

Our ref. Y2029/095/

25 September 2003

Minor Works Term Consultancy

2002 – 2004 Region 2

Consultancy Agreement No.: CAA L015

A new rain Cover

At Lei Cheng Uk Han Tomb Museum

41, Tonkin Street, Sham Shui Po, Kowloon

(Job No. 095 Project ID: 14000085)

Project Profile

For and on behalf of
WCWP INTERNATIONAL LIMITED

Clement H. Chu
Executive Director

TABLE OF CONTENTS

1. Basic Information

- 1.1 Project title
- 1.2 Purpose and Natural of the project
- 1.3 Name of Project Proponent
- 1.4 Location and Scale of the Project
- 1.5 History of site
- 1.6 Number and types of Designated Projects to be covered by the Project Profile
- 1.7 Names and Telephone Number of Contact Person

2. Outline if Planning Implementation Programme

3. Major Elements of the Surrounding Environment

- 3.1 Existing Sensitive Receivers

4. Possible Impact of the Environment

- 4.1 Implementation Process
- 4.2 Operation Time
- 4.3 Various Environmental Impacts

5. Environmental Protection Measures

- 5.1 Against visual impact
- 5.2 Against impact to site of cultural heritage
- 5.3 Public consultation

6. Use of Previously Approved EIA Report

APPENDICES

[Appendix A Location Plan](#)

[Appendix B Site Plan](#)

[Appendix C Plan from Land Registry](#)

[Appendix D Design Drawings of Foundations](#)

[Appendix E Design Layouts of Tensile Structure](#)

[Appendix F Photomontages of tensile structure](#)

[Appendix G Part of Draft Cheung Sha Wan Outline Zoning Plans](#)

[Appendix H Draft Minutes of 24th meeting of the Community Affairs Committee, Sham Shui Po District Council, 18 September 2003 \(in Chinese\)](#)

1.0 BASIC INFORMATION

1.1 Project title

A new rain cover over Lei Cheng Uk Han Tomb at Lei Cheng Uk Han Tomb Museum (hereafter referred to as “the Project”)

1.2 Purpose and Nature of the project

The Han Tomb is a cross-shaped brick structure with four chambers. The Tomb has been covered by concrete and waterproofing layers since 1950s and further protected by topsoil and turfing. It has been suffering from rainwater leakage problem on the roofing of the tomb, which will affect the structural safety of the tomb. However, direct repair and re-roofing exercise on the Han Tomb may cause further damages to its building fabric and structure.

Therefore, provision of a new cover hanging over the whole tomb is proposed to resolve the water seepage problem on the roof of the tomb.

1.3 Name of Project Proponent

Leisure and Cultural Services Department and Architectural Services Department.

1.4 Location and Scale of the Project

The site is located at Lei Cheng Uk Han Tomb Museum, 41 Tonkin Street, Sham Shui Po, Kowloon. (Refer to location plan and site plan in Appendix A & B respectively.) The cover is of approximate 400sqm sheltering the Han Tomb. Foundation works will be carried out at the outside the Han Tomb to support the structure of the cover.

1.5 History of site

The history of Lei Cheng Uk Han Tomb can be dated to Eastern Han dynasty (A.D. 25 –220). It is the only Han Tomb being identified in Hong Kong. It was declared by the Government as a gazetted monument in 1988 and is preserved permanently by the Antiquities and Monuments Ordinance (Cap. 53). The Han Tomb is delineated and shown edged red on the plan marked KM2a signed and deposited by the Secretary for Recreation and Culture in the Land Registry, in accordance with Section 3(4) of the Antiquities and Monuments Ordinance. (Refer to the plan marked KM2a in the Land Registry in Appendix C)

1.6 Number and Types of Designated Projects to be covered by the Project Profile

According to Schedule 2 Part 1 Section Q (Miscellaneous) of the Environmental Impact Assessment Ordinance (EIAO), the building works in a site of cultural heritage are classified as a Designated Project. Only one designated project is involved in this Project.

1.7 Names and Telephone Number of Contact Person

Key Personnel and contacts of the project are listed as below: -

Project Team	Party	Contact Person	Tel. No.	Fax. No.
Project Proponent	Leisure and Cultural Service Department (LCSD)	Mr. Brian Lam	27249015	27249090
	Architectural Services (ArchSD)	Mr. M.L.Lung	27732287	27656611
Project Architect	WCWP International Limited (WCWPI)	Mr. Jimmy Koo	28933000	28380503

2.0 OUTLINE OF PLANNING IMPLEMENTATION PROGRAMME

The design work, project administration, and supervision work on construction have been entrusted to WCWPI by ArchSD and LCSD. The construction work will be tendered to a selected list of approved contractors of ArchSD and awarded to a chosen contractor. After the completion of project, the subsequent maintenance work will be carried out by ArchSD.

Construction of the project is expected to commence in February 2004 and is expected to complete in May 2004. The tentative programme is indicated as below: -

	Commencement	Completion
Stage D – Detailed Design	July 03	End of October 03
Stage E – Contract Documentation and tender award	Mid December 03	End of February 04
Stage F – Construction	End of February 04	End of May 04

The project does not interact with broader programme requirements or other projects.

3.0 MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

3.1 Existing Sensitive Receivers

3.1.1 Han Tomb Museum

The museum is located adjacent to the Han Tomb.

3.1.2 Li Cheng Uk Government Primary School

Li Cheng Uk Government Primary School is located at the north of Li Cheng Uk Han Tomb and is approximately 3m from the nearest foundation work of the cover.

3.1.3 Han Garden, Lei Cheng Uk Garden and Lei Cheng Uk Playground

Han garden, the Lei Cheng Uk Garden and Lei Cheng Uk Playground are surrounding the Tomb Han at the West, North-West and East respectively. They are at least 10m away from the Han Tomb.

3.1.4 Li Cheng Uk Estate

Li Cheng Uk Estate surrounds the Han Tomb at the North and is at least 70m away.

4.0 POSSIBLE IMPACT OF THE ENVIRONMENT

4.1 Implementation Process

1m deep shallow foundations are proposed to sit at the level of 1.5m below the ground and the existing soil is of permissible bearing capacity not less than 75kpa. (Refer to the design drawings of foundations in Appendix D) Tensile cover structure consists of glass fibre coated fabrics, G.M.S or stainless steel posts; stainless steel wirings will be fixed on the foundations. The area of cover is approximately 400sqm. The cover will be minimum 2m above the Han Tomb structure and the four sides of the tomb will not be enclosed. (See the Design layouts in Appendix E and the two photomontages of the tensile cover in Appendix F)

Trial pit investigation may be required to verify the location of existing foundation of the retaining walls and adjacent museum building in order to avoid disturbance to the Tomb and Museum Building.

During the construction work, protective measures such as barrier/hoardings will be provided to segregate the visitors from the work area.

4.2 Operations Time

All works are confined to daytime operations (7:00a.m. to 7:00p.m. for normal weekday). There are no construction operations at any other times.

4.3 Various Environmental Impacts

Various environmental impacts have been considered in relation to works involved in the Project. Due to the nature of the Project as described in the above sections, certain environmental concerns are too remote to render further considerations. These include gaseous emission, dust, odour, traffic generation, liquid effluents, discharges, or contaminated runoff, generation of waste or by-products, manufacture, storage, use, transport, or disposal of dangerous goods, hazardous materials or wastes. The potential environmental concerns that render more detailed investigation can be found in the following sections.

4.3.1 Noise Impact

1. Baseline Conditions

The nearest noise sensitive receivers are the Han Tomb Museum, Li Cheng UK Government Primary School and Lei Cheng Uk Garden that are a few meters from the site and the remote receivers are the Lei Cheng Uk Playground, Han Garden and Lei Cheng Uk Estates.

2. Construction phase

The major operations for the Project are the shallow foundation works and fabrication of the cover. Light equipment and hand dug equipments are used for the foundation works. The predicted noise levels to the nearest noise sensitive receivers are considered acceptable and will be kept within the established standards of guidelines by Hong Kong Environmental Protection Department. Sound absorbent barriers may be adopted to surround the work areas of foundations. The noise levels to the other sensitive receivers are negligible. No particular protective measures are required.

3. Operation phase

No adverse impact will be produced.

4.3.2 Landscape & Visual impact

1. Baseline Conditions

A. Review of Planning and Development Control Framework:

The site is currently zoned 'Government, Institution or Community' (G/IC) on the latest Outline Zoning Plans for the area, and all works would be restricted to this zoning. The uses of zones surrounding the site are 'residential (Group A)' or

‘Government, Institution or Community’ (Refer to a part of Draft Cheung Sha Wan outline zoning plan)

B. Visual impact receivers

The visual impacts of the work are mainly received by Han Tomb Museum, Li Cheng Uk Government Primary School and Lei Cheng Uk Garden at ground floor level and Li Cheng Uk Estate at high level.

C. Landscape Features

The immediate surrounding of the cover is the Li Cheng Uk Garden. There are not many special landscape features at the site and they are summarized as below: -

1. Areas of distinctive landscape character: not exist at the site
2. Valued landscape: not exist at the site
3. Specific landscape elements: not exist at the site
4. Other conservation interest: site of culture heritage exists and further details is discussed in Section 4.3.3

2. Construction Phase

During the construction phase, there will be some temporary scaffoldings and protective layers erected around the Han Tomb and cause unsightly visual appearance. However, the duration will last only a few months.

3. Operational phase

The visual impact is assessed as below: -

A. Visual compatibility with surroundings

The immediate surrounding of the Han tomb is the Han Tomb Museum and the Gardens. The height of the tensile structure is less than 10m; all part of the cover will be at least 2m from the surface of the Han Tomb. Several large trees are adjacent to the cover. The cover in dynamic waveform will match with the curved turfing on the top of Han Tomb and the garden setting around. The cover is thin, translucent, white in colour and is designed to be compatible with the surrounding in view of its massing, height, shape, proportion and rhythms.

B. Visual obstruction

There is no blocking of views caused to landscape features, landmarks and notable features. The cover will only obstruct the view from high level to the top of the Han Tomb which is now covered with turfing and green colour tarpaulin and is of low visual quality. The tarpaulin will be removed after the erection of the cover.

C. Improvement of visual quality

Tensile structure is commonly used in HK and overseas' conservation projects of historical interests. It will be an appealing design feature that enhances the attractiveness of the Tomb. The subsequent visual impact will be more beneficial than before.

D. Glare from direct or reflected sunlight or man-made source.

As the tensile structure proposed is in white colour and translucent, no light interference from structures faced with mirror or polished materials or from direct light sources will be generated from the proposed development.

The impact will be beneficial as the project will complement the landscape and visual character of its setting as indicated in the two photomontages in Appendix F. One photomontage with façade of the Han Tomb museum is viewed at ground level from Tonkin Street and the other photomontage with the background of Han Tomb is viewed at the ground level of the Li Cheng Uk Garden, the public open space.

Other Protection measures will be provided to enhance the overall visual quality. Further details are discussed in Section 5.1.

4.3.3 Cultural Heritage Impact

1. Baseline Conditions

As mentioned in Section 1.5, the Lei Cheng UK Han Tomb is a gazette monument. The site of cultural heritage will be preserved in its totality and none of any part of the tomb will be removed.

2. Construction Phase

Impact on cultural Heritage will be induced, as the construction work will be carried over the site of cultural heritage. Adverse impact on it has been kept to minimum in accordance with the environmental protection measures in Section 5.2

3. Operational phase

After the construction, the cover will be a protective device to the monument against water ingress from rain and storm.

The impact is beneficial to the structural integrity of the monument.

Minimizing the disturbance to the Han Tomb structures in the long-term maintenance is a major consideration for the selection of cover system. Tensile structure with fabric cover of self cleaning properties and general cleaning required would be minimized. The life span of the fabric cover is relatively long and can be over twenty years and the complete replacement of cover will be easily carried out.

At times of any necessary complete removal of the tensile cover, it is comparatively more convenient than most of the other systems such as steel frame structure and causing minimum disturbance to the Han Tomb.

5.0 ENVIRONMENTAL PROTECTION MEASURES

5.1 Against visual impact

5.1.1 Construction phase

Control of Construction work practices

Prefabrication off site will be utilized to minimize site work and hence the visual impact.

5.1.2 Operation phase

Building Design & Material Selection

The visual impact of the cover is minimized in terms of the cover design and material selection of the cover. This has been discussed in Section 4.3.2.3.

The refurbishment of the museum will be carried out in 2004. The new image of museum will be designed to integrate into the new cover and finally achieve a coherent setting among the garden, Han Tomb and Han Tomb Museum. (Refer to the photomontage with new façade image of museum building in Appendix F)

5.2 Against impact to site of cultural heritage

5.2.1 Construction phase

Building Design and Material Selection

The proposed structural support and the footings are to keep away from the existing museum building and Han tomb in order to minimize the adverse effect on them. (Refer to the Design Layouts in Appendix E)

Control of Construction work practices

Disturbance to the cultural heritage is minimized in accordance with the following measures: -

- a. No heavy equipment will be used during the construction period.
- b. No surcharge is allowed to put on top and around the Tomb.
- c. Temporary Protection cover above the structure will be erected to prevent any surplus to fall on the Han Tomb.
- d. Prefabrication off site will be made use to minimize site work
- e. Sufficient monitoring programmes including ground settlement, tilting, vibration shall be provided both in the interior of and surroundings to the Han Tomb as well

as its neighboring structures. Existing survey ordinates installed inside the Han Tomb by Civil Engineering Department to detect any movement of Han Tomb structure can be made used as the monitoring measures during the construction work if permission from relevant department is obtained.

- f. Frequent monitoring works shall be carried out to ensure the structural safety of the Tomb. Construction works shall be ceased immediately if undue settlement or tilting occurs.
- g. The above measures from item a to f and the “Recommended Pollution Control Clauses” (RPCC)” will be incorporated into the tender document of the construction work and so that the future contractor is contractually obligated to follow them.

5.2.2.Operation phase

Site layout and Building Design

The impact to site of cultural heritage is minimized in terms of the cover design and material selection of the cover. This has been discussed in Section 4.3.3.3

5.3 Public Consultation

LCSD, ASD and WCWPI had informed the details of the project to the Community Affairs Committee of the Sham Shui Po District Council on 18 September 2003. The committee gave a green light to the project (Refer to the Draft Minutes of 24th meeting of the Community Affairs Committee, Sham Shui Po District Council, 18 September 2003 (in Chinese) in Appendix H).

6.0 USE OF PREVIOUSLY APPROVED EIA REPORT

No previous approved EIA reports were used in this project.