

Evaluation of Conservation Problems for Restoration of Great Karaosmanoğlu Khan, İzmir, Turkey

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ABSTRACT

Ottoman khans, built in the cities, are cultural assets that need to be preserved as they reflect the social, cultural and economic condition of the cities of the time when they were built. Great Karaosmanoğlu Khan, which is located in Kemeraltı, the historical market district of İzmir, Turkey, is one of the surviving khans that has considerably preserved its original architectural characteristics. The khan dates back to the beginning of the 19th century and is still used for commercial purposes. However, it has been subjected to partial demolition and a series of inappropriate interventions. These inappropriate interventions and neglected condition also brought some material problems to the building. The aim of this study is to evaluate all these problems and present restoration decisions for conservation of the building. The restoration proposal aims to preserve the remaining original characteristics, to reveal the lost values within the scope of contemporary conservation theory as well as to find a compatible use for the building.

KEYWORDS: Architectural Conservation, Khan, Great Karaosmanoğlu Khan, İzmir.

1 INTRODUCTION

Khans and caravanserais were the accommodation and commercial buildings located in the cities and on the trade routes during the Anatolian Seljuk and Ottoman Periods. The term khan and caravanserais in these periods have the same meaning and can be seen in the naming and inscription of the buildings. The ones that were constructed on the trade routes and designed to meet the daily life needs in terms of organizations are commonly known as caravanserais while khans were the places where production of goods and trade together were held and they are known by the names of the particular goods produced or sold (Akozan, 1963; Güran, 1976).

At present, khans are known as the historical buildings constructed for the purpose of trade and accommodations in the cities. Although they are few in number, the surviving khans in the cities continue their functions according to present day trade market. Ottoman period khans are generally two storey buildings with a central courtyard surrounded by a colonnaded portico with a series rooms behind it (Figure 1). The ground floor was mainly for trade activities and storage functions. The first floor was for accommodation of merchants. In late examples, the first floor was generally used as offices of tradesmen. The khans may also have stable, masjid, fountain and latrine. There might also be shops on the facades depending on the position and convenience of the facades.

During the Ottoman Period, the intensive trade activities of İzmir Port resulted in the construction of over 100 khan buildings mainly concentrated in Kemeraltı, the historical market district of İzmir, Turkey (Ersoy, 1991). Among these khans, the Great Karaosmanoğlu Khan is one of the 18 surviving khans. The building was constructed at the beginning of the 19th century by one of the noble families of the Aegean Region, Karaosmanoğlu family, and served for years as an important trade khan in İzmir (Kuyulu, 1992). The building was subjected to a series of changes in the course of time (Figure 2). The most important change that the building experienced was the demolition of approximately half of the building on the north part during the construction of Fevzi Pasha Boulevard in 1935 (Atay, 1978). The remaining part of the building is still used for commercial purposes at present. However, the type of commercial activities has changed. The alteration of commercial activities resulted with inappropriate interventions to adapt the building to present day requirements. The private ownership pattern, in which all the rooms have different owners, resulted in different types of interventions inharmonious with each other, as well as incompatibility with the original characteristics of the building. These inappropriate interventions and neglected condition have also brought some material problems to the building.

The aim of this study is to evaluate the problems of the building and present restoration decisions for conservation of it¹. With this aim, the architectural characteristics, construction technique, structural problems and material deteriorations were analyzed to understand the existing features of the building. The original characteristics were clarified through restitution studies based on the information coming from the building and historical research. The conservation problems and the values were determined and conservation decisions were developed.

2 ARCHITECTURAL CHARACTERISTICS

The building, which is located in the historical market district Kemeraltı, is adjacent to Mirkelamoğlu Khan (18th century) to the west and Manisalıoğlu Khan (19th century) to the southeast and is near Hisar Mosque (16th century) and Kızlarağası Khan (18th century). With demolition of its north part, the remaining part is completely open to the boulevard and the south is surrounded by later built commercial buildings (Figure 3).

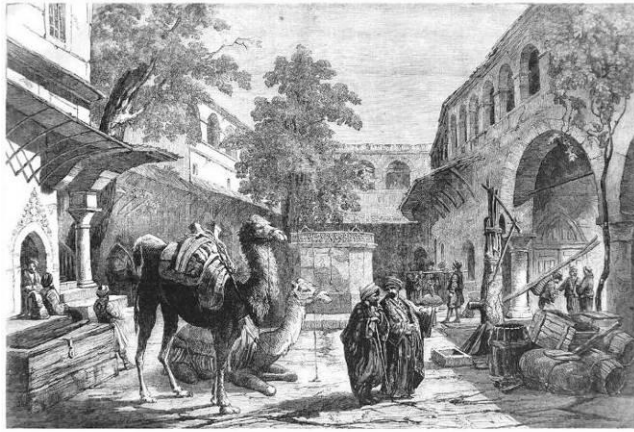


Figure 1: Courtyard of Great Karaosmanoğlu Khan during the 19th century, Gravure (Robertson, 1855)



Figure 2: Courtyard of Great Karaosmanoğlu Khan, 2013

¹ This study is based on The Restoration Project of the Great Karaosmanoğlu Khan in İzmir (Lacaj et al., 2013).

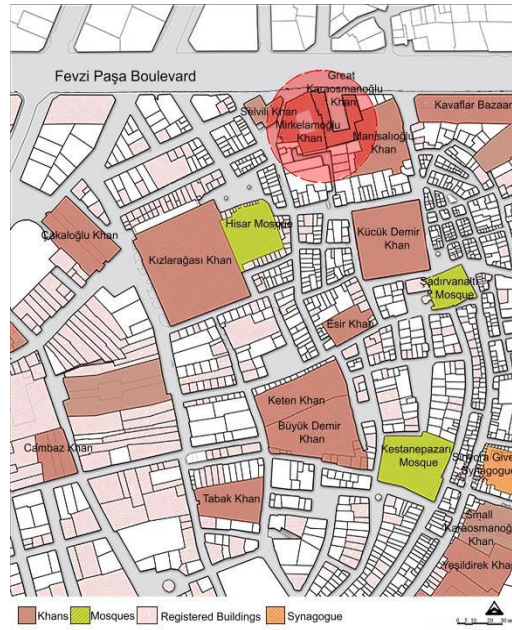


Figure 3: Site plan

At present, the building has a U shaped plan as the east wing is shorter than the west. The two storey building, of which the upper floor has a colonnaded portico, is designed around a rectangular courtyard (Figure 2). At present, all the ground floor spaces around the courtyard are used as shops for various retail trade and eating facilities. The upper floor is used as tailor ateliers or storage. Some of the spaces of the upper floor are empty.

On the ground floor, there are thirteen spaces remaining after the demolition of the north part (Figure 4). Twelve of them are original and one space in the east at the north end is a later addition mass. The openings to the courtyard of the spaces are completely altered with large glass display windows. The spaces lost their original characteristics to a great extent and it is very difficult to observe any original element on the ground floor except the space dimensions. All the spaces on ground floor are covered by barrel vaults supported by two semicircular arches in the middle except two spaces in the west. In these two spaces, based on the form of the later added suspended ceilings it is thought that the surmounting elements are the paneled vaults. All the rooms have additional mezzanine floors.

The courtyard is a large open space between the three wings of the khan. It is directly open to the boulevard and its main function is circulation, but it serves in correspondence with the shops as a space for advertizing their items and for tables by the eating facilities.

Access to the upper floor is provided by the stairs in the northern part of the west wing (Figure 5). Main characteristic of the first floor is semi open space arched portico supported by square piers (Figures 6, 7). The portico is divided into two parts; the first part is the west portico and the second part is the south and east porticoes. Unique to the first floor is the corridor in the west part of the building created by the room position looking directly on to the courtyard on the west portico. In the west portico, there are six rooms; the first is an additional room above the staircase and the others are original. The second part which is interconnected is the south portico with three rooms and an original toilet space and east portico with two larger rooms. All the spaces are covered by cloister vaults. The portico is covered with barrel vault in the south and barrel vaults with lunettes in the east and west. The narrow corridor is covered with barrel vault pierced by three small rectangular openings.

Only the north and south facades of the khan could be perceived since the east and west facades are juxtaposed to adjacent buildings. The upper part of the south facade, which can be seen, is unplastered rubble stone masonry. While the north facade is the cut section after the construction of the boulevard and it is in poor architectural quality due to inharmonious interventions to the shops and additional masses.



Figure 4: Ground floor plan

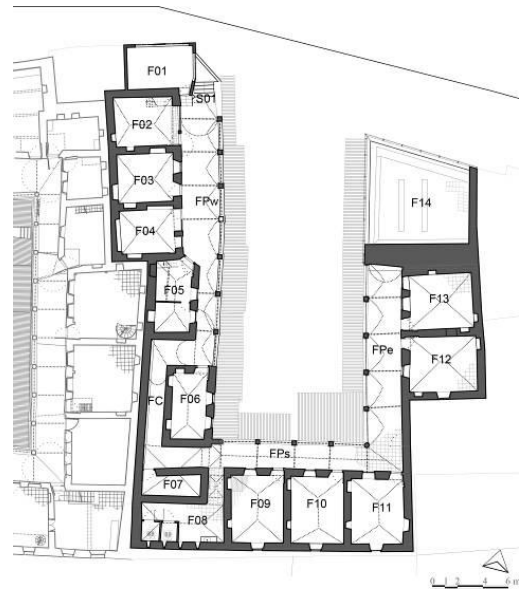


Figure 5: First floor plan

3 CONSTRUCTION TECHNIQUE AND MATERIAL USE

Great Karaosmanoğlu Khan is constructed of rubble stone and brick masonry. On the courtyard facades, the walls are constructed of rubble stone with brick in irregular alternating rows. The columns of portico and the arches together with the vaults are constructed of bricks. The tie bars between the arches are used to counteract excessive displacements under the influence of horizontal loads also used between the spandrels of the arches and the walls of the rooms on the portico and are locked to the vertical tie bars on the exterior surfaces of the walls facing to the courtyard. Brick relieving arches above the door and window openings are used to distribute the load of the walls above.

On both floors, walls are later cement plastered and white washed, in some spaces they were covered with ceramic tiles, timber panels or even wall paper. On the first floor, original lime plaster was partially observed on some parts of the vault of the corridor. Original floor coverings are later altered as cement screed covering, cast in mosaic, ceramic tiles, laminate, linoleum and carpet in the spaces and cement screed covering in the portico and washed concrete in the courtyard inharmoniously with the historical building.



Figure 6: West portico



Figure 7: South portico

The building has original drainage system in the walls and under the floor of the portico for discharge of rainwater coming from the roof to the courtyard. The outlets of the pipes are on the facades of the courtyard between the two floors. At the exterior, over the portico vaults there is a low gable roof while over the vaults of the closed spaces there are separately hipped roofs covered with half round tiles.

4 CONSERVATION PROBLEMS

Conservation problems of the building can be considered as alterations resulting from the inappropriate interventions related with formal modifications and incompatible materials and material deterioration due to lack of maintenance.

Alterations: Through time, inappropriate interventions to the building have resulted in loss of historic character of the khan. The major alteration is the missing north part of the building. Moreover; addition of inappropriate masses on the north end; one on the east comprising both floors and one on the west on the first floor and especially on the ground floor; elements such as large glass display windows, mezzanine floors, on the first floor; closing with glazing of the arch openings on the east portico and implementation of inappropriate covering materials on the floors and the walls, inharmonious partition walls, replacement of original lime plasters with incompatible cement plasters, conversion of original doors and windows to different form and material have affected the original architectural quality of the building (Figure 8).

Structural problems and material deterioration: Main structural change observed in the building is rising on the north part due to demolition of the building (Figure 9). It can be explained by tilting of the building toward the south due to changing of soil condition. By demolishing half of the building, the load on the soil was removed and that caused heave (soil expansion) under the demolished portion of the structure. The raise of the structure on northern part 17 cm, corresponding to angle of 0.58° . However, it did not cause any problems and any structural failure.

On the ground floor, due to major recent interventions, no deterioration of materials was observed. Deteriorations are seen on the first floor due to lack of maintenance, rainwater penetrating from the roof and original drainage system that are in poor condition and salt crystallization because of the incompatible material use in clumsy interventions. On stones and brick of portico, scaling is observed mostly because of salt crystallization besides crumbling and granular disintegration of these materials. Falling, cracks, detachment of plaster, microbiological growth, colonization of higher plants growth are observed especially on the walls of the first floor.

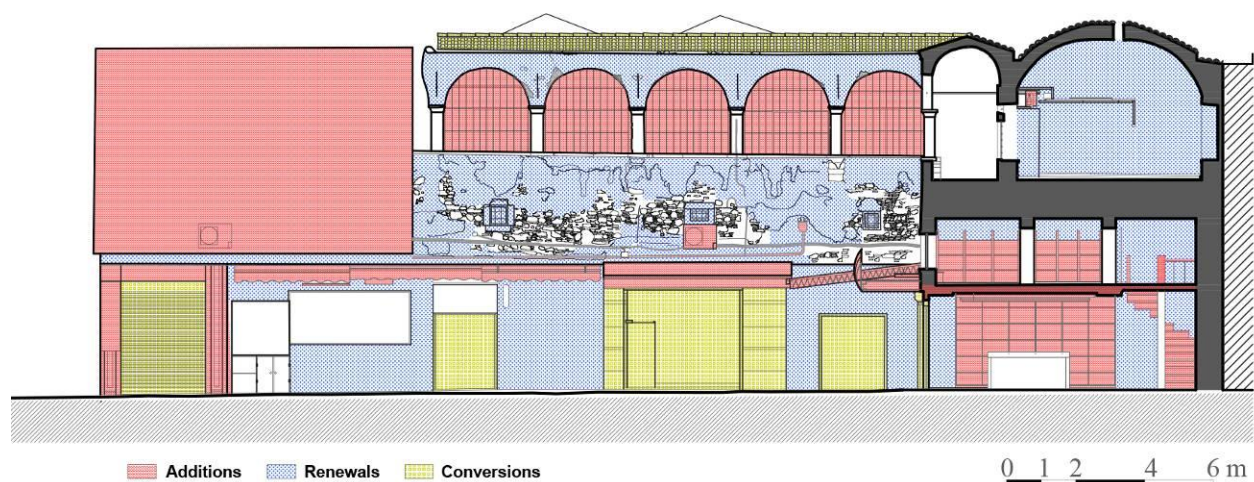


Figure 8: Types of alterations

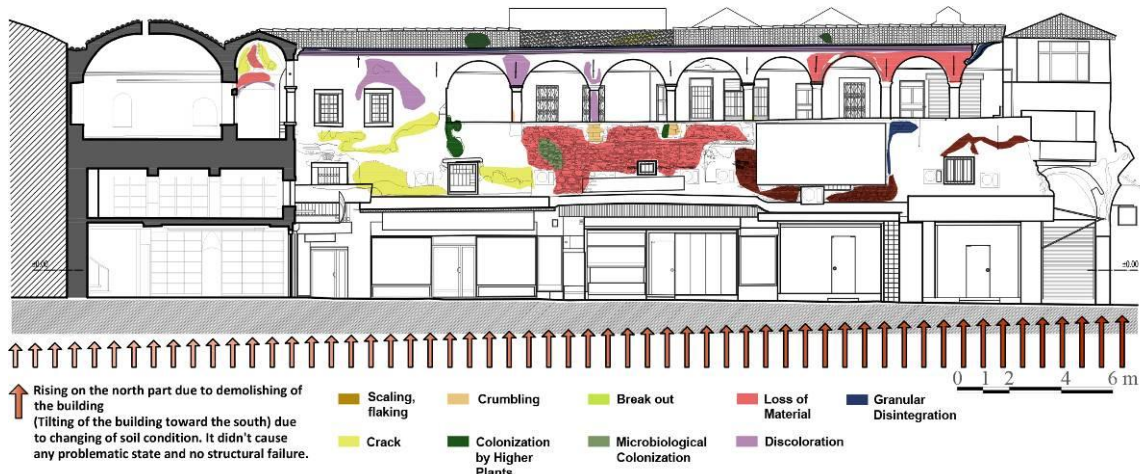


Figure 9: Structural problems and material deterioration

5 EVALUATION

To find the original architectural characteristics of the khan, restitution studies were realized based on historical research, comparative study with other khans and traces coming from the building itself. In the original state, the building was an open courtyard type with shops looking to the inner courtyard and to the street. The first floor was used for accommodation and offices of the traders or travelers.

Although half of the building was demolished, the remaining part substantially preserves its original spatial characteristics, construction technique, building materials and architectural elements. Thus, the building is a unique document representing not only architectural, but also social and commercial characteristics of its period. The building is on one of the main boulevards, very close to the sea shore and in the historical and commercial district of the city. This exceptional position makes the building environmentally valuable not only for being close to various other important historical buildings but also for being one of the inseparable components of this historical texture. The building has been used for commercial purposes from its construction at the beginning of the 19th century until today. This functional continuity gains more value to the significance of the building.

6 CONSERVATION APPROACH

The conservation decisions aim to pass the building on to future generations by preserving and revealing its historical, architectural and use values based on respect for authenticity; to find appropriate solutions to alterations and material deteriorations as well as to find a compatible use for the building.

The building is still used with its original commercial function, however, the trade types led to major alterations in the building especially on the ground floor. Besides, the commercial activities on the first floor do not let the public use this floor commonly. So it was decided to change the quality of commercial activities to attract public attention to the building. However, basic conservation principles for functional adaptation that provides minimum change in the layout and architectural features of the building were also considered. Accordingly, the ground floor is to continue its commercial character. However, the existing marketing activities are replaced with traditional handicraft commerce. Some of the rooms of the ground floor will work as traditional handicrafts stores. Some rooms will hold gallery function for exhibition of traditional Turkish art and handicrafts whereas some other rooms will serve for eating facilities such as cafes and restaurants. Remaining rooms will hold some retail shops.

The courtyard will serve as circulation space as well as the open space of eating facilities. It will be designed by adding pergola that will be constructed from the ground floor continuing to the roof.

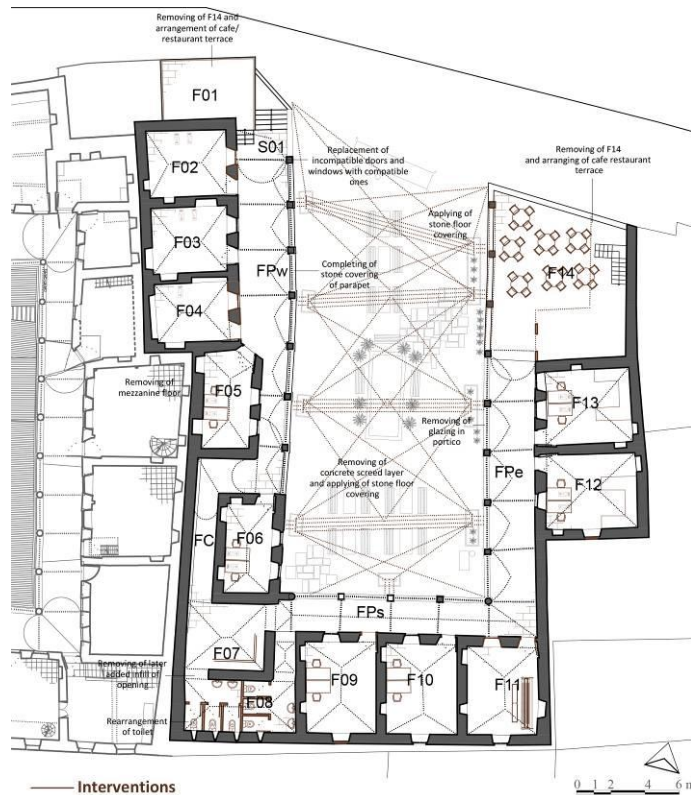


Figure 10: Proposal for use, first floor plan

On the first floor, the present folk dress sewing and tailor ateliers will be kept in their existing rooms. The abandoned rooms will be functioned as ateliers in relation with the products of traditional handicrafts stores sold on the ground floor. According to this scenario, the artists working in the field of traditional handicrafts such as ceramic, copper and rug production will work in their ateliers on the first floor and their products will be sold on the ground floor. The first floor will be open to public and will work as a living museum where manufacturing process of traditional handicrafts is visualized (Figure 10).

7 INTERVENTION DECISIONS

The first floor is used with low density and it is the less altered part of the building. The authenticity of spatial characteristics, building materials and architectural elements are still visible and felt. For this reason, a restitutive conservation approach is adopted for this floor. Accordingly, unskilled later additions to the first floor are to be removed. These additional elements are mass in the west portico above the staircase, glazing between columns in the east portico, floor coverings, mezzanine floors and partition wall between south and east portico. All the original structural and building elements are to be conserved and the authentic characteristics of inappropriately altered ones will be revealed based on the original characteristics determined by the traces on the building.

The ground floor, which is used densely today, is subjected to major alterations. It lost its original characteristics to a great extent and there are no reliable sources about these original characteristics. The only thing left original for the ground floor is the plan scheme. It was decided to reveal the original characteristics as much as possible by removing the unskilled additions hindering the original space characteristics such as mezzanine floors, floor and ceiling coverings. Modifications are to meet the requirements of the commercial function; however, these changes should be compatible with the original characteristics and should be visible.

The later incompatible mass additions; one on the east and one on the west in the first floor to the two edges of the U shaped remaining form of the building are to be removed. Instead, new terrace arrangements are proposed. The terrace to the east will serve as a cafe while the terrace to the west will be utilized as a gathering point for the tailors and artists working on the first floor.

In the courtyard, the system of the pergola will be a light structure based on tensile wire ropes and slim iron columns. This system will be integrated to the main structure with proper methods without damaging it. Climbing vine will be grown over the pergola to provide shade. Thus, the courtyard will be the key space attracting people passing through the boulevard.

Based on the results of visual observations, the structural problems of the building are rather in material scale and the main reason of these material deteriorations is the water penetrating from the roof due to the inappropriately working roof drainage system. Therefore, it is proposed repairing the roof, removing the later added screed layer in some parts and replacing it with the original type of roof covering material, which is half round tile. The lost and deteriorated stone and bricks will be completed or replaced with similar type of material. Lost and powdered mortar and plasters will be completed or renewed with compatible compositions.

8 CONCLUSION

The Great Karaosmanoğlu Khan is one of the most important 19th century surviving Ottoman khans representing the architectural, social and commercial characteristics of its period. In spite of half of the building being demolished and inappropriate interventions, its design characteristics could be still perceived. Surviving spatial characteristics, architectural elements, its location and functional continuity are significant values for its conservation. The principle of the conservation decisions is to reveal the remaining original characteristics of the building as well as arranging current trade activities that resulted in losing the original characteristics. The major intervention proposals may be summarized as follows:

- The building will continue its commercial function while the existing marketing activities are replaced with traditional handicraft commerce.
- The courtyard will serve as the open space of eating facilities related with the proposed cafes and restaurants on the ground floor. A light structure pergola system will be implemented to provide shade in the courtyard.
- The additional mezzanine floors, partition walls and floor coverings will be removed and original stone covering will be implemented.
- On the ground floor, large glass display windows will be replaced with the ones that are proposed in scope of the restoration project.

The most important subject during the interventions is to provide qualified workmanship and care not to lose remaining original architectural details.

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