



Conservation work. Photo by: Dan Thompson

# Banteay Chhmar, Cambodia

## Birthplace of Famous Khmer Face Towers

### Site Significance

The temple complex of Banteay Chhmar was commissioned by the 12th Century Khmer King Jayavarman VII (AD 1181-1219) in honor of four army generals and his son, the Crown Prince Indravarman, and is most notable for the extensive bas-reliefs documenting the period's contemporary history. In the 1990s, the site became a favored target of looters, resulting in 25 square meters of bas-reliefs and countless pieces of statuary being stolen from the temple site of the bas-reliefs approximately 1800-2000 square meters remain.

### Project Goals

Following the tenets of Preservation by Design, GHF's holistic approach to long-term site sustainability, the primary conservation and development goals at Banteay Chhmar are five-fold: (1) to prepare and implement a site Master Conservation Plan, including expanded site protection; (2) to preserve the bas-relief galleries and stabilize the central temple complex; (3) to aid the community in

developing tourism to the site and preparing for the increased impact on infrastructure; (4) to assist the Cambodian government in the UNESCO World Heritage Site nomination and inscription process and (5) to train a team of professionals and craftsmen and to create a conservation unit for the Ministry of Culture and Fine Arts.

### Preservation by Design®

#### Planning

GHF's Master Conservation Planning will provide Banteay Chhmar the means to establish an appropriate, long-term balance between the needs of conservation, access, sustainable economic development and the interests of the local community. Additionally, the government has recommended that the Master Plan will be prepared and will be used by the Ministry of Culture and Fine Arts (MCFA) to establish the future Zoning and development of Banteay Chhmar as a means for dealing with all of the issues affecting complex archaeological sites.



#### Threats

- Climate
- Vegetation
- Vandalism and Looting
- Unplanned Uncontrolled Development

#### Start Date

2008

## Project Partnerships

- Ministry of Culture and Fine Arts (MCFA)
- Community Based Tourism (CBT), Banteay Chhmar
- Friends of Khmer Culture (FoKCI)
- University of Heidelberg, Interdisciplinary Centre for Scientific Computing (IWR)
- South Asia Conservation and Restoration Agency (SACRA)

## Conservation Science

GHF is funding a two-year program to test materials, develop methods and train a local team to carry out the conservation of the sandstone bas-reliefs of Banteay Chhmar. Led by the South Asian Conservation and Restoration Agency (SACRA) Conservation Team under GHF's supervision, the preliminary training will be done, for the first time, in the Khmer language by Khmers for Khmers, which will be a landmark in the sustainable conservation process for Cambodia.

Additionally, there are numerous monumental structures which will need to be scientifically preserved and stabilized as Banteay Chhmar is a massive temple complex. GHF's vision is to conserve the site largely as a ruin with low-impact, safe visitor access via suspended cable platforms over the fallen structures, along with selective interventions for high-risk structures, bas-reliefs and towers. This unique vision of conserving Banteay Chhmar as a partial ruin will be a radical change from the standard concept of restoration favored in

Angkor. Visitors will instead experience a newly uncovered site previously hidden in the jungle for centuries and an accurate interpretation of a site with all its mystery intact and amidst natural features.

The Department of Applied Mathematics (IWR) Heidelberg University, will contribute their expertise to the virtual reconstruction of both the Khmer structures and the famous bas reliefs of Banteay Chhmar. Their highly refined technology will greatly assist those in the field with the enormous challenges of piecing together the bas reliefs and the unique Face Towers.

In addition, GHF is training a Conservation team for the MCFA which will eventually look after the northern regions of Cambodia.

## Community

While conservation initiatives can deliver the necessary financial and technical capacities to conserve cultural heritage assets, successful long-term sustainability ultimately depends on community engagement and stewardship. To that end, GHF is supporting the local community to organize and manage quality sustainable tourism activities such as homestays, local food and rural area discovery activities in advance of the expected increase in visitation. Close collaboration is also maintained with the village commune council on issues affecting the village such as access to water, the alignment of roads and ways that the project can aid in addressing those issues.

## Recent Accomplishments

- GHF has signed a multi-year agreement with the Ministry of Culture and Fine Arts for the master planning, conservation and protection of Banteay Chhmar following GHF's Preservation by Design methodology, which will take the site through a structured process of planning and design, threat mitigation, scientific site conservation, training and community development and stewardship.
- Complete clearing of fallen stone from the South Sector East Elevation, with all removed stones numbered and recorded in drawings prior to removal.
- Emergency propping for critical sections of the temple complex.
- Removal of trees causing structural problems in the Southeast Sector.
- Completed detailed elevation of the Southeast Sector bas-reliefs, both front and back.
- Completed plan of the Southeast Sector stone-paved platform, including column locations.
- Successful reassembly of approximately 70% of the vertical sections, Southeast Sector.
- Construction of a secure storage depot for materials and equipment
- Training of local workers in excavation techniques, conservation and drafting
- Commencement of training for local workers in stone conservation and repair
- Forging of close collaborative links with the Ministry of Culture and Fine Arts
- Development of proposals for water management in the moat
- Successful day long workshop of national and international scholars to discuss the Banteay Chhmar Conservation Project and provide guidelines
- Temporarily re-assembled about 25% of the South east Sector ready for re-erection once the foundations have been consolidated
- Built in Traditional style a Visitor Centre which will be managed by CBT along with a workshop for the Stone Conservation Unit and a General workshop with a traditional forge.



Detail of Bas-Relief. Photo by John Sanday

**Much of the historic knowledge of Banteay Chhmar is based on inscriptions...found in most Khmer temples, carved on sandstone door and window frames, Buddha statues, and stele.**



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