

The Bhutan-Swiss Archaeological Project **The fortification Drapham Dzong in Central Bhutan**

Werner Meyer (in collaboration with Eberhard Fischer and Jorrit Britschgi)

Written sources on the early history of the royal kingdom of Bhutan are rather scarce. In order to extract information about the development of the rich culture of Bhutan, one has to turn to records mainly outside the kingdom. Archaeology is however one of the most promising ways of extending our knowledge about the medieval period in this country situated at the southern slope of the eastern Himalayas. As the first major archaeological endeavour that Bhutan and Switzerland are jointly planning, we hope to explore the spatial organization, functional and social dimension of a specific fortification structure in Central Bhutan. One of us has had the chance to visit the ruined fort of Drapham Dzong, Bumthang valley in 2006 (see Jahresbericht SLSA 2006) and on the basis of his report the Executive Board of the SLSA has agreed to send a small group of Swiss representatives to further investigate this most promising site in 2007. The scope of our visit to Bhutan was to get acquainted with the site of Drapham Dzong and other relevant fortifications in Bhutan and to start exploration. The team consisting of Werner Meyer, Eberhard Fischer and Jorrit Britschgi spent altogether ten days in Western and Central Bhutan (October 29th to November 7th, 2008). Upon arrival in the capital Thimphu, we met with staff members of the several Departments of the Royal Government of Bhutan involved in this project. Our goal was to establish a legal and organizational framework under which such a project can be carried out in the future.

During our stay in Bhutan, we not only started to acquaint ourselves with the site, but also had a chance to extensively visit fortification structures similar to Drapham Dzong. These well-kept and renovated sites included the Drukyel Dzong (17th century), the Trongsa Dzong with its adjacent Ta Dzong and the Jakar Dzong (all 16th century and later).

We would like to express our gratitude to the following persons who enabled our visit, especially: Dorji Tshering (Director of the Department of Culture), Yangki Dorji (Head of the Division for Conservation of Architectural Heritage DCAH), Nagtsho Dorji (Architect, DCAH), Kuenga Wangmo (Archaeologist, PhD student at Cambridge, DCAH) and Sangje Wangchuk (Culture Officer Bumthang).



Fig. 1 Distance view of the Drapham Dzong
Photo: Werner Meyer

We furthermore state our thanks to Helvetas Bhutan for all their logistical, organizational and financial support and hospitality, namely Werner Külling (Resident Coordinator), Dr. Pema Gyamtsho (Deputy Resident Coordinator), Tashi Pem (Chief Programme Officer), Ms. Manju Mukhia and, especially, Namgyel Tshering (Project Representative for Helvetas) without whose support the entire project could not have taken place. In addition, we would like to thank the family Maurer and the staff of the Swiss Guest House for their excellent services and support.

The first exploration of the site was made possible by the Elena Probst Fonds of the Accentus Foundation. We would like to thank the foundation and Mrs. Elena Probst for their generous support.

Scope and Organization of the project

This preliminary report defines the conditions and aims for a first major excavation at the Drapham Dzong site in Bumthang District, Bhutan. The overarching project, however, encompasses several sub-projects. The Bhutanese representatives and the Swiss team agreed upon the name «The Bhutan-Swiss Archaeological Project» to institutionalize several joint undertakings. This title emphasizes the urgent need of the Royal Government of Bhutan to turn archaeology into a permanent field embedded in the framework of the administration. Our collaboration includes at least three major goals:

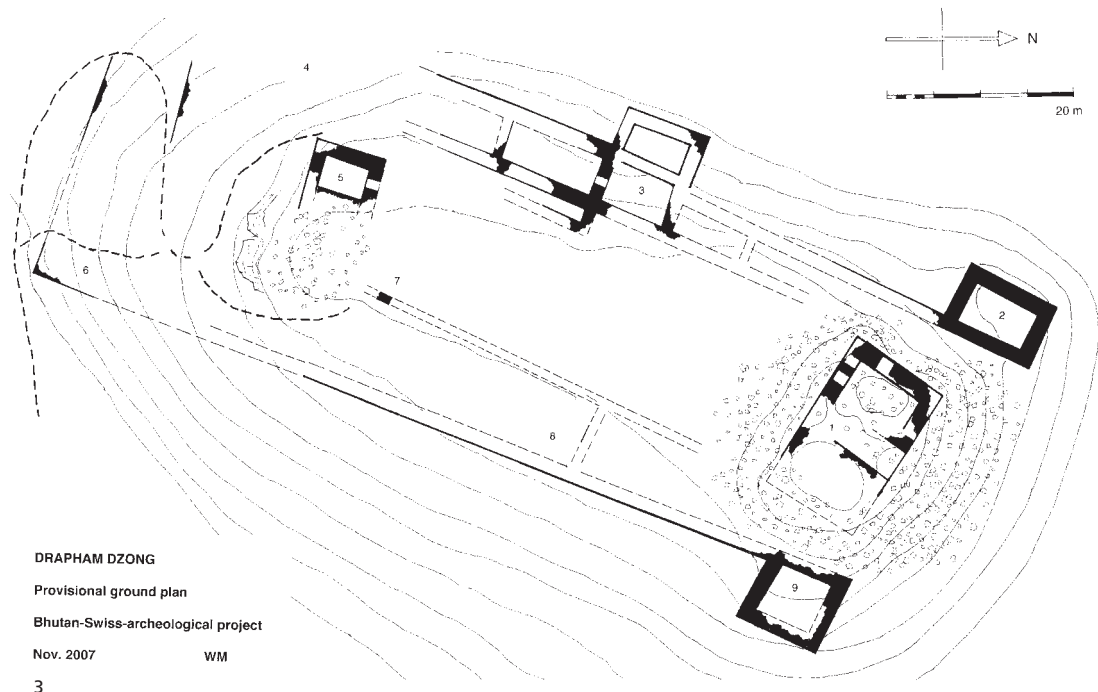
1 Excavation and conservation of Drapham Dzong

A team of Swiss archaeologists will work jointly with the specialist from the Royal Bhutan Government's Division for Conservation of Architectural Heritage in order to excavate the main structures of the Drapham Dzong, probably one of central Bhutan's most important ruins. The excavations, due to the overall large size of the site, will take place during a period of at least three years (2008–2010). The first campaign will take place in Winter 2008 as specified in Prof. Meyer's report. The joint excavation al-

Fig.2 View of the Boshai Cchu Valley
Photo: Jorrit Britschgi

Fig.3 Provisional ground plan of the site





allows on-site-training of future Bhutanese archaeologists. Parts of the Drapham structures such as the stairways leading up to the fortification might be excavated and documented by the Department of Culture during the Spring seasons in between the main excavation periods in Fall/Winter. In order to facilitate faster progress and to reduce the cost of the excavations, the length of the first excavation is extended to about 9–12 weeks.

2 Workshops on legal questions in archaeology

In order to give the Bhutanese authorities an idea of how the cantonal archaeology departments of Switzerland are imbedded in the Swiss legal system, a workshop is planned to be held in Bhutan. Swiss experts will give lectures on the functional, financial and political dimension of archaeology in Switzerland. Legal issues such as property rights will be of special concern.

3 Training of Bhutanese staff in Switzerland

The project also includes abroad training for one or two Bhutanese specialists in Switzerland. Recommended activities would include: visits to excavation sites (ongoing excavation and concluded projects), visits to specialized laboratories dealing with the conservation and analyses of artefacts (ETH etc.), visits to various Swiss Institutes dealing with archaeology in the broader sense (Universities, cantonal and civic archaeology departments) and visits to various museums.

We tried to secure the above goals by including several agencies from the Royal Government of Bhutan as well as from Switzerland:

- Ministry of Home and Cultural Affairs (Department of Culture; Division for Conservation of Architectural Heritage)
- Helvetas Switzerland in Bhutan
- Swiss-Liechtenstein Foundation of Archaeological Research Abroad (SLSA)
- University of Basel, Department of History, History of the Middle Ages
- Pro Helvetia.



Fig.4 Western Wall of the main tower (pos. 1)
Photo: Werner Meyer

Fig.5 Southwestern corner of the main tower (pos. 1)
Photo: Jorrit Britschgi

Fig.6 Plan of the the remains of the main tower (pos. 1)

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The representatives of the institutions involved have defined a general organizational framework to facilitate these goals, and a draft agreement has been produced and accepted by both parties. The following organizational chart has been defined for the project:

Steering Committee: Secretary of the Planning Commission/Secretary of the Department of Culture, Royal Government of Bhutan and the Resident Coordinator of Helvetas Switzerland in Bhutan.

The Committee shall meet to approve work-plans and reports, and resolve issues that might arise during the implementation of the Project.

Project Coordination Committee: Head of the Division for Conservation of Architectural Heritage, Government of Bhutan and the Secretary General of SLSA and the Head of Administration Helvetas in Bhutan.

This Committee shall be responsible for the overall coordination of the Project and shall provide technical and administrative support in the development of work-plans, budget, and reports (progress and financial).

Project management: The Project shall be managed by two Project Managers, one representing the Ministry of Home and Culture, Royal Government of Bhutan and the other representing the SLSA in Switzerland.

The Project Managers shall be responsible for the implementation of the Project and shall discuss project related issues, review work-plans and develop progress reports.

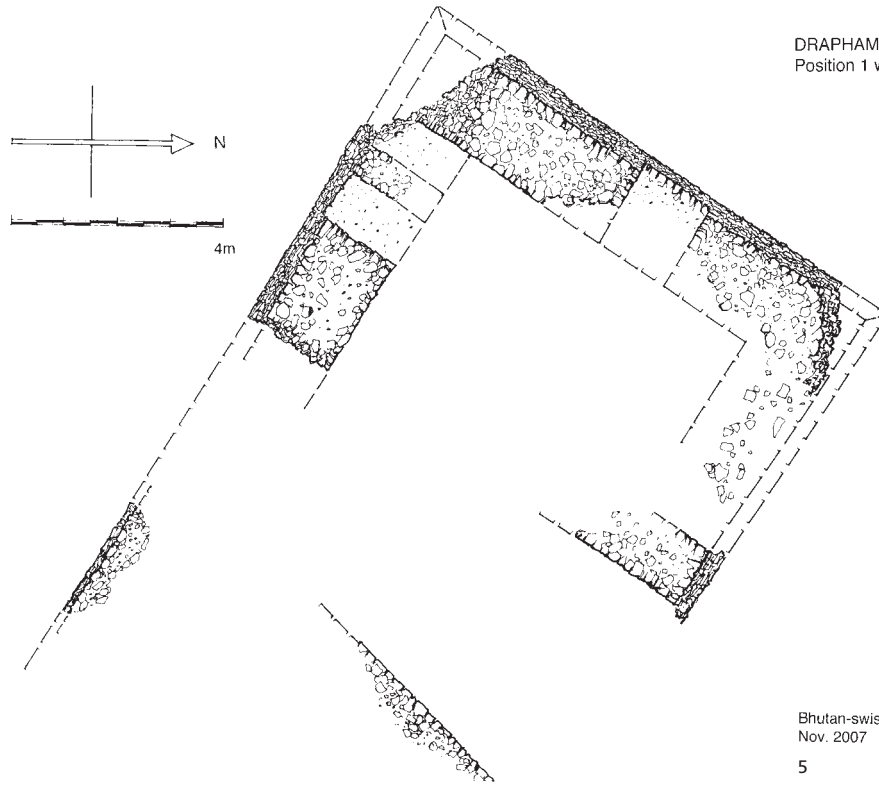
The persons in Bhutan representing the above-mentioned administration departments and organizations involved in the Bhutan-Swiss Archaeological Project are listed below:

Royal Government of Bhutan

- Dorji Tshering (Director of the Department of Culture)
- Yangki Dorji (Head of the Division for Conservation of Architectural Heritage, DCAH)
- Nagtsho Dorji (Architect, DCAH)
- Kuenga Wangmo (archaeologist, PhD student at Cambridge/Mass., DCAH)
- Sangie Wangchuk (Culture Officer Bumthang)



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Helvetas Switzerland in Bhutan

Werner Külling (Resident Coordinator)

Namgyel Tshering (Project Representative for Helvetas)

Dr. Pema Gyamtsho (Deputy Resident Coordinator)

Tashi Pem (Chief Programme Officer)

Ms. Manju Mukhia (Secretary)

Prof. Meyer has agreed to assemble a team of skilled Swiss archaeologists to conduct the first excavation campaign in Drapham dzong and he will supervise the archaeological work in October/December 2008. The team will consist of (persons involved subject to availability):

Prof. Dr. Werner Meyer, University of Basel

Valerie Wyler, Cantonal Archaeology Ticino, and University of Basel

Peter Fux, Museum Rietberg Zurich and University of Zurich

Silvi Scheuerer, University of Basel

(Two additional archaeologists/supporters, yet to be named)

Dr. Eberhard Fischer (Representative SLSA)

Dr. Jorrit Britschgi (Project Manager Switzerland)

Prof. em. Dr. Armin Grün (ETH Zurich, Institute of Geodesy and Photogrammetry) has furthermore suggested to document photogrammetrically the site of Drapham dzong and build a 3D-model of the Boshai Cchu-Valley in spring 2009.

(JB/EF)

1. Presentation of the Drapham Dzong

Exact location according to the map 1:50.000: 90° 45' 30"/27° 39' 10"

The Drapham Dzong lies on a rocky hill in approximately 3.000 m altitude with a crest of approximately 80 m length and 35 m width. Remains of walls of different heights (0.2 to 6 m over the current surface) extend over the whole hill crest and their eastern flank to the south slope of the saddle east of the hill. Thus, the estimated length from northwest to southeast is 500 m.

The whole ruin area is overgrown by a dense jungle and only a few narrow and steep paths pass through it. At first sight, the wall remains hint at an important fortification, however without any reference to a secured age determination.



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2. Activity of the survey team

For the first investigation, only two and a half days were available. This scarcely measured time forced us to concentrate our activities on the hill crest and their building remains. The extensive traces of walls and buildings in the lower south-eastern peripheral area could be seized only in the context of a short inspection and a small detailed documentation. A large part of the hill crest could be cleared from trees and bushes thanks to a team of local workers, which occasionally consisted of 25 persons. This action did not only serve to make the still preserved stonework visible for the documentation, but also to protect it against further decay caused by roots.



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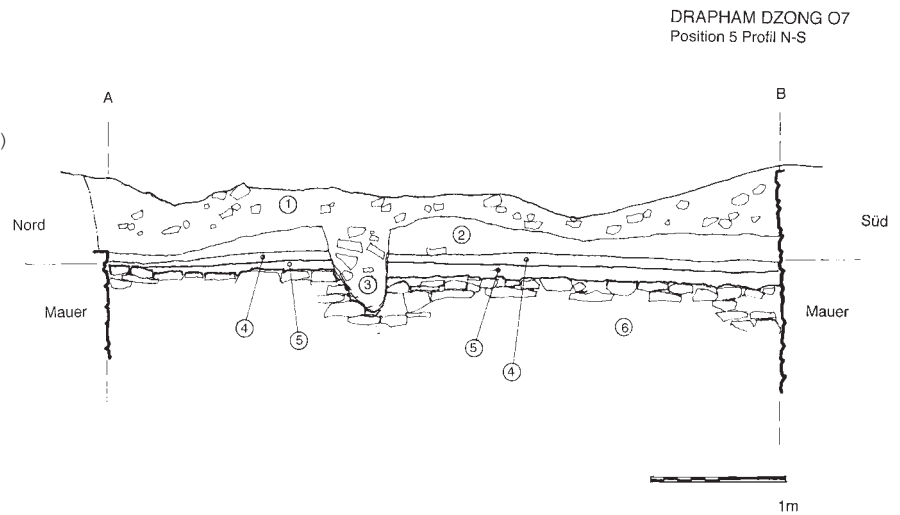
Fig. 7 Remains of a building at the southern end of the plateau (pos. 5)

Photo: Jorrit Britschgi

Fig. 8 Layer profile position 5

Fig. 9 Part of the eastern fortified wall (pos. 8)

Photo: Werner Meyer



- 1 Waldhumus
- 2 Störung
- 3 Gelbrauner Lehm
- 4 Weisser Kalkguss
- 5 Schwarzbraune Siedlungsschicht, ¹⁴C-Samples 1-3
- 6 Mauer und Bindemittel

Bhutan-Swiss Archeology Project
Nov. 2007
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After removing the trees and bushes, the edges of the still scarcely visible walls were superficially unveiled, which facilitated their measuring. The wall copings were not taken off, in order not to expose them to the weathering.

The following documentation work could be accomplished on the hill crest:

1. Drawing of a provisional site plan 1:200 with the still visible walls and an approximate image of the topography. The south-western corner of the area had to be excluded, since there was not enough time to clear this part of the hill top.
2. Organization of the area into individual positions. They serve as a basis for an inventory admission of the structural and topographical actual condition.
3. Detailed photographs in the positions 1 (view 1:50), 5 (layer profile 1:20), 7 (view of the wall 1:20).
4. Sampling of 4 pieces for radiocarbon dating in position 5. (These samples are examined at the Centrum voor Isotopen Onderzoek, University of Groningen NL. Results are expected not before April 2008).
5. Photographic documentation of the entire area and the individual positions

3. Feature of the investigation into the «core castle»

3.1. General information about the topography

The surface of the area, which is surrounded by walls, and the upper parts of the hill flanks are covered with forest humus and wall-debris. Particularly the building of position 1 is surrounded by big masses of debris. The adjacent rock is only visible at the south edge of the plateau as well as on the lower outside parts of the hill. Both, the upper plateau of the fortified area and a plateau, approx. 10 m lower, on the south side (not registered on the site plan), give the impression, that it has been artificially flattened.

3.2. Overview of the fortification system

The remains of the wall on the hill crest stem without any doubt from the core castle, which lies on the highest point of the fortification system. The individual wall lines show an approximately axial symmetrically arranged plan-concept. However, the question



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about temporally graduated phases of construction must remain open. On the two longer sides, the area is limited by a 1.6 m strong and straight enclosing wall. The west side of this enclosing wall is fortified by two rectangular and protruding towers (dimension of the walls: 1.7 m) at the north-western as well as at the north-eastern end. Two elongated building complexes (7 m wide) are divided into irregular sections. These building complexes lean against the enclosing wall from the inside. It seems that they leave an uncovered area of approx. 15 m width, which can be seen as an inner court (supplement 1).

On the southern narrow side of the plateau, remains of a rectangular building are recognizable, but there are no traces of an enclosing wall. Perhaps some unconnected parts of walls on a lower terrace on the south side can be interpreted as such.

The northern narrow side of the plateau is rather puzzling. Any reference to an enclosing wall between the two towers is entirely missing here. On the other hand, there are ruins of a powerful building of approx. 12 to 18 m from the edge of the area, rectangular to the longitudinal axis of the plateau. The walls with a remaining height of 6 m are based on a steep hill of debris which covers the wall on the eastern side almost entirely. This rectangular building probably is the main tower of the area. It is remarkable, that the orientation of its walls deviates approx. 10 degrees from the parallel running of the enclosing walls on the east and west side of the plateau.

Clear reference to a gate building is missing, although there is a certain assumption that the entrance was situated in the south at the adjacent lower situated bailey.

It is obvious that the exact architectural connections, as well as the functions of the different building complexes, can be determined only by means of excavations.

Fig. 10 Part of the western fortified wall (pos. 4)
Photo: Werner Meyer

Fig. 11 Remains of a building on the north-eastern corner of the plateau (pos. 9)
Photo: Werner Meyer

Fig. 12 Part of wall of a building leaning inside to the eastern fortified wall (pos. 7)
Photo: Jorrit Britschgi



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3.3. General information about the masonry work

Many walls are visible on the surface only as low stone barriers. Without an excavation neither the exact line nor the thickness of the wall are recognizable.

The visible brickwork consists of rather small, irregularly formed and scarcely manufactured stones of the environment. They are stratified to horizontal layers. Cornerstones, if still there, are carefully sculptured into the edges. A yellow loam serves as binding material. Its composition must be examined more precisely.

3.4. Inventory of the individual positions

Position 1

On the longitudinal axis of the area: remains of a building similar to a tower. The whole building stands on a hill of debris of up to 4 meters. Estimated dimensions of the ground plan: 12 to approx. 18 m. Western area: parts of walls of up to 6 meters. Eastern area: mostly buried under debris, modern disturbance by a recently built hut of a hermit. Opposite the longitudinal axis of the plan, the building is sloped by approximately 10 degrees.

Inside filled with debris. Traces of two transverse partitionings. The outside walls are 1.7 m thick, the outer bevel wall sheath from 30 cm to 6 m height. North, west and south parts of the wall of the western area with several openings of 1 to 1.4 m width at the height of the presumed first floor. The outmost part of the bond at the southwest and northwest corner obviously destroyed up to the wall footing.

The original height of the building is not determinable. The large masses of debris presume at least 3 to 4 floors. Apparently the building stood isolated. Anyhow, no connecting walls are visible. Because of the dimensions, the building of position 1 seems to be the main building of the core area.

Position 2

Northwestern tower of the area. Wall remains of 0.2 to 1.0 m above the surface are still preserved. Exterior dimensions approx. 10 to 7 m, dimensions of the wall 1.7 m. In the southeastern corner there is a connection to the western fortified wall, apparently without joint butt. In the periphery of position 2 relatively little wall debris.

Position 3

Along the western fortified wall, several wall lines are recognizable. They meet at approximately right angles. Wall height above surface 0.3 to 1.2 m. A rectangular flanking tower is identifiable with exterior dimensions of approx. 9 to 5 m. At the east side,



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Fig. 13 Plan of position 7

Fig. 14 Eastern fortified walkway leading up to the Drapham Dzong
Photo: Jorrit Britschgi

Fig. 15 Werner Meyer with the Team of the Ministry of Home and Culture, Royal Government of Bhutan

Photo: Jorrit Britschgi

Fig. 16 Excavation of position 5
Photo: Jorrit Britschgi



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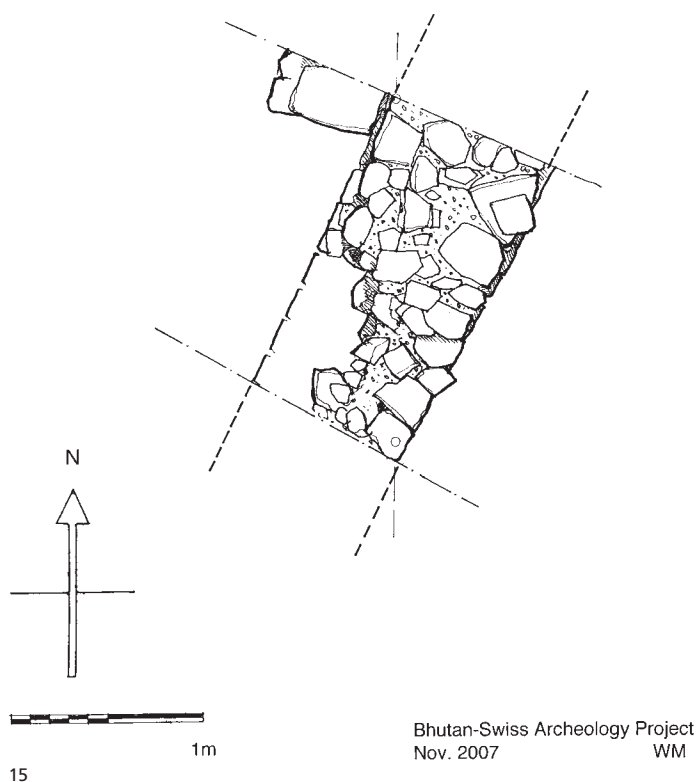
i.e. inside the fortified wall, traces of an elongated, multiply transverse divided part, which is built out from the western slope of the plateau. A transverse wall with a doorway. In direction of the court, traces of a narrow, passage-like porch. Northern and southern delimitation of this part not assignable.

Position 4

Southwestern corner of the plateau. Because of lack of time this part has not been cleared from trees and bushes. No statement about wall remains possible.

Position 5

Remains of a rectangular building at the southern edge of the plateau which is oriented transverse to the longitudinal axis. Only the western part is visible. Dimension of the wall, as far as assignable, 1.6 m. The preserved wall covers a room which is built approx. 2 m into the soil like a cellar. Entrance in the northern wall. Putlog holes on the northern and southern narrow side show the level of an intermediate floor (sampling pieces of wood for radiocarbon dating nr. 4). The wall coping of the eastern wall on the length side of this deeper area only reaches up to the level of this intermediate floor. Above the wall coping informative pattern of strata with humus settlement deposit (sampling for radiocarbon dating nr. 1–3). Above this settlement layer, a layer of mortar screed of limestone (supplement 4). The eastern part of the building buried in debris. No traces of connecting walls.



Position 6

South of the castle plateau, the area leads gradually down to the level of the bailey. The adjacent rock lies exposed at some parts.

The few traces of walls do not show any architectural connections. A carefully worked out wall corner, which is situated relatively low, seems to form the southeast end of the eastern fortified wall.

Position 7

Small part of wall of the building leaning inside to the eastern fortified, unveiled at unknown time. Dimension of the wall 0.9 m. Wall sheath partly broken out. To the western wall coping a small, not interpretable piece of wall meets with a butt joint (appendix 5).

Position 8

Eastern fortified wall with an elongated, hardly recognizable building inside leaning against it. A small wall fragment suggests a transverse partitioning. The yard-lateral longitudinal wall of the building seems to aim at the southeastern corner of the building of position 1.



The fortified wall can be well pursued on the whole length on the exterior side. Restored height of 0.4–1 m. Dimension of the wall not clearly definable, at least 1.6 m. Wall line with straight process. In the northern part, a remarkable opening of approx. 30 cm width, function unknown.



Fig. 17 Werner Meyer working on position 7
Photo: Eberhard Fischer

Fig. 18 Local workers clearing the remaining wall at the eastern part of the plateau
Photo: Jorrit Britschgi

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Position 9

Remains of a projected tower at the northern end of the eastern fortified wall. External dimensions approx. 9×8 m. The walls are still 0.2 to 1 m high. The corner part is carefully worked out. There is no butt joint between the tower and the fortified wall, which branches off at the southwestern corner.

Between the two towers of positions 2 and 9, no connecting walls are recognizable.

3.5. Appreciation

The ruin on the hill crest of the Drapham dzong doubtlessly represents a historical and archaeological monument of great importance. Its true meaning can only be estimated if we have the interpretation and dating determined by archaeological excavations.

The visible remnants of walls in the southeastern peripheral terrain (zigzag stairs, buildings and walls in the lower saddle) are assumed to be a powerful dam barrage, lateral to the enemy situated in southern direction downwards to the valley. Even if the archaeological excavations at the moment have to concentrate on the core castle on the hill crest, the peripheral remnants must not be ignored and should, as far as possible, be included in the project, at least by documentation and prospecting.

On the hill crest, the concept of the ground plan appears in general terms also in the actual condition, nevertheless many questions remain open. These firstly refer to the dating of the ruin. Only if the beginning and the ending is known, historical considerations can be made about the meaning and the constructors, inhabitants and possible conquerors or destroyers.

If the construction was built in one or in several phases, at present it is as unclear as the mode of their decline. (The missing corner at the building of position 1 could be a reference to a violent destruction.)

The unequal distribution of the wall debris is slightly confusing. While the building of position 1 is based in a big hill of debris, other walls are in strongly removed condition, though not accompanied by larger debris deposits.

The actual situation of the ruin area figures on build-historical surprises in case of an excavation. Probably the building of position 1 was constructed later or was used longer than the other buildings. And what does the mortar layer above the settlement-stratum in position 5 mean?

With an excavation, also the search for vital function mechanisms will be exciting. Where was the entrance? What about the constitution of water supply, kitchen equipment, heating and waste disposal facilities? Were domestic animals kept, and if so, which ones and for which purpose? Are there traces of religious life, commercial production or spacious trade relations?

Whatever the answers of the archaeological finds and findings to these questions are, they will be of great importance for the history of Bhutan.



4. The excavation project

4.1. Planning specifications

- The archaeological study of the entire area of the Drapham Dzong has to take place in several steps. At present, only step 1 can be precisely planned (intended for Autumn 2008).
- This first step concentrates on the hill crest, i.e. on the core castle.
- Step 1 has to be planned as an enclosed project, with budget, financial programme, scientific evaluation and publication as well as preservation of the opened stonework.
- The continuation of the project can only be decided upon after the conclusions of the excavations of step 1.

4.2. Procedure of the excavation

- Preparatory work: Clearance of the hill, bivouac, entrance, transport of the team and the material, local arrangements, recruiting of local workers
- Creating exact basic measurements
- Excavation in accordance with sketch on supplement 6
- Ongoing excavation documentation (diary, measuring, drawing, photographing)
- Ongoing withdrawal of laboratory samples (as required)
- Constant first editing of the small findings (classify, photographing, drawing, inventory according to find complexes)
- On trial wall preservation
- Termination work (among other things clearing the work site, safety precautions, packing the findings and the documentation material).

(WM)