



The Rural Houses of Akçakese – İstanbul

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ABSTRACT

Akçakese village is one of the most valuable and conserved villages of Şile, which is a district on the north of European side of İstanbul. Traditional Akçakese houses were built of natural materials and are of great cultural importance. The architecture of the village is an authentic example of an economic, flexible, nature-dependent architecture that emerges from the function and the needs of human being. The historical, architectural, environmental features of the traditional houses and how they developed through time with special characteristics and their relations with the settlement is evaluated. The construction system, spatial characteristics and the building materials are explained. Within the scope of this study, timber-framed structure filled-in with wattle and daub is analyzed through traditional rural houses of Akçakese and aimed to contribute to documenting the original features of these buildings. The assessment is based on literature review, field observations, interviews, visual materials that focus on the architectural characteristics of houses. It is considered that these data would provide guidance for the building designs in rural areas of today. It is important to retain awareness about the importance of preservation of this traditional houses and its environment. The village has a favorable cultural, environmental and architectural potential for rural tourism that is important in terms of heritage conservation.

Keywords: Architectural heritage, Rural Settlement, Traditional timber house, Timber frame, Wattle and Daub

1. INTRODUCTION

Vernacular architecture is the accumulation of traditional knowledge produced with local materials by developed craftsmanship. Materials and environmental factors such as topography and climate are the main determinants that shape characteristics of traditional architecture.

Throughout the history social-cultural factors, climate and physical properties of the place shaped vernacular settlements. These settlements reflect the simplest state of nature-human-culture interaction, and have been created and filtered through thousands of years of experience and knowledge throughout generations. The houses have been built with locally available materials in accordance with local conditions and reflect the local tradition. Therefore to protect and conserve them are crucial as they reflect the past. Different studies have pointed out the fact that vernacular architecture could not be evaluated only by geographical, climatic or environmental factors, along cultural and social factors are also the main determinants. (Rapoport¹ 1969, Oliver, 1969²-2006³).

Rural settlements have important examples of traditional architectural features and also represent the ideal synthesis of people's ability to modify the environment to their own advantage with minimum impact. Every building can be an important part of rural architecture creating the identity of a landscape or a region. Akçakese village in İstanbul is selected as a case study due to its authentic and unique architectural features as it maintains its traditional characteristics. The unique vernacular architecture of Akçakese reflects and supports the region's own identity.



In the historical process, the Anatolian/Turkish culture shaped the rural settlement in different parts of the country. The studies dealing with the rural settlements of Anatolia are questioned from different perspectives and concentrated on architectural characteristics, sustainability, preservation, tourism potential and energy-efficient characteristics. (Davulcu 2009⁴; Gezer 2013⁵; Kaya et al. 2015⁶; Köşlük K. 2012⁷; Şahinalp 2012⁸, Çorapçıoğlu et al. 2008⁹, 2011¹⁰).

Construction systems and materials of traditional rural areas have been the subject of research around the World (Ngowi 1997¹¹; Goodhew and Griffiths 2005¹²; Delgado and Guerrero 2006¹³; Pachego-Torgal and Jalali 2012¹⁴) and also studies on construction techniques of rural houses in Turkey. (Kafescioğlu 1949¹⁵; 1955¹⁶; Özgüner 1970¹⁷; Eriç 1979¹⁸; Batur 2005¹⁹; Tunçoku et al. 2014²⁰).

Akçakese village has large forest areas, so wood is the characteristic construction material. The structural system of houses consists of both masonry and timber as main construction materials. Wattle and daub technique is used as a wall infill system in timber framed structure of the houses. Under the effects of global economic, social and political circumstances deruralization is occurred in the village and the population of the village has decreased. Some of the houses are no longer in use and they have been left to deteriorate and the architectural elements of some houses have incompatible transformations.

Research Methodology

Statutory protection of traditional Akçakese houses dates from 2009, lists of buildings of special architectural or historic interest were compiled, totally 60 of them were recorded. Their form, plan and method of construction simply follow a tradition for the time and place of their conception. The unique vernacular architecture of village reflects and supports the region's own identity.

This study aims to understand the historical, architectural, environmental features of traditional Akçakese houses and tries to make analysis of the characteristics of the settlement, the building techniques and materials to contribute to documenting the original features of these buildings. Spatial and functional organization, construction systems and materials used for Akçakese houses are examined. It is considered that these data would provide guidance for the building designs in rural areas of today. The data used in this study is based on literature review, the documents of Şile Municipality, Plan and Project Management, visual materials (photos, maps) as well as site observations and interviews.

2. RURAL ARCHITECTURE IN TURKEY

The basic principles of rural architecture in Anatolia has defined by Bektaş as:

'Suitability to the conditions of environment and living; harmony between interior and exterior; compliance with the climate; solution inside towards the outside; dimensions based on the human body; selection of locally available materials; flexibility; realism; rationalism; prudence; simplicity' (Bektaş²¹, 2001).

Soil, Stone, and wood are the main building materials used in all civilizations until the industrial revolution. The most common materials in the local architecture in Anatolia are wood, stone and mud brick. These materials were used separately or mixed in various combinations in different structures due to climate, topography and cultural factors and traditions.

Kuban stated that: *'For us who are aware of the breathtaking possibilities of contemporary technology, it is surprising that until the 19th century, all the great building actions were carried out with least number of materials and primitive techniques. Equally surprising is the richness of form reached by these materials.'* (Kuban D, 1998, p.28)



Generally, the term Turkish House is used to define the houses, which located inside Ottoman Empire borders. The climate, topography, material are the main determinants of houses which produced in different variations in different regions. Many studies were conducted about traditional Anatolian houses in towns and cities (Eldem 1955²²; Aksoy 1963²³; Kuban 1995²⁴; Günay 1999²⁵; Küçükerman 2007²⁶). The most determining factor of the typology of Turkish house is based on plan schemas, and they were identified according to the location of the *sofa* (hall); and defined as houses with no sofa or with central, internal and external sofa (Eldem 1955²⁷-1984; Küçükerman 1973²⁸; Kuban 1995²⁹). The room-sofa organization has correlated the tent of nomadic Turks, (Küçükerman 1973³⁰) and also the influence of religion and different cultures or regional variations and materials are examined (Neumann, 1975; Günay³¹ 1999, Aksoy 1963³²; Eriç 1979³³; Kazmaoğlu and Tanyeli 1979³⁴; Kuban 1966³⁵).

Anatolia is geographically divided into seven different regions and this is reflected in the diversity of rural architectural examples. Each region has its own unique settlement organization that reflects its own characteristics. (Aksoy 1963³⁶; Eriç 1979³⁷; Kazmaoğlu and Tanyeli 1979³⁸; Kuban 1966³⁹). Besides the materials, geographical or cultural factors, risks such as the earthquake is also a significant factor affecting the development of the construction system. According to the construction techniques, traditional Turkish House are categorized as timber frame and masonry. There are various examples in which timber, stone, and mud brick are used in different combinations as composite solutions.

Kuban (1995⁴⁰) categorized the residential architecture of Anatolia (Anatolian house) into 7 regions according to climate and technique and also by considering the intangible factors such as cultural interaction;

1. Stone architecture: South-eastern Anatolia; reflects the common culture of Northern Syria
2. Stone architecture with wood lintels: Beyond Erzurum North-Eastern Anatolia related to the South Caucasus and Dagestan
3. Timber framed houses: Eastern Black Sea Region
4. Flat-roof and cubic stone architecture of the Aegean and western Mediterranean regions
5. The stone architecture of Central Anatolia, especially cities of Niğde and Kayseri
6. The mudbrick architecture of Central Anatolia mostly in the village and small city environment roots dating back to the new stone age
7. Hımiş technique: Between the coasts of Anatolia and the middle plateau, from the Sivas to the west and from the Inner Aegean to the northern slopes of the Toros, and to some extent in the Balkans. He stated that hımiş technique was developed in Anatolia and spread through the borders of the Ottoman Empire.

Timber Frame Structure

Timber is one of the main construction material which used with different details and techniques for the civil architecture. Timber which is used mostly in the forested area offers simple and functional solutions and preferred due to its lightweight compared to stone, its tensile and compressive strength. The timber walls are composed of either block wood or framed structure with totally wood or composite with timber studs and masonry infill (Arun⁴¹, 2012).

The timber frame structure is suitable for creating light, multi-story buildings, therefore it has wide application areas in all the regions of the country with different spatial solutions (bays, balconies, fringes). However it has been widely used in the northern and western Anatolia, in the Marmara Region and northern belt of Central Anatolia, which are Turkey's earthquake risk areas.

The earliest examples of residential structures with timber-framed construction technique in Turkey dates back to the seventeenth century and continued until the first quarter of

the twentieth century. After 1940, this tradition continued limitedly in rural areas. The distribution of timber frame structure is related also to the forested regions in Anatolia. It is used also as a log house style or as timber joint houses. (Şahin Güçhan, N, 2018⁴²)

Timber frame structure which is formed by posts and beams are constructed either by filling the gaps of the frame with different materials or cladding them by wood. Framed systems of timber structure consist of horizontal, vertical and diagonal members that are the main posts, studs, braces, window and door sills. Main posts are placed at the corners of the places and studs are used as secondary structural posts and they are also used for framing the openings. Diagonal braces provide the resistance of structure against horizontal forces and increase the resistance against earthquakes. Loads of floors and roofs supported by wall frames and they also resist the earthquake force and other horizontal forces.

Timber frame is constructed with vertical main load bearing elements in every 1,00 m to 1,50 m and secondary elements in every 40-60 cm. Due to physical properties of wood and its lightweight, the foundation of timber frame is designed in a simple way which is constructed as a shallow foundation. The timber-framed floor/s are constructed on either a masonry foundation, masonry sub-basement or top of the masonry ground floor and a composite solution is produced. The building loads were transmitted to the foundation and the ground via the wooden columns. The ground floors of the traditional houses are designed for service spaces and constructed with adobe or stone masonry with timber lintels used as a reinforcing component of the masonry walls.

Examples of traditional timber frame structures starting from the 17th century and extant are produced with 3 construction techniques; *hımış*, *bağdadi* and woodcladding. Günay classified timber framed structures in two groups; *hımış* and *bağdadi*, and classified *bağdadi* also in two; -with inner and outer surfaces plastered, -with inner surface plastered outer surface wood cladding (Günay 1999⁴³). *Hımış* and *bağdadi* systems have been used extensively in the coastal regions of Anatolia.

The majority of the structures which have survived until today are produced with *hımış* across the Ottoman Empire. In the *Hımış* system, timber frame is based on a masonry and finished with a timber roof. Timber frame is constructed in different dimensions with various solutions and composed the wall elements. They were cladded or infilled and then plastered or in some cases not plastered and reflect the elements of its system on its facades. As a filling material; brick, adobe, stone, wood, wattle and daub were used. Traditional timber framed systems should not be considered as a technically uniform type as it allows regional variations as a building technique and named regional names.

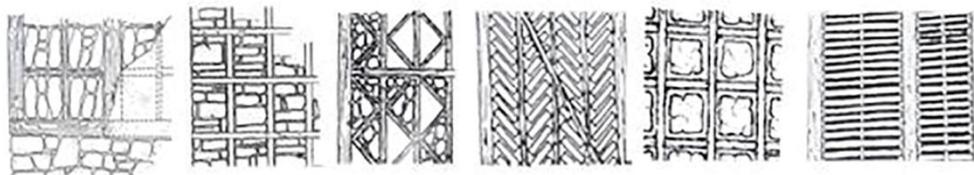


Figure 1: Various types of wall infill systems (Stone, brick, mudbrick, wattle and daub) in timber frame

Wattle and Daub Technique

The history of wattle and daub technique dates back to antiquity. As Kruger mentioned, it represents an example of independent or parallel invention as a common building strategy in distinct and unrelated parts of the World (Kruger⁴⁴, 2014). In the Encyclopædia Britannica wattle and daub, in building construction is defined as 'method of constructing walls in which vertical wooden stakes, or wattles, are woven with horizontal twigs and branches, and then daubed with clay or mud. This method is one of the oldest known for making a weatherproof structure. In England, Iron Age sites have been discovered with

remains of circular dwellings constructed in this way, the staves being driven into the earth.(url 1⁴⁵)

Fragments from prehistoric wattle and daub buildings have been found in Africa, Europe, Mesoamerica and North America (Shaffer, Garry D⁴⁶,1993). Earliest examples of wattle and daub can be found in an iron age settlement in Glastonbury in Britain (Davey⁴⁷, 1961).Vitruvius mentioned this technique in his second book: (chapter VIII paragraph 20)

"I could wish that it had never been invented. ...it is made to catch fire, like torches. And, in the stucco covering, too, it makes cracks from the inside by the arrangement of its studs and girts. For these swell with moisture as they are daubed, and then contract as they dry, and, by their shrinking, cause the solid stucco to split."(Vitruvius & Morgan⁴⁸, 1960)

According to archaeological finds in Anatolia, production of baskets, mats and similar household goods manufactured with wattles. The oldest wattle in Anatolia was discovered in BC 6500 in Çatalhöyük archeological site (Sentance⁴⁹, 2001).

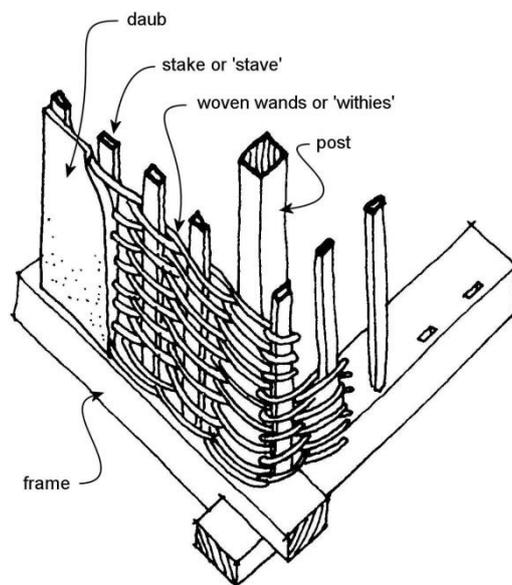


Figure 2. Wattle and daub walling, established by the Iron Age⁵⁰.

The wood frame infilled with wattle daub is lighter than the structures with brick and rubble infill which also has a positive impact of their earthquake performance. The examples of wattle and daub in timber framed wall are seen in Blacksea forest villages; İzmit, Değirmendere, Kandıra, Akyazı, and Isparta, Burdur. The techniques of Wattle and daub is dependant on the different styles of surrounding timber/timber-frame and are called different names, such as: *İğmeli* in Kırklareli and Edirne, *sergen* in villages of Giresun and Ordu. The panels that are wattled like basketing are used in houses, depots and cellars⁵¹(ŞahinGüçhan,N,2018).

3. RURAL HOUSES OF AKÇEKESİ VILLAGE

3.1. History & Geography Of Akçekese

Akçekese village is one of the most valuable and conserved villages of Şile. The district is located at the northwest of Turkey and northeast of Marmara Region on the Black Sea coast, its distance to İstanbul is 56 km. Due to its proximity, urbanites prefer to visit the region during the summer months. Şile has transitional climate with Mediterranean and Blacksea climate characteristics. The annual average temperature of the district is 13,6°

C, where cloudy conditions and relative humidity are observed in all seasons. Since the north side of the region is open to the Black Sea, under the influence of northward winds.

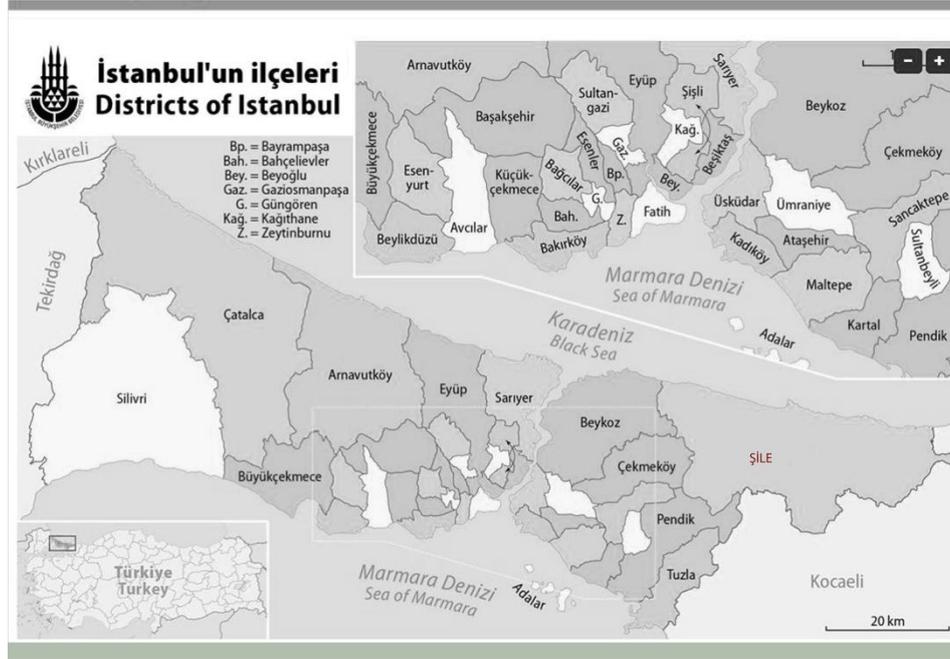


Figure 2. The districts of İstanbul and location of Şile

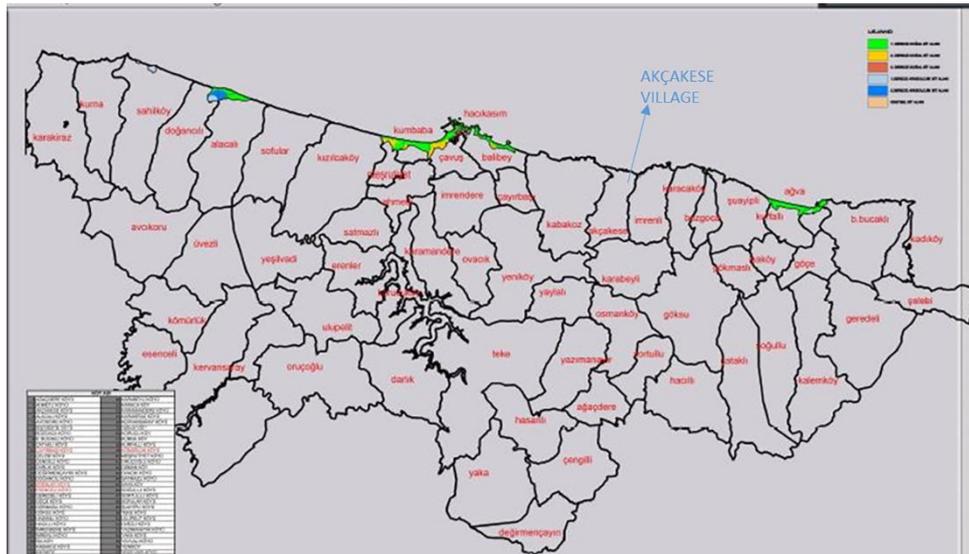


Figure 3. The villages of Şile district and location of Akçakese Village

Until the 90s, Şile was able to maintain its authenticity due to the difficulty of transportation conditions from İstanbul. The construction of Fatih Sultan Mehmet Bridge, the ring roads, and with the establishment of a direct transport network of West and East Black Sea, Şile began to lose slowly its authentic texture and affected by dense urbanization.⁵²(Alper, M., 1996).

The surface area of Şile is 755 km²; consisting %79 of forested area, %10 of agricultural area and its coastline is 60km long. The village is very rich in terms of river resources, and there are often cliffs along the black sea coast. In front of this high coast, there are small rocks separated from the coast by sea abrasion. There are large beaches, at the mouths of rivers and where the cliffs are subject to severe erosion.

Although there is no definite and sufficient information about the history of the district; formerly the center of the district is a small village, known as Philee, which in time has been transformed into 'Şile'. It is known that before the rule of the Byzantine Empire, it was dominated by the Romans, even before it was under the control of the Kingdom of Bithinia. Along with the caves around, it became the place of the refugees of the Christians of Izmit who were oppressed during the period of the Roman Emperor Diocletian (284-305). Şile, captured by the Ottomans during the Yıldırım Beyazıt period, and remained ruled by the Turks until the First World War and under the British supervision, occupied by the Greeks until 1922. Şile was a residential area where Orthodox Greeks, Muslim Turks and Armenians used to live together. The demographic structure of Şile changed by the Population Exchange Treaty which signed between the Turkish and Greek Governments in 1923, which enforced the citizens of the two countries be exchanged compulsorily. Now there is no diversity in the population like in the past. According to Vital Cuinet's population records, (1894) the population of district center had a cosmopolitan structure both in religious and ethnic terms, with a majority of Muslims and according to TİK 2017 the population of Şile is 35131.

There are cultural assets in the center and villages of the Sile that reflect the social, economic, physical and cultural structure of the period in which they belong, and which exhibit physical integrity. By the opening of the highway, transportation between Şile and İstanbul is facilitated also the foundation of the Işık University in the district affected the social and economic life of Şile.

There are totally 58 villages in Şile and a total of 848 registered civil architecture structures in 52 villages within the borders of the district. In addition, it has 27.6 Ha 1st-degree archeological site, 37,6 Ha 2nd-degree archeological site and 166,2 Ha 1st-degree natural site.

Akçakese is one of the most remarkable villages with its 800 m long beach located 12 km east from the district center. The village was established in the 13th century on the hill which is 1 km above from the beach. In Sultan Bayezid period the early settlers of Akçakese came from various parts of the Ottoman Empire, who were the turkmens. According to TİK 2017 the population of Akçakese village is 388. Black sea and the land area devoted to agriculture are in the north, oak, beech and chestnut forests are located at the south of the village.



Photo 1. Satellite pictures of Akçakese from the years 2017- and 2006 which shows the highway

TheŞile-Ağva highway, which started at the end of 2013, passes north of the village.



Photo 2. Aerial photographs of Akçakese Village

3.2.Traditional Akçakese Houses

Statutory protection of traditional Akçakese houses dates from 2009, totally 60 of them were recorded. Şile Municipality is conducted TheRehabilitation and Environmental Planning Project of the village. Regulation of the physical structure of the village with the social, cultural and economic rehabilitation and maintenance of local development is planning to be achieved with this project. The main goals of the project are summarized as follows:

- Restoration, preservation and maintenance of the registered houses and architectural elements
- Maintenance of the original road and transport axes.

Traditional Akçakese houses are characterized by detached houses and gardens. Self-building of homes by owner-families is the predominant mode of housing production. In terms of house form, the typical two-story wooden Turkish houses of the late nineteenth century dominated the village, and also apartment buildings exist as the new dwelling form. The traditional unique texture is largely preserved, the small quarters connect these wooden houses which sit comfortably to the landscape. Land use patterns reflect cultural factors, climatic conditions and the physical structure of the landscape. They are clearly expressed in their siting, scale, arrangement, and features. Houses laid out in a linear pattern along the principal road which set back from the road. Among from the houses village is characterized by its mosque, fountain, village oven and cemetery. The village is situated in the hills, there is no school and health unity and the mosque and village coffee are used as meeting places for men. Mostly, transport depends on private cars as public transport is restricted to a bus. Many villagers are retired and they are not involved in farming or animal husbandry. The houses have electricity and mains water system, and access to mains drainage, coordinated waste collection system is provided. It has been observed that there is a strong sense of community among the villagers. They live in big cities but seasonally come to the village.

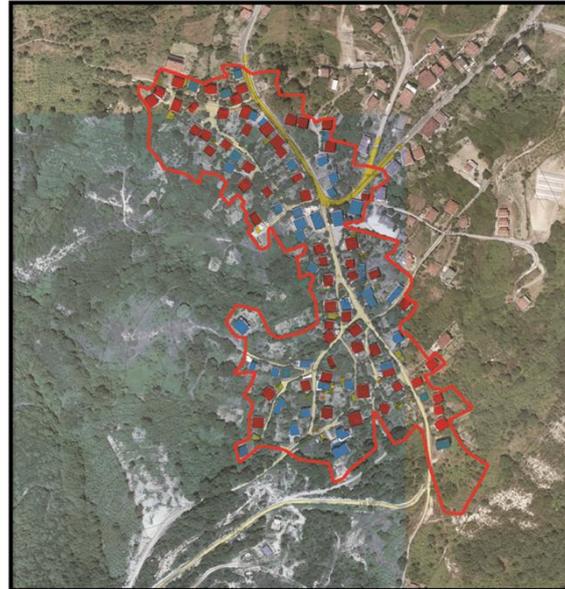


Figure 4: The map of registered buildings in Akçakese Village

3.3. Architectural Features:

Registered Akçakese houses can be classified as 5 types according to the number of floors:

- 54 of them are two story (Ground floor+First floor)
- 3 of them are (Basement+ Ground Floor +First floor)
- 1 is single floor
- 1 of them is (Gf+FF+SF)
- 1 of them is (Ground floor+ first floor +attic)



Single Storey House



Two Storey House



Two Storey House



Ground F.+First F.+Attic



G.Floor +2 Storey



Basement + GF+FF

Photo 3. Registered Houses of Akçakese

The houses were built of natural materials and are of great cultural importance because they have emerged from time-honored traditions. Materials used for the construction of



the houses were generally locally available materials which were a response to the limitations of cost, transport, and local construction skills.

The houses have been built in traditional timber construction techniques. The unique architecture of the village reflects and supports the region's own identity. They were the comfortable homes for generations of villagers. The houses were designed for the traditional lifestyle, which could serve appropriate functions for a traditional family who lived for a long time may be a lifetime together so they have enough rooms for large families.

The houses are square or rectangular in plan and generally, ground floor is used for service functions; such as a barn, woodshed or cellar. In the first floor, they have generally symmetrical plan scheme with inner halls and projections. The use of projections is one of the most distinguishing features of *hımış* houses. Across the village, the rooms are standardized features and provide the versatile use in terms of shapes and configuration. Most rooms are suitable for functions such as living, eating, washing and cabinets and stoves have been used in a particular model. Rooms in the upstairs have the connection to bathrooms or in some rooms, there are bathing cubicles inside the cabinets. Depending on the use of the room they are named as 'winter room, living room, bridal room, guest room'. Whereas the place of the rooms and the relations with each other in the house plans are formed with the same principles, differences arise in the room numbers and the room sizes or room-sofa organizations (with central, internal) depending on the family size or economic power. Timber was not used only as a building material but also used for decorative purposes; such as built in wooden cupboards, stairway etc. Upstairs are reached via a wooden stairway through the ground floor. These houses provide a unique record of certain aspects of intangible heritage with their solutions for the local responses to the conditions of everyday life, ways of organizing social life. It has been observed that there is a balcony in some houses on the front facade above the entrance door. Some of these balconies have no door access, they were not used to sit out on them, they were used to dry vegetables in the summertime and they have also fringe function for the entrance doors. Balconies finish with a triangular pediment on the roof, which emulates the classical greek architecture. During the interviews an old owner told that greek master builders worked also in the construction of the houses. The timber framed windows on the ground floor are smaller than the upper floors. Windows of the rooms were composed in guillotine form as rectangular and approximately with the ratio of 1:2 and their repetition defines facade characteristics. Regarding the ratios of the facades and the windows, the buildings display common attributes. The original wooden doors and windows are changed in accordance with the needs over time by the owners. Usually, there are two windows side by side on the walls of the rooms.

Table 1. Examples of Registered Buildings

	A	B	C
SITE PLAN			
SITE PLAN			
GROUND FLOOR PLAN			
FIRST FLOOR PLAN			
ROOF PLAN			
ELEVATION			
WINDOWS			

The predominant building materials are wood, stone, and adobe. Stone is commonly used for foundations and sub-basement. The thickness of the masonry walls varies between 50 and 60 cm with various heights depending on the topographical requirements. Chestnut and pine, are most frequently used types of wood as they are abundant in the region.

The architectural style of the region created by the characteristic construction system. Framed systems of timber structure consist of horizontal, vertical and diagonal members that are the main posts, studs, braces, window and door sills, and wooden floors. Main posts are placed at the corners of the places and studs are used as secondary structural posts and they are also used for framing the openings. Diagonal braces provide the resistance of structure against horizontal forces and increase the resistance against earthquakes. Loads of floors and roofs supported by wall frames and they also resist the earthquake force and other horizontal forces.



Wooden elements



Photo 4. Wooden Elements

Generally, wattle and daub technique is used in the walls of the Akçakese houses. Chestnut bars are wrapped inside the spaces of the wooden frames and then filled with mud and straw mixture and cladded with wood. Surfaces of the interior walls are plastered whereas the exterior walls are sometimes unplastered. The earthen material has a simple infilling purpose for the timber frame of the wall and increases its resistance against lateral forces, as it is light and elastic.



Photo5. Facade (Part of an unplastered exterior wall)



Photo 6. Wattle and Daub in Timber Frame

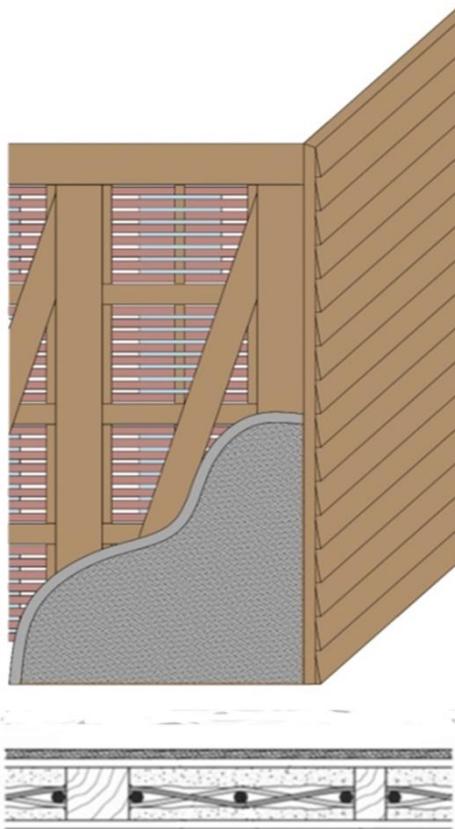


Figure 5. Detail of Wattle and Daub

In her MSc thesis Güner quoted from an old man from Şile who told the construction methods of this vernacular architecture: '*Among the vertical ones, the chestnut sticks are passed through as if the basket is knotted and then filled with mud and straw. After this process was finished, the interior and exterior surfaces were plastered with a mixture of linen padding and lime. When the plaster was dry, the exterior was covered with wood.*' (Güner, R., 2013, p.57)

Instead of the use of stone, brick, or mud brick as infill material, the use of wattle and daub infill in the timber-framed system increases its resistance against lateral forces, as this technique is light and elastic. The choice of natural building materials that have been sourced from the local areas is a significant factor also in the energy efficiency of these traditional rural houses. They consume less energy during their life cycle and have high thermal performance.



Photo 7. The hipped roofs

The hipped timber roofs (the inclination of the roof is 1:3) have been formed according to the plan and covered with Turkish style tiles. The loads coming from the roof are transferred to the foundation by load-bearing timber framework. The main posts, beams, braces, and studs are the primary structural elements of timber frame. Some variation is observed between the structures; some houses have complete masonry walls in ground floors with timber tie-beams (*hatıls*). Changing circumstances have led to changing solutions, local materials and local ways to use them and the learning process has always been to build on the past.

CONCLUSION

Rural settlements represent the ideal synthesis of people's ability to modify the environment to their own advantage with minimum impact. Every building can be an important part of rural architecture creating the identity of a landscape or a region. In Anatolia different construction techniques have developed according to regional features and materials. Rural Akçakese houses provide a valuable architectural legacy as they reflect geographical characteristics of their environments, construction techniques and sociocultural values. These houses provide a unique record of certain aspects of intangible heritage with their solutions for the local responses to the conditions of everyday life, ways of organizing social life. The physical context in which the architectural forms are synthesized with natural and cultural expressions is evident in the Akçakese village. The typical features are;

- organisation of spaces according to function,
- connected to nature with unique characteristics; expressed in their siting, scale and arrangement,
- the continuity of the form determined by traditional craftsmanship

According to the number of floors; houses can be classified as 5 types, and 54 of 60 are two-story houses. The number of rooms, the size of the house is formed due to the requirements of the family. The balcony on the front facade above the entrance door, was a defining feature of the period.



The houses have been constructed by local craftsmen, using experience and know-how that has been handed down from generation to generation. There have been shared values, local materials and local ways to use them. The houses based their solution on the abundant wood, stone and earth available in the area, transforming it into building materials. These materials were obtained from totally natural, local and renewable resources and have significant ecological characteristics as they are recyclable and do not produce any wastes. The construction materials are important components for determining the identity of the houses and are among the most interesting and remarkable visual images. The common feature of Akçakese houses are the construction system, they were built typically timber-framed and the frame usually filled with wattle and daub. Timber-framed buildings of the village retain important fabric and finishes, with its historic wattle and daub and represents an important part of the cultural and architectural heritage. Although this was an old and simple construction technique, it yielded well-insulated, comfortable spaces. Vernacular traditions have the potential to make to the development of sustainable future and may be integrated into contemporary building practices in order to create more appropriate settlements and buildings. It is important to retain awareness about the importance of preservation of this traditional houses and its environment.

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