

**CONSERVATION AIMED EVALUATION OF
DARKALE RURAL SETTLEMENT IN
SOMA, MANİSA**

VOLUME I

**A Thesis Submitted to
the Graduate School of Engineering and Sciences of
İzmir Institute of Technology
In Partial Fulfillment of the Requirements for the Degree of**

MASTER OF SCIENCES

in Architectural Restoration

**by
Ayşen ETLACAKUŞ**

**July 2015
İZMİR**

We approve the thesis of **Ayşen ETLACAKUŞ**

Examining Committee Members:

Assoc.Prof.Dr. Mine HAMAMCIOĞLU TURAN

Department of Architectural Restoration, İzmir Institute of Technology

Prof.Dr. Başak İPEKOĞLU

Department of Architectural Restoration, İzmir Institute of Technology

Prof.Dr. Hasan BÖKE

Department of Architectural Restoration, İzmir Institute of Technology

Assist.Prof.Dr. F. Nurşen KUL

Department of Architectural Restoration, İzmir Institute of Technology

Prof.Dr. Eti AKYÜZ LEVİ

Department of Architecture, Dokuz Eylül University

09 July 2015

Assoc.Prof.Dr. Mine HAMAMCIOĞLU TURAN

Supervisor, Department of Architectural Restoration
İzmir Institute of Technology

Prof.Dr. Başak İPEKOĞLU

Head of the Department of
Architectural Restoration

Prof.Dr. Bilge KARAÇALI

Dean of the Graduate School of
Engineering and Sciences

ACKNOWLEDGEMENTS

I would like to express my deepest acknowledgment to my supervisor Assoc. Prof. Dr. Mine Turan, for her guidance, advice, great patience and valuable contributions throughout the study.

I wish to thank Prof. Dr. Bařak İpekođlu, head of the Department of Architectural Restoration, for her support and encouragement.

Special thanks to Prof. Dr. Bařak İpekođlu, Prof. Dr. Hasan Bke, Assist. Prof. Dr. F. Nurřen Kul and Prof. Dr. Eti Akyz Levi for their attendance at my master thesis defense jury and for their valuable suggestions to this study.

I also wish to thank the project team of Darkale Village within the scope of a Preservation and Development Methods of the Historic Environment course in fall semester 2011 in IZTECH Department of Architectural Restoration.

I am also grateful to the hospitable inhabitants of Darkale Village especially the village head Mustafa Gven for their kind support and hospitality during the field survey.

I would like to thank Inst.Dr. Funda Adıtatar for her kind contributions to the history section of this thesis.

Also my special thanks to Spec. Kerem řerifaki for his help and moral support during this study.

I wish to express my deep gratitude to my dear friends Funda Uygun and Zıřan Karayazılı for their endless support, valuable contribution, patience and friendship in all phases of this study included the survey studies in the settlement, working with them was a pleasure for me. They are more than research partners, their friendships, help and moral support are very valuable to me, especially Zıřan Karayazılı who shared all her knowledge and data about Darkale generously with me.

I owe my spacial thanks to my dear family, I am forever indebted to my dear parents Mzeyyen and Sleyman zuysal and my dear sisters Zeynep vet and Sabiha Karagz for their endless love, support and understanding, especially Zeynep vet contributed to the geographic characteristics section of this study.

Finally, I would like to express special gratitude to my love, my spouse Umut Etlacakuř his endless love, encouragement, support and great patience in all the phases of this study and also all my life. This thesis is dedicated to him.

ABSTRACT

CONSERVATION AIMED EVALUATION OF DARKALE RURAL SETTLEMENT IN SOMA, MANİSA

This study aims to evaluate the heritage values and conservation problems of Darkale in Soma, Manisa; a historical rural settlement in which local way of life has been sustained. The method followed in this study is understanding the housing units as primary components of the rural settlement; and then, understanding the authenticity of the rural settlement itself with the tools of the discipline of architectural restoration; and finally developing ways of understanding the integrity of the rural settlement and the natural site in its surrounding.

Megaliths, the very narrow and dimly lighted valley, the sound of the brook, the fertile plains around the brook and steep eastern hill skirt viewing the Bakırçay plain make the natural site of Darkale unique. These opportunities have been benefitted starting with the Pergamon Kingdom Period. In turn, a cultural landscape with a very strong sense of place is identified. Pastoral farming and animal husbandry traditional production techniques, recreation activities and religious ceremonies are intangible signs of this cultural landscape. The rural settlement, formed just like a castle, includes very tight organization of its housing units interwoven to each other in all three dimensions, with very limited courtyards, but with passages over the streets. These are peculiarities, but the utilization of *Hayat* house concept as a basic spatial organization principle in each housing unit necessitates the evaluation of this rural settlement in the same group with other rural settlements dated to Ottoman era. Although the authentic elements have been preserved at a maximum amount; conversion of life style basically stemming from mining becoming a major profession and migration to cities threat the integrity of Darkale in all three scales analyzed.

This study has clarified that the absence of the concepts of rural settlement and cultural landscape in the national legal framework creates gap in the listing and conservation decisions of the related heritage. It has proposed tools for the definition and evaluation of the mentioned heritage.

ÖZET

MANİSA, SOMA'DAKİ DARKALE KIRSAL YERLEŞMESİNİN KORUMA AMAÇLI DEĞERLENDİRİLMESİ

Bu çalışmanın amacı, yerel yaşam biçiminin sürdürüldüğü tarihsel bir kırsal yerleşme olan Manisa, Soma, Darkale'nin, miras değerlerini ve koruma sorunlarını değerlendirmektir. Bu çalışmada izlenen yöntem, mimari restorasyon disiplininin araçlarıyla kırsal yerleşmenin temel öğeleri olarak konut birimlerini anlamak; ve sonra kırsal yerleşmenin kendisinin özgünlüğünü anlamak ve son olarak kırsal yerleşmenin ve onun çevresindeki doğal alanın bütünlüğünü anlamak için yollar geliştirmektir.

Megalitler, çok dar ve loş vadi, derenin sesi, dere çevresindeki verimli ovalar ve Bakırçay ovasını gören dik doğu yamacı; Darkale'nin doğal mevkisini eşsiz kılar. Bu olanaklardan Bergama Krallığı döneminden başlayarak yararlanılmıştır. Böylece, çok güçlü bir yer hissi olan bir kültürel peyzaj tanımlanmıştır. Kırsal çiftçilik ve hayvancılık, geleneksel üretim teknikleri, eğlence ile dinlence etkinlikleri ve dini törenler bu kültürel peyzajın somut olmayan işaretleridir. Tıpkı bir kale gibi biçimlenmiş kırsal yerleşme, birbiriyle her üç boyutta da iç içe geçmiş, sınırlı avluya sahip, ancak, sokaklar üzerinde geçitleri olan ve çok sıkı düzenlenmiş konut birimlerini içerir. Bunlar farklılıklardır, fakat Hayat evi kavramının temel mekan düzenleme ilkesi olarak her bir konut biriminde kullanımı bu kırsal yerleşmeyi Osmanlı dönemine tarihlenen diğer kırsal yerleşmelerle aynı grupta değerlendirmeyi gerektirir. Özgün elemanlar büyük ölçüde korunmuş olsa da; madenciliğin temel meslek haline gelmesinden ve kentlere göçten kaynaklanan yaşam biçimindeki dönüşüm; Darkale'nin her üç ölçekteki bütünlüğünü tehdit etmektedir.

Bu çalışma, ulusal yasal çerçevedeki kırsal yerleşme ve kültürel peyzaj kavramlarındaki eksikliğin boşluk yarattığı konusuna açıklık getirmiştir. Sözü edilen mirasın tanımlanması ve değerlendirilmesi için araçlar önerilmiştir.

TABLE OF CONTENTS

LIST OF FIGURES	ix
LIST OF TABLES	xv
CHAPTER 1. INTRODUCTION	1
1.1. Preliminary Studies	6
1.2. Definition of the Problem	8
1.3. Aim, Limitations, Methodology and Terminology	10
1.4. Content of the Study	14
CHAPTER 2. GEOGRAPHIC CHARACTERISTICS	16
2.1. Location	16
2.2. Topography and Rural Settlement	19
2.3. Climate	23
2.4. Flora and Fauna.....	23
CHAPTER 3. HISTORICAL DEVELOPMENT	26
3.1. Name and Etymology	26
3.2. Development of the Region	27
3.3. Conservation Decision	34
3.4. Social, Cultural and Economic Characteristics.....	36
CHAPTER 4. HERITAGE CHARACTERISTICS	45
4.1. Tangible Characteristics.....	45
4.1.1. Cultural Landscape Characteristics.....	45
4.1.1.1. Geographic Elements.....	45
4.1.1.2. Usage of Natural and Man-made Elements.....	48

4.1.1.3. Circulation Pattern.....	51
4.1.2. Rural Settlement Characteristics.....	52
4.1.2.1. Land Use.....	52
4.1.2.2. Ownership Pattern.....	73
4.1.2.3. Streets and Pathways.....	74
4.1.2.4. Storey System.....	78
4.1.2.5. Construction Technique and Material Usage.....	82
4.1.2.6. Roof Types.....	89
4.1.2.7. Conservation State.....	92
4.1.2.8. Alterations in the settlement scale.....	95
4.1.3. Housing Unit Characteristics.....	96
4.1.3.1. Lot Organization.....	96
4.1.3.2. Entrances of the Houses.....	100
4.1.3.3. Spatial Organization.....	101
4.1.3.4. Spaces and Architectural Elements.....	102
4.1.3.4.1. Spaces of the Living Floor.....	102
4.1.3.4.2. Spaces of the Service Floor.....	111
4.1.3.4.3. Architectural Elements.....	118
4.1.4. Alterations in Housing Units.....	122
4.2. Intangible Elements.....	123
 CHAPTER 5. EVALUATION.....	 126
5.1. Evaluation of the Cultural Landscape.....	126
5.1.1. Values of the Cultural Landscape.....	127
5.1.2. Typology of the Elements of the Cultural Landscape.....	130
5.1.3. Threats for the Integrity of the Cultural Landscape.....	131
5.2. Evaluation of the Rural Settlement of Darkale.....	134
5.2.1. Values of the Rural Settlement of Darkale.....	134

5.2.2. Typology of the Buildings of the Rural Settlement of Darkale	138
5.2.2.1. Position	139
5.2.2.2. Relation with Neighbors	142
5.2.3. Threats for the Integrity of the Settlement of Darkale	147
5.3. Evaluation of the Housing Units in Darkale	151
5.3.1. Values of Housing Units	152
5.3.2. Typology of the Living Floors of the Housing Units	152
5.3.3. Threats for Housing Units	161
 CHAPTER 6. CONCLUSION	 162
 REFERENCES	 166
 APPENDICES	
APPENDIX A. SITE IDENTIFICATION.....	172
APPENDIX B. HOUSING UNITS IDENTIFICATION.....	194
APPENDIX C. ARCHIVE DOCUMENT.....	503
APPENDIX D. JOURNAL ARTICLES.....	517

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
Figure 1. The map of the surveyed areas.	13
Figure 2. Manisa and its Provinces	16
Figure 3. Soma and its Villages	17
Figure 4. The map of the Asarkale and Tuzluk Hills.....	18
Figure 5. View of Darkale - Soma from Asartepe (Asarkale)	18
Figure 6. Geographic map of Soma	20
Figure 7. View of Darkale Village on the western skirt of Köseadağ Mountain,	21
Figure 8. Photos of Tarhala Brook.....	22
Figure 9. View of Köseadağ Mountain from the west	23
Figure 10. The map of land use of Soma.....	24
Figure 11. Olive yards in Yırca Village and vine yards in Soma	24
Figure 12. Pastoral views from Darkale	25
Figure 13. The map of Asia Minor, Drawn by Mitchell, Samuel Augustus.....	27
Figure 14. The map of Mysia, Drawn by W. Shawe.	28
Figure 15. a) The view of the remains of the watchtower belonging to the Byzantine Period at Asartepe b) The view of the ancient columns at Karşıyaka located at the west of Darkale, c) The view of the ancient road.belonging to the Byzantine Period between Darkale and Asartepe	29
Figure 16. The map of Darkale	32
Figure 17. The photo of snow well in Darkale	37
Figure 18. The view of the thermal power plant and Darkale Village	39
Figure 19. The view of olive yards before and after cutting down.....	42
Figure 20. The view of coal mining area in Soma.....	43
Figure 21. The view of coal mining area in Darkale	44
Figure 22. The view of tangible components of Darkale cultural landscape,	46
Figure 23. The view of the natural environment and peculiar natural elements	47
Figure 24. The view of the historical residential area, 2015.....	48
Figure 25. The views of the monuments located at the historical public gathering, commercial and production area.....	49

Figure 26. a) The graveyard located at the west, 2013 b) The view of the ancient columns at Karşıyaka.....	51
Figure 27. a) The motor vehicle paths b) The pedestrian path in residential area, c) The pedestrian path in agricultural and pastures areas	51
Figure 28 a) An old photo of Kırkoluk Square, b) The listed plane tree at Kırkoluk Square, c) The view of Kırkoluk Square	54
Figure 29. a) The view of Kırkoluk Mosque and Kırkoluk Fountain, b) The today view of Kırkoluk Mosque , c) the old photos of <i>şadırvan</i> d) the view of from the semi-open the last comers praying hall.....	56
Figure 30. The view of Minareli Mosque	57
Figure 31. a) The short minaret of the mosque, b) The entrance of the mosque and its fountain, c) The view of the interior of the mosque, d) Reused materials at the minaret.....	59
Figure 32. a) The view of Orta Masjid, b) The view from the interior of the masjid.....	60
Figure 33. a) The view of the laundry, b) The view of laundry and Tarhala stream c) Southwestern part of the laundry	61
Figure 34. a) The view of the bath from the north, b) The view of the caldarium, c) The view of the bath from the south.....	63
Figure 35. The view of Darkale Primary School from the entrance.....	64
Figure 36. The general views of Olive Oil Mill	65
Figure 37. The fountains in Darkale.	67
Figure 38. The fountains in Darkale.	68
Figure 39. a) The view of the oven in the housing unit, b) The view of the independent oven.....	69
Figure 40. a) The graveyard located at the west, b) The listed graveyard.....	70
Figure 41. a) The view of the empty lot, b) The view of the brook, c) The view of the natural land	71
Figure 42. a-b) Service buildings door number 72 and 73 b) The view of independent service buildings on shrubland.....	72
Figure 43. a) Original stone floor covering, b) Earth Covering, c) Key stone covering, d) Cement covering, e) Asphalt covering	75
Figure 44. The view of ramp between two housing units.....	76
Figure 45. View of passages of Darkale	77
Figure 46. The view of single storied house.....	79

Figure 47. The view of a two storied house.....	79
Figure 48. The view of mezzanine floor	80
Figure 49. The view of the housing unit has ground, first and second floor	81
Figure 50. The view of the housing unit has basement, ground and first floor	81
Figure 51. Schematic 3D drawing of construction technique of Darkale housing unit..	82
Figure 52. Housing units with hybrid construction technique.....	83
Figure 53. The structures constructed with stone masonry singularly	83
Figure 54. Stone masonry structures and bonding system of stone masonry	84
Figure 55. Timber frame and timber lath construction system.....	84
Figure 56. a) Reused materials on the exterior wall of the housing numbered 76, b) Reused materials on the exterior wall of the Kırkoluk Mosque,.....	85
Figure 57. a) Housing unit constructed with traditional construction technique and material, b) Housing unit constructed with traditional construction technique, materials and intervened with modern technique and material, c) Housing unit constructed with traditional construction technique, material and renewals and additions with modern construction technique and material d) Public building constructed with modern construction technique and material	88
Figure 58. The view of the roofs of the buildings in Darkale Village	89
Figure 59. The view of the <i>loğ</i> stone on the roof with earth covering.....	90
Figure 60. The view of detail of the earth covering.....	91
Figure 61. The view of the roof types.....	91
Figure 62. The view of the housing unit and Kırkoluk Mosque in good condition.....	93
Figure 63. The housing unit and Darkale School in moderate condition	93
Figure 64. The view of the housing unit and a bath in bad condition	94
Figure 65. The view of the ruined housing units	94
Figure 66. The view of the new public buildings	95
Figure 67. Original stone street covering renewed with key stone.....	95
Figure 68. The section of house numbered 43 composed of only main mass.	97
Figure 69. The section of house numbered 45 composed of main mass - courtyard.....	98
Figure 70. The section of house numbered 115 composed of mass with courtyard.....	98
Figure 71. The section of house numbered 13 composed of main mass with courtyard and annex.....	99

Figure 72. a) The entrances are located different levels b) The entrances are located different levels and streets	100
Figure 73. The entrances provided from secondary paths	101
Figure 74. Schematic drawings of the living and service floors of a housing unit.....	102
Figure 75. The plan of <i>Hayat 1</i>	103
Figure 76. The plan of the Room Type 1, house numbered 151.	104
Figure 77. The plan of the Room Type 2, house numbered 151.	105
Figure 78. a) The plan of the Room Type 3, house numbered 13, b) The plan of the Room Type 3, house numbered 45.	106
Figure 79. The plan of the Room Type 4, house numbered 13.	107
Figure 80. The plan of the Room Type 5, house numbered 13.	108
Figure 81. The plan and the section of the Room Type 6, house numbered 152.	109
Figure 82. The plan of the Room Type 7, house numbered 38.	109
Figure 83. The plan of the kitchen, house numbered 151.....	110
Figure 84. The plan of the <i>Taşlık</i> , house numbered 117.....	111
Figure 85. The plan of the <i>Hayat 2</i> , house numbered 151.....	112
Figure 86. The plan of the Courtyard, house numbered 45.	113
Figure 87. The plan of the hall, house numbered 117.	113
Figure 88. The plan of the Service Space1, house numbered 8.....	114
Figure 89. The plan of the Service Space 2, house numbered 117.....	115
Figure 90. The plan of the Service Space 3, house numbered 97.....	115
Figure 91. The plan of the Service Space 4, house numbered 117.....	116
Figure 92. The plan of the Service Space 5, house numbered 13.....	117
Figure 93. The plan of the Service Space 6, house numbered 151.....	117
Figure 94. The plan of the Toilet, house numbered 117.....	118
Figure 95. a) The view of open <i>Hayat</i> , b) The view of the rectangular sheet glass, c) The view of the double leafed window, d) The view of the double leafed window with railing and timber bar, e) The view of the sash window.	119
Figure 96. a) The view of the room door with glass, b) The view of the room solid door, c) The view of the double leafed timber door.....	120
Figure 97. The view of the architectural elements in Darkale.....	121

Figure 98. a) The view of <i>loğ</i> stone b) The view of the snow wells c) The animal husbandry in the pastures and shrub lands d) Cuisine tradition in the public activity area, e) Pomegranate tree in the residential area f) The example of the traditional activity; point lace g) The contemporary activities; biking h) The old photos of the folk dances; <i>Tarhala Baranası</i>	125
Figure 99. a) The view of the Darkale rural settlement b) The view of Kırkoluk Mosque c) The view of the Bath, 2013, d) The view of the graveyards e) The view of the ancient columns f) The peculiar natural elements of Darkale rural settlement.....	128
Figure 100. The site section of Darkale cultural landscape.....	129
Figure 101. a) An old photo of the historical residential area b) The present view of the historical residential area	132
Figure 102. The view of the historical residential area and location of the mining area close the settlement.....	133
Figure 103. The view of the houses and monuments are interwoven to each other and the street in the third dimension.....	135
Figure 104. a) The view of the original street b) The view of the passage c) The view of the original roof covering d) The view of the residential area	137
Figure 105. The view of authentic elements in the settlement	138
Figure 106. A main mass of housing unit at the corner	140
Figure 107. The houses positioned partially over the street	141
Figure 108. The houses oriented with all their stories to the vista of the valley	141
Figure 109. Schematic drawing of the independent building	142
Figure 110. Schematic drawing of the building juxtaposed by building on its one side	143
Figure 111. Schematic drawing of the building juxtaposed by building on its two sides.....	143
Figure 112. Schematic drawing of building surrounded by others on its more than two sides.....	144
Figure 113. Schematic 3D drawing and photo of the houses numbered 53-A and 53-B	145
Figure 114. Schematic 3D drawing and photo of the houses numbered 97 and 98.....	146
Figure 115. Schematic 3D drawing and photo of the houses numbered 23 and 98-B..	146

Figure 116. a-b) The view of the unqualified mass addition c) The example of the mass addition, house numbered 55.....	147
Figure 117. Additional new masses and altered historical masses that are not in line with the silhouette, 2013.....	148
Figure 118. a) The view of ruined house b) The view of empty lot.	149
Figure 119. a) An old photo of the historical residential area b) The present view of the historical residential area in recently	150
Figure 120. a) Housing unit constructed with modern technique and material b) The view of altered roofs.....	150
Figure 121. The diagram of the housing typology.....	160
Figure 122. The functional transformations of spaces.....	161

LIST OF TABLES

<u>Table</u>	<u>Page</u>
Table 1. Buildings surveyed in settlement and lot scales	12
Table 2. The Variation of population at the center of <i>Hüdavendigâr Vilayet</i>	39
Table 3. The distribution of population of Soma according to years	40
Table 4. The population of rural areas of Soma according to years	40
Table 5. General information about population of Darkale	41
Table 6. Building types and occupation distribution of the settlement.	53
Table 7. Ownership of lots.....	73
Table 8. Distribution of covering materials on streets and pathways.	74
Table 9. Distribution of the storey system	78
Table 10. Authenticity of construction technique.....	86
Table 11. Roof characteristics.	90
Table 12. The conservation state with number and ratio of buildings.....	92
Table 13. Distribution of the lot organization type.....	96
Table 14. Distribution of the position in the settlement.	139
Table 15. Distribution of the relation with neighbors.....	144

CHAPTER 1

INTRODUCTION

Rural heritage is part of our collective memory with its tangible and intangible values. Vernacular architecture, natural environment, economic and social features, and traditions are all its components. Beyond the aesthetic qualities of its tangible components, rural heritage has a historical dimension. A rural site is settled throughout history due to the natural opportunities of its position. At the same time, people learn throughout history how to cope with limitations of their rural site. For this reason, physical and social inputs of different civilizations overlap in a rural heritage site.

Darkale Village, which is a rural heritage site, is the subject of this study. It is a village of Soma, Manisa. Different states such as the Kingdom of Pergamon, the Byzantine Empire, the *Beyliks* of Sarukhan and Karesi, the Ottoman Empire and the Turkish Republic had left their traces in Darkale. It has tangible and intangible values with its authentic vernacular architecture, which is an end result of man-nature interaction at the site, and the related life pattern.

Today, Darkale Village is constituted by adjacent housing units and monuments which are shaped in harmony with natural topography. Although it is abandoned to some extent, there are reminiscences of the rural life pattern indigenous to the site.

The terms rural heritage, rural site and cultural landscape have been discussed at international platforms; in addition, regulations and charters are declared as mentioned in the below:

Until recently, rural heritage was considered to be consisted of buildings related to agricultural activity such as laundries or mills. Today, rural heritage has a wider definition which consists of tangible and intangible elements associated with human community that has been established with in a territory in time (CEMAT, 2003). In the Convention for the Safeguarding of the Intangible Cultural Heritage, UNESCO, 2003 (UNESCO, 2015), intangible heritage is defined as:

The practices, representations, expressions, knowledge, skills as well as the instruments, objects, artifacts and cultural spaces associated therewith that communities, groups and, in some cases, individuals recognized as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity.

On the other hand, tangible heritage includes immovable property such as residential buildings, monuments and historical places and movable properties and landscapes (CEMAT, 2003). In addition, landscape and cultural landscape are the basic inputs of rural heritage. Landscape and cultural landscape are defined in European Council of the Integrated Conservation of Cultural Landscape Areas as Part of Landscape Policies, Article 1, 1995 as:

Landscape: formal expression of the numerous relationships existing in a given period between the individual or a society and a topographically defined territory, the appearance of which is the result of the action, over time, of natural and human factors and of a combination of both” and “Cultural landscape areas: specific topographically delimited parts of the landscape, formed by various combinations of human and natural agencies, which illustrate the evolution of human society, its settlement and character in time and space and which have acquired socially and culturally recognized values at various territorial levels, because of the presence of physical remains reflecting past land use and activities, skills or distinctive traditions, or depiction in literary and artistic works, or the fact that historic events took place there.

In addition, the same recommendation was taken. Cultural landscape was an end product of human-nature relations. It presented the evolution of these relations throughout history. It included a definite spatial zone. This geographic area could also include intangible values stemming from historical events, literal or artistic traditions (COE, 2015). So, landscape and cultural landscape are part of tangible heritage.

Cultural and natural heritages are associated with rural heritage that can be understood from the definition of cultural and natural heritage which are defined in the UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage in 1972, Article 1. Cultural heritage includes monuments, groups of buildings and sites. In addition, natural heritage is defined in the Article 2 of the same convention:

Natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view; geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation; natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty (UNESCO, 1972).

Thus, components of rural heritage are tangible and intangible cultural heritages, and natural heritages.

In addition cultural landscape is re-defined according to Article 1 of the Convention in the World Heritage Convention, 2013.

Cultural landscapes are cultural properties and represent the "combined works of nature and of man" designated in Article 1 of the Convention. They are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal (UNESCO, 2013).

Landscape is considered as a unifying concept for the fields of humanities, spatial and natural sciences. The definition of cultural landscape has been made slightly differently in different periods. The traditional definition underlines the visual and aesthetic qualities of scenery in the 16th and 17th century, "the visible part of the Earth's surface and the sky above it, viewed from a certain vantage point." (Bakker, 2004 cited in Elerie and Spek, 2010). Then, the definition is broadened in the 19th century and the cultural landscape is referred as an area determining a cohesive system of natural, and anthropogenetic features, and genetic processes that distinguish it from its neighbors. "Since, landscape is the sum of individual features, structures, process and associations, different aspects of it can be studied by a large number of disciplines and sub-disciplines" (Troll, 1939 cited in Elerie and Spek, 2010). Finally, definition of cultural landscape is rearranged re-taking into account the human scale, "as landscape refers to an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors" (Council of Europe, 2000).

The types of elements which are possible to exist in a cultural landscape have been clarified after many researches. Basically, there are natural and man-made elements, which are composed of tangible and intangible sub-categories.

Natural tangible elements are plateau, valley, brook, hill, coast, open field, woodland, meadow, forest, heathland, megaliths, ditch, wasteland, local animal species, skyline and natural intangible elements are spiritual qualities, sensory impressions , quality of light, spiritual connection.

In turn, man-made tangible elements are residential areas, monuments, archeological areas, graveyards, agricultural areas, tracks, olive groves, vineyards, nutyards, poplars and man-made intangible elements are history settlement, traditional activity patterns, contemporary activities, cuisine, stories, myths, dialects, music and genealogical relationship (Stephenson, 2007).

Although rural heritage is an essential issue for world heritage, the importance of this heritage was underlined in the Council of Europe Granada Appeal Rural Architecture in Regional Planning dated 1977 as, “*the participants deem that the rural architectural heritage should be recognized not only for its aesthetic values, but also as a testimony of secular wisdom*”.

Moreover, in the same document, it is underlined that “*rural architecture and its countryside are threatened with extinction*” (Madran and Özgönül, 1999). In relation, with the change in agricultural production patterns, social structure changed. This was a threat for rural settlements. So, existing regulations underline the risk of abandonment. In 1989, European Council, Recommendation Decisions on the Protection and Enhancement of the Rural Architectural Heritage got some detailed decisions on rural heritage (COE, 2015). As a result of socio economic factors and increase in demands on contemporary life condition because of changing lifestyle, rural heritage is faced with the danger of vanishing. In addition, World Heritage under Risk Report dated 2001 underlined the fact that;

Rural heritage was the heritage type ruined the most rapidly all around the world as: In rural areas, where old houses were either cracked or fell victim to wall-collapse during tremors, a lack of understanding caused considerable damage. In many cases the old houses were demolished on the basis of reports by technical staffs that were not trained about historic preservation in any way (ICOMOS, 2015).

Vernacular buildings play an important role in rural landscapes. In ICOMOS Charter on the Building Vernacular Heritage, dated 1999, it is mentioned that:

The built vernacular heritage is important; it is the fundamental expression of the culture of a community, of its relationship with its territory and, at the same time, the expression of the world's cultural diversity (ICOMOS, 2015).

The specific techniques, materials and building details used in each particular rural area provides its vernacular architecture an identity. They are rich ethnographic evidences of rural technologies and ways of life in the countryside (Fuentes, 2010).

Again in ICOMOS Charter on the Building Vernacular Heritage, dated 1999, it is pointed out that:

Due to the homogenization of culture and of global socio-economic transformation, vernacular structures all around the world are extremely vulnerable, facing serious problems of obsolescence, internal equilibrium and integration (ICOMOS, 2015).

One of the concrete examples presenting the vulnerability of rural heritage and cultural landscape is mining sites. Mining activity causes a serious problem for the rural settlements in its vicinity. In 1988, Council of Europe's, Conclusion of Colloquy on Mining Engineering Monuments as a Cultural Heritage was presented. Although in this document, it is pointed out that mining can be accepted as a heritage in some cases, it is indicated that "*mining has made an impact on large parts of natural and built environment, including transport and supply systems*". Furthermore, in 1977, Granada Symposium on Rural Architecture within Regional Planning was held. It underlined that rural heritage should be considered, while preparing development projects at regional scale. Here, traditional rural architecture was not only considered with its aesthetic aspects, but it is understood as representative of memory of life. Tangible and intangible products of rural culture should be preserved (Madran and Özgönül, 1999).

Although there are a number of international principle decisions on preservation of rural heritage and cultural landscapes, Turkey has limited research regarding the conservation of its rural heritage and cultural landscape. 442 Numbered Village Law dated 1924 (TC Milli Eğitim Vekaleti, 1953), the 2863 numbered Law on the Protection of Cultural and Natural Heritage dated 1983 (Eres, 2008) and 3194 Numbered Development Law, Article 27 dated 1985 are the basic laws including remarks on the rural areas.

Contemporary rural heritage concepts were legally noticed by Turkey in 1989 with the acception of the European Agreement on Architectural Heritage Conservation dated 1985. This document included remarks on both rural and urban heritage. Furthermore, Turkey has signed European Landscape Agreement dated 2000 in 2003. The aims of this document are as in the following:

To encourage public authorities to adopt policies and measures at local, regional, national and international level for protecting, managing and planning landscapes throughout Europe. It covers all landscapes, both outstanding and ordinary, that determine the quality of people's living environment. The text provides for a flexible approach to landscapes whose specific features call for various types of action, ranging from strict conservation through protection, management and improvement to actual creation". (COE, 2015).

Notwithstanding, Turkey signed all these agreements; the reflection of all these new concepts to applications takes time (Eres, 2013).

1.1. Preliminary Studies

Preliminary studies on Darkale are evaluated in the below.

There are studies providing basic information on characteristics of Darkale. These are interpretations of non-professionals based on observations.

Altner (1937), written by a teacher who had been employed in Darkale Village between 1934-1936, presents observations on physical and social features of Darkale. This study represented to social and physical structures of the village in 1930's which is evaluated as an oral source for this thesis.

Kutlusoy (1971) who had been a district governor of Soma provides general information; history, physical and social about Soma district. This book is important for this study since, there are limited sources about the settlement and its environment.

Ergün (1997) who had been the mayor of Soma had updated the information in Kutlusoy (1971) according to the current data; however there is some misinformation about the settlement such as the minaret of the Kırkoluk Mosque was built when the book published but it was not mention in the book.

Soma Municipality, (2011), prepared Soma Guide, power point presentation and a written document on Darkale Village and Soma. These documents include old photos and general information about the case study and Soma visual data.

Panoramic virtual tour of Darkale Village (accessed date 13.03.2014) was prepared by mekan360. This virtual tour provides to access the panoramic images of the settlement.

The documentary film "Gezelim Görelim" (2012) produced by TRT1 introduces Soma-Darkale Village. The intangible features; historical and traditional activities of the settlement were presented in this program.

A second group of studies is the interpretations of conservation specialists based on preliminary observations.

Akpınar (2011) prepared a project proposal and power point presentation on Soma Tarhala Rural Development Project. This study provides general information on the settlement.

Tanaç Zeren, (2011), prepared an expert report on Conservation of Heritage Characteristics of Soma Darkale. This study makes a general evaluation of the heritage characteristics of the site based on observations.

Egi (2011), in his bachelor thesis, gives information on social, cultural and economic structure on Darkale village. This thesis helps to understand the current social structure of the settlement.

The third group is research on the geographical and/or historical characteristics of the settlement.

Karadağ (2005, 2006) discusses the geographic characteristics of Soma and evaluates demography and physical condition of Soma in relation with the coal mine. These studies contribute to the thesis in term of providing data on geographical characteristics of the site and on the demographic changes related to the socio economic structure.

Gökçen and Uluçay (1939) discuss the history of Manisa and its villages during the *Beyliks* of Sarukhan period. This study is one of the basic sources of the history of the Manisa which contributes to get the information about the history of the settlement and its close environment.

Arel (1991, 1992) discusses the importance of “Tırhala” by analyzing history of the village with reference to the historic documents and its historic monumental buildings. This research provides to detailed information about the monuments of the settlement.

Sevin (2001) discusses Asia Minor in the antiquity and analyzes the region of Mysia which included Trakhoula. This study included in the history of the Asia Minor which is synthesized the information of the travellers. Trakhoula was mentioned in this study. This should be taken as the proof of Trakhoula belonging to the Kingdom of Pergamon period.

Günay (2006) deals with the 16th century settlement development in Western Anatolia. The case of “Tarhala” and other small settlements are evaluated based on the documents in the Ottoman Archives. The social and economic structures and changes in the settlement patterns are presented. This research is a basic source of the history of the settlement in the Ottoman period at the 16th century when the border of the settlement reached its largest limits.

Wikipedia, (2014) is basically has the same as the information of the history section of the report of Tanaç Zeren (2011).

Karayazılı, et al. (2011) is a survey of the streets between the Minareli Mosque and the Orta Masjid of the settlement; within the scope of a preservation design studio in IZTEC Department of Architectural Restoration. The analysis of the surveyed part and the plan and façade sketches of twelve houses which were drawn in this study were revised in this thesis. In addition, the photos taken in 2011 were used when necessary with their references.

1.2. Definition of the Problem

Housing units are basic components of rural settlements that are end-results of interaction of the locals with the opportunities and difficulties of the related natural environment.

The identification and evaluation studies on rural sites play a crucial role in order to preserve the cultural landscapes as a whole. Vernacular buildings are basic inputs of rural settlements. Physical and social characteristics of a rural settlement are shaped by the lifestyle and demands of people; and cultural, social and economic factors.

As a result of important changes in lifestyle, preferences including demand for qualified services and job opportunities, socio-economic structure and methods of production, downsize of agricultural areas are seen. Eventually, this great increase in demands brings migration from rural settlements to city centers. Hence, rapid urbanization takes place. Rural settlements are reshaped in parallel with their ascending migration. Local population leaves rural settlements which are vulnerable against abandonment. As a result of this decrease in population in rural settlements, related vernacular architecture comes across with lack of maintenance problem. If buildings are used, they are maintained. In consequence of adverse factors stemming from changing lifestyle, all of the components consisting rural settlements face with the risk of disappearing. In order to cope with this problem, the philosophy of rural heritage preservation is discussed at international platform and related guidelines and charters are formulated.

Conservation of sites has started to be discussed much later than conservation of buildings. First, urban site conservation was emphasized; then, discussions on rural sites have started with 1970s (UNESCO, 2015).

In turn, experience on preservation of urban sites is more than that on rural sites. In addition to this reality, studies on rural settlements and their environment deserve support because their understanding is indispensable for better comprehending development of the cities whose hinterland they are located in.

The importance of the rural settlements is increasing gradually. Some preliminary inventory studies on rural settlements in south east Anatolia within the scope of a TÜBA project has been carried out (Akin and Eres, 2002, 2004). These are followed by other inventory work focusing on housing in rural areas, e.g., Karacakaya Village, Sürmene, in Trabzon (Demirel, 2010), Örenli Village, Kesput in Balıkesir (Yeşilyurt, 2012), villages of İzmir, (Tunçoku et al., 2012), Arapgir, Malatya (Eyüpgiller, 2014) and Ildırı, Çeşme, İzmir (Çil and Kul, 2015). These researches are essential for awareness of conservation of historical rural settlements in Turkey and provide basis for further researches regarding the disciplines of history of architecture, history of cities and regions, architectural restoration and conservation planning. However, implementation work on preservation of rural settlements is still very limited. An outstanding recent implementation example from our country is Cumalıkızık in Bursa, which was accepted for the World Heritage List in 2014 (UNESCO, 2015). Beypazarı, Ankara and Şirince, İzmir are some other significant rural settlements subject to conservation implementations.

On the other hand, since the concept of cultural landscape is new; there is no reference for it in our legal framework. Madran and Özgönül (2005) is an early study pointing out to this gap. In turn, there is almost no documentation work or application work referring to this concept. The inscription of Pergamon as a cultural landscape on the World Heritage List (UNESCO, 2015) is important; here the acropolis is regarded as a crown which is visually linked to the other ancient components on its skirts and nearby hill skirts.

As a result, academic discussions on cultural landscapes whose major elements are rural settlements should be improved and appropriate definitions and frameworks specific to Turkey should be formulated. Houses are basic components of rural settlements. Research on modest houses has started later than that on monumental buildings in the world. Camillo Sitte end of the 19th century emphasized a broad concept of artistic city-scape. His key concepts were applied in the presentation of the old Nüremberg in the early 20th century. Patrick Geddes in the early 20th century made selective urban renewals in the Edinburg old town. After the world wars which gave

way to destruction at area scale, desire of reconstruction of entire city scape stemming from the cultural traumas experienced was seen. So, in some cases, old housing areas were reconstructed based on documents (Glendinning, 2013).

The historical housing stock in Turkey that has reached today dates back to the 18th and 19th centuries. This goes for both urban and rural housing. There are scarcely limited data on the characteristics of the house during the early period of the Turkish conquest in Anatolia and the Balkans. There are a few examples from the 15th, 16th and 17th centuries (Kuban, 1995).

So, this thesis considers contributing to the evaluation of both local features of housing and settlement, and to the identification of common features of Ottoman houses basically in the 18th and 19th centuries. This evaluation includes basically determination of parameters identifying morphology of housing and settlement. These parameters are elements and their relationships. It provides limited reference to their origin and evolution. This thesis claims that; when rural settlements are major elements of their cultural landscapes, then filtering of heritage information should be made in different, but interrelated scales such as cultural landscape, settlement and housing units. In order to understand cultural landscape as architecture necessitates; first determination of its elements and borders. This architectural dimension brings forward necessity of clear definition of vista points. Preservation of authenticity and integrity should be taken as a primary criterion in the conservation aimed evaluation of rural settlements and housing units as their basic components.

1.3. Aim, Limitations, Methodology and Terminology

The main intention of this study is to make a conservation aimed evaluation of Darkale rural settlement in Soma, Manisa. The primary component of a rural settlement is its housing units. Since understanding of housing cannot be possible without understanding the whole of the settlement composed by these houses; and understanding of the settlement cannot be possible without understanding the environmental conditions giving way to the existence of that settlement, the characteristics of Darkale are evaluated in all of these three scales. Nevertheless, documentation, analysis and evaluation of cultural landscape, settlement and housing unit scales are all considered from the view point of the discipline of architectural

restoration. Interdisciplinary studies necessitated for especially the first two scales are out of the limits of this study.

The method of this study is comprised of literature review, archive research; field survey, data analysis and evaluation. So, the preliminary studies were reviewed. Then, archive research was made in the official website of the state archives. Air photos of the site were gathered from the archives of the municipality. Finally, basic sources on Ottoman housing and settlement were reviewed. In addition, the field surveys were carried out on 28 August 2013, 17-18 September 2014 and 19-20 June 2014 in three different scales.

During, the field survey at cultural landscape scale, the geographic difficulties and natural and man-made elements were observed and identified. Photographs were taken especially from the vista points; some limited sketches and measurements were realized. In addition, interviews with inhabitants of Darkale Village on tangible and intangible values were made. At the same time, both their physical and socio cultural realities were observed. In the field surveys at settlement scale, the basic elements of the settlement; housing units, public and service buildings and open spaces between them were documented by photos and sketches. Related maps were corrected at lot scale. In the field surveys at housing unit scale; totally 133 housing units were surveyed externally and 37 of them could be entered for interior survey (Table 1). These residential buildings and monuments and service spaces were documented with sketches and photos, in addition measurements were taken. Houses were selected in terms of not only being authentic examples, but also in terms of their peculiarities in order to give enough information about all house types in Darkale.

Then, the documentation and analysis were carried out in three different scales. At cultural landscape scale, different zones were mapped on the base map and air photos taking into consideration the geographic difficulties, natural and man-made elements and intangible qualities. In addition, partial sections describing the cultural landscape were prepared. Documentation and analysis at settlement scale, land use, streets and pathways, solid-void organization, entrances of the buildings, ownership pattern, position and relation with neighbors, storey system, construction system and material usage, roof types, conservation state and lot organization were analyzed by preparing thematic maps and tables. In turn, Documentation and analysis of housing units were realized in seven different sheets developed by transferring sketches of houses to electronic environment whereby AutoCAD Software. Sheet for; identification

of housing units, measured drawings such as; section and façade and plans of each floor, analysis of morphologic characters, alteration analysis, sources of the restitution analysis and restitution drawings. Moreover, the plan and façade sketches of twelve houses which were drawn previously (Karayazılı, et al., 2011) were revised.

In the evaluation phase, the evaluation criteria of the World Heritage Convention (2013) used for determination of World Heritage List were considered. The authentic characteristics and threats against the integrity of all scales are evaluated according to data and information coming from the literature and archive research, interviews, observation and analysis of the rural settlement. Evaluation results are mapped on the related convention drawings and also photos in all three scales considering the themes of authenticity and threats against integrity. Original typologies for all scales were also carried out in the evaluation section. Typology for cultural landscape was defined according to variation in geographic qualities. Typology element for the settlement was defined according to variation in the relationship of the elements of the settlement, typology for housing unit according to variation in the living floor organization.

Table 1. Buildings surveyed in settlement and lot scales

	Accommodation and Related Usages	Public Buildings	Service Buildings	Total
Survey in only Settlement Scale	97	7	10	114
Survey in Lot and Settlement Scales	-	7	-	7
Measured Survey in Lot and Settlement Scales	37	-	3	40
Total	134*	14	13	161

* This number includes 133 houses and one lodging building.

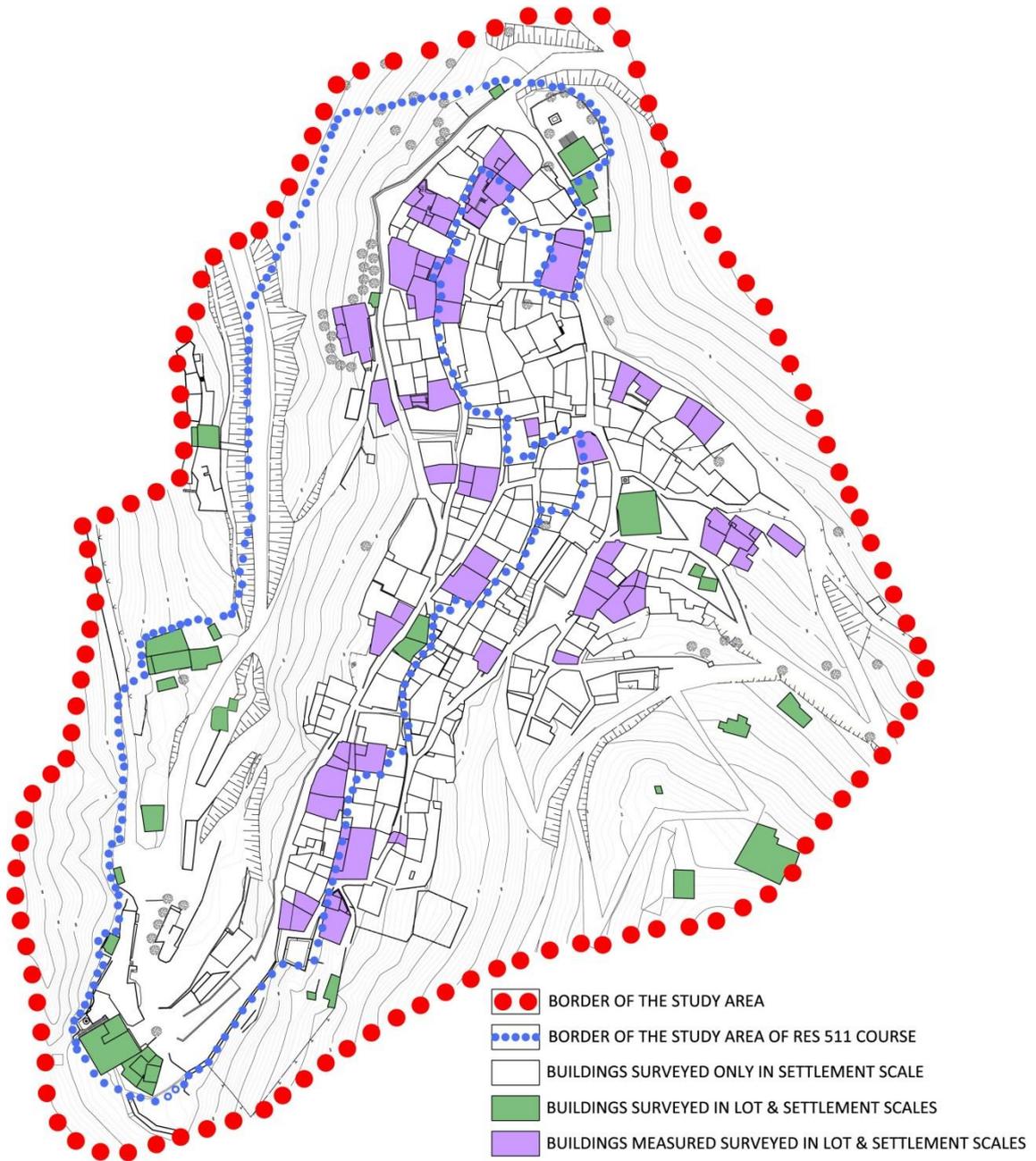


Figure 1. The map of the surveyed areas.

In this thesis, all of the drawings and photographs without reference are produced by the author.

In this study, cultural landscape is defined as a natural area, but including contribution of people who have lived in that area throughout history, making benefit of its opportunities and learning how to cope up with its difficulties, and presenting wholeness which can be perceived in a single glance by a pair of human eye due to its natural difficulties providing spatial borders.

Rural settlement is defined as a self-sufficient settlement in rural land, presenting homogeneity and harmony with nature, and accommodating local way of life including production techniques, recreation activities and religious beliefs.

Housing unit is defined as a physical and social unit in which daily life of a family takes place including living and production activities and comprised of closed semi-open and open spaces formed in harmony with natural constraints.

For the terminology of the spatial and architectural elements, the local terms were preferred, if they were documented: *hayat* (the exterior hall oriented to the vista, used for living and circulation), *mağaza* (the storage space located on the ground floor or mezzanine floor), *taşlık* (the closed space located on the ground floor which is accessed from the street or courtyard), *gusülhane* (the bathroom section with the closet system in the room itself), *sedir* (the timber architectural element for sitting and/or sleeping which is the elevated sitting platform and is higher than floor's level) and *abdestlik* (the counter located at the *hayat* space used for ablution).

If there is no local term, Turkish terms related with Ottoman architecture were used: *köşk* (kiosk), *sergen* (the timber shelve surrounding the room above windows), *loğ taşı* (roller), *sıcaklık* (caldarium).

1.4. Content of the Study

First chapter of the thesis includes the definition of the problem, aim, literature review, limitations, methodology, terminology and content of the study.

Second chapter consists of the geographical characteristics of Darkale Village and its environment. Location, topography and climate, flora and fauna of the rural settlement Darkale are explained together with the urban settlement of Soma.

Third chapter is on historic development of the region. This chapter presents a synthesis of literature review. Ancient names of “Trakhoula” and “*Tarhala*” are used in relation with the discussed time interval instead of Darkale in this chapter. Name and etymology are first presented. Then, historic background of the region is researched questioning boundaries, improvement and decline of the settlement and its environment. In addition conservation decisions of the rural settlement are presented. Moreover, demographic structure and geographic distribution of population are studied in accordance with social, cultural and economic characteristics of settlement.

Fourth chapter presents the heritage characteristics of the studied rural settlement in terms of their tangible and intangible characteristics at three different scales; cultural landscape, rural settlement and housing units. Under the title of cultural landscape scale; geographic elements, usage of natural and man-made element and circulation pattern of the cultural landscape of Darkale are analyzed. At rural settlement scale characteristics; identification and analysis of physical features are carried out in terms of streets and pathways, and distribution of building types, storey system, construction system and material usage, alteration and conservation state analysis. On the other hand, under the housing units scale, lot organization, architectural characteristics, spatial and architectural elements, alteration analysis of each studied house, are presented.

Fifth chapter is the evaluation section of the study. In this section, the authentic characteristics and threats against the integrity of all scales are evaluated according to data and information coming from previous chapters. Therefore, original typologies for all scales were also carried out in the evaluation section. Typology for cultural landscape was defined according to variation in geographic qualities. Typology element for the settlement was defined according to variation in the relationship of the buildings of the settlement, typology for housing unit according to variation in the living floor organization.

The last chapter presents heritage values and conservations problems at cultural landscape, rural settlement and housing unit scales.

CHAPTER 2

GEOGRAPHIC CHARACTERISTICS

In order to determine the elements and borders of the cultural landscape of Darkale, geographic characteristics of the area were researched. So; in this chapter; location of the case study, its topography, climate, fauna and flora are introduced.

2.1. Location

Darkale rural settlement is located in Soma, a district of Manisa that is a province in Aegean Region of Turkey. Manisa's neighboring provinces are İzmir at the west, Balıkesir at the north, Kütahya at the north-east, Uşak at the south-east and Aydın at the south. Soma is one out of the seventeen districts of the province and is located at the 11th northern latitude and 36th eastern longitude; it has altitude of approximately 175 m from sea level. It neighbors Kırkağaç province at the east, Kınık and Bergama at the west, Savaştepe and İvrindi at the north and Akhisar at the south. The surface area is approximately 826 km². It is 93 km far from the center of Manisa. It is composed of 14 quarters and 52 villages (Soma Municipality, 2011). Darkale is one of these villages at present (Figure 2).



Figure 2. Manisa and its Provinces
(Source: Wikipedia, 2014)

Darkale is located in Bakırçay river basin. It is three km from Soma to the south-east. Darkale village is situated on the north skirt of the Köseadağ Mountain at an altitude of approximately 983 m from sea level and the Tarhala stream passes by it (Figure 3) (Karadağ, 2005).



Figure 3. Soma and its Villages
(Source:Karadağ, 2005)

There are two stiff rocky hills that have altitude of 655m. These are Tuzluk and Asarkale Hills. Between two hills, which can be regarded as twins, there is a very narrow valley. The Kavaklık (Tarhala) stream which dries in summers, passes through this valley. Darkale village is settled on the north-east skirt of the Asarkale (Asartep) hill (Figure 5) (Ergün, 1997). There is another hill side at the west direction of Darkale which is called Karşıyaka (Bağarası) (Figure 4) (Soma Municipality, 2011).

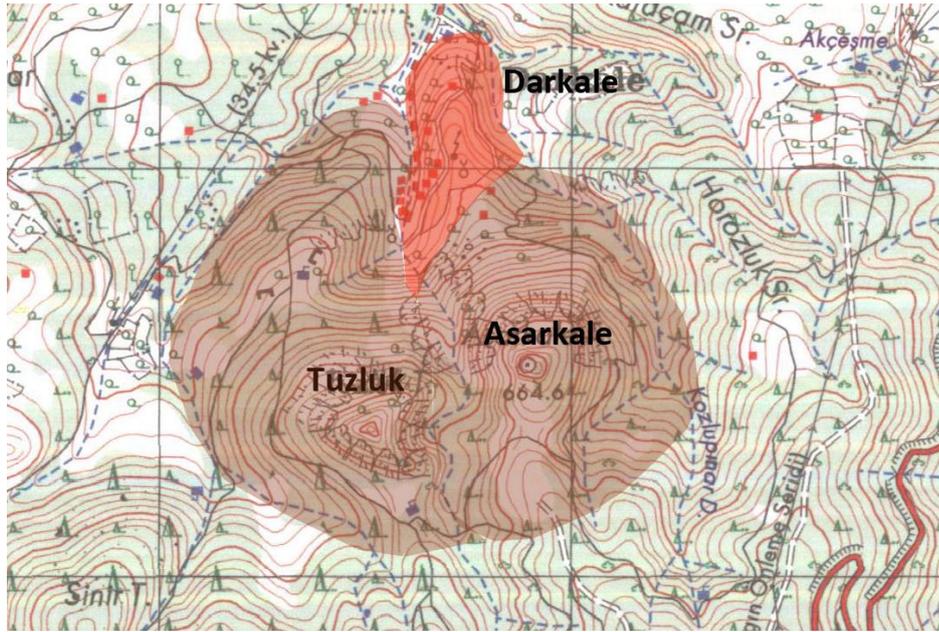


Figure 4. The map of the Asarkale and Tuzluk Hills
(Source Soma Municipality, 2011)

Darkale is settled on sloping land and its altitude changes between 341 m and 420 m. The surface area is approximately 182 242 m² (Soma Municipality, 2011) together with the woodland and rocky areas which surround the settlement.



Figure 5. View of Darkale - Soma from Asartepe (Asarkale)
(Source Soma Municipality, 2011)

Soma is integrated to highway and railroad webs. In terms of railway transportation, it is in a significant location. The railroad web in the region is one of oldest. In April 1890, the railroad that connects Manisa to Soma was established. It is possible to go to İzmir, Manisa, Balıkesir, Kütahya, Eskişehir, Ankara and Bandırma by trains and İstanbul Yenikapı by using ferry (Kutlusoy, 1971).

Darkale Village is three km far from Soma to the south-east. There are two asphalt roads to access the village from Soma. The first one is a steep roads, terminating at Kırkoluk Square at the south of the village. There is a coal mine on this road which is in bad condition, because of its frequent usage by coal mine lorries (Karadağ, 2005). The other road terminates at Darkale School to the north.

There is no public transportation from Darkale Village. However there are two motor vehicles belonging to village are used by population of Darkale for transportation from Darkale to Soma.

2.2. Topography and Rural Settlement

Mountains, plains, basins and streams constitute the topography of Soma. Mountains surround the district at its south, east, and north. There are plain areas in its west (Kutlusoy, 1971) (Figure 6).

The topography of Soma is characterized by a horst and graben structural style (Karadağ, 2005). Horsts and grabens are elongated fault blocks of the Earth's crust that have been raised and lowered, respectively, relative to their surrounding areas as a direct effect of faulting (Encyclopedia Britannica, 2015). Mountainous lands are constituted of 70% rocky terrain and the rest of the land is composed of hillside and plain equally (Kutlusoy, 1971). Topography consists of compact crystallized limestones, sand stones and pebble stones (Karadağ, 2005).

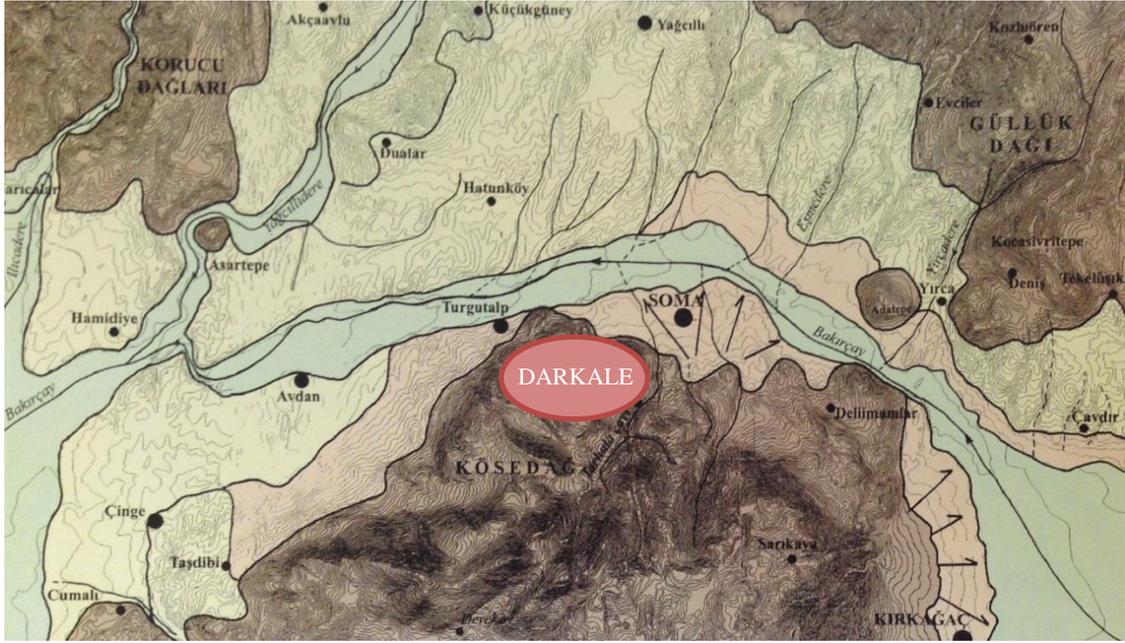


Figure 6. Geographic map of Soma
(Source: Karadağ, 2005)

- **Mountains**

Mountains are stiff and dense at the south and north of Soma. These are Şifa Mountain (875 m), Devriş Crest (Derviş Sivrisi) (850 m), Kurttepe Hill (869 m), Teke Hill (829 m) and Osman Mountain (788 m) at the north direction. Göktepe Hill (736 m), Türkali Mountain (789 m) and Kocagöynük Mountain (755 m) are located at the northwest. On the other hand, there are not only stiff mountains at the east, but there are also plains which are appropriate for settling (Kutlusoy, 1971).

The highest mountain where Darkale is settled at its northern skirt is called with various names by different authors. These names and authors are as in the following: Darchala (Kiepert, 1855), Kösedede whose top point is named as Belpınar (Kiepert, 1890), Çamlıca whose top point is named as Soma Sivrisi (1109 m) (Kutlusoy, 1971), Tarhala whose top point is named as Belpınar (1111 m) (Ergün, 1997) and Köseadağ (983 m) whose top point is named as Kösekaya (1071 m) (Karadağ, 2005).



Figure 7. View of Darkale Village on the western skirt of Köseadağ Mountain, 2014

- **Basins**

The most important basin of Soma and also Aegean Region is the Bakırçay Basin. It lies in the east west direction, and composed of alluvium. A part of Bakırçay plain is within Soma. This part has a height of 150 m from the sea level, length of 30 km and width of 10 km. It is surrounded by mountains at its south and north. Moreover, Bakırçay Basin has the most productive soil in Soma (Kutlusoy, 1971).

- **Valleys**

Grabens had been eroded and expanded over time so that break lines had formed on these fault blocks and deep river valleys had occurred along these lines (Karadağ, 2005). Valleys are denser at the west and north-west of Soma. They house brooks that feed Bakırçay (Kutlusoy, 1971). These are Tarhala, Sarıkaya, and Yılangözü which have their springs at Köseadağ Mountain (Karadağ, 2005).

- **Streams**

Bakırçay is the fourth longest stream in the Aegean Region; a total length of 120 km, 28 km of it passes through Soma. It flows in the west-east direction.

Bakırçay Stream has been an important water source throughout the history (Kutlusoy, 1971). It was named as Kaikos or Caicos in the period of Pergamon Kingdom. According Plutarchos; the old name of Bakırçay is Astos which is the name of Poseidon's son. Later, Kaikos killed accidentally one of the governors of Mysia, he regretted and committed suicide in the Astros River. After that the River was named as Kaikos (Bayatlı 1949 cited in Kutlusoy, 1971).

Tarhala Brook is one of the branches that flow into the Bakırçay stream which starts on the skirt of Köseadağ Mountain at Darkale, passes through the conservation area of Soma and ends flowing into Bakırçay (Figure 8). However, the portion of Tarhala Brook at the south direction of the conservation area of Soma was dried by general Directorate of State Hydraulic Works (DSİ) in 2009 because of floods (İller Bankası, 2009).



Figure 8. Photos of Tarhala Brook
(Source: İller Bankası, 2009)

2.3. Climate

Soma is located at the border between Aegean and Marmara Regions. The settlement is included in hemi-humid Mediterranean climate. The climate is characterized by dry summers and wet winters. The warmest month is July with an average temperature of 23-24 °C; however, January is the coldest month with an average of 3-5 °C. Snow fall is normal in winters but frost is seen often, and average rainfall is 631,8 mm. (Koçman, 1993 cited in Karadağ, 2005). Direction of wind is in north-northeast direction in winters and its velocity is 2,2-2,7 m/sn.

On the other hand, mining operation and existence of Soma Thermal Power Plant have caused degradation of the climate together with air pollution (Karadağ, 2005).

2.4. Flora and Fauna

The most determinant factors constituting the flora of a region are climate, geological structure and types of earth. More than half of the land of Soma is mountainous (Figure 9) and Bakırçay River basin plays an important role for flora and agricultural activity (Karadağ, 2005).



Figure 9. View of Köseadağ Mountain from the west, 2014.

According to the report of Soma District Directorate of Agriculture dated 2014, total land of Soma is 82 600 hectares. This land consists of; agricultural land and olive yards (23 247hectares), forestry- shrubbery land (42 512 hectares), and residential and industrial areas (16 868 hectares) (Figure 10) (Manisa Governorship, 2014).

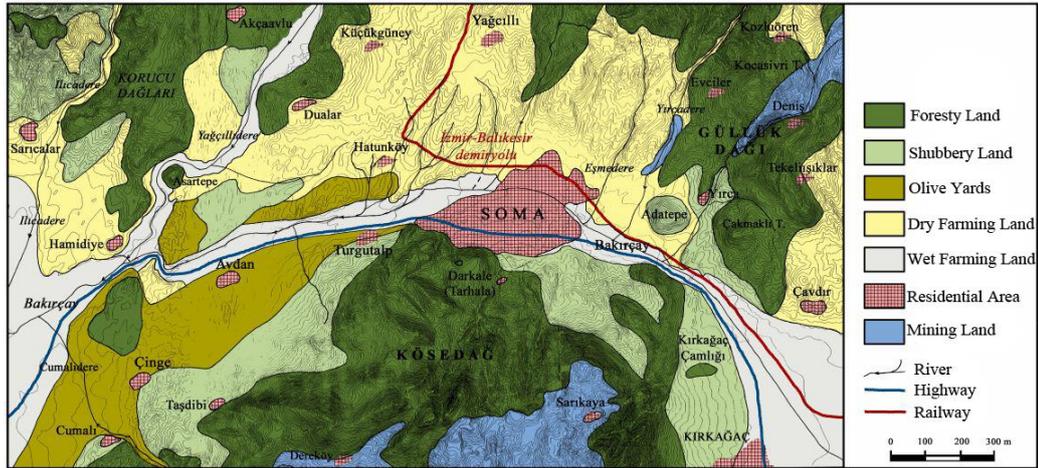


Figure 10. The map of land use of Soma
(Source: Karadağ, 2005)

The slope and the mountainous nature of the land in Soma makes agriculture difficult. Grain, tobacco and cotton are the most common farm products; on the other hand, olive, cherry and pine nut yards are widespread in Soma (Figure 11). Furthermore, cattle farming are less common than sheep and goat farming because of sloping land (Manisa Governorship, 2014).



Figure 11. Olive yards in Yırca Village and vine yards in Soma
(Source: Greenpeace, 2015 and Bank of Provinces, 2009)

According to the same report, there are six farms located at Darkale. Moreover, agricultural land is 250 decares and wetland is 158 decares. Olive and grain are the most common products. In addition, there are 36 cattles and 265 sheep and goats in Darkale (Manisa Governorship, 2014). Pomegranate and vine yards are also widespread in Darkale (Figure 12).



Figure 12. Pastoral views from Darkale, 2014

CHAPTER 3

HISTORICAL DEVELOPMENT

In this chapter; firstly name of the settlement, then historical development of the region, conservation decision of the rural settlement and finally, social, cultural and economic characteristics of Darkale are analyzed.

3.1. Name and Etymology

The settlement has been known by different names throughout history. The Turkish name Darkale was given during Republican Era in 1968 (Günay, 2006). According to Ramsay, name of Trakhoula was used in the first record about the settlement. This record was about participation of Trakhoula bishop to the second Nicaea Council at 787 during the Byzantine Period. According to Umar; Trakhoula means rocky and ‘Trakhys’ means the city settled on the rocky land (Umar, 1993).

It is known from the Ottoman archives that the name of the settlement is *Tarhala* (Uluçay and Gökçen, 1939, Altıner 1937; Günay, 2006) which was written in different ways by different authors such as Darkhala (Kiepert, 1867), *Tarhanya* (Uzunçarşılı, 1929), (Uluçay and Gökçen, 1939), Trakhoula (Ramsay, 1890; Sevin, 2001), *Tırhala* (Özkaya, 1977, Baykara, 1988, Arel, 1992), *Tarhanat*, *Tarhaniye* (Uluçay and Gökçen, 1939, Umar, 1993), Trakoula (Umar, 1993). Although it is not known certainly, the name is thought to be derived from ‘*tafrala*’ which means ditch, trench or fort. The other consideration is that it came from ‘*tiri kale*’, which means three beauties in Greek. These are thought to be the three hills located near the settlement; Asartepe, Temenni and Karşiyaka (Altıner, 1937). Moreover, before Darkale, the settlement was also called Turgutalp (1937) and Altınlı (1964) (Arel, 1992), in addition, Altınlı was mentioned in the book *Köylerimiz* (İçişleri Bakanlığı, 1968).

3.2. Development of the Region

Darkale is the historic settlement unit which is located at the historic region namely Mysia. This region was located in the northwest of ancient Asia Minor which is the antique name of Anatolia (Encyclopedia Britannica, 1970). It was surrounded by Lydia at the south, Phrygia at the east, Bithyia at the north east, Thrakia at the north, and the Aegean Sea on the west (Strabon, 2005) (Figure 13).



Figure 13. The map of Asia Minor, Drawn by Mitchell, Samuel Augustus, 1875. (Source: David Rumsey Map Collection, 2014)

Name of the Mysia thought to be derived from Mysians who started to live in Asia Minor approximately in 1200 BC. The first settlement of Mysians was near to the Olympos Mountain (Uludağ) and the second settlement was at the upper part of Kaikos Plain (Bakırçay Ovası) to the south of Mysia which was a quite dense residential area (Strabon, 2005).

Darkale was called Trakhoula at that time. Mysia region was enlarged towards the Apollia (Asarkale) at the south by II Eumenes (197-159 BC) in 185 BC during the Kingdom of Pergamon Period. Then, Trakhoula (Darkale), Germe (Soma) and Gambrian (Kınık) became border towns to the south (Sevin, 2001) (Figure 14).

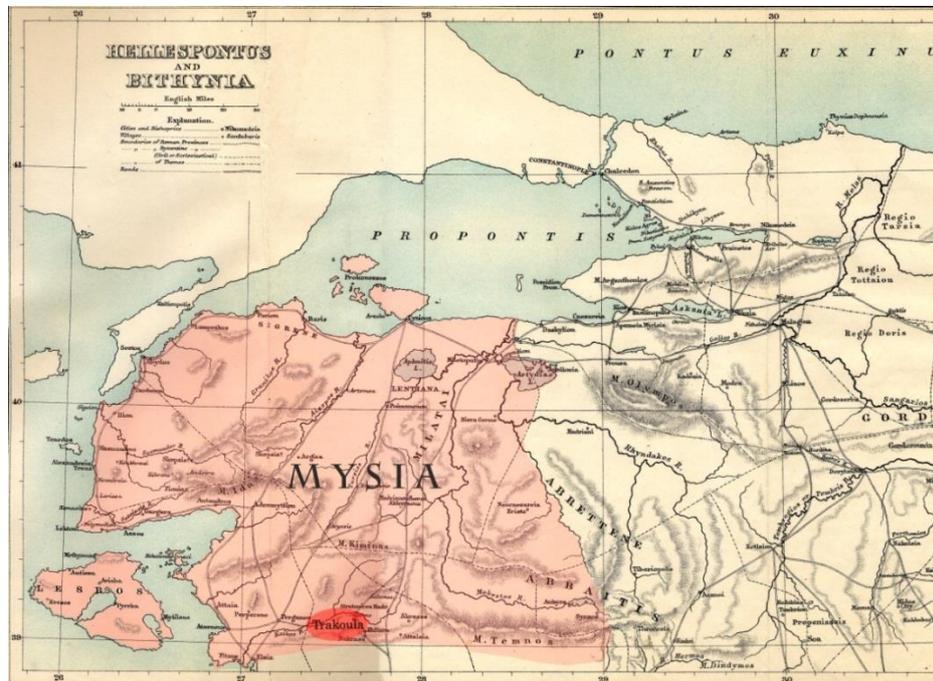


Figure 14. The map of Mysia, Drawn by W. Shawe, 1890.
(Source: William Mitchell Ramsay, 1890)

It is thought that Trakhoula was used as a summer place and the terminal head quarters of Kingdom of Pergamon in time of II Eumenes approximately in 185 BC. The settlement was an important station to defend against attack coming from the east. It was not only located far away from Akhisar-Bergama road to the north, but also it had enough height to control the road. Moreover, location of Köseadağ Mountain supported these features (Kutlusoy, 1971).

The archeological remains such as columns belonging to the Kingdom of Pergamon Period are observed at Karşıyaka (Bağarası) hill side of Darkale located at the west (Figure 15b). There are also architectural remains which are thought to be watchtowers and water cistern of the village in Asarkale Hill which is the located at Asartepe located at the southeast of the settlement (Figure 15a). In addition, there is an ancient road thought to provide access between Darkale and Asarkale (Figure 15c). It is about 500 meters in length. These architectural remains are thought to belong to the Byzantine Period. Nevertheless, it is difficult to analyze historical events of that time, because no archeological research has started yet in Darkale and its surroundings, also reminiscences of history are vanishing because of disasters such as earthquakes, fires, floods and vandalism (Kutlusoy, 1971).



Figure 15. a) The view of the remains of the watchtower belonging to the Byzantine Period at Asartepe b) The view of the ancient columns at Karşıyaka (Bağarası) located at the west of Darkale, c) The view of the ancient road belonging to the Byzantine Period between Darkale and Asartepe, (Sources: Soma Municipality, 2011)

There is carved marble slab thought to belong to the Byzantine Period which is detected in a garden wall on the north side of the Darkale-Soma road. Such reused material may be the remains of the ancient settlement of Trakhoula. The same goes for the stones bearing ancient inscriptions at the Balıkpazarı in Soma. The name Adrian (Hadrianus) can be deciphered in the third line of the inscription on the stone that can be seen set upside down at the gate of the Balıkpazarı, which indicates that this stone dates from the beginning of the second century AD. It is equally possible that these stones were brought from the small city of Germe which must have been located within the borders of the town of Soma or in its very close vicinity today (Umar, 1984).

Charles Texier had travelled throughout Anatolia in the last quarter of 19th century and he described Soma and its surroundings (Texier, 1882).

The route of Soma has a mountainous and woodland topography. In addition, location of Soma corresponds to description of position of the antique city Germa. Moreover, it is seen as a ruined settlement area of the Byzantine Period. The settlement is arranged in an order like a crown at high rocky area located a little ahead of Soma. The walls observed throughout the cliffs of high rocky area are pieces of ancient walls (Texier, 1882).

It has been still possible to observe these ancient walls at the north direction of the settlement.

At the Byzantine Period; W.M. Ramsay identified the former Byzantine Trakoula and Gandia, as a two town bishopry. In addition, the first record about this settlement was the participation of Trakoula bishop to the second İznik Council at 787. Trakoula seems to have retained its name as Trakhala, a village and mountain near Soma which is near the site of Germe. The ancient Germe which probably struck no coins was a small settlement unit of Trakoula during the late Byzantine Period (Ramsay, 1890). Thus, the first settlement of Soma was located at today's Darkale and its surrounding (Kutlusoy, 1971).

There are two different ideas about the first habitation of Turks in Tarhala which was the old name of Darkale. The first, Turks under the auspices of Kaleli Hoca (Kalelioğlu) migrated from Horezem because they were suffering of famine, then, they captured Tarhala (Altınır, 1937). The second, the settlement was conquered by tribes of Horezem. Darkale became one of the centers of the *Beyliks* of Sarukhan (Uluçay and Gökçen, 1939).

Tarhala was positioned between *Beyliks* of Karesi whose center was Bursa and *Beyliks* of Sarukhan whose center was Manisa (Hammer, 1983 cited in Arel, 1992). However, Arel (1992) claims that, Hızır Şah Mosque (1791-1792) was built in Soma which was one of neighborhood of Tarhala. Hızır Şah was an emir of *Beyliks* of Sarukhan. This should be taken as the proof of Tarhala belonging to *Beyliks* of Sarukhan in the 14th century (Arel, 1992). Nevertheless this settlement was listed as belonging to the *Beyliks* of Karesi (Hammer, 1983 cited in Arel, 1992). The *Beyliks* of Karesi was conquered by the Ottomans Empire in 1345 which was made a sanjak of Ottoman (Öden, 2001). Then, the sanjak of Karesi was combined with the *Beyliks* of Sarukhan which yielded to Ottomans. These *Beyliks* were made sanjaks under the Ottoman rule without changing their boundaries (Emecen, 1996).

Under the Ottoman rule, Tarhala is one of the twenty eight administrative centers of *Hüdavendigâr Livas*. The name of *Hüdavendigâr* is derived from Sultan Murat *Hüdavendigâr*. It is the administrative unit of Ottoman Empire between 14th and 19th centuries whose center is Bursa (Emecen, 1998). In early times of, the 16th century, suitability in term of defense was a primary criterion in localizing settlements. Those living in Bakırçay plain suffered from malaria. So, people had to move away from the river. The elevated position of Tarhala was the reason for its choice as the center of the *kaza* during the period of Beyazıt II (1481-1512) (Tuncel, 1977 cited in, Günay, 2006).

According to the Account of the *Vilayet* of Anatolia, numbered 166, *Liva* of *Hüdavendigâr*, 1530 (Department of the Ottoman Archives, 1995). Dated to the first half of the 16th century, Tarhala consisted of two quarters; Soma and Hisaraltı, 59 villages and nine ranches. In addition, one mosque and one bath were listed in the same documents. In the second half of the 16th century, Tarhala became the center of *kaza* composed of three *nefs* (city center), namely; *Nefs-i Tarhala*, *Nefs-i Soma*, *Nefs-i Kırkağaç*. Surface area of Tarhala reached its largest limits: approximately 1 396 m².

For a settlement to be named as *kasaba* or small city; it must have some features, components and activities as well as population. These are; commercial and agriculture activities, components such as *mahalles*, a square, agricultural areas, a mosque, a *zaviye*, a *tekke*, in addition, educational buildings; school, *sibyan mektebi*, madrasah, commercial buildings; open or closed bazaar, *arasta*, khan or *bedesten* and health facilities; bath or thermal spring (Selen, 1948 cited in, Günay, 2006). When these activities and components are considered, it can be said that Tarhala, Soma and Kırkağaç were *kasaba* in the second half of the 16th century (Günay, 2006).

Although Tarhala had been an important settlement because of its strategic location, in the second half of the 16th century, criteria for selecting settlement location changed based on economic reasons. Accessibility became more important than safety and health requirements. The importance of the settlement declined in the 17th century and the center of *kaza* shifted from Tarhala to Soma. Although it was recorded as Nefs-i Soma belonging to *kaza* of Tarhala in the 16th century, it was noted as Tarhala belonging of *Kaza-i Soma* in early 17th century. Having plain terrain and being near the trade route made Soma preferable in terms of economic reasons. Tarhala became a village, whose population reduced in time and this situation is still continuing (Günay, 2006) (Figure 16).

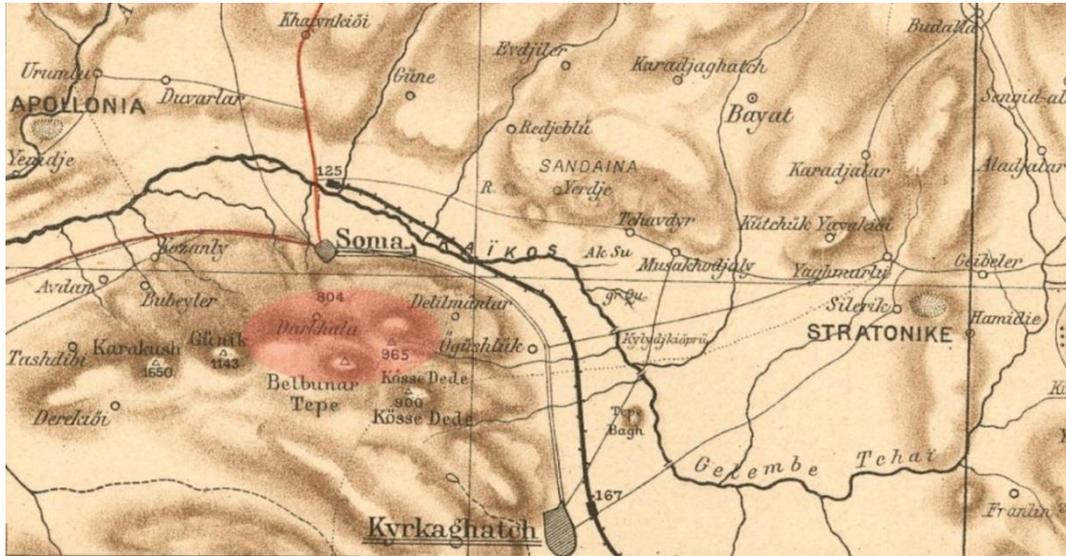


Figure 16. The map of Darkale
(Source: Kiepert, 1890)

As a result of economic and social development in Soma, the important monumental buildings had been constructed at the center of Soma after 18th century. Emir Hıdır Bey Mosque was constructed 1791/92 (Arık, 1973), Damgacı Mosque (1872) (Arel, 1992), Orta Mosque (19th century) (Kutlusoy, 1971). Moreover, the existence of a bath a *bedesten*, two khans and these mosques proves that Soma became an important settlement in terms of its economic features.

Nevertheless, Tarhala was still called as *kaza* in the first quarter of the 18th century in the archive documents. (General Directorate of State Archives, 2014). In addition, the existence of Toprak Baba, Yakibaba *Zaviyes* were mentioned for the 18th century in the same documents (General Directorate of State Archives, 2014). Furthermore the restoration of Kırkoluk Mosque located at the center of Darkale in Baroque style of the 19th century (Arel, 1992). All of these prove that Darkale had still importance at that time.

The railway between İzmir-Balıkesir, passing through Soma, presence of a rich coal mine, and a thermal power station present job opportunities for the inhabitants. Hence, there is an ongoing migration from villages to Soma. Today, the surface area of Darkale is less approximately ten times than that in the 16th century.

After the 18th century, Tarhala became a village of Soma (General Directorate of State Archives, 2014). Moreover, because of changing in settlement regulations in 1841, first, Soma became a *kaza* of Bergama in 1844, and then Soma was connected Balıkesir county in 1878. Bergama and Balıkesir were part of Bursa *Hüdavendigâr Vilayet* (İlgürel, 1992). In addition Soma and its surroundings were invaded by the Greek army on June of 24th, 1920 which lasted for two years. Then it released on September of 13th, 1922 when became as Independence Day of Soma. After the proclamation of the Republic, Soma has become a province of Manisa which was called Sarukhan Vilayet before the republic and Tarhala became a village of Soma Province (Ergün, 1997).

3.3. Conservation Decision

Four buildings, three of them are housing units, lot numbered 851, 850 and 809 and a bath, lot numbered 827 were listed with the decision of Supreme Council of Antiquities and Monuments dated 08.07.1977 and numbered A 633. In the same decision, necessity of a survey for definition of the borders of the site to be listed in Darkale was underlined (Arel, 1992). With the decision of the Supreme Council of Conservation of Cultural and Natural Entities dated 24.02.1984 and numbered 134; four monumental buildings; Kırkoluk Mosque, Minareli Mosque, Orta Masjid and laundry and three residential buildings lot numbered 858, 809 and 889 were listed and a buffer zone (*koruma alanı*) was defined. Lot numbered 809 and 889 are ruined today. Moreover, the remains of watchtower and water cistern were listed with the decision of İzmir No 2 Regional Conservation Council of Cultural and Natural Entities dated 07.03.1985 and numbered 738. In addition, the graveyards located at the lot numbered 711, 708, 709, 715 and 716 were listed with the decision of İzmir No 2 Regional Conservation Council of Cultural and Natural Entities dated 09.03.2006 and numbered 1946. Then, the border of the site was changed as a listed urban site with the decision of İzmir No 2 Regional Conservation Council of Cultural and Natural Entities dated 20.01.2012 and numbered 448. The same year, 22 housing units; lot numbered 842, 849, 813, 865, 868, 874, 881, 882, 892, 940, 1005, 951, 953, 968, 989, 988, 902, 952, 876, 976, 972, 851 and 925 and one olive oil mill and its storage were listed with the decision of İzmir No 2 Regional Conservation Council of Cultural and Natural Entities dated 22.11.2012 and numbered 2863. The ruin of the city wall is located the graveyard located at the lot numbered 716 at the southern direction were listed by the same council with a decision dated 28.03.2013 and numbered 2046. In addition, the areas are located at the north, southeast and southwest direction identified the first degree archeological site and the parcel the south direction of the settlement identified the second degree archeological site by the same council dated 28.03.2013 and numbered 2047. Furthermore, the residential building located at the lot numbered 954 and door numbered 120 was listed by the same council with a decision dated 27-28.06.2013 and numbered 2510. This house was bought by the chamber of commerce. In addition, a fountain located at lot numbered 972 was listed by the same council dated 27.09.2013 and numbered 2866 and Darkale Primary School lot numbered 924 was listed dated

04.03.2014 and numbered 3562 and the residential building located at the lot numbered 998 was listed and dated 27.11.2014 and numbered 4556 by the same council (Appendix C).

Recently, 49 housing units, lot numbered 884, 886, 890, 891, 873-872, 870, 869, 920, 921, 866, 871, 894, 916, 914, 896, 862, 908, 1006, 901, 1002-1003, 845, 971, 967, 978, 979, 981, 980, 985, 959, 958, 955, 943, 944, 855, 895, 846, 803, 918-917, 974, 972, 888-887, 877, 956, 875, 923 and a fountain embedded in the Kırkoluk Mosque, lot numbered 837 are evaluated as cultural assets by İzmir No 2 Regional Conservation Council of Cultural and Natural Entities dated 20.02.2015. However, they have not listed yet.

In addition, the inventory sheets of six listed buildings and structure were prepared by General Directorate of Cultural Heritage and Museums; the Kırkoluk Mosque, the Minareli Mosque, the laundry, the residential house door numbered 120, the fountain located at the lot numbered 972 and the graveyard located at the lot numbered 716.

Consequently, there are seven listed monuments, two fountains and 33 residential buildings two of them are ruined in the settlement, in addition, listing of 49 housing units and a fountain are evaluated by İzmir No 2 Regional Conservation Council of Cultural and Natural Entities today (Appendix A2).

Starting with 2010, a non-governmental organization (ÇEKÜL) and a private organization (OPET) have been working together on a project named “Protection of the cultural heritage of Soma and Darkale and provision of local development (*Soma ve Darkale kültür mirasının korunması ve yerel kalkınmanın sağlanması*). Furthermore, Darkale village takes attention with its unique and picturesque features from universities and tourists. Various universities organize trips to Darkale. The cultural landscape in the vicinity of Darkale is an attractive place for natural sports.

3.4. Social, Cultural and Economic Characteristics

In order to understand socio economic development of Darkale Village and its environment throughout history, demographical, economic, and cultural aspects should be analyzed in parallel with each other.

Trakhoula was a densely occupied area in time of the Kingdom of Pergamon owing to its strategic position and productive lands fed by Kaikos (Bakırçay). It was the most important grain yard of the Kingdom of Pergamon (Strabon, cited in Sevin, 2001).

The major natural richness of Mysia region was based on wood and mining (Sevin, 2001). So, agriculture and mining have been important in regional economy throughout history.

In the first half of the 16th century, population of Tarhala had grown because of the political manners of the Ottoman Empire on the region. Tarhala was center of the *kaza*. According to a publication of the Turkish Republic Prime Ministry, General Directorate of State Archives, Department of Ottoman Archives, the population of Tarhala was approximately 8 195 which consisted of two *mahalles*, Soma and Hisaraltı, 59 villages, 24 hamlets, nine farms and four communities. Tarhala was famous for its sumach, oat, barley, wheat, rice and cotton. It became the center of cotton agriculture in the 16th century. These products were exported from Çandarlı, Ayazmend (Altınova) and Karafoça ports (The Turkish Republic Prime Ministry General Directorate of State Archives Department of Ottoman Archives Publication cited in Günay, 2006). In addition, it is known that, *Tahunhane* (a factory in which oil is extracted from sesame by milling) was set up by Murat III at Tarhala in the 16th century (Gökçen, 1946). There was also an open bazaar and olive oil mill in the settlement. In addition, although there is not any trace today, it is known that there was a *Bedesten* on the Soma-Darkale road near the Bath (Arel, 1992). The existence of a *bedesten* proves that Darkale was an important settlement in terms of its economic features. Leatherworking was the main source of income and it is thought that there were tanneries located near the Kırkoluk square (Altner, 1937, Arel, 1992). According to a record; there were *derbentçis* (border guard) employed in Tarhala and Soma (Günay, 2006).

There were three major and nine minor tanneries at Darkale. The products such as shoes, boots, cases and clothing produced in the major tanneries were sold in İzmir and its vicinity. On the other hand, products produced in the small scale ones were sold in Soma and its vicinity and also used for daily needs (Altner, 1937).

In addition, ice cream was made in Darkale village. During winters, snow was stored in the snow wells (Figure 17). It was covered with the raw pine cones which prevent melting, and it is the only natural way of making ice cream. In summers, the snow in the well was cut and taken out by saws and brought out in large pieces. These snow pieces were used making ice cream (Kutlusoy, 1971).



Figure 17. The photo of snow well in Darkale
(Source: Soma Municipality, 2011)

Starting with the 17th century, about Soma was referred as *Nefs-i Soma* belonging to the *kaza* of Tarhala in the Court Record, 1603/4 (General Directorate of State Archives, 2014). On the other hand, it could be also referred as Tarhala belonging to Soma *Kaza-i Soma* in documentation Record, 1607/8 (General Directorate of State Archives, 2014).

In the 18th century, population density shifted from Tarhala to Soma because of economic reasons. In the 19th century, the change in geographical distribution and density in population of Soma was influenced by lignite mine activity rather than physical environmental conditions and agricultural activities (Karadağ, 2005).

According to the census dated 1831, the population of Soma, which was a district of Bursa *Hüdavendigâr Vilâyet*, was 922 and all of the population was Muslims (Karpat, 2003 cited in Karadağ, 2005). According to *Hüdavendigâr Vilâyet Salnamesi* dated 1878, Soma was included in *Karesi Vilâyet* belonging to *Hüdavendigâr Liva* because of governmental reasons (İlgürel, 1992). It was the most crowded settlement in Karesi Sanjak (Karpat, 2003 cited in Karadağ, 2005). Soma has been a municipality since 1891 (Kutlusoy, 1971).

The population reached 22 243 in 1891. Approximately 20% of the population was Jewish and Orthodox Christian in 1891 (Table 2). The reason of increase in the number of non-Muslims was related with the agreement between Ottoman and European countries in 1830 and the privileges provided to foreigners for mining and construction and operation of railway in Ottoman lands (Karadağ, 2006). Mines located 30 miles from to railways could be operated by the holder of the railway privilege (Kurmuş, 1974).

Soma railway was part of Kasaba-İzmir railway, which elongated in two directions. The first one was İzmir, Kasaba (Turgutlu), Salihli, Alaşehir route (76 km), and the other was Manisa-Soma route (93 km). Firstly, British contractor Edward Price, who was the owner of Smyrna-Cassabe Railway Company, had privileges starting with July 1863 (Altınok, 2001 cited in TCDD, 1966). The construction started in 1864 by the British company By-Liss which was the largest construction company in the world (Atilla, 2002). Second, the French company Regie Generale had the privileges after the British in 1893. This company completed the second route of Kasaba railway in 1912, when Soma Railway Station came into use. This railway had been managed by foreigners until the Turkish Republic acquired and developed it as the Turkish State Railways (TCDD) in 1934 (Kutlusoy, 1971).

Furthermore, the first date of mining overlapped with the opening of the railway station in Soma. Lignite was mined in Soma first by Ragıp and Cimeris *Beys* from Akhisar in 1913 (Kutlusoy, 1971). However, the mine was controlled by foreigners rather than native population whose main source of income was agriculture until 1950s (Karadağ, 2006).

Table 2. The Variation of population at the center of *Hüdavendigâr Vilayet*
(Source: Karpat, 2003 cited in Karadağ, 2005).

Years	<i>Hüdavendigâr Vilayet</i>	Muslim	Orthodox Christian	Jewish	Other Foreigners	Total
1831	Karesi (Balıkesir)	922	-	-	-	922
1881	Saruhan (Manisa)	17.686	1.219	2.357	1.087	22.243
1906	Saruhan (Manisa)	20.360	2.094	10	10	22.464

Economy of Soma was reorganized with the proclamation of the Republic. Coal mining decelerated because of absence of foreign capital. Main sources of income of native population were agriculture, animal husbandry and forestry. According to the census dated 1927, the population of Soma was 20 902. Approximately 82.5% of the population lived in the rural areas and 17.5% of it in the urban areas (Karadağ, 2006).

Rapid urbanization started in connection with migration after the management right of lignite mine in Soma was transferred to the Aegean Lignite Establishment (ELİ) and the first stage of the thermal power station was opened in 1957.



Figure 18. The view of the thermal power plant and Darkale Village

The population growth has continued since 1960s till today. Urban population of Soma has become relatively large starting with 1980s because of employment opportunities. There is an ongoing migration from rural areas to urban ones due to economic and social reasons. According to TUIK assessment in 2000, 24% of land is forest, 24.7% of land is available for agriculture, and 10.1% of land is residential areas. Although coal mine and thermal power station area make up 7.4% of the total area, they are main sources of income of 7000 families (Karadağ, 2006).

Today, Soma consists of four towns and 53 villages; and according to the census dated 2012, approximately 75% (102 666) of the population lives in the urban areas and 25% of it (26 361) lives in the rural areas (Table 3). Although there were 62 villages in Soma at the early Republican years, 53 villages have reached today (Karadağ, 2005) (Table 4).

Table 3. The distribution of population of Soma according to years
(Source: Karadağ, 2005).

	1950	1975	1990	2000	2010	2012
Population of Darkale Village	577	555	427	178	150	136
Urban Population of Soma	10.256	23.713	49.977	60.674	75.345	76.305
Rural Population of Soma	20.222	21.810	26.664	28.364	26.879	26.361
Total Population of Soma	30.186	45.523	76.641	89.038	102224	102.666

Table 4. The population of rural areas of Soma according to years
(Source: Karadağ, 2005).

Years	Number of Villages	Population of Villages	Percentage in Total Population
1950	62	20.222	%73
1975	60	21.810	%51
1990	57	26.664	%35
2000	53	28.364	%18

The population of villages has decreased year after year because of migration from rural areas. Darkale village is one of the examples for this state.

Until recently, the main sources of income of Darkale were leatherworking, ice cream production, agriculture and mining.

According to the census dated 2013, the population is 117. 44% of the population is males, 66% is females and average of age is 47 (Egi, 2011). Age 60 and over is the most crowded age range. Young population has immigrated from Darkale to Soma because of job opportunities (Table 5).

Today, the main sources of income of Darkale are agriculture, mining and fishery. The main agricultural products are pomegranate, olive and vegetables. In the recent years, these productions have been just used for daily needs rather than for an economic purpose. Animal husbandry is rare and it is only for family needs. Mining is a common profession of Darkale, however, the population of retired from mining is more than the population that is still working. On the other hand, 76% of widow population is females, 24% is males. This proves that males die young because of health problems stemming from coal mining (Egi, 2011).

Table 5. General information about population of Darkale
(Source: Egi, 2011)

Age range	Total	Male	Female	Marital Status		
				Single	Married	Widow
0-15	23	9	14	23	-	-
15-30	11	4	7	2	9	-
30-45	14	10	4	2	11	1
45-60	23	11	12	1	19	3
60-+	46	17	29	1	24	21
Total	117	51	66	29	63	25

The sources of income of the most of villages are agriculture and animal husbandry in Soma. Excessive mining and energy production activities threaten agricultural land and causes air pollution in the center of Soma and in the villages located at close environment. However, in the last quarter of 2014, Yırca Village, whose source of income is basically olive cultivation, was on the country agenda because of its 6666 olive trees cut down by a private company, without waiting the court decision, in order to establish a new thermal power station at Yırca (Figure 19). Moreover, the government took a decision of expropriation of these olive yards. However, public of Yırca and Greenpeace counter criticized this decision and, finally the council of the state prohibited the execution of this decision. (Greenpeace, 2015).



Figure 19. The view of olive yards before and after cutting down (Source: Greenpeace, 2015).

Lignite coal has been mined in Soma since 1939 (Tören and Ünal, 2001). Coal mines had been first activated at Köseadağ, Darkale, the center of Soma, Mumya, Sarıkaya and Işıklar. Open pit coal mines started to expand through Eynez Village. In addition; job opportunities, transportation density and commercial activities have increased because of growth of coal mining and power generation industries in Soma after 1960 (Karadağ, 2006). The total reserve of Soma is approximately 600 million tons and about 10 million tons of lignite is mined from the coal basin in Soma of the Aegean Lignite Establishment (ELİ). The coal basin is composed of three main districts; Soma, Deniz and Eynez (Tören and Ünal, 2001). Furthermore, coal industry of Soma compensates 31 % of total coal industry of Turkey (Karadağ, 2006). Although, coal

mining of Soma is a crucial source of energy for meeting the needs of the existing and growing industries of the country, coal mining has many environmental impacts; degradation of the land; loss of forest, topsoil and agricultural lands; changes in topography and the ground and surface water amounts, air and environmental pollution (Tören and Ünal, 2001).

Besides damaging the environment, mining accidents have been often taking place not only in Soma, but also in the country whole. Occupational accidents are seen more in the mining industry than other industries. According to the 2010 statistical information of parliamentary investigation committee of Turkish Grand National Assembly (TBMM); death as a result of occupational accidents in mining industry is seven times more than that in other industries (Düzgün, 2014).

This proves that mines do not only damage the environment, but also they are a threat for human life with their unqualified working conditions.



Figure 20. The view of coal mining area in Soma
(Source: Eli, 2015)

Mines located at Soma are vulnerable to occupational accidents, even to deadly ones, on account of their adverse working conditions, negligence, lack of necessary precautions and profit driven production like other mines in the country. According to a report of Soma Mine Disaster of Union of Chambers of Turkish Engineers and Architects (TMMOB), totally 655 casualties occurred between the years of 1983-2013 in the country. Because of more than ten mining accidents, ten people lost their lives in Soma between years of 2012-2013. Three people died due to mining accidents in Darkale mine between years of 2012-2013 (sendika.org, 2014). After these accidents, the mine located at Darkale was closed by the financier on November 2013 (Appendix D). Furthermore, unfortunately, 301 people lost their lives because of the underground mine fire on 13 May 2014 in the Eynez mine, Soma, which was the worst mine disaster in Turkey and also in 21st centuries history (TMMOB, 2014). After these bad experiences, starting with Eynez mine, totally 94 mines were closed by the Ministry of Labour and Social Security, and Ministry of Energy and Natural Resources in Soma because of being vulnerable to occupational accidents (Appendix D).



Figure 21. The view of coal mining area in Darkale
(Source: Hürriyet Ege, Yılmaz, 2013).

CHAPTER 4

HERITAGE CHARACTERISTICS

In this chapter; tangible and intangible characteristics of Darkale rural settlement are carried out at three different scales: cultural landscape, rural settlement and housing unit scales.

4.1. Tangible Characteristics

Tangible characteristics of the rural settlement of Darkale are analyzed at three different scales: cultural landscape, rural settlement and housing unit scales.

4.1.1. Cultural Landscape Characteristics

Presence of geographic boundaries is a necessity for the perception of an area as a unity by a pair of human eyes. Boundaries of a cultural landscape are defined by difficulties of its natural areas. In turn, zones are defined. These zones are basically the brook-valley system, the hill skirts, the wet open fields and elevated plateaus for Darkale. The components within these boundaries of Darkale cultural landscape are analyzed with their location, geographic features, form, meaning for the settlement and function in a perceived order.

4.1.1.1. Geographic Elements

The Darkale Village was settled at the valley located between two stiff rocky hills and the stream passes through this valley. Thus; mountains, rocky lands, forests, natural water sources, even peculiar natural element are inseparable parts of the rural settlement.

The tangible components of the landscape are analyzed under the three geographic headings; the brook-valley system, hill side and plateau (Figure 22, Appendix A3).

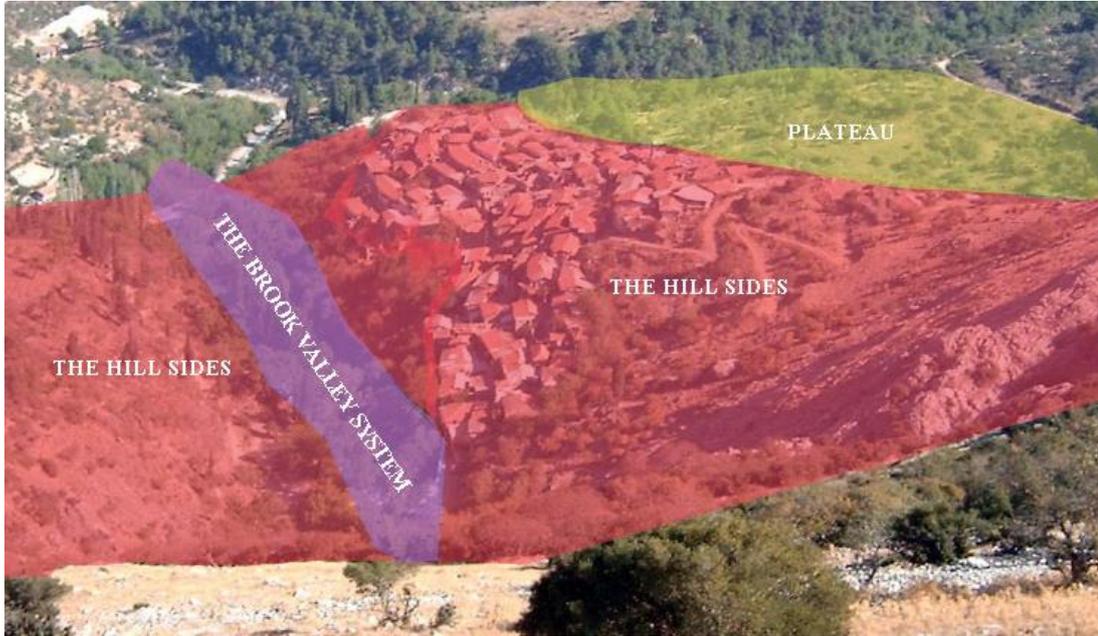


Figure 22. The view of tangible components of Darkale cultural landscape, (revised from Soma Municipality, 2011)

- **The Brook-Valley System**

The brook-valley system running in north-south direction is the basic natural element that has given life to Darkale. It runs in between the two hills, Asartepe and Köseadağ, and its brook Tarhala feeds Bakırçay at the north. The skirts of the hills are very steep (15-80%). In turn, a “narrow” valley (approximately 35 m in width) is defined (Appendix A3).

- **Hill Side**

Hill sides are located at the west and the east sides of the brook valley system. The hill side at the east viewing the road and controlling the plain, at the same time, is hard to access because of the steep inclination (40%); hence, these features make the hill skirt a safe place like a castle. In addition, the hill skirt open to the vista and it is heated by the west sunlight; these conditions are suitable of a residential area.

On the other hand, the other hill skirt (inclination 25-45%) at the west reaches to a lower for establishment lower level than the east one. For this reason, the eastern hill skirt limits its vista and it does not have good illumination (Appendix A3).

- **Plateau**

Plain terrains which are, positioned at the north east of the settlement; approximately 24 m higher than the brook level ($\leq 20\%$ inclination), constitute the plateaus of Darkale cultural landscape (Appendix A3).

There are also impressive megaliths located at the eastern plateau of the cultural landscape. These geographic formations are huge, sharp rock pieces (Appendix A3). They are known as *Soma Sivrisi* (Figure 23).

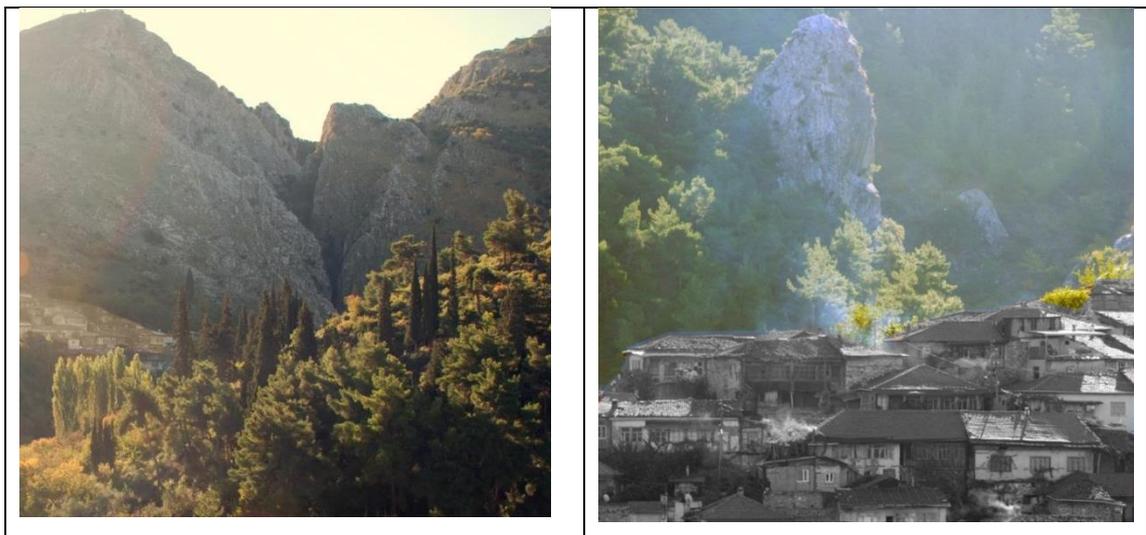


Figure 23. The view of the natural environment and peculiar natural elements, 2014

4.1.1.2. Usage of Natural and Man-made Elements

The natural elements of the cultural landscape are classified as areas shaped by man (oliveyards, pasrure and shrub lands, mediterranean woodlands and agricultural areas), areas previously shaped by man and the brook (Appendix A4).

In addition, historical residential area, historical public gathering, commercial and production area, graveyards, monuments, public activity area, archeological remains, tracks of tanneries and a bedesten, mining area and demolished and abandoned areas constitute the man-made features of the cultural landscape of Darkale.

Then vista points which provide visual link between settlement and its landscape are pointed out.

The distribution of these usages on the geographic elements are explained in the below.

So Darkale historical residential area is positioned here. The housing units have open/semi open living units oriented to the west (Figure 24).

The historical residential area occupies a wide area at the settlement which defines the physical, social and cultural identity of the settlement with its preserved authentic characteristics such as solid-void organization, articulation of building masses, traditional construction techniques and material usage and traditional rural activities. The information on traditional production methods are transformed from one generation to the other.

The public activities take place still on the streets of the settlement and at the special spaces such as ovens. The production of food such as for winter pomegranate syrup and jams is still made.



Figure 24. The view of the historical residential area, 2015.

Historical public gathering, commercial and production area located at the brook-valley system. On the two linear coasts of the brook; production (meal, bread, pomegranate juice, olive oil soap and jams), commerce (olive oil mill, bath and remains of tannery and *bedesten*) and public gathering (Kırkoluk Square, Kırkoluk Mosque, Kırkoluk Fountain and laundry) activities have been taking place. Many of these activities are at the same time water related activities: laundry, olive oil mill, tannery, bath and fountain. Although majority of these buildings are abandoned or vanished today, the area still continues its gathering function with its attractive Kırkoluk Square and Kırkoluk Mosque (Figure 25).



Figure 25. The views of the monuments located at the historical public gathering, commercial and production area, 2014

Open fields are located at the north, northwest and east of the hill side. They are settled on terraced, less inclined hill skirt of the mountain close to the brook and on inclined rocky hillside surface behind the residential area. The alluvial soil brought by the brook is the most productive one in Soma. Tarhala stream was called Cennet (Heaven) Stream or Bal (Honey) Stream in the past due to its taste (Altiner, 1937).

The main sources income of the rural settlement has been agriculture until recently. So, natural landscape shaped by human comprised of agricultural areas basically for grains, olive groves, vineyards, nutyards, poplars, cypress and conifer yards. These areas are essential constituents of the settlement with regard to physical and economic aspects.

Natural area is shaped by human encircle the residential area consisting of pastures for livestock farming and shrub lands and agricultural areas. The intact natural areas surround built areas, and laboured earth. Pastures for livestock farming and shrub lands are located at the eastern hill side at inclined rocky hillside surfaces behind the residential area. As a result, barns are observed within the pastures. Animal husbandry is one of the main sources of income in Darkale.

Mediterranean woodland and rocky terrains are on inclined hill side of the Kösedag Mountain to the south. The Mediterranean woodland comprises of flora of the Aegean region and also the region. Mediterranean woodland and rocky terrains constitute the border of Darkale cultural landscape.

Natural features are the basic inputs of the settlement. Carving its buildings and open spaces into the brook valley system and its eastern hill skirt has made the settlement part of the nature. Mountains, valley, brook, landforms, vegetation, pastures and their silhouette are natural features of the settlement.

There are architectural remains of watchtowers, a water cistern and an ancient road belonging to the Byzantine Period at Asarkale Hill located at the south east of Darkale. Moreover there are columns belonging to the Kingdom of Pergamon Period at hill side to the west namely Karşıyaka (Bağarası). They are essential in the way of proving that the history of the area dates back more than two thousand years ago.

Darkale cultural landscape has still preserved its intactness in terms of wild life. It is possible to meet wild animals such as horse and deer at the hill side of Darkale.

Graveyards are settled at the north plateau. Different civilizations lived in Darkale throughout history. Therefore, the inscriptions on gravestones give information about this long history of the settlement (Figure 26a).

The history of the settlement dates back to the Kingdom of Pergamon, and different states such as the Byzantine Empire, the *Beyliks* of Sarukhan and Karesi, and the Ottoman Empire have lived in Darkale, and had left their traces here. The archeological remains are important since they are documents of the fact that the village has been in use for more than two thousand years. Archeological remains are located at the northern plateau of the cultural landscape (Figure 26b).

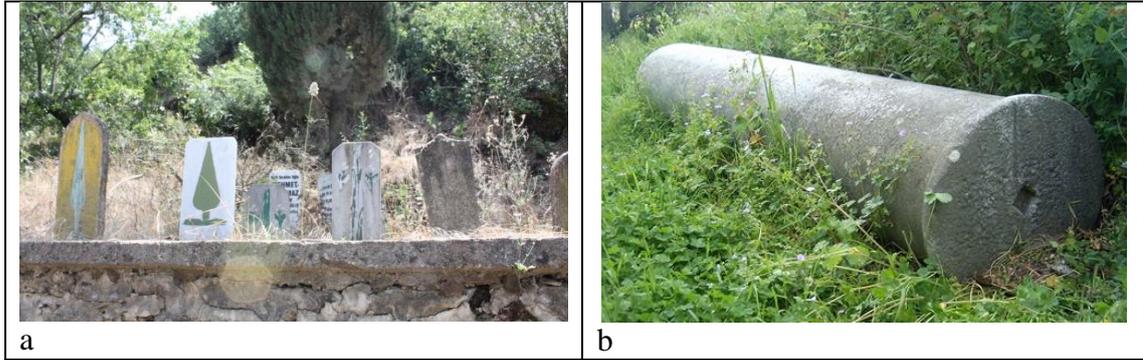


Figure 26. a) The graveyard located at the west, 2013 b) The view of the ancient columns at Karşiyaka, (Source: Soma Municipality, 2011)

4.1.1.3. Circulation Pattern

Three different paths constitute the circulation pattern of the cultural landscape of Darkale. These are motor vehicle paths, pedestrian paths in residential area and pedestrian paths in agricultural and pastures areas (Figure 27). The most important and deterministic factor affecting road organization is topography of the settlement.

There are two motor vehicle paths accessing the village from Soma at the west direction. The pedestrian paths in the residential area are generally narrow and steep due to the topography (p.74). The pedestrian paths in agricultural and pastures areas provide access between them and the residential area. In addition, the historical path located between Darkale Village and the archeological sites located at Asarkale Hill is evaluated among the pedestrian paths in the pastures and shrud lands (Appendix A5).

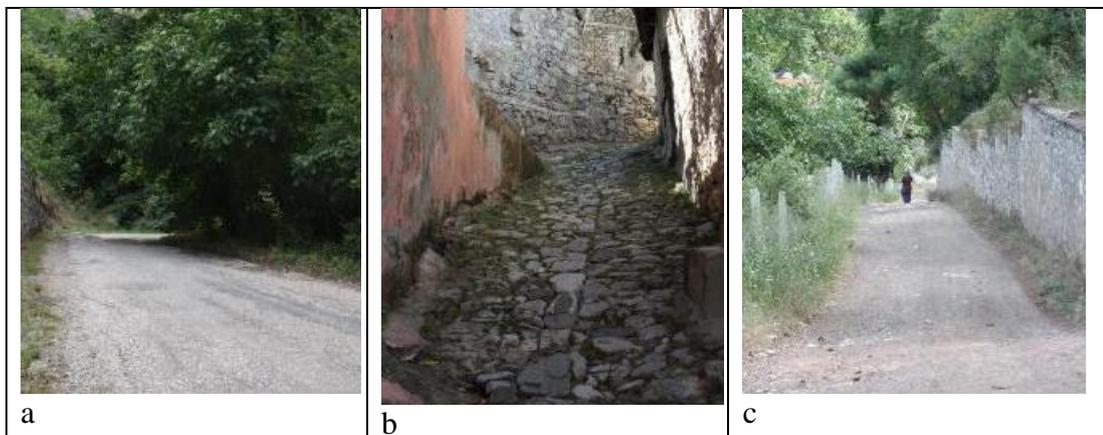


Figure 27. a) The motor vehicle paths, 2014, b) The pedestrian path in residential area, 2014, c) The pedestrian path in agricultural and pastures areas, 2014.

4.1.2. Rural Settlement Characteristics

In this section, identification and analysis of streets and pathways, position of buildings and their relation with neighbors, and definition and distribution of building types are analyzed at the settlement scale.

4.1.2.1. Land Use

There are 163 buildings in the settlement. 134 of them are accommodation and related usages, 133 of them are housing units, one of them is lodging. 14 of them are public usages, 14 of them service usages. The public usages can be grouped as historic monumental buildings (7/14) and new buildings (7/14). The historical monumental buildings are Kırkoluk Mosque, Minareli Mosque, Orta Mosque, a Bath, a Laundry, an Olive Oil Mill and Darkale Primary School; moreover, there are 11 fountains and three ovens evaluated as public usages. Service buildings are barns and storages (13/14) and a water tank. (Table 6, Appendix A9).

Furthermore, state of occupation is essential inputs for rural settlement. Although it is hard to give exact number of the used or abandoned of especially housing units because of seasonal usages, approximately more than half of houses are abandoned today. According to visual observation there are 58 housing units are in use, while 75 of them are abandoned. In addition, Kırkoluk Mosque and Orta Masjid and four fountains in the Kırkoluk Square are still in used while the other monuments, seven of fountains, three ovens, lodging and all of the service buildings as independent units are abandoned. However all of the new public space; community centers and restaurants are used today (Table 6, Appendix A9).

Table 6. Building types and occupation distribution of the settlement.

FUNCTION	TYPE	OCCUPATION		TOTAL NUMBER
		USED	ABANDONED	
Accommodation and Related Usages	Housing Units	58	75	133
	Lodging	-	1	1
Public Usages	Mosque	2	1	3
	Bath	-	1	1
	Laundry	-	1	1
	School	-	1	1
	Olive Oil Mill	-	1	1
	Community Center	3	-	4
	Fountain	4	7	11
	Oven	-	3	3
	Restaurant	3	-	3
Service Structures (as independent units)	Barn - Storage	-	16	16
	Water Tank	1		TOTAL NUMBER

While the accommodation and related usages will be evaluated elaborately in the section 4.2.1., the public usages and service usages are evaluated in the below.

Kırkoluk Square has been a focal point of Darkale Village throughout the history (Figure 28a). The road between Soma and Darkale is terminated at Kırkoluk Square. Most of the listed monumental buildings; Kırkoluk Mosque, a Bath, a Laundry and four fountains including Kırkoluk fountain, and the listed plane tree are located at the Kırkoluk Square (Figure 28b).

Today, Kırkoluk Square serves as a gathering space; moreover, it is an attraction place for tourists in terms of being a historic monumental building and also presenting a unique vista point for the whole of Darkale residential site (Figure 28c).



Figure 28 a) An old photo of Kırkoluk Square (Source: Soma Municipality, 1975), b) The listed plane tree at Kırkoluk Square, 2013, c) The view of Kırkoluk Square, 2013.

- **Kırkoluk Mosque**

It is located at the Kırkoluk Square, center of Darkale Village. It is elevated from ground level. The stone masonry ground walls are spanned with vaults. This ground space is thought to had been used as a shop and the terrace is located in front of the mosque was used to serve as a bazaar (Arel, 1991) (Figure 29a). However, the function of the basement is storage space today (Figure 29b).

Although there is not any information on the construction date of the mosque, it is thought to be constructed in the *Beyliks* of Sarukhan period (Arel, 1991) with its experimental design. Three sides of the mosque are surrounded with ablution fountains which were named after the building. The water stream, Tarhala, flows underneath the mosque that was built on a set. In addition, the source of the fountains is the same stream.

When the building was constructed first, it had no minaret; yet, a minaret (Kutlusoy, 1971) and the fountains were added when it was renovated in the late 18th century or the early 19th century. The stone panels of the fountains which are thought to belong to the 18th century are decorated with both Roman patterns and Turkish ones (Arel, 1991). A *şadırvan* is located at the center of terrace in front of the mosque (Figure 29d). The *şadırvan* which is thought to be brought from the historical Darkale bath located at the east side of the road between Darkale to Soma near the Kırkoluk square belongs to the 15th century (Kutlusoy, 1971).

The mosque has a rectangular plan. It was constructed with timber pillars. The last comers praying hall is designed as semi-open space (Figure 29c). A *mihrab* niche is located at the southeastern wall of the semi open last comers praying hall. A second *mihrap* niche and a *minber* are observed in the closed praying hall. The roof of the mosque was renewed with timber hipped roof with half round ridge tiles.

Kırkoluk Mosque is an outstanding historical monument in terms of its picturesque features integrating with the natural qualities of its setting and also of its embellishment with baroque style (Arel, 1992).

Kırkoluk Mosque was listed with the decision of the Supreme Council of Conservation of Cultural and Natural Entities dated 24.02.1984 and numbered 134. Continuity of its usage further emphasizes its value (Appendix C).



Figure 29. a) The view of Kırkoluk Mosque and Kırkoluk Fountain, b) The today view of Kırkoluk Mosque, 2014, c) the old photos of şadırvan, 1945 (Source: Soma Municipality, 2011) d) the view of from the semi-open the last comers praying hall.

- **The Minareli Mosque**

Minareli Mosque is located within the residential site (Figure 30). Although there is no inscription panel and information about its construction time, the architectural features of the monument point out that the monument is old and its vicinity has been settled for a long time. The lot of the mosque is consisted of the mosque building, its minaret and a courtyard in front of the mosque. The most remarkable feature of the mosque is its short minaret which is located at the north west of the courtyard independently (Figure 31a). Minareli Mosque recalls Gdk Minare Masjid in Birgi, demi, İzmir in terms of its architectural features such as short minaret, square plan, bonding type of stone masonry wall and simple workmanship. Gdk Minare Masjid is dated to the second half of the 14th century (lter, 1969 cited in nal, 2001). Then, Birgi was the capital of Aydınođlu *Beyliks*. The existence of a mosque in Tarhala is pointed out in a historical document dated 16th century. This is the Book of Account of the *Vilayet* of Anatolia, numbered 166, *Liva of Hdavendigar*, 1530 (Department of the Ottoman Archives, 1995). Today, all of the existing mosques in Darkale and its vicinity excluding Minareli Mosque, are known be constructed after the 16th century. So, Minareli Mosque may be interpreted as a monument belonging to the second half of the 14th.

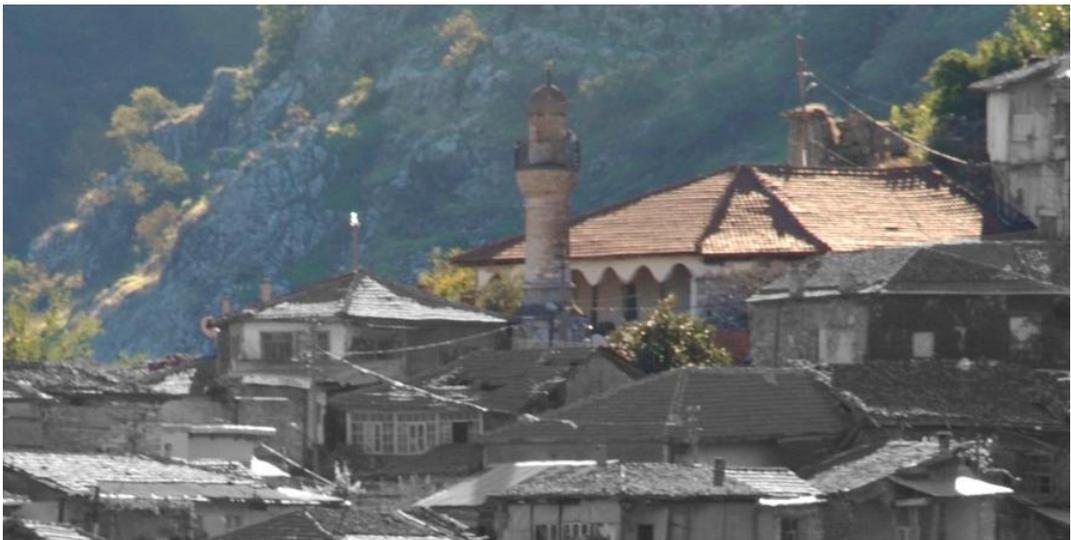


Figure 30. The view of Minareli Mosque, 2013

There is a fountain adjacent the west wall of the mosque and it is located near the entrance (Figure 31b). The mosque has a square plan type. It was constructed with stone masonry wall and timber posts. The last comers praying hall is designed as a semi-open space which is constructed with timber frame system. There is a ladies praying hall which is elevated from the ground level. A *mihrap* niche and *minber* are observed in the mosque. All of the walls are plastered and painted. While the floor is covered with slate, the ceiling is covered with timber (Figure 31c).

Reused materials which are thought to be from Seljuk Period were used in the construction of the minaret (Figure 31d). Moreover, antique building materials are observed in the courtyard.

The roof of the mosque was renewed with timber hipped roof with half round ridge tiles.

It is mentioned that the gate of the mosque is from the Byzantine Period (Kutlusoy, 1971); however, it could not be observed since it is no more present.

Minareli Mosque was listed with the decision of the Supreme Council of Conservation of Cultural and Natural Entities dated 24.02.1984 and numbered 134 (Appendix C).

Minareli Mosque is abandoned at present because of its structural failures and serious material deteriorations stemming from lack of maintenance and aging.



Figure 31. a) The short minaret of the mosque, b) Entrance of the mosque and its fountain, c) the view of the interior of the mosque, d) Reused materials at the minaret.

- **Orta Masjid**

Orta Masjid is located in the residential site of Darkale like Minareli Mosque (Figure 32a). It has no minaret. Although it cannot be distinguished from the housing units in terms of its façade and mass characteristics, plan organization of the masjid and its elements such as praying hall, *mihrap* niche, *minber* and ladies praying hall meet the necessities of mosque function (Figure 32b).

The floor of the masjid is elevated from the street level. It has a rectangular plan. All of the walls are plastered and painted. The floor and the ceiling are covered with timber. The roof of the mosque is consisted of timber hipped roof with half round ridge tiles and timber pitched roof with marseille tiles.

Orta Masjid was listed with the decision of the Supreme Council of Conservation of Cultural and Natural Entities dated 24.02.1984 and numbered 134 (Appendix C). The mosque has been still used.



Figure 32. a) The view of Orta Masjid, b) The view from the interior of the masjid.

- **Laundry**

It is located at the Kırkoluk Square, at the center of Darkale Village and on the bank of the Tarhala Stream. It is positioned adjacent to the wall of Kırkoluk Mosque. The historic laundry was used by woman until a few years ago. It has an irregular quadrilateral plan. There is a natural water spring in the middle of the laundry which is fed by Tarhala stream. The natural stream is surrounded by semi open iwan spaces with irregular quadrilateral plans and covered with vaults. These spaces were partially formed by carving of natural rock and partially by construction of stone masonry walls (Arel, 1992).

Historical laundry was listed with the decision of the Supreme Council of Conservation of Cultural and Natural Entities dated 24.02.1984 and numbered 134 (Appendix C). The laundry is abandoned at present due to the current lifestyle.



a



b



c

Figure 33. a) The view of the laundry (Source: an inventory sheet prepared by General Directorate of Cultural Heritage and Museums, 2013), b) The view of laundry and Tarhala stream, 2014 c) Southwestern part of the laundry, 2014.

- **Bath**

Darlake bath is located at the east of the road between Darkale and Soma, near the Kırkoluk square. It is on the bank of Tarhala stream. Although there is no inscription panel, it is thought to be constructed at the 16th century because of its architectural characteristics (Kutlusoy, 1971). It is hard to define of the plan organization exactly because of the ruined condition of the building. Especially, the transition elements which would provide information about the date of building are missing. It is consisted of a changing hall and a caldarium at present. The four walls of the changing hall can be observed, but its dome was demolished. The domes of the *sıcaklık* main space and hot spaces are relatively in good condition (Figure 39b). It is mentioned that there were wash basins, a belly stone and two hot rooms with domes in the bath and they were in good condition approximately 30 years ago (Kutlusoy, 1971), however; they cannot be observed anymore. Based on the observation on the current remains, it is thought that, the bath has elongated rectangular *sıcaklık* with domed central unit and two *halvets*. The plan type is frequently observed in the 15th-16th centuries (Çakmak, 2001). Furthermore, the existence of a bath in Tarhala is pointed out in a historical document dated 16th century. This is the Book of Account of the *Vilayet* of Anatolia, numbered 166, *Liva* of *Hüdavendigâr*, 1530 (Department of the Ottoman Archives, 1995). In the light of this information, Darkale Bath may be evaluated as to be constructed after the 15th century.

The historical Darkale bath was listed with the decision of the Supreme Council of Conservation of Cultural and Natural Entities dated 24.02.1984 and numbered 134 (Appendix C).

Darkale Bath is abandoned at present.



Figure 34. a) The view of the bath from the north, 2013, b) The view of the caldarium, 2013, c) The view of the bath from the south (Source: Soma Municipality, 2011)

- **Darkale Primary School**

Darkale Primary School is positioned close to the northern entrance of the village (Figure 35). It has a rectangular plan and a single storey. It is elevated from the ground level with a staircase. The school is surrounded with a courtyard.

It is constructed in stone masonry technique; all of the walls are plastered and painted, loss of plaster is observed on the west façade of the building. It was renewed with timber hipped roof with marseilles tiles.

It was built in early Republican architecture style. It is mentioned in the description panel above the entrance of the school that it was constructed by Hamdi ONAT in 1935.

It has not served as a school since mobile education started. It is sometimes used as a camping site nowadays.

Darkale Primary School was listed with the decision of İzmir No 2 Regional Conservation Council of Cultural and Natural Entities dated 04.03.2014 and numbered 3562 (Appendix C).



Figure 35. The view of Darkale Primary School from the entrance, 2013.

- **Olive Oil Mill**

Olive oil mill is positioned at the west of the road between Darkale and Soma; and in front of the bath.

Olive oil mill is an authentic commercial building which proves the importance of Darkale in terms of commerce for this vicinity. Olive has been an essential source of income throughout history in Darkale.

It has a rectangular plan and single storey. It is constructed in stone masonry technique. It was renewed with timber hipped roof with marseilles tiles (Figure 36).

There is not any information on its construction year. It is understood from the historical document dated 1702 that there was not any olive oil mill building in *kaza* of *Tarhala* before 1702. Hence, this building should be constructed later (General Directorate of State Archives, 2014). When comparative study with the olive oil mills that have similar architectural features is made (Kibar, 2008, Kıncı, 2014), it is thought to be constructed at the 19th or early 20th century.

Although the building is in good condition, it is abandoned due to changes of production methods in recent years.

Olive oil mill and its storage were listed with the decision of İzmir No 2 Regional Conservation Council of Cultural and Natural Entities dated 22.11.2012 and numbered 2863 (Appendix C).



Figure 36. The general views of Olive Oil Mill, 2013.

- **Fountains**

The other components of the settlement are fountains. There are 11 fountains in the study area. The most important one is Kırkoluk Fountain (Figure 37a). Its name is derived from its forty taps. It is flanked by Kırkoluk Mosque (Figure 37b). It was listed with the decision of the Supreme Council of Conservation of Cultural and Natural Entities dated 24.02.1984 and numbered 134 (Appendix C). There are three independent fountains on the Kırkoluk square. Only these four fountains located at the Kırkoluk Square are still in use in the settlement (Figure 37c, d, e).

The other six fountains are on the external walls of buildings. The first is arched and embedded in the external wall of the house with number 44 which is a registered residential building (Figure 37f). The basin and tap are filled in with additional stones. The second fountain is also arched and embedded in the basement wall of house numbered 137/1. This is one of the few houses with a passage over the street (Figure 37g). The taps and basin are still observed. This fountain was listed with the decision of İzmir No 2 Regional Conservation Council of Cultural and Natural Entities dated 28.03.2013 and numbered 2047. Moreover the inventory sheet numbered 44.11/04 was prepared by General Directorate of Cultural Heritage and Museums (Appendix C). The third fountain is embedded in the garden wall of the listed monumental building Minareli Mosque (Figure 37h). The fourth fountain is embedded in the external wall of the house numbered 53 (Figure 37i). Only the arched section of the fountain is observed. The fifth fountain is embedded in the external wall of the housing unit numbered 5. The basin and tap are filled in with additional stones. The sixth fountain is embedded in the garden wall of the house numbered 88. The last fountain is embedded in the external wall of the house numbered 122.



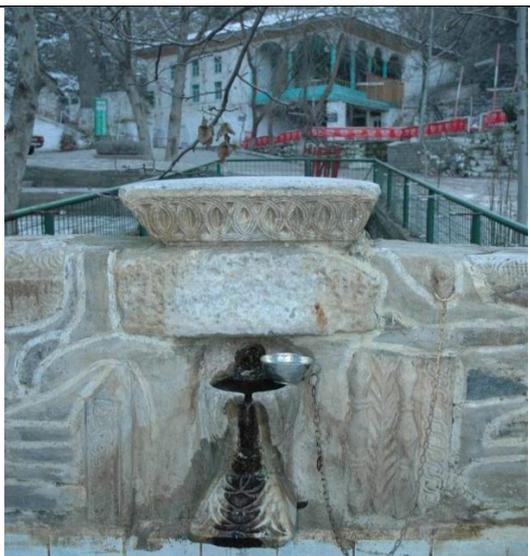
a) Source: Soma Municipality, (1945)



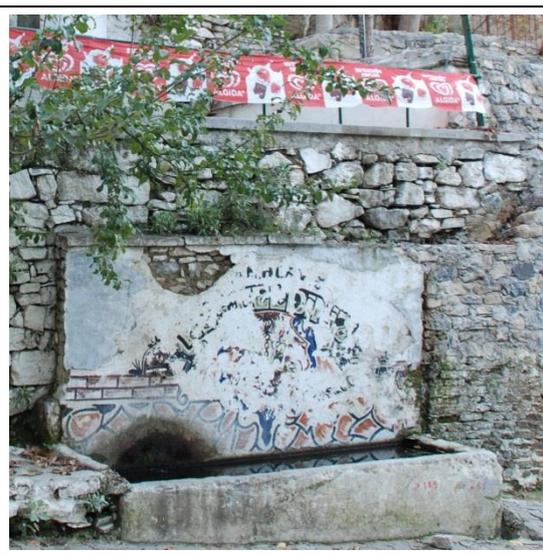
b (2013)



c (2013)



d (2013)



e (2013)

Figure 37. The fountains in Darkale.

(cont. on next page)



f (2013)



g (2013)



h (2013)



i (2013)

Figure 38. (cont.)

- **Oven**

Two different oven types are observed in the settlement: oven as an element of the housing unit (Figure 39b) (15/18), and independent oven (3/18). Oven is a small stone masonry structure. Stone masonry body of the oven is spanned with terracotta to form a dome. Independent ovens are protected with timber pent roof. The first example of the independent type is at the east of the residential area and at an elevated zone (Appendix A9) (Figure 39b). The second example is positioned at the center of the residential area. The other is adjacent to the external wall of the house numbered 117. Therefore, local people gather around this oven type in order to cook. So, private and public activity patterns are determined in relation with each type. Ovens related with the houses are discussed in the sections of the houses (Appendix B17, B112, B119, B158).



Figure 39. a) The view of the oven in the housing unit, 2013. b) The view of the independent oven, 2013.

- **Graveyard**

Different civilizations lived in Darkale throughout history. Therefore, the inscriptions on gravestones give information about this long history of the settlement. The graveyards are located at the skirts of the mountains enclosing Darkale Village from the north, southeastern, west and north (Figure 40a).

Among these yards, the one at the north is listed. The graveyard located at the lot numbered 716 at the north, was listed with the decision of İzmir No 2 Regional Conservation Council of Cultural and Natural Entities dated 09.03.2006 and numbered 1946 (Figure 40b). In addition, the inventory sheet was prepared by General Directorate of Cultural Heritage and Museums (Appendix C).



Figure 40. a) The graveyard located at the west, 2014 b) The listed graveyard (Source: manisafx.mekan360, 2014)

- **New Public Buildings**

The new public buildings are a wedding hall, three restaurants, and four community centers. They are all built with contemporary construction technique and materials. Community centers were converted from traditional house and wedding hall was built on an empty lot in the residential area. These new buildings are inharmonious with village pattern in terms of their mass, façade, scale and material features.

Green areas and gardens between the buildings are defined as open areas. There are empty lots created by demolishing of old buildings in the settlement (Figure 41a); it is thought that there used to be housing units in them. Moreover, banks of the brook (Figure 41b), and natural landscape in the close vicinity of the residential site (Figure 41) are evaluated as public spaces of the settlement.

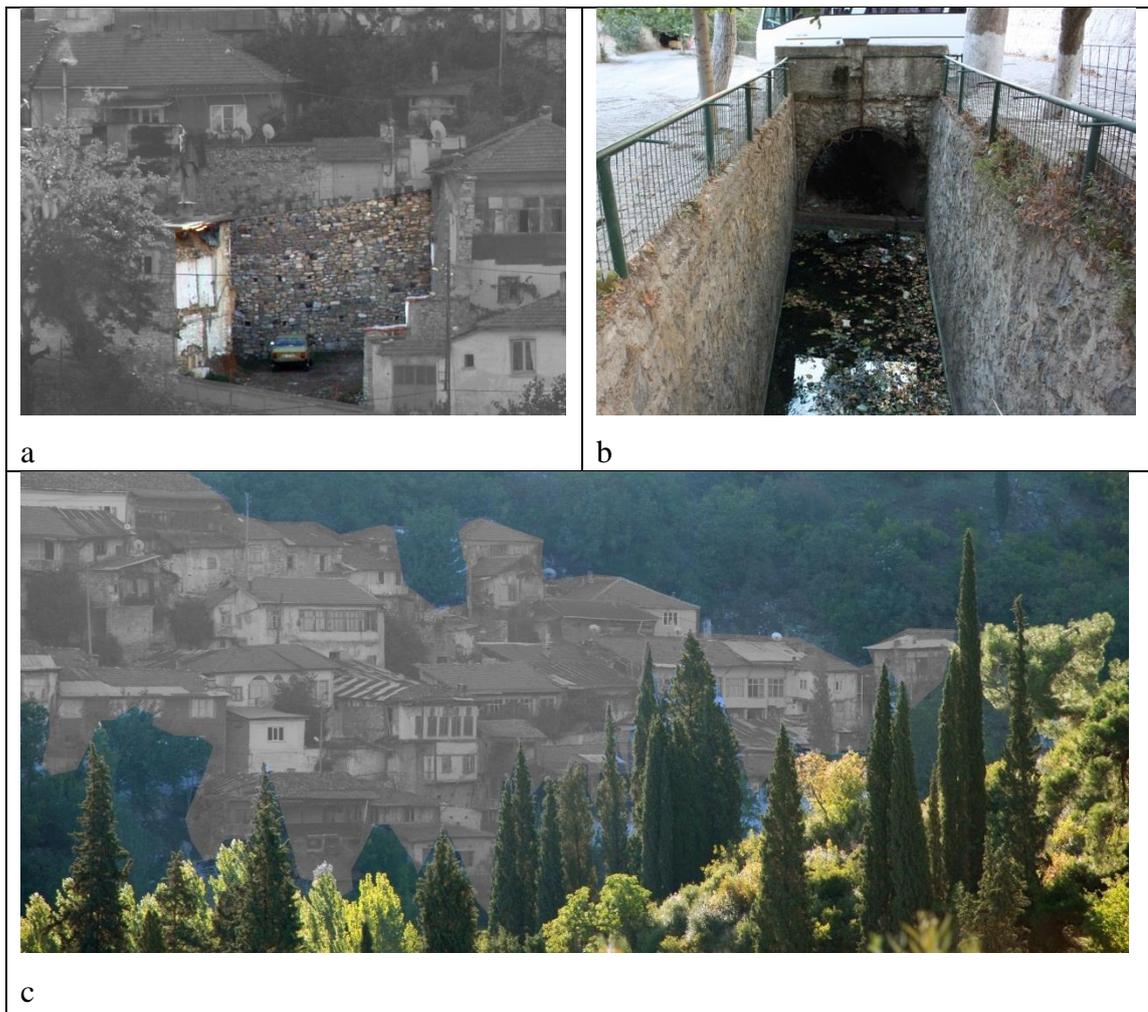


Figure 41. a) The view of the empty lot, 2013 b) The view of the brook, 2013, c) The view of the natural land, 2013.

- **Service Structures**

The service buildings exist in two different ways. They are generally located within housing lots (44/60). However, independent service buildings or structures can be also observed (16/60). Two of these independent service structures are within the settlement, are within the rest is on shrub land. The service buildings door number 72 and 73 are both altered. There might be houses in place of them originally. Those are (14/60) on shrub land (Figure 42 a, b). The service buildings and structures can be defined as barn, storage, wet space and water tank. Most of them are stone masonry; yet, additional service spaces in contemporary techniques can be observed (35/60).



Figure 42. a-b) Service buildings door number 72 and 73 c) The view of independent service buildings on shrub land, 2013.

4.1.2.2. Ownership Pattern

Distribution of ownership of land is observed under three titles according to the map of ownership (Soma Municipality, 2011). These are private ownership, judicial personality of Darkale village, and foundation ownership. The natural areas, roads and streets are excluded in this analysis (Table 7, Appendix A12).

Table 7. Ownership of lots
(Source: Soma Municipality, 2011)

Ownership of Lot	Total number of lot	Area (m ²)	Ratio (%)
Private ownership	273	70 278	37,8
Judicial personality of Darkale Village	47	58 617	32
Municipality ownership	5	289	0,2
Natural area	8	32 052	18
Roads and streets		21 006	12
Total area	333	182 242	100

Lots belonging to private ownership which covers the largest surface in the settlement 70 278 m² are generally positioned in the historical residential area. The second ownership type is judicial personalities of the Village (*Köy Tüzel Kişiliği*). It includes the historic monumental buildings, public buildings and public spaces, graveyards, some empty lots and agricultural areas; olive yards, vine yards, nut yards and poplar yards. Total surface area of judicial personalities of Darkale Village is 58 617 m². The third ownership is foundation. There are five lots owned by Soma Municipality in the settlement; three of them are housing units, the others are empty lots. Total surface area of municipality lots is 289 m². The rest of the surface area of the settlement comprise of natural area 32 052 m² and street and paths (21 006 m²).

4.1.2.3. Streets and Pathways

Total area of transportation is 21 006 m² in the whole village, including the road between Darkale and its close environment. However, in this section, only the streets and pathways positioned in the settlement are evaluated. The total area of streets and pathways is 13 455 m² in the settlement. Except for a few roads, all of them are in accordance with the ridge lines. They lie in north-south direction. They are designed for pedestrian traffic. They are approximately 2,5 m in width and inclined approximately 5%, except for the road between Kirkoluk Square and the house with number 01, which is inclined 20%. Transportation by motorized vehicles within the settlement is only possible on certain axes. On the other hand, roads positioned in the opposite direction of the ridge lines are narrower (approximately 1,5 m) and steeper (approximately 25%) than the other roads (Appendix A9).

In terms of their covering materials, the originality of the streets and pathways has been preserved only 18%: original stone covering and earth covering (Table 8).

Table 8. Distribution of covering materials on streets and pathways.

Covering Materials	Covered Area (m ²)	Ratio (%)
Original Stone Covering	260	2
Earth Covering	2 195	16
Key Stone Covering	7 300	55
Cement Covering	700	5
Asphalt Covering	3 000	22
Total	13 455	100

Original stone covering, which constitutes only 2% of the total streets and pathways area, is observed frequently at the entrance of houses (Figure 19a). There is an original water way in the middle of the streets with stone covering (Table 8).

Earth covering is observed at the entrance of houses, but at the same time on the streets connecting the residential site to its agricultural lands (Figure 19b). It constitutes 16% of the total (Table 8).

Key stone is the most common covering material of the settlement. Streets and pathways were renewed with this material by the municipality. The entire road with key stone covering is used by motorized vehicle (Figure 19c). The key stone covering constitutes 55% of the total area (Table 8).

Cement covering is generally observed at the entrance of the house. It is used as repair material by the owners of the house (Figure 19d). It constitutes 5% of the total area (Table 8)

Asphalt covering is observed just on the motorized vehicle roads connecting Darkale to Soma (Figure 19e). It constitutes 22% of the total transportation area within the borders of the study area (Table 8).



Figure 43. a) Original stone floor covering, 2013 b) Earth Covering, 2013 c) Key stone covering, 2013 d) Cement covering, 2013 e) Asphalt covering, 2013

Additionally, narrow sloppy ramp are observed between the two housing units which is not used by human (Figure 44). These street elements provide to carry of rainwater from the higher street to lower one. The flooding is prevented thanks to these ramps.



Figure 44. The view of ramp between two housing units, 2013.

Furthermore, passages are outstanding elements of the streets and pathways. They are one of features that make the settlement a unique site. They were built between two houses at first floor level. Streets are passing underneath them. They are generally part of houses. There are totally eight passages in the study area (Figure 45, Appendix A9).



Figure 45. View of passages of Darkale, 2013

4.1.2.4. Storey System

Storey system of the buildings is one of the factors, which creates the vertical pattern of the settlement. There are five different storey system types in the settlement; single storey, ground and first floor, ground and mezzanine and first floor, ground and first and second floor, and basement and ground and first floor (Appendix A13).

Table 9. Distribution of the storey system

Storey Systems	Housing Unit	Monument	New Public Building	Service Space (as independent)
Single Storey	7	5	6	16
Ground+First Floor	99	1	1	-
Ground+Mezzanine+First Floor	3	1	-	-
Ground+First+Second Floor	18	-	-	-
Basement+Ground+First Floor	6	-	-	-

The first storey system is building with single storey. There is a single storey settled on the bedrock. It is a rare storey system for the housing units (7/133). This storey system is generally preferred, when the bedrock level is higher than the street level. The entrances of single storey buildings provide from the street directly which generally access to the *Hayat*. This single floor is multi-functional; all of the functions of house are on this single floor.

In addition, there are single storied monuments (5/7), but their storey heights are higher compared to houses. Moreover, all of the service spaces as independent or inside the border of the housing units are single storied.



Figure 46. The view of single storied house, 2014

The second is the type with ground and first floors, which is observed commonly for housing unit in the settlement (99/133). General approach of function of floor allocation is that service spaces are located at ground floor commonly settled on the bedrock and living spaces are located at upper floors in order to provide them vista. In addition, two storied monuments are observed (1/7)



Figure 47. The view of a two storied house, 2013

The third is ground, mezzanine and first floor type. It is observed in a few housing units (3/133). The mezzanine floor is positioned partially between ground and first floor for this reason the height of ground floor is higher (3-3.5 m) than the typical height (2-2.5 m). Although this type is observed rarely, it is hard to differentiate this type without survey, so that the number of house of this type may increase, when interior surveys are completed. There are one or two rooms in the mezzanine floor serving production spaces, since fireplaces are observed.

In addition, there is one monument belonging to this typology (1/7).



Figure 48. The view of mezzanine floor, 2013

The fourth is ground, first and second floor type. It is observed as the second common type after the two storied one (18/133). The number of stories depends on the position of the housing unit. When the first floor lacks vista, another floor is added. In such circumstances, ground and first and rarely second floors are used as service space. This storey type is generally observed at the rear row of the settlement. In this case, the ground floor is generally constructed with stone masonry; the first and the second floors are constructed with timber frame.



Figure 49. The view of the housing unit has ground, first and second floor, 2013

The last type is the basement, ground and first floor type. It is observed rarely (6/133). The existence of this type is an outcome of the steep inclination. There is a basement floor located under the ground floor. One of the sides of the space generally leans its back on the rocks. It is generally accessed from the street directly; entrance of this space is lower than the main entrance. In this case the basement floor is used as barn or storage space. The other access option to the basement is from the upper floor with a timber staircase. This space is used as a shelter. The ground floor serves as a service space, while the first floor serves as a living space, and these two storeys generally open to vista.



Figure 50. The view of the housing unit has basement, ground and first floor, 2013

4.1.2.5. Construction Technique and Material Usage

The general construction approach of the Ottoman House is stone masonry walls providing a base for the timber frame system and timber roof in the upper floor, which is known as hybrid construction technique. A single stone masonry wall is continued until the roof as a service wall (Şahin Güçhan, 2007). In Darkale, however, three walls of the housing units are constructed in stone masonry from the base to the roof and, street façades which generally open to the vista are constructed with timber frame (Figure 52, Figure 52). In addition, this composite system is observed in some monuments: Kırkoluk Mosque, Orta Masjid. On the other hand, the stone masonry construction system is also used on its own in monuments; Minareli Mosque, the laundry, the bath, the olive oil mill, Darkale School, all fountains and all ovens and original service buildings in the settlement.

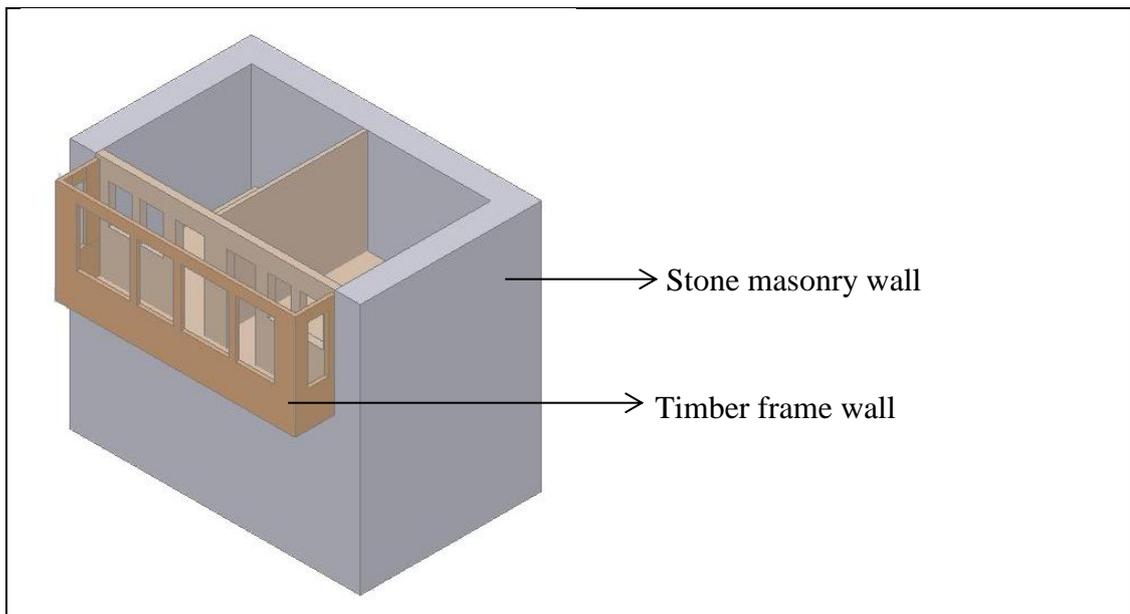


Figure 51. Schematic 3D drawing of construction technique of Darkale housing unit

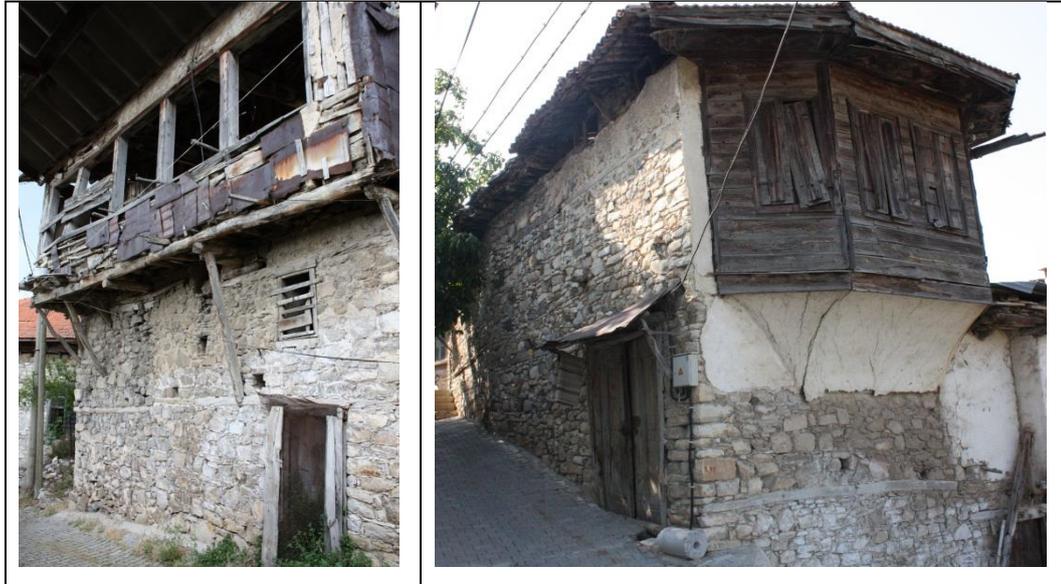


Figure 52. Housing units with hybrid construction technique, 2013



Figure 53. The structures constructed with stone masonry singularly, 2013

Stone is a common local material because the village is settled on rocky land. Stone masonry walls of structures are constructed with rough cut stone blocks and rubble stone blocks of various sizes, and made out of lime stone, slate stone, and pieces of brick, and, cut stone blocks reinforce the walls at their corners; a stone masonry wall is approximately 70-80 cm in thickness (Figure 54).



Figure 54. Stone masonry structures and bonding system of stone masonry, 2013

Timber material is used in form of timber frame with stone or timber infill (*humuş*) and timber lath (*bağdadi*) construction technique (Figure 55). All of the interior walls are constructed with timber material excluding the walls of fireplaces. Thicknesses of the timber walls are approximately 18-25 cm.



Figure 55. Timber frame and timber lath construction system, 2013

Reused materials are also observed in the walls of the buildings. These antique materials bear the traces of the previous civilizations settled in Darkale Village (Figure 56).

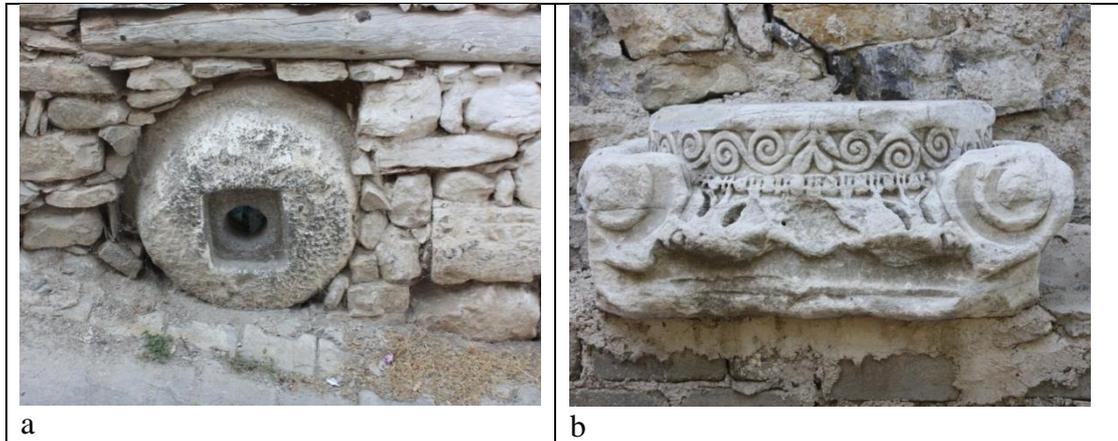


Figure 56. a) Reused materials on the exterior wall of the housing numbered 76, 2013, b) Reused materials on the exterior wall of the Kirkoluk Mosque, 2013

In addition to these traditional construction techniques, contemporary construction system and materials are observed in the settlement. The modern technique and materials are used to build new buildings, to make additions to the historical buildings or to make repairs.

The structures in Darkale Village are evaluated according to the authenticity of their construction techniques and materials in four groups; buildings constructed with traditional construction technique and materials; with traditional construction technique and materials, but intervened with modern technique and materials, with traditional construction technique and materials and altered with modern construction technique and material; and totally with modern construction technique and materials (Appendix A14).

Table 10. Authenticity of construction technique

Construction Technique	Housing Unit	Monument	New Public Building	Service Space (as independent)
Buildings Constructed with Traditional Construction Technique and Material	73 (55%)	7 (100)	-	15 (94 %)
Constructed with Traditional Construction Technique, Materials and Intervened with Modern Technique and Material	36 (27%)	-	-	1 (6%)
Constructed with Traditional Construction Technique, Material and Renewals and Additions with Modern Construction Technique and Material	23 (17,2%)	-	-	-
Constructed with Modern Construction Technique and Material	1 (0,8%)	-	7 (100%)	-

Traditional construction technique and material usage is observed commonly in housing units (73/133) (Table 10), in all monuments and majority of the service buildings (15/16) in the settlement. Although aging and lack of maintenance are the probable causes of material deteriorations, majority of the traditional buildings have succeeded to preserve their original characteristics and features (Figure 57a).

The second type is traditional construction technique and materials intervened with modern technique and materials. This type is observed in the housing units (36/133) (Table 10) and one service building. In this type, the traditional construction technique of the housing unit is preserved, however; some modern materials are implemented with modern technique in order to repair and renew deteriorated material (Figure 57b). This type is generally observed in the in used housing units. The authenticity and architectural characteristic of the houses are preserved and only architectural elements and covering materials are affected in this type.

The third type is the buildings constructed with traditional construction technique and materials, but altered with modern construction technique and materials.

This type is observed only in the housing units (23/133) (Table 10). Addition of mass and structural elements with modern technique and modern materials are observed in this type (Figure 57c). Although the main structure is preserved, plan organization and architectural characteristics of the housing unit are altered in this type. These interventions are implemented generally in order to increase comfort conditions.

The last type is the buildings constructed with modern construction technique and materials. A housing unit (1/133), all new public buildings (7/7) and additional service spaces located at the courtyards of housing units are in this group (Table 10) (Figure 57). These buildings are constructed in place of ruined historic buildings with completely new construction technique and new materials. These new buildings are ruining the integrity of the historic settlement with their inharmonious mass and materials.



Figure 57. a) Housing unit constructed with traditional construction technique and material, 2013, b) Housing unit constructed with traditional construction technique, materials and intervened with modern technique and material, 2013 c) Housing unit constructed with traditional construction technique, material and renewals and additions with modern construction technique and material d) Public building constructed with modern construction technique and material, 2013

4.1.2.6. Roof Types

The inclined topography has made the roof surfaces highly legible, and they have become characteristic elements of the settlement morphology (Figure 58).



Figure 58. The view of the roofs of the buildings in Darkale Village
(Source: Soma Municipality, 2011)

The roofs of the settlement are analyzed in terms of their form and finishing materials. There are four different types of roof forms in the settlement; hipped, pitched, pavilion and terrace roofs. There are five different finishing materials observed; earth covering, half-round ridge tiles, marseille tiles, corrugated metal sheet and cement covering (Appendix A15).

Table 11. Roof characteristics.

		FORM				Total %
		Hipped	Pitched	Pavilion	Terrace	
FINISHING	Earth Covering	-	-	-	261 m ² 1,6%	1,6%
	Half Round Ridge Tiles	1798 m ² 11%	1586 m ² 9,8%	169 m ² 1%	-	21,8%
	Marseille Tiles	4607 m ² 28,4%	5550 m ² 34%	323 m ² 2,1%	-	64,5%
	Corrugated Metal Sheet	305 m ² 2%	1465 m ² 9%	-	-	11%
	Cement Covering	-	-	-	180 m ² 1,1%	1,1%

Although terrace roof with earth covering is observed rarely in the settlement (1,6%) (Table 11), Altner (1937) claims that it is the original roof type of the village. The roof of the lower house was used to serve as the terrace of the upper house thanks to the inclined land. It was hard to maintain the earth coverings which had to be compressed after rains and snows (Altner, 1937). This process was carried out with *loĝ* stone which is still observed on the roofs with earth covering (Figure 59). At the eaves, traces of slate stones, rush mat and straws are observed.



Figure 59. The view of the *loĝ* stone on the roof with earth covering, 2013



Figure 60. The view of detail of the earth covering, 2013

Half-round ridge tiles are observed in three different roof forms; hipped, pitched and pavilion (21,8%) (Table 11) (Figure 61) This roof covering is thought to be implemented after the earth covering.

Majority of roof covering is marseille tiles (64,5%) in the settlement (Table 11) (Figure 61). It is observed by three different forms of the roof; hipped, pitched and pavilion. These types of tiles are later additions. So, they are observed at maintained houses.

The fourth roof covering material is corrugated metal sheet which is observed by two different forms; hipped and pitched (11%) (Table 11) (Figure 61). This material is inharmonious with the settlement (Table 11) (Figure 61).

The last roof covering material is cement on the terrace. It is generally observed on the later addition terrace roof (1,1%).

In turn, the houses with terrace roof and half round ridge tiles are in relatively bad condition, while those with marseille tiles, corrugated metal sheet and cement covering.

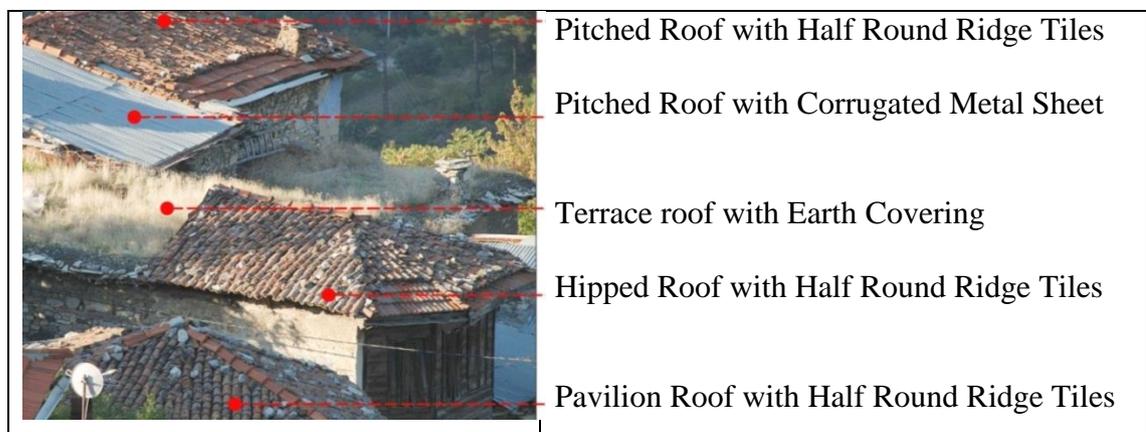


Figure 61. The view of the roof types, 2013

4.1.2.7. Conservation State

Historic buildings have been exposed to several failures and deteriorations stemming from abandonment, lack of maintenance, aging and weathering.

There are four different conservation states observed in the settlement; good condition, moderate condition, bad condition and ruined buildings (Table 12, Appendix A16).

There are 156 housing units including the ruined ones, seven monuments, seven new public buildings and 16 service buildings taken into consideration in this analysis.

Table 12. The conservation state with number and ratio of buildings.

Conservation State	Housing Unit	Monument	New Public Building	Service Space (as independent unit)
Good Condition	15 (10%)	2 (29%)	7 (100%)	2 (12%)
Moderate Condition	84 (54%)	4 (57%)	-	4 (25%)
Bad Condition	34 (21%)	1 (14%)	-	10 (63%)
Ruin	23 (15%)	-	-	-

The first conservation state is buildings in good condition. These buildings have been well maintained, structural failure is not observed, but there is localized surface deterioration of the building materials. There are 26 buildings in good condition. These are maintained and repaired housing units (15/156) and monuments (2/7 Kırkoluk Mosque and Orta Masjid), all newly constructed public buildings (7/7), and maintained and repaired service buildings (2/12) (Figure 62).



Figure 62. The view of the housing unit and Kirkoluk Mosque in good condition, 2013

The second conservation state is buildings in moderate condition. These buildings have localized structural failure of the load-bearing elements, in addition, well-developed surface deterioration and well-established break down of building materials are observed. However, exterior walls and roof have sustained their integrity. There are 92 buildings in moderate condition, majority of housing units (84/156) and monuments (4/7 Minareli Mosque, laundry, olive oil mill and Darkale School) and service spaces (4/16) are observed in moderate condition in the settlement (Figure 63). These buildings need urgent maintenance and repair.



Figure 63. The housing unit and Darkale School in moderate condition, 2013

The third conservation state is buildings in bad condition. Entire or localized loss of interior load-bearing elements, localized loss of exterior load-bearing elements and well-established break down of building materials are observed. There are 42 building in this type: housing units (34/156), a monumental building; (the bath) and service spaces (10/16). All of the bad condition buildings are abandoned (Figure 64).



Figure 64. The view of the housing unit and a bath in bad condition, 2014

The last conservation state is ruined buildings. Only housing units are observed as ruined (23/156). Entire loss of interior load-bearing elements and entire or localized loss of some exterior load-bearing elements are observed in the housing units (Figure 65).



Figure 65. The view of the ruined housing units, 2013

4.1.2.8. Alterations in the settlement scale

Physical and social characteristics of the settlement are shaped by the lifestyle and demands of people. As a result of the changing life style and increase in demands for contemporary living conditions, alterations occur in time. Due to the rapid urbanization, native population has left Darkale Village. In consequence, majority of monumental buildings (5/7), fountains (7/11), all ovens and many housing units (75/133) have become abandoned today. Furthermore there are 23 ruined housing units and 34 houses in bad condition. On the other hand, seven new public buildings were constructed with modern construction technique and materials in order to meet contemporary needs (Figure 66). In addition, changes and renewals were made in order to prevent failures. Original stone street coverings were renewed with key stone on majority of the streets (Figure 67).



Figure 66. The view of the new public buildings, 2014



Figure 67. Original stone street covering renewed with key stone, 2014

4.1.3. Housing Unit Characteristics

Design of houses presents variety in Darkale. There are 156 houses in the settlement. While 133 of them have stood against devastation, 23 of them are ruined. First, lot organization, relation with neighbours, and organization of entrances are evaluated for all houses. Then; spaces, architectural elements, spatial organization and alterations are analyzed for 37 housing units which were surveyed both externally and internally.

4.1.3.1. Lot Organization

Size of lot (27-290 m²) and its organization present variation according to location of the lot. There are four different types of lot organizations of the housing units in the settlement; housing unit consisting of only main mass (Figure 68), main mass and courtyard; main mass, annex(es) and courtyard; and only main mass with a passage over the street (Appendix A17).

Table 13. Distribution of the lot organization type.

Lot Organization Type	Parcel size	Number	Ratio (%)
Only Main Mass	27-240 m ²	78	60
Main Mass with Courtyard or Garden	58-140 m ²	24	18
Main Mass with Annex(es) and Courtyard or Garden	80-290 m ²	22	16
Only Main Mass with a Passage over the Street	27-175 m ²	9	6

Majority of the lot organizations is housing unit consisted of only mass (78/133) (Table 13). All of the components of the housing unit are under a single roof. There is no open space, service spaces are generally positioned at the *Taşlık* space instead of a courtyard or a garden. This lot organization is observed more on inclined land due to the parcel area limitations (Table 12). These houses spread out at the middle zone of the residential area. Here, majority of the housing units adjoin each other.

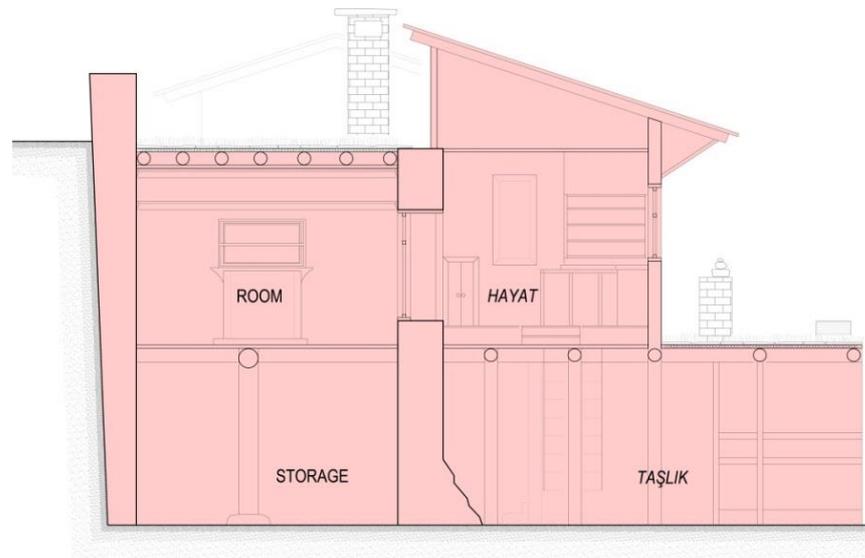


Figure 68. The section of house numbered 43 composed of only main mass.

Housing units may be composed of main masses and a courtyard (24/133) (Table 13). The courtyards are used as service spaces which are accessed from the street directly with a garden gate. They are generally composed of a fireplace, a fountain, a basin, a flower bed and fruit trees. They are multi-function spaces which are used for daily activities. The housing units having this plan organization are located generally at less inclined land and exist more independently compared to the housings with only mass plan organization.

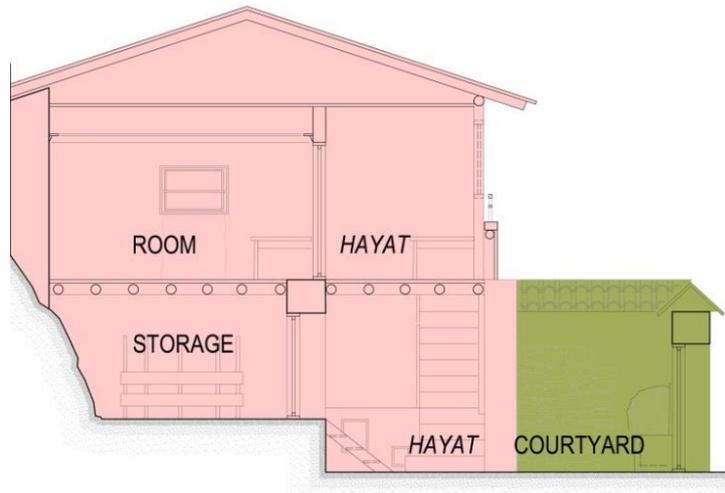


Figure 69. The section of house numbered 45 composed of main mass and courtyard.

The third lot organization type is formed when there are annexes such as storage, barn and wet space opening to the courtyard together with the main mass (Figure 70) (22/133) (Table 13). There are 11/44 original service spaces in this type of lots, the others are additional. There are 44 service spaces in the settlement, one housing unit sometimes has more than one service space. Most of them are stone masonry (11/44); however, additional service spaces in contemporary techniques can be observed (33/44). Construction of additional service spaces stem from architectural necessity.

The housing units having this plan organization have the largest surface area in the settlement (Table 13). In addition they are located generally at less inclined land and exist more independently like housing with of main mass and courtyard.

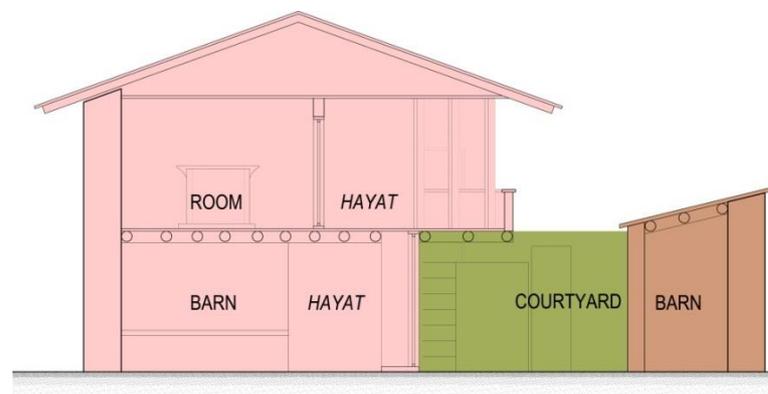


Figure 70. The section of house numbered 115 composed of main mass with courtyard and annex.

The last lot organization is street passing through the housing unit. Although it is represented with rare examples (9/133) (Table 13), this design is one of features that make the settlement a unique rural site. A portion of the first floor is constructed over the street. This passage serves as a room (4/8), sometimes serves as a service space (3/8), and there are two example in which it is the *Hayat* (2/8) (Figure 71). This plan organization is preferred when the housing cannot open to the vista due to positioning in the dense residential area or in order to design large programmed housing unit when the small lot area occurs as a result of the inclined land.

These spaces enrich the solid-void pattern of the settlement. The linear voids continue through the cubical solids. The landscape is carved and voids for solids are created. The added solids are recarved to recreate voids within them.

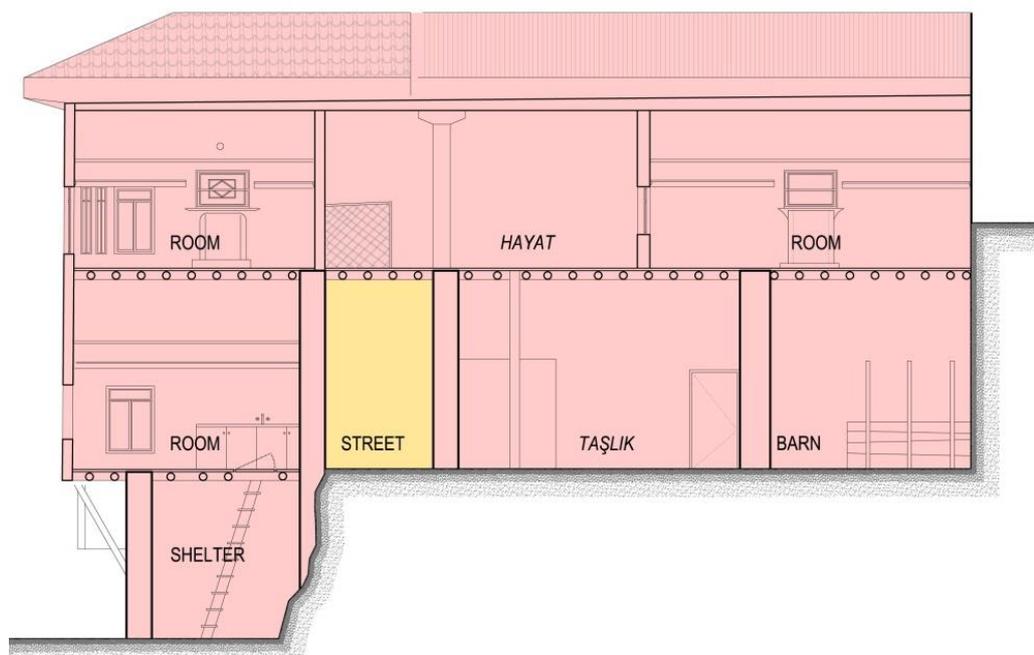


Figure 71. The section of house numbered 13 composed of main mass with courtyard and annex.

4.1.3.2. Entrances of the Houses

Location of the entrances of housing units presents variation in accordance with topography of the lot (Appendix A11). The entrances open to a courtyard (46/133) or a closed space such as a Taşlık or a room (87/133). Main and service entrances are observed in the settlement. Main entrances of the housing units are always located on the ground floors which are reached directly from the street, and they are at vista direction.

Housing units sometimes have more than one entrance which provides direct access to service spaces (17/133) (Figure 72). The service entrance can be located at the same level with the main entrance. However, if the presence of the service space is an outcome of steep inclination, then the service entrance is located at a lower level than the main entrance (11/17) (Figure 72a). In this case, this service space level is regarded as a basement floor. These entrances may be on the same (12/17) streets or on different streets (5/12) (Figure 72b).

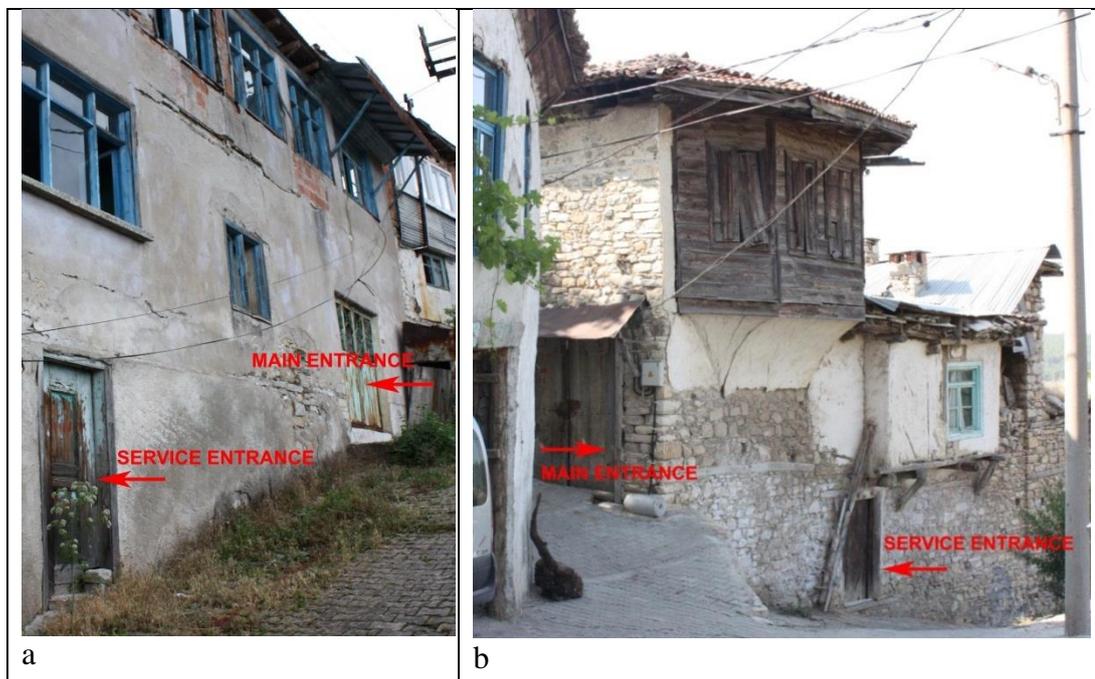


Figure 72. a) The entrances are located different levels, 2014 b) The entrances are located different levels and streets, 2014

In addition, the access to the main entrance of the housing unit may not be provided from the street directly, sometimes a secondary path is formed at a different level than the major street in order to provide access to the unit (7/133) (Figure 73).



Figure 73. The entrances provided from secondary paths, 2014

4.1.3.3. Spatial Organization

A Darkale house is composed of an elevated *Hayat* with vista and a multi-purpose room accessed from the *Hayat*, all over a base for services. So, the *Hayat* (*Hayat* 1) and the room (room type 1-living room) are the two indispensable elements of the house. The form, position and size of the *Hayat*; number, form, position and size of the rooms and the organization of the services present variation.

Houses generally consist of a living floor and a service floor. Spaces of the living floor are *Hayat* and room. Living floor is generally at first floor level (108/133), sometimes at second floor level (18/133) and rarely at the ground floor in the single storey housing units (7/133). Spaces of service floor are a *Taşlık* and *Hayat*, and service spaces barn, coop, hayloft, production space, storage and shelter. Service floor is generally at ground floor level (109/133), sometimes at first floor level (18/133) and rarely both at the ground floor and basement (6/133). Service spaces such as a kitchen and toilet can be sometimes observed at a main floor. These are additions. Moreover, additional spaces room and service spaces are observed in the houses evaluated as Room Type 7 and Service Space 6.

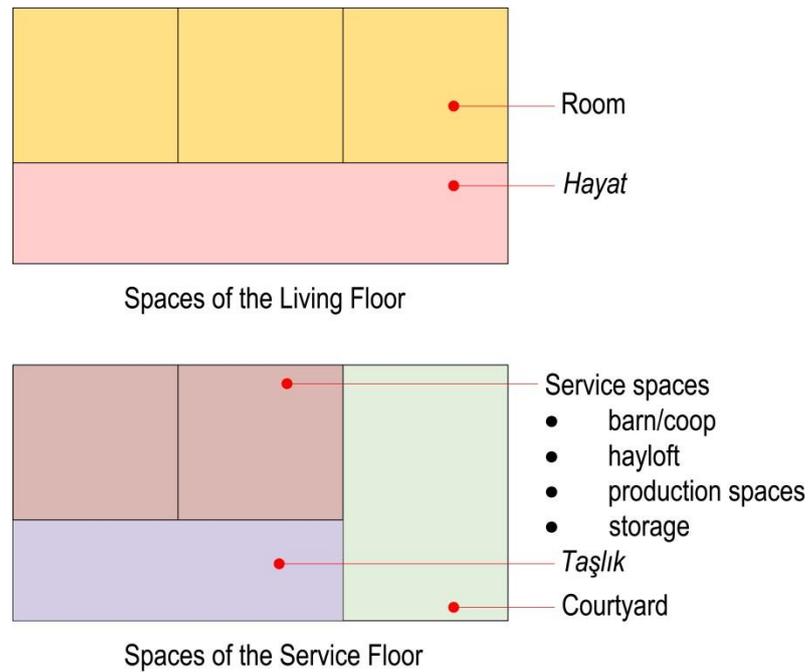


Figure 74. Schematic drawings of the typical living and service floors of a housing unit.

4.1.3.4. Spaces and Architectural Elements

In this section, the spaces and architectural element in the houses are presented with their functions and location in the house. Initially, spaces and its architectural elements are defined according to their location at the housing units respectively the living floor and service floor.

4.1.3.4.1. Spaces of the Living Floor

In this part, each space located at the living floor and its architectural elements are introduced respectively (Appendix B).

- **HAYAT 1**

Hayat 1 is located on the living floor or mezzanine floor which is a wooden colonnaded space continuing without interruption in front of the rooms on the living floor and sometimes in front of the storage spaces on the mezzanine. Mostly, *Hayat* extend to the view of the valley and sometimes to its own courtyard. *Hayat 1* is accessed from the *Taşlık* or *Hayat 2* through a flight of stairs. It opens to vista, it is illuminated directly and it is a well illuminated space. *Hayat 1* is a linear space running in front of the rooms and it has rectangular plan. Stairs and its elements; balustrades and shutter are main features of *Hayat 1*, moreover, wooden screens, or large sheet glasses form *Hayat's* façade. *Hayat 1* is sometimes enriched by a fireplace, *abdestlik*, *sedir*, cupboard system, niches, *shelves*, counter and / or chest. Its floor and ceiling are covered with timber. Its walls are plastered and painted. *Hayat 1* is for living purposes (gathering, production, eating and sometimes storage) and circulation purposes providing access to the other spaces; room, production space, storage, hayloft, pantry (Figure 75). It is sometimes a semi-open space (42/133), but it is generally transformed into closed space (91/133) (Appendix B).

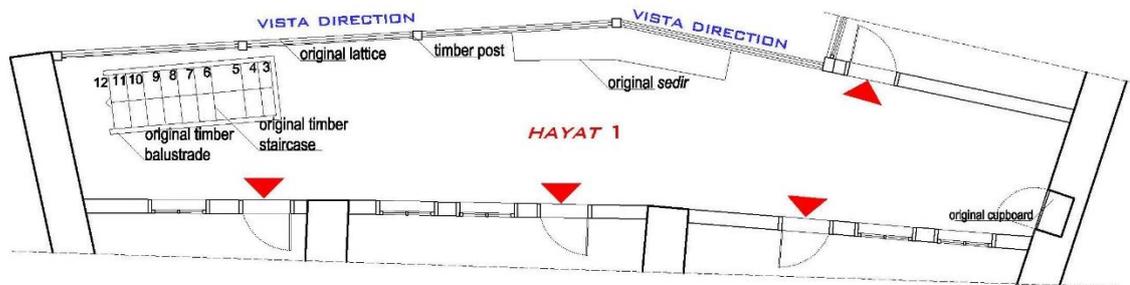


Figure 75. The plan of *Hayat 1*.

- **ROOM TYPE 1 (LIVING ROOM)**

Room Type 1 (32/37) is a living room and located on the living floor. There can be more than one in one housing unit. It is entered from *Hayat* and illuminated indirectly from *Hayat*. It is the largest room in the house and has rectangular plan. Room Type 1 is generally enriched with a *gusülhane*, a fireplace, *sedirs*, cupboard system, niches, counter, shelves, and / or *sergens*. Its floor and ceiling are covered with timber. Walls of the room are plastered and painted. It is thought to be for the living purpose of the family (gathering, eating and sleeping) and sometimes for reception of guests (Figure 76). Today, it may be used as living room, guest room, kitchen, storage or sometimes it is abandoned (Appendix B).

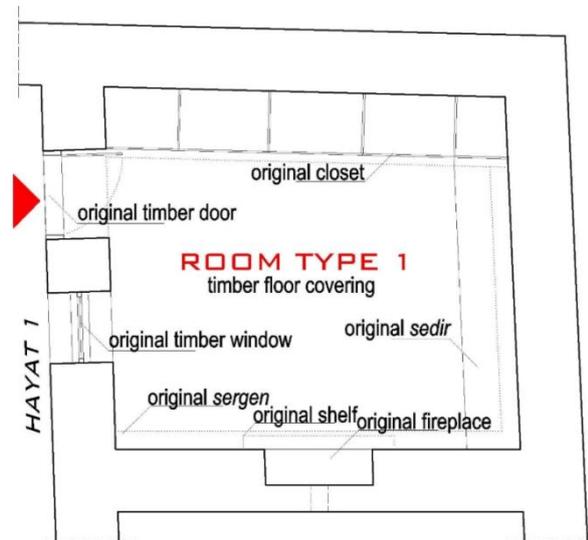


Figure 76. The plan of the Room Type 1, house numbered 151.

- **ROOM TYPE 2 (SANDIK ODASI)**

Room Type 2 (5/37) is located on the living floor. It is entered from *Hayat* and illuminated indirectly from *Hayat*. It is a small room in the house and has rectangular plan. Room Type 2 generally has *sergen*. Its floor and ceiling are covered with timber. Walls of the room are plastered and painted. It is thought to be *sandık odası* and may be for storage of mats, fruits, etc (Figure 77). Today, it may be used as a living room, guest room, kitchen, storage or sometimes it is abandoned (Appendix B).

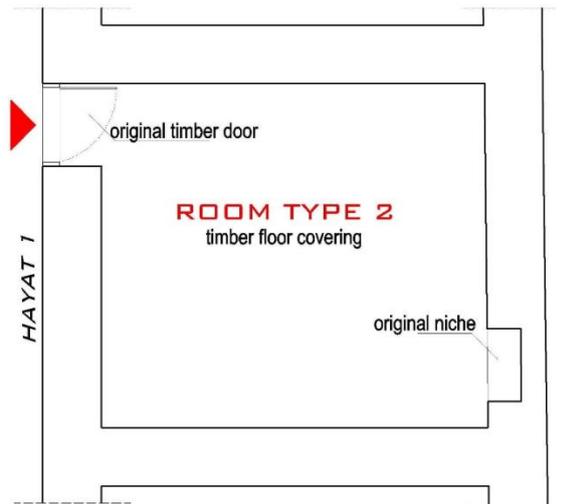


Figure 77. The plan of the Room Type 2, house numbered 151.

- **ROOM TYPE 3 (MAIN ROOM)**

Room Type 3 (11/37) is present in large programed examples whose in which Room Type 1 is also present and the smallest ones which have only one room. It is located on the living floor. It is entered from *Hayat*. Room Type 3 is illuminated directly and opens to vista (Figure 78b). Sometimes it is accessed directly from the street and sometimes at the same time from the *Hayat* (Figure 78a). The existence of this space is an outcome of the steep inclination. It is slightly small compared to Room Type 1 and has rectangular plan. Room Type 3 is generally enriched with a fireplace, *sedir*, cupboard system, niches, shelves, and / or *sergen*. Its floor and ceiling are covered with timber. Walls of the room are plastered and painted. It is thought to be for the living purpose of the family (gathering, eating and sleeping) and sometimes for reception of guests. Today, it may be used as living room, guest room, kitchen, storage or sometimes it is abandoned (Appendix B).

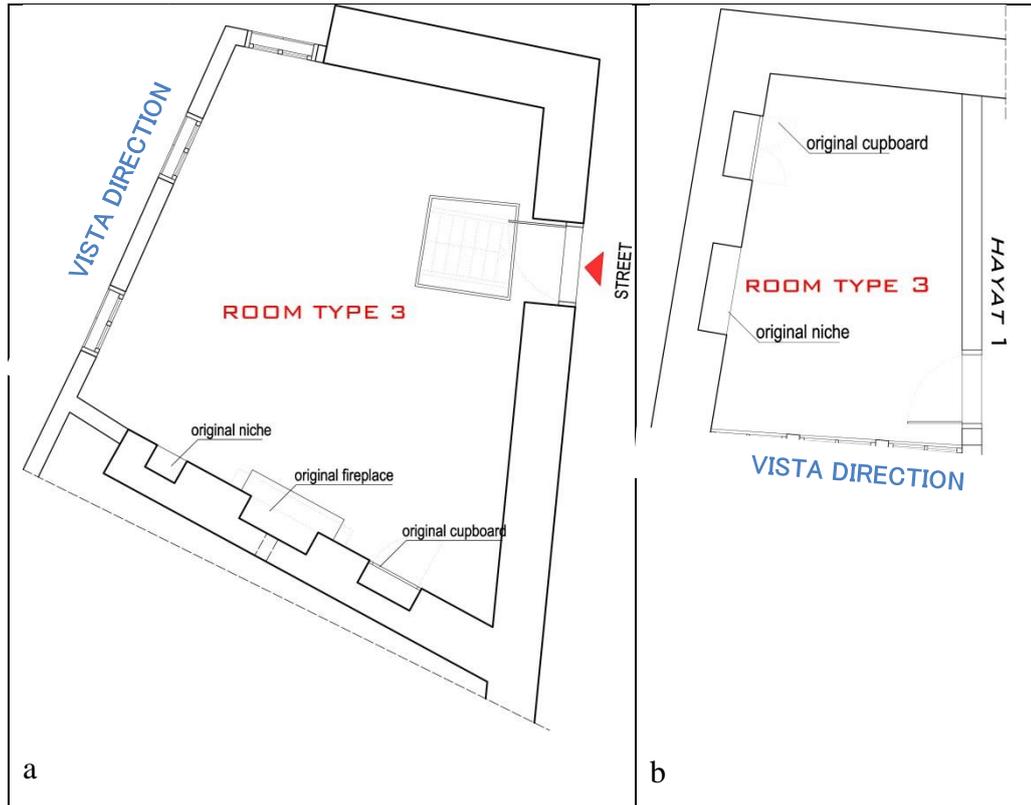


Figure 78. a) The plan of the Room Type 3, house numbered 13, b) The plan of the Room Type 3, house numbered 45.

- **ROOM TYPE 4**

Room Type 4 (1/37) has the features of Room Type 1, but it is illuminated directly and opens to vista. It is located on the living floor. It is entered from the *Hayat*. It is the largest room in the house and has rectangular plan. Room Type 4 is generally enriched with a fireplace, *sedir*, cupboard system, niches, shelves and / or *sergen*. Its floor and ceiling are covered with timber with decoration. Walls of the room are plastered and painted. It is thought to be for the living purpose of the family (gathering, eating and sleeping) and sometimes for reception of guests. Today, it may be used as a living room, guest room, kitchen, storage or sometimes it is abandoned (Appendix B 35-46).

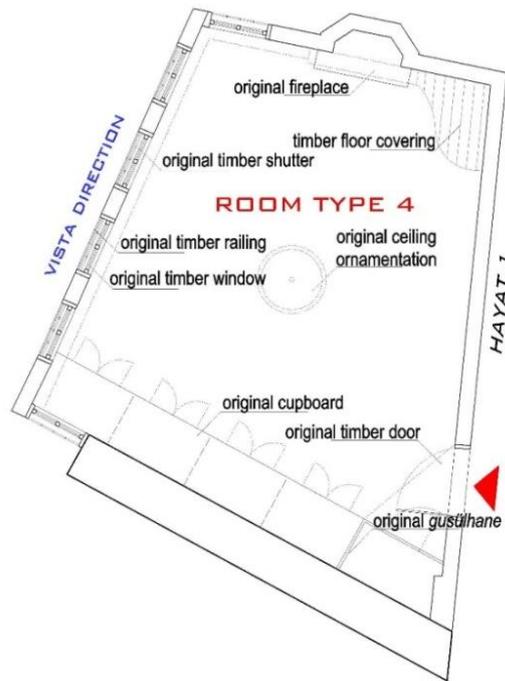


Figure 79. The plan of the Room Type 4, house numbered 13.

- **ROOM TYPE 5**

Room Type 5 (5/37) is a living room and located on the living floor. It is the largest room or room combination in the house which has rectangular plan. It is composed of two interrelated spaces: one main space connected with a smaller sub-space, entered from the main one. The main space is entered from the *Hayat* and illuminated indirectly from *Hayat*, whereas the small one has more privacy, opens to vista and illuminated directly, but it is sometimes totally dark with no window. The main space sometimes has a fireplace. Its floor and ceiling are covered with timber. Walls of the room are plastered and painted. The main space is thought to be for the living purpose of the family (gathering, eating and sleeping) and sometimes for reception of guests, whereas the smaller one is thought to be for the sleeping purposes. This smaller space is sometimes arranged as a storage or bathroom; then, it is without any window (Figure 80). Today, it may be used as a living room, guest room, kitchen, storage or it is abandoned (Appendix B).

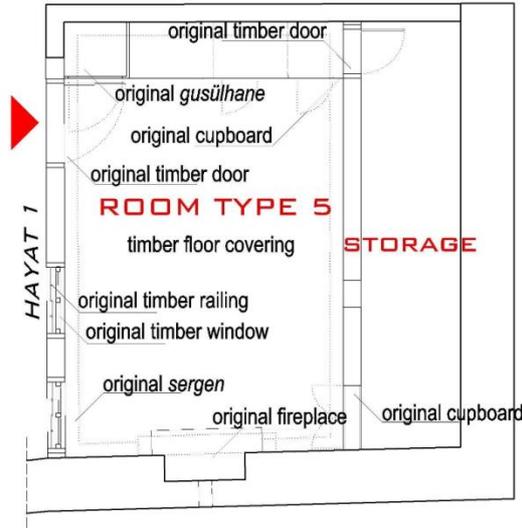


Figure 80. The plan of the Room Type 5, house numbered 13.

- **ROOM TYPE 6 (KIOSK, KÖŞK)**

Room Type 6 (1/37) is a Kiosk (*Köşk*) and located on the living floor. It is unique in the settlement. It is in piano nobile character; in other words, the void created underneath this space acts as a shadowed area in the courtyard and provides total ventilation of the Kiosk above it. It is entered from the *Hayat* through five ascending stairs. It opens to vista, and it is a well illuminated space, receiving light directly. It is slightly small compared to Room Type 1 and has rectangular plan. Room Type 6 is generally enriched with a *gusülhane*, fireplace, *sedir*, cupboard system, niches, shelves, a watch window for controlling the garden gate and / or *sergen*. Its floor and ceiling are covered with timber. Walls of the room are plastered and painted. It is thought to be for the summer living purpose of the family (gathering, eating and sleeping) and reception of summer guest (Figure 81). Today, it may be used as a living room, guest room, kitchen, storage or sometimes it is abandoned (Appendix B 281-288).

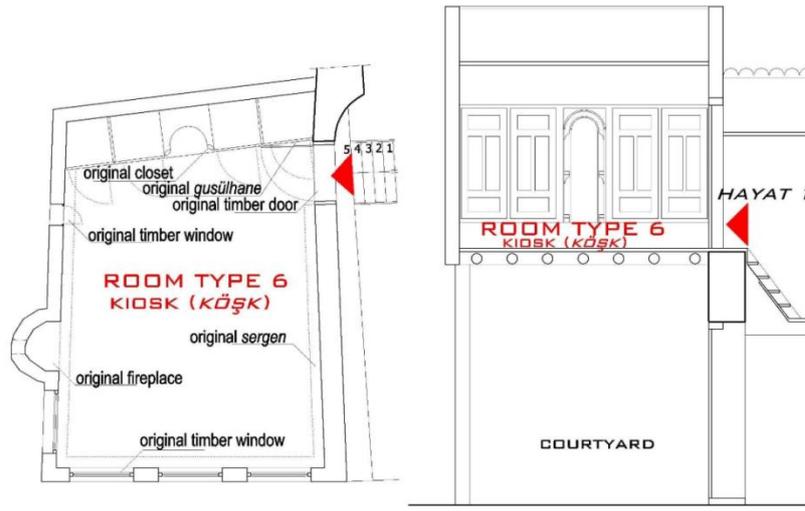


Figure 81. The plan and the section of the Room Type 6, house numbered 152.

- **ROOM TYPE 7**

Room Type 7 (13/37) is an additional room limiting the extension of Hayat or Courtyard space to nature. It is located on the ground floor or living floor. It is either entered directly from the courtyard (Figure 82) or from the Hayat. Room Type 7 does not have any architectural elements. Its floor and ceiling are covered with timber. Walls of the room are plastered and painted. It is thought to be for the living purpose of the family (gathering, eating and sleeping). Today, it may be used as a living room, guest room, kitchen, storage or sometimes it is abandoned (Appendix B).

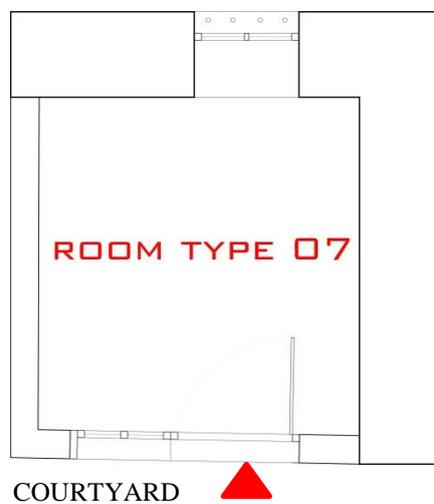


Figure 82. The plan of the Room Type 7, house numbered 38.

- **KITCHEN**

Kitchen (9/37) is a converted space which is generally located on the first floor. Three of them are converted Room Type 1, one of them is converted Room Type 3, one of them is converted Room Type 4, three of them are converted Service Space 2 and one of them is converted Service Space 3 (Figure 83). It is accessed from *Hayat 1* and rarely from the street. It is thought to be converted from a room for improving the comfort conditions. It is illuminated indirectly from *Hayat 1* or sometimes directly. It has generally rectangular plan. There are additional architectural elements such as a counter, a basin and a cupboard. Its floor is covered with ceramic tile or linoleum coverings and ceiling is covered with timber. Walls of the space are plastered and painted (Appendix B).

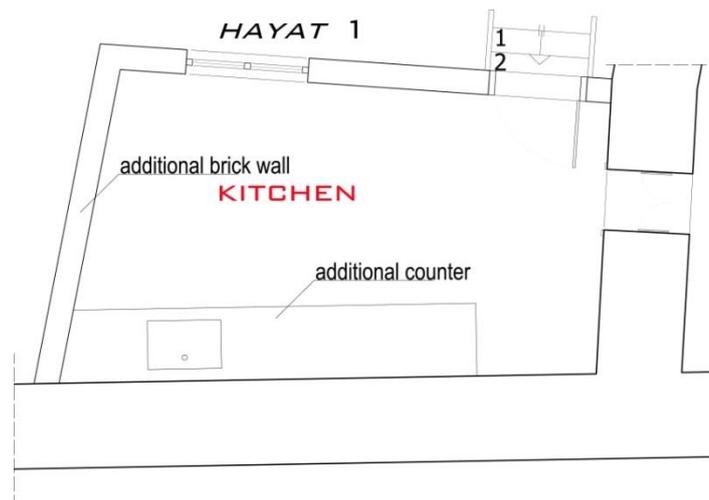


Figure 83. The plan of the kitchen, house numbered 151.

4.1.3.4.2. Spaces of the Service Floor

In this part, each space located at the service floor and its architectural elements are introduced respectively.

- **TAŞLIK**

Taşlık (27/37) is a closed space located on the ground floor which is accessed from the street or courtyard. It has generally limited illumination and ventilation. *Taşlık* is an entrance space and a datum element providing access to the service space on the ground floor or sometimes in form of a total space on the ground floor. The third dimension may be sometimes emphasized because of mezzanine usage.

It has generally rectangular plan. There are generally a fireplace, fountain, basin, staircase, manger, and / or *sepet* in the *Taşlık* space. Its floor is covered with timber floor covering, earth covering or stone covering; its ceiling is covered with timber beam. *Taşlık* is circulation space for ground floor, but it is also a multi-functional space (Figure 84). It is used for the daily activities of women and sometimes for storage (Appendix B).

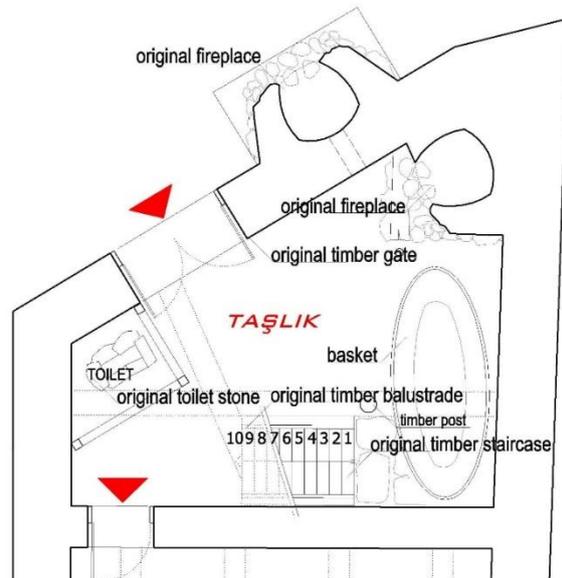


Figure 84. The plan of the *Taşlık*, house numbered 117.

- **HAYAT 2**

Hayat 2 (9/37) is a wooden colonnaded space, a semi-open one, in form of a continuous gallery in front of the service spaces on the ground floor. *Hayat 2* serves as a circulation space providing access to the service spaces and *Hayat 1*. *Hayat 2* is accessed from the courtyard. It is generally a linear space in rectangular form. There is staircase providing access to *Hayat 1* and sometimes a flower bed in the *Hayat 2*. Its floor is covered with stone and sometimes additional concrete floor covering is seen (Figure 85). Timber flooring is exposed without covering at its ceiling. Its walls are plastered and painted (Appendix B).

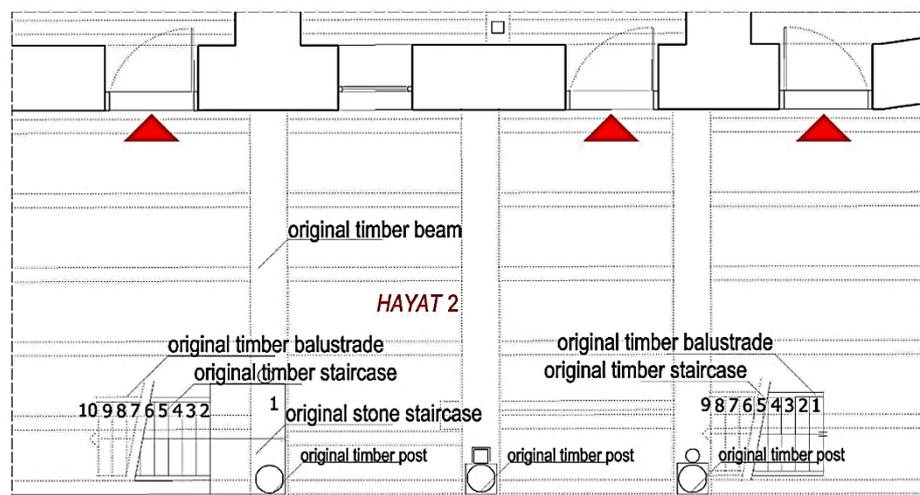


Figure 85. The plan of the *Hayat 2*, house numbered 151.

- **COURTYARD**

Courtyard (14/37) is located on the ground floor which is accessed from the street with a garden gate. It is an open space and the garden walls enclose the courtyard space. It is irregular or rectangular formed. There are generally a fireplace, a fountain, a basin, flower bed and fruit trees in the courtyard space. Its floor is paved with stone covering or additional concrete. Courtyard is a circulation space for ground floor but it is also a multi-functional space (Figure 86). It is used for the daily activities of women and sometimes for storage (Appendix B).

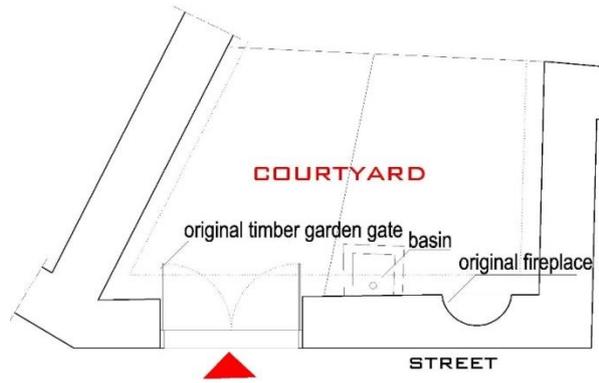


Figure 86. The plan of the Courtyard, house numbered 45.

- **HALL**

Hall (3/37) is a circulation space which is generally located on the mezzanine floor. It is accessed from *Taşlık* space with a timber staircase. It is for providing access to the service spaces and connection between ground floor and first floor. It is dimly lighted or almost a dark space. There is limited ventilation and it has no regular plan shape. Its floor and ceiling are covered with timber (Appendix B).

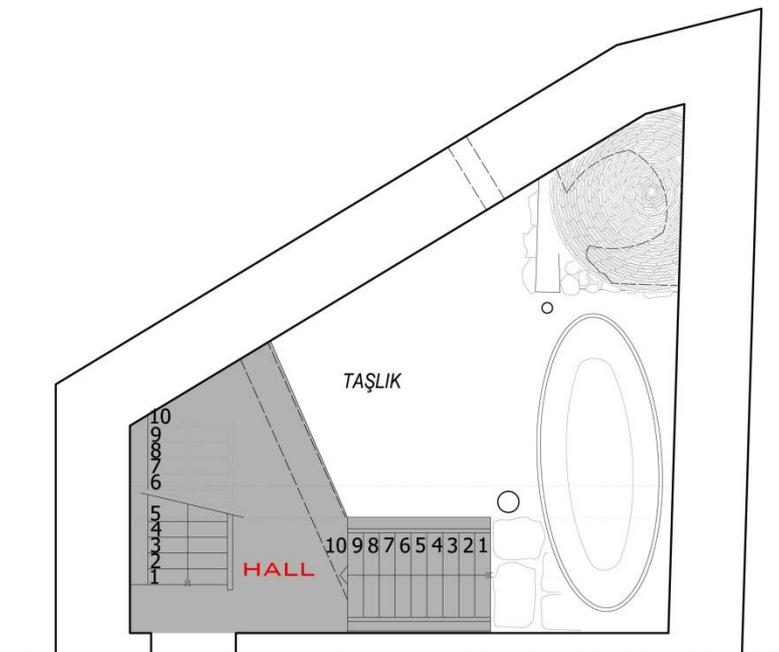


Figure 87. The plan of the hall, house numbered 117.

- **SERVICE SPACE 1 (BARN / COOP / HAYLOFT)**

Service Space 1 (30/37) is located on the ground floor. It is accessed from *Taşlık* or sometimes *Hayat 2*. These spaces serve as shelter for animals and storage food for animals. It is illuminated indirectly from *Taşlık*, sometimes *Hayat 2* or *Hayat 1*. It is dimly lighted or almost dark. There is limited ventilation and it generally has rectangular plan. There are manger, cupboard and niches in service space 1. Its floor is paved with stone at the entrance and then, earth floor is observed. The timber beams of the floor above are exposed without covering (Figure 88). Walls of the space are plastered and painted. Today, it is used as storage or sometimes it is abandoned (Appendix B).

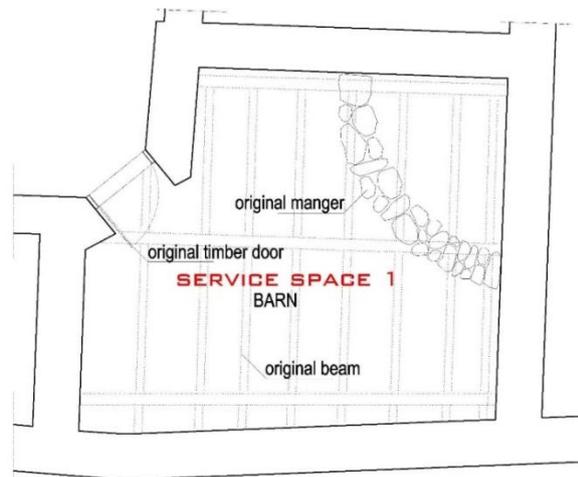


Figure 88. The plan of the Service Space1, house numbered 8.

- **SERVICE SPACE 2 (PRODUCTION SPACE)**

Service Space 2 (11/37) is located on the ground floor or mezzanine floor. It is generally accessed from *Taşlık*, sometimes from *Hayat 2* or *Hayat 1*. It is thought to be for the production purpose of the family. It is illuminated indirectly from *Taşlık*, sometimes from *Hayat 2* or *Hayat 1*. It is dimly lighted or almost dark. There is limited ventilation. It has generally rectangular plan. There are a fireplace, a cupboard and niches in this production space. Its floor is covered with timber floor covering and ceiling is covered with timber beams are exposed without covering in the ceiling (Figure 89). Walls of the space are plastered and painted. Today, it is used as storage or sometimes it is abandoned (Appendix B).

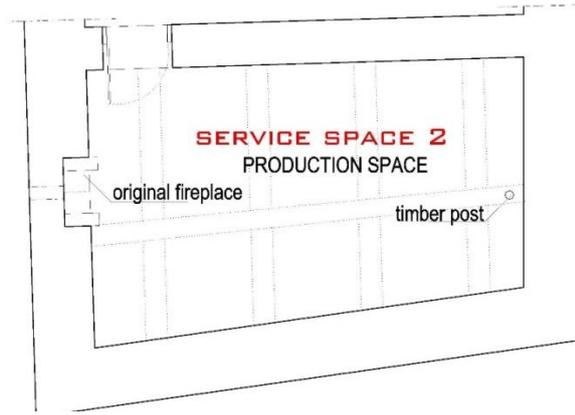


Figure 89. The plan of the Service Space 2, house numbered 117.

- **SERVICE SPACE 3 (STORAGE SPACE, MAĞAZA)**

Service Space 3 (18/37) is a pantry space and located on the ground floor or mezzanine floor. It is accessed from *Taşlık*, sometimes *Hayat 2* or *Hayat 1*. This service space is close to production space. It is thought to be for the storage necessities of the family and sometimes used for production. It is illuminated indirectly from *Taşlık*, sometimes *Hayat 2* or *Hayat 1*. It is dimly lighted or almost dark space. There is limited ventilation. It has generally rectangular plan. There are cupboard and niches in this space. Its floor is covered with timber floor covering and ceiling is covered with timber beams are exposed without covering in the ceiling (Figure 90). Walls of the space are plastered and painted. Today, it is used as storage or sometimes it is abandoned (Appendix B).

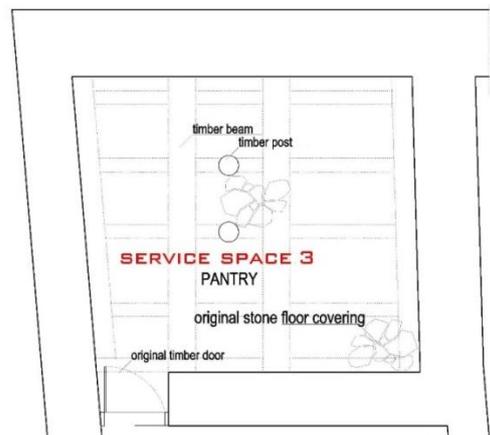


Figure 90. The plan of the Service Space 3, house numbered 97.

- **SERVICE SPACE 4**

Service Space 4 (5/37) is located on the basement, ground or mezzanine floor. It is accessed directly from the street and sometimes at the same time from the *Taşlık*. The existence of this space is an outcome of the steep inclination. One of the sides of the space sometimes leans its back on the bed rock. It is thought to be for the production and storage necessities of the family. It may be well illuminated directly from the street or sometimes it is dark. It generally has rectangular plan. There are a fireplace, a cupboard and / or niches in this space. Its floor is covered with timber floor covering and ceiling is covered with timber beams are exposed without covering in the ceiling (Figure 91). Today, it is used as storage or sometimes it is abandoned (Appendix B).

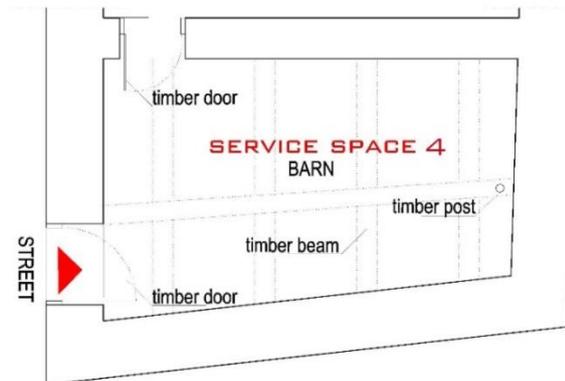


Figure 91. The plan of the Service Space 4, house numbered 117.

- **SERVICE SPACE 5 (SHELTER)**

Service Space 5 (2/37) is located on the basement floor. It is generally accessed from the upper floor with a timber staircase. The existence of this space is an outcome of the steep inclination. One of the sides of the space generally leans its back on the bed rock. It is thought to be for the storage and shelter in order to hide and defend. It is a dark space and there is no ventilation. It generally has rectangular plan. There is no architectural element. Its floor is covered with timber floor covering and ceiling is covered with timber beams are exposed without covering in the ceiling (Figure 92). Stone walls of the space are not plastered and painted. Today, it is used as storage or sometimes it is abandoned (Appendix B).

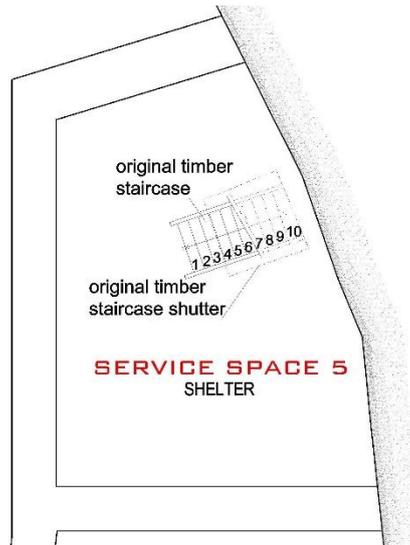


Figure 92. The plan of the Service Space 5, house numbered 13.

- **SERVICE SPACE 6 (ADDITIONAL SERVICE SPACE)**

Service Space 6 (14/37) is an additional service space which is located on the ground floor. It is accessed from the *Taşlık*, sometimes from *Hayat 2* or the courtyard. It is thought to be added for functional necessity. It serves as a toilet space or storage space. This additional space limits the perception of the whole of the main spaces and ruins the regular order of the main space. It is illuminated indirectly from the *Taşlık*, sometimes from the *Hayat 2* or the courtyard. It is dimly lighted and there is limited ventilation. It has generally rectangular plan. There are no architectural elements. Its floor is covered with ceramic tiles or concrete and ceiling is covered with timber beams are exposed without covering in the ceiling. Walls of the room are plastered and painted (Appendix B).

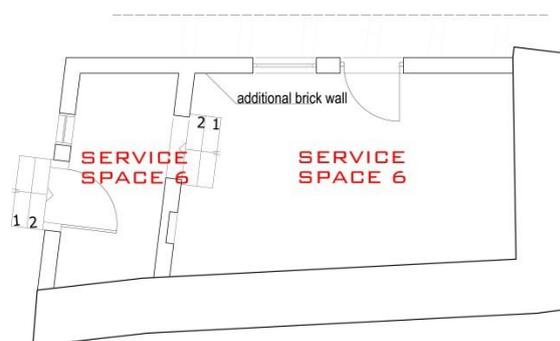


Figure 93. The plan of the Service Space 6, house numbered 151.

- **TOILET**

Toilet is located on the ground floor. It is accessed from *Taşlık* or courtyard. This original toilet arrangement is observed rarely in the settlement (36/37). Three of them are original, 33 of them are additional. It generally has rectangular plan. It is arranged with at least four timber posts covered with timber and there are slate stones as toilet stones in the middle of the space (Appendix B).



Figure 94. The plan of the Toilet, house numbered 117.

4.1.3.4.3. Architectural Elements

The spaces of the housing units are enriched with architectural elements (Appendix B1). Openings determining the light qualities in these spaces are evaluated as the primary architectural elements. The *Hayats* (types 1 and 2) (20/37) in their original design are exposed to day light at a maximum level through the rhythmic rectangular openings between their timber posts (Figure 95a). These are often intervened with rectangular sheet glass (17/37) (Figure 95b). The rooms (types 1, 2 and 5) (70/113) oriented to the *Hayat* are exposed to limited light through their double leafed (Figure 95c) or sash windows (Figure 95d), both rectangular in form and placed in rhythmic order, generally two, sometimes three in number, and with shutter and railing (Figure 95e). The rooms oriented directly to the vista (types 3, 4 and 6) (14/113) have higher light quality due to their single, double or triple leafed, rectangular window series, generally two, sometimes three in number. They also received light from their double leafed or sash windows oriented to the *Hayat*. In turn, this distribution of windows makes the upper floors relatively well light spaces compared to ground floors. These original windows of the rooms (1-6) are sometimes intervened with plastic joinery and/or enlargement.



Figure 95. a) The view of open *Hayat*, b) The view of the rectangular sheet glass, c) The view of the double leafed window, d) The view of the double leafed window with railing and timber bar, e) The view of the sash window.

The entrance of the spaces is generally provided with timber solid doors (Figure 96a) or doors with glass (Figure 96b). The closed spaces; namely, rooms and service spaces are accessed from *Hayat 1* and/or *Hayat 2* or *Taşlık* spaces with one leafed door, whereas entrance of the open spaces; namely, courtyards is provided from the street directly with single or double leafed doors (Figure 95c). These original door leaves are sometimes replaced with metal ones.



Figure 96. a) The view of the room door with glass, b) The view of the room solid door, c) The view of the double leafed timber door.

The rooms (types 1,3,4,5 and 6) and *Hayats* are enriched with, fireplaces, *sedirs*, *köşks*, cupboard systems, niches, counters, chests, shelves, *abdesliks*, *sergens*, and / or lattice. These elements prove that the mentioned rooms and *Hayat* spaces have been serving as living spaces. In addition, closets, *gusülhanes*, are always present at least in one of the rooms for living (room type 1,3,4,5, and 6). The ceiling ornamentations can be observed only in room types 1 and 4, which are main rooms. Moreover, the spaces of service floors are enriched with fireplaces, mangers, cupboards, shelves, baskets, niches and jars (Figure 97, Appendix B1).



Figure 97. The view of the architectural elements in Darkale, 2013.

4.1.4. Alterations in Housing Units

Alterations in the housing unit scale were analyzed in 37 housing units.

There are four different types of alterations; addition, conversion, renewal and missing. These alterations are evaluated for spaces and their elements (Appendix B2).

Mass addition is a primary alteration type. As a result of demands on qualified life conditions, additional service units have been constructed with new materials in the lots. There are 44 additional service buildings serving as wet spaces or storages for housing units in the settlement.

The other common addition is timber or brick walls or glass panels to close *Hayats*.

The second alteration is conversion of spaces and architectural elements. Abandonment is evaluated as a conversion. The functional transformation of space is common in the housing units due to changing lifestyle. Rooms sometimes were converted into storage space or kitchen especially in large programed houses. Furthermore, production spaces were converted into rooms.

Architectural elements were also converted due to some daily needs; the majority of fireplaces were converted into wall, *gusülhanes* were converted into storages, *abdestliks* were converted into counters.

The other common alteration is renewal in order to prevent further failures. The common renewal type is covering of the earthen terrace roof with new materials such as half-round ridge tiles, marseille tiles, corrugated metal sheets and cement. In addition, the renewal of staircases, openings and floor and ceiling covering materials are observed frequently in maintained houses.

The last alteration type is missing. If the traces of the lacking materials are observed or the existence of the elements is certain, these elements are evaluated as missing. Lacking voids of stairs; doors and windows, cupboard, closet, *sergen* are analyzed as missing in the houses. (Appendix B2)

4.2. Intangible Elements

In addition to tangible constitutes, Darkale has also intangible components which are revealed in cultural landscape, settlement and housing unit scales. They originate from the interaction between nature and man throughout history. These are sense of place, natural features, sensory reactions, contemporary features, historic features, historical events, spiritual connection and traditional activities (Figure 98).

Sense of place is a human feeling stemming from the physical and spiritual features of the rural settlement. Living within a narrow valley surrounded by high mountains in safety is the sense of the place for Darkale people. The housing units interwoven to each other very tightly create the effect of a castle, strengthening the feeling of safety.

Sensory experiences are associated with feelings of humans. The narrow valley of Darkale receives almost no morning light, but sharp noon light. The eastern hill where the residential area is located receives afternoon light. These shadow-light contrasts, soothing sound of the brook and nature, sharp forms of the hill, sensation of coolness in all four seasons and natural skyline are sensory experiences specific to Darkale.

Historic events provide important contribution to the intangible values of Darkale cultural landscape. The historical phenomena that determine the spirit of Darkale are its military identity as a border settlement of the Kingdom of Pergamon, its rural identity as a Byzantine village, its urban identity as an Ottoman center, its Turkish identity as a settlement contributing to the Independence War and its modern identity as a village interrelated with mining. Moreover, some historic activities are related with history of construction techniques in the rural settlement, e.g. using *loğ* stone to compress the roof after the rain and before snow (Figure 98a). Some other historical activities were tanning, weaving and making ice (Figure 98b).

Traditional productions methods and animal husbandry (Figure 98c) are transformed from one generation to the other, e.g. traditional pastoral farming including cotton, olive and grape production. In addition, cuisine tradition such as *çene çarpan* soup, *çığırtma* and *kabartlama* (Figure 98d), including pomegranate juice making (Figure 98e), olive oil soap production and point lace (Figure 98f) tradition have been still sustained in the housing units.

Activity patterns at cultural landscape scale include contemporary activities such as tracking around the settlement, camping and biking (Figure 98g); and traditional ones such as fishing and olive gathering.

Spiritual connection comprises of native traditions; stories about the name of the settlement and the way of the settling, dialect and the names of the things which are locals. In addition, recreation activities are folk songs, folk dances; *Tarhala Baranasi* (Figure 98h). Moreover, religious beliefs; namely, continuation of the presence of the congregation in most of its mosques are intangible sings of Darkale rural settlement.

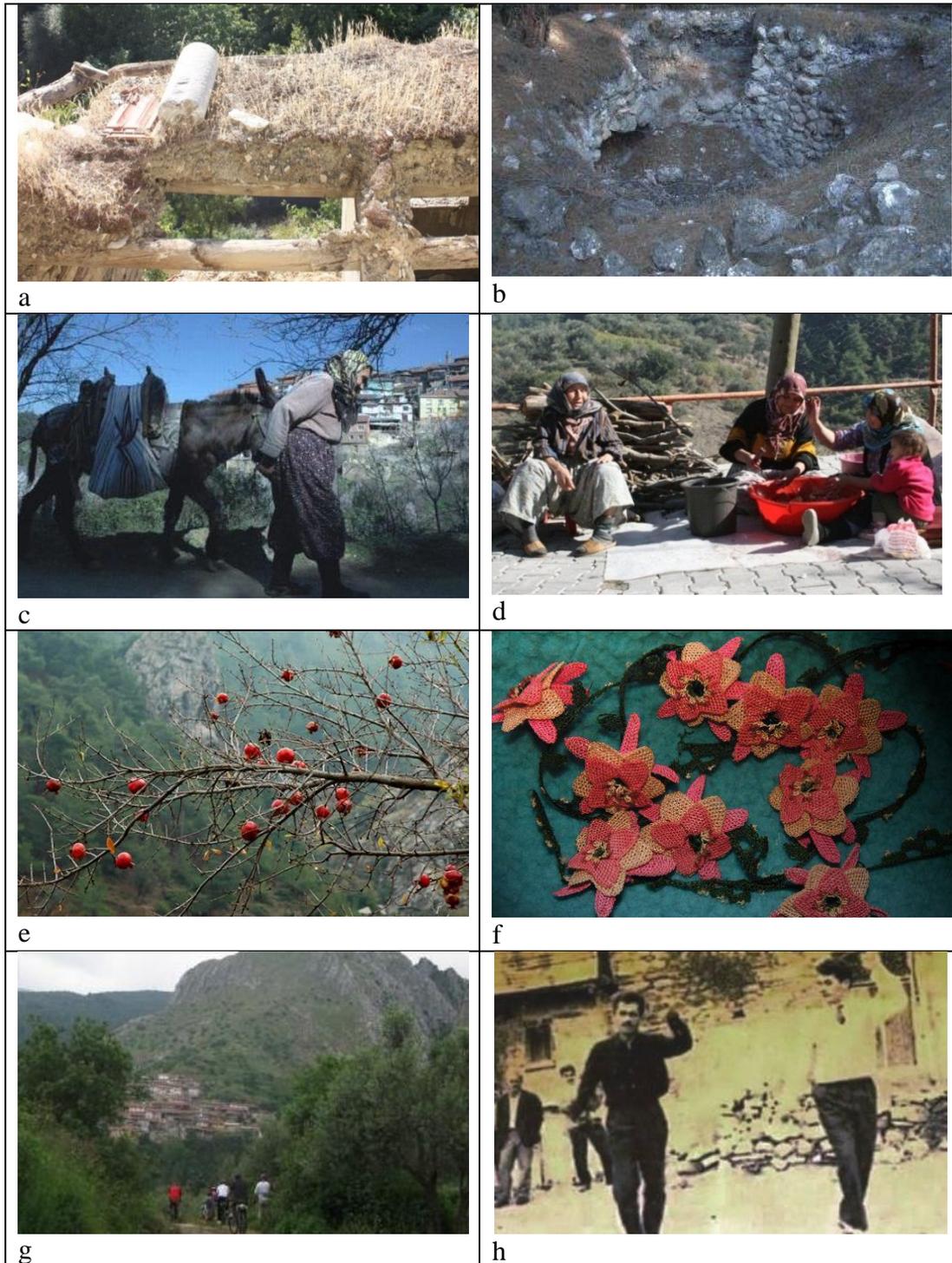


Figure 98. a) The view of *loğ* stone, 2013, b) The view of the snow wells, (Soma Municipality, 2011), c) The animal husbandry in the pastures and shrub lands, (Soma Municipality, 2011), d) Cuisine tradition in the public activity area, 2013, e) Pomegranate tree in the residential area, 2014, f) The example of the traditional activity; point lace, (Soma Municipality, 2011), g) The contemporary activities; biking, (Soma Municipality, 2011), h) The old photos of the folk dances; *Tarhala Baranası* (Soma Municipality, 2011).

CHAPTER 5

EVALUATION

In this chapter; Darkale rural settlement is evaluated in parallel with the analysis carried out in the previous chapters. Evaluation is made in three different scales; the cultural landscape of Darkale, the settlement of Darkale and the housing in Darkale.

5.1. Evaluation of the Cultural Landscape

The interaction of man and nature has constituted the rural heritage of Darkale throughout history. When the authenticity of its tangible-intangible features and integrity of site are evaluated, Darkale is considered as a cultural landscape.

Darkale is an exceptional testimony of development of Turkish settlements in Western Anatolia after its conquest. It had become a historical commercial center and center of *kaza* in the 16th century. The tanneries and *bedesten* remains have disappeared, but bath remains, olive oil mills, laundry, mosque, coffee house and fountains all reveal the significance of the place.

Today, Darkale is an outstanding example of a traditional rural settlement that is harmonious with the natural environment. Unity and the harmony of the natural environment and man-made features; historical residential area, historical public gathering, commercial and production area, public activity area, graveyards, archeological remains illustrate significant stages of human history.

Both the physical environment and the way of life illustrate that Darkale is a qualified representative of man-nature interaction throughout history.

Hayat houses on terraced hill skirt entered from the organic street parallel to the inclination; service structures, meadows, agricultural lands, and graveyards surrounding them; and the commercial center along the brook present a sustainable rural settlement.

Values and threats of the cultural landscape are evaluated below.

5.1.1. Values of the Cultural Landscape

Values of the cultural landscape of Darkale are evaluated under the headings of the authenticity and integrity which make Darkale Village an outstanding rural heritage (Appendix A6).

Authenticity

The history of the cultural landscape is thought to date back to the period of Pergamon Kingdom. It has preserved the heritage elements and the pastoral living tradition that characterizes it. The settlement still has the historical residential area from the Turkish period, the archeological remains of previous ages and historical monuments of different periods.

Overall layout, landscape, architectural form and construction technique have retained their original features. Hence, the level of authenticity of the settlement is high (Figure 99).

Integrity

Darkale has sustained its integrity as a rural settlement composed of historical residential area on terraced, western hill skirt of Kösedağ Mountain at the southeast and the brook valley system at the west with the commercial-production-religious area. This settlement is not independent from its surroundings labored by man throughout centuries, composed of open fields at the north, northwest and east, characterized by traditional agricultural uses such as olive, grain and plantation and impressive megaliths at the east, pastures for livestock farming and shrub lands at the east, Mediterranean woodland and rocky terrains at the north, olive groves and vineyards at the east, and pomegranate groves within the settlement. There are archeological sites at the northern and western plains and Asarkale located at the southeast and Ottoman graveyards at the north east and west representing the historical roots of the place (Appendix A6). In turn, man has given shape to nature throughout ages in this place to constitute the cultural landscape of Darkale (Figure 100).



Figure 99. a) The view of the Darkale rural settlement, 2015, b) The view of Kırkoluk Mosque, 2013, c) The view of the Bath, 2013, d) The view of the graveyards, 2013, e) The view of the ancient columns, Soma Municipality, 2011, f) The peculiar natural elements of Darkale rural settlement, 2014.

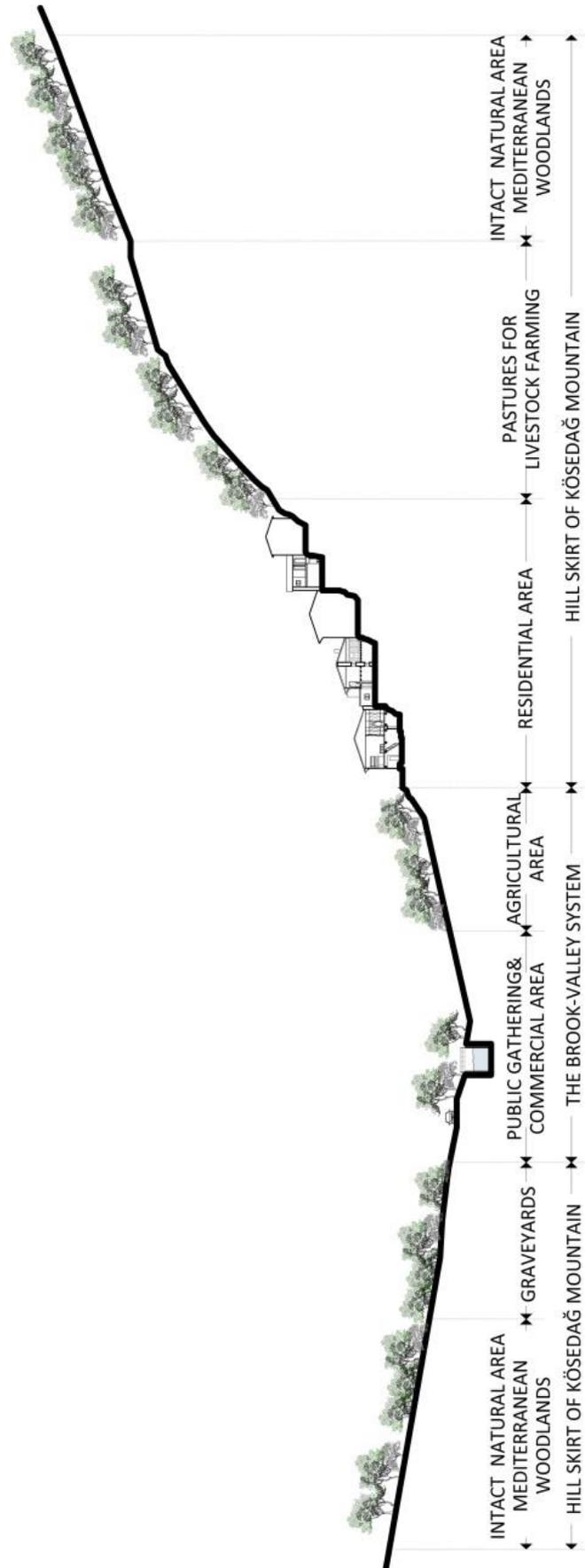


Figure 100. The site section of Darkale cultural landscape.

The area also has intangible heritages: history of the settlement and traditional activity patterns such as traditional pastoral farming, walking through the landscape, making pomegranate syrup, olive gathering, making ice cream; cuisine; sensory impressions such as generally medium quality of light due to orientation, soft colours, sharp forms of the hill, soothing sound of the brook; spiritual qualities such as genealogical relationships with the land stemming from prior generations way of life; stories regarding a secured settlement, the mining accidents; natural processes such as seasonal changes and regeneration of bushes, vegetables, fruits, flowerbeds; the three hills located near the settlement known as the three beauties; meanings conveyed by the names of the place “*Tarhala*”; sense of the place as living in a narrow valley.

Darkale cultural landscape is an outstanding rural heritage possessing integrity.

5.1.2. Typology of the Elements of the Cultural Landscape

Typology for the elements of the cultural landscape was defined on the basis of land use variations in accordance with the inclination amount. These elements are the public gathering, commercial and production area; residential area, agricultural area, pastures and shrub lands, and Mediterranean woodland (Appendix A7).

The cultural landscape of Darkale consists of the public gathering, commercial and production areas within the brook valley system at the central and lower level. All of the functions of the monuments, namely Kırkoluk Mosque, a Bath, a Laundry, and Olive Oil Mill, tracks of tanneries and a *bedesten*, are associated with water directly. Here, the inclination is almost zero.

Agricultural lands are located at the north, northwest and east of the cultural landscape. They are settled on terraced, slightly inclined (15%) hill skirts of the mountains close to the brook.

The residential area is positioned at the terraced, western hill skirt of Köseadağ Mountain at the higher levels. This hill skirt is very steep, (inclined 40%) and a safe place for sheltering (p.47).

Pastures for livestock farming and shrub lands and olive yards are located at the outer ring of the site (inclined 40-70%). These are rocky hillsides behind the residential area. Here, barns are observed within the pastures. At the same time, archaeological remains, which probably belong to the terminal head quarters of the Pergamon

Kingdom, are seen. At the west, north and south, there are historical graveyards at the borders of the site.

Mediterranean woodland and rocky terrains are on the steepest hill side of the Kösedag Mountain to the south (inclined 85%). Mediterranean woodland and rocky terrains constitute the border of Darkale cultural landscape.

5.1.3. Threats for the Integrity of the Cultural Landscape

The cultural landscape of rural settlement is reshaped in parallel with changing social structure, increasing demands and ascending migration. As a result of the changing life style, the settlement is exposed to socio-economic and physical changes. The basic socio-economic change is abandonment of traditional rural activities and promotion of mining. In addition, the transformation of the socio-economic life causes a decrease in quantities of plantation areas and quality of olive groves. The physical changes are construction of unqualified mass additions to meet contemporary necessities, degradation of structures due to the lack of maintenance giving way to voids contrasting the authentic solid-void organization pattern. Even though the rural settlement preserves its authenticity and integrity, when these features of the settlement are compared with those of the previous century (Figure 101a), the differences in the homogeneity of the built areas and their authenticity are distinguishable (Figure 101b). In addition, abandoned residential area and agricultural area ruin the spiritual integrity of the settlement (Appendix 8).



a



b

Figure 101. a) An old photo of the historical residential area (1945), (Source: Soma Municipality, 2011), b) The present view of the historical residential area, 2014.

In addition to these physical changes, the form of the social and economic life has also changed. The source of income of the settlement has been agriculture; nevertheless, a mining area is located close to the settlement (Appendix A17). The mine has been in use until 2013, and energy production and mining activities at the city center threaten agricultural land and cause contamination and degradation of the natural environment (Figure 102). This mine is not only a threat for the physical environment, but it also affects intangible values such as traditions, local production methods, natural and spiritual features. So, human and natural environment are affected directly by these changes. Consequently, the integrity of the cultural landscape of the rural settlement is partially ruined.



Figure 102. The view of the historical residential area and location of the mining area close the settlement (Source: Soma Municipality, 2011).

5.2. Evaluation of the Rural Settlement of Darkale

The settlement of Darkale consists of the residential area positioned at the hill skirt of Köseadağ Mountain at the higher level and the public gathering, commercial and production area are within the brook valley system at the lower level.

The settlement of Darkale is evaluated under three headings which are the values, typology and threats for the integrity of the settlement.

5.2.1. Values of the Rural Settlement of Darkale

Authentic characteristics of the settlement and the characteristics that are indispensable for sustaining the integrity are evaluated in the below (Appendix A18-19-22).

The historical buildings are one of the best preserved authentic characteristic of the settlement. 26 of 37 housing units, which were surveyed both externally and internally, and all of the seven monumental buildings have preserved their original plan characteristics.

The residential area comprises of 133 housing units, three monuments; Minareli Mosque, Orta Masjid and Darkale School and four new public buildings.

The public gathering, commercial and production area within the brook valley system are constituted of four historical monumental buildings; namely Kırkoluk Mosque, a Bath, a Laundry, and Olive Oil Mill, tracks of tanneries and a *bedesten*, and three new public buildings. All of the functions of the monuments are associated with water directly.

Furthermore, the solid-void proportion is approximately equal to each other in the housing area. The houses frequently cover up the whole of the lot (13 900 m² / 52%); open spaces are evenly distributed, included green areas, ruined lots, empty lots and roads (12 439 m² / 46%), the rest (2%) is monuments within the housing units (Appendix A10).

On the contrary with the residential area, the density of buildings in the brook valley system is low. The monuments and new buildings either cover up the whole of the lot (1 360 m² / 20%), or they have large open spaces (5330 m² / 80%).

Authentic street coverings; stone and earth, constitute 18% of the total streets and pathways area, as observed frequently at the entrance of abandoned houses (Figure 104a).

There are five positions in the settlement, stemming from extending to vista; the main mass located at the corner, the main mass partially over the street, all stories of the main mass oriented to the vista, living storey of the main mass oriented to the vista and none of stories of the main mass oriented to the vista. Majority of the buildings has more than one position due to the topography. The buildings commonly open to the vista with at least one storey (125/133 in housing units, 5/7 in monuments). The most unique position is the main mass partially over the street in the settlement which is observed (9/133) (Figure 104d).

In addition, lot formation on the rocky terrain of Kösedağ is in harmony with the limitations of the topography: small lots (36-290 m²) whose of most are enriched with vista of the valley have been created.

Housing pattern and the three monuments; in relation with housing units are in harmony with the terraced land formation located at the hillside. These components are interwoven to each other in the second and the third dimension.

The residential area is constituted mostly of adjacent dwellings which are compatible with topography. 35% of the housing units are juxtaposed by housing unit on its one side, 33% of the housing units are juxtaposed by housing unit on its two sides, 24% of the housing units are surrounded by others on all their all sides and only 8% of the housing units are independent. 5% of the houses are also interwoven to each other and the street in the third dimension (Figure 103); these are generally used by relative families. 6% of the houses are with a passage over the street.



Figure 103. The view of the houses and monuments are interwoven to each other and the street in the third dimension, 2013.

Excluding the Bath and the Olive Oil Mill, the laundry and Kırkoluk Mosque are elements of Kırkoluk Square. The Kırkoluk Mosque and the laundry are adjacent to each. The rest of the monuments are independent.

In case of the necessity of large programmed houses or bottom floors lacking vista, the houses develop vertically. Residential buildings have generally two (99 of 133) or three (27 of 133) storeys, but rarely one (7 of 133) storey which are generally located on small lots or over the street and on the bedrock. The number of floors depends on location of the dwellings. General approach of function of floor allocation is that service spaces are located at ground floor commonly settled on the bedrock and living spaces are located at upper floors in order to provide them vista. When the first floor lacks vista, another floor is added. In such circumstances, ground and first and rarely second floors are used as service space. For these reasons, the housing units positioned at the first row of the settlement have two storeys, when the difficulties in opening to the vista occurs, more than two storeys are observed generally at the rear rows of the settlement.

The silhouette of the settlement cannot be perceived from the street, but from the opposite hill side located at the west of the settlement. The original façade organization makes a contribution to integrity and harmony of the silhouette with its rhythm and the aesthetic of the design and elaboration of the material. Majority of the housing units have preserved their original façade characteristics at all floors (72/133), but some housing units have preserved their original façade characteristics only at ground floors (3/133) and a few housing units have preserved their original façade characteristics only at upper floor(s) (22/133). All of the monuments have preserved their original façade characteristics.

The construction technique of the residential area is hybrid system. The stone masonry base supports the timber frame construction of the upper floor and timber frame roof. This system represents the typical construction technique of the Ottoman House. Only one stone masonry wall continues as a service wall until the roof in a typical Ottoman house. However, in Darkale, more than one stone masonry wall can be observed at the upper floors stemming from the frequency of adjacent buildings. In addition, all of the monumental buildings are constructed with stone masonry.

The terrace roof with earth covering is interpreted as the original roof type of the settlement. Roof with half round ridge tiles covering is also evaluated as authentic roof material in terms of its age. Terrace roof with earth covering is observed rarely in the settlement (1,6%) and half-round ridge tiles are observed more common than earth (21,8%) (Figure 104c).

There are 19 historical buildings (15/156 in housing unit 2/7 in monuments and 2/12 in service buildings) in good condition. These buildings have been well maintained, structural failure is not observed, but there is localized surface deterioration of the building materials. All buildings are in use. Although these buildings loss their authentic material characteristics, they have still preserved their authentic plan and façade organizations.



Figure 104. a) The view of the original street, 2014, b) The view of the passage, c) The view of the original roof covering, (Source: Karayazılı, et al., 2011), d) The view of the residential area, 2013.

In addition to the buildings, there are outstanding elements that define the silhouette of the settlement: minarets, passages, fountains, supporting stone walls, ovens, kiosks, projections and lattices (Figure 105).



Figure 105. The view of authentic elements in the settlement, 2014.

5.2.2. Typology of the Buildings of the Rural Settlement of Darkale

The typology of the buildings of the rural settlement is defined according to their positions and relations.

5.2.2.1. Position

Darkale Rural settlement is a unique example in terms of interaction of buildings with each other and the site. The basic parameter for positioning of major buildings is extension to vista. There are five solutions preferred in order to fulfill this preference: corner position with the opportunity of two facades, parallel to the brook-valley system position with at least one storey oriented to the vista of the valley, and first storey positioned partially over the street for the advantage of long range street vista. However the building cannot open to the vista but only to the street in the dense residential area in the settlement (Appendix A20). Buildings are evaluated regarding their position and vista utility. Therefore; majority of the buildings are evaluated for a couple of position types stemming from the topography of the settlement.

Table 14. Distribution of the position in the settlement.

Position of Buildings	Housing Unit	Monument	New Public Building	Service Space (as independent)
The main mass located at the corner	63	7	4	16
The main mass partially over the street	9	-		-
All stories of the main mass oriented to the vista	46	4	3	-
Living storey of the main mass oriented to the vista	79	1	-	-
None of story of the main mass oriented to the vista	8	2	3	-

There are 90 buildings at corner position; 63 of them are main masses of housing units, all of the seven monuments, four new buildings and all of 16 service buildings as independent (Table 14). The benefit of this position is extending to the street with at least two façades (Figure 106).



Figure 106. A main mass of housing unit at the corner

Over the street positioning of the first floors of the main masses of the housing units, is represented with rare examples (9/133) (Table 14). While part of house is settled on the bedrock, part of the first floor surmounts the street and rests on a wall on the opposite side of the street (Figure 107a). This design stems from the space necessity, sometimes in order to open to room to the vista, sometimes to enlarge the upper floors toward to valley. There may be a fountain at this covered portion of the street (Figure 107b) or there may be the entrance of the adjacent house.



Figure 107. The houses positioned partially over the street, 2014

Since the settlement is on a hill skirt and the housing units are interwoven to each other following the ridge lines, majority of the units are oriented to the vista with their only living storey (79/133) (Table 14). Nevertheless, those on the front row and a few with distinguished positions open to the vista with all of their floors (46/133) (Table 14). The facades of this type have more openings than the other types. In addition, it is observed that none of stories of eight housing units oriented to vista in the dense residential area of the settlement. These buildings only open to the street. Moreover four monuments (4/7 Kırkoluk Mosque, Minareli Mosque, Darkale Primary School and Olive Oil Mill), three new public buildings open to the vista with all of their stories. Therefore, Orta Mosque opens to vista with only its first floor. On the other hand, a bath, a laundry and 16 service buildings do not open to the vista because of their functions. In addition three new public buildings cannot open to vista.



Figure 108. The houses oriented with all their stories to the vista of the valley, 2014

5.2.2.2. Relation with Neighbors

Relation with neighbors is an important input of the settlement. It is analyzed in two different aspects; horizontal and vertical interactions (Appendix A20).

There are four different horizontal relations with neighbors: independent housing unit (10/133), housing unit juxtaposed by another housing unit on its one side (40/133), housing unit juxtaposed by housing units on its two sides (47/133) and housing unit surrounded by others on its all sides (36/133).

Independent housing unit means that there is no neighbor on its sides; it is juxtaposed by the road and its garden. There are 10 independent housing units (10/133) in the settlement (Figure 109). Although it is rare relation type with neighbor for housing unit, the majority of monuments (4/7), new public buildings (3/7) and service building (14/16) as independent are located independently in the settlement.

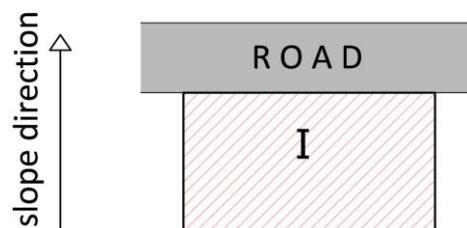


Figure 109. Schematic drawing of the independent building

Housing unit juxtaposed by housing unit on its one side is that there is one adjacent building on its one side. The other façades are juxtaposed by a road, an open space or an empty lot. This housing type is generally a corner building. There are 40 housing units of this type in the settlement (40/133). The existence of this relation with neighbors occurs stemming from the voids of the settlement due to the ruined buildings. There are also three monuments (3/7), three new public buildings (3/7) and two service buildings (2/16) positioned in this manner (Figure 110).

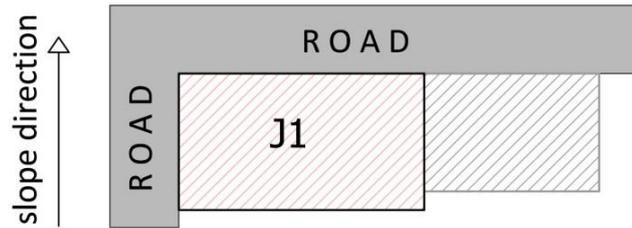


Figure 110. Schematic drawing of the building juxtposed by building on its one side

Housing unit juxtposed by housing units on its two sides denotes that there are two adjacent buildings on its two sides; the other two façades are juxtposed by roads. The majority of housing units presence in this relation type (47/133) (Figure 111).

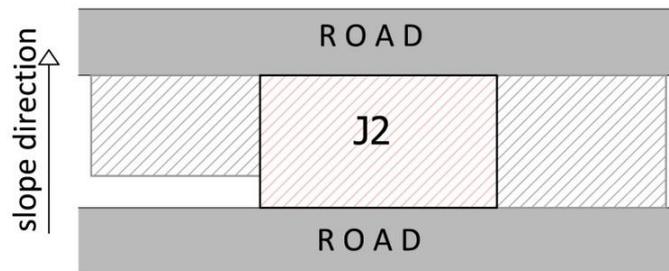


Figure 111. Schematic drawing of the building juxtposed by building on its two sides.

Housing unit surrounded by others on its more than sides is that there are at least three adjacent buildings on its three sides, and the entrance façade of house is located on the road side. There are 36 buildings of this type in the settlement (36/133). In addition there is a new public building presences in this relation which is thought to be converted from the housing unit (Figure 112).

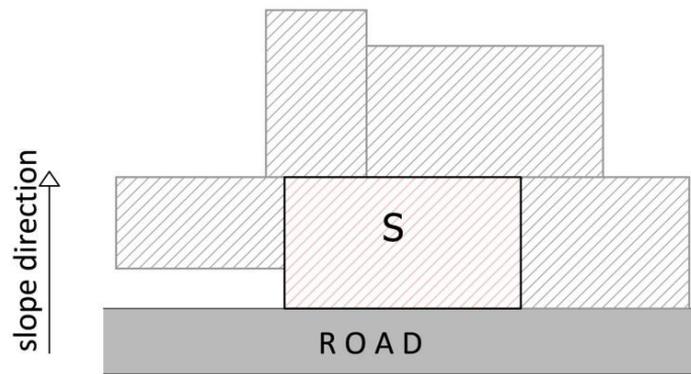


Figure 112. Schematic drawing of building surrounded by others on its more than two sides.

Table 15. Distribution of the relation with neighbors.

Relation with Neighbors	Housing Unit	Monument	New Public Building	Service Space (as independent)
Independent housing unit	10 %8	4 %57	3 %43	14 %88
Building juxtaposed by housing unit on its one side	40 %30	3 %43	3 %43	2 %12
Building juxtaposed by housing unit on its two sides	47 %35	-	-	-
Building surrounded by others on its more than two sides	36 %27	-	1 %14	-

Housing units interact with each other not only in plan organization, but also in the third dimension. Vertical interaction is one of the important features which make the settlement a unique rural site. The housing units interwoven with each at the third dimension are generally used by relative families. There are three types of vertical interaction in the settlement which have original plan organization and these designs are authentic.

One of them is observed in houses numbered 53-A and 53-B, which are adjacent buildings. The entrances of houses are positioned on the street facade. The entrance of house numbered 53-A opens to rear the courtyard and the three storied main mass is located behind the courtyard. On the other hand, the house numbered 53-B is a compact building without any open space and half of its first floor is over the ground floor of the house numbered 53-A (Figure 113).

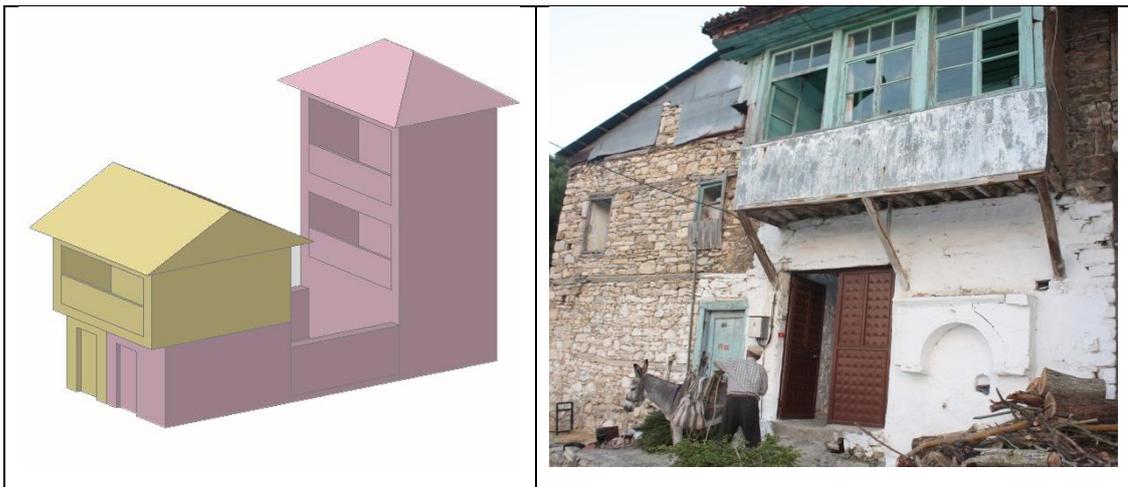


Figure 113. Schematic 3D drawing and photo of the houses numbered 53-A and 53-B

The second vertical interaction type is observed in the houses numbered 97 and 98. The house numbered 97 has ground, first and second floors, on the other hand, the house numbered 98 has ground and first floors. The second floor of the house numbered 97 covers up the first floor of the house numbered 98 (Figure 114).

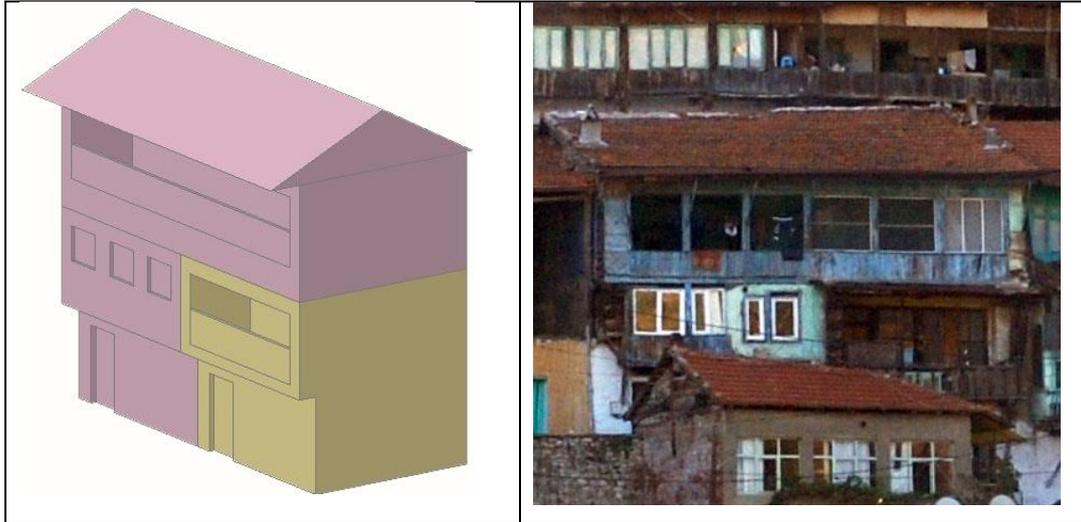


Figure 114. Schematic 3D drawing and photo of the houses numbered 97 and 98

The last vertical interaction type is observed in the houses numbered 23 and 98-B. These interwoven houses are different from the others since the entrances of the houses are located on different streets and at different levels. The ground floor of the house numbered 98-B is settled on the bedrock and on half of the ground floor of house numbered 23 (Figure 115).



Figure 115. Schematic 3D drawing and photo of the houses numbered 23 and 98-B.

5.2.3. Threats for the Integrity of the Settlement of Darkale

The settlement has preserved its integrity. Nevertheless, there are some changes that may be considered as risk (Appendix A21-A22).

New service buildings were constructed with solid brick or concrete and corrugated metal sheet; notwithstanding, these new buildings are evaluated as unqualified mass additions. The lot formation of the new buildings is inharmonious with terraced land. The heights and proportions of these masses (approximately 14x8x7 m) are different than historical ones (approximately 6x9x8 m). In addition, the authentic buildings of the settlement have been interwoven to each other in the plan and the third dimension, unlike these mass additions since they lack a *Hayat* as the datum element of spatial organization. The plan organization of mass additions is different from the authentic ones. Façade organization ruins the original silhouette in terms of absence of the shadow-light contrast present in the historical facades opening to vista. Roofs of the additions are different from the authentic ones with their forms and the materials (Figure 116), terrace roofs with iron railings and cement screed.



Figure 116. a-b) The view of the unqualified mass addition, 2013, c) The example of the mass addition, house numbered 55.

There are additional new masses and altered historical masses that are not in line with the silhouette (Figure 117). Even though these buildings have historical characteristics, they ruin the integrity of the settlement with their enlarged masses.



Figure 117. Additional new masses and altered historical masses that are not in line with the silhouette, 2013.

The settlement faces with the abandonment. Majority of housing units (75/133), monuments (5/7) and structures; ovens and fountains (10/14) are not used any more. Consequently, abandonment makes the settlement face with the lack of maintenance followed by ruining (Figure 118a). Majority of the housing units (67%) and monuments (71%) are in moderate and bad condition and 23% of housing units are demolished in the settlement. The views of demolished structures and their voids make the settlement appear like a ghost town (Figure 118b). Demolished structures and their voids ruin the solid-void organization and integrity of the settlement.

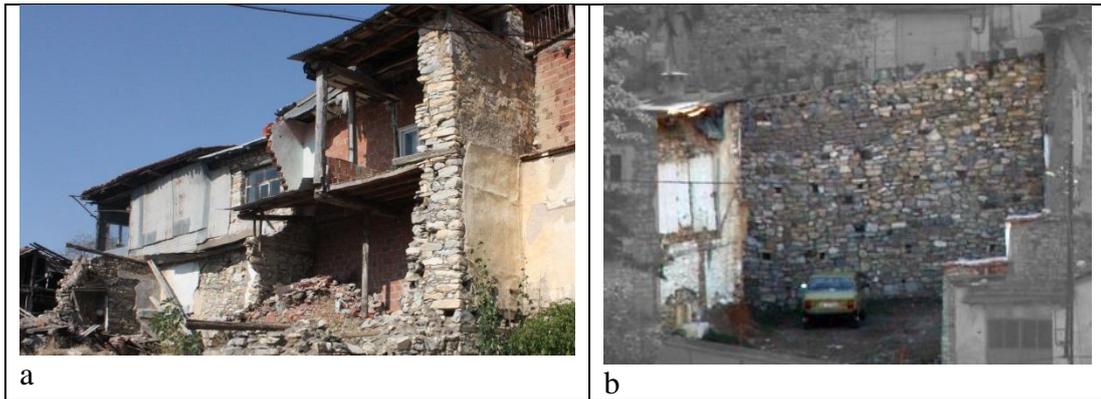


Figure 118. a) The view of ruined house, 2013, b) The view of empty lot, 2013.

In addition, majority of the streets (82%) are covered with the altered materials; key stone, cement and asphalt coverings. These material threat the authentic characteristics of the settlement.

Altered façade organization damages integrity of the silhouette of the settlement (Figure 119). Especially closed *Hayat* ruins the shadow-light contrast in the building masses. Housing units with altered façade characteristics at all floors (29/133), housing units changed only at ground floors (7/133) and housing units changed with upper floor(s) (3/133) are seen.

In addition to construction system with traditional technique, new construction technique or renewals and additions with new material are observed 45% of the settlement.

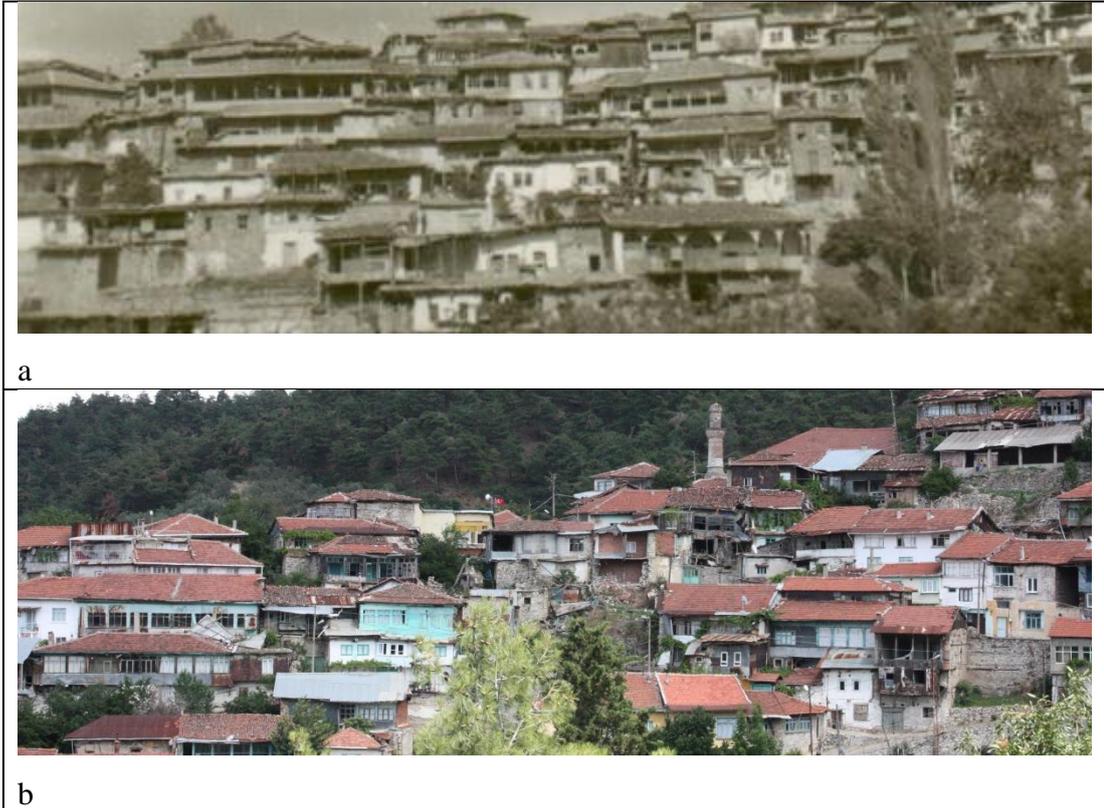


Figure 119. a) An old photo of the historical residential area (1945), (Soma Municipality, 2011), b) The present view of the historical residential area in recently, 2014.

The roofs of the buildings were repaired with marseille tiles and corrugated metal sheets by changing the original forms and heights of the roofs. Characteristics of altered roofs ruin integrity of the settlement with their inharmonious views and poor workmanships (Figure 120).

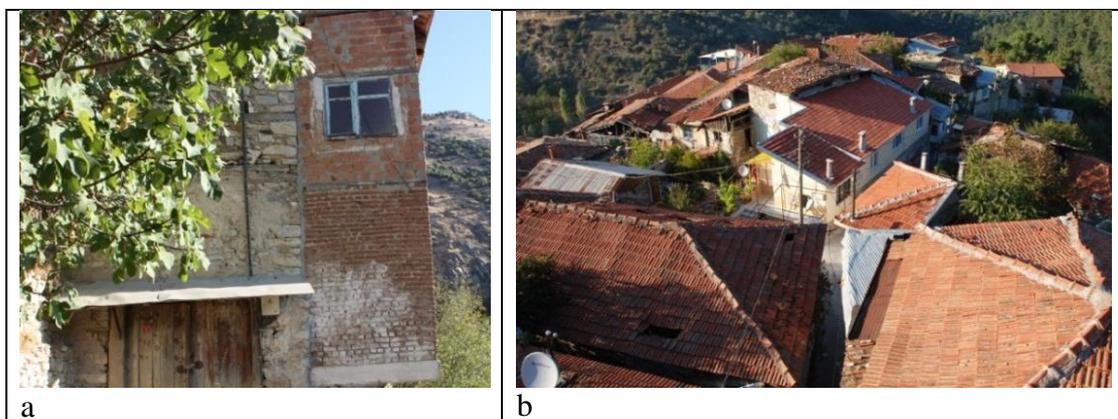


Figure 120. a) Housing unit constructed with modern technique and material, 2013, b) The view of altered roofs, (Source: Karayazılı, et al., 2011).

5.3. Evaluation of the Housing Units in Darkale

In this section, lot organization, entrances of the houses, spatial organization, spaces and architectural elements are evaluated. Finally, according to the resulting information, the restitution schemes are formulated and plan typology for the housing units is proposed. The authentic plan organization and architectural elements are evaluated as values of the housing, on the other hand, alterations of the housing units are considered as threats for the housing.

Lot formation on the rocky terrain of Kösedag is in harmony with the limitations of the topography: small lots (36-290 m²) most are enriched with vista of the valley have been created. There is no agricultural land within the residential area excluding some terraces full of fruit trees (42-278 m²) or small vegetable gardens (22-76 m²) because of the limitations of topography. This production is just for daily needs, not for an economic purpose. The housing units have four types lot organization, only main mass, main mass with courtyard or garden, main mass with annex(es) and courtyard or garden and only main mass with a passage over the street. The majority of housing units (78/133, 60%) are only mass. Moreover, the type of the lot organizations of the housing units is not related to the lot size.

Main entrances of the housing units are always located on the ground floors which are reached directly from the street, and they are at vista direction. The majority of entrances open to a closed space such as a *Taşlık* or a room (87/133).

Housing units consist of living and service spaces. Majority of the lots have only closed spaces (88 of 133); while some have both closed and open spaces (45 of 133). Dwellings commonly provide all necessities of daily life with their spaces suitable for living, producing, cooking, washing and storing. Majority of them consist only of a main mass, which is generally positioned at steep land and adjacent with each other. The other lot organizations, main mass with courtyard or with service space, are located at relatively less steep land and in a more independent manner.

The most significant spatial components of a Darkale house is *Hayat* and room whose size, location, orientation and form determine the plan typology of the housing unit.

5.3.1. Values of Housing Units

In its simplest form, a Darkale house is composed of an elevated Hayat with vista and a multi-purpose room accessed from the Hayat. A Darkale house is defined as a Hayat house opening to vista at the West. Houses generally consisted of only mass and they sometimes have courtyards. Housing units are in harmony with the terraced land at the steep hill side and they are interwoven to each other very closely both in horizontal and vertical directions.

So, limited presence of courtyards and housing units carved into the rock like sculpture and interlocking with each other in all three dimensions are peculiarities of this rural settlement. The preference of the *piano nobile* character for living spaces and organisation of the living floors repeat the typical characteristics of the Ottoman *Hayat* House. The service functions at the lower level are in accordance with the distribution of production-storage spaces in other self-sustained rural settlements of Anatolia. The utilization of local materials for construction is also a common preference in Ottoman settlements. However, the basic construction technique observed in the Ottoman houses, namely, masonry ground floors, timber frame upper floors and one service wall continuing as masonry through out the structure, is varied in Darkale in accordance with the rocky formation. The living floors are also masonry since they often interact with the rock at their rear facades and with the neighbours at their sides. So, only the vista facades and the interior walls of the living floors are timber frame.

5.3.2. Typology of the Living Floors of the Housing Units

Hayat 1 is the basis of a Darkale house. *Hayat* 1 may have linear, compact or T form. *Hayat* 1 may be oriented to vista at its long side or short side; and *Hayat* 1 may be terminated with a room or not. The other criterion is the number, orientation and distribution of the rooms. The number of the rooms range from one to four. Consequently, original plan typology of housing units is determined and presented below.

There are three basic plan types in the settlement. The first plan type is the plan with linear *Hayat 1*, the second type is plan with linear *Hayat 1* terminated with a room or kiosk, the last type is peculiar plan type (Figure 121).

Plan with linear *Hayat 1* is the most common type in the surveyed housing units (26/37). This type is observed in two different types according to orientation of *Hayat 1*; vista on the long side of *Hayat 1* and vista on the short side of *Hayat 1*, these types are classified with regard to the number of the rooms; one, two, three and four.

The type of housing unit with linear *Hayat 1*, vista on the long side of *Hayat 1* with one room is observed on the housing unit numbered 9, 30/B, 84, 119, 125 and 137/1 (6/37) (Appendix B296). All of them have preserved their authenticity. They are all small programmed houses comprised of a room and a *Hayat 1*. The housing units numbered 9, 125 and 137/1 have single stories, while the housing unit numbered 30/B is two storied; the others, 84 and 119, are three storied. The housing unit numbered 137/1 makes a passage over the street. The entrances are provided from *Hayat 1* in the single storied cases. These housing units have generally the smallest parcel size in the settlement ranging from 27 m² (housing unit numbered 137/1) to 70 m² (housing unit numbered 119). The area of *Hayat 1* varies between 6 m² (housing unit numbered 137/1) to 31 m² (housing numbered 119).

The *Hayat 1* space is generally enriched with a fireplace (number 125), an *abdestlik* (number 9 and 84), a *sedir* (number 119), niches (number 9, 119 and 137/1) and a timber staircase and its shutter in double storied houses.

While minimum area of a room is 9 m² (housing unit numbered 9), the maximum area of a room is 31 m² (housing unit numbered 119) Additionally, the features of rooms in the housing units numbered 9, 30/B 84 and 119 overlap with the Room Type 1 entered from *Hayat 1* and illuminated indirectly from *Hayat 1*. Rooms are enriched with a fireplace and *sergens* in all of the houses, and a *gusülhane* (housing units numbered 9, 84, 119, 137/1, 30/B), a cupboard system (housing units numbered 9, 30/B 84 and 119), niches (housing unit numbered 119), and shelves (housing units numbered 84 and 119). The other rooms located at the housing units numbered 125 and 137/1 overlap with the Room Type 3 entered from *Hayat 1* and illuminated directly from *Hayat 1*. These rooms are enriched with a fireplace, niches and *sergens*, a *gusülhane* and a cupboard system (housing unit numbered 137/1). The floor and ceiling of all of the rooms are covered with timber. Walls of the rooms are plastered and

painted. Rooms are thought to be for the living purpose of the family (gathering, eating and sleeping) and sometimes for reception.

Type of housing unit with linear *Hayat 1*, vista on the long side of *Hayat 1* with two rooms is also a common type (14/37), observed at the housing units numbered 1, 8, 17, 30/1, 38, 49, 53/A, 88, 93, 96, 98, 117, 120 and 134 (Appendix B297-298). Among these fourteen, ten have preserved their authenticity. They are all larger programmed houses compared to housing units with one room. The housing units numbered 1, 17, 30/1, 88, 96 and 120 have double stories, while the housing units numbered 38, 49, 53, 93, 98, 117 and 134 have three stories and the last house numbered 8 has two stories and a mezzanine. The parcel sizes of these housing units change from 38 m² (housing numbered 1) to 141 m² (housing numbered 8).

The area of *Hayat 1* ranges from 13 m² (housing numbered 17) to 72 m² (housing numbered 8). The *Hayat 1* space is generally enriched with a *köşk* which is the elevated platform (number 8 and 134), *abdestlik* (number 88, 98 and 117), *sedir* and cupboard (number 30/1, 53, 98 and 134), niches (number 9, 98, 119 and 137/1), chest (number 53), cupboard system (number 88 and 134) and a timber staircase and its shutter in all houses.

Furthermore, the features of rooms in all of these housing units overlap with the Room Type 1 entered from *Hayat 1* and illuminated indirectly from *Hayat 1*. However, there is one peculiar example with Room Type 5, combination of two interrelated spaces: one main space connected with a smaller sub-space, entered from the main one (housing unit numbered 49).

The area of these rooms varies between 7 m² (housing unit numbered 1) to 29 m² (housing unit numbered 38). These rooms are generally enriched with a fireplace, a *gusülhane*, a closet and a cupboard system, niches, shelves, *sergens* in all of the houses and ceiling ornamentation (housing unit numbered 96). The floor and ceiling of all of the rooms are covered with timber. Walls of the rooms are plastered and painted. They are thought to be for the living purpose of the family (gathering, eating and sleeping) and sometimes for reception.

The type of housing unit with linear *Hayat 1*, vista on the long side of *Hayat 1* with three rooms is a rare type (3/37), observed on the housing numbered 43, 45 and 46 (Appendix B299). All of them have preserved their authenticity. They have large lot sizes varying between 141 m² (housing unit numbered 43) and 250 m² (housing unit numbered 45). They are large programmed housing units comprised of three rooms and

a *Hayat 1*. In addition to the three rooms, there is another room at the vista side of the *Hayat 1* in housing unit numbered 45. There is a production space at the same floor with the rooms, but the entrance of this space is provided from the street directly, not from the *Hayat 1* in housing unit numbered 43. These housing units are all double storied.

The area of *Hayat 1* ranges from 33 m² (housing unit numbered 45) to 57 m² (housing units numbered 43 and 46). The *Hayat 1* space is enriched with an *abdestlik* (number 43), a *sedir* (number 45), niches (number 43), a *köşk* (number 8 and 134), a cupboard system (number 43 and 45) and a timber staircase and its shutter in all of these houses. *Hayat 1* of the housing unit numbered 43 and 46 is designed in two different levels; there is a stair in the middle of the space.

Moreover, the features of rooms in all of the housing units overlap with the Room Type 1 entered from *Hayat 1* and illuminated indirectly from *Hayat 1*. The area of the room varies between 10 m² (housing unit numbered 45) to 27 m² (housing unit numbered 43). Rooms are generally enriched with a fireplace, a *gusülhane*, a closet and a cupboard system, niches, shelves and *sergens* in all of the houses. The floor and ceiling of all of the rooms are covered with timber. Walls of the rooms are plastered and painted. They are thought to be for the living purpose of the family (gathering, eating and sleeping) and sometimes for reception.

The type of housing unit with linear *Hayat 1*, vista on the long side of *Hayat 1* with four rooms is a unique example (1/37), observed at the housing unit numbered 151 which have preserved its authenticity (Appendix A25). It is the largest programmed example. Its lot is 290 m², which is the largest one in the settlement. It is a double storied housing unit. The area of *Hayat 1* is 73 m², and there are two timber staircases due to the size of the space.

Moreover, the features of three rooms in the housing unit overlap with the Room Type 1 entered from *Hayat 1* and illuminated indirectly from *Hayat 1* and there is one room with the features of Room Type 2, which is thought to be a *Sandık* Room, whose area is 19 m². There is not any architectural element except the niche.

The area of Room Type 1 varies between 15 m² to 18 m². These rooms are generally enriched with a fireplace, a *gusülhane*, a closet and a cupboard system, niches, shelves and *sergens* in all of the houses. The floor and ceiling of all of the rooms are covered with timber. Walls of the rooms are plastered and painted. They are thought to be for the living purpose of the family (gathering, eating and sleeping) and sometimes for reception.

The Plan Type with linear *Hayat 1*, vista on the short side of *Hayat 1*, and two or three rooms is an end result of limited lot area (Appendix B300). General approach in the settlement is opening *Hayat 1* to the vista on its long side. There is one example (housing unit numbered 118) with two rooms, which is 47 m². It is comprised of *Hayat 1* (14 m²), enriched with a timber staircase and its shutter and *sedir* in front of the *Hayat 1* opening. One of the two rooms opens to the vista directly and is entered from the *Hayat 1* which is the Room Type 3 (11 m²). It is enriched with a *gusülhane*, a closet and a cupboard system. The other room (8 m²) is Room Type 1 entered from *Hayat 1* which is illuminated indirectly from *Hayat 1*. It is enriched with a fireplace, a cupboard and a *sedir*. The second housing unit is plan with linear *Hayat 1* and vista on the short side of *Hayat 1* with three rooms (number 35). The lot of it is 85 m². It is constituted of *Hayat 1* (31 m²), enriched timber staircase and its shutter. There are three rooms, one of them opens to the vista directly and entered from the *Hayat 1*, which is the Room Type 3. It is used for living purposes (13 m²). It is enriched with a *gusülhane*, a closet system and a fireplace. The other room is Room Type 2 (*Sandık Room*) entered from *Hayat 1*, which is illuminated indirectly from *Hayat 1*. *Sandık Room* served as a kitchen or storage which is 8 m². The third room is Room Type 1 entered from *Hayat 1* which is illuminated indirectly from *Hayat 1* (12 m²). It is enriched with a fireplace and a *sedir*.

The plan type with linear *Hayat 1*, terminated with a room or kiosk, is a rare type among the surveyed housing units (8/37). This type is observed in two different brands according to orientation of *Hayat 1*; vista on the long side of *Hayat 1* and vista on the short side of *Hayat 1*. These types are classified in term of the number of the rooms; two, three and four.

The type of housing unit with linear *Hayat 1*, vista on the long side of *Hayat 1* terminated with a room and with two rooms is observed at the housing units numbered 46/2 and 131 (2/37) (Appendix B301). Two of them have preserved their authenticity. They are all small programmed houses comprised of two rooms and *Hayat 1*. The housing unit numbered 46/2 is single storied and the lot is 64 m². The courtyard is located in front of the house (28 m²). The entrance of it is provided from the entrance hall located near the housing unit number 46/1. This house does not open to the vista; it is illuminated from the courtyard. There are *Hayat 1* (5 m²) and two rooms (7 m²) having the same features of Room Type 1 and Room Type 3 illuminated directly and opening to vista, which are enriched with fireplace, *gusülhane* and cupboard system. While the housing unit numbered 131 is doubled storied, its lot is 120 m². The housing unit is

comprised of the *Hayat 1* (13 m²) which is enriched with a staircase and its shutter and niches, and two combined rooms. This is Room Type 5 which is composed of two interrelated spaces: one main space (15 m²) connected with a smaller sub-space (12 m²), entered from the main one. The main space is entered from *Hayat 1* which is illuminated indirectly from *Hayat 1*, whereas the small one has more privacy, opening to vista and illuminated directly. The main room is enriched with a *gusülhane*, a closet system and *sergens*, whereas the smaller room is enriched with a fireplace, a shelf and a *sergens*.

The type of housing unit with linear *Hayat 1*, vista on the long side of *Hayat 1* terminated with a room or kiosk and with three rooms is observed at the housing units numbered 115, 130, 152 and 153 (4/37) (Appendix B302). All of them have preserved their authenticity. They are all larger programmed houses comprised to the three rooms and *Hayat 1* type. All of the housing units have double stories and the lot size varies between 218 m² (the housing unit numbered 115) and 126 m² (the housing unit numbered 153), the other housing units have 160 m² (number 130 and 152).

The area of *Hayat 1* ranges from 11 m² (housing unit numbered 153) to 41 m² (housing unit numbered 115). The *Hayat 1* space is enriched with a fireplace (number 115 and 152), an *abdestlik* (number 153), and a cupboard (number 152 and 153), niches (number 115), (number 53), a cupboard system (number 88 and 134) and a timber staircase and its shutter in all houses.

Furthermore, generally the features of rooms in the all housing units overlap with Room Type 1 entered from *Hayat 1* and illuminated indirectly from *Hayat 1*. The area of Room Type 1 ranges from 10 m² (number 153) to 27 m² (number 115). It is enriched with a fireplace, a *gusülhane*, a cupboard system, niches, shelves and *sergens* in all of the houses.

However, *Hayat 1* of the housing unit numbered 115 is terminated with Room Type 02 (*Sandık Room*) which is 22 m². In addition, *Hayat 1* is terminated with Room Type 3 (number 130 and 153). It is illuminated directly and opens to vista which is sometimes accessed directly from the street and at the same time from the *Hayat 1*. The areas of these spaces are 12 m² (number 130) and 41 m² (number 153). Moreover, *Hayat 1* is terminated with a kiosk which is Room Type 6 (number 152). Kiosk is on the living floor. It is in piano nobile character; in other words, the void created underneath this space acts as a shadowed area in the courtyard and provides total ventilation of the

Kiosk above it. The area of Kiosk is 19 m² and it is enriched with a fireplace, a *gusülhane*, a closet system, shelves and *sergens*.

The type of housing unit with linear *Hayat 1*, vista on the long side of *Hayat 1* terminated with a room and with three rooms is a unique example (1/37) (Appendix B303), observed at the housing unit numbered 19 which have not preserved its authenticity any more. It is the large programmed example and the lot is 192 m². It is a double storied housing unit. The *Hayat 1* space is located over the street in order to open to vista. The *Hayat 1* (44 m²) is enriched with a timber staircase and its shutter.

Moreover, the features of two rooms in the housing unit overlap with the Room Type 1 (27 and 14 m²), entered from *Hayat 1* and illuminated indirectly from *Hayat 1*. There is one room presenting the features of Room Type 2 (*Sandık Room*) whose area is 10 m². There is not any architectural element here, and the fourth room is the Room Type 3 whose area is 15 m². It is illuminated directly and opens to vista. It is accessed directly from the street and at the same time from the *Hayat 1*.

The last type is of housing unit with linear *Hayat 1*, vista on the short side of *Hayat 1* terminated with a room and with four rooms. It is a unique example (1/37), which is observed at the housing unit numbered 7 which have not preserved its authenticity (Appendix A29). The lot of the house is 94 m². It is double storied. The house consists of *Hayat 1* and four rooms. The area of *Hayat 1* is 24 m², which is enriched with a timber staircase and its shutter.

In addition, there is one room presenting the features of Room Type 3, whose area is 10 m². It is illuminated directly and opens to vista. It is accessed directly from the street and at the same time from the *Hayat 1*. The second room is Room Type 1 which is 10 m². The last room is Room Type 5. It is a combined room, composed of two interrelated spaces: one main space (19 m²) connected with a smaller sub-space (9 m²), entered from the main one. The main space is entered from *Hayat 1* which is illuminated indirectly from *Hayat 1* whereas the small one has more privacy, opens to vista and illuminated directly. The main room is enriched with a *gusülhane*, a closet system and *sergens* whereas the smaller room is enriched with a cupboard.

The last type is a peculiar plan type which is consisted of two subgroups: plan with central *Hayat 1* and plan with T formed *Hayat 1* (Appendix B304). There are two housing units in the plan with central *Hayat 1* group (number 12 and 76) which have preserved their authenticity. The housing unit numbered 12 is three storied (basement, ground and first floor) and the lot area is 170 m². The *Hayat 1* (56 m²) is located at the

center of the house and it passes over the street. It is enriched with a timber staircase and its shutter. In addition, there are three rooms. Room Type 4 (30 m²) is located at the vista direction which has the features of Room Type 1, but it is illuminated directly and opens to vista. It is entered from *Hayat* 1. Room Type 1 (30 m²) and Room Type 5 (22 m²) are located at the opposite side of vista.

The other house has plan with central *Hayat* 1. It is numbered 76. It is three storied (basement, ground and first floor) and the lot area is 96 m². The *Hayat* 1 (23 m²) is located at the center of the house. *Hayat* 1 is enriched with a timber staircase and its shutter, and a chest.

There is one room at the vista direction which is Room Type 4 (17 m²). Room Type 1 (34 m²) is located at the opposite direction of the vista. There are a fireplace, a *gusülhane*, a closet system, a *sedir*, a cupboard system, shelves and *sergens* at each room.

Plan with T formed *Hayat* 1 (number 42) is seen in a double storied house. This house has not preserved its authenticity. The lot area is 100 m². There is T formed *Hayat* 1 (42 m²) at the center of the house and there are two rooms (20 m²) at the two sides of *Hayat* 1 which are Room Type 1. There are a fireplace, a *gusülhane*, a closet system, a *sedir*, a cupboard system, shelves and *sergens* at each room.

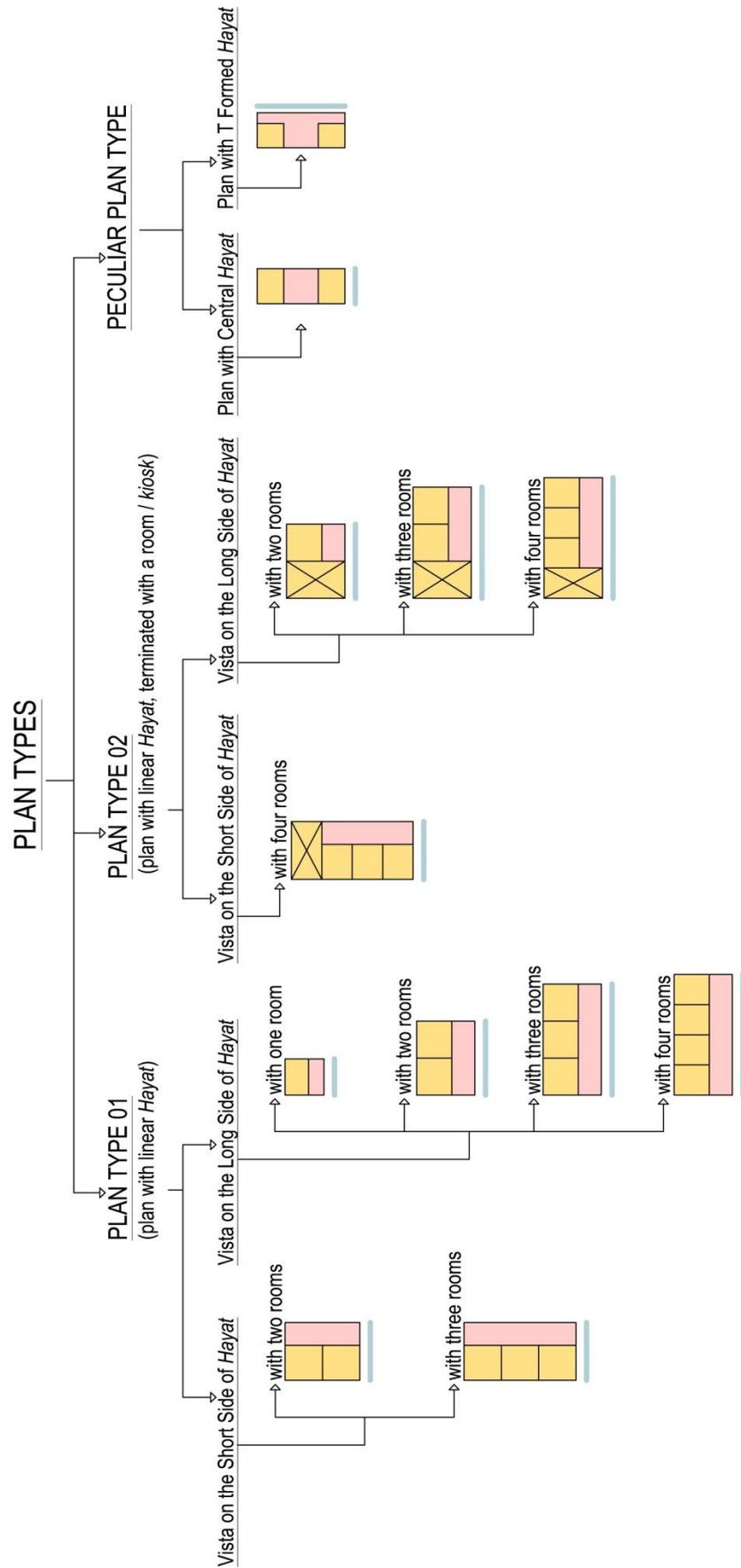


Figure 121. The diagram of the housing typology.

5.3.3. Threats for Housing Units

Altered spatial organization at housing unit scale is one of the inputs ruining integrity of the rural settlement. This evaluation is based on the housing units surveyed both externally and internally (37). 13 of 37 housing units have altered plan organization (Figure 122)

There are four different types of alteration in the housing units; addition, conversion, renewal and missing. The majority of additions are mass addition near the housing units for service necessities. Moreover, the additional timber or brick walls or glass panels to close *Hayat* is another common addition type. The conversion of function of the spaces is often observed; part of *Hayat* 1 or *Taşlık* spaces are converted into a room or rooms, room is converted into a kitchen or service space, service spaces are converted into rooms (Appendix B).



Figure 122. The functional transformations of spaces.

CHAPTER 6

CONCLUSION

Darkale in Soma, Manisa is a rural settlement which has preserved its authenticity and integrity. These are revealed in the continuation of the local way of life including production techniques such as pastoral farming and animal husbandry, pomegranate juice making, olive oil soap and cuisine tradition such as *çene çarpan* soup, *çiğirtma* and *kabartlama*, recreation activities such as *Tarhala Baranası* and point lace; and religious beliefs; namely, continuation of the presence of the congregation in most of its mosques. All these intangible heritage values have their consequences on the physical structure as well.

This thesis has put forward that understanding of the heritage characteristics of rural settlements necessitates filtering of information not only in settlement scale, but also in the surroundings of the rural settlement and also in the elements of this rural settlement.

The rural settlement of Darkale is surrounded by a natural area which has been shaped by its people throughout history, making benefit of its hill side position with moderate inclination (40%), capable of viewing the Bakırçay plain and the roads, in turn, providing secure sheltering opportunity, while enjoying the vista and warm western sunshine. The brook running through the valley and the planes ($\leq 20\%$ inclination) around which Darkale is situated is also benefitted in terms of the public activities such as commercing, washing people/clothes, tanning, oil making, eating and praying and also in terms of pastoral farming. The relatively steeper hill skirts (50-70 % inclination) and elevated plateaus surrounding the settled areas are utilized as pastures, shrub lands, Mediterranean woodland and graveyards.

In turn, the geography within which the rural settlement is situated is used in accordance with the qualities of its geographic elements such as brook-valley system, hill skirts with different inclinations and orientations, and plateaus. These geographic elements possess wholeness because they can be perceived in a single glance by a pair of human eye from different vista points. This is not only a visual wholeness but at the same time a functional one; a self-sustained settlement with its rural lands all full of

signs of interaction of its people with nature are present. The case study site which has preserved its, has been named as the cultural landscape of Darkale. This definition underlines the architectural dimension of the concept of cultural landscape; the related interdisciplinary discussions are beyond the limits of the study.

The rural settlement of Darkale is characterized by the homogeneity in the positioning and relationship of its buildings. Within the residential area, the housing units and also monuments are interwoven to each other very tightly in all three dimensions and carved into the rocky terrain like a sculpture so that each unit benefit from the opportunities of vista, sun light, safety of the hill skirt like a castle. These interactions between the natural and man-made inputs are so dense that there are very limited courtyards formed. Indeed, limited area of the hill skirt which suitable for living has been benefitted at a maximum amount. Orta Mosque, at the center of the residential area is differentiated only with its *minaret* and lack of a *Hayat*. The integrity in the silhouette is underlined with the homogeneity of the buildings masses all two or three storied, *Hayats* oriented to the vista, projections, supporting walls and passages over the street and also the local construction technique and materials such as cut stone blocks, rubble stone and slate stone. Within the brook-valley system, the density is low, and the monuments stand out with their relatively larger masses within the wide open spaces such as squares and agricultural fields. This very narrow valley with its low light quality and continuous sound of the brook creates a very strong sense of place for its people. This place is “Darkale”.

The housing units are the primary components of the rural settlement. They are characterized by living floors in piano nobile character and oriented to the vista, and service floors on the lower level. In addition to these typical characteristics of the Ottoman house, Darkale houses have some peculiarities stemming from rare presence of courtyards, very close relations with neighbors, and steepness of each lot due to the limitations of the deep valley and the steep rocky terrain. These all create the sense of being secured in a castle. The indispensable interaction with the rocks and the neighbor housing units have given way to another peculiarity; timber frame utilization only at the vista facades and interior walls of the upper floors.

The threats against the integrity of cultural landscape of Darkale are abandonment of the pastoral way of life and mining becoming a major profession; and immigration to cities and abandonment of the rural settlement. This gives way to lack of maintenance, running of housing units and finally gaps in the silhouette stemming from emptying of lots. Another result is construction of unqualified mass additions and further of housing units to meet contemporary necessities. In addition, the functional transformation of space is common in the housing units due to changing lifestyle; namely, *Hayats* becoming closed spaces, rooms becoming kitchens and other service spaces, *Hayats* and *Taşlıks* being converted into rooms.

Nevertheless, the interventions to the elements of the cultural landscape are limited, and have not ruined the overall integrity.

Despite these threats, Darkale rural settlement together with its cultural landscape and its housing units as its basic components has an outstanding value regarding tangible and intangible values, authenticity and integrity arousing in consequence of relation between human and nature throughout the history.

As a result, this thesis emphasized that;

- Preservation of authenticity and integrity should be taken as a primary criterion in the conservation aimed evaluation of rural settlements and housing units as their basic components.
- Conservation aimed evaluation of a rural settlement should not only focus on the settlement itself, but also consider its cultural landscape, since cultural landscape is functionally and visually linked with the settlement.
- The definition of a cultural landscape whose major component is a rural settlement should include geographic borders, natural and man-made elements and vista points.
- The borders of the listed site determined by the related Regional Conservation Council for Darkale do not overlap with the borders of the site including heritage values documented in this study. In other words, the site is listed as urban site. This brings forward focusing only on the residential area and the public gathering, commercial and production area. However, the case study is not an urban site, but a rural one. A rural settlement is a whole with its cultural landscape which involves its agricultural fields, pastures and shrub lands, Mediterranean woodlands and rocky terrains. The concepts of rural settlement and cultural landscape should be involved in

our legal framework. The definition of both of these borders requires interdisciplinary studies. This thesis has evaluated data only within the frame of the discipline of architectural restoration. Similarly, the buffer zone defined for the listed urban site of Darkale should be reconsidered, taking into account the borders and elements of the cultural landscape such as archeological ruins, historical graveyards, old paths, pastoral farming and animal husbandry zones, pastures and shrub lands and Mediterranean woodlands.

- The three scaled way of filtering heritage data and conservation problems proposed in this study will provide betterment in the handling of development-conservation balance.
- Turkey should be sincere in its applications related with conservation of its cultural and natural heritage since it has signed the related international documents.

REFERENCES

- Akın, N. and Eres, Z. 2002-2003. Kırsal Mimarlık Envanteri Fiş Örnekleri ve Kullanım Kılavuzu. *TÜBA-TÜKSEK Türkiye Kültür Envanteri Kılavuzu*. TÜBA Yayınları, İstanbul.
- Altınar, B. A. 1937. Tarhala Obasını Tanıyalım. *Gediz Dergisi*, IV.
- Altınok, S. 2001. Türkiye’de Ulaştırma Politikaları, Karayolları ve Demiryollarının Mukayesesi. *Sosyal ve Ekonomik Araştırmalar Dergisi 1-2*. Konya, pp. 73-87.
- Arel, A. 1991. Ege Bölgesi Ayanlık Dönemi Mimarisi: 1989 Dönemi Yüzey Araştırmaları. *IIIIV. Araştırma Sonuçları Toplantısı*. Kültür Bakanlığı Yayınları, Ankara. pp. 1-25.
- Arel, A. 1992. Soma Yakınlarında Eski Bir Dağ Yerleşmesi: Tırhala Köyü. *IX. Araştırma Sonuçları Toplantısı*. Kültür Bakanlığı Yayınları, Ankara. pp. 119-131.
- Arık, R. 1973. *Batılılaşma Dönemi Türk Mimarisi Örneklerinden Anadolu'da Üç Ahşap Cami*. Ankara Üniversitesi Basımevi, Ankara, pp. 40.
- Atila, N. 2002. *İzmir Demiryolları*. İzmir Büyükşehir Belediyesi Kültür Yayını, İzmir, pp. 30.
- Bakker, B. 2004. *Landscape en weredbleeld*. Van van Eyck tot Rembrandt, Amsterdam.
- Bayatlı, O. 1949. Bergama Tarihinde İlkçağ ve Bakırçay Havzası, *Arkhaik - Klasik Kültürler Fasikül: 1*. Bergamayı Sevenler Cemiyeti, İzmir, pp. 15.
- Baykara T. 1988. Anadolu’nun Tarihi Coğrafyasına Giriş I. *Anadolu’nun İdari Taksimatı*. Türk Kültürü Araştırma Enstitüsü Yayınları, Ankara.
- CEMAT. 2003. European Rural Heritage Observation Guide, <http://www.coe.int/t/dgap/localdemocracy/cemat/VersionGuide/Anglais.pdf>, accessed April 22, 2015.
- Council of Europe. 1988. Recommendation No.R (89) 6 on the Protection and Enhancement of the Rural Architectural Heritage, <https://wcd.coe.int/com.instranet.InstraServlet?command=com.instranet.CmdBlobGet&InstranetImage=610342&SecMode=1&DocId=701018&Usage=2>, accessed April 22, 2015.
- Council of Europe. 1989. Recommendation No.R (89) 6 on the Protection and Enhancement of the Rural Architectural Heritage, <https://wcd.coe.int/com.instranet.InstraServlet?command=com.instranet.CmdBlobGet&InstranetImage=610342&SecMode=1&DocId=701018&Usage=2>, accessed April 22, 2015.

- Council of Europe. 1995. Recommendation No.R (95) 9 on the Integrated Conservation of Cultural Landscape Areas as Part of Landscape Policies, <https://wcd.coe.int/com.instranet.InstraServlet?command=com.instranet.CmdBlobGet&InstranetImage=536539&SecMode=1&DocId=527032&Usage=2>, accessed April 22, 2015.
- Council of Europe. 2000. European Landscape Convention, <https://wcd.coe.int/ViewDoc.jsp?id=358887>, accessed April 22, 2015.
- Çakmak, Ş. 2001. *Birgi Tarihi, Tarihi Coğrafyası ve Türk Dönemi Anıtları*. Ed. H. R. Ünal. T.C. Kültür Bakanlığı Yayınları, Ankara.
- David Rumsey Map Collection Website. 2010. *Asia Minor map drawn by Mitchell Samuel Augustus, 1875*. <http://www.davidrumsey.com/luna/servlet/detail/RUMSEY~8~1~28534~1120427:AsiaMinor>, accessed December 23, 2014.
- Demirel, G. D. 2010. *Development and Conservation of Cultural Properties in Rural Areas of Eastern Black sea Region: A Case Study in Karacakaya Village*. Unpublished MSc. Thesis, Middle East Technical University, 142 p.
- Düzgün, H. Ş. 2014. 13 Mayıs 2014 Tarihinde Soma Eynez Yeraltı Kömür Ocağında Meydana Gelen Facia ile İlgili Değerlendirmeler. *TMMOB Jeoloji Mühendisleri Odası Haber Bülteni*, Soma Özel Sayısı, 3, Ankara, pp. 15-39.
- Egi, A. 2011. *Darkale Köyü'nün Sosyolojik İncelemesi: Darkale Köyü Yenileme Projesi Öncesinde Köyün Sosyal, Kültürel ve Ekonomik Durum Tespiti ve Öneriler*. Unpublished Bachelor Thesis, Balıkesir University, Faculty of Arts and Sciences, Department of Sociology, 142 p.
- Elerie H. and Spek T. 2010. *The Cultural Biography of Landscape as a Tool for Action Research in the Drentsche Aa National Landscape (Northern Netherlands). Cultural Landscape & Heritage Paradox: Protection and Development of the Dutch Archaeological -Historical Landscape and its European Dimension*. Amsterdam University Press, Amsterdam, pp. 83-115.
- Emecen F. 1996. *Beylikten Sancağa Batı Anadolu'da İlk Osmanlı Sancaklarının Kuruluşuna Dair Bazı Mülahazalar*. Türk Tarih Kurumu, Ankara, pp. 81-92.
- Emecen F. 1998. *Hüdavendigâr*. <http://www.islamansiklopedisi.info>, Cilt: 18, pp. 285-286, accessed December 23, 2014.
- Emecen F. 2009. *Saruhanoğulları*. <http://www.islamansiklopedisi.info>, Cilt: 36. pp. 170-173, accessed December 12, 2014.
- Encyclopedia Britannica. 2014. <http://www.britannica.com/search//graben>, accessed February 10, 2015.

- Eres, Z. 2008. *Türkiye’de Planlı Kırsal Yerleşmelerin Tarihsel Gelişimi ve Erken Cumhuriyet Dönemi Planlı Kırsal Mimarisinin Korunması Sorunu*. Unpublished PhD. Thesis, İstanbul Technical University, p.668.
- Eres, Z. 2013. Mimari ve Kentsel Koruma. *Prof.Dr. Nur Akın'a Armağan*. Ed. K. Eyüpgiller and Z. Eres. YEM Yayınları, İstanbul, pp. 439-452.
- Ergül, N. 15. September 2013, interviewed by Ayşen Etlacakuş, Darkale.
- Ergün, İ. 1997. *Soma I-II*. Soma Belediyesi Yayınları, İzmir.
- Eyüpgiller, K. 2014. *Arapgir Tarih, Mimari ve Yaşam Taşınmaz Kültür Varlıkları Envanteri*. Arapgir Kültür Derneği, İstanbul.
- Fuentes, J. M. 2010. Methodological bases for documenting and reusing vernacular farm architecture. *Journal of Cultural Heritage* 11, pp. 119–129. Doi:10.1016/j.culher.2009.03.004
- Genereal Directorate of State Archives, Department of the Ottoman Archives. 1995. *166 numaralı Muhasebe-i Vilayet-i Anadolu Defteri, Hüdavendigâr Livası, 1530*, (Ottoman tax census register of the kaza of Tarhala of liva of Hüdavendigâr documents, numbered 166), Ankara.
- Glendinning, M. 2013. *The Conservation Movement: A History of Architectural Preservation: Antiquity to Modernity*. Routledge, Taylor & Francis Group, London.
- Gökçen, İ. and Uluçay, Ç. 1939. *Manisa Tarihine Genel Bir Bakış*. Resimli Ay Matbaası, İstanbul, pp. 23, 42.
- Gökçen, İ. 1946. *Manisa Tarihinde Vakıflar ve Hayırlar I*. İstanbul, pp. 221.
- Greenpeace Website. 2014. *Yırca’da acele kamulaştırmaya yürütmeyi durdurma*. <http://www.greenpeace.org/turkey/tr/news/acele-kamulastirmaya-yurutmeyi-durdurma-071114/>, accessed December 12, 2014.
- Günay, V. 2006, XVI. Yüzyılda Tarhala Örneğinde Batı Anadolu’da Iskan Değişimi. *Tarih İnceleme Dergisi* Vol: XXI, Number: 1, Ege Üniversitesi Basımevi, İzmir.
- Güven, M. 24. August 2013, interviewed by Ayşen Etlacakuş, Darkale.
- Hammer, J. V. 1983. *Osmanlı Devleti Tarihi*, (Translated into English by M. Çevik, E. Kılıç). Üçdal Yayınevi, İstanbul.
- ICOMOS. 1999. Charter on the Built Vernacular Heritage, http://www.international.icomos.org/charters/vernacular_e.pdf, accessed April 22, 2015.
- ICOMOS. 2001. World Heritage under Risk Report <http://www.icomos.org/risk/2001/turk2001.htm>, accessed April 22, 2015.

- İçişleri Bakanlığı, İller İdaresi Genel Müdürlüğü. 1968. *Köylerimiz*. Başbakanlık Basımevi DSİ, Ankara, pp. 40.
- İlgürel, M. 1992. *Balıkesir*. <http://www.islamansiklopedisi.info>, Cilt: 5, pp. 12-14, accessed December 23, 2014.
- İller Bankası. 2009. *Soma (Manisa) Koruma Amaçlı İmar Planı Araştırma Raporu*, İller Banlası Genel Müdürlüğü, İmar Planlama Dairesi Başkanlığı.
- İlter, F. 1969. *Birgi Gündük Minare Camisi*. Anadolu, XIII. Türk Tarih Kurumu Basımevi, Ankara, pp. 77-81.
- Karadağ, A. 2005. *Coğrafi Değerlendirmelerle Soma'da Değişen Çevre, Kent ve Kimlik*. Ege Üniversitesi Edebiyat Fakültesi Yayınları 131, İzmir.
- Karadağ, A. 2006. Linyit İşletmeleri ve Termik Santralin Ardından Soma'da Değişen Çevre, Kent ve Kimlik. *Ege Coğrafya Dergisi* 15. İzmir, pp. 31-50.
- Karayazılı, Z., Mısırlı, A., Boztepe, Ç. and Karayılmaz, H. 2011. *Conservation Project of Darkale, Soma, Manisa*. Studio Course: Preservation and Development Methods of Historic Environment, Supervisor: Asst. Prof.Dr. Figen Akpınar, The Graduate Program of Architectural Restoration, İzmir Institute of Technology, İzmir.
- Karpat, K.H. 2003. *Türkiye'de Toplumsal Dönüşüm*. İmge Kitapevi, Ankara.
- Kıncı, D. 2014. *Restoration of a Historic Olive Oil Mill in Dikili*, Unpublished MSc. Thesis, İzmir Institute Technology University. p 185.
- Kıbar, A., 2008. *Restoration of a Historic Olive Oil Mill in Altınoluk*, Unpublished MSc. Thesis, İzmir Institute Technology University. p.240.
- Kiepert, H. 1855, 1867, 1890. *The Maps of Heinrich Kiepert*. The University Chicago Library. <http://www.lib.uchicago.edu/e/collections/maps/kiepert>. accessed February 10, 2015.
- Koçman, A. 1993. *Ege Ovalarının İklimi*. Ege Üniversitesi Edebiyat Fakültesi Yayınları, İzmir.
- Kuban, D. 1995. *The Turkish Hayat House*. Eren Yayıncılık, pp. 47-100.
- Kul, F. N. Çil, E., 2015. *Ildırı: Yerleşilemeyen Köy*. Mimarlık 381.
- Kurmuş, O. 1974. *Emperyalizmin Türkiye'ye Girişi*. Bilim Yayıncılık, Ankara.
- Kutlusoy, İ. 1971. *Soma*. Üçdal Neşriyat Kol. Şti., İstanbul.
- Madran, E. ve Özgönül, N. 1999. *International Documents Regarding the Preservation of Cultural and Natural Heritage*, METU Faculty of Architecture, Ankara, pp. 210-214, 335-336.

- Madran, E. ve Özgönül, N. 2005. *Kültürel ve Doğal Değerlerin Korunması*. TMMOB Mimarlar Odası, Ankara.
- Manisa Valiliği Gıda, Tarım ve Hayvancılık İl Müdürlüğü. 2014. *Soma İlçesinde Uygulanabilecek Tarımsal Projeler*, Manisa.
- Öden, Z. G. 2001. *Karesioğulları*. <http://www.islamansiklopedisi.info>, Cilt: 24, pp. 488-489, accessed December 12, 2014.
- Öz, F., 20. June 2014. interviewed by Ayşen Etlacakuş, Darkale.
- Özkaya, Y. 1977. *Osmanlı İmparatorluğu'nda Ayanlık*. Ankara University, Ankara.
- Ramsay, W. M., 1890. The Historical Geography of Asia Minor. *Royal Geographical Society*. The edition published in 1890 by John Murray, London, pp. 127-128.
- Selen, H. S., 1948. 16. ve 17. yüzyıllarda Anadolu'nun Köy ve Küçük Şehir Hayatı. *III. Türk Tarih Kurumu Kongresi Ankara 15-20 Kasım 1943*. Ankara, pp. 590-598
- Sendika.org Website. 2014. <http://www.sendika.org/2014/01/2013-madencilik-sektoru-kaza-raporu>, accessed December 25, 2014.
- Sevin, V. 2001. *Anadolu'nun Tarihi Coğrafyası I*. Türk Tarih Kurumu Yayınları, Ankara, pp. 1-5, 43-55.
- Soma Municipality. 2011. *Soma Guide*. Soma Belediyesi Yayınları, İzmir.
- Stephenson, J. 2007. The cultural values model: An integrated approach to values in landscapes. *Landscape and Urban Planning*, Vol: 84, pp. 127-139. Doi:10.1016/j.landurbplan.2007.07.003
- Strabon. 2005. *Antik Anadolu Coğrafyası – Geographika XII, XIII, XIV*. Arkeoloji ve Sanat Yayınları, İstanbul.
- Şahin Güçhan, N., 2007. Observations on Earthquake Resistance of Traditional Timber Framed Houses in Turkey. *Journal of Building and Environment*, Vol: 42, Issue 2, pp: 840-851. Doi:10.1016/j.buildenv.2005.09.027
- T.C. Başbakanlık Devlet Arşivleri Genel Müdürlüğü, 2014. *Osmanlı Arşiv Katalogları*. (General Directorate of State Archives. Ottoman Archive Catalogues), <http://katalog.devletarsivleri.gov.tr/osmanli/arsiv.aspx>, accessed December 8, 2014.
- TC Milli Eğitim Vekaleti. 1953. *Milli Eğitimle İlgili Kanunlar*. Milli Eğitim Basımevi, Ankara.
- TCDD, 1966. *Reorganizasyon Raporu*, Ankara.

- Texier, C. 1885. *Küçük Asya: Coğrafyası Tarihi ve Arkeolojisi II* (Translated into English by Ali Suat). Enformasyon ve Dokümantasyon Hiz. Vakfı, 2002, Ankara, pp. 81-82.
- Tören, T. and Ünal, E. 2001. Assessment of Open Pit Coal Mining Impacts Using Remote Sensing: A Case Study from Turkey. *17th International Mining Congress and Exhibition of Turkey*, pp. 461-466.
- Troll, C. 1939. *Luftbildplan und ökologische Bodenforschung, Zeitschrift der Gesellschaft für Erdkunde zu Berlin*, pp. 241-298.
- Tuncel, M. 1977. Türkiye’de Yer Değiştiren Şehirler Hakkında Bir İlk Not. *İstanbul Üniversitesi Coğrafya Enstitüsü Dergisi*, 20-21, pp. 119-128.
- Tunçoku, S. S., Akış, T., İnceköse, Ü., Avar, A. 2012. *İzmir Kırsal Alan Yerleşim ve Mimarlık Envanteri*. İzmir İl Özel İdaresi, İzmir.
- Turkish Republic Prime Ministry General Directorate of State Archives Department of Ottoman Archives Website. 2015. <http://katalog.devletarsivleri.gov.tr/osmanli/arsiv.aspx>, accessed April 22, 2015.
- Türk Mühendis ve Mimar Odaları Birliği. 2014. *Soma Maden Faciası TMMOB Raporu*. Mattek Basın Yayın Tanıtım Tic. San. Ltd. Şti, Ankara.
- Umar, B. 1984. *Mysia*. Ak Yayınları Kültür Kitapları Serisi: 9, İstanbul, pp. 15.
- Umar, B. 1993. *Türkiye’deki Tarihsel Adlar*. İnkılap Kitapevi, İstanbul, pp. 797.
- UNESCO. 1972. Convention Concerning the Protection of the World Cultural and Natural Heritage, <http://whc.unesco.org/archive/convention-en.pdf>. accessed April 22, 2015.
- UNESCO. 2013. Operational Guidelines for the Implementation of the World Heritage Convention, 2013. <http://whc.unesco.org/en/guidelines>, pp. 13-24, accessed April 22, 2015.
- UNESCO. 2015. *World Heritage List: Bursa and Cumalıkızık*. <http://whc.unesco.org/en/list/1452>, accessed April 22, 2015.
- Uzunçarşılı, İ. H. 1929. *Afyon Karahisar, Sandıklı, Bolvadin, Çay, İsaklı, Manisa, Birgi, Muğla, Milas, Peçin, Denizli, Isparta, Atabey ve Eğirdir deki Kitabeler ve sahip, Saruhan, Aydın, Menteşe, İnanç, Hamit Oğulları hakkında malûmat*. Devlet Matbası, İstanbul, pp. 71.
- Ünal, H. R. 2001. *Birgi Tarihi, Tarihi Coğrafyası ve Türk Dönemi Anıtları*. T.C. Kültür Bakanlığı Yayınları, Ankara, pp. 80-81.
- Yeşilyurt, G. H. 2012. *Conservation in Rural Areas: A Case Study in Örenli Village in Kepsut, Balıkesir*. Unpublished MSc. thesis, Middle East Technical University. 134 p.