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TYPOLOGICAL ANALYSIS ON TRADITIONAL EĞİRDİR HOUSES

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Abstract

Traditional houses that built at different cities of Anatolia, reflect many diversities according to the culture, climate and geography of the region which they built at. The history of the Eğirdir District which located at Turkey's Mediterranean Region, around the Lake Lands area, as a district of Isparta City, roots back to the Hellenistic Period. For this reason, there are diverse heritage buildings and archaeological remains at the district which can be dated from Hellenistic Period to early times of the Republic Period of the Turkey. Architectural heritages such as Traditional houses, mosques, churches, baths and other buildings with various functions, all together formed the urban texture of the district. However the homogeneous historical structure of urban texture has been degenerated by the land reclamation fillings that built with the development plan, crossing roads and new / high-raised buildings. The traditional houses were concentrated at specific streets. The houses that built between the end of 19.th and the beginning of the 20.th centuries are mostly abandoned and as a result of these actions, they are facing the risk of the disappearance. To ensure the continuity of the cultural heritage, it is crucial to preserving and keeping alive, the houses which reflect the society's socio-cultural life and architectural culture by conserving them. There is an urgent need to conservation projects and their implementation to prevent the disappearance of these important heritages. Documentation is a prerequisite for conservation projects. In this study, with the aim of preparing a base to Conservation of the Traditional Eğirdir Houses, as part of architectural documentation studies, typological analysis of locations, plan drawings, construction systems, usage of the materials and façades have been conducted.

1. INTRODUCTION

As stated by various references, the first settlement at Eğirdir and surroundings were established in the period of Arzawa Kingdom (B.C. 2000-1200) [1]. Eğirdir and surroundings, has been owned politically by Phrygians (B.C. 1200/750-690), Lydians (B.C. 690/687-547), Persians (B.C. 547/540-334), Alexander The Great (B.C. 334), Seleukos (B.C281), Permagums (B.C.188), Romans (B.C. 130), Cilicians (B.C. 102), East Romans (Byzantian) (A.D. 395), Anatolian Seljuks (1204), Beylik of Hamid (1301) [2]. Eğirdir, after 1390 was ruled by Ottomans in the period of Bayezid I, occupied at different times and in the period of Murad II. at 1423, completely joined to the Ottoman Lands. However, the reason of the long distance between Capitol, district lost its charming effect which it had during Beylik of Hamid. After the Tanzimat (The Edict of Gülhane) (1839), district had become kaza which is a part of Konya Vilayeti Hamit Sancağı (larger administrative unit at Ottomans). After the Proclamation of the Turkish Republic up to current times, Eğirdir's administrative status has remained as district [1], [2].

Eğirdir which had different demographic structure, up until the Proclamation of the Turkish Republic, district welcomed and sent off many immigrants during the population exchange that started at 1919 and continued until 1924 [3]. Because of the population and socio-cultural structure of the society had been changed. While Turkish citizens that lived at the region were immigrating to Anatolia, Orthodox Christian citizens of Turkey which lived at Burdur, Amasya, Denizli, Isparta and their surroundings immigrated to

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Greece. It is known that, up until 16th century, Eğirdir was one of the important trade centres. As mentioned by various references, despite the economic revival at the end of the 17th century, this economic revival has been more effective on Isparta City Centre and other districts such as Yalvaç. The first railroad line of Turkey which was built at 1912, İzmir-Aydın Railroad Line's last point was Eğirdir Train Station. This railroad line effected economy positively [3]. Because of the limited field area, some of the district residents immigrated to the large cities. After the immigrations, houses at the Island were mostly used as summerhouse. After the improvement of the road connection between the Island and the City Centre, residents of the Island preferred pension management as an income source [4]. However, the immigrations were continued, with this reason in mind traditional structures came to our day in dilapidated conditions because of neglection.

1.1. Historical Centrum

District's Centrum formed by Kale Mahallesi (Kale Neighbourhood) which is Eğirdir Kalesi (Eğirdir Castle) located at, Cami, Kubbeli, Seydim, Demirkapı, Hacışeyh, Katip, Hamam, İmaret and Ağa Neighbourhoods. At 1970's road connection between Centrum, Yeşil Island and Can Island was provided through Kale Neighbourhood. Image of the settlement, Eğirdir Castle, Dündar Bey Madrasah, Ulu Mosque, traditional houses and their gardens, narrow streets are the main elements that form historic urban texture. In time, dilapidated buildings and newly constructed buildings effected homogenous structure of the urban texture. The urban texture shaped with the effects of lake and mountainous topography. General settlement of the district formed around the Yesil Island, Eğirdir Castle (Kale Neighbourhood), the settlements around the castle (Cami, Ağa, Sevdim, Poyraz, Demirkapı, Hamam, Kubbeli, İmaret Neighbourhoods) and newly developed buildings around these historic settlement areas. Yeşil Island and Can Island which are connected to the peninsula known as Kaleburnu, are important elements of the urban texture. There is no settlement at the Can Island, at the other hand Yeşil Island has historical urban texture. Transportation is provided through axes that continue as parallel all along to the lakeshore. This axe is also defined by and used as connection freeway between Konya and Isparta cities. Rail roads are alternative transportation methods to the freeways, but at the case of Eğirdir the railroads are not in use today.

1.2. Current Status of Conservation Sites

Castle and its surroundings, with the A.K.V.K.B.K 's 24.04.1995 dated, 2507 numbered decision, has been taken under preservation as grade I. and III. Archaeological Site. With proclamation of the A.K.V.K.B.K's 25.05.1998 dated, 3830 numbered decision Can Island become grade I. natural preservation site, and with proclamation of the A.K.V.K.B.K's 14.04.2007 dated 1576 numbered decision Yeşil Island was declared as grade III. Natural preservation site. The list of the monumental structures and registered buildings of the civil architecture was declared with the proclamation of the A.K.V.K.B. K's 10.05.2007 dated and 49 numbered decision. The list of registered building of the civil architecture has been updated with the proclamation of the A.K.V.K.B.K's 19.04.2010 dated and 121 numbered decision. Within the perspective of the proclamation of the Conservation Board of Antalya's 27.12.2011 dated and 286 numbered decision, the conservation site boundaries of the subject buildings were determined and all of the Yeşil Island was included within these boundaries. Also, there is another conservation site which have boundaries formed by Seydim, Poyraz, Kubbeli, Hacışeyh, Demirkapı, Katip, Hamam, Ağa, İmaret Neighbourhoods. However, only the conservation development plan that belongs to the Yeşil Island and Can Island, were prepared by city planner Funda Yörük and approved by A.K.V.K.B.K at 21.12.2017. Previously mentioned neighbourhoods comprising the Eğirdir conservation site were included within the boundaries of the study area [6].

At the site as an example of the civil architecture 211 traditional houses, 7 traditional shops have been detected. However, only 113 of the traditional houses entered during the study. Among these houses only 8 of them were repaired carefully, just 2 of them restored with the projects that approved by the Board and 1 of them just has prepared projects. One of the two buildings that approved project implemented is a private property that legally located at 183th city parcel's 6th building plot at Kubbeli Neighbourhood and it is declared as a registered cultural heritage building with the A.K.V.K.B.K.'s 10.05.2007 dated and 1588 numbered decision. The building surveys, restitution and restoration projects and reports that prepared for

the building (Ümran Şenol House), are discussed and approved with in scope of the 27.11.2012 dated and 801 numbered Board's Agenda. Other building which is known as Eskiciler Mansion located at 185th city parcel's 12th and 13th city building plots, after the restoration, building continued its services as Nis Hotel. Building's projects were approved with the A.K.V.K.B.K's 21.10.2014 dated and 3127 numbered decision. Another building that has a prepared conservation project is located at 206th city parcel's 6th city building plot. The projects of the building were approved by 27.11.2012 dated and 801 numbered A.K.V.K.B.K.'s decision but the projects weren't implemented [6].

56 of the 113 traditional houses that entered during study are empty. Remaining 52 of the houses functioning as residential structures and 15 of these houses preferred as summer houses (which are in temporal usage) by the inhabitants. One of the traditional houses is adjacent to Mevlevi Dergâhı (Mevlevi Lodge) and it is empty. Just the space allocated for the tomb inside the house is currently in use. Among the houses one of them functioning as hotel, one of them as shop, one of them as restaurant and one of them functioning as museum. 59 of 98 residentials are empty, 32 of them used as currently house, 5 of them preferred as summer house, one of them hotel, one of them in mix use as both residential and commercial. However, these structures were not included to the study in perspective of their plan typologies and functions (Table1).

Table.1 Current usage of traditional Eğirdir houses

	Entered Buildings	Not Entered Buildings	Total	Percent
House	37	32	69	%32,7
Summer House	15	5	20	%9,5
House + Shop	1	1	2	%0,9
Hotel	1	1	2	%0,9
Restaurant	1	-	1	%0,5
Tomb	1	-	1	%0,5
Museum	1	-	1	%0,5
Vacant	56	59	115	%54,5
TOTAL	113	98	211	%100

The houses that preferred as summer houses by the inhabitants are neglected and dilapidated because they are not currently in use. Improper extensions were built to the houses that in use with different functions. Vast majority of these abandoned and not in use buildings have urgent need to the restoration, with restoration these buildings can contribute to the district's economy.

2. ARCHITECTURAL CHARACTERISTICS OF EĞIRDIR HOUSES

The traditional houses of the Eğirdir district have similar architectural characteristics with the traditional house examples around the Anatolia. Ground floors constructed with stone masonry techniques and upper floors constructed with timber framed techniques. While summer houses constructed as modest and humble structures, the houses built by the Greek builders which used all seasons are rich in perspective of aesthetical features at façades and craftsmanship on the doors' and windows' elements. The single or double storeyed buildings having courts and blind façades at road side flanks the current narrow concrete parquet paved streets which were stone paved at its genuine conditions. It is deductible from the archive photographs that there were two-storied, note-worthy agha mansions which are not at the place today (Figure 1).

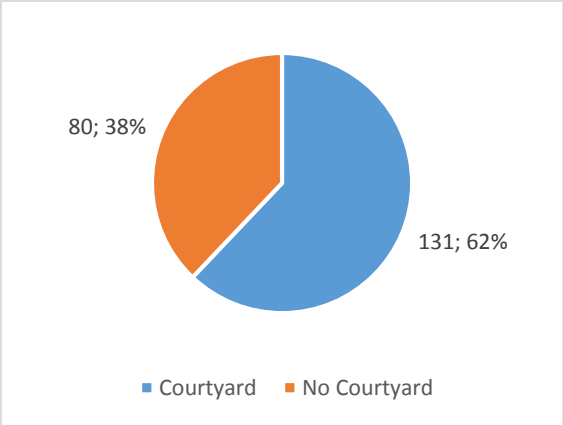
Figure 1. View of the Hacı Nuri House, which was constructed around 1890's as known, from the Lake [4]

2.1 Characteristics of the Parcel and Building Entrances, Location Typology

Houses have courtyards which called "Hayat". Courtyards are open spaces surrounded with stone walls which can be entered through double winged doors. It is possible to see houses with courtyards that have unique stone perimeter walls more often at Yeşil Island. Some courtyard perimeter walls of the island houses, continues as façade walls of main structure. Entrances of the structure shows variety according to the conditions of the courtyard and parcel. While, courtyards at South side, positioned as facing toward to lake, ones at North side positioned facing toward to south side of the buildings, while some courtyards have wells, fountains others have ovens that used for needs such as baking bread (Figure 2).

Figure 2. Examples of fountains and ovens of the Eğirdir houses

Buildings can be divided into two as ones with courtyards and the others without courtyard. 131 of 211 (62%) traditional houses have courtyard (Graphic 1). According to the parcel type and positioning structures are three types namely; middle ones (surrounded with other parcels), corner (ones have at least one side that connected to street, road etc.) and single (as only structure at the block). According to the entrance, structures subdivided into three types namely; houses have entrances from courtyard, from road and from both courtyard and road. Every type varies according the entrance sides of courtyard and main structure. As an example, at the houses that have courtyard entrance and built between parcels, entrances to courtyard might be provided from sides, front and back sides of the courtyard. The determination and deduction of entrances of the houses which were not entered during study, performed with use of site observation outcomes and data obtained from Ministry of Interior's web site. Almost half of the structures positioned at the corner or in middle parcels, again almost half of them have entrance from Street and other half has entrance from courtyard. There are 106 houses constructed at middle parcels, 99 are positioned at the corner parcels and there are 6 houses built on the single parcel inside a single block. Entrances of ten of the houses were provided through courtyard, 93 houses' were provided through street, 108 houses' entrances were provided through both courtyard and street at same time (Table 2). Most frequently preferred type of entrance for Eğirdir House is the type that provides entrance form both courtyard and street, secondly the types that provides entrance from street, as thirdly and the least preferred type of entrance that provide entrance only from courtyard.



Graphic 1. Existence of the courtyard at Traditional Eğirdir Houses

Table 2. Location and entrance typology in traditional Eğirdir houses

	Corner Parcel	Middle Parcel	Single Parcel	TOTAL	Percent
Entrance From Courtyard	5	5	-	10	% 4,7
Entrance From Courtyard and Road	48	57	3	108	% 51,2
Entrance From Road	46	44	3	93	% 44,1
TOTAL	99	106	6	211	% 100

2.2. Characteristics of Plan, Plan Elements and Space Elements

Houses have different number of floors and rooms depending on family's scale and economic status. At the houses that built in a way that satisfy the needs of more than one nuclear family, each room built in a way that satisfy the need of a single family. At some reachable archive sources, plan diagrams reflect that houses were larger than the ones that reach our days (Figure. 3). However, it is possible to understand that fire and calamities are the reasons behind those large houses' failure to survive up until today [7]. Eşref Adalı (2017) mentioned that some of the houses had guest houses which were single-storied, consist of few rooms and adjacent to the main structure [8].

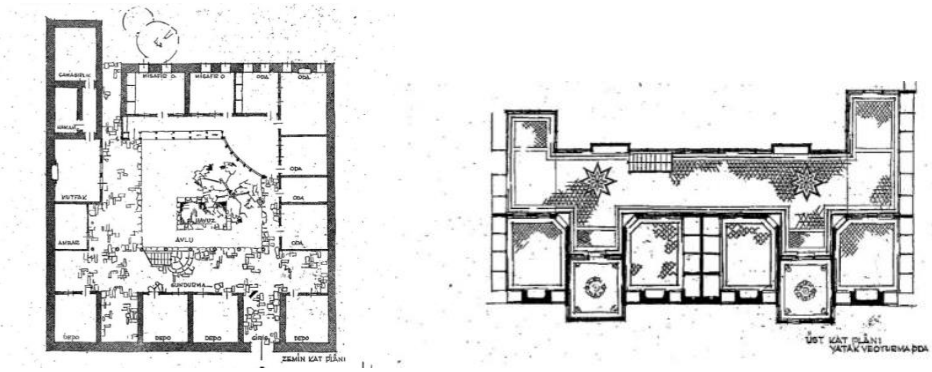


Figure 3. Measured survey drawings of an Eğirdir House that have not survive until today [7]

Usage of The Floors

Eğirdir traditional houses have similar characteristics to traditional houses at Anatolia. Houses are single, two or three-storied. Ground floors are surrounded by the walls that do not have openings except entrance door and courtyard walls. At some houses there are small windows at ground floor, on the façade that have entrance. Spaces like cellar, stable, storage, kitchen take place at this floor. These spaces interconnected by

"taşlık" or "sofa". At the region, space that located upper floor's sofa' under named as "taşlık". The floor of the "taşlık" which separated from the garden by timber posts, covered with stone or compacted soil. At the houses that has courtyard, there was an outbuilding. Upper floors' elements of plan are rooms and the "sofa" that rooms have connection. In addition, floors that located between the ground floor and upper floors can include storage spaces such as cellar and "hanealtı".

Living Spaces

Rooms are the spaces where vast majority of the daily activities such as sleeping, bathing, eating, sitting are performed. The rooms where guests welcomed are larger and faces through street or lake. Named as "Baş oda", these rooms' ceilings, storage units, alcoves have rich craftsmanship in comparison with other rooms. Some houses do not have "gusülhane" (specific space allocated for bathing). Space provide circulation and interconnects rooms named as "sofa". Also, sofas named as "haney" or "hanay" by the region's people. Sofas are designed as closed sofas1. Example of open sofa has been only found at a house that located at Yeşil Island (Figure 4) during study. Some of the sofas have elements such as "eyvan"2, "seki", "köşk"3 and "abdestlik" (Figure 5, 6).

Figure 4. House at Yeşil Island which have open sofa

Figure 5. Eğirdir Houses – Chamfered corner entrance Figure 6. "Köşk" part at the Sofa

Stairs

Connection between floors provided by timber stairs, from taşlık which located at ground floor, to the sofa that located at upper floors. The stairs are approximately 90 cm wide and the steps are 15cm high. Because of the level difference at some houses, there are different entrances for each floor. Shapes of the stairs are;

[1] It is thought that some of the houses had open sofas however at later times with similar construction materials, sofas were closed to obtain window wall.
[2] Space which is one side open and other three sides are closed **[9].**
[3] A space that raised from the floor with level difference, sometimes decorated with "sedir" sitting cushions. This space emphasized at the façades with projections.

L, I, U or C shaped (Figure 7). The concrete stairs which can be found at some houses, are additions that added after the construction of the main structure.

Figure 7. Examples of U, L, I, C shaped stairs of traditional Eğirdir houses

Wet Spaces

Kitchens generally located at courtyard, inside of outhouse which called "harpışta". At some houses kitchen takes place at ground floor's interior space (Figure 8). Harpışta is a space that used to store kitchen ware and baking. Also, harpışta is a multifunctional space that divided into few spaces that allocated for bathing, washing clothes and extracting grape's juice.

"Hela" (toilet) generally located at courtyards, at the houses that does not have courtyard, "hela" is located at ground floors. At some houses, the space under the "sahanlık" (landings) allocated for the "hela" (toilet) (Figure 9).

Figure8. Interior and exterior view of an outbuilding "müştemilat" which used until recently

Figure 9. A toilet stone "hela taşı" example

"Abdestlik" Washbasin; is a circular or rectangular shaped washbasin, that made out of stone, marble or cement, takes place at sofa, having timber window in front (Figure 10, 11). Today "abdestlik"s, are organised inside the buildings as toilets, bathrooms or cement plastered new spaces added to the building such as cellars and storages (Figure11).

Figure 10. "Abdestlik" Washbasin at sofa

Figure 11. Examples of "Abdestlik" Washbasin

Other spaces

As known as at some houses there is a "halı odası" (carpet room) which have carpet loom. About carpet rooms a thesis that Isparta Centrum studied has been prepared by Kevser Çeltik Şahlan. In the study there were a correlation between carpet looms' positioning and plan typologies of the houses. Existence of the carpet rooms was determined. In the study it is stated that carpet rooms must be one of the rooms that located far from the kitchen and close to the entrance for easy accessibility [10]. At the case of the houses at Eğirdir District, it is hard to determine the carpet rooms. Because during study, could not reached to people that interested at carpet weaving, could not found any sources that reflects existence of the carpet rooms and during the field surveys it was determined at the houses which have carpet loom, carpet looms were located at other rooms on top of the "seki"at sofas. However, it is learned from the inhabitants that one of the rooms, which have "seki", are used as carpet room. During study, number of the houses that related to the carpet loom and carpet business is 4 (Figure 12).

Figure 12. Carpet loom, carpet design pattern and its document that found at houses

"Kiler" or "Hanealtı" (cellar) is a space that has 1.5-2 m. width, contains and protects food supplies in terracotta pots, has not any windows. Cellar is usually located at ground floor and rarely located at upper

floors. At some houses there are some mezzanines that used as cellars and these spaces organised with some dividing elements (Figure 13).

Figure 13. Mezzanines that organised by dividing elements at traditional Eğirdir houses

Stables are the spaces that animals kept for riding or for husbandry purposes. Those stables can be without windows or with small windows. At stables, there are "yalaklar" (troughs) which follow the walls and have 60-70 cm. width. At some houses there are storages that used as firewood or hay storage.

Architectural Elements

Architectural elements that distinguished and specific to the Traditional Eğirdir House are doors, windows, ceilings, ovens, cupboards, lamp niches/shelfs and nichess. Doors; made with special care and attention according to their shape and location (Figure 14). While courtyard doors are humbler and more unadorned, entrance doors of the structures reflect owner's economic and social power with its ornaments and detailed craftsmanship. There are doors decorated with wrought iron rounded nails and wrought iron door handles and lock mechanisms. These nails also used as a part of the decoration element of the door. Some of the doors have timber railings and lattices at the top parts.

Figure 14 Examples of main entrance doors of Eğirdir houses

Even if the vast majority of the interior doors are plain rectangular shaped however, there are some examples that have profiled or arched pediments. There are some gypsum plaster ornaments around the doors of the rooms that entered from chamfered corners (Figure 15, 16, 17).

Figure 15. Examples of the double winged interior doors in the traditional Eğirdir houses.

Figure 16. Example of interior single winged doors which have profiled or arched pediment in the traditional Eğirdir houses

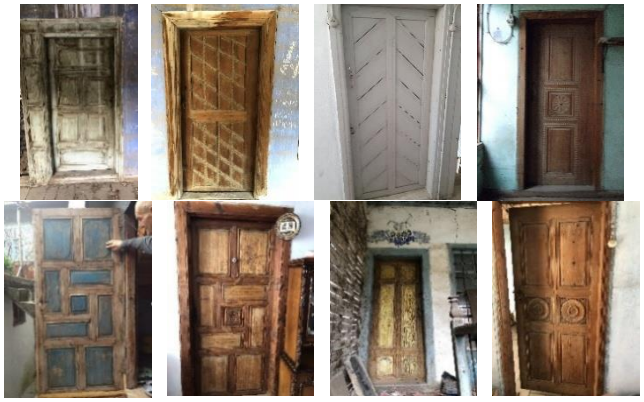


Figure 17. Examples of single winged interior doors in the traditional Eğirdir houses.

Metal and timber locking mechanisms which are still in use today, door handles and doorknockers "şakraklar" are other elements that relfects craftsmanship on the timber doors (Figure18, 19). Some of the doorknockers are shaped like a hand.

Figure18. Examples of doorknockers of traditional Eğirdir houses

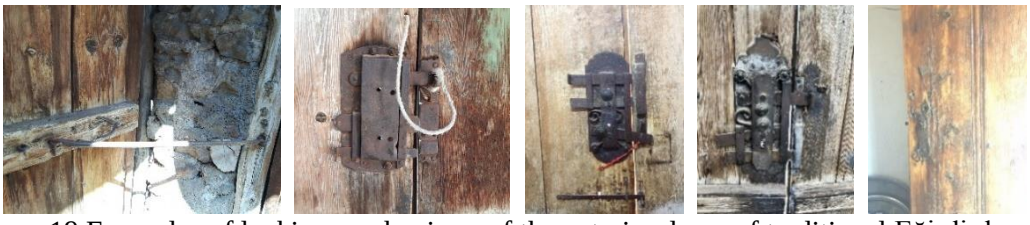


Figure 19 Examples of locking mechanisms of the exterior doors of traditional Eğirdir houses

All traditional windows has timber frames. Windows' shape and size show variety according to the function of the place that they belong to and the floor they are located on. The space that have most of the windows are sofas, followingly according to their hierachical status, rooms and service areas have windows as well.

Mostly groundfloor walls do not have windows, however there are some examples that have small windows with iron railings. Mostly straight railings used but some of them have curling decorations. Some windows have timber railings. Traditional Eğirdir houses have sash "giyotin" windows. They are 60-80 cm. width and 120-160 cm. length and also these windows have equally divided into six-eigth panes (Figure 20). At the houses that built with brick masonry techniques have arched windows (Figure 21).

Figure 20. Examples of metal and timber railings on windows of traditional Eğirdir houses

Figure 21. Examples of traditional Eğirdir houses' arched windows

Eğirdir Houses have ovens at both rooms and kitchens. The oven that foods cooked and heated has timber hoods "yaşmak" (Figure 22). There are shelfs and ornamented niches on both sides of the oven. However some ovens are plain and do not have timber hoods (Figure 23).

Figure 22. Example of ovens with timber hood "yaşmak" at the traditional Eğirdir houses

Figure 23. Example of plain ovens at the traditional Eğirdir houses

There are cupboards inside the walls which were used for various purposes. These cupboards are generally unadorned but there are some examples which have detailed carvings (Figure 24).

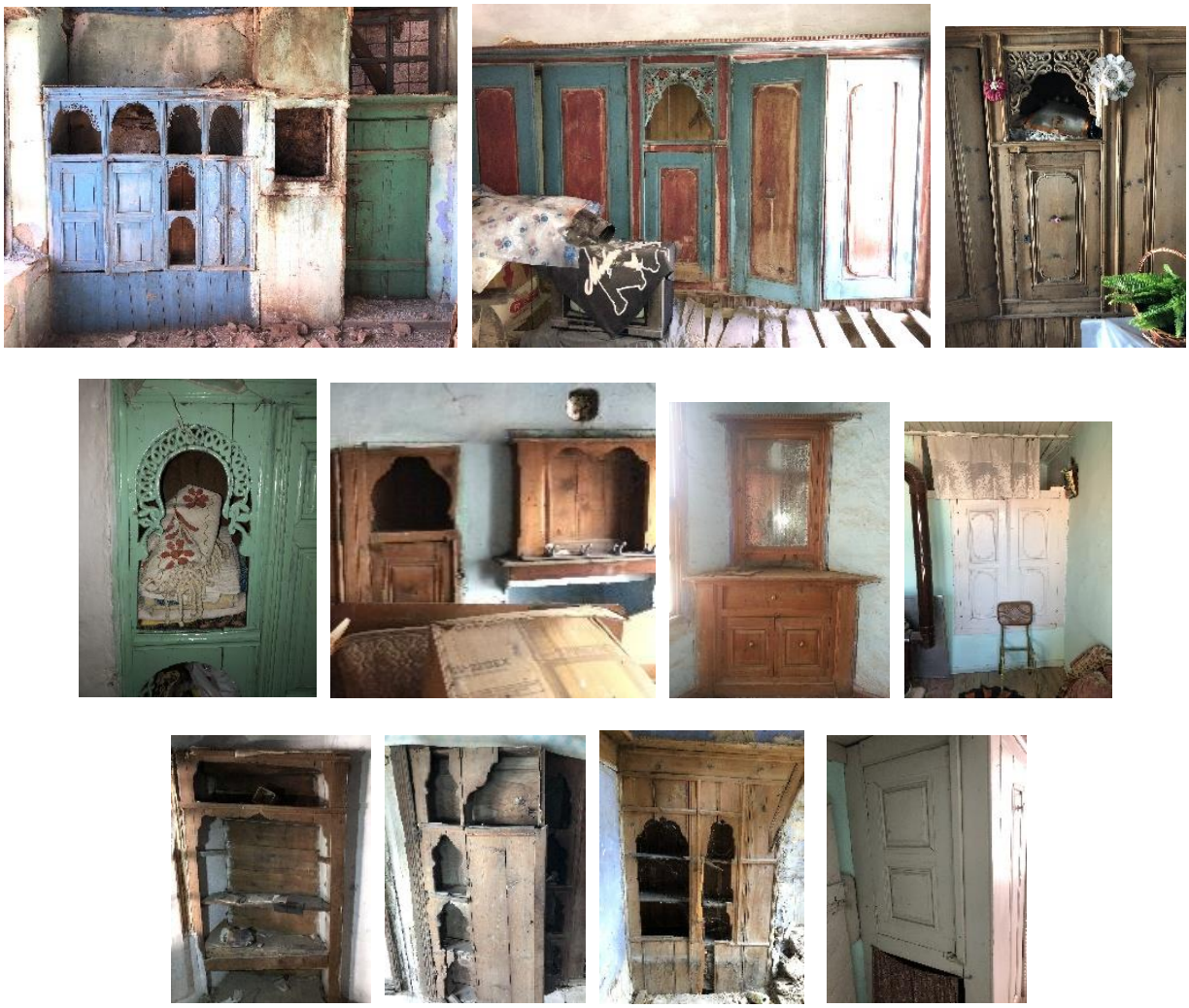


Figure 24. Examples of cupboards at traditional Eğirdir houses.

According to function of these cupboards, named as “yüklük” that quilts were stored in, “sandıklık” that wedding chest of the bride were stored. “Yüklük” is a cupboard that has double winged door and raised 40-50 cm. from the floor level. The upper part of the “yüklük” is called “musandıra”. Yüklük, sandıklık and gusülhane were lined and organised on a wall. Gusülhane, is located mostly at outfacing corner of the room and has appeareance of cuppoard. It is opened with a timber door and it is raised from the floor as a bathing space. Gusülhanes are transformed to yüklük because of construction of spaces allocated for bathing (Figure 25, 26).

Figure 25. Examples of yüklük, sandıklık and musandıra at traditional Eğirdir houses.

Figure 26. Examples of gusülhane at traditional Eğirdir houses.

At the rooms, there are candle / oil / gas lamp shelfs "kandillik" / "lambalık" which are made out of timber or gypsum, where the candle / oil / gas lamps were placed. A hand-drawn "kalem işi" ornament is detected on the lamp shelf at the wall of the house located at Yeşil Ada (Figure 27).

Figure 27. Examples of lamp shelfs and hand-drawn "kalem işi" ornaments at traditional Eğirdir houses.

Some of the rooms have timber and gypsum lantern or juice coves "kandillik" / "lambalık" or "şerbetlik". These niches were used as candle / oil / gas lamp shelfs "kandillik" / "lambalık" or juice shelves "şerbetlik". Some of the coves have profiled small corner shelfs at both sides. The bottom side of the coves can be convex or simple shelfs. The upper side of the coves can be finished as straight or arched shape (Figure28).

Figure 28. Examples of lantern or juice coves "kandillik" / "lambalık" or "şerbetlik" at traditional Eğirdir houses.

"Seki" Platform; is generally a raised sitting element, that has cotton filled cushions on top and at the waist supporting parts, and has storage spaces at the bottom. It is located at places where users can see outside while sitting. Some seki examples have carved timber balustrades at the corners (Figure 29). But sometimes "seki" is a wide platform in the sofa.

Figure 29. "Seki" Platform and hidden storages that part of seki at traditional Eğirdir houses

"Sergen / seren" is a shelf which continues all around the room at the top of the window's top line, and it has 15-20 cm. width. It exists in all traditional Eğirdir houses. Examples at the kitchens which used at storing kitchen wares are wider than the other examples at the rooms (Figure 30).

Figure 30. Example of "sergen / seren" at traditional Eğirdir houses

Sofa and rooms have ornamented ceilings which have ornaments with star patterns that carefully crafted out of timber at the centers and borders. Guest rooms that named "Baş Oda" have richer ceilings in perspective of ornaments and craftsmanship (Figure 31). A special ornament craftsmanship named hand-drawn "kalem işi" detected only at the ceilings of two houses (Figure 32). At some of the houses' ceilings, there are profiled capitals (Figure 33). Ceilings of the service spaces has simple timber plaque coverings. At the spaces such as barn and pantry, ceilings do not have timber coverings, timber beams left exposed (Figure 34).

Figure 31. Examples of ornamented timber ceilings and details of ceiling rose at traditional Eğirdir houses

Figure 32. Examples of hand-drawn "kalem işi" craftsmanship at the ceilings of traditional Eğirdir houses

Figure 33. Examples of profiled timber capitals at traditional Eğirdir houses

Figure 34. Examples of simple timber covering and uncovered timber beamed ceilings at traditional Eğirdir houses

Stairs and elements of the stairs, such as steps, balustrades "küpeşte", decorated top rails "zavrak", handrails are completely producted from timber (Figure 35, 36). Tread boards have diamond or cross patterned motives (Figure 37). While some handrails have carved profiles and different craftsmanship, there are handrails which have circular or square sections.

Figure 35. Types of balustrades and handrails at traditional Eğirdir houses

Figure 36. Examples decorated top rails "zavrak" at traditional Eğirdir houses.

Figure 37. Cross patterned motives on tread boards of traditional Eğirdir houses.

2.3. Types of Plan

Plan types of the Eğirdir Houses are different at ground floors, mezzanine floors and first floors. Ground floors are the levels that have spaces such as "taşlık" (entrance), barn, storage and pantry, etc. spaces that related to livelihood works. Access to the upper floors is provided with stairs from this level. Mezzanines, that mostly used as winter floors, have storage spaces such as pantry named "hanealtı". Height of these storeys are lower than the other floors and have smaller windows in comparison to other floors. With well-

arranged and rectangular plans, first floors are categorized into two types as outer sofa "dış sofalı" and inner sofa "iç sofalı" for exhibiting common sofa-room relationship (Table 3). Plans that have outer sofa has two types which are open-outer sofa "açık dış sofalı" and closed-outer sofa "kapalı dış sofalı". Closed-outer sofa typed plan has sub-groups which shaped as "I", "L","U" and surrounded with rooms. Inner sofa plan type is applied as two types which are single faced- inner sofa "tek yüzlü iç sofalı" and double faced-inner sofa "iki yüzlü iç sofalı". At space organisations that inner sofa preferred, rooms are aligned on the long sides of the rectangular designed sofa. At the single faced-inner sofa desings, while one side of the sofa located as facing to outside, other side of the sofa surrounded with spaces. At the double faced-inner sofa while both two side of the sofa were facing outside, windows and doors of the adjacent rooms connected to the sofa.

Plan typology is determined by considering the upper floors' plan types. At the cases that do not have upper floors, plan typology is determined by using the ground floors' plan types. Closed-outer sofa plan type is the most preferred type (%71,6). As sub-groups of this type are applied on designs with rates of; "I" typed ones (37.1%), "L" typed ones (%32.7) and "U" typed ones (%1.8). Example of the open-outer sofa plan type is determined at one building. As sub-type of inner sofa plan type, double facing-inner sofa plan type is applied at %19.5, single facing-inner sofa plan type is applied at %8 (Table 3, 5).

Table 3. Plan types of traditional Eğirdir houses

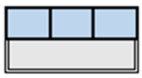
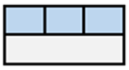
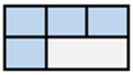
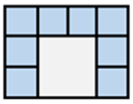
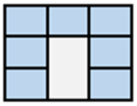
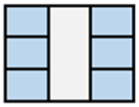
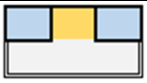
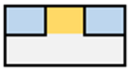
Plan Type	Number of Building	Percent	
Open Outer Sofa Plan	1	% 0,9	%0,9
Closed Outer Sofa Plan - I Type	42	% 37,1	%71,6
Closed Outer Sofa Plan - L Type	37	% 32,7	
Closed Outer Sofa Plan - U Type	2	% 1,8	
Inner Sofa Plan – Single Faced	9	% 8	%27,5
Inner Sofa Plan – Double Faced	22	%19,5	
TOTAL	113	%100	%100

While %23 of the buildings have iwan "eyvan", %77 of the buildings do not have iwan "eyvan". Eyvan is not a part of the typology of single-storyed houses. 12 of 26 buildings, that have eyvan, are in a typology group which is "L plan type", 5 of 26 buildings are in typology group which is "I plan type", 4 of 26 buildings are in typology group which is "single-faced inner sofa plan type", 4 of 26 buildings are in typology group which is "double-faced inner sofa plan type", 1 of 26 structures is in typology group which is "open outer sofa plan type". Eyvan has not been determined in "U plan type".

Table 4. Presence of iwan "eyvan" in Traditional Eğirdir houses

Presence of Eyvan	Number of Building	Percent
With Iwan "Eyvan"	26	%23
Without Iwan "Eyvan"	87	%77

Table 5. Traditional Eğirdir houses' plan typology

	OUTER SOFA PLAN				INNER SOFA PLAN	
	OPENED - OUTER SOFA	CLOSED - OUTER SOFA			SINGLE FACED	DOUBLE FACED
		I	L	U		
WITH IWAN "EYVAN"						
WITHOUT IWAN "EYVAN"						
SOFA: 	ROOM: 	IWAN "EYVAN": 				

2.4. Construction System and Use of Materials

Stone and timber material were used at traditional Eğirdir houses' construction. Usually, while ground floors of the houses were constructed with rubble stone masonry with or without bonding timber systems, upper floors were constructed with timber framed systems. Buildings which built with other construction systems such as timber frame, rubble stone masonry, brick masonry and different combinations of these systems were also detected. At the combined systems, two or three different systems and materials were used together. Houses that has outer walls which made of stone or brick masonry has inner walls that built with timber framed techniques. Some of the buildings' ground and upper floors, were constructed using brick masonry systems. Thickness of the outer walls shows variety, walls that built with rubble stone masonry have 50-90 cm, brick masonry have 50-70 cm, timber frame has 15-20 cm thickness. The timber framed inner walls are in 13-15 cm. thickness and finished with timber lathed "bağdadi" plaster technique (Figure 38, 39, 40, 41, 42) (Table 6).

Also, there are some traditional houses which is plastered and could not entered. These houses are categorised as unknown. These are buildings whose body walls are completely covered and the structure material of which cannot be understood. Some of these houses have sheet metal claddings "sac" and some of them have plastered at exterior surfaces. Especially at the houses, which located at Yeşil Island, timber parts of the buildings were begun to rot because of moisture. For this reason, these parts were covered sheet metal claddings "sac". PVC claddings, ceramic tiles and similar relatively new materials were detected at the exterior surfaces of houses during the study (Table 7).

Table 6. Traditional Eğirdir houses' structural system types

Structural System	Number of Building	Percentage
Reinforced concrete + stone masonry	4	% 1,8
Timber frame	5	% 2,4
Timber frame + stone masonry	120	% 56,9
Timber frame + stone masonry + stone brick	12	% 5,7
Stone masonry	18	% 8,5
Brick masonry	1	% 0,5
Stone masonry + brick masonry	9	% 4,3
Combined system	3	% 1,4
Unknown system	39	%18,5
TOTAL	211	%100

Table 7. Traditional Eğirdir houses' façade covering type

Covering Type	Building Number	Percentage
Sheet metal cladding (sac)	44	% 20,8
Plastered	66	% 31,2
Other covering materials	2	% 1
Sheet metal cladding + plastered	32	% 15,2
Sheet metal cladding + other covering	1	% 0,5
Plastered + other covering	1	% 0,5
No covering	65	% 30,8
TOTAL	211	% 100

(a) (b) (c)

Figure 38. Construction system at traditional Eğirdir house (a) brick + stone masonry (b) stone masonry + timber framed (c) mixed use of systems.

Figure 39. Using stone and timber framed system together in traditional Eğirdir houses

(a) (b) (c)

Figure 40. Traditional Eğirdir houses (a),(b) examples of timber framed system, (c) timber lathed "bağdadi"

(a) (b) (c)

Figure 41. Wall fillings at traditional Eğirdir houses (a), brick filling (b), (c) adobe filling

Figure 42. Examples of traditional Eğirdir houses which has stone masonry ground floors and brick masonry upper floors.

Plasters are generally soil based and contains straw. However, at some buildings there is lime plaster. Some buildings do not have plasters on the surface (Figure 43). At some buildings there are applied cement plasters and paints which are improper alterations that applied by property owners.

Figure 43. Examples of timber lathed "bağdadi" plaster at traditional Eğirdir houses

2.5. Characteristics of Roofs

Houses that inspected during the study has hipped, gabled, flat/terrace, pitched and mixed kind roofs. Materials of the roof coverings show variety such as Marseille tiles, Turkish style tiles, cement finishes or galvanised-corrugated metal sheets. Genuine coverings of the roofs made of Turkish style tiles, however at the repaired /restored roofs Marseille tiles were preferred. While Projections made of corrugated metal sheets and tiles were added to some houses, at some houses, similar spaces leaved as terraces.

Eaves are divided into five as open timber soffit, closed timber soffit, profiled timber soffit, brick saw-teeth "kirpi" eaves and non-eaved. While mostly preferred types are open and closed timber soffits, other types preferred lesser (Figure 44).

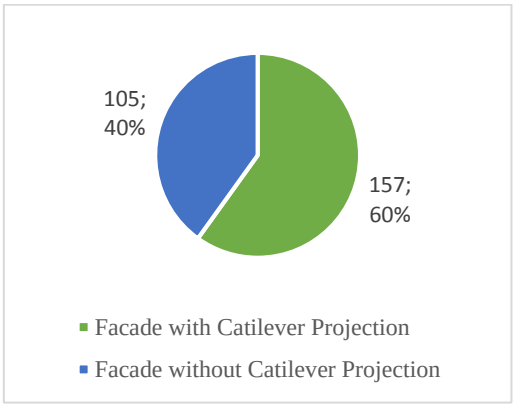
Figure 44. Eaves of traditional Eğirdir houses; (a) closed soffit, (b) open soffit, (c) profiled soffit, (d) brick saw-teeth "kirpi" eave

2.6. Characteristics, Elements and Typology of Façades

Many of the spectacular mansions that visible at archive photographs and drawings which belongs to traditional Eğirdir houses have not survive until today. At some examples of the survived houses, courtyard walls continue as façade of the structure. This situation is highly noticeable especially at houses located at island. There are projections on the façades which facing to entrance, street and courtyard. Openings such as doors and windows are located at façades which not facing to street. Houses that constructed in corner parcels has chamfered corners, even the houses that lost their traditional features, chamfered corners has remained until today (Figure 45).

Figure 45. Example of chamfered corners at Traditional Eğirdir Houses

According to the number of the storey, façades are classified as three groups; single-storeyed, two-storeyed, and three-storeyed. According to the elements of the façades are divided into two groups; façades that have projections and façades that do not have projections (Graphic 2). Due to the reason of each single façade of the houses, which are located in corner parcels, have various typological features, more than one façade of some houses were analysed during the study. For this reason typological analysis is conducted on 262 façades of the 211 traditional houses. In the study it is detected that most frequently built façade type is the one that has projection (%60) (Graphic 2).



Graphic 2. Existence of projections at traditional Eğirdir houses.

Projections divided into eight types which are middle projections, full façade/storey projections, saw tooth projections, corner projections, single side projections, double side projections, irregular projections and mixed projections. Irregular and mixed types of projections have more than one projections. Visually valuable silhouettes were created by the projections which are facing to streets. Some building' projections positioned as facing to courtyard (Figure 46) (Table 8).

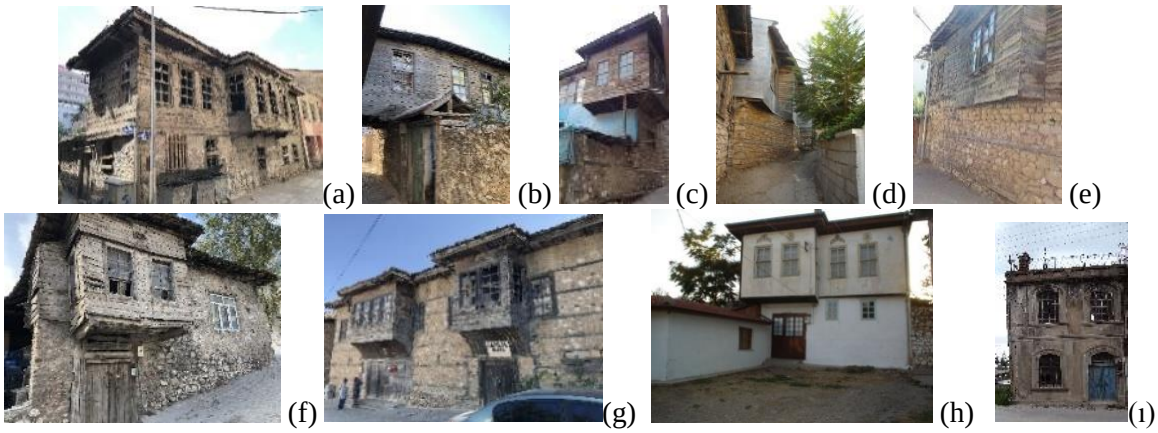


Figure 46. Façade types of traditional Eğirdir houses (a) middle projection, (b) full façade/storey projection, (c) corner projection (d), (e) saw tooth projection, (f) single side projection, (g) double side projection, (h) mixed projection (ı) façade that do not have projection.

Table 8. Traditional Eğirdir houses' façade typology

		1-STOREY	2-STOREY	3-STOREY
WITH PROJECTION FAÇADE TYPES	MIDDLE PROJECTION			
	FULL FAÇADE PROJECTION			
	CORNER PROJECTION			
	SAW TOOTH PROJECTION			
	SINGLE SIDE PROJECTION			
	DOUBLE SIDE PROJECTION			
	MIXED PROJECTION		The mixed projection façade which is mixed more than one projection type can be seen together	
WITHOUT PROJECTION FAÇADE TYPES				

9 of 262 analysed façades have middle projection (% 3,4), 43 of 262 have full façade/storey projection (%16,4), 36 of 2642 have single side projection (% 13,7), 8 of 262 have double side projection (%3,1), 27 of 262 have corner projection (10,3), 14 of 262 have saw tooth projection (5,4), 20 of 262 have mixed projection (%7,6) 105 of 262 façade do not have projection. At mixed projections, mostly sawtooth and full story projections are preferred together (Table.9).

Table 9. Traditional Eğirdir houses' façade typology distribution

	1-storey	2-storey	3-storey	TOTAL	Percent
Without Projection	14	86	5	105	% 40,1
Middle Projection		7	2	9	% 3,4
Full Façade Projection		38	5	43	% 16,4
Corner Projection		25	2	27	% 10,3
Saw Tooth Projection		10	4	14	% 5,4
Single Side Projection	24	33	3	36	% 13,7
Double Side Projection		7	1	8	% 3,1
Mixed Projection		18	2	20	% 7,6
				262	% 100

Projections' undercoats have two different types as opened and the covered ones that have timber plaques (Figure 47). Some projections' undercoats are covered with plastered and profiled, some projections' undercoats are supported with plain or profiled timber buttresses.

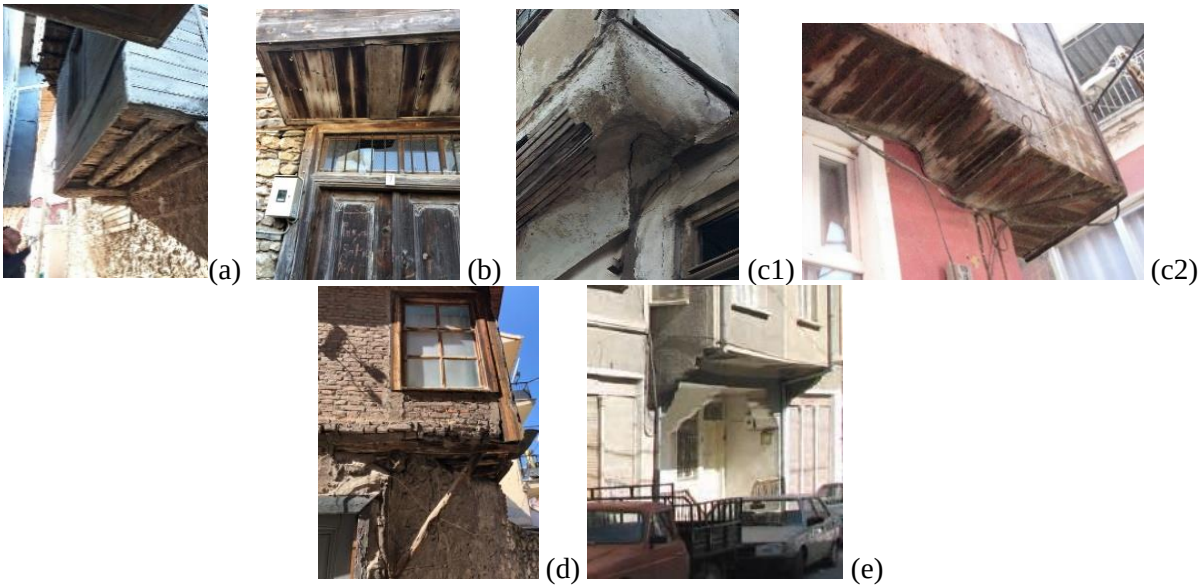


Figure 47. Projection undercoat of traditional Eğirdir houses (a) Projection with opened bottom (b) Projection that has plain undercoat, (c1, c2) Projection that have profiled undercoat, (d) Projection supported with plain buttress (e) Projection supported with profiled buttress

3. ASSESSMENT AND CONCLUSİON

Within the area that contains Eğirdir preservation site, 211 traditional houses' exterior features were studied. Entered 113 of 211 traditional houses' interior and exterior features were studied and typological findings that belongs to the traditional Eğirdir houses were concluded.

[4] Projections constructed due to elevation differences on the façades.

Eğirdir traditional houses, shows similarities to other traditional examples built at Anatolia; are the structures that mostly have two storeys, ground floors are made of rubble stone or cut stone masonry, upper floors are constructed with timber frames which have stone or brick filling (Table 6), façades do not have coverings however at later times façades cladded with sheet metal panels "sac" (Table 7), have courtyards (Graphic 1) and entrances from both street and courtyard (Table 2), buildings has façades that have any or small windows on street sides and has hipped roofs. While unique roof coverings were Turkish style tiles, after improper restoration applications, were changed to Marseille type tiles and few examples of the roofs that have Turkish style tiles have survived until today.

Similar to the Traditional Turkish Houses, Eğirdir traditional houses are built in a way that satisfy the needs of more than one nuclear family, each room organised in a way that satisfy the need of a single family. "Sofa" that provides interconnection between rooms is named as "haney/hanay" at Eğirdir. Kitchens are mostly located inside outhouse named 'harpışta' (Figure 8) however, there are examples of the kitchens which are organised at ground floor. Toilets are also located away from the main building.

At some houses there are spaces interconnected with sofa such as iwan "eyvan" and "köşk" where household spent time together. It is known that carpet business was of the income sources of the houses, with this reason in mind there were spaces called carpet room "halı odası" that allocated for this activity and carpet looms (Figure 12). It is observed that vast majority of the carpet rooms are currently in use for different purposes however, only four genuine carpet rooms were detected during the study.

There are two types of plans were used at traditional Eğirdir houses (Table 3, 5) which are the plan types that have inner sofa and outer sofa. The plan type that have outer sofa has two sub types that has open and closed outer sofa. While plans that have open-outer sofa was detected at only one house (Figure 4), it was observed that closed- outer sofa type was preferred more. Closed- outer sofa type plans have sub types such as "I shaped", "L shaped "and "U shaped" which named according to the organisation of the rooms around the sofa. Among these types "I" and "L" shaped types were preferred more than "U" shaped types, also plans that have inner sofa were preferred less than one have closed sofa. Plan types which has inner sofa has two sub types which are plans that has single faced inner sofa and double-faced inner sofa. Plan types that has double-faced inner sofa was preferred more than plans which has single-faced inner sofa. Plans types that have middle sofa which are commonly preferred at traditional Anatolian houses could not found at Eğirdir.

Façades which facing to streets are generally plain and do not have projection. However, there are one or more projections on the façades which facing to courtyards and at the façades of the houses which built in corner parcels. There are more houses that have projection on its façades than ones do not have (Graphic 2). Full façade/storey projections and single side projections were preferred more and applied widely (Table 9).

Façades of the traditional Eğirdir houses are plain and do not have ornaments. Within the limitations of timber framed systems, projections and windows which located with rhythmic pattern creates aesthetic beauty which proportioned to human scale. There are elements that plain and have aesthetical craftsmanship value such as timber railings and lattices (Figure 20), open and closed eave and projection soffits, entrance doors (Figure 14), doorknockers and locking mechanisms (Figure 18,19). Controversially interior elements such as timber stairs and handrails (Figure 7, 35, 36), doors (15, 16, 17), cupboards and storage elements "sandıklık / yüklük / musandıra" (Figure 24, 25, 26), ovens (Figure 22, 23), lantern coves and shelves (Figure 27, 28), "seki" / platform (Figure 29), "sergen" / shelf (Figure 30), timber ceilings that have special ornament technique "çıtakari" (Figure 31, 32) and profiled timber capitals are the elements that have ornaments (Figure 33), rich and detailed craftsmanship. Rooms with different functions have ornamented doors that have different scale of care and attention at craftsmanship. Floor coverings are generally simple and made of timber plaques.

Most of the traditional Eğirdir houses which have important historical and cultural values, are out of use therefore neglected, this situation increases the risk of dilapidation. Problems that complicate preservation and conservation of the historical urban texture can be listed as; newly built structures which do not have

aesthetical relations with traditional buildingss, new and concentrated building blocks and commercial areas at the central regions of the district within the scope of new development plan, improper extensions, un-defined empty areas, dilapidated houses and traditional houses that do not have access to main roads or street. Also, electrical substations, utility poles, air conditioner motors, tv antennas, empty spaces which contain waste materials and neglected gardens are other deflects that cause visual imperfections at historical context.

These problems which complicate preservation and conservation of the traditional Eğirdir houses and historical urban texture of the district, must be solved with fast, proper and sustainable methods. As a prerequisite of preservation and conservation, documentation is an action that needed to be done at first stage. With this reason in mind in this study; characteristics, use of the construction materials, architectural elements, typology of the façades and plans that belongs to traditional Eğirdir houses were documented with the aim of preventing possible degeneration on these qualifications of the buildings. These typological documents can be useful reference for preservation and conservation studies which will be conducted at future.

4. REFERENCES

[1] İnternet: http://www.egirdir.gov.tr ; Eğirdir Kaymakamlığı Internet Sitesi, (E.T. 01.05.2018).
[2] Türk, A. Doğal, Tarihsel ve Arkeolojik Alanların Turizm Potansiyelinin Belirlenmesi, Göller Bölgesi Örneği, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Şehir ve Bölge Planlama Anabilim Dalı, Şehir Planlama Programı, (2000).
[3] Yakit, İ., "Arşiv Belgeleri Işığında XIX. Asırda Eğirdir'in Sosyo-Kültürel ve Ekonomik Yapısı", I. Eğirdir Sempozyumu, 31 Ağustos - 01 Eylül 2001, Eğirdir, Isparta, (2001).
[4] Veziroğlu, N. G., Eğirdir Ansiklopedisi ve Hamidoğlu Tarihi Oyun, Sinan Ofset Matbaacılık, Isparta, (2005).
[5] Eraydin, Z. "Kentsel Markalaşma Stratejilerinin Kent Belleği ve Kent İmgesi Üzerine Etkileri: Ankara Örneği", Kent Araştırmaları Dergisi, Sayı:19, Cilt: 7, Mayıs 2016, sayfa: 80-115, (2016).
[6] Antalya Regional Board of Heritage Conservation archive decisions, (1995 – 2017).
[7] Hasekioğlu, N. - Evren, M. "Eğirdir İmar Planı", Mimarlık Güzel Sanatlar ve Şehircilik Dergisi, Yıl: IX, Sayı: 5-6, s.17-25, (1952).
[8] Adali, E., Göller Bölgesi, Özkaracan Matbaacılık, İstanbul, (2017).
[9] http://www.tdk.gov.tr ; Türk Dil Kurumu İnternet Sitesi (E.T. 01.05.2018).
[10] Çeltik Şahlan; K. 19. ve 20. yy. Osmanlı Toplumunda Konut İçi Dokumacılık Üretiminin Mekâna Yansıması: Geleneksel Isparta Konutları, Gazi Üniversitesi, Fen Bilimleri Enstitüsü, Mimarlık Anabilim Dalı, (2018).