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## **An Approach to Adapting Historical Buildings to Reuse: The Case of Kostaki Mansion in Trabzon**

*Tarihi Yapıların Yeni Kullanıma Uyarlanması Yaklaşımı: Trabzon Kostaki Konağı Örneği*

Ayşe Esin Kuleli\*

**Abstract:** Adapting a historical building that cannot preserve its original function to reuse suitable for its architectural character is an accepted approach in terms of contemporary conservation theory. If a building can no longer serve the purpose for which it was built, when it is adapted to the new function, the building will be sustainable and livable by ensuring the continuity of the structure's function. Kostaki Mansion is one of the buildings that cannot preserve its original use. The mansion, which was built by Banker Kostaki Teophylaktos in Trabzon between 1898 and 1913, has a special place in the architectural history of the country with its construction system differing from the traditional, facade layout, planimetric feature, intense decoration, and ornament program. The Kostaki family came to Trabzon in the 1890s and moved to the mansion in 1913 after the meticulous construction and decoration work carried out in the building was completed. However, during the Russian occupation, the mansion was turned into the headquarters of the Russian army and the family had to leave their home. The building, which was adapted to different functions in the later process, is used as a museum today. The interventions made to adapt the building to the different uses have caused significant material and structural problems in the building. Within the scope of the prepared conservation project, preservation and strengthening interventions were developed that planned to extend the life of the building, respecting both the initial design and subsequent interventions of the building, which was used with different functions in the historical process. This research examines the change and transformation process of the Kostaki mansion, which could not maintain its original function, from the first construction date to the present, by dividing it into three chronological periods. In addition to the restitution periodization proposal, it is also aimed to share the documents that developed during the preparation of the restoration and exhibition projects with the researchers.

**Structured Abstract:** Although many architects in history worked to use the historical structures created by their predecessors for different functions, this issue was first discussed in theory by Eugène Emmanuel Viollet-le-Duc (1814–1879) (Plevoets & Van Cleempoel, 2011, p. 156). In the early 20th century, the theory of reuse was also discussed by Alois Riegl (1858–1905). Riegl organized the building's various values, incorporated the value of use into the monument's values, and defined reuse as an essential component of the modern conservation approach (Wethered, 1875, p. 63).

Analysis of fundamental conservation theories in the 19th and 20th centuries presents the evolution of reuse concepts throughout history. These theories are basically presented in three groups: stylistic restoration, conservation (anti-restoration) and restoration-conservation movements. The theories cover various conservation activities, which are reflected on cultural heritage buildings (Yazdani Mehr, p. 931).

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Following the discussion of the conservation approach within the scope of these theories; international protection policies and regulations as Venice Charter (1964) (URL.4), the Amsterdam Declaration (1975) (URL.5) and the Australian ICOMOS Burra Charter were developed (2013) (URL.6).

In contemporary conservation theory and practise, adaptive reuse is considered as an important strategy towards conservation of architectural heritage. All interventions that ensure the prolongation of the life of a building with artistic value as a cultural and historical document by preserving its original characteristics constitute the restoration activity (Kuban, 2000, p. 123-124). Approaches regarding the preservation, restoration, and reuse of a historical building by adapting it to a reuse should be in accordance with the contemporary propositions of conservation theory. This theory accepts that intervention approaches related to historical buildings may differ depending on the values they carry (Orbaşlı, 2008, p. 28-29). These values defined by the theory, play a key role in determining the scope of the interventions to historical buildings as well as determining the characteristics of the new additional structure to be introduced.

In Turkey, which has a rich and multi-layered cultural heritage, intensive studies are carried out to bring new functions to historical buildings and in this context, positive and negative examples are seen in terms of protection. Although giving a new function to the historical building is a positive approach, the given function should be in accordance with the architectural character of the building and should not harm it. For this reason, it is important to share and discuss ongoing projects and practices.

In this context, it is aimed to share the results of the research and studies carried out to adapt Kostaki Mansion, which could not maintain its original function, to its new function.

According to Nemlioğlu, the construction of the mansion was completed by Banker Kostaki Teophylaktos in Trabzon in the early 1900s. Horuloğlu states that the building was built in 1917 by Kostaki, a wealthy Greek, in Trabzon, and the plan of the building was created by combining Greek and Russian architectural styles (Horuloğlu, 1978, p. 71). It has a special place in the architectural history of the country with its differentiated construction system, facade arrangement, planimetric feature, and intensive decoration program. The building, originally designed as a residence, was evaluated with different functions after its expropriation between 1927 and 1932. It has been used as the Trabzon Museum since 2001 (URL.1). It is understood that the fixed and live loads in the building have also changed due to the functions that have changed since its construction. Besides, some annexes had to be added to the building for new functions. The mansion, designed as a three-storey building, continues to exist today with its unique architecture enriched with its towers, domes, and elaborate facade design.

According to the researchers, Kostaki Mansion's ground floor has preserved its authenticity to a large extent, except for the additional buildings on the western side. On the contrary, it is thought that the interior spaces of the basement floor partially lost their original values, and the mezzanine, first, and second floors were partially changed (TRAM, 2014).

In this study, restitution research and conservation intervention proposals for Kostaki mansion to reuse as a museum were discussed. During the restitution research, the analysis of the original design and the different cultural layers and periods were analyzed in order to understand the initial design of the mansion.

It can be concluded that the structure has three main periods by evaluating all data obtained in the restitution research;

\*First Period: Early 1910's -1936

\*Second Period: 1937 - (1987 & 2001)

\*Third Period: (1987 & 2001) – Today

Related to the restitution research method, old photographs, documents in the archives of governmental offices, and the information and materials obtained as published literature were evaluated throughout the researches. Traces on the building, comparative studies with similar structures, and written and visual documents were examined in the process of identifying the items and/or sections that were altered partially or completely during the historical process. In that stage, while analyzing the differences according to the periods, a legend was used to show the added and modified sections in the second and third phases. Besides, the degrees of reliability of the resources related to the periodical proposals were established and graded (TRAM, 2014).

Emphasizing both the initial design and subsequent interventions of this mansion, which has assumed different functions throughout its history, conservation and consolidation interventions, including structural reinforcement, were developed with a respectful approach to the building in order to extend the life of the building. The additional building design, which is required for the museum function, has been prepared with a minimal attitude and respecting the original values of the building, within the scope of adaptation studies for reuse. In order not to cause scientific misunderstandings in the additional building design, special care was taken to visually express the new additions using modern technology. For example, it has been proposed to use modern technology and materials in the reconstruction of the collapsed kitchen roof.

**Keywords:** restoration, adaptive reuse, conservation interventions, museum display project, restitution phases, annex buildings.

**Öz:** Orijinal işlevini koruyamayan tarihi bir yapının, mimari karakterine uygun yeni bir işleve uyarlanması çağdaş koruma kuramı açısından kabul gören bir yaklaşımdır. Bir yapı, artık yapıma amacına hizmet edemiyorsa, yeni işlevine uyarlandığında yapının işlevinin devamlılığı sağlanarak yapı sürdürülebilir ve yaşanabilir olacaktır. Kostaki konağı orijinal işlevini koruyamayan yapılardan biridir. 1898-1913 yılları arasında Trabzon'da Banker Kostaki Teophylaktos tarafından yaptırılan konak, gelenekselden farklılaşan yapım sistemi, cephe düzeni, planimetrik özelliği, yoğun dekorasyon ve bezeme programı ile ülkenin mimarlık tarihinde özel bir yere sahiptir. Kostaki ailesi 1890'lı yıllarda Trabzon'a gelmiş olup, yapıda yürütülen özenli inşaat ve dekorasyon çalışmalarının tamamlanmasından sonra, 1913 yılında konağa taşınmıştır. Ancak Rus işgali sırasında, konak Rus ordusunun karargâhı haline getirilmiş ve aile evlerini terk etmek zorunda kalmıştır. Daha sonraki süreçte farklı işlevlere uyarlanan yapı, günümüzde müze olarak kullanılmaktadır. Yapıyı farklı kullanımlara uyarlamak için yapılan müdahaleler, önemli malzeme ve yapısal sorunların oluşmasına neden olmuştur. Hazırlanan koruma projesi kapsamında, tarihi süreçte farklı işlevlerle kullanılan yapının hem ilk tasarımına, hem de sonraki müdahalelere saygı duyularak, yapının ömrünü uzatmayı planlayan koruma ve güçlendirme müdahaleleri geliştirilmiştir. Bu araştırma, orijinal işlevini sürdüremeyen Kostaki konağının ilk yapım tarihinden günümüze kadar geçirdiği değişim ve dönüşüm sürecini üç kronolojik döneme ayırarak incelemektedir. Restitüsyon dönemleme önerisinin yanısıra, restorasyon ve sergileme projelerinin hazırlanması sırasında ortaya çıkan sonuçların ve üretilen yazılı ve görsel belgelerin de araştırmacılarla paylaşılması amaçlanmaktadır.

**Anahtar Kelimeler:** restorasyon, yeniden kullanıma uyarlama, koruma müdahaleleri, müze sergileme projesi, restitüsyon dönemleri, ek binalar.

## Introduction

Although many architects in history worked to use the historical structures created by their predecessors for different functions, this issue was first discussed in theory by Eugène Emmanuel Viollet-le-Duc (1814–1879) (Plevoets & Van Cleempoel, 2011, p. 156.). Viollet-le-Duc stated that the best method for the protection of a structure is to give the structure its function, to fulfill the requirements of the given function, and then to make no changes to the structure for other needs (Wethered, 1875, p. 63). In the early 20th century, theories of reuse were also discussed by Alois Riegl (1858–1905). Riegl organized the building's various values, incorporated the value of use into the monument's values, and defined reuse as an essential component of the modern conservation approach (Wethered, 1875, p. 63.). Especially since the second half of the 20th century, adaptation to reuse of historical buildings has increased significantly, and these conservation practices have become a scientific field of study.

As Feilden emphasized, the practice of adapting buildings for new uses is as old as time. A classic example is the Castel San Angelo, which was originally built as Hadrian's Mausoleum, was turned into a fortress, a papal residence, a prison, and is now a museum (Feilden, 1996, p. 259). In the historical process, many structures that could not maintain their original functions have been adapted to new functions in different countries. The aim of the first applications in this context was

to provide functional and economic benefits from the buildings rather than architectural heritage protection.

Analysis of fundamental conservation theories in the 19th and 20th centuries presents the evolution of reuse concepts throughout history. These theories are basically presented in three groups: stylistic restoration, conservation (anti-restoration), and restoration-conservation movements. The theories cover various conservation activities, which are reflected on cultural heritage buildings (Yazdani Mehr, p. 931). Following the discussion of the conservation approach within the scope of these theories; international protection policies and regulations such as Venice Charter (1964) (URL.4), the Amsterdam Declaration (1975) (URL.5), and the Australian ICOMOS Burra Charter were developed (2013) (URL.6).

In contemporary conservation theory and practice, adaptive reuse is considered as an important strategy for conservation of architectural heritage. All interventions that ensure the prolongation of the life of a building with artistic value as a cultural and historical document by preserving its original characteristics constitute the restoration activity (Kuban, 2000, p. 123-124). Approaches regarding the preservation, restoration, and reuse of a historical building by adapting it to reuse should be in accordance with the contemporary propositions of conservation theory. This theory accepts that intervention approaches related to historical buildings may differ depending on the values they carry (Orbaşlı, 2008, p. 28-29). These values defined by the theory, play a key role in determining the scope of the interventions to historical buildings as well as determining the characteristics of the new additional structure to be introduced. Conservation interventions to be developed for historical buildings in line with contemporary conservation theory differ according to the value, importance, and problems of the architectural heritage.

The definition of re-functioning is often used as a subheading of restoration, and the use and maintenance of historical buildings continue to work for the new function. If a building can no longer serve the purpose for which it was built, when it is adapted to the new function, the building will be sustainable and livable by ensuring the continuity of the structure's function. In addition, thinking about how much each new building has damaged the natural environment during the construction process and using the existing structure by giving it a new function instead of demolishing and reconstructing the building will provide environmental and economic benefits. However, while determining the new function, the spatial requirements of this function should be questioned and its suitability to the historical structure should be analyzed well (Kuleli, 2018, p. 15). In contemporary conservation theory and practice, adaptation studies to reus are accepted as an important strategy for the conservation of architectural heritage. During the adaptation studies to the new function, contemporary annexes are proposed in some cases. Annex buildings should be designed to be respectful to the historic building, easily identifiable, and with minimal impact. The additional structure will contribute to the historical structure to assume the new function more easily (URL.4, URL.5, URL.6.).

Kostaki mansion is one of the buildings that cannot maintain its original function. The mansion was built by Banker Kostaki Teophylaktos in Trabzon between 1898 and 1913, has a special place in architectural history of the country with its differentiated construction system, facade arrangement, planimetric feature, and intensive decoration program.

The building, originally designed as a residence, was evaluated with different functions after its expropriation between 1927 and 1932. It has been used as the Trabzon Museum since 2001 (URL.1). It is understood that the fixed and live loads in the building have also changed due to the functions that have changed since its construction. Besides, some annexes had to be added to the building for new functions.

As a result of the increasing conservation problems in the historical building, the Ministry of Culture and Tourism decided to have a preservation project prepared for this important mansion. In this context, the work was started with the idea of reopening the mansion as "Trabzon Museum" after the necessary interventions are completed for the protection of the building and the renewal of the exhibition system.

During the research in the conservation project preparation phase, a limited number of publications, especially the works of Nemlioğlu (2008), Erten (1989), and written and visual documents in the archive of "Trabzon Regional Conservation Council for Cultural Heritage" and "Trabzon Survey and Monuments Directorate" were examined and used by architecture office led by the author of this study.

This study examines the changes that the Kostaki mansion has undergone since the day it was built, and aims to discuss the conservation interventions developed for the protection of the mansion, additional building, and display proposals for its new function as a Museum.

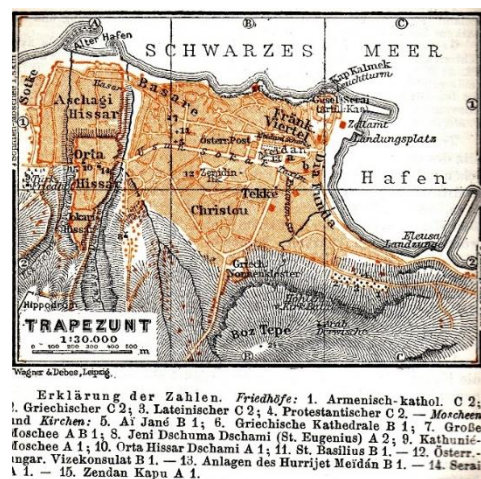
### Urban Texture of Trabzon and Architectural Character of Kostaki Mansion

#### Conservation of Urban Texture in Trabzon

Trabzon is an important historical city and contains many cultural assets. There are 25 protected areas in the city, including urban, natural, and archaeological sites (URL.2). Decisions ("13.11.1980 date ve A-2509 number", "04.09.1985 date ve 1426 number", "01.06.1989 date ve 334 number", "19/10/1998 date ve 3265 number", "11/01/2011 date ve 3148 number", "22/03/2013 date ve 1114 number") regarding the registration and protection of 3 urban sites in Ortahisar district of the city center were taken by Trabzon Regional Conservation Council for Cultural Heritage.

There is a total of 983 registered immovable cultural assets within the city. Among these cultural assets, there are Byzantine period structures such as Sümela Monastery, Hagia Sophia Museum, Girls' Monastery, Kuştul, and Vazeleon Monastery, as well as Ottoman period structures such as Gülbahar Hatun Mosque, İskenderpaşa Mosque, Arsenal, Trabzon Museum (Kostaki Mansion) and Atatürk Mansion (URL.3).

It is possible to have periodic information such as the location of Trabzon castle, religious buildings such as mosques and churches, residential areas, main squares, and streets by examining an old map of 1913 (Fig. 1).



**Figure 1:** The old map of Trabzon city center (1913).

([https://commons.wikimedia.org/wiki/Trabzon#/media/File:Trebizond\\_1913.jpg](https://commons.wikimedia.org/wiki/Trabzon#/media/File:Trebizond_1913.jpg)). (Access Date. 19.01.2021)



Trabzon, which preserved its historical urban texture until the 1960s, was unfortunately damaged by multi-storey and irregular structuring approach after those years (Karpuz, 1996, p. 126). Neglection towards the houses in the historical urban texture, the wrong decisions, caused the buildings to destroy gradually. The same things can be said for the buildings taken place on Zeytinlik Street and Kasım Street, on which Kostaki Mansion is located. From the examination of an old photograph that is thought to belong to the early 20th century, a texture consisting of two or three-storey historical buildings is perceived in the vicinity of the Kostaki mansion. Also it can be understood that the Kostaki Mansion had a dominant location in the city (Fig. 2).



**Figure 2:** Historical urban texture around Kostaki mansion (First half of 20th century).  
[https://commons.wikimedia.org/w/index.php?title=Category:Postcards\\_of\\_Trabzon&fileuntil=Walls+of+the+ancient+city%2C+Trebizond.jpg#/media/File:Trebizonde\\_-\\_Yeni-Cuma\\_quarter\\_colour.jpg](https://commons.wikimedia.org/w/index.php?title=Category:Postcards_of_Trabzon&fileuntil=Walls+of+the+ancient+city%2C+Trebizond.jpg#/media/File:Trebizonde_-_Yeni-Cuma_quarter_colour.jpg) (Access Date. 18.01.2021).

It is seen that multi-storey reinforced concrete buildings, which were planned without worrying about adaptation to the texture, were built near past. It is really hard to find Kostaki mansion among those irregular structures built around it (Fig. 3).



**Figure 3:** Irregular structures around Kostaki mansion Uzun Street (Kuleli, 2013).

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### *Architectural Character of Kostaki Mansion*

The Kostaki Mansion was built similarly to the examples of the capital mansions in terms of decoration programs and incorporating the features of the Baroque and Rococo styles, which were widely used in Istanbul. The mansion can be defined as one of the buildings that leave its mark on the silhouette of the city with its dominant location, scale, and flamboyant architecture.

According to Nemlioğlu, the construction of the building was completed in the early 1900s. Horuluoğlu states that the building was built in 1917 by Kostaki, a wealthy Greek, in Trabzon, and the plan of the building was created by combining Greek and Russian architectural styles (Horuluoğlu, 1978, p. 71) (Fig. 2). The mansion continues to exist today with its unique architecture enriched with its towers, domes, and elaborate facade design (Fig.4).

The mansion is designed to have three main floors and one basement floor. While the basement floor, ground floor, and second floor were planned with the approach of creating a central space, the use of an outer hall was preferred on the first floor. Besides, it is seen also corridors are used on each floor.

Domed towers were used in the southeast and northwest corners of the building. It is stated that the Greek-origin Kostaki Teophylaktov, who built the building, was one of the leading bankers, and traders of Trabzon. Due to Kostaki's commercial relations with Russia, Russian architecture may have affected the architectural form of the building (Erten, 1989, p. 87).



**Figure 4:** The domed tower on the eastern facade of the mansion (Kuleli, 2013).

### *Decoration Programme and Materials Used in the Construction*

Since the mansion has a special decoration program, it's worth mentioning it. While the mansion's walls were built using stone masonry techniques, the floors were constructed generally

wooden beamed. The use of an iron and brick flooring system was encountered in the basement and the second floor.

When the architecture of the mansion is examined, it is seen that different techniques and materials were used both on the facades and in the interior spaces of the mansion. According to Erten, who researched the building, it is known that foreign materials were used, and foreign craftsmen worked in addition to choosing a foreign architectural style for the mansion. Erten states that the mastery of the materials, workmanship, and detailing used is worth examining (Erten, 1989, 87). The original details produced with high-quality materials and workmanship were researched and documented in the survey process (TRAM, 2013). The material samples, such as stone, mortar, plaster, paint, etc., were taken by the experts working at the Istanbul Restoration and Conservation Central Laboratory. As a result of the analyzes made on the mortar samples taken from 5 different places, it was understood that the binder of the samples was 10-20% lime added, approximately 200-250 doses of cement, and a 2 mm sieve aggregate was used. Considering the construction date of the mansion, the binder can be considered to be an early period cement. A comprehensive report was prepared on the material properties and conservation interventions developed for the execution process (TRAMMAR, 2014).

If the facade design of the mansion is examined, it is seen that the towers with the tile panels having elegant, floral motifs and the domes with different shapes and materials, affect the character of the facade (Fig. 4). Pink andesite stone and cream-colored plastered surfaces were used in sequence on the walls of the building and facades were designed differently from each other. Also, the processing of the stone, located in the masonry of the basement, is different from the other parts of the facade. In this section, the middle part of the stones is left high and rough, while the edges are shaped by carving straight.

Special attention was paid to the entrance design of the mansion, and the use of marble was preferred for the stairs and balustrades ending with spiral curves on the sides (Fig. 5, 6). On the eastern facade of the entrance to the mansion, a balcony was designed and the empirical and baroque-style spiral fold branches and leaves on the balcony balustrades were used.



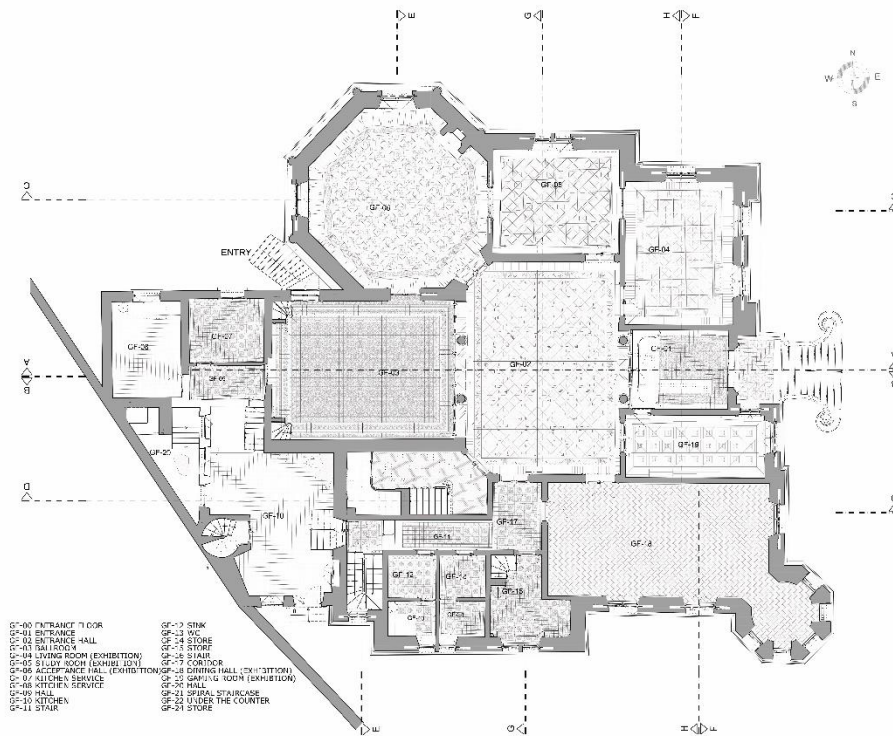
**Figure 5:** Main entrance to the mansion (Kuleli, 2013).

Original examples of the decoration program of the building such as granite columns, glasses decorated with sandblasting technique, silk wallpapers, plaster ornaments, mural paintings, tile mosaics can be seen on the ground floor (Fig. 7).



Different coating materials such as marseille type tile, lead, metal and zinc sheet were used on the wooden construction roof. A special glass roof with iron construction was designed for the ball room.

While square-shaped plain windows were used at the basement floor level, flattened arched windows were designed on the ground floor. Flattened arched windows and round-arched window types were used together on the first and second floors. Andesite cut stone is the material chosen for the windows' frames.



**Figure 6:** Ground floor, floor covering plan (Measured drawings) (Kuleli, 2013).

The ground floor is the most spectacular floor of the mansion with its rich decorations (Fig. 9, 10).



**Figure 7:** Decoration program of entrance hall GF-02 (Kuleli, 2013).

### **Restitution Researches**

#### **Usage of the Mansion in Historical Process**

Starting from its construction to the present, the use of the mansion can be listed chronologically as follows (Nemlioğlu, 2008, p. 12-14);

- The Kostaki family, came to Trabzon in the 1890s and moved to the mansion by completing the construction in 1913.
- The building was used as the Russian Headquarters during the Russian occupation from 1916-to 1918.
- The mansion was put up for sale in 1918, and it was bought by Nemlizade Akif Kaptan.
- The mansion was visited by Atatürk and his wife on 15 September 1924.
- The building was expropriated and used as the 3rd Public Inspection Building between 1928 and 1930. Then it was used as Trabzon Government House between 1930 to 1936.
- The building was handed over to the Ministry of National Education in 1936, first named Girl Art Institute and later as Girls' Vocational High School in 1961-1962.
- The mansion started to be used as Trabzon Museum after the repairs made in 1987-2001.

#### **Research Method on Restitution Phase**

Although there are some parts that lost originality during the repairs, it is understood that interventions were carried out with a respectful approach to the mansion's identity while the structure was adopting new usage. According to the researchers, Kostaki Mansion's ground floor has preserved its authenticity to a large extent, except for the additional buildings on the western side. On the contrary, it is thought that the interior spaces of the basement floor partially lost their original values, and the mezzanine, first, and second floors were partially changed (TRAM, 2014).

Old photographs, documents in the archives of the related directorates, and the information and materials obtained as published literature were evaluated throughout the research. Traces on the building, comparative studies with similar structures, and written and visual documents were examined in the process of identifying the items and/or sections that were altered partially or

completely during the historical process. In that stage, while analyzing the differences according to the periods, a legend was used to show the added and modified sections in the second and third phases (Fig. 11). Besides, the degrees of reliability of the resources related to the periodical proposals were established and graded.

In restitution research, indications such as traces on the building and old photographs were determined as the most reliable and first-degree sources. On the other hand, information obtained from comparative studies with similar structures is shown as second-degree sources. If a sufficient and reliable source was not found in the study and the architectural requirement was acted upon, this situation was stated as the third-degree grading and least reliable source in restitution (TRAM, 2014).



### Restitution Periods of the Mansion

It can be concluded that the structure has three main periods by evaluating all data obtained in the restitution research (Fig. 8);

\*First Period: Early 1910s -1936

\*Second Period: 1937 - (1987 & 2001)

\*Third Period: (1987 & 2001) – Today

Kostaki Mansion's Restitution Reliability Analysis		References
<b>1</b>	First Degree Reliability : Elements whose form, size, material and details are known and marked with the information coming in groups 1 and 2.	1. Traces from the building
<b>2</b>	Second Degree Reliability : Elements whose form, size, material and details are predicted and marked with the information coming in group 3.	2. Old photographs, drawings, reports, etc. documents
<b>3</b>	Third Degree Reliability : Elements whose presence and location are detected and marked with the information coming in group 4.	3. Comparative studies with similar period structures 4. Architectural requirement
Restitution Change Analysis		Construction Periods
 Added elements		• 1st Phase : 1913-1936
 Changed elements		• 2nd Phase : 1937 -1987 & 2001 • 3rd Phase : 1987 & 2001 - Today

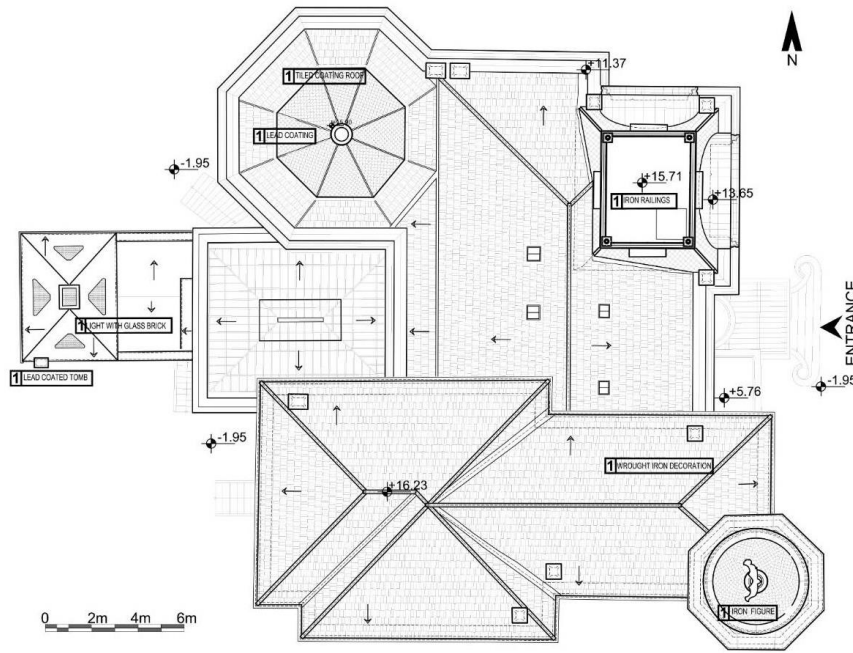
**Figure 8:** Reliability and change analysis legend developed during restitution research (Kuleli, 2013).

### *First Period: The Early 1910s -1936 (Fig. 9, 10, 11)*

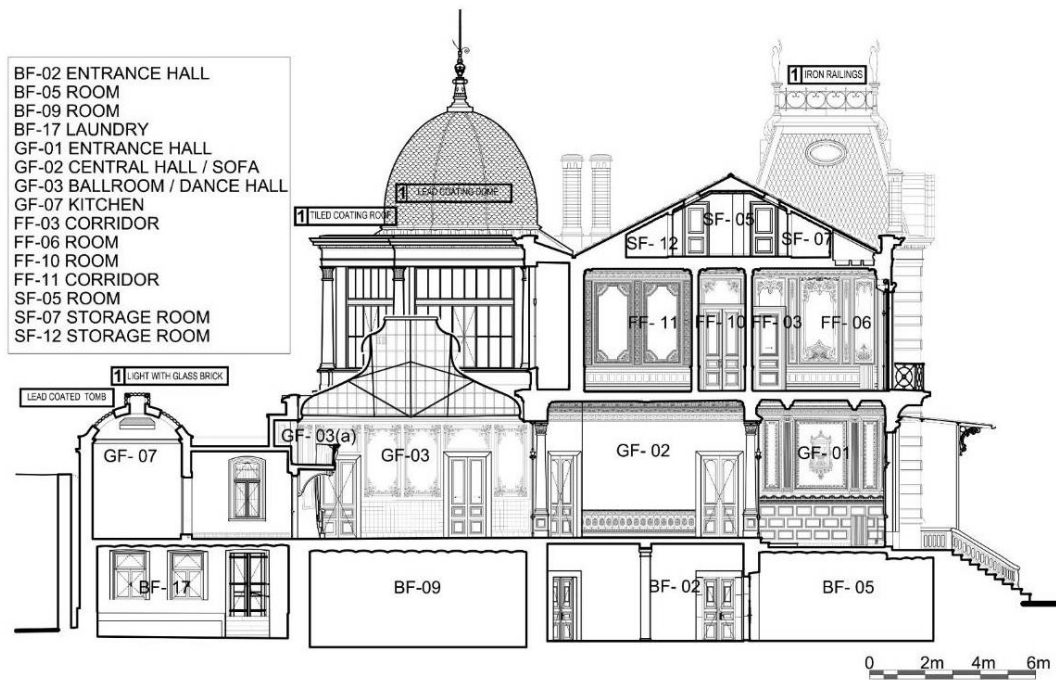
- It is understood from the sources and old photographs that the kitchen space coded GF-07 on the west side of the building was covered with a vault and a lantern in the first period. In addition, some part of the vault surfaces is covered with glass bricks (Fig. 9, 10, 11).
- It is believed that the section between GF-11 and GF-07 coded spaces was an open area in the first period and GF-11 and GF-07 coded spaces were accessed from this section on the ground floor. The direction of the wall chamfer of the door, which is entered to GF-11, must have been changed by

considering the interior and exterior relationship. The building must have been reached by an eight-step stone staircase from the garden level. The door on the facade must have had a decorated lintel like the other doors of the facade.

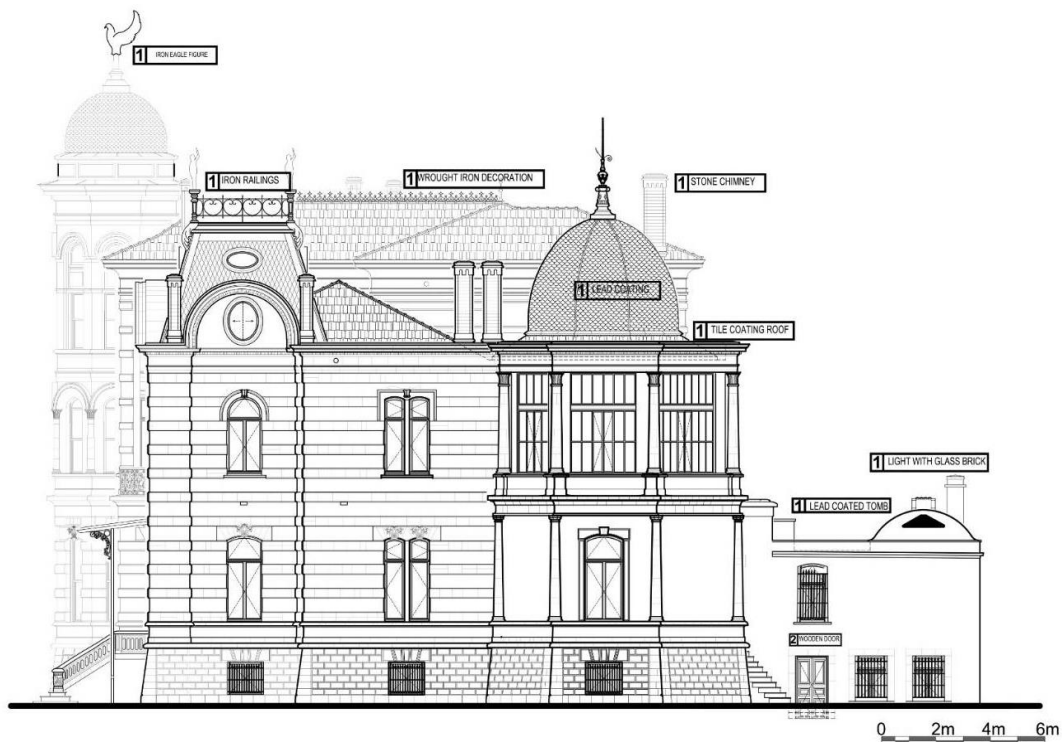
- Some double-winged wooden doors (BF-17, BF-01) and windows (BF-11) were replaced to be iron and single-winged during the previous repairs on the ground floor.
- Unique glass bricks of the window in the GF-22 space can be identified as rare examples of the period. The use of glass bricks in this section is also an indication that the building was built to receive light from its courtyard, that is, originally there was a courtyard in this section.



**Figure 9:** Roof plan (Restitution- First Period) (Kuleli, 2013).



**Figure 10:** A-A section (Restitution- First Period) (Kuleli, 2013).



**Figure 11:** North facade (Restitution- First Period) (Kuleli, 2013).

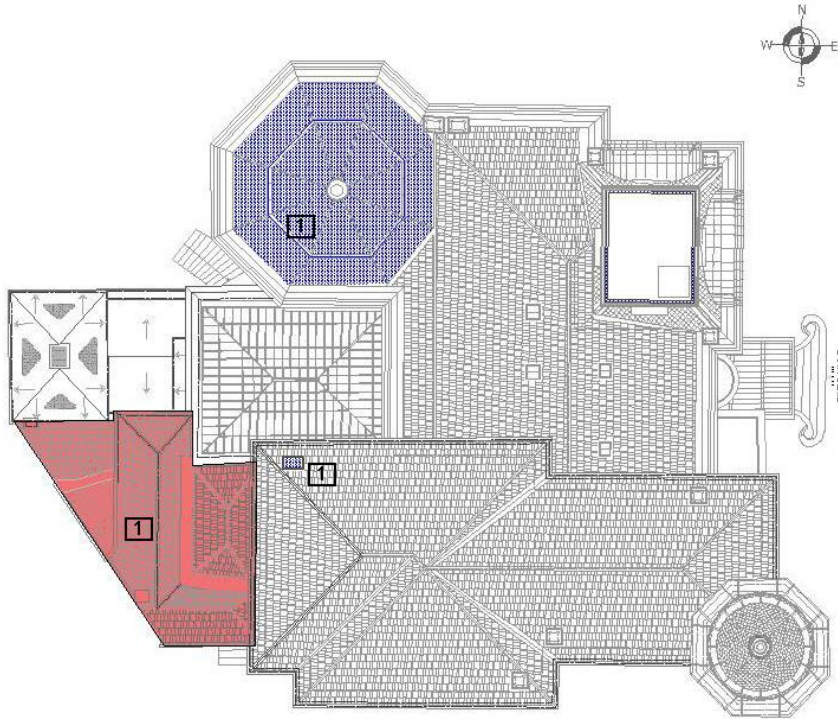


### ***Second Period: 1937 -1987 & 2001***

In this period, the building started to be used with its new function as the Girl Art Institute and some changes were made. The original values of the building were partially damaged during the repair works.

Using the sources obtained, the added items are marked in blue, and the changed items are marked in red in the drawings (Fig. 12).

- The courtyard area was converted into GF-10 and GF-20 coded spaces as an annex and covered with a roof during the repair.
- GF- 14 was divided into two rooms.
- Fish scale leaded roof coating of 1F-12 coded room's dome was changed with a plain lead coating.
- It is seen that the iron eagle figure on the dome covering the 2F-04 in the old photographs was removed during this period. Iron ridge decoration was also removed in this period.
- The garden, originally covered with stone, was coated with cast mosaic.



**Figure 12:** Roof plan (Restitution- Second Period) (Kuleli, 2013).

### ***Third Period: 1987 & 2001- Today (Fig. 13)***

- The original vault covering the GF-07 coded kitchen space located in the west of the building, was probably removed at the end of the second period or at the beginning of the third period.
- While repairing the building, the original brick vault and iron beams of the ceiling were covered with the suspended ceiling on the basement floor. On the other hand, the original ceiling system in BF-04, BF-05, BF-09, BF-10, BF-11, and BF-17 were not hidden with suspended material.

- While the display execution was carried out, coverings of the floor were renewed. In this context, spaces coded BF-01, BF-02, BF-03, BF-06, BF-07, BF-08, BF-09, BF-10, BF-12, BF-13, BF-15 were covered by using marble. The walls of these spaces were painted.
- BF-10's and BF-01's doors were renewed and an iron door was added to BF-17.
- The iron gate of GF-03's was renewed during this period.
- The walls of GF-08 (Service) and GF-10 (Kitchen) were covered with modern tiles instead of original tiles.
- The original wooden panels on the below part of the walls on the first and second floors were removed and replaced by the paneling technique used today.
- Kuranglez was set up for the drainage system and covered with an iron grid.
- Verbal information related to the raised garden level during the repairs carried out in the 1980s was given by museum staff. While the garden level was raised, the stair-step was decreased to 1 step height.
- The toilet, a water tank, and a ticket office were built as annex buildings.



**Figure 13:** Site plan (Measured drawings- Third Period) (Kuleli, 2013).

### **Adapting Kostaki Mansion to a New Function as a Museum**

#### **Intervention Proposals for Museum Function**

It is recommended to adapt the mansion to reuse as a museum with an approach that will minimize the load of artifacts and museum furniture. Also, in order to prevent damage to the building, a limited number of visitors should be allowed to visit the museum at the same time.

The main approach adopted in the restoration project is to propose interventions aimed at preserving their original values in terms of the design, architectural features, construction system, and material use of the mansion. In all interventions, it was aimed to protect the original material as much as possible, the minimum intervention principle was adopted, and care was taken not to intervene more than necessary.

The problems identified during the documentation phase of the project and the results obtained during the restitution research were evaluated together. Then, all projects including

restoration, engineering (structural strengthening, mechanical, electrical), exhibition, and landscaping design were prepared to use the building with the museum function.

Within the context of the restoration project, it is aimed to clean the building from the unqualified additions and interventions that were added to the building with physical and/or visual damage, disrupting the architectural integrity of the building.

The parts of the mortars of the walls that have lost their binding will be injected with diluted, slaked lime or hydraulic lime. Conservation and consolidation studies of materials such as stone, wood, and plaster will be carried out in line with laboratory analyzes and reports. During the work to complete the lost sections, specifying techniques that can distinguish the difference between the original and the new will be used (TRAM, 2014).

In order not to cause scientific mistakes in the future, modern technology elements were used in the annex building, and care was taken to visually indicate that the new additions designed in the main building were not original.

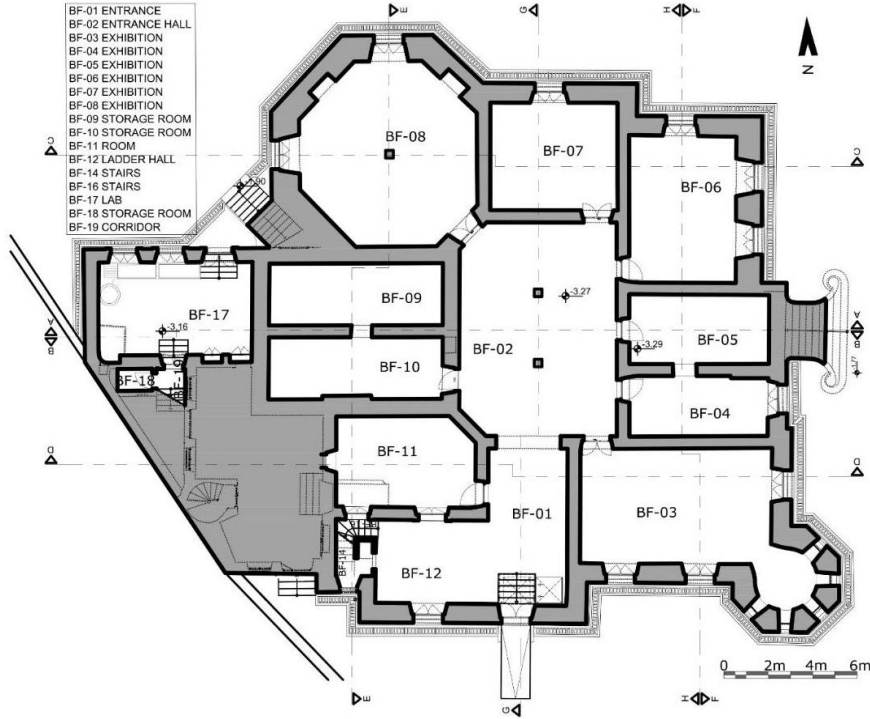
The conservation interventions suggested for the mansion are summarized on the basement and ground floor where the problems are concentrated, and the interventions on the mezzanine, first floor, and second floor are given in general;

#### ***Basement Floor (Fig. 14)***

Conservation interventions for the basement floor whose original structure was damaged will be carried out by experts in line with the restoration project and reports. In this context;

- Suspended ceilings will be removed, and original iron and brick ceiling system/ *volta* will be exposed and repair work will be carried out.
- The additional walls in BF-01 will be destroyed in line with the restitution data.
- The wooden counter and fake column in the BF-01 will be removed and the hall will be arranged as described in the exhibition design proposal.
- Covering materials of the floor will be removed and the original material will be sought.
- The iron door's wing opening to the outside of the BF-01 will be replaced with a wooden double-wing door in line with the restitution data.
- Steps in front of the exterior door of the BF-01 and a ramp will be added within the scope of the landscape design.
- The marble platforms which are not original in BF-02 Entrance Hall will be removed in line with restitution data.
- Wooden platform in BF-03 will be removed in line with the restitution data.
- While the original use of BF-17 space is laundry, it is decided to be used as a conservation laboratory due to the need of the Museum Directorate.
- The iron gate of BF-17, which is installed outside of the wooden door will be removed in line with the restitution data.
- The windows on the wall between BF-11 and BF-12 which were closed in past will be opened and brought to their original state.
- The wooden doors between BF-12 and the stairs will be removed.
- The original glass bricks of the window in BF-14 will be cleaned and the window will be brought to its original state.

- Within the scope of landscape design, the drainage channels around the building will be repaired. The lower part of the building facade under the garden level will be revealed with the elevation arrangement.



**Figure 14:** Basement floor (Restoration) (Kuleli, 2013).

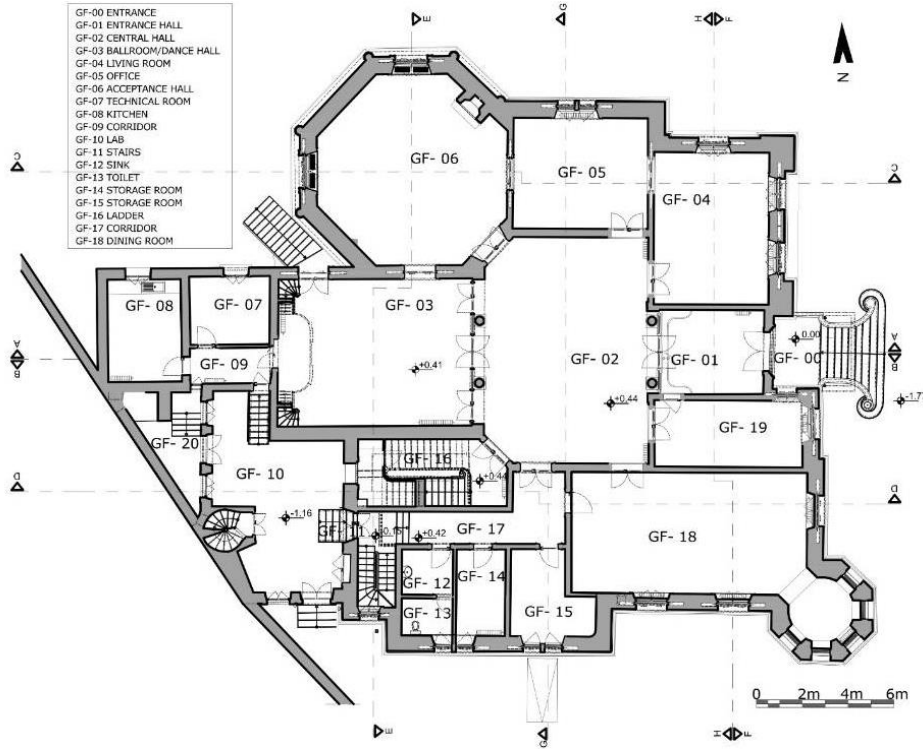
***Ground and Mezzanine Floor (Fig. 15- 16)***

Conservation and consolidation interventions for architectural elements and coatings such as original wall paintings, wooden panels, decorated glasses, and interior decoration items on the ground floor, should be implemented by experts in line with the restoration project and reports.

Restoration work should be scheduled within a program in which retrofitting interventions will take priority. In this context;

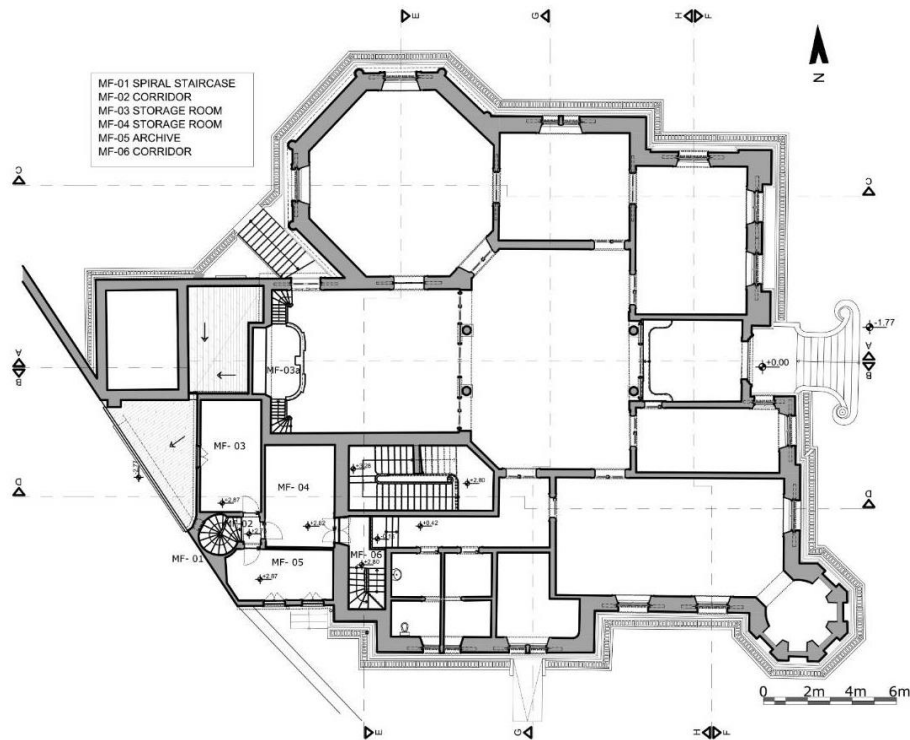
- The iron door of the GF-03 Ball Hall opening to the outside will be removed.
- The window, which was understood to be opened later periods in the GF-08, will be renewed in a way that it can be distinguished from the originals. Also, the floor covering of the space will be removed and the original floor covering material and level will be searched. If it can not be found, mosaic tile will be used for covering material for the floor.
- The unqualified ladders in the GF-10 Laboratory space will be removed and wooden coated ladders will be built.
- The ladder that connects the GF-03 Ball Hall to the garden will be coated with natural stone.
- The door of the GF-10 Laboratory, will be replaced in line with the first-period restitution data.
- Floor coverings of GF-12, GF-13 Toilet will be protected by cleaning and consolidation interventions.

- The dividing wall in the storage areas of the GF-14, GF-15 Warehouse will be removed in line with the first-period restitution data.
- The window with glass bricks located under the ladder in GF-22, will be protected as its original situation.



**Figure 15:** Ground floor (Restoration) (Kuleli, 2013).



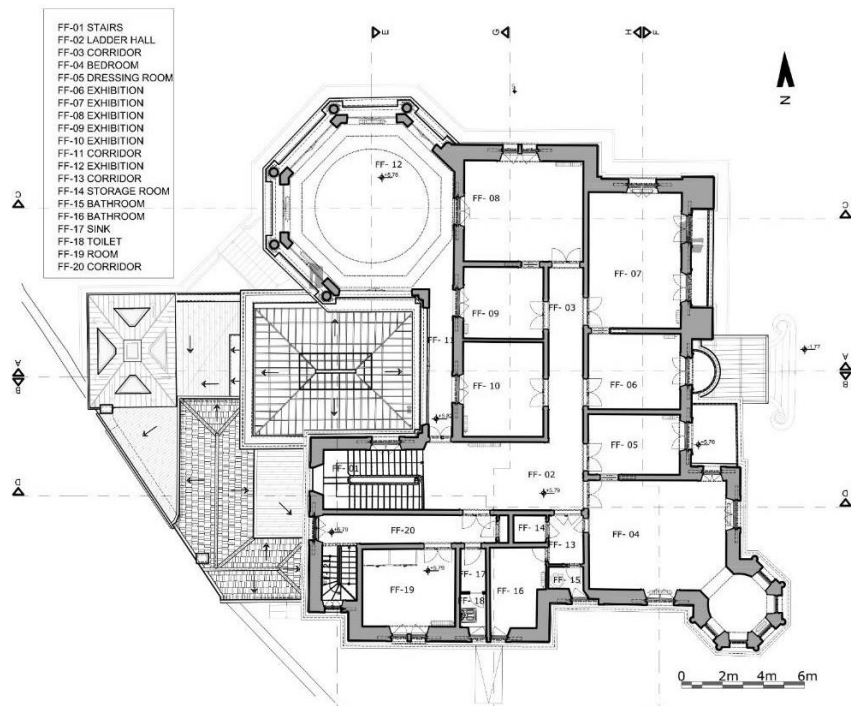


**Figure 16:** Mezzanine floor (Restoration) (Kuleli, 2013).

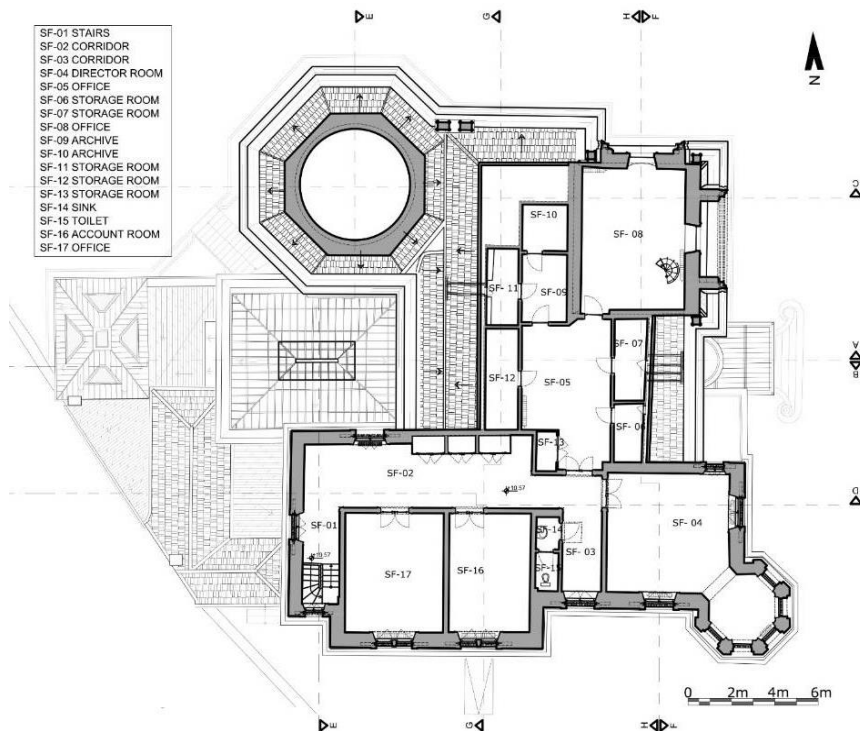
***First and Second Floor (Fig. 17- 18)***

While the administrative and exhibition areas are designed together on the first floor, the second floor is completely allocated to the museum administration. Due to the similarity of the problems in the first and second floors, the conservation proposals have been developed with the similar approaches. The original decoration of these floors were damaged during the previous uses, and the conservation interventions should be carried out by experts in line with the restoration project and reports. In this context;

- It was thought that the non-original wall panelings, which were renewed during the repairs carried out in the 1980s, should be considered as periodical annexes and preserved.
- Consolidation of mural paintings on the walls will be carried out. However, the same approach will be continued in the sections preserved by using the indication technique on the original mural paintings surfaces during previous repairs.
- The wooden steps, landings, wall panels, and handrails of the stairs will be repaired.
- Necessary conservation interventions will be applied to plaster profile moldings on the ceilings of the spaces.



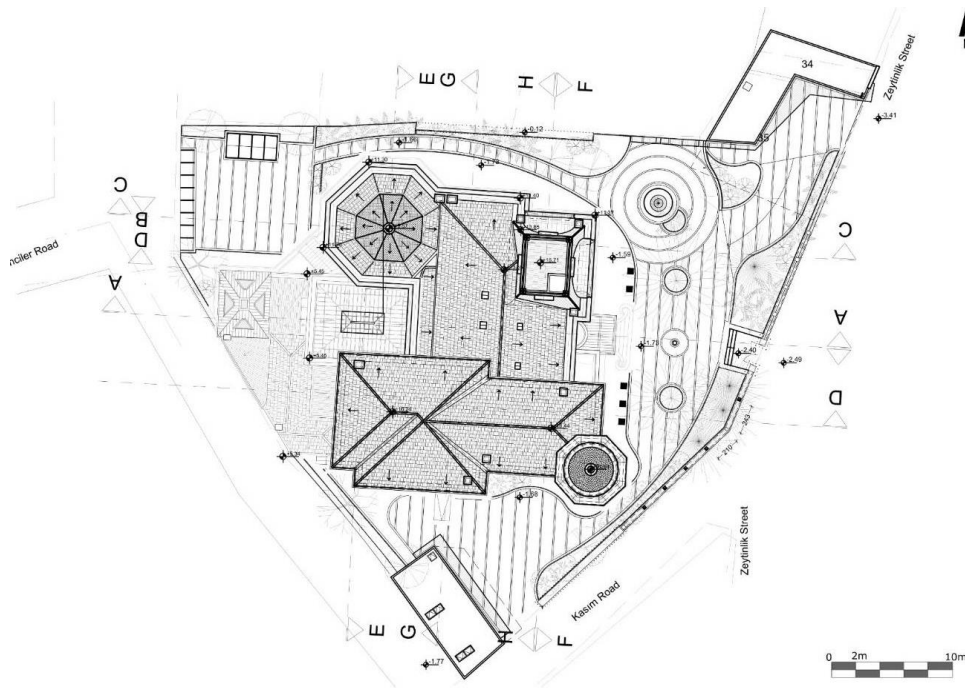
**Figure 17:** First floor (Restoration) (Kuleli, 2013).



**Figure 18:** Second floor (Restoration) (Kuleli, 2013).

**Roofs (Fig. 19)**

- The vault system of the GF-08 Kitchen-Service, which is originally made of stone and glass brick, will be produced with today's contemporary materials such as steel profile construction and glass.
- The L-planned roof covering of the MF-03, MF -04, and MF -05 warehouse spaces will be renewed by arranging slopes along with other parts of the building. The necessary structural interventions will be made on the original floors that will appear with the removal of the existing roofs.
- The dome of the FF-12 Exhibition Hall will be renewed with the original style lead coating in line with the restitution data.
- The chimney on the roof of the Ball Hall will be renewed with stone material in line with the restitution data.
- Insulation materials will be applied to the terrace roof of SF-08.
- The tile and lead coatings of the historical building will be checked and interventions will be made for the insulation.



**Figure 19:** Site plan (Restoration) (Kuleli, 2013).

**Structural Interventions**

Since the mansion adapted to different functions throughout its history, it is understood that it had some structural problems. During the preparation process of the structural strengthening project, some parts of the deflections, distortions, and cracks reflected on the surfaces could be observed visually in the structure. A comprehensive structural examination of the building will be possible during the restoration implementation process.

In order to find out the characteristics of the structural system following studies should be carried out;

Inspection pits should be opened around the basement floor walls in order to understand the stone foundation's situation, thickness, and height, and detail if there is an ampatement. If structural problems such as segregation in the stone foundations, section losses in stone or brick elements, and

structural quality defects in the binding mortar material are observed, such problems should be checked and intervened.

While checking the wooden flooring system of the upper storeys, when a decision is taken regarding the replacement of the wood floor beams that have been deformed and lost their bearing capacity, improvement details should be applied. Wooden floor beams should be connected to each other with support beams with the same wood material cross-section properties in an approach that will not contradict the original. In this way, deflections that may occur on the floors will be prevented and the floor beams will be provided to behave together structurally. In addition, floor beams should be tied with steel flats in the details given in the application project from their lower levels.

Regarding the separation and displacements observed between the wooden stairs and the load-bearing walls of the building, it is necessary to carefully remove the lower covering materials of the wooden stairs. So it could be possible to understand the connection details of the stair system with the wall. Any structural problem (material decay, separation of wooden stair from the construction elements, etc.), should be investigated and protection works should be carried out by taking necessary precautions such as suspension, so as not to spoil the original detail.

#### *Landscape Design Interventions*

Within the scope of the landscape of Kostaki Mansion, the front garden was redesigned as a gathering/dispersal area, pedestrian circulation was regulated, and open / exhibition spaces were proposed for the front and back gardens. The existing vegetative structure is preserved as it is, the same type of plants has been proposed for the missing parts (Fig. 19).

### **Exhibition Project**

#### *Exhibition Concept*

Even though the draft exhibition concept was decided in this phase, the last scenario will be prepared after the review of the objects deemed important by the museum together with the exhibition team and museum curator and the project proposal will be implemented.

The mansion structure itself is a display item with its architectural value containing planimetric and facade organization and interior design with its coating, painting, and decoration on the walls and ceilings. The showcases have been designed in sizes and shapes that will not look dense within the volumes where they will be located. The showcases are detailed to make the right load distribution.

#### *Basement floor*

The exhibition route will be started on the basement floor (Fig. 20). On this floor, it will be available to visit the exhibition of archaeological and ethnographic objects (Fig. 21). Besides, functions such as education atelier for children and conference hall are located.



**Figure 20:** Exhibition concept and visitor route in the basement floor (Kuleli, 2013).



**Figure 21:** Exhibition concept - 3D model (Kuleli, 2013).

### *Ground floor*

It is suggested that the original use of the mansion must be exhibited on the ground floor (Fig. 22, 23).

It is recommended to give brief information about the history of the Kostaki mansion on the right wall of the hall where the exhibition starts and to place a multi-use interactive city map in the middle of the room. The living room, study room, ballroom, game room, and dining hall will be exhibited with their original furniture on this floor.



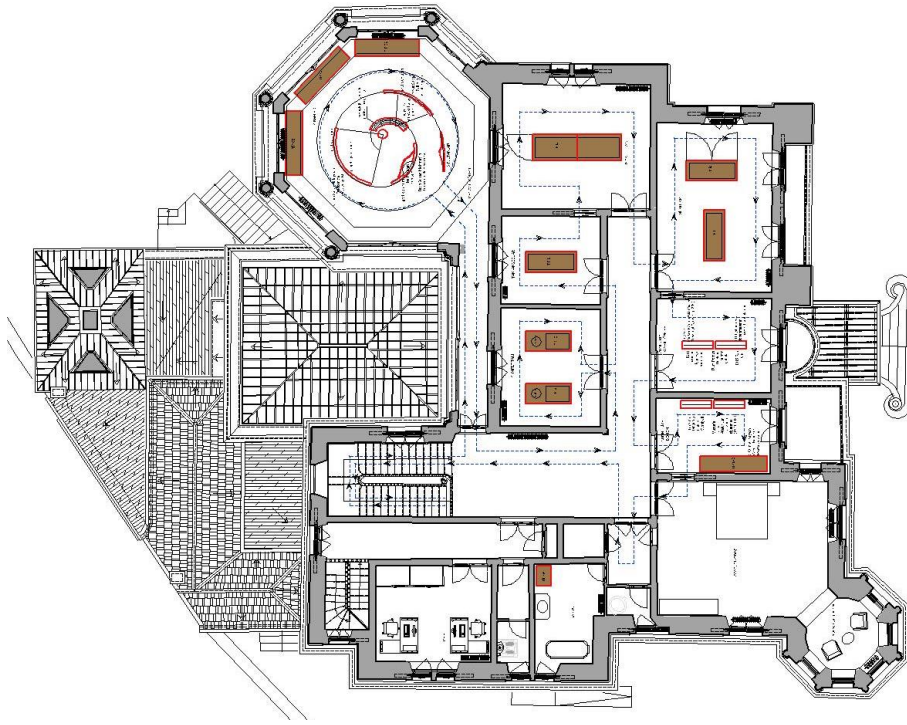


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***First Floor and Second Floor***

On the first floor, the exhibition route will be started with clothing, jewelry, and accessories used in the Ottoman Period (Fig. 24, 25). Then the itinerary will be continued with the Pre-Republic and Republic Period and the Chamber of Atatürk Exhibition. On this floor of the museum, it is envisaged to display exquisite examples of Ottoman weaving and embroidery, traditional man and woman clothing of the Ottoman era, accessories, and jewelry.

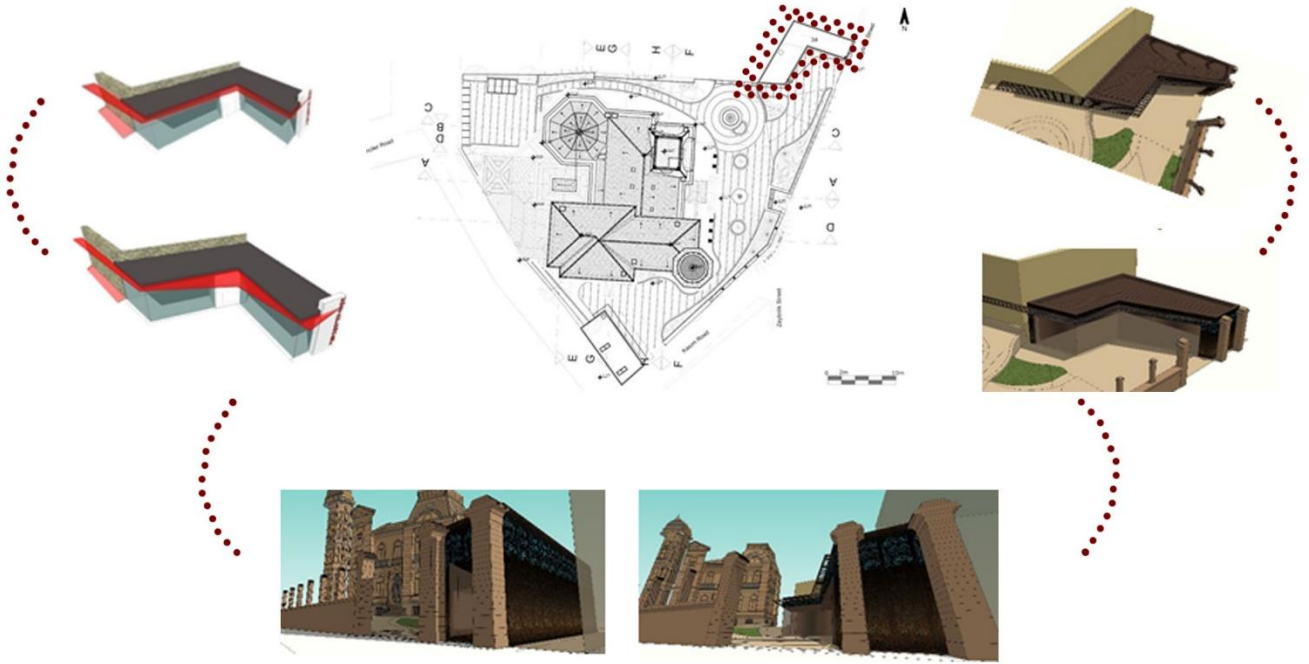
The rooms located on the second floor will be used by museum officials for administrative services.



**Figure 24:** Exhibition concept and visitor route on First Floor (Kuleli, 2013).



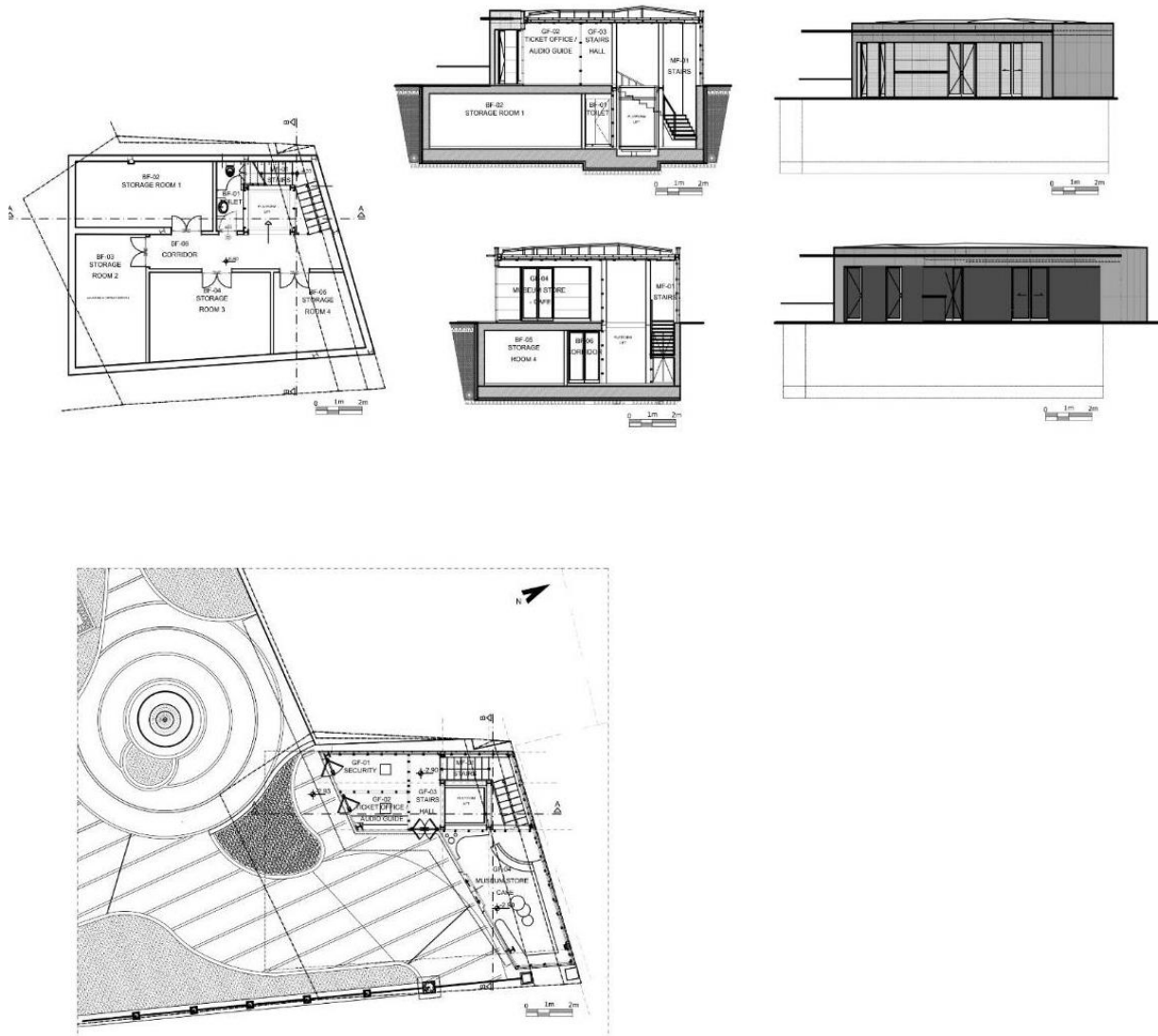
It is thought that it is appropriate to locate the annex building close to the garden entrance (Fig. 26). It is suggested to remove the existing ticket office located in the southeast corner of the courtyard and to build a new one with a basement floor in the same location. Considering the application data taken from the Trabzon Cadastre Directorate, the building is positioned to rest on the parcel boundaries in the southeast direction. While determining the form of the building, it is aimed to strengthen the orientation of the visitors to the Kostaki Mansion.



**Figure 26:** Location and appearance of annex building / 3d sketch drawings (Kuleli, 2013).

The building, designed to be of reinforced concrete and steel construction, has 112 m<sup>2</sup> on the basement floor and 59 m<sup>2</sup> on the ground floor. There is a ticket office, security office, audio guidance, museum shop on the ground floor, and storage takes place for the museum on the basement floor.

In the structural system selection of the building, it was preferred to use reinforced concrete on the basement floor and steel construction on the ground floor, by keeping in mind the necessity of requiring minimum infrastructure work around the historical building during the implementation process. The exterior facades of the structures, which are constructed with carrier steel profiles, will be covered with corten (rusted) semi-permeable (perforated) steel panels. The steel canopy element continues parallel to the courtyard wall in the east-west direction.



**Figure 27:** Annex building proposal's details (Kuleli, 2013).

### Conclusion

Today, many historical buildings that cannot maintain their original functions are adapted to reuse. If an architectural monument can no longer serve its original function, its usage with a new function will also ensure that the building is socio-cultural and environmentally sustainable. If the building is adapted to an appropriate new function successfully, it will contribute to the protection of the building in long term.

The concept of adaptive reuse is a positive strategy in terms of making the historical environment sustainable by preserving the identity of the city. The new function proposed for historic buildings should be in balance with the spatial organization of existing structures. This function should be suitable for the preservation of both the material and spiritual values of the existing architectural heritage. The proposed interventions should not spoil the originality of the building, and if additional structures are required due to new use, this annex should be in balance with the existing structure.



In this study, restitution research and conservation intervention proposals of the Kostaki mansion to reuse it as a museum were discussed. Within the scope of the conservation project, primarily documentation and analysis studies were carried out by using a 3d laser scanner and preparing cad drawings.

During the restitution research in the second phase, the analysis of the original design of the building and the different cultural layers and periods contributed to the understanding of the initial design of the mansion and the interventions and annexes made in the subsequent uses. The evaluation of the mansion with different functions such as the governorship, school, and museum after the residence function, which is its original use, caused some changes made in the building throughout history. It is understood that some of these interventions damaged the original quality of the building, while negatively affecting its structural condition.

By evaluating the information coming from the documentation and analysis phase of the building with the data obtained during the restitution studies examining the changes in the structure, "Conservation Intervention Suggestions" were developed for the preservation and use of the building as a museum.

Emphasizing both the initial design and subsequent interventions of this mansion, which has assumed different functions throughout its history, conservation and consolidation interventions, including structural reinforcement, were developed with a respectful approach to the building in order to extend its life of the building. The additional building design, which is required for the museum function, has been prepared with a minimal attitude and respecting the original values of the building, within the scope of adaptation studies for reuse. In order not to cause scientific misunderstandings in the additional building design, care was taken to visually express the new additions using modern technology. For example, it has been proposed to use modern technology and materials in the reconstruction of the collapsed kitchen roof.

The exhibition project for Kostaki Mansion was prepared as a concept for the Museum function determined by the Ministry of Culture and Tourism. Elements of the exhibition project such as showcases and panels were proposed with a design approach that would not damage the building visually and structurally. It is also aimed to introduce and exhibit the original mansion function of the building in the exhibition project.

### Acknowledgment

I would like to express my gratitude to the General Directorate of Cultural Heritage and Museums for their contribution to the conservation and exhibition project of the mansion and for their publication permits. In addition, I sincerely thank Tuğba Ağcabay and the project team who worked with an organized and collaborative spirit during the preparation of the mansion's conservation project.

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