SAFEGUARDING MY SON WORLD HERITAGE

- Demonstration and Training in the Application of International World Heritage Standards of Conservation at My Son Group G Monuments -

- 2005 –

Preliminary Technical Report
May 2005
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1. Introduction

During the month of May the main activities have been:

- **Third Scientific Board Meeting**
- **Continuation of archaeological excavations on east side of G area, around G5 and G1. (see Zolese’ Report)**
- **Continuation of geometrical survey of G2, G4, G5 and continuation of G3 restoration (see Condoleo’ Report)**
- **Visit of Mr. Heng Daovannary, Secretary of Lao UNESCO National Commission and M.me Ho Thi Thanh Lam, Vice-Chairwoman People's Committee of Quang Nam Province**

1.1 Scientific Board Meeting

From May 12th to 14th the Third Scientific Board Meeting has been held in My Son as requested by Mr. Richard Engelhardt with letter of April 25th.

The participants have been:

- **Dr. Richard Engelhardt**, General Advisor for Culture of Asia and the Pacific, UNESCO Office Bangkok.
- **Mr. Ric Favis**, Advisor for Culture, UNESCO Office Bangkok.
- **Dr. Dang Van Bai**, Director General Dept. of National Cultural Heritage of Vietnam, Ministry of Information and Culture, Vietnam.
- **Arch. Le Thanh Vinh**, Director of Institute of Conservation of Monument, Ministry of Information and Culture, Vietnam.
- **Mr. Phan Thanh Bao**, Director, the Center for Conservation of Heritages and Monuments - Quang Nam Provincial People's Committee.
- **Dr. Mauro Cucarzi**, International Co-ordinator, Lerici Foundation, University Polytechnic of Milan, Rome.
- **Dr. Patrizia Zolese**, Chief Technical Advisor, Lerici Foundation, University Polytechnic of Milan, Rome.

Arch. Pierre Pichard and Arch. Hoang Dao Kinh, members of the Scientific Board, participated at the preparatory meeting of 25th April because they supposed to be absent at the 12-14 May meeting. Also Prof. Luigia Binda could not participate to the Meeting because committed in other meetings in Italy, but she has been informed on the
suggestions expressed by other members of the Board during the preparatory meeting (document included in April Technical Report) and she agreed.

Many important matters have been discussed during the meeting and here briefly I summarise some conclusions. The official document is in preparation.

**Year 2005**

**G Group**

- G3 Restoration finished
- G5 Restoration finished
- G1 Emergency consolidation, prior to rainy season (NE NW corners)
- G2 Geometric survey completed, emergency consolidation, prior to rainy season
- Enclosure Wall: N NE NW portions of wall exposed and consolidated
- Area: N half of site cleared to original ground level, covered with protective sand layer
- Drainage inserted into N wall
- Prepare temporary exhibition of project’s process, at site museum.

- E7 Geometric survey completed
- E7 Emergency consolidation, prior to rainy season
- E7 Restoration plan and budget prepared by 1 August

- F Group: strategy meeting, second half of July

- On site visit of MoCI scientific board at end of September

- Prepare budget and workplan for 2006

**AGREED 2006**

**G Group**

- G2 Restoration finished
- G4 Restoration finished
- Enclosure Wall: S SE SW portions of wall re-exposed and consolidated
- Area: S half of site cleared to original ground level, covered with protective sand layer
- Drainage of entire area within enclosure wall rectified

- E7 Restoration in progress

**AGREED 2007**
G Group
- G1 Restoration finished
- Area: arranged, landscaped and prepared for visitors
- Drainage system of entire area finalized
- Entry: stairs constructed for visitor access
- Interpretation materials prepared
- Manual prepared
- National workshop on restoration methodology
- International scientific conference

- E7 Restoration finished
- E7 Area arranged and prepared for visitors
- E7 Interpretation material prepared

Other Matters

Steering Committee needs to be established with responsibility for the oversight of ALL work of any type (restoration, visitor facilities, etc) by any and all groups (international, bilateral, national, provincial, district, private, volunteer) at My Son.

Temporary exhibition in D1 and D2 needs to be removed to site museum (with perhaps exception of objects from D Group.) D Group will need to be restored; emergency work is required (major cracks in towers) and the bad effects of the temporary museum needs to be reversed.

Site watchmen are required during visit hours; watchmen need to be trained. UNV could be used for this purpose. MoCI will organize a training workshop during 2005 for local staff.

Regarding finances 2006/2007: MoCI will try to identify funds to be earmarked for E Group, and during this work national experts, local workers, and other facilities can also be shared with work on G Group.

Regarding contribution of province 2006: Province will endeavour to provide in-kind contributions of: staff house/electricity/water, car/driver/petrol, workers, and others to be identified.

Visits:
From May 19th to 23rd we invited Mr. Heng Daovannary, Secretary of Lao UNESCO National Commission to visit the site and to discuss different issues common in Lao and Vietnamese World Heritage Sites.
On May 29th Mrs Ho Thi Thanh Lam, Vice-Chairwoman People's Committee of Quang Nam Province and Mr. Phan Thanh Bao, Director of Cetntrre of Cultural Heritage of Quang Nam and National Project Director visited the site.
Preliminary Technical Report on archaeological Activity

By Patrizia Zolese
(Lerici Chief Archaeologist CTA)
The archaeological team is composed by:

- Dr. Patrizia Zolese (CTA, UNESCO Project- Lerici Field Director);
- Dr. Caterina Brunelli (archaeologist, Lerici Foundation);
- Dr. Federico Barocco (archaeologist, Lerici Foundation);
- Dr. Silvia Pozzi (archaeologist, Lerici Foundation)
- Mr. Amphol Sengphachahn (architect, Lerici Foundation)
- Mr. Sinthewa Xayasane (engineer, Lerici Foundation)

This campaign has been devoted to complete the excavation on G north side area, to open new trenches on east and south side and to record the final drawings of the architectural features after the final cleaning. In the meantime, the inventory activity of artefacts found during the excavation has been continued, as well as, the record of the balk before their removal.  
The original ground layer has been reached mostly in all excavated trenches. In view to prepare the site visibility, the balks dividing the different sectors, must be removed.  
This report is concerning the final description of monument G3, and the description of trenches B2, B3, B6, B7, C1, C2, C3, C4, C5, C6, C7 and D2.
G3: Note on the foundation

Following the dismantling of SW corner carried out during the conservation work, has been possible to verify the trend of the laterite blocks placed under the elevation wall, and to verify the type of internal texture and composition of the wall itself. The outer face is composed by two bands of moulded bricks.

From the bottom: the first moulding is composed by 5 rows of bricks placed on a foundation composed by half bricks layer and by a row of laterite blocks (37x20x8 cm). About half of the laterite layer is visible, composing a projecting walk side at the base of the monument, to prevent water erosion. The second moulding is composed by 4 brick rows, over which is posed the elevation wall.

The foundation, from the bottom, is composed as follows:

1. bedrock
2. two rows of bricks
3. two rows of laterite

As already noticed, during last year’ excavations, the mandapa was built on a low foundation trench, filled by fluvial pebbles and mixed with building material (brick and tile fragments, pottery sherd).

Over this base is placed the foundation, composed by two rows of bricks (among them have been noticed some re-used samples) and one row of laterite blocks. A second laterite row marks the the mandapa basement.

In the SW corner the second row of bricks has shown a different trend, if compared to the bricks composing the wall elevation. It follows in fact N-S orientation.

A squared brick (28x28 cm.) has been placed on the corner, to join the W and S walls. Between the two facing walls there’s a filling made by brick fragments, gravel and re-used material.
The picture and the drawing are showing the SW corner, with the square brick at the cross of the two walls.
Trench B3

A new trench has been opened on the E side of G area. This trench is overlapping the continuation of laterite enclosing wall, still buried.
During the opening has been recognized a long trench, following S-N orientation, dug in recent times. This trench is 2.40 m. width, and 90 cm. deep, probably made by Vietcong soldiers during the war. The trench has been refilled by incoherent bricks, and partly cut the trench of H. Parmentier.

On the W side has been recovered Parmentier’s dumping, while on the E side of B3 has been found the laterite wall, showing on its N side the original collapse of its elevation. During the wall cleaning have been recovered complete terracotta sculptures and antefixes.
Three complete antefixes, with carved floral decoration, have the tenon inscribed with Cham letters and Chinese ideogram. Among the artefacts, has been also found a gajasimha sculpture, probably related to the roofing decoration.
FONDAZIONE ING. CARLO MAURILIO LERICI  
Politecnico di Milano

These pictures are showing different phases of the east side of enclosing wall, where have been recovered architectural decorations, including an accent with Chinese ideogram.

The Chinese ideogram is probably meaning “to hang or to insert” and it was the instruction given to the carpenters where to place this decoration. It is important to note in this case, that Chinese craftmen were in service in Cham kingdom, during 10-11 cent.

Trench B1
B1 trench has been re-opened, having been already excavated last year. The trench is keeping on the E side the laterite wall, and of the W side the collapsing, still in original deposition, of the W façade of G1 and the N façade of G4.

These collapsing have not been not removed, in view to unify the collapse still buried around G1 (excavated during this season) to have a general and complete picture of original remains.

**Trenches B4 and B5**
These trenches are related to the E side of G1 monument. The excavations showed the Parmentier trenches dug around the basement, and collapsed bricks still in primary deposition, not disturbed by the previous excavations.

After the collapse removal has been reached the original ground level.

**Trench B6 e B7**
B6 trench is placed on the base of G1’ SE side.
B7 is covering the SE corner of G1 and part of N side of G4.

This trench showed the relation between the laterite wall and the sanctuary (11.55 m. distance).
On the W side of the trench has been recognized Parmentier’s trench, and on the E side have been found bricks still in connection, related to a phase of site abandonment.

General picture of the original collapsing of G1 tower, happened after the site abandonment.
A large and extensive collapse, related to G1 and G4, has been found. Architectural decorations belonging to G1 roofing have been found. One terracotta pyramidal finial, and the body of a terracotta flying goose (*Hamsa*) among some floral accents, was mixed among the bricks.
Architectural roof decorations found in B7.

On the N side of G area have been completed the excavations of trenches related to the laterite enclosing wall.
Trench C2

The laterite wall in this trench is preserved for a maximum high of 55 cm. and a width of 75 cm. The wall is composed by blocks of 30x23x9 cm. Among the rubble covering the wall have been found a wind fragment of *Hamsa*, inscribed tenons and different fragments of floral accents. An the base of the wall has been found a drain, composed by U-shaped carved brick crossing the whole thickness of laterite wall. The drain is presenting a slight sloping elevation, following S-N direction. It has been placed on the 2\textsuperscript{nd} row of brick foundation, sustaining the laterite enclosing wall, and is covered by a rounded laterite block with protecting function. On the n side the drain was placed directly on the bedrock.
Trench C4

A very interesting feature has been found during the excavation of a stretch of laterite wall exposed in this trench. The N face is presenting a projection made by three mouldings, 85 cm. width, in axis with the N blind door of G1.

The projected moulding of laterite wall is showed in this picture. Its shape is similar to the moulding found in the false door of the sanctuary and can maybe mark a symbolic entrance on north direction.
Restitution drawing.
This projection seems to imitate the shape of the door itself, and is showing how the laterite wall was not only a plane precinct but an articulated architectural construction decorated with terracotta elements and structural special design.

In fact in this trench have been found out numerous floral accents, a *makara* head and a tympanum decoration representing a female deity seated in the Indian position. The divinity has been found in correspondence of the projection itself.
Trench C6

Close to the SW corner of C6 trench has been exposed another drain, to discharge the water. This drain is maintaining the same characteristics of the previous one, and is also covered by a rounded piece of laterite.
The S area showed a large trace of a firing, happened between the abandonment of the site and the collapsing of the kalan.

The firing was maybe due to an old spoliation, and is related to a layer 20 cm. thick.
A similar situation corresponding also to the same stratigraphic layer has been exposed in trench D3, opened between G5 and G1 N side.

The black area is showing firing traces.

The firing traces are confirming different spoliation actions, occurred in the site in different periods.

**Trenches C7-C8**
These trenches showed the NE corner of the laterite enclosing wall. The corner is also presenting, on its two faces, three mouldings.
The top of the wall was covered by rubble, belonging to the wall itself and by the dumping of previous excavations. It is interesting to notice that along all the outer face of the enclosing wall have been found pottery fragments, Chinese type and Cham coarse ware, maybe showing the use to leave offerings outside the wall area. This recovering is very important because for the first time in all My So’n area have been recovered pottery remains still in their original deposition.
Balk removal and wall visibility

As mentioned above, the stratigraphic sequence exposed during the excavation has been unified, to reconstruct the different actions happened in the site since its foundation. Eight stratigraphic units have been recognized, from the original bedrock until the recent post-war rubble. Elevation datum has been taken to follow the trend of each single stratigraphic unit. This method will provide the possibility to reconstruct in 3D the original ground surface in use during the Cham period.

In the meantime, accomplished the section reading, the balks have been removed to allow the preparation of the site visibility, and to arrange the area to discharge the water during the coming rainy season.

The balk removal will continue during next months, to expose the entire shape of the enclosing wall that for its architectural importance will be restored and showed to the public.

This unexpected architectural feature, showing an important value for the comprehension of Cham architecture, must be preserved being the only one in all My So’n area still maintaining original features not disturbed by human interventions. The Cham enclosing walls have been not fully studied, maybe because were found in poor conditions, and the attention of the scholars was concentrated on the standing buildings.

The careful excavation carried out in G group gave the possibility to understand the relation between the standing monuments and the enclosing wall and also, as mentioned above, a complex articulation of its construction.

It’s important to remember, in fact, that in the Hindu religious concept the enclosing wall is marking a sacred area, is marking a defence against evils, is marking the pradaksina or symbolic tour around the holy space performed by worshippers.

On this view the enclosing wall is a monument itself, and must be evaluated on the same level of other buildings.
1. ON SITE ACTIVITIES

During the month of May, all the architectural activities on the site have been checked by the architects of DIS: P. Condoleo, F. Landoni and M. Core. They supervised the following of the reconstruction works in G3, the geometrical survey of G4 and G5, the storage of all the bricks found during the excavation carried out by the archaeological team and the tests made on new material chosen to complete the restoration of G3 monument.

1.1 G3 - Mandapa

The fixing of the bricks of the North-East corner is progressing as described in the previous report; also the original bricks without original joint have been replaced by gluing with the natural glue. (Figs 1, 2, 3)

1.2 North Side of G3
At present the fixing phase of the bricks made by resin and mortar on this side of the wall is almost finished, and only few courses of bricks are still to be fixed. (Figs 4, 5)

1.3 North - West corner of G3

In order to replace the part of the wall in its original position, in the North West corner of Mandapa the substitution of few damaged pieces of laterite has been necessary to reinforce the foundations. (Figs 6, 7) The original pieces of laterite used to restore this corner came from the archaeological excavation of the last year; they have been precisely cut in order to exactly fill the missing.
The original blocks of laterite have been fixed by a thin joint of mortar composed by lime and thin brick powder. (Figs 8, 9)

The reconstruction of the North-West corner by using original bricks is still in progress. (Figs 10, 11)
1.4 South – West Corner of G3

During the cleaning of the wall two bricks of a special square shape have been found at the foundation level of this corner. In the meanwhile, the photographic and geometrical survey has been carried out. (Figs 12, 13)

During this working phase some decorated bricks have been found both in the foundation level both in the internal layer of the wall. (Figs 14, 15, 16)
1.5 Dismantling of G3 South – West Corner

The internal South – West Corner of Mandapa has been dismantled and all the tree roots and the soil have been removed in order to replace the bricks in their original position and to fill all the missing with other original bricks coming from the excavation trenches. (Figs 17, 18, 19, 20)
1.6 Storage of the collapsed material

All the rescued material found during the trenches excavations has been stored inside the big storeroom that was built last year close to G Group area. All the bricks have been cleaned by brushes and classified according to these characteristics: origin, size, surface features, reuse. (Fig 21, 22)

![Fig. 21 – Big Storeroom near G Group.](image1)

![Fig. 22 – Classification of the bricks.](image2)

1.7 Preparation of mortar

Mortar used inside the wall of G3 – Mandapa was made by lime and brick powder (Figs 23, 24, 25, 26) in the following quantity:

--- Lime: 1 kg

--- Brick’s powder: 3 kg divided in

- 405 g made by 0.008 to 0.16 mm
- 1620 g made by 0.5 to 1 mm
- 975 g made by 1.6 to 2 mm
2. GEOMETRICAL SURVEY

The geometrical survey of the two monuments G4 and G5 has been finished by the architects of the Vietnamese team, (Fig 25) at present the geometrical survey is in progress on the monument Gopura G2. (Fig 26)
3. TYPOLOGICAL AND DAMAGE SURVEY OF THE BUILDING

The evaluation of typological characteristics, damages and vulnerability of the monuments in My Son has been finished and all the data will be processed at the Politecnico of Milan.

4. RESEARCH OF NEW COMPATIBLE MATERIALS

As it was mentioned in the previous report, in order to complete the consolidation and the reconstruction of the ruins with compatible materials, some new bricks have been ordered and made in a local kiln. (Fig 27) The clay has been chosen and sent to be tested in the Laboratory of DIS. Also some blocks of new laterite have been chosen from “Tam Anh – Nui Thanh”. (Fig 28) All these new materials will be tested in local place by (IRS) Specific Absorption and Capillary Absorption tests, following the Italian Normal “UNI EN 772-11”.

Fig. 25 – Geometrical survey on G4.

Fig. 26 – Geometrical survey in progress on G2.
Fig. 27 – New bricks. Fig. 28 – Block of new laterite.