

ARCHAEOLOGICAL RESEARCH AT BANTEAY KDEI TEMPLE : OVERVIEW OF INVESTIGATIONS OVER THE PAST TEN YEARS

Masako Marui

Sophia University-Angkor International Mission

Introduction

Banteay Kdei temple, located in the Angkor area, is thought to have been built in the end of the 12th century, during the Bayon period. The Sophia University Angkor International Mission has conducted archaeological research at this temple since 1991. Each of the 19 excavations carried out between 1991 and March 2001 has been rather small in scale.

Our activities aim to reach two important goals. One is to gain basic information about the temple, such as that concerning the foundation of each building of the temple, construction processes, or the function and the nature of each structure. The second goal is training of Cambodian students in archaeological research.

Research work has been carried out at several areas in the temple (Figure 1). Excavations were first

started around the Front Colonnaded Hall C09,¹ at the eastern side of the temple's central hall. In a second phase, we investigated the small hall labeled D08. More recently, we have started work around the Eastern Approach D01 at the temple's eastern side. This recent campaign aims to examine the structure of this Approach and its relation with other features. In this small report we would like to give an overview of our team's archaeological investigation work at Banteay Kdei over these ten years. The first section concerns the results of investigations at the Front

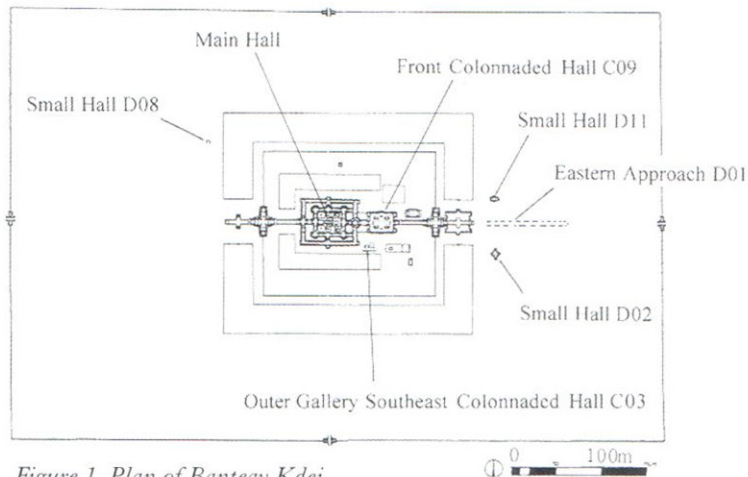


Figure 1. Plan of Banteay Kdei.

¹ All identification codes given here correspond to the inventory established by Sophia University. See Sophia University Angkor International Mission, "Banteay Kdei Building Inventory," 1997.

Colonnaded Hall C09: The second section concerns more recent research at the Eastern Approach D01.

I. Overview of investigations around the Front Colonnaded Hall C09

1. Background and outline of investigations.

Investigations began in 1991 around the Front Colonnaded Hall C09, mainly at the structure's southern side (Figures 2-8). C09 is situated at the eastern side of the Main Hall, which researchers have long called the "Dancers' Hall" because of its abundant apsara reliefs. The main purposes of this research work were to detect the structure of the base of C09, and the nature or condition of each feature. Each group in this mission therefore focused on C09.

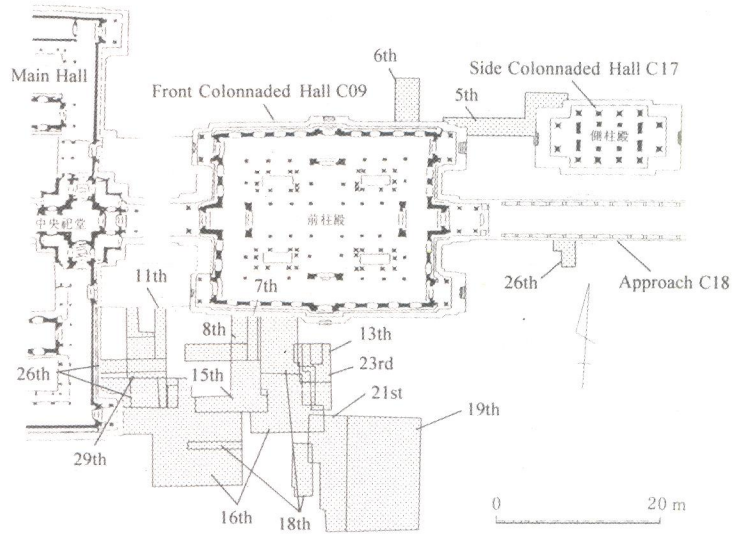


Figure 2. Investigation area around Front Colonnaded Hall.



Figure 3. Central Hall and Front Colonnaded Hall (right), seen from the east.



Figure 4. East side of Laterite Building.



Figure 5. West side of Laterite Building.



Figure 6. West side of Laterite Building. Open Canal of CU05 and Laterite Feature CU07.



Figure 7. Southeast Platform C10.



Figure 8. Southeast Platform C10, CU03 and CU04, see from the south.

2. The Foundation of Front Colonnaded Hall C09, and associated stratigraphy.

In the 15th mission in 1995,² an excavation trench was set up at the southern side of Front Colonnaded Hall C09 (Figure 9). The trench was dug down 4 m from ground level. At this 4 m depth there was no longer any indication of human activity, such that this layer is thought to have been the natural one and the base of this area. Another layer, containing rooftiles and pottery was at a depth of 1 m. Another layer made of sand was found 1.5 m deep. This layer, of fine sand filled in horizontally, contained pieces of laterite and volcanic rock. Laterite blocks of C09 had been laid on this sand base. We also excavated the base of the southern side of approach C18 at the eastern side of C09, where we detected the sand foundation. In addition, the sand foundations of the small halls labeled D08 and D11 were revealed. Together, this evidence suggests that the structures of this temple were built on a single foundation method. Nonetheless, another kind of base, structured with sand or sandstone, was also detected. Whether and how foundation types correspond to different aspects of the structures, such as size, function, and chronological phase, remains to be determined. This will be a topic of future research.

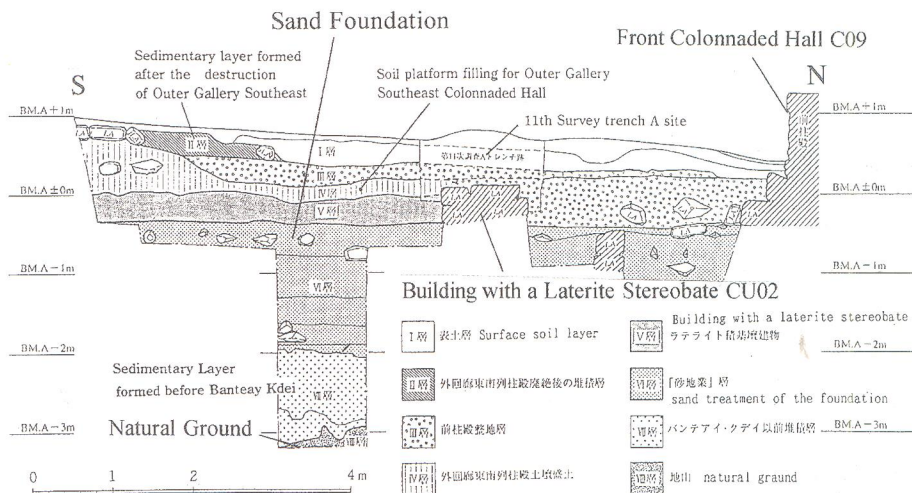


Figure 9. Stratigraphy section found in the 15th mission.

² The number of each excavation corresponds to an index established for each mission, such that these numbers do not correspond to the actual number of excavations.

3. Overview of the excavated features.

a. Outline and the construction process of the features: In the course of investigations, we found several buried features, of particular note at the southern side of the Front Colonnaded Hall C09 (Figure 10).

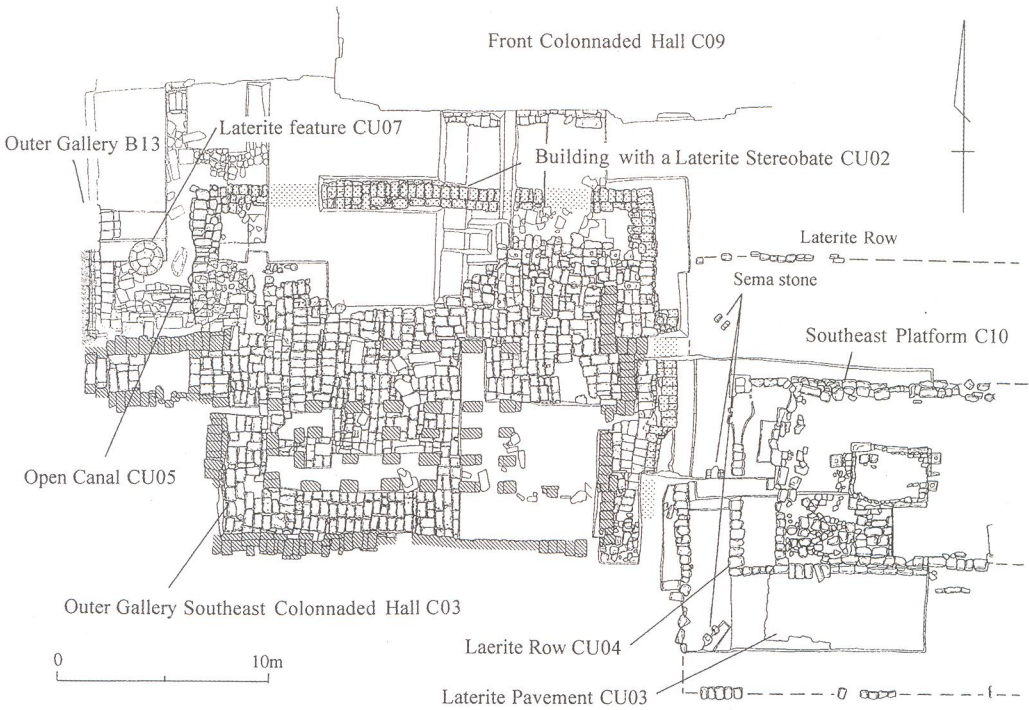


Figure 10. Features excavated at the southern end of Front Colonnaded Hall C09.

We excavated around and beneath the Outer Gallery Southeast Colonnaded Hall C03 at the southern side of C09. Under C03, there is a Building with a Piled Laterite Alignment (CU02) and an Open Laterite Canal, labeled CU05. At the eastern side of laterite feature C03 there are other features, such as Laterite rows CU03, CU04, and Laterite Platform C10.

The positioning of these features, along with the stratigraphical study, suggests that they were built at several phases, rather than at a single time. The general construction sequence can be read as follows. The laterite canal CU05 was built first, followed by Laterite feature CU02, followed by Outer gallery B13, the Laterite feature C03, and finally Front Colonnaded Hall C09. At the eastern side, CU03 was first, and concomitant with Laterite feature C03; next was Laterite feature CU04, and finally Platform C10.

Relations with the central area; were detected from evidence of Outer gallery B23, but remain somewhat problematic.

b. Features before the construction of Banteay Kdei: Layers and features preceding the building of Banteay Kdei temple were unearthed in some investigations. Historical evidence has long suggested the

existence of a village associated with a temple called “Kuṭiśvara,” but conditions prior to the construction of the temple remain unclear.

c. Open Laterite canal CU05: This feature was found between C03 and Outer gallery B13. At its western side the feature was destroyed with the construction of B23. The feature was built with laterite blocks measuring 0.8 m in width and 0.7 m in depth. The bottom of the ditch declined eastward, suggesting that the feature belonged to structures situated to the west.

d. Building with Piled Laterite Alignment CU02: This feature was structured on CU05. The feature was built with a row of laterite and is rectangular in plan. It measures 21.5 m wide east-west, while the north-south measurements remain undetermined as C03 is built on CU02. Two holes on the laterite blocks at the northwestern corner of the feature are thought to be postholes. The abundance of rooftiles excavated around the feature suggest that this was the base of a wooden structure.

e. Outer Gallery B13: In the next phase, the outer gallery was built. The ditch for the construction worked into the filling soil; with the later construction of CU02, soil was further filled. The laterite of B13 was constructed on this foundation. This construction destroyed CU05.

f. Outer Gallery Southeast Colonnaded Hall C03: The feature was built on CU02 directly, utilizing the latter feature as a foundation. The plan of the structure is rectangular, measuring, on the inside, 19 m east-west and 12 m north-south. The floor was paved with laterite, and the pillars constructed with laterite and sandstone. At first, the structure was considered to be relatively late, but evidence from archaeological research and architectural features indicate that it was constructed during the same phase as Front Colonnaded Hall C09. An abundance of rooftiles were excavated around the feature, suggesting that it also was covered with rooftiles. In addition, many ceramics, including earthenware, stoneware and porcelain, were unearthed from the feature and related strata.

g. Approach C18: The foundation of Approach C18 was revealed at the eastern side of C09. A trench was set up at its southern side. Excavations showed sand foundations laid like those of C09 and other features. In addition to this, architectural evidence indicates that the feature was modified.

h. Laterite pavement CU03: This feature is situated at the eastern side of C03. Stratigraphical evidence suggests that the feature was built in the same phase as C03. It consists of laterite considered to be the base of a structure. Excavations here revealed a statue made of sandstone and bronze Buddhist altar fittings on the floor, belonging to the Angkorian and Post-Angkorian periods.

i. Laterite row CU04: This feature, measuring 10 m north-south, was built on laterite pavement CU03. It is considered to be the base of a structure.

j. Platform C10: This feature was built on laterite row CU04. The form of the feature indicates this to have been the base of a hall related to Theravada Buddhism. The feature is rectangular in shape and measures 26 m east-west by 8 m north south. A laterite row and sima stones are situated around the platform. This feature, of rough construction, is comprised of laterite and sandstone blocks with no foundation work. Blocks from other places in the temple were re-used here, suggesting that the feature is of a later period. Numerous jars containing cremated bones were excavated around the platform, showing that this area was utilized for funerary purposes.

k. Laterite base CU07: This feature was found between C03 and B13. Measuring 1.5 m in diameter, it is round in shape, and therefore considered to be the base of a stupa.

4. Overview of excavated artifacts.

Fragments of rooftiles, stoneware and brown glazed ware were unearthed from the sand foundation

and its immediately underlying layer at the southern side of Front Colonnaded Hall C09. Artifacts such as rooftiles, earthenware, brown-glazed ware, celadon and white porcelain from Song Dynasty China were unearthed from features, such as Laterite buildings C03 and Laterite feature CU02. But these are few in quantity. The composition of excavated artifacts related to C03 and CU02 is high in earthenware and rooftiles; other artifacts are relatively rare. This might suggest that the southern side of Front Colonnaded Hall C09 was associated with daily human activity, rather than ritual activity, in the temple.

Celadon and white porcelain from Si-Sachanalai and another kiln in Thai territory, dating to the Post-Angkorian period, were excavated at the southeastern side of the features. Containers made of celadon, blue and white, multi-colored porcelain, stoneware and earthenware, belonging to later periods and containing cremated bones, were excavated around foundation platform C10.

5. Preliminary conclusions.

These investigations brought important evidence to the fore. Firstly, we determined the method of basement work of Front Colonnaded Hall C09; other features were also detected, such as the sand foundation and several buried features. The construction process was also revealed. We have seen that the features were constructed through several phases, rather than during a single time. Evidence at foundation Platform C10, belonging to the Post-Angkorian period, shows that the area was utilized continuously. This establishes basic information about historical transitions in this area.

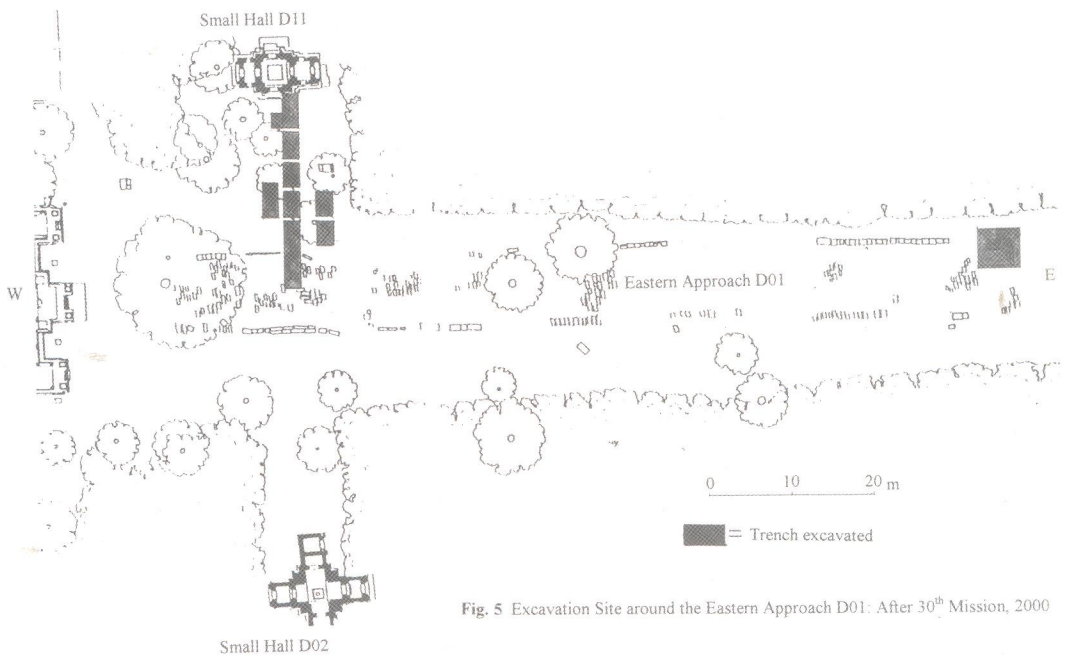


Fig. 5 Excavation Site around the Eastern Approach D01: After 30th Mission, 2000

Figure 11. Excavation site around Eastern Approach D01, after the 30th mission.

II. Recent investigation results: research around Eastern Approach D01

1. Background and progress of investigations.

From the 30th mission, in 2000, we began work around Eastern Approach D01 (Figures 11-17). As the features were covered with soil, their structure and scale remained clear. The main purpose of these investigations was therefore to obtain evidence of the eastern end and the northern side of the eastern

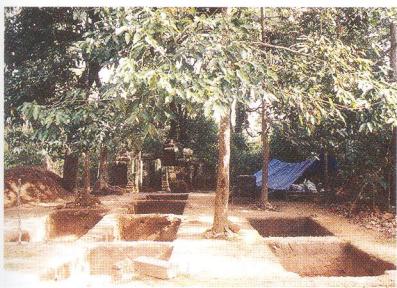


Figure 12. Small Hall D11, seen from the south.

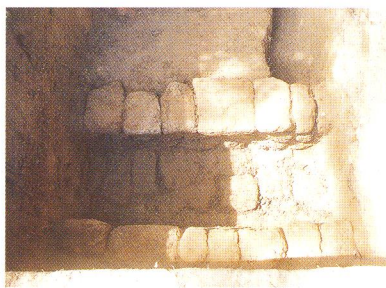


Figure 13. Drainage Facility DU08.



Figure 14. Trench 5.

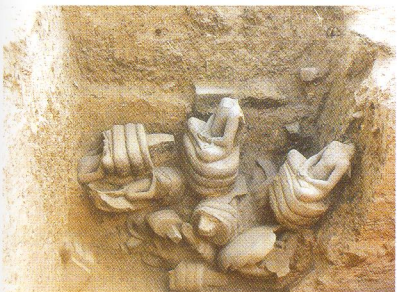


Figure 15. Buddhist statues excavated at trench 6.



Figure 16. Ceramic conch shell from DU05.



Figure 17. Small jar from DU05.

approach, along with the situation of D11 and the relation of these features to each other. Two excavations were carried out around eastern approach D01 and Small Hall D11 (in the 30th and 32nd missions).

2. Overview of the excavated features.

a. Eastern Approach D01 and laterite features: These investigations revealed the northeastern and northern end of the approach, and construction methods. The laterite blocks were laid without foundation work. Construction methods here are thus different from those revealed at Front Colonnaded Hall C09, and other structures. The approach is laid out with laterite blocks, some of which are recycled. On the eastern side the area excavated proved to be disturbed, preventing a clear understanding of the original situation. The feature is 91m long east-west. The stratigraphical study shows the feature to be at least 0.8m higher than the original ground surface.

In the western trench the Laterite Step DU07 attached to D01 was revealed (Figures 18-19). Many roof tiles were excavated from around this feature, suggesting that there might have been structures covered with roof tiles here. We also excavated Laterite Row DU06 in an east-west direction and Soil filling feature DU05, situated to the northern side of Laterite Step DU07. The horizontal situation suggests that these laterite features were unrelated to Small Hall D11.

Sandstone blocks can be seen on the edge of D01, but the original situation remained unclear. At any rate, the original landscape must have been quite different from the present one.

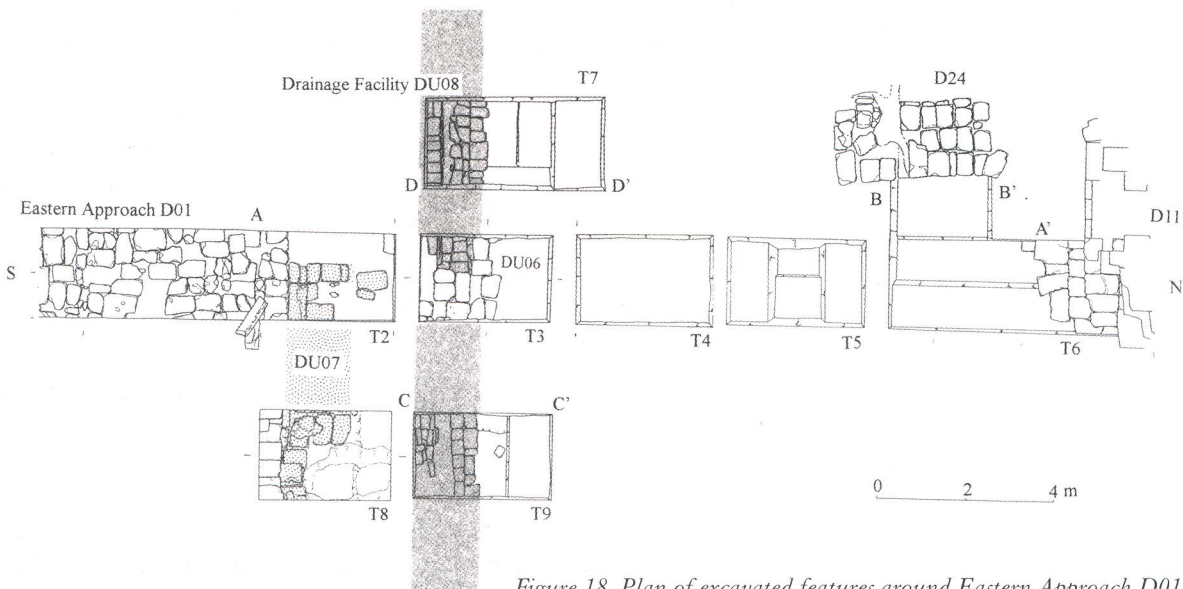


Figure 18. Plan of excavated features around Eastern Approach D01.

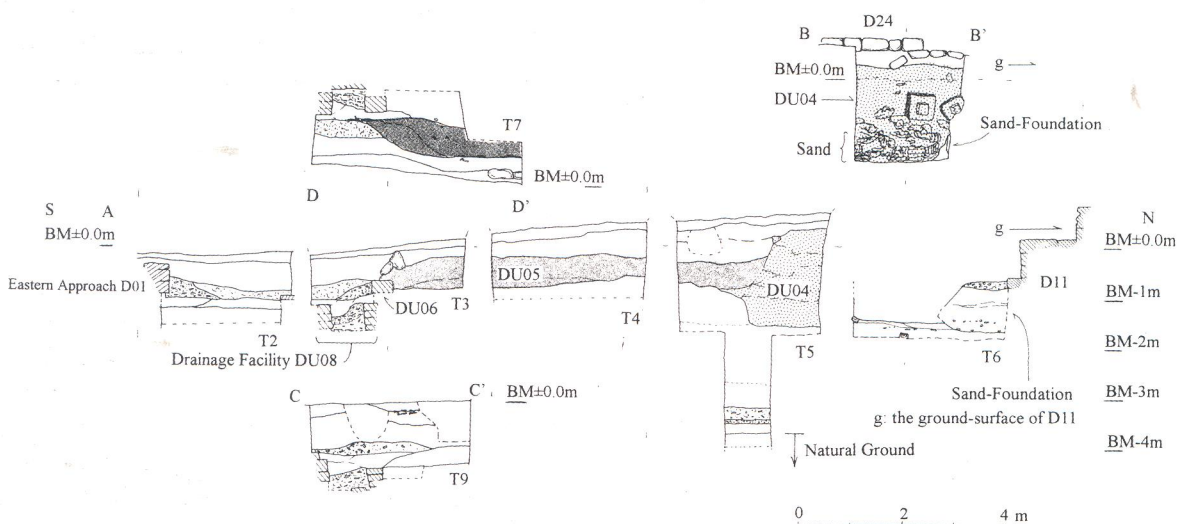


Figure 19. Section of the western trench excavated at D01.

b. Open Laterite Canal DU08: We also detected an open canal feature built with laterite and measuring 0.6 m wide and 0.5 m deep on the inside. Many rooftiles were unearthened from inside the ditch. This feature was detected under laterite row DU06, which suggests it to predate DU07 and D01.

c. Small Hall D11 and its construction methods: D11 is a small hall built with laterite, situated on the northern side of D01. At the southern side of D11 we excavated a trench reaching 6 m below ground level in order to determine the typical stratigraphy around this hall and methods used for its construction.

In this trench the natural soil layer with no traces of human activity was detected 4.2 m below from the present surface. Above that is a layer measuring 2.4 m thick containing rooftiles and earthenware. D11 was constructed on this layer. A construction pit was dug into this layer and filled with fine sand to construct the sand foundation. This foundation was built by accumulating fine sand horizontally, as we have seen with foundations of other structures of this temple. Many rooftiles were unearthened from around the hall, suggesting that it was once covered with roof-tiles, but not necessarily at its origin.

d. Soil filling feature DU04 at southern side of D11: Construction work digging and soil filling was detected at the southern side of D11. In addition, numerous statues were unearthened from the soil fill. Digging was evident from the top of the sand foundation of D11; statues and soil were then placed in the pit. The soil fill measured 1.8 m high from the bottom of the pit. More than 100 sandstone statues and fragments and bronze figurines were unearthened here. Many of the statues are of the Buddha, and have been decapitated or undergone damage to the head. The meaning and function of this soil fill with its statues remain unclear.

e. Laterite feature D24: A laterite pavement which can be seen on the present ground surface is thought to have been the base of buildings dating to the Post-Angkorian period. A small bronze vessel was unearthened from under the structure.

3. Preliminary conclusions.

The 30th and 32nd investigations enabled us to obtain important information about Banteay Kdei. Firstly, we learned about Eastern Approach D01. D01 would seem to have been 0.8 m higher than the original ground level. The structure of D01 and its surrounding landscape was once quite different from what we see at present. Around D11, particularly between this feature and D01, we detected a previously unknown feature containing soil fill up to feature DU04, 05 and others that were revealed. Most noteworthy is the discovery of statues. This constitutes important material for understanding the historical changes of Banteay Kdei. Many questions remain unanswered.

Conclusions

This research has enabled us to develop important information about Banteay Kdei temple. In addition to developing understandings of foundation and construction methods, we were able to detect a number of buried features. These features show that the temple was constructed over several different phases, such that the original situation differed greatly from the present one. Those features and artifacts dating to the Post-Angkorian period suggest that the temple functioned in the Theravada Buddhist context. All of this evidence provides basic information about historical changes of the temple. Analyses of excavated artifacts will provide further information for revealing the function of each feature and relative if not overall chronology. This work should provide basic information not only about Banteay Kdei

temple, but moreover about the history of Angkor in general.

Finally, we would like to mention training of Cambodian students which has been carried out continuously over the course of the mission, along with daily maintenance. In recent years, we have welcomed local people and researchers to the site on the opening day of research work. With these activities, we aim to promote recognition of the site's significance, an integral part of future development.

References

Institute of Asian Cultures Sophia University, 1991-2000, *Renaissance Culturelle du Cambodge*, vols.5-17, Sophia University, Tokyo.

Nakao Yoshiharu, ed, 2000, *Angkor Iseki no Koukogaku* (The Archaeology of Angkor), Rengo Shuppan, Tokyo.

Kunikazu Ueno, in press, *Banteay Kdei Building Inventory*, Sophia University, Tokyo.

Masako Marui, July 2001, *Buddha Statues Excavated from Banteay Kdei Temple*, hand-out for ICC.