

# **Maintenance of Yamen of Kowloon Walled City Park**

## **Project Profile**

**Leisure and Cultural Services Department**  
**The Government of the Hong Kong Special Administrative Region**

**Dec 2004**

## **1. BASIC INFORMATION**

### **1.1 Project Title**

Planned Maintenance of the Yamen of Kowloon Walled City

### **1.2 Purpose and Nature of the Project**

1.2.1 The purpose of the project is to carry out planned maintenance of the Yamen. This includes replacement of the termite infected roof members of the Middle Hall, internal and external redecorations and to undertake minor repairs and restoration as necessary.

1.2.2 A column and a few purlins of the Middle Hall are affected by termite infestation and replacement is necessary. The painting on the internal wall and external wall have been deteriorated and redecoration is necessary. As the Yamen is a main attractive point of the Kowloon City Area and a declared monument, it is necessary to keep it in a sound maintenance condition.

1.2.3 The repairs strategy and a draft specification was prepared by Architectural Services Department and vetted and agreed by Antiquities and Monuments Office. The work consists of the following major maintenance items and ancillary work:

- (i) Replace termite affected timber column and purlins, including taking down the roof tiles where necessary.
- (ii) Clean, repair and re-point the external grey brick walls and dentist replacement to individual damaged bricks.
- (iii) Internal and external redecoration
- (iv) Minor repairs to windows, doors, surface channels, etc.

1.2.4 A copy of the drawing is attached at Appendix I.

### **1.3 Name of Project Proponent**

Leisure and Cultural Services Department

### **1.4 Location of Project**

The Yamen at Kowloon Walled City Park, Kowloon City. The location plan is shown on the drawing at Appendix I.

## **1.5 History of the Yamen at Kowloon Walled City Park**

1.5.1 The Kowloon Walled City was a garrison town built by the Qing government in 1847 as a military outpost. The Yamen building, a three-hall structure, was originally the administrative office of the Assistant Magistrate of Kowloon. In 1987, it was announced that the Walled City would be cleared and replaced by a park. The Yamen has been preserved and restored.

## **1.6 Number and Type of Designated Project to be covered by the Project Profile**

1.6.1 The proposed work is a designated project under Section Q.1 of Schedule 2, of the Environmental Impact Assessment (EIA) Ordinance because the project will involve building works wholly in an existing site of cultural heritage (namely a Declared Monument site).

## **1.7 Contact person(s)**

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## **1.8 Estimated Cost**

\$1.0M

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

### **2.1 Responsibilities of Parties**

2.1.1 In this project, LCSD is the proponent and client department, who will manage and monitor the project. LCSD have engaged the Architectural Services Department (ArchSD) as their works agent who will be responsible for preparing the specification and the tender documents. Monitoring of the project while in progress will be undertaken by ArchSD.

2.1.2 The works will be undertaken by a specialist contractor (“the Contractor”) on the List of Approved Specialist Contractors for Repair and Restoration of Historic Buildings provided by the Environment, Transport and Works Bureau. In addition, this Contractor will be responsible in carrying out the mitigation measures for minimizing the environmental impacts induced by the project.

### **2.2 Site Survey**

2.2.1 A full structural and condition survey of the Yamen has already been carried out to identify problem areas and has recommended corrective action necessary. The draft specification for the proposed work has been vetted and revised by AMO to check that it fully complies with international conservation standards. Any further environmental requirements arising from the EIAO will be inserted into the final specification document prior to tender action.

### **2.3 Method of Construction**

2.3.1 As the work involves a historic building, a higher degree of care will be taken in all phases of the work. In particular, the temporary scaffolding will be provided to a high standard to ensure that all sections of the roof will be easily accessible for dismantling and no undue stress will be placed on any damaged materials.

### **2.4 Reconstruction of the Chinese Tiled Roof**

2.4.1 Existing roofing tiles are to be carefully removed and stacked for reuse. New tiles and sound old tiles will then be reused for retiling of the roof. New tiles should be of matching size, quality and colour to original. Sample of tiles is to be approved before ordering.

- 2.4.2 All new timber is to be the best of its kind, free from worm holes or other defects such as cracks.
- 2.4.3 During taking down of rotten or broken timber for replacement or repair, great care is required to take out the built-in section so as not to damage the adjoining plaster work. The Contractor may be required to cut the exposed part of the timber away first and carefully break down the built-in section into pieces by drilling (using only hand-held powered tools) before taking the section out.
- 2.4.4 All new timbers are pre-treated by the timber-suppliers in their own workshops with approved preservative. Termiticide will be sprayed on the existing and salvaged timbers to prevent termite infestation. The works will be conducted by specialists with great cares to avoid negative environmental impacts.

## **2.5 Replacement of Deteriorated Bricks**

- 2.5.1 Deteriorated bricks include those cracked, broken bricks, worn bricks for more than 3mm depth, and bricks with the hard surface skin worn away. Areas of missing or deteriorated bricks to be replaced by new or salvaged bricks shall be indicated on site to the Contractor by the Project Consultant.
- 2.5.2 Replacement of bricks shall be done by “piece-in” method as follows:
- (i) Areas identified to be replaced including deteriorated bricks, mortar/cement fillings or plaster should be completely taken out without affecting the neighboring sound bricks.
  - (ii) All existing mortar joint and pointing to be carefully removed to leave a tidy position to receive the piece in bricks.
  - (iii) Header and tie bricks adhered to both the inner and outer leave of the walls should be completely taken out even though only one side of it may be deteriorated or missing.
  - (iv) The final surface over the replaced area should be flat in relation to the existing surface of the wall.
  - (v) Bricks used for piece in repair should in one complete piece with similar colour and dimensions as the existing neighboring bricks and should be laid in the same pattern as the existing.

## **2.6 Implementation Programme**

The tentative implementation programme (as agreed with the building owners) is as follows:

Pre-contract preparations

(i.e. Design, Tender Document, EIAO, etc) Dec/2004 to Feb/2005

On-site Construction Period                      Apr/2005 to Jun/2005

## **3. POSSIBLE IMPACTS DURING CONSTRUCTION PHASE**

### **3.1 Cultural Heritage**

3.1.1 The roof of the Middle Hall has decayed and will be reconstructed partially. Also, the existing painting has deteriorated over time and needs to be redecorated. Special care and attention will be paid for maintaining the historic nature of the Yamen; therefore all building and painting works are to be carried out in a careful and skilled manner by very experienced artisans only, who will be subject to a high level supervision by staff of AMO and ArchSD to ensure that the works are of the highest standard and the materials are exactly as that required. On completion of the proposed major repair project there will be a positive benefit to the environment in general and to the users of the Yamen in particular.

3.1.2 Another declared monument, the Remnants of the South Gate are located within a 300m radius from the site. Due to the nature and scale of this project, as well as the distance of these buildings from the project site, no major adverse impact is anticipated.

### **3.2 Noise**

There are no residential dwellings nearby. Only minor noise impacts are anticipated, as no heavy power-operated machinery will be involved in this project. The only construction noise will be that generated by hand-held power tools, which will be at a very low level. It is therefore believed that the noise impact on the surrounding sensitive receivers is considered to be minimal.

### **3.3 Air Quality**

The problem of dust emission from construction work is expected to be minimal since the partial demolition of the existing roof will be mainly carried out manually by hand-held tools. The amount of dust generated is expected to be low and will be controlled using good site management procedures that are included in the specification.

### **3.4 Traffic Impacts**

Some traffic impact on the nearby feeder roads (namely, Tung Tsing Road) will be inevitable due to lorries occasionally transporting construction materials to and from the site, such as timber, bricks, builders waste, etc. Yet these impacts are considered to be very limited due to the busy nature of these roads for normal everyday users.

### **3.5 Solid Waste**

- 3.5.1 All unwanted builders debris, including cement mortar, roof timbers, roof tiles and will be removed off site promptly to an approved dump and the guidelines concerning proper disposal of waste will be strictly monitored. Any sound roof tiles and roof timbers should be retained on-site for reuse after inspection by the Architect. No significant impact due to the generation and disposal of the limited and non-toxic solid waste is therefore expected from the works.
- 3.5.2 Spent chemicals from any waste termiticide and normal domestic detergent will be handled, stored and disposed of in accordance with the Waste Disposal Ordinance. Where necessary, the hotline (2755 3554) for chemical waste control and chemical waste disposal will be contacted for enquiry on technical requirements for handling chemical wastes. Any waste temiticide should be carefully returned to its container and taken back to the contractor's workshop for filtering and future reuse. In view of the cost of the termiticide, the waste chemical is not expected to exceed 1 litre in total.

### **3.6 Spoil Water**

Spoil water is likely to be generated from washing down the brick walls, granite columns and the floors using a mild detergent and fresh water solution. Such waste water will be no more harmful than normal domestic waste water; however it will be filtered before discharge to remove any pieces of waste materials that may block up the drains. Quantity of waste water generated is not expected to exceed 1,000 litres total. Also, all the effluent discharge from the site will be subject to the Water Pollution Control Ordinance.

### **3.7 Dangerous Goods**

No designated Dangerous Goods are involved in the project.

### **3.8 Ecological Impact**

- 3.8.1 There are no trees, shrubs or planting either within the project site or close enough to the site to be damaged by the intended works. No landscaping issues therefore are expected to arise on this occasion.

## **4. ENVIRONMENTAL PROTECTION MEASURES TO BE INCORPORATED IN THE DESIGN**

### **4.1 Measures to Minimize Environmental Impacts**

- 4.1.1 From above section, it is assessed that noise, air quality, traffic, solid waste and spoil water arising from the project are minimal. At the same time, standard mitigation measures in accordance with the latest version of “Recommended Pollution Control Clauses for Construction Contracts” will be adopted for further reducing the environmental impacts.

### **4.2 Cultural Heritage**

- 4.2.1 Antiquities and Monuments Ordinance



According to the Section 6(1) of the Antiquities and Monuments Ordinance (Cap. 53), no person shall demolish, remove, conduct, deface or interfere with a monument, unless a permit is granted. As the Yamen is a declared monument, the required permit will be obtained from the Antiquities Authority before any work may commence on-site. Any person who contravenes Section 6(1) shall be guilty of an offence and shall be liable on conviction a fine of \$100,000 and imprisonment for 1 year. Moreover, the proposed works will comply with the requirements of the Permit in respect of building preservation.

#### 4.2.2 Standard of Workmanship

4.2.2.1 All works to be carried out shall match the original design and care has to be taken to trace form the existing building what the original construction including materials, dimensions and colour etc. should be or should have been.

4.2.2.2 On completion of the works, the new building works and paintworks should not appear too obvious and for this reason all colour for painting and all materials employed must be approved by the consultant before use.

4.2.2.3 The Contractor is required to employ experienced craftsmen and artists to reconstruct missing or damaged or deteriorated elements of the building where no similar elements can be found.

4.2.2.4 The Contractor is required to keep a record of materials adopted in this project to allow future maintenance with the same materials and methods.

#### 4.3 Noise

4.3.1 Demolition of part of the roof will cause slight amount of noise nuisance during the initial stage of the project. Also there is no close receiver.

4.3.2 No construction works will be carried out during 7 p.m. to 7 a.m. and any time on Sundays and General Holidays, as a result, there will not be any noise generated during these sensitive hours.

#### 4.4 Air Quality

Dust pollution will not be allowed to cause a major impact, as only a small amount of dust will arise from the demolition works during the taking down of some roof members and tiles. In addition, the Air Pollution Control (Construction Dust) Regulation will be strictly followed and monitored. The following mitigation measures will be carried out:

- (i) Avoid free falling of debris while roof material is being removed and dismantled, baskets or similar containers shall be used to carry such material from the roof to ground level for disposal.
- (ii) Spray the debris with clean water so that it remains damp before it is carted away.

#### 4.5 Solid Waste

Materials arising from the demolition or site clearance (i.e. broken clay tiles, roof timber, old clay bricks, cement mortar, plaster, etc.) will be removed from the site to the approved dump area; the maximum quantity involved is not expected to exceed 5m<sup>3</sup>. Moreover, all the construction and demolition waste, as well as chemical waste (namely, waste termiticide if there is any), will be handled and disposed in accordance with the Waste Disposal Ordinance, as a result, the environmental impact from waste disposal is minimal.

#### 4.6 Water Quality

There are no water sources in the vicinity of the site that can be impacted or affected.

#### 4.7 Further Environmental Implications

##### **Severity, Distribution and Duration of Environmental Effects**

The possible severity, distribution and duration of environmental effects and further implications are summarized below:

<b>Impact</b>	<b>Effects</b>	<b>Severity</b>	<b>Distribution</b>	<b>Duration</b>
Cultural Heritage	Enhance the condition and attractiveness of the Yamen	Beneficial	Project Site only	Long-term
Noise	Noise nuisance from demolition and clearance works	Minimal	Project Site only	About 2 months
Air Quality	Dust generated from demolition	Minimal	Project Site only	About 2 months

	works and construction activities			
Solid Waste	Handling and disposal of about 5m <sup>3</sup> of demolished building material	Minimal	Project Site only	About 1 months
Water Quality	Nil	Nil	Nil	N/A
Traffic	Additional lorries to and from works site	Minimal	Tung Tsing Road	About 2 months

#### **4.8 Consultation**

4.8.1 The Antiquities Advisory Board have been informed of the proposed project and they support the proposal

#### **4.9 History of Similar Project**

Similar roof reconstruction works are presently being carried out at Tin Hau Temple, Causeway Bay.

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

The approved Project Profile for Tin Hau Temple, Causeway Bay (Ref.: DIR-091/2003) has been referred to in this present case, as that also involves similar restoration/repair work to a traditional Chinese Declared Monument.

### **6. CONCLUSIONS**

6.1 Water quality, noise, dust, traffic and solid waste impacts will be minimal during the construction phase. Moreover, by adopting appropriate mitigation measures, no adverse impacts are anticipated and the sensitive receivers will be protected from impacts.

On-site environmental monitoring and audit will be carried out to ensure the proposed mitigation measures are properly implemented throughout all phases of the project.

- 6.2 The project will repair and restore the Yamen while preserving and enhancing the traditional features of the building. The Contractor will strictly comply with the requirements specified in the permit issued under Section 6 of the Antiquities and Monuments Ordinance by the Antiquities Authority. All the repair works will be carried out by experienced craftsman and workers. Experts from AMO as well as from ArchSD will monitor and supervise the works in order to ensure the historic value and architectural features of the building would be kept intact.
- 6.3 This project is intended to put the Yamen into good repair for a number of years in order that it may be enjoyed by both residents of the neighborhood and visitors alike. As the building forms one of the landmark in the Kowloon Walled City Park, its restoration will help to promote cultural tourism and heritage education in Hong Kong.
- 6.4 As the environmental impact arising from the project is not considered to be adverse, but on the contrary is considered very beneficial to the community, an application for permission to apply directly for environmental permit under EIA Ordinance is therefore requested.