

# **Improvement to the Ngong Ping Stream Rock Pool Monitoring Proposal**

**May 2006**

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## **Issue and Revision Record**

<b>Rev</b>	<b>Date</b>	<b>Originator</b>	<b>Checker</b>	<b>Approver</b>	<b>Description</b>
	May 06	JC	AFK	AFK	Draft

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## 1. INTRODUCTION

The construction works for the Improvement to the Ngong Ping Stream was completed on 31 March 2006. Shallow rock pools were created along the trimmed stream section to provide microhabitats for stream fauna. Excavated rocks and boulders were redistributed over the trimmed section to create rip-rap stream bed and riffles.

The purpose of this proposal is to set up an ecological monitoring programme in the current wet season to assess the ecological performance and effectiveness of the rock pools between the diverted Ngong Ping Stream at the Cable Car Terminal upstream and the trimmed stream section and to identify any further need for rectification.

## 2. ROCK POOL MONITORING

Upon the completion of the construction, regular ecological monitoring has been conducted to assess the effectiveness of the rock pools. The monitoring will be taken for six months (April to September 2006) in the current wet season. The monitoring will be carried out after a period of heavy rain to observe the water holding capacity of the pools, the connectivity of the pools with continuous flow and the utilization of the pools by stream fauna. Downstream of the trimmed stream section will also be included in the monitoring as a control.

## 3. EVENT / ACTION PLAN & RECTIFICATION PLAN

Based on the results of the ecological monitoring, actions in accordance to Table 1 will be taken to ensure the effectiveness of the rock pools. Advice will also be sought from AFCD and EPD from time to time.

**Table 1 Event / Action Plan for Ecological Performance of the Rock Pools**

<b>Event</b>	<b>Action</b>	<b>Limit</b>
Stagnant water observed without base water flow at the created rock pools	<ul style="list-style-type: none"><li>- Observe the natural stream section upstream for comparison;</li><li>- If no or very slow water flow is observed, this is result of low water content in the stream. Further monitoring will be taken once after rainfall to observe the connectivity of the pools.</li></ul>	Obvious/ significant water flow observed at the natural stream section upstream. The rocks in the trimmed stream section will be re-arranged under the supervision of the Qualified Ecologist to allow the water draining downstream, without minimizing the water holding capacity of the rock pools.

Event	Action	Limit
75% of the created rock pools do not hold water	<ul style="list-style-type: none"> <li>- Observe the natural stream section upstream for comparison;</li> <li>- If very low water level is observed, this is result of low water content in the stream as well as high evaporation rate. Further monitoring will be taken once after rainfall to observe the water holding capacity of the pools.</li> </ul>	<ul style="list-style-type: none"> <li>- A number of stream fauna found dead in the dried out pools in the trimmed stream section, and large ponding of water observed immediate upstream of the trimmed section. Action will be taken to re-arrange the rocks at the trimmed section under the supervision of the Qualified Ecologist to allow water draining downwards such that the rock pools could hold water.</li> <li>- Further monitoring will be taken once after heavy rainfall to observe the water holding capacity of the pools and the utilization by stream fauna.</li> </ul>
No stream fauna observed in the trimmed stream section	<ul style="list-style-type: none"> <li>- Observe the natural stream section upstream and downstream for comparison;</li> <li>- If a number of stream fauna observed at both upstream and downstream section, but not at the trimmed stream section for three visits after rain, observe the water holding capacity and the connectivity of the rock pools as listed above and take appropriate actions accordingly.</li> </ul>	If all actions listed above are taken and stream fauna is still not observed in the trimmed section (but recorded in natural section both upstream and downstream), planting of aquatic plants or riparian vegetation in the trimmed stream section will be considered in order to provide more suitable habitats for stream fauna to hide and seek shelter. Advice will also be sought from AFCD and EPD.

The conditions of the stream may vary differently. Justification will be provided to AFCD and EPD if the event listed above occurred but action has not been taken accordingly.