

**Agreement No. CE 28/2004 (GE)**  
**Landslide Preventive Works at Po Shan, Mid-Levels**  
**Design and Construction**  
**(Natural Terrain Risk Mitigation Works)**

**Landscape & Visual Audit and Monitoring**  
**(Construction Phase)**

**Monthly Inspection Report No. 15**

**(June 2009)**

Prepared by

URBIS LIMITED

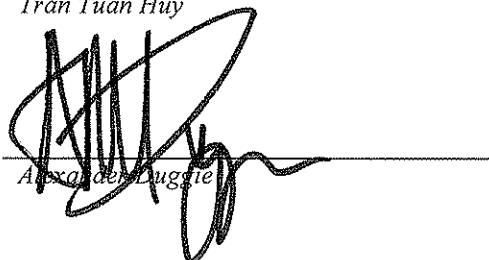
Prepared by :



*Tran Tuan Huy*

26<sup>th</sup> June 2009

Approved by :



*Alexander Luggie*

26<sup>th</sup> June 2009

## **1.0 INTRODUCTION**

The Landscape and Visual Audit & Monitoring are conducted to fulfill the requirements of the EIA Report during the Construction and Operational Phases of the project, and are based on the procedures and requirements as set out in the Agreement No. CE 28/2004 (GE) Landslide Preventive Works at Po Shan, Mid-Levels – Design and Construction (Natural Terrain Risk Mitigation Works) - Environmental Monitoring and Audit Manual.

As stated in section 3.5 and 3.6 of the EM&A Manual, all landscape and visual mitigation measures undertaken by the Contractor during the construction phase and the first 12 months of the operational phase shall be audited on a bi-weekly and monthly basis respectively to ensure compliance with the intended aims of the mitigation measures.

## **2.0 SCOPE OF AUDIT and MONITORING**

The broad scope of landscape and visual monitoring and audit on mitigation measures is as detailed below:

### **2.1 Construction Phase**

Identify any potential conflicts between the proposed landscape measures and any other project works or operation requirements, and recorded for the contractor to resolve in early stage, without compromising the intention of the mitigation measures. Also, the followings shall be monitored:

- designation of 'no-intrusion zones', and to record any trespass by the contractor, including damage to existing vegetation;
- allowance for adjustment of soil nails on site for the avoidance of tree trunks and tree roots;
- dust and erosion control for exposed soil;
- tree planting operations, checking method statement against specification requirements;
- all retained trees within the working boundary shall be regularly checked and reported to the engineer, including damage to the tree canopy edge.

Considerations shall also be made to address the appearance and view by public through:

- control over the appearance of construction workers, hoarding, construction plants / machines
- careful selection of security floodlights to avoid light pollution

### **2.2 Operation Phase**

Ensure the compensatory planting and horticultural maintenance operations are properly carried out during the 12 months establishment period, including:

- Inspection for fungal / viral attacks and pest infestations
- Litter collection
- Watering
- Weeding removal
- Replacement of defective planting material
- Grass cutting / groundcover trimming and removal of arisings
- Fertilizing application as required in specification
- Aeration / mulching application

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**3.0 INSPECTIONS**

**3.1 Summary of Inspection – 2<sup>nd</sup> June 2009**

**3.1.1 Matters Arising from Previous Inspections**

- The Contractor had removed safety ropes previously observed tied around the base of several existing trees.
- Removal of the termite infected dead tree T534 along the footpath stair was still outstanding. The Contractor was reminded to urgently remove the infected dead tree as soon as possible.
- It was still observed that no further rectification of tree ID numbers was carried out since the last couple of inspections. The Contractor was reminded to rectify the missing tree ID numbers on the remaining existing trees as soon as possible.
- It was noted that compensatory planting proposal for the replacement of dead tree T611 was outstanding. The Contractor was recommended to seek Engineer's agreement on the replacement planting as soon as possible.
- It was noted that the Contractor's clarification of the status of existing trees T516, T517, T666, and T698 located immediately outside of the works boundary was outstanding. The Contractor was reminded to provide necessary information as soon as possible.

**3.1.2 Protection of Existing Trees**

- It was observed that soil was compacted against the base of a small existing tree on the upper slope side and used as passage area. The Contractor was reminded the practice was unacceptable and the compacted soil is to be removed and constructed with proper passage without affecting the existing tree if required.

**3.1.3 Recommendations**

- The Contractor was recommended to remove the dead tree T534 from site for safety considerations, especially the tree was found infected by termite. The Contractor was also reminded to record and report all dead trees as found on site to the Engineer for record.
- The Contractor was again reminded to rectify all remaining ineligible tree ID numbers for all existing trees.
- The Contractor was again reminded to clarify the status of missing trees as soon as possible.
- The Contractor was again reminded to seek Engineer's agreement on the replacement planting for dead tree.
- The Contractor was recommended to clear the compacted soil at the base of existing tree and construct proper passage if required, without affecting the tree.

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### **3.2 Summary of Inspection – 16<sup>th</sup> June 2009**

#### **3.2.1 Matters Arising from Previous Inspections**

- The Contractor had removed the compacted soil away from the base of existing tree identified at the last inspection.
- The Contractor had removed the termite infected dead tree T534 from site.
- The Contractor had further rectified the tree ID numbers on site, with approximately 60% completed. The Contractor was reminded to finish the rectification of missing tree ID numbers works for the remaining existing trees as soon as possible.
- It was noted that compensatory planting proposal for the replacement of dead tree T611 was outstanding. The Contractor was recommended to seek Engineer's agreement on the replacement planting as soon as possible.
- It was noted that the Contractor's clarification of the status of existing trees T516, T517, T666, and T698 located immediately outside of the works boundary was outstanding. The Contractor was reminded to provide necessary information as soon as possible.

#### **3.2.2 Protection of Existing Trees**

- It was observed that the Contractor had tied ropes to the base of existing tree T668 for support of the large air hose. The Contractor was requested to remove the rope from the base of the tree.
- It was observed that an existing tree on the slope which had partially grown above an existing boulder was undermined by the recent removal of the boulder due to engineering safety considerations. The tree root system is now partially undermined and exposed, which would lead to dry-out and possible collapse during strong winds and typhoons. The Contractor was recommended to back-filled the pit and compact the slope surface area to stabilize the tree.

#### **3.2.3 Recommendations**

- The Contractor was reminded to rectify all remaining ineligible / missing tree ID numbers for all existing trees.
- The Contractor was again reminded to clarify the status of missing trees as soon as possible.
- The Contractor was again reminded to seek Engineer's agreement on the replacement planting for dead trees.
- The Contractor was reminded to remove the ropes from the base of tree T668 and not to tie ropes in future as support for any works on site.
- The Contractor was recommended to back-fill the pit caused by removal of boulder and to stabilize the tree.

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**3.3 Summary of Inspection – 23<sup>rd</sup> June 2009**

**3.3.1 Matters Arising from Previous Inspections**

- The Contractor had un-tied the rope around the base of existing tree T668 and the support for the large air hose was removed.
- Backfilling of the pit on slope exposed by the removal of the boulder below existing tree was still outstanding. The Contractor was reminded to rectify the condition in order to minimize the possibility of the roots drying out and possible collapse during strong winds.
- The Contractor had further rectified the tree ID numbers on site, with approximately 60% completed. The Contractor was reminded to finish the rectification of missing tree ID numbers works for the remaining existing trees as soon as possible.
- It was noted that compensatory planting proposal for the replacement of dead tree T611 was outstanding. The Contractor was recommended to seek Engineer's agreement on the replacement planting as soon as possible.
- It was noted that the Contractor's clarification of the status of existing trees T516, T517, T666, and T698 located immediately outside of the works boundary was outstanding. The Contractor was reminded to provide necessary information as soon as possible.

**3.3.2 Protection of Existing Trees**

- It was observed that the make-shift materials conveyor system had its edge board encircled an existing tree, with the tree trunk being easily damaged by the conveyor 'boat'. The Contractor was requested to rectify the edge board to ensure that conveying of materials would not damage the tree trunk.

**3.3.3 Recommendations**

- The Contractor was reminded to rectify all remaining ineligible / missing tree ID numbers for all existing trees.
- The Contractor was again reminded to clarify the status of missing trees as soon as possible.
- The Contractor was again reminded to seek Engineer's agreement on the replacement planting for dead trees.
- The Contractor was recommended to rectify the edge board of the make-shift conveyor system in order to minimize potential damage to the existing tree.

**4.0 AUDIT SCHEULE**

**4.1 Audit Schedule for July 2009**

The next audits are scheduled to be conduct on 14<sup>th</sup> and 28<sup>th</sup> July 2009.