AN INFORMED PROCESS FOR NEW BUILDING DESIGN IN HISTORIC SETTLEMENT: THE CASE OF İBRAHİMPAŞA VILLAGE, CAPPADOCIA-TURKEY

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ABSTRACT

AN INFORMED PROCESS FOR NEW BUILDING DESIGN IN HISTORIC SETTLEMENT: THE CASE OF İBRAHİMPAŞA VILLAGE, CAPPADOCIA-TURKEY

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Historical settlements are heritage sites which are formed in time, in accordance with the landform, climate, local materials and traditional living styles which all together specify the original characteristics of that area. They should be able to change and develop according to the needs, while they also maintain the continuity of their original characteristics. In this concept, new buildings in historical settlements is a conservation problem and solutions should be provided to maintain the values of the settlement and its historical continuity.

For designing new buildings in historical settlements, it is important to understand the heritage site in order to respond to the surrounding context and to provide historical continuity. The aim of this study is to understand a historical settlement with its constituent parts and its context in order to control the change with contribution of new buildings, while maintaining the values and historical continuity of the site. It is discussed over an example of İbrahimpaşa Village, which is related to town of Ürgüp, Nevşehir in the Cappadocia region and through the concept of *informed conservation* as a method for understanding and designing new buildings in heritage sites, which every architect who will evaluate and design new buildings in historical settlements would use.

Keywords: Cappadocia, İbrahimpaşa, Historic Settlement, New Building, Informed Conservation

ÖZ

TARİHİ YERLEŞİMLERDE YENİ YAPI TASARIMI İÇİN BİLGİLENDİRİLMİŞ KORUMA ÖNERİSİ: İBRAHİMPAŞA KÖYÜ, KAPADOKYA-TÜRKİYE ÖRNEĞİ

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Tarihi yerleşimler zaman içerisinde; doğal yapı, iklim, bölgede bulunan malzeme ve geleneksel yaşam biçimi ile şekillenen ve bütün bunların, o alanın özgün karakterini oluşturduğu miras alanlarıdır. Bu alanlar özgün niteliklerini koruyup tarihsel sürekliliklerini sağlarken aynı zamanda var olan ihtiyaçlar çerçevesinde değişmeli ve gelişebilmelidir. Bu bağlamda, tarihi yerleşimlerde yeni yapı bir koruma problemi olarak kabul edilmelidir ve değişimle beraber yerleşimin değerlerinin nasıl korunacağı ve tarihsel sürekliliğin nasıl sağlanacağın konusuna çözüm önerilmelidir.

Tarihi yerleşimlerde yeni yapı tasarlayabilmek için miras alanının bağlamını anlamak ve bunun ışığında tarihsel sürekliliği sağlayabilmek önemlidir. Bu çalışma, tarihi bir yerleşimin değerlerini korumak ve tarihsel sürekliliğini devam ettirmek için, onu oluşturan parçalarla birlikte nasıl anlamak gerektiğini ve yeni binaların entegrasyonu ile değişimin nasıl kontrol edilebileceğini araştırmayı amaçlamaktadır. Bu kapsamda Kapadokya bölgesinde bulunan Nevşehir ilinin Ürgüp'e bağlı İbrahimpaşa köyü örnek olarak çalışılmıştır. Tarihi yerleşimleri anlamak ve bu alanlarda yeni yapı tasarlamak için *koruma amaçlı bilgilendirme* bu örnekte bir metot olarak ele alınmış, üretilen analizlerin mimarlar tarafından değerlendirilerek yeni yapı tasarımına altlık olması hedeflenmiştir.

Anahtar Kelimeler: Kapadokya, İbrahimpaşa, Tarihi Yerleşim, Yeni yapı, Bilgilendirilmiş koruma

To my beloved family...

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CHAPTER 1

INTRODUCTION

Historical settlements are heritage sites which are formed in time, in accordance with the landform, climate, local materials and traditional living styles which all together specify the original characteristics of that area. They should be able to change and develop according to the needs, while they also maintain the continuity of their original characteristics. In this concept, new buildings in historical settlements is a conservation problem and solutions should be provided to maintain the values of the settlement and its historical continuity.

New buildings in historical settlements is a subject discussed concurrently with modernism. After the scope of conservation expanded from monument scale to an environmental scale and with the destructive results of the World Wars, conservation of historical settlements became an important attitude. With the rapid changes brought by modernization, materials and construction techniques changed bringing the problem of integration along. It was followed by development of new approaches regarding the principles for new buildings in historical settlements.

For designing new buildings in historical settlements, it is important to understand the heritage site in order to respond to the surrounding context and to provide historical continuity. In this thesis, how to understand the significance of a site for a new building design is discussed and İbrahimpaşa Village, which is related to town of Ürgüp, Nevşehir in the Cappadocia region, is chosen as an example.

Cappadocia region is unique in terms of its geological formation which started 60 million years ago (Giovannini, 1971, s. 59), natural features formed by different volcanic complexes, history which dates back to prehistoric times and architecture which involves different settlement patterns pertain to the region (Yüncü, 2015, s.

113). There are various studies about different aspects of Cappadocia, but regarding the İbrahimpaşa Village, there only two extensive studies. First one is Özlem Karakul's "A Holistic Approach to Historic Environments Integrating Tangible and Intangible Values Case Study: İbrahimpaşa Village in Ürgüp" and the second is Funda Solmaz's "Construction Techniques of Traditional Houses in Nevşehir Case Study on Ürgüp, Mustafapaşa and İbrahimpaşa" which form an important basis for this study.

In order to make this study, an overview of approaches and frameworks defined in international documents and meetings starting from 1967 to today are presented with concentration on Valletta Principles as the most up-to-date document, followed by the concept of "Informed Conservation" defined by English Heritage as a system for understanding and designing new buildings in heritage sites. İbrahimpaşa Village is analyzed and evaluated as an example for this process, concluding with a proposal involving the required information for this system.

1.1. Definition of the Problem

Historical settlements are faced with the threats of rapid and/or uncontrolled changes and urbanization processes which results in the disruption of their historical continuity. Improper use of new materials and technologies which are introduced with modernism, led to new buildings which ignore their context. As the aim of conservation is maintaining the values and historical continuity, designing new buildings in historical settlements becomes a conservation problem.

Historical settlements are places with unique characteristics which evolved gradually through time providing harmonious outcomes and they need to undergo a continuous change to maintain their historical continuity. The conservation problem in this respect is, how to manage this change with the tools of a new building.

Controlling change with maintaining the values and historical continuity, requires a good understanding of the place, its constituent parts and its context. Only then it is

possible to assess the significance of the place and its values (Clark, 2001). In order to have a successful new design process in heritage sites, the designer should be able to evaluate all the obtained information, define the things which can be used as design criteria and design a new building without harming the historical continuity but also expressing its own time.

Figure 1.1. Process of new building design in heritage sites

The problem in Turkey concerning this issue is that, for every new building design in heritage sites, the architect is responsible for obtaining and evaluating all the information regarding the site. This requires a lot of time, money and effort and still causing problems and addition to that, not all architects have a good understanding of the place. On the other hand, in most cases, the prepared conservation plans define new building rights bringing some limitations, without encouraging the imagination and creativity of the architect which results in bad imitations of historical buildings.

Yet, there should be a system to prepare and gather all the information according to a site accessible to any of the bodies who are concerned with designing new buildings in heritage sites for an informed process. Then, the architects should be able to define the principles for the site, through an understanding of the significance of the place and design a new building which is in harmony with the existing historical pattern, respecting its values and maintaining historical continuity. This evaluation of the site made by each designer himself, will provide new buildings which enrich the historical settlement with new relations.

The question which arises here is how to understand a historical settlement in order to provide successful new building design decisions about the site. It is important to

determine which information are needed to define the significance of a place and about what we should be careful to maintain the values.

1.2. Aim and Scope of the Study

This thesis focuses on the problem of new buildings in historical settlements as a conservation problem in order to maintain their values and historical continuity. Those settlements are formed in time with a continuous process of change, which constitute the characteristics of the place. With the rapid changes brought by modernization, they are either abandoned or new buildings are built with the use of new technology which ignores their context.

The aim of this study is to understand a historical settlement with its constituent parts and its context in order to control the change with contribution of new buildings, while maintaining the values and historical continuity of the site. It is an example of gathering information about a site which will form a basis for *informed conservation* and specify the significance of a place which every architect who will evaluate and design new buildings in historical settlements would use.

Within this framework, İbrahimpaşa Village is selected as a case study because of its physical environment, mostly keeping its traditional characteristics, authenticity and continuity of the living culture differentiating itself from its nearby settlements in the Cappadocia region. As a result, it is intended to be understood with its constituent parts and context with the necessary information to define its values and significance.

Firstly, the approaches and framework defined in international documents and meetings with reference to new buildings are presented in chronological order, related with the conservation developments of heritage sites in order to understand the arrived point of conservation studies as a guide for future developments. It is followed by the concept of "Informed Conservation" which provides advice on techniques for understanding historical buildings and their landscapes. The second chapter concludes

with what type of information is needed and how it is obtained for *informed conservation* in order to achieve a successful new building design in heritage sites.

In the third chapter, Cappadocia is studied in a regional context in order to have a general idea of regions history and characteristics. Then, İbrahimpaşa Village is analyzed starting from village scale, then concentrating on a determined area in the village. The village was not affected by the population exchange in 1923 like the other neighboring villages which means the historical continuity wasn't disrupted both in physical and social terms. Today, it is in a process of change caused by migration and tourism, resulting in traditional buildings which are abandoned or changed hands for tourism investments. Therefore, it is important to understand the significance of the village to preserve its authenticity and improve its values with contribution of new buildings.

Within the scope of this thesis, buildings, open areas and elements which contribute to the traditional settlement fabric are analyzed in the determined study area along with social aspects in order to provide the necessary information. Then a detailed assessment is made in order to understand the settlement fabric and to define the values and significance of place.

As a result, all the necessary information about İbrahimpaşa Village in order to understand is obtained to form a basis for *informed conservation* and specify the significance of a place which every architect who will evaluate and design new building in the village will use.

1.3. Methodology

1.3.1. Methodology of the Thesis

The problem of new building in historical settlements requires a comprehensive study, including studies of different disciplines for different scales of information. As the context is the historical settlements, understanding the characteristics of the place and

proposing a new building design through *informed conservation* is the main concern of this study.

In Chapter 2, an overview of approaches and framework defined in international documents and meetings with reference to new buildings in historical settlements are presented with special emphasis on Valletta Principles, as it is the most up-to-date document. The information is gathered from resolutions of meetings and from different resources which will be mentioned in the study. It is followed by the concept of "Informed Conservation" as a method for understanding and designing new buildings in heritage sites. It is promoted by English Heritage as a value-based approach in order to define the significance of a place, which provides advice on techniques for understanding historical buildings and their landscapes. The book of Clark (2001) was used as a main source on this subject. As a result, this chapter defines how to understand a historical settlement and what type of information is needed and how it can be obtained for a successful new building design.

Chapter 3 begins with the Cappadocia region in general, continued with İbrahimpaşa Village. In order to understand the village, the information about its general characteristics, history and traditional settlement fabric were presented. General characteristics and history were obtained from various document research whereas for the settlement fabric, site surveys were held. For the analysis of the traditional settlement fabric, analysis were made both for open and built-up areas. For the open areas; use, ownership, categories and characteristics were explained whereas for the built-up areas use, categories, structural system and condition, materials, change and architectural elements were analyzed. The required information were framed according to the previous chapter.

Chapter 4 consists of assessments of the traditional settlement fabric and buildings of the village based on the analysis made in the previous chapter. The information about building lots, buildings and their relations were used to determine the typologies and their evolution through time. At the end of this chapter, values, problems and

potentials of the village are presented and this chapter is an upper scale evaluation of the İbrahimpaşa Village which provides information and understanding of the site in order to make a decision without putting the significance at risk.

Chapter 5 concludes with a brief explanation of the process of *informed conservation*, on the example of İbrahimpaşa Village regarding to the defined principles and information mentioned in Chapter 2.

1.3.2. Methodology of the Site Survey

The information about the İbrahimpaşa Village was gathered from the Municipality of Ürgüp (Ürgüp Belediyesi), the Ürgüp Regional Conservation Council of Cultural Properties (Ürgüp Kültür Varlıklarını Koruma Bölge Kurulu)[1] and the General Directorate of Mapping (Harita Genel Müdürlüğü – HGM). The 1/1000 scale basemap of the village as NetCAD data, basemap of the village from 1972 as .jpg files, aerial photographs taken in the years 1958, 1976, 1992 and 2010[2] and conservation council decisions[3] comprise the basic data gathered from the institutions.

The first site survey for gathering above mentioned information and understanding the site, was made in October 2015. The digital basemap provided by the Municipality of Ürgüp didn't provide information about the building-lot relationships, as it only had the outer borders of the building blocks (Figure 1.2). Therefore, a new basemap is prepared during the site survey using the lot borders, regarding the present physical environment. In this site survey, information about open and built-up areas have been collected on the prepared basemap and the village is systematically photographed.

[1] Hereupon, this institution will be mentioned as the Conservation Council of Ürgüp
[2] Aerial photographs provided by HGM are given in Appendix A.

Figure 1.2. Example of the digital basemap provided from Municipality of Ürgüp

After the first site survey, the base map is prepared and the borders of the primary and secondary study areas are defined, according to the traditional building density and building characteristics.

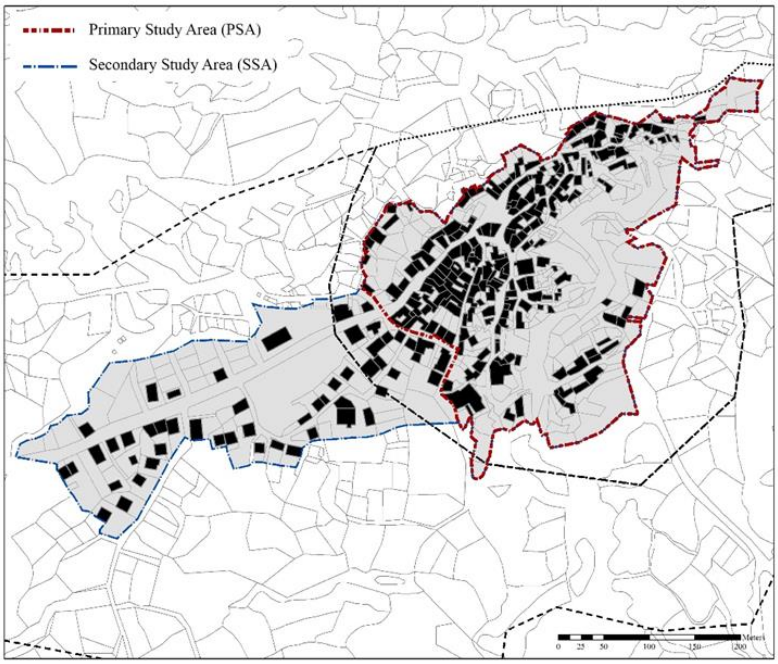


Figure 1.3. Borders of primary and secondary study areas and included buildings

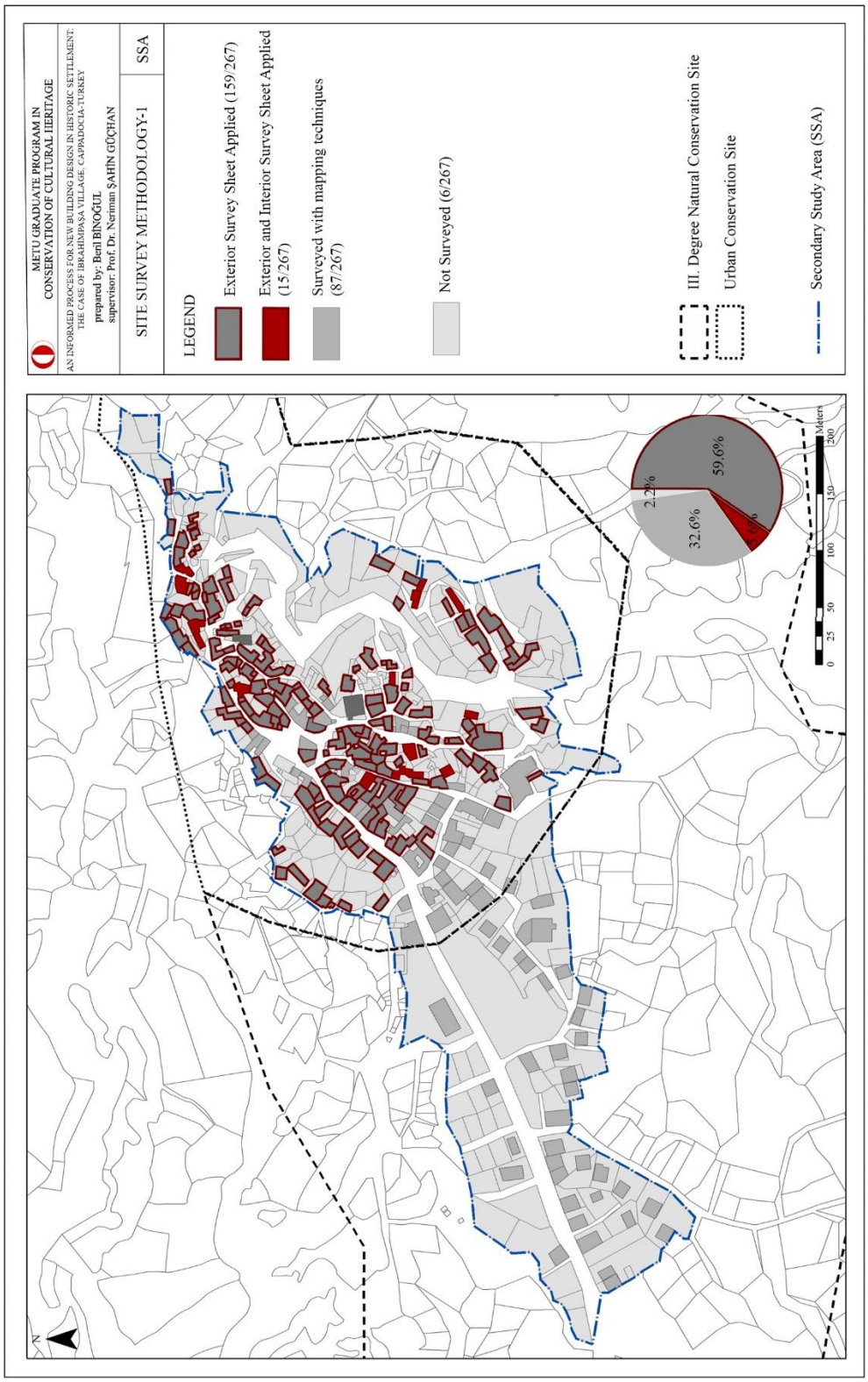


Figure 1.4. Site survey methodology

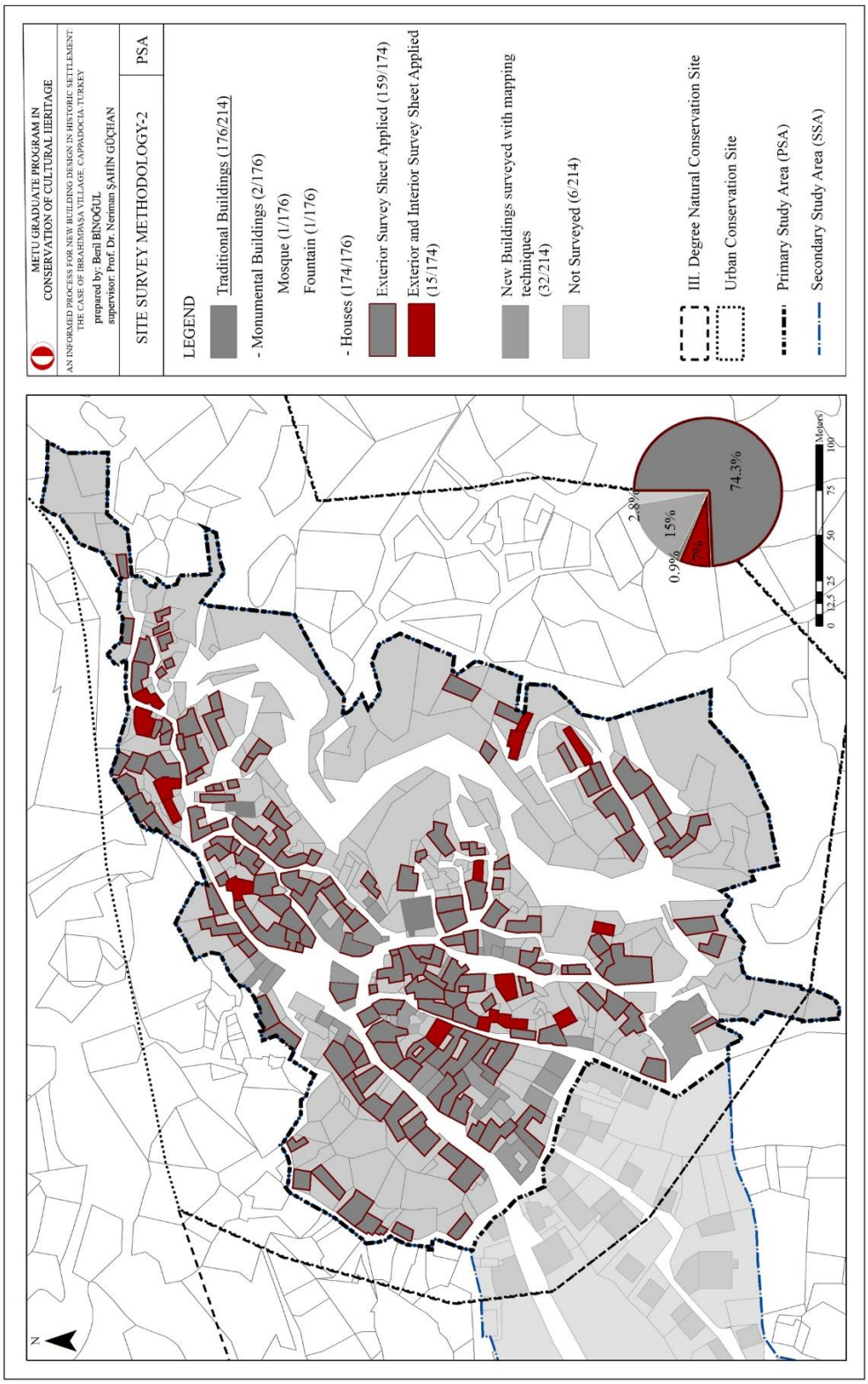


Figure 1.5. Site survey methodology for the primary study area

The second site survey was held in April 2016, and two different methods were used for the two study areas. Exterior survey sheets[4] were prepared and filled for the traditional buildings in the primary study area, whereas the buildings in the secondary study area and the new buildings in the primary study area were only surveyed with mapping techniques with the following information: registration status, ownership, building category and number of storeys. In the primary study area, 176 out of 214 buildings are traditional buildings and 174 exterior survey sheets are applied.

The third site survey was held in April 2017 and interior survey sheets were applied to 15 traditional buildings in the primary study area. For each building, architectural sketch drawings were prepared, detailed photographs were taken, and hand measurements of depth, width and height of the units were made in order to produce scaled sketches of the dwellings.

The information collected from the site and the institutions were added to a database using Geographic Information Systems (GIS). For the buildings, building lots, and open areas in the study area feature classes are created in order to enter the information collected in different fields. In order to do that, a coding system was developed with letters and numbers symbolizing different information for every field. Besides, natural features, natural and man-made elements are also added to the database as symbols. The maps presented in this study are exported from this database on ArcGIS, creating a map for the desired field or several fields together. Additionally, AutoCAD and Adobe Photoshop were used as data processing and presentation tools as secondary computer programs.

[4] Survey sheets are given in Appendix B

CHAPTER 2

INFORMED CONSERVATION FOR NEW BUILDINGS IN HISTORICAL SETTLEMENTS

Historical settlements are formed in time, in accordance with the landform, climate, local materials and traditional living styles which all together specify the original characteristics of that area. As the conservation studies evolved from focusing on a single monument to an urban scale, historical settlements started to be discussed with their physical and social environments. The concern of new buildings in historical settlements came along with the discussion of conservation of historical settlements.

Until the 19th century, there was a gradual development of historical areas which produced harmonious results, because the building materials, construction systems, and scales remained consistent over the time. After the second half of the 19th century, new materials, construction systems, infrastructure and transportation were introduced by modernism, which challenged the organic model. This rapid change disrupted the historical continuity of the settlements by ignoring the context and losing cultural and architectural values. Historic settlements should be able to change and develop according to the needs, while they also maintain the continuity of their original characteristics to continue their existence. In this concept, new buildings in historical settlements is a conservation problem and solutions should be provided to maintain the values of the settlement and its historical continuity.

For designing new buildings in historical settlements, one of the main considerations is that the new building should respond to its surrounding context, which is unique for each place evolving through time. By saying context, what is referred is “genius loci” of Norberg-Schulz, and the environmental character of the historical settlement, from which the new buildings should take their design culture. Therefore, defining the

characteristics and significance of a place is the first step of a new building design in historical settlements. It includes physical and social environments of the place which should be analyzed for a good perception of the place in order to be able to reinterpret with contemporary terms.

Preserving historical continuity is another consideration of new buildings in historical settlements, in order to continue their existence with their values. Change is inevitable over time but managing the change becomes a design problem. The new buildings which will be designed in historical settlements, should be considered as an integral part of the evolutionary process. This is only possible with an understanding of the reproduction system of the past and how the physical form of the settlement changes over time. In order to do that, a systematic research of the existing fabric and its tendencies is required to create a framework for future developments.

In this chapter, approaches and framework defined in international documents and meetings with reference to new buildings are presented in chronological order, related with the conservation developments of heritage sites. Valletta Principles, which is the latest and the most comprehensive international document, was presented in order to understand the arrived point of conservation studies discussing new interventions and as a guide for future developments. It is followed by the concept of "Informed Conservation" introduced by English Heritage which provides advice on techniques for understanding historical buildings and their landscapes. This chapter concludes with what type of information is needed and how it is obtained for *informed conservation* in order to achieve a successful new building design in heritage sites according to the principles defined in Valletta.

2.1. Approaches and Framework defined in International Documents and Meetings with Reference to New Buildings in Historical Settlements

End of the 19th century was a turning point for the conservation of historical settlements, as new buildings which are inharmonious with the tissue were built using

the new technological developments of industrialization. Until the discussions which started on an international level, conservation of historical fabric was only focused on single monuments. Athens Charter in 1931, introduced conservation at the environmental scale for the first time centering around the monuments, disregarding the architectural aspects of the fabrics. This conference became the first international meeting, which subjecting new buildings, that were restricted taking into consideration the character of their surroundings (Erder, 1975, s. 277).

In the first symposium of ICOMOS (International Council on Monuments and Sites) in 1967, it was declared that the "vitality" of the historical tissues was the basic criteria for a successful conservation. This was the first time that relating historical settings to modern cities was argued in an international meeting. It was stated that historical tissues should be "an integral part of the process of urban and economic developments" (Horler, 1975, s. 10). As no design methods for the "introduction of a modern architecture into ancient surroundings" were discussed, the term "modern" remained open in the first symposium of ICOMOS (Horler, 1975, s. 20).

The Brussels meeting in 1969 was the first time that the term "integrated conservation" was discussed on an international basis mostly presenting the legislative and administrative regulations. After Brussels, the Budapest Symposium was held in 1972 in connection with the Third General Assembly of ICOMOS, on the introductions of contemporary architecture into ancient groups of buildings. The following conclusions are adopted in the symposium[5]:

1. The introduction of contemporary architecture into ancient groups of buildings is feasible in so far as the town-planning scheme of which it is a part involves acceptance of the existing fabric as the framework for its own future development.
2. Such contemporary architecture, making deliberate use of present-day techniques and materials, will fit itself into an ancient setting without affecting the structural and aesthetic qualities of the latter only in so

[5] Resolutions of the Symposium on the introduction of contemporary architecture into ancient groups of buildings, at the 3rd ICOMOS General Assembly (1972)

far as due allowance is made for the appropriate use of mass, scale, rhythm and appearance.

3. The authenticity of historical monuments or groups of buildings must be taken as a basic criterion and there must be avoidance of any imitations which would affect their artistic and historical value.

Another important meeting for new buildings is Kazimiers Dolny (Madran, Özgönül, 1999, s. 138) in 1974, which introduced "systematic analyses investigating the fundamental relationships" and "scientific researches investigating the fundamental relationships between society and the architectural inheritance of the past" for successful practices of new buildings.

In the Bruges Symposium in 1975, which was after the Budapest Symposium, "Conservation of Historic Towns" were discussed. The Principles governing the rehabilitation of historic towns accepted the "possibility of new buildings in historic settings" declaring that "respect for authenticity implied the integration of modern architecture in old towns" (Jokhilehto, 1998, s. 46).

Following the Bruges Symposium, the year 1975 was declared as European Architectural Heritage Year and two important documents were released: the European Charter of the Architectural Heritage and the Amsterdam Declaration. Both point out the necessity for an "integrated conservation" to protect the architectural heritage, which calls for co-operation of architecture with urban and regional planning. This conservation model can be achieved by considering economical, social, administrative and legislative aspects and involving both local authorities and citizens. Considering its relation with new buildings, Karakul (2002, s. 27-28) mentions that:

> The legislation subjecting the new buildings to certain restrictions with regard to their volume and dimensions is thought as important to solve the economical problems of the model according financial advantages and taxes available for new buildings in the same proportion for the conservation of old buildings.

The following year, UNESCO organized a conference in Nairobi introducing safeguarding plans for practicing the integrated conservation model. It draws attention to the threat of modern urbanization, which increases the scale and density of the buildings. This attitude might ruin the environment and character of the adjoining historic areas and to prevent that, architects and town planners should be careful that the historic areas and contemporary life are harmoniously integrated. It emphasizes "the necessity of analysis of the urban context taking into consideration of the general character of the group of buildings and its dominant features, like height, colour, material and form"[6].

The Barcelona Meeting in 1990 (Madran, Özgönül, 1999, s. 382), was in a form of a workshop on planning, designing and implementation of rehabilitation projects in historical settlements. General outcome was "that planning, designing and execution of building works in historical settlements make the final phase of the integrated process of restoration or rehabilitation of built heritage" (Karakul, 2002, s. 29). New projects are the signs of our times and their integration with the historical settlement is possible with an in-depth study of the characteristics of the built environments.

The Vienna Memorandum in 2005 was on "World Heritage and Contemporary Architecture – Managing the Historic Urban Landscape". It aimed to contribute to the "the current debate on the sustainable conservation of monuments and sites, for an integrated approach linking contemporary architecture, sustainable urban development and landscape integrity based on existing historic patterns, building stock and context[7]. It implies that all designed interventions in a historical setting should be developed sensitively such as open areas, new constructions and additions to historic buildings. It is important that the design fits into the historic pattern and architecture remaining within the limits and contribute to the values of the settlement. The method to be able to do this, requires a deep understanding of the history, culture

[6] UNESCO, Records of the General Conference, 19th session, Nairobi in 1976 (for full text see https://unesdoc.unesco.org/ark:/48223/pf0000114038.page=136)
[7] UNESCO, Vienna Memorandum on "World Heritage and Contemporary Architecture – Managing the Historic Urban Landscape", 2005 (for full text see https://whc.unesco.org/en/documents/5965)

and architecture of the place using the tools for analyses of typologies and morphologies.

The most up-to-date international document is “the Valletta Principles for the Safeguarding and Management of Historic Sites, Towns and Urban Areas” which was introduced in ICOMOS meeting in Valletta in 2011. The aim of this document is to propose principles and strategies which can be applied for every intervention in historical settlements and urban areas. It implies that change is inevitable which concerns human settlements, triggered by new conditions in cities such as globalization, politics and new business practices and new international framework on urban conservation is aware of these new demands.

As seen from the progress mentioned above, the conservation studies evolved from focusing on a single monument to an urban scale which necessitates an interdisciplinary study including various fields. At this stage, new buildings are considered as conservation tools, which contribute to the values of the historical settlements without harming the legibility and the harmony of the existing historical settlement. As it is the latest and most comprehensive document, Valletta Principles implies the present situation on an international basis. The principles were presented and evaluated in detail by Altınöz (2013, s. 149-152), in order to understand the arrived point of conservation studies discussing new interventions and as a guide for future developments.

An important aim which is defined in Valletta Principles is the conservation of heritage areas while corresponding contemporary needs. Historic settlements should be able to change and develop according to the needs, while they also maintain the continuity of their original characteristics. The new buildings, which will be designed in historical settlements, should be considered as an integral part of the evolutionary process of the site. Basic principles for new interventions in heritage sites in Valletta Principles are presented by Altınöz (2013, s. 149) as;

- New interventions should respect the values and context of the site

- They should maintain the historical continuity and contribute to the enrichment of the site
- Respect to the historical values, layers and pattern of the site should form the basis for designing new buildings
- New architecture should be in harmony with the spatial organization and traditional morphology of the site, also reflecting its own time and architectural trends
- They should avoid the negative impacts of destroying the historical settlement fabric, disruption of historical continuity, and discrepancies in the site
- The creativity of the architect should be encouraged with an understanding of the sense of place without harming the existing architectural features.
- The architects and planners should encourage understanding the significance of the place and its context

In accordance with these principles, all interventions should respect tangible and intangible values and they all should aim to improve the life quality of the inhabitants and environmental quality. Change in the area should be controlled in order not to have any negative effects on the historical settlement fabric. Historical settlement fabrics and their context should be evaluated as a whole, conserving all its spatial, environmental, social, cultural and economic features and time is defined as a parameter which should be controlled in order to prevent drastic changes.

According to the principles, the interventions should be the end product of a process which involves detailed studies in order to understand the significance of the place and to determine the values. For this approach, different disciplines and stakeholders should cooperate for any intervention which will take place in the site. Management is also very important in order to have a clear and organized process for the sustainability and development of the heritage sites.

The proposals in Valletta Principles about new buildings are presented by Altınöz (2013, s. 150) as;

- New buildings should be in harmony with the existing historical tissue
- New buildings should respect the scale of existing buildings, evolution pattern of the architecture of buildings and settlement pattern, while finding its own expression
- Dominant features of the settlement such as; general architectural features, heights, colours, materials, forms, facades, roofs, relations of built-up and open areas, proportions, location of the buildings in lots and lot sizes should be analysed before any new intervention decision.
- Viewpoints, perspectives and landmarks, which are very important for the perception of the area, should be respected
- Existing state of the settlement should be well documented and analysed before any new intervention
- If the new intervention brings new functions to the area, it should be also evaluated also in this respect

To sum up, the new building proposals which respect the above-mentioned principles, which tends to understand the existing and try to respect its physical, spatial, functional and visual relationships are to be applied in heritage sites. In order to achieve this, the site should be understood from various angles with its constituent parts and its context.

2.2. Informed Conservation for New Buildings in Historical Settlements

The process of conservation of heritage sites is a dynamic process which involves change and development according to the needs. In order to achieve a successful conservation process and allow the passing on of heritage sites to future generations, it is important to understand what is valuable and significant of that site. This process involves making careful judgements through an understanding of a place, its constituent parts and its context in order to be able to make any decisions. As new

buildings are considered as conservation tools, understanding historical buildings and their landscapes should be an integral part of the creative design process.

On this subject, English Heritage promotes a value-based approach in order to define the significance of a place, which provides advice on techniques for understanding historical buildings and their landscapes using the term “Informed Conservation”. It proposes guidelines directed at any conservation adviser who is a part of a conservation process to inform from the scale of the work to the choice of materials and techniques.

These guidelines are defined as a first attempt to draw together the different techniques and approaches in order to understand the significance of buildings and their context as a part of conservation process (Clark, 2001, s. 14). It is presumed that every architect should have a general understanding of historical buildings and their context to in order to design new buildings in heritage sites. But, a successful conservation process requires an upper scale evaluation, providing sufficient information and understanding of the site in order to make a decision without putting the significance at risk. In these cases, this information should be prepared and provided to any of the bodies who are concerned with conservation of heritage sites. This information requires:

- A documentary research of the history of the site, use and change through time
- Historical information which is needed for a wider context (such as architecture, landscape, construction etc.)
- Visual descriptions and assessments
- Image-based and measured survey of the site
- Analysis of change, alteration and use demonstrated by phasing and analytical drawings
- Investigation of specialists (dendrochronology, paint research, material analysis, ecological geological or other assessments)

Once the settlement fabric is identified, the significance of the fabric should also be identified, and the values must be tied to physical fabric to be able to make decisions. After obtaining all this information, the designer should evaluate them before making any proposals and establish what is significant and what impact will any new proposal will have on the site. This process is "impact assessment" which is defined as a "codification of the basic analysis undertaken by any competent conservation adviser" (Clark, 2001, s. 22) and it depends upon the understanding the historical buildings and their context. Mitigation, meaning minimizing and avoiding damage, is the principal aim of the impact assessment process which necessities a careful design without compromising the existing significance of the site and a good choice of materials.

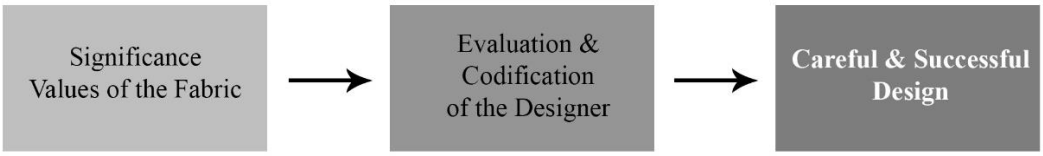


Figure 2.1. Careful & Successful design process

Assessing the significance of the place after obtaining this information is the basis for a new building process in heritage sites and it comes from the values which are attached to the place. It also requires a general understanding of the public values that underpin places, as historical settlements are also significant for their association with its inhabitants and memories. Once the significance of the place is set out, it is easier to manage and make decisions.

"Informed Conservation" also requires a shared responsibility between everyone who is involved in the conservation process. The provided information should always be shared, and the possible results of any intervention should be discussed between these bodies.

- National organizations, with funding roles or responsibility for stewardship and procedures for understanding
- Local authorities, through planning and registration are in a position to help applicants understand the benefits of good information. They can also consider they are in a position either to approve or reject the applications which don't provide sufficient information in order to make a responsible decision
- Conservation advisers (architects, planners, engineers, archaeologists, surveyors etc.), can ensure that their advice is based on a clear understanding of the significance historical buildings and their context
- The voluntary sector, which may include regional and local bodies, can facilitate local knowledge and participation in the process
- Owners, as their awareness will impact on their commitment to caring for it

This process of "Informed Conservation" involves also costs which will be made, but proper information provided at the beginning can save time and money in the long run. The items which needs to be considered are the preparation of management plans, analysis and recording of buildings, research, investigation and archeology (if needed).

In the light of the what is mentioned above, the new interventions in heritage sites should be the end product of a process which involves detailed studies in order to understand the significance of the place and to determine the values. For this approach, different disciplines and stakeholders should cooperate for any intervention which will take place in the site. Management is also very important in order to have a clear and organized process for the sustainability and development of the heritage sites.

The defined process starts with a documentary research about historical information providing a general understanding of the heritage site. In order to understand the traditional settlement fabric and its evolutionary process with its components, the existing buildings in the heritage site should be analysed in terms of their functions, scale, materials, forms, facades, relations with open areas, proportions, general

architectural features, lot relations and changes over time. The building lots should be also analysed in terms of their features and their relationship with the landscape. These analyses will lead to an understanding of the settlement fabric and its spatial organization. Viewpoints, perspectives and landmarks are also very important for the perception of the area.

After these information are obtained, settlement fabric will be understood, the evolutionary process of the settlement and its components will be defined in order to be able to maintain the historical continuity and values will be determined which are attached to the place. This process will lead to an understanding of the significance of a place which the designer should take into consideration before designing a new building. The designer should create a new design with this understanding without harming the historical continuity but also expressing its own time.

In the following chapter, a case study will be studied as an example for an understanding of a heritage site for a successful new building design. In order to progress correspondingly to *informed conservation*, it starts with a documentary research about historical information providing a general understanding of the heritage site. Then, the village will be analysed in terms of functions, scale, materials, forms, facades, relations with open areas, proportions, general architectural features, lot relations, evolution and change over time which will lead to an understanding of the settlement fabric and its spatial organization through visual and image-based surveys.

CHAPTER 3

CASE STUDY: ANALYSIS OF İBRAHİMPAŞA VILLAGE

Designing a new building in historical settlements are considered as conservation tools which necessities an understanding of historical buildings and their context. The concept of "Informed Conservation" suggest that the information about a site should be prepared and provided to any of the bodies who are concerned with designing new buildings in historical settlements. The necessary information and techniques in order to define the significance of a place along with its values are defined in the previous chapter. This chapter consists of analysis of the selected case study, İbrahimpaşa Village in Cappadocia, in order to have a general information of the heritage site, its context and its consistent parts.

İbrahimpaşa Village was selected because of its physical environment, mostly keeping its traditional characteristics, authenticity and continuity of the living culture differentiating itself from its nearby settlements such as Ürgüp, Uçhisar and Ortahisar. The village is affected from the migration which resulted either in a change of hands of the traditional buildings or conservation problems. It became a historical settlement which is in transformation and as there is no conservation plan of the village, there is a lack of control over the site in terms of conservation of traditional buildings, conservation of the traditional settlement fabric and new buildings activities.

Firstly, Cappadocia is studied in a regional context in order to give a general idea of regions history and characteristics. Then, İbrahimpaşa Village is analyzed based on the necessary information mentioned at Chapter 2 through the literature survey[8], site

[8] There are limited number of studies about the village and the most comprehensive ones are Özlem Karakul's "A Holistic Approach to Historic Environments Integrating Tangible and Intangible Values Case Study: İbrahimpaşa Village in Ürgüp" and Funda Solmaz's "Construction Techniques of Traditional Houses in Nevşehir Case Study on Ürgüp, Mustafapaşa and İbrahimpaşa".

survey and information provided by the Ürgüp Municipality and the Local Conservation Council. The information was collected in order to understand the region, the village, the settlement fabric and its features to be able to design new buildings. For this purpose, the necessary analysis about location, scale, use and architectural features are made and they are supported by maps and images.

At the end of this chapter, they will lead to an understanding of the settlement fabric, its spatial organization, evolutionary process and tendencies of change in the village which forms the basis to define the significance of the place and its values.

3.1. Regional Context: Cappadocia

3.1.1. General Characteristics

Cappadocia is a region in Central Anatolia, which is bounded with volcanic Erciyes and Hasan Mountains on the south and east, extends north in a series of valleys which run down towards the middle valley of the Kızılırmak and westward to the Tuz Gölü. Cappadocia today, covers the cities of Aksaray, Kayseri, Kırşehir, Nevşehir and Niğde.

The geological formation of Cappadocia region started around 60 million years ago during the third geological period. The Taurus Mountains were formed under the pressure from the Anatolian plateau to the north and several volcanoes (Erciyes, Hasandağ and Göllüdağ) became active. After numerous eruptions, lavas slowly ran towards the depressed areas and led to the formation of different volcanic complexes which correspond to the eruption centers (Yüncü, 2015, s. 113). Around 3 million years ago, central Anatolia was a region of thick layers of tuffaceous rocks, consisting of masses of eruptive material, molten lava and basalt flows (Ayhan, 2004, s. 12). Throughout the years, these eruptions continued until 600.000 years ago followed by an erosional period caused by very humid climatic conditions.

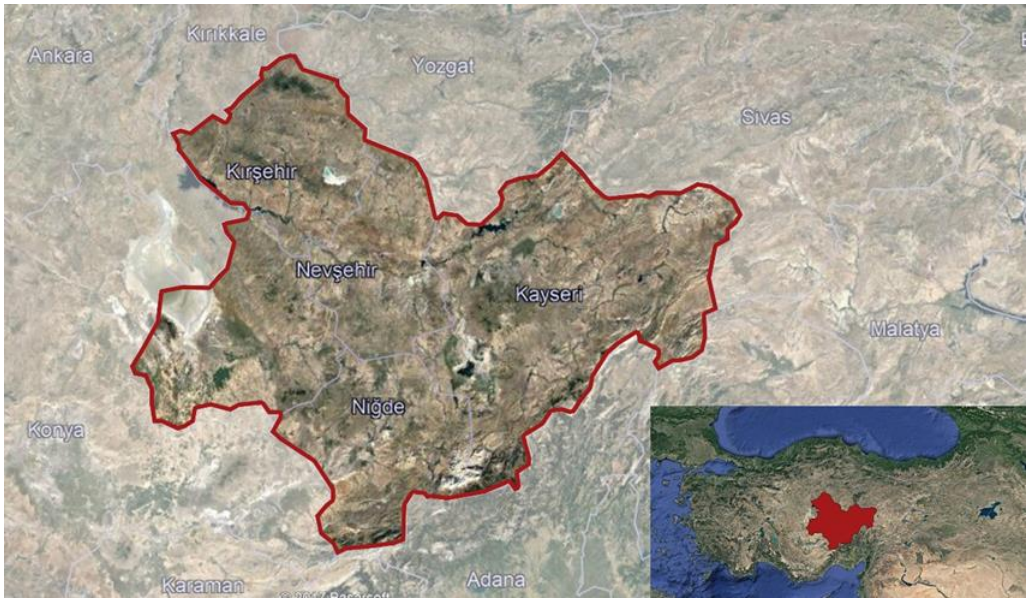


Figure 3.1. Cappadocia region (Google Earth map is used as base)

The top layer of volcanic deposits in fine-grained homogeneous tuff of highly compact structure; while this layer is hard and brittle, the layer below it is friable because of its medium-grained, pumice-like tuff of fairly loose structure; the third layer is again composed of medium-grained tuff, but of compact structure (Stea & Turan, 1993, s. 35). While the second and third layers are easy to carve, they were used as shelters for years.

Volcanism changed the general landscape of the area and created morphological contrasts and produced a wide range of features. Since the volcanic eruptions which shaped the rocky tableland occurred in different periods, their degree of erosion caused by winds, floods and temperature changes varied depending on the hardness of the rock. This process produced pinnacle shaped rocks which are called “fairy chimneys” (Figure 3.2).

Another characteristic feature of the area are the diverse curves (Figure 3.3) on the sides of the valleys formed by rainwater. The array of colour seen on some of the valleys is due to the difference in heat of the lava (Gülyaz & Ölmez, 2002, s. 6).

Because its geological structure allows different varieties of settlement, Cappadocia was inhabited from prehistoric times. Around 5000-4000 B.C., the region was occupied by small states with different degrees of independence and which were directed from important centers (Dinçol, 1982, s. 12). In 3000 B.C., the Hattis came to the region from the east, occupying an important place in fields like religion, traditions, mythology and arts. In about 1900 B.C., with the arrival of Nesa in to the region, the Hattis changed and togetherness of these two gave rise to the Hittite civilization. Hittite Empire remained in power for seven centuries, having their geographical center in Cappadocia.

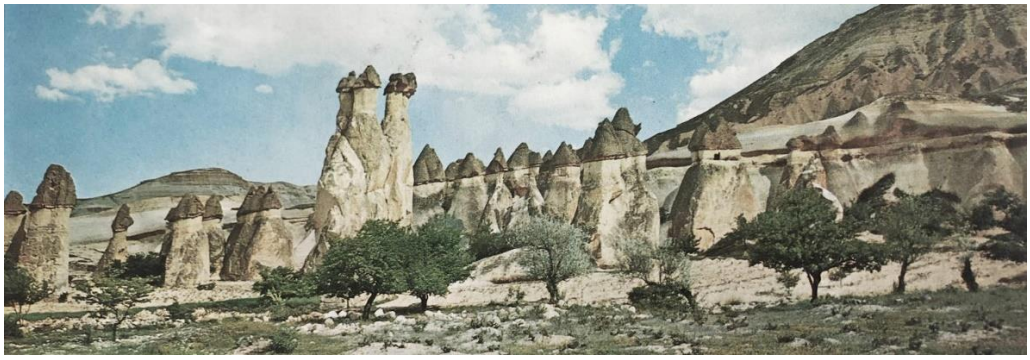


Figure 3.2. The Monks' Valley near Zelve with examples of fairy chimneys on different stages of their development (Giovannini, 1971, s. 60)

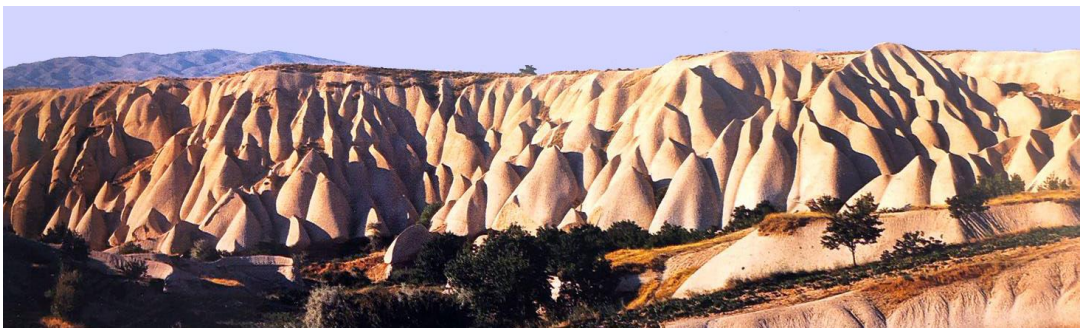


Figure 3.3. Diverse curves on the sides of valleys (Bonechi, 1988, s. 17)

The Kingdom of Cappadocia did not last long and fell under the Roman rule in 17 A.D., and it was declared as a city of Rome by the Roman Emperor Tiberius. In this period, it is seen that the ruling classes and organizations occupied easily accessible areas, whereas the mountains and rocky tracts in the erosion valleys were inhabited by the native people (Giovannini, 1971, s. 68). Christianity began to diffuse in the region in the 2nd century and some early Christians, who were threatened by pagan Romans, formed religious communities and hewed out the hillsides into churches, monasteries and hermitages (Cimok, 1987, s. 15). In 313 A.D., the Roman emperor Constantine guaranteed religious freedom to the Christians throughout the Roman Empire after the "Edict of Milan" and episcopacy of Caesarea (Kayseri) was established (Ostrogorsky, 1981, s. 23). As the region became a religious center, Christians began to lead a monastic life in the carved-out rocks of Cappadocia.

Figure 3.4. Monastery of Priests and Nuns (Göreme)[9] on the right and Zelve Monastery (Zelve)[10] on the left

After the death of Theodosius in 395 A.D., the Roman Empire was divided into west and east and Cappadocia stayed within the borders of Eastern Empire. The severe wars in the early 7th century between Byzantine and Sassanid armies, weakened them both and opened the doors of the region to Arabs. The people in lowlands took refuge in

[9] Image from https://toursce.com/destinations/goreme-open-air-museum/ accessed on 30.07.2019
[10] Image from https://turkeyphotoguide.com/cappadocia accessed on 30.07.2019

underground cities, whereas the people in highlands hid in carved-out spaces. During the Iconoclastic period (726-843) coinciding this era, Christian priests and monks who were in favor of icons began to take refuge in rock carved churches and many monasteries scattered around Göreme and Zelve (Cimok, 1987, s. 22).

When the Seljuks arrived in the area after the Battle of Manzikert in 1071, there must have been more than a thousand religious establishments (Cimok, 1987, s. 15). In 1080 Suleiman Shah founded the Anatolian Seljuk State which lasted for more than two centuries. In 13th and early 14th centuries, first Seljuk and then under Mongol rule, Moslem building activities were also followed by the Christians and several churches were built (Giovannini, 1971, s. 131-132). In 14th century, Cappadocia became a part of the Ottoman Empire and they brought gradual peace and stability to the region. Today, the region is in the borders of the Republic of Turkey and the last of the Christian population in the area have moved to Greece in the 1920s after a population exchange between Turkey and Greece.

Cappadocia as a region, has been a center for people from different religions and different ethnicities throughout the history and this diversity continued also in the Ottoman Era. During 19th century, the social structure of the region was composed of Turks (76%), Orthodox Greeks (22%) and Armenians (2%)[11]. After the great population exchange in 1923 between Greeks and Turks, Nevşehir[12] was one of the cities which was affected the most from this displacement with its high population of Greeks. The people from Thessaloniki and its surroundings were resettled in the abandoned houses of the Greeks in Nevşehir, but the city couldn't reach its former population density (Güney, 2008, s. 7).

Nevşehir dissociated from Niğde in 1954 and today consists of 8 counties, 23 municipalities and 153 villages. Its population increased rapidly after it became a city

[11] The percentages are calculated according to the information obtained from Yurt Ansk., Vol. VII, p.6068

[12] Because Nevşehir is considered as the capital city of Cappadocia and the İbrahimpaşa Village which will be studied later is related to the town of Ürgüp in Nevşehir, the following subjects are concentrated on Nevşehir.

itself. Nevşehir is one of the cities which has a high rate of emigration in Turkey and people from its rural areas migrate to certain cities like İstanbul, Ankara, Kayseri, İzmir and Kırşehir.[13]

According to the researches of TÜİK in 2016, 60.7% of the population lives in the center, while 39.3% live in villages/towns. This number of people living in small areas has decreased because of the migration either to the center, or to another city. After the establishment of Nevşehir University in 2007, the city became a student city also with students coming from outside of Nevşehir and it is within the first fifteen cities in Turkey according to the level and quality of education (TÜİK, 2013).

Nevşehir has an economy which is based on agriculture and tourism whereby the great majority of the population works in agriculture and the service industry. Wheat and potatoes are the most common agricultural products which is also followed by new investments of several firms in the field of potato chips. Viticulture (grapery) has always been an important part of the economy of the region since antiquity.

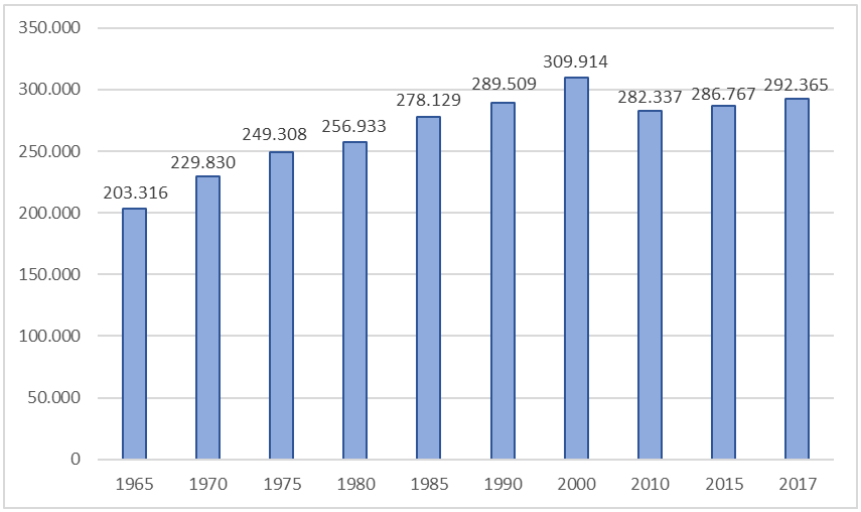


Figure 3.5. Population of Nevşehir between 1965 and 2017[14]

[13] Information was obtained from www.nevsehir.gov.tr, accessed on 11.12.2017
[14] Information was obtained from https://biruni.tuik.gov.tr/medas/?kn=95&locale=tr, accessed on February 2018

Ürgüp, Avanos and Göreme are the districts which provide substantial employment opportunities in the tourism sector for the people in the region. The food and beverage sector comes to prominence in the city center which is followed by construction, textile and metal industries (TUİK, 2009). Although Nevşehir has a higher employment rate than the average of cities in Turkey, its rates of GDP and percentage of industry workers are below the average.

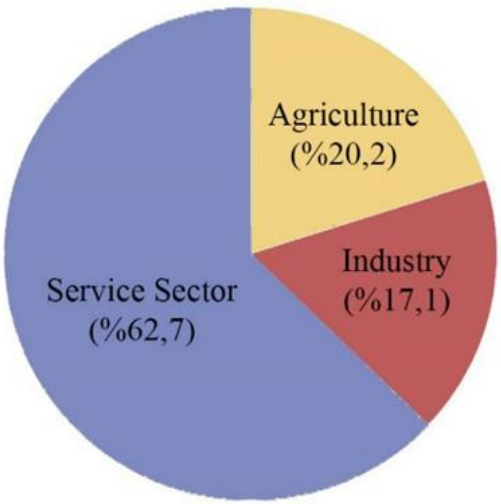


Figure 3.6. Percentages of the development of economic sectors

Among the places of historical, cultural and religious interest in Cappadocia, the area is also popular for ballooning, cross golfing, horseback riding, mountain biking, hiking, wine tours, thermal tourism and convention tourism.

The first land surveys in the region started in 1970 by the General Directorate of Ancient Arts and Museums of Ministry of Culture. The Cappadocia region has been determined as a preferred region in terms of tourism sector and envisioned to prepare physical plans by the decision of a ministerial decree[15]. The first environmental plan

[15] Decision numbered 7/5811 on 23.2.1973

of the Cappadocia region was approved by the High Council of Immovable Monuments and Antiquities[16] and with this decision, existing settlements in Cappadocia, archaeological sites, historical sites, buffer zones and tourism settlements were determined. According to this plan, Nevşehir involved four districts, five towns and twelve villages.

In 1981, after the Ministry of Tourism took over the authorization of approval of plans, the 1/25000 scale "Cappadocia Environmental Plan" was approved on 6.11.1981 by the Ministry. The aim of this plan was allocating the areas of tourism to develop with respect to the conservation principles of the region which has an extensive tourism potential (Solmaz, 2013, s. 15).

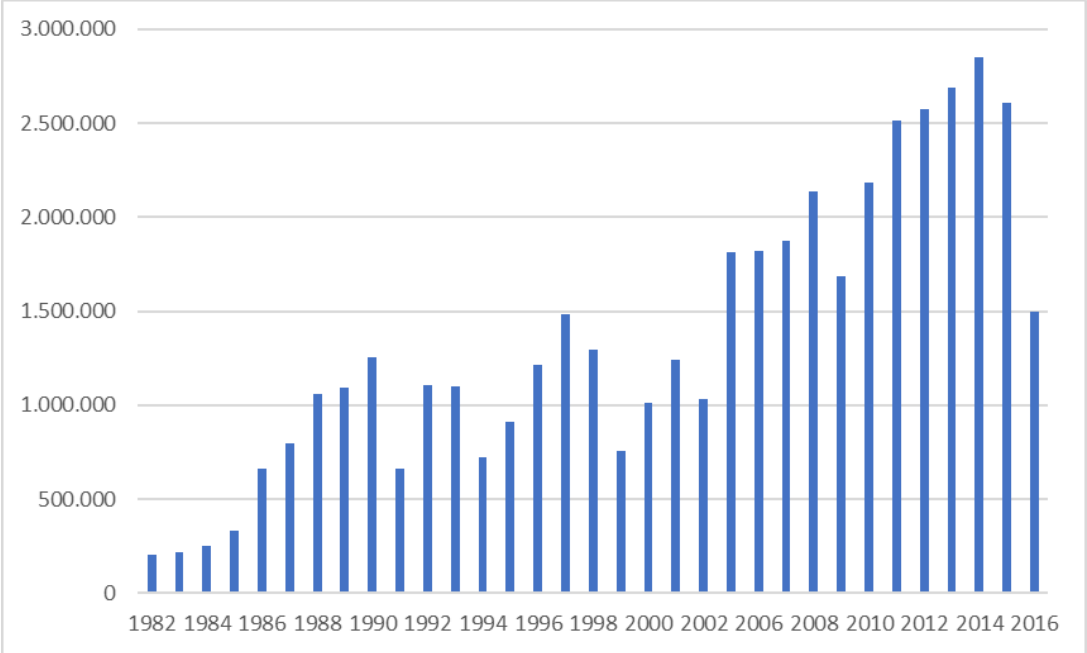


Figure 3.7. Number of visitors of Museums and Archeological Sites throughout the years[17]

[16] Decision numbered A-69 on 10.07.1976

[17] Konaklama İstatistikleri Bültenleri (1982-2016). Kültür ve Turizm Bakanlığı, Nevşehir İl Kültür ve Turizm Müdürlüğü.

UNESCO declared Göreme Valley as a World Heritage Site in 1985 and the territory between Nevşehir, Ürgüp and Avanos was designated as a "National Park" under the Act No. 2873 with the decision of Council of Ministers in October 1986. The boundaries of the region was redetermined in 1999[18] by the Nevşehir Council for Preservation having four districts, nine towns and fifteen villages and the transition period settlement conditions were determined[19].

The Ministry of Environment and Forestry started preparing the "Göreme National Park Long Term Development Plan" in 2001 and in 2005, the boundaries of "Tourism Area for Nevşehir and its Periphery" was cancelled and the region became "Cappadocia Culture and Tourism Conservation and Development Region". Following this change, the authority and legal responsibility on the area were transferred to the Ministry of Culture and Tourism and declared as "Tourism Conservation Development Area".

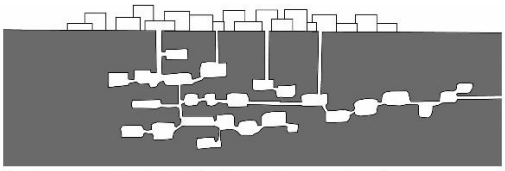
The Law about the Cappadocia Region (*Kapadokya Alanı Hakkında Kanun)*[20] was accepted in May 2019 which aims to collect the authority in one hand for faster actions. According to this law, "Cappadocia Area Commission" (*Kapadokya Alan Başkanlığı*) will be established to deal with the region and it will be responsible for the duties assigned to the regional committees. It is authorized to make decisions regarding the registration, changes of borders and reevaluation of natural sites in the area, elimination of ineligible practices and demolishing structures and facilities in violation. The commission will also have the power to decide all kinds of physical and construction implementations regarding the plans. Public institutions and organizations, municipalities and real and legal persons will have to comply with the decisions of the commission. Lastly, in October 2019, the national park status of Göreme Valley is removed due to Article 3 of the Law on Encouragement of Tourism.

[18] Decision numbered 1112 on 12.11.1999
[19] Decision numbered 1148 on 26.11.1999
[20] Decision numbered 7174 on 23.05.2019

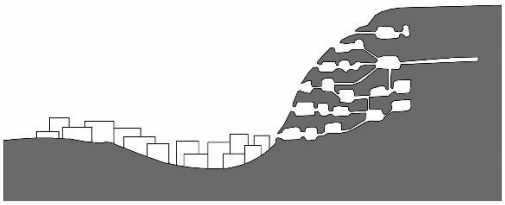
3.1.2. Settlement Characteristics

Cappadocia as a region experienced religious attacks, especially in early Christianity period throughout the history and consequently formed an architecture which fulfills safety needs and defensive requirements. Binan (1994, s. 66-67) classifies the traditional settlement pattern in three different types:

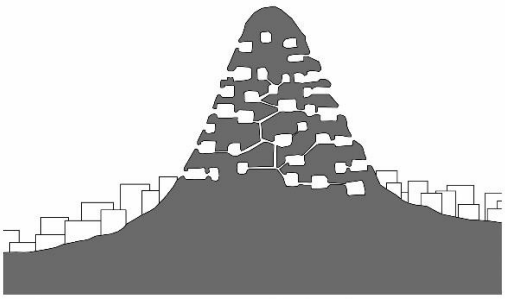
1. Settlements which are placed on lowlands, having underground settlements which are developed on one level or more levels underneath.
2. Settlements established on valley slopes, having another settlement excavated into rock slopes of the valley.
3. Settlements placed around giant tuff rocks, having another settlement which is carved into the rock in the middle.



Settlements on lowlands, having underground settlements



Settlements excavated into rock slopes of the valley



Settlements placed around giant tuff rocks, with settlement carved into the rock

Figure 3.8. Cappadocia settlement types in reference to Binan (19994, s. 66)

Figure 3.9. Uçhisar, as an example of a settlement placed around a giant tuff rock, with spaces carved into the rock

In addition to the defense reasons, this form of architecture is also a logical response to the local conditions of the area and “carving to dwell” has been a major form of placemaking in Cappadocia during its settlement history (Stea-Turan, 1993, p.165). Extension of carved spaces with exterior masonry structures is also a characteristic of the region and masonry structures as the last stage of this formation. These three types of settlement patterns constitute the variations of traditional houses.

Rock-cut houses as the earliest housing type, can be generated vertically or horizontally with spaces within the rock formation and as they grew according to the need, they don’t have any plan typology. In the mixed technique, the carved-out space is extended in the front with masonry structures such as addition of walls, aiwans or room(s) (Figure 3.10). In this process, additional spaces can also be added on the rock or on the masonry part as a second storey. Masonry houses are one, two or sometimes three storeyed buildings which don’t have any relation with rock cut spaces and this

group is considered as the last stage of other two construction techniques (Binan, 1994,s. 70).

The building materials used in Cappadocia traditional houses are stone, which varies in the region depending on the location because of the quarry, wood and iron. The local stone of the region is soft and easy to carve but when it is exposed to air it becomes hard, so it is easy to either quarry or to carve from a rock formation. It also provides warmer conditions in winters and cooler in summers. Wood is generally used in architectural elements such as windows, doors, cupboards etc. and iron on the details of these architectural elements and sometimes inside the thinner masonry walls of the upper floors to provide structural stability (Solmaz, 2013, s. 23).

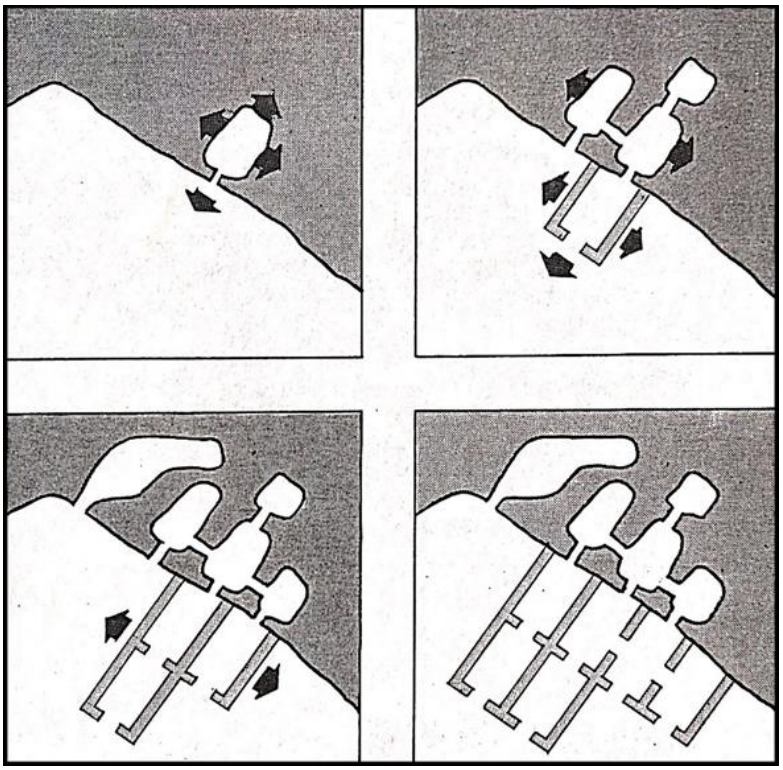


Figure 3.10. Evolution of local architecture from a single shelter to a traditional house complex (Stea & Turan, 1993, s. 256)

Figure 3.11. Examples of mixed technique, extending from rock-cut spaces with masonry units

The settlements in Cappadocia region are shaped according to the geography and natural features. The houses forming these settlement patterns are usually placed either facing the street having an entrance directly from the street or they are drawn back and have a courtyard in the front as a transition space between the street and the building.

Figure 3.12. Building placed in a courtyard (left - Mustafapaşa), Buildings placed facing the street (middle and right - Mustafapaşa) (Solmaz, 2013)

There is no systematic production technique of rock-cut houses because new spaces are added according to the needs of the inhabitants. For masonry houses, the buildings are either placed facing the street having a direct entrance, or the building is drawn

back of the parcel and connection is provided by a courtyard in the front (Erençin, 1979, s. 104).

Courtyards are places for daily life activities, and they are surrounded with high walls because of privacy reasons. The courtyard walls are above the eye-level and they are made of cut stone or rough-cut stone (Figure 3.14). Courtyards are entered through a double-winged timber door placed on the courtyard walls and the floor is covered with stone or soil (Solmaz, 2013, s. 27). The size of the courtyards can vary and alongside with elements such as *tandır*, toilet etc., spaces such as hayloft, storage, stable, *tandır* room and other living spaces are located in the courtyard (Solmaz, 2013, s. 27).

Figure 3.13. Examples of courtyards

Figure 3.14. Courtyard doors and walls

The houses generally have one or two storeys and there are also some examples of three storeyed buildings. The houses comprise of spaces with different functions such as rooms, aiwans, kitchens, *tandır* room , storage spaces, stable, hayloft and toilet (Solmaz, 2013, s. 27). Not all the houses have all the spaces, but they usually have most of them. In mixed type buildings, the carved-out spaces are usually used as service spaces, and the masonry rooms are used as living spaces whereas in masonry buildings whole spaces are built with stone (Binan, 1994, s. 138). If it is a building with more than one storey for both types, the service spaces are placed on the ground floor and the living spaces are placed on the upper floors. According to Erençin (1979, s. 45), spaces of houses are specialized by intended purpose and also affected by the seasons.

Planimetric features:

Room: Room is the basic unit of the house and it can be placed on any floor either as a whole masonry unit or as a complementary part of a carved-out space. The number of rooms in a house may vary depending on the family living in, their economic condition and the size of the house (Solmaz, 2013, s. 28). The layout of the second floor follows the plan of the first floor, but it can be either set on behind or have projections over the ground floor and the rooms are placed in a way that that all of them can gaze either the street or the courtyard (Binan, 1994, s. 133).

The rooms have stone floor coverings and the masonry walls are spanned with rib vaults but there are also some examples of usage of timber on the upper floor. Rib vault is a system that the structure is created by set of arches. There are certain architectural elements in the rooms such as fireplace, *seki, pabuçluk, musandra*, sedir, niche, cupboard, *lambalık* and shelves (Solmaz, 2013, s. 29).

Aiwan: Aiwan is another main unit of the house, semi-open in one side and closed in three sides and its covered with a vault (Erençin, 1979, s. 11). It can either be placed on the ground floor or on the first floor and there can be more than one depending on the need and the size of the building. If it is on the ground floor, it may have a *tandır*

on the floor and it is named as “summer kitchen” by the inhabitants (Solmaz, 2013, s. 29).

Figure 3.15. Examples of rooms from Ortahisar (left) (Solmaz, 2013), Ulaşlı (middle) (Solmaz, 2013) and İbrahimpaşa (right)

The aiwans can sometimes be ended with an arch system on the side that they are open with one , double, triple quarterly arch (Figure 3.16) or a hanging arch (Erençin, 1979, p.114). The aiwans on upper floor are connection areas between room and they face the courtyard sometimes having a direct connection from the courtyard with stairs.

Kitchen: Kitchen is placed on the ground floor, in relation with the storage rooms either directly or through the courtyard. Fireplace is the main architectural element of this space and it is used in winters (Solmaz, 2013, s. 30).

***Tandır* room:** *Tandır* room is a vaulted aiwan with *tandır* on the ground as the main architectural element. It is placed in front of the kitchen and used as a “summer kitchen”. *Tandır* is created by carving the floor and they sometimes have terra-cotta shafts, used for cooking food and bread (Erençin, 1979, p.110).

Figure 3.16. Aiwan on the ground floor (left) and upper floor aiwan with triple arch (Solmaz, 2013)

Figure 3.17. Kitchen (left) and tandır rooms (middle and left) (Solmaz, 2013)

Figure 3.18. Storage (left), toilet (middle) and stable (right)

Storage: These spaces are to store foods and other things and they are in connection with the kitchen either directly or through the courtyard. Storage spaces are mostly rock cut spaces with lots of niches and shelves (Solmaz, 2013, s. 31).

Toilets: Toilets are built separately from the house in courtyards, elevated from the ground level. Generally rough-cut stone is used and they are small in terms of their size (Erençin, 1979, s. 112).

Stable and Hayloft: These spaces are generally carved-out spaces which are located on the ground floor in relationship with the courtyard. If there are no rocks to carve because of the landscape, stables are built as separate masonry structures. Haylofts are spaces to store the hay which are gathered during summer and they are located as related with the hayloft (Solmaz, 2013, s. 31).

In traditional houses in the region, architectural elements are very important defining the characteristics of the building and also containing information about the owner and the time period that it was built in. These elements are either to be found inside the house or on the facade. Inside the house, there are architectural elements such as fireplace, cupboard, *sedir, seki, pabuçluk, şıralık, tandır, musandra, lambalık,* niche, shelves etc. which also defines the purpose of the room and on the facade, there are elements such as projections, doors, windows, cornices, and ornamentation (Solmaz, 2013, s. 31-36).

3.2. Understanding İbrahimpaşa Village

3.2.1. General Characteristics

İbrahimpaşa is a village related to town of Ürgüp in Nevşehir, located on Ürgüp-Nevşehir road, 12 km. far from Nevşehir and 14 km. far from Ürgüp. Access to the village is provided by car or by bus which travels between Nevşehir and Ürgüp. The settlement is separated into two parts by a stream, the Balkan Stream, which flows up

to Ürgüp crossing through Ortahisar. The village and its surroundings reflect natural characteristics of the Cappadocia region with its topography and natural vegetation.

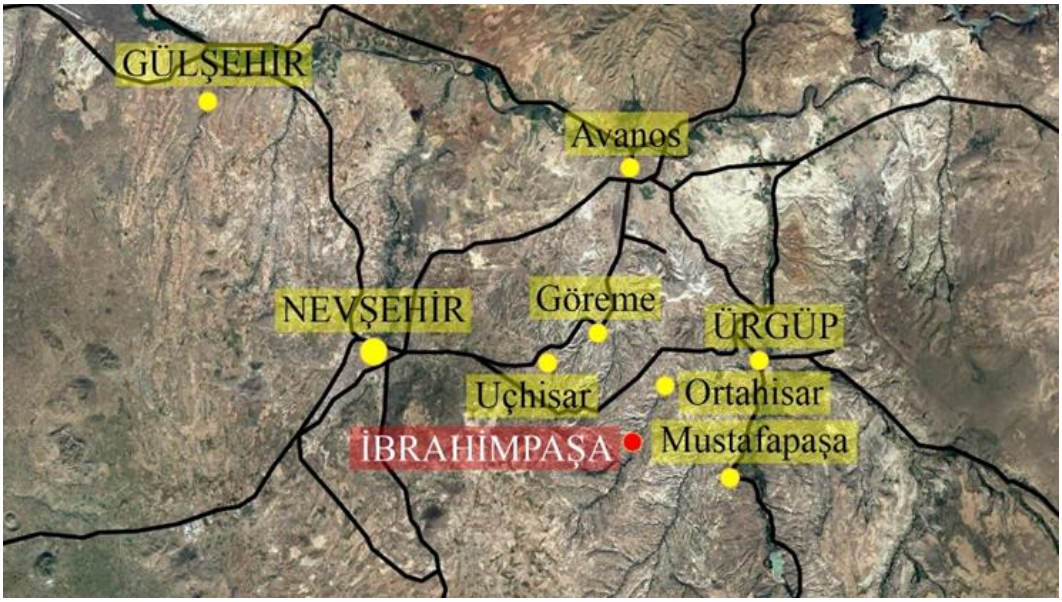


Figure 3.19. Nearby environment of İbrahimpaşa Village

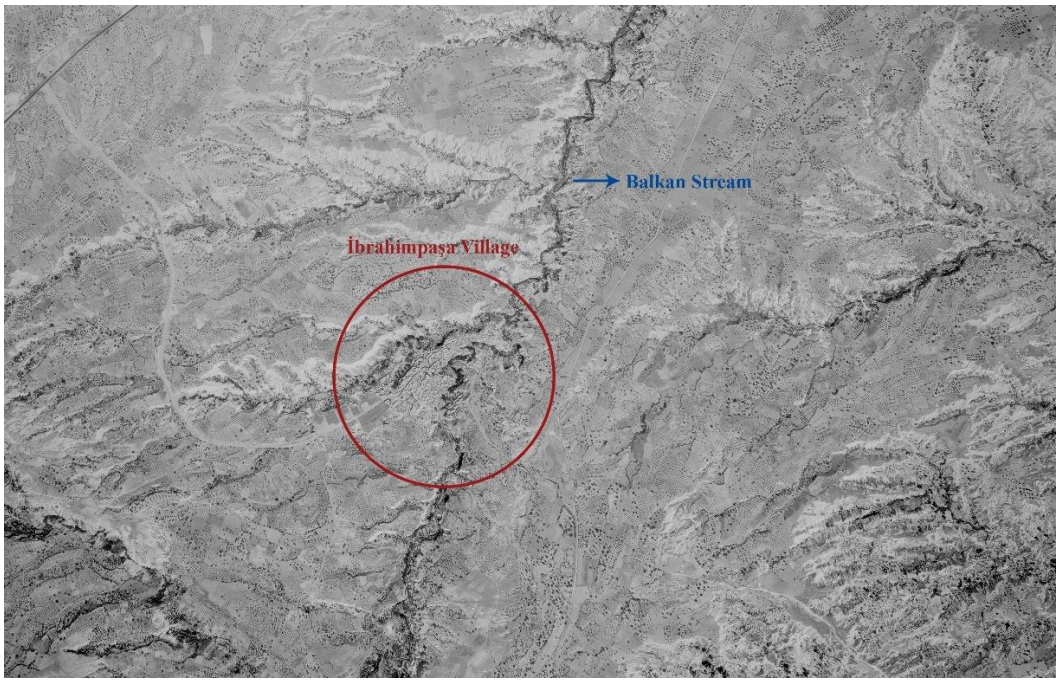


Figure 3.20. Image showing the Balkan Stream and İbrahimpaşa Village

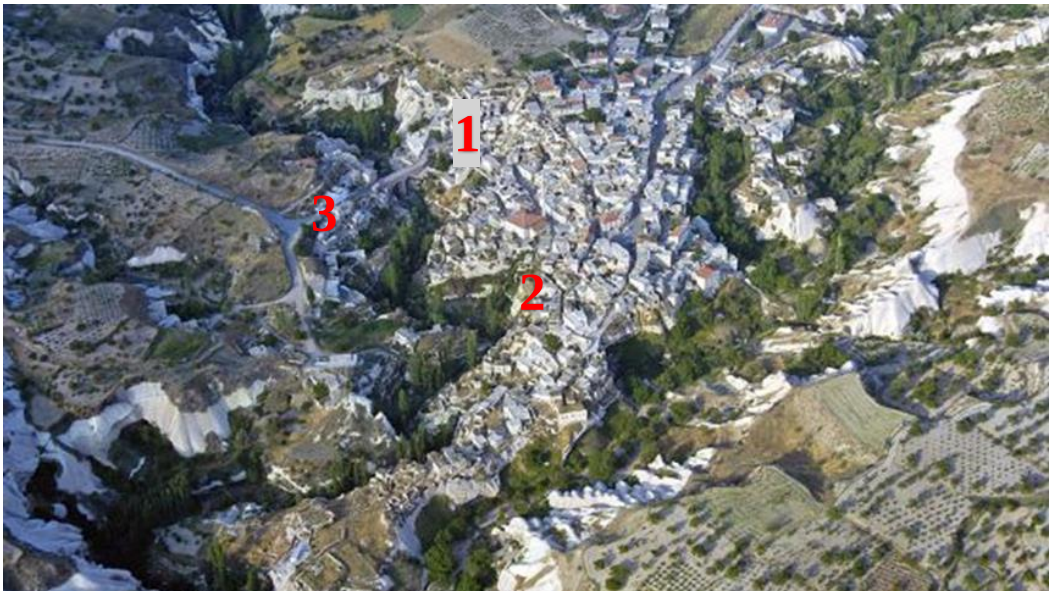


Figure 3.21. İbrahimpaşa Village[21].

Figure 3.22. Southwest part of the village (No:1 in Figure 3.21)

[21] Image from http://ayancuk.com/koy-19277-Ibrahimpasa-Koyu-Urgup-Nevsehir.html accessed on 5.01.2018

Figure 3.23. Northwest part of the village (No:2 in Figure 3.21)

Figure 3.24. East part of the village (No:3 in Figure 3.21)

The village is administered by a local authority which is called *"muhtar"* and who works under the Governor of Nevşehir. İbrahimpaşa Village has a total population of 725 according to the last population census made in 2016, consisting of 351 men and 374 women[22]. Considering its population was 1483 in 1990, there is a dramatic decrease by nearly 50% until today. This change is a result of migration of many people to big cities like İstanbul, Ankara, Kayseri and some to nearby settlements like Ürgüp and Nevşehir for better opportunities such as schools, healthcare, transportation and higher living standards.

There are 42 students studying with 5 teachers at the primary school[23] but there is no highschool in the village. Because of the difficulty of transportation, the children either end their education, or the families move to Ürgüp or Nevşehir. This situation results in a population mostly graduated from primary school, and also triggers the families to migrate from the village.

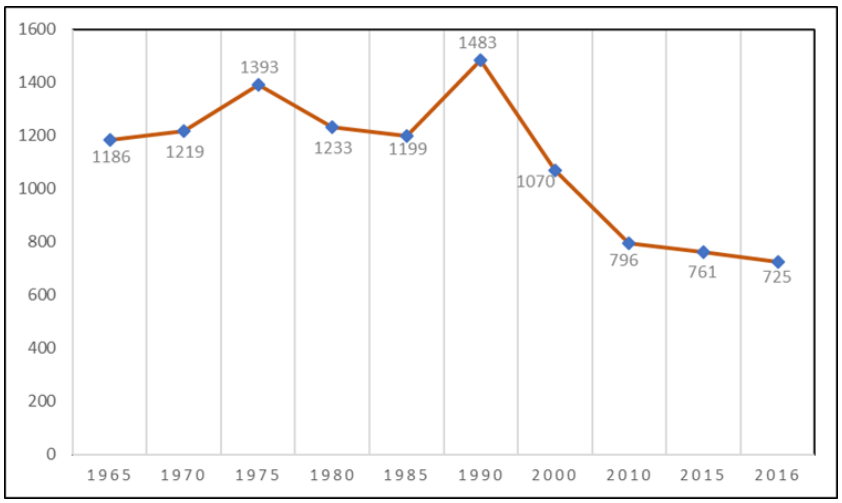


Figure 3.25. Population of İbrahimpaşa between 1965 and 2015[24]

[22] Information was obtained from the website of TUİK, http://www.tuik.gov.tr, accessed on 7.12.2017

[23] Information was obtained from the website of MEB, http://ibrahimpasa.meb.k12.tr (accessed on 7.12.2017)

[24] Information obtained from https://biruni.tuik.gov.tr/medas/?kn=95&locale=tr, accessed on December 2017

The main means of living of the village are: agriculture, animal husbandry, trade, tourism and manpower. Animal husbandry is on the decrease and the agricultural products are only adequate for the owners. The land around the village is not suitable for large scale agriculture but, there is a flat land in north-west of the village which is called *'manastır'* by the villagers (Figure 3.26) and used for dry agriculture which do not require regular maintenance. This type of agriculture is called "*kıraç*" by the villagers which they only use rainwater to grow tomatoes, potatoes, pepper, eggplant, cucumber, squash, watermelon and melon. Tourism has emerged as an economic value in the last years and effected other activities such as trade by selling local goods to tourists and manpower as a worker in construction or restoration activities.

Figure 3.26. *Manastır* area, İbrahimpaşa

In comparison to the other villages in the Cappadocia region, İbrahimpaşa was discovered later in terms of tourism. Therefore, the village has preserved its authenticity until today. Instead of being rich of accommodation options, the village is located on the tour routes and the tourists only pass through the village. There are two hotels and one restaurant for the visitors, but the villagers demand the development of tourism for their economic growth.

Although the Balkan Stream was a well-known path for groups, it is not used for several years since the sewage of the village is given to the valley in 1997. The necessary actions were taken to fix this problem in 2009[25] but today, the valley is not suitable enough for touristic tours. The popularity of the village started to rise in the last few years and considering its historical, natural and cultural features, it has a very high potential for cultural and religious tourism.

3.2.2. History of the Settlement, Planning and Conservation Activities

There are limited numbers of sources about the history of the village, but it is known that Cappadocia was inhabited in prehistoric times. The website of the district governorate of Ürgüp dates the village to 500 A.D.[26] but the oldest findings in the village are dating back to 10th century (Giovannini, 1971, s. 67), which are the paintings of Babayan Church. The name "Babayan", which is also the former name of the village, comes from "Papayani" (Papa Yanni) who was a priest living in the village in Christianity period (Çalışkan, 2005, s. 18-19).

After the foundation of the Turkish Republic, a population exchange between Turkey and Greece took effect in 1923 and the names of the settlements were replaced with Turkish names. The name of the village (Babayan) was converted to "İbrahimpaşa" after the Ottoman grand vizier Damat İbrahim Paşa, who brought water to the village from Kavak. It is known from different sources that the surrounding villages, especially Mustafapaşa (Sinasos), were densely populated by non-Muslim minorities but vast majority of the villagers in İbrahimpaşa were Muslims.

According to the information from the in-depth interviews of Özlem Karakul (2011, s. 69-71), there are several stories about the past of the village. The first story explains that Armenians inhabited the village until they had to migrate when the Turcomans

[25] This information was obtained from correspondence from the Council.
[26] Website of The District Governorate of Ürgüp (Kaymakamlık), http://www.urgup.gov.tr (accessed on 8.12.2017)

came to İbrahimpaşa from Niğde and damaged their vineyards because they were dealing with animal husbandry. When Turcomans settled in the village, they have used the existing buildings which were carved-out by Armenians.

According to the second story, the origin of the villagers never changed, and the Greek inhabitants of the village converted to Islam 300 years ago[27]. This is also corroborated by the fact that İbrahimpaşa was not affected by the population exchange in 1923. In both ways, İbrahimpaşa village has been a place which witnessed different cultures, religions and languages and buildings are a synthesis of these different ways of life.

İbrahimpaşa was declared as an urban conservation site and III. Degree Natural Conservation Site in 1999[28] (Figure 3.27). The Transition Period Principles of Conservation and Terms of Use in Nevşehir in the Cappadocia Region *(Nevşehir Kapadokya Bölgesi Sit Alanları Geçiş Dönemi Yapılaşma Koşulları)* are valid in the village but, both for restoration implementations and for new buildings activities, there is lack of control over the site. Because the conservation plan was not prepared in time, the principles of the transition period were suspended in İbrahimpaşa in 2008, leading to a stop of all kinds of building activities[29] except conservation activities of the traditional buildings.

There is a need for a conservation plan in the village to decide which type of interventions are to be made to which buildings and to be able to make the buildings function. Most of the restoration activities are "basic repairs" in İbrahimpaşa, which doesn't require the approval of the local conservation council. The council only permits the implementations regarding the buildings which are to be used as dwellings, and other buildings are on hold until there is a conservation plan of the village.

[27] In the book of Gürsel Korat (2003, s. 248), he mentions a similar story about the Christian inhabitants of İbrahimpaşa and how they converted to Islam.
[28] Decision numbered 1123 on 12.11.1999s
[29] This information is obtained from Özlem Karakul's in-depth interviews (Karakul, A Hollistic Approach to Historic Environments Integrating Tangible and Intangible Values Case Study: İbrahimpaşa Village in Ürgüp, 2011, s. 73)

There are very limited number of registered buildings and open areas in İbrahimpaşa Village. The earliest registration decision is the graveyard in the 1989 followed by the registration of İbrahimpaşa Bridge in 1997. Building lot registrations begins after the year 2007 and according to the information gathered from Nevşehir Local Council for the Conservation and Natural Properties on the date of May 2017, there are 25 registered building lots in the study area. 23 out of 25 contains edifices of civil architecture and it is seen from Figure 3.29 that the registrations concentrated on in the north-east of the village and that the most of the juxtaposed lots are registered concurrently.

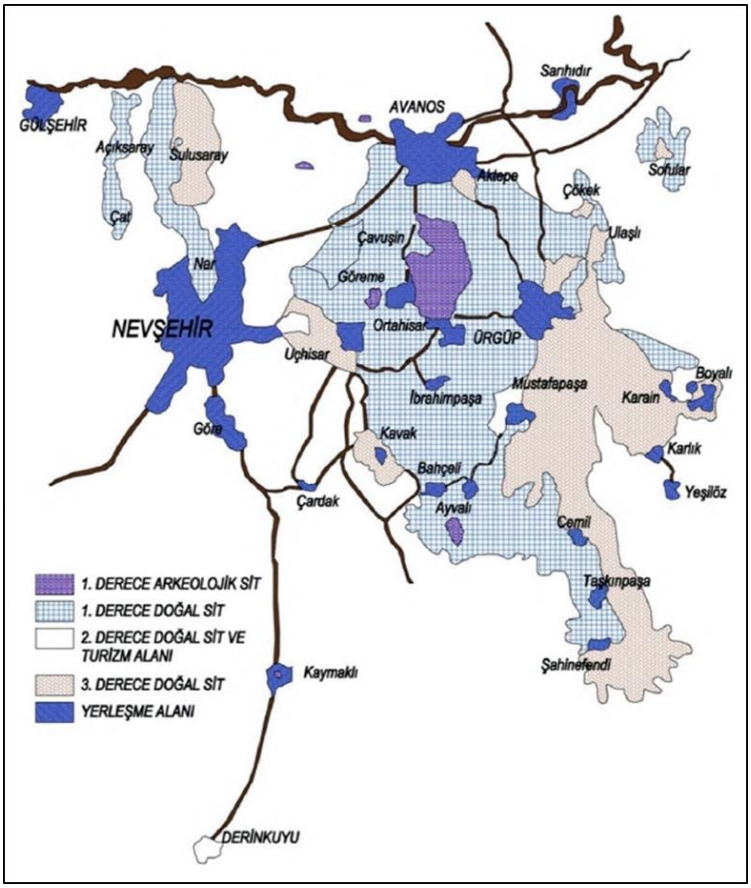


Figure 3.27. Appendix of Decision No:1123 on 12.11.1999[30]

[30] Source: Conservation Council of Nevşehir

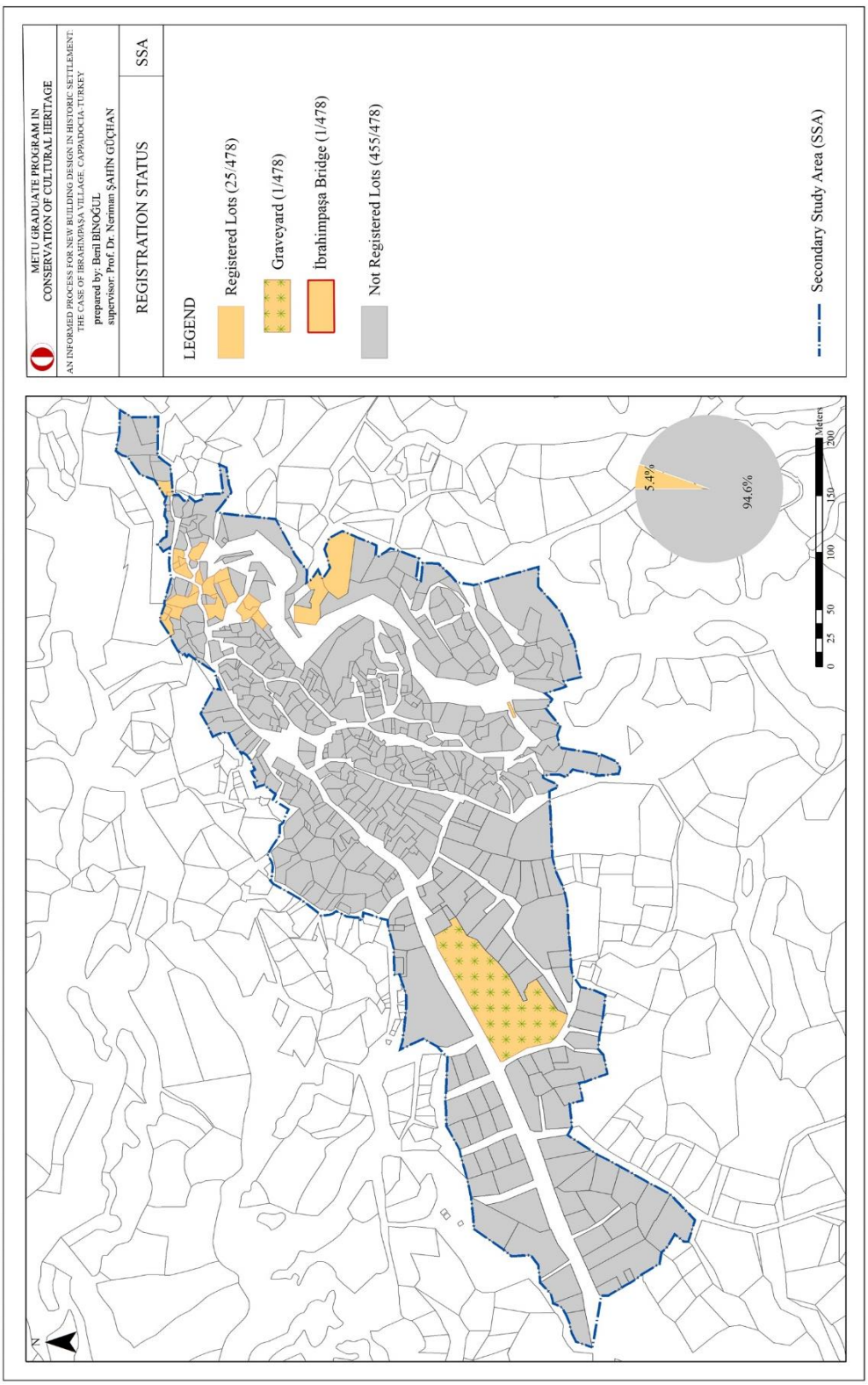


Figure 3.28. Registration Status of building lots

Figure 3.29. Decision dates and numbers of registered buildings

3.2.3. Analysis of İbrahimpaşa Traditional Settlement Fabric

The area where İbrahimpaşa Village is located, reflects all natural characteristics of the Cappadocia region. The village and its surroundings have a very undulating topography mainly formed by rainwaters creating a stream, which also separates the village into two parts with a valley. This results in a peninsula-like appearance of the village among this earth formation.

Figure 3.30. Rock formations of the northern side of the village

Figure 3.31. Rock formations on the east side of the village near the Balkan Stream

The river in the valley is dried out and today there are lots of trees growing up along the streambed (Figure 3.32). Apart from the rock formations around the village there are some green areas between them with different types of vegetation, but these areas are not suitable for large scale agriculture. As we see from Figure 3.34, the only cultivated land in this scale are the gardens of the new buildings and the gardens in middle of a building block in the northeast of the village with trees.

Figure 3.32. The streambed, which is dried out today

Figure 3.33. View of the streambed with İbrahimpaşa Bridge

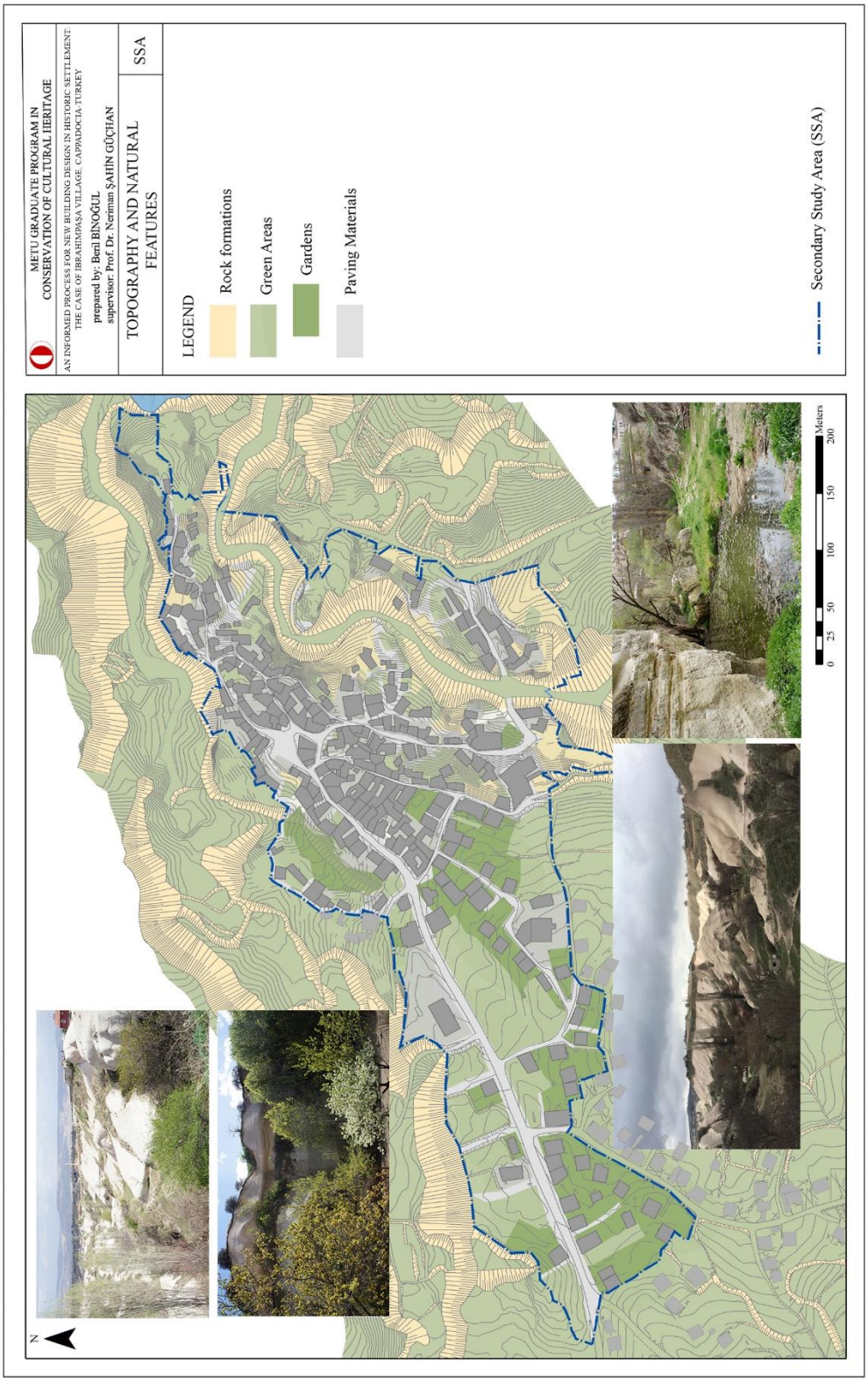


Figure 3.34. Topography and Natural Features

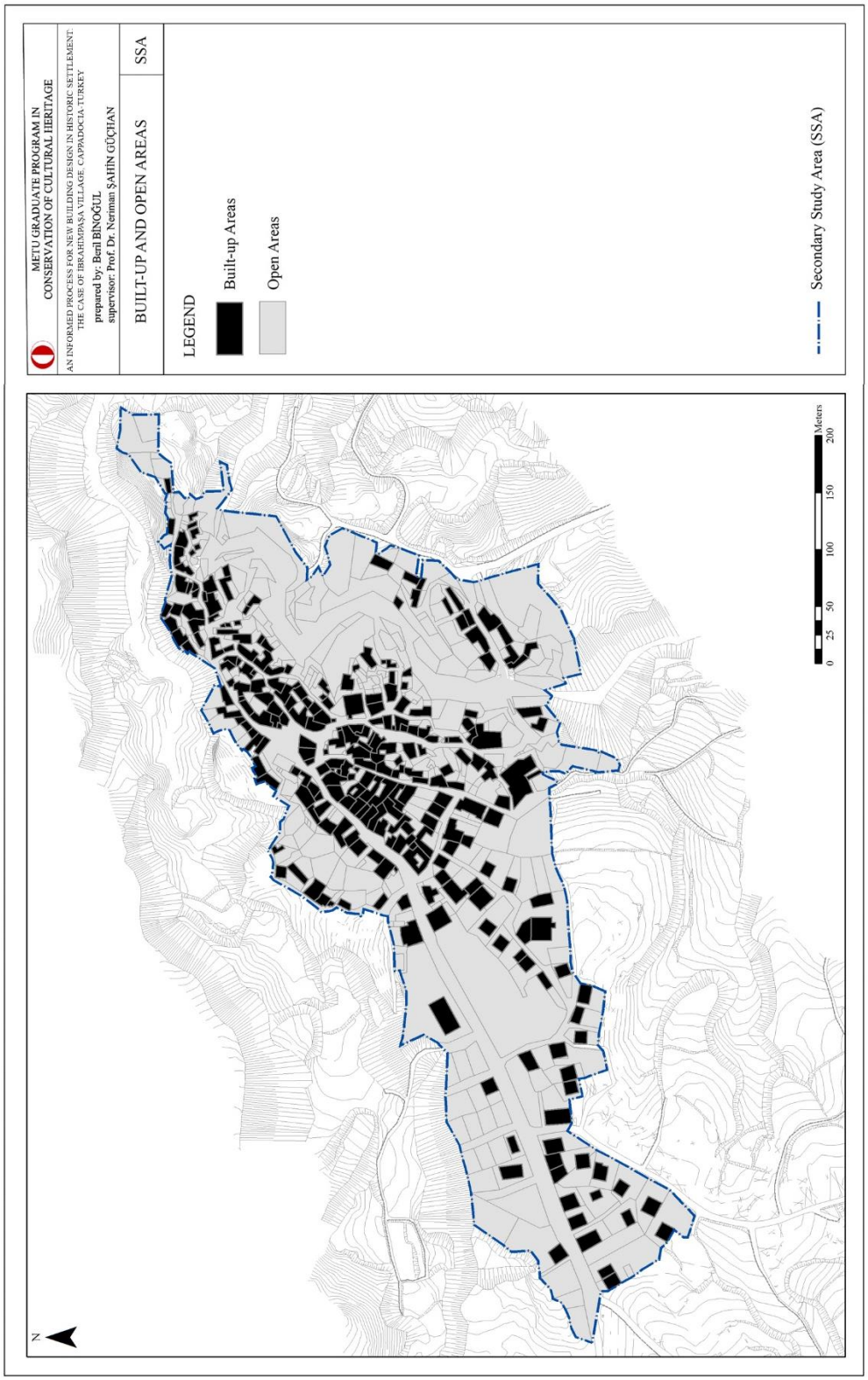


Figure 3.35. Built-up and Open Areas

Topography of the area affected the settlement characteristics of the village. The former living units were carved into rocks along the streambed as seen in Figure 3.36. The buildings are placed on the slopes in a way that they don't close the view of the others (Figure 3.37) on both sides of the streambed and the higher parts of the village are denser in terms of buildings intensity, gradually decreasing to the sides in harmony with the slopes (Figure 3.35).

Figure 3.36. Carved-out spaces along the streambed

Figure 3.37. Buildings on the slopes

Figure 3.38. View of the streambed with buildings on the slopes

The West part of the village consists of buildings placed in larger lots and surrounded by their own open areas; whereas, the east side has smaller and denser buildings with smaller open areas within a building block (Figure 3.35). The main road which connects Nevşehir-Ürgüp road to the village square continuing to Ortahisar, passes through the settlement crossing the streambed over the bridge.

Karakul (2011, s. 162-164) separated the transformation process of the village settlement into four periods with reference to inscriptions of specific structures, which are also supported by her in-depth interviews (Figure 3.40). According to her, in the first period until 1900, the settlement grew around the old village square, which is located in northeast of the current settlement. Current village square was at the edge of the village and called "*Harman Yeri*" as all the harvested products were processed there. The dwellings were mostly built by the carved-out units except for a few, which had a mixed technique of carved-out units and masonry structures. In the second

period, the settlement grew to the south along the streambed without any change of the village square and "*Harman Yeri*" and most of the dwellings were still built by carved-out units.

Figure 3.39. Old village square (left) and new village square which is formerly known as "*Harman Yeri"* (right)

The construction of İbrahimpaşa Bridge in 1939 is considered as a turning point for the transformation process of the village and it's the beginning point of the third period. From this point on, the settlement grew up on the other side of the stream where there used to be fields and vineyards of the villagers and "*Harman Yeri*" started to be used the main square of the village. In the last period until today, the settlement started growing up to the west also depending on the landscape along the main road.

The following analysis of the village will concentrate on the building inventory which belongs to the third and fourth periods as the study area, and the borders of the third period will be mentioned as "primary study area".

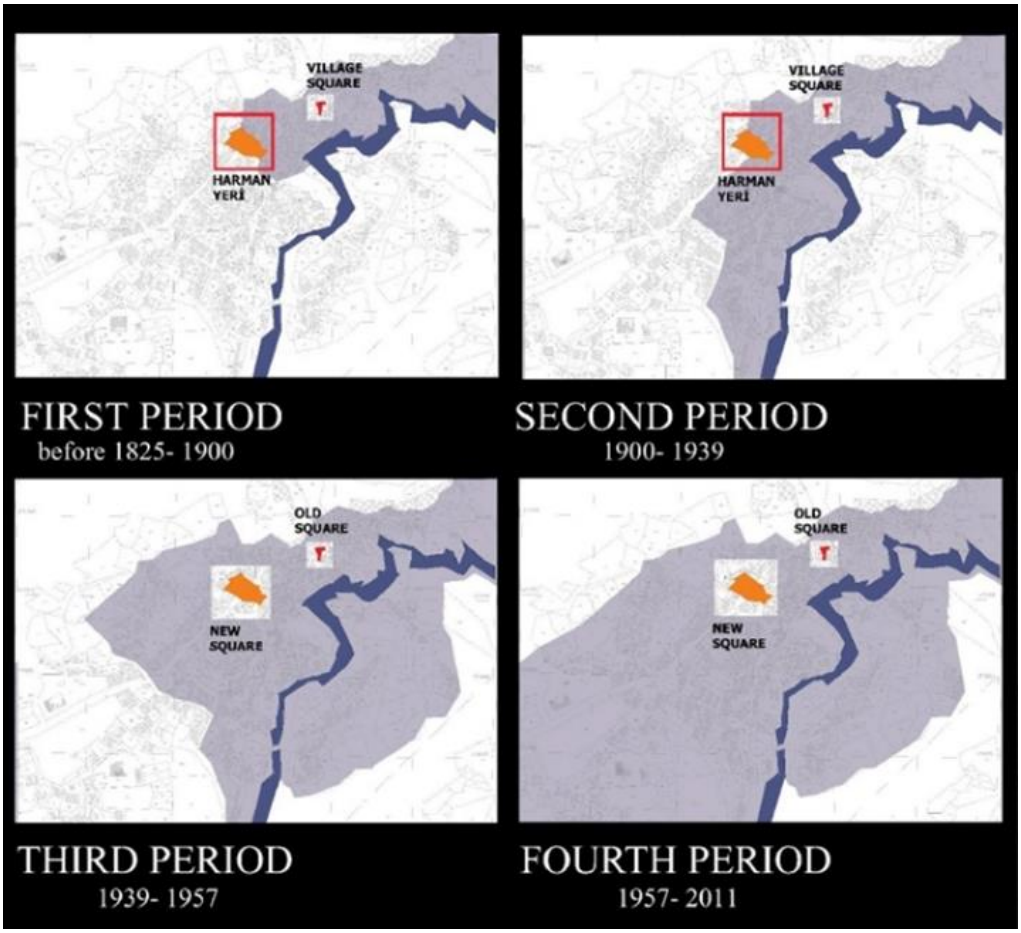


Figure 3.40. Transformation process of the village settlement (Karakul, 2011, s. 162)

There are 478 building lots in the study area which are mostly privately owned (Figure 3.44). Nearly 10% of them are public, belonging to *Köy Tüzel Kişiliği,* 4% are dead end streets defined by lot boundaries penetrating the building blocks and there are 2 building lots with separate ownership of different storeys (ground floor public, first floor private). Public lots are larger in size in comparison with the private lots and they are either concentrated along the streambed or belong to a public building such as educational buildings, mosques, dormitory, *kahvehane,* fountain or used as a graveyard.

Figure 3.41. Both sides of the village connected with İbrahimpaşa Bridge

Figure 3.42. Dormitory (left) and primary school (right) as public buildings and their open areas

The effects of migration can be seen in Figure 3.45 as 20% of the private lots in the primary study area are sold to outsiders either in groups or on an individual basis. The owners either move outside of the village or sell their houses and build new houses on the plain areas in the northwest side of the village around the main road.

3.2.3.1. Open Areas

Open areas of the village are analyzed under two main categories that are; the ones which are defined by lot boundaries and the ones which are not, such as; streets, squares and streambed. As mentioned above, the open areas which are defined by lot boundaries are either private or public. Private open areas constitute most of the study area having various types such as courtyards, gardens, rock formations, areas with ruins and empty areas. Courtyards are open areas of traditional buildings enclosed with masonry walls and their location varies throughout the study area. They are seen mostly in the northeast part of the village where the built-up area is denser.

Figure 3.43. Streets of the village

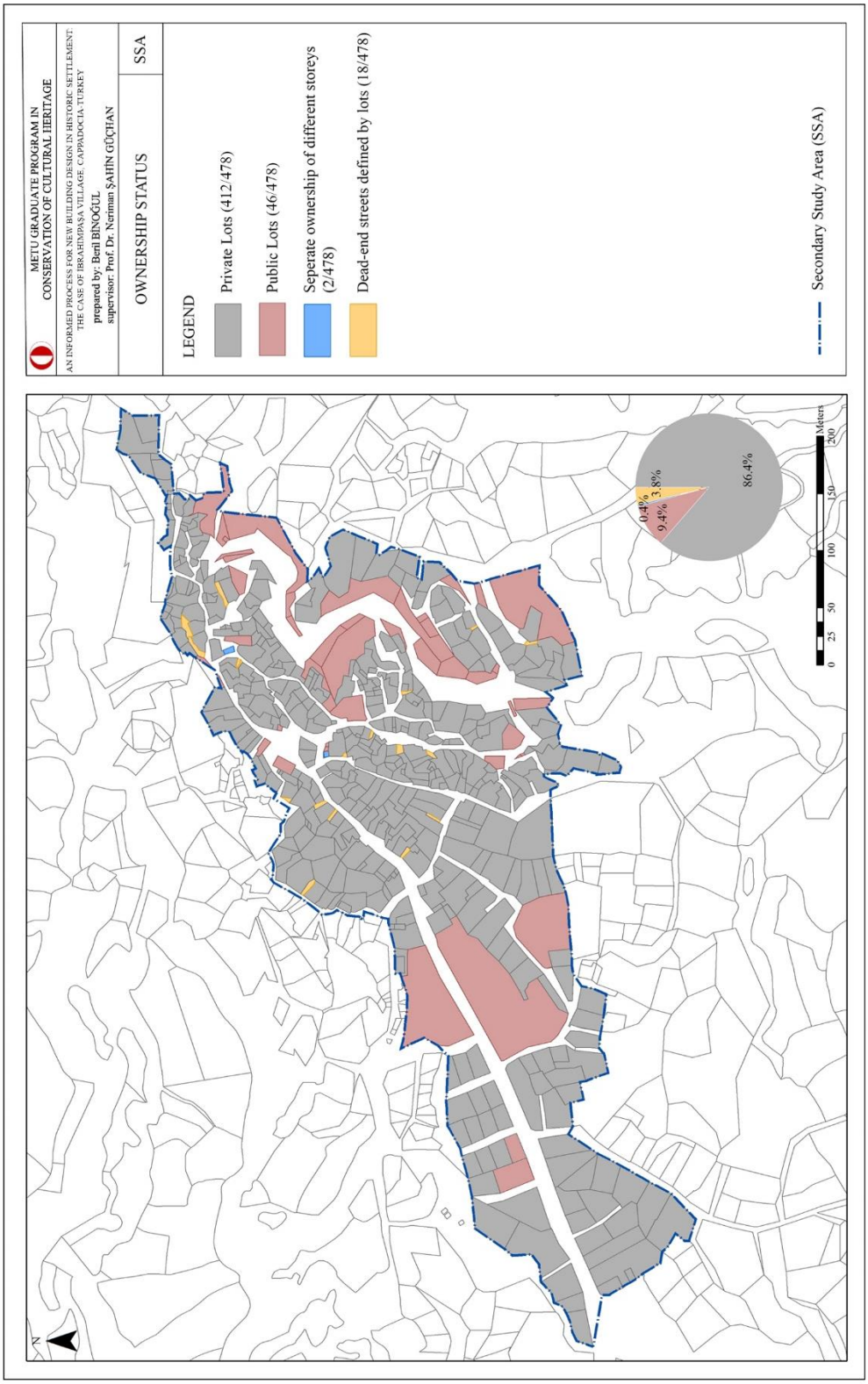


Figure 3.44. Ownership Status

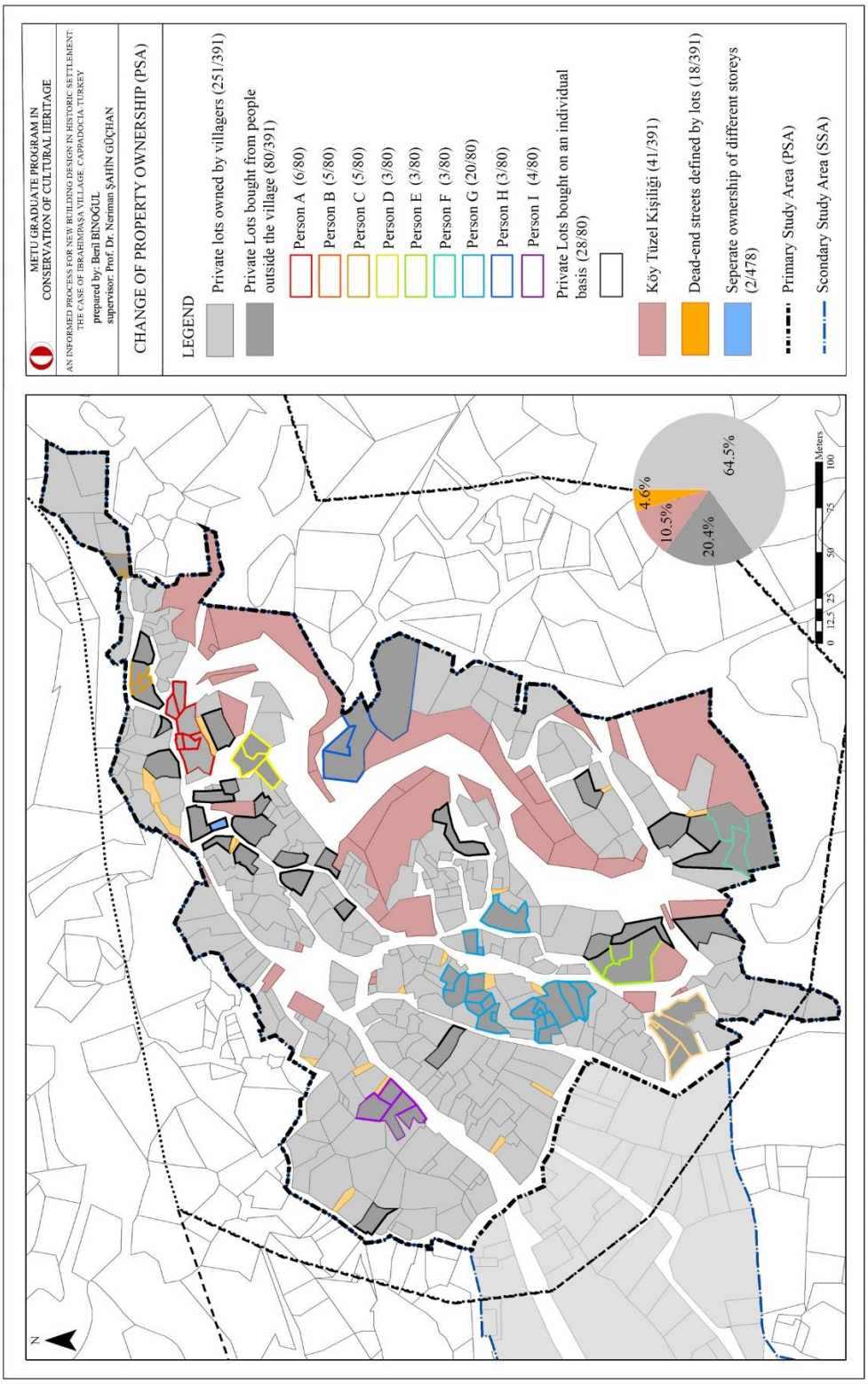


Figure 3.45. Change of Property Ownership

Figure 3.46. Views from the streambed

Courtyards are generally paved, sometimes having some land for planting. There are also some courtyards which are used by several buildings which do not have their own private open areas and entered through an archway from the street which are called "*Aralık*" or "*Kemeraltı*" (Figure 3.48).

Figure 3.47. View from a courtyard

Figure 3.48. Archway and Courtyard through an archway

Private gardens are either open areas of buildings having soft scape elements or cultivated land with trees which belongs to villagers but there are no buildings in the lots. As seen in the Figure 3.50, private gardens are mostly found in the northwest side of the study area having bigger sizes then courtyards. There are also some private lots comprising rock formations on which, agriculture or building activity is not possible. Other than the categories explained above, there are some private open areas with ruins mostly found along the streambed and northeast end of the village.

Figure 3.49. Private gardens located northwest side of the study area

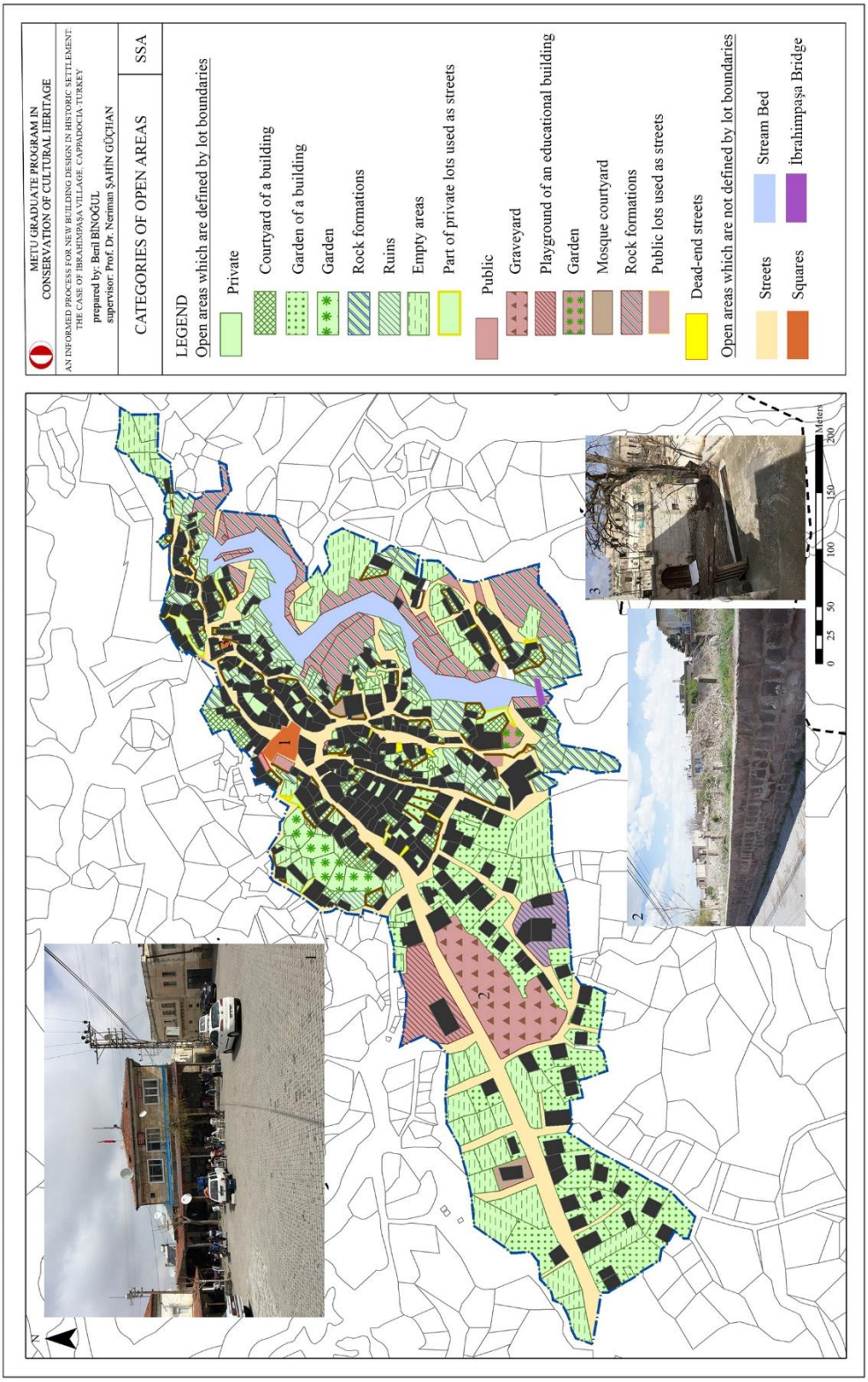


Figure 3.50. Categories of Open Areas

Public open areas which are defined by lot boundaries are composed of different types based on usage, character and physical differences. The graveyard which is also the biggest lot in the study area includes several headstones some with inscriptions and tombs belonging to Ottoman times. According to the information obtained from the inventory of Nevşehir Local Council for the Conservation of Cultural and Natural Properties which was prepared in 1997, the area across the street used to be another part of the graveyard and it was parceled according to a decision of the village council.

Figure 3.51. The graveyard

Today, there are residential buildings a school and a village clinic placed on that area. There are two playgrounds which are used by public with limited access, one belonging to the primary school the other to the dormitory which is also a Quran course. There are also courtyards of the two mosques and there is a garden near to the bridge placed next to a building which is used as a hotel.

Figure 3.52. Buildings with separate ownership

The public open areas which are located along the streambed consist of rock formations, some of them comprising of carved-out spaces (Figure 3.53) and there are also some lots which the borders are not perceived (Figure 3.54) and became a part of the street. The dead-end streets are also defined by lot boundaries and they are used by public as continuation of streets.

Figure 3.53. Carved-out spaces

Figure 3.54. Lots which the borders are not perceived

Open areas, which are not defined by lot boundaries and which are visible and accessible for everybody, consist of streets, squares and the streambed. Streets are open areas which provide the pedestrian and/or vehicular access. The road which connects the Nevşehir-Ürgüp road to the village square is wide, branching with narrower streets into the village. This main road also connects the village to Ortahisar passing through the settlement, crossing the streambed over İbrahimpaşa Bridge, which is also an important part of public open areas.

Figure 3.55. The road which connects the village to Nevşehir-Ürgüp road (left) and the main street with pedestrian and vehicular access (right)

There are two squares in the village. The main square, which is also called *Harman* or *Harman Yeri* by the villagers, was on the periphery in the past (No.1 seen in Figure 3.50). The area used to be an area where harvesting was carried out and the area was named after this activity. Today, it is placed in the middle of the settlement as a focal point where all streets branch from. There was another square in the village which is today called the Old Square (No.3 seen in Figure 3.50). It is in the north-eastern part of the village, surrounded by an old mosque, a laundry and a fountain.

Use of Open areas: Use of open areas are analyzed in two groups which are either private or public. Private open areas are either used as courtyards by the inhabitants of the dwellings (or there are also courtyards which are used by the inhabitants of several neighboring dwellings as formerly explained), which are mostly paved having flowerpots or a small area for harvesting, or as gardens. The gardens which belong to a certain building are usually in the western part of the village which is an extension area including new buildings. There are also some gardens in the northern part of the village, which do not contain any dwellings.

There are two types of streets in the study area. The streets in the west within the new developed area and the road which runs through the village are wider with both pedestrian and vehicular access. All other streets in the village are narrower with various pavements and only accessible by pedestrians. The sides of the streets which have vehicular access are used as parking areas but the roadsides within the old settlement are used by women to socialize and carry out their daily activities.

Village square is mostly used by men, who also spend most of their time in the surrounding coffee houses and they don't tolerate the walk of women in the square. Today, it is mostly used as a parking space both for the villagers and tourists who come to visit the village. The shopping activities for grocery and clothes find place in the village square and they are provided by suppliers coming in the village with their vehicles and setting up a small marketplace on certain days. The square is also used

as a gathering place for social events like weddings, funerals, pilgrimage and for sending someone to the army which gather both women and men in the square.

Figure 3.56. Streets with pedestrian and vehicular access (left) and narrow street only with pedestrian access

Figure 3.57. Village square, used as carpark

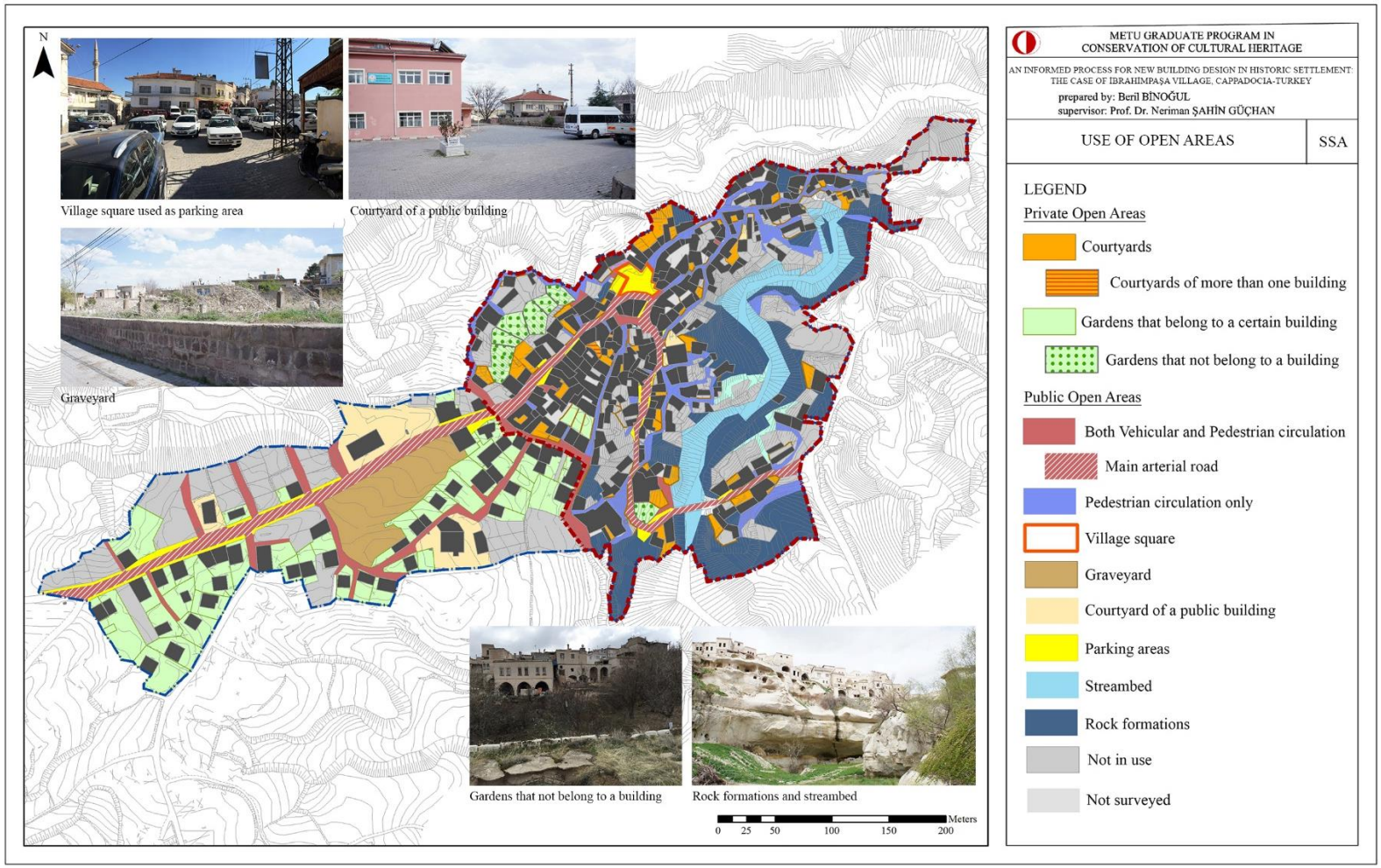


Figure 3.58. Use of Open Areas

Characteristics of Public Open Areas: Public open areas involve certain elements contributing to their characteristics which are either natural or man-made. As the village reflects all natural characteristics of the Cappadocia region, the natural elements are very important. The streambed is the most dominant natural element giving the village its characteristic. The rock formations are also unique with their peculiar forms and rock cut spaces. The streambed is also significant with its poplar trees which can be seen from anywhere in the village creating an epic atmosphere.

Figure 3.59. Different views from the streambed

Open areas involve man-made elements such as fountains, power poles and stairs. Fountains are usually located at the junctions of roads as they were important meeting places for women in former times. There are four fountains in the study area located in different places and the oldest one is the one which is in the old square.

Today, villagers do not use the fountains for drinking but for watering their animals or other needs. Stairs are another type of street elements used in areas with steep slopes.

Figure 3.60. Fountains as street elements

Figure 3.61. Stairs as street elements

There are different types of pavements in the study area. The traditional natural stone is only seen in western part of *Aşağı Mahalle* and a small part of *Yukarı Mahalle.* The main road and the village square, which have both vehicular and pedestrian circulation, is paved with pavement blocks. It is seen that the streets which are located on areas with steep slopes are covered with earth and sometimes with vegetation on them. Remaining streets are paved with screed and the İbrahimpaşa Bridge is paved with natural block stones.

Figure 3.62. Different types of pavements in the study area

Landmarks and Reference Points: The elements which are identified as landmarks are recognized by all of the villagers and most of the people who visit the village. İbrahimpaşa Mosque, İbrahimpaşa Bridge, the Chapel in the valley, Old Mosque and the old Minaret are landmarks of İbrahimpaşa along with the streambed and its natural features.

İbrahimpaşa Mosque, which is located near the village square in the primary study area, is the place where most of the villagers come for their religious activities. It is called as *New Mosque* (No:3 in Figure 3.63) by the villagers although it was built in 1957 but it differs from traditional buildings in the village in terms of buildings material and construction system. The Mosque was built in the place of another mosque, from which the old minaret (No:1 in Figure 3.63) remains just behind the building. Another important building is the old mosque (No:2 in Figure 3.63which is located on the old square along with a laundry and a fountain. It is entered through an embedded open area from the square and it has two main spaces with vaulted ceilings.

After the village started to grow up to the south, and the new mosque was constructed, the old mosque and surrounding buildings were abandoned. Connecting the two parts of the village, İbrahimpaşa Bridge[31] (No:4 in Figure 3.63) is another very important landmark. It was constructed in 1939 with cut stone and restored in 1998 according to its inscriptions. After passing the bridge through the valley, there is the oldest building of the village, the chapel (No:5 in Figure 3.63), which was built in the 10th century. It couldn't be accessed neither from the valley, nor from the small hole below a house on the other side of the village because it was partially collapsed. The chapel has wall paintings with colorful figures and there are some remains of pigeon holes.

The information about the reference points are collected by observations and interviews with villagers depending on how they define the locations and routes in the village. The landmarks which are mentioned above, fountains, and some specific houses with certain characteristics are used by the villagers depending on the location of the target.

[31] The Bridge was registered in 30.05.1994 by Nevşehir Regional Council for the Conservation of Cultural and Natural Property.

Figure 3.63. Landmarks

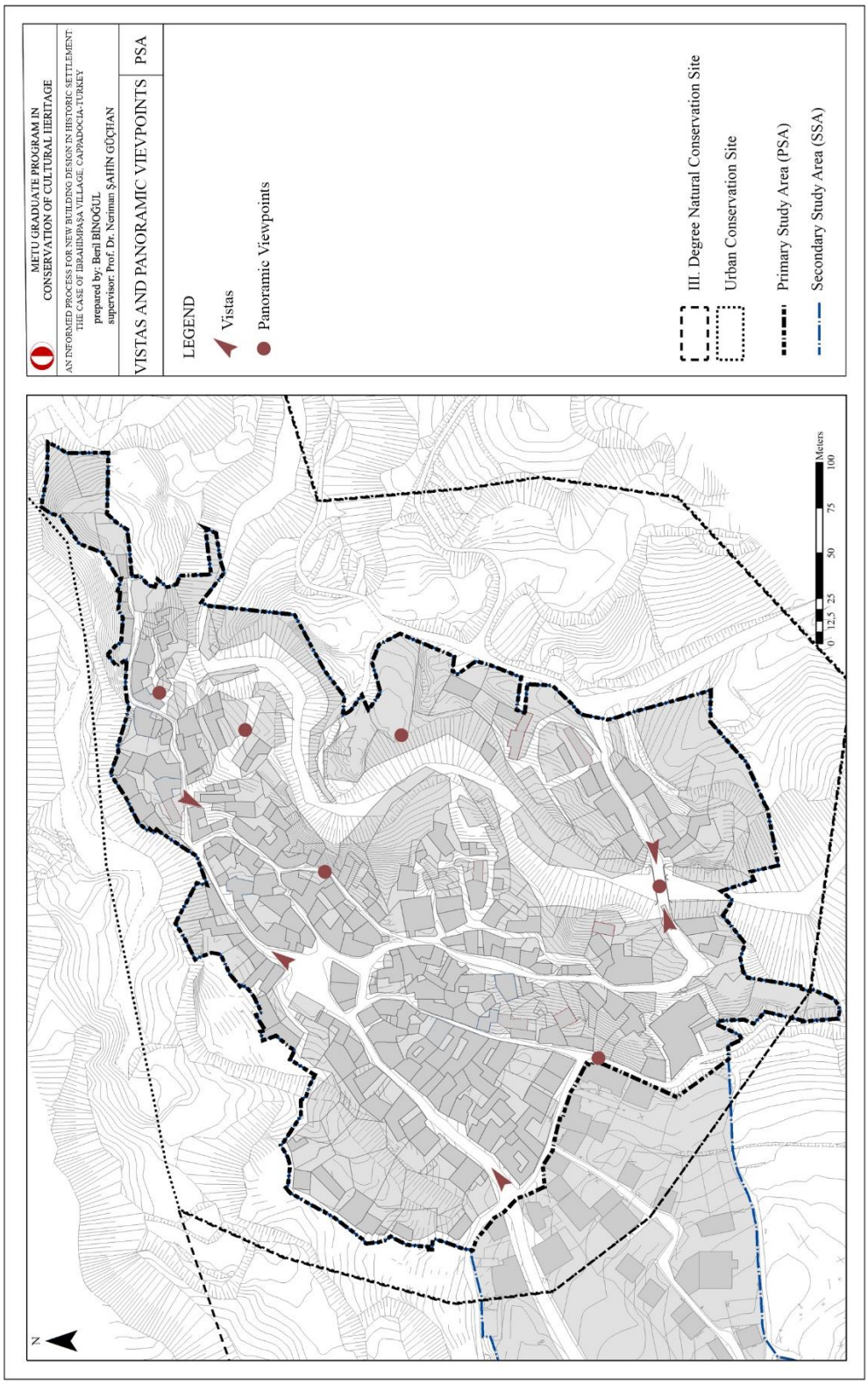


Figure 3.64. Vistas and Panoramic Viewpoints

Figure 3.65. Wall paintings and exterior view of the Chapel

Figure 3.66. Examples of panoramic views from the village

3.2.3.2. Built-up Areas

The buildings are categorized based on their construction technique, materials and original function in order to define the character of the current building stock in the study area (Figure 3.68). There are edifices which are constructed with traditional technique and materials, having original functions of house and mosque. Houses, under this category, constitute the majority with the number of 175 out of 267 buildings in the study area, two of them having also fountains (one of them also has a laundry which is not used today). These houses are to be found in the old center which is also defined as the primary study area.

Figure 3.67. Houses in the primary study area

Edifices, which are constructed with new construction materials, system and techniques are having functions like house, mosque, fountain, service, accommodation, educational, health center and *kahvehane* which is also used as *muhtarlık.* Among the fountains of the village, there are two old laundries which were used by the women in the past to wash cloths. There are 64 new houses; 3 of them having *bakkal*, and 3 of them with storage spaces on their ground floors and there is only one apartment building in the study area.

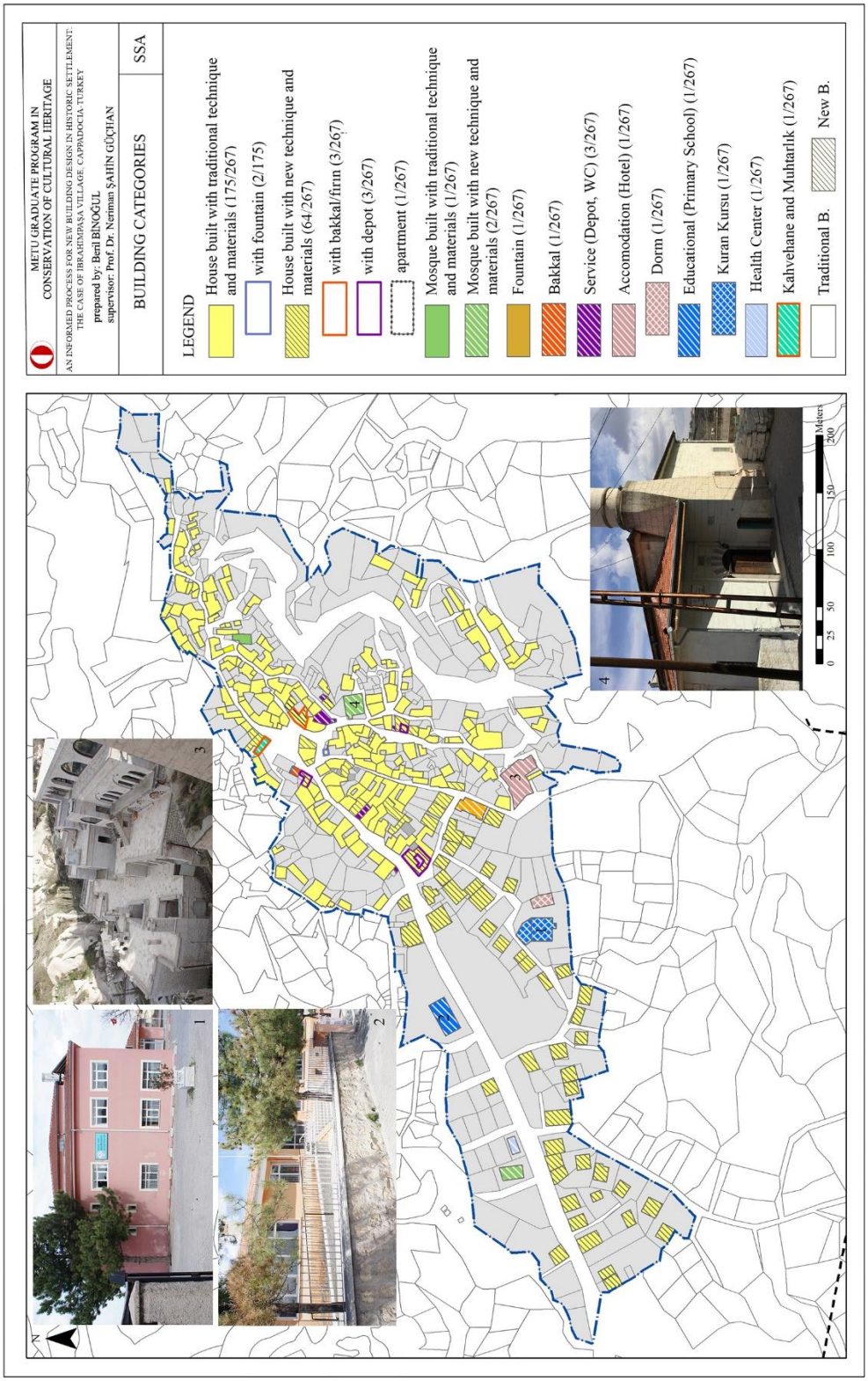


Figure 3.68. Building Categories

Most of the buildings in the study area are two-storey buildings disregarding their carved-out spaces (Figure 3.70). The heights of the buildings are accordant with the topography except one building located in the south of the study area, which is a new hotel building constructed on several building lots. As mentioned before, migration effected the village and its population negatively and as a result, nearly half of the buildings in the primary study area are not in use.

Current uses of the buildings can be seen in Figure 3.71 in detail. There are 11 hotel buildings in total which are converted from houses but only 4 buildings are used for accommodation. The village square is surrounded by *kahvehane*, office of the village headman (*muhtarlık*), *bakkals* (either as a single building or on the ground floor of a residential building), hearth, and a building for İbrahimpaşa Sports Club.

Figure 3.69. Hotels which are converted from houses

Nearly all buildings in the primary study area are constructed with local stone, "white stone" which was carved from a quarry near the village. This stone was used on street facades and main walls whereas tuff was used for secondary walls and in rock cut units by being carved out (Karakul, 2011, s. 76). Traditional buildings are built with stone masonry as additions to a rock carved space or as a single building. In the main

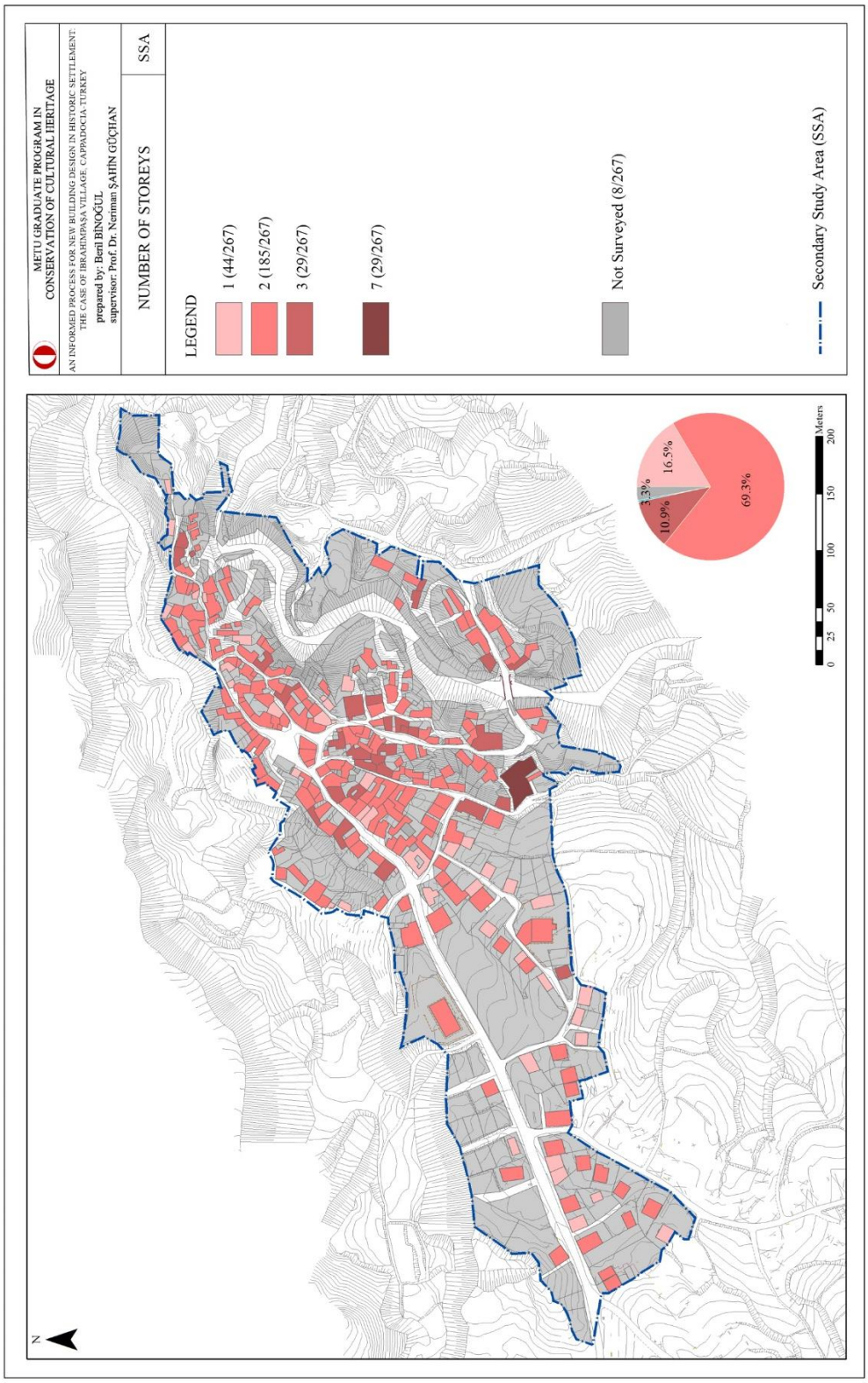


Figure 3.70. Number of Storeys

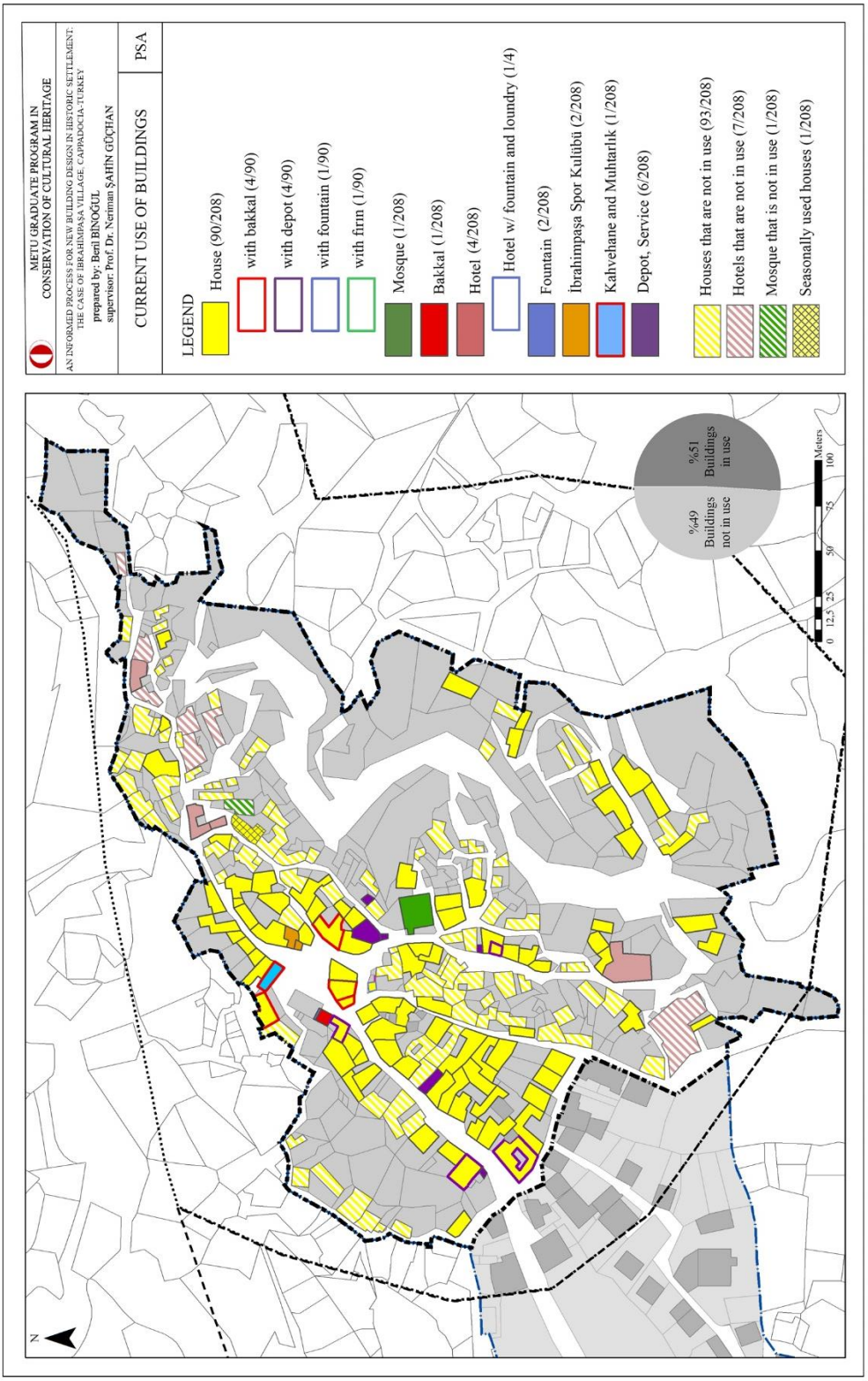


Figure 3.71. Current use of buildings

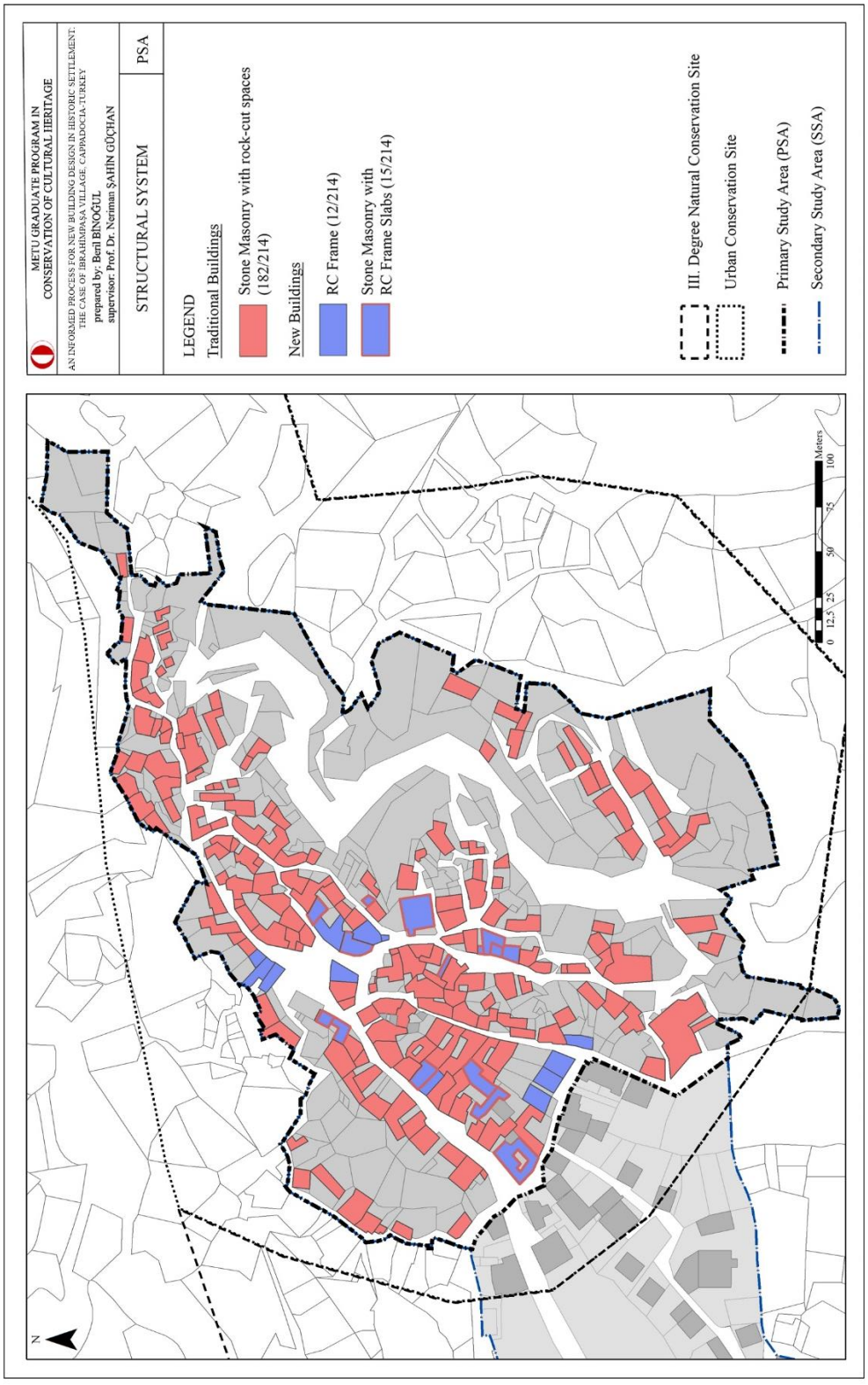


Figure 3.72. Structural system

study area, 182 out of 214 buildings are traditional buildings with stone masonry whereas the rest is defined as new buildings. There are two types of new buildings in the village; first group consists of buildings which are constructed with RC frame as the second one consists of buildings which are constructed with stone masonry but have RC frame slabs in between (Figure 3.72). New buildings are mostly located on the higher parts of the village and around the village square.

Figure 3.73. The local “white” stone used for buildings

Figure 3.74. Buildings with serious structural problems but are still standing

Figure 3.75. Buildings which are partially collapsed

Architectural elements of traditional houses: In traditional houses in the region, architectural elements are very important defining the characteristics of the building and also containing information about the owner and the time period that it was built in. In İbrahimpaşa village, projections, ornamentations, doors, windows, and many others generate the authenticity on facade and elements like niches, *şıralık*, *lambalık*, cupboards, fireplaces and so on gives us a hint about the spaces and their purposes. The architectural elements of the village are constructed with timber, stone or rock-cut.

There is a comprehensive study about construction techniques and details of architectural elements written by Funda Solmaz as a master thesis of which the title is "Construction Techniques of Traditional Houses in Nevşehir; Case Study on Ürgüp, Mustafapaşa and İbrahimpaşa". In this study, architectural elements which play an important role in defining the İbrahimpaşa House are mentioned from exterior to interior elements.

Projections: There are two kinds of projections (Figure 3.77) in the study area as open and close projections. Open projections (balconies) are usually placed on the middle unit of the second floor and they are made of timber, having either stone brackets or

timber braces underneath. The open projections are also to be found on buildings as a part of a closed projection which will be explained below.

There are 2 main types of closed projections in the village (Figure 3.77). Type 1 consist of rectangular projections generated by pulling out the whole second floor. In this case, the enlarged first floor is supported by stone brackets varying in size depending on the size of the projection. Type 2 consist of triangular projections (beveled projections) constructed by placing the stones upon each other extruding a certain distance to the street. The buildings which doesn't have projections, have cornices. They don't have any structural function, but they emphasize visually the distinction between first and the second floors. Buildings with cornices build out the simplest form of a facade in the village.

Figure 3.76. The buildings without a projection might have cornices as ornamentation

Facades with projection have mouldings as the most ornate part of the facade, having three different degrees of ornamentation (Figure 3.79). As mentioned above, the stone projections are supported by stone brackets which have various details in their section.

Figure 3.77. Projection typology

Figure 3.78. Projection typology - 2

Figure 3.79. Facade ornamentation

Even though this is a simple form of a stone bracket, because of their details it becomes a decoration element on the facade which are classified in the first group. The second-degree group consist of two different types decoration elements used in addition to the stone brackets. In this type, a round shaped figure (rosette), geometrical motif or a geometrical symbol is placed between the brackets followed by another either semi-round or triangular shaped figure placed above the brackets (Figure 3.79). The motives of the both figures are various creating a non-repetitive composition on the façade of the building. The third-degree group is an upgraded version of this one with additional ornamentation both on the brackets and on the figure above. The degree of ornamentation is generally regarded as an indicator of the differentiation of wealth and poverty depending on the economic strength of the inhabitants.

The different meanings which are attributed to the motifs can't be comprehended by the limited information obtained gained from builders and villagers. According to Özlem Karakul, the holistic meanings and the presence of ornamentation are more important than the individual meanings, which have been transmitted as a part of intangible cultural heritage (Karakul, 2011, sf.149).

Doors: Doors can be categorized into two groups: exterior doors which provide an entrance either to the building or to the courtyard from the street, and interior doors connecting the interior spaces of the building. Exterior doors are mostly spanned by stone arches having two timber wings and they have three types within the primary study area with similar proportions (nearly 4:5) but differentiating from each other by their arch types (Figure 3.82). Type 1 doors are spanned with a flat arch and this type is only used for entrance to the building and it is not used for courtyards. Type 2 and Type 3 doors are used both for entrance to the building and to the courtyard with similar proportions. Type 2 doors are spanned with round arches whereas Type 3 are spanned with type of a flat arch having a profiled stones on the top of the side rows.

Some of the buildings might have more than one entrance to the building. This is usually is the case when the building faces two different streets and/or levels. In this

case, there is a door which is spanned with stone arches with various types having one timber wing besides the main entrance having the properties described above.

Interior doors are also built with timber having one wing. Doors of vaulted rooms are placed between two cover arches and they have metal components such as hinge, lock and handle (Solmaz, 2013, sf. 93). The simplest type is assembled with three, four or five pieces of wood placed vertically and fixed with horizontally nailed thinner timber pieces on the back (Figure 3.81).

Figure 3.80. Examples of secondary entrances to the buildings

Figure 3.81. Examples of interior doors

Figure 3.82. Door typology

Windows: Windows in the study area can be categorized into three main groups (Figure 3.83). First group consists of room windows which are to be found only on upper floors of the traditional buildings having a ratio of nearly ½. Second group is top windows which are also a part of the door enlightening the entrance hall. Their size and shape vary independently of the type of the door underneath. Third group consists of room windows which are to be found on ground floors and are placed above the eye level because of privacy concerns.

The windows which constitute the first group are placed in rooms of the upper floors and a categorization was made by their profiles and opening types (Figure 3.83). The window profiles in the study area were damaged or replaced with PVC profiles, so this typology was made among the authentic windows which still existed. The windows are mostly winged opening from the midline and the most common profile type was the one which is divided into to three parts vertically and into two horizontally. The vertical three parts have two wings, one part having two sections and the other one only one. Two-sectioned part can be placed below or above the other part but if it is placed above, the upper part of the window is fixed and can't be opened. Another type of the winged windows is very similar with it, only having two sections with the proportions of three. In this type, the upper part is fixed having two longer wings underneath. Aside from the winged windows, a rare type is guillotine windows having two main parts vertically sliding, each divided into four pieces.

There are various ornaments above or around the doors and windows. Their level varies depending on the whole facade also considering the ornamentation above the projection (*gerdanlık*). The borders of the doors which belong to Type 2 (mentioned in Figure 3.82 are generally decorated with semi-circular or curvilinear shapes whereas the other types might be decorated with stones which make recessions. The windows on the other hand, have borders with geometrical shapes on both sides and a more ornamented area on the top with rosettes or different elements. Usage of front façade ornamentation was either simplified or disappeared in the village after 1950s (Karakul, 2011, sf. 148)

Figure 3.83. Window typology - 1

Figure 3.84. Window typology - 2

Pigeon Houses: In the region, pigeon excrement are used fed for fertilizing the soil and for killing insects. There are lots of pigeon houses carved along the rock valley and also on the facades of the dwellings as a common architectural element (Figure 3.85). They are sometimes ornamented in harmony with the façade of the building.

Inscriptions: Inscriptions are mostly placed on the entrance doors, some of them written in Arabic, some of them in Turkish letters and they contain information about the construction date of the dwellings (Figure 3.85).

Figure 3.85. Examples of pigeon houses and inscription (right)

Flower shelves / *Saksılık*: The flower shelves are made of stone, projecting from the facade of the dwelling. Their shapes vary throughout the village, but they are only big enough to carry one pot and they are placed on the sides of the first floor windows.

Stones for keys / *Anahtarlık Taşı*: It is a specially shaped stone placed above the entrance door for keeping the keys (Figure 3.86). Besides its function, it has a connotative meaning showing the trust among villagers (Karakul, 2011, s. 155).

Figure 3.86. Examples of flower shelves and stone for keys

Şıralık: It is generally located in kitchens, 15-20cm lower than the floor and used for preparing grape molasses (Figure 3.87).

Tandır**:** It is a hole on the ground, which is made of stone or terra-cotta, used for cooking food and bread. It can be located either in a closed room or in the courtyard (Figure 3.87).

Fireplace: Fireplaces are located either in rooms for heating or kitchens as a main architectural element (Figure 3.87). It is usually placed between two arches in a room and it is ornated and even sometimes painted. In carved-out places, fireplaces are located in a rock.

Seki / Pabuçluk / Musandra**:** In some of the houses, there is a space when you enter the door and an elevated area which is called 'Seki' continuing inwards. It is either made of stone or timber in the area creating a hierarchical order in the room. The area which is lower is called 'Pabuçluk' as it is a place to take the shoes of and there is a timber balustrade between these two areas, which is called 'Musandra' (Figure 3.87).

Figure 3.87. Fireplace (left), tandır (middle), şıralık (right)

Figure 3.88. Seki, Pabuçluk and Musandra

***Sedir*:** 'Sedir' is an architectural element which is either constructed with timber or stone and located along the front façade of the room in front of the windows. Its height is around 30-40 cm. used for sitting or sleeping (Figure 3.89).

Niche / *Taka*: Niches are called 'Taka' by the locals and they are placed either in the rock or in the stone walls. There are various shapes, sizes and decorations of niches located in the rooms (Figure 3.90).

Figure 3.89. Examples of *sedir*

Figure 3.90. Examples of different types of niches

Cupboards / *Yüklük:* Cupboards are either carved-out from the rock or they are placed in a stone wall having wooden doors, mostly used for storing quilts and pillows. The wings might be simple of decorated with geometrical motifs (Figure 3.91).

***Lambalık*:** Lambalık is a cantilevered stone element placed on the walls, creating a space to put lighting equipment (Figure 3.92).

Shelves: They are wooden elements placed on the walls to put small moveable belongings. They sometimes have decorated profiles or paint on them.

Figure 3.91. Examples of cupboards

Figure 3.92. Different types of *lambalık*

Figure 3.93. Examples of staircases

Staircase: The stairs are very important architectural elements contributing the circulation through the building. The staircases in the study area are either rock carved or they are built with stone and sometimes they are used together. There are two different types of stone staircases. The stairs are either supported by a wall, arch or a rock, or the stone steps fits in the wall sitting on each other working as a console.

As designing a new building in historical settlements are considered as conservation tools which necessities an understanding of historical buildings and their context. This chapter consisted of information which forms a basis for *informed conservation* which are analyzed about a certain settlement and should be prepared and provided to any of the bodies who are concerned with informed conservation.

CHAPTER 4

UNDERSTANDING AND ASSESSMENT OF THE TRADITIONAL SETTLEMENT FABRIC AND BUILDINGS OF İBRAHİMPAŞA VILLAGE

In this chapter, the analysis made in the previous chapter is evaluated with additional data collected during the site survey concentrated on the primary study area. By this means, the typologies will be determined for the components which constitute the İbrahimpaşa traditional houses and the settlement fabric an assessment is made considering values, problems and potentials of the village. This outcome defines the significance of the place after which, the architect who will design new building in İbrahimpaşa Village will evaluate before making any proposals and establish what is significant and what impact any new proposal will have on the site.

For this purpose, firstly, typology of lots, plan and facade of the traditional buildings were determined with their relation to lot form and streets. Building lots are classified according to their features like their nearby relations, form, size and location of buildings within the lots. Plan typology was prepared by using the data which comes from the 15 survey sheets applied to traditional houses of which, the plan scheme is legible. The main criteria was the configuration of the units on the ground and the first floor according to the circulation areas while preparing the typology. Legible and original facades become the subject of the facade typology, in which the main criteria was the number of units that are mentioned in plan typology. At the end of this section, all information gathered from typologies is superposed in order to understand which forms the traditional settlement fabric.

Secondly, an assessment of the Traditional İbrahimpaşa House is made through the studies in this thesis in accordance with its evolution. At the end of this chapter values,

problems and potentials of the village is presented in order to define the significance of the place which are essential for a decision-making process.

4.1. İbrahimpaşa Traditional Settlement Fabric and Traditional Houses

The building blocks in the study area are formed according to the topography. As seen in Figure 4.1, they are more fragmental and amorphous on the slopes around the streambed. In parallel with this, the building lots which constitute those building blocks on the slopes, are becoming smaller. In order to analyze the settlement fabric, the building lots will be analyzed according to their nearby relations, form, size and location of buildings within the lots as they form the fabric.

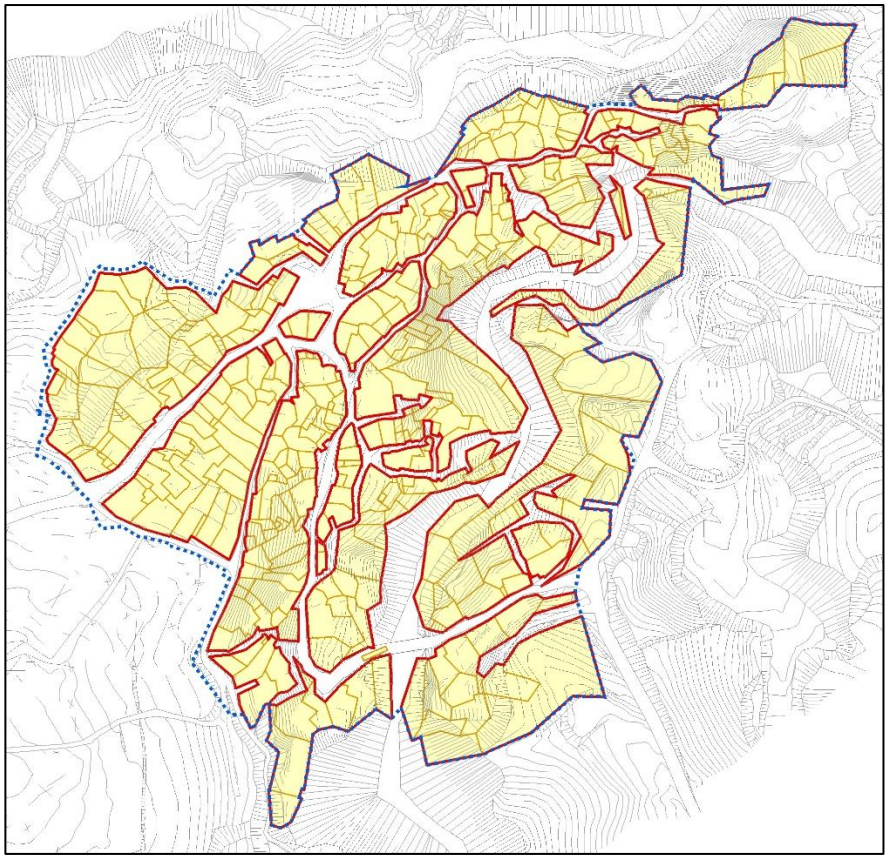
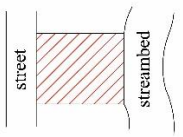
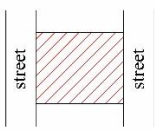
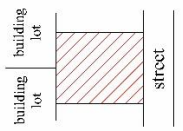
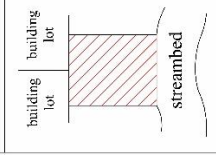
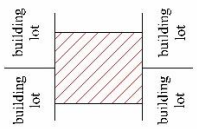


Figure 4.1. Building blocks of the primary study area

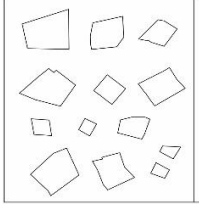
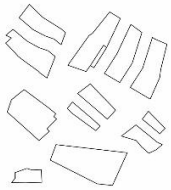
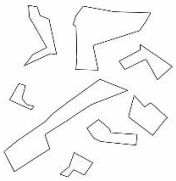
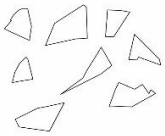
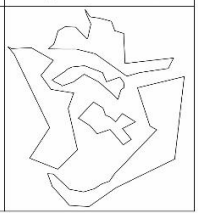
Nearby Relations of Building Lots: The settlement fabric of the village is formed by various nearby relations of three components: streets, streambed and the building lots (Figure 4.2). More than half of the building lots in the primary study area have a nearby relation which they have a building lot on the backside and street in the front. Depending on the size of the building block and the slope, some of the building lots have streets on both sides and these two varieties can also be seen if the street component is replaced with the streambed. 15% of the building lots have building lots all around them and it can be seen that either they have a connection with a dead-end street or that they belong to the same owner with one of the surrounding building lots.

Table 4.1. Nearby relations of building lots

street - building lot - streambed	street - building lot - street	building lot - building lot - street	building lot - building lot - streambed	building lot - building lot - building lot
				

Form of the Building Lots: Building lots in the study area are divided into five different groups according to their forms such as square, rectangular, L-shaped, triangular and has no regular geometric form. As seen in the Figure 4.3, most of the building lots in the primary study area are rectangular. This type of lots are mostly located on flat terrains along with square and L-shaped ones. Triangular shaped lots are usually the corners of building blocks and non-geometric shaped lots are mostly located on the slopes and around the streambed.

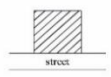
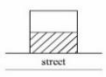
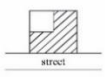
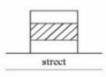
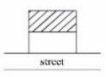
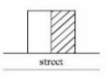
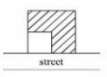
Table 4.2. Examples from the site for form of the building lots

square	rectangular	L-shaped	triangular	has no regular geometric form
				

Size Groups of Building Lots: Building lots in the primary study area are divided into 5 different groups according to their size range. The group with the smallest sizes has the range $7m^2$ - $25m^2$ mostly consists of dead-end streets, fountains, and depots. The group with the largest square meter range is between $650m^2$ - $17000m^2$. These are mostly the public lots along the streambed having few or no area which is suitable for building. Another group of buildings lots between $230m^2$ - $650m^2$, build up the group large lots, either having new buildings or, traditional buildings but made in a more recent time period in comparison with the rest of the study area. The group which constitutes the majority among this group is the middle range with 46,7%. The size of the building lots vary between $75m^2$ and $230m^2$ and usually consist of a house and an open area (Figure 4.4).

Typology according to the Location of the Building in the Lots: In the primary study area, there are five different types, defining how the building is located within the building lots (Table 4.3).

Table 4.3. Typology of Location of Building Lots

A	B		C	D	E	
The building is located on the whole lot	The building covers the whole side facing the street	The building is located on the front side of the lot and back side of the lot is partially covered	The building is located in the middle of the lot	The building is located on the back of the lot	The building partially covers the side facing the street	The building is located on the back of the lot and the front side of the lot is partially covered
						

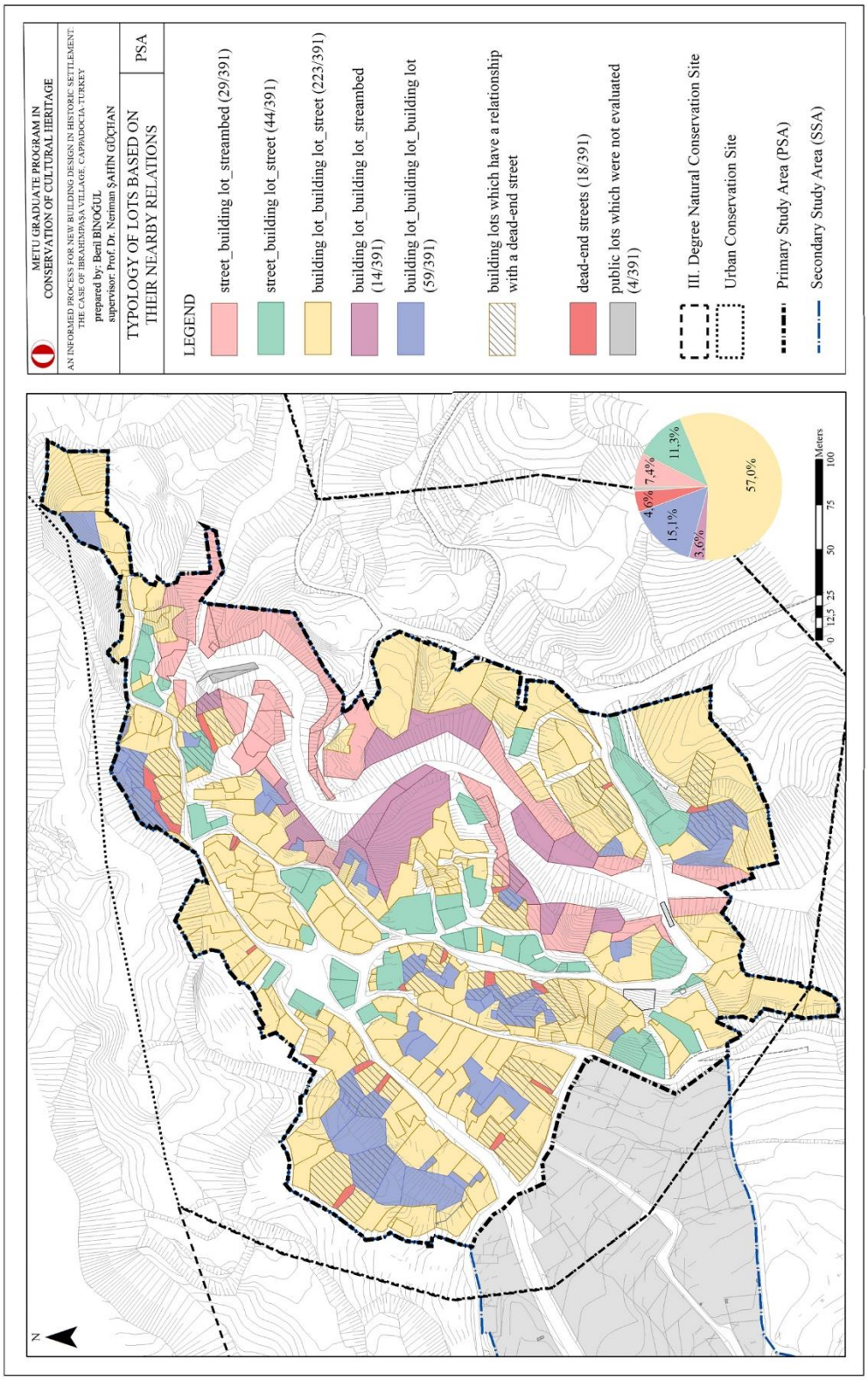


Figure 4.2. Typology of lots based on their nearby relations

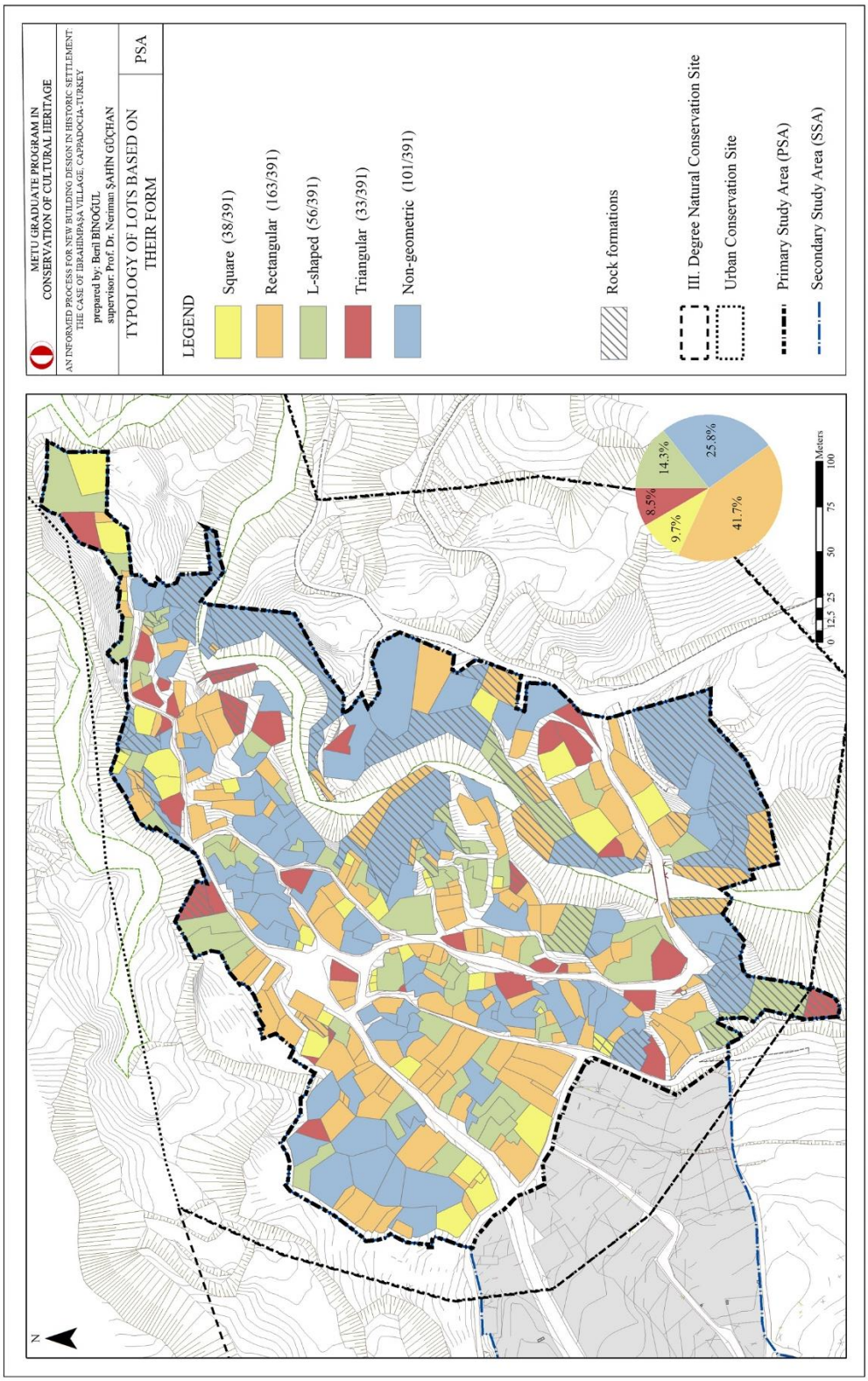


Figure 4.3. Typology of lots based on their form

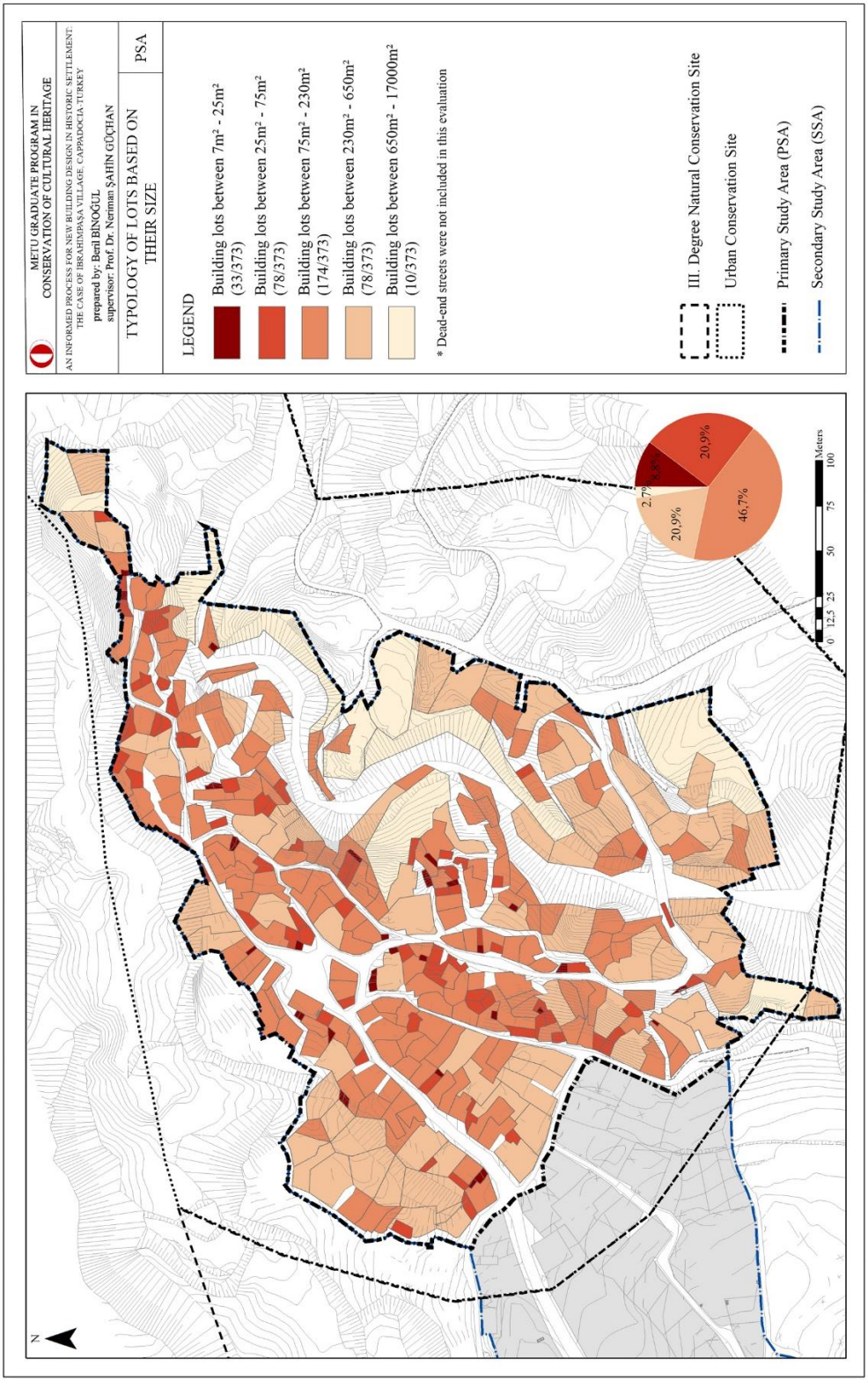


Figure 4.4. Typology of lots based on their size

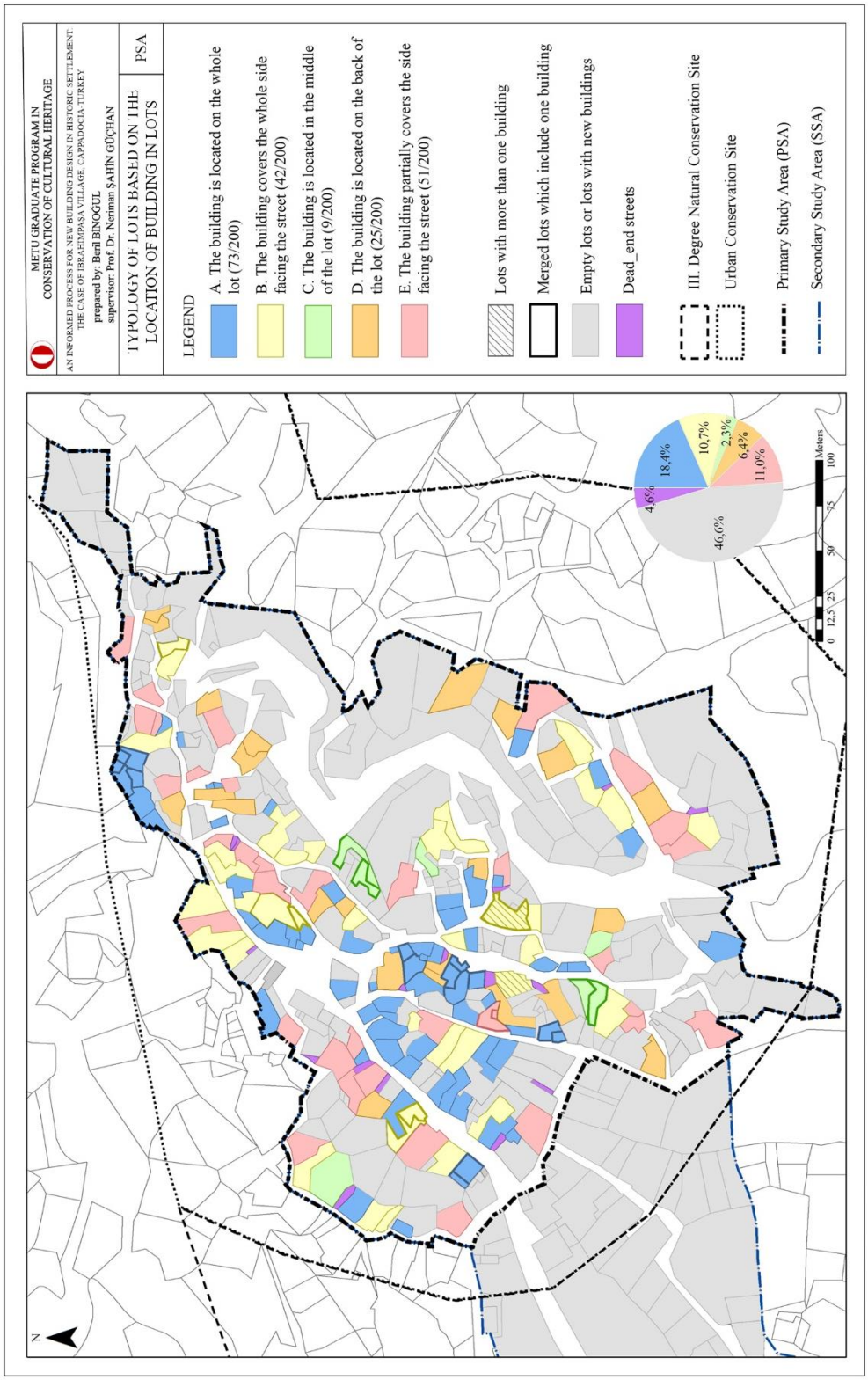


Figure 4.5. Typology of lots based on the location of the buildings in lots

According to Group A, the building is located on the whole site. This type is mostly seen where the topography is flatter, and the buildings are denser. As no building has a courtyard at the back, Group B consist of buildings which have rock formations at their back within the borders of their building lots. Group C is also a similar case with a rock formation but which also has a courtyard in the front. Group D and E are both cases which the building has a courtyard and they are mostly placed on flat lands without any interaction with a rock formation.

Figure 4.6. Buildings with rock formations at their back as examples for Group B

Except the fact that the half of the building lots are empty, as the majority, nearly 20% of them are the ones which the building is located on the whole lot (Type A). Type B and E constitute the vast majority of the lots in the study area.

Plan Typology of the Traditional Houses: The plan scheme of a traditional İbrahimpaşa House consist of living spaces (rooms), aiwans, circulation spaces, courtyard (if exists), kitchen/*tandır evi*, storage spaces, stable, *şırahane* and wc. There are different variations of their allocation but there are also some specific locations according to their functions.

The room is the main unit mostly placed on the first floor, which might have architectural elements such as *sedir*, fireplace, *seki*, *pabuçluk, musandra,* niche,

cupboard, shelves and *lambalık*. A room can either have all these elements or some of them and its always placed on the front side of the building having two or three windows. It is either placed as a whole masonry unit or as a complementary part of a carved-out space. According to the size of the building, there are more than one room. The rooms have stone floor coverings and the masonry walls are spanned with rib vaults which is a system that the structure is created by set of arches.

Figure 4.7. Room as the main living space

Circulation spaces are either stairs, corridors or aiwans in some cases if the building is located in a courtyard. The corridors are located at the back side of the building whereas the aiwans are located such as rooms. The stairs can be located inside the building or outside (if the building has a courtyard) combining the units of the building.

Aiwans are semi-open spaces which are covered with vault and they can be placed either on the ground floor or the first floor. . If it is on the ground floor, it may have a *tandır* on the floor and it is named as "summer kitchen" or "*yazlık*" by the inhabitants. The aiwans on the first floor connect the rooms, sometimes having a direct connection from the courtyard with stairs and they can sometimes have an arch system on the side that they are open. If they are only located on the ground floor, their depth varies according to the size of the building and the building lot.

Figure 4.8. Circulation spaces

Figure 4.9. Examples of aiwans

Figure 4.10. Views from inside of courtyards including a WC (left and middle) and courtyard wall (right)

Courtyards are open spaces of traditional buildings, surrounded by stone masonry walls above the eye level where the daily life activities occur in. The spaces on the ground floor such as kitchen, stable, *şırahane* and storage spaces are connected with the courtyard and the size of the courtyard might vary.

Kitchen is placed on the ground floor, in relation with the storage rooms either directly or through the courtyard. There are no examples in the studies buildings of a masonry kitchen space and they are usually carved out spaces with *tandır* inside. The *tandır evi* is an aiwan with a tandır, placed in front of the kitchen and used in summer times.

Figure 4.11. Kitchen (left) and *tandır evi* (right) with a tandır placed in an aiwan

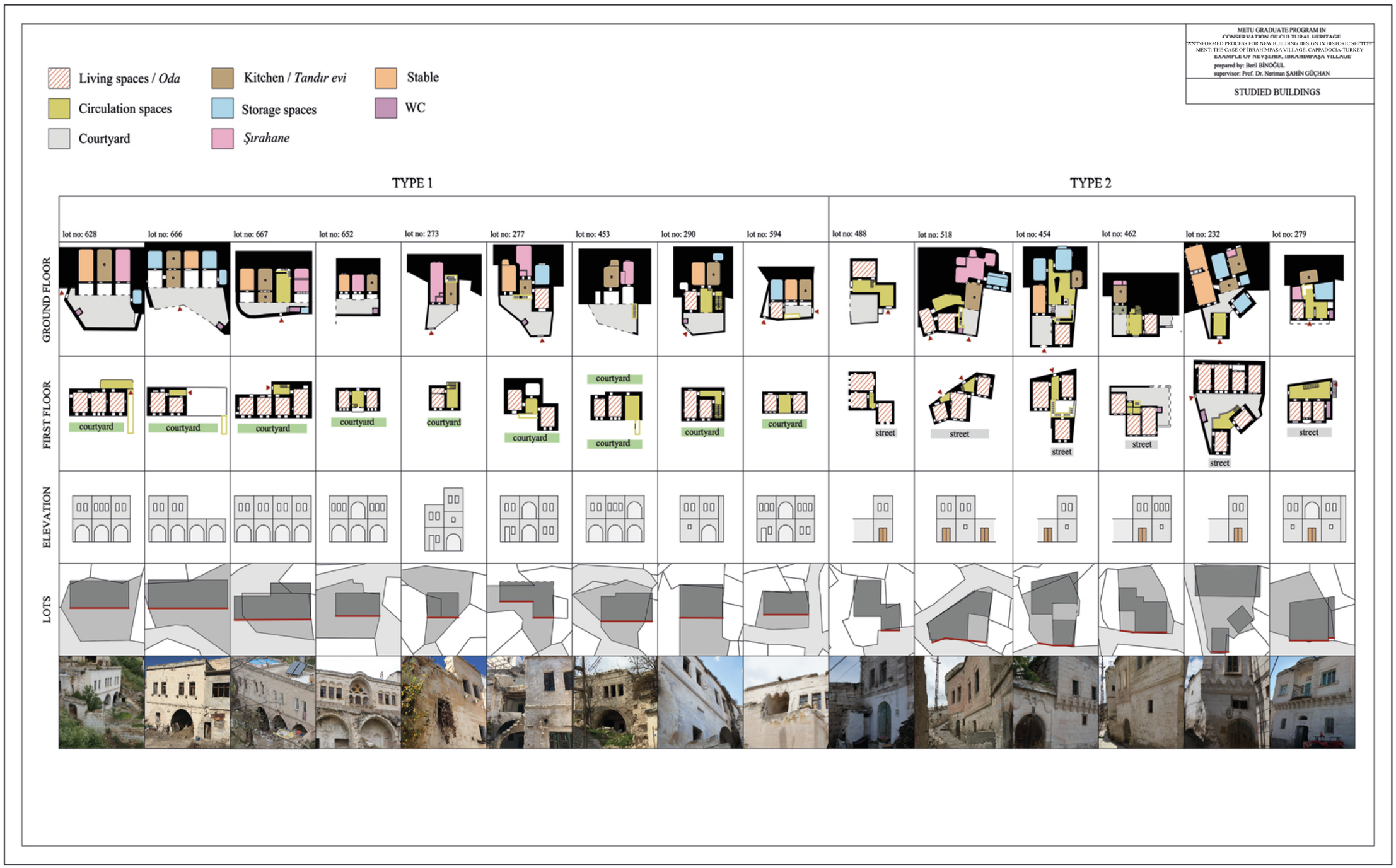


Figure 4.12. Studied Buildings

Storages are carved-out spaces to store foods and other things and they are located on the ground floor in connection with the kitchen either directly or through the courtyard. They have lots of niches on their walls for the stored goods. Stables are also carved-out spaces located on the ground floor and in relationship with the courtyard. They have larger niches on the walls to put animal feed and sometimes they have fireplaces. As another part of the plan, *şırahanes* are spaces for preparing grape molasses in the buildings which has special pools in order to trample the grapes by feet and obtain grape juice.

Figure 4.13. *Şırahane* (left) and hayloft (right)

For the study of plan typology, 15 buildings were surveyed in the primary study area (Figure 4.12) and there are two main types of buildings which effects the plan typology in the village: the building is either placed in a courtyard (Type 1) or have a street facade (Type 2) (Figure 4.18). The plan schemes which belong to the buildings placed in a courtyard (Type 1) have two different variations for their ground floor. In the first one, they have their units arranged side by side, one after another all facing the open space in the front (Type 1.G.a). These types of buildings have their circulation with stairs at the back or going up through an aiwan (Figure 4.14).

Figure 4.14. Buildings having their ground floor units arranged side by side (Type 1.G.a seen in Figure 4.18)

The main characteristic of the ground floor units is that they always have a semi open space in the front of which the depth can vary. The first floors of this type of ground floor plan schemes are also very ordered and the walls are aligned with the ground floor. So, the units are placed side by side having their circulation on the back side. The units are either have the same size, or one can be bigger depending on the circulation area. In Type 1, there are no buildings which have more than four units placed next to each other either on the ground floor or on the first floor.

The second type of ground floor plan scheme has their units placed around a semi-open aiwan, from where the upper floor is also accessed (Type 1.G.b). Despite the irregularity of the ground floor, units of the first floor are placed side by side just like the other type, with a small difference that one of the units is used as circulation area.

The plan schemes which belong to the buildings which have a street facade (Type 2) have no specific typology for their ground floor. Units can be arranged according to the surrounding buildings, depending on the shape of the building lot or the landform. But for the first floor, there are two different typologies.

In the first one, units are placed irregularly, but also depending on the ground floor, placed around a circulation area which has access to all of the units (Type 2.F.a). With

this type of plan schemes, the building has a street facade but also has a courtyard. The second one, which is also very similar with the buildings placed within a courtyard, has its units placed side by side with a circulation area at the back. In Type 2, there are no buildings which have more than three units placed next to each other either on the ground floor or on the first floor.

Figure 4.15. Buildings which have their ground floor units placed around an aiwan (Type 1.G.b seen in Figure 4.18)

Figure 4.16. Buildings which have units placed irregularly having a street facade and a courtyard

Figure 4.17. Buildings having a street facade and having their units placed side by side

Facade Typology: As seen in Figure 4.20, there are three main units in the façade typology. First is the entrance unit (A), second is the room unit with its windows (B) and third is an aiwan (C). There are two types of entrance units which are either entering the building through a main two-winged door from the street (A), or through a single-winged door from the courtyard (A1).

For the room units, the variables are the windows with their size and number. If there is a room on the ground floor, the window(s) are placed above the eye level.

While the ground floor room units have either one (B2) or two (B3) windows, the room units of the first floor have two (B) or three (B1) windows. Aiwans are semi-open spaces which are closed on three sides and besides their other functions, aiwans are used as entrances to the buildings and they function as circulation space. For facades, there are different types of aiwans considering sofas are a closed type. First type is an aiwan but with a door on the back (C1) functioning as a circulation space and which is only to be found on the ground floor of a building which is in a courtyard. Second type is an upper floor aiwan with triple arches (C2) again functioning as a circulation space. Third type is a balcony (C3) which means there is a closed aiwan (sofa) behind the wall and an open are in the front. Both C2 and C3 can be found on the first floor but C2 is only in the buildings which are located in a courtyard.

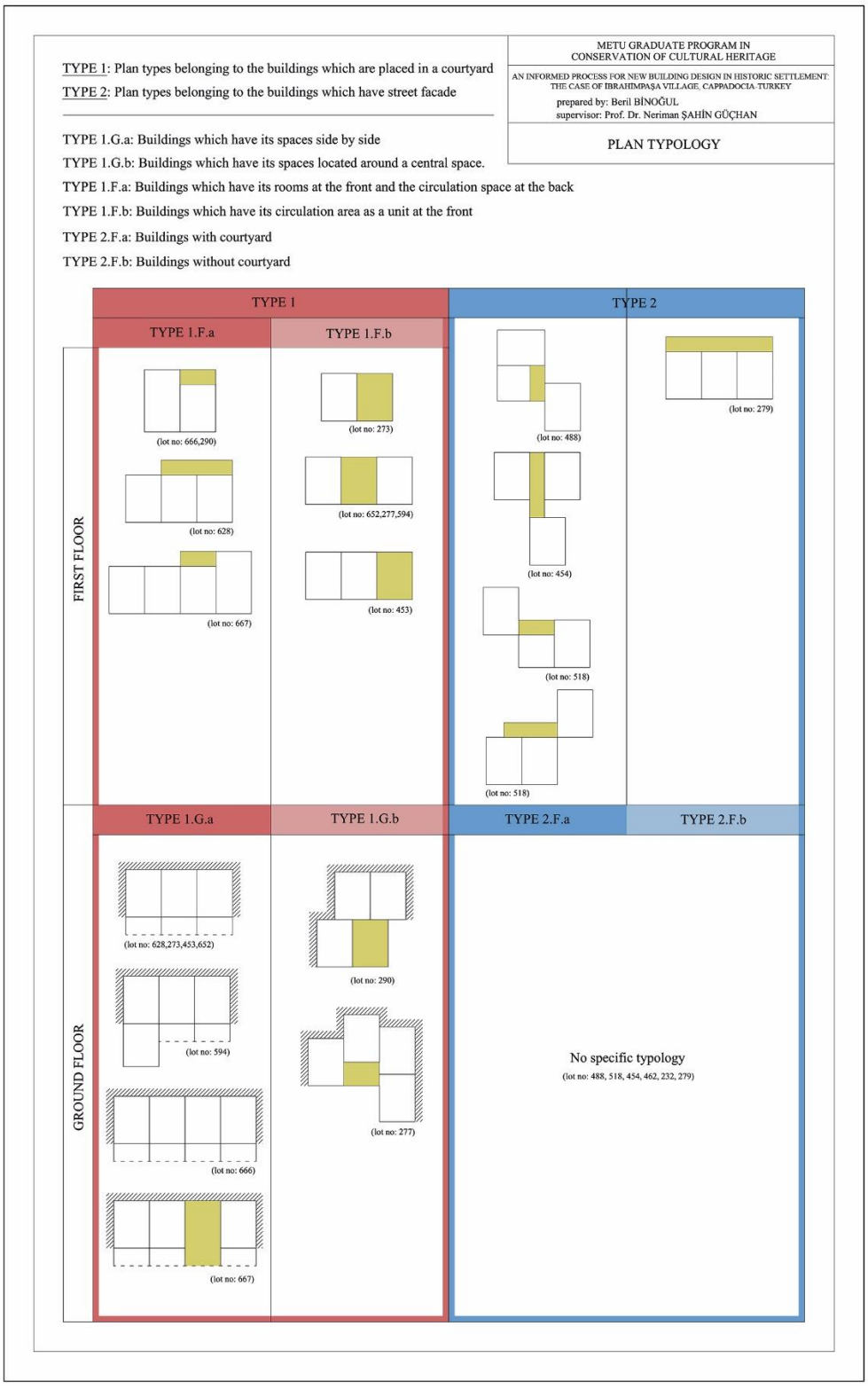


Figure 4.18. Plan typology

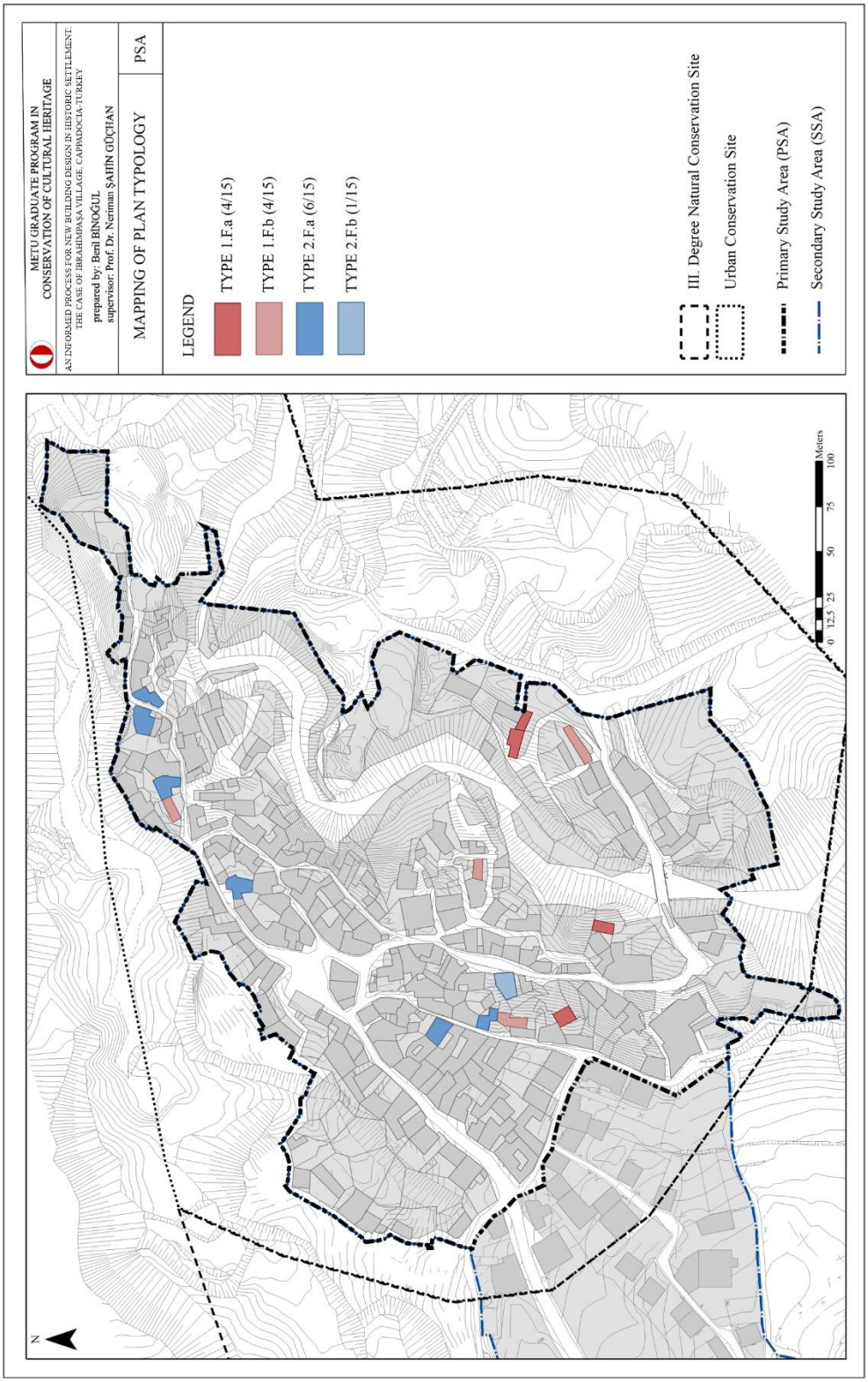


Figure 4.19. Mapping of plan typology

Table 4.4. Examples of units of traditional houses

A	A1	B	B1	B2

C	C1	C2	C3

The different combinations of A, B, C units defined above in the primary study area can be seen in Figure 4.21. The facades are divided into groups based on their number of units counted horizontally, either facing the street or the courtyard. If the building has one unit facing the street, that means it has a courtyard on the side[32]. This courtyard is either entered directly from the street or only from the building. If the building has two units facing the street, building is certainly entered only from the street and these types have no courtyard door if they have a courtyard. Second unit of the building can have one or two floors either having the entrance or a room. If the two-unit building is located in a courtyard, it has two floors on both units and an aiwan on the ground floor. The most common type in the primary study are the buildings with three units. It is also the only type having only one floor for the whole building with only one example. If the building is facing the street and the units have two floors, this type of facades are symmetrical having the entrance in the middle. The unit in the middle on

[32] There is only one exception for a building with only one unit and hasn't got a courtyard. That building is located near the village square and has a fountain on the ground floor covered with a vault in accordance with the aiwan typology (C).

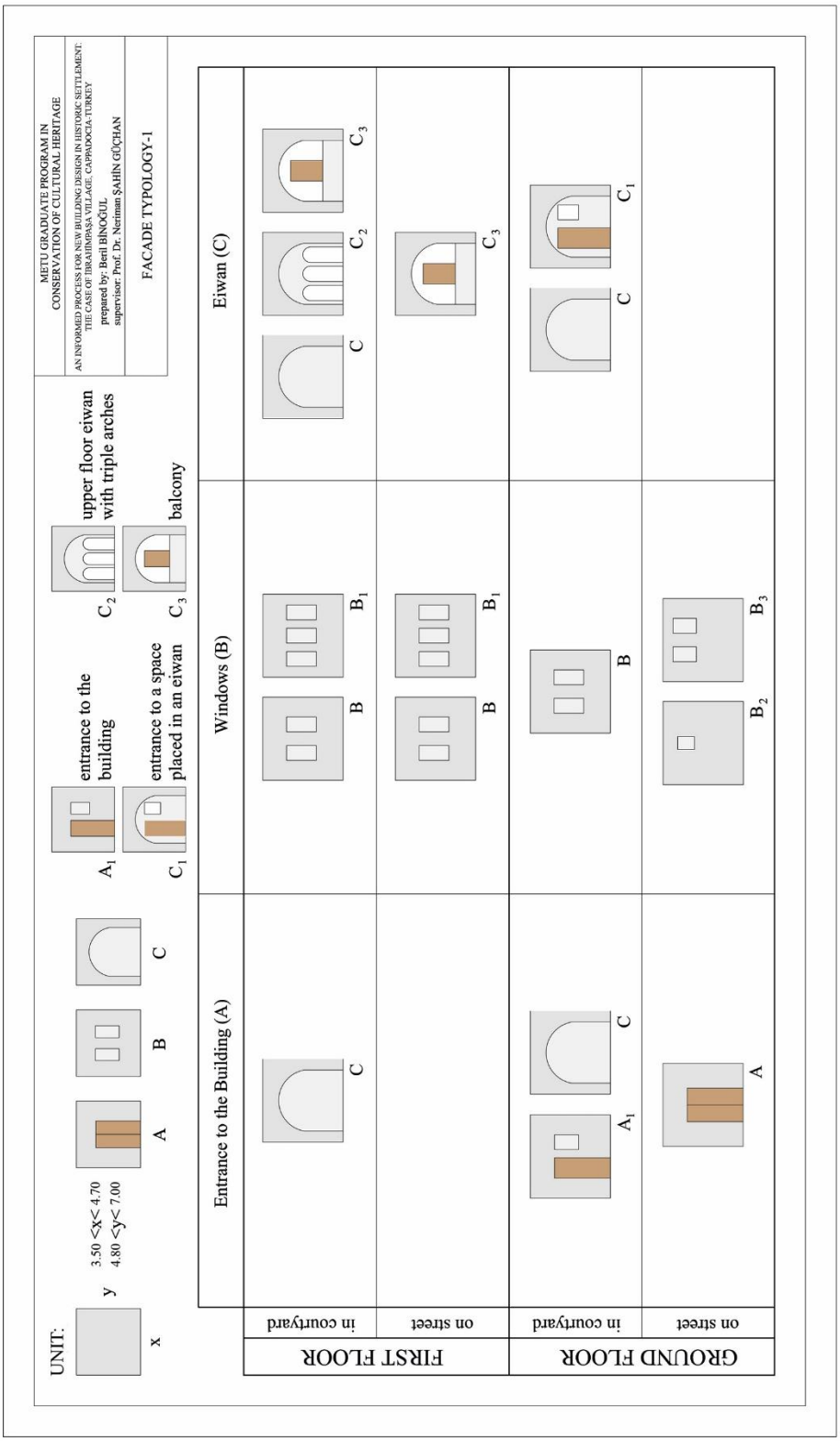


Figure 4.20. Variations in units forming facades of traditional İbrahimpaşa house

Figure 4.21. Facade type created by the units

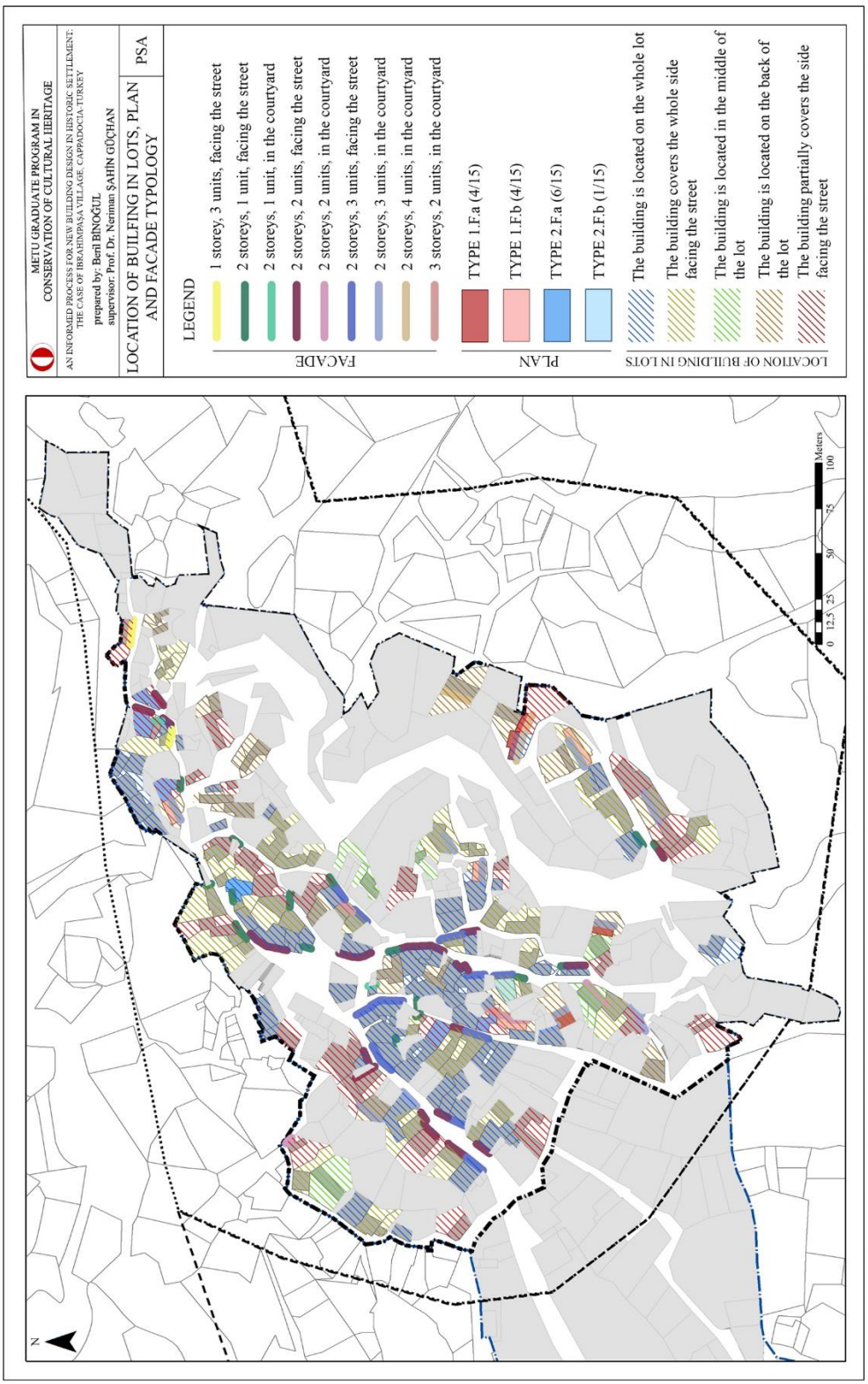


Figure 4.22. Location of building in lots, plan and facade typology

the second floor is either an upper floor aiwan with triple arches or a balcony or it is a room unit. If the building is located in a courtyard, there are various combinations also depending on the plan. There are no buildings in the study area which has four units facing the street. They are located in courtyards having either one or two floors on some of the units.

Figure 4.23. Different combinations of units

There is a certain pattern of generating a building in the village starting from the features of the building lot. Within the whole studied buildings, there are only two exceptional types. The first one is the buildings which have only one floor and with facades facing the street. There are only two buildings of this type, but they also have the same features. The buildings which have one floor consist of three units located

facing the street. They both have Type 1.F.b[33] plan and have their circulation area as one of the units providing a passage either to the courtyard or inside the building. The second one is a single example within the studied buildings which have three floors. This type has two units located in a courtyard having again the Type 1.F.b plan the buildings is located on the back of the lot.

Two storey houses constitute the majority among the traditional houses in the village and they will be the subject of the following evaluation. The buildings which have one unit facing the street are mostly located either covering one side of the lot or when the building is located on the whole lot. This building type matches with Type 2 plan and the one which are located partially covering one side of the building lot, have a courtyard on one side facing a second facade. The buildings which have two units facing the street are either located on the whole lot or on the front side of the building lot. They usually have again the Type 2 plan and their circulation space is located at the back side of the building. The buildings which have two units located in a courtyard, are mostly located in the middle of the lot or located on the back of the lot. Those types are entered through the courtyard having stairs which leads to the circulation space of the second floor. In some examples, that stairs become a unit, or they connect to the aiwan of the second floor. There is only one exceptional building in the area having three storeys which has two units of facade and located in the courtyard.

4.2. Assessment and Evolution of Traditional İbrahimpaşa House

İbrahimpaşa village reflects the characteristics of the Cappadocia region and for its construction system, carved-out units and their extensions as masonry structures (built-out units) constitute the traditional buildings in the village. The dwellings are

[33] For plan types see Figure 4.18 on page 106.

generated from different combinations of these two units and they are affected by landscape, their building lot and the needs of users.

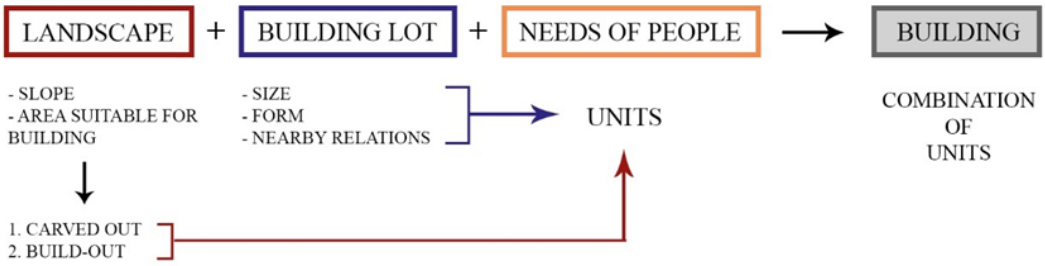


Figure 4.24. Process of buildings

The traditional houses in İbrahimpaşa are formed through a process which is shown in Figure 4.24. There are three main inputs that needs to be considered, which are the landscape, building lots and needs of the users. The landscape is important in order to determine the built-up area and to decide the usage of two main construction systems. The features of the building lots are also affected by the landscape and they are the key determinant which the building is formed accordingly. The needs of the users are another part of this process as they specify the characteristics of the units and their relationships with each other.

The village is laid down on a land which is formed by a stream dividing the village into two parts. As a main natural feature of the village, there are rock formations mostly around the stream, which are not suitable for building on them (Figure 4.25). The earliest dwellings of the village were all rock cut spaces along the streamed which dates back to 10th century[34]. Those rock cut spaces expanded to the slopes starting from the northeast of the village and as they had suitable land when the angle of the slope decreased, they built masonry extensions in the front. The first extensions were

[34] This is the date of the earliest findings in the village (Giovannini, 1971, s. 67) which are the paintings of Babayan Church, located also on the streambed.

in form of aiwans and as the built-out units started to be constructed, spatial organization of the buildings started to develop.

Figure 4.25. The streambed, dividing the village into two parts

Figure 4.26. Earliest dwellings as extensions of the rock cut spaces

In the first period of the development process of the village (see Figure 3.40 on s. 61), the building lots were smaller in size and the dwellings were in a direct relationship with the street having a street facade. The sizes of the dwellings varied according to the size of the buildable area of the lots either covering the whole lot or having a courtyard on the side. The plan schemes of the buildings were shaped according to the

form of the lot and the landscape without a certain typology. The ones which had a suitable rock formation at the back, carved according to their needs, always in a relationship with the courtyard on the side. If they didn't have an open area, they had a bigger carved-out unit which operated as a circulation area between the service units. All service units such as *tandır evi*, kitchen, storage, *şırahane*, stable and wc are located on the ground floor in a relationship with a carved-out circulation area or the courtyard. There might also be a living unit on the ground floor which is always placed on the street side of the building but the whole first floor consists of living units and circulation spaces.

Figure 4.27. View from the village which the evolution process can be followed from bottom to top

In the second period as the settlement grew to the south along the streambed, the landscape flattened in comparison to the northeast and the lot sizes slightly enlarged especially in the areas close to the streambed. In addition to the types defined above, buildings have courtyards in the front without having a direct relationship with the street. Their ground floors doesn't have a certain typology but again all the service

spaces are carved-out spaces opening to the courtyard. In few examples, there is also a living unit on the ground floor but again the whole first floor consists of living units and circulation spaces. As the building is placed in a courtyard, the circulation space is not at the back of the building like former examples but it becomes a unit which also effects the facade of the building.

Another change in comparison to the former period are the buildings which have three units facing the street without having a courtyard. This type of buildings are mostly located on flat lands in the areas which are close to *Harman Yeri*. Their ground floor is mostly constructed with stone masonry having one or few carved-out spaces. The unit which is entered through the street operates like a circulation area between the masonry service units. The first floor consists of living rooms and a circulation area which is located at the back of the building. In this type, the unit in the middle might be emphasized with a balcony or a projection.

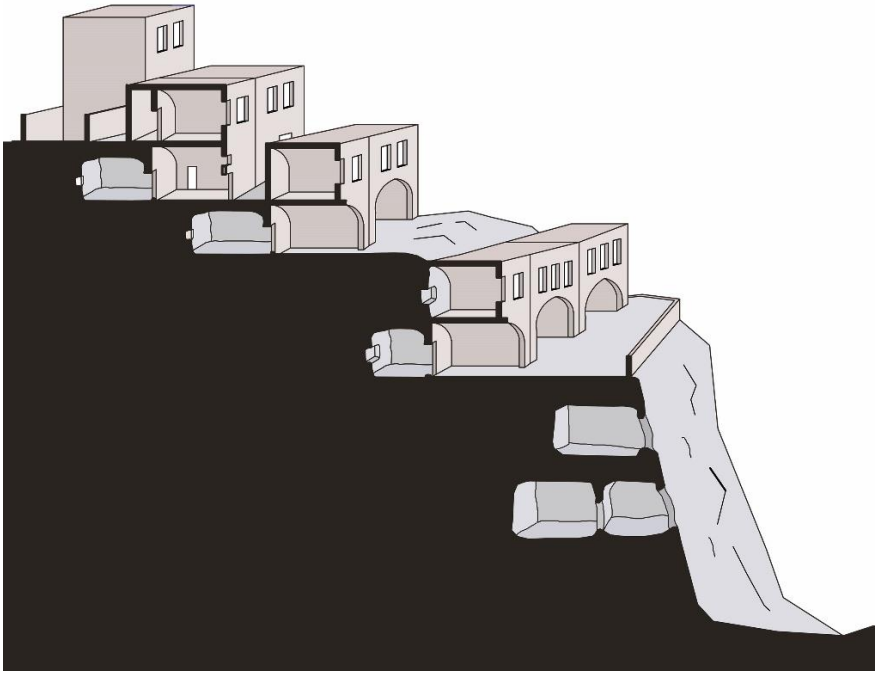


Figure 4.28. Schematic section of the village showing the placement of the buildings on the slopes

After the construction of the İbrahimpaşa Bridge in 1939, the settlement grew to the other side and to the north where there used to be fields and vineyards. With the change of landscape and the size of the building lots, a new typology emerged. The buildings are located in a courtyard, having three or four units. The service units on the ground floor are placed side by side having a semi-open space in the front. Unlike other examples, in this type there is no living unit on the ground level and all of them are located on the first floor colliding with the units underneath. Access to the first floor is either from stairs outside the building or one of the carved-out spaces on the ground floor is used as a circulation space containing stairs which leads to the first floor.

4.3. Learning from the Tendencies of Change and New Buildings

Change of traditional buildings: This study aims to understand the types and tendencies of changes of traditional buildings in the study area. For this purpose, after analyzing the types of changes, there will be an evaluation based on an overall change gradation with the information acquired from interior and exterior changes observed in the study area which will be an important data for the value assessment of traditional buildings.

The degrees of change under different titles are gathered together from the least changed to the most. The main criteria was the legibility of the traditional building, considering the possibility to turn back to its original status. Restored and new buildings are not a subject of this study.

An assessment is made regarding the changes in the primary study are in order to determine the buildings which are authentic and the buildings which lost their architectural characteristics and became illegible (Figure 4.35). For this purpose, a table is prepared according to their degrees of change in different titles. They are considered together and graded from least changed to the most. First, exterior change of the buildings are graded considering both their mass and facade changes, then an

overall assessment is made by grading their exterior change with the interior change for the buildings which were entered.

Figure 4.29. Examples of facade changes in the village in reference to Figure 4.32

The vast majority of the buildings in the primary study area have no or minor changes on their facades. The most common change in the facades are due to the change of original architectural elements with new ones, but their proportions and facade organizations are conserved. The reason is that they are more affordable, easy to find and do not need regular maintenance. In some of the buildings, the openings are combined as one large opening in order to have more light inside the rooms. In a few buildings, the facade became illegible because of the changes and additional architectural elements due to the functional changes of the plan units by the users.

There are also some changes in the mass properties (only additions) of the traditional buildings which are in use, according to the needs of users. This change can be either in vertical or horizontal direction depending on the building and the need. The most common reason for a mass addition in a horizontal direction is the need of an extra room and in some cases a secondary entrance from the other side of the building.

If the building is located between two streets, a third floor is built, which is perceived as a one floor building from the other side of the street (Figure 4.30). Change in vertical dimension in most cases occurs as a result of enclosure of the courtyard where the courtyard becomes a closed space having a direct entrance from the street. In these cases, also a horizontal addition can be added as a second floor to the closed area (Figure 4.31).

There are 15 buildings which were surveyed both from exterior and interior, including planimetric features. Among these buildings, 14 of them were conserved in terms of their plan scheme. Only a few had some changes due to mass or stair additions, but they are legible because of the used material (Figure 4.34).

Table 4.5. Table for exterior change (left) and table for overall change (right) of the traditional buildings in the primary study area

	M1	M2	M3	M4
F1	E1	E1	E2	E3
F2	E1	E2	E2	E3
F3	E2	E2	E3	E3
F4	E3	E3	E3	E4

	I1	I2	I3
E1	A	B	B
E2	B	C	C
E3	C	C	D
E4	C	D	D

As seen from Figure 4.35, there are only three buildings in the primary study area which have lost their authenticity and it is not possible to turn them to their original status. Other buildings conserve their architectural and spatial characteristics with minor changes which don't affect their legibility and can be turned to their original status with necessary interventions.

Figure 4.30. Facade elevations of the same building from two different streets

Figure 4.31. Examples for mass additions in vertical dimension

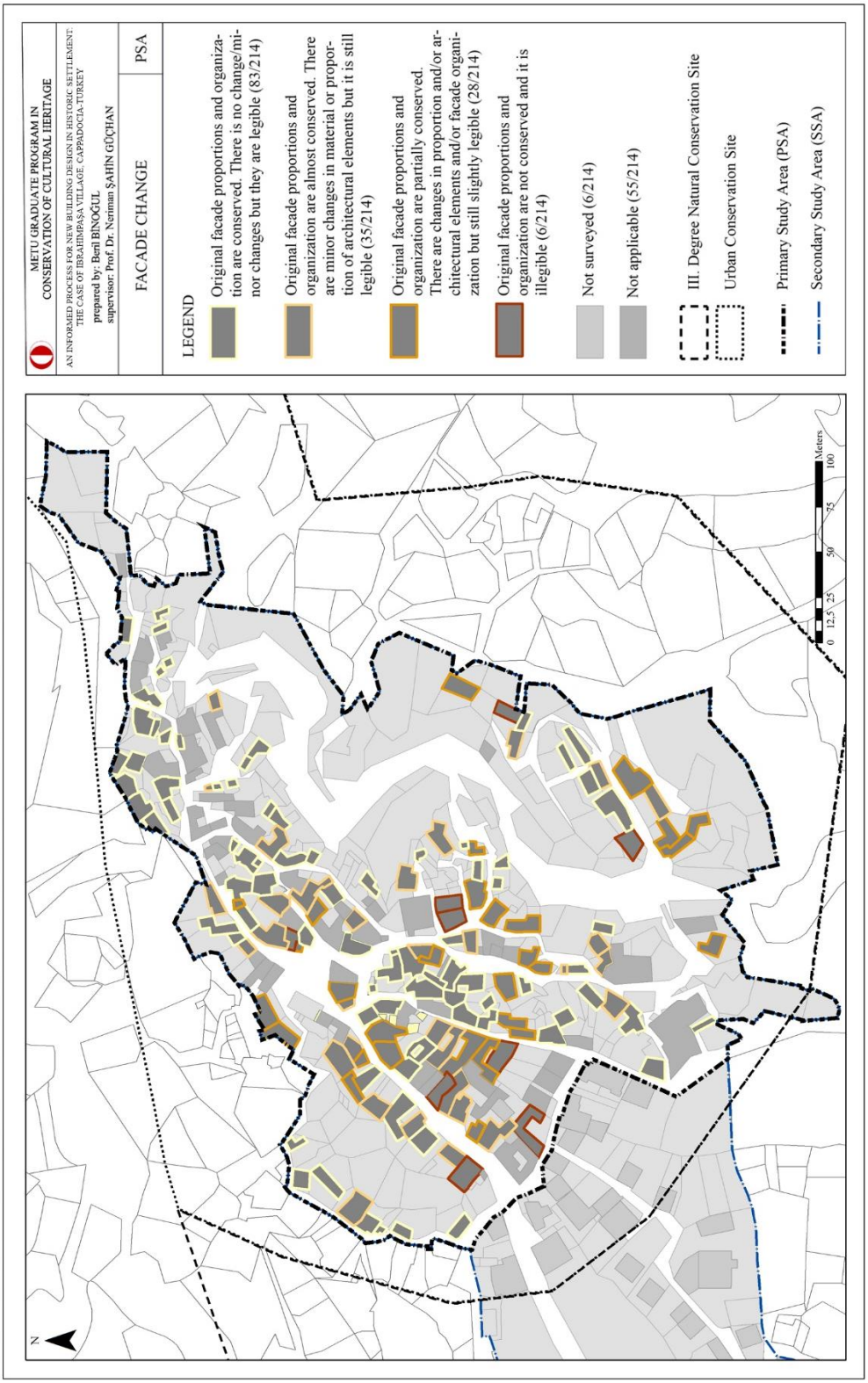


Figure 4.32. Facade Change

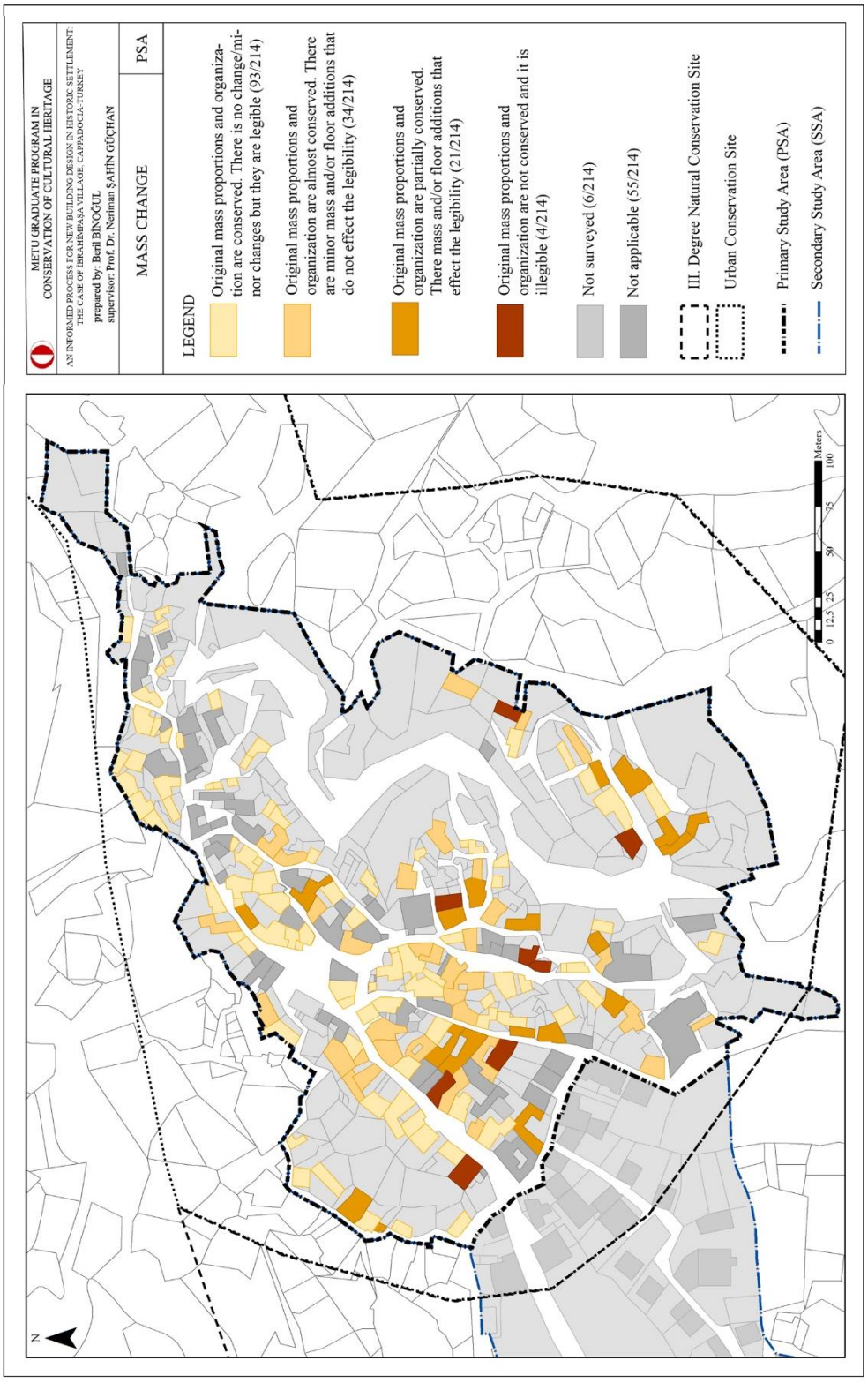


Figure 4.33. Mass Change

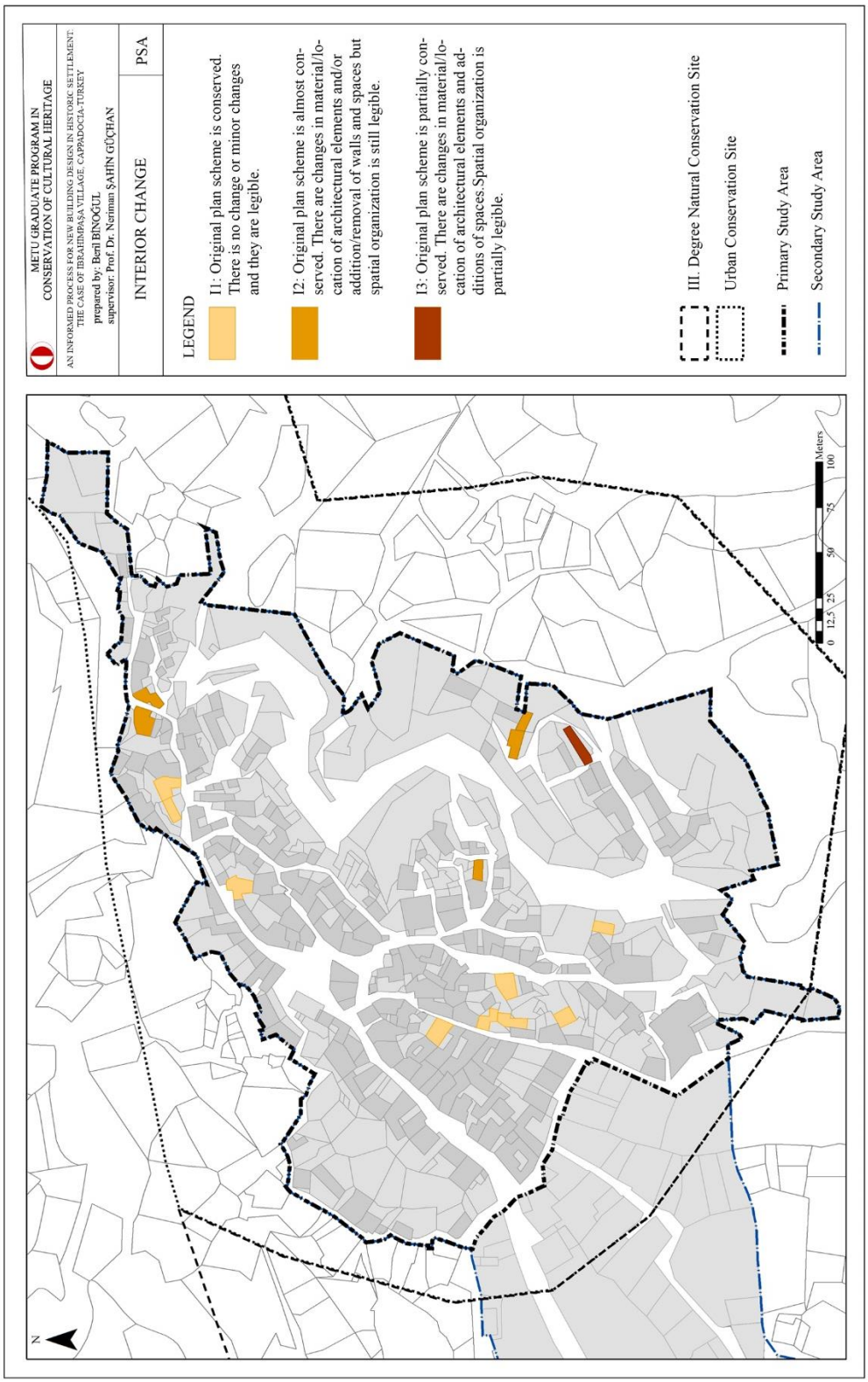


Figure 4.34. Interior Change

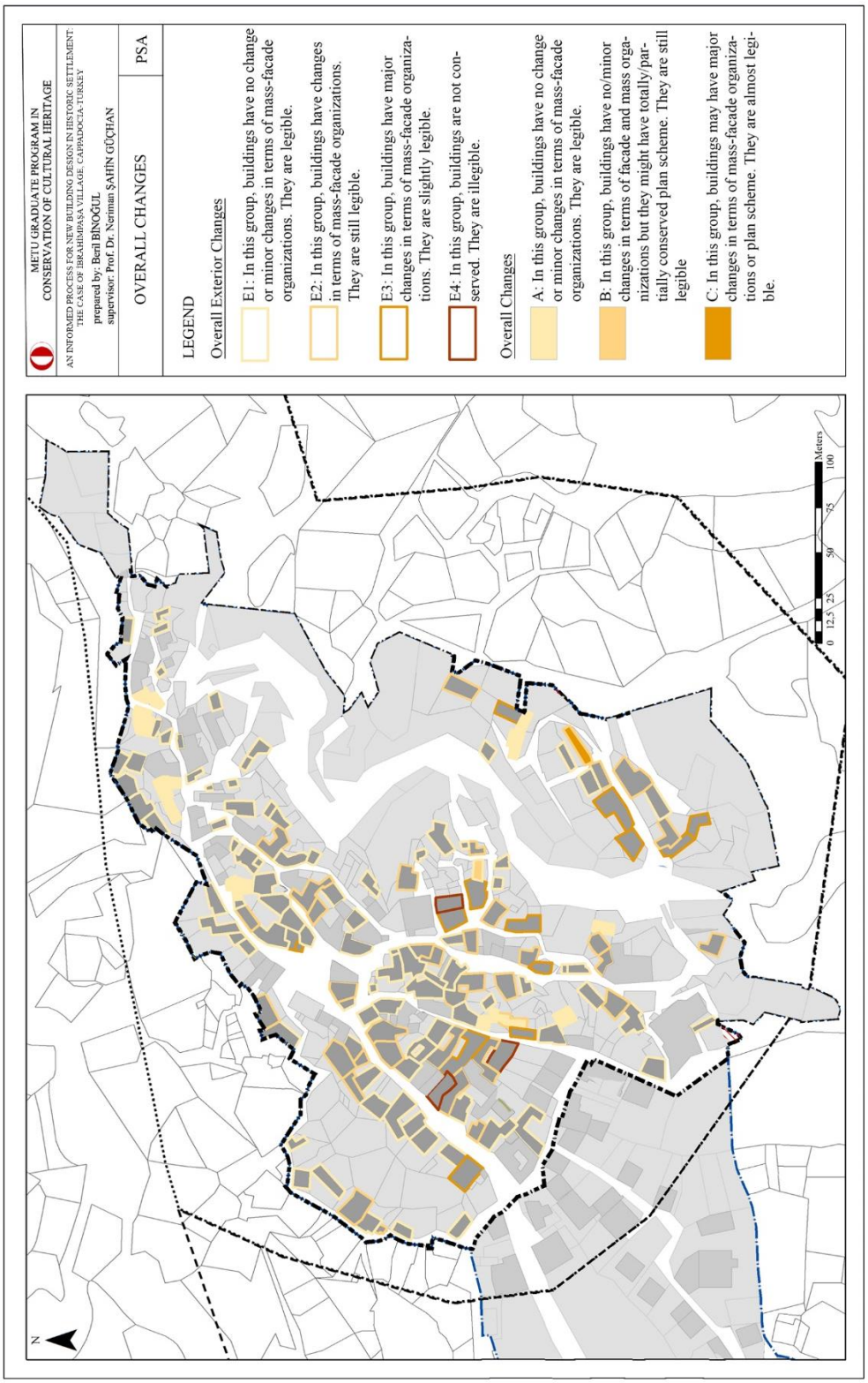


Figure 4.35. Overall Change

Figure 4.36. The buildings which have lost their authenticity

Evaluation of new buildings: This study aims to understand the tendencies of new building constructions in the study area and how it affects the settlement fabric. New buildings in the primary are mostly built after the second half of the 20th century with different materials and construction system. They are mostly located around the village square and the northwest side of the village, where the village tends to grow. As mentioned previously in Figure 3.72, they are either built with stone masonry walls having RC Frame slabs or totally built with RC Frame. The traditional techniques of arches and vaults were not used in new buildings. To evaluate their harmony with the traditional settlement fabric, a table is prepared according to the general criteria (Table 4.6).

In this table, new buildings are evaluated by their building/lot relationship, scale, building material, their finishing and architectural elements. The main criteria is their relationship with their lot and their scale. Group A and Group B are considered as harmonious with the traditional settlement fabric whereas Group C are inharmonious. Some buildings (Group B are harmonious with the fabric but they have bad quality of materials or a bad workmanship which affect the continuity of the street facades.

Table 4.6. Evaluation of new buildings in terms of their harmony with the traditional settlement fabric

	Building/Lot relationship	Scale	Building material	Finishing	Architectural Elements
GROUP A	●	●	●	●	●/○
GROUP B	●	●	●	○	●/○
GROUP C	○	○	●/○	●/○	●/○

Figure 4.37. New buildings located northwest side of the village

Figure 4.38. Examples for masonry walls with RC Frame slabs of new buildings

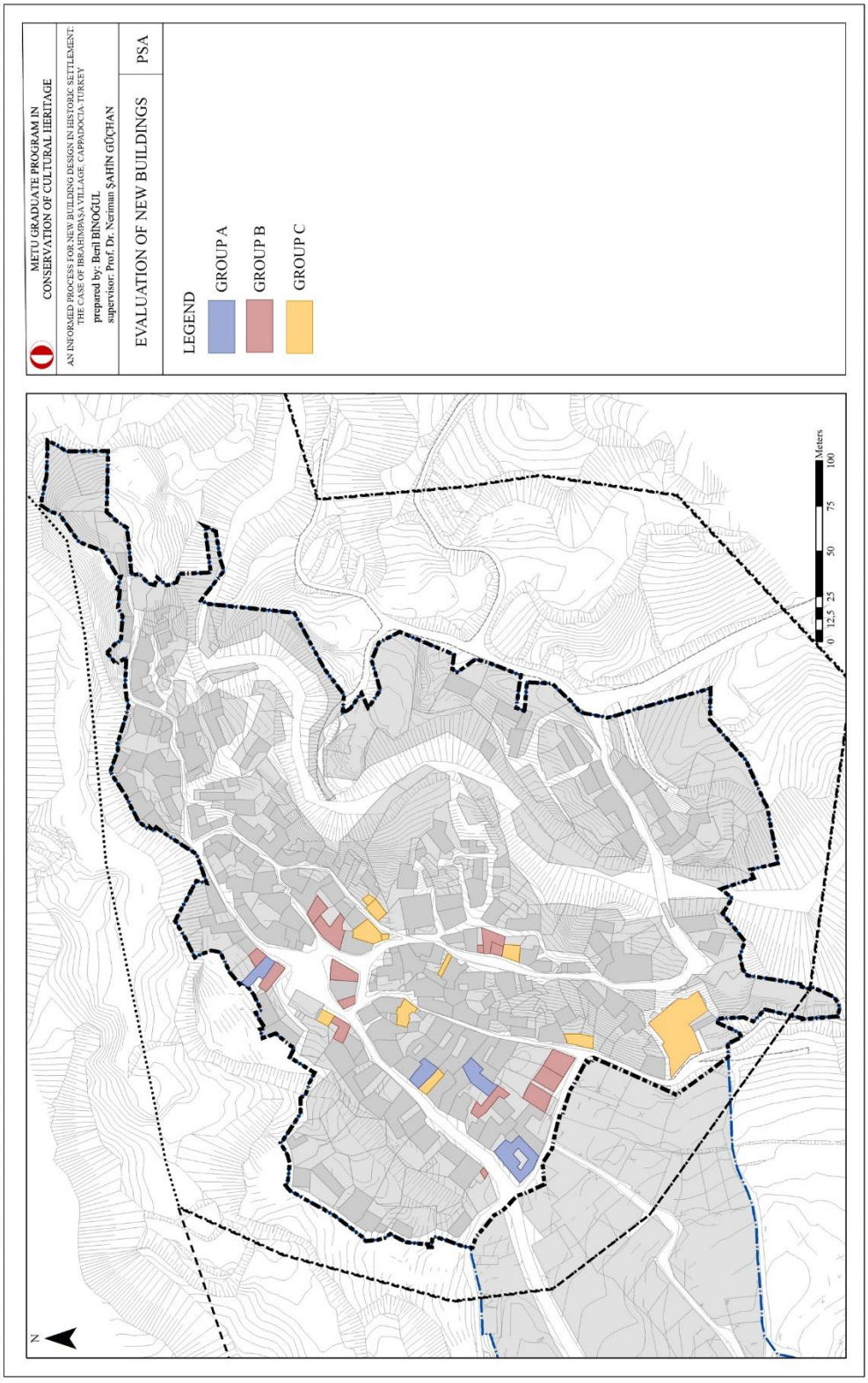


Figure 4.39. Evaluation of new buildings

Figure 4.40. Examples of inharmonious new buildings belonging to Group C

Evaluation of İbrahimpaşa Village in general: İbrahimpaşa Village is a unique settlement in Cappadocia region which **preserves its historical and natural characteristics**. It is located in an area with the highest tourism rate because an open-air museum, fairy chimneys, touristic valleys, churches, sightseeing areas and various historical settlements are in its surroundings but unlike its nearby settlements, it is mostly conserved. The main problem in other settlements is that with the effect of tourism, they are abandoned by their local inhabitants and they don't have a traditional way of life continuing in them. Ibrahimpaşa Village is an area which is at the beginning of a transformation process but **still having its local inhabitants living in the village**.

The formerly explained Balkan Stream flows from south to north and expanding to east creating diverse curves around the village. These earth formations compose the general natural characteristics which surround İbrahimpaşa. This situation directs the growth of the village to the west, as there is no suitable land for settlement and agriculture on the other sides. The village is located on an alternative route for cars that travel from Ürgüp or Nevşehir to Ortahisar and it is mostly used by tourist groups during sightseeing tours. Tourism increased in the recent years, bringing new economic activities to the village such as operating hotels and servicing to tourists, selling antiques, dry food and handcrafts to the visitors.

Values of the study area: Although there is a movement in the village from the primary study area to the northwest, the **village square** is still used as a gathering place for villagers. It is a set-up place for the open market once in a week and the villagers come to the square either with their cars or by walking in order to go to the mosque or spend time in the ***kahvehane*.**

The village also contains its original elements such as **fountains, original pavements of some streets, monumental trees and minaret of the old mosque** which also contribute to the characteristics of the settlement. Another value of the village is the **streambed with a chapel and carved-out spaces all along**, which used to be a well-known path for groups before 1997.

Table 4.7. Value groups of traditional buildings

	Structural Condition	Architectural Elements	Typology	Authenticity
V1	1, 2, 3	◙	✓	A
	1, 2, 3	●	✓	A, B
V2	1, 2, 3	●	✓	C
V3	1, 2, 3	○	-	C, D

Assessment of the traditional settlement fabric and buildings of the village requires determination of value groups of traditional buildings. It is essential both to understand the existing building inventory and to decide interventions which are necessary for the continuity of the historical settlement fabric. In order to determine the value groups the following parameters were used: the structural condition of the buildings, their architectural elements including their ornamentation degree, typological features and their authenticity degree (Table 4.7).

Value group V1 consist of buildings which have the typological features of a traditional İbrahimpaşa house and preserving their authenticity. V1 has another sub-group for the buildings which have ornamented facades and are rich in terms of architectural elements.

Value group V2 consist of buildings which have the typological features of a traditional İbrahimpaşa house, have changes in terms of authenticity but which are still legible whereas the value group V3 consist of buildings which don't have any architectural elements, no typological features and are illegible.

Figure 4.41. Buildings which belong to group V1 and rich in terms of facade ornamentation and architectural elements

Figure 4.42. Buildings belonging to value group V2

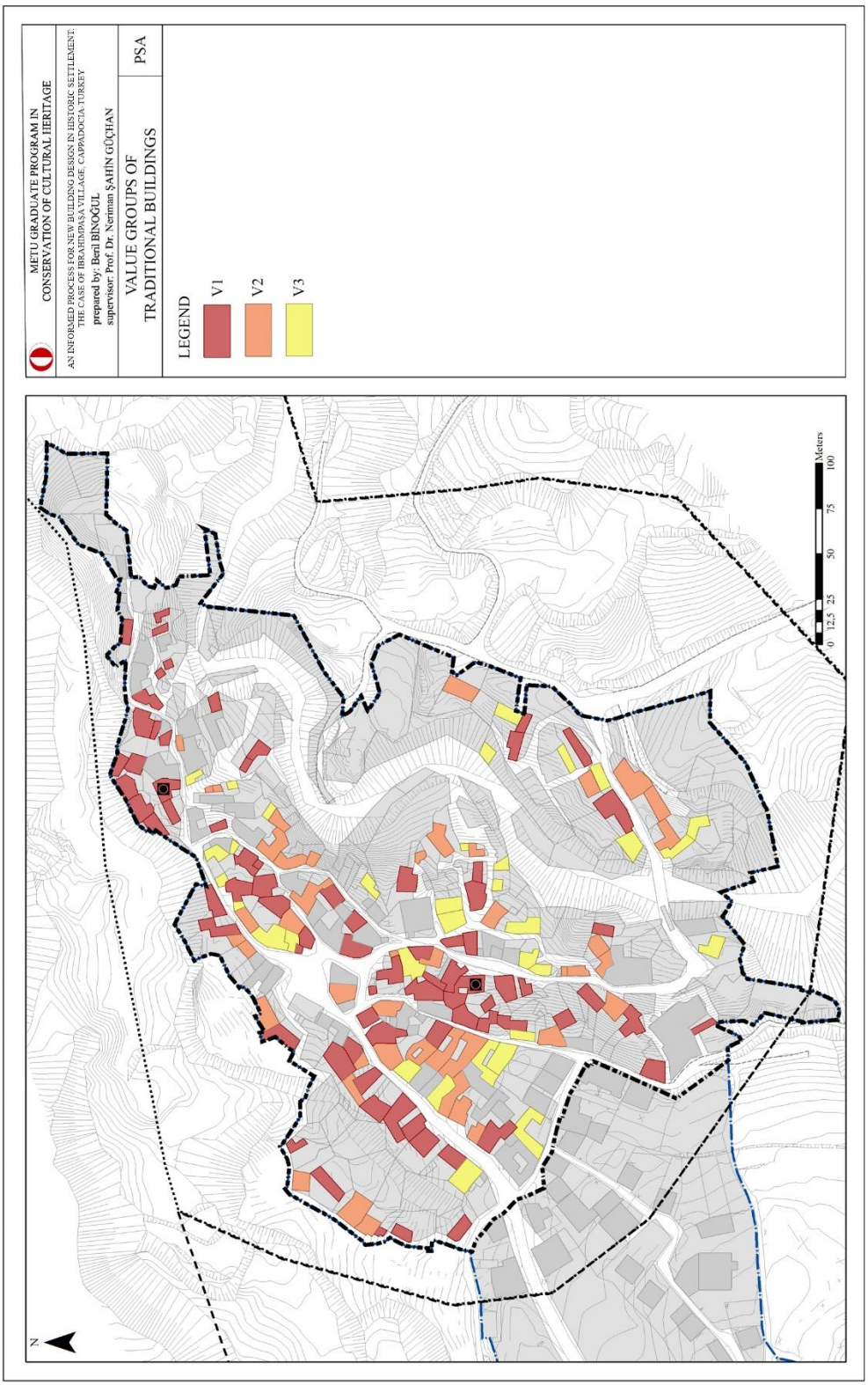


Figure 4.43. Value groups of traditional buildings

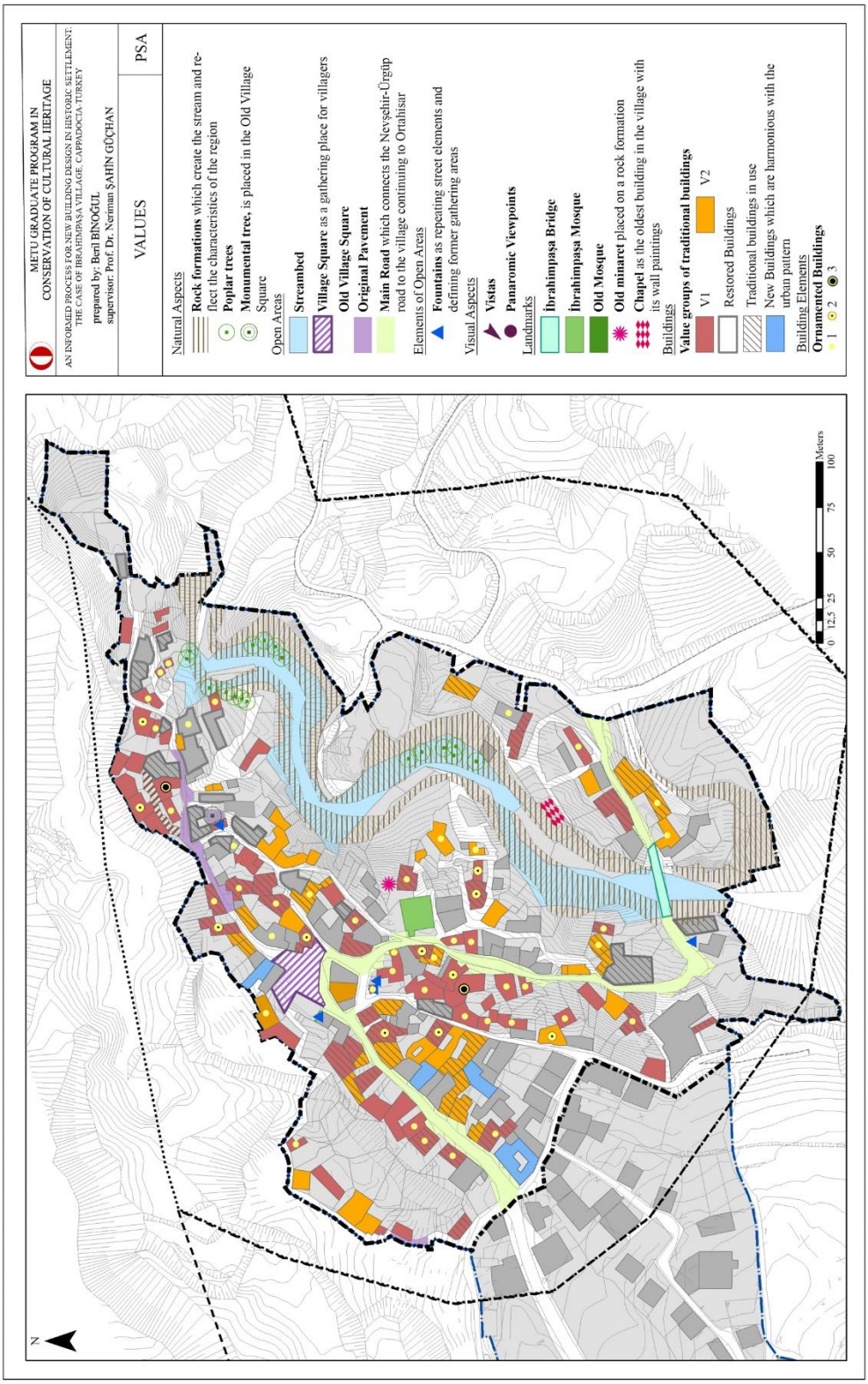


Figure 4.44. Values of the primary study area

Figure 4.45. Examples of buildings belonging to value group V1

Figure 4.46. Buildings belonging to value group V3

Problems of the study area: The village is faced with **tourism** and **migration** problems which causes **abandonment** of traditional buildings or **change of ownership** in the village.

The villagers tend to migrate outside the village mostly because of their children because there is no highschool in the village. Another reason is that the **agricultural production has decreased**, and the villagers go through **economic difficulties** and as they are getting conscious of the values of their houses, they try to make profit by selling their houses.

The villagers who wants to take advantage of this situation or **don't have enough money for restoration works** that their houses need, move inside the village to the west, building new buildings with better conditions. This abandonment of the traditional houses causes a **high number of unused or ruined buildings** in the village. The people who buy the houses from the villagers are either people who plan to live in the village, or investors who plan to build hotels in order to satisfy the possible need which will increase in the following years. As seen in Figure 3.45 on page 65 only 22.7% of the building lots have traditional buildings which are used by the villagers and 24% of the building lots are both by outsiders.

In terms of built-up environment, most of the buildings in the first study area are in a good condition in terms of structure and material but there are also lots of unused buildings in the study area which have already turned to **ruins** or which will if the preventive precautions are not taken (). In these cases, architects may use the information given in this study in order to construct a building from its footprints.

A non-negligible tendency in the region is **to unite adjacent building lots** in order to build **bigger buildings** for different functions. There is only one example for this case in the village but unless there is no conservation plan prepared, it might affect the settlement fabric of the village. Another tendency in the region is ownership because of the **rock-cut spaces of the buildings continuing under another building lot**.

There should also be restrictions defined by conservation plans in order to prevent physical damages to other buildings.

Another problem are the **buildings which are inharmonious with the traditional urban fabric** either because they have changed a lot and became illegible, or because they are new buildings not having necessary qualities.

Figure 4.47. Unused and ruined buildings

Figure 4.48. Village square, used as carpark

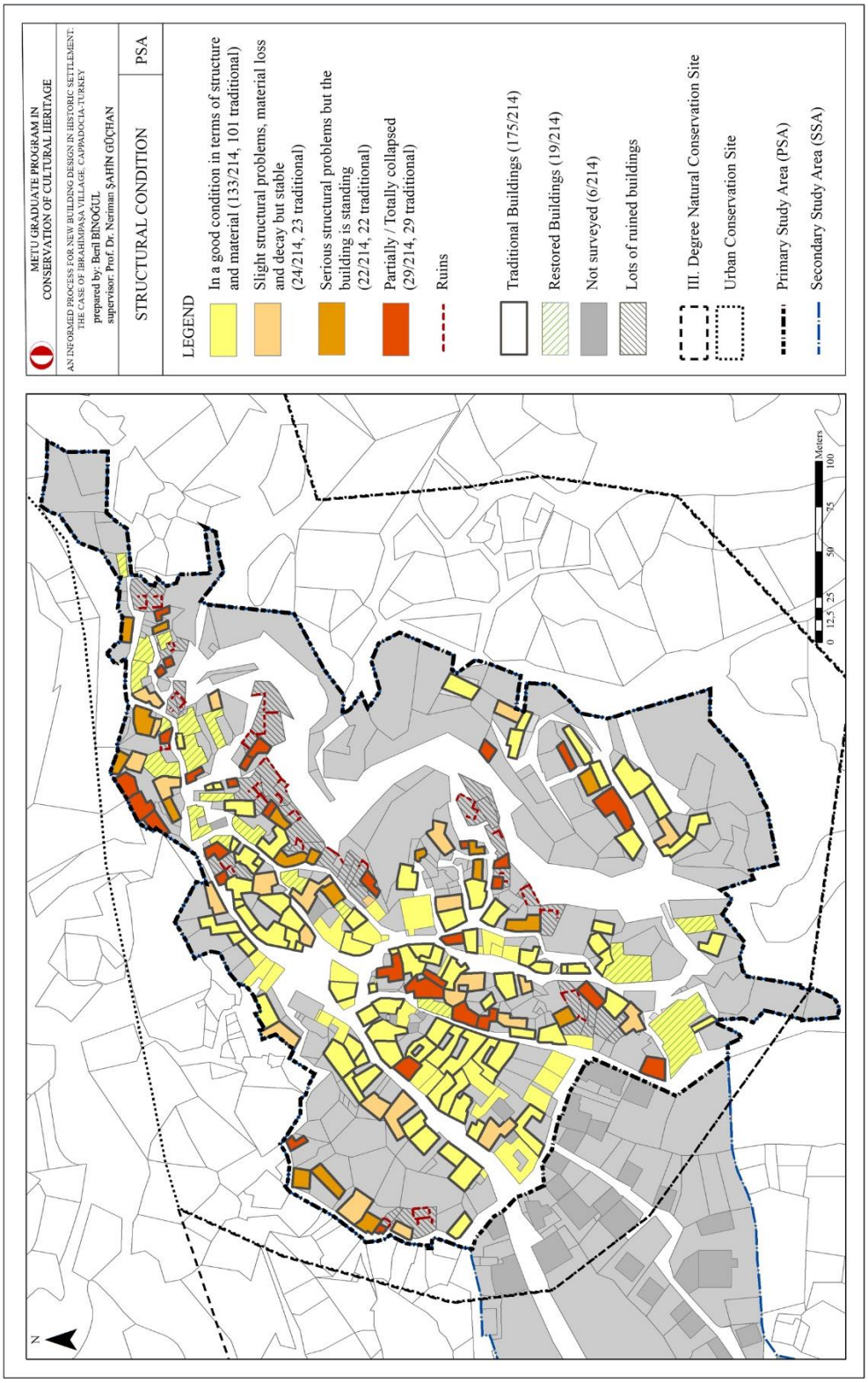


Figure 4.49. Structural condition

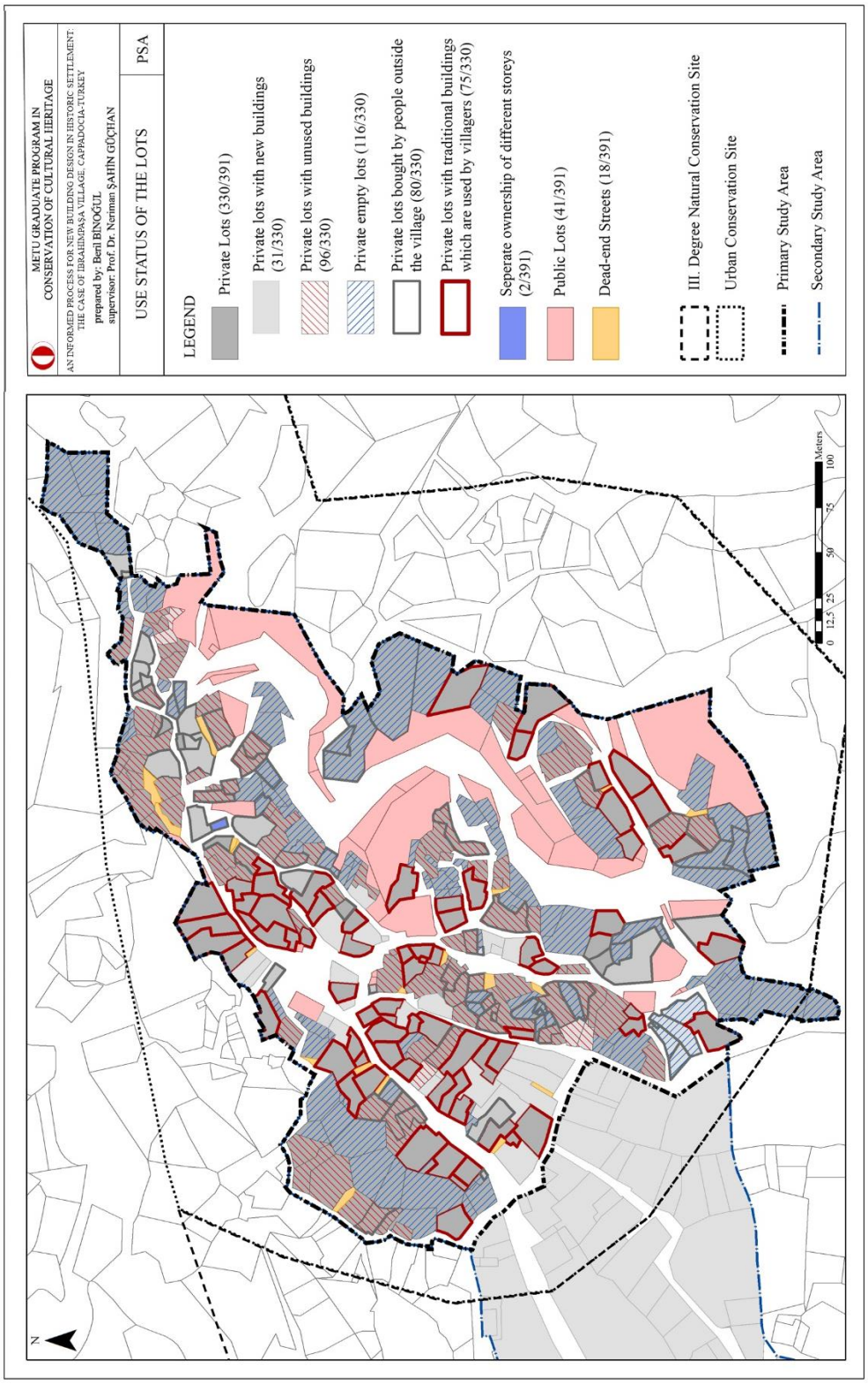


Figure 4.50. Use status of the building lots

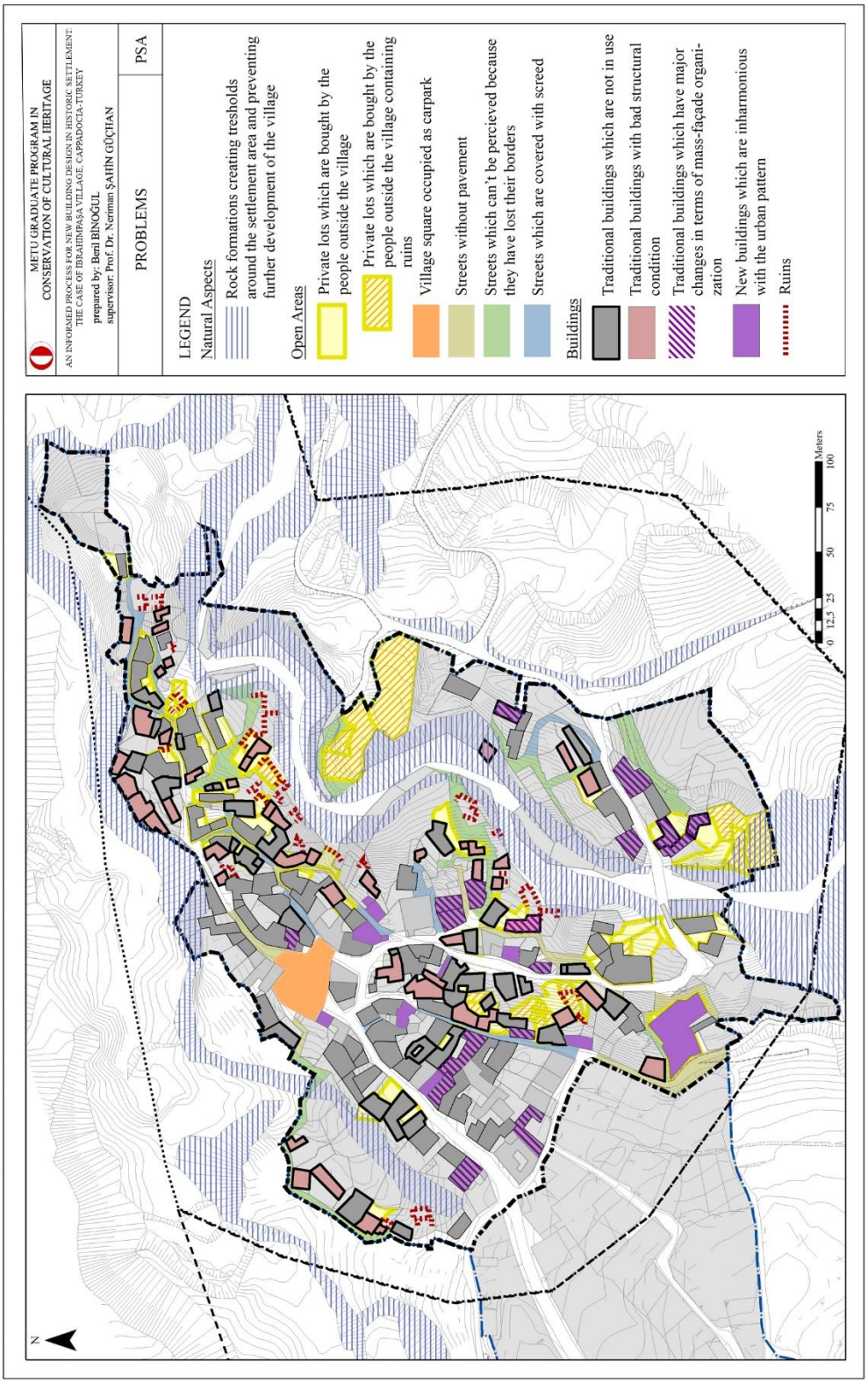


Figure 4.51. Problems of the study area

Figure 4.52. Streets which have lost their borders

Figure 4.53. New buildings which are inharmonious with the traditional urban fabric

Potentials of the study area: The village is at the beginning of a transformation process in compare to the neighboring settlements, mostly **conserving its physical and social characteristics**. Considering the other settlements in the area and the changes of the village, **tourism is the growing tendency**. There are only three hotels in the village for now but there are lots of building lots which are bought as investments by outsiders in groups, in order to be utilized for the tourism sector in the future. The growth of the tourism sector inside the village should be controlled in order to conserve the authenticity. This control might be provided by conservation

development plans as they can limit the number of buildings which can be used for touristic purposes and prevent further change of hands.

A considerable number of **villagers** who have abandoned their houses**, didn't leave the village**, they just moved into another house with better living conditions. Even if their house is at a certain distance from the **village square**, it is still a **gathering place** for the villagers where daily activities take place. This means they can't drift away from the social interactions related to the village, but they tended to move as they couldn't afford regular maintenance of their traditional house or they were aware of the values of their houses and want to make a high profit by selling them. If tourism activities enhance **new employment opportunities** for the villagers, the maintenance problems of the traditional buildings are solved, and sales of the traditional houses are limited, the **original users might be kept in their houses**. It is a big potential of the village as it is at a point that the negative transformation and **migration can be prevented** in order to conserve the historical settlement.

Except a remarkable amount of traditional buildings in the study area, there are also buildings which are inharmonious with the traditional settlement fabric or buildings which turned to ruins. These areas can also be handled as **empty lots** having potential for the construction of new buildings that enrich the historical settlement fabric.

By gathering the required basic information about a historic settlement, it is possible to understand its traditional settlement fabric with its constituent parts, its evolution and tendencies of change which forms the basis for a successful new buildings design in the area. This evaluation gives us the opportunity also to understand what to avoid in order to preserve its historical continuity and values.

CHAPTER 5

CONCLUSION

The main concern of this study is to define how to understand a historical settlement in order to propose a successful new building design in the site, over an example of İbrahimpaşa Village in Nevşehir. This concern brings the concept of "Informed Conservation" which is defined by English Heritage as a value-based approach in order to define the significance of a place, which provides advice on techniques for understanding historical buildings and their landscapes.

Informed conservation proposes guidelines directed at any conservation adviser who is a part of a conservation process to inform from the scale of the work to the choice of materials and techniques, which subjects new buildings in this thesis. It is presumed that every architect should have a general understanding of historical buildings and their context to in order to design new buildings in heritage sites. As a successful conservation process requires an upper scale evaluation; providing sufficient information and understanding of the site in order to make a decision without putting the significance at risk, it requires a shared responsibility between everyone who is involved in the conservation process.

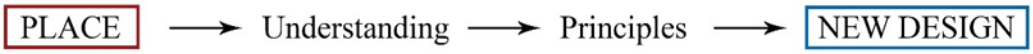


Figure 5.1. Process of new building design in heritage sites

A successful design process begins with a good understanding of a place, its constituent parts and its context in order to assess the significance and its values to be

maintained. This study is concentrated on how to understand a place to be able to evaluate and define principles for a new building and it will present a system of *informed conservation* to prepare and gather all the information according to a site accessible to any of the bodies who are concerned with designing new buildings in heritage sites.

As mentioned in Chapter 2, there are some basic principles for every new intervention in heritage sites. In this regard, there are some prominent concepts which should be taken into consideration such as; values, context, historical continuity, enrichment, respect, harmony and significance of place. In order to be able to achieve them, certain information is needed through various methods.

5.1. Informed Process of New Interventions

A successful understanding of a site begins with a documentary research of the history of the region and the site with its general characteristics and historical information such as architecture, landscape, construction etc. This information includes geographical characteristics, history of the settlement, social and demographic structure, economic structure, tourism and conservation and planning history of the site. Then, analysis are needed to define the dominant features of the settlement fabric such as general architectural features, heights, colours, materials, forms, facades, relations of built-up and open areas, proportions, location of the buildings in lots and lot sizes. Viewpoints, panoramas and landmarks are also very important for the perception of the area and they need to be determined in order to be respected. Analysis of change of buildings, alteration and use should be presented in order to understand the change over time. Through these, existing state of the settlement will be well documented as the first stage.

In order to be able to control the change with maintaining the values and historical continuity, assessment of the traditional buildings and settlement fabric is very important. This can be achieved through an understanding of the change pattern of the

settlement and evolution of the traditional buildings through time. As the last stage, the values, problems and potentials of the settlement should be determined in order to assess the significance of place and to have a wider understanding of the site. The new building design should be the end product of this process, which is shown in this study requiring various information.

Today in Turkey, the new building principles are defined by strict rules, which results in bad imitations of existing historical buildings in the site without encouraging the imagination and creativity of the architect (Table 5.1). Contrary to the system which is used today with strict rules of conservation plans and which the architect is responsible obtaining and evaluating all the information regarding the site, there should be another system to save time, money and effort and to have successful new design proposals.

Informed conservation offers a system of which required information mentioned above is obtained by working groups organized by local authorities, archived and is available to any of the bodies who are concerned with designing new buildings in heritage sites. These are to be prepared on maps and so that every designer will be able to get the information about the site, context, buildings and typologies. Then, they should be able to define the principles for the site, through an understanding of the significance of the place and design a new building which is in harmony with the existing historical pattern, respecting its values and maintaining historical continuity. This evaluation of the site made by each designer himself, will provide new buildings which enrich the historical settlement with new relations.

5.2. Conclusions about İbrahimpaşa Village

The Cappadocia region, in which the İbrahimpaşa Village is located, is a unique region with its geological formation and its settlement characteristics which were formed accordingly. This unique characteristic of the area with rock-cut spaces and masonry extensions, brings different conservation considerations along.

For the case of İbrahimpaşa Village, it keeps its original characteristics, authenticity and continuity of the living culture differentiating itself from its nearby settlements in the region such as Ürgüp, Mustafapaşa and Uçhisar. It is at a beginning point of a transformation which began with change of property ownerships and abandonment of the village by its inhabitants. As there is no conservation plan prepared for the village, vulnerable to possible damages so, proper actions should be taken.

Building new buildings is a growing tendency in the village as there are lots of buildings which are ruined or in a structurally bad condition and the intentions of the property ownership is to build hotels for tourism activities. As building new buildings in historical settlements is considered as a conservation tool, the potential change of the village should be controlled.

Today in Cappadocia region, the new building principles are defined by strict rules, which results in bad imitations of existing historical buildings in the site without encouraging the imagination and creativity of the architect. If we look at the conservation plans, it is seen that they try to provide the opportunity of new buildings for their historical continuity and they intend to preserve their historical settlement fabric with harmonious buildings. But, what is mentioned by harmony in the plans is that they specify the dimensions, ratios and materials for the buildings and for the architectural elements as well (Table 5.1). These two conflicting ideas is the main problem of new buildings in historical settlements and by these limitations, imagination and creativity of the architect is not encouraged and this results in bad repetitions.

The importance of informed conservation arises at this point, which requires a good understanding of a place with information regarding the site and evaluated by the architect himself. For the case of İbrahimpaşa Village, traditional settlement fabric with its constituent parts, its evolution and tendencies of change were analyzed throughout this thesis as an example and gives the opportunity to the architect to design a building in the light of all this to design a new building which is in harmony

Table 5.1. New building principles of different conservation plans from nearby settlements of İbrahimpaşa Village.

	ÜRGÜP	**UÇHİSAR**	**MUSTAFAPAŞA**
Building – Lot relationship	0.50	0.40 with a total floor area of 0.80	Max. 0.90
Facade	Max. 10m. in harmony with their surroundings, revealing that they are new and modern.	Max. 12m. in harmony with their surroundings, revealing that they are new and modern.	
Height	Max. two floors	Max. 7m. with two floors	Two floors max. 2.40m. each Total max. 7.50m
Structural System	Local / Traditional Stone / Stone covering No decoration	Local / Traditional Stone / Stone covering No decoration	
Building Material	Local / Traditional Stone / Stone covering No decoration	Local / Traditional Stone / Stone covering No decoration	Stone / Stone covering bearing columns and beams can be exposed or plastered but the walls will be covered with stone
Architectural Elements	Only architectural elements which exist in the site	Only architectural elements which exist in the site	
Roofs	Flat & inclined (max. 40%) Flat - local stones/materials with similar colour and texture Inclined – covered with tiles	Flat roof with a similar colour	Flat, inclined and hipped covered with brown, tan or beige coloured similar materials
Windows	Timber 0.60 – 0.80 x 1.00 – 1.60 Ratio: 1/1.5 – 1/2	Timber 0.65 – 0.70 x 1.10 – 1.20	Ratio: 1/2 or 1/2.5
Doors	Timber 0.80 – 1.00 x 1.80 – 2.00 (one wing) 1.40 – 1.60 x 1.80 – 2.10 (two wings)	Timber 0.80 – 0.90 x 1.90 – 2.00 (one wing) 1.40 – 1.60 x 2.00 – 2.10 (two wings)	
Projections	Closed, *gönye* & *dik*	Open & closed	Smaller than half of the length Max. 1.20 cm depth
Courtyard walls	Made of stone Covering forbidden Min. 2m.	2.00 – 2.20m. (max. 1.20m. if on viewpoint)	1.40m. Stone, stone covering & plastered

with the existing historical pattern, respecting its values and maintaining historical continuity.

In İbrahimpaşa Village, the settlement fabric is formed according to the geography so, nothing can be planned or designed avoiding the topography of the area. This is another reason why specific rules with certain proportions between the building lot and the building defined in conservation plans are not suitable. The building lots vary

according to the topography and the buildings vary according to the building lot, so every traditional building in the village is a result of a unique combination with certain pieces all together consisting the traditional settlement fabric and this reproduction system should be preserved.

5.3. Further Discussions

Within the scope of this study, understanding heritage sites for successful new building designs, which are in harmony with the existing urban fabric and respecting the values and significance of the place were presented for the case study İbrahimpaşa Village in Nevşehir.

Although the general framework of the study was formed by "informed conservation", each different case has its own characteristics. In the real world, each historical settlement is unique because they are formed in time, in accordance with the landform, climate, local materials and traditional living styles which all together specify the original characteristics of that area. *Informed conservation* in this manner, is a method for understanding and designing new buildings in heritage sites which requires certain information about the site which was presented by an example in the study.

Thus, further research may be needed for different examples from specialists such as dendrochronology, paint research, material analysis, ecological geological or other assessments. Moreover, the study focuses on the physical aspects of understanding, but it also requires a general understanding of the public values that underpin places, as historical settlements are also significant for their association with its inhabitants and memories. The inclusion of a social survey is also needed for a more comprehensive research. Furthermore, a study on the management and financial model is also very important in order to have a clear and organized process for the sustainability and development of the heritage sites.

Studying the case of İbrahimpaşa Village was beneficial and informative, because of its physical environment, mostly keeping its traditional characteristics, authenticity and continuity of the living culture differentiating itself from its nearby settlements in the Cappadocia region. However, the lack of resources regarding the history of the settlement and inadequacy of the present basemap provided from the Municipality of Ürgüp were the main challenges for the study. The historical information has been gathered from the in-depth interviews and analysis from Karakul (2001) and of aerial photographs dating back to different years starting from 1958. Another difficulty was the stratified traditional settlement pattern of the village with carved out spaces and buildings while interior surveys and trying to understand the fabric.

In conclusion, although this study focuses on a specific case for new buildings in historical settlements, it attempts to initiate the evolution of a general framework for *informed conservation*. With the contribution of further research, it is hoped to convert to a new system towards conservation of heritage sites.

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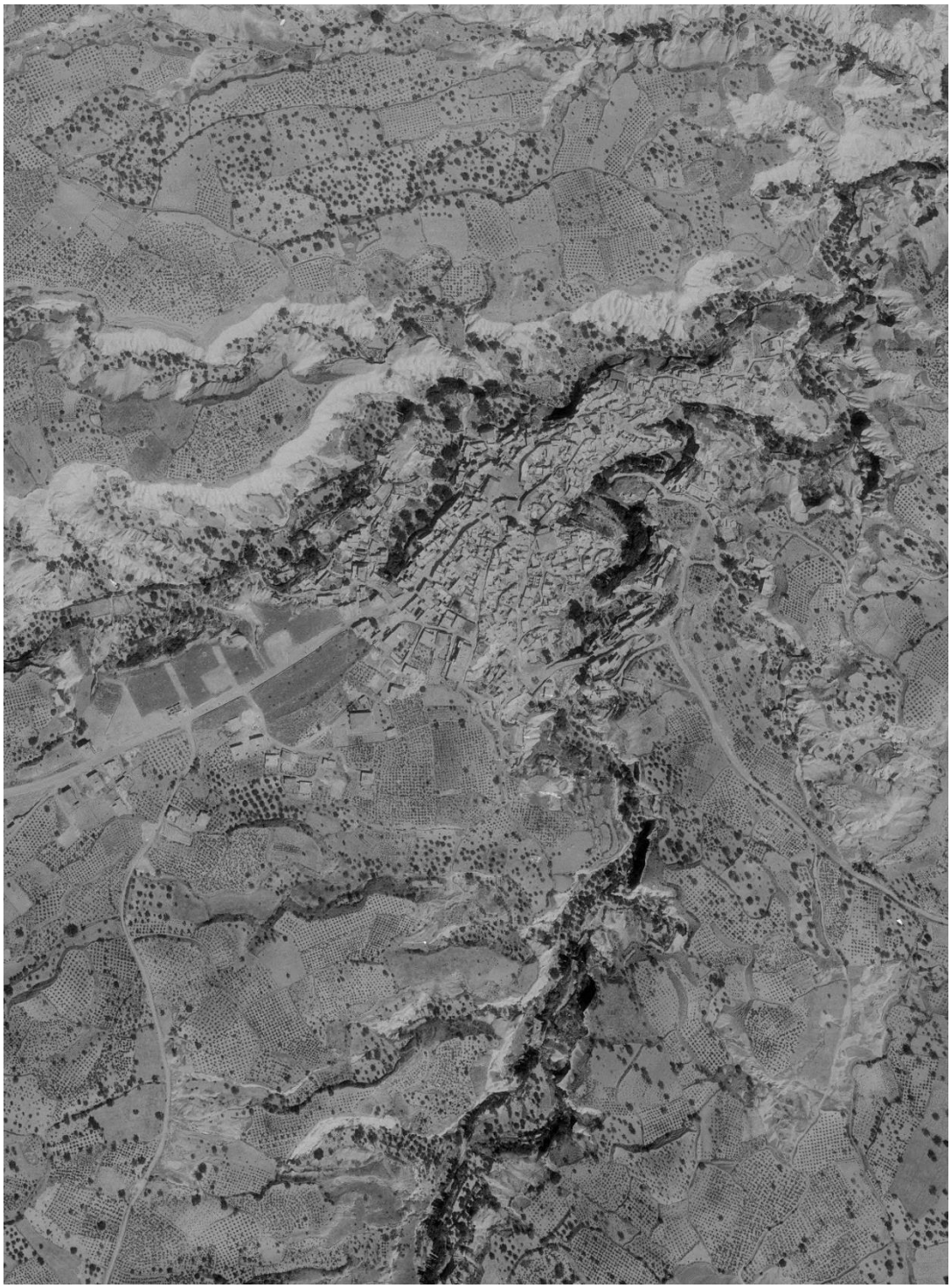
APPENDICES

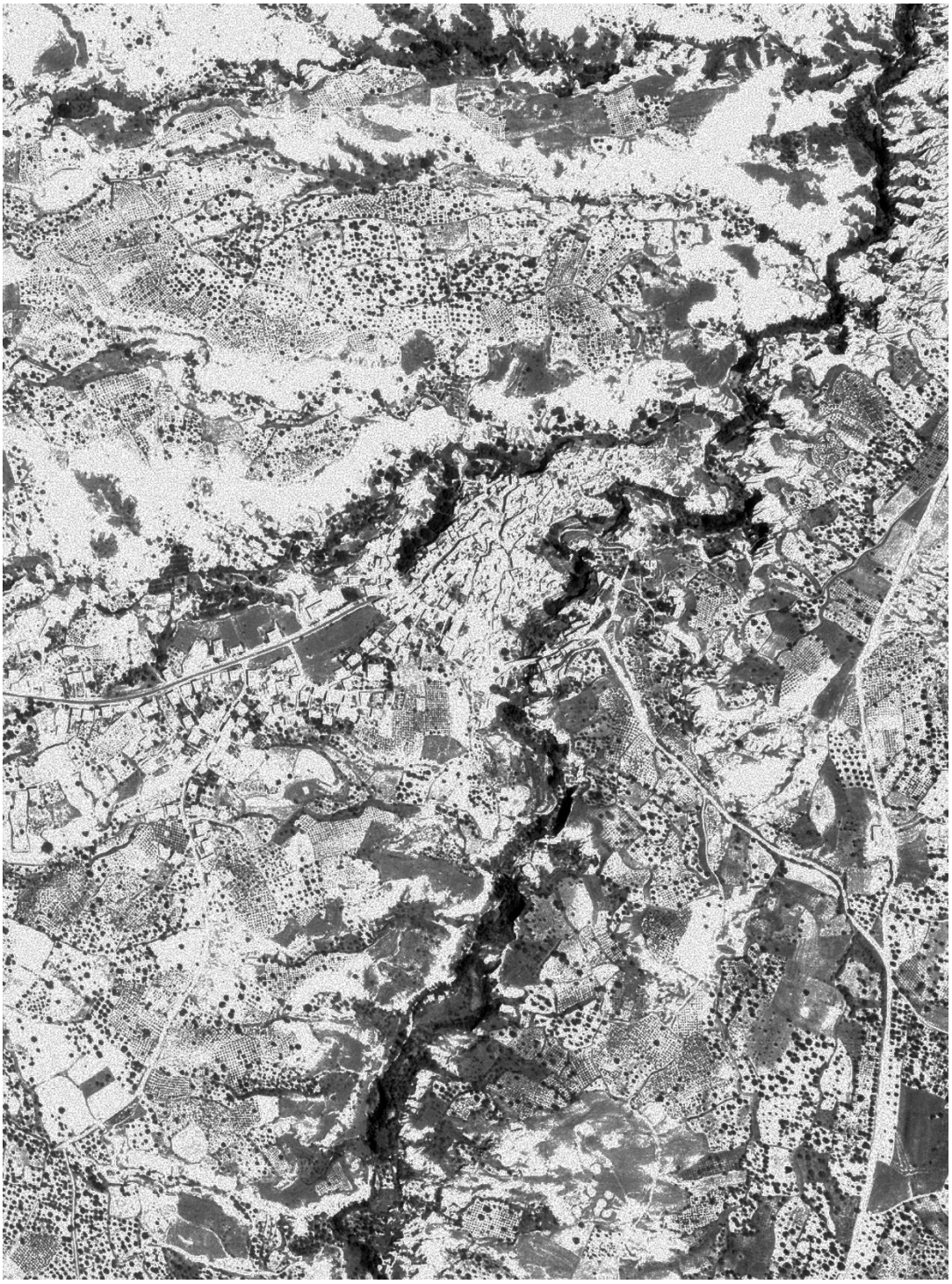
A. Aerial Photographs provided by HGM

Aerial Photograph of 1958

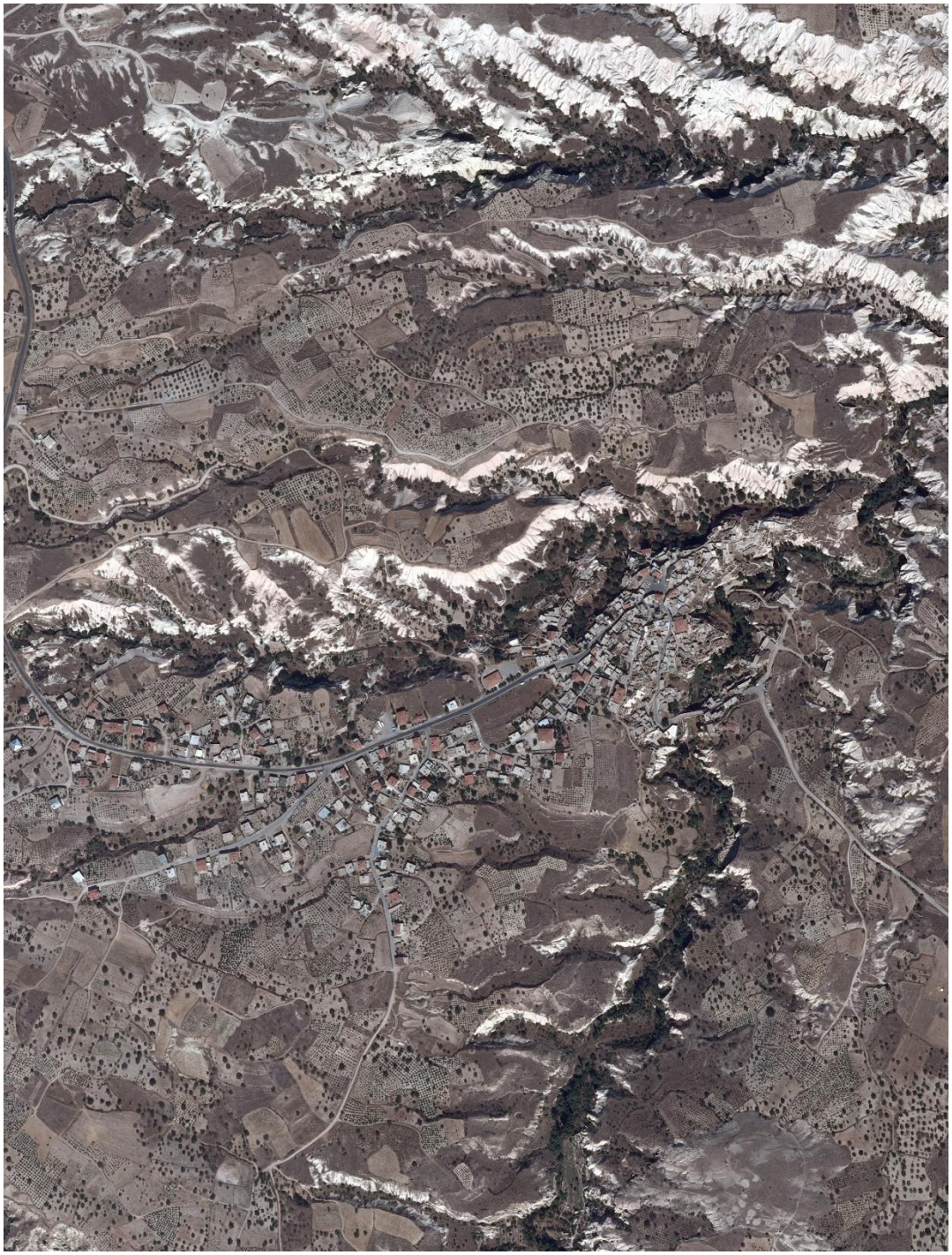
Aerial Photograph of 1976



Aerial Photograph of 1992



Aerial Photograph of 2010



B. Survey Sheets

Exterior Survey Sheet

EXTERIOR

ID (block, lot, no):					Photo No:	
Building Type:					Current Func.:	Use:
Status	Reg.	Not Reg.	Restored	N/A	Number of floors:	Building Height:
Ground Floor					**First Floor**	

WALLS(Wa)				DOORS(D)		WINDOWS (Wi)			Rock-cut (R)		PAINT	
STONE MASONRY (S)			ROCK-CUT WALL (R)						On stone walls (S)		Walls	
Single sided	*Thin double sided (40-60cm.)*	*Thick double sided (60-85cm.)*	Notes:	*Single Wing*	*Double Wing*	*Rectangular*	*Square*	*Top Window*	Mixed (M)		Window frames	
									Other (O)		Doors	
									FINISHING		Other	
									PLASTERED	UNPLASTERED		
S1	S2_tn	S2_tk		Sw	Dw	Rec	Sq	Tw				

ARCHITECTURAL ELEMENTS										
PROJECTION	*Open*	*Closed (Bevelled)*	*Closed (Plain)*		**ROOF**	*Timber*	*Earth*	*Rock*	*Other*	
CORNICES	*Inner*	*Outer*			**Eaves**	*Timber*	*Stone*	*Other*		
decorated, plain..										

Bird Holes		**ORNAMENTATION**			**STAIRCASE** *Timber*		*Stone*	
Inscription		Simple		*Location, details..*	Console		*Location, details..*	
Flower Shelves		Avarage			Supported by rock/wall			
Stones for Keys					Supported by arch			
Oturak taşı		Very Ornated			Mixed type			
Chimney								
Çörten								

	ORIGINAL MASS PROPORTIONS AND ORGANIZATION	ORIGINAL FACADE ORGANISATION & ELEMENTS
CHANGES	1 *is conserved*	1 *are conserved* *there is no change/ there are minor changes but it is legible*
	2 *is almost conserved* *there are minor mass addition and/or removal and/or floor add. that do not effect the legibility*	2 *are almost conserved* *there are minor changes in finishing materials, material and/or detail and/or proportion of architectural elements but it is still legible*
	3 *is partially conserved* *there are mass addition and/or removal and/or floor add. that effect the legibility*	3 *are partially conserved* *there are changes in proportion and/or material of architectural elements, and/or finishing materials and/or facade organisation* *in only one floor or one part of façade but still slightly legible.* *in whole façade(s) but still slightly legible.*
	4 *is not conserved and it is illegible*	4 *are not conserved and it is illegible*

CONDITION			
	GOOD	1	*In good condition in terms of structure & material whereas minor problems in finishing materials.*
	FAIR	2	*No structural problem, but surface deterioration in material.*
	MEDIUM	3	*Slight structural problems, material loss besides material decay, slight deformations started but building is stable.*
	SEVERE	4	*Deeper structural problems, severe material decay & material loss, structural decay but building is stable.*
	COLLAPSE	5	*Partially / totally collapse.*

Interior Survey Sheet

INTERIOR

ID (block, lot, no):		Photo No:
Floor No:	Current Func.	Poss.Original Func.
Const. System:	Material of Walls:	Finishing Material:
Material of Floor:	Material of Ceiling:	Material of Stairs:
Number and Code of Dwelling:		

SPACES	Used In		Floor Coverings			Ceiling				Architectural Elements													C.O.F	S.A
	Original	Altered	Stone	Timber Planks	Other	Rock-cut	Vault	Timber beams	Other	Fireplace	Tandır	Pabuçluk	Musandra	Seki	Sedir	Sıralık	Niche	Cupboard	Yüklük	Shelf	Staircase			

Condition of Finishing		Spetial Adequecy	
1	In a good condition, intervention is not needed.	1	Dimension of space is adequate in terms of today's requirements.
2	Condition can be improved by intervention.	2	Dimension of space is inadequate but it can fulfill today's requirements with a special design
3	Condition can not be improved by intervention.	3	Dimension of space is inadequate but it can not even fulfill today's requirements with any intervention.

details and explenations

ORIGINAL PLAN ORGANISATION & ELEMENTS

CHANGES		
1	are conserved:	There is no change/ there are minor changes in finishing material, but it is legible.
2	are almost conserved:	There are changes in material/location of architectural elements and circulation pattern but spatial organization is totally legible .
3	are partially conserved:	There are changes in material/location of architectural elements and circulation addition and/or removals of walls and/or arch. elemants but spatial organization is still partially legible.
4	are not conserved and it is illegible	

CONDITION		
GOOD	1	In a good condition in terms of structure& material whereas minor problems in finishing materials.
FAIR	2	No structural problems, but slight deterioration on the surface of materials of inner walls, and/or floors, and/or ceilings and/or architectural elements
MEDIUM	3	Slight structural problems, but slight deteriorat ions/deformations started in materials of inner walls, and/or floors, and/or ceilings and/or architectural elements.
SEVERE	4	Structural cracks, material&structural decay, material loss, materials of inner walls, and/or floors, and/or ceilings and/or architectural elements.
COLLAPSE	5	Partially / Totally collapsed.