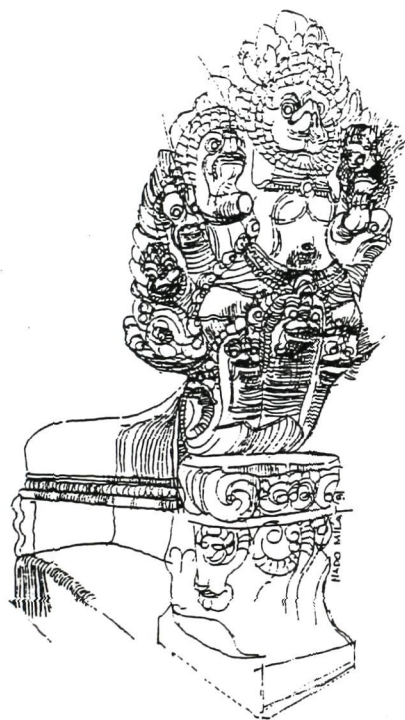


**PREAH KHAN CONSERVATION PROJECT
HISTORIC CITY OF ANGKOR**

Siem Reap, Cambodia

**PROGRAM PROPOSAL AND BUDGET
PREAH KHAN FIELD CAMPAIGN II**
(October 1993 - April 1994)



WORLD MONUMENTS FUND

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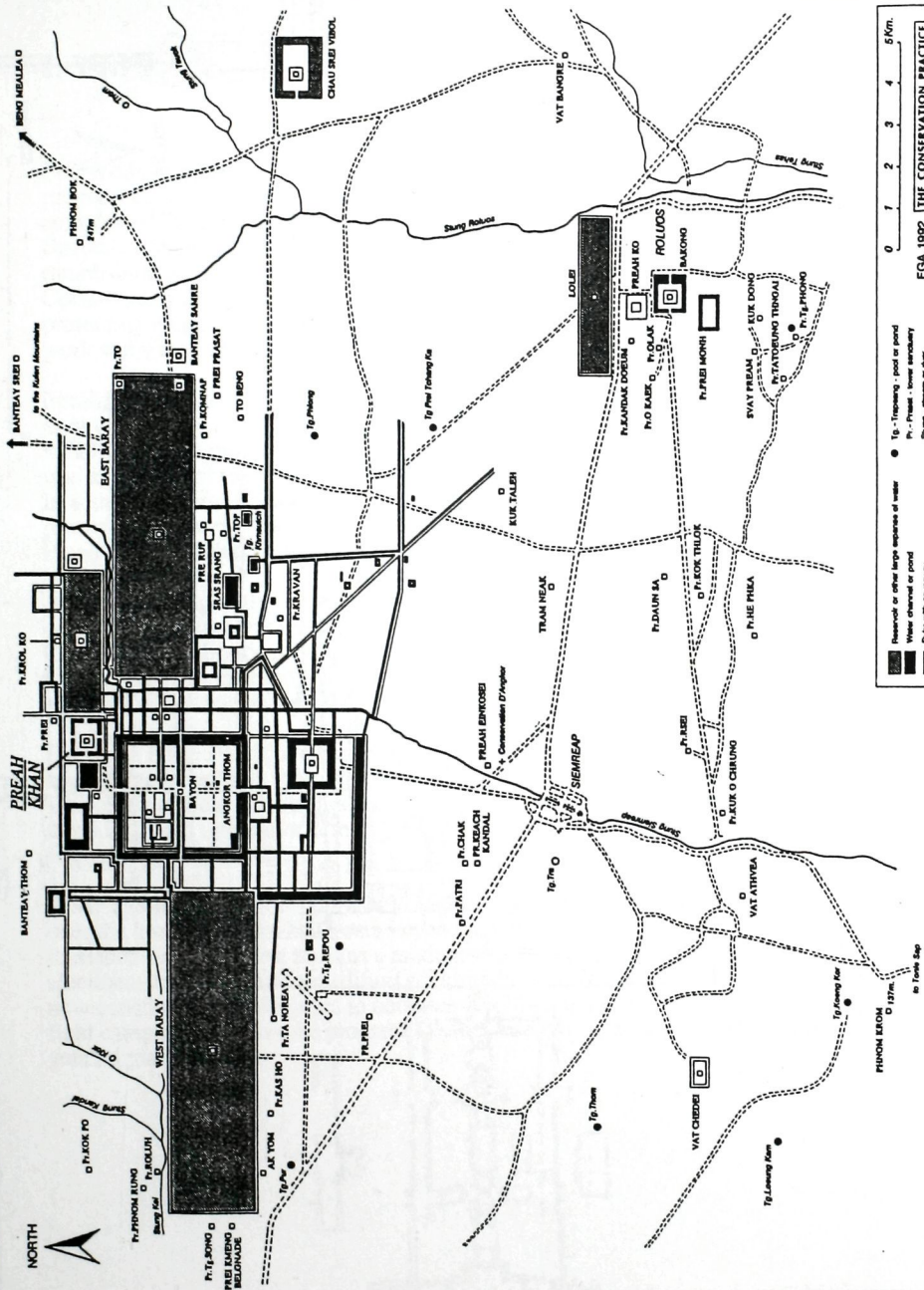
New York
September 1993

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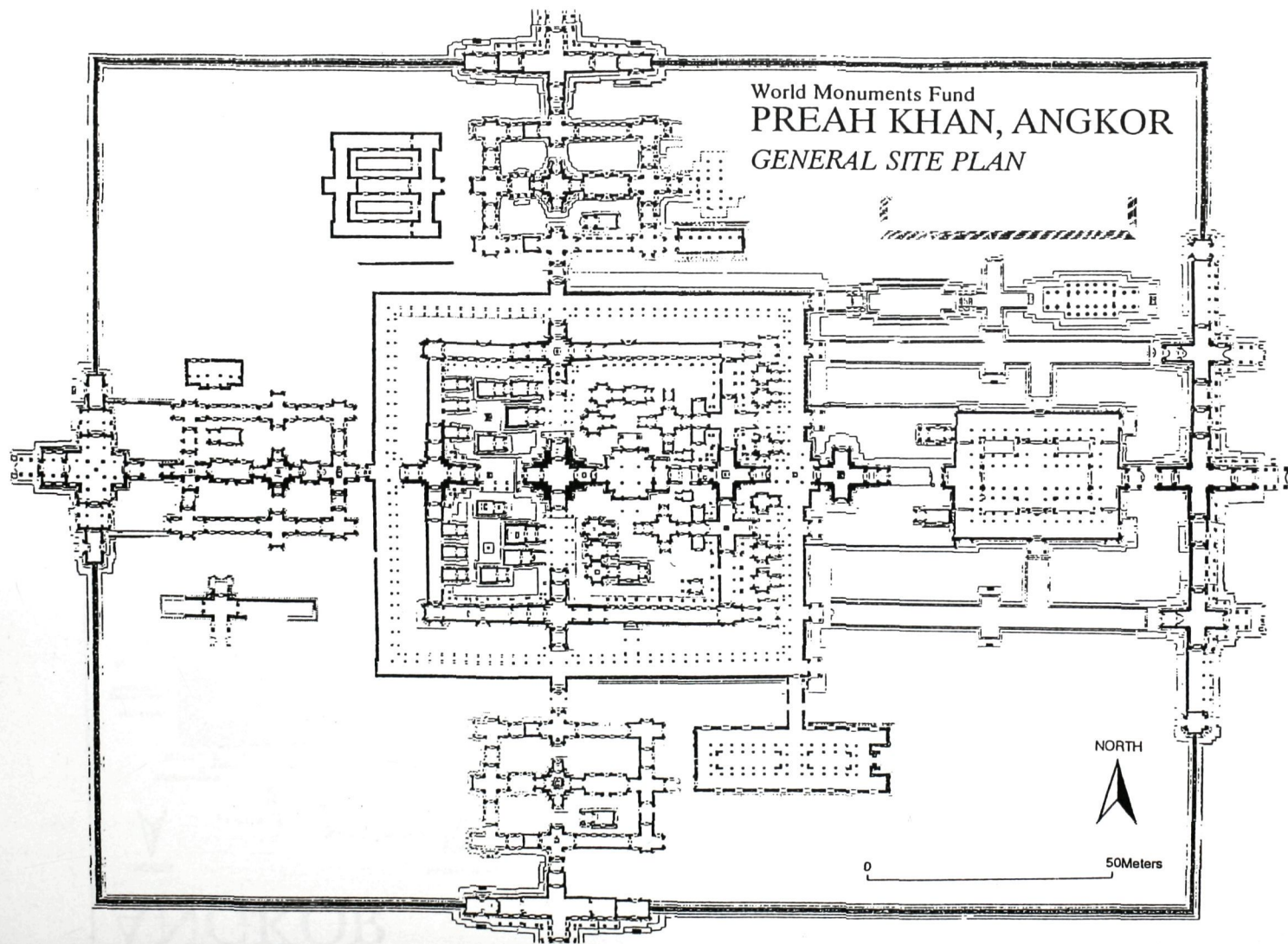
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ANGKOR

NORTH



World Monuments Fund
PREAH KHAN, ANGKOR
GENERAL SITE PLAN



1. PREFACE

The World Monuments Fund has been active since 1989 in developing and promoting a program for the conservation and partial restoration of the 12th Century monastic complex of Preah Khan in the Historic City of Angkor. Following its first mission in December 1989, WMF realized the great need to assist Cambodia with the re-establishment of its cultural identity and to support the Ministry of Culture and the Conservation d'Angkor in Siem Reap in the overwhelming task of conserving and presenting Angkor to the world again, especially as they lacked funds to undertake the work and were bereft of the skills to manage and implement such a task.

Realizing that one priority was to train personnel at both the professional level as well as at the crafts level, WMF joined forces with UNESCO and Sophia University, Tokyo to help establish initial programs for training Cambodian students at Angkor. WMF was also directed towards a specific project at Preah Khan by the Ministry of Culture. In addressing this challenge WMF endeavors to use appropriate principles and procedures in implementing a variety of research programs for building conservation at Preah Khan which could also be used elsewhere at Angkor.

At the beginning of the 1992/93 work season WMF was pleased to launch its fourth consultant mission and Field Campaign I at Preah Khan with the full approval of the Cambodian Authorities and UNESCO. On November 3, 1992 WMF mobilized a work force and an administrative team to commence a long term program to conserve and present Preah Khan as a partial ruin.

For Preah Khan Field Campaign I WMF assembled a team of fifteen specialty consultants from eight different countries. In addition there are seven students from the University of Fine Arts, in Phnom Penh, most of whom have participated in previous missions. This international team has created a wide interest in Preah Khan and a supportive constituency.

WMF and its team has continuously supported conservation-related activities at Angkor over the last three and a half years in spite of the difficulties that Cambodia has faced in its efforts to re-establish itself as a modern nation. Following the recent national elections, the creation of a coalition government, and the current efforts at forging a new constitution, WMF is set to continue its efforts to raise funds and mount seasonal field campaigns to advance progress Preah Khan Project as per its previously proposed general plan of action.

For the 1993/94 Field Campaign II, WMF has set the goal of raising \$160,000 to continue its program of conservation work in a series of sub-projects which were initiated in the 1992/93 Field Campaign I. WMF also proposes to further its involvement in assisting with architectural education and on site training in conservation. WMF's Field Campaign II is designed to include a relatively modest program of field work since as of the time of this writing the new Government has yet to re-establish the State Ministries and Departments which will control the international to safeguard Angkor. It is for this reason that WMF has decided to schedule its first full consultant mission to occur in January 1994.

In the meantime there will be an advance mission in October/November 1993 to formally present WMF's Field Campaign II program to the new Cambodian Government in Phnom Penh and its administration in Siem Reap. At this time WMF Project Manager John Sanday will also begin to re-activate the local work force used in Field Campaign I. In early November WMF will also be bringing a third group of its supporters to visit Preah Khan and Angkor.

Fully developed consultant missions are planned for the months of January 1994 and March/April 1994. The latter mission is to largely complete the field work undertaken in Field Campaign II and to record its accomplishments which will by mid-summer be presented as Report V in WMF's Preah Khan publication series. During the first four months of 1994 the Project Director will visit the site as required to direct and monitor the work.

World Monuments Fund is a not-for-profit private organization based in New York, USA whose purpose is to assist in the preservation of man's most significant artistic and architectural heritage through the planning, development and funding of major conservation projects worldwide. To accomplish its projects WMF is dependent on financial, material and 'in-kind' contributions. contributions to support the Preah Khan Project. It is difficult, therefore, at this time to assess the extent of work that can be undertaken each year WMF in Cambodia though it is expected that a good response to its fundraising efforts will result in the accomplishment of most, if not all, of the objectives outlined in the following proposed program of activities.

2. PROJECT SUMMARY

The World Monuments Fund's appended Report IV *Preah Khan Field Campaign I - Project Mobilization* records the activities of the project fiscal year of July 1992 to July 1993. All significant activities done in connection with the year's efforts have been described and three specific 'sub-projects' at the site have been identified for further investigation and development. Specific survey reports for each of these sub-projects are described in detail in *Appendices IV/A thru C* which address the West Processional Entrance Way, the Vishnu Temple Complex and the *Dharmasala* or Pilgrim's Rest House.

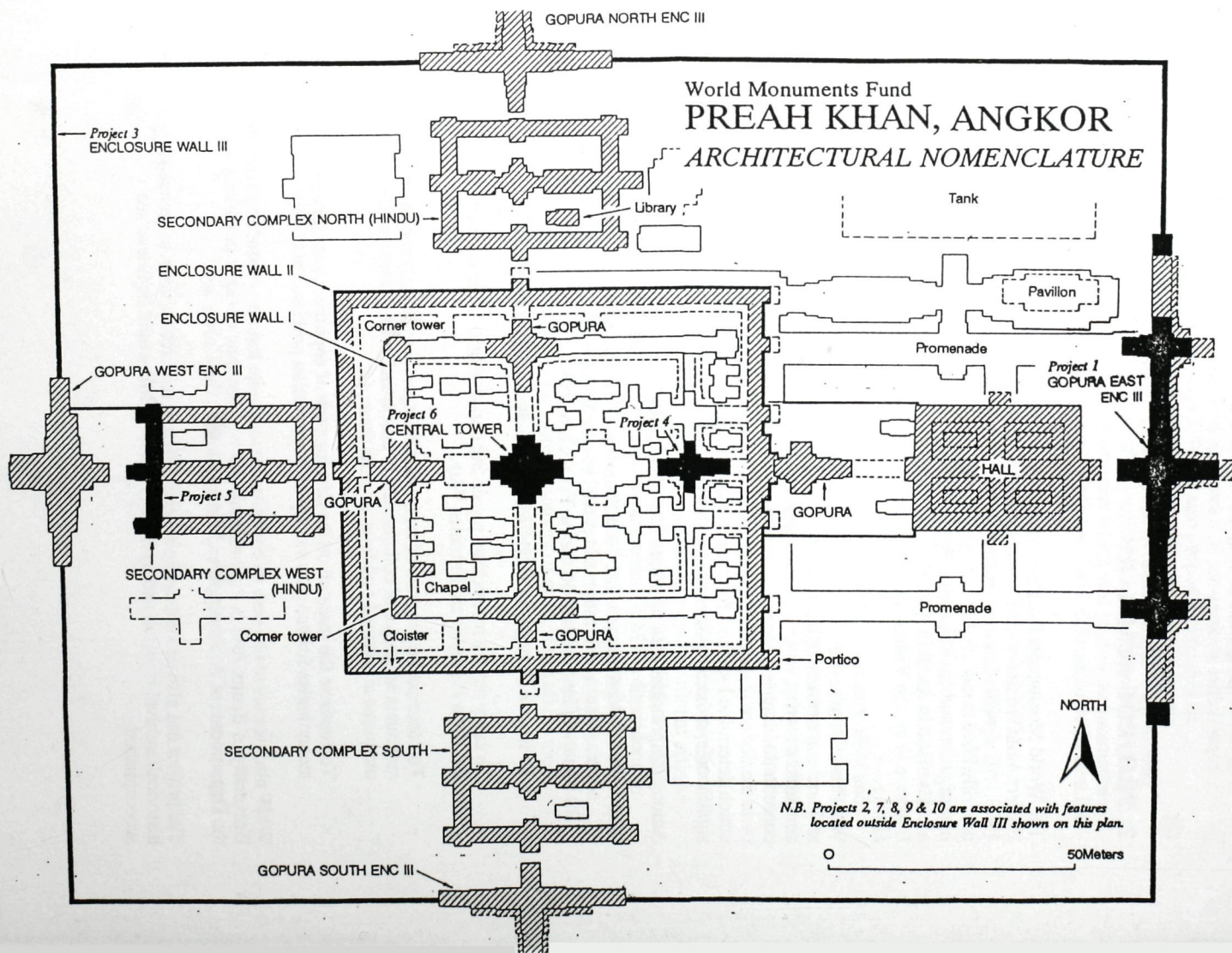
WMF intends to conserve Preah Khan as much as is feasible and present the architectural remains of the site as a partial ruin. Each building is being assessed for its structural integrity, its artistic significance and its material condition. Priorities for conservation intervention are being noted based on the degree to which structures or parts thereof are threatened by collapse and other serious deterioration. Other aspects which determine locations for intervention include visitors' safety, historical significance, artistic significance and interpretive potential.

Among the priorities that have been identified in Report IV on Field Campaign I are:

- To continue research and documentation of the Vishnu Temple complex and to commence stabilization and partial re-erection of roof vaults and sculpted doors and windows unearthed during Field Campaign I.
- To initiate a program of stabilization and repair of the Dharmasala.
- To carry out the re-erection, repair and conservation of the lanterns (bornes) on the West Processional Entrance Way.
- To continue the program of temporary emergency stabilization measures at structures in danger of collapse and to commence with permanent stabilization measures at selected buildings or parts thereof.
- To continue the research on the development of appropriate conservation technologies for use on a variety of conservation problems at the site.

WMF also intends to increase its commitment to on-site training of students from the University of Beaux Arts in Phnom Penh and will continue to assist in various ways the Departments of Architecture and Archaeology at the University.

The project can also accommodate several different research projects in archaeology, historical/archival research and hydrology which WMF would be like to see accomplished.



3. PROJECT PROPOSALS AT SITE

WMF will select from the list below the most suitable projects for 1993/94 Field Campaign II.



Site Clearance and Maintenance, November 1992.

PROJECT 10 - CONTINUED SITE CLEARANCE AND MAINTENANCE

The World Monuments Fund plans to continue its program of general site clean-up and maintenance including selected site clearance of undergrowth.

Research: This season, WMF is hoping to add a Forester to its team of consultants to advise on the maintenance and control of the jungle in and around Preah Khan. At the same time research will be undertaken on the use of herbicides for the removal of deep

rooted plant growths from the structures. Research is also planned for methods of controlling other forms of plant growth especially at areas which have already cleared.

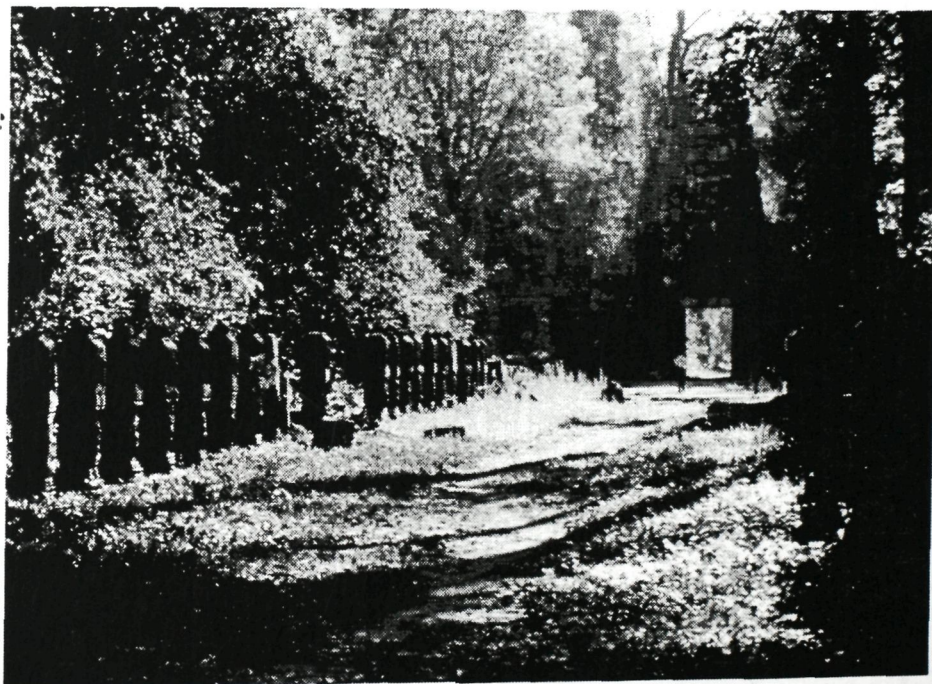
Maintenance Program: A successful plant material disengagement and clearance program has opened up the monastic complex for viewing and analysis and, to a considerable extent, has already cleared many of the structures of damaging plant and tree growth. Pathways have been cleared through the jungle and the complex itself, providing improved access for visitors.

WMF anticipates the need for a minimal amount of additional clearance of undergrowth which will be undertaken during Campaign II, mostly around the Enclosure Walls III & IV. Afterwards one team will be responsible for regular control of vegetation and the sweeping of the pathways throughout the site.

SUPERVISION: 1 Supervisor, 1 Student, 1 Corporal

WORK FORCE: Initially 2 Flottant Teams for Clearance
Succeeded by 1 Flottant Team for Maintenance

PERIOD: Continuous



West Processional Way Before Debris Removal, October 1992.



West Processional Way After Soil Build-up and Debris Removal, November 1992.

PROJECT 9 - WEST PROCESSIONAL WAY

Research: During Field Campaign I a detailed survey with conservation recommendations was prepared as a basis for restoring the present initial entrance sequence to Preah Khan known as the West Processional Way.

Conservation Program: Report IV Appendix A entitled *Preah Khan, Angkor, The West Lantern Approach, An Archaeological Appraisal & Condition Report* contains a detailed description of each of the 47 pairs of lanterns (bornes) which line this passageway with recommendations for their conservation and repair. The report will serve as the main reference for repairing and conserving these stone elements which are the first impression of nearly all visitors to the site today. It is planned to complete this report by describing conservation work undertaken on each of the two part lantern structures. A summary of the re-erection, repair and conservation measures required at the West Processional Way is listed below:

SUPERVISION:	1 Consultant, 1 Student, 1 Corporal
WORK FORCE:	1 group of Masons - Ouvriers
PERIOD:	2 Months
SPECIAL EQUIPMENT:	Small Gantry, Chain Block and Tackle Resin Based Adhesive, Non-Ferrous Dowels
WORK PLAN:	The level of intervention required to conserve each lantern is summarized below using the following expressions: 'No action', 'Low', 'Medium', and 'High'.

NORTH RANGE OF LANTERNS

N1	Low/Medium	Reorganize pedestal, place lantern beside.
N2	High	Remove lantern for safety.
N3	Low	Realign lantern.
N4	No Action	
N5	Low	Realign pedestal & lantern.
N6	High	Dismantle, repair & reassemble or leave 'as is'
N7	Medium/High	Dismantle, check crack, repair & reset, .
N8	Low	Check hairline crack in lantern.
N9	Medium/High	Replace old repair, check crack in pedestal.
N10	Medium/High	Replace old repair, compare with lantern N12.
N11	Low	Check crack in lantern.
N12	High	Remove incorrect lantern.
N13	Medium	Replace repair in pedestal, repair lantern.
N14	Medium	Reset part of finial.
N15	High	Dismantle, repair, & rebuild.
N16	No Action	
N17	Low	Check cracks.
N18	No Action	
N19	No Action	
N20	No Action	
N21	Medium/High	Dismantle, repair cracks, rebuild.
N22	Low	Check hairline cracks in pedestal.
N23	High	Gather pieces, repair & reassemble.
N24	Low	Check crack in pedestal.
N25	High	Reassemble.
N26	High	Repair, & reassemble.
N27	High	Relocate & reassemble if possible.
N28	No Action	
N29	No Action	
N30	High	Remove, realign & repair.
N31	High	Remove, repair & re-set.
N32	High	Remove, repair, re-set & reposition finial.
N33	High	Remove, repair and re-set.
N34	No Action	
N35	High	Dismantle, repair & erect.
N36	Low/Medium	Check cracks in foot & lantern.
N37	High	Remove, repair & replace.
N38	No Action	

N39	High	Compare, replace & stabilize.
N40	High	Compare, replace & stabilize.
N41	High	Compare, reconstruct & replace.
N42	Medium/High	Realign & repair.
N43	No Action	(Item missing.)
N44	Low	Check stability, check crack in lantern.
N45	Low	Realign lantern.
N46	No Action	
N47	Low	Check hairline crack.

SOUTH RANGE OF LANTERNS

S1	Medium/High	Check crack in lantern, and re-set on pedestal
S2	No Action	
S3	Medium/High	Repair cracks in pedestal & re-set lantern.
S4	Low	Realign.
S5	Medium/High	Repair cracks in lantern, dismantle & re-erect
S6	High	Dismantle, repair pedestal & re-erect.
S7	No Action	
S8	Medium/High	Repair crack in lantern.
S9	Medium/High	Dismantle, repair cracks in pedestal & re-erect.
S10	Medium/High	Check cracks in pedestal, repair & re-erect.
S11	Low	Check cracks in pedestal.
S12	Medium/High	Repair lantern & re-set.
S13	High	Dismantle, repair lantern, re-erect & realign.
S14	No Action	
S15	High	Dismantle, repair pedestal & re-erect.
S16	Medium/High	Realign pedestal & reset lantern.
S17	No Action	
S18	High	Check crack in pedestal repair lantern & re-erect.
S19	No Action	
S20	High	Dismantle, repair pedestal, re-erect & re-set finial.
S21	No Action	
S22	No Action	
S23	Low	Check crack in lantern.
S24	Low	Check crack in lantern.
S25	High	Reassemble & repair & re-erect.
S26	No Action	
S27	No Action	
S28	High	Repair pedestal, repair lantern & place on plinth.
S29	High	Repair & re-position.
S30	Medium/High	Dismantle, repair cracks & re-erect.
S31	High	Re-erect pedestal, repair & rebuild fractured lantern.
S32	Medium/High	Re-erect.
S33	Medium/High	Repair pedestal & re-erect.
S34	Medium/High	Dismantle, repair cracks in pedestal & re-erect.
S35	High	Repair pedestal & re-erect lantern.
S36	No Action	
S37	No Action	
S38	High	Repair pedestal & lantern & re-erect.
S39	Low	Re-position lantern, & extra pieces for repair.
S40	No Action	
S41	No Action	
S42	Medium/High	Re-erect pedestal.

S43	Medium/High	Re-erect & check for cracks.
S44	Medium/High	Check cracks in pedestal, re-erect lantern. Alignment.
S45	Medium/High	Remove lantern, repair & replace.
S46	High	Dismantle, repair pedestal, & re-erect.
S47	High	Dismantle, repair pedestal, & re-erect.

NECESSARY INTERVENTION GROUPED BY PRIORITY

High Priority

North Range 2, 6, 12, 15, 23, 25, 26, 27, 30, 31, 32, 33, 35, 37, 39, 40, 41.

South Range 6, 13, 15, 18, 20, 25, 28, 29, 31, 38, 46, 47.

Medium Priority

North Range 7, 9, 10, 13, 14, 21, 42.

South Range 1, 3, 5, 8, 9, 10, 12, 16, 30, 32, 33, 34, 35, 42, 43, 44, 45.

Low Priority

North Range 1, 3, 5, 8, 11, 17, 22, 24, 36, 44, 45, 47.

South Range 4, 11, 23, 24, 39.

No Action

North Range 4, 16, 18, 19, 20, 28, 29, 34, 38, 43, 46.

South Range 2, 7, 14, 17, 19, 21, 22, 26, 27, 36, 37, 40, 41.



Typical Situation Requiring Emergency Structural Stabilization, February 1993.

PROJECT 11 - MISCELLANEOUS STRUCTURAL STABILIZATION

Research: Further studies may be necessary to ensure correct implementation techniques for structural stabilization designed and proposed by the Consultant Engineer. During the latter part of Field Campaign I, there was a concentrated effort to address emergency structural stabilization needs throughout Preah Khan, a prioritization of these needs and recommendations for a preliminary structural consolidation program.

Maintenance Program: Further temporary emergency stabilization measures are required in areas which were not physically accessible during Field Campaign I. It is also essential that monitoring of all temporarily stabilized buildings or building components is undertaken on a regular basis. A program is being prepared to demonstrate methods of permanent consolidation.

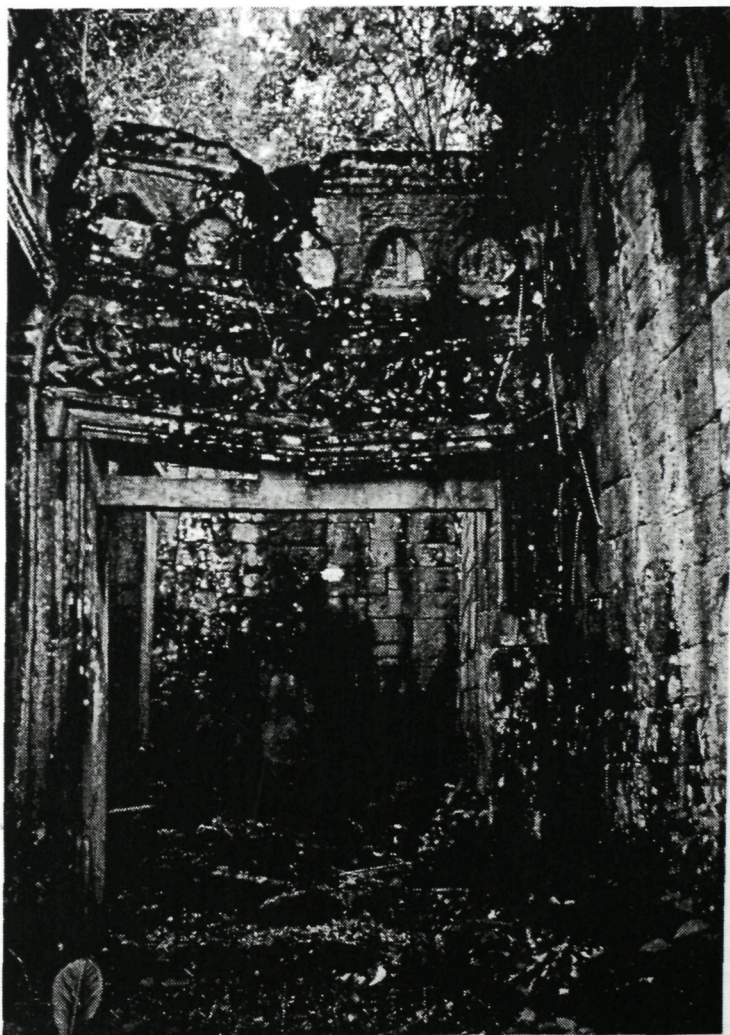
Conservation Program: A typical example of the need for emergency stabilization is the South Porch of East Gopura III which has tilted outward and faces imminent collapse.

SUPERVISION: 1 Consultant, 1 Supervisor, 2 Students, 2 Corporals

WORK FORCE: 1 Carpentry Group
1 Mason - Ouvrier Group

SPECIAL EQUIPMENT: Small Gantry, Chain Block and Tackle, Portable Scaffolding, Resin Based Adhesive; Non-Ferrous Dowels

PERIOD: Continuous



Hall of Dancers Showing Previously Stabilized Cracked Lintel, March 1992.

PROJECT 12 - HALL OF DANCERS REMEDIAL REPAIRS

Research: One of the areas of research that WMF is eager to expand upon is research into suitable technologies for materials conservation. A wide range of structural and materials conservation problems exists at Preah Khan where more extensive research is necessary.

Stone: Further studies need to be undertaken on the sandstone and laterite used in the construction of Preah Khan. It is important to ascertain their source, chemical properties and other characteristics such as absorptive qualities and degradation rates.

Stone Cleaning: Further studies are needed to verify preliminary field tests on the cleaning and treatment of stone.

Stone Adhesives: Further field research and testing will be necessary to finalize suitable adhesives. Methods of drilling and dowelling will need to be developed for both laterite and Kulen sandstone.

Conservation Program: It is planned to use the area known as the Hall of Dancers for the development of appropriate conservation technologies. This area is proposed since it contains the complete range on stone conservation challenges at Preah Khan all in one accessible location. Problems to address include structural failures which immediately threaten to cause further damage such as bowed walls, cracked lintels and dislocated corbelled vaults. Conservation work on the finely sculpted architectural features in the area such as carved lintels, door surrounds, and low profile bas reliefs on the ceilings of cloister (quarter) vaults, will *not* be done without extensive testing on similar less artistically important details located elsewhere at the site. Instead, within this area it is proposed to select an example of unstable wall for structural consolidation and an example of a fractured lintel for repair by drilling and 'stitching' with non-ferrous metal or fiberglass dowels.

SUPERVISION:	1 Consultant, 1 Student, 1 Corporal
WORK FORCE:	1 Group of Specialized Masons - Ouvriers
SPECIAL EQUIPMENT:	Scaffolding, Jacks, Small Gantry, Chain Block & Tackle, Resin Based Adhesive, Non-Ferrous Dowels
PERIOD:	2 Months



Vishnu Temple Complex - Damaged Ficus Tree in Need of Removal, March 1993.

PROJECT 14 - TREE REMOVAL IN VISHNU COMPLEX

Research: See proposals for Forester's Research Project under Item 10 above.

Conservation Program:

- Carefully cut down this storm damaged tree in sections to avoid any harm to structures. below.
- Disengage roots from small temple structure at present tree base and consolidate temple structure as required.

SUPERVISION: 1 Supervisor, 1 Corporal

WORK FORCE: 1 Sawyers Group plus Flottants

SPECIAL EQUIPMENT: Block and Tackle, Chain Saw, Biocides

PERIOD: 1 Month



Vishnu Temple Complex - (West Elevation) View of Work in Progress, November 1992.

PROJECT 5 - VISHNU TEMPLE COMPLEX (WEST)

Research: The work on the Vishnu Temple Complex (West) is likely to be the main focus of Preah Khan Field Campaign II. Some further work will be necessary to complete the disengagement of stone piles lying inside the structures and on the eastern side of the complex. In addition it is planned to carry out an analysis of the construction of the corbelled vaults and the collapsed central tower. A survey team will also carefully document the process of stonework repair and reconstruction as this project as the project progresses.

Conservation Program: Preah Khan Report IV includes Appendix IV/B which is entitled *Preah Khan, Angkor - The Vishnu Temple Complex (West) An Archaeological Appraisal & Condition Report*. For a description of WMF's proposed work methodology for structural repairs and consolidation in this area please also refer to Appendix IV/D *Preah Khan Conservation Project - Structural Consolidation, Repair and/or Strengthening of Monuments*. It is anticipated that a full mason's chantier (work force) will be established around this project. Sturdy scaffolding and lifts will be erected to enable the careful dismantling of some of the failing stone vaults and their reconstruction thereby precluding the necessity of removing them to ground level. Other methods of structural consolidation proposed in the field report will also be implemented. This work requires supervision by the Consultant Engineer.

A previously unknown facade consisting of windows and doors was exposed in Field Campaign I. It is proposed to carefully reconstruct as much of these components as time allows during Field Campaign II following the research set out in the above cited report.

SUPERVISION: 1 Consultant Engineer, 1 Consultant Foreman Mason,
1 Supervisor, 2 Students, 1 Corporal

WORK FORCE: 1 Group Specialized Masons - Ouvriers.

SPECIAL EQUIPMENT: Structural Scaffolding, Hoist, Chain Block and
Tackle, Resin Based Adhesive, Non-Ferrous Dowels,
Steel, Concrete.

PERIOD: 4 Months



Dharmasala (Pilgrims's Rest House) - Showing Need for Consolidation, March 1993.

PROJECT 13 - DHARMASALA - STRUCTURAL STABILIZATION

Note: WMF had considered starting a major conservation intervention for this structure during Field Campaign II. However, due to the reduction Field Campaign II's primary field activity from five months to three months this project will have to be postponed until Field Campaign III, except for additional emergency stabilization measures that may be required.

Research: Continue a careful assessment of structural failures and prepare a short- and long-term work plan for the repair and consolidation of the whole structure possibly for adaptation as shelter for interpretative materials relevant to Preah Khan. The Consultant Engineer has developed a detailed study of the structural condition of the dharmasala. It is likely that the technology proposed for use in conserving this building will require further field testing.

Conservation Program: For a clearer understanding of the style and condition of the pavilion refer to the Separate Appendix IV/C entitled *Preah Khan - Angkor, The Dharmasala - A Survey Report* and Appendix IV/D *Preah Khan Conservation Project - Structural Consolidation, Repair and/or Strengthening of Monuments*. The advantages of undertaking a major program of repair and consolidation on the dharmasala are its accessibility, it is a unique and detached structure, and it contains most of the structural and material failures found at Preah Khan. It would therefore serve as a particularly good model for using different structural consolidation methods, that should prove useful at other Angkor sites. The work proposed will require temporary emergency propping and shoring of the entire structure, to ensure structural stability and safety for workers at the site. The foundations are suspect and may require underpinning along some sections of the north wall.

Once foundation work is complete, a sound working scaffold would be erected to enable the roof vaults to be partially dismantled and stored on timber platforms at the cornice level prior to their re-assembly. The dismantling and reconstruction will require careful supervision by the Consultant Engineer. Under similar careful supervision, the end walls must be partially reconstructed and tied back to the long walls of the structure.

SUPERVISION:	1 Consultant Engineer, 1 Consultant Foreman Mason, 1 Supervisor, 1 Student, 1 Corporal
WORK FORCE:	1 Group Specialized Masons - Ouvriers.
SPECIAL EQUIPMENT:	Structural Scaffolding, Chain Block and Tackle, Resin Based Adhesive, Non-Ferrous Dowels, Reinforcing Steel, Concrete
PERIOD:	5 Months



North - South Axial Passage Showing Collapse of Vaulted Roof, November 1992.

PROJECT 15 - NORTH SOUTH ACCESS PASSAGE

Research: Supplementary analyses of the vaulted roof structures of Preah Khan are to be carried out at the beginning of Field Campaign II. A plan will be prepared for diagram for their possible reconstruction. The section of passage providing access to the north from the Central Shrine should be the location for the first reconstruction work along this axis because its re-activation as a circulation passageway would again allow greater physical access in this architecturally significant area.

Conservation Program: Prior to the commencement of work all unstable sections of vaulting should be temporarily stabilized or dismantled. After careful study and recording of the *in situ* vault remains the stones should be labeled, carefully moved and stacked for reassembly. The vault should be carefully rebuilt and structurally consolidated, following the Consultant Engineer's recommendations.

SUPERVISION: 1 Consultant Engineer, 1 Supervisor, 1 Student,
1 Corporal

WORK FORCE: 1 Team of Masons - Ouvriers

SPECIAL EQUIPMENT : Steel Scaffolding and Fittings, Hoist, Block and
Tackle, Non-Ferrous Dowels, Adhesives

PERIOD: 3 Months

4. DOCUMENTATION

COMPUTERIZED ARCHITECTURAL INVENTORY

The software for comprehensively documenting the architectural features and condition of Preah Khan in a database program has been sufficiently developed to continue with field trials. With the added research and information available from recent missions, it is planned to enter data gathered on the different structures and prepare an analysis of the constructional types and conditions of the whole Preah Khan complex.

The software necessary for the inclusion of digitized images (photographs) has been customized into the program. In addition plans have been developed to expand the system and to enable data to be entered directly using laptop computers at the site.

An estimate has been included in the overall Campaign II budget for purchase of the required hardware to install and run this program. Following recommendations in WMF's Report III - *Preah Khan Conservation Plan* the project requires at least three powerful laptop computers with VGA screens to be able to complete the data loading operation. A "home based" computer can be later used to analyze the data.

This project dovetails well with the proposed computerized Movable Artifacts Inventory.

COMPUTERIZED MOVABLE ARTIFACTS INVENTORY

The urgency of establishing a procedure for recording movable artifacts and decorative stone carvings became apparent after a major break-in and theft of objects from the depots of the Conservation d'Angkor in February 1993, and to the alarming increase of looting at Preah Khan in the past twelve months. In response the Preah Khan team has developed a provisional inventory system for artifacts and easily movable architectural components (items weighing up to one metric ton). The Movable Artifacts Inventory is an expansion on the Preah Khan Computerized Architectural Inventory program previously developed for architectural documentation. All objects are to be recorded using a simple video camcorder. As each piece is filmed, a verbal commentary is also audio recorded.

The software needed to undertake this inventory must be customized according to the layout of the inventory form included in Report IV *Preah Khan - Project Mobilization*. The software for the incorporation of video taped images will also require adaptation.

The computers used for the Computerized Architectural Inventory can also be utilized for this inventory. The equipment required to initiate this project includes a video camcorder, a monitor screen and an editing system. Once the documentation is entered, it can be stored in the home based computer for different ways of analysis.

RESEARCH AND DOCUMENTATION

WMF is promoting the concept of pairing visiting foreign students with Khmer students to undertake specific research projects. Such projects could include expanding upon existing research on the morphological growth of Preah Khan, forestry and botanical researches any number of iconographical analyses. In addition, computerized inventory data inputting should be kept current. See also Section 5 "Training."

PUBLICATIONS

Besides preparing regular field reports WMF hopes to prepare a small illustrated guidebook on Preah Khan as well as a new brochure to replace the current highly successful photocopied brochure which is available to site visitors.

WMF will also continue to encourage and support scholarly publications and lectures relating to Preah Khan and other matters relevant to the conservation of Angkor.

5. TRAINING

'ON-SITE' TRAINING FOR STUDENTS

WMF will continue its commitment to both 'on-site' training at Preah Khan and the more formal lecture programs at the University of Fine Arts in Phnom Penh. WMF is hoping to engage a mature student of architecture from the USA who will take on the role of tutor and administrator for the training program. If time and financial resources permit, this person can also assist the Department of Architecture with its teaching program.

With the help of the American student WMF hopes to expand its scope of training activities at Preah Khan thus providing a more integrated educational program. As before all primary consultants will serve as teachers, but under the proposed system will no longer be responsible for the day to day organization of the students or their instructional program.

Following the successful trial programs to date of 'on-site' workshops with the Preah Khan students, it is proposed that (with the help of the tutor) several similar workshops will be held which, as before, will be open to all Cambodians involved in the management of historic sites. As the Preah Khan conservation project progresses in the future new facets of research, materials conservation, structural consolidation and site management will be addressed in the workshops.

ASSISTANCE TO THE UNIVERSITY OF FINE ARTS

Training Abroad: Although the formal training of architects and archaeologists is not strictly within WMF's purview at Angkor, through its international contacts opportunities may arise for the placement of students abroad to enable them to complete their undergraduate or post graduate formal education. WMF has decided to try and seek such opportunities for the present group of Preah Khan students that may be interested in continuing their education outside the country. Two universities in Italy have already offered to provide one year scholarships to further the scope of architectural education of selected Cambodian Students, and in America the Frank Lloyd Wright Taliesin program has offered at least one apprenticeship. For the archaeologist the most appropriate initial experience abroad might be with an archaeological excavation elsewhere in the world. The Program Director of WMF in New York has encouraged UBA archaeology students to first identify other places for training by selecting possibilities in the *Archaeological Institute of America's annual Archaeological Fieldwork Opportunities Bulletin* which has been placed for reference at the University Library.

Lectures at the University: WMF plans to continue its assistance to the Faculties of Architecture and Archaeology by providing lectures on different aspects of architecture and archaeology by its team of consultants, either at the beginning or the end of each mission. Throughout the year WMF is in communication with the respective Deans of Architecture and Archaeology regarding educational and equipment needs at the University.



University of Beaux Art Students Coding Disengaged Stones, West Vishnu Complex, November 1992.

ADVICE ON ARCHAEOLOGICAL THESES

Following the very good work undertaken by the Preah Khan students on site, WMF has offered to serve as advisors to at least two of the final year archaeology students. Both have opted to do theses related to their work at Preah Khan.

During Field Campaign III it is hoped that similar guidance will be given to the students of architecture.

6. MISCELLANEOUS RESEARCH PROJECTS

MORPHOLOGICAL GROWTH RESEARCH

A large amount of work has been done over the years on analyzing the development of Preah Khan as an architectural complex. Since the first concerted efforts by EFEO to research the site in the second decade of this century, Preah Khan's morphological development in relation to the complex story of its various religious uses have been subjects of much scholarly inquiry. The key explanations of the development of the site over time can be noted in Preah Khan Report IV, Separate Appendix E - *EFEO Archive on Preah Khan*. See also Report II - Appendix F "Bibliography Relevant to Preah Khan". Subsequent work on this subject done under the aegis of WMF was conducted by young French scholars Christine Hawixbrock and Bruno Bruguier (1991-1992). Since 1989 Professor Claude Jacques has been of major assistance to project team in explaining the history of the site. (See Appendix C "Translation of the Preah Khan Stele" of the present report and Report I - *Considerations for the Conservation and Presentation of the Historic City of Angkor* - Appendix A.) From the beginning of WMF's involvement at the site attention has been given to questions regarding dates and functions of the various buildings that comprise Preah Khan. To date there is a general understanding of the chronological development of the complex but there remains a number of additional questions. There is also the problem of the fact the history of the site is not as well known as it should be by the larger project team, not to mention the occasional visitor to the site.

Consequently in Field Campaign II WMF would like to considerably expand the general knowledge of the architectural history of Preah Khan and articulate this information in a new and more effective way. The approach to this challenge is to first analyze all that has been written on the subject and re-state the architectural history of the site in light recent knowledge gained by the exposure of inaccessible areas of the site and the recently acquired *EFEO Archive on Preah Khan* (See Separate Appendix IV/E.)

FORESTRY/BOTANICAL RESEARCH

Preah Khan is endowed today by still having an almost undisturbed jungle context. Over the past two years there has been the judicious removal of small trees and undergrowth to provide visual and physical access to the architectural remains. The vast majority of the site within its perimeter moat is fully forested and is from an ecological standpoint in tact as it has been for over four centuries. It is the intention of WMF to try and leave as much of the jungle environment at Preah Khan as is practicable and also to

recognize this jungle setting for the special aesthetic quality that it provides. Consequently WMF proposes to analyze the botanical and faunal aspects of the site with as much dedication as it would use in investigating its man-made architectural remains.

During Field Missions III and IV in 1992 -1993 questions regarding the environmental context of Preah Khan were initially addressed. Preliminary analyses with regard to Soil Composition and Botanical Observations were conducted by scientists from Sophia University (Tokyo). See Report III - *Preah Khan Conservation Plan* , Appendices D & E.) During Field Campaign II a U.S. trained Cambodian forester is joining the team and will begin to develop a full inventory of botanical specimens at the site and analyze the coexistence of these plant forms. Objectives of this study will be to better understand the ecosystem of this temple complex at Angkor, to determine ways to manage plant growth as it may affect the architectural remains, and to enhance an appreciation of these natural features through appropriate methods of interpretation.

ROLE OF WATER AT PREAH KHAN

Any visitor to Angkor can immediately see that the development of the ancient city was almost completely dependent on the manipulation of water. Its tropical climate, its geographical features and the ambition of its builders resulted in the development of a hydrological system which in its size and complexity is a marvel of human achievement.

Preah Khan has its share of impressive man made water features as are seen in its perimeter moat, tanks (reservoirs), reflecting pools within the various building complexes and its sophisticated above and below grade water drainage systems. A wide range of architectural solutions were used to handle precipitation which are increasingly noticed as the site is cleared of vegetation and debris. (See Report IV - "Waterproofing".) Given the fact that the site will be presented as a stabilized ruin and given that water is a major consideration in the conservation of ruins, an array of solutions must be developed for the protection of Preah Khan's architectural fabric from further damage. The historic role that water played at Preah Khan when it operated as a functioning complex through at least the 15th century must be better understood and when it is, this important aspect of life at the site must be interpreted. The methodology for the analysis of this natural element and its role in the Khmer culture should also be investigated through art historical themes, (the endless depictions of boating scenes noticed at Angkor Wat and the Bayon), references in inscriptions (such as the Preah Khan stele) and the famous 13th century historical account of Angkor given by Chou Ta-Kuan entitled *Notes on the Customs of Cambodia* (trans.).

MATERIALS CONSERVATION

Field Campaign I - Project Mobilization included a number of preliminary investigations pertaining to materials conservation issues. The work thus far has involved experimental applications of conservation technologies used elsewhere in the world at Preah Khan through various field tests on sample areas. Field Campaign II will involve the conservation of selected sizable building components where the results

of prior and planned additional field testing will actually be implemented. In January a full complement of materials conservation experts will conduct supplementary conservation tests and oversee materials conservation work on various areas slated for reconstruction, restoration and/or stabilization. (See also Report IV - Research and Field Testing and proposed project descriptions within this document.)

7. PROJECT PROMOTION

PUBLIC AWARENESS, BROCHURE, LECTURES & ADVOCACY

WMF will continue to promote the conservation of the Historic City of Angkor in any ways which it can. The same methods used since 1989 will continue to be used, and as opportunities arise expanded upon. For a list of WMF's promotional accomplishments for Angkor see relevant sections of Reports I, II, III & IV.

During Field Campaign II the project development team hopes to produce a more complete visitor's guide to Preah Khan and perhaps start on monograph on the history of the site, its significance, and discoveries made during its analysis and the conservation process. All project promotion will be done in cooperation with the National Heritage Protection Authority of Cambodia, the various state ministries, UNESCO and WMF's various international sponsors and project partners.

8. PROJECT DEVELOPMENT TEAM

WMF TEAM AND CAMBODIAN COUNTERPARTS

The team of consultants planned for 1993/94 Field Campaign II comprises former members of the project development team with the exception of the addition of a Cambodian Forester Mr. Ranachit Yimout (Ronnie) who has settled in Oregon USA but is back in Cambodia on an exchange program. Possible additional members may include a student of the Graduate Program in Historic Preservation at Columbia University who is expected to help with cataloguing and computer documentation work and an ICCROM trained assistant architectural conservator from Texas USA. It is likely that the work program of Field Campaign III will require that the team to be brought to Cambodia in two or three missions depending on the availability of the consultants and the success of fund raising efforts. As before, administration of the project will be divided between the World Monuments Fund office in New York, through John Stubbs, WMF Program Director, who will continue to visit the site whenever feasible, and John Sanday, WMF's Project Manager for Preah Khan who is based in Asia. Listed below are the responsibilities of the proposed team members.

Job Descriptions

WMF Project Manager - Conservation Architect - SANDAY

- To oversee the development and management of conservation activities at Preah Khan.
- To serve as project representative in the absence of World Monuments Fund (New York) management.
- To be in charge and accountable for material and labor used in connection with the conservation project and its various support requirements.
- To organize and participate in the 'on-site' training program for students of the University of Beaux Arts in Phnom Penh.
- To contribute to and coordinate the final draft of annual reports prior to their dispatch to New York for final editing, design and printing.

Conservation Architect/Planner - STUBBS

- Jointly assist Project Director in the development and management of the Preah Khan Project.

- To act as liaison between the Project Director and World Monuments Fund New York.
- To serve as representative of the Preah Khan Project for World Monuments Fund.
- To participate in the 'on-site' training program for students of the University of Beaux Arts in Phnom Penh.
- To serve as contributing author and coordinate the final production of the annual reports following their dispatch to New York for final editing, design and printing.

Surveyor/Recorder - ALDSWORTH

- To undertake the necessary survey and documentation of the structures of Preah Khan as directed by the Conservation Architect.
- To prepare necessary detailed drawings of project areas at Preah Khan following guidelines provided by Conservation Architect for use as working drawings and for report illustrations.
- To provide on site training for the team of University of Beaux Arts students working at Preah Khan and whenever possible to undertake lectures on the principles of surveying and recording, and its role in the conservation of monuments.

Civil Engineer - GAVRILOVIC

- To survey and draw up programs and designs for emergency structural stabilization, repair and reconstruction according to guidelines set by the Conservation Architect.
- To contribute to the WMF annual reports by providing descriptions of fieldwork and conservation intervention solutions.
- To prepare designs and specifications for recommended structural interventions.
- To provide 'on-site' training for the team of University of Beaux Arts students working at Preah Khan and whenever possible give lectures on the principles of Civil Engineering relative to the conservation of monuments.

Archaeologist/Researcher - HAWIXBROCK

- Under the direction of the Historian and Project Manager, to prepare a study of the morphological growth of Preah Khan which will provide direction in the assessment of structures planned for conservation.
- In collaboration with the Historian to prepare a program of *sondages* to further research the historical development of Preah Khan.
- To provide guidance to students in the Department of Archaeology, University of Beaux Arts with regard to their dissertations on Preah Khan.
- To provide an historical overview of Preah Khan for the team of Preah Khan students and introduce them to the archaeological research program. NB:

Archaeological research is referred to here as 'above-grade' architectural fabric analysis, and not orthodox subterranean work.

Historian - JACQUES

- To advise WMF on matters relating to the History, Archaeology and Epigraphy of Preah Khan. To assist in the authorship and editing of annual reports and other publications relating to Preah Khan.
- To provide direction on research activities relating to archaeology and history as may be required.
- To provide guidance to the students from the Department of Archaeology, University of Beaux Arts in the preparation of their dissertations on Preah Khan.

Computer Programmer - ARMINGTON

- To revise the computer program for the Architectural Inventory of Preah Khan as required and expand the section on movable objects.
- To train Khmer students in the gathering of information pertaining to the architectural and movable art inventories.
- To advise on the management and updating of data relating to Preah Khan and on other uses for the computer program at Angkor.

Forester/Botanist - RANACHIT (RONNIE)

- Undertake a detailed survey of the botanical features at Preah Khan.
- Prepare recommendations for the management of the forest adjacent to and within the outer moat of Preah Khan.
- Provide guidelines for the site maintenance of the moat and the forests and other plant material at Preah Khan.

Environmentalist - JEST

- To provide guidance on appropriate methodologies for the preservation and presentation of the ecology of Preah Khan.
- To help develop a model ecological analysis of Preah Khan which respects the needs of conserving the architectural remains of the complex.
- To serve as advisor to WMF on project development activities in Cambodia.

Materials Conservation - PREUSSER

- To undertake research and advise WMF on the condition of the building materials at Preah Khan.
- To provide recommendations on techniques and applications for the cleaning and consolidation of historic building materials at Preah Khan.
- In collaboration with the Forester, to provide recommendations for the control of vegetation on the structures of Preah Khan.

- To provide 'on-site' training for the team of Preah Khan students and whenever possible to undertake lectures on the principles of materials conservation and its role in the conservation of monuments.

Administrative Assistants - SMITH et al

- To provide various types of assistance to the Project Manager and the specialists working at Preah Khan.
- To serve as liaison between WMF and administrative authorities in Cambodia in the absence of the Preah Khan Project Manager.
- To oversee payments to the Preah Khan work force and maintain detailed records of such transactions.
- To oversee and be responsible for, in the absence of the Preah Khan Project Manager, receipts of sales and donations collected at the Preah Khan reception facility and maintain accurate records of these accounts.
- To oversee and be responsible for, in the absence of the Preah Khan Project Manager, the proper display of merchandise offerings which are sold for the benefit of the Preah Khan Project.
- To maintain site visitation activities, a visitor count log book and the site guest book.
- To keep a site diary of discoveries, activities, visitors etc. on a daily basis.
- To draw up an inventory of materials and keep safe and secure all WMF property in storage in Siem Reap and at Preah Khan.
- To execute various special projects and tasks for WMF administration in New York and the Preah Khan Project Manager in connection with the Preah Khan project and its display.

MISCELLANEOUS COLLABORATIVE EFFORTS

World Monuments Fund welcomes collaborative efforts and is actively encouraging other organizations to participate in the overall program to conserve and present Preah Khan as a partial ruin. There is already a proposal for preliminary research into the archaeological potential of Preah Khan under the direction of Professor Claude Jacques, Director of Studies at the Ecole Pratique des Hautes Etudes (Paris). Other ideas such as the study of architectural finishes, hydrology and wildlife at the site have been tendered and are possible as research activities in near future.

WMF is also interested in participating in collaborative programs for the Campaign to Safeguard the Monuments of Angkor and have proposed to UNESCO a joint undertaking to develop an Interpretive Center for Angkor to be located in the Angkor Tourism Building in front of the main entrance to Angkor Wat. To this end WMF has corresponded with Mr. Noe Sam, the Leader of the People's Provincial Committee of Siem Reap offering to finance the proposal. WMF also met with Mr. Leng Vy who is responsible for cultural affairs on 20th March to discuss the proposal. Mr Leng Vy was very supportive of the concept and it was agreed that WMF should ask for UNESCO collaboration and support which WMF has done. A copy of the correspondence and a brief project description is attached as an annex to this proposal.

9. BUDGET COST ANALYSIS

INTRODUCTION

The budget for Field Campaign II is based on observations made and first hand experience gained during Field Campaign I - Project Mobilization.

The budget amounting to \$225,000 has already been proposed to the WMF Board of Trustees and, subject to their approval, actions to implement the proposed activities will commence at the beginning of October pending government approval of this Campaign II Work Plan.

SUMMARY OF PROJECT ESTIMATES

As there are considerable overheads in mounting a Field Campaign of this nature, WMF has not established specific sub-project budgets at this stage. The Budget has therefore been broken into eight different activities which each have a budget line. The Budget Lines are:

OPTIMUM BUDGET

A. LOCAL SUPPORT	\$ 13,120.00
B. SITE LABOR & MAINTENANCE	\$ 24,900.00
C. SITE EQUIPMENT NON EXPENDABLE	\$ 36,500.00
SITE EQUIPMENT EXPENDABLE	\$ 9,500.00
D. OFFICE EQUIPMENT	\$ 7,250.00
E. DOCUMENTATION	\$ 3,500.00
F. TRAINING ACTIVITIES	\$ 6,700.00
G. CONSULTANTS & RELATED COSTS	<u>\$123,400.00</u>
TOTAL	<u><u>\$224,870.00</u></u>

Note In case funds for the Optimum Budget cannot be realized, a minimal Operational Budget has been calculated which follows:

OPERATIONAL BUDGET

A. LOCAL SUPPORT	\$ 13,120.00
B. SITE LABOR & MAINTENANCE	\$ 24,900.00
C. SITE EQUIPMENT NON EXPENDABLE	\$ 16,000.00
SITE EQUIPMENT EXPENDABLE	\$ 6,500.00
D. OFFICE EQUIPMENT	\$ 5,000.00
E. DOCUMENTATION	\$ 3,500.00
F. TRAINING ACTIVITIES	\$ 6,700.00
G. CONSULTANTS & RELATED COSTS	<u>\$ 86,200.00</u>
 TOTAL	 <u><u>\$161,920.00</u></u>

Note The cost of overheads, travel, daily subsistence, fees etc. are built into each of the budget lines.

BUDGET FOR FIELD CAMPAIGN II OCTOBER 1993 - MARCH 1994

WORLD MONUMENTS FUND - NEW YORK

NO	A C T I V I T Y	OCT/93	NOV/93	DEC	JAN/94	FEB/94	MAR/94	I	TOTAL

A	LOCAL SUPPORT							I	
	-----							I	
	Project Office Expenses		200	100	100			I	\$400
	House Rent	900	900	900	900	900	900	I	\$5,400
	Local Staff Salary/Bonus							I	\$0
	Administrator (Nicki)	350	350	350	350	350	350	I	\$2,100
	Students (X2)		200	200	200	200	200	I	\$1,000
	Local Manager (Soreun)		100	100	100	100	100	I	\$500
	House Staff (X2)		150	150	150	150	150	I	\$750
	Monthly Site Salaries							I	\$0
	Chef de Chantier (1m Mar)	70	70	70	70	70	70	I	\$420
	Site Manager (Depot)	50	50	50	50	50	50	I	\$300
	Transport (Hire 1 Car/1 Moto)		750		750		750	I	\$2,250
	-----							I	
								I	\$13,120

B	SITE COSTS							I	
	-----							I	
	Labour Costs (120 Workers)	1200	4500	4500	4500	4500	4500	I	\$23,700
	Site Maintenance Equipment	200	200	200	200	200	200	I	\$1,200
	-----							I	
								I	\$24,900

C	EQUIPMENT FOR SITE							I	
	-----							I	
	Jeep Purchase	4000						I	\$4,000
	Moto Purchase	1000						I	\$1,000
	Scaffolding/Fittings (On Site)	12000						I	\$12,000
	Small Mobile Crane (On Site)	5000						I	\$5,000
	Scaffold Lift	3500						I	\$3,500
	Generator		3000					I	\$3,000
	Compressor	1500			2000			I	\$3,500
	Percussion Drill & Bits	4500						I	\$4,500
	Materials (Steel, Cement, Etc)	2000	1000	500	500	500	500	I	\$5,000
	Wheel Barrows	500						I	\$500
	Epoxy Glues	1500						I	\$1,500
	Herbicides	1500						I	\$1,500
	Stone Cleaning Agents	1000						I	\$1,000
	-----							I	
								I	\$46,000

D	OFFICE EQUIPMENT							I	
	-----							I	
	Computers (2 No.)	4500						I	\$4,500
	Printer	1500						I	\$1,500
	Monitor	750						I	\$750
	Furniture, etc	500						I	\$500
	-----							I	
								I	\$7,250

E	DOCUMENTATION/PHYSICAL STUDIES							I	
	-----							I	
	Inventory of Movable Objects						1000	I	\$1,000
	Research on Materials (Stone)				1000			I	\$1,000
	Compile & Maintain Computer				500	500	500	I	\$1,500
	-----							I	
								I	\$3,500

F	TRAINING ACTIVITIES							I	
	-----							I	
	Student Expenses							I	\$0
	Food Costs - (\$6/Stu)		1200	600	600	600	1200	I	\$4,200
	Air Tickets - (\$100/Stu)		800	300	300	300	800	I	\$2,500
	-----							I	
								I	\$6,700

G	CONSULTANTS (Fees, Travel, Transit)							I	
	-----							I	
	Project Director (PJS)	5500	10500	800	5500	800	10500	I	\$33,600
	Surveyor/Recorder (FA)		7900				7900	I	\$15,800
	Environmentalist (CJ)		5500					I	\$5,500
	Historian (CJO)		4500					I	\$4,500
	Archaeologist (CH)		1500	1500	1500	1500	1500	I	\$7,500
	Structural Engineer (PG)		8500				8500	I	\$17,000
	Computer Programmer (SA)		3700					I	\$3,700
	WMF Program Director (JS)		2000				2000	I	\$4,000
	Mason Foreman		7900	4000	4000	4000	4000	I	\$23,900
	Supplementary Consultants		7900					I	\$7,900
	-----							I	
								I	\$123,400

H	PUBLICATIONS & PROMOTIONS							I	
	-----							I	
	Annual Report Publication							I	\$0
	-----							I	
								I	\$0

	MONTHLY TOTALS	53520	73370	14320	23270	14720	45670	I=====	

								I	\$224,870

FREAH KHAN CONSERVATION PROJECT

BUDGET FOR FIELD CAMPAIGN 11 OCTOBER 1993 - MARCH 1994

WORLD MONUMENTS FUND - NEW YORK

NO	A C T I V I T Y	OCT/93	NOV/93	DEC	JAN/94	FEB/94	MAR/94	I	TOTAL
A LOCAL SUPPORT									
	Project Office Expenses	200	100	100				I	\$400
	House Rent	900	900	900	900	900	900	I	\$5,400
	Local Staff Salary/Bonus							I	\$0
	Administrator (Nicki)	350	350	350	350	350	350	I	\$2,100
	Students (X2)		200	200	200	200	200	I	\$1,000
	Local Manager (Soleun)		100	100	100	100	100	I	\$500
	House Staff (X2)		150	150	150	150	150	I	\$750
	Monthly Site Salaries							I	\$0
	Chef de Chantier (Im Mai)	70	70	70	70	70	70	I	\$420
	Site Manager (Depot)	50	50	50	50	50	50	I	\$300
	Transport (Hire 1 Car/1 Moto)		750		750		750	I	\$2,250
								I	\$13,120
B SITE COSTS									
	Labour Costs (120 Workers)	1200	4500	4500	4500	4500	4500	I	\$23,700
	Site Maintenance Equipment	200	200	200	200	200	200	I	\$1,200
								I	\$24,900
C EQUIPMENT FOR SITE									
	Jeep Purchase	3000						I	\$3,000
	Moto Purchase	1000						I	\$1,000
	Scaffolding/Fittings (On Site)	3000						I	\$3,000
	Generator	2000						I	\$2,000
	Compressor	1500						I	\$1,500
	Percussion Drill & Bits	4500						I	\$4,500
	Materials (Steel, Cement, Etc)	1000	1000	500	500	500	500	I	\$4,000
	Epoxy Glues	1500						I	\$1,500
	Herbicides	1500						I	\$1,500
	Stone Cleaning Agents	500						I	\$500
								I	\$22,500
D OFFICE EQUIPMENT									
	Computers (2 No.)	2000						I	\$2,000
	Printer	1500						I	\$1,500
	Monitor	500						I	\$500
	Video Camcorder	1000						I	\$1,000
								I	\$5,000
E DOCUMENTATION/PHYSICAL STUDIES									
	Inventory of Movable Objects						1000	I	\$1,000
	Research on Materials (Stone)				1000			I	\$1,000
	Compile & Maintain Computer				500	500	500	I	\$1,500
								I	\$3,500
F TRAINING ACTIVITIES									
	Student Expenses							I	\$0
	Food Costs - (\$6/Stu)		1200	600	600	600	1200	I	\$4,200
	Air Tickets - (\$100/Stu)		800	300	300	300	800	I	\$2,500
								I	\$6,700
G CONSULTANTS									
	(Fees, Travel, Transit)							I	\$0
	Project Director (PJS)	5500	10500	800	5500	800	10500	I	\$33,600
	Surveyor/Recorder (FA) [3 Wks]		7900				7900	I	\$15,800
	Environmentalist (CJ) [2 Wks]		2500					I	\$2,500
	Historian (CJQ)		1500					I	\$1,500
	Archaeologist (CH)		7900				7900	I	\$15,800
	Structural Engineer (PG) [3 Wk]		6000					I	\$6,000
	Conservator (FP) [2 Wks]		1000				1000	I	\$2,000
	WMF Program Director (JS)		3000	1000	1000			I	\$5,000
	St Anne's Project Masons 2 Nos.		4000					I	\$4,000
	Computer Programmer (SA) [2 Wk]							I	\$86,200
H PUBLICATIONS & PROMOTIONS									
	Annual Report Publication							I	\$0
								I	\$0
MONTHLY TOTALS		32770	54770	9820	16770	9220	38570	I=====	\$161,920

10. PROJECT SCHEDULE

PERIOD BETWEEN APRIL 1993-OCTOBER 1993

Since the Field Campaign closed at the end of April 1993, a maintenance crew has been stationed at Preah Khan to keep the vegetation at bay and to patrol the site to help prevent further looting.

During this period the consultants have prepared their individual reports which have been submitted to the Program Director of WMF who along with the Project Manager is responsible for the production of the annual report for Field Campaign I.

PERIOD BETWEEN OCTOBER 1993-APRIL 1994

The proposals for Field Campaign II are set out in the present Program Proposal and Budget and in the following schedule of activities. They describe the program for both the consultants' missions as well as specific site activities that are planned for Field Campaign II.

WMF plans two major missions to occur within Field Campaign II - one at the beginning of January 1994 to set up the work program, and one in March 1994 to bring the intensive period of field activity to a close and to record the Campaign's accomplishments. It is also planned that the Project Manager will visit Preah Khan during October and again in November 1993 to reactivate the project and will visit the site during January for two weeks and at other times as required.

PREAH KHAN CONSERVATION PROJECT

OCTOBER 1993\ - JULY 1994 CAMPAIGN

WORLD MONUMENTS FUND - NEW YORK (9/7/93)

NO	A C T I V I T Y	OCT/93	NOV/93	DEC/93	JAN/94	FEB/94	MAR/94	APR/94	MAY/94	JUN/94	JUL/94	AUG/94	SEPT/94
A	LOCAL SUPPORT												
	Prepare Project Office	==>											
	Prepare Site Office	==>											
	Prepare WMF House	==>											
B	SITE ACTIVITIES												
	Project 5 - VISHNU TEMPLE COMPLEX - (WEST)												
	- Emergency Stabilization	=====>											
	- Scaffolding	=====>											
	- Partial Dismantling		=====>										
	- Consolidation			=====>									
	- Partial Reconstruction				=====>								
	Project 9 - WEST PROCESSIONAL WAY												
	Repair Re-erect and Clean Lanterns	=====>											
	Project 10 - GENERAL SITE CLEARANCE												
	- Site Maintenance	----->	----->	----->	----->	----->	----->	----->	----->	----->	----->	----->	----->
	Project 11 - MISCELLANEOUS STABILIZATION												
	General Emergency Stabilization	----->	----->	----->	----->	----->	----->	----->	----->	----->	----->	----->	----->
	Project 12 - HALL OF DANCERS												
	Example - Structural Consolidation				=====>								
	Example - Repair of Fractured Lintel					=====>							
	Example - Wall Stabilization						=====>						
	Project 13 - N.E. PAVILION (RESTHOUSE)												
	- Emergency Stabilization	=====>											
	- Consolidate Foundations		=====>										
	- Scaffolding			=====>									
	- Partial Dismantling				=====>								
	- Partial Reconstruction					=====>							
	Project 14 - TREE REMOVAL VISHNU COMPLEX												
	Carefully Remove Tree - NW Courtyard	=====>											
	Project 15 - N/S ACCESS N CENTRAL TOWER												
	Move, Stack Stones	=====>											
	Reconstruct Stone Vaults		=====>										
	Consolidate Stone Vaults			=====>									
C	RESEARCH PROGRAMS												
	Field Archaeology Program				=====>								
	Morphology of Preah Khan				----->								
	Forestry/Botanical Study				----->								
	Inventory Programs	=====>			----->								
	Materials Analysis	=====>			----->					----->		----->	
D	TRAINING ACTIVITIES												
	Diploma Supervision	==>	=====>		=====>		=====>		=====>				
	Training Sessions (7 Students)		=====>		=====>		=====>		=====>				
	Site Supervision (3 Students)			=====>		=====>		=====>		=====>			
E	DOCUMENTATION/PHYSICAL STUDIES												
	Development of Stone Inventory				=====>	----->							
	Research on Materials (Stone)				=====>	----->							
	Maintain Computer Inventory				=====>	----->							
F	PUBLICATIONS & PROMOTIONS												
	Preparation of Annual Report					=====>							
	Guidebook Preparation					----->							
	Brochure/Circular Mailing				----->								
G	CONSULTANTS												
	Project Director (PJS)	==>	=====>		=====>		=====>		=====>				
	Survey/Recording (FA)		=====>		=====>		=====>		=====>				
	Environmentalist (CJ)				=====>		=====>		=====>				
	Historian (CJQ)				----->		----->		----->				
	Archaeologist (CR)				=====>		=====>		=====>				
	Structural Engineer (PG)				=====>		=====>		=====>				
	Computer Programmer (SA)				=====>		=====>		=====>				
	WMF Program Director (JS)				=====>		=====>		=====>				
	Materials Scientist (FP)				=====>		=====>		=====>				
	Forester (RV)				----->		----->		----->				
	Mason Foreman (AB)				----->		----->		----->				
LEGEND													
	Principle Activity Deadlines	=====>											
	Ongoing Activities	----->											

ANNEX I - PROPOSAL FOR AN INTERPRETIVE CENTER AT ANGKOR

The following is a proposal forwarded to the Leader of the People's Provincial Committee, Siem Reap.

ប្រធាន អង្គការកូដិពិព្រាណាទបុរាណវិភាគលោក

សូ ម ជី រ ា ច ដូ ន

លោក ប្រធានធនាគារកម្ពុជាប្រជាជនទេសសៀមរាប-ឧត្តរមានជ័យ

ក ម រ ៖ សំនើសុំអនុញ្ញាតឱ្យអង្គការកូដិពិព្រាណាទបុរាណវិភាគលោក
ព្រាណាទបុរាណវិភាគ យកទឹកប្រាក់ចំនួន ១០០ លានរៀល ដើម្បីប្រើប្រាស់
អង្គរ និង យកវត្ថុអនុញ្ញាតវិធី ។

ដោយអង្គការយើងបានដឹងពីកំណត់អនុវត្តការជួសជុល និង ការងារ
សិក្សាស្រាវជ្រាវបច្ចេកវិទ្យាសាស្ត្រសិល្បៈខ្មែរ ក្នុងការស្រាវជ្រាវ និង បុរាណវិទ្យា
នៅព្រាណាទបុរាណវិភាគ ចាប់ពីឆ្នាំ ១៩៧០ មក តើយោងទៅតាមច្បាប់ឆ្នាំ១៩៧២-៧៣
នេះតទៅ ក្នុងការសិក្សា និង ជួសជុលព្រាណាទបុរាណវិភាគ ។

ដោយឡែកយើងឃើញនៅតំបន់អង្គរនេះមានការខ្វះខាតកន្លែងសំរាប់
ជួសជុលរូបរាងប្រាសាទ និង ជួសជុលស្ថាបត្យកម្មខ្មែរ សម្រាប់
ការសិក្សាស្រាវជ្រាវ និង ទស្សនាទៅលើអង្គរនេះ ដោយឡែកនោះ អង្គការយើងបានដឹងពីកំណត់
នៅព្រាណាទបុរាណវិភាគ អាស្រ័យលើផែនការស្រាវជ្រាវ និង ជួសជុលអង្គរនេះ
សៀមរាបឧត្តរមានជ័យ តាមការស្នើសុំរបស់អង្គការកូដិពិព្រាណាទបុរាណវិភាគ ឬ ប្រើប្រាស់ក្នុងផែនការស្រាវជ្រាវ
និង ជួសជុលអង្គរ នេះឡើងវិញ ។

អាស្រ័យតេឡេក្រាម សម្រេចលោកប្រធានមេត្តាពិនិត្យឲ្យបានច្បាស់លាស់
នេះមកដល់អង្គការយើង ដើម្បីបានជួយសម្រួលទៅតាមស្ថាបត្យកម្មខ្មែរ និង រៀប
ចំការធានាសម្របទៅតាមការសិក្សាស្រាវជ្រាវ និង ជួសជុលអង្គរនេះ
ដើម្បីជួសជុល និង រកទុនមកជួយសម្រួលការងារអភិរក្សព្រាណាទបុរាណវិភាគ
ព្រាណាទបុរាណវិភាគនៃតំបន់អង្គររបស់ខេត្តសៀមរាបយើង ។

សូមចម្លាក់ថា ទុនបំណែងទាំងឡាយត្រូវបានទាញទៅក្រៅ
ប្រទេសឡើយ ដ៏ទុនសំរាប់ការងារអភិរក្សព្រាណាទបុរាណវិភាគទាំងអស់ ។
ទុនសំរាប់ជួសជុលនិង រៀបចំព្រាណាទបុរាណវិភាគនៃតំបន់អង្គរ
ព្រាណាទបុរាណវិភាគ ប្រើប្រាស់ប្រាក់ចំនួន ១០០ លានរៀល ដើម្បីប្រើប្រាស់
ក្នុងការស្រាវជ្រាវ និង ជួសជុលអង្គរនេះ តាមការស្នើសុំរបស់អង្គការកូដិពិព្រាណាទបុរាណវិភាគ និង រដ្ឋកម្ពុជាជាដាច់ខាត ។

សម្រេចលោកប្រធាន ទទួល ក្នុងការដោះស្រាយបំណងដ៏ខ្ពង់ខ្ពស់អភិរក្ស
វិទ្យាសាស្ត្របុរាណវិភាគក្នុងការសិក្សាស្រាវជ្រាវ និង ជួសជុលអង្គរ ។

៨- ប្រធាន
អង្គប្រតិភូ

ព្រះន សុប

អត្ថបទ : - លោក ព្រាណាទបុរាណវិភាគស្ថាបត្យកម្មខ្មែរឧត្តរមានជ័យ
W.M.F. - ១០០ លានរៀល ៨០ លានរៀល ១០០ លានរៀល
ទូរស័ព្ទ ២១២-៨១៧-៨១៨ ទូរសារ ២១២-៨១៨ ៣១២៦

WORLD MONUMENTS FUND

174 East 80th Street
New York, New York 10021
Telephone: 212 517 9367
Telefax: 212 628 3146

C/o Conservation d'Angkor
Siem Reap

16th March 1993

From: Program Director, World Monuments Fund

To: Mr Noe Sam Leader of People's Provincial Committee,
Siem Reap - Odor Mencheay, State of Cambodia.

Subject: Proposal for Converting the Angkor Tourism Building (in front of
Angkor Wat) to an Interpretive Center Exhibition Hall and Simple
Retail Outlet for Angkor.

World Monuments Fund is continuing its program for the conservation of Preah Khan at Angkor which it began in 1990 and has continued to undertake during 1992 and 1993, while at the same time training students from the Departments of Architecture and Archaeology from the University of Beaux Arts Phnom Penh.

After initial investigation WMF has realized that there is a shortage of information centers on the Angkor region for tourists and there is no place for the sale of good quality books maps and souvenirs to promote the image of Angkor internationally. WMF is therefore interested in developing a proposal to use the above mentioned building for such purposes. As this building is presently in the hands of Angkor Tourism but not being put to any use we respectfully request you, Chief of the Provincial Committee, to consider the above proposition and to consider handing over this building to the WMF and its collaborators to repair it using traditional Khmer architecture, and in collaboration with other organizations to arrange the interpretive center for the promotion of national history, information on Angkor and for the sale of souvenirs. Any profit derived from this enterprise will be used solely for the conservation and interpretation of the monuments of Angkor or other monuments within Siem Reap Province.

WMF assures you that all expenses for renovation and for stocking and running the Interpretation Center will be paid for from external funds. All profits generated will be kept in Cambodia for use on Khmer Monuments.

We attach an English copy of a formal proposal for your consideration together with a Khmer translation.

Please, Chief of the Provincial Committee, accept the highest salutations from the World Monuments Fund.

JOHN STUBBS
Program Director
World Monuments Fund

C/o Dean Hor Lat
Department of Architecture
Phnom Penh.

