

SK & DIV JV

Contract No. DC/2010/06
Upgrading of Central and East
Kowloon Sewerage – Phase 2
Archaeological Watching Brief Report

October 2014

Environmental Resources Management

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SK & DIV JV

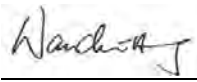
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For and on behalf of
ERM-Hong Kong, Limited

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Position: Partner/ Licence Holder

Date: 22 October 2014

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摘要

水務署委託森記&迪時聯營(承建商)進行九龍中部及東部污水收集系統改善工程 - 第2期(合約編號 DC/2010/06)(合約)，香港環境資源管理顧問有限公司則受承建商所委託，按合約要求進行考古監察。

在與古物古蹟辦事處就考古監察的計劃取得共識，並由考古學家鄭君雷博士取得相關的搜尋或挖掘牌照後(牌照編號328及347)，由於牛池灣村村民反對此工程，在牌照有效期內並無進行考古監察。最新的搜尋或挖掘牌照(牌照編號372)則於2014年7月12日取得，並於2014年7月28日至30日進行考古監察。

考古監察只在牛池灣村監察地點1a進行，其他工程段及相關的監察地點因牛池灣村村民反對而取消。監察地點1a擬建一沙井，尺寸為1m寬x2m長x2m深。監察結果可見監察地點1a已被過去幾十年間為鋪設現代設施而進行的挖掘工程所擾亂，沒有發現任何考古文物。根據揭露出的現代設施管道走向亦可知整條富池徑已被嚴重擾亂。因此本工程沿富池徑的發掘工作不會對考古文物帶來任何影響，不需進行進一步的考古工作。

SUMMARY

ERM-Hong Kong, Limited (ERM) has been commissioned by the SK & DIX JV (the Contractor) to carry out an Archaeological Watching Brief (AWB) during the construction phase of *Upgrading of the Central and East Kowloon Sewerage – Phase 2 works* of Drainage Services Department as required in *Contract No. DC/2010/06* (the Contract).

An *Archaeological Watching Brief Proposal* has been prepared. Upon agreement of the AWB Proposal with the Antiquities and Monument Office (AMO), relevant Licences to Excavate and Search for Antiquities (Licence Nos. 328 and 347) were obtained by the archaeologist, Dr Zheng Junlei. No construction works had been conducted during these licenced periods due to the opposition of the villagers of the Ngau Chi Wan Village on the works. The licence was renewed on 12 July 2014 (Licence No. 372) and AWB was conducted from 28 to 30 July 2014.

AWB was conducted at monitoring location 1a (a drainage manhole with a size of about 1m (width) x 2m (length) x 2m (depth)) at Ngau Chi Wan Village. As the villagers of Ngau Chi Wan Village opposed to the other proposed works, the AWB associated with these works was cancelled. The findings of the AWB show that location 1a has been highly disturbed by the previous excavation works for the installation of the utilities in the last few decades. No remain of archaeological interest has been identified. Taking account of the alignment of the existing utilities, it is anticipated that the soil layers of the whole Fu Chi Path are highly disturbed and have no archaeological potential. No further archaeological works in this area is required.

1.1 PROJECT BACKGROUND

ERM-Hong Kong, Limited (ERM) has been commissioned by the SK & DIX JV (the Contractor) to carry out an Archaeological Watching Brief (AWB) during the construction phase of *Upgrading of the Central and East Kowloon Sewerage – Phase 2 works* (the Project) of Drainage Services Department (DSD) as required in *Clause 1.105 (1) of the Particular Specification (PS) of Contract No. DC/2010/06* (the Contract).

An *Archaeological Watching Brief Proposal (AWB Proposal)* which details the scope of the monitoring has been prepared and submitted to the Antiquities and Monuments Office (AMO) for agreement. It was used to support the application of a *Licence to Excavate and Search for Antiquities* under the *Antiquities and Monuments Ordinance* (Cap 53) (the Licence) before the commencement of the AWB. Upon agreement of the *AWB Proposal* with AMO, relevant Licences to Excavate and Search for Antiquities (Licence Nos. 328 and 347) were obtained by the archaeologist, Dr Zheng Junlei. No construction works had been conducted during these licenced periods due to opposition of the villagers of the Ngau Chi Wan Village on the works. The licence was renewed on 12 July 2014 (Licence No. 372) and the AWB was conducted from 28 to 30 July 2014. AWB was conducted at monitoring location 1a (a drainage manhole with a size of about 1m (width) x 2m (length) x 2m (depth)) at Ngau Chi Wan Village. As the villagers of Ngau Chi Wan Village opposed to the other proposed works, the AWB associated with these works was cancelled.

This *Archaeological Watching Brief Report (AWB Report)* presents the findings of the AWB.

1.2 ARCHAEOLOGICAL TEAM MEMBERS

The individuals participated in the AWB were as follows:

Dr Zheng Junlei	Licenced Archaeologist
Ms Peggy Wong	Experienced Archaeologist
Ms Kitty Liu	Assistant Archaeologist
Mr Edward Chiu	Assistant Archaeologist

In addition to the above team members, 3 labourers were employed by the Contractor for the Project works, who also assisted the archaeologist in conducting necessary works for the AWB. Field recording and post-AWB processing of field records were led by Dr Zheng Junlei and carried out by Ms

Peggy Wong and Ms Kitty Liu. Maps and drawings were produced by Ms Kitty Liu, and the GIS and graphic teams of ERM.

Authors of this *Report* include: Dr Zheng Junlei, Ms Peggy Wong and Ms Kitty Liu.

1.3

STRUCTURE OF THE REPORT

Following this introductory section, the remainder of the *AWB Report* comprises the following sections:

- Section 2* presents the objectives, scope and methodology;
- Section 3* presents the historical, topographic, geological and archaeological background;
- Section 4* presents the findings of the AWB;
- Section 5* presents the conclusion; and
- Section 6* presents the bibliography.

2.1 OBJECTIVES

The objectives of this AWB are to ensure any identified archaeological resources (if any) within the excavation areas are adequately recorded and recovered, and appropriate measures are taken on site to minimise the impact on the archaeological remains within the excavation areas and to minimise delays to the construction programme.

2.2 SCOPE

The sections of the sewerage requiring AWB, as defined under *Clause 1.105 (1) of PS*, are located at the Ngau Chi Wan Village and Ping Shek Estate. Areas requiring AWB under the Contract is shown in *Figure 1.1*. The construction works to be executed under the Contract involve soil excavation for construction and replacement of sewers. Two constructions methods, open cut (open trench excavation) and heading, were used for the construction works.

According to *AWB Proposal*, no AWB was proposed at Ping Shek Estate but four monitoring locations (1a to 1d) were proposed at the Ngau Chi Wan Village. However due to opposition of the villagers on the proposed sewage work, construction works were only carried out at Fu Chi Path. The AWB were conducted at location 1a (a sewerage manhole with a size of about 1m (width) x 2m (length) x 2m (depth)) and sewer at Fu Chi Path.

2.3 METHODOLOGY**2.3.1 Pre-AWB Tasks**

An *AWB Proposal* including the latest Project site area and alignments, a review to refine the scope of the AWB, proposed monitoring frequency and other necessary information (such as the objectives, methodologies, resources and equipment deployed on site and the programme of field works) has been prepared and agreed with the Engineer and AMO prior to applying for a *Licence*. The licence was renewed on 12 July 2014.

2.3.2 Archaeological Watching Brief Field Monitoring

Upon receipt of the *Licence*, advanced notice was given to the Engineer and AMO prior to the commencement of the monitoring.

The field monitoring was carried out based on the selective and sampling approach during the construction phase. At the monitoring location, a monitoring pit was excavated for the inspection by the archaeologist. The archaeologist supervised the soil excavation process until it reached the required depth for excavation for the construction of the sewers and

manholes. The size of pit is subject to the width of the trenches required for the sewer laying works or size of the manholes.

Upon identification of any archaeological materials or features during the AWB, the Contractor would provide immediate access for the archaeologist to record the location of materials/features *in situ*, antiquities retrieval and sample collection. The archaeologist would immediately inform the Engineer and AMO for site inspection, and determine if the number of the monitoring locations needs to be increased or appropriate mitigation measures to be adopted based on the extent of discovery, site condition and categories of finds recovered. Proper records were made for all archaeological works undertaken.

2.3.3 ***Reporting***

After the completion of the AWB, a draft *AWB Report* would be submitted to the Engineer and AMO for comment. The report presents the procedures and results of the AWB in accordance with the requirements of the *Guidelines for Archaeological Reports*. The report includes details of the overall programme, methodology, sampling strategy, implementation, findings and interpretation. Upon resolution of comments received, the report would be finalised. Three hard copies and two electronic copies of the final report would be submitted to AMO for upload to the AMO's website for public inspection.

Field records were prepared following the recording system presented in the agreed *AWB Proposal*.

3.1 HISTORICAL BACKGROUND

According to the edition of the 25th year of Jiaqing (嘉慶二十五年) (1820) of the *Xin'an Gazetteer* ⁽¹⁾, Ngau Chi Wan (牛池灣) was recorded, which indicates that Ngau Chi Wan Village has a history of over 190 years. Moreover, in the map of "*Xin'anxian quantu*" (新安縣全圖, literally means "Full Map of *Xin'an* County") draw by *Shaoyan Shi* from *Lingnan* (in Chinese "嶺南少岩氏") ⁽²⁾, Ngau Chi Wan was located south of a major road, which indicates that Ngau Chi Wan Village maybe one of the well-known villages at that time. Therefore, Ngau Chi Wan has some degree of historical importance in Hong Kong.

3.2 TOPOGRAPHIC AND GEOLOGICAL BACKGROUND

The superficial geology of the AWB monitoring location 1a at the Ngau Chi Wan Village is alluvium which is considered to have archaeological potential (see *Figure 3.1*). ⁽³⁾ AWB location 1a is at about +8.0 mPD.

3.3 ARCHAEOLOGICAL BACKGROUND

No site of archaeological interested is located in nearby area. No previous archaeological works have been conducted in nearby area.

(1) 舒懋官，《新安縣志》。

(2) 譚廣濂，《從圓方到經緯——香港與華南歷史地圖藏珍》：頁102-103。

(3) In house GIS database with geological data from CEDD dated to 2006.



4.1

FINDINGS OF THE AWB

Monitoring pit at location 1a is the proposed location of a drainage manhole. The size of the monitoring pit was approximately 1m (width of sewer trench) x 2m (monitoring length) x 2m (depth). Width of the manhole should be 2m and maximum impacted depth should be 2.5m. The width and depth was reduced in order to avoid damage to the existing utilities.

The findings of the AWB show that location 1a has been highly disturbed by the previous excavation works for the installation of utilities in the last few decades. No remain of archaeological interest has been identified within the AWB area. Detailed information and soil profiles at location 1a are illustrated in *Table 4.1*.

Table 4.1 *Detailed Findings at Location 1a*

Location	1a				
Monitoring Date	28-30 July 2013	Reference Figure No.	1.1		
Excavation Method: Open trench excavation construction method. Manual labours excavation was adopted for soil excavation from ground level to the required level (approximately 2.5m below existing ground level (bgl)). Excavation stopped at 2m bgl due to discovery of a ceramic pipe at the bottom of the monitoring pit.					
Findings and discovery: No archaeological remain had been identified.					
Stratigraphy:					
Layer	Description	Cultural Remains	Dating and Interpretation	Approximate Depth from Existing Ground Level (cm)	Thickness (cm)
1	Concrete road surface	None	Modern road surface	0 to 25	25
2	Brownish yellow sandy soil, with concrete lumps and small rocks	None	Modern fill layer	33 to 38-63	5 to 30
3	Brownish red sandy soil, with brownish grey soil, carbon, plastic sheet and concrete lumps	None	Modern fill layer	38-63 to 132	68 to 96
4	Grey soil with yellowish soil, with concrete lumps	None	Modern fill layer	132 to 200	65 to 70

Location

1a

Photograph:



NW Section



SW Section

Location

1a

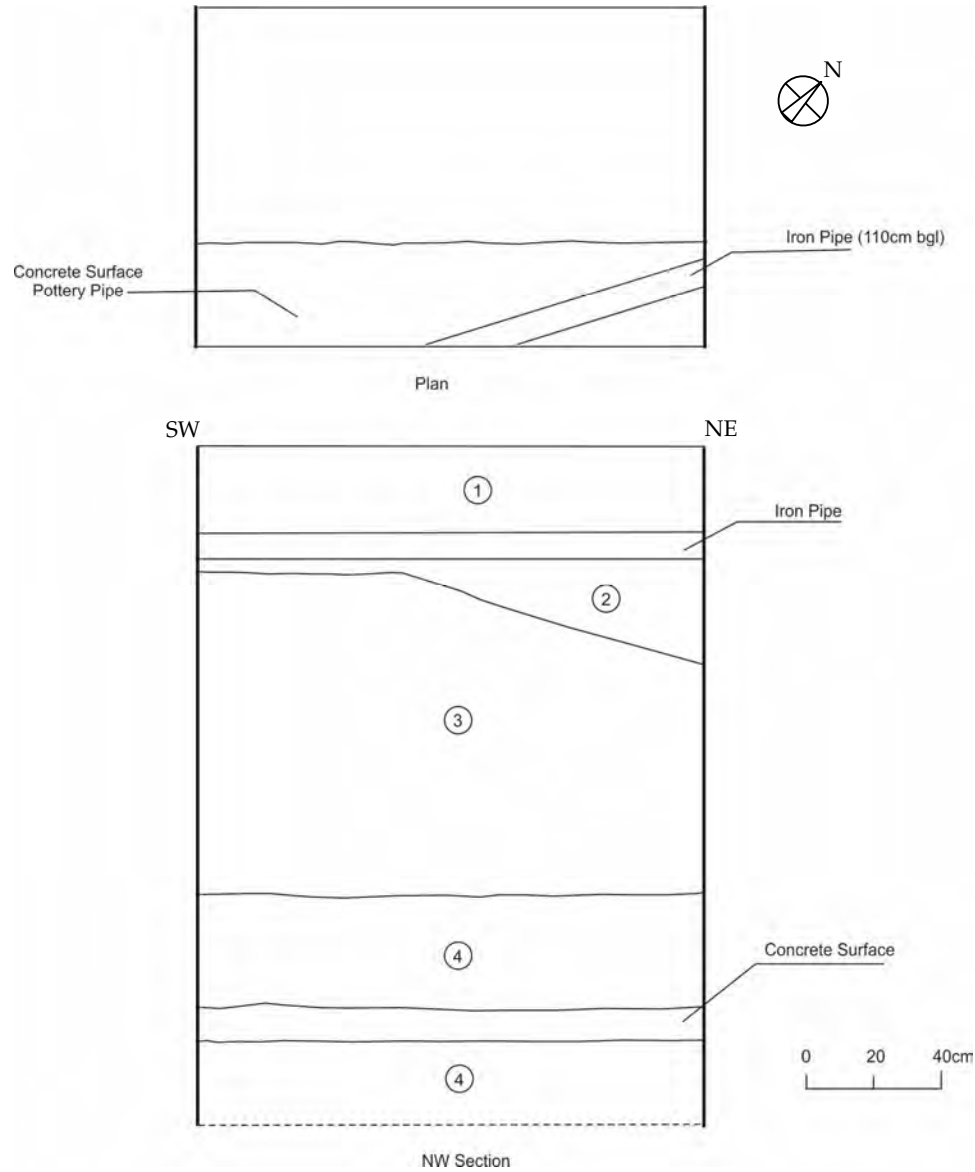


SE Section

Location

1a

Drawing:



Due to the opposition of the villagers on the proposed works at Ngau Chi Wan Village, the construction works were carried only at the Fu Chi Path. AWB is therefore only carried out at Fu Chi Path at location 1a.

The AWB shows that location 1a has been highly disturbed by previous excavation works for laying utilities in the last few decades. No remain of archaeological interest were identified in the AWB. As the existing utilities are laid along the Fu Chi Path, it is anticipated that the soil layers of the whole Fu Chi Path have been highly disturbed.

As the manhole and associated sewer will be placed in the fill soil layer which has been highly disturbed and have no archaeological potential, the excavation works will not cause archaeological impact. No further archaeological works is required.

For other AWB locations 1b, 1c and 1d along Kam Chi Path which are cancelled due to opposition of the villagers of Ngau Chi Wan Village, scars could be observed on concrete surface along Kam Chi Path where the soil has been disturbed. The proposed works are in shallow ground probably in disturbed soil layer without archaeological potential. Therefore, no mitigation measure is considered necessary for future works along Kam Chi Path.

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舒懋官 (1820)，《新安縣志》(台北：成文出版社，1974)。

譚廣濂，《從圓方到經緯——香港與華南歷史地圖藏珍》(香港：中華書局(香港)有限公司，2010)。