

Questioning Urban Design Dimensions of the Cul-De-Sacs in the Walled City of Famagusta

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ABSTRACT

“Cul-de-Sac” is a french term that means the street pattern which have passage from one side and connects with larger streets. The other name of the “cul-de-sac” is Dead End Street. There are two different types of dead end streets, which are traditional and modern cul-de-sacs. According to the case study of this thesis, traditional cul-de-sacs’ typology will be refered. In the traditional urban texture, cul-de-sac is semi-public space that provides safety for children and semi-private space for adults. This typology brings significance to the urban pattern with the traces of traditional culture. As the aim of this thesis, ten cul-de-sacs situated in the Walled City of Famagusta are analysed according to the six dimensions of urban design. These dimensions are visual, temporal, functional, social, morphological and perceptual dimensions. In this thesis, four chapters are included that are structured with introduction, literature review, case study that is the cul-de-sacs in the Walled City of Famagusta and conclusion. At the end of the study, the findings that determined throughout the thesis are presented and reccomondations are provided as a guide for further research. In this study, it is mainly determined that most of the cul-de-sacs are weak. In terms of physical and functional qualities.

Keywords: Cul-de-sac (Dead End Street), Functional Dimension, Morphological Dimension, Urban Design, Perceptual Dimension, Physical Dimension, Social Dimension, Street Typology, Visual Dimension, Walled City of Famagusta

ÖZ

“Cul-de-sac”, tek taraflı geçişi olan ve diğer sokaklara bağlanan sokak dokusu anlamına gelmektedir. Fransızca kökenli olan bu terim, çıkmaz sokak anlamındadır. Çıkmaz sokaklar, geleneksel ve modern olarak ikiye ayrılmaktadırlar. Bu tezde ele alınan çıkmaz sokak örneklerinin bulunduğu tarihi dokudan dolayı, geleneksel çıkmaz sokak dokularına değinmektedir. Geleneksel çıkmaz sokak örneklerine bakıldığında, bu sokaklar çocuklar için güvenli ve yetişkinler için yarı özel alan niteliği taşımaktadırlar. Bu sokak tipolojisi, gelenekselleşmiş kültürün izlerinin önemini vurgulamaktadır. Bu araştırmada, Gazimağusa Suriçinde bulunan çıkmaz sokakların görsel, fiziksel, fonksiyonel, sosyal, morfolojik ve algısal boyutlarını literatür taramasına bağlı kalarak değerlendirilmesi amaçlanmıştır. Yapılan çalışmada ilk olarak giriş kısmı yer almaktadır. Burada çalışmanın amacı ve metodu verilmiştir. Ardından yapılan çalışmaya ışık tutmak için teorik çerçeve yer almaktadır. Burada, kamusal açık alanlar başlığı altında sokak tipolojileri ve çıkmaz sokaklar hakkında bilgi aktarılmaktadır. Üçüncü bölümde ise alan çalışmasının değerlendirmesi yapılmıştır. Ardından, mimari ve kentsel ölçekler ile ortaya çıkan çalışmada elde edilen özgün ve objektif bulgular ileriki çalışmalara veri oluşturacaktır. Bu çalışmadaki ana bulgular Gazimağusa suriçindeki birçok çıkmaz sokağın fiziksel ve fonksiyonel açıdan zayıf olduğunu göstermektedir.

Anahtar Kelimeler: Gazimağusa Suriçi, Kentsel Tasarım, Sokak Tipolojisi, Çıkmaz Sokak, Görsel Boyut, Fiziksel Boyut, Fonksiyonel Boyut, Sosyal Boyut, Morfolojik Boyut, Algısal Boyut

To my family

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Chapter 1

INTRODUCTION

Cul-de-sacs (dead end streets) are one of the distinct elements of urban pattern that presents character to the urban environment that comes from the history. In general, these streets are residential streets and they have only one access.

Streets are one of the most important urban spaces. They have different kinds of typology that comes from the history. Cul-de-sacs (dead end streets) are one of the important types of streets. Cul-de-sac is defined in architecture and urban design literature as ‘the street pattern open only in one side and connected to other larger streets’(Keleş, 1999; Sözen & Tanyeli,1992).

1.1 Statement of Thesis Problem

Today, as it is observed, there are 10 cul-de-sacs in the Walled City of Famagusta. Currently it is recognized that they do not have active uses. However, it is known that, cul-de-sacs have potential to be used in more efficient way. Urban design is the process of making better places for people. It involves considerations of equity, gender, income groups, etc., and generally stresses broader, collective outcomes rather than narrower, individual outcomes. Second, it emphasizes the value of place and the need for an explicit concern for issues of place making and responses to both local and global contexts. Third, it recognizes that urban design operates in the ‘real’ world and that the field of opportunity for urban designers is typically constrained and bounded by forces (market and regulatory) that are beyond its control or

influence (Madanipour, 1996).

The focus of this research is analysing the six dimensions of cul-de-sacs in the Walled City of Famagusta in North Cyprus.

1.2 Aim of the Thesis

Walled City of Famagusta is one of the distinct urban patterns of North Cyprus. In this urban pattern, there are several cul-de-sacs (dead end streets) that are important part of streets types. In order to analyze these streets in a systematical way, dimensions of urban design are considered by referring to Carmona's book that is "Public Places, Urban Spaces" (2003). In this research, the main aim is to analyze and evaluate the "cul-de-sacs" (dead end streets) in the Walled City of Famagusta in terms of urban design dimensions. These dimensions are visual, temporal, functional, social, morphological and perceptual dimensions. In order to satisfy the aim, the main research questions are raised as such;

What are the physical and functional qualities of cul-de-sacs in the Walled City of Famagusta considering six (visual, temporal, functional, social, morphological and perceptual) urban design dimensions?

Besides, the following sub questions are raised as such;

- What are the significances and types of public open spaces?
- What is cul-de-sac in terms of street types?

1.3 Limitations of the Study

The research is limited by the evaluation of ten existing cul-de-sacs in the Walled City of Famagusta based on the six urban design dimensions as; morphological, functional, social, visual, temporal and perceptual dimensions.

1.4 Methodology of the Study

This study is a qualitative research. Data collection technique is included collection of some maps, photos and theoretical review. In this research, two different analysis methods are utilized. The first one is physical analysis; the second one is interview survey. For physical analysis, existing maps of Walled City of Famagusta including historical maps have been collected and new maps have been developed for modifying existing ones. In addition to the maps, photos that reflect current condition of the cul-de-sacs have been taken and old photos have been collected in order to determine the urban characteristics of the cul-de-sacs in the Walled City of Famagusta. For the interview survey, an interview form was prepared with open-ended questions to collect more flexible information from the residents' point of view. Interview was conducted with a total of 36 people. In this study, ten cul-de-sacs in the Walled City of Famagusta evaluated separately.

Chapter 2

THEORETHICAL INFORMATION ABOUT STREETS

In this chapter, theoretical information is given about streets and six urban design dimensions of cul-de-sacs (dead end streets) that are one of the distinct elements of public open spaces.

2.1 Definition of Public Open Spaces

In this section, initially general information is given about public space then, the street space is focused. Public open spaces are taken an important part in urban heritage. They are the strong elements that have prominence as social interaction and community development (Woolley, 2001; Council of Europe, 1986). Public is the opposite of private and the definitions include “pertaining to the people as a whole that belongs to, affects, or communities of people and nation that belongs to, affects, or communities of people and nation”. Similar definitions have been given as “concerning the people as a whole and open and shared by all people” (Madanipour, 1996). Urban Public Space is a space in between buildings physically accessible for everyone.

“Public spaces have formed the background of public life and supported community`s needs for commercial activities, sacred celebrations, social interaction and entertainment” (Slessor, 2001). This gave the concept of public space a wide range of notions, from a space of democratic expression, to a space between buildings that fosters human interaction (Varna, 2009).

According to Kostof (2005, p.123), “public spaces can be aligned in two aspects; one is the chance of coming across friends or neighbors in public places. The second is the ritual that the construction of communal activities such as festivals, riots, celebrations, public executions”. The main aim of public spaces is to ensconce community and arbitrate social conflict.

In addition, “public spaces are significant factor in reflecting the lifestyles and cultures of the inhabitants; and are providing channels for movement, the nodes for communication and the common grounds for play and relaxation” (Carr,1992, p3).

2.1.1 Background of Public Open Spaces

In the Middle Ages, public open space was used for multiple purposes such as religious, commercial, political purposes. The streets, squares and plazas performed multiple functions in the social life of the cities. “The street of the Middle Ages was the place of work, the place of buying and selling, the place of meeting and negotiating and the place for religious ceremonies” (Jackson, 1987, p.289). In Italian cities, for example, there were two or three principal squares each associated with one set of activities. Despite this specialization of space and functional separation, there was an intensive use of public space for public life. The city squares were decorated with fountains, monuments, statues and other works of art and were used for public celebrations, state proceedings and exchange of goods and services. But all this started to change in the modern period, when the public squares of cities started to be used as parking lots and the relationship between them and the public buildings around them almost completely disappeared (Collins et. al, 1986).

2.1.2 Significance of Public Open Spaces

According to Jacobs (1961, p.), it is marked that a turning point in the gradual

erosion of the concept of public spaces and public life. For as this assessment indicates that from around this time, it is possible to see a number of related events such as the closing of streets to traffic, the introduction of pedestrian streets, as well as a growing amount of research and publications promoting the concept of public spaces and public life (Thompson et al, 2007).

In such a context Carr (1993) makes a reference to “When public spaces are successful, they will increase opportunities to participate in communal activity. In the parks, plazas, markets, waterfronts, and natural areas of cities, people from different cultural groups can come together in a supportive context of mutual enjoyment. As these experiences are repeated, public spaces become vessels to carry positive communal meanings”.

2.1.3 Types of Public Open Spaces

The differentiation between the typology, use, and the characteristics of public open spaces bring categorization between each other. According to Carr (1992), public open spaces (P.O.S) can be classified as;

- Squares or Plazas
- Parks
- Playgrounds and Recreational Areas
- Waterfronts
- Streets

2.2 Definition and Importance of Street

Jacobs (1993) identifies that streets are one of the important elements of the city. They are appropriate spaces for socio-economic activities (ibid). Moreover, as a

dominant factor, streets can be described as one of the most critical components of public spaces (Jacobs, 1961).

The paradox here is that while Shamsuddin (2011) suggests that they are acting as one of the most critical units and tools in presenting the features of urban fabric. Streets define the city structure by providing socio-economic activities and through signifying the outdoors (Lynch, 1960; Jacobs, 1993). Streets are often the most vital yet underutilized public spaces in cities. They are spaces for travelling and play big role for the communities in the public life of the cities.

Moor (2006) states that “The street appeared as a result of collectively accepted though unwritten codes which have over time been absorbed and unwritten into civil law. Subsequently, the argument that at first, sight, the street is little more than a simple collection of kerbstones; a couple of pavements and the road reveal much more. To take an analogy with the brain, the street determines where the trees are placed the position of lamp posts, rubbish bins and furniture, it decides where cars can/cannot park, where to walk, where to cross from one point to another, it even specifies where the rainwater will pour into the gutter”.

Although Moor et al. (2006) was focused on the street also provides an address not merely a numerical tact on one’s front door, this address is also a stage on which to show the world who we are. Another challenge suggested by Moor et al. (2006) is that it is possible define the streets as a display window for identity and status.

Moughtin et al. (1992) advocate for defining the theoretical approach of the street. Moughtin (1992) also claims that in this approach defines street as: “a road that is a

linear structure along which movement occurs between the adjacent houses. It runs between two lines of houses and shops”.

In view of the fact that the recent terminology is identified by Trancik (1986) is: “streets are in a linear form, which also have the properties of three-dimensional frame, two-dimensional pattern, and objects to provide interest and focal points”.

Therefore, in anticipation that streets are settings for social activities. Rykwert (1998) described evidence suggests that “Street is similarly a perilous matter as a place and furthermore to its architectural identity, it has social importance and economic function”.

As a point for attention is drawn by Jacob (1965) is that “think of a city and what comes to mind? If a city’s streets look interesting, the city looks interesting; however, if they look dull, the city looks dull.”

Other important reasons that have been specifically mentioned by Le Corbusier (1967) “Our streets no longer work. Streets are an obsolete notion. There ought not to be such a thing as streets; we have to create something that will replace them.” A key argument is that “No pedestrian will ever again meet a high-speed vehicle” (Le Corbusier, 1967, pp.121-123).

In this sense Ford (2000) argues that: “Good streets, sidewalks, parks, and other public spaces bring out the best in human nature and provide the settings for a civil and courteous society. In addition, this phenomenology Ford (2000) claims that everything will be fine if we can just get the design right. According to Ford (2000)

ideology on public spaces that in parallel for using the parks and other public spaces mainly based on physical and social characteristic streets and its sidewalks which are the first place of social interaction in cities.

Moreover, it has to be noted that streets can also be considered as the major element in formation the structure of physical environment. The functional layout of the streets is based on an ideology to create a linkage between public spaces of its surrounds, both in street and in city scale and provide connection between neighborhoods, buildings and even cities together. It is important to seek clarity as a linkage, street eases the movement of people within vehicles or as pedestrian; it also helps the movement of goods to keep in existence the wider market and many specific uses within the street.

An extension of this argument is that the expressive duty of street comprises its use as a site for occasional interaction, containing recreation, conversation, and entertainment, as well as its use as a site for formal observances. Moughtin (1992) argues that the street is also a common area which works for a group and not just one family; as a space which is serving a group. There is evidence that it is somehow closed social system and has clearly defined boundaries in spite of acting as a common thoroughfare to other areas.

Although one could argue that it may not be irrelative while studying about street to have analysis of Islamic cities. For example, in Islamic cities it is structured along a spatial continuum alternating from private, semi-private/semipublic to public space.

However, it is importnat to keep in mind that thinking about Islamic streets and its

classification may remind anyone that not only residential streets but also all kind of streets may need its own safety and discipline. It is notable that the street is a place for people to interact and somehow spend their time, safety of a street in a huge city with different sort of people is a concerns for many people. As stated earlier in this chapter, great cities are not as same as towns and suburbs, even they have differences in their basic concepts; they are not just denser or larger.

Moughtin (1992) claims that keeping the city safe is a fundamental duty of a city's streets and its sidewalks. Jacob (1965) claims that the first thing to understand is that public peace the sidewalk and street peace of cities is not kept primarily by the police, necessarily as they are police. Jacob (1965) describes his work, which claims that it is kept primarily by an intricate, almost unconscious, network of voluntary controls and standards amongst the people themselves and enforced by the people themselves.

It has even been suggested by Jacobs (1961) to identify three conditions that are necessary for any street to keep its safety for pedestrians and encourage more people to use it. It is subsequently suggested that there must be a clear and strong demarcation between public and private space.

Subsequently, it is quite obvious that, to have eyes upon the street at all time; eyes belong to those that somehow may be the natural properties of the street. But as can be seen the third one is that, any street and its sidewalks must have users on it that might be continuously and properly, not only to enhance the number of effective eyes on street but also to encourage people in the buildings to watch the sidewalks in adequate number.

Jacobs (1961) claims that nobody likes to seat and watch an empty street, while there are many people who enjoy watching street activities. It is important to consier that street and their sidewalks need people to use them to be interesting, lively and secure. At the same time, in response people enjoy to spend time in the street in order to see and be seen.

Here, particular attention is drawn to the street`s duty is not only secure the city from predatory strangers, but also they must protect the large number of well-meaning and peaceable strangers who use them, and be sure of the safety of these passengers too as they pass through (Jacobs, 1961). It is by way of this statement, there is a way keep such surveilliance on street; to have substantial number of shops along it especially the ones, which works in evening and night. For example, stores, bars and restaurants works for street for long hours, which not only causes to keep its safety but also to bring more people to street.

Indeed, in reviewing the literature available on defining the quality and livability of street Carmona (2007) claims that people who are demanding for food or drink became attractive for many people to watch. It is essential to establish the term of the street which is well prepared to manage strangers and has a good and effective separation between public and private spaces. Jacobs (1961) indicates that the physical characteristic of street also has a basic source of activity and eyes, if has more strangers would be merrier.

In order to identify the relevant literature on definign the importance of street. Indeed, it seems that the street roles in daily especially social life nowadays several change have taken place in the social outlines of life in cities. For example, about

thirty years ago many housewives would walk to shops or even they would walk their children to school. However, nowadays this situation has changed rapidly in order to identify the role of housewives. In such a way that they may be a breadwinner or head of a single parent family or even a co-working family partner, so their responsibility increased and they neither have enough time to walk in streets.

However, it is acknowledged that more journeys are now made by car to the supermarket or to school and leisure day out. No matter male or female, old or young, a larger number of social interactions take place at the destination comparatively during the trip, and the telephone call somehow plays the role of chats on the doorstep. Moughtin (1992) stress that these changes not only causes the streets to be fade but also causes environmental or green problems, which may be a reason to return to a more compact urban form.

2.2.1 Types of Street

In urban design, street typology can be variated according to physical form as open-ended streets and cul-de-sacs (dead end streets) or land use function as residential, commercial, mixed-used. Streets are also classified according to their capacity and character (Table 1). Capacity of the streets involves with the safely movement of every kind. Character is defined considering with the role of the street in the urban realm and the types of building and landscape.

Table 1: Street types that combine capacity and character (Davies, 2000)

Conventional capacity based terminology	Streets that combine capacity and character
Primary distributor	Main Road Routes providing connections across the city
District distributor	Avenue or Boulevard Formal, generous, landscaping
Local distributor	High Street Mixed uses, active frontages
Access road	Street or Square Mainly residential, building lines encouraging traffic calming
Cul-de-sac	Shared space for parking and other uses

Forbes (1999) claims that streets are used to link different entities together. This is the assumption which this research seeks to investigate. From this, it is evident the likes of Forbes et al. (1999) the street characteristics and capacities they are taking different names. The street type can be listed as follows **highways, boulevard, avenue, drive, street, road, alley, lane, passage, and path.**

However, it also serves to highlight the fact that streets can be considered, as a place more than a simple pathway. In responding to this challenge, it is somehow a series of connected places with different functions, a place for staying in but not only for moving through.

Norberg and Schulz (1971) stress that in order to identify the definition of street. As they point out that in the ancient times, a street was a small universe. This is perhaps why Norberg and Schulz (1971) states that the street in the past was a place that the character of district and even the town as a whole was offered in a condensed form to

a passerby. In light of this statement, a street may present a section of life while history had shaped its parts (Norberg- Schulz, 1971, p.81).

Rapoport (1987) identifies the definition of street is that the streets are the more or less narrow, linear spaces lined between buildings found in settlements and used for circulation, and sometimes, other activities. For in adopting such an approach, it is shown that streets are primary designed for movement of people. However, while nurturing such an approach Shamsuddin (2011) stress that lots of different functions take place along the street simultaneously.

Mehta (2006) claims that people expect streets for various kind of activities such as leisure, social, and functional. In order to identify the relevant literature on defining the livalibity of streets. Gehl (1987) stress that having opportunity to socialize and accessibility are the main two significant activities people expect in streets to have advantage from transmitting and interacting with each other by greeting, meeting and shopping. Reviewing various literatures shows that designers and planners mostly consider the role of street being accessible and having social interaction for cohesion, awareness and contact (Mehta, 2007).

2.2.1.1 Residential Street

By examining the completeness of the different street categories, it is possible to detect that the ultimate function of streets within a quarter was on the one hand to insure accessibility for the actual neighborhood residents. However, while this tends to suggest the restrict mobility (acting as interior corridors that adjust the degree of privacy) rather than facilitate it to ensure safety for its residents (Figure 1).

In order to better understand the mentioned literature above, in defining the

phenomenological study on streets and alleys that looked like a maze of featureless cul-de-sacs to foreigners, are in reality coded with a subtle, complex visual reference system of thresholds, transition zones, and buffer spaces.

The reasons for focusing attention on these areas as follows: The act collectively as filters to keep strangers, outsiders and bachelors out, and the thresholds used were usually things such as arches, low stone posts, piles of bricks, or simply the sudden narrowing of an alley.

While notable, the problem with this particular study is that residential streets acted as devices serving the social order well in its desire for privacy and exclusion and also as a tool to contain internecine conflicts in earlier periods. The other problem is that later they were used as a defense against colonizers, who ultimately ordered their removal. This is because it is only in this manner Çelik (1997) stress that they also functioned as a platform for social activities among neighbors and provided safe sheltered areas as playgrounds for children to play watched over by old men chatting and drinking tea and coffee. Similarly, it can be seen that their narrow cross-sections insured a nice microclimate and protection from desert winds. They also play a major role as the dominant public open space in the daily life of the local people serving mainly pedestrians and enhancing local identity (al-Hemaidi, 2001).

Several aspects of livable residential streets can be listed as such;

- Walkable patterns of short blocks;
- Low traffic speeds;
- Pedestrian space buffered from traffic;
- Pleasant and attractive pedestrian environment and public spaces;

- On-street parking;
- Sense of security.



Figure 1: Residential Street in Hameln, Germany

2.2.1.2 Commercial Street

Commercial streets are public open spaces where pedestrian activity is high and vehicular movements are discouraged. Moughtin (1992) claims that, the function of such a street has own identity. It is therefore maintained that this category is located in the center of a commercial district (Calthorpe, 1993). This kind of streets should be in such a way that to have slow traffic, accommodate pedestrians and provide side car parking. Furthermore, make a pleasant shopping atmosphere and comfortable pedestrian environments to encourage walking for many shopping trips, thereby reducing reliance on the automobile and creating an active main street (Figure 2) (Calthorpe, 1993, p.99)



Figure 2: Commercial Street in England (URL1)

2.2.1.3 Mixed Used Sreet

In general, the term ‘mixed-use’ refers to the existence of a variety of different land uses within the same location whether that is a project area, precinct, locality, site or building. Therefore, it is importnat to look at a variety of land uses may be co-located side by side along a street or one above the other. For example, shops at ground level with residential development above. It has to be said that the term ‘mixed-use development’ refers to buildings that contain a mix of uses such as commercial, retail or other non-residential uses, maintaining an active commercial and business environment at street level often in conjunction with residential dwellings on the upper levels in a multiple dwelling configuration (Figure 3).



Figure 3: Mixed-used street, Paris (URL2)

2.2.2 Physical Characteristics of Street

Besides to all various definitions and ideas about streets, it also can be defined and categorized by its physical characteristics. For example, streets can be defined in two ways: vertically which refers to height of buildings, trees and walls along the street; or horizontally which concerns about length and spacing between whatever which may interference in street definition. However, it must be bear in mind that at the end of street and contains both vertical and horizontal features, it may be somehow a building which is defining elements, or a wall, may be trees, and sometime composition of both of them and always the floor; these elements are particularly categorize in physical characteristics of street (Jacobs, 1993).

At the same time Moughtin (1992) claims that streets also can be categorized based on their forms such as long or short, straight or curved, enclosed or open, wide or narrow, formal or informal. Moreover, to these factors form of street can be evaluated in terms of proportion, rhythm, scale, contrast and connections to other streets and squares.

It is obvious that the physical characteristics of streets are related to many factors,

which are explained more in the next part. Physical characteristics of streets can be listed as below:

1. Street form
2. Street length
3. Street proportions
4. Street unity
5. Edge and center in streets
6. Building facades of streets
7. Sidewalks along streets
8. Flooring
9. Microclimate in streets (natural lighting, wind flow, shading)
10. Elements of streets (street furniture, artificial lighting, landscape elements)

It is important to take account the street with strong physical character possesses a volume with positive and well-defined form and keeps a strong sense of enclosure. Furthermore, it has to be said that the sense of spatial enclosure also determines not only by height-to-width ratio but also by the continuity of street wall. To the contrary, the width of the street separately defines the surrounding architecture and how it is being seen. According to this, it would seem that in this approach Sitte (1901, p.61) states that the ideal street must form a completely enclosed unit!". In addition to this Collins, G.R. and Collins, C.C., (1986) claim that even more impressions are limited within it; its image will be more perfect.

2.2.3 Function and Form of Street

Streets can be categorized according to their functions and forms. Moughtin (1992) explains that the uses as commercial, residential, civic or mixed use, it is possible to

classify the street functions. It has to be remarked that in a more general dimension, streets can be called vehicular or pedestrian streets, however, in most cases the characteristics' and the identities' evaluation criteria depend on these type of classification.

Despite the fact that Gehl (1987) argues that considering with the use and function of the streets, the accessibility, opportunities for socializing are mentioned as predominant activities and the users are interacted through meeting and shopping.

As regards the contents and objectives of this study, the main uses of street can be listed as:

- Spaces for pedestrian and vehicular circulations
- Passage to the buildings
- Space for different facilities
- Storage space
- Car parking space
- Gathering space for neighborhoods

This is a particularly important fact that almost in all public streets, it is possible to see these functions. According to their locational characteristics and social environment some differentiation can be seen. It can be seen that the function of the street can be classified into three categories; passage for vehicles and pedestrians, route for commercial activities and space for social activities. These determine the formation of the street.

As a matter of fact, the main incentive for this study is that the street form can be explained as **straight** or **curved**; **long** or **short**, **wide** or **narrow**, **enclosed** or **open**, **formal** or **informal** (See Figure 4). Carmona (2003) states that “the form of the street also could be described in terms of scale, proportion, contrast, rhythm or connections to other streets and squares”.

Therefore, it is necessary to assess that the street form, enclosed streets are literally means “cul-de-sac” as a french term. It may be useful to mention some research programs in this field. Assuming that, it commonly refers to a dead-end street. *The Oxford English Dictionary* defines it as “a street, lane, or passage closed at one end, a blind alley; a place having no outlet except by the entrance”.



Curved Street Picadilly Street London (URL3)



Long Steet (Boulevard) Las Ramblas, Barcelona (URL4)



Wide Street Edinburgs, New Town(URL5)



Figure 4: Street Forms

2.3 Cul De Sacs

Studies in defining the theoretical dimension of Cul-de-sac, as well as its physical aspects Keleş (1999) and Sözen (1992) mention that Cul-de-sac is defined in architecture and urban design literature as “the street pattern open only in one side and connected to other larger streets”.

It could be stated that it is essentially, cul-de-sac is perceived something negative as dead end street, blind path or alley that are used alongside cul-de-sac, namely dead, numb, sluggish, lethargic, shiftless, indolent ways. Although Keleş (1999) argues that Cul-de-sac is either a semi-private or semi-public road for residential groupings with only one access.

In order to draw more strongly on the terminology to understand the term of Cul-de-sac has been discussed on the literature. Cul-de-sac is a French term that means “bottom of the sack.” On the other words it is dead-end street. It is defined “a street, lane, or passage closed at one end, a blind alley; a place having no outlet except by the entrance” in the Oxford English Dictionary (Fig. 5). Joseph (1995) indicates that

Cul-de-sacs were short and straight streets with few houses in suburban spaces. For the dwellings in the cul-de-sacs, public realm was provided with safety.



Figure 5: Cul-De-Sacs with no visual and physical permeability (Bentley, 1985)

Some argue that in urban planning culs-de-sac are created to limit through-traffic in residential areas with particular reference to the theoretical terminology in which some cul-de-sac streets provide no possible passage except in and out of their road entry, others allow cyclists, pedestrians or other non-automotive traffic to pass through connecting easements or paths (Figure 6).

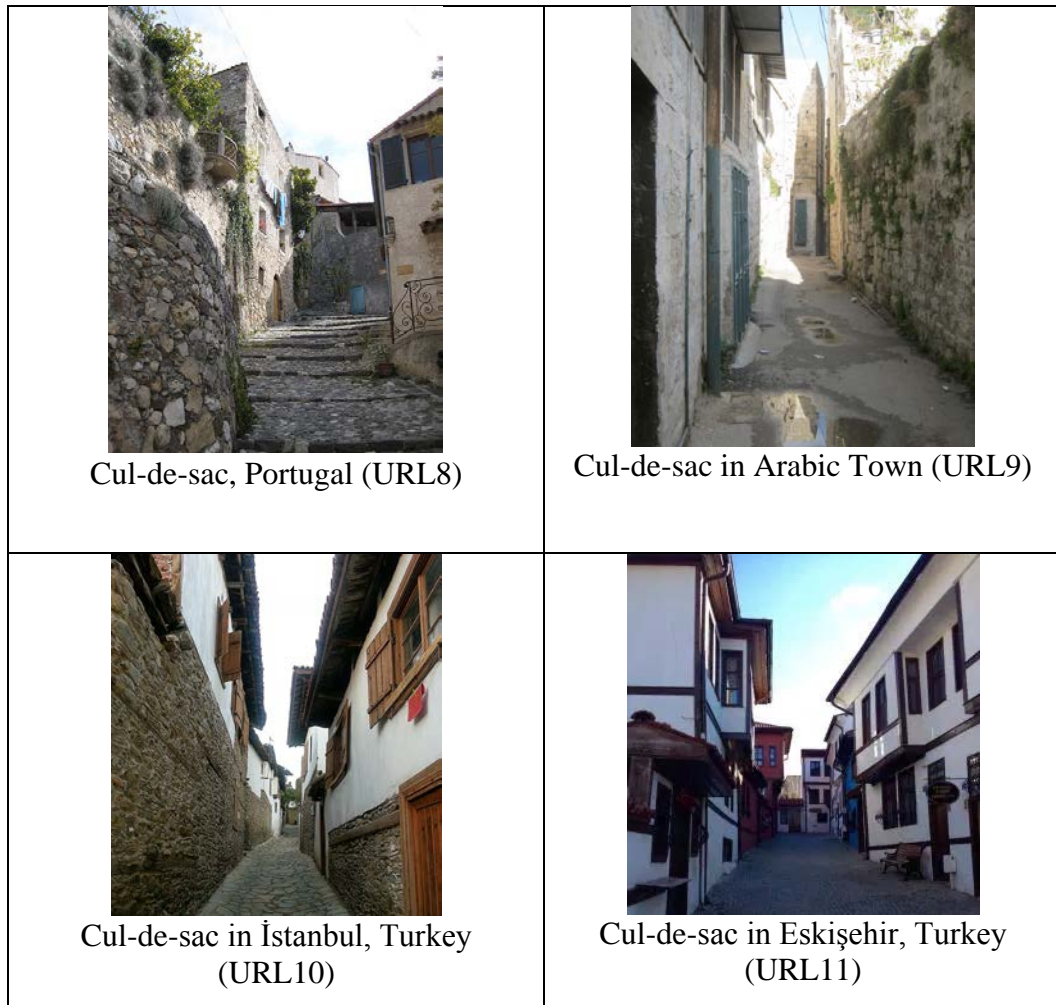


Figure 6: Examples of cul-de-sacs from different towns

2.3.1 Types of Cul-De-Sacs

Cul-de-sacs are classified as traditional and contemporary. The origin of this pattern based on islamic cities. In fact, the research on defining the term of Cul-de-sac has been initiated throughout the history the logic behind the cul-de-sacs was re-interpratated and influenced suburbs in western countries.

2.3.1.1 Traditional Cul De Sacs

Aru (1998) claims that traditional Anatolian cities were organic, free, rhythmic, not geometric. The reasoning for this comes from the view of understadning the pattern of traditional residential areas had a courtyard belonging to house and a cul-de-sac pattern gives to users a sense of belonging and a territory where they feel safe and

protected. In addition this this Stewing (1966) argues that they appear as public, semi-public, semi-private and the private overlap.

Hence, as discussed previously Raymond (1995) claims that the growth of these cities occurred in two concepts. The first concept was the filling the gaps as lost spaces in the city pattern. The second concept appeared as an expansion of urban settlement areas out at the edges. In achieving this target Denel (1982) explains that administrative, legal and economic alterations observed in Anatolian counties under the Ottomans rule after the 1839 proclamation of Tanzimat which was a series of Western influenced regulations. Setting this aside these alterations comprise the transforming of the traditional Ottoman city pattern into a grid by deteriorating traditional city patterns. Many would argue that the social logic that creates cul-de-sac has become the other starting fro the Tanzimat period. In simple terms, when new spatial hierarchies were taken into consideration, the modern city lost the cul-de-sacs as interface.

The literature review is conducted on this study in Islamic cities the concept of border is shaped according to the importance of private property more than public property. In these reviewed literature study in Islamic Law the cul-de-sacs are considered as private areas based on the agreement of property owners of dwellings, which face with the cul-de-sac (Figure 7). For only in this way it is possible to say that Cul-de-sacs, separated from each other by gates according to different ethnic groups of users.

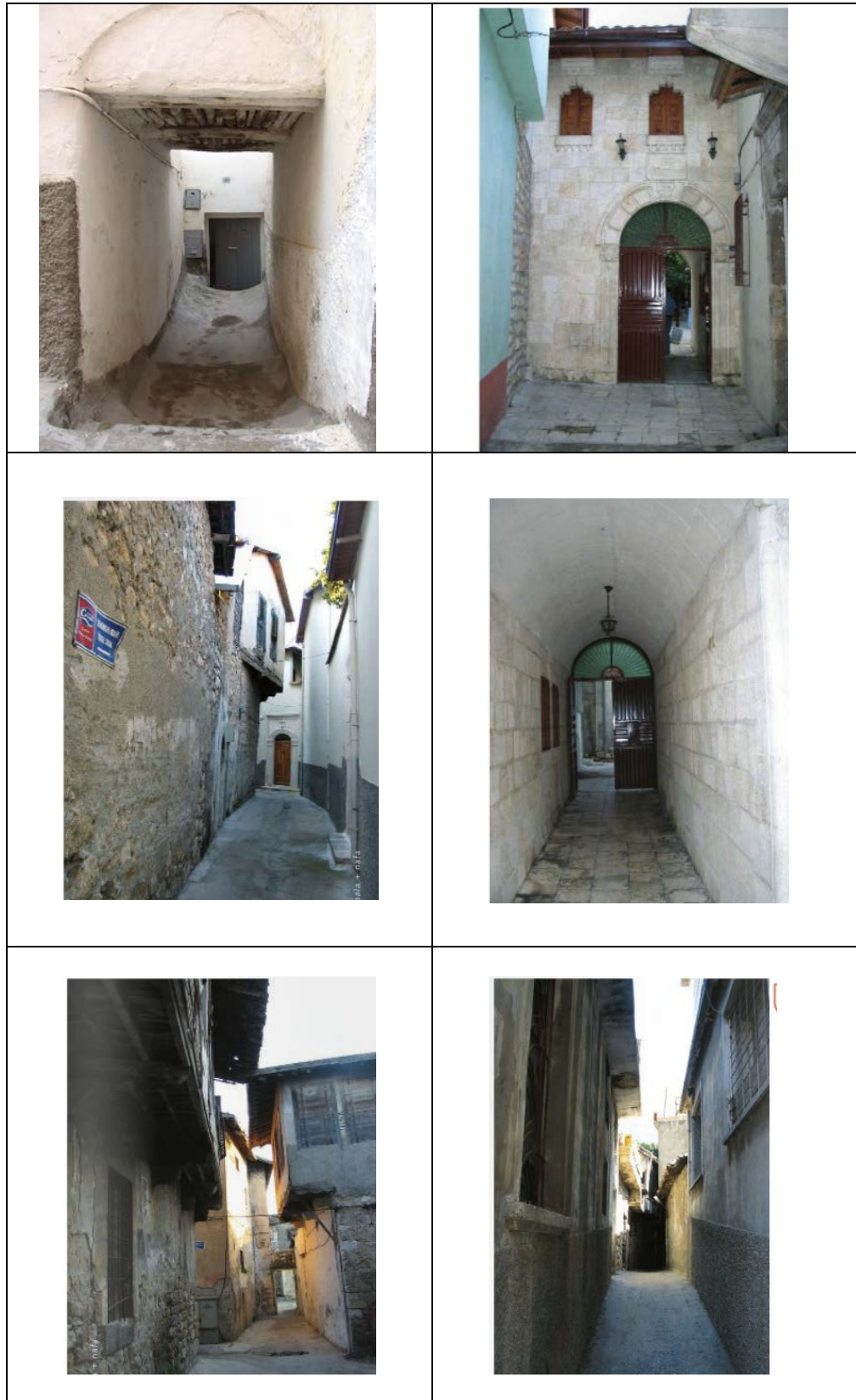


Figure 7: Examples of Traditional Cul-De-Sacs (URL12)

In Turkey, according to the differentiated ethnic groups, historical background, and

geographical characteristics the typology of the cul-de-sacs of cities have unique significant. Aru (1998), classified the morphological dimensions of the street patterns by achieving street maps of the of selected cities in Turkey that can be easily compromised in Figure 8.

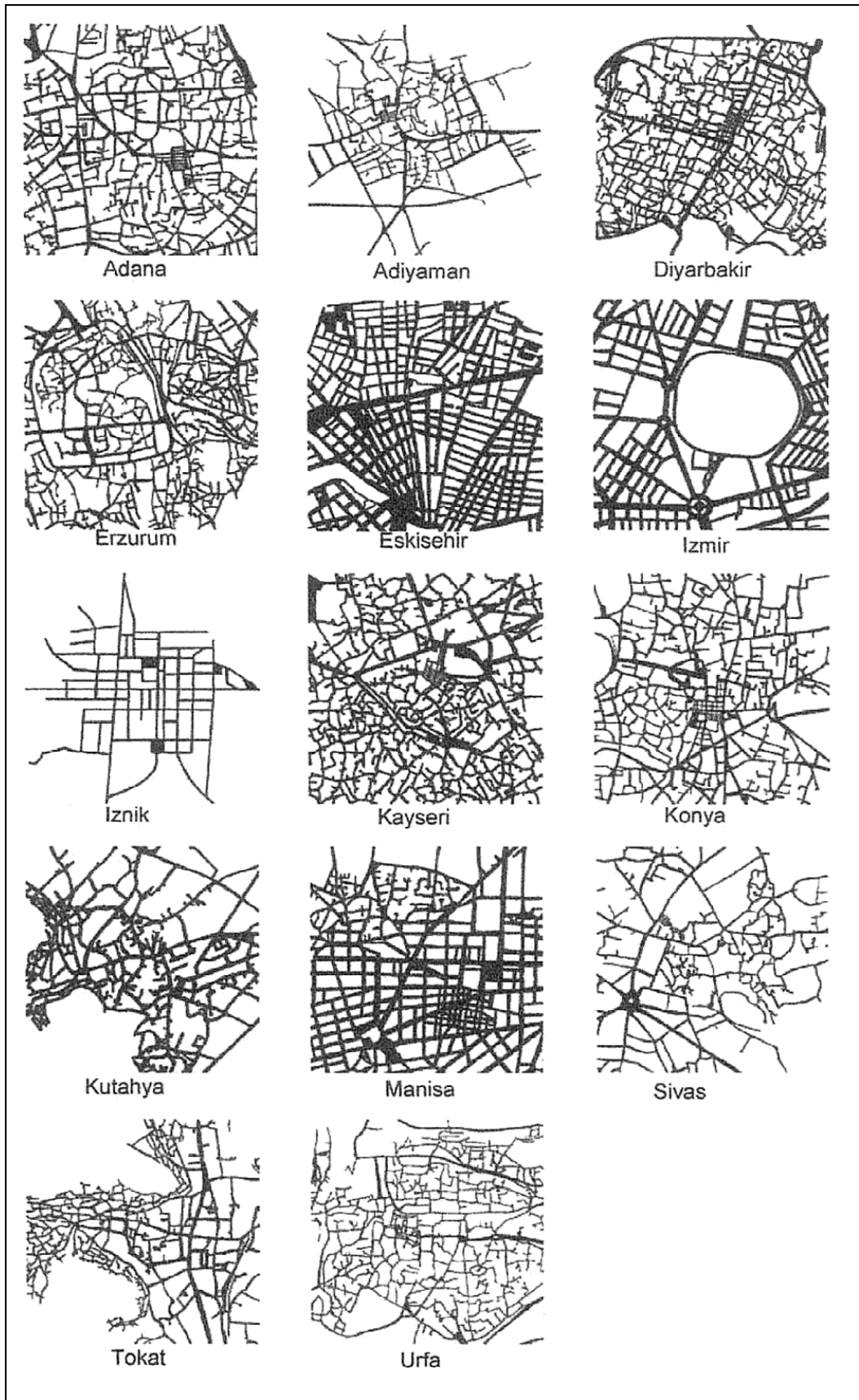


Figure 8: Street networks with cul-de-sacs of selected Turkish cities, (Aru, 1998)

2.3.1.2 Contemporary Cul-De-Sacs

Throughout the history, the logic behind the cul-de-sacs has been reflected to the western suburban development. The increase of vehicular use brought the need for safety and less car movement in residential areas. At this point, cul-de-sacs with few houses were occurred in American suburbs (Southworth et al., 2004).

The great advantage of cul-de-sacs is they have no through traffic, so they're quieter and it's safer for children to play outside on the street. As long as they are not too long, they can create a sense of place and possibly promote greater social interaction among residents too (Figure 9).

The contemporary cul-de-sacs are located at the suburbs in developed countries. The increase of density in the city centres cause overcrowding and the inhabitants were demanding more private and safe living places as cul-de-sacs. As a difference, these contemporary cul-de-sacs are appropriate for vehicles and wider spaces for social interactions.



Figure 9: Top view of a contemporary cul-de sac in USA (URL12)



Figure 10: Vehicular use of contemporary cul-de-sac in USA (URL13)

Therefore, it indicates that the contemporary cul-de-sacs are located at the suburbs in developed countries. It is believed that the increase of density in the city centers cause overcrowding and the inhabitants were demanding more private and safe living places as cul-de-sacs. This indicates that as a difference, these contemporary cul-de-sacs are appropriate for vehicles and wider spaces for social interactions.

2.3.2 Uses of Cul-De-Sacs

Cul-de-sacs are used as private spaces for the residents. It is possible to note that depending on the privacy, they are considered as front gardens and safe spaces for the users' social activities. Similarly, it can be seen that traditional cul-de-sacs are narrow spaces that are permeable for the pedestrians only and limited cars.

2.4 Urban Dimensions of the Streets

They are visual, temporal, functional, social, morphological and perceptual dimensions. In the following sections, they will be discussed. According to the focus of the thesis study, within the integration of the dimensions of the public open spaces, the streets act as a dominant tool to orient the case of the cul-de-sacs in the Walled City of Famagusta. In addition to the dimensions of the public spaces, a broader perspective is occurred within the urban scale of the streets.

2.4.1 The Morphological Dimension

“The morphological dimension mainly focuses on the urban pattern and the layout of the urban spaces. In this study it is maintained that there are two kinds of urban spaces, which are traditional and modern. It is further emphasised that each has different pattern language that brings some reasons behind, in dependence of other dimensions of the urban spaces” (Carmona, 2003).

It is therefore assumed in this study several factors such as topography, landscape, architectural existence, geopolitical reasons, land use, regulations, culture, population and historical background play role for the formation but as can be seen morphology of the streets. Subsequently, it is quite obvious that within the effects of these factors, streets became identified and unique by reflecting the character of the whole urban

and city characteristics relevant with the morphology.

2.4.2 The Perceptual Dimension

It is worth remembering that awareness and appreciation of environmental perception, and, in particular, of perception and experience of 'place', is an essential dimension of urban design. In particular, since the early 1960s an interdisciplinary field of environmental perception has developed, and there now exists a significant body of research on people's perception of their urban environment.

It can be stated that the value of perceptual dimension of urban design is the stress on people and how they perceive, value, draw meaning from, and add meaning to, the urban environment. Therefore, in anticipation that places those are 'real' to people, invite and reward involvement - intellectual and/or emotional - and provide a sense of psychological connectedness.

As mentioned in several contexts earlier, streets become the images of the cities from the perspective of users. Aspects that are taken into consideration are within the senses of perception people experience the environment of the streets and the relationships between the pattern, smell of the history, users, greenery, architectural elements and the semi-private and semi-public spaces in between the solids and voids a unique point of view is occurred which depends of users' background and perspective.

2.4.3 The Social Dimension

It is difficult to conceive of 'space' without social content and, equally, to conceive of society without a spatial component.

There are five key aspects that are considered in social dimension which are;

- The relationship between people and space.
- Interrelated concepts of the 'public realm' and 'public life'.
- The notion of neighborhoods.
- Issues of safety and security.
- Issue of accessibility.

It is interesting to note that people are not passive, however; they influence and change the environment, as it influences and changes them. To general consensus seems to be that in a two-way process. It is important to seek clarity as while physical factors are neither the exclusive nor necessarily the dominant influence on behavior, environmental opportunities clearly affect what people can and cannot do: a window in an otherwise solid wall allows one to see out, while a continuous wall does not afford that opportunity. At the same time, Carmona (2003) argues that human behavior is therefore inherently situational. It is embedded in physical social, cultural and perceptual contexts and settings.

However, it also serves to highlight the fact that people face a variety of threats in the urban environment: crime, terrorism, fast-moving vehicles, air pollution, water contamination, and so forth. In addition to this, there is another view that in some places the threat of natural disasters is an everyday fear to be faced in the design of buildings and settlements.

This is the truth of the matter because the social dimension of the streets is significance to analyze the spaces as livable or not. Moreover, it has to be noted that neighborhood relationship of the streets is a factor to identify the spaces and

questioning the sense of belonging for the users. To general consensus seems to be that the period of the user groups of the streets owners of the dwellings especially in residential streets it is possible to achieve the result of the wellbeing of the streets.

2.4.4 The Visual Dimension

An important factor to be considered is the spaces within the visual dimension many aspects can be discussed as components of the urban environment. To a certain extent these components include positive and negative spaces throughout the human perspective. Alexander (1977) argues that enclosed, outdoor spaces have a definite and distinctive shape that can be perceived by the boundaries such as architectural elements (building blocks) and hard and soft landscaping elements (greenery, water elements, pavement, etc.). At the same time, Trancik (1986) assumes that oppositely, the negative spaces are shapeless and present lack of perception of edges and form.

In order to identify the relevant literature it is interesting to note that if the street spaces are considered in terms of visibility, the perception of the users can present differentiation according to their individuality. However, within the combination of the smaller and bigger scales of the urban spaces as architectural and city scales, since the street spaces act as transitional elements in between, the reflection of the other factors including the all dimensions of urban design brings more objective visual evaluation of the streets.

2.4.5 The Functional Dimension

Functional dimension of urban design involves how places work and how urban designers can make 'better' places. This is the assumption which this study seeks to investigate the 'social usage' and 'visual' traditions of urban design thought each had a 'functionalist' perspective. In holding these assumptions "that of the former

concerned the functioning of the environment in terms of how people used it, while in the latter, the human dimension was often abstracted out and reduced to aesthetic or technical criteria such as **traffic flow, access or circulation.**) claims that the use of public spaces, mixed uses and density considerations and the environmental design can be concerned in relevant with this dimension” (Carmona 2003).

By examining the completeness of the different street categories, it is possible to detect that as defined formerly, street is a multi-functional space, bringing enclosure and activity along with movement. It has some basic functions as follow:

- Circulation, for all groups of users (pedestrians, cyclists and vehicles);
- Movement access;
- Access to buildings, light equipment and ventilation system;
- A route for facilities;
- Storage space, mostly for automobiles;
- Public space for human activities; everything from marching and gatherings to provide various kinds of opportunities” (Shahidegh, 2013).

2.4.6 The Temporal Dimension

It is essential to determine that temporal dimension is related with the timing. Malieh (2001) argues that by considering this dimension, it is possible to measure the physical changes through the time.

Only in this manner, as time passes, spaces become lived-in places, made more meaningful by their time-thickened qualities. However, saying this, it is also evident that the passage of time in the urban environment in two ways: through rhythmic repetition and the heartbeat, breathing, sleeping and waking, hunger, the cycles of

sun and moon, the seasons, waves, tides, clocks; and through progressive and irreversible change (Lynch, 1972, p.65).

Subsequently, the argument that temporal (time) dimension of urban space concerns the circumstances of impacts of time on places, changing occasions in cycles by progressive or irreversible ways.

Lynch (1960) stress that, affect of time on space can be experienced by two ways: First one is; rhythmic repetition which refers to breathing/sleeping/walking/cycles of sun/moon/the seasons. Second one is; progressive and irreversible change which refers to growth and decay time and space are related to each other.

The march of the time: It is possible that under the term of “march of time” time pass causes technological, social and cultural changes. Thus, it appears that in some cases, these changes and spirit of time affect urban environment physically. Clearly, there are factors that natural processes, forces, wars, revolutions cause irreversible change on urban spaces. In undertaking an assessment, At 1980s conservation of historic environments, buildings started. A compelling argument is that these are effects of irreversible changes on urban space. Under the topic of conservation Desdall list more common justifications;

- **Aesthetic Value** for architectural diversity and contrast.
- **Environmental Value** for functional diversity
- **Resource Value** for Continuity of cultural memory and heritage
- **Economic Value** Commercial Value

Obsolescence: There are three types of obsolesce which are;

- 1. Physical and Structural:** Any building is subject to physical/structural deterioration, which leads to obsolescence.

- 2. Functional Obsolescence:** Obsolescence of this nature may arise due to the functional characteristics of the building/ area. A building may fail to meet the contemporary standards and requirement of the user/ potential user, on account of its design and fabric.

- 3. Locational obsolescence:** Locational obsolescence is primarily an attribute of the functional activities within the area. This type of obsolescence is classified into two which are;
 - i. Image obsolescence: This is related to the perception of a building or an area. Uncomfortable traffic circulations, noise, smell, vibration in old quarters makes the building or area unattractive.

 - ii. Official/legal obsolescence: This is related to physical and functional dimensions. Restrictions may render buildings obsolete; in an area, which is declared as 'conservation zone', the absence of financial incentives may hinder the willingness of property owners to restore and rehabilitate their property. This, in turn, reinforces official obsolescence. (Tiesdell et al., 1996).

2.5 Summary of the Chapter

In this chapter, first of all brief information about the public open spaces (P.O.S) have been given including the historical background and significance of P.O.S

according to the emphasis of interpretations of significance scholars. In the second step, within the classification, spaces have categorized according to their types as square, park, waterfront and street. In addition, streets have been evaluated related with their types forms and functions. By achieving the urban spaces in a more detailed process, all the dimensions of urban design have introduced within the integration with the streets.

In the third chapter, by the synthesis of the literature review, the research field that is the “cul-de-sacs in the Walled City of Famagusta” will be evaluated with six urban design dimensions.

Chapter 3

CASE STUDY: EVALUATION OF THE “CUL-DE-SACS” IN THE WALLED CITY OF FAMAGUSTA

In this chapter, six urban design dimensions will evaluate cul-de-sacs in the Walled City of Famagusta. This chapter is divided into three main sections. Initially, brief information is given about methodology and history of the city. Then, there will be a review on research location. Following that, some information will be given about research location. After that evaluation of the selected cul-de-sacs will be presented considering the six urban design dimensions.

Ten cul-de-sacs are evaluated which are whole of the cul-de-sacs in the Walled City of Faamagusta. Some of the cul-de-sacs do not have any name and they are mentioned by the street numbers in this study.

Street 1- Behran Pasha Street

Street 2- ST2 (Nameless)

Street 3- Turgut Reis Street

Street 4- Kuru Çeşme Street

Street 5- Suphi Ezel Street

Street 6- ST6 (Nameless)

Street 7- Pertev Pasha Street

Street 8- ST8 (Nameless)

Street 9- Görmüş Street

Street 10- Kışla Yolu Street

These are analysed by considering six urban design dimensions that include; visual, temporal, functional, social, morphological and perceptual dimensions and the considered issues as it is shown in Table 2.

Table 2: Considered issues in Urban Design Dimensions

URBAN DESIGN DIMENSIONS	CONSIDERED ISSUES	
VISUAL DIMENSION	Harmony	
	Floor Covering	
	Enclosure	
	Other	
TEMPORAL DIMENSION	Day and Night Use	
	Obsoloscence	Physical
		Functional
		Locational
FUNCTIONAL DIMENSION	Uses of the Public Space	
	Privacy	
	Environmental Design	
	Capital Web	
SOCIAL DIMENSION	Safety	
	Accesibility	
	Neighnorhoord Relationship	
	Uses	
MORPHOLOGICAL DIMENSION	Changes through the periods	
PERCEPTUAL DIMENSION	Sight	
	Smell	
	Hearing	

3.1 Method of Study

In this research different analysis methods are utilized as well as theoretical review. The first is the physical analysis that is related with the morphological, physical, visual and perceptual dimensions and the interview survey the last is conservation type of survey that is related with social, functional and temporal dimensions of urban design.

For physical analysis, existing maps of Walled City of Famagusta have been collected and new maps have been developed for modifying the existing urban pattern of the “cul-de-sacs”.

In addition, interview forms are prepared. At the site, ten inventory forms are filled and pictures were taken. For interviews survey, 36 interviews were completed through randomly selected residents of the cul-de-sacs in the Walled City.

3.2 History of Walled City of Famagusta

Throughout the history, different civilizations lived in Cyprus island. Therefore, it is possible to see the traces of Lusignans (1192-1489), Venetians (1489-1571), Ottomans (1571-1878), British (1878-1960) and after 1974 in the Walled City.

One of the distinct characters of Walled City Famagusta is its location. The city is situated near to the harbour that is important for the eastern mediteranean. In Lusignan Period, remarkable form of the city and architecture was occurred. After that Venetians brought architectural identity to the Walled City with several numbers of religious buildings as churches and chapels. The Christianity in the city improved as well as the economy with the increase of commercial and artistic activities. St

Nicholas Cathedral (Lala Mustafa Pasha Mosque) is one of the significant examples of Lusignan architecture that is still accepted as the most prominent landmark of the city (Fig.11, Fig. 12).



Figure 11: St. Nicholas Cathedral in Venetian Period Famagusta (URL14)

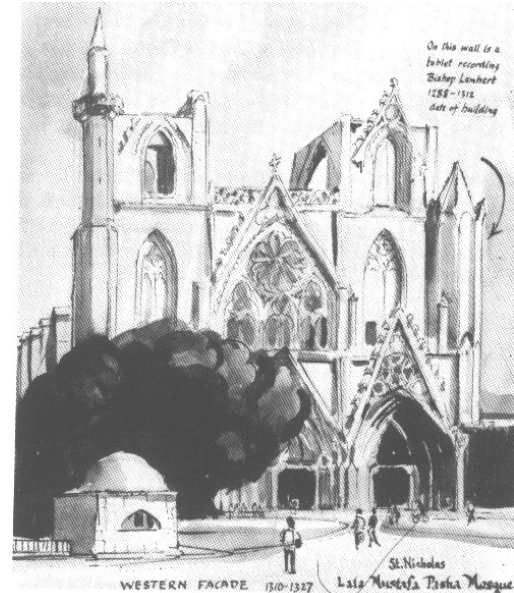


Figure 12: St. Nicholas Cathedral in Ottoman Period Famagusta (URL15)

In 1571 after the Lusignans and Venetians, Ottomans were coming to the island. Depending on their Islamic structure, they converted the churches into mosques. As an example by adding minaret, St. Nicholas Cathedral was converted into Lala Mustafa Pasha Mosque.

After the Ottomans, British colonial authorities came to the Walled City of Famagusta and upgraded some elements of the city by improving the harbour, adding warehouses and residences and activating some fabrics. In this period, Turkish Cypriots were settled into the city and played important role of the city's history of architecture. After Republic of Cyprus (1960), the density of the architecture was increased and the buildings became modernized in the Walled City of Famagusta.

After the war in 1974, the city of Famagusta was faced with many problems as all Cypriot settlements. The main problem was multi-dimensional urban development problem with the existence of historic urban character and identity with its monumental structures and with its organic urban pattern (Onal, et.al. 1999).

“Both in architectural and urban scale, these recent decades brought many additions to heritage buildings, vernacular housing, and the urban pattern. This erosion of built heritage was due to the use of cheap replacement materials and additions, new modern infill buildings, the creation of wider roads and parking lots, and closing off the port and some lands inside and outside the walls from everyday access for military use” (Onal et al., 1999).

3.3 Research Location

Famagusta is a city on the east coast of Cyprus. It is located east of Nicosia that is the capital city, and possesses the deepest harbor of the island. Throughout history, Famagusta had been ruled due its strategic position in the Mediterranean Sea. During the medieval period (especially under the maritime republics of Genoa and Venice), city of Famagusta was the island's most important port city, and a gateway for trading. Therefore, the city is influenced by different cultures (Fig. 13).



Figure 13: The Location of Famagusta in Cyprus (Luke,1964)

The history and urban development of Famagusta date back to the first century A.D.

The city has been developed throughout seven particular periods:

- The early periods (A.D. 648-1192 – the foundation of the city)
- The Lusignan period (1192-1489)
- The Venetian period (1489-1571)
- The Ottoman period (1571-1878)
- The British period (1878-1960)
- The period between 1960-1974
- The period after 1974

In this thesis, cul-de-sacs (dead end streets) in the Walled City of Famagusta will be evaluated according to the dimensions of urban design.

The urban environment in the Walled City influenced from social, political and economical changes through the history. These changes can be easlily perceived from the photos taken in different periods. The changes in residential areas are emphasized in Figures 14-16.



Figure 14: One of the residential streets (Akkule Street) in Famagusta, 1915(Pygmalion Atelier Famagusta Archive,2016)

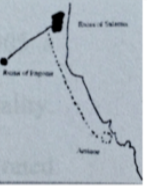
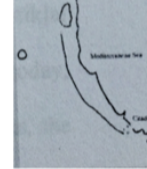


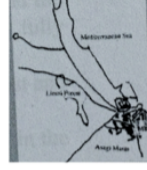



Figure 15: Perspective to residential streets in Famagusta (Chamberline, 1954)



Figure 16: Perspective from Akkula to Walled City

Table 3: Morphological Change of the Walled City of Famagusta (Onal et al., 1999)

DATE AND PERIOD	Development of the Famagusta City	
<p>643 AD 1192</p> <p>The emergence of the city</p>	<p>City was a little coastal and fishing town</p>	
<p>1192-1489</p> <p>Lusignan period</p>	<p>In 1291 it was known as an enter point for all commercial transactions between west and east.</p>	
<p>1489-1571</p> <p>Venetian Period</p>	<p>At the time the urban pattern of the city developed mainly along the principal axes in the south/north and south-east / north-west directions and the urban center of the city lay within the triangle of St. Nicholas Cathedral, its square and the Venetian Palace.</p>	
<p>1571-1878</p> <p>Ottoman Period</p>	<p>Population was transferred from Anatolia and no Christian was allowed to live within the city walls.</p> <p>The city was utilized as a station for political exiles and military base.</p> <p>The city lost its economic importance.</p> <p>The existing buildings kept and made use of them by necessary modification and transformations in order to fit the socio-economic and cultural life of the new inhabitants (conversion of the cathedral and churches to mosque)</p>	
<p>1878-1960</p> <p>British I</p> <p>British II</p>	<p>The island through the Ottomans was leased to the British and in 1919 it became a true colony of the British Empire. With two ethic groups of Greeks and Turks.</p> <p>Famagusta port became a commercial center.</p>	
<p>1960-1974</p> <p>Cyprus Republic</p>	<p>The walled city was turned into an isolated Turkish Cypriot enclave.</p> <p>The Walled City and the areas outside the Walls, in the south-west, west and north-west of the Walled City in which the Turks mainly lived, were neglected.</p>	
<p>1974 till present</p> <p>Turkish Republic of Northern Cyprus</p>	<p>City was touched by different kinds of political, socio-economic and cultural determinants.</p> <p>The commercial center in the Walled city turned into a center serving the whole city and region which created demand for shops.</p> <p>The physical structure of the Walled City damaged.</p> <p>Wholesale clearance of the old building stone during 1880s and 1890s</p>	

3.4 Evaluation of the Study

Whole cul-de-sacs are selected and evaluated in terms of six urban design dimensions that are visual, temporal, functional, social, morphological and perceptual dimensions. In the Figure 17, their locations are given.

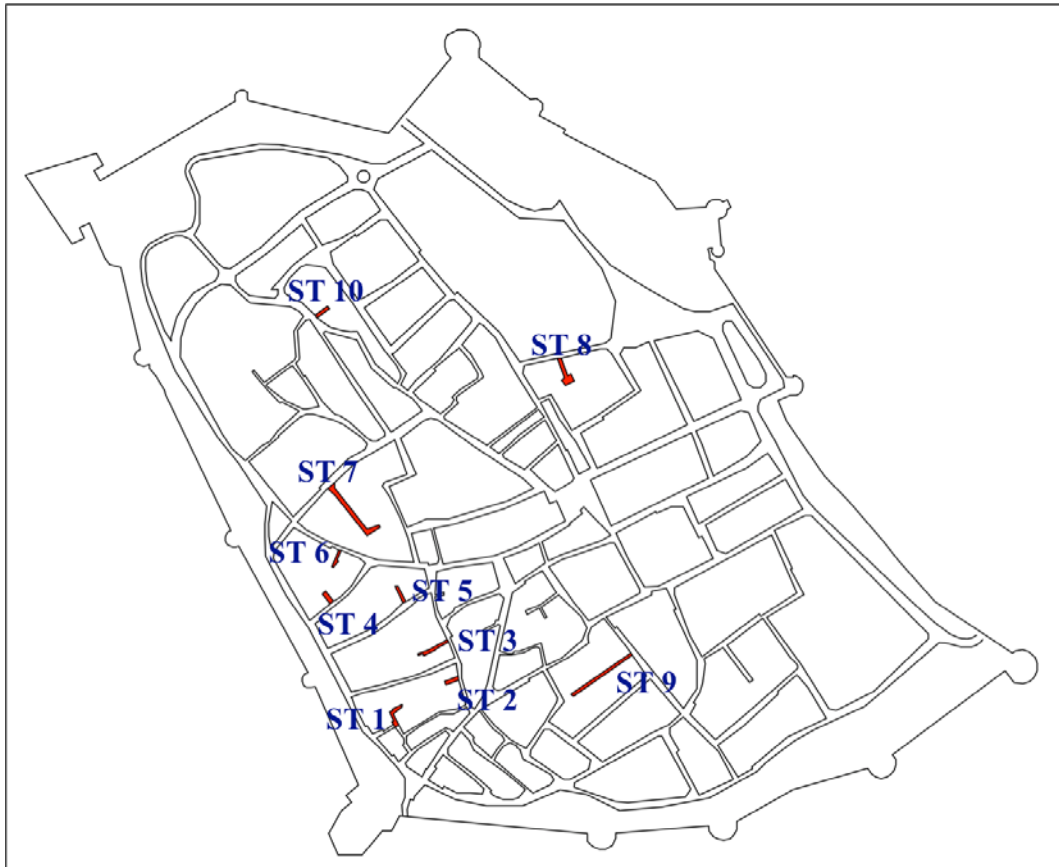


Figure 17: Ten cul-de-sacs in the Walled City of Famagusta

Street 1 (Behran Pasha Street)

Behran Pasha Street (ST1) is located on the south-west (Figure 18) of the Walled City of Famagusta.

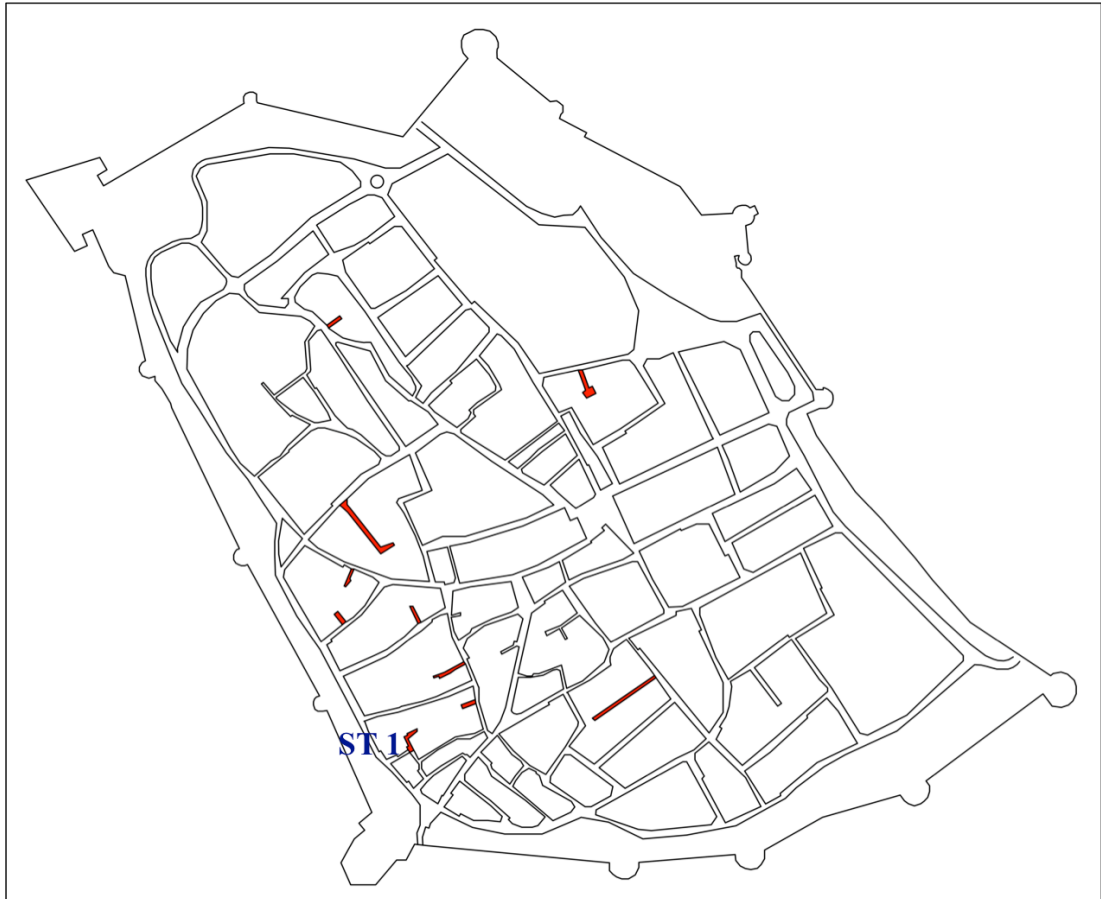


Figure 18: Location of Behran Pasha Street in the Walled City

Visual Dimension

When visual dimension qualities are considered, it is seen that there is no harmony in term of unity of the buildings. Each buildings have different surface covering and inappropriate addition on their facade (Figure 19). He base is covered by grey parquet. There is strong enclosure in the street space. Besides, there is no maintenance on the buildings and the street spaces.



Figure 19: View of adjacent buildings in Behran Pasha Street

Temporal Dimension

It is clearly seen that there is physical obsolescence in this street. In addition, it is not possible to perceive any difference in day and night uses of the street.

Functional Dimension

This street is a kind of residential street. Since typology of the street is a cul-de-sac, it can be said that Behran Pasha is a semi-public street. It is just used for accessing of the residents.

It is open to the prevailing wind, during the day and night . It is possible to feel the wind. There is no special car parking areas. The cars are parked along the street space that cause visual pollution in the street space (Fig 21).



Figure 20: Deteriorated building in Berhan Pasha Street



Figure 21: Inadequate Car parking on Berhan Pasha Street



Figure 22: View of Street 1



Figure 23: Street as a sitting space

Social Dimension

Considering social dimension, it can be said that, it is a safe street. There is adequate number of lighting elements. Due to its location, it is a permeable street. The street is used for sitting (Fig. 23) parking and passage (Fig. 22). There is no strong relationship among neighbors.

Morphological Dimension

Throughout the history, when the maps are compared with each other, the morphological changes can be perceived. In addition to the maps, the existing









situation of the building characteristics act as tools to understand the additions in different periods (Figure 21).

While passing through the street, the smell of food coming from the houses that can be perceived. On the other hand, unfortunately, there is smell of garbage and humidity. Since the buildings attached to the street space, the voice of television, radio and conversation can be heard while walking through the street. In Table 4 urban design dimension of Behran Pasha Street is summarized according to the considered issues. In Table 5, analysis of street 1 (ST1) is shown in systematic way that is supported by images and maps.

Table 4: Summary table of Behran Pasha Street

URBAN DESIGN DIMENSIONS	CONSIDERED ISSUES	STREET 1	
VISUAL DIMENSION	Harmony	No harmony among buildings	
	Floor Covering	It is covered by yellow parquet	
	Enclosure	Strong enclosure	
	Other	- Physical deterioration - Inappropriate addition to the buildings facade	
TEMPORAL DIMENSION	Day and Night Use	During the day and night it is used for passage	
	Obsoloscence	Physical	it has physical obsoloscence
		Functional	
		Locational	
FUNCTIONAL DIMENSION	Uses of the Public Space	Residential street	
	Privacy	Semi-public	
	Environmental Design	It gets daylight and prevailing wind	
	Capital Web	It has adequate capital web	
SOCIAL DIMENSION	Safety	It is safe during the day and night	
	Accesibility	It is accesible	
	Neighnorhoord Relationship	Medium relationship	
	Uses	-Car parking, - Passage	
MORPHOLOGICAL DIMENSION	Changes through the periods	It has changes from Ottoman period to today	
PERCEPTUAL DIMENSION	Sight	Traditional mosaic can be perceived	
	Smell	Smell of food	
	Hearing	Voice of tv and radio	

Table 5: Six Urban Design Dimensions of ST1

DIMENSIONS OF THE CUL-DE-SACS IN THE WALLED CITY OF FAMAGUSTA		
STREET ANALYSIS 1 ST1 Behran Pasha Street		
VISUAL DIMENSION	<p>Aesthetic Preference:</p> <ul style="list-style-type: none"> • Harmony and Unity: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No • Floor Covering: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No • Enclosure: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No • Other: <ul style="list-style-type: none"> • Abandoned historical house • Inappropriate maintenance on facades and openings. 	<p>Social Dimension:</p> <ul style="list-style-type: none"> • Safety: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No • Accessibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No • Neighborhood Relationship: <input type="checkbox"/> Good <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Bad • Uses of Space: <ul style="list-style-type: none"> • <input checked="" type="checkbox"/> Sitting • <input checked="" type="checkbox"/> Car Parking • <input type="checkbox"/> Drying Clothes • <input type="checkbox"/> Playing (Children) • <input type="checkbox"/> Storage • <input checked="" type="checkbox"/> Passage 
TEMPORAL DIMENSION	<p>Time Cycles: Same use in both day and night</p> <p>Obsolescence:</p> <ul style="list-style-type: none"> • <input checked="" type="checkbox"/> Physical • <input type="checkbox"/> Functional • <input type="checkbox"/> Locational • <input type="checkbox"/> Image • <input type="checkbox"/> Official /Legal 	<p>Morphological Dimension:</p> <p>Venetian Period: </p> <p>British Period: </p> <p>Ottoman Period: </p> <p>Today: </p>
FUNCTIONAL DIMENSION	<p>Use of Public Space:</p> <ul style="list-style-type: none"> • <input checked="" type="checkbox"/> Residential • <input type="checkbox"/> Mixed Use • <input type="checkbox"/> Other..... <p>Privacy:</p> <ul style="list-style-type: none"> • <input type="checkbox"/> Public • <input checked="" type="checkbox"/> Semi-Public • <input type="checkbox"/> Semi-Private • <input type="checkbox"/> Private <p>Environmental Design:</p> <ul style="list-style-type: none"> • <input checked="" type="checkbox"/> Daylight • <input checked="" type="checkbox"/> Prevailing Wind • <input type="checkbox"/> Planting <p>Capital WEB:</p> <ul style="list-style-type: none"> • Parking Area: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No • Infrastructure: <input checked="" type="checkbox"/> Sewage <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Electricity <input checked="" type="checkbox"/> Telephone 	<p>Perceptual Dimension:</p> <p>Sight:</p> <ul style="list-style-type: none"> • Mosaic of history • Inappropriate maintenance <p>Smell:</p> <ul style="list-style-type: none"> • Food • Garbage • Humidity <p>Hearing:</p> <ul style="list-style-type: none"> • Private speeches from indoor spaces • Television voice • Birds 
Analysed by Nesil Afsin, 2016		

Street 2 (Nameless Street)

Street 2 (ST2) is located on the south-west (Fig. 24) of the Walled City of Famagusta. This street does not have any name as the other nameless streets in the Walled City.



Figure 24: Location of Street 2 in the Walled City

Visual Dimension

According to the visual dimension, it is seen that there is no harmony in term of unity among the buildings. When the buildings construction periods are considered, there are incompatible characteristics with each other. The base is covered by asphalt. There is strong enclosure in the street space. Besides, there is inappropriate maintenance on facades and openings (Fig. 26).



Figure 25: Entrance to the front gardens



Figure 26: Entrance of Street 2

Temporal Dimension

It is easily perceived that there is physical and functional obsolescence in this street. There are demolished historical buildings and inappropriate additions on these remains. The street is used as semi-private spaces for the residents. In addition, it is not possible to perceive any difference in day and night uses of the street.

Functional Dimension

This dead end street is a kind of residential semi-public street. It is used for accessing of the residents and act as a front garden of many houses.

It is closed to the prevailing wind, during the day and night . Since the density of the buildings and their heights, there is less wind. The residents dry their clothes (Fig. 28) and also they park cars along the street space (Fig. 27), that cause visual pollution.

Social Dimension

Considering social dimension, it can be said that, it is not a safe street. There is inadequate number of lighting elements. Due to its closure to the commercial street that is Istiklal Street, it is a permable street. Unfortunately, street is used for car parking, storage, drying the clothes and passage for residents who does not have strong relationship with each other.



Figure 27: Inadequate car parking on ST



Figure 28: Street is used for drying the clothes

Morphological Dimension

Throughout the history, the morphological changes can be perceived from the maps and buildings characteristics. These maps show that, the formation of the cul-de-sac was occurred on the last decays and there is no remain of street in the history. Dead-end street is seen as an empty field in previous periods.

Perceptual Dimension





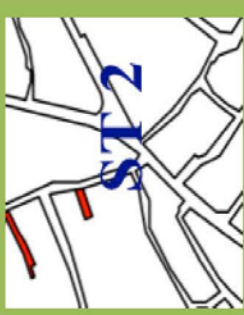

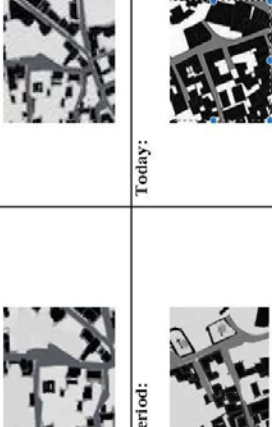



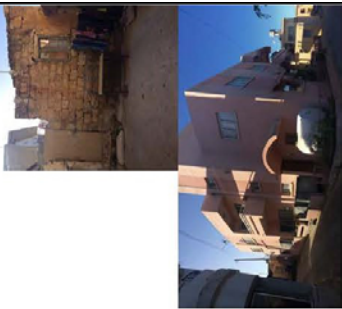
While passing through the street, the smell of food coming from the houses can be perceived. On the other hand, unfortunately, there is smell of garbage and humidity.

Since the buildings attached to the street space, the voice of television, radio and conversation can be heard while walking through the street. In Table 6 urban design dimension of Street 2 is summarized according to the considered issues. In Table 7, analysis of Street 2 (ST2) is shown in a systematic way that is supported by images and maps.

Table 6: Summary table of ST2

URBAN DESIGN DIMENSIONS	CONSIDERED ISSUES	STREET 2	
VISUAL DIMENSION	Harmony	No harmony among buildings	
	Floor Covering	It is covered by grey parquet	
	Enclosure	Strong enclosure	
	Other	Inappropriate maintenance on facades and openings	
TEMPORAL DIMENSION	Day and Night Use	During the day and night it is used for passage	
	Obsoloscence	Physical	it has physical obsoloscence
		Functional	
		Locational	
FUNCTIONAL DIMENSION	Uses of the Public Space	Residential street	
	Privacy	Semi-public	
	Environmental Design	It gets daylight and prevailing wind	
	Capital Web	It has adequate capital web	
SOCIAL DIMENSION	Safety	It is not safe during the night	
	Accesibility	It is accesible for pedestrians	
	Neighnorhoord Relationship	Weak relationship	
	Uses	-Car parking, -Passage -Drying the clothes	
MORPHOLOGICAL DIMENSION	Changes through the periods	Majority of the buildings were constructed after British Period.	
PERCEPTUAL DIMENSION	Sight	Adjacent buildings from different periods.	
	Smell	Garbage Humidity	
	Hearing	Dogs	

Table 7: Six Urban Design Dimensions of ST2

STREET ANALYSIS 2 ST2 (Nameless Street)			DIMENSIONS OF THE CUL-DE-SACS IN THE WALLED CITY OF FAMAGUSTA				
VISUAL DIMENSION 	SOCIAL DIMENSION  <p> Aesthetic Preference: • Harmony and Unity: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Floor Covering: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Enclosure: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Other: <ul style="list-style-type: none"> • Abandoned historical house • Inappropriate maintenance on facades and openings. </p>	MORPHOLOGICAL DIMENSION  <p> Time Cycles: Same use in both day and night Obsolescence: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Physical <input type="checkbox"/> Functional <input type="checkbox"/> Locational <input type="checkbox"/> Image <input type="checkbox"/> Official / Legal </p>	PERCEPTUAL DIMENSION  <p> Use of Public Space: <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Mixed Use <input type="checkbox"/> Other..... Privacy: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Semi-Public <input type="checkbox"/> Semi-Private <input type="checkbox"/> Private Environmental Design: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Daylight <input checked="" type="checkbox"/> Prevailing Wind <input type="checkbox"/> Planting Capital WEB: <ul style="list-style-type: none"> Parking Area: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Infrastructure: <input checked="" type="checkbox"/> Sewage <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Electricity <input checked="" type="checkbox"/> Telephone </p>	FUNCTIONAL DIMENSION  <p style="text-align: right; font-size: small;">Analysed by Nesil Afşın, 2016</p>	VISUAL DIMENSION  <p> Safety: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Accessibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Neighborhood Relationship: <input type="checkbox"/> Good <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Bad Uses of Space: <ul style="list-style-type: none"> <input type="checkbox"/> Sitting <input checked="" type="checkbox"/> Car Parking <input checked="" type="checkbox"/> Drying Clothes <input type="checkbox"/> Playing (Children) <input checked="" type="checkbox"/> Storage <input checked="" type="checkbox"/> Passage </p>	MORPHOLOGICAL DIMENSION  <p> Nationality of Users: <input checked="" type="checkbox"/> Turkish Cypriot <input checked="" type="checkbox"/> Immigrants <input type="checkbox"/> Other Venetian Period:  British Period:  Today:  </p>	PERCEPTUAL DIMENSION  <p> Sight: <ul style="list-style-type: none"> • Mosaic of history. • Inappropriate maintenance Smell: <ul style="list-style-type: none"> • Food • Garbage • Humidity Hearing: <ul style="list-style-type: none"> • Private speeches from indoor spaces • Television voice • Birds • Dogs </p>

Street 3 (Turgut Reis Street)

Turgut Reis Street (ST3) is located on the north-west (Fig. 29) of the Walled City of Famagusta.

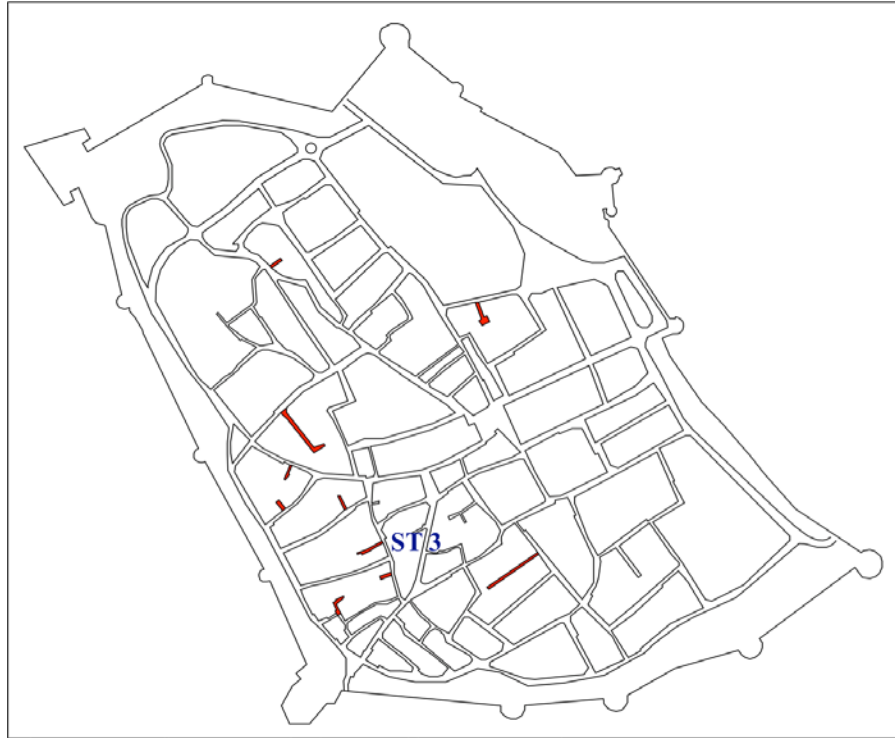


Figure 29: Location of Turgut Reis Street in the Walled City

Visual Dimension

According to the visual dimension, it is seen that there is no harmony in term of unity of the buildings. When the buildings construction periods are considered, most of the buildings are constructed in British period. The base is covered by yellow parquet. Narrow, and adjacent buildings support enclosure in the street (Fig. 30). Besides, there are deterioration caused by humidity and inappropriate maintenance on facades and openings.

Temporal Dimension

The abandoned buildings (Fig. 31) and immigrants are threats for physical obsolescence in this street.. Therefore, it is easily seen that street act as the front garden of this dwelling. In addition, it is not possible to perceive any difference in day and night uses of the street.



Figure 30: View of Turgut Reis Street



Figure 31: Abandoned building

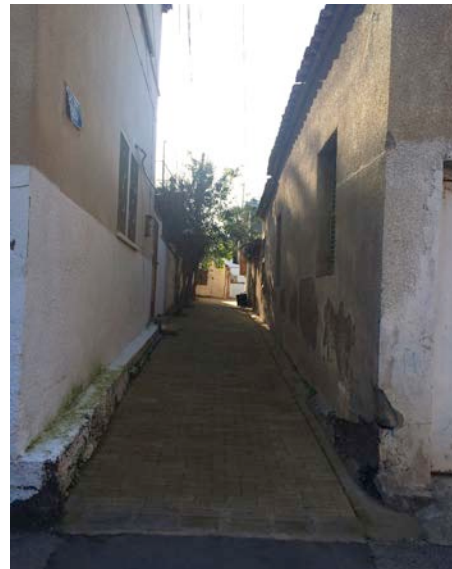


Figure 32: Entrance of ST3

While walking through the Turgut Reis Steet, it is possible to feel the wind since its location and majority of one storey buildings and it takes good day light. As a negative manner, narrow and adjacent buildings can prevent car parking.

Social Dimension

Considering social dimension, it can be said that, it is a safe street although there is inadequate number of lighting elements. Children play in the street space and the extension to street space improve safety. Due to its close distance to the commercial street that is Istiklal Street, it can be said that it is a permeable street. Unfortunately, street is used for car parking, storage, drying the clothes and passage for residents who does not have strong relationship with each other.



Figure 33: Two storey buildings in ST3



Figure 31: Children playing on ST3



Figure 35: Attached buildings in ST3

Morphological Dimension

Throughout the history, the morphological changes can be perceived from the maps

(see Table 9) and buildings characteristics as the other cul-de-sacs. From the maps and building characteristics it is clearly seen that the formation of the street is mainly developed in British period.








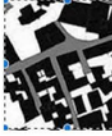
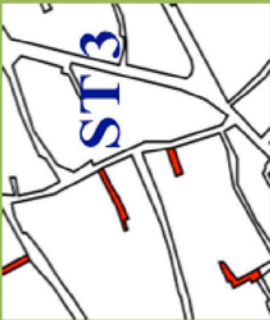

Perceptual Dimension

As the other cul-de-sacs it can be perceived that, Turgut Reis Street presents reflection of the indoor life of the residents. Private activities are extended to the street space. Detoriated water tanks at the roofs and some abondened houses cause the humidity among the street. In Table 8 urban design dimension of Street 2 is sumarized according to the considered issues. In Table 9 analysis of Street 3 (ST3) is shown in systematical way that is supported by images and maps.

Table 8: Summary table of ST3

URBAN DESIGN DIMENSIONS	CONSIDERED ISSUES	STREET 3	
VISUAL DIMENSION	Harmony	No harmony among buildings	
	Floor Covering	It is covered by asphalt	
	Enclosure	Strong enclosure	
	Other	-Inappropriate addition to the buildings facade -Abandoned buildings	
TEMPORAL DIMENSION	Day and Night Use	During the day and night it is used for passage	
	Obsolosc nce	Physical	it has physical obsolosc nce
		Functional	
		Locational	
FUNCTIONAL DIMENSION	Uses of the Public Space	Residential street	
	Privacy	Semi-Private	
	Environmental Design	It gets daylight and prevailing wind	
	Capital Web	It has adequate capital web	
SOCIAL DIMENSION	Safety	It is not safe during the night	
	Accesibility	It is accesible	
	Neighnorhoord Relationship	Medium relationship	
	Uses	-Passage - Strorage	
MORPHOLOGICAL DIMENSION	Changes through the periods	It has changes from Venetitian period to today	
PERCEPTUAL DIMENSION	Sight	Mosaic of History	
	Smell	Smell of food, garbage and humidity	
	Hearing	Voice of tv and private speeches from indoor spaces	

Table 9: Six Urban Design Dimensions of ST3

DIMENSIONS OF THE CUL-DE-SACS IN THE WALLED CITY OF FAMAGUSTA		
STREET ANALYSIS 3 Turgut Reis Street 	VISUAL DIMENSION 	SOCIAL DIMENSION Safety: <input type="checkbox"/> Yes <input type="checkbox"/> No Accessibility: <input type="checkbox"/> Yes <input type="checkbox"/> No Neighborhood Relationship: <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Bad Uses of Space: <input type="checkbox"/> Sitting <input type="checkbox"/> Car Parking <input type="checkbox"/> Drying Clothes <input type="checkbox"/> Playing (Children) <input type="checkbox"/> Storage Nationality of Users: <input checked="" type="checkbox"/> Turkish Cypriot <input checked="" type="checkbox"/> Immigrants <input type="checkbox"/> Other
TEMPORAL DIMENSION 	MORPHOLOGICAL DIMENSION 	MORPHOLOGICAL DIMENSION Venetian Period:  Ottoman Period:  British Period:  Today: 
FUNCTIONAL DIMENSION 	FUNCTIONAL DIMENSION Use of Public Space: <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Mixed Use <input type="checkbox"/> Other..... Privacy: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Semi-Public <input type="checkbox"/> Semi-Private <input type="checkbox"/> Private Environmental Design: <input checked="" type="checkbox"/> Daylight <input checked="" type="checkbox"/> Prevailing Wind <input type="checkbox"/> Planting Capital WEB: Parking Area: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Infrastructure: <input checked="" type="checkbox"/> Sewage <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Electricity <input checked="" type="checkbox"/> Telephone	PERCEPTUAL DIMENSION Sight: <ul style="list-style-type: none"> • Mosaic of history. • Inappropriate maintenance Smell: <ul style="list-style-type: none"> • Food • Garbage • Humidity Hearing: <ul style="list-style-type: none"> • Private speeches from indoor spaces • Television voice 
Analysed by Nesil Afşin, 2016		

Kuru Çeşme Street (ST4)

Kuru Çeşme Street (ST4) is located on the west side (Fig. 36) of the Walled City of Famagusta (see Table 11). It is one of the short streets in the Walled City.



Figure 36: Location of Kuru Çeşme Street 1 in the Walled City

Visual Dimension

When visual dimension is considered, it is seen that there is no harmony in term of unity among the buildings on the street. The renovation of one of the buildings and some annex to them have brought livability to cul-de-sac. This renovated buildings converted to Boutique Hotel that increase the attraction to close environment. After the opening of boutique hotel. The base was covered by yellow parquet and lighting elements were added.



Figure 37: Panaromic view of boutique hotel

Functional Dimension

There are both residential and accomodational uses in this street. Since the existence of boutique hotel, the street is used both at the day and night time. The residential buildings are mainly empty. Some of the owners use them periodically and some other are trying to sell their dwellings.

After the construction of Boutique Hotel (Fig. 37), the street became more popular. The plants at the hotels' garden improve environmental quality.

It is easy to access to the Kuru Çeşme Street. In addition the hotels' signs on the main street orient the people for passing through the street.

Morphological Dimension

From the morphological point of view, the maps (see appendix C) show that the formation of the street typology is based on the Britih Period. In previous periods the cul-de-sac was an empty field.

Perceptual Dimension

While walking through the Kuru Çeşme Street, the preveiling wind that brings the smell of the flowers can be felt. During the night time, because of the empty

dwellings, there is silence in the street.



Figure 38: Entrance of boutique hotel










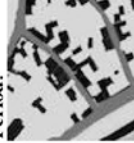

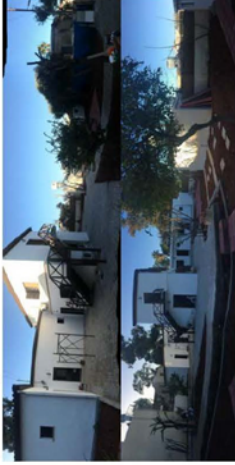
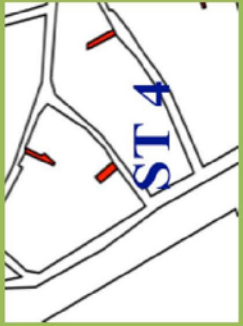
Figure 39: View of ST4 before the renovation

Fig 47 and Fig 39 show the difference after the renovation of the boutique hotel can be clearly perceived. After the opening of boutique hotel the floor coverings were changed. In Table 10 urban design dimension of Kuru Çeşme Street is summarized according to the considered issues. . In Table 11 analysis of Street 4 (ST4) is shown in systematical way that is supported by images and maps.

Table 10: Summary table of ST4

URBAN DESIGN DIMENSIONS	CONSIDERED ISSUES	STREET 4	
VISUAL DIMENSION	Harmony	No harmony among buildings	
	Floor Covering	It is covered by grey parquet	
	Enclosure	Strong enclosure	
	Other	- Physical deterioration -Abandoned buildings -Annex for renovated building.	
TEMPORAL DIMENSION	Day and Night Use	During the day and night it is used for passage	
	Obsoloscence	Physical	it has physical obsoloscence
		Functional	
		Locational	
FUNCTIONAL DIMENSION	Uses of the Public Space	Both Residential and accomodational use	
	Privacy	Public	
	Environmental Design	It gets daylight and prevailing wind	
	Capital Web	It has adequate capital web	
SOCIAL DIMENSION	Safety	It is safe during the day and night	
	Accesibility	It is accesible	
	Neighnorhoord Relationship	Weak relationship	
	Uses	-Passage	
MORPHOLOGICAL DIMENSION	Changes through the periods	It has changes from British period to today	
PERCEPTUAL DIMENSION	Sight	Irregular position of building blocks Detoriated facades Renovated building as Boutique Hotel	
	Smell	Flowers	
	Hearing	Speeches of guests who visit Boutiwue Hotel	

Table 11: Six Urban Design Dimensions of ST4

DIMENSIONS OF THE CUL-DE-SACS IN THE WALLED CITY OF FAMAGUSTA			
STREET ANALYSIS 4 ST4 Kuru Çeşme Street			
VISUAL DIMENSION	 <p>Aesthetic Preference:</p> <ul style="list-style-type: none"> • Harmony and Unity: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <p>Floor Covering: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Enclosure: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Other:</p> <ul style="list-style-type: none"> • Abandoned historical house • Inappropriate maintenance on facades and openings. 	 <p>Time Cycles: Same use in both day and night</p> <p>Obsolescence:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Physical <input type="checkbox"/> Functional <input type="checkbox"/> Locational <input type="checkbox"/> Image <input type="checkbox"/> Official / Legal 	
SOCIAL DIMENSION	<p>Safety: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Accessibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Neighborhood Relationship: <input type="checkbox"/> Good <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Bad</p> <p>Uses of Space:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Sitting <input checked="" type="checkbox"/> Car Parking <input type="checkbox"/> Drying Clothes <input type="checkbox"/> Playing (Children) <input type="checkbox"/> Storage <input checked="" type="checkbox"/> Passage 	<p>Nationality of Users: <input checked="" type="checkbox"/> Turkish Cypriot <input type="checkbox"/> Immigrants <input checked="" type="checkbox"/> Other.....Tourists</p> <p>Venetian Period:</p>  <p>Ottoman Period:</p> 	<p>British Period:</p>  <p>Today:</p> 
MORPHOLOGICAL DIMENSION	<p>Use of Public Space:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Mixed Use <input checked="" type="checkbox"/> Other: Accommodation (Boutique Hotel) <p>Privacy:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Public <input checked="" type="checkbox"/> Semi-Public <input type="checkbox"/> Semi-Private <input type="checkbox"/> Private <p>Environmental Design:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Daylight <input checked="" type="checkbox"/> Prevailing Wind <input checked="" type="checkbox"/> Planting <p>Capital WEIB:</p> <ul style="list-style-type: none"> • Parking Area: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No • Infrastructure: <input checked="" type="checkbox"/> Sewage <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Electricity <input checked="" type="checkbox"/> Telephone 	<p>Sight:</p> <ul style="list-style-type: none"> • Irregular position of building blocks • Detoriated facades • Renovated building as boutique hotel <p>Smell:</p> <ul style="list-style-type: none"> • Flowers • Humidity <p>Hearing:</p> <ul style="list-style-type: none"> • Silence 	<p>PERCEPTUAL DIMENSION</p>
FUNCTIONAL DIMENSION		<p>Analysed by Nesil Afşin, 2016</p>	

Suphi Ezel Street (ST5)

Suphi Ezel Street (ST5) is located on the west side (Fig. 40) of the Walled City of Famagusta (see Table 13). It is one of the short streets in the Walled City.



Figure 40: Location of Suphi Ezel Street in the Walled City

Visual Dimension

In this cul-de-sac it is not possible to see any harmony between the buildings. Since the two storey dwellings and the garden walls provide strong enclosure to the street space. This space is covered by grey parquet. Although some alterations were done to the facades, it is possible to perceive inappropriate maintenance on the buildings. In addition, many of these dwellings are not visible caused by less definition of their entrance.

Temporal Dimension

During the day and night, there is no difference of the street use. However, throughout the periods, the buildings were faced with physical obsolescence.

Functional Dimension

This street is a residential semi-public cul-de-sac. Trees at the front gardens present some greenery to the street space. There is natural ventilation, however due to the narrow two storey buildings, daylight can not reach to the street.

Social Dimension

There is no empty buildings in this street. The continuous usage of these street brings safety. Although the residents of the streets live in their houses for a long time, they do not prefer to socialize with each-other. Accordingly, the street space is only used for passage.

From the maps (see Table 13) it can be that the street was developed in British Period and after.

Perceptual Dimension

It can be perceived that some building blocks have irregular position. The entrance of the street is well defined (Fig. 41, Fig. 42), however some dwellings' entrances doesn't have permability. While walking through these buildings the smell of food comes from the houses, besides their way of life can be felt. In Table 12 urban design dimension of Suphi Ezel is summarized according to the considered issues. . In Table 13 analysis of Street 5 (ST5) is shown in systematical way that is supported by images and maps.



Figure 41: One and two storey attached buildings in ST5



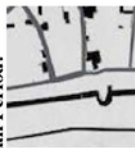
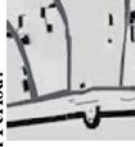
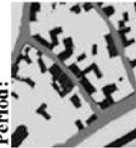



Figure 42: Entrance of ST5

Table 12: Summary table of ST5

URBAN DESIGN DIMENSIONS	CONSIDERED ISSUES	STREET 5	
VISUAL DIMENSION	Harmony	No harmony among buildings	
	Floor Covering	It is covered by grey parquet	
	Enclosure	Strong enclosure	
	Other	Renovated one and two storey	
TEMPORAL DIMENSION	Day and Night Use	During the day and night it is used for passage	
	Obsolescence	Physical	Less obsolescence on facades.
		Functional	
		Locational	
FUNCTIONAL DIMENSION	Uses of the Public Space	Residential street	
	Privacy	Semi-Private	
	Environmental Design	Less daylight	
	Capital Web	It has adequate capital web	
SOCIAL DIMENSION	Safety	It is safe during the day and night	
	Accessibility	It is accessible for pedestrians	
	Neighborhood Relationship	Good relationship	
	Uses	-Passage - Storage	
MORPHOLOGICAL DIMENSION	Changes through the periods	It has changes from British period to today	
PERCEPTUAL DIMENSION	Sight	Buildings almost in good condition caused by alteration	
	Smell	-	
	Hearing	Silence	

Table 13: Six Urban Design Dimensions of ST5

DIMENSIONS OF THE CUL-DE-SACS IN THE WALLED CITY OF FAMAGUSTA		
STREET ANALYSIS 5 ST5 Suphi Ezel Street		
VISUAL DIMENSION	TEMPORAL DIMENSION	FUNCTIONAL DIMENSION
<p>Aesthetic Preference:</p> <ul style="list-style-type: none"> • Harmony and Unity: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <p>Floor Covering: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Enclosure: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Other:</p> <ul style="list-style-type: none"> • Abandoned historical house • Inappropriate maintenance on facades and openings. • Less definition of entrance points. 	<p>Time Cycles: Same use in both day and night</p> <p>Obsolescence:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Physical <input type="checkbox"/> Functional <input type="checkbox"/> Locational <input type="checkbox"/> Image <input type="checkbox"/> Official /Legal 	<p>Use of Public Space:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Mixed Use <input checked="" type="checkbox"/> Other: Accomodation (Boutique Hotel) <p>Privacy:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Public <input checked="" type="checkbox"/> Semi-Public <input type="checkbox"/> Semi-Private <input type="checkbox"/> Private <p>Environmental Design:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Daylight <input checked="" type="checkbox"/> Prevailing Wind <input checked="" type="checkbox"/> Planting <p>Capital WEB:</p> <ul style="list-style-type: none"> • Parking Area: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No • Infrastructure : <input checked="" type="checkbox"/> Sewage <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Electricity <input checked="" type="checkbox"/> Telephone
SOCIAL DIMENSION	MORPHOLOGICAL DIMENSION	PERCEPTUAL DIMENSION
<p>Safety: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Accessibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Neighborhood Relationship: <input type="checkbox"/> Good <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Bad</p> <p>Uses of Space:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Sitting <input checked="" type="checkbox"/> Car Parking <input checked="" type="checkbox"/> Drying Clothes <input checked="" type="checkbox"/> Playing (Children) <input checked="" type="checkbox"/> Storage <input type="checkbox"/> Other..... <p>Nationality of Users: <input type="checkbox"/> Turkish Cypriot <input type="checkbox"/> Immigrants <input type="checkbox"/> Other</p>	<p>Venetian Period:</p>  <p>Ottoman Period:</p>  <p>British Period:</p>  <p>Today:</p> 	<p>Sight:</p> <ul style="list-style-type: none"> • Irregular position of building blocks • Detoriated facades • Renovated building as boutique hotel <p>Smell:</p> <ul style="list-style-type: none"> • Flowers • Food <p>Hearing:</p> <ul style="list-style-type: none"> • Silence
Analysed by Nesil Afşin, 2016		

Street 6 (Nameless Street)

Street 6 (ST6) is located on the west side (Fig. 43) of the Walled City of Famagusta (see Table 15). The street is one of the nameless cul-de-sacs. It is one of the narrow and short streets in the Walled City.

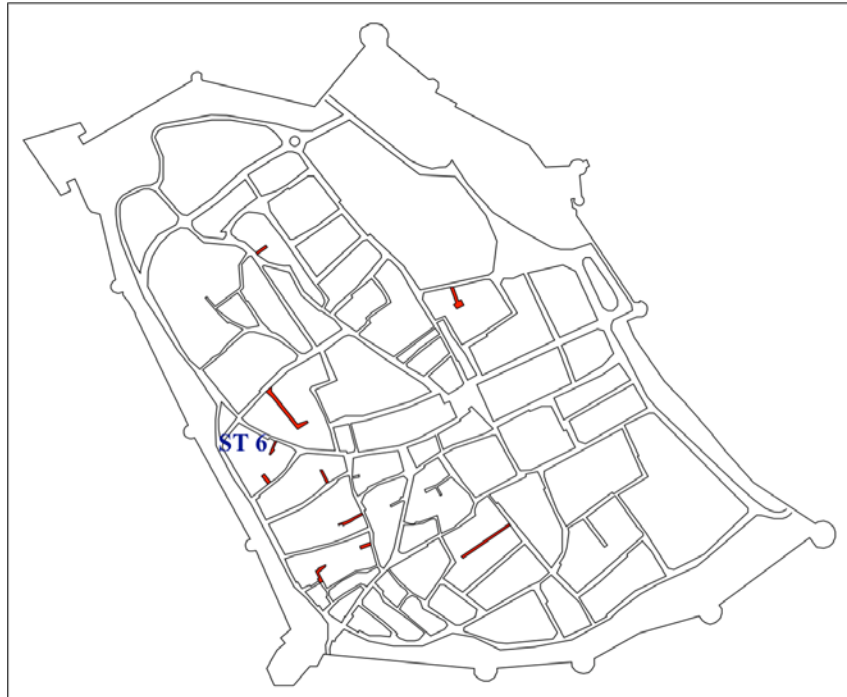


Figure 43: Location of Street 6 in the Walled City

Visual Dimension

According to the visual dimension, it is seen that there is no harmony in term of unity among the buildings. Thickness of the walls gives clue about their construction period that are close to each-other. However, inappropriate wall covering materials, and openings as doors and windows disturb the harmony. There is no base covering material. In addition, the staircases and water tanks in the street prevent passing through and give the sense of private front garden of a dwelling.

Temporal Dimension

Inappropriate additions and maintenance to the buildings present chaotic view to the street. There are physical obsolescence that is clear from the humidity on the walls and rusted water tanks (Fig. 45).

Functional Dimension

When the time cycles are considered even the day light is not enough to enlight the street. This semi-private street is dark in both day and night time. Lack of daylight and narrow buildings cause shaded street space during the day (Fig. 44).

Social Dimension

This street is used for storage, sitting and passage. Because of the narrow buildings, there is lack of permeability to the street.

Morphological Dimension

The formation of the street mainly developed in British Period can be seen through the morphological maps. Since the inappropriate facade coverings and maintenance except the wall thicknesses it is not possible to perceive the construction period of the dwellings.

Perceptual Dimension

It is difficult to understand the existence of the street at first. Entrance of the street is seen as a space between two buildings. Therefore, there is visual permeability in this cul-de-sac. In Table 14 urban design dimension of Street 6 is summarized according to the considered issues. In Table 15 analysis of Street 6 (ST6) is shown in systematical way that is supported by images and maps.



Figure 44: Inappropriate maintenance on facades



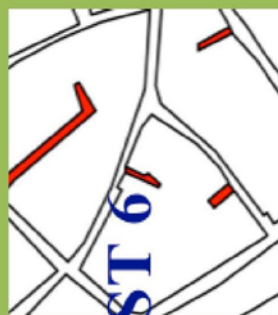


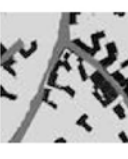




Figure 45: Physical obsolescence of the street

Table 14: Summary table of Street 6

URBAN DESIGN DIMENSIONS	CONSIDERED ISSUES	STREET 6	
VISUAL DIMENSION	Harmony	No harmony among buildings	
	Floor Covering	No floor covering	
	Enclosure	Strong enclosure	
	Other	- Physical deterioration - Inappropriate maintenance buildings facade	
TEMPORAL DIMENSION	Day and Night Use	During the day and night it is used for passage	
	Obsolosc nce	Physical	it has physical obsolosc nce
		Functional	
		Locational	
FUNCTIONAL DIMENSION	Uses of the Public Space	Residential street	
	Privacy	Semi-Private	
	Environmental Design	Less daylight	
	Capital Web	It has adequate capital web	
SOCIAL DIMENSION	Safety	It is safe during the day and night	
	Accesibility	It is accesible for pedestrians	
	Neighnorhoord Relationship	Good relationship	
	Uses	-Passage - Storage	
MORPHOLOGICAL DIMENSION	Changes through the periods	It has changes from Ottoman period to today	
PERCEPTUAL DIMENSION	Sight	Occupation to publicity	
	Smell	Fruit Trees Humidity	
	Hearing	Voice of tv and private speeches from indoor spaces	

Table 15: Six Urban Design Dimensions of ST6

DIMENSIONS OF THE CUL-DE-SACS IN HE WALLED CITY OF FAMAGUSTA	
STREET ANALYSIS 6 ST6 (Nameless Street)	
VISUAL DIMENSION	<p>Aesthetic Preference:</p> <ul style="list-style-type: none"> • Harmony and Unity: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <p>Floor Covering: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Enclosure: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Other:</p> <ul style="list-style-type: none"> • Abandoned historical house • Inappropriate maintenance on facades and openings. • Less definition of entrance points. <p style="text-align: center;">Time Cycles: Same use in both day and night</p> <p>Obsolescence:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Physical <input type="checkbox"/> Functional <input type="checkbox"/> Locational <input type="checkbox"/> Image <input type="checkbox"/> Official /Legal
TEMPORAL DIMENSION	
FUNCTIONAL DIMENSION	
SOCIAL DIMENSION	<p>Safety: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Accessibility: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Neighborhood Relationship: <input checked="" type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Bad</p> <p>Uses of Space:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Sitting <input type="checkbox"/> Car Parking <input type="checkbox"/> Drying Clothes <input checked="" type="checkbox"/> Playing (Children) <input checked="" type="checkbox"/> Storage <input checked="" type="checkbox"/> Passage <p>Nationality of Users: <input type="checkbox"/> Turkish Cypriot <input checked="" type="checkbox"/> Immigrants <input type="checkbox"/> Other</p>
MORPHOLOGICAL DIMENSION	<p>Venetian Period: </p> <p>Ottoman Period: </p> <p>British Period: </p> <p>Today: </p>
PERCEPTUAL DIMENSION	<p>Sight:</p> <ul style="list-style-type: none"> • Irregular position of building blocks • Detoriated facades • Hidden dwellings <p>Smell:</p> <ul style="list-style-type: none"> • Fruit Trees • Food • Humidity <p>Hearing:</p> <ul style="list-style-type: none"> • Private Speeches from indoor spaces. <p style="text-align: center;"></p>
FUNCTIONAL DIMENSION	<p>Use of Public Space:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Mixed Use <input checked="" type="checkbox"/> Other: Accomodation (Boutique Hotel) <p>Privacy:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Public <input type="checkbox"/> Semi-Public <input checked="" type="checkbox"/> Semi-Private <input type="checkbox"/> Private <p>Environmental Design:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Daylight <input type="checkbox"/> Prevailing Wind <input type="checkbox"/> Planting <p>Capital WEB:</p> <ul style="list-style-type: none"> • Parking Area: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No • Infrastructure: <input checked="" type="checkbox"/> Sewage <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Electricity <input checked="" type="checkbox"/> Telephone
Analysed by Nesil Afşim, 2016	

Pertev Pasha Street (ST7)

Pertev Pasha Street (ST7) is located on the west side (Fig. 46) of the Walled City of Famagusta (see Table 17).

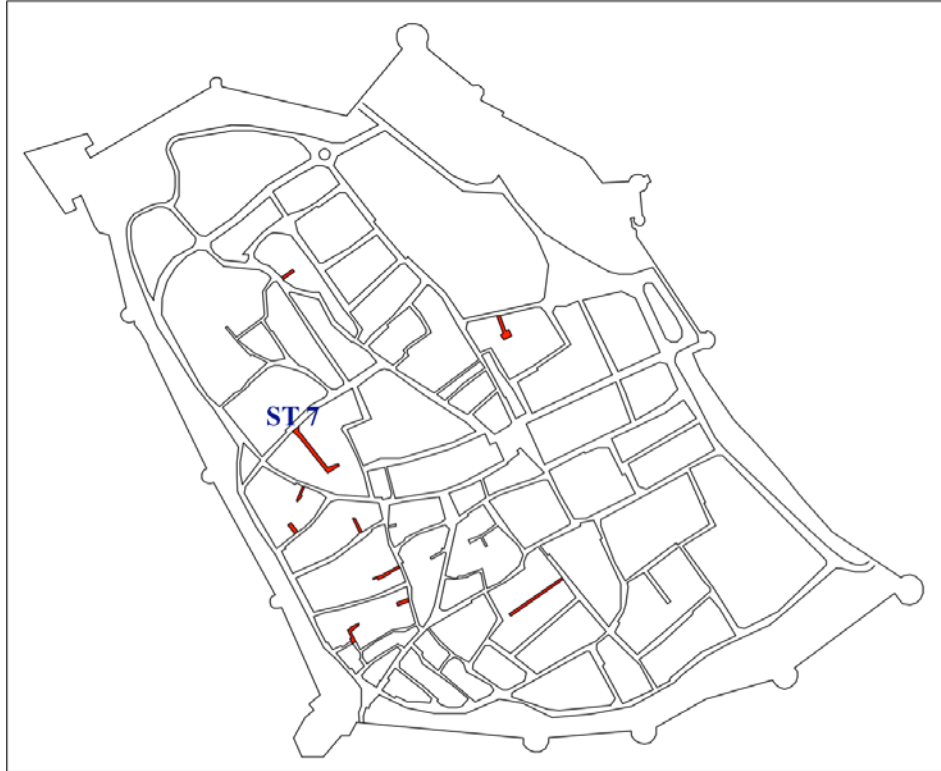


Figure 46: Location of Pertev Pasha Street in the Walled City

Visual Dimension

It is one of the dominant dead end streets in the Walled City. When visual dimension is considered, it is seen that there is unity among the buildings on the street. Each buildings have different surface covering and inappropriate addition on their facade. The base is covered by asphalt. One and two storey adjacent buildings come together and create enclosure to the cul-de-sac. As a difference to the other cul-de-sacs the corner building of the street acts as an entrance definer. (Fig3.36)

Temporal Dimension

According to the time cycles, at the both day and night time the residents prefer to live introverted behind the facades that face with the physical obsolescence.

Functional Dimension

This residential street is a semi-public street that takes prevailing wind. While walking through the streets the smell of the fruit trees (Fig.47) comes from the front gardens of dwellings.



Figure 47: Plants behind the garden walls

Social Dimension

When the social dimension is considered, since the street has direct access from the main street, it is safe. Sometimes, during the day time, children who stay at the dwellings come together and play in the street space.

Morphological Dimension

From the construction materials and details on facades (Fig.48-Fig.49) it is clearly seen that the development of Pertev Pasha Street is based on the British Period and

after.



Figure 48: One Storey building in ST7



Figure 49: Detoriation on facades

Perceptual Dimension

From the perceptual dimension, mainly the silence is dominant with the smell of the fruit trees and garbage (Fig. 50). Renovated historical buildings make the street more wellcoming although some detoriated structure and grabage are existed. In Table 16 urban design dimension of Pertev Pasha Street is sumarized according to the considered issues. In Table 17 analysis of Street 7 (ST7) is shown in systematical way that is supported by images and maps.



Figure 50: Garbage












Figure 51: Entrance of Pertev Pasha Street

Table 16: Summary table of ST7

URBAN DESIGN DIMENSIONS	CONSIDERED ISSUES	STREET 7	
VISUAL DIMENSION	Harmony	Less harmony among buildings	
	Floor Covering	It is covered by asphalt	
	Enclosure	Strong enclosure	
	Other	-Strong definition of the street entrance -Physical deterioration	
TEMPORAL DIMENSION	Day and Night Use	During the day and night it is used for passage	
	Obsoloscence	Physical	it has physical obsoloscence
		Functional	
		Locational	
FUNCTIONAL DIMENSION	Uses of the Public Space	Residential street	
	Privacy	Semi-public	
	Environmental Design	It gets daylight and prevailing wind	
	Capital Web	It has adequate capital web	
SOCIAL DIMENSION	Safety	It is safe during the day and night	
	Accesibility	It is accesible	
	Neighnorhoord Relationship	Good relationship	
	Uses	-Car parking, -Passage	
MORPHOLOGICAL DIMENSION	Changes through the periods	It has changes from British period to today	
PERCEPTUAL DIMENSION	Sight	Mosaic of History Renovated buildings	
	Smell	Fruit Trees Garbage	
	Hearing	Silence	

Table 17: Six Urban Design Dimensions of ST7

DIMENSIONS OF THE CUL-DE-SACS IN THE WALLED CITY OF FAMAGUSTA				
STREET ANALYSIS 7 ST7 Pertev Pasha Street				
VISUAL DIMENSION	<p>Aesthetic Preference:</p> <ul style="list-style-type: none"> • Harmony and Unity: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <p>Floor Covering: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Enclosure: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Other:</p> <ul style="list-style-type: none"> • Corner Building acts as entrance definer. • Strong definition of space 		SOCIAL DIMENSION	<p>Safety: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Accessibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Neighborhood Relationship: <input checked="" type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Bad</p> <p>Uses of Space:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Sitting <input type="checkbox"/> Car Parking <input type="checkbox"/> Drying Clothes <input checked="" type="checkbox"/> Playing (Children) <input checked="" type="checkbox"/> Storage <input checked="" type="checkbox"/> Passage <input type="checkbox"/> Other..... <p>Nationality of Users: <input checked="" type="checkbox"/> Turkish Cypriot <input checked="" type="checkbox"/> Immigrants <input type="checkbox"/> Other</p>
TEMPORAL DIMENSION	<p>Time Cycles: Same use in both day and night</p> <p>Obsolescence:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Physical <input type="checkbox"/> Functional <input type="checkbox"/> Locational <input type="checkbox"/> Image <input type="checkbox"/> Official /Legal 		MORPHOLOGICAL DIMENSION	<p>Venetian Period: </p> <p>British Period: </p> <p>Today: </p> <p>Ottoman Period: </p>
FUNCTIONAL DIMENSION	<p>Use of Public Space:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Mixed Use <p>Privacy:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Public <input type="checkbox"/> Semi-Public <input checked="" type="checkbox"/> Semi-Private <input type="checkbox"/> Private <p>Environmental Design:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Daylight <input type="checkbox"/> Prevailing Wind <input type="checkbox"/> Planting <p>Capital WEB:</p> <ul style="list-style-type: none"> • Parking Area: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No • Infrastructure: <input checked="" type="checkbox"/> Sewage <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Electricity <input checked="" type="checkbox"/> Telephone 		PERCEPTUAL DIMENSION	<p>Sight:</p> <ul style="list-style-type: none"> • Mosaic of history • Renovated buildings <p>Smell:</p> <ul style="list-style-type: none"> • Fruit Trees • Garbage <p>Hearing:</p> <ul style="list-style-type: none"> • Silence
Analysed by Nesil Afşin, 2016				

Street 8 (ST8)

Street 8 (ST8) is situated at the core (Fig. 52) of the Walled City of Famagusta (see Table 19). This street does not have any name as the other nameless streets in the Walled City.

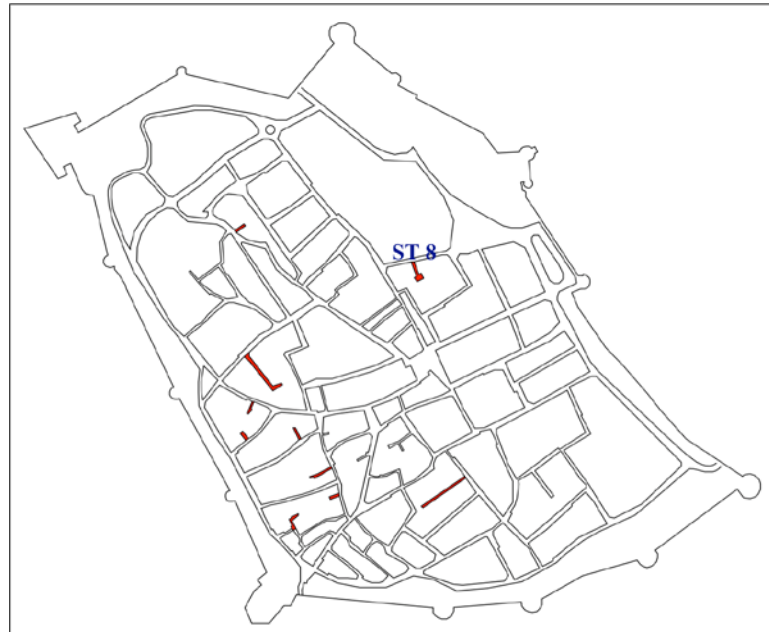


Figure 52: Location of Street 8 in the Walled City

Visual Dimension

According to visual dimension, it is seen that there is no unity among the buildings. When the buildings construction periods are considered, variety of construction details are perceived. The base is covered by asphalt. Also, there is less definition of street entrance and the separate buildings do not bring any enclosure to the cul-de-sac.

Temporal Dimension

It is easily perceived that there is physical obsolescence in this street. Although the dwellings are constructed in the last decades, the deterioration on the openings and

facades can be seen. In addition, the lack of lighting elements cause difference between the day and night uses (Fig. 53). Unfortunately, even the street space can not be seen at night.



Figure 53: Night view of ST 8



Figure 54: View of Lala Mustafa Pasha Mosque from ST8

Functional Dimension

It is a residential semi-public street. It is used for accessing of the residents and planting as well as car parking. The empty land that is utilized for planting.

Social Dimension

Considering social dimension, it can be said that, it is not a safe street. There is inadequate number of lighting elements. Although it is located at the core of the Walled City, it is not easy to understand the existence of the cul-de-sac. Since the empty land at the street is used for planting, the residents share the fruits that strengthen relationships among neighbours.

Morphological Dimension

Throughout the history, the morphological changes can be seen. The formation of the cul-de-sac was occurred on the last decays and there is no trace from the historical periods.



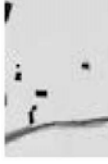






Perceptual Dimension

Although the buildings character does not present any architectural and historical value, while passing through the cul-de-sac, nice view of Lala Mustafa Pasha Mosque from the street (Fig. 54), brings a special identity to the cul-de-sac with the smell of the fruit tree. In Table 18 urban design dimension of Street 8 is summarized according to the considered issues. In Table 19 analysis of Street 8 (ST8) is shown in systematical way that is supported by images and maps

Table 18: Summary table of Street 8

URBAN DESIGN DIMENSIONS	CONSIDERED ISSUES	STREET 8	
VISUAL DIMENSION	Harmony	No harmony among buildings	
	Floor Covering	It is covered by asphalt	
	Enclosure	Less enclosure	
	Other	Less definition of street entrance	
TEMPORAL DIMENSION	Day and Night Use	During the day and night it is used for passage	
	Obsoloscence	Physical	it has physical obsoloscence
		Functional	
		Locational	
FUNCTIONAL DIMENSION	Uses of the Public Space	Residential street	
	Privacy	Semi-Private	
	Environmental Design	It gets daylight and prevailing wind	
	Capital Web	It has adequate capital web	
SOCIAL DIMENSION	Safety	It is safe during the day and night	
	Accesibility	It is accesible	
	Neighnorhoord Relationship	Good relationship	
	Uses	Car parking, -Passage	
MORPHOLOGICAL DIMENSION	Changes through the periods	It has changes from British period to today	
PERCEPTUAL DIMENSION	Sight	No aesthetic and architectural value	
	Smell	Garbage Tree Flower	
	Hearing	Silence	

Table 19: Six Urban Design Dimensions of ST8

DIMENSIONS OF THE CUL-DE-SACS IN THE WALLED CITY OF FAMAGUSTA		
STREET ANALYSIS 8 ST8 (Nameless Street)		<p>Visual Dimension</p> <p>Aesthetic Preference:</p> <ul style="list-style-type: none"> • Harmony and Unity: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No • Floor Covering: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No • Enclosure: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No • Other: <ul style="list-style-type: none"> • Less definition of street entrance. • No definition of street space. <p>Day</p> 
<p>SOCIAL DIMENSION</p>	<p>Social Dimension</p> <p>Safety: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Accessibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Neighborhood Relationship: <input checked="" type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Bad</p> <p>Uses of Space:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Sitting <input checked="" type="checkbox"/> Car Parking <input type="checkbox"/> Drying Clothes <input checked="" type="checkbox"/> Playing (Children) <input checked="" type="checkbox"/> Storage <input checked="" type="checkbox"/> Passag <input checked="" type="checkbox"/> Other... Agriculture 	<p>Social Dimension</p> <p>Nationality of Users: <input checked="" type="checkbox"/> Turkish Cypriot <input checked="" type="checkbox"/> Immigrants <input type="checkbox"/> Other</p> <p>Venetian Period:</p>  <p>British Period:</p>  <p>Today:</p>  
<p>TEMPORAL DIMENSION</p>	<p>Temporal Dimension</p> <p>Time Cycles: Day</p>  <p>Night</p>  <p>Obsolescence:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Physical / Structural <input type="checkbox"/> Functional <input type="checkbox"/> Locational <input type="checkbox"/> Image <input type="checkbox"/> Official / Legal 	<p>Morphological Dimension</p> <p>Perceptual Dimension</p> <p>Sight:</p> <ul style="list-style-type: none"> • Google view of Lala Mustafa Pasha Mosque • No aesthetic and architectural value <p>Smell:</p> <ul style="list-style-type: none"> • Garbage • Flowers • Trees <p>Hearing:</p> <ul style="list-style-type: none"> • Silence
<p>FUNCTIONAL DIMENSION</p>	<p>Functional Dimension</p> <p>Use of Public Space:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Mixed Use <input type="checkbox"/> Other: <p>Privacy:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Public <input checked="" type="checkbox"/> Semi-Public <input type="checkbox"/> Semi-Private <input type="checkbox"/> Private <p>Environmental Design:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Daylight <input checked="" type="checkbox"/> Prevailing Wind <input checked="" type="checkbox"/> Planting <p>Capital WEB:</p> <ul style="list-style-type: none"> • Parking Area: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No • Infrastructure: <input checked="" type="checkbox"/> Sewage <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Electricity <input checked="" type="checkbox"/> Telephone 	<p>Functional Dimension</p> 
Analysed by Nesil Afşin, 2016		

Görmüş Street (ST9)

Görmüş Street (ST9) is situated at the South (fig. 55) of the Walled City of Famagusta (see Table 21).

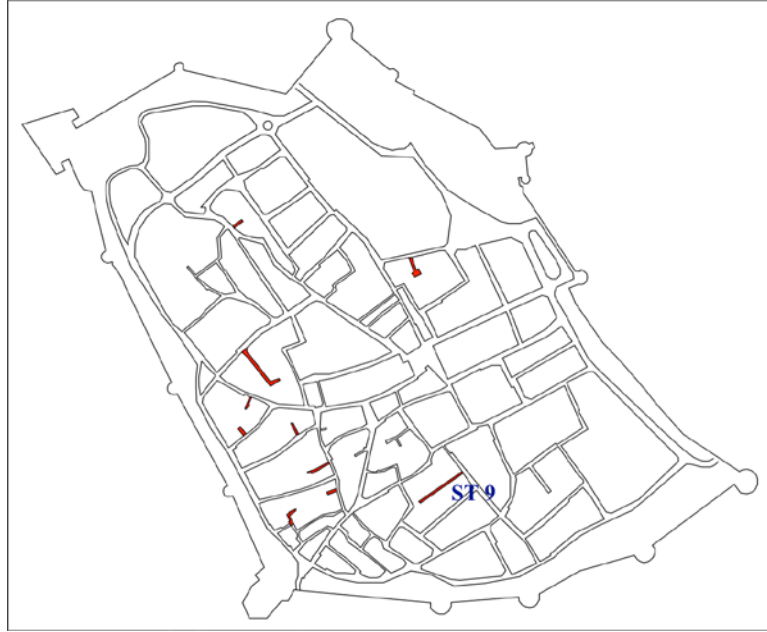


Figure 55: Location of Görmüş Street in the Walled City

Visual Dimension

When visual dimension qualities are considered, it is seen that there is no harmony and unity among the buildings. Since the majority of the buildings are concrete, it is clearly seen that the street formation was started on the last decays. As a distinguish character from the other cul-de-sacs, the existence of historical religious building (Fig. 59) brings a unique identity to the street space.



Figure 56: Lost Spaces in Görmüş Street

Temporal Dimension

Despite of the good condition of concrete dwellings on the street, there are physical and functional obsolescence on the remains and abandoned religious building. On the last decays, inappropriate buildings were constructed without any consideration to the architectural and historical value were constructed and brought image obsolescence to the space.



Figure 57: One and two storey buildings in Görmüş Street

Around the religious building, there is no permission for construction. In this manner, the empty lands in this cul-de-sac are used for planting. As a difference to the other cul-de-sacs, Görmüş Street is recognized more public to the others since the existence of old historic religious building.

Social Dimension

It is a safe street. The users of the dwellings in this cul-de-sac, stay there for a long time. There is a strong neighborhood relationship among neighbours. On the other hand, the sense of belonging of the residents can be recognized from the alterations to the dwellings and usage of the empty lands for agricultural facilities.



Figure 58: Empty land in ST9



Figure 59: Religious Building in ST9



Figure 60: Farming facilities in ST9

Morphological Dimension

From the morphological point of view, except the old religious building, the other structures were developed at the last decays.


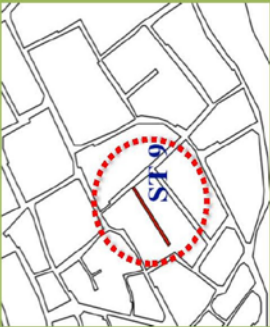
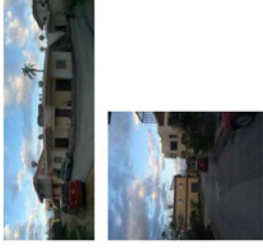
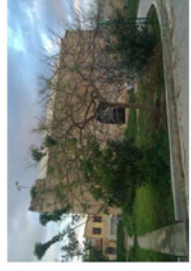
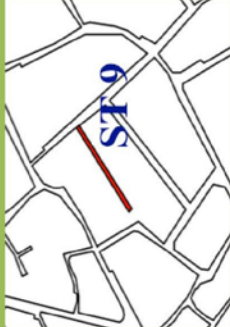




Perceptual Dimension

When the perceptual dimension is considered, the first impression from the street space is uncontrolled use of empty lands. These empty lands are used for storage, car parking (Fig. 58) and feeding the chicken (Fig. 60), the smell of trees, garbage and fertilizer come from the cul-de-sac. In Table 20 urban design dimension of Görmüş Street is summarized according to the considered issues. In Table 21 analysis of Street 9 (ST9) is shown in systematical way that is supported by images and maps.

Table 20: Summary table of Görmüş Street

URBAN DESIGN DIMENSIONS	CONSIDERED ISSUES	STREET 9	
VISUAL DIMENSION	Harmony	No harmony among buildings	
	Floor Covering	It is covered by asphalt	
	Enclosure	Less enclosure	
	Other	Less definition of public open space	
TEMPORAL DIMENSION	Day and Night Use	During the day and night it is used for passage	
	Obsoloscence	Physical	it has physical obsoloscence
		Functional	
		Locational	It has locational obsoloscence
FUNCTIONAL DIMENSION	Uses of the Public Space	Residential and religious use	
	Privacy	Public	
	Environmental Design	It gets daylight and prevailing wind	
	Capital Web	It has adequate capital web	
SOCIAL DIMENSION	Safety	It is safe during the day	
	Accesibility	It is accesible	
	Neighnorhoord Relationship	Medium relationship	
	Uses	Car parking, -Passage -Livestock	
MORPHOLOGICAL DIMENSION	Changes through the periods	It has changes from Venettian period to today	
PERCEPTUAL DIMENSION	Sight	Uncontrolled use of lost spaces	
	Smell	Fruit Trees Garbage Fertilizer	
	Hearing	Chicken	

Table 21: Six Urban Design Dimensions of ST9

DIMENSIONS OF THE CUL-DE-SACS IN THE WALLED CITY OF FAMAGUSTA		
STREET ANALYSIS 9 ST9 Gürmüç Sokak		
VISUAL DIMENSION	<p>Aesthetic Preference:</p> <ul style="list-style-type: none"> • Harmony and Unity: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No • Floor Covering: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No • Enclosure: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No • Other: <ul style="list-style-type: none"> • Less definition of space 	
TEMPORAL DIMENSION	<p>Time Cycles: Same use in both day and night</p> <p>Obsolescence:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Physical <input checked="" type="checkbox"/> Functional <input checked="" type="checkbox"/> Locational <input checked="" type="checkbox"/> Image <input type="checkbox"/> Official / Legal 	
FUNCTIONAL DIMENSION	<p>Use of Public Space:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Mixed Use <input checked="" type="checkbox"/> Other ... Religious <p>Privacy:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Public <input type="checkbox"/> Semi-Public <input type="checkbox"/> Semi-Private <input type="checkbox"/> Private <p>Environmental Design:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Daylight <input checked="" type="checkbox"/> Prevailing Wind <input checked="" type="checkbox"/> Planting <p>Capital WEB:</p> <ul style="list-style-type: none"> • Parking Area: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No • Infrastructure : <input checked="" type="checkbox"/> Sewage <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Electricity <input checked="" type="checkbox"/> Telephone 	
SOCIAL DIMENSION	<p>Safety: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Accessibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Neighborhood Relationship: <input checked="" type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Bad</p> <p>Uses of Space:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Sitting <input type="checkbox"/> Car Parking <input type="checkbox"/> Drying Clothes <input checked="" type="checkbox"/> Playing (Children) <input checked="" type="checkbox"/> Storage <input checked="" type="checkbox"/> Passage <input type="checkbox"/> Other:..... 	
MORPHOLOGICAL DIMENSION	<p>Nationality of Users: <input checked="" type="checkbox"/> Turkish Cypriot <input checked="" type="checkbox"/> Immigrants <input type="checkbox"/> Other</p> <p>Venetian Period:</p> 	
PERCEPTUAL DIMENSION	<p>Sight:</p> <ul style="list-style-type: none"> • Inappropriate maintenance • Uncontrolled use of lost spaces <p>Smell:</p> <ul style="list-style-type: none"> • Fruit Trees • Garbage • Fertilizer <p>Hearing:</p> <ul style="list-style-type: none"> • Chicken 	
Analysed by Nesli Afşin, 2016		

Kışla Yolu Street (ST10)

Kışla Yolu Street (ST10) is located very close distance to the centra square (Fig. 61) of the Walled City of Famagusta (see Table 23)

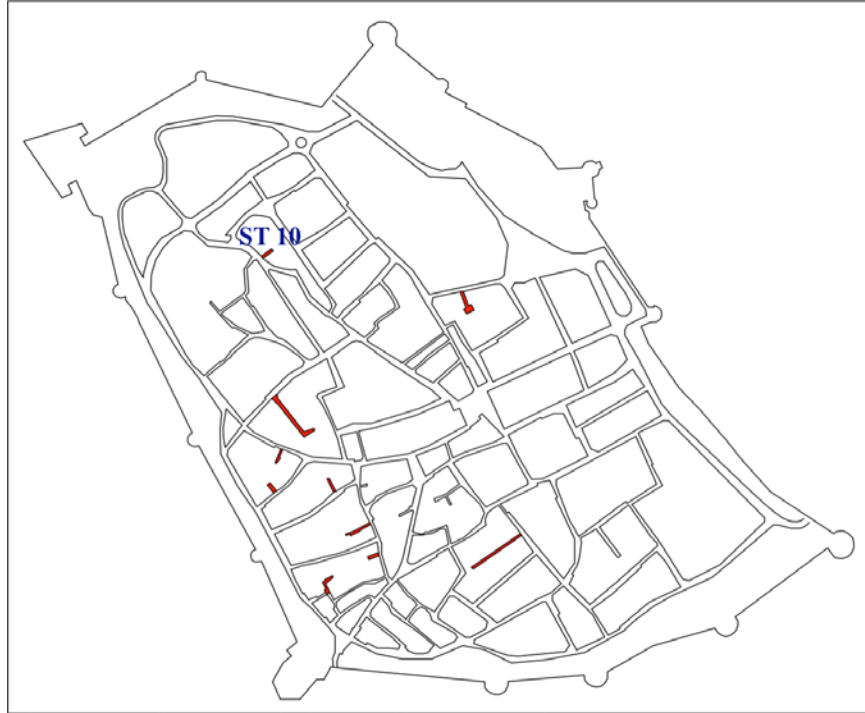


Figure 61: Location of Kışla Yolu Street in the Walled City

Visual Dimension

Garden walls, trees and two storey buildings in this narrow street (Fig. 64) brings strong enclosure to the space. Dwellings at the end of the cul-de-sac can not get benefit from the daylight. However the users prefer to spend their time in the balconies (Fig. 62) that are located at the first floor.

Functional Dimension

Although the dwellings are so close to each-other, the neighborhood relationships are not strong. Street space is only used for passage.

Morphological Dimension

Typology of this cul-de-sac was structured in British Period. The characteristics of the old British house (Fig. 63) with front garden brings strong reference to the street space.

Perceptual Dimension

As a first impression the buildings are recognized hidden dwellings behind the garden walls and trees. However, the food smells from the interiors spaces are passing through these introverted structures. In Table 22 urban design dimension of Kışla Yolu Street is summarized according to the considered issues. In Table 23 analysis of Street 10 (ST10) is shown in systematical way that is supported by images and maps



Figure 62: View of terrace in Kışla Yolu Street



Figure 63: View of front garden in Kışla Yolu Street


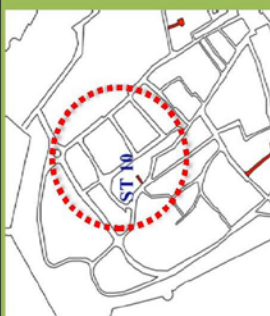
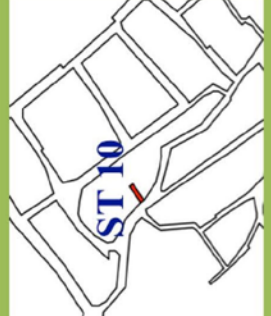


Figure 64: Entrance perspective of Kışla Yolu Street

Table 22: Summary table of ST 10

URBAN DESIGN DIMENSIONS	CONSIDERED ISSUES	STREET 10	
VISUAL DIMENSION	Harmony	No harmony among buildings	
	Floor Covering	It is covered by asphalt	
	Enclosure	Strong enclosure	
	Other	Narrow Street Front gardens and balconies are used as semi private spaces	
TEMPORAL DIMENSION	Day and Night Use	During the day and night it is used for passage	
	Obsoloscence	Physical	it has physical obsoloscence
		Functional	
		Locational	
FUNCTIONAL DIMENSION	Uses of the Public Space	Residential street	
	Privacy	Semi-public	
	Environmental Design	Less daylight	
	Capital Web	It has adequate capital web	
SOCIAL DIMENSION	Safety	It is safe during the day	
	Accesibility	It is accesible	
	Neighnorhoord Relationship	Medium relationship	
	Uses	-Passage	
MORPHOLOGICAL DIMENSION	Changes through the periods	It has changes from British period to today	
PERCEPTUAL DIMENSION	Sight	Hidden dwellings	
	Smell	Food Fruit Trees	
	Hearing	Private speeches from interior spaces	

Table 23: Six Urban Design Dimensions of ST10

STREET ANALYSIS 10 Kısla Yolu Street		DIMENSIONS OF THE CUL-DE-SACS IN THE WALLED CITY OF FAMAGUSTA	
			Analysed by Nesil Afşin, 2016
VISUAL DIMENSION	TEMPORAL DIMENSION	FUNCTIONAL DIMENSION	SOCIAL DIMENSION
Aesthetic Preference: • Harmony and Unity: <input type="checkbox"/> Yes <input type="checkbox"/> No Floor Covering: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Enclosure: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Other: • Narrow Street • Front gardens and balconies are used as semi private spaces.	Time Cycles: Same use in both day and night Obsolescence: <input checked="" type="checkbox"/> Physical /Structural <input type="checkbox"/> Functional <input checked="" type="checkbox"/> Locational <input type="checkbox"/> Image <input type="checkbox"/> Official /Legal	Use of Public Space: <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Mixed Use <input type="checkbox"/> Other Privacy: <input type="checkbox"/> Public <input type="checkbox"/> Semi-Public <input checked="" type="checkbox"/> Semi-Private <input type="checkbox"/> Private Environmental Design: <input type="checkbox"/> Daylight <input type="checkbox"/> Prevailing Wind <input type="checkbox"/> Planting Capital WEB: • Parking Area: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No • Infrastructure : <input checked="" type="checkbox"/> Sewage <input type="checkbox"/> Water <input checked="" type="checkbox"/> Electricity <input checked="" type="checkbox"/> Telephone	Safety: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Accessibility: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Neighborhood Relationship: <input type="checkbox"/> Good <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Bad Uses of Space: <input type="checkbox"/> Sitting <input type="checkbox"/> Car Parking <input type="checkbox"/> Drying Clothes <input type="checkbox"/> Playing (Children) <input type="checkbox"/> Storage <input checked="" type="checkbox"/> Passage Nationality of Users: <input checked="" type="checkbox"/> Turkish Cypriot <input type="checkbox"/> Immigrants <input type="checkbox"/> Other
PERCEPTUAL DIMENSION	MORPHOLOGICAL DIMENSION	OTTOMAN PERIOD:	
		Venetian Period:	Today:
		Sight:	Smell:
		<ul style="list-style-type: none"> • Hidden buildings • Less street entrance definition 	<ul style="list-style-type: none"> • Fruit Trees • Food
		Hearing:	
		<ul style="list-style-type: none"> • Private speeches from interior spaces. 	

3.5 Summary of the Chapter

In this chapter, ten cul-de-sacs in the Walled City of Famagusta were analyzed according to the six dimensions of urban design. The findings are summarized in Table 25. These findings are also shown in Table 3.23 to compare the cul-de-sacs in a precise manner. In this table, the lowest quality and the highest quality of cul-de-sacs in the Walled City can be easily perceived according to considered issues in urban design dimensions. As a result, when Suphi Ezel Street (ST5) is recognized with highest quality, ST6 and Görmüş Street (ST9) are recognized as the cul-de-sacs with lowest quality in the Walled City.

Table 24: Comparison table of cul-de-sacs in the Walled City

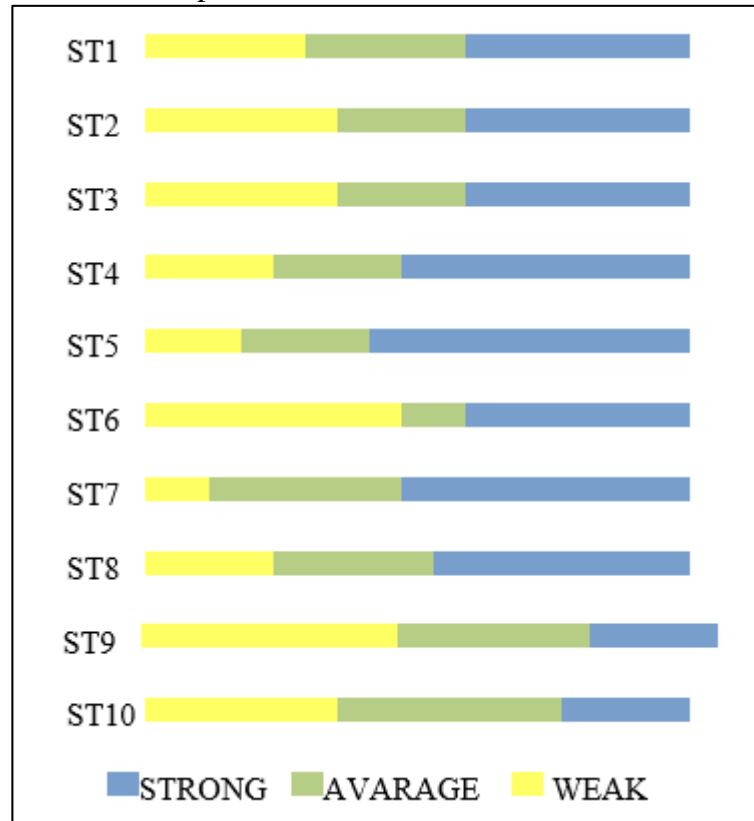


Table 25: Summary of the findings

URBAN DESIGN DIMENSIONS	CONSIDERED ISSUES	STREET 1	STREET 2	STREET 3	STREET 4	STREET 5	
VISUAL DIMENSION	Harmony	No harmony among buildings	No harmony among buildings	No harmony among buildings	No harmony among buildings	No harmony among buildings	
	Floor Covering	It is covered by yellow parquet	It is covered by grey parquet	It is covered by asphalt	It is covered by grey parquet	It is covered by grey parquet	
	Enclosure	Strong enclosure	Strong enclosure	Strong enclosure	Strong enclosure	Strong enclosure	
	Other	- Physical deterioration - Inappropriate addition to the buildings facade	Inappropriate maintenance on facades and openings	-Inappropriate addition to the buildings facade -Abandoned buildings	- Physical deterioration -Abandoned buildings -Annex for renovated building.	Renovated one and two storey	
TEMPORAL DIMENSION	Day and Night Use	During the day and night it is used for passage	During the day and night it is used for passage	During the day and night it is used for passage	During the day and night it is used for passage	During the day and night it is used for passage	
	Obsoloscence	Physical	it has physical obsoloscence	it has physical obsoloscence	it has physical obsoloscence	it has physical obsoloscence	Less obsoloscence on facades.
		Functional					
		Locational					
FUNCTIONAL DIMENSION	Uses of the Public Space	Residential street	Residential street	Residential street	Both Residential and accomodational use	Residential street	
	Privacy	Semi-public	Semi-public	Semi-Private	Public	Semi-Private	
	Environmental Design	It gets daylight and prevailing wind	It gets daylight and prevailing wind	It gets daylight and prevailing wind	It gets daylight and prevailing wind	Less daylight	
	Capital Web	It has adequate capital web	It has adequate capital web	It has adequate capital web	It has adequate capital web	It has adequate capital web	
SOCIAL DIMENSION	Safety	It is safe during the day and night	It is not safe during the night	It is not safe during the night	It is safe during the day and night	It is safe during the day and night	
	Accesibility	It is accesible	It is accesible for pedestrians	It is accesible	It is accesible	It is accesible for pedestrians	
	Neighnorhoord Relationship	Medium relationship	Weak relationship	Medium relationship	Weak relationship	Good relationship	
	Uses	-Car parking, - Passage	-Car parking, -Passage -Drying the clothes	-Passage - Strorage	-Passage	-Passage - Strorage	
MORPHOLOGICAL DIMENSION	Changes through the periods	It has changes from Ottoman period to today	Majority of the buildings were constructed after British Period.	It has changes from Venetitian period to today	It has changes from British period to today	It has changes from British period to today	
PERCEPTUAL DIMENSION	Sight	Traditional mosaic can be perceived	Adjacent buildings from different periods.	Mosaic of History	Irregular position of building blocks Detoriated facades Renovated building as Boutique Hotel	Buildings almost in good condition caused by alteration	
	Smell	Smell of food	Garbage Humidity	Smell of food, garbage and humidity	Flowers	-	
	Hearing	Voice of tv and radio	Dogs	Voice of tv and private speeches from indoor spaces	Speeches of guests who visit Boutiwue Hotel	Silence	

STRONG  AVARAGE  WEAK 

URBAN DESIGN DIMENSIONS		CONSIDERED ISSUES	STREET 6	STREET 7	STREET 8	STREET 9	STREET 10
VISUAL DIMENSION	Harmony	No harmony among buildings	Less harmony among buildings	No harmony among buildings	No harmony among buildings	No harmony among buildings	No harmony among buildings
	Floor Covering	No floor covering	It is covered by asphalt	It is covered by asphalt	It is covered by asphalt	It is covered by asphalt	It is covered by asphalt
	Enclosure	Strong enclosure	Strong enclosure	Less enclosure	Less enclosure	Strong enclosure	Strong enclosure
	Other	- Physical deterioration - Inappropriate maintenance buildings facade	-Strong definition of the street entrance -Physical deterioration	Less definition of street entrance	Less definition of public open space	Narrow Street Front gardens and balconies are used as semi private spaces	
TEMPORAL DIMENSION	Day and Night Use	During the day and night it is used for passage	During the day and night it is used for passage	During the day and night it is used for passage	During the day and night it is used for passage	During the day and night it is used for passage	During the day and night it is used for passage
	Obsoloscence	Physical	it has physical obsoloscence	it has physical obsoloscence	it has physical obsoloscence	it has physical obsoloscence	it has physical obsoloscence
		Functional					
		Locational				It has locational obsoloscence	
FUNCTIONAL DIMENSION	Uses of the Public Space	Residential street	Residential street	Residential street	Residential and religious use	Residential street	
	Privacy	Semi-Private	Semi-public	Semi-Private	Public	Semi-public	
	Environmental Design	Less daylight	It gets daylight and prevailing wind	It gets daylight and prevailing wind	It gets daylight and prevailing wind	Less daylight	
	Capital Web	It has adequate capital web	It has adequate capital web	It has adequate capital web	It has adequate capital web	It has adequate capital web	
SOCIAL DIMENSION	Safety	It is safe during the day and night	It is safe during the day and night	It is safe during the day and night	It is safe during the day	It is safe during the day	
	Accesibility	It is accesible for pedestrians	It is accesible	It is accesible	It is accesible	It is accesible	
	Neighnorhoord Relationship	Good relationship	Good relationship	Good relationship	Medium relationship	Medium relationship	
	Uses	-Passage - Strorage	-Car parking, -Passage	Car parking, -Passage	Car parking, -Passage -Livestock	-Passage	
MORPHOLOGICAL DIMENSION	Changes through the periods	It has changes from Ottoman period to today	It has changes from British period to today	It has changes from British period to today	It has changes from Venettian period to today	It has changes from British period to today	
PERCEPTUAL DIMENSION	Sight	Occupation to publicity	Mosaic of History Renovated buildings	No aesthetic and architectural value	Uncontrolled use of lost spaces	Hidden dwellings	
	Smell	Fruit Trees Humudity	Fruit Trees Garbage	Garbage Tree Flower	Fruit Trees Garbage Fertilizer	Food Fruit Trees	
	Hearing	Voice of tv and private speeches from indoor spaces	Silence	Silence	Chicken	Private speeches from interior spaces	

STRONG  AVARAGE  WEAK 

Chapter 4

CONCLUSION

Cul-de-sacs are more than just physical urban spaces that have symbolic meaning come from the history. Especially in historic quarters, they are introverted, semi-public places. This research is included four chapters. In the first chapter, aim and objective of the thesis, problem definition, limitations and a brief information about research location is given. After that, in the second chapter, some theoretical information is given about public open spaces, streets, cul-de-sacs and urban design dimensions. Streets that is a kinds of public spaces are examined within the functions and types. Than, six dimensions of the street spaces are explained. In the third chapter, dimensions of urban design dimensions of cul-de-sac in the Walled City of Famagusta are considered and they are evaluated with them.

4.1 Result of the Analyses of the Cul-De-Sacs in the Walled City of Famagusta

In the following lines the major findings of ten cul-de-sacs are given.

The satisfaction, safety and comfort of the users should be provided to create livable dead end streets. In summary, the main characteristics of cul-de-sacs can be listed as;

- It is a kind of sitting room of the neighborhood that does not have a ceiling
- Semi-public streets that are safe for children
- Semi-private spaces for adults
- Transitional spaces between public and private

Visual Dimension

Considering visual dimension, harmony and unity, enclosure, floor covering, building conditions are observed in ten cul-de-sacs in the Walled City as such;

- No harmony and unity among the buildings
- Inappropriate maintenance on the structures and facades of the buildings
- Strong enclosure on the street spaces

Temporal Dimension

According to the temporal dimension, day and night uses have been compared and obsolescence of the street spaces were observed during the analysis process of the cul-de-sacs in the Walled City. The results can be listed as such;

- Same use in day and night time
- Physical obsolescence exists in all cul-de-sacs
- Structural obsolescence on abandoned dwellings are perceived.

Functional Dimension

In order to evaluate the functional dimension, the use of cul-de-sacs as residential, commercial, mixed uses, the privacy, environmental design as daylight, prevailing wind, planting and also capital web as parking area and infrastructure are considered. For each street, a checklist type of table have been structured to achieve results for evaluation of the functional dimension. Following issues of functional dimension are cleared in evaluation process;

- Residential use in general
- Semi-private or semi-public street spaces
- Controlled daylight, prevailing wind and planting in most of the cul-de-sacs

- Lack of daylight, and natural ventilation in narrow and short cul-de-sacs

Social Dimension

During the analysis, the users profile was studied in terms of social dimension. As much as possible, conversations were done with the users who use the dwellings in order to understand their perspective to the environment. Today, the majority of the owners prefer to rent their houses with low prices. If the existing situations of the buildings are weak, owners leave them abandoned. Although, the majority of the weakness of dwellings in terms of physical, in some it is possible to see renovated buildings. Elderly local people who have sense of belonging do not prefer to live in another space and they do alteration for their houses. This diversity in users' profile reflects the social dimension throughout physical quality of the public open spaces. The featured characteristics of the social dimension of cul-de-sacs in the Walled City are listed below;

- During the day they are mostly safe
- They are permeable streets
- Neighborhood relationships are not strong
- Streets spaces are used for passage, sitting, storage, car parking and drying the clothes in general

Morphological Dimension

The evolution of the urban pattern of the Walled City of Famagusta dates back throughout the last six different historical periods, since no sufficient data has been found so far for the earlier periods. In order to evaluate the morphological dimension of the cul-de-sacs, firstly more general evaluation of the whole city is

mentioned including the historical process in chronological order. After that, more detailed information is given within the evaluation of the cul-de-sacs.

Today, the urban morphological character of the Walled City can be described as in the following;

- Organic street network with **cul-de-sacs**,
- Centrally located around Lala Mustafa Pasha Mosque
- Generally defined by attached two-storey buildings (so called terrace houses) along narrow streets with usually 1-1 (width to height) in proportion
- Contemporary buildings those are incompatible with the morphology of the cul-de-sacs.

According to the unique urban pattern of the Walled City of Famagusta, **cul-de-sacs** are one of the distinct urban elements. In order to present their morphological formation, data collection is the tool to achieve information about the process throughout historical periods.

Two important issues directly affected the town's development. First, the underutilized port of Famagusta regained its importance on the island, which brought economic improvement and a population increase in the town. A few new gates have been opened in the fortifications, which have provided improved access to the town.

Second, British regulation of the streets brought significantly changes to the street pattern in the town. Some cul-de-sacs were connected to other streets, and some new streets were open parallel to one another. Schools, a library, a covered market, a

police station, and warehouses were built during this period. Most of the agricultural areas were divided into plots for public use (Uluca, 2006, p.205).

The streets that exist at the edge of the city (defined by the city walls) were structured from 1930 to 1960. The formation of the street pattern of the city was located in between Namik Kemal Square and the city walls. The historical urban pattern of Walled City of Famagusta adapted to contemporary needs as vehicular and pedestrian traffic according to width of the streets. Majority of the streets are narrow. Caused by the narrow streets most of them are one way for vehicular use. There are also dead end streets (cul-de-sacs) at the south, south-west, and central parts of the Walled City within higher density (Fig. 18) (Uluca p.45).

Perceptual Dimension

In the sixth dimension of urban design, the perception is analysed. What is seen, heard and smell are perceived. Perceived features are listed in following lines;

- Mosaic of history
- Inappropriate maintenance on facades and openings
- Lack of environmental organisation
- Smell of food, garbage and humidity
- Smell of fruit trees and flowers
- Voice of television and radio comes from interior spaces
- Voice of private speeches especially in narrow streets
- Silence in the streets if the majority of the buildings are abandoned

Cul-de-sacs are important components as a part of the urban pattern. In terms of social, physical and functional features they bring diversity to the urban

environment. In the Walled City of Famagusta, although the existence of the several number of cul-de-sacs, they become forgotten formations in the historical pattern. Unplanned urbanization, locational and physical obsolescence of the walled city, low rent prices and the existence of immigrants are some of the main reasons that cause this result. Since they are mostly unsecured streets, the majority of dwellings are abandoned, demolished, deteriorated and used by the immigrants. Public or semi-public spaces cannot be established without people. Because of the less consideration to the Walled city and unspoken issues, the profile of the users have been changed specially in the last decades. The effects of this change reflect to the social dimension of the public spaces within physical and locational obsolescence.

In this thesis the cul-de-sacs have been analysed according to the dimensions of urban design by considering the characteristics of urban spaces and the typology of the dead end streets. The satisfaction, safety and comfort of the users should be provided to create livable dead end streets. In summary, the main characteristics of cul-de-sacs can be listed as;

- They provide sitting space of the neighborhood that does not have a ceiling
- Semi-public streets that are safe for children
- Semi-private spaces for adults
- Transitional spaces between public and private

4.2 Recommendations

Cul-de-sacs are forgotten semi-public spaces in the Walled City. Although this kind of urban typologies brings the traces of history, today there is no awareness to them. These streets can be successful and livable urban spaces in the Walled City.

However, they have problems that can be solved. Therefore, more attention is needed to make livable and attractive dead end streets.

According to physical, functional and social characteristics of the cul-de-sacs, most of them have potential within the remains that could be survived throughout the history. They need some physical, functional and social adjustments. This research is based on the findings of the analysis of each dead end street according to the dimensions of urban design. Depending on, the following lines present some suggestions to improve the quality of cul-de-sacs in the Walled City of Famagusta;

- Renovating the old houses
- Emphasizing the streets entrances and define them with special signs.
- Differentiate the floor coverings from the other streets
- Increase the amount of landscape elements as trees, seating elements and lighting elements.
- Create attractiveness for the users and visitors
- Make sense of place to users
- Enhance the physical and visual permeability as much as possible
- Adapt the contemporary needs as car parking areas without ignoring the streets.
- Promote the existence of accommodation and the boutique hotel within the significance and characteristic of the cul-de-sacs in the Walled City of Famagusta
- Use the lost spaces as potential gathering spaces and make them appropriate areas within landscape
- Increase the security and safety by adding lighting elements and renovate the abandoned houses
- Adding playgrounds for children and sitting elements for adults.

4.3 Further Research

Cul-de-sacs are semi-private spaces for the residents who stay in the dwellings. Since they are introverted spaces that are only used by the residents of the dead end streets in the Walled City. In addition to the analysis of the cul-de-sacs in the Walled City of Famagusta in further studies researches could be carried out about their livability and accessibility in order to increase their liveability and the success. This research makes benefit for city planners, architects, householders in the Walled City, academicians, and authorities as government and municipality.

REFERENCES

- Alexander, C., Jacobson, M., Silverstein, M., & Ishikawa, S. (1977). *A pattern language: Towns, buildings, construction*. New York: Oxford University Press.
- Arû, K. A. (1998). *Türk kenti: Türk kent dokularının incelenmesine ve bugünkü koşullar içinde değerlendirilmesine ilişkin yöntem araştırması*. Harbiye, Turkey: Yapı-Endüstri Merkezi Yayınları.
- Bell, P. A., Greene, T. C., Fisher, J. D., & Baum, A. S. (1990). *Environmental Psychology*. Fort Worth, TX, USA: Holt, Rinehart and Winston. Inc.
- Ben-Joseph, E. (1995). *Livability and safety of suburban street patterns: a comparative study*. University of California at Berkeley, Institute of Urban and Regional Development.
- Biddulph, M. (2008). The origin of the liveable street concept. *Urban Design International*, 13(2), 57-60.
- Calthorpe, P. (1993). *The next American metropolis: Ecology, community, and the American dream*. New York: Princeton Architectural Press.
- Carmona, M., Heath, T., Oc, T., & Tiesdell, S. (2003). *Public Places - Urban Spaces* (1st ed.). Oxford: Architectural Press.

- Carr, S., Francis, M., Rivlin, L. G., & Stone, A. M. (1992). *Public space*. Cambridge: Cambridge University Press.
- Davies, L. (2000). *Urban design compendium. For English Partnerships with Commission for Architecture and the Built Environment and the Housing Corporation*. London.
- Deasy, C. M., & Lasswell, T. E. (1990). *Designing places for people: A handbook on human behavior for architects, designers, and facility managers*. New York: Whitney Library of Design.
- Dong, L. (2004). *Waterfront development: A case study of Dalian. Master of Applied Environmental Studies in Local Economic Development–Tourism Policy and Planning*. Waterloo: University of Waterloo.
- Doratlı, N., Hoskara, O., & Dagli, U. (2001). Revitalising the walled city of Gazimagusa (Famagusta). *Open House International*, 26(1), 42-59.
- Doratlı, N., Zafer, N., & Ozgurun, A. (n.d.). *The Walled City Of Famagusta (Gazimagusa): An Opportunity for Planned Transformation*.
- Forbes, G. (1999). *Urban Roadway Classification Before the Design Begins. Proceeding of Urban Street Symposium*. Dallas.
- Francis, M. (2003). *Urban Open Space: Designing for User Needs*. Washington: Island Press, Landscape Architecture Foundation.

- Gebauer, M., & Samuels, I. (1981). *Gebauer, M., Samuels, I., , Urban morphology: an introduction Joint Centre for Urban Design*. Oxford.
- Gehl, J. (1987). *Life Between Buildings*. New York: Van Nostrand-Reinhold.
- Gürsoy, K., & Smith Neville, L. (2006). *Northern Cyprus*. England: andmark Publishing Ltd.
- Hashemi, M., & Amiri-Aref, M. (2011). Application of TOPSIS method for evaluating the temporal dimensions of Marand City in urban design. *IEEE International Conference on Industrial Engineering and Engineering Management*, 742-746.
- Hou, D. (2009). *Urban waterfront landscape planning (Doctoral dissertation, Master thesis)*. Sweden: Blekinge Institute of Technology Karlskrona.
- Jacobs, A. (1993). *Great Streets, Cambridge, MA: The MIT Press*. Cambridge, MA: The MIT Press.
- Jacobs, J. (1961). *The Death and Life of Great American Cities: The Failure of Modern Town Planning*. London: Peregrine Books.
- Krier, R. (1979). *Urban Space*. Rizzoli International Publications.
- Lynch, K. (1960). *The Image of the City*. MIT Press.
- Madinapour, A. (1996). *Design of Urban Space*. New York: Willey.

- Marcus, C., & Francis, C. (1998). *People Places: Design Guidelines for Urban Open Space*. Canada: John Wiley & Sons Inc.
- Mariti, G., & Cobham, C. D. (1909). *Travels in the Island of Cyprus. Translated from the Italian... by Claude Delaval Cobham... With Contemporary Accounts of the Sieges of Nicosia and Famagusta*. University Press.
- Martire, A. (2008). *Leisure Coast City: a comparative history of the urban leisure waterfront. Barcelona. Chicago. Buenos Aires. 1870-1930 (Doctoral dissertation, TU Delft, Delft University of Technology)*.
- Means, M., & Tims, C. (2005). *People-making Places: Growing the Public Life of Cities*.
- Mehta, V. (2006). *Lively Streets: Exploring the relationship between built environment and social behavior*.
- Moor, M., & Rowland, J. (2006). *Urban design futures*. Routledge.
- Moughtin, C. (1992). *Urban design: Street and square*. Oxford: Butterworth Architecture.
- Moughtin, C. (2003). *Urban design: street and square*. Routledge.

Oktaý, D., Rüstemli, A., & Marans, R. W. (2009). Neighborhood satisfaction, sense of community, and attachment: Initial findings from Famagusta quality of urban life study. *ITU A/Z Journal*, 6(1), 6-20.

Önal, Ş., Dađlı, U., & Doratlı, N. (1999). The urban problems of Gazimagusa (Famagusta) and proposals for the future. *Cities*, 16(5), 333-351.

Psychology (3rd ed.). (n.d.). London.: Holt, Rinehart & Winston, Inc.

Sairinen, R., & Kumpulainen, S. (2006). Assessing social impacts in urban waterfront regeneration. *Environmental impact assessment review*, 26(1), 120-135.

Shamsuddin, S. (2011). *Townscape Revisited: Unravelling the character of the historic townscape in Malaysia*. Penerbit UTM Press.

Slessor, C. (2001). Public engagement. *Architectural Review*, 209(1250), 36-37.

Southworth, M., & Ben-Joseph, E. (2004). Reconsidering the cul-de-sac. *ACCESS Magazine*, 24(06), 28-33.

Stewing, R. (1966). *Istanbul Cul-de-sac*. Istanbul: Baha Press.

Thompson, C. W., & Travlou, P. (2007). *Open space: people space*. Taylor & Francis.

Trancik, R. (1986). *Finding lost space: theories of urban design*. John Wiley & Sons.

Uluca, E. (2007). *Urban Transformation and Development of Famagusta throughout History, Phd Thesis, Restoration and Conservation of Historical Buildings Program*. Istanbul: Istanbul Technical University.

URL1. (n.d.). *Dordrecht, Netherlands - June 30: Busy Shopping Street With People Walking And Cycling In The Sunny Historic Center On June 30, 2013 In Dordrecht. The New Shopping Street Was Opened In June 2013. Stock Photo 147388703 : Shutterstock*. Retrieved from shutterstock Inc.: <http://www.shutterstock.com/pic-147388703.html>

URL10. (n.d.). Retrieved from http://triyada.blogspot.com.cy/2015_03_01_archive.html

URL11. (n.d.). Retrieved from http://www.fr2day.com/biot_village

URL12. (n.d.). Retrieved from <http://onsitereview.blogspot.com.cy/2008/10/cul-de-sac-private-streets-public.html>

URL13. (n.d.). Retrieved from <http://www.wherethesidewalkstarts.com/2015/03/the-paradox->

URL14. (n.d.). Retrieved from <http://19thholeturf.com/sannich-cul-de-sac-livens-median/>

URL15. (n.d.). Retrieved from <http://www.cypnet.co.uk/ncyprus/history/lusignan/4pierre2.htm>

URL16. (n.d.). Retrieved from <https://www.stwing.upenn.edu/~durduran/drfm1.html>

URL2. (n.d.). (The International Making Cities Livable Council) Retrieved from <http://www.livablecities.org/articles/high-density-livability-question>

URL3. (n.d.). *Current Weather Conditions for Barcelona Spain*. Retrieved from <http://barcelona-spain.ca/guide/weather.html>

URL5. (n.d.). *Royal Mile - Wikipedia, the free encyclopedia*. Retrieved from Wikipedia.org: https://en.wikipedia.org/wiki/Royal_Mile

URL6. (n.d.). *Narrow Street In Gozo Stock Images - Image: 28171454*. Retrieved from Dreams time: <http://www.dreamstime.com/stock-images-narrow-street-gozo-image28171454>

URL7. (n.d.). *Panoramio - Photo of Dover street, London*. Retrieved from panoramio.com: <http://www.panoramio.com/photo/47020827>

URL8. (n.d.). Retrieved from http://www.fr2day.com/biot_village

URL9. (n.d.). Retrieved from <http://ilgvarsjansons.blogspot.com.cy/2012/03/urban-elements-of-arabic-islamic-cities.html>

Varna, G. (2009). Designing the sustainable city: the role of public space. *Universitas 21 International Graduate Research Conference* (pp. 187-194).

Melbourne & Brisbane: Department of Urban Studies, University of Glasgow;.

Yassin, A. B., Eves, C., & McDonagh, J. (2010). An evolution of waterfront development in Malaysia. *The 16th annual conference of the Pacific Rim Real Estate Society*, (pp. 24-27). Wellington, New Zealand.

Yıldız, N. (2011). The Cultural Evolution and National Identities Reflected in the Architecture of Cyprus during the Westernisation Period and the Eclectic Architecture of the Colonial Period. In Y. S, Y. Z, & Bağcı, *Tradition, Identity, Synthesis: Cultural Crossings and Art. In Honor of Professor Günsel Renda* (pp. 265-272). Ankara: Hacettepe Üniversitesi Edebiyat Fakültesi Yayinlari.