



## Rebuild, Renovate and Reusing the Old Borsa Han (Çifte Han) Istanbul Aydın University

Tarek Naser, Istanbul Aydın University, Turkey  
tareknaser@stu.aydin.edu.tr

### ABSTRACT

This study discusses the methods and special techniques for restoration to rebuild, renovate and reusing Khan Old Borsa (ÇIFTEHAN) at Diyarbakir\_Turkey, by shining a light on a similar project (Khan Al Wakala) built in the same era almost been implemented and the mechanism followed during implementation The research aims to study and evaluation of Khan Al Wakala project in Palestine, which was restored to arrive at a clear methodology for restoration in order to achieve excellence in the areas of restoration and preservation of architectural historic buildings and areas of value, and improved optical image of the historical areas affected by the war or as a result of neglect in the city of Diyarbakir.

**Key words:** rebuild, renovate, restoration techniques, Khan Old Borsa (ÇIFTEHAN), Khan Al Wakala, historic buildings at Diyarbakir.

### 1 - INTRODUCTION

Restoration specialist process depends on respect for the original material [1]. And any additional work must be clearly marked and carry contemporary character. The word restoration means rebuilding as much as possible to its original state through the process of treatment include getting rid of the manifestations of the damage caused by the damage and the difference between damage factors and manifestations of damage factors that damage factors are causing the manifestations of the damage that we see with our eyes on the damaged building and different methods of treatment according to the construction and type of case whether stone or wood and require restoration restorers in the very skill to maintain the building.

The study methods and techniques of dealing with the process of restoration, which included the case of Khan Al\_wakala for Palestine in the study, in order to reach a systematic and clear mechanism can be used

in the renovation project of Khan Bursa Historical and for buildings that were built with materials and methods of traditional own law building, and handling is quite different from dealing with the modern buildings that are usually built of stone and concrete and other construction materials that developed after the Industrial Revolution, and commonly used with the early thirties of the twentieth century in Palestine. Here it is necessary to understand the characteristics of traditional building styles, so that we can deal with them sensitively and avoid the use of modern building materials and techniques that have proven detrimental to the old buildings. [2]

#### 1.1. Aim of the Research

This study discusses the methods and special techniques for restoration to rebuild and renovate Khan ESKI OLD BORSA (ÇIFTEHAN), Diyarbakir, Turkey by shining a light on a similar project Khan Al Wakala built in the same era almost been implemented and the mechanism followed during implementation.

- Highlighting international experiences in the restoration and the methods followed to become a point of reference for information on the methods and techniques of restoration.
- Preparation of specialists at a high level in the field of preservation and restoration techniques through field training schools like those that took place in Khan Project Al wakala.
- Conduct specialized studies to assess the state of historical and archaeological facilities and suggest the style of restoration includes the conduct of field and practical tests to assess the state of origin.
- Holding awareness for the application of international standards in restoration activities.

### 1.2 Scope of Research

Research will be limited to the study of Khan Al Wakala project in Palestine, which was restored and re-build some of its parts, and discuss the positive and negative aspects of this project For use in the restoration and construction of the old Khan Old Borsa (ÇİFTEHAN), Diyarbakir.

Preparation method and philosophy of the restoration project and the preservation of archaeological building: Adopted a philosophy of maintaining a methodology consists of three steps:

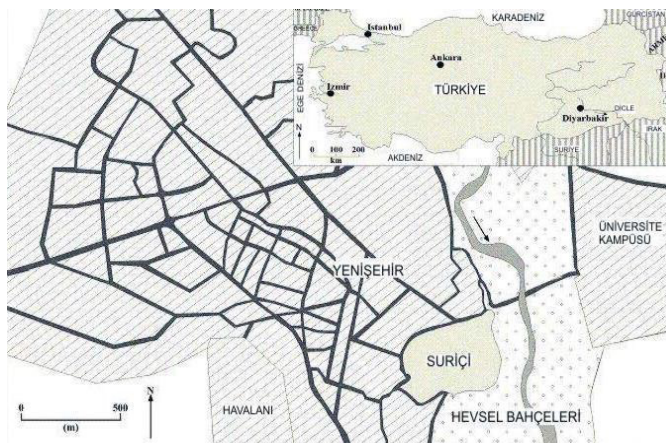
- Shall be determined values carried by the building, which aims architectural restoration

project because achieves the highest degree of preservation, so as to two kinds of values:

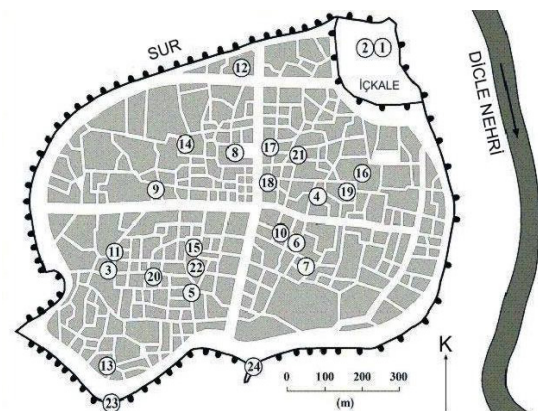
- First: the historical values. The second architectural values.
- A preliminary report: Make a list of the problems facing the preservation of archaeological building, so that is not limited to the manifestations of degradation, but also include to determine the causes of this deterioration
- Define a strategy to maintain in general, so as much of the preservation of the different values and carried by the building (values Alotreyh-architectural values) and so are addressed to stop all the causes of deterioration, and the treatment of the manifestations of this deterioration, and therefore the preservation strategy done through the setting of priorities and then propose recommendations to address these problems.

## 2 CURRENT SITUATION OF KHAN OLD BORSA (ÇİFTEHAN)

It is not known exactly the date of construction of the the Khan and who built it. It is believed to be an Ottoman artifact dating from the 16th century[3].The building is located on the Borsa street, east of Gazi Caddesi, south of the Hasan Paşa Khan.



**Figure 1 .** Diyarbakir location map and the locations of historical buildings (Suriçi) (1).



**Figure 2.** The locations of historical buildings (Suriçi) (1).

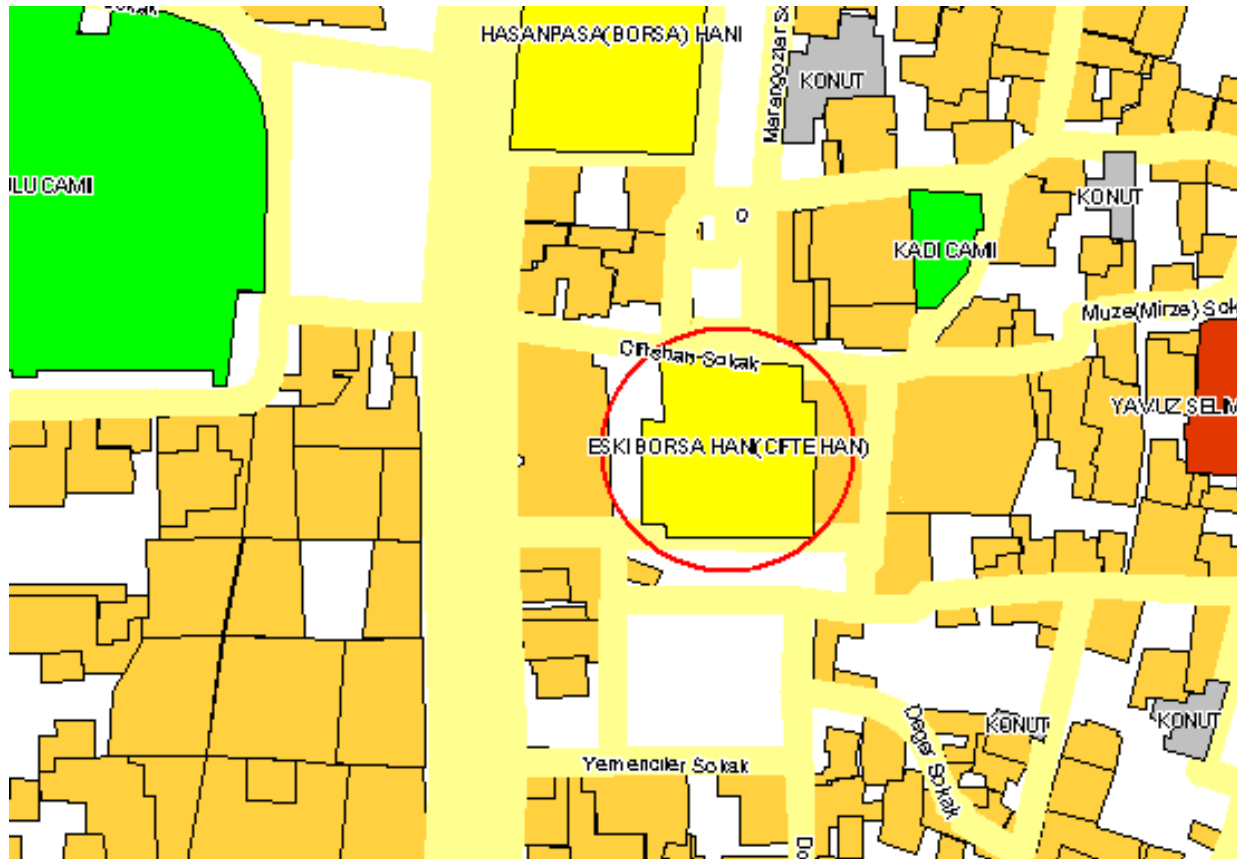


Figure 3. Location of Hhan ÇIFTEHAN (1)

The ÇIFTEHAN khan consists of two buildings with two floors. For this reason it is called "Çifte Han" double inn. It was considered as a double inn during the first construction, and the second one was destroyed during the road opening in the 1940s. If the entire rest of the building on the old status it will form a different application example in the form of a two-storey house adjacent to the Diyarbakır khans [Figure 4][3].

Çiftehan khan is made of cutting black basalt stone. There is a courtyard in the middle and arched porticoes on three sides of the courtyard. The entrance door a little further ahead than, a ladder on the left side provides connection to the upper floor [Figure 5].

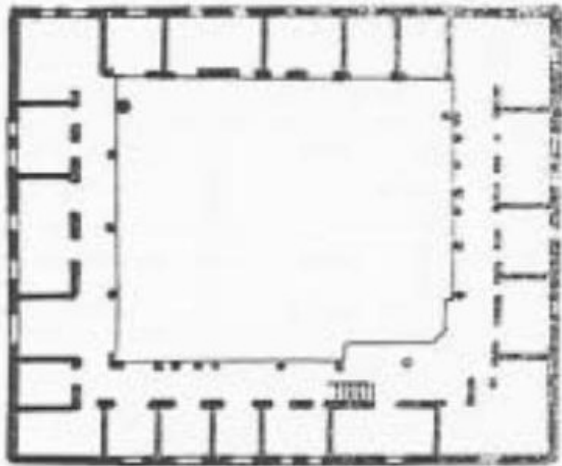


Figure 4. Plan of khan ÇIFTEHAN(1)

The entrance floor of the khan is used as a storage and the upper floor is not used. In Bodrum there is an barn department. This khan has remained leaner than the Deliler khan and Hasan Pasha khan.

**3. STUDY AND EVALUATION OF KHAN AL WAKALA PROJECT IN PALESTINE**

Khan al-Wakala is located in the north-western side of the Old City of Nablus, an old historic building dating back to the period of the Ottoman built (1795 AD), and was used as an inn for travelers and traders and a stable for animals in that period [4]. Construction of the original Khan al-Wakala around a courtyard internal wraps an



Figure 5 . Khan ÇIFTEHAN entrance elevation(1)

irregular polygon contains corridors hung serving the upper floors, and a large number of rooms spread over two floors in the north, east, and south, and three floors on the west side [Figure 6].

The average width of a single chamber 2.5 m and a depth of about 3 meters were used to sleep on the upper floors either lower floors was used stables and places to store the goods. Representing eastern and northern closets inside the entrance to the stables, while the northern rooms overlooking represented on the main street shops belonging to Khan al-Wakala [6].

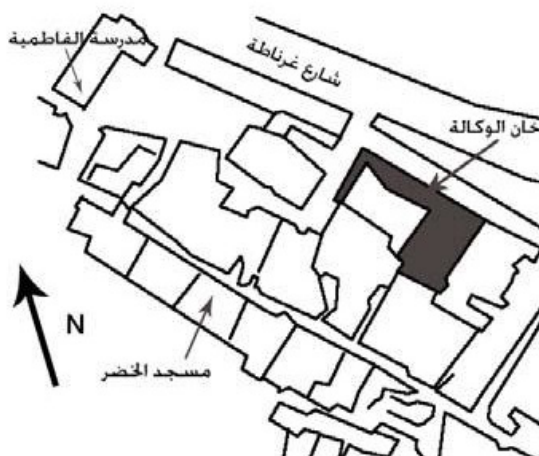


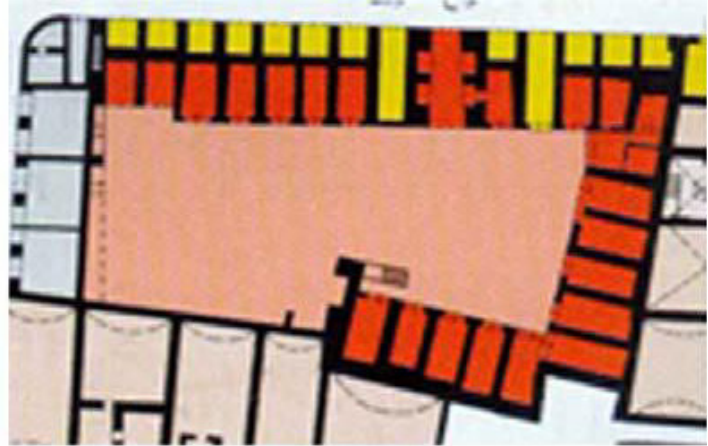
Figure 6 . Khan al-Wakala site on the outskirts of the old town of Nablus (2).



The building has lost many of its parts in the 1927 earthquake, it has faltered western segment and the entire west side of the southern part of the courtyard, and he was about 15 chamber Figure 8 Then in the invasion of Israeli forces to the city of Nablus in 2002 it was demolished the gate completely. Subsequently, the



**Figure7.**Khan al-Wakala after 1927 the Israeli invasion in 2002 (3).



**Figure 8.** Khan al-Wakala plan in 1998 before earthquake

Organizers of the work on the rehabilitation project Khan Al\_wakala to set up a field school where trained team of technicians on practical experience in the field of restoration, as well as the exploitation of the building as an investment project back good gains for the municipality and citizens alike in the same time. Also rehabilitation reuse Khan in the commercial and artisan sectors who are famous for their Nablus scheme also included.

So keep to some extent on the original function, but commensurate with the times change, and benefit the largest number of members of the community to provide distinctive entertainment and cultural services. [4]

Was developed rehabilitation plans by the Italian architect "Michelangelo" in collaboration with the Municipality of Nablus, The proposal to strengthen the existing parts and rebuild the destroyed parts of the Khan as it was before 2002, so that it contains the first floor commercial stores, municipal hall, cafe, and other

Nablus Municipality Bastmlake of "The Arafat" They are the last family owned Khan for restoration and benefit from it as a commercial venture serves the city of Nablus, after they got financial support from the European Union through UNESCO, was starting the implementation of the project in 2005[4].

services. See Figure 5 The second floor of the existing originally re-use as a museum. While a second and third floor of the new building for sleeping and services attached to the project. [7]

Rehabilitating Khan Al\_wakala Project represents an advanced stage and a quantum leap in terms of the existence of a comprehensive documentation of the work steps, and modernization of the methods used in the consolidation of the physical building materials, emulating thus global standards in strengthening and consolidation, and is a first rehabilitation of a historic building project holds these features at the level of province Nablus.

### 3.1 Documentation Project Khan Al-Wakala's Operations

Staff faced many challenges in the rehabilitation of Khan's most important Al\_wakala lost and destroyed parts of the Khan were great, even the parts found were very poor condition due to exposure to various

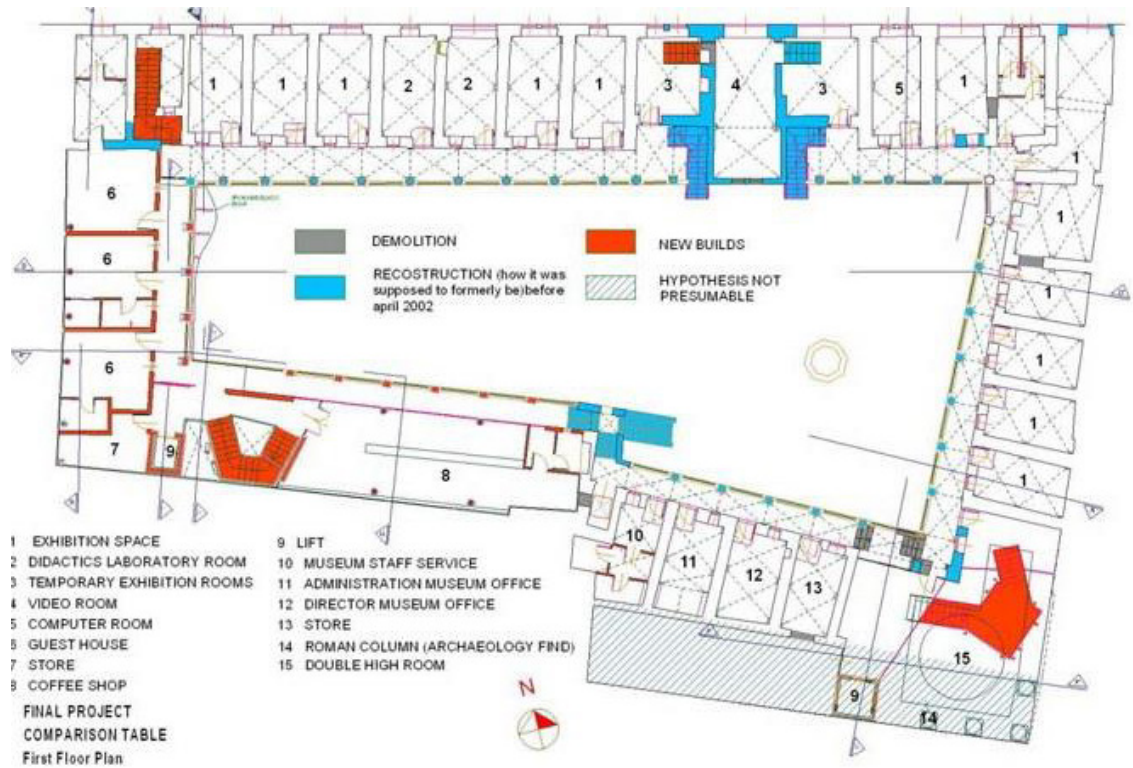


Figure 9. Reuse schemes of the ground floor of Khan Al\_wakala. Reuse schemes of Khan Al\_wakala (4).

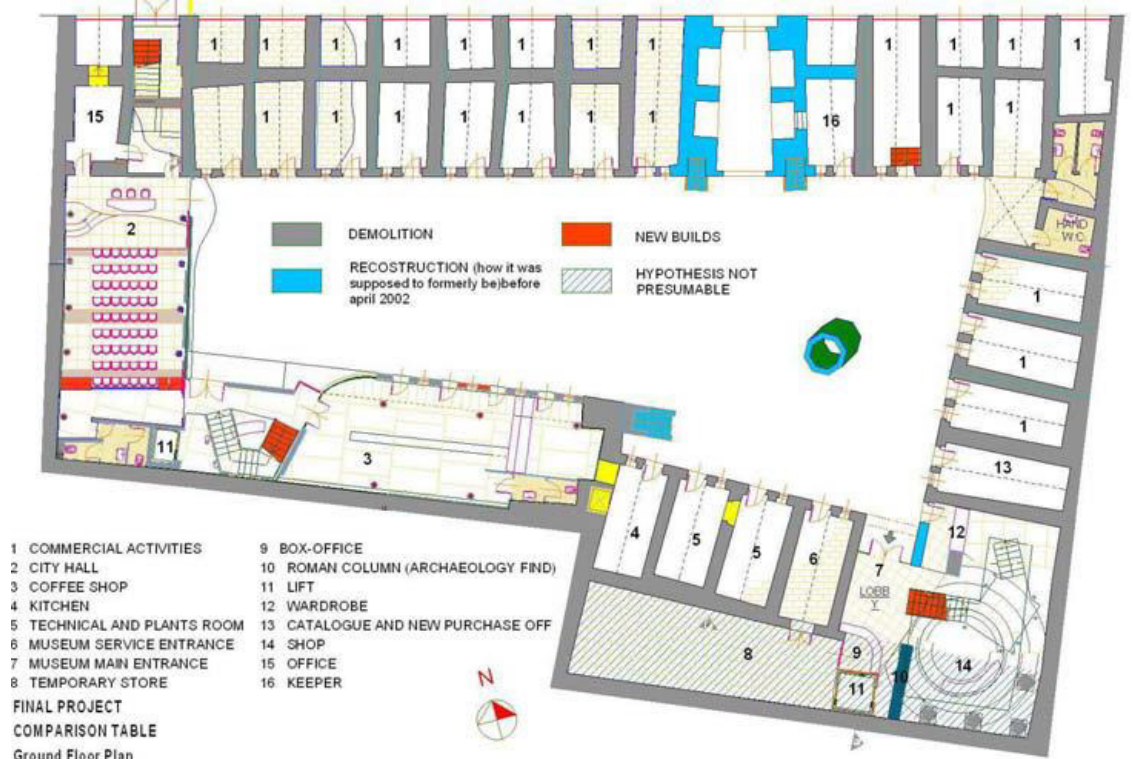


Figure 10. Reuse schemes of the first floor of Khan Al\_wakala. Reuse schemes of Khan Al\_wakala (4).



building damage and neglect factors during the previous years, In addition, the building was originally built low-quality materials and on several stages at different time intervals [8]. Figure 11-12-13 shows the status of Khan Al\_wakala before restoration.

Before starting any restoration process is necessary that there should be closer to the building operations, in Khan

Al\_wakala was prepared base maps and took pictures of the building and to identify problems and damage and installed on the maps by one of the contracting engineering offices with the project, as the use of a team of trainees of architecture students An-Najah national University for the two phases of undergraduate and graduate.



Figure 11. Interior eastern elevation\_existing situation



Figure 12. Interior northern elevation\_existing situation

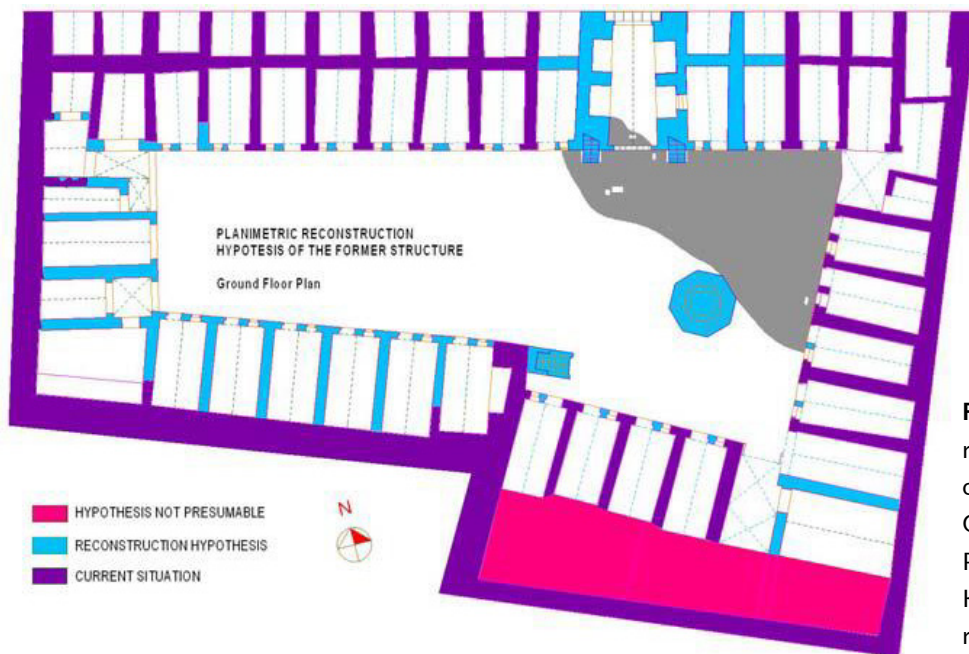


Figure 13. Planimetric reconstruction hypothesis of the former structure. Ground floor plan. Photo shows Concours Khan building before restoration (4).

Charts were not complete in some parts and areas of the building, making the team the opportunity to intern for drawing diagrams or sketches and to identify the problems and damage inflicted on the charts by documenting the problems that exist in the building across a number of ways, including:

Photography, mapping and take down twice built upon points. Figure 14-15.

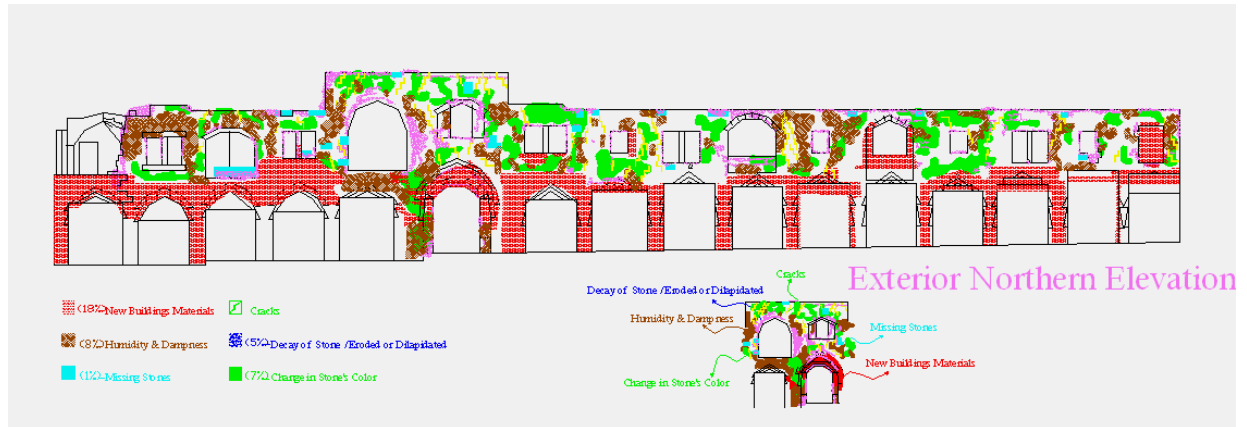


Figure 14. Exterior northern elevation

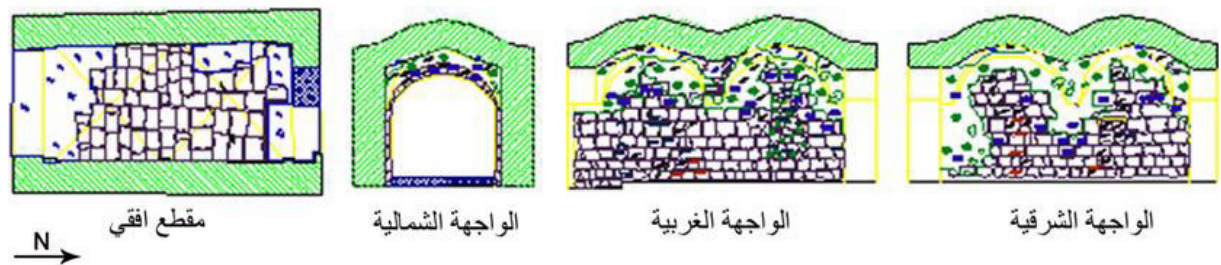


Figure 15. Document the damage inside a khan rooms before restoration

A form to document the damage inside a khan parts and elevations before restoration (2).

Been through countless documented many problems in the building, the most important of the presence of dust and debris that was covering most areas of the building and hide a lot of attractions, as well as the implications of the building and parts of ramshackle stone because of corroded and lost. Amaallenbataat, herbs and algae, they were caked in most parts of the building, causing cracks and crevices longitudinal and lateral [8].

### 3.2. Relay operations and consolidation project in Khan Al\_Wakala

What makes the work organized and high-quality project in Khan Al\_wakala, taken care of by the staff before starting to dissolve any of the previous problems at the sampling site, studied and analyzed in the university laboratories. The selection of these samples from different areas of the building parts as varied as the old plastering, the stones used in construction, the mixture supportive of the site. And then choose the appropriate materials and original approach to the



material to be primitive analysis of these materials to ensure quality and compliance The conditions required for restoration. Of these conditions the cohesion of the sample well with original parts, not cracking the sample or the appearance of cracks (cohesion with each other) Mtlaimtha chromatically with the main building [6].

The most important fortification operations and consolidation that has been practiced in the project Khan Al\_wakala were:

Strengthening the interfaces, stone processing, processing plastering, the removal of harmful algae and plants, and processing of cracks and crevices.



**Figure 16.** To the right business consolidation by wooden struts of the northern facade of Khan, to the left to strengthen the roof of one of the rooms in the building from the inside by pillars (3).

The second process is to address the gaps formed with the passage of time within the walls of the building. The reasons for these spaces back to the movement of the building or to a decrease in the quality of work and perfection during construction. The process of addressing this problem are to remove dust and dust in this vacuum, using electric hood or by blowing compressed air into the space in order to expel all appendages of it, after which it is vacuum injected with water in order to ensure that the dry mixture quickly.

After the injection of water is vacuum injection by adhesive bond (Albraimil, mixing it with water by 5-7%).

### 3.3. Strengthen elevation of building

Cementing operations consisted of facades addressing the stones or the edges of the parts that have them Owalacod incoherent parts for industrial reasons at the hands of human and natural causes such as tremors experienced by the region which led to the weakness of these parts and make them prone to fall at any moment,It has been strengthened by the wooden rail cushions and legs so that they are able to support these parts do not harm them.The following figure shows the status of barriers and warning signs which indicate the seriousness of the region.

The injection process is performed using small water pumps or using needles medical injections, after which it is vacuum injection. & Nuts limestone by: (1 Hydraulic built 0.5 Quartz 0.5 sand desert) [8].

### 3.4 Functional rehabilitation

Intended to restore functional rehabilitation, a spatial changes in the interior of the building -Cuts remove or add some architectural elements of the slots and interfaces ..., in addition to strengthening operations and strengthening the aforementioned, even fits with the new rehabilitation Alozievh that have been chosen for the historic building scheme.

Most of the new jobs that are selected for the building to be rehabilitated is a general functions: cultural centers, libraries, research centers ... and so for several reasons, the most important of the re-use of historic building in public office have the chance opportunity to more people entering and learn about the heritage of their country, which have been preserved[9].

In the city of Nablus are working in the rehabilitation of historic buildings institutions to re-use those buildings in public office also Because of limitations imposed by the funded institutions to these projects, the most important of ownership of the building must be public until it is supporting the project, and therefore it can not be a public building that is used in special functions dwellings private or commercial premises. This is what happened in the Rehabilitation Project Khan Agency -salv Alzkr-, while Nablus municipality had to Astmlake of the last owners (of Arafat), so that the municipality be able to get financial and technical support for the project from the European Union and UNESCO.

#### 4. RESULTS

Through previous project presentation can evaluate the plans and execution in Khan Agency by clarifying the positive and negative points and in terms of the extent of public participation and how to achieve sustainability

Positive aspects:

- Use the new proposed business venture as a building my services aims to maintain the business and craft of old services in the city of Nablus, and this fits with the basic function of which was occupied by Khan, as well as the case for the use of parts of it as rooms for sleeping, as the upper floors of the fields used in the past as an inn for merchants coming to the city.

Acquisition of the municipal project was designed to provide services to achieve sustainability of the project and serve the cultural and civilizational desired purpose of re-restored and used like to use a large part of the spaces on the first floor where a museum and public hall for the municipality as well as cafe.

- included in the project team of experts in the field of restoration of engineers, surveyors and technicians.
- Use the new deal sensitively with the old section of the building and by trying restored and returned to the original position in terms of maintaining the blanks unchanged.
- The use of means and methods of modern consolidation in which to save the building's historical value.
- supervision of UNESCO on the project to make the process of restoration is subject to international standards.
- The missing parts of the project and that insufficient information on how it was designed in line with the spirit of the project and previous uses did not exist design.
- characterize the existence of a comprehensive project document (document geologist, architect, and structural) before and during the work.

*Kerpic'16 Cultural Landscape: Rebuilding after Decay  
Second Day of the Conference for Graduate Students*

Negative aspects:

- The selection of new uses for spaces Khan Agency's building agreement between the cities of Nablus Municipality and the Italian designer and UNESCO without activating the principle of community participation. And therefore, the people in the city do not know much about the project while the success of this project depends on the participation of the people and their sense of belonging to him.
- enriched material respects on the implementation of the project, as the owner (Nablus municipality) made changes in the project plans and details in order to save costs.

## REFERENCES

- [1] Article 9 of the document Venice 1964.
- [2] A gallery guide for the maintenance and restoration of historic buildings in Palestine.
- [3] Diyarbakir'daki tarihi üç handa pencere boşluklarının doğal aydınlatma açısından karşılaştırmalı olarak incelenmesi.
- [4] <https://www.alwatanvoice.com/arabic/news/2015/07/08/740598.html>
- [5] <http://www.nablus-city.net/?page=details&newsID=1391&cat=20>
- [6] Mohammed A F Itma , Rehabilitation Of Historical Buildings in Palestine “A Case Study of Nablus Experience since 1994”.
- [7] Al-Masri. Majd Najdi Naji, Evaluating Methods and Techniques of Restoration in Palestine Nablus a Case Study
- [8] Interview with Engineer Omar Alozka working in the project Khan Al\_wakala and technicians: strengthening operations in Khan Al\_wakala. Nablus 2006
- [9] [http://www.enpi-info.eu/mainmed.php?id=566&id\\_type=6&lang\\_id=470](http://www.enpi-info.eu/mainmed.php?id=566&id_type=6&lang_id=470)

## Figures

- 2.1, 2.2, 2.3. Diyarbakir'daki tarihi üç handa pencere boşluklarının doğal aydınlatma açısından karşılaştırmalı olarak incelenmesi.
- 2.4, 2.5. Mohammed A F Itma , Rehabilitation Of Historical Buildings in Palestine “A Case Study of Nablus Experience since 1994”.
- 3.1. Archive of Khan Office Al-Wakala, unpublished.
- 3.2, 3.3 Al-Masri. Majd Najdi Naji, Evaluating Methods and Techniques of Restoration in Palestine Nablus a Case Study



