



A Proposal for the Restoration of the Satici Dwelling in Corum

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ABSTRACT

The unique and original Satici dwelling is located in the city center of Çorum. Its plan typology includes an open sofa, and the construction involves a rare technique that uses a wooden carcass filled with mud-brick in every part of the walls. Documentation of this dwelling carries the utmost importance due to its intensive deterioration and the danger of collapse. This article is derived from a master's thesis completed by the authors. The documentation of the dwelling includes measured drawings and analysis of the deterioration and corruptions. Research for restitution, interventional proposals for restoration, and new function are presented.

Keywords: *Satici dwelling, Çorum, restitution, restoration, conservation*

1. INTRODUCTION

Anatolia is a region that has been settled by people since ancient times and has harbored many civilizations. Çorum has been a continuous settlement due to its rich mining products and is a conjunction of trade routes in

Anatolia. Chalcolithic traces start in the Çorum city center, and its vicinity is formed with layers added by the Hatti empire, Assur Empire, Hittite Empire, Phrygian Empire, Roman Empire, Byzantine Empire,

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Principality of Danişmend, Anatolian Seljuk Empire, and Ottoman Empire. These additions have been preserved until today [1]. However, immovable cultural assets in the city have been destroyed due to poor preservation policies, financial problems, illiteracy, and ranting. Residences preserved from the civilian architecture of the Ottoman Empire and early republic eras face such a situation. These buildings are rare and sparse in the city center. Among them, the Satıcı dwelling with its open sofa plan set-up is important as a rare intact example. The dwelling is chosen for study because it is in the city center, and it has usage and touristic potential due to its garden and courtyard and the dense housing around it. It has the only open sofa plan set-up in the city center (aside from the Tekkeli hoca dwelling, which is in derelict condition), and it is one of the rare examples of a structure made of a wooden carcass completely filled with mud-brick. The original plan set-up, space, and most of the features of the Satıcı dwelling are preserved, but there are major problems:

- The mansion was abandoned 10 to 12 years ago by its owners, and during this period, homeless and vandal groups settled in the house. The dwelling's deterioration accelerated because of these settlers, who burned the unique parts of the dwelling for heating purposes.
- A car wash facility opened recently next to the dwelling plot. The mud-brick and wooden carcass parts of the dwelling that are close to the facility have deteriorated due to the waste water that is discharged into the garden and the dwelling's foundation.
- An asphalt road (Osmancık 4th street) passes in front of the *haymalık* (a local term meaning an outdoor roof and a part of the courtyard that includes the barn, *tandır*, toilet, courtyard gate, etc.). This road has raised the elevation of the street and left some parts of the *haymalık* under it. Also, the street is open to high-tonnage vehicles, so the *haymalık* part is the most deteriorated part of the building.
- The dwelling and its *haymalık* were left in the open and affected by the atmosphere conditions due the loss of some of its original elements. As a result, physical and chemical changes have started to occur in the constructional elements.

It was possible to determine the potential of the structure and its problems via a study involving extensive documentation of the dwelling, measured drawings, analysis, and evaluation. Based on the data obtained, proposals for intervention, restitution, and restoration are presented.

2. DEFINITION OF SATICI DWELLING

2.1. History and location

The Satıcı dwelling is situated in the Üçtutlar neighborhood in Çorum city. It lies on Osmancık, 4th street, in the 76th section on the 120th block and in the 54th parcel. It was officially registered as a cultural asset by the Ministry of Culture on December 26, 1986, with decree no. 2930 [2]. The oldest document regarding the history of the building is the *tapu* deed record, which indicates that the building existed in 1926 [3]. Together with the Tekkeli Hoca dwelling, it is considered as one of the two examples in the Çorum master plan of the preservation report under the title, "Registered buildings from the end of the 18th century and the mid 19th century" [4].

Akok dates the dwelling to the 19th century and concludes that dwellings with open sofa plans are the oldest in Çorum [5]. The construction date of the Tekkeli hoca house is H.1250/C.1835. According to these resources, the Satıcı dwelling (Inventory no. 77) is presumed to have been built in the 19th century with precautionary record.

The dwelling is located in an urban conservation site. There is an elementary school and Osmancık 4th street to the south and an empty parcel that is used as a car park to the north. To the southeast, there is a car wash facility, car park, and the Hakkı Bilal mansion, which is registered as an immovable cultural asset like the Gevher mansion to the west of the dwelling.

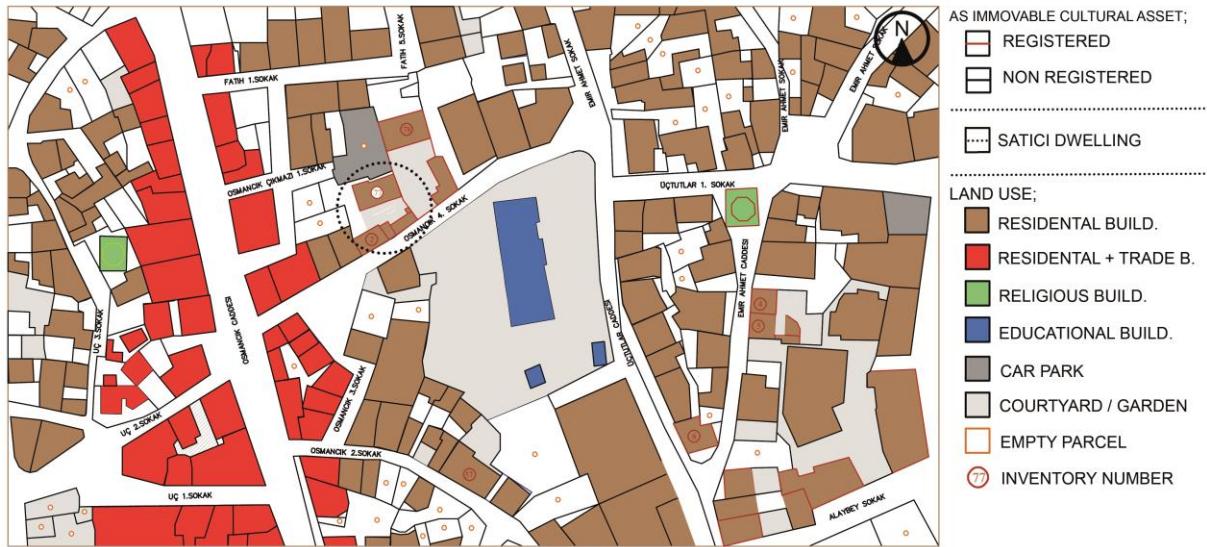


Figure 1. Neighborhood analysis and Location of Satıcı dwelling.

2.2. Plan layout

The parcel of the Satıcı dwelling is 374 m², which is rectangular on the north-south axis. The southern border of the parcel is next to the street, and the entrance from the *haymalık* is on this side. The dwelling is built on the northern edge of the parcel and has an area of 138 m². The area between the *haymalık* and the dwelling itself is set up as a courtyard that is made of green and firm ground.

The outdoor elements are located under the wooden *haymalık* roof. This part includes a barn and washing area (*çamaşır taşı*) on the west side, a *tandır* and an unqualified toilet on the east, and a courtyard door in between them (Fig. 2a, b; Fig. 3u, v, y, z). The courtyard occupies 150 m² between the entrance gate and the dwelling on firm ground and soil areas. The soil areas are used for recreational purposes, and a thick layer of trees was planted. In the north of the courtyard, the dwelling is situated on the west-east axis.

Outdoor elements:

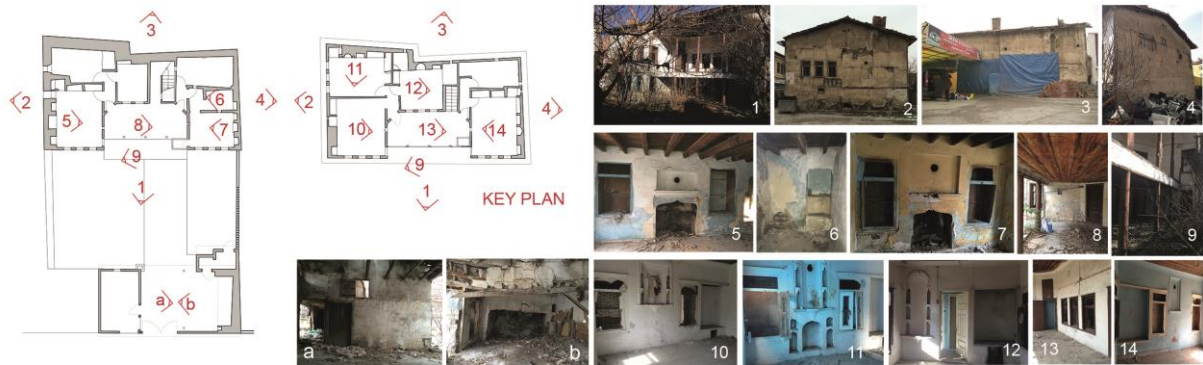


Figure2. Photographs of Satıcı Dwelling (2014)

Set-up of the dwelling:

The Satıcı dwelling is a two-story building with service areas and rooms for winter on the ground floor and a living area on the top floor. The open sofa and its projection on the ground floor called the *taşlık* face the courtyard. All of the spaces open to the sofa, which provides access to the courtyard as well (Fig. 3).

The stairwell, winter rooms, and halls on the ground floor that connect to storage are opened to the *taşlık*. The wooden poles that carry the open sofa on the upper floor reach the *taşlık*, which is rectangular with beveled edges (Fig. 3a). The height of the ground floor is 220 cm. Two of the rooms are situated on the west and the east sides of the *taşlık*, and they are designed to be luminous and spacious with their windows opened to the courtyard. The room on the west side was used as a kitchen before the building was abandoned (Fig. 3b).

The room on the east was divided into two rooms (Fig. 3j, k). The other room on the north side is dark because its windows open to the *taşlık* (Fig. 3e).

All the rooms have architectural elements like furnaces, closets, niches, lamp stands, and abluion niches. Storage areas were designed in the back of the western and eastern rooms. The *mazgal* loop hole of the western storage room is original (Fig. 3c). There is an original window with wooden fences that opens to the stairs on the eastern storage room (Fig. 3h). Storage rooms are connected to the *taşlık* with halls (Fig. 3d,g). Another space that opens to the *taşlık* is the stair hall, which connects the *taşlık* and the open sofa (Fig. 3f).

The living floor is a projection of the ground floor with a height of 275 cm. The open sofa is designed as a

beveled rectangle (Fig. 3m). It is on the ground floor, and the stairwell, rooms, and halls that connect rooms to the open sofa are opened to this room. Rooms on the west and east side of the sofa that constitute the southern façade all together are related to both the sofa and the courtyard (Fig. 3n, t). The western room that constitutes a part of the north and west façades is connected to the sofa via a hall (Fig. 3o). Another room has a window opening to the open sofa and is entered via the hall as it is on the ground floor (Fig. 3p, q). The main/master room is the biggest and most ornamented room in the dwelling and is reached via the other hall, which constitutes the northern façade (Fig. 3s). All the rooms have furnaces, closets, niches, lamp stands, and abluion niches, and they are more ornamented than the ground floor versions (Fig. 2).

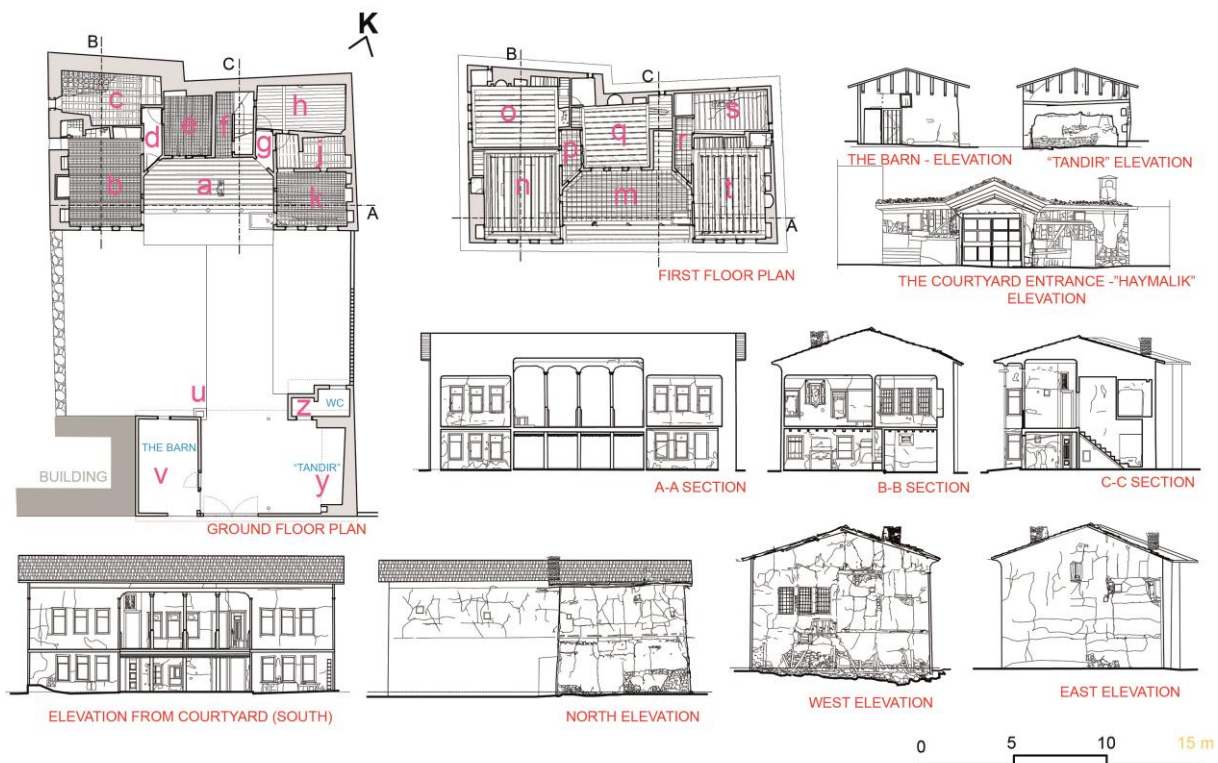


Figure 3. Measured drawing of Satıcı dwelling

2.4. Construction Technique

In the *haymalik* section, the original barn and the façade of the *tandır* are designed as a wooden carcass filled with mud-brick. The inner side of the *tandır*, which faces the barn under the *haymalik* roof, is built with a brick furring technique. The *haymalik* section was coated with a lime-based mortar in its original condition. Today, most of this coating has fallen off. In this section, the timbers used in the bearing walls and

the roof construction are rough-hewn style. The roof is currently covered with Marseilles-type tile (Fig. 4c).

The dwelling differs from other examples in Çorum because its walls are not stone or brick masonry on the ground floor level. The main post and foot plates are rectangular in shape and made with fine-hewn timber. The sills, main braces (cross pieces), studs, bracings, and other posts are rough-hewn timber. The mud-brick tiles in between the wooden carcass are approximately $30 \times 17 \times 10 \text{ cm}^3$ (Fig. 4a, b).



Figure 4. The detail photographs of the dwelling

The entrance floor rests on the earth. Except for the rooms, this part was originally covered with terracotta plaques. Today, most of these plaques are covered with a concrete layer (Fig. 4d). The floors of the rooms on the ground floor are covered with timber lining, and the walls are plastered. A lath-nailed wooden ceiling is used on the girders of the *taşlık* (Fig. 4d). The girders of the other room's ceilings on the ground floor are not covered and are made with rectangular fine-hewn timber (Fig. 4i). The rest of the ceiling girders are rough-hewn timber.

The stairs that connect the *taşlık* and the open sofa are made entirely of timber. The floors of the open sofa and the halls that connect the rooms to the sofa are covered with terracotta plaques (Fig. 4e, f, g). In the section where the sofa opens to the courtyard, three wooden poles carry the roof and the first floor pavement. There are 80-cm-wide hand rails with balusters in between the poles, and arches were made on the roof joineries over split wood with lime-based mortar. In all the spaces except the open sofa and the halls, floor girders are covered with timber linings. There is a lath-nailed wooden ceiling under the girders in all the spaces (Fig. 4h). The roof is a gable roof, and today, it is covered with Marseilles type tile.

2.5. Architectural Elements

Doors: The courtyard door has changed over time and is not original. Only the barn door is original among the doors in the *haymalık*. This door has the same features as the other doors on the ground floor. Doors on the ground floor are formed by fine-hewn timber linings that are 3 to 4 cm thick and 15 to 20 cm wide. These were constituted by locating them vertically next to each other. These parts are fixed together by bents, pegs, and nails. However, on the upper floor, the original doors are made by joining rectangular ornamented wood plates with the mortise and tenon method (Fig. 4r, s).

Windows: All the windows of the dwelling are made of wood and have been replaced over time, except for some of the loop holes. Today, the existing windows have single or double glass wings. It was determined from the traces on the window frames that there was

once a wooden *şebeke* grid system located in front of them (Fig. 4p).

Closets: All the closets in the rooms are located 25 to 30 cm over the floor and are designed with wooden shutters. The insides of the closets are covered with mortar. No original shutters are left today (Fig. 4j).

Cupboards: The cupboards are generally embedded inside the walls near the furnace. Inside they are covered with timber and there are shelves. They were determined to be designed with shutters via the traces on the frames, but most of them have no shutters currently.

Abution niche: A sitting platform, a corner lamp stand, and a *mazgal* loop hole are present in every abution niche, which is found in every room. Wastewater is carried away from the building via pipes. The insides are also covered with mortar as in the closets, and privacy is maintained with two winged shutters. There are no shutters left today (Fig. 4k).

Lamp stands: Lamp stands are present over the furnaces or on walls and are ornamented or plain with various sizes in every room. The top of the lamp stands in the walls that lead to the hall are carved to make a hole in the wall for lightning both areas. They are made of gypsum (Fig. 4 l, m).

Furnace: A furnace is present in every room, but some of them have been closed up. They are designed to be rectangular, simple, and plain (Fig. 4n).

Shelves: The shelves are made of wood and are present in almost every room on the first floor.

Ornaments: There is ornamentation on the shelves in the rooms, as well as little flower figures on the wooden ceilings, and ornaments on the gypsum architectural elements.

3. STRUCTURAL CONDITION / DETERIORATIONS AND CORRUPTIONS

The structural condition of the dwelling requires urgent intervention. Deteriorations and corruptions in the dwelling were divided into those caused by nature and those made by people (Fig. 5).

3.1. Deteriorations caused by nature

Natural deteriorations include fine structural cracks in the wooden carcass system that carry the building. Other examples are deflection and displacements, moistening, rotting and change of color, erosion of the

mud-brick due to the swelling of mortar, breakage, rupture, moistening, and color change of the earthenware structural materials. Broken glass, moistening, shedding, denudation and swelling of the paint, molding, vegetation growth, and infestation are also included (Fig. 5).



Figure 5. Deteriorations and corruptions determined in Satıcı dwelling

3.2. Deteriorations Caused by People

Deteriorations caused by people are the removal of doors, shutters, door frames, railings, and balusters of the open sofa of the structural elements. Closing of the furnaces, changing some of the elements with unqualified versions, painting the wood with oil paint, separating the spaces via walls, addition of ceramics, linoleum, and carpet, and the addition of the unqualified toilet are other examples.

4. RESTITUTION APPROACH

4.1. Using sources in restitution

The sources used for restitution have been divided into five degrees of reliability (Fig. 6):

1. **First-degree reliable sources:** This category includes information obtained from the building itself, the spaces, original and intact surfaces and elements, old photographs, and maps. Preservation is proposed by strengthening and reconstruction in accordance with the information obtained.
2. **Second-degree reliable sources:** These sources include presence of traces and elements that are not present but are determined via comparison to be a part of the dwelling. Integration with original materials, forms, and details is proposed for this category. In this

context, elements to be completed are doors, windows, closet shutters, wooden borders, closed furnaces, and floor coverings.

3. **Third-degree reliable sources:** These sources are information regarding elements that have traces but no examples in the building and are gathered via comparative study (Fig. 7). Integration with the original place, material, and form but with different detail is proposed for these elements. Such elements can include the wooden grid system in front of windows, the border of the *taşlık*, and the courtyard door.
4. **Fourth-degree reliable sources:** This includes information regarding elements that do not have any traces on the building but that should be present in the building due to their original functions. This information is obtained from comparative study and oral resources. Integration with the original place and material but with different form and detail is proposed for these elements. Such elements can include ablution niches, the original toilet, the original garden wall, and its copestone.
5. **Fifth-degree reliable sources:** These are elements that are necessary for architectural purposes and are proposed for integration with new forms, materials, and details.

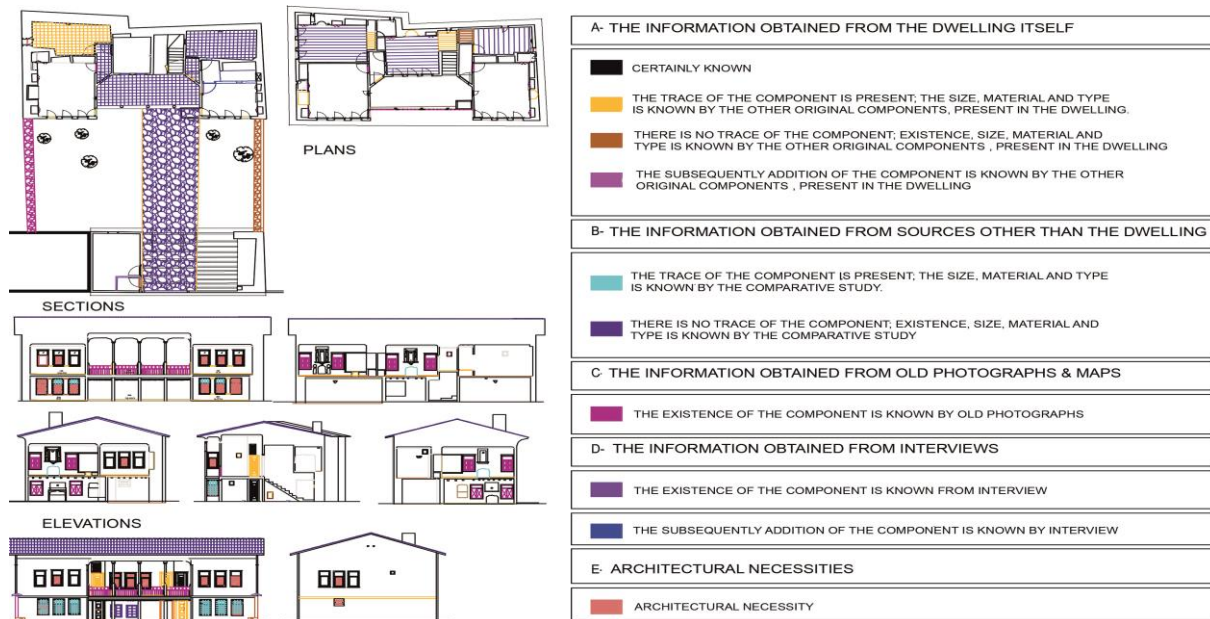


Figure 6. Using Sources in Restitution

4.2. Comparative Study

A comparative study was done to create resources for the restitution work. Historical residences in Çorum were examined, and the ones with suitable open sofa typology and construction period were chosen for comparison. Six examples were obtained (Fig. 7).

| NAME | YEAR OF CONSTRUCT. | PLANS | | FACADE | EXISTENCE/ CONDITION |
|--|--------------------------------|-------------------|------------------|--------|----------------------|
| | | GROUND FLOOR PLAN | FIRST FLOOR PLAN | | |
| TEKKELİ HOCA DWELLING (Akok, 1951) | 1835 | | | | RUINED BUT EXIST |
| CELEPZADE DWELLING (Akok, 1951) | END OF 18 th.C -19 th. Century | | | | NOT EXIST. |
| HAFIZ HACIZADE DWELLING (Akok, 1951) | END OF 18 th.C -19 th. Century | | | | NOT EXIST. |
| BEZGİNOĞLU DWELLING (Akok, 1951) | 1842-43 | | | | NOT EXIST. |
| KALE İÇİ - D.N:1 DWELLING (Karakurt, 2014) | UNKNOWN | | | | EXIST |
| KALE İÇİ - D.N:2 DWELLING (Karakurt, 2014) | UNKNOWN | | | | EXIST |

Figure 7. Comparative Study chart

5. RESTORATION APPROACH AND PROPOSAL FOR NEW FUNCTION

In order to pass on the Satıcı dwelling to future generations in a healthy manner, it should be open for conscious use. In this context, the building was given to the Women’s Culture Center for use. The reason for this choice is to open the dwelling for public use since it is

in the center of the city. Another motive is to support the women of Çorum, who mostly do not have the means to train themselves. In this context, all the rooms shall serve as classes for small groups, with a cafeteria and other wet areas located in the *haymalık* section.

Proposed solutions for the building restoration are summarized below:

- After rasping the deteriorated mortar from the walls, the wooden carcass will be analyzed in detail, and the type and corrosion will be determined. According to the data obtained,

the parts and elements will be preserved on site and supported, and the parts to be renewed will be determined.

- The parts of the structural system will be propped up temporarily where necessary, and elements that have lost their qualities will be changed to impregnated wood. The ones in better condition will be strengthened after analysis. Anti-vegetation and infestation applications are advised for these interventions.



Figure 8. Restoration project

- After a soil survey of the ground where the building is situated, the foundation of the building and its structural system will be supported for earthquake risk by taking necessary precautions.
- A drainage system will be made in order to fend off underground water and rain water on the ground, and necessary isolation will be applied to the walls that will come in contact with water.
- The roof is in bad condition and will be repaired in order to protect the building from atmospheric conditions. Necessary precautions will be taken in order to transfer

the rain water from the roof to the drainage system at the bottom.

- Protective applications will be applied to architectural and structural elements that are original and have been preserved against deformation and deterioration of the materials.
- In order to protect the metal materials, rust remover chemicals will be applied to eliminate rust and corrosion, followed by protective paint.
- Various additions will be removed, including the unqualified toilet in the courtyard, door wing, separators for dividing rooms, non-original cement finish, iron railings, and

various installations that disrupt the general effect of the building and do not carry any architectural or aesthetic value.

- Closed sections such as furnaces will be re-opened and put to use.
- Missing architectural elements will be renewed for restitution.
- The type of cleaning for the façade will be chosen according to laboratory results (either mechanical or chemical cleaning).
- Mud-brick can be protected via constant maintenance, which involves plastering with mud mortar. Mud-brick that has lost its quality and its physical/chemical features will be re-made with original materials via original means. The necessary plaster will be applied for the protection and constant maintenance will be provided.
- The plaster that lost its quality and physical/chemical features will be rasped, and original plaster will be made and applied to determined walls in accordance with laboratory results.
- Necessary cleaning will be applied to terracotta tiles, point repairs will be made by mixing tile dust and particles with the original mortar and necessary binders, and an original look with original materials will be maintained. For missing tiles, new ones will be re-made with original materials via original means.
- Oil painting on the cupboards, windows, doors, railings, and pillars will be cleaned by chemical means if necessary, and wooden surfaces will be protected with the necessary applications.
- Little cracks on wooden parts will be repaired with filling paste.
- Due to the “Women’s Culture Center” function, the building needs to use electricity and heating. An electric heating system is suggested to protect the visual and physical aspects of the building. As the building is wooden, fire precautions must be taken, and electric wiring will be isolated from the wall surfaces. All the additional materials will be distinguishable from the original elements but will not harm them.

- The courtyard will be cleared of crabgrass, and the trees will be maintained.

6. CONCLUSION

Dwellings are left to rot or are demolished, which leads to the deterioration of our historical richness. This results from the indifference by local authorities, governments, and the public, as well as insufficient legal enforcement, the abundance of dwellings, and insufficient funds for repairs and restoration. Studies are therefore needed to increase public awareness. The responsibility mostly falls on municipalities and governments, which have to be informed about the “Act on Promotion and Intervention for Cultural Heritages” no. 5225 and should be motivated to benefit from this act. It should not be forgotten that immovable cultural assets in Çorum like the Satıcı dwelling are historical documents that carry the lifestyles, habits, and needs of people in the past in their plan types, the halls and relationships between residence, courtyard, and street, the past technologies, and the use of materials.

CONFLICT OF INTEREST

No conflict of interest was declared by the authors.

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