Livability in Historic Urban Quarters
Case Study: Walled City of Famagusta

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ABSTRACT

Today livability is one of the main issues throughout the world. In general livability has rolled in three main areas: environmental quality, neighborhood amenity and individual well-being. Generally, the concept of livability involves different aspects of urban life; how well the city works for us, as well as how comfortable and enjoyable our neighborhood and city are.

Historic preservation could increase the livability in historic districts. Preservation of historical building and cultural heritage leads to increase livability in the area. Livability has many dimensions and indicators. In this study the physical and functional dimension of livability is examined to measure the livability level in the area, although for complete measurement of livability, the social and environmental dimension has to be measured too.

Zone 1 of Walled city of Famagusta is taken as a case study of this research. Due to the lack of appropriate historic preservation and obsolescence, the livability level in the area is questionable.

The livability of Zone 1 of Walled city of Famagusta is measured, and some recommendations and suggestions for increasing the level of livability are described. However, before measurement of livability in historic urban quarters, it is necessary to mention about the relation between historic preservation and livability, then the measurement due to these relation will be explained.

Keywords: Livability, historic preservation, physical and functional dimension of livability, quality of life, quality of place.

ÖZ

Bugun, yaşanabilirlik en önemli konulardan biridir dünya çapındadir. Genel olarak yaşanabilirlik üç temel alanda rolü vardır: çevre kalitesi, mahalle tatlılık ve bireysel refahı.

Genel olarak, yaşanabilirlik kavramının kentsel yaşamın farklı yönlerini içerir; şehir bizim için ne kadar iyi, hem de bizim mahalle ve şehir ne kadar rahat ve keyifli bir ortamdir. Tarihi koruma, tarihi bölgelerde yaşanabilirlik artırabilir. Tarihi bina ve kültürel mirasın korunması yaşanabilirlik artmasına neden oluyor. yaşanabilirlik birçok boyutu ve göstergeler vardır. Bu çalışmada yaşanabilirlik fiziksel ve işlevsel boyut yaşanabilirlik seviyesi ölçmek için incelenmiştir, ama yaşanabilirlik tam ölçümü için sosyal ve çevresel boyutu çok dikkatli ölçülmelidir.

Mağusanin Suriçi bölgesi bölge 1, bu araştırmanın bir Örnek olay İncelemesi olarak alınmıştır. Uygun tarihi koruma ve eskime olmaması nedeniyle, bölgedeki yaşanabilirlik seviyesi sorgulanabilir. Mağusa Suriçi bölgesi bölgesi 1 yaşanabilirlik ölçülmüştür, ve bazı öneriler ve yaşanabilirlik düzeyini artırarak yüksek ulaşmak için öneriler açıklanmıştır. Ancak, tarihi kentsel kesimlerde yaşanabilirlik ölçümü önce, bu tarihi koruma ve yaşama gücü arasındaki ilişkiyi bahsetmek gerekir, daha sonra bu ilişki nedeniyle ölçüm açıklanacaktır.

Anahtar Kelimeler: yaşanabilirlik, tarihi koruma, yaşanabilirlik fiziksel ve işlevsel boyut, yaşam kalitesi, yeri kalitesi.

To My Family

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Chapter 1

INTRODUCTION

Urban centers are among the main parts of the cities, which could be historic districts or newer centralities, and categorized and designed for diversity of uses, for example housing, mix of civic administrative and professional services and among others, retailing. Usually these centers faced with successful and unsuccessful phases which had negative impact and affect the livability of older parts of cities and their neighborhoods. These phases and cycles had direct relation to the economy and the cultural, historical, social and political trends (J. L. Balsas., 2004).

The older parts, or in other words historic urban quarters represent a strong sense of place and identity by the historic and cultural associations they provide. These quarters sometimes has an important role in city's image and identity, whereas functional and visual qualities of these areas have a direct effect on the city's image and identity too. Moreover historic quarters, which are mostly located in the central part of the cities, attract different groups of people and have variety of users such as workers, shoppers, tourists and people who lives in these areas (Tiesdell et. all, 1996). Also due to the location of these areas, these areas are in risk of deterioration, physical destruction and also due to the traditional causes of decay (Doratli, N. 2000)

Historic centers have different types of characteristic and it may be considered as poor environment, or places with lack of public facilities and places that have high crime rates. Thus the historical urban centers have gained negative image and losing their attractiveness due to the improper and dysfunctional usage and due to the poor lifestyles of the people who lived in these centers, the condition of the environment is radically changed. In line with changing social and economic conditions through time unfortunately historical urban centers are changing and their attraction is decreasing. However, the significance of the historical urban centers has been re-evaluated, and there is an attempt to promote them as a "healthy and livable city center" and to improve these areas as main parts of cities (Oruc, D & Giritlioğlu., 2008).

The value of historic urban quarters was not always a concern for cities; actually it became an issue in 1970s when cities decided to protect and preserve these quarters. Later on, the approach improved form protection to revitalization. What triggers revitalization actions in these areas is obsolescence, mainly locational, which leads to physical, structural and eventually functional obsolescence in the area. Since historic quarters are commonly located in center of cities, if these quarters have traditionally been a center for industrial and commercial activities of the city, it's more likely that these functions will move to cheaper and more convenient locations as the city develops. So the decisions regarding these areas are limited, whether the city will demolish historic buildings in the center of cities for economic reasons which means destroying the city's heritage, or a wiser approach to revitalize these quarters which means not only preserving the heritage of the city but to enhance economic and industrial output of the city (Tiesdell et. all, 1996).

In general livability has rolled in three main areas: “environmental quality, neighborhood amenity and individual well-being” (Lennard , 1995).The main characteristics of a livable city is mentioned as “attractive public spaces, walkable streets, mixed use, high density neighborhoods that support a range of green infrastructure and transportation, affordable housing, vibrant, exciting, sociable, human-scaled pedestrian experiences.” “Walking, bicycling and the use of public transport” are among the main elements which contribute to livable places. (YUEN, B. & LING OOI, G. 2011).

Livability elements has contact with “environmental, economic and equity goals” which are the elements for reaching and alteration to sustainability. “What makes a livable city?” Many urbanism researchers studied how livable streets have built and how to design friendly and livable public spaces and housing. During the 1990’s, due to emergence of movements such as “smart growth” and “new urbanism” in USA, researchers around the world began mentioning a relation between urban design knowledge and how to make cities livable, furthermore they considered that different areas needs different principles and solutions(YUEN, B. & LING OOI, G. 2011). (YUEN, B. & LING OOI, G. 2011).

The historic urban quarters being threatened of destruction not just by their obsolescence and natural disasters, but by constant changes in social, environmental and economical conditions of cities which has more negative impact and effect in these areas rather than newly built environment. In other word, historic urban quarters are the most vulnerable areas in cities facing development and changes. By growing rapidly in different sector of community and societies, developing the cities and communities for reaching modern lifestyle, improving real estate sector and

developing in transportation system, the well-being and livability in historic urban quarters are reducing rapidly (Doratli, N. 2000).

1.1 Statement of the Problem

Generally in most historic urban districts around the world the decreasing. The major reason is the locational characteristic of these areas; which means they are mostly located in downtown and central parts of the city. Even just based on observation, it can be claimed that in the Walled City of Famagusta, which has been determined as the "case" of this research, livability is also decreasing. Additionally decreasing quality of built environment and quality of place can also be observed. The city is faced with problems in different parts and especially in historic center such as, the lack of accessibility and proper and various functions which attract diversity of user to the place. So it is difficult to say that the historic center of Famagusta is a livable place.

Similar to many historic centers throughout the world, the Walled City, the traditional center of the city of Famagusta on North Cyprus, is faced with many problems, which diversely affected its livability. The historic center is not able to fascinate and attract people and citizens and is faced with lack of public and private sector investment.

1.2 Aim of the Study and Research Question

Based on what have been stated above, this research aims to, firstly, presenting the definition of a livable place and the livability in historic centers in general, and in the Walled City of Famagusta in particular. Secondly it also aims to propose recommendations to increase the livability in the Walled City of Famagusta.

The main research question of this research is:

What is the level of livability in the Walled City of Famagusta?

In order to be able to answer this main question, the sub-questions of the study are as follows:

What is livability?

What are the main dimensions and criteria of livability in historic centers?

How can livability be measured?

What is the relation between livability and historic preservation?

1.3 Limitation of the Study

As it will be presented in chapter 2, according to Yeang, livability has four dimensions (Yeang, L.D, 2006). But this research will be more limited and focused on the physical and functional dimensions. Because, when considering the built environment as a sort of "container" in which all other social, economic and cultural issues happen, it can be claimed that understanding the physical and functional dimensions would be given priority in terms of determining the livability of a specific place. This is also what this thesis will do.

1.4 Research Methodology

The methodology which is utilized in this study is a case study research. The approach involves evaluating a case study and conducting research surveys. The main focus of this research will be on the livability in historic centers and in order to achieve the aim of the study, literature survey, observation and questionnaire will be conducted. The first part of this research starts with theoretical framework which was done through documentary research. The information gained from the theoretical framework is used as a tool to determine, the methodology for measuring the livability of a place.

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Chapter 2

THEORETICAL FRAMEWORK

2.1 Livable Cities

In order to achieve the aim and goal of this study, it is necessary, firstly, to understand the concept of a "Livable city". According to Oxford dictionary (2010) livable means 'fit to live in'. EIU (2011) describes livability as one of the characteristics that could collaborate to high quality of living. Because high quality of life impresses the lifestyle, health condition and represents permanence and strength of the built environment. Generally main city centers around the world would struggle to keep themselves safe, to improve health condition of the citizens, maintaining "economic stability" and preparing suitable and functional transportation network and system (Shuhana Shamsuddin et al. 2012).

Increasing popularity of the concept of "urban livability" dates back to 1960s and 1970s, when it has been frequented in an intriguing analysis of Vancouver politics. Urban geographer Ley considered the rise of 'a new ideology of livability' adopted by The "Electors Action Movement (TEAM) an urban reform party in the city of Vancouver". Ley also stated that since the 1970s livability has been a 'dominant category of urban discourse' used by different groups in the urban field, each with their own ideas of urban livability. These different ideas, as Ley stated 'much about the various publics who have competed for the power to define the quality of urban life' (Kaal, H., 2011).

Today livability is one of the main issues throughout the world; many countries have their own meaning and interpretation for this concept. For example in German it is described as “Lebensqualitat”, in Sweden as “livskraftighet”, in Dutch as “leefbaarheid” and British and American describe it as livability. As Hovey stated, “the term livability is enjoying an extended vogue in the American language’: “Organizations sprout up everywhere to promote more livable communities. Public policies are aimed to improve the livability of our cities’. Talking about the livable urban environment or giving description is like drawing utopia, we call a place livable when it is safe and secure, have a decent infrastructure, high level of service provisions and is economically viable and environment-friendly. Referring to policy programs, political policies and business philosophies, sustaining or improving a city’s degree of livability seems to be one of the main issues of a variety of actors, ranging from the scopes of local and state government to civil society and businesses (Kaal, H., 2011).

Generally, the concept of livability involves different aspects of urban life; “how well the city works for us, as well as how comfortable and enjoyable our neighborhood and city are”. Most of the residents feel the area livable when the environment is safe, healthy and protected from natural disasters. The condition and opportunity for employment and quality of public services and school along with affordable housing price are also mentioned. The physical and functional form of the area helps significantly in increasing the livability and makes the places livable in a long term. An area is called livable when it is safe, healthy, and designed for different group of people to invite diversity of users and satisfy their needs.

Furthermore a livable place or city respects the cultural and historical heritage and develops with respect and connection to the past (Southworth. M., 2007).

If livability is considered within urban system, it refers to development and improvement in different aspect such as physical, social and well-being. The main principles and elements which gave substance to livability are "equity, dignity, accessibility, conviviality, participation and empowerment". Moreover a livable city is considered as a link and a connection between past and future, "the livable city respects the imprint of history (our roots) and respects those who are not born yet (our posterity)" (Timmer. V. & Kate Seymoar. N., 2005).

Therefore it is important, firstly to understand the values of physical and functional features in historic parts of the cities, secondly to determine the livability of these area, and thirdly to propose some measures to protect them as well in order to increase their livability.

Thus, a livable city is a city which maintains and preserves the sign of history which includes the sites, layouts and the buildings. Also in a livable city physical and social elements must corporate to reach the development and improvement of community and well-being of its citizens. A livable city must work and develop as a "continues network" from the central areas to distant areas. For example if we imagine livability as a coin, it has two sides: "livelihood" is one side and the other one is "ecological sustainability". In order to reach livability these two sides have to work together by "providing livelihoods for its citizens, ordinary as well as affluent, in ways that preserve the quality of the environment" (Timmer. V. & Kate Seymoar. N., 2005).

Although there is no specific definition for the livability, it is broadly defined as “the well-being of a community and represents the characteristics that make a place where people want to live now and in the future”. In many researches and scholars, ideas regarding livability, the concept are linked with some factors such as: quality of life, quality of place, safety, and accessibility (Kennedy R. & Buys L., 2010). In the following part, the relationship between quality of life and quality of place with livability will be explained.

2.2 Livability and Quality of Life

Livability is also argued globally and is a highly debatable issue in the quality of life studies. (Glaser and Bardo, 1991; McNulty et al., 1985). McNulty et al. (1985) stated that there is a relation between quality of life and economic success of cities and mentioned that if the city is not livable, there is not any attraction to perform economic function for now and future planning. So increasing the livability is the main objective in every city’s strategy and master plan. Moreover, the elements of livability has major role in economic growth and city development. Additionally, in a city vision they take into consideration the achievement of the livable city in order to reach the economic growth. (YUEN, B. & LING OOI, G. 2011).

In a journal report, Dowell Myers (1988) defined quality of life as a strong political concept which is describing citizen satisfactions at different residential locations. The author claims that “The concept lies close to the heart of planning, given that the professions central purpose, variously stated, is promotion of the general welfare, the public wellbeing, or the public interest” (Myers, 1988, p.347).

According to Brook Lyndhurst, livability, though interpreted differently in different continents, still appears to be same as quality of life, well-being and life satisfaction (Brook Lyndhurst, 2004).

Livability is basically a “concept about people’s quality of life above anything else”. Form the resident point of view, the elements which make city livable is mentioned as a “good place for living, working, travelling and recreation”. But in general, livable environment contains “the adaptation and adjustment to the local climate, the protection of the natural environment such as air, water, soil and urban greenery”. And also the quality of urban built environment “including the provision of urban infrastructure, municipal facilities, amenities along with sufficient and good indoor and outdoor spaces” (Zeng Zheng, Y., 2011).

Generally the conception of livability, quality of life, sustainability and quality of place overlaps, since all of them focus on the relation between people and environment. Environment is defined as “physical, built, social, economic and cultural” elements. As figure 1 shows livability and quality of place are placed in to the environmental section. Also in community section, it has a relation between quality of life and community. In sustainability part, the focus is on the future, which describes compatibility of people and the environment in future. But livability and quality of life is focused and related to ‘here and now’. Central part shows “different approaches are the interaction between environmental conditions and human responses” (See Figure 1) (I. van Kamp et al. 2003).

Figure 1: A Conceptual Model of Factors That Contribute To Community Quality Of Life from a Human Ecological Perspective (Shafer et al. 2000). (I. van Kamp et al. 2003)

The quality of life is consisting of different elements, these elements has relation with health and the daily living environment. In figure 2 these elements are shown.

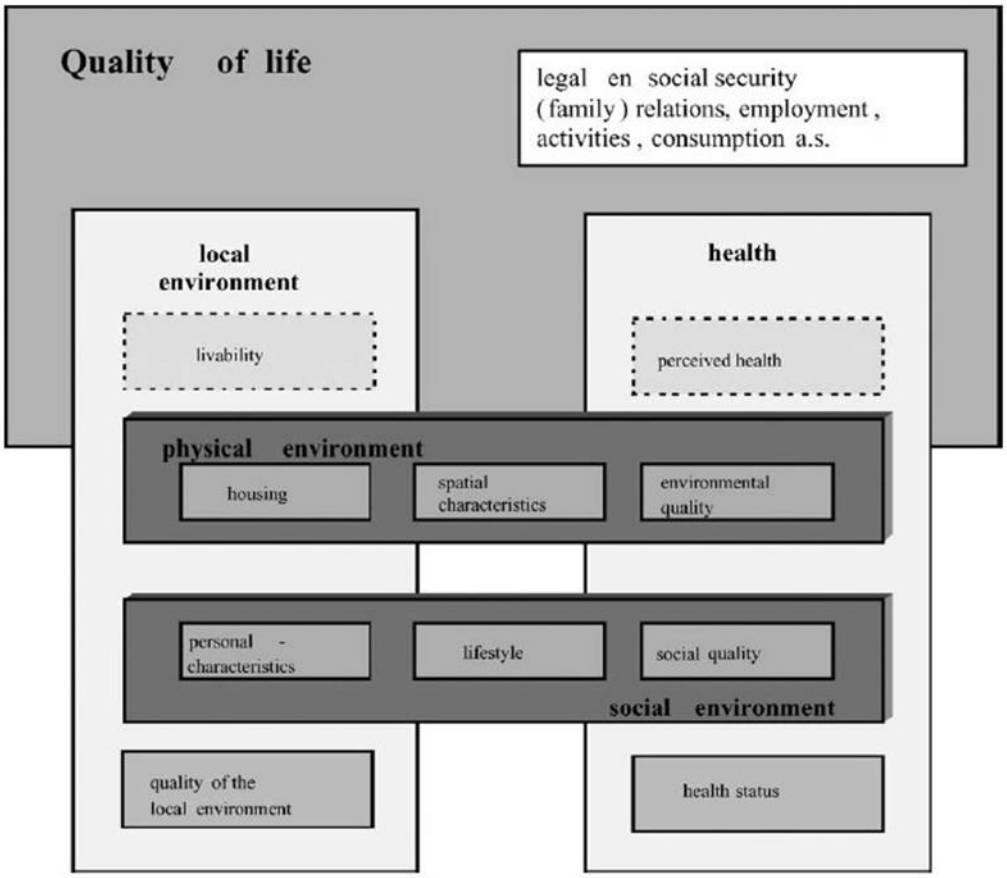


Figure 2: Scheme of the Basic Elements of Quality-Of-Life, Health and the Daily Living Environment (RIVM, 2000). (I. van Kamp et al. 2003)

Components of quality of life

Generally quality of life has different components and these components have a direct relation and effect on the quality of life. In Figure 3 the main components of quality of life is shown.

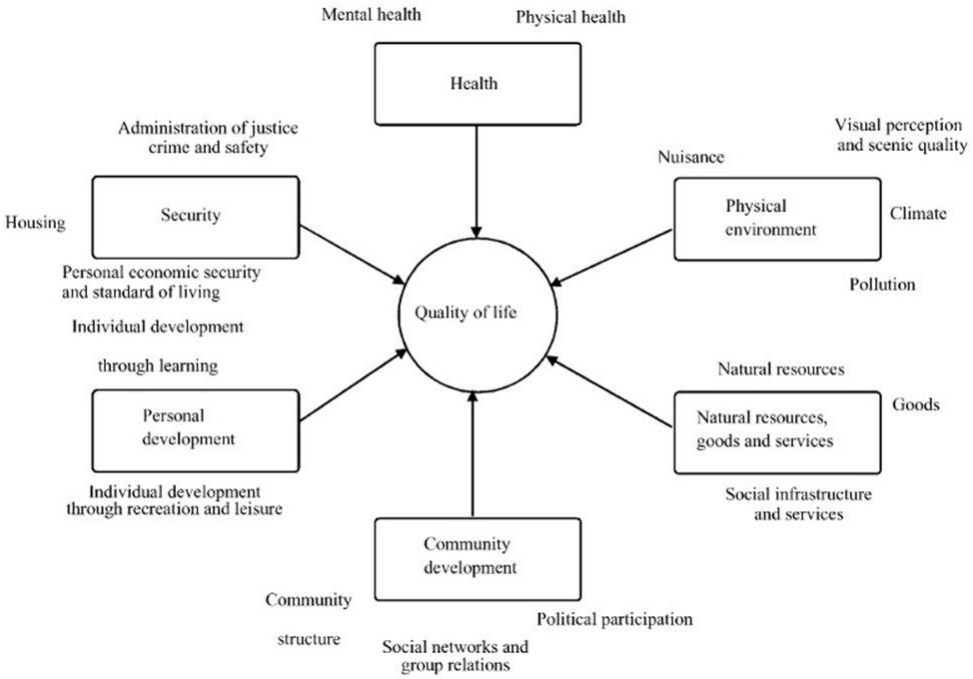


Figure 3: Quality-Of-Life Components (Mitchell, 2000). (I. van Kamp et al. 2003)

As Figure 3 shows the component of quality of life is composed of various elements. These elements are mentioned as physical environment, health, natural resources, goods and services, community development, personal development and security. As mention above and showed in Figure 3, the relation between quality of life and personal elements and also similarities between these elements and livability are visible. These similarities are referred as security, physical environment, community development and health.

2.3 Livability and Relation to Quality of Place

Usually quality of place is equivalently used in terms of livability and sustainable development and "covering factors as diverse as local environmental quality, culture, education, economic development, public realm and many others". Generally the concept of quality of place is referred in social, physical and economic terms. Also it mentioned elements and factors which help to define a place and differentiate

between places. Andrews (2001) mentioned quality of place in the context of quality of life and defined quality of life as “a feeling of well-being, fulfillment, or satisfaction on the part of residents or visitors to a place”, and quality of place as “the aggregate measure of the factors in the external environment which contribute to Quality of Life”. Additionally local quality of place has common term with “ensemble term of livability”. Local quality of place includes: cultural amenities, crime, green spaces, and congestion, while they had various “spatial level of application”. In addition according to Yeang, quality of place consists of different factors and elements such as: “culture, local environment, public realm, housing, community safety, access, health”, which the combination of these factors makes the place livable (Yeang, L.D, 2006).

Figure 4**:** Situating Quality of Place (Yeang, L.D, 2006)

According to Yeang quality of place is part of wider quality of life concept and it implied as two levels. The first level is city level which refers to the “wider factors which help to define the offer of the city or city-region as a whole” and the second level is about local livability which includes the factors that have relation to local, “at

least in terms of their impact on the city and certainly in terms of competitiveness" (See Figure 4) (Yeang, L.D, 2006).

As Figure 4 explains, quality of place includes different factors at both levels. At the city level, there are educational and cultural facilities, such as theaters, universities. And also "wider attributes of the city such as a strong retail and commercial offer and a good public transport network". In local livability, there are factors which are related to environment such as: the quality of parks and open spaces and safety. It is obvious that both features of quality of place have different role to influence the "Regional Economic Competitiveness" (Yeang, L.D, 2006).

Figure 5: Local Livability and City Factors In Quality of Place (Yeang, L.D, 2006)

As shown in Figure 5 the quality of place acts as a linkage between local livability and city level factors as well as residential offer. If the city maintains the main elements of local livability such as public realm, local environment quality and safety, it helps the city to reach the quality of place and by reaching the quality of place it leads the whole city to become a livable place since it covers all of the mentioned factors along with residential offer.

2.4 Dimensions and Indicators of Urban Livability

As it has been highlighted in the previous sections livability covers many things. However in order to be able to comprehend livability in a systematic way, it is necessary to understand its dimensions.

In general term, the dimensions of livability will be different according to the culture and location or situation. (Van Kamp et al., 2003; Pacione, 2003). Omuta (1988) in his research on quality of life and livability in Benin City has mentioned about five dimension of livability. These dimensions are "the physical characteristics of the house, the physical characteristics of the residential environment, the social characteristics of the residential environment and the functional characteristics of the residential environment." In another research on livability in England four key indicators are suggested, which are "environmental quality, physical location quality, functional place quality and safer places" (Lau Leby.J & Hariza Hashim.A 2010) and according to Yeang livability has four dimensions: The environmental quality, place quality, which is related to physical features, place quality, which is related to functional features and safer places, which is related to social issues (See Table 1) (Yeang, L.D, 2006).

Table 1: Dimensions of Livability (Yeang, L.D, 2006)

A. Environmental Quality
1. Noisier-Quieter?
2. Dirtier-Cleaner?
3. More or less congested?
4. Building quality, Better or Worse?
B. Place Quality (Physical)
5. Quality of the built environment 'product'
6. Levels of derelict land
7. Quality of parks and green spaces
8. Public realm quality
C. Place Quality (Functional)
9. Pedestrian journeys: easier-or harder?
10. Public transport quality
11. Vitality and viability of services
D. Safer Places
12. Crime levels
13. Anti-social behaviour

In Table 2 the different livability dimension in five selected studies is shown (Lau Leby.J & Hariza Hashim.A 2010).

Table 2: Livability Dimensions In Different Studies (Source: Office of the Deputy Prime Minister, 2006)

Omuta (1988)	Holt-Jensen (2001)	Visser et al (2005)	Heylen (2006)	ODPM (2006)
Employment	Aesthetics of living environment	Housing	Dwelling	Environment quality
Housing	Personal	Social environment	Social environment	Physical environment
Amenity	Social relations	Physical environment	Physical environment	Functional environment
Educational	Functional	Functional	Safety	Safety
Nuisance				
Socio-economic				

Note: ODPM is "Office of the Deputy Prime Minister"

Examination of Table 2 reveals that the four dimensions, which are suggested by Yeang as environmental quality, physical place quality, functional place quality and safety, are utilized in all cases, as functional, physical and social dimensions. Also housing and safety is visible in most of the cases. These four dimensions are the main dimensions of livability. However "it should be noted that these dimensions might not have exact the same content and meaning in all researchers or studies, even though the same term might be used" (Lau Leby.J & Hariza Hashim.A 2010).

In order to comprehend the livability dimensions, it is necessary to determine the most appropriate indicators, and in the next section these indicators will be explained in detail. In general four dimensions and themes are shown (See Table 3). In the following, each dimension will be described in detail (Lau Leby.J & Hariza Hashim.A 2010).

Table 3: The Dimensions and Themes of Urban Livability (Lau Leby.J & Hariza Hashim.A 2010)

Liveability dimension	Theme
Social dimension (social relations)	behaviour of neighbours (nuisance)
	community life and social contact
	sense of place
Physical dimension (residential environment)	environment quality
	open spaces
	maintenance of built environment
Functional dimension (facilities and services)	availability and proximity of amenities
	accessibility
	employment opportunities
Safety dimension (crime and sense of safety)	number of crime
	number of accidents
	feeling of safety

2.4.1Social Dimension

In social dimensions various elements about community life and social contact are mentioned. Also "neighbor's behavior in terms of nuisance" and sense of place along with the relationship between neighbors are the other concerns in this category. (Lau Leby.J & Hariza Hashim.A, 2010).

Other elements and themes might be taken into consideration such as "access to affordable housing which is a key component of a livable city as it determines whether people can actually live in it." And "creating separate neighborhoods for people of different income levels to encourage a fragmented rather than a tolerant and diverse culture". In addition "by building high density and different housing types within neighborhoods, communities can provide housing options at different pricing levels". A livable city is a city which discovers strength point in "the interactions of people from different perspectives and backgrounds. By placing diverse groups of people within one community, social diversity is supported and

tolerance is nurtured. In order for a city to welcome people of different income levels, they need to be provided with affordable places to live" (Timmer. V & Kate Seymoar. N 2005). (Lau Leby.J & Hariza Hashim.A 2010).

2.4.2 Safety and Crime Dimension

Generally, safety is one the most important needs in every society and citizens desire to live in a safe neighborhood. In a neighborhood with high crime rate, it is impossible to maintain high quality of life due to significant influence and impact of unsafe places in citizen's life even though other conditions are met. According to Savasdisara's (1998) studies in Japanese communities' safety and security is one of the main elements of quality of life and living conditions. The indicator which measure safety dimension is "neighborhood's safety level". It is divided into three types, "the frequency of different types of crime (homicide, property crime and sexual assaults), incidents of injuries or accidents and feelings of security" (Lau Leby.J & Hariza Hashim.A 2010).

2.4.3 Physical Dimension

The physical environment is the place, where people work, live and communicates with each other (Lau Leby.J & Hariza Hashim.A 2010). According to Yeang the elements and indicators, which are in this category, is related to the quality of built environment, quality of parks and land, public realm quality and levels of derelict land (Yeang, L.D, 2006). Also according to Heylen's (2006) "the availability of amenities and services" is related to this category (Lau Leby.J & Hariza Hashim.A 2010).

2.4.4 Functional Dimension

According to Holt-Jensen (2001) the functional indicators is related to well-being which "depends on good provision and location of communication systems, shops, kindergartens, shopping centers, clinics, schools and other services". The other factor which relates to this category is about accessibility (Lau Leby.J & Hariza Hashim.A 2010). Also according to Yeang the main elements and themes which relates to the functional dimension of livability are mentioned as public transport utility, accessibility, pedestrian condition and vitality and viability of services (Yeang, L.D, 2006).

Based on the evaluation of the dimensions, it can be claimed that understanding the physical and functional dimensions would be given priority in terms of determining the livability of a specific place. Accordingly, in this study, place quality (physical); quality of built environment, levels of derelict land and public realm quality; and place quality (functional); vitality and viability of services, the pedestrian journeys and public transport utility will be conducted as accessibility parameter and indicator. These dimensions which are suggested by Yeang, will be taken as a basis and it will further be presented together with the indicators in the following section.

2.5 Themes of Physical Dimension of Urban Livability

2.5.1Quality of Built Environment

Built environment is the product of human activities and needs. Also the human environment is surrounded by physical and artificial element which maintains built environment and context for human activities. Generally built environment consist of elements which are created by people, such as public utilities, pedestrian path and streets. (McClure and Bartuska, 2007).

The physical qualities in residential districts mostly the fundamental, proximity, environmental and basic services create the main factor of residential built environment. As shown in Figure 6 the definition of built environment is shown and mentioned by Batruska (2007) in four related and connected elements of the man-made environment. In Figure 6 livability is presented as a concept which brings the perspective of desirable life and appropriate quality of life in local scale by creating living condition (Gerrardbown, 2006) (Rama U. et.al 2010). As argued in pervious part the direct relation and connection between the quality of life and livability is described, so from this point of view the relation between local livability and quality of life is understandable.

Figure 6: The Characteristic of Built Environment (Source: Wendy R. McClure and Tom J. Bartuska)

Generally the built environment is referred to livable when it is safe, affordable, beautiful, hygienic and suitable to live (Sustainable Seattle, 2008). To sum up the subject, the physical built environment consist of urban area which is planned at local scale and city scale, also the economic and social elements has relation and effect in livability at local scale. In general residential built environment has various aspects (OECD, 1978). For example for a specific social group of people the quality of public spaces and green spaces considers as local livability but for other social group the local livability is accessibility and hygienic condition. Also the other factor which affects the factors of livability is technology and modern life style (Rama U. et.al 2010).

In Figure 7 the conceptual frame work of built environment and livability is shown. As shown the social and economic elements along with time and technology are related to lifestyle of the people. The residential built environment is related with spaces which also has relation with lifestyle. The built environment is connected to with livability, each elements of livability has relation with the indicators of built environment and also these indicators are measurable. Generally this framework (Figure 7) shows the relation between built environment and livability which leads to the achievement of desired livability (Rama U. et.al 2010).

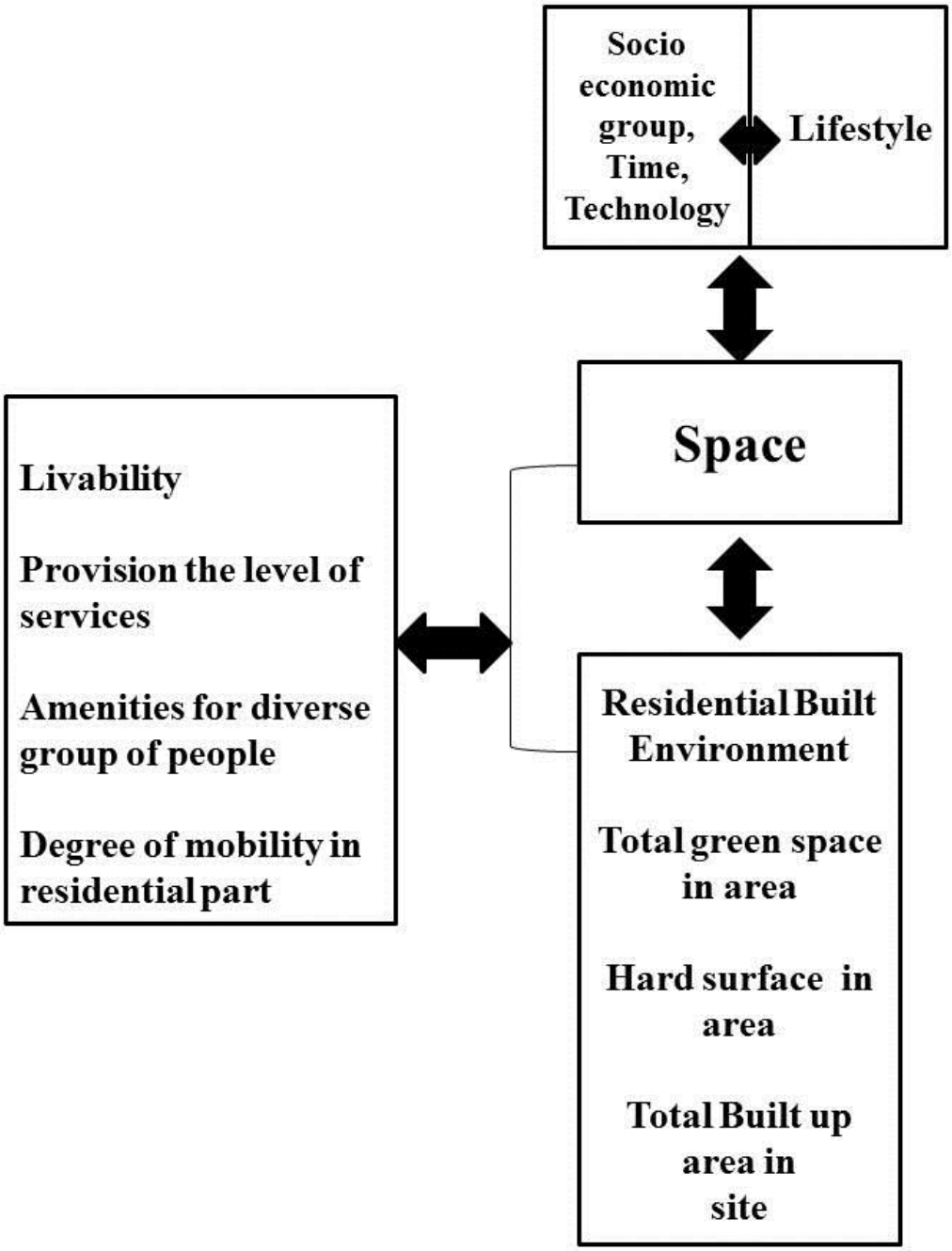


Figure 7: Conceptual Frameworks of Residential Built Environment and Livability (Rama U. et.al 2010)

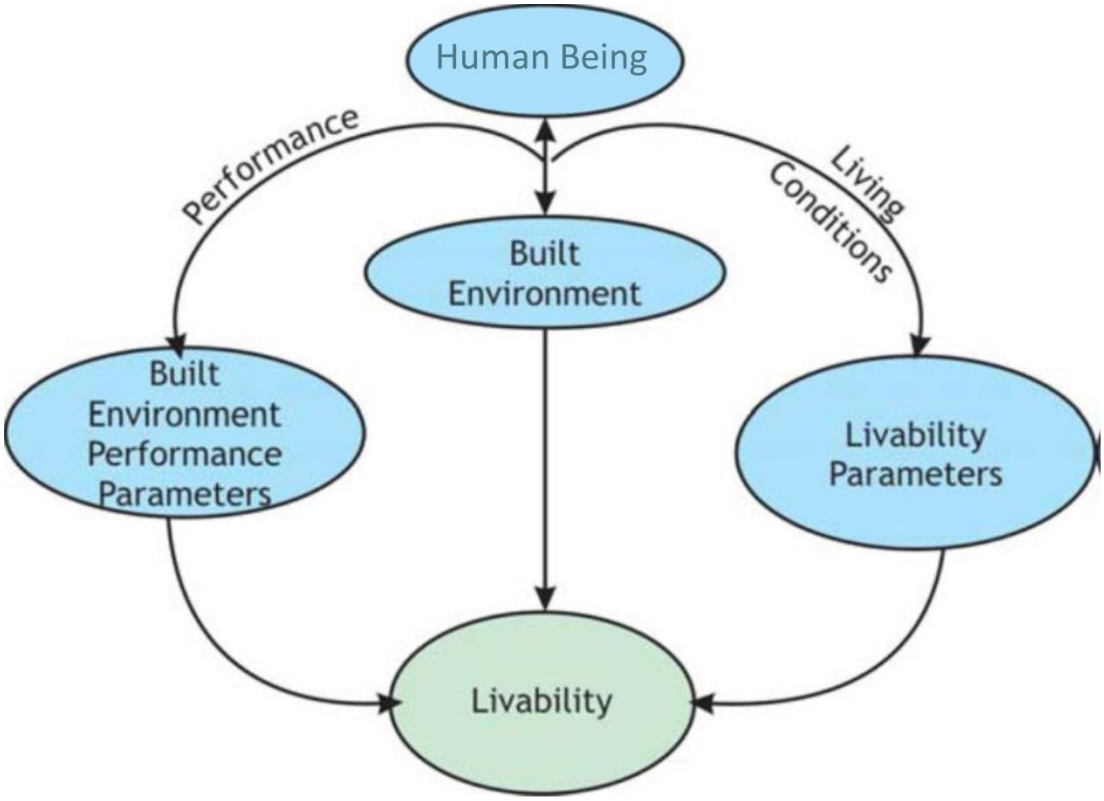


Figure 8: Relations Between Livability and Built Environment (Rama U. et.al 2010)

In Figure 8 the relation and connection between livability, built environment and human needs are shown, which indicates that livability has a direct relationship with the built environment and human needs.

The parameters of built environment and indicators of built environment which has relation and affects the livability are shown in Table 4.

Table 4: The Built Environment Parameters and Main Indicators (Rama U.et.al 2010)

Parameters of Built Environment	Indicators of Built Environment
Green Space	Ratio of green space to built surfaces
	Green surface to built surface density
Density	Total builtup area to site area
	Ratio of population density (Population/m2)
Clean Environment	General Sanitary condition
	Municipality garbage collection
Noise and Safety	Proximity to noise generating activities in the vicinity
	Safe walking throughout the day
Visual Character	Building materials, Colour and texture
	Harmony in façade building

The first parameter of built environment is introduced as the green space, which refers to the green space of the area as a whole and the ratio of the green space to built surface. The second parameter is about density and mention about the population of the area and the whole built area in the site. The third parameter is about hygienic and cleanness of environment and mention about the garbage collector and the sanitary conditions of the environment. The fourth parameter is about the noise and safety of the area and mention about the proximity to the noisy facilities and feeling safe in day and night when walking in an area. The last parameters is about the visual character and mention about the material of the building and texture of the building and façade.

If the parameters of built environment (Table 4) is linked to the Yeang's dimension of livability (Table 1), it is visible that most of the parameters have relation with dimension of livability, for example the parameters of clean environment and noise and safety has relation with environmental quality and visual character is related to place quality (physical). So it is understandable that the livability and quality of built environment has direct relation and affect each other constantly. (See Table 5).

Table 5: Relation Between Parameters of Built Environment and Dimension Of Livability

The Parameter of Built Environment		Dimensions of Livability
Noise and Safety	⟷	**Environmental Quality**
Visual Character	⟷	**Place quality (physical)**

2.5.2 Public Realm Quality

"The public realm includes all exterior places, linkages and built form elements that are physically and/or visually accessible regardless of ownership." The elements of public realm may include but not limited to: pedestrian way, squares, parks, building interfaces and other (http://www.upc.gov.ae/prdm/public-realm-definition.asp).

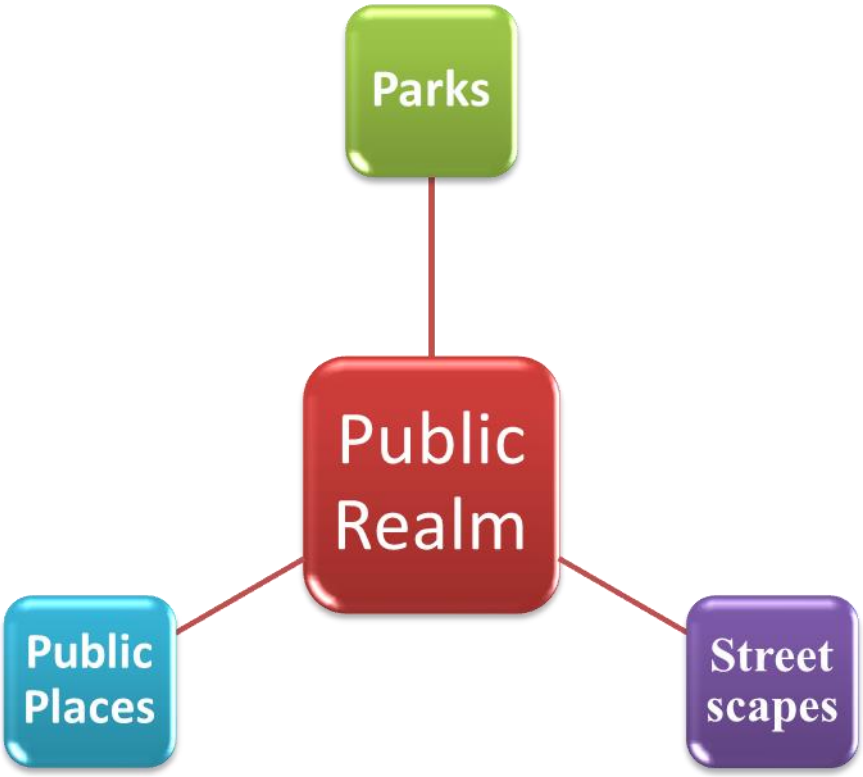


Figure 9: The Categories of Public Realm

The public realm is consisting of three categories, as shown in Figure 9; each category will be defined in below.

Parks: Public open spaces in an area which are used for recreational purposes.

Streetscapes: "The visual elements of a street including the road, sidewalk, street furniture, trees and open spaces that combine to form the street's character." (http://www.upc.gov.ae/prdm/public-realm-definition.asp).

Public Places: "All open areas within a community visible to the public or for public gathering or assembly" (http://www.upc.gov.ae/prdm/public-realm-definition.asp).

Public spaces broadly defined as the all part of built environment, "private and public, internal and external, urban and rural," It may include: "all the streets, squares and other rights of way, whether predominantly in residential, commercial or community/civic uses; the open spaces and parks; the open countryside; the 'public/private' spaces both internal and external" (Carmona, et all, 2008).

According to Jackson the green space and environment play a key role in physiological and physical level of human life. For people, the accessibility to green area is important and it is needed in local and city scale (Jackson, 2003). Lack of green area in one district may lower physical activity which leads to social problems and isolations (Lindheim and Syme, 1983).

Generally public spaces and green areas have an important role in term of improving livability and well-being. Also it enhances the socioeconomic and environmental elements. So it is important to understand the relation between quality of public spaces and quality of life and it is vital to encourage the public and private sector to invest in public spaces and realm is vital (Beck. H., 2009).

The role of public spaces in regeneration and well-being

The good quality of public spaces brings socioeconomic and environmental value in different ways. Certainly the public services can maintain and bring different benefit to the area in which they are located (Beck. H., 2009).

Additionally the poor public spaces have negative impact on the environment and area which invites vandalism, crime and anti-social behavior (CABE Space, 2005a). Whereas the good quality of public spaces attracts people to live, work or invests in the area (CABE Space, 2005b). Moreover the good quality of public spaces has an impact and effect on neighborhood, surroundings and creates opportunity to invite people and investors to the area (CABE Space, 2005c).

The survey which was conducted by MORI and CABE Space (2004), reveals that 91 percent of the people who were surveyed mentioned the importance of open spaces, public spaces and improvement in quality of life, and 74 percent declared that public spaces and open spaces are vital for physical well-being, health and mental well-being (CABE Space, 2005) (CABE Space, 2005).

As mentioned above the importance of the public realm and spaces are defined and the relation of public spaces with livability is mentioned in further part of this study.

Linking the quality of public space to livability, regeneration and well-being

Nowadays the importance of quality of life and livability is the main concern for planners and designers, and they considered in their planning and regeneration projects, the importance of the livability and quality of life. Generally there is not one specific indicator for measuring the quality of public spaces. However through the parameters of quality of public spaces which are comfort, safety and maintenance and the dimension of the quality of life which introduced as social, health and safety, the quality of public spaces, it is possible to measure the quality of public spaces (Beck, 2009). In Table 6 the indicators which measure the quality of public spaces are shown with the features for each indicator.

Table 6: Indicators and Criteria of Public Space (Beck, 2009)

Parameters of quality of public spaces	Indicators of public spaces
Condition and Maintenance	The overall structural condition of the building
	Degree of maintenance of buildings
Design	Well-designed public space
	Legibility of public space
	Gauge of sense of enclosure in public space
User	Healthy
	Has a space for social interaction
	Fulfilling
	Relaxing
Function	Community resource
	Vital and viable
	Functional

2.5.3 Levels of Derelict and Vacant Land

In urban settlements the land is used as tool to define spatial elements of the cities. Because it's immobile and indestructible, the value and importance of land depends on the location of the land, accessibility, social value and further development and planning (Coleman 1982; Peirce 1995). Some land may be vacant for providing proper space for recreational function or function which related to parks, forest preserve, playgrounds and many other things. These lands have to be vacant because of its nature which brings positive effect to the area and place (Mhatre. P).

According to Northam (Northam, 1971) vacant and derelict land can be divided into five groups. The first group is related to a parcel which is small and has undefined shape and not developed in the past. The second group is related to parcels which have limitation such as steep slope and parcels which are unbuildable. The third group is related to the parcels which keep for future planning and development. The fourth group is related to parcel which keep for speculation in transitional district. The last group is related to the parcels which related to institutional function and keep for future development of that function (Mhatre. 2007). Vacant and derelict land has negative impact and effect on the quality of place, thus reducing the further investment and livability of the area.

Generally the measurement of the vacant and derelict land is essential and useful for reaching livability because if these derelict and vacant lands would be properly utilized and functionalized, it could attract diversity of user with variety of functions. Different group of people would be encouraged to come to the place, thus increasing diversity of users and enhancing the quality of life and public spaces which lead to livability. In Table 7 the indicators of vacant and derelict land is shown.

Table 7: Indicators of Vacant and Derelict Land (King County Benchmark Report, 1998)

Indicators of vacant and derelict land
Ratio of vacant area to built-up area
Ratio of vacant buildings to total number of buildings

As it is in Table 7 shown, the first indicator of vacant and derelict land is related to the ratio of vacant area to built-up area, the second indicator is related to ratio of vacant buildings to the total number of buildings in the area.

2.6 Themes of Functional Dimension of Livability

2.6.1The Vitality and Viability of Services

Vitality refers to "how busy an urban center is at different times and locations" and viability refers to "the continuing ability of that center to attract investment". These two measurements have relation with the level of occupation (vitality) which is seen as a major factor in investment decisions (viability). Moreover development of facilities (viability) improving the attraction of people and visitors (vitality) (Ravenscroft, N., 200).

Generally the range of indicators which are related to the vitality and viability is wide but according to the DOE the indicators of vitality and viability of services is divided into nine main parts, but for the purpose of this research it has been reduced to six main parts which is shown in Table 8(DoE, 1996).

Table 8: Indicators of Vitality and Viability of Services (Doe, 1996)

Indicators of vitality and viability of services
Commercial yield on non-domestic property
Diversity of uses
Physical structure of the centre
Business representation and intentions to change representation
Proportion of vacant street-level property in the primary retail area
Customer's views

The indicators in Table 8 is: commercial yield, which described trust of the investors for investment in long term; diversity of uses, which is describing different function in the area; physical structure of the center which describes the physical quality of area; business representation and intentions to change representation, which describes the function locating in center and function wishes to locate in center; and the customer's views, which describes improvement and development of services and management of the services (DoE, 1996).

In summary the key indicators of viability and vitality are: "Commercial yield and rent, Occupancy rates, Diversity of current usage, Pedestrian flows, Environmental quality and Incidence of crime" (Ravenscroft, N., 200).

2.6.2 Accessibility

The last indicator which described in this study is related to the accessibility. Although in Yeang's Table (Table 1) it is mentioned as public transportation quality and pedestrian journey's, but in this study will be considered as one indicator, named as accessibility. Accessibility defined just not as dimension of livability but the factor which has impact and effect on location decisions for different function, for example, recreational function, retail function and etc. so it has main role in development of the city. In general accessibility is key element to reach the livability in city and has an impact and effect in other indicators of livability such as quality of built environment and vitality and viability of services. According to İstillozlu the main indicators of accessibility are shown in Table 9.

Table 9: Indicators of Accessibility (İstillozlu, 2011)

Parameters of accessibility	Indicators of Accessibility
Vehicular Accessibility	**Public transportation, Road type/ Transport Infrastructure**
Non-vehicular Accessibility	**Street type sidewalks, Pedestrian ways, Cycling ways**
Streetscape	**Street furniture/Landscape elements, Cleanliness, Car parking (visual intrusion by side parking)**
Integration of modes	**Integration of different public transportation modes, Integration of private transportation & public transportation modes**
Safety of Roads	**Traffic calming, Segregated bike lanes, Safe sidewalks**

As shown in Table 9 it is visible that the parameters of accessibility has direct relation with the functional place quality (Table 1), the relation is shown in Table 10 below.

Table 10: Relation Between the Accessibility Parameters and Functional Place Quality (İstillozlu, 2011)

Parameters of accessibility		Functional Place Quality
Non-Vehicular Accessibility, Safety of Roads	⟷	Pedestrian Journeys
Vehicular Accessibility, Integration of Modes	⟷	Public Transportation Quality
Streetscape	⟷	Vitality and Viability of Services

Based on all these discussions, the indicators of physical and functional dimensions can be presented as a whole in Table 11.

Table 11: Indicators of Physical and Functional Dimension of Livability

Dimensions	Parameters	Indicators	Criteria for Indicators
Physical	Quality of Built Environment	Green Space	Ratio of green space to built surfaces
			Green surface to built surface density
		Density	Total builtup area to site area
			Ratio of population density
		Clean Environment	General Sanitary condition
			Municipality garbage collection
		Noise and Safety	Proximity to noise generating activities in the vicinity
			Safe walking throughout the day
		Visual Character	Building materials, Colour and texture
			Harmony in façade building
	Public Realm Quality	Condition and Maintenance	The overall structural condition of the building
			Degree of maintenance of buildings to public spaces
		Design	Well-designed
			Legible
			Has a sense of enclosure
		User	Healthy
			Has a space for social interaction
			Fulfilling
			Relaxing
		Function	Community resource
			Vital and viable
			Functional
	Levels of Derelict and Vacant Land	Ratio of vacant area to build area	Total area of vacant area to total built area
		Ratio of vacant building to total building	Total area of vacant building to total built area
Functional	The vitality and viability of services	Commercial yield on non-domestic property	The number of commercial building of area
		Diversity of uses	The variety of function in area
		Physical structure of the centre	Physical structure in center
		Business representation and intentions to change representation	Frequency changing of business in area
		Proportion of vacant street-level property in the primary retail area	The vacancy rate in commercial zone of area
		Customer views	The effectiveness of services in area
	Accessibility	Vehicular Accessibility	Public transportation
			Road type
			Transport Infrastructure
		Non-vehicular Accessibility	Street type sidewalks
			Pedestrian ways
			Cycling ways
		Streetscape	Street furniture
			Landscape elements Cleanliness
			Car parking (visual intrusion by side parking)
		Integration of modes	Integration of different public transportation modes
			Integration of private transportation & public transportation modes
		Safety of Roads	Traffic calming
			Segregated bike lanes
			Safe sidewalks

2.7 Livability in Historic Urban Quarters

Since this thesis aims to understand the livability of the Walled City of Famagusta, which is a historic urban quarters, in this section overview of livability in historic urban quarters will be presented.

Historic urban quarters, which are mainly located in central part of cities, due to their locations and lack of historic preservation plan, these areas, are in danger and risk of obsolescence and destruction and the livability level in these areas are low (Doratli, N. 2000). So to increase the livability level in historic urban quarters, it is necessary and vital to provide proper preservation plan to reach the appropriate livability level.

In the past historic preservation is seen and used rarely for development and improvement of the cities. Nowadays, literature review reveals that the revitalization in historic area has positive effect and impact on community and environment. In fact the government and policy maker has to integrate and connect historic assets safely to community and everyday life. It has positive effects on local citizens, which creates many jobs and functions such as: souvenir shop, outdoor market, religious center and etc. Generally it creates and develops recreational and cultural activities which act as tool to make connection and linkage between past, present and future in historic districts. The more usage of historic preservation in community, the more livability and diversity of users and functions are provided in these districts. So because of the relationship and connection between better quality of life and historic preservation, it is vital to understand these relations and use them as a tool to improve and develop the city in a direct way and reach the livability and good quality of life (Eugene Graham, 2006).

Globally historic towns give identity and character to their own communities. Because of the location of historic center in the downtown area of the cities, historic preservation can act as a linkage to make the community attractive, livable and dynamic. Although the functions and activities in downtown area are variable, but still it is an appropriate place for small business and shops. Also because of the historic heritage value of these sites, it attracts and invites heritage tourists, so when tourists come, they spend money and if the place is livable enough they will be eager to stay longer or like to return soon, this will lead to beneficial assets for society and community (Adler, 2005).

Generally the historical and architectural heritage has an important role in people's life and brings identity and characteristic to the community. Historic preservation leads the community to the social, cultural, environmental and economic sustainability. Also, historic areas and heritage is a key element for reaching livability and quality of life, reducing the negative impact in the area and the environment and generating and improving economic vitality. In today's modern life, historic character brings identity and character to the city and historic districts is the cultural landscape and cultural identity for the whole society (Preservation in Salt Lake City, 2012).

Several livable cities around the world encourage and promote planners to identify and distinguish historic preservation to reach livability in communities. According to the liveCom awards, they concerned "heritage management" as one the main elements and criteria, other element such as "walkability"; "appropriate human scale architecture"; "traditional neighborhood structure"; "distinctive, attractive communities with a strong sense of place" (Allison. E. & Peters. L. 2011).

Figure 10 and Figure 11 shows the Portland cities which listed as livable city by Forbes, use of historic preservation as a tool to reach livability.

Figure 10: Portland, In 1890, Listed as a Livable City by Forbes Magazine in 2009. (Allison. E. & Peters. L. 2011).

Figure 11: Historic Lampposts Enhance Environment Of The Tom Mccall Waterfront Park In Portland, Oregon (Allison. E. & Peters. L. 2011)

Figure 12 and Figure 13 shows the heritage program and use of historic preservation in Vancouver which listed by Forbes as most livable city.

Figure 12: Heritage Program In Vancouver (en.wikipedia.org)

Figure 13: Keeping Active the Historic Tram for Cherishing The Heritage in Vancouver (en.wikipedia.org)

2.7.1 Elements of Community in Historic Urban Quarters

The role of building is important in developing and improving and reaching a livable downtown area. However, building is one of the elements and factors which contribute to development of these areas. In general the main factors which contribute to development of these areas are mentioned as: "*community character, economic vitality, mix of uses, ownership, and streetscape design*". In historic and downtown area these factor has to be improved in order to reach a livable area. The challenge lies within preserving and conserving historic characteristics in parallel to growth and development of these areas (Adler, 2005).

Community character: Communities and societies hast to improve distinct identity which makes differentiation from other areas and places. A well-known and unique building helps the town to reach identity. The preservation and conservation of historic building is vital to create "sense of place" and reaches livability and makes people at home. It also contributes to creation of a character for societies and community (Adler, 2005). It is visible that the role of the historic building and historic preservation to reach the character and identity of community is necessary which identity makes the community character and community character has relation with social dimension of livability.

Economic vitality: A vital economy is one of the main important elements to maintain and reach livable downtown area. It is necessary for cities to create effective business and preserve historic buildings to reach a "sound community". To create the effective business, small historic building is ideal for that purpose but depend on specific identity and heritage value, also small business usually work better in group in specific part of historic downtown area and they could survive

from creating national chains shops, and restoration of old building need less fund than creating new building and construction (Adler, 2005). So the relation between the economic vitality and the "parameters of vitality and viability of services", with historic preservation and livability is visible.

Mix of Uses: Diversity of uses improves the economic stability, historic down town area is livable and active when it has mix uses and various functions, such as: retail, residential, restaurant and many different function and uses. By placing the residents on the upper floors of buildings in the down town area, the area will be active and livable. Additionally street life in the down town area is maintained by putting business, functions and services. Generally the diversity and mix of uses maintain "compact central area", where people has social interaction, communicate with each other, work and live to keep the area livable in 24 hours a day. Also by encouraging public societies and institutions such as: libraries, state offices and post offices to stay in down town area, thus making the area livable and help the community to reach vitality (Adler, 2005). So the relation between the diversity and mix of uses which mentioned as "parameters of vitality and viability of services", that has been mentioned in the previous section with livability and historic preservation is visible.

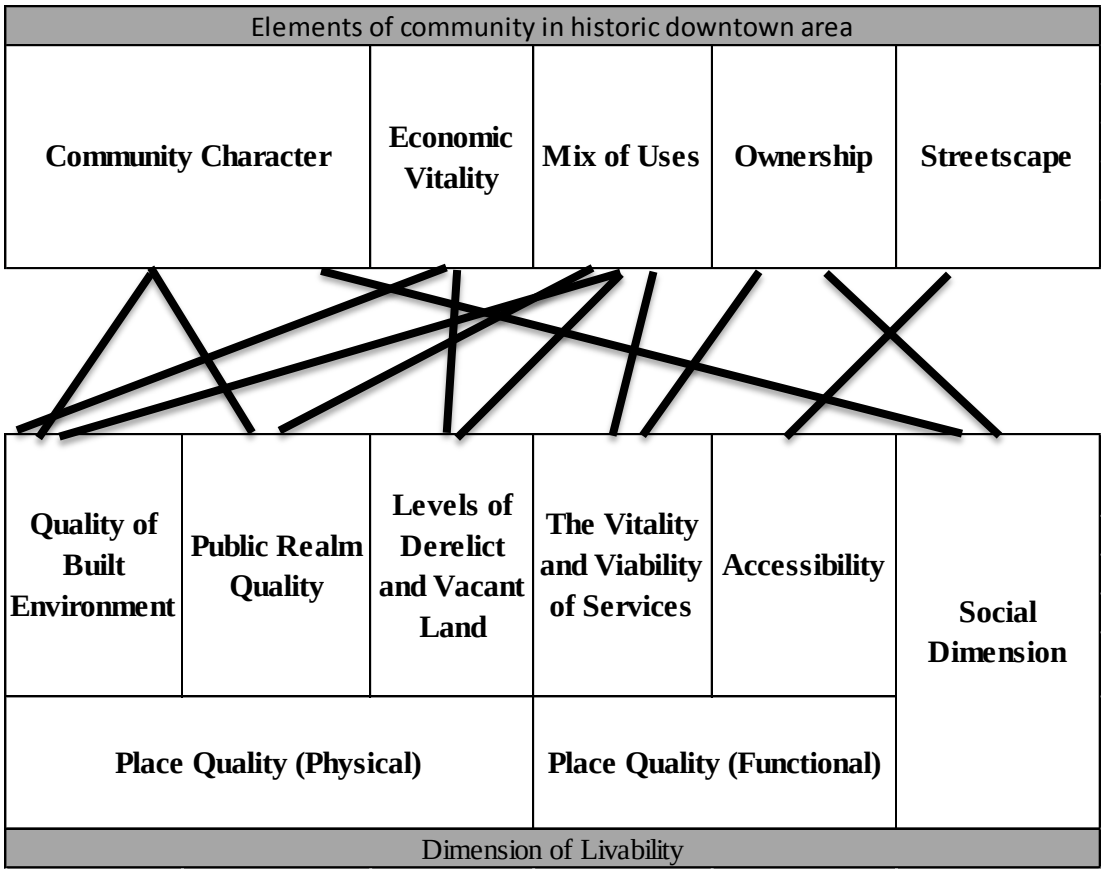
Ownership: the ownership is one the important factors in the downtown area, because the owner of the building is eager to protect the building from decay and obsolescence. By protecting and improving the building by owner, it provides better economic condition and livability in the area, which has benefit and profit for the owner and community. Absentee owners are not eager to protect and improve the building because of the economical profit in short term. By giving financial aid to the owner of the building in the downtown area to preserve and improve the condition of

buildings, is solution to keep the building by their own owner and reach the livability in community (Adler, 2005). So the relation of the ownership issue with the social dimension of livability is visible.

Streetscape: A high quality and well-designed street scape has direct impact on the character and identity of down town area, and it creates “sense of place” and making a good appearance and image for community. Also the facades of building, sidewalk, lighting, street furniture are other important factors in designing the streetscape. In general well-designed street with appropriate lighting elements, good street furniture, large place for public events and social interaction and parking space, invited diversity of users and reach the livability in area (Adler, 2005). So the relation between streetscape and indicators of accessibility which is mentioned in pervious part is visible.

The relation between elements of community in historic downtown area and dimension of livability is shown in Table 12.

Table 12: The Relation Between Elements Of Community In Historic Downtown Area And Dimension Of Livability



2.7.2Importance of Historic preservation for livability and Quality of life

In general historic preservation contributes to reach a viable and livable community. By preserving the historical building and using the economics potential of area, the preservation and development goes in a parallel way. Small changes in the area should improve the area without damaging the historical character and identity. Each community has specific culture, heritage and history which can be used as tool in designing ideas. A community goal and aim should be to conserve and preserve as much historic heritage and character as possible to reach the livability in an area and gain the unique and specific character (Adler, 2005).

The historic district could bring the character and identity to the local environment and encourages people to walking and getting into social interaction with each other. The physical sense in the district can improve stability in community, strength the social pattern and networks and help to feel of safety for residents (Preservation in Salt Lake City, 2012). Also with proper and various functions in these areas, it makes the area livable and encourages people to come to the districts and spend their time.

In 1985 the organization of "The International Making Cities Livable Movement" was established. One of their goals and missions describes and defines the characteristic for designing and preservation in historic districts. As mentioned below; they had many goals and aims but some of them are related to historic preservation and livability as mentioned below:

- Creating a visually cohesive neighborhood environment
- Creating a local economic generator
- Maintaining diversity of race, culture, and income
- Increasing the affordable housing stock
- Creating a vital neighborhood which is sustainable (Allison. E. & Peters. L. 2011).

The goals of livable city movement are mentioned above; and each goal has relation to the main dimensions of livability, in the following each goal and the relation with the dimension of livability is presented.

Visually Cohesive Neighborhoods:

Historic districts naturally have specific and unique architectural style, so these places are cohesive and pleasant for the residents (Allison. E. & Peters. L. 2011). This goal is related to the physical dimension of livability and describes the quality of built environment and visual character indicators, as mentioned in pervious part of this study. It categorized and measured by the visual character of built environment.

Local Economic Generators

Historic districts could act as an income generator; it could attract tourists and different group of people. Tourists help the economic vitality in city by spending and making jobs for residents of the city for example souvenir shop, tour leader and so on. Also, it keeps shops and other functions of the area active and makes the area livable (Allison. E. & Peters. L. 2011). This goal has relation with the functional dimension of livability and is related to the vitality and viability of place which was mentioned in pervious part of the study.

Maintaining Diversity and Affordable Housing

Preserving vernacular architecture and preservation grants, lead the area to diversity, neighborhoods can maintain diversity, by creating local jobs and functions to reach the affordable housing unit. Restoring and preserving units is another economical way for reaching the affordable housing unit and makes less trouble for residents and citizen. Instead of renewal project, it is better to preserve and conserve existing house and units to keep communities integrated and intact and keeping affordable housing. (Allison. E. & Peters. L. 2011). As Alexander Garvin stated “Preservation is a

powerful generator of affordable housing. Equity is a core tenet of sustainable development, and affordable housing is a key to achieving equity. Historic buildings have served as a valuable source of affordable housing (Garvin, A., 1980). This goal is related to functional and social dimension, vitality and viability, which is mentioned in pervious part.

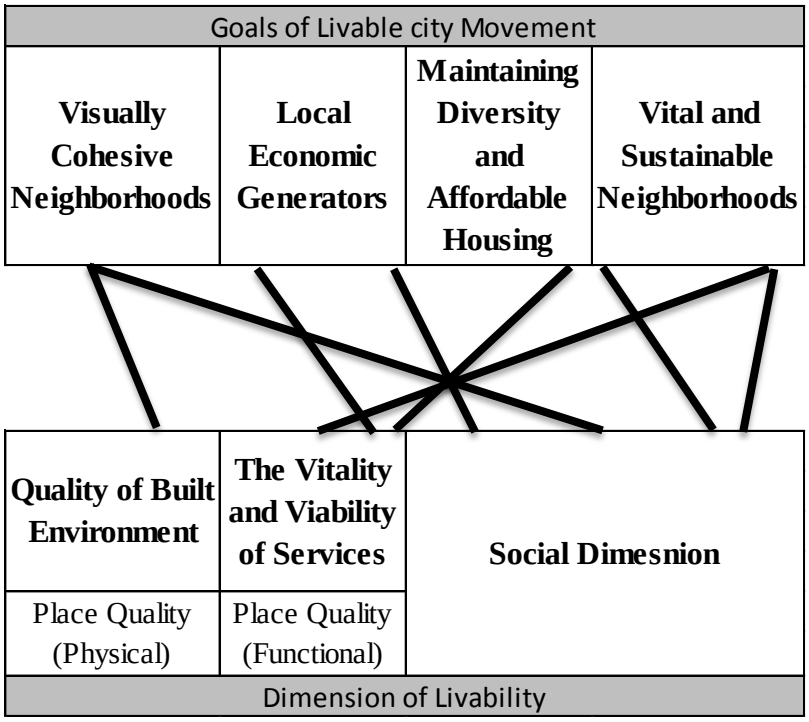
Vital and Sustainable Neighborhoods:

One of the benefits of historic preservation is revitalization of the building instead of demolishing them. Revitalization of the area, reduces the displacement, improves and develops local economy, standard quality of housing and quality of life and livability in the area. Also it makes the resident feel and sense of pride and improves the community and social interaction (Allison. E. & Peters. L. 2011). This goal has relation with the social dimension of livability and is related to “sense of place” and functional dimension, and related to accessibility and pedestrian journeys.

Livable cities are walkable and possess mix use with variety of function and uses which invite different group of people and tourists to the area. In general the main goal and slogan of the "International Making Cities Livable" indicate the creation and making "compact, walkable, safe, mixed-use neighborhoods, cities and towns." (www.livablecities.org). Historic area covers all of these factors and the good example of the relationship and connection between livable cities and historic preservation. Historic areas have unique and various identity and characteristic which people like to live and visit. People like to show their respect to culture and their roots by visiting or living in these areas. Additionally, they feel responsible for their own heritage and they want to keep the past for future. Historic area acts as a tool to

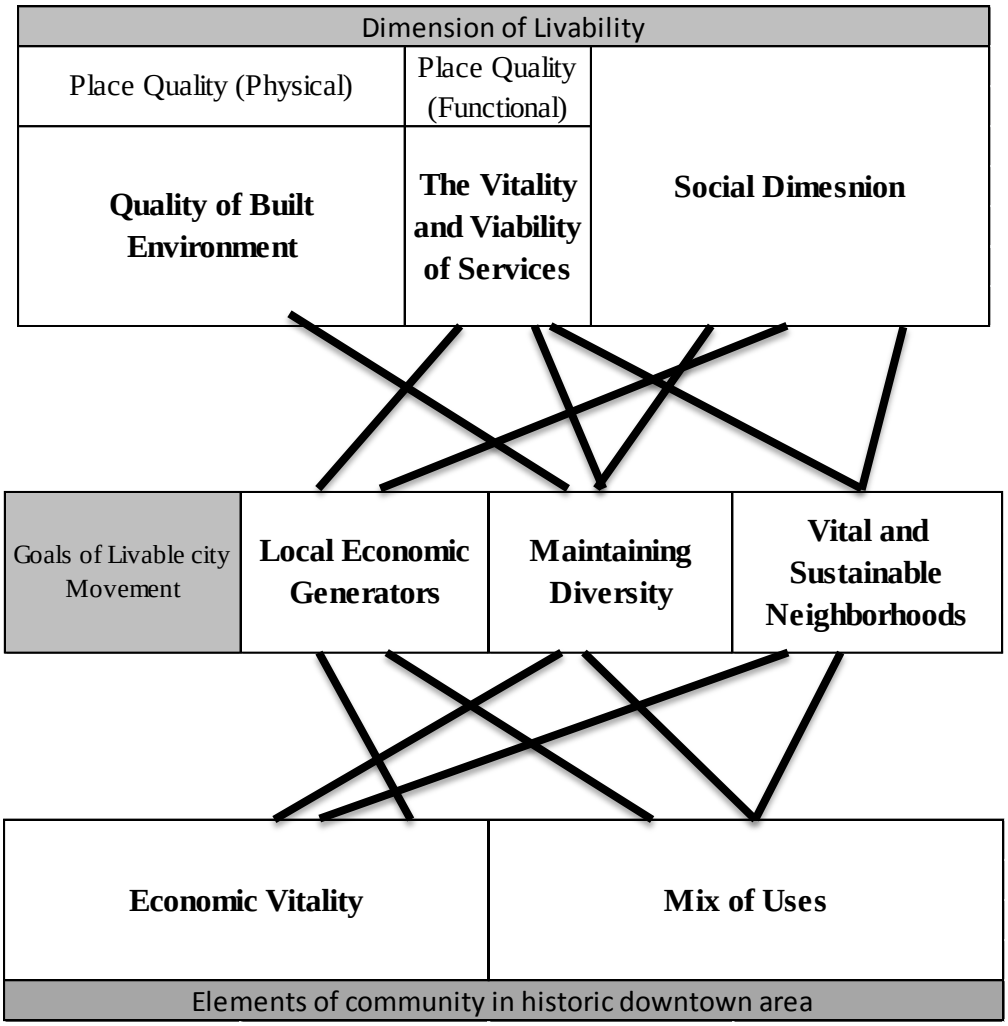
link and communicate between past and future and proved to mark and label. This is one of the main signs of city's rebirth (Allison. E. & Peters. L. 2011). The relation between the goals of livable city movement and dimension of livability is shown in Table 13.

Table 13: The Relation Between The Goals Of Livable City Movement And Dimension Of Livability



By evaluating the elements of community in historic downtown area and the goals of livable city movement, it revealed that these two has relation in some parts which shown in Table 14

Table 14: The Relation Between Elements Of Community In Historic Downtown Area, The Goal Of Livable City Movement And Dimension Of Livability.



2.7.3 Indicators of Historic Preservation

Historic preservation is an endeavor that seeks to preserve, conserve and protect buildings, objects, landscapes or other artifacts of historical significance. It tends to refer specifically to the preservation of the built environment. By integrating the historic preservation indicators in community and planning process, it makes easier to assess and evaluate the positive and negative impacts of changes in area. Table 15 shows the indicator of historic preservation which divided into four categories: gauging (related to type and amount); protecting (ordinances and regulations);

enhancing (partnerships and incentives); and interfacing (uses) (McLendon, et.al 2006).

Table 15: Indicators Of Historic Preservation Which Relation to Quality Of Life and Livability (McLendon, et.al 2006).

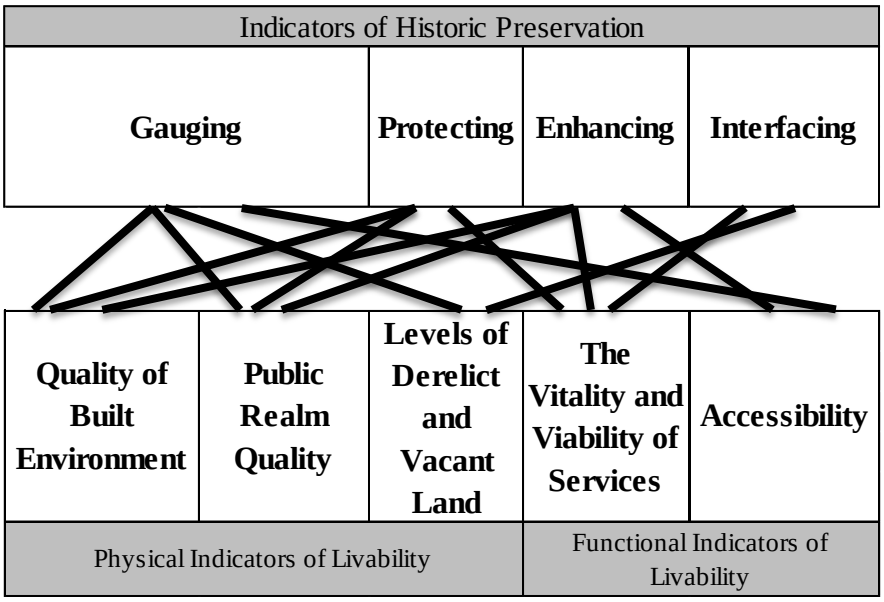
Indicators	Features
Gauging	**Historic fabric, Districts, structures, landmarks, Assessed property value trends, Historic district/property reinvestment.**
Protecting	**Historic preservation element/plan integration, Design guidelines, Historic preservation survey, Historic preservation commission, Preservation ordinances.**
Enhancing	**Historic preservation non-profits, Neighborhood participation, Main Street program.**
Interfacing	**Housing affordability, Heritage/cultural interactions, Business use, Community use factors.**

Gauging indicators are related to the number and type of historic resources in the area and community, protecting indicators are related to regulations and policies, enhancing indicators are related to cooperativeness and incentives and interfacing indicators are related to the uses and functions of property.

By evaluating the indicators of historic preservation and the physical and functional indicators of livability, it is visible that they had some connection and relation between them, for example: gauging indicators has relation and connection with quality of built environment (physical indicators), enhancing has relation with

vitality and viability of services (functional indicators) and interfacing has relation with accessibility (functional dimension) (Table16).

Table 16: The Relation Between Indicators Of Historic Preservation And Physical, Functional Indicators Of Livability.



By evaluating the Table 16, it revealed livability has relation and connection with historic preservation, so for reaching and evaluating the livability in historic area, the indicators of livability should be analyzed for measuring the livability of historic area, in following part the criteria and methodology of measurement will be explained.

Before mentioning the measurement of livability, in order to fully understand the relation between livability and historic preservation, two livable cities which had utilized historic preservation as a tool for reaching livability are examined and explained in the next part; these cities are Vienna and Melbourne.

2.7.4 Examples of Livable Cities and Historic Preservation

Vienna

According to the Economist 2010 rankings, Vienna is the second livable city. Vienna is the city of different activities such as museums public spaces and many other functions and activities. The main aim and approach of the city to reach the livability is mentioned below. (Allison. E. & Peters. L. 2011).

Appropriate and well-designed public transportation network and system.

Increase the safety in whole part of the city.

Well-designed public spaces

Keep the city clean and hygienic

Appropriate accessibility in whole part of the city with well-designed streets, road and highways.

Affordable housing units.

Appropriate educational facilities.

Preserve and keep historic buildings and sites.

Protect and preserve cultural resources. (Allison. E. & Peters. L. 2011).

As the main goal and approach of the Vienna as a livable city, it is shown that, the main indicators and elements of livability which stated in previous parts are mentioned and used in this city. For example the well-design public spaces is related to the physical dimension and related to the public realm quality which shown in

previous part that public realm quality has relation with indicators of historic preservation (gauging, protecting and enhancing) , the safety is related to the social dimension of livability, the clean and hygienic issue is related to the environmental quality which shown in previous part that quality of built environment has relation with indicators of historic preservation (gauging, protecting and enhancing), the good transportation and accessibility system is related to the functional dimension (accessibility), which shown in previous part that has relation with indicator of historic preservation (enhancing), affordable housing unit which is related to the main goal of livable movement, appropriate educational services which relates to the functional dimension and viability and vitality of services which shown in previous part that has relation with indicators of historic preservation (enhancing and interfacing). Also the most important element is paying extreme attention to preserving historic sites and cultural resources which manifests the connection between livability and historic preservation. This connection is clearly visible within Vienna's distinguishable physical character which differs from any other city in Europe.

Figure 14: Historic Center Of Vienna (Rehfeld. S)

Figure 15: Historic center of Vienna (Rehfeld. S)

Figure 16: Historic Center Of Vienna (Ko Hon Chiu. V)

Melbourne

Melbourne is elected as the third livable city according to the Economist 2010. In planning process, they defined and mentioned about the sustainability and livability characteristics. The main goal of the city is stated as: "Melbourne to be a thriving and sustainable City that simultaneously pursues economic prosperity, social equity and environmental quality" (State Planning Policy Framework, Melbourne, Australia)

The main approach and goal of the city is mentioned below:

To preserve and protect all historic buildings which has importance in the character of the city and area.

The further development of the city has positive effect and impact to the area and respects to the historical, social and architectural characteristic of the city.

Encourage and improve the protection and preservation of cultural value. (Allison. E. & Peters. L. 2011).

As the main approach and goal of the Melbourne city stated, it shows that they pay more attention and consideration to the historic preservation and use it as a tool to reach livability in the whole part of the city. They also considered cultural and heritage value of the city and planned future developments in accordance to cultural values to reach livability and to maintain the unique characteristic of city.

Figure 17: Albert Park, Has Many Heritage And Historical Buildings (australiavisanews.net)

Figure 18: Finders Station In Melbourne 1927 As A Landmark Of The city (melbourneourhome.blogspot.com)

2.11Measuring Livability

Measurement of livability is one the necessities for urban built environment. Also, to achieve the balanced development in all part of the cities, the measurement of livability is necessary. For example in UK the main focus and concept of livability and vitality is used to measure the city centers health. This mentions that whether people feel lively in city centers and whether it had capability and capacity for business and leisure activity (DoE, 1994, p. 55).

One of the necessities for cities is to create indicators to examine the changes that happen in city centers and down towns. These indicators represent and measure the development and improvement of revitalization plan in city centers and down towns

for public and private sector interests. Also the need of comprehensive agreement is on “who decide what to measure, why and how to measure it” (J.L. Balsas, 2004).

As stated in pervious parts, the main indicators of livability is mentioned and considered, in general to measure the livability level in city. These main indicators have to be measured and considered to determine the livability level in cities. These are quality of built environment, public realm quality, levels of derelict land, the vitality and viability of services and accessibility. Although the social indicators have also to be considered, the main focus of this study is on the functional and physical dimension of livability. By measuring the indicators which mentioned above, the livability level will be determined. Based on these findings, it will also determined in which parts, there is a lack of appropriate elements and parameters.

2.11.1 Methodology of Measuring Livability in Historic Area

Generally an indicator works as a tool to maintain data and vision and also “for analysis and decision making among urban actors”. In urban livability key performance indicators (KPI) act as necessary tool to “move a city center’s agenda forward”. It provides perspective of what happen in city center in certain time in future and also aid to measure the success of marketing actions (Kotval, 2001). These indicators varies in each cities and country, as Tomalin (1997) mentioned the idea of each cities have ‘core’ and ‘specific’ indicators, of which some indicators may be the same and usable in each cities and some of them may be variable for each cities (J.L. Balsas, 2004).

The criteria for measurement of livability in historic area are related to “What to measure” but the methodology for measurement is related to “how to measure”. Since the focus of the study is related to the physical and functional dimension of the livability and relation with historic preservation, the appropriate method for measuring is “questionnaire survey”, “interview” and observation.

For measuring the livability in a historic area, each parameter and indicator of livability that has a relation with historic preservations should be measured, and these relations are stated in previous part.

The information and data in this study is evaluated by the “Likert Scale”. As McCall stated one of the way to understand the needs and evaluate the problem is using the “Likert Scale”. The evaluation in “Likert Scale” is numerical and it could be evaluated for each element separately. Usually the evaluation in “Likert Scale” is divided into five parts, but for this study as it has been suggested by İstillozlu, an additional part will be added, as “not available” (İstillozlu, 2011).

In the following the criteria of measurement for each indicator is described, for determining the livability of historic area (Table 17).

Table 17 Public Realm Quality Measurement

Indicators of Public Realm Quality	Criteria ofIndicators	Measurement of Indicators					
		Not Available	Very Poor	Poor	Average	Good	Very Good
Condition and Maintenance	The overall structural condition of the building	0	1	2	3	4	5
	Degree of maintenance of buildings to public	0	1	2	3	4	5
Design	Well-designed public space	0	1	2	3	4	5
	Legibility of public space	0	1	2	3	4	5
	Sense of enclosure in area	0	1	2	3	4	5
User	A space for social interaction in area	0	1	2	3	4	5
	Fulfilling of area	0	1	2	3	4	5
	Relaxing in area	0	1	2	3	4	5
Function	Vitality and viability of area	0	1	2	3	4	5

As mentioned above for indicators, which has direct relation with historic preservation and provide the information to evaluate the livability in historic area, as showed “3” mentioned as “average” so the thirty one indicator is stated, then thirty one time three- ninety three, if the total result of the evaluation is 93 then the livability in this area is average, if it is below the 93, then the new guidelines, proposal plan and new policies should be considered. The very good has 5 points, so the total result will be 155, if the result is 155 the area is totally livable, so if the result is between 93 to 154, the area needs improvement , rehabilitation, conservation and revitalization plan should be considered. In table 18 the result needs interval are shown in general.

Table 18: Result Needs Interval In General

Livability Evaluation	Below Average	Above Average
Total Result	**0-92**	**93-154**
Vital Needs	**New guidelines, proposal plan and new policies**	**Improvement , rehabilitation, conservation and revitalization plan**

Chapter 3

CASE STUDY

Cyprus is located in the north east part of Mediterranean Sea. As being ruled by different conquerors, the island owned many different cultures, the Byzantine, Lusignan, Venetian, Genoese, Ottomans, Turks and Greeks. Intermitting culture reflected in a distinctive historical and cultural heritage, which makes up the unique identity of cities. After 1974 due to political reason, Cyprus is divided into two parts, the north part and the south part, Famagusta which is the case study of this research is located in the north part of the island. Generally there are four historic urban quarters in the north Cyprus, the Walled city of Famagusta; the Walled city of Nicosia; the Walled city of Girne (old harbor) and Lefke (Figure 19) (Doratli, N. 2000). The Walled city of Famagusta one of the four main parts of the city together with Asgai Maras area, which held and developed by the Greek Cypriot, Maras area, which closed due to political reason from 1974.The newly developing part in the North-West part; Figure 20 shows all the location of these parts (Onal, Dagli and Doratli, 1999). In this chapter firstly, overview of the history of Famagusta, then the result of questionnaire survey will be evaluated and at last the evaluation and measurement of the livability of the Walled city of Famagusta with an emphasis of the physical and functional dimension of livability will be presented.

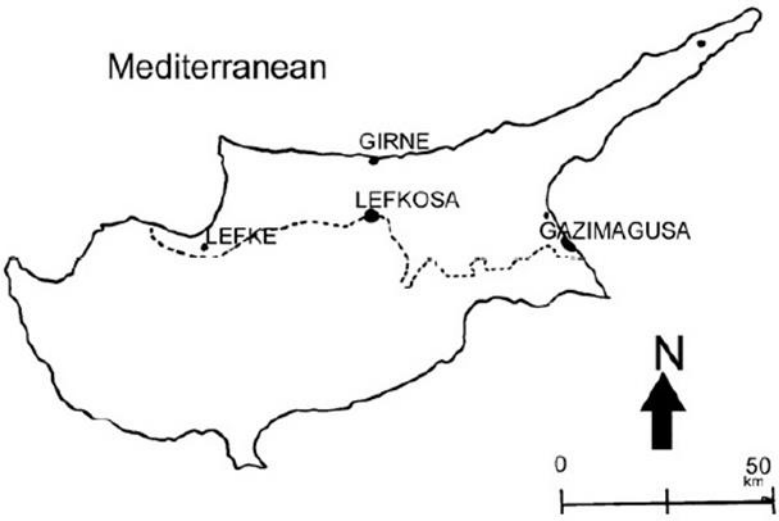


Figure 19: Locations of Historic Urban Quarters in the North Cyprus (Doratli, N. 2000)

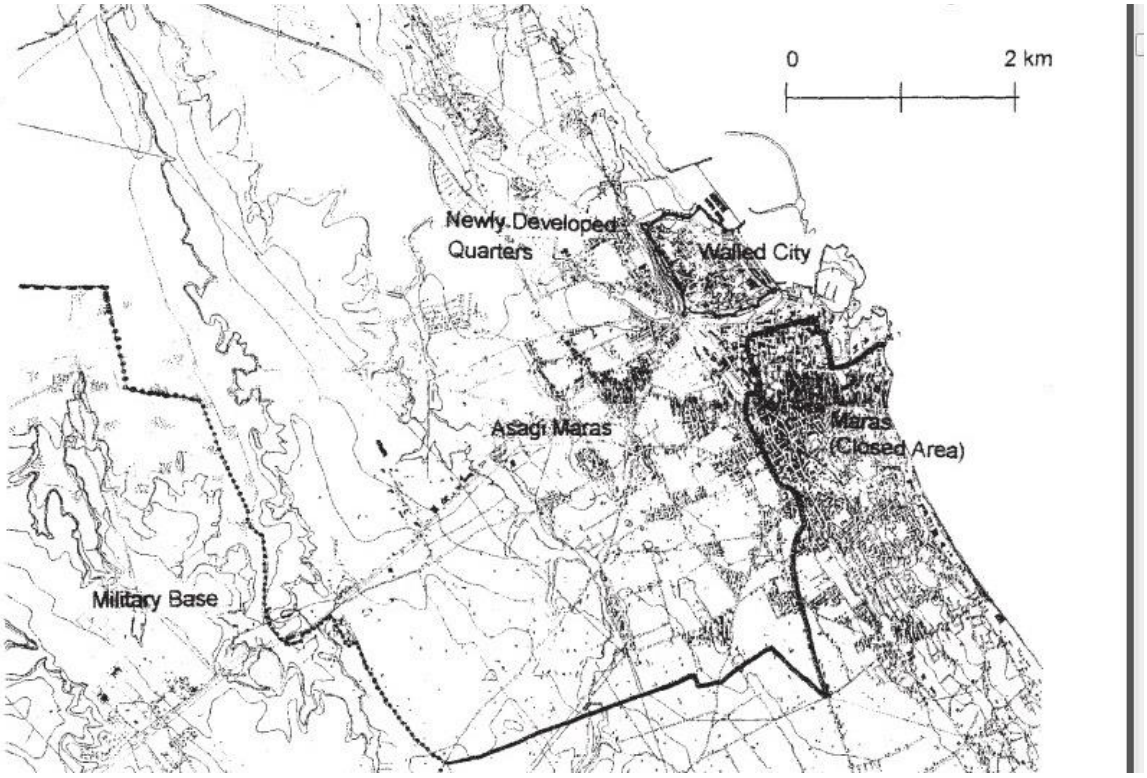


Figure 20: Districts of Famagusta (Onal, Dagli and Doratli, 1999)

3.1Historic Development of Famagusta

The historic periods of Famagusta is mentioned as: First foundation of city (648-1192), the Lusignan Period (1192-1489), the Genoese Period (1374-1464), the Venetian Period (1489-1571), the Ottoman Period (1571-1878), the British Period (1878-1960), Cyprus Republic (1960-1974) and after 1974, when the city is divided into North and South parts.

Famagusta was founded by Ptolemy II in 300 BC, and built on the ruins of ancient lagoon settlement of Arsinoe, after the attack by Arabs, the residents moved to the current city and develop and improved it to the commercial port. During the Lusignan period, Famagusta became a commercial town. During the Venetians period Famagusta became a military base. In the Ottoman period non-Muslim people were forced to live outside of Walled city and they moved to Varosha (Maras). Also, the economic activity and importance is reduced. The development inside the Walled is less than outside of Walled city because of some Islamic culture and many vacant lands. When British Empire took over the control of Cyprus, the Turkish and Greek people lived together and the Famagusta port is improved and developed, mostly the Turkish Cypriots lived inside the Walled city and Greek Cypriots outside the Walled city. The British built the administrative buildings between Walled city and Maras with an aim to develop another city center outside the Walled city (Onal, Dagli, & Doratli, 1999).

During the Republic of Cyprus period the municipality of the city is divided into two, one of them inside the Walled city for the Turkish Cypriots and the other one outside the Walled city for the Greek Cypriots. In this period city had good development and

improvement in Maras and Asagi Maras as tourism center, due to the war in 1969-1970 in Beirut as result, the Walled city felt behind the development and urbanization of Maras and Asagi Maras district. After the war (1974) Famagusta is faced with many problems and development of the city changed negatively until the establishment of the High Institute of Technology in 1979 which later known as Easter Mediterranean University (EMU). After this period the city started to develop towards the north (Onal, Dagli, & Doratli, 1999).

According to the census of 2006, Famagusta has 42526 population (http://en.wikipedia.org/wiki/Famagusta). The population of Walled city of Famagusta is According to the Famagusta Revitalization Plan, which was finalized in 2006 approximately 2250. According to this Plan, 149 of 941 houses is empty (15.9%), average household is 2.84 person, 19.2% of people who lived in the area has single dwellings, and 28.6% of people has two storey dwellings. The majority of the population is Turkish Cypriots (81%) and the rest of the population is foreigners (Famagusta Walled city, revitalization plan, 2006).

Character of Walled city of Famagusta

The Walled City of Famagusta have unique and distinct characteristic, these characteristic are mentioned below:

- 3,900 meters long huge city walls, surrounded around the city.
- Narrow streets descending down from the Middle Ages and having an organic structure;

- Monumental buildings belonging mostly to the middle Ages, which have managed to preserve their architecture, their materials of good quality and beautiful decorations.
- Single and two-story stone buildings having a unique architectural character and taking place especially in certain areas of the city;
- The ancient harbor, which is being used as a conventional one;
- Big open areas in the city;
- The storage buildings, which were constructed at the beginning of the previous century in the city and in the harbor to serve the harbor and which bear the features of the Colonial era; (Famagusta Walled city, revitalization plan, 2006).

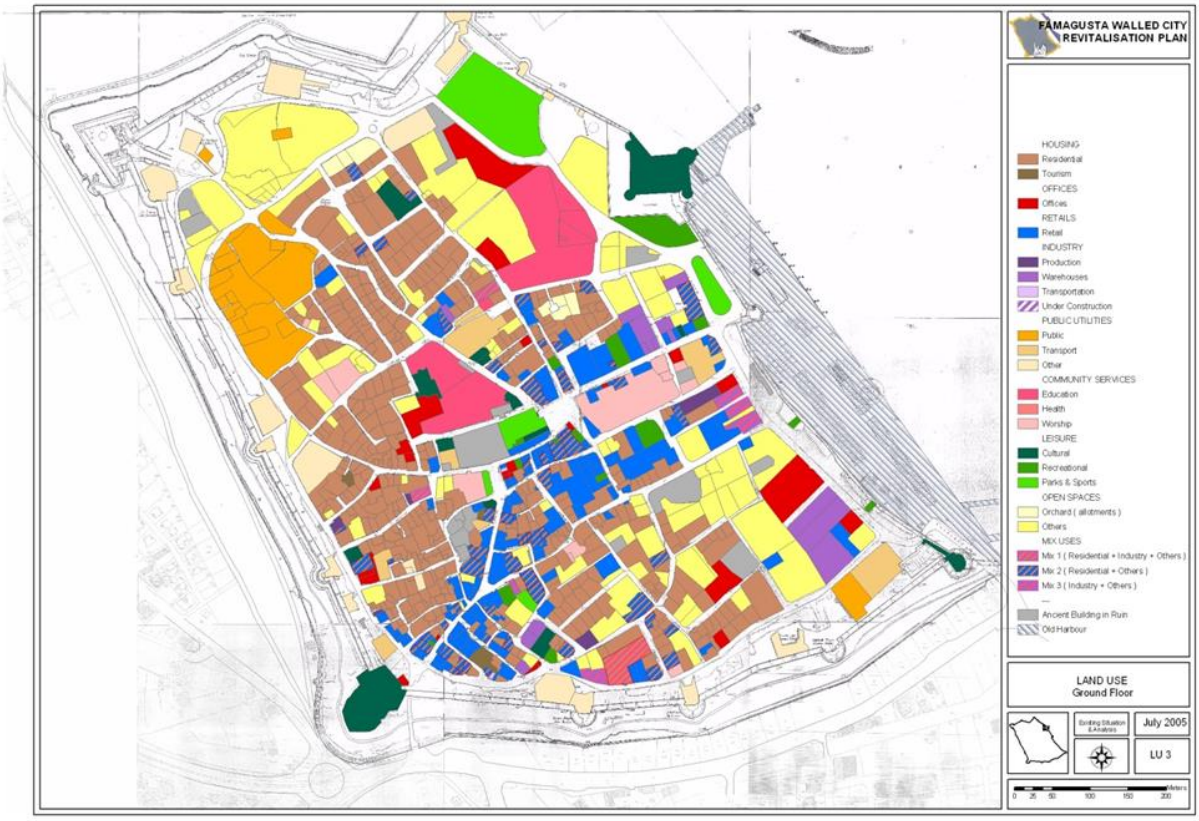


Figure 21The Land Use Map of the Walled City of Famagusta (Famagusta Walled city, revitalization plan, 2006).

According to the land use survey which was conducted by the students of EMU, Faculty of Architecture (1997-98), there is 820 houses, 539 units which related to commercial function such as: 240 shops with different activity, 8 banks, offices and storage building. Also there are 2 elementary school, library, cafes, restaurant and 3 mosques in Walled city of Famagusta (Doratli, Önal Hoşkara, Dağlı, 1999).

The total number of buildings in Walled City of Famagusta is 925(main and auxiliary). As the architectural evaluation map shows the buildings are divided in to six main categories except deformed old buildings (Figure 22). The first three categories are the building worth to be preserved due to the cultural and historical identity of area. Also the monumental building related to different periods of time which remain and stand in organic tissue of area. Due to the physical obsolescence,

Figure 22 Architectural Evaluation of the Area (Famagusta Walled city, revitalization plan, 2006).

The 50% of the buildings which belongs to first four categories are in poor physical condition (Doratli, Önal Hoşkara, Dağlı, 1999).

As the main focus of this study is livability in historic urban quarters, the case of this study is Walled city of Famagusta. According to the Walled city Revitalization Plan in 2006, the Walled city of Famagusta has nine zones; the zone which will be focused and analyzed in this study is the zone 1 of Walled city of Famagusta. The Zone 1 of Walled city of Famagusta is examined, because this zone has main historical buildings and main lively function is located in this zone (Figure 23).

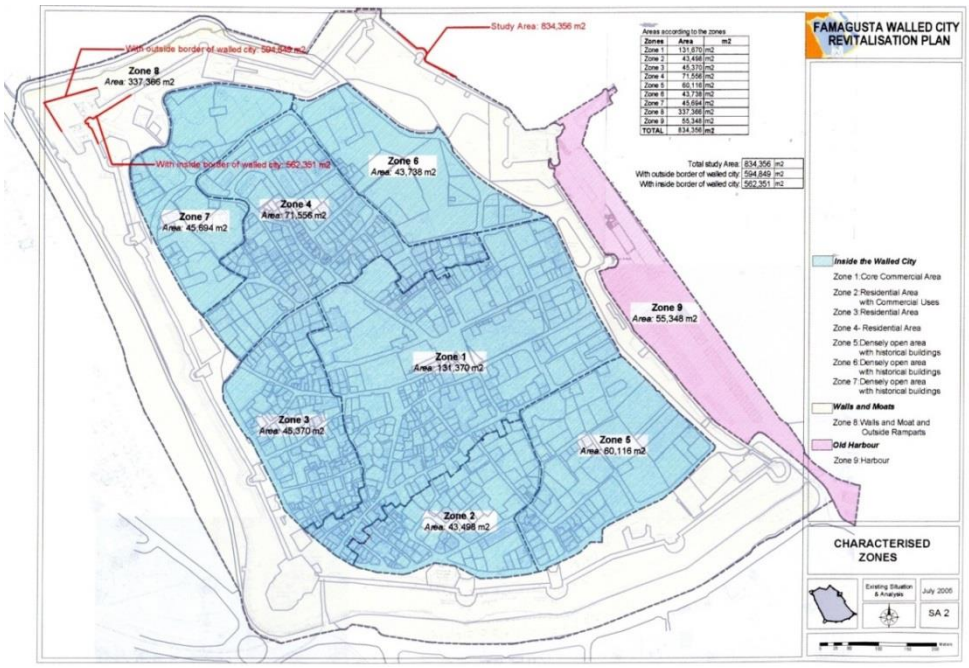


Figure 23: Different Zones of Walled City of Famagusta (Famagusta Walled city, revitalization plan, 2006)

Zone 1 of the Walled city of Famagusta is the biggest zone of the area and includes the commercial, governmental and cultural buildings and areas. The main lively activities and historic areas are located in this zone. The main axis of the zone 1 of the Walled city of Famagusta is: the Istiklal Street, Namik Kemal square and the road which goes to the harbor. Also on this axis, the main commercial activities and main historic buildings are located such as: "Lala Mustafa Pasha Mosque (St. Nicolas Cathedral), the Venetian Palace, The Church of Hospitaler and Templar, the Chimney House, old prison, residential units and Bandabuliya (Famagusta Walled city, revitalization plan, 2006).

3.2 Measuring the livability in Walled City of Famagusta

In this part, livability in Zone 1 of Walled city of Famagusta is evaluated according to the dimensions of livability which stated in chapter two, focusing on physical and functional dimension. The methodology of the evaluation consists observation, literature review and questionnaire survey. For some of the indicators which is related to people needs and suggestions, questionnaire survey is conducted for specific criteria such as: cleanness and health condition in area, noise level in area, safety level in area, feel of affection to area, the effectiveness of services in area, pedestrian ways condition in area and etc. These questions were asked to fifty people who lived and worked in Walled city of Famagusta especially the citizens who live in Zone 1 of Walled city of Famagusta. According to the census, the population of the Walled city of Famagusta is approximately 2250, and the population of Zone 1 according to the number of houses and commercial building, approximately 600 people, so the 50 people is 30% of total population of Zone 1 of the Walled city of Famagusta.

According to literature review in pervious chapter, for measuring the livability in historic urban quarters, with focusing on physical and functional dimension of livability, it is necessary to measure the quality of built environment, public realm quality, levels of derelict and vacant land, the vitality and viability of services and accessibility to reach the livability level in historic urban quarters. The criteria of measurement for each element which is mentioned above, after the measurement of each indicator and parameters, the total result of measurement is revealed then according to the average level for livability which is mentioned before, it makes possible to understand the livability level in Walled City of Famagusta. In the next

section, the measuring of quality of built environment as one of the physical dimension of livability is measured by observation, questionnaire survey and literature review methods and by the “Likert Scale” methods which is mentioned in previous chapter.

3.2.1 Measuring the Quality of Built Environment in Walled City of Famagusta

One of the physical parameters of livability is related to quality of built environment. For measuring the quality of built environment in Walled city of Famagusta, the indicators of quality of built environment have been utilized.

According to the literature review, the first indicator of quality of built environment is related to the green space, and according to the land use of the Zone 1 of Walled city of Famagusta which shown in Figure 26 below, the total area of green space in the area is 2627.4 m^2. 2% of the total area is green space and 5.68% of total built area is related to green space. So according to the above evaluation the ratio of green space to built surfaces, there is no sufficient green area for citizen and people who live in area or come to area, then for the measurement of green space, the green space level is poor and the green surface to built surface density is poor too.

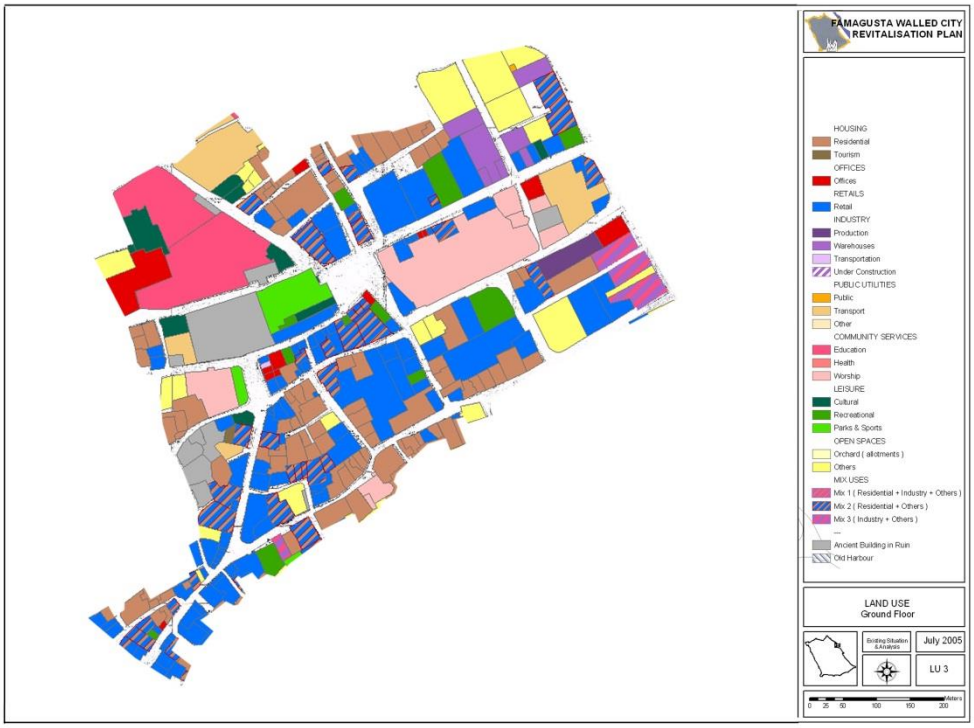


Figure 24: Land Use of Zone 1 of Walled City of Famagusta (Famagusta Walled city, revitalization plan, 2006).

The second indicator of quality of built environment is related in to density of area, the total built up area in zone 1 of Walled city of Famagusta is approximately 46232.11m^2 and the total area of the area is 131370m^2, so 35% of total area is built-up area. According to the evaluation, the density in zone 1 of Famagusta is average.

The third indicator of quality of built environment is related to clean environment. The questionnaire was distributed to 50 citizens of the area, according to the questionnaire and observation, the result is average (Table 19).

Table 19: Questioner Survey Result

Indicators of quality of built environment	Criteria ofIndicators	Measurement of Indicators					
		Not Available	**Very Poor**	**Poor**	**Average**	**Good**	**Very Good**
Clean Environment	**Municipality garbage collection**	**4%**	**18%**	**14%**	**38%**	**20%**	**6%**

The fourth indicator of quality of built environment is related to noise and safety in area. According to the questionnaire survey and observation, the safety of area is poor and the noise level of area is average (Table 20).

Table 20: Questionnaire Result about Noise and Safety

Indicators of quality of built environment	Criteria ofIndicators	Measurement of Indicators					
		Not Available	**Very Poor**	**Poor**	**Average**	**Good**	**Very Good**
Noise and Safety	**Noise level in area**	**6%**	**20%**	**26%**	**30%**	**16%**	**2%**
	Safe walking throughout the day	**6%**	**14%**	**28%**	**24%**	**20%**	**8%**

The last indicator of quality of built environment is related to visual character, according to the observation in area, chaotic use of advertisement signs which cover facades of traditional shops , as well as low quality of contrasting new buildings have a negative impact on the visual character. The other reason is lack of attention and usage of traditional material in the new façades of buildings which also has a negative effect on the visual character. The figure25 and 26 shows the façade and building in the area, Figure 27 shows the advertisement signs in area. So the visual character in area according to the reason which mention above is poor and the harmony in façade is poor too.

Figure 25: Contrasting Buildings next to monumental area

Figure 26: Structural Condition in Walled City Of Famagusta

Figure 27: Shops Advertisement Which Makes Negative Effect in Visual Character

The overall results for the quality of built environment are shown in Table 21, the red column represents the evaluation, based on observation, information from the Revitalization Plan and the numbers in columns represent the questionnaire survey result.

Table 21: Overall Results of Measurement for the Quality of Built Environment

Indicators of quality of built environment	Criteria ofIndicators	Measurement of Indicators					
		Not Available	**Very Poor**	**Poor**	**Average**	**Good**	**Very Good**
Green Space	**Ratio of green space to built surfaces**						
	Green surface to built surface density						
Density	**Total builtup area to site area**						
Clean Environment	**Municipality garbage collection**	**4%**	**18%**	**14%**	**38%**	**20%**	**6%**
Noise and Safety	**Noise level in area**	**6%**	**20%**	**26%**	**30%**	**16%**	**2%**
	Safe walking throughout the day	**6%**	**14%**	**28%**	**24%**	**24%**	**6%**
Visual Character	**Building materials, Colour and texture**						
	Harmony in façade of the building						

According to the Table 21 the clean environment, noise level in area and total built up area is at an average level and the other indicators is at poor level, so it could be concluded that the quality of built environment is at a poor level.

3.2.2 Measuring the Public Realm Quality in Walled City of Famagusta

Public realm quality is one of the physical parameters of livability, for measuring the public realm quality, the indicators of public realm quality should be measured.

According to literature review, the first indictor of public realm quality is related to condition and maintenance of building. According to observation and evaluation of buildings in Zone 1 of Walled city of Famagusta, it is understandable that the buildings are in poor condition especially in the residential part, considering the low quality of municipal houses and refugee houses. The maintenance of buildings is normally done by the owner of the buildings which is rarely done, (Figure 28, 29 and 30). Also for measuring the degree of maintenance according to the literature review of this study the feel of affection to the area should be measured, for the measurement of the feel of affection to the area, questionnaire survey is conducted (Table 22).

Table 22: Questionnaire Result about Feel of Affection to the Area

Indicators of Public Realm Quality	Criteria ofIndicators	Measurement of Indicators					
		Not Availabl e	**Very Poor**	**Poor**	**Average**	**Good**	**Very Good**
Condition and Maintenance	**Feel of Affection to the place**	**0%**	**18%**	**16%**	**44%**	**12%**	**10%**

According to the questionnaire result the feel of affection to the place is average.

Figure 28: Condition of Buildings

Figure 29: Maintenance of Buildings

Figure 30: Maintenance of Buildings

The second indicator of public realm quality is related to the design of area, which would be measured by the criteria legibility, well-designed public space and sense of enclosure in area.

For measuring the legibility of area, the lynch analysis should be conducted to understand the legibility of area. According to Lynch, legibility of the place defined

and characterized by the people understanding the place, which is shown by the mental map and image of the place. (Long, & Baran, 2012). (Figure 31).

Figure 31: Lynch Analysis of Walled City Of Famagusta

As shown in lynch analysis, the Walled city of Famagusta has well-design edges (the Walls), the Lala Mustafa Pasha Mosque could be a land mark of area, due to the shape and location of the building; the organic street pattern which makes the stranger lost in place, is without any specific and well-designed signage system. The area has a main node (Namik Kemal Square), which is located in front of the Venetian palace. In this node the interaction between vehicle and pedestrian is visible, in overall the legibility in the area could be average.

Due to the disorganized open spaces which result in low quality of public spaces, unfavorable intervention to the buildings and lack of recreational areas & other facilities, the Walled city of Famagusta does not have well-designed public spaces to invites people and citizens and increase the livability in area.

Generally a sense of enclosure provides and maintains a semi-private realm to be like an outdoor living room, also, brings safety and security in area. To achieve the sense of enclosure in area, it is necessary that the ratio of height of buildings “in proportion to the width of intervening public space”. The definite ratio depends on the street or open space type and it may be variable (Table 23) (Haile, 2012).

Table 23: Height to Width Ratio (Haile, 2012)

Types	Maximum	Minimum
Minor Street. E.G MEWS	1 . 1.5	1. 1
Typical Street	1. 3	1. 1.5
Squares	1.6	1.4

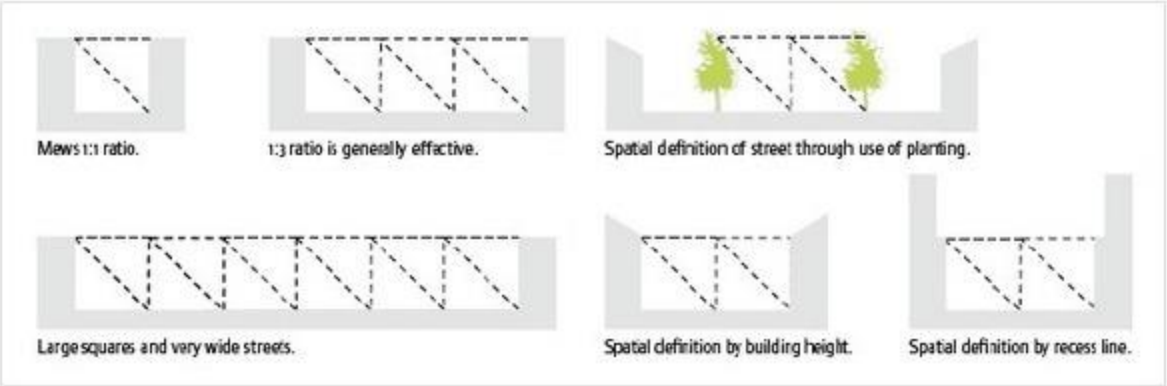


Figure 32: Illustration of the Ratio (Haile, 2012)

According to what mentioned above and observations, the sense of enclosure is good in Walled city of Famagusta, because the height ratio of building is appropriate Also in residential part, the height of building and width of street is compatible, which provides a good sense of enclosure. So the sense of enclosure in area is good (Figures 33, 34 and 35).

Figure 33: Namik Kemal Square as a PUBLIC SPACE

Figure 34: Namik Kemal Square as a PUBLIC SPACE

Figure 35: Sense of Enclosure in the Residential Part

The third indicator of public realm quality is related to user, which measures the spaces for social interaction, fulfilling in area, which means that the area can fulfill and perform the needs of the user. According to the questionnaire survey these result are achieved (Table24).

Table 24: Questionnaire Result about User Indicators

Indicators of Public Realm Quality	Criteria ofIndicators	Measurement of Indicators					
		Not Available	**Very Poor**	**Poor**	**Average**	**Good**	**Very Good**
User	**A space for social interaction in area**	**4%**	**14%**	**28%**	**24%**	**24%**	**6%**
	Fulfilling of area	**0%**	**10%**	**38%**	**16%**	**26%**	**10%**
	Relaxing in area	**0%**	**18%**	**16%**	**44%**	**12%**	**10%**

As the Table 24 shown, according the questionnaire survey, the space for social interaction is poor, the fulfilling area which related to the gauge of the area to perform and fulfill the user needs is poor and relaxing area is average.

The last indicator of public realm quality is related to function, which measures the vitality and viability in area. In this area because of the lack of proper function and variety of function in public spaces and lack of plan and management to create proper function, the vitality and viability in area in in poor level.

In Table 25 the overall measurement of public realm quality are shown.

Table 25: Overall Measurement of Public Realm Quality

Indicators of Public Realm Quality	Criteria ofIndicators	Measurement of Indicators					
		Not Available	**Very Poor**	**Poor**	**Average**	**Good**	**Very Good**
Condition and Maintenance	**The overall structural condition of the building**						
	Degree of maintenance of buildings to public						
Design	**Well-designed public space**						
	Legibility of public space						
	Sense of enclosure in area						
User	**A space for social interaction in area**	**4%**	**14%**	**28%**	**24%**	**24%**	**6%**
	Fulfilling of area	**0%**	**10%**	**38%**	**16%**	**26%**	**10%**
	Relaxing in area	**0%**	**18%**	**16%**	**44%**	**12%**	**10%**
Function	**Vitality and viability of area**						

3.2.3 Measuring the levels of Derelict and Vacant Land and Buildings in Walled City of Famagusta

The last parameter of physical dimension of livability is related to levels of derelict and vacant land. For measuring the levels of derelict and vacant land, the indicators should be measured.

According to literature review, the first criteria for measuring the level of derelict and vacant land are related to ratio of vacant area to built-up area. The total vacant land in area is 8539.05m^2 which means that 6.5% of total area is vacant land and the area of built-up area is 46232.11m^2. So the ratio of vacant land to built-up area is 18.46%. So the vacancy rate at a good level.

3.2.4 Measuring the Vitality and Viability of Services in Walled City of Famagusta

One of the parameters of functional dimension of livability is related to vitality and viability of services. For measuring the vitality and viability of services, the indicators of vitality and viability of services are measured.

According to literature review, the first indicator of vitality and viability of services is related to commercial yield on non-domestic property, which is measured by the number of commercial building in the area. According to observation and land use map, the majority of commercial building is located in Istiklal Street, although they had no variety of functions but the number of commercial buildings in the area is good. The Figure 36 shows the land use map of area and the mass of commercial building in area.

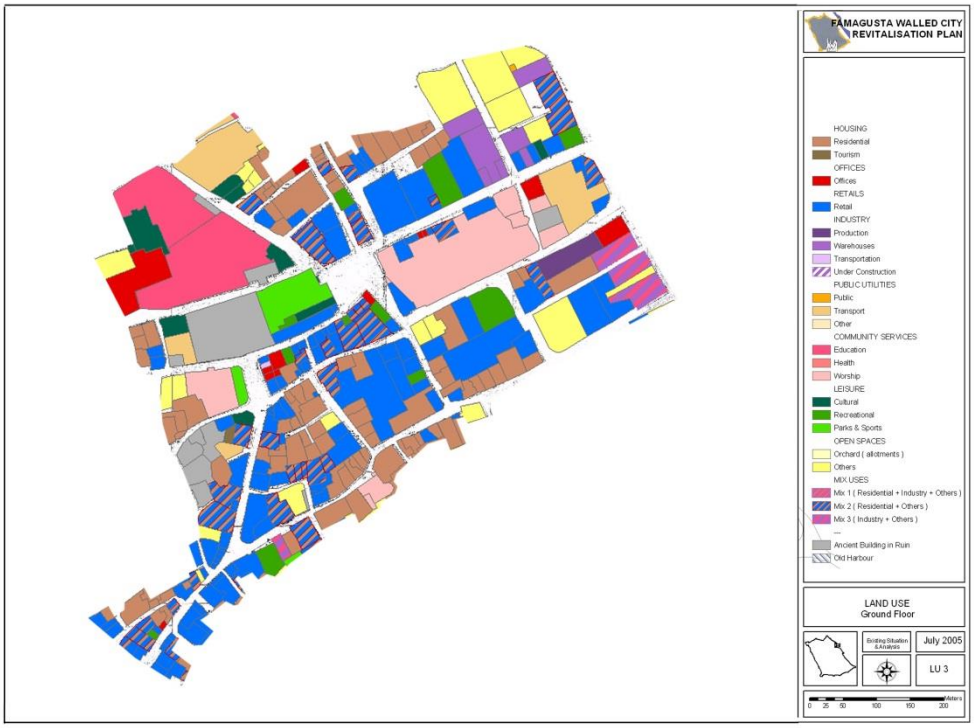


Figure 36: Land-Use Map of Area and The Commercial Building In Area (Famagusta Walled city, revitalization plan, 2006).

The next indicator of vitality and viability of services is related to diversity of uses, which is measured by variety of function in area and the other of is related to effectiveness of services which related to customer views , for measurement of these two indicators, questionnaire survey is conducted, (Table 26).

Table 26: The Results of Questionnaire about Diversity of Uses and Customer Views

Indicators of Public vitality and viability of services	Criteria ofIndicators	Measurement of Indicators					
		Not Available	**Very Poor**	**Poor**	**Average**	**Good**	**Very Good**
Diversity of uses	**The variety of function in area**	**4%**	**40%**	**36%**	**12%**	**6%**	**2%**
Customer views	**The effectiveness of services in area**	**6%**	**26%**	**34%**	**16%**	**18%**	**0%**

According to the questionnaire results, the diversity of uses is very poor and the effectiveness of services is poor.

The next indicator of vitality and viability of services is related to business representation and intentions to change representation, which is measure by frequency of change of the business area. According to observation as well as the lack of variety function which stated before, the changing function is not visible, so the measuring result could be very poor.

The next indicator of vitality and viability services is related to the physical structure of area, and according to the observations, obsolescence in some parts of many buildings is visible, low quality of building, underutilization, and low level of quality of buildings the physical structure is in poor condition. In overall some of the historic/cultural buildings are in bad condition and deserted and disobedience to the common rules of shared life in a city; and dirty, unplanned development which makes individualistic and bad interventions, lead to the formation of physical structures in contrast to the main fabric of the city, lack of a master physical plan covering the whole country and lack of regional and local planning (Figure 37 and 38).

Figure 37: Physical Structure of Area

Figure 38: Physical Structure of Area

The last indicator of vitality and viability of services is related to proportion of vacant street-level property in the primary retail area, which is measured by the rate of vacancy in the commercial area. According to land-use map of area the vacancy rate in commercial zone is rare, although the second floor of building is usually vacant but in overall the vacancy in this area is observed just in first floor is good. Table 27 shows the measuring the vitality and viability of services as whole.

Table 27: Overall Measurement of the Vitality and Viability of Services

Indicators of Public vitality and viability of services	Criteria ofIndicators	Measurement of Indicators					
		Not Available	**Very Poor**	**Poor**	**Average**	**Good**	**Very Good**
Commercial yield on non-domestic property	**The number of commercial building of area**						
Diversity of uses	**The variety of function in area**	**4%**	**40%**	**36%**	**12%**	**6%**	**2%**
Physical structure of the centre	**Physical structure in center**						
Business representation and intentions to change representation	**Frequency changing of business in area**						
Proportion of vacant street-level property in the primary retail area	**The vacancy rate in commercial zone of area**						
Customer views	**The effectiveness of services in area**	**6%**	**26%**	**34%**	**16%**	**18%**	**0%**

3.2.5 Measuring the Accessibility in Walled City of Famagusta

One of the parameters of functional dimension of livability is related to pedestrian journey and public transportation quality which in this study mentioned together as accessibility. For measuring the accessibility, the indicators of accessibility should be measured. Because of the available data of measurement of accessibility for whole Famagusta, street sidewalk, segregated bike lanes and integration of modes are eliminated from the measurement of accessibility for this study (Table 28).

Table 28: Measurement of Accessibility (İstillozlu, 2011).

Indicators of Accessibility	Criteria ofIndicators	Measurement of Indicators					
		Not Available	**Very Poor**	**Poor**	**Average**	**Good**	**Very Good**
Vehicular Accessibility	**Public transportation**						
	Transport Infrastructure						
Non-vehicular Accessibility	**Pedestrian ways**						
Streetscape	**Street furniture/ Landscape elements**						
	Cleanliness						
	Car parking						
Safety of Roads	**Safe sidewalks**						

The first indicator of accessibility is related to vehicular accessibility, which is measured by public transportation in area and Transport Infrastructure in area. As long as the whole city does not have any proper public transportation system except the Eastern Mediterranean University (EMU) services which is used often by citizen too, so the public transportation is not available and the transport infra-structure is at average level according to the accessibility map of the area (Figure 39).

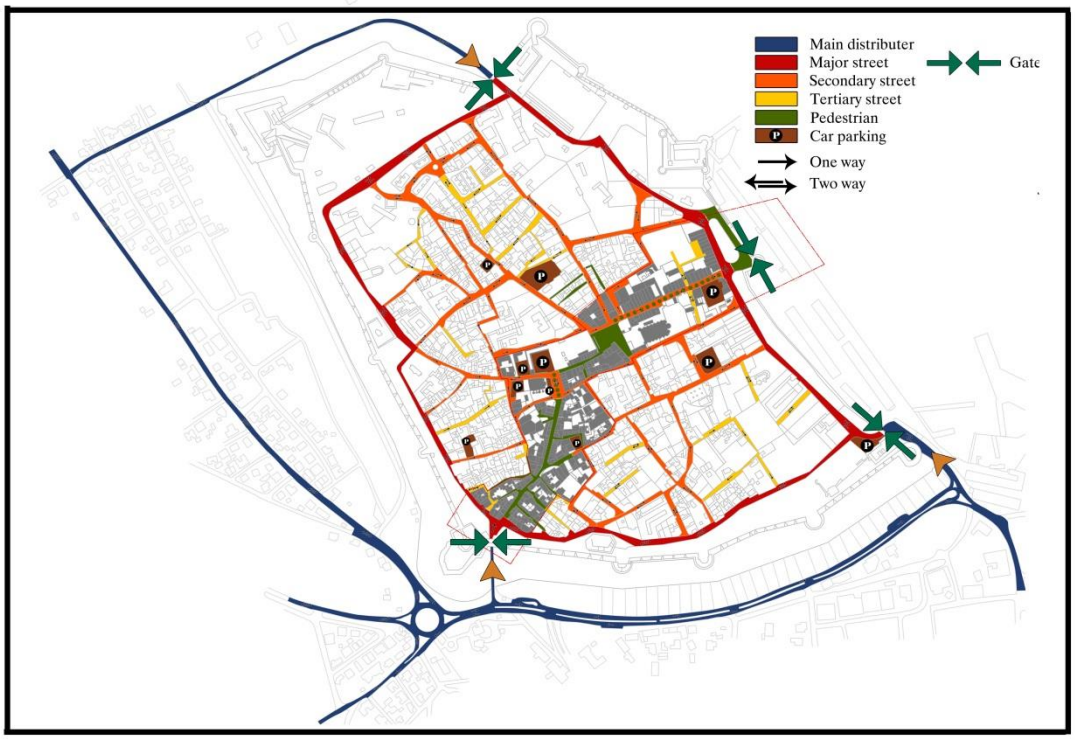


Figure 39: The Accessibility Map of Walled City Of Famagusta

The second indicator of accessibility is related to non-vehicular Accessibility, which is measured by street sidewalk types and pedestrian ways For street sidewalks, as long as the area is a walkable place beside of some places has interaction between pedestrian way and vehicle, it could be average for street type sidewalk and for pedestrian ways the questionnaire survey is conducted (Table 29).

Table 29: Questionnaire Result of Pedestrian Ways

Indicators of Accessibility	Criteria ofIndicators	Measurement of Indicators					
		Not Availabl e	**Very Poor**	**Poor**	**Average**	**Good**	**Very Good**
Non-vehicular Accessibility	**Pedestrian ways**	**4%**	**16%**	**20%**	**40%**	**18%**	**2%**

According to the Table 29 the condition of pedestrian way is average.

The third indicator of accessibility is related to streetscape and measured by street furniture and car parking in area. According to the land use map the car parking condition is average for area and for street furniture questionnaire survey is conducted (Table 30).

Table 30: Questionnaire Result of Street Furniture and Landscape Elements

Indicators of Accessibility	Criteria ofIndicators	Measurement of Indicators					
		Not Availabl e	**Very Poor**	**Poor**	**Average**	**Good**	**Very Good**
Streetscape	**Street furniture/ Landscape elements**	**4%**	**20%**	**38%**	**22%**	**16%**	**0%**

According to the questionnaire result, the condition of street furniture and landscape elements is poor.

The last indicator of accessibility is related to safety of roads. For safety sidewalks the questioner survey is conducted. Table 40 shows the questionnaire result.

Table 31: Questionnaire Result of Safe Sidewalks

Indicators of Accessibility	Criteria ofIndicators	Measurement of Indicators					
		Not Availabl e	**Very Poor**	**Poor**	**Average**	**Good**	**Very Good**
Safety of Roads	**Safe sidewalks**	**4%**	**28%**	**32%**	**22%**	**12%**	**2%**

According to questionnaire results, the safe sidewalks are poor. One of the main reason is related to the interaction the vehicular and pedestrian path together and riding the motorcycle in pedestrian path, which during the questioner survey mentioned by the people. Figure 40, 41 and 42 shows these interaction and motorcycle riding.

Figure 40: Interaction between Pedestrian Vehicular Movements

Figure 41: Riding the Motorcycle in Pedestrian Path

Figure 42: Vehicle and Motorcycle in Pedestrian Path

All of the measurements for accessibility in area are shown in Table 41.

Table 32: Overall Measurement of Accessibility Indicators

Indicators of Accessibility	Criteria ofIndicators	Measurement of Indicators					
		Not Available	**Very Poor**	**Poor**	**Average**	**Good**	**Very Good**
Vehicular Accessibility	**Public transportation**						
	Transport Infrastructure						
Non-vehicular Accessibility	**Pedestrian ways**	**4%**	**16%**	**20%**	**40%**	**18%**	**2%**
Streetscape	**Street furniture/ Landscape elements**	**4%**	**20%**	**38%**	**22%**	**16%**	**0%**
	Car parking						
Safety of Roads	**Safe sidewalks**	**4%**	**28%**	**32%**	**22%**	**12%**	**2%**

3.2.6 Total Results of the Measurement

According to the measurement and evaluation of the physical and functional dimension of livability in Walled city of Famagusta the measurement for all of the parameters which related to physical and functional dimension are achieved, the total result of measurement is 70 and the average result should be 93, so the measurement for zone 1 of Walled city of Famagusta is below average. From this measurement it is understandable that the Zone 1 of Walled City of Famagusta is not livable and the result of measurement is below average (Table 33).

Table 33: Total Result of Livability Measurement of Zone 1of Walled City Of Famagusta

Livability Evaluation	Below Average	Above Average
Total Result	**0-92**	**93-154**
Vital Needs	**New guidelines, proposal plan and new policies**	**Improvement , rehabilitation, conservation and revitalization plan**

According to the Table 33 and measurement result, it is below the average, so for reaching livability in Zone 1 of Walled City of Famagusta, as the table shown, it is necessary to propose new guidelines, proposal plans and new policies should be conducted to achieve the minimum livability in area.

At last, according to the Table 15 and the result of measurement of livability in Zone 1 of Walled city of Famagusta, it could be revealed that by using the indicators of historic preservation (gauging, protecting, enhancing and interfacing) and relation which shown in Table 16, it is possible to improve physical and functional dimension

of livability and increase the overall livability level in the Walled city of Famagusta. It is understandable that due to the existing historic heritage and, by historic preservation of the Walled city of Famagusta, the livability level in the area could be increased and it could act as tool and linkage to lead the area to livable place.

Chapter 4

CONCLUSION

Introductory research on livability concept revealed that it has relation with quality of life and quality of place. The dimension of livability by focusing on physical and functional dimension as the limitation of the study is stated. Accordingly the livability in historic urban quarters and the relation between historic preservation indicators and livability dimension and indicators is mentioned in detail. At last the measurement of livability with focusing on physical and functional dimension is revealed in this study.

In chapter 2 of this study, the main concept and general definition of livability is concerned, also the relation between the livability and quality of life, components of quality of life and the relation between livability and quality of place described in detail. Moreover according to Yeang the dimension of livability is stated by focusing of the physical and functional dimension. Then the livability in historic urban quarters and relation between physical and functional dimension of livability and historic preservation is shown with two examples for more understanding the concept of these relations. At last the measuring livability in historic urban quarters with indicators and criteria of measurement is described.

In chapter 3, Zone 1 of Walled city of Famagusta is taken as the case study, and the livability with focusing in physical and functional dimension is measured by the

method which stated in chapter 2. Also for some indicators the questionnaire survey is conducted with 50 people who lived in Zone 1 of Walled city of Famagusta. By measuring the result of each indicator by the criteria of measurement, it revealed that the livability is below the average in Zone 1 of Walled city of Famagusta. So according to the methodology of measurement which is mentioned in chapter 2, it is necessary to propose new guidelines, proposal, revitalization plan and new policies to increase the livability level in Zone 1 of Walled city of Famagusta, but according to the focus and limitation of the study which mention about physical and functional dimension of livability, so in this part described recommendation and suggestion to increase the livability level in Zone 1 of Walled city of Famagusta by focusing on physical and functional dimension of livability.

To increase the livability level in Walled city of Famagusta, the following recommendations and suggestions should be taken into consideration, which are divided into two groups: physical and functional.

Physical:

- Increase the green space area to provide the opportunity for people to come to these areas, and by increasing the social interaction to reach the proper livability level.
- Increase the cleanness and hygienic elements of area to be pleasant for citizens.
- Decrease the noise level in area by placing the noise generating activities and function in proper place, also increase the safety level of area.

- Encourage and promotes construction companies and builders to use the proper material for the building to reach the proper texture in area and harmony in façade.
- Propose a well-designed public space for area to provide a place for people to come and spend their free time,
- Proposing a variety of function and utilizations to keep the public place livable and active.
- Providing a place for people and citizen who they could be relaxed there, and proposing some places for social interaction.
- Preserving the historic buildings and area to keep the characteristic and identity unique and reach the livability.

Functional:

- Increase the variety of function in the whole area to invite diversity of users to come to place and keep the place livable and active.
- Propose proper and appropriate function and activities in vacant land and building to reach the proper livability level by diversity of function in vacant and derelict land.
- Improving the effectiveness of services in commercial zone and provide new facilities and functions in these areas to keep the citizens and user satisfy in area.
- Try to avoid keeping the vacancy building and land in commercial area to increase the livability.

- Propose the proper public transportation facilities to provide public services for citizens and people.
- Propose the cycling ways in area to attract variety of people to come to area and increase the livability.
- Propose well-designed and compatible street furniture and landscape elements to increase the street scape level and also livability level.
- Increase the pedestrian path and pavement elements to increase the walkability in whole area and reach the livability.
- Increase the safety in pedestrian path to increase the walkability and livability level in area.
- By proposing the proper function for historic buildings to reach the diversity of function and users.

All these suggestion and recommendation may contribute to reach the proper livability level in Zone 1 of Walled city of Famagusta.

Based on the evaluation of dimension of livability, it could be revealed that, for measuring the livability in area, all dimension and indicators (Social, physical, functional and environmental) has to take into consideration and evaluate, for reaching the livability in area, although the social dimension could be individually introduced as topic of another thesis, but as mentioned in limitation of the study, when considering the built environment as a sort of "container" in which all other social, economic and cultural issues happen, it can be claimed that understanding the physical and functional dimensions would be given priority in terms of determining the livability of a specific place. At last by using the theoretical framework which is

mentioned in this study, it could convey to an understanding of livability level of the area approximately.

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APPENDIX

Appendix A:

Gender: Age:

Please grade each option with the number 0 to 5, 0 represent not available, 1 represent very poor, 2 represent poor, 3 represent average, 4 represent good and 5 represent very good.

Indicators	Measurement of Indicators					
	Not Available	**Very Poor**	**Poor**	**Average**	**Good**	**Very Good**
Cleanness and health condition in area						
Noise level in area						
Safety level in area						
Has a space for social interaction						
Feel affection to the place						
The effectiveness of services in area						
The variety of shops and restaurant in area						
Pedestrian ways conditions in area						
Street furniture condition in area						
Safe sidewalks						