

# **Drainage Improvement Works at Ngong Ping**

## **Project Profile**

**Drainage Services Department**

**April 2011**

---

## TABLE OF CONTENTS

<b>1.</b>	<b>PROJECT INFORMATION</b>	<b>1</b>
1.1	Project Title	1
1.2	Purpose and Nature of the Project	1
1.3	Name of Project Proponent	1
1.4	Location and Scale of the Project	1
1.5	Number and Types of Designated Project to be Covered by the Project Profile	2
1.6	Name and Telephone Number of Contact Person	2
<b>2.</b>	<b>OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME</b>	<b>3</b>
2.1	Planning and Implementation of the Project	3
2.2	Project Time-table	3
2.3	Interfacing with Other Projects	3
<b>3.</b>	<b>POSSIBLE IMPACT ON THE ENVIRONMENT</b>	<b>4</b>
3.1	General	4
3.2	Construction Phase	4
3.3	Operation Phase	5
<b>4.</b>	<b>MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT</b>	<b>6</b>
4.1	Existing and Planned Sensitive Receivers	6
4.2	Major Elements of Surrounding Environment and Land Uses	6
<b>5.</b>	<b>ENVIRONMENTAL PROTECTION MEASURES TO BE INCORPORATED IN THE DESIGN AND ANY FURTHER ENVIRONMENTAL IMPLICATIONS</b>	<b>7</b>
5.1	Environmental Mitigation Measures	7
5.2	Possible Severity, Distribution and Duration of Environmental Effects and Other Implications	8
<b>6.</b>	<b>USE OF PREVIOUSLY APPROVED EIA REPORTS</b>	<b>8</b>

### LIST OF TABLES

Table 1.1	Scale of the Proposed Drainage Works	1
Table 2.1	Project Key Dates	3
Table 5.1	Suggested Mitigation Measures to the Potential Environmental Impacts	7

### LIST OF DRAWINGS

<b>DDN8837</b>	Drainage Improvement Works at Ngong Ping – Location Plan of the Project
----------------	---

## 1. PROJECT INFORMATION

### 1.1 Project Title

The project title is “Drainage Improvement Works at Ngong Ping” (hereinafter referred to as the Project).

### 1.2 Purpose and Nature of the Project

The purpose of the Project is to improve the existing drainage system at Ngong Ping in accordance with the recommendation of the “*Drainage Study for Ngong Ping*” so as to reducing the flood risk in Ngong Ping area.

### 1.3 Name of Project Proponent

The Project proponent is Drainage Services Department (DSD).

### 1.4 Location and Scale of the Project

The project site is located at the northern side of the Po Lin Monastery and the Ngong Ping 360 Terminal in Ngong Ping, Lantau Island. The proposed works (including a 3m wide drainage reserve) mainly align underneath the local footpaths / accesses and the near vicinity. According to the approved Ngong Ping Outline Zoning Plan (OZP) No. S/I-NP/6, majority of works falls in areas zoned “Green Belt” and “Village” and is in close proximity to an area zoned “Conservation Area”. Besides, portion of works falls within the Lantau North Country Park.

The project comprises the implementation of drainage improvement works as shown on **Drawing No. DDN8837**. The scale of the project is detailed in *Table 1.1* below.

**Table 1.1 Scale of the Proposed Drainage Works**

Location	Works	Details of Proposed Works			
		Approx. Length	Average Base Width	Approx. Depth of Excavation (below existing ground)	Construction Method
At the northern side of the Po Lin Monastery	Construction of new drainage pipe	270m	2.5m	max. 6m	Conventional open-cut excavation
		180m	2.5m	max. 10m	Trenchless method
At the north-western side of the Po Lin Monastery near Lin Ping Drive	Construction of new box culvert	180m	5.0m	max. 8m	Conventional open-cut excavation
		50m	4.0m	max. 6m	Conventional open-cut excavation
At the northern side of Ngong Ping 360 Terminal and Columbarium	Construction of new drainage pipe	220m	3.0m	max. 10m	Trenchless method

### **1.5 Number and Types of Designated Project to be Covered by the Project Profile**

The Project is defined as a designated project under Item I.1(b)(vii), Part I, Schedule 2 of the Environmental Impact Assessment Ordinance.

### **1.6 Name and Telephone Number of Contact Person**

Enquiries regarding the Project can be addressed to:

Name: Mr. LAU Wing-wah  
Post: Senior Engineer  
Telephone: 2594 7402  
Fax: 2827 8700  
Address: Drainage Projects Division, Drainage Services Department,  
45/F, Revenue Tower, Wan Chai, Hong Kong

Name: Mr. CHAN Sze-chai, Rick  
Post: Engineer  
Telephone: 2594 7363  
Fax: 2827 8700  
Address: Drainage Projects Division, Drainage Services Department,  
45/F, Revenue Tower, Wan Chai, Hong Kong

## **2. OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME**

### **2.1 Planning and Implementation of the Project**

In-house staff of Drainage Services Department will be deployed for the overall design, contract management and works supervision of the Project. An approved Roads and Drainage civil works contractor will be employed to implement the proposed drainage improvement works.

### **2.2 Project Time-table**

The key dates of investigation, design and construction of the Project are shown in *Table 2.1*.

**Table 2.1 Project Key Dates**

<b>Activity</b>	<b>Key Date</b>
Completion of Investigation	Early 2012
Completion of Detailed Design and Relevant Procedures	Mid 2014
Works Commencement	Mid 2014
Works Completion	End 2016

### **2.3 Interfacing with Other Projects**

No major projects have been identified to be carried out concurrently in the vicinity or within the Project site boundary.

### **3. POSSIBLE IMPACT ON THE ENVIRONMENT**

#### **3.1 General**

The Project comprises construction of drainage pipes / box culverts below ground level and its potential environmental impacts are associated with construction and operation. The construction phase impacts will mainly involve site clearance, site preparation, earthworks, excavation, construction of concrete structures and other general construction activities. The operation phase will primarily be the routine maintenance and operation of the completed drainage system where no major activities affecting the environment are expected.

The following sections consider the likely construction and operation activities and associated potential environmental impacts that may arise.

#### **3.2 Construction Phase**

##### **3.2.1 Air**

The proposed works will generate dust and gaseous emission from construction activities as well as construction vehicles / plants. This may result to short-term impact on local air quality. The related construction activities in this respect mainly include spoil transports, earthworks and excavation works.

##### **3.2.2 Noise**

The powered mechanical equipment and plant have the potential to impose temporary noise impact to the adjacent environment. The equipment and plant likely to be used include air compressors, generators, hydraulic or pneumatic breakers, excavation plants and construction traffic.

##### **3.2.3 Water**

Potential water quality impact may arise from site run-off carrying suspended solids, fuel or oil spill from construction plants, discharge of wastewater from construction sewerage generated by workforce.

##### **3.2.4 Waste**

Construction and Demolition (C&D) materials such as excavated spoil (soil and rock), unusable concrete and grout, other used and surplus construction materials, chemical wastes and general refuse will be generated from construction activities.

##### **3.2.5 Ecology**

The proposed drainage works are located in close proximity to the Conservation Area whilst section of works also falls within the Lantau North Country Park. The construction may have the potential to impose direct / indirect disturbance to the existing habitats, including flora and fauna as well as aquatic species in the existing natural watercourses.

##### **3.2.6 Landscape and Visual**

The proposed works may require the removal of existing vegetations and trees within the works site. The presence of construction equipment and stockpiled materials may also be a source of visual impacts to the nearby environment.

### **3.2.7 Cultural Heritage**

No archeological / heritage sites, historic monuments or buildings / structures are identified within and in the vicinity of the works locations.

### **3.3 Operation Phase**

It is not expected that the Project will generate any significant environmental impacts during operation phase as the activities involved will primarily be the routine maintenance and operation of the completed drainage works.

#### **4. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT**

##### **4.1 Existing and Planned Sensitive Receivers**

The project site is located near the existing village houses of Ngong Ping Tsuen, the Po Lin Monastery, the Columbarium as well as other temples in the close vicinity. Sensitive receivers of the Project also include the existing water storage tank at the northern side of the Po Lin Monastery, natural watercourses and drainage channels, the adjacent Conservation Area as well as the Lantau North Country Park. Sensitive receivers will be reviewed and further identified in the EIA Study.

##### **4.2 Major Elements of Surrounding Environment and Land Uses**

The proposed drainage system will be aligned underneath existing footpaths / accesses as well as vegetation area. The surrounding environments and land uses are mainly shrubby grasslands, natural watercourses, gabion channel and rural area. Residential areas are also rural in nature and mainly comprise agricultural and village houses. Also, portion of works site falls in areas zoned “Green Belt” and in close proximity to an area zoned “Conservation Area”.



## 5. ENVIRONMENTAL PROTECTION MEASURES TO BE INCORPORATED IN THE DESIGN AND ANY FURTHER ENVIRONMENTAL IMPLICATIONS

### 5.1 Environmental Mitigation Measures

To alleviate potential environmental impacts associated with the proposed works under the Project, mitigation measures are recommended to be implemented on site as summarized in **Table 5.1**. Such measures will be reviewed and recommended in detail under the EIA Study.

**Table 5.1 Suggested Mitigation Measures to the Potential Environmental Impacts**

Potential Environmental Impact	Mitigation Measures	Relevant Section in the Project Profile
Air	<ul style="list-style-type: none"> <li>- Regular watering to suppress dust</li> <li>- Stockpiles or debris to be adequately covered / sheltered</li> <li>- Provision of wheel washing facilities</li> <li>- Other control measures as stipulated in the Air Pollution Control (Construction Dust) Regulation</li> </ul>	3.2.1
Noise	<ul style="list-style-type: none"> <li>- Use of quiet plant equipment and working method</li> <li>- Avoidance of construction activities / traffic at night-time or restricted hours</li> <li>- Limiting the use and number of equipment close to the sensitive receivers</li> <li>- Other control measures as stipulated in the Practice Note for Professional Persons: Noise from Construction Activities – Non-statutory (ProPECC PN 2/93)</li> </ul>	3.2.2
Water	<ul style="list-style-type: none"> <li>- Provision of wastewater collection, treatment and disposal facilities</li> <li>- Control of construction surface run-off as stipulated in the ProPECC PN 1/94 (Construction Site Drainage)</li> </ul>	3.2.3
Waste	<ul style="list-style-type: none"> <li>- Maximize the re-use of public fill C&amp;D material</li> <li>- C&amp;D material and waste to be sorted on site</li> <li>- Disposal of chemical waste by licensed collectors</li> </ul>	3.2.4
Ecology	<ul style="list-style-type: none"> <li>- Regular checking to ensure that the work site boundaries are not exceeded and that no damage occurs to surrounding areas</li> <li>- Develop specific mitigation requirements to alleviate potential ecological impacts to the adjacent ecological sensitive receivers</li> </ul>	3.2.5
Landscape and Visual	<ul style="list-style-type: none"> <li>- Develop tree protection measures and transplanting / compensatory proposals</li> <li>- Prompt removal of disused materials and erection of hoardings</li> </ul>	3.2.6
Cultural Heritage	<ul style="list-style-type: none"> <li>- No mitigation measure is necessary</li> </ul>	3.2.7

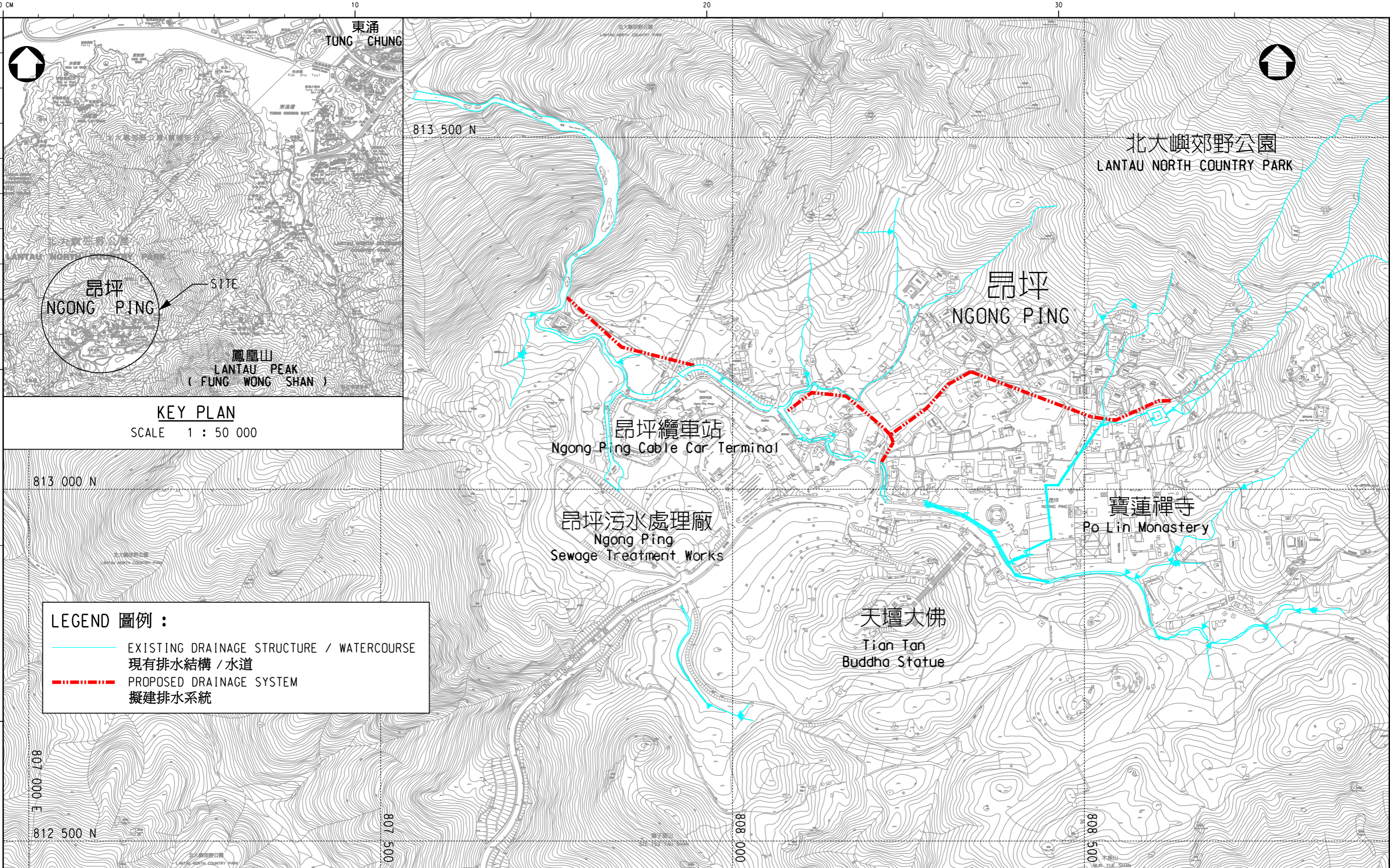
## **5.2 Possible Severity, Distribution and Duration of Environmental Effects and Other Implications**

The Project involves the construction of new drainage system below ground level and the environmental impacts are mainly associated with construction stage. As such, the environmental impacts are considered not significant and of temporary as well as local in nature. With effective control and mitigation measures in place following the EIA, potential environmental impacts on the surrounding environment will be appropriately controlled to meet the established criteria.

Close coordination with relevant stakeholders is necessary. During the planning stage of the Project, consultations have already been made in 2009 with the local stakeholders including the Po Lin Monastery, local villagers, Ngong Ping 360 Limited as well as the concerned green groups with supports gained from them on the proposed works. Further consultation will be carried out with more information provided during the detailed design stage.

## **6. USE OF PREVIOUSLY APPROVED EIA REPORTS**

No previous EIA report has been approved or submitted for the Project.



**LEGEND 圖例：**

- EXISTING DRAINAGE STRUCTURE / WATERCOURSE  
現有排水結構 / 水道
- - - - - PROPOSED DRAINAGE SYSTEM  
擬建排水系統

PROVISIONAL  
SUBJECT TO AMENDMENT

圖則名稱 drawing title

**DRAINAGE IMPROVEMENT WORKS AT NGONG PING - LOCATION PLAN OF THE PROJECT**

**昂坪排水系統改善工程 - 項目位置圖**

繪畫 drawn	K. F. SUNG	日期 date	30 MAR 2011	修改項目 description	圖則編號 drawing no.	圖則編號	DDN8837	簡簽 initial	比例 scale
核對 checked	S. C. CHAN	日期 date		保留版權 COPYRIGHT RESERVED					1 : 5 000 OR AS SHOWN
批核 approved		日期 date		香港特別行政區政府渠務署					
部門 office	排水工程部 DRAINAGE PROJECTS DIVISION			D		DRAINAGE SERVICES DEPARTMENT GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION			