Report of the Joint UNESCO-WHC / ICOMOS Reactive Monitoring Mission to
The World Heritage Site of
“ANCIENT THEBES WITH ITS NECROPOLIS”, EGYPT
(8-12 April, 2017)

Karnak Temple (A. Seif)
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1 PURPOSE OF THE MISSION

Based on Decision: 39 COM 7B.49 on “Ancient Thebes with its Necropolis - Egypt” (Bonn, 2015) and taking into consideration the Operational Guidelines for the Implementation of the World Heritage Convention, The World Heritage Centre (WHC) and ICOMOS conducted a joint Reactive Monitoring mission to Egypt (Luxor) to undertake the following:

1. Assess the overall state of conservation of the property;
2. Examine the maintenance and restoration works carried out at the property;
3. Identify whether the property has been subject to encroachments which affect its authenticity and integrity;
4. Establish whether essential stabilization works are required at the property and, if so, the scope and urgency of such works;
5. Assess proposed development activities at the property, in particular the planning and design of proposed and ongoing projects, in particular those related to infrastructure and their potential impact on the Outstanding Universal Value of the property, including conditions of authenticity and integrity;
6. Assist the State Party in elaborating the terms of reference for the development of an integrated management plan and determining the program and timing for its completion.

Based on the results of the above-mentioned terms of reference and the on-site discussions with the State Party representatives, the reactive monitoring mission team prepared the following report on the findings, including recommendations to the State Party.

2 ACKNOWLEDGEMENTS

The mission wishes to express its gratitude to the Ministry of Antiquities, in Dr. Yasmin El Shazly, Head of the Department of International Organizations for Cultural Heritage and International Cooperation, Dr. Mahmoud Afifi, Head of Egyptology Sector and Dr. Waadallah Abou El-Elaa, Head of Projects Sector -
Ministry of Antiquities for their warm welcome and support. Also, the mission’s gratitude goes to Mohamed Abd el Fattah, Assistant Supervisor of International Organizations for his constant availability.

In Luxor, Dr. Mohamed Abdel Aziz, General Director of Upper Egypt for his positive attitude towards the recommendations of the mission; Dr. Hager Ahmed, Chief Inspector, Karnak Temple, Mrs. Hanaa Morsy El Desokey, Inspector - Temple of Luxor, Mr. Mohamed Hassan Wannan, Chief Inspector of Luxor Temple, Ahmed El Lithy, Director of Mut Temple, Mr. Mohamed Yahia Ewada, General Director of Archaeological Sites of Upper Egypt, Dr. Adel Erfan Ali, Director of Missions and Mr. Ali Al Reda Mohamed, Chief Inspector of the West Bank who spared no efforts to assist the mission, as well as Mr. Ahmed Khalifa, Director of Public Relations of Antiquities - Upper Egypt.

Finally, the members of the mission are also grateful to Governor Dr. Mahmoud Badr for receiving them.

3 BACKGROUND TO THE MISSION

3.1 Inscription history

The property of Thebes with its Necropolis was inscribed on the World Heritage List in 1979, at the third session of the Committee. The justification for inscription presented in the Nomination file was as follows:

"The unique character of ancient Thebes and its necropolis is the fact that it was, in the second millennium B.C., the capital of the earliest known empire in the history of mankind, from Eufrates in the north, to the 5th Nile cataract in Sudan in the south, and at least to El Alamein in the west. This empire, immense for its time and administrative technology, gave rise to an economic and cultural wealth, the basis for the creation of architectural and artistic masterpieces, crowded with rare density in a comparatively restricted area. The monuments are, generally speaking, in an extraordinary state of preservation, and constitute, together with finds of papyri, stelae, statues etc. from Thebes, the greatest source of information on all aspects of Pharaonic civilization, its internal history and external relation. The texts and pictures contain a rich documentation - also on other peoples and cultures: Nubia, Punt (at Bab el Mandeb) and Libya in Africa, Syria-Palestine and the Hittites in Asia, as well as the Aegean world.

One or several monuments or categories of monuments meet each of the criteria for inclusion in the World Heritage List. As a whole they exhibit one of the most important phases in the development of architecture as cultural expression and signify notable landmarks in the history of world architecture. The temples of Karnak and Luxor, as well as e.g. the paintings of the private tombs, undoubtedly represent unique artistic and aesthetic achievements, and the temple of Deir el Bahri is a masterpiece of the creative genius of Senmut, the most important man during the reign of Queen Hatshepsut. Pharaonic art and thought, as we find it in Thebes, has repeatedly influenced later generations in the world history."
As exponents of the capital of the earliest known empire they reflect as a whole an important socio-political stage in the development of human society and are thus associated with ideas of outstanding historical importance.”

3.2 Criteria and Outstanding Universal Value

The ICOMOS evaluation was the following:

“The site of Thebes, which includes sites as prestigious as Luxor and Karnak, certainly merits recognition, and seems to be indisputable from the point of view of World Heritage.
ICOMOS recommends the inscription of this property on the World Heritage List on the basis of criteria (i), (iii) and (vi).

(i). Thebes, the city of the god Amun, is renowned for its temples whose imposing ruins are the glory of Karnak at Luxor. These truly colossal complexes which have been enlarged numerous times comprise some of the most fascinating realizations of Antiquity the "Hypostyle Hall" of Karnak begun by Seti and completed by Ramses II (measuring 102 metres in width and 53 metres in depth, covers a surface of 5,000 square metres; its roof is supported by 134 columns, those of the central nave measuring 20.40 metres with a diameter of 3.40 metres); the temple and the colonnade of Amenophis III at Luxor, one of the most refined masterpieces of Egyptian architecture (14th century B.C.). The Theban necropolis relinquish nothing in importance or beauty to these monuments: it suffices to note the tombs of the Valley of the Kings (1,500 B.C. to 1,000 B.C.) among which is that of Tutunkhamun, the Valley of the Queens, where, among others, Nephertari, wife of Ramses II, and Tuy, his mother, are entombed; and finally at Deir-El-Bahari (western Thebes) the funerary temple of the queen Hatshepsut with its immense porticos, it superimposed terraces flanking the mountain and its frescoes which trace her voyage to the country of Punt.

(iii). The few examples which remain among these splendid monuments serve to attest to the antiquity, the unique and unequalled character of these monumental Theban ensembles.

(vi). The monumental and archaeological complex of Thebes with its temples, tombs, and royal palaces; its villages of artisans and artists; its inscriptions; its innumerable figurative representations, as valuable from an aesthetic as from a documentary point of view, constitute the material witness of the aggregate history of the Egyptian civilization from the Middle Kingdom to the beginning of the Christian era. Moreover, the texts and the paintings are the source of information concerning the people and cultures of neighboring countries: Nubia, the country of Punt, Libya, as well as Syria and the Hittite and Aegean civilizations.”

3.3 Examination of the State of Conservation by the World Heritage Committee


Three monitoring missions previous to the present one were undertaken by the UNESCO-World Heritage Centre and ICOMOS respectively in 2006, 2008 and 2009. These missions relayed the same concerns regarding the threats to the OUV of the Property.

The factors previously noted as affecting the Property can be summarized as follows:

1. Raise of the underground water level;
2. Risks of flooding (Valleys of Kings and Queens);
3. Absence of a comprehensive Management Plan;
4. Major infrastructure and development projects taking place or scheduled;
5. Uncontrolled urban development;
6. Housing and agricultural encroachment on the West Bank of the Nile;
7. Demolitions in the villages of Gourna (Al Qorna) on the West Bank of the Nile and transfer of the population;

Furthermore, the Committee has expressed many concerns, requests and suggestions throughout the different Decisions over almost a decade.

In this framework, the last Committee Decision 39 COM 7B.49 adopted in Bonn, July 2015:

1. Expresses its concern about the factors affecting the property and the seeming lack of a comprehensive policy, which constitutes a threat to the integrity of the property;
2. Urges the State Party to develop, as a matter of priority, an integrated management plan for the property including conservation plans for individual site elements and a tourism control strategy, and to reduce all interventions and development measures to only essential stabilization works until such a plan has been developed and adopted;
3. Encourages the State Party to revise its Master plan 2030 to directly integrate commitment to maintaining the outstanding universal value of the property within all projects, notably the Avenue of the Sphinx, the Cornice and the landing stage for cruise boats on the West Bank, the plaza in front of the Karnak temple as well as for Gourna, etc.;
4. Reiterates its request to the State Party, in accordance to Paragraph 172 of the Operational Guidelines, to provide detailed information on the planning and design of proposed and ongoing projects, in particular those related to infrastructure development including Heritage Impact Assessments (HIAs), for a review by the Advisory Bodies, prior to approval and implementation;

5. Also requests the State Party to invite a joint World Heritage Centre/ICOMOS Reactive Monitoring mission to consider the above, evaluate the state of conservation of the property and assist the State Party in elaborating the terms of reference for the development of an integrated management plan;

6. Further requests the State Party to submit to the World Heritage Centre, by 1 December 2016, an updated report, including a 1-page executive summary, on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 41st session in 2017.

3.4 Justification of the mission

Based on the above-mentioned threats, reflected in the previous State of Conservation (SOC) reports, as well as on the Decision of the World Heritage Committee requesting that the State Party convene a Reactive Monitoring Mission, Decision 39 COM 7B.49 (Bonn, 2015), the State Party invited the World Heritage Centre and ICOMOS to conduct a joint Reactive Monitoring Mission to the site of Ancient Thebes with its Necropolis.

4 NATIONAL POLICY FOR THE PRESERVATION AND MANAGEMENT OF THE WORLD HERITAGE PROPERTY

4.1 Protected area legislation

The property is protected under the Antiquities Protection Law No. 117, issued in 1983. This Law was revised and amended by Law No. 3 as published in the official gazette in February 2010.

Currently this Law is also under revision due to the changes in the administrative structure that happened in 2011. The high council of antiquities, the national authority that is responsible of the management of the Archaeological Heritage in Egypt was transferred from the Ministry of Culture to the newly established Ministry of Antiquities.

As for the World Heritage Property, it is a three-part serial nomination consisting of the two temples or complexes on the East bank of the Nile, Karnak and Luxor, and a large archaeological area on the West Bank consisting of seven named temples or complexes in addition to the vast necropolis of the Valley of the Kings the Valley of the Queens, Deir el Bahri and the tombs of the Nobles.
The delimitation of the core site and its buffer zone were revised by the state party and submitted to the WHC in 2006.

The ownership of the property is national, regional and private. Consequently, even if the Law No. 117 (amended by Law No. 3) is applied in the archaeological areas, it does not have the same power in all the core zone of the property (private properties) and even less in the buffer zone.

4.2 Institutional Framework

As stated earlier, the Ministry of Antiquities is the sole body responsible of the archaeological sites in Egypt. Consequently, the Ministry performs its prerogatives inside the archaeological sites that are the property of the state.

In the areas situated outside the archaeological zone, or those that are privately owned, the power of decision goes to the Governor of Thebes. The Governor has the only and complete power of decision in these areas. Consequently, any infrastructure project that is planned within the Property, must be approved by the Governor’s office.

The mission noticed a lack of coordination between the different stakeholders with respect to infrastructure works and future development projects. The Governorate as the main governmental body having authority in the area. The Ministry of Antiquities is not the main decision maker with regards to the Property.

Most infrastructure and development projects are old projects that have been approved by old decrees. They were not executed at the time because of the lack of funds or because they were not considered as a priority. However, these projects are still likely to be implemented.

The Ministry of Tourism is responsible for the promotion of the archaeological sites and deals with the tourism-related activities.

As for the Ministry of Culture, after the transfer of the High Council of Antiquities to the newly established Ministry of Antiquities, it has little to do with the archaeological heritage as it used to. The New Gourna village, which is located within the boundaries of the Property falls under its jurisdiction.

4.3 Management structure

While the whole area is managed by the Supreme Council of Luxor under the authority of the Governor, the regional office of the Supreme Council of Antiquities
that is under the authority of the Ministry of Antiquities is designated as the responsible governmental body for the management and the conservation of the property. However, decision making at the property and its buffer zone mainly lies with the Governorate.

Furthermore, after the revolution and the new changes in the administration in 2013, the Supreme Council of Antiquities has been cancelled, and the Ministry of Antiquities has been established; a new department was established within the Ministry of Antiquities as a focal point for the international organizations of the cultural heritage and the international cooperation affairs. The mission learned that this department will also be the focal point for the World Heritage sites in Egypt and will be the reference for all matters related to the management of the World Heritage properties in the country.

Currently, the Ministry of Antiquities is assigning new site managers for the World Heritage properties that will report directly to the newly established department. As we have been informed during our mission that the process of nomination of these managers is currently underway.

5 IDENTIFICATION AND ASSESSMENT OF ISSUES

During the mission, many issues related to the management structure and staff, the basic infrastructure at the site, the visitors’ facilities, etc. were identified.

5.1 Management

5.1.1 Personnel and Staff

The responsible staff for the Property and eventually of the archaeological sites in the Governorate in general are divided between archaeologists and architects with some having good knowledge in restoration.

The managing staff members have no degree or formal training in the management of heritage sites, not to mention, World Heritage properties.

All the staff met during the mission requested training and assistance in order to establish the needed Management Plan requested by the World Heritage Committee. It seems that the State Party has not yet commenced the process leading to the preparation of this long-awaited Management Plan. Moreover, it was noted that the staff responsible for the property in Thebes wasn’t aware of the existence of the Operational Guidelines to the World Heritage Convention.
A few staff members who had some World Heritage related training, are now beginning to structure up in order to cope with the requirements of cultural World Heritage properties in Egypt, and are recruited in the focal point unit recently created by the Ministry of Antiquities under the direction of Dr. Yasmine El Shazly. This unit (the Department of International Organizations for Cultural Heritage and International Cooperation) is taking the task of upgrading the Management level of the World Heritage properties in Egypt, namely in Luxor.

Still, this unit with the few people in it will not be at present able to fully cope with the tremendous job that the management of the World Heritage properties and the preparation of the management plans would entail. Nonetheless, if better structured and reinforced with qualified and trained staff, and adequate financial resources, this unit would constitute a real resource to fulfil the requirements with respect to World Heritage Sites.

5.1.2 Management infrastructure

The mission noticed a lack of basic infrastructure for the management of the World Heritage Property.

In the West Bank, the only office for the management authorities is situated near the Medinet Habu Temple. It is a modest and poorly equipped building that used to host Howard Carter’s offices and the later missions to the area. There is an absence of proper scientific archive and document repository. The few books and references are deposited in a room managed as a ‘library’. Maps and plans are wall-hanged in frames but no proper working maps and plans are at the disposal of the working staff. The most complete version of the maps they use is the one published within the Atlas of the "Theban Mapping Project".
Fig. 1: The West Bank Antiquities Inspectorate (A. Seif)

Fig. 2: The office of the Director of the West Bank Antiquities Inspectorate (A. Seif)
The department is equipped with only two computers having only basic office programmes. Basic Microsoft Excel tables act as database inventories of the heritage assets for the World Heritage properties of this part of the property.
On site, there are small offices for the inspectors of the department that usually has an administrative role of checking the entrance tickets and the foreign missions who undertake excavations or restoration works.
In the East Bank, two main offices are established in Karnak and Luxor. The Karnak office is of two floors, the ground floor is dedicated for the administration and issues related to the management of the daily works with the citizens. The upper floor is occupied by the French archaeological mission with a room left for the antiquities inspectors.

Also the Karnak office has the same problems as the West Bank office. The Luxor office is the most equipped one since it is the office of the General Director of Upper Egypt in Luxor. At the Mut temple the inspector site office is a mud-brick house with no equipment and a lack of working maps. There is no sanitary (even a mobile one) in this site.
Fig. 6: The inspector’s office of the Temple of Mut – Karnak (A. Seif)
Most of the management is done through the main offices. The inspectors’ offices on site are only dedicated to check on the tourists and the foreign teams that do their excavations or restoration works during their respective missions.

The other structures present on site are visitor centres (not in all the property’s components), the police checkpoints (sometimes small movable installation) and the souvenir shops in addition to mobile WC’s.

5.1.3 Visitor Centres

The Valley of the Kings
The visitor centre opened in 2008 is today in a degraded ‘state of conservation’ and needs maintenance. The air-conditioning system is falling apart and most of the lighting system is not functional anymore.
The Centre’s architecture was tackled in the 2007 UNESCO/ICOMOS mission report. The security system, namely the Scanner Gates are partially functioning and the X-ray Baggage Scanner is out of order.

Apart from a very well-done model of the valley of the Kings, the visitors centre lacks interpretive material e.g. plans, brochures or audio guides.
There is also a lack of sanitary in comparison with the number of visitors and users.

**Fig. 11: The disaffected building at the Valley of the Kings exit (A. Seif)**

At the end of this short path, the visitor will enter the souvenir shops’ area.

**Fig. 12: The souvenir shops at the Valley of the Kings exit (A. Seif)**
Deir El Bahri
The visitors centre at the Deir al Bahri site is in a dangerous structural state. In addition to the low maintenance level of the facility, the absence of the basic visitors' orientation material and the security systems that do not work, the structure of the building faces serious structural problems apparently due to differentiated land settlements. Cracks in the concrete are visible on a section of the building, which compromises to a certain extent, the visitors' security.

Fig. 13: The structural failure of the western wall of the Deir el Bahri visitors’ centre (A. Seif)
Karnak

The visitor centre in Karnak is the best-kept centre. After speaking with the inspector of antiquities at the site, it was clear that the maintenance is done as a personal initiative of the staff since there is no staff nor budget allocated for this matter.

Nevertheless, not everything is functional in this visitors’ centre. All the DVD systems installed for projecting visitors’ information about the Karnak temple complex are out of order. Some of the TV screens are lit without showing any content.
5.1.4 Other Visitors facilities

WCs
At all the components of the property, except the Luxor temple, mobile WC units are installed in the premises of the entrances or the visitors’ centres. Despite the fact that they have a highly visual impact on the sites, these mobile units lack the proper required hygiene.
5.1.5 Interpretation and site presentation

Despite the lack of the basic interpretive material that can be distributed, rented or sold to the visitors, the sites have explanatory panels for the monuments, tombs or separate features.

Most of these panels are elaborated in the framework of the ‘Theban Mapping Project’.
Some QR code panels were noticed by the mission at Deir El Bahri and the Rameses III temple of Medinet Habu. Many attempts to read the QR codes were done without success since the panels are damaged due to the fragile nature of the material from which they were made.

5.1.6 Lighting and Security cameras

During the site visits, the mission noticed the presence of many Security cameras (CCTV) and lighting systems installed in all the sites’ locations.
After enquiring about this matter, it was explained to the mission that these CCTV cameras and lights were installed within the framework of a project that intended to ensure the utmost security to the Archaeological sites in order to create a reassuring environment for tourists. The project, which is a Loan from the Spanish Government, included the installation of lighting poles and security cameras in all the archaeological sites and their immediate surroundings. However, the CCTV cameras are still not operational.

The implementation of the project began in 2005 and stopped in 2011 due to the Revolution, then restarted again in 2013. Still, despite the fact that the lighting system is completed and functioning today, the CCTV system needs more time to be operational.

In this framework, according to the State Party officials, the installation works in Karnak and Luxor are finished up to 90%. The works are still ongoing in the West Bank, namely at the sites of the Ramasseum and the Hatshepsut Mortuary Temple.

The Mission requested that the State Party to submit to the World Heritage Centre, based on article 172 of the Operational Guidelines, comprehensive documentation on the project in the shortest delays for review by the Advisory Bodies.

### 5.1.7 Management Plan

The previous UNESCO/ICOMOS mission of 2008 reported that the property still lacks a comprehensive Management Plan. It also noted that the Getty Conservation Institute has been preparing a Management plan for the Valley of the Queens, while
the World Monuments Fund is doing a similar work in the Valley of the Kings and the SCA at Medinet Habou with the American Research Centre in Egypt.

Furthermore, the World Heritage Committee decisions since 1998 requested the State Party to submit a comprehensive Management Plan.

As we mentioned earlier, the level of expertise and proficiency of the staff at Thebes does not provide them the capacity to prepare a proper Management Plan as per the requirements of the World Heritage Committee. It is to be noted that an integrated approach will require coordination between different management plans set by the different parties involved (Getty, WMF, etc.) and implementation mechanisms.

Consequently, in order to respond to this need, the UNESCO Office in Cairo proposed to establish a series of capacity-building workshops dedicated to a hands-on training for the responsible staff. This hands-on training would be a way to assist the State Party, namely the Thebes Antiquities staff, to elaborate the needed Management Plan.

The comprehensive Management Plan could therefore result from this capacity building activity, which would be elaborated by both the trainers (World Heritage experts) and the trainees (the Antiquity Department Staff).

The director of the UNESCO Cairo Office assured the mission members of its commitment to launch this activity, and of the availability of the budget.

In the absence of a proper comprehensive Management Plan, the State Party is ensuring the minimum management functions of the Property as per the administrative prerogatives of the different administrative departments in the ministry’s structure. In this sense, the minimum basic requirements are assured namely: guards; security; minimum trash collection from the areas open for tourists (not satisfactory in all the sites); visitors ticketing and tickets inspection; channelling of the touristic flow toward the areas open for visits; coordination with the different archaeological and conservation missions (administratively); the execution of the different administrative decision of the central administration at the Ministry of Antiquities.

In the absence of proper conservation plans for the sites or for the individual monuments, scattered conservation actions without any comprehensive overall conservation strategy are undertaken by the SCA staff and the different foreign
missions in addition to conservation training projects by the American Research Centre in Egypt (ARCE).

Those activities do not follow any comprehensive plan and target only the embellishment of the monuments that have aesthetic potential for the tourists. In this regard, even the wall paintings conservation, despite the effectiveness of some of them, are done not for the surface conservation sake but in an embellishment approach for attracting more tourists.

Therefore, it is important that the comprehensive Management Plan and the Conservation Plan include an agreed clear vision and strategy and a harmonised conservation approach to be adopted and followed by all stakeholders.

5.2 Factors affecting the property

It is clear now that the State Party did not take into account the major recommendations of the previous missions or the previous recommendations of the World Heritage Committee.

Consequently, the major part of the Old Gourna (Al Qorna) houses were destroyed and the population living in them displaced.

The Plaza between the entrance of the Karnak temple complex and the Nile, in addition to the visitors centre and the souvenir shops were implemented in an incompatible scale, while the 2009 Reactive Monitoring mission report had envisaged a compatible scale and consistent architectural layout; therefore the current design requires improvement.

The excavation of the Alley of the Sphinx has been almost completely executed between the temple of Karnak and the temple of Luxor; this process led to the destruction of several important modern and traditional architectural buildings including the former ‘French Village’ close to the Nile River. The 2009 Mission indicated that several buildings that have been removed in the process were illegally built, and their inhabitants were relocated.

The decisions taken in the buffer zone/setting of the property have created a Fait Accompli; such a situation requires mitigating collateral damage and their resulting odd consequences, and trying to find solutions to lessen their impact.

These issues, in addition to other issues identified during the previous missions and stated throughout the respective decisions of the World Heritage Committee were
revisited by the present mission in order to evaluate their state of conservation, evolution and present significance. They are developed in the following paragraphs.

5.2.1 Rising of the underground water table level

The mission inspected the issue of the groundwater table in both the West as well as the East Bank parts of the property.

This matter was also discussed during the meetings with Dr. Mohamed Abdel Aziz, the Antiquities Director General of Upper Egypt and Engineer Waadallah Abou El-Elaam, the Head of Projects' Sector at the Ministry of Antiquities in Cairo.

According to the authorities, all the underground water table works were completed in 2011. They both confirmed that the installed water pumping systems in Karnak, Luxor temples and the West Bank are monitored daily with monthly reports on the evolution of the level of the underground water table sent to the Ministry of Antiquities.

The system is made of a series of trenches and perforated pipelines networked with pumping stations that collect the ground water and send it to the Nile River with some of it to the agricultural land.

The mission had the opportunity to inspect the pumping station at Luxor and verify the installation. Effectively the water table level dropped considerably in this location. Dr. Mohamed Abdel Aziz, General Director of Upper Egypt, confirmed that at 90% of the problem is solved. The water level under the Temple of Luxor and Karnak complex has been lowered from 50 cm to –2.50 metres.
Fig. 22: The underground water levels in the Luxor temple station (A. Seif)

Nevertheless, in the West Bank, namely in both the Memnon temple area and the Medinet Habu temple, the mission noticed preoccupying high ground water levels, raising the question of the overall consistency in the technical solutions to address the water table problem in this zone of the World Heritage Property.
In this framework, it is important to remember that the previous missions (2008 and 2009) requested that the drainage system of the West Bank should be an integral part of a Management Plan of the entire area. Also, it stressed that a proper archaeological investigation should be carried out before the final plan was drawn and implemented, in order to adjust the course of the drainage system and avoid damaging archaeological remains that might be discovered.. Unfortunately, this project has been implemented without taking into consideration the recommendations of the previous missions.

Consequently, the mission requested to receive a comprehensive report including an overview of the project design and the implementation phases in additional to the ground water monitoring report for the last seven months in order to check the fluctuations of the underground water level; this report and additional information will allow to better evaluate the efficiency of the implemented methods.

5.2.2 Risk of Flooding (Valley of the Kings and the Queens)

After discussing the flood risks with Engineer Waadallah Abou El-Elaa, the mission noticed that the risk is not present only in the Valley of the Kings and the Valley of the Queens but also in Tombs of the Nobles and the Rameses III temple at Medinet Habu. Also, and as noticed during the mission, the risk is still present at the Memnon Temple also.
According to Mr. Abou El-Elaa, the conditions in the West Bank are less satisfactory than the ones on the East Bank when it comes to floods. He proposed solutions and ideas to the Ministry, but no final decision has been taken yet. Consequently, an Emergency plan was drafted regarding the channelling of water away from the tombs. Currently, there are some channels dug for the floods at the valley of the Kings and partial solutions implemented for diverting the rain water but not efficient enough for floods.

The mission requested a complete report on the channelling and the Emergency Plan to be sent to the World Heritage Centre for review by the Advisory Bodies.

5.2.3 Major infrastructure and development projects taking place or scheduled

As the mission noticed from the different meetings and discussions with the officials, there are two major drives behind the government’s decisions to implement all the development projects in Thebes without sometimes replying to the requests of the World Heritage Committee or taking into consideration the recommendation of the different Reactive Monitoring Missions.

*The first* is the extreme focus on tourism as the only function of the cultural heritage inscribed on the national registry and World Heritage present in Egypt. One of the major ideas behind these projects is the transformation of Luxor into an ‘open-air museum’ attracting the maximum number of tourists and consequently raising the national income. The mission heard this more than once from the Governorate and other antiquities officials and site managers.

*The second* derives from the first and is very well defined in the 2008 mission’s report, it is: *the generally detrimental emphasis on Pharaonic Egypt. This results in the neglect or, more often, the destruction of remains of all later periods, Ptolemaic, Roman, Early Christian, etc., right up to 19th/20th century structures of historic and aesthetic value. The destruction is the result of an effort to expose the Pharaonic remains (as is the case with the Avenue of Sphinxes and the villages of Gourna – see below) or to highlight them (e.g. the plaza in front of the temple at Karnak – see below).*

Within this framework, the Mission inspected the three locations, namely the Plaza, the Avenue of the Sphinx and Old Gourna.
The mission was informed by the Karnak antiquity inspectors that the State Party has dropped the Marina project, consequently, it was not further discussed. Nevertheless, a formal letter to the UNESCO World Heritage Centre confirming this matter would be advisable.

As for the Cornice project, it was frozen for the moment owing to lack of funds. Therefore, the mission reiterates the recommendations of the 2009 Reactive Monitoring Mission regarding this matter, in case the funds are made available:

1) **Avoid any widening of the vehicular road along the riverbank:** this should remain a two lane road for local traffic, with a well organised system of diffused parking along the sidewalk opposite the Nile that should be reshaped in the framework of the renovation of the urban facade;

2) **Provide continuation and upgrading of the existing riverbank as a promenade,** which would take advantage of the foreseen removal of the floating hotel boats and allow for a continuous and close contact with the water stream and the river landscape, with landing wharfs for feluccas and small boats;

3) **Study different project concept sections,** in order to provide appropriate solutions responding sensitively to the varying site conditions. In particular, the need has been stressed to reconsider the structure of the riverbank corresponding to the Luxor temples: the existing concrete retaining walls prevent the drainage of the underground waters towards the river and represent a danger for the conservation of the site. Moreover, the opportunity should be seized to reshape the riverbank in connection with the proposed “plaza” so to improve the visual linkages between the temple and the river;

**Old Gourna**

After clearing many buildings in the disaffected village, the authorities kept part of the old village fabric with some selected houses on site. According to the Director of Upper Egypt, most of the houses are empty and part is used by the antiquities inspectors as offices and warehouses for the work equipment they use in the area of the Noble tombs. Nevertheless, we have observed at least one family still living in one of the houses.
UNESCO has undertaken damaged assessment in New Gourna and drafted project proposals for emergency restoration works that are still awaiting the green light by the State Party.

After the discussions with the authorities and the observation made on site, the mission is afraid that a series of informal occupation would operate in the
remaining houses of Old Gourna that would lead to new conservation issues in the future.

**The Plaza in front of the temple at Karnak**

As the other projects, the Plaza in front of the Karnak temple is today a *Fait Accompli*. During its inspection of the site, the mission noticed that few people use the Plaza that is in need of maintenance. According to the Antiquity inspectors, the Plaza has been rehabilitated three times since it was completed in 2011. The mission noticed that most stone paving has begun to ware and that the lighting installation is not functioning and needs maintenance.

*Fig. 26: The empty Plaza in front of the first Pylon of the Karnak temple complex*  
(A. Seif)
A model of the Plaza is displayed inside the visitors’ centre. It shows clearly the aim of the construction that goes within the tourism enhancement approach that is promoted by the State Party. The Plaza is intended to be the transitional platform for the people coming in cruise ships from the docking locations on the Nile to the Karnak Temple. Also, it is intended to host big public events.

Still the distance between the Plaza entrance and the Temple entrance is a bit far and crossing it during the hot season is not a pleasant experience. Furthermore, the Plaza is fenced and closed from the Nile side, which makes it little used by the inhabitants of Luxor.

Since it is a *Fait Accompli*, and in order to mitigate the adverse impact of the Plaza, the mission suggests reconsidering the landscaping of the plaza, following historical and archival research on its evolution throughout history, with a consideration on reconnecting it with the city fabric and re-inviting people to adopt it and to use it again; this could be the subject of an international landscaping competition. Such a project would need to be sent to the World Heritage Centre for review by the Advisory Bodies.

*The Avenue of the Sphinx*

The mission visited the avenue of the Sphinx which excavation and display are almost completed. The mission noted that the project was implemented
without a clear follow-up of the recommendations of the 2009 mission report, to conduct a comprehensive urban and social investigation, an assessment of significance of the urban fabric concerned by the project, and a Heritage Impact Assessment (HIA).

The State Party considers this project as part of its ‘transformation of Luxor into an Open Air Museum’.

From the site’s observations, the mission noted that the excavations did not take into consideration all the upper archaeological layers and strata later to the New Kingdom archaeological occupation phase. These layers were excavated in a haste by archaeologists without leaving any remains from them. Consequently, excavations removed all the features from them until it reached the New Kingdom period to which the sphinx statues belong. It would be important to provide detailed documentation on the excavations process and the adopted methodological approach to the excavations, and to clarify what was discovered from the later periods and what was the criteria involved in the decision making process when it came to removing them and continuing the excavations in order to reach the New Kingdom occupation phase.

These upper layers and findings which are part of the OUV as defined in criteria (vi) of the nomination file: *The monumental and archaeological complex of Thebes with its temples, tombs, and royal palaces; [...] constitute the material witness of the aggregate history of the Egyptian civilization from the Middle Kingdom to the beginning of the Christian era. [...]*.  

This major archaeological discovery justifies that the State Party should submit a revised statement of OUV (RSOUV), and propose a minor boundary modification. The boundary modification should include the area of the Sphinx Avenue located between the recently constructed retaining walls with a 15 meters high protection buffer zone on each side. The new modification should also include the new cleared area between the 10th Pylon of the Karnak Temple Complex and the Temple of Mut.

The above mentioned retaining walls were built on both sides of the Alley since its level is lower than the actual city streets. They are covered with clad stones for aesthetic enhancements.
Bridges are built over the avenue in order to reconnect both sides of the city that were separated by the avenue ‘canal’ or ‘ditch’.

Nevertheless, there is a section of the avenue that is not exposed yet due to the presence of two churches on its path. According to the Governor, one of the churches will be relocated and the avenue will be cleared.

The 2009 Reactive Monitoring Mission report recommended that a number of important and interesting buildings be maintained, including a minaret, a church and a number of houses.

Based on the above, the present mission recommends that a detailed statement of significance should be prepared for the two churches and the remaining buildings to be submitted to the Advisory Bodies before any action is taken by the State Party in this section of the Avenue.

The Governor emphasised that the Avenue of the Sphinx project will be completed in 2018 if the budgets are ensured as he is expecting.

![Fig. 28: The churches with part of their structures on the line of the sphinx statues (A. Seif)](image)

Also, the Governor informed the mission that a residential plot between the Mut temple and the 10th Pylon of the Karnak temple is expropriated already.
These buildings will be removed after their inhabitants leave in order to clear the way and finalize the project.

Fig. 29: The residential plot intended to be cleared out (Google Earth)

In the absence of regular maintenance, the newly exposed Avenue of the Sphinx is filled with garbage coming from the residential units on its sides.

Fig. 30: The trash and trash bins in the sphinx alley (A. Seif)
Another major issue is the state of conservation of the sphinx statues along the avenue. Most of them suffer from neglect and are in a terrible state of conservation. The ones near the residential houses are used as benches with writing in paint present on some of them. Some statues are in several scattered fragments that could be easily lost with time if not properly reassembled together.

*Fig. 31: One of the exposed sphinx statues used as a bench (A. Seif)*
Fig. 32: A sphinx statue with paint inscription (A. Seif)

Fig. 33: Scattered fragments of a destroyed sphinx statue (A. Seif)
An urgent intervention is crucial in order to conserve the exposed sphinx statues and protect them from the adverse effect of neglect and involuntary/unconscious vandalism. This situation is alarming and the statues could be lost forever if no action is immediately taken towards their conservation and protection.

5.2.4 The Birds and Bat droppings

The Birds and bat droppings is a generalized issue in all the sites either in the East or the West Bank. Many solutions were adopted but the lack of maintenance of any adopted solution is the main element behind its failure. Moreover, the application of the solutions could also be enhanced. The iron nets used in the Memnon temple, due to lack of maintenance, are found on the ground after they were taken off from their fixed original place. In the other temples, nets are put in order to close specific halls or sections of the monuments but the issue remains with the top of the architraves and the walls. This is where the pigeons stay most of the time and nest. These issues will be tackled separately when the state of conservation of the different monuments will be discussed.
5.3 The buildings of Architect Hassan Fathy of New Gorna (Al Qorna)

As outlined above, UNESCO has undertaken damaged assessment in New Gourna and drafted project proposals for emergency restoration works that are still awaiting the green light by the State Party.
It was understood that the Ministry of Culture who is the responsible authority intends to undertake a cultural adaptive reuse programme in New Gourna.

During the meeting with the Governor, the mission conveyed the alarming situation. Consequently, the Governor discussed the matter with the Minister of Culture over the phone during the meeting and promised that the situation will be solved in the near future.

The mission stressed the need to continue the follow up of this matter and to communicate with the Cairo office for further coordination. From its side the Director of the Cairo office took notice of the Governor’s action and will also follow up the matter in order to implement the conservation project as a matter of urgency, as soon as a formal request by the Egyptian authorities is made.

Furthermore, as a follow up to the recommendations of the 2009 Reactive Monitoring Mission, the mission recommends that the project budget would include an allocation for a complete assessment of the New Gourna village to be carried out permitting to better define how New Gourna (or the core as defined by the original plan) might be linked formally to the attributes reflecting the property’s Outstanding Universal Value.

Fig. 38: Hassan Fathi’s house in New Gorna showing the UNESCO temporary consolidation (A. Seif)
Fig. 39: The khan built by Hassan Fathi in New Gorna (A. Seif)

Fig. 40: The Mosque built by Hassan Fathi in New Gorna (A. Seif)
5.4 The State of Conservation of tombs and monuments

The mission visited a limited number of tombs/monuments in the different inspected sites. The time allocated to the mission was not sufficient to inspect all the elements of the property. Consequently, a sampling choice had to be made.

The mission was not allowed to visit the Tomb of Seti and the shrine of Hatshepsut. The reason given by the officials is that the visit would need a special authorization from the ministry that they cannot have. It is proposed that the UNESCO Cairo office undertake this visit at the next mission in Luxor.

The state of conservation of the different tombs/monuments visited, is detailed hereunder.

5.5 The Valleys of the Kings and the Queens

The visited tombs in the valley of the Kings are KV.62 (Tutankamon), KV.6 (Ramsesse IX), KV.2 (Ramsesse IV), KV.23 (Ay), QV.66 (Nefertari),
5.5.1 The parking facility and the route leading to both the valleys

In both valleys, the parking is situated in front of the visitor centre and the cars or buses are not allowed to go further inside the valley. From the visitor centre, towed trailers serving as a shuttle transport the visitors from the visitors’ centre to the entrance of the valley. The remaining path is continued on foot. This spatial and routing organization is satisfactory since the cars are limited to the parking next to the visitors centre and the shops.

As the mission noticed, the State Party took into consideration the previous missions and the World Heritage Centre comments regarding the closure of the area in front of the monument and prohibiting the cars and buses from parking in it while finding other adequate parking spaces.

5.5.2 Conservation issues

The 5 visited tombs are in a good state of conservation. Nevertheless, the mission asked to visit tombs that are not open to the public where the conservation has not yet started or not completely done e.g. Tomb KV 11 where the mission noticed construction equipment lying in front of it. The reply of the inspectors is always the inaccessibility to the keys of these tombs. It is proposed that the UNESCO Cairo office undertake this visit at the next mission in Luxor.

Fig. 42: Tomb no KV.11 closed for visitors (A. Seif)

Nevertheless, the mission managed to visit some of the Noble Tombs later and assess their state of conservation and the ongoing conservation measures that appear to be preoccupying in terms of conservation techniques (see below). It is hoped that the closed tombs in both the Valley of the Kings and the Valley of the Queens are not restored similarly.
5.5.3 Ongoing Conservation Works

Two of the visited tombs were conserved by the Getty institute (Tutankamon in the Valley of the Kings and Nefertari in Valley of the Queens). Although they were finished some time ago, they are very well maintained and their conditions are monitored using a remotely controlled system which the Getty Conservation Institute has installed in these tombs.

Nevertheless, maintenance is lacking for some tombs after their conservation by the expert teams, which will definitely result in more damage to the conserved monument in a very short time after the completion of conservation works. More important is the monitoring of the degradation of the conserved elements of the monuments. E.g. in the tomb KV.6, despite the fact that many enhancements were introduced to protect the walls and their paintings, the door system at the entrance of the tomb does not prevent the dust and sand from entering inside and damage the recently installed wooden floor. The mission recommends a cycle of daily cleaning of the wooden surface to prevent the accumulation of sand and dust.

*Fig. 43: The weather and control station in front of the Tomb of Nefertari (A. Seif)*
5.6 Deir El Bahri

5.6.1 Parking facility and the road to the Hatshepsut Mortuary Temple

In the Deir El Bahri site the same approach is adopted as in the Valleys of the Kings and the Queens. From the visitor centre, towed trailers serving as a shuttle transport the visitors from the visitors centre to the entrance of the valley. The remaining path is continued on foot.

This spatial and routing organization is satisfactory since the cars are limited to the parking next to the visitors centre and the shops.

By contrast with most other areas of the Property, the general condition of this temple site is satisfactory and the level of cleanliness is acceptable within the temple site and its premises. Nevertheless, there is equipment and some material left from the lighting and camera surveillance project that are lying on the side of the main areas thus causing visual pollution to the site's environment.
Also, in the same premises of the Temple, an area is transformed into a junk area for the unused and damaged trailer cars usually used to transport the tourists from the parking to the temple entrance.

The conservation works in the site are done by a Polish team from the University of Warsaw (cf. report in Annex 8.3)
Fig. 47: Part of the conservation works executed by the Warsaw University team (A. Seif)

P.S.: Since the mission was prevented from entering the sanctuary of the Hatshepsut Mortuary Temple, this part of the site was not assessed. Nevertheless, it can be assumed from the report that proper maintenance and conservation works are done by the Warsaw University team. It is proposed that the UNESCO Cairo office undertake this visit at the next mission in Luxor.

5.7 The Medinet Habu temple

5.7.1 Conservation issues

Water table

The underground water table in the Rameses III temple is still not well managed as the water level is not dropping as it should be. Traces of rising damp are clearly visible on most of the lower parts of the monuments despite the different attempts to mitigate its effect by digging trenches on the perimeter of the walls in specific places e.g. the temple of Amun Djeser-Set.
Birds Droppings

The pigeons are present in huge numbers at the site and take the upper parts of the monuments as their nesting ground. Consequently, their droppings are spread everywhere over the site’s walls and floors. The damages of the droppings on the painted walls are clearly visible and they require a technical solution.
Visitors-Induced Damages
Adverse effects resulting from visitors are present in all parts of the temple. Grease-marks are clearly shown on the lower parts of the walls from hand touching and on the bases of the columns used as benches. Even with the presence of ropes to keep the visitors to a certain distance the damage is already done and urgent protection measures are needed.
Fig. 52: Traces of worn and grease on the base of a column (A. Seif)

Fig. 53: Evidence of wearing and grease marks, caused by visitors, on the base and the lower part of a pillar (A. Seif)

**Lighting infrastructure**

The damages done by the installation of the lighting system cables is clearly visible on the flagstones of the pavements and on some lower parts of the architectural elements of the monument.
No attention was made during the installation of this network inducing visual encroachment, and most importantly irreversible damages to the stones.

Fig. 54: Cables popping up from the floor damaging the flagstones and the base of the column (A. Seif)

Fig. 55: Another example of the electric network cables (A. Seif)

5.7.2 Active Conservation Measures

Conservation works are properly conducted by the Chicago House team from the American Research Centre in Egypt at this site and funded by USAID. The works
are evolving slowly but there is a lot to do in order to cope with the fast degradation of the monument.
We include one of the conservation works report done on site in Annex 8.4.

5.8 The Tombs of the Nobles
The mission inspected the Old Gourna site where the demolished houses revealed a series of new Nobles tombs. These need appropriate protection and management measures.
The visit was made to the Gourna site as well as to some earlier discovered tombs.

5.8.1 Conservation issues and active conservation measures

Tomb TT.55 (Ramose)
The tomb presented serious damages due to cracks and fractures in the ceiling that let the rainwater seep inside the hypostyle hall. Also, the abutting rock-cut structures are in a terrible state of conservation, which is affecting the inside of Tomb TT.55. This situation compelled the SCA to take urgent actions by putting some permanent scaffoldings in order to support the collapsing bedrock. Evidence of piers splitting along bedding planes were observed and the whole bedrock is fragmenting with an important loss of material.
In fact, the whole structure and the rock in which the tomb was cut is presenting a series of serious cracks, fractures and splitting in some specific areas. All this requires adequate urgent interventions. Such interventions have to be targeted towards ensuring the structural stability of the Tomb.
In this sense, some emergency actions were taken by the State Party to support the fragile structural parts. Still, the tomb and its rock base need a serious consolidation intervention based on a thorough study namely for its structural stability.
Other closed tombs

The mission couldn’t visit the closed tombs. The same key reason was given by the staff accompanying the experts. Nevertheless, a quick tour was sufficient to show the state of the tombs and their surroundings that are used as trash collecting spaces.

It is proposed that the UNESCO Cairo office undertake this visit at the next mission in Luxor.
Fig. 58: The garbage accumulating in one of the closed tomb (A. Seif)

**Tombs TT.38, TT.112 and TT.131**
The mission visited three tombs where conservation works are being executed by the Ministry of Antiquities restorers. After a close inspection and the discussion with the staff working inside the tombs, it was noticed that the work is done without any pre-set programme or study. No proper documentation was done prior to the interventions. The only documentation is photographic documentation of the structural elements of the entrance of TT.38 that were to be replaced by new elements made of cut lime stones.

It was clear to the mission that the State Party authorities staff with the undoubtedly skilled conservation workers and personnel are trying to imitate the same approach adopted by the other conservation institutions. Dangerously, they are neglecting the most important phases of the conservation process, namely the research and documentation, and stepping directly to the implementation phase of the work.

Chemical solutions are used without proper precautions toward their limitation of use nor their appropriateness. The consequence was the over cleaning of most of the paintings which resulted in their almost complete worn out.
Fig. 59: Tomb TT. 131 (A. Seif)

Fig. 60: The damages done by over cleaning of the ceiling paintings of the vestibule of Tomb TT. 131 (A. Seif)
Fig. 61: Some of the chemicals used in the cleaning of the wall paintings of Tomb TT. 131 (A. Seif)

Fig. 62: The situation of the wall paintings in Tomb TT.112, which seem to be damaged by the inappropriate treatment and wrong cleaning methods of crystalizing salts, black stains and soiling (A. Seif)
Fig. 63: Tomb TT.38 before the restoration works of the entrance (A. Seif)

Fig. 64: Tomb TT.38 after the end of the restoration of the entrance (A. Seif)
5.9 Karnak Complex

5.9.1 Conservation issues and active conservation measures

*The excavations in front of the first Pylon*

These excavations began within the wide excavations project undertaken with the Avenue of the Sphinx project. The works in this area revealed the embankment of the temple front in order to manage a docking facility for the pharaoh’s boat allowing him and his procession to go up and continue their route to the inner sanctuary of the temple of Amon.

Nevertheless, the excavations, which revealed all the important information about the embankment, is now becoming a conservation burden. The features revealed during the excavations are degrading and deteriorating. They are in need of a quick intervention in order to stabilize them and/or backfill them for protection purposes. In the lower parts of the excavation trenches, reeds are growing at a fast pace due to the presence of the underground water table.

The mission suggested a backfilling of the already excavated and studied areas without compromising the reading of the site. It also recommended that a complete project be prepared in order to have a comprehensive approach to the conservation and the presentation of this part of the site, taking into account archaeological and historical evidence.
The Pigeons and Bat Droppings, in addition to the electric lighting network

Like in the other temples (Ramses III in Medinet Habu, Luxor, etc.) the Karnak temple complex suffers from the pigeons and bat droppings everywhere. Also, the electric and lighting networks placed to reveal the site during the night are one of the major sources of damage to these sites.

The Light show equipment and facilities

The mission was surprised to see a Seating structure built for the light show on the eastern side of the sacred lake. The mission was advised that this imposing concrete structure dates from the 1970s, but has recently been refurbished. The recent works have made it visually prominent and it is encroaching on the visual landscape of the site imposing itself as if it is one of the site’s monuments. It is not clear how this structure has affected archaeological remains but, being within the boundaries of the World Heritage Property, this structure has a clear negative impact on the OUV, and the project should have been submitted to the World Heritage Centre for review by the Advisory Bodies as per Operational Guidelines article 172.
Fig. 67: View of the seating structure from the sacred lake of the Karnak Temple complex (A. Seif)

Fig. 68: Another view of the light-show seating structure (A. Seif)
The mission addressed this issue with the inspectors of the site and stressed on the fact that according to article 172 of the Operational Guidelines, the State Party needs to submit its project to the World Heritage Centre for review by the Advisory bodies prior to implementation, in particular for interventions of this size and impact.

**The closed parts of the Temple complex**

The areas that are closed for visitors show a less satisfactory state of conservation, not to mention the classical problem of pigeons’ droppings and low maintenance of the structure.

The mission noticed the presence of a tower crane installed next to the 9th Pylon of the Karnak temple. This Pylon, situated in the area closed for the visitors, is in a critical structural state and risk of collapsing at any time. It was to be subject to a restoration project in the 1980s, but works never actually commenced. The tower crane was installed since that time and never functioned because the project did not proceed. Today both the Pylon and the tower crane are in an unknown state of stability and both risk of falling at any time.

The mission insisted on the site inspectors that an immediate action has to be taken in order to inspect the stability of both the 9th Pylon and the tower crane in order to ensure the safety of the monuments and the people on the site.
The Conservation Projects
There are many conservation projects going on in the Karnak temple complex. Some are less successful but the majority, especially the surface conservations are giving satisfactory results.

Some of the wall painting cleaning projects done by the Ministry of Antiquities team are using heavy approaches and thus causing the disappearance of some of the colours on the walls.
On the other hand, the surface conservation and repointing of the Akhmenou temple, the southern wall of the Ramses III temple wall as well as the restorations of the statues of Seti II in the Oudjet hall of the temple of Amon appear to be satisfactory.

Fig. 72: Conservation works of the southern wall of the great hypostyle hall of the temple of Amon (A. Seif)
Fig. 73: view of the Seti II restored statues at the southern Oudjet hall (A. Seif)

Fig. 74: The conservation works undertaken by the Egyptian team at the Akhmenou temple (A. Seif)

**Conservation works at the Akhmenou temple**

The collaboration between the French and the Egyptian conservation teams in some of the works done in a separate section of the Akhmenou temple are
giving good results through a sustainable approach to the conservation of archaeological buildings.

![Fig. 75: The French-Egyptian team conservation works at the Akhmenou temple (A. Seif)](image)

In this project all the conservation steps are respected and done by all the teams members paving the way to a more structured approach to the conservation. If these actions are sustained and continued, they will definitely pave the way for a better conservation practice in the near future.

**Conservation Training Project**

The mission visited yet another successful conservation project done in collaboration between the American Research Centre in Egypt (ARCE) and the Egyptian conservation students. The training field school program is financed by USAID. The team is working on the Temple of Khonsu where the trainees (most of them are advanced and almost professionals) are dealing with all the aspects of surface conservation, from stone consolidation to wall paintings.

The results are satisfactory and are done in a sustainable framework replying to the real needs of the conservation framework of the monument in hand.
The Conservation Laboratory
In the same framework, USAID financed a building material conservation laboratory, run by Dr Abdel Hakim Ahmed El Badry from ARCE. This
laboratory is the backbone facility for all the needed tests and analysis essential for the proper conservation work the team is doing on the ground.

Other conservation projects
In addition to the conservation projects mentioned above, the French team has a regular conservation programme on site. At present, they are working on the restoration of the eastern wall of the 7th Pylon Cachette court.
The restoration projects and the actions taken in addition to the collaboration efforts represent good practices that ensure the sustainability of protection endeavours, an approach that is widely needed throughout the components of the property.

5.10 The Temple of Mut

5.10.1 Conservation issues

The temple in all its elements suffer from neglect. Most of its elements are deteriorating and have serious degradation issues.
The situation is also alarming in the temple of Ramses III where the stones are fragmenting and falling apart. In fact, all the surfaces and stones present symptoms of scaling, fragmentation, delamination and disintegration.
5.10.2 Active Conservation Measures

A restoration project was done on the statues of Mut-Sekhmet by the ARCE funded by the John Hopkins University. Additionally, information panels are installed on site by the latter.
Another project was made for the Amenhotep III statue within ARCE.

Unfortunately, even if the conservation actions are giving satisfactory results in themselves, these projects are tourism-driven projects and follow the budget or the interests of the different parties involved in the study or the management of the site.
They do not follow a pre-established plan based on a long-term vision, nor on priorities and conservation needs of the different monuments.

5.11    Luxor Temple

5.11.1 Conservation issues

*Birds and bat droppings*

As outlined earlier, the pigeons are present in huge numbers at the site and take the upper parts of the monuments as their nesting ground. Moreover, bats take the sanctuary as their playing ground during the idle hours when no visitors are around. Consequently, their droppings are spread everywhere over the site’s walls and floors. The damages of the droppings on the painted walls are clearly visible.

*Fig. 85: An example of bat dropping on one of the walls of the sanctuary (A. Seif)*

*Visitors-Induce Damages*

Adverse effects of excess of visitors are present in all parts of the temple. Grease-marks are clearly shown on the lower parts of the walls from hand touching and on the bases of the columns used as benches. Even with the presence of ropes to keep the visitors to a certain distance away was recently put, the damages are already done and need urgent interventions.
5.11.2 Active Conservation Measures

Many conservation projects were being carried on at the Luxor Temple. The mission inspected three of them, which were going on or have been done recently.

*The colonnaded hall east wall* restored and stabilized by the Oriental Institute of Chicago University.

The roof of this section of the temple collapsed in the 1st century BC, and the stone blocks of the walls were late quarried and reused as building material around Luxor Temple in the medieval period. Many wall fragments were recovered in the late 1950s. 42 of these fragments were restored on the inner face of the wall hence completing part of the Opet water procession.
The Ramesses II Colossus reconstructed by the SCA staff team. This huge statue of Ramesses II was destroyed during the 4th century AD earthquake. Later, all its pieces were collected and put on a dedicated platform as a temporary storage location. The Egyptian authorities took the initiative to restore this monument and exposed it in its original place, in front of the West Pylon Tower of the Luxor Temple.
The wall paintings at the entrance of the barque sanctuary conservation ongoing project under the supervision of the Ministry of Antiquities. The project consists of the cleaning of the wall paintings in order to enhance the visitors’ experience in this part of the temple. The mission was a bit concerned about the loosen security measures taken by the authorities responsible for the projects. The scaffolding was not secured with high risk that the conservation equipment and material falling on the visitors.
Figs. 89-90: the wall paintings conservation project with the unsecured scaffolding
(A. Seif)

Here again, similarly to the situation in the temple of Mut, even if the conservation actions are giving satisfactory results in themselves, it appears that the projects are tourism-driven and follow the budget or the interests of the different parties involved
in the study or the management of the site. They do not follow a pre-established plan based on priorities and conservation needs of the different monuments.

5.11.3 The Mosque of Abu Al Haggag

After a fire that ravaged the Mosque in 2011, the restoration works undertaken by the responsible religious authorities unveiled the Pharaonic remains of the Luxor temple on which the Mosque was built.

![Fig. 91: The Mosque from the outside showing the restored façade (A. Seif)](image)

These works were done with a limited supervision from the professional bodies because the restoration works had to be done quickly in order for the Mosque to become operational again ASAP.

The WHC has not been informed of this operation or of the discoveries.
Fig. 92: A view of the Mosque from the inside (A. Seif)

Fig. 93: A view of the Mosque from the inside (A. Seif)
Fig. 94: A view of the Mosque with the Mihrab carved in one of the columns showing to the left (A. Seif)
6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The mission would like to acknowledge the efforts made by the State Party namely the Antiquities authorities for their efforts to protect the property. In this regard, the mission is glad to know about the creation of the Department of International Organizations for Cultural Heritage and International Cooperation. This focal unit is created at the Ministry of Antiquities in order to cope with the requirements of the World Heritage properties under the direction of Dr. Yasmine El Shazly. Consequently, the mission encourages the head of this unit and the team members to put their efforts into upgrading the management level of World Heritage properties in Egypt, namely in Luxor. It is important that the UNESCO office in Cairo maintain close collaboration with this unit and supports its actions in order to empower it in the accomplishment of its task.

Planning and coordination within a comprehensive conservation plan is lacking and needs to be addressed urgently. However, this should occur within an over-arching framework of the overdue and previously-requested Management Plan. The mission encourages the initiative of the UNESCO Office in Cairo in proposing to establish a series of capacity-building workshops dedicated to a hands-on training for the responsible staff. This hands-on training will be a way to assist the State Party, namely the Thebes Antiquities staff, to elaborate the needed Management Plan for the Property.

The comprehensive Management Plan will therefore be the result of this sustainable capacity building activity, which will be elaborated by both the trainers (World Heritage experts) and the trainees (the Antiquity Department Staff). The UNESCO Cairo Office plans to support the preparation the State Party in launching the preparation of the Management Plan.

The mission noticed that the State Party took into consideration the comments of previous missions and the World Heritage Committee regarding the closure of the areas in front of the temple of Deir el Bahri, the valley of the Kings and the Valley of the Queens and has prohibited cars and buses from park within the temple precincts.
As for the other large infrastructure projects, the mission expresses its great concern on their impact over the OUV of the property.

In this sense, the mission was informed by the Karnak antiquity inspectors that the State Party has dropped the Marina project; a formal letter addressed to the UNESCO World Heritage Centre confirming this matter would be advisable.

As for the Cornice project, frozen for the moment due to lack of funds, the mission reiterates the recommendations of the 2009 Reactive Monitoring Mission regarding this matter, in case the funds are made available:

1) Avoid any widening of the vehicular road along the riverbank: this should remain a two lane road for local traffic, with a well organised system of diffused parking along the sidewalk opposite the Nile that should be reshaped in the framework of the renovation of the urban facade;

2) Provide continuation and upgrading of the existing riverbank as a promenade, which would take advantage of the foreseen removal of the floating hotel boats and allow for a continuous and close contact with the water stream and the river landscape, with landing wharfs for feluccas and small boats;

3) Study different project concept sections, in order to provide appropriate solutions responding sensitively to the varying site conditions. In particular the need has been stressed to reconsider the structure of the riverbank corresponding to the Luxor temples: the existing concrete retaining walls prevent the drainage of the underground waters towards the river and represent a danger for the conservation of the site. Moreover, the opportunity should be seized to reshape the riverbank in connection with the proposed “plaza” so to improve the visual linkages between the temple and the river.

The mission noticed that the authorities at the Governorate and the Ministry of Antiquities have an extreme focus on tourism as the only function of the National and World Heritage sites present in Egypt. Based on this vision, the authorities can engage in extreme projects like the ones we have witnessed lately e.g. the Avenue of the Sphinx and the major shift of population from Old Gourna, and other similar projects. One of the major ideas behind these projects is the transformation of Luxor into an ‘open-air museum’ attracting the maximum number of tourists and consequently raising the national income. The mission heard this statement more than once from the Governor and from other antiquities officials and site managers.
The mission also noticed another drive that derives from the touristic vision mentioned above; this drive was very well defined in the 2008 mission’s report, it is the generally detrimental emphasis on Pharaonic Egypt. This results in the neglect or, more often, the destruction of remains of all later periods, Ptolemaic, Roman, Early Christian, etc., right up to 19th/20th century structures of historic and aesthetic value. The destruction is the result of an effort to expose the Pharaonic remains (as is the case with the Avenue of Sphinxes and the villages of Gourna) or to highlight them (e.g. the plaza in front of the temple at Karnak).

The UNESCO Cairo Office awaits the green light by the Egyptian Authorities to ensure technical support for Hassan Fathi’s New Gourna.

In this sense, as a follow up to the recommendations of the 2009 Reactive Monitoring Mission, the mission recommends that the restoration project of Hassan Fathi’s village in New Gourna include a special allocation dedicated for a complete assessment of the village to be carried out permitting to better define how New Gourna (or the core as defined by the original plan) might be linked formally to the attributes reflecting the property’s Outstanding Universal Value.

Also the mission reiterates the recommendations of the 2009 Reactive Monitoring Mission namely, to stop the on-going building activity inside the village area and to establish immediately protective measures for the safeguarding of the existing buildings and for a buffer area, possibly coinciding with the area of the original plan of the village, where any further uncontrolled transformations have to be avoided.

Regarding the state of conservation in the temple complex of Mut, unfortunately, even if the conservation actions are giving satisfactory results in themselves, these projects are tourism-driven projects and follow the budget or the interests of the different parties involved in the study or the management of the site. They do not follow a pre-established plan based on a long-term vision and harmonised conservation approaches and techniques, and are not planned and implemented according to priorities and conservation needs of the different monuments.

In Luxor, more emphasis should be put on the conservation of the endangered parts of the monuments where the birds and bat droppings are causing great damage as well as conservation of the walls that are on the visitors’ level of reach and where wearing and grease marks are causing the deterioration of the underlying wall paintings and reliefs.
The mission regrets that owing to administrative miscommunications, its members were not able to access and inspect some of the monuments. The mission was not able to visit the Tomb of Seti and the shrine of Hatshepsut. Furthermore, the mission couldn’t visit the closed tombs in the Valley of the Kings, in the Valley of the Queens and in the Gourna site of the Noble tombs. These should be visited by UNESCO Cairo at the next opportunity.

Furthermore, the mission requested some reports and data from the State Party during its stay in Luxor and during the meeting in Cairo with the responsible at the Ministry of Antiquities. Most of these reports were not delivered and where this did occur, the documentation was not satisfactory. Consequently, the mission reiterates that the following items should be sent to the World Heritage Centre and the advisory bodies for review:

- Comprehensive documentation on the project of the lighting and security cameras with details regarding its implementation phases.
- A comprehensive report, including an overview of the underground water project design and the implementation phases, in additional to the ground water monitoring report for the last seven months, in order to check the fluctuations of the underground water level.
- A complete report on the flood channelling and the Flood Emergency Plan established for the Valley of the Kings and the Valley of the Queens.

6.2 Recommendations

In addition to the above conclusions, the mission makes the following recommendations for additional action to be taken by the State Party, including recommendations to the World Heritage Committee:

Urgent Actions

1. An urgent intervention should occur, in order to conserve the exposed sphinx statues along the Avenue of the Sphinx and protect them from the adverse effects of neglect and vandalism. This situation is alarming and the statues could be lost forever if no action is immediately taken towards their conservation and protection.

2. Urgent measures should be taken by the State Party regarding the adverse effects of the birds and bat droppings in all the components of the property.
3. Urgent action should be taken by the State Party to support the fragile structural parts of tomb TT.55 (Ramose). The tomb and its rock base require a serious consolidation intervention based on a thorough study.

4. Urgent action should be taken in order to inspect the stability of both the 9th Pylon and the tower crane erected beside it in order to ensure the safety of archaeological remains and people.

5. Urgent actions should be taken regarding the visitors centre in Deir el Bahri, which is in a dangerous structural state. Despite the low maintenance level of the facility, the absence of the basic visitors’ orientation material and the security systems that do not work, the structure of the building faces serious settling problems. Cracks in the concrete are visible on a section of the building, which compromises to a certain extent, the visitors’ security.

Management and Planning

Management Plan

6. An integrated Management Plan should be prepared for the Property, as recommended by the previous Reactive Monitoring Missions and requested by the World Heritage Committee in its Decision 39 COM7B.49 (Bonn, 2015), based on the protection of the property’s OUV. It should include an operational management structure, measures to prevent urban encroachment, a detailed sustainable tourism management plan and a conservation plan, as follows:

Tourism and Visitor Management

- Besides focusing only on tourism development, the State Party should consider an integrated development approach that would ensure the protection of the property’s OUV, while taking in consideration socio-economic considerations, in line with the World Heritage Sustainable Development Policy. In this regard, the State Party should refrain from building tourism infrastructure that would affect the property’s OUV or integrity.

- In order to mitigate the adverse effects of tourism flows within the property, the State Party should prepare a tourism control strategy, to be included as a main section in the overall Management Plan,
which particularly considers visitor carrying capacity in consultation with both the tourism industry and local communities.

Conservation Plan

- A Conservation Plan or series of conservation plans should also be prepared setting out priorities and needs of the different monuments and components of the property in terms of conservation, maintenance and restoration works, and harmonised conservation approaches and techniques.

Reporting

7. To avoid further irreversible and adverse effects on the property and its OUV, the State Party should submit any new or ongoing project that was implemented without prior consultation with the Advisory Bodies to the World Heritage Centre for examination by the Advisory Bodies in accordance with paragraph 172 of the Operational Guidelines.

8. A comprehensive report should be provided on the documentation process followed in the conservation of the Noble tombs TT.112 and TT.131 in addition to the study on the basis of which the methods of intervention were decided.

Governance, Staff Capacity and Liaison

9. The State Party should reinforce the management and conservation structure, staffing, and financial resources.

10. Co-ordination should be strengthened between all stakeholders, especially the Governorate, the Ministry of Culture and the Ministry of Antiquities.

11. The capacities of the local staff should be reinforced; a series of training workshops and capacity building activities to be organized in collaboration with UNESCO Cairo Office would help to this effect.
12. The State Party should reinforce its cooperation with the UNESCO Cairo Office especially with regard to the preservation of the historic buildings in Hassan Fathy’s New Gourna village.

**Conservation Works**

13. To avoid the adverse and irreversible effects of inappropriate conservation choices and techniques observed at the property, no conservation works should start before detailed historical and technical studies and documentation are prepared, and quality control of conservation techniques undertaken.

14. Backfilling of the already excavated and studied areas in front of the Karnak Temple should occur, without compromising the reading of the site, and a comprehensive project should be prepared for the conservation and the presentation of this part of the property.

15. Further interventions to tombs and other monuments should cease until missing reports have been submitted to the World Heritage Centre and the Advisory Bodies for evaluation and assessment.
7 ANNEXES

7.1 Itinerary and programme

8 April  Arrival to Luxor

9 April  Visit of sites on the West Bank
        Memnon Complex
        The valley of the Kings
        Deir el Bahri
        Medinet Habu

10 April Visit of sites on the East Bank
        Karnak Temple Complex
        Mut Temple Complex
        Luxor Temple Complex

11 April Visit of sites on the West Bank
        Old Gourna – The tomb of the Nobles
        The Valley of the Queens
        Meeting with the Director of Antiquities of Upper Egypt
        Meeting with the Governor of Luxor

12 April  Arrival to Cairo
        Meeting with the Ministry of Culture officials
        Meeting with the Director of the UNESCO Cairo Office
        Departure from Cairo
7.2  Composition of mission team & List of met people and officials

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7.3 University of Warsaw conservation report
EGYPTIAN-POLISH ARCHAEOLOGICAL AND CONSERVATION MISSION
OF THE

TEMPLE OF HATSHEPSUT
AT DEIR EL-BAHARI

SEASON 2017

8 PRELIMINARY REPORT

BY ZBIGNIEWS. SZAFRANSKI
The Egyptian-Polish Mission of the Temple of Hatshepsut at Deir el-Bahari worked in the period from the 1\textsuperscript{ih} of March to the 6\textsuperscript{th} of April, 2017. It was a very short season. On the 19\textsuperscript{th} of October 2016, the Program of the Mission for season 2016/2017 was approved by Ministry of Antiquities (Legna Daima). Since that day, the Mission waited for the police Security Clearance which came on the 5\textsuperscript{th} of March 2017 (almost five months latter).

The Mission comprised:

Dr Zbigniew E. Szafranski, Egypologist, Director of the Mission;
Dr Miroslaw Barwik, Egyptologist, Deputy Director;

Egyptologists: Dr Franciszek Pawlicki, Katarzyna Kapiec, Dr Edyta Kopp, Adrianna Madej, Cynthia May-Sheikhalislami;
Conservators: Rajmund Gazda, Dorota Rudzinska and Dr Maria Lulkiewicz;
Architects: Dr Teresa Dziedzic, Sergio A. Robledo;
Engineer: Mieczyslaw Michiewicz;
Photographer: Maciej Jawomicki;
Documentalist: Sarah Fortune;
Student of archaeology: Katarzyna Kasprzycka;
Volunteer: G. Katarzyna Szafralska.

Ministry of Antiquities was represented by inspectors: Mr. Omar Fathi Hassan Hasan and Mr. Elazab Ragab Ahmed Abd Rabu. Mr. Ragab Ahmed Yassin assumed the task of \textit{rais}.

Our project benefited from the generous assistance of Dr Mohamed Ismail, Director General of Sector for Foreign Missions Affairs, Dr Mohamed Abdel Azis, Director General of Upper Egypt, Mr. Talat Abdel Aziz, Director General of West Bank, Mr. Ezz el-Din, Chief Inspector of West Bank Central Sector, Mr. Ibrahim Souleyman (former director of Kamak) and Dr. Hisham Elleithy, Director of Scientific Publication and Documentation Department.
I. STUDIES and DOCUMENTATION

1.1. MAIN SANCTUARY OF AMUN-RE, Upper Terrace

In previous seasons several parts of this structure went under conservation and reconstruction treatment. The documentation of relief decoration was carried on in order to prepare publication of the Sanctuary by Franciszek Pawlicki. 3D photographic documentation and drawings are essential for the project.

![Fig. 1. Entrance to the Main Sanctuary of Amun-Re. Space between blocks prepared for dovetail](image1)

In the Statue Room, the western wall of Chapel D, and the façade of the granite portal, have been copied in scale 1:1, on a plastic foil. The space between blocks in the entrance wall of the Sanctuary [Fig. 1], and their wooden dovetail

![Fig. 2. Wooden dovetail joint element (phot. M.](image2)

Documentation of graffiti located on the limestone construction [Fig. 3] above the Bark Hall was continued.
Fig. 3. Stone construction above the Bark Hall (phot. M Jawornicki)
Official opening of the Sanctuary for the public is planned in Fall 2017.

With this in mind, two information tablets were erected in front of the Sanctuary, close to the southern wall of the Ptolemaic Portico. We keep them covered awaiting for official opening [Fig.].

Electric lighting system was introduced inside the Sanctuary chambers [Fig. 5]. The tablets and lighting were arranged by Mieczysław Michiewicz, Franciszek Pawlicki and Zbigniew E. Szafranski.
Fig 5. Installed lamps in chambers of the Main Sanctuary of Amun-Re (photo Z.E. Szafranski)
1.2. SOUTH CHAMBER OF AMUN-RE, Upper Terrace

The conservation treatment of the South Chamber of Amun-Re of the Upper (Festival) Courtyard of the temple was finished some years ago. During this season, we have continued documentation of the decoration of the Chamber. The façade of the Chamber and representations of Sennenmut in the entrance have been copied in 1:1 scale on a plastic foil by Katarzyna Kapiec. Digital drawings of the eastern and northern walls were verified.

1.3. COMPLEX OF THE ROYAL CULT, Upper Terrace

1.3.1. Collation of plates destined for publication by Miroslaw Barwik was the aim of the present season. It comprised the decorated walls of the vestibule of the Chapel of Tuthmosis I, eastern and southern wall of the Chapel of Hatshepsut, and mortuary texts in that chapel.

Fig. 6. Preliminary reconstruction of an offering scene, which consists of 7 fragments from the Chapel of Tuthmosis I (photo M. Jawornicki)

Digital reconstruction of the northern and western walls (including portal) of the vestibule of the Tuthmosis' I Chapel has been made. Photographic documentation of decorated fragments from the Chapel of Tuthmosis I [Fig. 6] and its Vestibule has been completed by Maciej Jawornicki.

Architectural documentation of the Chapel of Hatshepsut, conducted by Teresa Dziedzie, comprised of study on the chronological construction of the Chapel's walls and their relation to the Vestibule's walls and arrangement of architraves. Theoretical reconstruction of the transport process and placement of the Chapel's heavy granite false door have been completed.

Documentation of decorated blocks and study on the reconstruction of the Complex Vestibule, made by Edyta Kopp, and of the Complex Courtyard, made by Adrianna Madej, were conducted.
1.4. THE UPPER COURTYARD, Upper Terrace

1.4.1. Documentation in 3D model
Walls and colonnades of the Courtyard were documented in 3D model by Sergio A. Robledo. The collected data forms a base for 3D reconstructions of the Courtyard.

1.4.2. Documentation of texts on the west wall
Columns of hieroglyphic texts, located on both sides of big niches of the Upper Courtyard’s West Wall, was documented in previous seasons, in scale 1:1, on a plastic foil. The texts contain a term "Mansion of Million of Years at Djoser-Djoseru ", this is one of the terms which describes the temple of Hatshepsut. Verification of the collected texts was conducted by Z.E. Szafranski.

1.5. REGISTRATION OF OBJECTS

1.5.1. Coffins and Cartonnages

Excavation in the Upper Terrace of the temple resulted in discovery of over thousand fragments of cartonnages and coffins found in tombs of the Third Intermediate Period. Work and studies on the material was continued during this season by Cynthia May Sheikhaleslami and Sarah Fortune. The material was arranged into separate inventory catalogues.

1.5.2. Offering cones

Among inscribed objects, the offering cones of the 25th Dynasty, bearing names of Mentuemhat and his wives, was documented and studied by Z.E. Szafranski.

Fig. 7. Cones of the 27th Dynasty found in the necropolis (photo M. Jawornicki)

1.5.3. Sphinxes

Study and documentation work was devoted to the material, which has derived from sandstone sphinxes of Queen Hatshepsut, found by Herbert Winlock on first half of 20th century. Some parts of these material were sorted in previous seasons. During these works were re-found many stone fragments. Among them were some sandstone fragments of bases derived from sphinxes; some walls fragments with blue-painted inscriptions, three walls fragments probably coming from chapel of Ramesses's II relative, and some fragments of votive stelae. As a result of inventory work come into being a
catalogue of wooden chests. These inventory works have been succeeded in connecting a few parts of *nemes* in nearly two wholes: ST 810 and ST005 were created one whole and ST1222, ST 1223, ST 1224 (old 924) and 1225 were created the second whole.
As a result of documentation work, made by Katarzyna Kasprzycka, some sandstone fragments were registered in statuary inventory and also come into being catalogue of drawings. All in were came into being 87 drawings of pieces which probably originated from sphinxes' bases.

1.5.3. General Inventory Books

Works on General Inventory Books, including separate catalogues of object categories, were continued by Sarah Fortune.

II. CONSERVATION AND RESORATION

11.1. Upper Shrine of Anubis, Upper Terrace

In previous seasons, movement of blocks in the corner of the Chapel western wall and the southern wall of its niche was noted. We have decided to excavate the area above the corner (S.1/17) to find the reason of the movement. In the result, the movement was caused by the work of installing electric cables for temple lighting. A trench for cables was cut in the rock. Hammer activity caused movement of Chapel blocks. It seems the situation of the Chapel is stable now, however, monitoring of the blocks will be continued.

Caution!: the lighting project works should be executed with assistance of SCA inspectors.

11.2. Hypostyle of the Lower Shrine of Anubis, Middle Terrace

Ceiling slabs of the Hypostyle went under conservation treatment. The work of the previous season on the southern part of the ceiling slabs, inside the Hypostyle, was continued [Figs. ]. Painted mortar filling between the slabs was consolidated with injections of liquid POW and Primal AC 33 by Maria Lulkiewicz. Gaps in stone were filled with the Remmers l.K substance. Paint layers on stone were consolidated with application of Paraloid B72 in toluene (Rohan&Haas, USA).
Fig. 8. Lower Anubis Shrine – Hypostyle. Conservation of ceiling slabs and architraves (photo R. Gazda)

Fig. 9. Lower Shrine of Anubis, Hypostyle.
Ceiling gaps after conservation treatment; to the right – a separate fragment, with decoration, reattached into filling between slabs (photo M Jawornicki)

Separate fragments of the painted filling were reattached inside gaps between the ceiling slabs [Fig. 9, right].
Above the Hypostyle ceiling slabs, on the walking level of Upper Portico, the southern part of the area (5 x 3.5 m) went under testing conservation treatment. Former covering level, made of white cement and sand, was removed.

*Fig. 10. The area above ceiling slabs of the Lower Anubis Shrine Hypostyle is covering with the last protecting layer (photo R. Gazda)*

Rajmund Gazda in assistance of Mieczysław Michiewicz, with application of a acryl substance Remmers Hydrotiefengrund. A level (2-3 mm) of an elastic substance Remmers Elastoschlamme was laid on the consolidated surface. This level, after 24 hours, was covered with a next protection layer, made of the cement CEM I 42.5 Portland and fine sand [*Fig. 10*]. In addition, the area was protected against sun and water with application of the silicon Atlas "HS". The treatment, covering the whole area above the Hypostyle ceiling slabs, will be continued in next season.

### 11.3. Conservation of the North Osiride Colossus, Lower Terrace

In 1929 the Metropolitan Museum of Art Mission restored a colossal figure of Hatshepsut in the form of Osiris at the end of the Northern Portico of the Lower Terrace. Since that time, new original fragments of this Colossus have been found by Polish-Egyptian Mission of the Temple of Hatshepsut. A head of the North Colossus had been restored in previous seasons. We have found two big right arm fragments among a newly discovered original material belonging to this colossus [*Fig. 11*].

*Fig. 11. Preliminary restoration of the body with the nehaha attribute of the Southern Colossus (photo M Jawornicki)*

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1 H. Winlock, *The Egyptian Expedition 1928-1929, EMMA November 1929*, 13, fig. 16.

During previous season, we started rearrangement and restoration of the sculpture. In this season, original parts of the Colossus: its three fragments of body and a fragment of its arms, went under conservation and consolidation [Fig. 12] by Dorota Rudzinska. Into destructed stone places, injections with liquid Remmers Hard 100 and BH 100 were applied.

![Fig. 12. Condition of a limestone body fragment of the Southern Colossus of Hatshepsut (photo R. Gazda)](image)

The restoration work and study on the Northern Colossus will be continued in next season.

11.4. Hathor Shrine
11.4.1. The façade of the Hathor Shrine Hypostyle I was reconstructed almost a century ago. Due to strong sun operation the surface of the restored blocks and soft gypsum fillings between them were destructed.

![Fig. 13. Conservation of the Hathor Shrine façade, the northern pylon (photo R. Gazda)](image)

Conservation treatment of the north-eastern part of the façade, in the area of two block layers below dado, conducted by Maria Lulkiewicz with assistance of Ahmed Hussein, has comprised of:

- Cleaning of the surface of then used for reconstruction blocks;
- Integration of the fillings between the blocks with application of Primal;
- Refilling the gaps between the blocks with application of a renovation substance Remmers;
- Colour unification of the block surface.

11.4.2. Below the façade of the Hathor Shrine Hypostyle I [Fig. 14] and in the northern wall of the Hypostyle I, block movement in the eastern retaining wall of the temple has been noted. To control the movement, six gypsum stabilizers were installed on the wall, by Mieczyslaw Michiewicz.
11.5. Birds Activity

Results of birds activity was removed by Dorota Rudzinska in two places:

II.5.1. The southern wall of the Punt Portico has been cleaned from the birds guano.

Caution!: lamps on the ceiling of the Portico are installed to close to the wall.

II.5.2. The southern jamb of the granite portal at the entrance to the Upper Courtyard has been cleaned from birds guano.

Dr. Zbigniew E. Szafranski
Director of the Mission
8.4 Chicago House conservation report
The mortuary temple of Rameses III (c. 1161 - 1130 B.C.) was originally surrounded by a sandstone pavement with a mud-brick wall, although much of this feature has since deteriorated or disappeared. The Epigraphic Survey of the Oriental Institute, University of Chicago, is currently working to restore this walled pavement along the south side of the temple. With the addition of
viewing platforms along the way, this walkway will allow visitors a path to less accessible points of interest in the southern side of the Mediate Habu temple complex, including the southern well of Rameses III and the columned house of the 21st Dynasty scribe, Butchamon. This project will result in a passage to these areas that is safer both for the archaeological remains, and the visitors who wish to enjoy them.
9 Introduction

A mud brick functions as an element of masonry structures. Being an integral part of a wall mass, it must be understood structurally and chemically. The susceptibility of a mud brick to be affected by decay agents depends on the type of raw materials used, the methods of construction, location, the microclimatic conditions, the mechanical and micro-structural characteristics of the mud brick itself. In this work, mineralogical composition and granulometric distribution of ancient mud bricks will be studied by using some scientific techniques such as XRD, XRD and electrical mechanical sieves, to determine the main components and characteristics, which will serve as reference for the contrivance of new mud bricks. Two samples of mud-brick wall of Rameses III were taken to be analysed by XRD to know the mineralogical composition and it will continue to gather more information by using scientific techniques to know the physical properties of historic mud bricks.

10 Conservation of mud-brick \Vall of the palace of Rameses

Ancient mud brick
Rameses III mud brick wall (c. 1161 - 1130 H.C.)

The visual appearance of the ancient mud bricks indicated that all the deterioration symptoms were due to the synergetic effects of various deterioration factors, especially air temperature and humidity factors. They also resulted from wind erosion, ground and domestic wastewater, human activities and also some biological agents.

XRD analysis results will be indicated in the report of the next season. Other researches on ancient mud brick indicated, the presence of Quartz grains [Si02], Albite [NaA1Si308] and An orthoclase [(Na,K)A1Si308] as major minerals. Those minerals originated in the raw materials of mud bricks. The presence of other minerals in old bricks was essentially linked to the aggressive effects of some deterioration factors, particularly the chemical weathering agents.
Phow 1, shows the mud-brick foundation of the first palace.
One size of mud brick was used in the construction of the palace of the Rameses III mud-brick wall and we have replicated this sizes for the conservation work. The size of mud-brick wall used in Rameses III palace, *(was mentioned in the publication of Uvo Holscher, The mortuary temple of Rameses III)*, which is approximately \(43\text{cm} \times 21\text{cm} \times \frac{1}{3}\text{cm}\) and it has been confirmed after it has been cleaned the original foundation of mud-brick wall of the first palace of Rameses III.

Mud bricks consisted mainly of Quartz \([\text{SiO}_2\text{ (Alpha quartz)}]\), Albite \([\text{NaAlSi}_3\text{O}_8]\) and Anorthoclase \([\text{(Na,K)}\text{Al}_2\text{Si}_3\text{O}_8]\), as major minerals. Diaspore \([\text{Al}_2\text{O}_3(\text{OH})]\) Orthorhombic \([\text{KA}1\text{Si}_{308}]\), Kaolinite \([\text{Al}_2\text{Si}_{205}(\text{OH})_4]\), Calcite \([\text{CaCO}_3]\) and K-feldspars \([\text{KA}1\text{Si}_{308}]\). Furthermore, Montmorillonite \([(\text{Na,Ca})_{0.33}\text{ (Al,Mg)}_2\text{Si}_{404}\cdot\text{nH}_2\text{O}]\), Illite \([(\text{K,H}_3\text{O})_2(\text{Al,Mg,Fe})_2(\text{Al,Si})_{4010}\cdot\text{(OH)2,H}_2\text{O}]\) present in small amounts.

Ancient mud brick
2.5th Dynasty (c. 760 - 656 B.C.)

Some mud brick structures are for the path of the wall Ramses III, which are from later period (the 25th Dynasty), small traces of its foundation found during the cleaning phases, which measuring \(30\text{ cm} \times 15\text{cm} \times 9\text{cm}\) *(mentioned in publication of Uvo Holscher 1941)*, and we have replicated this sizes for the conservation work.

*photo 2, shows the original mud-brick wall foundation of the first palace*

State of Conservation of mud-brick wall
Mud-brick wall of the first palace of Rameses III considered one of the important ancient buildings in Theban. Mud bricks are composed of clay, oven ash and straw. Each of those materials has its special characteristics, deterioration problems and resulting patterns. In fact, the site around that monument is subject to many aggressive destruction and alteration processes and the palace itself suffered serious damage, due to various factors, which lead to a great number of deterioration and degradation effects. Symptoms, such as crumbing and granular disintegration of brick units, were the result of wind erosion. Moreover, wash away, either in the soil or in the components of brick, resulted from the action of both ground-water and domestic wastewater.
The degradation by decomposition and alteration of the palace's main structure resulted from the effect of different destructive human actions. Animals can excavate burrows in earthen material, and by depositing their waste they can accelerate the rates of erosion. People. Sometimes the people who come to visit the monuments cause damage to them. This is because taking the same path through a monument can cause it to erode. Moreover, the disintegration and collapse of brick units occurred due to aggressive variations in air temperature and humidity and to wind erosion.

Desegregation, corrosion and holes resulted from the actions of biological agents, such as some species of animals (mice, rats etc.), and of aggressive climatic factors. Pitting effects also resulted from the action of some biological factors (insects and microorganisms). Moreover, the collapse and fall of the main structure of the monument occurred due to some severe mechanical and physical actions.

Conservation Processes

The season (October 2015 - April 2016) started on 22nd Oct. 2015 to 11th April 2016. The conservation work consisted of:

1. Site preparing, cleaning the area to reveal the traces of mud-brick foundation of first palace wall and hand-made mud brick.

2. Studying and examine the condition of mud-bricks foundation wall.

3. Consolidation of mud-brick foundation


1. Site preparing, deaning the area and reveal the traces of mud-brick foundation of first palace wall and hand-made mud brick.

Cleaning and reveal of mud-brick foundation

Holscher map was the reference to re-detect the foundation of mud-bricks wall of the first palace and split the work area searching the traces which indicated to the wall width about 291cm, we started cleaning in three areas; one was close to the wall of the second palace and second was a along the side of the temple and the third area was close to the traces of mud bricks of the structure of the mud-brick wall of 25th Dynasty.
The cleaning and removing the debris was done using by trowel, brushes and other small handheld tools with a flat, pointed blade, used to apply and spread mortar or plaster in conservation. During the cleaning, we found stone objects were buried with the debris of the excavation works in 1941, where the original pavement were missed.
photo 3-10, showing the conservators during the cleaning and revealing the foundation of mud-brick 1 of Rameses III first palace.
photo 11. shmv the Holscher map and -work area of mud-brick wall of Rameses III of the jirsi palace & pavement
photo 12,13,14, shmv the i-vork area during the cleaning and revealilng of the foundation of mud-brick wall of Rameses III of the first palace & objects found ‘were used infill in’.
photo 15-22, short' the mud-brick foundalio11 of RamesesIIIva!! and the structure of the 25th Dynasty mud-brick
Given the importance of the conservation of the mud-brick wall of the first palace of Rameses III, we were carefully to use natural hand-made mud bricks that include no additives, and mud for the mortar. The bricks were made in two sizes to replicate the original sizes used in site (two different periods). The Rameses III mud-brick, larger size is 43cm x 21cm x 13cm and the 25th Dynasty smaller size is 30cm x 15cm x 9cm; each of the bricks will be stamped "CU" of Chicago University. It has been prepared four wooden templates; two of big size and two of small size and and during the phase of producing mud-bricks, we improved the finishing form of hand-made mud brick by preparing other 4 iron templates to give the smoothly of mud brick sides. In Ancient Egypt, workers gathered mud from the Nile river, and then dug a pit and poured the mud into the pit. Workers then tramped on the mud while straw was added to solidify the brick. In the same way we gathered the clay from different land, and then the workers tramped on the mud while straw was added to reinforce the mud-brick.

New mud brick types are considered some of the most important materials to be used for the conservation of ancient brick buildings in general and in the restoration of the studied monument in particular.
photos 23-31, show the wooden templates & the stamp of Chicago University, the workers tramped on the mud and mud-bricks production.
Soil has been one of the most widely used building materials since the Neolithic, particularly in arid and semi-arid parts of the world. Commonly termed adobe, it still has considerable potential. Almost any kind of soil can be used although some modification is often necessary to add strength, it is relatively easy work with, and its plasticity and chemical stability give it great versatility. It can be moulded by hand or within rigid moulds into building blocks (bricks), can be rammed between formwork to create walls directly, and is equally suited for plastering to produce smooth or moulded finishes. Its vulnerability to erosion and damage do, however, create a constant need for maintenance in the form of re-plastering and actual repair.

2. Studying and documentation of mud-bricks foundation wall.

The examination is carried out on one level: a general examination in situ with the naked eye and with simple instruments, as an usb microscope and magnifying lenses In order to determine both the techniques and materials used, and the alterations. In the case of the foundation of mud-brick wall of first palace of Rameses III, it requires to understand the mud brick architecture. However, mud-brick construction was not without its disadvantages: mud-brick structures required continual upkeep and even with constant care would have had a limited life span. we have done a map with a scale 1:20 to register all the traces and bricks of the foundation of Rameses III mud brick wall and the small structure of the 25th Dynasty.
Photo 32-40, show the conservitors during the survey and wrapping of the old mud-bricks

Rameses III
THE FOUNDATION OF MUD-BRICK WALL OF THE 1ST PHASE OF RAMESSES PALACE

1:20

0 50
3. Consolidation of mud-brick foundation

Pre consolidation is meant for protection of mud-bricks before the following conservation works by raising the structure using new mud bricks. Ethyl silicate consolidants are materials which have been used to consolidate sandstone and limestone through the formation of silica or insoluble silicates. Ethyl silicate, the common name for tetra ethyl ortho silicate (TEOS), has found worldwide acceptance in applications when a liquid precursor of silica (SiO₂) is needed. When properly hydrolysed, ethyl silicate produces very fine particles of silica which can act as a binder to adhere refractories into ceramic shapes or provide corrosion-resistant coatings in combination with zinc dust. When vaporised and thermally decomposed upon the surfaces of semiconductor chips ethyl silicate forms electrically insulating layers of silica glass which are necessary in the fabrication of integrated circuits. The chemical applications for ethyl silicate, including cross-linking of silicones, are numerous and new applications for this versatile chemical are constantly being developed. The information presented here is intended as an aid to tailoring ethyl silicate products to your own end use.
Complete hydrolysis of ethyl silicate will produce silica and ethyl alcohol.

\[ \text{Si(OC}_2\text{H}_5\text{)}_4 + 2\text{H}_2\text{O} \rightarrow \text{SiO}_2 + 4\text{C}_2\text{H}_5\text{OH} \]

TEOS       WATER       SILICA       ETHANOL

The mud-bricks of Rameses III wall and the 25th Dynasty were consolidated using ethyl silicate. Should be to strengthen the remaining of mud brick wall of Rameses III and the remain of the 25th Dynasty structure before any intervention works, then covered with wet cloth. Been strengthened using brushes up near to the saturation, and then covered with a cloth moistened and then covered with plastic insulation to be away from direct sunlight for 15 days at least.
photo 42-45, show the conservators during the consolidation phase using ethyl silicate, applied by hand and injection.
Conservation of mud-brick architecture & Filling gaps of the new mud brick construction.

Construction planning and work organization. The analysis of the methods employed to build mud-brick houses, funerary monuments, and temples can serve to illuminate not only the structures and their construction, but also can reveal aspects of the construction planning and the levels of the organization of work and workers employed to produce the structure. Then, as now, construction presumably would have begun with a planning phase in which the size and layout of the structure would have been determined and the number of bricks needed for the project calculated, though...
this initial phase is little attested in either the textual or the archaeological record. The conservation of mud-brick architecture is an especially delicate task for archaeologists and conservators since this kind of structures are extremely fragile and vulnerable to environmental factors.
photo 51-60. show the conservators and trained workers during The reconstruction phase after the isolation of old mud-brick using fibreglass grid, then covered it with clay mortar
The reconstruction of mud brick walls was made after it had been treated and isolated the old mud-brick positioning and extend the fibreglass grid over the old mud brick, then it covered with clay plaster to make the second layer of insulation before rebuilding the mud-brick wall with new bricks.

we started rebuilding the first palace wall from the second palace wall by width about 291cm x 200cm x 1.3 height, then we left a distance of 200cm for the stone enter to pass to the stone pavement along the temple side, then we continued the extension of the wall for about 8 meter. and we will continue raising the wall next season October 2016.

filling the gaps and joints of new mud bricks was done using clay mortar and under square.
Photo 6J-70, show the conservators and trained workers during the reconstruction phase after the isolation of old mud-brick and filling the joints using clay mortar.
photo 71-75. show the consen..ators and trained workers during the reconstruction phase after the
isolation of old mud-brick and filling the joints using clay mortar
photo 76-77, shows the final section done in season with the new pavement and a plan, showing the old mud brick 11-all and the new construction.