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Conservation and Community Participation at the Palace of Prince An Naq Al Jamdār in Historic Cairo for Use at Similar Sites

Abstract

This article presents an integrated applied model of restoration methodology, re-use, and community participation to preserve one of the oldest Mamluke palaces located in one of the oldest neighborhoods in historic Cairo. The palace of Prince An Naq Al Jamdar is located in the Ad Darb Al Ahmar district, near the Cairo Citadel. This palace was mentioned by Ibn Khaldun, who lived in the years AD 1332–1406. The architecture of this palace dates to AD 1293–1659 (AH 693–1070) within the Mamluk Bahri Dynasty. This project combined scientific applications from the field of archaeological restoration with the study of historical buildings and addresses the subject of neglect that affected the building for decades. The Prince An Naq palace is an in an integrated structure with various architectural elements of stone and brick, along with wood covered with painted canvas that distinguishes the palace. Adam (2012) documented multiple mortar layers on walls, marble mosaic remains, inscriptions, iron grills, and stucco stained-glass windows in the palace. This study is in addition to the aspect of community participation that focused on achieving community development through the active participation and integration of the local community through training in maintenance, restoration, and handicraft skills for preserving archaeological and historical buildings. All activities related to the revival of ancient crafts are inseparable from antiquities and are considered an integral part of the heritage environment. This study presents a model of integrated techniques to preserve the palace architecture, including building materials and old implementation technology. It starts with a deterioration survey to develop the process of restoration using modern technologies and applies it with

the help of the local community through training and the consolidation of the concept of heritage preservation. This also entails developing proposals for adaptive re-use to place the structure on the regional tourist map in order to create a stable income for the surrounding community. This concept can also be applied to similar places in other Arab countries.

Background

The vocabulary of national heritage should represent the local cultural features and character of each country and constitute, at the same time, the degree and distinguishing features of its cultural sophistication. The archaeological and historical buildings, with their unique architectural styles, represent a vivid example of constructive interaction between humans and the environment.

The economy plays a role in the development of people and the manifestation of their creative talents in various fields of life. The flourishing of arts, architecture, and urbanism is associated with eras of economic prosperity. Cairo is a unique summary of an urban culture that consists of several overlapping historical layers that reflect the long history of the city. The importance of the historical city is due to its rich components and capabilities, in addition to the continuity of the traditional structure of social life and popular cultural values. This was the motivation for UNESCO to register it on the World Heritage List.

Introduction

We understand from the explanation of Al-Qalqashandi (1922) that the Ad Darb Al Ahmar area is in the heart of historic Cairo and is among its oldest historical areas, rich in Islamic monuments from its various eras. It starts with the Fatimid monuments and continues through the Ayyubid, Mamluk, and Ottoman periods. Just as the urban fabric of that region has varied historically, it has also diversified functionally. We find residential architecture represented by the palace and house, religious architecture represented by mosques, mausoleums, and khanqahs, civil architecture represented by the wikala and maqaad, service architecture represented by the sabil and the bimaristan, and also military architecture represented by the defensive walls and rebat. Study of this area takes place within the framework of cultural protocols agreed upon between the Egyptian government and heritage preservation organizations engaged in social work, including community participation coupled with heritage preservation. During my employment with Agha Khan Culture Services–Egypt (AKCS) I was honored to work on one of these projects as a specialist in the field of antiquities restoration and conservation: the project of the restoration and development of Prince An Naq Palace, which was designed from its inception to be a comprehensive restoration and conservation program for the building.

The Palace of Prince An Naq

The restoration of the Mamluk palace of Prince An Naq in Ad Darb Al Ahmar represented an opportunity to apply an integrated model of practical training in building restoration with community economic development and preservation of traditional crafts (FIG. 1). The palace dates to AD 1293 (AH 693) and is located on Ad Darb Al Ahmar Street. Al-Maqrizi (1956: 1364–1442) states that the owner of the palace was Prince Seif al-Din al-Naaq, and his title was the bearer of arms for protection. He also provided drink and clothes to the Sultan.

The external and internal facades were built out of fine equal-sized limestone blocks. Previous interventions were carried out by the Comité de Conservation des Monuments de l'Art Arabe from 1881 to 1961 by removing additions that were not original to the palace, in addition to restoring some of the walls. The main entrance, located on the western facade, was decorated by stone muqarnas (stalactites), in addition to green and white marble. The entrance square is covered by a painted wooden ceiling decorated with an inscription recording the name and titles of the owner. This type of ceiling is one of the rarest types of Mamluk ceilings that survives, using a unique technique combining canvas over wood covered with painted and gilded plaster. The ground floor consists of the main entrance hall marked by stone muqarnas bearing paint remains. The ground floor also contains the courtyard, stable, and a passageway between the courtyard and the stable (FIG. 2). The first floor consists of the Main Hall of the palace and its annexes represented in the Northern and Southern Iwan and Darqa (FIG. 3).

At the beginning of the documentation process, which was followed by training operations, all available old documents and previous studies were collected. This process succeeded with assistance from responsible authorities such as the Ministry of Tourism and Antiquities (known at the time as the Supreme Council of Antiquities, affiliated with the Ministry of Culture). A group of glass slide photographs from the early twentieth century and the late nineteenth century was also collected. These documents were considered in the evaluation of the palace's state at the beginning of the twentieth century up to the time of restoration in 2004. Examples are shown in Figures 4 and 5 dating between the years 1900 and 1983.

All previous documentation was taken into account when conducting the condition survey for the palace before restoration and the craft training programs began. This formed the basis of the scientific data used to assess the current conditions for restoration of the architectural and artistic elements inside the palace. The completion of this phase of work resulted in a complete documentation folder. The elements were studied extensively prior to the start of the project.

Examples of documented survey conditions include the following:

- Partial and total loss of large areas from the wall structure (FIGS. 6 and 7).
- Calcifications and color change on stone surfaces, both external and internal (FIG. 8).
- Deformation of artistic elements, such as hidden stucco windows.
- High water content in external facades.
- Deterioration of external and internal plaster coatings.
- Loss of all wooden ceilings in the halls on the first floor.
- Wood and metal elements, as well as marble wall decorations.
- Blurring of writing features and the decorations of the interior walls.
- The presence of cracks and vertical breaks in walls.

According to Yaghi (2004), the structural, architectural, and decorative elements of the palace were characteristic of Mamluk buildings in that period. These are considered among the treasures that have been left to us until today. Examples of handicraft include the following:

- Stucco windows with stained glass.
- Woodwork and ceilings decorated using methods that distinguished the Mamluk era, such as the quality of wooden ceilings covered with layers of canvas that bear gypsum pastes, and have been painted and gilded, such as the ceiling of the entrance to the palace.
- Marble cladding work that was used on most of the interior walls of the palace, characterized by marble mosaic styles.
- Various decorative works on the walls.
- The crafting of mortar. Study revealed that multiple (at least 7–9) layers of mortar were placed on the walls of the palace halls. Each layer was characterized by different and varied components, indicating that the nature of this craft was to place mortar in successive periods of time.
- Metalwork represented in windows and door coverings.

All of this created an intellectual wealth for the provision of field training schools for the youth of the region, who live and coexist with the historic monuments in this environment. This created a variety of training opportunities in traditional crafts associated with their Islamic heritage (FIG. 9). The launch was a combination of the restoration of the palace and the training of the youths of the region on how to preserve their cultural heritage as well as training in artistic crafts. The craft training is a cultural value left to us by our ancestors, and it is an economic resource.

The Scientific Methodology of Restoration and Training Programs at An Naq Palace

The program started by selecting members of the work team from among the individuals that had previous and accurate experience in heritage preservation work. This included fields such as antiquities, history, architecture, heritage crafts in their various fields (such as construction and arts), management, and accounting. Special consideration was given to those who had the ability to manage a project and work in a social environment, as well as having the skills of teaching and transferring information. The next stage was the selection of the trainees (the local beneficiaries of the program), where the selection process focused on age groups ranging from youth to middle age. The aim was to make the merging of different groups effective, especially in transferring soon-to-be-lost arts and crafts skills from past generations to modern generations.

The start of the restoration project involved training the people of Ad Darb Al Ahmar to increase the knowledge of the local population, utilizing social participation to create a cooperative generation that is bound to preserve its material heritage and history. The process of fully documenting all the elements of the building was carried out to record and monitor the level of deterioration and the current condition of the structural, architectural, and artistic elements of the palace (FIG. 10). This included risk analysis and development of restoration, preservation, and restoration solutions. This knowledge was applied in the training workshops that were coordinated on site and in work with local individuals with architectural, artistic, historical, and archaeological educational backgrounds under the supervision of specialists.

The building materials were studied and analyzed and their qualities were evaluated using non-destructive samples and techniques (FIGS. 11 and 12). After that, restoration materials were

proposed for use based on the results of previous material tests, including the application of practical test samples that preceded actual application on the archaeological building.

Excavations were conducted in the building by international and local specialists in the field (FIG. 13). Selected trainees from the local community were combined with students who study archaeology and excavations with regional Egyptian universities. The objective was the documentation of archaeological material to provide additional historic information on the archaeological aspects of the building, to use in the implementation of the restoration.

Among the most important traditional crafts in Islamic buildings was the art of building with stone, and the wonderful Islamic structures left to us illustrate this, especially in the Mamluk period. The restoration process for the crumbling walls of the palace was one of the most important, difficult, and dangerous parts of the training school for technicians and craftsmen specialized in building with heavy stones and bricks (FIG. 14). The stone restoration training process included a large area for education in the arts of building and architectural craft with the transfer of experiences. All the building materials that were used in the restoration operations of the palace were of the same quality as the original building materials that were studied, and their components were identified using correct scientific methods. We were also able to implement the goal of field training for participants from the region during the implementation of the restoration operations in their various stages. There was also a cooperative effort combining the craft of building masonry and the craft of carpentry in making wooden formations that were used to set up rounds for the openings in the walls of the Mamluk buildings, so that the builder and stone cutter could rotate around them and build the required shape (FIGS. 15 and 16). It is known today as the "Farma."

Along with the training and restoration programs that were applied and implemented in the reconstruction and restoration of the Mamluk palace, there was another aspect necessary in the process of preserving the historic building: the use of modern building techniques to preserve certain features. One these techniques was an isolation process that had to be implemented to protect the ancient archaeological ceilings from further decay, especially the ceiling of the entrance that was shown to be a distinctive and unique style. It used canvas covered with a layer of colored plaster that was applied to barrels and panels of Azizi wood.

Restoration operations that were carried out on the ancient wooden ceiling of the palace entrance revealed complete damage to the upper insulation layers, in which organic materials such as mats and baskets were used, that led to damage and leakage of rain over continuous periods of time. As a result, the layers of canvas and paints were damaged. The correction process involved removing the old loads and the backfill that damaged the ancient roof. The next step was the consolidation and bonding process by hanging the old roof in a relief roof above it. The new roof was supported from above with walls that passed a structural study (FIG. 17). Roof insulation materials, such as polyethylene, were used to protect against moisture, and heat-insulating foam sheets were also employed. These were placed on top of the new layer of panels, which were used to cover the suspension bolts that were used to support the

original roof (FIGS. 18 and 19).

This was followed by the treatment and restoration of the decorated ceiling from below, including the restoration of wood, layers of canvas, paints, and layers of gilding (FIG. 20). This was done by applying the field school training method in which specialists in the field, recent graduates, and technicians and trainees from the region worked together. Studies and analysis of the ancient craft methods used on this ceiling have revealed one of the masterpieces of Mamluk art: the wooden ceilings covered with a layer of colored canvas from that era. Further details can be read in Adam (2012).

This program also focused on training in and the practice of one of the most important crafts that characterized Mamluk buildings, marble for floors and walls (also known by some as scrap marble) (FIG. 21). Revault and Maury (1982) describe the use of marble inside structures from the Ottoman period as an extension of Mamluk decoration. The marble in the palace exists as remnants and facades, and there are also remains of scrap marble inlaid with mother-of-pearl in the interior walls of the palace.

Another of the handicrafts that the training program worked on preserving and reviving was the craft of stained-glass plaster (FIG. 22). This craft was widespread in other Mamluk structures and was one of the key aspects that gave the buildings something of a distinctive spirituality, due to the penetration of sunlight through the colored glass with a geometric design. Many of these stained plaster windows were detected in the palace. They were hidden under the layers of mortar high on the interior walls of the halls. This is one important part of the full detection documentation that assisted in the restoration and revealed historic information.

Plaster inside the palace halls in some cases reached eleven layers. The wood that was used in construction was discovered inside the walls and that discovery revealed that it had distinctive decorations. This indicated that the wood pieces were re-used from previous buildings, or parts that were renovated inside the palace. Figure 23 show examples of decorated wood.

The writings on stone that were in the process of disappearing, especially in the entrances, went through a process of detection, documentation, and restoration. The writings mainly consisted of Quranic verses, dates of creation, and some supplications. Ultraviolet light was utilized to enhanced imaging to read the size and shapes of the scattered lines, using the same technique as Villers (1981). Finally, training in metalcraft, especially copper (FIG. 24), was also done by specialized craftsmen as it was always used in the decoration on wood, a phenomenon that was characteristic of the doors of Mamluk buildings.

Conclusion

This project contributed to the rehabilitation of an important historical neighborhood suffering from limitless problems of neglect (FIGS. 25 and 26). Recently, there has been a cultural shift to turn the area into a tourist attraction and international destination. Coordination was arranged between the Ministry of Tourism and Antiquities with the Aga Khan Foundation to train Egyptian youth from the Ad Darb Al Ahmar community, in order to transfer the experience and knowledge from the older generation to the younger generation and to help ensure the continual fabrication of historical regional crafts.

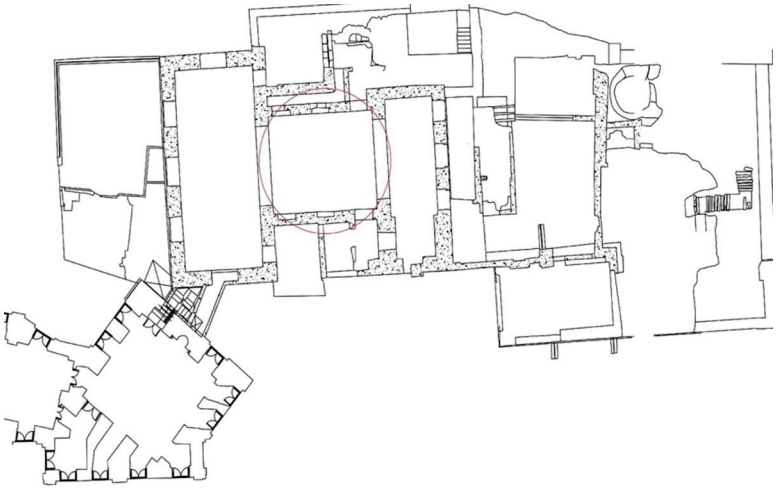
Each historical building should have a special restoration file in which all the studies, tests, and examinations that have been carried out on its

materials are documented, as well as all the documentation on the stages of the restoration work that was applied to the structure. As maintenance and other future restoration commences, the file should be updated.

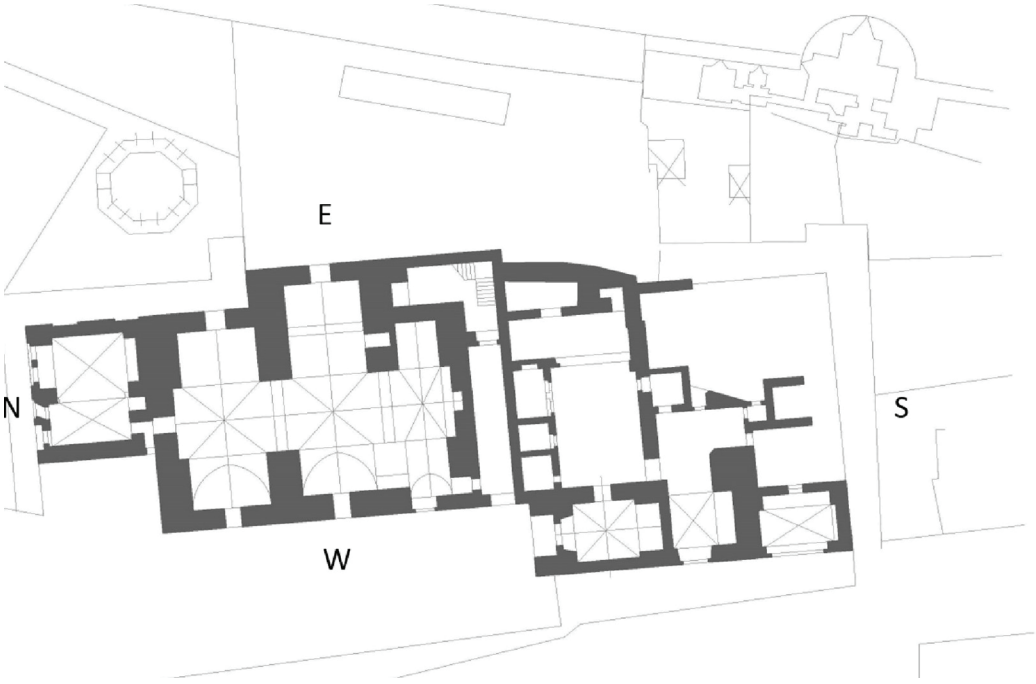
The unique aspect of this project was the priority given to the youth of the Ad Darb Al Ahmar region, male and female, as the local population who already lives in and around neglected archaeological and historical buildings. This is an economically disadvantaged area which threatens the preservation of urban heritage. In order to improve the area, new graduates from institutes and colleges related to archaeology, arts, architecture, environment, economics, accounting, and management from the local community were included and matched with specific projects in the program. The project included cooperation with older and experienced craftsmen in the region by employing them in the project with the aim of providing a financial return, as well as transferring expertise and skills to the new generation.

The Agha Khan Foundation for Cultural Services has granted small loans to craft shop owners to revive their professions and support economic development to help their businesses thrive. This should assist in the permanent maintenance and employment of residents after the project is completed. We also recommend re-using the restored heritage buildings as training centers for folk arts and traditional crafts (adaptive re-use). This could include traditional music revival, in addition to cultural and entertainment programs. One of the largest initiatives of the Aga Khan Cultural Services projects in Egypt was the formation and establishment of these places within the communities that live among and coexist with heritage spaces and buildings. One example was establishing and sponsoring the Ad Darb Al Ahmar Art School (DAAS). Finally, the development of tourism was encouraged in the region by reviving the tourist path of restored places in Ad Darb Al Ahmar, which was done in cooperation with the Egyptian Ministry of Tourism and Antiquities. It was my great honor to be part of the team working on these projects over several years.

1. Aerial photograph of the general site of Qasr Al-Naq (photo by Aga Khan Cultural Services, Egypt, November 2004.)



2. Plan of Prince An Naq palace showing the ground floor (drawing by Aga Khan Cultural Services–Egypt, November 2004).



3. Plan of Prince An Naq palace showing the first floor drawing by by Aga Khan Cultural Services–Egypt, November 2004).

4. An Naq palace, west façade (20th century) (photo from the Archives of the Antiquities Registration Center in the Citadel, 2002).

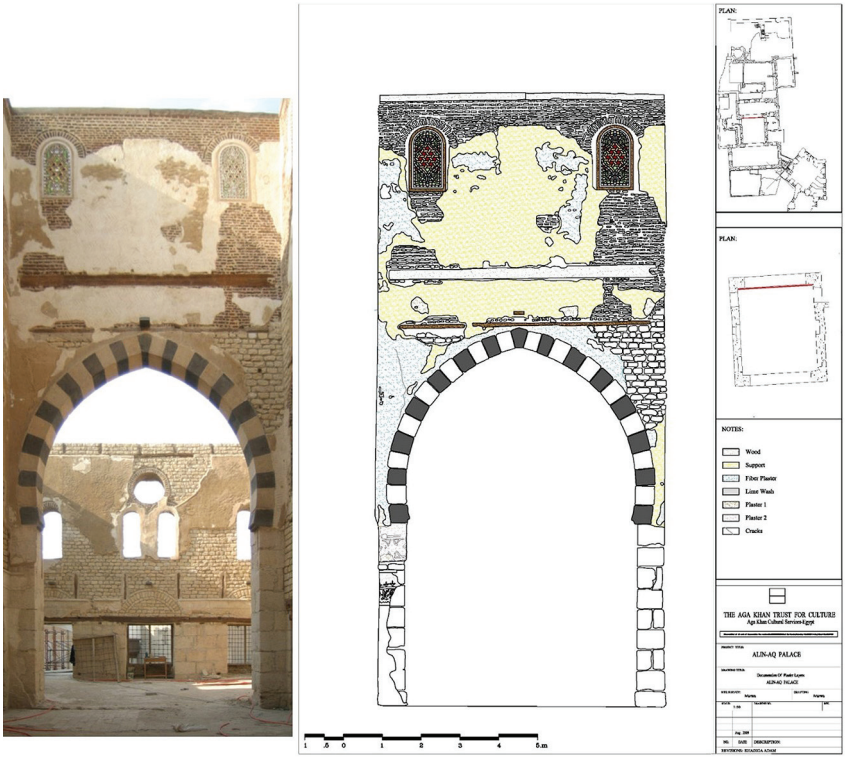
5. An Naq palace, east façade (20th century) (photo from the Archives of the Antiquities Registration Center in the Citadel, 2002).

6. An Naq palace, external walls conditions (photo by Aga Khan Cultural Services–Egypt, December 2004).

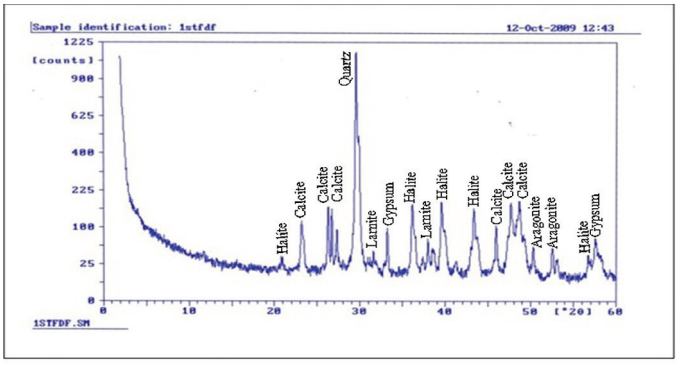
7. An Naq palace, internal wall conditions (photo by Aga Khan Cultural Services–Egypt, December 2004).

8. An Naq palace, condition of walls consisting of stones, bricks and plaster (photo by Aga Khan Cultural Services-Egypt, photogrammetric team, January 2003).

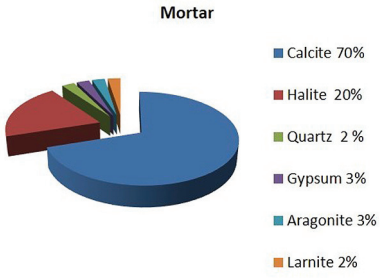
9. Activities of the restoration and training workshops with specialists in craft art (photo by Aga Khan Cultural Services–Egypt, October 2002).



10. Example of the documentation processes of an internal wall from the An Naq Palace (photo and drawings by K. Adam, Aga Khan Cultural Services-Egypt, May 2007).

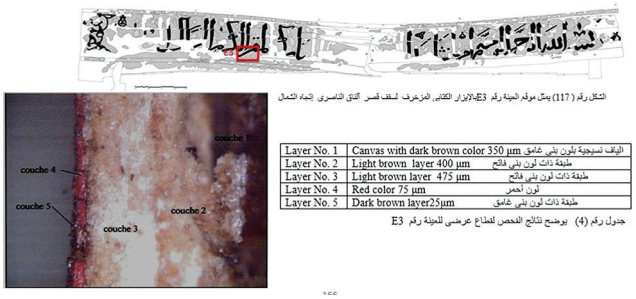


X-Ray diffraction



chemical analysis

11. Examples of tests and examinations of building materials that were carried out on the original building elements (image from mineral investigation lab report, Egypt, 2005).



12. Examples of tests and examinations of ceiling wood paints back to the beginning of the era of the construction of the palace (photo from Blaise Pascal University lab report, France, 2005).

13. Excavation activities with the specialists and local community members in An Naq palace (photos by Aga Khan Cultural Services–Egypt, May 2005).

14. Masonry work activities with the specialist and local community members in An Naq palace (photo by Aga Khan Cultural Services–Egypt, March 2008).

15. A project showing the application and synergy of carpentry and masonry in An Naq palace (photo by Aga Khan Cultural Services–Egypt, March 2008).

16. A craftsman at work with the "Farma" in An Naq palace (photo by Aga Khan Cultural Services–Egypt, March 2008).

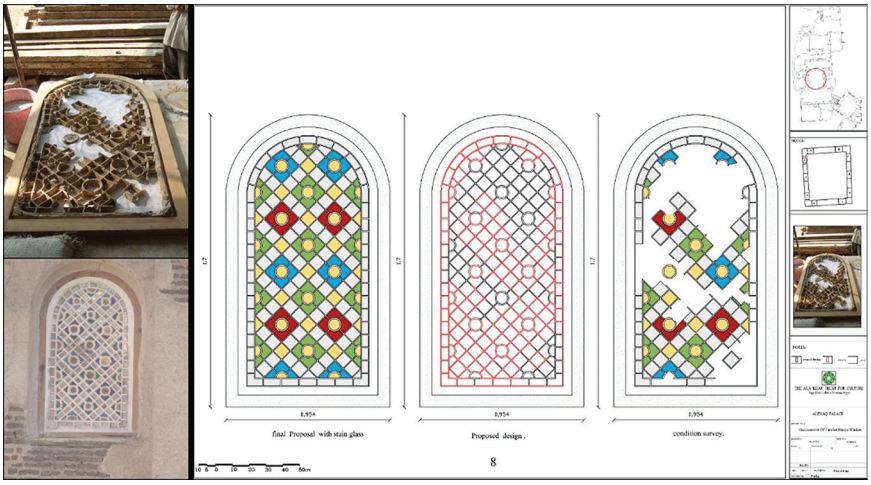
17. The wooden ceiling suspension and support system for An Naq palace entrance (photo by K. Adam, Aga Khan Cultural Services-Egypt, April 2005).

18. The modern isolation treatment for the palace entrance wooden ceiling to protect the historic canvas and paints (photo by K. Adam, Aga Khan Cultural Services-Egypt, April 2005).

19. The modern isolation treatment for the palace entrance wooden ceiling to protect the historic canvas and paints; second view (photo by K. Adam, Aga Khan Cultural Services-Egypt, April 2005).

20. The painted wooden ceiling during and after conservation of the An Naq palace entrance (photos by Aga Khan Cultural Services–Egypt, April 2005).

21. Traces of the marble decoration from interior walls at An Naq palace (photo by Aga Khan Cultural Services–Egypt, April 2005).



22. The stained-glass windows conservation process at An Naq palace (photos and drawings by K. Adam, Aga Khan Cultural Services-Egypt, March 2008).

23. Discovery of decorated re-used wood found in interior walls from An Naq palace (photos by K. Adam, Aga Khan Cultural Services-Egypt, March 2008).

24. Part of the training workshop on the ornamentation of copper repose on wooden doors (photo by K. Adam, Aga Khan Cultural Services-Egypt, July 2008).

25. Photograph of one of the walls in the palace, showing before and after restoration (photos by K. Adam, Aga Khan Cultural Services-Egypt, July 2008).

26. Photograph of one of the walls in the palace after restoration (photo by K. Adam, Aga Khan Cultural Services-Egypt, January 2009).

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