

Architectural Conservation of Decorative Timber Windows and Ornamental Columns at Buli Monastery

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Abstract Conservation and promotion of traditional architecture is one of the major policies of the Royal Government of Bhutan. It is mandatory for all the buildings to incorporate traditional features to get approval for construction. However, traditional architecture is getting marginalized due to the rampant influx of modern materials, construction methods and software dependent copy and paste designs. This is leading to a facade architecture which is neither modern nor traditional. Falsification of traditional details and the shrinking number of local artisans have all contributed to the deterioration of architectural heritage. This study describes the process of the conservation of timber structures in the ancient Buli monastery that was carried out by the Department of Culture, Bumthang District Administration and the American Himalayan Foundation. The project was successful in the conservation of the decorative timber windows and ornamental columns which was threatening the monument with collapse. The intervention was successful to restore the monument to its original form and conserve the timber members and its architectural heritage.

Keywords: *Architectural conservation, Buli monastery, department of culture, decorative timber windows, heritage sites, ornamental columns*

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1. Introduction

The rich architectural heritage of Bhutan is closely interlaced with the country's civilization and her identity as an independent nation. Her living heritage has some of the great masterpieces of architecture as stated in the Bhutan 2020 vision document [1]. For centuries the traditional architecture held its own sacred space in both the religious, political and social avenues. Large fortresses (Dzong), temples (Lhakhang), monasteries (Goenpa), stupas (Choeten), palaces (Phodrang), bridges (Zam) and vernacular housing (Yue Chim) that dot the countryside of Bhutan form diverse examples of traditional Bhutanese architecture [2]. According to records, the oldest standing buildings in Bhutan are Kyichu Lhakhang in Paro, Jambay Lhakhang in Bumthang, Lhakhang Karpo and Nagpo in Haa, which were built in 7th century AD [3].

Today, traditional architecture continues to evolve with regard to the changing needs of society and the availability of modern construction materials. Therefore, heritage sites and buildings are continuously evolving to fulfill new needs of clients and communities with modern materials and techniques. Such practices are distorting and diluting the historic fabric and architectural authenticity. The situation is aggravated due to minimal understanding of conservation, architectural values, techniques and materials by the communities and stakeholders [4].

The Division of Conservation of Historic Sites in the Department of Culture under the Ministry of Home and Cultural Affairs is the central agency that works on the conservation of Historic Sites and Architectural Heritage through implementation of projects, publications and advocacy. Such projects are in line with Conservation and Promotion of Culture pillar of Gross National Happiness (GNH) and the funding for such projects is mostly provided by the Government or the International Donors, Development Partners and Non-Governmental Organizations.

The Department of Culture and the Bumthang District Administration set up the first Historic Monument Conservation Training Project at Buli Monastery, Gyatsa Bumthang in 2002-2005. The monastery was selected because of severe structural problems and decaying wall paintings that provided the trainees with an excellent opportunity to learn modern methods of conservation.

The funding of eight million Bhutanese Ngultrum (BTN) was provided by the American Himalayan Foundation (AHF), an international non-government organization. The Foundation supports education, health care, cultural and environmental preservation throughout the Himalayan region. The training was offered by a team of conservation consultants under the guidance of Mr. John Sanday, a world renowned conservation architect. Mr. Sanday had worked in many conservation projects in Nepal including the conservation of Hanuman Dhoka Palace, the conservation of Buddhist monasteries in

Mustang, upper Nepal and in the world heritage site of Angkor Wat in Cambodia [5].

This paper describes the process followed for conservation of the decorative windows and ornamental columns at the project.

2. Geographical, Historical and Cultural Significance

Buli is a small, but historically important Monastery located at Gyatsa village under Chhume Gewog in Bumthang (Figure 1). A popular legend among the local natives of Gaytsa says that Terton Dorji Lingpa (1346-1405) was meditating in Lami Goofai located in the neighborhood and his ceremonial hat flew (Phur) and landed where the present monastery is built. It was originally known as Phurling Lhakhang (Monastery). The monument is Located at Gaytsa village, 27 km before Jakar town, which is a 10-hour drive from Thimphu, the capital city.

Terton Dorji Lingpa is one of the distinguished religious figures and the five great treasure revealers of the Nyingmapa tradition, the oldest schools of Tibetan Buddhism [6]. The monastery was founded in the 15th century by Choeying, the “heart son” of the great religious figure Dorji Lingpa and extended in the early 20th century [7]. The monument is where Desi Jigme Namgyel, the father of the First King, stayed before he proceeded towards Trongsa in his early life. The Buli Lama Shakya Namgyal blessed Jigme Namgyal and presented him to the then Trongsa Penlop [8]. Buli is one of the important monasteries of Chhume valley and holds the Buli Mani festival every two years on the 16th day of the first month of the Bhutanese calendar.



Figure 1. Buli monastery and the Gyatsa village at Chhume valley Bumthang

3. Documentation and Team Composition

Prior to the intervention on the structure, a site visit was done by the consultant’s team, architects from the Department of Culture and Bumthang District engineers to prepare a preliminary plan. This was followed by detail documentation of the building by architect Karma Gelay and the Druk Heritage Consultancy firm based in Thimphu.

The documentation revealed that the tilting decorative windows on the southern facade, distorted columns and the sagging timber beams required immediate intervention. The wall paintings were also falling apart. The first phase of the work was to stabilize and conserve the decorative windows and structural timber members with minimum intervention.

A team of seven local carpenters from Gyatsa village was formed headed by Mr. Jobthong. This was to ensure that the local carpentry team, who knew about Bhutanese building techniques, worked along with Mr. Nil Kumar Sheresta, the consultant’s head carpenter and an expert in the conservation of historic timber structures. The carpentry team was supported by a site manager, site in charge and two local trainee architects.

4. Conservation of the Decorative Windows (The Rabsel)

The decorative windows (Rabsel) are one of the most prominent decorative components in traditional Bhutanese architecture. Traditionally it consists of timber frame structure with multiple windows and panels that cantilevers from the masonry wall. “Rab” means “good” and “Sel” means “clarity”, and thus, it provides light and clarity into a building through its multiple window openings [2]. The Rabsel found at Buli monastery is the Parop Rabsel, of which three tiers of windows is separated by two horizontal timber members (Figure 2 (F)).

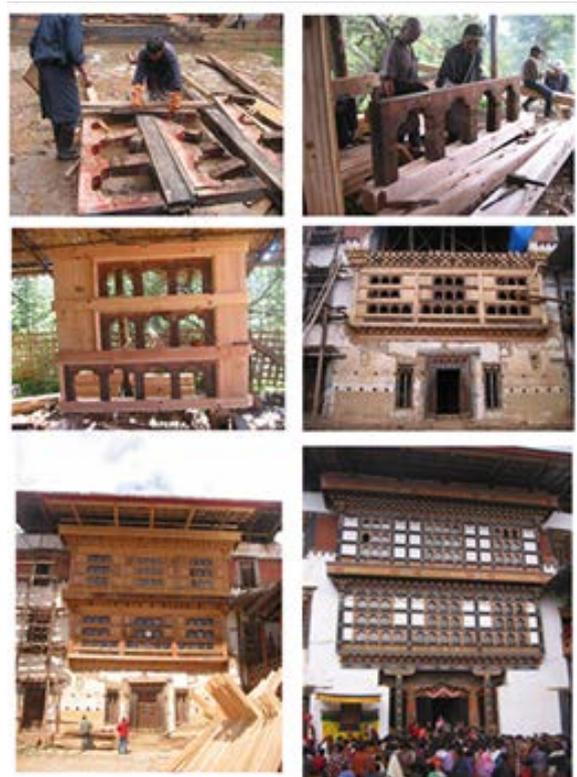


Figure 2. The details of conservation of Rabsey. A. Inspection of the dismantled Rabsey in the courtyard in March 2003. B. Efforts to save the good components of the Rabsey in the workshop. C. A module of the Rabsey after intervention. D. The completed Rabsey till the first floor. E. The complete Rabsey after conservation. F. The Rabsey during the Buli Mani festival March 2005

The Rabsel, which was anchored to the main structure by timber joists, was tilted and on the verge of collapse. During the intervention, the sagging joists were lifted from inside using a simple structural system made up of timber joist and hydraulic jacks releasing the load. The Rabsel was then delicately taken out of its position and brought down to the courtyard with the help of a system of pulley fixed on the tie beams of the roof truss and timber scaffoldings. Detail component inspection and documentation at the courtyard showed that the structural members have failed due to decaying whereas the ornamental parts were intact (Figure 2 (A)). The Rabsel units were repaired at the workshop behind the monastery (Figure 2 (B) and Figure 2 (C)) and fixed at its original place (Figure 2 (D)- Figure 2 (F)). The conservation method used new seasoned timber of the same species and dimensions to replace the rotten parts and used the original ornamental parts intact. The new timber members were treated with two coats of bitumen to avoid problems arising in the future.

5. Conservation of the Ornamental Columns (Kachens) in the Ground Floor

Kachen (the decorative columns) is the traditional Bhutanese timber column. A column is known as “Ka”, while “Chen” means large. Therefore, a Kachen means large column. It is one of the main architectural elements of traditional architecture. Historically Kachen were more commonly installed in Dzongs, Monasteries, Lakhang and Royal palaces to signify their importance. The Kachen is traditionally placed on a circular or square base known as Kadhen made of single slab of stone or timber [2]. Kachens are 12, eight or four sided. Twelve sided represent the 12 accomplishments of the Buddha. Eight sided represent the eight different paths to Buddhahood. Four sided represent the four noble truths and four limitless virtues [9]. Two 12-sided Kachens were found on the ground floor vestibule (Figure 3 (C)) and 12 four-sided were found in the upper floors of the Buli Monastery (Figure 3 (C)).

During the intervention, it was found that the Kachens at the ground floor vestibule were covered by a stone wall (Figure 3 (A)), whereas all the other walls were made up of rammed earth. The vestibule was open and the stone wall was constructed around 40 years ago by a team of local carpenters headed by Zow Gembo of Gyatsa village to provide anchorage to the falling Rabsel above; therefore, the Kachens were not visible from outside.

The intervention involved the removal of the stone wall to expose the Kachens. Similar to the conservation of the Rabsel, the Kachens were extracted out of their original position and detail inspection of its parts was carried out. The base of the Kachens which was resting on the flat stone base was severely rotten (Figure 3 (C)), while the upper ornamental parts were intact. Lack of air circulation and the dampness were the main reason for the growth of wood-rotting fungi [10]. The conservation technique involved removal of the rotten base and replacing it with a seasoned timber of the same species and same design

(Figure 3 (D)). Small cross ventilating openings were made at their bases to allow air circulation.



Figure 3. Conservation of Kachen of the ground floor. A. Kachen found embedded inside the stone wall. B. Inspection of the Kachen. C. Condition of the base of the Kachen. D. Kachen after conservation

6. Conservation of the Ornamental Columns (The Kachens) in the Upper Floors

It was found that the Kachens, along with the Rabsel were badly distorted from their original position (Figure 3 (A)) and the joists above them were found sagging. The Kachens were extracted out of their original position (Figure 4 (B)) and detail inspection of its parts was carried out. It was observed that only the bases of the columns were rotten (Figure 4 (C)). The conservation technique involved the similar technique used to conserve the ground floor Kachens (Figure 4 (D)).



Figure 4. Conservation of Kachens of the upper floors. A. Condition of Kachen before intervention. B. Removal of the Kachen. C. Condition of the base of the Kachen. D. Kachen after conservation

7. Conclusion

Preservation and promotion of culture is one of the pillars of Bhutan's development philosophy of GNH. Article 4 of the Constitution of the Kingdom of Bhutan states that "the State shall endeavor to preserve, protect and promote the cultural heritage of the country, including monuments to enrich the society and the cultural life of the citizens". Traditionally, the Bhutanese believe that constructing a new monastery would bring more spiritual benefit than repairing old ones; however, if a temple is built in the same place it should be larger than the previous [11]. Due to the influence of modernization many heritage buildings have undergone changes without respecting the authenticity and diversity of architecture and construction techniques. Article 5 of the Venice Charter (1964) states that the conservation of monuments can be facilitated by making use of them for some socially useful purposes; such use must not change the lay-out or decoration of the building.

Conservation of monuments and historic sites in Bhutan is carried out in consultation with the locals, so that the ownership of the monuments is passed on to them. Documentation and research on other completed, ongoing and upcoming conservation projects like Simtokha Dzong, Daga Dzong and Trashigang Dzong would bring into light the project specific issues, challenges and impacts.

Tourism is one of the major revenue and employment generating sectors of the Bhutanese economy. The traditional culture and way of life, religious festivals, historic monuments and pristine environment are the main tourist attractions in Bhutan [12]. Localized heritage tourism has a huge potential in Bhutan and further research to study the impact of heritage conservation on the tourism economy at a grass-roots level would be one of the areas for the integration of Sustainable Economic Development and Preservation and Promotion of the

Culture pillars of GNH. Such publications and projects can guide policy and investments in conservation of historic sites and buildings that give the best expression to the unique Bhutanese identity and culture as well as provide employment and income to the local people.

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