ASSESSMENT OF CHANGES IN WORLD HERITAGE SITES: THE CASE OF ‘PERGAMON AND ITS MULTI-LAYERED CULTURAL LANDSCAPE’

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submitted by **ASLI CANDAN** in partial fulfillment of the requirements for the degree of **Master of Science in Conservation of Cultural Heritage in Architecture Department, Middle East Technical University** by,

Prof. Dr. Halil Kalıpçılar
Dean, Graduate School of **Natural and Applied Sciences** _____

Prof. Dr. Cânâ Bilsel
Head of Department, **Architecture** _____

Assoc. Prof. Dr. Güliz Bilgin Altınöz
Supervisor, **Architecture, METU** _____

Examining Committee Members:

Prof. Dr. Neriman Şahin Güçhan
Architecture, METU _____

Assoc. Prof. Dr. Güliz Bilgin Altınöz
Architecture, METU _____

Assoc. Prof. Dr. Mert Nezih Rifaioğlu
Architecture, Hatay Mustafa Kemal University _____

Date: 04.12.2019

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Surname: Aslı Candan

Signature:

ABSTRACT

ASSESSMENT OF CHANGES IN WORLD HERITAGE SITES: THE CASE OF 'PERGAMON AND ITS MULTI-LAYERED CULTURAL LANDSCAPE'

Candan, Aslı
Master of Science, Conservation of Cultural Heritage in Architecture
Supervisor: Assoc. Prof. Dr. Güliz Bilgin Altınöz

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This study aims to investigate effects of World Heritage Listing on heritage places and to analyze possible reasons and impacts of change after inscription on a selected heritage place.

In the selected case of 'Pergamon and its Multi-Layered Cultural Landscape', two consequent surveys were conducted, before and after the inscription containing the same set of information on the physical, functional and socio-economic features of the heritage place. These two data were presented and evaluated in order to understand the changes together with the reasons and impacts of these changes in Bergama.

Later, within the context of defined aim, reasons of these changes in global and local context and their impacts on selected heritage place were evaluated and presented. Finally, a brief discussion on the pros and cons of heritage listing and the future of the selected heritage place was made.

Keywords: World Heritage List, World Heritage Site, Pergamon, Bergama, Change

ÖZ

DÜNYA MİRAS ALANLARINDA DEĞİŞİMİN DEĞERLENDİRİLMESİ: ‘BERGAMA ÇOK KATMANLI KÜLTÜREL PEYZAJ ALANI ÖRNEĞİ’

Candan, Aslı
Yüksek Lisans, Kültürel Mirası Koruma
Tez Danışmanı: Doç. Dr. Güliz Bilgin Altınöz

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Bu tez kapsamında, Dünya Miras Listesine dahil olmanın bir miras alanı üzerindeki etkileri ve oluşturabileceği değişimleri ve bu değişimlerin nedenlerini seçili bir örnek üzerinden araştırmak amaçlanmıştır.

Seçilen Bergama Çok Katmanlı Kültürel Peyzaj Alanı’nın fiziksel, fonksiyonel ve sosyo-ekonomik özellikleri ile ilgili miras alanı olması öncesi ve sonrasında toplanan aynı detayda veriler değerlendirilmiş, alandaki değişimler ve nedenleri araştırılmıştır.

Sonrasında, ortaya konan değişimlerin uluslararası ve ulusal nedenleri ile bunların seçilen miras alanı üzerindeki etkileri değerlendirilmiştir. Sonuç olarak, Dünya Miras Listesine dahil edilmenin artıları ve eksileri tartışılarak seçilen miras alanlarının geleceği hakkında öngörülerde bulunulmuştur.

Anahtar Kelimeler: Dünya Miras Listesi, Dünya Miras Alanı, Pergamon, Bergama, Değişim

to my beloved son Çınar Ayaz,

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ABBREVIATIONS

UNESCO: United Nations Educational, Scientific and Cultural Organization

ICCROM: International Centre for the Study of the Preservation and Restoration of Cultural Property

ICOMOS: International Council on Monuments and Sites

IUCN: International Union for Conservation of Nature

SMP: Site Management Plan

CHAPTER 1

INTRODUCTION

UNESCO World Heritage List was created to preserve the Outstanding Universal Value of heritage sites in order to pass them to future generations. Since the establishment of the list, views on what to preserve and how to preserve them have been redefined over the years. In the meetings held by UNESCO, while new heritage places were inscribed, new ideas and challenges on preserving natural and cultural values for these sites were continued to be investigated. Almost half a century after the creation of the list, preserving Outstanding Universal Value, integrity and/or authenticity of heritage places is still problematic.

The major outcome of World Heritage List inscription is the sudden national and international recognition of the heritage place. This recognition often increases the tourism activities together with national and/or international funds coming to the site. Apart from the aim of preserving the value and integrity for a heritage place, decision makers also desire to obtain economic gain from the property's recognition for the prosperity of people living in or around the site. As heritage listing creates attraction and economic gain, uncontrolled economic desires and insufficient management and/or monitoring systems generated changes in physical, functional and socio-economic aspects of the site. These changes can put heritage places at risk of irreversible damage.

As heritage listing attempts to preserve the value of heritage places, it also puts extra pressure of change on heritage places. In order to preserve the Outstanding Universal Value of heritage places, effects of listing and their reasons must be analyzed and evaluated.

1.1. Definition of the Problem

The term ‘Cultural Heritage’ was described by UNESCO as; monuments, groups of buildings and sites which have Outstanding Universal Value from the point of history, art or science (UNESCO, 1972). Where the cultural heritage is always threatened by destruction, preserving it for all the nations of the world is imperative. In that context, ‘*Convention Concerning the Protection of the World Cultural and Natural Heritage’* was accepted in the General Conference of UNESCO in 1972. According to this convention, cultural heritage sites having Outstanding Universal Value (OUV) must be identified and included in the ‘World Heritage List’ to ensure their transmission into future generations.

Where change is an inevitable aspect of heritage sites, preserving cultural values of heritage places can often become challenging. Whether as the result of changing needs of modern lifestyle or improper conservation principles adopted by local and national authorities, every heritage site is open to change. But for heritage places, the rate of change is more rapid due to sudden national and international recognition of the site after their inscription. This recognition almost always results in increased tourism activities which then leads to physical, functional and socio-economic changes for the heritage place and its surroundings.

Monitoring systems are important tools in updating physical, functional and socio-economic data for a site in a period of time. For heritage places, where imminent changes occur in physical, functional and socio-economic features, monitoring is an essential part of identifying and evaluating change. As conservation is often considered as the management of change (Jokilehto, 1998), setting efficient management principles is also essential for the preservation of heritage places. When tendencies of change in heritage places are fully investigated and understood, managing these changes in order to preserve sites cultural values can become possible.

Generating monitoring and management principles are time-consuming and highly expensive processes. Having a functional management system or an agenda that focuses on preserving OUV for each nominated site is obliged by UNESCO in order for a site to be inscribed. UNESCO also requests reports on the process of the prepared management plan after the inscription. But there is no template for this type of management systems where they are created according to the values and needs of sites individually. Where there is a variety in management plans for heritage sites, common principles are implemented for every site. Management plans are mainly focused on planning, monitoring and evaluating proposed action plans created by different parties involving in this process. In most of the newly inscribed heritage places, even if all the necessary steps were taken in the preparation of a management plan, only a part of the proposed action plans can be implemented due to lack of funding, miscommunication of parties and political disputes.

Under the pressure of being inscribed on the list, changes in heritage places can progress in different rates. Change can sometimes be slow and in control with right monitoring and management implementations. But in most of the cases, changes are rapid and even threaten the cultural values of heritage places. If these changes are not overseen or controlled, OUV of heritage places can become endangered. Where the main objective in the formation of the World Heritage List is preserving OUV, integrity and/or authenticity of a cultural heritage site, in the light of researches conducted in this matter, it became clear that not every heritage place has been able to preserve their values after listing.

As monitoring changes is an important part of heritage preservation, investigating and understanding reasons of these changes is also crucial in order to manage these changes to preserve cultural values. Where all heritage places share the same qualification of having OUV, they are under the effect of different indicators, depending on their setting, which can generate changes in their physical, functional and socio-economic features. Therefore, reasons of these changes for each heritage place, must be investigated by the indicators recovered within their own context.

Heritage places are considered a whole with their unique tangible and intangible assets. Local communities living in these heritage places have effects on these assets therefore, their actions play an important role on preserving cultural values. As they are the permanent residents of these sites, their understanding of these heritage places and their sense of ownership is a crucial variable in heritage preservation. On that context, in identifying the reasons of changes in heritage places and managing them, social and economic structure of the local community must be well investigated and understood.

In Turkey, most of the heritage sites are in danger of losing their cultural values as the result of changes in their historic environment with improper interventions conducted by inhabitants and insufficient conservation planning policies. For these sites, inscription in the WHL is often considered as a way to preserve their cultural values. For the people living in these heritage sites, there is an assumption that; after a heritage site is inscribed in the WHL, they are under the protection of UNESCO. Where this thought is partially correct, the main purpose of UNESCO is to help and guide governments and local authorities to generate necessary actions to preserve WHSs. Therefore, in the attempt to preserve heritage places in Turkey, responsibilities of government, local authorities and other decision makers must be well identified and implemented.

As the result of increased international and national recognition after the inscription, tourism activities accelerate in most of the heritage places and often generate economic prosperity for the region. But desires for economic gain, together with inadequate monitoring systems and improper management plans, can put heritage sites under the danger of losing their cultural values.

Therefore, after the inscription of a heritage place, proper monitoring tools must be used to document the values of the site and to identify the tendencies of change. Reasons of these changes also needs to be investigated and evaluated in order to propose proper conservation policies. Only with understanding the reasons of change

and their impacts on heritage places that we can manage these changes to help facilitate future decisions on preserving cultural values.

1.2. Research Questions, Aim and Scope of the Thesis

This thesis is constructed on the hypothesis that, WHL inscription generates changes in heritage places and these changes have positive and/or negative impacts on sites' physical, functional and socio-economic features.

Based on the defined hypothesis, this study aims to answer these following questions;

1. What type of changes occur in heritage places after inscription?
2. What are the dynamics and reasons of these changes?
3. How do these changes impact the values of heritage places?
4. What steps can be taken to preserve the values of heritage places?

In light of these research questions, this study aims to investigate and identify the reasons and impacts of change after WHL inscription and to quest for possible actions to preserve cultural values in a selected heritage place.

In the context of defined aim, first the criteria and the process of heritage inscription was studied and a literature research was conducted on studies that focused on investigating and evaluating changes in heritage places over the world. This research was used to understand the tendencies of change for heritage places after their inscription. Where changes can occur in many aspects of a heritage place, investigating and evaluating each aspect is not possible in the scope of a master thesis. Therefore, changes in physical, functional and socio-economic features of heritage places were investigated in the literature study.

For identifying and evaluating changes in heritage places, a heritage place containing physical, functional and socio-economic data prior to its inscription was selected as the case study. Monitoring methods for heritage sites were investigated and used for the evaluation of changes for the study area.

As this study aims to understand the reasons for change in heritage places, political and economic conditions of the region was studied together with the interviews conducted by locals and decision makers to investigate the problems generated after the inscription. Finally, all of the data were studied to generate an insight on the impacts of WHL inscription on the selected case.

1.3. Methodology of the Study

In the scope of the defined aim, first a literature survey was conducted on the definition of the World Heritage List with the criteria and process of being inscribed. The literature survey continued by investigating procedures and the process after the inscription. The literature survey then concluded by identifying the effects of inscription on heritage places.

In order to fully understand these concepts, international documents consisting of charters, conventions and publications of UNESCO and ICOMOS were studied thoroughly. International publications, articles and other written documents were also screened together with the legislations focused on these subjects.

Later, parallel with the problem definition, discussions and publications on WHSs in the world and in Turkey were examined to identify changes occurred in these sites after entering the WHL. Finally, an overall evaluation on the reasons and impact of change on heritage places after the inscription was made.

In order to understand reasons and impacts of change on heritage places, first, changes must be identified and evaluated. For the purpose, existence of at least two sets of data collected on same indicators on different site surveys was required. For that reason, Pergamon and its Multi-Layered Cultural Landscape was chosen for the case study, mainly because of the existence of baseline data collected in 2008 in the course of preparing a Conservation project in Bergama by the students of METU which the author of this thesis was part of. Also, the supervisor of this thesis was one of the instructors of that course so, the case is well known and well-studied. In 2014, after

the preparation of this project, Bergama was inscribed on the WHL. Therefore, in the course of defined aim, Pergamon and its Multi-Layered Cultural Landscape is considered a suitable case.

In the study of 2008 (METU, 2008), a site survey was carried out focusing on physical, functional and socio-economic aspects of the site. As the data in this survey was gathered by 15 people from different disciplines, it consists of highly detailed information in both city and building scale. But in the scope of this thesis, evaluation of changes is limited on the indicators identified through the literature survey. Therefore, the base-line data of 2008 was evaluated in that concept and reformatted under the identified indicators. Later, data on same indicators were collected in the site survey of 2018. Afterwards, these two data were evaluated together and physical, functional and socio-economic changes in the heritage place after the inscription is assessed.

The assessment of change was conducted in two scales; town scale and building scale. In town scale, changes in the physical and socio-economic aspects of Bergama were evaluated. For the physical features, changes in land use and transportation were investigated where for the socio-economic features, changes in tourism activities were investigated and analyzed.

Tourism is an important aspect of change in heritage sites. With the inscription of a heritage place, tourism activities tend to increase. If tourism activities is not monitored and managed properly, can cause rapid changes in physical, functional and socio-economic features of the site. To identify changes in tourism activities for the selected case, data on the number of visitors and their accommodation rates between 2008 and 2018 were gathered from the Bergama Museum and the Municipality. Changes in the tourist routes were also investigated by the interviews with the municipality personnel and local business owners. Later all the collected data were studied and changes in tourism activities were evaluated together with the reasons of these changes. Also,

current problems in tourism for the site were also investigated and discussed in order to identify possible imminent changes that can occur in Bergama.

For evaluating changes in building scale, buildings located within the limits of the selected study area in 2008 were investigated and changes in physical, functional and socio-economic features for those buildings were investigated and evaluated.

In the process of assessing changes in the study area, Geographical Information System (GIS) is used to document, categorize and evaluate the collected data. With the help of this system, maps showing the conditions of indicators for 2008 and 2018 were created. Later, with superimposition of these maps, the rate of change was evaluated and shown in created individual tables and charts. In the scope of this evaluation, areas where the change is localized were identified.

Increased recognition of a heritage place can also affect the rate of ownership changes for the site and its surrounding. As the values of heritage places gain national and international recognition, purchase rates and prices of buildings and lands tend to increase. With the desire for economic gain, investors often start to purchase buildings and lands in newly inscribed heritage places. Identifying the rate of this change and managing it's impacts on built environment is an important aspect for the preservation of cultural values in heritage places. Therefore, in the scope of this study, prices of unit square meter of the land for the studied buildings were gathered from the archives of the Municipality of Bergama and building and land purchases after the inscription of the site in 2014 were gathered from the Directorate of Land Registry. Distribution of these changes were shown on created maps, charts and tables. Later effects of these ownership changes on physical and functional conditions of buildings in selected study area were evaluated by the superimposition of created maps for different indicators[1].

[1] List of superimposed indicators and reasons of their selection were described in the beginning of Chapter 4.

As stated before, understanding the reasons of change is also an important aspect for preserving cultural values. To identify reasons of change in the selected case, interviews were conducted with municipality personnel, local business owners, real estate agency worker and a former mayor of Bergama within the course of site survey in 2018. On these interviews, the process of the site's WHL inscription and the current conditions of proposed development projects were investigated. These interviews also shed some light on the socio-economic problems emerged in the site after the inscription.

Heritage places are under the pressure of change for both internal and external effects. While this study is mainly focused on the effects of inscription, changes in political and economic conditions of the country where the heritage place is located also generate impact on WHSs. Especially for Turkey, changes in international policies, effects of terrorism and economic problems between the two site surveys are investigated to understand the dynamics of change in Bergama.

After all the gathered data from the site and the literature survey were evaluated, reasons and impacts of change in Bergama were identified. Later, the impact of inscription on WHL for Bergama were discussed to identify its Pros and Cons. Finally, with the help of interviews conducted on the site survey, an insight on if and how the locals can be engaged in the process and benefit from the WHL inscription were obtained.

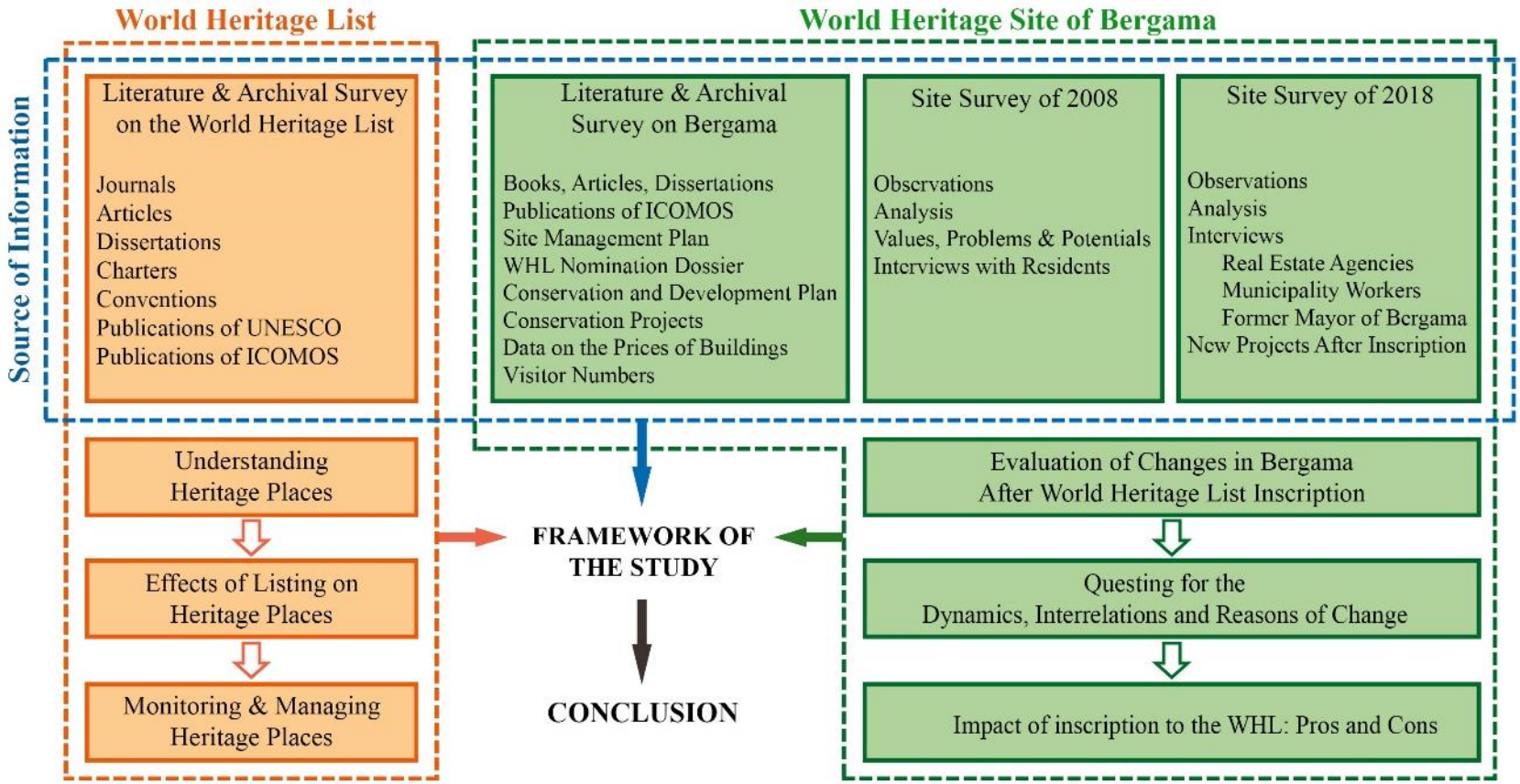


Figure 1. Methodology of study

1.4. Structure of the Thesis

The first chapter starts with the problem definition for the thesis and continues with the aim and scope of the study, definition of the methodology and identifies the structure of the thesis.

The second chapter of the study was handled under two main parts. In the first part, information gathered in the literature survey for the UNESCO's WHL was given. This part identified the criteria and process of WHL inscription through international documents, charters and conventions.

The second part of this chapter concentrates on the aftermath of WHL inscription. In this part, first, procedures and process after the inscription was studied on international documents, charters and conventions. Later, discussions on the effects of inscription were studied for heritage places. Information on this context were gathered from international and national articles focused on this subject. In this part of the study, a brief literature survey was conducted on monitoring systems used in heritage places and their importance on preservation of cultural heritage. Some examples from monitoring activities in heritage sites were given and their short and long-term results were identified.

Second part of this chapter concludes with an overall evaluation of changes in heritage places. These changes were analyzed and evaluated under three aspects as; physical changes, functional changes and socio-economic changes. Each aspect was investigated with the reasons of change and their impacts on heritage places. For this evaluation, data collected throughout the chapter was studied and examples from heritage places were given.

The third chapter starts by identifying the selected case study. First, topographical, geological and climatic conditions, historical development and planning and conservation activities of Bergama were summarized. Later, general characteristics of

the city today was investigated by focusing on its physical, functional and socio-economic aspects of both the city and the study area.

The chapter continues with identifying the criteria and process of the site's inscription on the WHL. In this part, data collected on literature survey focused on Bergama's inscription process and the criteria for its inscription were studied and briefly summarized. Also, the process after the inscription was investigated and request of the World Heritage Committee after the inscription were identified and discussed.

The fourth chapter of this thesis was handled under four parts. In the first part, physical, functional and socio-economic aspects of the site in 2008 and 2018 was identified from the data collected in both site surveys. Individual maps, charts and /or tables prepared for each indicator showing their condition before and after the inscription. In the prosses of identifying the conditions of these indicators, data collected from the municipality and other governmental institutions were used. Later, changes in these aspects after the inscription were identified.

In the second part of this chapter, an overall assessment of change in Bergama was made. For this assessment, maps showing changes in different indicators were superimposed and how different indicators affected each other in the study area were investigated and evaluated.

The third part of this chapter focused on identifying the dynamics, interrelations and reasons of changes in Bergama. For that purpose, changes in physical, functional and socio-economic aspects were studied together with the conducted interviews, also with the help of data collected from the literature and archival surveys.

Finally, on the light of identified changes and their reasons, impacts of these changes on Bergama were described. Future actions to ensure the preservation of the cultural values of the heritage places was discussed.

CHAPTER 2

EFFECTS OF WORLD HERITAGE INSCRIPTION ON HERITAGE PLACES

2.1. UNESCO World Heritage List

Cultural and natural heritages all over the world are constantly faced with present and imminent threats for destruction. UNESCO, in the attempt to prevent the loss of cultural and natural heritage, accepted the '*Convention Concerning the Protection of the World Cultural and Natural Heritage*[2]*"* in the General Conference of 1972 (UNESCO, 1972).

This convention aimed to safeguard the preservation of cultural and natural heritages and intended to identify, protect and conserve these heritages in order to ensure their transmission to future generations (UNESCO, 1997). In that context, it is decided to identify and record all the natural and cultural heritage properties having Outstanding Universal Value[3] (OUV) under the title of 'World Heritage List'.

Therefore, the World Heritage List can be described as; the compilation of cultural and natural properties that needs to be preserved for the benefit of all humanity, by an international collaboration of countries accepted the World Heritage Convention.

'The World Heritage Committee' was also established in the conference of 1972, with the election of members from State Parties attending the meeting. The main responsibility of the Committee is to decide on the criteria for inscription of properties

[2] 'Convention Concerning the Protection of the World Cultural and Natural Heritage' will be referred as 'World Heritage Convention' in the following chapters of this thesis.
[3] The term 'Outstanding Universal Value' is used for properties having natural and/or cultural importance that needs to be preserved for all the people in the world and also for future generations.

on the World Heritage List. Other responsibilities of the Committee were described in the Operational Guidelines[4] as; observing the conditions of properties in the list with periodic reports submitted by the State Parties, deciding if heritage places will be kept on the list or deleted and determining which heritage places can of World Heritage Fund and how.

'Advisory Bodies', consist of ICCROM, ICOMOC and IUCN, which advises the Committee on the implementations of the convention in their fields of expertise. ICOMOS and IUCN are also responsible for consulting the State Parties, evaluating the nominated properties and submitting reports to the Committee on these properties. Advisory Bodies are also responsible for monitoring the conditions of heritage properties after their inscription

2.1.1. The Criteria of Being Inscribed

Heritage properties are nominated to the list under one of the three titles as; natural heritage, cultural heritage or mixed heritage. And any type of heritage property, having OUV is considered the main criterion for inscription. To identify OUV, the nominated property must meet at least one of the ten criteria listed in the Operational Guidelines under the title of 77 (WHC, 2017). The first 6 criteria in the list are used to identify the value of cultural heritages and the other 4 criteria are used to identify natural heritage values.

In order to prove the OUV, the nominated property also has to meet the identified conditions of integrity and/or authenticity together with an adequate management system that ensures the protection of the property. Authenticity is only searched in

[4] As a guide to understand the criteria and process of WHL inscription 'Operational Guidelines for the Implementation of the World Heritage Convention' was created in 1977. Over the years, this document was revised with the acceptance of new concepts and changes in the implementations of the process.

cultural heritage properties, where all the nominated properties must meet the conditions of integrity.

The term authenticity was first described in the Nara document in 1994. The credibility of the source of information is considered crucial when the authenticity of a cultural heritage is investigated. As the values of cultural heritages may vary for every culture, cultural values must be measured within their own cultural context. The nominated property must also express their values through the attributes listed in the title of 82 of Operational Guidelines (WHC, 2017).

All nominated properties must have integrity. As integrity refers to the intactness and wholeness of the heritage property, physical features of the nominated cultural heritages must be in good condition or the deterioration has to be well controlled (WHC, 2017).

Protection of a heritage and its management are also an important criterion for its nomination. Even if the properties have OUV, integrity and/or authenticity, their values must be well protected and managed through a functional management system in order to be inscribed in the list.

2.1.2. The Process of Being Inscribed

Prior to the nomination, State Parties should initially include the heritage property that they want to nominate on their 'Tentative List'. Since 1988, nominations to the World Heritage List are not considered unless the nominated property has already been included on the State Party's Tentative List at least one year before the nomination (WHC, 1997).

To include properties on this list, an inventory consists of details about the property has to be created by the State Party and submitted to the World Heritage Center (WHC) for investigation. The compliance of the submitted document then investigated by the Committee and the Tentative List is registered. State Parties are

also encouraged to examine their Tentative list in every ten years and re-submit them to the Committee (WHC, 2017).

For every nominated heritage property, a nomination document must be prepared. In the course of preparing this document, participation of private, governmental and non-governmental organizations is considered essential to investigate and evaluate every aspect of the nominated property. The Secretariat of the WHC also provides information and assistance on the preparation of required documents and share examples from successful nominations.

The nomination document must contain all the necessary information requested by the WHS about the nominated property. Initially, boundaries of the property and buffer zone, if present, must be clearly identified and shown on detailed maps. Later on, the nominated property must be described and a general information about the history and development of the property must be presented. After that, necessary information stating the OUV, integrity and/or authenticity of the property must be given. Then, present conditions of the property must be identified and factors that are affecting the property must be presented. Finally, protection, management and monitoring systems for the property must be explained (WHC, 2017).

When all the necessary information about the proposed property was gathered by the State Party and the nomination document is created, it needs to be submitted to the WHC Secretariat. After the submission of the document, the nomination will first be investigated by related Advisory Bodies in order to evaluate whether the property have OUV, integrity and/or authenticity, if the property is protected and constitutes appropriate management systems. Later, Advisory Bodies submit a report to the Committee containing their evaluation for the nominated property.

World Heritage Committee meets once a year, in June or July, to evaluate the nominations. During this meeting, guided by the reports prepared by Advisory Bodies on the statement of OUV for the property, Committee decides whether the property is

qualified to be inscribed in the World Heritage List. The Committee can also propose modifications in the boundaries of the heritage property, can change the name of the nominated property and also change the criteria used for the justification of the OUV of the property.

As of 2019, there is a total 1121 properties inscribed on the WHL in 167 State Party territory. 869 of these properties are cultural heritage sites, 213 of them are natural heritage sites and 39 of them are mixed heritage sites.

2.2. Aftermath of Inscription on Heritage Places

Inscription in the WHL, is sometimes considered as the ultimate agenda to ensure the preservation of heritage places. On the contrary, it should be considered as the beginning of the preservation process.

Upon the inscription, heritage place becomes more open to change and damage in their OUV, integrity and authenticity as a result of increased national and international attention to the inscribed property. For that reason, procedures and process after the inscription must be well understood and implemented.

To ensure the safeguarding of heritage places after their inscription, possible effects of the inscription must be investigated. For this part of the study, a literature survey was conducted on different views on the effects of inscription. Possible outcomes of listing on cultural values were investigated by giving examples of heritage places over the world. And, positive and negative impacts of changes in heritage places upon inscription were identified and evaluated.

2.2.1. Procedures and Process After the Inscription

With the inscription of a heritage property on the list, State Parties are obligated to preserve the identified OUV of these heritage places. To preserve the OUV, effects that can damage its integrity and/or authenticity should be well managed. For that

purpose, reports on the condition of heritage places must be prepared and submitted to the Committee.

The primary report is called ‘Periodic Report’. These reports are submitted to the Committee for every six years upon registration. Preparing these reports is the official duty of the State Party to the Committee. The report must contain legislative and administrative requirements adopted by the State Party and actions taken to preserve the heritage place. These periodic reports are valuable for the people responsible to manage the heritage place where they can review the management systems they are using, identify the possible threats to their properties and develop necessary action plans. These reports can also provide an international exchange of information which can help to preserve heritage places (WHC, 2017).

‘State of Conservation Report’ is also an important tool to help preserve the values of heritage properties that are under the risk of damage. These reports are prepared to inform the Committee on the planned interventions in or around the inscribed heritage place and submitted in every year or two years depending on the case. Every intervention after the inscription is considered as a threat to the heritage place by the Committee. Therefore, preparing these reports should aim to demonstrate to the Committee that, the proposed interventions will be well managed and generate no major effects on the OUV of the property.

State of Conservation reports are valuable in identifying possible threats on OUV of heritage places after the inscription. For that purpose, UNESCO performed a study in 2013 that aimed to identify and analyze threats on heritage places by investigating State of Conservation reports prepared between 1979 and 2013. Out of the 14 primary and 83 secondary threats that were identified through this study, management and institutional factors acquire impacts on heritage sites, followed by, threats related to building and development, social/cultural uses of heritage, transportation infrastructure and other human activities (UNESCO, 2014).

UNESCO is aware of the possible threats on heritage places therefore created the 'List of World Heritage in Danger'. Heritage properties that are under threat of losing their OUV, integrity and/or authenticity is placed on this list. The major purpose of this list is to inform the international community of conditions which threaten the characteristics of heritage properties and to encourage corrective action. Inclusion on the List of World Heritage in Danger is sometimes seen by general public as the loss of pride but it is also a conservation tool, giving countries access to international technical assistance. It is also a way to gather political and public support for conservation of an endangered site at the national level (UNESCO, 2002).

2.2.2. Discussions on the Effects of Inscription

As the World Heritage List was created to preserve the OUV of a heritage place, inscription in the list draws an immediate national and international recognition to the site's unique values therefore considered the major outcome of World Heritage Listing.

Without a doubt, a large number of countries invest in the world heritage inscription process to promote their historical and natural assets and give them a place on the world stage. The involvement in the process of entering the WHL also strengthens a country's relationship with the international heritage movement (Frey & Steiner, 2011). As in the Osun-Osogbo Sacred Groves in Nigeria, 15 years of efforts, lobbying combined with political and economic interests, played an important role in sites listing (Maurel, 2017).

With the international recognition after the inscription, heritage places become a universal brand. Their unique qualities are promoted by governments and heritage places begin to be marketed on international fields. With their unique cultural and/or natural values, countries desire to obtain economic value and benefit through marketing their heritage places with this brand.

Figure 2. Outcome of WHL inscription

Therefore, after the inscription, heritage places generally become a touristic attraction point that generates a rapid increase in the number of visitors which contributes to the country's economy. Economic contribution of tourism is the primary interest for some countries having insufficient funds to preserve their heritage sites. Therefore, it is not possible to investigate the effects of heritage listing apart from tourism where it is an important variable in the preservation of heritage places.

There are controversial studies in academic circles focused on the effects of tourism in World Heritage Sites. Some researchers only dwell on the economic contributions of tourism and discards the dilution in the site's authenticity by extreme visitation (Jimura, 2011; Buckley, 2004). Others focus on preserving the identity of the heritage sites under the pressure of intense tourism but neglects the changing needs of modernization and urbanization (Barron, 2017; Maurel, 2017).

When the positive effects of tourism are addressed, it is clear that increase in the number of visitors provides new job opportunities, income generation and enhanced community infrastructure therefore, help to improve the urban quality of life in heritage sites (Jimura, 2011; Frey & Steiner, 2011). Economic development also generates funds for local authorities and residents which encourages them to do necessary interventions on monuments, buildings and on the other aspects of the physical environment. Tourism can also promote cultural values by supporting local handicrafts or by offering alternative economic activities (Pedersen, 2002). Even with all its advantages, tourism is generally considered a fragile industry because, when the whole economy of a region is based on tourism, decrease in the number of tourists can generate problems not only for the owners of businesses but for all the collaborators of the industry (Gordon & Brian, 2000).

UNESCO recognizes that tourism is an important management issue and an industry with well-known costs but also with the potential for aiding protection (UNESCO, 2002). While managing a heritage site, tourist attraction must be periodically renewed to remain competitive and managers should be aware of the international obligation they are under in order to maintain or restore the site's original values. For that reason, the idea of "Sustainable Tourism" were promoted which argues that; by taking appropriate actions at the different levels of the process, tourism can be managed to generate clear site benefits. For the purpose of ensuring local communities to benefit from tourism activities and to manage visitor flows in ways that are compatible with heritage conservation, the year 2017 was proclaimed as the "International Year of Sustainable Tourism for Development" (Barron, 2017).

Tourism has positive effects on the local communities and help to finance preservation and conservation activities in heritage sites where it is also known to generate negative effects on physical environment and the cultural values of a site (Caust & Vecco, 2017). Today, principles of world cultural heritage are diverted from its official purpose and used to promote tourism (Maurel, 2017; Cuccia, Cuccio & Rizzo, 2016).

By promoting tourism, number of visitors instantaneously increase in heritage places after inscription. Like in the case of Melaka in Malaysia, conservation of the historic center with the restoration of shophouses prior to the nomination, helped with the inscription process and tourism activities are increased for the site. While the conservation of buildings was continued by the usage of conventional materials and detailed studies, for the desire to attract more visitors, archaeological properties of the site was poorly analyzed and even a part of the demolished forts was reconstructed without proper documentation. This approach shows that authorities in Melaka chose to build a tourist attraction point rather than preserving the authenticity of the real heritage (Ertan, 2017).

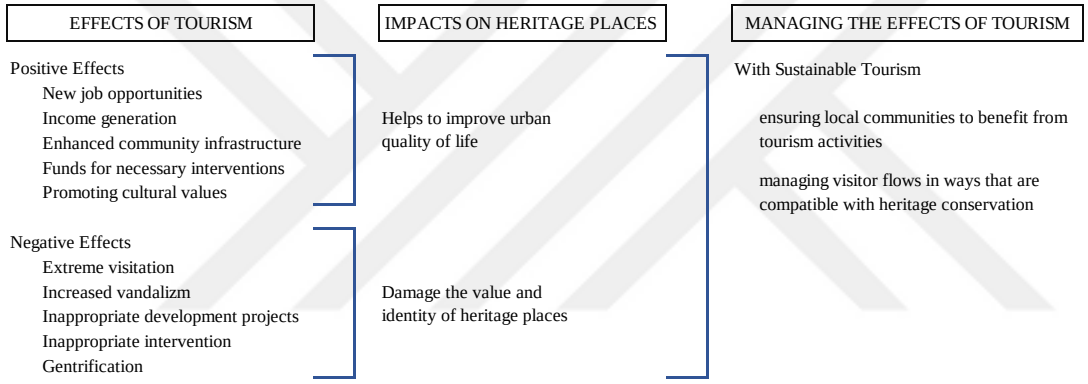


Figure 3. Effects of tourism and their impacts on heritage places

There are some management strategies that are proposed by UNESCO on minimizing the effects of visitors on heritage places (Pedersen, 2002). The primary method is limiting the number of visitors entering the site. To do so, they propose restriction in the number of visitors, limiting the length of stay in the area and introducing entrance fees. Introducing or increasing entrance fees help limit visitors and create funds to help maintain the property. But this type of actions can only be practical for sites having physical boundaries such as archaeological sites limited by routes or for

monumental buildings. When a cultural landscape or a town is concerned, it is not easy to limit the number of visitors (Barron, 2017).

Tourism impacts on heritage places are mostly caused by development projects created to accommodate visitors therefore, increase in the number of visitors alone do not express the amount of possible impact on heritage sites (UNESCO, 2002; Jimura, 2011). Development projects focused on managing the needs of increased number of visitors also cause problems in preserving the identity of heritage sites. So, the amount of tourism impact is an important input regarding the quality and quantity of development projects prepared in a heritage site.

As UNESCO desires to ensure an appropriate and equitable balance between conservation, sustainability and development (Budapest Declaration on World Heritage, 2002), managers and decision makers often struggle to find balance between the economic benefits the inscription provides and preserving the physical, functional and social features of the site as a whole (Barron, 2017; Landorf, 2009). For that purpose, UNESCO encourages preparation of management and conservation plans for heritage sites starting from the nomination process and declares in the Operational Guidelines that these plans should protect heritage places from the changes caused by social and economic pressures that can damage the OUV, integrity and/or authenticity (WHC, 2017). Therefore preparing a management plan of a heritage site that balances pressures of change and preservation of the heritage value is crucial and in the absence of these plans physical and social outcomes of these pressures on sites could be severe (Jimura, 2011).

With the inscription on the list and by the recognition of the heritage place, conservation activities tend to increase. Preparation of conservation plans, containing detailed information for the heritage place, is an important tool to generate effective conservation activities. In most of the heritage places, the conservation process after the listing deals with; conducting scientific studies to inventory heritage, better understanding on historical and archaeological context or architectural characteristics,

improving the system for protecting the site and defining new uses (UNESCO, 2014b). But in some cases, like in Melaka of Malaysia, the conservation of traditional shops in the historic town center started in 2002 for the purpose of generating a model for conservation activities for all the site that led to the inscription in 2008 (Ertan, 2015). Also, in Luang Prabang, with the establishment of Maison du Patrimoine (Heritage House) after the inscription in 1995, conservation of traditional and colonial houses is carefully monitored and many pre-Second World War religious and other listed monuments in the town were preserved and restored (Berliner, 2012).

Inscription has effects not only on the physical environment of the heritage place, but also on the social structure of the community. Studies on various changes in heritage places after inscription are often focused on tourists, tourism development, conservation and visitor management. There is a lack of research on the views of local communities in/around the heritage sites (Jimura, 2011). Where locals are the permanent residents of heritage sites, their understanding of the site and their sense of ownership is an important variable of heritage conservation.

In the case of Luang Prabang in Laos, the site became an intense tourism destination for both local and European visitors after the inscription in 1995. With grown attraction to the site and funds coming from international organizations, number of tourism facilities increased enormously in both the town center and in suburbs. While most of the people living in Luang Prabang is happy with the positive effects of UNESCO listing, as the number of traditional houses converted to hotels or guesthouses are increased and the number of visitors began to outrun the residents, the city started to lose its values on the eyes of locals (Berliner, 2012).

Economic gain generated from tourism as the result of national and/or international recognition, do not necessarily used to generate needed improvements in the physical and social environments that are under the pressure of change. Issues as accessibility, transport, accommodation and other service provisions which are raised by the increase in tourism activities may result in increased food and property prices, traffic

jams, noise and air pollution, and huge volumes of waste, can cause residents of the site considerable inconvenience and may result an utter decrease in their quality of life. (UNESCO, 2003). Like in the case of Ogimachi in Shirakawa-mura, Japan, increased tourist attraction to the site, especially in national holidays, creates problems in traffic which alters the attitudes of residents towards heritage conservation (Jimura, 2011).

Witnessing these negative effects of inscription in heritage places can sometimes be useful for decision makers in other heritage sites. Like in Cuenca, Spain, the government restore public spaces, encourage the use of bicycles, pedestrianization at certain hours, and the implementation of activities that contribute to wellbeing in public spaces. These activities together with the testing of non-polluting, soft mobility practices helped to maintain the street's social diversity (UNESCO, 2014a).

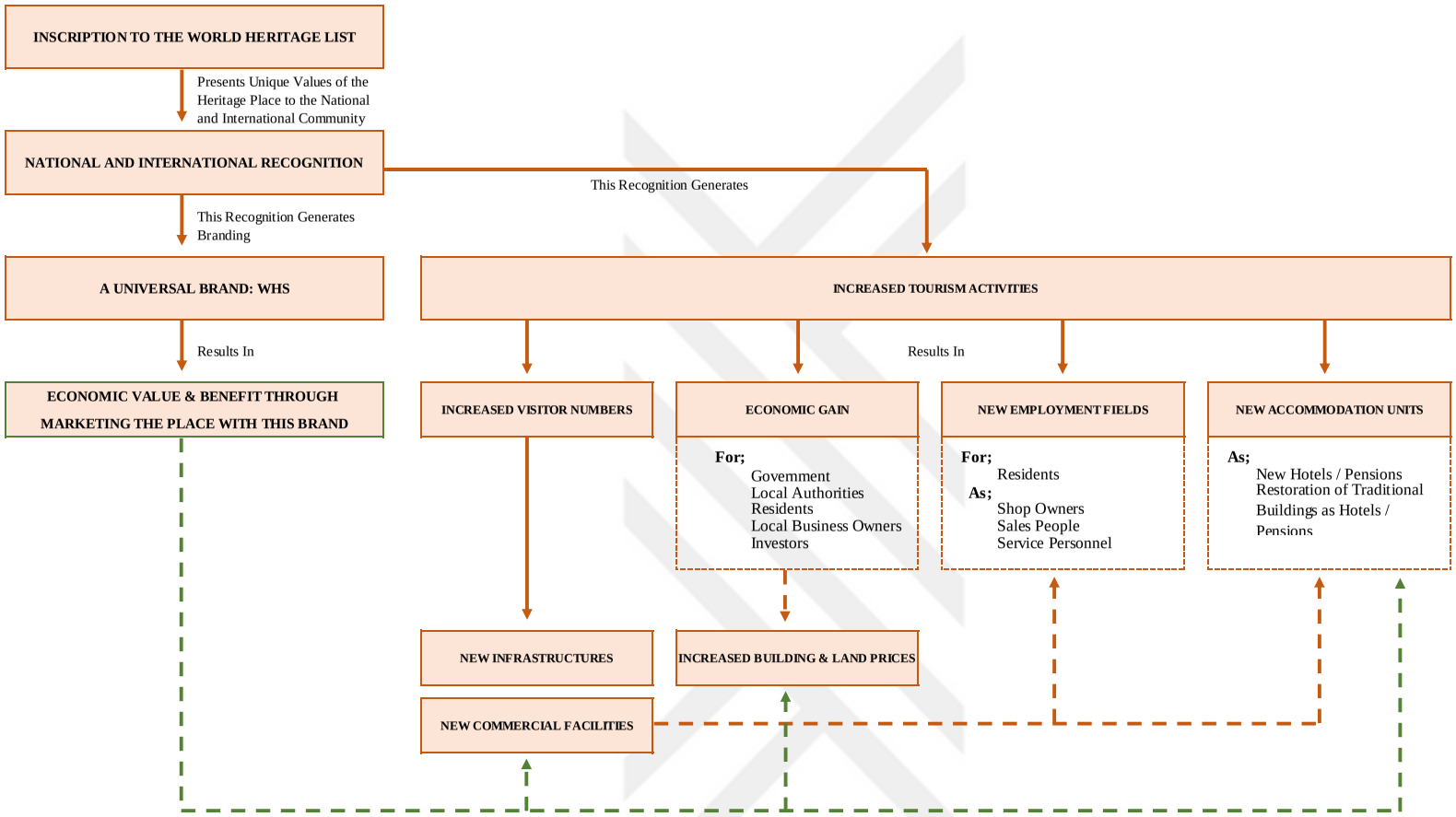


Figure 4. Effects of WHL inscription on heritage sites

2.2.3. Overall Evaluation: Change in Heritage Places After the Inscription

In the scope of this study, the word ‘change’ refers to difference, and this difference can be considered either a positive or a negative outcome depending on the point of view. So, when change is measured for WHSs, these prospects should be investigated together.

Change in a heritage places after the inscription can progress slowly or quickly depending on; management and conservation plans, legislative, regulatory and contractional measures for protection in the region where the heritage place is situated, approach of decision makers on heritage protection, socio-economic conditions of the country, tourism activities, social and cultural structure of the residents and the degree of awareness of the community on the heritage value. In order to preserve the OUV of a heritage site together with its integrity and/or authenticity, tendencies of change in heritage sites must be investigated thoroughly.

2.2.3.1. Physical Changes

Change is a constant result of passing time. Whether change is tangible or intangible, all heritage properties are open to change not only by the effects of time, also by the effects of human contact. Where physical change on heritage places after the inscription is inevitable, actions on identifying the tendencies of these changes and managing them is crucial for heritage preservation. Physical change in heritage sites can occur both in physical environment and in buildings individually as they are in constant interaction with each other.

Physical environment consists of physical elements that surrounds people such as land, buildings, and other infrastructures. Every feature of physical environment has an effect on the formation of heritage sites therefore has to be maintained in order preserve the values of site in question. But in the process of maintaining physical environment, needs of residents must be considered where they are the major indicator of change.

Changes in a physical environment after the inscription can have positive or negative effects on a heritage place. Managing these possible changes helps to find balance between the needs of people and preserving the site values. But today most of the heritage sites are under the pressure of intense tourism, and without functioning management plans changes in physical environment can be irreversible (ICOMOS, 2009). In heritage sites, the most common changes in physical environment are changes in; public spaces, physical conditions of buildings, number and character of new interventions, protection of site afforded by conservation legislations and street infrastructures.

Public spaces contain streets (or boulevards), squares, parking lots, gardens etc. and managing changes in these areas are important for preserving the character of heritage sites where they state its history and identity (UNESCO, 2014b). Change in streets of heritage sites can occur in two ways, street elements can change depending on the conservation activities and density of traffic (both vehicle and pedestrian) can change as a result of tourism activities and/or local legislative alterations. In the Visby, Gotland, asphalt streets were replaced by paving stones, street signs were scrapped for smaller ones and signboards with big neon lights were abandoned to generate an old medieval look for the town center. But these changes become problematic for visitors in ways of mobility and accessibility where visitors became unable to find their way because of small signs also wheelchairs and strollers cannot function in cobblestone streets (Ronstörm, 2014). An attempt of maintaining the character of medieval streets, these actions caused local residents to disengage themselves from the town center. This types of interventions to historic towns reinforces the idea that inscription is not to transform sites to ‘museums’ but to preserve the settlement as a living entity shared with residents and tourists (UNESCO, 2014b).

Transportation is essential to maintain and increase the quality of life for the residents living in historic centers and therefore an important issue in assessing changes for physical environment. Installing infrastructure into cultural sites having dense and

complex fabric generates conflicts between preserving the identity of the site and providing accessibility. With modernization, use of cars and other transportation tools increases in historic centers which generally results with intense traffic and generates air pollution and noise. Increase in the use of cars also bears problems for pedestrians visiting these sites. Like in Rhodes, Greece, heavy automobile traffic became a barrier for visitors wishing to enter the medieval city. For that purpose, in most of the heritage places, local authorities began to restrict vehicle entrance to historic centers.

In some cases, like Strasbourg in France, local authorities decided to build a surface tramway in the historic city to minimize the effects of dense traffic. This type of actions were generally found risky where they can compromise the site's OUV like in the Dresden Elbe Valley in Germany. Construction of four-lane bridge in the center of the cultural landscape resulted in the delisting of the site from the WHL in 2009. But for Strasbourg, this installation generated the opposite effect and helped to preserve the site's integrity by redistribution transportation infrastructure and making the historic center more accessible, less polluted and thus more pleasant for its residents and visitors (UNESCO, 2014b).

As the result of changing need of housing stock in the context of increased population and modernization, new developments in heritage sites are inevitable. It is a fact that, new developments should reflect their own period's character and must be in harmony with the old setting (UNESCO, 2005). But in some heritage places there are examples which contradicts this statement and new developments damage the OUV of the property.

As in the Liverpool, in UK, where site managers stated during the time of inscription that; development projects in the area will continue in harmony with the existing urban fabric, construction of high-rise buildings and a new museum damaged the visual integrity of the site (Rodwell, 2014). In 2011, a proposal for 55-storey new building in the city center elevated the threat of irreversible damage to the OUV and resulted

with the placement of the heritage place in the List of World Heritage in Danger in 2012.

With elevated tourism activities after the listing, new tourism facilities are generally included in historic settlements such as; hotels, tourist information centers and museums. In the 'Mausoleum of the First Qin Emperor' in Xian, China, a museum was constructed on the site to preserve and display the terracotta warriors of the Emperor. But the situation and architectural quality of this museum had an appearance of a shopping mall rather than a tomb site (UNESCO, 2003). This poorly situated museum therefore generated negative visual effect on the heritage place and damaged the authenticity of the property (Barron, 2017).

Multi-layered urban settlements are also object to the dangers of change. In these sites, new development projects face the problem of integration with the archaeological remains and with other buildings of different periods of time[5].

Changes in Physical Conditions of Traditional Buildings

As stated in the Operational Guidelines (WHC, 2017, p.27, par.88); '*integrity is a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes'* and all the heritage places must satisfy the conditions of integrity. It is also stated that in examining the integrity of a property, the extent of *suffers from adverse effects of development and neglect* must be assessed (WHC, 2017, p.28, par.88). In the scope of preserving the cultural values of a heritage places after their inscription, traditional building stock constitutes an important issue with its large quantity in the physical environment and with their tendencies to change and/or neglect. It is a fact that traditional buildings, without proper interventions, are unable to meet the current needs of their residents. Insufficient spatial and sanitary conditions

[5] Further information on criteria and method of new interventions in Urban archaeological context can be obtained from Kaya, M. 2014, *Constructing the Present Over the Past: The Case of Bergama*, Unpublished Master Thesis, METU Ankara

of this properties cause decrease in the quality of life and displease for their residents. Increasing the quality of life in historic centers, can only be obtained by prioritizing the need of residents by providing decent living conditions adapted to current lifestyles within traditional buildings.

Even though most of the traditional buildings are located in historic centers, they tend to be deteriorated extensively. In Lima in Peru, the city center was inhabited by poor families with insufficient economic conditions necessary to conduct conservation activities in their homes. This resulted with intense deterioration of traditional buildings up to the point where substantial risks began to occur regarding the physical safety of their residents.

Where the general outcome of heritage listing is economic gain for the community, in cases like Lima, the profits are not always used for conservation of traditional building. One of the main reasons of this problem is the types of ownership. Private owners of traditional buildings in heritage sites usually do not have the means to finance and guide the conservation process. On the other hand, restorations conducted by public or private assistance can cause functional problems. At the end, local authorities have to step in and generate necessary funds to motivate inhabitances in conservation activities and supervise their implementations (UNESCO, 2014b). Another responsibility for governments and other local authorities is to execute social projects that will help to create public understanding on the historic values and integrate the public in conservation activities. In the attempt to preserve the character of the traditional urban settlement in Lima, an iconic building in the neighborhood called "Casa de las Columnas" were restored by an NGO. With his study families living in traditional building were directly integrated in conservation activities.

2.2.3.2. Functional Changes

In heritage places, functional changes can occur after the inscription. These changes can have positive and/or negative effects on integrity of the heritage place and also in

the cultural values of the site. Where refunctioning of monumental buildings is not encouraged for the reason of possible damage in authenticity, functional changes are generally seen in traditional building stock.

Buildings in urban texture of a heritage place can be neglected and therefore deteriorate to a state in which that they could no longer be refunctioned without proper conservation activities. Absence in knowledge for conservation policies and procedures together with the necessary economic conditions, conservation of traditional buildings can become challenging for their owners and/or residents. For that purpose, local authorities should generate social activities and/or projects to provide assistance in this process. Apart from the application of conservation activities, public understanding of the conservation goals and how conservation can be part of the development in heritage places is essential. To do that, a shared understanding for cultural heritage preservation must be manufactured within the different divisions of governments and the society (UNESCO, 2003).

With the international recognition and increase in the tourism activities, refunctioning of traditional buildings in heritage places are often generated in the concept of commercialization and nearly always based on the needs of visitors. This creates an important field of tension between the inhabitants and the visitors (Ronstörm, 2014). Whether newly established commercial facilities generate new jobs opportunities, they also create problems in preserving the integrity and cultural identity of the settlement (Barron, 2017). Therefore, in order to preserve the cultural values of a heritage site, the degree of change in traditional buildings regarding the commercial facilities should be assessed carefully (UNESCO, 2002).

The process of refunctioning generally occurs in three ways. First, local owners of the buildings generate needed interventions and reuse or rent them for commercial purposes like hotel, restaurant or a café. But in developing countries, when the owners lack necessary economic conditions, local authorities generate funds to support these interventions. Later, national and/or international investors start to purchase buildings

in the area and after the necessary interventions use or rent the buildings for commercial or recreational facilities. Finally, the local authorities generate interventions in traditional government buildings with initial or private funds to reuse or rent these buildings.

As in the case of Hoi An in Vietnam, the architectural and cultural identity of the site was preserved apart from the rest of the sites from Vietnam because of its exclusion from economic development occurred in the country for the past 100 years. But with the inscription, the tourism to the site increased %10 in the first year. Mainly because of the increased tourism, most of the buildings in the town center was turned into cafes or restaurants from their original functions (Caust &Vecco, 2017).

When the number of commercial facilities increase together with the number of visitors, accessibility becomes problematic to locals and they start to move outside the historic centers. Local authorities also tend to promote outskirts of heritage places for new constructions (Ronstörm, 2014). With the locals leaving, changes in the type of trade began for historic centers from hardware stores or health centers that are used mainly by locals into cafes and restaurants for the purpose of tourism.

For some cases like Chew Jetty in George Town in Malaysia, the region's economy was based on trade with other communities. With the inscription of the town in 2008, original type of trade in jetties were changed and transformed them into tourist based commercial shops. While the listing has protected these jetties from destruction, it resulted substantial change in site's cultural identity (Barron, 2017).

2.2.3.3. Socio-Economic Changes

Inscription of a heritage place effects the social structure of local population as it effects the built environment. With the increased attention to the site after the inscription, ownership changes generally start to increase. Investors or other residents start to purchase buildings or lands in the newly inscribed heritage sites for the purpose

of gaining from the site's potential economic growth due to the probable increase in tourism activities.

When changes in ownership increases in heritage sites, character of residents also starts to change. People outside the region or country start to move into the buildings located within the heritage place and open new businesses. As this change is considered to have positive effects for the sites future, rapid and uncontrolled changes in ownership can result in the loss of appreciation for heritage values by the newly established population.

Changes in ownership generally occurs as the result of commercialization. In the attempt of generating economic gain from their traditional buildings, most of the local residents refunction their homes as pensions, hotels and restaurants. Where most of the locals benefit from this transformation, with the increased recognition of the site, investors out of the region start to purchase traditional houses as well.

But in most cases with the increased number of visitors and commercial facilities, real estate values start to rise resulting with the increased social and cultural homogenization which is causes gentrification (Ronstörm, 2014). This process sometimes happens slowly or rather quickly depending on the attitudes of local authorities and implementation of new regulations. As in the Melaka, in Malaysia, conservation of traditional shophouses in the historic center prior and after the inscription created a rapid increase in the number of visitors. This increase, together with the 'Control of Rent' act for the region, led to the increase of rents and eventually forced old tenants to move out (Ertan, 2017).

Like in Panama City, after the inscription, tourism has increased rapidly and resulted with great economic gain for locals from land and property sales. Historic Casco Viejo neighborhood, located in Panama City, was formerly inhabited by people from poorer classes. When the restoration of colonial buildings in and around this neighborhood rapidly increased and started to be owned by rich foreigners, locals were practically

forced to move to the city limits (Maurel, 2017). As in San Gimignano, in Italy, nearly all the houses inside the walls of medieval city has turned into restaurants, bars and souvenir shops for tourist and there were no shops solely used by locals where they all moved out of the center into modern houses (D'Eramo, 2014). Also, in Luang Prabang in Laos, most of houses in the historic center has turned into hotels and restaurants where locals have moved out to the outskirts (Berliner, 2012).

Existence of these negative examples force decision makers and other professionals to generate tools in order to minimize or diminish the possibility of gentrification of heritage places. Like in Cuenca, Spain, the government set up policies for restoration of buildings by maintaining their social functions in order to avoid gentrification. They also encouraged the promotion of heritage conservation by newly generated socio-economic policies (UNESCO, 2014b).

With the change of ownership in heritage sites, new residents generally do not feel connection with the values of the site. This disconnection could have diverse affects in preservation of cultural identity of the site. The same kind of disconnection is also seen on new generations living in these sites, where the traditional houses are lack basic modern comforts, they do not share nostalgia for their surrounding (Barron, 2017).

This disconnection with the heritage places sometimes generates problems on the continuance of traditional professions. Where in Bukhara, Uzbekistan, the listing helped in invigorating local products. But for some cases, it caused the alteration of local industry into tourism. (Jimura, 2011)

Table 1. Indicators of change for physical, functional and socio-economic features of heritage places

Changes in Heritage Places	INDICATORS OF CHANGE		DEGREE OF CHANGE	REASONS OF CHANGE
PHYSICAL CHANGES	CHANGES IN OPEN AREAS			
	New Open Areas	Public Open Areas Private Open Areas	Expropriation of Private Lots	To Increase Accessibility and Mobility
	CHANGES IN INFRASTRUCTURE			
	Changes in Street Elements	Street Pavements	Changes in Street Coverings	To Increase Accessibility and Mobility
			Addition of Sidewalks	
		Sign Boards	Addition or Removal of Sign Board	
			Changes in Types of Sign Boards	
			Changes in Forms of Sign Boards	
	Changes in Transportation	Density of Traffic	Increase in Density	To Increase Accessibility and Mobility
			Decrease in Density	
		Type of Circulation	Restrictions in Vehicular Circulatio	
		Types of transportation	New transportation tools like; Tramways, Cable Cars, etc	
	NEW CONSTRUCTIONS			
	New Buildings Harmonious or Inharmonious With Its Surrounding	Accomodation Units	Hotels	To Provide for Increased Tourism Activities To supply for Increased Housing Demand
			Pensions & Guest Houses	
		Commercial Buildings	Shops	
			Restaurans & Cafes	
		Residential Buildings	High-rise Buildings	
			Building Complexes	
		Tourism Facilities	Museums	
			Visitor Centers	
	PHYSICAL CONDITIONS OF BUILDINGS			
	Traditional & New Buildings	Residential Buildings	Better Physical Conditions	Sufficient Funds of Residents
				Proper Conservation Interventions
		Commercial Buildings	Worse Physical Conditions	Insufficient Funds and Abandonment
				Improper Interventions
		Governmental Buildings	Better Physical Conditions	Sufficient Funds of Government
			Worse Physical Conditions	Insufficient Funds of Government
FUNCTIONAL CHANGES	CHANGES IN OPEN AREAS			
	Types of Open Areas	Public Open Areas	Refunctioning of Public Open Area	To Increase Accessibility and Mobility
			New Public Open Areas	
		Private Open Areas	Refunctioning of Public Open Area	
			New Public Open Areas	
	CHANGES IN BUILDINGS			
	Traditional & New Buildings	Residential Buildings to Commercial Buildings	Hotels Pensions & Guest Houses Shops Restaurans & Cafes	To Provide For Increased Tourism Activities
		Commercial Buildings to Residential Buildings		To Provide for Increased Demand

Table 2. Indicators of change for physical, functional and socio-economic features of heritage places (continued)

SOCIO-ECONOMIC CHANGES	CHANGES IN OCCUPANCY			
	Traditional & New Buildings	Occupied Empty Buildings	Increase in Occupancy	To Provide for Increased Demand
		Emptied Buildings	Decrease in Occupancy	Abandonment Due to Physical Conditions of Buildings
				Abandonment Due to Changing Social Character
	CHANGES IN OWNERSHIP			
	Traditional & New Buildings	Increase in Purchase Rates	Increase in Local Residents	To Provide for Increased Demand
			Increase in Foreign Residents	
	CHANGES IN BUILDING & LAND PRICES			
	Traditional & New Buildings	Increase in Purchase Rates	Increase in Building & Land Prices	Increased Attention to the Heritage Place

CHAPTER 3

A WORLD HERITAGE SITE IN TURKEY: PERGAMON AND ITS MULTI-LAYERED CULTURAL LANDSCAPE

3.1. Topographical, Geological and Climatic Conditions of Bergama

Bergama is a province of İzmir in the western Aegean region of Anatolia. The town is located 105 km north of İzmir on the 39.07 north latitude and 27.12 east longitude. Bergama is surrounded by Ayvalık, Burhaniye and İvrindi provinces of Balıkesir in the north, Soma province of Manisa in the east, and by other provinces of İzmir which are Dikili, Kınık and Aliağa in the east, west and south. According to the Governorship of İzmir, Bergama is the largest province of İzmir with its 1573 km^2 area (İzmir Valiliği cited in Binan, Kaptı, Kıraç & Arıoğlu, 2004).

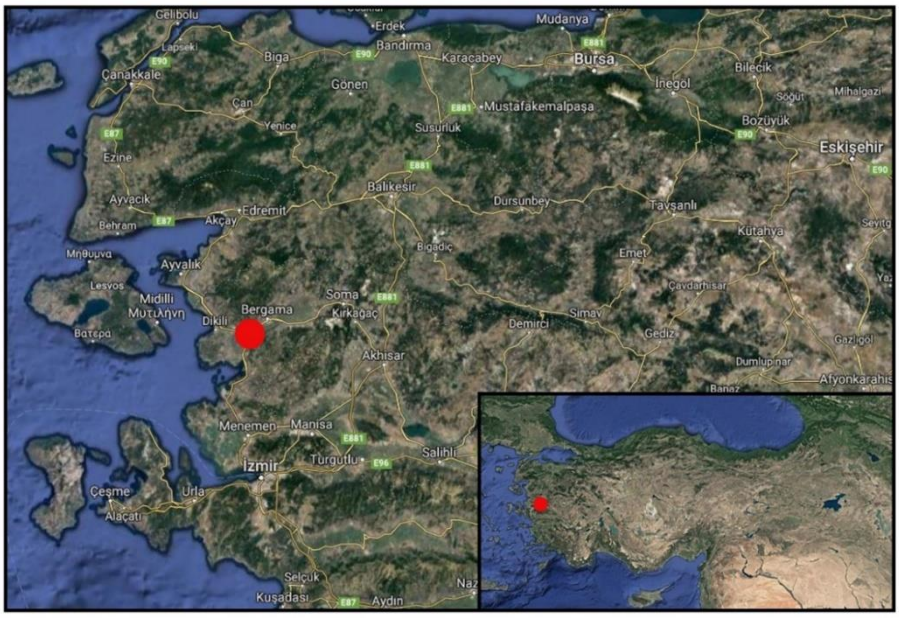


Figure 5. Satellite view of Bergama and its immediate vicinity (Google earth, last accessed on 16.07.2019)

Bergama is located in Bakırçay Plain which is one of the four biggest plains in the region. It is surrounded with Madra Mountain of 1338 m height in north and Yunt Mountain of 1088m height in south. Bakırçay Plain is also a sinkage area and has a fertile land filled with alluvium from Kaikos Creek (Bakırçay) which made this area desirable for many previous settlers since the early ages (Emekli, 2003).

The settlement area of the town is situated between two arms of Kaikos Creek (Bakırçay), Selinus (Bergama Çayı) and Cetius (Kestel Çayı) (Kaya, 2014). Selinus and Cetius Creeks are coming from opposite sides of the Acropolis Hill and both have a role in shaping the settlement area. Where the Selinus Creek divides the town into two parts, the Cetius Creek generate a natural border for the settlement area.

The area has the typical Mediterranean climate with hot-arid summers and warm-rainy winters. The average temperature is 6° C in winter and 26 °C in summer where the temperature difference between day and night is 15 to 20°C (Eriş, 1990). Bergama is in the 1st degree earthquake zone which is called the "Zeytindağ-Bergama Fault Zone" and has active fault lines that flow on the Southwest- Northeast direction (Bilgin, 1996).

3.2. Historical Development of Bergama

As sited before, Bergama is located in Bakırçay Plain, where highly fertile lands made the area suitable for habitation. Detailed archaeological research and excavations conducted in the settlements near Bergama provides finding which date back to Pre-historic ages and it is suggested that, Bergama has been inhabited since very early ages.

In that regard, historical layers of Bergama in terms of main periods can be listed as: Pre-Historic, the Archaic and Classical, Hellenistic, Roman, Byzantine, Principles, Ottoman and Republican periods (Kaya, 2014).

Pre-Historic period, also known as Bronze Age, is dated by scholars between 3000 and 1050 BC. Existence of prehistoric rock settlements, the most important being the Kybele Sanctuary, and tombs in the region together with movable pieces were found in the Acropolis Hill, in the valley and also in other excavations close to Bergama throughout the years. These findings point out that, a certain kind of settlement was established in and around Bergama in Pre-Historic ages (Bilgin, 1996). As most of the archeological finding were movable items, it is not possible to know the exact location of that settlement area.

In the Archaic and Classical Ages (600-330 BC), the name of Pergamon (Bergama) was mentioned in historical texts as a well-guarded citadel. Even traces of this period can be seen in the city walls, inner organization of the city cannot be known with the information in hand (Radt, 1993). There are also evidences of movable archaeological pieces like vases, ceramic and sculptures and traces of an archaic building (Eriş, 1990). These findings show that, Bergama was a settlement area in that time.

In the Hellenistic Period (333-30 BC), independent kingdom of Pergamon was established and the city started to became a center for science and art. The settlement area was confined in city walls and located on a hill, today referred as 'The Kale Hill' looking down to the fertile lands of Bakırçay Plain (Bilgin, 1996). In that time, the city of Bergama was divided into two parts; Acropolis and the settlement area around it. These two parts of the city were separated by strong city walls (Radt, 1993). There are evidences that, the city was surrounded by grave mounds from the 3rd century BC onwards (Pirson, 2014).

With Eumenes II (197-159 BC), Bergama started to live its golden years. In his reign, he aimed to create a new city by extending the settlement area. Within the limits of the topographical features, the city extended down the hill and reached the plain (Bilgin, 1996). One of the most significant buildings of Hellenistic period were situated at the Kale Hill. Such as; Temple of Athena, the Altar of Zeus, the library and the theater. The sacred area of Asclepion was located on the southwest of Kale Hill

and connected to the settlement area with a road passing through the plain (Binan, 2016). There are 5 tumuli, constructed in Hellenistic Period, located in the south and east of the Bakırçay plain.

After the death of Attalos II, the kingdom passed on to Rome and became an important province. Roman period starts by the establishment of Roman Empire in 30 BC and ends in 395 AC. In that time, as a result of new building activities, the city started to have a new form. Excavations done in the Acropolis indicate that buildings represent the Hellenistic era were neglected where the fortress was still an important part of the settlement area (Kaya, 2014).

Temple of Serapion, referred as 'The Red Hall', was constructed in the beginning of 2nd century BC and dedicated to the Egyptian gods. The temple is situated on Hellenistic tunnels which connected the two sides of the Selinos. Without the obstacle of using small bridges, the settlement extended over the river and reached the plain (Bilgin, 1996; Pirson 2014). The new settlement area was designed with a grid patterned street network with the temple of Serapis in the center. Even the settlement area was extended to the plain, edges of the city was not defined by solid boundaries but by buildings and graveyards. Theater, Amphitheater and Musalla Mezarliği limited the city in the west, while Koca Mezarlık at East and the remains of a probable 2nd century AC necropolis at the South (Wulf, 1994).

During the late Roman period two major earthquakes, in 178 and 262, caused gradual collapse in the Acropolis and damaged the infrastructure. This demolition together with the increase in the Christianity caused in loss of attraction to the hill and resulted with its abandonment. The settlement area in the plain became the main center of the city where early Christian basilicas and Red Hall were located. The expansion of the city continued till Asclepion in the West and Tumuli in the South (Wulf, 1994).

The Byzantine Period of is dated between 395 and 1306 AC. In the early Byzantine era, the settlement was mainly focused the plain where construction activities in the

hill were rare (Pirson, 2014). In that time, religious character within the city started to change. Construction of St. John's Church inside the Red Hall was an important example of this change. Religious conflicts together with the plague, reduced the population substantially. When Persian and Arab attacks occurred between 5th and 7th centuries, the city was exposed to these attacks. Therefore, the settlement area in the plain was reduced and withdrawn to the hill within the city walls for protection (Rheidt, 1991). Inside the city walls, reuse of materials from Hellenistic buildings started to damage the remains of this period. This approach was later seen as a reaction to Arab invasions (Pirson, 2014). 12th and 13th centuries were considered as dark ages of Bergama's history. As the result of poor economic conditions, earthquakes and plagues, around that time, burial activities in the acropolis hill were increased intensively (Kaya, 2014).

At the end of 13th century, the city lost its importance to the kingdom and started to transform into a muslim society. This led to the conquest of the city by Karesioğulları Beyliği and started the Principalities Period for Bergama dated between 1306 and 1336 (Kaya, 2014). In that time, a Turkish village was set on the skirts of the hill without damaging any previous cultures. There were only a few structures dated 14th century which were Selçuklu Minaret, Ulucami, Ulucami Bridge and Tabaklar Bath (Özcan, 1990). When the general layout of an Ottoman city is concerned, Ulucami is mostly placed in the center of the settlement. Therefore, the commercial center of 14th century Bergama is considered to be located around the Ulucamii and Tabaklar Bath in the North of the river. Existence of the Tomb structure in the East of Red Hall, suggests the location of the cemetery around that time (Bilgin, 1996).

The Ottoman period of the city starts in 1336 and ends in 1923 with the proclamation of the Turkish Republic. Information about the early Ottoman period is limited as the Principalities period. Concentration of Hans, Bedestens and Mosques generally suggest the location of the commercial center of the Ottoman city. Where these buildings are mostly constructed in the South of the river, it is understood that the

center of the city is shifted into the plain (Özcan, 1990; Binan, Kaptı & Bachmann, 2014a).

In the Late Ottoman period, the settlement area continued to extend towards the South, where the center of the commercial area enlarged in the Northeast direction and reached the Red Hall (Kaya, 2014; Binan, 2016). The map created by G. Texier in 1830, shows the settlement area close to the Red Hall. The traditional pattern of the city has been damaged by natural disasters as, the flood of 1842 and the fire of 1853. The plan generated by Otto Berlet in 1904 is considered the primary document showing the general settlement and limits of the city at the end of the Ottoman Period.

In this period, distinction between Muslims and non-Muslims is seen in the positioning of the quarters. Muslims lived close to the commercial center, where non-Muslims, Christians, Armenians and Jews, settled in the skirts of the hill. Residential buildings constructed in the North of the river are generally dated between 1850 and 1920 (Binan et al., 2014a).

With the Republican period starting in 1923, new settlements in the valley section continued and after 1980's the city expanded extensively through South and Southwest directions. The general tissue of the city is mostly conserved around this time. Some changes in the transportation system and widening of the streets brought by the planning studies had occurred. The settlement around the Red Hall, shown on Otto Berlet's plan in 1904, was demolished between 1932 and 1938. Changes in the physical characteristics of the traditional houses began after 1960's, when reinforced concrete building started to be built by demolishing timber frame structures (Binan et al., 2004).

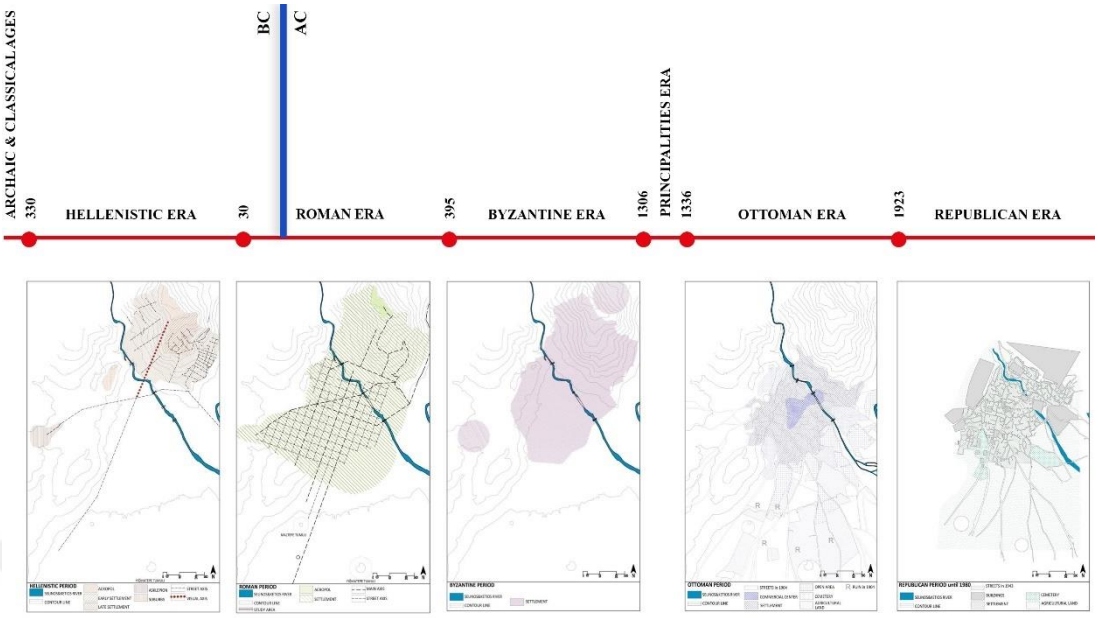


Figure 6. Layout showing the historical development of settlement areas in Bergama (Maps are taken from Kaya 2014, p.97)

With the declaration of Bergama as an antique city in 1973 and the site boundaries are drawn, parts of the city left outside of the boundaries and opened to development. Even with the changes in site boundaries over the years, damage to the urban tissue continued until the site was declared as 'urban archaeological site' in 2002. With the restrictions on the archaeological and urban sites in Bergama, development of the settlement area is expanded still expanding in South and Southwest directions.

3.3. Planning and Conservation Activities in Bergama

Bergama is considered one of the pioneering cities in Anatolia with respect to conservation and planning activities with a long-term legislative, institutional and social background starting with the foundation of the Republic of Turkey in 1923 (Bilgin, 2014b).

The first master plan for Bergama was prepared between 1943 and 1948 in order to assist other master plan studies, provide information about the physical conditions and

conservation approach of Bergama. In this plan, conservation approach was limited on the monumental buildings by identifying periods of buildings but also propose protection zones. The plan also proposes future investigations on conserving the character of Bergama buildings together with present and future developments (Kaya, 2014). This plan is therefore important for attempting to balance the present city with the old.

Later in 1969, Bergama and its surrounding were declared as 'Historical National Park' by Ministry of Forests and 'Pergamon Historical National Park Master Plan for Protection and Use' was prepared with the cooperation with USA National Park Services. The aim of the plan was to direct development and management of Antique Bergama, as a national park (Kaya, 2014). This plan is aimed to conserve the historical and archaeological properties of Bergama. This project also accepted the Venice Charter and UNESCO Recommendation in 1956 as main guides for implementations and defined three zones having different conservation status (Ministry of Forestry, 1972). Therefore, it can be considered an attempt for integrated conservation and management of a cultural site together with the living urban heritage and its natural context (Bilgin, 2014b).

After the concept of 'site' was entered in to the law definitions of Turkey in 1973[6], Bergama was registered as an 'antique city' according to the 77th decision of the GEEAYK[7] (Kaya, 2014). With this decision, the boundaries of the site were generated consisting nearly the whole city therefore, causing future problems for development projects. Increase in the new demand for buildings, insufficient technical and economic conditions together with the lack of specialist created weakness in control mechanisms. That led to destructions for the tissue, mainly in the city center and its surroundings thus Bergama Museum and Municipality requested the revision of site boundaries (Bilgin, 1996).

[6] The term 'site' was identified in 06.11.1973 of Ancient Monuments Law numbered 1710.
[7] Gayrimenkul Eski Eserler ve Anıtlar Yüksek Kurulu.

The archaeological and urban site of Bergama was registered in the 4602th decision of the Committee of Ancient Real Estates and Monuments in 9.9.1983. Later in 1984, according to the Law No:2863, registered by the High Council for the Conservation of Immobile Cultural and Natural Assets (Kaya, 2014; Binan et al., 2004). Then, again in 1984, the boundaries and degrees of the site were reassessed. New identified boundaries generated important outcomes in the conservation activities in Bergama (Bilgin, 1996). With these new boundaries, some parts of the urban site were excluded and opened to development causing damage in the traditional tissue of the city.

In 1988, Revision Master Plan was prepared for areas which had been taken out of the urban site area. According to this plan, three main zones were defined as; areas where constructions are not permitted, existing and developing areas and agricultural areas. However, urban and archaeological sites were not taken into consideration when these zones were identified which led to high-rise constructions and caused destructions in the areas excluded from conservation (Kaya, 2014).

In 1990, with the acceptance of the proposal regarding re-degree the existing site and addition of new sites, the central urban site was defined as 'Urban Site and 3rd Degree Archaeological Site' by the conservation council (Bilgin, 1996). Preservation and conservation plan of 1991 was then prepared to eliminate the destructions of 1988 Revision Plan. This plan aimed to conserve environmental, urban and archaeological values of the site and try to improve them by integrating conservation concerns. Revisions on this project were applied and definitions such as 'excavation areas' and 'Special Project Areas' were emerged between 1991 to1995 (Kaya, 2014).

Revisions on the site boundaries were generated each year between 1991 to 1996 and again in 2002 by Cultural and Natural Heritage Conservation Council (Kaya, 2014). Later, the site was declared as 'Urban Archaeological Site' with by İzmir District Number 2 Cultural and Natural Heritage Conservation Council in 2001, together with transition period development decisions that were valid until the approval of conservation and development plan. According to this decision, the sites in Bergama

are defined as; Urban Archaeological Site, 1st, 2nd and 3rd Degree Archaeological Sites (Kaya, 2014). In 2004, enlargement of Urban Archaeological Site and declaration of 2nd and 3rd degree Archaeological Sites as Urban and 3rd Degree Archaeological Site was approved (Binan et al., 2004).

Conservation and Development Plan in 2006 was prepared by KUDEP[8] for only 3rd Degree Archaeological Site but did not function as planned. So, later in 2012, Conservation Plan for Bergama was prepared by a private company in Izmir, Ege Planlama, and accepted by İzmir District Number 2 Cultural Heritage Conservation Council in 08.06.2012 (Kaya, 2014).

In April 15, 2011, Bergama entered to the UNESCO's Tentative List under the name of 'Pergamon and its Multi-layered Cultural Landscape'. In December 2011, UNESCO World Heritage and Management Unit was established under the Municipality of Bergama. Preparation of nomination documents were handled by this unit and finalized in September 2012. After the document is sent and investigated by the Advisory Bodies and by the Committee, 'Pergamon and its Multi-layered Cultural Landscape' entered the World Heritage List in June 22, 2014 as the 999th World Heritage Site.

[8] KUDEB refers to "Koruma Uygulama Denetim Bürosu"

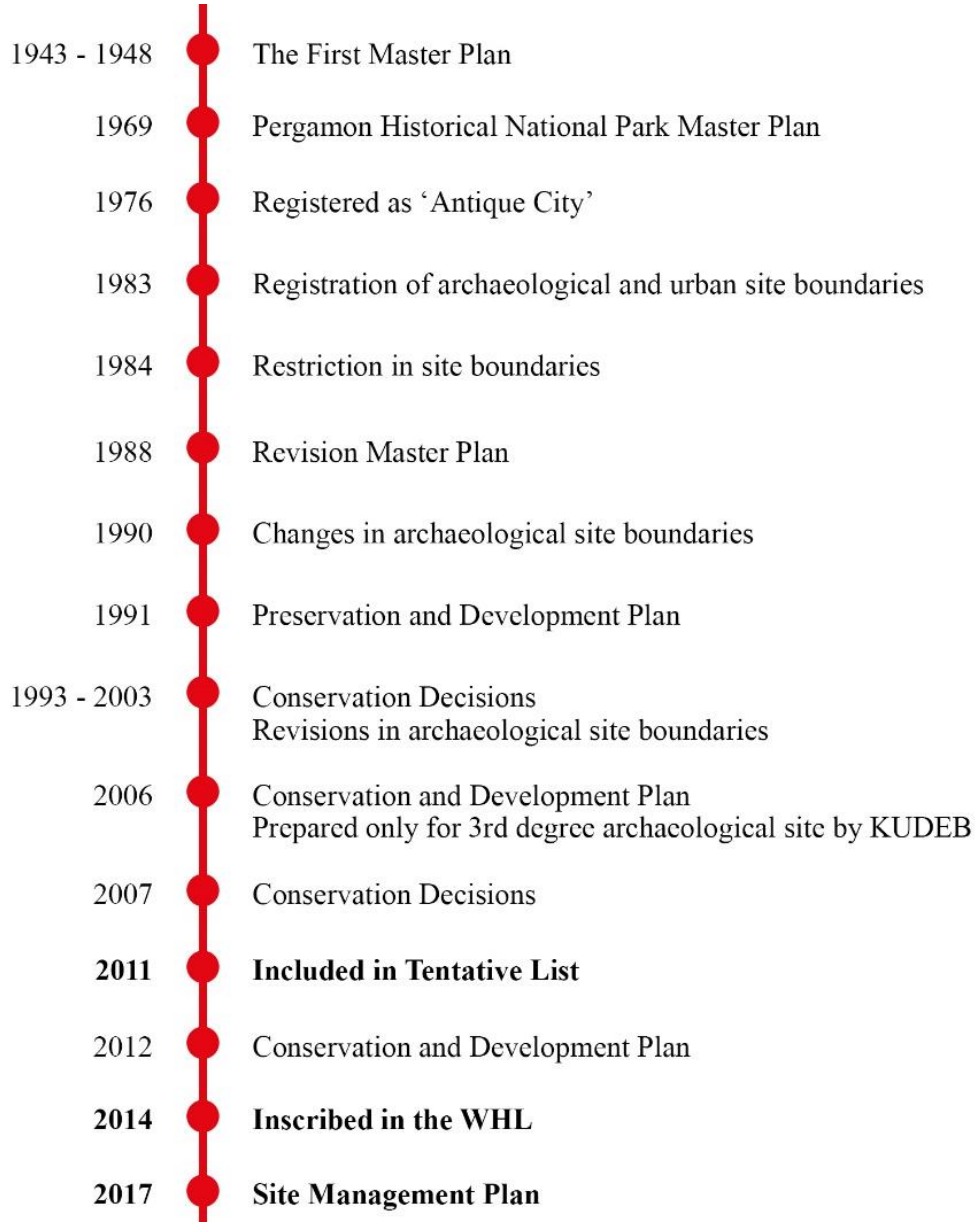


Figure 7. Chronological list of conservation and development studies in Bergama

3.4. Bergama as a UNESCO World Heritage Site

Out of the 1121 heritage places inscribed on the World Heritage List today, 18 of these heritage sites are located in Turkey. 16 heritage places are inscribed under the of criteria cultural heritage where 2 are mixed heritage sites.

Amongst most of the other heritage places in Turkey, 'Pergamon and its Multi-Layered Landscape' strikes out for its inscription as a cultural landscape by meeting 5 out of 6 criteria described for Outstanding Universal Value. The heritage place also meets the criteria for both integrity and authenticity.

Bergama has been inhabited by different civilizations through centuries, having different religious beliefs, socio-economic conditions and cultural significance. Each civilization inhabited Bergama, left traces of their physical and cultural properties that co-exist together until today.

Where Bergama being the capital of Attalid Dynasty, represents the characteristics of a classical Hellenistic city. Under the rule of Roman Empire, Byzantine Empire, Turkish Principalities, Ottoman Empire and Republican Period, some parts of the Hellenistic city were lost, reused and altered with interior and exterior effects of changing way of life. Addition of new monuments, buildings and other properties led to the creation of the cultural identity of Bergama today.

3.4.1. The Criteria of Inscription

Bergama, consists of 1st Degree, 2nd Degree and 3rd Degree Archaeological Sites as well as Urban sites. The nomination of Bergama possesses 1/3 of the town including all the degrees of archaeological sites and the urban site (WHL Nomination Dossier, 2014). The nomination was done for a total of nine sites including the city of Pergamon in its multi-layered context, Kybele Sanctuary and 7 tumuli situated through the heritage site.

Values of these nine different sites and their unity is considered alongside the multi-layered structure of the city and the site was nominated as a cultural landscape.

Considering that the term 'Cultural Landscape' is described in the Operational Guidelines (WHC, 2017, p.19, par.47) as; *sites showing the evolution of civilizations and settlements through time*. And Bergama shows the general characteristics of this category.

In the nomination document (WHL Nomination Dossier, 2014), identified sites and their buffer zones are considered as a whole in representing the OUV, integrity and authenticity of Bergama (SMP, 2016). As described in prior chapter, the main objective for a heritage site to be listed in WHL is to have OUV. And for cultural heritage sites, they must meet at least one of the six criteria described in the list. Pergamon and its Multi-Layered Landscape is nominated under the criteria of *(i), (ii), (iii), (iv), and (vi)*. Bergama also meets the conditions of both integrity and authenticity[9].

For the justification of OUV, Bergama was firstly investigated under the criterion (i) which focused on existence of masterpieces in the nominated site. As the site possesses unique masterpieces of Hellenistic and Roman Periods, this criterion is considered relevant. In the criterion (ii), examples seen in the site on the major developments of Hellenistic Period was described. As this criterion also referred to the interchange of values over time, the multi-layered texture of the city is considered highly relevant. Where the criterion (iii) demands that nominated sites has to show the unique characteristics of at least one civilization or a cultural tradition, Bergama being inhabited for different civilizations over the time showing the cultural characteristics of nearly all of these civilizations, is highly qualified for this criterion. Existence of outstanding architectural masterpieces in the site from both Hellenistic and Roman Periods makes the criterion (iv) relevant. Finally, for the criterion (v), Red Hall was given as an outstanding example of continuity in belief as it is constantly used by people from different religions over the years. Invention of Parchment in Hellenistic

[9] A detailed information about the criteria of OUV, integrity and authenticity of Bergama was given in the WHL Nomination Dossier, 2014, p. 4-5. These values were summarized and described throughout this part of the chapter.

Period and the continuity of its production today was also mentioned for this criterion (WHL Nomination Dossier, 2014).

Even a heritage property meets one of the criteria of OUV, it still needs to have integrity in order to be nominated. Integrity of Bergama comes mainly from the existence of elements representing the features of Hellenistic and Roman Periods within a multi-layered context. All the cultural layers of the city can be clearly seen today, such as; large terraces on Kale Hill, Asclepion, Red Hall, tumuli, ancient bridges constructed over the river and monumental buildings of that period, whether in use today or not.

The authenticity of the property comes mainly from being the only remaining example of Hellenistic Capital today. As Kale Hill is the main settlement area of the Hellenistic city and has not been inhabited after Antiquity, represents the integrity of archeological areas in Bergama. The Amphitheatre and Roman theatre located outside the settlement area, preserves their integrity as buried archaeology.

Where some of the significant buildings representing the characteristics of their periods are in use today, they also preserved their integrity over the years. Red Hall is considered an important example of both integrity and authenticity. The structure is considered authentic because of its significant design, dimension and materials that shows the Hellenistic construction techniques. With the tunnels under the building is still in use today, the building preserves its integrity (WHL Nomination Dossier, 2014).

3.4.2. The Process of Inscription

The process of WHL inscription for Bergama[10] started in 2010. With the studied conducted by the Municipality of Bergama and the Ministry of Culture and Tourism,

[10] The process of inscription into the WHL for 'Pergamon and its Multi -Layered Cultural Landscape' is described by collected data from interviews conducted with the officers in both Municipality of Bergama and UNESCO World Heritage and Management Unit.

general characteristics and importance of the site was identified and the boundaries of the heritage property was described in a report that was later sent to the WHC. After the investigation of this report by the Committee, Bergama was inscribed on the Tentative List in April 15, 2011 under the name of 'Pergamon and its Multi-layered Cultural Landscape'.

After this inscription, UNESCO World Heritage and Management Unit was established under the Municipality of Bergama in December 2011. This unit, together with local and governmental authorities, non-governmental organizations and other voluntary participants, started the prepare nomination documents for WHL inscription process.

During this period, a number of scientific meetings and conferences were held to lay out the necessary steps for the inscription process. Also, a comprehensive literature survey was conducted including national and international publications, papers maps and photographs in order to fully investigate the OUV of the property. In the light of these studies, a draft nomination dossier was sent to the WHC in September 2012 for investigation.

World Heritage Center investigated the draft and requested more detailed maps and images in order to fully identify the OUV. Therefore, the data were re-evaluated under the requested titles with the cooperation by Ministry of Culture and Tourism. The finalized nomination document was then sent to the World Heritage Center in January 31, 2013 by the Ministry of Foreign Affairs.

Between 23 and 27 of September 2013, an ICOMOS technical evaluation mission visited the property and investigated the contents of the nomination dossier on site. After their visit, ICOMOS prepared a report on the evaluation of the site in March 6, 2014. In this report, ICOMOS suggests that, except for Hellenistic and Roman remains, significance of other layers in the city (Byzantine and Ottoman layers) were not properly justified. And thus, the nomination must be limited with the properties of

Hellenistic and Roman remains of the city. ICOMOS created a Recommendation Report, containing these suggestions, to the Committee to be evaluate in the context of the nomination process of the property.

After the issues of this report were addressed together with Municipality of Bergama and Ministry of Culture and Tourism, it is decided to set against the suggestions of ICOMOS on limiting the nomination area. This decision was later approved in the meeting conducted with UNESCO National Commission of Turkey, Permanent Representation of Turkey to UNESCO and academicians in May 2014. Notions about this decision and their reasons were sent to 20 other State Parties included in the World Heritage Committee by the Permanent Representation of Turkey to UNESCO. In the 38th session of the World Heritage Committee, held in Qatar, Doha between 15 and 25 of June 2014, objections to the prepared ICOMOS report were found fitting and resulted in the inscription of 'Pergamon and its Multi-Layered Landscape' in the World Heritage List in 22 of June 2014.

It should also be noted that, Bergama is one of the few heritage places in the WHL that the inscription process is rapidly handled by the State Party. The inscription of Bergama lasted 3 years, within the minimum period authorized by the Convention.

3.4.3. Process After the Inscription

After the WHL inscription, State Party responsible for the heritage place should generate SoC reports each year or every two years and depending on the request of the Committee, or before conducting substantial projects in the site that could damage the OUV, and send them to the WHC.

Two SoC reports were generated by the local authorities on the state of the heritage property in 2015 and 2017. These reports concentrated on the progress of requested applications identified by the Committee during and after the inscription of the heritage place.

Committee requested that some necessary steps must be taken in order to preserve the OUV. These steps can be described as; preparation of a management plan, improvement of monitoring systems, restriction of vehicles to Acropolis, preparation and implementation of Selinos Brook Amelioration Project and determination of new height limits for the buildings in the heritage place and around tumuli. Process and condition of each step is investigated and summarized below.

Management Plan Preparation:

During the nomination process, Bergama did not have a management plan concentrated on preserving the values of the heritage place. As the existence of a management plan is considered substantial for the inscription of a heritage place, Committee requested that the preparations should be finalized rapidly.

After the inscription, management plan preparation process has inclined. In that process, meetings with different public institutions, organizations and NGOs were conducted on the issues concerning necessary action plans and the management plan was prepared in 2015. But in 2017, with the amendment of the law in 2016, responsible parties in preparing management plans for heritage places in Turkey were redefined and the approval process has extended. After newly created Advisory Body and other authorized departments investigated the prepared plan, it was presented to the Coordination-Supervision Board for approval. On November 23, 2017, Site Management Plan of Pergamon and its Multi-layered Cultural Landscape was approved.

In the context of this plan, tangible and intangible values of heritage place were described and prepared action plans to preserve these values were identified. This plan is considered the main source of information on the current and imminent interventions regarding the heritage place.

Improvement of Monitoring Systems:

The Committee requested detailed information about the organizations responsible for monitoring each indicator and also inclusion of seismic monitoring systems for the heritage place.

Upon this request, State Party submitted a list to the Committee on which organization is responsible for monitoring which indicator. On seismic monitoring, Ministry of Culture and Tourism stated that, Prime Ministry Disaster and Emergency Management Authority is responsible for seismic monitoring of the site and studies were handled by the Boğaziçi University Kandilli Observatory and Earthquake Research Institute. A collaborated study on preservation of heritage properties from the effects of seismic waves is aimed to be started in the first half of 2016.

Restriction of Vehicles to the Acropolis:

The main road leading to Acropolis is situated close to archaeological remains and the traditional settlement. High density vehicular transportation in this road endangers the physical conditions and integrity of these remains by vibrations and exhaust gas generated by busses and automobiles. For that reason, the Committee requested that all vehicle transportation to Acropolis must be restricted except for emergencies.

With the construction of cable car system in 2010, access to the Acropolis by the use of vehicles were restricted. But after the establishment of this system, accidents occurred due to the adverse climatic conditions in the region. Therefore, total restriction of vehicles to Acropolis was not possible without generating required action plans to use shuttle busses for transportation.

After the necessary investigations done on the use of shuttle systems, it became clear that any type of shuttles is not suitable to be used on the steep slope road leading to Acropolis. Therefore, automobiles are still permitted to enter the site today, but the main transportation to Acropol is obtained by the use of cable car.

Selinos Brook Amelioration Project:

As of 2015, the Selinos Brook Amelioration Project was finalized by the Municipality of Bergama and approved by the Regional Conservation Council. The Committee requested the submission of the finalized project, together with conducted site surveys and prepared Heritage Impact Assessment Report. The Committee especially desires the Advisory Body to review this project and assess its potential impacts on the OUV of the heritage place. Upon the approval of the project, Heritage Impact Assessment Report was prepared and sent to the Committee in 2017.

Due to the changes in the legislation, Municipality of İzmir was appointed responsible for the administration of these types of projects. Therefore, IZSU (General Directorate of Water and Sewerage Administration of İzmir) is handling the funding and implementation of this project today.

New Height Limits in the Site and Around Tumuli:

Building in the center of the city are generally one to three storesy high and heights of new construction were controlled as the result of conservation policies until 1973. But due to changes in the boarders of archaeological sites in 1984, some heritage properties were included in the development areas of the city. This change caused the new buildings of 4 to 5 storey high to be constructed near heritage properties. Especially in the new development areas around the tumuli, building height disrupts the visual connection between the city and Acropol. For preserving this visual connection, the committee requested that expropriations must be done regarding the buildings around tumuli.

Studies on new building height regulations that will preserve the visual connection were finalized by the Municipality of Bergama and sent to the Committee in 2015.

3.5. Bergama Today

Anatolia, due to its location and geographical features, was constantly inhabited by different civilizations having different cultural and social structures. These different settlements are mostly constructed with relation to each other or sometimes on top of each other by creating constituting layers (Bilgin, 2014a). Bergama is a multi-layered Anatolian town consisting of historical layers from the Hellenistic, Roman, Byzantine, Karesi Principality, Ottoman and Turkish Republic Periods. In the case of Bergama, it is possible to observe the physical and cultural reflections of these different eras in the historical continuity of the urban environment today (Binan, 2016).

Figure 8. View of the urban settlement from Acropolis (taken by the author in 2008)

Bergama has 137 quarters in total with 18 within the center of the town. According to TUIK (Turkish Statistical Institute), population of Bergama today is 103.185 with 51.920 men and 51.265 women. Where Bergama is the largest province of İzmir, nearly half of the population is living in the center of the town.

Selinos (Bakırçay) running through the city, divides the settlement of Bergama into two. Urban settlement generates from the Acropolis hill, where there is no settlement today, spreads out to Selinos and to the surroundings of Ulu Camii where it reaches the plain. The settlement area of the city in Roman Period overlaps with the settlement in Ottoman and Republican periods in traditional historical market and traces of each period can be seen on monumental buildings, traditional houses, open public spaces and also in the pattern of streets (Bilgin 2014a). These areas, where the multi-layered character of the city can be observed, is located in both sides of the Selinos river. Beyond the center, the settlement in Bergama continues to the south, and into the Bakırçay plain where the new settlement areas are situated. The city still expands in this direction and new modern buildings are constantly being constructed. Most of the people in the center of the town is living in these new settlement areas.

The main entrance to the city is through the Southwest of Atatürk Boulevard and connects the town to İzmir. This boulevard reaches the Cumhuriyet Street around the Bergama Culture Center and continues in the Northeast direction until it reaches Cumhuriyet Square. The location and direction of this road lines up with the probable main street of the Roman City and shows that the street pattern of that period is still partially legible (Bilgin 2014a). Bankalar Street starts from Cumhuriyet Square and goes through the Ottoman settlement where it reaches İstiklal Square. These streets together form the main axis of transportation in Bergama today.

Commercial center of Ottoman city ‘Arasta’ is located on the south of the river and situated on the West of Bankalar Street. Arasta is still used as the main commercial area of the city. With resent conservation projects, traditional fabric of the area is preserved. Monumental buildings of Ottoman Period are commonly located in each side of Bankalar street and today they are mostly conserved and refunctioned for governmental purposes. Mosques located on Bankalar Street are conserved and currently used. There are also ongoing conservation projects for other monumental and residential buildings located within Arasta and other quarters.

Traditional buildings, originally inhabited by Muslims, are mostly situated on the South of the river and located around the commercial center. These houses reflect the general characteristics of Anatolian houses. They are mostly one or two storeyed timber buildings with masonry walls surrounded from three sides. Entrance to these buildings are generally through courtyards or gardens and has no relations with street. These buildings generally have an open *sofa* or *hayat*, consists of mostly two rooms and their service like toilet, kitchen and stables are located on the garden or courtyard. As the settlement in the south of the river is located close to the new development areas, traditional buildings in this area are mostly replaced with new buildings through the years. When the remaining buildings is analyzed, it is seen that most of these buildings are unoccupied and in poor physical conditions today (Binan, Kaptı, Kıraç & Töre, 2007).

The settlement area in the north of the Selinos river was mostly occupied by Greeks, Armenians, and Jewish people in the Ottoman Period and commonly called as 'Rum' quarter by the people in Bergama. Most of the buildings in this area was constructed between 19th and early 20th century (Binan et al., 2004). Upon their construction, foundations and vaults remaining from the Hellenistic city were used. This area reflects the characteristics of multi-layered settlement in Bergama by Ottoman and Republican buildings constructed over the Hellenistic settlement. Physical features of different periods can still be seen today in open areas and buildings.

The construction system of these traditional buildings is mostly stone and brick masonry with timber floors and ceilings. There are also examples of buildings having stone and brick masonry basements and timber frame upper floors. Nearly all traditional buildings in this part of the town are situated within a courtyard with different types of building and building lot relationships. Use of building materials derived from ancient structures, is a common feature in of these buildings. In most cases, walls are assembled by stone blocks and bricks struck from ancient buildings and decorative ancient pieces are used in the exterior walls in order to create attraction.

Use of stone and brick in different numbers and orders on both street facades and side walls of the traditional buildings creates an aesthetic view for the street facades. For other traditional buildings, the facade is ornamented by the use of plaster sills, geometric motifs, belt coarse and wall textures creating a rich facade organization (METU, 2008).

Traditional fabric of this area seems to be less damaged than the South. As new constructions in this area is not permitted, buildings generally preserved their original forms and functions. The pattern of streets is also mostly preserved and there are still remains of Hellenistic period street coverings in areas close to Acropolis.

Bergama has been an important center for agriculture for centuries where it is surrounded by fertile lands of Bakırçay plain (Emekli, 2001). Cultivation areas of Bergama is eligible for agriculture as the result of rivers running through the plain, alluvial soil and Mediterranean climate of the region. Main agricultural products are; cotton, tobacco, tomato, olive corn and wheat (BAR, 2018). According to the statistics of 2018, 40% of the population is engaged in agriculture as their main occupation where 20% is indirectly deals with agriculture (BMPP, 2018).

Forestry is also an important source of income for the people of Bergama where 25% of the population resided in forest lands (BMPP, 2018). Especially in Kozak Plateau, the specific soil, climate and water structure enables the cultivation of pine trees which create the only natural pine nut forests in Turkey today. There are 13 private and 1 governmental facility in the region that processes pine nuts and most of the products are exported. There are also a great number of olive groves in Bergama and production of table olive and olive oil is important for the inhabitants' economic profit (SMP, 2016).

Production of livestock such as; cattle, sheep and hair goat generate valuable income to the town's economy. Also, products of livestock are processed in establishments in the town which creates job opportunities for the locals. Wools of sheep are used for

weaving, milk of goats and sheep are used to make cheese and the skins of goats are used for the production of leather and parchment (SMP, 2016).

Where agriculture is considered as the backbone of Bergama's economy, after the establishment of 1st and 2nd Organized Industrial Sites in 1997 industrial activities are increased in the center of the town. Today, there are 380 businesses in the site focused on production and repair of agricultural implement and equipment but rate of industrial production is still low. With the establishment of a new factory in 2017, which produces wind turbine equipment, new job fields were created for locals (BMPP, 2018). Bergama also has granite, perlite and gold mines, mostly located in the Kozak district. There are 24 stone quarries in Kozak and 1 granite factory in the organized industrial site (BAR, 2018).

Where Bergama is a town that possesses different civilizations and cultures within its physical and social character, cultural activities also has an important part in Bergama's history. Some of these activities still exist and considered as the intangible values of Bergama. Traditional Bergama Fair is the primary social gathering in Bergama that continues since 1937 and considered as the first and uninterrupted fair in Turkey. As part of this fair, theater performances, concerts and other artistic activities were held in Asclepion and in town squares, conferences on art, science, tourism and other cultural and social topics were also conducted each year (SMP, 2016).

Bergama has great potential for economic growth. Most of the values of the town is not well used due to the lack of funding and proper development project. For example, Bergama has a great amount of ground water reservoir which was used for healing purposes in Asclepion. So, the town has a potential for establishing thermal spring facilities (Erköse, 2010). Also, due to the climatic conditions of the region, Bergama and its surrounding districts are eligible for producing renewal wind energy (BAR, 2017).

Cultural tourism is another important aspect for town's economy. Main attraction points for visitors in Bergama are; Acropolis, Asclepion, Red Hall and Bergama Museum. Today these areas hold the 18% of the total number of visitors coming to Izmir. But there are a great number of archaeological areas in and around Bergama which are not excavated and opened for visitation.

Table 3. Number and percentage of visitors for Bergama in 2018 (TUIK)

	Number of Visitors in 2018	**% of Visitors in 2018**
Bergama	**290.620**	**18%**
Other Districts of Izmir	1.295.599	82%
Total	1.586.219	100%

3.6. Visions and Projects for the Future of Bergama

Inscription in the WHL is merely the beginning of the process in preserving the cultural values of a heritage place. New development projects and conservation activities after the inscription must be well planned and monitored without damaging the values that granted the inscription. To do so, investigating and understanding the vision of the authorities and institutions' responsible for conducting conservation activities in heritage places are crucial.

For understanding the vision of the local authorities, governmental and other institutions for the future of Bergama, literature survey on former projects in the area, archival data collected from the municipality, interviews conducted by the municipality personnel and other locals were used together with the newspaper articles and other written documents. On that context, first the governmental agencies responsible for preparing, financing, and implementing development and conservation projects for Bergama is investigated and listed.

According to this analysis, conservation studies for monumental and traditional buildings owned by the government are funded by the Special Provincial Directorate of Administration, which is under the charge of Governorate of Izmir. Izmir General

Directorate of Foundations are responsible for preparing and funding conservation activities for monumental or traditional buildings in Bergama owned by the Directorate of General Foundations. Municipality of Bergama and the Directorate of Zoning and Urban Planning is also in charge of preparing town and building scale conservation and development projects and in some cases subcontract other institutions. Apart from the activities of the governmental institutions, some private foundations and universities also generated inventory studies, conferences, workshops and projects to help preserve the cultural values of Bergama.

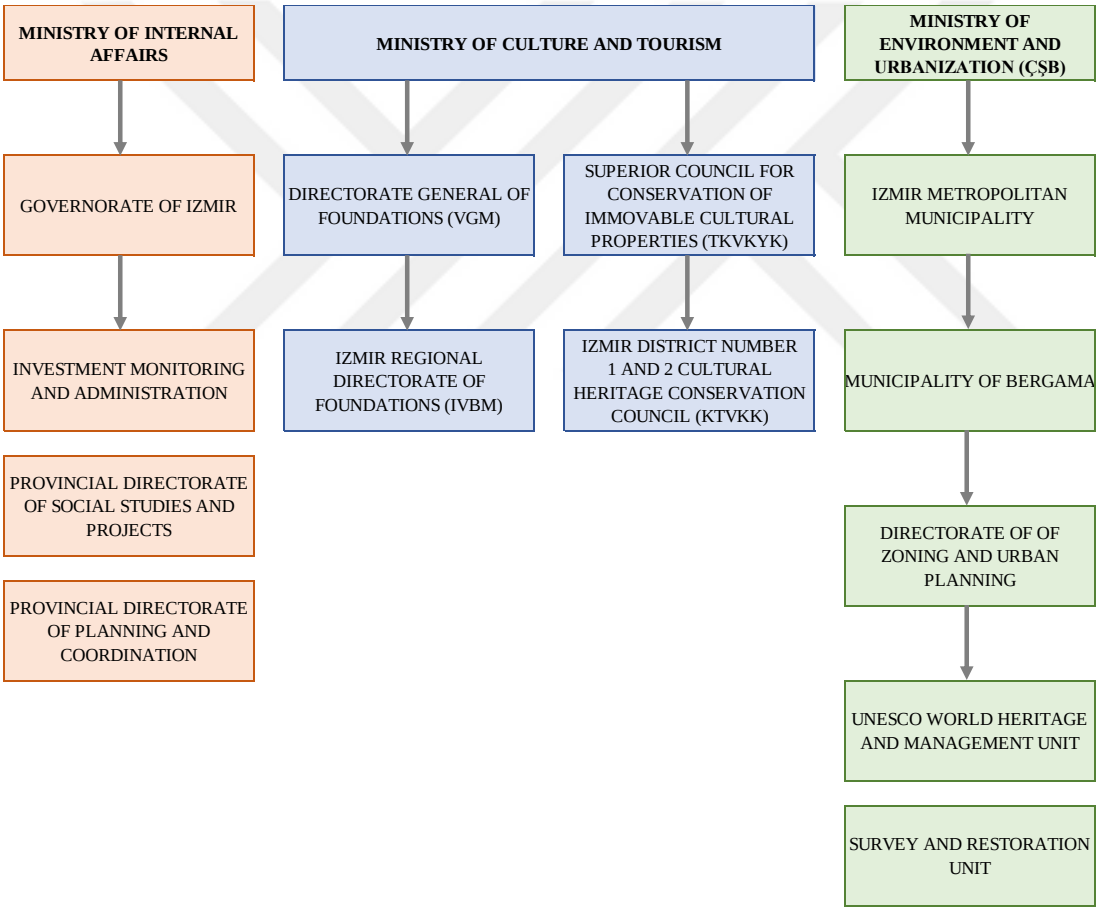


Figure 9. The schema of authorities responsible for preparing, financing, and implementing development and conservation projects for Bergama

There are several projects planned by the Municipality of Bergama and Ministry of Culture and Tourism that focused on preserving the cultural values of Bergama. Some of these projects were concentrated on the physical features of Bergama and some were on the social character of the locals.

Most of the projects concerning the physical character of Bergama was planned by the Municipality which started even before the inscription. These projects can be listed as; Selinos Brook Amelioration Project, establishing a Parchment Museum, construction of cable car, construction of new cultural center, restorations on traditional commercial, educational and residential buildings, some restrictions in vehicle circulation and changes in the development plan.

Selinos Brook Amelioration Project is one of the important projects planned for Bergama, by a private company selected by the municipality, that can affect the physical and social character of the town. Preparation of this project began before the inscription and concluded in 2015. This project includes; rehabilitation of the river bed, restoration of the bridges and Hellenistic vaults over the Selinos and traditional buildings in both sides of the river. It also proposes new recreational areas near the river band. As this area generates visual pollution and safety problems for the locals, implementation of this project could help to initiate new projects for the surrounding of the project area. But due to the changes in the legal legislations, all the responsibility of the municipality on the implementation of this project was transferred to IZSU in 2014. According to the municipality personnel Fatih Kurunaz, the project is still on hold and waiting on necessary funding.

Municipality also desires to establish new museums and other touristic facilities that can increase the national and international attraction of Bergama. For that reason, a restoration project was prepared for the abandoned Tabakhane buildings located near Selinos to be refunctioned as a parchment museum. As parchment was manufactured in Bergama during the reign of Eumenes II and considered a breakthrough in the ancient times, it holds an important part in the town’s cultural heritage. Therefore,

creating a museum to display these artefacts helps to preserve this craft for future generations and increase the local community's interest on their disappearing cultural values.

This restoration project was finalized and the needed expropriations for the lots and buildings together with the budget studies were done in 2017. According to Fatih Kurunaz, Special Provincial Directorate of Administration also approved to fund 60% of the required amount for restoration of buildings and other new constructions. He also stated that, there were five bidders in the prepared tender but none of them could finance the project. So, implementation of this project is still on hold.

Another significant project actualized by the municipality was the construction of a new cultural center located on Cumhuriyet Caddesi, the main road passing through Bergama. This project was created in 2013 and included a theatre, a cinema and a library together with numerous shops and cafés. Construction was finalized in 2016 and according to the locals, became a meeting area and a social center for the people of Bergama. There are other cultural facilities like, libraries or educational centers established by the municipality after the inscription.

Construction of the cable car system was also an important project for Bergama. This project was initially proposed within the Historical National Park project in 1969 for decreasing the vehicle circulation for the surrounding areas of Acropol. It was important for preserving these areas from the negative effects of dense traffic like, vibrations and pollution. The project was finalized after nearly forty years and the cable car was constructed in 2010.

After its construction, vehicle access to the Acropol was limited. But the municipality also recommended the use of shuttle busses in adverse weather conditions when the cable car could not be safely used. Municipality's approach to the restriction of vehicles to Acropol is positive but due to the steep roads of Bergama and intense windswept in the region, it is not still well implemented.

Documenting current conditions of traditional buildings provide useful data for future restoration projects. In order to create an inventory of all the physical features of traditional Bergama houses, students of MSGSÜ[11], YTÜ[12] and DEÜ[13] generated field studies to create measured drawings and restoration projects for traditional residential buildings. With the collaboration of TÜBA[14] and MSGSÜ, an inventory of traditional buildings of Bergama was created containing 1.501 buildings (Binan, 2016). There were three articles published from this study in between 2004 and 2006. But, due to the changes in administration and financial difficulties of TÜBA, this collaboration was terminated and the current studies on creating this inventory is continued by the academicians and students of the Graduate Program in Conservation at MSGSÜ.

There were also numerous restoration projects prepared by the Municipality of Bergama and Izmir General Directorate of Foundations on traditional buildings. The most significant one was the rehabilitation of several streets by the municipality in and around the commercial center. Other restoration projects prepared for traditional buildings owned by the municipality were also restored after the inscription. Also, a number of expropriations done for private lots containing traditional buildings that were damaged or under the risk of collapse which were generated by the municipality in the attempt to preserve these cultural properties.

Izmir General Directorate of Foundations restored most of the monumental buildings in their possession and still generating new conservation projects. But there are still some monumental buildings which are at risk of disappearing, most significant being the Tabaklar Bath located near the Selinos River. As this building is situated within the limits of the Selinos Brook Amelioration Project, uncertain agenda of this project is putting Tabaklar Bath and other traditional buildings within the project at risk of irreversible damage.

[11] MSGSÜ refers to Mimar Sinan University of Fine Arts
[12] YTÜ refers to Yıldız Technical University
[13] DEÜ refers to Dokuz Eylül University
[14] TÜBA refers to Turkish Academy of Science

Another project created for Bergama was the construction of a Visitor Reception Center for informing the locals and visitors on the cultural values of the town. Construction of this center was initially proposed within the Historical National Park project in 1969 and planned to be located on the empty land between the Red Hall and the abandoned Tabakhane buildings. Where the location of this center is outside the jurisdiction of the municipality, Ministry of Culture and Tourism created a new project in relation with the newly planned Archaeology and Ethnography Museum. Both of these projects were still not implemented.

Where Bergama is located in the earthquake zone and there were numerous floods in the region history, a disaster management plan was desired to be manufactured by the municipality. In that attempt, two events were generated in February 14 and 15, 2019 named "World Heritage and Disaster Risk Reduction". These events were carried out by the architects and anthropologists from four Japanese University and participants from the Directorate of Bergama Museum, Izmir Metropolitan Municipality Fire Department, AFAD[15] with other relevant personnel from both municipalities. In the process of this event, interviews with locals were conducted to investigate residents' understanding on the heritage values and ways to preserve these values under the pressure of imminent disaster.

Municipality also conducted changes in development plan to preserve the visual link between the tumulus and Acropol. In that context, new height limits for buildings surrounding the tumuli were assigned and new buildings in the area were constructed by those limitations. Municipality also carried out studies for unregistered traditional buildings by preparing measured drawings and restoration projects. With the help of Survey and Restoration Unit of the municipality and the restoration projects created

[15] AFAD: Disaster and Emergency Management Presidency of the Ministry of Internal Affairs. It is an institution working to prevent disasters and minimize disaster-related damages, plan and coordinate post-disaster response, and promote cooperation among various government agencies. (https://en.afad.gov.tr.)

by previously mentioned universities, registration of eight traditional buildings were executed after the inscription to WHL.

Apart from the projects focused on the physical aspects of the town, there were also projects concentrated on promoting Bergama as a WHS, increasing the public's awareness on the cultural values that the town possess and educating the locals in attempt to involve them in heritage preservation.

Promotion of Bergama in national and international channels was handled by the municipality and the Ministry of Culture and Tourism as they attended numerous expositions in Turkey (İstanbul, İzmir and Ankara) and in other countries (Netherlands, Japan, Germany and Russia), meetings and conferences.

Another project that helped to promote Bergama was established in 2013, before the inscription of Bergama. Three dimensional models the Red Hall, Asclepion, Altar of Zeus and the Temple of Athena were generated by the collaboration of BILKOM and Municipality of Bergama with the help of architecture and archaeology students from three universities in Izmir. With the application created by BILKOM as a part of the civil society initiative called "iVisit Anatolia – History Comes to Life in 3D", visitors manage to view the original rendering of these heritage properties on site from their mobile phones. This project was considered pioneer in this field and won three awards in national and international organizations.

As, Traditional Bergama Fair being the main social gathering for the local community, this fair also has an important place in Bergama's history and a good way to promote the natural and cultural values of the town. Apart from continuing organizations, new festivals and organizations were held in Bergama that helped to increase the attraction to the town after the inscription.

One of these new festivals was International Theatre Festival of Bergama that began in 2018 and planned to be held annually. This festival is similar to Bergama Fair but departs from it by focusing mainly on theater performances and concerts. Another new festival was International Retro Motorcycle Festival of Bergama that began in 2016.

This festival contained concerts, motorcycle shows and tours. Earnings from this festival was used to finance Bergama Municipality Football Team. But in 2017 the festival was cancelled.

Bergama also became a destination place in the annual bicycle tour called "UNESCO World Heritage Bicycle Tour" which began in 2016. This tour was created with the collaboration of UNESCO National Commission of Turkey, Izmir Metropolitan Municipality, Municipality of Bergama and Municipality of Selçuk. This tour aimed to create unity between WHSs' in Izmir and other districts of Turkey.

There were also several social studies held by the municipality to increase the public's awareness on the cultural values of Bergama. To do, the municipality conducted workshops, conferences and tours, which were mostly focused on the school children, to enlighten the community on the historical importance of Bergama. They also published booklets and other educational documents which describes the tangible and intangible cultural values of Bergama.

Municipality of Bergama is a member of TKB[16], which is a union that assists municipalities in Turkey to exchange information and collaborate on necessary topics to help preserve cultural values of historic towns. This union held regional meeting in September 13 and 14 of 2017 at the Cultural Center of Bergama. The focus of this meeting was to represent the cultural values of Bergama, the process of inscription in WHL and problems that needs to be solved in order to preserve Bergama as a whole. The meeting also addressed to the importance of sustaining the relationship between water and urban settlement areas in Bergama by referring to the problems in preserving the Selinos river and its surroundings.

[16] TKB refers to Union of Historical Towns (Tarihi Kentler Birliği), which is a member of the European Historic Towns and Regions Association and aims to obtain solidarity and collaboration among the municipalities in protection of the natural, cultural and historical heritage of the cities. (http://www.tarihikentlerbirligi.org/)

ÇEKÜL[17] is a private foundation that conducts workshops and conferences to increase awareness on local and national communities for the cultural values in Bergama like most other cities in Turkey. This foundation carried out numerous conferences to address the conservation studies performed on Bergama, conducted instructional programs to educate local community on how can they get integrated in conservation activities and provide a neutral ground between decision makers in governmental agencies and the local community. Very recently, a meeting was held to analyze the Site Management Plan prepared for the WHS of Bergama as a part of Site Management Educational Program created by ÇEKÜL in November 2019.

[17] ÇEKÜL refers to the Foundation for the Protection and Promotion of the Environment and Cultural Heritage (Çevre ve Kültür Değerlerini Koruma ve Tanıtma Vakfı). It was founded in 1990 and derives from the idea of generating a nation-wide awareness and network in attempt to preserve the urban and rural, built and natural environment in Turkey. (https://www.cekulvakfi.org.tr/we-exist-through-nature-and-culture)

CHAPTER 4

ASSESSMENT OF CHANGE IN BERGAMA AFTER THE INSCRIPTION ON THE WORLD HERITAGE LIST

Assessing changes in any aspect of a heritage place requires two sets of comparable data. In the scope of this thesis, Pergamon and its Multi-Layered Cultural Landscape is chosen as the case study, mainly because of the baseline data collected in 2008 in the process of preparing a Conservation Project for the requirement of a course called Rest 507- Planning and Design in Urban Conservation. This project was handled by the students of METU, which the author of this thesis was part of and also, the supervisor of this thesis was one of the instructors. After the preparation of this project, Bergama was inscribed in the World Heritage List in 2014. As this study aims to assess physical, functional and socio-economic changes on heritage places after inscription, existence of a detailed baseline data created before the inscription process provides a substantial information on identifying changes. Therefore, Pergamon and its Multi-Layered Cultural Landscape is considered a suitable case for this thesis.

In the literature study of this thesis, changes in WHSs' after inscription were investigated. Where the values and characteristic of heritage places differ, changes in some physical, functional and socio-economic aspects were seemed to be mutual. Therefore, these aspects are considered as indicators of change in heritage places. Later, these indicators were investigated in the WHS of Bergama in order to assess changes after inscription.

Within the limits of a master thesis, it is not possible to collect all the necessary comparable data on each indicator for the whole heritage place. So, the study area of 2008, where the detailed baseline data exists, was selected in order to limit the study.

In 2008, study area was divided into two parts as; Main Study Area and Neighboring Study Area. This distinction was made because of the degree of data collected for these areas throughout the site survey. Data in main and neighboring study areas was collected by only examining the exterior features of the buildings, but in the main study area, some of the houses were surveyed by entering inside the houses and by conducting interviews with occupants that provided information on social structure of the users.

This distinction was also made through the data collection process in 2018. But due to the limitations of this study, each indicator used in the data collection process of 2008 was not investigated in the site survey of 2018. Therefore, indicators that were used to assess changes for open areas, traditional and new buildings were listed. In addition to these features, an investigation of the real estate values was conducted in the whole study area for the purpose of evaluating the economic effects of inscription.

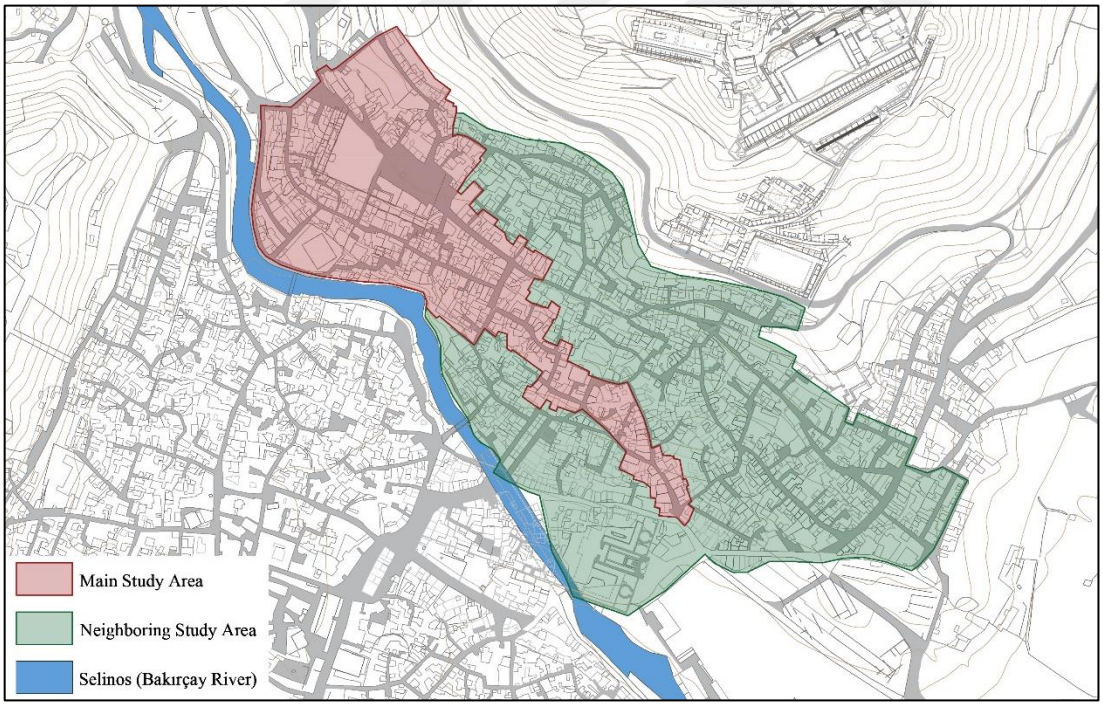


Figure 10. Map showing the limits of the study area

Table 4. List of defined indicators used to asses changes in the study area

	Open Areas		Traditional Buildings		New Buildings	
Physical Features	2008	2018	2008	2018	2008	2018
	Open & Built Up Relationship	Open & Built Up Relationship	Registered Building Lots	Registered Building Lots	-	-
	-	Changes in Open & Built Up Relationship	-	Changes in Registered Building Lots	-	-
	Private & Public Open Areas	Private & Public Open Areas	Building Heights & Number of Storey	Building Heights & Number of Storey	Building Heights & Number of Storey	Building Heights & Number of Storey
	-	Changes in Private & Public Open Areas	-	Changes in Building Heights & Number of Storey	-	Changes in Building Heights & Number of Storey
	Street Pattern	Street Pattern	Exterior Condition	Exterior Condition	Exterior Condition	Exterior Condition
	-	Changes in Street Pattern	-	Changes in Exterior Condition	-	Changes in Exterior Condition
	Vehicular & Pedestrian Circulation	Vehicular & Pedestrian Circulation	-	Conservation Interventions	-	-
	-	Changes in Vehicular & Pedestrian Circulation	Overall Exterior Changes	Overall Exterior Changes	-	-
	Vehicular & Pedestrian Density	Vehicular & Pedestrian Density				
	-	Changes in Vehicular & Pedestrian Density				

	Open Areas		Traditional Buildings		New Buildings	
Functional Features	2008	2018	2008	2018	2008	2018
	Parking Areas	Parking Areas	Occupancy	Occupancy	Occupancy	Occupancy
	-	Changes in Parking Areas	-	Changes in Occupancy	-	Changes in Occupancy
	Functions	Functions	Functions	Functions	Functions	Functions
	-	Changes in Functions	-	Changes in Functions	-	Changes in Functions

	Open Areas		Traditional Buildings		New Buildings	
Social Features	2008	2018	2008	2018	2008	2018
	-	-	Ownership	Ownership	Ownership	Ownership
	-	-	-	Changes in Ownership	-	Changes in Ownership

	Traditional and New Buildings			
Economic Features	2008	2010	2014	2018
	Price of unit square meter of the land	Price of unit square meter of the land	Price of unit square meter of the land	Price of unit square meter of the land
	-	Changes in Price of unit square meter of the land between 2008 & 2010	Changes in Price of unit square meter of the land between 2010 & 2014	Changes in Price of unit square meter of the land between 2014 & 2018

As the physical, functional and socio-economic features of the study area are investigated in detail, features of townscape and other aspects are only mentioned superficially in order to generate an understanding on the tendencies of change for Bergama.

Table 5. List of defined indicators used to asses changes in town scale

Town Scale								
Physical Features	2008	2018	Functional Features	2008	2018	Social Features	2008	2018
	Land Use	Land Use		-	New Touristic Facilities		Visitor Numbers	Visitor Numbers
	-	Changes in Land Use					-	Changes in Visitor Numbers
	Transportation	Transportation					Accommodation Numbers	Accommodation Numbers
	-	Changes in Transportation					-	Changes in Accommodation Numbers

4.1. The Changes in Bergama: Before and After the WHL Inscription

In order to assess change, first changes must be identified. In that context, data on physical, functional and socio-economic conditions of the defined indicators in 2008 and 2018 was investigated and described. Afterwards, collected data in both site survey was documented in the geographic information system and two sets of data was generated.

Later, maps and charts showing the condition of each indicator in 2008 and 2018 were generated. Finally, these two sets of data were analyzed and changes in defined indicators were assessed.

4.1.1. Physical Aspects of 2008 & 2018

The study area is situated between the Acropolis and Selinos (Bakırçay) in the skirts of the hill on the Northern end of Bergama. The site is located within the borders of Ulucami, Talatpaşa and Kurtuluş quarters and located within the boundaries of 1st Degree, 2nd Degree and Urban & 3rd Degree Archaeological Sites.

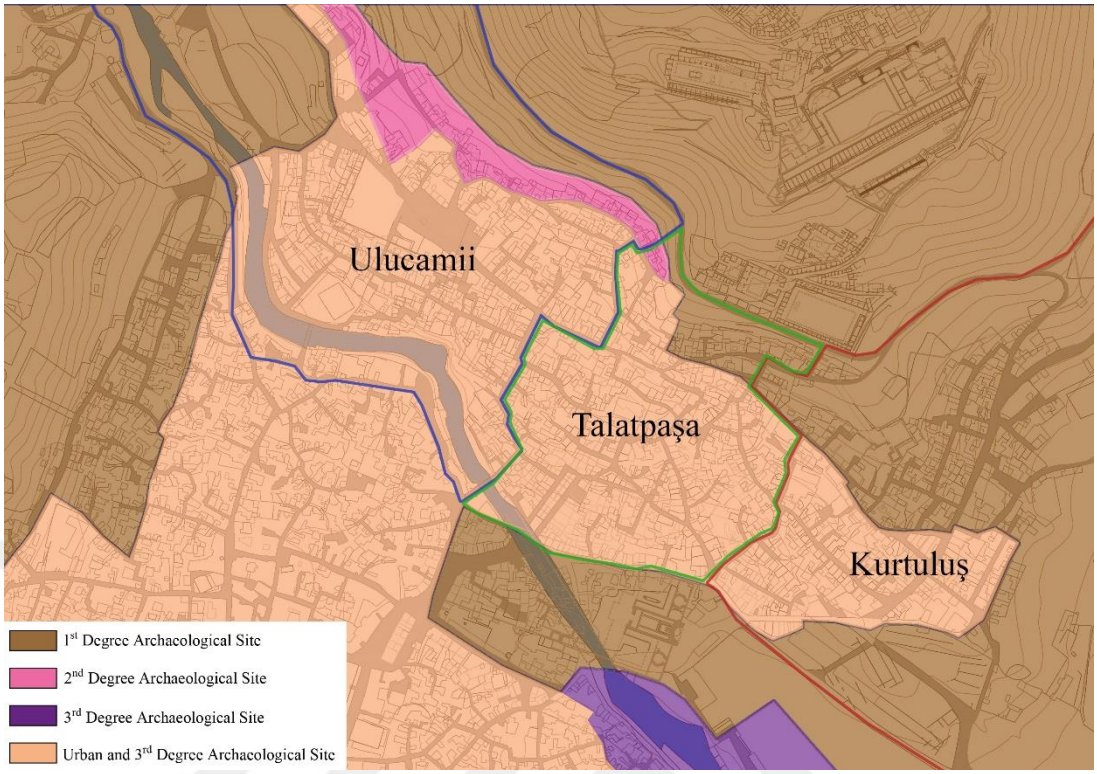


Figure 11. Limits of the archaeological sites and districts in the study area

Figure 12. View of the site from the Roman Theater

Topography is an important aspect in the formation of the physical environment for the study area. With the limitations of the hill and Selinos, entrance to the study area is established from Kınık Caddesi situated on the north of the Red Hall (Kızıl Avlu) or from Tabaklar and Ulu Camii Bridges.

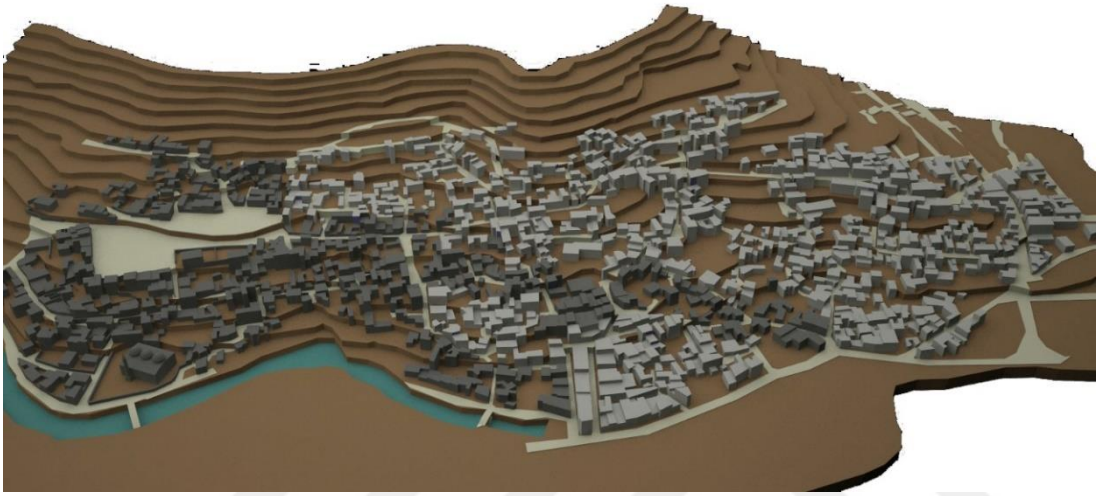


Figure 13. 3D model of the study area prepared in the scope of Conservation Project of Bergama (METU, 2008)

The study area was densely built-up in 2008, especially along the main axis starting from the Kozak Street and leading to Grunellia and also in areas close to the commercial center. Except for the streets and squares, size and location of courtyards for traditional and new buildings constituted the ratio of open and built-up relationship.

As of 2018, there are no major changes in the density of the built-up areas. Open areas in 2008 preserved their boundaries but, as the result of 7 collapsed buildings, new open areas were created within the study area. These new open areas are generally by the public used as car parks today.

Figure 14. Example of a new open area generated by the collapse of traditional building and used as a car park (Left: Taken in 2008 Right: Taken in 2018)

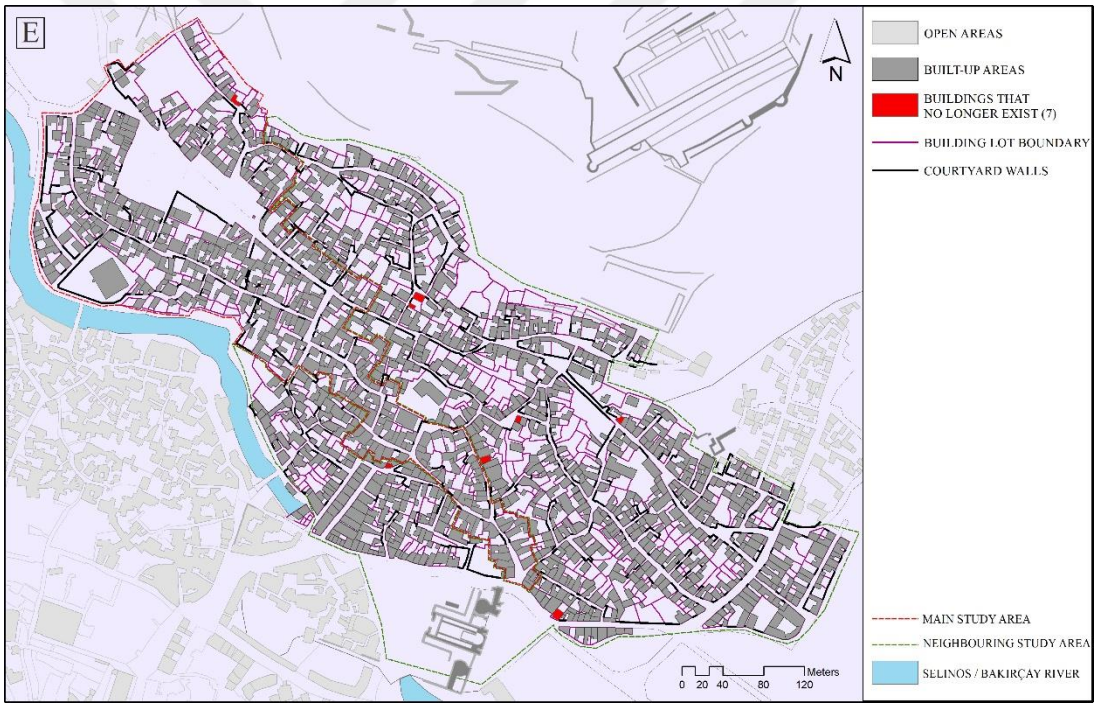


Figure 15. Assessment of open & built-up relationship for the study area

Open areas in the study area can be categorized as; public and private open areas. Public open areas contain streets, squares and parks where private open areas are courtyards of residential and other privately-owned buildings and open areas of public buildings.

In the process of evaluating changes in open areas, changes in private open areas of privately-owned buildings were excluded from the analysis where no data was gathered for these areas in the site survey of 2018[18]. Therefore, the evaluation was limited with the changes in public open areas and in private open areas of public buildings.

Grunellia (Domuz Alanı) is the Hellenistic Agora of Pergamon and still used as the main public open area in the study area. The park situated in front of the Red Hall and the courtyard of Ulu Camii are other important public open areas even today. In 2008, open areas around the Selinos were generally not used efficiently because of the problems in accessibility. There are a number of squares in different forms and sizes formed by street junctions. These squares are generally defined by fountains or buildings having commercial functions.

In 2018, it is seen that all public areas preserved their boundaries and their functions. In Grunellia, placement of new sporting equipment gave the area an additional function. Throughout the study area, physical conditions of open areas and their architectural elements were deteriorated. Green areas were also not attended properly resulting in the loss of flowers and other plants.

[18] In the site survey of 2008, most of the private lots of traditional buildings were surveyed by entering the buildings and their courtyards. According to this investigation, a typology for building & building lot relationship was developed for the study area. This typology shows that, buildings are either located facing the street by generating open areas in the back and/or on the sides of the buildings or located on the back of the lot creating open areas between the building and the street, separated by a courtyard wall. In some cases, buildings are covering the whole lot and does not have a courtyard.

Figure 16. New sporting equipment placed in Grunellia

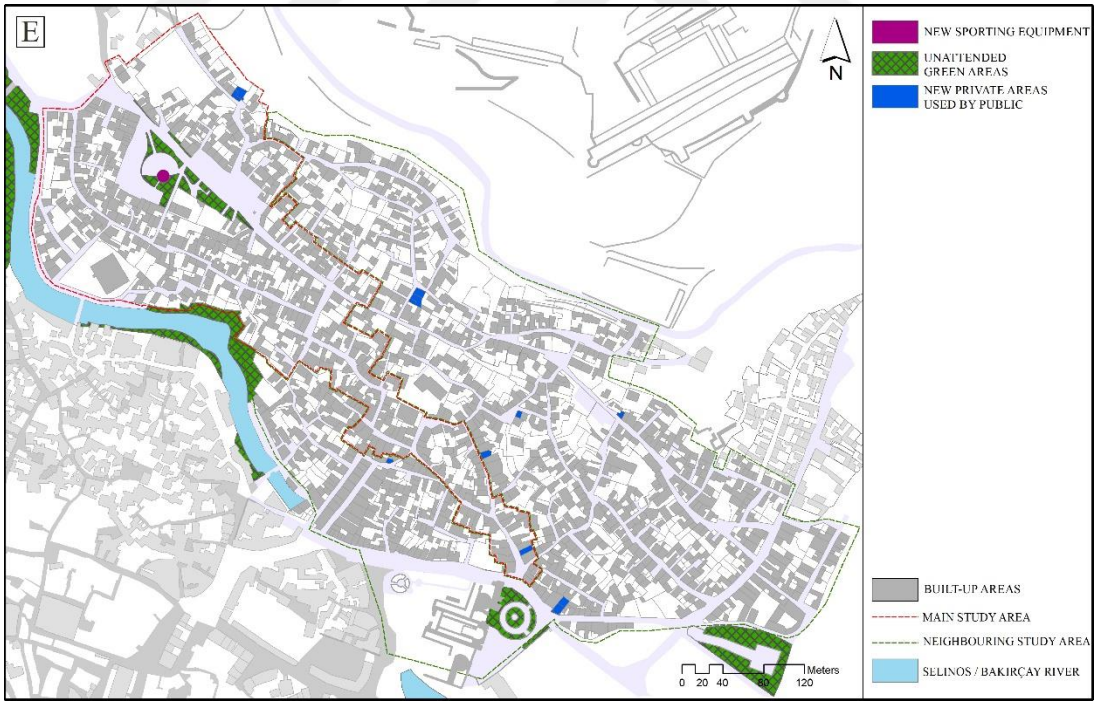


Figure 17. Evaluation of changes in open area

As the study area is located on a sloped land, main streets are generally positioned parallel to each other and to the Selinos in order to create non-sloped streets. Other streets connecting them are mostly dead-end streets having inclined slopes which makes them hard to access by both vehicles and pedestrians. Most of the streets in the site are narrow and generates a one-way vehicular circulation where others can only be accessed by pedestrians. Streets connecting the study area to the bridges are also located vertically to main streets but generally wider. When the street pattern of the study area in 2008 and 2018 are evaluated, it is seen that, there are no changes in the character or form of streets.

In 2008, streets were mostly covered with modern cut stones, and concrete but original andesite blocks are still visible in some dead-end streets. In 2018, it is seen that there are no major interventions to the street coverings, except some deterioration with the effects of time and as the result of infrastructural interventions on sewer system conducted by the municipality.

Parmakbatıran Caddesi is the main street passing through the study are vertically and establishing connection to Acropolis. In 2008, because of the wide formation of this street, it was generally used by coaches and taxies. After the inscription, with the requests of UNESCO, coaches' entrance to Acropol was restricted and the cable car system constructed in 2010 was declared as the main transportation of visitors to Acropol. Today, coaches of travel agencies continued to use Parmakbatıran Caddesi but started to park around the cable car station. There was also an increase in the use of private automobiles and taxies in Parmakbatıran Caddesi and its surrounding.

Kınık street located in the south of the study area had a dense vehicular density in 2008. Apart from tour busses, city busses and automobiles, trucks containing stone blocks from surrounding quarries also used this street for transportation. As this street is situated on top of the Hellenistic vaults created problems in their stability. Also, in 2018, it is seen that the type of transportation in this street was not changed. But the

density of vehicular circulation in Abacıhan Sokak, positioned perpendicular to Kozak Street, seems to be increased.

Figure 18. Cable Car Station with parking area for coaches and cars

Figure 19. Increased use of taxies by the visitors in Parmakbatıran Street

Figure 20. Dense truck traffic in Kınık Street

As the study area was densely built up and has narrow steep streets, parking was a big problem in 2008. There were no planned parking areas in the residential area where the only one was located around the Red Hall. Empty areas in Grunellia, some empty building lots, dead-end streets and areas in front of abandoned building were used as parking areas by the locals. In 2018, there were no newly planned parking areas within the study area. Only planned parking area was reserved for tour busses near the cable car station which is outside the limits of the study are. Locals continued to park in areas where they consider appropriate which resulted with the creation of numerous new improper parking areas for the study area.

In 2008, there were no special arrangement for the pedestrians like sidewalks or handicapped raps except for the Kınık Street, Grunellia and the surroundings of the Red Hall. This situation seems to be unchanged in 2018. The density of pedestrian circulation was also preserved in most of the streets. The only change is seen in the Parmakbatıran Caddesi where the pedestrian density seems to be increased together with the density of vehicular circulation.

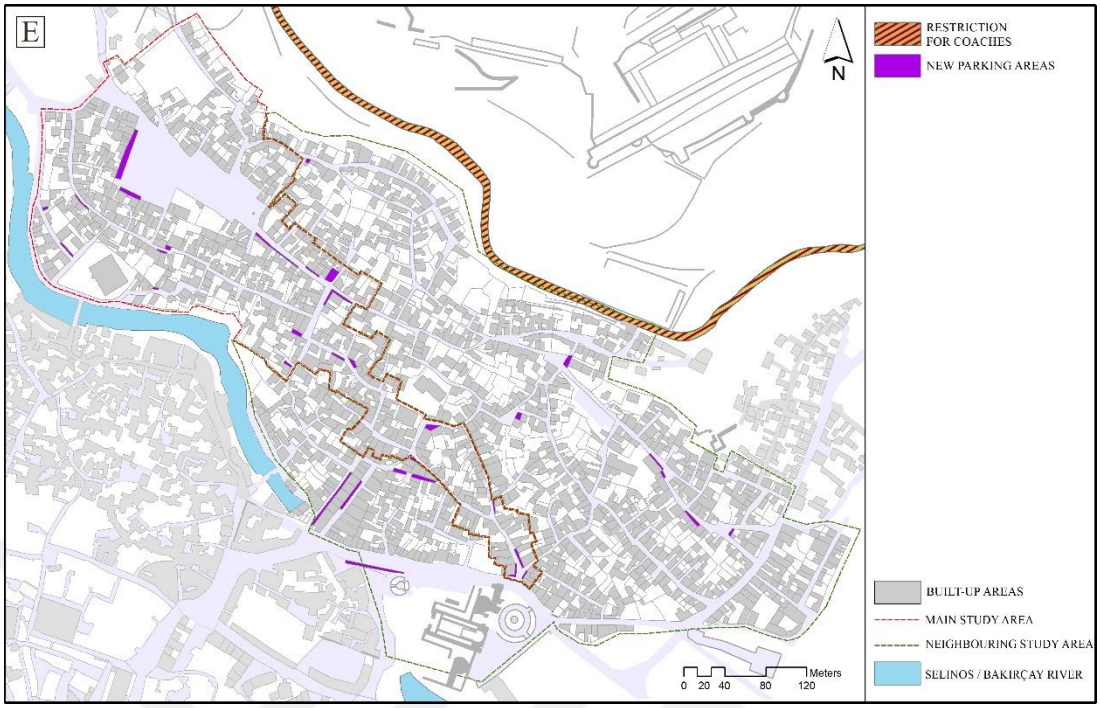


Figure 21. Evaluation of changes in vehicular and pedestrian circulation

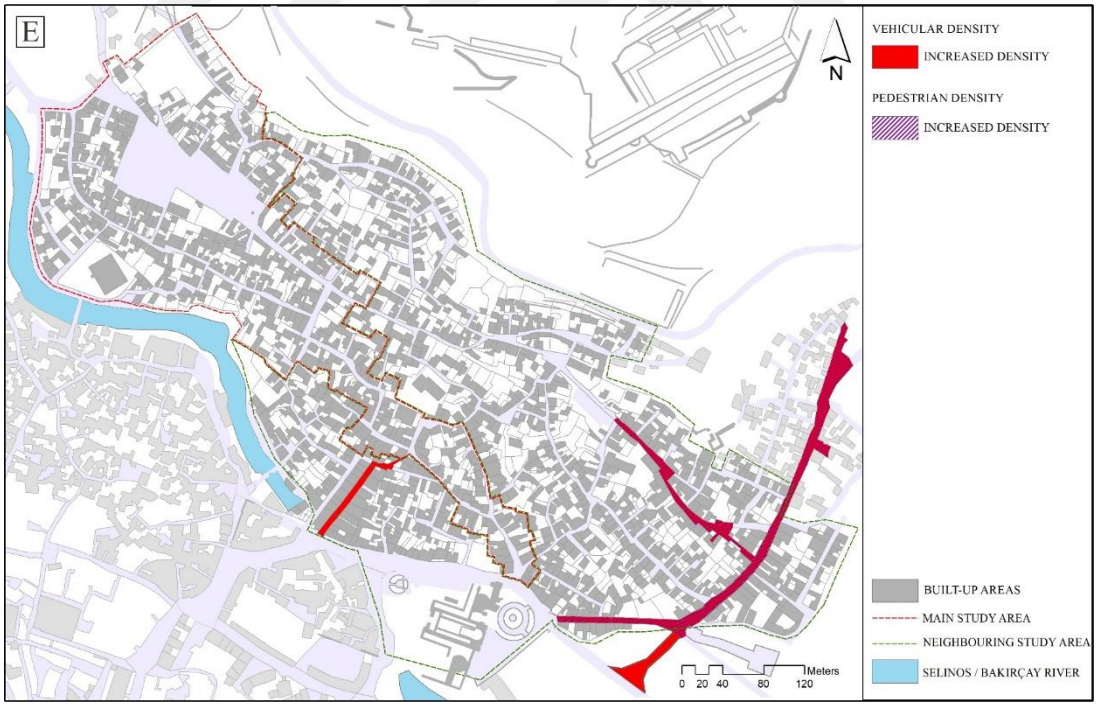


Figure 22. Evaluation of changes in vehicular and pedestrian density

In 2008, there were a few sign boards located through the study area, directing visitors to Acropol, Red Hall, Grunellia and Traditional Bergama Houses. As of 2018, the number of these signboards in and around the study area were increased and a large number of signboards belonging to the hotels in the study area were documented.

Figure 23. New signboards placed within the study area

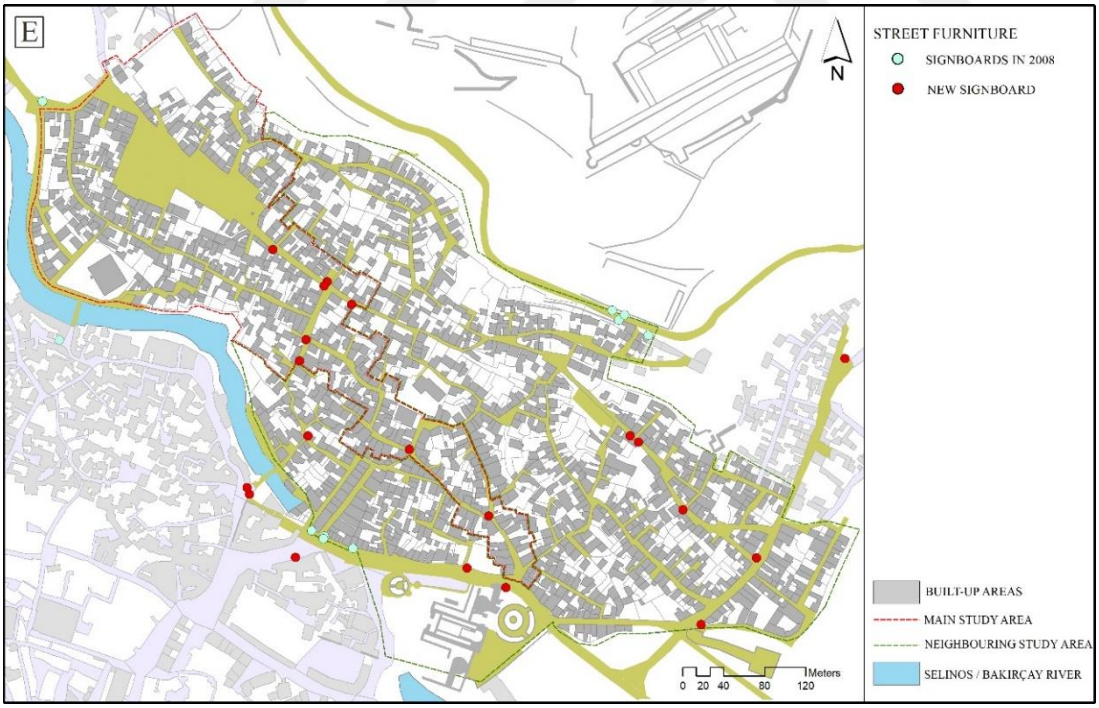


Figure 24. Distribution of signboards in the study area

In the study area, there are a total of 1.122 building lots. In 2008, 265 (24%) of these 1.122 building lots were registered. According to the collected data from the municipality during the site survey of 2018, it is seen that 30 new lots were registered and 2 of the lots lost their registration status between 2008 and 2018. With the increase in the registration studies after the inscription, number of registered building lots in the study area increase to 293 (26%).

In the course of both site surveys, 857 out 1.398 buildings in the study area were investigated and documented.

The study area is a mixture of traditional and new buildings constructed next to each other[19]. In 2008, out of the 857 studied buildings, 658 (77%) were traditional buildings and 199 (23%) were new buildings. As the study area is located within the boundaries of 1st Degree, 2nd Degree and Urban & 3rd Degree Archaeological Sites, there are restrictions for new constructions. Therefore, as of 2018, there are no new buildings constructed in the study area.

Figure 25. Examples of traditional and new buildings in the study area

[19] Most of the traditional houses are constructed between 19th and early 20th century (Binan et al., 2004). New houses in the site are constructed after 1940's as the outcome of insufficient conservation regulations around that time.

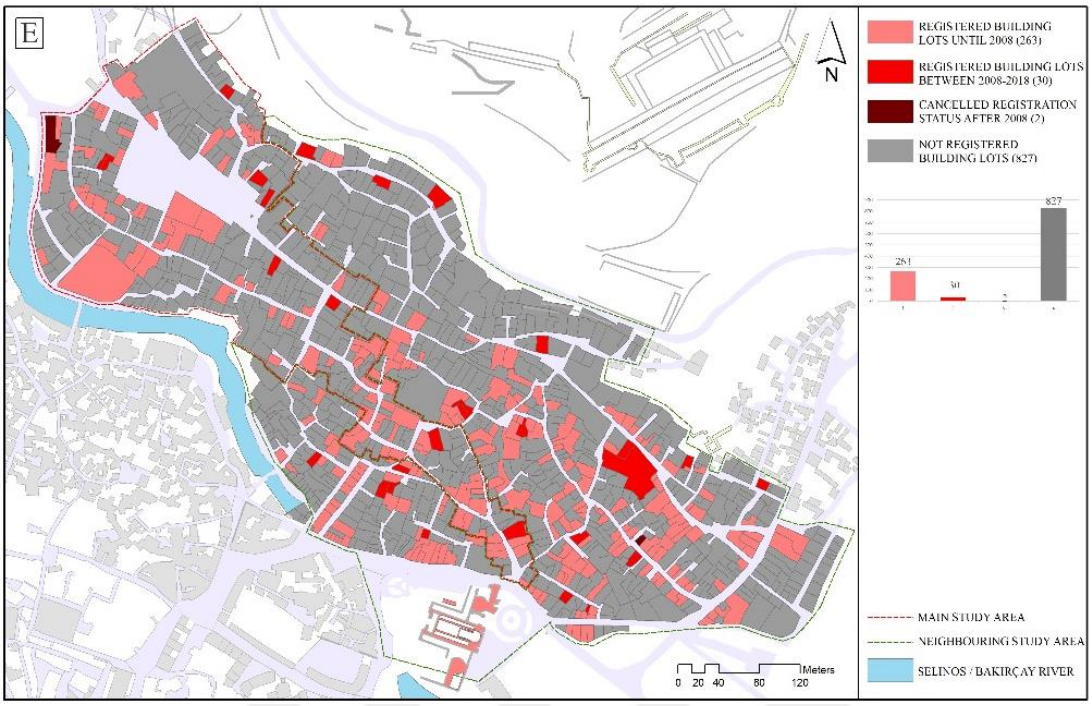


Figure 26. Evaluation of changes in registered building lots

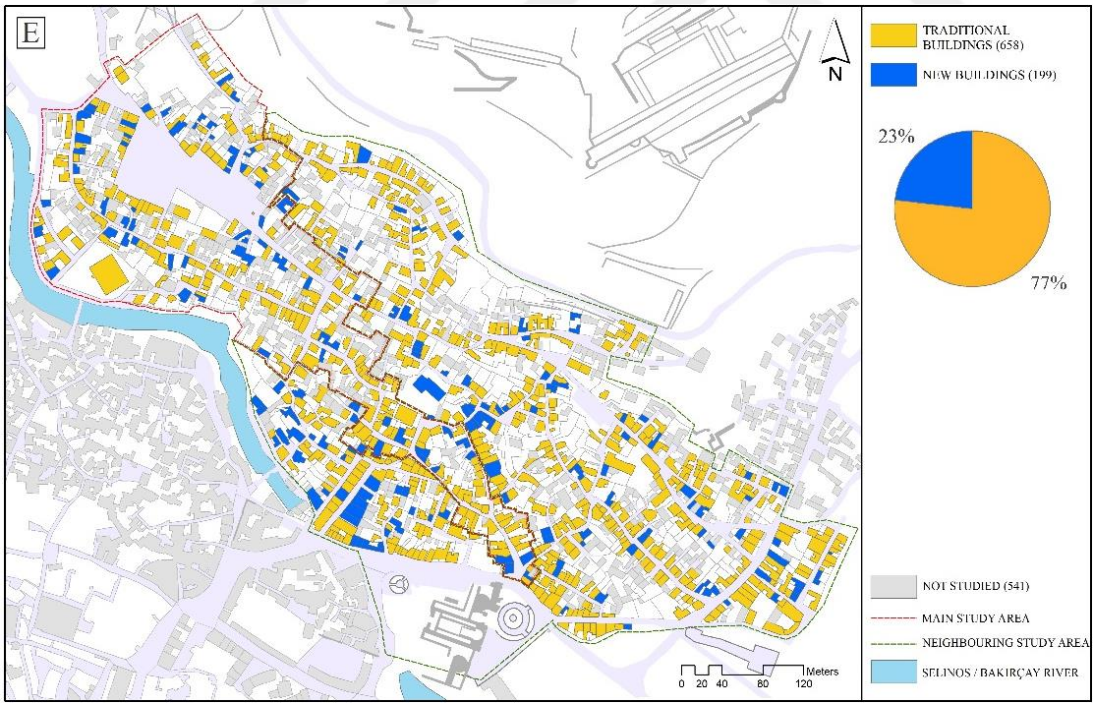
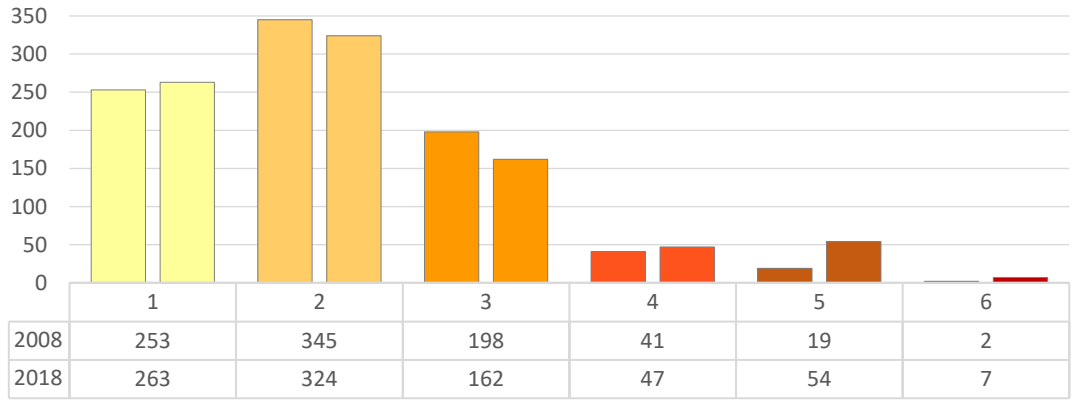


Figure 27. Evaluation of traditional and new buildings in the study area

Changes in physical conditions of buildings in heritage places is one of the major effects of inscription. In the scope of this study, only exterior conditions of the buildings in the study area were investigated for all studied traditional and new buildings. In 2008, a scala was created to identify exterior conditions of buildings, so, the same scala was again used to determine the exterior conditions of buildings in 2018. Exterior conditions and its distribution through the study area were shown for both 2008 and 2018 in individual maps.

In 2008, out of the 857 studied buildings, 253 (30%) were in good condition with small deteriorations in their architectural elements and finishing. In the survey of 2018, it is seen that, this number increased to 263 (31%) buildings. Where the physical conditions of some buildings were improved, buildings which had severe physical conditions and partially or totally collapsed, seems to be increased from 62 (7%) buildings to 108 (12.5%) buildings between two site surveys.



	1	2	3	4	5	6
2008	253	345	198	41	19	2
2018	263	324	162	47	54	7

Figure 28. Chart showing the number of buildings for each degree of exterior condition

To evaluate the degree of change in exterior physical conditions of studied buildings, a chart is created and each building was analyzed by using this chart. This chart helped to identify negative and positive changes in studied buildings.

Change in Exterior Condition For Studied Buildings	2008 \ 2018	1	2	3	4	5	6
In good condition in terms of structure & material	1		B1	B2	B3	B4	B5
No structural problems, slight surface deterioration on facade	2	A1		B1	B2	B3	B4
No structural problems, surface deterioration and material loss on facade	3	A2	A1		B1	B2	B3
Structural cracks, material decay, slight structural deformations started but building is stable	4	A3	A2	A1		B1	B2
Partially collapsed	5	A4	A3	A2	A1		B1
Totally collapsed	6	A5	A4	A3	A2	A1	

NEGATIVE CHANGE

POSITIVE CHANGE

Figure 29. Chart created to identify the degree of change in the exterior conditions.

According to this assessment, 476 (56%) buildings out of the studied 857 buildings had changes in their exterior conditions and 381 (44%) buildings had no changes. When 476 buildings which had physical changes were investigated, it is seen that, 203 (43%) buildings out of 476 are in better condition where, 273 (57%) buildings seems to be in worse condition than 2008.

Exterior Condition for All Studied Buildings		
Change in Exterior Condition	476	56%
No Change in Exterior Condition	381	44%
Total	**857**	**100%**

Change in Exterior Condition			**476** in 857		
Positive Change	**203**	**43%**	Negative Change	**273**	**57%**
A1	160	34%	B1	207	43%
A2	30	6%	B2	50	11%
A3	9	2%	B3	13	3%
A4	4	1%	B4	3	1%
A5	0	0%	B5	0	0%

Figure 30. Number and percentage of buildings which had positive and negative changes in exterior physical condition.

When the distribution of positive and negative changes in exterior conditions through the study area were evaluated, it is seen that, there are some areas where positive and negative changes were localized.

Figure 31. Examples of studied buildings which had positive changes in their exterior conditions

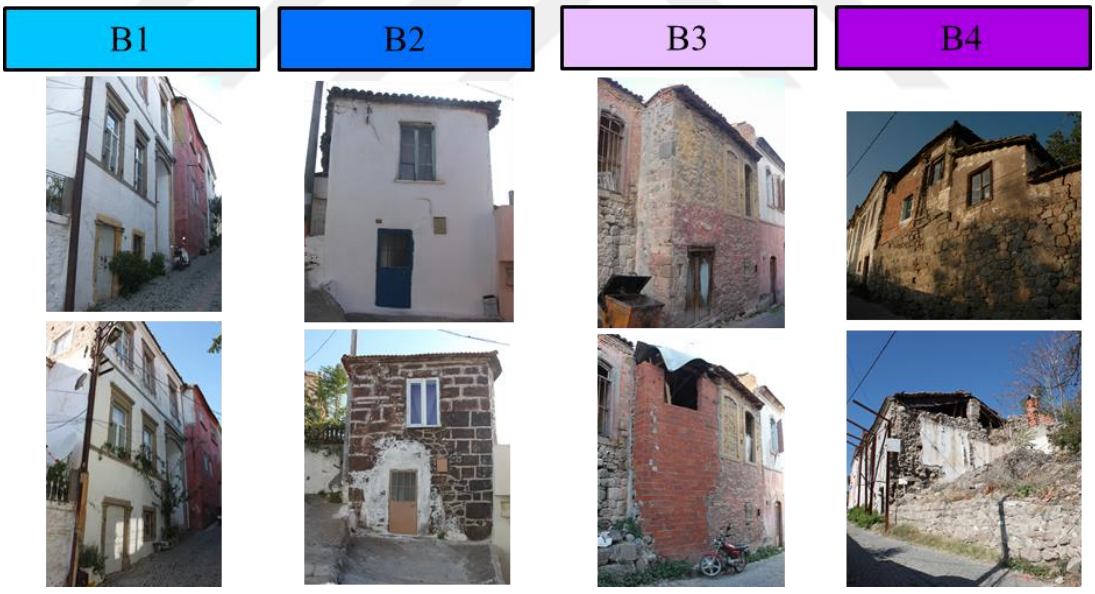


Figure 32. Examples of studied buildings which had negative changes in their exterior conditions

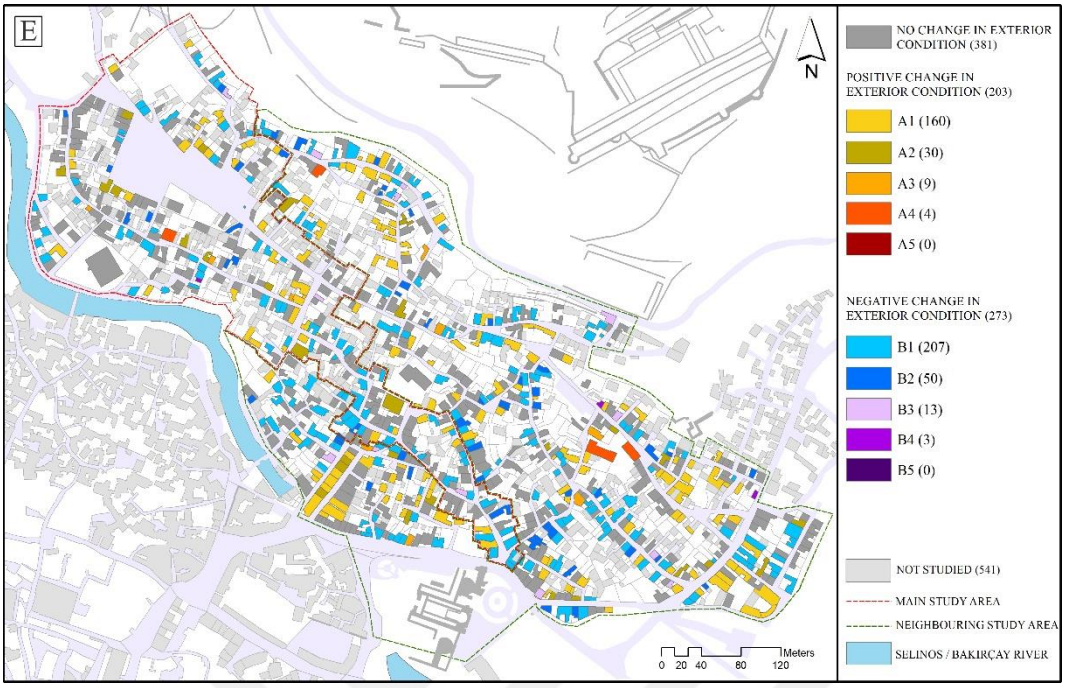


Figure 33.Evaluation of change in exterior conditions of buildings in the study area

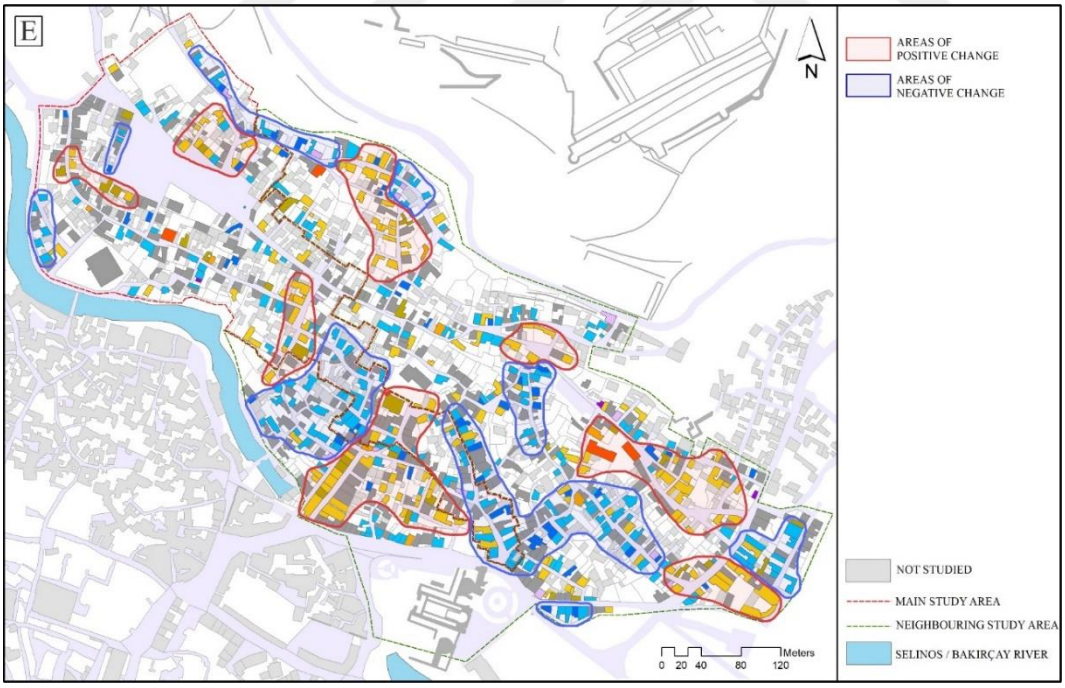


Figure 34. Areas where positive and negative changes in exterior conditions are localized

As mentioned before, 658 (77%) of the 857 studied buildings were traditional buildings. Due to their majority, changes in exterior conditions of traditional buildings were investigated to identify whether these changes affected the traditional fabric of the study area. Analyzed exterior data for traditional buildings shows that, physical conditions of 170 (25,8%) out of the 658 traditional buildings were improved where 220 (33,4%) buildings were in worse physical condition. For the 268 (40,7%) traditional buildings, exterior conditions seem to have no change between 2008 and 2018.

Traditional buildings which had positive changes shows the degree of conservation activities within the study area. Conservation activities in WHS's can be rapid due to increased attention to the heritage place after inscription. To ensure the preservation of cultural identity, conservation activities must be monitored extensively. To do so, first, the type of conservation interventions were identified for the study area by categorizing the degree of positive change for each traditional building. These interventions are listed in 3 titles as; simple repair, extensive repair and restoration. Buildings that had renewed finishings were considered as simply repaired where buildings that had changed facade elements like windows doors and roof coverings were considered as exstensively repaired.

In the study area, major intervention in the façade is simple repair, which is seen in 115 (68%) out of the 170 conserved traditional buildings. Most of these buildings had renewed finishing and the color of the façade has been changed. For the 14 (8%) traditional buildings that had extensive repair, it is seen that architectural elements of the façade, such as; windows, doors and roof coverings were repaired or changed. It is also seen that, 41 (24%) traditional buildings were restored between 2008 and 2018. When the distribution of the traditional building which had conservation intervention were investigated, buildings that were restored or had simple repair seem to be located close to each other.

Exterior Condition of Traditional Buildings		
Positive Change	170	25,8%
Negative Change	220	33,4%
No Change	268	40,7%
Total	**658**	**100%**

Conservation Intervention		
Simple Repair	115	68%
Extensive Repair	14	8%
Restored	41	24%
Total	**170**	**100%**

No Conservation Intervention		
In Same Physical Condition	268	55%
In Worse Physical Condition	220	45%
Total	**488**	**100%**

Figure 35. Number and percentage of traditional buildings which had conservation intervention

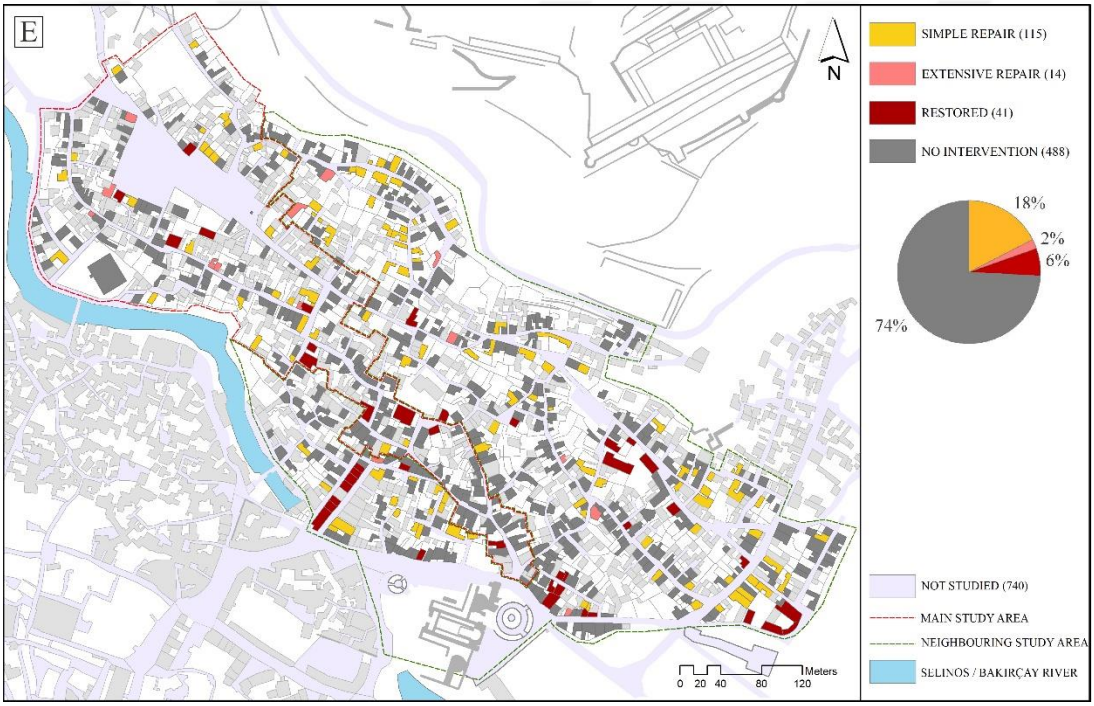


Figure 36. Evaluation of conservation interventions in the study area

As mentioned before, there are restrictions for new constructions in the study area where it was situated in 1st Degree, 2nd Degree and Urban & 3rd Degree archaeological Sites. This also effects the changes in building heights where new floor additions are not permitted. But in some examples, it is seen that protective roofs were added to

both traditional and new buildings within the main study area. There were also some examples where areas created under the protective roofs were included in to the buildings. Therefore, these additions were investigated within the limitations of the main study area. According to the conducted analysis, out of the 286 studied buildings in the main study area 11 (4%) buildings had mass additions between 2008 and 2018.

Figure 37. Example of protective roof addition (ID: 456_43)

Figure 38. Example of including new spaces into buildings (ID: 652_13)

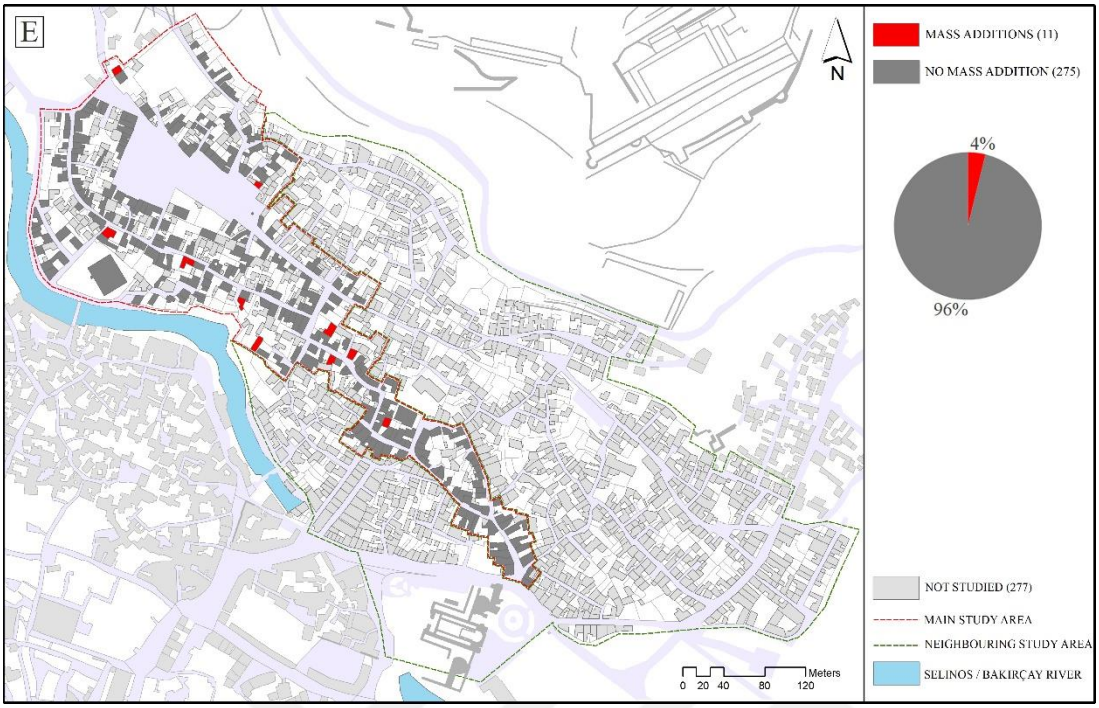


Figure 39. Evaluation of mass additions in the main study area

In the study of 2008, an overall evaluation of exterior changes was made for the studied 196 traditional buildings that are located in the main study area by investigating their façade and mass changes. In this evaluation, a scala was used to examine the degree of change. The same scala was again used to evaluate overall changes for the traditional buildings in 2018.

When these two data were evaluated, it is seen that 38 (19%) of the 196 traditional buildings in the main study area had increase overall exterior change. Which means that, façade organizations and mass proportions of these buildings had changed in ways that damaged the legibility of their original properties. On the other hand, 147 (75%) of these buildings had no changes in their façade organizations and mass proportions between 2008 and 2018. For 11 (6%) out of 196 total buildings, evaluation of overall exterior change was not applicable where they were restored between two site surveys.

<table>
<tr><td colspan="3" rowspan="2">OVERALL EXTERIOR CHANGES IN TRADITIONAL BUILDINGS</td><td>M1</td><td>M2</td><td colspan="3">M3</td></tr>
<tr><td>Original mass proportions and organisation are conserved.</td><td>Original mass proportions and organisation are not conserved but still legible.</td><td colspan="3">Original mass proportions and organisation are not conserved and not legible.</td></tr>
<tr><td colspan="3"></td><td>Partial mass addition and/or removal that does not effect the legibility of original mass proportions and organisation.</td><td>Floor addition and/or removal and/or building addition that effects the legibility of original mass proportions and building height as the roof structure can not be read</td><td>Partial mass addition and/or removal that effects the legibility of original mass proportions and organisation.</td><td>Floor addition and/or removal and/or building addition that effects the legibility of original mass proportions and organisation.</td></tr>
<tr><td>F1</td><td>Original façade organisations and sizes are conserved</td><td></td><td>E1</td><td rowspan="2">E2</td><td rowspan="3">E4</td><td colspan="2" rowspan="3"></td></tr>
<tr><td rowspan="2">F2</td><td rowspan="2">Original facade organizations and sizes are not conserved but still legible</td><td>Changes in original materials of architectural elements and/or finishing material.</td></tr>
<tr><td>Changes both in original form and material of architectural elements and finishin material and/or façade proportions.</td><td>E3</td></tr>
<tr><td rowspan="2">F3</td><td rowspan="2">Original facade organizations and sizes are not conserved and not legible</td><td>Original façade organisations is still legible only in a part of the façade.</td><td rowspan="2">E5</td><td colspan="3" rowspan="2">E6</td></tr>
<tr><td>Original façade organisations can not be read</td></tr>
</table>

Figure 40. Scala used to determine the degree of overall exterior changes in traditional buildings

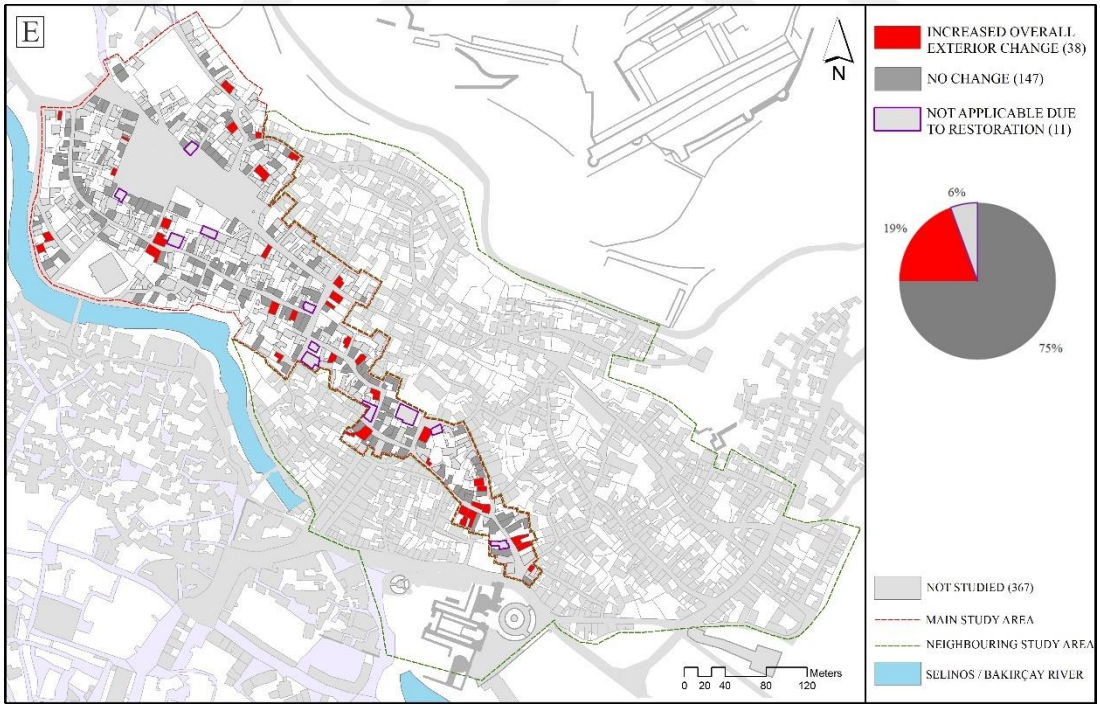


Figure 41. Evaluation of overall exterior change in the main study area

4.1.2. Functional Aspects of 2008 & 2018

In 2008, 743 (87%) out of the 857 studied buildings were occupied either for residential, commercial, educational, religious or for other reasons. As of 2018, this rate has decreased 5% and today, there are 700 (82%) occupied buildings in the study area. According to the analysis conducted in the type of change in occupancy, 39 (5%) buildings out of 857 were occupied between 2008 and 2018 when 81 (9%) buildings in the study area were emptied. Also, for 737 (86%) buildings, there seems to be no change in occupancy.

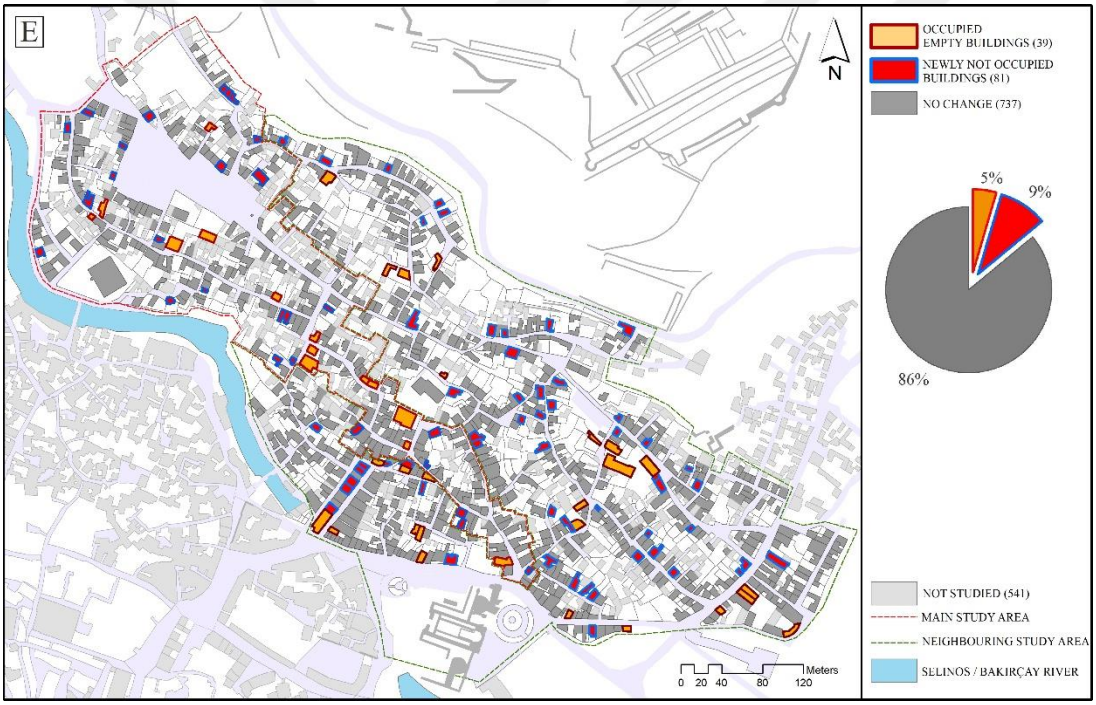
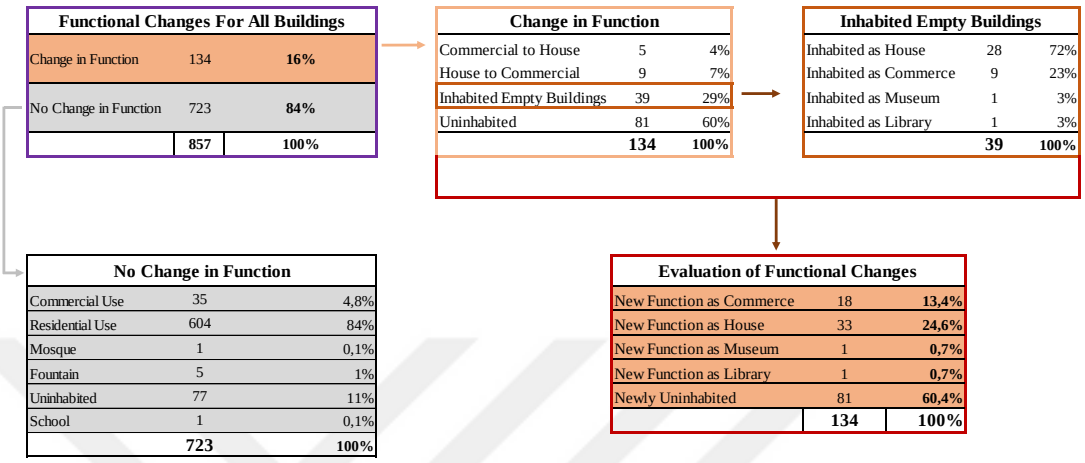


Figure 42. Evaluation of occupancy of buildings in the study area

Functions of studied buildings were investigated in two phases. At first, functions of all the studied buildings in 2008 and 2018 were identified and shown in individual maps without the distinction of traditional and new buildings. Then these maps were

compared and changes in functions for the whole study area was evaluated. Secondly, data collected for new buildings were eliminated and functional changes for traditional building were determined and mapped.



Functional Changes For All Buildings		
Change in Function	134	**16%**
No Change in Function	723	**84%**
	857	**100%**

Change in Function		
Commercial to House	5	4%
House to Commercial	9	7%
Inhabited Empty Buildings	39	29%
Uninhabited	81	60%
	134	**100%**

Inhabited Empty Buildings		
Inhabited as House	28	72%
Inhabited as Commerce	9	23%
Inhabited as Museum	1	3%
Inhabited as Library	1	3%
	39	**100%**

No Change in Function		
Commercial Use	35	4,8%
Residential Use	604	84%
Mosque	1	0,1%
Fountain	5	1%
Uninhabited	77	11%
School	1	0,1%
	723	**100%**

Evaluation of Functional Changes		
New Function as Commerce	18	**13,4%**
New Function as House	33	**24,6%**
New Function as Museum	1	**0,7%**
New Function as Library	1	**0,7%**
Newly Uninhabited	81	**60,4%**
	134	**100%**

Figure 43. Number and percentage of all buildings that had functional changes

When functional changes for all the studied buildings were investigated, it is seen that, between 2008 and 2018, 134 (16%) out of 857 studied building had change in function. 5 (4%) of these 134 buildings had commercial functions and changed into houses where 9 (7%) of them were houses started to be used for commercial purposes.

39 (29%) buildings out of 134 were empty in 2008 and started to be used for different functions in 2018 where 81 (60%) of them were occupied in 2008 and uninhabited in 2018. 28 (72%) of the 39 newly inhabited buildings were used as houses and 9 (23%) were used for commercial purposes. 1 (3%) of these buildings were used as museum and 1 (3%) as library.

Out of the 857 studied buildings, 723 (84%) have preserved their functions from 2008 to 2018. Within these buildings, 604 (84%) were houses, 77 (11%) were uninhabited, 35 (4,8%) were commercial buildings, 5 (1%) were fountains, 1 (0,1%) was a mosque and 1 (0,1%) was a school.

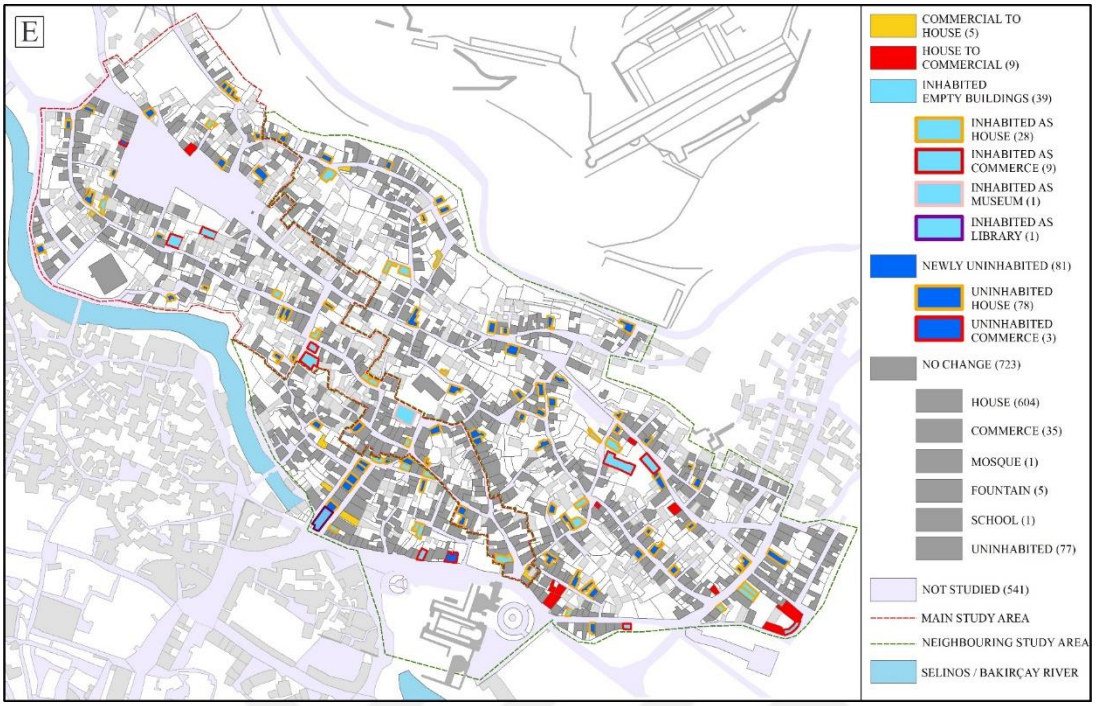


Figure 44. Evaluation of functional changes for all studied buildings

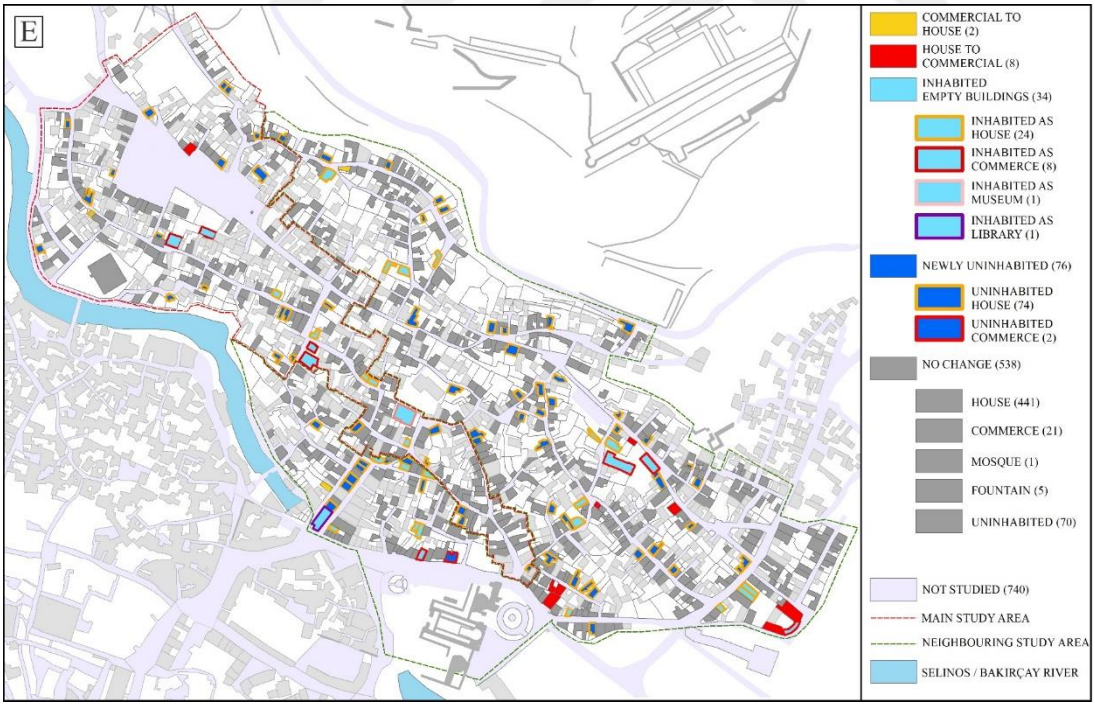
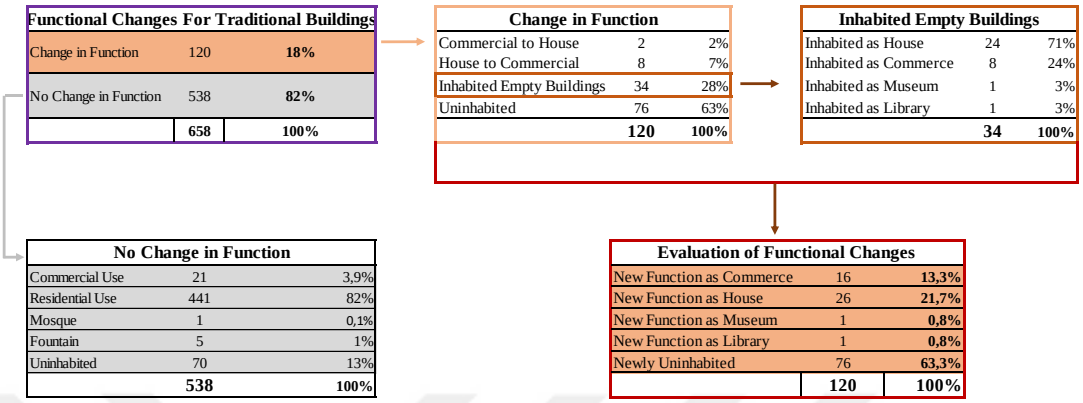


Figure 45. Evaluation of functional changes for traditional buildings

When the same analysis was conducted for the traditional buildings in the study area, in is seen that 120 (18%) out of the 658 traditional buildings had functional changes.



Functional Changes For Traditional Buildings		
Change in Function	120	18%
No Change in Function	538	82%
	658	100%

Change in Function		
Commercial to House	2	2%
House to Commercial	8	7%
Inhabited Empty Buildings	34	28%
Uninhabited	76	63%
	120	100%

Inhabited Empty Buildings		
Inhabited as House	24	71%
Inhabited as Commerce	8	24%
Inhabited as Museum	1	3%
Inhabited as Library	1	3%
	34	100%

No Change in Function		
Commercial Use	21	3,9%
Residential Use	441	82%
Mosque	1	0,1%
Fountain	5	1%
Uninhabited	70	13%
	538	100%

Evaluation of Functional Changes		
New Function as Commerce	16	13,3%
New Function as House	26	21,7%
New Function as Museum	1	0,8%
New Function as Library	1	0,8%
Newly Uninhabited	76	63,3%
	120	100%

Figure 46. Number and percentage of traditional buildings that had functional changes

2 (2%) of these 120 buildings had commercial functions and changed into houses where 8 (7%) of them were houses started to be used for commercial purposes. 34 (28%) buildings out of 120 were empty in 2008 and started to be used for different functions in 2018 where 76 (63%) of them were occupied in 2008 and uninhabited in 2018. 24 (71%) of the 34 newly inhabited buildings were used as houses and 8 (24%) were used for commercial purposes. 1 (3%) of these buildings were used as museum and 1 (3%) as library.

Out of the 658 traditional buildings, 538 (82%) have preserved their functions from 2008 to 2018. Within these buildings, 441 (82%) were houses, 70 (13%) were uninhabited, 21 (3,9%) were commercial buildings, 5 (1%) were fountains and 1 (0,1%) was a mosque.

4.1.3. Social Aspects of 2008 & 2018

As stated before, inscription of a site in WHL increases the public attention to a heritage site. This attention can sometimes generate discontinuity of inhabitants due

to increased change in ownership. Origin of residents in traditional buildings can change and number of foreigners in the region can increase.

In the course of this thesis, it was not possible to conduct interviews with the residents of all the studied building to document the origin of inhabitants. In the determination of change in ownership, only the data retrieved from the Directorate of Land Registry were used. As the WHL inscription was finalized in 2014, purchase records from that date until today was used to analyze the change in ownership.

When the collected data was analyzed, it is seen that ownership has changed in 178 (13%) buildings of all the 1398 buildings present in the study area. Out of these 178 buildings, 135 were studied buildings, constituting 16% of the 857 studied buildings. Within the buildings that are not studied through the site survey, 43 (8%) out of the 541 buildings had changed ownership.

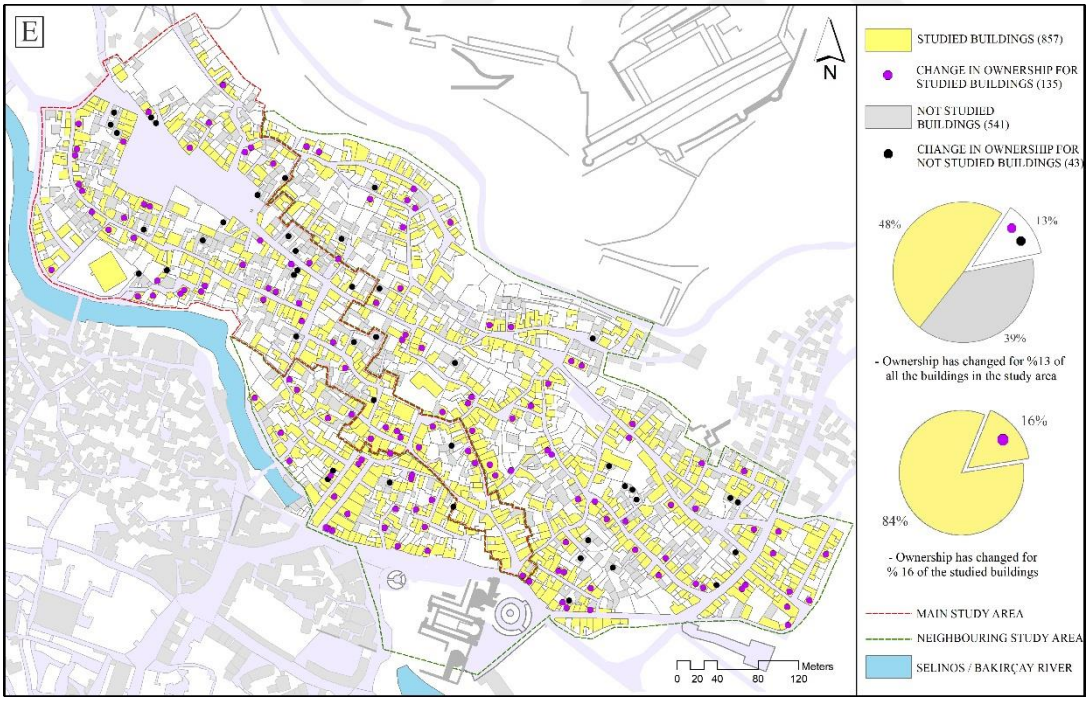


Figure 47. Map showing the change in ownership for all the buildings in the study area

Change in Ownership			
Studied Buildings		857	
●	Change in Ownership For Studied Buildings	**135**	16% of studied buildings 10% of all buildings
Not Studied Buildings		541	
●	Change in Ownership For Not Studied Buildings	**43**	8% of not studied buildings 3% of all buildings
Total Number of Buildings		1398	
Total Number of Change in Ownership		**178**	13% of all buildings

Figure 48. Number and percentage of buildings which had ownership changes

When buildings with ownership changes were analyzed according to their category, it is seen that 101 (75%) out of the 135 studied buildings were traditional buildings and 34 (25%) were new buildings. This evaluation shows that ownership changes are mostly seen in traditional buildings.

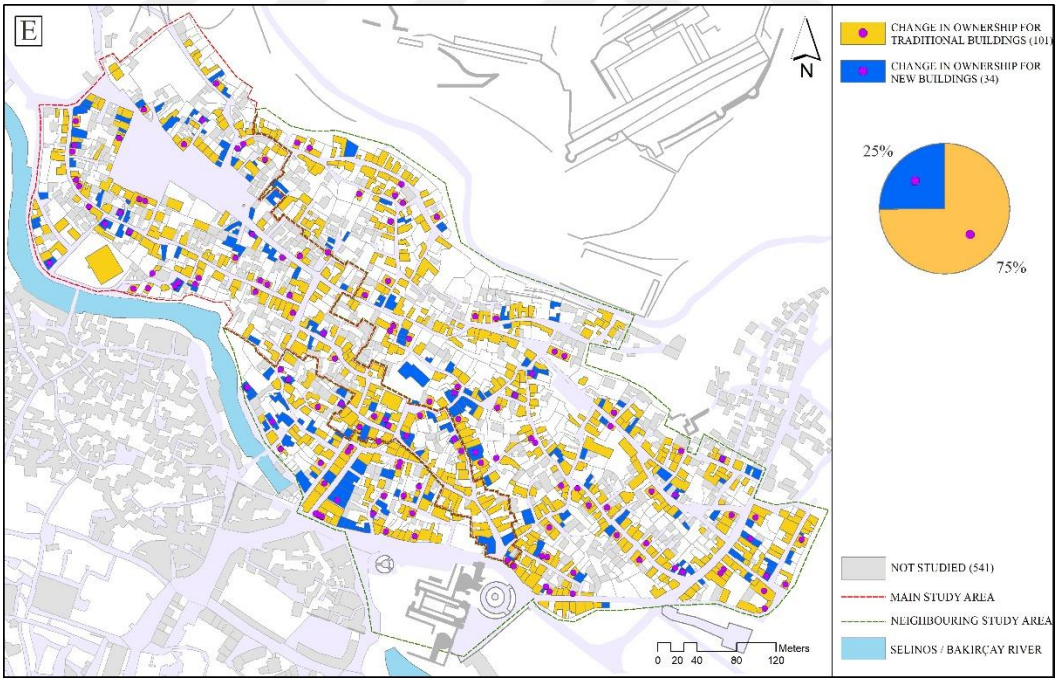


Figure 49. Evaluation of change in ownership with the distinction of traditional and new building

4.1.4. Economic Aspects of 2008 & 2018

As mentioned in previous chapters, changes in physical, functional and social aspects of a heritage place are mostly affected by changes in tourism activities right before and after WHL inscription. Increased attraction to the site after the inscription generally increases the number of visitors which than generates an economical gain for the local authorities and residents with the changes in product and property prices. Also new commercial facilities used for tourism purposes are often generated to provide for the needs of visitors. Therefore, changes in tourism activities for Bergama was studied in order to understand the effects of WHL inscription on the economic aspects of heritage places.

Changes in the number of visitors in heritage places are considered the main outcome of inscription. To understand the degree of change in visitation for Bergama, number of visitors before and after the inscription were studied and evaluated. In the process of gathering the data, archival documents of TUIK, ETIK[20] and BERTO[21] were investigated and a table showing the number of native and foreign visitors in Bergama between 2008 and 2018 was created. As the Acropolis, Asclepion, Red Hall and Bergama Museum are the main visitation areas in Bergama, number of visitors coming to these locations are considered as the main data for the calculation of total visitor numbers.

As stated before, Bergama holds the 18% of visitors coming to Izmir today and has an important place in İzmir's tourism potential. When the number of visitors before the inscription was analyzed, it is seen that there was a total of 377.729 visitors visited Bergama in 2008. Between 2008 and 2011 and the rate of native visitors seems to be increased each year, where the rate of foreign visitors has no significant change and the number of visitors in 2011 was reached to 508.582. After 2011, number of both native and foreign visitors started to decline until 2014 and the total number of visitors

[20] ETIK refers to *"Ege Turistik İşletmeler ve Konaklamalar Birliği"*
[21] BERTO refers to *"Bergama Ticaret Odası"*

was 416.066 upon inscription. After the inscription of Bergama, number of native visitors started to increase but the decline in foreign visitors continued. In 2016, there was a rapid decrease in the number of both foreign and native visitors into 169.701. After that, visitor number started to increased and reached to 290.620 in 2018.

Table 6. List showing the number of native and foreign visitors in Bergama between 2008 and 2018.

Year	Native Visitors	Foreign Visitors	Total Number of Visitor
2000	104.956	245.139	350.095
2001	202.606	303909	506.515
2002	127.426	257.719	382.145
2003	81.022	222.421	303.448
2004	91.527	287.305	378.832
2005	89.417	344.825	434.242
2006	78.567	237.652	316.219
2007	70.218	315.312	385.557
2008	**66.691**	**311.038**	**377.729**
2009	59.536	307.298	366.834
2010	66.283	366.336	432.619
2011	120.586	387.996	508.582
2012	107.471	371.237	478.708
2013	93.944	316.274	410.218
2014	**117.412**	**298.654**	**416.066**
2015	116.656	236.174	352.830
2016	98.058	71.643	169.701
2017	110.168	88.876	199.044
2018	**134.481**	**156.139**	**290.620**

When the visitor numbers for Acropolis, Asclepion, Red Hall and Bergama Museum before WHL inscription are investigated in detail, it is seen that the majority of visitors prefer to visit Acropolis and Asclepion where Bergama Museum and the Red Hall holds about the 20% of all the visitors in Bergama.

It was mentioned that, after 2011, the number of visitors started to decrease in Bergama until 2013. According to the collected data, there was a rapid decrease in the

number of visitors for the Red Hall in 2013. This decrease was due to the restriction of visitation in the Red Hall for the conservation activities conducted through the year.

Table 7. List showing the number of visitors for each visitation area in Bergama before inscription

Places / Year	2008	2009	2010	2011	2012	2013
Bergama Museum	17.580	17.410	21.952	25.416	22.433	24.703
Acropolis	229.464	219.593	260.010	291.284	269.707	240.650
Asclepion	108.021	106.077	113.409	154.976	149.119	140.928
Red Hall	22.664	23.754	37.248	36.906	37.449	3.937
Total Visitors	**377.729**	**366.834**	**432.619**	**508.582**	**478.708**	**410.218**

When the number of visitors in all of these locations after the inscription were investigated, the numbers began to decrease after the inscription in 2014 until 2017 and slightly increased in 2018.

Table 8. List showing the number of visitors for each visitation area in Bergama after inscription

Places / Year	2014	2015	2016	2017	2018
Bergama Museum	23.147	26.738	20.457	21.277	19.741
Acropolis	238.757	188.202	92.384	111.214	157.490
Asclepion	131.596	110.268	40.605	49.894	83.624
Red Hall	22.566	27.622	16.255	16.659	29.765
Total Visitors	**416.066**	**352.830**	**169.701**	**199.044**	**290.620**

The number of accommodation units can also change in heritage places after inscription due to the potential of increased visitor numbers. To identify changes in accommodation units in Bergama after inscription, data gathered from BERTO, TUIK and ETIK were listed.

According to this analysis, it is seen that the number of three starred hotels in Bergama did not change between 2008 and 2018 but the number of guesthouses were increased from six to seven. In 2008, there were no boutique hotels in Bergama but it is seen that, 13 boutique hotels were opened until 2018.

Table 9. List showing the number of accommodation units in Bergama and their potential for accommodation in 2008 and 2018.

	Types and Classes of Accomodation Units	Number of Units	Room Number	Bed number
2008	3 Starred Hotel	2	127	258
	Guesthouse	6	89	189
	Total	**8**	**216**	**447**
2018	3 Starred hotel	2	127	258
	Boutique Hotel	13	247	514
	Guesthouse	7	59	133
	Total	**22**	**433**	**905**

Changes in visitation after inscription can also be considered as the main indicator for the changes in the economic aspects of heritage places. New tourism facilities can be generated to supply for the increased visitor numbers and traditional buildings in heritage places, with their large quantities, are generally seen as tools to be used in order to supply this demand.

As the values of WHS's were recognized by the international and national communities, the market value of traditional and new buildings within the limits of the heritage place and its surroundings begin to increase. To assess the change economic features of heritage places, real estate values of the site must be investigated.

The value of unit square meter of the land[22] is used to document the real estate values for the study area throughout this thesis. As this value was used to control the rate of taxes collected from property owners and defined specially for every street, is considered an appropriate tool to determine the changes in the economic value for the built environment of the study area after inscription.

[22] The value of unit square meter of the land is calculated and depending on the economic conditions of the country, location of the property, the social character surrounding the property and according to the supply and demand of the property in the market. This value was generated for each street separately and calculated by the real estate assessment experts chosen by the Municipality (Özçakır, 2018).

The value of unit square meter of the land is calculated in every four years and revisions in this value between these years are determined by the Ministry of Finance. (Özçakır, 2018) Therefore, first the years which the changes in this value was identified by investigating the archival documents of the Municipality between 2008 and 2018. According to this investigation, the value of unit square meter of the land changed in Bergama in the years of 2010, 2014 and 2018. Secondly, by the determination of these years, the value calculated for each street in the study area were identified and listed.

According to the literature survey conducted on the determination of changes in the value of unit square meter of the land, it is seen that in order to generate viable data, the prices of the unit square meter of the land must be calculated in USD. Therefore, prices collected from the Municipality were recalculated with the yearly exchange of dollar.

As mentioned before, these prices were defined for each street separately. In order to understand the changes in the prices of the unit square meter of the land for studied buildings, the generated data streetwise was implemented on each building. To do so, information on mailing addresses for each studied building was gathered from the GIS created by the Municipality of Izmir.

Table 10. List of the value of unit square meter of the land for the streets in the study area in USD

Street Name	2008 1 USD = 1,3 TL	2010 1 USD = 1,5 TL	2014 1 USD = 2,19 TL	2018 1 USD = 4,835 TL
1. Kale Sokak	11 USD	13 USD	12 USD	9 USD
2. Kale Sokak	11 USD	13 USD	12 USD	9 USD
Taksim Aralığı Sokak	11 USD	13 USD	12 USD	9 USD
2. Turgut Çıkmazı Sokak	11 USD	13 USD	12 USD	9 USD
Taksim Çıkmazı Sokak	11 USD	13 USD	12 USD	9 USD
2. Taksim Çıkmazı Sokak	11 USD	13 USD	12 USD	9 USD
1. Taksim Çıkmazı Sokak	11 USD	13 USD	12 USD	9 USD
Yeniçeşme Sokak	11 USD	13 USD	12 USD	9 USD
Turgut Sokak	11 USD	13 USD	12 USD	9 USD
Mahmut Şevket Paşa Çıkmazı Sokak	11 USD	13 USD	12 USD	9 USD
Kılıçali Sokak	11 USD	13 USD	12 USD	9 USD
Kara Halil Sokak	11 USD	13 USD	12 USD	9 USD
Şazelli Sokak	11 USD	13 USD	12 USD	9 USD
Küçük Alan Sokak	11 USD	13 USD	12 USD	9 USD
Zafer Sokak	11 USD	13 USD	12 USD	9 USD
Tufan Sokak	11 USD	13 USD	12 USD	9 USD
Turan Sokak	11 USD	13 USD	12 USD	9 USD
Kültür Sokak	11 USD	13 USD	12 USD	9 USD
2. Kurtuluş Çıkmazı Sokak	11 USD	13 USD	12 USD	9 USD
Alp Çıkmazı Sokak	11 USD	13 USD	12 USD	9 USD
Alp Sokak	11 USD	13 USD	15 USD	11 USD
Yeni Çıkmazı Sokak	11 USD	13 USD	12 USD	9 USD
Şark Çıkmazı Sokak	11 USD	13 USD	12 USD	9 USD
Arifbey Sokak	11 USD	13 USD	12 USD	9 USD
Arifbey Çıkmazı Sokak	11 USD	13 USD	12 USD	9 USD
Seda Sokak	11 USD	13 USD	12 USD	9 USD
Asya Sokak	11 USD	13 USD	12 USD	9 USD
Tabak Köprü Çıkmazı Sokak	11 USD	13 USD	12 USD	9 USD
Kale Çeşme Sokak	11 USD	13 USD	12 USD	9 USD
Sıtkiye Sokak	11 USD	13 USD	12 USD	9 USD
Kılıçarslan Sokak	11 USD	13 USD	12 USD	9 USD
Kale Sokak	11 USD	13 USD	12 USD	9 USD
Tevkifiye Sokak	12 USD	13 USD	12 USD	9 USD
Dolaplı Bahçe Sokak	12 USD	14 USD	13 USD	10 USD
Gürbüz Sokak	11 USD	17 USD	15 USD	11 USD
Kurtuluş Çıkmazı Sokak	11 USD	17 USD	15 USD	11 USD
Gündoğdu Sokak	11 USD	17 USD	15 USD	11 USD
Mahmut Şevket Paşa Caddesi (After 16)	11 USD	17 USD	15 USD	11 USD
Dede Sokak (After Alp Sokak)	12 USD	17 USD	15 USD	11 USD
Kayalık Sokak	15 USD	17 USD	15 USD	11 USD
Kestelli Sokak	15 USD	17 USD	15 USD	11 USD
Taksim Caddesi	15 USD	17 USD	15 USD	11 USD
Kalaycı Sokak	15 USD	17 USD	15 USD	11 USD
Kadı Çıkmazı Sokak	15 USD	17 USD	15 USD	11 USD
Soğandere Sokak	15 USD	17 USD	15 USD	11 USD
Kocaalan Sokak	15 USD	17 USD	15 USD	11 USD
Ulu Camii Yokuşu Sokak	15 USD	17 USD	15 USD	11 USD

Table 11. List of the value of unit square meter of the land for the streets in the study area in USD (continued)

Vakıfbahçe Sokak	15 USD	17 USD	15 USD	11 USD
Beyazıt Çıkmazı Sokak	15 USD	17 USD	15 USD	11 USD
Menekşe Çıkmazı Sokak	15 USD	17 USD	15 USD	11 USD
Kadı Sokak	15 USD	17 USD	15 USD	11 USD
Mahmut Şevket Paşa Caddesi (Before 16)	15 USD	20 USD	18 USD	14 USD
Dündar Sokak	15 USD	20 USD	18 USD	14 USD
Tabak Köprü Caddesi	15 USD	20 USD	18 USD	14 USD
Parmakbatıran Caddesi	22 USD	24 USD	21 USD	16 USD
Saban Pazarı Sokak	22 USD	27 USD	24 USD	18 USD
Eski Kozak Caddesi	22 USD	27 USD	24 USD	18 USD
Türkeli Sokak	22 USD	27 USD	24 USD	18 USD
1. Türkeli Sokak	22 USD	27 USD	24 USD	18 USD
Ittihat Terakki Sokak	22 USD	27 USD	24 USD	18 USD
Dede Sokak (Before Alp Sokak)	18 USD	30 USD	27 USD	18 USD
Tabak Çıkmazı Sokak	23 USD	30 USD	27 USD	21 USD
Abacıhan Sokak	25 USD	33 USD	30 USD	23 USD
Kınık Caddesi	32 USD	33 USD	30 USD	23 USD

After the data on the prices of the unit square meter of the land for studied buildings were included in the geographical information system created by the author, real estate values for studied buildings in 2008, 2010, 2014 and 2018 were shown on individual maps using a gradual legend. Later, changes in the real estate values were investigated between 2010 & 2014 and 2014 & 2018 and mapped. In this analysis, changes between 2008 and 2010 were not included because it could generate false result where revisions in prices were done in four-year periods.

When the generated maps were evaluated, it is seen that the real estate values were mostly decreased within the study area between 2010 and 2014. Only in Alp Street, located in the middle of the study area, the real estate value seems to be increased 15%. Between 2014 and 2018, the real estate value for the whole study area was also decreased. The minimal decrease is seen in areas close to the Kozak street and the commercial center. For the areas located away from the commercial areas, real estate values had a slight decrease between 2010 and 2014 but their values seem to be decreased substantially between 2014 and 2018.

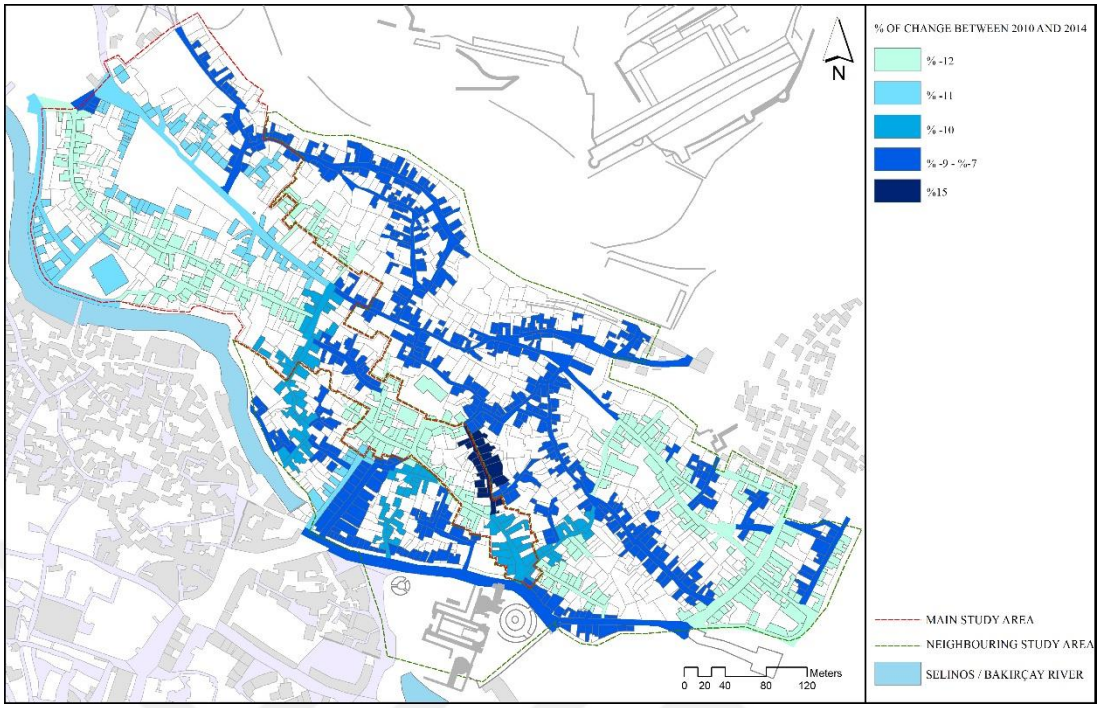


Figure 50. Percentage of change in real estate values between 2010 and 2014

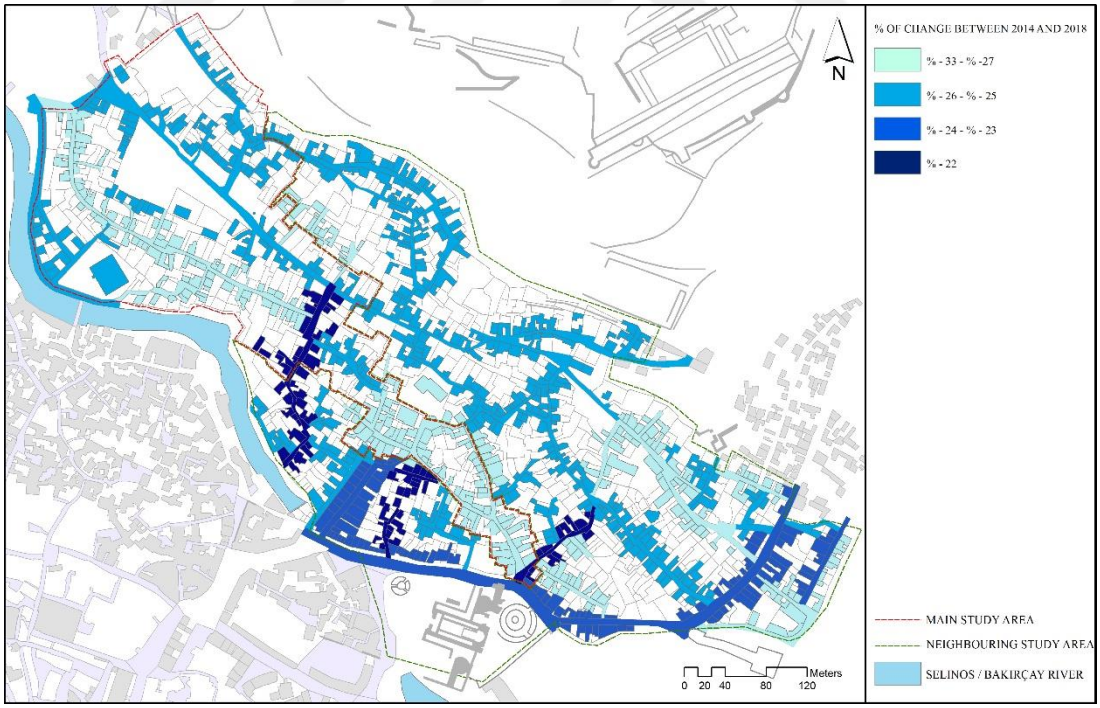


Figure 51. Percentage of change in real estate values between 2014 and 2018

4.2. An Overall Assessment of the Changes in Bergama

To understand changes in the study area after WHL inscription, different indicators investigated throughout this study were superimposed. Data generated from the superimposition of these indicators were used to evaluate changes in the physical, functional and socio-economic features of the study area and point areas where change was more intense.

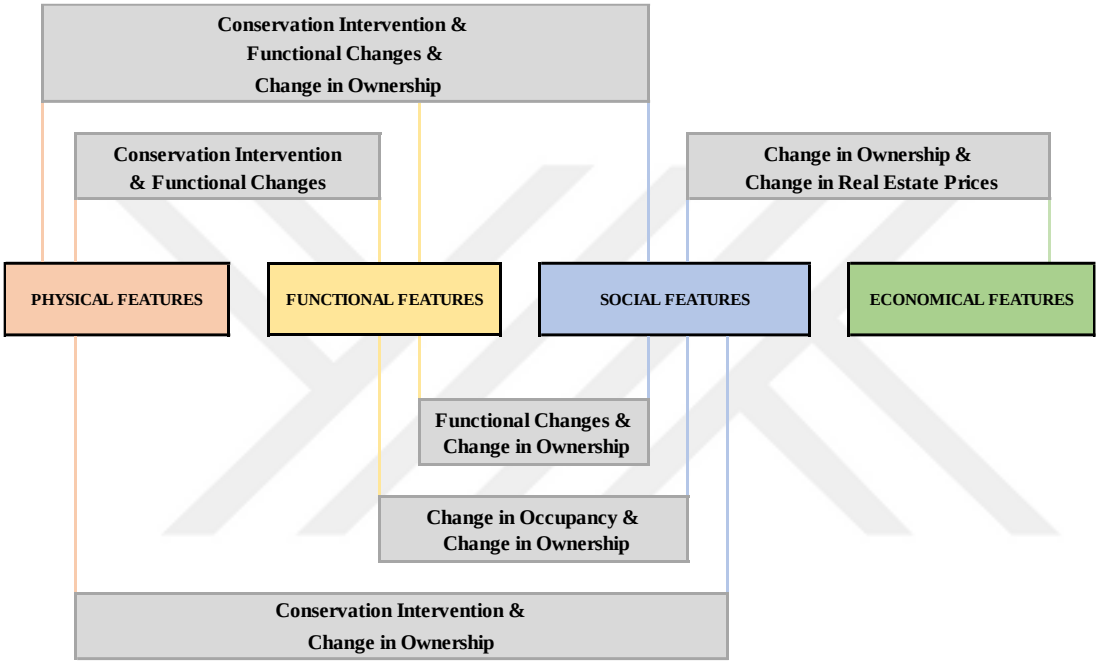


Figure 52. Method used to superimpose different indicators for evaluating changes

Changes in Occupancy & Change in Ownership

Literature survey on the effects of inscription shows that, with the increased international and national recognition after the inscription the number of building purchases also increases. This increase causes changes in the type and rate of occupancy in heritage places To understand the effects of inscription on occupancy and ownership on Bergama, these two indicators were superimposed and evaluated.

According to the analysis, there were 120 buildings in the study area that had changes in occupancy. Out of these 120 buildings, 39 (33%) were occupied empty buildings and 8 (21%) of them had changes in ownership. There were 81 (68%) newly not occupied buildings out of the 120 buildings which had occupancy changes. 9 (11%) of these 81 buildings also had ownership changes. In total, 17 (14%) out of 120 buildings that had changes in occupancy, also had ownership changes between 2014 and 2018. This analysis shows that, ownership changes did not fully affect the rate of occupancy changes for the study area.

Change in Occupancy				Change in Ownership		
Occupied Empty Buildings	39	33%	&	8	47%	21%
Newly Not Occupied Buildings	81	68%		9	53%	11%
Total Change in Occupancy	**120**	**100%**		**17**	**100%**	**14%**

Figure 53. Number and percentage of buildings which had changes in occupancy and changes in ownership

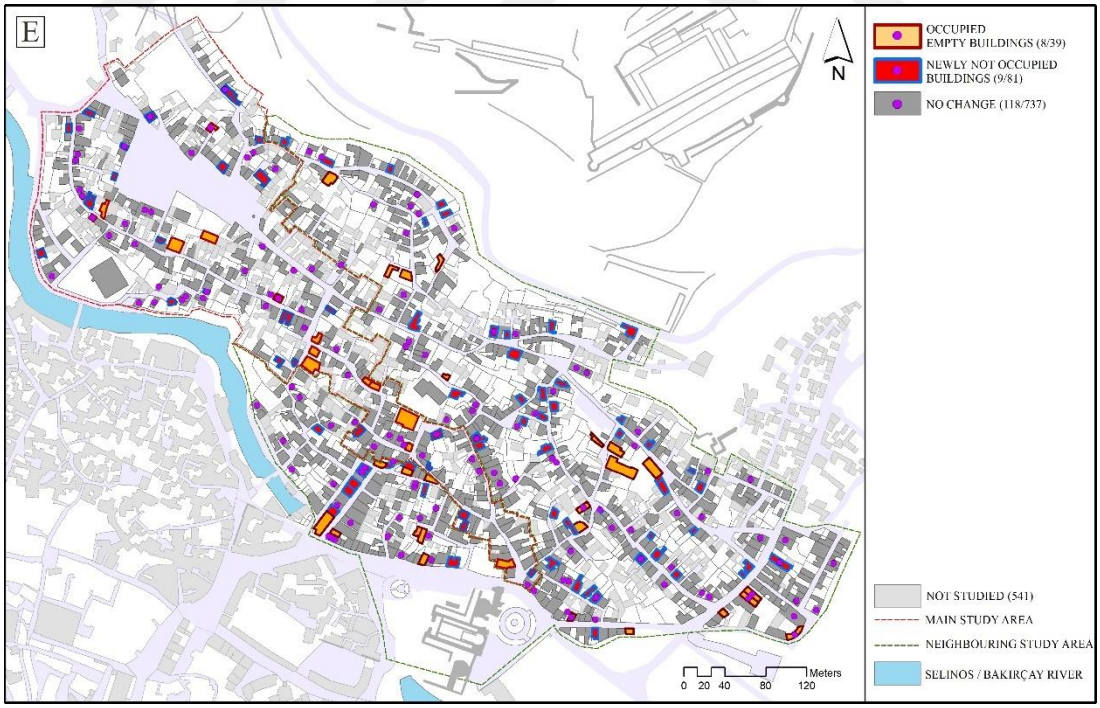


Figure 54. Evaluation of changes in occupancy and ownership change

Functional Changes & Change in Ownership

Functional changes are seen in every heritage site regardless of their inscription to the WHL. These functional changes must be investigated together with the changes in their ownership in order to understand if functional changes were affected by the changing rate of property purchases.

To do so, purchase records gathered from the Directorate of Land Registry and dated between 2014 and 2018 were used to identify changes in ownership for the buildings in the study area. Functional changes in studied buildings between 2008 and 2018 then were evaluated together with the changes in ownership to identify the rate of ownership changes for buildings which had functional changes.

First, these indicators were evaluated for all the studied buildings and it was seen that, out of 134 buildings that had functional changes, 25 (19%) also had change in ownership. Within the 25 buildings that had ownership changes, 12 (48%) occurred in newly uninhabited buildings, 8 (32%) in newly inhabited buildings, 4 (16%) in residential buildings which started to be used for commercial purposes and 1 (4%) in commercial buildings which started to be used for residential purposes. For 723 buildings that had no functional changes, 110 (15%) buildings also had change in ownership.

Functional Changes of All Studied Buildings			Change in Ownership		
Change in Function	**134**		**25**	**19%**	**19%**
Commercial to House	5		1	4%	20%
House to Commercial	9		4	16%	44%
Inhabited Empty Buildings	39		8	32%	21%
Inhabited as House	28	&	7	88%	25%
Inhabited as Commerce	9		1	13%	11%
Inhabited as Museum	1		0	0%	0%
Inhabited as Library	1		0	0%	0%
Newly Uninhabited	81		12	48%	15%
No Change in Function	**723**		**110**	**81%**	**15%**
	857		**135**	**100%**	

Figure 55. Number and percentage of all studied buildings which had functional changes and change in ownership

When the type of functional changes was investigated together with ownership changes, the most significant rate of change occurred in residential buildings that were started to be used for commercial purposes. Out of these 9 buildings, 4 (44%) had ownership changes. For newly inhabited buildings, 8 (21%) buildings out of 39 had ownership changes. Within 5 commercial buildings which were started to be used for residential purposes, 1 (20%) building had change in ownership. The rate of change for newly uninhabited buildings seems to have less ownership changes according to other buildings by 12 (15%) buildings out of 81.

Later, data collected from traditional buildings were also evaluated for the same purpose. According to this analysis, 21 (21%) out of 120 traditional buildings which had functional changes also had changes in ownership. For 658 traditional buildings that had no functional changes, 80 (15%) buildings had change in ownership.

Functional Changes For Traditional Buildings			Change in Ownership		
Change in Function	**120**		**21**	**21%**	**18%**
Commercial to House	2		0	0%	0%
House to Commercial	8		4	19%	50%
Inhabited Empty Buildings	34		7	33%	21%
Inhabited as House	24	&	6	86%	25%
Inhabited as Commerce	8		1	14%	13%
Inhabited as Museum	1		0	0%	0%
Inhabited as Library	1		0	0%	0%
Newly Uninhabited	76		10	48%	13%
No Change in Function	**538**		**80**	**79%**	**15%**
	658		**101**	**100%**	

Figure 56. Number and percentage of traditional buildings which had functional changes and change in ownership

The analyzed data indicates that most of the traditional residential buildings purchased after the inscription were refunctioned for commercial purposes. Even the majority of traditional buildings were newly uninhabited after 2008, only 13% of these buildings had ownership changes after inscription. This shows that, most of the traditional buildings in the study area were abandoned after being purchased and not refunctioned.

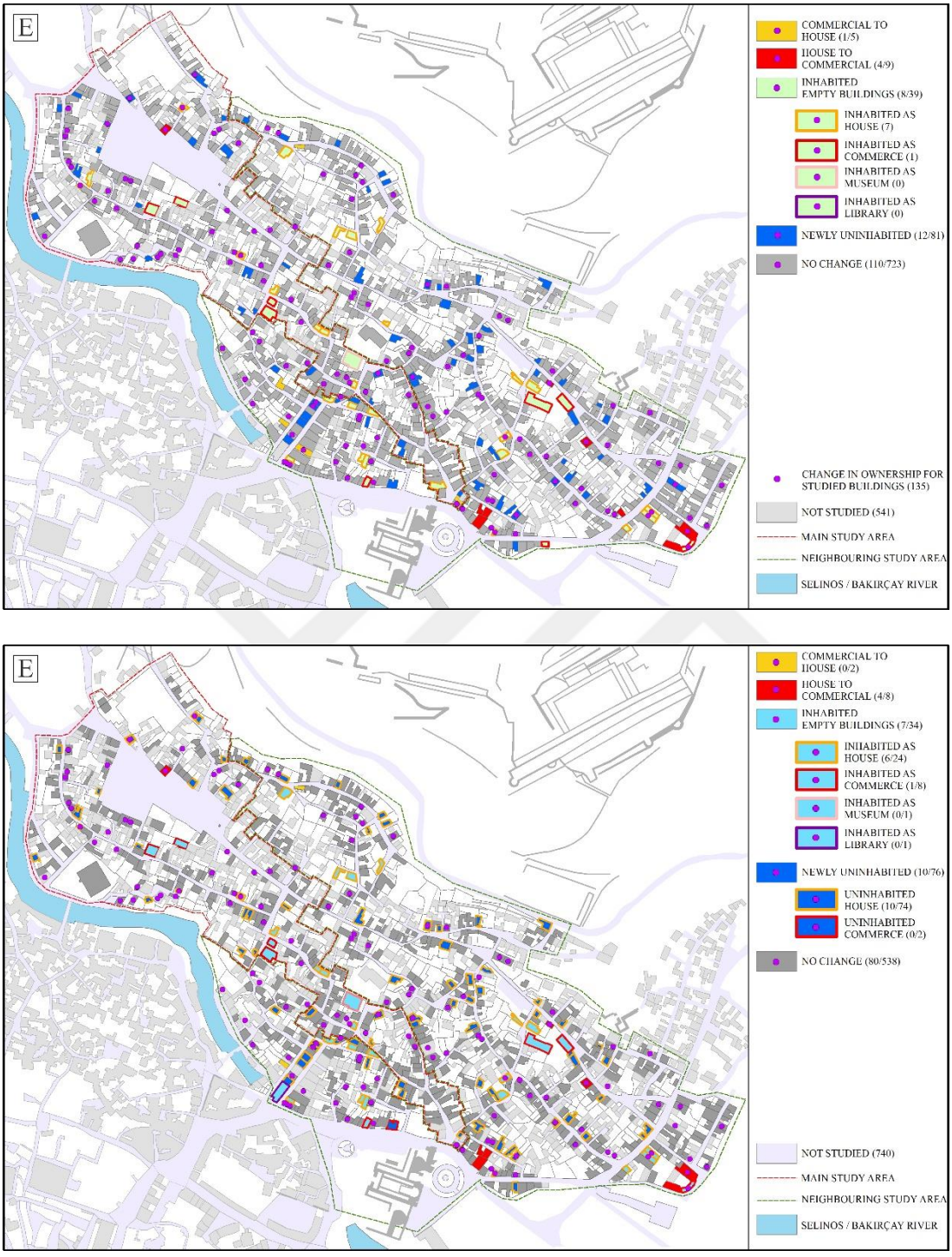


Figure 57. Evaluation of functional changes and ownership relationship for all buildings (above) and traditional buildings (below)

Conservation Intervention & Change in Ownership

Type and density of conservation activities conducted on traditional buildings give us clues about the tendencies of the inhabitants of these buildings and the local authorities on preserving the cultural identity for their site. With the increased international and national attention after inscription, purchase rates in heritage places can increase and can lead to uncontrolled conservation activities, which can damage the cultural identity of the site. Therefore, traditional buildings in the study area that had undergone conservation activities were investigated together with the changes in their ownership to understand if these ownership changes after inscription affected the physical conditions of traditional buildings.

The conducted analysis reveals that, majority of the change in ownership is seen in restored buildings with 14 (34%) out of the 41 restored traditional buildings. Extensive repaired buildings also had a high ownership change with 3 (21%) out of 14 buildings. For 115 traditional buildings which had simple repair, only 15 (13%) had ownership changes.

Conservation Interventions				Change in Ownership			
Simple Repair		115	17%	15	14%	**13%**	Percentage of change in ownership for buildings having conservation intervention
Extensive Repair		14	2%	3	3%	**21%**	
Restored		41	6%	14	13%	**34%**	
No Intervention		488	74%	78	71%	**16%**	
	In Same Physical Condition	268	41%	40	51%	**15%**	
	In Worse Physical Condition	220	33%	38	49%	**17%**	
		658	**100%**	**110**	**100%**	**17%**	

Figure 58. Number and percentage of traditional buildings which had conservation intervention and change in ownership

This evaluation shows that the rate of conservation activities is low in the study area. Out of the 170 conserved traditional buildings, only 32 (19%) had changed ownership. Where most of the conserved buildings had simple repair, only 15 (13%) of these 115

buildings had ownership changes. This result points that conservation activities in the study are did not rapidly increased due to ownership change after the WHL inscription. On the contrary, 220 (33%) traditional buildings are in worse condition than they were in 2008. Even 38 (17%) of these 220 buildings had change in ownership, they are still deteriorating.

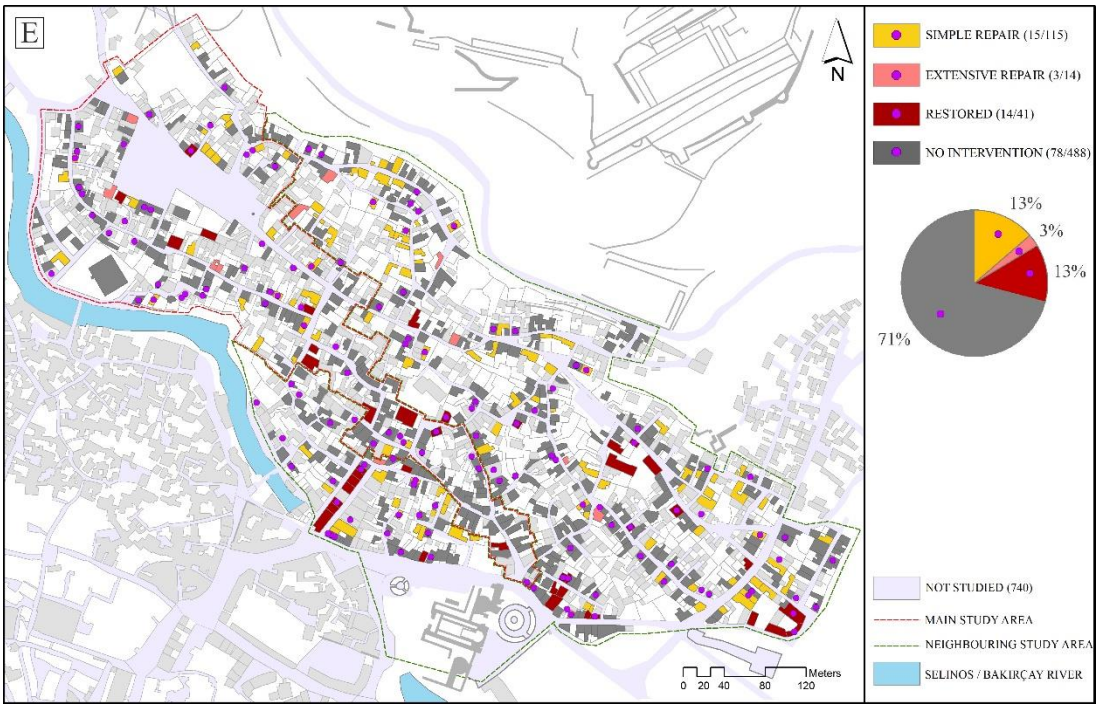


Figure 59. Evaluation of conservation intervention and ownership relationship for traditional buildings

Conservation Intervention & Functional Changes

In the process of functional changes in traditional buildings, some interventions can be conducted depending on the degree of change. Different type of interventions can be generated on traditional buildings when they were refunctioned for commercial or residential purposes. Improper interventions conducted on these buildings can damage

the cultural identity of heritage places. So, understanding type and degree of intervention on traditional buildings as the outcome of functional changes is crucial for identifying the effects of inscription. Therefore, the purpose of this analysis is to evaluate the type and degree of conservation activities for buildings that had functional changes.

According to the conducted analysis, 45 (26%) buildings out of 170 traditional buildings that had undergone conservation activities also had functional changes. The majority of the functional changes have occurred in 27 (66%) out of 41 restored buildings. For traditional buildings which had extensive repair, 5 (36%) out of 14 had functional changes. The minimal rate of functional changes was seen in buildings which had simple repair with 13 (11%) out of 115 traditional buildings.

Conservation Intervention				**Functional Changes**		
Simple Repair	115	68%		13	29%	**11%**
Extensive Repair	14	8%	&	5	11%	**36%**
Restored	41	24%		27	60%	**66%**
Total	**170**	**100%**		**45**	**100%**	**26%**

		Conservation Intervention					
		Simple Repair	%	Extensive Repair	%	Restored	%
Functional Changes	Changed Function	**13**	**100%**	**5**	**100%**	**27**	**100%**
	As Commercial Use	0	0%	0	0%	16	59%
	As Residential Use	12	92%	5	100%	2	7%
	As Uninhabited	1	8%	0	0%	7	26%
	As Museum	0	0%	0	0%	1	4%
	As Library	0	0%	0	0%	1	4%

Figure 60. Number and percentage of traditional buildings which had conservation intervention and functional changes

When the type of functional changes for conserved buildings were analyzed, it was seen that 12 (92%) of 13 buildings that had simple repair was refunctioned for residential purposes and 1 (8%) was newly uninhabited. All the buildings that had extensive repair was also refunctioned for residential purposes. Within 27 buildings that were restored, 16 (59%) were refunctioned for commercial purposes, 7 (26%) was uninhabited, 2 (7%) was refunctioned for commercial purposes, 1 (4%) as a museum and 1 (4%) as a library.

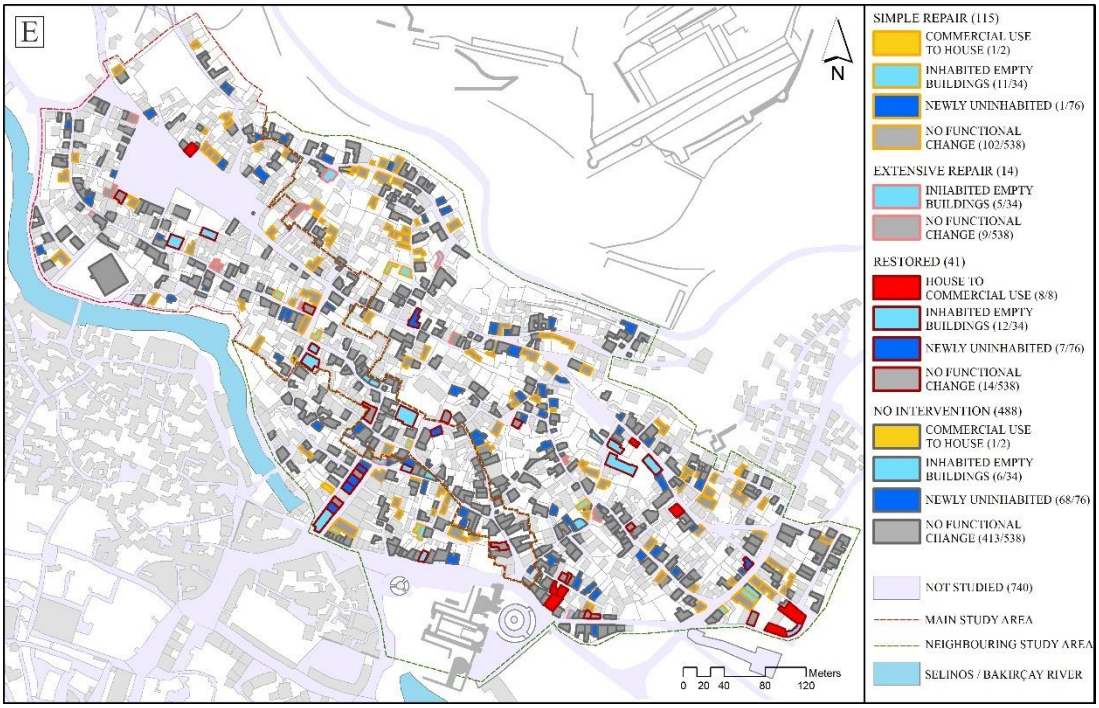


Figure 61. Evaluation of conservation intervention and functional changes for traditional buildings

On the light of this analysis, simple and extensive repair is commonly seen in buildings that were newly inhabited or refunctioned for residential purposes. For buildings that were restored, most of the buildings were newly inhabited or refunctioned for commercial purposes. Also, the analysis indicates that 7 (26%) of the 27 restored buildings were uninhabited after restoration.

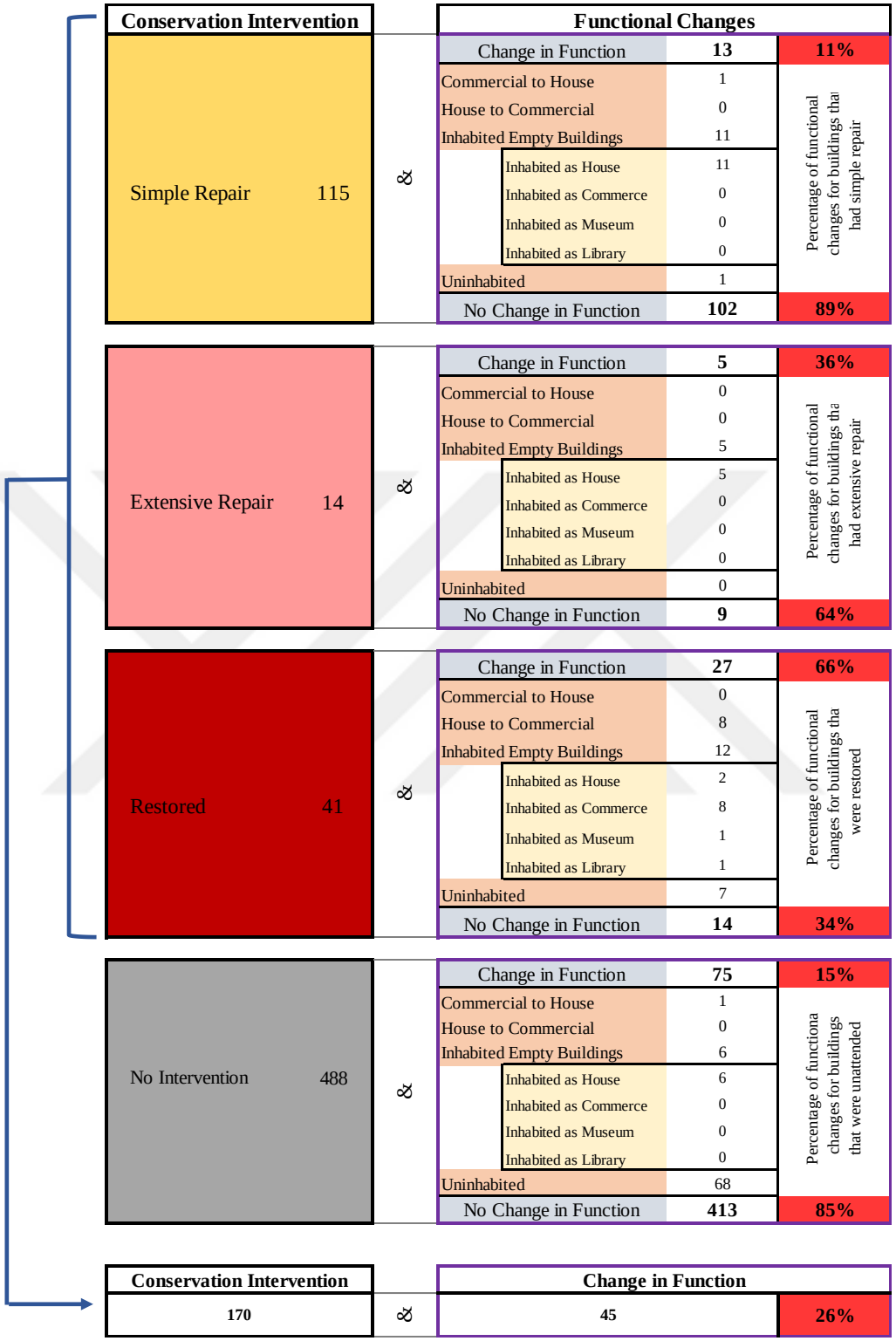


Figure 62. Number and percentage of conservation intervention and functional changes for traditional buildings listed with all functional changes

Conservation Intervention & Functional Changes & Change in Ownership

In order to understand the rate of ownership changes in buildings, which had conservation activities and functional changes, these three indicators were superimposed and results were evaluated.

Conservation Intervention		&	Change in Function	&	Change in Ownership
Simple Repair	115		13		3
Extensive Repair	14	&	5	&	2
Restored	41		27		7
Total	**170**		**45**		**12**

Figure 63. Number of buildings which had conservation intervention, change in function and change in ownership

To do so, buildings that had simple and extensive repair were grouped as repaired buildings and the evaluation was conducted accordingly. The evaluated data shows that, 18 (14%) out of 129 repaired traditional buildings had functional changes. Out of these 18 buildings, only 5 (28%) buildings had change in ownership

Changed Functions of Repaired Buildings					&	Change in Ownership				
	Simple Repair	Extensive Repair	TOTAL			Simple Repair	Extensive Repair	TOTAL		
Commercial Use	0	0	0	0%		0	0	0	0%	**0%**
Residential Use	12	5	17	13%		3	2	5	28%	**29%**
Newly Uninhabited	1	0	1	1%		0	0	0	0%	**0%**
	13	5	**18**	**14%**		3	2	**5**	**28%**	**28%**
No Change in Functions of Repaired Buildings						**Change in Ownership**				
No Change	102	9	**111**	**86%**		12	1	**13**	**72%**	**12%**
Total Repaired Buildings	**115**	**14**	**129**	**100%**		**15**	**3**	**18**	**100%**	**14%**

Figure 64. Number and percentage of repaired buildings which had functional changes and change in ownership

When the rate of functional changes for restored buildings were evaluated, the data showed that 27 (66%) out of 41 restored traditional buildings had functional changes. Out of these 27 buildings, only 7 (26%) also had ownership changes.

Changed Functions of Restored Buildings				Change in Ownership		
Commercial Use	16	39%		5	36%	**31%**
Residential Use	2	5%		0	0%	**0%**
Uninhabited	7	17%		2	14%	**29%**
Used as Museum	1	2%	&	0	0%	**0%**
Used as Library	1	2%		0	0%	**0%**
	27	**66%**		**7**	**50%**	**26%**
No Change in Functions of Restored Buildings				**Change in Ownership**		
No Change	14	**34%**		7	**50%**	**50%**
Total Restored Buildings	**41**	**100%**		**14**	**100%**	**34%**

Figure 65. Number and percentage of restored buildings which had functional changes and change in ownership

According to the conducted analysis, it was seen that the rate of ownership change for repaired and restored buildings which had functional changes are similar. As the data of ownership changes before 2014 could not be obtained, it was understood that, most of the repaired and restored buildings which had functional changes preserved their original owners from 2014 to 2018.

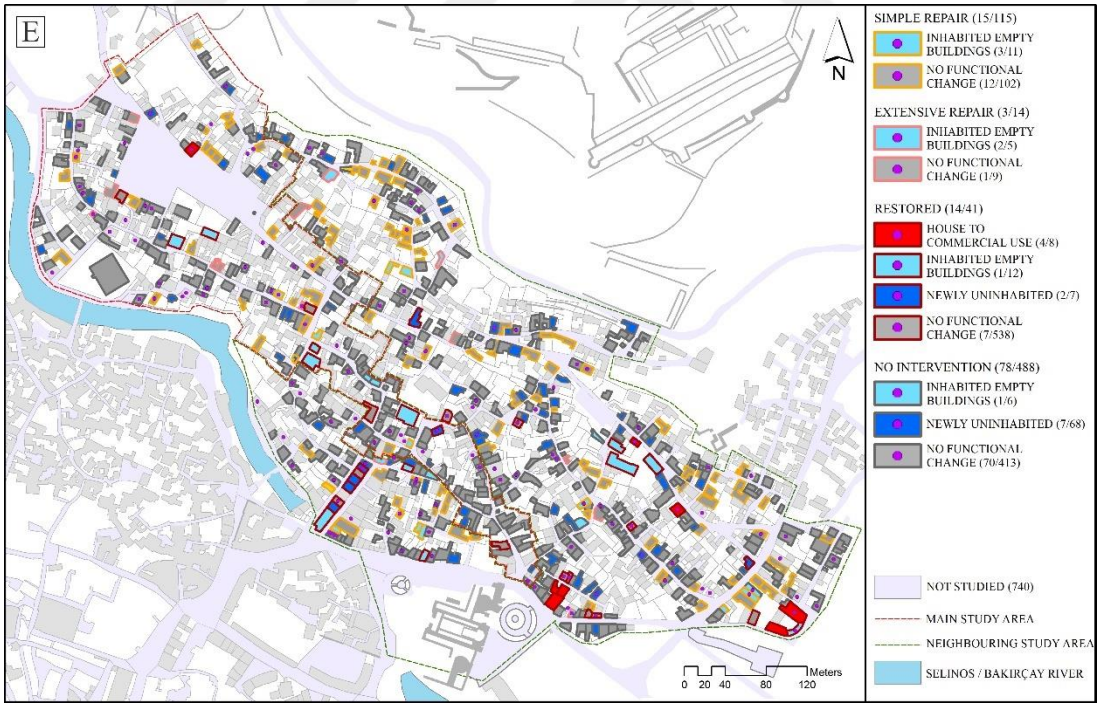


Figure 66. Evaluation of conservation intervention, functional changes and change in ownership for traditional buildings

Conservation Intervention		&	Functional Changes			&	Change in Ownership	
Simple Repair	115	&	Change in Function	13	11%	&	3	23%
			Commercial to House	1	Percentage of functional changes for buildings that had simple repair		0	Percentage of change in ownership for buildings that had simple repair and functional change
			House to Commercial	0			0	
			Inhabited Empty Buildings	11			3	
			Inhabited as House	11			3	
			Inhabited as Commerce	0			0	
			Inhabited as Museum	0			0	
			Inhabited as Library	0			0	
			Uninhabited	1			0	
			No Change in Function	102	89%		12	12%
Extensive Repair	14	&	Change in Function	5	36%	&	2	40%
			Commercial to House	0	Percentage of functional changes for buildings that had extensive repair		0	Percentage of change in ownership for buildings that had extensive repair and functional change
			House to Commercial	0			0	
			Inhabited Empty Buildings	5			2	
			Inhabited as House	5			2	
			Inhabited as Commerce	0			0	
			Inhabited as Museum	0			0	
			Inhabited as Library	0			0	
			Uninhabited	0			0	
			No Change in Function	9	64%		1	11%
Restored	41	&	Change in Function	27	66%	&	7	26%
			Commercial to House	0	Percentage of functional changes for buildings that were restored		0	Percentage of change in ownership for buildings that were restored and had functional change
			House to Commercial	8			4	
			Inhabited Empty Buildings	12			1	
			Inhabited as House	2			0	
			Inhabited as Commerce	8			1	
			Inhabited as Museum	1			0	
			Inhabited as Library	1			0	
			Uninhabited	7			2	
			No Change in Function	14	34%		7	50%
No Intervention	488	&	Change in Function	75	15%	&	8	11%
			Commercial to House	1	Percentage of functional changes for buildings that were unattended		0	Percentage of change in ownership for buildings that had were unatended and had functional change
			House to Commercial	0			0	
			Inhabited Empty Buildings	6			1	
			Inhabited as House	6			1	
			Inhabited as Commerce	0			0	
			Inhabited as Museum	0			0	
			Inhabited as Library	0			0	
			Uninhabited	68			7	
			No Change in Function	413	85%		70	17%

Figure 67. Number and percentage of conservation intervention, functional changes and change in ownership for traditional buildings listed with all functional changes

Changes in Real Estate Values & Change in Ownership

When changes in economic aspects of the study area were evaluated, it was seen that real estate values were decreased after the inscription. In order to understand whether

this decrease affected the ownership changes for the study area, these two indicators were superimposed and evaluated. Where the data used to identify changes in ownership was present after 2014, changes in real estate values between 2014 and 2018 were used for this evaluation. There was a total of 135 buildings in the study area that had ownership changes between 2014 and 2018. According to the conducted analyses, out of these 135 buildings 49 (36%) ownership changes occurred in buildings which had decreased real estate values between -33% and -27%. For 58 (43%) buildings, ownership changes occurred in buildings which had decreased real estate values between -26% and -25%. The minimum change in ownership occurred in 8 (6%) buildings that had decreased real estate values of -22%.

This analysis shows that, ownership changes occurred mostly in buildings that had more decrease in their real estate values, which were located away from the commercial center.

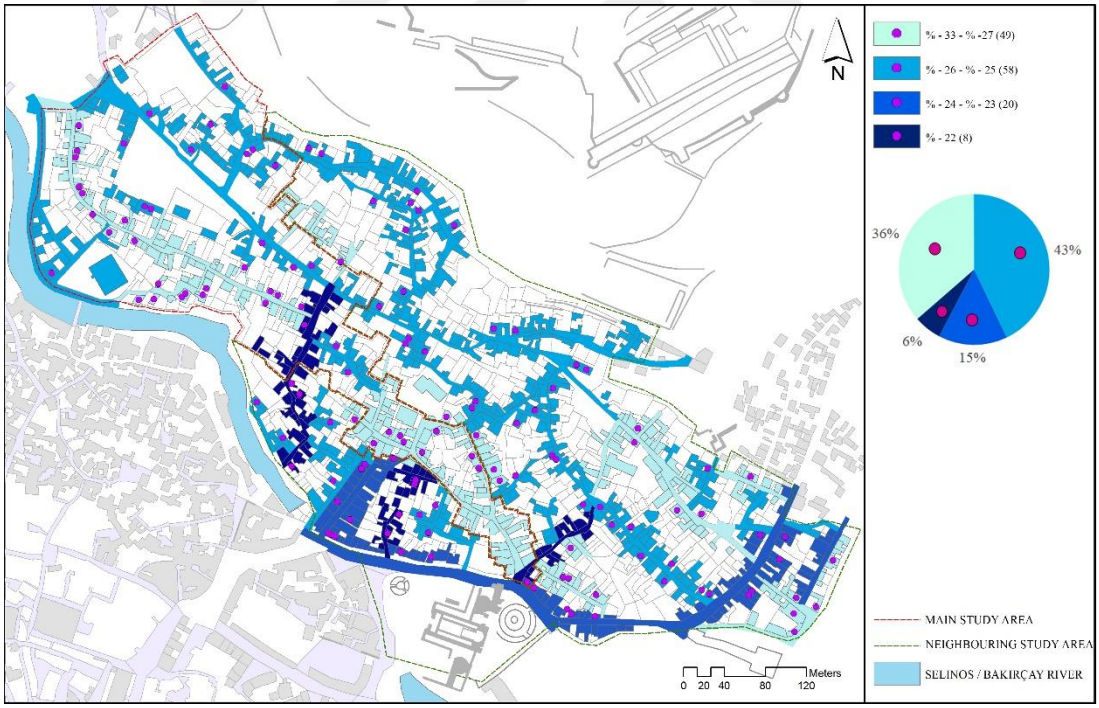


Figure 68. Evaluation of changes in real estate values and changes in ownership

4.3. Questing for the Dynamics, Interrelations and Reasons of Change

Literature survey conducted through this thesis reveals that physical, functional and socio-economic aspects of heritage places tend to change after inscription. Whether the change have negative or positive effects on heritage values and integrity of the property, change is an inevitable aspect of inscription. But to fully understand changes in heritage places, reasons and impacts of these changes must be well investigated and studied in order to generate proposals to preserve heritage values. On that note, reasons of changes in physical, functional and socio-economic aspects of Bergama was investigated with the help of data collected in the site and archival surveys. Interviews with local business owners, municipality personnel and real estate agency owners were used to understand the reasons of change. Also, an archival survey on Turkey's economic and political policies was handled to identify the national problems and their possible effects on Bergama.

4.3.1. Dynamics of Global and Local Context

When a heritage site is inscribed in WHL, unique values of the heritage place is recognized by national and international community and it becomes a universal brand. In WHSs, the primary outcome of recognition and marketing increased tourism activities in and around the heritage place. In most of the heritage places, tourism activities and number of visitors are often increased following their inscription (Hall & Piggin, 2002). This increase is often promoted by local authorities and governments as the main goal of heritage inscription. As tourism usually generates economic prosperity for local and national community, decision makers in WHSs' throughout the world are competing to attract more visitors (Jimura, 2011). But tourism is a fragile industry and there are numerous factors that are affecting tourism in both WHSs and other destinations.

Safety is one of the major factors that effects visitors' desire to travel to a tourism destination. When the visitors do not feel safe to travel to a specific tourism destination due to acts of terrorism, tourism activities in that region starts to decrease (Baker,

2014; Kahn & Mendes, 2018). Where terrorism can be implemented in different forms and magnitudes, in recent years, most of the countries are subject to different terrorist acts between 2014 and 2017. As terrorism aims to infamize the region, it also creates problems for regions where the economy is mostly depending on tourism (Baker, 2014; Çelik & Karaçuka, 2017). The same problem is also seen in WHSs. Increased attraction to a heritage place after inscription can be damaged by the acts of terrorism and these acts can cause economic problems and political struggles.

In the past decade, Turkey was subject to numerous terrorist acts in different types and magnitudes. Some of these acts in Turkey were tourist oriented, like both suicide bombing in Sultanahmet and gunning of tourist in the international terminal of Atatürk Airport, other terrorist acts were directed to the government agencies and the citizens within that period like the July 15 coup attempt in 2016. These acts caused decrease in visitation for nearly all tourism destinations in Turkey. Political struggles that come after these terrorism acts and economic implementations of these struggles together with the changes in foreign policies and currency fluctuations also effected the rate of tourism in Turkey (Deniz & Karadağ, 2018).

4.3.2. Interrelations and Reasons of Change

As this study derives from the hypothesis that inscription to the WHL generates changes in physical, functional and socio-economical features of WHSs, heritage places are also subject to change by the effects of changing global and national situations. Bergama, like other heritage sites in Turkey, was affected by these situations in the past decade. Therefore, reasons of changes in physical, functional and socio-economical features of Bergama must be investigated by taking global and national situations into account.

When the changes in tourism activities for Bergama in the past ten years were evaluated, it is seen that; until 2015, origins of the visitors were changed in time but there were no fundamental changes in the total number of visitors. There was a slight

increase in the numbers for both native and foreign visitors in 2015, the year following the inscription, especially for the numbers of Red Hall. But the number of foreign visitors decreased substantially within the next year. This decrease in the number of foreign visitors coincide with the time of terrorist acts in Turkey. Also, during the interviews conducted in the site survey, most of the locals argued that the main reason for this decrease is the impairment of security as the result of terrorist acts in both Turkey and other European countries. Therefore, it would not be wrong to assume that the unexpected change in foreign visitor numbers for Bergama is mostly due to terrorism in Turkey.

Terrorist acts in Turkey and other Mediterranean countries also damaged the cruise tourism in İzmir. According to the data gathered from İzmir Chamber of Commerce (IZTO), after the peak of cruise tourism in 2015, the number of ships coming to the port of Alsancak and Kuşadası started to decrease substantially each year and in 2018 the cruise tourism had completely stopped. Foreign visitors coming to Izmir by cruise ships occasionally visit Bergama by bus tours (Ataberk, 2014). Therefore, decrease in the number of cruise ship also affected the number of foreign visitors coming to Bergama.

Acts of terrorism also affected the rate of native visitors for the same security reasons. Where most of the native visitors coming to Bergama as the part of day-trip tours prepared by local travel agencies in İzmir and Ayvalık, number of these tours also decreased between 2016 and 2017. Another reason for this decrease in quantity of bus tours was economic problems in Turkey, which started around that time and is still affecting local businesses. As travel agencies struggle to finance these tours, citizens cannot afford to pay for travel fees. Therefore, the number of native visitors in Bergama also decreased in 2016 but not so much as foreign visitor.

After 2016, number of both native and foreign visitors started to increase and today it reached the number of 2015. This data shows that, effects of terrorism on visitor numbers has diminished in Bergama today.

Effects of terrorism in Turkey also caused interruption in the economic contribution of inscription for the government and local community, where the economic gain through tourism is one of the major outcomes of inscription. Entrance fees of archaeological sites, income from commercial facilities, increase in the land and property purchases together with the increased number of national and international investors in heritage places generate an economic growth for the region. With the terrorist acts, Bergama, like most of the other tourism destinations in Turkey, lost its appeal in the international community and investment to the region was decreased. Decline in the economic contribution of national and international investors together with the decrease in acquisitions from visitors, governmental institutions and local businesses in Bergama did not generate the estimated profit from the inscription.

As mentioned before, most of the visitors come to Bergama with bus tours. Nature of these visits are generally constructed around visits to the Acropolis, Asclepion, Red Hall and some to Bergama Museum with groups and ends with a visit to souvenir shops. Only a few of these groups, commonly small ones, have their lunches in restaurants within the town (Ataberk, 2014). Therefore, there is a disruption of local community's interrelation with the visitors. This disruption also prevents the local business owners to profit from these visits. This problem is addressed by the locals during the conducted interviews. They mostly complain about the lack of economic gain through visitors and state that inscription of Bergama did not create the expected outcome for the prosperity of the local community.

Insufficient accommodation rates also cause problems in Bergama's economic gain from tourism (Ataberk, 2014). According to the data gathered from the Bergama Chamber of Commerce, today, there are a total of 23 hotels and pensions in the town that can accommodate a total of 905 visitor. In the past ten years, accommodation rate of tourism facilities decreased by %50 where the number of accommodation units had doubled.

The primary reason for the low rates of accommodation is the type of tourism implemented in Bergama. As most of the visitors comes to Bergama with bus tours on one-day basis, none of these tours offer accommodation (Ataberk, 2014). According to the local hotel owners, tourists with a group of not more than five people mostly stay in their establishments. Accommodation of large groups are not possible due to the insufficient number of hotels touristic bed capacities.

As the result of Bergama's distant location from the coast, tourists often prefer to stay in Ayvalık or Dikili in summer season (Emekli, 2003). Bus tours generated from these locations increase the visitation to the town but accommodation in Bergama is not preferred. With the decrease in the accommodation of visitors, other local businesses are also unable to gain sufficient funds from tourism in Bergama.

The same problem is seen in the land and property prices and the rate of purchases. Where building and land prices increased within the study area with respect to the inflation, locals state that expected rate of increase after the inscription is not fully met.

As the study area includes the majority of the traditional buildings in Bergama, the rate of purchases in that area is a substantial data for understanding the change in real estate activities. According to the collected archival data, it is seen that 13% of the buildings in the study area have been purchased by locals or foreigners after the inscription of Bergama. 75% of these purchases was for traditional buildings. Due to the limitations of this study, data on the origin of owners could not be obtained. But in the interviews made by local real estate agencies, it became clear that most of these purchases are made by foreign investors living outside Bergama or Turkey.

When the reasons of property purchases were investigated, real estate agencies stated that, most of the buyers were investors wanting to sell off these buildings after their value increases. Others wanted to use these buildings for commercial purposes such as; hotels, souvenir shops, restaurants and cafes. Only a few of them purchased these

building to live in. So, the main purpose for these purchases seem to be motivated by economic gain through the potential of increased building prices and increased number of visitors.

Commercialization in heritage places is a significant outcome of inscription. With the establishment of new commercial facilities, more visitors come to these areas. With more visitors, building values and rate of purchases start to increase.

Between 2008 and 2018, 16 new commercial facilities were established in the study area. Most of them were traditional residential buildings refunctioned as hotels and pensions. In the site survey, owners of these facilities are interviewed. None of the owners were original inhabitants of Bergama and they also stated that, they purchased these buildings with the expectation of increased tourism in Bergama after inscription to the WHL. But when the date of purchase for these buildings were investigate, it was seen that only five of them were purchased after inscription. Therefore, it became clear that the ownership changes of traditional buildings for commercialization started before the inscription process.

This estimation is also verified by the real estate agencies as they stated that, building purchases increased substantially right before the inscription and this rate continued until 2016. But after 2016, rate of land and building purchases and their prices started to decrease constantly. According to the real estate agencies, the main reason for this decrease is the economic problems in Turkey. With the declined economic standards of the citizens and continuing increase in the foreign currencies, locals and other citizens do not prefer to purchase these properties. Today, within the study area, there is nearly no land or building purchases.

Changes in ownership is the major outcome of inscription in most of the WHSs. In Bergama, ownership changes started before the inscription and disrupted after 2016. The main reason for this disruption can be considered as the loss of attraction for the region due to terrorist acts in Turkey around that time. In the conducted interviews,

insufficient marketing of Bergama in national and international channels was also mentioned as the reason for this decrease.

Municipality's and the government's indifference for dealing with the problems of Bergama was also mentioned by nearly all the interviewed residents. According to the interviewees, values of Bergama are not well presented by local authorities in the national and international channels where the above-mentioned safety problems and economic conditions of Turkey damaged the tourism activities after 2015.

There are also problems in implementing the proposed conservation projects in Bergama which are within the responsibility of Bergama Municipality and Ministry of Culture and Tourism. Some of these projects are also considered highly important by UNESCO and they are mentioned in SoC reports. Especially, implementation of Selinos Brook Amelioration Project is considered essential for Bergama. The project was prepared in 2015 by Bergama Municipality, but due to the changes in the legislation, implementation of the project and funding is now the responsibility of IZSU. Today, according to the municipality workers, this project is still under-funded and they have no information about when the implementation of the project will begin. According to Fatih Kurunaz, there were attempts made by the municipality for the expropriations required before the restoration of the Tabaklar Bath, but Izmir General Directorate of Foundations is not putting any afford in that subject.

This project is considered important for this study mainly because, margins of the project area is located within the limits of this thesis's study area. The project includes; rehabilitation of the river bed, restoration of the bridges and Hellenistic vaults over the Selinos and traditional buildings in both sides of the river. Project also proposes new recreational areas that could increase the accessibility for the buildings located near the river band. Implementation of his project, therefore, is imperative for preserving the traditional fabric surrounding the river. And if the project is properly executed, without damaging cultural values, it can also help to increase the visitation rate of the study area.

In 2008, before the preparation of this project, area surrounding the river band had problems in accessibility due to the narrow and steep streets, boundaries of open areas were indefinite and neglected. Traditional buildings in that area were also in bad physical condition. Today, it is seen that, both open areas and traditional buildings are in worse physical condition than they were in 2008. If this project was executed after 2015, traditional buildings would be in better condition and open areas would be used by the public as parks which would make the area more appealing for the visitors and residents of Bergama.

4.4. A Discussion on the impact of inscription to the WHL: Pros and Cons

According to the literature study, the main effect of inscription is considered as the national and international recognition of heritage places and branding them with WHS status. This status provides heritage places a global recognition and increases people's interest on the outstanding values they possess.

Once a heritage place is recognized by the world, necessary steps are often taken immediately for the preservation of its values. Governmental and local decision makers which are the main responsible parties, together with the help of private organizations, provides the necessary funds and tools to preserve the heritage place. And when these funds and tools are used efficiently and within their intended purposes, OUV of the heritage place are preserved and transferred to future generations.

But in most cases, WHS status is used as a marketing tool and the values of the property is promoted for economic gain by the same institutions that are responsible for the preservation of these heritage places. For some governments and decision makers, increased economic prosperity of the region and the local community is the main priority of inscription. In those cases, economic desires get ahead of the main purpose of inscription and preserving the values of heritage places become

problematic. That ultimately results with the OUV of these heritage places becoming endangered or getting severely damaged.

Damages seen in the OUV are mostly the result of rapid changes in physical, functional and socio-economic features of heritage places that were generated due to the increased tourism and conservation activities after inscription. Insufficient legal legislations and improper management plans generated by the governments and local authorities together with their inefficient implementations causes these damages. In the attempt to preserve heritage places, decision makers can also put extra pressure of change on these places. This dilemma is one of the major problems of heritage preservation that is commonly seen in WHSs.

As mentioned within the context of the literature study, inscription to the WHL have positive and negative effects on the physical, functional and socio-economic features of heritage places considering the degree and limitations of intervention. Reflections of these interventions cause changes in these features that directly or indirectly effects the cultural values of heritage places. As change is the major outcome of inscription, the rate of change and its impacts on the cultural values helps us to understand the outcomes of inscription.

Changes in any physical feature of the heritage place can progress slowly or rapidly. The rate of these changes is affected by the proper planning and implementation of management plans created for heritage places. As each heritage place differs from each other with their unique physical and socio-economic conditions they possess, the process of preparing management plan and its implementation also must be unique. If right action plans and policies are created in the context of these management plans and they are operated with the right approach and timing, changes in physical functions can be controlled and managed without damaging the values and the integrity of the heritage place.

New interventions are commonly seen in heritage places after inscription with the creation of new development plans. Demand for new housing and commercial areas can increase as the result of increased attention to the heritage place. This attention eventually increases the population in and around the heritage place after their inscription. Increased number of visitors also has an important effect on the amplified demand for new tourism and commercial facilities. With the establishment of these new facilities, the physical environment present before the inscription can change and the cultural values of the heritage places can be endangered.

As the majority of the building stock in heritage places are traditional buildings, they are the category of buildings which are mostly affected by the impacts of inscription. Interventions done by their owners or by the local authorities with the attempt to conserve these buildings are mostly increased after inscription. Where empty traditional buildings often have insufficient physical conditions due to abandonment, interventions in these buildings are crucial for the preservation of the cultural values in heritage places.

When these interventions are done properly and without damaging the original forms and architectural elements of these properties, it helps to protect traditional buildings from being collapsed and also helps to preserve cultural values of heritage places. But in cases where the conservation activities are rapid and done without proper planning and with inadequate techniques and materials, interventions can severely damage the integrity of the built environment.

Interventions in traditional building are sometimes seen in the form of mass additions to the buildings or in their courtyards and gardens. With the changing lifestyle and modernization, residents of these buildings often construct new rooms or service facilities by mass additions and the gardens start to lose their original purposes and became idle. These types of interventions are seen in many traditional buildings in heritage sites as the result of inefficient legal measures and their prosecutions. But when a heritage site is inscribed in the WHL and the attention to the place is increased,

execution of these types of interventions are mostly restricted. Therefore, inscription provides an increased control on the improper interventions and helps to preserve the identity of the place by protecting the integrity of traditional buildings.

As mentioned before, increased attention resulted by the inscription also generates increase in tourism activities for most heritage places. Therefore, functional changes in traditional buildings are also seen, apart from the new constructions in heritage places, in attempt to supply for the increased demand of tourism and commercialization. In most of the WHSs, the rate of refunctioning in traditional residential buildings for commercial purposes often increased in order to supply for this demand. New hotels and pensions together with new shops are generally established by the refunctioning of traditional buildings to provide the needs of visitors.

Another impact of the increased tourism and commercialization is seen in the social character of the residents. Establishment of new commercial facilities provide new job opportunities for the local community. These new facilities also help to increase economic gain for the owners of traditional buildings. But in some cases, the number of these establishments can increase rapidly within the residential areas of heritage places and this increase creates severe changes in the social characteristics of the residents. The rate of local community to the visitors began to decrease and the locals start to feel like foreigners in their own domain.

Continuity in the social characteristics of the residents is crucial in order to preserve the cultural values of heritage places. Apart from the possible increase in the foreigner's insufficient physical conditions of traditional buildings can also lead the locals to sell off their buildings and begin to live in the modern residences located in the outskirts of the heritage place. This increase in the purchases mostly results in the increase in real estate values and provides an economical gain for the local community. But in cases where these ownership changes are rapid and generated for

the majority of the buildings, social characteristics of the community starts to change and eventually damage the cultural values of the heritage place.

As mentioned before, in most of the heritage places, number of visitors increases after inscription. Increased number of visitors combined with the residents of newly occupied buildings; population start to increase in heritage places. With the rising population, existing infrastructures generally becomes insufficient.

New projects are mostly developed in order to improve the insufficient infrastructures in heritage places. Most of the projects are prepared with the attempt to increase accessibility where problems in circulation is the major outcome of increased population. As the density of pedestrian and vehicular circulation increases, locals often begin to lose their sense of ownership to the heritage place and become estranged.

When all the above-mentioned impacts of inscription are taken into account, it is not possible to generalize the effects of inscription where each heritage place is unique with their cultural values. Therefore, changes in heritage places must be studied within their own limitations. Therefore, changes in the physical, functional and socio-economic aspects of Bergama after inscription, together with their reasons are evaluated and pros and cons of inscription of Bergama was identified.

Investigation on the impacts of inscription in physical aspects of Bergama revealed that conservation activities were increased in some areas with the help of local authorities and private investors. Mostly in the commercial center of the town, conservation of commercial buildings increased after the inscription. But in residential areas, the rate of conservation activities seems to be insufficient. With the increased ownership changes, a large sum of traditional buildings was abandoned and therefore caused deteriorations in their physical features. Poor physical conditions of these buildings together with the insufficient infrastructural interventions, damages occurred in the open and built environment.

Type and degree of functional changes are also important in order to preserve the cultural identity of heritage places. In Bergama, refunctioning of residential buildings for commercial purposes seems to be increased after inscription. These new commercial buildings increased the public's attention to the study area and also generated a national attraction to the heritage place. In the process of refunctioning, traditional buildings were conserved and their physical conditions were improved.

Inscription also impacted the social character of Bergama. Locals awareness for the values of their town and surrounding environment were increased. Conferences and workshops focused on presenting the values of the heritage place created a local and national attraction to Bergama. On the other hand, this attraction increased the rate of building purchases and ownership changes which began to alter the social structure in the town.

The major economic contribution of inscription is the increased funds coming from the visitors. But in Bergama, due to the above mentioned global and local reasons, number of visitors were decreased after the inscription. Therefore, the economic gain generated from tourism activities was less than expected. The primary economic gain for the locals was the increased rate of building purchases. Even with the increased building purchases, the real estate values are constantly decreased after inscription. So, the local community did not benefit from the economic contribution of inscription.

To sum up, it would not be wrong to say that, Bergama diverts from other heritage places investigated in the literature survey and changes in physical, functional and socio-economic features of Bergama progressed slowly after inscription. But it is clear that changes have been started and the impacts of these changes must be managed in order to preserve the heritage values of Bergama.

Pros and Cons of Inscription of Bergama to the WHL

	PROS	CONS
Physical Aspects	Increase in the conservation activities, with the help of local authorities and private investors, helped to preserve the built environment.	Incresed abandonement of traditional buildings after inscription resulted with deteriorations in their physical features. Insufficiency for implementing required infrastucture interventions caused damages in the open and built environment.
Functional Aspects	Functional changes in traditional buildings helps to increase conservation activities. Refunctioning of residential buildings for commercial purposes increased the attraction to the study area.	
Social Aspects	Contribution in fairs and conferences increased the national and international recognition of Bergama. Insctiption to the WHL increased the awareness of locals to the cultural values of their town.	Rapid ownership changes in traditional buildings occured for the traditional buildings in the study area and can cause damages in the social characteristics of the heritage place if not managed properly.
Economic Aspects	Recognition provided by the inscription increased the national and international fund coming to the heritage place by increases in the rate of building purchases.	Number of visitors decreased after the inscription due to security reasons in the region and decreased the income generated by these visitors for the local authorities and commercial facilities Residents in the study are did not benefit from the economic contribution of inscription.

Figure 69. List of pros and cons of inscription for Bergama

4.5. The Way Forward: How to Proceed in Managing the Impacts of Change for UNESCO WHS of Bergama

In the literature study of this thesis, a general analysis was made on the impacts of change in heritage places after inscription. According to this analysis, in most of the heritage sites over the world, changes in the physical, functional and socio-economic features were rapid therefore, causing damages in the values of these heritage places.

But in the selected case, WHS of Bergama, changes in physical, functional and socio-economic features of Bergama progressed slowly after inscription. Therefore, the values of the heritage place are mostly preserved. Even with this slow rate of change, Bergama is still under the danger of losing its values with the negative impacts of inscription. In order to preserve these values for future generations, positive impacts of inscription must be increased while minimizing the negative ones.

For that reason, UNESCO is demanding a functional management plan prepared for each heritage place prior to the nomination. A well-planned and functioning management plan is considered crucial for the preservation of heritage places. Monitoring is an important aspect of management in heritage places. All the features that are subject to change must be monitored in order to identify the type and degree of these changes. Monitoring these features and identifying the tendencies of change helps to generate future actions in the attempt to preserve the values of the heritage place.

In the interviews conducted by the municipality personnel, slow rate of change in physical, functional and socio-economic features of Bergama was stated as the result of municipality's conservation policies for the preservation of cultural values. They also mentioned that the site management plan of Bergama was planned quickly and finalized right after the inscription. Municipality also conducted many legislative changes and conservation activities in Bergama after the inscription in the attempt to preserve the value and integrity of the heritage place.

On the light of these facts, municipality's statement could be considered vital for heritage places that had rapid increase in the number of visitors which provided an increased demand for development projects and conservation activities. But the archival and site studies show that, there were no substantial increase in the demand for new development projects for Bergama or a sudden increase in the tourism activities where the number of visitors even decreased after the inscription.

While investigating the effects of inscription in other heritage places through written documents, the apparent idea was that, changes in heritage places start after the inscription to the WHL was finalized. But according to the conducted analysis on the socio-economic features of Bergama, ownership of traditional buildings in Bergama started to change even before the inscription. The anticipation of increased tourism activities led to the purchase of traditional buildings for the purpose of refunctioning them for commercial purposes. According to the real estate agencies in Bergama, ownership changes were also occurred by the purchases of investors for the purpose of economic gain that can generate due to the possible increase in the real estate prices after the inscription.

When the traditional buildings that had ownership changes were investigated, most of them seems to have become unoccupied after they were purchased. Whether they were purchased to be restored or refunctioned, they seem to be emptied and started to degrade physically due to abandonment. Where conservation of traditional buildings and their environment is an important step in preserving the cultural values of heritage places, abandonment created problems within the study area and numerous traditional buildings either collapsed or are in worse physical condition than before inscription.

On that note, it should be mentioned that preserving a heritage place means not only to conserve the built environment, but to preserve the cultural identity of the site as a whole. This purpose can only be implemented by preserving the local community living in these places. Therefore, increased foreign residents in heritage places is not a desired outcome of inscription. In Bergama, decrease in purchases by locals and

increase in the foreign residents can, in time, damage the social structure of the community. Because of the economical insufficiencies of locals, lands and buildings are in danger of losing their local owners by the purchases of foreign investors.

Local community and their awareness on the values of these heritage sites also have a major effect on the preservation of cultural values. Where heritage places are mostly affected by outside factors, local's sense of ownership for their cultural identity bears and important role in heritage preservation. Therefore, necessary steps in educating the local community is essential to preserve heritage places as a whole.

In that attempt, Municipality of Bergama and other governmental or private organizations conducted meetings, fairs and other educational workshops to increase the public awareness and help in preserving the social characteristics of Bergama. But even with the conducted studies to increase the local community's involvement in the preservation of Bergama, interviews revealed that the OUV of the WHS is not fully understood by the locals. This problem was generated due to the insufficient marketing of the cultural values of Bergama in national and international channels.

Therefore, this study revealed that; with the anticipation of inscription, the process of change in physical, functional and socio-economic features of Bergama was started. But this process was interrupted before changes generated substantial impact. Therefore, it would be wrong to say that impacts of inscription are clearly seen in Bergama.

As changes occur in minimal rate, impacts of these changes can be foreseen and managed without damaging the cultural values. Therefore, this interruption in the process after the inscription of Bergama can be considered a positive outcome in order to manage the possible changes that can occur in the future. In order to prevent possible damages in the physical, functional and socio-economic features of Bergama, some preliminary actions must be taken by the Municipality of Bergama, the Ministry of Culture and Tourism and by other responsible parties.

First of all, the values of Bergama must be well promoted and marketed to increase the tourism activities in the heritage place to provide an economical contribution to the region and the local community. In the attempt to increase tourism in Bergama, the municipality and the Ministry of Culture and Tourism must primarily strengthen the relationship between the archaeological sites in Bergama with other sites surrounding the town. To do so, a touristic route must be created including these sites and other natural or cultural properties that the region possesses.

Dikili and Ayvalık, located in the west of Bergama, are coast towns and accommodate great number of visitors, national and foreign, especially in summer season. Today, there are bus tours generated from these towns to Bergama in order to visit the archaeological sites. But they are few in number and within the concept of these tours, visitors pass through Bergama with busses and do not interact with the local community. Where the main contribution of tourism for the locals is economic gain, owners and workers of commercial businesses generate nearly no income from these visitors. By increasing the number and duration of these tours and also by changing their content to provide the visitors some time to explore the commercial and residential areas, Bergama can socially and economically benefit from these tours.

Where Bergama is a district of Izmir, it's contribution to the tourism activities in Bergama is even less than Dikili or Ayvalık. There are nearly no tours provided by the local businesses or other organizations of Izmir that includes Bergama as a destination point. There were some private tours planned for tourists coming to Izmir by cruise ships, but with the decrease in the number of these ships after the terrorist attacks in Turkey, these tours were cancelled. Today, there are only a couple of tours planned from Izmir to Bergama and has no substantial effect on the town's tourism activities. On the other hand, with the increase in the number of cruise ship visited Izmir last year and with the expectation for the continuous increase, more tours can be planned and eventually help to increase tourism in Bergama.

But increasing the number of visitors is not the only contribution to the town. First, problems in the presentation of the towns cultural values must be identified and attended. One of the major problems for the town's presentation is the absence of a planned travelling route. With the creation of a route including different layers of the town and demonstrating the multi-layered character of the settlement, cultural values Bergama can be presented to the visitors.

Presenting the cultural values and the multi-layered character of the town to the visitors is crucial. But the local community must also become aware of these features. As mentioned in the course of this study that, in the process of preserving values of a heritage place, awareness and contribution of the local community is imperative. To do so, a community-based conservation must be implemented. The values of the heritage place must be well known by the locals and necessary steps must be taken to increase their sense of ownership. As the selected study are for this thesis constitutes numerous examples of the multi-layered character of the town, actions to draw people to this area is crucial in that context. In that attempt, the main step must be to educate the local community by performing social activities like; conferences, panels, meetings and trips. Also, the community living outside the borders of the heritage place must be encouraged to participate.

Educating children on the importance of cultural values and how to preserve them is an important aspect of heritage preservation. As they can eventually become authorities and decision makers, educating them to understand and own their cultural values will eventually help in the preservation of heritage places. There were projects prepared and executed by the municipality that were focused on the school children which aimed to describe the history of the town and its importance. These actions must be continued for Bergama in order to increase public awareness and sense of ownership in the future.

Next step in preserving the values of Bergama is the conservation of the built environment. Economic prosperity of the town is one of the factors that effects

conservation activities. In that context, tourism can help the conservation of the cultural values of Bergama with its economical contribution to the local authorities and the residents. Also, governmental institutions and other investors must take part in conservation activities with the contribution of local authorities as control mechanisms. While conservation of the built environment helps in preserving cultural values, uncontrolled and improper interventions can eventually damage them.

It is a well-known fact that, planning and implementing conservation studies is time consuming and highly expensive process for the residents living in heritage places. Due to this fact, some governmental and private institutions assist them throughout this period in legal and financial matters. Even with the help of these institutions, the process is still problematic in Bergama and for most of the heritage places in Turkey. Residents, in a way, avoid conservation activities with the prejudice that it does not worth the afford and continue to live in buildings that are insufficient to supply their changing needs. To include the local community in conservation activities for Bergama, first this prejudice must be overcomed by educating and guiding the locals.

Conducted interviews with the residents and hotel owners in the study area revealed that, accessibility and infrastructure is major problems for this part of the town. With the steep roads, no planned areas for pedestrians, other infrastructural problems and insufficient commercial areas, people living in other parts of the town have no desire to live in or visit this area. Also, for the residents in the study area, these problems began to draw people outside, to the new developing areas. Therefore, supplying for the needs of these residents must be the priority of the municipality in order to preserve the social character of the area.

CHAPTER 5

CONCLUSION

The main purpose for the creation of the WHL was preserving the outstanding value, authenticity and integrity of heritage sites in order to pass them to future generations. In the years between the creation of the list and today, numerous studies, conventions and meetings were handled by private and governmental organizations, different ideas and tools were developed by the decision makers in the attempt to execute this purpose. Even with all these efforts, preserving the values, authenticity and integrity of WHSs were always challenging.

In that context, this study aimed to;

- investigate the outcomes of WHL inscription by conducting literature survey,
- identify and evaluate changes in WHS of Bergama after inscription,
- investigate the reasons of these changes in global and local context,
- identify the impacts of these changes on the physical, functional and socio-economic aspects of Bergama,
- quest for possible actions to preserve the cultural values.

Conducted literature study throughout this thesis reveals that, inscription to the WHL generates positive and/or negative impacts on heritage places. Over the decades, researchers and academicians discussed these positive and negative impacts by investigating different aspects of heritage places. For some, the main purpose of the list is not always fully achieved in each WHS. They argued that; in some cases, economic contribution of inscription became the priority of the governments and locals, values of the heritage place were promoted to increase tourism activities and preservation of these values are neglected. Some of them even claimed that, inscription brought more harm than good and escalated the probable damage in

heritage places (Barron, 2017; Maurel, 2017). For others, recognition generated by the inscription provided necessary funds for regions where preserving heritage properties was not possible due to their economic conditions. Therefore, helped in the preservation of WHSs. They also argued that, WHL inscription increased the awareness of all people living in any part of the world, on the values of WHSs and the importance of heritage preservation (Jimura, 2011; Buckley, 2004).

The main challenge in preserving heritage places is to find the balance between the positive and negative impacts of inscription. It is crucial to minimize the negative impacts while increasing the positive ones. To do so, heritage places must be well monitored and managed. But each heritage place is unique with their physical, functional and socio-economic features, located in different parts of the world and most of them are under the responsibility of different governments having diverse legal systems and legislations. Therefore, each heritage place must be investigated within its own limitations and requires different tools in order to preserve their OUV, integrity and authenticity.

It is important to mention that, change is seen in every aspect of a heritage site and generated with respect to the changes in legal legislations, attitudes of decision makers, lifestyle of residents and other internal and external factors. But when a heritage site gets inscribed in the WHL and branded with the WHS status, the pressure of change increases. With additional measures taken to preserve and promote these sites, impacts of changes can be rapid and severe. Depending on the rate and density of these changes, the values of the heritage place can become endangered.

On the light of the conducted literature study and the observations done in Bergama, it is seen that physical, functional and socio-economic features in heritage places are in close relationship with each other and changes in any aspect directly affects others. Therefore, it is not possible to understand the tendencies of change in heritage places after inscription without investigating these features and their relationship with each other.

To do so, an investigation was made in the course of the literature study to identify the features in heritage sites that are mostly affected after the inscription. This investigation also helped to understand the relationship between different features, how they affect each other and why. As this investigation provided an insight on the possible changes in heritage place after their inscription, it also helped to identify the type and degree of these changes.

Changes in heritage places commonly occur as the result of interventions. Any intervention in heritage places, have reflections on physical environment, functional continuity, socio character and economic context. Impacts of these interventions can be seen in any aspect of the heritage place and also generates changes in cultural values. Most of these interventions are seen right after the inscription where their cultural values became more open to change mainly as the result of increased national and international recognition generated by the inscription and desired economic gain due to this recognition.

To understand the impacts of inscription on heritage places, first, indicators that are mostly affected by the inscription must be identified and changes in these indicators must be investigated. Therefore, in the context of the WHS of Bergama and within the limitations of a master's thesis, possible indicators that can be affected by the inscription was primarily identified, changes in these indicators after the inscription of Bergama was investigated and evaluated, then reasons of these changes and their impact on the values of the heritage place was identified.

In the scope of investigating the effects of inscription, these following questions were investigated;

- Which indicators of heritage places are more open to change after inscription?
- What types of changes occur in heritage places after inscription?
- What are the possible reasons of change in heritage places generated as the result of inscription?
- How do these changes impact the cultural values in heritage places?

Due to the limitations of this thesis, a group of indicators were selected for investigation and evaluating changes in the study area. In the process of selecting these indicators, the unimplemented Conservation Project of 2008 (METU, 2008) were used as a baseline data together with the data gathered form the literature study focused on changes in other heritage places in the world.

After the identification of indicators in physical, functional and socio-economic aspects of Bergama, changes in these indicators were analyzed by created maps, charts and tables. Later all the analyzed data were evaluated and changes in Bergama after inscription were identified.

To identify the reasons of these changes, archival data collected on these indicators and the interviews with the decision-makers and residents of Bergama were used. Later, with the evaluation of all the data, impacts of the inscription on the cultural values of Bergama was defined.

In most of the investigated sources, rapid changes occur in physical, functional and socio-economic aspects of heritage places after inscription. But in Bergama, conducted analysis reveals that, the rate of change is slow and, in some parts, nonexistent and therefore dissents from the other investigated WHSs. This outcome showed that; impacts of inscription differs in each heritage place with respect to changing global and local effects, physical conditions of the region and socio-economic character of the inhabitants.

Identifying the type, reasons and impact of change is crucial in order to propose the right management policies to preserve the cultural values of heritage places. But within the scope of this thesis, proposing conservation approaches and management policies was not possible due to the quality of the collected data through the literature and site surveys. Therefore, a brief assessment on the conservation approaches in Bergama and the responsibilities of the local authorities and other decision-makers were made by stating the observation done through the site survey.

Later, by considering all the gathered information, comments were made on the possible future actions that can be implemented to preserve the values of Bergama. Also, responsibilities of the local and governmental institutions and other decision makers on implementing these actions were identified.

To sum up, this thesis provided a unique and exemplary study on how to investigate the effects of inscription on the physical, functional and socio-economic features of WHSs. This thesis study can also be considered as an initial effort for creating a monitoring method for WHSs. Investigations done in the course of this study for identifying the indicators that are more open to change after inscription helps to create a monitoring method for heritage places. Where monitoring is the key for identifying changes, a monitoring method, created specifically for each heritage place is crucial in order to foresee the possible damages in cultural values. Also, recurring monitoring surveys must be done to prevent probable damages in heritage places.

Monitoring data of this thesis was limited within the margins of the baseline data. But with additional surveys and studies including all the features of the heritage place, more precise and useful data could be generated to identify the impacts of WHL inscription on the whole heritage place.

To conclude, this thesis hopes to guide further studies that are focused on investigating the effects of inscription in other heritage places after their inscription and also, desires to help other researchers in creating efficient tools to investigate these effects. Finally, this study wishes to aid all the decision-makers of heritage places in their attempt to preserve the values, authenticity and integrity of WHSs for future generations.

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APPENDIX A

MAPS AND DOCUMENTS FOR THE WHS OF BERGAMA

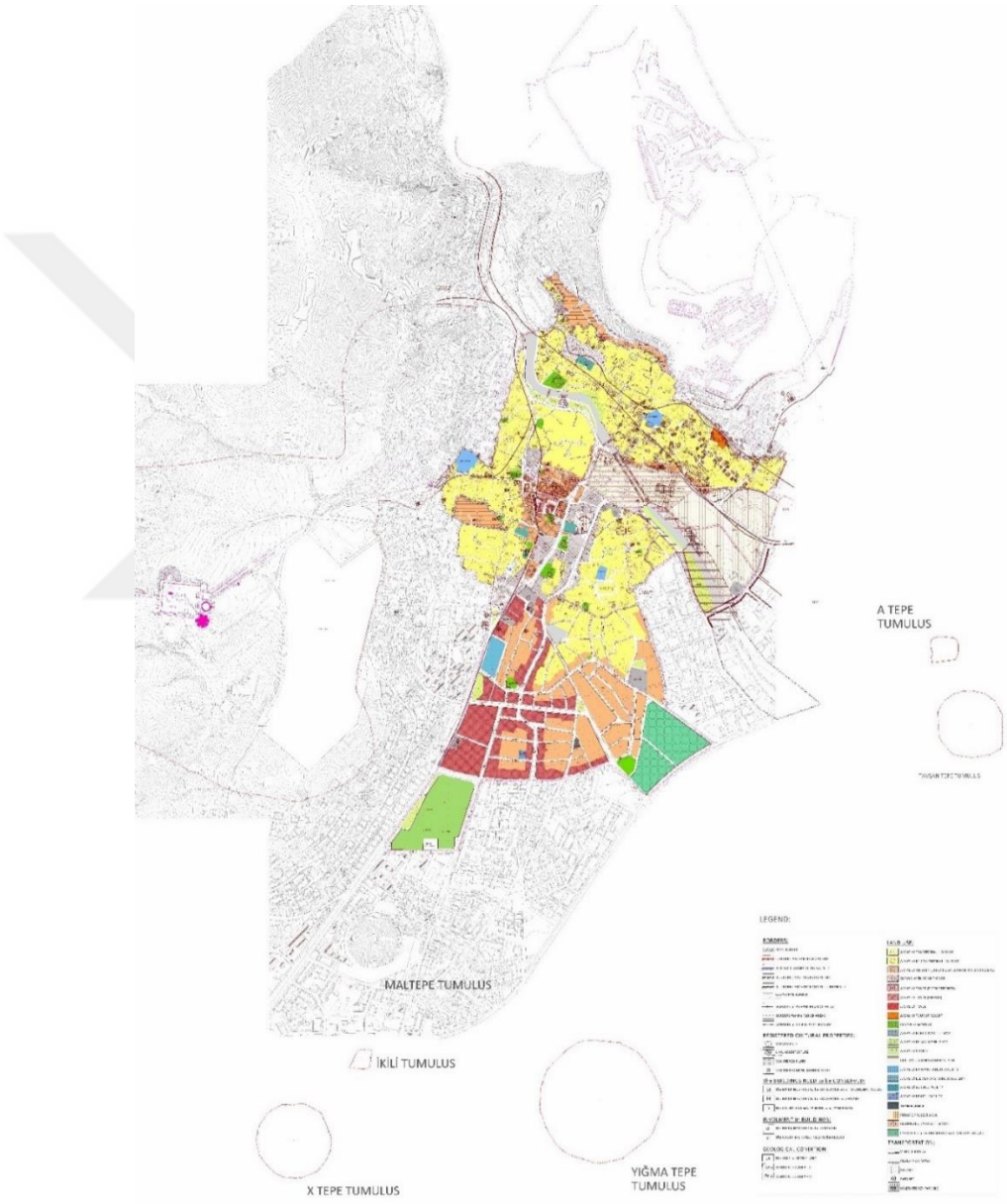

Figure 70. Conservation Management Plan of Bergama in 2012, prepared by Ege Planlama (WHL Nomination Dossier, 2014)

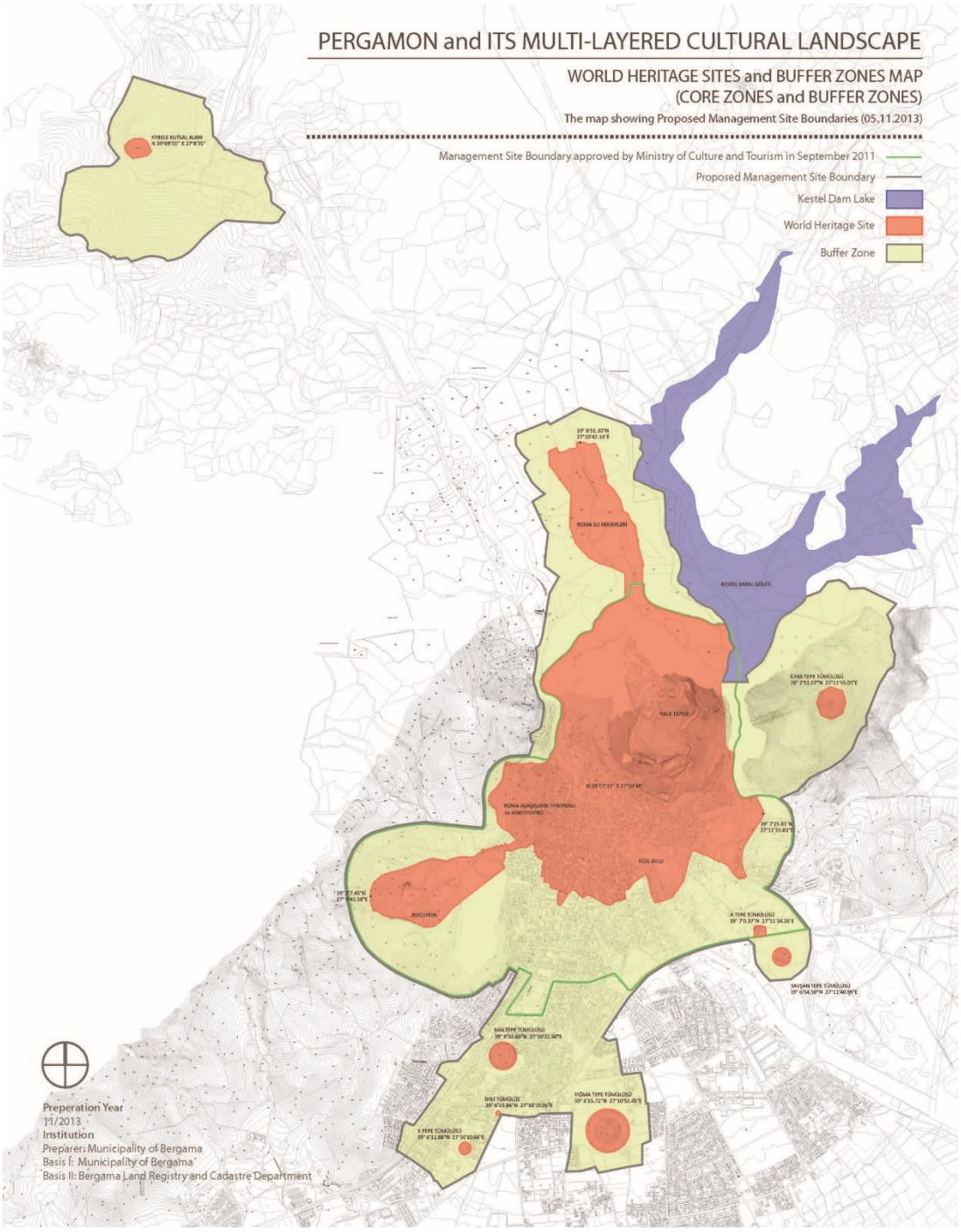

Figure 71. Core and buffers zones for the WHS of Bergama (WHL Nomination Dossier, 2014)

SUMMARY OF THE SOC REPORT FOR BERGAMA IN 2015

Executive summary of the report

During the 38th session (Decision: 38 COM 8B.38), World Heritage Committee has demanded works to be carried out for Pergamon and its Multi-Layered Cultural Landscape. The works carried out by the State Party about each demand has been stated below.

- ***Completing the Management Plan expeditiously and submit a progress report by 1 December 2015 for review by ICOMOS,***

During the preparation of Management Plan, meetings with different public institutions, organizations and NGOs on the matters of preservation of cultural assets have been extended due to some important action plans. But at the end, all discussions and meetings about action plans have been concluded positively. After discussions, institutions agreed to take collective actions to solve related conservation and preservation problems in the Core and Buffer zone of World Heritage Area. In this way necessary actions for the preservation and conservation of World Heritage site have been processed in the Management Plan. The finalized plan is in the process of approval. The formal approval of the plan is aimed to be completed as soon as possible.

- ***Improving the monitoring system by specifying which organization is responsible for monitoring each indicator and include seismic monitoring,***

Within the monitoring system it is already named by domestic laws that which organization is responsible for monitoring each indicator. A list has been formed for monitoring indicators of Pergamon and its Multi-Layered Cultural Landscape in the Section 5.

In Turkey, the Prime Ministry Disaster & Emergency Management Authority is responsible for monitoring the seismic waves as a public organization. Scientific

monitoring is also being carried by the Boğaziçi University Kandilli Observatory and Earthquake Research Institute. This institute monitors all the seismic waves in Bergama and its surrounding regularly. It has been decided to carry out a more detailed work together with Kandilli Institute in order to monitor the effects of the seismic waves on the archaeological and medieval structures of Bergama. This new research is aimed to be started in the first half of 2016.

- ***Restricting vehicle access to the acropolis except emergency services****;*

The access to Acropolis is provided by two different ways; car road and cable car system. Due to intensity and continuity of the winds in and around Bergama, the cable car system cannot work sometimes half or full day and sometimes two or more days consecutively. Moreover, in the beginnings of 2015 due to a couple of accidents happened in cable car system, the priority has been given to works for providing safe access to Acropolis. Therefore, before restricting vehicle access to the Acropolis in short term, the works for the transport plan should be carried out including some action plans like seismic researches, selection of shuttles and building visitor welcoming and information centre.

- ***Other Issues***

1. We would like to inform the World Heritage Centre that Bergama Municipality has started preparatory work of preservation project of Selinos Brook.

2. In compliance with the Committee decision, Bergama Municipality approved the new height limits to maintain visual links between the Acropolis and Tumuli.

SUMMARY OF THE SOC REPORT FOR BERGAMA IN 2017

1. Executive summary of the report

During the 40th session (Decision: 40 COM 7B.59), World Heritage Committee has requested works to be carried out for Pergamon and its Multi-Layered Cultural Landscape. The works carried out about each request has been stated below.

- **Requests the State Party to finalize, as soon as possible, the study on the restriction of vehicles to the Acropolis and submit it to the World Heritage Centre, for review by the advisory Bodies;**

As a general rule, access to Acropolis begun to be provided by the cable car, and alternatively only automobiles have been permitted. Except for emergency situations and except for automobile, vehicles are not being allowed to enter the Acropolis road.

- **Notes the proposed Selinos Brook Amelioration Project and also requests the State Party to provide the World Heritage Centre with the survey and Heritage Impact Assessment for the project, with a specific section focusing on its potential impact on the Outstanding Universal Value, for review by the Advisory Bodies;**

The Selinos Brook Amelioration Project was presented to the Regional Conservation Council for approval, and the Heritage Impact Assessment Report is being prepared. After the Heritage Impact Assessment Report has been completed, it will be sent to the World Heritage Centre.

- **Other current issues:**

With the amendment in conservation law in 2016, the Site Coordinator of the Bergama Multi-layered Cultural Landscape, the members of the Advisory Board and members of the Coordination-Supervision Board have been appointed by the Ministry of Culture and Tourism. With the works of the newly established Boards and Coordinator, Bergama Multilayer Cultural Landscape Area Management Plan (2017-2021) was approved. After completing the English translation and proofreading of the

text, The Bergama 2017-2021 Area Management Plan will be sent to the World Heritage Centre.

2. Response to the decision of the World Heritage Committee

During the 40th session (Decision: 40 COM 7B.59), World Heritage Committee has requested works to be carried out for Pergamon and its Multi-Layered Cultural Landscape. The works carried out about each request has been stated below.

- **Requests the State Party to finalize, as soon as possible, the study on the restriction of vehicles to the Acropolis and submit it to the World Heritage Centre, for review by the advisory Bodies;**

As a result of negotiations with the shuttle companies operating in the national and international areas during 2015 – 2016 periods, it became clear that shuttles (any type) have not been suitable to use on the steep slope road of Acropolis. For this reason, access to Acropolis has mainly been provided by the cable car, and alternatively only automobiles have been permitted. Except for emergency situations and except for automobile, no vehicle has been allowed to enter the Acropolis road since 2016.

- **Notes the proposed Selinos Brook Amelioration Project and also requests the State Party to provide the World Heritage Centre with the survey and Heritage Impact Assessment for the project, with a specific section focusing on its potential impact on the Outstanding Universal Value, for review by the Advisory Bodies;**

The surface surveys for the Selinos Brook Amelioration Project were completed in 2016 and then Amelioration Project which dealing with the details of the rehabilitation work and detailing the activities for cultural assets during rehabilitation. For the project presented to the Regional Conservation Council for approval as required by our legislation, the Heritage Impact Assessment Report is being prepared. After the Heritage Impact Assessment Report has been completed, it will be sent to the World Heritage Centre.

3. Other current conservation issues identified by the State(s) Party(ies) which may have an impact on the property's Outstanding Universal Value

With the amendment in Cultural and Natural Heritage Conservation Law numbered 2863 in 2016, the authority to prepare the Area Management Plan for all heritage sites in Turkey including UNESCO World Heritage sites has been granted to the Ministry of Culture and Tourism. The appointment of the Site Coordinator, Advisory Board and Coordination-Supervisory Boards which have the responsibility and authority in the approval, implementation and supervision of the Site Plan have also been left to the Ministry.

After the amendment of the law, the Site Coordinator of the Bergama Multilayered Cultural Landscape, the members of the Advisory Board and members of the Coordination-Supervision Board have been appointed by the Ministry. On 21 November 2017, the newly established Advisory Board presented the Bergama Multilayer Cultural Landscape Area Management Plan (2017-2021) to the Coordination and Supervision Board for being approved. On November 23, 2017, the Coordination-Supervision Board approved the plan.

The Bergama 2017-2021 Area Management Plan was sent to English proofreading. It will then be sent to the World Heritage Centre.

4. In conformity with Paragraph 172 of the Operational Guidelines, describe any potential major restorations, alterations and/or new construction (s) intended within the property, the buffer zone (s) and/0r corridors or other areas, where such developments may affect the Outstanding Universal Value of the property, including authenticity and integrity.

No major restorations alterations and/or new construction may affect the Outstanding Universal Value of the property are intended within the world heritage property or buffer zone.

APPENDIX B

MAPS AND PLANS OF THE STUDY AREA

Figure 72. 1904 Plan of the study area by O. Berlet[23] (Conze, 1913)

[23] For internet access: https://digi.ub.uni-heidelberg.de/diglit/conze1913/0013/image

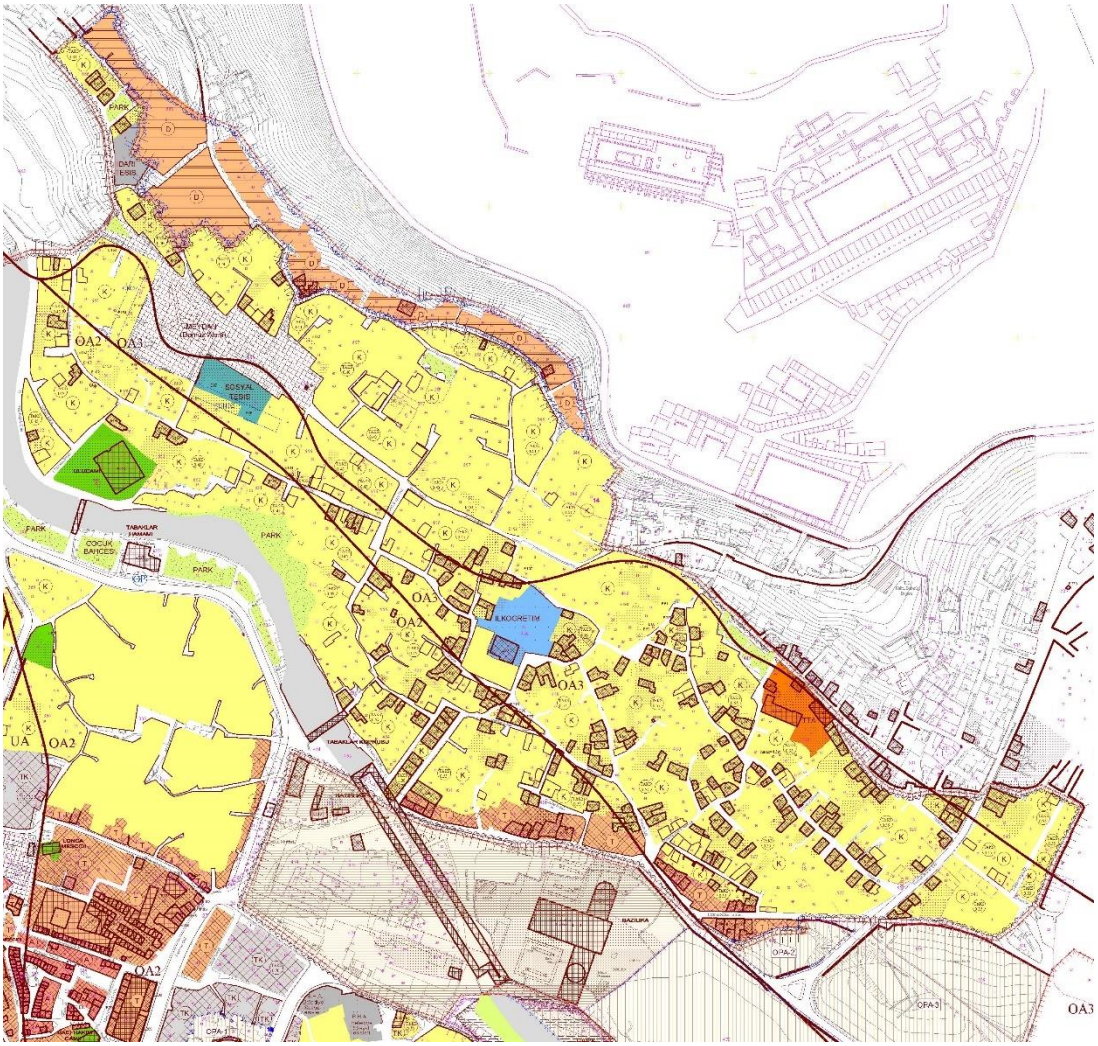

Figure 73. Conservation Management Plan of the study area in 2012 (WHL Nomination Dossier, 2014)

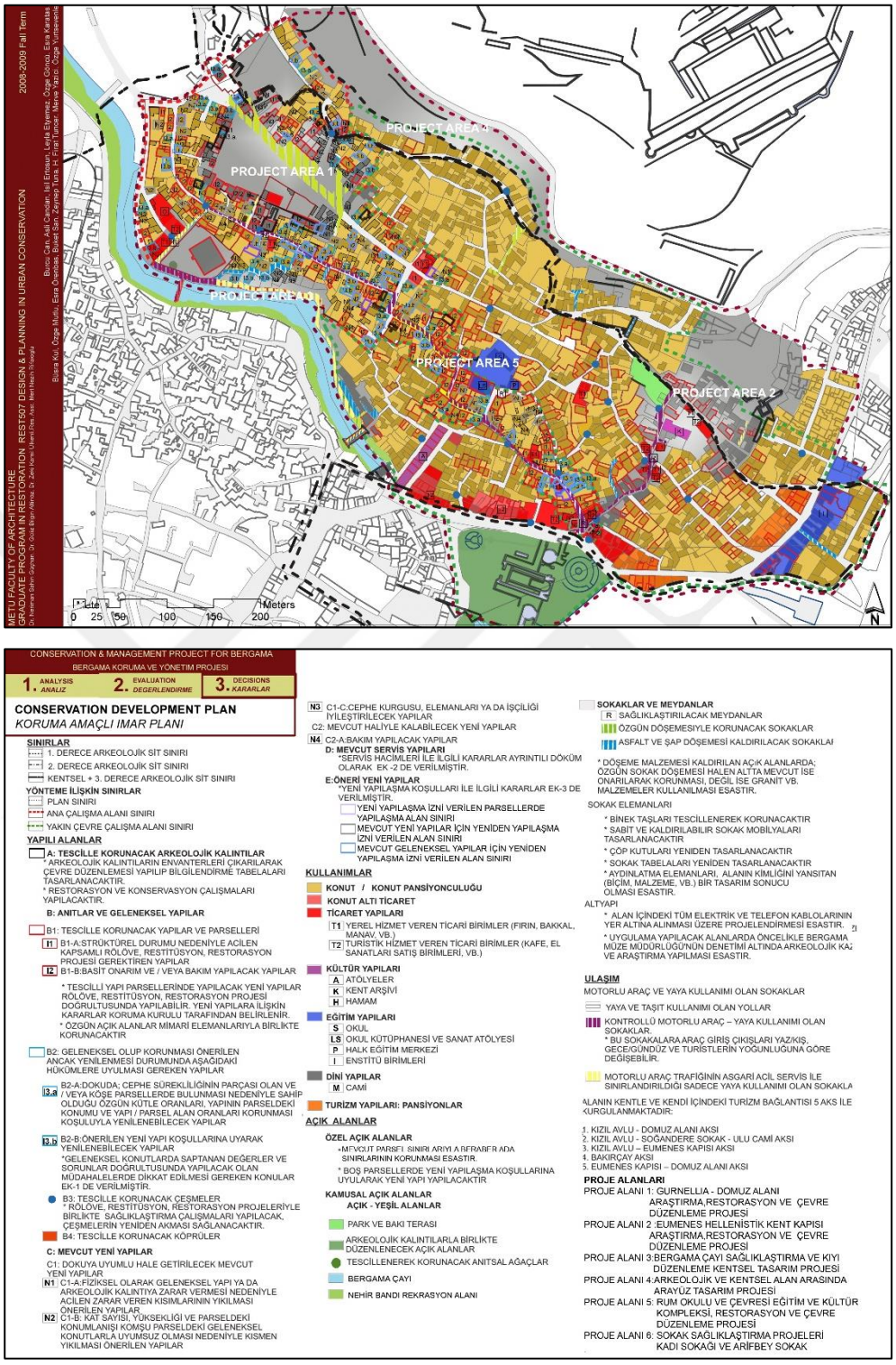

Figure 74. Conservation Management Plan prepared for the study are in 2008 (METU, 2008)

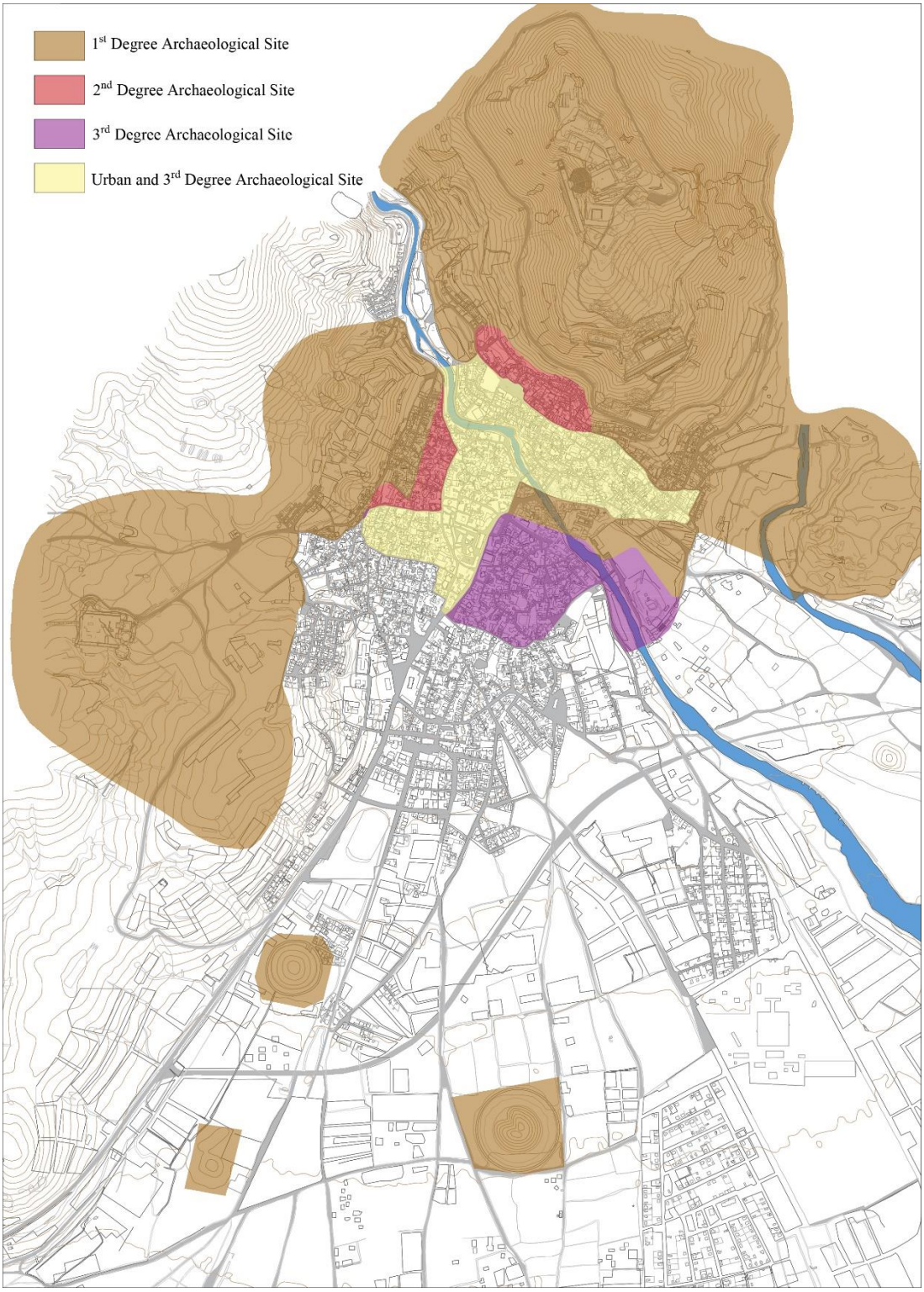

Figure 75. Borders of the archaeological sites in 2008

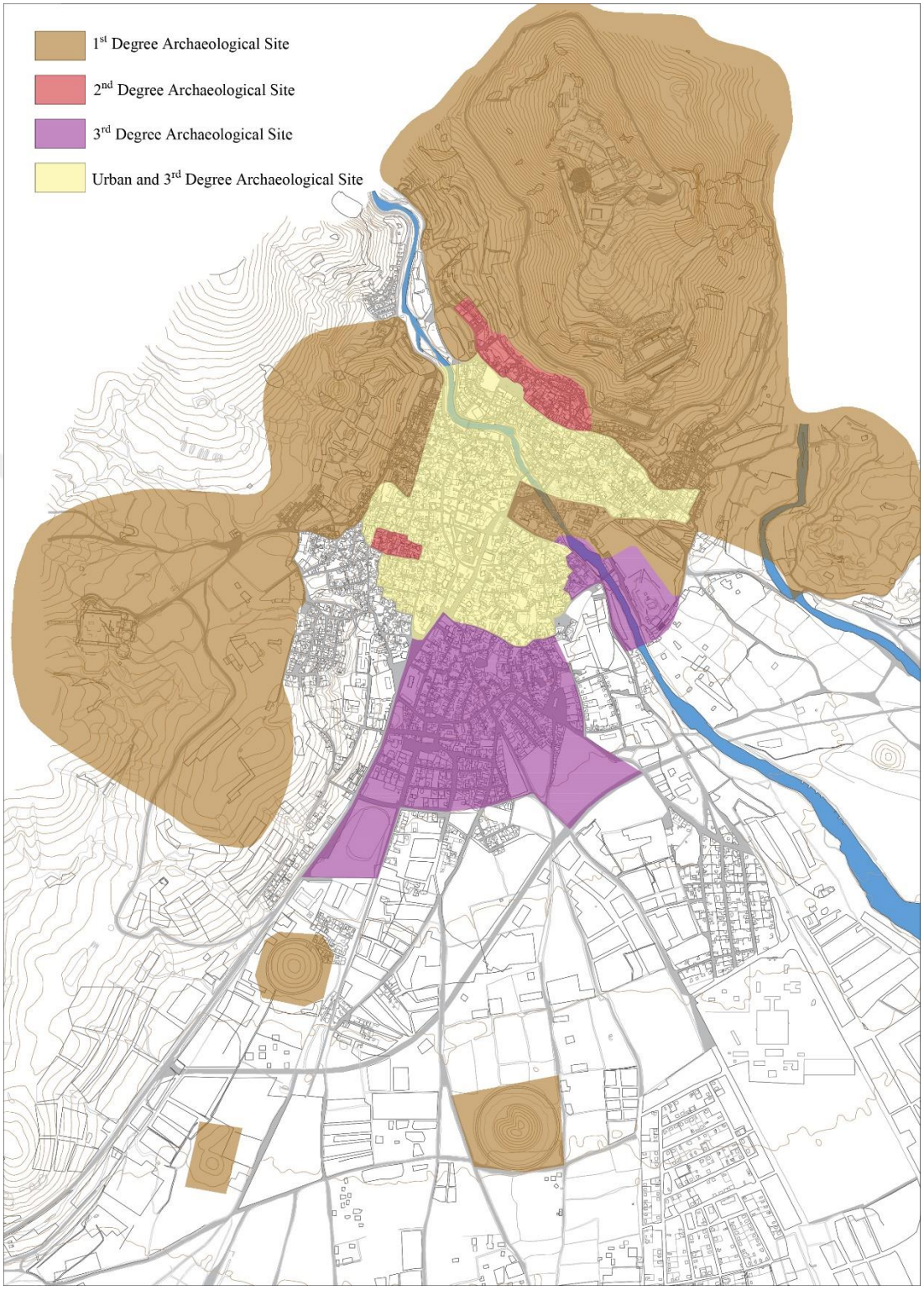

Figure 76. Borders of the archaeological sites in 2018

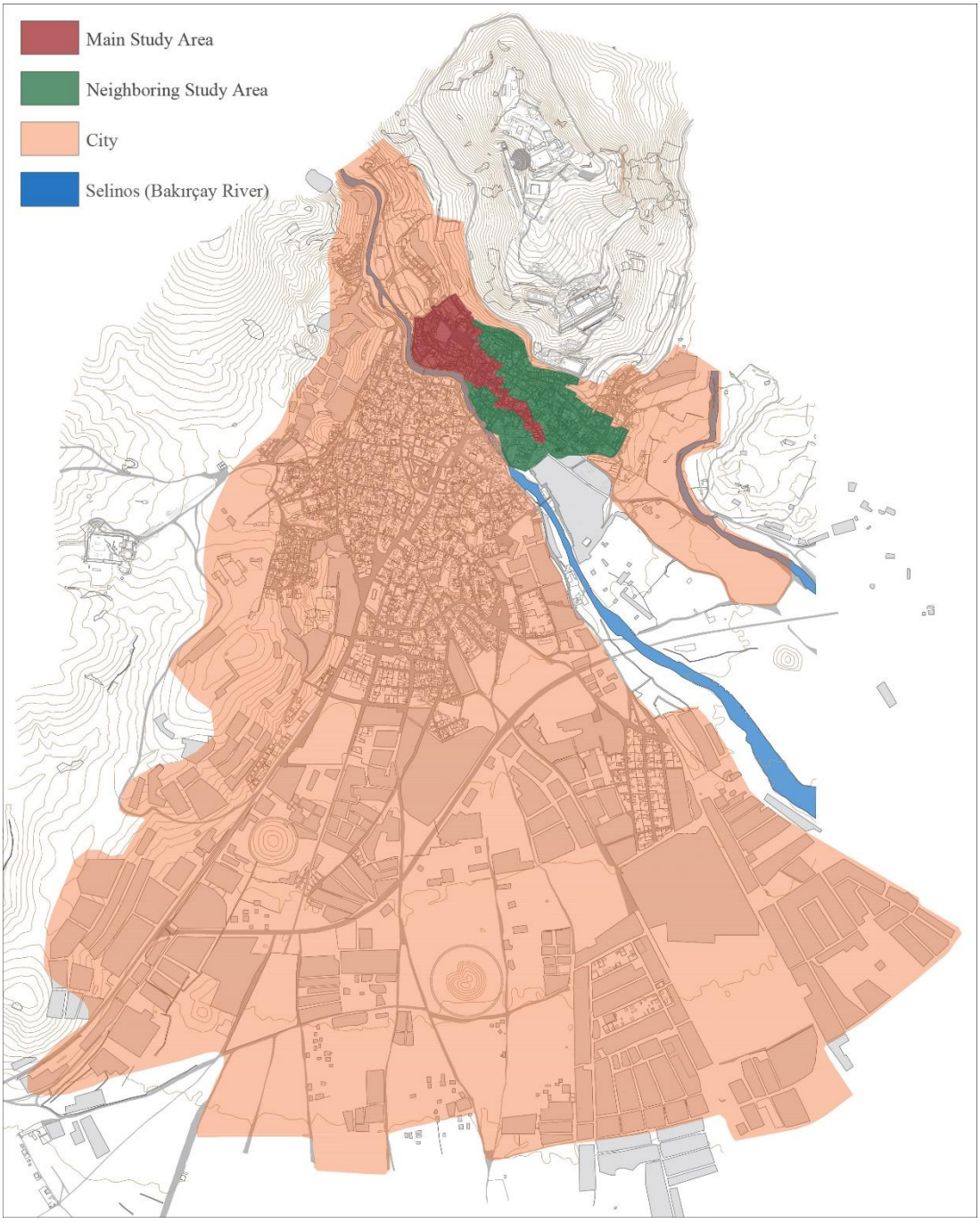

Figure 77. Limits of the study areas within Bergama

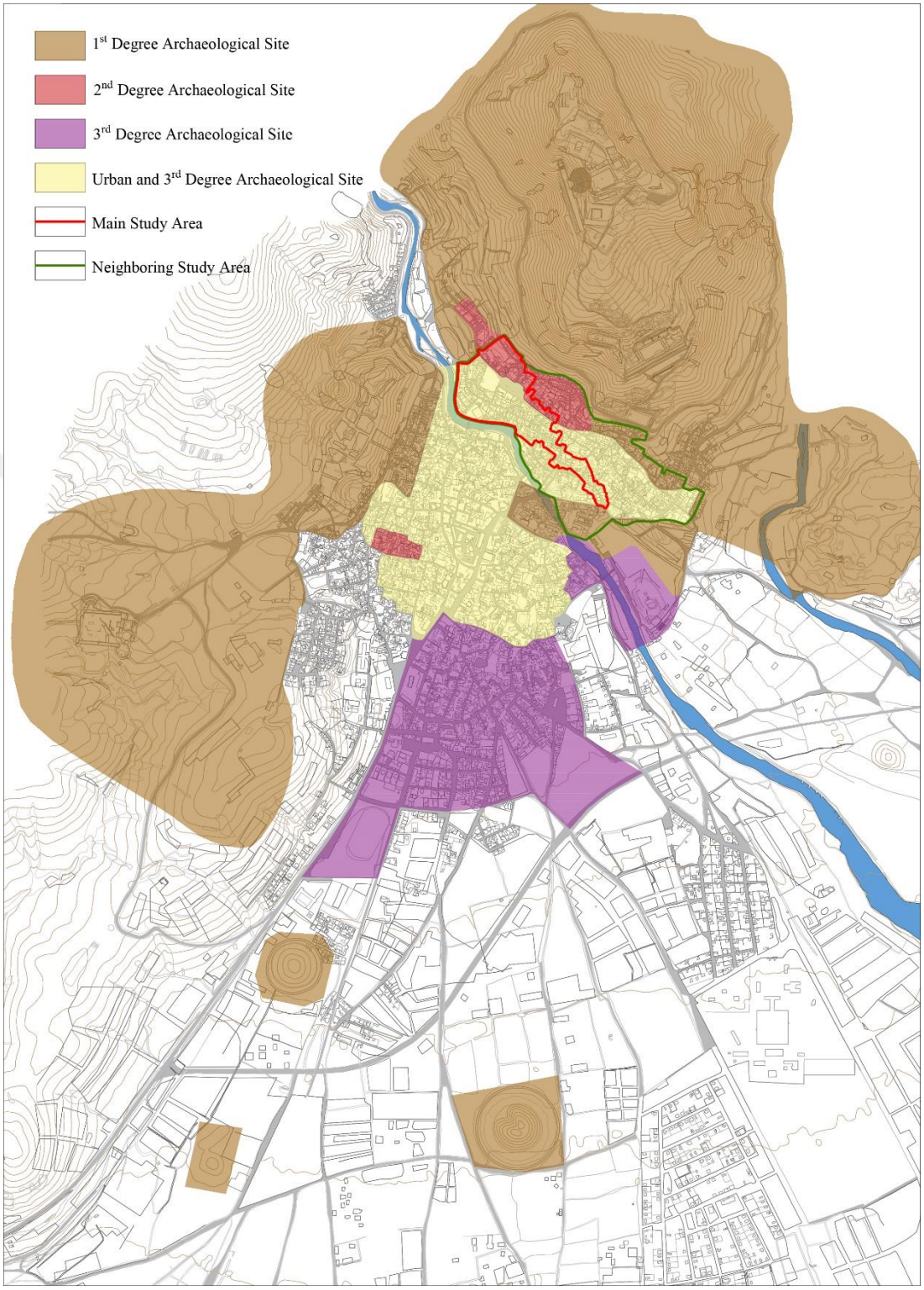

Figure 78. Limits of the study area and the boarders of the archaeological sites in 2018

APPENDIX C

EVALUATION MAPS OF THE STUDY AREA

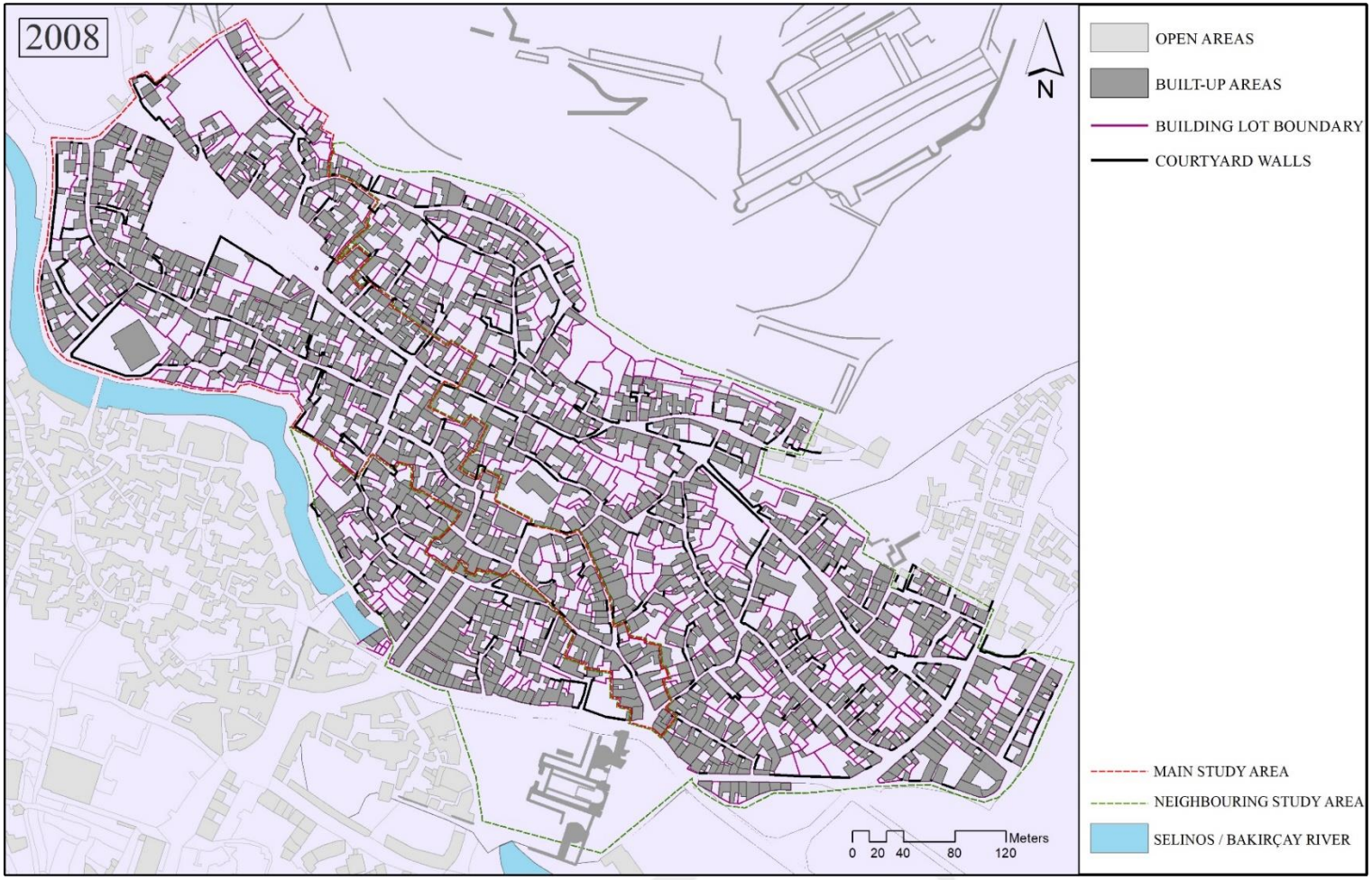

Figure 79. Open and built-up relationship in 2008

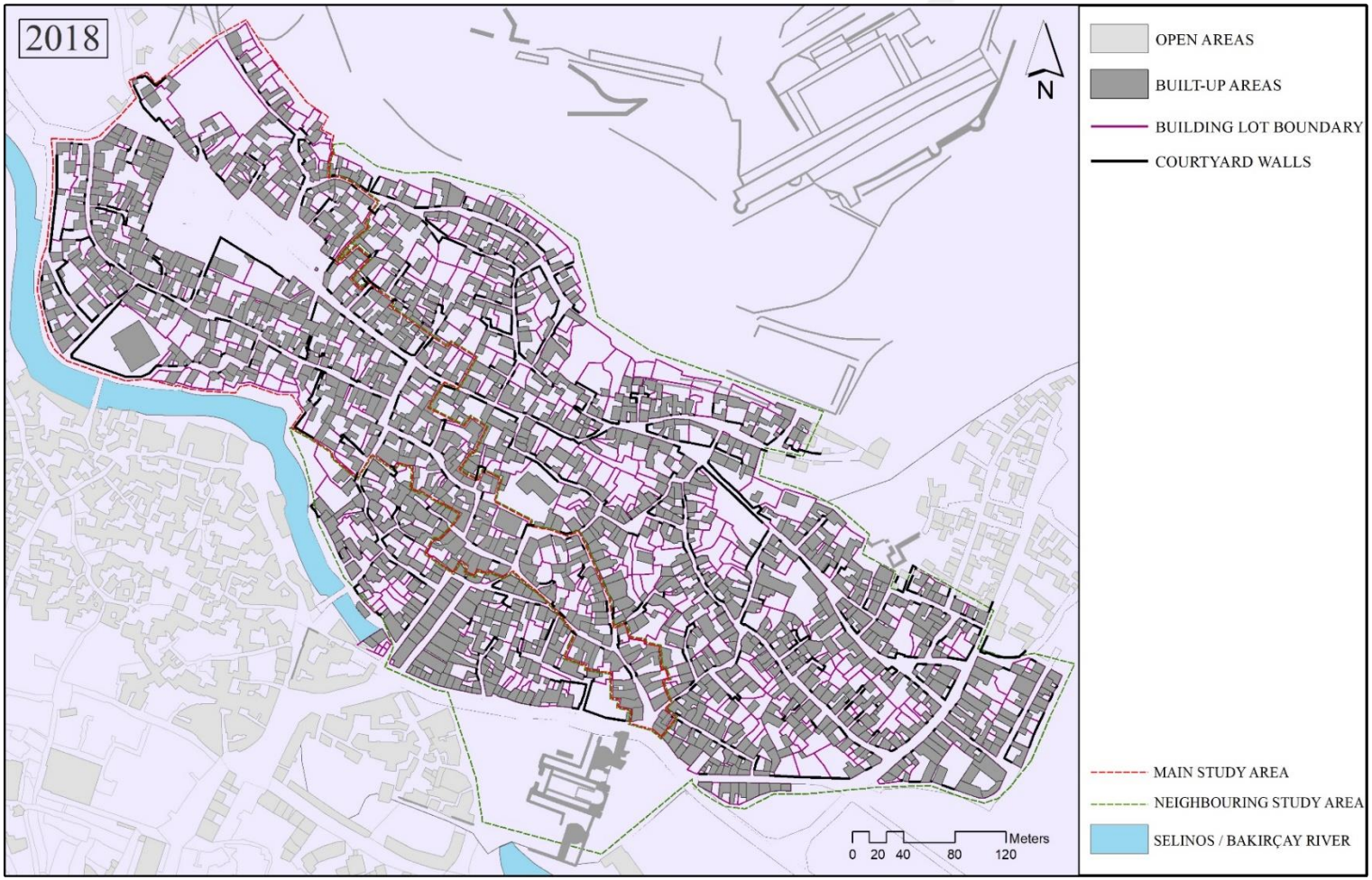

Figure 80. Open and built-up relationship in 2018

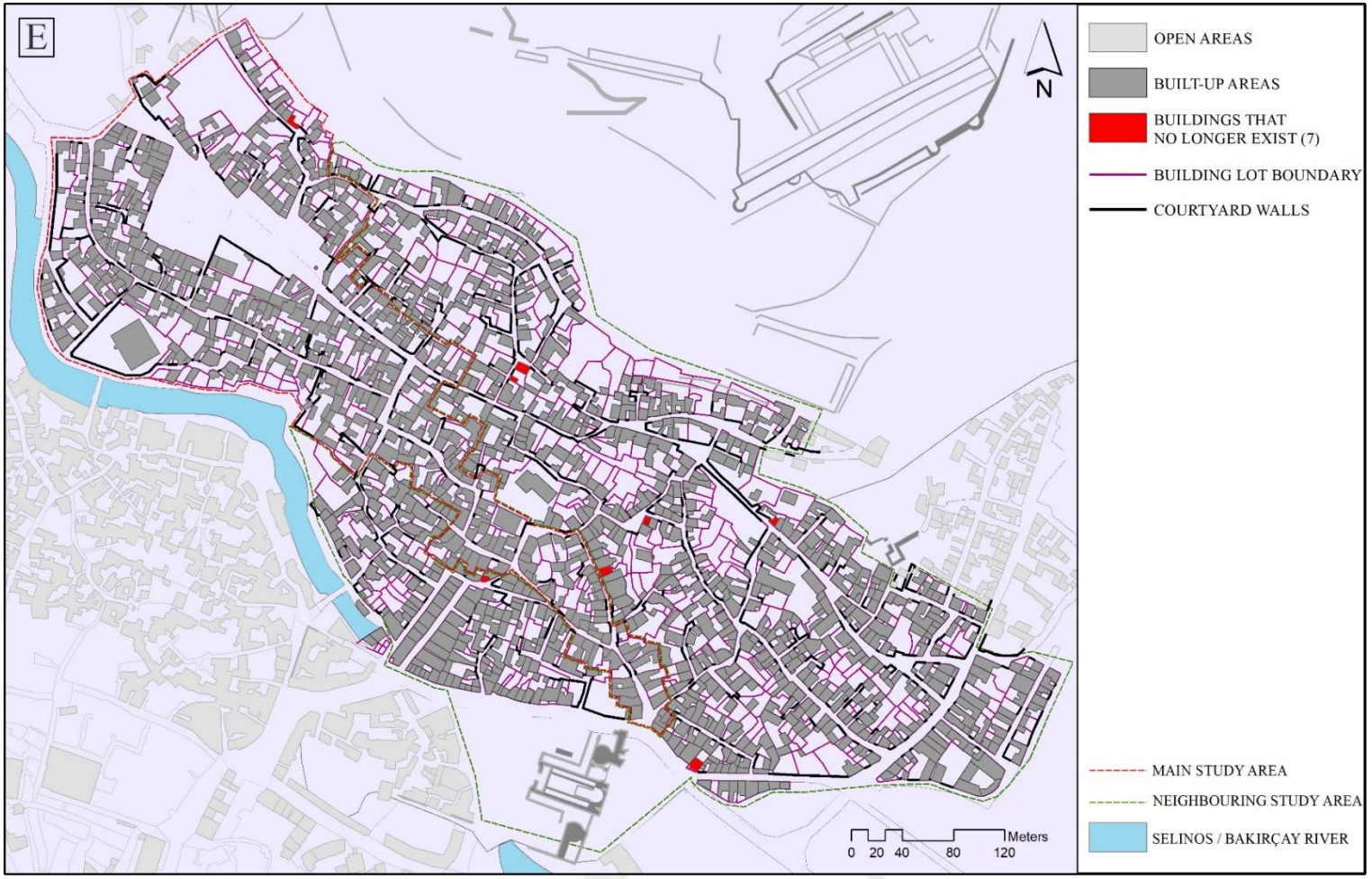

Figure 81. Changes in open and built-up relationship

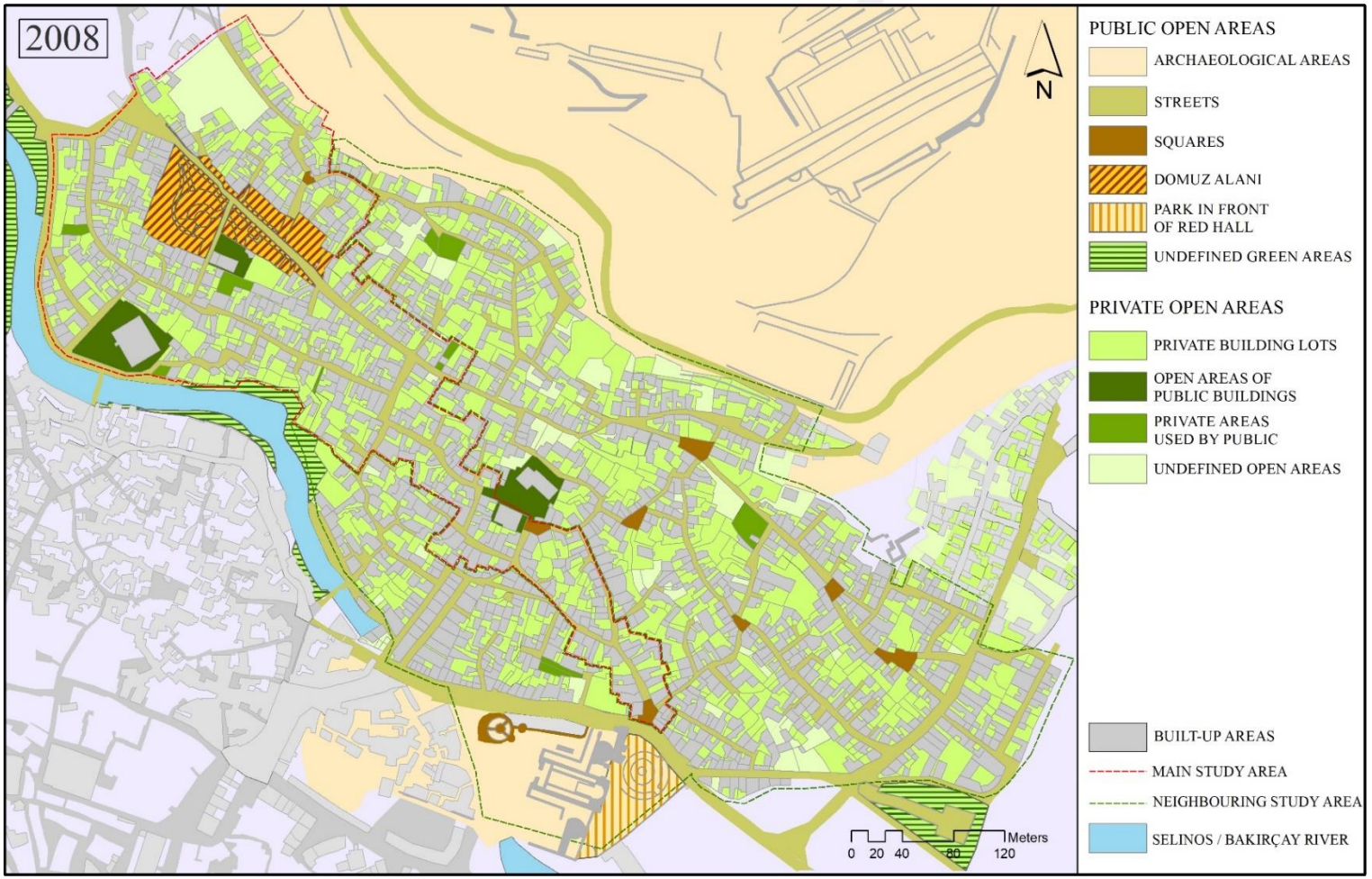

Figure 82. Categories of open areas in 2008

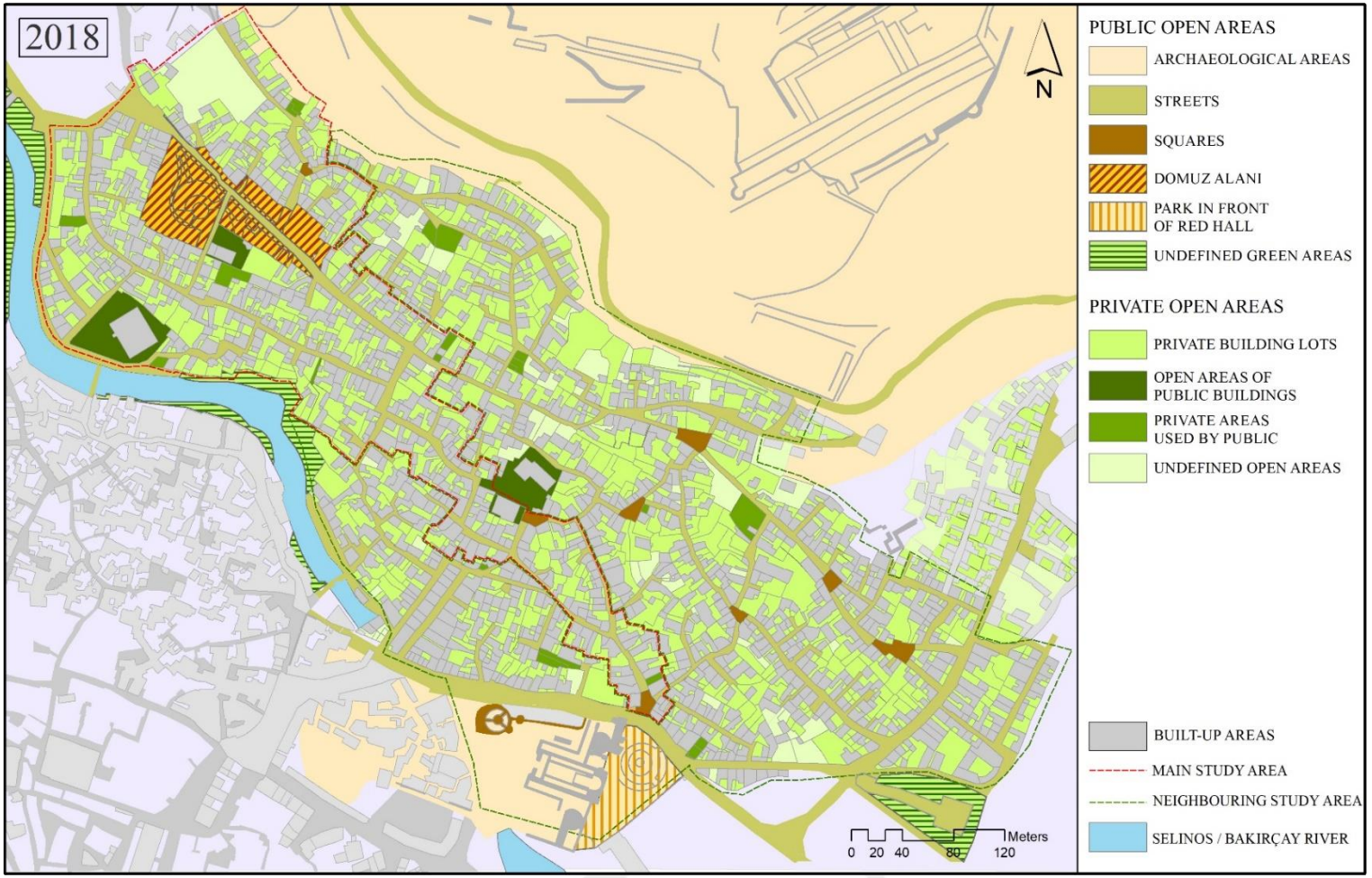

Figure 83. Categories of open areas in 2018

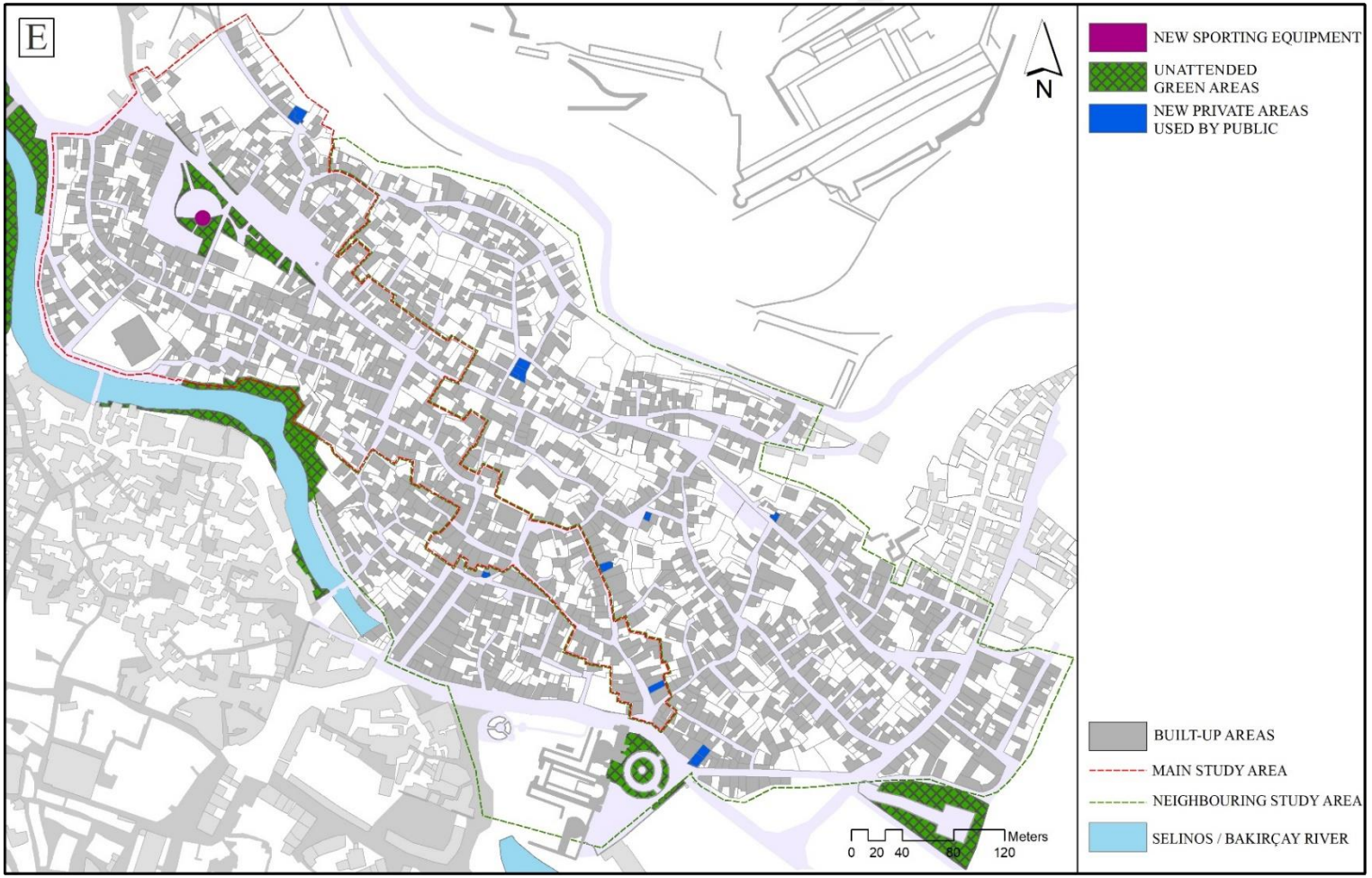

Figure 84. Evaluation of changes in public and private open areas

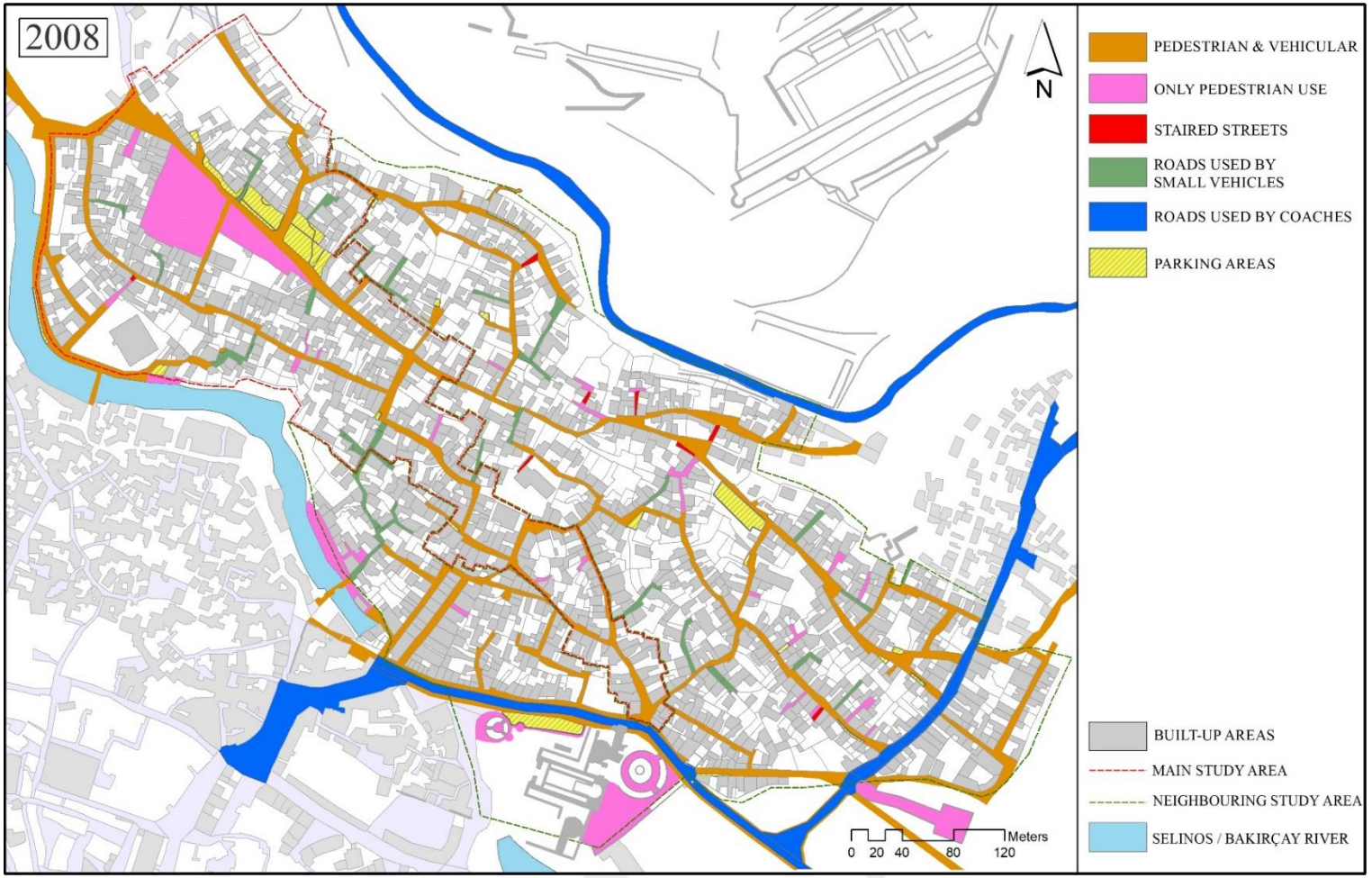

Figure 85. Types of vehicular and pedestrian circulation in 2008

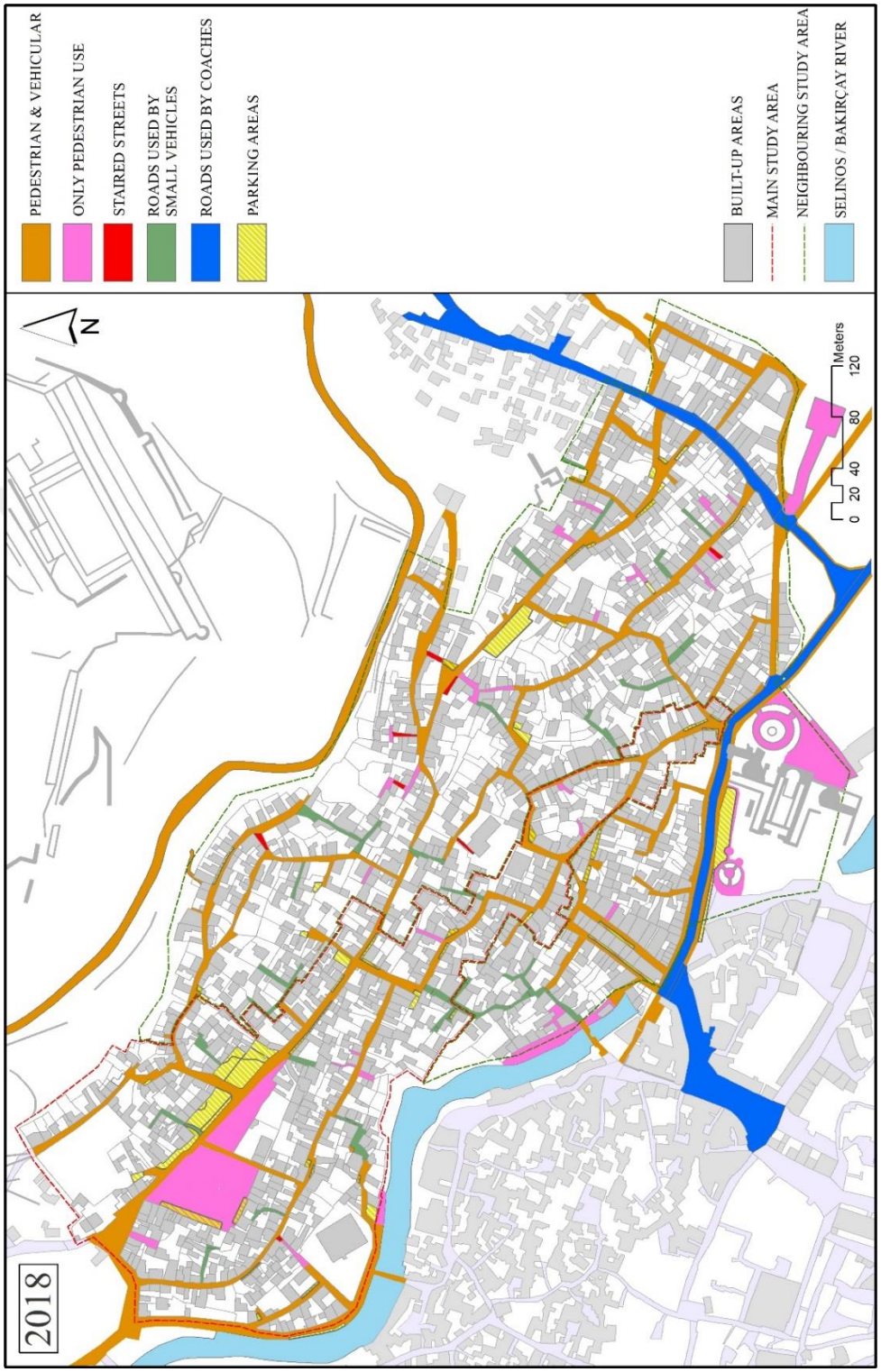

Figure 86. Types of vehicular and pedestrian circulation in 2018

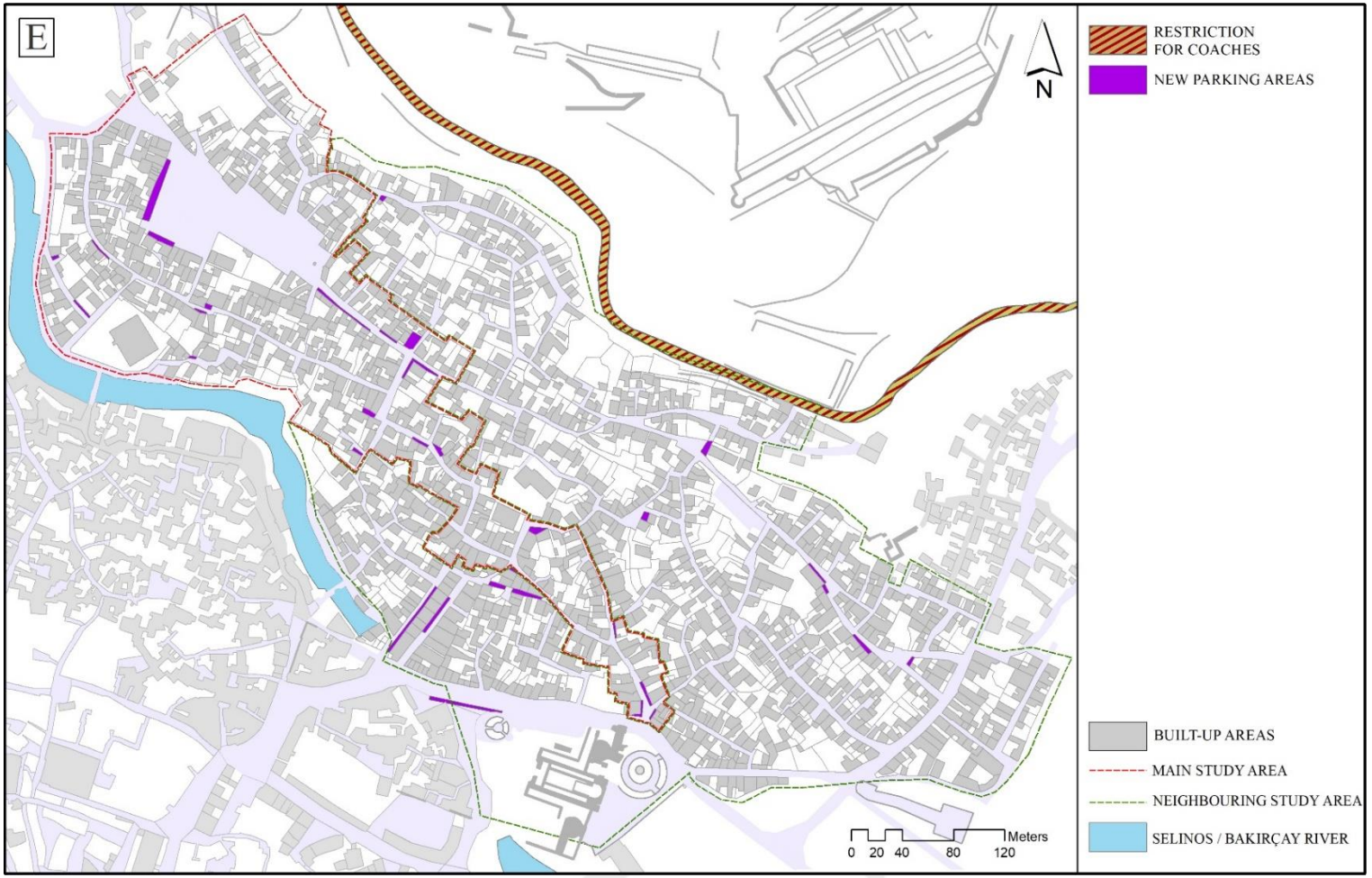

Figure 87. Evaluation of changes in vehicular and pedestrian circulation

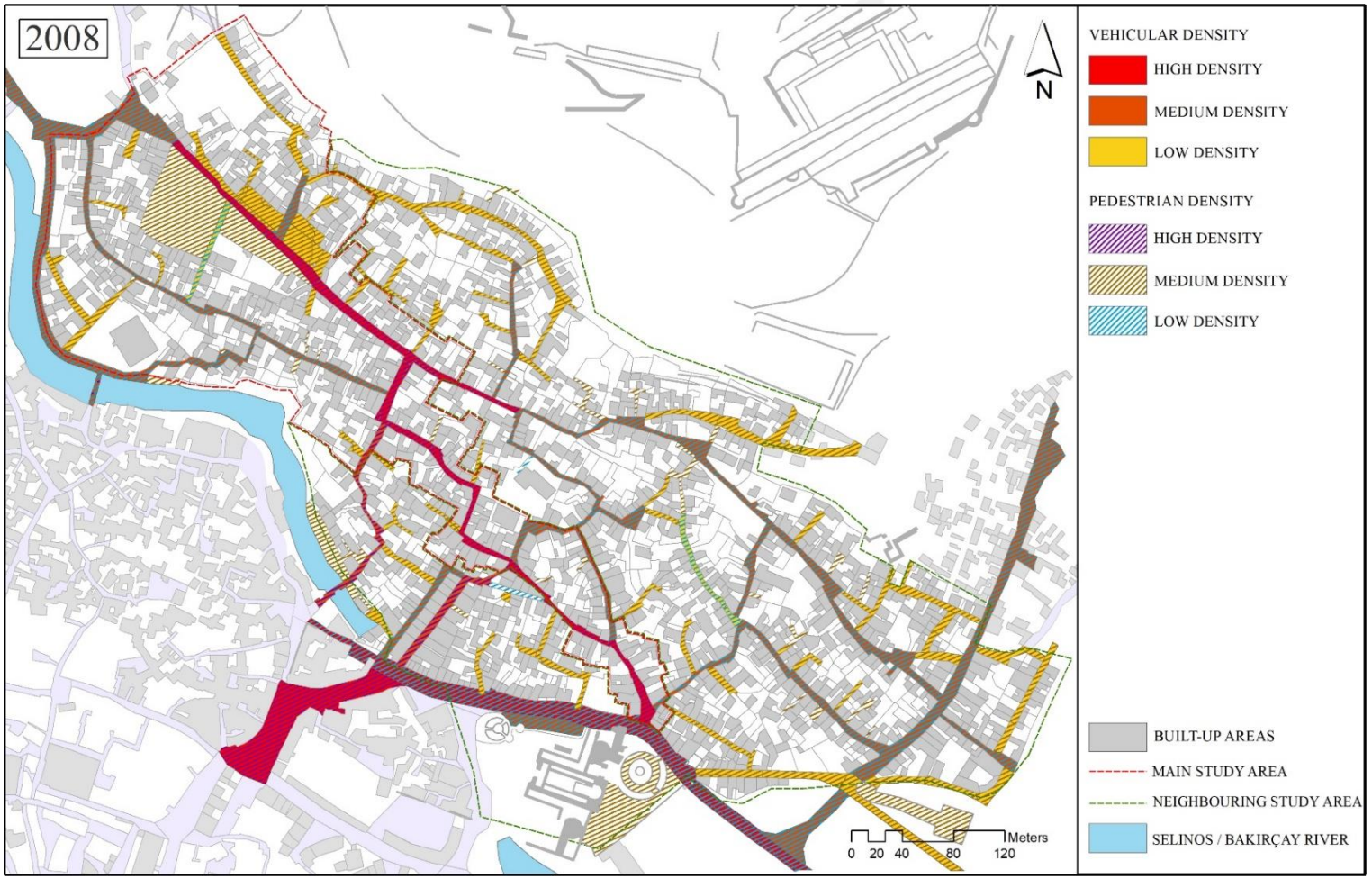

Figure 88. Vehicular and pedestrian density in 2008

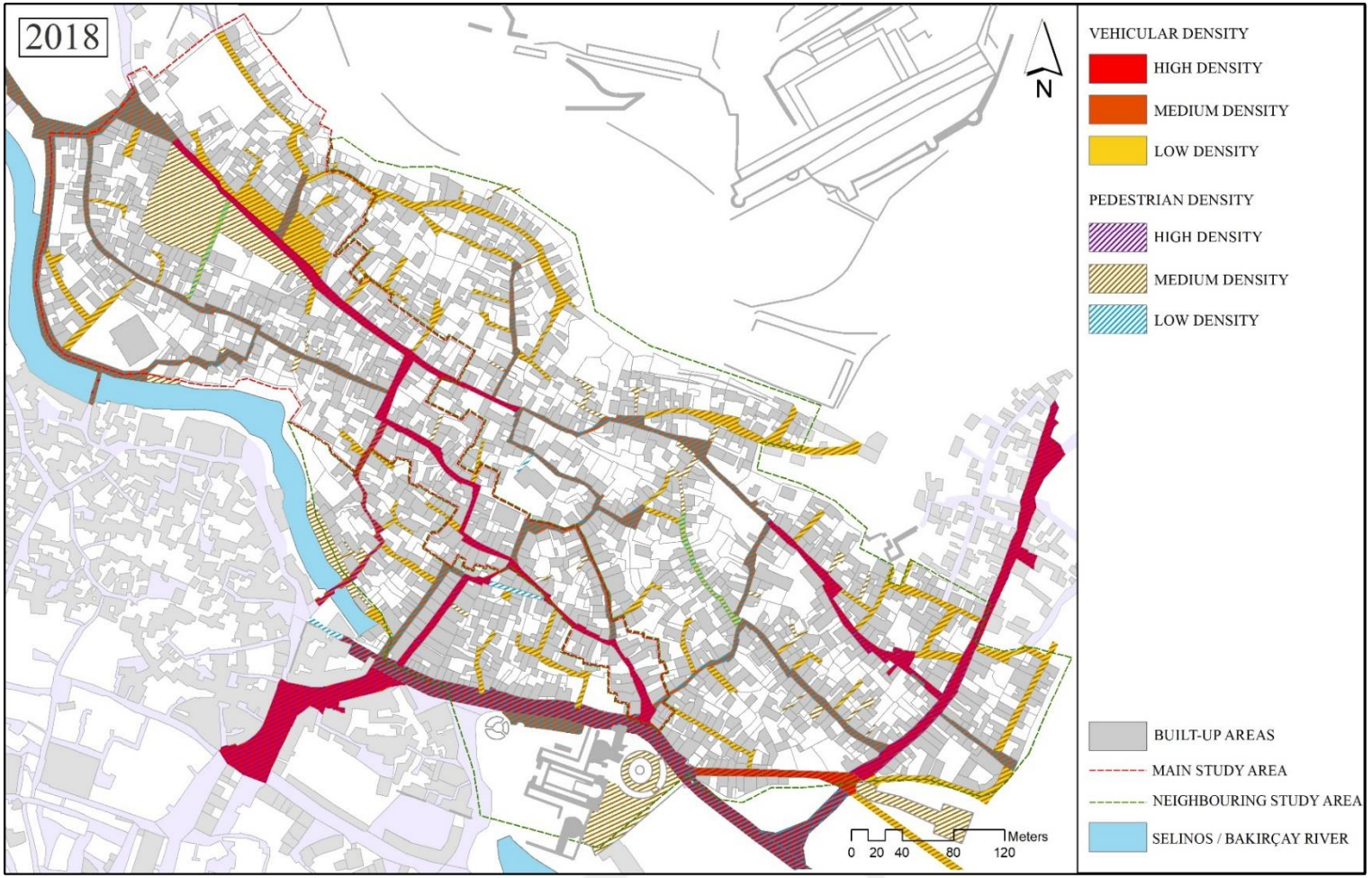

Figure 89. Vehicular and pedestrian density in 2018

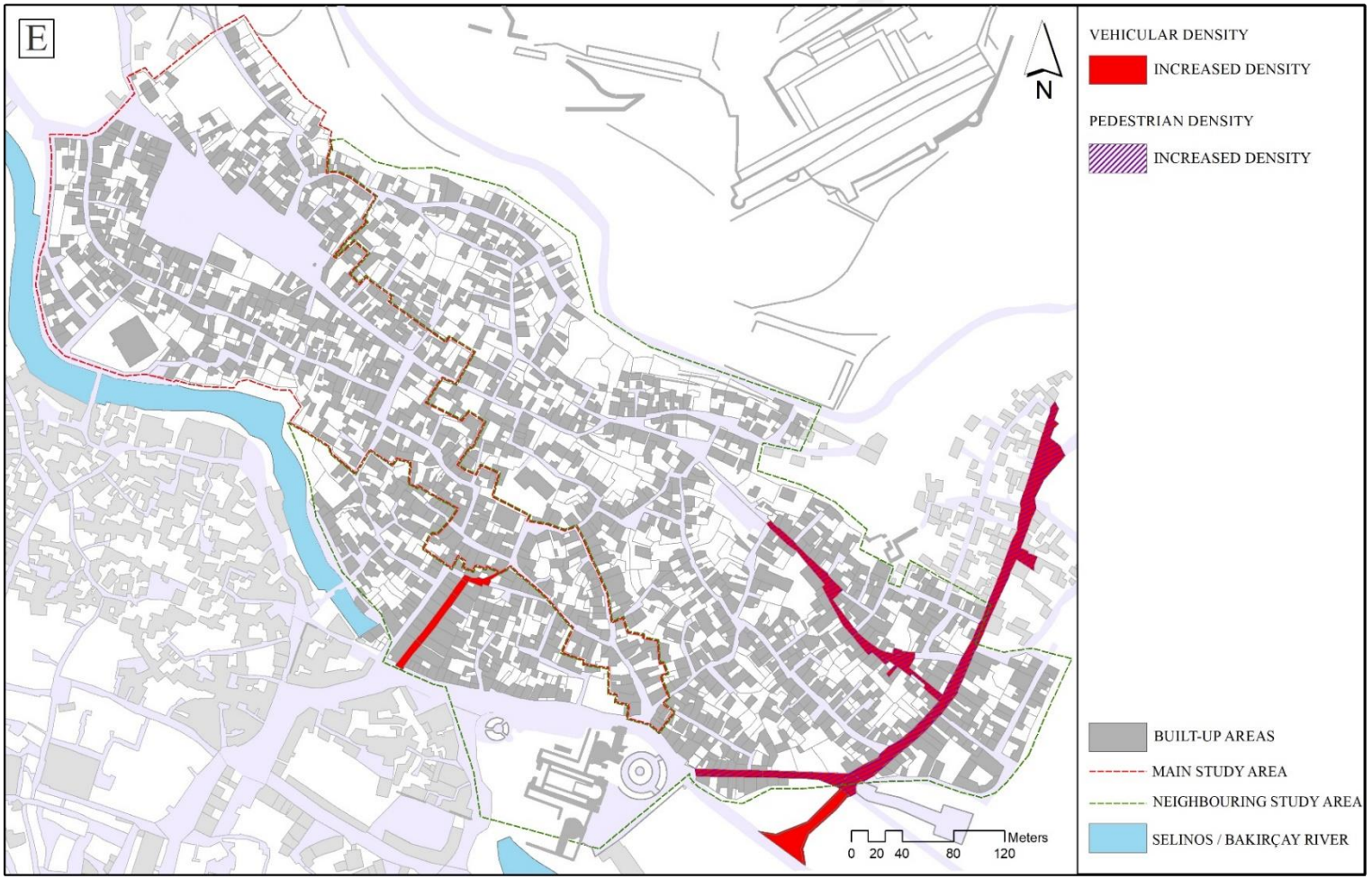

Figure 90. Evaluation of changes in vehicular and pedestrian density

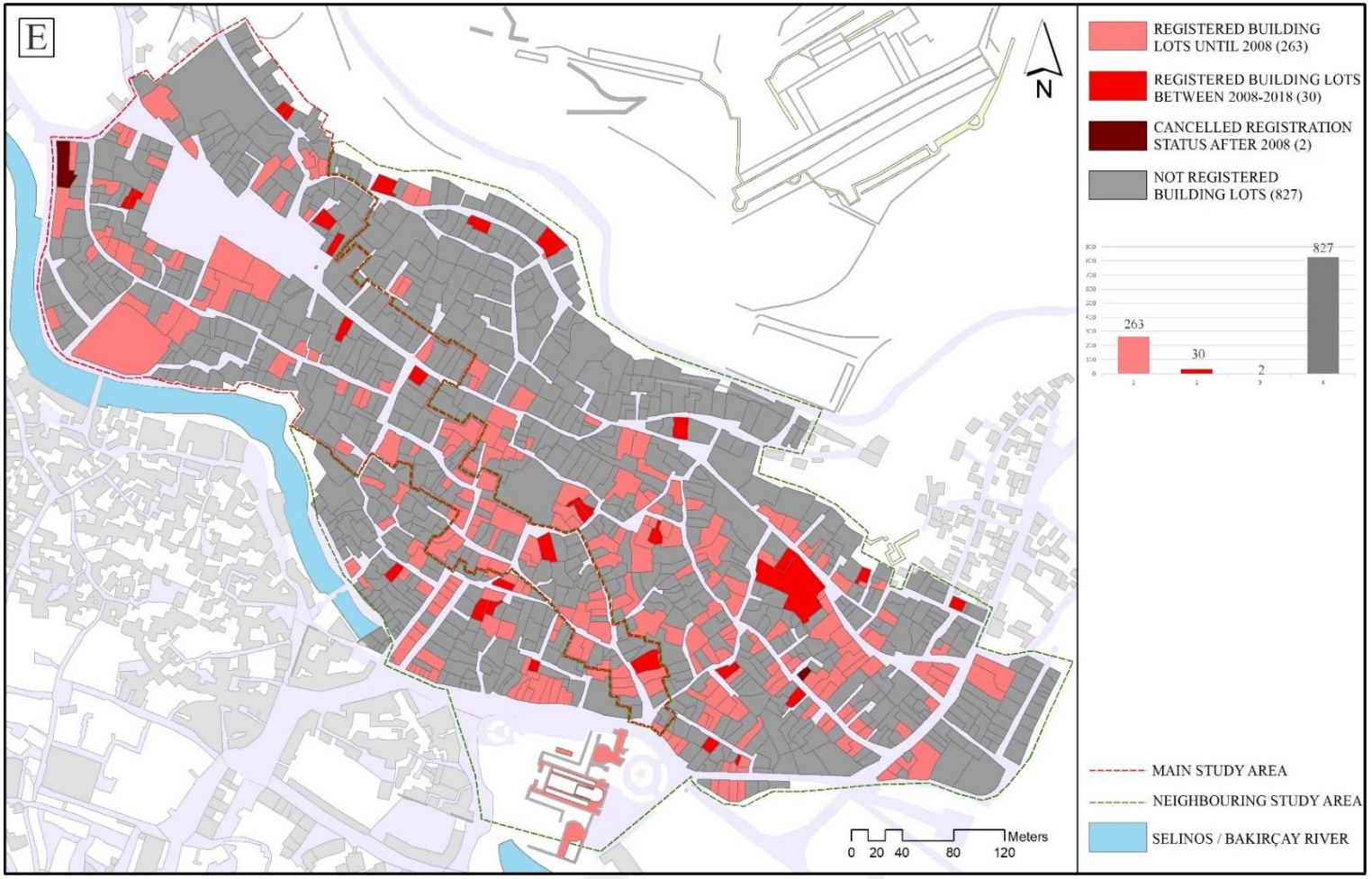

Figure 91. Evaluation of changes in building lot registration

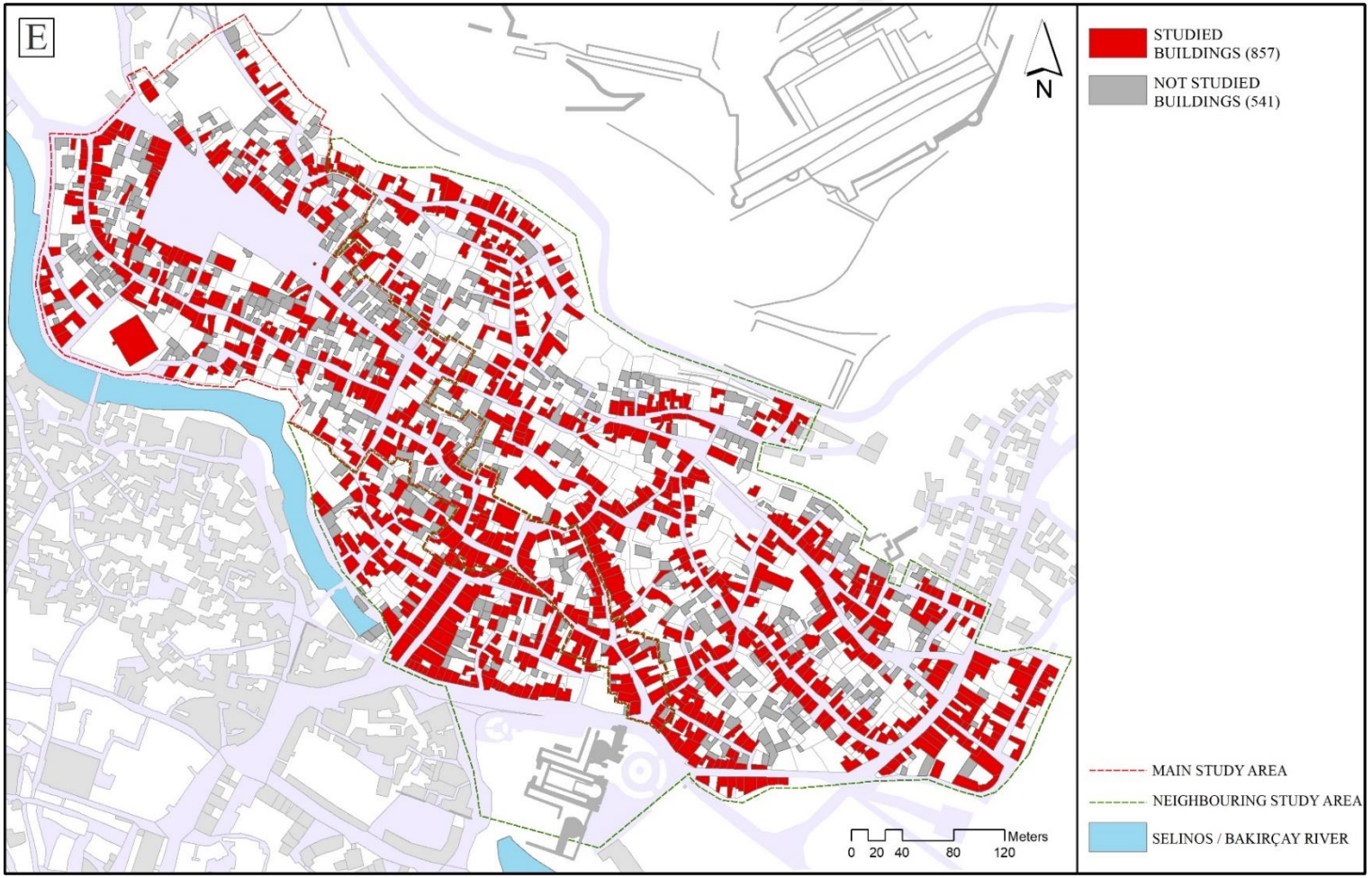

Figure 92. Studied buildings in the study area

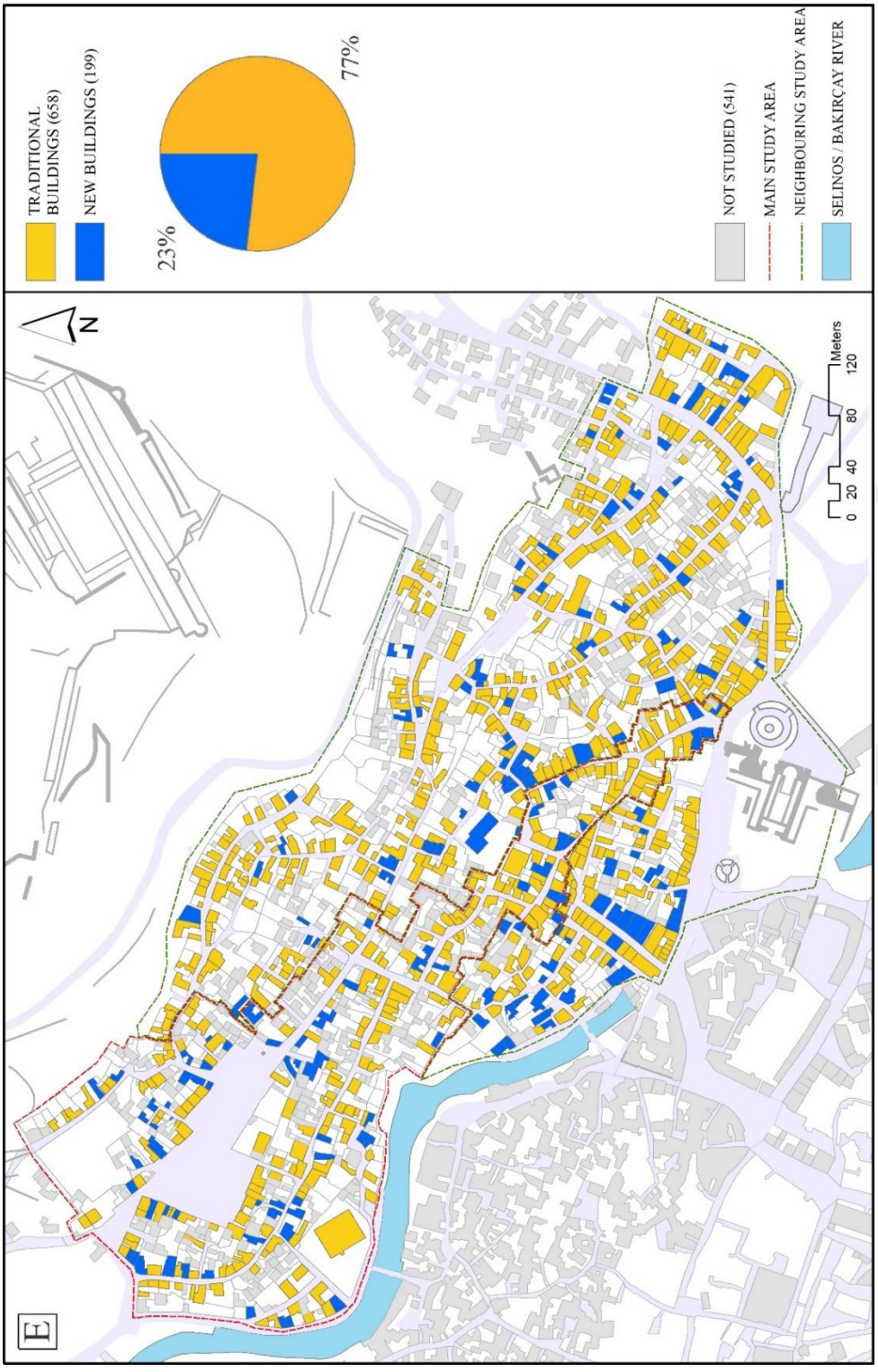

Figure 93. Category of buildings

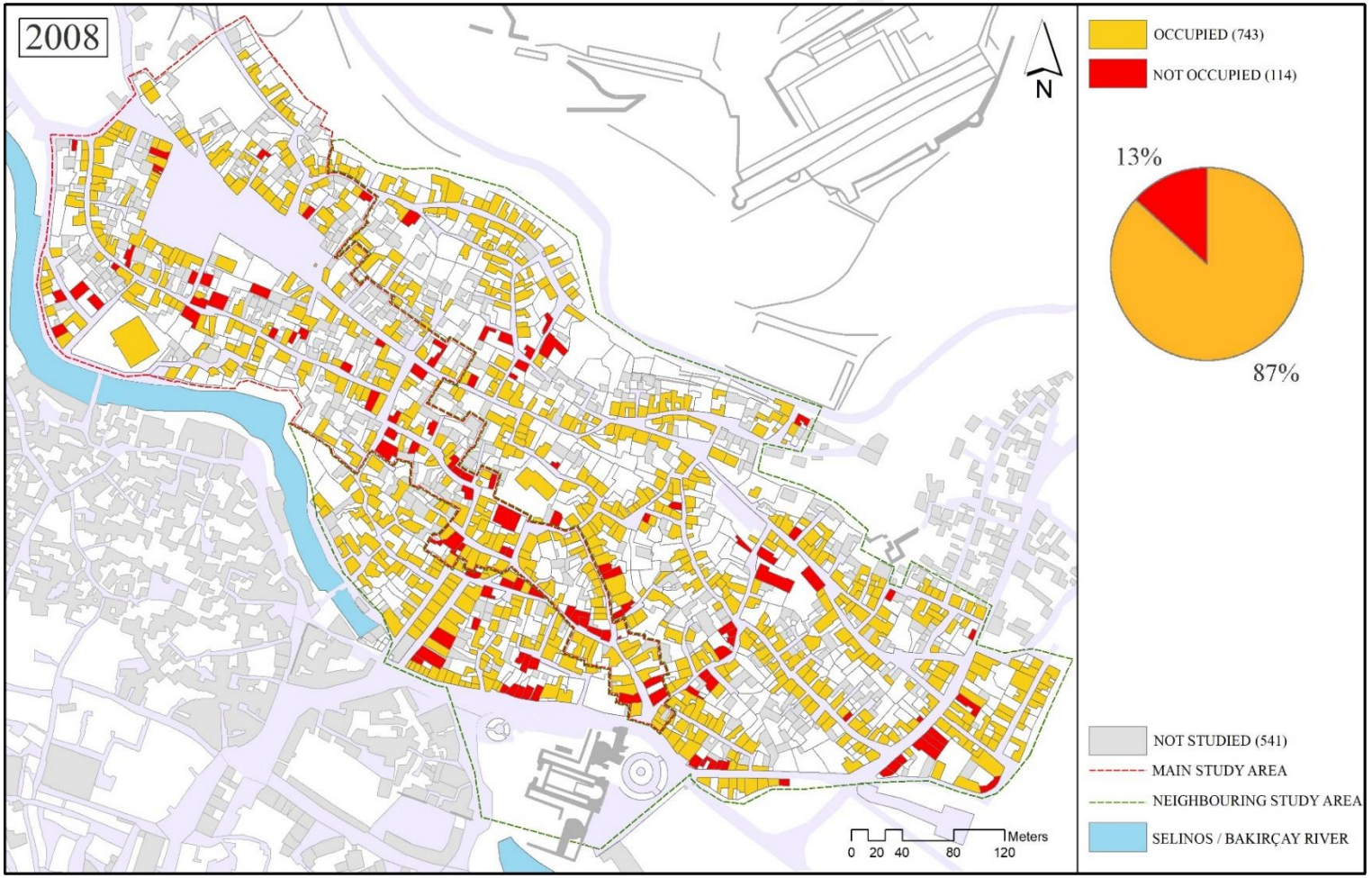

Figure 94. Occupancy of studied buildings in 2008

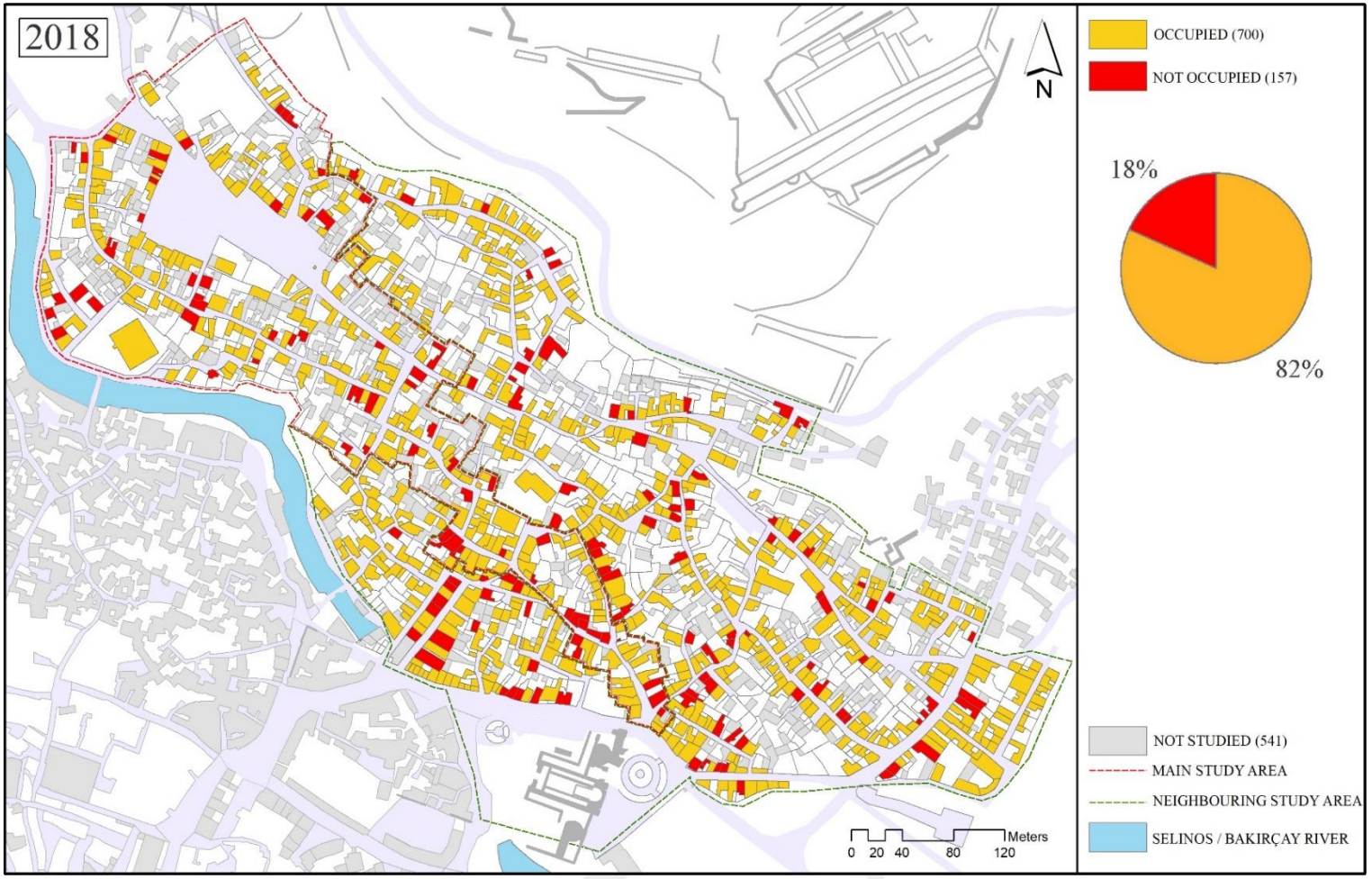

Figure 95. Occupancy of studied buildings in 2018

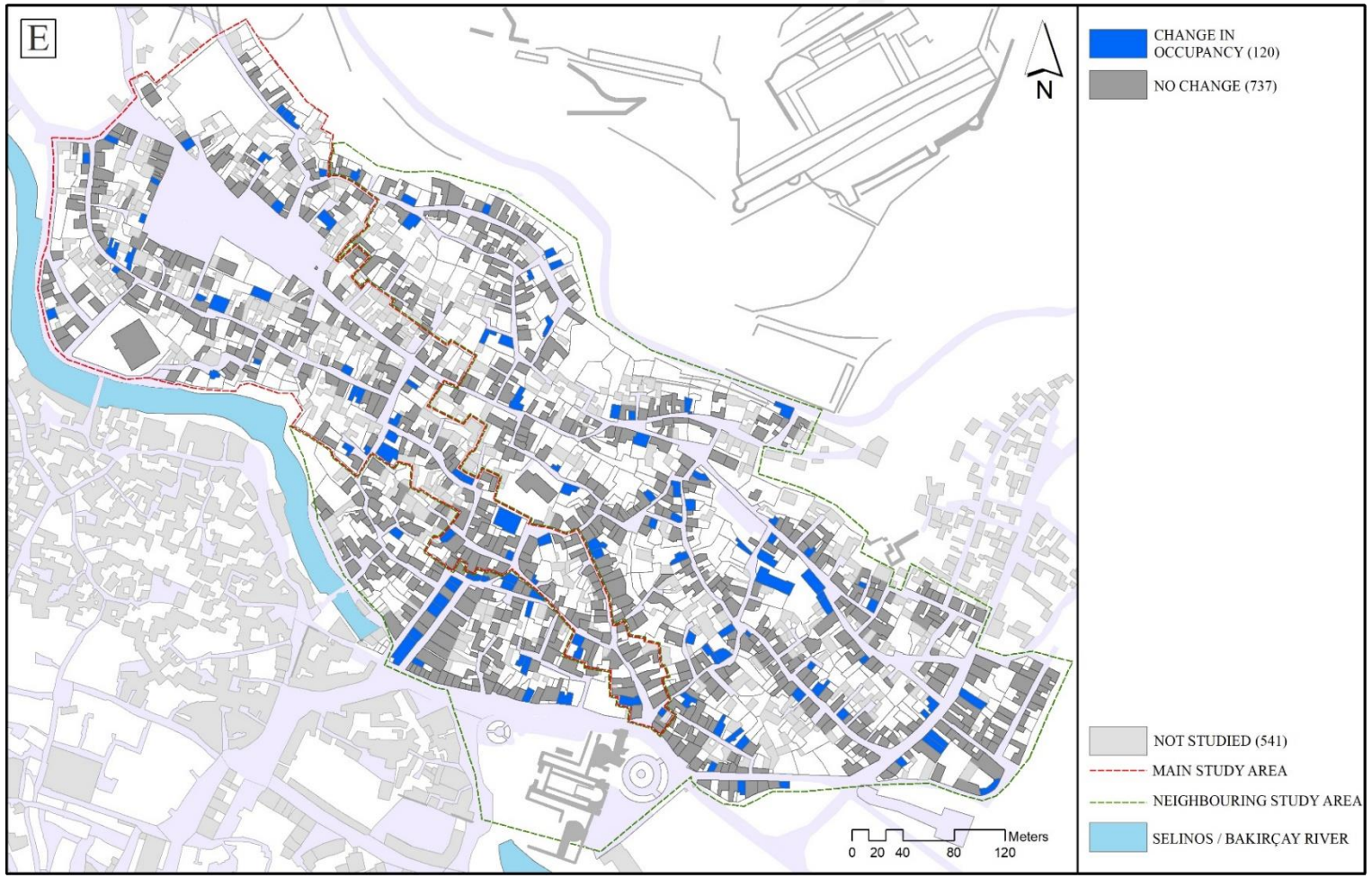

Figure 96. Change in occupancy for studied buildings between 2008 and 2018

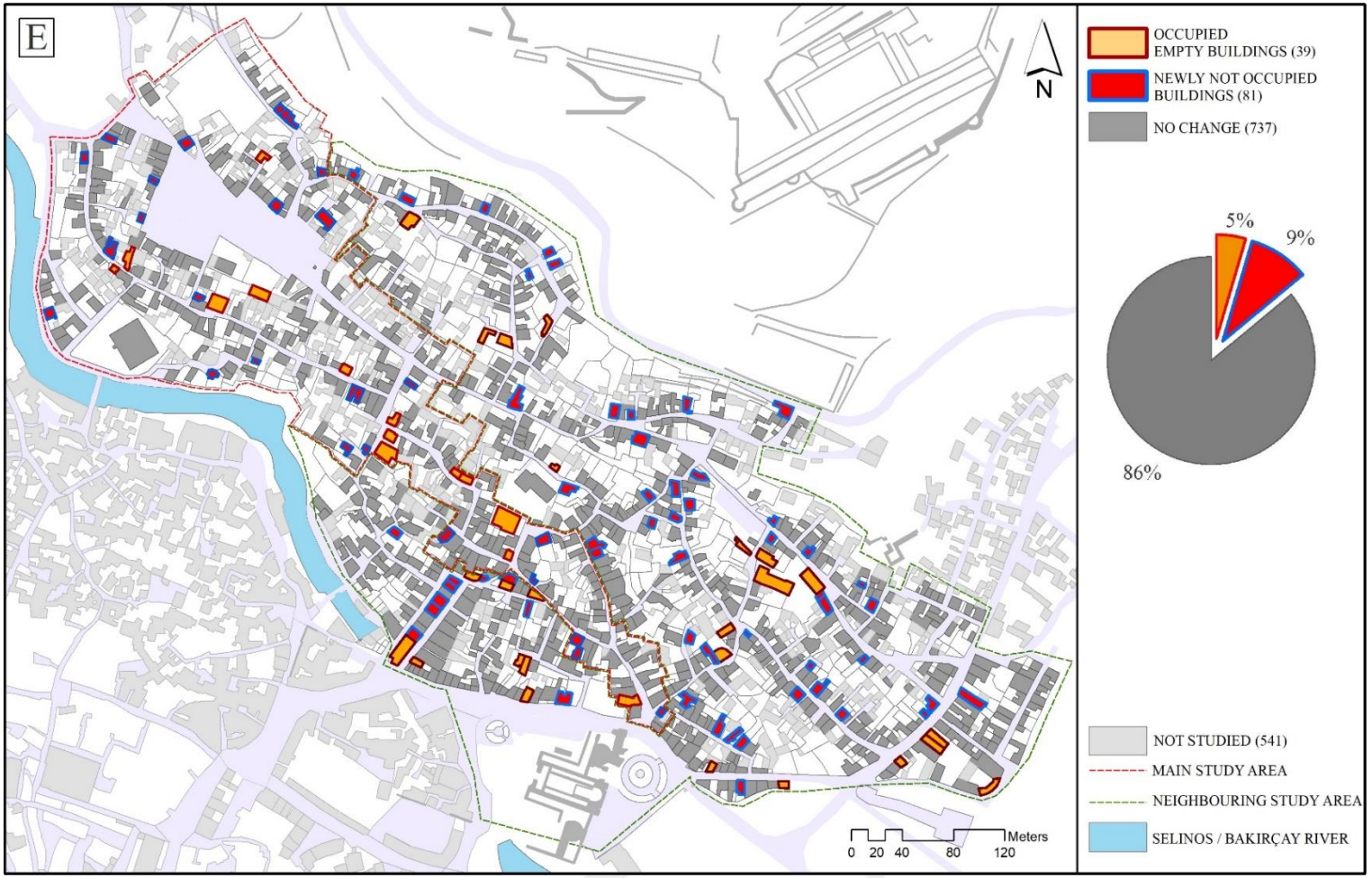

Figure 97. Evaluation of change in occupancy for studied buildings

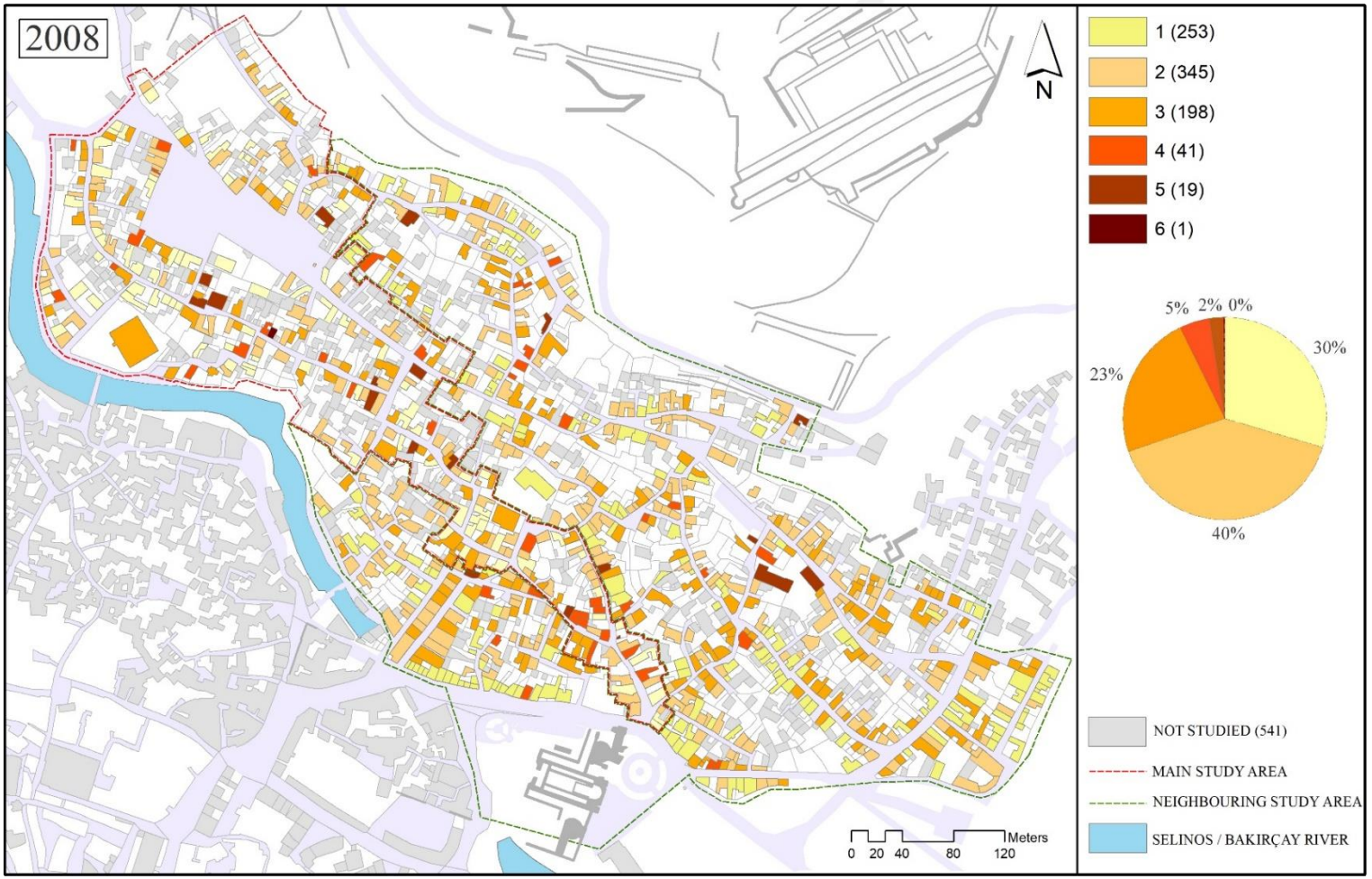

Figure 98. Exterior physical conditions of buildings in 2008

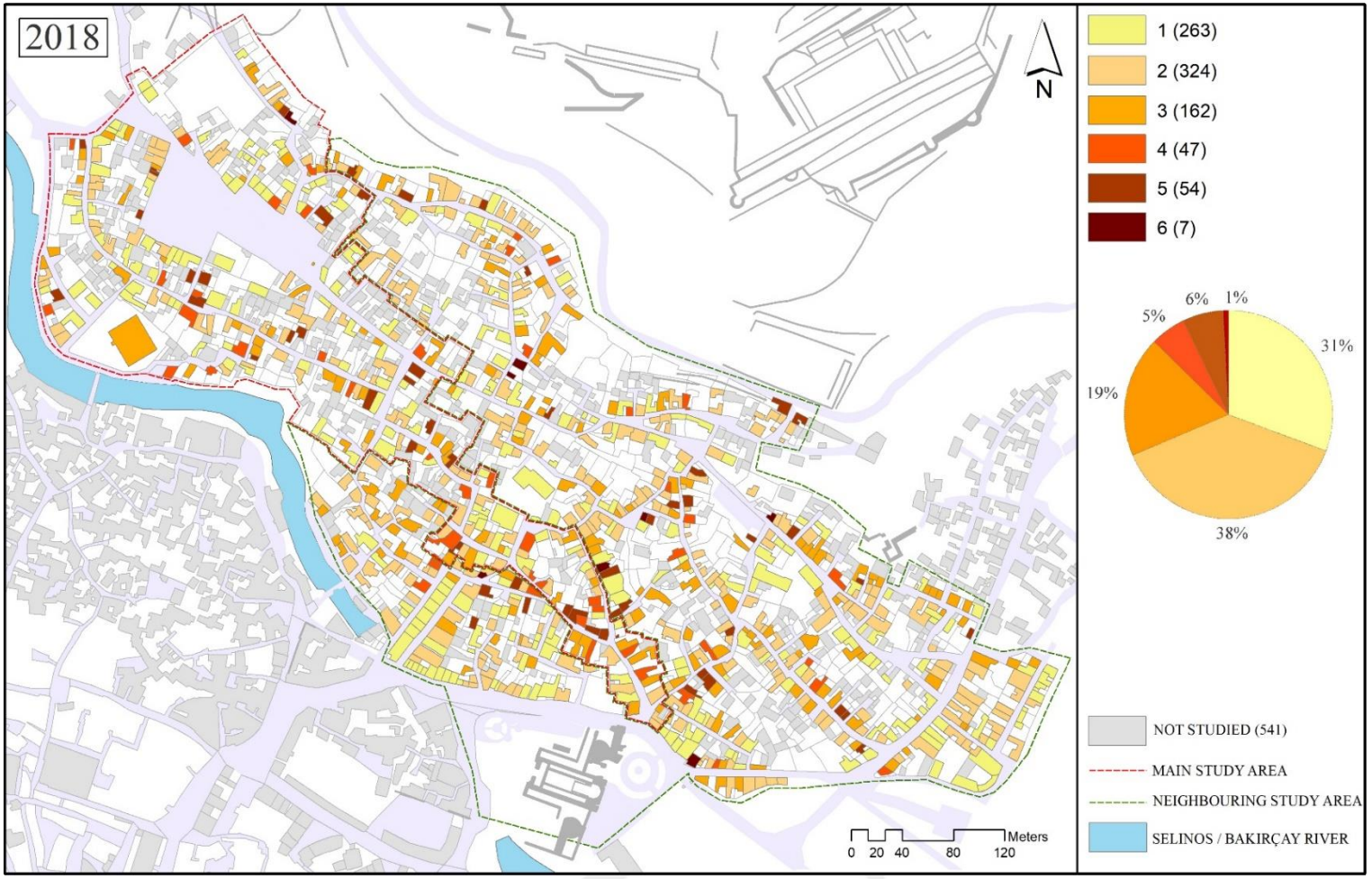

Figure 99. Exterior physical conditions of buildings in 2018

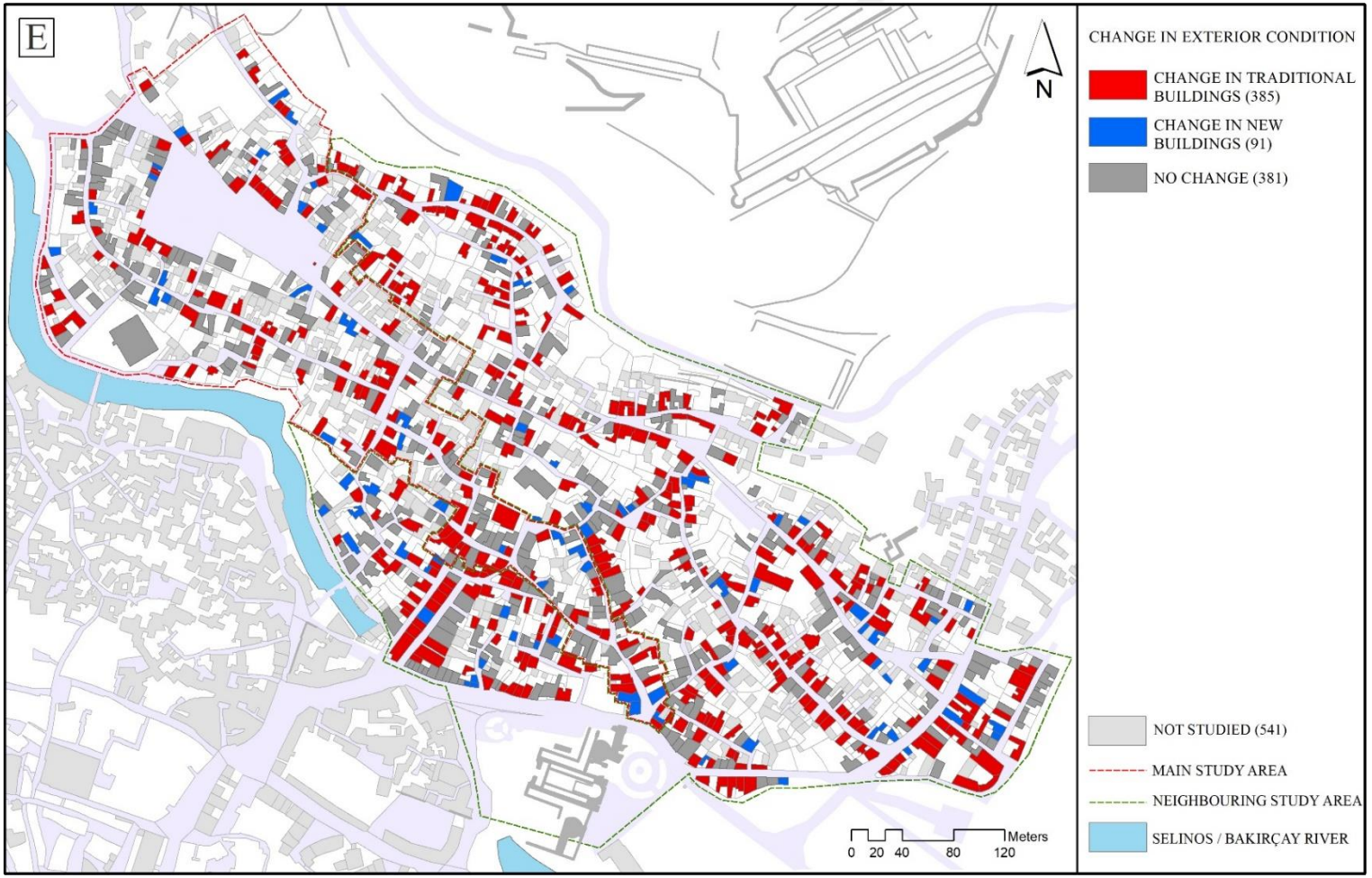

Figure 100. Changes in exterior conditions of buildings

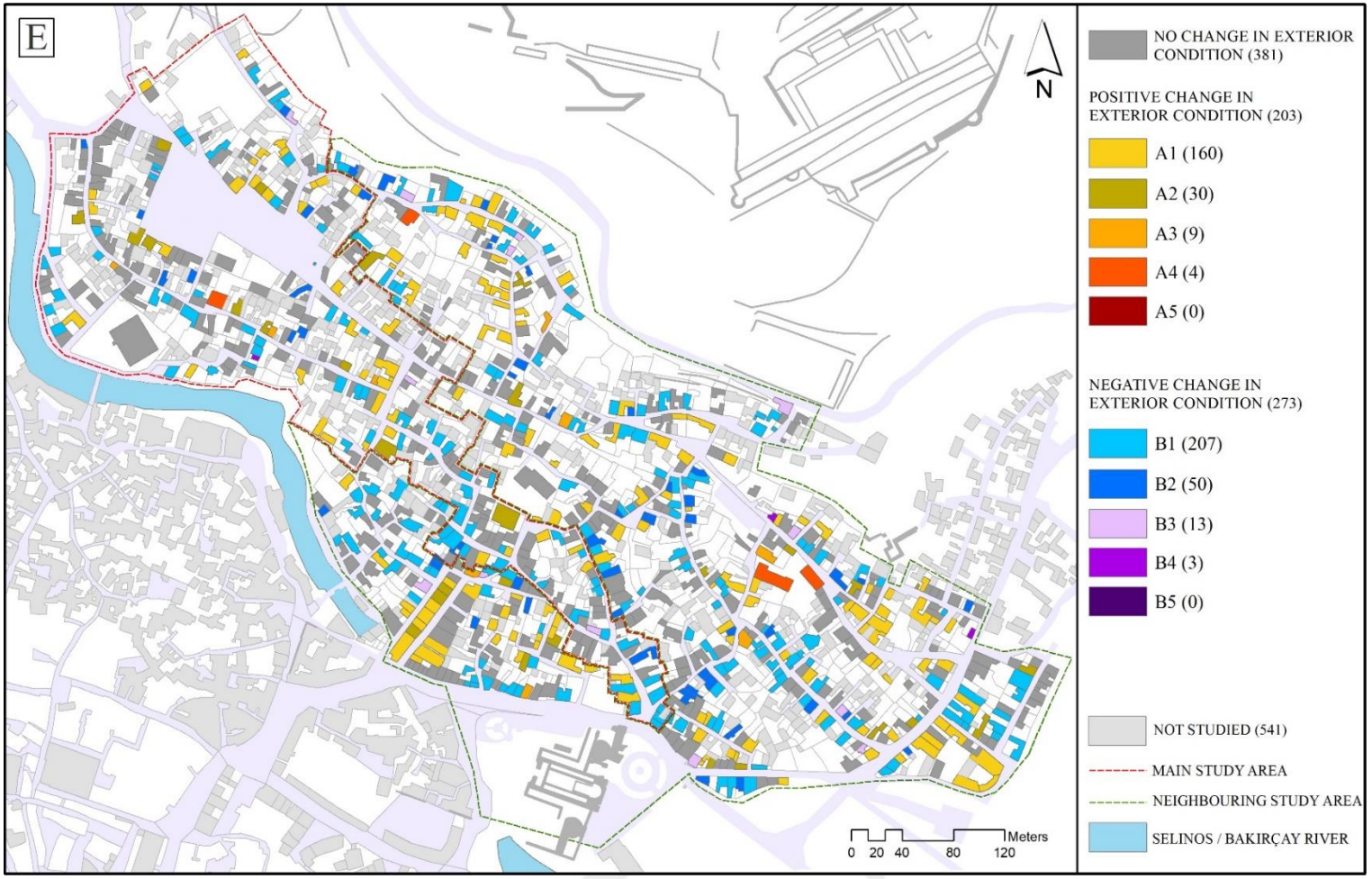

Figure 101. Evaluation of changes in exterior conditions of buildings

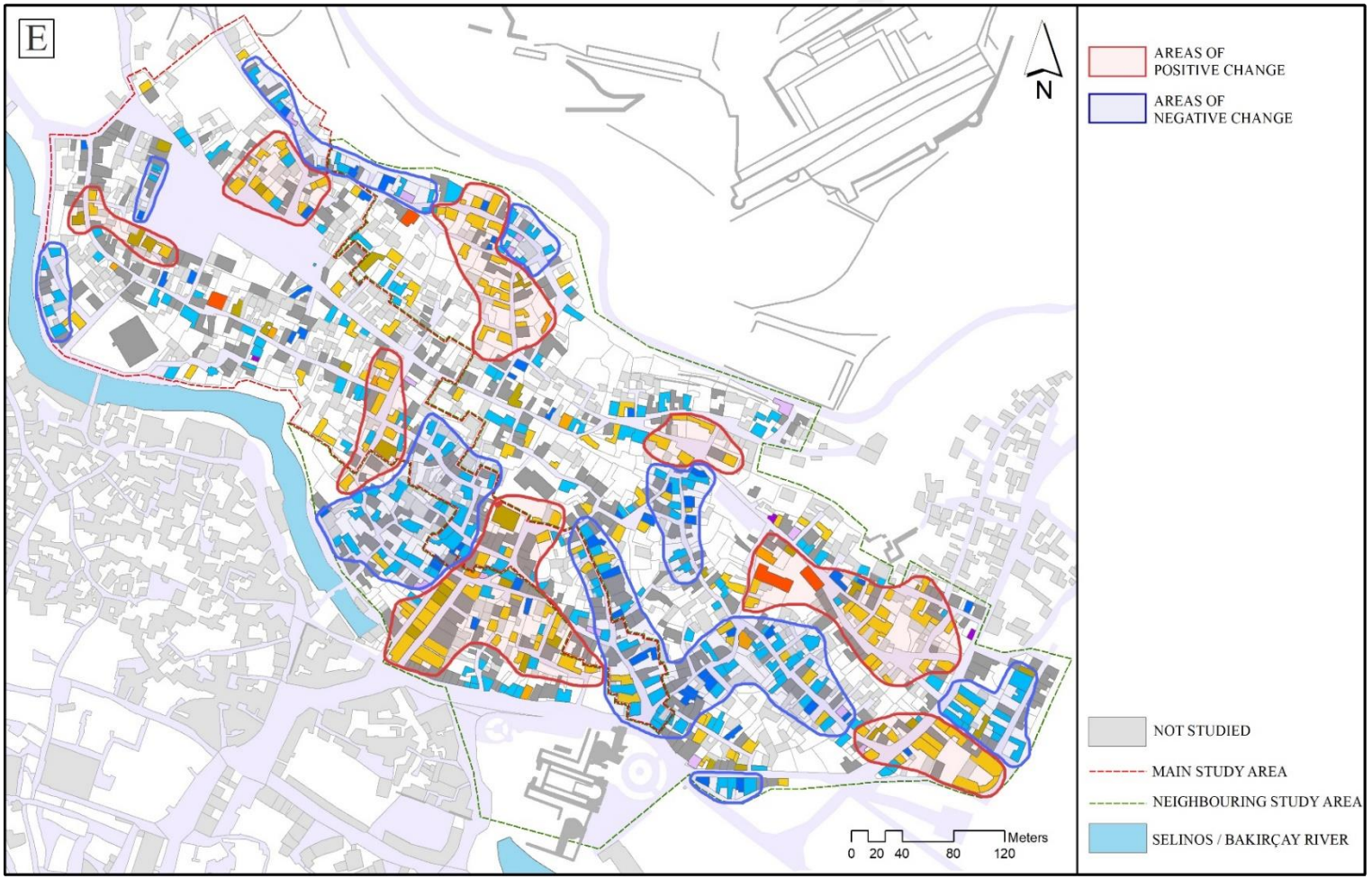

Figure 102. Map showing areas where positive and negative changes in exterior conditions are localized

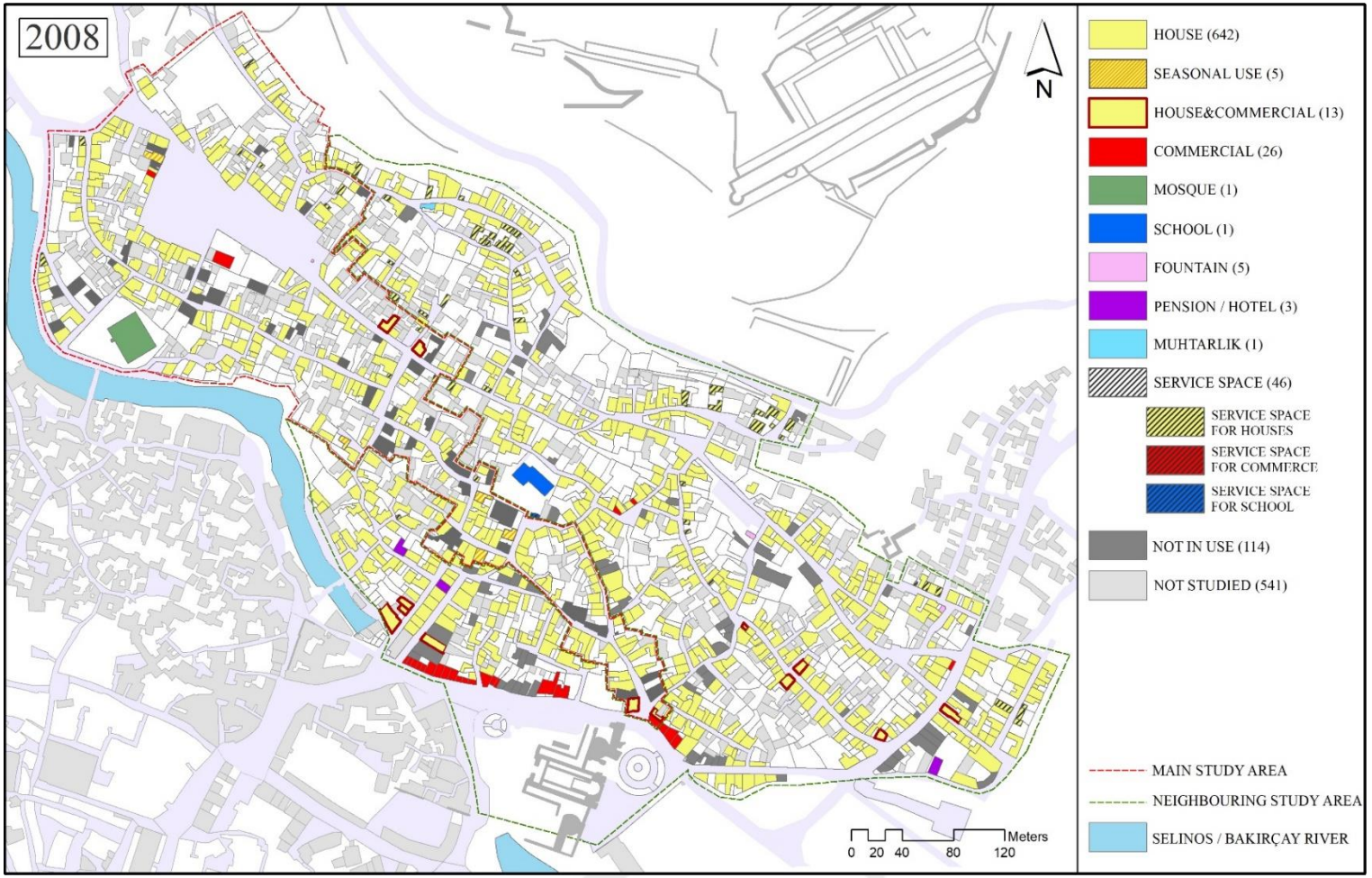

Figure 103. Functions of studied buildings in 2008

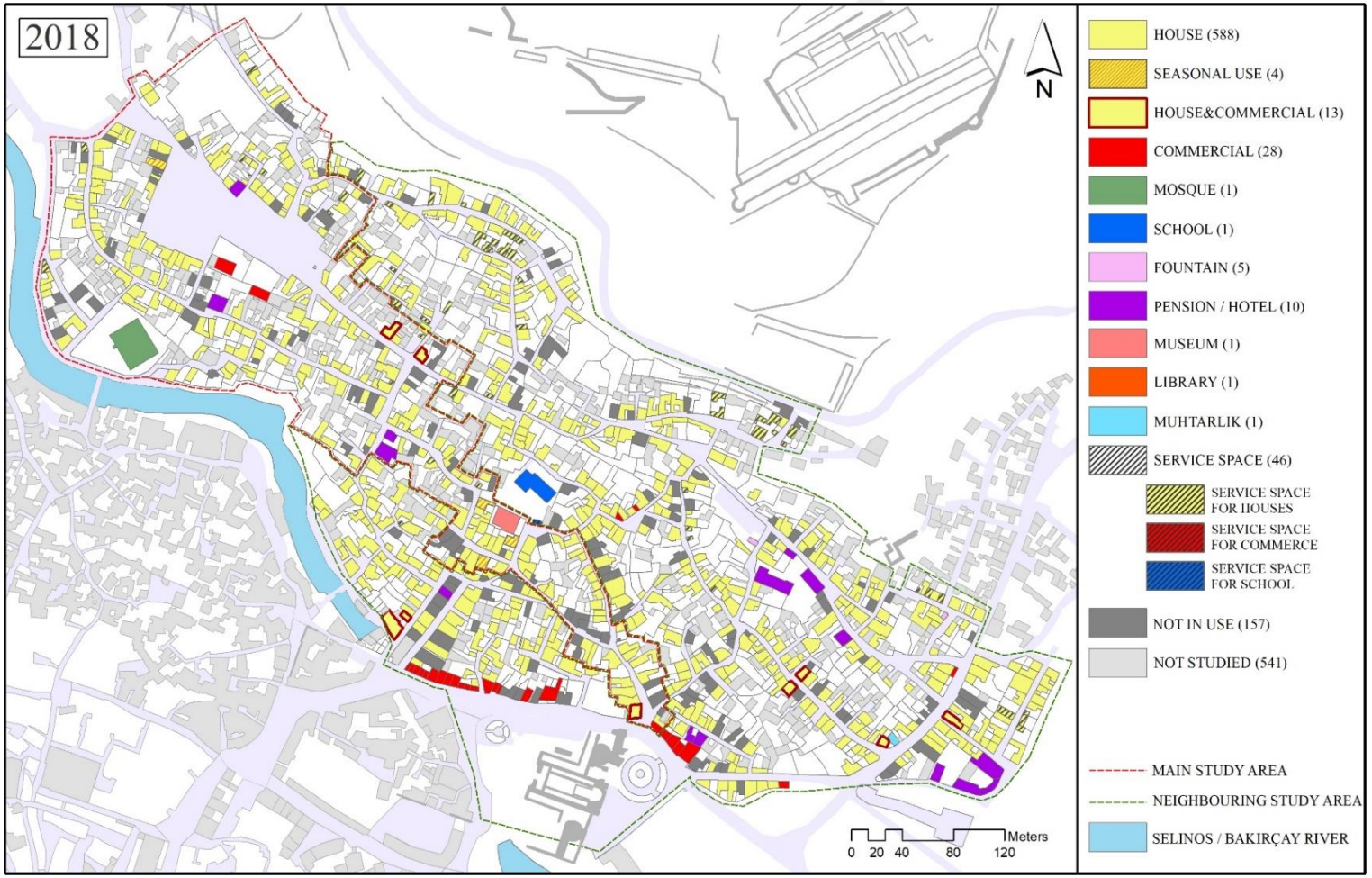

Figure 104. Functions of studied buildings in 2018

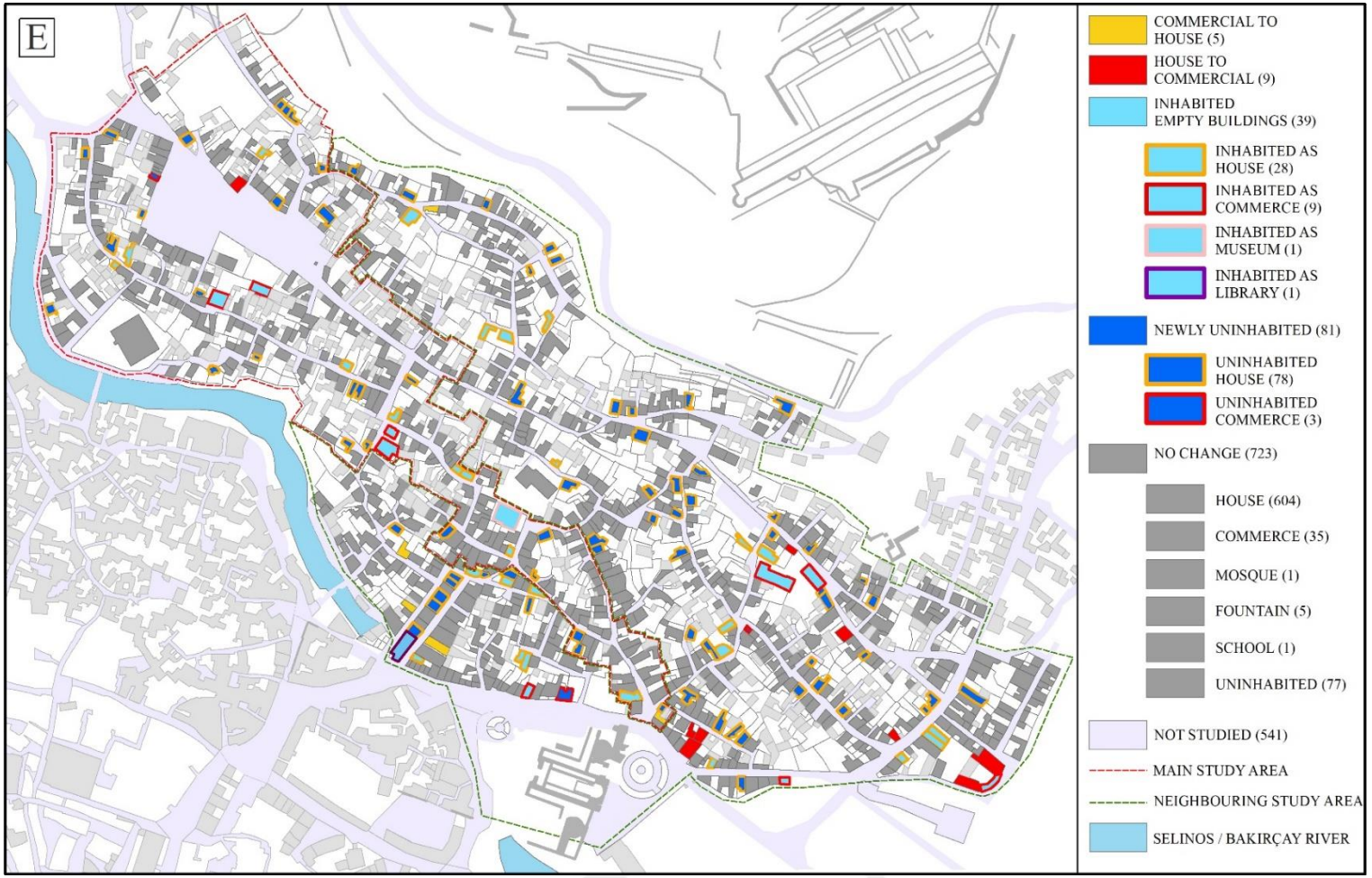

Figure 105. Evaluation of functional changes for all studied buildings

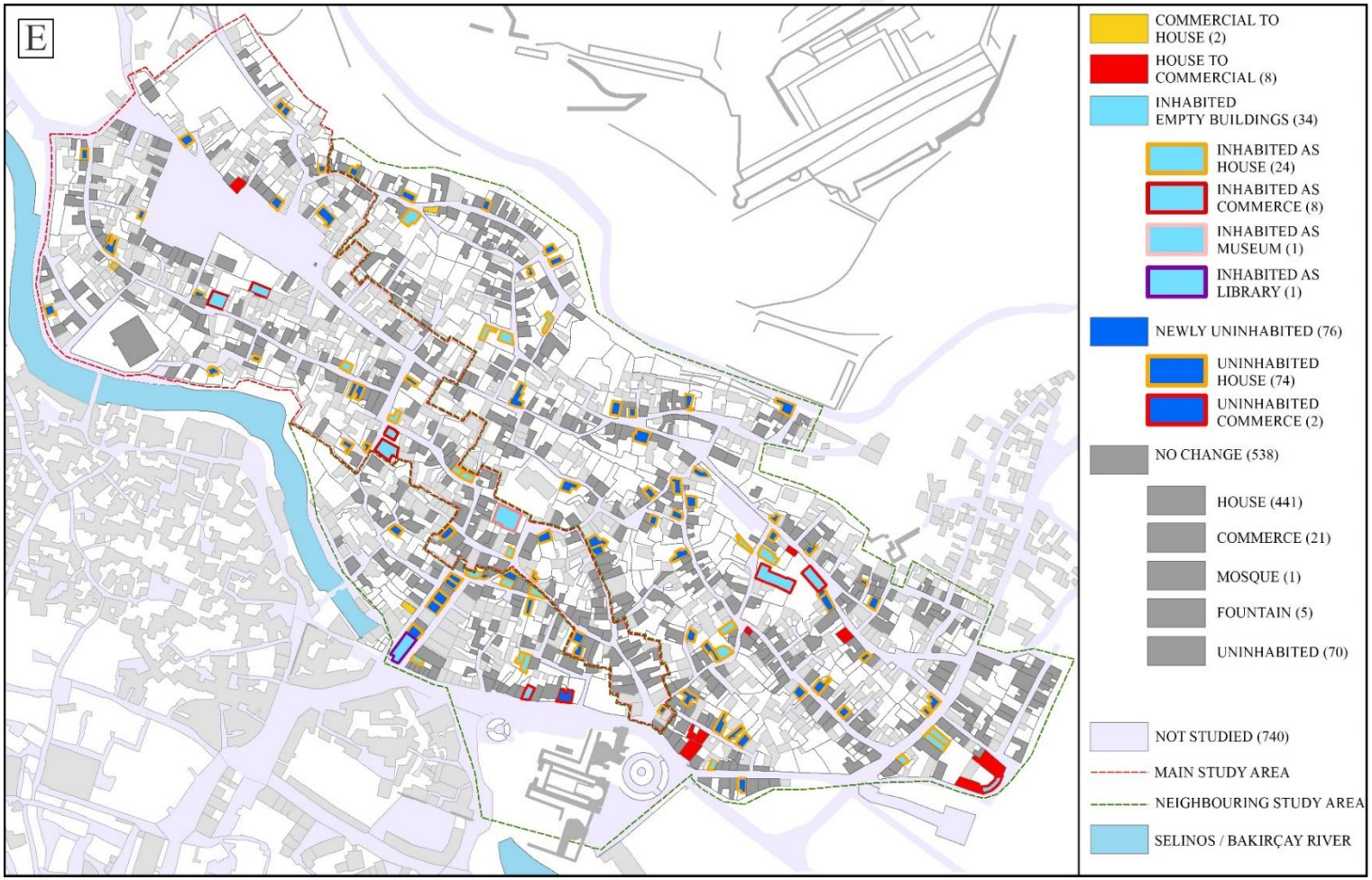

Figure 106. Evaluation of functional changes for traditional buildings

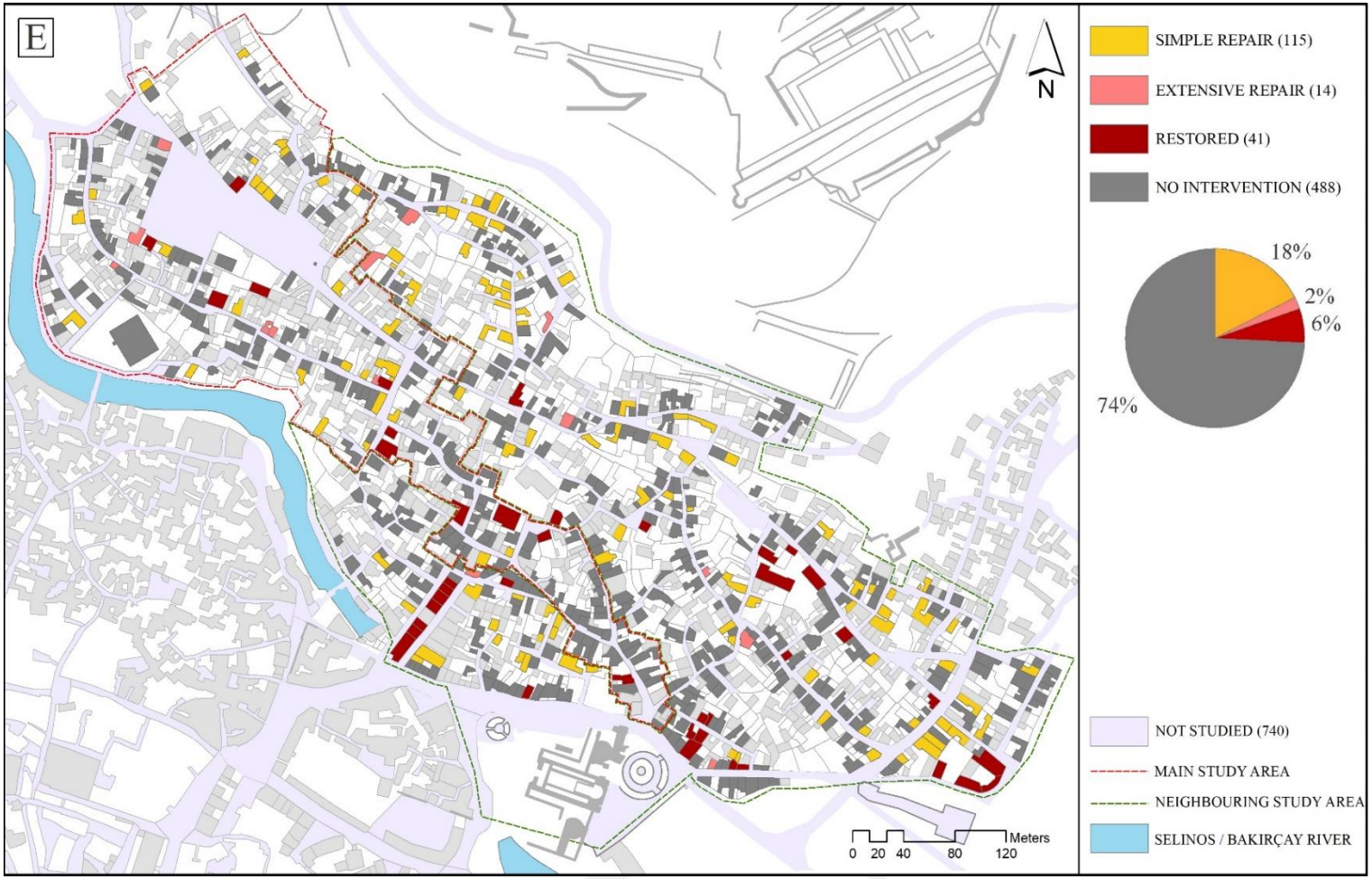

Figure 107. Conservation interventions in traditional buildings

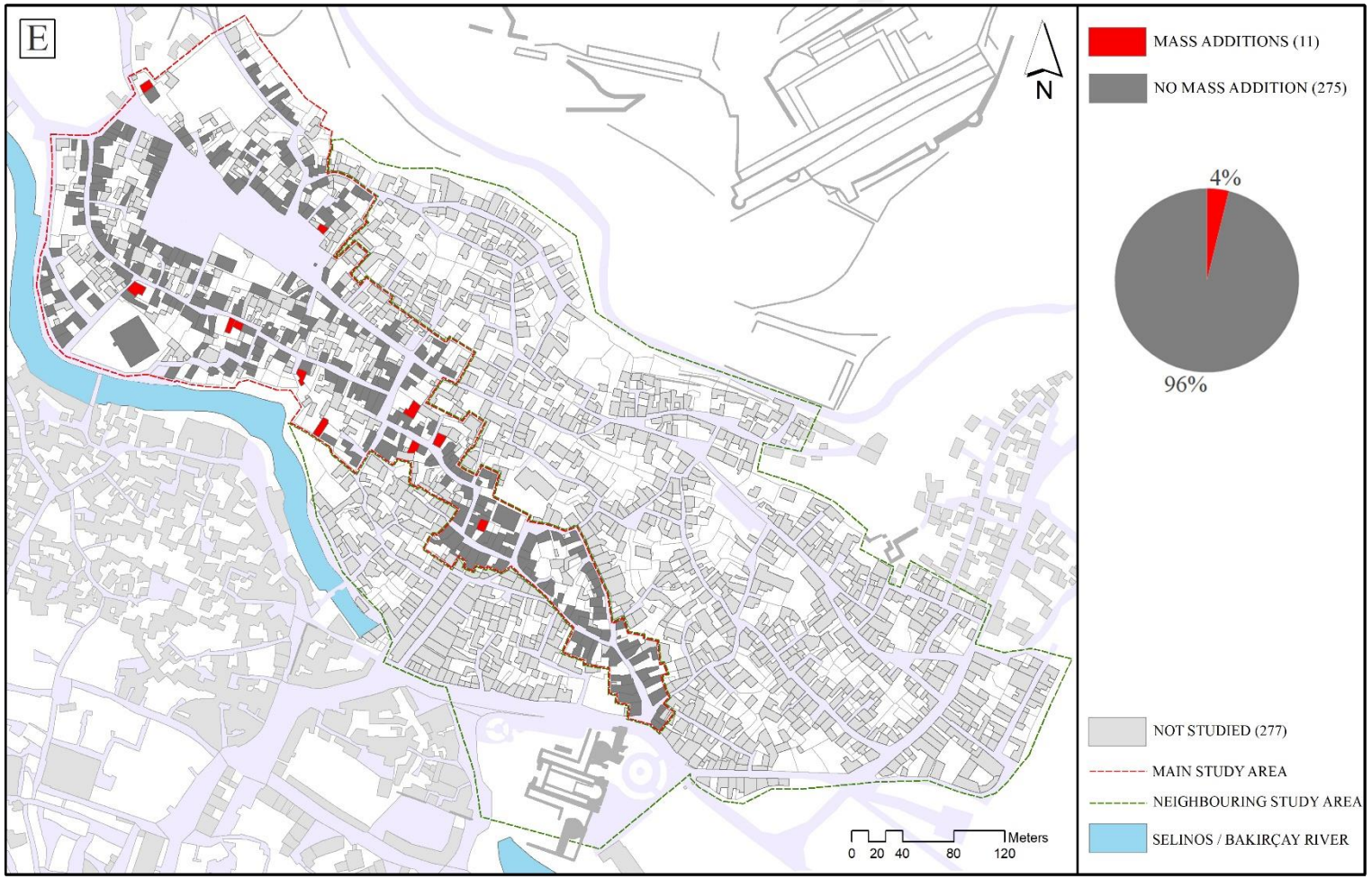

Figure 108. Evaluation of mass additions in the main study area

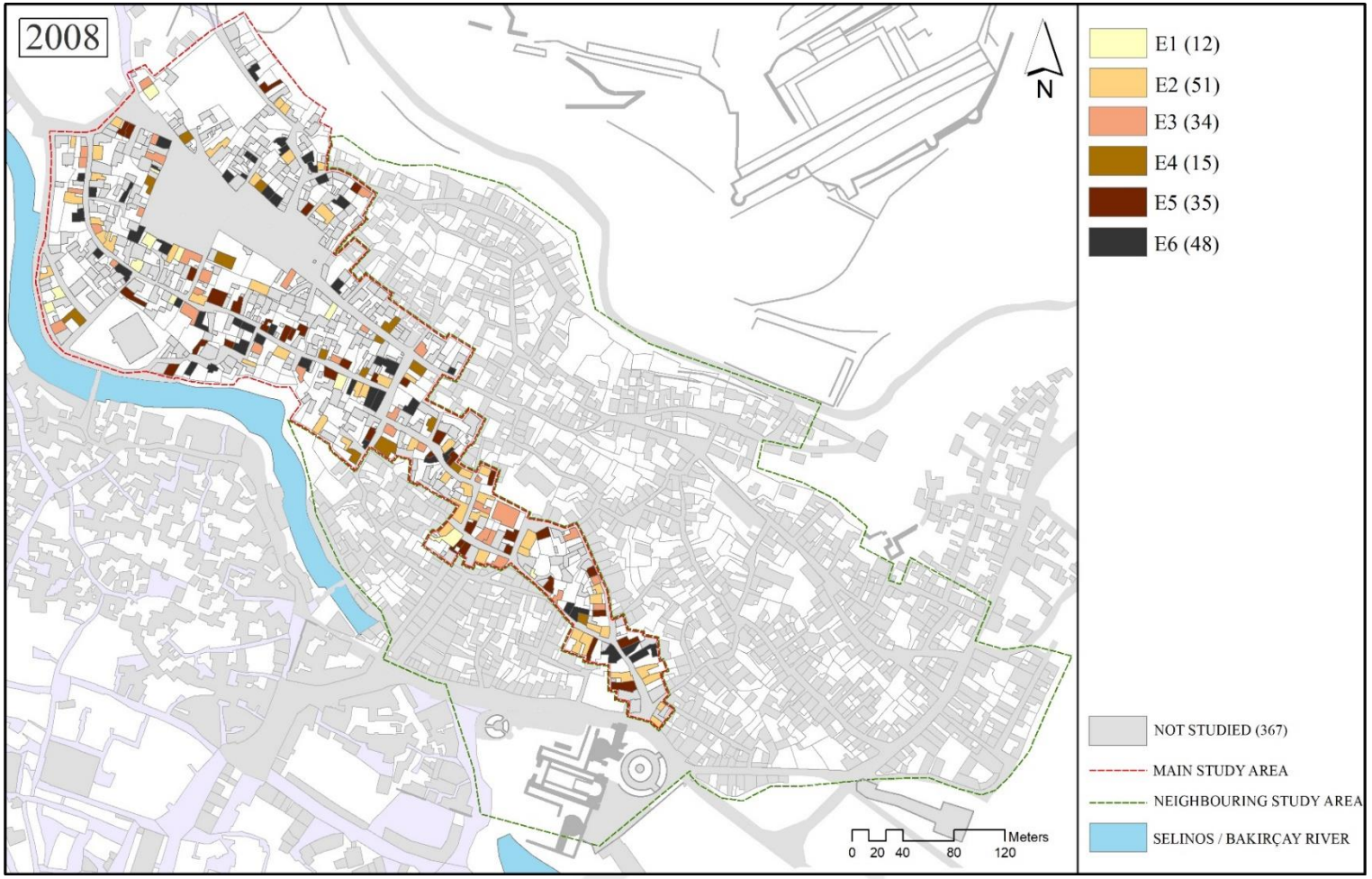

Figure 109. Overall exterior change in the main study area in 2008

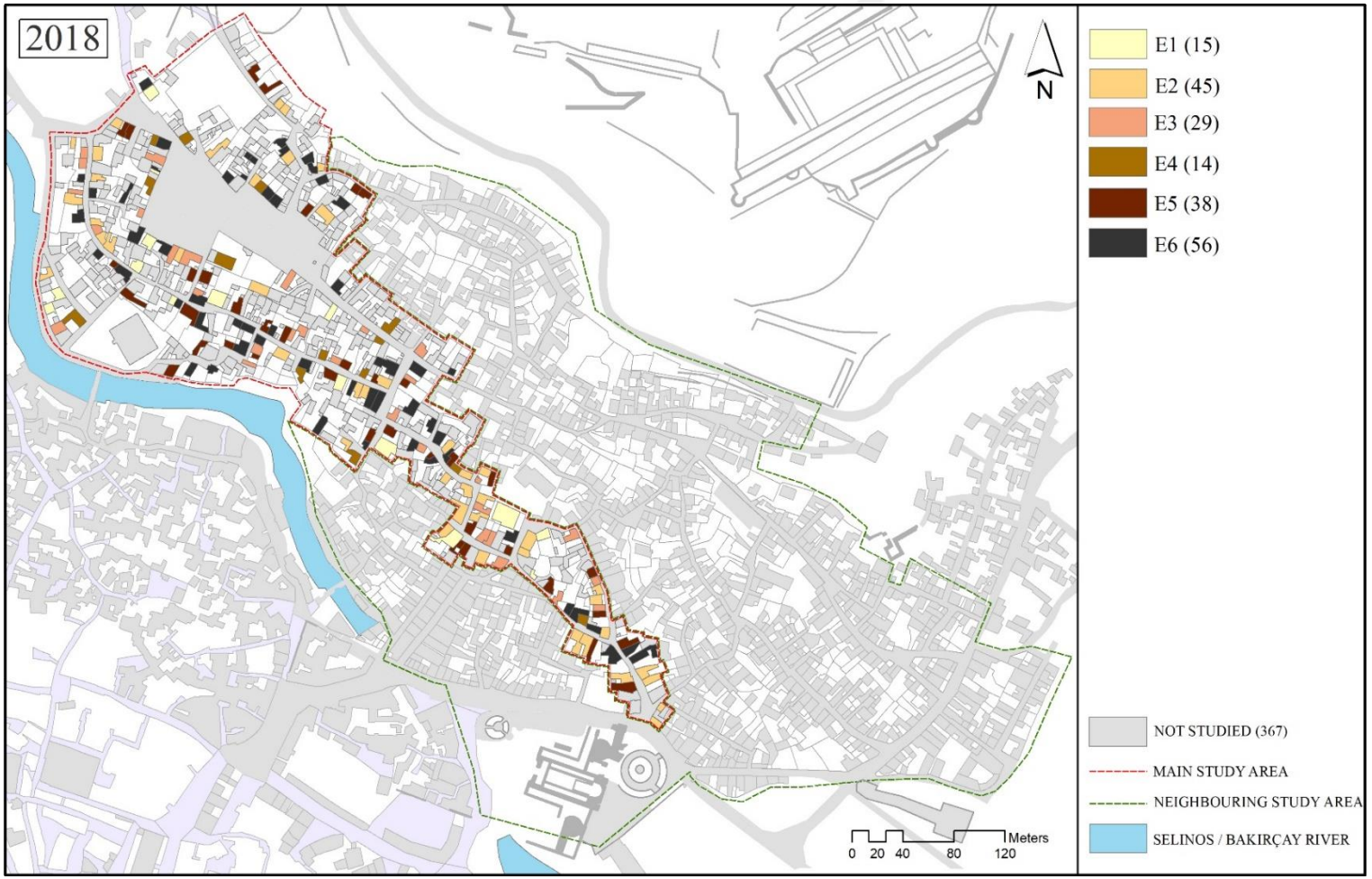

Figure 110. Overall exterior change in the main study area in 2018

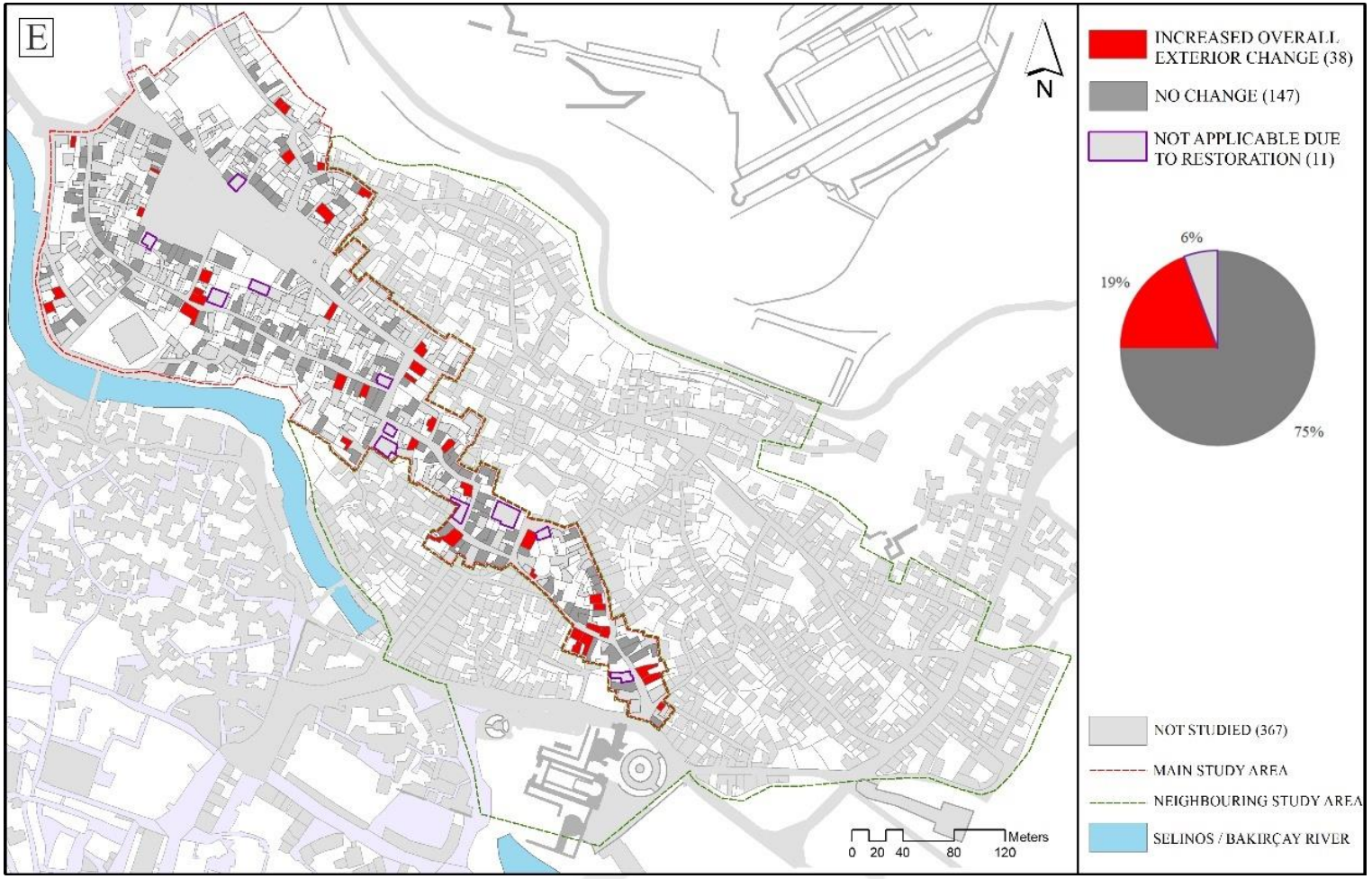

Figure 111. Evaluation of overall exterior change in the main study area

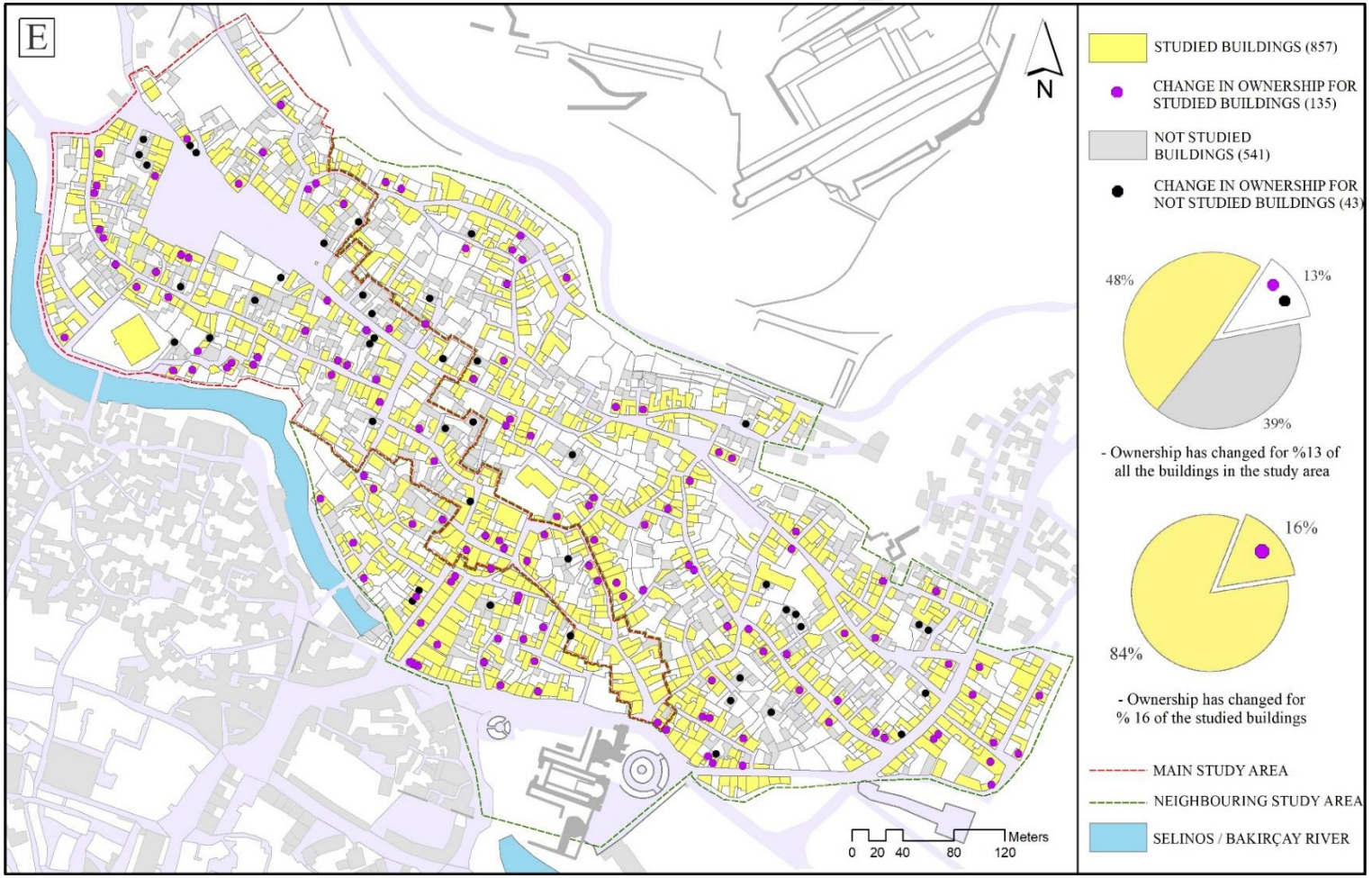

Figure 112. Change in ownership for the buildings between 2014 and 2018

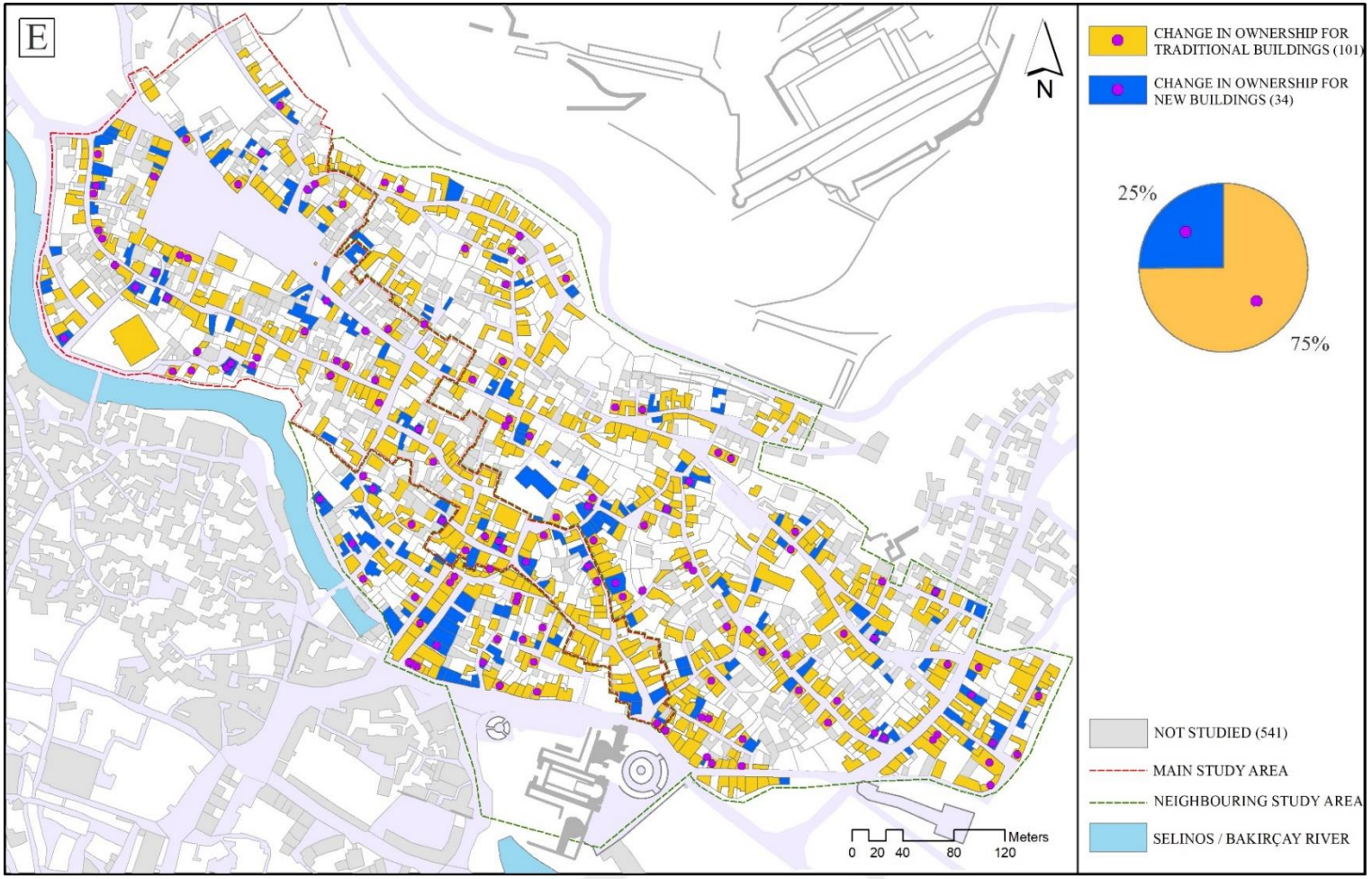

Figure 113. Evaluation of change in ownership with the distinction of traditional and new building

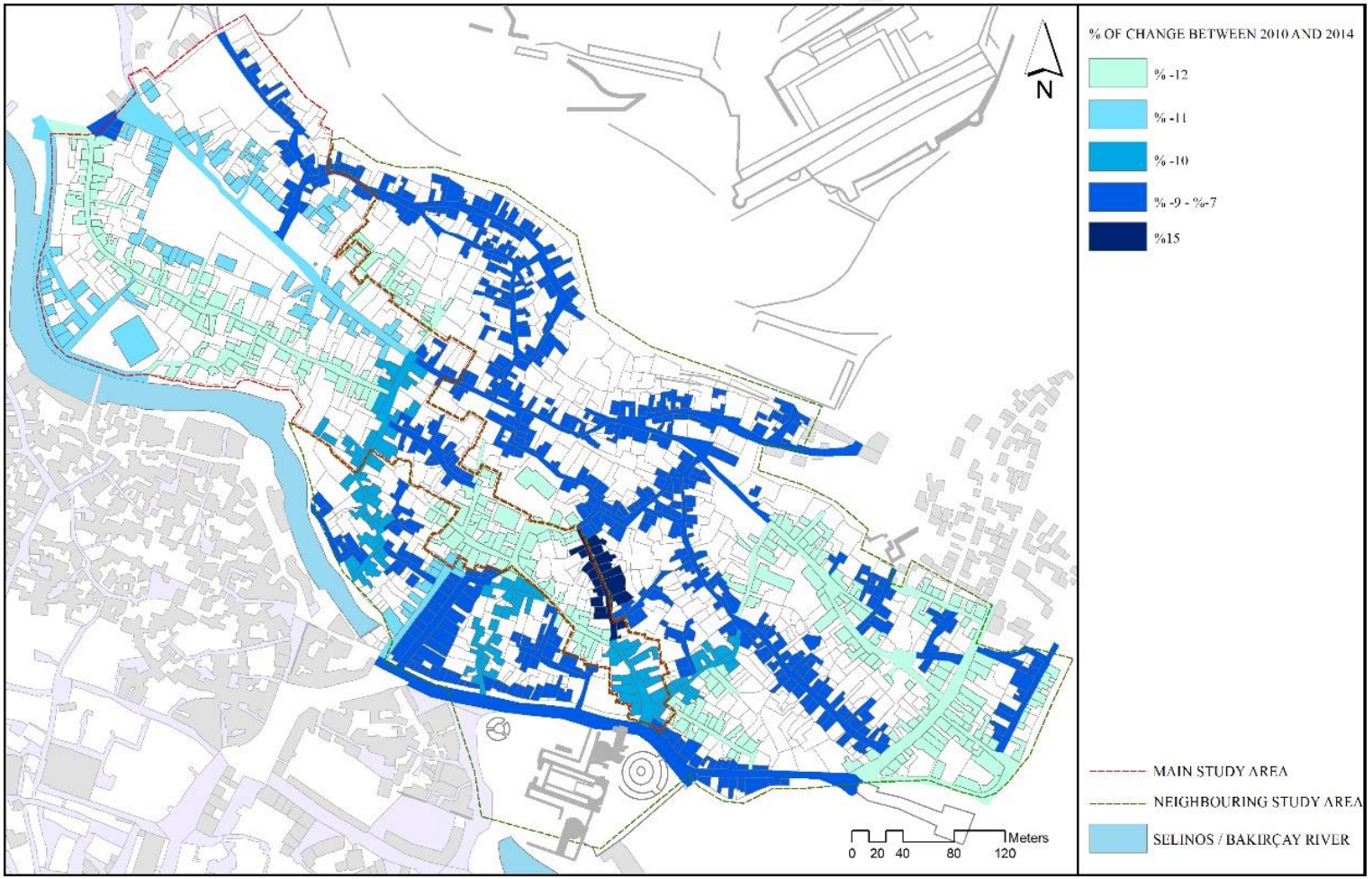

Figure 114. Percentage of change in real estate values between 2010 and 2014

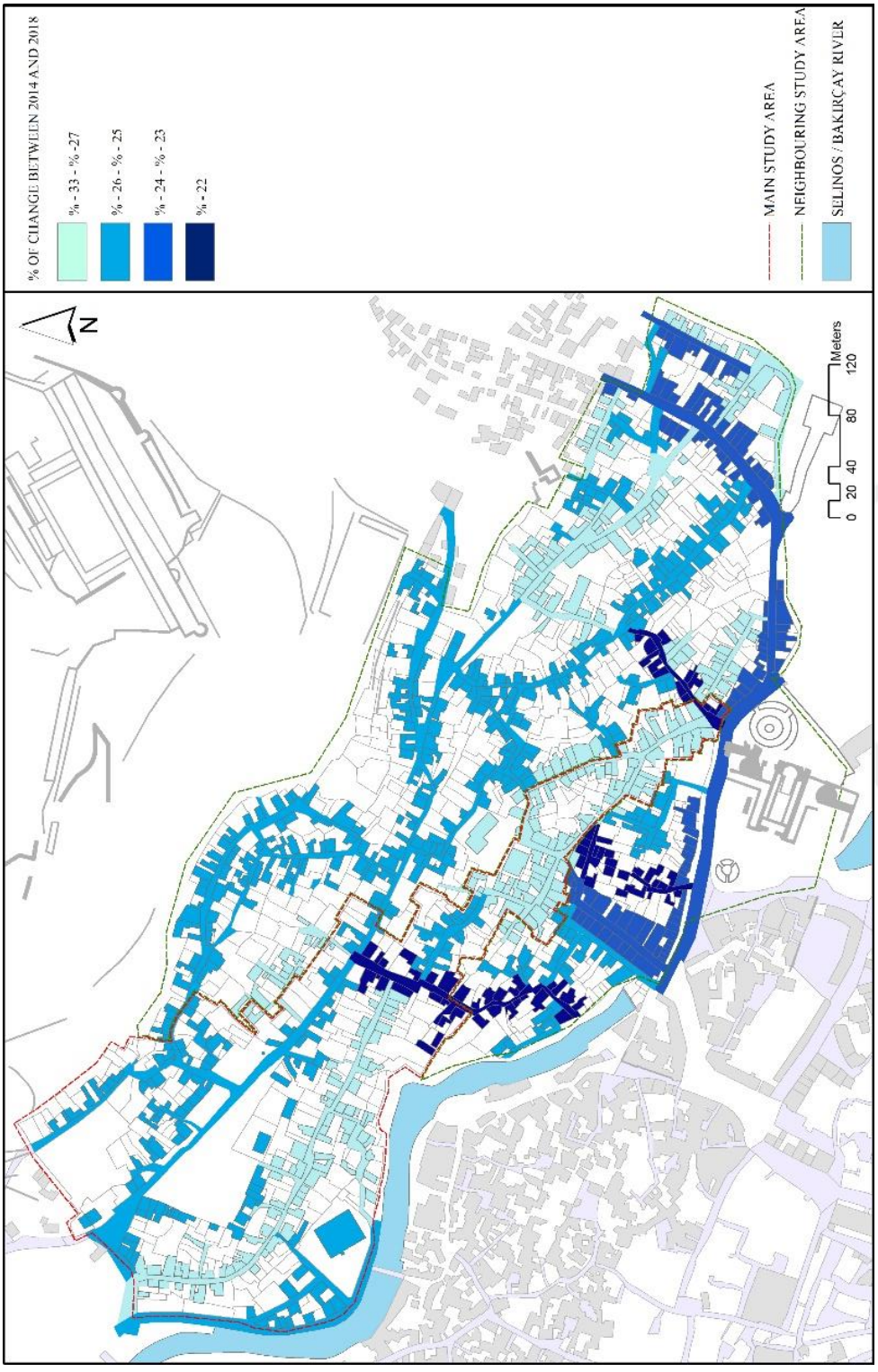

Figure 115. Percentage of change in real estate values between 2014 and 2018

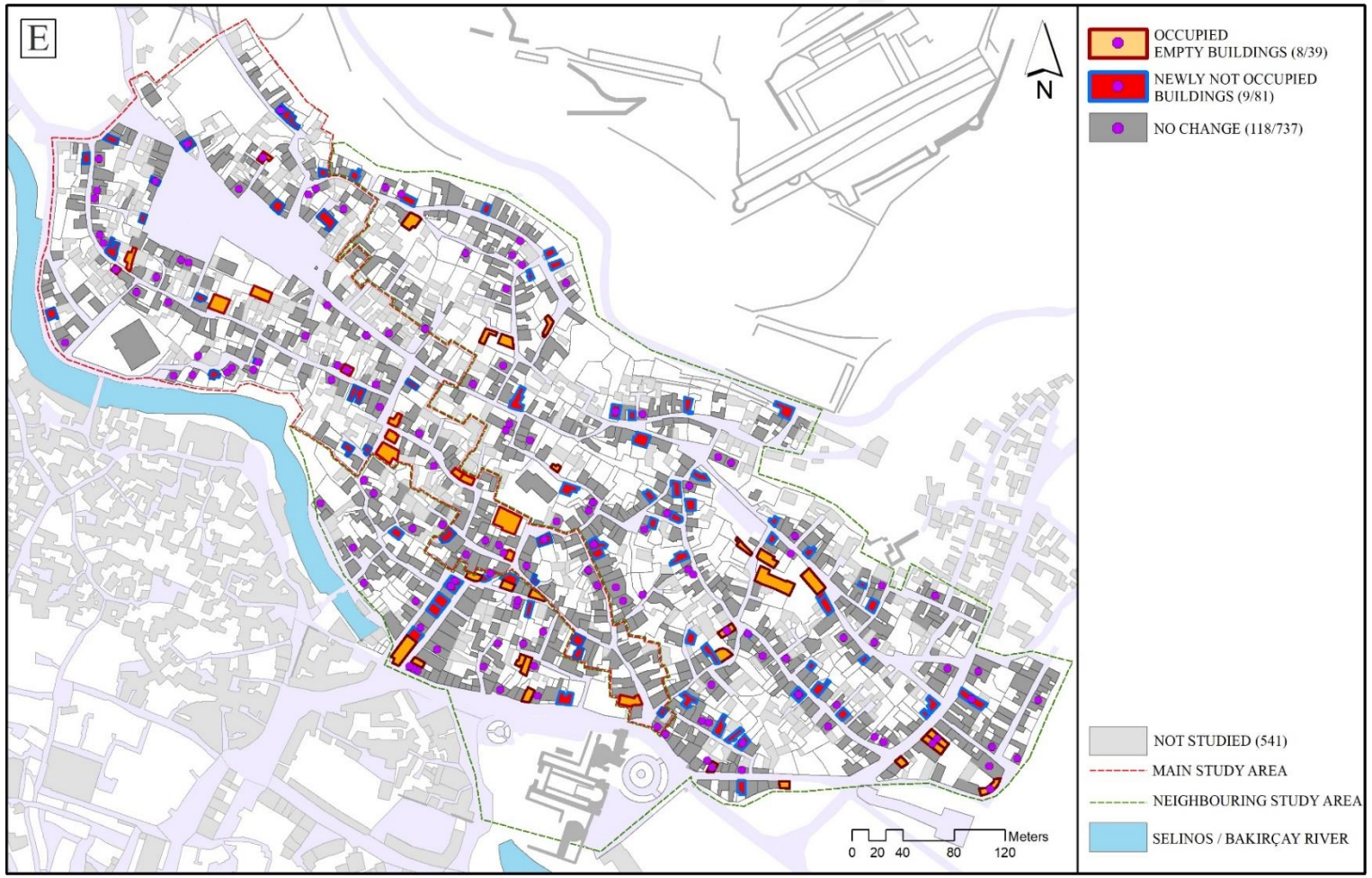

Figure 116. Evaluation of changes in occupancy and ownership change

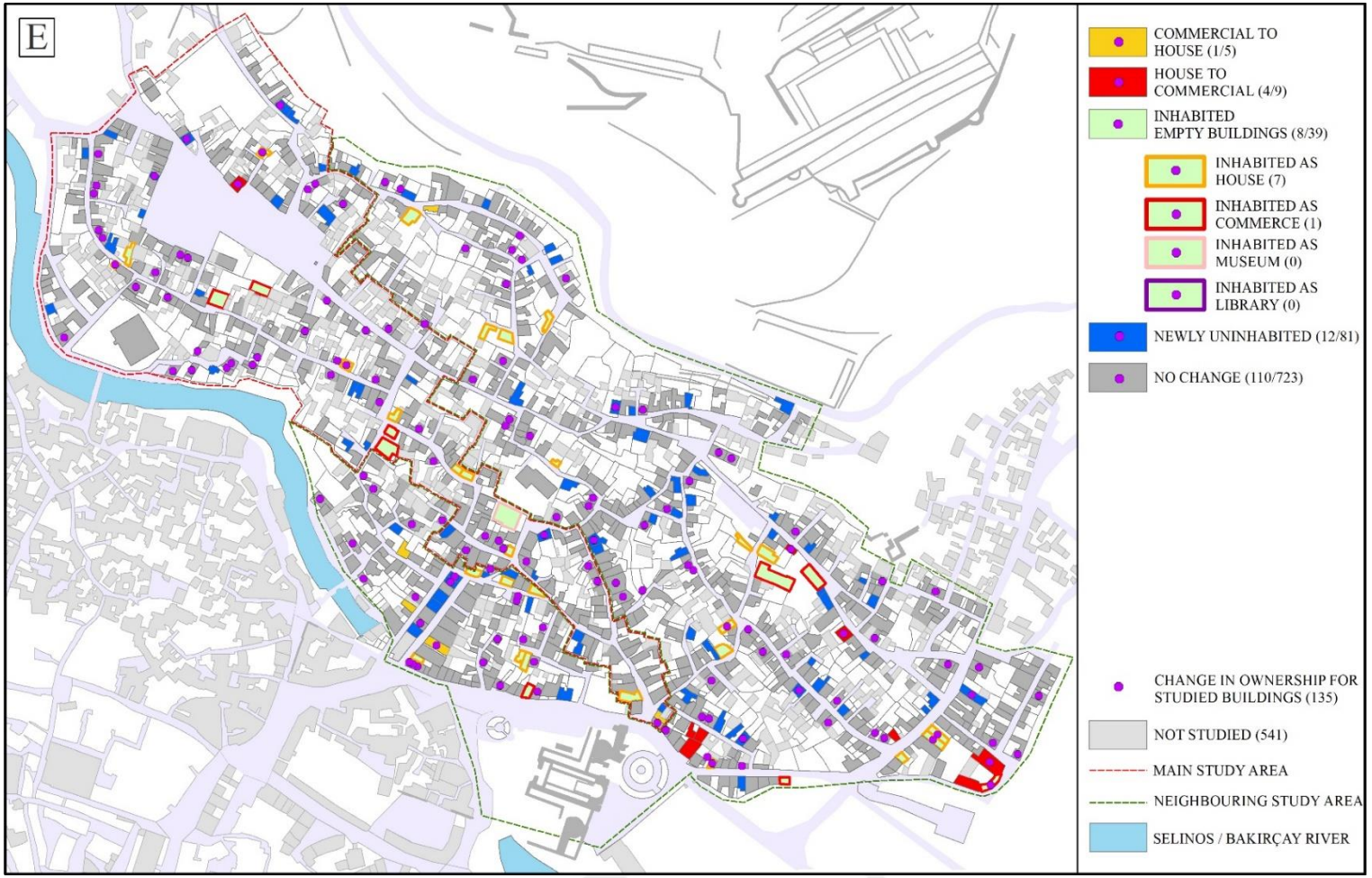

Figure 117. Evaluation of functional changes and ownership relationship for all buildings

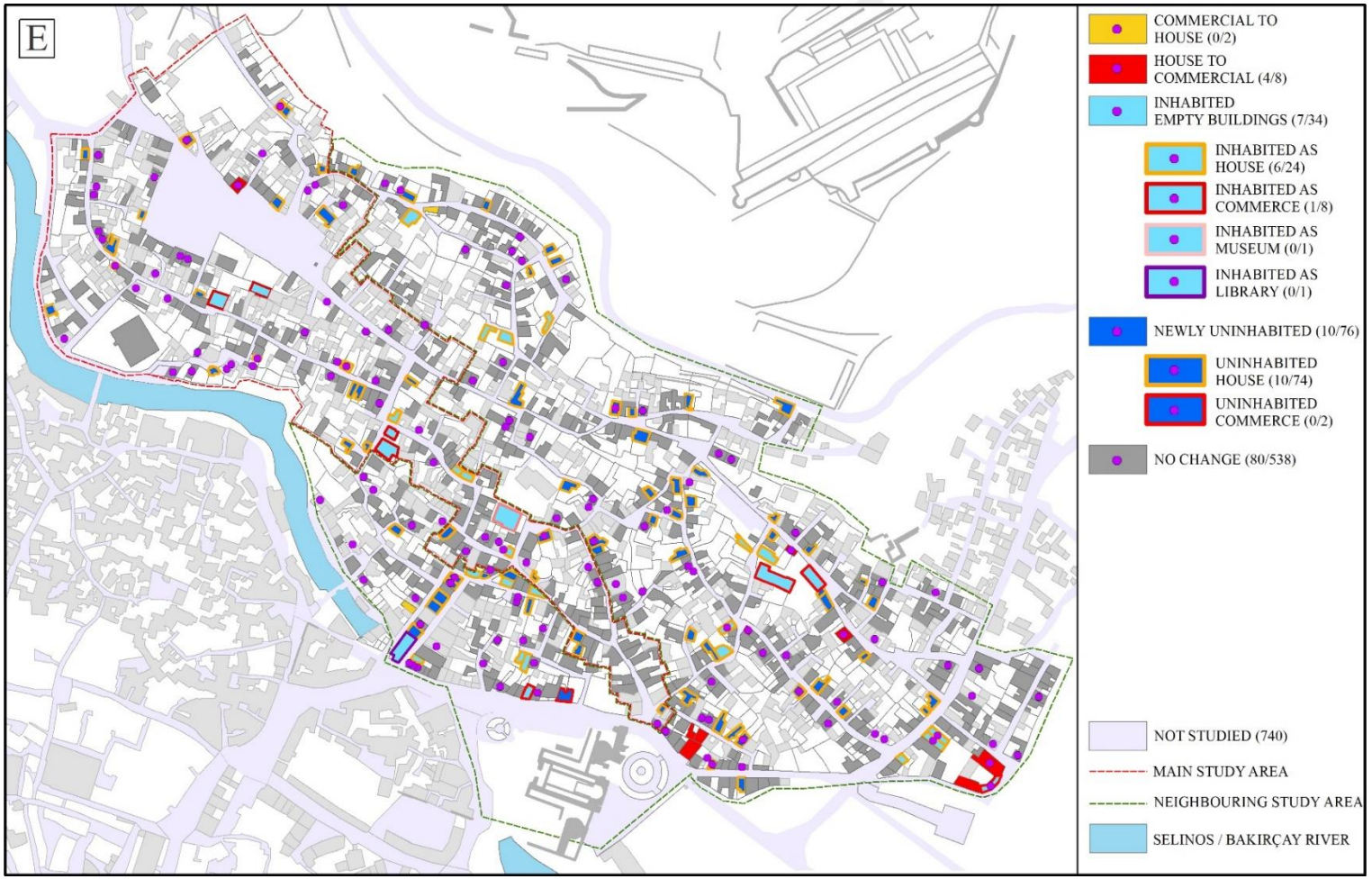

Figure 118. Evaluation of functional changes and ownership relationship for traditional buildings

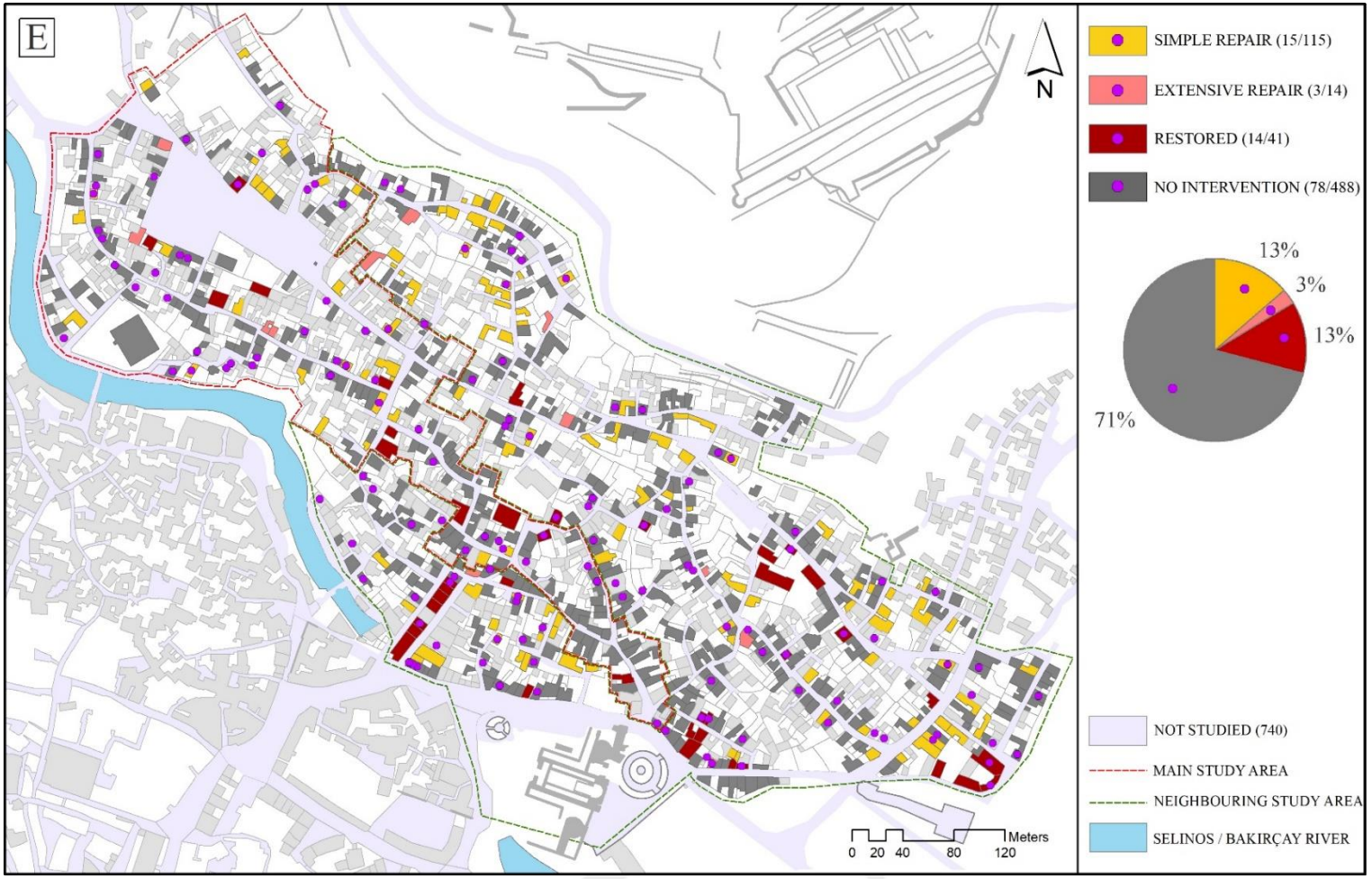

Figure 119. Evaluation of conservation intervention and ownership relationship for traditional buildings

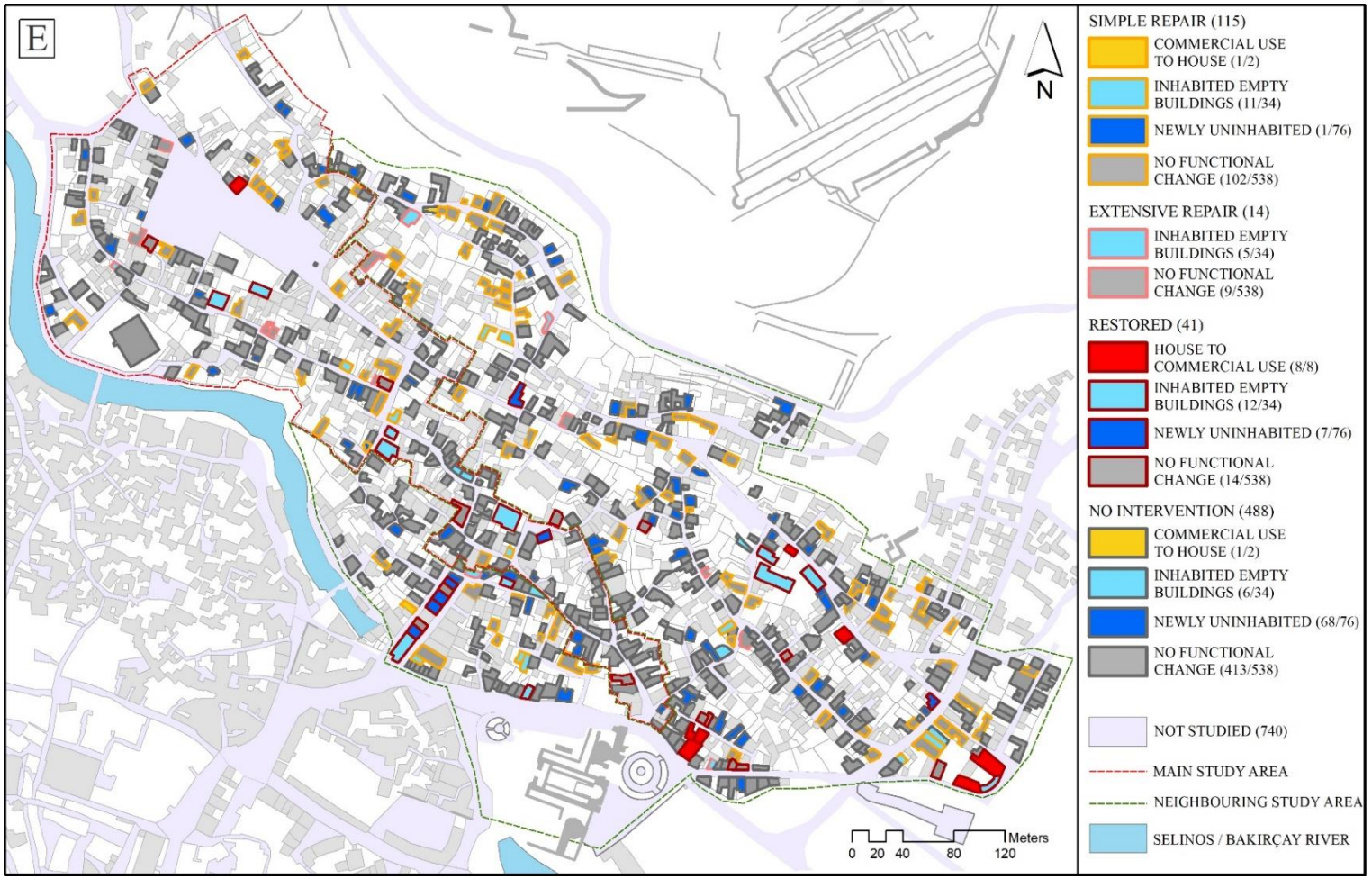

Figure 120. Evaluation of conservation intervention and functional changes for traditional buildings

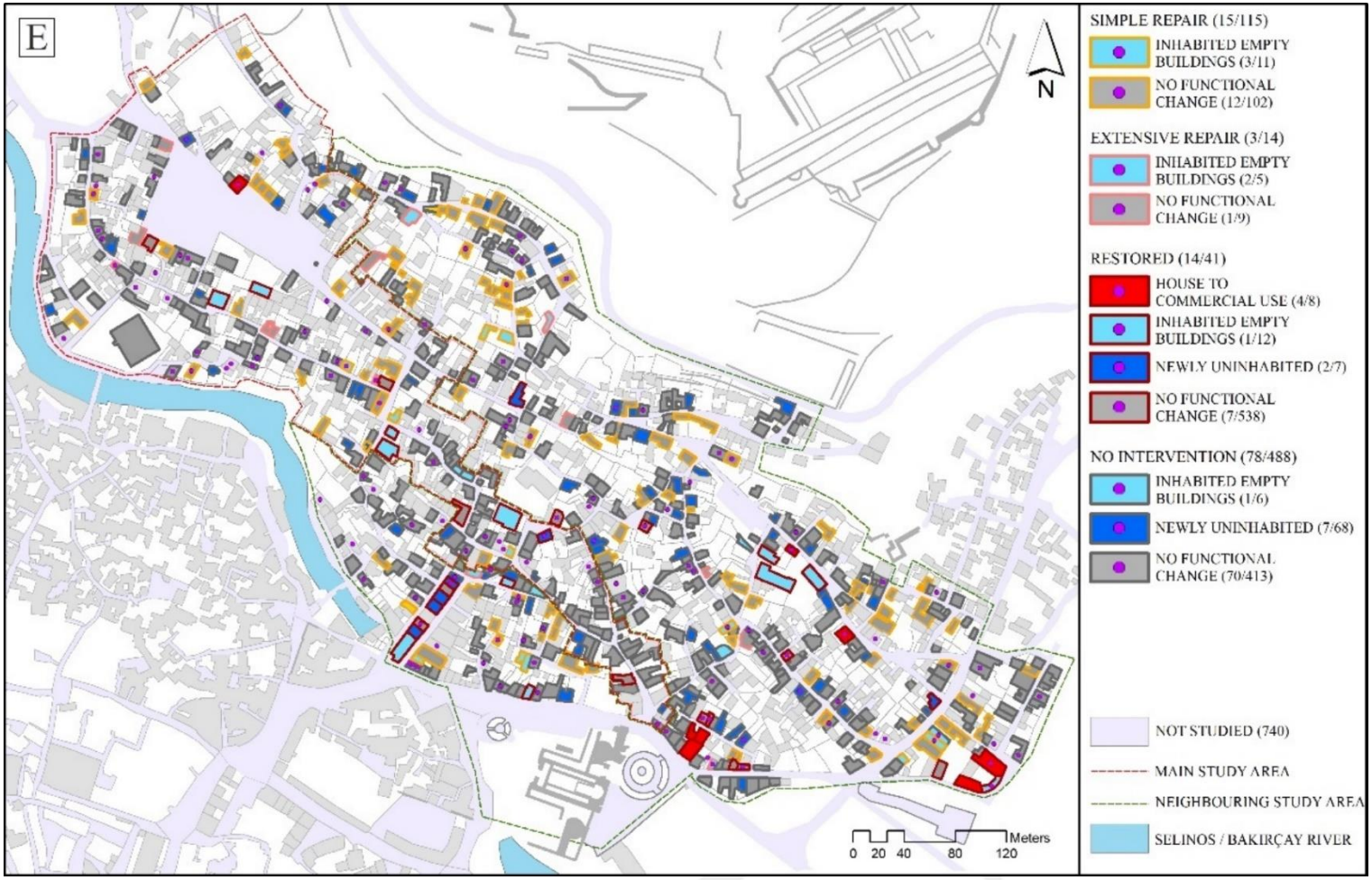

Figure 121. Evaluation of conservation intervention, functional changes and change in ownership for traditional buildings

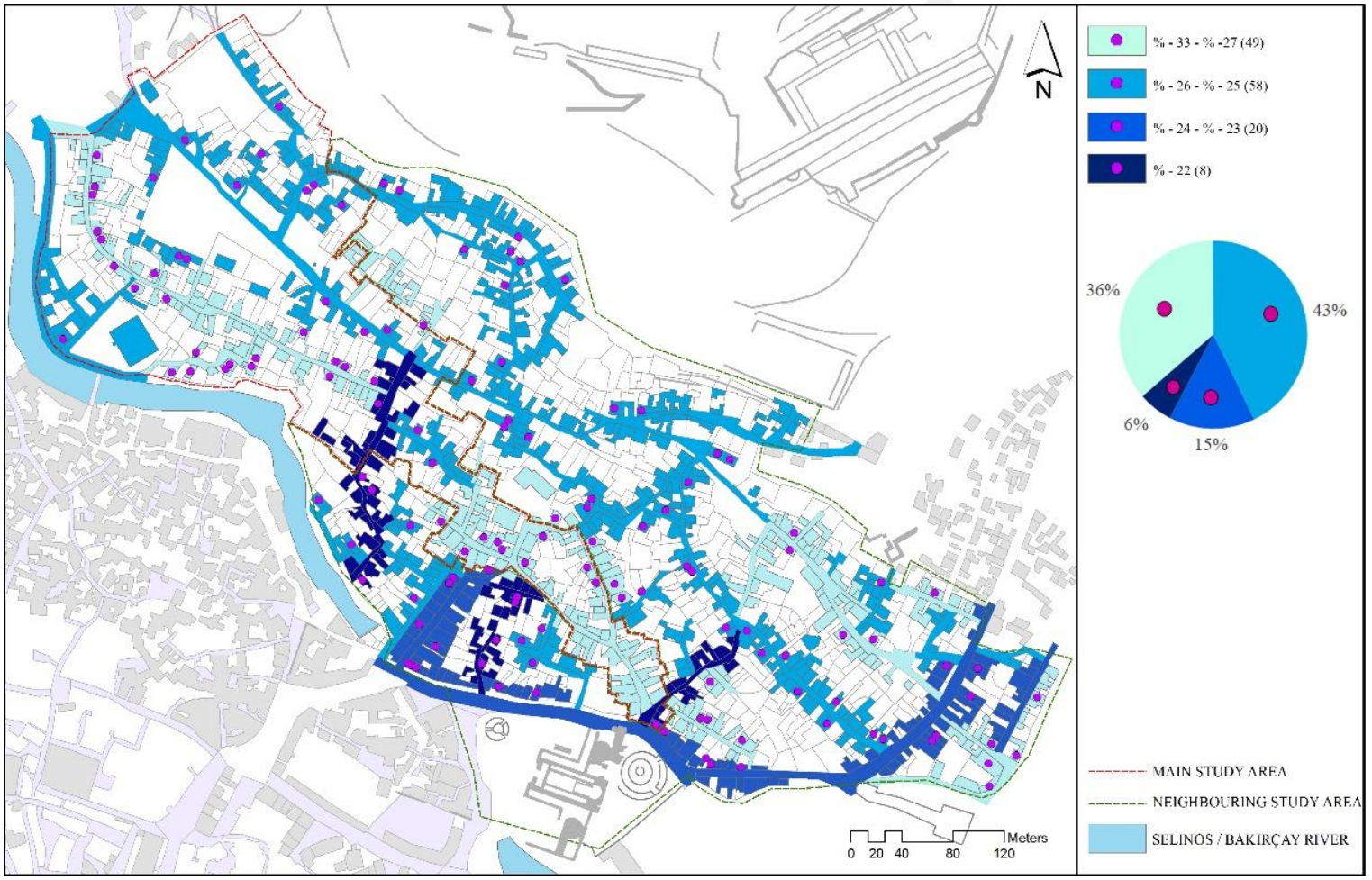

Figure 122. Evaluation of changes in real estate values and changes in ownership