



THE RESTORATION OF
ITUM BAH
FINAL REPORT | OCTOBER 2017

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IMPLEMENTED BY THE KATHMANDU VALLEY PRESERVATION TRUST



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Kathmandu

Detail of the Kathmandu core area with four of the seven main Monasteries (*mubaha*) of the central section of the city

- 7 Makhanbaha
- 8 Itumbaha
- 9 Janabaha
- 10 Mubaha
- 8a Kayanunani
- 8b Bakunani
- 8c Taranani
- 8d Sasunani
- 8e Dhanajucaitya
- 8f Yetkhabaha
- 11a Tunchenbaha
- 12a Laykunhahi



INTRODUCTION AND PROJECT DESCRIPTION

Itumbaha, one of the five principal monasteries of Kathmandu, is regarded for its ritual importance in Newar Buddhism, its wealth of early woodcarvings, and its architectural configuration dates to the 13th century. In 2000 and 2002, Itumbaha was included in the World Monuments Watch, a list of the world's 100 most threatened monuments.

Built around a central courtyard, the monastic complex retains its original two-story configuration, with intricately carved, wooden architectural elements—windows, doors, cornices, columns struts, tympanum. The courtyard is dotted with numerous votive figurines, including an extraordinary seventeenth-century “four-faced stupa” (caturmukhi caitya), six-armed deity. Portions of the complex are believed to date to as early as the Lichhavi Period (A.D. 300-879).

The monastery is located in the heart of Kathmandu in a rapidly developing area north of the Kathmandu Darbar Square. Between 2002 – 2005, The Kathmandu Valley Preservation Trust restored the south and west wings of Itumbaha as part of its Buddhist Kathmandu Campaign with support from German Foreign Ministry through German Embassy in Kathmandu. From 2005 – 2006, Itumbaha's religious trust (sangha) restored the north wing with their own funding.

With the generous support from Oriental Cultural Heritage Sites protection Alliance, France and the Keshachandra Mahavihara Conservation Society of Itumbaha the KVPT

has completed the restoration of the remaining principal east wing. The main objective of the restoration plan was to restore the east wing back to its original configuration. This objective was achieved through the rebuilding of all damaged masonry walls, the replacement of all damaged structural timbers, introduction of seismic strengthening measures, installation of a traditional tiled roof, as well as the repair and restoration of all historic carved timber elements.

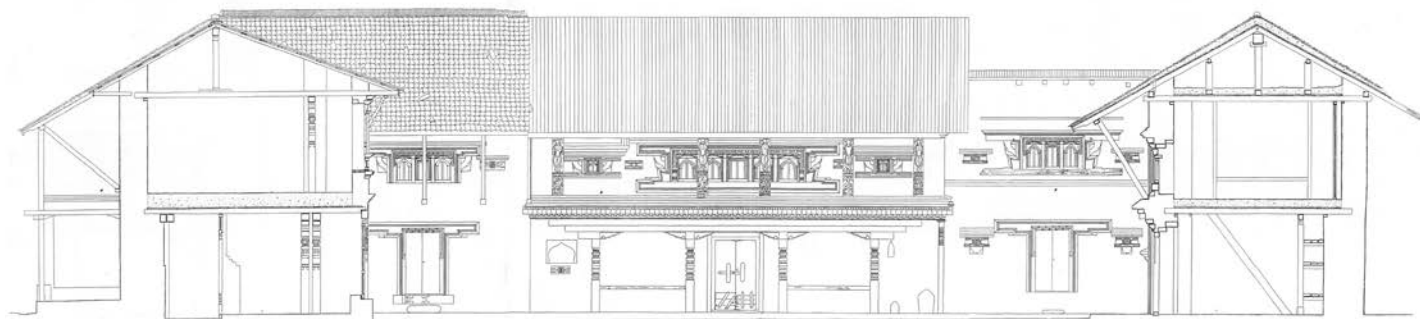
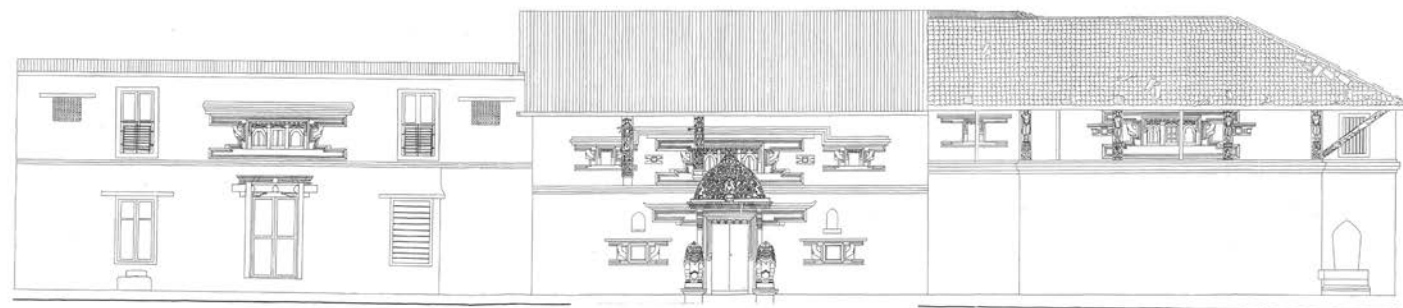
The progress of the restoration work was affected for few months due to the devastating earthquake in April 2015.



Historic view of Itumbaha's East Wing | pre 1934

This undated photograph was most likely taken before the great earthquake of 1934. Already in poor structural condition as indicated by the sagging central section of the building, the monastery still retains its original square shape. The ground floor has no other doors and windows except the central entrance.





Itumbaha East Wing
The existing condition Drawing
Top: east facade
Bottom: west facade



REBUILDING OF ITUM BAHU EAST WING

History of Itumbaha

Itumbaha is first mentioned NS 361 (1240 AD) in a chronicle called Gopalarajavamsavali as the Yatumbahara fort in the southern half of Kathmandu. According to a colophon of a manuscript dated NS 478 (1357 AD), the full Sanskrit name and title of Itumbaha is recorded as “Sri Bhaskara Deva Samskarita Sattasri Kesava Candrakrt-Aparavata mahavihara”. In addition, several inscriptions in the Itumbaha compound refer to Kesavacandra as the founder of the vihar.

The earliest stone inscription found in Itumbaha is dated 1381 AD and concerns the offerings of the icons of Dipankar, Yamaraj and Arya Tara by the family of Chief Minister Jayasiharama Varddhana of Palanchok. Fifteen inscriptions from the following centuries confirm the continuity of building activity at Itumbaha.

The great earthquake of 1934 damaged much of Itumbaha’s historic fabric necessitating extensive repairs but almost all historic doors and windows survived. The roofs were rebuilt with little attention to historic detail, using salvaged timber of inappropriate dimensions. An inscription on the facade of the north wing attests to these repairs.

Over the years the courtyard has undergone many changes but still preserves its historic character and original square footprint. Continuous encroachment and illegal use of the building has also contributed to haphazard repairs and inappropriate additions.

Cultural and Religious Significance

Itumbaha is one of eighteen major monasteries (*mubaha* or *mahaviharas*) connected with the Acaryaguthi of Kathmandu. The Acaryaguthi is an association whose members are Vajracarya (the “masters of the vajra”) and affiliated with the individual bahas. As with five other bahas, Itumbaha congregation is a mixture of Vajracaryas and Sakyas. Kathmandu also has ten purely Sakya bahas, as well as 16 bahis and 60 branch monasteries (*kabaha*). Within the Itumbaha courtyard, members’ sons receive sacred initiations, usually every 12 years. At an early age they are required to live the life of a monk for three days. Later, the sons of the Vajracarya receive tantric empowerment. Other complexes, including Kayagunani, Bakunani, Taranani, and Sasunani, are attached to Itumbaha. Each of these houses members of the community; none has a separate shrine. Together, the entire group represents what is probably Nepal’s largest monasterial complex.

Itumbaha is one of the very few monasteries in Kathmandu that preserves the original square plan of a traditional Buddhist monastery. However, it is not only an invaluable architectural monument but also an active monastery with a history of some eight centuries or more. It is at the forefront of Newar monasticism and an important force for Newar Buddhism at large. Traditionally, these monasteries function as repositories of Buddhist learning in the widest sense, guarding ritual and tantric traditions. Furthermore, with their shrines and consecrated images of Buddhas and other deities, the monasteries serve as temples for



Itumbaha
seventeenth-century “four-faced stupa”
(*caturmukhi caitya*) situated along the north south
axis





Blind windows of Itum Baha
All the original blind windows

the Buddhist community. Through their community of Vajracarya monks, the monasteries provide priestly service for the Buddhist population. The community is collectively responsible for the monastery, taking care of specific duties by rotation. Most importantly, it is periodically their turn, which in Itumbaha lasts for one week, to carry out the daily worship (nityapuja) of the monastery's deities. The monastery is also the place where the members of the community celebrate their important family feasts and other functions.

Conservation approach

The ultimate objective of the rebuilding is to restore the east wing to its original configuration following the overall guiding principle of preserving as much of the original/ historic fabric as possible. The historic details, which were, altered during last few renovations were corrected as close as possible to historic configuration.

Timber cornice and some of the missing/damaged decorative windows had to be recreated based on the surviving pieces. In all cases, decorative elements were copied in analogy to preserved pattern on similar architectural components. This principle is followed on the repair of all the decorative elements, on which missing parts are replicated following examples on the survived section.

Foundations - The condition of the brick foundation was thoroughly assessed and found to be in good condition and did not require additional reinforcement.

Walls - As the masonry walls in the east wing were in fairly poor condition, the entire east and west facade wall had to be extensively re-built using traditional brick (*ma apa* and *daci apa*) in yellow mud mortar. In order to preserve as much historic fabric as possible, some of the recycled original bricks were reused whenever they are in good enough condition.

Plinth and entryway - The exterior plinth, built with traditional bricks (*ma apa*) and edge stone had to be entirely re-built. The plinth had suffered a number of damages due to past repairs: for example, the existing plinth was rebuilt in the improper width during a later intervention.

Carved timber elements - Dating from 1627, the elaborate tympanum of Itumbaha is probably the oldest in Kathmandu and possibly also the oldest tympanum of all Buddhist institutions in Nepal. The one above the lintel of the gate leading into the monastery depicts the Buddha's temptation by the Maras after his enlightenment. In July 2002, community members prevented the theft of one of the tympana.

Three of the 14th century yaksini struts were stolen from the monastery in the mid-1980s. Fifteen struts from early 18th century renovations remain.

Most of the carved timber elements, such as columns, windows, doors, tympanum, struts, were in fairly good condition and were reused. Some of these carved timber components date back to the 13th century, making their

proper conservation all the more important. The extent of damage of all the dismantled carved elements were determined; the damaged carved elements were carefully cleaned with plain water and caustic soda and were repaired, and lost carvings skillfully replicated by KVPT experienced woodcarvers. Seventeen of the original carved roof struts have been lost. In absence of historical evidence documenting the iconography of the original struts, it was decided to replace them with un-carved, plain timber struts. Except for the tympanum above the main entrance which is stored inside the monastery for security reason, all other elements were reinstalled in their original location.

Joists and wall plates - Most of the floor joists were damaged by wet rot as a result of rising damp, and were weakened beyond repair and less than 30% of the original members could be re-used. All the damaged joists were replaced with new pine joists. All wall plates were severely damaged and weakened by rising damp. As important structural elements, all existing wall plates were replaced with new hard wood pieces.

Floor cover- Following the replacement of joists in the first floor, a layer of wood planking and a layer of marine-grade plywood were installed above. The plywood acts as a diaphragm providing horizontal bond in case of earthquake. Then brick soling in lime surkhi mortar was laid on top of the ply board. The floors were finished with traditional square terracotta floor tiles (*cikan apa*).

Rafters - The existing roof rafters were all inauthentic replacements, dating from repairs after the 1934

earthquake when resources were scarce. The rafters were widely spaced and were not of the proper size to support the heavy tiled roof. The entire roof framing including ridge beams, ridge posts, the timber base for ridge posts, and capitals have been replaced. All rafters are made new out of properly sized pine and are spaced closely together.

Roof cover - As the historic roof has been completely lost the entire roof cover has been rebuilt. The timber-framed roof received a layer of marine-grade plywood to reinforce the structure against seismic damage. A waterproofing membrane hyperplas was introduced above the marine-grade plywood in order to protect the timber roof structure from water penetration. The traditional roof tile (*aypa*) were installed on top of a 4-inch thick mud bed over the waterproofing membrane.



Top
Roof Struts of Itumbaha
One of the three 14th century yaksini struts which was stolen from the monastery in the mid-1980s.
Left
Main Door Tympanum of Itumbaha | August 1999
The "Victory over Mara" tympanum (*toran*), installed in 1627
Photograph S. Klimek





Itumbaha East wing | 2006
Dilapidated condition of the east facade, including the unhistoric corrugated tin roof, windows and doors.



SUMMARY OF RESTORATION ACTIVITIES COMPLETED (2014 - 2017)

1. Construction of temporary workshop shade and storeroom, installation of fencing and constructing of scaffolding for dismantling the existing structure.
2. Dismantling of the existing dilapidated east wing to ground level and careful removal and storage of all reusable timber elements such as windows, doors niches, pillars, tympanum, roof struts.
3. All reusable timber elements were cleaned and washed with soft brush, plain water and caustic soda to remove dirt and unhistorical paint applied during earlier repair.
4. Repair, replicate and retrofitting of the damaged parts of doors, windows including providing historical adze finishing and sizing the new joists and rafters.
5. Excavation of part of the foundation to allow structural assessment. Rebuilding of ground floor and first floor masonry wall using traditional *ma-apa* brick in yellow mud mortar.
6. Reinstallation of all the restored columns, doors, windows, cornices in their historical locations.
7. Installation of joists on first floor level and wall plates on second floor level and ridge posts and beams for roof.
8. Rebuilding of attic level wall, installation of wall plates and cross beams
9. Rebuilding of roof including laying of traditional terracotta tile
10. Brick soling and laying of traditional floor tiles on ground and first floor level in lime surikhi mortar. Paving of stone in the open arcade and plinth area.
11. Installation of newly replicated corner struts and repaired roof struts in their respectively locations.
12. Dismantling of scaffoldings and the temporary working shed.



PHOTOGRAPHIC DOCUMENTATION OF EXISTING CONDITION



Itumbaha East Wing | March 2015
Existing condition of east and west facade before restoration.





Itumbaha East Wing | March 2015
Existing condition of first floor level interior space
before restoration.





Itumbaha East Wing | March 2015
Existing condition of ground floor interior space
level before restoration.



PHOTOGRAPHIC DOCUMENTATION OF REBUILDING ACTIVITIES



Itumbaha East Wing | March 2015
Installation of fencing and constructing of
scaffolding for dismantling the existing structure.



Itumbaha East Wing | March 2015
Historic roof struts were taken off carefully and stored.





Itumbaha East Wing | March 2015
Existing corrugated tin sheet roof dismantled.





Itumbaha East Wing | March 2015
Views of Itumbaha east wing from east and
courtyard during dismantling.





Itumbaha East Wing | March 2015
Views of Itumbaha east wing from south and courtyard during dismantling process.





Itumbaha East Wing | April 2015
All timber elements are carefully removed and cleaned with plain water and caustic soda to remove dirt and unhistoric paints applied in the past.





Itumbaha East Wing | April 2015, Aug 2016
The “victory over Mara” tympanum originally installed above the main entrance on east facade is being cleaned with dry brush. Due to security reason this tympanum has not been reinstall in its original location and is stored inside the monastery,





Itumbaha East Wing | April & August 2015
Woodcarver replicating the decayed or lost part
of the doors and windows. The repaired three bay
windows is ready for installation.





Itumbaha East Wing | April & August 2015
Repair, retrofitting and recreation of carved
windows, doors and corner columns.





Itumbaha East Wing | August 2015
Existing foundation was assessed and found to be in good condition. Repaired columns erected and building of traditional *ma-apa* brick wall in yellow mud mortar has started.





Itumbaha East Wing | September 2015
Masons rebuilding ground floor masonry wall in traditional ma-apa brick with yellow mud mortar Ongoing rebuilding of masonry wall and reinstallation of the repaired/restored wooden elements in their existing locations.





Itumbaha East Wing | Dec 2015
The rebuilding of masonry wall and reinstallation of the repaired/restored wooden elements has reached first floor cornice level.





Itumbaha East Wing | Sept & Dec 2015
Carpenters installing the first floor joists including new timber cornice on principal facade.



Itumbaha East Wing | January & March 2016
Masons rebuilding first floor masonry wall in traditional *ma-apa* brick with yellow mud mortar after the installation of historical windows, which were repaired, replicated and retrofitted.





Itumbaha East Wing | Jan & Mar 2016
 Rebuilding of completed up to second floor level.
 New pine rafters prepared by giving adze finishing and sizing and are ready for roof reconstruction.
 Close up view of one of the installed historical blind window.





Itumbaha East Wing | Feb & Mar 2016
Masons rebuilding traditional *ma-apa* brick wall in yellow mud mortar on the principal east facade above second floor level. Partition wall is being built in traditional *ma-apa* brick after the installation of inner and outer doorframe in southeast corner roof on first floor level.



Itumbaha East Wing | April 2016
Installation of *sa/* wood cross beams on attic level completed. Stainless steel plates were installed with screws to tie the inner and outer wall plates.





Itumbaha East Wing | May, 2016
 Roof rebuilding initiated with the installation of base wood, pillars, capitals and ridge beam. Mason building partition wall with traditional *ma-apa* brick in mud mortar on southeast corner. Roof rebuilding continued by installing corner, valley rafters and purlins (*chalu*).





Itumbaha East Wing | May, 2016
Carpenter making holes for inserting timber peg (*cuku*) on rafters. Roof rebuilding continued by installing rafters. Nut bolts are installed to tie two opposite side rafters on ridge level.

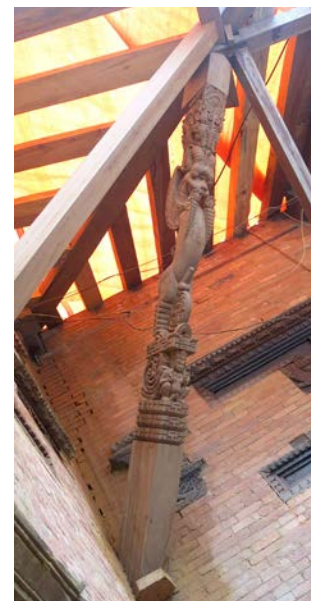


Itumbaha East Wing | May & June, 2016
Roof rebuilding continued by laying of *sal* wood planking over the rafters and installation of rafters on south east corner. Labor cleaning procured salvage traditional roof tiles (*ayapa*) with plain water.



Itumbaha East Wing | June, 2016
A view of ongoing roof reconstruction from southeast corner, after the installation of rafters completed including *sal* wood planking over the rafters.





Itumbaha East Wing | June, 2016
Woodcarvers preparing the newly carved corner strut for installation. Installation of newly carved corner roof struts completed in southeast corner of courtyard and principal facade.



Itumbaha East Wing | June, 2016
Carpenter making the new *sal* wood window panel of *pasukajhya* and installing it. A view of first floor level after the installation of waterproof plywood completed.



Itumbaha East Wing | June, 2016
The traditional terracotta tiles (*kothapau*) is layed in between rafters instead of *sal* wood planking half of the roof.



Itumbaha East Wing | July, 2016
Waterproofing membrane *hyperplas* is being laid over the *sal* & terracotta planking (*kothapau*) on the roof including timber batten. The angled wooden bats helps prevent the mud base of the tile roof from sliding down.





Itumbaha East Wing | July, 2016
Laying traditional roof tile (*ayapa*) over the yellow mud bed is initiated from courtyard side south part. Roof layers laying of traditional roof tiles above the main roof. The tiles are laid on top of a layer of yellow mud below which are the waterproofing membrane hyperplas sheets over sal and terracotta planking.



Itumbaha East Wing | July 27, 2016
Carpenters installing the repaired roof struts on the courtyard side. Workers laying ridge tiles as final step of roof tile laying after completion of the traditional roof tile.





Itumbaha East Wing | July, 2016
Carpenter making and installing new door leaf for
the main entrance on the east side.





Itumbaha **East Wing** | July, 2016
Carpenter repairing and replacing damaged portion of the struts with new timber piece.
Installation of the railing in the first floor level staircase opening.



Itumbaha East Wing | May, 2016
Stone was paved on top of the flat brick soling in the arcade area of ground floor.



Itumbaha East Wing | August, 2016
Flat brick soling completed on the first floor level over the joist and planking where traditional floor tile *cikan-apa* was laid. Preparation of lime surkhi mortar for brick soling and laying of new terracotta floor tiles in lime surkhi mortar has started in the first floor.





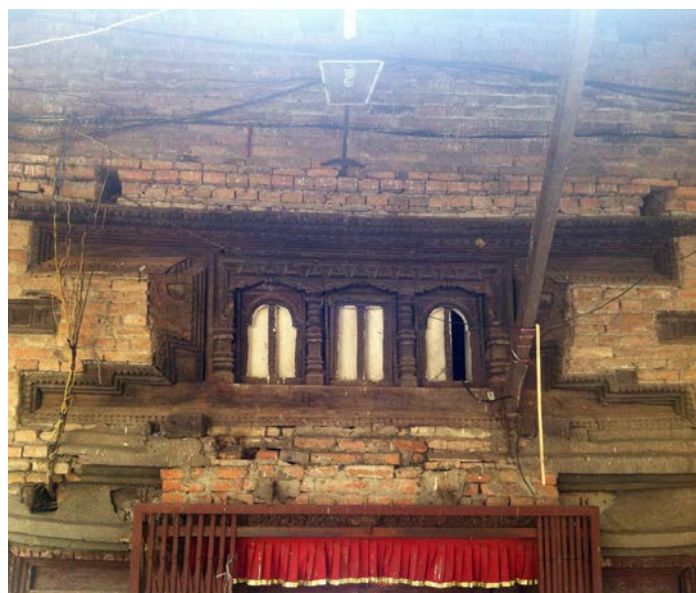
Itumbaha East Wing | Sept, 2017
Laying of new terracotta floor tiles in lime surkhi mortar has been completed in the first floor. All the historical windows are fitted with new inner frames as the original ones were damaged beyond repair. Mud plaster has been applied on the walls.



Itumbaha East Wing | Nov, 2014; & Sept, 2017
Before and after photos of the historical blind windows flanking the left and right side of main entrance on the principal facade. Both the windows have been cleaned, repaired and fitted with new lattice as the original ones were missing.



Itumbaha East Wing | Nov, 2014; & Sept, 2017
Before and after photos of the three bay blind window above the main entrance. This window has been fitted with new panels from the inside.





Itumbaha East Wing | Aug, 2016 & Sept 2017
A courtyard view and exterior view of east wing
after all restoration work has been completed.





Itum Baha East Wing | Sept 2017
Itum Baha east wing after completion of all
restoration work.



Itum Baha
Income & Expenditure
31 December 2008 - 30 September 2017

Paticulars	Total
Incomes:	
Itum Baha Sangh	250,000.00
Transfer from Standard Chartered Bank	93,916.98
Alliance De Protection Du Patrimoine Culturel Asiatique 1st & 2nd Installment	1,738,819.40
Alliance De Protection Du Patrimoine Culturel Asiatique 3rd & 4th Installment	1,631,036.88
Kaze Travels	200,000.00
Alliance De Protection Du Patrimoine Culturel Asiatique 5th and 6th (Final) installment	1,564,510.20
University of Applied Arts Vienna, Institute of Conservation	916,080.00
Alliance De Protection Du Patrimoine Culturel Asiatique	1,824,174.00
Itum Baha Sangh	200,000.00
Total Income	8,418,537.46
Expenditure:	
Bank Charges (Itum)	1,568.00
Implementation Team (Itum)	900,850.00
Brick (Itum)	730,505.00
Construction Materials (Itum)	1,675,402.00
Timber (Itum)	2,420,135.00
Wages (Itum)	2,603,536.00
Total Expenditure	8,331,996.00
Balance	86,541.46





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