LEARNING FROM CHANGE: ADAPTING TRADITIONAL HOUSES THROUGH USER INTERVENTIONS, CASE STUDY: ANTAKYA, HATAY

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ABSTRACT

LEARNING FROM CHANGE: ADAPTING TRADITIONAL HOUSES THROUGH USER INTERVENTIONS, CASE STUDY: ANTAKYA, HATAY

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Change is generally considered as a threat for heritage places. However, change is the way for heritage places to adapt themselves to the contemporary life, thus continue to survive. Therefore, instead of trying to stop the change, ways to manage it should be found. The issue is also valid for the traditional houses which are shaped according to the way of living of the period they were constructed. With the changing lifestyle, interventions for adaptation becomes inevitable, otherwise they are abandoned. While users' interventions usually harm some heritage values, they are still very important as they reflect users' needs, expectations as well as the solutions developed based on a living experience. Although studies are done to understand the modern life adaptations in traditional houses, there has not been an attempt to integrate the intervention of users into the conservation process. Consequently, this thesis aims to analyse and understand the changes made by users in the traditional houses, to develop principles and proposals for integration of the users' interventions as an input in conservation process. Antakya, Hatay is chosen as the case study site with its traditional houses those are still inhabited and thus could survived today by the users' interventions. The research consists of literature research and the site study which includes architectural and social surveys.

Keywords: Change in Traditional Houses, User Interventions, Adaptation, Traditional Antakya Houses

ÖZ

DEĞİŞİMDEN ÖĞRENMEK: GELENEKSEL KONUTLARIN KULLANICI MÜDAHALELERİ ÜZERİNDEN ANLAŞILMASI VE MODERN YAŞAMA UYARLANMASI, ALAN ÇALIŞMASI: ANTAKYA, HATAY

Yürük, Tuğçe
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Kültürel miras alanları için genellikle bir tehdit olarak görülen değişim, miras alanlarının çağdaş yaşama uyum sağlamalarının ve böylece varlıklarını sürdürmelerinin bir yoludur. Bu nedenle, değişimi durdurmaya çalışmak yerine onu yönetmenin yolları bulunmalıdır. İnşa edildikleri dönemin yaşayış biçimine göre şekillenen geleneksel konutlar için de benzer durum geçerlidir. Değişen yaşam tarzına uyum sağlayabilmek için müdahaleler kaçınılmaz hale gelir, aksi takdirde geleneksel konutların terk edildiği görülmektedir. Kullanıcıların müdahaleleri genellikle bazı miras değerlerine zarar verse de müdahaleler, yaşayanların ihtiyaçlarını, beklentilerini ve yaşanmış bir deneyimden yola çıkılarak geliştirilen çözümleri yansıtması nedeniyle çok önemlidir. Geleneksel konutlardaki modern yaşam uyarlamalarını anlamaya yönelik çalışmalar yapılsa da kullanıcı müdahalelerinin koruma sürecine entegre edilmeye çalışılmamıştır. Sonuç olarak, bu tez, geleneksel konutlarda kullanıcıların yaptığı değişiklikleri analiz etmeyi ve anlamayı, koruma sürecine bir girdi olarak dahil etmeyi, kullanıcı müdahalelerinin entegrasyonu için ilke ve öneriler geliştirmeyi amaçlamaktadır. Antakya, Hatay, halen yaşanılan ve kullanıcıların müdahalesiyle günümüze kadar gelebilen

geleneksel konutları ile örnek çalışma alanı olarak seçilmiştir. Araştırma, literatür çalışması ve mimari ve sosyal araştırmaları içeren saha çalışmasından oluşmaktadır.

Anahtar kelimeler: Geleneksel Konutlarda Değişim, Kullanıcı Müdahaleleri, Çağdaş Yaşama Uyarlama, Geleneksel Antakya Konutları

In loving memory of my warm-hearted father...

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CHAPTER 1

INTRODUCTION

Traditional houses have been one of the most important assets as cultural heritage places since they are great in number and they reflect some of the significant features of the period they were constructed in such as the lifestyle, human-space relationships and building traditions. Therefore, conservation of traditional houses with their both tangible and intangible values and the problem of abandonment have become major interests both in the World and in Turkey. Because the main aim in the conservation of the traditional houses is to survive the building as in its original state as possible, the change in the living spaces is disregarded or considered as a negative aspect that damages the integrity and authenticity of the traditional houses, because of the direct understanding of the statement in Venice Charter (1964) about the conservation of heritage places "in their full richness of authenticity" (p.1). However, as it is later expressed in the Nara Document on Authenticity (1994) the changing circumstances and values should be considered for the assessment of authenticity.

One of the most significant features of the traditional houses is that they can be considered as living organisms that have survived throughout the years with their users. The change is needed and inevitable for the traditional houses to adapt themselves to the changing lifestyles of the users, otherwise they are abandoned, and abandonment can lead to demolishment. With the changing lifestyle, the spaces that were built for the needs and expectations of a previous period, starts to become inadequate and impractical with the space functions, sizes, capacity, or furnishings. Generally, in an effort for the adaptation of their houses, users' interventions are seen in the traditional houses. Although interventions by the users can harm some of buildings' heritage values, they can also add different values, since they show that the house is not abandoned and still in use, in other words still living, and they

become instruments for understanding the contemporary needs and expectations of the users.

As stated above, conservation process of the traditional houses usually concerns with the original physical condition of the buildings and overlooks the changes and interventions by users which are indicators of the cumulative living experiences and the needs. As a result of this perspective, the traditional houses are seen to be turned into their states in the 19th and 20th centuries, thus become unsatisfactory for today's users. Traditional Antakya settlement of Hatay province is chosen as a case study site to understand and learn from the users' interventions and change in the traditional houses. Antakya district stands as an example of a traditional settlement that is survived with the interventions of users throughout the years.

During the course of the research, a devastating earthquake with a magnitude of 7.8 hit the region on February 6th, 2023, and caused a grave destruction, loss and a big sorrow. Unfortunately, studied traditional houses had also been severely affected from the disaster alongside with the rest of the city, and the region. I believe, the scope of the thesis with the detailed information gathered, the analyses and the evaluations on these fourteen traditional Antakya houses can be a valuable source to be utilized for the reconstruction and refurbishment processes.

1.1 Definition of the Problem

Traditional houses in Turkey are inseparable parts of the city and rural life. Architectural characteristics, workmanship, craftsmanship, space usage and social life representations of the traditional houses reflects various values such as historical, age, artistic, social and use values. However, today the traditional residential buildings face with several problems.

Historical traditional houses in Turkey are seen to be abandoned, empty or changed due to their characteristics that do not fulfil modern lifestyle needs. When the houses became unfunctional because of their problems or lack of space, their use value decreases or gets erased due to abandoning. "Traditional houses change shape over

time in an effort to adjust to changing occupant needs over time" (Winawangsari, Hanan & Martokusumo, 2017, p. 2).

Inhabitants either move out from their traditional houses to the buildings constructed with new techniques and modern features such as indoor service spaces like bathrooms and toilets, separate bedrooms and living rooms, adequate heating, cooling and hot water systems or they change the houses with interventions in order to adapt the buildings to their lives. While empty buildings face with certain problems in the structure or materials, the houses where the life sustains encounter different issues because of the interventions to original materials, mass, architectural elements, façade and plan features.

It is mostly observed that the inhabitants of the traditional residential buildings in Turkey, struggle to maintain life in the houses considering the modern life necessities, so they change the spaces or repair the structure within their preferences, capabilities, and financial opportunities. Although the changes are mostly "primitive solutions developed by the users themselves" (Kuloğlu & Durmuş Öztürk, 2014, p. 8) and they may cause damage to the buildings' structural and architectural integrity, "the necessary adjustments can meet the needs of a contemporary way of living and thereby provide a healthier environment for people" (Philokyprou, 2015, p. 115). Also, spatial transformations and the adaptation of houses contribute to the continuity of life in traditional tissue. Adaptation which is described by Douglas as "any intervention to adjust, reuse or upgrade a building to suit new conditions or requirements" (2006, p. 1) is the major aspect that should be considered to understand the in-use traditional houses. Also, Khan states that transformation of the houses happens spontaneously throughout the lifetime of the user in the house and "it has been identified as an integral part of inhabitation" (2014, p. 22).

There are several reasons behind the abandonment and neglect of traditional houses in rural areas such as social and economic reasons. Beside from them, one of the major problems in the conservation of traditional rural heritage is the fact that often, the professionals approach the subject with an educated but outsider point of view

and instead of designing with a collective approach that considers users' newly emerged needs and expectations, they try to remove all the changes and return the traditional house to its original state. This point of view in fact, ignores the reality of the continuity of life in the houses and the necessities that comes with it such as adequate systems and designs for the modern lifestyle of the users. On the other hand, users also usually harm the traditional house whether by using incompatible materials in the interventions or changing the identity and integrity of the house with redundant transformations. Therefore, for sustainability in the conservation of traditional houses, both users and professionals' perspectives, experiences and expectations should be taken into consideration in the conservation process. Otherwise, "without any clear direction, the transformation of traditional houses can remove the local identity of the traditional community" (Vitasurya, Hardiman & Sari, 2018, p. 2).

Considering these issues, it is clear that there is a need for a collaborative effort in the conservation of traditional residential houses. Understanding and learning from the techniques and mentality of both traditional building masters and inhabitants who have been trying to preserve the houses and lives in the traditional houses with their experiences and improving those intervention techniques professionally are crucial for the successful sustainable conservation.

1.2 Aim and Scope of the Thesis

The aim of the thesis is to analyse and understand the architectural characteristics of traditional Antakya houses, determine the changes in the in-use traditional houses that are implemented by the users and the needs and expectations of the users. After understanding the place and the change in the place, the main aim of the thesis is to learn from the users' interventions which will enlighten the materials and techniques used and intentions and expectancy behind the interventions of users and develop principles and proposals for the integration of the interventions into the conservation process with a participatory approach.

The research has several important focal points such as developing methodology to identify and evaluate the change in traditional houses, to understand and transfer the importance of continuation of life in the houses and the user interventions. Moreover, space-user relationship is one of the most essential aspects of understanding traditional architecture and traditional life. One of the aims is to be able to clarify the utilization of the spaces by the inhabitants according to the modern life needs.

There are studies in the literature regarding the adaptation of traditional buildings, re-functioning of the traditional houses, spaces or built-in furniture in relation with the modern lifestyle needs and the transformation of traditional house tissue in rural areas (Avcı, 2012; Ulaş, 2013). These research show that beside being one the main resources for such studies, there is a need to understand why the users felt the urge to change their living environment and how they achieve the aimed interventions with their facilities. Therefore, the reasons and ways of change in traditional life and architecture is a significant research interest in the conservation field. After understanding the causes and process of the interventions by users, the aim is to improve the learnings from users' methods of change with an interior architect in conservation point of view with principles and proposals for the integration of interventions. The main intention behind the proposals is to contribute to sustainable conservation processes which will be in "an approach to conservation that preserves the best of the heritage but does so without imposing insupportable costs and which effects a rational balance between conservation and change" (Delafons, 1997, p. 118).

1.3 Methodology of the Thesis

Literature research had revealed several exemplary case studies focusing on the adaptation of traditional houses, changes done by the users or the spatial analysis of the altered traditional houses and each has some similar and some different methodologies that helped to shape a methodology for the thesis.

The thesis is conducted as a part of 2551 TUBITAK- British Council Collaboration Program "The Newton-Kâtip Çelebi Fund" Project entitled "PROcesses for sustainable retrofit of Traditional dwellings in Turkey for Climate-resilience, Conservation and ComforT (PROT3CT)". Antakya, which is a district of Hatay, is selected among the five regions that have been studied in the scope of the project. For the thesis, fourteen in-use traditional houses have been selected during the site survey, from the three central neighbourhoods of the traditional Antakya settlement: Zenginler, Ulu Cami and Gazi Paşa Neighbourhoods. The traditional houses have been documented to be analysed in terms of architectural and structural features, original and current usage, user interventions, modern life in traditional houses, and user needs and expectations.

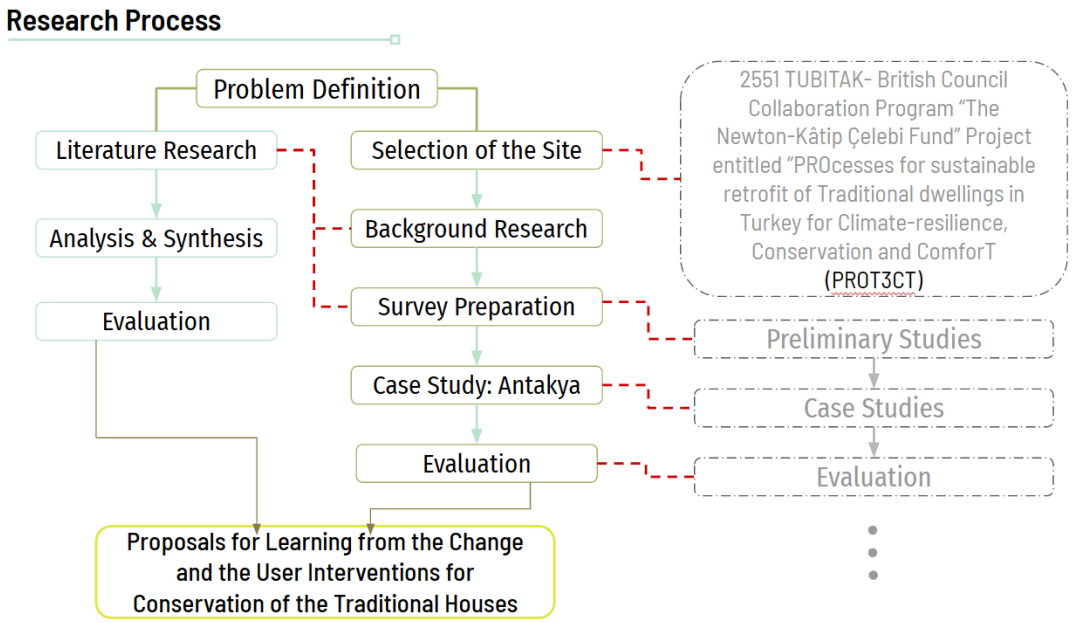


Figure 1.1. Research process of the thesis (Author, 2021)

The research consists of three stages which are literature research, site survey which includes architectural survey, and social surveys; and evaluation stage where the collected data is analysed, and the findings are evaluated. Firstly, literature research had been done in order to understand the theoretical background on the authenticity and change in conservation of cultural heritage, traditional houses as living cultural heritage places, modern life adaptations in traditional houses, as well as the physical

features and architectural tissue of the place. Following the intensive literature research, the site study to Antakya, Hatay is conducted, and traditional houses had been selected to be studied. The houses needed to be built with traditional techniques and reflect the architectural characteristics of traditional Antakya houses. Also, the houses were needed to be in-use preferably permanently, or seasonally. Fourteen traditional houses had been studied in total from three neighbourhoods, including the Ülkü – 19 House which is studied in the scope of PROT3CT project.

Selected traditional houses had been documented and analysed both physically and socially through the surveys which consist of technical drawings; structural, spatial and material analysis about the buildings and in-depth interviews with the users. Social surveys with the fourteen users had been completed during the case study with the inhabitants of the in-use houses about their needs and expectations for the houses, comfort conditions in their living environments, the reasons behind their interventions, their lifestyle and use of the houses and open spaces within the lots. The questionnaire which is used during the site survey was a part of the PROT3CT[1] project (see Appendix).

The questions were grouped under 5 categories which includes the personal data, ownership status and demographical information, space-user relationship and satisfaction, end-uses and thermal comfort parameters, economic structure, and willingness to pay; and finally, multiple-choice questions about the comfort conditions. The interviews were conducted face-to-face and unstructured besides from the survey questions since the users' responses may lead the conversation and give information about other important topics about the traditional house, and the life of inhabitants in their living environments.

[1] More information and data about the project can be found on the PROT3CT website: www.prot3ct.metu.edu.tr

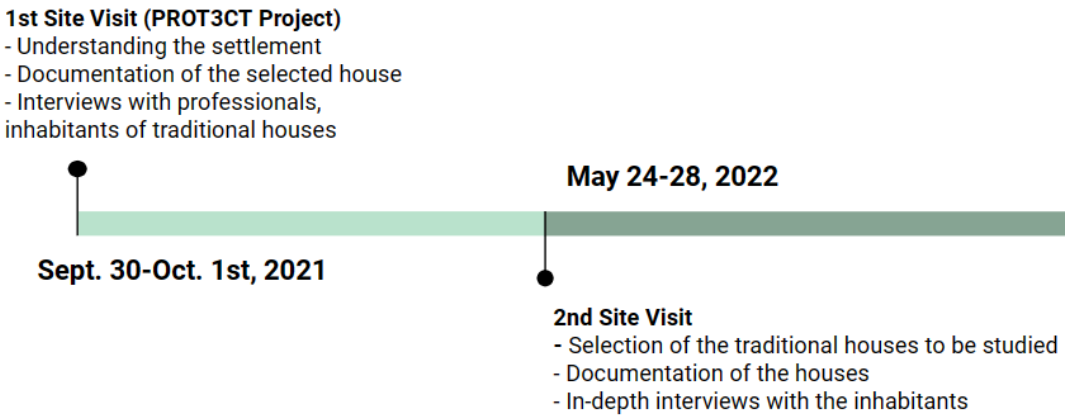


Figure 1.2 Case study timeline (Author, 2022)

After the site survey, both the data from the literature research and site survey have been put in use for the analysis and evaluation stage of the research. Studied traditional houses have been categorized according to floor plan, mass and façade typologies, the technical drawings of the houses are prepared, and the intervention types and scales in the traditional houses have been identified. For the identification of the change and the interventions, a table showing the types and scales is prepared with the help of the studies of the PROT3CT project and the table called "scale of adaptation options and degree of change" (Douglas, 2006, p. 4) is utilized.

As another important part of the analysis stage, each user intervention for each studied case is listed on a table explaining the type and scale, material and construction technique, reasoning of the user, effects on both daily life and the structure, and finally the afterthoughts of the user. However, there are some cases where the house is currently being rented and the background information about the previously done user interventions are limited. The intervention table had not been prepared for those cases like the Nevizade House which is the only rental among the fourteen studied houses.

Moreover, the most common user interventions are determined through the architectural analyses of studied cases and detailed classification of the user interventions. Proposals for the integration of user interventions to the conservation processes are developed by taking the most common interventions as guides in order

to be able to offer design solutions to the most immediate needs of the inhabitants which are deducted from the analyses and evaluations.

Lastly, while the importance of the integration of the user intervention is explained, the crucial aspects that should be taken into consideration by the professionals during the process are emphasized.

CHAPTER 2

CHANGE IN TRADITIONAL HOUSES

2.1 Authenticity vs. Change in Conservation

The integrity of heritage places and the importance of preserving them have been among the conservation area's main objectives. This objective requires assessing and understanding the original and current states, the function, and context of the historical place to be able to determine the integrity to be conserved. In this direction, authenticity is considered being one of the essential points taken into consideration. The concept of authenticity has been a widely discussed subject in the conservation of cultural heritage since the pioneers both in practice and theory. Staple argued matter about authenticity in the literature, charters and professional area has been whether the historical work of art should be returned to its original and authentic state and preserved or the passage of time and the changes that come along with it should also be acknowledged, understood, and conserved as well.

The first idea can be dated back to the works and ideas of Viollet-Le-Duc who was one of the pioneer names in the restoration field. His stylistic unity approach was essentially a revivalist stance believing that there should be unity in the style of the heritage buildings, so that the changes, repairs, additions, or restoration work should be done in the style of the original, and they should not be visible (Ersen, 2015, pp. 3,16). This idea and the applications by him were notably criticized by one of the other important pioneers in the area, John Ruskin by defining the restoration as “a destruction out of which no remnants can be gathered: a destruction accompanied with false description of the thing destroyed” (Ruskin, 1889, p. 194). Ruskin’s point of view was that the historical buildings don’t belong to the current generation, so

the sole purpose should be carrying them over to the future generations rather than completely altering the heritage places with the stylistic unity approach (Ruskin, 1889, p. 197). Obsession and ambition to create authentic appearances in historic monuments and buildings had led some professionals to imitate former architectural styles, thus the false description mentioned by Ruskin had arisen. It can be said that the restorations executed with the stylistic unity approach had resulted in a somewhat fabricated authenticity and it made it difficult to read certain eras of buildings since the aim to erase the unoriginal traces was succeeded. Although the approaches of Viollet-Le-Duc and John Ruskin can be seen on the opposite poles of the spectrum of the ideas on authenticity in the conservation of cultural heritage literature, the conflict had paved the way for further study.

Over the course of the development of modern conservation theory, the discussion on the concept of authenticity had progressed and the importance of preserving the lifetime of a heritage place had come into prominence. As one of the leading names in the conservation theory literature, Brandi (1996) stated later that trying to imitate the work of the past generations in restoration can be classified as "artistic or historical forgery" (p. 1996) and the traces of time should be respected and should not be dissolved away. Moreover, according to Bendix (1999), "authenticity as a criterion should not matter in attempts to appreciate and understand the culture" (p. 14) and the strong visions on authenticity are rather romantic. The definition of conservation had evolved and instead of the efforts to bring historical buildings and monuments back to their original state and rather perceive them as constant exhibition pieces, it was seen as "expressing the modern way of maintaining living contact with cultural works of the past" (Philippot, 1996, p. 268).

International charters had also attributed importance to the concept of authenticity since the notion had been a subject of debate from the beginning. "Authenticity appears as a kind of battleground of meanings, easily invoked, variably applicable, multifaceted and adaptable to the most diverse situations" (Heynen, 2006, p. 288). In the Venice Charter (1964), the issue of stylistic unity was resolved in the Restoration chapter of the charter, and it is stated that "the valid contributions of all

periods to the building of a monument must be respected since the unity of style is not the aim of a restoration" (Article 11). After 30 years from the Venice Charter, the *Nara Document on Authenticity* (1994) was solely focused on the cultural diversity and authenticity topics as a whole. Although the Nara Document had been one of the milestones in the conservation of cultural heritage for international guidelines and understandings, the clear definition of the term *authenticity* was given 20 years later in 2015 with *Nara +20*. The document had attributed importance to the clear definition of authenticity, the debate of authenticity as a criterion in conservation, and the need for further study in the subjects for the development of the conservation field. It defines authenticity as "a culturally contingent quality associated with a heritage place, practice, or object that conveys cultural value; is recognized as a meaningful expression of an evolving cultural tradition; and/or evokes among individuals the social and emotional resonance of group identity" (2015, p. 146). The definition approaches the problem of authenticity from several angles and one of the highlighted points is how traditions evolve. The statement is important for expressing the transforming, changing, and evolving nature of traditions, thus the cultural heritage as the products of the traditions and societies.

The most emphasis given to the topic of change in cultural heritage places is in The Burra Charter by ICOMOS. Although the charter was initially adopted in 1979, several revisions and changes have occurred, proving the still-evolving nature of the conservation field and the major discussions. The charter is focused on the cultural significance of places and is known with the important flowchart of actions to be followed in conservation called the Burra Charter Process. Among the significant contributions, the charter offers two different articles on change in general and managing change which are Articles 15 and Article 27. The comprehensive approach that is needed towards the changes as one of the frequently encountered issues in conservation was essentially achieved with The Burra Charter. Article 15 clarifies both the positive and negative aspects that come with the changes in heritage places by stating that "change may be necessary to retain cultural significance but is undesirable where it reduces cultural significance" (ICOMOS, 1999). The efforts to

trace, understand and assess authenticity had become such prevalent throughout conservation theory development that the change as a reality of historical places had often been overlooked (Upton, 1993, p. 14).

Considering the authenticity of cultural heritage, one of the major points that need taken into account and discussed is change. Although the reasons behind it vary, it is undeniable that with the changing periods, the lifestyles transform, new needs and expectations occur and cultural heritage places change over time. The transformation and change bring the concerns about authenticity to light. As Young explains, "on the one hand there is the desire to preserve stability and the past and the other, humanity's insatiable desire to grow and change" (1991, p. 3). Although the discussions on the topic started in the late-19th century with Viollet-Le-Duc and Ruskin, there are still similar conflicts on whether the change in cultural heritage has a positive or a negative impact, whether it should be avoided or embraced and how it should be approached in terms of conservation.

2.1.1 Understanding and Assessing the Change in Heritage Places

Cultural heritage buildings and places are products of past periods that display their architectural, social, economic, and aesthetic characteristics and preferences on these spaces that are shaped with the interactivity between people and environment both during their formation and life span after the construction. The effects of time showcase themselves in different forms in historical heritage places in both material and spatial forms such as decay, deterioration, loss, and transformation, so the change in the historical buildings and places emerge as an outcome of these actions and reactions. Therefore, the built heritage which has been involved in continuous interaction with its inhabitants or users becomes spontaneous areas where the change is inevitable.

While the authenticity of heritage places and the struggle to conserve them as in their most authentic state as possible are among the serious discussion topics, the reasons

behind the change, the negative and positive aspects of change should be comprehended in order to be able to manage it in favour of both the heritage place and the users. Heritage places can change and transform in many different ways. In addition to the changes such as decay and deterioration caused by environmental impact, there are manmade changes in historical buildings. By understanding and assessing the change, it is possible to conceive the positive and negative aspects of changes on structures and spaces. As with other subjects researched in the conservation of cultural heritage field, the analysis of the topic of change also ensures that the built heritage is conserved and successfully transferred to the future.

There are several methodological approaches in the literature regarding the studies of understanding and assessing change. The methods involve both assessment and analysis phases which can be carried out in-situ or after field surveys. In-situ analysis methods can be formed according to the characteristics of the heritage building, the site, and the necessary aspects that need to be considered. James Douglas in his book called *Building Adaptation* (2006) presents a scale displaying the "scale of adaptation options and degree of change" (p. 4) in which he explains how and how much the building has changed with the aim of using the scale as a tool in the building's adaptation to the modern life. The scales are small, medium, and large, the degree of change is listed as low-key, substantial, and drastic. He explains the types for each scale and provides examples. His work is not exclusive to the cultural heritage buildings, but it is an important contribution to the change and adaptation studies in the field.

Historical spaces change and transform with the new requirements, needs, and expectations brought by the main social, cultural, political, and economic reasons. There are several reasons behind the changes that can affect either forms, materials, functions, or meanings of the places. The magnitude of the changes and their effects vary depending on the cause, the significance, and the scale of the heritage site or building. For instance, whereas the function changes in Hagia Sophia in İstanbul, Turkey throughout the eras manifest the cultural transformations, change in the belief system of the society, or political stances of governments (Nur & Say Özer, 2017,

pp.60-76); the adaptive reuse of Chicago Military Academy (Spector, 2003) which had turned into a school for in-need children indicates community engagement, change in social needs or priorities, and the addition of wet spaces to a traditional house (Erdem, 2007) sheds light to the modernization of lifestyle, changing and occurring needs and expectations of the users (Avcı, 2012). Through the assessment of change, it is possible to understand the interrelating circumstances and underlying reasons and their impact on cultural heritage places which can provide guidance for the conservation within the holistic approach.

2.1.2 Change in Traditional Houses

The built environment of local settlements which had developed and had become a building tradition over time with the efforts of the locals themselves is called the vernacular architecture and it is "generally characterized by a continuous process over time, as it has been growing in response to actual needs with the available means of every place" (Philokyprou, 2015, p.111). The main characteristic feature of vernacular architecture is defined in the Charter for Built Vernacular Heritage (ICOMOS, 1999) and they can be listed as follows:

- belonging to a community,
- having distinguished characteristics shaped by the environment including climate, topography etc.,
- consistency in design, or the adoption of architectural styles that have been used for decades,
- traditional design and building knowledge that is passed on informally,
- Efficient solutions to certain limitations of the site
- Optimum utilisation of traditional techniques and skills

Since it is shaped by the people of the place with the bioclimatic, economic, social, and physical constraints and decisions in mind, the change in any factor can cause the change in a vernacular building in which traditional houses are part

of. Furthermore, it can even be said that it is the expected result of the vernacular built environments to change and transform over the years, because of the organic formation process of these areas. The important aspect to consider for the subject of change in vernacular architecture is whether the change disturbs the continuity of the traditional tissue or not. Philokyprou (2015), discusses the nature of vernacular architecture, the continuities and discontinuities in these settlements and she states that "vernacular architecture as a continuous creation of life shows continuities and discontinuities through its routes and develops its own initiatives in the conditions of each period and area" (p.116). Thus, in vernacular architecture, the needs, the trends, the limitations, and requirements of a period can define new functions, forms, and materials for the traditional buildings.

In light of the nature and the formation of vernacular architecture, the subject of change and authenticity should be discussed in regard to these significant characteristics of the vernacular built environments such as the spontaneity, and being in constant evolution because of the direct interaction with its users.

2.1.3 Learning from the Change in Heritage Places

The importance of understanding the undeniable and inevitable change in heritage places should not be disregarded. The change in question can be through decay and deterioration in the materials and the structure that comes with time, or it can include the transformations, alterations, and interventions by users in an effort to keep up with the emerging needs and expectations over time. The thesis mainly focuses on the interventions by the users in traditional residential buildings and the change in these heritage places that comes along with the interventions, in order to contribute to the literature on the users' reasonings and methods for the alterations, the needs and expectations of traditional house inhabitants, and proposals for the integration of user interventions to the professional field.

The lifetime of heritage places brings along the change with them and in order for the sustainable and successful conservation of the cultural heritage, the professionals in the field should learn from the change and the ways to manage the change in a direction that will benefit the heritage places should be researched and found. Studies on change in traditional houses, the causes and outcomes of change can provide insight into the perspectives seen in the literature and can help to establish a background on the subject.

Perker and Akıncıtürk (2011) study the physical change in traditional houses through the three examples from Bursa and they assess and classify the reasons for changes under five categories which are cancellation, division, transformation, expansion, and addition (pp. 33-34). The conclusion in their research is that the continuity of life in traditional houses is essential for their conservation, but the balance between usage and conservation should be established in the changes (Perker & Akıncıtürk, 2011, p.38).

Şimşek (2013), researches the conservation problems caused by the change in the traditional houses with a case study in Mardin. The past and present forms and functions of traditional house examples are compared, and changes are studied with the space syntax method. Also, the inevitability of change and the importance of developing solutions that can meet the inhabitant's needs without causing damage to the cultural heritage are highlighted (Şimşek, 2013).

Kuloğlu and Durmuş (2014) also research the reasons behind the change in traditional houses and they compare the past and present states of family structure, concepts, and lifestyle. The study focuses on how the changes may cause problems in terms of safety, functionality, and aesthetics. Another study conducted about the Bali Aga Houses and their adaptation to modern life reveals the reasons behind the changes in the traditional houses as "economic demands and the influence information and tourism in Bali, as well as a consumptive life culture are the factors of influence that threaten the uniqueness and sustainability" (Winawangsari, Hanan & Martokusumo, 2017, p. 2).

It is seen through the exemplary studies that the change in heritage places have been a research interest, the user interventions have been studied and analysed. However, there is a need for a conservation approach which includes the analysis of change in accordance with the needs and expectations, detailed assessment and classification of user interventions and integration of them in conservation practices.

2.2 Traditional House as a Living Organism under Continuous Change

The vernacular architecture and the traditional houses can be shortly defined as the architecture 'by and for the users' and it is considered to be shaped by the locals in accordance with the challenges that had been presented by the natural, topographical, economical, technical and social conditions of the settlements. The cumulative knowledge which has formed over the decades had been passed over generations after generations by the local craftsmen and the inhabitants. With the emerging needs and expectations of each period, the existing structures had been transformed for the users either with the inherited knowledge, or by integrating the local knowledge with the new materials and techniques.

Even though the need for shelter has remained constant since the earliest living space solutions, dwelling design and construction have been a field in perpetual transformation, change, and development. It is possible to comprehend this process of change through vernacular architecture and traditional houses as documents of the transforming lifestyle, environment, values, and aesthetics. Because the traditional houses have not been rigid pieces of history, housing "is a continuing process including necessary changes and continuous adaptation as a response to social and environmental constraints" (The Burra Charter, 1999, p. 1).

Change and transformation in the houses can occur in different ways such as in form, function, material, and even the meaning attributed to the spaces. Traditional houses are products of interrelation between people, physical environment, social structure, and spatial habits that as a result makes them instruments that reflect the architectural

and social features of the periods that they were built in. Thus, the conservation of historical traditional houses as both intangible and tangible cultural heritage has been a widely researched and studied area in the field.

Traditional houses have been formed in line with certain needs and expectations of their users with the interaction of people and the environment and fulfil the architectural and structural necessities of the period. However, the change in living conditions, social environment, economic circumstances, and modernization, in general, cause the houses to no longer meet the requirements inhabitants seek. When these circumstances are considered, adaptation and change in the traditional living spaces to alternate them according to the emerged needs become an inevitable way for the continuity of life in cultural heritage places since the alternative options can lead to neglect and abandonment.

The actors and ways of change in traditional houses should be analysed to be able to further understand and assess the transformation and the adaptation. The implementers of the interventions determine the methods preferred in the process, the details, materials selected, and the outcomes vary according to the actors who are taking part in the change. The interventions can be divided into two categories considering the actors which are professionals and inhabitants. There are positive and negative effects and results of either category. On one hand, the professionals offer expertise in architectural features, materials, and structural systems, sensitivity to heritage values, and extensive research; on the other hand, the inhabitants benefit from local cumulative knowledge, have access to local materials, knowledge of the climate, desired comfort levels and understanding of the needs and expectations from their living spaces. However, in some cases, while professionals can approach the project from an outsider point of view and disregard some aspects that need to be taken into account such as management issues or social values; the inhabitants can stumble in the material selection or detail solutions which can severely damage the integrity of the structures.

The interventions and conservation projects on the traditional houses executed by the professionals of the field have been undergone to preserve the structural, material, architectural and social integrity of the cultural heritage place in question. Professional approaches developed in light of the principles of conservation discipline have been applied for the traditional houses with the help of extensive historical research, restitution studies, professional skills, technology, and equipment. Although theoretically, the desired outcomes have been expected to be the ideal conservation scenarios where the values of the heritage place, architectural quality, soundness of materials and structure, continuity of life, traditional context, and tissue are respected and conserved successfully; there are contradictory examples that illustrate the negative sides of the professional interventions where different motives behind the project affected the results.

Several factors and motives are affecting the conservation process and professional decisions. Economic, political, social, or technical factors can be listed as "rapid urbanisation, the pressure of tourism, lack of funds for culture, authoritarian regimes, improper project selection, corruption, erroneous policy for conservation" (Roy & Kalidindi, 2017, p. 291). Although the reason and purpose behind them may differ, the conservation projects carried out with these specific priorities or motives may cause undesirable and serious results such as gentrification, abandonment, destruction, or loss of the heritage place.

The dwellings, in which their inhabitants are in constant interaction, are inevitably altered by their users, whether the need is personalization, reinforcement, or adaptation. Interventions by the inhabitants can be considered to be spontaneous and usually described as "primitive solutions developed by the users themselves" (Kuloğlu & Öztürk, 2014, p. 8) with the available resources and skills at hand. The concept of "spontaneous transformation" (Khan, 2014, pp. 21-33) is used to explain any change in a house by the household throughout the life span of the house. Khan notes that these transformations are mostly seen in self-built houses, similar to the traditional houses in question, and they reflect the users' habits, spatial behaviours, needs, and expectations developing accordingly with the period. He, then, integrates

his ideas with the Choice Theory of psychologist Glasser (1998) and concludes that users change their houses with the need to survive, to belong, to have freedom, control, and emotional fulfilment (Khan, 2014, p. 23).

While alterations by inhabitants reflect their certain needs in a living space, there can be some unwanted consequences resulting from these unprofessional changes. Materials that are incompatible with the traditional structure such as cement-based mortars and binders, or concrete because of several reasons such as availability in the market, affordable price, lack of care or education, and negligence cause decay and deterioration in the original building materials, affect the soundness of the structure and even cause irreversible damage. Excessive additions or removal of masses to the original space with the need to either achieve more rooms for newly emerged functions or eliminate the existing undesired spaces that will need maintenance can affect the perception of the house, traditional proportions, houses relation with its surrounding, or street façade characteristics.

The point of view towards the interventions by inhabitants differ and although the positive sides are mentioned, there are highly negative opinions in the literature because of the common, abovementioned encountered effects of the alterations in the traditional structures. Özker (2020) even states that the user needs and expectations, so the changes occurred accordingly, are one of the important reasons for traditional houses to lose their meaning so that the inhabitants should not be allowed to alter their houses (Özker, 2020, p. 226). One of the other common views on the subject is that "instant solutions developed by users without resorting to expert opinion will result in architectural cause problems at different scales" (Kuloğlu & Öztürk, 2014, p. 9).

The change in traditional houses manifests itself in several different ways. Whether they are realized by professionals or inhabitants, change can be seen in the functions and the forms which affect and be affected by the human-space relationships, space hierarchy, usage, materials, architectural elements, and details. Depending on the

intended transformation, available resources, and trends, the methods applied may vary.

Changes and ways of change can affect or cause different transformations. For example, changes in form can be observed as a result of a functional change. Through the assessment and understanding of the ways of change and the reasons behind them, the history and transformation of the house, structure, inhabitants, social construct that shapes and affects the usage, and the lifestyle can be brought to light. The functions that are attributed to the places when they are first designed and constructed can be changed later due to the fact that the spaces have no longer be adequate for the transforming requirements of modern lifestyle and the needs and expectations of the inhabitants.

The most common functional change in traditional houses is the conversion of rooms which were multi-functional spaces that are used for many daily activities in their original design into single-functional spaces such as bedrooms and living rooms. One of the reasons behind being that the house which once built and lived in by large families are started to be used by nuclear families. While an existing place can be altered in line with the emerging needs, new spaces which were not present in the original structure but become an inevitable necessity of daily life can be formed.

The addition of service spaces to the traditional houses or the improvement of existing original ones is one of the most common changes since the lack of adequate kitchens and bathrooms challenges the inhabitants who are trying to meet their contemporary needs. The new kitchens and bathrooms can be obtained in different ways. A new mass can be added, an existing space can be transformed, or an existing space can be divided accordingly (Erdem, 2007). Thus, a need for a new function in the traditional house causes changes in the form.

The changes mostly occur in 5 different ways which are abolishment, division, transformation, expansion, and addition (Perker & Akıncıtürk, 2011, pp. 33-37). Whether the aim is to alter a function, add or remove a mass, transform or divide an existing space, the materials and details applied during the interventions should be

analysed in order to be able to understand the ways of change. Interventions by inhabitants have usually been criticized because of the usage of incompatible materials with the existing original structure in the interventions such as "new building materials that are easy and fast to work, available on the market, affordable and durable prices" (Winawangsari et al., 2017, p.5).

2.3 A Critical Evaluation: Learning from and Managing the Change in Conservation of Traditional Houses

The concept of authenticity and the effect of change in the authenticity of heritage places has been one of the most controversial subjects in the conservation of cultural heritage. The debate which was set with the discussions on the works of Viollet-Le-Duc in the 19th century continued to be deliberated with the international charters and the issue has remained contentious. Traditional houses as one of the most affected heritage places from change should be studied for their integrated conservation.

The change that occurred in the houses can be analysed with three different questions: *Who? Why? and how?* The interventions can be implemented by professionals in the field or the inhabitants of the house. While the professionals often approach the project with the required research, skills, knowledge, sensitivity, equipment, and technology that is needed for the interventions, there can be problems resulting from being an outsider. On the other hand, even if the inhabitants do not have the required skills, they can create simple solutions with the available materials, cumulative local knowledge that professionals can learn from. Their efforts to survive in the traditional houses, improve the comfort standard in their living spaces, adapt their habitat to contemporary life which have contributed to the continuity of life in the traditional settlements have led them to make changes.

In order to analyse the change in a systematic way, the user interventions have been classified according to the types and scales of the interventions and a table has been

designed to be able to assess the user interventions in a systematic way. The impact of the intervention on the architectural and structural features of the traditional house, increases with both the scale and the type goes up.

The types of interventions represent the form of intervention, and the five types of interventions can be listed as the interventions related with;

1- Material and Finishing

2- Space Usage

3- Architectural Elements

4- Space Addition/Removal

5- Mass Addition/Removal

TYPE / SCALE	1 Material & Finishing	2 Space Usage	3 Architectural Elements	4 Space Addition/Removal	5 Mass Addition/Removal
A | LOW	**1A** - Repair works - Minor overlay/ replacement	**2A** - Modern-day functions within the existing areas	**3A** - Replacement of the elements with the same material	**4A** - Service area additions in small scale (eg. Basin additions in courtyards)	**5A** - Service mass additions - Loss of mass in small scale
B | MEDIUM	**1B** -Replacement/Overlay of the finishings in a larger area - Partial reconstructions	**2B** - Addition of new fittings/utilities - Underuse of the original spaces	**3B** - Alteration of elements' form/scale - Replacement of the architectural elements - Partial removals	**4B** - Service space additions with incompatible materials	**5B** - Room additions/removals in a larger scale - Division of the house
C | HIGH	**1C** - Reconstructions with incompatible materials in a larger scale	**2C** - Underuse in a larger scale	**3C** - Addition of new openings/elements using incompatible materials (eg. PVC windows)	**4C** - Removal of architectural elements via the space addition/removal	**5C** - Floor additions/removals

Figure 2.1. The types and scales of user interventions (developed by the Author, 2023)

There are three scales which are low, medium, and high. The interventions can be coded and identified with the help of the table in order to understand the type, scale and the possible impact with a code. For example, the minimum intervention in a traditional house would be the tier 1A where it is related with the material and finishings on a low scale; and the most drastic intervention would be the 5C tier where it is related with the mass addition or removal in a high scale. For each category of type and scale there are exemplary cases indicating the techniques used

in the intervention. The user interventions in the studied traditional houses can be assessed and understood with the help of the table.

The systematic analysis and understanding of the user interventions contribute to the idea that the value of local knowledge and craftsmanship that is put into the design and construction of traditional houses in the first place should not be disregarded as well as the value of inhabitants' solutions according to their contemporary needs and expectations. Residential buildings have been in constant relationship with their inhabitants due to their nature. Thus, the interaction between human and space, house and its user bring along the transformation, adaptation, and overall change within.

As inhabitants of the traditional houses change over time, the buildings transform accordingly. The inevitability of change raises the issues of understanding, assessing, and most importantly managing it for the conservation of traditional houses. The management of change should not mean more restrictions for the inhabitants who are already struggling to continue their lives in the traditional houses and rather should be aimed at a collaborative conservation approach that will bring the expertise of the professionals and needs of inhabitants together. The professionals can learn from simple solutions in the interventions of inhabitants and improve the solutions with the compatible techniques and materials which can contribute to the conservation of cultural heritage practice and literature while adapting the houses for the inhabitants.

CHAPTER 3

UNDERSTANDING USER INTERVENTIONS AND CHANGE IN TRADITIONAL ANTAKTA HOUSES

Antakya district of Hatay had been chosen for the site survey among the five areas which have been studied in the scope of PROT3CT project. Existence of a still inhabited and relatively conserved traditional settlement, the traditional tissue and houses with significant architectural and social features had been the main reasons behind the site choice. In this chapter, the historical development of Antakya region in Hatay, physical characteristics of traditional urban core and the traditional Antakya Houses will be detailed. Moreover, the original and current usage in the traditional houses will be explained in order to be able to determine the user interventions, the impact of the intervention and overall change in the houses.

3.1 General Information about Antakya, Hatay

3.1.1 Natural Features of the Region

As the main district of Hatay province, Antakya "is located in the South-Eastern part of Turkey, 25 km east of the Mediterranean Sea and 20 km northwest of the Syrian border at an altitude of 80 m" (Rifaioğlu, 2012, p.124). There are fifteen districts in total and two of them, Antakya, and Defne, are the central districts by Antakya being the capital of the province. As a result of the geological position of the area in South-East of Turkey near Mediterranean Sea, Mediterranean climate is seen on the region with hot and dry summer seasons and warm and rainy winters. The proximity of the area to the Syrian border, the Asi River that runs through the

area, the mountains Amanos, Kel and Habib-i Neccar, and the fertile Amik River delta can be listed as the other important geographical features of the Hatay province.

Figure 3.1 Antakya district of Hatay (Google Earth, 2023)

3.1.2 Historical Background of Antakya as a Multicultural and Multi-layered Settlement

"From the early days of its formation, the city of Antioch had evidently political, economic, social and religious importance in the Fertile Crescent" (Rifaioğlu, 2003, p. 127; Figure 3.2). Antakya and the region had been a significant land from the antient periods to modern days (Figure 3.3). Settlement's rich history can be understood through the periods as the Seleucus Period; Roman Period; Arab, Byzantine, Seljuks, Crusades, and Mamluk Periods; Ottoman Period; French Mandate and the Turkish Republic Periods (Rifaioğlu, 2003).With a history of nearly six thousand years, Having witnessed many civilizations, cultures and settlements in its nearly 6000-year history makes Antakya a multi-layered city where traces of the past civilizations can be seen through and through.

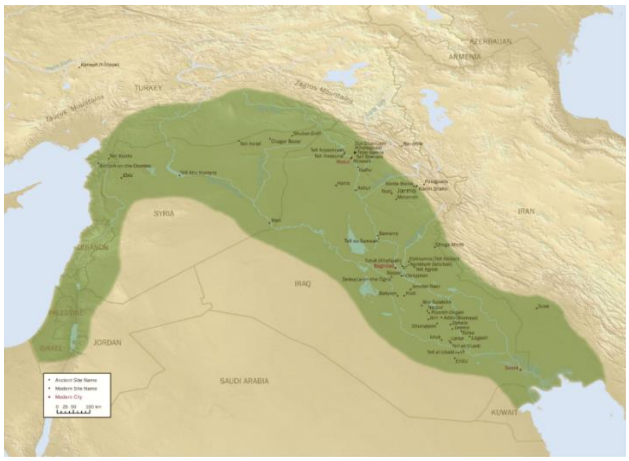


Figure 3.2. Map of the Fertile Crescent (Retrieved from news.uchicago.edu/explainer/fertile-crescent-explained)

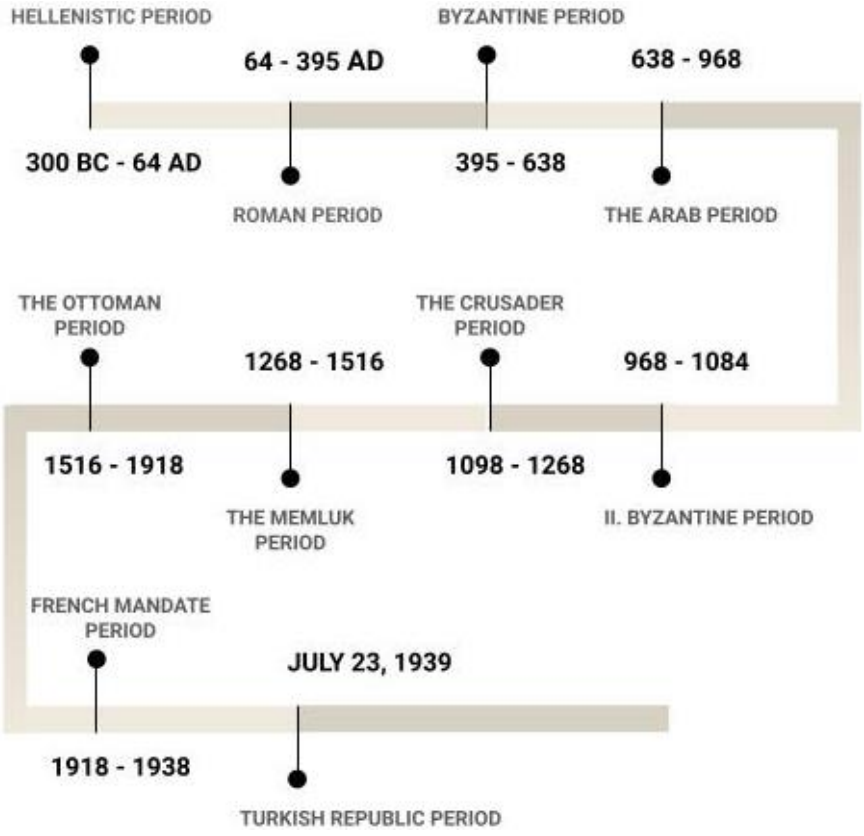


Figure 3.3. Historical timeline of Antakya (Prepared by the Author, developed from Rifaioğlu, 2012)

Understanding the historical background of the city helps to comprehend the formation of the intertwined urban pattern of the historical Antakya city centre. The

development of the city plan for Antakya starts at the early periods since the city had been among the most important settlements of the civilizations thanks to its geopolitical position. Initially, "the layout of Antakya, the new capital of the Seleucid Empire, was typical of cities of the Hellenistic period with a grid of streets intersecting at right angles, in accordance with the so-called Hippodamian system" (Demir, 2004 p.221). Over the decades, the grid plan had changed, and the streets became more organic. However, there are traces of the grid plan to this day "where a few streets intersect at right angles with this main road creating several rectangular blocks" (Demir, 2004, p. 224).

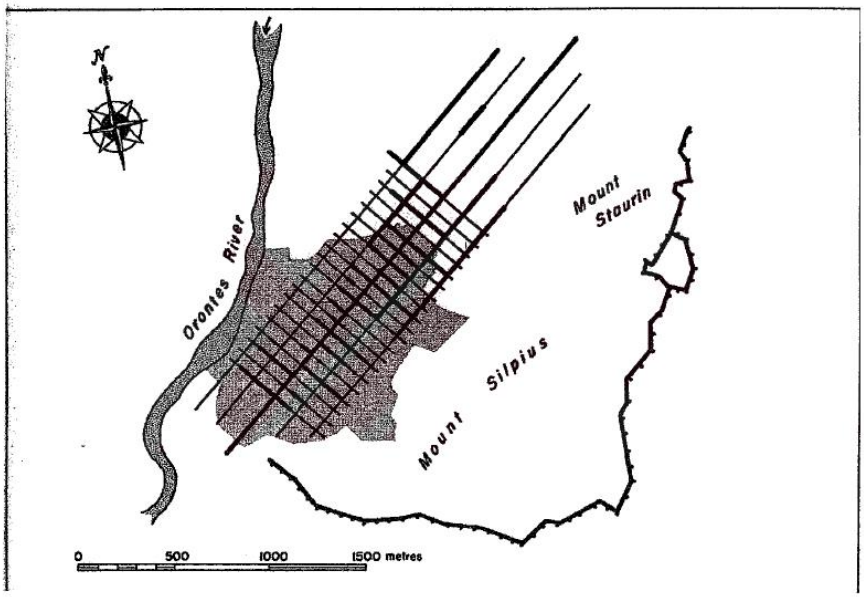


Figure 3.4. The grid plan used in the formation of the city of Antakya during the Hellenistic Period under Seleucid Empire (Demir, 2004, p.234)

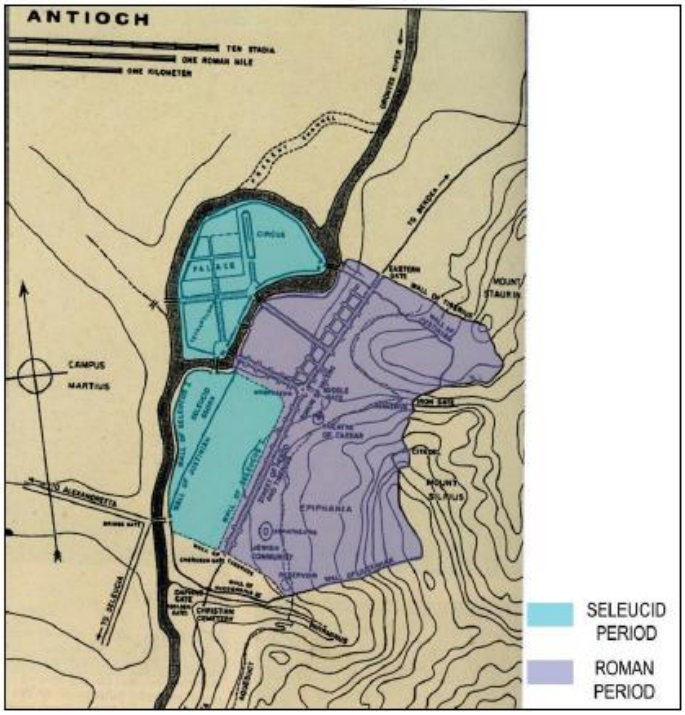


Figure 3.5. The map showing the Seleucid and Roman Periods' settlements (Rifaioğlu, 2012, p.132)

The city of Antioch and the region was under the rule of Roman Empire for three hundred and thirty years between 64-395 AD. During the Roman Period, the city had been enlarged with new constructions including temples, bridges, palaces, and roads. Although the city had witnessed a devastating earthquake in 115 and 365, it had been refurbished by the emperors (Rifaioğlu, 2012, pp. 131-135).

Through the centuries, different significant cultures and civilizations had reside in the region including the periods of Byzantine, Arab, Ottoman, Memluk, Crusader, II. Byzantine, French Mandate and finally Turkish Republic. Each period affected the region in various ways and had contributed to the cultural heritage.

“As a result of its importance, the city has been formed/re-formed over time by different empires, and many structures from various periods are still persist in the current urban form” (Rifaioğlu, 2014, p. 271).

3.2 Physical Characteristics of Traditional Antakya Houses

There are essential features that need to be analysed in order to understand the traditional houses of Antakya. In this part, the elements contributing to the formation and existence of the houses such as the street-house relationship, architectural, spatial, and structural features, typologies, human-space relationship, original and current usages have been explained in detail. As products of vernacular architecture, traditional Antakya houses had been transformed and changed over decades, before taking up their final form. Traditional Antakya houses reflects the multi-layered and multicultural nature of the settlement where the influence of several different cultures can be seen in traditional tissue.

3.2.1 Essential Privacy: Street-House Relationship

The formation and evolution of the urban pattern of Antakya have been studied widely throughout the years since Antakya has been an important settlement since 300 BC and occupied by several civilizations. The initial grid plan which had been preserved in the Roman Empire period as well started to shape more organically with the Islam influence (Demir, 2004, pp. 222-224). "The largely organic street layouts formed of narrow and curved streets and cul-de-sacs" (Rifaioğlu, Larkham & Şahin Güçhan, 2010, p. 10). The narrow streets have been one of the most characteristic features of the city. With the help of their direction and narrowness, "the streets served as wind tunnels" (Demir, 2004, p. 221) in the traditional settlement of Antakya. There are channels called *arık* in these narrow streets mainly to carry the rainwater from the mountains to the Asi River as well as to carry the water from the courtyards when it is washed.

Figure 3.6. Traditional narrow street examples from the case study area (Author, 2022)

Traditional Antakya houses are separated from the narrow streets by courtyard walls. The high courtyard walls surrounding the houses are windowless for privacy reasons. The passage from the street to the courtyard is also separated by a transition area called *aralık* and a 40-50 cm high threshold separates the entrance and acts as a flood prevention (Demir, 2004, p. 227).

Traditionally, the houses and the service masses around the courtyard "are oriented according to the direction of the dominant wind (south-west) and reflect the architectural culture of the geography they are located in with their spatial, structural, architectural elements and decorations" (Rifaioğlu, 2021, p.69). In relation to the hot climate, courtyards – traditionally called *havuş* – with flagstone pavements, are not only a transition area between the street and the house, or between. the masses but also areas where the most time is spent during the day as a living space and are also used as sofas.

Traditional Antakya houses, which are generally two-storey, are located around the courtyards and the courtyard is in the centre. On one side of the courtyard, there is

the building with the living areas; the service buildings, where the kitchen and the bath are, are located separately from the main building (Demir, 1996, pp. 226-228).

3.2.2 Personal Oasis: *Havuş*

In the traditional Antakya houses, courtyards are "the equivalent of the sofa or central hall on the upper floor of traditional Turkish houses in colder climates. So, the traditional Antakya house has no sofa on either the ground or upper floor" (Demir, 2004, p. 227).

The courtyards are called *havuş* in the region and the courtyard elements are among the characteristic features. In addition to elements such as a stone staircase that is latched onto the courtyard wall, a pool, well, and *seki*, thin water channels called *bellaa* that allow the water to flow into the street when the courtyard is washed, a stone mortar called *soku* used for pounding pepper or bulgur. Fruit trees are seen in the courtyards to benefit from the shadows. There are elements such as *livan/ivan*, which is a semi-open resting area closed on three sides and raised with 2-3 steps (Bozkurt, 2019, p. 9). Due to the hot climate, the shadowy courtyards have been one of the living areas of the house. As it is observed during the case study, *havuş* is also a place where neighbours usually get together to spend time with each other.

Figure 3.7. Traditional courtyard examples from the studied houses (Author, 2022)

3.2.3 Architectural Features of Traditional Antakya Houses

Courtyard façades are the main and most detailed facades of traditional Antakya houses, as the characteristic façade features also develop in relation to the importance of the courtyard. On the high-ceilinged ground floors, which are the living quarters, the rooms are side by side with their entrances facing the courtyard. “The wooden doors and window wings commonly made with the *kündekari* technique” (Rifaioğlu, 2021, p. 70). Above the doors and main windows, there are small windows called *kuş takası* for ventilation and sunlight. The details and the amount of ornamentation on the *kuş takası* differ according to the social and financial status of the owner. There are examples where every taka of the façade has a unique stonework ornament along with the examples where the takas are more modest and simpler. In addition, there are niches at the level of the main windows, called *sebil/fanus takası*, where gas lamps can be placed to illuminate the courtyard at night, or in some examples, a fountain can be found inside.

Figure 3.8. Top windows (*kuş takası)* of the studied Ülkü-21 House (Author, 2022)

The interiors of the ground floor rooms also have significant elements. The rooms are elevated 40-50 cm from the courtyard level, and they are entered through a marble-paved space called *eşiklik* which acts as a transition space between the courtyard and the rooms; and also, is a place to leave shoes when entering. Traditionally, there is a small hole in the threshold which is used to drain water when the *eşiklik* or - depending on the flooring material - the room is washed.

The original flooring of the ground floors can be wooden, stone, or marble. However, cement or terrazzo tiles can be seen in some later-period houses. Usually there are only windows facing the courtyard and the other three side of the room has wooden cabinets and shelves which has different traditional names accordingly with their functions. There are shelved wooden units next to the door which are called *kitabiye* and a big open niche to store bedding called *mahmel* (Demir, 1996, pp. 244-245). Big timber-framed windows facing the courtyard have shutters on the interior that act as curtains which protects from the heat during the day as well as the light. The intricate details of the architectural elements can be seen in the shutters too as the shutters perfectly close the gap between the window frame and provide continuity in the interior surface of the wall when opened.

The upper floors generally have low ceilings and large wooden shutters or latticed windows, and they were used for drying or storing food in the early periods. However, there are examples from later periods in which the upper floor has balcony-

type semi-open space and rooms are located behind it. In these types of upper floors, the entrances to the rooms are from the balcony similar to the ground room entrances being only from the courtyard. Access to the upper floor can be obtained from the staircase in the courtyard, while in some houses there is a wooden staircase called the *mabeyn*, in which the door is designed to look like a closet door, hidden for privacy reasons, located between the two rooms on the ground floor.

Figure 3.9. Wooden and stone mabeyn examples from the case study site (Author, 2022)

The construction technique in traditional Antakya houses differs from the common techniques seen in the traditional Anatolian houses because of the drastic difference in the climate, culture, and resources. The ground floor, which is the living floor, has 60-70 cm thick rubble stone-filled and cut stone-faced walls.

Generally, street-facing walls of the ground floor do not have regular windows for privacy reasons, but *kuş takası* can be seen. The upper floors are usually brick-filled, timber frame structures and there are projections facing the street, which were created to expand the area (Arıman, 2002). Depending on the period, in some examples, the stone walls can continue along in single or several walls on the upper floor. The gable roofs are covered with over-and-under tiles. A kind of yellow-

coloured and easy-to-work limestone called Şenköy Stone was used in the construction of the buildings (Çelebi, 1982, p. 166).

3.2.4 Façade, Mass, and Floor Plan Typologies

The historical centre and the traditional houses of Antakya had been studied in the scope of the METU Graduate Program in Conservation of Cultural Heritage in several courses throughout the years. The typology studies conducted during the 2002 Urban Conservation Studio where the historic city centre of Antakya had been studied in detail to prepare a conservation plan, are the main source of the analysis. The typology studies consist of plans, façade, and mass typologies.

First of all, the living and service spaces are found as to be situated in different masses in traditional Antakya houses. Therefore, ground floor plan types intertwine with the mass typology. The categorization is done accordingly with the allocation of the main and service masses on the lot. There are 5 main types (A, B1, B2, C, D, E) and the areas that are shown with solid fill on the figure are representing the main masses.

Type A: The masses are situated on one side of the lot and next to each other. The courtyard is in front of the masses as a transition between the street and the house.

Type B1: The masses are located parallel to each other on two sides of the lot. The courtyard is in between the masses and the entrance is through the courtyard. There are variations to the type according to the size of the masses or type of entrance. One variation shows the traditional space called *aralık* which is a transitional space between the street and the courtyard.

Type B2: Similar to B1, the masses are parallel to each other, but the entrance is not through the courtyard but through one of the masses (usually service mass).

Type C: The main mass in located on one side of the lot and the service spaces are situated on the opposite side corners. The house is entered through the courtyard and the entrance is in between the service masses.

Type D: The masses are situated in an L-shape. The variations show the difference in sizes of the masses, shape of the lot or the placement types of the masses on the L-shape. The entrance to the house is through the courtyard.

Type E: There are rare examples where the house consists of only the living mass and the mass fills the entire lot, without a courtyard.

In addition to the typology study, the rooms on the ground floor of the main masses are situated next to each other and there are usually two or three rooms. Also, a secret wooden staircase to the first floor called *mabeyn* can be found between two rooms.

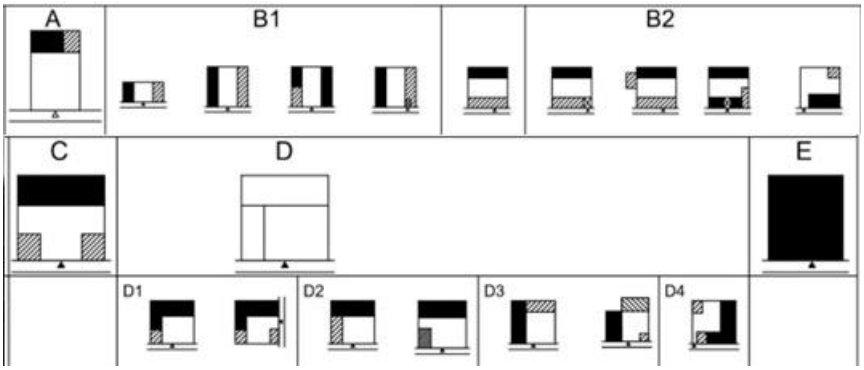


Figure 3.10. Ground floor plan typology of traditional Antakya houses (METU Graduate Program in Conservation of Cultural Heritage, CONS 507- Planning and Design in Urban Conservation, 2002)

The first floors on the early examples of traditional Antakya houses were storage or food drying areas with low ceilings and had wooden shutters on the windows without the frames. On later periods, the first floors are started be built and used as living spaces. The typology study is done according to the later period examples. There are four types which are A1, A2, B1 and B2 (Figure 3.11). The categorization is done gradually according to the position of the stairs, then the type of entrance to the rooms. Type A refers to the ones where the stairs are situated on the courtyard and

Type B refers to the ones where the stairs are in the building which is the above-mentioned *mabeyn.*

Type A1: There is a small semi open corridor/sofa in front of the rooms and the entrance to the rooms are from this area.

Type A2: The stairs led directly to the rooms and if there is more than one room, the entrance to the other rooms is from the attached room.

Type B1: The rooms are located on either side of the staircase and entrance to the rooms are directly from the staircase or there is a room-to-room entrance.

Type B2: Entrances to the rooms are from the transitional space/sofa.

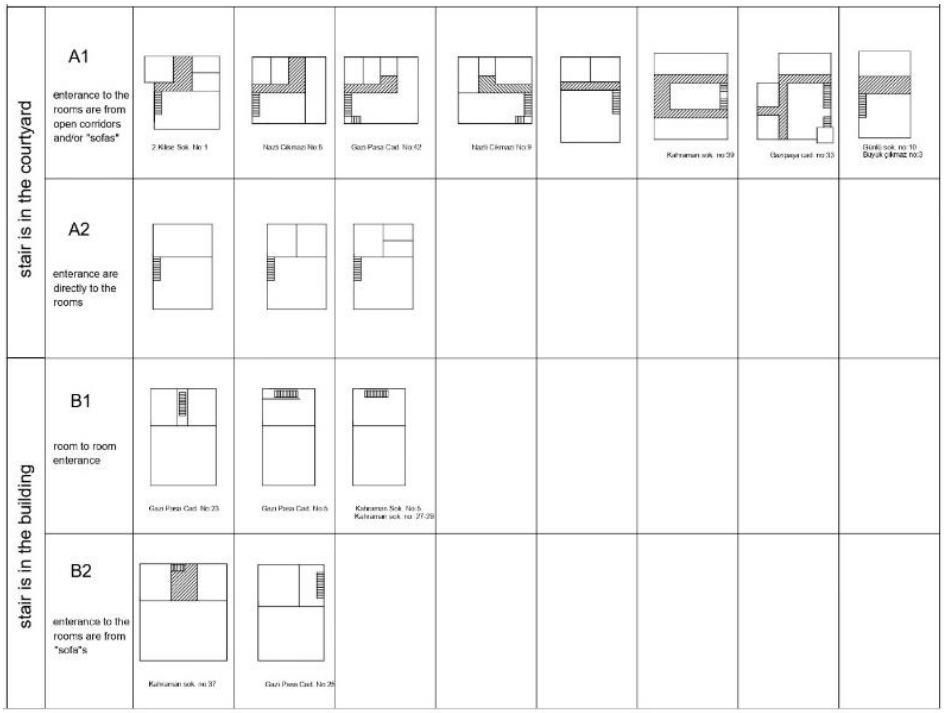


Figure 3.11. First floor plan typology of traditional Antakya houses (METU Graduate Program in Conservation of Cultural Heritage, CONS 507 - Planning and Design in Urban Conservation, 2002)

Façade typology is determined according to the number of rooms, architectural elements, and level of ornamentations. Overall, there are three main typologies

which are categorized as the façades with one door, two doors and three doors. Types are divided into two subgroups as rich and simple façades.

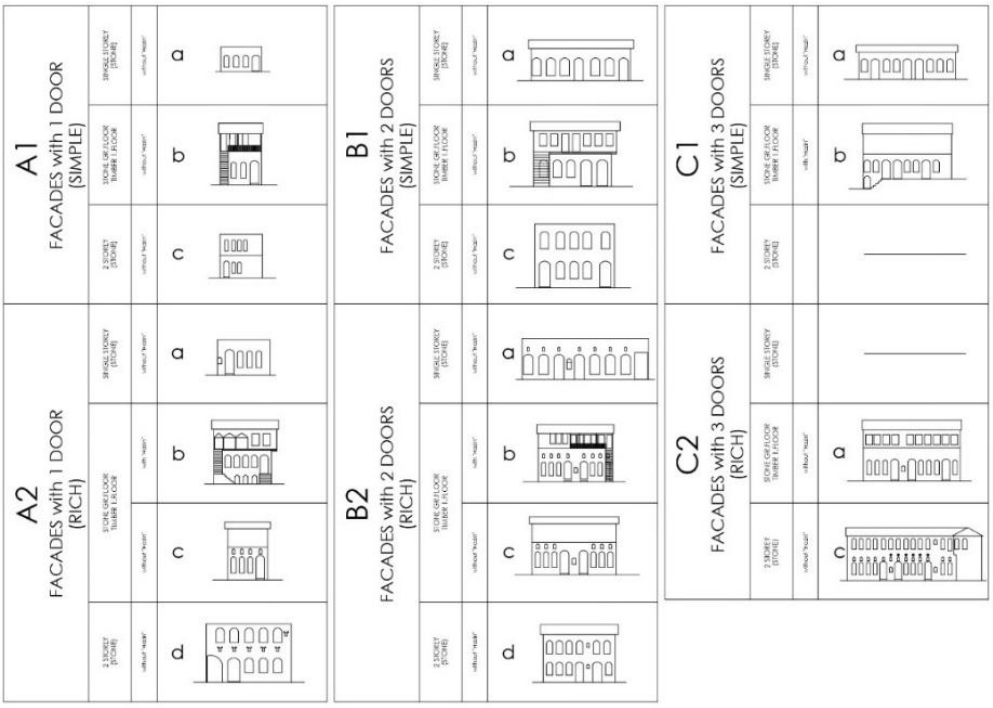


Figure 3.12. Façade typology of traditional Antakya houses (METU Graduate Program in Conservation of Cultural Heritage, CONS 507 - Planning and Design in Urban Conservation, 2002)

3.3 Then and Now: Daily Life in Traditional Antakya Houses

There are various strategies and executions regarding the development and growth of the Antakya settlement and its urban core over the centuries starting with Hellenistic period till the Ottomans. The modern urban planning attempts of formerly French Mandate Period and lastly Turkish Republican period had caused the city to be transformed in various ways and forms which also caused the historical urban settlement to suffer in both physical and social aspects which had been resulted in demolitions or distortions (Rifaioğlu, 2012, p. 203).

The transformations in the historical settlement had also affected the traditional houses of Antakya and the houses had undergone several physical, spatial, and social

changes over the decades. Rifaioğlu (2012) explains each era and important historical development which had affected the historical urban core of Antakya, and the property rights in detail. His works related to the urban conservation can be interpreted for residential scale since he also sheds light to the change in built environment and the lifestyles through the modern developments. Accordingly, there are significant characteristics of different eras in which the transformation had occurred while transitioning from one to the other.

The historical settlement had shaped under "the Islamic tradition, the Ottoman Empire, and finally the Turkish Republic" (Rifaioğlu, 2012, p. 297). From the conservation point of view, the Islamic tradition had set several rules regarding to have freedom over one's own built environment, not to damage the properties and to be respectful to the others' rights as well. The freedom of the inhabitants had been restricted within the Ottoman period with a structuralized ownership status which enlarges the authorities' ownerships. During these periods the organic street pattern had been respected and preserved.

With the French Mandate Period the attempts for the modern development of Antakya had started to be seen. In the 20 years between 1918 and 1938, the first development plan had been prepared in 1929, the infrastructure had been improved the electricity had started to be used, French-influenced façades and buildings started to be seen on the new main street etc. There are five urban plans from the Turkish Republic period and according to Rifaioğlu, they had impacted the traditional historical urban core through the attempt to transform the organic street layout to a straighter and wider layout, contradictory measures for the original characteristics, "inappropriate development strategies on the original historical urban morphology: proposals for new and inharmonious functional injections through the urban context" (2012, p. 302).

It can be said that there are external and internal factors behind the transformation of physical and spatial features of the traditional houses from the original to the current states. The above-mentioned developments regarding the civilizations, religion,

culture, as well as legislations, regulations and historical urban developments and conservation plans can be considered as the external factors since the focus of the developments and the guidelines were focused on the city as a whole and the traditional houses were affected as a subsidiary consequence. The factors affecting the inhabitants and the traditional houses directly and personally, can be considered as the internal factors and they can be listed as the traditions, family structure, the needs, and expectations of the users, change in the living patterns and habits, the building trends, and facilities etc.

It is important to understand the original and current usages of the houses in order to be able to analyse the interventions and comprehend the motivations behind the change. There are several determining differences in the life in the traditional houses then and now. The change in family structure, daily activities, consumption habits, economic conditions, and spatial patterns have been reflecting on the houses, thus making them living organisms as well as the inhabitants.

3.3.1 Original Usage of the Traditional Antakya Houses

The original usage, reasons, and meanings behind the formation of traditional houses, architectural elements and spatial habits have been a topic of conservation of cultural heritage field and have been researched by important academics. Traditional houses reflect the lifestyle of the inhabitants since they had been built organically over time by considering the immediate needs, social status, economic conditions, available material, and techniques.

There are various common features with the traditional Anatolian houses and the traditional houses of Antakya. However, the determining factors such as climate, materials and techniques, daily life and social structure bring the unique features along. Traditional Antakya houses were initially occupied by large families where each room was for each nuclear/sub-family. The married son of the family would

continue to live in the house by taking a room. Each room would have been used for different daily activities during the day and night, making the units multifunctional.

The lifestyle determines the formation and the role of the architectural elements as well. For instance, the large cupboards in the rooms traditionally called *mahmel* are "related to the habit of packing up beds during the daytime as a trace of the nomadic lifestyle of Turkish people" (Asatekin, 2005, p. 391).

Moreover, the climate as another determining factor, has a significant impact on the formation and spatial patterns of the traditional Antakya houses. Because of the hot climate, the shady courtyards have been designed and built to have a space in the house where it is airy, shady, and cool. The ground floors being the main living floor where there is a direct access to the courtyard from every room indicates the intertwined life in open and closed spaces in the traditional Antakya houses.

Originally, while the ground floors have high walls, the first floors have lower ceilings with frameless windows with only wooden shutters and the first floors had been used to dry food for the winter preparations. Also, the stone mortar pieces on the courtyards called *soku* had been used for food preparation as well. The kitchen had been located in another mass on the courtyard and there are usually furnaces on the courtyards. The original courtyard elements and use of the first floors reflect the daily life in the houses, consumption, and production habits of the period. The daily life in the houses can be read through the actions of the women since the men would have worked during the day.

Accordingly with the socioeconomic conditions of the families, gender specific areas both for women and men called *haremlik* and *selamlık* can be found in the larger houses (Bozkurt, 2019, p. 6). However, the importance given to the privacy is not limited with the specific rooms. The secret staircases between the rooms called *mabeyn* where some would go to the upper floor without being seen by the guests, or the high courtyard walls not to be seen by the passers-by, the blind wall of the ground floor walls facing the street reflects the privacy needs of the period.

3.3.2 Current Usage of the Traditional Antakya Houses

The daily life in the traditional Antakya houses had transformed over the years with the change in demographic, family structure, number of occupants, contemporary developments etc. The figure below showcases the transformation of an exemplary traditional Antakya house over the years (Figure 3.13).

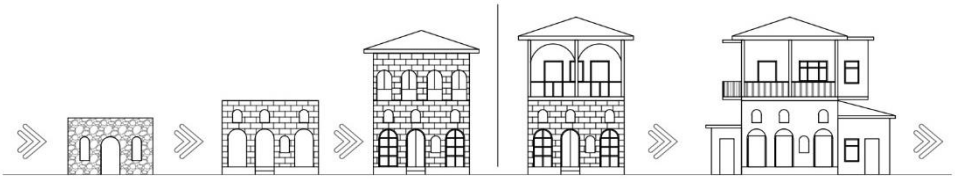


Figure 3.13. Transformation of a traditional Antakya house over the years (Author, 2023)

Each transformation affects the traditional houses in different way, shape or form, since it effects the core reasons behind the original formation of a house. The houses which were originally built for large families, are now being used by nuclear families or even one inhabitant in some cases which is an underuse case for the traditional Antakya houses. The change in the family structure and the number of occupants bring their own issues in terms of space usage and as a result of the underusage, some parts of the houses are currently inactive and empty or used as storage spaces.

Traditional houses not being able to meet the newly emerged needs and expectations of the inhabitants, bring along the user interventions from the inhabitants who try to survive in these cultural heritage places. In an effort to have contemporary service spaces, the users add service spaces either as a separate mass on the courtyard or as a part of an existing room. Since the problem of not having and adequate service space usually requires and immediate solution, the additions can appear to be incompatible with the original structure and in poor quality. Moreover, because the installations had been done poorly, they can deteriorate in short time periods and become inadequate for the users once again.

Modern furnishings are used within the traditional rooms which showcases the synthesis of the old and new life in the traditional houses since the traditional built-

in cabinets and niches are still in-use as well. As a relatively modern addition to the houses, the use of curtains appears to be a particular subject. The wooden shutters which acted as both curtains and a way to eliminate heat, are now mostly replaced with curtains due to the loss of the original elements. However, they are not just used for the windows but also utilized for the *mahmel* which is the large niche on the ground floor rooms used to store beddings etc. in effort to hide the unpleasant appearance of the stored belongings and beddings. It reflects that the privacy is still and importance in the daily lives of the inhabitants.

Moreover, use of modern lighting appliances is a notable subject because it had become a requirement for modern-day houses, and it is seen in every traditional house. Usually, a fluorescent light fixture is fixed either to the exposed timber beams, or to the timber cladded ceilings.

Although the traditional houses had undergone a transformation and adaptation over the years, there are still certain spatial habits that have not changed. For intances, the use and significance of the traditional courtyards had not been changed. They are still among the most used areas of the houses and one of the living spaces and gathering areas. The inhabitants still spend most of their time in the spacious courtyards.

3.4 Zoom into the Selected Cases: 14 Traditional Houses from Antakya, Hatay

The case study which is conducted to understand the physical and social features of traditional Antakya quarters, user interventions, and changes in the houses; included architectural surveys and interviews with the inhabitants. In the scope of the case study, the houses are selected from the Zenginler, Ulu Cami, and Gazi Paşa Districts which are among the main areas of the historical urban site of Antakya where some of the traditional houses are still occupied and used for residential purposes.

Fourteen traditional houses have been studied in total in terms of architectural characteristics, original and current usage, user experiences, and social and physical changes. The main determinant factors in the selection process for the traditional houses were;

- The original structure must be constructed with traditional techniques.
- The building must be inhabited and used as a house (permanently or seasonally)

The selection criteria for the houses were kept rather broad since it has been a challenge to be able to find a house in use. Due to the urban transformation in the historical city centre, which is leaning towards tourism, most of the traditional houses have been sold or rented by their owners and turned into cafes or hotels through adaptive reuse practices. Therefore, the quarters which once were residential areas gradually started to become commercial zones.

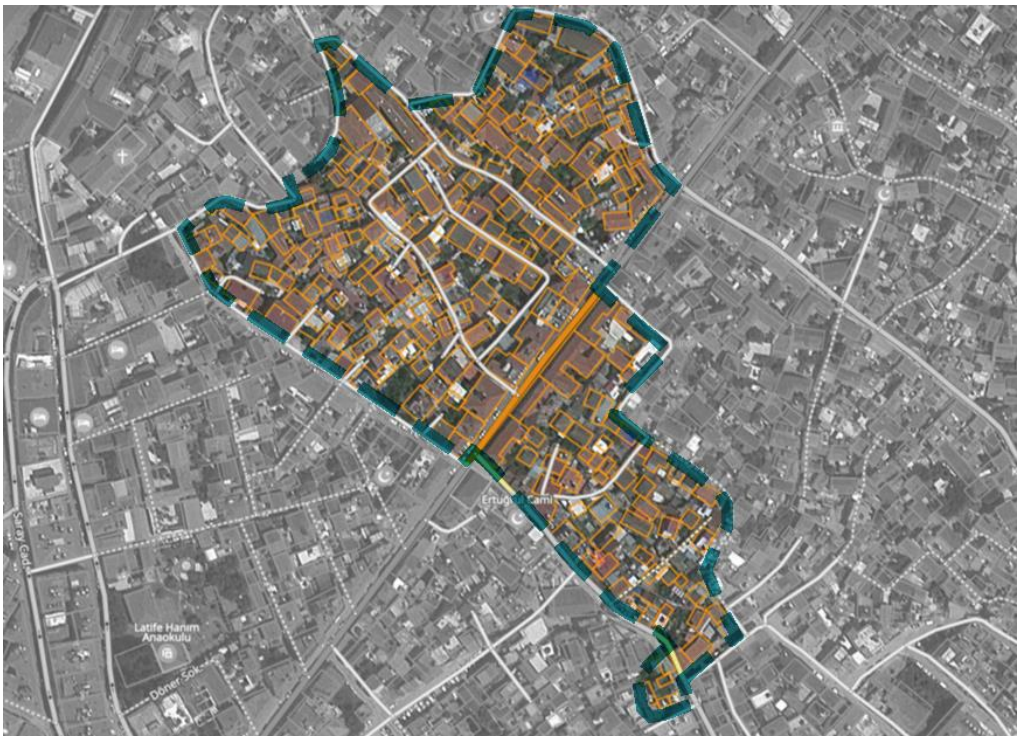


Figure 3.14. Case study area

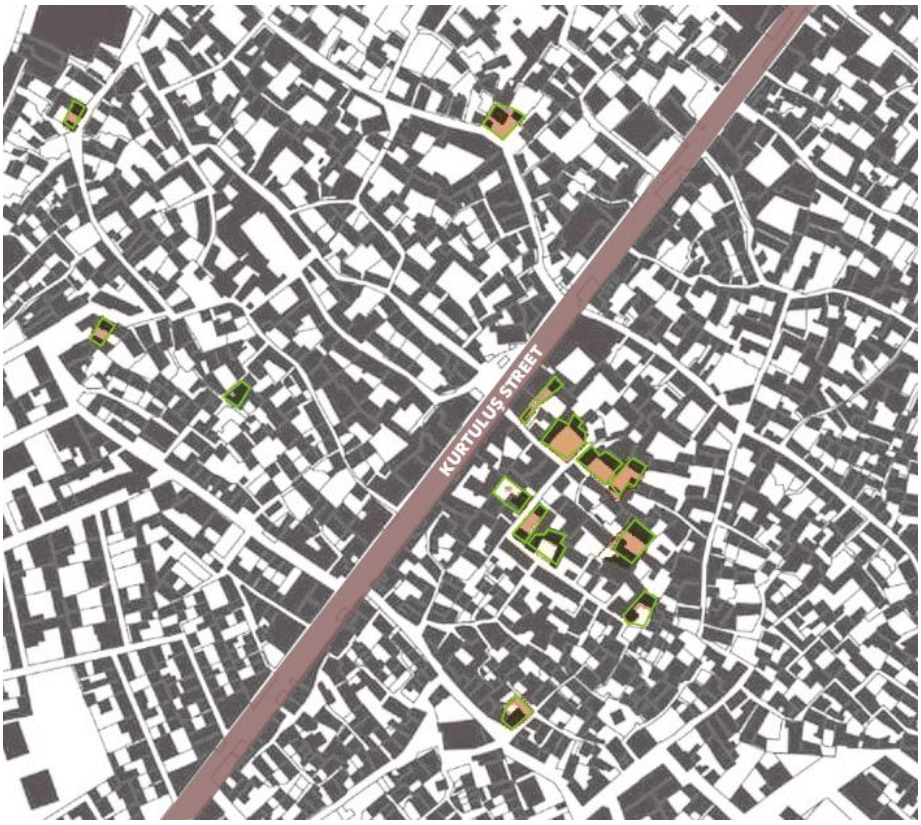


Figure 3.15. Selected and studied traditional houses

3.4.1 Architectural Analysis

Fourteen traditional houses had been studied in the scope of the case study in Antakya. The houses are documented through the survey sheets with technical drawings and questionnaires, also with photographs. The interventions have been studied in detail and the reasonings of the inhabitants have been found out via in-depth interviews.

The traditional houses studied within the scope of the site survey reflects the architectural and social variety and richness of the study area. The houses showcase the architectural characteristics of traditional Antakya houses in different scales and levels from small to large or simple/modest to rich.

All of the studied houses are separated from the traditional narrow streets with high, stone courtyard walls and as one of the common traditional features, all studied buildings are entered through the courtyard. Mainly, the ground floors of the masses on the lot are stone masonry with varying finishes and the first floors are timber frame structures with exceptions of a few houses where the first floor is replaced with brick/concrete blocks after they had collapsed.

Ten out of the fourteen studied houses have the traditional façade elements like the top windows called *kuş takası* which are varying in terms of size or the amount of ornamentation. Eight of the houses have *fanus/sebil takası* which is a type of niche on façade to put lighting elements or water features like faucets. Although the wooden shutters and the material of the windows have appeared to be altered in some of the houses due to several reasons which will be explained in detail in later sections, the high windows on the façade are among the other common architectural features of the studied houses.

During the site survey, courtyards have appeared to be one of the most significantly utilized and used spaces of the traditional houses justifying the literature research. All of the users have expressed during the interviews that the courtyards are the most treasured part of their houses, and it is the most used area in daily life. The courtyards -traditionally called *havuş*- are multifunctional spaces and actively in use for lounging, gathering, cloth and food drying, cooking etc. Among the fourteen traditional houses, seven of the courtyards are covered with stone, five of them have concrete slab coverings and two of the courtyard pavements are cement tiles.

Following the courtyards, the ground floors of the masses which are located around the courtyard and entered from there, have the most used interior spaces such as living room and bedrooms on the main buildings and kitchen, WC and bathroom on the service buildings. The rooms are usually elevated from the courtyard to prevent water or dirt coming from the courtyard. While the service spaces are seen to be more modest and simpler, the rooms on the main masses have the rich traditional architectural elements like the differing wooden cabinets traditionally called *mahmel*

and *kitabiye*, wooden shutters, *eşiklik, seki* etc. The number of architectural elements and the state of each element differs from house to house. Although it is seen during the study that most of the traditional windows have been replaced with PVC ones or the shutters are removed, the traditional wooden shutters can be seen intact in some of the examples. The floor finishings of the ground floors differentiate from original stone or marble to concrete slab and the there are various types of wooden ceiling covers with different styles and details.

Timber-framed and plastered first floors of the buildings are usually utilized as storage spaces. There are some instances where different functions such as service spaces, bedrooms or living rooms are included in the upper floors. For example, in Ülkü St. No.19 the family functioned the first floor as another house and there are three bedrooms, a kitchen, a bathroom and a living room on the floor.

The traditional *hazin* space which is a one-room wide basement entered through the courtyard is not seen in the studied houses. However, some of the inhabitants stated that there was *hazin* space in the house, but it was covered or closed in the past.

Case #1 – Ülkü-21 House

The house on Ülkü Street number 21 in Gazi Paşa District is a registered traditional house and occupied by 72-years-old N.A. The house is situated in a cul-de-sac where the street leads to the entrance of the lot. The traditional *aralık* space acts as a transition area between the narrow street and the courtyard. The masses of the traditional house are located around the spacious courtyard (Figure 3.16). There are three masses, two of them being main masses and the one being the service mass (Figure 3.17).

The courtyard has several traditional elements such as the furnace and the *fanus takası* on the courtyard wall on top of the furnace near the *aralık* space. The stone staircase leading to the first floor of the Mass B is attached to the courtyard wall. The pavement of the courtyard is covered with a concrete slab and the owner has stated that the original stone pavement is still underneath the concrete.

The courtyard as the most used space of the traditional house has a seating area with a table and couple of chairs. The owner uses the area to have her neighbours over in the afternoons in the sunny days. There is not any canopy or covering on the courtyard as it is seen in the original traditional Antakya houses, however it can become difficult to navigate to the service areas at the opposite side of the courtyard, during the rainy days.

The two main masses are two storey buildings, and the service mass has a single floor. Front façades of the masses are covered with the traditional cut stone and the sizes and proportions of the windows, and the doors represents the traditional architectural characteristics.

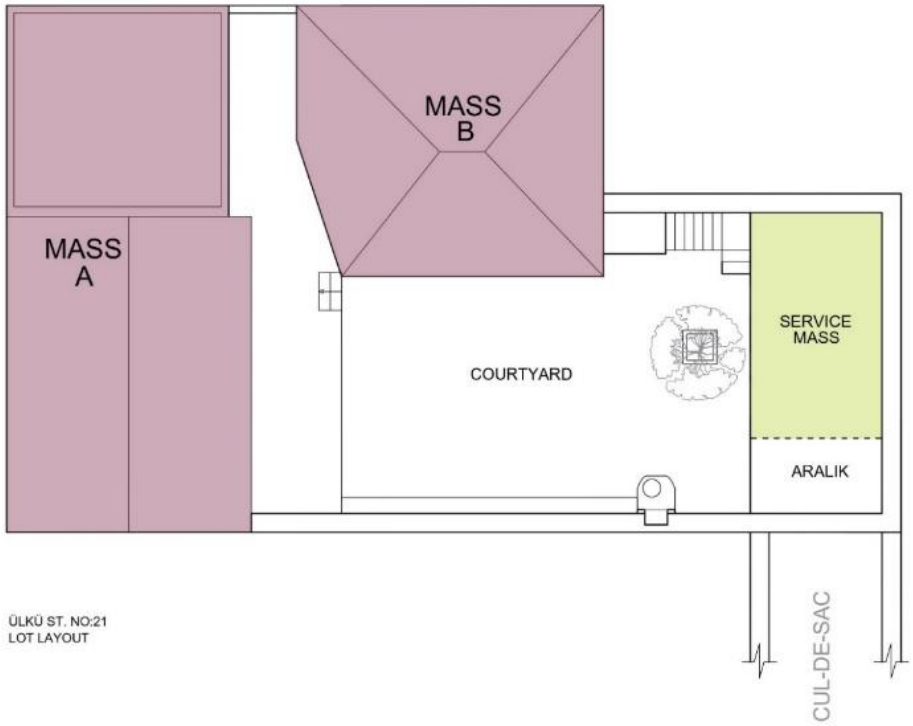


Figure 3.16. Ülkü-21 House lot layout around the the courtyard

Figure 3.17. Two main masses, the service mass and the aralık space of the house (Author, 2022)

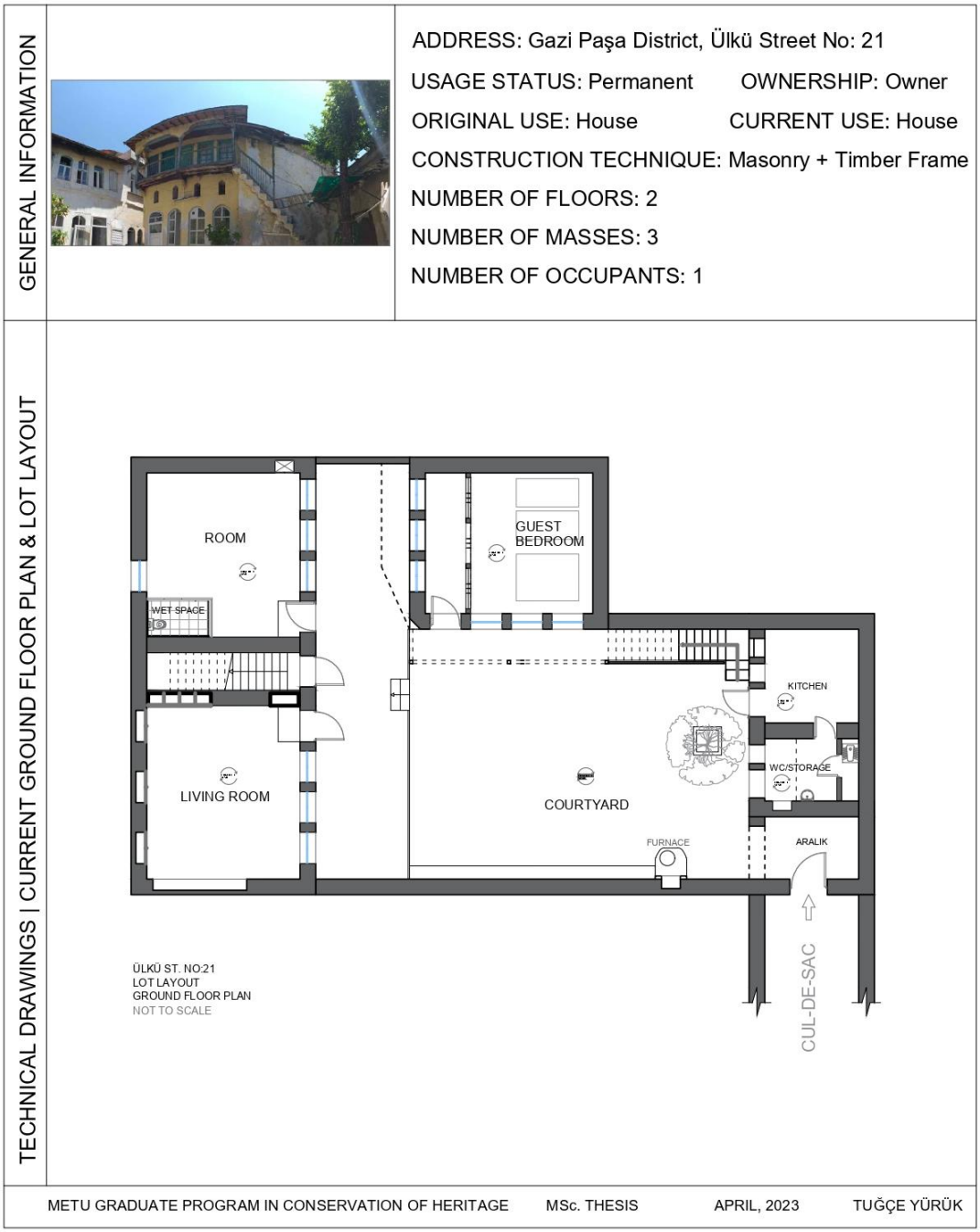


Figure 3.18. Current ground floor plan of Ülkü-21 House (Author, 2022)

There are two rooms which are the living room, and the bathroom/room at the ground floor of the Mass A, and there is a guest bedroom at the ground floor of the Mass B, and the kitchen and a lavatory space with a basin and a toilet is located at the service mass (Figure 3.18).

The living room has been furnished with a modern sofa set and there is a single bed near the windows which is used by the inhabitant. The traditional cabinets, *kitabiye* and the *mahmel* is still intact and in-use. There are three identical cabinets with wooden doors along the wall across the entrance which are painted white with the whole room (Figure 3.19). Originally, there are no doors to the *kitabiye* and the *mahmel* but the owner has placed curtains for the traditional cabinets since she does not wish her stored beddings or personal belongings to be seen (Figure 3.20). Original stone floors had been covered with a concrete slab and the traditional *eşiklik* space is filled up as well.

Figure 3.19. The living room of the house with the traditional cabinets and the modern furniture (Author, 2022)

Figure 3.20. *Kitabiye* and *mahmel* with the curtains in the living room (Author, 2022)

The second room on the ground floor of the Mass A had been utilized to place the bathroom area which includes a shower, and a toilet. The toilet had been placed inside the shower area (Figure 3.21). The floor of the room is covered with a concrete slab and ceramic tiles are seen at the wet space. The plumbing for the wet space goes through the room and the traces can be seen on the floors (Figure 3.22). The walls of the room are limewashed, but ceramic tiles are also used for the walls of the wet space to a certain height of nearly a meter. There is a window at the wall across the entrance which had been opened by the users, and the window is facing towards the small gap between the Ülkü-21 House and the neighbouring house. Also, there is a small cabinet with wooden doors.

Figure 3.21. The wet space addition with a toilet inside a shower area (Author, 2022).

Figure 3.22. Screed covered traces on the concrete slab of the room (Author, 2022)

The staircase to the upper floor is located between two rooms and currently, the access to the staircase is through the courtyard with a door. However, it is thought to be the traditional *mabeyn* in original, which is a secret staircase between the rooms (Figure 3. 23).

Figure 3.23. *Mabeyn* with stone steps on the Mass A (Author, 2022)

There is only one room on the ground floor of the second main mass of the house which is the Mass B. It is being used as a guest bedroom and there are two single beds and a double bed in the room, standing attached to one another. The entrance to the house is on the same level with the courtyard but the rest of the room is elevated which creates the traditional *seki* area. The *seki* is separated from the entrance area not only with the height difference but also with timber arches and fences (Figure 3.24). The flooring of the entrance area is marble which is laid to create a pattern at the middle of the area, and the floor of the *seki* area is covered with a concrete slab. There is also an ornamented wooden cladding on the ceiling of the room where a florescent light is fixed at the middle of it (Figure 3.25).

Figure 3.24. The *seki* on the ground floor of the Mass B (Author, 2022)

Figure 3.25. The ornamented ceiling of the room, and the fluorescent light fixture (Author, 2022)

There is a kitchen, and a WC which is also used as a storage on the service mass of the house which is located near the entrance to the lot. The storage area is a raised wooden cabinet, and it is being used to store firewood. There is also a niche on the wall of the WC area (Figure 3.26). The kitchen could not be entered.

Figure 3.26. The firewood storage, WC, and the niche (Author, 2022)

First floors of the main masses are underused spaces which are used as storage areas or rather left empty (Figure 3.27). The construction techniques of the floors also differ. The first floor of the Mass A is stone masonry with cut stone covering, except from the partially reconstructed section which is done with concrete blocks. The first floor of the Mass B is timber framed with unidentified filling. There are two rooms at the timber-framed first floor of the Mass B. Also, there is balcony-like corridor in front of the rooms which is also one of the characteristic features of the traditional Antakya houses (Figure 3.28). Both rooms have traditional cabinets, and *kitabiye* next to the entrance of the rooms (Figure 3.29). The roof of the Mass B is partially damaged, and it can be seen from the rooms, since the traditional wooden cladded ceilings are partially collapsed in one room, and damaged in the other room (Figure 3.30). The first floor of Mass A could not be entered.

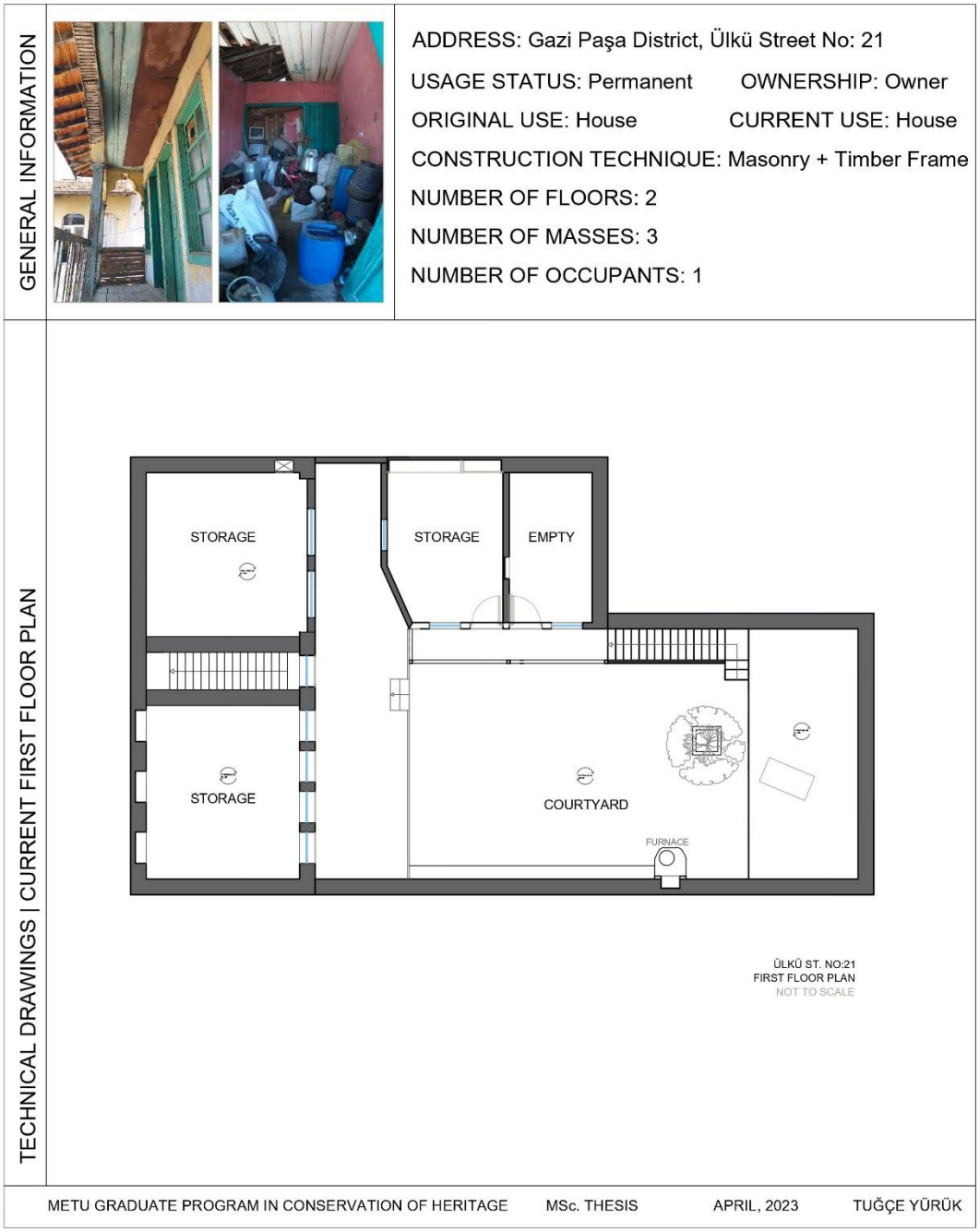


Figure 3.27. Current first floor plan of Ülkü-21 house (Author, 2023)

Figure 3.28. The stone stairs leading to the first floor of the Mass B, and the corridor in front of the rooms (Author, 2022).

Figure 3.29. Traditional cabinets in the first-floor rooms of the Mass B (Author, 2022)

Figure 3.30. The ceilings of the first-floor rooms of the Mass B (Author, 2022)

Case #2 – Ülkü-19 House

The house on Ülkü Street Number 19 is among the buildings which have been studied in the scope of the PROT3CT project and monitored for a year with the sensors. The photographic documentation of the house and in-depth interviews with the inhabitants had been completed within the process as well. The technical drawings of the house had been kindly provided by the Mersin University Graduate Program in Conservation of Cultural Heritage where the team had studied the building in detail at the end of 2019.

The two-storey traditional house is shared by two families. The ground floor of the house is occupied by the grandmother of the family and the first floor is being used by the nuclear family of four. The courtyard of the house is being used by all the inhabitants of the house. There are several traditional courtyard elements such as a small fountain, a furnace area which is currently not in-use, and a three for shade (Figure 3.31).

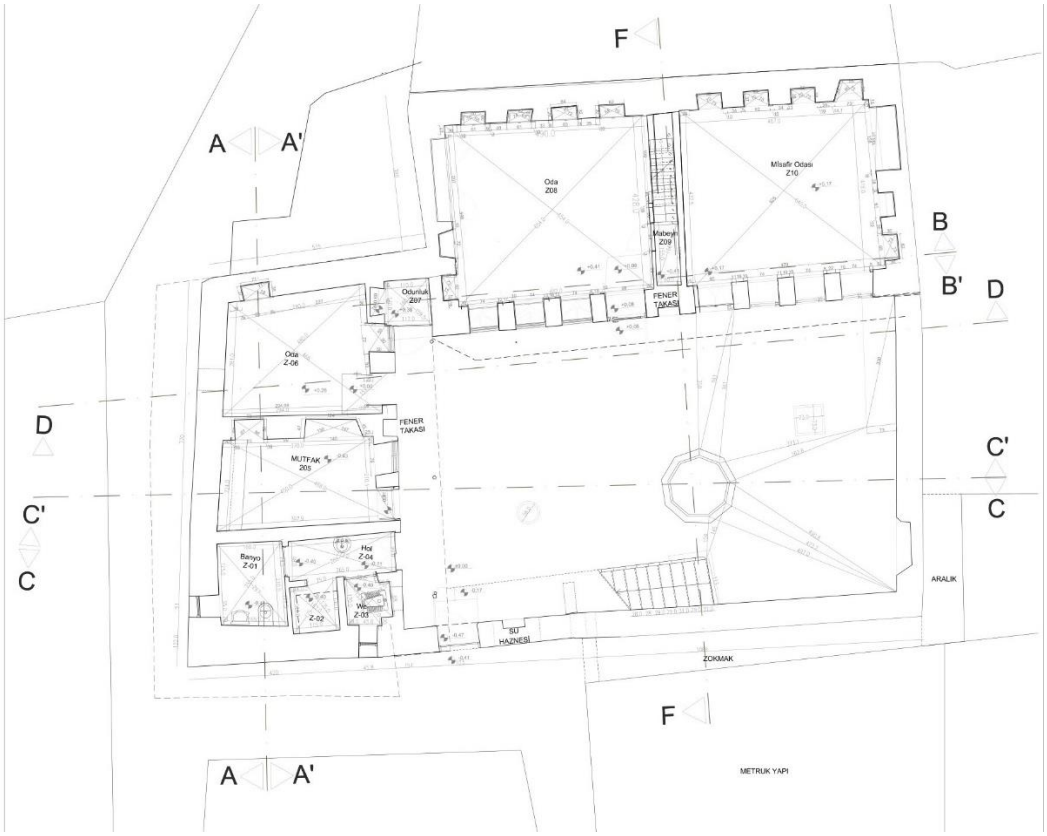


Figure 3.31. Ground floor plan of Ülkü-19 House (Akat et al., Mersin University Graduate Program in Conservation of Cultural Heritage, Restoration Project for Ülkü St. No:19 House, 2019)

Moreover, the traditional elements of the front façade effect the courtyard as well such as the *fanus takası* which is a niche to put lantern to light up the courtyard. Original stone pavement of the courtyard is overlayed with a concrete terrazzo pavement. There are two masses creating an L-shape around the spacious courtyard.

There is a living room, a bedroom, a bathroom, and a separate WC, also an empty room which is used as a storage on the ground floor of the house (Figure 3.32).

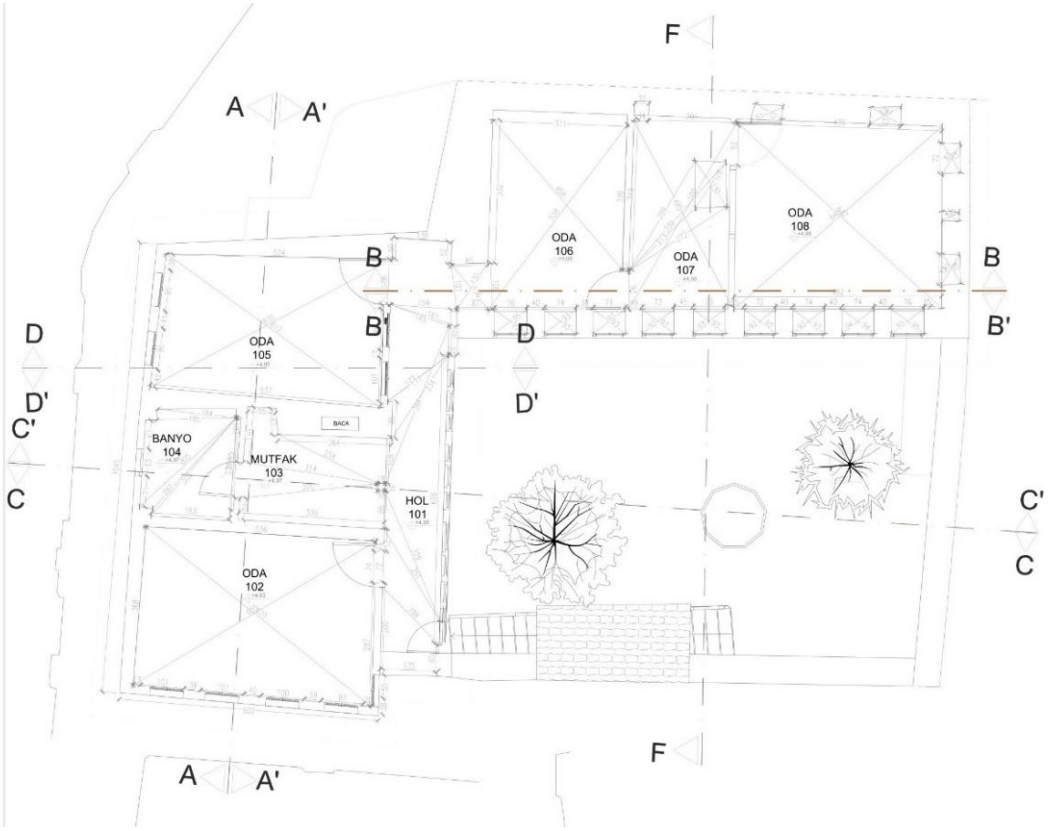


Figure 3.32. First floor plan of Ülkü-19 House (Akat et al., Mersin University Graduate Program in Conservation of Cultural Heritage, Restoration Project for Ülkü St. No:19 House, 2019)

The rooms reflect the characteristics traditional Antakya houses with the wooden cabinets, *mahmel* and *kitabiye*, traditional wooden cladding on the ceilings, transitional *eşiklik* areas, the wooden shutters for the windows, and the traditional top windows called *kuş takası* (Figure 3.33). Moreover, there is a *mabeyn* with wooden steps which is the traditional secret staircase, between the living room and the empty room. The door to the mabeyn is located at the living room and the door is crafted similarly to the cupboard doors, and the secrecy of the staircase is achieved through the traditional design.

Figure 3.33. The traditional architectural elements of Ülkü-19 House

The bathroom, WC and the lavatory area on the ground floor had been constructed long time ago with new techniques and modern appliances at the time of the interventions. There is a stone bath basin like the ones in the traditional bath houses, and a metal boiler which is severely deteriorated due to the heat. Overall, the materials and appliances are in poor condition.

The first floor is the main living area of the nuclear family, and there is a living room, a contemporary kitchen and a bathroom, the bedrooms and two empty rooms which are being used as storage areas (Figure 3.34). The living room has a traditional wooden ceiling, contemporary furnishings, and cement tile flooring. The wooden

shutters on the empty rooms on the first floor had been replaced with timber-framed windows long time ago and the timber roof structure is exposed in these two rooms.

Figure 3.34. The storage area on the first floor of the Ülkü-19 House

Case #3 – Ülkü-17 House

The house on Ülkü Street number 17 in Gazi Paşa District is a registered traditional house occupied by a single family of four. The entrance to the lot is directly from the Ülkü Street and there is not a transitional *aralık* space. However, the lot is surrounded by high courtyard walls and the walls of the service space which creates the desired privacy. The courtyard acts as the transition area between the street and the house, and it is the most used space of the house (Figure 3.35). The masses create a U-shape around the spacious courtyard with the locations of the L-shaped main mass and the service masses (Figure 3.36). The main mass has two upper floors which are constructed with new techniques and the service masses are single storey.

Figure 3.35. The courtyard of the Ülkü-17 House (Author, 2022)

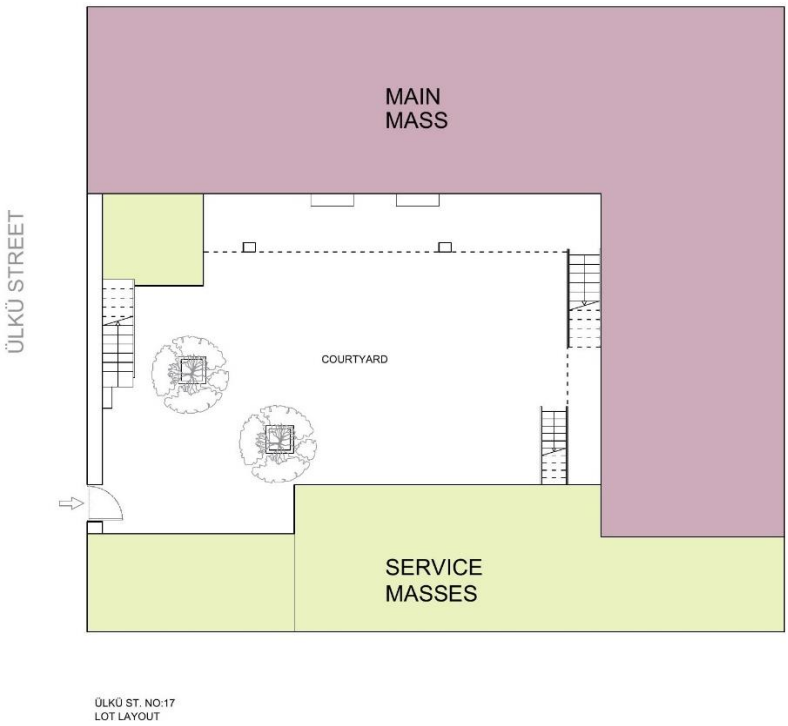


Figure 3.36. Ülkü-17 House lot layout (Author, 2023)

The façade of the main mass is one of the most significant parts of the traditional house with its traditional elements such as two *fanus takası* with an inscription next to one of them, and the top windows traditionally called *kuş takası*. The owner stated that there are 27 different ornamentations in total and there is a different ornamentation for each *taka* (Figure 3.37).

Figure 3.37. Traditional top windows and niches on the front façade of the Ülkü-17 House (Author, 2022)

The courtyard has several elements like the trees that provide shade during the sunny Antakya days, staircases and a seating area for the family and the guests. There are three staircases in the courtyard leading to the first floors and one of them is attached to the courtyard wall, the other is a new staircase attached to the front façade of the main mass and the last one is a metal staircase that leads to the flat roof of the service mass. The courtyard pavement is terrazzo cement tiles.

There are five rooms on the ground floor of the main mass which are the living room, a contemporary kitchen, and a bathroom, two bedrooms and an empty room which is used as a storage. Also, the service masses are being used as storage areas as well (Figure 3.38). Since the owners did not give permission to enter the first floors and photograph the interior of the house, a floor plan for the first floor cannot be provided. However, they provided the necessary information about the functions during the interview, and they allowed to show one room on the ground floor of the main mass which is the new kitchen.

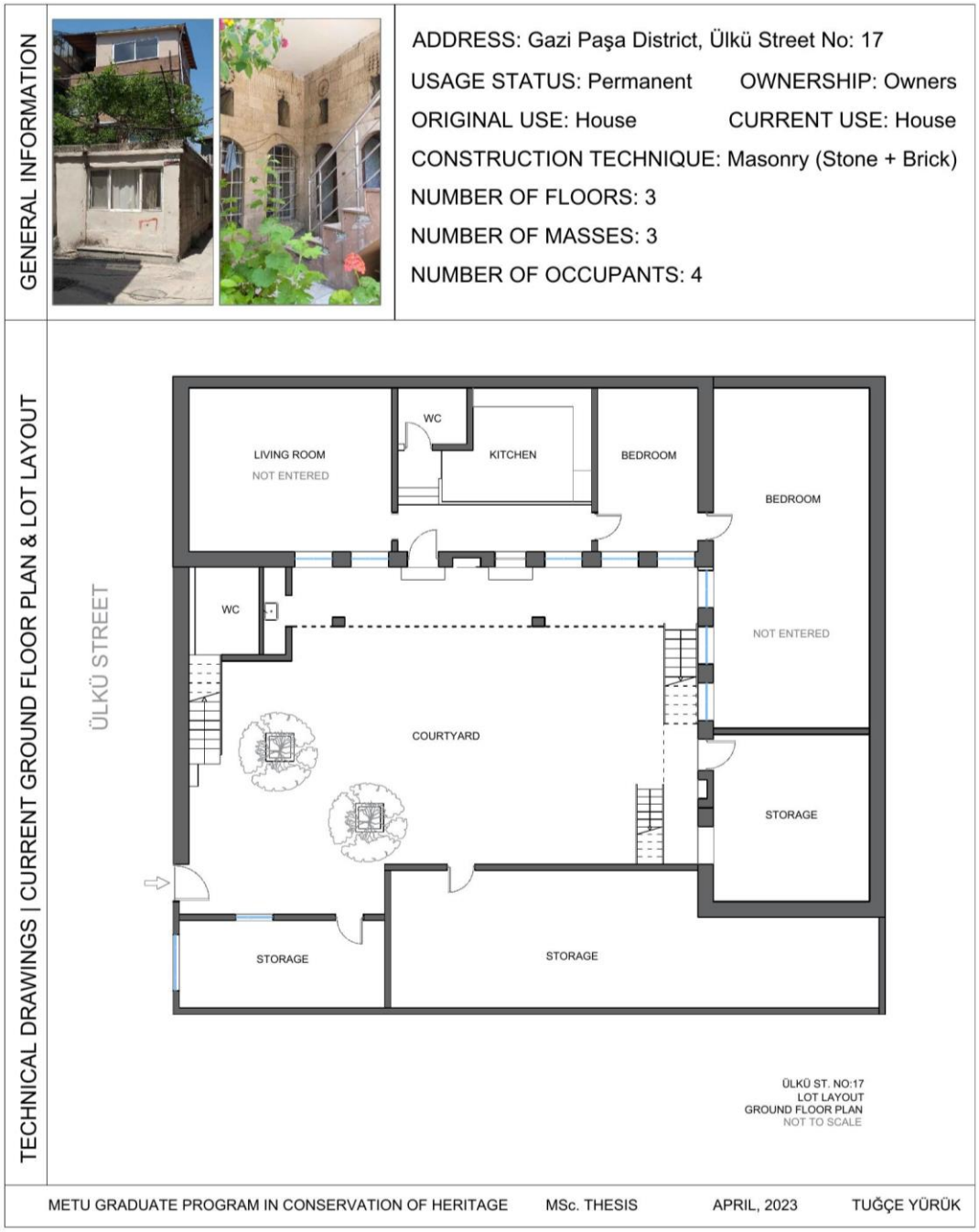


Figure 3.38. Current ground floor plan of the Ülkü-17 House (Author, 2023)

The ground floor of the main mass is constructed with traditional techniques which is the stone masonry with cut stone covering on the front façade. The service masses are constructed with new techniques with brick and cement plaster. Also, the staircases are concrete with tile coverings, and metal and aluminium railings.

The kitchen on the ground floor is a later addition to the space. The floor is elevated with three steps and the contemporary kitchen with modern appliances and cupboards is located at the elevated part in the room. A half-wall is placed between the platform and the corridor-like space at the entrance of the room that is created by the elevation of the kitchen area. Moreover, a contemporary bathroom is installed on the elevated area next to the kitchen.

The entrance to the living room was originally from the courtyard, but the owners had cancelled the door to the courtyard with the mass addition for a lavatory. Currently, the living room is entered through the corridor-like space on the middle room. The same situation is valid for the bedrooms as well. The storage area on the main mass is entered from the courtyard, but it is an un-used room.

The first floors of the house are constructed with brick and concrete, and access to the floors are through the staircases on the courtyard. The concrete columns which are constructed for the load bearing of the floors are in front of the façade and partially blocking the area and the perception of the traditional façade (Figure 3.39). The effects of the upper floors to the structure and the architectural characteristics of the traditional house will be discussed on the next chapter.

Figure 3.39. The upper floors of Ülkü-17 House constructed with new techniques (Author, 2022)

Case #4 – Ülkü-5 House

The traditional house on the Ülkü Street number 5 in Gazi Paşa District is occupied by a single family of three. One of the most recognizable features of the house is the fact that it is a divided traditional house where the other section of the structure is currently owned and being used by a boutique hotel.

The lot is entered through the street and there is not a traditional *aralık* space but a thin and long corridor-like area when a staircase and the service mass is seen when it is entered to the lot and the house is in private (Figure 3.40). There is an awning for the courtyard which is attached to the main mass and the material of the awning is corrugated metal shingles. The original stone pavement of the courtyard is covered with a concrete slab, but the stones are visible on some areas where the concrete slab is deteriorated.

Figure 3.40. The lot, the entrance and the façade of Ülkü-5 House (Author, 2022)

The main mass is situated at the opposite side of the entrance and the service masses are located in between (Figure 3.41). There is a WC and a washbasin next to the lot entrance, and a staircase leading to the small service area on the upper floor. The service mass which is constructed with new techniques with brick and cement plaster

is located next to the staircase across the main mass. There is a small courtyard area in front of the main mass where also a kitchenette area with contemporary cabinets appliances such as a washing machine and microwave oven. The living room is located at the single unit of the ground floor of the main mass (Figure 3.42). There are two rooms on the first floor of the main mass which are the bedrooms, and they are accessed through the stairs inside the living room. The masses could not be entered but the necessary information is provided by the owner.

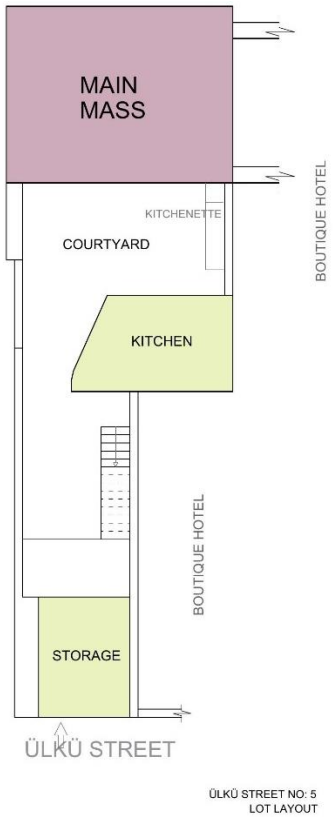


Figure 3.41. Lot layout of Ülkü-5 House (Author, 2023)

The main mass is constructed with stone masonry and the front façade walls are cladded with cut-stone. There are traditional top windows called *kuş takası*. The top windows have modest ornamentations. Original wooden windows are replaced with white PVC windows on the ground floor and brown ones on the first floor.

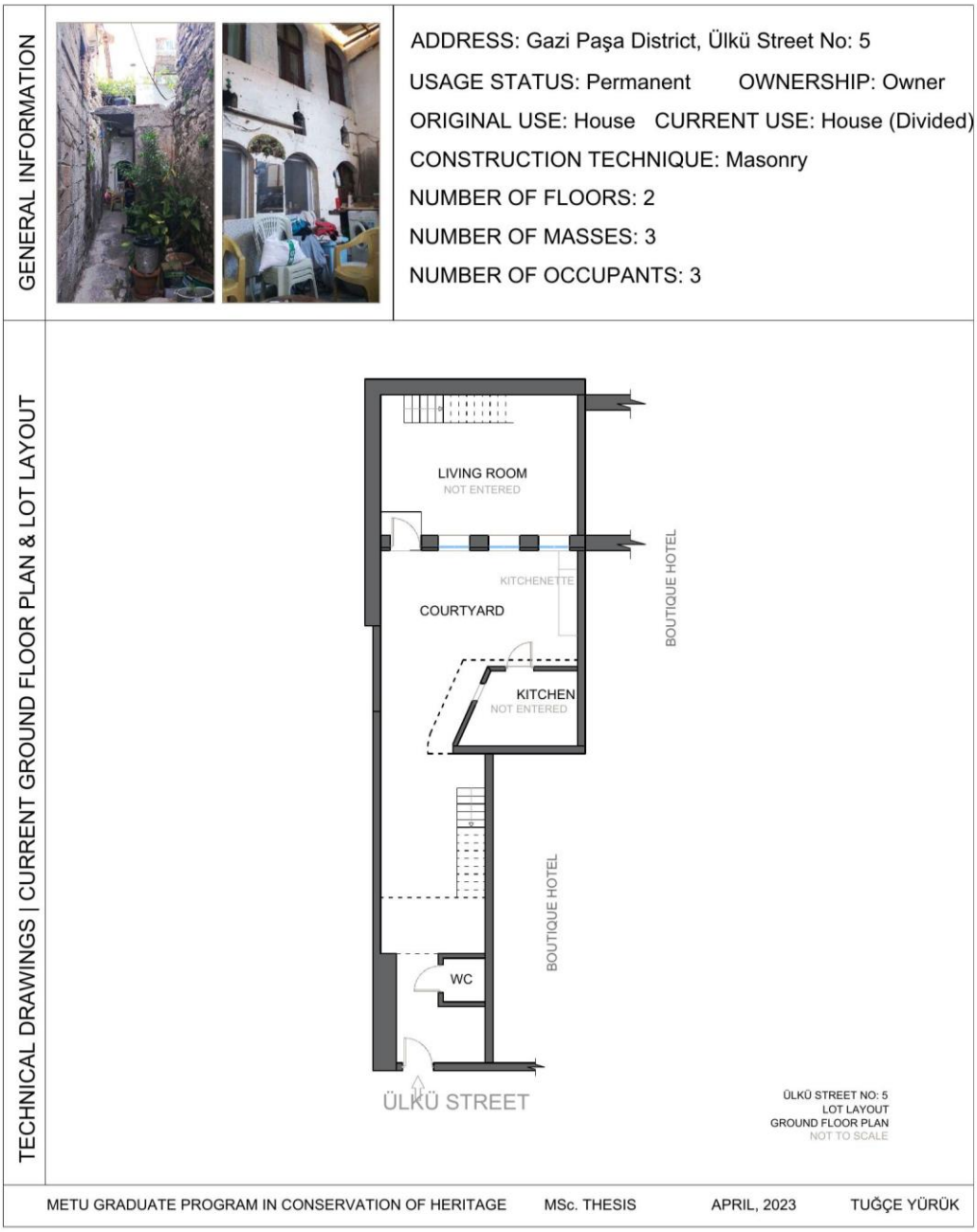


Figure 3.42. Current ground floor plan of Ülkü-5 House (Author, 2023)

Although the service spaces are relatively new, constructed with new techniques, and contemporary appliances had been used, they are in poor condition with deteriorated materials (Figure 3.43).

Figure 3.43. The kitchenette, WC, washbasin, and the storage area of the Ülkü-5 House (Author, 2022)

Case #5 – Ülkü-33 House

The house on Ülkü Street number 33 in Gazi Paşa District is a traditional house which is currently occupied by a single family of three, the Sakiçoğlu family. The couple has twin daughters and one of the sisters is away, studying in university now.

The entrance to the lot is through the street and the courtyard is reached after entering to the lot. The desired visual privacy is achieved with the high courtyard walls. There are two masses which are two storeys, across from each other at the opposite sides of the courtyard (Figure 3.44). Since there are living areas on both masses currently, they have been both identified as main masses.

The courtyard is being used as a living and a gathering space. Also, there is a washbasin addition on the courtyard wall next to the entrance. There are two staircases on the courtyard, standing attached to the courtyard wall, leading to the first floors of the masses. One of the staircases is concrete and the other one is a traditional stone staircase with monolithic stone block as the steps. There is also an awning addition which is attached to the walls with a metal structure and has a translucent, PVC material (Figure 3.45).

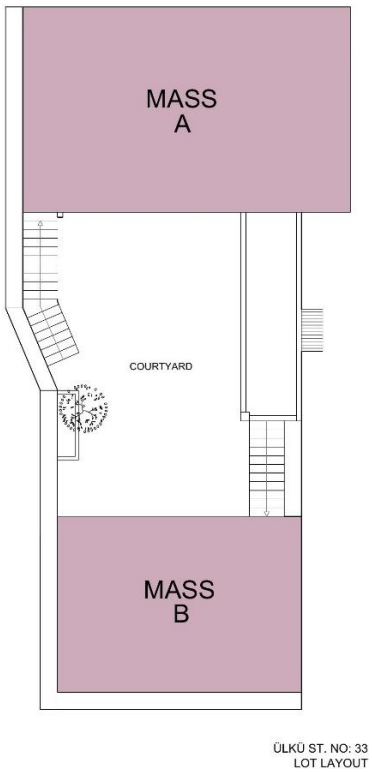


Figure 3.44. The lot layout of Ülkü-33 House (Author, 2023)

Figure 3.45. The courtyard elements of the Ülkü-33 House (Author, 2022)

There are two rooms on the Mass A which are a contemporary kitchen with modern cupboards and appliances and a bedroom with contemporary furnishings. Mass B has a single unit which is being used a living room (Figure 3.46). The rooms on the Mass A open directly to the courtyard and they are entered through four-step concrete stairs. The rooms are connecting through the door in between them as well.

The living room on the Mass B is entered from the courtyard through a step and it is furnished with a contemporary seating unit. Although the sizes and materials of the windows and the door have been altered, and original cut-stone cladding on the walls have been limewashed, the front façade of the Mass B reflects the characteristics of traditional Antakya houses with the traditional top windows called *kuş takası* and the niche called *fanus takası* (Figure 3.47).

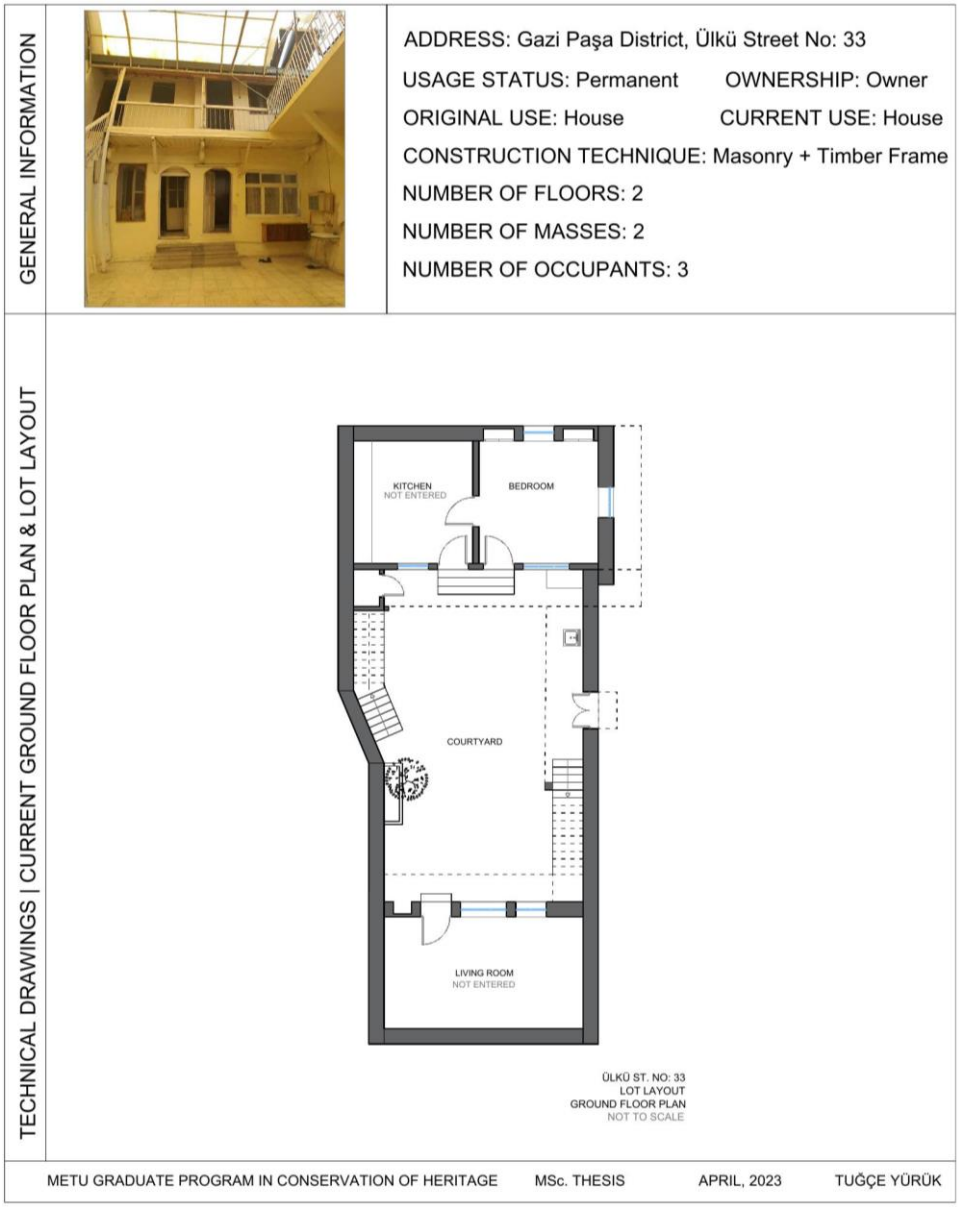


Figure 3.46. Current ground floor plan of Ülkü-33 House (Author, 2023)

Figure 3.47. Front façade of the Mass B (Author, 2022)

The first floors of the masses had not been entered, but the necessary information is provided by the owner during the interview. The first floors of both masses are constructed with brick masonry with cement plaster, and there is a bathroom and a bedroom on the first floor of the Mass A and a room on the Mass B (Figure 3.48). At the time of the study, the first floor of the Mass B was under construction to be used as another bedroom. The first floor of the Mass A creates a projection to the Ülkü Street, and there are timber buttresses. Moreover, there are balcony-like corridors in front of the rooms where the stairs are leading to on each mass, and the rooms are entered through this transitional area.

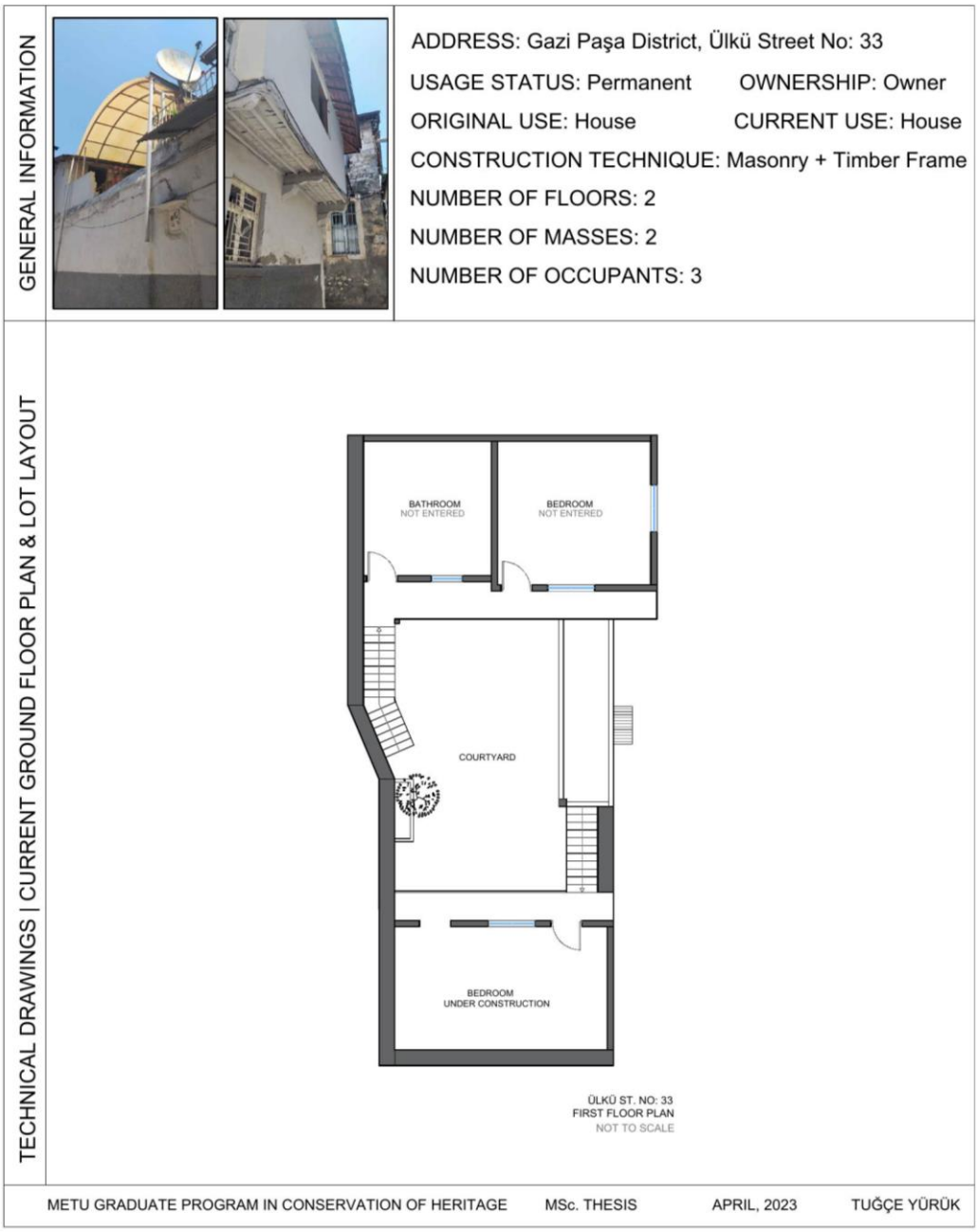


Figure 3.48. Current first floor plan of the Ülkü-33 House (Author, 2023)

Case #6 – Ülkü-63 House

The house on Ülkü Street number 63 in Gazi Paşa District is a traditional Antakya house occupied by a middle-aged couple, the Accan family. The house is situated on a street node and the node is the gathering area for all the neighbours and their children to spend time together during the day.

The entrance to the lot is from the node and although there is not a traditional *aralık* space, the service masses create a passageway to the courtyard. There are three masses of the house one of them being the two-storey main mass and other two are modest-sized, single storey service spaces (Figure 3.49). There is a concrete staircase attached to the courtyard wall leading to the first floor of the house and the terrace area on the flat roof of the service mass. A burlap-like material is stretched roof to roof in order to create an awning for the courtyard in order to provide shade, and shelter for the most used area of the house.

The front façade of the main mass reflects the characteristics of the traditional Antakya houses with its proportions, materials, elements like top windows, stone buttresses, and the balcony-like open sofa in front of the rooms on the timber-framed first floor (Figure 3.50).

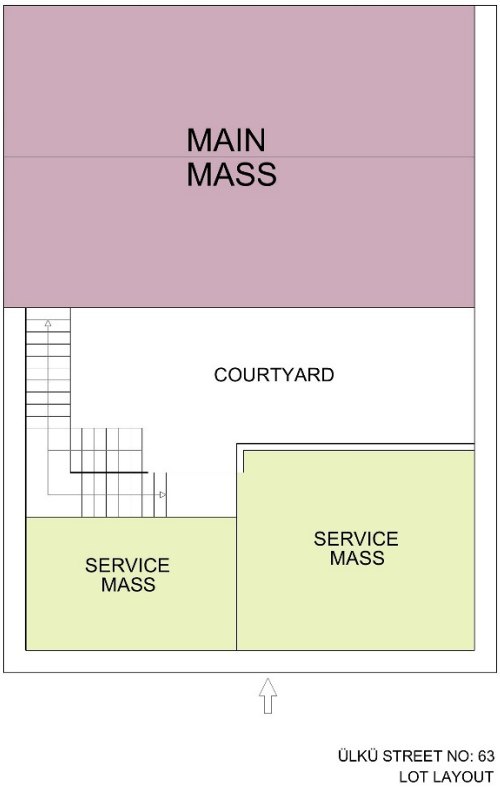


Figure 3.49. The lot layout of Ülkü-63 house (Author, 2023)

Figure 3.50. The front façade of the Ülkü-63 House (Author,2023)

The courtyard has differing pavements including marble, travertine stone tiles, cement terrazzo tiles, ceramic and the original stone, which act as traces to the house's history (Figure 3.51).

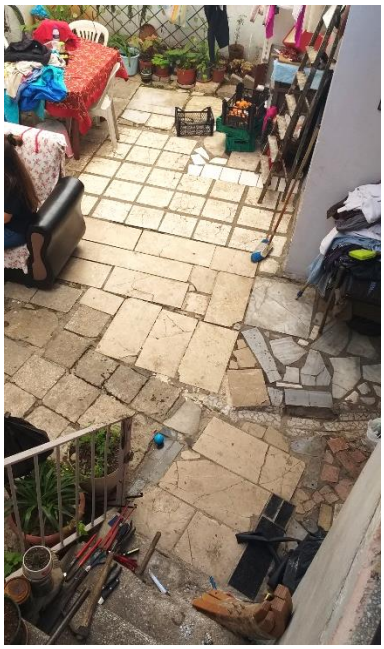


Figure 3.51. The courtyard pavement of the Ülkü-63 House (Author, 2022)

There is a bedroom and a living room on the ground floor of the main mass, and a contemporary kitchen and a bathroom is located at the service masses (Figure 3.52). There are various architectural elements on the main mass such as the traditional wooden cabinets including the *mahmel* and, the transitional *eşiklik* space on each room, and wooden cladding on the ceilings (Figure 3.53).

The rooms are entered through the courtyard, but there is a door between the rooms as well. The original floorings of the rooms are replaced with cement tiles. There are contemporary furnishings in the rooms including a fluorescent light fixture fixed to the timber beam, and curtain rods placed on the wooden cladding of the ceilings.

The service masses are constructed with new techniques of brick masonry and cement plaster, and the floorings are ceramic tiles. The kitchen has contemporary appliances, and old wooden cabinets. Since the kitchen does not have adequate space, the refrigerator is placed on the courtyard. The bathroom could not be entered during the study.

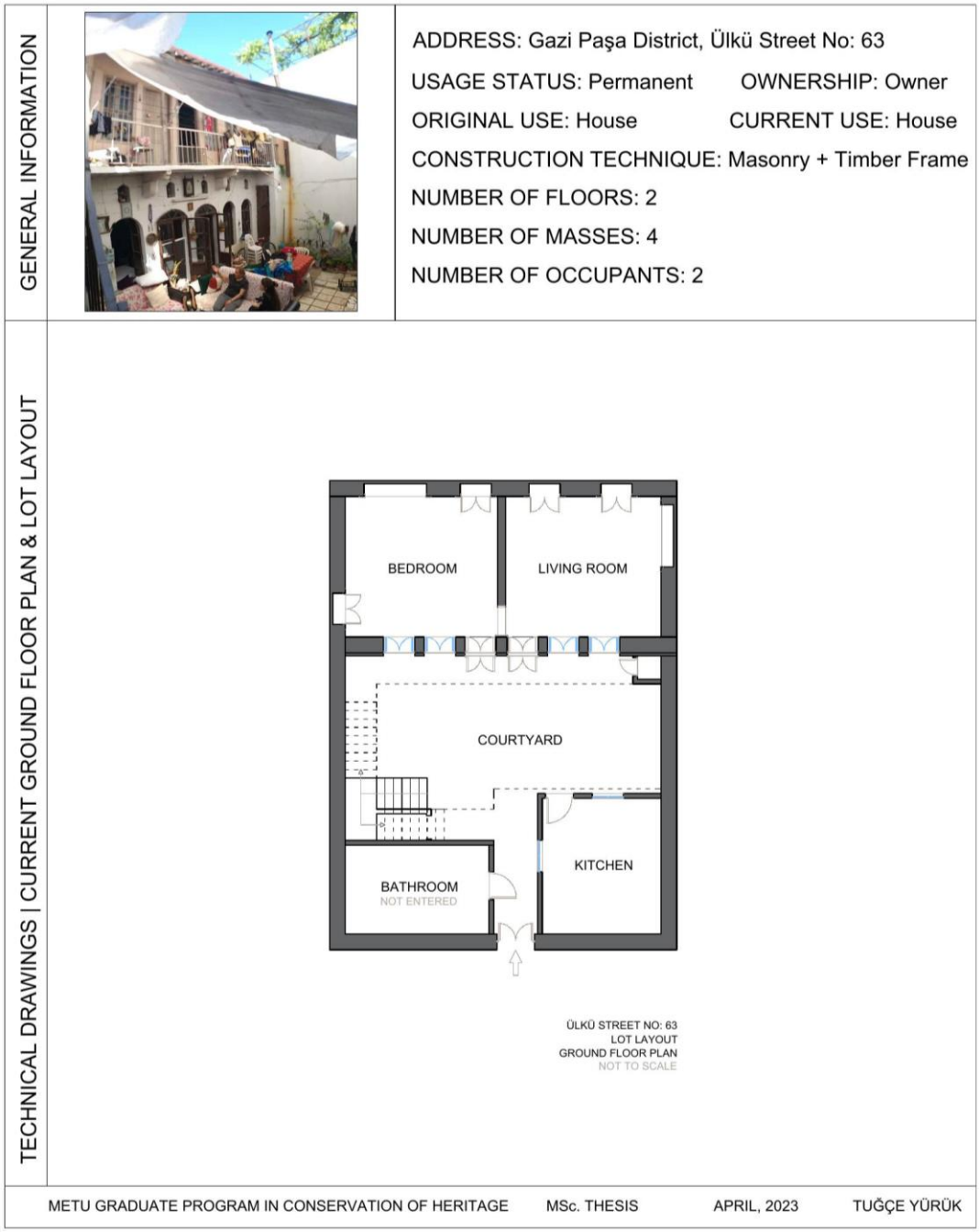


Figure 3.52. Current ground floor plan of the Ülkü-63 house (Author, 2023)

Figure 3.53. Traditional architectural elements on the ground floor bedroom of the Ülkü-63 House (Author, 2022)

There are two rooms on the first floor on the main mass, and they are being used as a bedroom and a storage. The flat roof of one of the service masses had been utilized as a terrace area (Figure 3.54). The construction technique of the first floor is timber-framed with unidentified filling. There is a balcony-like area in front of the rooms which has a concrete slab, and metal railings. The doors and the windows are wooden. There are also several significant traditional architectural elements on the first-floor rooms as well such as the wooden cabinets, the wooden cladded ceilings, and the timber flooring (Figure 3.55). Contemporary furnishings had been used for the rooms and a fluorescent light fixture is fixed to the wooden cladding on the bedroom.

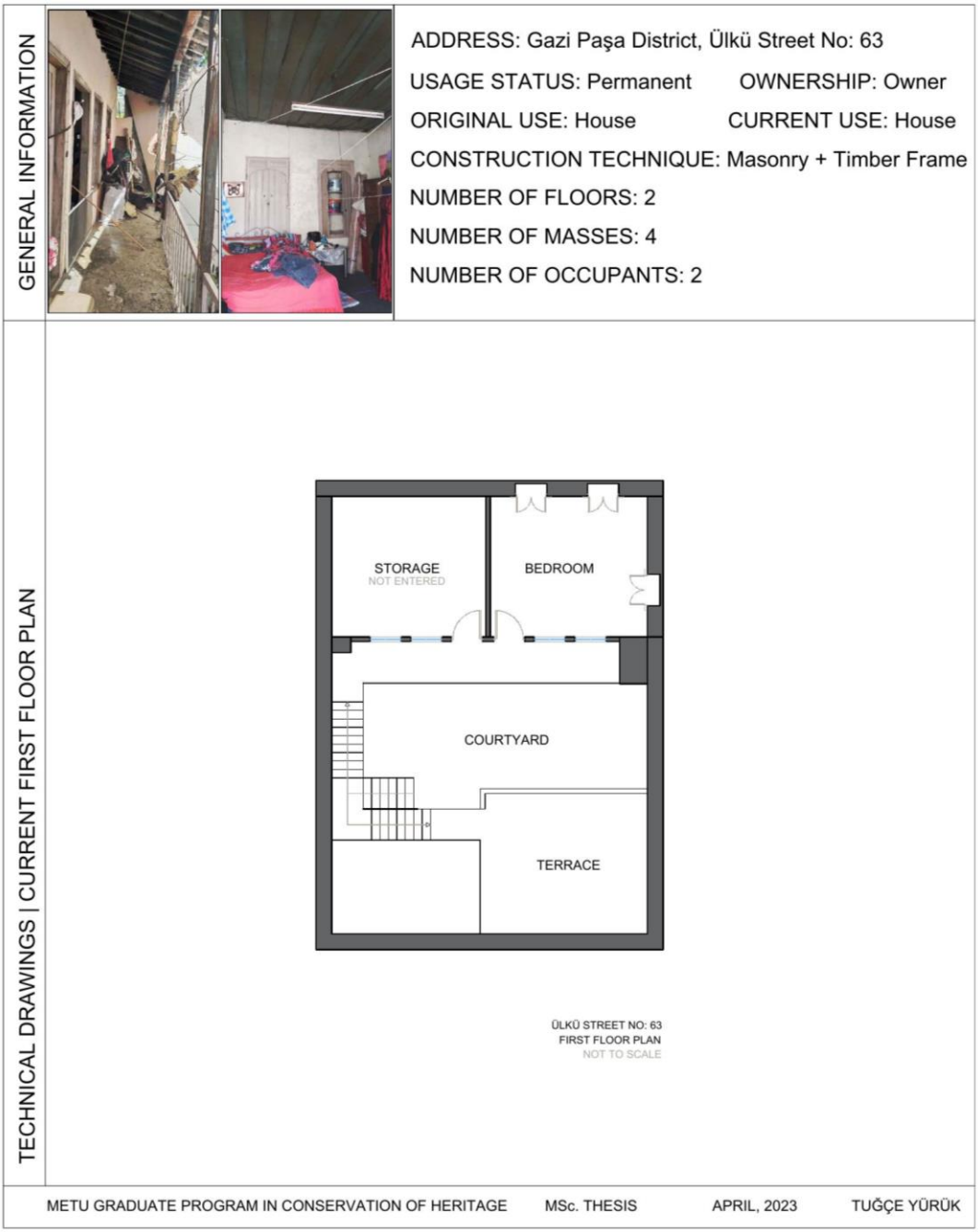


Figure 3.54. Current first floor plan of the Ülkü-63 House (Author, 2023)

Figure 3.55. The first floor of the Ülkü-63 House (Author, 2022)

Case #7 – Kastal-4 House

The house on Kastal Street number 4 in Zenginler District is occupied by the Mukhtar of Zenginler District and his family, the Gülcü Family. The house is also being used as an official building by the Mukhtar. The house is situated on the intersection of two streets creating a street node in a commercial area with touristic stores and cafes.

The courtyard of the house is entered directly from the street without the transitional aralık space, but the needed privacy is accomplished with the high courtyard walls and the PVC screen placed on top of the stone wall. There are two masses at two sides of the courtyard across from each other making the courtyard the centre of the lot (Figure 3.56).

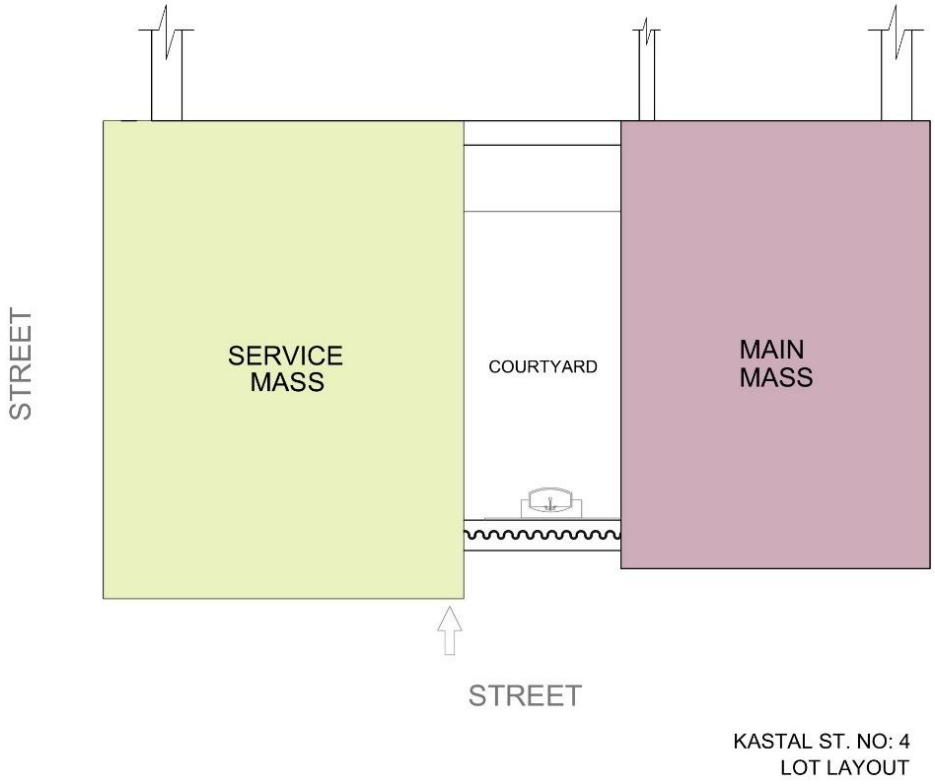


Figure 3.56. Lot layout of Kastal-4 House (Author, 2023)

The courtyard as the most used space of the house has several elements. Firstly, the pavement of the courtyard is original stone pavement. There is a washbasin area and the wall behind the basin is covered with ceramic tiles in order create a backsplash for cleaning purposes. There are also a concrete staircase leading to the first floors, a PVC awning addition, and a seating area on the courtyard. The space under the stairs had been utilized to place the washing machine, and a small WC (Figure 3.57). The courtyard is relatively small compared to the other studied traditional Antakya houses because of the division of the original house. While the half is used as a house by the Gülcü family, the other half of the house had been converted into a performance hall (Figure 3.58).

Figure 3.57. The courtyard wall, the staircase area, and the washbasin addition on the courtyard of Kastal-4 House (Author, 2022)

Figure 3.58. Division of the traditional house (Author, 2022)

There is a living room situated on the ground floor of the main mass, and a contemporary kitchen had been installed on the service mass (Figure. 3.59).

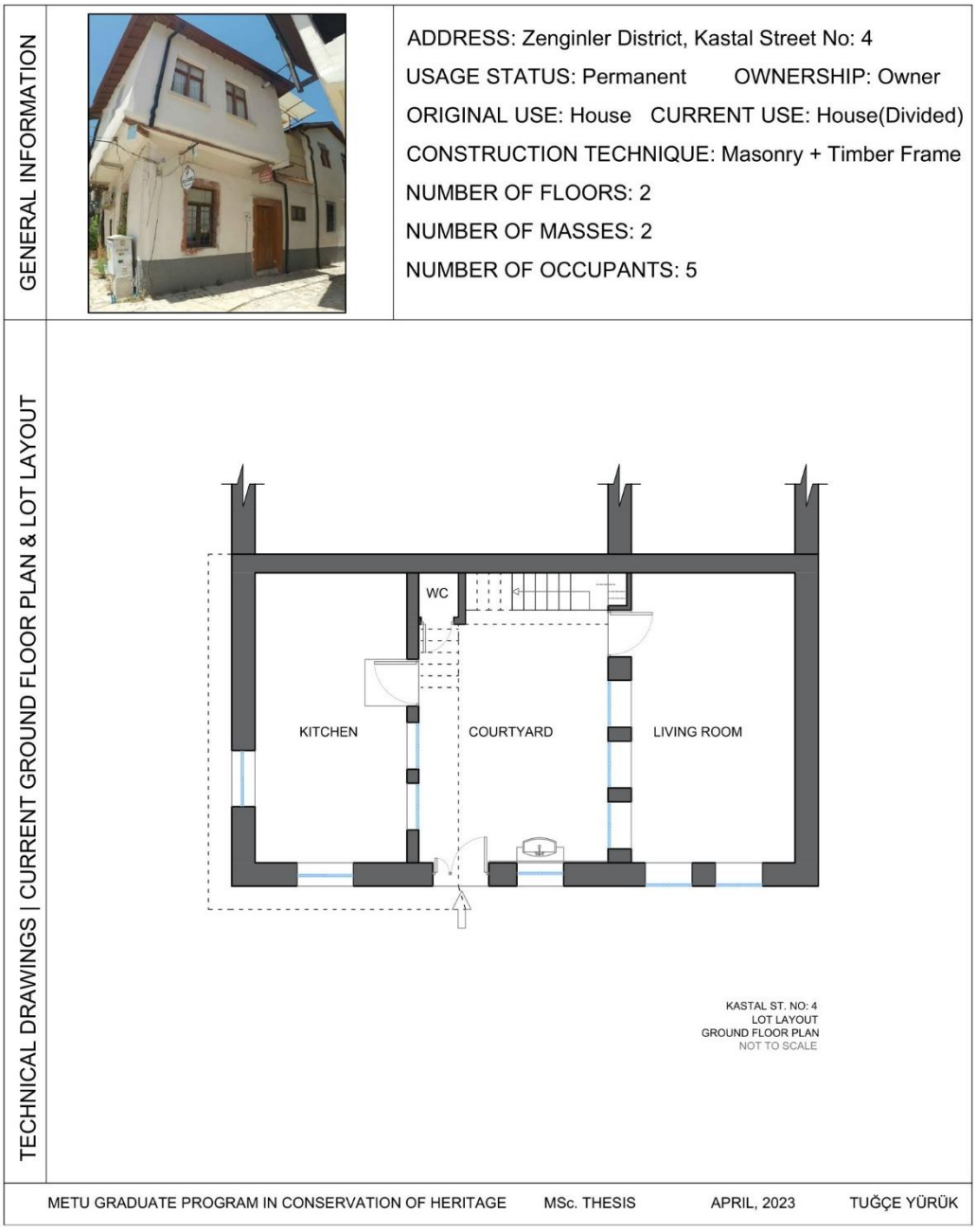


Figure 3.59. Current ground floor plan of Kastal-4 House (Author, 2023)

The first floor of the house could not be entered during the case study, but the necessary information is provided by the owner. The bathroom and the bedroom of the children is located at the first floor of the service mass which is the part of the

house facing to the street node, and the master bedroom is located at the first floor of the main mass (Figure 3.60). The first floor of the service mass is extended, and it creates a projection to the street. As it is mentioned above, two masses are connected to each other with the help of a newly constructed passageway in the form of a balcony. The façades and the roof structure of the house had been renovated as a part of street rehabilitation project by the municipality.

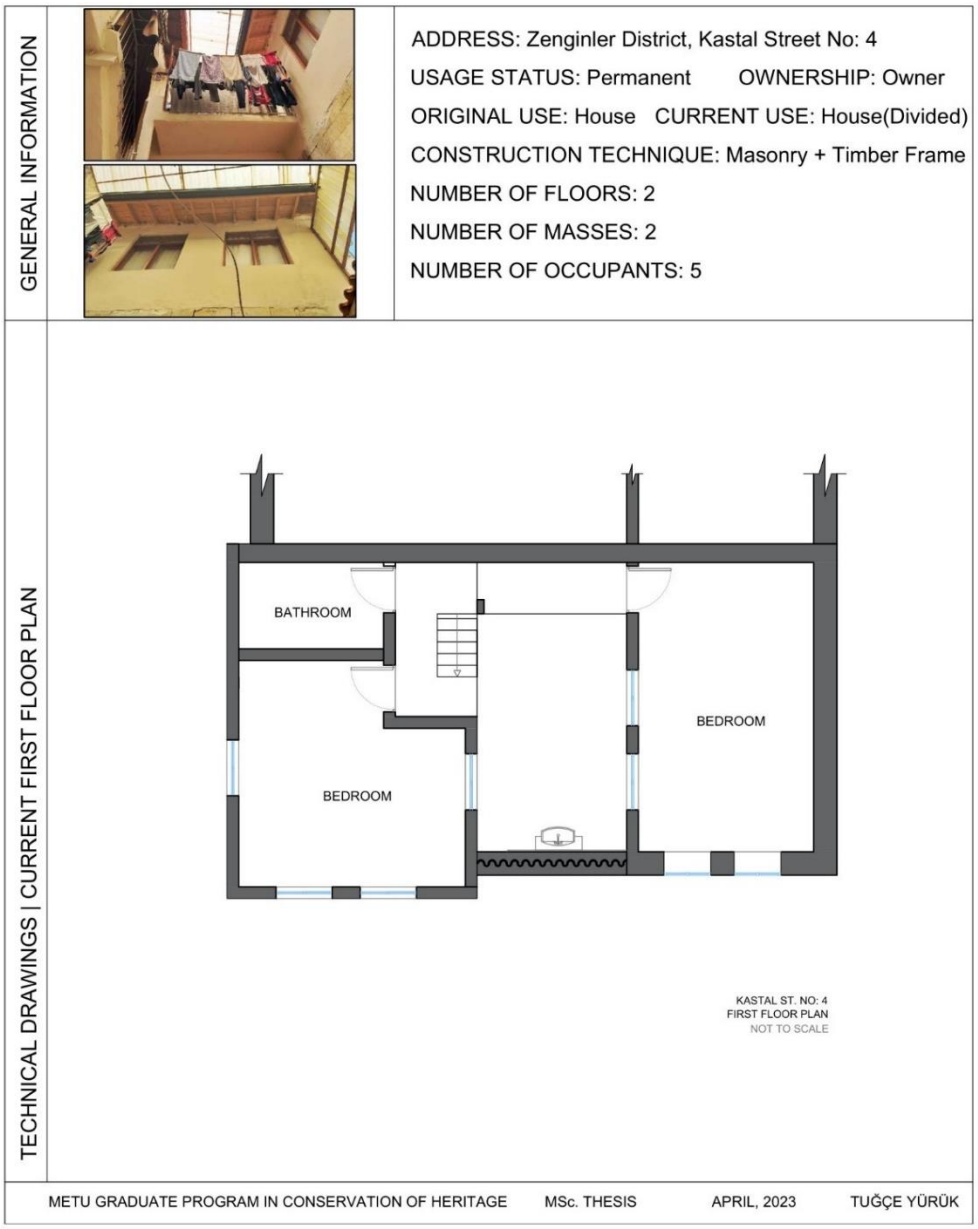


Figure 3.60. Current first floor plan of Kastal-4 House (Author, 2023)

Case #8 – Anafartalar-26 House

The traditional house on Anafartalar Street number 26 in Gazi Paşa District is occupied by an elderly woman. Most of the time, she babysits her two grandchildren in the house as well.

The house is surrounded by the streets on three sides and a cul-de-sac on the other. The front façade of the house facing the Anafartalar Street, and the other two street-facing façades reflects the traditional characteristics with its proportions, the protection, and the materials (Figure 3.61). There are two masses on the lot one being a main mass and the other being a service mass which is constructed on later periods (Figure 3.62).

Figure 3.61. The façade of the Anafartalar-26 House (Author, 2022)

The courtyard is entered through the cul-de-sac and although there is not a transitional *aralık* space, high bling walls of the ground floor, and the entrance being secluded in a cul-de-sac provides the desired privacy for the family. The courtyard as the most used area of the house has different elements (Figure 3.63). There is a washbasin located next to the entrance attached to the courtyard wall. Also, there is an opening on the reconstructed courtyard wall above the basin. The courtyard has a

metal staircase leading to the first floor of the main mass. Also, there is a metal awning addition for the courtyard to provide shade and shelter.

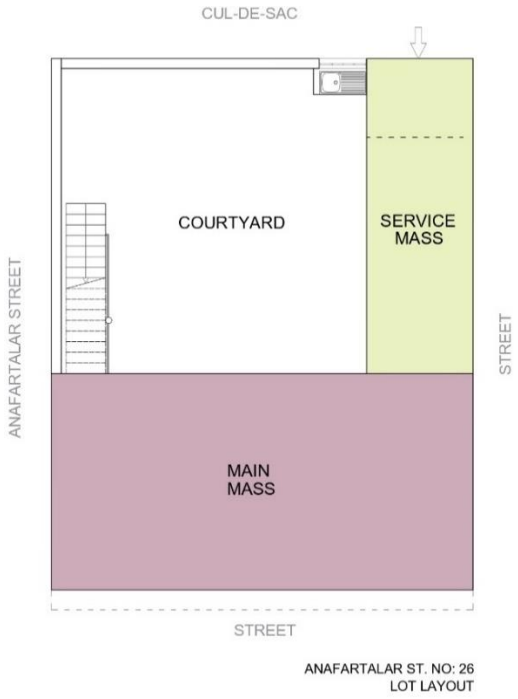


Figure 3.62. Lot layout of Anafartalar-26 house (Author, 2023)

Figure 3.63. The courtyard elements of Anafartalar-26 House (Author, 2022)

There are two rooms on the ground floor of the house which are a living room and a bedroom (Figure 3.64). Occasionally the living room is also being used as a guest bedroom.

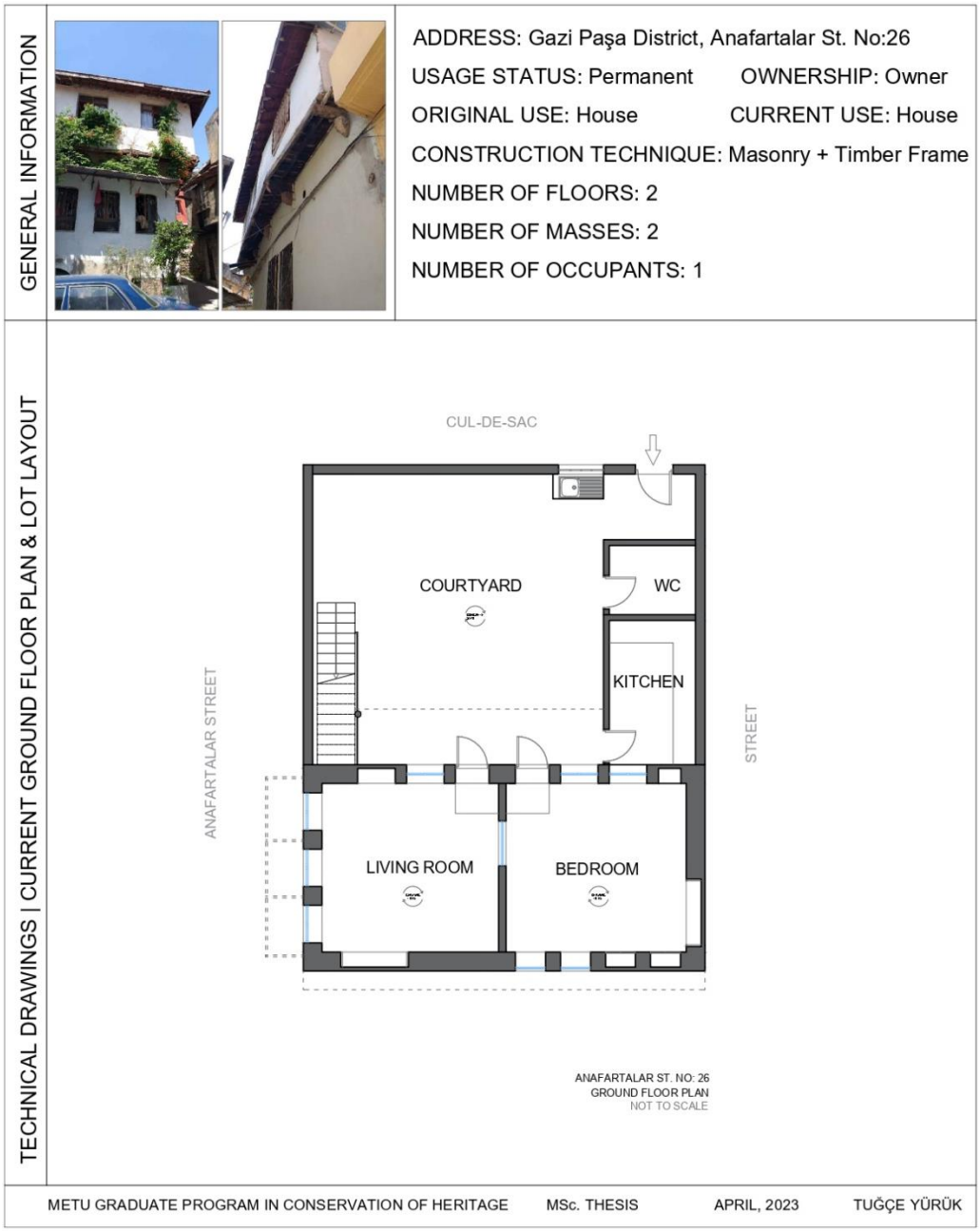


Figure 3.64. Current ground floor of Anafartalar-26 House (Author, 2023)

Case #9 – Asi House

The house on Ülkü Street number 37 in Gazi Paşa District is famously known in the area as the 'Asi House' since the house was once used as the set of a former tv series called *Asi*. The house stands out among the studied traditional houses by being one of the most successfully conserved examples with its original traditional architectural characteristics. A family of four had resided in the house till 2022 permanently and the owner F.Ö. had been living in the house for over 60 years. Although the family had moved out, they continue to maintain daily contact with the house and spend long times in it as well.

The three sides of the lot are framed by the masses and there is a high courtyard wall on the street-facing side in which the entrance door is also situated (Figure 3.65). There is a spacious courtyard in between the masses and the rooms on the ground floors are entered through the courtyard as well. The stone-paved courtyard has a large stone platform traditionally called *seki* on one of the corners which is currently being used to place large flowerpots (Figure 3.66). The stairs to the first floor of a mass is attached to the courtyard wall and formed with stone blocks for each step in line with the traditional features. The owner had stated that the courtyard is the most used space of the house. Thus, there is also a fruit tree in the middle of the courtyard which provides the much-needed shade during the hot, sunny Antakya days. There is also a lavatory area next to the WC in the courtyard which are both later additions.

The ornamented front façades of the main masses have all the traditional architectural façade elements with materials, forms, and proportions (Figure 3.67). There are tall wooden windows with wooden shutters on the interior and frames on the exterior, traditional top windows called *kuş takası* for ventilation and light on top of each window and door, two niches on the same level as the windows called *sebil/fanus takası* on the cut stone covered walls. Moreover, the windows on the first floors do not have glassed frames and only have wooden shutters as it is seen in the original examples from the literature as well.

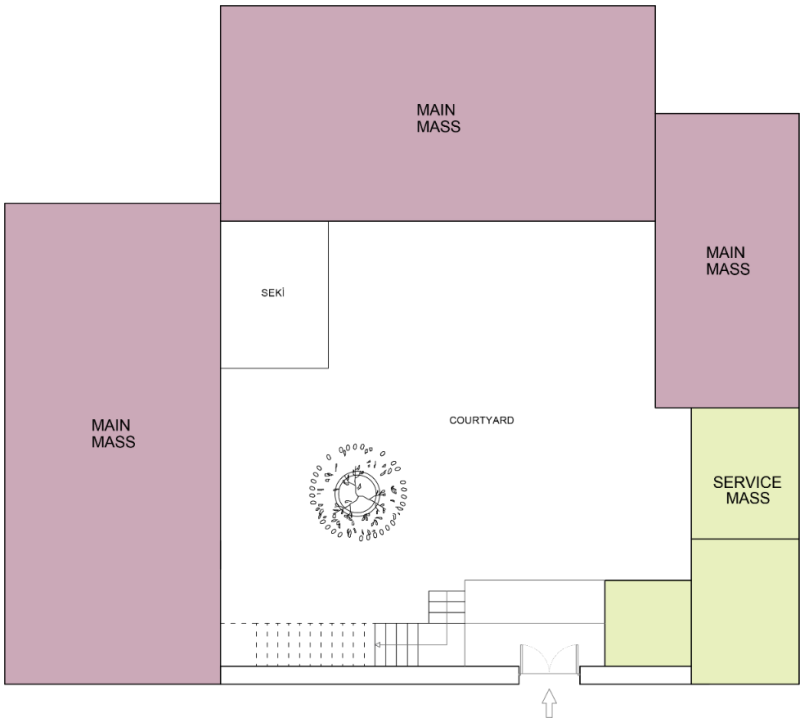


Figure 3.65. Asi House lot layout around the courtyard (Author, 2022)

Figure 3.66. The courtyard of the Asi House (Author, 2022)

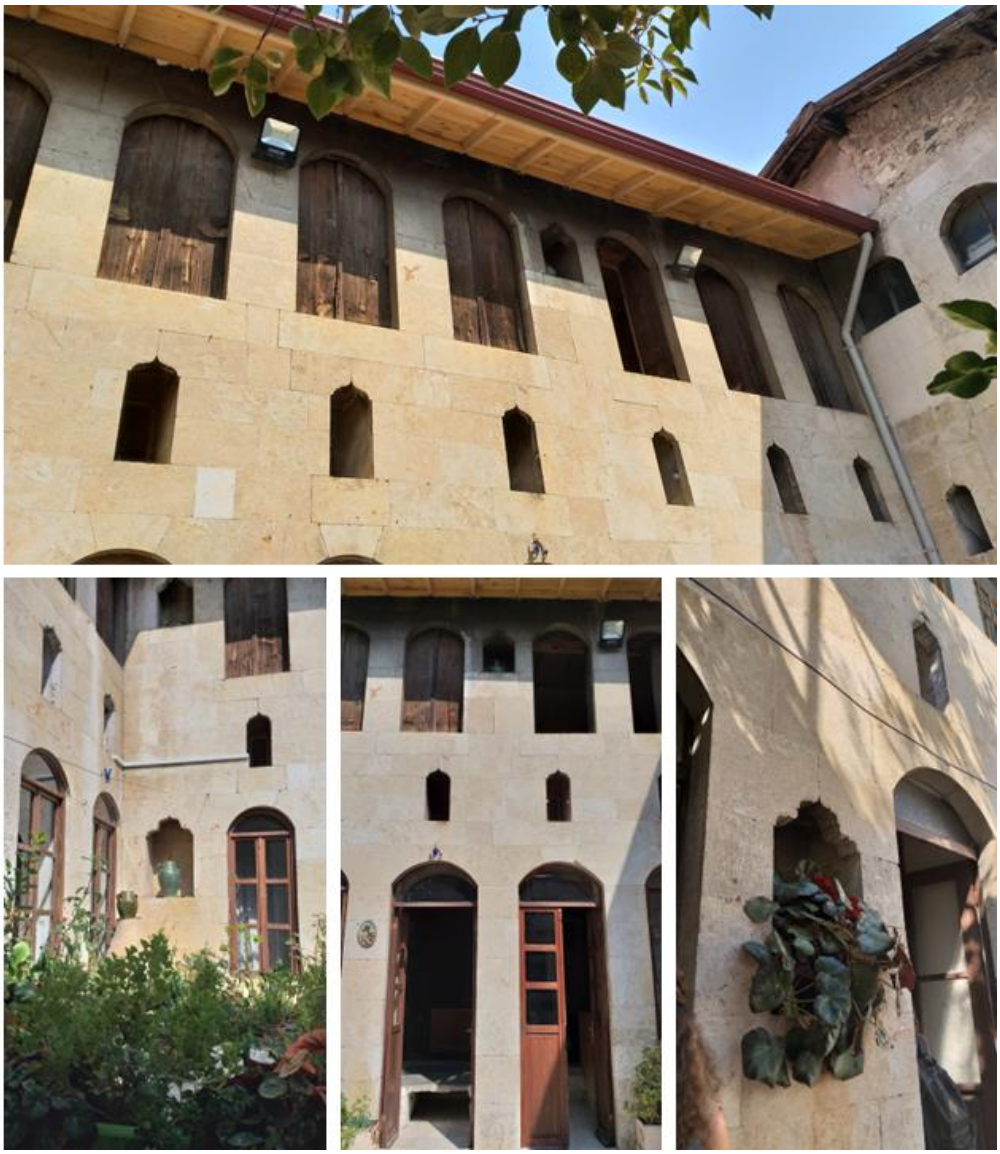


Figure 3.67. Traditional façade elements of Asi House (Author, 2022)

As well as the façades, the ground floors of the masses also reflect the architectural features of traditional Antakya houses with their various significant elements (Figure 3.68). There is the transitional *eşiklik* space in each room and in some of the rooms the *eşiklik* area is covered with marble flooring (Figure 3.69). There are also traditional wooden cabinets including *mahmel* and *kitabiye* in each room on the main masses (Figure 3.70). The interior walls are timber-cladded in between the cabinets, so there is a unified appearance. Traditional high shelves called *sergen* continues through the three blind walls of the rooms as well. There is a secret passageway

between the living room and the bedroom on one of the masses where the doors are designed to look like cabinet doors (Figure 3.71).

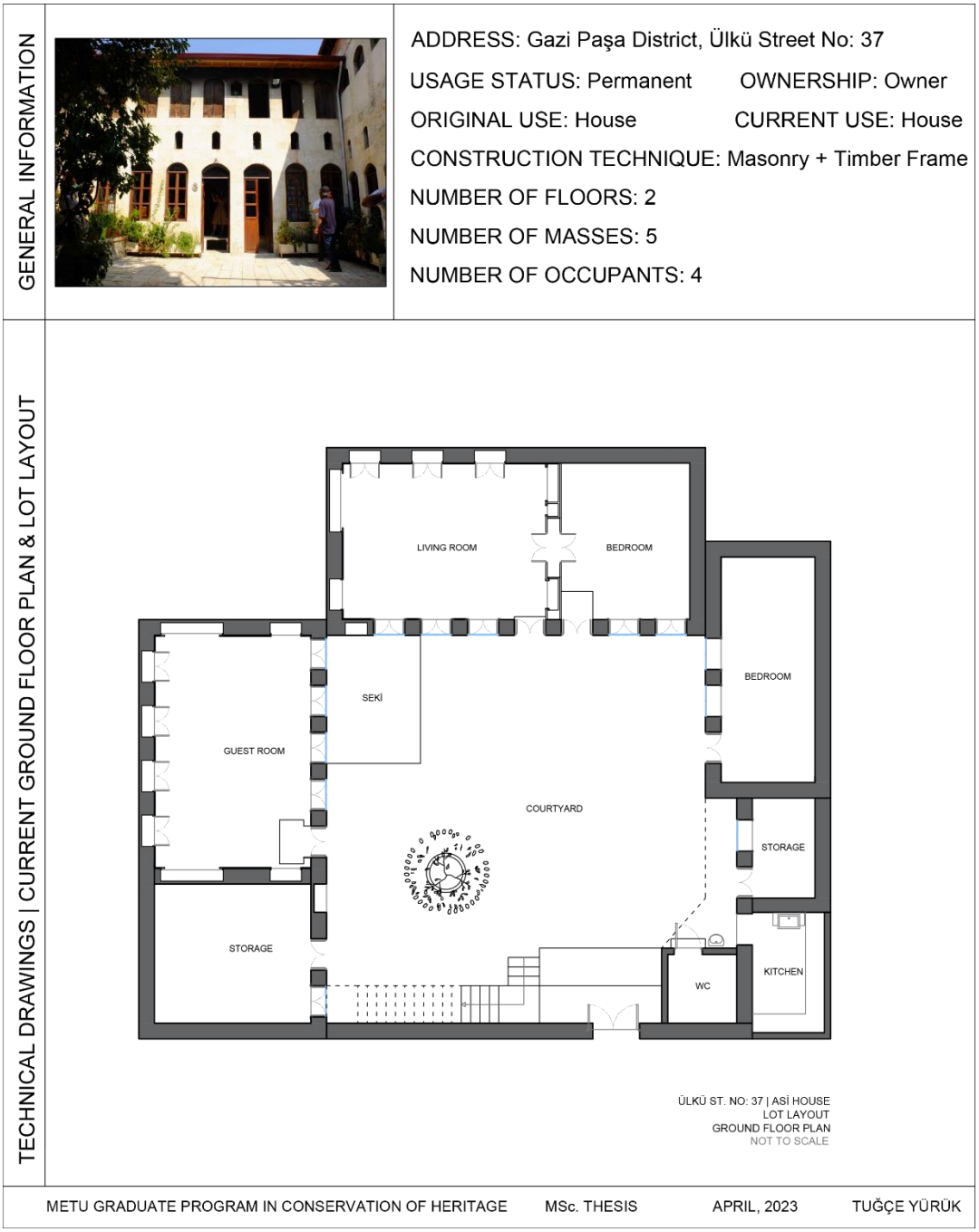


Figure 3.68. Current ground floor plan of Asi House (Author, 2022)

There are two bedrooms, two storage areas, a living room, a guest room, a kitchen, and a WC on the ground floor level of the house. The kitchen and the WC are brick masonry later additions while the main masses are original stone masonry.

Figure 3.69. *Eşiklik* of the guest room on the ground floor of the Asi House (Author, 2022)

Figure 3.70. The rooms on the ground floors of the Asi House (Author, 2022)

Figure 3.71. The secret doors between the two rooms of Asi House (Author, 2022)

There are small scale service space additions including a kitchen and a WC which are located attached to the courtyard wall near the courtyard entrance (Figure 3.72). A flat roof with concrete slab had been added for the service area masses and the solar panels are placed on top of the flat roof. There are contemporary cabinets installed for the kitchen with a marble countertop. There is a kitchen sink next to the entrance, separate from the cabinets. Also, there is a window addition on the new wall of the kitchenette area.

Figure 3.72. The WC addition, the flat roof with the solar panels, and the kitchen in Asi House (Author, 2022)

Case #10 – Gazi-16 House

The house on Gazi Paşa Street number 16 in Zenginler District is a permanently used residential building in a more commercial area, surrounded with various cafes. The house is also being used by the Antakya Environmental Protection Association (Antakya ÇEKO) since the owner is also involved with the organization. The owner C.Y. had stated that Prof. Dr. Ataman Demir who is among the most important scholars for Antakya with a street named after him was a close friend of his. He expressed that being Demir's friend had a great influence on his giving importance to the care and conservation of his traditional house.

The street façade of the house can be considered as modest and there are windows on both floors which are facing the streets (Figure 3.73). Originally the privacy was considered and there were not any openings on the ground floor level for the street façade, but it is seen that the openings on the ground floors are later achieved by converting the traditional cabinets. Overall, the house is in harmony with the street with its number of floors, materials, and forms.

Figure 3.73. The street façade of Gazi-16 House

Two masses are situated opposite to each other in the relatively small courtyard where it is reached through the narrow *aralık* space (Figure 3.74). The traditional transitional area *aralık,* helps the house to be isolated from the crowded streets, ensuring both privacy and security for the inhabitants.

There are fruit trees, a small, traditional stone platform called *seki*, one traditional cantilever staircase and a later addition concrete staircase, and a fountain in the stone-paved courtyard (Figure 3.75). The owner also uses the courtyard as an extension of his workshop and works on his wood carvings on the table in the courtyard since the wood dust can be discomforting to breathe and the courtyard provides the airy environment he needs.

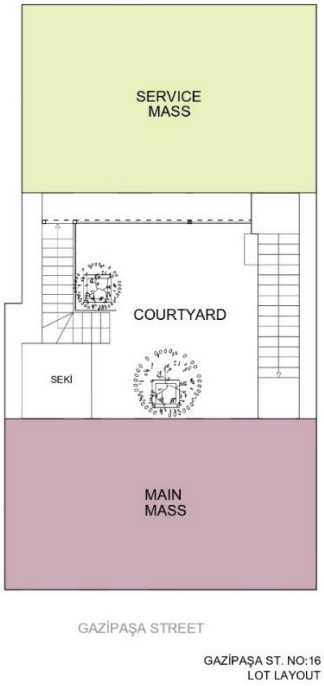


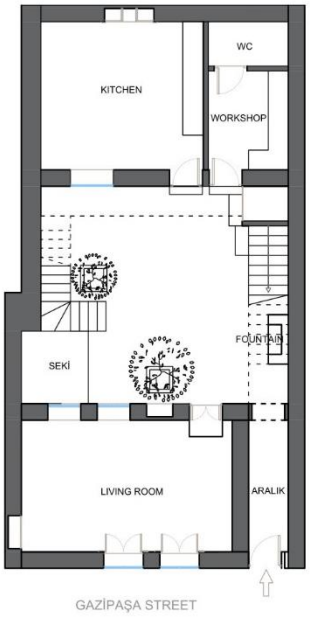
Figure 3.74. Gazi-16 House lot layout around the courtyard (Author, 2022)

Figure 3.75. The courtyard of Gazi-16 House (Author, 2022)

GENERAL INFORMATION

ADDRESS: Zenginler District, Gazipaşa St. No: 16
USAGE STATUS: Permanent OWNERSHIP: Owner
ORIGINAL USE: House CURRENT USE: House
CONSTRUCTION TECHNIQUE: Masonry + Timber Frame
NUMBER OF FLOORS: 2
NUMBER OF MASSES: 2
NUMBER OF OCCUPANTS: 1

TECHNICAL DRAWINGS | CURRENT GROUND FLOOR PLAN & LOT LAYOUT



GAZİPAŞA ST. NO:16
LOT LAYOUT
GROUND FLOOR PLAN
NOT TO SCALE

METU GRADUATE PROGRAM IN CONSERVATION OF HERITAGE MSc. THESIS APRIL, 2023 TUĞÇE YÜRÜK

Figure 3.76. The ground floor plan and lot layout of Gazi-16 House (Author, 2023)

There is a living room on the ground floor of the main mass and a kitchen, a WC and a workshop on the service mass (Figure 3.76). The courtyard façade of the main mass stands out with its traditional cut-stone covering that continues to the roof, top windows called *kuş takası*, *fanus takası*, and the wooden door and windows with traditional proportions (Figure 3.77). There are traditional elements in the living room such as the *eşiklik*, wooden cabinets, and exposed timber ceiling structure. The stone courtyard pavement continues in the *eşiklik* space too, and the elevated floor of the room is covered with concrete terrazzo tiles.

Figure 3.77. The courtyard façade of the main mass and the living room of Gazi-16 House (Author, 2022)

The façade of the service mass is more modest than the main mass appropriately with the other traditional examples. The courtyard façade of the mass is cement plastered and painted white. There is a cabinet-like small area consisting of two parts with wooden doors, attached to the façade. The kitchen, the workshop and the WC is located at the ground floor of the service mass and the spaces had undergone a professional renovation. The rooms are entered with a step since they are above the courtyard level. Currently the kitchen has wooden counters, a traditional cabinet in the form of a wall niche, and a kitchen table. The flooring of each service area is

ornamented cement tiles. A big window is also added to the kitchen during the renovation. In addition, the WC is located at the back of the room and entered through the workshop area which indicates the division of original room (Figure 3.78).

THE SERVICE MASS

KITCHEN WORKSHOP WC

Figure 3.78. The service areas of the Gazi-16 House (Author, 2022)

Through the renovations the first floors of the masses had been converted into living and service spaces (Figure 3.79). The first floor of the main mass is reached through the traditional stone, cantilever stairs attached to the courtyard wall. The first floor of the service space is a later addition, and the concrete stairs are constructed for the access. The stairs led to a balcony-like corridor and the rooms are entered through this space similarly with the traditional examples.

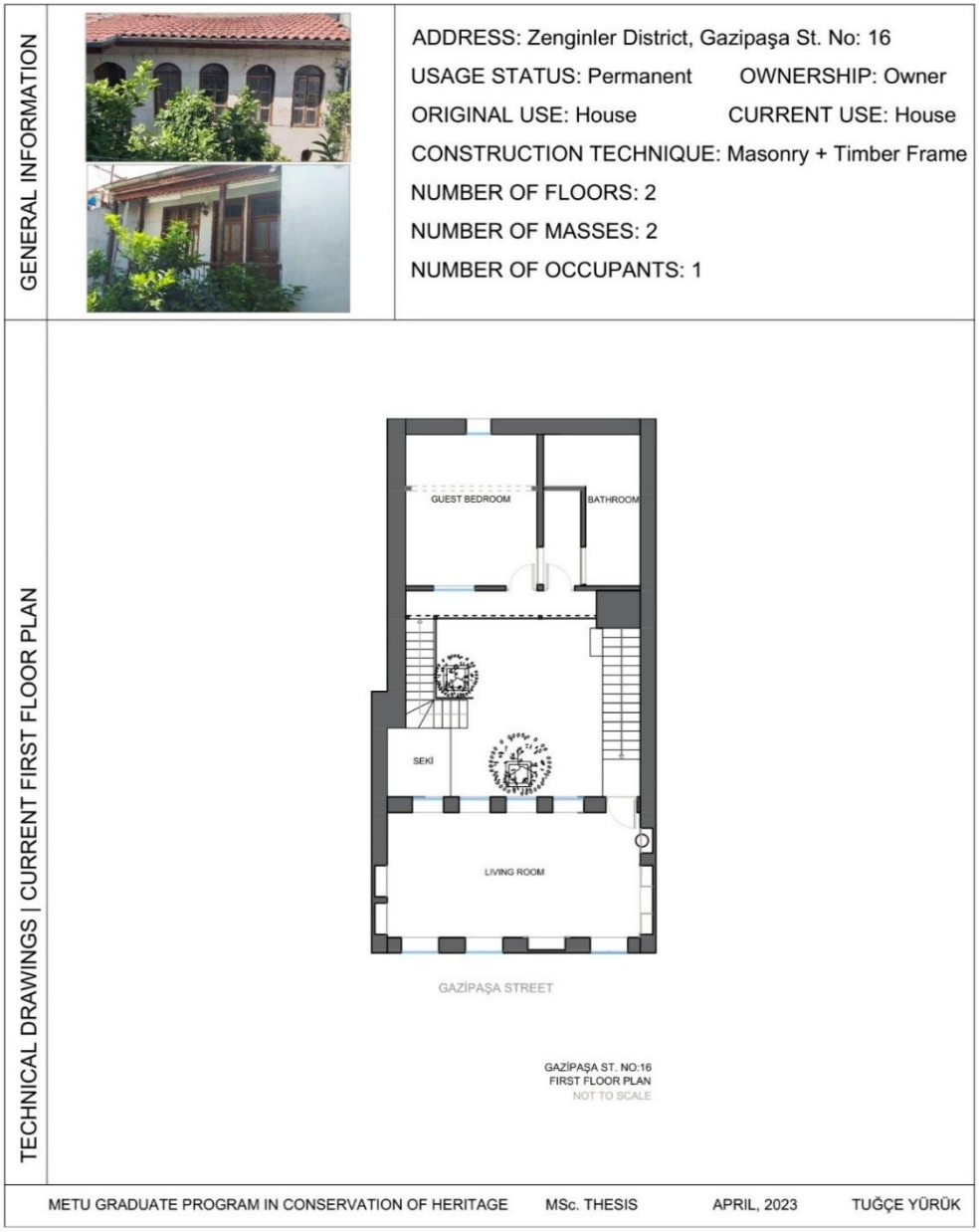


Figure 3.79. The first floor plan of Gazi-16 House (Author, 2023)

The living room on the first floor of the main mass has several architectural elements including a *fanus takası* near the entrance. A barred and ornamented frame is installed in front of the niche as well. There are also wooden cupboards, an upper shelf above the windows, and a traditional wooden open shelving unit *kitabiye* (Figure 3. 80). The roof structure which is also exposed in the room had been renewed as well as the room with compatible timber. There is also an air conditioner addition for the room installed at the side wall of the mass. The room is furnished with the antiques belonging to the family and it is mostly used as a guest room for the house.

Figure 3.80. The living room on the first floor of the Gazi-16 House (Author, 2022)

The bedroom and the bathroom are situated on the first floor of the service mass, and they are later additions (Figure 3.81). The timber roofing structure is also exposed in the bedroom similar with the living room. There are wall niches and hand-made wooden furniture which are crafted by the owner himself. There is also an air conditioner for the room which is placed under a wooden shelf. There is an original double-winged wooden door opening to the small transition space between the bedroom and the bathroom. While the bedroom flooring is timber, the transition area and the bathroom floors are covered with ceramic tiles. The bathroom can be reached through the bedroom as well as the balcony area.

Figure 3.81. The bedroom of Gazi-16 House (Author, 2022)

Case #11 – 40 Asırlık-65 House

The house on 40 Asırlık Türk Yurdu Street number 65 in Zenginler District is a registered traditional house occupied by a middle-aged couple. The relatively small courtyard is entered directly from the street and two masses are situated around the courtyard in an L-shape (Figure 3.82). Both masses can be considered as main masses since there are living spaces in both. There are small service space additions and a washbasin addition built as attached to the courtyard wall.

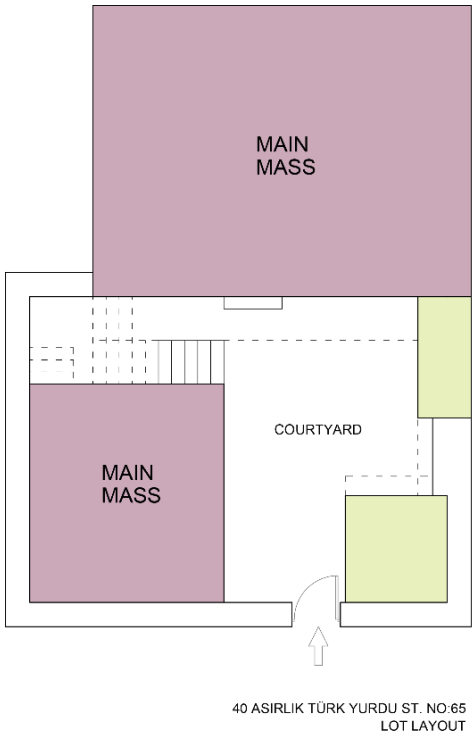


Figure 3.82. The lot layout of 40 Asırlık-65 House (Author, 2023)

The roofs and the upper levels of the service areas are covered with flowerpots which creates a lively environment for the users. The family spends most of their time in the courtyard and in the multifunctional room on the ground floor. The owner G.K invites her neighbours and have them in the courtyard where they have placed a dining table and chairs. The courtyard is covered with a concrete slab and the stair

to the upper floors is also situated in the courtyard, in between the masses as well (Figure 3.83).

It is important to note that the street façade and the roof structure of the house had been renewed by the municipality in the scope of street rehabilitation process.

Figure 3.83. One of the masses, the entrance, and the courtyard of the 40 Asırlık-65 House (Author, 2022)

Currently there are four areas in the ground floors of the two masses in total where there is a storage in one, and a multifunctional room, and service spaces in the other (Figure 3.84). One of the masses is being used more since the owners have altered the spaces according to their daily needs. One section of the original room had been divided with a partition wall and a small kitchen and a bathroom had been installed. There is an arch separating the kitchen and the room, and the bathroom is located at

the back side of the room (Figure 3.85). Although the kitchen and the bathroom are fully functional and have almost every necessity for the family, both because of the size of the spaces and because of the economic reasons, the spaces are inadequate and deteriorated.

Although the courtyard façade of the mass at the back of the courtyard no longer reflects the traditional characteristics, there are traditional elements in the multifunctional room.

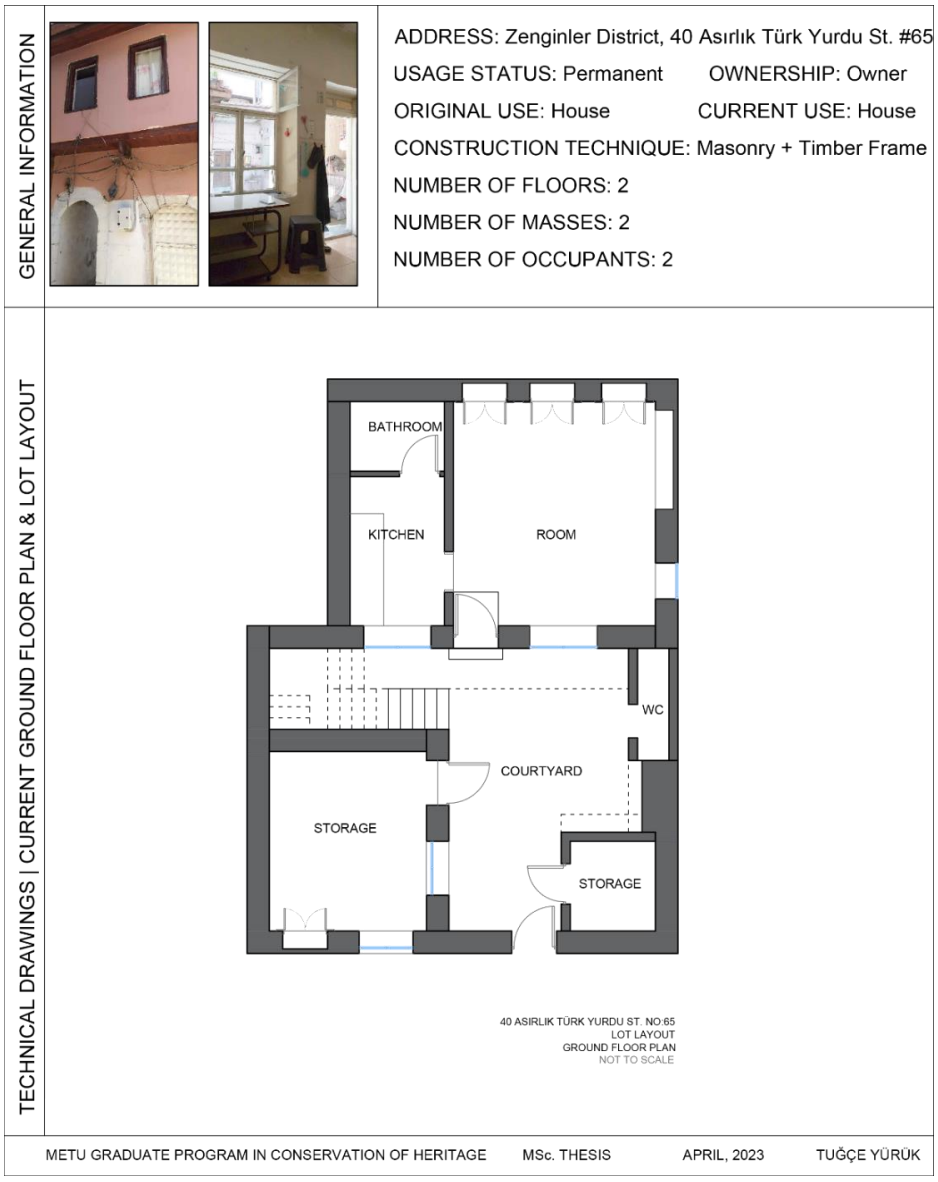


Figure 3.84. Current ground floor plan of 40 Asırlık-65 House (Author, 2023)

Figure 3.85. The service spaces in 40 Asırlık-65 House (Author, 2022)

There are traditional wooden cabinets on the wall across the entrance which are painted white with the rest of the room. There is also traditional large wall niche for the beddings called *mahmel* (Figure 3.86). The owner had installed curtains for the *mahmel* since she does not want the stored beddings to be seen by the guests. The

original flooring of the multifunctional room and the service areas are covered with ceramic tiles.

Figure 3.86. The multifunctional room and the traditional architectural elements of the house (Author, 2022)

The storage room on the other mass is also being used to do laundry and the washing machine is located at the one corner of the room. There is also a large closet beside from the stored belongings (Figure 3.87). There is a traditional wooden cabinet and

a window facing the street which is thought to be a later addition since traditionally the ground floors of the street façades are blind for privacy reasons.

Figure 3.87. The storage on the ground floor of the street-facing mass in 40 Asırlık-65 House (Author, 2022)

The first floors are reached through the stairs in the courtyard which is a solution for the problem of reaching two areas at different masses and at different levels with a single stair. The first floor of the street-facing mass is original while the other first floor is a later addition and there is a multifunctional room and storage areas (Figure 3.88). The floors are at different levels both because of the ceiling height difference between the ground floors and because of the way of construction.

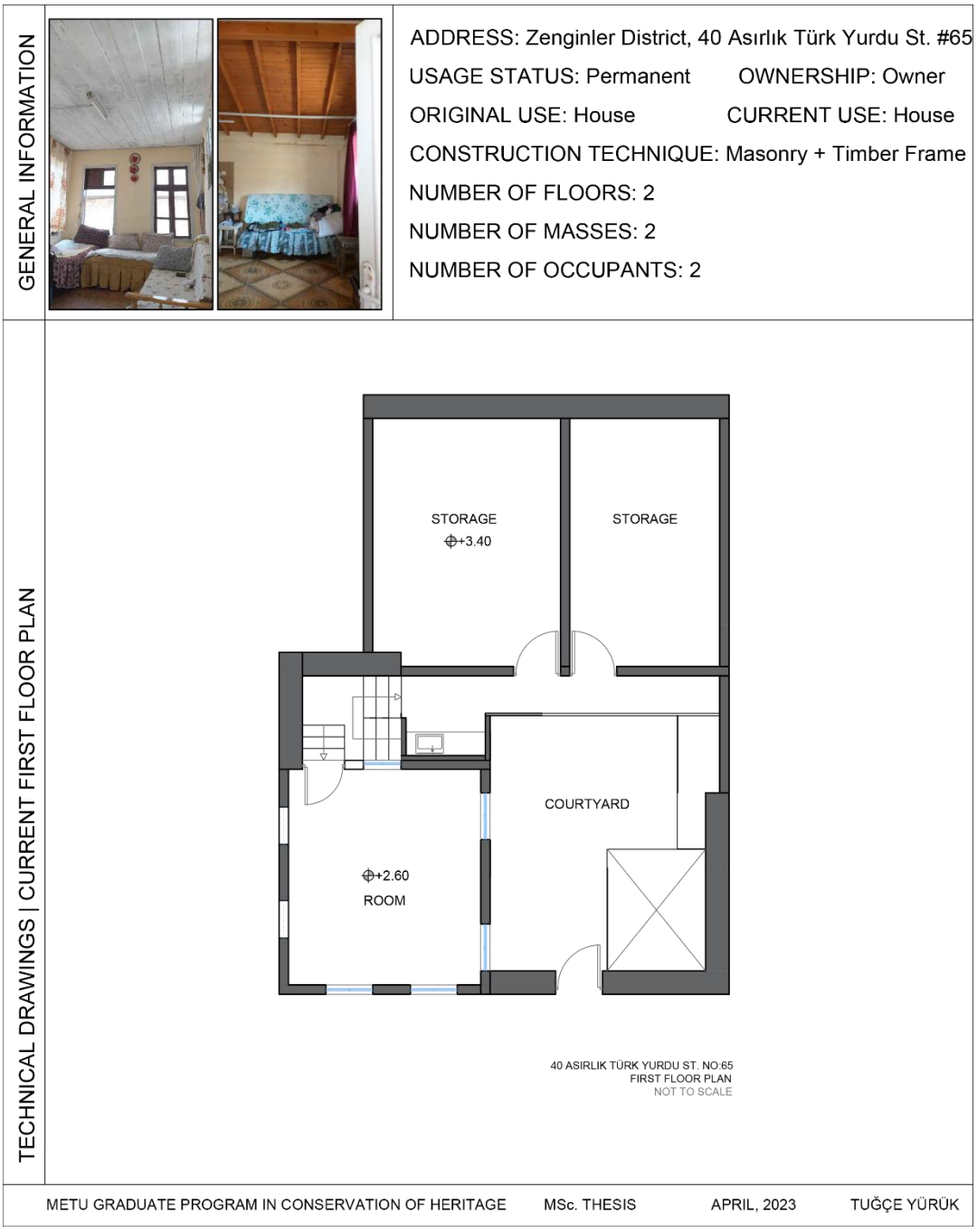


Figure 3.88. Current first floor plan of 40 Asırlık Türk Yurdu-65 House (Author, 2023)

There is a living room situated at the first floor of the street-facing mass. There is contemporary furniture as well as the backless seating units resembling the traditional sitting platforms called *seki*, but they are freestanding with metal structure. The owners use the room to relax, and they are using the couches as beds

as well. The flooring of the room is linoleum similarly with the kitchen on the ground floor.

There is a corridor-like balcony on the first floor of the back-side mass, where there is also a kitchen sink and storage area had been placed (Figure 3.89). The level is 80 cm above from the living room on the first floor. The rooms are currently not in use and being used as storage areas by the users (Figure 3.90).

Figure 3.89. The balcony area and the kitchen sink addition (Author, 2022)

Figure 3.90. The rooms on the first floors of the masses (Author, 2022)

Case #12 – Ülkü-43 House

The house on Ülkü Street number 43 in Gazi Paşa Distict is situated on a cul-de-sac where there is also an entrance for the attached building is placed. The house is occupied by a family of two, the elderly mother and her middle-aged daughter.

The entrance to the house is 40-50 cm under the street level since the street level had been raised through the addition of concrete slab. A thin, long corridor is being passed to reach the courtyard where there are two masses situated across from each other (Figure 3.91).

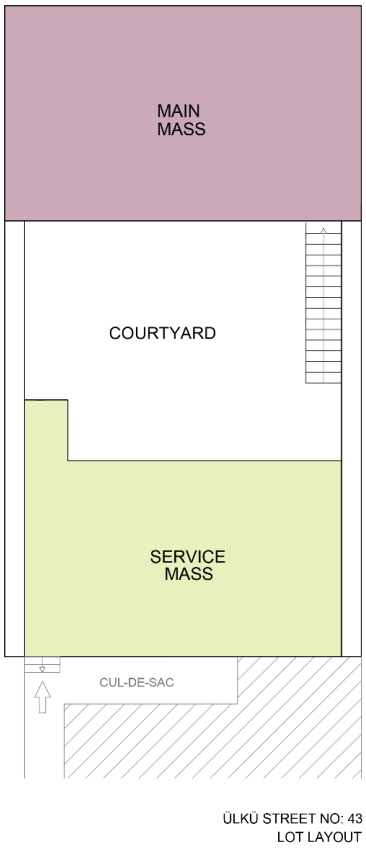


Figure 3.91. Lot layout of Ülkü-43 House (Author, 2023)

Majority of the living areas are situated at the first floors such as the bedrooms. The ground floor of the main mass is being used as a guest room. There is also a WC addition. There is a contemporary kitchen and a small living room addition on the service mass (Figure 3.92).

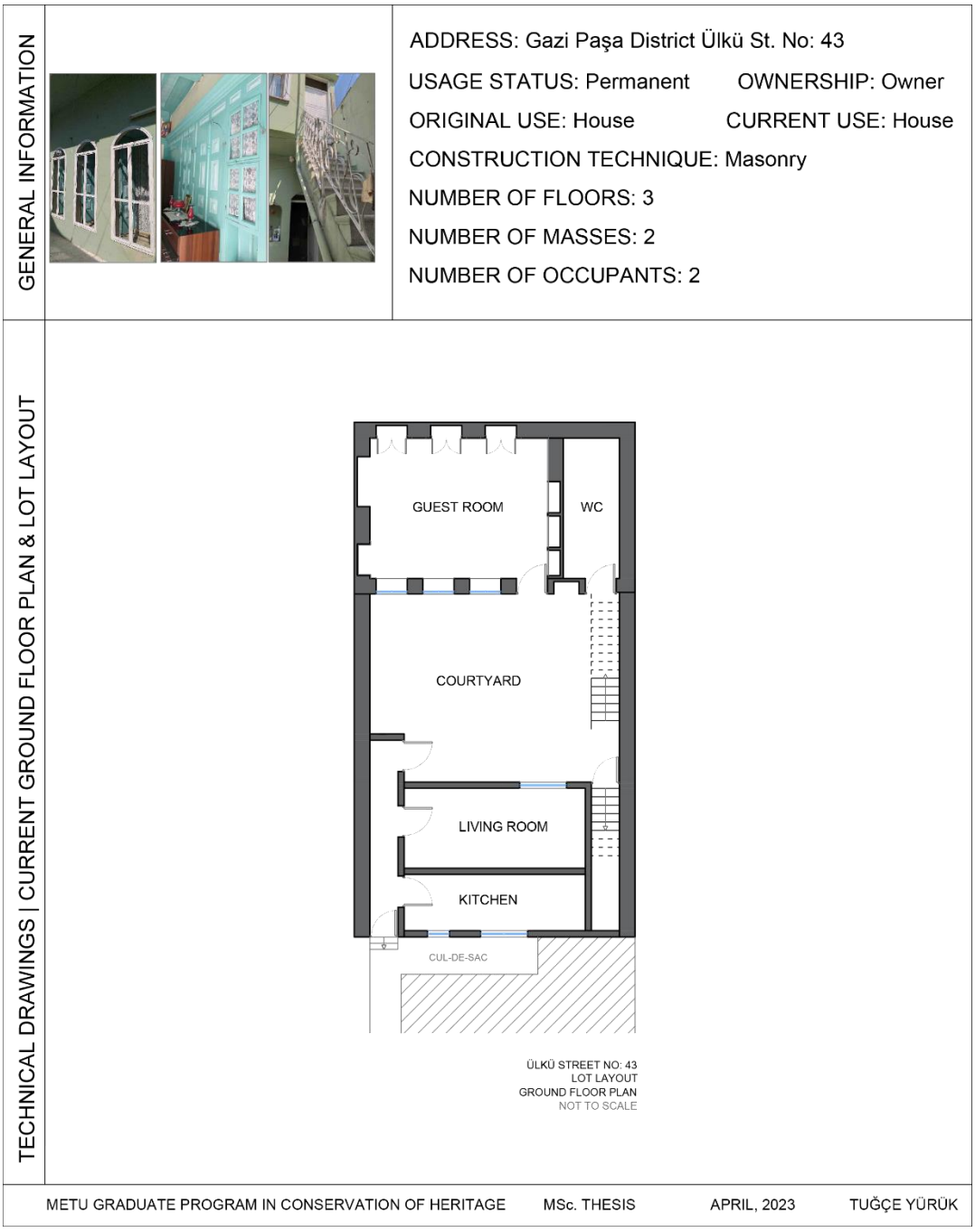


Figure 3.92. Current ground floor plan of Ülkü-43 House (Author, 2023)

The two-storey service mass is a later addition and entrances to the rooms are from the thin corridor. The house had undergone several interventions in the 70s and 80s and two upper floors had been constructed for the main mass and being used as a separate part of the house (Figure 3.93).

Figure 3.93. Upper floor additions and the stairs in the courtyard of the house (Author, 2022)

The guest room reflect the traditional architectural features with the wooden cabinets surrounding the three blind walls of the room (Figure 3.94). Besides from the cabinets, there is a mahmel and kitabiye in one wall. The timber cladded ceiling is decorated and there is a timber beam running through in the middle. The ceiling and the cabinets had been painted turquoise. The room is furnished with contemporary seating unit and a dining set.

The courtyard is one of the most used spaces of the house and there is an awning addition for both the terrace on the first floor and the part of the courtyard where a couch is placed. There is also a washbasin addition under the stairs. The courtyard pavement is covered with concrete terrazzo tiles.

Figure 3.94. The guest room and the traditional architectural elements of Ülkü-43 House (Author, 2022)

Case #13– Ülkü-10 House

The house on Ülkü Street number 10 in Gazi Paşa District belongs to the Beştek Family and occupied by the architect S. Beştek and his wife N. Beştek. The family is among the important old families of the neighbourhood and has another empty traditional house across the street which had been studied in the scope of CONS 506 Design in Architectural Conservation course of METU Graduate Program of Conservation of Cultural Heritage in 2019.

Since the house is being owned by an architect, it had been preserved by the users as well as possible and renovated while keeping the needs and expectations of the users in mind. There is a new mass addition on the courtyard which is separate from the main mass. Moreover, a lavatory and a WC had been installed. There are also air conditioning additions in most of the rooms to raise the comfort conditions for the users (Figure 3.95).

Figure 3.95. The main mass, new mass and WC additions of Ülkü-10 House (Author, 2022)

Case #14– Nevizade House

The Nevizade House which is named after the café the user also owns, is situated at the Zenginler District in a more commercial area on a cul-de-sac. It is the only rental

traditional house among the fourteen studied houses, and it is currently being used by the workers of the café.

The house is one of the most intervened examples as well. There are mass additions from the 80s and the finishing had been altered with cement-based materials across the house. There is one room on the main mass which is a single storey, and the traditional architectural elements are available both in the interior and in the façade. There is a *fanus takası* along with the traditional large windows in the courtyard façade of the original mass which is covered with cement-based plaster. There are traditional wooden cabinets, mahmel and kitabiye in the room (Figure 3.96). The room is currently being used as storage, while the later additions had become the living areas.

Figure 3.96. The façade and the rooms with traditional architectural elements in Nevizade House (Author, 2022)

3.4.2 Human-Space Relationships and Space Usage

Majority of the studied houses are occupied by the same users for long years. There are some examples in which the house is rented and used seasonally or for short period of time when needed. The user interviews conducted with the inhabitants have been a valuable source of information to understand the perception of the architectural features and space usage patterns in traditional Antakya houses in general.

The human-space relationship in the traditional houses can be analysed starting with the importance of neighbourhood in the area. As both an observed and learned fact, the inhabitants who live in the attached buildings in the traditional streets have strong relationships and spend time together during the day. As a result of the relationship between neighbours, the courtyards which are already significantly valuable for the users with its multifunctionality, become the focal point of houses since they are also gathering spaces. During the interviews, the inhabitants stated that the courtyards are in use starting from early in the morning with having breakfast in, to the night where sometimes they even sleep in during the hot summer. Also, the courtyards are the transition spaces between the main masses and service areas. Since it is the most valued and used space, the interventions to enhance the comfort in the courtyards are popular.

There are different types of overhangs seen in the traditional houses which are fabricated to prevent rainfall and heat so that they can spend more time in courtyard and use the service building with ease. The users have altered the layout in courtyards to suit their needs and most of them have placed contemporary furniture accordingly.

The rooms on the ground floors are appeared to be secondary spaces for the users. The contemporary furniture and appliances are used with the traditional architectural elements. Most of the users put emphasis on the functionality of the traditional wooden cabinets since they provide large amount of compact storage space. As a popular pattern observed during the site survey, majority of the inhabitants who have

a *mahmel* – a bedding storage without covers – in their rooms have installed curtains for the cabinet, because they use the rooms as living areas and do not want the stored beddings to be seen. The addition of curtains appears to be a common trend for the inhabitants of the traditional houses, and it puts the change in the understanding of privacy in perspective.

The original service spaces do not meet the current needs of the users. Thus, there are several interventions in order to create contemporary service spaces for the houses. Some inhabitants incorporated service spaces inside the spacious courtyards and some of them altered the existing service space with new materials and appliances.

The mobility in the traditional Antakya houses is an important point to be considered since the rooms are elevated from the courtyard with one or two steps and has the transitional *eşiklik* area which has another larger step. The service spaces being on another mass in the courtyard may cause some problems for the users, especially for the handicapped and elderly. For example, there is a contemporary bathroom installed in one of the rooms on the ground floor of the main building in Ülkü-21 House where a 72-year-old user can use the service space more comfortably.

3.5 Assessment of the User Interventions in the Selected Cases

Traditional houses in the study area have undergone several interventions in different scales and forms. While the professionals or local craftsman are consulted for some of the interventions, majority of the interventions are made by the users themselves with available funds and means. The importance of understanding the user interventions is that when users make changes in their physical environment, they prioritize the immediate needs and solve the problems in the most efficient way for themselves economically and practically.

3.5.1 Types and Scales of User Interventions

The table developed for the analysis and classification of the user interventions have been put in use for the selected traditional Antakya houses (Figure 3.97). Each user intervention in each of the selected houses have been assigned a code from the table which explains the type and the scale of the intervention. With the help of the classification, the overall change status for each house and the overall situation for the studied houses have been determined.

Figure 3.97. Examples for each type and scale from the selected traditional houses (Author, 2023)

3.5.2 Detailed Analysis of the User Interventions

Each user intervention has been listed in detail for each house. Besides from the type and scale, the construction materials and techniques used during the interventions; and the main reasoning of the users behind the interventions are analysed. Thus, the list of interventions has become a tool to understand the overall tendencies regarding the user interventions, and possible impacts of the change on the traditional architectural features, structural systems, and daily life in the houses.

The analysis had not been done for some of the studied houses in which the renovations were done by professionals. Asi House, Ülkü-10 House and Gazi-16 House are the ones where the users had consulted to professionals for the conservation and adaptation of their traditional houses.

Moreover, the user interventions in Nevizade House had not been included since the house is rental, the interventions were done before the current tenant and the information on the implications, reasonings behind the interventions and afterthoughts are limited.

The content of the tables and the context of the analysis for each house is explained below.

Case #1 – Ülkü-21 House

In general, the user interventions in Ülkü-21 House can be considered on the medium scale, and mainly about the material and finishings. The interventions have been listed and there are two tables prepared. The first table focuses on the type and scale, material used, and the reasoning of the user (Figure 3.98). The second table is the analysis of the effects of the interventions on daily life, and on the structure and traditional architectural characteristics of the house. Moreover, the afterthoughts of the user have been analysed.

It can be seen from the types and scales of the interventions that there are mainly interventions on low and medium scale, and about materials and finishings, architectural elements and service space additions. It is understood from the visual and technical documentation, and the in-depth interview that the interventions are only done when it is seemed necessary within their practical and economic capabilities such as the change in floor finishing or courtyard pavement is done because the original materials were severely deteriorated. The first floor had been partially reconstructed due to collapse. According to the user, when the first floor of

the main mass is partially collapsed, the stone pieces had not been removed from the courtyard and they are under the current concrete slab.

Addition of a bathroom on one of the ground floor rooms is one the most unique user interventions that is encountered during the case study. The reasoning of the intervention which is accessibility is an important topic for the conservation as well.

As it is known and described on the research, the service spaces are usually situated on different masses on the courtyard. There is a WC area on a service mass in Ülkü-21 House as well. However, it is an inconvenience for the user to walk across the courtyard while also having to use a 3-step staircase to use an everyday facility. Since the spaces become idle over the years, the user decided to install a contemporary, walk-in shower area on the room next to living room/bedroom on the ground floor. The toilet is placed inside the shower to save space, so a walk-in shower had become a bathroom for the user. Although incompatible materials like concrete slab, and ceramic tiles had been used for the intervention, selection of the location and the size of the new addition is important to note.

HOUSE	TYPOLOGY	INTERVENTIONS	TYPE & SCALE	MATERIAL	REASONING	EFFECTS ON DAILY LIFE	EFFECTS ON THE STRUCTURE & TRADITIONAL ARCHITECTURAL CHARACTERISTICS	AFTERTHOUGHTS OF THE USER
ÜLKÜ-21	MASS B1	Bathroom addition of one of the ground floor rooms	4B	Concrete slab Ceramic tiles Contemporary appliances	Modern day requirements Accessibility	Easy access to an every day necessity	Incompatible materials' damage to the original materials	She is contented with the location, but would prefer a better application.
		Partial reconstruction of the 1st floor	1B	Cement blocks	Demolishment of the original structure	Utilizing the otherwise unusable space	Incompatible materials' damage to the original materials	"This was the best solution within our limits at the time"
	FAÇADE B2-d	Change in courtyard pavement	1B	Concrete slab	Deterioration of the original stone pavement	Easy cleaning	Incompatible materials' damage to the original stone materials underneath the concrete	She prefers the original stone pavement Slight regret in the decision
	PLAN B1	Change in interior floor finishings on the ground floor rooms	1B	Concrete slab	Deterioration of the original flooring Easy cleaning	Easy cleaning Undesired appearance	Incompatible materials' damage to the original materials	She prefers the original flooring, but enjoys the easy cleaning aspect
		Removal of the eşiklik space on one of the masses	3B	Concrete filling	Accessibility	Easy access with the removal of the high step	Loss of a significant traditional architectural element	U/I
		Repair work with metal sheets for the roofs	1A	Metal Sheets	Deterioration of the original structure Easy access to the material	U/I	U/I	She does not like the appearance of rusty metal sheets

Figure 3.98. Analysis of the user interventions in Ülkü-21 House

Case #2 – Ülkü-19 House

The interventions in Ülkü-19 House are generally small and medium scaled interventions mostly related with space and function additions (Figure 3.99). Starting from the courtyard, the first intervention is over cladding the courtyard pavement with cement terrazzo tiles. Also, there is a concrete staircase addition standing attached to the stone courtyard wall which was built to have another access the first floor other than the traditional *mabeyn*.

There is also a canopy addition for the staircase as a shelter which is a wooden plank fastened with metal elements. There is a bathroom addition on the ground floor which was done nearly 30 years ago by using cement-based finishings and contemporary appliances of the time.

Since the first floor of the house have been used as a separate living floor by the nuclear family, there are interventions related with adapting the original rooms into service spaces or bedrooms. New service spaces with contemporary appliances had been installed in one of the first-floor rooms. The kitchen is opened to the corridor area for easy access.

HOUSE	TYPOLOGY	INTERVENTIONS	TYPE & SCALE	MATERIAL	REASONING	EFFECTS ON DAILY LIFE	EFFECTS ON THE STRUCTURE & TRADITIONAL ARCHITECTURAL CHARACTERISTICS	AFTERTHOUGHTS OF THE USER
ÜLKÜ - 19	MASS D1	Bathroom and washbasin addition on the ground floor	4A	Cement plaster Contemporary appliances	Modern day requirements Accessibility	Access to a contemporary service space	Incompatible materials' damage to the original materials	The user is not satisfied with the service space since it is severely deteriorated
		Contemporary kitchen and bathroom addition on 1st floor	4B	Brick + Cement plaster Contemporary appliances	Modern day requirements	Access to contemporary service spaces	The impact of the load and incompatible materials on the existing traditional structure	The user is satisfied with the intervention
	FAÇADE B2-d	Division in the use of the floors	2A	—	Privacy	The nuclear family can have a separate living area within the house	<u>U/I</u>	The user is satisfied with the intervention
	PLAN B1	Partial alteration of the first floor façade	3A	Timber	Expantion More daylight	The windowed façade lets more light into the rooms and the area still acts as a corridor	<u>U/I</u>	<u>U/I</u>
		Overcladding the courtyard pavement	1B	Cement tiles	Deterioration + Easy cleaning	Cleans easily but appearance is not satisfactory to the user	Incompatible materials' damage to the original materials	The user is satisfied with the intervention since it is easy to clean
		Staircase addition to the courtyard	4B	Concrete + Metal Canopy	Access to the 1st floor	Access to the first floor	Incompatible materials' damage to the original materials	<u>U/I</u>

Figure 3.99. Analysis of the user interventions in Ülkü-19 House

Case #3 – Ülkü-17 House

It is important to note that the inhabitants altered the house as much as they can to suit their living conditions and ‘within the limits of conservation council’ as they stated. Although the inhabitants have kept the original, ornamented façade of the ground floor, the house had become unrecognizable from the street and had affected the street façade and traditional pattern. The list of interventions below showcases the type and scale, material, and reasoning in the user interventions (Figure 3.100).

They are satisfied with the interventions and believe that it was a must to build the upper floors to be able to continue living in the house as a family. It can be said that the wealth of the family can be understood from the interventions, since they basically built a new house on top of the existing traditional house. Although they have made severe, high scale changes, they express that living in traditional house is important for them and they value the traditional characteristics of the house such as the top windows with twenty-seven different ornamentations, and the spacious courtyard.

The effects of the interventions are also listed on the table below. Since the interventions are implemented with incompatible, cement-based materials, the damage caused by these materials is a common effect on the structure. Also, construction of two new upper floors causes additional load to the structure which can cause drastic deterioration on the ground floor structure.

HOUSE	TYPOLOGY	INTERVENTIONS	TYPE & SCALE	MATERIAL	REASONING	EFFECTS ON DAILY LIFE	EFFECTS ON THE STRUCTURE & TRADITIONAL ARCHITECTURAL CHARACTERISTICS	AFTERTHOUGHTS OF THE USER
ÜLKÜ-17	MASS	Addition of two new floors	5C	Brick + Concrete	Need for extra space	Having extra spaces to be used for the everyday needs	The impact of the load and incompatible materials on the existing traditional structure	Overall, the users are satisfied with the interventions and they believe that they had to make the alterations to be able to live in the traditional house which they respect and care for.
	D3	2 new staircase additions in courtyard	5B	Concete + Ceramic Tiles + Aluminum Railings	Access to upper floors	Access to upper floors	Deterioration on the original stone walls + Change in the perception of the original façade	
	FAÇADE C2-a	Addition of service masses	5B	Brick + Concrete	Need for service spaces	Access to contemporary service spaces	Additional load to the structure with the incompatible materials and architectural style	
	PLAN - New upper floors	Change in the interior layout	4B	Gypsum Board + Cement plaster	Need for interior service spaces	Accessing each room without having to go through the courtyard	U/I	
		Contemporary kitchen and bathroom additions for the interior	4B	Concrete slab + Ceramic tiles	Need for interior service spaces	Access to contemporary facilities	Additional load to the structure with the incompatible materials and architectural style	
		Interior floor finishing replacement	1B	Ceramic tiles	Easy cleaning	Easy cleaning	Incompatible materials' damage to the original materials	
		The inhabitants altered the house as much as they can to suit their living conditions and within the limits of conservation council as they stated. Although the inhabitants have kept the original, ornamented façade of the ground floor, the house had become unrecognizable from the street and had affected the street façade and traditional pattern.						

Figure 3.100. Analysis of the user interventions in Ülkü-17 House

Case #4 – Ülkü-5 House

The interventions on Ülkü-5 house reflects the choices and decisions of a low-income family living on a traditional house. As it is mentioned previously, the original traditional house had been divided, and a single unit of the structure belongs to the family. Thus, their interventions are mainly about mass or space additions in different scales, and they have been done to have more service spaces, or simply have an additional bedroom for their child (Figure 3.101).

The intervention had been done five to ten years ago and the new masses had already been deteriorated. The service masses added to the courtyard are in relatively modest sizes, but incompatible materials had been used and it effected the traditional characteristics of the courtyard and the perception of the traditional house.

Overall, the owner wishes if only they would have better resources for the interventions to be able to use better materials and techniques that would be compatible with the original structure.

HOUSE	TYPOLOGY	INTERVENTIONS	TYPE & SCALE	MATERIAL	REASONING	EFFECTS ON DAILY LIFE	EFFECTS ON THE STRUCTURE & TRADITIONAL ARCHITECTURAL CHARACTERISTICS	AFTERTHOUGHTS OF THE USER
ÜLKÜ-5	MASS	WC and washbasin additions on the courtyard	4A	Brick + Cement plaster	Modern day requirements	Access to modern day requirements	Minimum effect	The owner wishes if only they would have better resources for the interventions to be able to use better materials and techniques that would be compatible with the original structure.
	A	Service mass additions	4B	Brick + Cement plaster	Modern day requirements	Access to modern day requirements	Incompatible materials' damage to the original materials	
	FAÇADE A2-c	Staircase addition to the courtyard	4B	Concrete	Access to the woodshed	Access to the small service area	Incompatible materials' damage to the original materials	
	PLAN B1	Kitchenette addition on the courtyard	4A	Contemporary wooden cabinets	Modern day requirements	Access to modern day requirements	Minimum effect	
		Change in interior layout	2A	Brick + Cement plaster	Need for an extra bedroom	The bedroom for a family member is provided	Additional load and damage to due incompatible materials	
		Change in form and material of the architectural elements on ground floor	3B	PVC	Deterioration of the original material	Decay caused by incompability of the materials and forms causes hard maintanance	Loss of a significant traditional architectural elements	
		Overcladding the courtyard pavement	1B	Concrete slab	Deterioration of the original material Easy cleaning	Easy cleaning	Damage to the original stone underneath the concrete	

Figure 3.101. Analysis of the user interventions in Ülkü-5 House

Case #5 – Ülkü-33 House

The user interventions in Ülkü-33 House are mostly on the moderate scale and each type of intervention can be found in the house (Figure 3. 102). However, there are several drastic interventions such as the brick masonry upper floor additions and alteration of the sizes and forms of the traditional windows.

Efforts to adapt the traditional houses to their modern needs, the users had altered architectural elements such as the cancellation of traditional *eşiklik* areas and the openings. The original floor finishings had been replaced with cement tiles both in courtyard and in the ground floor rooms. The main reasoning of the user for the change in courtyard pavement and floor finishing is to be able to clean easily since the deterioration on the original finishings had made cleaning to become inconvenient for them.

Beside from the alteration of architectural elements and materials, there are several additions and space alterations in the house. The users had altered one of the rooms to be a kitchen and had installed contemporary appliances and furniture. Also, there is a washbasin addition in the courtyard which is one of the most common interventions seen on site.

One of the most distinct interventions in the house is the PVC canopy addition. Corrugated PVC sheets had been placed attached to a metal structure which is also fastened to the walls of the masses on both sides of the courtyard. The reasoning behind the addition is to have a shelter for the courtyard to be protected from the sun and rainfall. However, according to the users the canopy causes a greenhouse effect because of the PVC and makes the courtyard hotter during the summer days. Moreover, the users also had mentioned that the maintenance of the canopy is quite challenging because of the size, form, and difficulty of access. The one example they provided is when the middle part of the canopy was damaged, the workers who were trying to do a patchwork on the PVC had gone through difficult times and almost got injured.

HOUSE	TYPOLOGY	INTERVENTIONS	TYPE & SCALE	MATERIAL	REASONING	EFFECTS ON DAILY LIFE	EFFECTS ON THE STRUCTURE & TRADITIONAL ARCHITECTURAL CHARACTERISTICS	AFTERTHOUGHTS OF THE USER
ÜLKÜ-33	MASS	First floor additions	4C	Brick + Cement plaster	Need for the extra space	Needed extra space is provided	Incompatible construction technique damage the original structure beneath	The users are satisfied since they get access to the much needed space
	B1	Canopy addition for the courtyard	2B	PVC + Metal	Need for shade and shelter	Although the rain is avoided, the courtyard becomes hotter because of the material use	Additional load and damage to due incompatible materials	The users regret their material choice since it creates a greenhouse effect
	FAÇADE B2-c	Addition of a washbasin on the courtyard	4A	Ceramic	A daily necessity	Easy access to a much used facility	Minimum effect	U/I
	PLAN A2	Addition of new windows in different sizes	3C	Timber	Desire to have wider windows	U/I	Original traditional façade elements are removed and the proportions are effected	U/I
		Staircase addition to the courtyard	4B	Concrete	Access to the new first floor on the Mass B	Access to the first floor of the Mass B	Incompatible materials' damage to the original materials	U/I
		Change in floor finishings	1B	Concrete slab	Deterioration of the original stone Easy cleaning	Easy cleaning	Incompatible materials' damage to the original materials underneath	The user is satisfied with the intervention since it is easy to clean
		Removal of the eşiklik space on the masses	3B	Concrete slab	U/I	U/I	Loss of a significant traditional architectural element	U/I
		Change in courtyard pavement	1B	Cement tiles	Deterioration of the original stone Easy cleaning	Easy cleaning	Incompatible materials' damage to the original stone materials underneath	The user is satisfied with the intervention since it is easy to clean

Figure 3.102. Analysis of the user interventions in Ülkü-33 House

Case #6 – Ülkü-63 House

The user interventions in Ülkü-63 House are mostly about material and finishing and the main reasoning for the material related changes is the deterioration of the original material (Figure 3.103). There are also service mass additions and a staircase addition which are among the types of interventions which can have major impact to the traditional house. However, the mass additions had been the solutions for daily necessities and accessibility related problems.

Although the types of interventions are not drastic, the vast use of concrete is incompatible with the original structure. The floor finishings of the ground floor rooms had been replaced with ceramic tiles and concrete slab underneath. Moreover, due to a demolishment of the original in the past, the corridor-like balcony is reconstructed with concrete which adds additional load to the structure besides from being incompatible with the original materials.

One of the most impressive user interventions in the house is the burlap awning addition which is also become an exemplary application for the proposal development phase of the study. The intervention had solved a common and significant space usage problem which is not being able to use the courtyard during the hot and sunny days and during the rainfall, while being compatible with the original materials and having little to no impact on the structural integrity due to the minimum contact and weight.

Overall, it can be said that the user interventions in Ülkü-63 House had been the results of modern-day requirements, aging and deterioration of the original structure. Moreover, as it was also understood through the social survey, the users care about and try to do their best to preserve their traditional house.

HOUSE	TYPOLOGY	INTERVENTIONS	TYPE & SCALE	MATERIAL	REASONING	EFFECTS ON DAILY LIFE	EFFECTS ON THE STRUCTURE & TRADITIONAL ARCHITECTURAL CHARACTERISTICS	AFTERTHOUGHTS OF THE USER
ÜLKÜ-63	MASS C	Addition of service masses	4B	Brick + Cement plaster	Modern day requierement	Access to modern day requirements	Although the additions are modest, use of incompatible materials and techniques effects the overall perception of the traditional house	The owner thinks it was a big necessity to have functioning wet spaces and satisfied with the intervention
		Partial change in courtyard pavement	1A	Marble Cement tiles Ceramic tiles	Deterioration of the original material	U/I	U/I	The owner wishes to have a more unified look for the pavement
	FAÇADE B2-c	Staircase addition to the courtyard	4B	Concrete	Access to the first floor and the terrace	Accessibility	Incompatible materials' damage to the original materials	U/I
	PLAN A1	Canopy addition for the courtyard	2B	Burlap	Need for shade and shelter	Spending more time in the courtyard which is desired	The burlap is a natural and a lightweight material which does not damage the original structure	The user wants a more permanent and durable solution
		Change in floor finishings	1B	Cement tiles Concrete slab	Deterioration of the original material	Easy cleaning	Incompatible materials' damage to the original materials	The user is satisfied with the intervention since it is easy to clean
		Reconstruction of the balcony-like area on the first floor	1B	Concrete slab	Partial collapse & deterioration	Accessibility	Incompatible materials' damage to the original materials	U/I
		Limewash on the front façade	1A	Limewash	Desire to have a clean look	Having a more clean looking house	The material is compatible with the original materials	U/I

Figure 3.103. Analysis of the user interventions in Ülkü-63

Case #7 – Kastal-4 House

Each type of intervention in low and medium scales can be seen in the user interventions in Kastal-4 House (Figure 3.104). The user states that they tried to achieve a liveable environment for their family through the interventions.

There are service space additions which are the kitchen on the ground floor, the washbasin addition on the courtyard and the bathroom addition on the first floor. Contemporary furnishing and appliances had been installed for the spaces as well.

Similarly with the some other traditional house examples, the users had installed a canopy addition for the courtyard to act both as a sunshade and rainfall protection. The canopy is made out of corrugated PVC and the outcome is almost same with what had been seen in Ülkü-33 House which is the greenhouse effect and difficulty in maintanance.

One of the notable features of the interventions in the house is the fact of some interventions leading to further interventions because of the results of the previous. For example, the users wanted to have access between the first floors of the masses and had built a corridor as a passageway. However, since the new corridor was above the courtyard wall level, there were issues regarding the privacy. The inhabitants were concerned about being seen by the neighbours across the narrow street and also by the passers-by. Thus, a PVC screen as a continuation of the canopy had been placed on top of the courtyard wall.

As it is seen in all of the studied houses, there is a washbasin addition in the courtyard. However, the difference in this intervention is the finishing change in the courtyard walls. The users had installed ceramic tiles behind the bathroom style washbasin unit by overcladding the original wall for easy cleaning purposes.

Moreover, as it was mentioned previously, the original traditional house is divided into two and currently the other half is being used as a cafe.

HOUSE	TYPOLOGY	INTERVENTIONS	TYPE & SCALE	MATERIAL	REASONING	EFFECTS ON DAILY LIFE	EFFECTS ON THE STRUCTURE & TRADITIONAL ARCHITECTURAL CHARACTERISTICS	AFTERTHOUGHTS OF THE USER
KASTAL-4	MASS	Addition of balcony-like passage between masses on the first floor	4A	Concrete	Access between the first floors	Easy access between the rooms on the first floor	Minimum effect	Since the corridor is above the courtyard wall height, the users had issues regarding privacy and had to add PVC covering same as the canopy, on top of the courtyard wall
	B1	Canopy addition for the courtyard	2B	PVC + Metal	Need for shade and shelter	Although the rain is avoided, the courtyard becomes hotter because of the material use	Additional load and damage to due incompatible materials	
	FAÇADE A2-c	Washbasin installation in courtyard	4A	Ceramic + Wooden cabinets	A daily necessity	Easy access to a much used facility		
	PLAN A1	Overcladding the courtyard walls behind the washbasin	1A	Ceramic tiles	Easy cleaning	Easy cleaning	Incompatible materials' damage to the original materials underneath	The user is satisfied with the intervention since it is easy to clean
		Installation of a contemporary kitchen	3B & 4B	Contemporary wooden cabinets & appliances	Modern day requierement	Access to a contemporary service space		
		Division of the traditional house	5B	—	Change in ownership	None		The user thinks they did the best they could with the available funds and resources
		The façade and the roof of the building had been renovated by the municipality during the street rehabilitation process.						

Figure 3.104. Analysis of the user interventions in Kastal-4 House

Case #8 – Anafartalar-26 House

There are various user interventions encountered in Anafartalar-26 House from each type and in low to medium scale (Figure 3.105). Most of the interventions are dated back to 20 to 30 years ago. Overall, the user states that they had done the best they could with the available funds and resources at the time. However, there are still several regrets regarding the details of the applications, and material choices.

First of all, contemporary service spaces had been added to the courtyard which is the most common intervention seen on site. The spaces are included through small mass additions in the courtyard by using brick with cement plaster, and contemporary appliances had been used.

The first floor and the stairs in the courtyard of the original house had partially collapsed in the past. Thus, the demolished parts had been reconstructed by the users. Incompatible materials such as concrete slab, briquettes and cement plaster had been used for the reconstruction which causes damage to the original materials and causes additional load to the structure. Also, a metal staircase had been added for the access to the first floor.The user deeply regrets the decisions of using metal for a staircase in the courtyard which is an area exposed to climatic conditions since it is already rusted and causes an unpleasant appearance.

There is also a canopy addition for the courtyard where the metal structure had been placed on top of the courtyard wall and fastened to the original walls. There are metal shingles on top of the metal structure. Similar to the staircase, the canopy is already rusted and the user is not satisfied with the intervention.

Moreover, floor finishings had been replaced with ceramic tiles and the courtyard pavement had been overcladded with a concrete slab. These are among the interventions the user is content with since it makes cleaning easier according to her.

HOUSE	ANAFARTALAR-26						
TYPOLOGY	INTERVENTIONS	TYPE & SCALE	MATERIAL	REASONING	EFFECTS ON DAILY LIFE	EFFECTS ON THE STRUCTURE & TRADITIONAL ARCHITECTURAL CHARACTERISTICS	AFTERTHOUGHTS OF THE USER
MASS D2	Partial reconstruction of the 1st floor	1B	Brick + Concrete	Deterioration of the original materials	Access to the needed space	Incompatible materials' damage to the original materials	"This was the best solution within our limits at the time"
	Partial reconstruction of the courtyard wall	1A	Brick + Cement plaster	Partial collapse	Achieving the needed privacy	Incompatible materials' damage to the original materials	U/I
FAÇADE B1 - a	Kitchenette and WC additions	5A	Brick + Cement plaster	Need for service spaces	Access to modern-day requirements	Incompatible materials' damage to the original materials	She is contented with the location, but would prefer a better application.
PLAN A1	Washbasin installation in courtyard	4A	Aluminum	Convinience	Easy access to an every day necessity	U/I	U/I
	New staircase in courtyard	3B	Metal	Collapse of the original stairs	Access to the 1st floor	Negative effect on the architectural integrity	The user regrets using a metal staircase since it is already rusty
	Canopy addition for courtyard	2B	Metal shingle	Need for a shelter for sun and rain	Being able to spend more time in the courtyard	Additional load to the structure with the incompatible materials and architectural style	The user thinks they did the best they could with the available funds and resources
	Wall finishing replacements	1A	Cement plaster	Deterioration of the original materials		Incompatible materials' damage to the original materials	U/I
	Window addition to the interior wall	3B	Wooden	Ventilation	U/I	Damaging the soundness of the partition wall	U/I
	Interior floor finishing replacement	1B	Ceramic tiles	Deterioration of the original materials	Easy cleaning	Incompatible materials' damage to the original materials	The user is satisfied with the intervention since it is easy to clean
	Overcladding the courtyard pavement	1B	Concrete slab	Deterioration + Easy cleaning	Cleans easily but appearance is not satisfactory to the user	Incompatible materials' damage to the original materials	The user is satisfied with the intervention since it is easy to clean

Figure 3.105. Analysis of the user interventions in Anafartalar-26 House

Case #9 – 40 Asırlık-65 House

The users of 40 Asırlık-65 House had done various interventions and according to them, the interventions were done to maintain living in the traditional house, and they had done the most convenient interventions within their limits (Figure 3.106). The street façade and the roof structure had been renovated by the municipality in the scope of the street rehabilitation process.

Starting from their most immediate needs, service spaces had been added including a kitchen and a bathroom within an existing room by using ceramic tiles on floors and walls and contemporary cabinets and appliances. The room is divided with a partition wall and cement-based plaster is used. There are also small mass additions which were done previously by using bricks and currently the one next to the lot entrance is unused.

An upper floor had been built for one of the original masses by using concrete slab, briquettes, and cement-based plaster. Also, a concrete staircase had been added in between the masses and it allows to access both upper floors which are on different levels. A kitchen sink had been placed in the corridor-like balcony area.

Besides from the kitchen and bathroom, the floor finishings of the multifunctional room is also replaced with ceramic tiles with a concrete slab underneath. However, the user states that although it is easier to clean, she is not satisfied with the appearance of the tiles.

They had also replaced the traditional windows with bigger windows which causes the original wall damage by affecting the structural integrity, and it changes the traditional façade of the house.

Overall, the use of incompatible materials and change in traditional architectural elements had damaged the architectural and structural integrity of the house.

HOUSE	TYPOLOGY	INTERVENTIONS	TYPE & SCALE	MATERIAL	REASONING	EFFECTS ON DAILY LIFE	EFFECTS ON THE STRUCTURE & TRADITIONAL ARCHITECTURAL CHARACTERISTICS	AFTERTHOUGHTS OF THE USER
40 ASIRLIK TÜRK YURDU-65	MASS	Installation of a contemporary kitchen & a bathroom	3B & 4B	Contemporary wooden cabinets & appliances	Modern day requierement	Access to a contemporary service space	Incompatible materials' damage to the original materials	The users thinks the service spaces are inadequate and small for her needs but satisfied with the decision
	D1	Staircase addition in the courtyard	4B	Concrete	Access to upper floors	Having access to upper floors	Incompatible materials' damage to the original materials	U/I
	FAÇADE A1-b	Washbasin installation in courtyard	4A	Ceramic	A daily necessity	Easy access to a much used facility	Minimum effect	The user is satisfied with the placement and finds the addition useful z
	PLAN A2	Change in courtyard pavement	1A	Concrete slab	Deterioration of the original stone pavement Easy cleaning	Easy cleaning	Incompatible materials' damage to the original materials underneath	The user is satisfied with the intervention since it is easy to clean
		Change in floor finishings	1A	Ceramic tiles	Deterioration of the original stone pavement Easy cleaning	Easy cleaning	Incompatible materials' damage to the original materials underneath	The user is not satisfied by the appearance of the ceramic tiles
		Upper floor addition in one of the masses	5C	Concrete slab Brick Cement plaster	Need for extra space	Access to more space	Additional load to the structure with the incompatible materials	U/I
		Washbasin installation in the first floor	4A	Concrete counter Kitchen sink	Having access to a much used facility	Convenience for the user since there are not any service spaces on the first floor	The load of concrete slab counter damages the balcony structure and creates an additional load on the original ground floor walls	The user is satisfied with the placement but prefers to have a better application
		Change in form and size of the windows	3B	Wooden	U/I	U/I	Architectural and structural integrity of the house had been affected negatively	U/I
	The façade and the roof of the building had been renovated by the municipality during the street rehabilitation process.							

Figure 3.106. Analysis of the user interventions in 40 Asırlık-65 House

Case #10 – Ülkü-43 House

According to the user statements from the social survey, the user interventions in Ülkü-43 House are from 35 years ago. Incompatible materials are appeared to be used in almost all the interventions in large scales (Figure 3.107)

There are large mass additions both as a separate mass on the courtyard and on top of the original mass. Two new upper floors and a two-storey mass are constructed with brick and cement plaster which are damaging to both the original materials, the structural integrity, and the architectural characteristics. The new mass addition had changed the street façade of the traditional house and made the house unrecognizable from outside.

Since the original staircase was demolished, a new staircase with concrete steps had been added to the courtyard to access the new first floor.

The courtyard level had been raised with a concrete slab and paved with concrete terrazzo tiles which caused the traditional *eşiklik* space to be cancelled. However, it made the access between the rooms and the courtyard easier for the elderly user since the levels had been evened out.

The original wooden windows were deteriorated, so new metal windows had been installed as a replacement. The form and size of the windows had not been changed during the intervention.

The interventions in the original room are in low to medium scale regarding the finishings. The wooden elements of the room had been painted, and the floor finishings had been replaced with ornamented cement tiles with a concrete slab underneath.

HOUSE	TYPOLOGY	INTERVENTIONS	TYPE & SCALE	MATERIAL	REASONING	EFFECTS ON DAILY LIFE	EFFECTS ON THE STRUCTURE & TRADITIONAL ARCHITECTURAL CHARACTERISTICS	AFTERTHOUGHTS OF THE USER
ÜLKÜ-43 HOUSE	MASS A	Addition of two new upper floors	5C	Briquette + Cement plaster	Need for extra space	Access to more space	Additional load to the structure with the incompatible materials	U/I
		Staircase addition in the courtyard	4B	Concrete	Access to upper floors	Having access to upper floors	Incompatible materials' damage to the original materials	U/I
	FAÇADE B1-a	Raising the courtyard level	1B	Concrete slab + Cement tiles	Evening the room entrance levels to the courtyard	Easy access between the spaces for the elderly user	Damage to the traditional characteristics of the house Incompatible materials' damage to the original materials	The user is satisfied with the intervention
	PLAN - New upper floors	Change in courtyard pavement	1A	Cement tiles	Raise in courtyard level	Easy cleaning	Incompatible materials' damage to the original materials underneath	The user is satisfied with the intervention since it is easy to clean
		Replacement of the original windows	3A	Metal	Deterioration of the original materiaks	U/I	Minimum effect	The user is satisfied with the intervention since the windows looks more clean
		Service mass addition	5C	Briquette + Cement plaster	Need for a kitchen and extra space	Access to modern day requirements	Change in the traditional street façade, lot layout and overall architectural features	U/I
		Interior floor finishing replacement	1B	Concrete slab + Cement tiles	Deterioration of the original materials	Easy cleaning	Incompatible materials' damage to the original materials	The user is satisfied with the intervention since it is easy to clean

Figure 3.107. Analysis of the user interventions in Ülkü-43 House

3.5.3 The Most Common Interventions

There are variety of interventions differing from low scale finishing changes to drastic mass additions. However, to understand the priorities, main needs and expectations of the users, it is important to determine the common intervention types applied for the traditional houses. The study revealed that the most common intervention seen on the case study site is the addition of service spaces such as a WC, bathroom, or a kitchen, and it is seen on all the studied houses. The applications change, but the motivation and reasoning behind the alteration is similar which is the need for modern day facilities.

Overall, in all the fourteen studied houses, there are service space additions whether it is a small basin addition in the courtyard or a service mass addition. Change in architectural elements have been among the most common intervention since it is seen in all studied houses wither through replacement, removal, or addition. Also, the floor finishings have been altered in all the fourteen houses. Another common intervention which is the tendency to add an awning or a canopy as shelter is seen in five of the studied houses.

The common interventions will determine the design proposals since they reflect the common user needs and expectations within the case study area.

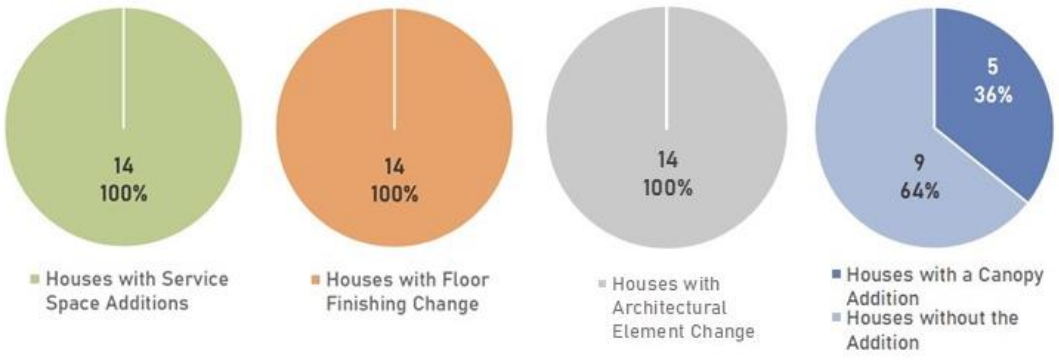


Figure 3.108. The most common user interventions seen on the case study site

The scale, the materials and techniques used, the reasoning of the users, and the positive and negative aspect of the most common interventions seen on the case study site have been analysed and can be seen in the table below (Figure 3.107).

INTERVENTION	SCALE	MATERIAL / TECHNIQUE	REASONING	POSITIVE AND NEGATIVE ASPECTS
SERVICE SPACE ADDITION (14/14)				
as an attachment on an existing wall	A	Ceramic or metal sinks Plywood cabinets	Modern day requirements	Access to an everyday necessity Poor quality masses distrupt the perception of the traditional house Damage to the original structure due to the use of incompatible materials Loss of significant architectural elements in the adaptation process
through adaptation of an existing room	B	Concrete slab Ceramic tiles Contemporary appliances		
as a separate mass on the courtyard				
mass additions in small or medium scale	B	Concrete slab Brick or briquette masonry Cement plaster		
mass additions in larger scale	C	Concrete slab Brick or briquette masonry Cement plaster		
CHANGE IN FLOOR FINISHINGS (14/14)				
Overlay	A-B	Marble/Stone Mosaic cement tiles Ceramic Concrete slab	Deterioration of the original material	Contribution to the conservation w/ compatible materials Incompatible materials' damage to the original finishing underneath Loss of original materials
Replacement	A-B			
CHANGE IN ARCHITECTURAL ELEMENTS (14/14)				
Alteration	A-B	Wooden PVC	Deterioration of the original material	Contribution to the conservation w/ compatible materials and forms Loss of traditional characteristics due to incompatible materials and form
Removal	B-C	Overlay w/ cement plaster or briquette	Change in spatial use Space/mass additions	Documentation value if traces are visible Loss of the traditional architectural elements
Addition	B-C	Timber or PVC	Desire for more openings Space/mass additions	Incompatible additions' damage on both structural and traditional characteristics
AWNING/CANOPY ADDITIONS ON THE COURTYARD (5/14)				
Heavy Structures	B	Metal components w/ corrugated PVC or metal	Shade and Shelter	Extended use of the courtyards Incompatible details' damage to the original materials and structure Additional load to the structure
Lightweight and Temporary Solutions	A	Canvas		Extended use of the courtyards Non-destructive installation with compatible materials

Figure 3.109. Detailed analysis of the most common interventions seen on the case study site (Author, 2023)

The user interventions can be divided into two categories of compatible and incompatible interventions (Figure 3.108). The compatibility of an intervention relies on the material selection, application, or installation whether it is destructive or not, and effect on the historical building components and characteristics.

There are accessible and complex alternatives withing the compatible interventions. The accessible interventions are the ones affordable, easy-to-produce, and available for the users. For example, the canvas awning addition in Ülkü-63 House, or the washbasin additions in the courtyards of almost every studied house from the site. The complex alternatives include the interventions where professional assistance had been consulted to an extent, usually with a higher budget. Refurbishment of the floor finishes in the houses can be considered as a complex, compatible user intervention.

The incompatible user interventions represent two alternatives which are reversible, and irreversible. The interventions considered to be reversible either still have the visible traces of the original features or have the original materials but hidden. Service space additions within an existing room, or separate mass additions, concrete slab overlays where the original pavement is underneath, or alterations regarding the spatial organization or division of spaces can be considered among the reversible incompatible user interventions.

Irreversible interventions where the traces, original materials and forms are lost in large scales are seen to be the second alternative for the incompatible user interventions. Upper floor additions, floor or room removals, and the removal of architectural elements are among the irreversible incompatible user interventions.

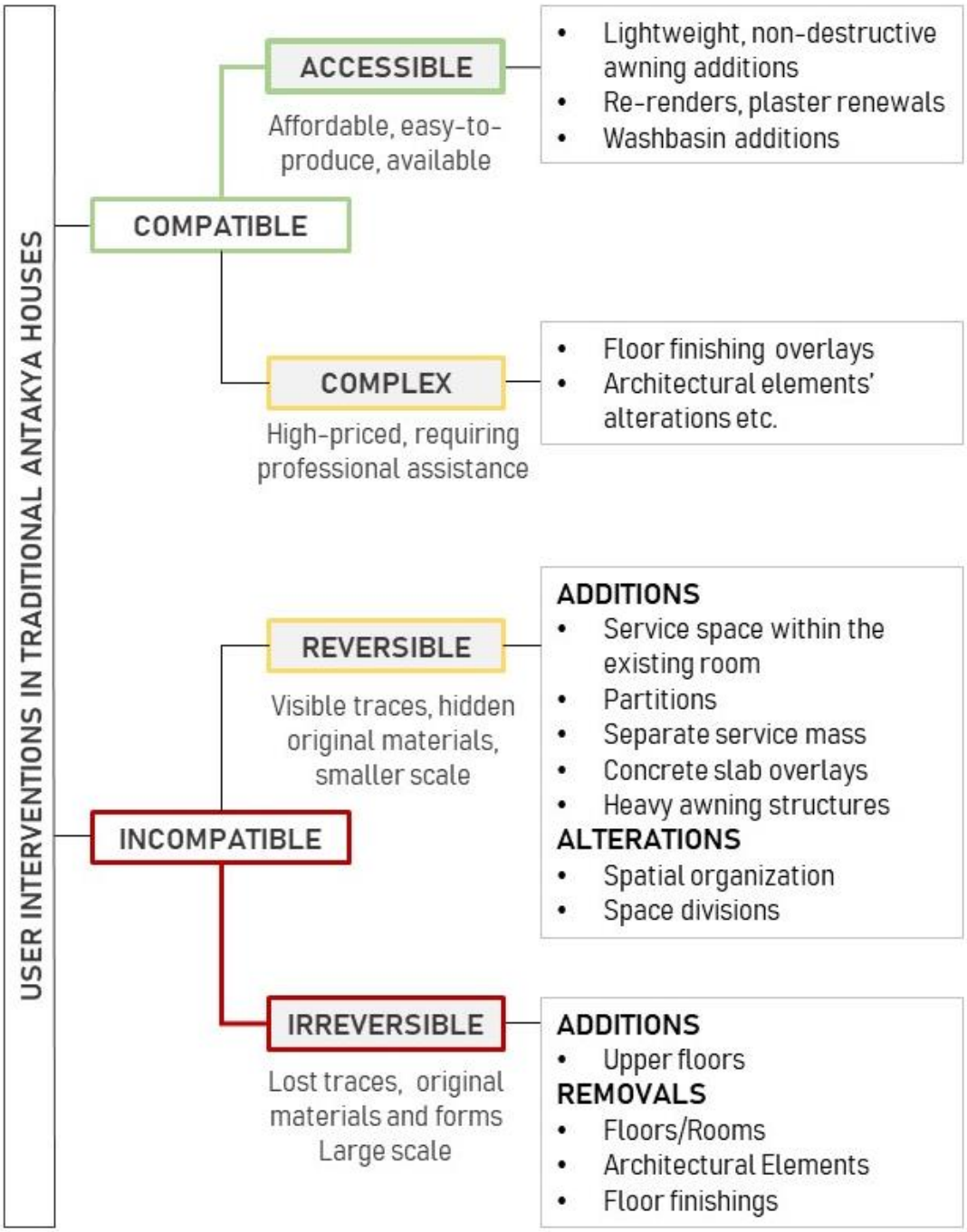


Figure 3.110. Categories of the user interventions in traditional Antakya houses

Contemporary Service Space Additions

The most common user intervention seen during the site survey is the service space additions and it is seen in all the fourteen studied houses. The valid need and desire to have a functional, contemporary service space for the continuation of life in traditional houses had led the users to solve the problem of not having adequate utilities, with their own techniques within their means and limits.

There are several alternatives for the service space solutions in traditional houses as it is also seen on site as well. The service space can be placed in the courtyard in a separate mass, it can be placed in one of the rooms on the ground floors, an existing service space can be converted into a contemporary one, or the necessary appliances like a washbasin can be placed to the courtyard wall or to the wall of an existing mass. There are positive and negative aspects that should be considered for each choice to develop proposals.

Service Space Addition as a Separate Mass on the Courtyard

The mass additions seen on the studied houses had revealed that incompatible materials such as concrete, briquette, and cement-based plaster are used for the construction of the new masses. Although the deterioration of the materials is least in this alternative since the mass had been built separately from the original structures, or with minimum connection, the physical appearance of the new mass can affect the perception of the traditional house, or even the street. For example, the service space additions on Ülkü-17 House are connected to only one wall of the original structure, but the additions had changed the traditional street façade with its incompatible architectural features such as the cement-plaster and the briquettes, and a big PVC window on ground floor level which is unusual for the street façade of a traditional Antakya house. On the other hand, it is a reasonable choice considering the fact that there can be unused areas in the spacious courtyards of these traditional houses and the users prefer and desire to utilize the space for an important and much needed function.

Out of the fourteen studied houses, service mass additions with new techniques are seen in 7 of them. These houses are the Ülkü-17, Ülkü-63, Ülkü-5, Anafartalar-26, Kırk Asırlık-65, Asi House and Nevizade House (Figure 3.109). The service mass additions seen on the site vary in scale. There are modest additions in small scale similar to the addition in Anafartalar-26 and Kırk Asırlık-65 Houses, and there are moderate or drastic additions. The differentiation in the scale of the additions is the result of the number of inhabitants, assigned function, required space and available space, and budgetary conditions.

Figure 3.111. The service mass additions in courtyards in the studied houses (Author, 2022)

Service Space Addition through Adaptation of an Existing Room

Out of the fourteen studied houses, service mass additions within an existing room are seen in 7 of them. These houses are Ülkü-17, Ülkü-19, Ülkü-21, Ülkü-33, Anafartalar-67, Kastal-4, and Gazi Paşa-16 Houses. Different techniques and decisions are seen for the adaptation of the traditional rooms into service spaces. The three main approaches for this type of user intervention are listed below.

- The whole room was utilized for one service space (Figure 3.110)
- The room was divided for multiple service spaces (Figure 3.111)
- A portion of the room was utilized for the service space (Figure 3.112)

It is seen that when the whole room is converted into a single service space, they are mostly adapted as kitchens since the size of a traditional Antakya room is more suited for a kitchen. It these examples, it was possible for the users to achieve a more complete space with every appliance and contemporary cabinet space they needed.

Figure 3.112. Kitchens of Gazi Paşa-16 and Asi Houses with single service space function in a room (Author, 2022)

The examples where a room was divided for multiple service areas are the most common decision seen on site. Usually, a bathroom is placed at the end of a kitchen. This approach helps the users to fulfil two of their most significant needs in a single space. Also, it allows to solve technical details like ceiling, wall, and floor finishings and plumbing within a more limited area. However, it is seen in some examples that

the rooms had become unrecognizable since most of the elements, and the proportions had been altered to be suited for two service spaces. Usually, new windows on the originally blind walls are seen since it is a necessity for ventilation.

Figure 3.113. Service spaces of 40 Asırlık-65 and Ülkü-19 Houses with multiple functions in a single room (Author, 2022)

The wet space addition in Ülkü-21 House which is analysed in previous chapters is the only example of the partial use of a room. The scale of the intervention is compatible with the traditional proportions, but the material uses and finishings should be improved. The intervention utilizes the portion of a room, but since the shower area is faced when the room is entered, there is a problem regarding privacy.

Addition of a Service Area to an Existing Wall

The service area addition on the courtyards is seen in all the studied houses in different scales (Figure 3.112). Where it is simply a washbasin addition in some cases, it can be a kitchenette area with cabinets as well. This approach can be seen

in the houses where there is not enough space since it can be considered as a space-saving solution. The washbasin in the courtyards is a necessity and a convenience for the inhabitants because they wash the courtyards on a regular basis. The washbasin can be seen as a kitchen sink in the houses where there is not enough kitchen space.

Figure 3.114. Washbasin additions in the courtyards of the studied houses (Author, 2022)

The addition can be attached to a new wall which is reconstructed or added in later periods, it can be directly attached to the original wall, or there can be backsplash addition between the service area and the wall. Since these additions are mostly seen on the ground floor levels, the plumbing goes directly through the courtyard pavement.

Change in Architectural Elements

The second most common intervention seen on site is the alteration of architectural elements. The change in traditional architectural elements represent themselves in various ways, but in all fourteen houses there are changes in the elements to an extent. Interventions on the architectural elements such as the windows, doors, or cabinets are seen on mainly three categories which are replacement, removal, or addition.

It is important to note that majority of the interventions are related with the replacement of the original architectural elements, and they have been done due to the deterioration of the original materials or the inadequate comfort conditions. The decay in the elements can affect the daily life in the houses directly either through thermal comfort, safety, space usage, or simply through aesthetic reasons. Although the vernacular architecture is a product of local features such as climate and culture, change in these circumstances, and the overall deterioration of the materials brings along the replacement of the elements.

Traditionally, single-glazed windows would achieve the desired comfort conditions because of the wall thickness, and the air gap created through the windows on the exterior and the wooden shutters on the interior side of the wall. However today, the wooden shutters are not found in most of the studied houses which would contribute to the interior comfort conditions and act as curtains as well. In addition, the gradual decay and deterioration over time caused the inadequacy for the traditional windows.

In some of the studied houses like the Asi and Gazi Paşa-16 Houses, the windows and doors have been replaced with the ones with the same colour, material, and form, whereas regular, white PVC windows and doors are seen in some of the other houses. Besides from the two ends of the spectrum, there are examples in between. Overall, the replacement can be analysed through the material choice, form, and colour. The intervention can be done with compatible materials, form and colour, either form or colour can be incompatible, or both of them can be incompatible. The similar situation is also accurate for the replacements with incompatible materials. All the

possible interventions regarding the replacement of the traditional architectural elements are shown in the Table below.

REPLACEMENT OF THE TRADITIONAL ARCHITECTURAL ELEMENTS		
MATERIAL	FORM	COLOUR
Compatible Material (Wooden)	+	+
	+	-
	-	+
	-	-
Incompatible Material (PVC)	+	+
	+	-
	-	+
	-	-

Accordingly with the table above, it can be said that although compatible materials have been used to replace a traditional architectural element, the form and the colour of the new elements might be incompatible with the traditional architectural features. Moreover, there are examples where PVC windows have been used for the replacements, but the form and colour of the element is compatible with the traditional house. The interventions related with the replacement of the architectural elements should be analysed while keeping all the variables in mind.

Incompatible form
Incompatible PVC
White

Compatible form
Different proportions
Incompatible metal
White

Compatible form
Different proportions
Ordinary, current style
Incompatible PVC
White

Incompatible form
Compatible
material in poor
quality
White

Figure 3.115. Replaced architectural element examples from the site (Author, 2022)

Besides from the replacement, addition of new openings has been seen during the site visit. There are openings seen on traditionally blind walls for more daylight and ventilation purposes. The place selection for the new windows seems arbitrarily chosen by the users in some cases, but there are examples where the traditional elements and proportions taken into consideration such as in Gazi Paşa-16 House, one of the traditional cabinets had been turned into a window.

Awning/Canopy Additions for the Courtyards

There are five cases with canopy additions among the studied traditional houses (Figure 3.116). The reasonings of the users are mainly the need for a sunshade and a shelter for rainfall. Material choices and installation techniques differ and there are three different types of canopy additions which are PVC panels, corrugated metal panels, and canvas.

PVC coverings are used in Kastal-4 and Ülkü-33 Houses where the PVC panels had installed with a metal structure and the structure is fastened to the existing stone walls. Corrugated metal panels are seen in Anafartalar-26 and Ülkü-5 Houses. Similarly with the PVC examples, the corrugated metal sheets are placed on top of a metal structure. In four cases, the metal structure is weathered and deteriorated. Also, the inconvenience of the maintenance poses a problem for the inhabitants. The last canopy addition example is from Ülkü-63 House where a burlap-like canvas is stretched through the courtyard and fastened with the help of ropes. The lightweight material is seen to be installed with non-destructive methods in the example.

Figure 3.116. Canopy additions in studied houses (Author, 2022)

Change in Floor Finishings

Change in floor finishings is seen in all of the studied cases in site. There are mainly two reasons for the user interventions regarding floor finishings. The first reasons is the decay and deterioration of the original materials. The second reason can be viewed as a result of the first reason which is the difficulty in maintenance or cleaning. When the original material is damaged, the cleaning becomes a problem for the users.

The most common materials used for the replacement of the floor finishings are concrete slab, cement tiles, or ceramic tiles on top of the slab. According to the user statements in some cases, the original flooring is still underneath the slab.

Figure 3.117. Floor finishing examples from the studied houses (Author, 2022)

CHAPTER 4

PRELIMINARY SUGGESTIONS FOR THE INTEGRATION OF THE USER INTERVENTIONS TO THE CONSERVATION PROCESSES

4.1 A Methodological Proposal for Learning from the Change in Traditional Houses

The concept of learning from the change in traditional houses represents the idea of collaboration with the users of the houses in the conservation processes. The aim is to understand, thus learn from the interventions of the users and how they have changed their environment throughout the years, so that the change in traditional houses can be managed by professionals and conservation of the traditional houses can be achieved while taking the users into consideration whom have the key roles for the continuation of life.

As it is for all aspects of the conservation of cultural heritage, comprehensiveness, a multidisciplinary study, and a participatory approach are the key elements while understanding the change in the traditional houses. A methodological approach has been developed regarding these various significant points. The methodological approach includes four main stages which includes the preliminary studies, case study, analysis and evaluation of the change in traditional houses, and finally integration of the user interventions to the professional conservation practices (Figure 4.1.). The methodology aims to achieve successful and sustainable conservation processes, and overall the main goal is the safekeeping of the contunity of life in traditional houses with their inhabitants.

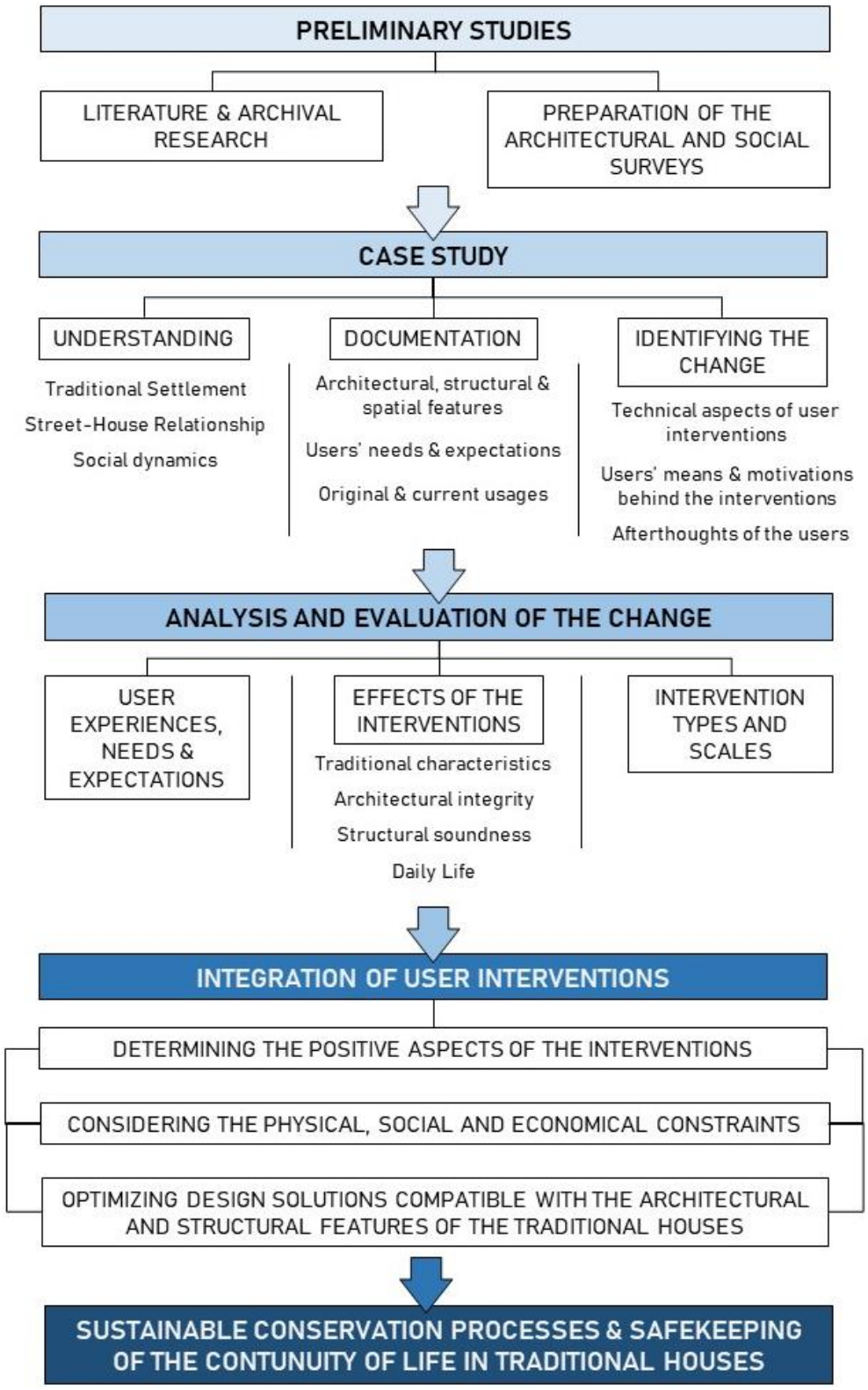


Figure 4.1. A methodological proposal for the integration of user interventions into conservation practices

Preliminary studies stage includes the literature and archiaval research about the place and the general traditional architectural characteristics of the settlement followed by the preparation of the surveys which will be used during the case study. The surveys can be designed accordingly with the context of the research, but overall they can focus on technical, architectural and social aspects of the traditional houses that will be studied on site.

The next and second stage is the case study and it includes the several important elements that should be taken into consideration on site. These are understanding, documenting and identification of change. Understanding the context, the environment, traditional settlement, street patterns, street-house relationships, and social dynamics of the traditional settlement is important in order to be able to see the big picture and approach the traditional house not just as a single building, but a valuable part of a greater whole. Then, the selected traditional houses should be studied in detail with the documentation of the architectural, stuctural and spatial features through the prepared technical surveys. The needs and expectations of the inhabitants, original and current usages should be identified with the help of the social surveys and in-depth interviews with the users.

In particular, determination of the change and user interventions in the traditional houses should be the focus point of the study. How the interventions were applied, what kind of materials and techniques used during the process and what the motivations of the users were for their interventions should be documented in detail with drawings, photographs and statements of the users themselves. Users' means and motivations for the interventions should be documented as well. Another important is the afterthoughts of the users about their interventions and the changes that they made in their traditional houses. Although the interventions are done by the users with their own needs and expectations in mind, there can be regrets or different opinions about the change since the user intervention process is relatively spontaneous.

The third stage is the analysis and evaluation of the change in the studied traditional houses. An overall analysis and evaluation including the user experiences, needs and expectations; positive and negative effects of the interventions on the traditional characteristics, architectural integrity, structural soundness, and daily life in the house should be made. Moreover, type and scale of each intervention should be determined in order to have a better understanding of the local tendencies and building trends, common needs and expectations of the users.

The fourth and final stage is the integration of the user interventions into the professional conservation processes of the traditional houses. Since the positive and negative effects of the user interventions would have been analysed during the previous stage, the positive effects should be sorted out in order to be utilized. For example, although the wet space addition in the studied Ülkü-21 House had been applied with incompatible materials and techniques which are damaging to the original structure, and the details are not convenient; the intervention has several positive features such as the space selection and the proportions of the addition, and the fact that it is being an easy solution to an important necessity for the daily life.

Besides from the positive effects, the reasons behind the users' choices on material and techniques that comes with certain physical, social and economical constraints should be considered. Design solutions should be optimized regarding these constraints as well as the architectural and sctructural features of the traditional houses. The solutions should be cost-effective to be convenient for the users, easy-to-produce by the users themselves or the local craftsmen, accessible, and well-designed with the precision and knowledge of the professionals in the conservation field.

4.2 Design Decisions for the Integration of the User Interventions to the Conservation of Traditional Houses in Antakya

Although there are not absolute rules on how to adapt a traditional house to the contemporary lifestyle, certain aspects should be considered for the sake of conservation of cultural heritage. Article 12 and 13 in Venice Charter (1994) focuses on the new additions in historic buildings by stating that the replacements, or additions "must integrate harmoniously with the whole, but at the same time must be distinguishable from the original so that restoration does not falsify the artistic or historic evidence". Moreover, in Article 13 the importance of the balance between the new additions and the original structure is emphasized. Contemporary additions should not overpower and distract from the historical building.

The most common interventions from the case study site have been the main sources for the design proposals since they showcase the most urgent or preferred change in the traditional houses, according to the inhabitants. In line with the analysis, the proposals are developed for the design of;

- Contemporary service spaces,
- Change in architectural elements,
- Awnings/Canopy for the courtyards,
- Maintenance/Refurbishment of the floor finishings

The most compatible user intervention for each category and the significant aspects regarding the spatial, practical, or economic decisions will be examined in order to integrate the user interventions to the design proposals.

4.2.1 Contemporary Service Spaces

There are several important points that should be considered for the addition of a contemporary service space regarding the structural integrity, architectural characteristics, and the potential risks to the traditional house. The great attention

should be given to the plumbing system, the quality of the materials, the positioning of the pipes and the wires, and the allocation of the service space. “Any damage especially to the structural members and the architectural elements which have great value in the house, should be avoided” (Şahin, 1995, p. 349). The three different approaches by the users for the service space additions is analysed in the previous chapter.

The proposals for the service space addition as a mass on the courtyard should be considered since it is a widely applied alternative. Compatible materials should be used such as stone for the walls, timber for the architectural elements, and earth-based plaster. However, there should not be an effort to imitate the original traditional architectural style, but rather a harmony should be achieved. The new mass should be built in a way that does not damage the original courtyard pavement or original walls if there is any in contact. Also, since the mass additions are for the service spaces which can be considered a secondary function over living spaces, the façade of the new mass should not be ornamented and should be modest and simple. If any façade of the service mass is street-facing, it should not disturb the overall perception of the traditional street.

As well as it should be for any designed space, the comfort conditions should be considered for the service masses. Adequate ventilation methods, plumbing systems, sanitary conditions, and the standards for the placements of the appliances and an efficient layout should be ensured accordingly with the function of the new service mass whether it is a kitchen, bathroom, or a WC.

The approach of adding the service space as attached to a wall causes the minimum damage among the other alternatives since it does not intervene with the original structure as much as the others. However, it cannot function as the only service space of the house since not all wet areas can be solved in the open courtyard. In addition, it is not possible to maintain the structural, material, and sanitary conditions of these spaces since they will be exposed to conditions that cause wear and tear much more than the interiors. In most of the studied houses, the decay and deterioration in this

type of service area additions can be observed. Also, when the addition is in large scale, it can overpower the traditional courtyard and negatively affect the traditional characteristics.

There are wall niches in traditional Antakya houses called *sebil takası* which can be translated as the 'fountain niche' which was originally used to place a water source or a stone sink and a small tap in later periods. Thus, it is clear that the need for a basin area have been a constant for the traditional Antakya houses. Although the fountain niche is not found in all of the traditional houses, it should be utilized and renewed accordingly if the house already has a fountain niche.

If a washbasin will be added to the courtyard, it should be located in an area where it is not damaging to any of the traditional façades, especially the ornamented front façades of the main masses. Also, the material of the sink should be considered. In the studied houses, aluminium kitchen sinks or ceramic bathroom sinks are used by the inhabitants because of the accessibility and affordable prices. Among these material alternatives, ceramic stands out as a natural and a compatible choice.

4.2.2 Change in Architectural Elements

Replacement of the traditional architectural elements is mostly result of the decay and deterioration, or the loss of the original materials. While the inhabitants replace the windows and doors, the most common solution is to place a regular element seen in contemporary houses. While the choice of such elements is the most immediate solution to a somewhat emergency, the compatibility of the elements is usually disregarded by the users. However, it is seen that the inhabitants of traditional houses do not have available choices for these elements in the market even if they want to install compatible options.

The case study had revealed that the subject of change in traditional architectural elements requires professional guidance regarding the selection of new elements. The guidance should not only be for the users, but it should also be for the supplier

as well. When most of the available elements on the market are PVC or its derivatives, the users are drone to these accessible, and relatively affordable options in the replacement processes even though the incompatibility of these elements is known.

Moreover, addition of new openings can be severely damaging for the houses both structurally and aesthetically. Besides from affecting the architectural characteristics, a new opening in a wrong spot can cause serious structural impact depending on the scale and placement of the opening by interrupting the integrity of a wall, shifting the load bearing systems and weakening the connections.

- Addition of new openings on the existing original walls should be avoided as much as possible.
- If a traditional house has a later opening addition, the possible impact of the opening should be analysed to ensure the structural strength.
- If a new opening had an overpowering impact on a front façade, it should either be closed, or the material and form of the opening should be altered for a much more muted appearance.

4.2.3 Awning/Canopy Additions for the Courtyards

Among the five houses where there is an awning addition for shade and shelter purposes, the solution developed by the users in Ülkü-63 House is the most compatible intervention. A canvas has been stretched out from one mass to the other with minimum destruction the original structure by using small hooks or by simply tying edges to the balustrades (Figure 4.2). The addition is sustainable, reversible, non-destructive, and affordable. Use of a natural material with a coherent colour, not causing additional load, or a greenhouse effect seen on the two other examples, being easy to install can be listed among the compatible features of the intervention.

Figure 4.2. The awning addition in Ülkü-63 House (Author, 2022)

There are professional applications which are called sunshade sails in the market, and they can be considered an improved version of the intervention in Ülkü-63 House. There are different materials used for the shade sails, but most of them are waterproof and durable which is also another user expectation since besides from providing shade, the users had implemented the awnings for rain protection as well.

However, there is not a single correct solution for a shelter addition for the courtyard. The main idea for this kind of intervention is that the addition should not harm the original structure by either being freestanding or keeping the connection to the original walls or the roof at the minimum. The usage and the maintenance of the awnings should be also convenient for the users and should not be overly complicated.

4.2.4 Refurbishment of the Floor Finishings

The most common intervention for floor finishings is the addition of concrete slabs whether for courtyard pavements or interiors. Although the selection of concrete and

slab installations seem to be the most accessible choice for the users, the damaging nature of the cement-based materials should not be overlooked. The condition of the original materials should be a priority for the conservation processes. Thus, the unqualified and harmful concrete screed should be removed from the floors as much as possible.

- If the concrete slab had been installed as an overlay and it is possible to salvage the original material underneath, the necessary procedure should be followed.
- If the original material had been removed, the new flooring material should be selected among the compatible options rather than cement-based alternatives.

Specifically for the courtyards, the site survey had revealed that usually, the original stone pavement is underneath the slab. There are examples from the literature and professional field where the later concrete slab additions had been removed with various projects. The street rehabilitation by the Hatay Metropolitan Municipality and MNR Architecture, with the consultancy of Assistant Professor Mert Nezih Rifaioğlu in the significant traditional streets of Antakya is an exemplary practice and it can also be applied for the traditional courtyards as well. During the conservation process, the slabs are removed, and the original stone underneath is repaired with compared materials to achieve the most successful results.

CHAPTER 5

CONCLUSION

Traditional houses as cultural heritage places have been shaped and constructed accordingly with the needs and expectations of the users of the period, and they have been continuing to survive as living organisms mainly with the efforts of the inhabitants through the years. However, the traditional houses are faced with the threat of obsoleteness, abandonment, collapse, or loss of identity due to neglect, contemporary needs and expectations, or incompatible interventions. The traditional houses should be inhabited in order to survive; thus, the users play significant role in conservation of the traditional houses.

There are several important questions which had been discussed and tried to be answered in the scope of the thesis. However, one of the most crucial questions is the following. Can traditional houses stay in their original state when the daily life had been changed significantly? Although the houses continue to survive, they usually change from their original state according to the needs and expectations of the current users.

The change occurs in materials and finishings, space usage, architectural and structural integrity, and soundness in the houses. Mainly, users intervene their houses by either altering an existing space or adding new spaces or fuctions to be able to meet the contemporary needs. The techniques and materials used in the user interventions often causes them to be seen as threats to the buildings by the professionals in the field. However, the thesis puts emphasis on the importance of the efforts of the inhabitants who try to hold on to their life on the traditional houses.

It is important to learn from the inhabitants' choices for the interventions and their

simple solutions and integrate them with the technical and architectural knowledge of the conservation professionals. Besides from learning from user interventions, there are major key aspects that should be considered for the conservation of traditional houses which are listed down below (Figure 5.1)

1- Accepting change as a natural process for living cultural heritage places, especially the traditional buildings residential buildings, and learning from the change through the users since every user's decision reveals crucial information about the current situation of the traditional houses.

2- Understanding the interrelations between the actors of conservation. The actions of each corresponding parties affect one another. Thus, the decisions along the way for the preservation of traditional houses and continuation of life should be carefully curated through an effective, open communication.

3- Ensuring flexibility for the traditional houses as living organisms and give the inhabitants freedom to intervene their environment. However, the given flexibility should not exceed the acceptable limits of change regarding these heritage places. Conditions of traditional houses should be monitored and the irreversible incompatible interventions which would highly damage the integrity of the traditional house should be prevented before it is too late. Thus, the significance of open communication between the stakeholders comes to place once again.

4- Being aware of the values to be sustained throughout the conservation process. The previous user interventions which will be managed and the possible interventions planned should not be conflicting with or harming the values of the traditional houses.

5- Recognizing the reality of climate change and concerning about the comfort conditions in the traditional houses should be among the priorities of

conservation. Through multidisciplinary studies, the comfort conditions in traditional houses should be provided. The PROT3CT project entitled "Processes for sustainable retrofit of traditional dwellings in Turkey for climate-resilience, conservation and comfort" in which the thesis is also a part of, is a comprehensive study regarding this significant subject. The project, which is funded by British Council and TÜBİTAK, is a part of multidisciplinary Newton Institutional Links program and jointly run by METU and UCL in an interdisciplinary manor. [2]

6- Foreseeing and being prepared for the future risks such as natural disasters. The professionals and policymakers take responsibility for the safekeeping of the traditional houses, like the rest of the building stock while being in awareness of our geography being under the threat of heavy disasters like earthquakes. Structural earthquake responses of the building components should be examined for any new additions, and mass related interventions. While the interventions damaging the soundness and structural integrity of the traditional houses should be seriously avoided, necessary precautions regarding earthquake-resistance should be implemented with professional precision and conservation of cultural heritage awareness.

[2] More information and data about the project can be found on the PROT3CT website. www.prot3ct.metu.edu.tr

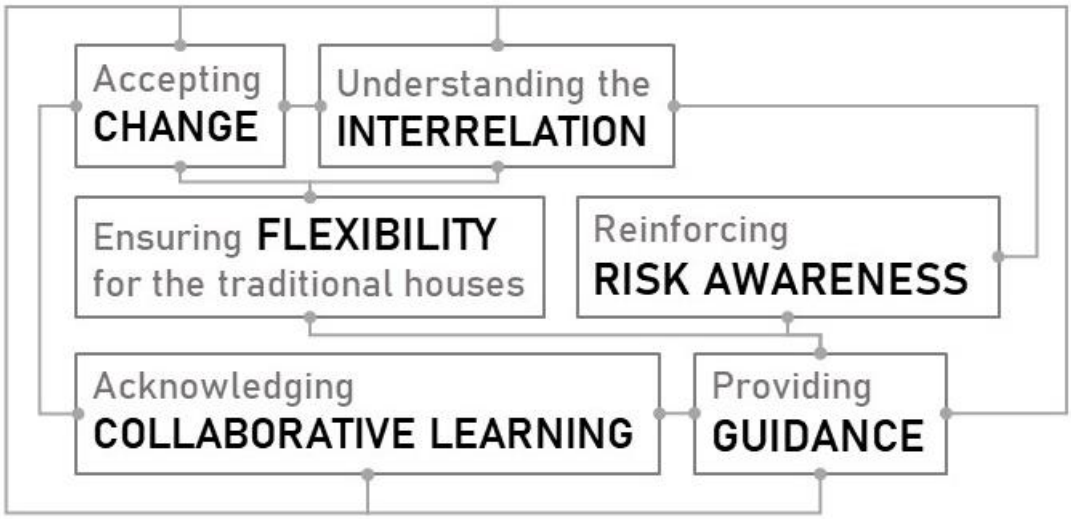


Figure 5.1. Major key aspects for the integration of user interventions to the conservation processes (Author, 2023)

5.1 Learning from the Change in Traditional Antakya Houses

Antakya as a significant historical settlement endowed with the still inhabited residential buildings, has been the proving ground by reflecting the change, alterations, and user interventions in the traditional houses. Each user intervention in each traditional house reveals valuable information regarding the life in these cultural heritage buildings. Although the design proposals in the preview chapter are developed specifically for the common user interventions encountered on site, the methodology for the integration of them is intended to be utilized as a roadmap for similar conservation processes. The initial steps towards learning from the change in the traditional Antakya houses are adaptable for varied other cases.

The most common interventions seen on the site also reveals the top inadequate features in the traditional Antakya houses according to the users. The preferences, decisions, and different implementations in the user interventions have been a tool to understand the adaptation of the houses to modern life through inhabitants' interventions. However, while there are compatible and accessible intervention that can be integrated to the conservation practices, there are incompatible, irreversible,

and damaging interventions as well. Thus, the significant points should be laid down to design a guide for the sustainable integration of user interventions into conservation practices.

The interventions regarding the lack of certain contemporary functions especially service spaces including kitchens and bathrooms, should be the priority. In general, the spatial necessities and desires of the inhabitants should be solved carefully while respecting the valuable characteristics, structural integrity, and soundness of traditional Antakya houses.

- If there is a mass addition, the mass should be freestanding and unattached to the original mass as much as possible in order not to damage the original materials with the new incompatible materials or affect the original proportions of the traditional mass negatively.
- If an original room will be adapted as a service space, the specific requirements such as plumbing should be solved with minimum impact on the original structural system.
- If a partition will be constructed to alter a traditional room, the material of the partition wall should not be incompatible like concrete or briquette, and the finishing should be carefully selected.
- Either mass additions or space alterations in the traditional Antakya houses should be constructed and applied with caution to achieve good quality structures and spaces compatible with the original.
- The interventions should not affect the perception of the traditional houses negatively. They should not be overpowering and more dominant than the original structure.

The existing interventions which are incompatible with the traditional houses can also be altered by the professionals for the conservation purposes while communicating with the users as well.

- If the incompatible intervention is reversible and there are compatible and accessible alternatives, the intervention should be carefully removed, and the alternative should be applied instead.
- The compatible and accessible user interventions should be shared with the other local inhabitants of the traditional houses to both raise awareness and present sustainable alternative choices for the common needs.

Overall, the interventions regarding the continuity of live in traditional houses as vivid cultural heritage places, should be attempted with at most attention to detail by keeping the whole in mind. The experiences of users who are in constant interaction with the traditional houses should be taken as valuable inputs for the conservation processes since the inhabitant factor is one of the distinctives for the traditional houses.

The case of Antakya for the analysis of user-space relationships and user interventions have revealed diverse outcomes with its still inhabited traditional settlement which have helped to set up detailed types and scales that will contribute to the literature for further studies.

5.2 The Aftermath of the Earthquake

The great earthquake with 7.8 magnitude that took place on February 6th, 2023 had a devastating impact on Antakya, as well as the other ten provinces in Southern Turkey and parts of Northen and Western Syria. The earthquake, which caused many tragic casualties and brought the life to a standstill in the region, wound us deeply, and at the same time reminded us of many crucial issues regarding city planning, architecture and conservation of cultural heritage.

The extreme state of the region and the cultural heritage at risk had led us to reflect on the priorities of the conservation. It is once again understood that not only the authenticity, but the structural soundness, earthquake resistance, and disaster

preparedness are among the most significant aspects for the safekeeping of cultural heritage places including traditional settlements.

The three neighbourhoods, Zenginler, Gazi Paşa and Ulu Cami Districts as the study area of the research, had been among the most affected areas alongside with the rest of Antakya. Unfortunately, the studied houses had been damaged or collapsed as well. Majority of the studied houses had been affected by the earthquake in various degrees. Ülkü-21, Ülkü-63, Ülkü-19, Kastal-4 are among the severely damaged and partially collapsed buildings.

There are conservation professionals believing in the power of science and solidarity including our professors from METU Graduate Program of Cultural Heritage and professors from the region like Assoc. Prof. Dr. Mert Nezih Rifaioğlu and many others who are working extensively for both the safekeeping and the refurbishment of the cultural heritage on the site.

Figure 5.2. Part of Ülkü Street after the Earthquake (Retrieved from atlas.hgm.org.tr)

Figure 5.3. Another part of Ülkü Street after the Earthquake (Retrieved from atlas.hgm.org.tr)

REFERENCES

Arıman, B., 2002. *Antakya Kenti Tarihi Doku İçinde Tipolojik Analiz Çalışmaları*. (Unpublished master's thesis). Istanbul Technical University, Department of Architecture, Istanbul.

Asatekin, G. 2005. Understanding traditional residential architecture in Anatolia, *The Journal of Architecture*, 10:4, 389-414, DOI: 10.1080/13602360500285518

Avcı, D. (2012). *Upgrading the Old: The Adaptation of Traditional Residential Buildings to the Contemporary Life.* (Unpublished master's Thesis). Middle East Technical University, Ankara.

Brandi, C. 1996 (Orig. published, 1963). Theory of Restoration I, *in Historical and Philosophical Issues in the Conservation of Cultural Heritage*, N. Stanley Price, M. K. Talley Jr., and A. M. Vaccaro (eds.), Los Angeles: The Getty Conservation Institute, pp. 230-235.

Bozkurt, S. G. (2019). A study on the courtyard features of the traditional houses of Antakya. *Turkish Journal of Forest Science*, 3(1).

Charter of the Built Vernacular Heritage. (1999). ICOMOS International Council on Monuments and Sites.

Çelebi, Y., 1982. Bir Grup Eski Antakya Evi. *Türk Etnografya Dergisi XVII.*

Demir, A., 1996. Through the Ages Antakya. Akbank Publications, İstanbul.

Demir, A., 2004, The Urban Pattern of Antakya. *Topoi. Orient-Occident.* Supplément 5. Antioche de Syrie. Histoires, images et traces de la ville antique. https://www.persee.fr/doc/topoi_1764-0733_2004_act_5_1_2898

Doğruel, F., & Leman, J. (2009). "Conduct" and "Counter-Conduct" on the Southern Border of Turkey: Multicultural Antakya. *Middle Eastern Studies*, *45*(4), 593–610. http://www.jstor.org/stable/40262691

Douglas, J. (2006). Building Adaptation (2nd ed.). Spon Press.

Erdem, E. (2007). *Intervention Principles in Wet Spaces for Contemporary Residential Use, in Eski Foça Traditional Dwellings.* Unpublished M. Sc. Thesis). Middle East Technical University, Ankara, Turkey.

Ersen, A. (2015). E. E. VIOLLET-LE-DUC Stilistik Rekompozisyon "Üslup Birliği" Anlayışı ve Rekonstrüksiyon Düşüncesinin Kökenleri. *Restorasyon ve Konservasyon Çalışmaları Dergisi*. (14). pp. 3-16. https://dergipark.org.tr/tr/pub/restorasyon/issue/48719/619891

Heynen, H. (2006). Questioning Authenticity. *National Identities*. 8(3). pp. 287–300. DOI: 10.1080/14608940600842607

Khan T.H. (2014). Spontaneous Transformation as an Integral Phenomenon of Inhabitation. Living with Transformation. pp. 21-33. SpringerBriefs in Geography. Springer, Heidelberg. DOI: 10.1007/978-3-319-00720-5_2

Lawrence, R. J. (1983). The Interpretation of Vernacular Architecture. Vernacular Architecture, 14(1), 19–28. doi:10.1179/vea.1983.14.1.19

Nara + 20: On Heritage Practices, Cultural Values, and the Concept of Authenticity, Heritage & Society. (2015). 8:2. pp. 144-147.

Nur, Y. B., Say Özer, Y. (2017). Temporality and Memory in Architecture: Hagia Sophia. ICONARP International Journal of Architecture and Planning. 5. pp. 60–76. https://doi.org/10.15320/ICONARP.2017.26

Philokyprou, M. (2015). Continuities and discontinuities in the vernacular architecture. Athens Journal of Architecture, 1(2), 111-120.

Riegl, A. 1996 (Orig. published, 1903). The Modern Cult of Monuments: Its Essence and Its Development. Historical and Philosophical Issues in the Conservation of Cultural Heritage, N. Stanley Price, M. K. Talley Jr., and A. M. Vaccaro (eds.). Los Angeles: The Getty Conservation Institute. pp. 69-83.

Rifaioglu, M. & Larkham, P. & Şahin Güçhan, N. (2010). The influence of Land Ownership and Control on Urban Form in the Historic Urban Core of Antakya (Antioch) 1. Formation and Persistence of Townscape, 17th Conference International Seminar on Urban Form - ISUF -. 2023 August, Hamburg/Lübeck, Germany. http://www.isuf2010.de/Papers/Rifaioglu_Mert.pdf

Rifaioğlu, M. N. (2012). *An enquiry into the definition of property rights in urban conservation: Antakya (Antioch) from 1929 title deeds and cadastral plans.* (Unpublished PhD Thesis). Middle East Technical University, Ankara, Turkey.

Rifaioğlu, M. N. (2014). The historic urban core of antakya under the ınfluence of the french mandate, and Turkish republican urban conservation and development activities. *Megaron*.

Roy, D., Kalidindi, S.N. (2017). Critical challenges in management of heritage conservation projects in India. *Journal of Cultural Heritage Management and Sustainable Development*. Vol. 7 No. 3. pp. 290-307. https://doi.org/10.1108/JCHMSD-03-2017-0012

Ruskin, J. (1889). The Seven Lamps of Architecture (6th ed.). George Allen. Kent.

Spector, S. (2003). Creating Schools and Strengthening Communities through Adaptive Reuse. National Clearinghouse for Educational Facilities. Washington, DC. Retrieved from eric.ed.gov/?id=ED479383

Şahin, N. (1995). *A study on conservation and rehabilitation problems of historic timber houses in Ankara* (Ph.D. Thesis). Middle East Technical University, Ankara, Turkey.

The Nara Document on Authenticity. (1994). ICOMOS International Council on Monuments and Sites.

Upton, D. (1993). The Tradition of Change. *Traditional Dwellings and Settlements Review*. 5(1), pp. 9-15.

Venice Charter - The International Charter for the Conservation and Restoration of Monuments and Sites (1964). ICOMOS International Council on Monuments and Sites.

Winawangsari, D., Hanan, H., Martokusumo, W. (2017). The strategy of Adaptation of Traditional House Architecture Bali Aga. International Journal of Research in Engineering and Science (IJRES). 5(8). pp. 1–8. Retrieved from http://ijres.org/vol5issue8.html

Young, G. (1991). Authenticity in Cultural Conservation. Australian Planner. 29:1. pp. 3-6. DOI: 10.1080/07293682.1991.9657492

APPENDIX

A. The questionnaire used for the user surveys in the studied cases

USER SURVEY - QUESTIONNAIRE

Date: .....

Address / Case Town: .....

I. Personal data and ownership status

1. Name – Surname:
2. Sex:
3. Age:
4. Occupation:
5. Education:
6. Where are you from?
   If the respondent was not born in the case town,
   - When did you move here?
7. How many years have you been living in this house?
8. Do you know when the house was built and by whom?
   If the respondent is not the first user of the house,
   - Do you know the previous owners of the house?
9. Do you live here whole the year (both in summer and winter)?
   If periodic,
   - Where else do you go during the year, how long and why?
10. Are you the owner or a tenant?
11. How many people do you live in the house? Who lives on?

II. User-house relationship and satisfaction:

1. What part of the house do you use mostly throughout the **day and night**?
2. What part of the house do you use mostly throughout the **summer and winter**?
3. What are the features of your house that you are most satisfied with? Which part/feature of your house is the most valuable?
4. What are the features of your house that you are most dissatisfied with? Which part/feature of your house is the most problematic?
5. Do you maintain or repair your house?
   If so,
   - Why, how and how often?
6. Has your electricity or water installation been renewed? If so, when?
7. Have you made any other alterations in your house?
   If so,
   - When was the last one? What has changed? Who made them?

25. If your building needs a repair / alteration to reduce the amount you pay for heating and cooling, would you agree to spend for that repair?

*If the answer is **'yes'**,*

26. What is the maximum amount that you will agree to pay every month for a year?

27. What will you do if the cost for the repair turns out to be more than you expect?

……. *I will still get it done*
……. ***I will think about it****
……. ***I will not get it done****

28. *Would you change your decision positively, knowing that this repair will reduce the damage to nature in the long run?

*If the answer is **'no'**,*

26. Would you change your decision positively, knowing that this repair will reduce the damage to nature in the long run?

*If the answer is **'yes'**,*

27. What is the maximum amount that you will agree to pay every month for a year?

28. What will you do if the cost for the repair turns out to be more than you expect?

……. *I will still get it done*
……. *I will think about it*
……..*I will not get it done*

*If the answer is **'no'**,*

Proceed to 29th question.

29. If you had the enough money, would you rather improve the conditions of this house or would you move elsewhere? Why?

8. Are there any local builders? Who?
9. If you had the chance, what else would you like to change in your house? How?
10. Are you satisfied with the region in which your house is located?
    - What are the features that you **like** in this region?
    - What are the features that you **do not like** about this region?
11. Do you think there has been a change in the seasons when compared to the past? *(It used to be warmer / humid or there used to be more rain etc.)*
12. Do you think your house is able to adapt to these changes?
13. What is the biggest risk / threat to your house?
14. Has your house suffered from or damaged by any disaster such as earthquake, flood or fire?
    If so,
    - How was it damaged? Did you repair it? How?
15. Are there any other houses in this area affected by disasters except your house?

III. Thermal comfort parameters

15. How do you heat your house? What fuel do you use?
16. How do you cool your house?
17. Does your house get warm easily in winter and cool in summer?
18. Do you heat the entire house or only part of it during the winter?
    If partially,
    - Which parts? Why?
19. Do you need to ventilate your house?
    If so,
    - How many times do you ventilate your house during the day? When?
20. Do you experience any problems in your house such as damp and mould; stuffy air; dust; unpleasant smell etc.?
    If so,
    - In which part of the house?
    - When of in which season does it happen more frequently?
    - How do you tackle this problem?
21. Where do you dry your laundry?
    If inside the house,
    - How often?
22. Is there a particular season where the comfort conditions become particularly poor?

IV. Economic structure and willingness to pay

23. How much on average do you spend for heating and cooling per month?
    - How? How much does it change regarding the seasons?
    - Can you share your invoices for the next 12 months with us? Can you note the invoice costs?
24. Do you think the invoices are high? Do you think this amount is high considering your monthly income?

V. Feedback on thermal comfort parameters[1]

How would you explain the following **indoor conditions** of your traditional house in **summer season**?

- **Indoor Temperature** (please tick one)

Cold (-3)	Cool (-2)	Slightly cool (-1)	Neutral (0)	Slightly warm (+1)	Warm (+2)	Hot (+3)

- **Humidity – Moisture content in the atmosphere** (please tick one)

Very dry (-3)	Moderately dry (-2)	Slightly dry (-1)	Neutral (0)	Slightly humid (+1)	Moderately humid (+2)	Very humid (+3)

- **Air movement inside the building** (please tick one)

Very still (-3)	Moderately still (-2)	Slightly still (-1)	Acceptable (0)	Slightly draughty (+1)	Moderately draughty (+2)	Very draughty (+3)

How would you explain the following **indoor conditions** of your traditional house in **winter season**?

- **Indoor Temperature** (please tick one)

Cold (-3)	Cool (-2)	Slightly cool (-1)	Neutral (0)	Slightly warm (+1)	Warm (+2)	Hot (+3)

- **Humidity – Moisture content in the atmosphere** (please tick one)

Very dry (-3)	Moderately dry (-2)	Slightly dry (-1)	Neutral (0)	Slightly humid (+1)	Moderately humid (+2)	Very humid (+3)

- **Air movement inside the building** (please tick one)

Very still (-3)	Moderately still (-2)	Slightly still (-1)	Acceptable (0)	Slightly draughty (+1)	Moderately draughty (+2)	Very draughty (+3)

[1] ASHRAE, Thermal environmental conditions for human occupancy, ANSI-ASHRAE standard 55-2004.

What is your ranking for the **overall thermal comfort** of your house? (Please tick one)

- **In summer season:**

Very uncomfortable	Uncomfortable	Slightly uncomfortable	Comfortable	Very comfortable

- **In winter season:**

Very uncomfortable	Uncomfortable	Slightly uncomfortable	Comfortable	Very comfortable