

Renovation Project for Tin Hau Temple in Causeway Bay

Project Profile



**Antiquities and Monuments Office,
Leisure and Cultural Services Department**

September 2003

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1. BASIC INFORMATION

1.1 Project Title

Renovation Project for Tin Hau Temple in Causeway Bay.

1.2 Purpose and Nature of the Project

1.2.1 The purpose of the project is to reconstruct the temple roof and to strengthen the main walls of the Tin Hau Temple in Causeway Bay.

1.2.2 An inspection, which carried out by the Buildings Department (BD), showed that the temple roof was sagging and one of the main flank walls was bulging. As a result, the Repairs Notice was given to the temple owner (Tin Hau Temple Red Incense Burner Causeway Bay Tai Tsz Fook Tong Limited). (Photos showing the deteriorated components of the temple are at Appendix I) As the Antiquities and Monuments Office (AMO) has the responsibilities to carry out repair works to the declared monuments, a renovation project is proposed for the Tin Hau Temple in Causeway Bay.

1.2.3 The repairs strategy and specification was vetted and agreed by BD. The work consists of repair items and ancillary work as follows:

- (i) Erection of temporary timber shoring to support the main flank walls and a hoarding around the works site.
- (ii) Dismantling of existing main roof, including roofing tiles and timbers.
- (iii) Careful demolition of the top portion of the left-hand side external flank wall (adjoining the Sitting-Out Area).
- (iv) Re-construction of the brickwork, including top portion of the flank wall, two side chambers and “dentist” replacement to individual damaged bricks using new brickwork.
- (v) Reconstruction of the main roof timbers and then the tiling.
- (vi) Redecoration to new roof timbers, removal of temporary hoarding and general clearing up of site.

1.2.4 Drawings showing the proposed work are attached at Appendix III to VIII.

1.3 Name of Project Proponent

Antiquities and Monuments Office (AMO), Leisure and Cultural Services Department

1.4 Location of Project

Tin Hau Temple, No. 10 Tin Hau Temple Road, Causeway Bay, Hong Kong. (Location plan showing the project area is at Appendix II).

1.5 History of the Temple

1.5.1 The Tin Hau Temple in Causeway Bay was built by the Tai family probably in the early 18th century. The Tai family are Hakkas from Guangdong who first settled in Kowloon in a village now lost beneath the former Kai Tak Airport. The family used to go to Causeway Bay to gather grass and, according to legends, some members of the family found a statue of Tin Hau in the rocks near the shore. They then erected a shelter for it and, as the shrine became popular with the boat people who made out donations, a proper temple building was subsequently constructed.

1.5.2 The Tin Hau Temple in Causeway Bay is one of the many temples dedicated to Tin Hau, goddess of the sea, and is a fine example of temple architecture of the period, still largely in its original form despite subsequent renovations. The temple is still under the management of the Tai family. The Tin Hau Temple was declared a monument in 1982.

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, the Environmental Impact Assessment (EIA) Ordinance because the project will involve the building works wholly in an existing site of cultural heritage.

1.7 Contact Person(s)

Mr. Bill Greaves	Senior Projects Manager Antiquities and Monuments Office Phone: 2721 2421 Fax: 2721 6216 Email: wdgreaves@lcsd.gov.hk
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Mr. Robin Howes	Building Surveyor Kenward Consulting Phone: 2526 0466 Fax: 2840 0525 Email: kenwardc@netvigator.com
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1.8 Estimated Cost

\$ 2.5 million.

2. OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

2.1 Responsibilities of Parties

2.1.1 In this project, the AMO is the proponent, who will manage and monitor the project. The Kenward Consulting Limited is employed by AMO as the Project Consultant (the “Project Consultant” hereafter) for designing the detailed plan of the project and carrying out site supervision.

2.1.2 The construction works will be undertaken by a specialist contractor (“the Contractor” hereafter) on the List of Approved Specialist Contractors for Repair and Restoration of Historic Buildings provided by the Environment, Transport and Works Bureau. In addition, the 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 building has already been carried out which has identified the problem areas and has recommended corrective action. The specification has been vetted and revised by AMO to check that it fully complies with international conservation standards.

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 Reconstruct of the Chinese Tiled Roof

2.4.1 Existing roofing tiles are to be carefully taken off, stacked for reuse. New tiles and sound old tiles should then be mixed during retiling. 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 Strengthen the Walls

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. The Contractor is required to provide access to all parts of the building so that the Project Consultant can identify areas where replacement is required as early as possible to suit the delivery period of replacement bricks.

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 neighbouring 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.

2.5.3 For the installation of joists supported on gable walls, the formation of or the making good existing slot/holes for the replacement of the joists should be allowed for. In taking down the existing joists supported by gable walls, great care must be taken not to enlarge the original hole and affect the fabric of the walls. In cutting the joists into the correct length, it is necessary to take into consideration of the half-dovetail joint, which connects two joists at the supporting point.

2.6 Implementation Programme

The tentative implementation programme is as follows:

Design and Tender Documents June/2003 to Oct./2003
Proposed Construction Period Nov./2003 to March/2004

3. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

- 3.1 The project site is located in an urban area of Causeway Bay. Its surrounding area consists of numerous residential buildings and commercial properties along Tin Hau Temple Road and Dragon Road. Most of the residential dwellings, which are considered as sensitive receivers, are located in the eastern and northwestern side of the project site. (approx. 15 m from the work site)
- 3.2 A public sitting-out area (SOA) is adjacent to one side of the proposed works site. The SOA is also used as a pedestrian walkway from Tin Hau Temple Road up to Dragon Street.
- 3.3 The major noise source in the area is dominated by road traffic noise from Tin Hau Temple and Dragon Road. The existing air quality is also influenced by emission from such high volume of traffic in and near the area.

4. POSSIBLE IMPACTS ON THE ENVIRONMENT

Impacts During the Construction Phase

4.1 Cultural Heritage

- 4.1.1 The roof of the Tin Hau Temple has decayed over the years due to a combination of termite attack and natural weathering. The temple roof will be reconstructed and the main walls of the temple will be strengthened. Special care and attention will be paid for maintaining the historic nature of the temple; 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 to check that such work are of the highest standard and the materials are exactly as that required.

4.2 Noise

- 4.2.1 In view of the valuable nature of the building, no heavy-power-operated machinery will be used and the construction noise will involve only that produced by hand-held power tools. As a result, the noise impact on the surrounding sensitive receivers is considered to be minimal. In addition, hoarding will be erected around the site for mainly safety and visual reasons, which will also serve a noise barrier for reducing the construction noise even further.

4.3 Air Quality

- 4.3.1 The problem of dust emission from construction work is expected to be minimal since the demolition of the existing roof and the section of brick walls will be by hand-held powered tools. The small amount of dust generated is expected to be minimal and controllable using normal site management procedures that are included in the specification.

4.4 Traffic Impacts

4.4.1 Traffic impacts on the adjacent road may arise. Lorries for occasionally transporting construction materials to and from the site, such as timber, bricks, builders waste, etc would use the Tin Hau Temple Road nearby.

4.5 Solid Waste

4.5.1 All unwanted builders debris will be removed off site promptly and the guidelines concerning proper disposal of waste will be strictly monitored. Therefore, there will not be any significant impact due to the generation and disposal solid waste.

4.5.2 Spent chemical, such as waste termiticide, if there is any, shall 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.

4.6 Spoil Water

4.6.1 Any spoil water generated will be of minimum quantity arising from some new brickwork construction and concrete strengthening to the walls. Such spoil water will be filtered before discharge. Also, all the effluent discharge from the site will be subject to the Water Pollution Control Ordinance.

4.7 Dangerous Goods

4.7.1 No dangerous goods are involved in the project.

5. ENVIRONMENTAL PROTECTION MEASURES TO BE INCORPORATED IN THE DESIGN

5.1 Measures to Minimize Environmental Impacts

5.1.1 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.

5.2 Cultural Heritage

5.2.1 Antiquities and Monuments Ordinance

5.2.1.1 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 Tin Hau Temple 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 to 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.

5.2.2 Standard of Workmanship

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

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

5.2.2.3 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.

5.2.2.4 The Contractor is required to keep a record of methods and materials adopted in this project while the format of the record should be accepted by the Project Consultant. A copy of the record will be given to the AMO for future maintenance purpose.

5.2.2.5 The record shall contain types of materials used (including common names and technical names), area of application, mix proportion, method of mix, method of application, code name or number etc., to allow future maintenance with the same materials and methods.

5.3 Noise

5.3.1 Demolition of the existing roof and part of the external walls by using the hand-held power tools will cause slight amount of noise nuisance during the initial stage of the project

5.3.2 The mitigation measures stated in the recommended pollution control clauses for the demolition works, such as the use of quieter machinery, proper maintenance of plant and good working practices will be adopted. Moreover, a metal hoarding will be erected around the site. As a result, exceeding noise impacts will not be approached.

5.3.3 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 impacts at sensitive hours.

5.4 Air Quality

5.4.1 Dust pollution should not be a major cause of concern, as only a small amount of dust will arise from the demolition works. 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 removal roof material, use basket and the like to carry such material from the roof to ground level for disposal.
- (ii) Spray the debris with water so that it remains wet before it is carted away. In addition, water will be continuously sprayed on the surface where any drilling, cutting or other small-scale breaking operation is carried out by using hand-held power tools.

5.5 Solid Waste

5.5.1 Materials arising from the demolition or site clearance will be removed from the site to the approved dump area. Moreover, all the construction and demolition waste, as well as chemical waste, if there is any, would be handled and disposed in accordance with the Waste Disposal Ordinance, as a result, the environmental impact from waste disposal is minimal.

5.6 Water Quality

5.6.1 No water sources will be impacted or affected.

5.7 Further Environmental Implications

Severity, Distribution and Duration of Environmental Effects

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

Impact	Effects	Severity	Distribution	Duration
Cultural Heritage	Enhance the condition and attractiveness of the temple	Beneficial	Temple site only	Long-term
Noise	Noise nuisance from demolition and clearance works	Minimal	Temple site only	About 2 months
Air Quality	Dust emission from construction activities	Minimal	Temple site only	About 2 months
Solid Waste	Handling and disposal of about 10m ³ of demolished building material	Minimal	Temple site only	About 1 month
Water Quality	Nil	Nil	Nil	n/a
Traffic	Additional lorries to and from works site	Minimal	Tin Hau Temple Road	About 2 months

5.8 Public Consultation

- 5.8.1 Eastern District Council was consulted on 17 July 2003. The temple owner has also been kept constantly informed through regular progress meetings. Public interest from the regular users of the temple is expected during the progress of the work as they are most anxious that the work is completed as soon as possible and they can return to their usual custom of paying regular respect to the goddess.

6 USE OF PREVIOUSLY APPROVED EIA REPORTS

- 6.1 There are no known similar approved EIA reports that we have been able to refer to.

7 CONCLUSIONS

- 7.1. Water quality, noise, dust, traffic and solid waste impacts will be minimal during the construction phase. Moreover, with adopting appropriate mitigation measures, the adverse impacts would not be anticipated and the receivers would comply with the legislative criteria. (The mitigation measures are summarized in Appendix VIII) Moreover, on-site environmental monitoring and audit will be carried out to ensure the proposed mitigation measures are properly implemented.
- 7.2. The project aims at renovating the existing Tin Hau Temple. The traditional features of the building will be preserved. 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. Also, all the repair works will be carried out by experienced craftsman and workers. Experts from the AMO will monitor and supervise the works in order to ensure the historic value and architectural features of the building would be kept intact. It is believed that the project will enhance the attractiveness of the temple for the benefit of both residents of the newighbourhood and visitors alike.
- 7.3 As the environmental impact arising from the project is not considered to be adverse, the application for permission to apply directly for environmental permit under EIA Ordinance is therefore requested.



Photo 1 The Main flank wall has been bulged and is now being supported by temporary timber shoring



Photo 2 Termite infestation at the beams of the main hall of the temple

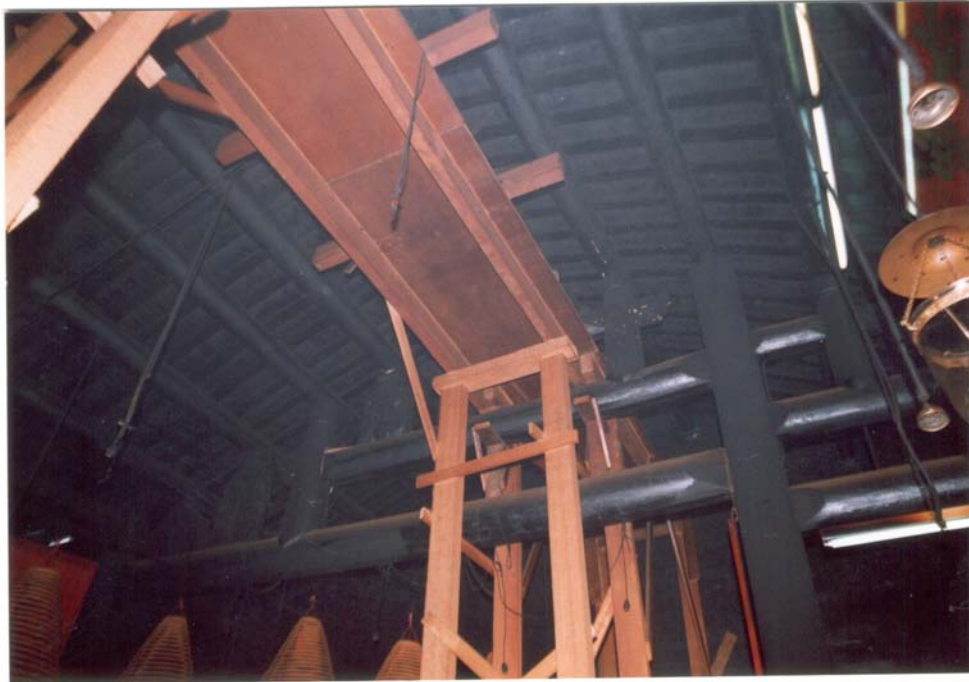
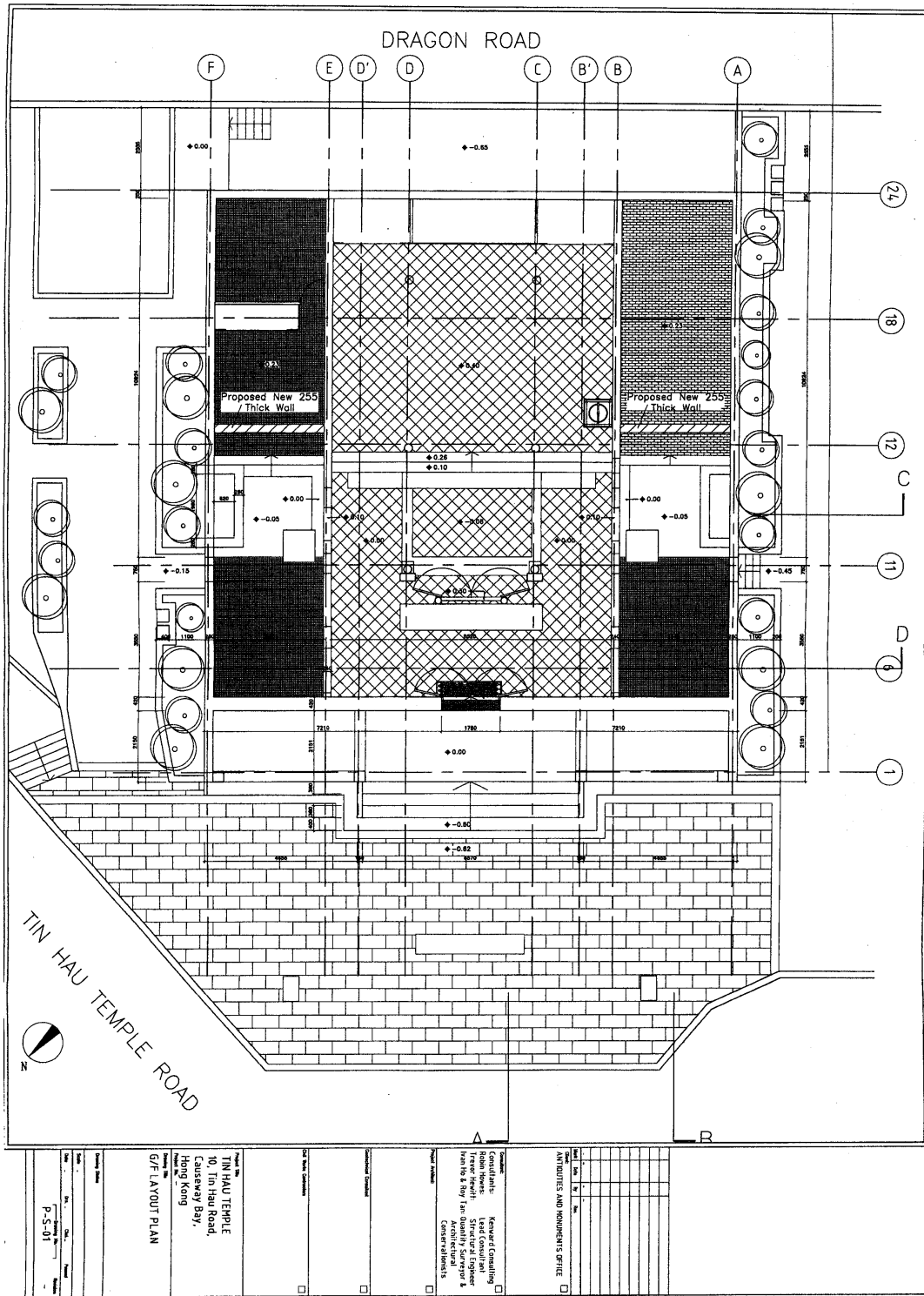
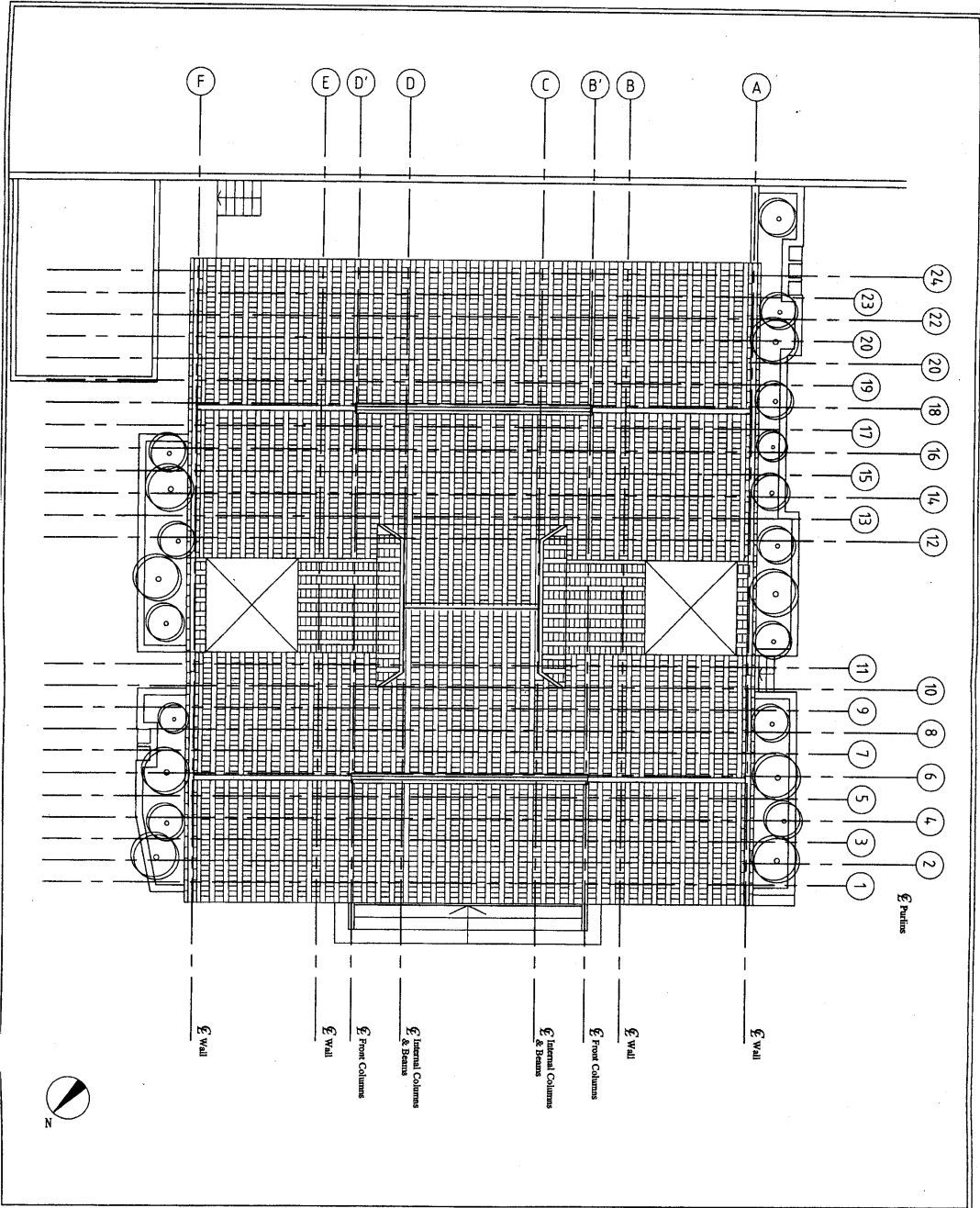


Photo 3 Part of the timber has been rotten or broken that temporary shoring has been erected to support the roof of the temple



Photo 4 The temple roof has been sagging

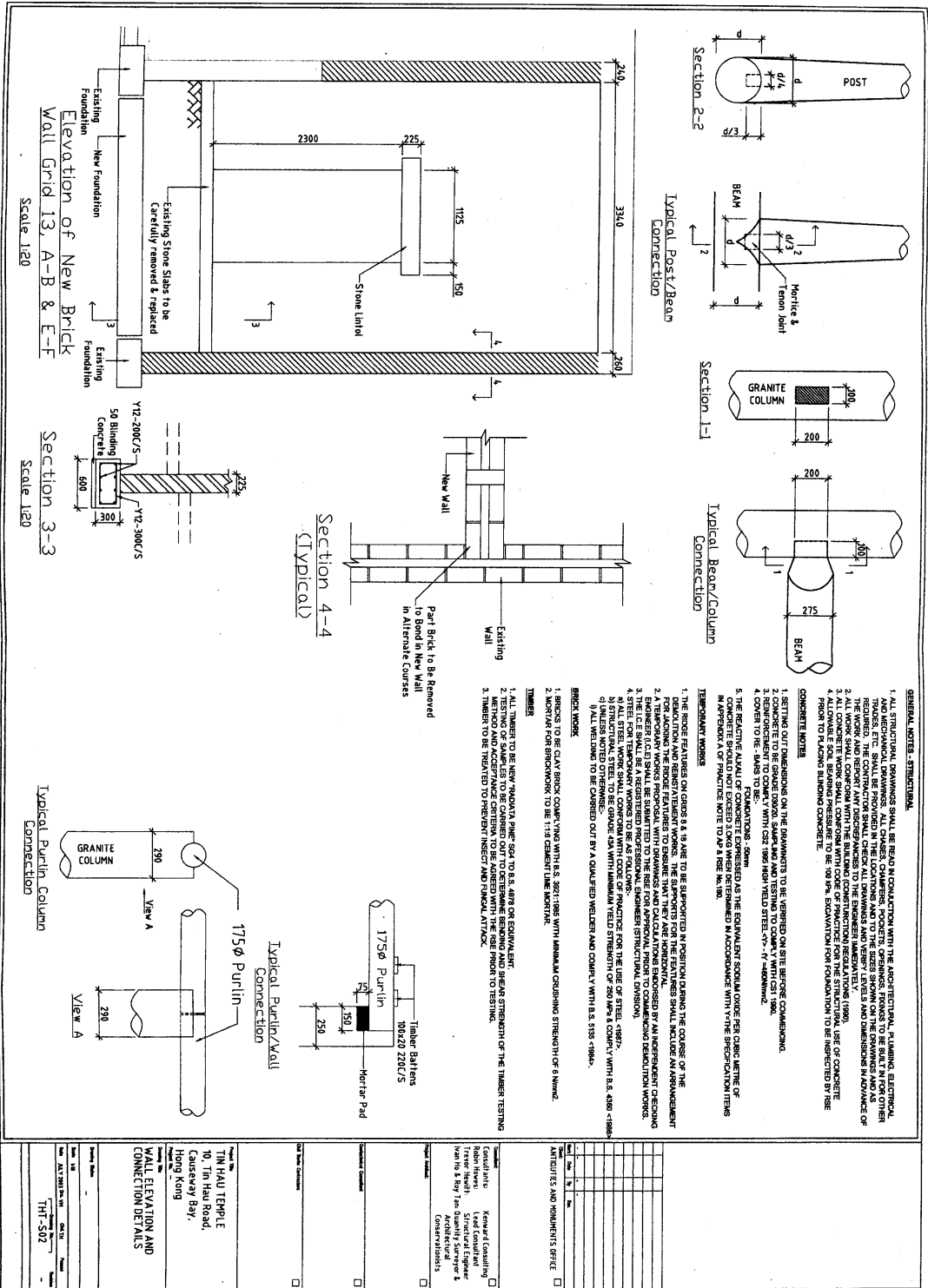




<p>Project No. _____</p> <p>TIN HAU TEMPLE 10, Tin Hau Road, Causeway Bay, Hong Kong</p> <p>Project Name ROOF PLAN</p>	<p>Contractor _____</p> <p>Structural Engineer Yan Ho & Roy Tam Quantity Surveyor & Conservators</p>	<p>Approved By _____</p> <p>Scale _____</p> <p>Date _____</p>	<p>Drawn By _____</p> <p>Checked By _____</p>	<p>Project No. _____</p> <p>Scale _____</p> <p>Date _____</p>	<p>Project No. _____</p> <p>Scale _____</p> <p>Date _____</p>	<p>Project No. _____</p> <p>Scale _____</p> <p>Date _____</p>	<p>Project No. _____</p> <p>Scale _____</p> <p>Date _____</p>	<p>Project No. _____</p> <p>Scale _____</p> <p>Date _____</p>	<p>Project No. _____</p> <p>Scale _____</p> <p>Date _____</p>	<p>Project No. _____</p> <p>Scale _____</p> <p>Date _____</p>
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Known Consulting Engineers
 Structural Engineer
 Quantity Surveyor & Conservators
 Antiquities and Monuments Office

P-S-02



Checked by:	Lead Consultant
Drawn by:	Structural Engineer & Lead Consultant
Reviewed by:	Structural Engineer & Lead Consultant
Approved by:	Structural Engineer & Lead Consultant
Scale:	As Shown
Date:	13/07/2018
Project:	THE SUI
Sheet:	THE S02

THE HAU TEPHLE
70, Tin Hau Road,
Causeway Bay,
Hong Kong

WALL ELEVATION AND CONNECTION DETAILS

Summary of Mitigation Measures

Renovation Project for Tin Hau Temple in Causeway Bay

Project Profile Sections	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the Measure(s)?	Location of the measure	When to implement the measure?	What requirements or standards of ordinance/ guidelines for the measure to achieve?
5.2.1.1	Apply the Section 6 Permit of the Antiquities and Monuments Ordinance (Cap.53)	As the Tin Hau Temple is a declared monument, permit will be obtained from the Antiquities Authority before any work may commence on-site	Project Consultant	Tin Hau Temple	Before the commencement of the project	Antiquities and Monuments Ordinance (Cap.53)
5.2.2.1	Works carried out shall match the original design	To preserve the historical and architectural significance of the temple	Contractor	Site area	During the construction period	---
5.2.2.2	All colours for painting and materials employed must be approved by the consultant	To preserve the historical and architectural significance of the temple	Contractor	Site area	During the construction period	---
5.2.2.3	Employ experienced craftsmen and artists	To preserve the historical and architectural significance of the temple	Contractor	Site area	During the construction period	---
5.2.2.4	Keep record of material and means adopted in the project	For future maintenance purpose	Contractor	Site area	During the construction period	---
5.3.2	Implement noise mitigation measures (e.g. use quieter machinery, proper maintenance of plant, good working practices and erect metal hoarding)	To minimize noise impact due to construction	Contractor	Site area	During the construction period	Noise Control Ordinance

Project Profile Sections	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the Measure(s)?	Location of the measure	When to implement the measure?	What requirements or standards of ordinance/ guidelines for the measure to achieve?
5.3.3	No works will be carried out during 7 p.m. to 7 a.m. and any time on Sundays and General Holidays	To minimize the noise impacts at sensitive hours	Contractor	Site area	During the construction period	Noise Control Ordinance
5.4.1 (i)	Use basket and the like to carry debris from the roof to ground level for disposal.	To minimize the dust problem created by the demolishing works	Contractor	Site area	During the construction period	Air Pollution Control (Construction Dust) Regulations
5.4.1 (ii)	Water spray	To minimize the dust problem caused by the demolishing works, drilling, cutting polishing or other small-scaled mechanical breaking	Contractor	Site area	During the construction period	Air Pollution Control (Construction Dust) Regulations
5.5.1	Construction and demolition waste and chemical waste would be handled and disposed carefully	To minimize the impacts from waste disposal	Contractor	Site area	During the construction period	Waste Disposal Ordinance