

# THE PATAN ROYAL COMPLEX

A Program for Conservation and Adaptive Reuse  
an initiative of the  
Kathmandu Valley Preservation Trust  
2006-2012

## MULCOK

A Preliminary Proposal for Restoration and Adaptive Reuse  
including a Cost Estimate

May 2006





# Mulcok - A Program for Conservation and Adaptive Reuse

## Executive Summary

### Existing Situation

At present (BS 2063, AD 2006) only four rooms on ground floor level are used in a ritual context. One room of first floor level remains closed since twenty years as the ritual obligations became obsolete. The remaining rooms are largely neglected and unused since a generation.

The replacement of the roof, the ceiling joists and the edge of the plinth had been - for want of adequate funds - implemented in the fashion of an emergency repair and in disrespect of historic rafter and ceiling joist spacing.

The repair of the struts had been accomplished in the same manner.

The garden facade displays a patchwork of a variety of brick sizes, documenting successive repairs since the 1934-earthquake.

### Conservation and Restoration

The renewal of the entire roof with historic rafter size and spacing is mandatory. In deviation from the present situation, marine plywood will have to be used as covering material, with an additional layer of multiplast. The roofing with clay and roof tiles follows the historic formula.

Above groundfloor, all joists except above the three arcades will be replaced following the traditional formula of size and spacing which survives above the arcades. Floors will be of 5 cm lime and brick rubble with tiles on top to allow a flow of visitors with minimum production of dust. The walls will be covered by lime and brick-dust plaster.

### Adaptive Reuse

Most of the ground- and first floor rooms will be utilized to display exhibits in connection with the neighbouring Sunadricok. As an "Architectural Museum" it will present drawings documenting major building types and construction techniques and display architectural fragments which had been salvaged elsewhere. The collection of fountain spouts will be displayed in the newly created courtyard. The garden facade will be renewed and opened up towards a newly created backyard to create a continuity of space towards the Bhandarkhal tank.

### Costs

Restoration

|   |             |
|---|-------------|
| The above mentioned <b>material interventions</b> | 261.000.-\$ |
|---|-------------|

|  |            |
|--|------------|
| Detailed <b>design, supervision, reporting</b> etc | 40.000.-\$ |
|--|------------|

Museum Installation

|                 |            |
|-----------------|------------|
| Concept, design | 56.000.-\$ |
|-----------------|------------|

|  |            |
|--|------------|
| Curatorial work: procurement of exhibits plus labels | 42.000.-\$ |
|--|------------|

|                                   |            |
|-----------------------------------|------------|
| Frames, boxes, lighting will cost | 38.000.-\$ |
|-----------------------------------|------------|

|              |                    |
|--------------|--------------------|
| <b>Total</b> | <b>437.000.-\$</b> |
|--------------|--------------------|

Patan, 30 April 2006, 17 Baishaka 2063 - akshaya tritiya

**The Kathmandu Valley Preservation Trust**  
initiates the conservation and development of the  
**Patan Royal Complex**

and the development of the extensive backyard.

The present paper does not represent a design but aims at identifying problems and the potential for development. Alternatives are expected in the course of an extensive process of discussion.

**Objectives of the Project**

The aim is to rehabilitate Mulcok as well as Sundari Cok to house the collection of exhibits in stone owned by the Department of Archaeology. The available space would also allow to realize an Architectural Museum, which in 1993 was already planned to be incorporated by the Patan Museum at Keshav Narain Cok. More options should be explored like an introduction into the history of the entire Palace Complex and the ritual use of Mulcok (Taleju, Kumari etc.).

The **extension of the museum** might be implementable under the authority of the existing museum. Other options should be explored. In case the future museum turns out to be one entity, three entrances would be open with a single ticket. An extended rear area will be defined as being part of the museum complex.

The **level** of this entire area will be lowered by 60 to 90 cm. The present level was created after 1934 by rubble left over by the earthquake. The advantage is that the upper terrace of the tank will be integrated into a new pavement. A new courtyard behind Mulcok adds an architectural space that could also provided an arcade for the display of exhibits.

The rear area of the museum complex will have an explicit **architectural character** – in contrast to the wide area beyond which could partly be landscaped in addition to the forest in the north-eastern corner.

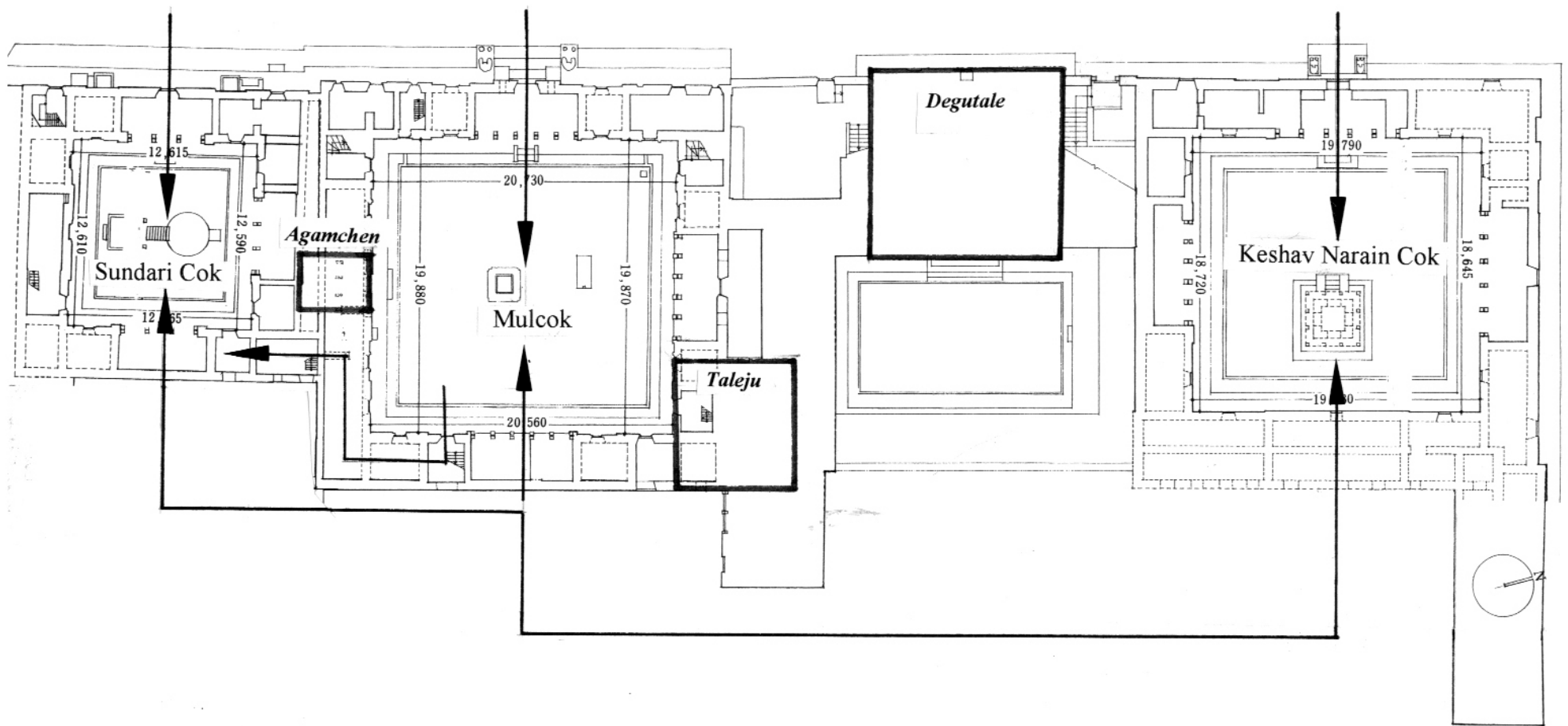
The future development of the remaining area in the southeast will be discussed in coming years in order to identify the potential of a public-private partnership. All parties involved are invited to submit proposals.

The school has leased the northern area including Bahadur Shah's Palace from HMG. The aim is to reclaim the palace wing for the museum complex and to rehabilitate and fully equip it's hall as a conference centre. A minimum of 5 metres behind the north wing should be reclaimed by the museum complex to allow free circulation from north to south, from Bahadurs Palace to Sundari Cok.

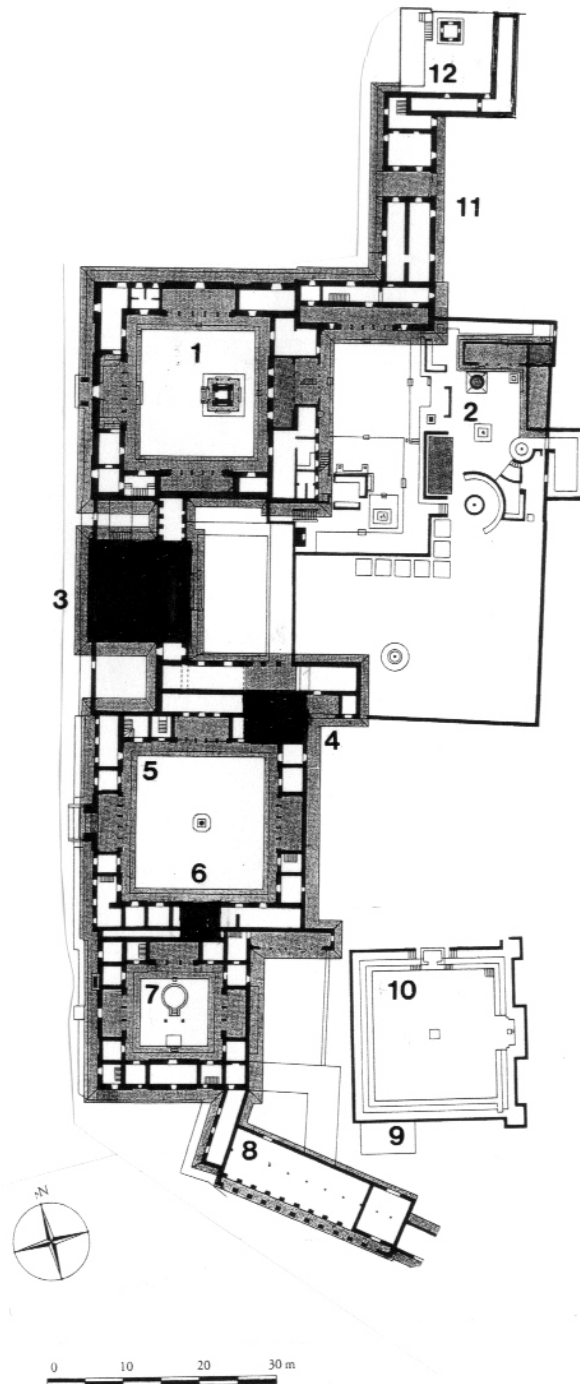
**Individual Conservation Projects:**

- Bahadurs Palace
- Mulcok
- Sundari Cok
- Kot Building
- Bhandarkal Tank

Patan, January 2006



**THE PATAN ROYAL COMPLEX**  
 Circulation in Future Museum Complex  
 Scale 1:400



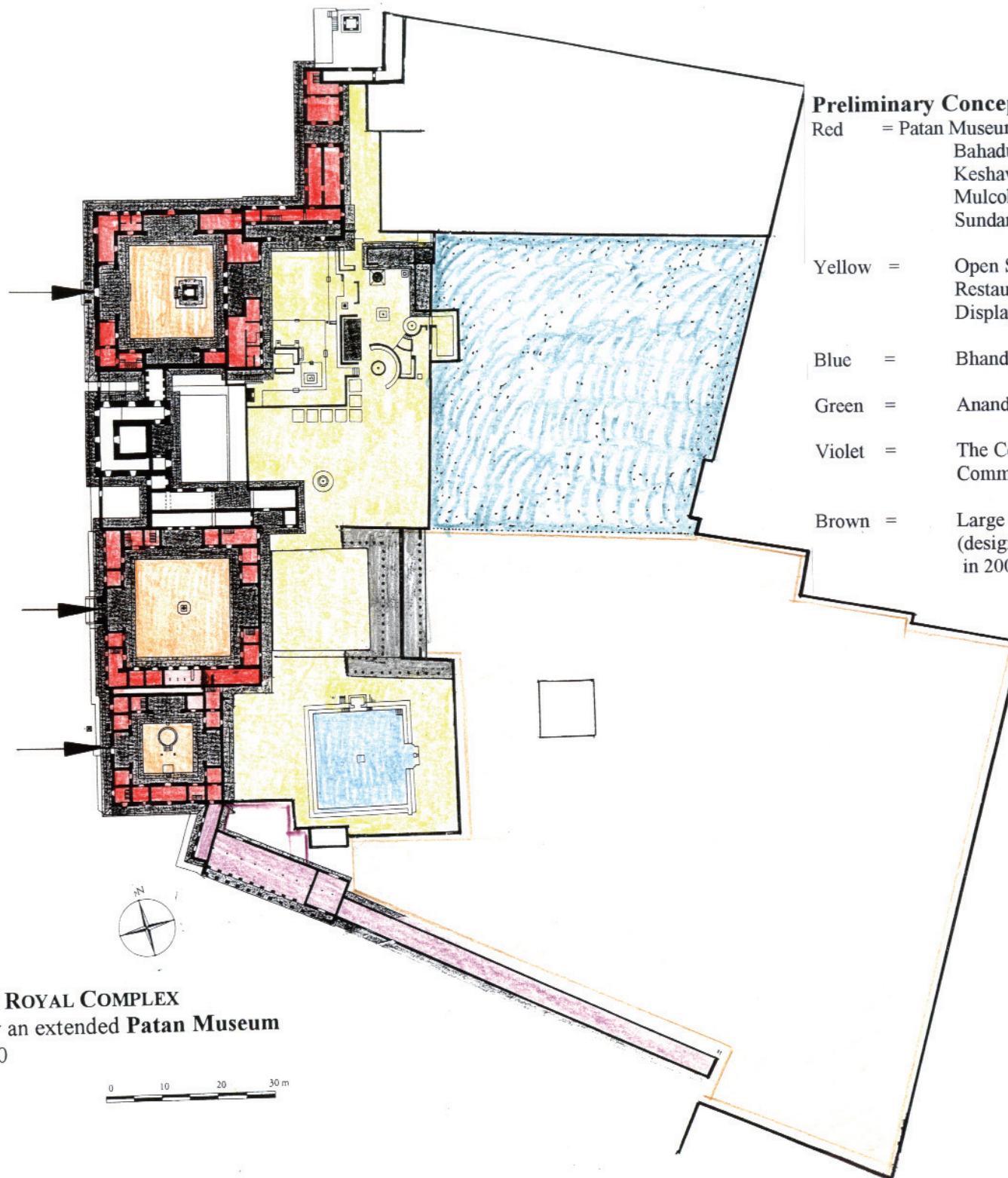
## THE PATAN ROYAL COMPLEX

**Mulcok** – existing situation,

Location between Sundari Cok and Taleju Temple

Scale 1:1000

- 1 Keshav Narain Cok (Patan Museum)
- 2 Museum Court, Restaurant and Garden
- 3 Degutale Temple
- 4 Taleju Temple
- 5 Mulcok**
- 6 Agamchen
- 7 Sundari Cok
- 8 Court Building
- 9 Duimaju Shrine
- 10 Bhandarkhal Pukhu
- 11 Bahadur Shah Palace (North Wing)
- 12 Muchen Agamchen

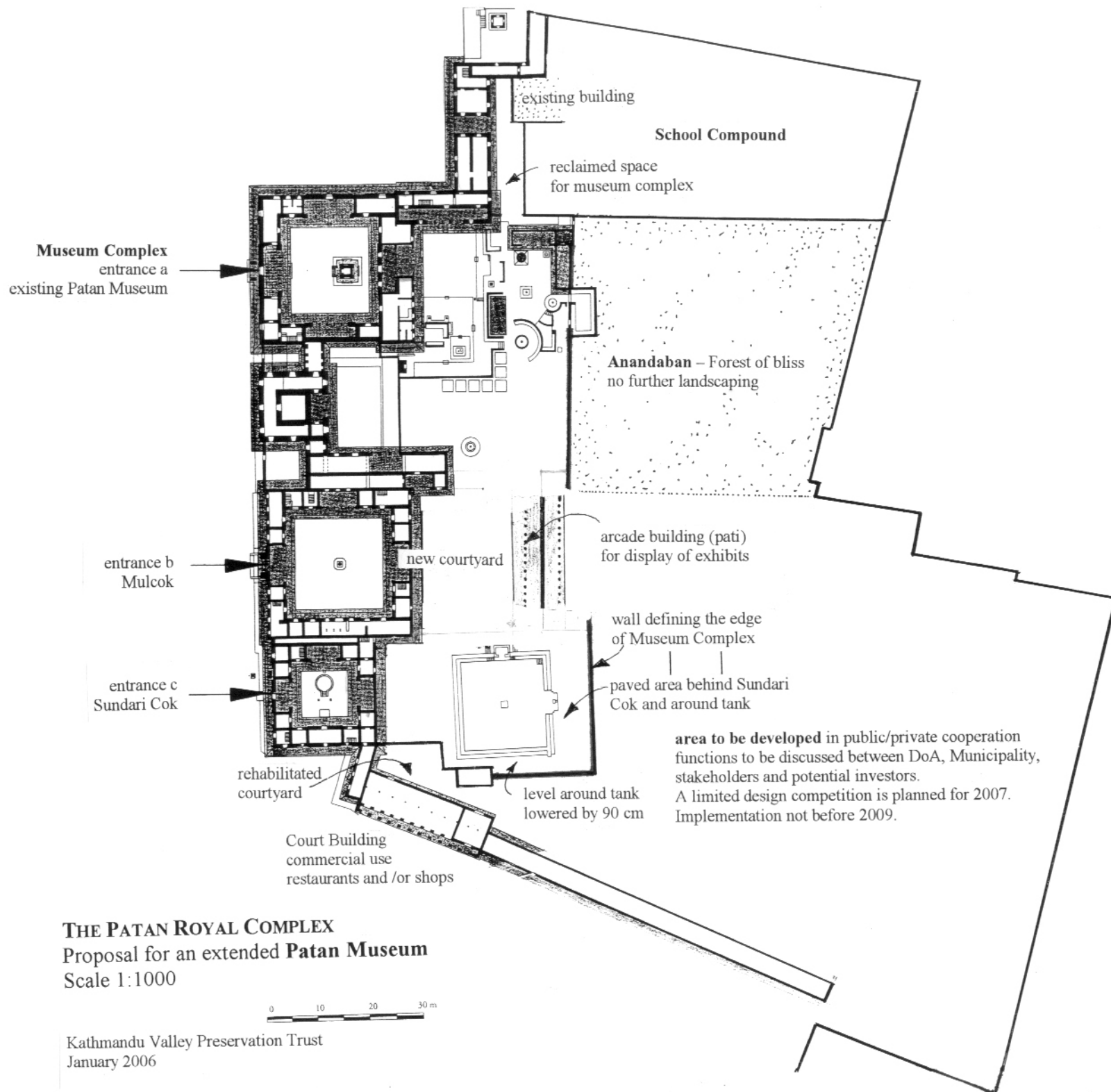


# **Preliminary Concept, January 2005**

- Red = Patan Museum Complex
  - Bahadur Shah Palace (North Wing)
  - Keshav Narain Cok
  - Mulcok
  - Sundari Cok
- Yellow = Open Space behind the royal courtyards
  - Restaurants
  - Display (Stone Museum)
- Blue = Bhandarkal Tank
- Green = Anandaban – The Forest of Bliss
- Violet = The Court Building and Courtyard
  - Commercial (restaurant & shops)
- Brown = Large space public and/or commercial use
  - (design competition after extensive hearings in 2008)

**THE PATAN ROYAL COMPLEX**  
 Proposal for an extended **Patan Museum**  
 Scale 1:1000

0 10 20 30 m



**THE PATAN ROYAL COMPLEX**  
 Proposal for an extended **Patan Museum**  
 Scale 1:1000

0 10 20 30 m

Mulcok

# EXISTING SITUATION

April 2006



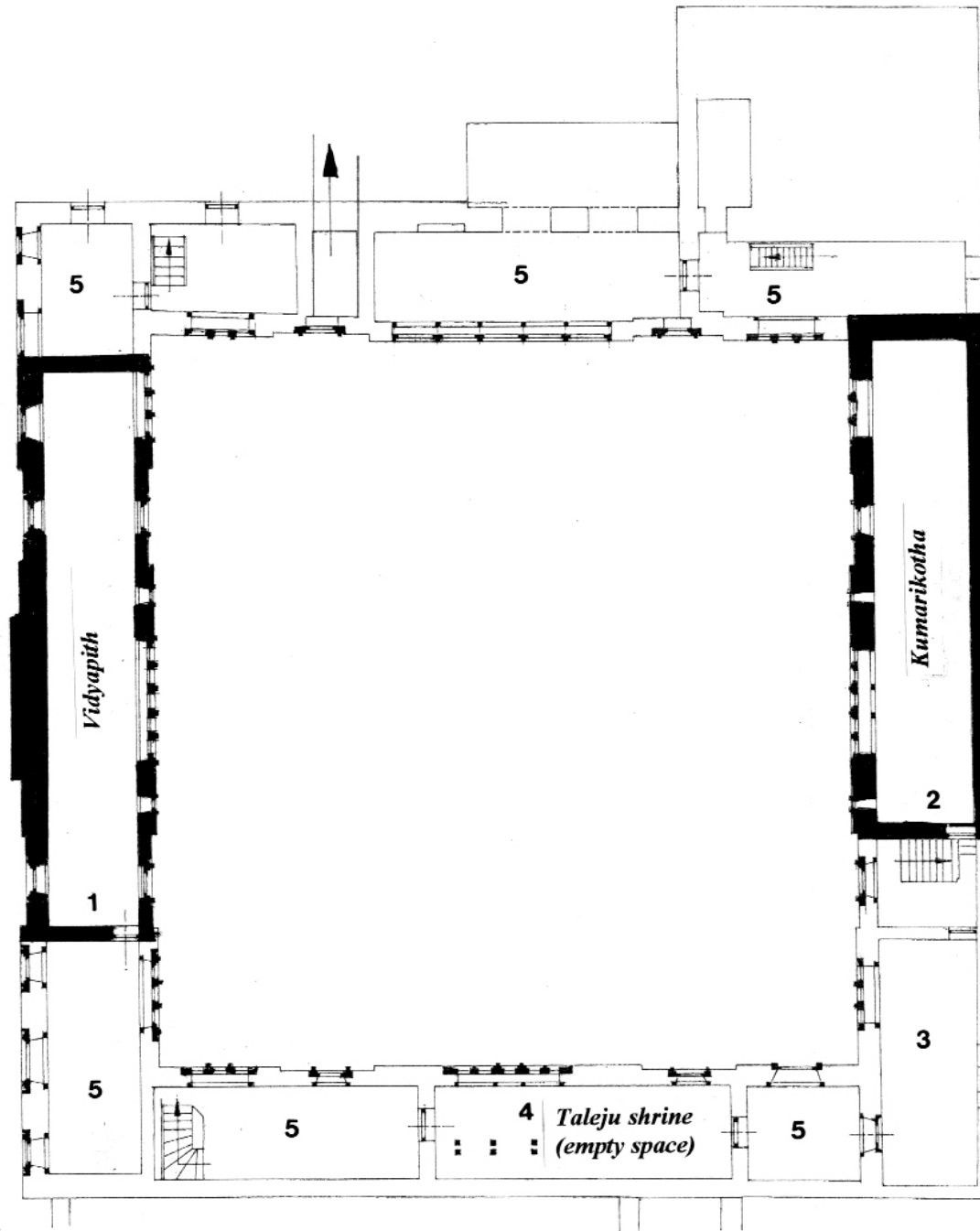


# THE PATAN ROYAL COMPLEX

**Mulcok** – First Floor Plan, Scale 1:200  
Existing situation (November 2005)

- 1 Vidyapith of Rajupadhyaya priest, remains closed, worship discontinued.
- 2 Kumarikotha (the Kumari spends here the night of navami, the 9<sup>th</sup> day of Dasain in October).
- 3 Kitchen for the Kumarikotha (used once a year).
- 4 Empty (undefined) space above the Taleju shrine.
- 5 Storerooms (undefined)

staircase to  
Taleju Temple



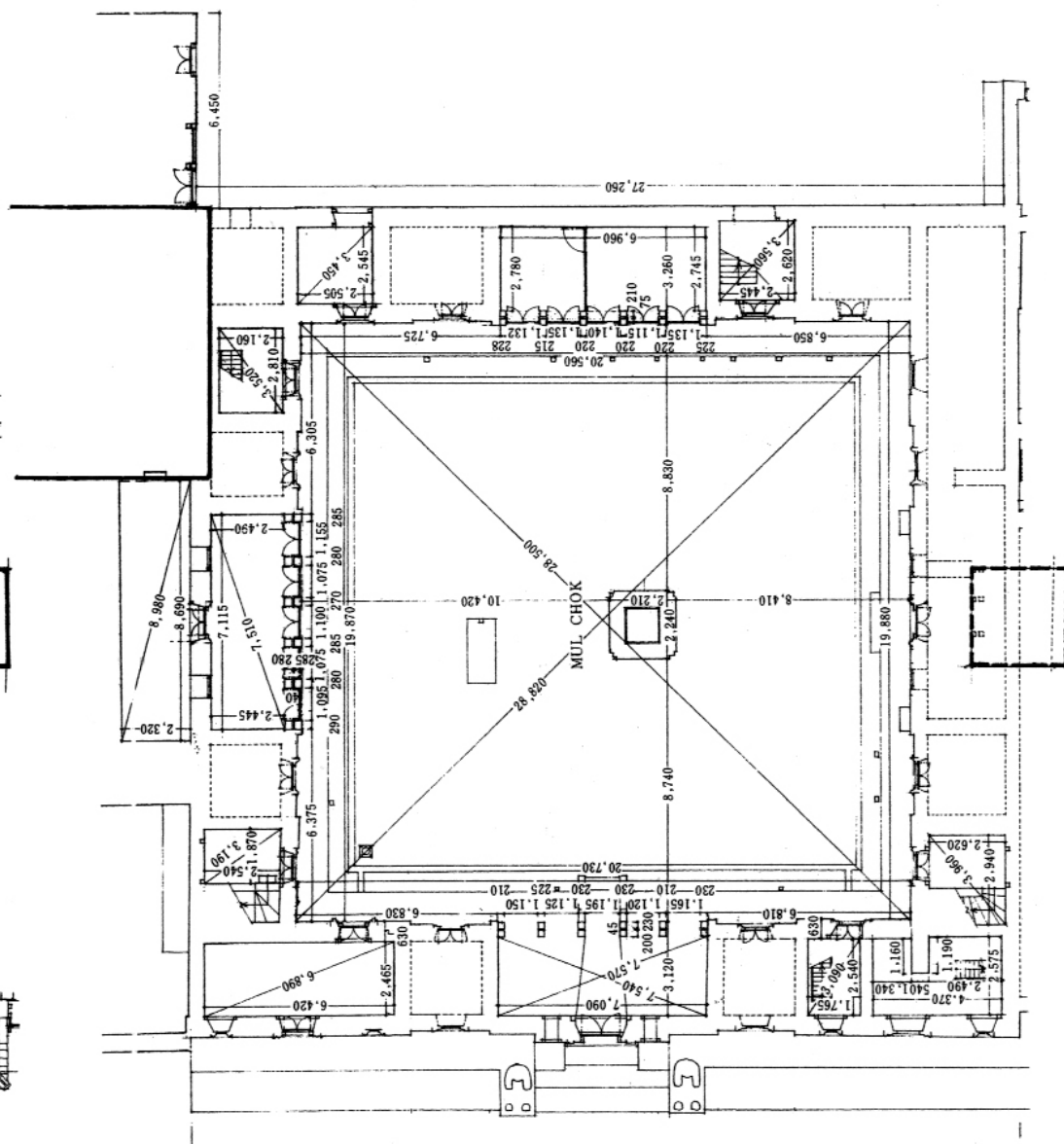
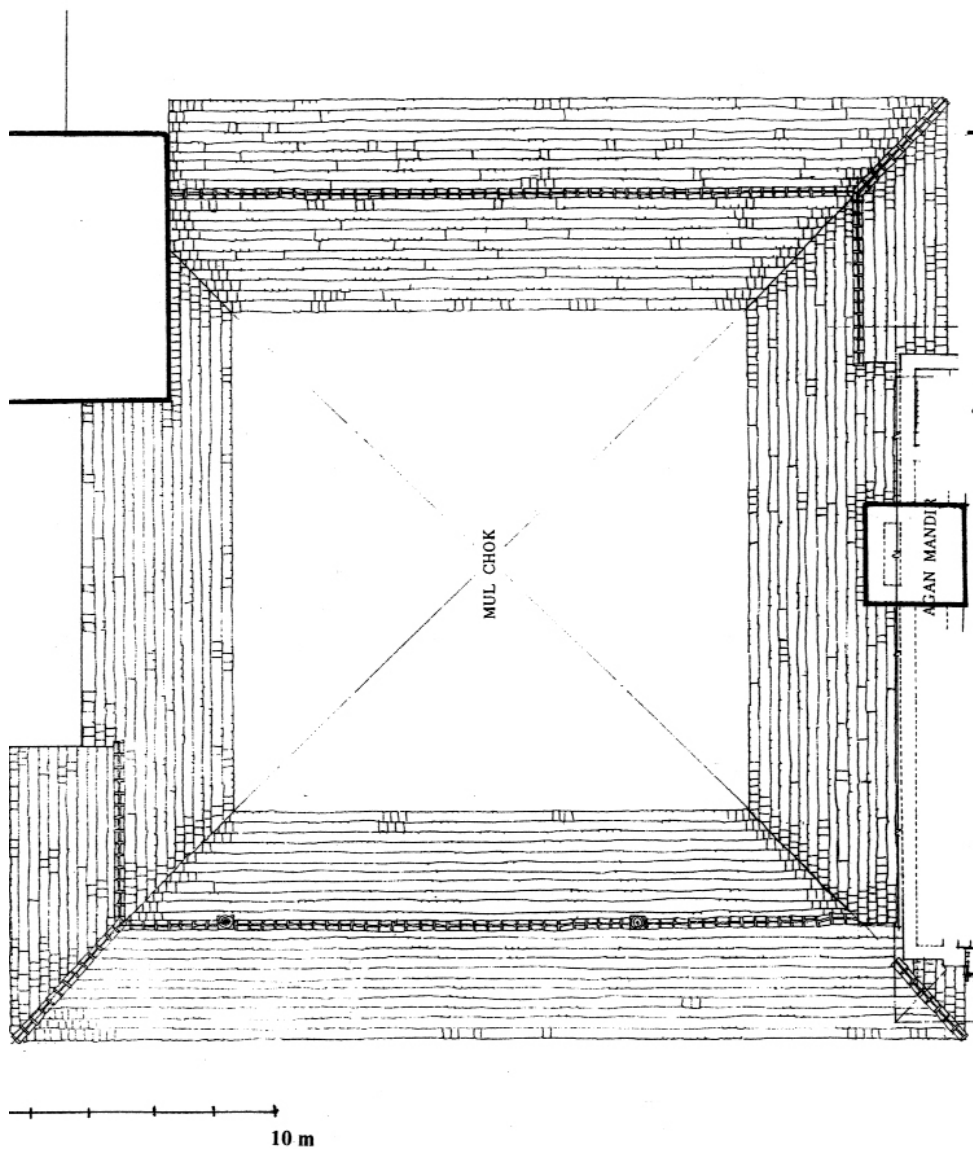
**tan Darbār - Mulcok**

ound Floor Plan and Top View, Scale 1:200

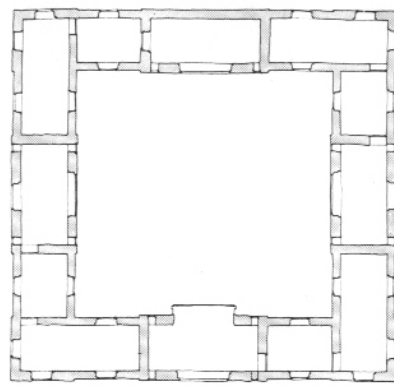
vey by the Nippon Institute of Technology, December 1977

Conservation and Rehabilitation Program 2006-2012

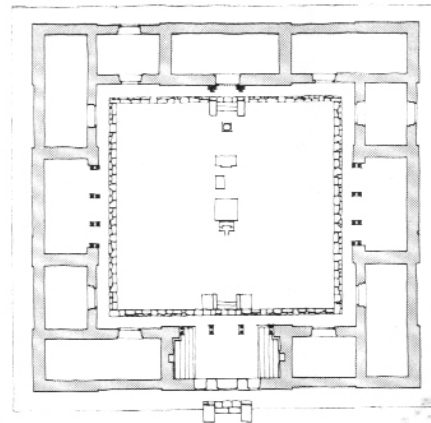
## Chamandu Valley Preservation Trust



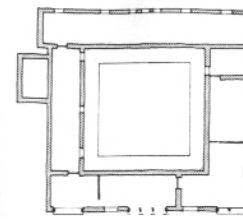
1.  
 Hatano, *Plan Composition of Royal Palace*  
*pace Design (SD)*, No. 194, November 1980, pp. 22-65



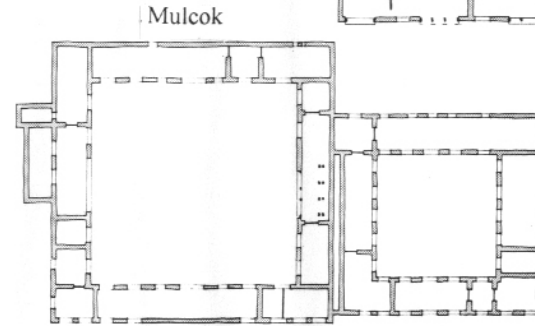
2階平面図 second floor plan



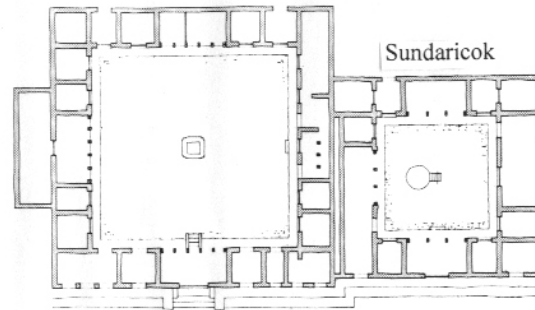
Mulcok  
 チューシャ・パハル 1階平面図 first floor plan



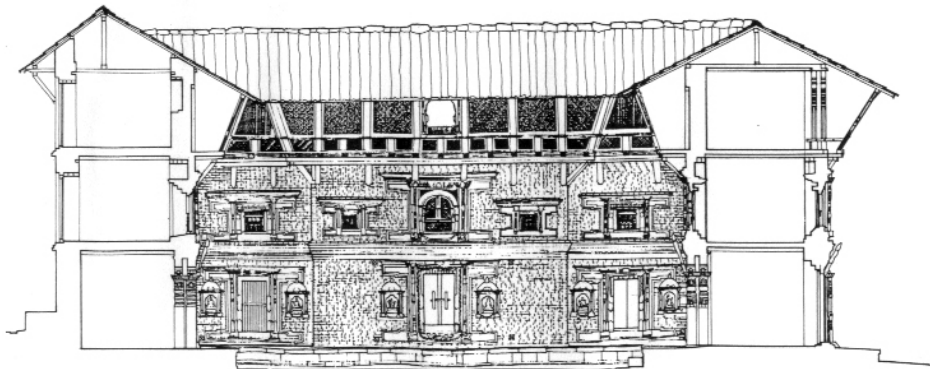
3階平面図 third floor plan



2階平面図 second floor plan

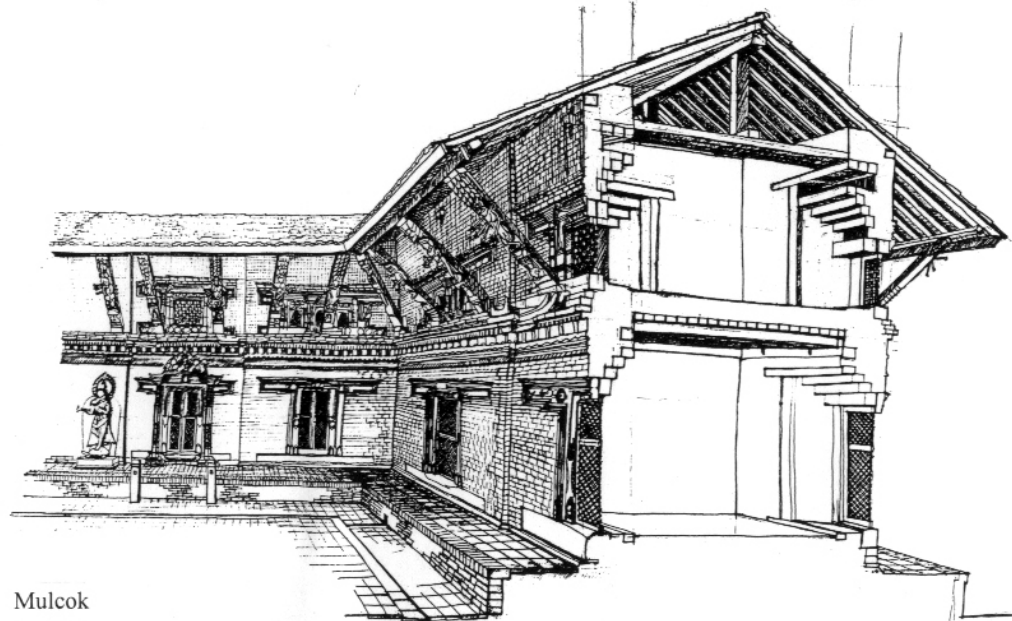


Sundaricok  
 1階平面図 first floor plan  
 ▲ バタン王宮 ▲ ムル・チョーク ▲ スンダリ・チョーク



Sundaricok

スンダリ・チョーク東西断面図（南を見る）



Mulcok

バタン王宮 ムル・チョーク断面図

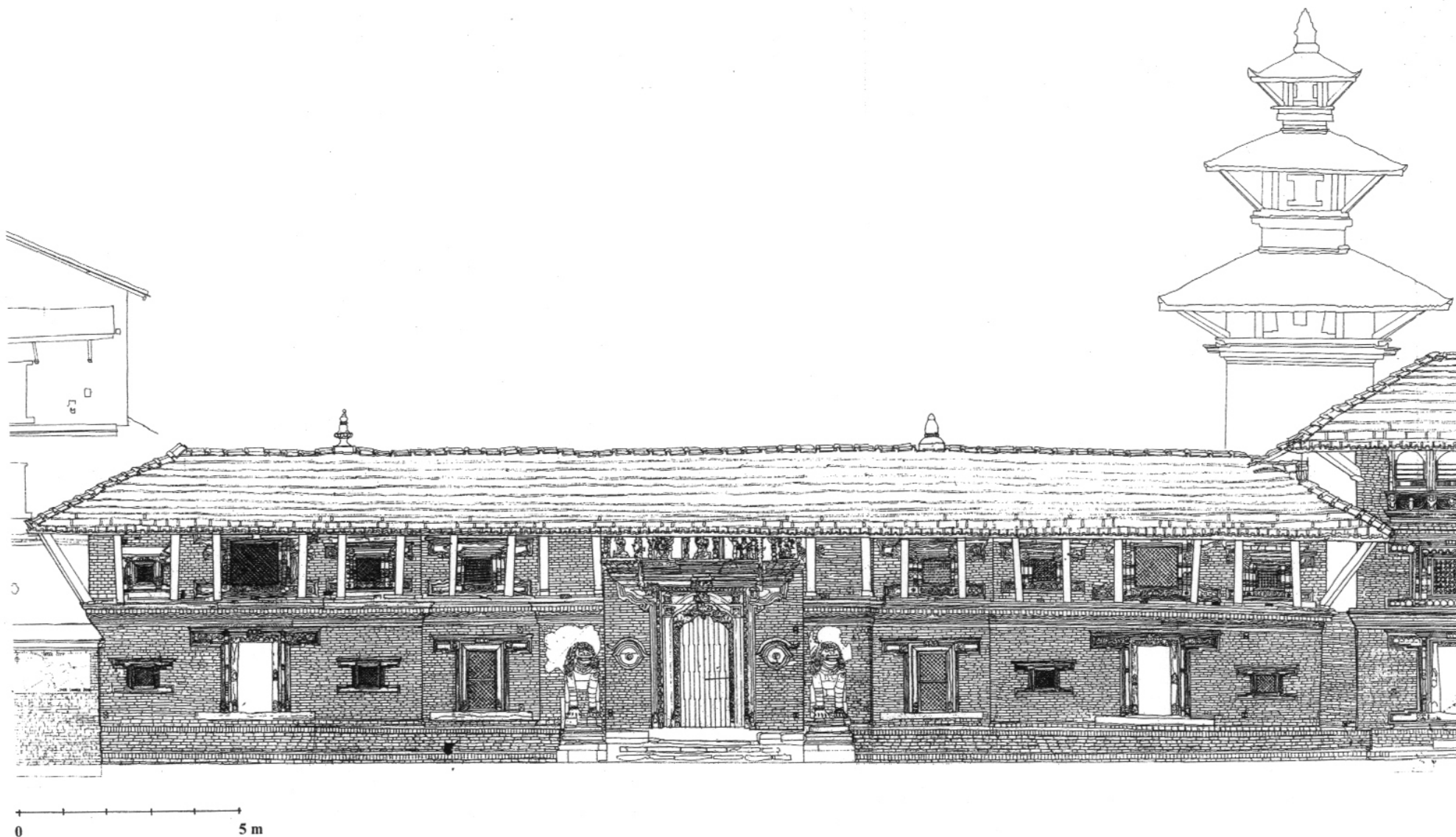
**Patan Darbār - Mulcok**

Elevation West, Scale 1:100

Survey by the Nippon Institute of Technology, December 1977

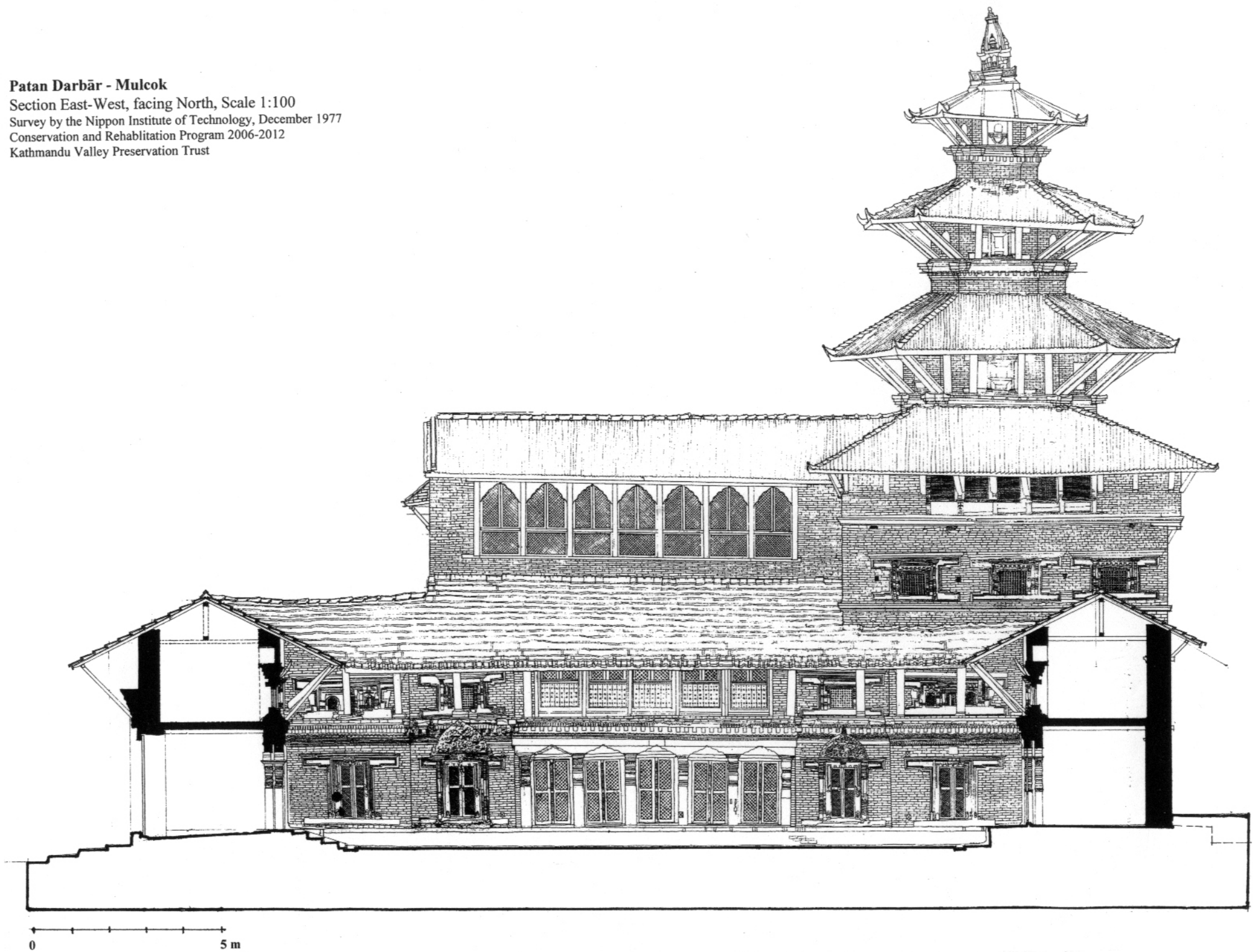
Conservation and Rehabilitation Program 2006-2012

Kathmandu Valley Preservation Trust



**Patan Darbār - Mulcok**

Section East-West, facing North, Scale 1:100  
Survey by the Nippon Institute of Technology, December 1977  
Conservation and Rehabilitation Program 2006-2012  
Kathmandu Valley Preservation Trust



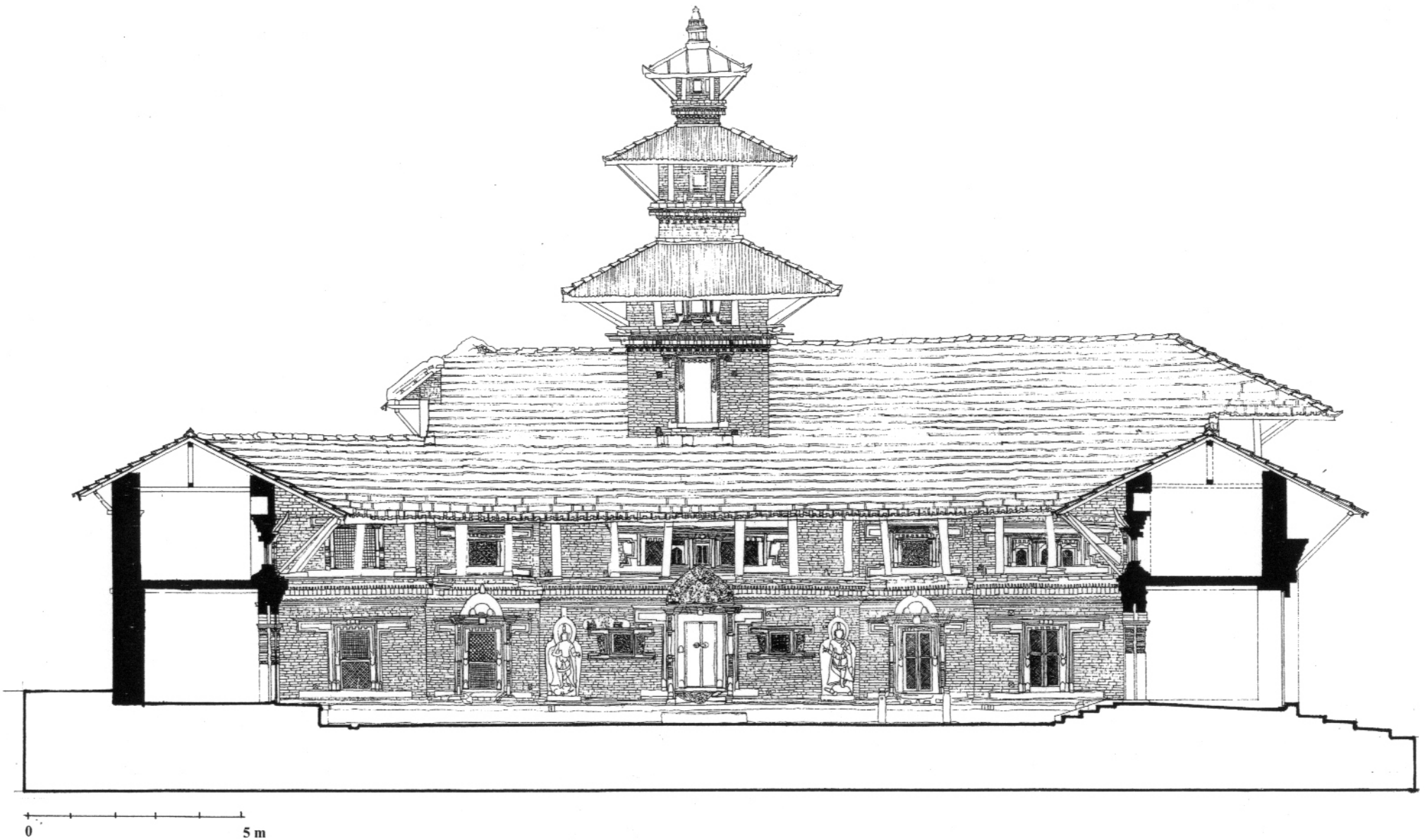
**Patan Darbār - Mulcok**

Section East-West, facing South, Scale 1:100

Survey by the Nippon Institute of Technology, December 1977

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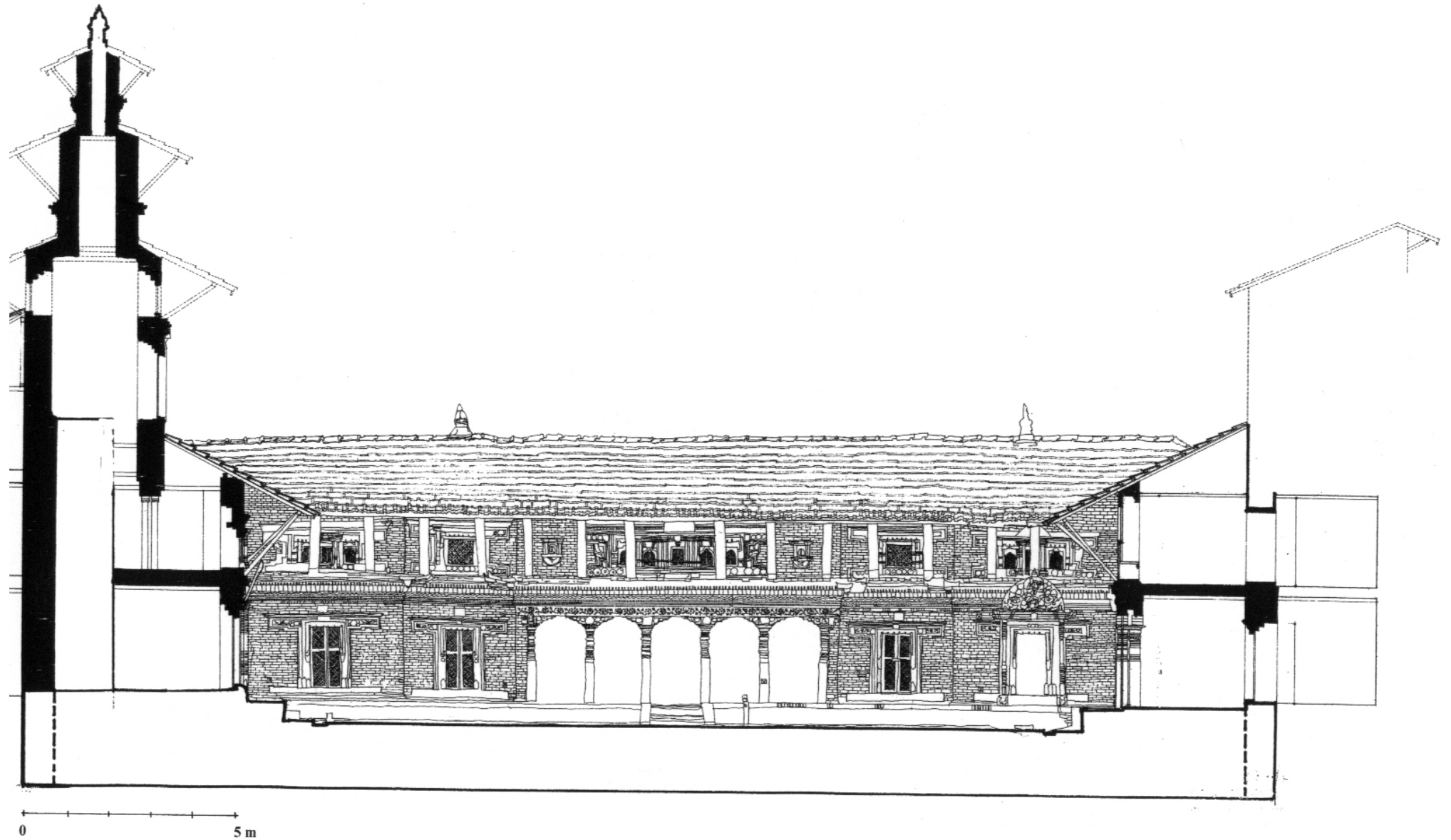
**Jan Darbār - Mulcok**

Section North South, facing West, Scale 1:100

Surveyed by the Nippon Institute of Technology, December 1977

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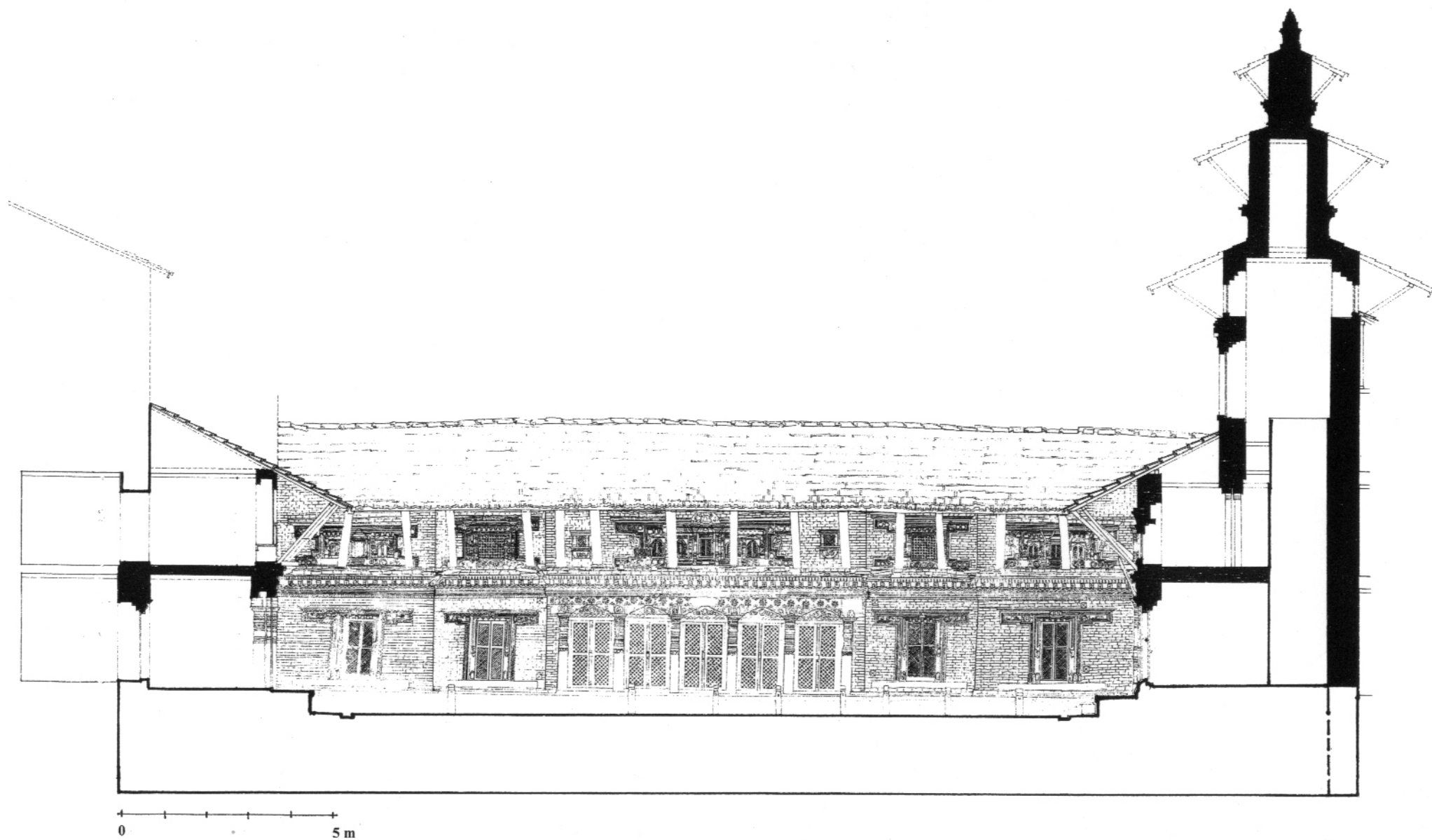
**Patan Darbār - Mulcok**

Section Nirth-South, facing East Scale 1:100

Survey by the Nippon Institute of Technology, December 1977

Conservation and Rehabilitation Program 2006-2012

Kathmandu Valley Preservation Trust

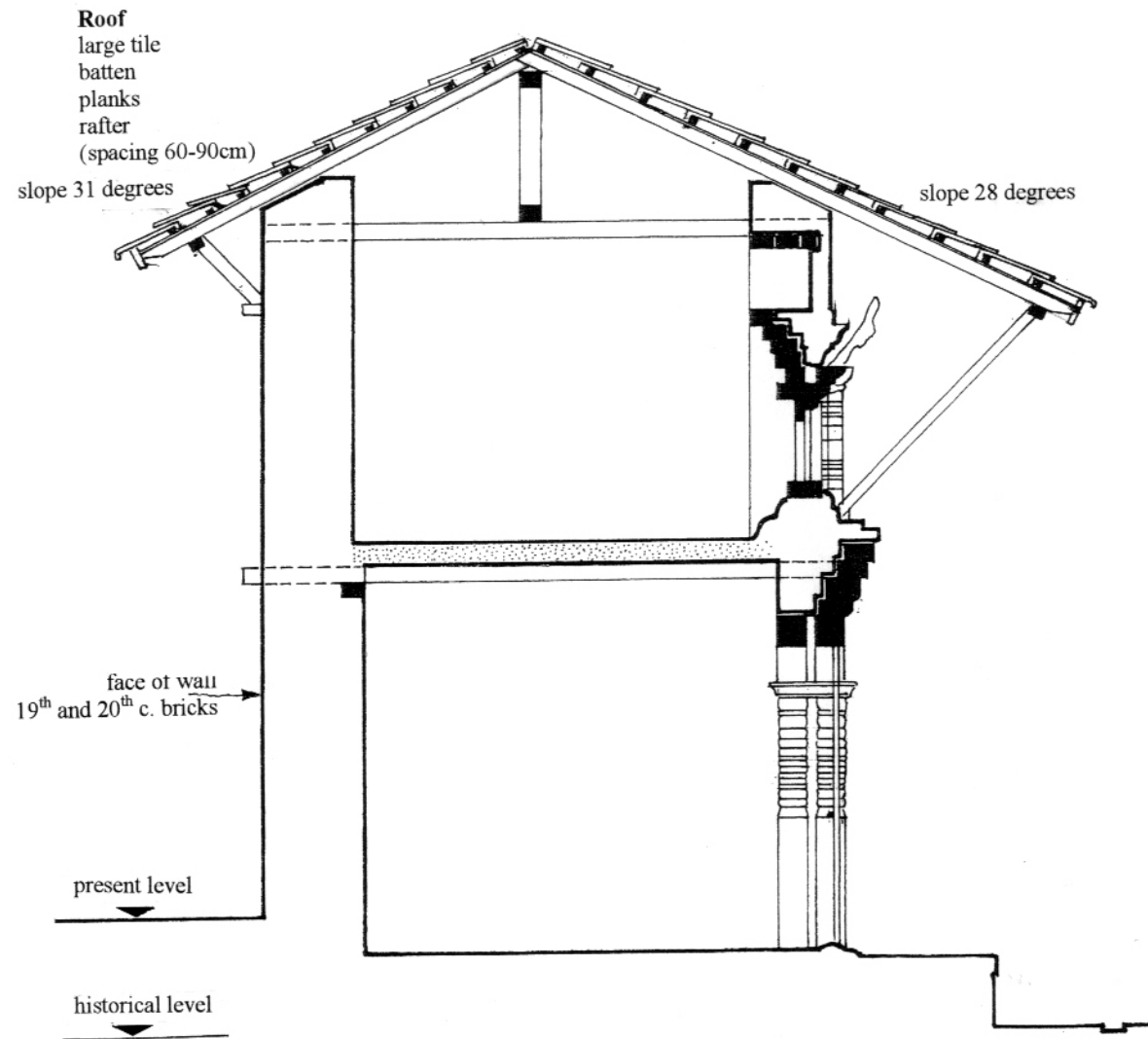




**THE PATAN ROYAL COMPLEX**

**Mulcok** – Section East Wing, Scale 1:50

Existing Situation





### **Mulcok**

Vest wing, Khadgakothe (left) with a large wooden box for the royal sword that is paraded through the city on certain occasions.



Middle intact, probably 18<sup>th</sup> century narrow spaced ceiling joists (dhalin) above the ground floor arcade (dhalan). The frieze painted on clay below the wall plate has faded away. Right, renewed ceiling joists (1999) in the guard room (the north-western corner room).  
Photo 29 November 2005







# **Mulcok**

Left, west wing, renewed, ceiling joists in the room, where the Brahmin priest keeps his puja material. Middle, The original narrow spaced ceiling joists in the ground floor arcade (dhalan), the clay panel for painted scenes below the wall plate has been removed in a recent renovation. Right, renewed ceiling joists with planking above the passage to the garden area.

Photos 29 November 2005





### **Patan Darbār - Mulcok**

Documentation of rooms, photographs 4 April 2006

Left, row of four double posts bearing the Agam-shrine above the Talejukoṭha. The use of uncarved posts and capitals and undersized ceiling beams indicate a recent (1950s?) replacement.

Middle, door leading to the small room between the Kumārī-kitchen and the room above the Talejukoṭha.

Right, the inner frame of the triple window of the Kumārī-kitchen is largely intact. The roof displays a makeshift character with widely spaced rafters with a layer of planks. Regular shrinking makes the covering layer of tarfelt visible.





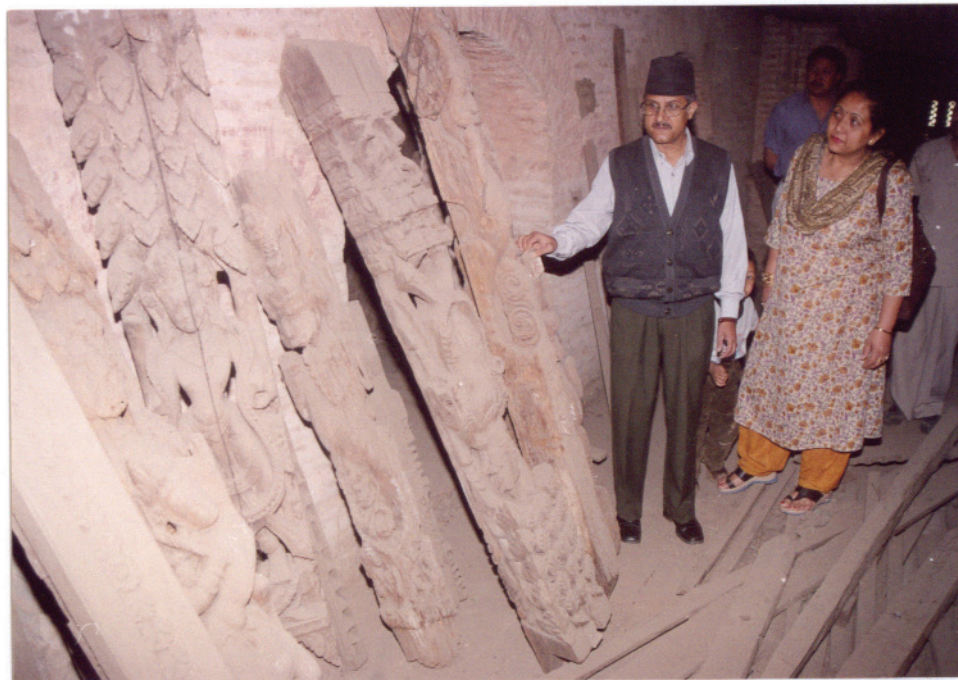
### **Patan Darbār - Mulcok**

Documentation of rooms, photographs 4 April 2006

Kumārīkoṭha, the room which until 2004 had been used by the Kumārī during Dasain (in October).

The roof had been renewed with widely spaced rafters in the 1980s, its posts and base resting on triple joists. The mud plaster probably date to the 1950s. A door frame indicates a former accessibility from a balcony, that existed until the 1950s. The inner frame of the fivefold window (*pasukājhyah*) is largely intact, one post is missing.





### **Patan Darbār - Mulcok**

Documentation of rooms, photographs 4 April 2006

Left, the narrow northeastern room adjacent to the Taleju-tower.

A recent undersized layer of ceiling joists are covered with bricks.

Right, Bhim Nepal inspecting architectural fragments stored in the

long room above the northern arcade (*dalan*). A ceiling of corrugated zinc sheets (*jasta*) is left from an earlier function as an office.





### **Patan Darbār - Mulcok**

Documentation of rooms, photographs 4 April 2006

*Jamarakoṭha* - the room to grow barley during Dasain

Wide-spaced, undersized ceiling joists are covered with planks.

A door-frame indicates a former access to the narrow corridor south of the courtyard. Two beams (*ninaḥ*) which bear the northern wall of the Agam-shrine project from the wall that divides the *jamarakoṭha* from the Talejukoṭha.







## Patan Darbār - Mulcok

Documentation of bricks of the garden facade  
(photographs 4 April 2006).

A large variety of brick types suggest that the entire wall was repaired in patches until very recently. The use of so called "Chinese bricks" from the brick factory in Harisiddhi demonstrates an ongoing process until the 1990s.

*Datiāpa*, the veneer bricks that stand out as an important contribution of Newar architecture to world art, can be found only in isolated locations. They are certainly not found in situ but were obviously reused from demolished walls. *Maāpa*, flat sized "traditional bricks" (without frog) are widely used, especially in the southeastern corner. Recent repairs with late 20<sup>th</sup> century norm bricks (*desiāpa*) in thick joints of grey clay were used to fill up larger patches.

A door on ground floor level was closed after the 1934 earthquake, its jambs got rotten as the backyard has been filled up by debris. Two door frames on first floor level represent vestiges of a former, possibly pre 1934 existence of an arcaded balcony.

- 1 at a height of 210 cm *maāpa*, size 20 x 15 cm.
- 2 below the left lintel end of the window *datiāpa*, size 21 x 6 (high)
- 3 above the right lintel of the window *maāpa*, size 20 x 15 x 4.5
- 4 Chinese brick 24 x 6 cm
- 5 left of the door lintel *maāpa* 18 x 4 and Chinese brick 24 x 6 cm.
- 6 modern norm bricks (*desiāpa*) 23 x 6.5 cm
- 7 large patch of Chinese bricks 24 x 6 cm
- 8 rotten lower end of door jamb, door opening filled with *maāpa* and *desiāpa*.
- 9 fragment of a door frame, the opening filled with *maāpa* and *desiāpa*
- 10 patches of mud plaster above the ceiling joists, above a patch of *maāpa*, 21 x 4.5 cm.
- 11 above the left lintel end *maāpa* and isolated *datiāpa*
- 12 large crack where two types of bricks meet: left *maāpa*, right *datiāpa*.





**Patan Darbār - Mulcok**

Documentation of bricks of garden facade, photographs 4 April 2006



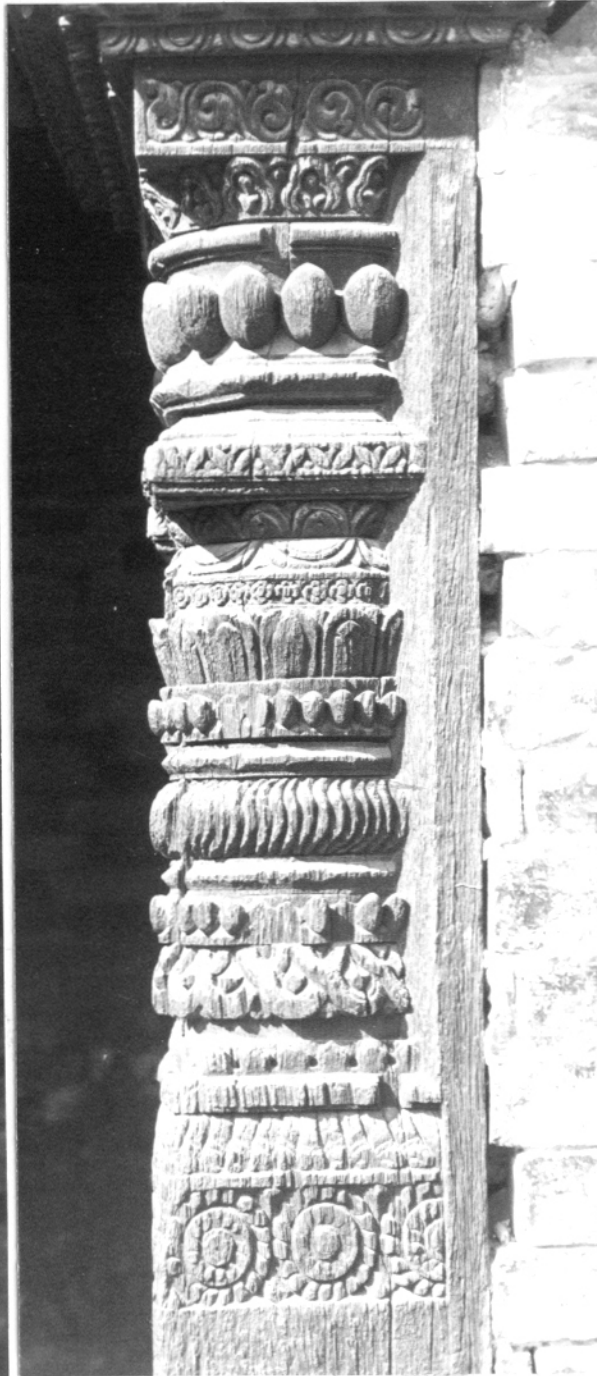
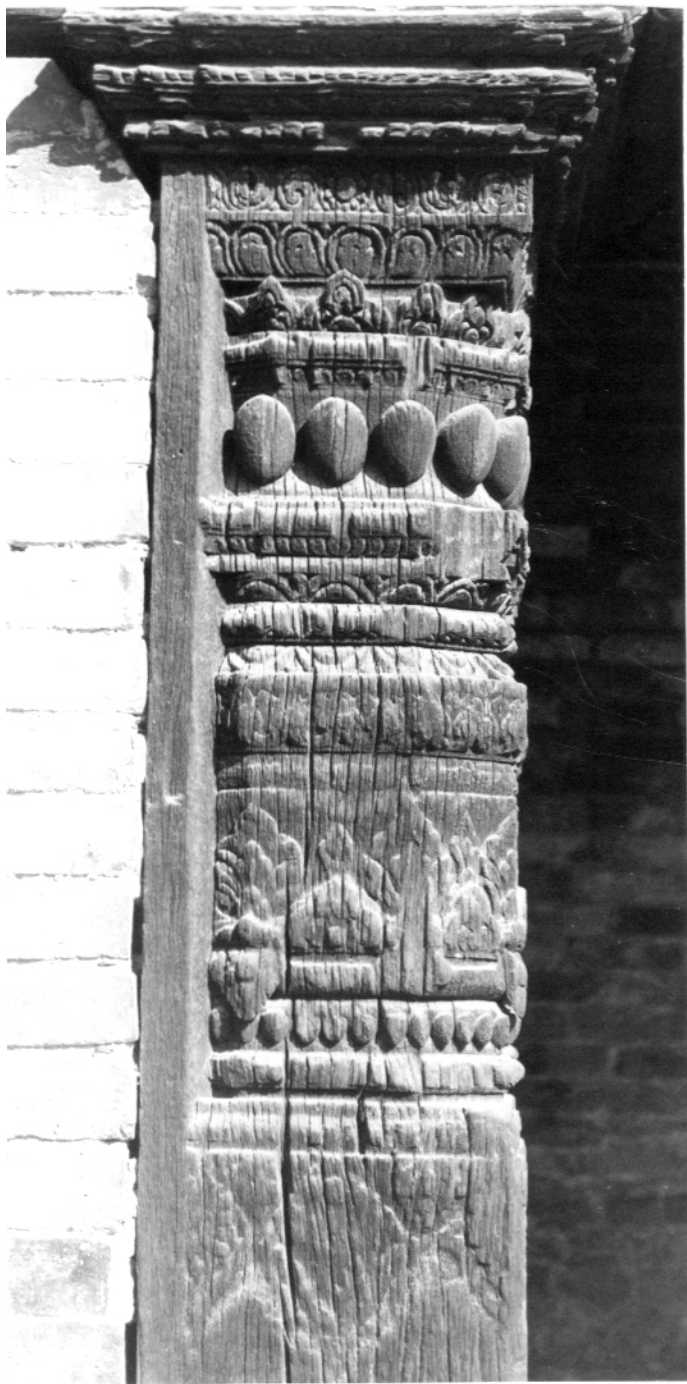


**Patan Darbār - Mulcok**

Documentation of bricks of garden facade, photographs 4 April 2006







Mulcok: pillars framing the arcades. Left at the eastern arcade, middle and right at the western arcade. Photo 1<sup>st</sup> December 2005





### Patan Darbār - Mulcok

Upper ends of pillars of the northern arcade (*dalan*).  
Cracks document the fact that fresh timber was used for carvings.  
Lower left: Durgā as the slayer of the buffalo demon on the lintel  
of the door leading to the Mūchē Āgama, lost in 1934.





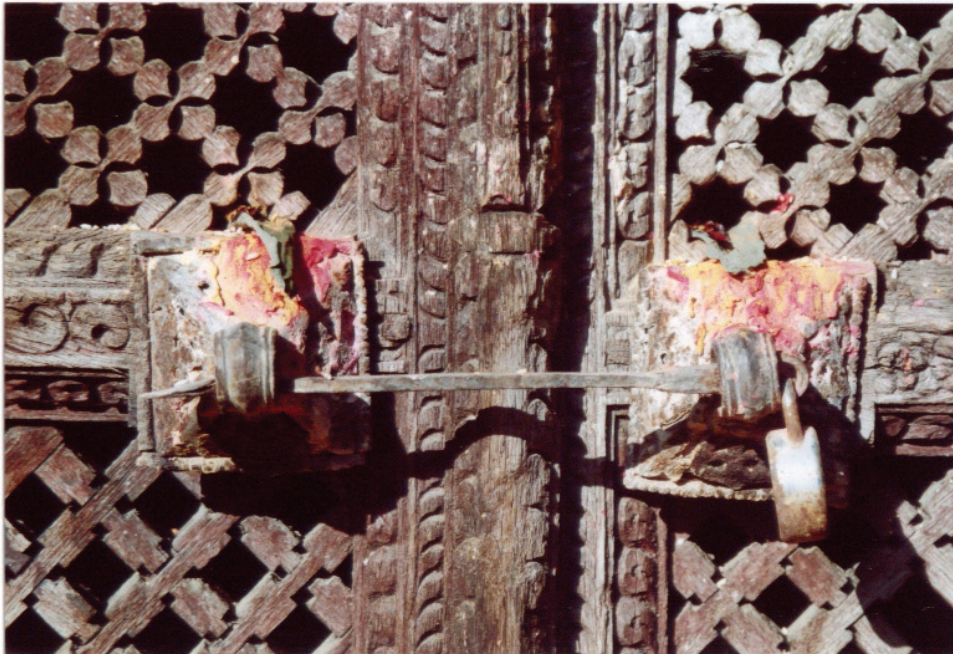
Mulcok: the framing pillars of the north wing arcade. The pillar at the eastern end is out of place as it is not designed to be placed on a wall tongue. The painted floral decoration dates to the 1980s. Photo 1<sup>st</sup> December 2005





Mulcok: bottom of door jambs in the north wing. The door openings are guarded by three protective deities, in the middle a snake virgin (nāgkanya) with the gesture of adoration.  
Photo 1<sup>st</sup> December 2005





### **Mulcok**

North wing with Bhagavati shrine  
(left, also detail of the door whose  
lock is worshipped. Right the latticed  
door that leads to a staircase.  
Photo 29 November 2005



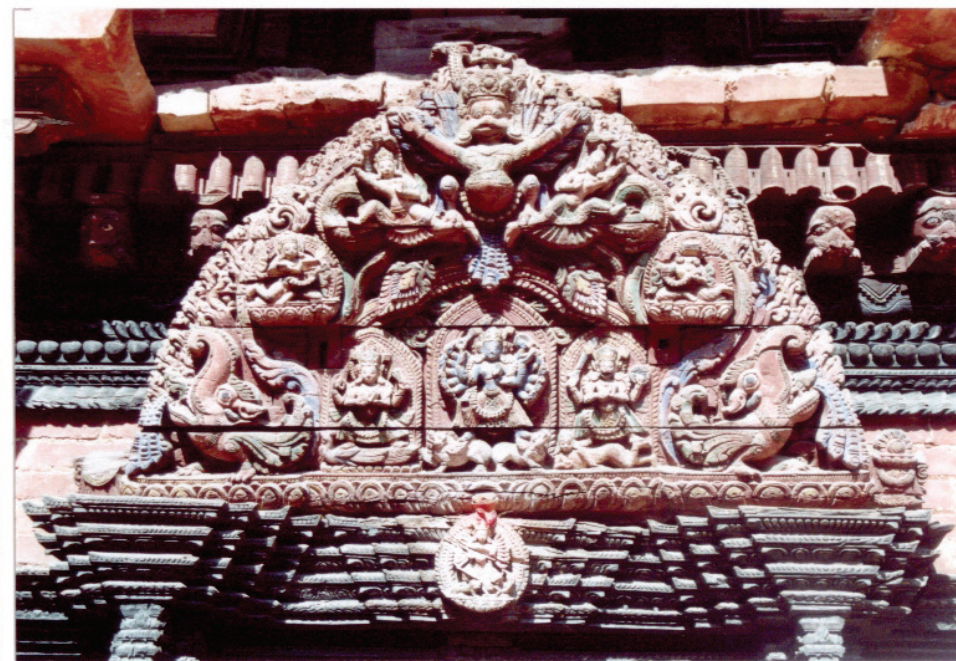


# **Mulcok**

Left, south wing: the large cornice bricks have been replaced in a recent renovation (1995).  
Photos 29 November 2005

Above right: the entire roof has been renewed in 1985 with small, widely spaced rafters, planking and large size industrial roof tiles; below (west wing) repaired wall face (1995) of the open ground floor arcade.





**Mulcok**  
 Various tympana (torana)  
 Photos 29 November 2006





### Patan Darbār - Mulcok

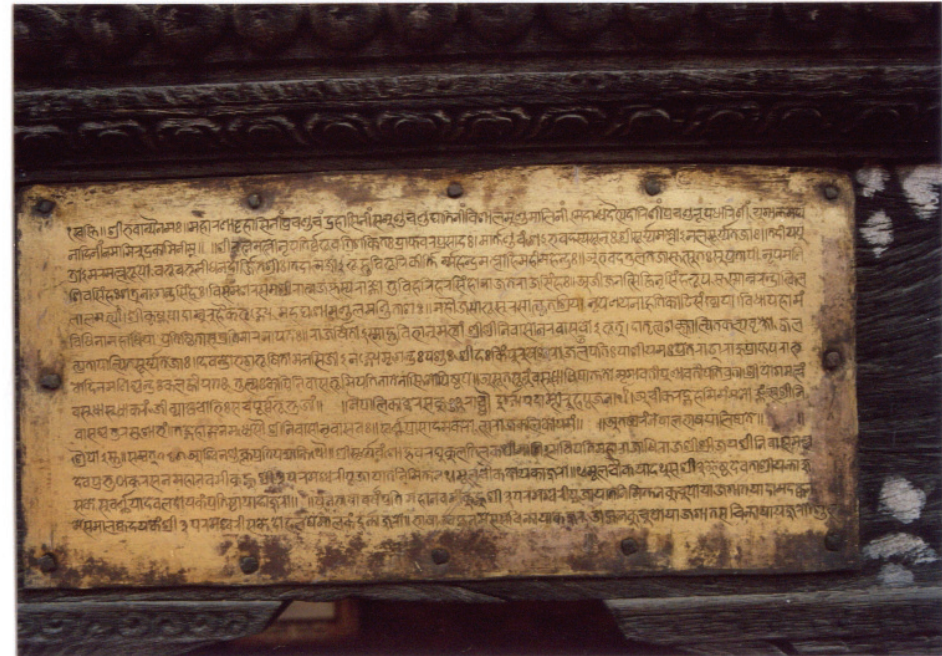
Tympana above the door flanking the main entrance to the Taleju shrine. The depiction of Durgā as the slayer of the buffalo demon on the lintel is almost identical.

Left, replacement of the lost tympanum above the eastern door. The simple carving present an unidentifiable goddess with a club, flanked by *kinnaras* under a tri-lobed arch with Garuḍa in the apex, flanked by *nāgakanyas*.

Right, the original, 17th century tympanum with Bhairava on Vetāla in the centre, flanked by two kinnaras, under a tri-lobed arch with Kīrttimukha in the apex.

Photographs 4 April 2006





### Patan Darbār - Mulcok

Row of six deities and two inscriptions fixed to the capitals above the pillars of the eastern arcade (*dalan*).

Photographs 4 April 2006



4



5



6



### Patan Darbār - Mulcok

Row of six deities and two inscriptions fixed to the capitals  
above the pillars of the eastern arcade (*dalan*).  
Photographs 4 April 2006



## Patan Darbār - Mulcok

### STRUTS (*tunaḥ* or *bilampu*)

Replacement of missing parts and of those of inferior quality

#### East Wing

- 1 6 hands missing, 2 inferior quality, leg missing
- 2 6 hands of inferior quality
- 3 2 hands missing, 3 inferior quality, part of shawl
- 4 6 hands missing, 3 inferior quality, part of shawl
- 5 4 hands missing, part of shawl
- 6 5 hands missing, 1 inferior quality, left leg
- 7 3 hands missing, 2 inferior quality, part of shawl
- 8 4 hands inferior quality
- 9 2 hands missing, 1 inferior quality, part of lotus base
- 10 1 hand missing, 1 inferior quality
- 11 1 hand inferior quality
- 12 1 hand missing
- 13 3 hands missing, 1 inferior quality, 2 parts of shawl
- 14 3 hands missing, 3 inferior quality, 2 parts of shawl

#### South Wing

- 15 3 hands missing, 7 inferior quality, part of shawl
- 16 1 hand missing, 3 inferior quality
- 17 1 hand missing, 7 inferior quality, part of shawl
- 18 1 hand missing, 5 inferior quality
- 19 6 hands missing, 8 inferior quality, part of shawl
- 20 5 hands missing, 5 inferior quality, part of shawl
- 21 1 hand missing, 5 inferior quality, part of shawl
- 22 4 hands missing, 6 inferior quality, part of shawl
- 23 1 hand missing, part of shawl
- 24 9 hands inferior quality, part of shawl
- 25 4 hands missing, 6 inferior quality
- 26 9 hands missing, 7 inferior quality
- 27 4 hands missing, 6 inferior quality
- 28 7 hands missing, 7 inferior quality, part of shawl

#### West Wing

- 29 3 hands missing
- 30 3 hands missing
- 31 1 hand missing
- 32 2 hands missing
- 33 3 hands missing
- 34 1 hand missing, 1 inferior quality, part of shawl
- 35 ---
- 36 1 hand missing, part of shawl
- 37 3 hands missing, 3 inferior quality
- 38 1 hand inferior quality
- 39 4 hands missing, 3 inferior quality, part of shawl
- 40 2 hands missing
- 41 ---
- 42 2 hands missing, 6 inferior quality, part of shawl

#### North Wing

- 43 2 hands missing, 8 inferior quality
- 44 2 hands missing, parts of shawl
- 45 3 hands missing, 3 inferior quality, part of shawl
- 46 4 hands missing, 4 inferior quality, part of shawl
- 47 6 hands lost, 5 inferior quality, part of shawl
- 48 3 hands missing, 4 inferior quality, part of shawl
- 49 5 hands missing, 5 inferior quality, part of shawl
- 50 6 hands missing, 6 inferior quality, part of shawl

In the 1980s a number of hands were replaced in an inferior quality.  
In the meantime more hands got lost. All struts have to be cleaned in order to present them in their original surface of wood.

|   |            |
|---|------------|
| 307 hands and 49 parts of shawl and leg @ 760.- | 2.70.560.- |
| material (salwood)                              | 1.32.788.- |
| replacement of attributes                       | 80.000.-   |
| cleaning  | 20.000.-   |
| unforeseen repairs and handling                 | 1.00.000.- |

total

6.03.348.-Rs  
8.619.-US \$





### **Patan Darbār - Mulcok**

Documentation of struts (*bilampu*), photographs 4 April 2006  
East Wing, nos. 1-5 (from left to right = north to south)





**Patan Darbār - Mulcok**

Documentation of struts (*bilampu*), photographs 4 April 2006  
East Wing, nos. 6-10 (from left to right = north to south)





### **Patan Darbār - Mulcok**

Documentation of struts (*bilampu*), photographs 4 April 2006  
 East Wing, nos. 11-14 (from left to right = north to south)





**Patan Darbār - Mulcok**

Documentation of struts (*bilampu*), photographs 4 April 2006  
South Wing, nos. 15-19 (from left to right = east to west)





**Patan Darbār - Mulcok**

Documentation of struts (*bilampu*), photographs 4 April 2006  
South Wing, nos. 20-24 (from left to right = east to west)





### **Patan Darbār - Mulcok**

Documentation of struts (*bilampu*), photographs 4 April 2006  
 South Wing, nos. 25-28 (from left to right = east to west)





**Patan Darbār - Mulcok**

Documentation of struts (*bilampu*), photographs 4 April 2006  
West Wing, nos. 29-33 (from left to right south to north)





### **Patan Darbār - Mulcok**

Documentation of struts (*bilampu*), photographs 4 April 2006  
East Wing, nos. 34-38 (from left to right = south to north)





**Patan Darbār - Mulcok**

Documentation of struts (*bilampu*), photographs 4 April 2006  
East Wing, nos. 39-42 (from left to right = south to north)





### **Patan Darbār - Mulcok**

Documentation of struts (*bilampu*), photographs 4 April 2006  
North Wing, nos. 43-46 (from left to right = west to east)

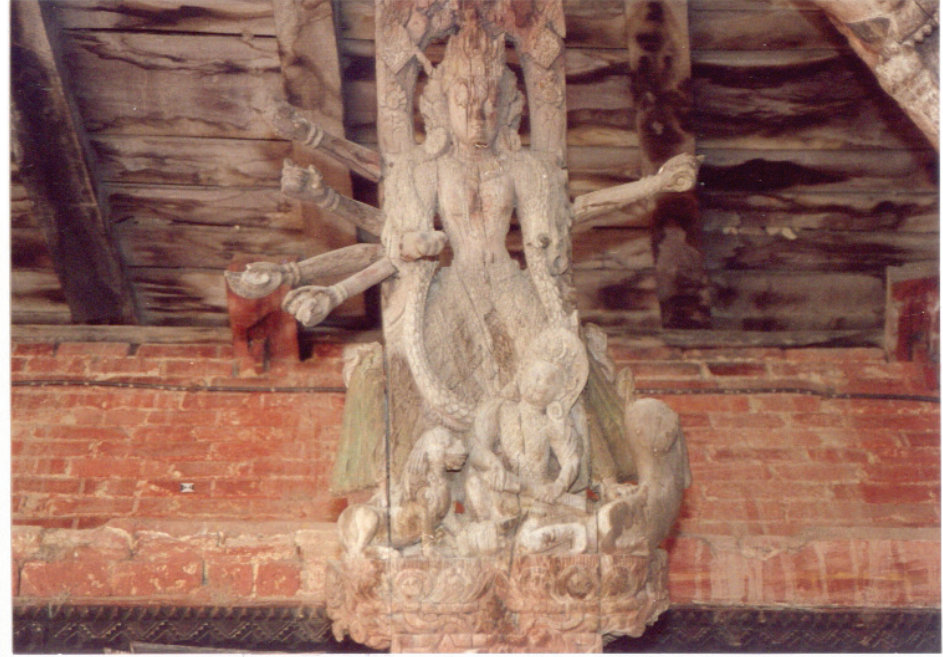




**Patan Darbār - Mulcok**

Documentation of struts (*bilampu*), photographs 4 April 2006  
 Noth Wing, nos. 47-50 (from left to right = west to east)





Documentation of struts (*bilampu*), photographs 4 April 2006  
 Above left southeastern corner, below left southwestern corner  
 above right northeastern corner , below right detail of no. 50,  
 depicting the twelve-armed Durga as Mahisasuramardini.





### **Mulcok**

South wing, typical strut depicting a Devī on her human mount. As a late 18<sup>th</sup> century innovation, the bearing timber is flanked by additional, non-bearing elements to provide space for the deity with her legs wide apart. The colouring represents a mid-120<sup>th</sup> century innovation.

Photo 29 November 2005







**Patan Darbār - Mulcok**

Documentation of struts (*bilampu*), photographs 4 April 2006  
Facing the Darbār Square: nos. 1-5 (left to right = north to south)





### **Patan Darbār - Mulcok**

Documentation of struts (*bilampu*), photographs 4 April 2006

Facing the Darbār Square: nos. 6-10 (left to right = north to south)





### **Patan Darbār - Mulcok**

Documentation of struts (*bilampu*), photographs 4 April 2006

Facing the Darbār Square: nos. 11-15 (left to right = north to south)





# **Patan Darbār - Mulcok**

Documentation of struts (*bilampu*), photographs 4 April 2006  
Facing the Darbār Square: nos. 16-20 (left to right = north to south)





### **Patan Darbār - Mulcok**

Documentation of struts (*bilampu*), photographs 4 April 2006  
 Left, facing south: nos. 21 (southwestern corner),  
 middle dragon (*malah*)-shaped strut in iron, Probably installed  
 by Jagat Shumsher Rana in c. 1855 in the context of reshaping  
 the entire entrance,  
 right detail of the cornice of the western facade with the usual  
 sequence of eight mouldings, including frill (*libin*), snake body  
 (*nagvah*), stylized beam ends in the shape of a beaked monster  
 and lotus leaves (*paleha*).





### Patan Darbār - Mulcok

Documentation of struts (*bilampu*), photographs 4 April 2006  
 Details of the gate, which probably replaced an older one in c. 1855.  
 Left the moulded jamb, framed with skeleton faces (*kavankhvaḥ*)  
 and twisted snake bodies (*camvaḥ*), above right the lintel with pairs of yak tail  
 whisks (*camvaḥ*), vermillion container (*sinhamḥu*) and mirror  
 (*jvalanḥaykan*), framing a central vase of plenty (*kalaśa*) -  
 crowned by a female triad, probably Durgā (or Taleju) in the center,  
 framed by Lakṣmī and Sarasvatī.





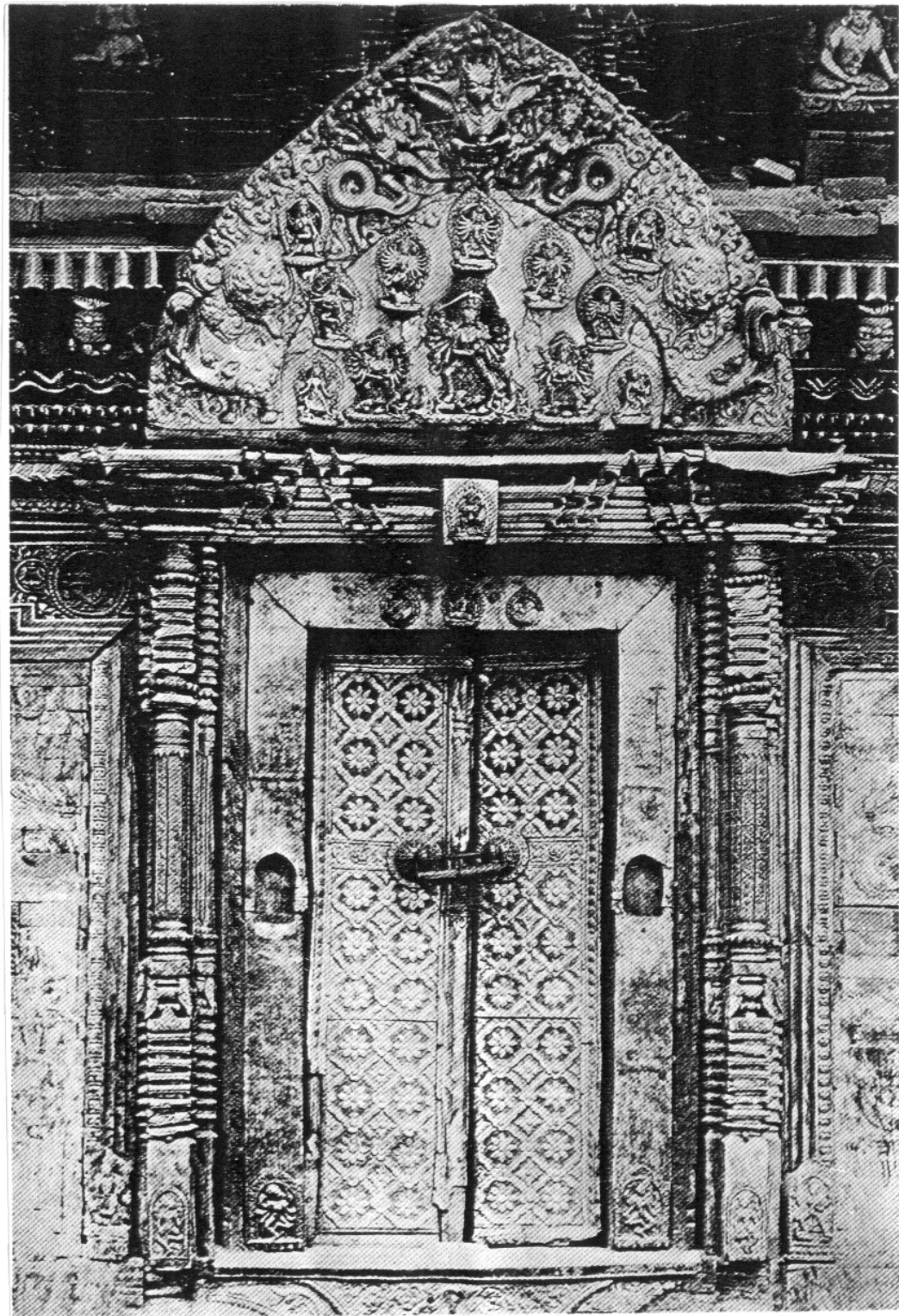
**Mulcok**

Entrance to the Taleju shrine  
in the southern wing.

Photograph by N. R. Banerjee,  
Archaeological Adviser to HMG  
from 1966 to 1972

(From: Nepalese Architecture,  
Delhi 1980, Pl. XXII)

Photograph Ranjit Gupta, 1962.







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### **Mulcok**

Entrance to the Taleju shrine  
in the southern wing: the flanking  
deities Gaṅgā (on makara) and  
Yamunā (on a tortoise).

Photographs Fran P. Hosken, 1971  
(From: F. P. Hosken, *The Kathmandu  
Valley Towns*, New York 1974).



**Mulcok**

Gaṅgā (on a makara) and Yamunā (on a tortoise) guarding the entrance to the shrine of Taleju in the centre of the southern wing.

The river-goddesses in anthropomorphic form, were produced in gilded copper-repousse in the second half of the 17<sup>th</sup> century. Already the earliest photographs document the battered state of repair.

Photograph by Suzanne Held, c. 1995

(From: Suzanne Held and Gilles Béguin, *Nepal. Valley of Gods*, Bombay 1997, p. 99)







**Mulcok**

The head of Gaṅgā

Photo Niels Gutschow, 29 November 2005





Aulcok  
 Details of battered legs and cracks  
 left Gaṅgā, right Yamunā  
 Photos Niels Gutschow, 29 November 2005





### Darbār - Mulcok

gate to the Taleju-shrine: two figures of Durgā slayer of the buffalo demon (Mahiṣāsuramardīnī) when ripped off the gilded tympanum. The lotus with her lion and the buffalo demon remains. Parvati, with her shawl broken off (1), the jewel arm lost (2) and the chain across her breast (3). the tiny figure of Kālī on the lintel survived. photos 4 April 2006







### **Patan Darbār - Mulcok**

Lintel and door jambs of the entrance to the Taleju shrine.  
 Left and above, the repoussee work is incomplete.  
 Below, the inscription on the lintel documents the donation  
 of the gilded copper repoussee in AD 1707.  
 Photographs 4 April 2006



Mulcok

# RESTORATION PROJECT COST ESTIMATE

April 2006



## THE PATAN ROYAL COMPLEX

**Mulcok** – Ground Plan, Scale 1:200

Identification of ritual space (black)  
and rooms for display (Patan Museum)

### Ritual Space:

The shrine room in the southern wing is reserved for a representation of Taleju during the ten days of Dasain in October. Suggestion: define clearly the space reserved for the deity.

The adjoining room is used as jamarakotha, space for the barley sprouts during Dasain.

The shrine room of Bhagavati in the northern wing remains closed because the deity is stolen, the torana remains. Suggestion: instal a replica of Bhagavati.

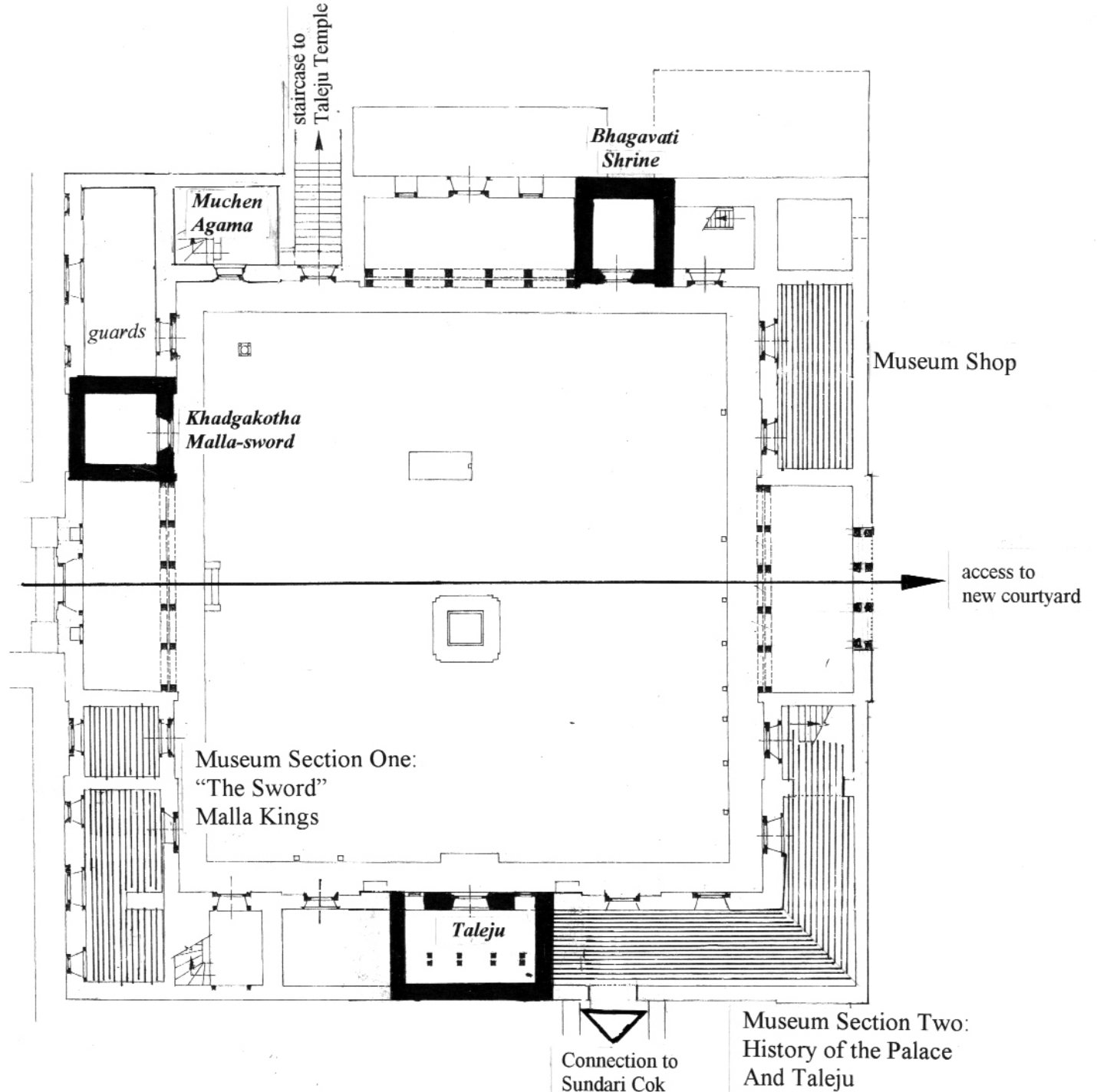
The second room of the north wing has been reserved as Muchen Agama, but the deity is not being brought here since a decade. Originally, a tower structure was on top of this room. It collapsed in 1934 and was never reconstructed. One room of the west wing houses the sword of the Malla Kings, which is carried in procession a couple of times a year. Suggestion: keep the door always open and display the ritual object to visitors behind a screen of security glas.

### Museum Space:

The southwestern corner should offer a display to explain the ritual importance of the sword.

The southeastern corner should present the history of the palace.

The arcade of the eastern wing should allow direct access to a new courtyard with attached arcades for the display of objects of stone ("Stone Museum").





## THE PATAN ROYAL COMPLEX

**Mulcok** – First Floor Plan, Scale 1:200

Identification of ritual space (black)

And rooms for display (Patan Museum)

### Ritual Space:

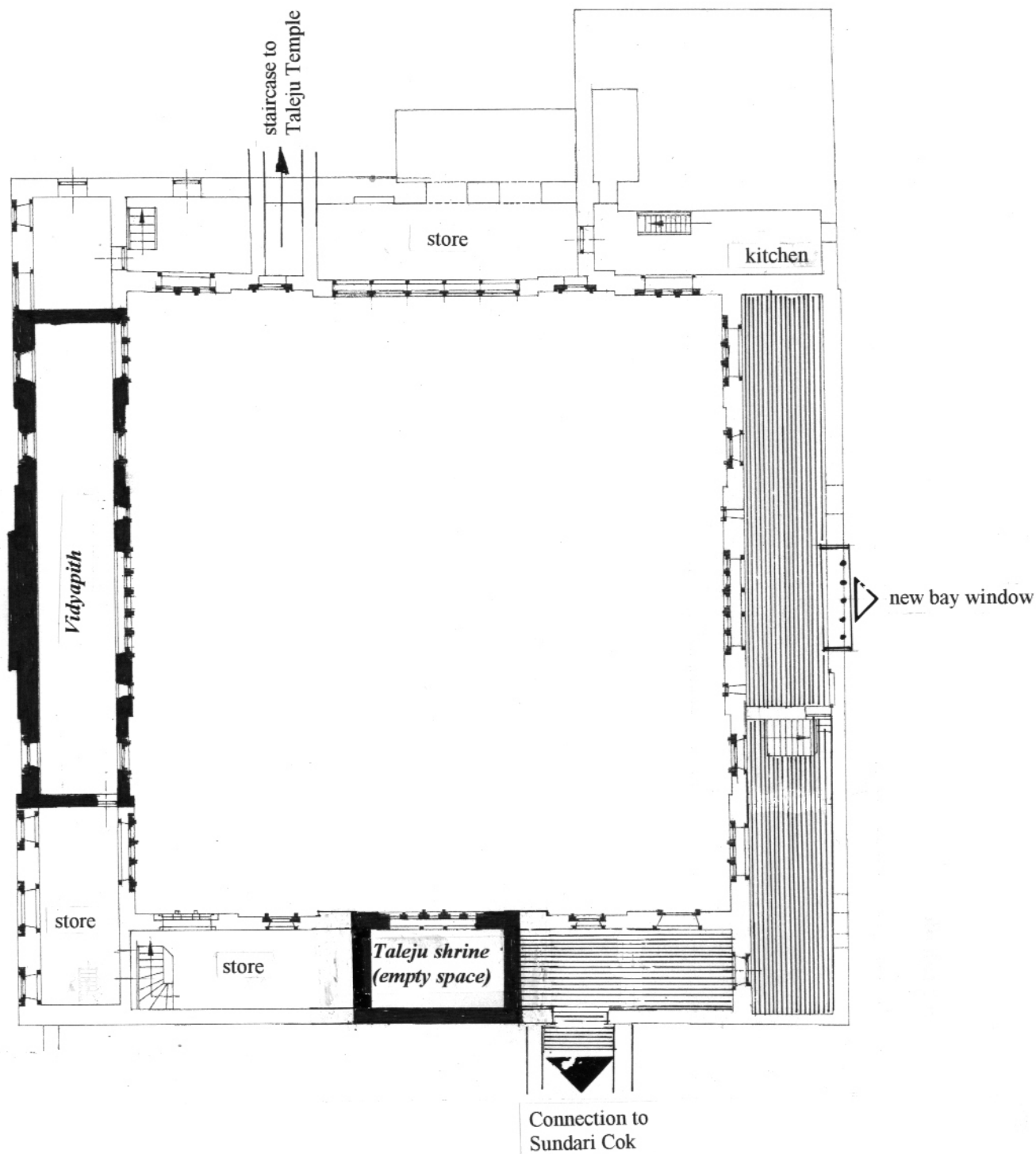
For the time being the long room of the Vidyapith should be reserved as such.

The space above the Taleju shrine will be newly defined and kept empty.

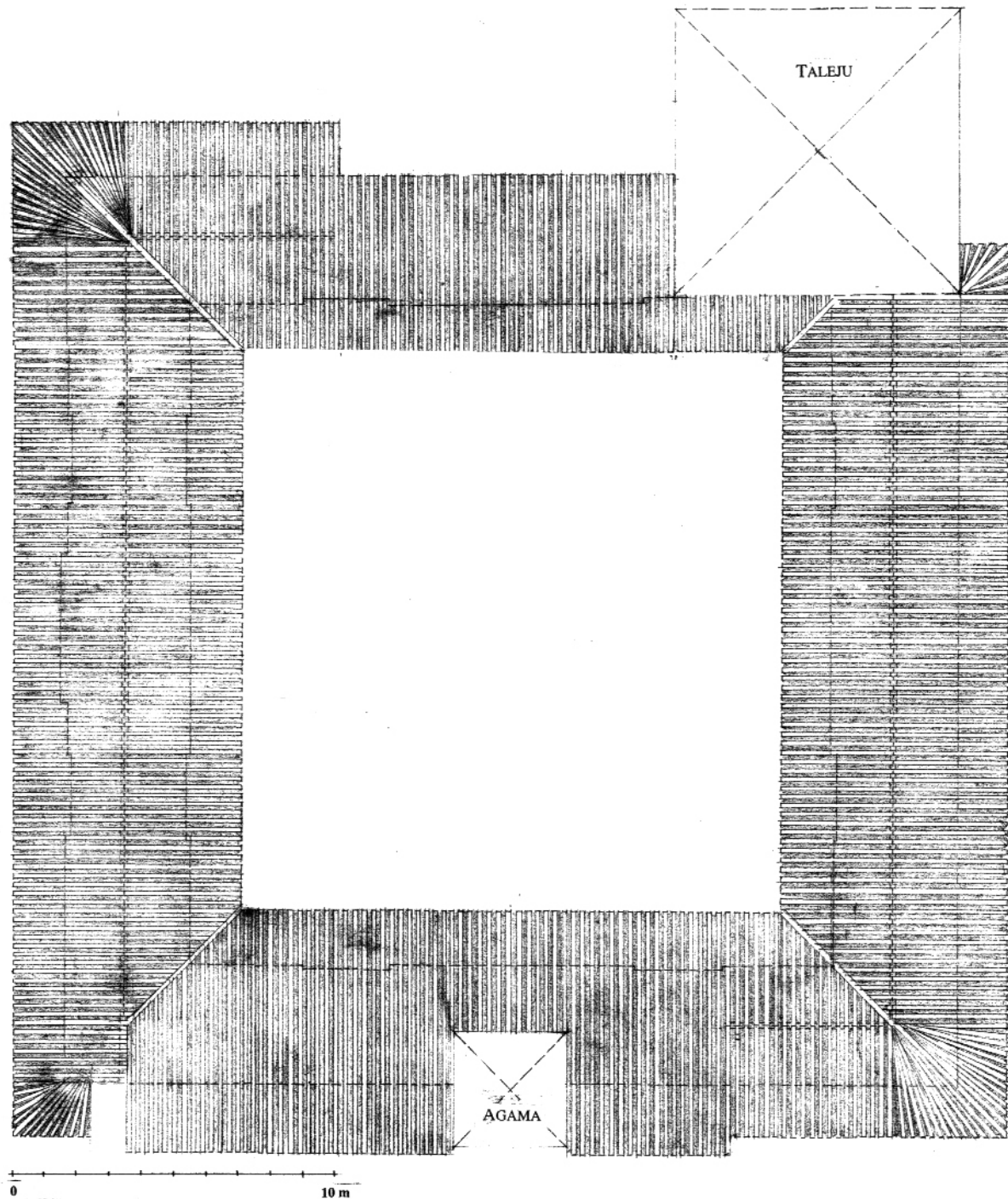
The entire east wing and the southeast corner should be remodelled for museum purposes.

The Kumarikotha will be closed for the public during Dasain to allow the necessary rituals to be enacted. A new kitchen will be installed in the northeastern corner.

The remaining rooms will be reserved for storage.

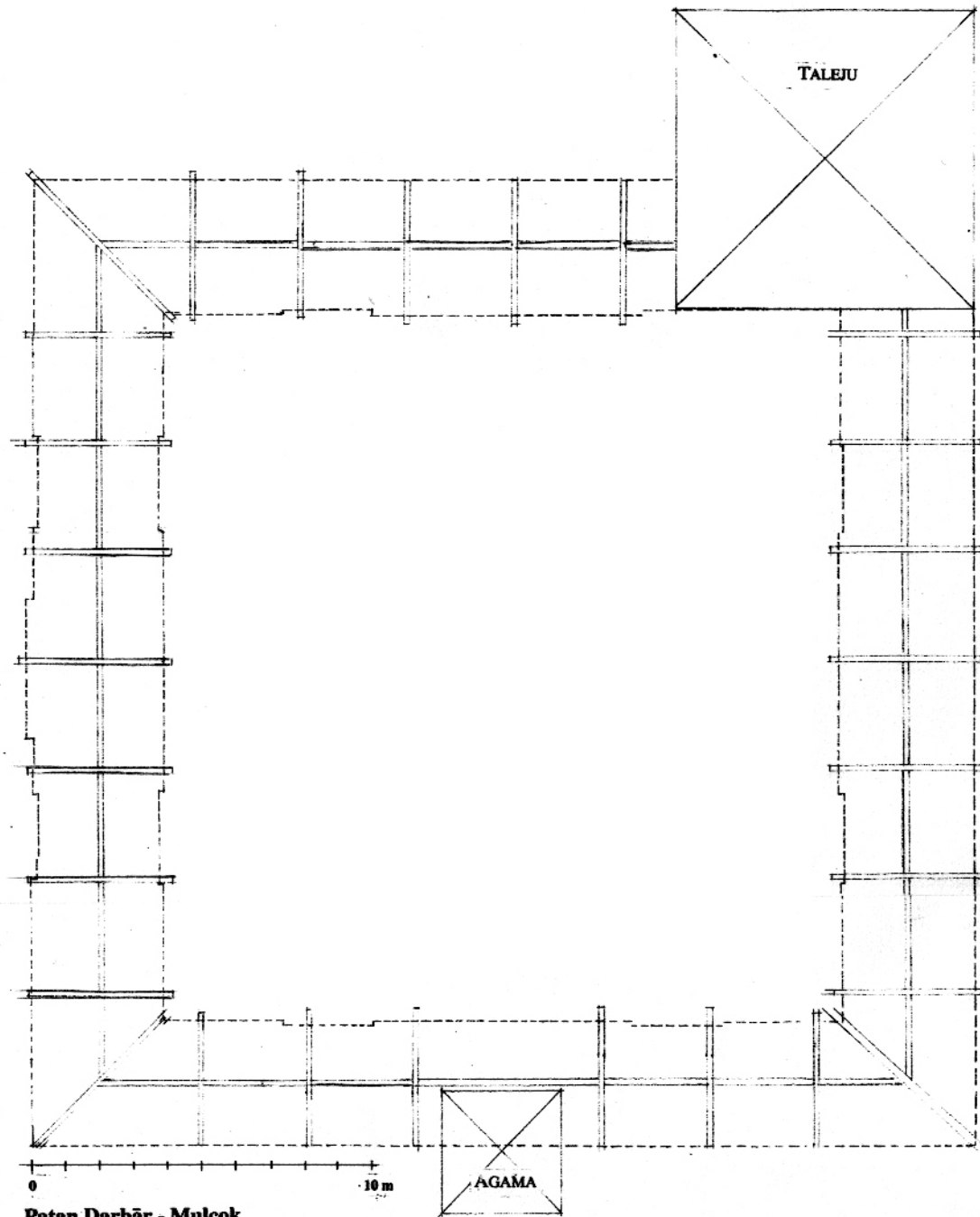






**Patan Darbār - Mulcok**  
Rafter Plan, Scale 1: 00  
Prepared by Bijay Basukala, April 2006

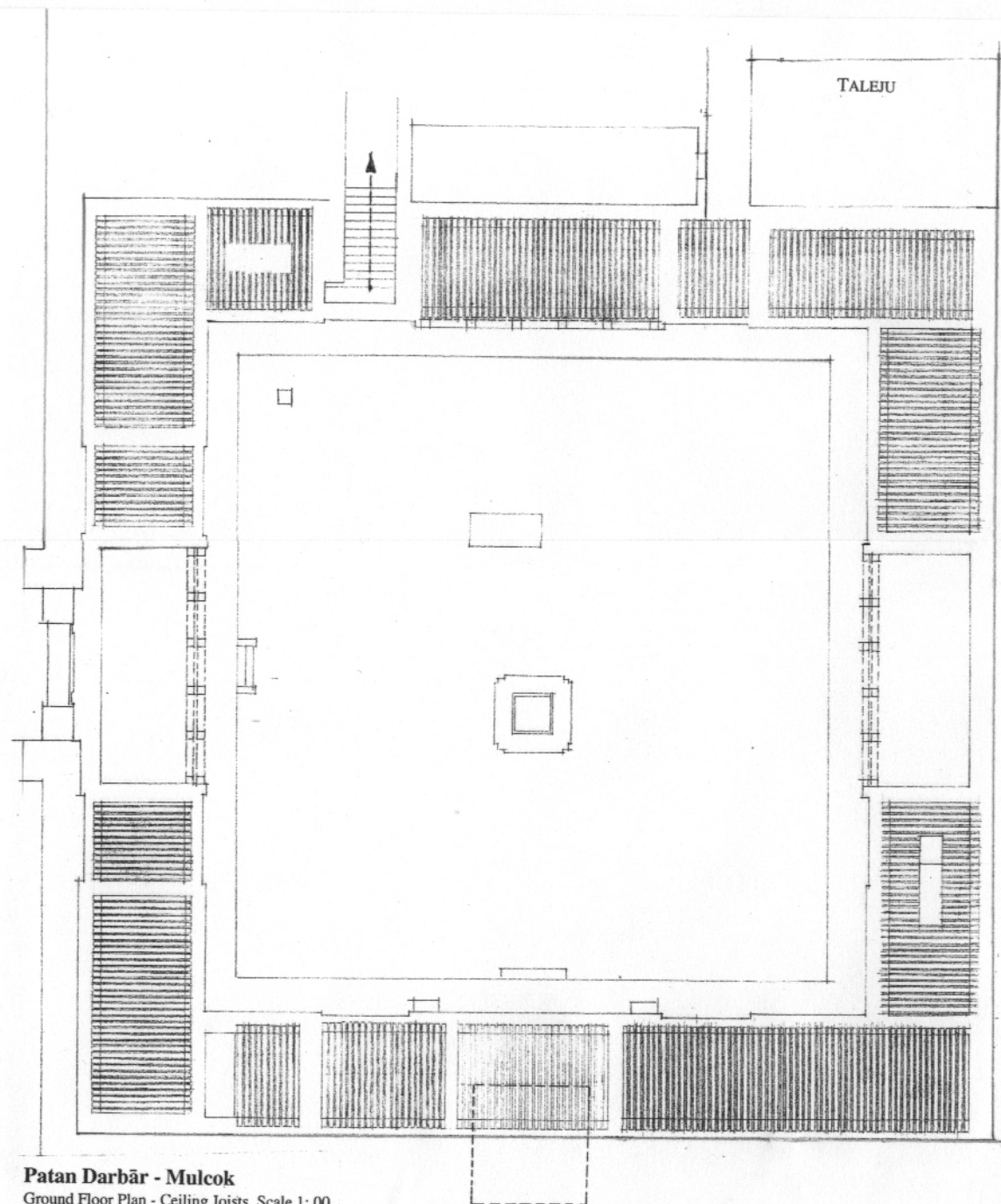




**Patan Darbār - Mulcok**

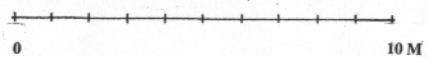
Plan for Placement of Trusses, Scale 1: 00  
Prepared by Bijay Basukala, April 2006





**Patan Darbār - Mulcok**

Ground Floor Plan - Ceiling Joists, Scale 1: 00





### Ground Floor Plan

Conservation and Rehabilitation Program 2006-2012

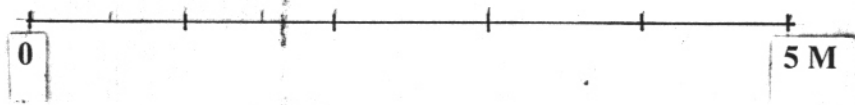
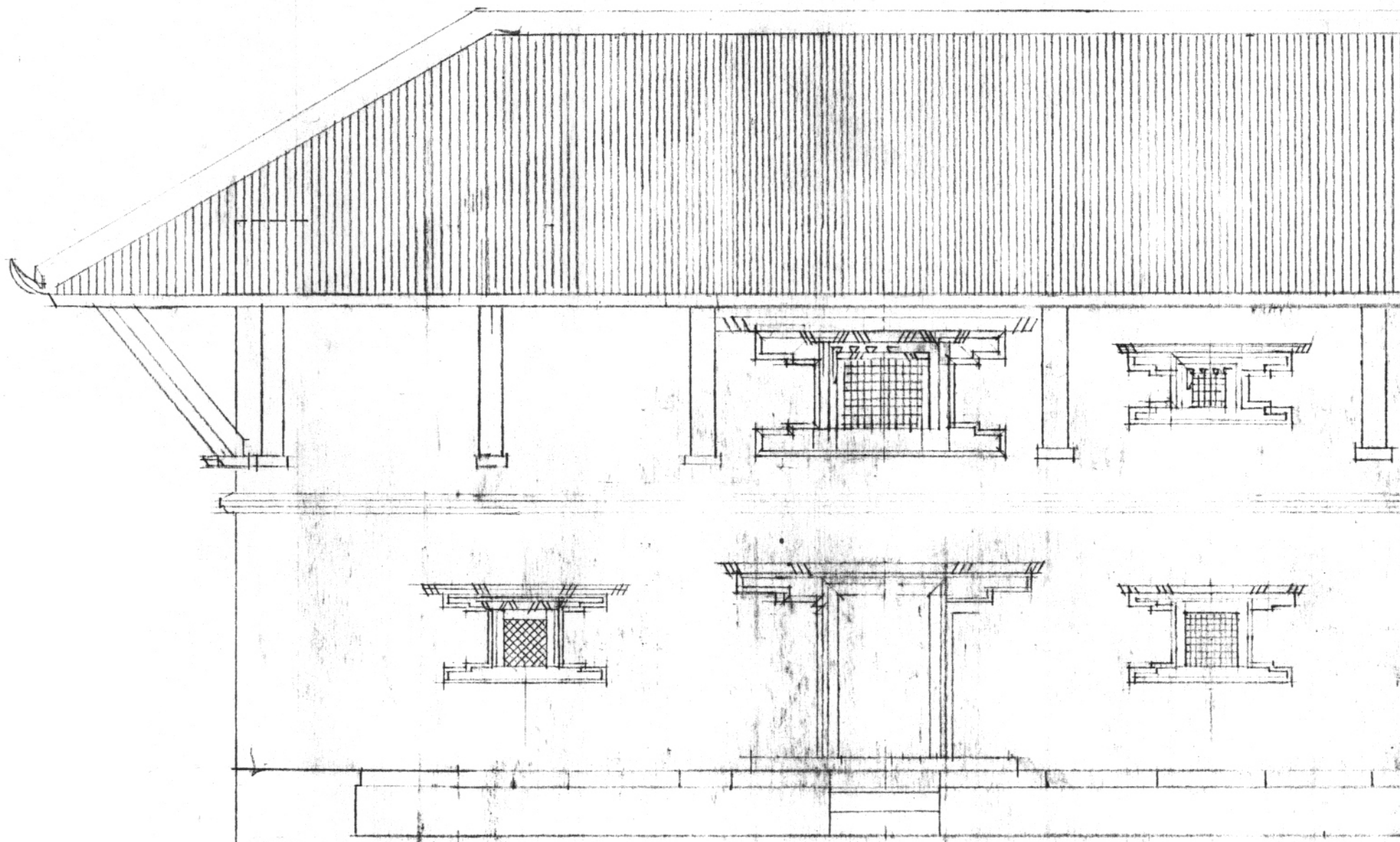
[illegible]

in stone 5 x 18 inches, 3 to 4 feet long @ 3.000.-/m fully dressed

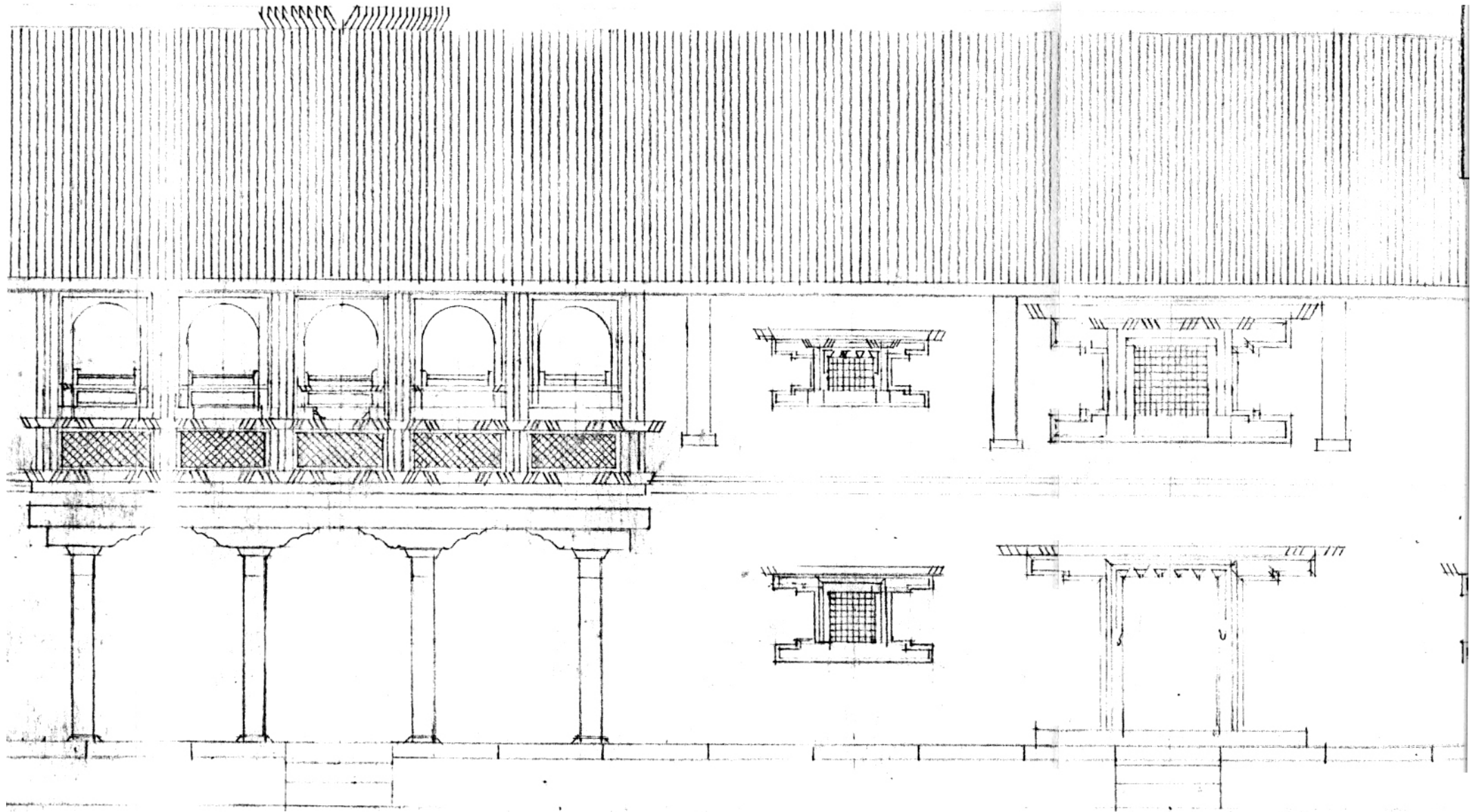
|   |             |
|---|-------------|
| Courtyard 71 metres                           | 219.000.-Rs |
| Backyard 26 metres (initial phase)            | 78.000.-Rs  |
| fine brickdust/lime (surkhi) bed 97 m @ 200.- | 19.600.-Rs  |
| stone dust/lime for pointing 97m @ 100.-      | 9.900.-     |
| Subtotal                                      | 326.500.-Rs |

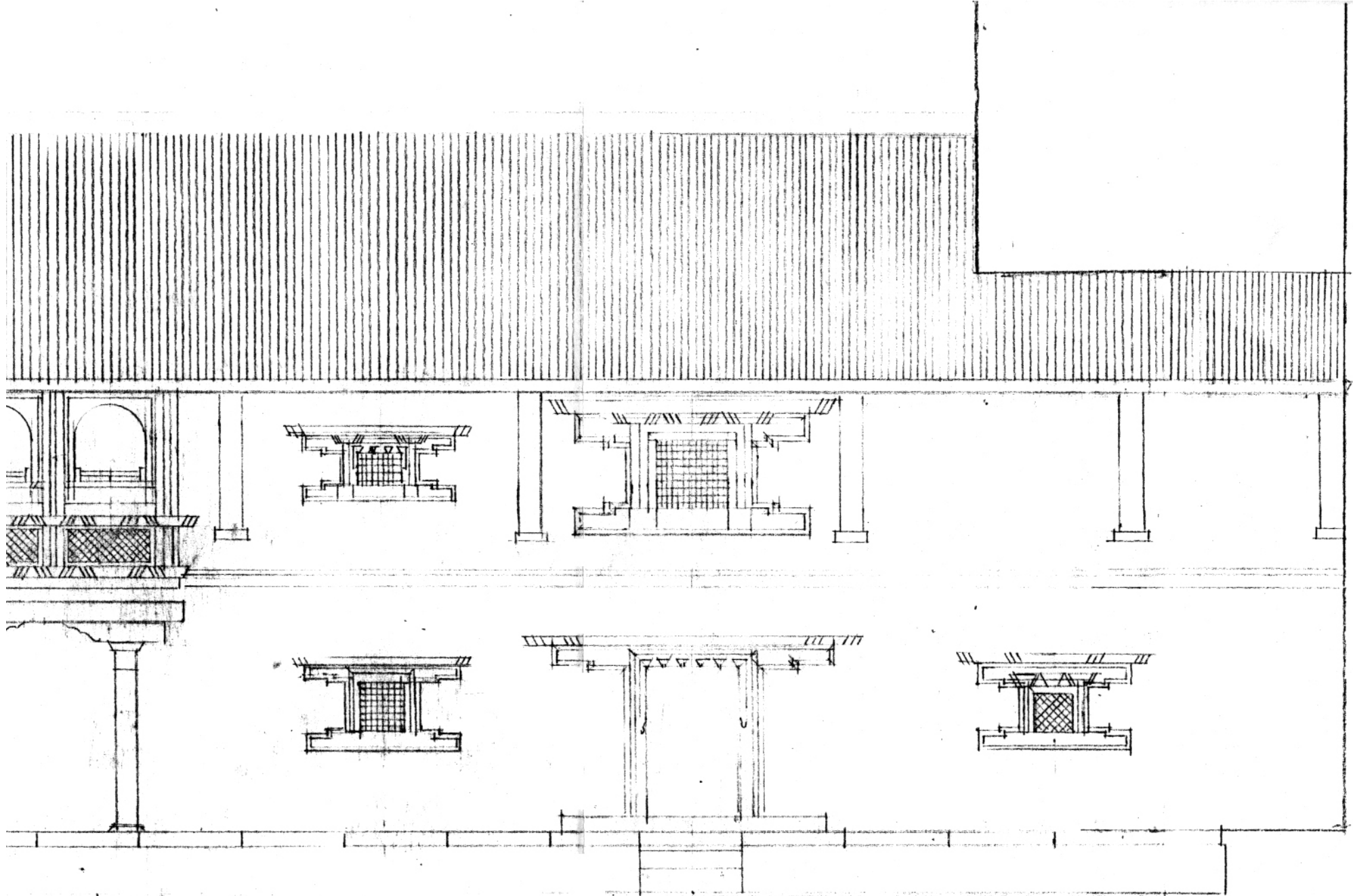
|  |                    |
|--|--------------------|
| 97 metres placing stone in surkhi bed and pointing |                    |
| 97 days dakami @ 400.-                             | 39.600.-           |
| 97 days jyami @ 200.-                              | 19.800.-           |
| Subtotal   | 59.400.-Rs         |
| <b>Grand total</b>                                 | <b>385.900.-Rs</b> |











**Patan Darbār - Mulcok**  
Design of the wall facing the garden (east)  
Scale 1:50, April 2006



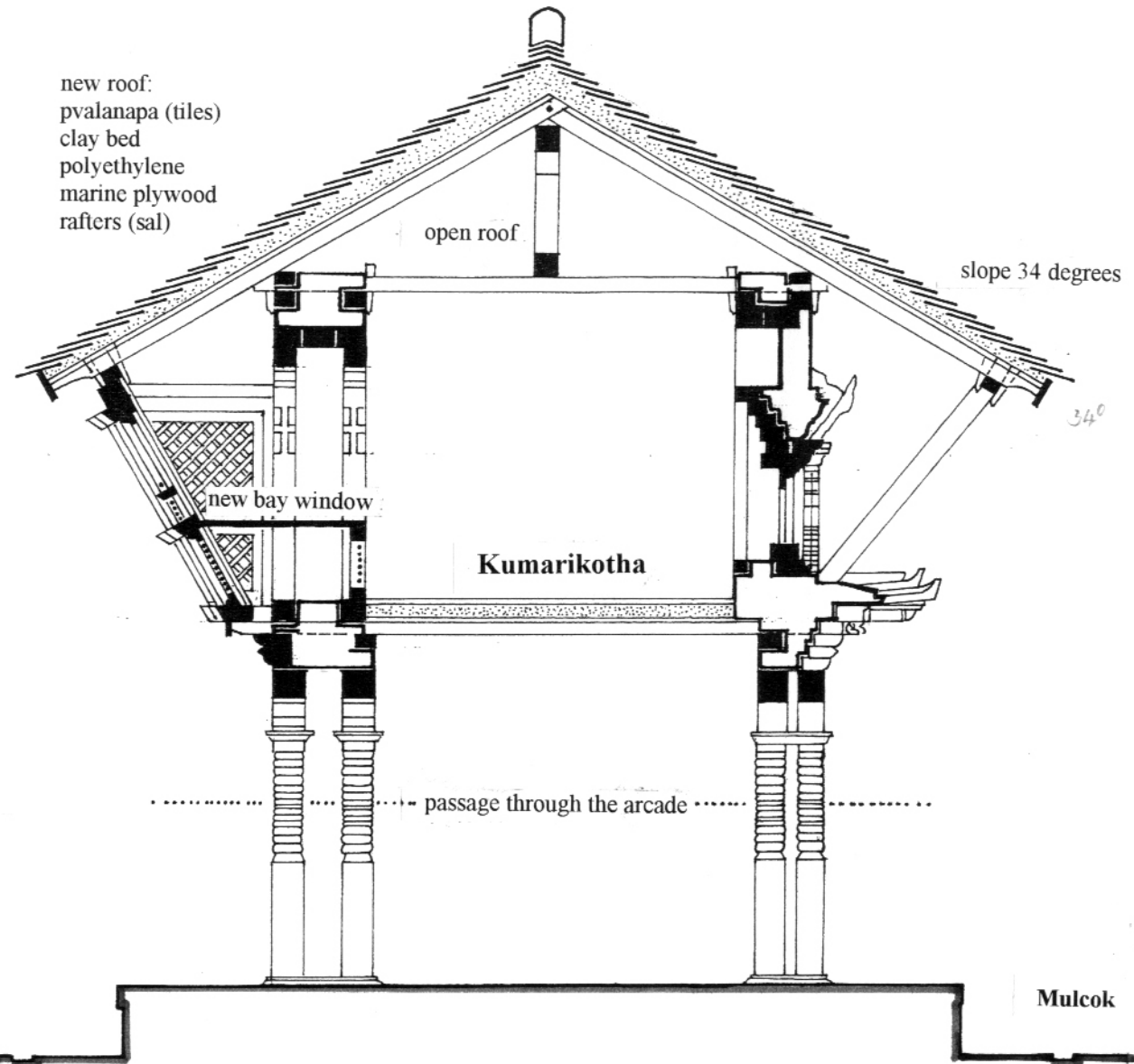
**Patan Darbār -Mulcok**

Section East Wing, Scale 1:50

Reconfiguration of the rear (garden) facade

**Alternative A:**

Design for an upright window with three openings



# C O S T E S T I M A T E

## 1. LINING OF PLINTH IN STONE

The lining of the plinths in stone had been replaced by "Chinese" bricks from the Harisiddhi brick factory. The plan is to reintroduce stone in order to reinstate the historical situation.

Stone 5 x 18 inches, 3 to 4 feet long @ 3.000.-/m fully dressed

### Material

|   |             |             |
|---|-------------|-------------|
| Courtyard 71 metres                           | 219.000.-Rs |             |
| Backyard 26 metres (initial phase)            | 78.000.-Rs  |             |
| fine brickdust/lime (surkhi) bed 97 m @ 200.- | 19.600.-Rs  |             |
| stone dust/lime for pointing 97m @ 100.-      | 9.900.-     |             |
| Subtotal                                      |             | 326.500.-Rs |

### Labour

|  |          |            |
|--|----------|------------|
| 97 metres placing stone in surkhi bed and pointing |          |            |
| 97 days dakami @ 400.-                             | 39.600.- |            |
| 97 days jyami @ 200.-                              | 19.800.- |            |
| Subtotal   |          | 59.400.-Rs |

### Grand total

3.85.900.-  
= 5.512.-\$

## 2. REPAIR OF STRUTS

In the 1980s a number of hands were replaced in an inferior quality. In the meantime more hands got lost. All struts have to be cleaned in order to present them in their original surface of wood.

|   |            |
|---|------------|
| 307 hands and 49 parts of shawl and leg @ 760.- | 2.70.560.- |
| material (salwood)                              | 1.32.788.- |
| replacement of attributes                       | 80.000.-   |
| cleaning  | 20.000.-   |
| unforeseen repairs and handling                 | 1.00.000.- |

### Total

6.03.348.-Rs  
= 8.619.-US \$



### 3. ROOF

The relatively recent (appr. 1985) renewal of the entire roof is of a standard that makes a complete replacement mandatory. The aim is to reinstall historic standards which are based on flat proportions of the rafters (*musī*, 15 cm broad, 10 cm high) with a gap in between of 15 cm. Until the 19th century rafters were covered by long flat tiles (*cilāapā*) with a small rebate to hold the covering layer of clay. Only by the middle of the 20th century this standard was replaced by planking, topped by tarfelt to ckeck seepage. Reed or split bamboo was regularly used for residential buildings. For the replacement of the roof, the long flat tiles are reintroduced within the visible section of the projecting eaves. For the remaining section marine plywood is suggested to ensure a smooth surface for a layer of highly durable multiplast. Battens nailed on top of multiplast serves to hold the layer of clay into which the roof tiles (*āypā* or *pvalāapā*) are pressed.

Marine plywood represents an introduction of a new technique similar to the introduction of planking and tarfelt only two generations ago. Planks were never dry, the shrinking produced gaps through which the tarfelt was not only visible, but often the bitumen was leaking and finally it broke at such gaps. The nailing of marine plywood improves the stability of the structure considerably and produces an immaculate surface, fit for a museum space that has to be clean and avoid dust.

#### 3.1 Rafters

|                | Nos. | lenth       | quantity  | total      |
|----------------|------|-------------|-----------|------------|
| Corner rafters | 7    | 7.00 m      | 0.955 cbm |            |
| West Wing      | 11   | 4.40 - 5.40 | 0.715     |            |
|                | 11   | 3.10        | 0.443     |            |
|                | 190  | 4.25        | 10.497    |            |
|                |      |             |           | 11.654 cbm |
| North Wing     | 11   | 5.00        | 0.715     |            |
|                | 17   | 2.00        | 0.442     |            |
|                | 50   | 4.25        | 2.860     |            |
|                | 38   | 6.50        | 3.211     |            |
|                |      |             |           | 7.128 cbm  |
| East Wing      | 166  | 4.25        | 8.600     |            |
|                | 12   | 5.00        | 0.780     |            |
|                | 35   | 2.00        | 0.910     |            |
|                |      |             |           | 10.29 cbm  |
| South Wing     | 12   | 5.00        | 0.780     |            |
|                | 36   | 4.25        | 1.880     |            |
|                | 67   | 8.75        | 7.621     |            |
|                |      |             |           | 10.389 cbm |
| sub-total      |      |             |           | 40.410 cbm |
| wastage 8%     |      |             |           | 3.320 cbm  |
| sub-total      |      |             |           | 43.640 cbm |

The rate for extra-long timber (above 3.00 m) was  
66.045.- Rs in April 2006 =

28.82.203.- Rs

|  |  |                      |
|--|--|----------------------|
| Labour   |  |                      |
| 25 days @ 400 (carpenter) per cbm = 10.000.-Rs |  | 4.04.100.- Rs        |
| 10 days @ 200 (helper) per cbm = 2.000.-       |  | 80.828.-             |
| transportation @ 1.000.- = 1.000.-             |  | 41.434.05            |
| sub-total                                      |  | 5.26.362.-           |
| <b>Grand Total</b>                             |  | <b>34.08.565.-Rs</b> |
|  |  | <b>= 48.693.-\$</b>  |

### 3.2 Roofing

|                                  |                                  |                     |
|----------------------------------|----------------------------------|---------------------|
| lower layer                      |                                  |                     |
| marine plywood                   | 562.86 m <sup>2</sup> @ 700.-Rs  | 3.94.002.-Rs        |
| multiplast                       | 828.68 m <sup>2</sup> @ 675.-    | 5.59.359.-          |
| lower roof tiles (cilaapā)       | 265.82m <sup>2</sup> @ 350.-     | 93.037.-            |
| labour                           |                                  | 28.000.-            |
| upper layer                      |                                  |                     |
| roof tiles, clay, labour         | 828.68 m <sup>2</sup> @ 1.127.94 | 9.34.701.31         |
| ridge tiles                      | 102 metres @ 515                 | 52.530.-            |
| metal plates and belts for eaves |                                  |                     |
| corner bricks (gvangaapā)        | 4 @ 500.-                        | 2.000.-             |
| <b>Total</b>                     |                                  | <b>20.63.629.-</b>  |
|                                  |                                  | <b>= 29.400.-\$</b> |

### 3.3 Truss

|                                      |                          |                      |  |
|--------------------------------------|--------------------------|----------------------|--|
| ridge beam ( <i>thāymā</i> )         | 15x15 cm, 90.8 m         | 2.043 cbm            |  |
| ridge post ( <i>baigaṭhān</i> )      | 15x15x 150 cm, 34 nos    | 1.140                |  |
| capital ( <i>meth</i> )              | 15x15x 100 cm, 34 nos    | 0.765                |  |
| ridge post plate ( <i>lakansin</i> ) | 15x15 cm, 90.8 m         | 2.043                |  |
| truss joist                          | 20x15x4.25, 34nos.       | 4.330                |  |
| lower wall plate                     | 8x10 cm, 286 m           | 2.280                |  |
| upper wall plate                     | 8x10 cm, 325 m           | 2.600                |  |
| strut rail ( <i>calu</i> )           | 8x10 cm, 149.5 m         | 1.196                |  |
| wastage 8%                           |                          | 1.310                |  |
| subtotal 17.700 cbm @ 71.762.-Rs =   |                          | 12.70.187.-Rs        |  |
| eaves board ( <i>mhutah</i> )        | 15x2.5, 119.45 m @ 357.- | 42.643.-             |  |
| <b>Total</b>                         |                          | <b>13.12.830.-Rs</b> |  |
|                                      |                          | <b>= 18.754.-\$</b>  |  |



#### 4. FIRST FLOOR

|                                    |                                  |            |                           |
|------------------------------------|----------------------------------|------------|---------------------------|
| wall plaster in lime surkhi        | 500 m <sup>2</sup> @ 350.-       | 1.75.00.-  |                           |
| floor in lime surkhi (5 cm),       |                                  |            |                           |
| tiles (15 x 15 cm cikāāpā @ 12.50) | 231.94 m <sup>2</sup> @ 1.197 Rs | 2.77.632.- |                           |
| repair of windows                  |                                  | 2.00.000.- |                           |
| <b>Total</b>                       |                                  |            | 6.52.632.-Rs<br>9.323.-\$ |

#### 5. GROUND FLOOR

|   |                            |               |                             |
|---|----------------------------|---------------|-----------------------------|
| wall plaster in lime surkhi                 | 600 m <sup>2</sup> @ 350.- | 2.10.00.-     |                             |
| floor in lime surkhi (5cm),                 |                            |               |                             |
| tiles (15 x 15 cm cikāāpā @ 12.50)          | 218.41m <sup>2</sup>       | 2.61.436.-    |                             |
| repair of doors                             |                            | 2.00.000.-    |                             |
| ceiling joists (dhalin) 12x13x350, 317 nos. |                            |               |                             |
|   | 17.30 cbm @ 71.762.-       | 12.41.487.-Rs |                             |
| <b>Total</b>                                |                            |               | 19.12.923.-Rs<br>27.327.-\$ |

#### 6. FACADES

|                                      |  |  |                           |
|--------------------------------------|--|--|---------------------------|
| Repair of windows, repair of masonry |  |  | 3.00.000.-Rs<br>4.285.-\$ |
|--------------------------------------|--|--|---------------------------|

#### 7. EASTERN FACADE (facing the garden)

|  |                           |            |                             |
|--|---------------------------|------------|-----------------------------|
| removal of wall                        | 97 cbm @ 176.-            | 17.145.-   |                             |
| new wall in lime surkhi, maapā         | 80 cbm @ 6.714.-          | 5.37.160.- |                             |
| 8 pillars with plate, capital and beam |                           | 2.00.000.- |                             |
| large bay window (five openings)       |                           | 5.00.000.- |                             |
| two large latticed windows             | @ 50.000.-                | 1.00.000.- |                             |
| six small latticed windows             | @ 35.000.-                | 2.10.000.- |                             |
| cornice (wood and tile)                | 28 m @ 8.000.-            | 2.24.000.- |                             |
| waterproofing                          | 14 m <sup>2</sup> @ 675.- | 9.450.-    |                             |
| <b>Total</b>                           |                           |            | 17.97.755.-Rs<br>25.682.-\$ |

## 8. TALEJU GATE RESTORATION

|  |                    |             |
|--|--------------------|-------------|
| Gilding: Gold for Ganga, Yamuna and door | 63 tola @ 17.500.- | 11.02.500.- |
| Copper for missing parts and repair      | 136 kg @ 700.-     | 95.200.-    |
| labour: repair of door                   |                    | 1.04.500.-  |
| labour: repair of Ganga, Yamuna          |                    | 1.52.000.-  |
| Renewal of ten deities for the tympanum  | @ 25.000.-         | 2.50.000.-  |

|              |                      |
|--------------|----------------------|
| <b>Total</b> | <b>17.04.200.-Rs</b> |
|              | <b>24.345.-\$</b>    |

## 9. ELECTRIFICATION

|                                    |            |
|------------------------------------|------------|
| Lump sum for wiring without lights | 2.00.000.- |
|------------------------------------|------------|

|              |                     |
|--------------|---------------------|
| <b>Total</b> | <b>2.00.000.-Rs</b> |
|              | <b>2.857.-\$</b>    |

## 10. SCAFFOLDING

|                            |            |
|----------------------------|------------|
| 1332m <sup>2</sup> @ 237.- | 3.15.684.- |
|----------------------------|------------|

|              |                     |
|--------------|---------------------|
| <b>Total</b> | <b>3.15.684.-Rs</b> |
|              | <b>4.510.-\$</b>    |

## 11. SITE WORKSHOP

|                     |
|---------------------|
| <b>3.00.000.-Rs</b> |
| <b>4.285.-\$</b>    |

## GRAND TOTAL

|                |
|----------------|
| 149.57.466.-Rs |
| 213.678.-\$    |

Unforeseen 12%

|               |
|---------------|
| 17.94.895.-RS |
| 25.641.-\$    |

Overhead 10%

|               |
|---------------|
| 14.95.746.-Rs |
| 21.367.-      |

## GRAND TOTAL

|                        |
|------------------------|
| <b>1.82.48.107.-Rs</b> |
|------------------------|

US Dollars @ 70.-Rs

|                    |
|--------------------|
| <b>260.687.-\$</b> |
|--------------------|

Euro @ 85.-Rs

|                   |
|-------------------|
| <b>214.683.-€</b> |
|-------------------|