



## Documentation of Architectural and Textural Characteristics and Determination of the Problems of Eskişehir Seyitgazi District.

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### Article Info

Received: 09/12/2021

Accepted: 29/12/2021

### Keywords

Urban Protected Area,  
Conservation Zoning  
plan,  
Rural Architecture,  
Cultural Heritage,

### Abstract

Seyitgazi district of Eskişehir province is a rural district center that includes more than one archaeological site, nature protection zone, including the city of Nakoleia. The part of the district containing the Seljuk and Ottoman period settlements was declared as an urban protected area in 2012 and was taken under protection. In the region, where conservation zoning plan studies started in 2019, different experts made determinations about the texture and structures; The problems and problems were determined, and qualitative and quantitative studies were completed in the physical, social and cultural context for the zoning plan to be made in the area.

Within the scope of this article, the data collected during the preparation of the zoning plan for conservation purposes related to the registered or unregistered historical buildings with the traditional construction system are summarized. With the sharing of these data, it is aimed to share the physical condition of the buildings, construction systems, typological analyzes and the situation regarding the identified problems with the field of science.

## 1. GENERAL PROPERTIES AND HISTORICAL BACKGROUND OF SEYITGAZI DISTRICT

Seyitgazi district is surrounded by Merkez district in the north, Mahmudiye district in the northeast, Kütahya province in the west, Afyon province in the south, Çifteler and Han districts in the east. Pine forests and hilly areas covers a large part of the district. The district, where the continental climate is dominant, is located in the 2nd degree earthquake risk zone [1]. 8.85% (1186 persons) of the people living in the district are of school age, 64.47% (8642 persons) constitute the young working population. It is also the district with the highest rural population density, with an urban population of 18.40% and a rural population of 81.60% [4].

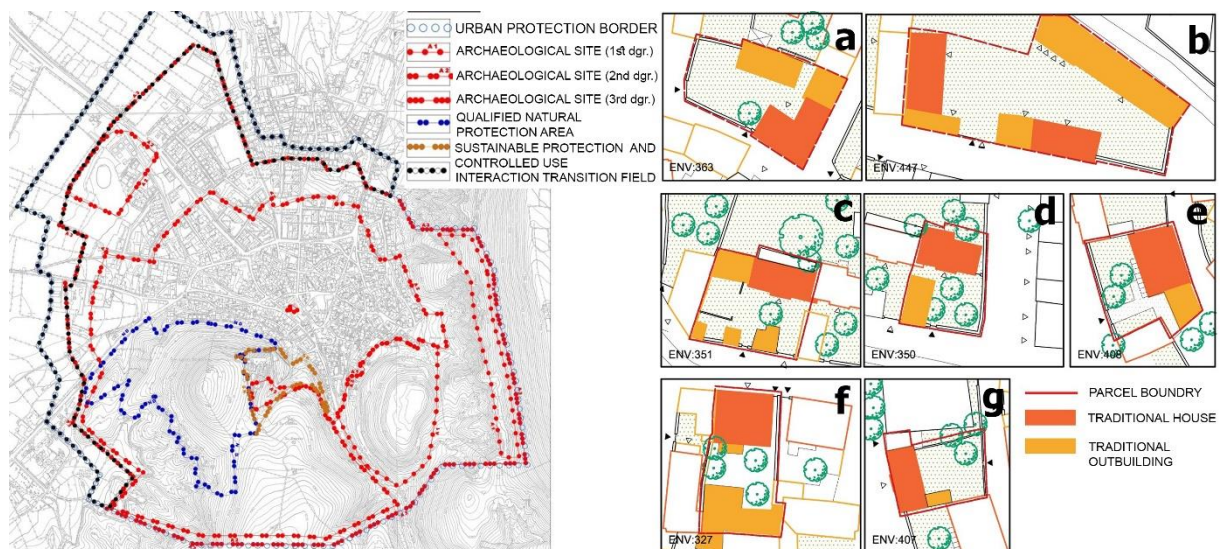
The region is located on a wide plain, which 3 big rivers- sakarya, porsuk and Sarısu- forms. Due to the productivity of this plain, it has been a permanent settlement area starting from prehistoric times and continuing until today. Seyitgazi is known as Nakoleia in ancient times. Pessinus, together with Justinianopolis (Sivrihisar) and Germia (Gümüşkonak), has been an important city since the 4th century in the Byzantine period [2]. The city, which was between the centers of the diocese and archbishopric between the 5th and 8th centuries, was conquered twice during the Arab raids in the 8th century. attacks and conquests lasted for 300 years. In these attacks, Battal Gazi, one of the commanders of Caliph Harun Reşid, was martyred in the Battle of Akreanon (740) near Afyonkarahisar. The city was named "Seyitgazi" because Battal gazi was wanted to be kept alive in Nacoleia with the title of veteran [3]. In 1074, Süleyman Shah and the Byzantine Emperor VII. With an agreement between Mikail Dukas (1071-1078), Dorylaion (Eskişehir) and Söğüt were left to the Turks [5]. XIII. In the 19th century, the city passed under the rule of Germiyanogulları; The beginning of large Turkmen movements against the Mongols in Anatolia started the establishment process of the Ottoman Principality [6]. Under the Ottoman rule, with the progress of the conquests, Eskişehir became an administrative and cultural center from being a simple market place and a stop on the main roads for those engaged in agriculture. In the 18th and 19th centuries, there were intense migration movements to the Eskişehir region. The settlement

of Yörük and Turkmen, which took place at the end of the 18th century, is followed by a great wave of immigration from the Caucasus, Crimea, Romania and Bulgaria from the second half of the 19th century to the beginning of the 20th century. During the 19th century, in parallel with the Ottoman Empire's loss of territory in the Balkans, intensive migration from these regions to Eskişehir took place. Eskişehir and the cities of the region, which were a rather dull city until 1850, entered the development phase in parallel with the increase in population after this date [7]. The city, which showed armed resistance against the regional occupations during the Kuva-yı Milliye period, was liberated from the Greek occupation on September 1, 1922, after the Great Offensive [1].

## 2. ARCHITECTURAL, PHYSICAL AND SOCIAL ANALYSIS OF SEYITGAZI DISTRICT

Seyitgazi district constitutes an important and valuable geography in terms of natural beauties as well as historical and cultural aspects. There are 1,2 and 3 degree archaeological sites, a qualified natural protection area and a Sustainable Conservation and Controlled Use Area in the district (Fig1). For the region, which was determined as an urban site in 2012, the work on the conservation plan started in 2019 and the plan is in the approval phase.

In the district, a texture consisting of building groups with gardens and courtyards that form a whole, together with the outbuildings consisting of 1 and 2 storey buildings with rural characteristics, is dominant. This texture is generally intact, only damaged by high-rise buildings on the peripheries of the trade center, which can be considered as the urban center.



**Figure 1.** Seyitgazi district protected area borders, parcel settlement typology [1].

In the district of Seyitgazi, 4 different parcel types can be identified as "Corner Parcel", "Intermediate Parcel", "Island Parcel" and "Single Plot". However, when we look at the housing parcels, it is possible to talk about two different types of parcel formation in terms of settlement and whole formation method. The parcels (Fig1 a,b) consisting of the buildings gathered around a courtyard with their outbuildings and the parcels containing the houses with gardens and outbuildings (Fig1 c,d,e,f,g) are separated from each other.

### 2.1. Qualified Urban/Rural Public Buildings

Seyitgazi district, with its many cultural assets, is a district that has been the subject of continuous settlement of past civilizations. There are also artifacts from the Seljuk and Ottoman periods in the city, which is known to have started the settlement with the ancient city of Nakoleia. Among the most important works of the Seljuk period is the Seyit Battal Gazi complex, which was built by the mother of Alaeddin Keykubat I in 1208-1209. There is a church in the complex, also known as the "girls' monastery", which belongs to the Byzantine period. The complex has undergone various interventions during the Ottoman period as well, and has been supplemented. Only the foundations and ruins of

Develik Han, which was built during the Seljuk period, have survived. However, in the same period, the bath, which was built in the 13th century; It has been restored and is used as a boron mineral and ethnography museum after the change of function. Another important structure in the city is the Seyitgazi caravanserai. Today, only the northwest and northeast walls of the building, which was built by Murat IV in 1635 - are used as the wall of police station today - are standing. The other two structures that have survived from the Ottoman period are the Ulupınar fountain and the Çarşı mosque. Apart from the monumental buildings in the district, the laundries, which are among the architectural values unique to the region and known as 'SAKANA' locally, are important.

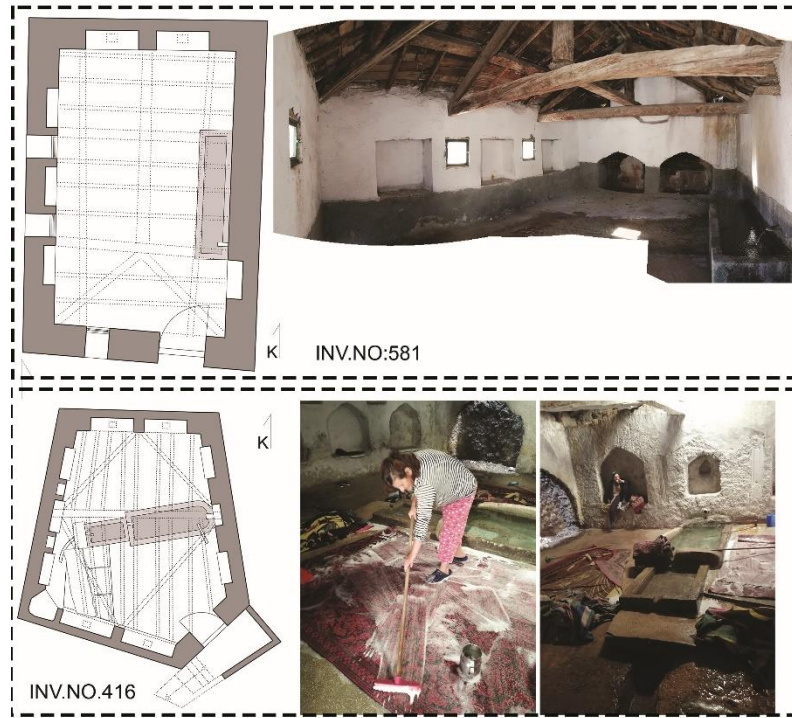
The principles of cooperation and solidarity, which form an important part of life in rural areas; It also shapes social life. Works done 'together' such as baking bread, washing clothes and preparing various winter foods have become a part of culture over time as well as social life. The tools and spaces needed for such activities have taken their place in traditions and customs as well as in life; have survived/preserved until today as both intangible and tangible cultural heritage. Laundry places, which are located in Seyitgazi district and called "sakana" in the region, are important components of this local culture and have continued to exist until today.

Laundries have survived to the present day with the help and solidarity of women in many provinces and districts in Anatolia and are used for laundry and carpet washing functions. In some examples in Anatolia, it was stated that there was a second room in the building, which was designed for the washing of those who came to do laundry, used as a bathroom or had a pool [8]. In some sources, it is stated that the big furnaces of the laundries, called 'boiler furnaces', are used for daily preparations such as cooking and for seasonal preparations such as tomato paste and molasses [9]. These structures, which have many examples, are also given local names such as yunmalık, yunaklık, yunak.

Laundries in Eskişehir, on the other hand, are known and used with the name 'sakana' specific to the region. Studies on these laundries, which are specific to Eskişehir and its surroundings, are also very limited. Within the scope of the studies, the sakanas of Eskişehir Yukarığdeğacı, Eskişehir Yukarı Doğanolu and Eskişehir Örencik villages were examined [10]. In Seyitgazi district, there are 3 sakanas and two of them are in use.

The first of these sakanas is 416 inventory number (Fig 2); It is the building located at the intersection of Odunpazarı and Hamamyolu streets. The structure is in the form of an irregular polygon and was built with masonry rubble stone and has a wall thickness of approximately 80 cm. It is covered with a roof made of wooden rough hewn timber logs and covered with terracotta tiles. There are 2 furnaces on each of the northern and southern walls of the building, and each furnace has a separate chimney connection. Niches in the western and eastern directions are positioned at a height of ~60 - 120 cm from the ground in order to store goods. The original stone tubs in the Sakana, into which the water is constantly transferred, consist of two interconnected parts. Mosaic screed was poured on the floor of the building, the floor of which was originally covered with raft stones. The building, which is still in intensive use today, does not have a structural problem in general [11].

The other sakana identified in the area is the building located at the intersection of Bardakçı street and Kurtuluş streets with inventory number 581 (Fig.2). The building is in the shape of a regular rectangle extending in the north-south direction and has a floor area of approximately 53 m<sup>2</sup>. Its entrance is from the south side and is positioned at the same level as the road. The floor of the building, which was built as brick masonry, is concrete mosaic, and the tub into which the water is transferred uninterruptedly with the help of a pipe is also made of concrete mosaic. Its roof is a snap-on roof, and it was formed with rough-hewn timbers. There are 2 hearths on the north wall of the building, and both have separate chimney connections. In the building, which has one niche at the beginning of the bathtub on the east wall and three niches on the west wall, there are also 3 separate windows measuring 50x60 cm and 140 cm above the ground. Although the building, which has no structural problems, was built as masonry, it was built recently and is not qualified [11].



**Figure 2.** Plans and photographs of Seyitgazi sakana's

## 2.2. Formation of The Houses

As a result of the loss of Crimea with the Treaty of Küçük Kaynarca in 1774, the pressure policy applied by the Russian Empire caused the Crimean Tatar migration. Tatars left their homeland and migrated to nearby regions first, and to Anatolia with the 93 war (1877-1878 Ottoman-Russian War). A large number of immigrants first came to Istanbul or to a few ports in Anatolia by trains or ships, and were then directed to the interior and settled in places deemed appropriate on the axis of Istanbul, Bursa, Eskişehir and Ankara [12]. As a result of this settlement, the immigrants who settled in Anatolia brought their accustomed housing system with them and set up the same in the regions where they settled. This living space setup is called 'karaldı' in and around Ankara [13]. Eskişehir region is one of the regions that witnessed the Crimean-Tatar migration and subsequent settlement, such as Ankara, Bursa, and Istanbul. There are also village settlements established in this way around Seyitgazi. These villages; It was identified as Aksaklı, Çukuragil and Varioren by H.Kırımlı [14], Kara (2011) on the other hand, as the immigrant villages in Seyitgazi District; Aksaklı counts the villages of Söyleren (Örenlik) and Yenikent (Hamdiye-Reşadiye-Canköy) [15].

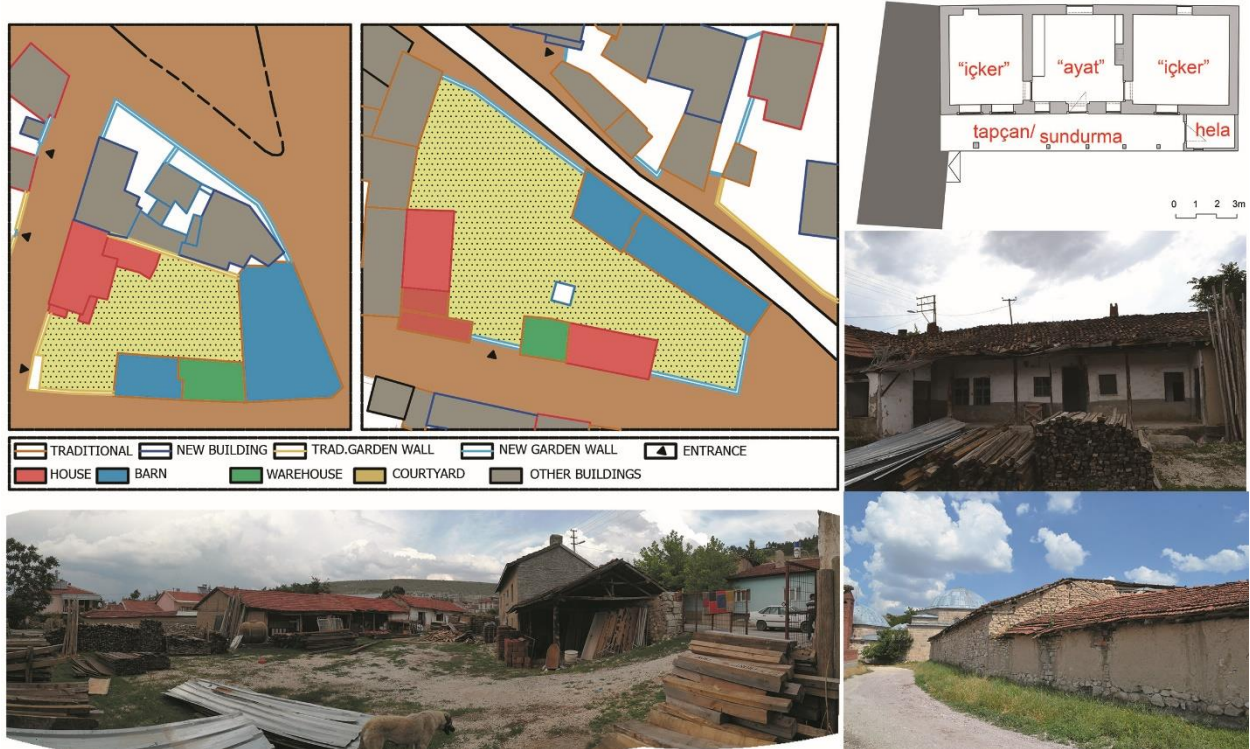
Studies on the settlement of immigrants in Seyitgazi district are limited. In this context, based on the work of Önder and Kırılı and Sofuoğlu; It is known that 114 households from Karinabad and Silistra immigrants were settled in the Seyitgazi district of Eskişehir. They were settled in the newly formed villages of Salihye, Büyükyayla, Burhaniye and İlyas by allocating lands where they could cultivate. Shumen immigrants who migrated from the Balkans around Seyitgazi District were also settled. This village, which has a population of one hundred and seventy immigrants in forty-two households, was named Şükranıye [16,17].

Karaldı's were formed by the coming together of units, forming a border with each other. It can be said that the Karaldı's are the complexes designed to continue of life of the whole family . But this design is not one seen in traditional Anatolian villages. It can be said, in line with the information given by Ülksal, that the local people continued the settlement order in Dobruca and Crimea, where they came from, with all their characteristics, in the rural areas where they settled in Anatolia [18]. Ülksal (1966) defined the elements of karaldı as houses, barns, barn and garden, and stated that the living area, animal life and storage areas are separated from each other by fences or mud brick walls. However, the kitchen unit called "aşgana" is also among the components in the karaldı's in Haymana. In the past, it is understood from the oral information, the traces and examples that have survived to the present day that the Karaldı's



were also in large numbers in the Seyitgazi district. However, there are very few of them physically preserved in the district. Existing buildings, on the other hand, have lost their karaldı formation due to functional changes that cause changes, deteriorations, additions and subtractions.

Asgana (kitchen) structure was not found in the "karaldı's in Seyitgazi district. It has been determined that a small kitchen unit has been added to the hall, which forms the entrance of the house and is called 'ayat'. While the sample with inventory number 747 preserved its function (housing and outbuildings) among the other examples detected in the district, the sample with inventory number 447 underwent a functional transformation in the context of timber processing and sales and lost its original function [Fig3)



**Figure 3.** The formation of the courtyard and buildings of 2 karaldı examples from Seyitgazi; sketch of an original house; remain in a karaldı complex.

Karaldı's open to the street with a large courtyard gate called "portakapı". Today, the original door can be detected in very few examples. Karaldı's are surrounded by high masonry walls in parts where it is not surrounded by buildings. Some of these walls were designed at a height of 100-150 cm from the ground, and some were built along the height of the building. The walls are generally built as masonry stone walls or as masonry mudbrick walls with a binder as mud mortar. All residences and living units are designed around the courtyard, facing the courtyard. Since the life is facing the courtyard, no windows were opened to the public street as much as possible, and the windows that opened were kept very small to allow light into the space, only in some residences.

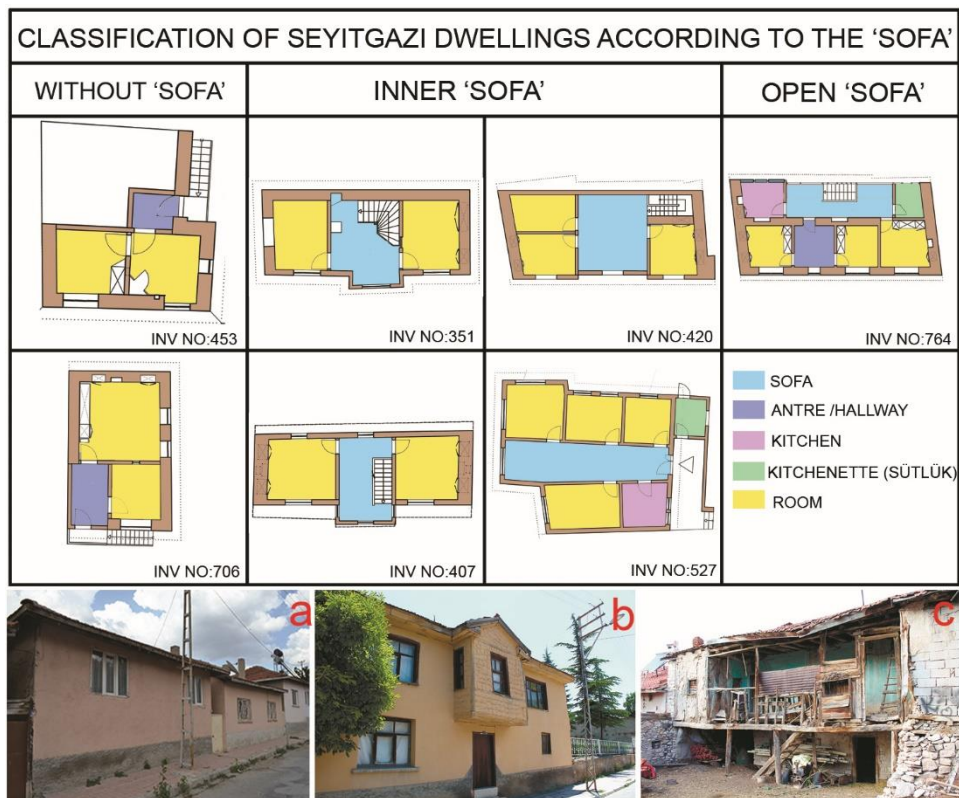
Although the houses surrounding the Karaldı's were placed together in a part of the original settlement, usually on 2 or 3 sides, this order was disrupted by the additions and renovations made over time. It has been determined that some of the buildings were demolished because they were not needed, and in some of them, the function of the courtyard of karaldı was changed / transformed by the addition of new buildings (garage, storage unit, etc.) and the division of the land, and the organization of the space became difficult to read. The front façade of these houses, which form the courtyard perimeter, is oriented to the south in the original examples in Crimea and Dobruca [18]. It is also possible to see this orientation in the examples found in Haymana [13]. However, the front facades of the houses in Seyitgazi can be in different directions.

The plan scheme of the houses consists of a hall with the local name "ayat" on the axis of the entrance door and a room on each side with the local name "içker" (Fig.3). At the entrance of the residences, there

is a platform raised 15-30 cm from the ground, this platform is called “tapçan”. Ülksal states that this platform was made of mud brick in Crimea [18]. Tapçan is covered with a porch roof, and this part is also called a porch ‘sundurma’ in the region.

The houses were built with mud mortar rubble masonry up to the lower level of the window or the basement level, and the upper part of this section was built with adobe masonry system. In the sections with masonry adobe, the use of frequent or sparse rough-hewn framing-stitching is preferred, depending on the need. In some buildings, no other system was used other than the rubble stone masonry system, and rough-hewn wooden logs were used only on the roof.

Rough-cut wooden logs were used as beams for openings of the windows and doors. The roofs of the buildings are of the hipped roof type. The residential buildings are designed to surround the Karaldı and to be located adjacent to each other. For this reason, in many karaldı’s, it is seen that the hipped roof is continued as a single integrated roof over the spaces, despite the changes in the interiors and functions of the spaces.



**Figure 4.** The typology of Seyitgazi houses according to the hall (sofa) [11].

The houses, which are not a part of the Karaldı but are designed to include their own outbuildings in the garden, are designed in a separate order with a garden. The garden boundary of these houses, which have access from the street or the garden (courtyard), is marked with a wall. Garden gates for families engaged in agriculture and animal husbandry are designed in such a way that high vehicles such as tractors can pass. In the garden, there may be units used for many functions such as coal shed, woodshed, haystack, barn, poultry house, warehouse, as well as architectural elements such as furnaces, şarapana’s and also pools in more qualified non-rural examples.

The buildings are generally two-storey and mostly designed to have an inner sofa (Fig 4b). Most of the houses in the area have 2 rooms opening to the inner sofa and are designed in the form of a rectangular prism. (inv.no 407, 420, 351) The entrance leads directly to the sofa. The staircase that provides access to the upper floor may be in the hall (inv.no. 407,351), as well as examples where one of the rooms has been reduced to a space (inv.no 420). Among the houses with an inner sofa, only one example was found with more than two rooms opening to the sofa. This house with inventory number 527 was built in the late period; It shows a 5-room structure with its sofa and kitchenette (sütlük) opening to the entrance, which is accessed by stairs.

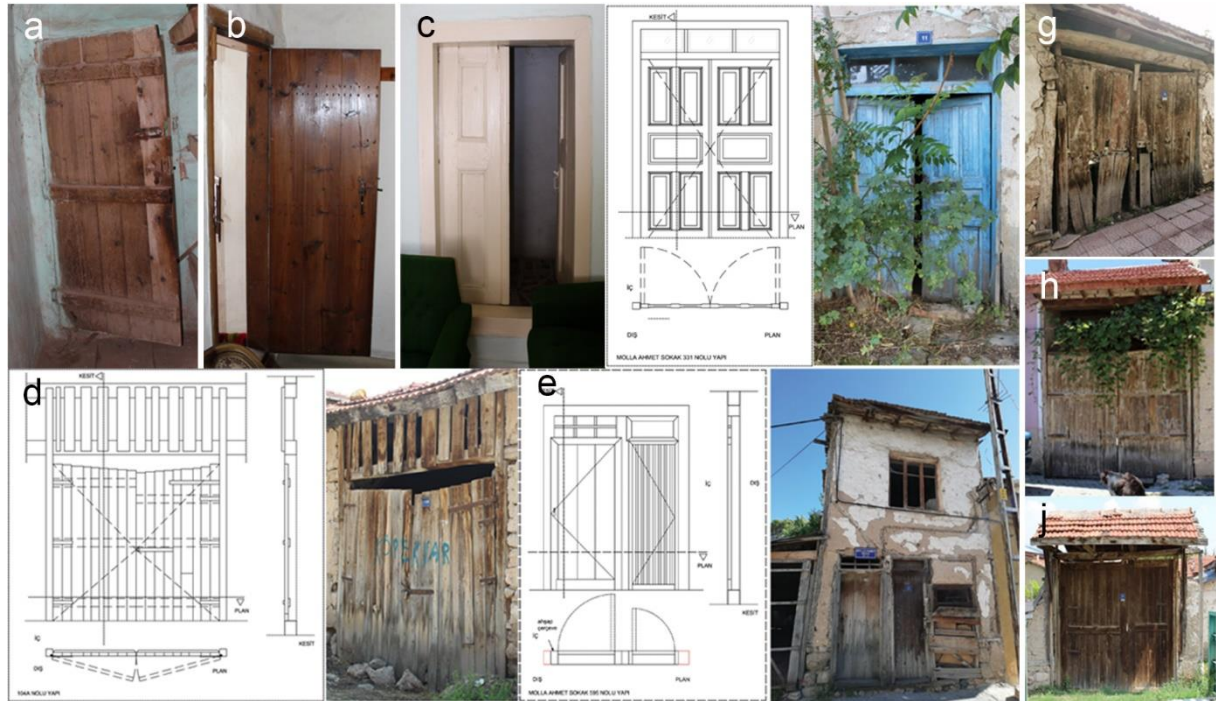
Only one example without an inner sofa was found in the area (Fig 4c). The house numbered 765, which was learned from the owner of the house that was built after 1850 within the scope of verbal information, and which is not used today because it is ruined, exhibits a feature with an open sofa. The staircase leading to the upper floor of the house, the lower floor of which is reserved for animals and the storage function, which is designed as the living floor, leads directly to the sofa. The sofa is rectangular in shape, and the kitchen and kitchenette (sütlük) are opened to the narrow parts of the rectangle. The building has 3 rooms, one of them has a direct entrance from the sofa, and the other two are passed through a gap opening to the sofa. In the study carried out in the field, 2 examples without sofa were found (Fig 4a). In these houses numbered 453 and 706, there is a direct access to the rooms through a small entrance hall.

### 2.3. Architectural Elements Of The Houses

In the gardens and courtyards of the houses, there are furnaces and troughs 'şarapana'. The furnaces are designed on one side of the courtyard, under separate eaves. These furnaces, which are used by plastering with mud after being made of stone or brick, are still used in the preparation of long-lasting foods such as canned food, tomato paste, which will be used especially in winter. It has been learned in the context of verbal information that it was frequently used for bread making in the past, but today it is very rarely made, and the bread is usually bought from the bazaar (Fig.6i,j). During the examination carried out in the area, a 60x130 cm stone trough called 'şarapana' was found in a single dwelling. These troughs, made of stone or wood, are used to extract the juices of fruits such as grapes and mulberries for making molasses. Very few of the courtyard doors of the houses in the district have survived to the present day. It has been determined that these doors are simple single-plated wooden doors, and that they are connected by 3 belts from the back of 4-7 thin wooden pieces. The studs used to attach the wood to the belt are wrought iron and have a circular head with a diameter of about 2 centimeters (Fig.5 g,h,j). The outbuildings doors, on the other hand, were formed in a regular rectangular shape, as in the courtyard and interior doors, by fixing thinly carved timbers to 3 belts from the back. These doors, which are arranged with thresholds, are attached to the safe with metal (iron) cannonballs. Most of them do not have a detectable locking system. The doors are closed only with the slider (Fig. 5d.).

The ones that have survived from the entrance doors of the houses to the present day have generally reached the present day from the recent period, after the republic. These doors are generally double-winged, and there are rarely single-winged examples. Most of the doors are plated, single storey, and lozenge-shaped geometric ornaments were found in a single example. In some of the entrance doors, there is a skylight that continues over the whole door in order to illuminate the entrance. These windows are approximately 30-40 cm wide and designed as 3 or 4 panes. The majority of the handles used on the doors are made of brass and are also examples of the late period. In one part, there are metal door rings and knockers; It is mostly seen at the gates of buildings that do not have courtyards. In the examples with a courtyard door, the knocker is fixed to the courtyard door (Fig. 5ç,e). Interior doors are generally single-layered. The doors are arranged as 3 belts within the space. There are 3-5 pieces of wood thinly cut pieces on the door plate. These wooden pieces were brought together without joints and were fixed to the straps with metal square nails. The belt that fixes these pieces, which are 15-25 cm in width and 140-200 cm in length, was used in 5-6 cm thickness and 5-10 cm in width (Fig.5a,b,c).





**Figure 5.** Courtyard Doors, outer and inner doors of the houses [1]

The buildings contain window types that entered our country in 1950 and later. Although these windows are also winged, they are multi-panelled as in the early windows, the distance between the registers is kept narrow and windows are formed with small glasses. There are many different types of multi-panel windows, including those that open from the top in the form of transom.

The furnaces in the majority of qualified houses in the district have been closed. As the reason for this closure, it was learned within the scope of verbal knowledge that there was no need for furnace because functions such as heating and cooking were analyzed in different ways. One of the 2 houses whose furnace have not been closed yet is in a dilapidated condition and the other is in a very bad condition and is not used. The closed and unclosed furnaces at Qualified houses were fully functionally designed ones without ornaments. These furnaces; rectangular or oval openings with an ashtray of approximately 1 m<sup>2</sup> in front of them; don't have a chimney hood (Fig 6a,b,c).

In most of the original examples in the area, it is seen that the staircase was resolved with steps and piers fixed between two stair beams or between the wall and the stair beam. Generally single-armed and straight-sided stairs; The beams were carved to accommodate the edges of the steps and piers, and steps and piers were placed in these opened slots. The thickness of the beams is 10-12 cm and they are made of solid wood. The height and width of the steps and piers are arranged according to the available space. The number of steps in the stairs, which are generally designed as 20 cm and above, varies between 8-12.

Some of the ablution niches in the houses are located on the right or left side of the furnace with a cupboard, as is usually seen in most rural houses. Although there are quite different features, it has been determined that they are usually plastered inside and the water flow is given either to the lower floor or to the outside with the help of a pipe (Fig.6h).

Some of the ablution niches, on the other hand, are generally built in a closet on the opposite wall, apart from the furnace. The closets are generally designed without a cover / open, and the part with a cover on one side is used as an ablution niche. In the examples where the ablution niche is next to the furnace, it is seen that this section was used as a closet. There are very naive decoration examples in a few examples of closets made of wood. In a few examples, it was seen that the wooden lamp holder ( lambalık – limonluk) was also designed as a part of the closet. The open sections of the closets start 40-50 cm above the ground. Just below this section, there is another cabinet that opens with a hinge to the inside of the room with a cover. The niches identified in the rooms were generally obtained by opening and plastering a space as needed inside the wall. In some examples, they are formed by placing a wooden cabinet module with a cover in the space opened into the wall (Fig.6 d,e,f,g).





*Figure 6. Architectural elements of houses*

#### 2.4. Construction System

In the study carried out in the field, it was determined that there are original building examples for 3 types of construction systems. However, the foundation is the same in all three systems. The foundations of the original structures are built in the width of the main walls or wider, at a depth of 50-70 cm. The stones used in the foundations are the same size or slightly larger than the stones used in the building walls. Mud mortar is used as a binder between the stones. The foundations can be continued to the basement level, to the lower or upper level of the window or along the entire ground floor wall, and continue to function as a masonry wall. Three types of construction systems have been identified in Seyitgazi. These systems are masonry system, Timber framed system and mixed systems in which both systems are used together.

Masonry systems are grouped under three headings: brick, stone and adobe masonry structures. Brick masonry structures are dated to the late post-republic period. These buildings, which were built using solid bricks, are located on the island at the intersection of Uğurlu street and Öğretmen Nasuh Yayalan street, the majority of these buildings are abandoned and are not in use (Fig7b).

In the houses built in the stone masonry system, 2 different types were determined according to the stone used. The first of these is the examples in which walls are formed by placing untreated rubble stones of different sizes on top of each other. This type of untreated stones is generally preferred in garden walls, buildings where stone is used until flooding, and outbuildings, but residential structures built in this way have also been encountered. On walls with this feature, wooden beams are used, usually at intervals of 50-70 cm, to bring the stones to the same level and to ensure the stability of the wall against settlement.

Another feature used is rubble stone, which is roughly leveled (rough cut). The color of this stone is a lighter gray / white, giving the impression that it may be a lime-based sedimentary rock due to the way and direction of melting close to the ground. In the oral interviews conducted in the field, it was learned that this light gray-white stone was called the 'çukurca' stone and was brought from a quarry in the close vicinity. The walls created with this type of stone create texture due to the staggering of the joints and the use of stones of different lengths and widths, and are usually left unplastered. It has been observed that the stability is increased by using wider and larger stones at the corners (Fig. 7a,h).The mortar used between the stones is mud mortar, and it can be seen that it melts and loses its section in parts that are open to atmospheric effects.

Wooden rough logs were used as lintels in the door and window spaces on the wall, which was built with stone with both features. There are also examples where these logs are covered with wooden veneer boards. These logs were either notched in order to hold the plaster, or the soda caps were fixed with nails

to ensure plaster grip. In some of the two-storey houses formed by masonry stone walls, it is seen that the pillars carrying the second floor also form an intermittent skeleton within the masonry stone wall. The number of buildings found to be built in this way is 2, and it is possible to encounter such applications in some of the plastered buildings.

Mudbrick was generally used for filling empty spaces between the timber frame. Used as masonry in very few buildings, mudbrick is generally seen in outbuildings and building annexes. There are examples where mudbricks found to be of different sizes are used with whole (Ana) and half (kuzu) size, as well as examples where the joint is confused by placing the full adobe horizontally and vertically. The outer walls, built with mudbricks, are between 35-50 cm thick. Although the sizes of the adobe blocks vary from structure to structure, the dimensions of 23x33x11 cm are repetitive.



**Figure 7.** Examples of construction system

In the study carried out in the field, it was determined that most of the qualified buildings were constructed by timber framed system. The frame is generally on the first floor above the floor in 2-storey buildings; in single-storey buildings, it is used above the sub-basement. The struts, which are arranged at very different intervals, have different cross-section sizes, provided that they are the main carrier and the partition struts. Generally, rough cut wooden logs are used, and the distance between the carrier and the dividing struts varies between 30 and 45 cm. Stone or mudbrick was preferred as filling in these frames. In the examples where the stone is preferred as a filling, the stone used is rubble stone and has not been subjected to any processing. Mud mortar was used between the rubble stones, and the walls were plastered with mud mortar from the inside and outside. In the examples where adobe is used as a filling between the wooden carcasses, it is full adobe. Mud mortar was used between the adobe bricks, and the walls were plastered and painted inside and out (Fig. 7c).

The content of the mud mortar used in qualified buildings has been determined as clay soil, straw and water within the scope of the information received from the local people. Fine sand was also found in this mortar, which was especially used as plaster. The interior walls of the buildings are usually made of mudbrick filled between the wooden frames. The frame spacing on these walls is usually over 1 meter. Horizontal wooden elements are also used to prevent deflection between the frames (Fig.7d).

Ground floors of the buildings are made by laying mud brick on compressed soil in 10-15 cm thickness and compressed it. According to the information received from the village elders, the soil under the mud is wetted and compacted before the mixture is added. On the other hand, the upper floor floorings are usually made by fixing the tie-dye laths with nails, one cm apart, under the rough-hewn wooden beams with a diameter of 15-20 cm, which are usually placed at 80 ~ cm intervals. These laths are 1 cm thick and are rough cut laths 2-3 cm wide. Mud mortar is filled on the laths, including the beams. The top of the mud mortar is covered with a covering board with a thickness of 1.5–2.5 cm, a width of 20–40 cm and varying lengths. Cladding boards are also fixed to the rough-hewn wooden beams with the help of nails. The top of the Baghdadi boards is plastered with mud mortar from the lower floor and painted, thus



preventing the bad appearance. In the study conducted in the area, an example was found in only one house, where these bagdadi laths were driven continuously and painted without plastering. In the buildings in the district, all of the examples of wooden ceilings that are not covered with plaster are wooden ceilings with laths (rusty ceiling). The wooden laths used on the ceiling vary in the range of 1-2 cm, and the coating boards in the range of 15-25 cm. (Fig. 7e,f,g).

It has been determined that all the roofs of the qualified buildings in Seyitgazi are timber constructed roofs resting on timber ceiling beams. Roof types seen in buildings are shed roof, hipped roof and gable roof. The gable roof is generally built in outbuildings and adjoining; It was found in structures such as haystacks, barns and corrals seen around the courtyard in 'karaldı'. The hipped roof was generally used for houses. Apart from this, hipped roofs were found in monumental buildings and a very few buildings with different functions. Shed roofs, on the other hand, are generally built in later additions, in the building sections such as entrance, wc-toilet; The space added by using the courtyard wall was preferred on the top and unqualified - seasonal semi-open spaces. The only building in the area with a different type of roof is a mansard roof house built in the 2000s. Apart from this, there are domes, cones and vaults in religious buildings.

### 3. PROBLEMS ENCOUNTERED IN BUILDINGS

The problems encountered in the buildings are diversified as in the building plan, facade elements, space and construction materials. These problems can be caused by adding, removing or changing methods, as well as by human hands, or due to natural factors.

#### 3.1. Problems Caused by Human

In the context of the spatial configuration of the buildings, it has been determined that the most common problem is the addition of the toilet and bathroom functions into the building. These add-ons are generally obtained with unqualified workmanship, using materials such as briquettes and bricks with a masonry system and plastering with cement-based plaster (Fig. 8).

In the interior of the spaces, it has been determined in many instances that the furnaces, which have become dysfunctional, were closed. With the arrival of electricity, stoves became unnecessary for the lighting function and for the heating function with the establishment of the stove. Over time, the function of one of the rooms of the house as a kitchen, the establishment of sinks and countertops, the use of electric or gas stoves caused the furnaces to become completely dysfunctional and closed (Fig.8i).

Similarly, the ablution niches inside the room have also lost their function. Ablution niches, the details of which can still be determined, in unused, empty - dilapidated houses; It was transformed from a bathroom function to a closet function in the houses used, and started to be used as a closet. In some examples, it is seen that these non-functional sections were removed and the sink and stove sections were taken into these sections.

Another problem encountered in the field is oil paint and similar applications applied to protect the original wooden elements. As a result of these applications, the deterioration of wooden elements that are disconnected from the air accelerates. In addition, it is not possible to remove the paint that is added continuously over the years from these elements, it is not possible due to the mechanical damage, and it brings along time-consuming and time-consuming applications that require a very expensive specialist, as chemical methods are needed.

In order to pass the electrical and water installations, examples where original elements are damaged, punctured, broken or removed are also quite common.

Vandalism is another human-made damage. In the examination carried out in the area, it was determined that the windows of the abandoned houses were broken by the stones thrown. Due to these fractures, living organisms, animals, moisture and rain water entering the building cause biological and physical damage to the structure. However, it was determined that the buildings, especially the abandoned buildings, were deliberately written with spray and oil paint on the buildings, thus damaging the buildings.

One of the most important of the facade changes encountered in the area is the closing of the windows (Fig.8m). In connection with these examples, there are also many examples where old windows were removed and replaced with new ones (Fig.8k). In these examples, the pillars on the wooden frame walls



of the buildings are cut and the new window is placed in this space (because it is larger). In this context, in addition to the destruction of the original window of the building - thus the deterioration of its originality, changes are also brought about in the structure of the building that affect the stability, which is a factor that accelerates the deterioration of the structure.



**Figure 8.** Problems encountered in buildings

Some of the replaced windows are wooden cased windows called "asri", long before today. However, the recently replaced windows are usually aluminum and are incompatible with the structures and textures in terms of color and frame size. In addition to these, the lack of air passage in these windows creates serious moisture problems as long as the walls are also intervened.

In addition to the windows, another architectural element where the change is seen most intensely is the doors. Especially due to the replacement of the courtyard gates, 4-5 original gates remained in the whole district, and these were mostly ruined when they were in unused courtyards (Fig.8h). In addition to the courtyard doors, the replacement of the street entrance doors is a very common type of deterioration.

Within the scope of changes in building material and technology, the most intense rate is the deterioration that occurs due to not using the original material (Fig.8a). Wood, stone, mudbrick and similar materials used in traditional houses and obtained from the immediate surroundings are expensive, difficult to reach and troublesome; Today, their use has become very limited due to the difficulties in finding the master and the fine workmanship in the details. It has been determined that the users prefer materials such as unqualified briquettes, block bricks, etc. for structures that will be used for a long time and are desired to remain in summer and winter, waste material for short-term structures such as poultry houses and the like, and reinforced concrete construction technique in cases such as additions or reinforcements to the structure (Fig.8 c,d,e,f).

The use of reinforced concrete causes both the deterioration of its originality in the context of additions to qualified buildings and negative results in terms of physical and chemical aspects. Additions made to the structure in the reinforced concrete system are negative in terms of added weight to the structure, as well as negative results because the adherence of both materials to each other, expansion and contraction coefficients are different. In addition, due to the salts in the cement, problems such as flowering or chemical metamorphosis are also seen in the original material, and the structure is damaged.

### 3.2. Problems Caused by Nature

The majority of the deteriorations caused by natural factors; It occurs due to atmospheric conditions due to abandonment and consequently neglect. Especially in abandoned buildings, due to the lack of constant maintenance or care, dilapidation occurs. The deterioration triggers structural separations and cracks over time. Separations and deep cracks, which are frequently seen in the mudbrick walls, which have become

unprotected against atmospheric conditions over time, are among the most important factors that facilitate the collapse of the structure.

Another problem encountered in the area is plaster wear / falling – spillage that occurs due to the lack of continuous maintenance over time. With the pouring of the plaster, the walls become open to atmospheric conditions. For this reason, serious melting occurs in adobe walls, and in masonry stone walls, instability occurs in the stability of the wall due to the melting of the mortars.

The absence of a business that causes environmental pollution, such as industry, in the district and its immediate surroundings causes formations such as lichen and moss on the stones to be seen frequently. Especially the fact that lichens live in clean and oxygen-rich air is among the important reasons for this deterioration to occur in this region as well. In addition to this, the roots of plants growing alongside/inside the unused houses, walls and architectural elements also cause serious deterioration and destruction.

#### **4. EVALUATION AND CONCLUSION**

Seyitgazi is a district surrounded by natural and archeological protected areas, which is still heavily engaged in agriculture and animal husbandry, and contains traces of past civilizations. For the part of the district determined as an urban protected area, the works for the conservation plan have been completed. The submitted plan work is in the approval process. In the district, which hosts many cultural and natural features, Seyitgazi complex is also preferred in the context of local tourism, as it is a structure that is constantly visited in the context of Alevism. However, there are serious deficiencies identified in the text within the scope of protection. It has been determined that these errors are largely due to ignorance.

For example; The rate of those who know where to apply for restoration is 8%. The rate of those who know what needs to be done for restoration and the benefits of the conservation plan is 9%. 84.2% of the household representatives believe that the historical buildings in the region should be preserved. However, according to the answers given to the question about who has the most responsibility to preserve the historical and cultural texture, 46.5% of the participants belong to the “state/official authorities”, 26.7% to “the people living here”, and 9.9% to “politicians”. 5% of them stated that they belong to “non-governmental organizations” and 3% to “everyone”.

In this context, it is important to raise awareness, which is the most important condition of protection, immediately.

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