

**Role of Adaptive Re-use of Buildings in the
Revitalization Process of the Historic Quarters: The
Case of the Walled City of Famagusta**

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ABSTRACT

At some point in its lifespan, every building will lose the purpose for which it was built and may become obsolete in terms of its function. These obsolete buildings will have a negative effect on both the character of buildings and the area, in which they are located. Adaptive reuse, which is adaptation of this kind of building to a new function or use, on a large scale can create a new confidence through a deliberate functional diversification and/or restructuring and promote revitalization of the historic urban quarters. This action gives an impulse to both the building and its environment.

Warehouses, which are located in the historic Walled City of Famagusta, with good and improving access and connectivity, with their large floor area, high ceilings, strong floor which would play a significant role in the revitalization of the historic area, became vacant or are under-utilized, due to various reasons.

Depending on certain conditions, as any type of building the Warehouses can also adapt to a new function which can be referred to the most appropriate reuse. In the Revitalization Plan of the Walled City of Famagusta, which has been prepared by the Famagusta Municipality in 2005, these warehouses have been considered as the robust and suitable buildings for conversion to various alternative uses to promote the area; thus, some alternative reuse were proposed for them. In this thesis all of these proposals have been re-evaluated according to six criteria in order to determine the most appropriate reuse for these warehouses.

Keywords: Revitalization, Historic Quarters, Adaptive Reuse, Industrial buildings+
Warehouses, Walled City of Famagusta.

ÖZ

Her bina kendi yaşam sürecinde amacını ve fonksiyonunu kaybedip terkedilebilir. Terkedilen binaların kendilerine ve çevrelerine olumsuz etkileri vardır. Yeniden kullanım, binalara yeni fonksiyon veren veya yeniden kullanımını sağlayan işlev, büyük ölçekte fonksiyonel çeşitlilik ve/veya yeniden yapılandırma sağlayarak tarihi kentsel alanların canlandırılmasını sağlar. Bu eylem, bina ve içinde bulunduğu çevreye önemli bir katkı sağlar. Gazimağusa Sur-içinde yer alan depo binaları, kolay ulaşımı, geniş alan, yüksek tavan, güçlü zemin gibi özellikleri ile, tarihi alanın bölgelerinin yeniden tanıtılmasını sağlar. Yapılan yeniden kullanım işlevi binaya ve anlandırılmasında önemli rol oynama potansiyeline rağmen, çeşitli nedenlerden dolayı boş yada atıl durumdadırlar.

Belirli koşullara bağlı olarak, diğer binalar gibi, depo binalarının da türüne uygun olarak yeni bir fonksiyon verilebilir. 2005 yılında hazırlanan Gazimağusa Suriçi Canlandırma Projesi kapsamında, endüstriyel ambarlar, bölgenin canlandırılmasında çeşitli alternatif kullanımlar için güçlü ve uygun olarak belirlenmişlerdir. Bu nedenle bazı alternatif yeniden kullanım fonksiyonları depo binaları için önerilmiştir. Bu tezde en uygun yeniden kullanımı belirlemek için, tüm öneriler altı kritere göre yeniden değerlendirilmiştir.

Anahtar Kelimeler: yeniden canlandırma, tarihi bölge, yeniden kullanım, endüstriyel yapılar+ depo binaları, Mağusa Surlariçi.

To my Family

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Chapter 1

INTRODUCTION

1.1 Introduction

Historic urban quarters are the known places in cities where a numerous variety of historic and cultural values have occurred and equip memories of their own origins. These invaluable structures are more and more threatened with decline from both “the normal processes of deterioration and changing social and economic condition” (Doratli, 2012) and become obsolete. The walled city of Famagusta which is a well-known historic quarter in Cyprus with a strong historical identity is not an exception with this regard and some of its buildings became obsolete in structural and functional terms. Due to this obsolescence, the historical buildings and quarters fall into deterioration.

Keeping this in mind, Oktay (2005, p.98) states that revitalization, which is the best way to overcome various types of obsolescence, is indispensable for sustainable urban conservation. The process of revitalization not only results in enhancement in physical terms but also brings social and economic vitality (Doratli et- al., 2004). Thus, for achieving this goal, intervention in historical buildings as well as in the area is needed. These interventions to the buildings and the area can sort from basic preservation to demolition and between these two interventions there are other ones such as rehabilitation, renovation, remodeling and restoration (Douglas, 2006; Fitch, 1990).

Tiesdell et al., (1996) sorted the 'rehabilitation' as a level of intervention in terms of refurbishment and conversion (adaptive reuse). This intervention can be used for a building which fell into structural and functional obsolescence. Adaptive reuse (conversion) of buildings, which is the main focus of this study, is described by Fitch (1990, p. 46-47) as the only economic way through which old buildings can be saved, by adapting them to new uses. This organization of space may call for other levels of intervention as well. However, it should be kept in mind that revitalization of a historic urban quarter should be more comprehensive rather than focusing on an individual building (Doratli, 2012). This sort of intervention (adaptive reuse) when occurs in a big area will change the function of the quarter which is referred to as functional restructuring or a more limited restructuring that brings in new uses able to support the quarter's existing economic base, has been termed a functional diversification.

In this thesis among the various types of buildings for re-use in a historic quarter, conversions of the industrial buildings especially warehouses after being obsolete in their function are considered. This issue is not only due to the flexibility of these buildings to new functions but also their new uses have many benefits for the revitalization of an area rather than being used inappropriately, which caused deterioration of the historic quarter. Additionally as the process of urban sprawl encourages developers to look further from city centres for affordable land, these former industries will take on new roles as locations for culture, business and urban living.

1.2 Statement of the Problem

During the British Colonial Period due to the harbor works, Famagusta became an important port of the country. In connection with this development, a lot of warehouses and other-related buildings were built in the Walled City of Famagusta. After the end of British Colonial Period, the harbour lost its importance so that most of these warehouses and related buildings became obsolete in their function from 1960s onwards. Up to now some of these warehouses are unused or used inappropriately which contribute to the deterioration of the city.

1.3 Aim and Objectives of the Study

In this study adaptive re-use of buildings will be focused on as an approach not only for conserving and extending the life of historical buildings but also as a mean to have significant contribution to the development and revitalization of the Walled City of Famagusta at large scale. Since the achievement of successful revitalization requires the recognition and exploitation of the assets and opportunities of a quarter, there is a need to evaluate the Walled City of Famagusta as the case of this research.

- The main aim of this research is to make suggestions to extend the life of some selected buildings (warehouses) through adaptive reuse in order to contribute to the conservation and revitalization of the Walled City of Famagusta as a whole.

The sub-aims of this study are as follows:

- To evaluate the condition of the warehouses and contemporary needs in the area, keeping in mind the overall revitalization of this historic area.

- To propose the most appropriate reuse for these buildings according to contemporary needs.

This study will focus on the warehouses in the Walled City of Famagusta from the British Period, and try to provide the most appropriate suggestions for their reuse, in line with the most appropriate strategic approach for revitalization of the Walled City of Famagusta.

In line with this, the research questions are:

- What is the contribution of adaptive reuse of buildings to the revitalization of historic urban quarters?
- What are the criteria for adapting buildings to new function in respect to revitalizing an area?

1.4 Research Methodology

This study is based on qualitative research. The methodology of the research has been organized in two main parts. The literature review is used to develop the theoretical framework and to discover the gap. Additionally, evaluation of some example of revitalization of industrial areas will convey to finding out a proper function and strategic approach for the case study.

The warehouses in the Walled city of Famagusta will be thoroughly examined through a site survey. Observation, interview, questionnaire, photography, sketches and maps are applied to investigate the case study to propose the most appropriate uses.

Chapter 2

CONCEPTUAL AND THEORETICAL FRAMEWORK

2.1 Preservation and Revitalization of Historic Urban Quarters

Historic urban quarters are known as places where significant numbers of historic buildings are concentrated. Many cities have sense of place and identity just through their historic urban quarters which provide historic and cultural link. These quarters are often an integral part of the city's attraction and appeal, and as Lynch (1960) states, their visual and functional qualities are important elements of the city's image and identity.

Indeed some cities to prevent or drive away the threat of large-scale clearance, gradual decay and demolition, have tried artificially to create historic character to attract people and investment or tried to retain their historic unity and integrity. Thus, many historic urban quarters rather than being destroyed and redeveloped which was often the case in the 1950s and 1960s, are now being revitalized to become lively, vital and animated parts of cities. In addition, as historic quarters are often located in central areas, their preservation and revitalization is often important and required aspect of the overall preservation and revitalization. Attracting shoppers, workers, tourists and more importantly people to live and animate these quarters as the internal areas are symbol of a contemporary re-charm with cities and urbanity. This new lease of life in these quarters may often be the result of introducing new functions, such as housing, commercial, tourism and related facilities.

Although many declined quarters have been revitalized without any planned development it is since the 1970s, that the whole parts of cities with its historic character have undergone a re-assessment of their importance.

As it is shown in Figure 1, the first wave of historic preservation policies were about protection of individual buildings and structures. This policy was limited in effect, the preservation of individual buildings and spaces was regarded as a necessity but it was only limited attempt in its scope.

Due to this, in 1940, the second wave of preservation as area-based policies has emerged. It was concerned with group of historic buildings, townscape, and the spaces between buildings. The challenge of this policy was the protection of many buildings as museums or public expense. Furthermore area-based conservation came as a reaction to the social, cultural and physical disturbance that caused by redevelopment and by road-building schemes (Carmona, 2010, p.246). However designation of an area would only prevent the area from clearance and widespread redevelopment but as Ashworth and Tunbridge (1990) mentioned, the problem of this designation of areas comprised an open-ended commitment to the maintenance of that area. This wave of conservation policies was enacted in early 1970s during a period of steady economic growth in most countries. So it was reasonable to assume that the task of conservation planners was to control and channel the various competing demands for space in the city (Burtenshaw et al., 1991, p. 7 and p. 154).

In the new conservation legislation very little attention had been given to the problem of encouraging the utilization of the increasing stock of conserved space, especially the overall demand for space in the city. Consequently in 1970s a third wave of

policies which was concerned with the revitalization of the protected historic urban areas and quarters through growth management emerged. The aim was to generate investment and develop the local economy to provide finance necessary and furthermore conserve and enhance the quarter. Revitalization which brings areas back into active use is known as a dynamic process (Tiesdell, S., Heath, T., & Oc, T., 1996).

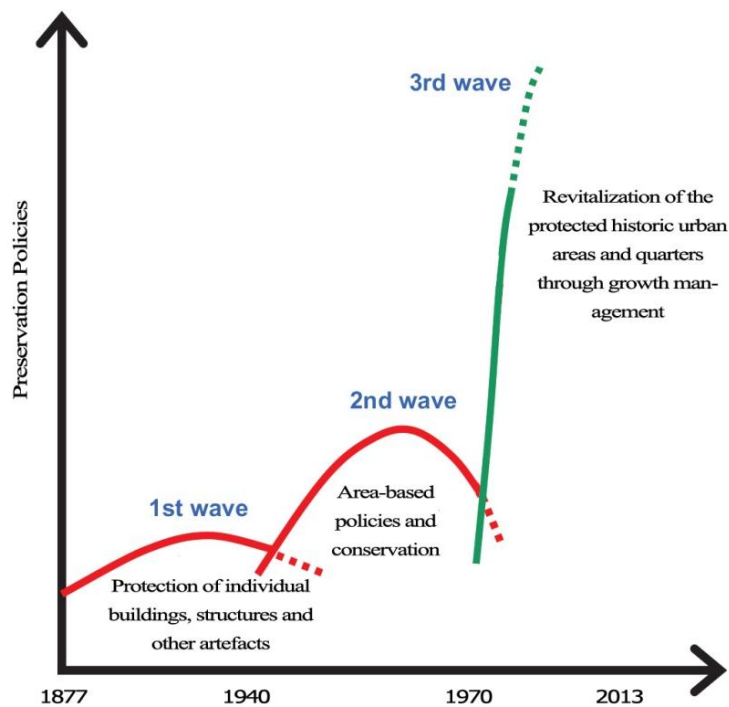


Figure 1: Three wave of preservation derived from Feilden (2003); Tiesdell et al. (1996) and Tallon (2010); Carmona (2010, p.246).

With this awareness, it seems that the desire to preserve and conserve historic urban quarters is relatively recent. Rypkema (1992, p. 206) notes: often the "value" of historic areas encourages the preservationist to preserve them. In fact one of the strongest arguments for preservation ought to be that historic buildings and quarters has multiple layers of "value" to their own community (Riegl, 1902; Feilden and Jokilehto, 1998; English Heritage, 1997; Mason, 2002, p. 10; Feilden, 2003, p. 6; Throsby, 2006, p. 43; Tiesdell, Heath, & Oc, 1996; Rypkema, 1992, p.206).

In general the following seven values are the main reasons for historic preservationist to preserve historic buildings and areas:

- Aesthetics value,
- Value for architectural diversity,
- Value for environmental diversity,
- Value for functional diversity,
- Resource value,
- Value for continuity of cultural memory/heritage value,
- Economic and commercial value (Tiesdell, Heath, & Oc, 1996; Rypkema, 1992, p.206).

These values have to be investigated, and then synthesized in order to outline the ‘significance’ of the historic artifact and its environment. Some of these values deserve amplification (Feilden, 2003). Underpinning the other values, however the desire to preserve must finally be a rational economic choice. In the absence of economic reasons, the only thing that occurs is more to do with preservation, which is concerned with limited change and prevents the initial physical change for rehabilitation. On the other hand, due to such an approach the process might fail to protect the buildings, since the long term maintenance of these buildings would be questionable. Thus understanding the distinction between preservation and conservation would convey to a better understanding of revitalization.

The term "*Preservation*" is concerned with limited change while "*Conservation*" is always associated with changes and the management of these changes. Lynch (1972,

p. 233) argued that the key conservation is to ‘disentangle it from the idea of preserving the past’. Furthermore in the declaration of Amsterdam a policy of *conservation* means the integration of the architectural heritage into social life. Therefore it emphasizes the use of the built heritage as part of the social life of the community and for the benefit of present and future generations which leads to the idea and concept of “revitalization” (Vehbi, & Hoşkara, 2009). Furthermore as stated by Tiesdell, et al. (1996, p.22), conservation of the historic urban quarters has to be considered not as a straightforward and restrictive issue with preservation but as a concern with revitalization and enhancement. With such a concern revitalization focuses on recognizing the values of properties and attempts to generate the financial development in appropriate ways able to provide the economic bases necessary for conserving, maintaining and enhancing the quarter. And since the process of revitalization should include social and economic dimensions rather than only physical protection, it can be considered as a complex issue which would convey to the enhancement of the environment in a long-term perspective. These long term strategies would be utilized either as the indigenous regeneration of the traditional activities of the locality or a restructuring of the quarter's economic base.

2.1.1 Revitalization of Historic Urban Quarters

Revitalization becomes necessary for all older parts of cities, not just those with greater historic character and qualities. Additionally as fore mentioned all urban areas in revitalization process undergo change. Following Beauregard and Holcomb (1981), urban revitalization means to infuse new life into cities and to upgrade areas for 'higher' social and economic uses. It is notable that the process of revitalization in dealing with historic quarters with its scarce resources has to cope with changes in their economic fortunes while change in their physical landscapes should be limited

for the sake of conservation. Thus revitalization efforts in such quarters have to be conducted within a sensitive context and environment which operates as both a restriction and for a benefit. This process begins when investments driven by a multitude of incentives. Nevertheless, as Lynch (1972, p. 39) states: “The management of change and the active use of remains for present and future purpose are preferable to an inflexible reverence for a sacrosanct past”. Thus, physical change is unavoidable in historic urban areas. Additionally an environment without change invites its own destruction. So a world which can be modified is more preferable.

In general revitalization is a process which involves reconciling a mismatch which is expressed between the services offered by the fabric and the needs seen through contemporary eyes (Lichfield, 1988, p. 25). This mismatch is called obsolescence. In fact, obsolescence might have its source in the physical fabric or in the economic activities within the fabric. Nevertheless, as the building ages and the world around it changes, the building becomes obsolete and when it is completely useless with respect to all possible uses it might be called upon to support (Lichfield, 1988, p. 22). Obsolescence, or diminished utility, is the reduction in the useful life of a capital good. As discussed by Tiesdell et al. (1996), there are various dimensions of obsolescence (Fig. 2). These different and interrelated dimensions of obsolescence involve both buildings and areas. Some of these are attributes of the buildings and their functions while others are related to the area.

Types of obsolescence
Physical/ Structural
Functional
Legal or Official
Image
Locational
Financial
Relative or Economic

Figure 2: Types of obsolescence (Tiesdell et al., 1996)

Determining the particular course of action to address the obsolescence or diminished utility of buildings and other individual structures is usually a rational economic process which assesses the costs and benefits of the various courses of action.

Many dimensions of obsolescence can be addressed directly: the structural obsolescence can be remedied by repairing; functional obsolescence can be addressed by rehabilitation; official obsolescence can be dismissed by rescinding the planning decisions that entailed demolition or clearance for road building schemes and the creation of conservation areas or historic districts. Among these, it is possible to mention that image obsolescence is related to the perception of a building or an area with its uncomfortable traffic circulation, noise, smell, and vibration. “The image obsolescence might be generic or specific to a particular use. For example, the image of inner areas of cities and the connotations of air pollution, noise, vibration, etc. makes them unattractive for the occupation of dwellings built in earlier times.” (Tiesdell et al., 1996, p.24). “Image obsolescence can be addressed by physical improvements and by promotion of the area so that the area would be perceived differently, for example, as a tourism attraction rather than as a rundown industrial

area” (Tiesdell et al., 1996, p.203). What is often the most intractable form of obsolescence is locational obsolescence. Locational obsolescence often results in a low utilization and demand for the historic buildings due to various reasons, and other areas in the city would have a greater competitive advantage.

In general for each of these interrelated dimensions of obsolescence, the degree of obsolescence will not be uniform for any building or area (Lichfield, 1988, p. 22). Thus it is a clear fact that the efforts to revitalize historic urban quarters must address and/ or remedy obsolescence and extend the economic life of the historic building stock. Additionally one of Lichfield's arguments about conservation is to check the obsolescence of manmade resources (Lichfield, 1988, p. 29). Consequently the process of revitalization starts with recognition and understanding the particular dimensions of obsolescence with which area suffers. Depending on the type of obsolescence and dynamism of a quarter different measures towards revitalization will be needed. Consequently this factor would define the most relevant strategic approach of revitalization for a quarter (Doratli, 2000; Oktay, 2005).

2.1.2 Types of Revitalization in Historic Urban Quarters

The revitalization of historic urban quarters according to different types of obsolescence involves both the physical fabric and the active economic use of buildings and spaces. Accordingly there is a need for both physical and economic revitalization. Additionally the social public realms of the quarter must be also revitalized (Tiesdell et al., 1996, p. 18- 20). According to Oktay (2005, p. 98) sustainable historic urban quarters and revitalization are based on common principles. Therefore “if urban revitalization in all levels – economic revitalization- physical revitalization and social revitalization- is applied to have successful

revitalization, then this will lead to sustainability at three levels as well and this will end up with sustainable historic urban environment” (Oktay, 2005, p. 98) (Fig. 3).

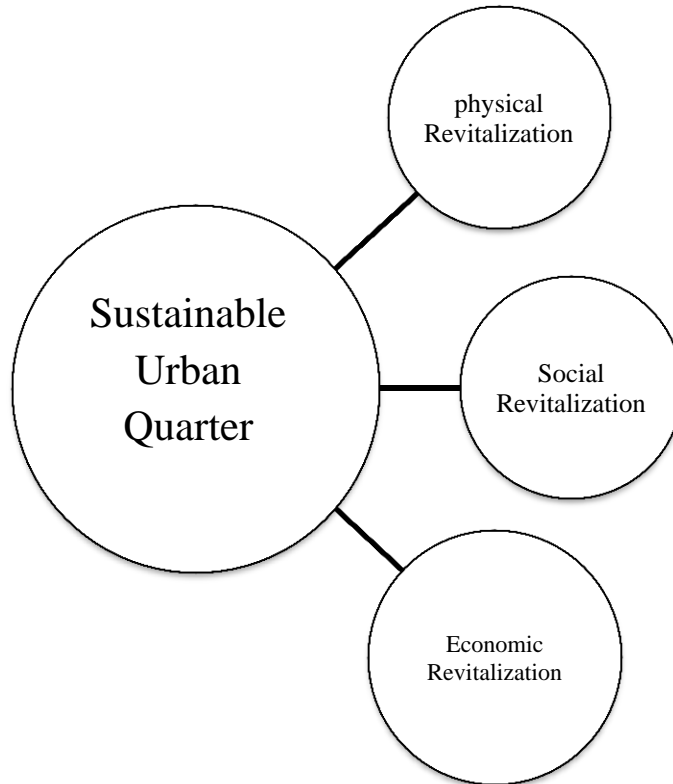


Figure 3: Three types of revitalization (Adapted from Oktay, 2005)

Physical revitalization tries to improve the quality of buildings and area. As Tiesdell, et al. (1996) argues the physical revitalization of properties can be adapted by two modes of renewal: rehabilitation and demolition. Since demolition and redevelopment is an undesirable approach in historic quarters, the term rehabilitation will be take into consideration. Rehabilitation by introducing necessary changes, seeks to extend the useful life of properties. In this thesis rehabilitation is used as a generic term to include: refurbishment (addressing the obsolescence of a building in existing use) and conversion/ adaptive reuse (adaptation of buildings for new uses function).

Although physical revitalization helps to increase confidence in an area and can result in an attractive, well-maintained public realm, it might be a short term strategy to improve the infrastructure and environmental conditions in an area (Oktay et al, 2003). Since physical revitalization as a short- term strategy is temporary and cannot be sufficient to implement sustainable revitalization, the implementation of long-term strategy is essential for successful revitalization (Vehbi & Hoşkara, 2009). This statement does not imply that there is no need for physical revitalization, in fact the physical revitalization intended to induce a deeper economic revitalization and a historic quarter with retaining viable economic function together with social revitalization can get benefit from revitalization in the long term (Oc et al., 2007; Tiesdell et al, 1996 p.18). Therefore both physical and economic revitalization are essential to address the different types of obsolescence and create a sustainable historic environment (Fig. 3).

Revitalization in terms of economic activity in a long-term perspective depends on different types and intensity of obsolescence which necessitates different types of strategic approaches. These strategic approaches are: functional regeneration, functional restructuring and functional diversification (Tiesdel et al., 1996, p. 18; Doratli, 2000, Oktay, 2005). These approaches are utilization and purposeful occupation of the improved and enhanced building stock in an area. Therefore it may contain economic, functional and social dimensions in a quarter.

In the functional regeneration alternatively the existing function/uses may remain but it operates more efficiently. Tiesdel et al (1996, p. 39) stated functional regeneration is shorter term than the other two strategy. The reason of this statement may also be

focused in Worthing et al. (2008) research. He stated that the traditional use in its modern appearance and requirements would be less compatible than other alternative uses (Worthing & Bond, 2008, p.148). But according to Doratli (2000) although in functional regeneration the existing uses remain, it operate more efficiently and profitably with regard to the social needs. Therefore this strategy can be defined as a long term strategy. Functional restructuring in terms of human activities and economic growth within the building fabric, can arise from changes in occupation by introducing new uses or activities which is replacing the former ones. Whereas functional diversification refers to the attempt to keep the existing uses but also introducing some additional new ones. In Table 1 the different measures toward revitalization is shown.

Table 1: Types of revitalization (Tiesdel et al., 1996, p. 18; Doratli, 2000, Oktay, 2005)

Revitalization:				
Short- term	Physical	Mode of Renewal	Rehabilitation	Refurbishment
				Conversion/ adaptive reuse
			Demolition and redevelopment	
Long- term	Economic	Strategic Approach	Functional regeneration	
			Functional restructuring	
			Functional diversification	

Generally with respect to the historic buildings and area, Fitch (1990, p. 47) and Douglas (2006) suggest a useful sorting of 'levels of intervention according to a scale of increasing risk of obsolescence of the physical fabric of the buildings and areas (Fig. 4). Any of these interventions to the physical fabric of a building and area inevitably changes the history of the building and area for all time and become part of its history (Tiesdel et al, 1996, p. 166). As can be seen in figure 4, the level of

intervention may range from basic preservation to demolition and between these two interventions there are others such as: rehabilitation, renovation, remodeling and restoration.

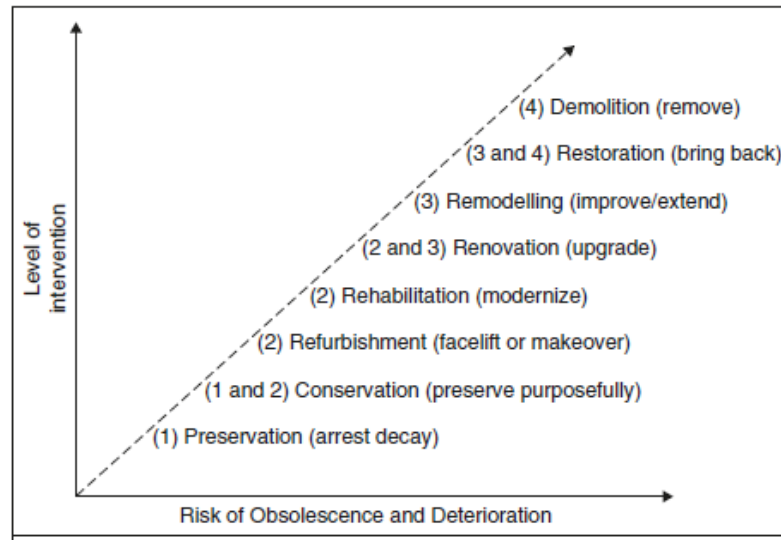


Figure 4: The range of intervention (Douglas, 2006)

As stated before, preservation: is the maintenance of the artefact in its current physical condition (Fitch, 1990, p. 46). Restoration is the process of returning the artefact to the physical condition in which it would have been at some previous stage of its morphological development. Remodeling is the piece-by-piece reassembly of an artefact, either in situ or on a new site. And the demolition, although this may be an undesirable approach in an historic quarter, under certain conditions might be an inevitable type of intervention within the span of physical revitalization. The term rehabilitation includes refurbishment and conversion. While refurbishment (Conservation and consolidation) is the physical intervention in the actual fabric of the buildings to ensure the continued performance of its structure and fabric, conversion (Adaptive reuse) is the adaptation of a building to a new function or use. The term rehabilitation is the most complex intervention among others. This possible

course of action in an area takes place when works are carried out to overcome at least some of the obsolescence, normally structural and functional (Lichfield, 1988, p. 132). For this to happen, in some cases new appropriate uses and functions are needed to be determined for utilization of the historic buildings by conversion/ adaptive reuse and in others it just needs improving the physical fabric of the quarter to conserve the previous function through refurbishment. In both cases the buildings should be kept in good repair and the streets need to be animated with people and activities which finally are intended either to restore confidence or create new confidence in an area's economy (Solesbury, 1990). In general rehabilitation by introducing necessary changes, seeks to extend the useful life of an existing building.

When considering revitalization in a long- term perspective, economic value must be created at two scales: at the level of the individual building and as buildings within an area. As Rypkema (1992, p. 210) stated, buildings are interdependent assets; the quality, condition, maintenance and management of neighboring properties and the environment has a direct effect on the value of any given building. He (1992, p. 208) also added that a rehabilitated empty building does not particularly add to an economic revitalization strategy in historic areas. Likewise Tiesdell et al. (1996) mentioned that the refurbishment and/or conversion of individual buildings may not make a significant difference to an area's economy. This factor reinforces the need for a more comprehensive area-based approach for revitalization and historic quarters of cities should be considered as a whole area rather than on a piecemeal basis. In revitalization process, although the demonstration and flagship projects are important, the intention is to encourage comprehensive change in the area. Therefore

whenever the rehabilitation of the individual buildings comes into question the most appropriate alteration or option should be consider with regard to the area as a whole.

As stated before depending on the various types and degree of obsolescence with which a historic urban quarter faces, three different types of strategies in economic terms would be defined. Whenever the existing uses in an area remained but operate more profitably is called 'functional regeneration'. In other words this strategy is somehow refurbishment of buildings in an area which addresses the obsolescence of buildings in an area in their existing uses (Tiesdell et al., 1996, p.34). Functional restructuring as a different strategy will occur in cases when the function of buildings in an area is disused or derelict. Thus the whole area can be fundamentally restructured without displacing traditional activities (Tiesdell et al., 1996, p.39; Oktay, 2005, p. 46; Doratli, 2005). This strategy involves of adaptive reuse on a large scale. A more limited restructuring that introduces new uses, which able to synchronize and support the quarter's existing economic base, has been termed as functional diversification.

These statements indicate a relation between rehabilitation (refurbishment and conversion) and strategic approaches for revitalizing historic urban quarters which have been shown in figure 5.

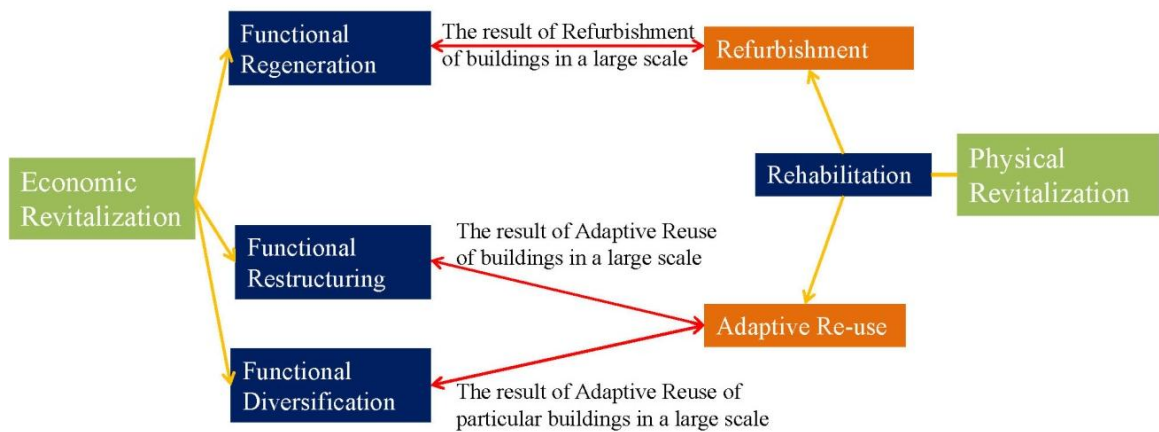


Figure 5: The relation between two types of rehabilitation and strategic approaches in revitalization of historic quarters

Keeping this relation between rehabilitation and the strategic approaches in mind, the following parts will focus on the adaptive reuse and its related strategic approaches, to achieve the aim of the study.

2.1.3 Adaptive Reuse in Relation with the Strategic Approaches for Revitalization of Historic Urban Quarters

Rypkema (1992, p . 206) observes that a-major benefit of the amount of historic preservation activity over the past 25 years has been the demonstration that there is, in fact, an alternative use for virtually every kind of structure. Furthermore, good architects around the world have devised innovative ways to mitigate or overcome what might otherwise be defined as utility-diminishing design deficiencies of old buildings in an area. Mostly the reuse of the buildings is more effective method of innovation and conservation that can be extended to a wider circle of buildings (Lepel, 2006).

Whenever in an area the function became declined or in other words the previous function does not work profitably even by improving the environment, new function intentionally or unintentionally would be inevitable. If adaptive reuse

would be a dominant intervention throughout the area, according to Tiesdell et al (1996, p.34) it becomes an integral part of a functional restructuring of the area. On the other hand in some quarters if the existing function would be preserved but adaptive reuse may be introduced just for some of the building to support the existing economic base, this would be a functional diversification strategy for revitalization (Tiesdell et al 1996, p.34). Since functional diversification and functional restructuring are two types of economic revitalization and they involve adaptive reuse of buildings in a large scale, it seems this intervention has a direct influence on revitalization of a quarter. The relationship between adaptive reuse and revitalization in historic urban quarters are presented in figure 6.

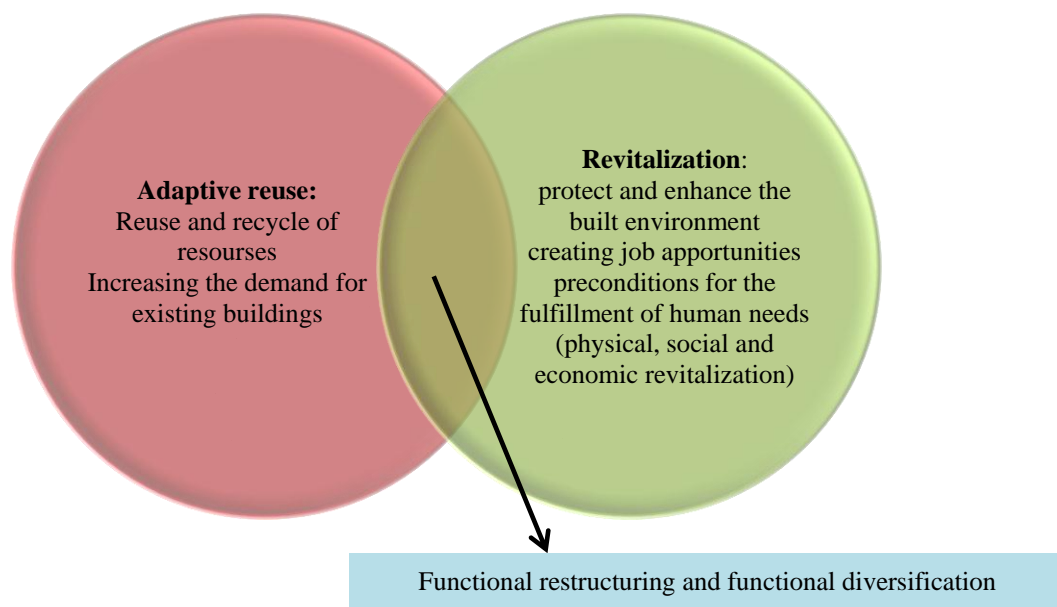


Figure 6: Relationship between adaptive reuse and revitalization

As stated by Tiesdell et al (1996, p. 42) these sorts of revitalization strategies entails the displacement of existing functions and users. Literature review reveals that this displacement gives rise to a debate on the displacement of the residents. “While this displacement has appeared to physically improve neighbourhoods and has been

linked to the wider economic development of cities it has also forced out existing residents leading to fundamental questions about the social cost of urban revitalization” (Atkinson, 2003, p.1). A diversity of grassroots neighbourhood groups has opposed the displacement because of its impacts on displacing the poor community (Marcuse, 1989; Atkinson, 2003; Slater, 2002). Table 2 summarizes some of the main neighbourhood impacts of displacement.

Table 2: Summary of neighbourhood impacts of social displacement (Atkinson & Bridge, 2005, p.5)

<i>Positive</i>	<i>Negative</i>
	Displacement through rent/price increases
	Secondary psychological costs of displacement
Stabilisation of declining areas	Community resentment and conflict
Increased property values	Loss of affordable housing
	Unsustainable speculative property price increases
Reduced vacancy rates	Homelessness
Increased local fiscal revenues	Greater take of local spending through lobbying/articulacy
Encouragement and increased viability of further development	Commercial/industrial displacement
Reduction of suburban sprawl	Increased cost and changes to local services
	Displacement and housing demand pressures on surrounding poor areas
Increased social mix	Loss of social diversity (from socially disparate to rich ghettos)
Rehabilitation of property both with and without state sponsorship	Under-occupancy and population loss to gentrified areas

More from social displacement, the functional displacement which occurs through changing the previous function is sometimes regarded as undesirable, because part of

an historic quarter's sense of place derives from its functional character. This functional and social displacement is the process known as gentrification¹.

Due to the impacts of gentrification several historic quarters have sought a functional as well as a physical conservation. Tiesdell et al (1996, p. 204-205) state:

Such conservations attempt to resist market forces and other forces of economic change, and, as a consequence, will ultimately be futile. Thus, it is often more important to protect the physical character rigorously but be more flexible with its functional character. Concern for functional character might frustrate attempts to generate the investment required to conserve and revitalize the quarter physically, leading to the deterioration and/or loss of the historic building stock.

Somehow further blight may result from the fervent protection of the functional character.

As it is shown in figure 7 and according to Tiesdell et al (1996, p. 204) gentrification is an inevitable outcome of the revitalization in historic urban quarters especially in case of functional restructuring and functional diversification strategic approaches. In revitalizing process of an area there is a need to be aware of all impacts of gentrification.

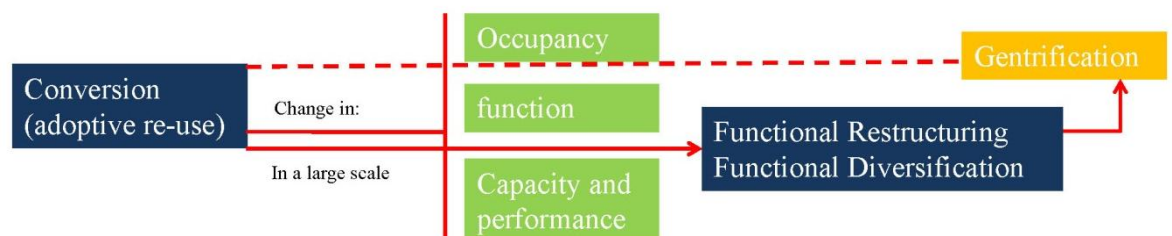


Figure 7: Impact of adaptive reuse on changing the function and inhabitants which lead to gentrification

¹ Gentrification is deeply rooted in social dynamics and economic trends (Lees et al., 2008).

2.2 The Concept of Adaptive Reuse

Adaptive reuse is defined as "conversion of a facility or part of a facility to a new use which is significantly different from that was at first planned" (Iselin and Lemer, 1993, p. 63; Tiesdell et al., 1996). The classic monument protection, scientific exploration and restoration due to financial, rationalization and utilization reasons, can only be carried out for a few buildings. Recently in the UK, altered national planning guidance places increased emphasis on keeping historic buildings in active use as the best way of preserving them (DOE, 1994) and it is suggested that where the original use is no longer viable, the capacity for change should be considered. This type of intervention is a reasonable strategy when there is no cohesion between facilities and user's needs and it involves a greater degree of change than refurbishment and restoration. Therefore this intervention, which restores the utility by changing the building's function, is about overcoming obsolescence and redundancy in buildings. It is also about ensuring the long-term future of buildings threatened by dilapidation, vacancy and eventual demolition (Douglas, 2006). For this reason, before their demolition, the possibilities of the re-use for the buildings should be considered.

Some benefits of this intervention were identified by Bullen (2007) as:

- Support the tenets of sustainability,
- Reducing resource consumption, energy use and emissions,
- Extending the useful life of buildings,
- Being more cost effective than demolition and rebuilding,
- Reclaiming embodied energy over a greater time frame,

- Creating valuable community resources from unproductive property,
- Revitalizing existing neighborhoods,
- Reducing land consumption and urban sprawl,
- Enhancing the aesthetic appeal of the built environment,
- Increasing the demand for retained existing buildings,
- Retaining streetscapes that maintain sense of place and retaining visual amenity and cultural heritage.

All of these benefits contribute to the conservation of historic buildings of a city. However, as Tiesdell et al. (1996, p. 172) mentioned, there are some obstacles against adaptive reuse of buildings and the capacity for change is limited to a number of factors:

- The physical, spatial and architectural characteristics of the existing building;
- The constraints imposed by special historic building controls on permissible change,
- The planning policy context, the environmental consequences of the change of use (particularly in terms of traffic generation and management);
- The reception of the commercial market and possible users and investors in the change of use (Tiesdell et al., 1996).

Although the driving force behind reuse was basically functional and financial, it should also be appropriate with the environment (Powell, 1999). Accordingly adaptive re-use is utilized to development projects in different ways including compatible re-use and most appropriate re-use, both of which contribute to create a

new function for the facility (Yıldırım & Turan, 2012). It is clear that: each building has its own potential to be converted to a new function but the new function should be compatible (ICOMOS, 1999). The compatible reuse is developing a building through a new function which can carry out its function without damaging the historical fabric (Worthing & Bond, 2008, p.65) “whereas a most appropriate use will be not only compatible but will also reinforce and maximize the understanding of the cultural significance of a historical place” (Pearson & Sullivan, 1999).

With this description, it seems that “refurbishment” which retains the building’s original function would be the most appropriate re-use. However, it may not be possible for a variety of reasons; for example, the existing use may not be sufficiently profitable to yield the capital to make a comprehensive refurbishment. Therefore the traditional uses would be less compatible than other uses (Worthing & Bond, 2008, p.148). Douglas (2006, p.99) categorized buildings according to their previous function and offered some appropriate new uses (Table 3).

Table 3: Range of typical conversion schemes (Douglas, 2006)

<i>Original category</i>	<i>Existing use</i>	<i>Typical new use</i>
Agricultural	Barn	Single/multiple dwelling; arts/crafts centre; coffee/snack bar; souvenir shop; local museum/gallery/centre
	'Dovecote' or 'Doocot'	
	Threshing mill	Parish/community hall; hotel/leisure centre; function room
	Cart shed	
	Stable	
Commercial	Smithy	Ditto
	Bank	Coffee bar; public house; wine bar; new shop/office; restaurant; flats
	Public house	
	Shop	Ditto
	Office	Ditto
	Pavilion	Ditto
	Hotel	Office
	Corn exchange	Performing arts centre; drama/television studio
Office block	Hotel; residential	
Ecclesiastical	Church	Dwelling/s; arts centre; film theatre; lecture theatre
	Function hall	Community centre; office
	Manse/parsonage house	Restaurant; storage; workshop/garage; multiple flats; nursing/residential home
Industrial	Whiskey bond	Multiple flats; mixed use – shops and offices on ground floor, flats or small businesses on upper floors
	Mill, warehouse	
	Maltings/distillery	Ditto
	Railway station	
	Factory	
	Warehouse	
Windmill	Dwelling; office	
Institutional	School	Community centre; flats
	College	Hotel
	Hospital	Educational facility; flats
	Mental asylum	Sports complex
		Youth/detention centre
Residential		Offices
		Luxury apartments
	Tenement	Improved housing, with modified layouts/facilities
	Townhouse	
	Mansion house	Multiple flats
Medieval castle/tower house	Restaurant and bar	
	Holiday accommodation	
	Large single dwelling, or multiple apartments	

In all these cases the new function should “maintain the essence of the buildings and area character, while serving new uses or functions” (Park, 2006). As Brink and Dehart (1992, p.16) state: “buildings must serve people, rather than making people serve buildings so we must seek means whereby historic buildings can be adapted to new uses with a balance of preservation standards and contemporary lifestyle needs”.

As it is shown in Douglas's categories (Table 2) and according to Tiesdell et al (1996, p. 8): among the various types of buildings for re-use, the conversion of industrial buildings especially "warehouses offer considerably more freedom than the conversion of buildings of outstanding architectural importance that require scholarly restoration and inhibit changes of use." But unfortunately most of the time these abandoned industrial buildings are used inappropriately. This inappropriate use is due to the lack of knowledge about the values of these buildings and the impacts of their appropriate reuse for revitalizing an area. Ford (1994, p. 113) writes: 'The exaggerated opulence that characterized offices, hotels, department stores, and apartments during the late 1800s was applied to many large warehouses and factories.' It means factories and warehouses are often perfect for alternative uses as they are robustly built and grand in scale.

The flexibility of these types of buildings for reuse and influences of their conversion to promote their environment is visible in many cases. In the following lines, three examples among these many cases will be highlighted, as they are very similar in terms of their context and features to the case study of this thesis.

For example the Old Swan Brewery in Australia was used for brewery. Due to some reason it was abandoned and finally in 1980s the building was converted to a mixed use buildings which leads to the revitalization of the area (Australian Government, 2004).

Another example of the industrial building is a warehouse in San Francisco. This warehouse was built in an industrial district and it was basically unused and vacant for years. In 2002 it was started to be reused as a restaurant, bar and full production

brewery of the best brewery brand in San Francisco (URL1) which cause facilitated the promotion of the quarter.

The last example is a warehouse in Garden Island in Australia. This warehouse was built in 1894 as a Victualing Store and used as a general naval store since 1913; Garden Island's warehouse became redundant and it was abandoned. This four storey warehouse in 1985 converted to Main Dockyard Office which was a need of the area (Australian Government, 2004) and this reused project encouraged the other investors to create similar projects in the area (Appendix).

Although these types of buildings are more flexible in converting to other functions, this statement doesn't mean that the intrinsic character and value of them is not important. While "in converting industrial buildings to another function, it is important to resist the temptation to 'over domesticate' them and thereby sever the link with their own history" (Cunnington, 1988, p. 122). Tiesdell et al (1996, p. 76) states "it is important that 'a warehouse should retain some of its rugged "warehouseness". If this has gone, the area's intrinsic qualities would be lost."

As it is clear, accommodating new and different functions can have a range of influences. In considering the design of conversions, there will inevitably be conflicts and compromises concerning the degree of change and the necessary respect for the building's architectural integrity and original character. At the limit, however, Lowenthal (1981, p. 14) observes there is little point in "saving" the past if what is saved is degraded or altered beyond recognition. The degree of fidelity must, however, be balanced by considerations of viability.

Generally the reuse of buildings whether industrial or not requires an adequate appraisal of their state of conservation to subsequently plan for their recuperation and exploitation (Armesto González, 2006). In relation to this point, Hewison (1987, p.85-86) states that placing a contemporary civilization in connection with a previous tradition and giving meaning to the present requirements, needs understanding of the past. Therefore with this background, the suitable new use and perhaps maximizing income generation should come with understanding the cultural significance of historic buildings, environment and documentation of this mentioned building. Therefore according to Yilmaz et al. (2007) documentation is necessary for:

- Transmitting cultural heritage to next generation,
- Making the building alive by using it in contemporary manner,
- Obtaining correct data for future plans,
- Determination of the problems in historical building and in historical site or monument,
- Acquisition of knowledge about the history of the building (Yilmaz, 2007).

Along with the documentation and recording, knowledge about the building which can be capitalized upon using old photographs, old maps, old drawings and projects, civil and personal archives, pictures and gravures, archaeological data and notes, Fuentes (2010) and Yildirim (2012) proposed six-step method to deal with the study of the historical pattern and the subsequent reuse of interesting vacant buildings in six successive steps (Fig.8).

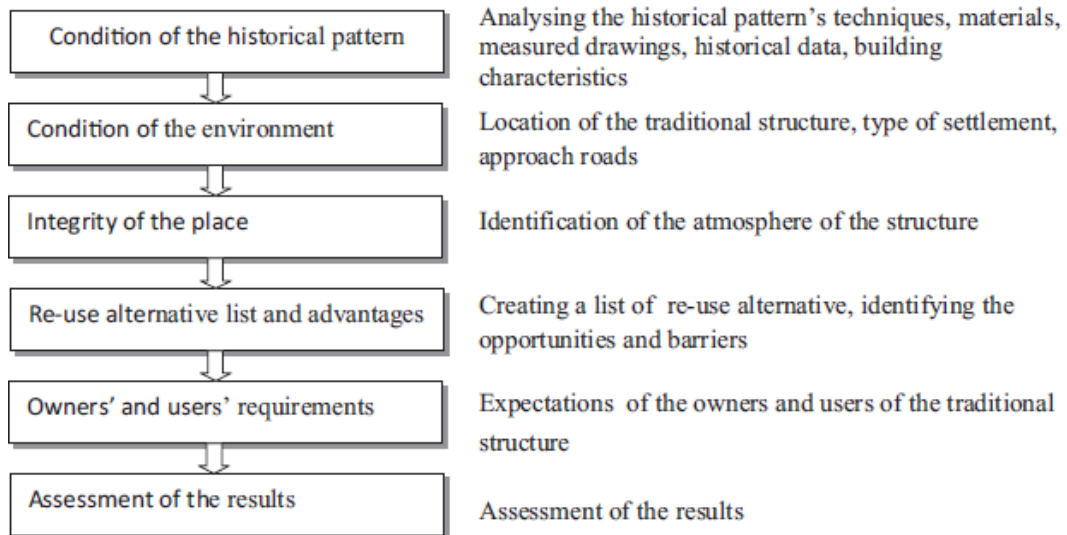


Figure 8: Six-step method for the study of the documenting buildings and re-use assessment (Fuentes, 2010; Yildirim, 2012)

As Yildirim (2012) states these steps provide a generalized model for decision-making and its practical application is easily transferable to any cultural context.

In addition, studies on the conservation of monuments are based on the evaluation of heritage values (Balen, 2008). Therefore, to successfully conserve and manage heritage buildings, a much broader range of values should be taken into account in addition the criteria, which have been suggested above.

The values could be material values such as: form, setting, techniques, and non-material values such as: function, use, tradition, and spirit (Stovel, 2008). According to the types of buildings these values may change.

Finally, since the main aim of this research is to deal with adaptive re-use in relation with different strategic approaches for revitalization of historic urban quarters, after distinguishing the type and level of obsolescence and listing the

alternative uses for the buildings, accordingly the most relevant strategic approaches for the quarter should be defined.

Thus in line with the main aim of this thesis modification of the six step method suggested by Yildirim (2012) is suggested to include *values of the buildings* and *the most relevant strategic approach* (Fig.9).

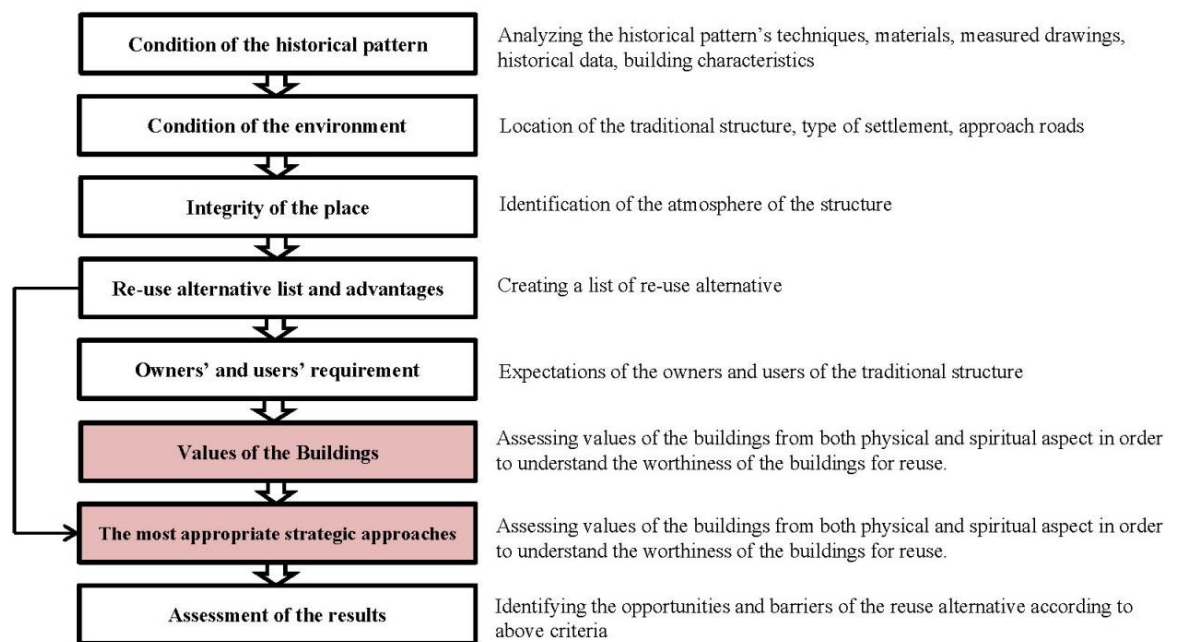


Figure 9: Eight criteria for the re-use of historical buildings based on managing the use and change model of Yildirim (2012)

In addition, after implementation in the quarter the balance between project feasibility, environmental impact and social benefit can be objectively evaluated.

2.3 Examples of Revitalization Projects including Adaptive Reuse of Warehouses

Since this thesis is focused on adaptive reuse in relation with the related strategic approach for revitalization and most of the successful industrial quarters, revitalized through extensive adaptive reuse in terms of functional restructuring and diversification, in this part some revitalized industrial quarters will be evaluated. The evaluated cases are:

- LOWELL, MASSACHUSETTS
- CASTLEFIELD, MANCHESTER
- TEMPLE BAR, DUBLIN
- SOHO, NEW YORK
- THE MERCHANT CITY, GLASGOW
- SHAD THAMES, LONDON
- THE LACE MARKET, NOTTINGHAM
- LITTLE GERMANY, BRADFORD
- LOWER DOWNTOWN (LODO), DENVER

Furthermore locating of plenty of warehouses in industrial area induced the author to survey these areas to find out a proper strategic approach in the case of Walled City of Famagusta. Although Kotler et al. (1993, p. 20) noted that: No two places are likely to sort out their strategies, use their resources, define their products, or implement their plans in the same way, here there is a need to evaluate examples of revitalization projects and their proposed reuse to find out a proper reuse and strategic approach according to the situation of a quarter.

LOWELL, MASSACHUSETTS

Lowell as the first manufacturing quarter of nineteenth century in America (Ryan, 1991, p. 377) was established in 1821. The city expanded rapidly by the late 1900s and it became a dense urban concentration of more than 90 000 people with ten mill complex and a machine building factory. However, this was a short-lived measure and very soon the quarter became declined.

The problem of decline began with superseding of steam- power instead of water- power in the late nineteenth century. Additionally the quarter suffered from locational obsolescence in terms of transportation. All these problems led to many manufactures move to another area (Norkunas, 2002).

Although with beginning of the First World War and the Second World War it became revived but it was short-lived and temporary. In the early 1950s tow Mills closed and in the late 1950s, Lowell consisted of millions of square feet of empty five and six-storey brick-built mill complexes, a decaying central business district and high unemployment.

According to Gall (1991) the first attempt for revitalizing the quarter started from 1970. In that year initial funding was acquired from the Great Society Model Cities Programme to create a National Historic Park. The National Park helped to provide technical assistance to property owners in the renovation of their historic buildings. This resulted in over one hundred old properties being rehabilitated and many new uses being found.

Additionally in 1973 there was sufficient support for preservation to form the Lowell Historic Commission and for the city council to designate two historic districts which were entered on the National Register of Historic Places in 1975/1976 (Ryan, 1991). These districts became qualified for federal grants and various tax benefits and incentives. This led to the first physical improvement and revitalization to the façades on the main street. This environmental impact in historic urban quarters is important since it usually provides the initial rationale for revitalization; the built environment being the primary resource for tourism in historic quarters. After that the city tried to change its emphasis away from the physical fabric to a tourism approach with special focus on the walkways, recreational nodes, the 'Canalway' and a network of canals.

Another important factor in revitalizing the quarter was the decision of Massachusetts to create the University of Lowell in a rehabilitated mill complex in the town in 1975 (Fig. 10). Apart from this issue Lowell's developers persuaded the microcomputer firm of Wang to locate its international headquarters in the town (Gall, 1991; Ryan, 1991; Falk, 1986). Wang's rapid growth in the early 1980s had a multiplier effect on the local economy (Castells and Hall, 1994, p. 31). As Gall (1991, p. 398) notes: 'The impact of high tech in the community's resurgence has been so powerful that one local politician was said to have remarked, somewhat cynically, that Wang is worth a hundred national parks.' The 'Wang factor' in Lowell's resurgence is well documented (Gall, 1991; Falk, 1986).



Figure 10: University of Lowell in a rehabilitated mill complex

The major visitor's attractions are the converted Boott Cotton Mills to museum which trace the history of industrialization (Gall, 1991) (Fig.11). Among these the city was provided by mixed use accommodation for the tenants. In addition there are residential apartments, a food hall, artist's galleries, the Tsongas Industrial Centre, a Cultural Resource and Folk life Centre, teacher training facilities and other exhibition areas to attract the visitors.

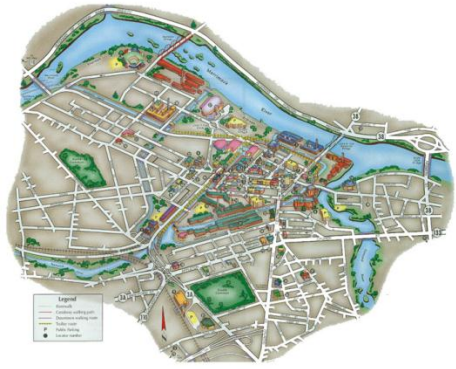



Figure 11: Conversion of Boott cotton mill into Museum

Each of these has been designed to have an explanatory theme focusing on the founding and industrialization of the city. The development of the tourism industry and the growth of the high technology related companies have resulted in a varied mix of supporting economic activity (Falk, 1986).

Although a disreputable past has often been hidden in the promotion of tourism, Lowell has had to carefully avoid creating or manufacturing a false facade to its history. There was a strong desire amongst the local community that the true picture - including the exploitation of workers, poor working conditions, and the role of the immigrant minorities - should be portrayed. 'In Lowell, there was a strong effort to make sure that the museums and exhibitions were factually accurate and did not attempt to deceive visitors (Ryan, 1991). The catalyst for the revitalization in Lowell has been its ability to build upon its heritage assets and recreate the community's sense of pride. As Gall (1991, p. 404) states: 'If there is a lesson other aging industrial cities can learn from Lowell, it is the fact that revitalization begins with the kinds of changes in a community's self-image which project a palpable sense of confidence and direction.' Gall also notes that: 'Without rejecting its past or clinging mindlessly to it, Lowell translated its heritage into a source of local pride and a touchstone for future development. This shows the appropriate reuse which occurred to the Lowell and caused a functional restructuring in term of economic revitalization.

Table 4: Evaluation of historic quarter of Lowell and its revitalization

LOWELL, MASSACHUSETTS		photography	
1. Location and History of the quarter	Lowell is a former mill town located twenty-five miles north-west of Boston at the confluence of the Concord and Merrimack rivers and bordering the Eastern Canal.		
2. Pre-existing uses of buildings	<ul style="list-style-type: none"> - Five and six-storey brick-built cotton mill complexes - a machine building factory - canal - worker housing - warehouses 		
3. The reason of decline	Superseding of steam-power with Lowell's natural advantage of water-power. Also the town suffered from a locational obsolescence as its inland situation soon became an interruption in terms of transportation. These two issues were the main reason for declining Lowell.		
4. Types of obsolescence	Physical/structural obsolescence	Decaying vacant buildings and infrastructure	
	Functional obsolescence	collapse of Lowell's cotton textile industry	
	Locational obsolescence	Decline of the textile industries and due to its inland situation the area became a hindrance in terms of transportation.	
5. New functions of the buildings	<ul style="list-style-type: none"> - Create the university of Lowell in a rehabilitation mill in 1975 - Conversion of Boott cotton mill into Museum 		
6. Revitalization strategy	Physical revitalization	Designation of the district as historic in 1975/1976, improve the façades on main street	
	Functional restructuring	Reusing the buildings to a new function and attracting new activities such as tourism	
7. Development	Planned	√	Result of the revitalization strategy
	Unplanned (Market driven)	–	Without rejecting its past, Lowell translated its heritage into a source of local pride and a touchstone through tourism led revitalization.
8. Gentrification	Social	√	
	Functional	√	

CASTLEFIELD, MANCHESTER

The area of the Castlefield which is located on the Western edge of Manchester city centre has its origins, dating back to AD 79 with the development of the first Roman settlement in the area and the village that grew up around the fort until its abandonment in AD 411. After that this area in the eighteenth century became the setting for Manchester's industrial revolution which was dominated by many warehouses to store various cargoes. By 1830, the Railway of Liverpool to Manchester - the first railway in the world - had opened with the first passenger railway station on Liverpool Road. This resulted in a series of brick and cast-iron bridges and viaducts that are still dominant features of the Castlefield townscape. By the 1960s, with the decline of the textile industries together with the changes in transportation and storage methods the quarter fell into an abandoned industrial area in the city (Tiesdell et al., 1996, p. 82).

After this decline in 1974, the potential of the area that possessed a strong historical and cultural background was recognized by the Manchester Council through policies which was related to development of tourism with an emphasis on preserving important buildings and finally in 1979 the area was designated as a conservation area. As the previous function disappeared, the city council tried to attract appropriate new economic activities and uses such as tourism in its detection of the economic restructuring in the quarter. Converting of the historic terminus of the railway to the Museum of Science and Industry has attracted over 300 000 visitor in 1994 and it became a symbol of the quarter's revitalization (Fig. 12). This project while maintained both the character of the area and links with the past also

encouraged other economic activity and residential development (van der Borg & Russo, 2008)



Figure 12: Converted of ex railway warehouses (1830) into museum of Science and Industry (Communication)

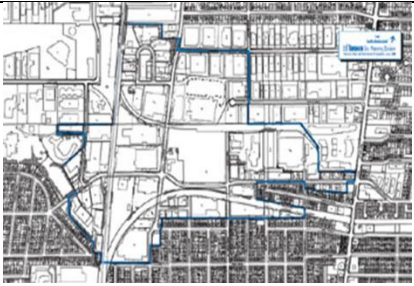

The Central Manchester Development Corporation (CMDC) which was established in 1988 recognized that tourism by creating jobs and creating more attractive image for the area would be appropriate approach to revitalize the area. Thus the main intention was physical and functional revitalization of the area. One of the key aims was imaginative and sensitive use by the physical assets - canals, viaducts and listed buildings. To implement all the aims, the CMDC divided the quarter into five different zones. In this case most of the proposed tourism projects planned for Castlefield are now complete and the whole area has undergone rapid transformation with the renovation of original warehouses (Tiesdell et al., 1996). The warehouses were undergone mixed-use redevelopment with office, residential, commercial and retail developments (Fig. 13). This review shows that many of these structures have

been rehabilitated and new uses were introduced to revitalize the area as a tourism quarter. Therefore Castlefield has experienced a dramatic functional restructuring and tourism has created employment, wealth and image enhancement in the quarter and made Castlefield a growth area that benefits other local attractions. It has positively reduced negative impacts such as crime, vandalism and waste management (Kazimierczak, 2012).



Figure 13: Castlefield is characterized by large-scale brick-built warehouse and mill buildings. Many of these structures have been rehabilitated and new uses found to revitalize the area as a tourism quarter.

Table 5: Evaluation of historic quarter of Castlefield and its revitalization

CASTLEFIELD, MANCHESTER		photography	
1. Location and History of the quarter	The Castlefield area as the first Roman settlement is located on the western edge of Manchester city centre and is dominated by the railway and canal networks that shaped the history of arguably the world's first industrial city.		
2. Pre-existing uses of buildings	<ul style="list-style-type: none"> - Passenger railway station - warehouses 		
3. The reason of decline	The decline of textile industries combined with the changes in transportation and storage methods, the quarter fell into an abandoned industrial area in Manchester.		
4.Types of obsolescence	Physical/structural obsolescence	Decaying vacant buildings and infrastructure	
	Functional obsolescence	Change of storage methods Indigenous economic functions had disappeared	
	Locational obsolescence	decline of the textile industries combined with the changes in transportation and storage methods	
5.New functions of the buildings	<ul style="list-style-type: none"> - Locating the Museum of Science and Industry - Locating the Granada Television - Establishment of Central Manchester Development 		
6.Revitalization strategy	Physical revitalization	Designated the quarter as a conservation area in 1979 by the city council	
	Functional restructuring	Reusing the buildings to a new function and change the function of the quarter through tourism revitalization.	
7. Development	Planned	√	Result of the revitalization strategy
	Unplanned (Market driven)	–	The quarter has benefited through the impact of tourism which has turned inner city disadvantages into opportunities for local residents and the business community.
8. Gentrification	Social	√	
	Functional	√	

TEMPLE BAR, DUBLIN

The Temple Bar quarter is located between the two major retail and commercial center of the city. Dublin castle and Christchurch Cathedral also located in the area and Trinity College on the eastern boundary. The first history of the area dates back to an Augustinian Monastery in 1259. In the eighteenth century, the area dominated by traders on the south side to the Liffey River and in the mid- to late eighteenth century the area was dominated by printers, bookbinders and publishers. And finally by the nineteenth century, Temple Bar had become a centre for the clothing and woollen trade in the city (Liddy, 1992).

In the 1950s, the clothing companies and buildings failed into disrepair and this led to relocating of many retails and distribution firms to relocate to better location. In 1981 the Irish state bus company (CIE) announced plans to redevelop the area as a transportation centre which would have destroyed the historic physical fabric and street pattern that still existed. The Dublin Corporation supported this future for the quarter. Thus, from 1981, as property prices began to fall CIE began to acquire land and properties in readiness for the demolition and reconstruction. But this planning blight caused the fall in property and rental value which resulted a process of revitalization (Montgomery, 1995, p. 138). Activities which needed only low rents or no rent at all moved into the area. So the low-rent was a key factor in the revival of interest in the area.

In 1985 the proposal for a transport was rejected. In 1988, the area's traders, entrepreneurs, community groups, conservationists and historians established the Temple Bar Development Council (TBDC) (Montgomery, 1995). Early in 1989, the

TBDC proposed in their prospectus that a Cultural Enterprise centre should be created and that a Temple Bar Development Trust should be formed to spearhead the cultural revitalization of the area. The TBDC proposed the purchase of all CIE-owned properties, suggesting three main areas for action: environmental improvements, the physical fabric, and investment in cultural activities. In 1989 the potential for tourism in the quarter was recognized and highlighted. Thus European interest and awareness of Dublin had increased as a result of its designation as City of Culture for 1991. The increased interest in the qualities of Temple Bar signified the growing impetus for revitalization in the area (McCarthy, 1998).

In 1992, the Temple Bar Development Programme introduced a detailed mixed-use plan that included the vertical zoning of land-uses. This policy concentrated on the social urban realm and encouraged active ground floor uses such as retail, bars, clubs, galleries and other cultural facilities to animate the streets and provide a boost to the evening economy and, therefore, the safety of the quarter. The control over the upper floors was more relaxed and allowed for a variety of more 'passive' uses such as residential and office accommodation (Fig. 14) (Rains, 1999).. The concentration of these activities into a tourism quarter creates a clear focus for both visitors and investors alike. Law (1993, p. 128) states that: 'The argument for concentration is that tourists prefer a compact, walking city, and that a clustering of facilities makes a city more attractive to potential visitors because the total is perceived to be greater than the sum of the parts.'





Figure 14: The 1992 Temple Bar development programme introduced a detailed mixed-use plan that included the vertical zoning of land-uses.

TBPL recognized the importance of the Temple Bar's heritage in projecting the quarter's character and image in its Development Programme overview: 'Temple Bar has a highly distinctive historical, architectural and archaeological heritage. It is the policy of Temple Bar Properties to integrate recognition of the unique qualities of the area's heritage, both historic and contemporary, into all aspects of its development programmes.' Montgomery (1995a, p. 162) recognizes that: 'In this way, culture is not viewed simply as an add-on, or simply as a marketing device, but rather as an integral and key part of Temple Bar's economy and sense of place.'

Thus, culture was seen as the key to the place promotion exercise and to change the image of the quarter. The emphasis in Temple Bar has been on enhancement of the ambience and character of its alternative cultural activities as opposed to creating more conventional tourism attractions. The importance of culture to Temple Bar is

demonstrated by the 1991 survey carried out by TBPL and Nexus Europe Consultancy which identified 33 per cent of businesses in the quarter being involved in cultural consumption or production.

Table 6: Evaluation of historic quarter of Temple Bar and its revitalization

TEMPLE BAR, DUBLIN		photography	
1. Location and History of the quarter	The Temple Bar quarter, occupying an area in the heart of Dublin, is located between the city's two major retail and commercial centres.		
2. Pre-existing uses of buildings	- Retail and distribution firms		
3. The reason of decline	Narrow streets, fossilization of the built form, poor state of the buildings was the reason that many companies relocated to another places. Additionally the Irish state bus company announced plans to redevelop the area as a transportation centre and this caused the price of the property fall down.		
4.Types of obsolescence	Physical/structural obsolescence	The buildings were in a poor state of repair	
	Functional obsolescence	Fossilization of the built form	
	Locational obsolescence	Companies and buildings falling into disrepair Irish state bus company (CIE) announced plans to redevelop the area as a transportation centre.	
5.New functions of the buildings	- Commercial uses (Local products and other goods) - Accommodation		
6.Revitalization strategy	Physical revitalization	physical improvement and new pedestrian	
	Functional restructuring	changing the economics of the quarter and become as an cultural and touristic quarter	
7. Development	Planned	√	Result of the revitalization strategy
	Unplanned (Market driven)	√	
8.Gentrification	Social	√	The success of the revitalization process in Temple Bar is partly identifiable from the following statistics: in 1992, there were only two hotels, 27 restaurants, 100 shops and 200 residents in the quarter; in 1996, it is forecast that there will be five hotels, over forty restaurants; 200 shops; 2 000 residents, twelve cultural centres, and over 2000 people employed in the quarter.
	Functional	√	

SOHO, NEW YORK

The name SoHo is a 1960s invention derived from the quarter's location South of Houston Street, the area had been originally a residential area but at the end of nineteenth century most of these houses were converted to a centre for mercantile and dry goods trade till the end of this century. In the twentieth century, it changed to light manufacturing, particularly in textiles.

From the 1950s, due to the planning destruction and for a variety of other reasons, an increasing number of small firms and businesses began to leave the quarter. Until the late 1960s loft rents were cheap and stable, so the artist found these vacant lofts suitable for living and working. Although their living was illegal the area's functional restructuring occurred. In 1969 the artists united with the historic preservationist in a coalition of common purpose but different interest: the artists to protect their homes and workplaces; the preservationists to protect the buildings. Due to this in 1973, the city authorities legalize as a working and living quarter for artists and it became the first commercial district in New York City. It is significant that the revitalization of SoHo through a housing-led restructuring was not a planned process. By mid-1970s, developers were proposing eliminating all legal restrictions, and removing the legal barriers against loft living by non-artists (Zukin, 1989, p. 13). As it is clear from SoHo, revitalization through a housing-led restructuring, which had been applied in this quarter, was not a planned process. Although, its warehouses and construction lacks the consistent architectural character and townscape, it is an eclectic combination of renovated cast-iron fronted warehouses and new condominiums, innovative art galleries, new clubs and restaurants (Fig. 15). Following the influence of SoHo, many American cities now have residential

communities in historic warehouse districts: for example, Portland's Skidmore Old Town and Philadelphia's Old Town. In these cities, the process has been different (Grodach & Loukaitou-Sideris, 2007).



Figure 15: A combination of renovated cast-iron warehouses and new apartments, art galleries, new clubs and restaurants in SoHo.

The displacement and gentrification issues in SoHo are more complex. There was initially a functional gentrification where one higher value use or function displaced a lower value use or function. This would only occur where there was a commercial incentive to convert the property to a new use. Thus, a key factor in the housing-led revitalization of SoHo was the strength of the New York housing market (Tiesdell et al., 1996, p.114).

Table 7: Evaluation of historic quarter of SOHO and its revitalization

SOHO, NEW YORK		photography	
1. Location and History of the quarter	SOHO is a quarter of Manhattan and located South of Houston Street. The area had been originally a residential area but at the end of nineteenth century most of these houses converted to a centre for mercantile and dry goods trade till the end of century.		
2. Pre-existing uses of buildings	<ul style="list-style-type: none"> - light manufacturing, particularly in textiles - Warehouse 		
3. The reason of decline	From the 1950s, due to the planning blight and production expenses were relatively low firms and businesses began to leave SoHo.		
4. Types of obsolescence	Functional obsolescence	From the 1950s firms and businesses began to leave SoHo.	
	Locational obsolescence	the area was blighted by a planned expressway	
5. New functions of the buildings	<ul style="list-style-type: none"> - Residential uses - Art galleries - restaurants, cafes and bars 		
6. Revitalization strategy	Physical revitalization	-	
	Functional restructuring	It was an industrial quarter but after declined it become artistic gallery and residents for artistic, also restaurant and bars was opened for increasing the residential	
7. Development	Planned	-	Result of the revitalization strategy
	Unplanned (Market driven)	√	Following the influence of SOHO, many American cities now have residential communities in historic warehouse districts: for example, Portland's Skidmore Old Town and Philadelphia's Old Town. It mean the revitalization by that time was successful.
8. Gentrification	Social	√	
	Functional	√	

THE MERCHANT CITY, GLASGOW

The Glasgow's Merchant City until the 1965 was a place of wholesale distribution in Scotland. This commercial activity due to alteration of commercial patterns over the next fifteen years became depressed and over a third of all property vacant. The area was suffering from planning blight and locational obsolescence. The high concentration of warehouses and related uses caused major traffic congestion in both the Merchant City and surrounding areas which was a sign of the area's functional obsolescence. In addition, the buildings themselves were functionally obsolescent and unable to cater for the contemporary demands of warehousing and distribution. During the early 1970s, efforts to encourage new uses into the area were the only limited success. The area with many important buildings became structurally at risk. In 1976 the whole of the Merchant City was included in Glasgow's central conservation area and due to this some of the threats to the area were removed and the district council owned about 40 percent of property in the Merchant City involving 60 percent of the vacant property. In these vacant properties which resulted few problems of displacement, the Merchant city needed a new economic activity to be revitalized (Gómez, 1998).

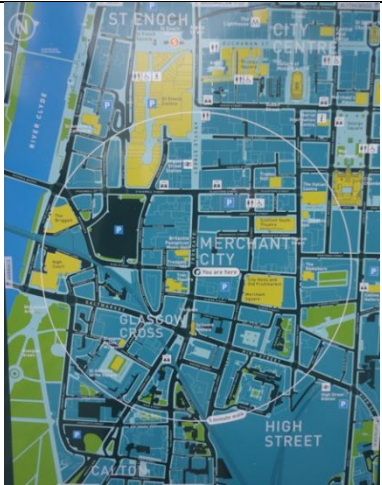

Consequently housing-led revitalization was the decision of the district council to revitalize the area. To avoid the subsequent problems of this kind of revitalization in the area, the district council undertook a feasibility study of some of its commercial property in the Merchant City to assess the scope for conversion to housing and ways of encouraging private developers. From these investigations, it was determined that conversion to housing would be structurally practical and acceptable standards could be achieved. Nevertheless given the estimated selling prices, it would not be

economically viable. Therefore district council was able to offer conversion grants. One of the converted buildings was a listed four- storey warehouse on Ingram Street. This building was converted into 23 flats with shop on the ground floor. A complete city block, which is located in the heart of the Merchant city, contained fourteen individual buildings, mainly warehouses, workshops and offices, with a few retail shops at street level (Johnson, 1987, p. 40) (Fig. 16). This project introduced a new style of joint venture between the public and private sectors. The Ingram Square project was the most significant for the revitalization of the Merchant City for a number of reasons: raising the scale of development from a single building to a complete street block; introducing the building of new houses rather than solely conversion; and offering solutions to more complex problems such as the partial use of buildings and car parking. The Ingram Square development also diversifies the quarter's population by including an element of student housing for Strathclyde University. Since the first housing conversion in 1982, more than 1200 flats have been created in the quarter providing an indigenous population and a demand for other facilities which leads the quarter to face a functional restructuring (Spaans, 2004) (Prior, 1993, p.237).



Figure 16: Ingram Square development

Table 8: Evaluation of historic quarter of Merchant City and its revitalization

THE MERCHANT CITY, GLASGOW		photography	
1. Location and History of the quarter	Glasgow's Merchant City was the first extension westward from its overcrowded and squalid medieval High Street.		
2. Pre-existing uses of buildings	- wholesale distribution - warehouses		
3. The reason of decline	Commercial patterns in the Merchant City altered radically and economic activity became depressed. The high concentration of warehouses and related uses caused major traffic congestion in both the Merchant City and surrounding areas. In addition, the buildings were functionally obsolescent and unable to cater for the contemporary demands of warehousing and distribution. The area was suffering from planning blight, locational and functional obsolescence.		
4. Types of obsolescence	Physical/structural obsolescence	Buildings becoming structurally suspect and at risk.	
	Functional obsolescence	commercial patterns in the Merchant City altered radically increasing of vacant property	
	Locational obsolescence	Commercial patterns in the Merchant City altered radically. The area was suffering from planning blight	
5. New functions of the buildings	- Residential uses - shops		
6. Revitalization strategy	Physical revitalization	By removing some of the threat and environmental improvement	
	Functional restructuring	Provide a new use for warehouses and wholesales buildings through the creation of a viable residential market in the area.	
7. Development	Planned	√	Result of the revitalization strategy
	Unplanned (Market driven)	–	
8. Gentrification	Social	√	The housing-led revitalization of the Merchant City has been relatively successful (Tiesdell et al ,1996, p. 122)
	Functional	√	

SHAD THAMES, LONDON

Shad Thames is an area on the east of Tower Bridge and it is surrounded by warehouses. During the twentieth century, some sites were redeveloped and there was also a series of poor quality new developments around and among the more substantial Victorian warehouses. Since the closing of the harbors in the mid-1960s, many of the warehouses had been abandoned. Although there had been plans for their demolition and replacement with a commercial development along the river, very little demolition had occurred.

In Shad Thames the duty was on private sector developers to recognize the potential for the conversion of the vacant waterside warehouses to residential uses within easy walking distance of the City of London. The key project that initiated the housing-led revitalization of Shad Thames was New Concordia Wharf by Andrew Wadsworth. In 1979, Wadsworth had moved to London from Manchester and started looking for a warehouse on the river. In September 1979, he found New Concordia Wharf, a Victorian grain warehouse built in 1885, and situated in the east of Tower Bridge on the corner of St Saviour's Dock. Therefore he bought it and in December 1980, Wadsworth managed to purchase the 120 000 sq. ft. building. Not just residential units, Wadsworth's intention was to produce a mixed use development. The project had a major effect on Docklands as a whole. Within five years, virtually every waterside warehouse in Docklands had been converted or was in the process of being converted or plans were in hand for conversion. The revitalization of Shad Thames was effectively led by its major landowners (Stratton, 2013, p.167).

In 1984, an assortment of warehouses either side of Shad Thames purchased by a group of companies for converting purpose. To enhance its attractiveness, an element of functional diversity was also introduced into the area (Fig. 17). Although many of the sites have predominantly housing uses, they also include a small element of other uses, such as restaurants, offices and shops on the lower floors. Shad Thames is emerging as a remarkable restaurant quarter serving a broader community. In addition, the London Design Museum was located on Shad Thames, while residential accommodation for students at the London School of Economics diversifies the social mix of the area. The quarter of Shad Thames developed very quickly; the length of the river frontage between Tower Bridge and St Saviour's Dock which was dominated by several of warehouses was largely revitalized through residential conversions between 1983 and 1989 stimulated by the booming house market in London and in Docklands in particular. This quarter like previous ones was revitalized through housing led revitalization but the approach was quiet different, however the probability of it occurring with the same results elsewhere is highly questionable.

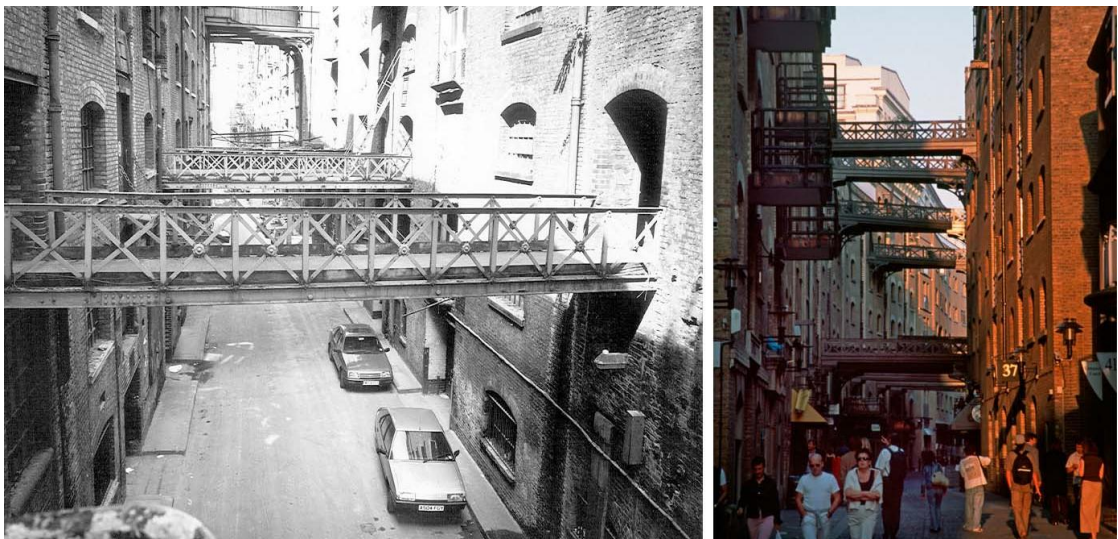




Figure 17: Conversion of abundant warehouses to residential flats

In both the Merchant City and Shad Thames, the housing-led revitalization occurred in terms of high levels of vacancy. Thus, there have been fewer instances of displacement and gentrification. In Shad Thames the conversions were undertaken without major subsidies. By comparison, the Merchant City was a planned process led by the local authority and involving considerable public subsidies to encourage the functional restructuring of the quarter provide use for historic buildings and, through the creation of a viable residential market in the area with no tradition of such uses, bring people to live in and near the city centre.

Table 9: Evaluation of historic quarter of Shad Thames and its revitalization

SHAD THAMES, LONDON		photography	
1. Location and History of the quarter	Shad Thames is the area immediately to the east of Tower Bridge on the south bank of the River Thames.		
2. Pre-existing uses of buildings	<ul style="list-style-type: none"> - Commercial activities - Warehouses 		
3. The reason of decline	Change of storage methods and poor quality of new developments around and among the Victorian warehouses was the main reason of declining of the area.		
4. Types of obsolescence	Physical/structural obsolescence	poor quality new developments in the area.	
	Functional obsolescence	By the late 1970s, many of the warehouses had been derelict.	
	Locational obsolescence	Change of storage methods and poor quality of new developments.	
5. New functions of the buildings	<ul style="list-style-type: none"> - Residential uses - mixed use (workshops/ studios, offices, restaurant) 		
6. Revitalization strategy	Physical revitalization	Preserving and repairing the buildings	
	Functional restructuring	Converting the area from warehouses to residential, it had also some evidence of mix using in the area.	
7. Development	Planned	–	Result of the revitalization strategy
	Unplanned (Market driven)	√	The quarter developed very quickly which was very successful. However in many ways the manner in which Shad Thames developed was the result of a very permissive planning authority that, in effect, allowed the area's largest landholders to pursue revitalization in the way they thought best.
8. Gentrification	Social	√	
	Functional	√	

THE LACE MARKET, NOTTINGHAM

The Lace Market is a unique British cityscape containing nineteenth century industrial architecture. In the 1850s and 1860s, the area became the world centre for the lace industry. After the First World War area with its about 200 lace making firms (Crewe and Hall-Taylor, 1991) went into decline. Although the lace industry has virtually disappeared from the area, the number of textile and clothing firms preserved a functional link with the area's past as similar skills. Nevertheless, due to decline of the area many firms would like to move out but do not have the necessary capital to make that move. Among these problems the preservation of the historic Lace Market began with its designation as a conservation area in 1969, rescuing the area from further destroying road building and redevelopment plans and also the city planning policies attempted to conserve the area from functional restructuring by seeking to protect not only the physical landscape but also the traditional industrial character of the Lace Market by resisting the conversion of warehouses to office use.

Since 1979 a more positive encouragement for the physical conservation of the Lace Market has been its status as an Industrial Improvement Area² (IIA). By 1982, more than 100 buildings had been renovated under various grant schemes. This improved the physical image of the quarter but had little impact on the economic base of the area other than a temporary stabilization. The weakness of local firms and businesses could not be stable for the physical conservation and functional regeneration (Tiesdell, 1995).

² Industrial Improvement Area came from the Inner Urban Areas Act 1978 to encourage employment opportunities in the inner city area.



Finally this functional conservation could not go further and the inability to control market-led restructuring of the Lace Market forced the city council into a late deliberation of the need for further functional diversification. In brief the quarter had to marry physical conservation with a limited functional restructuring. Considerable market pressure for office development which would entrain some potential benefits was recognized. Between 1971 and 1989, a number of warehouses were converted into restaurants and small businesses. Additionally sixteen warehouses were converted into offices with a further nine at that time (1989) (Crewe and Hall-Taylor, 1991) (Fig. 18). Although the Lace Market tried to preserve traditional activities, some new uses were introduced and it forced the quarter to face the functional diversification.



Figure 18: Inevitable conversion of warehouses to office use.

The Lace Market is the most interesting example of a local authority's determination in both conservation and revitalization the quarter. Although the area has not been comprehensively revitalized, it can be argued that it has - at least - been 'saved' from comprehensive conversion to office space.

Table 10: Evaluation of historic quarter of Lace Market and its revitalization

THE LACE MARKET, NOTTINGHAM		photography	
1. Location and History of the quarter	The Lace Market is a unique British cityscape containing some of its finest nineteenth century industrial architecture in Nottingham.		
2. Pre-existing uses of buildings	- The area was the world centre for the lace industry.		
3. The reason of decline	After the First World War, wartime bomb damage area and the area declined.		
4. Types of obsolescence	Physical/structural obsolescence	Damage of buildings due to war	
	Functional obsolescence	The lace industry has virtually disappeared from the area and replaced by the textile and clothing industry and firms.	
5. New functions of the buildings	- The attempts was preserving the previous functions but after that some buildings converted to office uses		
6. Revitalization strategy	Physical revitalization	designating the area and buildings improvement in 1972	
	Functional regeneration and diversification	Functional regeneration (Preserving the previous function and continued concentration on clothing and textile, addressing functional obsolescence by refurbishment) Functional diversification (the change of use of some buildings was introduced, change from industrial to office use)	
7. Development	Planned	√	Result of the revitalization strategy
	Unplanned (Market driven)	–	The Quarter still has high levels of office vacancy, and the remaining clothing and textile companies face serious difficulties,
8. Gentrification	Social	–	
	Functional	–	

LITTLE GERMANY, BRADFORD

On the edge of Bradford's city centre, Little Germany was established as one of the finest collections of Victorian warehouses in Britain. Little Germany was originally Bradford's merchant quarter. By 1850, Bradford had been transformed from a small market town to a thriving industrial/commercial centre. During this period of growth, an increasing number of foreign merchants, particularly German, came to reside in Bradford. By the mid-nineteenth century these merchants were able to invest in high quality buildings with architectural and historical significance. With the outbreak of the First World War the German merchants were forced to leave Little Germany. The area became abandoned and by late 1960s, there were few remains of the area's original activities. Its decline continued through the twentieth century (Firth, 1990).

In 1973 the area was designated a conservation area by Bradford City Council. In conjunction with the listing of the fifty-five buildings, this was the first positive step towards securing the quarter's physical conservation. After that the Bradford City Centre Local Plan tried 'to bring land forward for development, to stimulate new industry and assist existing businesses' so the City Council declared two Improvement Areas. With specific reference to Little Germany and the Cathedral Conservation Area, the council also permitted alternative uses by converting predominantly industrial warehouse areas to some activities such as small retailing outlets, cafes and motorcar showrooms. Encouraging mixed uses in multistorey buildings was seen as a way of bringing the buildings back into productive use, as well as giving greater vitality to the areas. Furthermore in the city centre as an appropriate location, vacant buildings renovated and converted to office uses (Fig. 19).

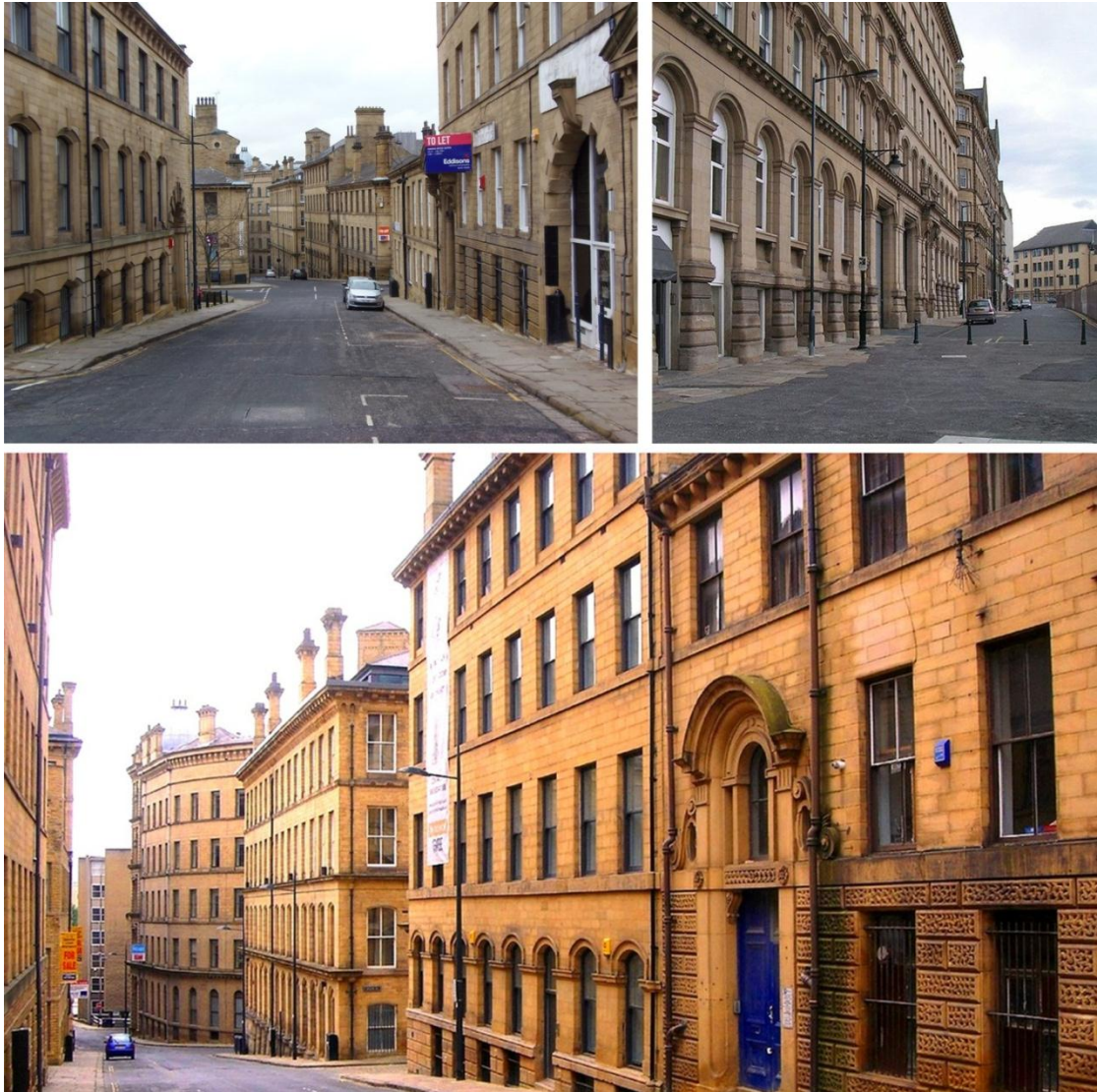


Figure 19: Conversion of industrial warehouse to office uses.



Conversion of warehouses to offices was not always a straightforward process. Many had become obsolete, making them either undesirable or impractical for potential developers to consider moving into.

In 1986 private sector were commissioned by the City Council, the English Tourist Board and English Heritage to draw up a Revitalization Strategy for the area. This identified the need for environmental improvement. Little Germany Action operated within the area from July 1990 until July 1992 and it was established with six main

aims: to encourage creative business to set up and grow in the area and to promote design and cultural activities in the area; to raise additional funds, particularly from the private sector; to help existing businesses in the area with growth potential to expand; to foster investment to bring empty or under-used property into productive use; to develop Little Germany's potential as a place to visit; and to help and encourage local people to play a more active role in the area and its future. The main task for the Little Germany Action Team (LGAT) was to develop the four main strands of the Revitalization Strategy for business development, cultural development, tourism development and residential development. It was recognized that business activity was one of the most important aspects to be addressed. Commitment was made to promoting this sector and to ensuring that no other part of the strategy harmed existing local businesses. Also discussions were held with the University of Bradford to assess the possibility of student accommodation in Little Germany, but the capital costs of building conversion, combined with the complexity of the area's buildings, made the proposition unviable (Tiesdell et al., 1996, p. 153-157).

In this quarter where the original industry has disappeared from the area and as the textile warehouses in the area were in a major decline, a functional regeneration would have been both inappropriate and commercially unrealistic. Thus, there was no opportunity or desire to pursue a functional conservation and regeneration of the area. The need was for an economic restructuring; new activities needed to be attracted to the quarter. In this way LGAT contributed a lot of activity and energy producing a significant impact in addressing the quarter's image obsolescence, projecting a more positive image and profile for the area (Hughes, 1999).

Table 11: Evaluation of historic quarter of Little Germany and its revitalization

LITTLE GERMANY, BRADFORD		photography	
1. Location and History of the quarter	On the edge of Bradford's city centre, Little Germany constitutes one of the finest collections of Victorian warehouses in Britain		
2. Pre-existing uses of buildings	<ul style="list-style-type: none"> - Merchant quarter within its textile industry - Warehouses 		
3. The reason of decline	Change of storage methods and poor quality of new developments around and among the Victorian warehouses was the main reason of declining of the area.		
4. Types of obsolescence	Functional obsolescence	Many of the buildings lay largely vacant and abandoned	
	Locational obsolescence	The merchants were forced to leave the area after the World war.	
5. New functions of the buildings	<ul style="list-style-type: none"> - Office uses - Cafes and motorcar showrooms - Small retailing outlets 		
6. Revitalization strategy	Physical revitalization	In 1973 it was designated as a conservations area which was a step for physical conservation	
	Functional restructuring	mixed-used such as restaurants, bars, offices as commercial uses introduced and previous function disappeared	
7. Development	Planned	√	Result of the revitalization strategy
	Unplanned (Market driven)	—	The quarter developed very quickly which was very successful.
8. Gentrification	Social	√	
	Functional	√	

LOWER DOWNTOWN (LODO), DENVER

LoDo - the Lower Downtown of Denver - is again an historic warehouse district which is located at the north end of the Sixteenth Street Mall. This quarter represents the largest concentration of historic buildings in the Denver Region. Because of the demand for new energy resources The Denver downtown declined in the late 1970s and early 1980s and during this time LoDo suffered from a high level of vacancies.

However, during this period preservationists began to identify historic buildings in the LoDo and to build public support for the idea of an historic preservation district. The first unsuccessful ordinance for the area was creating a mixed use quarter in 1974 and it failed to contain any controls over development and historic preservation (Collins et al., 1991). Between 1981 and 1988 an estimated 20 per cent of the building stock of LoDo had been demolished (Hammer, et al., 1996). Thus, the initial challenge was the physical preservation of the quarter.

In 1984 the mayor instituted a major city centre planning effort which was more about physical preservation. More specifically, the plan stated: 'The district must be preserved and redeveloped through a package of actions that stimulate new economic demand and protect its historic character by preserving the existing buildings and promoting compatible infill development' (Hammer, et al., 1996).

Between April 1990 and March 1992, twenty six applications for rehabilitation and nineteen applications for minor repairs were approved, while only one new, construction and two demolitions were approved (Hammer, et al., 1996). In addition, there was a commitment to public investments, civic design improvements and business promotion activities aimed at revitalizing the district which was benefited

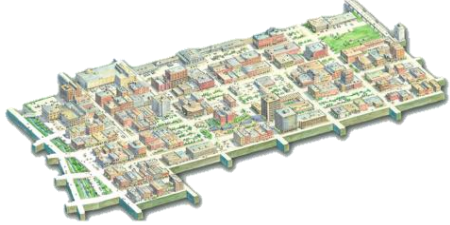

from investment in infrastructure. This investment in terms of environmental improvements, repairing of streets, new street lighting, street furniture and pedestrianization, together with rehabilitated buildings, provides a physical conservation that provides a platform for the economic revitalization of this historic quarter.

LoDo continues to attract entertainment and arts-oriented establishments, unique shops, arts, retail and restaurants. The fact that LoDo is an integral part of the Downtown area is a major factor in its revitalization. LoDo sectors which contain a mix use of offices, retail, restaurants, housing, parking and a growing design community to create a symbiotic relationship with the Downtown offices must and will work in harmony to come to full potential (Hammer, et al., 1996) (Fig. 20). Activities, street life and shopping are important site attractions that businesses offer their employees. As a marketing tool for the central core, LoDo provides a major attractant to entice new business to Downtown. It is therefore vitally important that the success of the outer sectors occurs, in order to regain office market strength for the whole of Downtown'. LoDo is also expected to benefit further from two adjacent developments - Corrs Field Sports Arena and Elitches Amusement Park - which will increase demand for offices, entertainment, retail and residential.



Figure 20: Conversion of warehouses into office use, retail and restaurant.

Table 12: Evaluation of historic quarter of Lower Downtown and its revitalization

LOWER DOWNTOWN (LODO), DENVER		photography	
1. Location and History of the quarter	LoDo - the Lower Downtown of Denver - is an historic district located at the north end of the Sixteenth Street Mall		
2. Pre-existing uses of buildings	Warehouses district		
3. The reason of decline	Worn-out warehouses rundown hotels and bars were the reason of decline in that area.		
4. Types of obsolescence	Physical/structural obsolescence	exhausted buildings	
	Functional obsolescence	high level of vacancies	
5. New functions of the buildings	- Mixed used function (Offices, shops, restaurant, housing and also a centre of arts and design community)		
6. Revitalization strategy	Physical revitalization	Damage of buildings due to war	
	Functional restructuring	It converted to a mixed used quarter (offices, shops, restaurants, housing and also a center of arts and design community)	
7. Development	Planned	√	Result of the revitalization strategy
	Unplanned (Market driven)	–	LoDo contains a mix use of offices, retail, restaurants, housing and parking and a growing design community which creates a symbiotic relationship with the Downtown offices.
8. Gentrification	Social	√	
	Functional	√	

2.3.1 Finding and Evaluation of the Examples of Revitalization Projects

Examining these several case studies of revitalization projects and as Lepel (2006) illustrates it appears that there are several reasons due to which the industrial building would lose their functions:

- The location of the building is insufficient to the industrial purpose or technology. Among the reasons environmental, township development, communication or infrastructure problems can be mentioned;
- Size, form, load capacity of the building excludes the development and expansion of the production, it means that it cannot satisfy the capacity, space and technological requirements of the new technology;
- Stoppage, cancelation or replacement of the production for economic and technological reasons;
- Closing down the company for various economic reasons.

After terminating the industrial activity, the building may not be used effectively and will be derelict. Due to this, illegal use without technical intervention may happen. In many cases these new uses are incompatible and will affect the building and area.

The first three cases (LOWELL, CASTLEFIELD and TEMPLE BAR) attempted to exploit the tourism potential for revitalizing its economic base and have undergone an economic restructuring. The next three cases (SOHO, MERCHANT CITY and SHAD THAMES) again revitalized through functional restructuring, this restructuring was more desirable than remaining as an industrial and commercial use. As it is shown, these three cases were revitalized through housing-led revitalization.

The last three examples (LACE MARKET, LITTLE GERMANY and LOWER DOWNTOWN) illustrate different approaches for areas which had commercial/industrial functions in the nineteenth century and have experienced varying degrees of physical and economic obsolescence in the twentieth century. The Lace Market was revitalized through functional regeneration. In Little Germany, the local authority, realized that functional conservation would be ineffective attempt. Therefore they made a creditable effort to bring revitalization through physical conservation and functional diversification. LoDo in Denver is another example of a successful revitalization of an historic urban quarter. This quarter shows significant signs of economic revitalization. Unlike the Lace Market, there was never an opportunity or desire for functional conservation; the City of Denver sought to create jobs and create a vital and vibrant area by attracting investments willing to take risks in this historic environment.

In these reviewed cases with the exception of the Lace Market as the warehouses in the areas were in a major decline a functional regeneration would have been both inappropriate and commercially unrealistic. Therefore in order to become sustainable they forced to change their previous functions. For example from areas of production and storage to office use and various forms of consumption: retail, leisure and tourism. The emergence of these new functions in the area caused a functional restructuring or more limited functional diversification in terms of economic strategic approaches. In both functional diversification and restructuring, the historic attributes of the area have been exploited as assets.

Chapter 3

REVITALIZATION OF THE WALLED CITY OF FAMAGUSTA AND REUSE OF THE WAREHOUSES

3.1. Introduction

In this chapter, firstly the potential of the Walled City of Famagusta and the reason for revitalization of this historic quarter will be explained. Secondly a quarter of warehouses in the Walled city will be investigated to determine the most appropriate reuse for them and create a new confidence in the neighborhood which lead to restructuring the economic base of the quarter.

In order to determine the most appropriate new uses for these buildings some criteria have been selected based on the suggestions of Yildirim (2012) as:

- Condition of the historical pattern,
- Condition of the environment,
- Integrity of the place,
- Reuse alternative list and advantages,
- Owners' and users' requirements

Integration of these criteria was aimed to create a better environment based on current situation of the Walled City of Famagusta which will be explained in the following parts.

3.2 Brief Information on the Walled City of Famagusta

The Walled City of Famagusta, which is dominated with 3900 meters long huge defensive walls with 18 meters high, deep moat with its gentle slope, is one of the indispensable great historical cities both at local and international levels (Fig. 21).

Since Cyprus has gone under the influence of many different states and cultures, the changes was also reflected on the city of Famagusta, which houses traces of these intermingling cultures. Today the historic and cultural influences of all conquerors such as: Lusignans, Venetian, Ottoman, British and even recent cultures are visible and reflected side by side in harmony within the Walled City.

In the year 648, when the city of Salamis was demolished by Arab raiders, the inhabitants moved to the site of today's Walled City. Therefore the city of Famagusta has its origins in the Walled City and its history dates back to the first century AD. The city is known as one of the most important and unique defense cities of the Middle Ages (Yildiz, 2005). The main development of the city occurred through seven particular periods which is shown in Table 13.

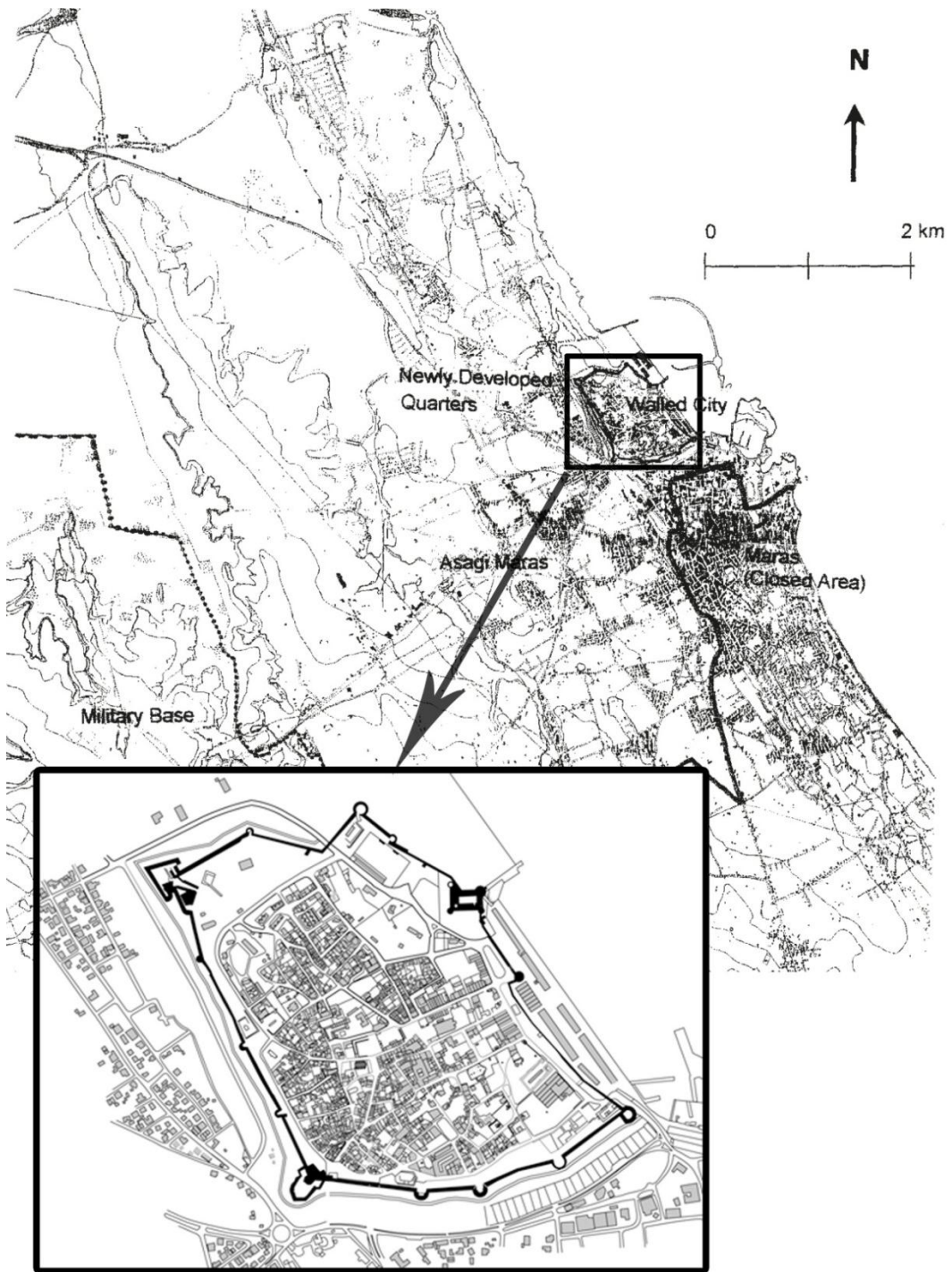
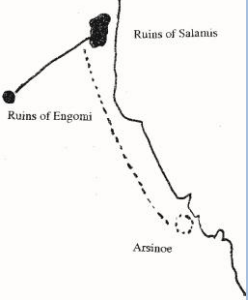
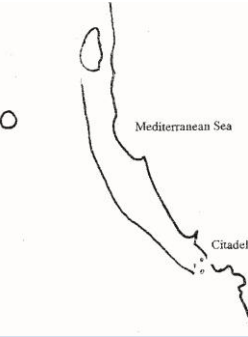
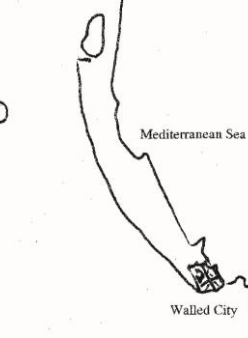
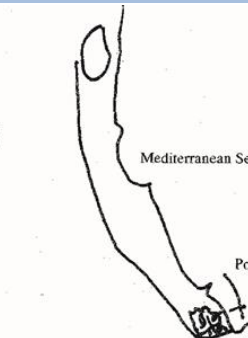
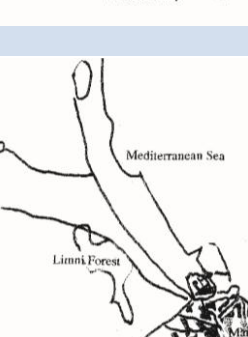
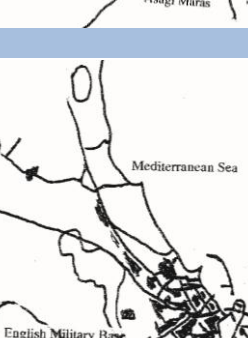


Figure 21: The Walled City of Famagusta

Table 13: The history and urban development of Famagusta until present (Önal et al., 1999; Yildiz, 2011)

Date	Period	Important monuments	Development of the city	
648 AD-1192	The emergence of the city	The foundation of the city	The city for a long while was just a little coastal and fishing town.	
1192-1489	Lusignan period	Slightly fortified Citadel Many religious and public buildings were constructed such as: Cathedral St. Nicholas	In 1291 it was known as an enterport for all commercial transactions between west and east. The failure of the trade policy caused decline of harbor in 1374.	
1489-1571	Venetian period	Improve the fortifications and rebuilt of the old walls according to the latest development of the military, Digging moat Sea Gate and Land Gate	At the beginning Famagusta lost its former glory and fall into decline. At that time the urban pattern of the city developed mainly along the principal axes in the south/north and south-east/north-west directions and the urban center of the city lay within the triangle of St Nicholas church, its square and the Venetian Palace.	
1571-1878	Ottoman period	Bedesten and Arasta, Medrese, Bath, Fountain and Inns	Population was transferred from Anatolia and no Christian was allowed to live within the city walls The city was utilized as a station for political exiles and a military base. The city lost its economic importance and the commercial and economic activities attracted towards Larnaca. The existing buildings kept and made use of them by necessary modification and transformations in order to fit the socio-economic and cultural life of the new inhabitants (conversion of the cathedral and churches to mosque)	
1878-1960	British I British II	Construction of an administrative center In connection with development of the port a lot of warehouse and other port-related buildings were made in the city	The island through the Ottomans was leased to the British and in 1910 it became a true colony of the British Empire. With two ethnic groups of Greeks and Turks. The port of Famagusta was expanded and gained importance as a port and become a commercial center.	
1960-1974	Cyprus Republic	Separation of the administration into two municipalities for Greeks and Turkish.	The walled city was turned into an isolated Turkish Cypriot enclave. The Walled City and the areas outside the Walls, in the south-west, west and north-west of the Walled City in which the Turks mainly lived, were neglected.	
1974 till present	Turkish Republic of Northern Cyprus	Old buildings for establishing new shops were demolished.	City was touched by different kinds of political, socio-economic and cultural determinants. The commercial centre in the Walled city turned into a centre serving the whole city and region which created demand for shops. The physical structure of the Walled City damaged. Wholesale clearance of old building stone during 1880s and 1890s	

In 1989 the Walled city was declared as a Conservation Area under the new Town Planning Law (55/89) (TRNC, Official Gazette, 1989). In 1999, 249 buildings were listed by the Department of Antiquities and Museums and in December 2005 a 'Revitalization Plan for the Walled City' was finalized by Famagusta Municipality. In addition, some piecemeal projects which are far from being part of an integrated planning approach, such as pedestrianization of Namik Kemal Square and Istiklal Avenue and provision of car parking areas have been implemented. However today, despite this implementation of conservation policies during last two decades, the Walled City is still faced with deterioration and decay. It seems that, this declaration and physical revitalization was not sufficient to cover the whole quarter and address the deterioration. Furthermore its contribution is less than expected.

As Doratli (2007) states the reason for not achieving successful result for revitalization as follows:

- Area schemes prepared for the various parts of the historic quarter were only implemented in a piecemeal method by the public authorities owing to financial, legal and organizational constraints;
- Area schemes were more emphasized on physical revitalization rather than economic revitalization. Due to this, dynamics of place, obsolescence and the position of the Walled City within the overall urban context were not fully considered;
- The base of financial incentive is not enough to encourage private interest and investment.
- As a result the conservation of the area did not become 'a shared vision' in the community.

In addition to these above issues, financial, political, environmental and somehow cultural issues, which happened during the history of the Walled City, forced residents and businesses to flight out of the walls and these has been also a natural process of decay.

Despite these decay and deterioration, the Walled City is still a place of concentrated commercial, residential and other activities. Consciousness of its potential, which is listed below, forces the planners to work on measures for reconciling this deterioration through revitalization- not only in physical but also in social and economic terms for the improvement in a long-term perspective.

Potential of the Walled City:

- The richness of the cultural and historic fabric of the city is also an asset in terms of acquiring international aid for its revitalization;
- In the walled city there are many potential possibilities to be utilized for the revitalization of the city;
- In recent times the Walled City started to attract some attention from investors;
- Its high quality working atmosphere, potential open areas and its nearness to the riches of the sea;
- The rich historic and cultural fabric of the walled city is an attraction for especially foreign visitors;
- Cultural and art related activities reflecting different cultural fabrics are traditionally and regularly organized within the Walled City;
- Each part of the whole walled city is within a walking distance;
- By an administrative decision the old harbor can be fully integrated with the walled city.

As stated before, each quarter depending on its intrinsic qualities in addition to its local, physical and socio economic conditions, different strategies and comprehensive approaches should be engaged in their revitalization processes. An advanced approach is required to assess the resource and adapt historic buildings and monuments for contemporary uses while preserving their unique characteristics and qualities.

Being aware of the value and potential of the Walled City of Famagusta, there have always been studies or attempts for its protection and enhancement. Among these, the latest has been the revitalization plan for the Walled City of Famagusta, which has been prepared by the Famagusta Municipality in 2005. In the following, important features of this plan will be highlighted, as it will provide a basic for discussions on the adaptive re-use of warehouses along the revitalization process.

3.3 Revitalization Plan for the Walled City³

Since the overall approach of the ‘Revitalization Plan for the Walled City’ fits well with the principles of conceptual and rational integrated conservation, it has been taken as a basis for determination of the most appropriate adaptive reuse option for the warehouses and relevant approach for the case study.

In the Revitalization Plan two approaches were given priority. The first is revitalization based on tourism and cultural-led revitalization and the second is district characterization. These two approaches were used as the basic methodologies, on which the revitalization was based.

³ This part is fully based and taken from “Famagusta Walled City Revitalization Plan” (Famagusta Municipality 2005)

3.3.1 Tourism and Cultural- led Revitalization

The Walled City is very important in terms of the historic and cultural heritage. These are values that should be given priority in terms of revitalization. Rather than viewing cultural and tourism related heritage as a responsibility and liability, culture and tourism based revitalization approach views this heritage as an asset to be utilized for revitalization of the city. Bringing about new utilization models; which would be compatible with the historic and architectural characteristics, urban atmosphere and historic context of the city; rather than continuing with the old utilization methods is the essence of culture and tourism based revitalization approach (Famagusta Municipality, 2005).

Tourism and culture-led revitalization approaches, as employed in the revitalization plan for the Walled City of Famagusta, form a strategy for restructuring the economic base. This is in keeping with the proposition that if a historic urban quarter suffers severely from physical, functional and locational obsolescence, revitalization can only be realized through restructuring the economic base of the area for the sake of sustainable conservation.

In the Revitalization Plan, the Tourism and Cultural-led revitalization used as a safe and constructive approach; which will preserve, develop and consolidate the present fabric of the city, and ensure that the new developments related with culture and tourism will be more successful, oriented to the district and more compatible with the fabric of the city. This is an easy and beneficial method especially in terms of assessing the potential of the city and determining district characteristic.

In fact as stated by Doratli (2012) too much emphasis on tourism may very well result in some serious problems, seen elsewhere in other historic towns, such as overcrowding and over-consumption, and may actually lead to the deterioration of the cultural heritage. However, she also stressed that her statement is not to imply that it is entirely wrong to utilize a tourism and culture-led strategy for the revitalization of the Walled City. The Walled City is a tourist attraction, and it would be unrealistic to ignore this potential. What is being advocated instead is the importance of incorporating and utilizing this potential in conjunction with the many other strengths Famagusta possesses, for example the Eastern Mediterranean University.

3.3.2 District Characterization

The second method was attended to divide the quarter into nine zones (Fig.22). The consideration behind this division was related to physical locations, historic background, historic fabric of the city and urban topography⁴. Unique material, architectural shape and reflections of unique social/economic characteristics on physical locations have also been taken into consider for these divisions. These divisions are not only a fundamental method for recognizing and analyzing the present state of the Walled City but also for making easier the revitalization proposals. In this case, instead of identifying the Walled City as a whole, different zone with different characteristic and richness of these zones were highlighted.

As Doratli (2012) mentioned this approach can be considered as an appropriate option for two reasons:

⁴ urban topography means, areas like the city walls, the squares, areas belonging to mosques and churches and similar places, which contributed to the formation of the physical shape of the historic city (Famagusta Municipality, 2005).

- Although the Walled City itself is a historic quarter and defined by obvious physical border, it is possible to identify nine districts (or character areas), thanks to their distinctive functional and physical characteristics.
- Through a character area-based planning approach, distinctive features as well as opportunities for areas with different characters can easily be identified. Additionally, the competitive advantage of each area can be evaluated and may positively support and sustain the general revitalization efforts for the whole Walled City.

This approach beside its contribution to the future preservation and continuation of sustainable local differences and the historic character of the city, is useful for both understanding the past and present of the city in terms of determining future concept for revitalization (Famagusta Municipality, 2005). The features of these zones are described below.



Figure 22: Characterized Zones (Famagusta Municipality, 2005)

Zone 1: Core Commercial Area

This is the biggest area and it basically includes commercial, governmental and cultural areas. The most important and lively activities of the historic city take place in this area. The main axis of this area includes The Istiklal Avenue, The Namik Kemal Square and the road along the harbour. This is the axis where the most important activities in the city take place. Commercial and other activities in the city concentrate on this axis. In this area there are also monumental buildings like the Lala Mustafa Pasa Mosque (St. Nicolas Cathedral); The Venetian Palace; The Church of Hospitaler and templar; The Bugday Mosque etc.; the old prison and school buildings; The house with a fireplace (sömineli Ev), which is used as the ethnography museum; and civil buildings; The British Warehouses which are used as shops; open areas such as the municipal marketplace. The Namik Kemal Square and the Istiklal Avenue, which are pedestrianised; and well-organized car parks also, take place in this area.

During daytimes the commercial centre, which is an important business centre for both the historic city and the whole of Famagusta; is mostly used by employees, commuters, visitors. At nights, especially at summer nights, there are also people coming for entertainment purposes. There is a difference both in terms of quality and quantity between the night and daytime populations of the centre.

Zone 2: Residential Area with Commercial Uses

This area takes place in the north of the Akkule gate. In this area, especially around the Akkule gate, there is a concentrated commercial activity. Many buildings in this area have lost their historic characters due to insensible renovation. Yet there are quite a good number of listed historic buildings in the region.

In this area residential and commercial usage of buildings is mixed, but in the areas near to the Istiklal Avenue and on the Altun Tabya Street commercial usage is more.

Zone 3: Residential Area

This is the most important area in terms of the features of city fabric and architectural fabric. This area, which residences dominate, has a unique and decent physical fabric. The area is adjacent to the Istiklal Avenue, which is the commercial centre of the old city within the city walls.

In this area residences with courtyard gardens and narrow streets predominate the general fabric. An outstanding feature in terms of materials used in the buildings is stone walls beneath plasters. Also there is a ruin of an old bath, foundations of which have been preserved. One of the two arched buildings within the city walls and having an arch over a road takes place in this area. Furthermore, in the area there is an old school building with a garden, which is used as an association building.

Zone 4: Residential Area

This area, which is situated in the place known as the council houses, is also a residential area and it is the most lately constructed area of the walled city. This is also the most populated and most resided area of the Walled City and there are three different categories of buildings in it. One of the categories is the category of apartment type council houses. These are rectangular buildings and they are bigger than all the other civil building examples. Another category is the detached housing buildings. These buildings include both single and two-storied ones. The third category is the category of terrace houses, either the high garden walls of which or the buildings themselves are aligned to road. Most of these buildings have courtyard gardens. The old bath known as the Kertikli Bath is in a bad condition and out of use.

Zone 5: Densely Open Area with Historical Buildings

This area, which is the northeastern part of the Walled City and takes place in Canbulat Gate region, is mostly comprised of Warehouses, historic buildings and open areas and it can be regarded as the least developed area within the walls.

At first sight, there is no trace of the traditional tissue in the area, although there are several ruined churches as well as an old cemetery. Because of the presence of these ruins, which were listed under the British Antiquities Law, the area was preserved from any kind of development for a long while after 1963. The New Gate, one of the four entrances into the Walled City, which was opened during the British period, is located at the northern edge of the area. The new wide road, which runs along the edge of the walls and connects this entrance with the Canbulat Gate, stands in contrast with the organic street pattern of the Walled City. The old warehouses, the old quarantine building, which is currently used by the Veterinary Department, a library, an elementary, a nursery school, a sports club building, a restaurant, a sports field and an orphanage are all located here. Some of these facilities are dispersed throughout the area in a haphazard fashion, leaving a great deal of lost space in between which afflicts the quarter, and displaying little respect for the traditional tissue. Two blocks of refugee houses, built to accommodate homeless families after 1963, are among the few residential buildings in the area.

Zone 6: Densely Open Area with Historical Buildings

This area takes place in the northeast of the walled city and includes the football field and the club building used by the Magusa Türk Gücü sport club, day nurseries, an elementary school, and open areas. In this area there are three building blocks including 10 residences. The remaining part is comprised of open areas.

Also there are ruins of monumental buildings and an open areas and old Ottoman cemetery in the area. Two of the four gates of the walled city open to this area.

Zone 7: Densely Open Area with Historical Buildings

This area is under military control. Access to the Martinengo Bastion, which is the most important Bastion on the city walls, is made through this area.

There is also a military building in the area. Most of the area is made up of open areas. There are both ruined and preserved monumental buildings in this area. Furthermore, in an area near to the Martinengo Bastion entrance, there are underground caves.

Zone 8: Walls, Moat and Glacises

The walls with bastions, moats, glacises are very important examples of Middle Age military architecture. The two original city gates, the inner Castle of Othello, the 14 towers including Akkule and Martinengo (Tophane), the deep and wide moat and the glacises are all among the most important examples in the whole world, of defence related architecture belonging to the Middle Ages. The city walls of Famagusta have two original gates. One of them is Land (Akkule) and the other is Sea Gate. A portion of Land Gate has collapsed but Sea Gate is well preserved.

The Castle of Othello was constructed as a citadel. Besides many bastions over its walls, there are also many crenels. These crenels are used for different purposes and they are close to the use and visit of the people. The moat is unique in terms of its length, depth and width. Its total length is 3,340 meters and trees and other plants in it add to its uniqueness. Due to its location and structure the moat is isolated from the other parts of the city both in terms of visibility and accessibility.

Zone 9: Harbour

The old harbour, which has served the historic city for centuries, is the only area, which is opened to the sea, in the walled city. Nowadays it is being used as a conventional harbour. One part of it is serving fisherman's boats and another is used as a shipyard for repair and maintenance. Southern part of the harbour is a military zone.

In the harbour, which has been enlarged by filling the gap between the city walls and the sea at the beginning of the 20th century, there are many warehouses, service buildings and other buildings belonging to the British Colonial era.

3.4 The Warehouses in the Walled City

Although it is possible to observe warehouses, which are scattered throughout the Walled City, most of these warehouses are located on Liman Street or Canbulat Avenue.

In this thesis, the major focus will be on the warehouses on the Canbulat Avenue. When considering the character areas these buildings are located in Zone 1 and 5. Therefore characteristics of these zones will be determined.

The eastern part of the Walled City which face the eastern walls are dominated by plenty of old warehouses to serve the demand for storage during the British period. Today, due to changing situation of the harbor and existence of other warehouses in the same direction but outside the city walls, these old warehouses cannot serve their previous function anymore; accordingly some of them are either leftover or are inappropriately utilized (Fig. 24).

Towards the end of the Liman Street in zone 1 some warehouses which can be seen all the way down to the end of this street were used for logistics purpose for many years. It can also be found when turning right at the end of the road toward Canbulat Avenue. Nowadays, almost all of the warehouses in the Liman Street have been renovated and used as shops by well-known brands. Although the way how the façade and interior parts of these buildings changed would be questionable in terms of the function they have increased livability of the street (Fig. 23) (Fig.24).



Figure 23: Reused warehouses as retail (Taken by author, 2013)

Since rests of unused warehouses are located on the main road (Canbulat Avenue) along the walls, their revitalization can be essential to promote the quality of the street and the whole area. These warehouses as important elements of British period have great importance in urban pattern of Walled City and are known as unique buildings. Also in terms of their dimension, mass, roofs, materials and architecture; these buildings stand out among other buildings.

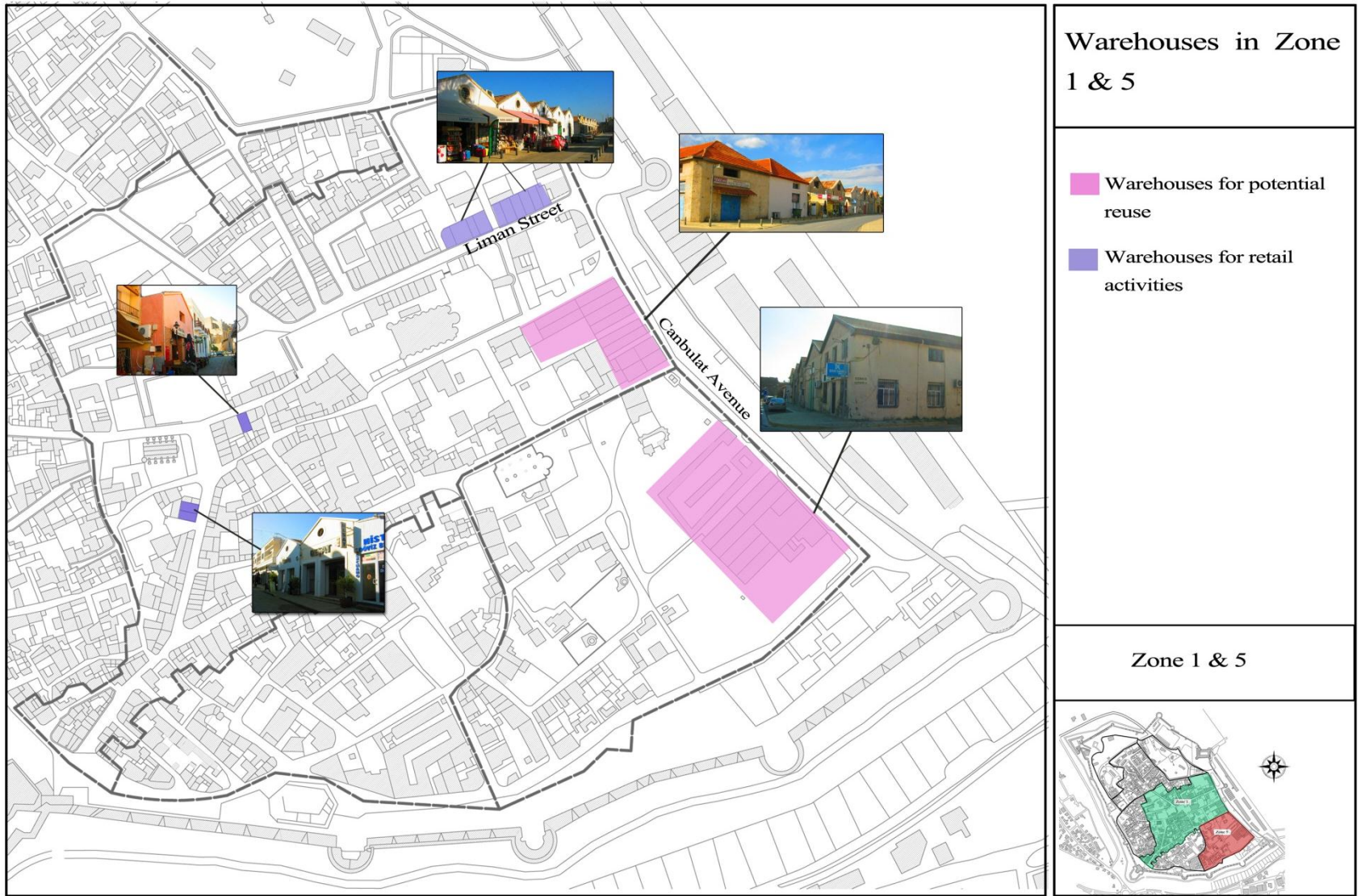


Figure 24: Warehouses in Zone 1 and 5

3.5 Assessment of the Warehouses

In this thesis as mentioned before a set of criteria has been utilized to determine the appropriate new uses for the unused or underutilized warehouses in the historic quarter of the Walled City of Famagusta. As it is shown in figure 25, these criteria will serve for the identification of area's historical pattern and the aspirations of its users. In addition, the balance between project feasibility, environmental impact and social benefit will be highlighted. All these issues will be explained in detail in the following:

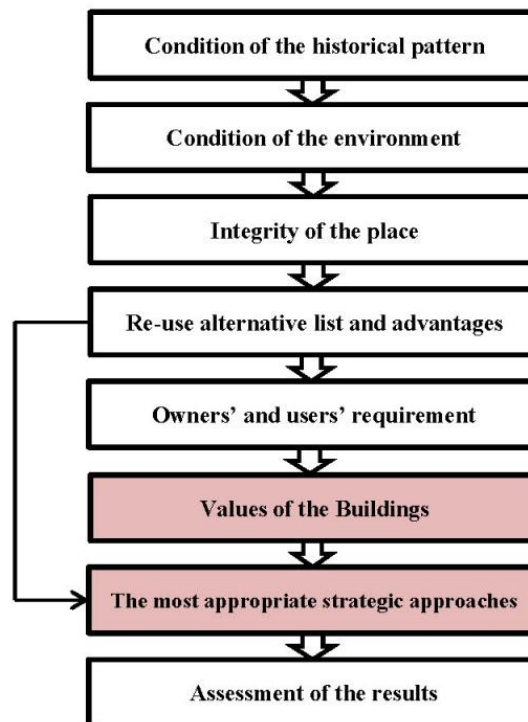


Figure 25: Eight-step method for the study of the documenting buildings and re-use assessment (Adopted from Yildirim, 2012).

3.5.1 Condition of the Historical Pattern

For a new use, the condition of the historical pattern must first be assessed. Due to this, the physical state and original uses of the structure, building techniques, plan,

architectural details, materials, additions to and subtractions from the buildings were investigated.

The old warehouses along the harbor and Canbulat Avenue were constructed with the aim of stocking up guns which were brought there from the harbor by the British in during the British period (Fig. 26). As Dagli (2013) stated these warehouses were massively used especially when trains were still in use (1905- 1952) in Cyprus. After the British colonial period due to economic and political changes in Famagusta, these warehouses could not serve their previous function.



Figure 26: Warehouses along the Canbulat Avenue (Taken by author, 2013)

These warehouses during the Cyprus Republic period (1960-1974) became under control of Turkish authorities and in 1974 after the division of the Island, continued to be controlled by them but with some problem within this. Some of these warehouses were sold out to the private sector without any regulation for their uses. In some cases the roof of these buildings collapsed due to burning. Moreover, each warehouse was sold out to two or more entrepreneurs and the result was the division and alteration of the interior parts of the buildings. The rest of these warehouses remained under the state property or Municipality Storage.

These warehouses which cover the largest proportion (20.2%) of the Walled City of Famagusta (Oktay, 2005; p.382) due to their environmental values, were listed as grade III as illustrating social and economic history of that period. Warehouses with this value don't have very strong architectural character but they are as important as the monumental buildings in a sense that they are dominating components of the unique townscape (Doratli, 2000). Also these buildings are reflecting the features of significant period and contribute to the character to the city. Preserving this group of buildings is the most difficult part in the conservation efforts, unless favorable conditions are provided. Simply because of being under private property and the official protection of historic buildings is restricted to only monumental buildings. However their lost would convey to the loss of the character and identity of this particular place.

The shape of these one storey buildings is rectangular in plan with duo-pitched or conical roofs. The materials which were used for the buildings were based on available local materials (yellow stone).

The structural conditions of these building are bad and in some cases the façades were partially or completely deformed. Additionally there are some alterations, additions to and subtractions from these buildings which are shown in red colour in Figure 27.



Figure 27: The floor plan, front view and alteration of the warehouses (Drawn by author, 2013)

3.5.2 Condition of the Environment

In order to determine the condition of the environment, types of settlement, approach roads, pedestrian and vehicular accessibility, circulation and parking capacity, and environmental factors have been analyzed.

These warehouses take place on the Canbulat Avenue which is one of the asphalt primary ring road with two-way traffic. This avenue has direct access from the outside the walls through Yeni Kapi (The New Gate) in the north-eastern direction which was opened in British Empire Period. The other is the Canbulat Gate. In addition, this road has side parking and sidewalks on both sides (Fig. 28). In front of them is the view of the date palm trees and historic walls as well as some ruins.

Some of the warehouses in Canbult Avenue are under private ownership and used as the car repair shop, carpenter workshop. Whereas some belong to the State or the Municipality, and they used as storage and quarantine building is used by the Veterinary Department.

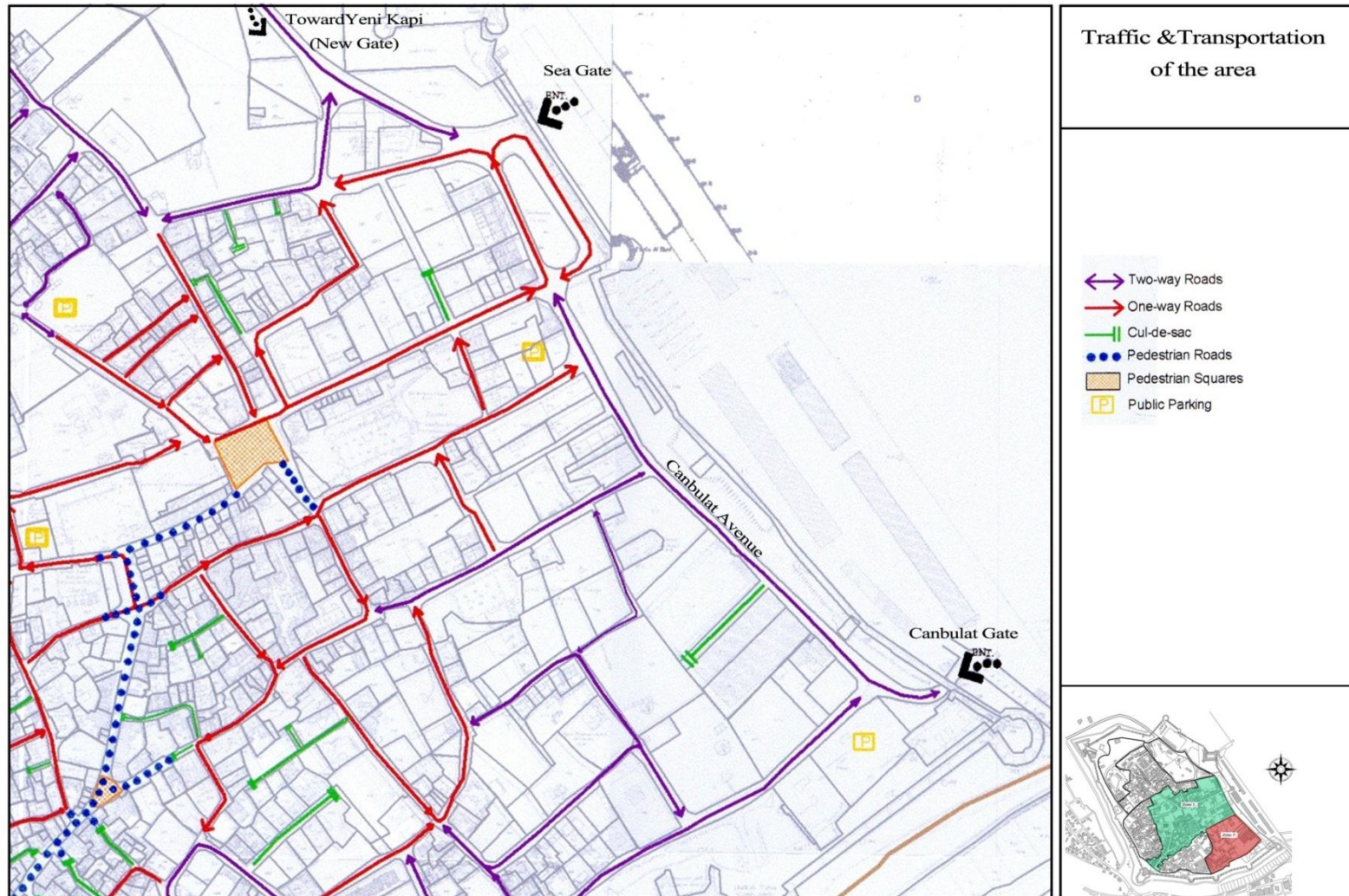


Figure 28: Types of approach roads, pedestrian and vehicular accessibility and parking capacity (Famagusta Municipality, 2005)

3.5.3 Integrity of the Place

The integrity of the quarter plays a key role. This issue is defined as the spiritual or emotional significance of the site.

Since reuse of warehouses in the area must respect the spiritual atmosphere of the quarter, functional analysis of the environment will provide the direction towards the new use (Fig.29). However, warehouses and buildings in this quarter were used for different purposes in different periods; history of some important function which took place in this area is explained below.

Famagusta's infamous Super Kola also known as "Garga Suyu" (Crows Water) was first produced in one of the converted British warehouse in the 1960's. The owners have now converted the buildings into a centre selling Cyprus Handcraft products (Fig. 29).



Figure 29: Super Kola in the converted warehouses in 1960

On the Muzaffer Ersu Street there is a favorable place of 1960s and 70s which is Canbulat Cinema. The summer building is no longer used; however some additions

have been made to the winter building which still remains in use. Continuing down towards the Canbulat Avenue there are the British Warehouses. Facing them, there is a restaurant with a garden and some ruins of a church can be reached next to the eastern walls.

Veterinary building which dates back to the British Colonial period with an entrance gate, the British escutcheon and a courtyard, has been used for more than a half century as the Veterinary department.

The Canbulat Museum and the tomb under the Canbulat (Arsenal) Bastion are also an important attribute in area.

In this area especially behind the warehouses there is some open area (lost spaces). Some parts of these spaces cannot develop because of the ruins which are located on these pilots but presents an important potential in terms of satisfying the need for outdoor uses.

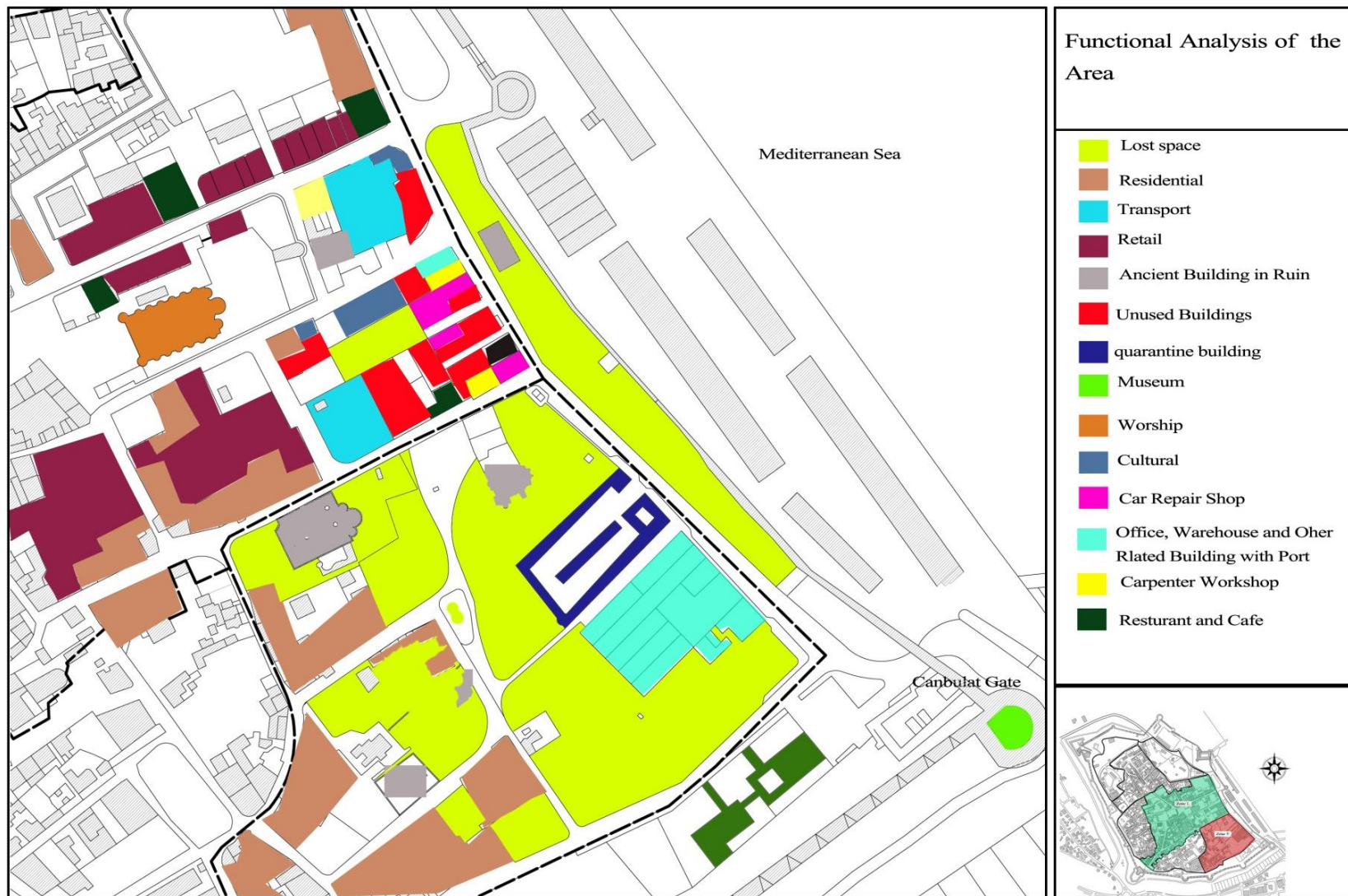


Figure 30: Functional analysis of the environment of the warehouse

3.5.4 Reuse Alternative List and Advantages

Re-use alternatives must be proposed by experts who have knowledge about the re-use of historical buildings, including architects, architectural historians, governmental workers and owners. They should define the objectives and the expectations for the re-use and identify the re-use criteria (Yildirim, 2012). These criteria include cultural, economic, environmental, architectural, authenticity and social parameters.

Accordingly, presentation of the re-used alternatives and the scientific analysis of the warehouses may help to avoid the demolition of these valuable buildings. Since their original functions have vanished and they can neither be demolished nor comprehensively cleared and redeveloped. Rather than being simply rundown or derelict space, in the Revitalization Plan for the Walled City of Famagusta (2005) some reuse alternatives were proposed for these warehouses which are listed below:

Alternative 1: Shopping Centre: By taking into consideration the big sizes of the warehouse, it is aimed to turn them into a big shopping centre. It is also aimed to make cafés and other places giving similar services to the people coming for shopping.

Alternative 2: Workshops of art, exhibition saloons, cafes, and restaurants: It is aimed to make workshops for different arts, places to exhibit and sell items of art to be produced in these workshops; and to make cafes, restaurants, buffets and similar places to serve the visitors.

Alternative 3: A complex of handicraft shops: It is aimed to turn the old warehouse into a collection of handicraft shops in which traditional works of art are sold. It is claimed that these shops will give the opportunity to the interested visitors to find a wide variety of handicraft items in the same complex.

Alternative 4: Entertainment centre: It is aimed to turn the old warehouse into an entertainment centre. It is also claimed that there should be places like cinemas, a bowling saloons, cafes, pubs and fast food restaurants as well in this centre.

Alternative 5: A complex for the functions of shopping, entertainment and art: It is claimed that joining these functions in a complex to be made out of the old warehouse will be a better alternative to having them in separate buildings.

In addition to these proposed alternatives in the Revitalization Plan, Doratli (2012) proposed another alternative function for these British warehouses which is considering the potential of the Eastern Mediterranean University (EMU) with its 15,000 students. According to the literature review and also Doratli's study (2012), universities play a crucial role in the revitalization of neighbourhoods and population centres in the USA or UK, such as University of Massachusetts at Lowell or Strathclyde University in Glasgow. It demonstrates clearly how an urban university can help to tackle economic and developmental problems in areas of environmental degradation. Considering the functionally distinctive areas within the walls, and the architectural evaluation of the buildings in these areas, it seems obvious that British storage buildings and those in the near vicinity could easily be transformed to suit this new and important function. This proposal was the possible use of these building to faculty buildings and workshops for arts and leisure facilities.

3.5.5 Owners' and Users' Requirements

For reusing buildings in an area it is necessary to consider the requirements and aspirations of the owners and users of the site. The warehouses are used as car repair shops which carry higher risks in terms of fire and other hazards to the building, carpenter workshop, cargoes, Municipality Storages and Veterinary Department.

For these types of buildings, it is necessary to determine the most appropriate uses. This may not be priority for entrepreneurs, for whom profit is the priority.

The private owners or users of these warehouses do not have any interest to repair their buildings, firstly due to the ownership problem, secondly the government doesn't exert any system of financial and tax incentives to encourage owners to rehabilitate these buildings to acceptable standards and mostly due to the low number of customer and low rate of return, it is difficult to make investments. And the last was the problem of the infrastructure in the area such as: pavement and light of the vacant lands (lost spaces) which are behind these buildings.

Quarantine building is used as the Veterinary office and for the purpose of quarantining animals which are bringing to Cyprus through harbor. This building according to its function should be close to harbor with its particular organization of interior spaces.

In spite of these problems the owners were enthusiastic to convert their buildings to another function with more social aspect not only to get more profit of it but also to bring social life to that corner of the city. Their proposals were more related with some social activity such as TV show (live match show), night club, restaurant,

supermarket for providing their daily needs, and finally some tourist activities. Their proposal was already among the Revitalization Plan (2005) proposals which were explained before.

3.5.6 Values of the buildings:

In order to attain a suitable solution for both buildings and new uses, the architect should study the buildings' history. Therefore for determining the appropriate re-use of the buildings they should be assessed according to their specific values. The heritage values of the warehouses in Walled City of Famagusta were assessed based on historic, use, social and scientific values (Table 14).

Table 14: Assessing the value of the warehouses in the walled city of Famagusta

Values for the Warehouses				
Sources	Use Value	Historical Value	Social Value	Scientific Value
Form & Design	The component can be used for contemporary needs	According to their history they are the last examples of their types	The structure show the pattern of the design	The forms of the warehouses reflect their specific function.
Material	The stones which used in the buildings are still stable	Using indigenous material	It shows the construction process	It show the technology of using the stone and metal
Use & Function	The warehouses were related to the harbor for using them to store goods.	The buildings show the evaluation of the construction techniques	Show the development of the city	Provide scientific evidence of the forms developed throughout history
Technique & Workmanship	Skill of craftsmanship quality in that period which still could be used in these days	The works reflect the skills	The craftsmanship presents the construction process	Illustrate ancient techniques
Location & Setting	These warehouses are in the historic site of the city	The site has been developed through the centuries	The warehouses were established close to each other which show the purpose of establishing them	The location reflects the development of the quarter

This category is used to understand the worthiness of the warehouses for using an appropriate reuse and preserve the identity of them from both physical and spiritual aspect.

3.5.7 The Most Appropriate Strategic Approach

As mentioned earlier, there are three basic strategic approaches for the long-term revitalization of historic urban quarters: functional restructuring; functional diversification; functional regeneration (Tiesdell et al., 1996). As Doratli (2005) mentioned these strategic approaches are distinguished in accordance with the type and level of obsolescence which an historic urban area is faced with (Doratli, 2005). Since the quarter of the warehouses in the Walled City of Famagusta is faced with physical, functional and locational obsolescence the most relevant strategic approach for this area is functional restructuring.

The buildings in the area have to be utilized for a different function from the original one, in order to be compatible with the supporting revitalization strategy: the functional restructuring.

It should be noted that, the examination of many examples of implemented revitalization projects reveals that the success of these projects is very much related to the relevance of the strategic approach that has been pursued.

3.5.8 Assessment of the Results

An assessment of the results would be a help to determine the appropriate re-use for the warehouses. According to all the criteria which are the conditions of the structures and the environment, integrity of the place and also according to the desires of the owners and users, the advantages and disadvantages of the proposed re-use which was suggested in the Revitalization Plan and Doratli (2012) are evaluated in table 15.

Table 15: The opportunities and barriers of the proposed new function

Re-use alternative	Advantages	Disadvantages
Shopping Centre	<ul style="list-style-type: none"> • Financially and technically feasible, • long-term management provided, • Ability to be implemented • Attention paid to the desires of the community, • The area and buildings in terms of the condition of its environment has capability for supporting high number of people. 	
Workshops of art, exhibition saloons, cafes, and restaurants	<ul style="list-style-type: none"> • Impact of tourism, • Significance enhanced and protected vulnerability mitigated 	
A complex of handcraft shops	<ul style="list-style-type: none"> • Preserving the culture of people, • Significance enhanced and protected vulnerability mitigated 	<ul style="list-style-type: none"> • According to the investment result of the Centre selling Cyprus Handcraft products, this alternative would not be feasible in financial terms.
Entertainment centre	<ul style="list-style-type: none"> • Social activity, • habit of the local people 	<ul style="list-style-type: none"> • Would have detrimental effect on historic buildings.
A complex for the functions of shopping, entertainment and art	<ul style="list-style-type: none"> • Significance enhanced and protected vulnerability mitigated 	<ul style="list-style-type: none"> • Congestion in buildings which caused wear and tear
faculty buildings workshops for arts	<ul style="list-style-type: none"> • Linkage with the university and rest of city 	<ul style="list-style-type: none"> • Lack of familiarity of the owners with these kinds of land uses.

For converting these warehouses to accommodate students or academicians (Eastern Mediterranean University) due to the organization of the plan would not be structurally practical and acceptable standards. Therefore these buildings may not be converted to housing like the case of SoHo, Merchant City and Shad Thames.

Although the quarantine building somehow is used for its original function, according to Worthing & Bond (2008, p.148) this refurbishment like some of the refurbishment cases in the Lace Market is not appropriate with the quality of the environment. And it is better to relocate it outside the wall, but still near the harbor.

According to its plan and organization of the interior part it can be reused as open market to serve fresh fruit and vegetables once a week. Since this market which is already located in another site of the city can help to bring people from all part of the city to the quarter and it can help to the revitalization of the area.

Even the famous Supermarket (old Lemar) which is located near the open market can relocate in two of the Warehouses (since these warehouses have access with each other from inside) to Supplement the open market.

The important offices can also be located in these warehouses like the case of locating the microcomputer firm of Wang in Lowell.

Additionally the frontage functions (along the Canbulat Avenue) could be as the case of Temple Bar included retail, bars, clubs, art galleries and other cultural facilities to help animation of the street and provide a boost to the evening economy and, therefore, the safety of the quarter. The control over the back of the street is more

relaxed and allow for a variety of more 'passive' uses such as office and university faculty buildings workshops for arts like the case of Lowell or the Merchant City, Little Germany and Lower Downtown.

According to Tiesdell et al., (1996, p.43) the effect of a number of individual (commercial or market) decisions to locate in the area can also in aggregate result in the area's functional restructuring for example, the change of New York's SoHo from an industrial area to a mixed-use area. Therefore these reuses proposal for the warehouses would contribute for revitalizing the area which would result in functional restructuring in the quarter.

Chapter 4

CONCLUSION

In all cities, including their historic urban quarters, the processes of change are ongoing and due to this inevitable issue many historic quarters are in a danger of losing their traditional character unless relevant strategies are not put in place to ensure the continuity of their characters. This is valid for all sectors such as residential, commercial and industrial.

In the case which is a quarter, (according to the classification of the obsolescence) fall into a physical, functional and locational obsolescence, there is a need to create a new confidence. In such a case, several theories can explain adaptive reuse because of cities' determination to revitalize their urban cores, rise to prominence. On the other hand, adaptive reuse should be preferred to increase economics activities and in areas where existing building stock is not fully utilized.

The thesis has two parts. The first part consists of a comprehensive discussion of revitalization and adaptive reuse from an historical and theoretical perspective. The role of adaptive reuses in earlier historical periods and identification of economic, architectural, cultural, and other factors that account for the revival of buildings have been highlighted.

The second part describes the principles of adaptive reuse in one part of the historic quarter of the Walled City of Famagusta. In this thesis the interest has been in revitalization of an industrial part of the Walled City of Famagusta as part of the overall revitalization of the whole Walled City. Due to changing situation of the harbor, the warehouses became underutilized in terms of their function and location. Therefore these buildings became obsolete which contribute to the overall deterioration of the Walled City. Nowadays, although these warehouses are used by the public and private sector, their functions are not compatible. Additionally they don't contribute for promoting the area.

The problem of the area is not only efficient use of buildings as it is an aggregation of lost spaces. According to Trancik theory, (1986) the problem of lost space or the inadequate use of space, can be resolved by creating linkage and interrelation between mass and void. Therefore, in order to increase the contribution of the warehouses (with most appropriate new function); to the overall revitalization of the Walled City, firstly it is worth to evaluate the potential of these buildings together with the lost spaces around them. Secondly, the existing or suggestion of new linkages between this area and the already pedestrianized zone should be provided.

Each research has some outlooks for its society; Since the main motive behind the proposal of the new use for the warehouses in this thesis has been the idea that it would be a reliable support for revitalizing the Walled City of Famagusta, both public and private sector and in general society will get benefit out of it.

The expected contributions of this thesis are as follows:

1. It tries to grasp the opportunities and challenges of adaptive reuse in revitalizing the historic urban areas.
2. This thesis may well contribute to propose new conception and knowledge, and may be equally important to all other organizations (whether public or private) involved in revitalizing historic urban quarters.
3. Enhancing the built environment stock by adaptive reuse in terms of financial, environmental and social benefits by taking into an account of a case study.
4. It may also contribute to realization of the potential of adaptive reuse in changing function of a quarter which will eventually become a reward for the society and to the people – for instance – rundown textile industrial quarter of Temple Bar was successfully revitalized via tourism development.
5. Moreover, it may enable the researchers to carry out further detailed or similar task related to this study.

This course of action will be obtained by the incentive of grant aid from the state and other public actions and funding or control over it by exerting a system of financial and tax incentives to encourage owners to rehabilitate historic buildings and environments to acceptable standards which may need a further study.

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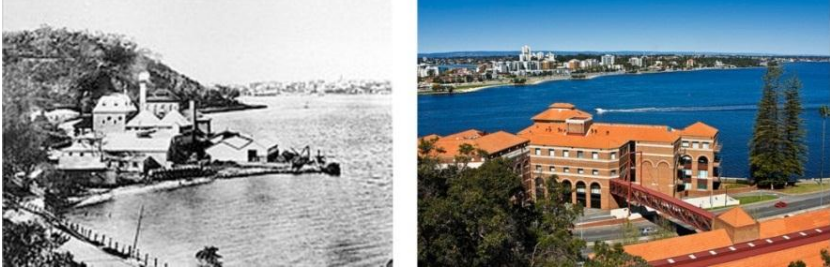
APPENDIX

Appendix:

The Old Swan Brewery

The Old Swan Brewery was built in historic area and used for brewery in Australia. Proposals to adapt the Old Swan Brewery buildings to other uses attracted considerable controversy in the late 1980s and early 1990s which leads to revitalize the area (Australian Government, 2004). This building was listed in 2000 under the Heritage Act of Western Australia, and converted to mixed use – Residential, Retail, Commercial uses as the most appropriate uses (Table 16).

Table 16: Reuse of the Old Swan Brewery and its benefit

The Old Swan Brewery		
Original Category	Previous function	New function
Industrial	Whiskey bond (factory)	Mixed use – Residential, Retail, Commercial and Public Car park facilities
Benefit of the conversion	<ul style="list-style-type: none"> • Extending the useful life of buildings, • Being more cost effective than demolition and rebuilding, • Creating valuable community resources from unproductive property, • Revitalizing existing neighborhoods, • Enhancing the aesthetic appeal of the built environment, • Increasing the demand for retained existing buildings, 	
		

Warehouse in San Francisco

This warehouse was built in a warehouse district in San Francisco and it was basically unused and vacant for years. After that in 2002 it was reused as a restaurant, bar and full production brewery of the best brewery brand in San Francisco (URL1) which is the most appropriate reuse according to Douglas's categorization (Table 17).

Table 17: Reuse of a warehouse in San Francisco and its benefit

One of the warehouses in San Francisco		
Original Category	Previous function	New function
Industrial	Warehouse	Southern Pacific Brewing (restaurant, bar, and full production brewery with distribution)
Benefit of the conversion	<ul style="list-style-type: none"> • Creating valuable community resources from unproductive property, • Revitalizing existing neighborhoods, • Increasing the demand for retained existing buildings, • Reducing land consumption and urban sprawl, • Encourage the other investors to create such these projects 	



Warehouse in Garden Island in Australia

This warehouse was built in 1894 in Garden Island in Australia as a Victualing Store and used as a general naval store since 1913; Garden Island’s warehouse became redundant and it was abandoned. This four storey warehouse in 1985 converted to Main Dockyard Office which was need of the area (Australian Government, 2004) this reused project encouraged the other investors to create such these projects in the area (Table 18).

Table 18: Reuse of a warehouse in Garden Island and its benefit

One of the warehouses in Garden Island in Australia		
Original Category	Previous function	New function
Industrial	Warehouse	Main Dockyard Office
Benefit of the conversion	<ul style="list-style-type: none"> • Saving the cost of demolition and reconstruction • Creating valuable community resources from unproductive property, • Encourage the other investors to create such these projects • The access, transport and security issue associated with its island location 	

