Drainage Services Department
The Government of the Hong Kong
Special Administrative Region

Tolo Harbour Sewerage of Unsewered Areas Stage I Phase IIB

Tung Tsz Road Sewage Pumping Station Project Profile

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MWH
美華集團

Table of Contents

1 BASIC INFORMATION…….1
1.1 Project title
1.2 Purpose and nature of the project
1.3 Name of the Project Proponent
1.4 Location and scale of project
1.5 Number and type of designated project
1.6 Name and telephone number of contact person

2 OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME…..…...2

3 POSSIBLE IMPACT ON THE ENVIRONMENT……2
3.1 During construction stage
3.2 During operation stage

4 MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT……4

5 ENVIRONMENTAL PROTECTION MEASURES TO BE INCORPORATED IN THE DESIGN AND FURTHER ENVIRONMENTAL IMPLICATIONS…….4
5.1 During construction stage
5.2 During operation stage

6 USE OF PREVIOUSLY APPROVED EIA REPORT…….6

Appendix

Figure 1
Figure 2
Figure 3
Figure 4
Figure 5

1. BASIC INFORMATION

1.1 Project title

The Tung Tsz Road Sewage Pumping Station, hereinafter referred to the "Project", is part of the Contract "Tolo Harbour Sewerage of Unsewered Areas Stage I Phase IIB".

1.2 Purpose and nature of the project

The Project, Tung Tsz Road Sewage Pumping Station, is part of a sewerage scheme for the Tung Tsz area which has no sewerage system at present. Sewage collected from the villages along Tung Tsz Road will be pumped to Ting Kok Road trunk sewer, which is being constructed by Territory Development Department, and ultimately be conveyed to Tai Po Sewage Treatment Plant.

1.3 Name of the Project Proponent

Consultant Management Division, Drainage Services Department

1.4 Location and scale of project

Location plan (Figure 1) and site plan (Figure 2) are attached herewith. The Project falls within the conservation area which is to conserve its ecological value (freshwater marsh) and provides feeding ground to Shuen Wan Egretry. However, the Project falls at the fringe of conservation area and is located on a formed area which abuts Tung Tsz Road and an existing access road (Figure 3) without disturbing the existing freshwater marsh.

The average dry weather flow of the pumping station is 920 cu.m/day approximately. One duty and one standby pump will be installed underground inside an enclosed wet well of the pumping station. No boundary wall will be provided to the pumping station which is based on the local villagers' comment. The above ground structures would be a control kiosk [approx. 3.2m (Length) x 2.0m (Width) x 2.8m (Height)], a vent pipe of approximately 100mm diameter and 1m height, a water tap with water meter box and a planter [approx. 2.4m(Length) x 1.6m (Width) x 0.6m (Height)] to screen off the control kiosk being viewed from Tung Tsz Road.

1.5 Number and type of designated project

The Project constitutes a Designated Project of type Q.1 in Schedule 2 of the EIA Ordinance.

1.6 Name and telephone number of contact person

2. OUTLINE OF PLANNING AND IMPLEMENTAION PROGRAMME

Montgomery Watson Harza and Mouchel Asia Ltd. will carry out design of the Project. The construction of the Project will be carried out by qualified contractors. Operation and maintenance of the completed works will be taken up by the Sewage Treatment 1 Division and the Hong Kong and Islands Division of Drainage Services Department.

The detailed design of the works of the Project has been completed. Construction is anticipated to commence in early 2002 for completion and commissioning in 2004.

The Project will be implemented jointly with Tolo Harbour Sewerage of Unsewered Areas Stage I Phase IIB works, for which an EIA report has been undertaken under the Preliminary Design for Tolo Harbour Sewerage of Unsewered Areas Stage I Phase II and placed in the register. The EIA report concluded that there are not likely to be any insurmountable or unacceptable environmental impacts from construction or operation of Tolo Harbour Sewerage of Unsewered Areas Stage I Phase II. This EIA report also mentioned that the Stage I Phase II works are considered to be environmentally feasible and are considered to be preferable due to long term benefit to water quality and the sanitation of the villages.

3. POSSIBLE IMPACT ON THE ENVIRONMENT

3.1 During construction stage

(a) Dust

Dust may be generated from the construction activities, mainly from excavation of the wet well.

(b) Noise

The construction activities will generate some noise for a very short duration through the use of conventional construction plants and equipment.

(c) Water

Due to the small scale of the Project, it is not anticipated to generate significant water impact.

(d) Ecological impact

The ecological value of the conservation area, where the Project locates, is the freshwater marsh which is a feeding ground of Shuen Wan Egretry. However, the Project falls at the fringe of conservation area and is located on the formed area which abuts Tung Tsz Road and an existing access road. Therefore, as the Project is away from freshwater marsh, the Project would not affect existing freshwater marsh and/or feeding ground of Shuen Wan Egretry. It is unlikely to cause any significant ecological impacts.

(e) Fisheries impact

There is a pond to the south-west of the Project which has been dried up for many years. There are two active fishing ponds approximately 140m to the south of the Project as shown on figure 4. Due to the small scale of the Project and the long distance from these fishing ponds, it is unlikely to cause any fisheries impact.

(f) Visual impact

There will be some conventional construction plants and equipment on site for a very short duration during the construction stage. It is not anticipated to generate significant visual impact.

3.2 During operation stage

(a) Odour

The wet well of the pumping station could be the source of odour nuisance if not enclosed.

(b) Water quality

The Project is an integral part of the Tung Tsz village sewerage works, collects sewage generated from the villages along Tung Tsz Road to the trunk sewer at Ting Kok Road and finally to Tai Po Sewage Treatment Plant for treatment before discharging to Tolo Harbour. Implementation of the Project will enhance the water quality of the surrounding environment. Besides, an emergency sewage bypass into a stormwater drain has been incorporated in the design of the Project. With the implementation of preventative measures described in paragraph 5.2(b), the probability of emergency sewage bypass is also extremely remote.

(c) Noise

The pumps are potential noise source during operation of the pumping station if not enclosed.

(d) Waste

A basket screen will be installed at the inlet chamber to screen off large solid materials in sewage from entering into the pumps so as to prevent damage of the pumps. A small quantity of screenings will thus be generated.

(e) Ecological impact

By the same reasons as mentioned in paragraph in 3.1(d) above, it is unlikely to cause any significant ecological impacts.

(f) Fisheries impact

By the same reasons as mentioned in paragraph in 3.1(e) above, it is unlikely to cause any fisheries impact.

(g) Visual impact

As there will be no boundary wall for the Project after taken the local villagers' comment, the main above ground structure is the control kiosk which is commonly found elsewhere. Therefore, the visual impact will be extremely minor.

4. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

The Project falls at the fringe of an area zoned Conservation Area (CA) on the draft Ting Kong OZP No.S/NE-TK/7 (Figure 1). This CA is zoned to conserve its ecological value (freshwater marsh) and provides feeding ground to Shuen Wan Egretry. However, the Project is located on a formed area which abuts Tung Tsz Road and an existing access road. No existing freshwater marsh and/or feeding ground to Shuen Wan Egretry will be affected.

The areas to the north and north-east of the Project across Tung Tsz Road are three containers and car-dump and an open storage of cars. Further north and north-east from the Project is the San Tau Kok Village (the potential noise and air quality sensitive receivers) in which the nearest village house is 35m away approximately. As the small scale of the Project and the measures adopted in the design and the construction contract document, the potential noise and air quality impact is considered negligible.

Immediately across the access road to the south-east of the Project is a plant nursery. The area to the west of the Project is the fallow agricultural land. The area to the south-west is a pond which has been dried up for many year. There will be no tree felling within the Project boundary.

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

5.1 During construction stage

(a) Dust

The effect of dust generation from the construction works is expected to be insignificant as the excavation is mainly for the wet well chamber which is approximately 300 cu.m. Relevant clauses have been incorporated into the construction contract documents to request the Contractor to prevent dust nuisance and to minimize dust impacts on the surrounding environment. (e.g. air pollution control system to be used on the site should be approved)

(b) Noise

The construction activities involved in the Project will include excavation and general concreting works. Common construction plant including backhoe and concrete mixer will be used. Based on the small scale of the Project, it is anticipated that minor noise will be generated. Notwithstanding this, clauses have been incorporated into the construction contract documents requiring the Contractor to comply with the Noise Control Ordinance and its subsidiary regulations so as to control the noise level within acceptable limit during the construction. (e.g. Noisy construction activities shall be effectively sound-reduced by means of silencers or screens to avoid disturbance.)

(c) Water

Relevant clauses have been incorporated into the construction contract documents requiring the Contractor to comply with the Water Pollution Control Ordinance and its subsidiary regulation. In addition, a clause has been added in the construction contract documents requiring the Contractor to take appropriate measures to ensure that muddy water is not discharged into public drains and these measures shall at least consist of covering excavated materials with canvas or similar material. Another clause also requires the Contractor to contain within the site all surface runoff which should confine the water impact to a negligible level.

5.2 During operation stage

(a) Odour

To minimize odour impacts, the wet well of the pumping station will be located underground and enclosed by airtight covers. In addition, deodorizing drum scrubber will be installed in vent pipe to filter air inside wet well before it enters to atmosphere. With these measures in place the possible odour impacts can be mitigated to insignificant level.

(b) Water quality

A standby pump has been adopted in the design to minimize the water quality impacts arising from the emergency sewage bypass. A 2.3-hour backup storage capacity at average flow rate has been incorporated into the design of wet well. Apart from this, a telemetry system has also been incorporated into the design to send signals of the pumping station to the existing Tai Po Sewage Treatment Plant such that immediate actions could be taken by maintenance personnel in case of emergency. With these measures in place, the need to emergency sewage bypass is anticipated to be extremely remote.

(c) Noise

To minimize any noise impact from operating pumps, all the pumps inside the pumping station have been designed to locate underground in the wet well and submerge under sewage. The wet well covers are designed to be airtight to minimize the leakage of sound from the wet well. With these measures in place, the noise impact generated from the submersible pumps is anticipated to be negligible. From the conclusion of EIA report for Tool Harbour Sewerage of Unsewered Area Stage I Phase II, the predicted sound power levels that would be generated immediately outside a similar pumping station would be only 50dB(A), which is within the acceptable day and evening noise criteria.

(d) Waste

As the flow to the pumping station is not large, the quantity of screenings will be extremely small. The screenings will be removed and enclosed in plastic bags by maintenance personnel and transported to landfill site for disposal.

(e) Visual impact

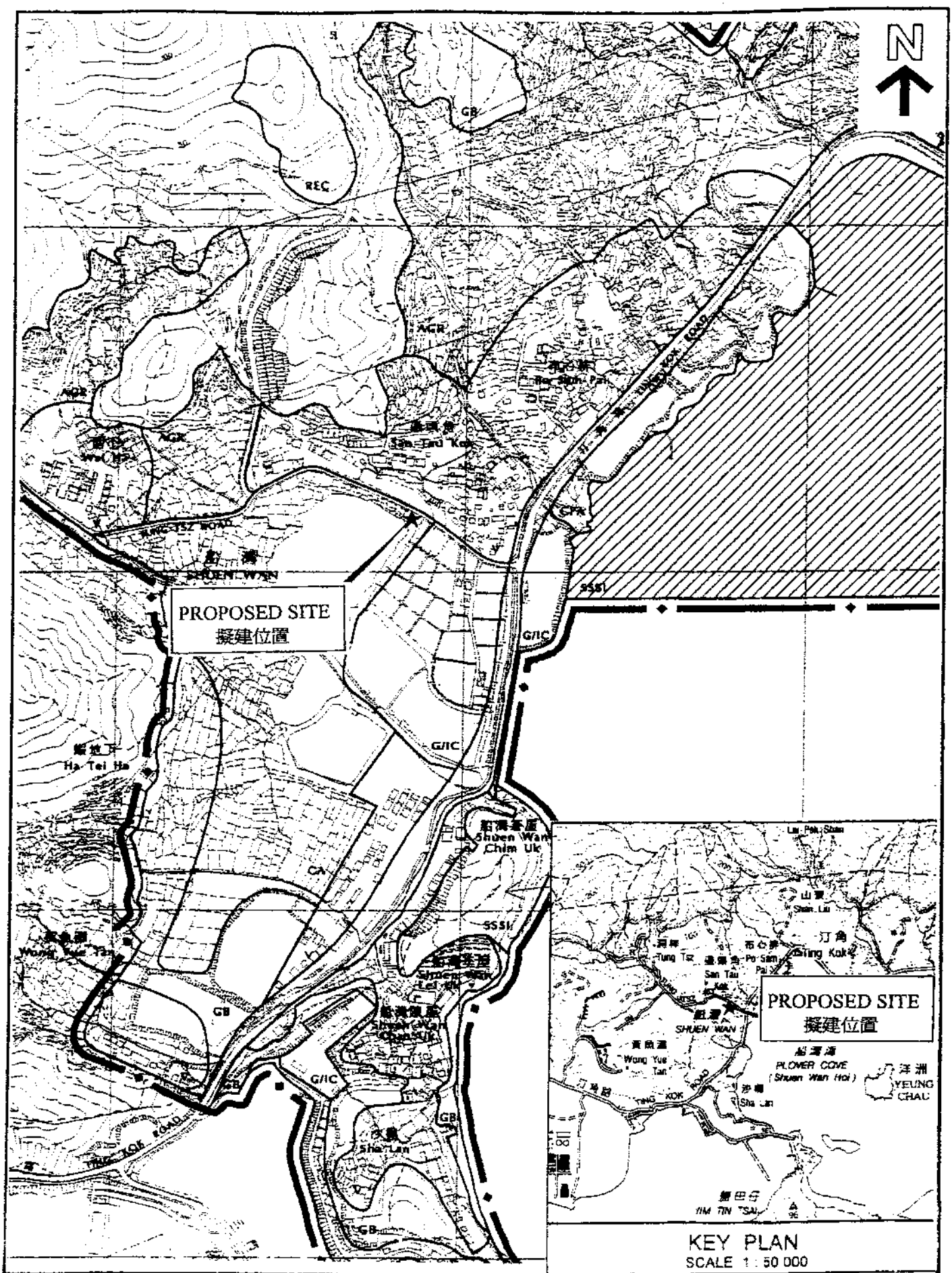
As there will be no boundary wall for the Project, the original view of the area would not be altered except an above-ground control kiosk. A planter (Figure 5) with plants has been incorporated in the design to screen off this control kiosk. With these measures in place, the impression of the Project would be the extension of Tung Tsz Nursery which is located

across the access road. The control kiosk would adopt it natural concrete colour to tally with the existing concrete road colour where it located.

6. USE OF PREVIOUSLY APPROVED EIA REPORT

The EIA report "Tolo Harbour Sewerage of Unsewered Areas Stage I Phase II" was approved in February 1997 and placed in the register. Due to the design change of the Ting Kok Road Improvement Project, the sewage pumping station was added to the Tung Tsz village sewerage system. Reference to the environmental impact to the Tung Tsz area and the potential impact by the similar pumping stations in the above EIA report were made for the assessment of the Project.

Appendix



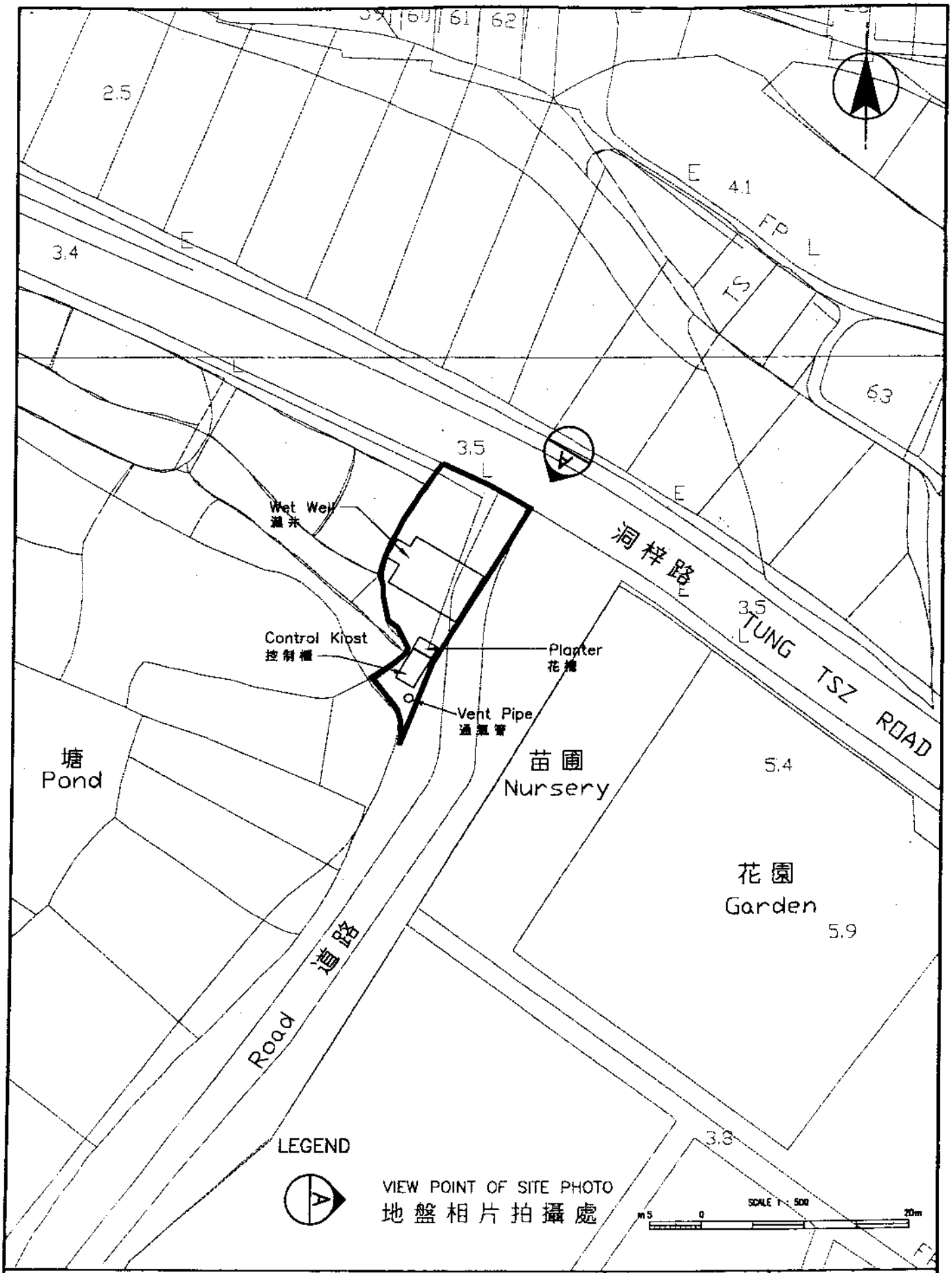
TUNG TSZ PUMPING STATION
桐梓泵房

LOCATION PLAN
位置圖

Scale As Show
Date Sep.,01

Figure 1
圖 一

MONTGOMERY WATSON
環境工程顧問



TUNG TSZ PUMPING STATION
桐梓泵房

Scale As Show
Date Sep.,01

Figure 2
圖 二

SITE PLAN
地盤平面圖

MONTGOMERY WATSON
環諮工程顧問

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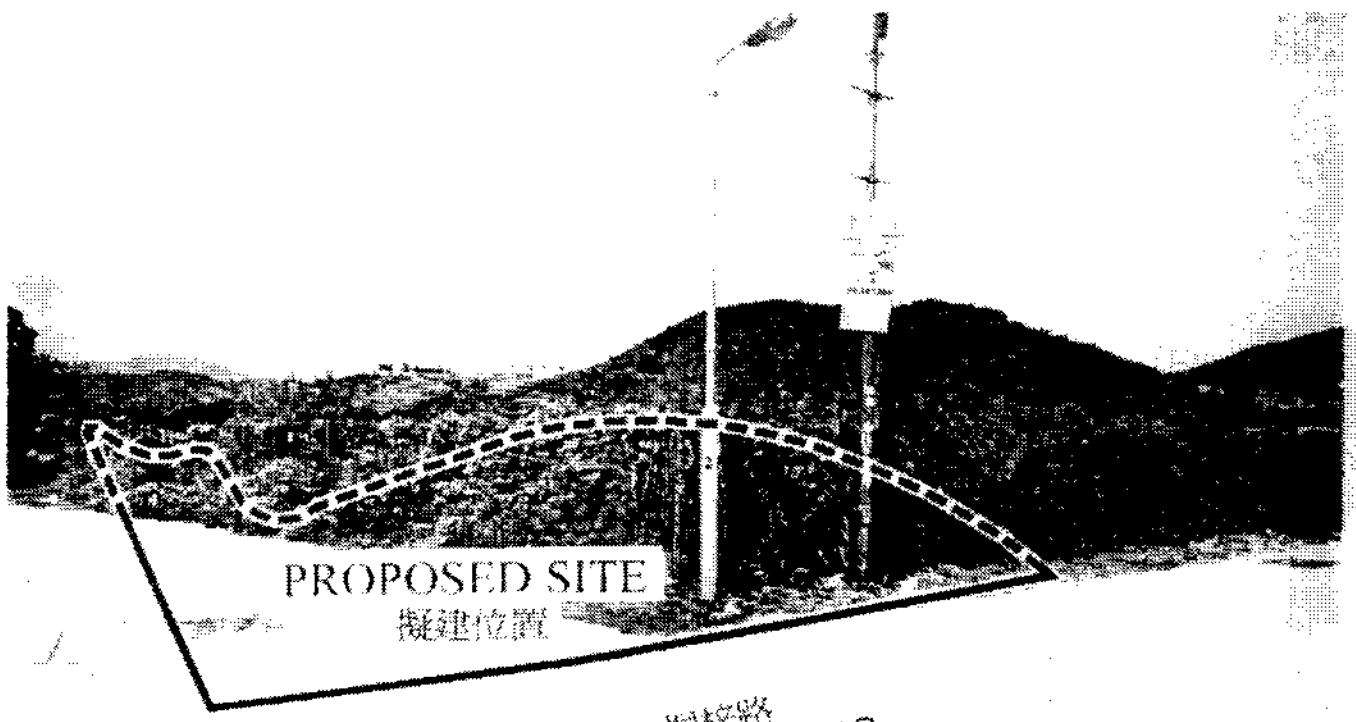
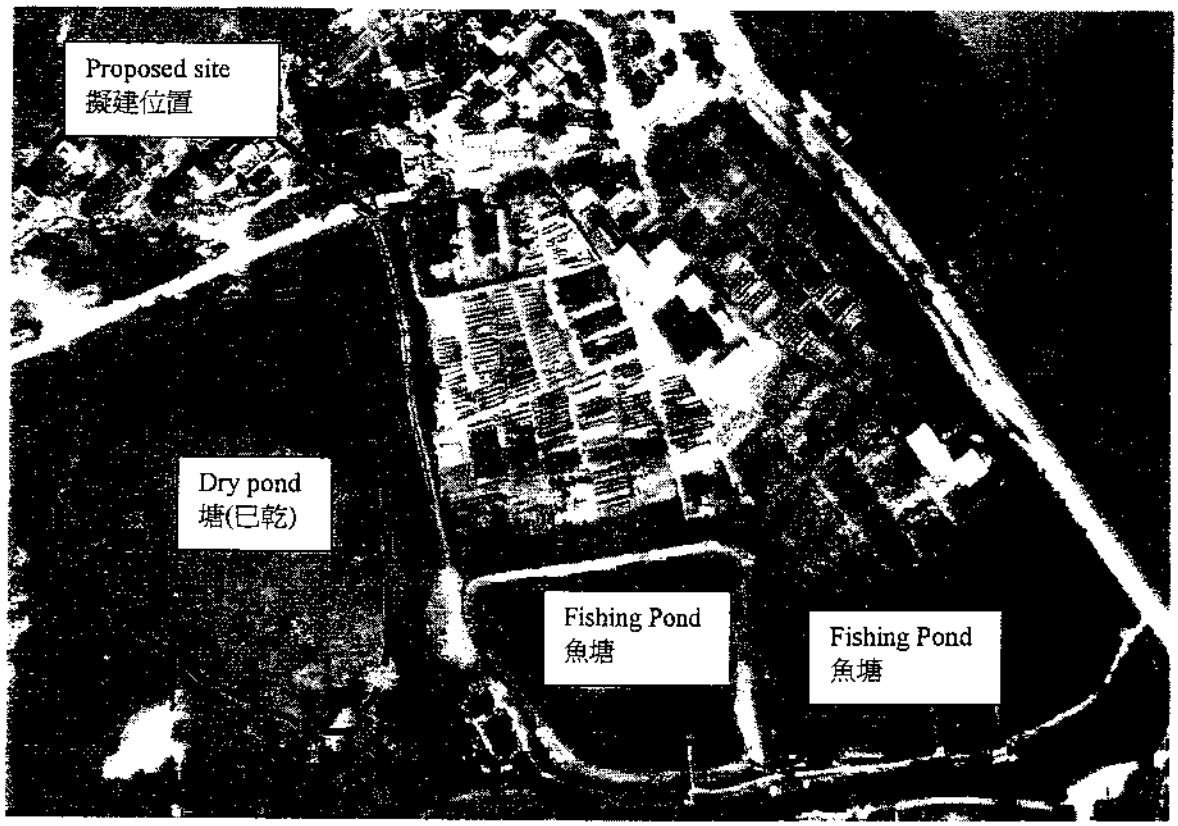
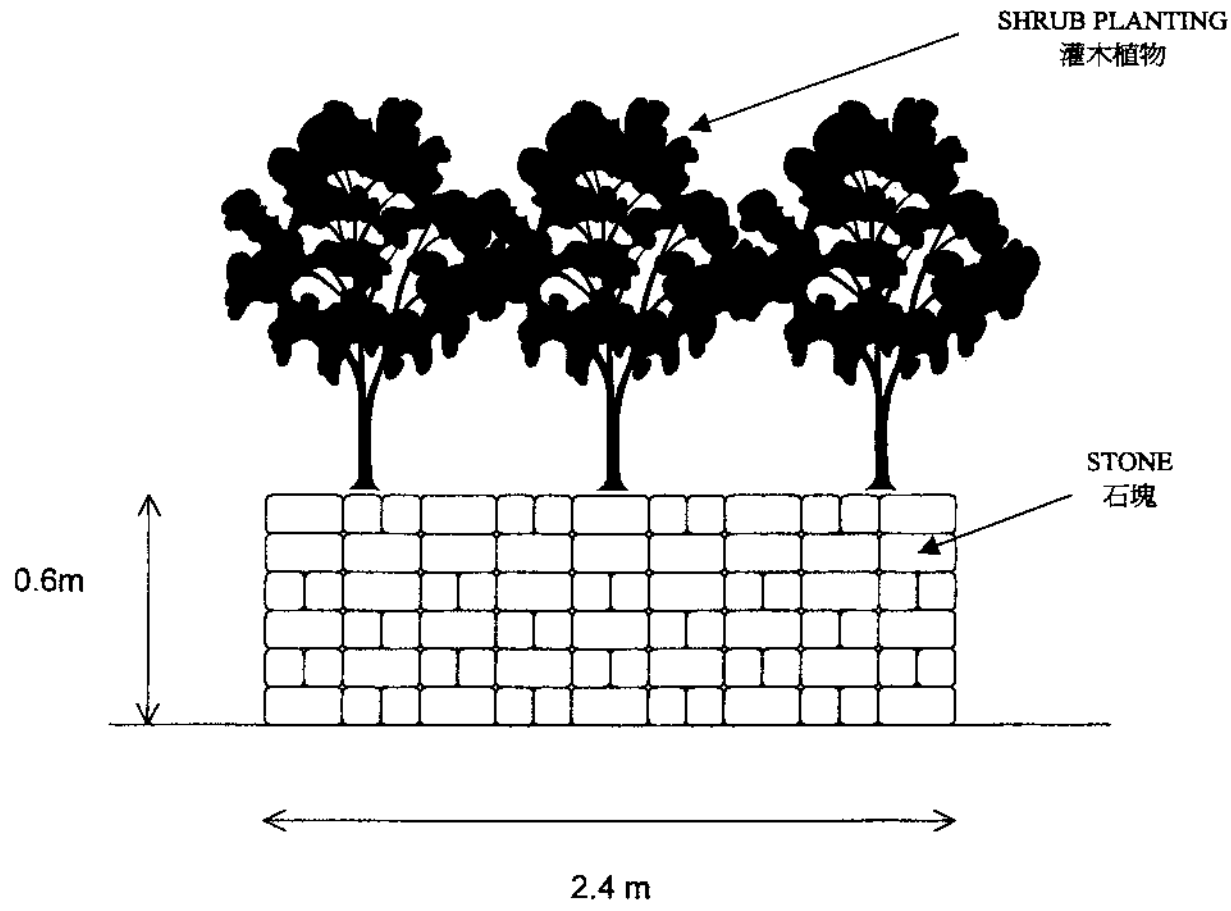


TUNG TSZ PUMPING STATION 桐梓泵房	Scale As Shown Date Sep.01	Figure 3 圖 三
SITE PHOTO 地盤相片	MONTGOMERY WATSON 蒙特工程顧問	



TUNG TSZ PUMPING STATION 桐梓泵房	Date Sept.,01	Figure 4 圖 四
AERIAL PHOTO 空中攝影照片	MONTGOMERY WATSON 環 協 工 程 顧 問	



TUNG TSZ PUMPING STATION 桐梓泵房	Date Sept.,01	Figure 5 圖 五
PLANTER 花槽	MONTGOMERY WATSON 環 協 工 程 顧 問	