MAINTAINANCE PLAN FOR RELIGIOUS BUILDINGS IN BHUTAN USING BULI LHAKHANG AS A CASE STUDY by Karma Gelay for

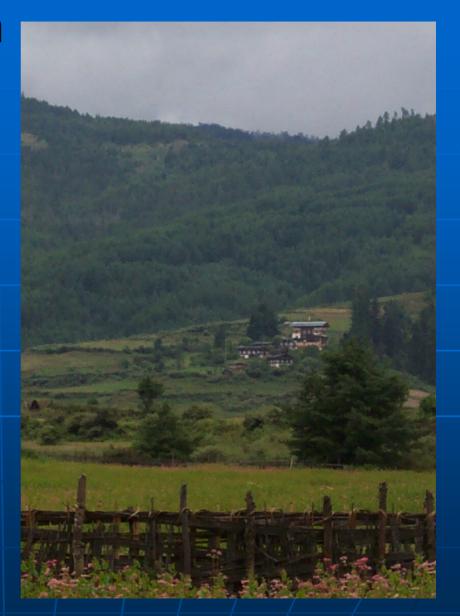
The Advanced Training Programme
CONSERVATION AND MANAGEMENT OF HISTORIC BUILDINGS
conducted by the
Department of Architectural Restoration and Conservation
Department of Housing Development and Management
Lund University, Sweden and SIDA

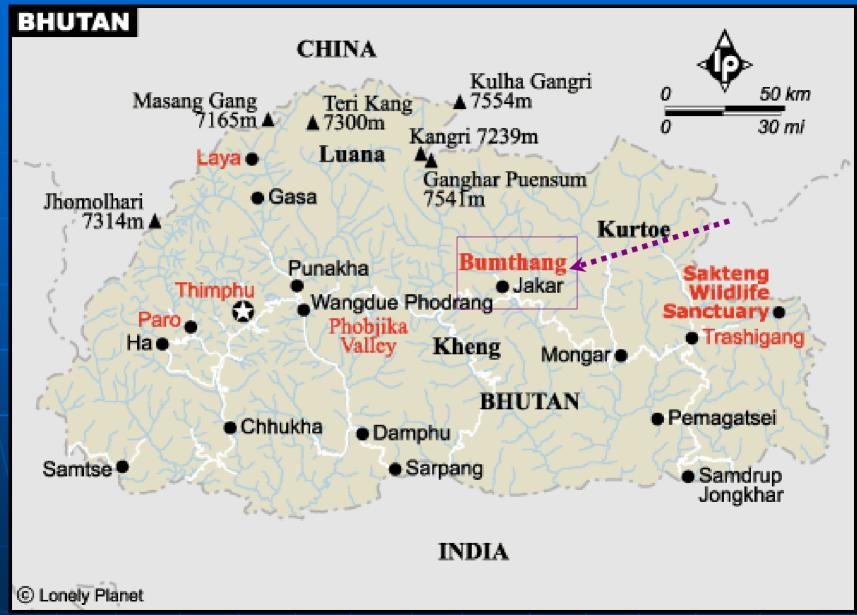
Part 1: Introduction

BULI LHAKHANG

Geographical location

Buli Lhakhang is beautifully situated on a hillock with a backdrop of pine forest and overlooks the Chhume valley with splendid views of ancient pilgrimage sites like the *Tharpaling* and *Samteling* monasteries and the Domkhar Dzong. Ten households, a Gomdey of 25 gomchens and some resident monks constitute the Buli settlement which is accessed from Gaytsa along the Trongsa Jakar highway. A tractor trail leads from the highway and terminates near a stream and a footpath leads across the stream and climbs to the site about 50 m above the road level. Jakar Dzong the administrative center of the Bumthang Dzongkhag is a further 27 km to the east. The Bumthang Dzongkhag in central Bhutan is rightly considererd the "cultural heartland" of Bhutan









HISTORY

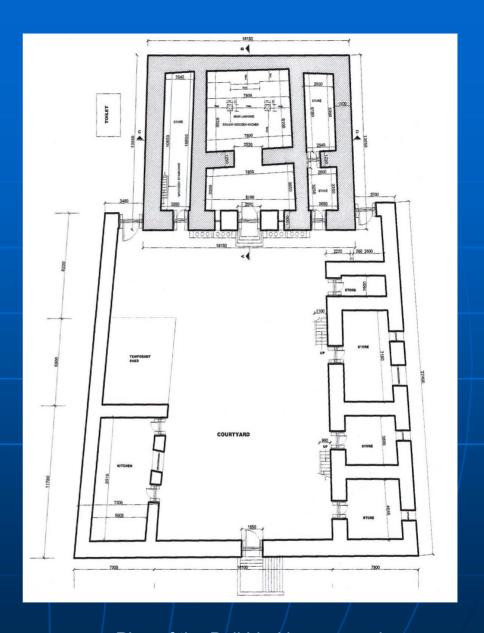
- HISTORY AND RELIGION IN BHUTAN IS INEXTRCABLY LINKED
- The most important historical milestones are religious ones
- Bhutan has a written history following the advent of Buddhism. Prior to that and even continuing today is an "oral legacy"
- Art and architecture in Bhutan is influenced intimately by religion.
- Sandwiched between the two Asian giants China and India, Bhutan had been surprisingly insulated from external influences and colonization even.
- Much of our age old customs have survived intact even to this day



Brief history and physical description of the Lhakhang before intervention

The site of the Buli Lhakhang is said to have been ordained when the Muali - the hat worn by Terton Dorji Lingpa flew - Phurli to the spot where the temple stands today. The words appears since to have corrupted eventually to Buli. The Lhakhang is more correctly known as the Lhendup Yoesel Choelina Lhakhang - the temple of the "heart wishes and clear light". The present temple is said to have been built by the grandson of Terton Dorji Lingpa (1346 – 1405). This indicates that the Lhakhang Buli built was sometime in the 15th century.

The approach to the Buli Lhakhang is through a cluster of 6 houses that comprise the main Buli village. Beyond the last village house a short flight of steps on the south leads to the main door of the Buli Lhakhang complex.



Plan of the Buli Lhakhang complex



NEED FOR INTERVENTION



The obvious need for immediate intervention

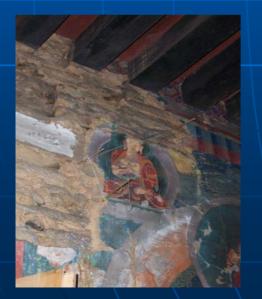




Critical structural members threatening imminent collapse









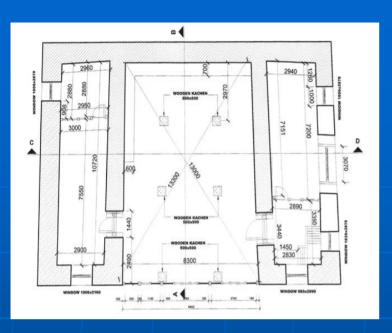


The ancillary buildings and wall paintings in urgent need of intervention

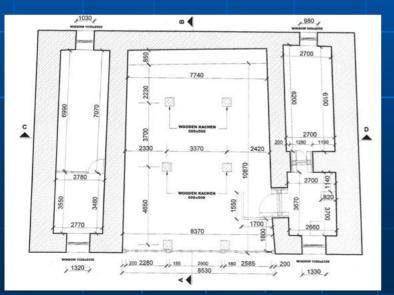
DATA ABOUT PROPERTY

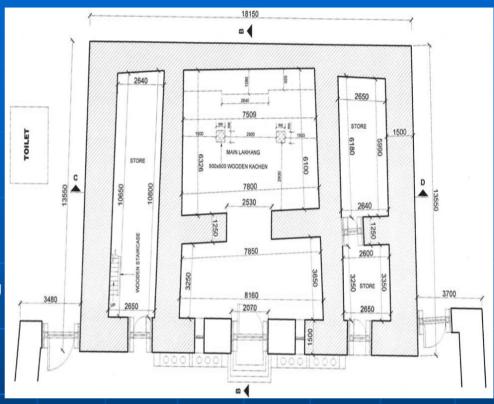
- Temple owned by the Monk Body the Government
- Caretakers appointed by the Monk body and the Gomdey a quasireligious lay body
- The symbiotic relationship of the community and the temple – an age old tradition from the days of the Buddha
- Shared responsibilities but by and large monasteries are state run
- Over 2000 religious structures in Bhutan most of which most are in the rural areas of Bhutan. Only 20 % of Bhutan live in urban centres. Only few under municipalities
- Legislation for cultural properties under preparation. However respect for religion and religious objects as part of our "living culture" at large serve to safeguard the overall interests of historic monuments.





The second floor plan: The Tshepamed Lhakhang





The ground floor plan of the main temple with the principle Jowo Jampa shrine

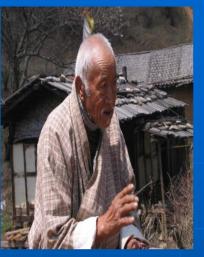
The temple complex is approximately 31 m x 41 while the main temple measures about 19 m x 13.5 m. The courtyard is about 16 m x 25 m

Part 2: The Processes

- Documentation : Measured drawings, history of property and photographic documentation of existing structure
- Project schedule and budget proposals preparation and presentation
- Preliminary investigations presentation of findings and preparation of proposals with and for the community the authorities all stakeholders concerned.
- Removal of Rabsel and "unearthing" the causes of the structural failure. Preparation of further proposals following the investigations. Preparation of drawings and estimates
- Approval of proposal and estimates
- Implementation of proposal and fine tuning of proposals on site
- Progress and work (quality) evaluation by Project team and the Authorities



Aum Pangla of Buli



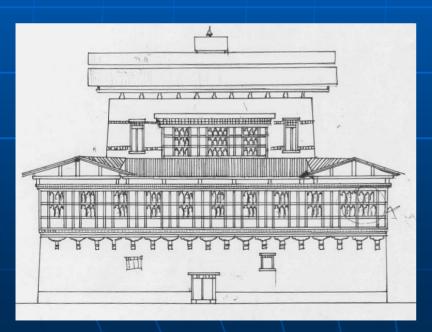
May may Gyaltshen of Buli

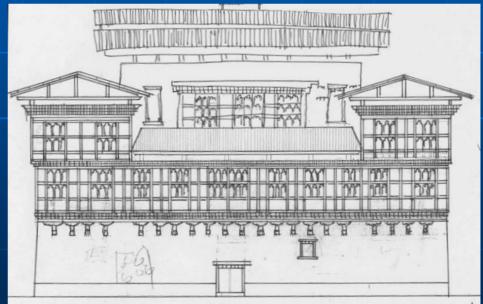


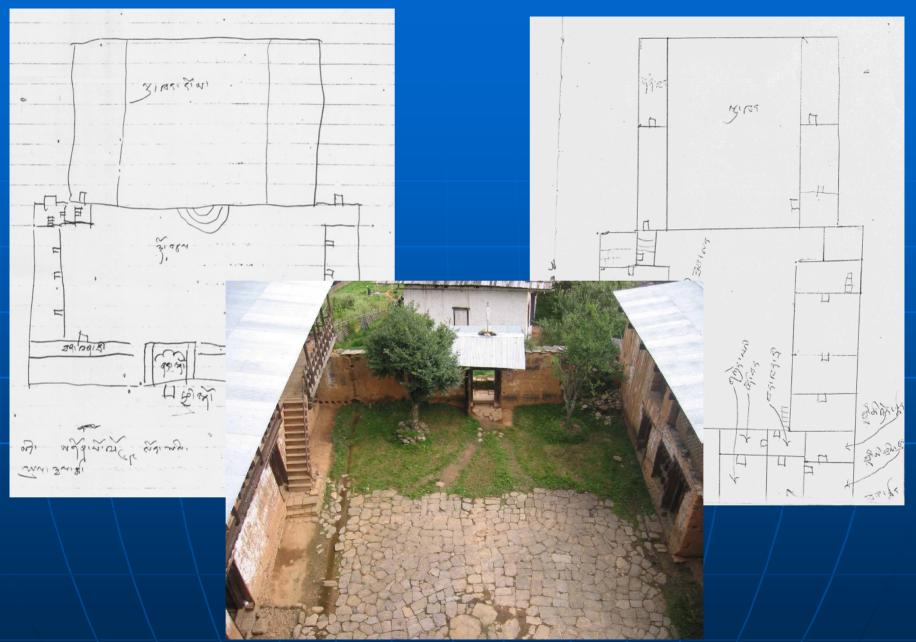
Pow Nokchen of Buli



Zow Gembo of Gaytsa







Zow Gembo's recollection of the complex and physical evidence to support his claim









Participation at all levels











Conservation works in progress

















Investigations and inferences . The leaning Rabsel: Its cause and the proposed remedy

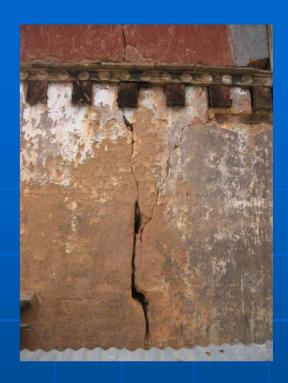


The physical evidence of the double/triple storied building at the entrance of the temple complex



















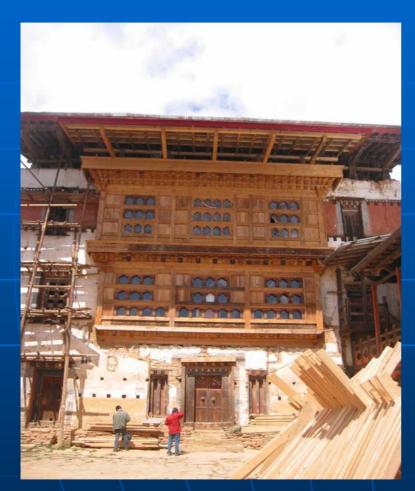








The Rabsel after the very first efforts of Conservation in Bhutan





The completed Rabsel and the Rabsel after the traditional painting









Examination of kachens and removal of the decayed heart wood.









Insertion of a new core, grafting of the kachens and the stacking for use.





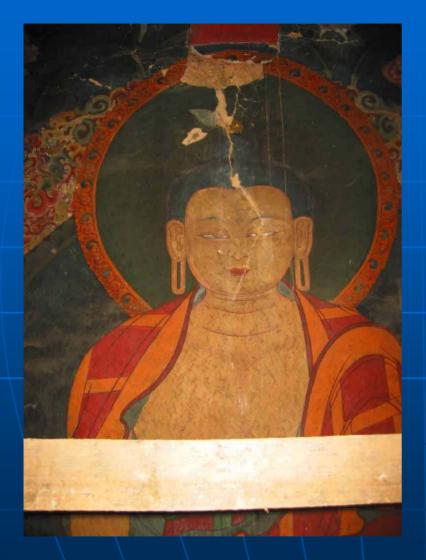




Views of the courtyard before during and after intervention

Rudolfo Lujan the Wall painting Conservator with the trainees







A close up of the Buddha Sakyamuni before and during intervention





Lord Buddha before and after intervention









BASIC MAINTENANCE PLAN FOR BHUTANESE TEMPLES

Protection from rain water/waste water

- Roof: Provide impervious roofing with gutters
- Provide proper drainage channels
- For adverse climatic conditions like excessive humidity it might be cost beneficial in the long term to invest in heavier timbers. Minimum precaution is to use seasoned timber and apply some waterproofing and termite proofing (if necessary) at the ends that are going to be in direct contact with th works.
- For flooring ensure that timber is seasoned and that there are provisions for air vents to assist in the circulation of air below the flooring boards.
- Always provide a sloped plinth protection around he building.
- Waste water should be disposed with proper attention
- White wash the building yearly if possible.
- To reduce Fire hazards, care must taken to light butter lamps in a room made outside the temple.
 A metal tray below the butter lamp can provide additional protection.
- Cooking to be ideally done outside the main temple.
- Electrification to be carried out under the direct supervision of a supervising Architect.
- Sanitation to be accorded high priority for the well being of all.

PART 3 : CONCLUSION : CONSTRAINTS, CHALLLENGES AND LESSONS THAT MIGHT BE APPLICABLE TO THE BHUTANESE CONTEXT

- Lack of written historical data and photographic evidence. Buddhist art and architecture is largely anonymous; the Buddhist concept of "gaining merit" for one's deeds as well the oral tradition of Bhutan makes dating historical structures and interventions a difficult task. All works to be documented carefully.
- Lack of funds and scientific equipment to perform simple tests and verify results.
- Influx of mass produced construction materials that are cheaper and readily available. Even timber can be a problem in Bhutan. The choice of materials must be debated and reviewed.
- Authenticity in the Bhutanese context may not be most relevant given the fact that we still are a "living culture". The choice of materials is a case in point. The kachens (timber columns) and the chams (floor/ceiling joists) in Buli lhakhang need to be discussed in this light.
- Lack of legislation can be a problem in the future. The present moment poses little problem given our low population (approx 750,000 only), small and intimate society where "every one knows everyone". Religion still commands respect and veneration from all. Age old customs and traditions still form aspects of our living culture.
- Planning and zoning with special concern for cultural and heritage issues need to be in place even in the rural settlements. Buffer zones around historic buildings need to be established.
- Preparation of detailed work-plans and budgets. Need for constant updating. Sequence of work to be debated and updated.
- Preparation of detailed master plans for the heritage as well as buffer zones need to be initiated immediately.

TACK SÅ MYCKET & TRASHI DELEK