation	N/A – The quarterly inspection will be conducted at later stage.
Noise					
<i>S5.9</i>	-	<ul> <li>The following site practices should be followed during the construction of the Project:</li> <li>Only well-maintained plant will be operated on-site and plant will be serviced regularly during the construction phase;</li> <li>Silencers or mufflers on construction equipment will be utilised and will be properly maintained during the construction phase;</li> <li>Mobile plant, if any, will be sited as far away from NSRs as possible;</li> </ul>	Whole Site	During construction	$\checkmark$

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Location	When to Implement the Measure	Status
		<ul> <li>Machines and plant (such as trucks) that may be in intermittent use will be shut down between work periods or will be throttled down to a minimum;</li> <li>Plant known to emit noise strongly in one direction will, wherever possible, be orientated so that the noise is directed away from the nearby NSRs; and</li> <li>Material stockpiles and other structures will be effectively utilised, wherever practicable, in screening noise from on-site construction activities.</li> </ul>			
<i>\$5.9</i>	-	Noise insulating sheet would be adopted for certain PME (eg drill rig, excavator for demolition of existing structures, etc). The noise insulating sheet should be deployed such that there would be no opening or gaps on the joints.	Whole Site	During construction	$\checkmark$
<i>S5.9</i>	-	Use temporary noise barriers to mitigate the noise impact arising from the construction works, particularly for low-rise NSRs. Movable noise barriers of 3 m in height with skid footing should be used and located within a few metres of stationary plant and mobile plant such that the line of sight to the NSR is blocked by the barriers. The length of the barrier should be at least five times greater than its height. The noise barrier material should have a superficial surface density of at least 7 kg m <sup>-2</sup> and have no openings or gaps.	Whole Site	During construction	√
<i>S5.9</i>	-	Use quiet PME as far as practicable to mitigate the construction noise impact.	Whole Site	During construction	$\checkmark$
<i>S5.9</i>	-	Scheduling of construction activities with identified grouping of PMEs.	Whole Site	During construction	$\checkmark$
S5.11	S5	Weekly noise monitoring will be undertaken at the representative NSRs N2 Ho Fook Building and N5 Chancery House. Monthly site audits will be conducted to ensure that the recommended mitigation measures are properly implemented during the construction stage.	Whole Site	During construction	V
Air Qu	ality				
S6.8.1	-	Dust control measures stipulated in the <i>Air Pollution Control</i> ( <i>Construction Dust</i> ) <i>Regulation</i> will be implemented during the construction phase to control the potential fugitive dust emissions.	Whole Site	During construction	$\checkmark$

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Location	When to Implement the Measure	Status
S6.8.1	-	In particular: Temporary stockpiles of dusty materials will be either covered entirely by impervious sheets; placed in an area sheltered on the top and three sides; or sprayed with water to maintain the entire surface wet at all the time.	Whole Site	During construction	V
S6.8.1	-	Impervious sheet will be provided for skip hoist for material transport.	Whole Site	During construction	$\checkmark$
S6.8.1	-	Vehicle washing facilities will be provided at the designated vehicle exit points.	Whole Site	During construction	$\checkmark$
S6.8.1	-	Every vehicle will be washed to remove any dusty materials from its chassis and wheels immediately before leaving the worksite.	Whole Site	During construction	$\checkmark$
S6.8.1	-	Road sections between vehicle-wash areas and vehicular entrances will be paved.	Whole Site	During construction	$\checkmark$
S6.8.1	-	The load carried by the trucks will be covered entirely to ensure no dust emission from the vehicles.	Whole Site	During construction	√ 
S6.8.1	-	Hoarding of not less than 2.4m high from ground level will be provided along the Project Site boundary adjoining a road where the new buildings (Old Bailey Wing and Arbuthnot Wing) will be constructed.	Whole Site	During construction	√
S6.8.1	-	Stockpiles of more than 20 bags of cement, dry pulverised fuel ash and dusty construction materials will be covered entirely by impervious sheeting sheltered on top and 3-sides.	Whole Site	During construction	$\checkmark$
S6.8.1	-	An effective dust screen will be provided to enclose scaffolding, if required, from the ground floor level of building for construction of superstructure of the new buildings.	Whole Site	During construction	$\checkmark$
S6.8.1	-	Impervious dust screen or sheeting will be implemented for demolition of structures and renovation of outer surfaces of structures that abuts or fronts open area accessible to the public to no less than 1m higher than the highest level of the structure being demolished.	Whole Site	During construction	√
S6.8.1	-	The area at which demolition work takes place will be sprayed with water or dust suppression chemical immediately prior to, during and immediately after the demolition activity.	Area for Demolition Work	During construction	√

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Location	When to Implement the Measure	Status
S6.8.1	-	ULSD will be used for all construction plant on-site.	Whole Site	During construction	$\checkmark$
S6.8.1	-	The engine of the construction equipment or trucks during idling will be switched off.	Whole Site	During construction	$\checkmark$
S6.8.1	-	Site practices such as regular maintenance and checking of construction equipment deployed on-site will be conducted to avoid any black smoke emissions and to minimise gaseous emissions.	Whole Site	During construction	N/A – Not observed.
S6.10	S3.2	Monthly environmental site audits to ensure that appropriate dust control measures are properly implemented and good construction site practices are adopted throughout the construction period.	Whole Site	During construction	$\checkmark$
Water (	Quality			1	
S7.6	-	Channels, earth bunds or sand bag barriers will be provided on site to direct stormwater to silt removal facilities. The design of silt removal facilities will make reference to the guidelines in <i>Appendix A1</i> of <i>ProPECC PN 1/94</i> . All drainage facilities and erosion and sediment control structures will be inspected on a regular basis and maintained to confirm proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit will be removed regularly.	Whole Site	During construction	$\checkmark$
S7.6	-	All drainage facilities and erosion and sediment control structures will be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit will be removed regularly and disposed of.	Whole Site	During construction	N/A – Not observed.
S7.6	-	Measures will be taken to reduce the ingress of stormwater into excavation areas. If the excavation of the concrete foundation is to be carried out in wet season, they will be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations will be discharged into stormwater drains via silt removal facilities.	Whole Site	During construction	N/A – Not observed.
S7.6	-	Open stockpiles of excavated and demolition materials will be covered with tarpaulin or similar fabric during rainstorms. Measures will be taken to prevent the washing away of residues, chemicals or debris into any drainage system.	Whole Site	During construction	$\checkmark$

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Location	When to Implement the Measure	Status
S7.6	-	Manholes (including newly constructed ones) will always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system.	Whole Site	During construction	N/A – Not observed.
S7.6	-	Precautions will be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarised in Appendix A2 of <i>ProPECC PN 1/94</i> . Particular attention will be paid to the control of silty surface runoff during storm events.	Whole Site	During construction	N/A – Not observed.
S7.6	-	All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge will be adequately designed for the controlled release of stormwater flows. All sediment traps will be regularly cleaned and maintained. The temporary diverted drainage will be reinstated to the original condition when the construction work has finished or the temporary diversion is no longer required.	Whole Site	During construction	N/A – Not observed.
S7.6	-	Vehicle and plant servicing areas, vehicle washing bays and lubrication bays will, as far as possible, be located within roofed areas. The drainage in these covered areas will be connected to foul sewers via a petrol interceptor.	Whole Site	During construction	N/A – Not observed.
S7.6	-	Oil leakage or spillage will be contained and cleaned up immediately. Waste oil will be collected and stored for recycling or disposal.	Whole Site	During construction	N/A – Not observed.
S7.6	-	Waste streams classifiable as chemical wastes will be properly stored, collected and treated.	Whole Site	During construction	$\checkmark$
S7.6	-	All fuel tanks and chemical storage areas will be provided with locks and be sited on paved areas.	Whole Site	During construction	$\checkmark$
S7.6	-	The storage areas will be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled oil, fuel and chemicals from reaching the receiving waters.	Whole Site	During construction	۸ 
S7.6	-	The Contractors will prepare guidelines and procedures for immediate clean-up actions following any spillages of oil, fuel or chemicals.	Whole Site	During construction	$\checkmark$

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Location	When to Implement the Measure	Status
S7.6	-	Surface runoff from bunded areas will pass through oil/grease traps prior to discharge to the stormwater system	Whole Site	During construction	N/A – Not observed.
S7.6	-	The stormwater discharge from the site will be monitored as part of the routine monitoring under the WPCO licence, if applicable.	Whole Site	During construction	N/A – Not observed.
S7.6	-	The existing toilet facilities of the CPS will be available to the construction workforce. The sewage will be discharged to the public sewer.	Whole Site	During construction	$\checkmark$
S7.8	S5.2	Monthly site audits of the works areas will be carried out during the construction phase to monitor the environmental performance of the Project and to enable prompt actions to rectify any malpractice which may give rise to water pollution problem.	Whole Site	During construction	$\checkmark$
Waste I	Manageme	nt			
S8.5	S6.3.1 & Table 6.1	<u>General</u> The Contractor shall apply for and obtain all the necessary waste disposal permits or licences are obtained prior to the commencement of the construction works.	Whole Site	During construction	$\checkmark$
S8.5	-	<u>Management of Waste Disposal</u> The construction contractor will open a billing account with the EPD. Every construction waste or public fill load to be transferred to the Government waste disposal facilities such as public fill reception facilities, sorting facilities, landfills will require a valid "chit" which contains the information of the account holder to facilitate waste transaction recording and billing to the waste producer.	Whole Site	During construction	N
S8.5	S6.2	A trip-ticket system will also be established to monitor the disposal of construction waste at landfill and to control fly-tipping. The trip-ticket system will be included as one of the contractual requirements and implemented by the contractor.	Whole Site	During construction	√

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Location	When to Implement the Measure	Status
S8.5	S6 & Table 6.1	A recording system for the amount of wastes generated/recycled and disposed of will be established during the construction phase.	Whole Site	During construction	√
S8.5	S6.3	<u>Reduction of Construction Waste Generation</u> C&D material will be segregated on-site into public fill and construction waste and stored in different containers or skips to facilitate reuse of the public fill and proper disposal of the construction waste. Specific areas of the work site will be designated for such segregation and storage if immediate use is not practicable.	Whole Site	During construction	$\checkmark$
S8.5	S6	<u>Chemical Waste</u> The contractor will register as a chemical waste producer with the EPD.	Whole Site	During construction and operation	$\checkmark$
S8.5	S6	<ul> <li>Containers used for storage of chemical waste shall:</li> <li>Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed;</li> <li>Have a capacity of less than 450 L unless the specifications have been approved by the EPD; and</li> <li>Display a label in English and Chinese in accordance with instructions prescribed in <i>Schedule 2</i> of the <i>Regulations</i>.</li> </ul>	Whole Site	During construction and operation	$\checkmark$
S8.5	S6	<ul> <li>Storage areas for chemical waste shall:</li> <li>Be clearly labelled and used solely for the storage of chemical waste;</li> <li>Be enclosed on at least 3 sides;</li> <li>Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest;</li> <li>Have adequate ventilation;</li> <li>Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary); and</li> <li>Be arranged so that incompatible materials are appropriately separated.</li> </ul>	Whole Site	During construction and operation	$\checkmark$

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Location	When to Implement the Measure	Status
S8.5	S6	A licensed contractor shall be employed to collect chemical waste for delivery to a licensed treatment facility.	Chemical Waste Treatment Centre at Tsing Yi	During construction and operation	$\checkmark$
S8.5	S6 & Table 6.1	<u>General Refuse</u> General refuse will be stored in enclosed bins separately from construction and chemical wastes. The general refuse will be delivered to the transfer station, separately from construction and chemical wastes, on a daily basis to reduce odour, pest and litter impacts.	Whole site	During construction	$\checkmark$
S8.5	S6	Recycling bins will be provided at strategic locations to facilitate recovery of aluminium can and waste paper from the Site. Materials recovered will be sold for recycling.	Whole site	During construction and operation	$\checkmark$
S8.5	S6	<u>Staff Training</u> At the commencement of the construction works, training will be provided to workers on the concepts of site cleanliness and on appropriate waste management procedures, including waste reduction, reuse and recycling.	Whole site	Commencement of construction	$\checkmark$
S8.7	S6.1 & 6.3	Monthly audits of the waste management practices will be carried out during the construction phases to determine if wastes are being managed in accordance with the recommended good site practices. The audits will examine all aspects of waste management including waste generation, storage, recycling, transport and disposal.	Whole site	During construction	√

Remark:

 $\sqrt{}$  Compliance of Mitigation Measures

<> Compliance of Mitigation but need improvement

x Non-compliance of Mitigation Measures

▲ Non-compliance of Mitigation Measures but rectified by Gammon Construction Ltd

Δ Deficiency of Mitigation Measures but rectified by Gammon Construction Ltd

N/A Not Applicable in Reporting Period

Annex H

Noise Monitoring Results

#### Annex H Noise Monitoring Results

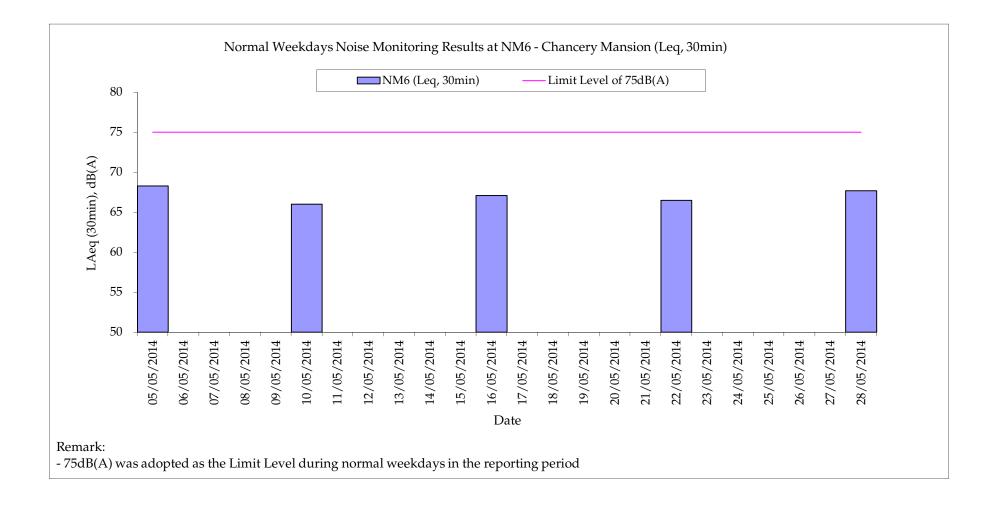
#### **Daytime Noise Monitoring Results**

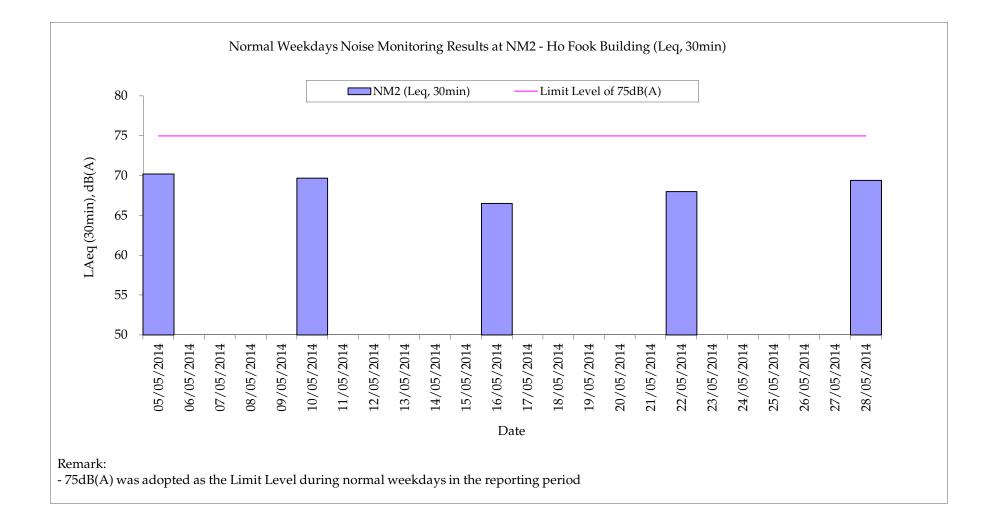
#### NM6 Chancery Mansion

Date	Start Time	End Time	Weather	Noise	level (dB(A)	), 30 min	Major Construction Noise Source(s) Observed		Remarks	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90		Observed				
05-May-14	9:42	10:12	Cloudy	68.3	69.7	66.2	Interior fitting, crawler crane (within the project site)	Traffic Noise	-	0.5	RION- NL31 (S/N 00410224)	RION - NC73 (S/N 10786708)
10-May-14	11:35	12:05	Cloudy	66.0	67.4	63.8	Interior fitting, crawler crane (within the project site)	Traffic Noise	-	0.5	RION- NL31 (S/N 00410224)	RION - NC73 (S/N 10786708)
16-May-14	9:43	10:13	Cloudy	67.1	68.6	64.3	Interior fitting, crawler crane (within the project site)	Traffic Noise	-	0.3	RION- NL31 (S/N 00410224)	RION - NC73 (S/N 10786708)
22-May-14	9:58	10:28	Cloudy	66.5	67.9	65.0	Interior fitting, lifting (within the project site)	Traffic Noise	-	0.2	RION- NL31 (S/N 00410224)	RION - NC73 (S/N 10786708)
28-May-14	10:10	10:40	Sunny	67.7	69.0	65.6	Interior fitting, lifting (within the project site)	Traffic Noise	-	0.2	RION- NL31 (S/N 00410224)	RION - NC73 (S/N 10786708)
			Min.	66.0								
			Max.	68.3								

#### NM2 Ho Fook Building

				Noise	level (dB(A)	), 30 min	Major Construction Noise	Other Noise		Wind Speed	Noise Meter	Calibrator
Date	Start Time	End Time	Weather	Leq	L10	L90	Source(s) Observed	Source(s) Observed	Remarks	(m/s)	Model / ID	Model / ID
05-May-14	10:20	10:50	Cloudy	70.2	71.8	67.6	Interior fitting, lifting within the project site)	Traffic noise	-	0.5	RION- NL31 (S/N 00410224)	RION - NC73 (S/N 10786708)
10-May-14	13:00	13:30	Cloudy	69.7	71.4	66.9	Interior fitting, lifting (within the project site)	Traffic Noise	-	0.5	RION- NL31 (S/N 00410224)	RION - NC73 (S/N 10786708)
16-May-14	10:20	10:50	Cloudy	66.5	68.2	63.6	Interior fitting, lifting (within the project site)	Traffic Noise	-	0.2	RION- NL31 (S/N 00410224)	RION - NC73 (S/N 10786708)
22-May-14	10:35	11:05	Cloudy	68.0	70.8	64.6	Lifting, interior fitting (within the project site)	Traffic Noise	-	0.2	RION- NL31 (S/N 00410224)	RION - NC73 (S/N 10786708)
28-May-14	10:48	11:18	Sunny	69.4	70.8	67.2	Interior fitting, lifting (within the project site)	Traffic Noise	-	0.2	RION- NL31 (S/N 00410224)	RION - NC73 (S/N 10786708)
			Min.	66.5								
			Max.	70.2								





Annex I

Construction Programme for the Project

Activity ID	Activity Description	Duration in Days	I A S O N D . I F M A M . I . I A S O N D . I F M A M . I . I A S O N D . I F M A M . I . I A S O N D . I F M A M . I . I A S O N D . I F M A M . I . I A	
GENERA		III Days		Marina marina Marina marina
S110	PRECONSTRUCTION WORKS	592		
	BUILDINGS	002		
160010	BLOCK 16 WORKSHOP & LAUNDRY (DEMOLITION WORKS)	198		
180010	BLOCK 18/14 ANNEX/BLDG F/G/H/ (DEMOLITION WORKS)	149	BLOCK:18/14/ANNEX/BLOG/F/G/H/ (DEMOLITION WORKS)	
080010	BLOCK 08 ABLUTIONS BLOCK	731		
170005	BLOCK 17 F HALL	593		
010005	BLOCK 01 POLICE HEADQUARTERS BLOCK	626		
140005	BLOCK 14 D HALL	645		
120010	BLOCK 12 B HALL	341		
110010	BLOCK 11 A HALL	311	-	
100010	BLOCK 10 SUPERINTENDENT'S HOUSE	517		
130010	BLOCK 13 C HALL	517	Т : : : : : : : : : : : : : : : : : : :	
060005	BLOCK 06 MARRIED SERGEANTS' QUARTERS	223	BLOCK 06 MARRIED SERGEANTS QUARTERS	
070005	BLOCK 07 SINGLE INSPECTORS' QUARTERS	225		
030005	BLOCK 03 BARRACK BLOCK	440		
020005	BLOCK 02 ARMOURY	425		
090005	BLOCK 09 CENTRAL MAGISTRACY	425		
150010	BLOCK 15 E HALL	304		
040005	BLOCK 04 MARRIED INSPECTORS' QUARTERS	349	BLOCK 04 MARRIED INSPECTORS QUARTERS	
190005	BLOCK 19 BAUHINIA HOUSE	277		
050002	BLOCK 05 (DEMOLITION WORKS)	119		
OTHER V	VORKS			
253110	REVETMENT WALL / U/G UTILITIES / ROAD WORKS	679		DWORK
NEW BUI	LDINGS	-		
S200	OBW OLD BAILEY WING	1,097		
S300	AW ARBUTHNOT WING	1,056		
BASEME	NT PLANTROOM AND SERVICES TRENCH			
	BASEMENT PLANTROOM / SERVICES TRENCH	588	BASEMENT, PLANTROOM!/ SERVICES TRENCH	
NEW FOO	OTBRIDGE			
2300125	PROPOSED FOOTBRIDGE	699		
	Т76М		Sheet 1 of 1 GCL / P / J3416 /SUM/CP01 Date Revision Checkert	



#### CENTRAL POLICE STATION CONSERVATION AND REVITALIZATION (MANAGEMENT CONTRACT) CONSTRUCTION PROGRAMME SUMMARY PROGRAMME

	GCL / P / J3416 /SUM/CP01		
Date	Revision	Checked	Approved
13NOV12	for EPD		
04MAR13	revised		

Annex J

Tree Inspection Reports



Yan Wing (Hong Kong) Environment Management Limited

香港 新界 沙頭角 新樓街 15 號 二樓 No. 15, San Lau Street, 1/F., Sha Tau Kok, N.T., Hong Kong

通信地址 (Mail Address): 上水郵局信箱 八八九 號 (Sheung Shui Post Office Box 889) Tel: 9776 1987, 2486 2317 Fax: 2482 4667 E-mail: yanwinghk@netvigator.com

Our Ref.: YW/TP/GAMMON/2014/05/1

30<sup>th</sup> May 2014

Tel. 2516 8823

Fax.2516 6260

Gammon Construction Limited 28/F Devon House, TaiKoo Place 979 King's Road Hong Kong

Attn : Mr. Cliff C.H. LEUNG, Mr. Ariel LUI

Dear Sirs,

# Summary of Monthly Inspection Report for the Six Existing Trees <u>at Central Police Station Compound for May 2014</u> ( Contract Ref. : J3416/400.4/D00025 )

Tree	Botanical	Date of	Overall Health Condition	
No.	Name	Inspection	Good/Fair/Poor	Remarks
Tree-5	Mangifera indica 芒果	2 <sup>nd</sup> May 2014	Good	1. No further action is required.
Tree-6	Aleurites moluccana 石栗	2 <sup>nd</sup> May 2014	Fair	1. No further action is required.
Tree-7	Aleurites moluccana 石栗	2 <sup>nd</sup> May 2014	Fair	1. No further action is required.
Tree-8	<i>Plumeria rubra</i> 紅雞蛋花	2 <sup>nd</sup> May 2014	Fair	1. No further action is required.
Tree-9	Araucaria cunninghamia 花旗杉	2 <sup>nd</sup> May 2014	Fair	1. No further action is required.
Tree-11	Dracaena marginata 馬尾鐵	2 <sup>nd</sup> May 2014	Fair	<ol> <li>No further action is required.</li> </ol>





# Yan Wing (Hong Kong) Environment Management Limited

香港 新界 沙頭角 新樓街 15 號 二樓 No. 15, San Lau Street, 1/F., Sha Tau Kok, N.T., Hong Kong

通信地址 (Mail Address): 上水郵局信箱 八八九 號 (Sheung Shui Post Office Box 889) Tel: 9776 1987, 2486 2317 Fax: 2482 4667 E-mail: yanwinghk@netvigator.com

Tree Inspection Reports and Tree Group Inspection Form (Form 1) are attached for your reference and record, please.

I should be much grateful if you could endorse the attached Invoice (No.1070) and fax it to my Office at 2482 4667. Thank you.

Yours faithfully

For and on behalf of Yan Wing (HK) Environment Management Ltd.

(WONG Pak Hay) **Contract Manager** 



# FORM 1: TREE GROUP INSPECTION FORM 表格 1: 樹群檢查表格

# General Information 基本資料

Company 公司:				Name of Tree Inspection officer	LAU Man Chung	
File Ref. 檔案編號:	YW/TP/0	GAMMON	/2014/05/2	Name of Endorsement Officer	覆核人員姓名:	WONG Pak Hay
Date of Inspection 巡查日期: May 2, 2014						
Project/Contract No.合	約/工程編	號:	J3416/400.4/D0002	5		

# Location Information 位置資料

Location 地點:	Central Police Station Compound.		Nearby Utility Post No. 就近公用設施編號:
Address :	ocation Types 地點類別: ddress : Roadside 路旁 x Open space 空地 multiple answers allowed) Exhibition Centre 展覽中心		

# General Tree Information 基本樹木 答約

<b>General Tree Information</b>	n 基本樹木資料			* Delete as appropriate 請把不合適的刪除		
Main tree species in the group or minority tree species of significant size 在群組內的主要樹種或樹幹 胸徑或高度或樹冠範圍較大 的樹種 (Note 2)	Approx. number of trees in the relevant species or as a % of tree group 該樹種在群組內 的百份比/數目*	Range of tree height (m) 該樹種高度範圍	Overall health condition 整體健康狀況 (good, fair, poor 好,良,差)	Overall structural condition 整體結構狀況 (good, fair, poor 好,良, 差)	Other remarks (Any special tree condition, e.g. dying/dead, pest/disease problem and structural defects; and soil condition 其他評語 (樹木狀況例如: 凋謝/枯樹/病蟲害 或結構問題; 及泥土狀況)	
Mangifera indica 芒果	17%, 1 No.	16M	GOOD	GOOD	NFA	
Aleurites moluccana 石栗	32% 2 Nos.	10-13M	FAIR	FAIR	NFA	
Plumeria rubra 紅雞蛋花	17% 1 No.	7M	FAIR	FAIR	NFA	
Araucaria cunninghamia 花旗杉	17% 1 No.	13M	FAIR	FAIR	NFA	
Dracaena marginata 馬尾鐵	17% 1 No.	8M	FAIR	FAIR	NFA	

## Target 目標

TARGET (people or property potentially affected by tree/branch failure) 目標 (因樹木倒塌或枝條斷裂而受影響的人或財產)					
Does target exist? 目標是否存在? x Yes 是 No 否					
Can target be moved?能否移除目標? [] Yes 是 [x] No 否					
Can the use of site be restricted? 可否限制場地的使用? X Yes 是 No 否					
Frequency of use of location 使用該地點的頻密程度:					
□ Occasional use 偶爾使用 □ Intermittent use 間歇使用 x Frequent use 經常使用 □ Constant use 恆常使用					

## Identification of Trees for Remedial Action or Detailed Tree Risk Assessment

識別下述樹木,以便採取風險緩減措施或進行詳細樹木風險評估 Trees falling under the following criteria Number of trees Remedial action or detailed tree risk assessment 樹木數量 樹木屬於以下任何一項或多於一項類別 緩減措施或進行詳細樹木風險評估 Trees on complaint list with structural or health problems NII (1)投訴個案中,結構或健康問題的樹木 (Note 1) Mature trees belonging to species with brittle wood structure and having NII (2)unsatisfactory health or structural conditions with failure potential 屬木質脆弱品種並已達成熟期及有倒塌風險的樹木 (Note 1) Tree with major defects or health problems NII (3) 有明顯缺陷或健康問題的樹木 (Note 1) (4) Trees growing in very stressful site conditions with failure potential NII 生長於非常擠壓環境而有倒場風險的樹木 (Note 1)



Signature of Tree Inspection Officer : Signature of Endorsement Officer:

Name of Contractor

Date:

man	
M.	
an Wing (HK) Environment Management Ltd.	
0-5-2014	

Note 1: If remedial action (such as pruning) undertaken cannot mitigate the potential risk of tree or branch failure, detailed tree risk assessment (using Form 2) should be carried out.

備註 1: 若風險緩減措施(如枝幹修剪)仍未能解決倒塌或枝條斷裂的潛在風險,應爲該樹進行詳細的樹木風險評佔(表格 2)。

Note 2: Please read in conjunction with TMO's Guidelines on Tree Risk Assessment and Management Arrangement (Para. 4.3. refers.)

Y 30

備註 2: 請參閱樹木管理辨事處的樹木風險評估安排及管理指引(第43節)

I. TREE NUMBER: Tree-5 Mangifera indica 芒果

### II. BASIC INFORMATION :

Height (m)	16m	Crown spread (m)	18m
DBH (mm)	1000mm	Overall Health Condition	Good
		Good/Fair/Poor	
Date of Inspection	2 <sup>nd</sup> May 2014	Last Inspection Date	3 <sup>rd</sup> April 2014

## III. COMMENTS :

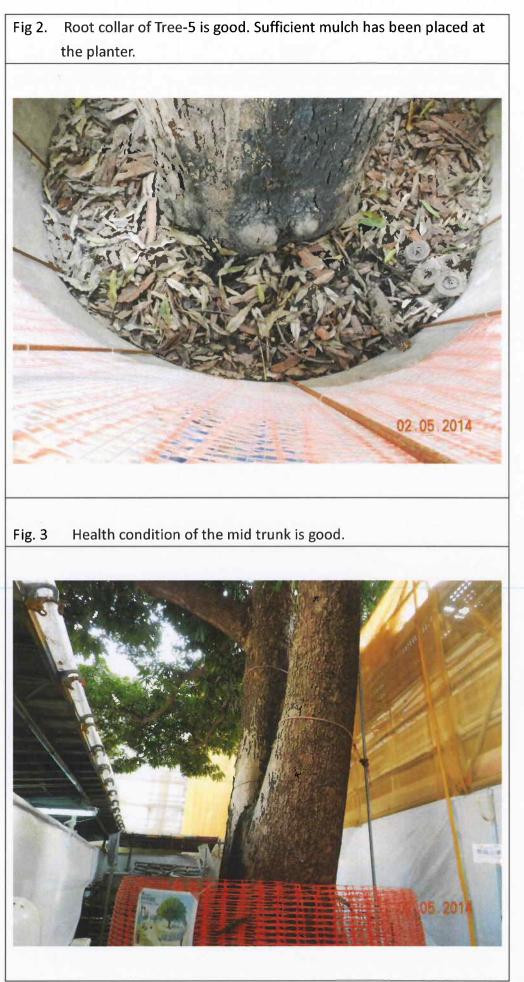
- 1. Overall health condition of the tree is good.
- 2. Sufficient mulch has been placed at the planter.
- 3. Renovation works are in progress near the tree.
- 4. The small cordon zone is in good order.
- 5. Construction works are in progress outside the cordon zone.
- 6. The site outside the cordon zone is clean and tidy.

## IV. RECOMMENDATIONS :

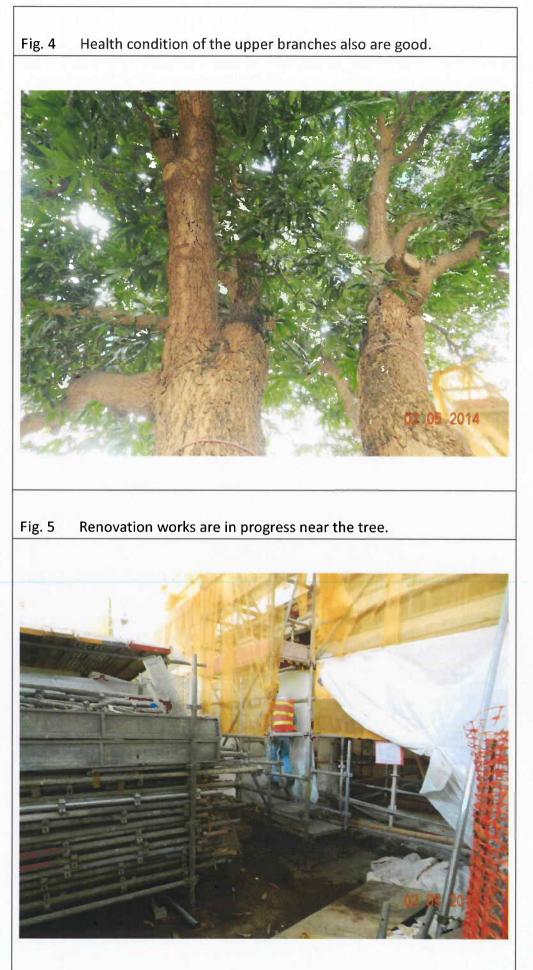
1. No further action is required.



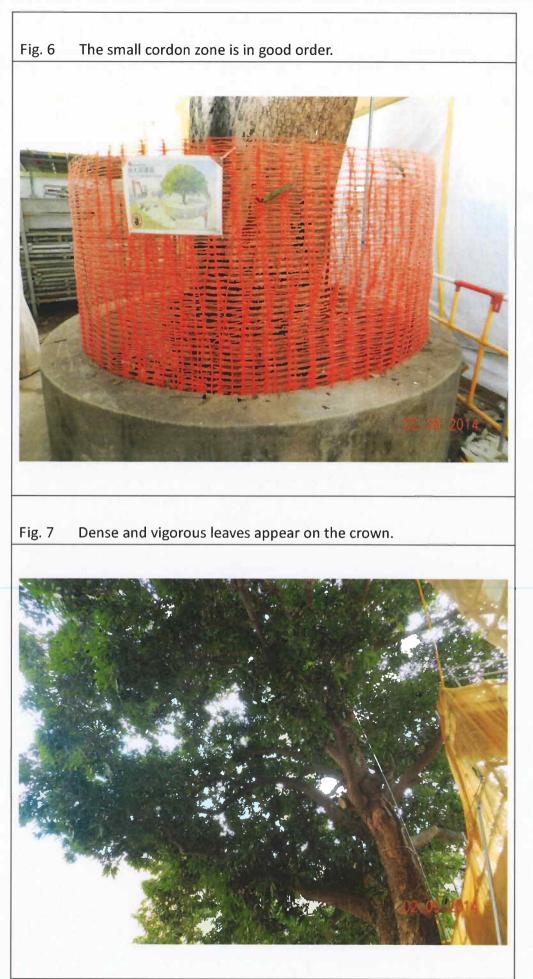




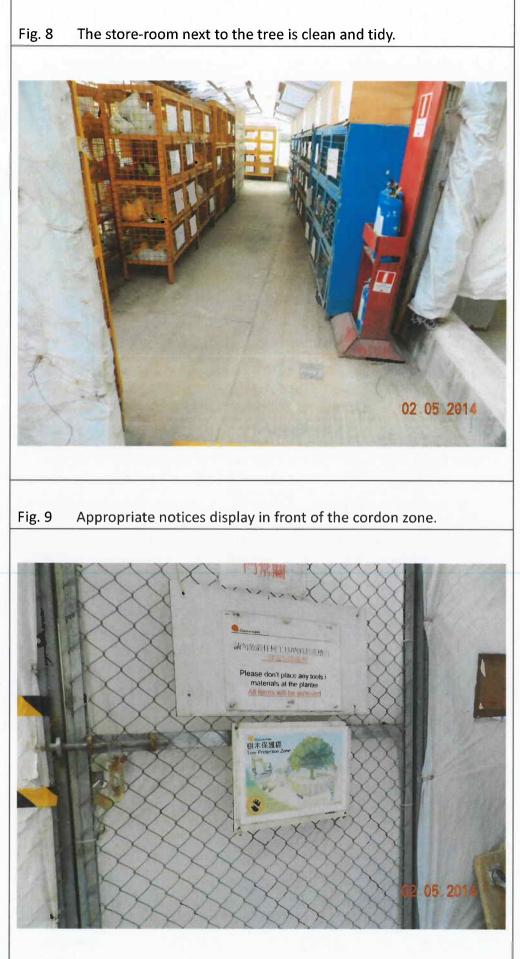




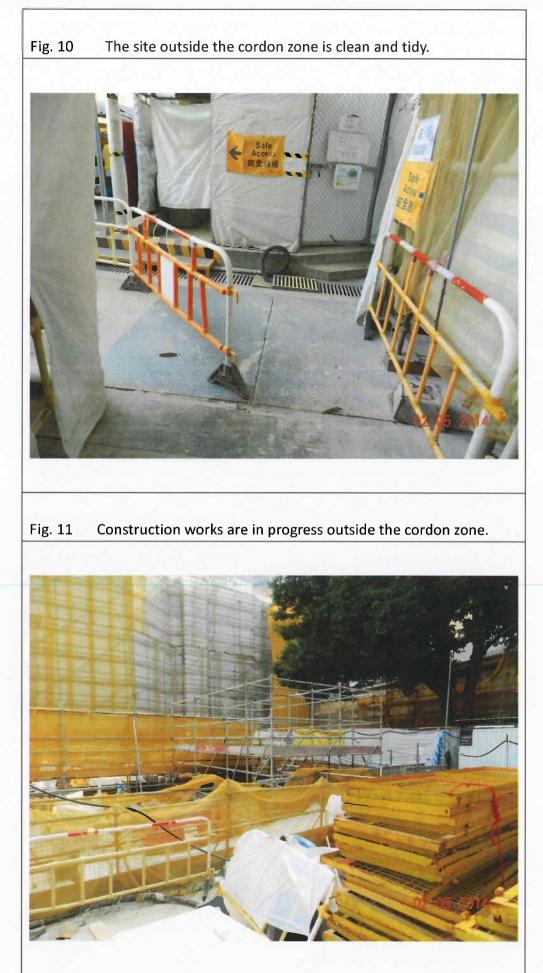




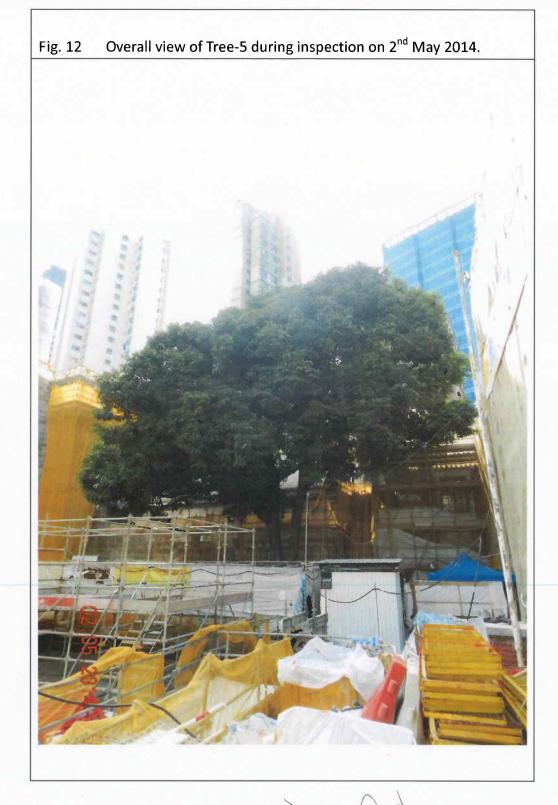












Signature of Inspection Officer : (Mr. LAU Man-chung, ISA CA–HK0050A)

Signature of Endorsement Officer : (Mr. WONG Pak-hay, Contract Manager)

Name of Contractor :

Yan Wing (HK) Environment Management Ltd



30<sup>th</sup> May 2014.

7

I. TREEE NUMBER: Tree-6 Aleurites moluccana 石栗

### II. BASIC INFORMATION :

Height (m)	10m	Crown spread (m)	10m
DBH (mm)	510mm	Overall Health Condition	Fair
		Good/Fair/Poor	
Date of Inspection	2 <sup>nd</sup> May 2014	Last Inspection Date	3 <sup>rd</sup> April 2014

## III. COMMENTS :

- 1. Overall health condition of the tree is fair.
- 2. Sufficient mulch has been added at the planter.
- 3. Many bulky items are placed near the planter.
- 4. The crown is full of green and dense leaves.
- 5. The site outside the cordon zone is clean and tidy.

## IV. RECOMMENDATIONS :

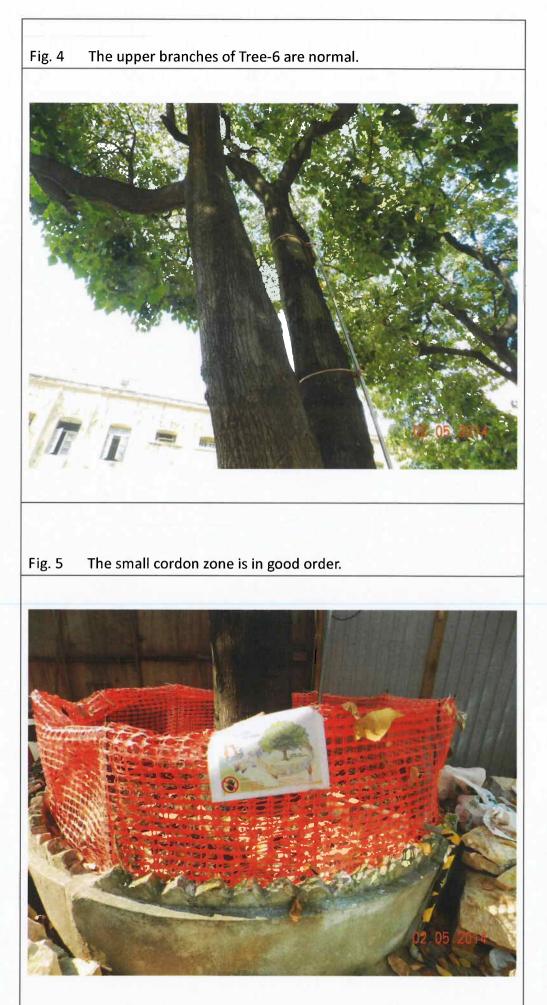
1. No further action is required.



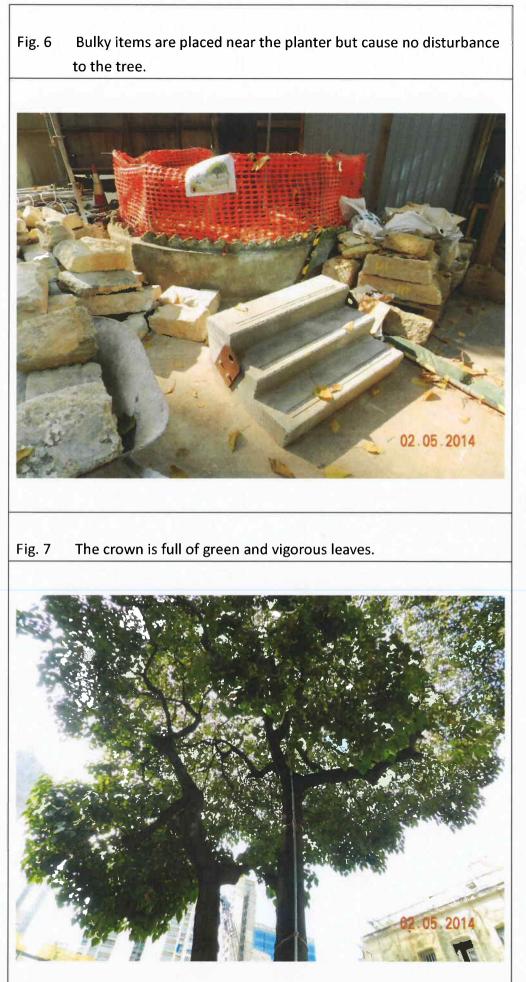


Health condition of the root collar is good. Sufficient mulch has Fig 2. been added at the planter. Fig. 3 Health condition of the mid trunk is fair. TIT 111 概 02 05 2014





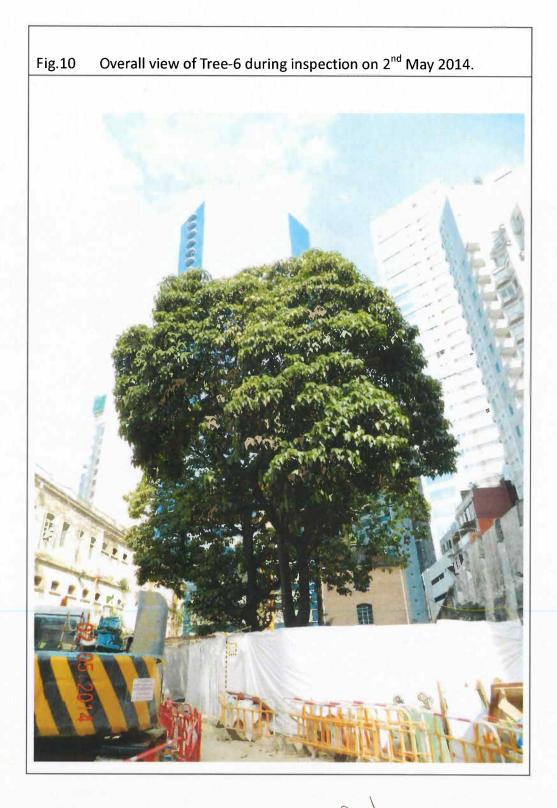












Signature of Inspection Officer : (Mr. LAU Man-chung, ISA CA–HK0050A) Signature of Endorsement Officer : (Mr. WONG Pak-hay, Contract Manager)

Name of Contractor :

<u>AA</u>

Yan Wing (HK) Environment Management Ltd.



30<sup>th</sup> May 2014

#### Appendix 3

## Inspection Report for the 6 Existing Trees <u>at Central Police Station Compound</u> ( Contract Ref. : J3416/400.4/D00025 )

### 1. TREEE NUMBER: Tree-7 Aleurites moluccana 石栗

#### II. BASIC INFORMATION :

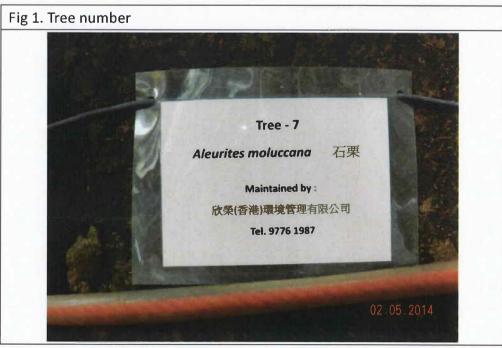
Height (m)	13m	Crown spread (m)	12m
DBH (mm)	650mm	Overall Health Condition	Fair
		Good/Fair/Poor	
Date of Inspection	2 <sup>nd</sup> May 2014	Last Inspection Date	3 <sup>rd</sup> April 2014

#### III. COMMENTS :

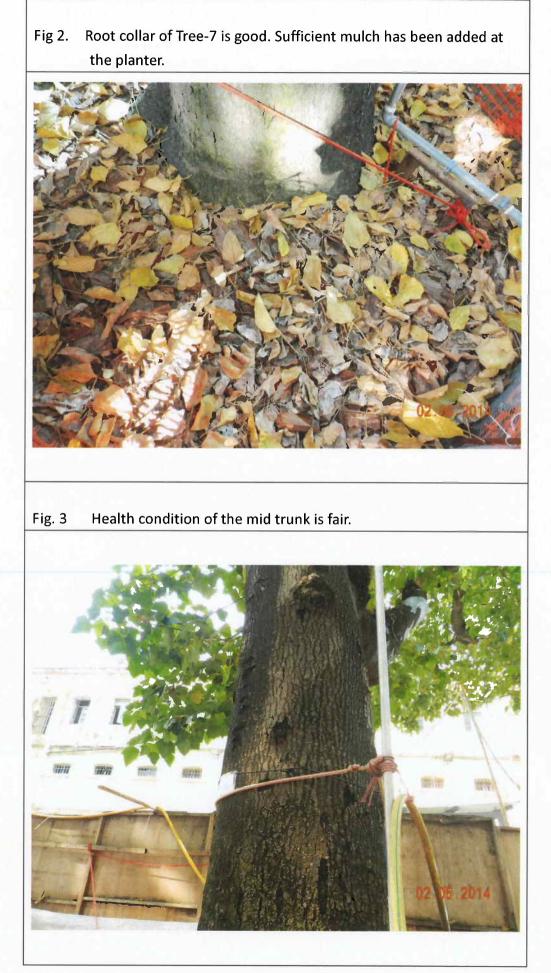
- 1. Overall health condition of the tree is fair.
- 2. Sufficient mulch has been added at the planter.
- 3. Many bulky items are placed near the planter.
- 4. The small cordon is in good order.
- 5. The crown is full of green and dense leaves.
- 6. The access outside the cordon zone is clean and tidy.

### IV. RECOMMENDATIONS :

1. No further action is required.









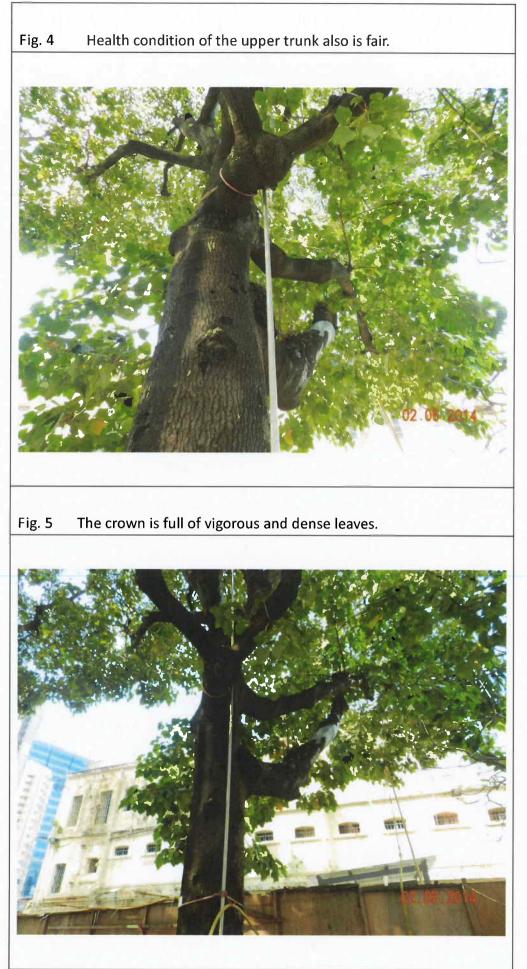


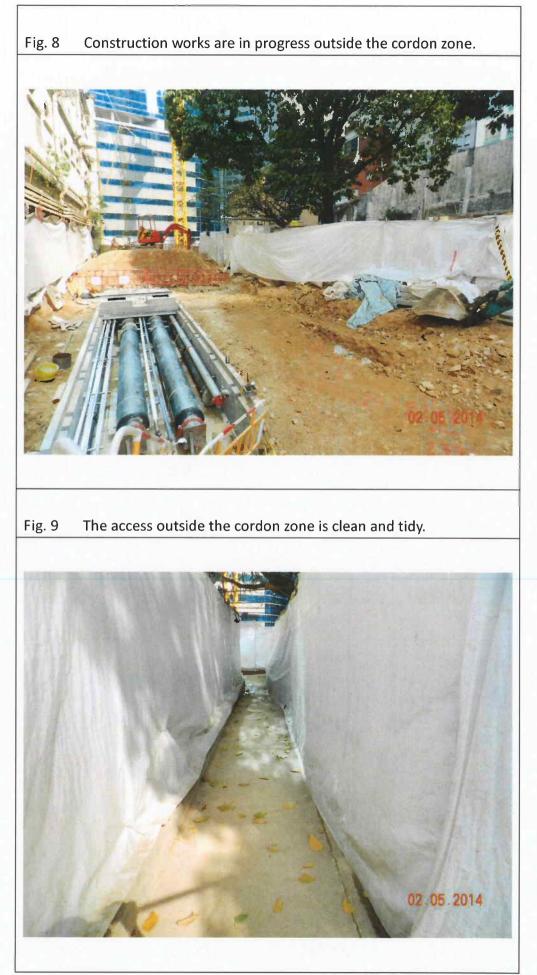




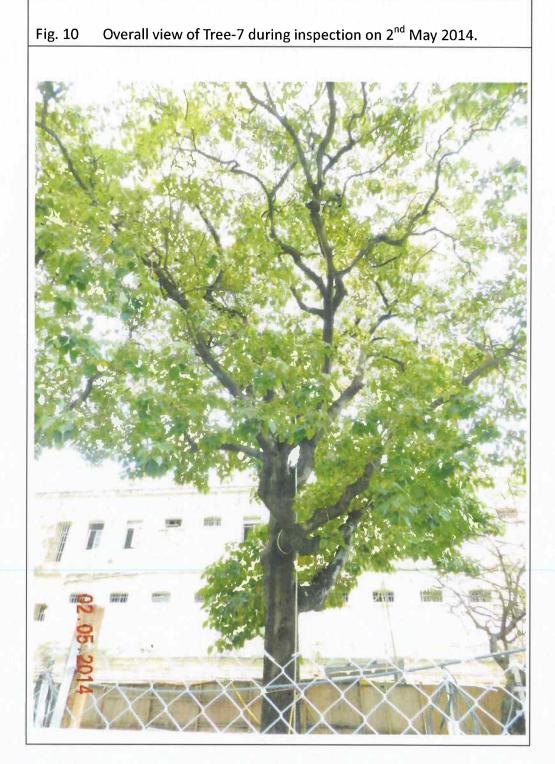
Fig. 7 Bulky items are placed near the planter but cause no disturbance to the tree.











Signature of Inspection Officer : (Mr. Lau Man-chung, ISA CA–HK0045A) Signature of Endorsement Officer : (Mr. WONG Pak-hay, Contract Manager)

Name of Contractor :

Yan Wing (HK) Environment Management Ltd.

30<sup>th</sup> May 2014



## I. TREEE NUMBER: Tree-8 Plumeria rubra 紅雞蛋花

### II. BASIC INFORMATION :

Height (m)	7m	Crown spread (m)	9m
DBH (mm)	430mm	Overall Health Condition	Fair
		Good/Fair/Poor	
Date of Inspection	2 <sup>nd</sup> May 2014	Last Inspection Date	3 <sup>rd</sup> April 2014

#### III. COMMENTS:

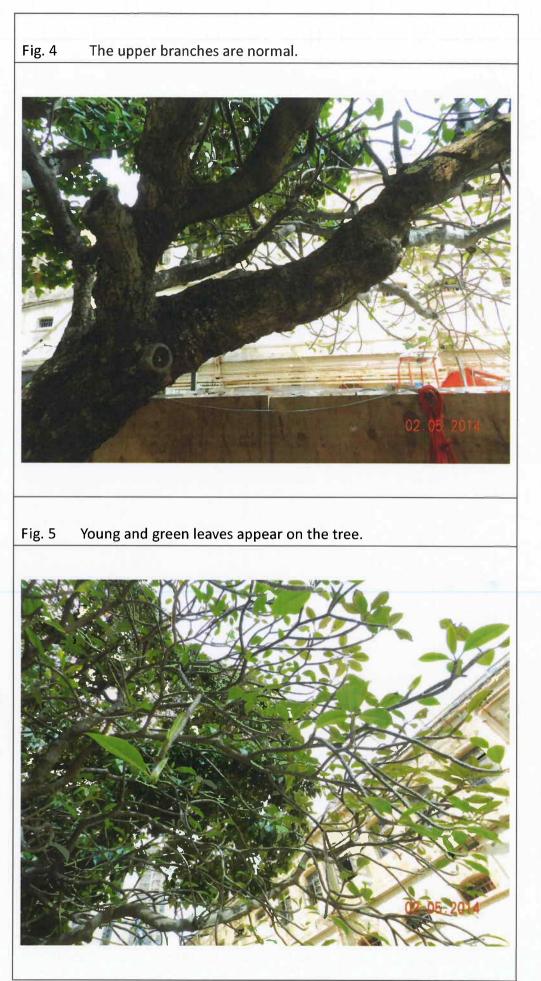
- 1. Overall health condition of the tree is fair.
- 2. Sufficient mulch has been added at the planter.
- 3. The small cordon zone is in good order.
- 4. Young and green leaves appear on the tree.
- 5. Many bulky items are placed near the planter.
- IV. RECOMMENDATIONS :
- 1. No further action is required.







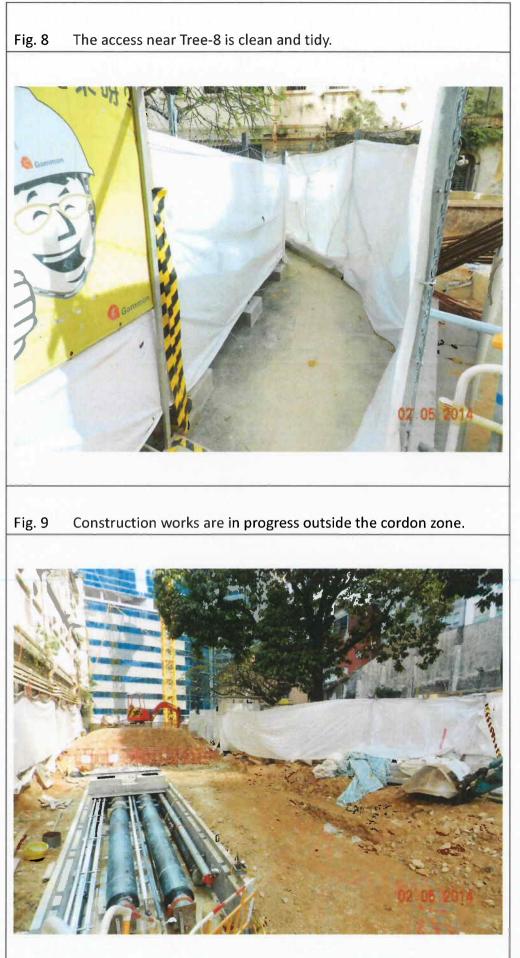




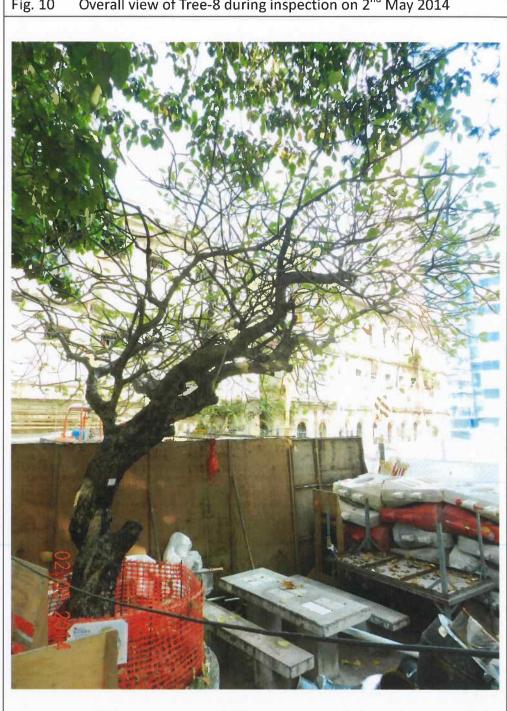












Overall view of Tree-8 during inspection on 2<sup>nd</sup> May 2014 Fig. 10

Signature of Inspection Officer : (Mr. LAU Man-chung, ISA CA-HK0050A) Signature of Endorsement Officer : (Mr. WONG Pak-hay, Contract Manager)

Name of Contractor :

Yan Wing (HK) Environment Management Ltd. 30<sup>th</sup> May 2014



## I. TREEE NUMBER: Tree - 9 Araucaria cunninghamia 花旗杉

### II. BASIC INFORMATION :

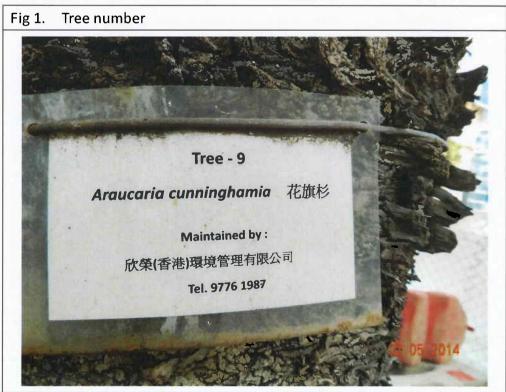
Height (m)	13m	Crown spread (m)	5m
DBH (mm)	230mm	Overall Health Condition Good/Fair/Poor	Fair
Date of Inspection	2 <sup>nd</sup> May 2014	Last Inspection Date	3 <sup>rd</sup> April 2014

### III. COMMENTS :

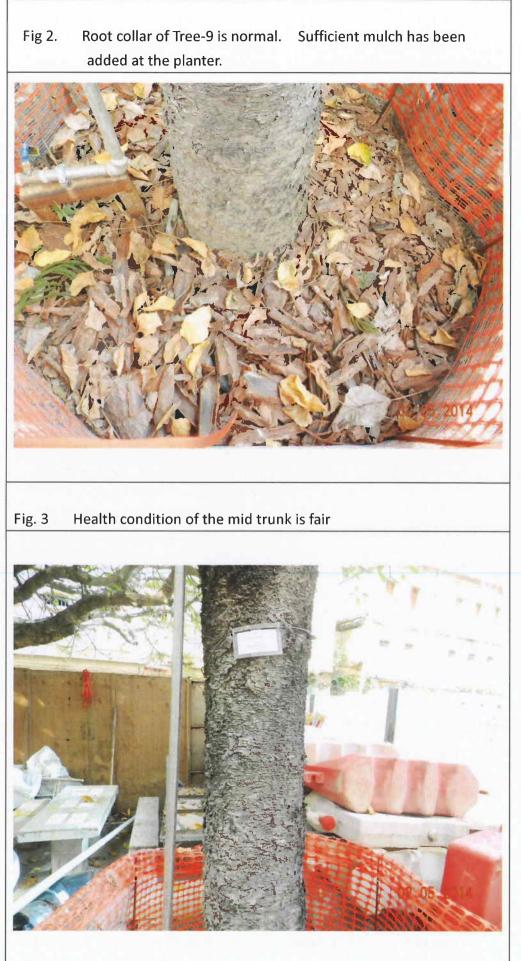
- 1. Overall health condition of the tree is fair.
- 2. Many bulky items are placed near the planter.
- 3. The small cordon zone is in good order.
- 4. Green and vigorous leaves appear on the tree.
- 5. The access outside the cordon zone is clean and tidy.

## IV. RECOMMENDATIONS :

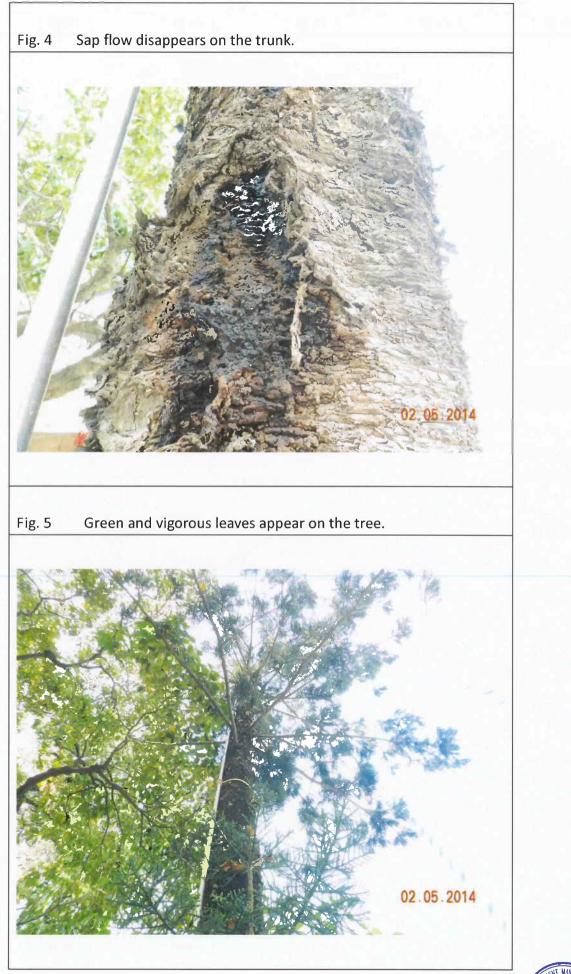
1. No further action is required.



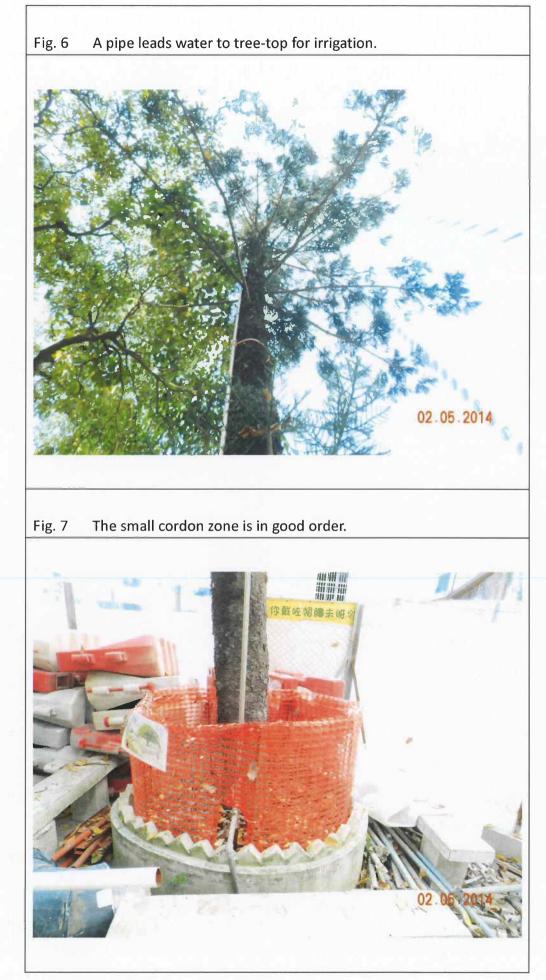




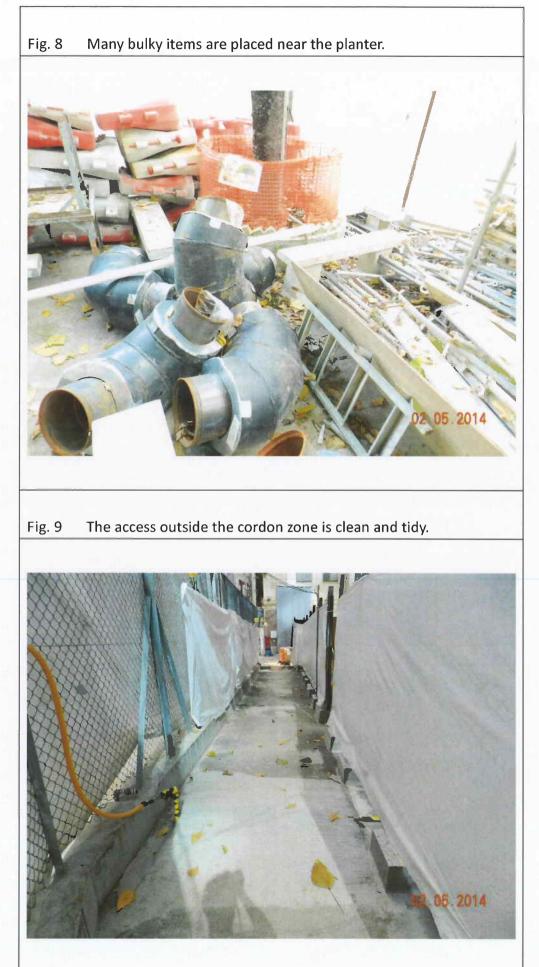




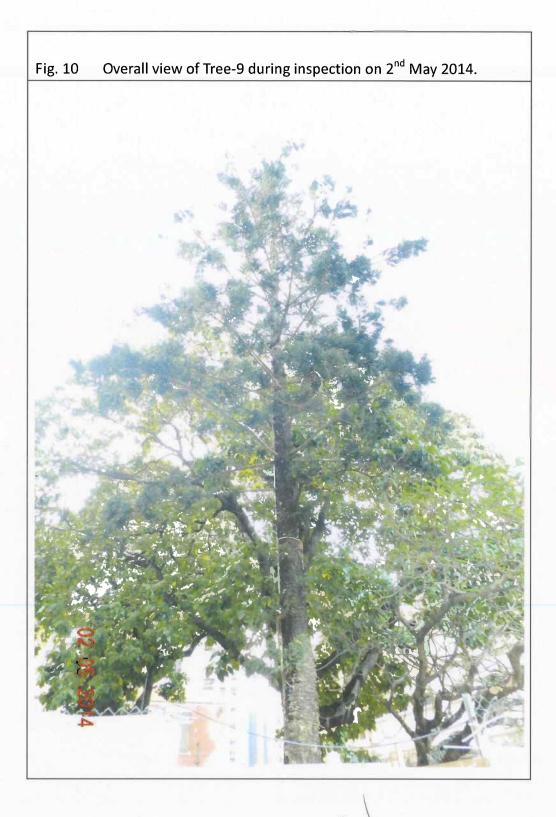












Signature of Inspection Officer : (Mr. LAU Man-chung, ISA CA–HK0050A) Signature of Endorsement Officer : (Mr. WONG Pak-hay, Contract Manager)

Name of Contractor :

Dated this :

Yan Wing (HK) Environment Management Ltd.



30<sup>th</sup> May 2014

1. TREEE NUMBER: Tree -11 Dracaena marginata 馬尾鐵

### II. BASIC INFORMATION :

Height (m)	8m	Crown spread (m)	2m
DBH (mm)	170mm	Overall Health Condition	Fair
		Good/Fair/Poor	
Date of Inspection	2 <sup>nd</sup> May 2014	Last Inspection Date	3 <sup>rd</sup> April 2014

### III. COMMENTS :

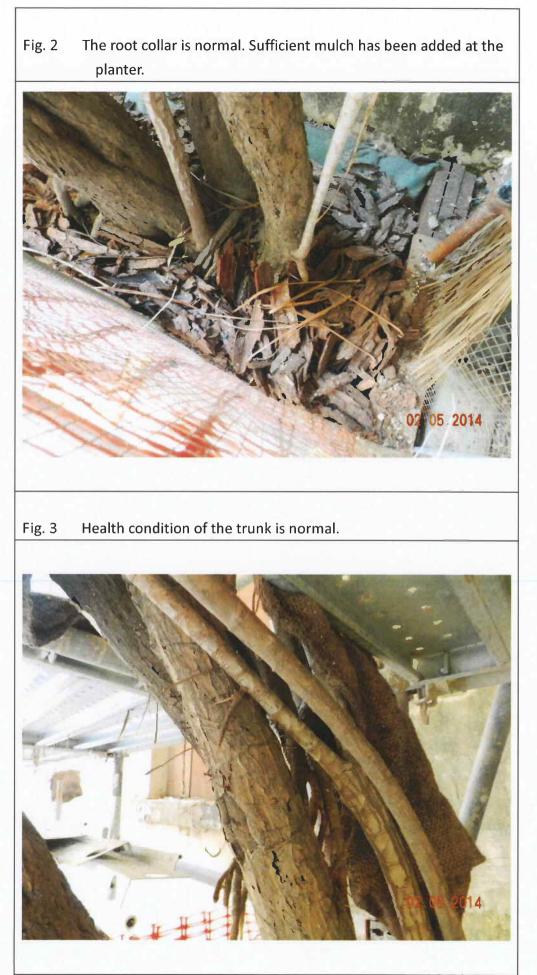
- 1. Overall health condition of the tree is fair.
- 2. Sufficient mulch has been added at the planter.
- 3. The small cordon zone is in order.
- 4. Renovation works are in progress near the tree.
- 5. The crown is full of green and vigorous leaves.
- 6. The site outside the cordon zone is clean and tidy.

#### IV. RECOMMENDATIONS :

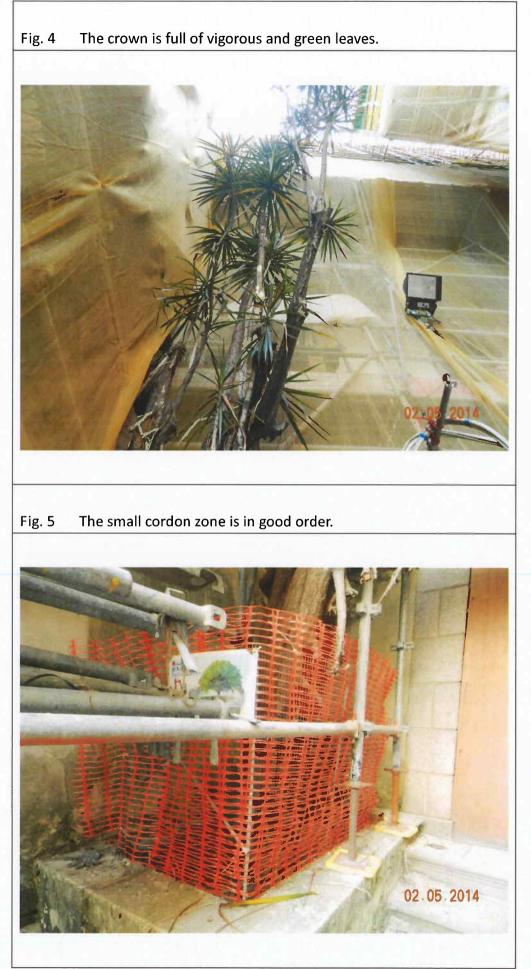
1. No further action is required.



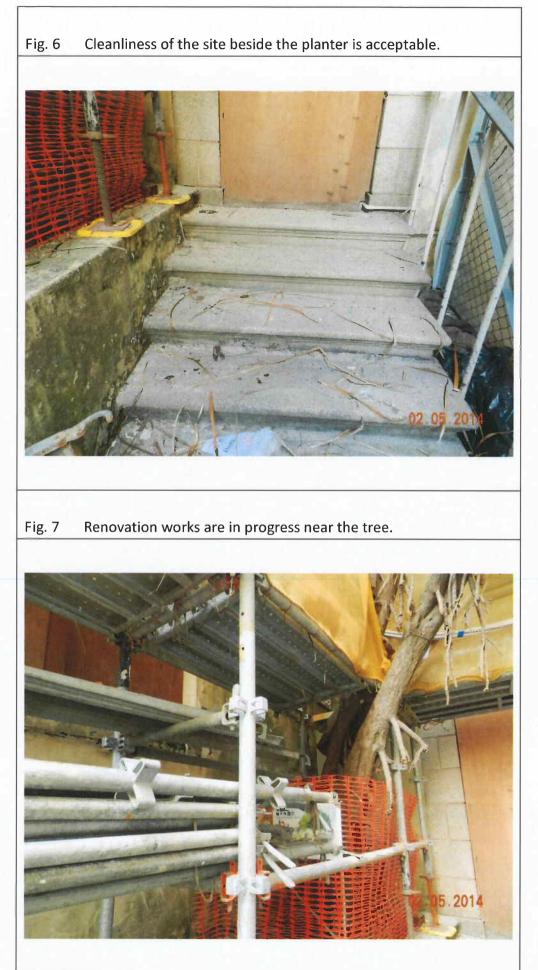




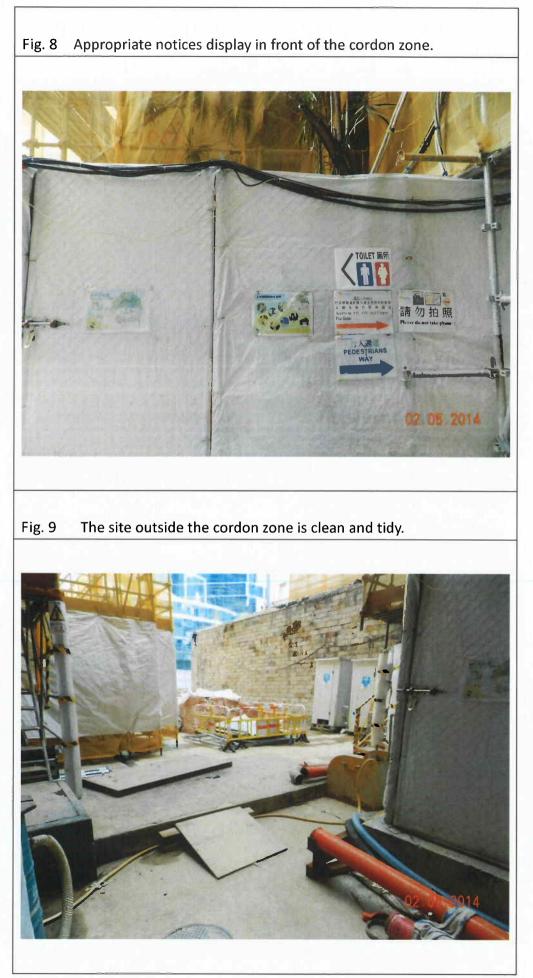




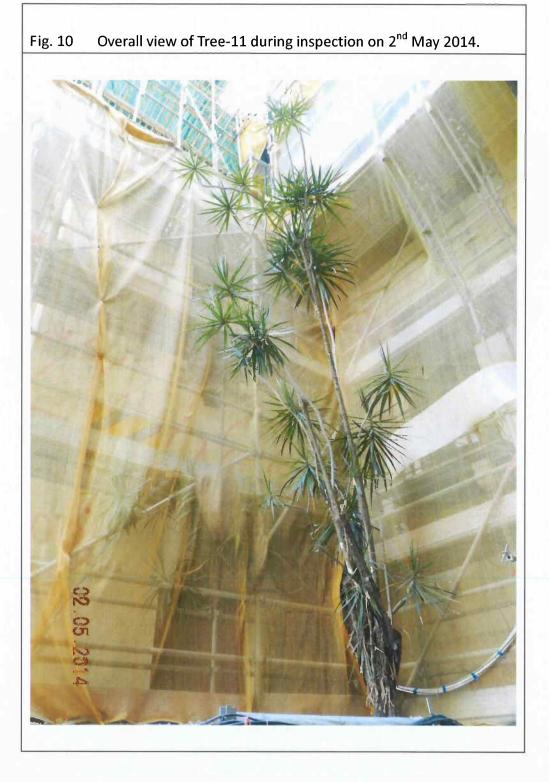












Signature of Inspection Officer : (Mr. LAU Man-chung, ISA CA–HK0050A) Signature of Endorsement Officer : (Mr. WONG Pak-hay, Contract Manager)

Name of Contractor :

Dated this :

Yan Wing (HK) Environment Management Ltd. 30<sup>th</sup> May 2014



Annex K

Environmental Complaint, Environmental Summons and Prosecution Log

Reporting Month	Number of Complaints in Reporting Month	Number of Summons/Prosecutions in Reporting Month
November 2011	0	0
December 2011	0	0
January 2012	0	0
February 2012	0	0
March 2012	4	0
April 2012	0	0
May 2012	0	0
June 2012	2	0
July 2012	1	0
August 2012	0	0
September 2012	0	0
October 2012	0	0
November 2012	2	0
December 2012	0	0
January 2013	0	0
February 2013	1	0
March 2013	1	0
April 2013	0	0

Annex K Cumulative Complaint and Summons/Prosecutions Log

ENVIRONMENTAL RESOURCES MANAGEMENT

Reporting Month	Number of Complaints in Reporting Month	Number of Summons/Prosecutions in Reporting Month
May 2013	0	0
June 2013	0	0
July 2013	0	0
August 2013	0	0
September 2013	0	0
October 2013	0	0
November 2013	0	0
December 2013	0	0
January 2014	2	0
February 2014	1	0
March 2014	1	0
April 2014	1	0
May 2014	0	0
Overall Total	16	0

## ENVIRONMENTAL RESOURCES MANAGEMENT

Annex L

Records of Vibration Monitoring for Piling works





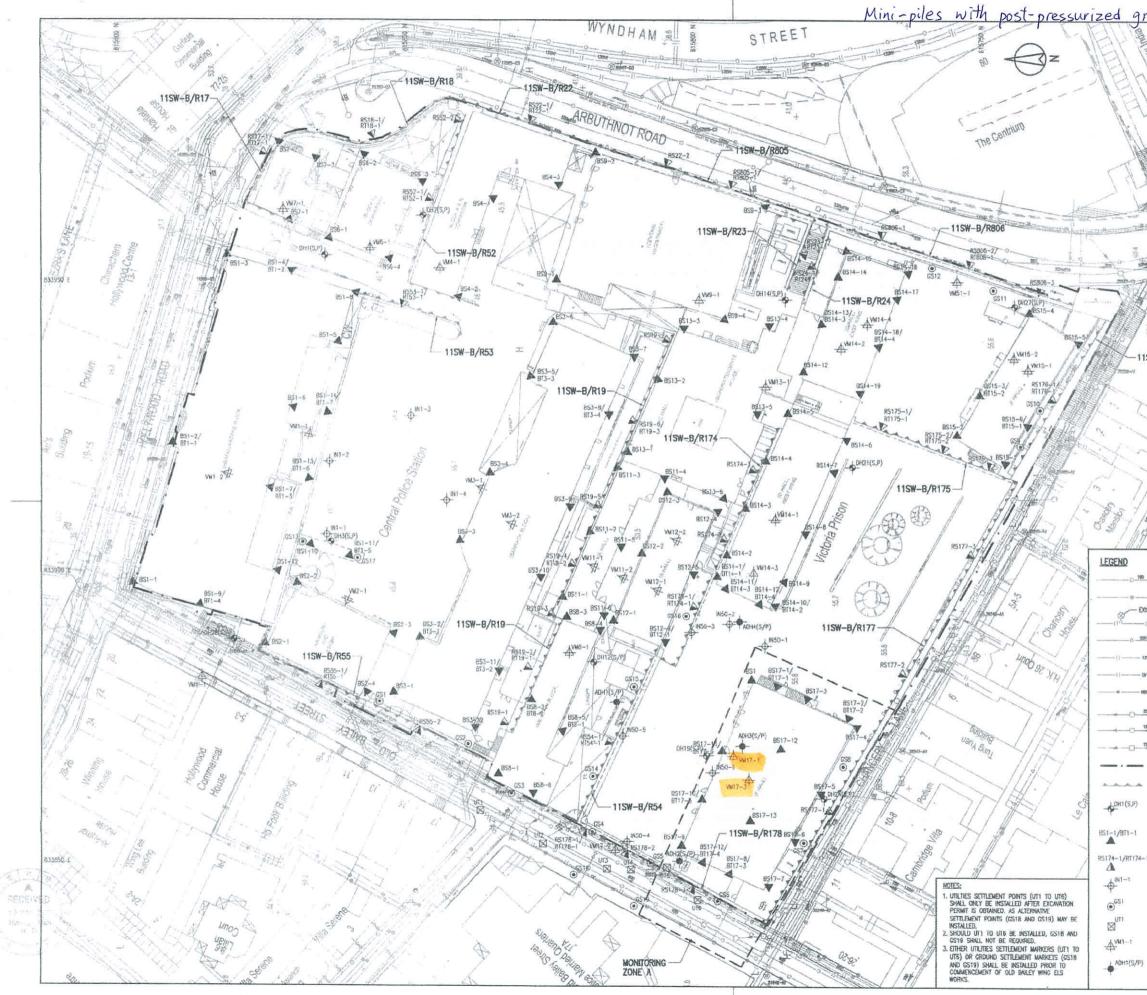
## Vibration Monitoring Record (MAY)

		Parade Ground										
Point	VM1-1	VM1-2	VM2-1	VM3-1	VM3-2							
Date	mm/s	mm/s	mm/s	mm/s	mm/s							
01-May-14	Holiday											
02-May-14	0.439	0.760	0.369	0.687	0.316							
03-May-14	0.217	0.283	0.138	0.384	0.176							
04-May-14			Sunday									
05-May-14	0.251	0.251	0.143	0.087	0.087							
06-May-14			Holiday									
07-May-14	0.193	0.205	0.169	0.159	0.112							
08-May-14	0.349	0.083	0.117	0.327	0.098							
09-May-14	0.259	0.164	0.271	0.314	0.241							
10-May-14	0.338	0.141	0.261	0.624	0.228							
11-May-14			Sunday									
12-May-14	0.341	0.254	0.595	0.431	0.272							
13-May-14	0.087	0.087	0.106	0.102	0.090							
14-May-14	0.095	0.268	0.111	0.196	0.144							
15-May-14	0.571	0.236	0.145	0.102	0.164							
16-May-14	0.175	0.172	0.132	0.095	0.647							
17-May-14	0.663	0.208	0.156	0.351	0.191							
18-May-14			Sunday									
19-May-14	0.438	0.423	0.242	0.304	0.333							
20-May-14	0.128	0.145	0.421	0.176	0.802							
21-May-14	0.164	0.251	0.235	0.199	0.204							
22-May-14	0.103	0.117	0.194	0.678	0.192							
23-May-14	0.124	0.146	0.162	0.162	0.137							
24-May-14	0.193	0.281	0.116	0.371	0.265							
25-May-14			Sunday									
26-May-14	0.209	0.208	0.209	0.416	0.310							
27-May-14	0.307	0.652	0.574	0.423	0.739							
28-May-14	0.150	0.147	0.108	0.290	0.203							
29-May-14	0.539	0.370	0.194	0.214	0.244							
30-May-14	0.349	0.319	0.406	0.259	0.247							
31-May-14	0.128	0.227	0.117	0.223	0.381							



Block & at Pile Works SO Rel IN SHEDKAS - ED SJEARSSION 12/11 299.65 Shiu King Court 000 Plan Approved 9500 tis NG Kin-shing Chill Structural Engineer for BUILDING AUTHORITY 20 FEB 2012 2.54 Key Plan 常引四 - 115W-B/R176 BD SUBMISSION Drawing Status 製图狀況 - This many and co mains been at \$c o of sky of conducts 本文社及代史書的語言が知られて知知られたら。 EWAY KIN X 4월2021 IV 10 ISB 6 8 II 12 3 6 97 11 13 16 Ho gan of the drawing and the design conserved here a Ery to expression of whom the prior action conserved relevant consultants 조합 [[[10] (FD]) 218 월(일도, 平강산성관군) 49 5 % 위험 ([11] Ou mi lake seaso as only in Which TEELFERRI. Cod and only aldered are on site EXISTING FRESH WATER WAIN Rest Res drawny a convertion with the specific and a mixer when it drawnys RES 2300 Rt 21 R 21 R 21 E E E - IF 21. EXISTING SALT WATER WAN - EXISTING STREET LIGHTING NO. 33488-A1 normany builters Breachtricel, edigerents DUSTING STREET LIGHTING CABL len III RUAZORATIRAN Ibe Jacker Clab CIS Lielted EXISTING GAS MAIN DUSTING HY ELECTRICITY CABLE EXISTING LY ELECTROITY CABLE HERZOG GDE MEURON EDISTING TELECOMMUNICATION DUCT trefthy anima HUTCHISON GLOBAL COMMUNICATION LAMITED) EXISTING STORMWATUR DRAIN Vanders Arrindert \$ 25 ROCCO 许尔 14 EXISTING FOUR SEWER PROPOSED FOLK SEWER E & M Engine Suvaural Engineer / RSE R. JRP STE DOUNDARD ARUP DUSTING RETAINING WALL Project INEL CENTRAL POLICE STATION CONSERVATION AND REVITALISATION PROJECT FXCSTING ORIHINGEF WITH STANDFIPE/PEZOWETER Drawing Takes MONITORING LAYOUT PLAN PROPOSED BURLOWC SETTLEMENT POINTS/TR\_TWETER PROPOSED RETAINING WALL SETTLEMENT PORTS/TILTMETER Scale LER Draven S.E. PROPOSED INCLINOUETER TO BE FAINT IN TECTED FILE WALL OL IPIPE FILE WALL KCLd 1:3000A1 00-0AP209674-G-001 PROPOSED GROUND SETTLEMENT PORITS PROPOSED LITELY MONTORING PODITS PROPOSED VERATION MONITORING POINTS PROPOSED ADDITIONAL DEALHOLE Cost fire : 00-04/209571-G-001.049

					( Block 8 Fo	oundation)		
WW 恆誠颈	聿築工種	程有限公	司	Monitoring Check Pts.	Trigger Levels			
				Vibrating Monitoring	Alert level	Alarm level 2.5mm/s	Action level	
Win Win Way Co	nstruction	i Company	Ltd.	#Vibrating Monitoring #Vibration at largest span of	2mm/s	2. Smm/s	3mm/s	
				highest Structural level	5.0mm/s	6.0mm/s	7.5mm/s	
			V	ation Record				
Project Title: Central Po	lice Station C	Conservation &	Revitalization	Project No: WP201	1-May-2014	to	31-May-2014	
POINT	<b>VM8</b> -1	VM11-1#	VM11-2					
DATE PD/(m)	mm/s	mm/s	mm/s					
19-Jun-2012 (Initial)	0.56	0.13	0.19					
1-May-2014				Holiday				
2-May-2014	0.72	0.50	0.48					
3-May-2014	0.71	0.48	0.49					
4-May-2014				Sunday				
5-May-2014	0.83	0.52	0.34					
6-May-2014				Holiday				
7-May-2014	0.75	0.49	0.55					
8-May-2014	0.74	0.46	0.54					
9-May-2014	0.77	0.47	0.53					
10-May-2014	0.76	0.49	0.51					
11-May-2014				Sunday				
12-May-2014	0.75	0.48	0.52					
13-May-2014	0.74	0.46	0.53					
14-May-2014	0.73	0.47	0.51					
15-May-2014	0.78	0.46	0.50					
16-May-2014	0.76	0.45	0.49					
17-May-2014	0.75	0.43	0.42					
18-May-2014				Sunday				
19-May-2014	0.77	0.44	0.48					
20-May-2014	0.75	0.46	0.47					
21-May-2014	0.76	0.45	0.46					
22-May-2014	0.74	0.47	0.47					
23-May-2014	0.75	0.43	0.45					
24-May-2014	0.73	0.40	0.43					
25-May-2014				Sunday				
26-May-2014	0.73	0.38	0.43					
27-May-2014	0.74	0.37	0.41					
28-May-2014	0.75	0.36	0.43					
29-May-2014	0.72	0.38	0.42					
30-May-2014	0.73	0.36	0.40					



Mini-piles with post-pressurized grout in CDG and steel shear H-piles at Block 1, D SUBMISSION RD SUGMISSION B BD SUSMISSION Shou King Calif 10-1 Plas Approved NG Kun-shing Chief Structural Engineer for BCILLINNG ALTCHORITO 1 9 MAR 2012 lay Plan 索引導 11SW-B/R176 BD SUBMISSION wing Blatux 對顯狀況 ゼロlisist Lonsilion。 主義法以外の内容現象体的指面明白1 remains optionants. 未加有機範疇合同實動阿爾。卡德皮解此機械 出版或如約 的mit Like meansaments 的导致转动器系上重要的 Check and while a4 dimensions on sa 所有尺寸必須加工地領導者參加單核. EXISTING FRESH WATER MAD and an other related scoreigh 素羅是心思與現俗說何喜及其它介張講師一座認識。 EXISTING SALT WATER MAIN STREET LIGHTING NO. 33488-A1 EXISTING TRUES & BORERARY DUSTING STREET LIGHTING CABLE Chent @ 1 EXISTING GAS MAIN 唐馬會文物從直有關公司 Jovan Carl US Listin XUSTING HV ELECTRICITY CASEE EXISTING LY ELECTRICITY CABLE HERZOG&DEMEURON EXISTING TELECOMMUNICATION DUCT (HUTCHISON G OBAL COMMUNICATIONS LIMITED) EXISTING STORMWATER DRAIN ROCCO 许纳严 EXISTING FOUL SEWER PROPOSED FOLL SEWER 三古鮮王的 R. JRP STIE BOUNDAR ARUP EXISTING RETAINING WALL Project 251 CENTRAL POLICE STATION CONSERVATION AND REVITALISATION PROJECT EXISTING DRILLHOLE WITH STANDPIPE/PIEZOMETER Drawing Title EA MONITORING LAYOUT PLAN PROPOSED BUILDING SETTLEMENT POINTS/TRUTMETER PROPOSED RETAINING WALL SETTLEMENT POINTS/TRUTMETER Chann 90 PROPOSED INCLINOMETER TO BE BUILT IN BORIED PILE WALL OR PIPE PILE WALL 1:300041 K.C.Lei 00-0AP209674-G-001 B PROPOSED GROUND SETTLEMENT POINTS PROPOSED UTILITY MONITORING POINTS PROPOSED VERATION MONITORING POINTS PROPOSED ADDITIONAL DRILLHOLE Cat Sis : 00-434P209674-G-601.dwg



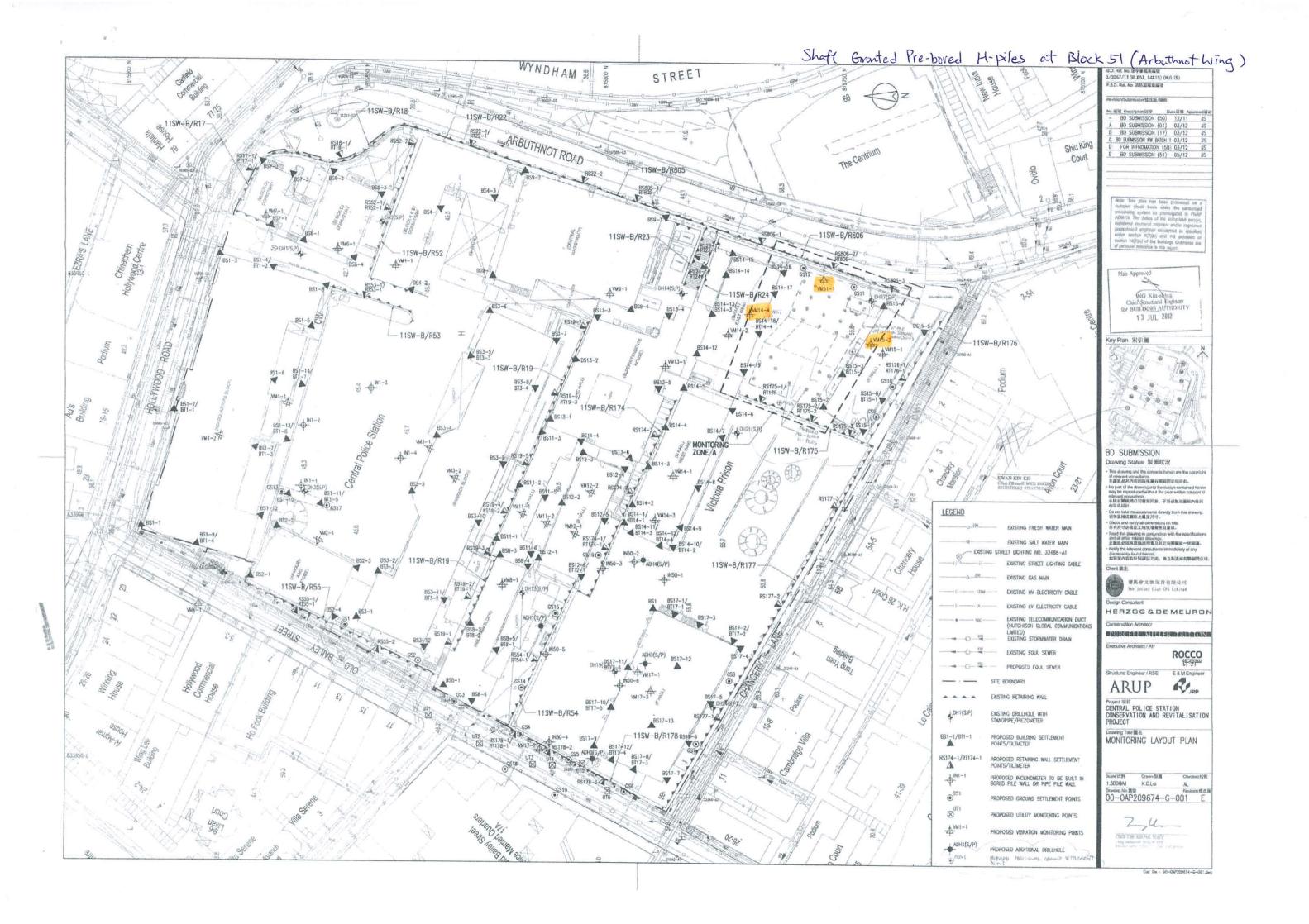
Block 17 Foundation Works ) Trigger Levels Monitoring Check Pts. Alert level Alarm level Action level Vibration Monitoring 2mm/s 2.5mm/s 3mm/s # Vibration at largest span of 5.0mm/s 6.0mm/s 7.5mm/s highest Structural level Vibration Record

				vibiau	on Record			
Project Title: Cen	tral Polio	ce Station C	onservation & Revi	talization	Project No: WP201	1-May-2014	to	31-May-2014
POINT		<b>V</b> M17-1	<b>V</b> M17-3 #					
DATE I	PD/(m)	mm/s	mm/s					
19-Jun-2012 (Init	tial)	0.13	0.37					
Surveying Date								
1-May-2014			•	•	Holiday	•		•
2-May-2014		0.26	0.59					
3-May-2014		0.25	0.57					
4-May-2014					Sunday			
5-May-2014		0.30	0.66					
6-May-2014					Holiday			
7-May-2014		0.29	0.65					
8-May-2014		0.31	0.67					
9-May-2014		0.30	0.68					
10-May-2014		0.28	0.64					
11-May-2014		0.20	0.04		Sunday			
12-May-2014		0.29	0.68					
13-May-2014		0.30	0.65					
14-May-2014		0.31	0.66					
15-May-2014		0.30	0.67					
16-May-2014		0.38	0.65					
17-May-2014		0.36	0.64					
18-May-2014					Sunday			
19-May-2014		0.32	0.64					
20-May-2014		0.35	0.63					
21-May-2014		0.31	0.64					
22-May-2014		0.28	0.62					
23-May-2014 24-May-2014		0.30 0.29	0.62 0.61			+ +		
25-May-2014		0.23	0.01		Sunday			I
26-May-2014		0.33	0.60					
27-May-2014		0.31	0.59					
28-May-2014		0.30	0.61					
29-May-2014		0.29	0.62					
30-May-2014		0.28	0.59					



Gia	/Pipe Pile Walls	3/3053/11 (BLK 17&56) (HW)(S)
UI MIC	B1002 N 001518	F.S.D. Raf. No. 消防虛检索編號
	CH3/	Revision/Submission 修改版/报出 No.编集 Description 說明 Date日期 Approved 審定
1//		- BD SUBMISSION 12/11 JS
21		
15	Shiu King Gourt	
	L-TL II - Frank	
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	100 100 100 100 100 100 100 100 100 100	
404 Hos	of the ofference	Plan Approved
01	E to the t	X
UH.	354	NG Kinlshing Chief Structural Engineer
	· · · · ·	for BUILDING AUTHORITY 2 0 FEB 2012
1 52	Tent	
-115	W-B/R176	Key Plan 索引圖
-41		Store A
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11	AN ANTIN	BD SUBMISSION
	AN 5	Drawing Status 製圖狀況 - This drawing and the contents herein are the copyright
1 /3)	KWAN KIN KEI Ceng Fismete Mice ton Medistenen structure and enorsen	of relevant consultants. 本關紙及其內容的版框風有調驗問公司所有。 - No part of the drawing and the design contained herein
11	REGISTERED STRUCTORAL ENGRAVE	may be reproduced without the prior written consent of relevant concultance. 未經有關顧問公司書面同意。不得後對此靈經內任何
		內容或設計。 - Do not take measurements directly from this drawing 切勿直接從圓纸上量度尺寸。
0-100	EXISTING FRESH WATER MAIN	<ul> <li>Check and verify all dimensions or site.</li> <li>所有尺寸必須在工地現場複查及著核。</li> <li>Read this drawing in conjunction with the specifications</li> </ul>
©	EXISTING SALT WATER MAIN ING STREET LIGHTING NO. 33488–41	and all other related drawings. 此關於必須與現格證明書及其它有關關紙一併閱讀。 - Notify the relevant consultants immediately of any
- LAIST	EXISTING STREET LIGHTING CAELE	discrepancy found herein. 如役現內容有任何謬误之處,應立刻通知有調解問公司。
ê) 150	EXISTING GAS MAIN	Client 菜主 賽馬會文物保有有限公司
1330	EXISTING HV ELECTRICITY CABLE	The Jockey Club CPS Limited
1.9	EXISTING LV ELECTRICITY CABLE	
HIZ -	(HUTCHISON GLOBAL COMMUNICATIONS	Conservation Architect
C	LIMITED) EXISTING STORNWATER DRAIN	Executive Architect / AP
150	EXISTING FOUL SEWER	ROCCO
15]	PROPOSED FOUL SEWER	Structural Engineer / RSE E & M Engineer
	SITE BOUNDARY	ARUP ARUP
	EXISTING RETAINING WALL	Project項目 CENTRAL POLICE STATION
,P)	EXISTING DRILLHOLE WITH STANDPIPE/PIEZOMETER	CONSERVATION AND REVITALISATION PROJECT
-1	PROPOSED BUILDING SETTLEMENT POINTS/TILITMETER	Drawing Title 1828 MONITORING LAYOUT PLAN
174-1	PROPOSED RETAINING WALL SETLEMENT	
	PROPOSED INCLINOMETER TO BE BUILT IN	Scale 比例 Drawn 別園 Checked 校时 1:3000A1 K.C.Loi AL
	BORED PILE OR FIPE PILE WALL PROPOSED GROUND SETTLEMENT POINTS	Drawing No 画弦 Revision 你说加 00-0AP209674-G-001 -
	PROPOSED UTILITY MONITORING POINTS	
í,		
0 (0)	PROPOSED VIBRATION MONITORING POINTS	
(S/P)	PROPOSED ADDITIONAL DRILLHOLE	

14/14/						(Bore	d Pile Walls / Pipe	Pile Walls at I	Block 50)	
WW 恆調	成建築	工程有限	公司		Monitoring	Check Pts	Trigger Levels			
							Alert level	Alarm level	Action level	
Win Win Way	Construc	uon Compa	ny Lia.		-	Monitoring	2mm/s	2.5mm/s	3mm/s	
						largest span of ictural level	5.0mm/s	6.0mm/s	7.5mm/s	
				Vibration	Record					
Project Title: Central F	Police Station	Conservation	& Revitalizatio	on	Project No: W	P201	1-May-2014	to	30-May-201	
POINT	<b>VM8-</b> 1	<b>VM11-1</b> #	<b>VM</b> 11-2	VM12-1#	VM12-2	VM14-3	<b>VM</b> 17-1	<b>VM</b> 17-2	<b>VM</b> 17-3 #	
DATE PD/(m)	mm/s	mm/s	mm/s	mm/s	mm/s	mm/s	mm/s	mm/s	mm/s	
19-Jun-2012 (Initial)	0.56	0.13	0.19	0.22	0.13	0.21	0.13	0.13	0.37	
Surveying Date									1	
1-May-2014					Holiday		·			
2-May-2014	0.72	0.50	0.48	0.51	0.42	0.47	0.26	0.68	0.59	
3-May-2014	0.71	0.48	0.49	0.49	0.43	0.46	0.25	0.65	0.57	
4-May-2014		•		•	Sunday		<u> </u>			
5-May-2014	0.75	0.51	0.53	0.52	0.43	0.56	0.30	0.75	0.66	
6-May-2014		1			Holiday				-	
7-May-2014	0.75	0.49	0.55	0.51	0.42	0.54	0.29	0.74	0.65	
8-May-2014	0.74	0.46	0.54	0.50	0.41	0.53	0.31	0.73	0.67	
9-May-2014	0.77	0.47	0.53	0.49	0.40	0.55	0.30	0.73	0.68	
10-May-2014	0.76	0.49	0.51	0.51	0.42	0.54	0.28	0.74	0.64	
11-May-2014					Sunday					
12-May-2014	0.75	0.48	0.52	0.50	0.45	0.56	0.29	0.75	0.68	
13-May-2014	0.74	0.46	0.53	0.49	0.44	0.53	0.30	0.73	0.65	
14-May-2014 15-May-2014	0.73	0.47	0.51	0.49	0.40	0.54	0.31	0.72	0.66	
16-May-2014	0.78	0.46	0.50	0.47	0.39	0.56	0.30 0.38	0.71	0.67	
17-May-2014	0.76	0.43	0.49	0.46	0.41	0.53	0.36	0.70	0.63	
18-May-2014	0.75	0.45	0.42	0.44	Sunday	0.32	0.50	0.07	0.04	
19-May-2014	0.77	0.44	0.48	0.45	0.40	0.54	0.32	0.67	0.64	
20-May-2014	0.75	0.46	0.43	0.43	0.38	0.51	0.35	0.65	0.63	
21-May-2014	0.76	0.45	0.46	0.44	0.41	0.52	0.31	0.67	0.64	
22-May-2014	0.74	0.47	0.47	0.41	0.39	0.50	0.28	0.61	0.62	
23-May-2014	0.75	0.43	0.45	0.43	0.38	0.48	0.30	0.65	0.62	
24-May-2014	0.73	0.40	0.43	0.42	0.37	0.49	0.29	0.62	0.61	
25-May-2014					Sunday		<u> </u>			
26-May-2014	0.73	0.38	0.43	0.42	0.33	0.48	0.33	0.59	0.60	
27-May-2014	0.74	0.37	0.41	0.39	0.38	0.47	0.31	0.61	0.59	
28-May-2014	0.75	0.36	0.43	0.40	0.36	0.50	0.30	0.60	0.61	
29-May-2014	0.72	0.38	0.42	0.41	0.37	0.51	0.29	0.58	0.62	
30-May-2014	0.73	0.36	0.40	0.40	0.36	0.47	0.28	0.53	0.59	



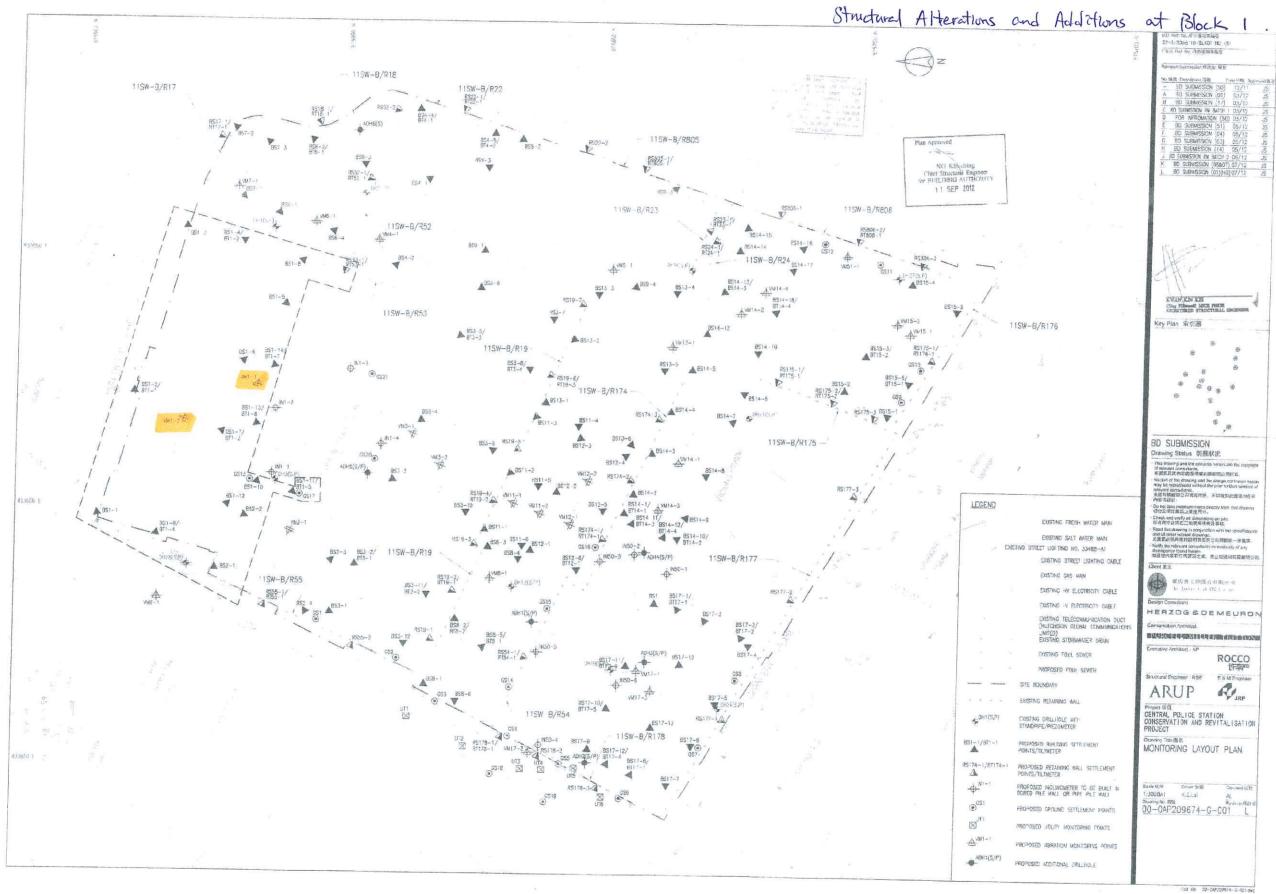
							( Shaft Gro	outed Pre-bor	ed H-piles at I	Block 51)		
WW A	ह≣∄ढ	事符工	程有限公	지크				Trigger Levels				
	且或灭	き 深 上	任月1121	ンロ		Monitoring Check	Pts.	Alert level	Alarm level	Action level		
						Vibrating Monitor	ing	2mm/s	2.5mm/s	3mm/s		
Win Win W	Vay Coi	nstructio	on Company	<sup>7</sup> Ltd.						1		
					Vibration	Record						
Project Title: C	Central Po	olice Station	n Conservation	& Revitalization	n Projec	ct No: WP201	1-]	May-2014	to	31-May-2014		
POINT		<b>VM</b> 14-4	VM15-2	VM51-1								
DATE P	D/(m)	mm/s	mm/s	mm/s								
03-Dec-2012 (Ini	tial)	0.14	0.21	0.3						1		
1-May-2014				и — "Ц		Holiday						
2-May-2014		0.27	0.12	0.13								
3-May-2014		0.27	0.12	0.13								
4-May-2014		0.20	0.15	0.12		Sunday						
-		0.00	0.1.1	0.10		Sunuay						
5-May-2014		0.28	0.14	0.12		TT 1' 1						
6-May-2014			T	1		Holiday						
7-May-2014		0.27	0.12	0.13								
8-May-2014		0.26	0.13	0.12								
9-May-2014		0.25	0.12	0.12								
10-May-2014		0.28	0.12	0.13								
11-May-2014						Sunday						
12-May-2014		0.33	0.16	0.14								
13-May-2014		0.34	0.18	0.13								
14-May-2014		0.36	0.17	0.12								
15-May-2014		0.30	0.16	0.10		+ +				1		
16-May-2014		0.29	0.15	0.15						1		
17-May-2014		0.30	0.17	0.14						1		
18-May-2014			·	· · · · · ·		Sunday	•			÷		
19-May-2014		0.31	0.16	0.13								
20-May-2014		0.30	0.18	0.14								
21-May-2014		0.29	0.17	0.15						ļ		
22-May-2014		0.31	0.16	0.13								
23-May-2014		0.34	0.15	0.12								
24-May-2014		0.31	0.16	0.13		Com dana						
25-May-2014	-	0.21	0.14	0.15		Sunday		1				
26-May-2014 27-May-2014		0.31	0.14 0.17	0.15		<u>├</u>				+		
27-May-2014 28-May-2014		0.33	0.17	0.16								
29-May-2014		0.32	0.15	0.13						+		
30-May-2014		0.32	0.14	0.13								

Annex M

Records of Vibration Monitoring for Other Construction Works



14/14		- b - t. fat.					( Block 14 Str	uctural A&A	)
VV VI	/ 肉	誠建築	工程有降	民公司		Monitoring Check Pts.		Trigger Levels	
						Monitoring Check Pts.	Alert level	Alarm level	Action level
Win Wi	n Way	v Construe	ction Comp	oany Ltd.		Vibration Monitoring	2mm/s	2.5mm/s	3mm/s
						# Vibration at largest span of highest Structural level	5.0mm/s	6.0mm/s	7.5mm/s
					Vibration	Record	•		•
Project Title:	Central	Police Station	n Conservation			ect No: WP201	1-May-2014	to	31-May-2014
Tiojeet Title.	Central	Tonee Station	i conservation	& Revitalizati			1-1v1ay-2014	10	51-Widy-2014
POINT		<b>VM14-1</b> #	VM14-2 #	<b>V</b> M14-3	VM14-4				
DATE	PD/(m)	mm/s	mm/s	mm/s	mm/s				
19-Nov-12 (I		0.103	0.112	0.147	0.136				
1-May-2014			•			Holiday	I		1
2-May-2014		0.18	0.10	0.13	0.38				
3-May-2014		0.17	0.11	0.15	0.37				
4-May-2014						Sunday			1
5-May-2014		0.23	0.15	0.16	0.40				
6-May-2014						Holiday			1
7-May-2014		0.23	0.13	0.15	0.39				
8-May-2014		0.22	0.12	0.15	0.38				
9-May-2014		0.22	0.13	0.16	0.35				
10-May-2014		0.21	0.13	0.14	0.36				
11-May-2014						Sunday			1
12-May-2014		0.23	0.11	0.13	0.35				
13-May-2014		0.24	0.12	0.14	0.36				
14-May-2014		0.25	0.13	0.15	0.34				
15-May-2014		0.23	0.10	0.14	0.35				
16-May-2014		0.21	0.11	0.13	0.36				1
17-May-2014		0.20	0.10	0.16	0.38				1
18-May-2014	l					Sunday			+
19-May-2014		0.23	0.14	0.16	0.40				
20-May-2014		0.22	0.13	0.18	0.35				1
21-May-2014		0.24	0.12	0.17	0.36				1
22-May-2014		0.25	0.15	0.16	0.33				
23-May-2014		0.23	0.13	0.15	0.34				1
24-May-2014		0.22	0.13	0.14	0.32				1
25-May-2014						Sunday	I		1
26-May-2014	I I	0.23	0.13	0.13	0.35				
27-May-2014		0.22	0.13	0.15	0.34				1
28-May-2014		0.21	0.14	0.13	0.35				1
29-May-2014		0.22	0.12	0.14	0.33				
30-May-2014		0.19	0.11	0.13	0.31				1



Structural Additions and



0	Ilterations at 13	B.D. Ref. No 原字要指案编辑
ew India	10USE 815700	22-3/3066/10/BLK11(HU)(S) F.S.D. Ref No. 消防原復築編號
(Bill)	Site .	Revision/Submission 性较粒/极批
1		No.编弦 Description 說明 Date 日界 Approved畫
	5. C.	- BD SUBMISSION (50) 12/11 JS A BD SUBMISSION (01) 03/12 JS
14	q	B BC SUBMISSION (17) 03/12 JS C BD SUBMISSION RW BATCH 1 03/12 JS
-	Shiru King	D FOR INFROMATION (50) 03/12 JS E BD SUBMISSION (51) 05/12 JS
1	Court	F BD SUBMISSION (04) 05/12 JS
		H BD SUBMISSION (14) 05/12 JS
te		J BD SUBMISSION RW BATCH 2 06/12 JS K BD SUBMISSION (06&07) 07/12 JS
		L BD SUBMISSION (01)(HQ)07/12 US M BD SUBMISSION (11) 07/12 US
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530-61		Plan Approved
11	7	CHIONG Kam-yueng Jacky
1	240	Chief Structural Engineer for BUILDING AUTHORITY
5	91	- 3 OCT 2012
67.	Jac.	
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11	TI	BD SUBMISSION
14	S M M	Drawing Status 製麗狀況 This drawing and the contents berein are the copyright
18	KWAN KIN KEI CLAS FISHME MICE PHKIE BEOSTERED STRUCTURAL ENGINEER	of relevant consultants。 本確能及其內容的版權屬有關關問公司所有。
97	14 8	<ul> <li>No part of the drawing and the design contained herein may be reproduced without the pror written consent of relevant consultants.</li> <li>未詳有詞解問公司書面回意。不得也製此圓紙內任何</li> </ul>
		「内容既投計 - Do not take measurements directly from this crawing.
100	EXISTING FRESH WATER MAIN	切勿直浪從審紙上量度尺寸。 Check and vorify all dimensions on site 研有尺寸必须在工地現場抱意及審核。
	EXISTING SALT WATER MAIN	<ul> <li>Read this drawing in conjunction with the specifications and all other related drawings.</li> </ul>
EXISTI	NG STREET LIGHTING NC. 33488-A1	此置統必須與契格設明實及其它有關團紙一併相議。 - Notify the relevant consultants immediately of any discrepancy found iterian, 約發現內容有任何課版之處。應立對通知有關期間公司。
- 6-	EXISTING STREET LIGHTING CABLE	如發現內容有任何將脫之處。應立刻通知初調朝開公司。 Client 聚主
250	EXISTING CAS MAIN	· 赛局会文物保育有限公司
1320	EXISTING HV ELECTRICITY CABLE	The Jorkey Club CP Limited
LV	EXISTING LV ELECTRICITY CABLE	
нас -	EXISTING TELECOMMUNICATION DUCT	
225	(HUTCHISON GLOBAL COMMUNICATIONS LIMITED) EXISTING STORYWATER DRAIN	
150	EXISTING FOUL SEWER	Executive Architect / AP
150	PROPOSED FOUL SEWER	ROCCO 许争严
		Structural Engineer / RSE E & M Engineer
-	SITE BOUNDARY	ARUP RURP
	EXISTING RETAINING WALL	Project 项目
	EXISTING DRILLHOLE WITH STANDPIPE/PIEZONETER	CENTRAL POLICE STATION CONSERVATION AND REVITALISATION PROJECT
	PROPOSED BUILDING SETTLEMENT POINTS/TILTMETER	Drawing Title蜀名 MONITORING LAYOUT PLAN
-1	PROPOSED RETAINING WALL SETTLEMENT	
	POINTS/TILTMETER	Scale 분위 Drawn 응용 Checked 단함
	PROPOSED INCLINOMETER TO BE BUILT IN BORED PILE WALL OR PIPE PILE WALL	1:3000A1 K.C.Lai AL
	PROPOSED GROUND SETTLEMENT POINTS	Drawing No. 周記 00-0AP209674-G-001 M
	PROPOSED UTILITY MONITORING POINTS	
	PROPOSED VIBRATION MONITORING POINTS	
	THE STEP NEWTON MONITORING POINTS	
)		



## **Gammon** Vibration Monitoring Record (MAY)

	Blo	ck 1	Block 2	Blo	ck 3	Block 4	Block	6&7	Block 9	Bloc	<mark>k 11</mark>	Bloc	k 12	Block 13	Bloc	ck 15
Point	VM1-1	VM1-2	VM2-1	VM3-1	VM3-2	VM4-1	VM6-1	VM7-1	VM9-1	VM11-1	VM11-2	VM12-1	VM12-2	VM13-1	VM15-1	VM15-2
Date	mm/s	mm/s	mm/s	mm/s	mm/s	mm/s	mm/s	mm/s	mm/s	mm/s	mm/s	mm/s	mm/s	mm/s	mm/s	mm/s
01-May-14	Holiday															
02-May-14	0.439	0.760	0.369	0.687	0.316	0.230	0.177	0.145	0.129	0.251	0.106	0.363	0.380	0.119	0.370	0.225
03-May-14	0.217	0.283	0.138	0.384	0.176	0.268	0.216	0.181	0.208	0.358	0.183	0.291	0.169	0.175	0.468	0.398
04-May-14								Sur	nday							
05-May-14	0.251	0.251	0.143	0.087	0.087	0.302	0.186	0.212	0.128	0.266	0.285	0.556	0.506	0.169	0.639	0.166
06-May-14								Hol	iday							
07-May-14	0.193	0.205	0.169	0.159	0.112	0.228	0.182	0.310	0.139	0.524	0.162	0.326	0.224	0.192	0.331	0.521
08-May-14	0.349	0.083	0.117	0.327	0.098	0.455	0.251	0.354	0.163	0.120	0.842	0.182	0.108	0.137	0.160	0.100
09-May-14	0.259	0.164	0.271	0.314	0.241	0.394	0.586	0.165	0.331	0.318	0.124	0.165	0.167	0.153	0.138	0.327
10-May-14	0.338	0.141	0.261	0.624	0.228	0.216	0.328	0.197	0.128	0.536	0.268	0.132	0.185	0.194	0.201	0.354
11-May-14								Sur	nday							
12-May-14	0.341	0.254	0.595	0.431	0.272	0.194	0.422	0.447	0.139	0.137	0.131	0.119	0.135	0.129	0.122	0.124
13-May-14	0.087	0.087	0.106	0.102	0.090	0.116	0.087	0.083	0.163	0.086	0.087	0.716	0.116	0.093	0.122	0.086
14-May-14	0.095	0.268	0.111	0.196	0.144	0.180	0.129	0.131	0.331	0.087	0.086	0.551	0.117	0.122	0.098	0.117
15-May-14	0.571	0.236	0.145	0.102	0.164	0.451	0.306	0.177	0.128	0.124	0.102	0.087	0.095	0.151	0.114	0.086
16-May-14	0.175	0.172	0.132	0.095	0.647	0.209	0.317	0.536	0.886	0.137	0.105	0.100	0.102	0.120	0.093	0.087
17-May-14	0.663	0.208	0.156	0.351	0.191	0.549	0.558	0.184	0.222	0.977	0.094	0.093	0.090	0.106	0.094	0.151
18-May-14								Sur	nday							
19-May-14	0.438	0.423	0.242	0.304	0.333	0.228	0.199	0.837	0.778	0.977	0.094	0.483	0.177	0.539	0.349	0.272
20-May-14	0.128	0.145	0.421	0.176	0.802	0.499	0.619	0.452	0.154	0.262	0.230	0.178	0.481	0.402	0.178	0.298
21-May-14	0.164	0.251	0.235	0.199	0.204	0.324	0.403	0.251	0.208	0.311	0.146	0.226	0.143	0.156	0.197	0.286
22-May-14	0.103	0.117	0.194	0.678	0.192	0.335	0.276	0.150	0.192	0.086	0.102	0.180	0.111	0.136	0.091	0.087
23-May-14	0.124	0.146	0.162	0.162	0.137	0.132	0.132	0.102	0.093	0.098	0.151	0.258	0.196	0.095	0.275	0.681
24-May-14	0.193	0.281	0.116	0.371	0.265	0.228	0.201	0.188	0.118	0.661	0.203	0.199	0.124	0.167	0.301	0.275
25-May-14								Sur	nday							
26-May-14	0.209	0.208	0.209	0.416	0.310	0.318	0.191	0.303	0.264	0.585	0.397	0.257	0.321	0.364	0.236	0.313
27-May-14	0.307	0.652	0.574	0.423	0.739	0.606	0.446	0.497	0.499	0.091	0.093	0.106	0.586	0.098	0.093	0.202
28-May-14	0.150	0.147	0.108	0.290	0.203	0.536	0.606	0.492	0.178	0.170	0.128	0.309	0.177	0.147	0.095	0.087
29-May-14	0.539	0.370	0.194	0.214	0.244	0.194	0.227	0.166	0.307	0.098	0.131	0.132	0.214	0.145	0.102	0.098
30-May-14	0.349	0.319	0.406	0.259	0.247	0.246	0.542	0.240	0.338	0.341	0.112	0.229	0.137	0.156	0.267	0.351
31-May-14	0.128	0.227	0.117	0.223	0.381	0.104	0.106	0.102	0.116	0.105	0.271	0.122	0.274	0.321	0.112	0.514