

YETKHA BAHA AGAMCHHEN

FINAL REPORT

A JOINT PROJECT OF

DEPARTMENT OF ARCHAEOLOGY, HMG OF NEPAL
KATHMANDU METROPOLITAN CITY
UNESCO KATHMANDU OFFICE
SHREE ARYANAMA SANGATI (BHASKAR KRITI MAHAVIHARA)

KATHMANDU VALLEY PRESERVATION TRUST

SUPPORTED BY

THE SUMITOMO FOUNDATION (JAPAN)

Grant for projects for the protection, preservation and restoration of cultural properties outside Japan

ROHIT RANJITKAR * RAJU ROKA
KATHMANDU VALLEY PRESERVATION TRUST
MARCH 2003

The Kathmandu Valley Preservation Trust is proud to announce the completion of the restoration of Yetkha Baha Agamchhen; the third project under the banner of "Buddhist Kathmandu Campaign", on March 2003. On behalf of the Trust, we wish to thank all our generous supporters.

With generous support from

THE SUMITOMO FOUNDATION (JAPAN) UNESCO KATHMANDU OFFICE KATHMANDU METROPOLITAN CITY SHREE ARYANAMA SANGATI (BHASKAR KRITI MAHAVIHARA) GERMAN DEVELOPMENT SERVICE (DED) AND KATHMANDU VALLEY PRESERVATION TRUST (USA)

Implemented by

Kathmandu Valley Preservation Trust

In cooperation with

Department of Archaeology, HMG of Nepal Kathmandu Metropolitan City, Kathmandu

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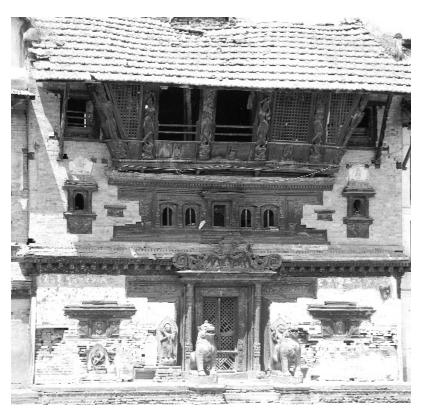
1. Introduction

The "Buddhist Kathmandu Campaign" was born and first presented on the occasion of a meeting of the board in March, 1998 by Erich Theophile, Executive Director of the Trust. The first Buddhist Monastery to be restored as part of the Campaign Project was Chusyabaha (1999-2001). This was the beginning of a new awareness, bringing hope for future restoration projects of neglected sites, especially Buddhist Monasteries.

The Yetkha Baha project is the second project under the banner of the "Buddhist Kathmandu Campaign", one of the earliest structures of the Kathmandu Valley. The Buddhist shrine structure "Agam" of Yetkha Baha has been a figure of Nepalese history since the 12th century. It's configuration and fragmentary building fabric possibly date back to the Licchavi era (300-879 A.D.). Although dilapidated, the principle building preserves much of it's 12th century form including the facade configuration consisting of carved windows, pillars and roof struts.

Documentation of this existing structure started in January, 1999 with the readings of inscriptions by Nutan Dhar Sharma. This focus of Yetkha Agam was prioritized based on the extreme importance of the surviving "tympanum" (13th c.) and struts (14th c.) which had never been seriously studied or documented. The Trust also viewed and studied other carved fragments and elements from the historical building that were stored. Based on the historical structure, the documentation and detailed design proposal for the restoration was completed in Summer, 2000.

Normally, everyone's eyes are focussed on World Heritage Sites or popular monuments which are worshiped on a daily basis. Sites not frequently visited have been neglected, especially Buddhist Monuments, which are typically off the main road or not placed in the main square. These monasteries are generally in the center of community buildings, where the community members have their clan God to worship. Exterior facades are not the prime importance of Buddhist monasteries because most of the monasteries are in their own courtyard system in which the prime facade becomes the courtyard facade.



A view of shrine house from 1968. Photo: Marry Slusser.



A picture showing complete collapse of roof in 1987.



A view of shrine building before restoration in 2000. Photo: Raju Roka.



A view of building in historic form after restoration in 2003. Photo: Brandon Smith.

2. History of the Building

Yetkhabaha is situated in the western section of Kathmandu. Yetkha literally means West in the *Newari* language and Baha means Buddhist Monastery. The structure stands two blocks north-west of the Kathmandu Durbar World Heritage Site, embedded in a network of communal and religious courtyards whose historical plan is preserved, despite much of the modification and rebuilding at the upper levels. This monastery has been considered as one of the branch monasteries of Itumbaha. Itumbaha is located 150 meters north-east of Yetkhabaha. Legend indicates that the wife of Bhaskar Deva, who ruled from 1045 to 1047, consecrated Yetkhabaha naming it after King Sri Bhaskarakirtivihara. (published by Hemaraj Shakya, 1979, pg.22) No direct evidence could be found to support this early origin.

3. Project Description

Restoration of this outstanding historic structure was undertaken in a project framework including both public outreach activities and critical training of local manpower in project management, public relations, preservation advocacy and state of the art conservation technology.

The Kathmandu Valley Preservation Trust was uniquely positioned to implement this project as one of the very few international preservation groups with an established local fund-raising base and a built up cadre of private sector professionals. The Trust is the only international, non-government organization working on historic preservation and registered in Nepal. This project was executed in close cooperation with *guthi Shree Aryanama Sangati (Bhaskar Kriti Mahavihara)*, Kathmandu Metropolitan City and the HMG Department of Archaeology. All personnel involved with the project were private-sector Nepalese professionals. Project monitoring and design inputs were provided by the board of the Trust and the Trust's core staff.

This project was a component of a larger initiative undertaken by the Trust under the banner of "Buddhist Kathmandu Campaign". Though this outstanding monument currently stands outside of the protected areas of the World Heritage Sites, the Trust was able to make restoration possible.

4. Significance

Of some 83 historical examples of Buddhist quadrangles in the country, Yetkha Baha and nearby Itum Baha are only two of a handful of sites to remain largely intact. What makes this building more significant than any other is the fact that this historic shrine preserves some of the finest, oldest examples of Nepalese wood carvings. This monument has a unique type of "tympanum" dating to the 12th century and roof struts dating to the 13th century that

Given the embryonic state of research regarding this earliest period of architecture in Nepal, the careful preservation of this structure merits international attention. In fact, the cluster of early Buddhist architectural monuments in and around this monastic quadrangle (Baha) represents the last opportunity to save an ensemble of historical structures of such artistic importance and continuity in Kathmandu.

Before the restoration began half of the Yetkha Agam roof structure was in ruins. Past monsoons had threatened to totally collapse and damage the facade and other historical elements. Unfortunately, the greatest symptomatic threat to not only to this structure but the architectural heritage of Nepal is the government's inability to identify, list, and protect historical structures outside of the World Heritage Sites or sites under private ownership. Sensitized to this problem in 1993 by a proposed World Heritage Sites In Danger listing, the government has not been able to address this critical policy gap. However, inclusion in the World Monuments Watch "Most Endangered Monuments" List, Year 2000, has raised awareness of the disastrous situation at Itumbaha and the crisis of the other monuments in danger throughout the Kathmandu Valley.

This outstanding monument stands outside the protected area of the World Heritage Sites and is semi-privately owned. Worthy conservation projects far outreach local resources and manpower. Nepal being one of the poorest nations in the world has a huge challenge to meet and conserve its numerous world class architectural monuments such as Yetkha Baha.

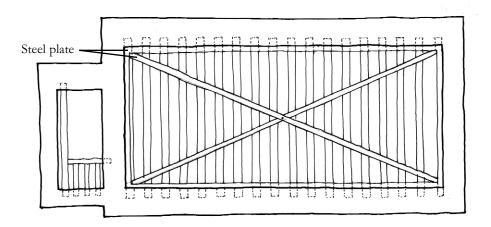
5. Restoration

The restoration process of Yetkha Baha was a multi-faceted progression with the complex combination of incorporating new modern techniques with traditional time honored materials and methods.

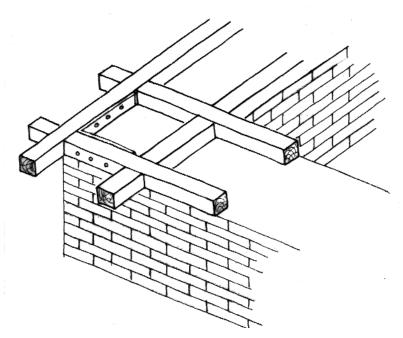
The attic and second floor of the temple were completely dismantled and rebuilt maintaining traditional materials and techniques. Due to the extent of the damage the existing joists on all floor levels (attic, first and second floor), were removed and replaced with by using new *sal* wood joists, one of the strongest woods available in Nepal. The existing mud floor was also removed and replaced with new timber plank flooring.

The encroachment of public buildings surrounding historical monuments is one of the ongoing problems with historical buildings in the Valley. In the case of Yetkha Baha, on the rear side of the building, the third floor cantilevered roof had to be eliminated from the original design due to the encroachment of the property line from the building next to the temple. The Trust was able to maintain the historical appearance as much as possible even with the restrictions involved.

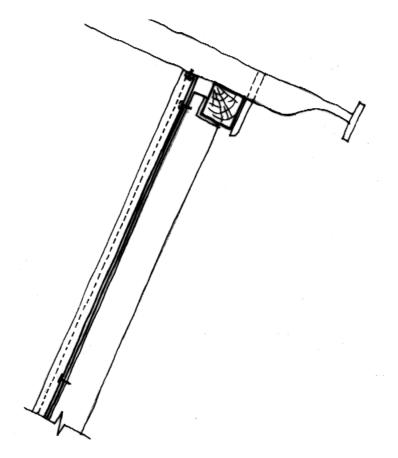
Much restoration work took place on the front façade, including the five bay windows. Using previous research and investigation work, the Trust used local craftsmen who not only preserved the knowledge of how the old bricks were fabricated but used the traditional methods and materials to make new bricks. Found, old bricks were also located and re-used. On lower level of the façade, bricks that were missing or decomposing were



Seismic reinforcement with steel cross plate above the joist act as horizontal stiffening plate.



Improved joints with wall plate installed at the corners to act as timber ring beam for support in the event of seismic movement.



The bracing of the struts with steel angles, between strut and planking, allows the load from the roof to be transferred evenly without putting the entire load only on the strut. This also protects the strut from theft.

replaced. The upper most level the façade was re-faced with new brick as required. This shrine house is another successful example in the use of the brick work developments. The entire plinth of the building was replaced to its historic detail due to its deteriorated condition. The five bay windows were also reconstructed by retrofitting the historical struts that were preserved into the restored façade.

As there is no current public system of maintenance for historical monuments, the Trust is not just focused on "visible" restoration only but also structural restoration that will allow the building to help maintain it self. The Trust has incorporated additional structural details, such as using steel angles at corners of joists to create timber ring beams and angles for extra bracing of struts, for further support in the event of a seismic movement. Based on the new structural reinforcement details that were developed for the "Kathmandu Darbar Initiative" by Robert Silman & Associates, New York City, U.S.A., modified seismic reinforcement details for Yetkha Baha were also applied.

The key element and one of the focal points of the Trust is to maintain as much of the historical fabric of the building as possible with the incorporation of new building techniques in order to maintain the buildings integrity for the future.

6. Public Awareness & Training Program

Before the actual restoration work began in May 2002, the ownership problem had to be addressed and solved. The the care taker appointed by the a local *guthi* member to perform the necessary daily ritual (*puja*) for the *kwa-padyah* had occupied the building and obtained an ownership certificate (*lalpurja*) 4 decades ago from the Cadastral Office (*malpot adda*). After a great amount of difficulties and problems with the appointed occupant, it was finally agreed that with a certain amount of compensation, they would leave the building. The settlement of ownership transfer was made possible with the help and pledge of funds of local guthi members (NRs 300,000), Kathmandu Metropolitan City (NRs 200,000) and Kathmandu Valley Preservation Trust (NRs 375,000). Currently the Yetkhabaha is in the name of Community Trust (guthi). The entire negotiations to solve this ownership dispute with the occupant took the better part of a year.

There are many other examples in the Kathmandu Valley, where shrine houses, Sattals, Patis and public buildings are occupied and then privatized.

Ayuguthi Sattal in Patan Darbar Square was the first example to bring back a once public, then privatized building, back to the public after nationalization, which took 10 years. Even though the case was won to bring back the building to the public, within that 10 year period of time, the historical building was lost altogether. In the case of Yetkhabaha, guthi members were able to get back their shrine house much quicker with the large compensation of NRs. 875,000.

The complete restoration of the monuments has preserved cultural heritage and fuelled awareness among the local community. Valuable partnerships with the Kathmandu Metropolitan City, Naradevi Area Cultural Heritage and Development Committee and the religious community of the Yetkha shrine were key components of this endeavor, providing critical models and lessons for these organizations to further develop their skills and sensitivity to historic preservation. A large-scale connection between the local and international preservation communities was forged in this model collaboration and a key to its success.

Architect, Lumanti Joshi and two carpenters are in continuous training to work with historical buildings. With the completed documentation of the historic terracotta pinnacle, a copper replica has been fabricated and installed. Lumanti is also handling the final documentation of other KVPT projects which were completed before she joined KVPT and also worked on the documentation of restored condition drawings of Yetkha Baha, including detail drawings of carved figures. Lumanti completed her architecture study in Nepal Engineering Collage, Changunarayan, Bhaktapur. Two additional architectural students, Shrijan Joshi, from the School of Planing and Architecture, New Delhi and Maie Kitamura, from Paris Architectural School, completed a two month internship training program with KVPT on architectural heritage of the Kathmandu Valley. Typically carpenters are not skilled to work with historical buildings. The goal of training is to educate them to be able to work with the historical monuments. Extensive training allows these carpenters to expand their knowledge; use their eyes and and minds to create exceptional wood carvings and the general understanding on how to replicate the damaged historic carvings.

7. Benefits

With the completed restoration of the temple the local community has regained its principal shrine and the centerpiece of the urban square. This is also a vital key to urban upgrading developments and awakens cultural preservation concerns. Local craftsmen received challenging and educational building and design tasks in this international-standard restoration project. The economic impact for the community cannot be overlooked, the refurbishment of this world-class monument will establish a new tourist destination just steps from Kathmandu Darbar Square, thus bringing income and job opportunities to the vicinity. Since job opportunities for young citizens in this field have, until now, been extremely limited, the ongoing training of private sector professionals in historical conservation and related activities remains one of the most important and vital contributions possible in the historical preservation process.

8. Historic Wall Paintings

The public deity of the of the Yetkha Bahal is hosted on the ground floor. the first floor bears another shrine where a secret deity is kept, separated from the main room by a brick wall. The shrine has a central wooden entry only accessible by members of the religious community, called *guthi*. The *guthi* members are responsible for worshiping the deity.

The separating wall is plastered with mud on both sides, showing various monochrome layers of paint. Outside the shrine, stone images of guardian deities have been placed on both sides of the door. This stone relief was embedded in mud plaster, which was formed to a framing profile. When restoration started, the stone images were taken out to maintain the mud and plaster. On the right side of the wall only a small patch of mudplaster which was covered by the stone image is remaining.



The Yetkhabaha wall painting. Photo: Heike Pfund, December 2002

Accidentally, wall paintings were detected on a layer of the mud plaster, well hidden by the stone image on both side of the door. The painting are carried out on a smooth mud surface. Assumingly, the guardian deity *Singhini* is depicted (lion-head), is depicted on the left side of the wall. On the right side of the door, on the small remining patch of plaster fragments of the counterpart, *Vyaghini* (tiger-head), could be revealed.¹



Singhini and Vyaghini. ¹

The measurements of the visible part of the *Singhini* painting, which is left of the entry to the secret shrine, are approximately: 60 cm high, 40 cm wide. Part of the painting is still hidden under mud plaster. More mud plaster was removed to reveal the entire figure and to determine their identity. The painting is in decent condition, the paint layer is strong enough to be cleaned with soft brushes and a special eraser-sponge ("Wish - ab). The slightly shiny surface indicates the use of animal glue as a binding agent. No chemical analysis has been carried out to date.

The painting was produced in three colors: black, red and white. These colors are considered by painters to be the most powerful. BLOM wrote, "The white colour is 'considered to bring about all kinds of good influence, freedom of fear' and it can be associated with the 'foreboding of wealth or

a magical rite to archive this'. Black is associated with the powers of evil and with death. The third color, red, is associated with fertility and reproduction as well as danger and blood. Red sometimes has a symbolic meaning similar to black. Thus, red and black are seen to figure as complementary symbols of fierce supernatural effectiveness. The symbol of fierceness is especially seen in Tantric religion and accordingly the most frightful deities in the Tantricized pantheon of Nepal have a black or red color."²

The wall painting will be covered by the stone images after the examination and documentation process is completed. Covering these paintings will be the best way to preserve them for the future. This will help prevent greasy dirt from the highly polluted air in Kathmandu from accumulating on the surface and the threat of mechanical damage will be avoided. (See attached report for further information and analysis result).

¹M.L.B. Blom, Depicted Deities. Painter's Model Books in Nepal 1989, Rijksuniversiteit Utrecht, Netherlands. Pp.57/58.

²M.L.B. Blom, Depicted Deities. Painter's Model Books in Nepal 1989, Rijksuniversiteit Utrecht, Netherlands. Pp.12/13.

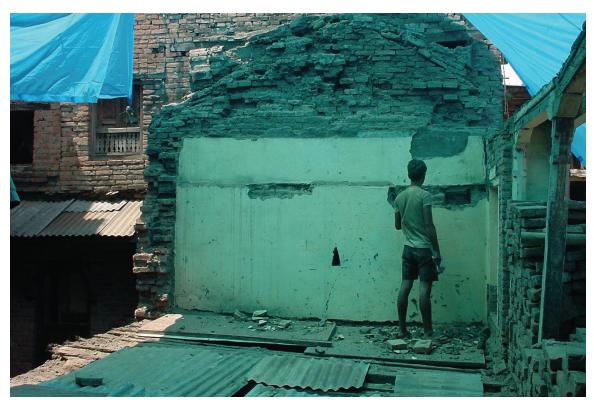
9. Documentation of Photos and Drawings



A historical view of Yetkha Baha courtyard during the annual festival. Photo: Ganesh Photo, 1890.



A comparative view to historical photo showing significant changes. Photo: Brandon Smith, March 2003.



Later added zinc sheet roof and 2nd floor level brick wall dismantled in order to rebuild in historic figure with traditional material. Photo: Raju Roka, May 2002.



Joist at attic and 2nd floor level dismantled to replace with historic size timber and spacing. Photo: Raju Roka, May 2002.



The historic pillars, capitals and beams were reinstalled after cleaning. New beams added to replace the deteriorated portion. Photo: Rohit Ranjitkar, August 2002.



A carpenter fitting the historic corner strut. Photo: Rohit Ranjitkar, August 2002.



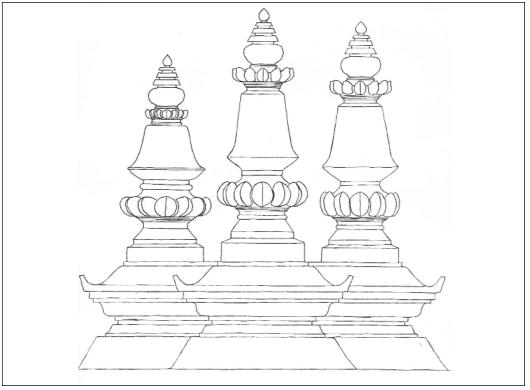
A carpenter shaping the timber for replacing rotten base area of the historic strut. Photo: Rohit Ranjitkar, August 2002.



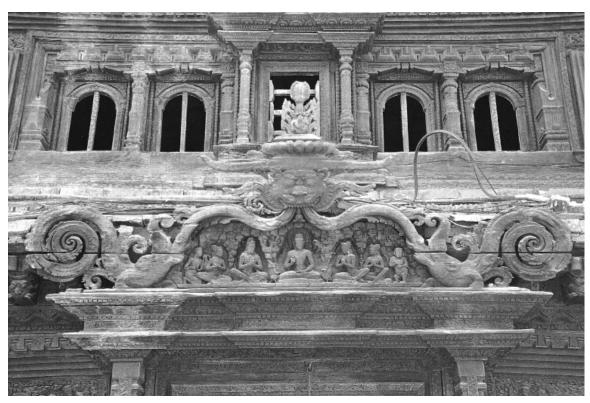
The 13th c. historical roof struts were repaired by replacing decayed portion of the struts. Photo: Raju Roka, August 2002.



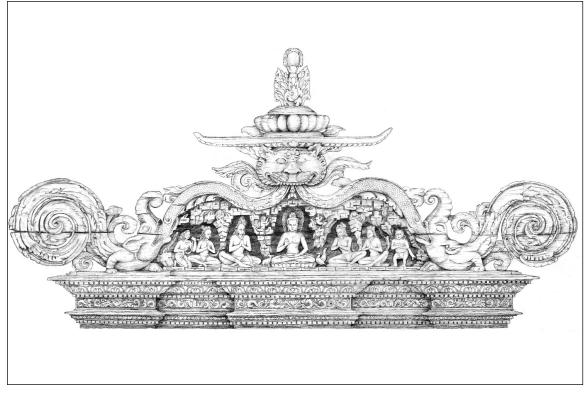
Remaining fragments of the historical terracotta pinnacle. Photo: Raju Roka, September 2002.



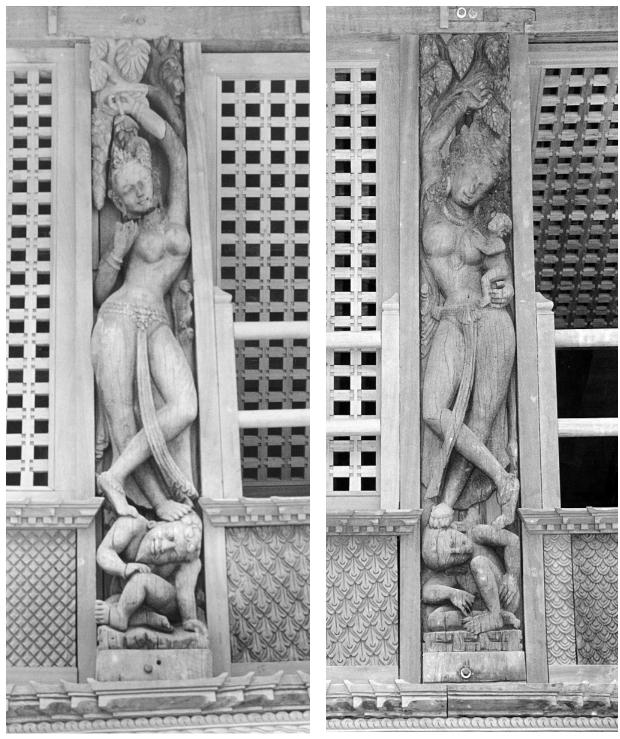
A reconstruction drawing of the Shrine house pinnacle based on historic fragment, comparision with other pinnacles of the same age and historical photograph. Drawing: Lumanti Joshi. September 2002.



A unique type of 12th c. tympanum (*toran*) which is flanked over the main entrance. Photo: Brandon Smith, March 2003.



A drawing of 12th c. tympanum by Rajan Shrestha, March 2003.



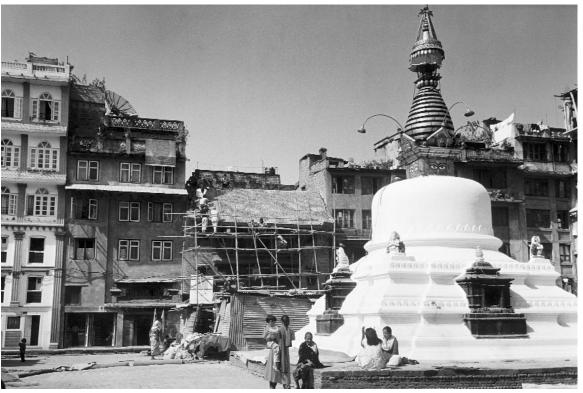
The preserved historical 13th century roof struts belonging to bay window. Photo: Raju Roka, February 2003.



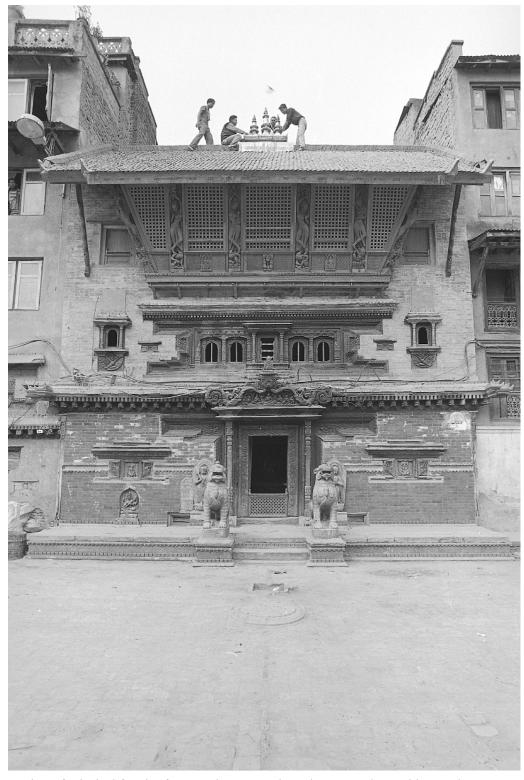
The preserved historical 13th century roof struts belonging to bay window. Photo: Raju Roka, February 2003.



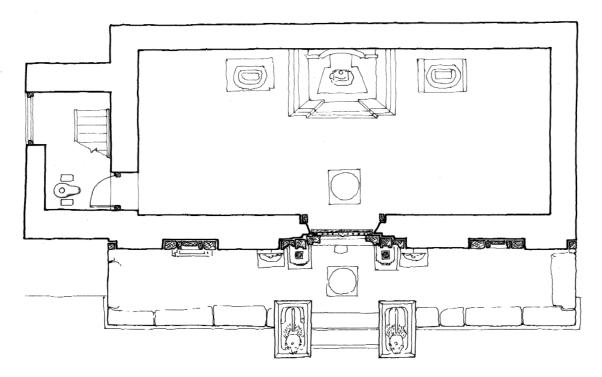
Roof water proofing membrane being laid over planking to prevent water penetration during the rainy season. Photo: Raju Roka, October 2002.



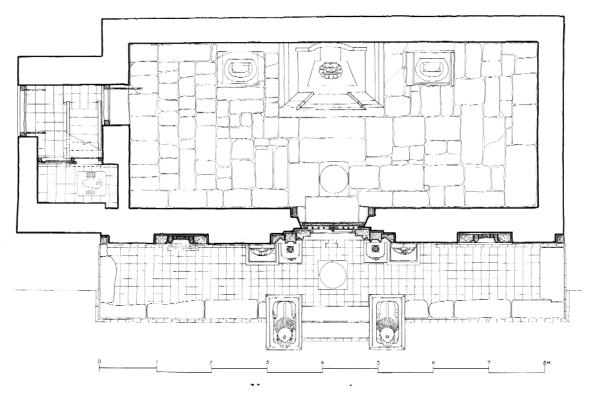
Jhingati (historical roof tiles) being laid over the mud bed. Photo: Heike Pfund, October 2002.



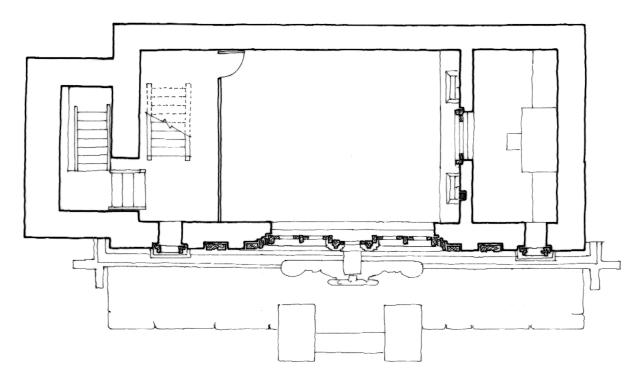
A view of principal facade after complete restoration. Photo: Brandon Smith, March 2003.



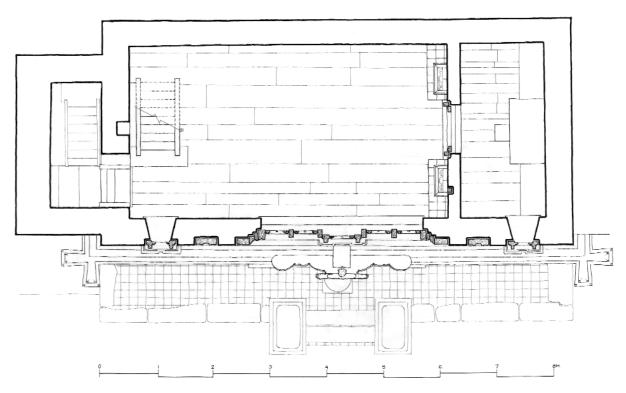
Ground Floor Plan: Existing Condition



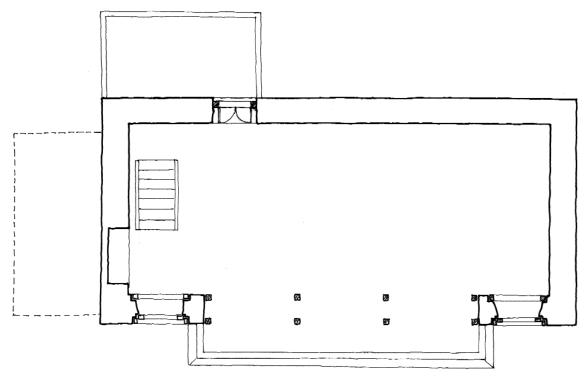
Ground Floor Plan: Restored Condition



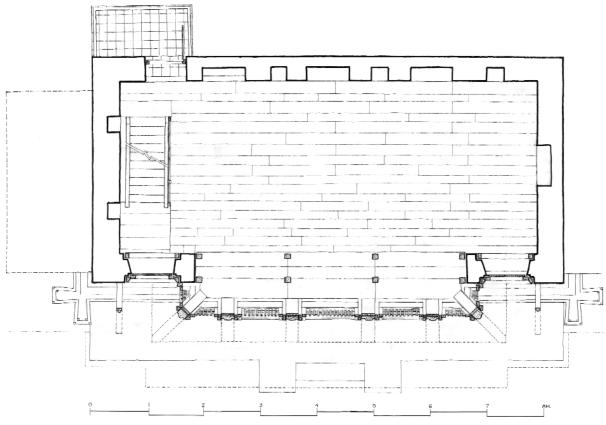
First Floor Plan: Existing Condition



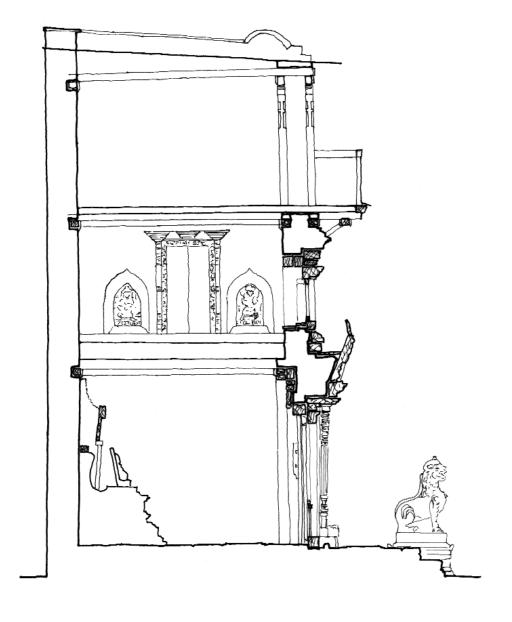
First Floor Plan: Restored Condition



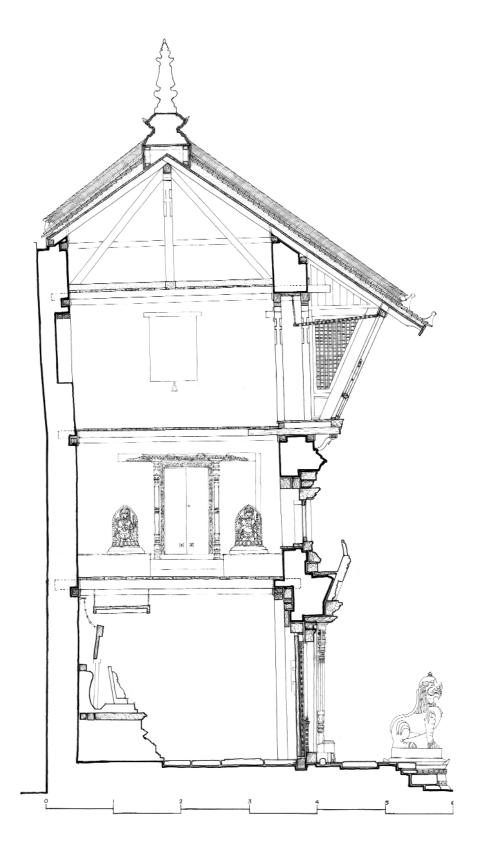
Second Floor Plan: Existing Condition



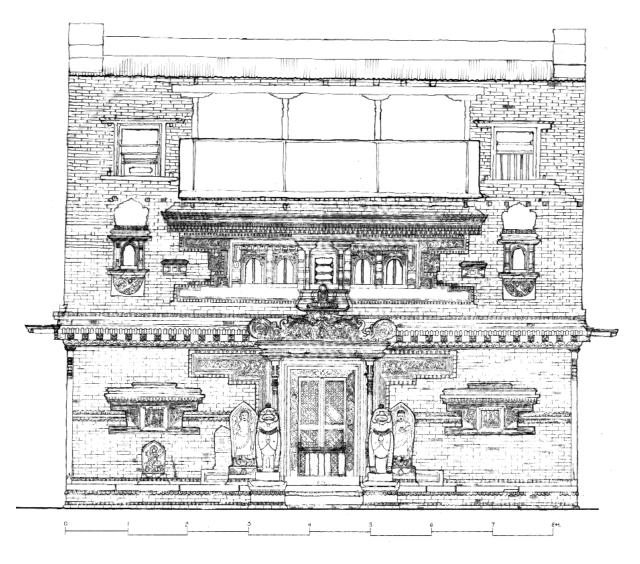
Second Floor Plan: Restored Condition



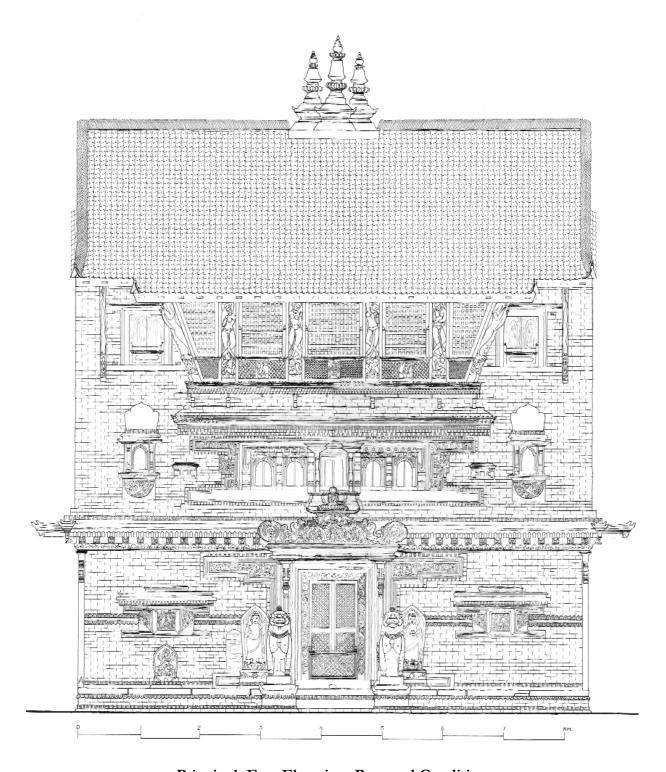
West-East Section: Existing Condition



West-East Section: Restored Condition



Principal East Elevation: Existing Condition



Principal East Elevation: Restored Condition

10. Chronology of Work

1998

- Selection of project under the banner of "Buddhist Kathmandu Campaign".

1999

- Documentation started.

2000

- Documentation completed with project proposal for donor agencies.

2001

- Partial fund received for restoration from Sumitomo Foundation Japan through UNESCO Kathmandu.
- Negotiation started for transferring the ownership with occupant.

2002 January:

- Ownership transfer was completed and *lalpurja* received in the name of *guthi* member.

April:

- Yetkha Baha Agamchen Restoration Project Agreement between *guthi* and the Trust in the presence of HMG Department of Archaeology, UNESCO Kathmandu and Kathmandu Metropolitan City representatives, completed.
- Material collection started. Store room and working space constructed.

May:

- Dismantling of added cement plaster in two levels, zinc sheet roof, second floor joist, tilted back wall in two levels etc.
- Mud floor of first and second floor levels taken out.
- Preparation of sal joist and wall plates for second floor.
- Replication of lattice window and lost carved elements started.

June:

- First floor existing joist brought back to water level.
- Ground and first floor wall repaired and reconstructed with traditional *ma-apa*.
- Preparation of new beam, cleaning of old pillar and capital for three bay opening.
- Preparation of *sal* joist and wall plates for attic floor.
- Double wall plates and joist installed on second floor.

July:

- On second floor north, south and west wall reconstructed on traditional *ma-apa*, principal facade wall reconstructed in *dachi-apa* and *ma-apa*.
- Preparation of wall plates, rafter, beam and pillar for attic and roof.

August:

- Preparation of wall plates, rafter, beam and pillar for attic and roof continued.
- Pillar, capital, and beam installed on second floor five bay opening on principal facade.
- Double wall plate and joist installed on attic floor.
- Wall reconstructed with traditional ma-apa on attic floor.
- Broken historic strut repaired with reinforcement.

September:

- Double wall plate, purlin, rafter and eaves board installed on roof.
- Every third rafter was bolted with purlin and wall plate.
- Struts installed with sanjhya.
- Preparation of lattice window frames.
- Preparation of planking for roof.

October:

- Preparation material for mud plaster.
- Repair of lattice window, cornice and carved panel for 5 bay window.
- Planking laid over the rafter.
- Copper gutter installed on the west side of the roof.
- Water proofing membrane laid over the planking and roof tiles (jhingati)
- laid over the mudbed.
- Pinnacle documented and size fixed.

November:

- Short fall of fund received from KVPT USA for completion of project.
- Preparation of planking for first, second and attic floor.
- Ground floor stone pavement laid on level.
- Planking laid over the joist on attic and second floor.
- First coat of mud plaster applying started.
- Steel horizontal cross bracing installed as seismic reinforcement, recommended by seismic engineer during his site visit.

December:

- Lattice widow, carved panels installed in 5 bay window.
- Planking laid over the joist on first floor.
- First coat of mud plaster applying completed on first, second and attic floor.
- Mud plaster preparation for final and fine coat.

2003 January:

- Pinnacle ordered. Ground floor facade wall repaired.
- Main entrance door lattice repaired and fixed.
- Dachi-apa facade and carved elements cleaned with water insitu.
- Fine coat of mud plaster applied inside.
- Scaffolding, store room dismantled and restoration completed

March:

- Inauguration

11. Summary of Expenditures

01.	Construction Materials	1,373,477.00
02.	Tradesmen	605,880.00
03.	Implementation Team	280,930.00
04.	Training Activities (Architect, Carpenter)	94,970.00
05.	Communication	7,658.00
06.	Documentation	21,600.00
07.	Documentation Team	81,300.00
08.	Photography	32,500.00
09.	Reprography	25,800.00
10.	Fundraising	18,000.00
11.	Local Conveyance	24,000.00
12.	Research	30,000.00
13.	Local Consultants	60,000.00
14.	Bank Charges	340.00
15.	Miscellaneous Expenses	56,739.00
Total expenditure		2,713,194.00



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