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SUSTAINABILITY OF THE LIBYAN HOUSH IN THE OLD CITY OF TRIPOLI

NADIR NASIR MOHAMMED SHEMBESH

THESIS FOR THE DEGREE OF MASTER OF ARCHITECTURE

IN ARCHITECTURE PROGRAM

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ABSTRACT

SUSTAINABILITY OF THE LIBYAN HOUSH

IN THE OLD CITY OF TRIPOLI

The ancient city of Tripoli was founded by Phoenicians around 3,000 years ago. As a result of various civilizations taking place, there are architectural and artistic works that constitute a real treasure in the city. The city, located in North Africa, has been serving as a transition between Europe and Africa. During Roman, Islamic States, Ottoman and Principalities period, especially commercial center and rich residences in this center were formed. These residences, which are called "Housh" with traces of the Ottoman and Qaramanli Periods, are buildings shaped around a courtyard.

Over the years, Tripoli has increased its importance as an economic, commercial and political center in Libya. On the other hand, especially after the World War I. Italian and after the World War II the British influence deepened. After 1950 first King Idris and then Gaddafi period followed. Starting from the 1930s on the Italian influence, the old city texture was abandoned at an increasing rate since 2000. The political uncertainty after 2009 also accelerated the decline.

In fact, these "Housh", which combine the characteristics of the Mediterranean architecture plan with local materials and techniques, have suffered from long-term disuse. Physical deterioration in historic houses, deterioration in service and infrastructure networks are advanced. As a result of the changing needs imposed by modern life, the population has accelerated. Today, lack of financial resources, combined with a lack of historical consciousness, created a different demographic and social structure in the historical city. The primary aim of the thesis is to document the current situation, to examine the sustainability of "Housh" type structures and to develop suggestions for sustainability of the Libyan Housh.

Keywords: Libyan Housh, Tripoli Old City, Libyan Architecture, Traditional Libyan House, Historical Sustainability.

KISA ÖZET

TRABLUS KENTİ TARİHİ BÖLGESİNDE
LİBYA TİPİ "HOUSH"UN SÜRDÜRÜLEBİLİRLİĞİ

Trablus Antik Kenti, yaklaşık 3.000 yıl önce Fenikeliler tarafından kurulmuştur. Çeşitli medeniyetlerin sahne alması sonucu, kentte gerçek bir hazine oluşturan mimari ve sanatsal eserler bulunmaktadır. Kuzey Afrika'da konumlanan kent, tarih boyunca Avrupa ile Afrika'nın çeşitli bölgeleri arasında geçiş görevini üstlenmiştir. Roma, İslam Devletleri, Osmanlı ve Beylikler dönemi kentte özellikle ticari merkez ve bu merkezde yer alan zengin konutlar oluşturmuştur. Osmanlı ve Beylikler Dönemi izleri taşıyan "Housh " olarak adlandırılan söz konusu konutlar, bir avlu çevresinde şekillenen yapılardır.

Trablus yıllar geçtikçe, bir yandan Libya'daki ekonomik, ticari ve siyasi merkez olarak önemini arttırmış; bir yandan da özellikle I. Dünya Savaşı sonrası İtalyan ve II. Dünya Savaşı sonrası İngilizler etkisinde kalmıştır. 1950 sonrası önce Kral İdris ve onu takip eden Kaddafi dönemleri yaşanmıştır. İtalyan etkisinde 1930'lardan başlayarak 2000 yılından itibaren artan bir hızla eski kent dokusu terkedilmiştir. 2009 sonrası oluşan politik belirsizlik de terki hızlandırmıştır.

Gerçekte Akdeniz mimarisi plan özelliklerini, yerel malzeme ve teknikle birleştiren söz konusu "Housh"lar uzun süre kullanılmamaya dayalı yıpranmaya uğramıştır. Tarihi konutlarda fiziksel bozulma, hizmet ve altyapı ağlarında bozulma ileri düzeydedir. Modern yaşamın dayattığı değişen ihtiyaçlar sonucu da nüfusun terki hızlanmıştır. Günümüzde maddi kaynak eksikliği, tarih bilinci eksikliği ile birleşerek tarihi kentte farklı bir demografik ve sosyal yapı yaratmıştır. Tezin öncelikli amacı güncel durumu

belgelemek, "Housh" tipi yapıların sürdürülebilirliğini irdelemek ve özellikle tarihi sürdürülebilirlik açısından öneri geliştirmektir.

Anahtar Kelimeler: Libya Housh'u, Tripoli Eski Kenti, Libya Mimarisi, Geleneksel Libya Konutu, Tarihi Sürdürülebilirlik.

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I thank my father who taught me patience and perseverance, I thank my mother who was always urging me to study, as well as my wife and brothers and sisters. Also, my friends in Libya, Turkey and my family, who showed patience and kindness, I would like to express my gratitude because they are a constant source of inspiration during the work.

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CHAPTER ONE: INTRODUCTION

The Research about the traditional and sustainable Libyan Housh is one of few studies which have not taken its importance in the field of architecture studies because architecture cannot be separated from the fact that it ultimately works to achieve an internal environment for the user of different ages. The traditional home is an integral part of our culture or heritage. The heritage which keeps us in the social fabric and reminds us of how our ancestors lived in these brilliant homes of sustainable architectural character, how they were dealing with the climatic conditions and environment which surrounding them in this country or anywhere else, and how the design of the Housh(s) came to develop ingenious solutions to face the problems of heat, cold storms, dust and water, and how this design fit with our social traditions and religious values.

This concept may not be far from the scope of this research, which will study the characteristics and functions of architecture of the ancient city of Tripoli and the study of the old the Libyan Housh, and compare it with an ancient Arabian city to know the architectural properties of the Libyan Housh and the specialties of it which make the Libyan Housh or buildings different from other area's buildings or Housh(s). The Ottoman buildings in general through ages considered as one of the most important tool in achieving aesthetics and sustainability in the values of architecture and architectural space and the possibility of coexistence, although these studies dealing with the architectural style of these traditional homes which have not yet died. This important part of Architecture and the right arts in this age, vocabulary emerged and architectural contributed to the development of architectural design in a concrete way and gave its distinctive characteristics that respond to its multiple functions.

1.1.Search Problem

The problem of research is how to revive this architectural heritage and how to preserve this legacy from the disappearance, by studying the architectural elements of the Libyan Housh in the old city of Tripoli, and their respective functions to revive this heritage, the emphasis on maintenance and restoration of environmentally friendly materials from the same

environment and how to develop these Housh(s) and make them sustainable, which deriving their reference from the criteria stemming from the surrounding conditions and making these Housh(s) livable by their inhabitants by not giving them a chance to abandon their Housh(s) for any reasons.

1.2.The Limits of the Study

This study included the selection of samples of the most important traditional Libyan Housh(s) in the old city of Tripoli between two periods the Ottoman and the Qaramanli. The study samples were chosen to introduce these Housh(s) and to explain them to the reader to know the greatness of these Housh(s) when preserving and providing these Housh(s) with many ways to live in them and when they abandon and neglect these Housh(s) which led to being destroyed due to weather conditions. The samples in this study were selected as follows:

1. Housh AL-Qaramanli.
2. Housh AL-Bashawat (Dar AL-Qadi).
3. Housh Hassan AL-Faqih (French Consulate).
4. Housh AL-Qurji.
5. Housh Bait AL-Maal.
6. Housh Al-Qarqani.

1.3.Research Question

The problem of research in the methodology of the architectural style through the homogeneity and the interdependence of the elements of the Housh(s) and what the nature of the functions and environmental factors and heritage to maximize this old Housh.

- What are the characteristics of the architecture in these Housh(s), which distinguishes it despite the simplicity of design?
- Is the Libyan Housh sustainable?

- Why the inhabitants of the old city have migrated these brilliant Housh(s) which considered as an ancient civilization and live in new houses or modern houses which modernize by them except living their old Housh(s)?

1.4.Objectives of the Study

This study aims to review the architectural elements and architectural style of the Libyan Housh, the study also focuses on reviving the edifice and the legacy of Libyan Housh, and to remind the reader of the past, also its about how the Libyan families can live in these traditional Housh(s) and how this Housh is sustainable as the other modern Housh(s) and may be better than the modern one for many Circumstances. The study aims at dealing with the idea of identifying the components of the architectural style of the Libyan Housh. It is also known as the most important sustainable and environmentally friendly materials that participated in the formation of these Housh(s), as well as the most important structural elements of the Libyan Housh, namely the inner courtyard and its moral and material values. The relation with a courtyard as a healthy environmental perspective, also the relation between the element of the courtyard in the traditional Housh and its relationship to the interior and its connection with outer space and also aims to re-employ the vocabulary of architecture in accordance with the spirit of the new era.

1.5.The Importance of Studying

The importance of this study lies in the architectural analysis of the ancient city of Tripoli and the traditional Libyan Housh(s) in the old city of Tripoli and the possibility of clarifying the elements and the sustainable characteristics.

The basic importance of the study is to determine the internal area of the Libyan Housh and study the inner courtyard and its role in social relations and the sustainability of these Housh(s) and the possibility of achieving the architectural principles that formed these Housh(s) and make them as a special nature at the level of interior design and exterior shape of the Libyan Housh.

1.6.Research Method

The researcher relied on his field of research and through photographs which had been taken by him and from his visits to the Libyan Housh in the case of the study. The attached pictures in this study, which do not have any reference, are from the researcher's photography. He also reviewed the archives of the Old City of Tripoli and collected his information from other institutions related to restoration and heritage. The study also dealt with articles, studies, books, and the definition of sustainability and how to use them and their different forms to see their spatial details and their relevance to the architectural style.

The Data collection and mapping of the AutoCAD program by a party of Historical Cities Management organization, Department of Technical Affairs, Department of Design and Architectural Studies, Tripoli, Libya. Re-editing, drawing and writing as well as a three-dimensional drawing by researcher Nadir Shembesh 12/11/2017.

Also included in this study are copies of UNESCO's report through the field visit to the Old City of Tripoli, which was commissioned by the Libyan State in 1988. It included the study of the public site, historic buildings, architectural and cultural buildings and public buildings within the old city.

With reference to the International Expert Meeting on the Safeguard of Libyan Cultural Heritage, which organized by UNESCO and ICCROM and the support of the Embassy of the United States of America to Libya in Tunis, May, 2016, which was UNESCO's last report on Libya. This report referred to the archeological buildings in Libya and the Libyan ruins in the cities (such as the archaeological sites of Leptis Magna, Sabratha, Cyrene, the rock-art sites of Tadrart, Acacus and the Old Town of Ghadames). This report mentioned the ancient heritage of the old city of Tripoli with only few sentences in the page 3, and on the page 12 of the report, which states how the buildings were modified and changed, such as the French Consulate (one of the houses in the case study below), and this was one of the reasons for maintaining it. The report also addressed the reasons for the illegal occupation of abandoned houses and the reason for their neglect as we discussed in this study and tried to shed light on it to draw the attention of the reader to the causes of negligence and lack of maintenance and breakdowns of the historical and heritage features and one of these features was the Libyan Housh(s). A copy of the report pages (3, 12) can be found in the Annex 3.

A copy of the permission sent to the researcher attached as Annex to this study, as a permit for the work of the study and taking pictures that would help clarify the study.

The list of the architectural vocabulary of Libyan Housh can be found in the Annex 1, and the list of the elements of the traditional Libyan architectural can be found in the Annex 2.

CHAPTER TWO: THE SUSTAINABLE DEVELOPMENT

The dome, the high ceiling, and the courtyard, these aesthetic architectural elements, which in turn softens the internal heat of the Housh because of the above-ground air, unlike the flat concrete Housh(s). The ceiling and low-rise, which lead to raise the heat in the summer and lower it in the winter, which will lead to more using of fluctuations mechanical devices, fuel and electricity, and expenses harmful material and health.

Also, the importance of fences in the study, which covered by the shadows of Housh(s) which led to make cold air currents between Housh(s) in summer and sometimes expand to become warm boards in winter, which reflects on the environment of the inhabitants and their intimate relations and deepen the love and cooperation between them.

This specification simply fits with the modern definition of sustainable architecture or green architecture and early applications of the concept of architecture that the study is talking about.

Sustainable development has been defined in many ways, but the most frequently quoted definition is from Our Common Future, also known as the Brundtland Report as follows: Sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Within the framework, smart growth is an urban planning and transportation concept that concentrates on the growth in compact walkable urban centers to avoid sprawl. Communities are using creative strategies to develop, preserve natural lands and critical environmental areas, protect water and air quality, and reuse already developed land, in the resource conservation by reinvesting in existing infrastructure and reclaiming historic buildings. By designing neighborhoods that have shops, offices, schools, churches, parks, and other amenities near homes, communities are giving their residents and visitors the option of walking, bicycling, taking public transportation, or driving as they go to their business. A range of different types of homes makes it possible for senior citizens to stay in their homes as they age, young people, to afford their first home, and families at all stages in between to find a safe, attractive home they can afford. Through smart growth approaches, that enhance neighborhoods and

involve local residents in development decisions, these communities are creating vibrant places to live, work, and play. (Vatalis, 2013)

Moreover, the interior spaces of green buildings are healthy, comfortable and productive environments. Thus, the movement towards sustainable design is very important in order to eliminate the environmental impact of traditional buildings.

In view of the old city of Tripoli and those empty areas of the impact of the collapse of the old traditional buildings because of the lack of maintenance and attention, which led to collapse these Housh(s) and as a conclusion of collapses it left an empty space which exploited by some parking lot or other benefits as a regard of this it can be redesigned and take advantage of these spaces and re-built these Housh(s) And reconstruction of its history, which is likely to disappear, especially since spreading of the traditional historic Housh(s) in the old city of Tripoli, through the study that the similarity and the kinship provided by sustainable design in their homes, and the materials used in these Housh(s) are eternal splendor It is eco-friendly materials of the same type, and the environment surrounding them. It is about reviving these architectural treasures and this history duration just to remind the Libyan peoples about their past and try to revive it before it became extinct. This is the main point of the research as an analytical study of traditional Housh(s) in the old city of Tripoli.

2.1.Definition of Sustainable

Although the terms ‘Sustainable’ and ‘Green’ are often used interchangeably; they are different concepts. Sustainable design, which is a broader concept, covers three dimensions, which are environmental, economic, and social factors; whereas green design is related to environmental factors only. (Tudora, 2011)

Although sustainable or green construction is a strategy to create healthier and more efficient models of resources for construction, renovation, operation, maintenance, and demolition, where energy remains as a central component, the green design should take the other environmental impacts into consideration. Recent research and experience have clearly shown that when buildings are designed and operated taking into account the effects of their life cycle, they usually provide much greater environmental, economic and social benefits. This forces us to conclude that the

success of green construction requires the implementation of an integrated approach to building design. (Kubba, 2010)

Sustainable development depends on two main concepts:

The first concept is fulfilling fundamental needs, especially taking into consideration the human from every part on this earth.

The second concept is the idea of having full control of the technology and understanding the surrounding environments regarding social factors.

Sustainable design also depends on the ability to meet future needs, as a consideration of the following principles:

A. Reduction of the consumption of non –renewable resources.
B. Preserving the natural environment.
C. Eliminating harmful emissions.

2.2.Parameters of Sustainable Design

Through our day designer, architect, builder, and building owner are more interested in green and sustainable buildings. The concept of sustainable construction counts on a variety of strategies, including the usage of green building materials in the design and implementation of projects. Sustainable buildings display a variety of benefits including:

A. Lower maintenance needs.
B. Reduced energy consumption.
C. Increased occupant health conditions and productivity.
D. Lower costs for spatial alterations.
E. Higher levels of design flexibility.
F. Reduced environmental pollution.

Sustainable buildings must follow a clear, environmentally and friendly approach to each part of the plan, from the site for the construction selection and completion of the construction process. It is known that buildings have a significant impact on the environment during the stages of construction and operation, i.e. through the consumption of large amounts of energy, water, and materials, in addition to

generating large quantities of waste. In any design, the following principles must be observed:

A. Reducing the consumption of non-renewable resources.
B. Improve the natural environment.
C. Avoiding the use of toxic substances.

Through the earlier study, the study came to a very important conclusion, it's about how these buildings can affect strongly impact the ecosystems around us. Moreover, the buildings themselves create new indoor environments that present new environmental problems and challenges.

Indeed, sustainable green-building strategies and practices offer a unique opportunity to create environmentally sound and resource-efficient buildings. An integrated approach to design can achieve this by inviting architects, engineers, land planners, building owners and operators, and members of the construction industry to work as a team to design the project. (Kubba, 2010)

The manner in which green buildings can reduce the overall impact of the built environment on human health and the natural environment is by the following strategies:

A. The efficient use of energy, water, and other resources.
B. Protecting the health of a building's occupants.
C. Improving employee productivity.
D. Reducing waste, pollution, and environmental degradation.

When making decisions for sustainable buildings, it is important to consider what is working best for projects and offer better options for efficiency. Before making any decision, it considers as a wise move, make a thorough research and evaluate several available choices.

Through the design process and construction, a common idea that, as the process approaches, implementation of sustainable construction techniques becomes more difficult and costly, especially when designers and implementers neglect and do not study well before implementation.

By looking at the following figure, the principles of sustainable construction - energy, consumption of efficiency and renewable resources, conservation of water, the

efficiency of materials and systems, and waste management. In addition, the principles of sustainable architecture are based on the choices of designers and users, with respect to environmentally friendly materials, energy, and water consumption methods. (Tudora, 2011)

2.3.Sustainable of Housing Design

"Sustainable housing design is a form of affordable housing that also incorporates a friendly environment and community-based practices. It attempts to reduce the negative impact that homes can have on the environment by choosing better building materials and environmental designs". Furthermore, in the Hilary Armstrong's interpretation of sustainable housing is sustainable if everyone has the opportunity of access to a home that is decent; if it promotes social cohesion, well-being and self-dependence".

To achieve sustainable housing in any society, a central role should be given to the importance of sustainable housing. The home as a family unit addresses three different dimensions of well-being, economic development, social welfare and environmental welfare as shown in figure (2.1). (Shahran, 2017)

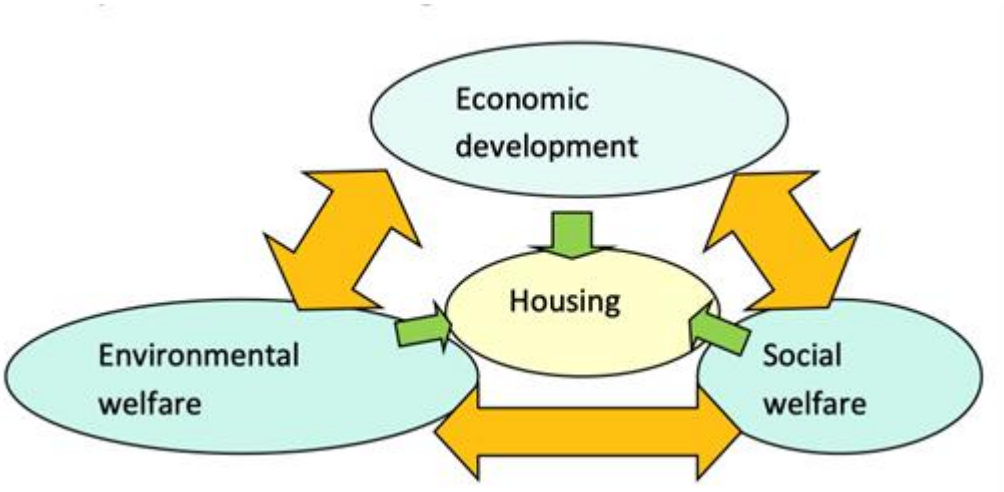


Figure 2.1 The three dimension of sustainable housing (Atmansuri, 2010)

Design and environmental welfare: The identities formed by buildings and structures that human's construct in the natural environment. The impact of contemporary buildings has been highlighted by Enertia Building Systems (2006) as

the construction is the second largest industry in the world after agriculture, and the pollution from heating and cooling of buildings cause the main damage to the environment and grow to be greater than cars pollution. The environmental quality of the housing conditions of the residents and the residential activities on the ecological system are the major concerns of a sustainable environmental perspective. (Atmansuri, 2010)

Design and social and cultural welfare: Sustainable communities need to allow families to invest long periods of time in their neighborhood. The cultural sustainability of housing can be associated with the preservation of housing heritage. The adaptation of residents to the natural habitat, how it changes with time and the progression of technology all reflects the physical form of housing. Therefore, the physical form becomes a part of the culture's itself. The arrangement of housing's internal spaces is an outcome of socio-cultural values, customs, and practices as well as enhanced by housing legislation and roles. While the external forms of housing represent the result of the availability of building resources, the climatic conditions, construction capability of the residents and the aesthetics of specific communities over specific periods of time.

To achieve a sustainable and balanced society in housing requires a number of issues to be addressed such as social exclusion, crime and employment opportunities, as well as the usual priorities of energy and environmental performance. The transformation of a culture and the cultural identity of a place represent the lifestyle of a person, as well as the aesthetic and the artistic dimensions of culture. The conservation of residential buildings for aesthetic and heritage values enhances the continuation: of a culture. (Atmansuri, 2010)

From the economic perspective: There are two fundamentals for housing to be economically sustainable:

A. The benefits to housing providers panel producers must be more than or equal to the costs of housing, the production given the housing demand levels.
B. The production and consumption processes must be within the environmental capacity to provide and absorb, given the mitigating technology.

The first one relates to the operation of the housing sector and the ability of housing consumers to afford quality housing, while the second one refers to the recognition of the environmental gains and costs of housing activities. (Atmansuri, 2010)

A. Principles of sustainable housing

a. The dwellings residence Housh(s) should be compact for less land use; to reduce motorized travel; effective thermal resistance for good microclimatic performance and efficient use of infrastructure and the protection of agricultural land.
b. Compact form to provide high density, low-rise buildings.
c. Dwelling should be flexible and adaptable to allow for future changes in the family organization.
d. Spaces in the dwelling should be multi-use at different times of the day. (Shahran, 2017)

B. Principles of the Sustainable Architecture

Sustainable design techniques are becoming increasingly important in building design, it should include all kinds of activities and processes that increase the capacity of people or the environment to meet human needs and improve the quality of human life. Many studies have been conducted on the principles of sustainable architecture. Studies have summarized the main principles of sustainable architecture as follows:

a. Respect of the user's social-cultural values. The variety in architectural form can be seen as a result of a host of social, cultural, economic, physical, and technological variables.
b. Adapting the climatic conditions. Sustainable buildings should respect and benefits from local climatic conditions and adapt to the daily and seasonal.
c. Energy conservation. Buildings consume energy not only in their operation, for heating, lighting, and cooling, but also in their construction. Construction often requires large amounts of energy for processes ranging from the moving earth to welding. Also the transportation of the materials used in buildings.
d. The use of local materials. Using the provided local material will significantly contribute to respecting and enhancing environmental issues.
e. Respect the location (site conditions). It is essential to consider that the building design and construction will not have a major effect on the site topography and the surrounding architectural style.

f. Water efficiency. As water consumption is a serious ecological concern nowadays, it is very important to consider regulating its use and reuse inside and outside buildings.
g. The use of natural light and ventilation. Building and window design that utilizes natural light and ventilation will lead to conserving electrical lighting energy, shaving peak electric loads, and reducing cooling and heating energy consumption.
h. Studied the use of colors. Colors have physiological and psychological impacts on the human body and in addition to its aesthetic values, it plays a significant role in reducing and reflecting solar radiation on the external walls.
i. Treatments for ecological problems such as noise pollution. The Noise is like the light in its effect on psychological human health, accordingly, buildings should be protected from noise sources. (Atmansuri, 2010)

2.4.The Housh Estimation Principles in the Old City of Tripoli

These standards are not a tool for home design. Rather, they are aspects that will help to broaden knowledge about interesting systems in regulating and developing the housing classification in specific climatic, cultural, technological and social conditions in Libya. In here will study:

A. Climate of location
B. Natural ventilation functions
C. Factors that affect ventilation and flow of air
D. Ventilation in traditional architecture
E. Thermal comfort
F. Urban setting
G. Housh organization
H. Materials and structural systems

A. Climate of location

The climate conditions play a key role in the formation of the residential area of home designs in Libya. It is clear that climate is one of the main factors in Libyan society, one of the most influential elements in the form of buildings. Variations in

temperature, wind and sun density are the conditions that must be solved when designing homes in Libya. This is the mainspring of all the sensory qualities that add to the bio-tropical architecture. Because of the relative absence of cloud testing, and because of the high temperature in most seasons, especially in the summer, the earth receives a large amount of solar radiation daily, while emitting a large amount of heat to the atmosphere at night. Therefore, the comfort of indoor people in these areas largely depends on the thermal properties of walls and ceiling. (Shahran, 2017)

B. Natural ventilation functions

Natural ventilation and air movement Produce three functions are:

a. Providing fresh and healthy air,
b. Cooling or heating the buildings from the inside with load currents and this comes when there is a difference in temperature between the inside and outside, that is until the cooling of the building from the inside should be the temperature outside cooler than the inside and vice versa, that is, to warm the building from the inside must this temperature difference depends on how much the temperature changes during the day (the heat obtained from the outside and the heat generated at home or the combination of all these factors and this type of ventilation called structural cooling or structural).
c. Cooling the residents or residents under certain conditions by cooling the body and remove the sweat and moisture from the human body and as the ventilation increases the process of loss of the body heat convection currents due to rapid air movement in the presence of air currents. The coolness and the feeling of recovery result from the cold and the recovery is not due to the coldness of the body but comes as a result of the passage of air currents fast enough to vaporize the sweat and gradually reduce the temperature of the body, which leads to feeling cold. Air movement is the term used to express this type of ventilation and is relatively affected by the speed of the air currents and come to the radiator of the body. (Tantosh, 2010)

The power of producing natural ventilation in buildings results from changing the air due to the difference in temperature, which is known as the stack effect

When the warm interior air is replaced by the heavy cold the outside air as well as the flow of air due to the differences in pressure, while the movement of relatively slow the speed of the air and the result of the thermal impact stack is possible for both the supply of clean air and cooling load.

These forces are rarely sufficient to create a movement of air that can be recognized and required in some warmer areas to provide thermal comfort.

C. Factors that affect ventilation and flow of air

a. Orientation,
b. Vegetation,
c. Cross Ventilation. (Tantosh, 2010)

D. Ventilation in traditional architecture

One of the basic elements of ancient Arab architecture is what applies to the ancestors of the successful architectural solutions, taking into account the dampening of the atmosphere in the summer months and overcoming the reality of harsh climatic by simple and authentic solutions, that necessitate study and renovation work, so that they can be applied in modern architecture today and strive to Developed Examples of traditional architectural innovations are the Mashrabiya air distribution, which is designed to take the air from the top of the building and directed it to inside the building. It varies and it depends on the climatic zones in terms of function and the quality of the air inside. As well as the residential courtyard in the hot areas and narrow streets shadowed and shaded in the old Arab cities and their impact on reducing the temperature through the shadow of Housh(s) on the streets and use the fountain in moisturizing the atmosphere and reduce the heat. (Tantosh, 2010)

E. Thermal comfort

Using only architectural knowledge and experience without any additional complex systems, traditional builders can obtain a level of comfort which in many places would be sufficient without having to use contemporary energy supplies. Without necessarily

increasing the initial investment in the construction, a vernacular Housh can save a high percentage of energy costs, both in heating and in cooling by using passive and purely architectonic elements to collect the natural energy. (Shahran, 2017)

F. Urban setting

Through our days, the Libyan population has become more urban than the rural area's population, which is very influential in areas with traditional homes and urban areas, and the related buildings of neighborhoods. Most of the impossible has evolved in hot and coastal climates where Housh(s) in clusters are somehow interconnected.

G. Housh organization

The internal organization of the Housh(s), such as courtyard, roof, and typology of openings, strongly influence and contribute to the adequate function and thermal comfort of the Housh(s) in different Libyan environments.

H. Materials and structural systems

The coastal zones and the climate characterize Libya as a place have differences between day and night temperatures as a result of this case, the best materials are the materials which do not heat.

Architecture in Libya, construction companies they often use simple materials which available domestically and always focus on the benefits of their use in construction and as a solution to many problems such as pollution, the economy, and complex construction and so on. The Areas and construction materials sold at reasonable prices. The colloquial concepts of structural systems can be inspiring to contemporary homes in many respects. It is important to study how the structures, built in some cases 2000 years ago, are very sustainable and still exist today. (Shahran, 2017)

The feature of architectural materials and elements of the Libyan Housh, in the old city of Tripoli which affected through the ages with a lot of incidents Tripoli as they

characterized it according to many intersections which were the location and without forgetting the time's factors:

A. The mixture of the sea flows from the shores of the Mediterranean Sea, from Baghdad to Marrakech and from Istanbul to Cordoba, all associated with local creativity in the city of Tripoli,
B. A combination of effects which came from the history, which extended from ancient times to the modern era, but with the Ottoman era which control of the architectural style remaining until this day. The reuse of elements from previous eras is also very common. The ruins are used as building materials and distinctive elements such as columns and capitals are used as decorative or symbolic elements inside and outside of the buildings.

The traditional local materials which contain (stone, wood, clay) it was the only materials used in construction until the Italian occupation. Despite they start using the stones and bricks during the Italian occupation period, it did not give a fundamental change in the architectural complexes of the old city, because of the modest size of the buildings that were built during that period. (Engineers 2016)

The re-use of the architectural elements from previous eras is very common and it's like a relation to the permanent renewal of the decorative element according to the Duke prevailing at every historical stage. The decorative elements often come as wall cladding elements and therefore not always considered the period during which the building was constructed. These elements have been subject to change in their forms and materials, which are made of marble, porcelain, plaster, ceramics, or Maltese stone. During the Italian occupation, new materials were introduced, and the use of red bricks covered with plaster and metalwork was used indoors and openings. The old buildings contain a mixture of ancient and relatively modern techniques that may exist together in one building. (Engineers, 2016)

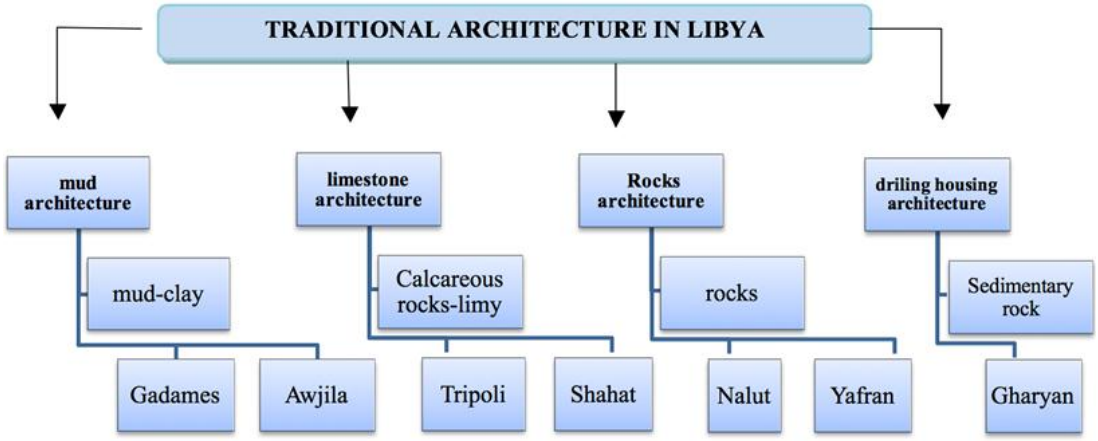


Figure 2.2 Diagram of Traditional Architecture in Libya (Khatib, 2010)

An architecture classification in Libya, according to the availability of local building materials. Most of the Housh(s) in Libyan architecture include four types of buildings:

Drilling: The drilling Housing Architecture in Gharyan.

Rocks: The Architecture which depends on the rock predominantly rocks material in Nalut and Yafran.

Mud: The architecture which depends on mud predominantly clay and mud material in Awjila and Ghadames.

Limestone: The architecture which depends on the Limestone predominantly calcareous rocks and limy material in Tripoli, Benghazi, and Shahat.

Technology has evolved through the years even in the way of building the Housh with yard Libyan Arab and Roman and Ottoman empires during their home was built from materials such as sand, limestone and clay, wood and brick, glass and faience invented the method approved construction on the walls bearing in buildings with floor and two floors, while three floors are very common. As for building materials used in building walls and architectural details for the Housh, EL-Trabelsi was composed of:

A. The brick: rock includes limestone and marble,
B. Sand,
C. Lime: it consists of quicklime and hydrated lime,
D. Alshahpa: from the ashes of the furnaces (kusha).

The thickness of the walls of buildings are different dimensions on the height and type of the materials which used to build any building, common walls are "hit the wall" and is composed of disorganized dimensions stones with mud, and some of the buildings used in the constructed stone broken and Maltese stone, the walls were built in interfaces and leave without plaster. Moreover, in the old city there are some ancient buildings built of Roman stones, fetched from old buildings, sometimes it also may be able to be from broken small stones and by mixing it with clay it represents the old method used in construction.

Ceiling made of palm trunks parts which work like a beam in the transverse direction of the beam are placed above a layer of thin wooden planks, then placed over it a layer of clay and stones where settle in final form, with the thickness of the ceiling sometimes to 35 cm. (Abdelslam, 2017)

Figure 2.3 Showing the wall (Abdelslam, 2017)

Figure 2.4 Showing to build walls (Abdelslam, 2017)

Figure 2.5 Use Palm trunks in ceiling (Abdelslam, 2017)

Each type of traditional architecture has historical value should maintain this heritage because it holds a history a story of the people who lived in that area how they were handling the climatic conditions, construction materials which lived all these years and lifestyle.

The aim here is to study the materials usage in historical buildings that related to sustainability, this study, also aims to develop guidelines for interior architects/designers to choose environmentally friendly /green materials to achieve a higher level of sustainability, also analysis the principles applied in their design to achieve thermal comfort for residents. It is clear that natural circumstances of Libya present a great challenge to designers to finding appropriate ingredients to accommodate these circumstances in the characters of the built form, the open space as well as in the nature of the material of construction used. In internal aspects, designers faced similar constraints in finding an adequate spatial arrangement, décor, and furniture and so on.

The study of traditional architecture in Libya it appears that designers have risen to this challenge and succeeded in developing a number of design tools to sustain the climatic and physical conditions of the old city of Tripoli. Acquiring to the skills which it had been gained from observation and the experience with such an environment, the designer successfully adapted elements such as a material of construction, wall thickness, lighting, furniture, height, and décor to local climate conditions. These solutions found explicitly in materials used in the old Libyan Architecture, provide contemporary designers of similar environments with valuable lessons for coping with harsh climate conditions. (Khatib, 2010)

2.5.Conclusion for Chapter Two

The good buildings in their design and their building materials, environment and climate, reduce the use of industrial energy and the non-consumption of materials, natural resources and minimize the negative impact on the environment and non-conflict with nature and benefit from the recycling of waste of life resources, just to preserve a wealth for future generations. The hope to see in the traditional Libyan Houshs) from the sustainability of design through the definition of building materials and architectural elements represented in the doors, windows, lighting, marble, patio, hallway and roofing that gives it the characteristics of sustainable construction.

CHAPTER THREE: THE OLD CITY OF TRIPOLI

Tripoli is an ancient magnificent city located on the Mediterranean seashore, inhabited and populated by mixtures peoples. Back to history, it was conquest by Umru Ben Al-Aas who took a lead after the twenty-third year after Omar Ben Al-Khatab's Caliphate. What arouses our attention in this saying is that it is described by antiquity and loftiness and it used to be inhabited and populated, the matter that confirms that it occupied a significant place in such period among the Islamic cities spreading in the coast. Al-Yakhoubi took an interest also in describing other areas in Libya, which are Cyrenaica, Wadan, Zweila, and Fezzan. (Talisi, 1997)

It was obvious that Arabs found therein and in some other Libyan cities, what dispenses them from thinking in founding new cities, such as the case in the cities they were keen in founding them in the internal regions of North Africa. They made the city a sea center at the same time the land and the sea makes a connection between the east and the west side of the world. They did not neglect it as they do with some other cities such as Leptis, but they kept for it its center across the various epochs, this city has participated in the various events that followed in succession on the Islamic existence in the Mediterranean Sea since ancient times to the modern era.

Figure 3.1 Old Map of Tripoli Harbor (Cowderly, 2011)

It is rich in many architectural and artistic monuments which tell the story of various epochs that the city experienced from the Phoenician era, which called this city "Marcoyat" followed by the Carthaginian rulers coming from Carthage during the 6th

century BC until 161 BC. Until the year 42 BC, where it was captured by the Romans, at the Romans era the city titled as "Tripolis" which mean the three cities, after the Romans the Vandal took place which came from Germany, in 455 AD until the year 532 AD the Byzantines ruled the city, until the Muslims conquest it in 643, by Arabian leader "Omar bin al-Aas" Since then, the name of "Eterables" has been known to extend the Arabian and Islamic rule through its various covenants until 1510, when the Spanish seized the city and ruled it for 20 years and then handed it over to the Knights of St. Jena coming from Malta in 1530 until it was reopened by the Ottomans in 1551, the Ottomans rules extended in two stages, the first one took over by the family Qrh Manlleh which ruled Tripoli in 1711. Until 1835. (Al-Lafi, 2008)

The Ottomans took the rule of the city until 1911 after the ottomans rule the city subjected to the Italian occupation until 1943. The Allied forces won world war two at that period of time Libya became under British administration until 1951, When Libya won the false independence from the British administration until the coup of Gaddafi in 1969. Until the revolution of the seventeenth of February 2011, from that time until now a lot of problems and many changes happened, which led to floundering in state governments which also led to other problem Libya till now doesn't have an election for the presidency.

3.1.The site

By taking a view from the east side the view contain a wide gulf which metaphorically swimming in the light of the sun, behind that gulf it appears an extension land with palms, while behind the white roofs through the western side of the city the view is about a coast of yellow sands, which oriented to the southwestern side washed by blue waves to the west from this view and behind the blue waves which follow by a declining line of desert coasts mixed with mirage thus it gave view of the sea from two sides the east and west, while the city from the north side the city from there is built on high ground with no view of the sea. (Talisi, 1997)

the site of the city before the Arabian and Islamic period, it appeared that it used to be above the same place, but "Leo" the African mentioned that the news used to refer to the fact that it used to be located in the north. Although the writers discussed it lately

he said: “we do not find behind the rock barrier in the North West other than the deep water”. (Talisi, 1997)

The general location of the city, the ancient city of Tripoli is located in the western part of the Libyan coast; which located in the north of the equator on the Mediterranean Sea and at the top of the plain of the Jaffara agricultural. As a conclusion, it’s located at the heart of the climate of the Mediterranean countries.

Figure 3.2 Aerial of Tripoli (Al-Lafi, 2008)

3.2.Historical Development

Libya with its civilization and long history have passed through several eras, and from these eras that have left an impression:

A. The Phoenician covenant (During The 6th)
B. The rule of the Romans Islamic conquest
C. The Wondrous Covenant
D. Islamic conquest
E. The reign of the Knights of St. John
F. The First Ottoman Period (1711- 1551)
G. Period of the Qarmanian Dynasty (1711 - 1835)
H. The Second Ottoman Period (1835-1911)
İ. The Ottoman-ruled it until the Italian occupation in (1912 - 1942)
J. The role of British (1943-1951)
K. The role of King Idris (1952 - 1969)
L. The Period of the rule of Gaddafi (1969 - 2011)
M. The present period after the revolution of 17/12/2011

A. The Phoenician covenant (During The 6th)

The city founded by the Phoenicians which came from Lebanon to Sicily three thousand years ago based on the importance of its strategic position in terms of trade, because it represents the link between Africa and the northern coast of the Mediterranean sea, it's omitted to mention that it was originally as Romanian city, which was founded between the 7th and 8th centuries BC. In addition, the Phoenicians established two other cities, Lebda and Sabratha. In the western part of Libya, three cities became the capital when the capital moved from Lebda al-Kubra to Ayyut. They were followed by the Carthaginians who came from Carthage during the 6th century BC until 161 BC and were followed by the Numidians until 42 BC. (Al-Lafi, 2008)

B. The rule of the Romans Islamic conquest

The Roman governor called it "Tripolis", the name composed from two parts "Tri" in the sense of three and "Polis" in the sense of the city, ie the three cities, and then was diverted to "Tripoli" due to the succession of governors and the difference of their tongues. The Romans used the Roman planning system in all their cities.

The city consists of two main streets: Cardo: which extended from north to south and Decumanus: which extended from east to west. At their junction, there is an arch called the "Arc de Triomphe", which belong to one of the emperors who belong to the Roman state.

It is clear that the Old City has also undergone this planning law, but only the arch known as Marcus Aurelius, which faces the port of Tripoli from the north-east and the sea, remains of this effect as shown in figure (3.3).

Figure 3.3 Arch of Marcus Aurelius and various archaeological remains (Engineers, 2016)

Figure 3.4 A sketch of the city of Tripoli for the year 1559 (Engineers, 2016)

C. The Wondrous Covenant

The city was signed under the rule of the Vandal in 449 AD until 642 CE. No construction work was carried out except during the rule of the Byzantines. The urban works were limited to fortification, construction of observation towers and the construction of a group of Christian churches. 642 AD. (Al-Lafi, 2008)

D. Islamic conquest

After the conquest of the city by Amr ibn al-Aas the first thing which done by Muslims conquerors was constructing a mosque, which constructed by Amr ibn al-Aas in the same place of the Mosque of Ahmed Pasha Qrh Manli, It is worth saying here that

Amr ibn al-Aas is the first one who calls the city by Arabic word "Ettrables" but they deleted the first letter " أ " the name become as known now, "Tripoli", but the management of the old city recovered the name of the city launched by Amr ibn al-Aas and became the word "Iraplas" to the old city and the word "Tripoli" to be launched on the new city. (Al-Lafi, 2008)

The rule of the Arabs lasted from 642 AD until 1510, about nine centuries and the most important works of architecture were:

a. Number of Housh(s) have increased as a result of the return of migrants,
b. Retail stores and markets,
c. The Arab Islamic city was not characterized by specific planning laws other than Housh(s), where the heights were determined in respect of the neighbor. The markets were built along the street where the gate is located and at the intersection of the gates of the gates built the city square, and built by the Grand Mosque or mosque and therefore became the word "Jamea" which mean a Masjid. (Al-Lafi, 2008)

E. The reign of the Knights of St. John

The Spanish occupied Tripoli on July 25, 1510. One of the Spanish military commanders wrote: "The city of Tripoli is square in shape, its perimeter is more than one mile, and it has two walls with narrow, deep trenches. The first wall is high and thick while the second one is short, full of fortified towers and surrounded by the sea. From three sides and has a great port that can accommodate more than four hundred ships and inhabited by more than ten thousand Arabs and Jews.

The most important urban works:

a. Renovation of the wall for the sake of protecting the population from the consequences collapse.
b. Reconstructing the Roman citadel which belongs Romanian era in origin,
c. The establishment of the gates for military purposes and the gates are: Bab al-Jadid, Bab al-Bahr, Bab al-Mashir Gate, Bab Hawada, Bab al-Arab "Gate of Freedom Now". (Al-Lafi, 2008)

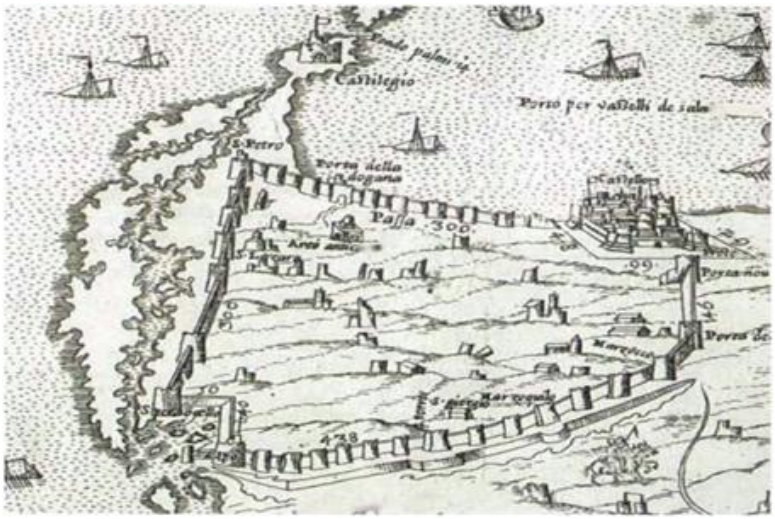


Figure 3.5 The map of ancient Tripoli in 1567 (Engineers, 2016)

F. The First Ottoman Period (1711- 1551)

After the Libyan population request help from the Ottoman Empire, the Ottomans took over the city until the beginning of the twentieth century. The first two cities passed from 1551 to 1711, were then occupied by the people of Manilla until 1835. The governors punished them until the Italian occupation in 1911 the most important parts of this period are the "urban works and laws". Murad Agha was the first Ottoman governor his foremost works of Tripoli was:

a. Encouraging the movement of Arabian Housh(s) within the Old City,
b. Re-fortification of the city,
c. Make the city the capital of the state of Libya,
d. Constructing Turkish baths through the city,
e. Establishing religion schools through the city. (Al-Lafi, 2008)

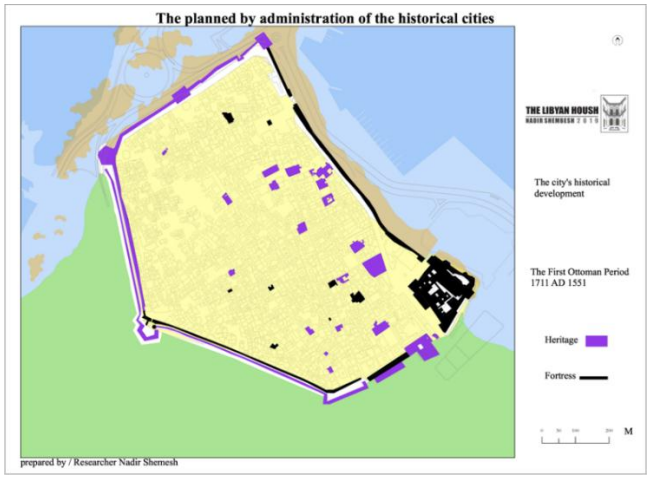


Figure 3.6 The First Ottoman Period (1711- 1551) (Tripoli, 2008)

G. Period of the Qarmanian Dynasty (1711 - 1835)

The most important architectural works were:

a. Construction the famous mosque, which is still there until now "Mosque Ahmed Pasha Qura Manli" which built on the ruins of the mosque, "Amr ibn al-Aas" was extended to a school called with the same name,
b. Renovation of the walls of the city,
c. Establishment of a shipyard.

As a result of the movement of urbanization, population growth, trades activity and other elements of the city's establishment, it was incumbent on the governors of Tripoli to issue laws and regulations governing the course of life and construction. The city was before the Second Ottoman Period without law, except for customs. (Al-Lafi, 2008)

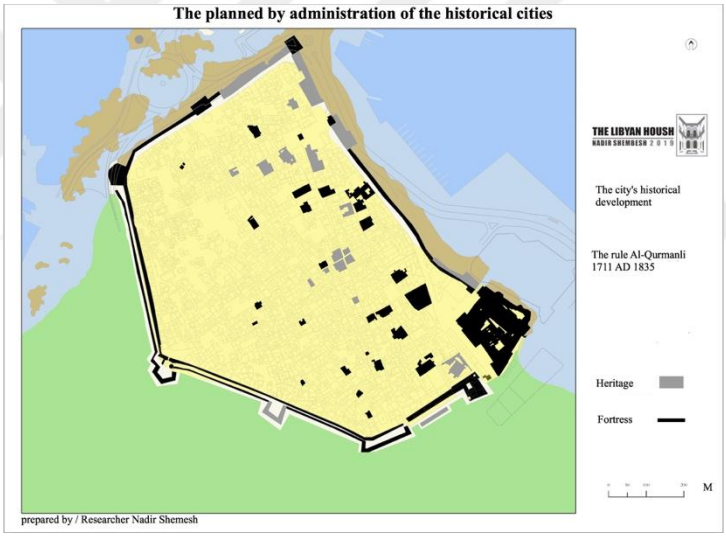


Figure 3.7 The rule Al-Qurmanli (1711 - 1835) (Tripoli, 2008)

H. The Second Ottoman Period (1835-1911)

The most important works of the Second Ottoman Empire

a. Lighting and telephone lines between Tripoli and Benghazi.
b. Regulation of the "Meri" tax.
c. Establishment of the School of Arts and Crafts.
d. Establishment of the military school "Bab al-Bahr".
e. Conducting the first land registration process in real estate registration.

f. Establishment of Marshal market 1906 m.
g. Demolition part of the western wall of the city in 1909 to encourage urban development through outside of the walls.

There were 29 mosques, 5 churches, 7 synagogues, a middle school, 19 primary schools, 20 bakeries, 1019 shops, 22 cafes, 14 hotels, 2453 Housh(s) and 7 foreign consulates. (Al-Lafi, 2008)

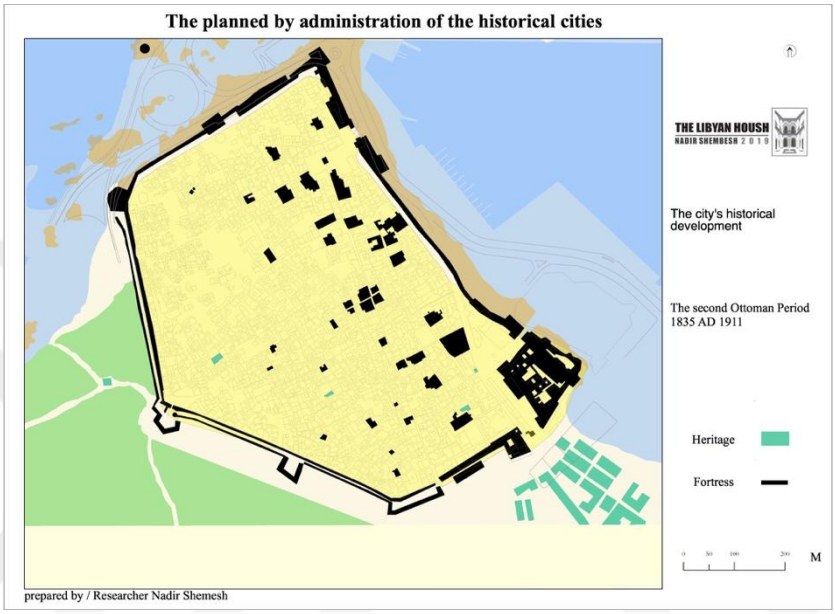


Figure 3.8 The second Ottoman Period (1835 - 1911) (Tripoli, 2008)

İ. The Ottoman-ruled it until the Italian occupation in (1912 - 1942)

All that was written about the Municipality of Tripoli during the Ottoman period through the history which recorded by the Antiquities Authority, which is accurate information, while the information that speaks about the municipality during the Italian occupation period is derived from the Italian references translated. The municipal council was dissolved immediately after the Italian occupation which appointed a military administration to run the country. Here are some of the orders that issued by General "Caneva" concerning the division of Tripoli into shops as follows:

a. Local AL-Baladya.
b. Bab al-Bahr locality.
c. The great of Hara locality.
d. The small of Hara locality.

e. Al-Saffar locality.

f. Houmt Gharian locality.

Figure 3.9 The division of the city of Tripoli into administrative areas (administrative discipline) (Tripoli, 2008)

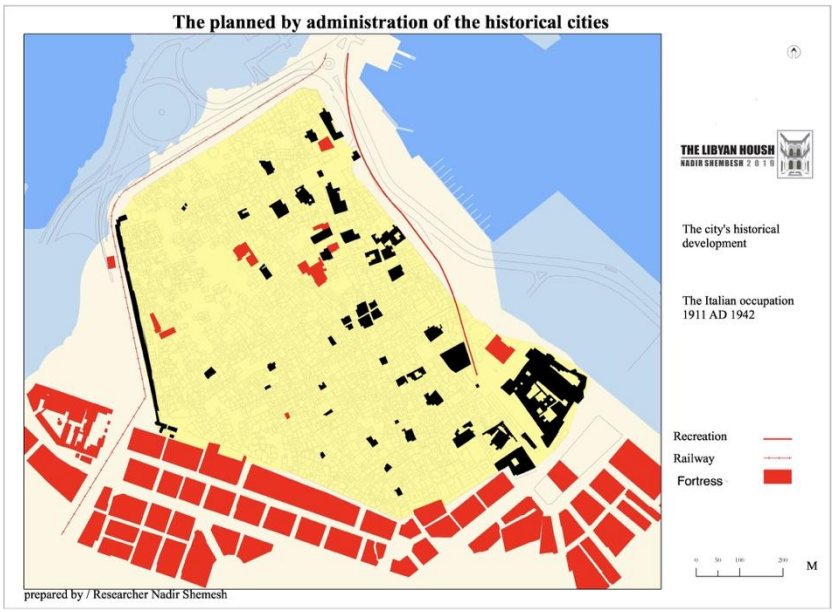


Figure 3.10 The Italian occupation (1911 - 1942) (Tripoli, 2008)

J. The role of British (1943-1951)

Under British rule, the monument was demolished and replaced with a drinking water tank.

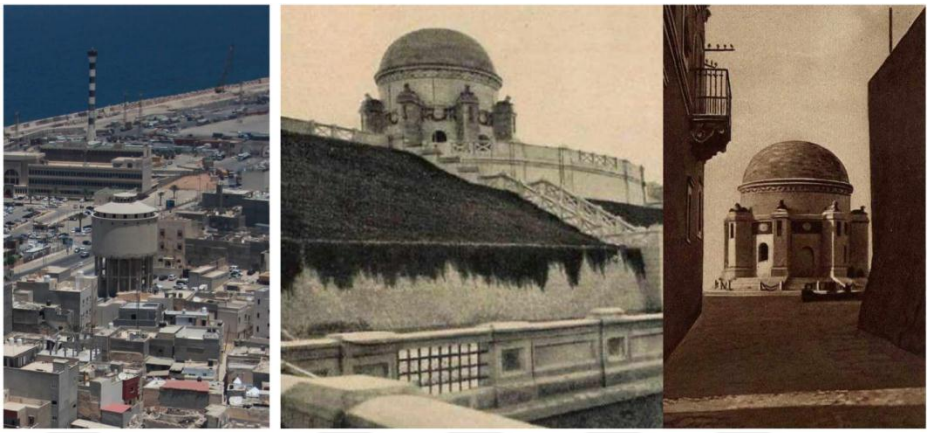


Figure 3.11 The monument that has been demolished (Tripoli, 2008)

K. The role of King Idris (1952 - 1969)

The most important urban projects in that period:

a. Create an old city tank.

b. Paving some roads.

c. The establishment of a corniche between the Saraya and the port. (Al-Lafi, 2008)

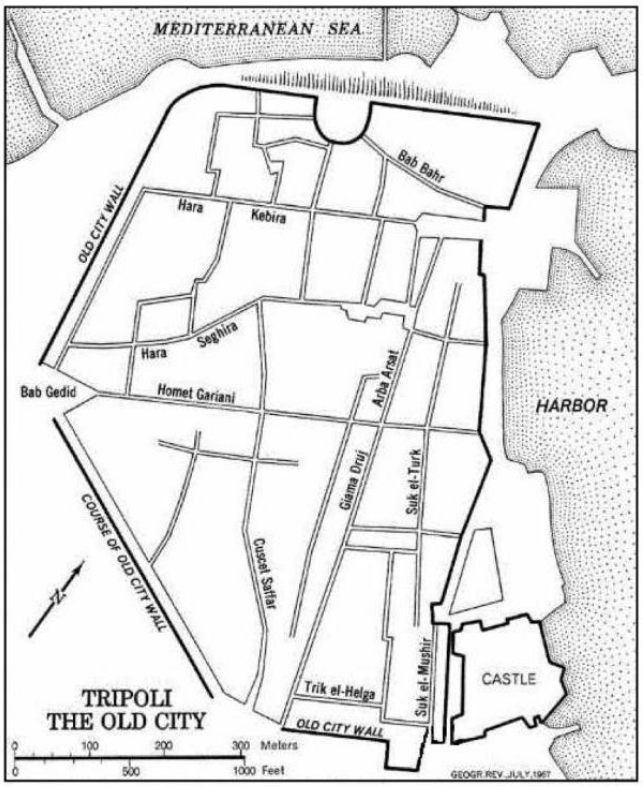


Figure 3.12 Map of the old city (Al-Lafi, 2008)

L. The Period of the rule of Gaddafi (1969 - 2011)

In 1983, the General People's Committee No. (58) Issued a decree establishing the technical apparatus for the organization and administration of the Old City. The decision contains twelve articles related to the administration, organization, and execution of technical plans for the Old City.

In 1985, the General People's Committee No. (40) Was issued establishing the administration and management of the old city of Tripoli. It contains fourteen articles and the most important articles:

Article (2): The project established under the provisions of this decree shall establish and implement cultural, technical, engineering, restoration, maintenance programs and plans, all establishments related to buildings and facilities in the old city.

The development and implementation of the technical and cultural projects confirm the continuity of the civilized entity of the original living values.

a. To carry out the designs and specifications according to the special condition on which the implementation is carried out.
b. To develop the necessary budgets for the implementation of plans and programs.
c. The conclusion of contracts for implementation plans.
d. Development of regulations for the identification of uses.
e. Develop internal systems for the work of the project.
f. Doing documentation, studies and research. (Al-Lafi, 2008)

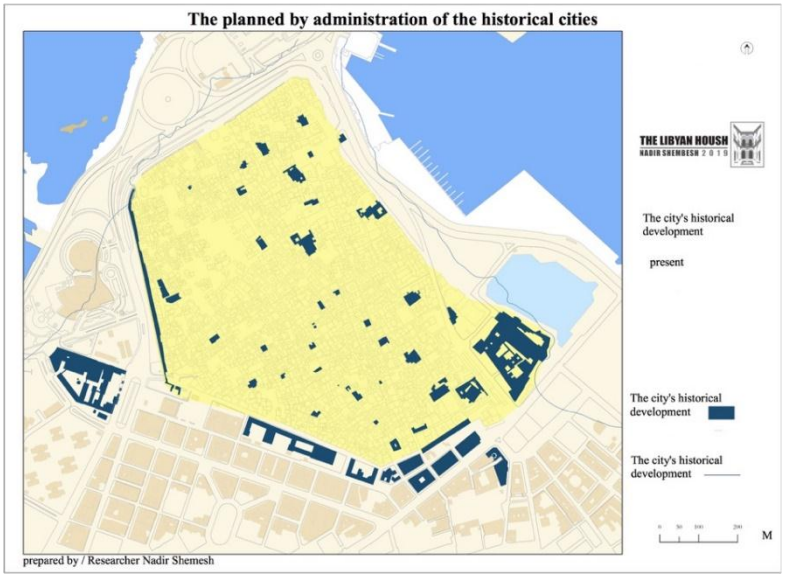


Figure 3.13 present (Tripoli, 2008)

M. The present period after the revolution of 17/12/2011

Under the title of “Arabian Spring”: When the king's rule “Idris al Senussi” was subjected to a military coup and the army seized power in Libya until the Libyan people revolted against injustice and tyranny. Freedom and liberation were achieved through the revolution which known worldwide as the Revolution of February 17, 2011.

In view of the historical importance of the ancient city of Tripoli and its architectural and artistic momentum, the documents and the civilizations which rolled and the result of the remarkable urban development outside the walls of the old city, the old city was neglected due to the migration of the original inhabitants and delegations of migrations coming to work in the city after the emergence of oil. The immigrants' culture, as well as the culture of these immigrants, did not absorb their historical value, in addition to their lack of economic resources, and considered them a temporary settlement area. They did not care about restoration and maintenance. For underdeveloped regions urban and turned a blind eye of what it represents the historical and cultural value of the Libyan people and re-revival and restoration of historical monuments.

3.3.The Architectural Analysis

The deep-rooted city of Tripoli is considered to be a living model of the Arabic Islamic city in the constructive design in terms of its functional significance and the architectural form which considered greatly represented in the Islamic building: the mosques, schools, minarets, graveyards, caravansaries, Alsaray, hotels, roofed markets and bathrooms.

A. The General location

The ancient city of Etrapels is located in the western part of the Libyan coast which located in the north of the equator on the Mediterranean coast and at the top of the plain of the Jaffara agricultural. As a conclusion, it’s located at the heart of the climate of the Mediterranean countries.

The sea surrounding the city by two ribs of the five-pointed shape of the site bordered to the east and north-east by Al-Fath road and from the north-west by Al-Qubba Street, the coastal road and the south-east by Al-Shuhada Square, from the south-west and north-west by the historic wall and by Sidi Amran Street. It has a total area of 48 hectares. It also boasts many architectural and artistic achievements that tell the story of the different bonds that the city felt from the Phoenician era. (Al-Lafi, 2008)

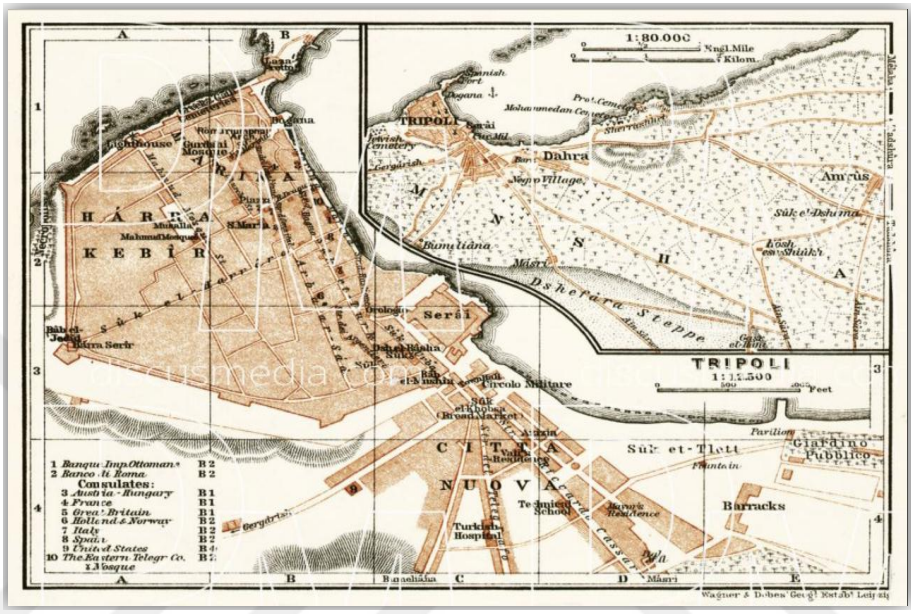


Figure 3.14 Tripoli city map 1911 (Debes, 2005)

And between the palm beach and the city expands to the direction of the Gulf Bay in the shape of a crescent separated from the sea by a group of rocks and places of low depth, and this bay was the port of Tripoli, which was called some Rahalin port Tripoli and varied views in that. (Ghanem, 2010)

Figure 3.15 An aerial view of the port city of Tripoli (Ghanem, 2010)

B. The General Shape

The flourishing of the decorative and the decorative design in this city and its architecture during the various stages and historical periods that the city has undergone is determined by three important main factors:

a. Local climatic characteristics and distinctive geographical location near the sea from one hand and desert with soft sand on the other hand.
b. Artistic and local architectural tradition.
c. The religious situation with the Arabic-Islamic orientation.

In the climatic conditions where freedom predominates in the city of Tripoli, and as in the rest of the cities of North Africa, the architectural design takes into account how to adapt the position of the sun during daylight hours so that all sections of the building receive light and shade alternately.

The unique architectural form, sometimes for the city of Tripoli, defines and gives a clear idea of the basis and form of the different ancient cities. Contrary to the description given by the Orientalist scholar A. Karakoski about the city of Tripoli in his book: Confirming that the historical architectural evidence that remained in the city of Tripoli dates back to the period of the Ottoman. (Al-Hamali, 2011)

Figure 3.16 The General Shape of old city of Tripoli

Figure 3.17 An aerial view of the old city of Tripoli

C. Building Floors

In this figure (3.18), with a three-dimensional drawing, accompanied by an aerial photograph, showing the height of the buildings, through this illustration, all the old historical buildings, including the traditional Housh(s), inside the walls of the old city of Tripoli do considered as a two floors building, while the new buildings which constructed outside the fence range it contains three and sometimes four floors.

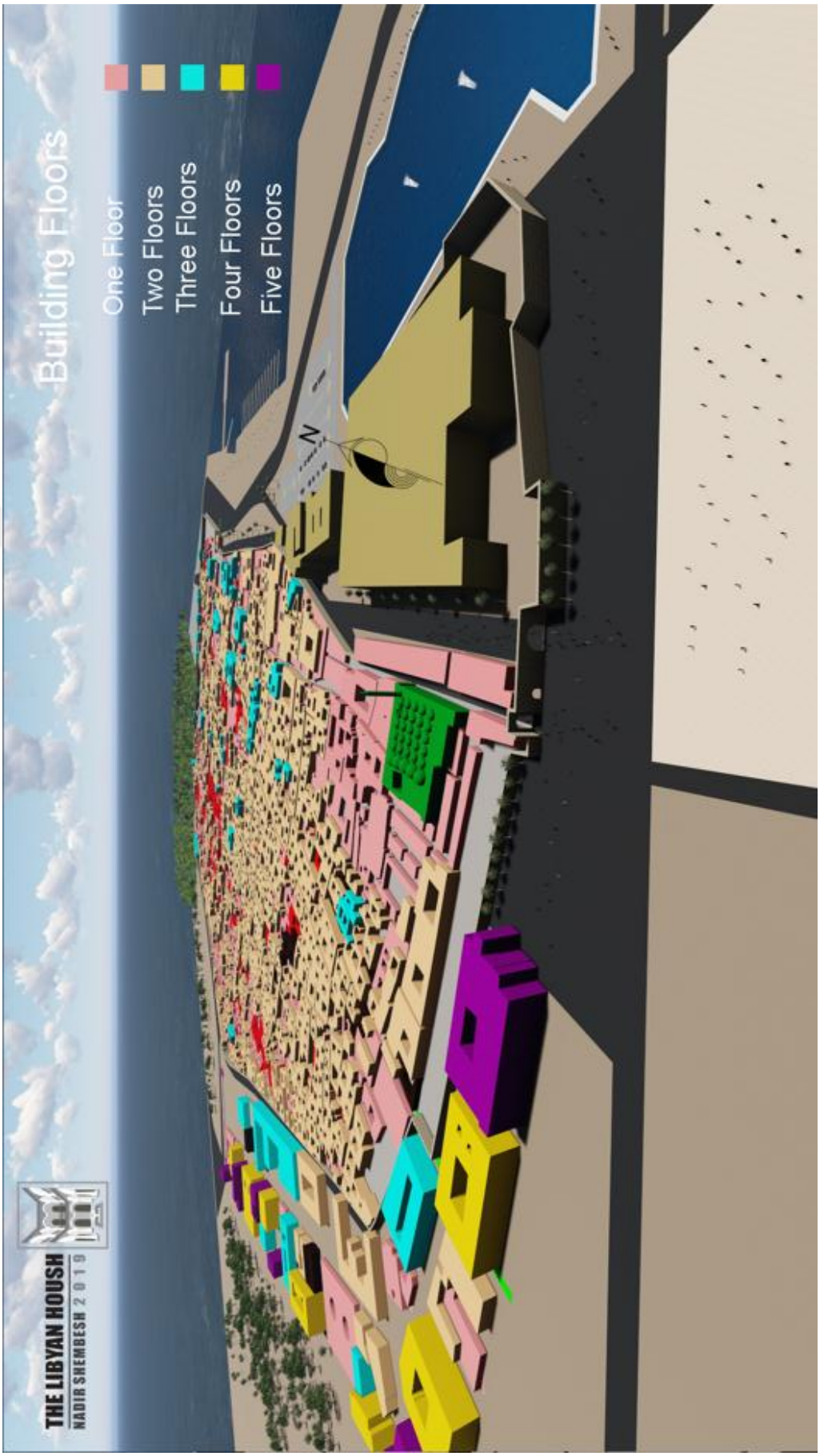


Figure 3.18 Building Floors of old city of Tripoli

Figure 3.19 An aerial view of the old city of Tripoli

D. Function of Buildings

Figure (2.20) illustrates three-dimensional drawing of the current uses of the old buildings in the traditional wall of the old city of Tripoli.

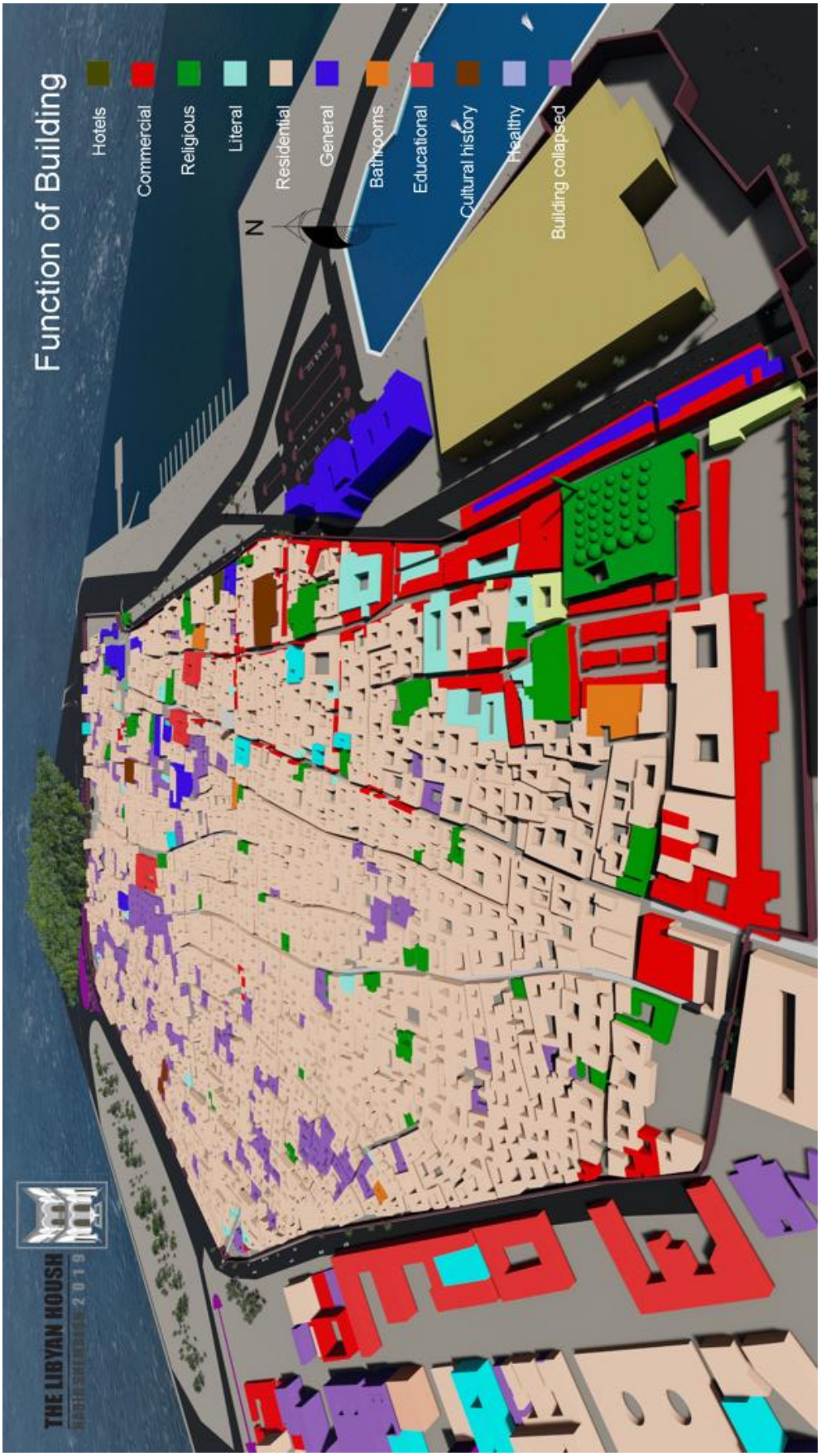


Figure 3.20 Function of Buildings

E. State of the Building

Figure (2.21) shows the three-dimensional drawing the state of the buildings between the new and medium buildings and partially collapses and completely collapsed, because of negligence and non-follow-up maintenance periodic maintenance.

Figure 3.21 State of Building of old city of Tripoli

F. Building Collapsed

As shown in figure (3.23), the urban plan over the years and the collapse of the traditional buildings and spaces in a continuous and non-stop development, in figure (3.22), illustrates the three-dimensional drawing of the current state of the buildings until present days and unfortunately, will continue If people and government took a step against what happening, for the maintenance and restoration of these traditional Houshs) with history and legacy of ancient architecture.

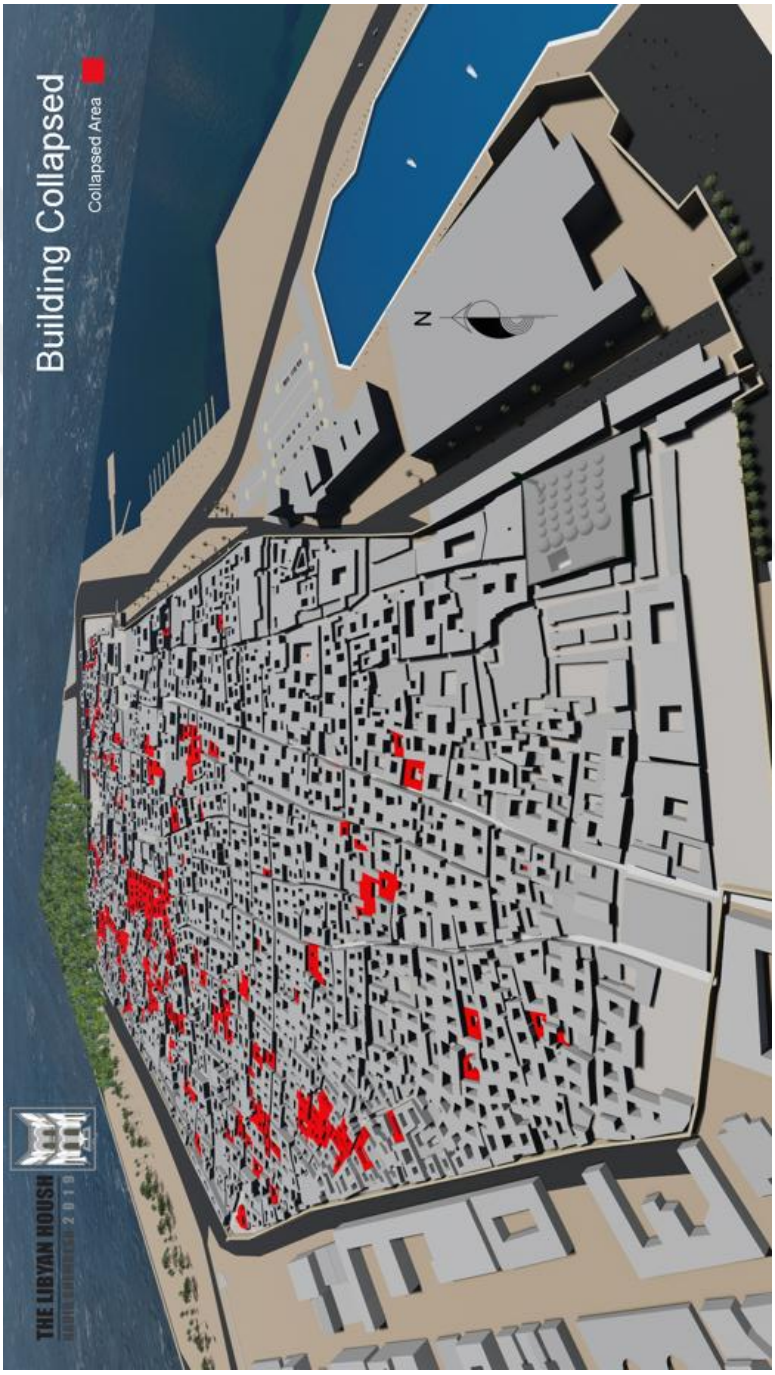


Figure 3.22 Building Collapsed

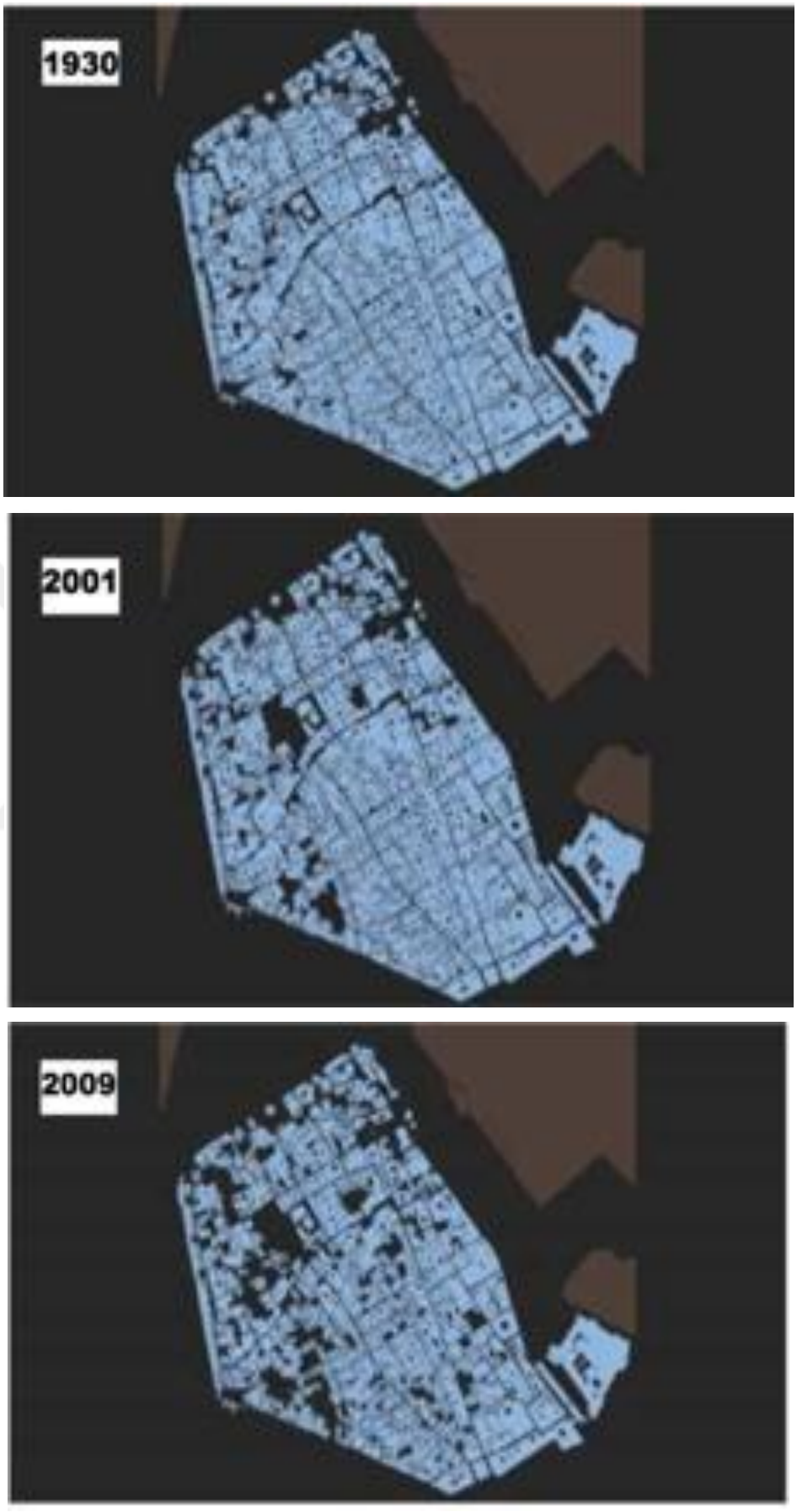


Figure 3.23 Urban Plan of Building Collapsed (Engineers, 2016)

Percentage the Collapse of Historical Buildings: Figure (3.24) shows the percentage of the building condition, less than half of the historic buildings within the walls of the old city of Tripoli are still in good condition and the rest as shown in the drawing showing the state of the buildings.

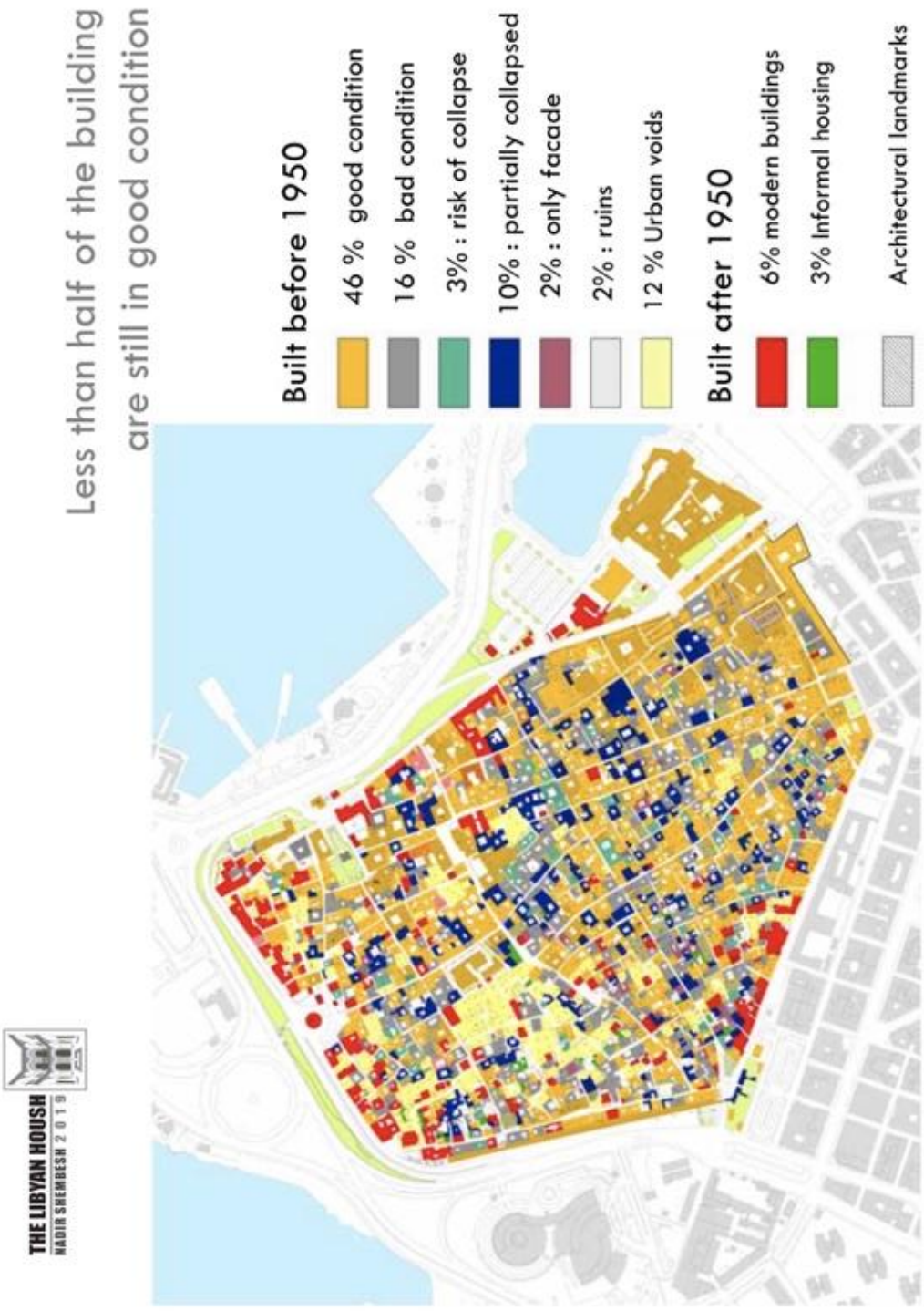


Figure 3.24 Percentage the Collapse (Engineers, 2016)

G. The Historical Government and Public Building

Figure (3.25) shows the three-dimensional drawing of the location and location of traditional government buildings located inside the “Old City of Tripoli”.

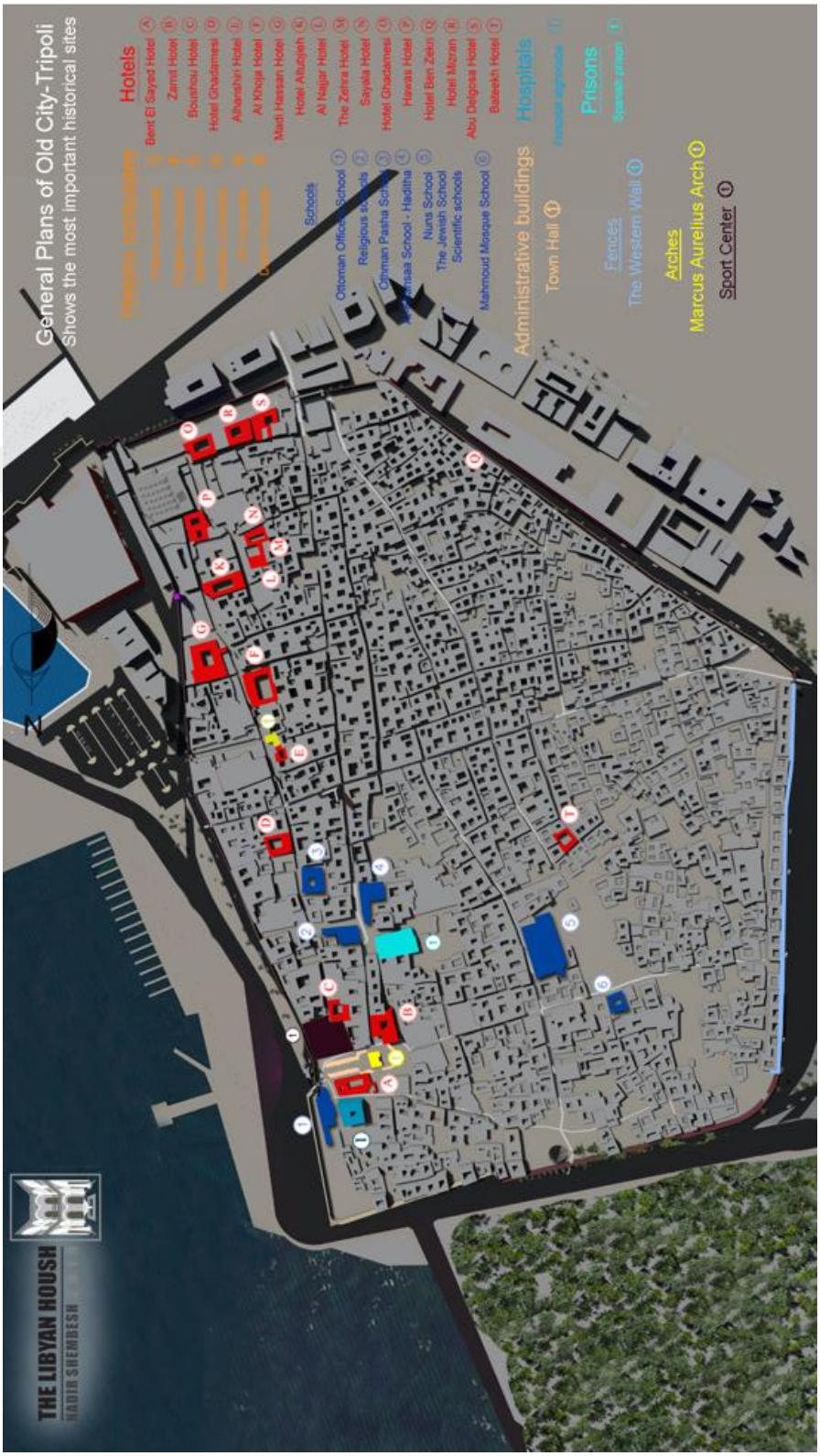


Figure 3.25 Most Important Historical Government and Public Building

H. The Historical Traditional Housh(s)

Figure (3.26) shows the three-dimensional drawing of depicting the sites and places of traditional historic Housh(s) which located inside the Old City of Tripoli, as stated in the Administration of the Historical Cities of the Old City of Tripoli. And table 3.1 shows same Housh(s) in the figure (3.26) of the Historical Traditional Housh(s) located inside the Old City of Tripoli. It is a about 21 Housh(s), and only six Housh(s) have been examined in this study, as indicated in section 1.2 on page 2 with the reason of selection of these Housh(s) due to their functional diversity and construction conditions.

Table 3.1 The Historical Traditional Housh(s) located inside the Old City of Tripoli

1.	Housh AL-Qaramanli.
2.	Housh AL-Bashawat (Dar AL-Qadi).
3.	Housh Hassan AL-Faqih (French Consulate).
4.	Housh AL-Qurji.
5.	Housh Bait AL-Maal.
6.	Housh Al-Qarqani.
7.	Housh AL-Rosario
8.	Housh AL-Daghes
9.	Housh Mahmoud Bey
10.	Housh AL-khoja
11.	Housh Salem Elbakoush
12.	Housh AL-Sabon
13.	Housh Ben Mose
14.	Housh Ben Mahmoud
15.	Housh AL-Sahli
16.	Housh AL-Jahani
17.	Housh AL-Ghadamsi
18.	Housh AL-Habeb
19.	Housh Mahmoud AL- Jammal
20.	Housh AL-Lalouna
21.	Housh of Maltese

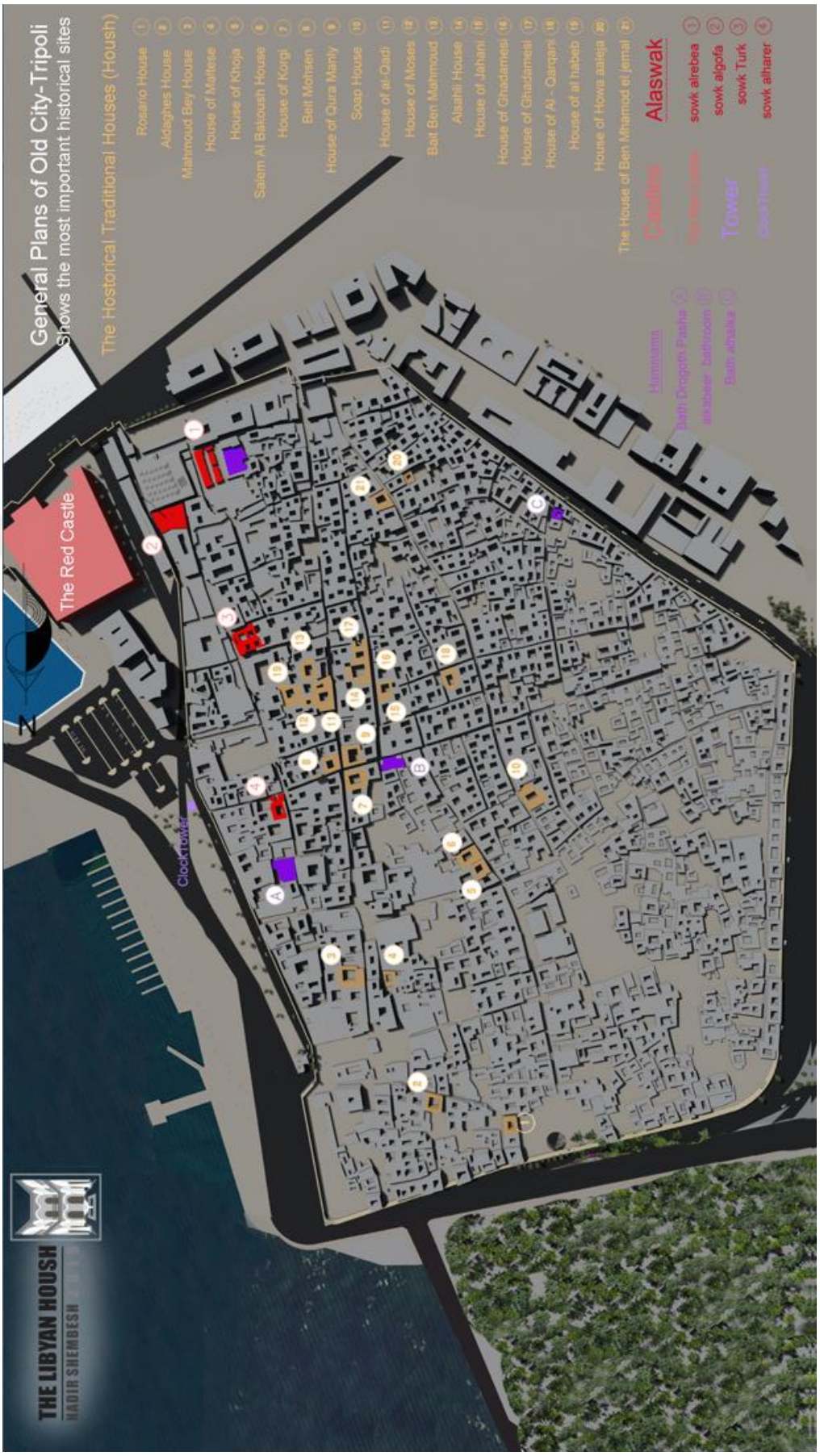


Figure 3.26 Most Important Historical Traditional Housh(s)

3.4.Conclusion for Chapter Three

In this section of the study, the study clearly explored the ancient city of Tripoli, which located inside the historical wall, the city was created from ancient times through the historical ages, many historians and travelers talked about the spectacular parts of the city's streets and corridors, including to other travelers whose touched by city's building, architectural and form it's historical dimension, while some of them touched by the strategic location of the city, and how the city of Tripoli link between the West and the Arab-Islamic cities through two periods which contain peace and war.

Also, this chapter reviewed the situation of traditional Houshs) (which is the case of this study), in terms of location, height, construction, and architectural status, which it is clearly mentioned in this study, the study through this chapter dealt with something very serious "Saving The legacy" it's about taking step to save the legacy of old city of Tripoli, because if this serious problem of the collapses of the historical building, due to lack of maintenance and care of the historical buildings if this problem doesn't solve, it will lead to disaster which will lead to Tripoli's loses the historical and cultural significance. Which historians and travelers do not long to sing in their books and unfortunately become the past and do not inherit this legacy for generations from afar.

CHAPTER FOUR: THE LIBYAN HOUSH

Libyan Housh and sometimes called the ancient “Trabelsi Housh” this model of the Housh(s) is one of the most important components of the Housh(s) in the old city of Tripoli. The shapes and sizes of these Housh(s) depending on the different considerations that affect the home, as well as all the components of the city.

The Italian (Stifano Bianco) specialized in the field of building cities and Islamic architecture believes that Islam left its strong impact on the constitution and formation and development on the appearance or the form pertaining to the city, which according to his opinion, deserves to be followed as a marvelous and successful model in the complex building for the Islamic city.

The fundamental properties of the constructions of the Arabic Islamic city are marked in the middle ages by isolationism and the isolation of separated buildings inside the complexes and residential quarters, it is constituted through solitary Housh(s), at the same time it groups every Housh around the internal courtyard with the existing special source such as (the fountain) that gives full autonomy to the residents from the remaining neighboring residential Housh(s). (Hashem, 1999)

The subjectivity or autonomy that marked most of the Islamic Housh(s) appeared as a followed tradition, at the same time as a symbol of the spiritual independency for the believers, to be added thereto each residential Housh built on the basis of setting the relationship of the paterfamilias with the external world, who is the first responsible in connecting this relationship through the room of reception known by "the salon" to facilitate the entry of strangers to the Housh without going through the interior of the Housh and know its privacies but with this isolation, there is a big social concord and as Cozarick mentioned, the quarter in the Arabic Islamic city is composed of residential Housh(s) set adjacently and closely packed with each other, which creates an impression of the presence of familiarity and relationship between the inhabitants residing therein, constituting one unified social group in the reality and fact of the quarters as described as one social architectural unit, it constitutes the unity of the Islamic city, a residential bond grouped and was found therefrom not because of the links of cognation but due to the peculiarity that marked the various professions and handicraft works in the city – the quarter and a feature and clear indication came into sight over the constitution of this quarter and to notice it in the grouped markets and

the market consists of roofed streets where spread over its sides the shops and store for the various crafts and professions that used to be exercised in such era and the people gather in such markets and they are distinguished from each other by a certain type of crafts or industry. Hence, for instance, there is a market for the tailors and the goldsmith, a market for coppersmiths, a market for the copyists of books and others for leathers and other kinds of markets which provide service for the inhabitant.

The Housh(s) in the quarters were organized at the form of one line connected from the side of the street and in each Housh a back as though it is dependent or connected to the other Housh that preceded it and thus. (Hashem, 1999)

The condensation of the buildings which distinguishes the city of Tripoli whereas there are for example more than 480 Housh(s) at a distance of one hectare that refers to the measurement or size of the internal Housh and then constitution of the Housh from one, two or three stories shall be subject to certain rules not to be transcended by the component of this Housh no matter the reasons.

Hence, there are positive and required conditions in the Moroccan buildings in the Islamic city as per the following:

A. Appropriateness of height or altitude of such Housh(s) with each other. Hence, the Housh shall not rise over the general pursued height.
B. Equilibrium and equality of all the measurements of the constructional elements to the size of the ordinary building.
C. Conformity of the rates of building in such a way that man is able to see the other neighboring building from lower to the upper in the quarter of closely packed buildings and consequently, he cannot see anyone inside the neighboring Housh(s). (Hashem, 1999)

4.1.Housing throughout History in Libya

That human beings need shelter and his quest for rest and stability was one of the reasons that called for Humanity to the formation and creativity of architecture within the formations of space began mono and simple and extended ،To be complex and with the process of spatial creation of the dwelling, man sought to choose formations The human life has evolved with the development of civilizations throughout the ages.

The basic principle of the formation of the Housh remains access to security, comfort and internal balance. As a human being has discovered that starting into the interior of his home is the appropriate approach to his needs and necessities. His goals from the dwelling to the comfortable accommodation, from this approach, man created the idea of the Housh, the courtyard or the inner courtyard to represent the universe.

The Great Universe: It is the world around him with his qualities raised on the four original bodies.

The small universe: It is the one that includes the open dish, which is the roof of that specific heavenly space.

Here, it is clear that the traditional Libyan Housh(s), where it appears "as an internal structure exposed to the corridors sometimes and surrounded by walls surrounding walls and spaces are linked to the courtyard is closely related architecture, the courtyard had only one entrance and then form a place resembling the Umayyad (parachute) in one of the staff or in the back of the yard to settle Under which he and his family, and then built a room overlooking the courtyard to live in and then built, the rest of the rooms attached to each other and overlooking the courtyard and continue to increase the family members and the need for additional rooms that are built next to the rooms and here the courtyard became surrounded by rooms and buildings that are increasing to surround it from all sides, Sometimes the dwelling Shelter and space that protect human beings from climatic factors and provide them with their needs and necessities. The housing has emerged in its various forms to represent a situation that reflects the human desires to settle and fight against environmental influences and assets for the stage of full stability of the construction of safe housing.

The formation idea of residential space has gone through stages that led to crystallization and the emergence of the moment from the space of the caves and caves to the space of a single room and access to the space complex and multi-assets to form a space with the courtyard and includes environmental treatments, whether social or religious. (Adeema, 2015)

EL-kheama (The tent): The tent is the first type of accommodation known to man in the desert and a trip from the mountains to become habitable.

Figure 4.1 The tent (EL-kheama) (Adeema, 2015)

EL-Kahef (The cave): The cave is the transformation of natural caves to become habitable.

Figure 4.2 The Cave (Ekreem, 2015)

Al-Jbel (The Mountain) Housh: Deep in the mountainous area of the Libyan city of Gharyan, the owners of the remaining fauna or non-traditional Housh(s) dug in caves seeks to attract visitors from both Libyans and foreigners. "This is the Housh of Housh Omar Belhadj, and Omar Belhadj dug this Housh in 1666 AD," said Arabi Belhadj, grandson of the first owner of the Housh.

Figure 4.3 The Cave Housh Omar Belhadj (Magazine, 1666)

EL-Qoba (The mud domes): The mud domes are a hollow room with a roof protected by natural factors, as in the desert city of Agdamas, where statues and stone inscriptions have been found indicating the existence of life in this area 10,000 years ago, occupied by the Carthaginians in 795 BC. Then the Romans occupied it in 19 BC, it was occupied by the Arabs under the leadership of Aqba bin Nafi in 42 AH. (Afteeta, 2012)

Figure 4.4 The mud domes (Afteeta, 2012)

The formation of a rectangular building: The formation of a rectangular building with a roof and walls with a few of an openings holes to provide lighting, ventilation and habitable as shown in figure (4.5).

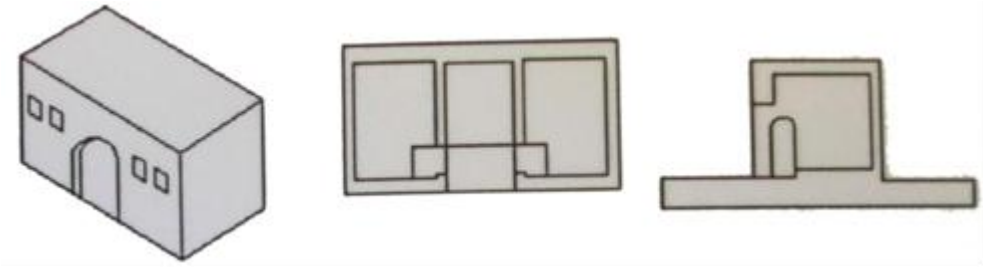


Figure 4.5 The formation of a rectangular building (Adeema, 2015)

The composition of the corridors: The composition of the corridors which aligned along one axial axis to be a space covered with a trio of walls and front is fully open to the air as shown in figure (4.6).

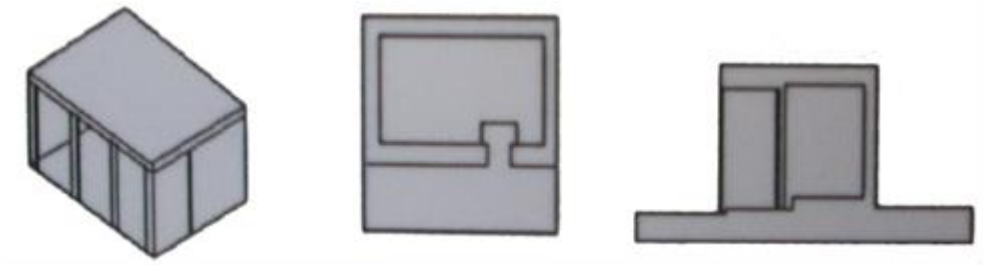


Figure 4.6 The composition of the corridors (Adeema, 2015)

The development of space construction: The development of space construction with the emergence of being the middle distributor of spaces added around as shown in fugue (4.7).

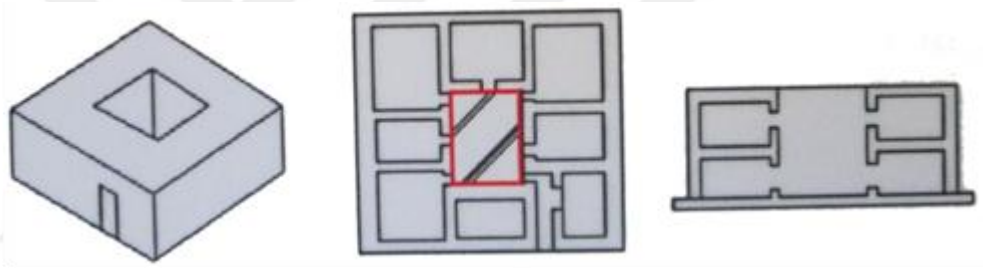


Figure 4.7 The development of space construction (Adeema, 2015)

4.2.Factors Affecting

Climatic factors: The old engineers dealt with the entrance of procedures such as the courtyard which used to provide the Housh with cool air to protect it from the warm atmosphere. It also offers a shaded place through a long time of the day, there are several elements that contributed to the climatic treatment (the fountain, the air, the vents). (Engineers, 2016)

The privacy factor: Housh created for purpose a suitable vessel for the individual and the nation of the perfect model of the Housh and the neighborhood, so firstly it provides a guarantee of privacy, while secondly, it gives independence and familiarity together. Thus, the privacy of these Housh(s) was used in line with the Libyan Islamic culture. (Engineers, 2016)

The social factors: The average of living situation in Libya, especially in Tripoli, there was not a large proportion of the rich who are well-known among the Libyans, there was the rich class of owners of industries and crafts and clerics close to the Ottoman rulers. The difference in the citizen living and economic life in the Ottoman era is due to the imposition of taxes and royalties on citizens and excessive living. The main factor in the design of the Housh is to achieve separation, so that the separation between the men and women guests and the people of the Housh, and separated from the public street with the achievement of full privacy.

Economic factors: The Housh takes a possible less space for the family and gives them a sufficient space to carry out all activities under architecturally appropriate conditions, and the possible lowest cost, and makes access between the corners of the Housh quickly and easily. (Engineers, 2016)

4.3.The Environment

The Housh is built according to the principle of negative energy management, such as the white facades, which reflect the sun and keep cool in the interior spaces, there was always a need to provide a nice climate during the hot summer times, unlike the winter, if the cold does not prevail very much and did not need a lot of heating. The courtyard was the main element in the design of the Housh which provides suitable climatic conditions during the summer and works with the average internal temperature of the spaces gathered around it in the courtyard protected by the walls of the surrounding rooms and the dome of the roofed roof all the time, the temperature is moderate during most of the day and helped create conditions Climate (mini) is comfortable inside the Housh The rooms and interior spaces remained protected from the direct sun through the shadowy courtyard, the thick walls, and the vaulted ceiling, and maintained a moderate temperature. On the other hand, the air in the courtyard encouraged the transfer of heat between the interior and exterior spaces.

During the day the air moves from the patio to inside the rooms which help to cool the air in the rooms. As the Housh is ventilated and cooled at night by convection currents when the hot air rises from the interior and replaces the cold air that descends to the courtyard. And to increase the conditions in the yard and improve the environmental conditions built in the water availability, and planted plants and trees have been

evaporation of water and the presence of plants to increase the degree of air softening and contain palaces in many Housh(s) of the old city on one or more evergreen citrus trees. In addition to a small water fountain, and a pot of flowering plants that add to the private patio a pleasant atmosphere. Also, the large openings in the Housh were directed towards the courtyard, thus received a limited amount of sunlight and natural light while facing the small outflows outward.

Traditional Housh(s) built the dense urban fabric in the old city and provided thermal protection of individual Housh(s) inside by reducing the area of walls exposed to the sun to the lower cheek, the open spaces in the city were on the narrow streets and private pavilions. (Engineers, 2016)

4.4.Flexibility and Development

Approximate area of Housh: The average area of the land on which the palaces are built is 200 square meters, 1414 × 1515. But there is a much larger fauna based on plots of land ranging from 400 to 800 square meters, the courtyard easily occupies an area of 100 square meters and the surrounding building is limited depth by four or five meters in the ground floor, One or more) on the upper floor, the rooms are of low depth.

Elevations:

The building's height usually contains two floors in usual, and in three roles in exceptional cases, and the level of the current height is 4 to 8 meters and sometimes 12 meters. Natural lighting comes into the rooms from the interior courtyards. (Engineers 2016).

The structure of the marsh is flexible and interacts with its urban environment. Where it can be developed and restructured in various forms, for example:

A. It may develop itself and condense at the same time (expansion at the expense of the yard, creating a role, the emergence of a gallery).
B. It may interact with the urban space adjacent to it: turn the ground floor leading to the street of shops, expand the role to the street, edit the part of the floor and rent it (close to the courtyard and open from the public vacuum), and even though the expansion above the street “Sabat".

C. May interact with the surrounding fishes by interfering with them (canceling or adding some rooms, expanding the role more than neighbor). (Engineers, 2016)

Possibility of development inside: The possibility of developing the traditional Housh trapped inside the urban fabric and away from the street as shown in figure (4.8). (Engineers, 2016)

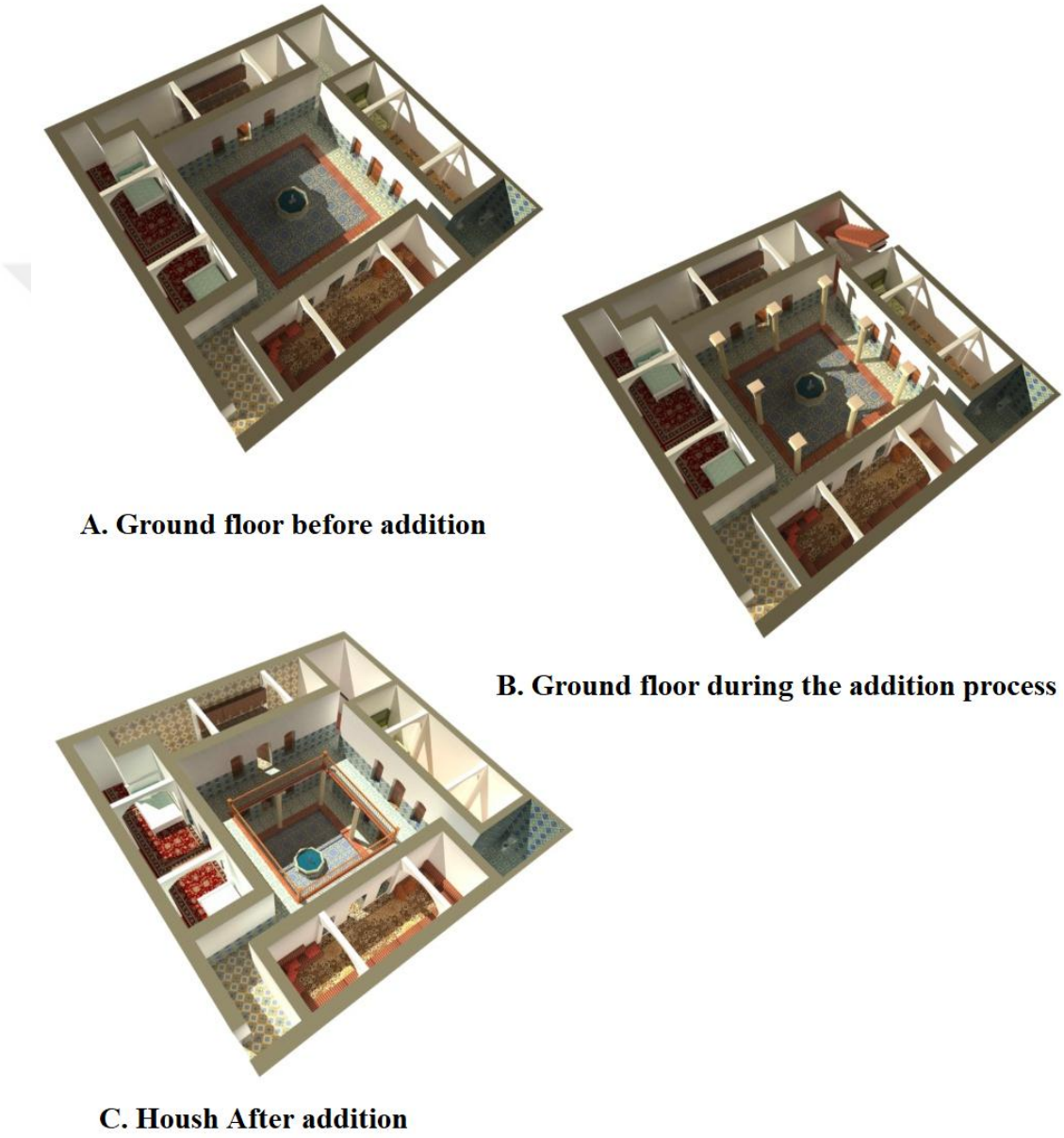


Figure 4.8 Inside the traditional housh (Engineers, 2016)

Possibility of development abroad: The possibility of developing traditional Housh overlooking the street as shown in figure (4.9). (Engineers, 2016)

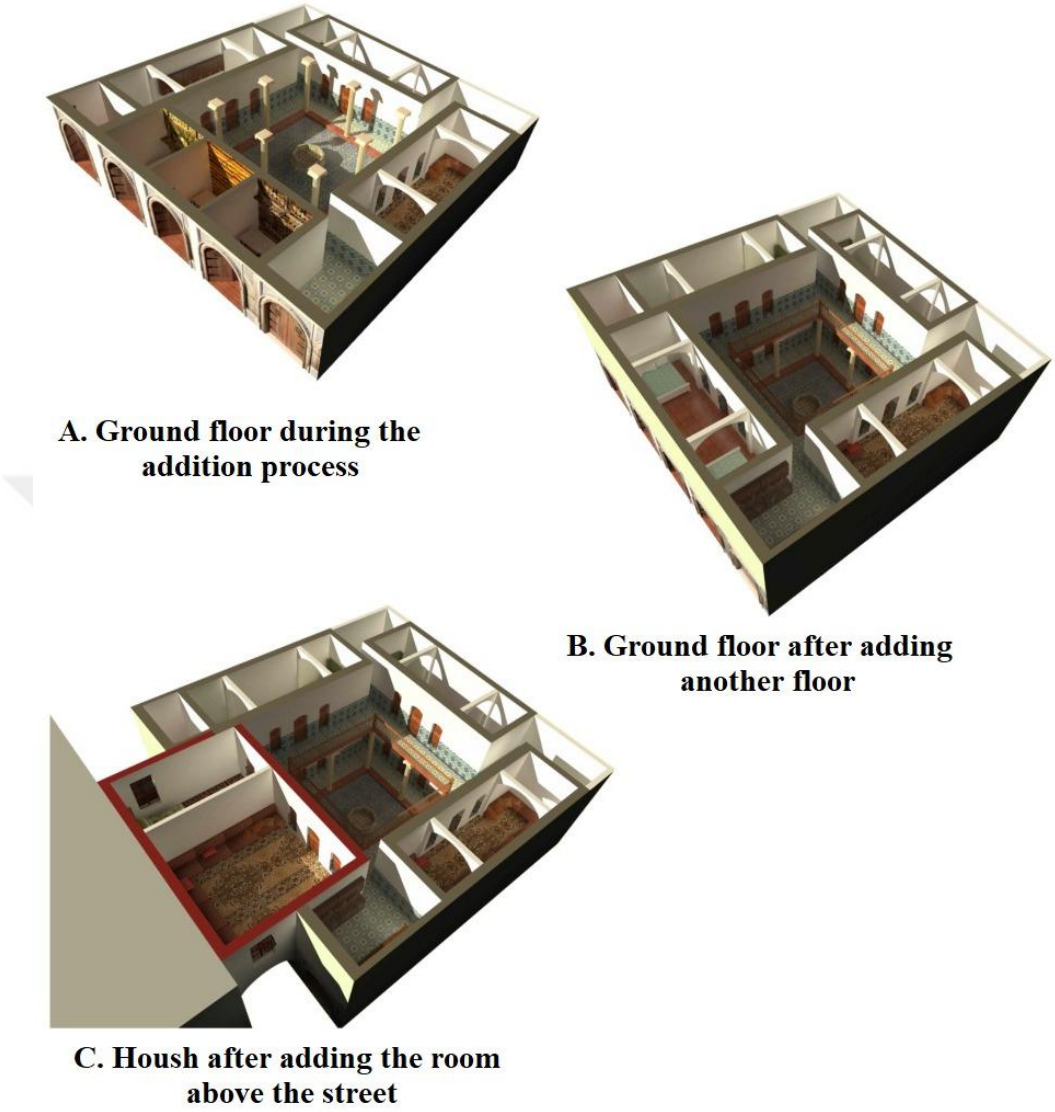


Figure 4.9 Abroad The traditional housh (A, B and C). (Engineers, 2016)

4.5.Conclusion for Chapter Four

The architecture of art chronicles the consciousness of peoples and devotes the concepts of dealing with the environment, the conditions of natural elements. The Housh(s) which made by "mud" are a sign of the best treatment, because of its ability to isolate they protect the summer heat and from the cold winter. This category of Housh(s) has collected all the elements of the architectural elements of functional, aesthetic, environmental and economic. In addition, it focuses on natural materials and uses, the good shape of the buildings. There are a functional gradient and the

specificity of the spaces. There is a study of the relation between four parts which contain Housh(s), ocean, Housh(s) design and the design of the terrace the relation between these four parts gives them a marvelous of the landscape, and provides them with the intimate social relationship between The inhabitants as well as provide them with different weather factors which considered as the most important part, which is protected “Housh” from the heat of the sun in the summer, and protected it from the coldness in the cold winter. In this chapter of the study, it clearly discussed the Traditional Libyan (Housh) and how it originated and how it has the possibility to be evaluated and the factors that influence the emergence of this great edifice, and how to deal with the environment. Finally, the study touched on its components and elements of architecture and construction.

CHAPTER FİVE: THE CONCEPT OF THE COURTYARD

This style of art developed in the past until Babylon was defeated in 539 BC. The architecture was difficult in this era because the geographic location provided a few usable materials, meaning that there was very little stone but abundant clay there. For this reason, the Mesopotamians opted to use brick and adobe in their architectural foundations.

Although the use of lintels (using wooden beams), vaults, and arches, was more common in Egyptian art, these three elements can also be seen in Mesopotamian art, and feature prominently in their architecture. The most notable difference between Egyptian art and this style of art was a little significance they placed on funerary buildings, only developing and focusing on two types of buildings: temples and palaces.

These consisted of a large walled courtyard that would have its most characteristic feature in the space of one of its smaller sides: the ziggurat, which is a square tower consisting of several stepped floors, at the top of which is a shrine. Its sides face towards the four cardinal directions and a ramp that surrounds the four sides leads up to the different levels. Alternatively, were two symmetrical stairways that climbed up the front or sides, built using the richest materials like marble, alabaster, lapis lazuli, gold and cedar wood. (Ancient Civilizations, 2018)

Figure 5.1 Ancient Ziggurat

In fact, the use of Housh(s) with a courtyard in Libya began since the Roman era (Atrium) in Libda and Sabrata and several other cities in Libya. And developed and continued by the Ottomans in their various civilizations throughout their reign of Tripoli. (Al-Lafi, 2008).

The Housh(s) with courtyard are defined as a special Islamic Characteristics Housh(s), because the entire openings exposed on the inside of the Housh in the courtyard, which gives the Housh this specialty. The Libyan Housh(s) express the sustainable Housh(s) because it contains the most important elements of sustainability, namely the courtyard, which earns privacy, ventilation, lighting and ease of movement between the spaces and because of the components that make up the courtyard.

This type of Housh(s) has spread since several eras, one of the famous era was the first Ottoman and Al-Qurmani periods, and examples of these Housh(s) were the Sennari Housh one of the Ottoman Housh(s) in Egypt.

Al-Sinari Housh is one of the most beautiful examples of residential buildings, due to the presence of floors, the palaces of the princes and he great statesmen of the Ottoman era. (House of Science, 2018)

The courtyard as plural it called courtyards, the courtyard is "the space in front of the property, whether it was a home or a room from the Housh or even the whole Housh," Ibn Mandoor says" the squares in front of the doors of the Housh and the courtyard of the Housh extended from its aspects"

As Dr. Akbar points out, "the concept of the courtyard lies within two frameworks, the first one is the central space around which the different spaces are surrounded, while the second one is the area adjacent to the property, that is for the use of the inhabitants of the building adjacent to the courtyard, whether that building was residential, commercial or industrial". The courtyard is defined as "a free space, sahn or a square, or any word which describe a free space inside and in the middle of the Housh"

As Abdel Gawad defines it as, "The courtyard is like an area of empty space located inside or outside the building, with windows of rooms has a view on it."

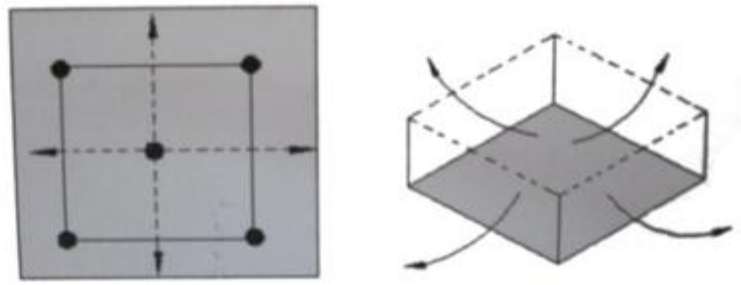
Waziri defines courtyard as "The empty space connected to the outer space above, it is intended for the ventilation and lighting of rooms and construction facilities, and

extends from below to above without any obstacle other than the pulses authorized on it."

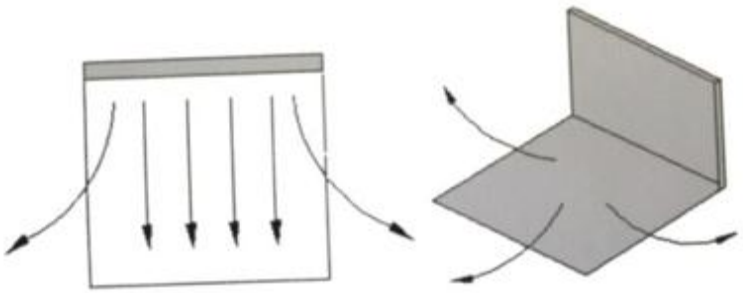
Waziri said, "The courtyard is the space opened directly to the sky and in the middle, there is a basin, plants, and trees with side rooms around it".

Shafei said "The courtyard is that closed or semi-enclosed space that is formed by continuous or semi-continuous walls from its four sides in the case of the quadrilateral or more in multicolored forms. The elements of the building and its spaces are overlooked in it. It is open to the outside air from above and can be found in the one Housh more than a yard connected with each other or separate. "

Professor Ali described it as a "The inner courtyard of the Housh is inside the interior of the building to illuminate and ventilate the interior units. It may be closed when surrounded by space units from the four sides, or open when surrounded by space units from three sides or two sides, as shown in figure (5.2). (Adeema, 2015)



(A) A space surrounded by four sides.



(B) A space of three sides.

Figure 5.2 space units (A-B) (Adeema, 2015)

5.1.Functions and Features of the Courtyard in the Libyan Housh

The functions of the courtyard in the Libyan Housh, lie in the main points which are as follows:

Health aspect: The courtyard provides all sections of the Housh with light, air, and sunlight and it makes the atmosphere of the housh warmer in winter and colder in the summer season. The courtyard provides ventilation without pollution by creating a continuous air stream between inside and outside the Housh.

Social and psychological aspect:

a. The courtyard is just like the window from the center of the Housh, which gives a view of the infinite universe, it always shaded by the dome of the sky and its stars and clouds. And feel the absolute freedom and calm and tranquility.
b. The courtyard is where the family members meet and cooperate and a place for meetings, for family meetings at morning and evening, and social gatherings are the best places to welcome the events of weddings.

The privacy aspect: The courtyard helps the family on having privacy, It is used for guests where the courtyard called selamlık or (Albrani) and its use for living and called Harem or sahn (Joani), while the other part it uses for the services is called Khadamlik.

The environmental aspect: The courtyard has evergreen trees and flower basins, and a fountain (sea) in front of the Iwan, the courtyard floor was made of marble, pumice stone, mazy and basalt stone, which played a role in achieving the thermal balance in the Housh. The real estate area controlled the shape of the courtyard and the Housh. The area and size of the courtyard follow the area of the property and its size in direct relation.

The architectural aspect: The courtyard contributed to the organization and distribution of movement within the Housh smoothly and without complication, which contributes to facilitating the lives of people inside the Housh. (Adeema, 2015)

5.2.Objectives of the Formation and Origin

Among the features of the environmental home is the central courtyard, which is one of the most important components of its main features, and has several objectives of which:

Environmental objectives: The courtyard came as a climatic solution, an open space to the sky in the middle of the Trabelsi Libyan Housh, it can be expressed by the living space of the Housh. It is often rectangular and closer to the square. Its area is 70-100 square meters, depending on the size of the yard. The ratio between the average size of the yard and the dimensions of the walls in the yard itself is 1: 1 to help make the courtyard shaded most of the day. Through the entrance to the courtyard is usually one of the pillars and is surrounded by a paved corridor leading to all the rooms around it so that the level of the gallery is higher than the level of the courtyard and the roof of the hallway is usually composed of stone vaults or a wooden ceiling extending the entire gallery and connected to the roof of the rooms so that the ceiling Sometimes decorated with some vegetal motifs that show the Islamic style. (Al-Lafi, 2009)

By summarizing the real goals of the courtyard, it contains four basic goals: (ventilation, lighting, solarization, noise insulation). The courtyard is an architectural element which deals with the environmental problems with great success, and the courtyard acts as a regulator of the temperature inside the building day and night through the distribution of convection inside the building to give the building more air conditioning and a sense of comfort inside the building, as shown in figure 5.3.

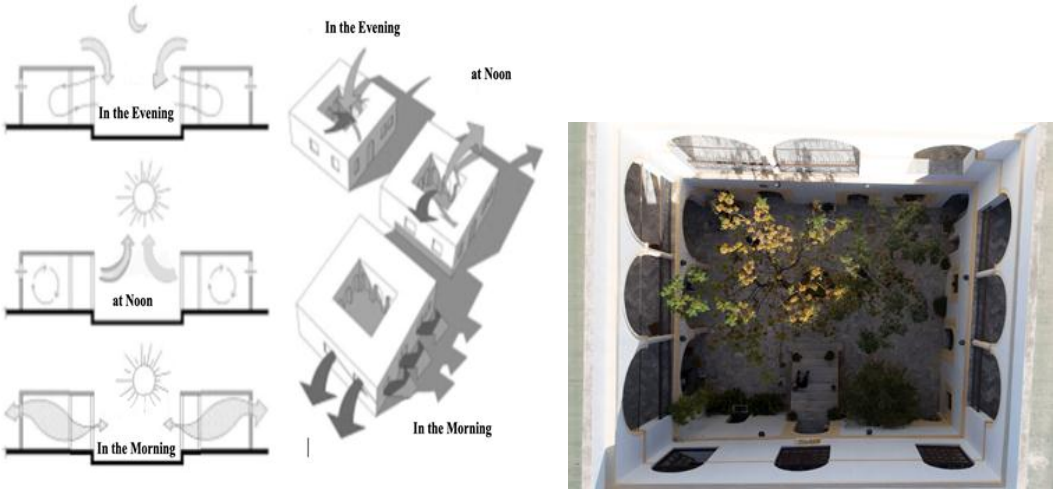


Figure 5.3 Courtyard as a regulator of heat day and night

Social objectives: All the doors and windows have a view to the courtyard the advantages here are it always provides the occupant with a shaded space inside or through the Housh, in all seasons of the year and twenty-four hours a day. There is privacy provided by the inner courtyard which gave it the full privacy to users of the Housh, by receiving guests, also it gave privacy space for movement between the rooms, and a play area for children, where washing and cooking and doing other daily activities. As well it gave an opportunity by giving more the social cohesion between the members of the family, the mother has full control over the movement of her children, whether in need of care or vulnerable to the consumption of excessive movement unexpected, With the ease of communication remotely without the need to move from the corner inside the Housh as it happens in modern homes.

Hence, the concept of the Housh is manifested as a safe Housh that has privacy and is a safe place for children to play under the supervision of their parents.

Beneficial performance: The courtyard is the main feature of the Arab and Islamic buildings in all different types of buildings, such as the Housh(s), palaces and public buildings such as mosques, palaces, and others. As the courtyard provides a central (often central) area within the buildings of all types and functions to be the main source of space, as in figure 5.4. (Adeema, 2015)

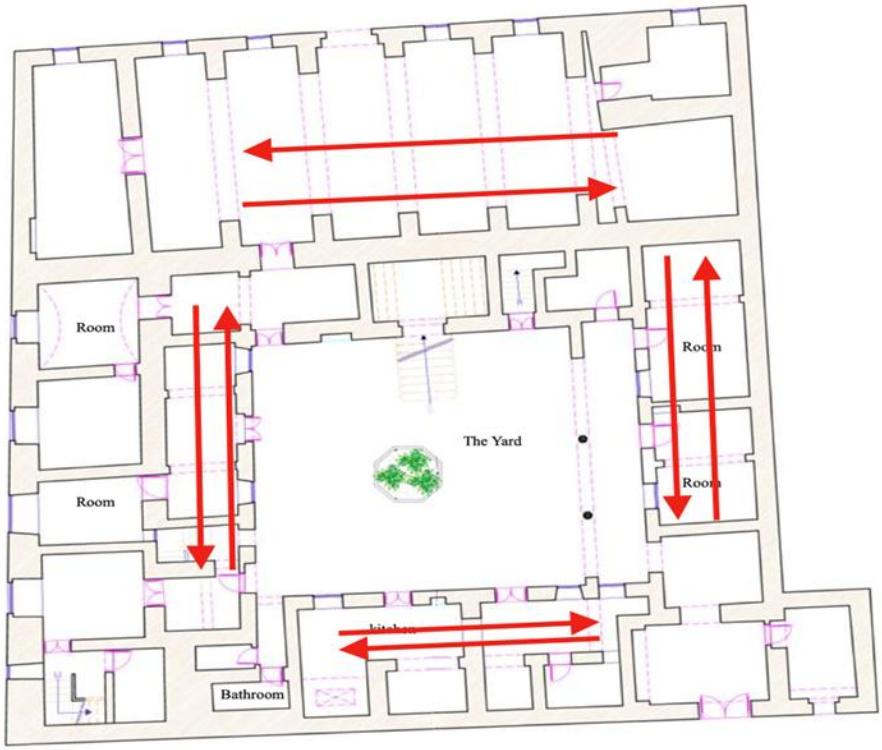


Figure 5.4 The central courtyard is the main source of space.

The Housh revolves around the square or rectangular inner courtyard and distributed the movement vertically and horizontally on various elements and activities, and as the separation between the movement of guests and the movement of the people which live in the Housh, it has a multi-use space of sitting for the family and living room and movement and the social interaction, the courtyard has multiple entrances to the upper floors and the multiplicity of location where each ends on a different floor, and there are ladders between the floors and alternative corridors to provide privacy for the people of the Housh as figure 5.5. (Adeema, 2015)

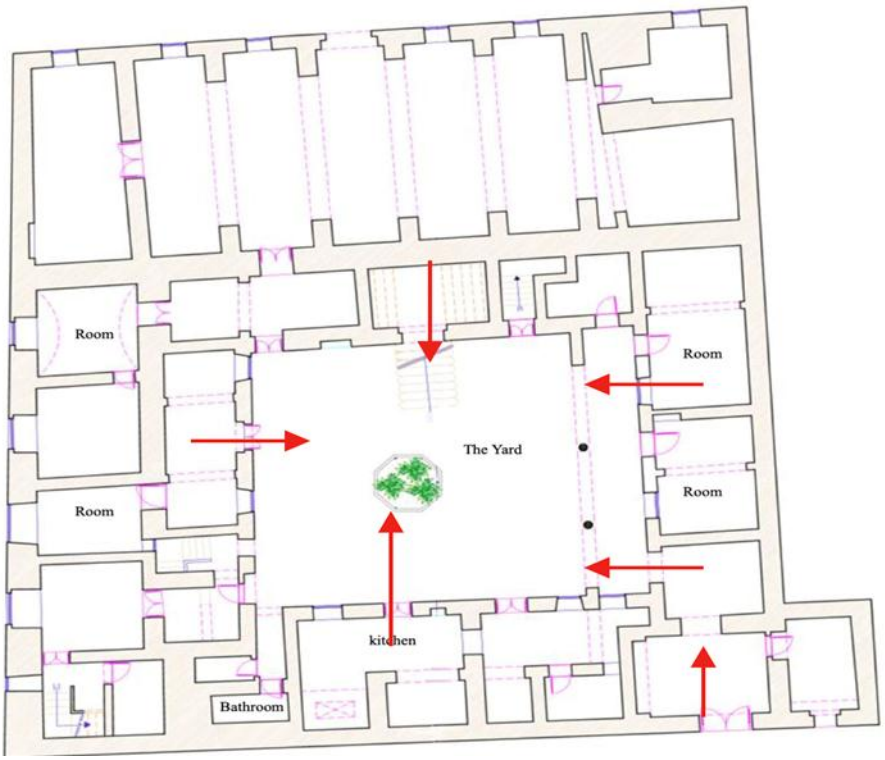


Figure 5.5 Wrapping of the Housh spaces around the inner courtyard.

It is considered that "The use of the courtyard is an ideal solution to provide a quiet space inside the building, isolating external noise and by cultivating and coordinating trees and plants that reduce the temperature, absorption of solar radiation by the evaporation process and the presence of water bodies that help move the air and moisturize it and then move to surrounding spaces, around the rooms. The choice of tree type and its location in the Housh was carefully studied in the old buildings, so that the trees play shading and food production, such as berries and others, as shown in figure 5.6.

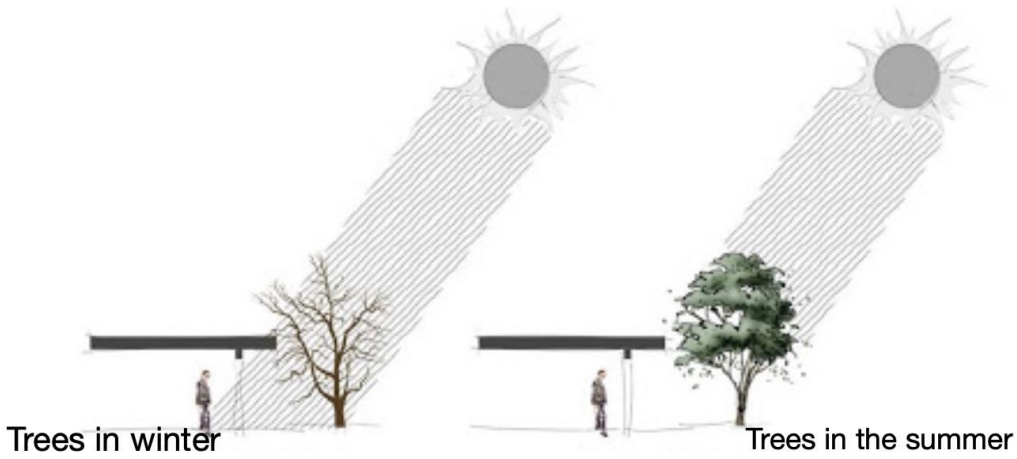


Figure 5.6 The role of trees in softening the atmosphere and providing shadows (Adeema, 2015)

Because of the flat surface of the courtyard, the temperature of the thin layer of air above the flat surfaces will change according to the temperature changes, the intensity of the solar radiation and the absorption of the surface, as well as the relative surface capacity to release the heat by radiation and the intensity of radiation emitted to the sky.

The temperature of this layer or thin membrane of air above the surface can fall under the temperature of the atmosphere during the night and can be used in the cooling situation of internal and external spaces of the Housh, during the day the surface is hot which will raise the temperature of the air by natural load currents, while at night the cold air on the surface is required to increase the density and to reserve and use this air. The walls to prevent cold air flowing away from the edge of the roof to the areas that cannot be used by the walls also reduce the movement of air that will reduce the composition of cold air pools mixing thin surface layer cold with normal air temperature and the simplest way to take advantage of cold air will be to provide windows on the surface for cool air to flow down when the air on the surface is colder than the indoor air and this window will be to have the cooling effect of air greater than the impact T heating the sun. (Tantosh, 2010)

This method is simple and useful to take advantage of the cold air and directed it to the small closed courtyard, which will do the job of the basin to catch cold air and allow it to pass and flow through the rooms around the courtyard, while the hot air will be directed out of the rooms to the courtyard and rises to the sky and therefore

surrounded the courtyards open raft with A low stone barrier helps the flow of the cold air into the rooms, as shown in figure 5.7. (Tantosh, 2010)

Morning Afternoon Evening

Figure 5.7 Demonstrates the movement of cold and warm wind in the courtyard

5.3.The Main Components

The courtyard in the Libyan Housh consists of the following elements:

AL-Sellam (Ladder): The ladder was found to connect the ground floor to the upper floors or to be a point of connection between the ground floor and the vault, which necessitated the existence of these ladders were an essential component of the courtyard, as shown in figure 5.8 A.

AL- Nabatat (Plants):the Libyan Housh(s) depend on two types of plants: the first type is the plants for decoration such as roses, jasmine, lily, and others, while second part is the citrus trees, oranges, lemons, pineapple, mulberry, pomegranate, figs, and other trees, as shown in figure 5.8 B. (Adeema, 2015)

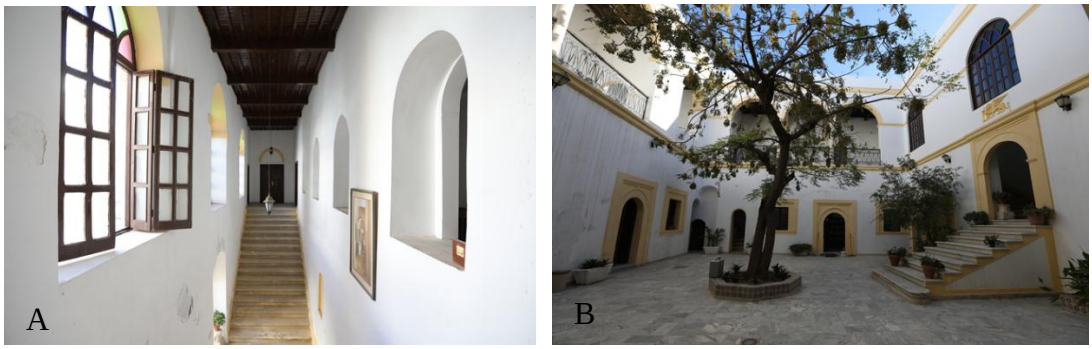


Figure 5.8 The form of, A-the ladder, B- Plants in the courtyard.

AL- Nafora (The Fountain): It is the main component and element in the courtyard of the Libyan Housh. It comes in various forms, it came in many shapes polygonal, round, or in the form of a curved or an oval shapes, or of different geometric shapes, all shapes decorated with stone or ornamented marble or painted or abstract, carved, decorated and colored panels within the frame of the fountain. Its diameters are about (0.60 - 0.80 - 1.20) cm, and its depth is from (0.50 - 0.60) cm deep to its surface. This is because the main factor in moisturizing is the surface of the combining between water and the air which passing over it, as shown in figure 5.9. (Adeema, 2015)

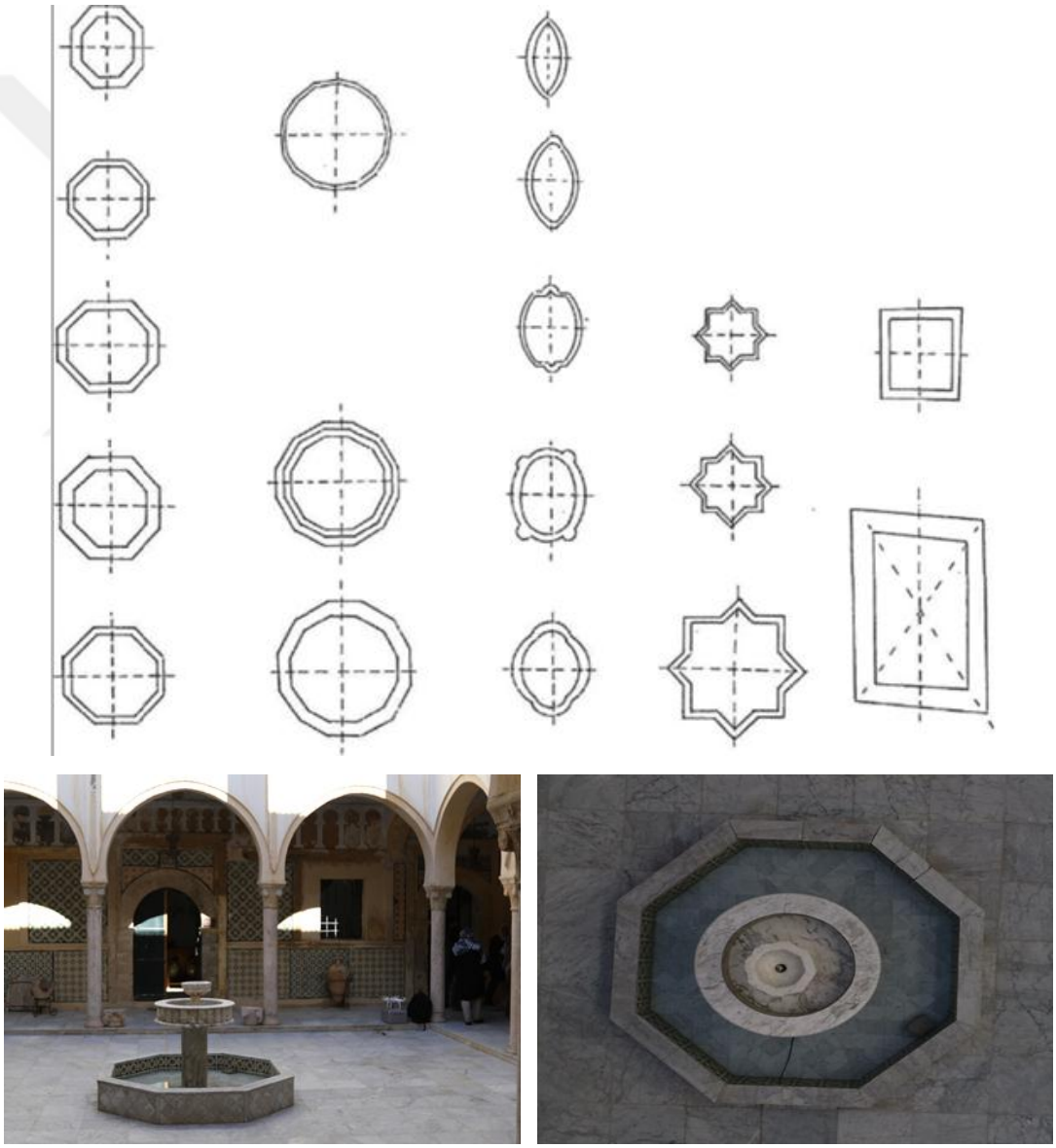


Figure 5.9 Forms of fountains in Islamic Housh(s) in Libya.

AL-Qous (Archs): Arch is a curved architectural element in the form of a circular strip based on two concentric points. Muslims have developed these arches, there are many types and shapes have emerged to give Islamic architecture dimensions and wonderful architectural styles.

The arches were used in Islamic homes for two main reasons which are:

- structural aspect to increase the bearing strength of the ceiling by distributing the main loads on both sides of the arch,
- Architectural decorative aspect to give shape and style beauty as shown in figure 5.10. (Adeema, 2015)

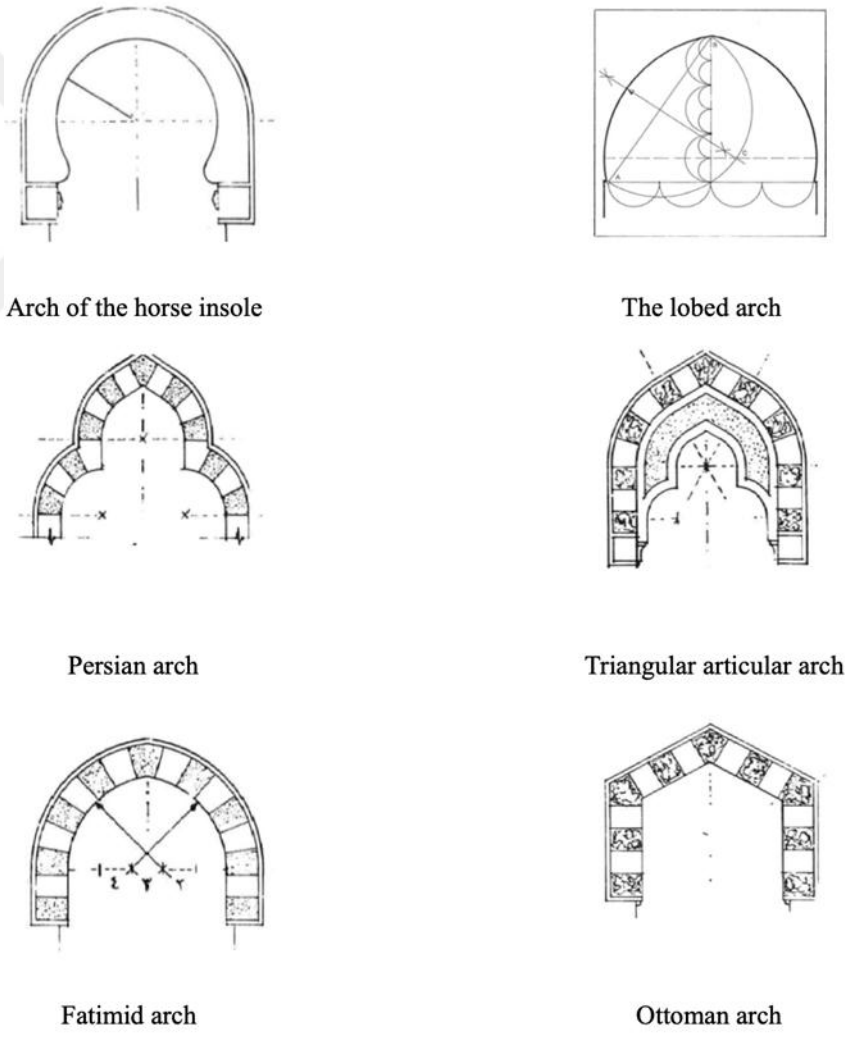


Figure 5.10 Models of forms of contracts in Islamic Housh(s) (Adeema, 2015)

AL- Amod (Columns): It is the main element in the courtyard of the Libyan Housh, columns are longitudinal elements that help to give an upward view of the space and it gives the Housh kind of toning factor. The columns of muqarnas contribute to the formal unity of the Housh. This element is used in many parts of the interior space of the Housh, as simple columns appeared in ordinary homes as well as pillars without crowns.

There are many types of columns:

a. Muqarnas Column: It is an octagon and a crown in muqarnas of wood.
b. The semi- muqarnas column: It is an octagonal and small muqarnas in the corners of wood and garden ornament.
c. Polygonal column: An octagon with a garden ornament in the crown of wood.
d. The marble column is decorated with garden ornament: it is around spiral-shaped the crown decoration is a garden ornament with a square base.
e. The simple is semi-vaulted column: it is an octagonal polygon, crown with the asymmetrical semi-vaulted section.
f. Pillar Column: It is round or polygonal without a crown.
g. Other types of columns: They differ from one location to another, including the spherical crown, as shown in figure 5.11. (Adeema, 2015)

Figure 5.11 The form of columns and crowns in the courtyard (Adeema, 2015)

5.4.The Form of Columns and Crowns in the Courtyard

Analyzing the most important architectural elements used to provide ventilation and natural lighting of the building. (Adeema, 2015)

AL- Malkaf (Picker): The natural ventilation is one of the most important principles of sustainable design in Libya's traditional habitat. Natural ventilation it increases the air pressure through the Housh, and it helps to cool the human body, while the rate of the heat transfer from the body to the surrounding environment, also it helps to eliminate moisture and cooling the building.

Types of Pickers: (Wikipedia, 2019)

- Single wind Picker that face the prevailing wind are usually built within the same thickness of the wall and usually do not exceed 50 cm x 20 cm in diameter. The bottom ends with an opening that does not exceed one meter above the floor. Its upper openings cover a rectangular or curved ramp with a semi-circular knob topped by a cylindrical vault.
- Exhaust air vents of the prevailing wind are used to pull hot air out of the rooms into the outside air, which replaces wet air coming from the yard. As in the Libyan Housh in the Old City of Tripoli.
- Wall air fresheners, based on the effect of wind pressure on the large surfaces of the walls of rooms, appear from the outside in the form of horizontal hollow slats, located in the middle of the height of the outer wall and at the bottom of the alcove there is a shutter to control the opening or closing of the inside. The high-pressure air passing through the outer wall of the room facing the wind gathers inside the loops and pushes inside through the openings, causing air movement inside.
- The design of air picker that consists of two overlapping surfaces, the front or outer surface of which is the lower half of the blade. It is built of brick or compact clay. The upper half is rolled back, leaving a gap for the passage of the air and works in the way of the wall hangers.
- Ventilation towers, a square tower divided from inside to four ventilation wells anchored by two perpendicular walls and parallel to the outer walls. The air enters two wind-proof wells while the hot air exits through the other two wells.
- Compound aerators, sets of ventilators co-create a combined ventilation tower, which serves a number of chambers and is commonly used in hot and humid areas.

Figure 5.12 Types of Picker, (A, B) Picker in Iran, (C) Picker in Egypt (1878)

Picker is the most important means of catching the wind and introducing it through the spaces of the Housh, which is considered one of the most important elements in Arab Islamic homes. Figure 6.13 illustrate the shape of the picker in the Libyan Housh.

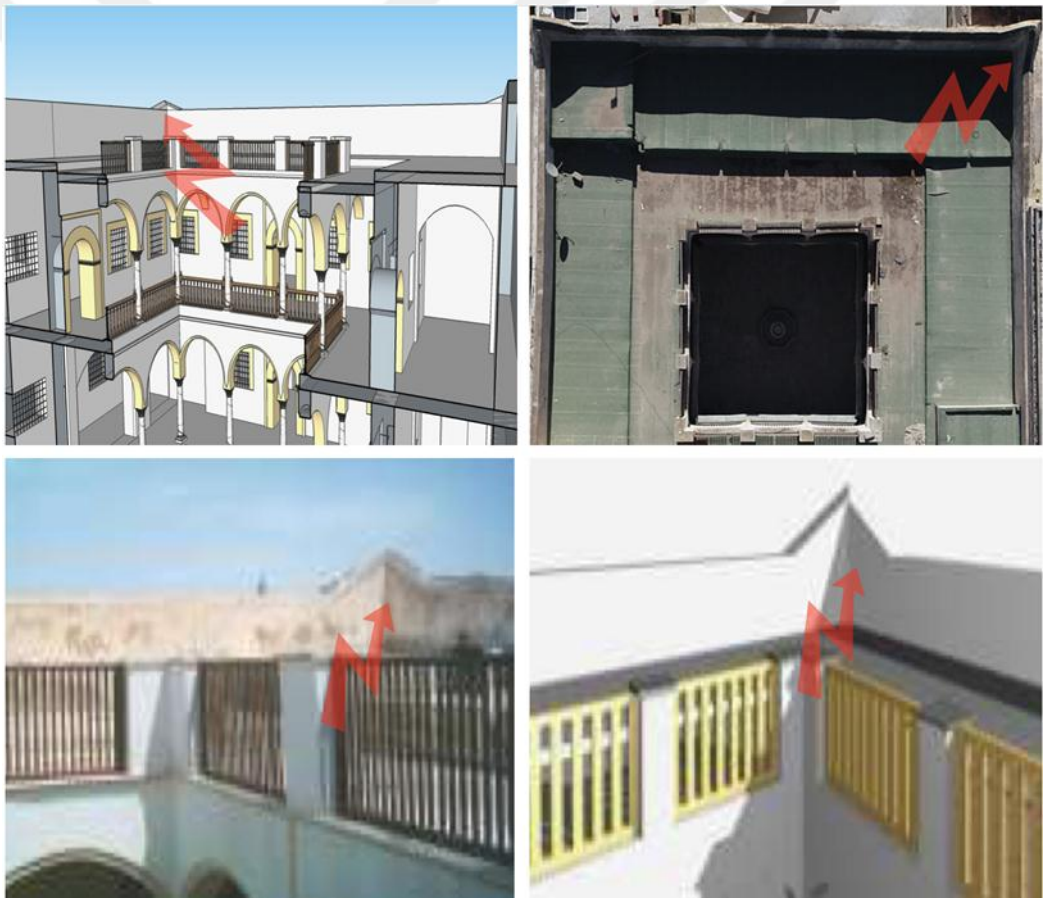


Figure 5.13 The form of Pickers in the old city of Tripoli

The idea of the picker is known in ancient times in areas characterized by hot weather such as the old city of Tripoli. The evidence for this is many in the Arabian Peninsula, the Arabian Gulf and the Middle East areas, which did not have great climatic value,

by softening the internal air of the building and its architecture, so the picker has become a key element in the design of some buildings, and if it is implemented according to the basics and modern studies and provide the windows wet straw, it eliminates the use of industrial air conditioners.

The presence of the air picker on the southern side of the building to perform several functions, catching the northern wind and directing it to the inside of the yard as it works on the distribution of undesirable wind is the southern wind loaded with sand away from interior courtyard opening (Wind traps) as shown in figure 6.14.

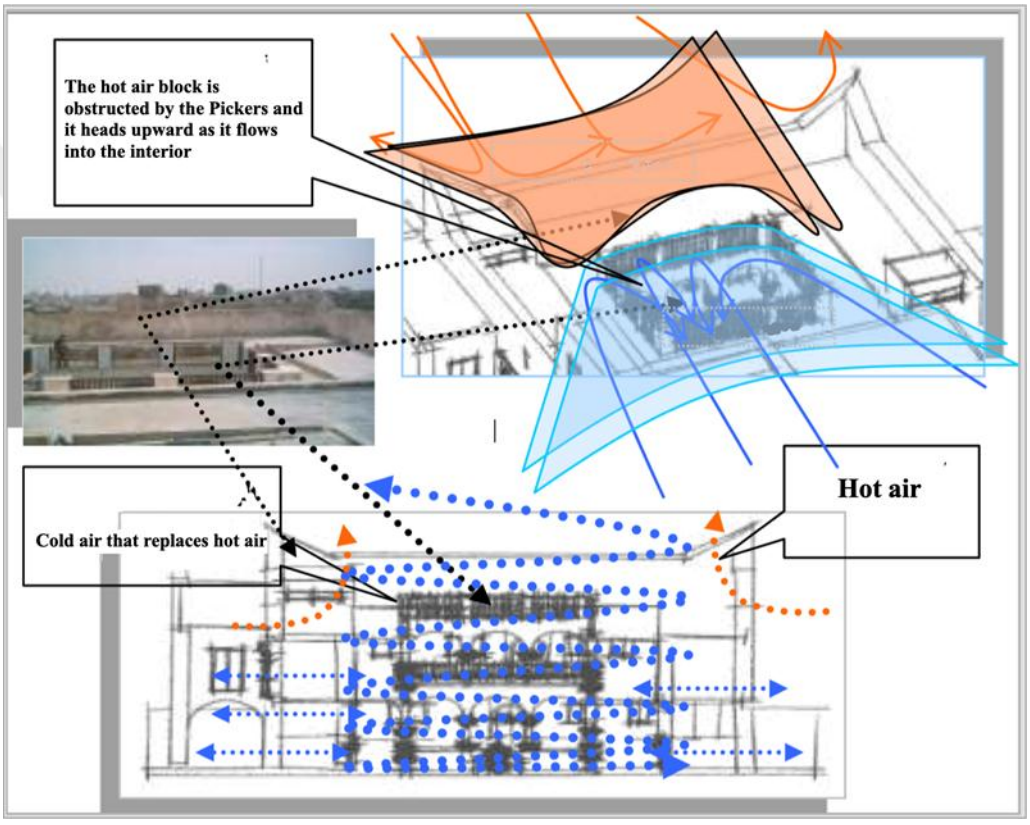


Figure 5.14 The form of Demonstrates catching the wind through the picker (Almogherabi, 2012)

One of the advantages of the picker is the difference in height between the selected picker wall and the top opening of the yard to facilitate the direction of the current air stream inside the yard and exclude the unwanted air current and the screw in figure (5.15) shows the difference of the level. (Almogherabi, 2012)

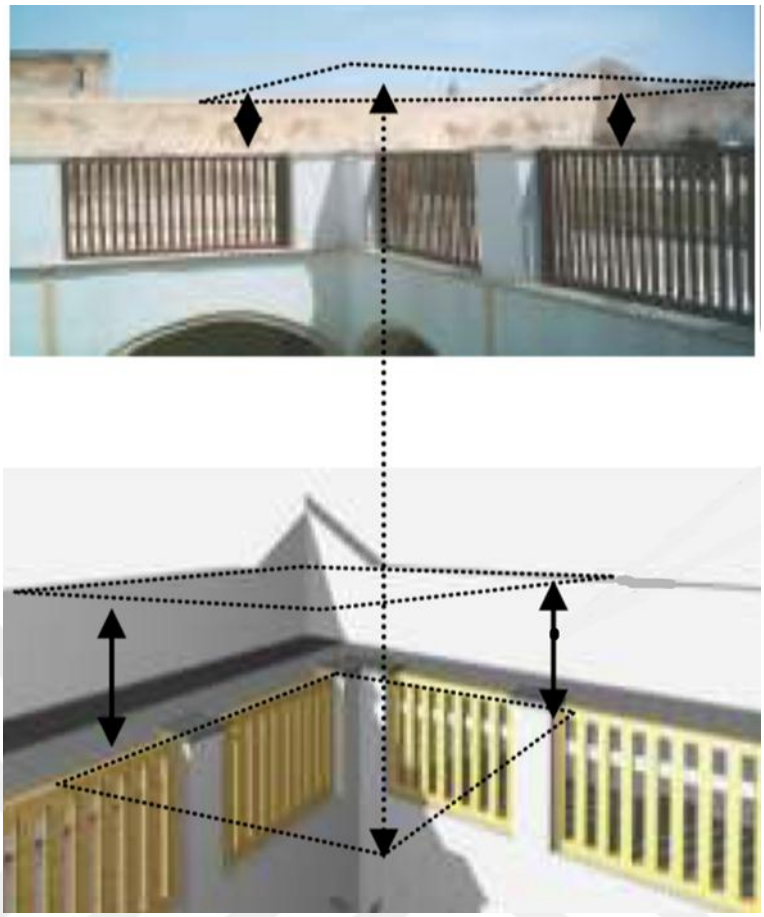


Figure 5.15 The form of Demonstrates the different height (Almogherabi, 2012)

AL- Rewag (Gallery): One of the most important architectural elements of the Housh(s) in the presence of an exhibition surrounding the courtyard it considered as one of the most important elements by increasing the shading ratio and reducing the patio area exposed to direct radiation as shown in figure (5.16), in order to reduce the internal temperature rate. (Almogherabi, 2012)

As shown in figure (5.17), the role of the gallery is how to create areas of low pressure and high resulting in a vacuum in the air leading to the flow of air into the various architectural spaces and acts as a reducer to the temperature of the currents through which it passes.

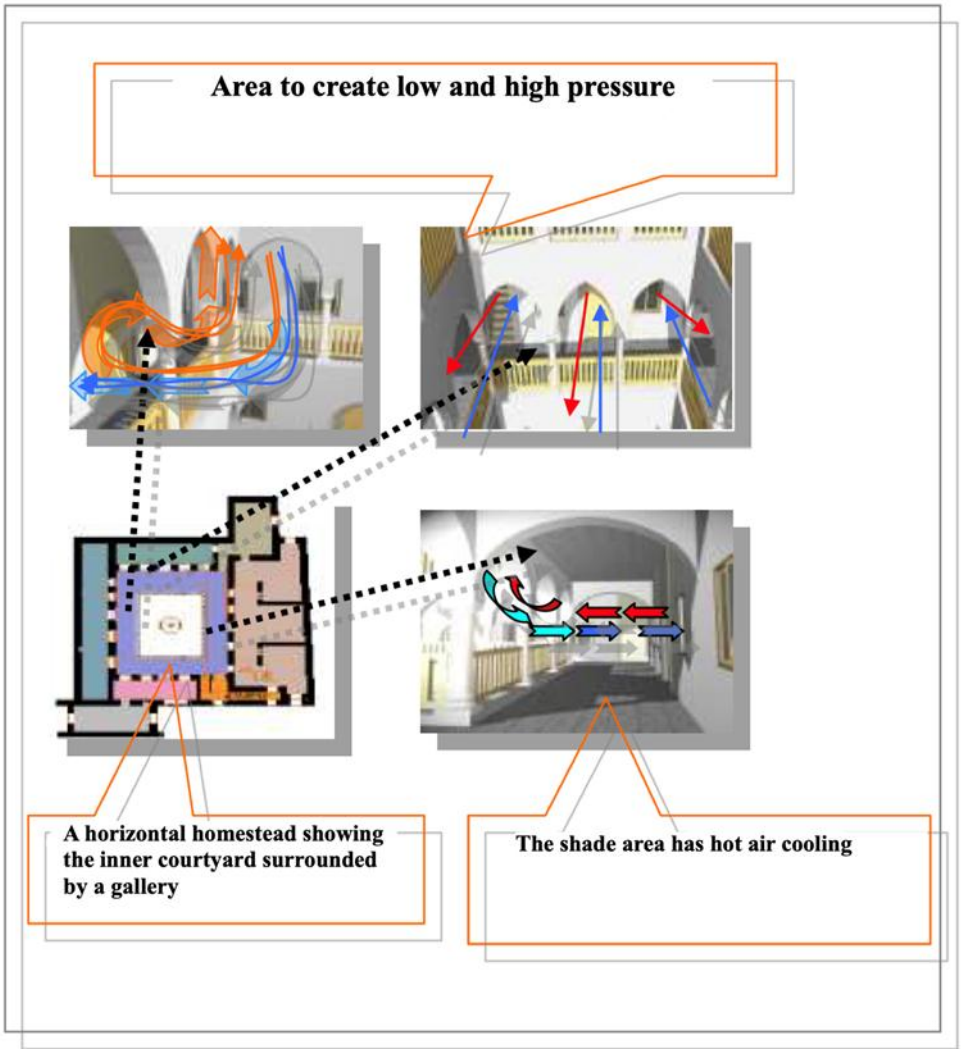


Figure 5.16 Illustrates the importance of the gallery in the housh (Almogherabi, 2012)

Figure 5.17 The gallery in the housh

El-Dawaya (Lighting): It is one of the solutions to provide natural lighting directly to the housh for the proportion of the western and southern rooms and the stairs which located on the first floor, were the ceiling of the rooms have more height than the other rooms this ceiling have a holes directed to the north side to provide sunlight, through this holes to the rooms of the Housh, which are playing a key role in the distribution of ventilation north-east of the street through the levels into the Housh. As the figure (5.18) shows the existence of the hallway, which is in the first round, showing the distribution of air currents entering the role of those levels in the rooms and heading towards the hallway. (Almogherabi, 2012)

The residents of the Housh enjoy direct and indirect lighting by 50% to 75% according to the direction of the windows of the rooms, and they do not receive the sun early suddenly when they sleep, where the eyes gradually become accustomed to light before going out into the street. (Al-Lafi, 2009)

It is one of the architectural techniques that characterizes the Libyan Housh and gives it a sustainable design.

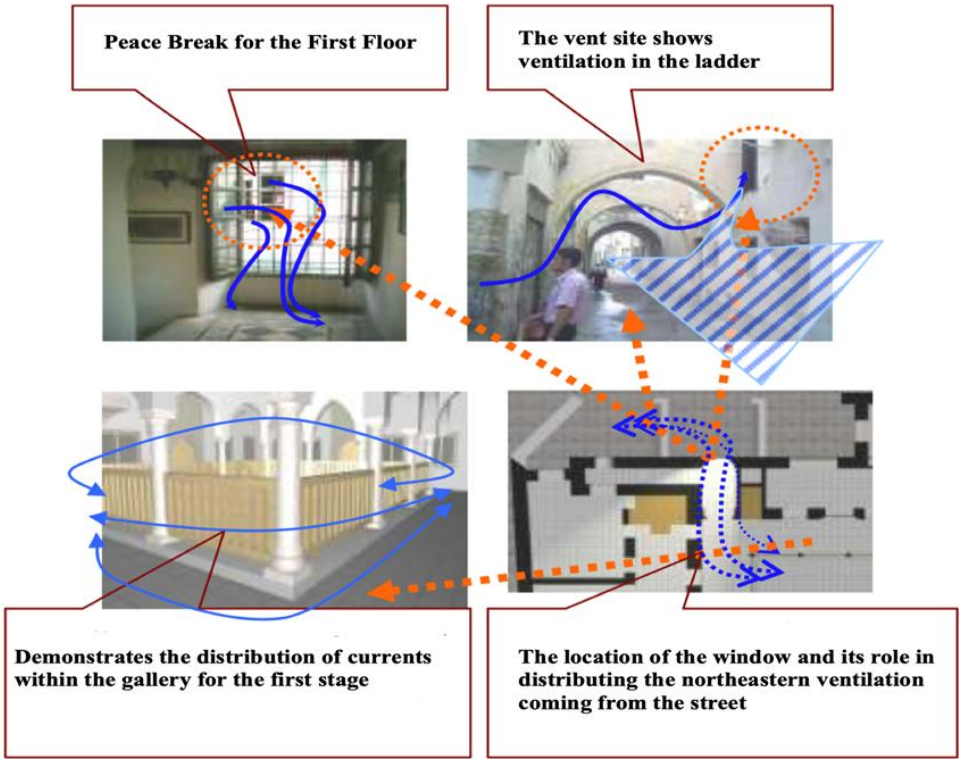


Figure 5.18 Illustrates the importance of the openings (EL-Dawaya) in the housh (Almogherabi, 2012)

Figure 5.19 The lighting (EL-Dawaya) in the housh

EL- Tahweya (Openings stairs): The architectural elements of the Housh is the presence of the holes in the peace lounge of the first floor, which distributes the north-eastern wind from the interior of the back streets to the hallway of the first floor, which helps in pushing the hot air stream outside the courtyard and helps to provide the appropriate lighting stairs stairway.

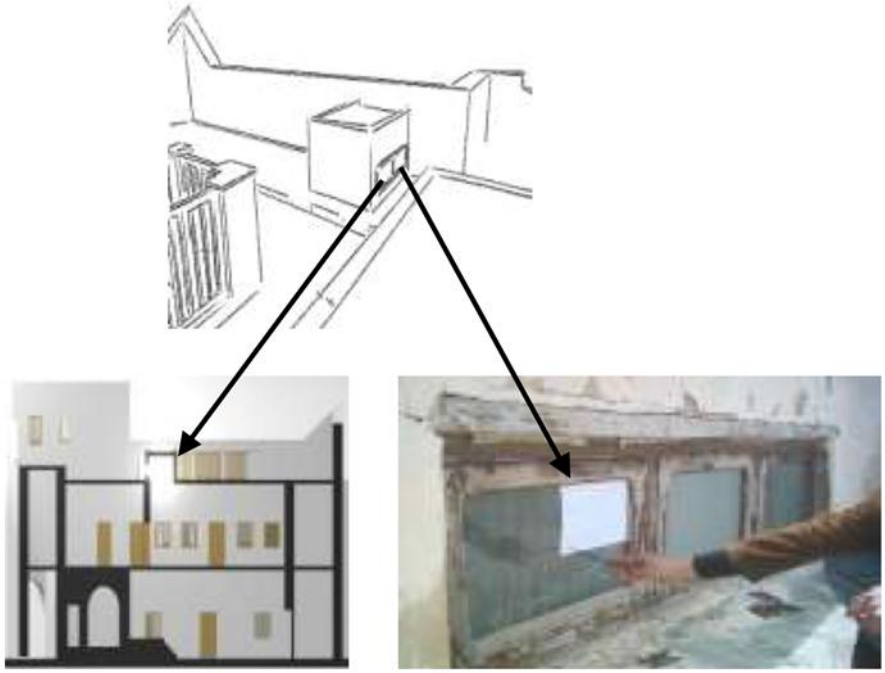


Figure 5.20 Illustrates the importance of the openings stairs in the housh (Almogherabi, 2012)

Figure 5.21 The lighting stairs in the housh

5.5.Conclusion for Chapter Five

As a conclusion for this chapter of the study, no one can deny this technical development that humanity has achieved during past centuries, which included a great deal in the field of traditional architecture. However, it doesn't neglect this valuable matter in order to access the technology to obtain appropriate buildings using simple, affordable, environmentally friendly and sustainable methods that produce sustainable, environment-friendly homes that are around us for human use.

Through this day, they are known for the concept of environmental architecture, the use of these solutions is practical and scientific and developed and applied now because it is not necessary to be large buildings and equipped with different system types of insulation, special air conditioning and expensive, when used, produce harmful residues in the core around us.

Through this study of the courtyard through the performance, components, and analysis of the most important elements of architecture in this chapter it came to the conclusion, through the environmental design of the traditional Libyan Housh since ancient times characterized by its characteristics, and heritage, which is characterized by the old city of Tripoli, and this design Is more derivation. It's more than a scientific element on ventilation as an important element in Design, high-level to deal with hot and humid climatic conditions. It is also considered that its inner courtyard plays an

important role in the thermal balance of different household areas. More functional relationships provide better private design and distribution to the home. The inner courtyard has a missing social role and it needs to be returned, including the family seat, the natural place for raising children and the other social aspects that took place in this vacuum.

CHAPTER SİX: THE OLD CITIES SUPPORTING STUDY

Architecture focuses on the knowledge of many aesthetic areas for more development and upgrading, it also considered a true reflection of the urban environment, which gives a distinctive personality that has changed over the years as one of the factors affecting the structural production of urban communities. Therefore, the absence of character requires us to recognize the importance and study the negative consequences that lead to the occurrence of visual pollution and deterioration of the aesthetic values of urbanization.

Traditional architectural patterns, whether local or Arab, are built from the simplest raw materials of the natural environment and have contributed to focusing on the architectural elements and its interaction with the elements of the surrounding nature. It was necessary to study and clarify their ideas based on a deep understanding of the potential of the surrounding environment, the potential of the times, the nature of the society and the characteristics of the climate.

On the other hand Architecture over the years is a mirror of culture and political characteristics reflects the changes which happened through the passing years, and it varies from place to other, it also effected from the internal and external influences. This generalization may not be very different from the scope of this chapter, which will deal with the characteristics and architectural functions of the old traditional Housh from other Arabian cities by making a comparison with the Traditional Libyan Housh, which is case study throughout this chapters.

6.1.Marrakech / Morocco

A. The ancient city

Moroccan architecture back to 110 BCE with the Berber's massive pisé (mud brick) buildings. The Moroccan architecture has been influenced by Islamization during the Idrisid dynasty, Moorish exiles from Spain, and, also by France which occupied Morocco in 1912. The city of Marrakech, it was the fourth largest historical cities in the country, after Casablanca, Fez and Tangier in Morocco where it was a city Marrakesh also was known by the French spelling Marrakech, is a major city of the Kingdom of Morocco. It is the capital of the mid-southwestern region of Marrakesh-

Safi. Located to the north of the foothills of the snow-capped Atlas Mountains, Marrakesh is situated 580 km (360 mi) southwest of Tangier, 327 km (203 mi) southwest of the Moroccan capital of Rabat, 239 km (149 mi) south of Casablanca, and 246 km (153 mi) northeast of Agadir.

The history of Marrakesh, dates back nearly to a thousand years. The country of Morocco itself is named after it. Founded in c. 1070 by the Almoravids as the capital of their Marrakeshian Empire, went on to, also serve as the imperial capital of the Almohad Caliphate from 1147. The Marinids, who captured Marrakesh in 1269, relocated the capital to Fez, leaving Marrakesh as a regional capital of the south. During this period, it often broke off in rebellion into a semi-autonomous state. Marrakesh was captured by the Saadian sharifs in 1525 and resumed its status as imperial capital for unified Morocco after they captured Fez in 1549. Marrakesh reached its epic grandeur under the Saadians, who greatly embellished the city. The Alawite sharifs captured Marrakesh in 1669. Although it served frequently as the residence of the Alawite sultans, Marrakesh was not their definitive capital, as Alawite sultans moved their courts frequently between various cities. (wikipedia, 2018)

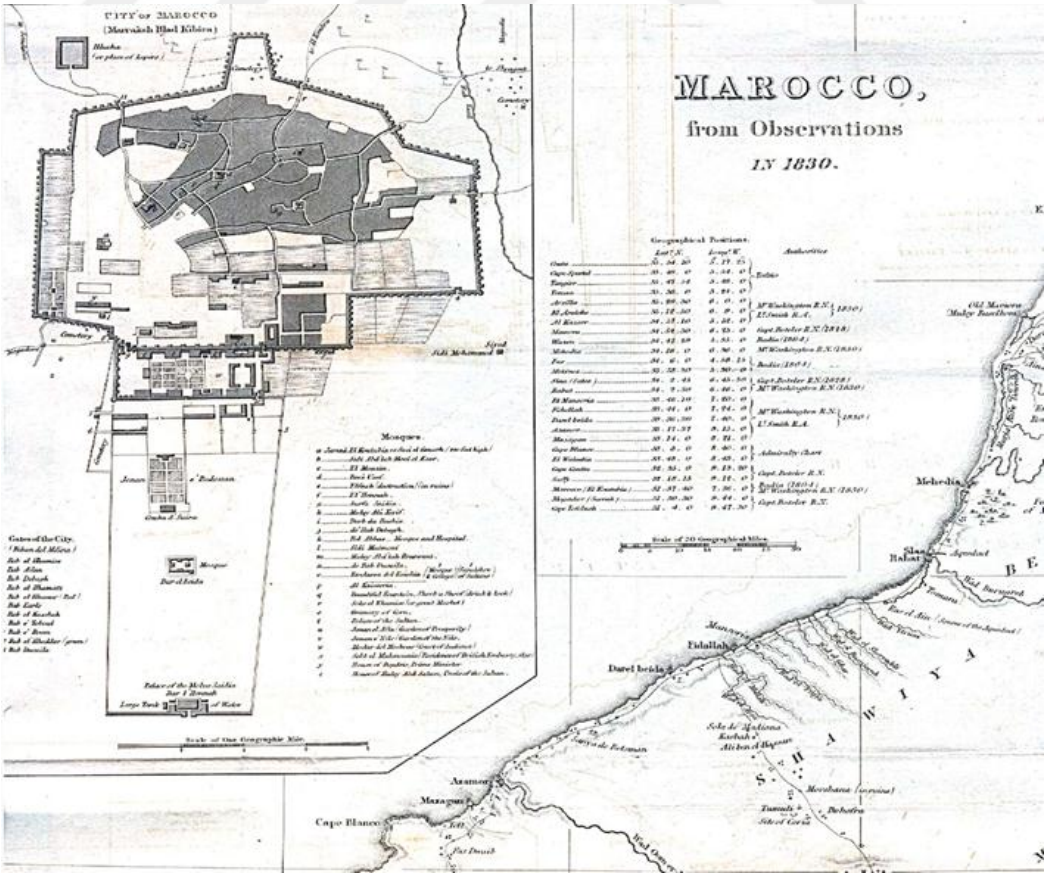


Figure 6.1 Marrakech city map in 1830 (Marrakech, 1830)

Climate Marrakesh has a hot and dry climate. The city has few rainfalls during the year. The summer of Marrakech is characterized by heat and drought, the highest temperature month is July, with an average temperature of 28.6 degrees Celsius. The city's winter is characterized by a mild and pleasant climate. The lowest temperature and the coldest one is January, with an average temperature of 11.3 ° C. The highest rainfall in February, with a rainfall of 35 mm. (Mawdoo3, 2017)

B. The Marrakech Housh

The most interesting thing in the old neighborhoods of Moroccan cities such as Fez, Meknes, Marrakech, and Rabat is that the Housh(s) inhabited by large and well-known families do not attract the attention of passers-by, because their exterior shape is very simple and does not reveal what is inside the Housh(s). Great for foreign engineering to show off and social status, the Traditional Moroccan Housh(s) or the role of the old city, as Moroccans call it, are still intriguing because of its unique architecture and lifestyle, which is totally different from the lifestyle of modern homes, Therefore it is not something new to find many Moroccans clinging to their old Housh(s) and renovating their Housh(s), while preserving their internal architecture, which provides great privacy for their families, as well as providing the various facilities necessary for living in healthy conditions and a comfortable atmosphere. Because of these characteristics, foreigners are currently buying, renovating and making permanent residences for them, or turning them into restaurants and guesthouses. (Mawdoo3, 2017)

The ancient Moroccan role often consists of one or two layers. All rooms are open to a central courtyard, in the center of the Housh, where a fountain is built on the reception for the guests near the main door with marble and decorated tiles, under the walls of the plaster layers sculpted in an exquisite form derived from Andalusian art and based on columns with mosaics. Overlooking this lobbies are balconies and wood compartments with elaborate decoration.

Traditional Housh(s) in Morocco usually take a typical design, and the Housh(s) in the city have three types. The Dar: which is a Housh with a central courtyard “wast ed-dar” and rooms surrounding it. The Douiria: is very similar to the dar, but it is an apartment-like proportion. The Riad: normally it is rectangular in shape, square, or it

has “U” shape plan, with an inner garden (not just a courtyard like in Dar) with plantation and a fountain in the middle, Housh(s) in Medina do not have to open to the street on the ground floor, windows are mainly on the upper floors and are small with some musharabis to keep the privacy of the Housh, and besides these small windows all openings are facing inner balconies, that are representing open corridors to the Housh, leads to all rooms, that are surrounding the courtyard and the inner balcony, while service spaces (kitchen, wet areas, circulation, and domestics rooms usually occupy the corners. Façades of medina Housh(s) are made up of colonnades or arches, doors that are generally small and wooden, sekaïa (tap or fountain). (Kagermeier, 2000)

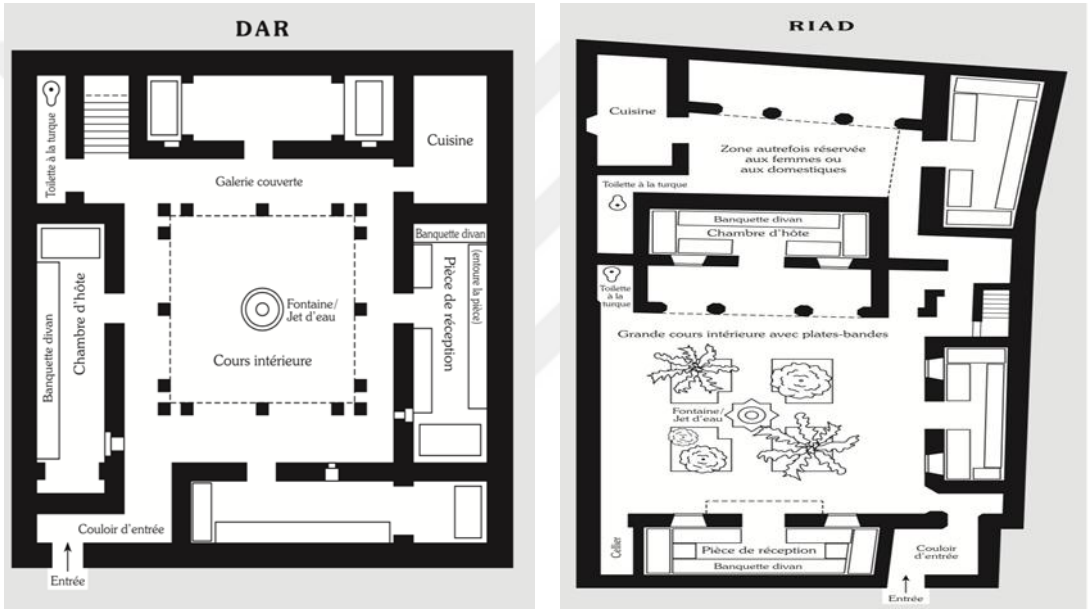


Figure 6.2 The difference between Dar and Riad (Kagermeier, 2000)

Perhaps the most important feature of ancient Moroccan architecture is the height of the roof and the thickness walls, thickness ranging between 60 and 120 centimeters, while the height of the ceiling is between 8 and 10 meters. This architectural peculiarity offers an intimate atmosphere within the home, warm in the winter and cool in the summer. These Housh(s) are characterized by the entrances of rooms with arches, columns and brilliant architectural decoration that help to preserve the lusters, charming, and warmth of the Housh. Because the beauty lies in the details, which vary from one Housh to another, Moroccans are interested in their old role, through their attention to the details of the ceilings, which are carved in whole or in part, in what is

called "zoek". It is an ordinary column of juniper or plaster. The colorful "mosaic" details are found everywhere in fountains, furniture, walls, and columns. The colors of these pieces usually vary from blue to green, violet, light black, chestnut, yellow or red. On the other hand, the decoration of the plaster is one of the pillars of the Moroccan decorative arts. The inscription on the plaster is the work of the Moroccan craftsmen, who have preserved and developed this tradition, and have introduced innovations to it. Decors and design elements it can be changed from one Moroccan city to another, but from one region to another within a single city, but they all share the originality and beauty. (Saeidaty, 2017)

Figure 6.3 Inside a riad (Kagermeier, 2000)

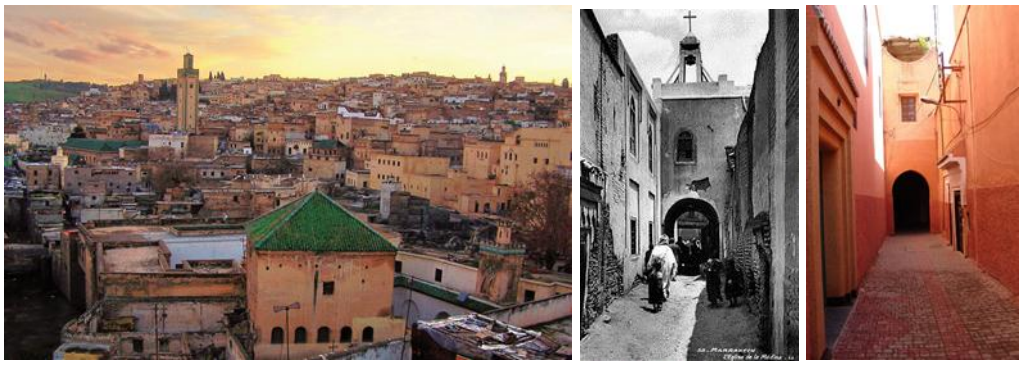


Figure 6.4 Photos of facades of Marrakech (Canalblog, 2015)

6.2.Ismailia /Egypt

A. The Ancient City

Egyptian cities through the history are the result of a series of physical, cultural and civilizational interactions occurred in a particular geographical area under the influence of special environmental conditions, which help to produce urban and cities complexes from urban characteristics and similar nature, the differences were in terms of location, size, shape, characteristics. The city of Ismailia city construction date back to the separation of the Red Sea from the Mediterranean and the appearance of Lake Al-Tamsah, and the presence of Wadi Al-Tamilat, one of the old branches of the Delta.(Zayat).

The Pharaohs were interested in being as a fortress on the eastern of Egypt. The fortress of Tharobothum and the city of Itham near Lake Tamsah are the main castles and guard posts of the line of defense erected by the Pharaohs on the eastern Egyptian border to repel enemy raids on the country. The Roman in particular in agriculture, this is illustrated by the inscriptions that appeared on the Pythome plate, in spite of all this evidence of the existence of Ismailia on the map of Egyptian architecture in various ages, beginning from the Pharaonic era until the Mamluk era, but the city with its current features did not appear to exist only in 1869 with the opening of the Suez Canal in front of international navigation. Ismailia is a modern city that is not more than 140 years old, but it is a city with a history, it was created by the geography of the site, which imposed on Ismailia a distinguished fighting role in the modern and contemporary Egyptian history. Although it was by virtue of its establishment and by

virtue of the population structure an open city and socially and culturally open, a point of convergence between Egyptians and many foreign nationalities. (Zayat, 2013)

Figure 6.5 Ismailia Town from the Air 1952 (Wikipedia, 2017)

B. The Ismaili Housh

The social formation of Ismailia consisted of a mixture formed by three waves or conglomerates. The first wave of this movement came with the beginning of digging the Suez Canal from the south and the cities in Upper Egypt which participated in digging the canal. Some of them preferred to stay in the city after the completion of excavation and the opening of the canal. The second wave came from the north of the delta and was made up of fishermen in the areas overlooking Manzala Lake, which they found a new source of livelihood, and they turned it into a society based on fishing and trade. The third wave of these clusters came from the middle of the delta from the city of Zagazig in particular. It was the main station where workers from all over the country gathered to go to work in the excavation area, which is the nearest city of Ismailia now a day, it is the main source of all incoming migration to Ismailia. The construction began with the increase in the number of arrivals to the city of merchants and hotel owners to serve the men of the Canal Company, engineers and workers, and

then established a railway between Cairo and Ismailia and confined the city in the form of a rectangular between the railway and Ismailia. The building extended to morphological features of a modern city. The villa of the Musio Deleesps, the Musio Fozan Bek and the governor of the canal were among the villas, the engineers and workers' residences, and Fozan Bey and the city were divided into Foreign District or (Paris District) and the Arab District(Zayat)

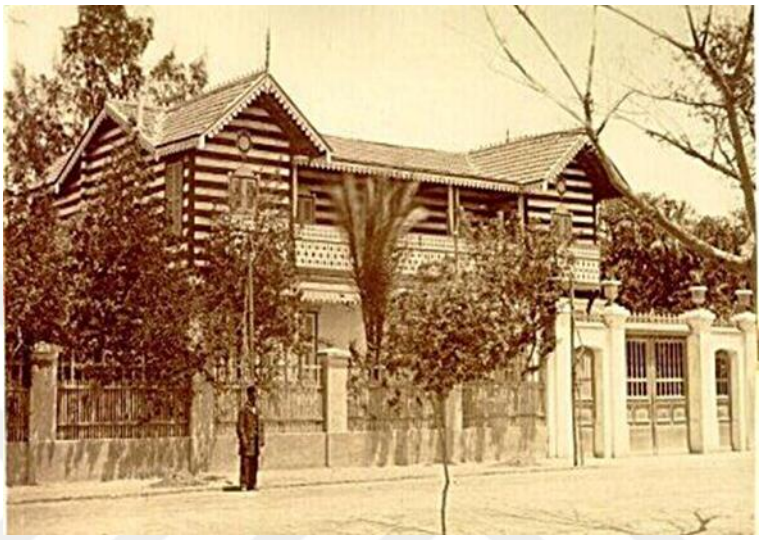


Figure 6.6 The villa of the Musio Deleesps 1980 (Pinterest, 2017)

Figure 6.7 The villa of the Musio Deleesps (Zayat)

Figure 6.8 Photos of facades of Ismailia (Zayat)

6.3.Dyer Bani Malik /Saudi Arabia

A. The ancient city

Dyer Bani Malik governorate is characterized by an enchanting environment and a distinguished topographical and architectural diversity from traditional stone villages and Houshs) above the mountaintops, which are similar in design to the fortified castles, skillfully and creatively, but many of which are of interest to architectural, aesthetic and cultural heritage. And therefore it is necessary to draw a clear identity to which it can be preserved and rooted in contemporary architecture, inspired by the cultural features that are indicative of the culture, history, and style of the people of that region. The region has recently witnessed architectural patterns, In addition; the modern buildings look similar to the buildings in the other areas that spread in the Kingdom, which do not have the same environmental characteristics, which created a negative image in the architecture of the region. And its old buildings that are compatible with the environment. Knowing the architectural nature of a region is an important necessity to preserve its architectural and urban identity, especially the "environmental, aesthetic and social characteristics, The rapid urban development

imposed by the current economic, social and technical conditions, cannot preserve the environment and architectural layout, without knowledge of the environment and identify the nature of the environment. (Antiquities, 2013)

Figure 6.9 Agricultural terraces and vegetation dense with mountains Bani Malik (Antiquities, 2013)

The importance of the historical province between Dyer and the Jazan region for its administrative scope. This region has historically been the commercial and religious link between Yemen, Hijaz, and Sham. This has gained historical and economic importance. The region has experienced many conflicts since the emergence of peace through the rule of Yubin in 569 AH and then the Mamluk in 922 AH through Ottoman rule in the late tenth century and one of the most elusive era in the region, until the Ottomans withdrew and returned to the local rulers, but soon turned into a conflict Between the supervision of Mecca and the tribes of Yemen, until the region was subjected to Ottoman rule again by Mohamed Ali Wali of Egypt, (Amara - 1976) until the Imam Muhammad Drisi, at the beginning of the thirteenth century AH of the formation of an emirate extended its influence to Asir after the weakness of the Ottoman Empire And defeated the rulers of Yemen, after his death, his successors could not keep their king. They asked for protection from King Abdul Aziz under the Mecca Treaty in 1345 AH / 1926. The region then became part of Saudi Arabia.

Location The province of The Dyer Bani Malik is located in the south-west of the Kingdom of Saudi Arabia and in the northeast of Jazan, between longitudes 43.04 and

43.18 east and latitude 17.16, 32.17 Shama and 130 km from Bandar Jazan. The mountain range is estimated at an area of 1250 km2. It is located in the south of Jebel and the Republic of Yemen, the follows the headquarters of the Emirate of Jazan, which lies on the eastern coast of the Red Sea and southwest of the Kingdom. (The location of the Emirate of Jazan). (Antiquities, 2013)

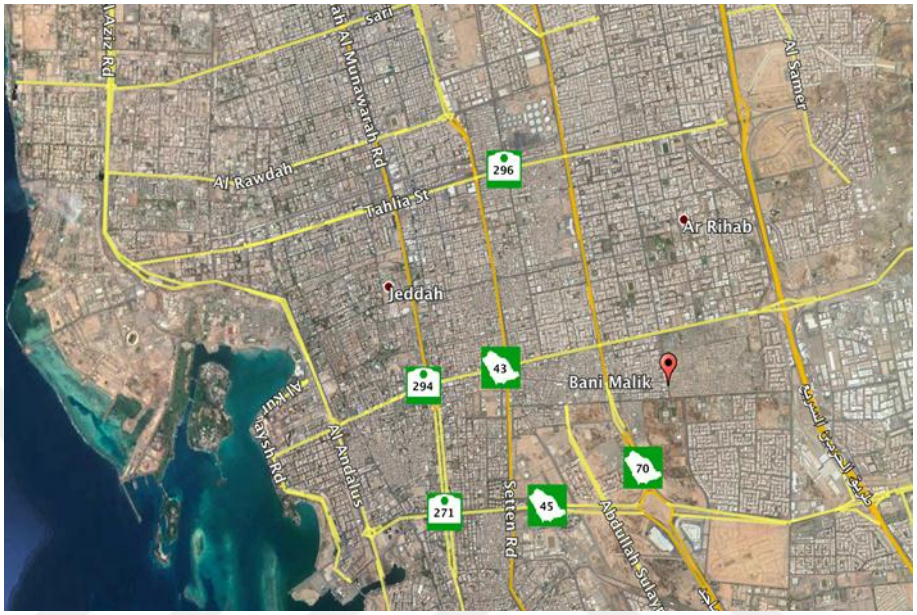


Figure 6.10 Image from Google Earth of Dyer Bani Malik.

B. Housh of Diar Bani Malik

The Architectural Styles in Deir Bani Malik there are three patterns can be observed from three different periods of time corresponding to the prevailing conditions in each period.

They can be classified as follows:

The first period: Buildings of the first period It has high windows that do not allow anyone to sneak into the Housh, and are usually high near the roof to avoid any aggression from the outside, and often take the cylindrical shape, more like castles, It is built of stone and is covered with juniper or cedar wood.

Second period: Buildings of the second period It has extends from the middle of the 14th century to the end of the eighteenth of the same century, and is observed in this period of security, and Housh(s) were built in the areas of flat surface and expanded at

the level of horizontal and multiple rooms and expanded windows with a low level of the period First, It was built of stones and its roofs were made of local trees.

Third period: Buildings of the third period: This period extends to the present time, where the population used modern materials. Most of them are concrete structures.

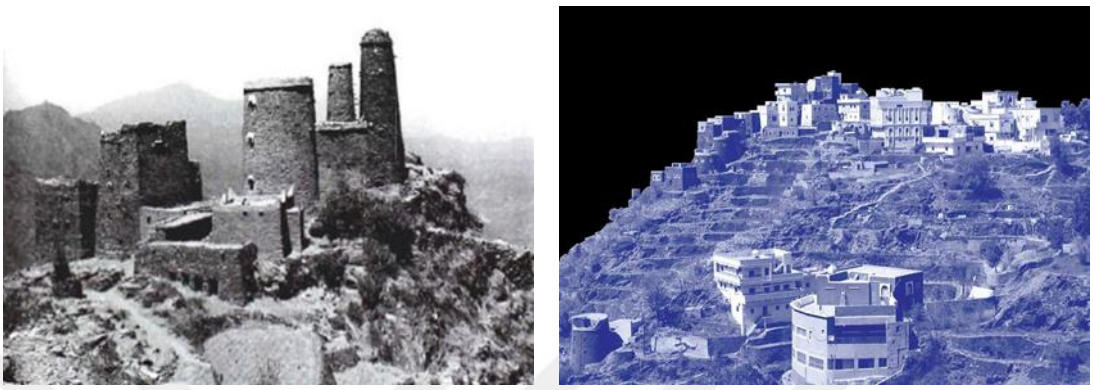


Figure 6.11 Sample villages of the third period (Antiquities, 2013)

6.4.The Old City of Sana'a / Yemen

A. The Ancient City

The city of Sana'a has a unique urban heritage and a distinctive local architectural model, in the old city of Sana'a, Which lies in the middle of a high mountain at that area and wide range place, as well as in the middle of a spacious plain. The ancient city of Sana'a has a unique development. The Yemeni architect has been based on the principles of functional environment and specific techniques. The most important of which is the architectural approach of opening to the outside instead of the interior and directing the spaces which follow the movement of the sun and wind to obtain the required lighting and ventilation, and creating spaces in the outskirts of the media and the center, as came squares and roads and alleys necessitated by necessity and the need for movement and linkage on the one hand and lighting and ventilation on the other, in addition to dictated Security, defenses and other data. The city is characterized by harmonious automatic planning and organic development, which is based on the need for growth. The main road that connects the city and other parts of it, the secondary network roads within residential neighborhoods, which consists of paths and monuments. The inclusion of the street network has led to simplified and clear

planning, as well as easy communication between which led to the realization of a variegated variety. (Shawash, 2010)

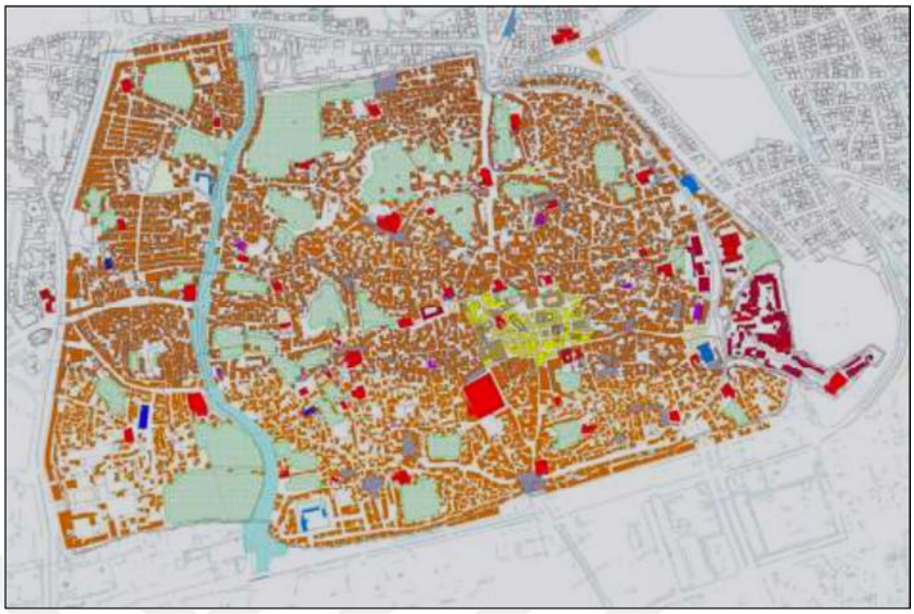


Figure 6.12 Old City (Shawash, 2010)

The planning of the Old City and the design of its various elements has been followed by many appropriate environmental applications. The planning and fabric of the old city made most of the Housh(s) and palaces overlooking all directions on orchards, which are spread in most of the residential neighborhoods, back to history. (Shawash, 2010)

The city of Sana'a is characterized by a special climate, despite its presence in the tropical climatic range on latitude (31˚15˚) and longitude (11˚44˚), but it occurs in the mountainous highlands at an altitude of about 2300 m above sea level. The high ground is surrounded from the all sides by rainwater from its water banks to the coastal area where the city is situated. This has made the city actually a pelvic area, characterized by a moderate climate throughout the year, intense solar radiation with relative coldness in winter, Rain is in the summer, and the prevailing winds are northerly and northeast, which is cold and undesirable.

B. The Yemeni Housh

The city planning is considered as something important, the city is characterized by its high building unit and homogeneous forms of façades, most of the Housh(s) are directed to the south, the preferred route to obtain the maximum amount of solar radiation possible in winter, while lack of integrity and different sectors even at the level of one street, has hindered the movement of cold wind and reduce the speed and impact, so that the streets do not work as a tunnel for the wind, with availability the greatest amount of shadows for pedestrians during the summer.

The Yemeni Hush is the first component of the warm fabric and then the neighborhood. The city consists of a group of residential buildings and they are adjacent to each other, in the form of a stripe or wrap around the courtyard and open the main facades on the street or on the road as its rear facades often open towards the skyscraper or orchard. In the general landscape of the city of Sana'a, the dominant element in the city's planning. Al-San'a Housh is also distinguished in the city Old, with an average height of between four and six floors and its mass in terms of architectural form and compact and tends to Cube shape, the ground floor is usually built of stone, as it contains the spaces of the grain stores and place animals and warehouse rooms (stores). (Shawash, 2010)

The first floor usually contains a large hall (room) overlooking the room, bathroom and store if available, the reception room (the Dewan), Which may extend along the length of the floor and the entire floor, and use the Dewan the rooms in the Housh of the plant for the purpose of living and reception day and at night. The second role is usually the first stage, and the third (repeated) role is played on the upper garden, which is the beginning of opening up to The sky for the Housh of Snaani is considered as a surface where some plants can be placed with a smell, On the outer perimeter. The functional spaces of the residential building of the neighbor as well as enable him to obtain natural ventilation and achieve the most appropriate view possible and also found harmonious compatibility of the neighbor's rights to obtain natural light and the penetration of sunlight relative to each, to study the facades of buildings appropriately, for that the openings of buildings are growing from the bottom up to provide, view and open to the outside and allow the sun shines to enter and to prevent noise. Also found in the facades of buildings of all kinds (stone, wood, and wood) for privacy and water

cooling and allow streams light air is thinner and with direct sun blocking. (Shawash, 2010)

Figure 6.13 Photos of facades of Sana’a (Shawash, 2010)

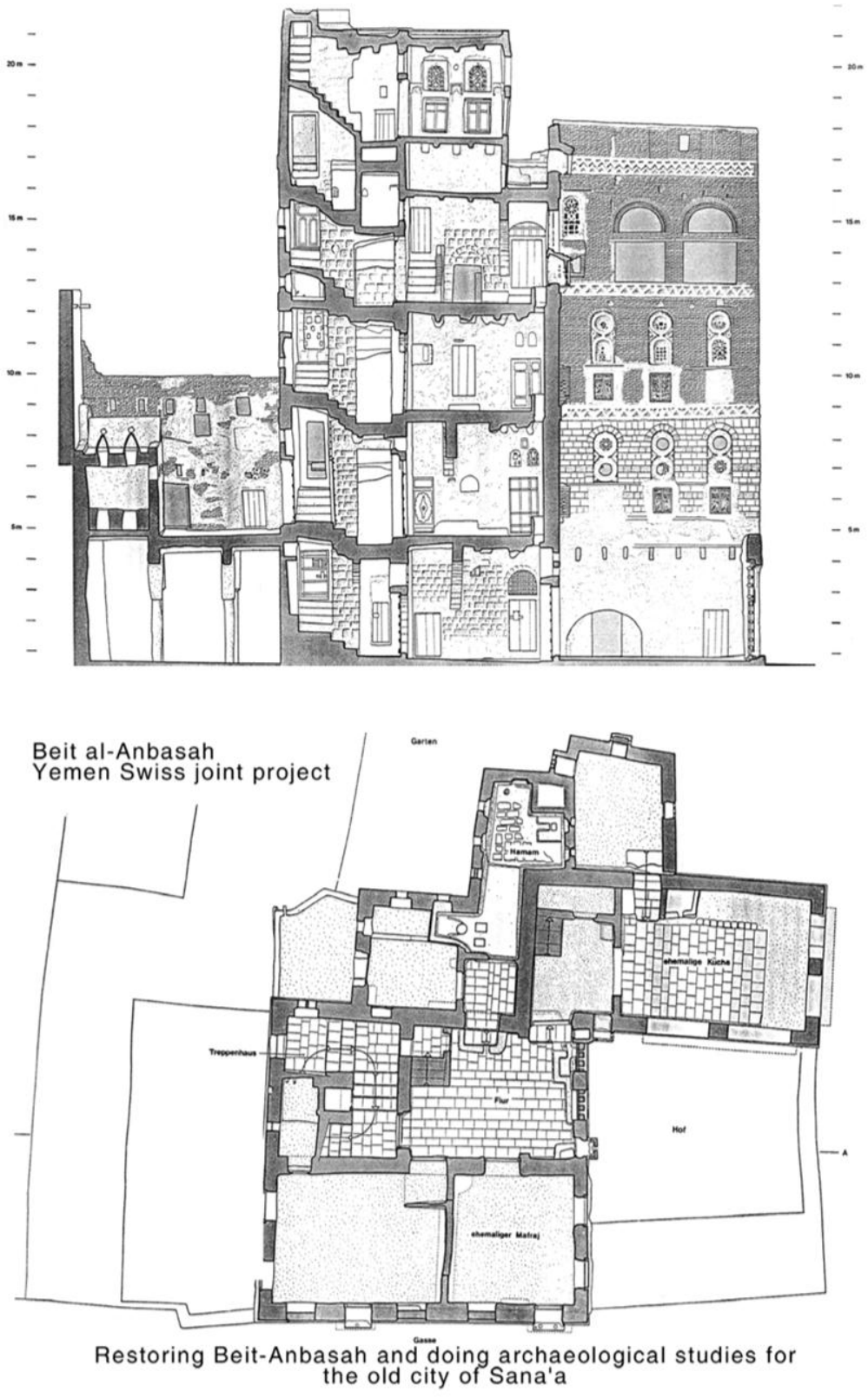


Figure 6.14 Beit-Anbasah/ plan – section (Shawash, 2010)

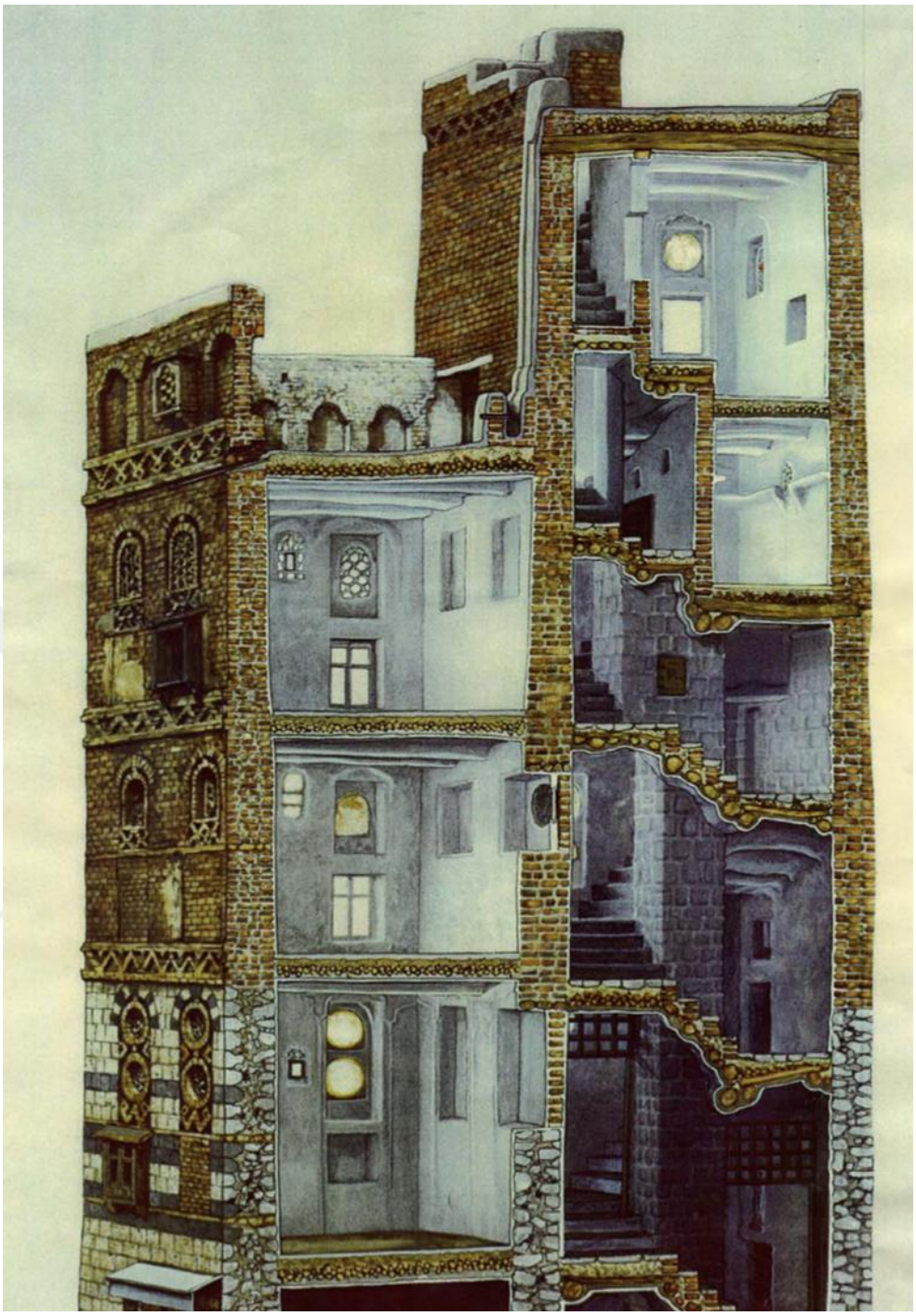


Figure 6.15 Beit-Anbasah/ Perspective sector (Shawash, 2010)

6.5.Conclusion for Chapter Six

Study and work as shown in table (6.1), analyzes the architectural characteristics of the traditional home of Arab cities, of the researcher's workers.

Table 6.1 Table of Analyzing The architectural Characteristics

			Tripoli/libya	Marrakech /Morocco	Ismailia /Egypt	The Dyer Bani Malik /Saudi Arabia	Sana'a/Yemen
Description of The Place- Site	Location For Old Town	Outside		*	*	*	
		Inside	*				*
	Type of District	Residential				*	*
		Commercial					
		Mixed	*	*	*		
	District Relationship for The City	Centre					
		Integrated				*	
		Both Ends	*	*	*		*
Description of Buildings in the Ancient City	Building Heights	One Floor	*	*			
		Two Floors	*	*			
		More than two Floors			*		*
		Buildings of Various Heights				*	
	Building Facades	Traditional Style	*	*		*	
		Modern Style			*		*
		Deaf		*		*	
		Balcony	*		*		*
		Decoration	*		*		*

			Tripoli/libya	Marrakech /Morocco	Ismailia /Egypt	The Dyer Bani Malik /Saudi Arabia	Sana'a/Yemen
Architectural Elements and Spaces	Architectural Spaces	Courtyard	*	*			
		Hallway	*	*			
	Architectural Elements	Arches	*	*			*
		Pillar	*	*			*
		Pond or Fountain	*	*			
		The Mashrabiya	*		*		*
		Skylight	*		*	*	*
		The Chimney					*
Relationship with Urban Fabric	Similarity with Neighborhood	Construction Materials	*		*	*	*
		Facades	*	*	*	*	*
		Type of Construction	*	*	*	*	*
	Merger	linked	*	*	*		*
		Separated				*	
Building Materials	Materials used for Construction	Brick	*	*	*	*	*
		Clay	*	*			*
		Lime	*				
		The Wood			*		
	Materials used for Decoration	Ceramic Decorated	*	*			*
		Gypsum	*	*	*		*

The study and work of the above table, which analyzes the architectural characteristics of the traditional home of the Arab cities, concludes that:

For The Location / There are differences of traditional old cities and capitals, For example, Marrakech is outside the capital of the Kingdom of Morocco, The Dyer Bani Malik /Saudi Arabia is built outside the capital of Saudi Arabia, and Ismailia is outside the Egyptian capital. For Tripoli, it is the capital of the Libyan which stated, Sanaa is the capital of Yemen.

As for the type of District of the old traditional cities, there are only housing such as Dyer Bani Malik in Saudi Arabia and Sanaa in Yemen, and the rest are mixed. In the city of Tripoli, the old multi-functional relations of the buildings, including residential, commercial, educational and public, same thing in the city of Ismailia and Marrakech.

As for the height of the Housh(s), they are different for all of them for example, Marrakech and Tripoli consist of one and two-floor Housh(s), Ismailia and Yemen are more than two floors while the Housh(s) of Dyer Bani Malik in Saudi Arabia are variable.

As for the facades of the old traditional Housh(s), they are different for each of them, each has its own character which is without the balcony, while other have a balcony, and including what contains the decorations and windows, including what contains only some skylight and windows. For example, the façade of traditional Housh(s) in Tripoli has a traditional façade, some of which contain balconies and some decorations, As for the old Housh(s) in Ismailia, it contains a facade of modern style with balconies and decoration, including what they contain the traditional facades, but the general nature of the city is dominated by modern facades with the balconies.

As for the buildings of Housh(s) in Dyer Bani Malik in Saudi Arabia, they are a facade that does not contain any of the balconies or decoration, As for the facades of Housh(s) in the city of Sana'a in Yemen, it is a brilliant old façade, it contains some of the balconies and mashrabiya and decoration that increase the beauty of its facades.

As for the architectural elements of the Housh(s), they are different from each other. Marrakesh in partnership with Tripoli, in many elements including the Courtyard, the corridors, the arches, the pillar, the fountains, and the little ones, such as the mashrabiya, the Courtyard, and the support. Tripoli skylight both mashrabiya

Marrakech does not contain, Sana'a and Tripoli share a lot of elements with a few differences. They share the arches, pillars, mashrabiya which allows and skylight here it been clear that the Housh(s) in Sana'a are different in their design and architectural style, they do not contain the Courtyard, the fountain or the corridors, the façades of Dyer Bani Malik and Ismailia are quite different. In the land of Bani Malik, there are not much of the architectural elements of especially and it contains only the skylight and windows. The Housh(s) in Ismailia contain the windows, skylight, mashrabiya, which are few elements with the rest of the Arab cities under study.

As for the participation with the new residential neighborhoods in the capital city, ie with the residential neighborhoods of the city, they share the building materials with the residential neighborhoods that surround them after the residential expansion, and what they share with their neighborhoods in the nature of them. The city acquires the same old architectural character to preserve the character of the old city, which is the oldest of them in terms of the date of its establishment, from which it shares the façades, including what is involved in the method of construction, including what is involved in the construction materials.

As for the interdependence of Housh(s) in relation to the city, it is found that they are interconnected in the way of building and planning the city, there what they are separate and far from the other, which gave a different layout and character of the city.

As for the construction materials, as noted in the table above, it is one of them which was established by brick, There are also what was established by limestone, including what made mud and there is also what was created by wood, such as Ismailia, as shown in Figure (4.8).

As for the interior and exterior decoration materials, what is the use of ceramics in the interior decoration such as the Housh(s) of Marrakech and Tripoli, and what are they used in external decoration such as the Housh(s) of Sanaa which made by gypsum which used in the interior such as Marrakech and Tripoli and what are used abroad such as Ismailia and Sanaa.

As a conclusion of a few wards of this chapter, the study reached a part of the analytical study of the architectural properties of the traditional Housh(s) of the ancient Arab historical cities.

CHAPTER SEVEN: THE CONDITIONS OF THE HOUSH: CASE STUDY

Housh in the historical city of Tripoli is one of the landmarks of Arab and Islamic architecture and has unique influence in history. This art reached the peak of creation and the correct employment of all housing and family needs by specialists and those interested in the East and the West.

In fact, the ancient Libyan home built for more than 500 years has become a unique architectural institution in line with oriental architecture in terms of appearance and content. Housh(s) are not just rigid architectural structures, but they are loaded with many indicators and artistic and architectural features. Architecture is a major part of the culture of any country and its heritage. It has close links to the environment and geography that surrounds it. It derives its general character and features. Building materials are also derived from materials available in the environment according to that area's nature. The study of the prevailing architectural patterns in a place is an important factor in the study of the nature and history of this place, while the changes in buildings and forms of architecture are an indicator of the social and economic changes in society. The Tripoli Libyan Housh was also distinguished in terms of building materials used, clay, bricks, wood, stones, marble, plaster, colors and Arabic inscriptions in most walls, windows, ceilings, and floors, where the destination of Arab and foreign tourists as a tourist destination.

The functional relationship that characterizes Arab Islamic architecture does not always preclude the possibility of decorating buildings. The facades of the old city of Tripoli are adorned with decorations for many architectural buildings. Doors and windows are decorated with iron windows, wooden windows, and thick wooden doors, white marble and enameled tiles used for architectural or decorative finishes on the facades.

Figure 7.1 An old picture of the Housh of Ahmad Pasha Al – Qaramanli (Engineers, 2016)

Unfortunately, modern social culture has been involved over the destruction of many traditional buildings and replacing the traditional buildings with new buildings "modern buildings" without any connection with the Libyan history and the Libyan society In addition, it often rejects everything that is old even if it has a high historical value, but the limited possibilities of the regulatory institutions concerned with the maintenance of historic cities and buildings have contributed directly and significantly to the appearance of unacceptable architectural features confused about the inherent architectural values.

Heritage is the historical incubator of the people. The preservation of this heritage considered as a priority. However, an accelerated lifestyle makes it very difficult for those interested in preserving their heritage and the legacy of the coming generations to follow. Hence, the management of historic cities, which are interested in heritage and archeology, carries out some repairs and alterations that transform old Housh(s) and change their functional relationship to museums, cultural centers, cafes, restaurants, hotels and other new relationships to bring them back to life, thus providing an economic return that can be used to maintain interest and maintenance. And not neglect it as well as the definition of this heritage for tourists through some seminars and conferences held in these centers.

In the old city there are many old historic Houshs), the most important of which are (21 Houshs)), as mentioned in Table 3.1 in (3.3.The Architectural Analysis). However, this study consists of six (6) Houshs) which differ from each other depending on their functional relationship. Some of the Houshs) were renovated and maintained by state agencies and under the supervision of the Old City Authority. They were used after maintenance as a museum and there is what has been used as a cultural center, which is in good construction condition. And there is what has been restored and maintained by the attention of its inhabitants but the limited possibilities and materials that do not meet the standards of maintenance and also difficult to maintain regular maintenance, which made parts of them collapse. And Houshs) abandoned by the inhabitants and left without maintenance for several reasons, which caused the collapse completely.

And our concern about this subject and our fear of this wealth of loss and attention to what he can care about, which made us study the situation and through our tour in some neighborhoods of the old city of Tripoli surprised us with many scenes of horrific historical images and dilapidated Houshs) and the collapse of most of the historic neighborhoods and corridors that have been visited, To manage the historical cities of Tripoli and to supervise their employees to perform their duties to the fullest extent in order to preserve the urban fabric of the old city inside the wall surrounded by the addition of some axes outside the fence. Through this chapter, the study dealt with two types of Houshs), the Houshs) which been controlled by its owners, while the other part is about the Houshs) which had been neglected for many reasons, the study in this chapter talked about the building materials. Through this chapter these Houshs) will be addressed according to their construction's status:

A. Good Condition Housh,
    a. Housh AL-Qaramanli
    b. Housh Hassan AL-Faqih (French Consulate)
B. Bad Condition Housh,
    a. Housh AL-Qurji
    b. Housh AL-Bashawat (Dar AL-Qadi)
C. Partially or Totally Collapsed Housh.
    a. Housh Bait AL-Maal
    b. Housh Al-Qarqani

7.1.Good Condition Housh

These Housh(s) were a priority by the state agencies in the maintenance and restoration were in good condition as an example of these Housh(s):

A. Housh AL-Qaramanli

One of Tripoli's oldest monuments in Libya is one of the finest and most brilliant buildings of Islamic architecture. It was built in the Qaramanli era and it was the capital of Tripoli in 1839 it was used in the construction of the Arab and Islamic art. It is located in the old city ' The interior of the courtyard is open to the sky. The building consists of two floors. It considered as one of the most brilliant Islamic styles. It consists of many different types, elements and architectural decorations for the living of the family. The building area is 472 square meters for each floor. Some old photos of the Housh AL-Qaramanli shown in the figure 7.2.

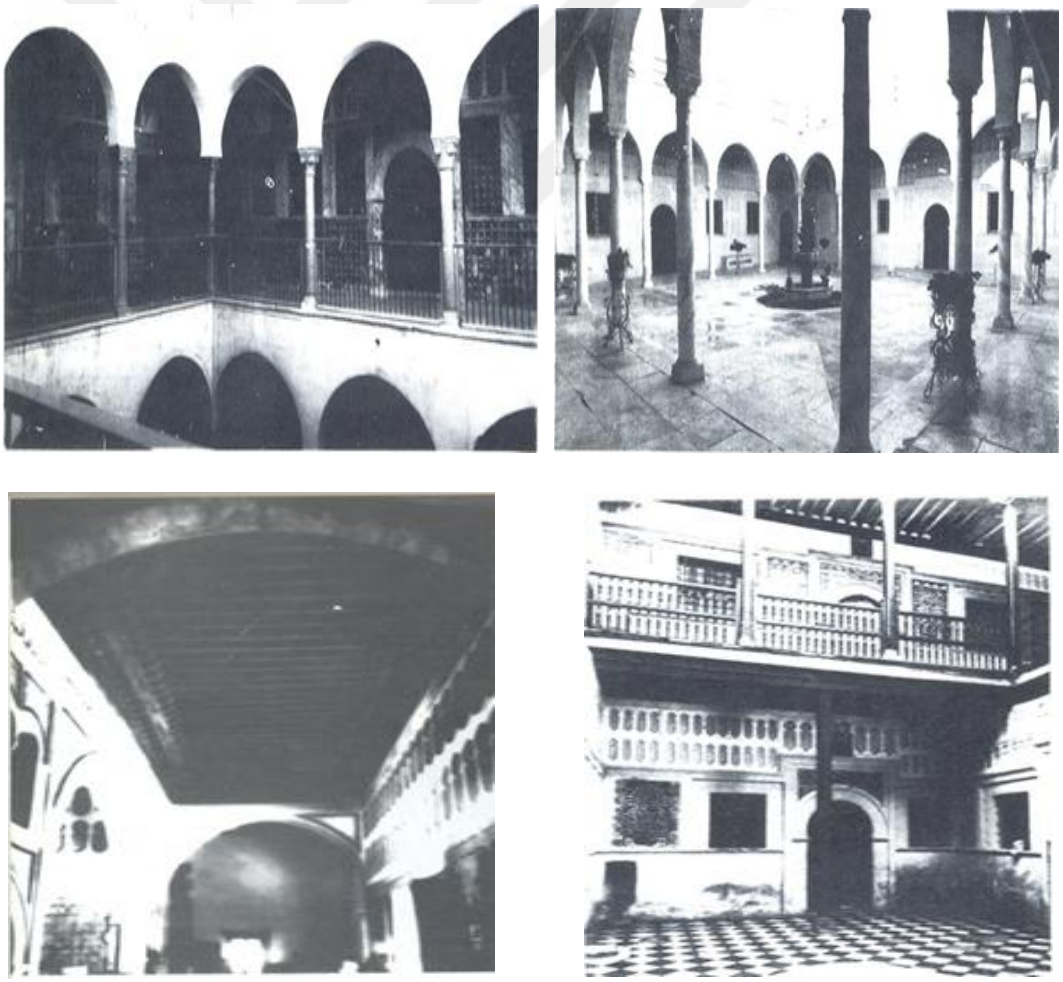


Figure 7.2 Old photos of the Housh AL-Qaramanli (Hashem, 1999)

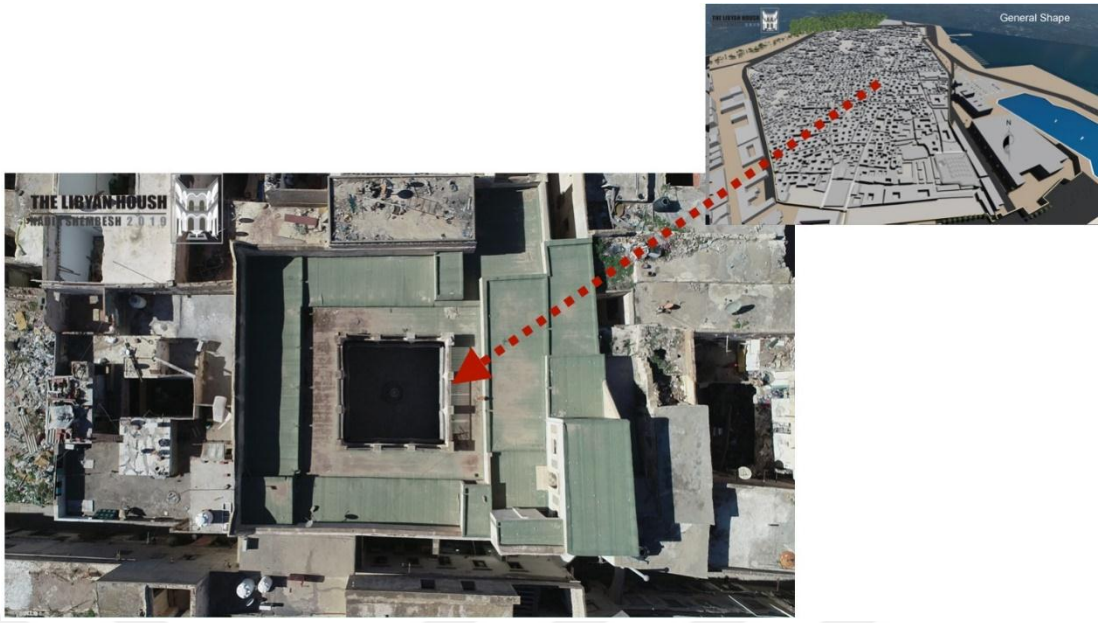
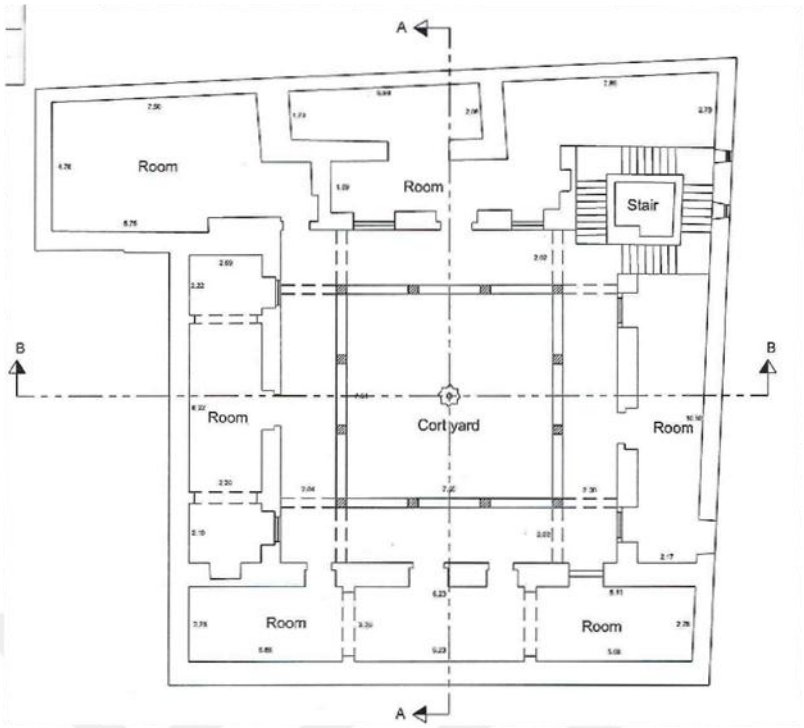


Figure 7.3 General location of the Housh AL-Qaramanli

a. Plan / Section / Elevation:

The diagrams and drawing showing the details of the Housh AL-Qaramanli and its different from housh to size, or geographic area.



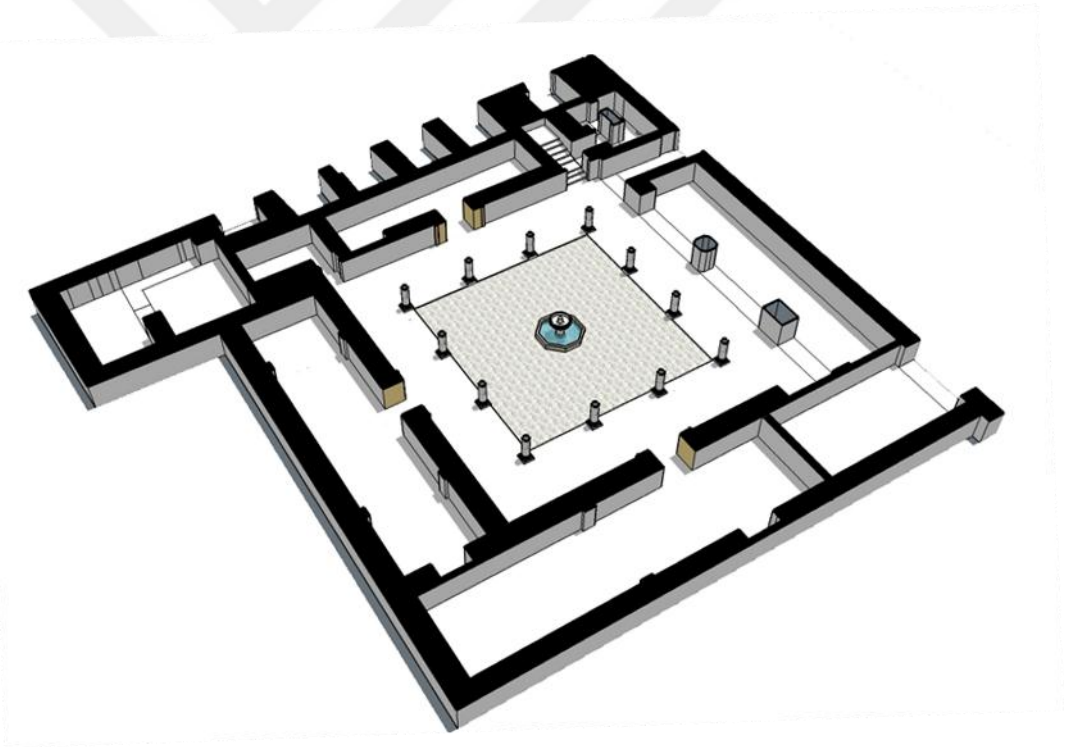


Figure 7.4 the Ground Floor

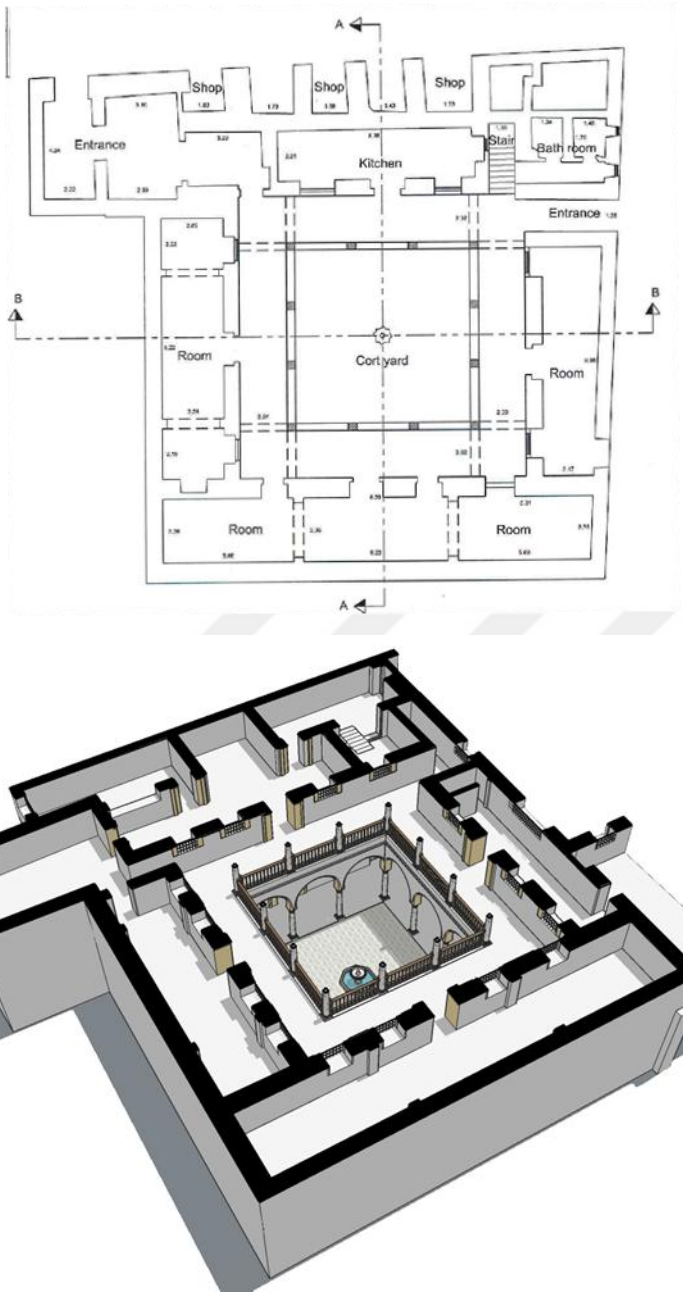
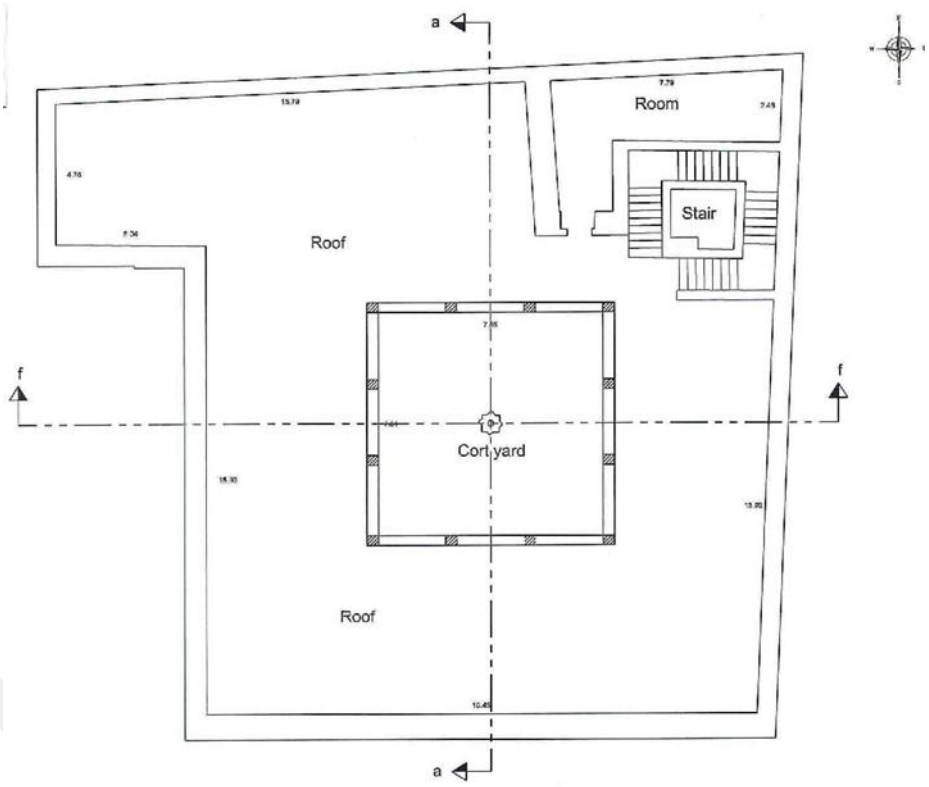


Figure 7.5 the First Floor



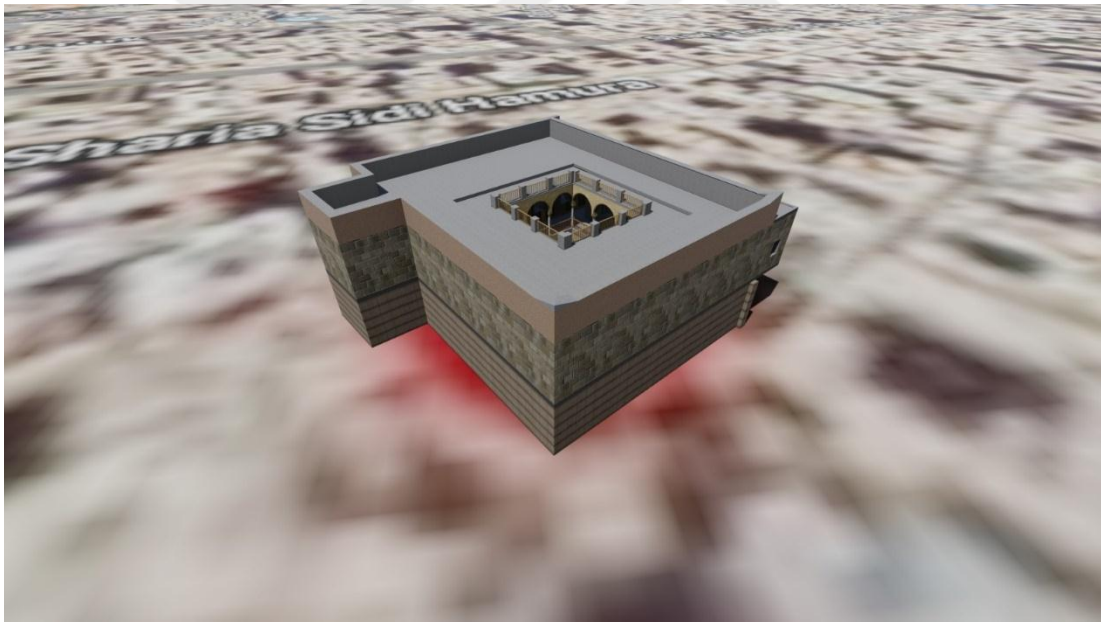


Figure 7.6 the Roof

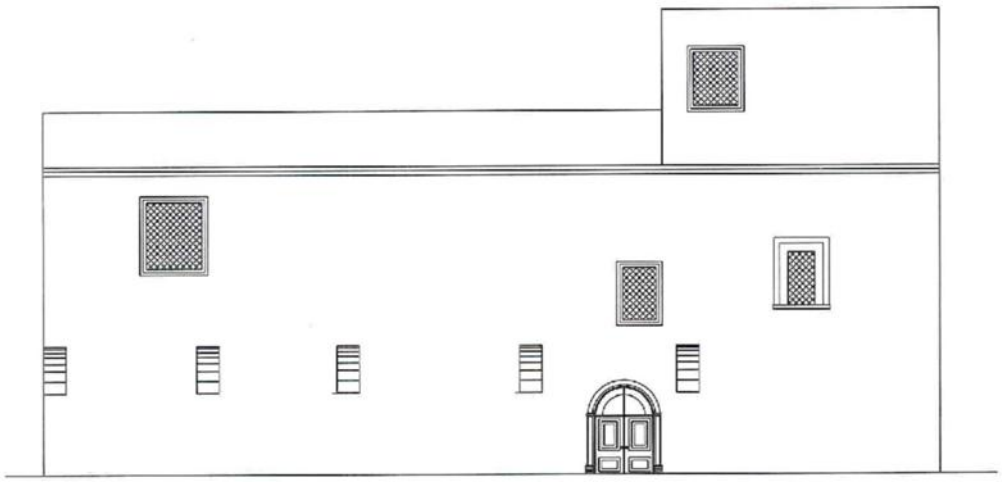


Figure 7.7 Elevation

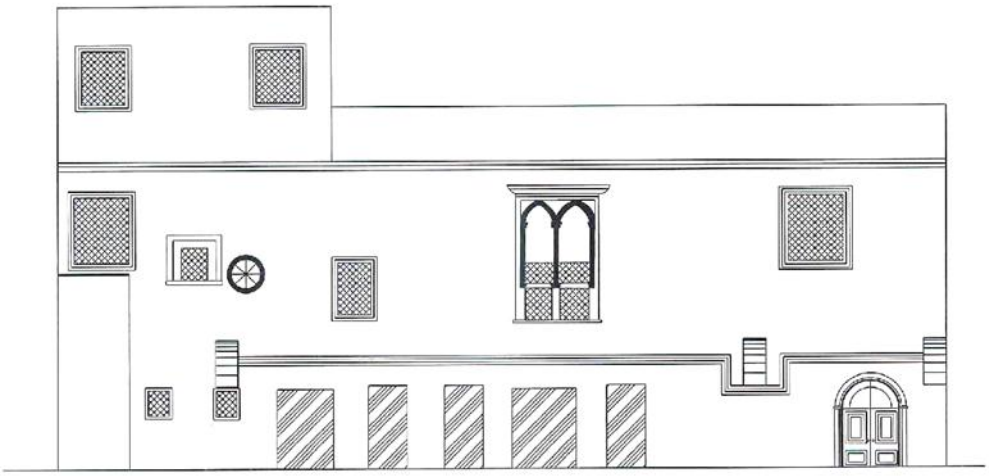


Figure 7.8 front Elevation

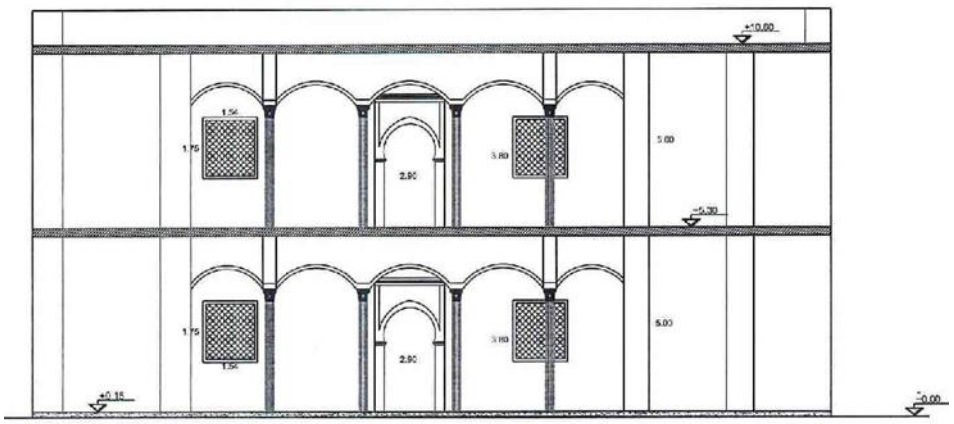


Figure 7.9 Section A-A

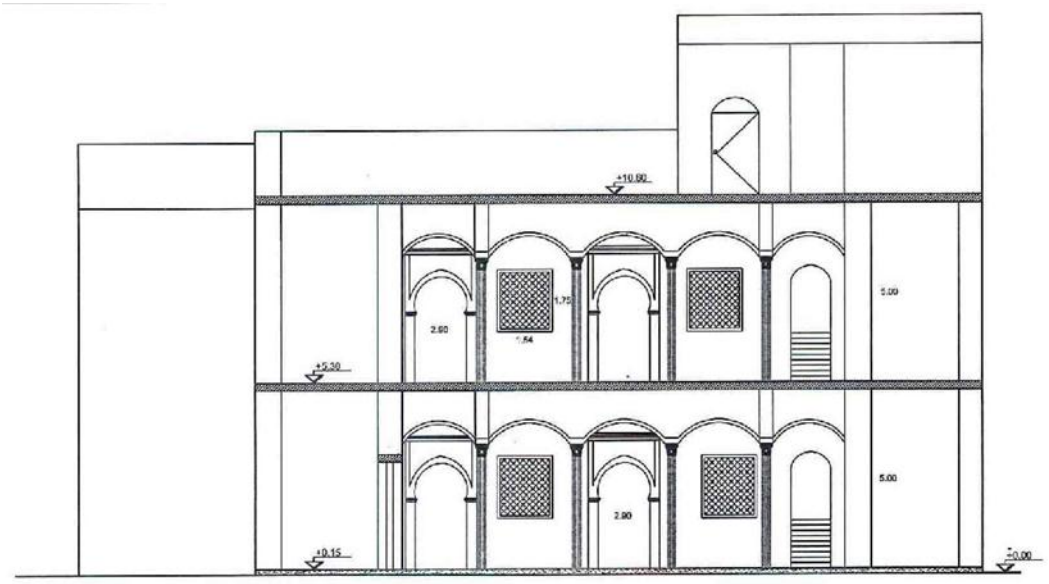


Figure 7.10 Section B-B

Figure 7.11 Perspective Sector

b. The Current Housh Situation:

The Qaramanli Housh is one of the few Housh(s) in the old city that has been preserved periodically and continuously, which made the age of its architectural elements longer. In view of the architectural and artistic characteristics in the formation of this Housh, the distribution of spaces around the roofless courtyard.

The elements of division in the Arabic Housh it's different from one housh to another depending on the size of the housh or the geographical area in it, it is possible that these elements are not common in different the Arabic Housh are as follows:

Al-Madkhal (The Entrance): which is often a corridor that is winding or broken leading to the dish and often opens a door to the Council, and the importance of its form is that it isolates the decision on the street, the person standing at the door or inside the Council to do anything It provides privacy and even leaving the door open makes the air flow to the Housh from the street, and as shown in figure (7.12) they are recently refurbished and it's in good condition. (Zubaydah, 2002)

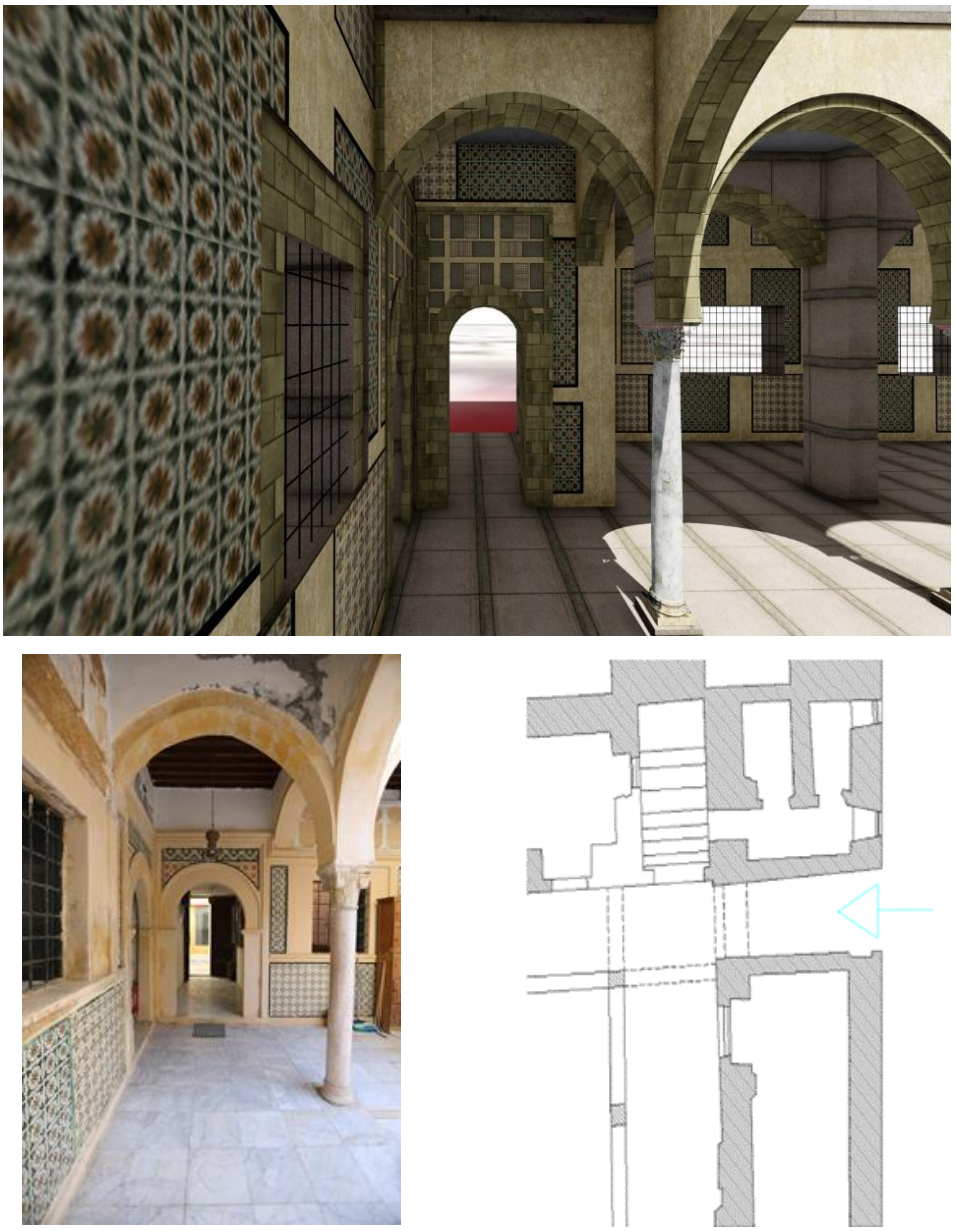


Figure 7.12 The form of the Entrance.

Al-Sellam (Stairs): It is located on one side of the entrance of the housh, which connects between the ground floor and the first floor is closed, and as shown in figure (7.13) the condition of the stairs is good with some avalanches for the outer coating layer only, and this is possible due to the paint type and various weather factors.

Figure 7.13 The form of Stairs.

Al-Rewak (The gallery): It is located on one side of the entrance of the Housh, which connects between the ground floor and the first floor and has a handrail of iron or woodwork is installed in the pillars courtyard and as shown in figure (7.14) they are in good condition.

Figure 7.14 The form of the Gallery

Al-Qous (The Arch): The arch and the architectural element is curved in the form of a circle based on the points of focus, Muslims have developed this, there have been many types and many shapes and decorations to add to the Islamic architecture dimensions and brilliant architectural features have been used in the arch of Islamic homes for two main reasons:

The constructional area to increase the bearing strength of the roof and distribute the main loads. A decorative architectural area to give the beauty of shape and style. By looking at the figure (7.15), the arches are in good structural condition with the need for some light restoration and painting layer. (Hashem, 1999)

Figure 7.15 The form of the arches.

Al-Fenaa (The Courtyard): This inner courtyard is intertwined in many times the fountain or a room that is stitched with ponds of flowers, plants, and trees. It is surrounded by the main rooms in the Housh, and there can be more than one courtyard in the Housh. Components of the courtyard, and as shown in figure (7.16) the aerial picture of the courtyard, it is missing some of the plants that give it better view.

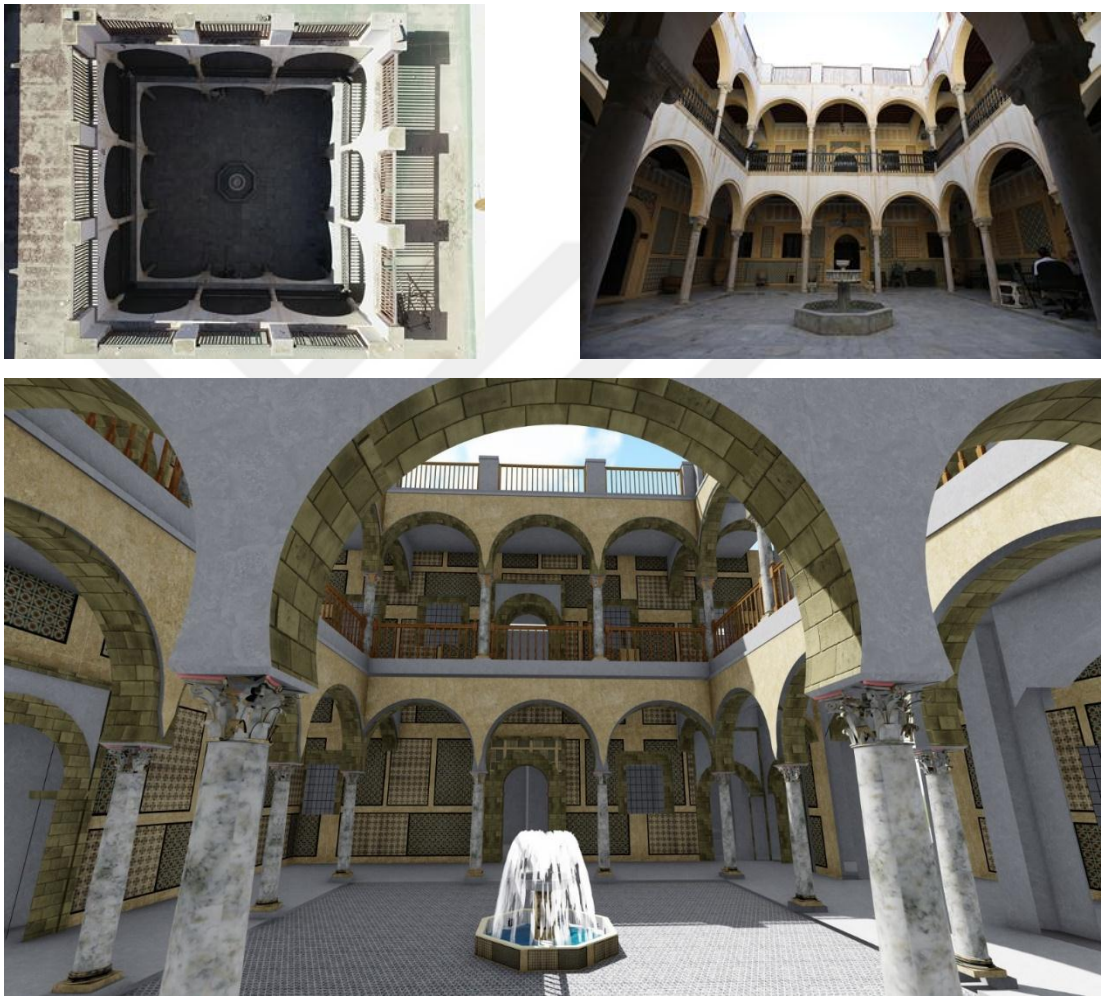


Figure 7.16 The form of the Courtyard

Al-Zilaiz (Flooring): Where the floors in the Arabic Housh received special attention, it has mastered the architecture of the implementation of the stones or the marble covered and kneaded according to the different importance of places and rooms were focus more in the ground and rooms. The focus was more on the floor of the dish, where often these floors are a brilliant painting as shown in figure (7.17)

Figure 7.17 The form of Flooring.

Al-Sakef (The Roofs): Is a process of decorating the roofs with wooden beams and the related pillar with some cabinets or furniture that is located in the Housh as in figure (7.18).

Figure 7.18 The form of the Roofs.

Iwan (Sitting Room): A hall surrounded by a triangular wall, open by the door completely from the fourth and overlooking the open dish, and a gallery, perhaps contacted the halls and rooms according to various construction function and it has decorations on the walls as shown in figure (7.19). (Adeema, 2015)

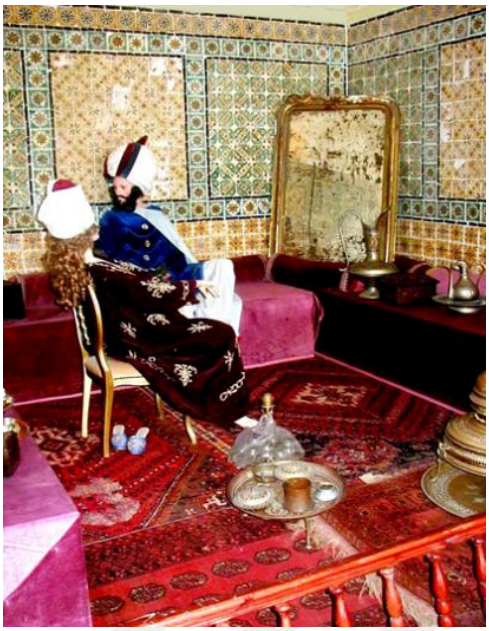


Figure 7.19 The form of the sitting room

Al-Nkowsh (Decorations): An architectural element that appeared in the Islamic era in many Muslim homes. This decoration has been developed throughout the ages and civilizations. Many species and shapes of different types as in figure (7.20).

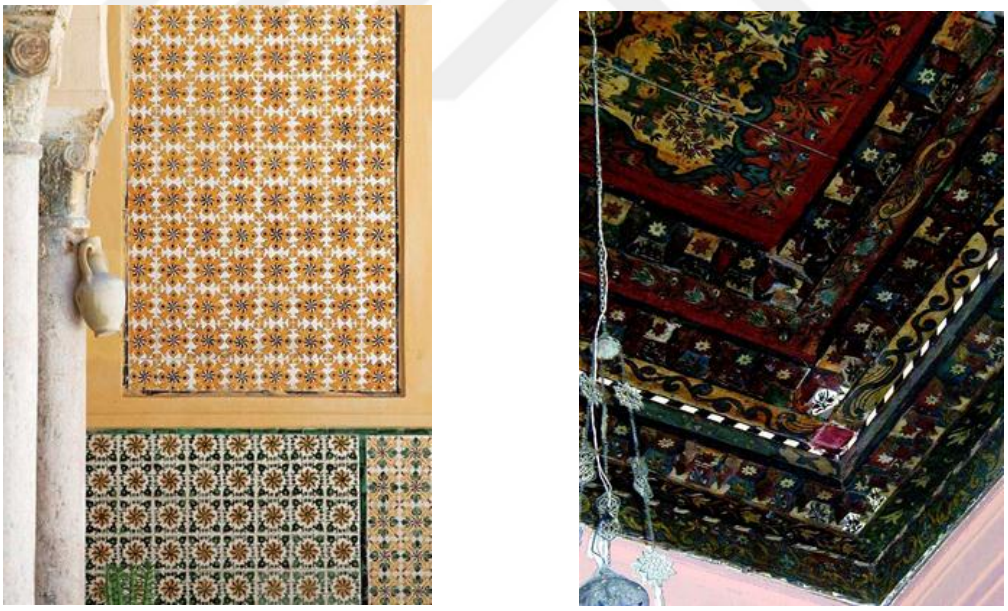


Figure 7.20 The form of Decorations.

B. Housh Hassan AL-Faqih (French Consulate)

During the Second Ottoman Empire and the Qaramanic period, many French consuls were punished by the French government for more than 250 years. The most prominent

of them was Charles Ferro, who wrote in the corridors of this palace one of the most important books in Libyan history, the book of the Libyan periodicals.

After the Second World War, the French Consulate left this building in 1943 to move to what was known as the European Tripoli or the Italian Tripoli, and then the ownership of the building was transferred to a Turkish family. It was owned by the then-president of the country, Mohamed El Sayed. The ownership of the building was then transferred to the Tripoli family known as Mokhtar Marmash family at public auction until the project of organizing and managing the old city was received, maintained and re-employed as a cultural facility under the name of Dar Hassan Faqih Hassan for Arts and Culture. Faqih, who wrote a diary related to the history of Libya for fifty years.

Housh Hassan AL-Faqih building is located in the north-east of the old city of Tripoli and near the old port, as in the following figure (7.21). The building overlooks the most important buildings of the historical monuments of the ancient city the Roman arch known as the (Marcus Aurelius) and near the historical mosque of Mustafa Gurji. It is also located in the center of most of the European consulates accredited during the Turkish period in Libya (1551 - 1911). (Gebran, 2005)

Some old Photographs of Housh Hassan AL-Faqih shown in figure (7.21) (Gebran, 2005)

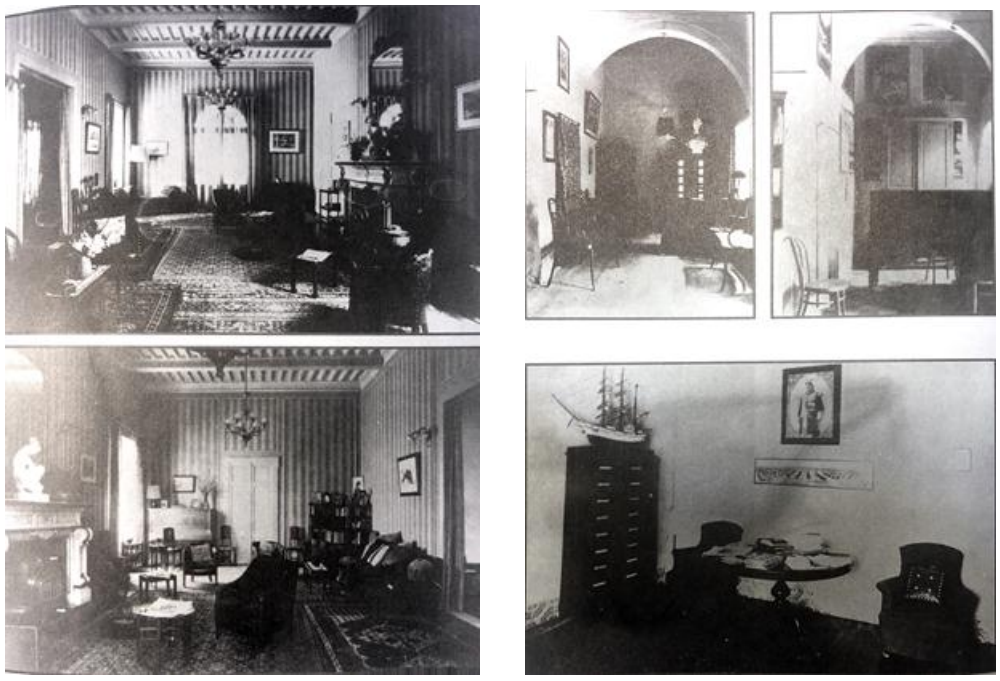


Figure 7.21 Some old Photographs (Gebran, 2005)

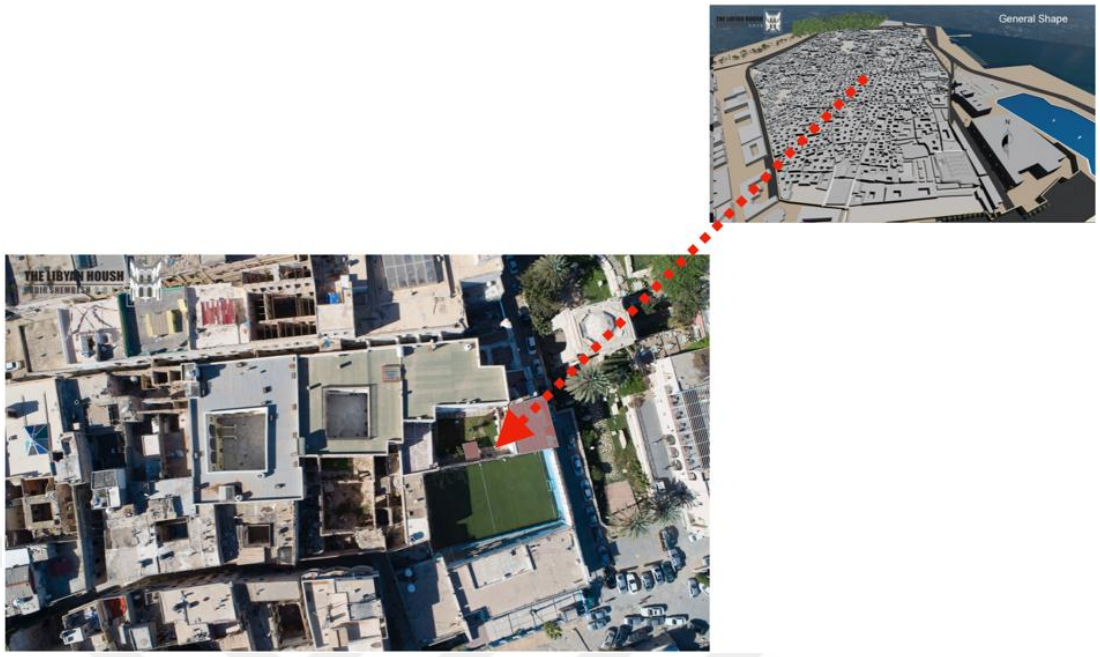


Figure 7.22 General location

a. Plan / Section / Elevation

These drawings and drawings illustrate the detailed distributions in the Housh Hassan AL-Faqih (French Consulate), which was designed in the Ottoman architectural a blend of Arab and European influences as shown in the following architectural plans:

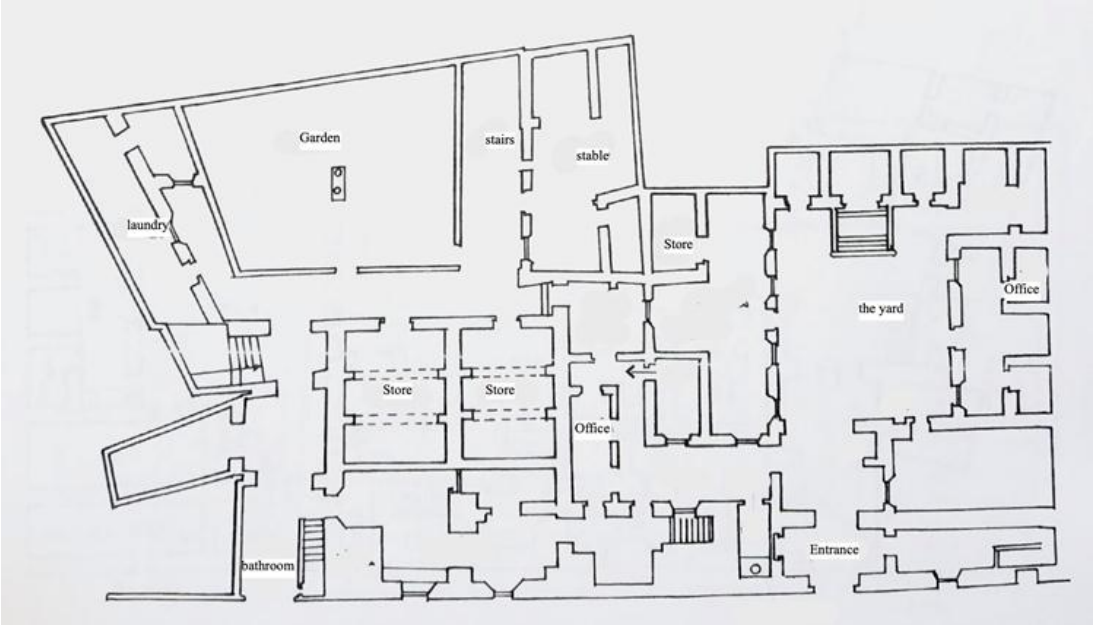


Figure 7.23 the Ground floor (1912 AD) (Gebran, 2005)

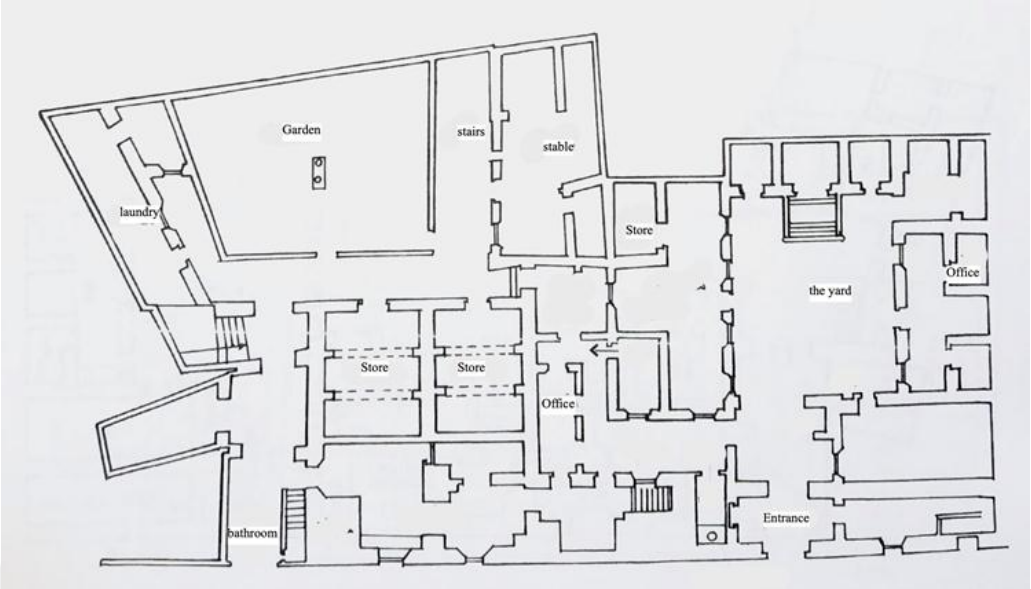


Figure 7.24 The First Floor (1912 AD) (Gebran, 2005)

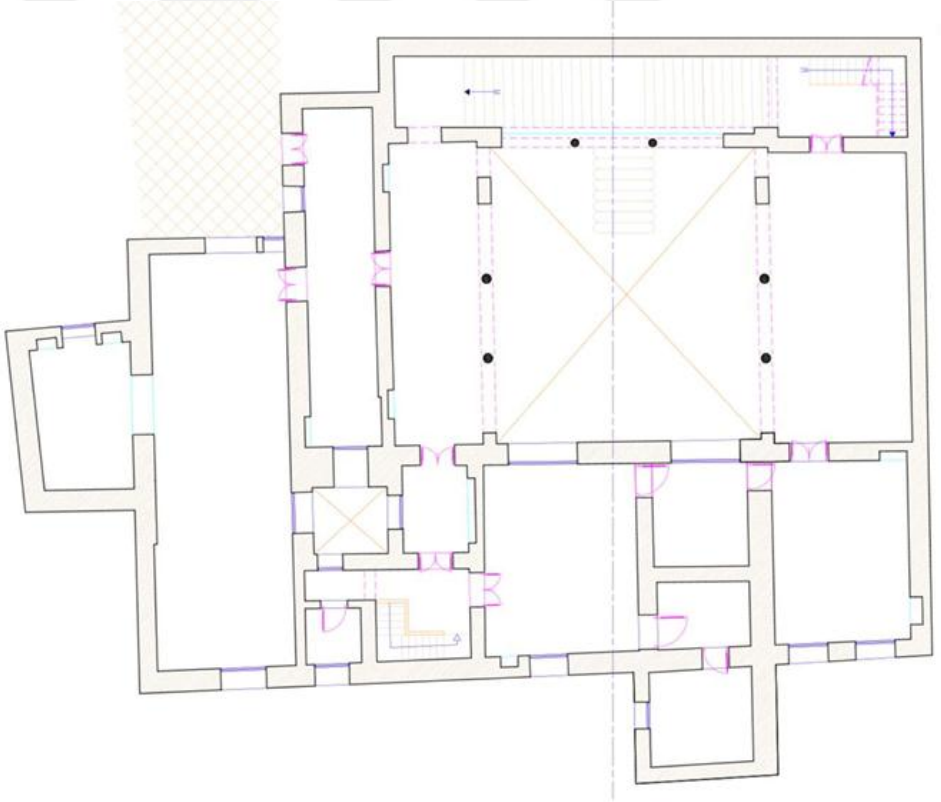


Figure 7.25 The Ground Floor Current Situation (Cities, 2008)

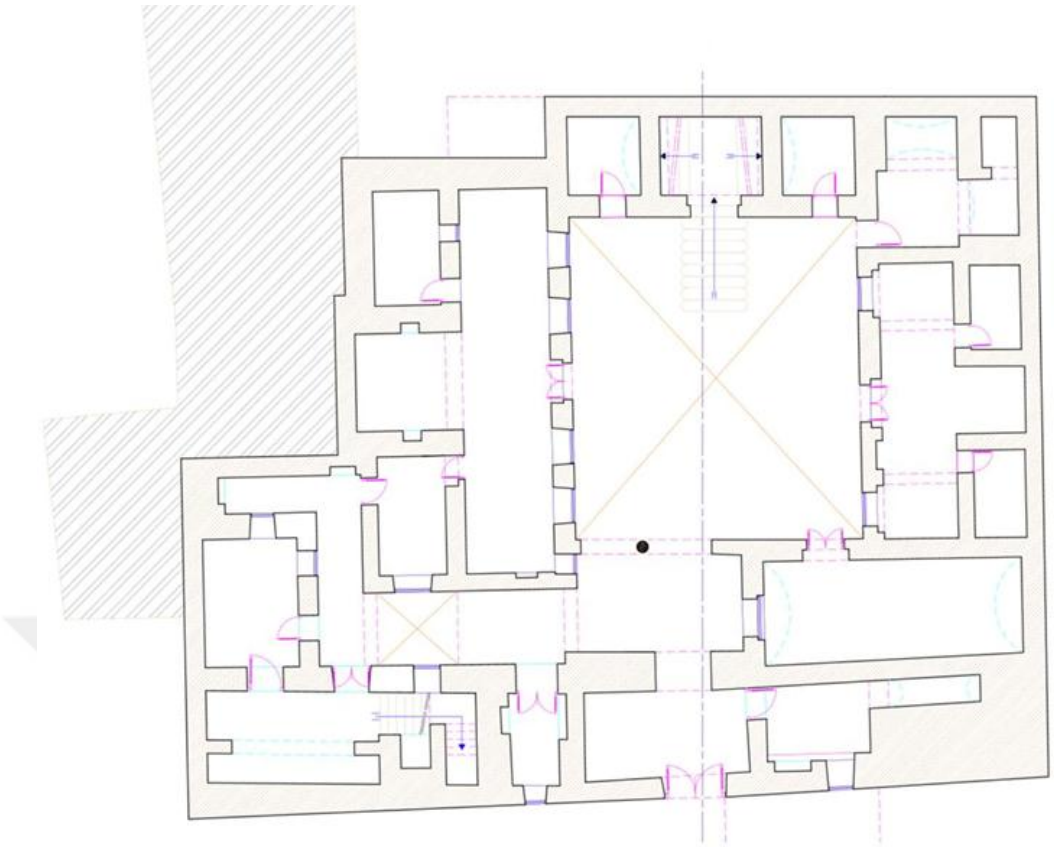


Figure 7.26 The First Floor current situation (Cities, 2008)

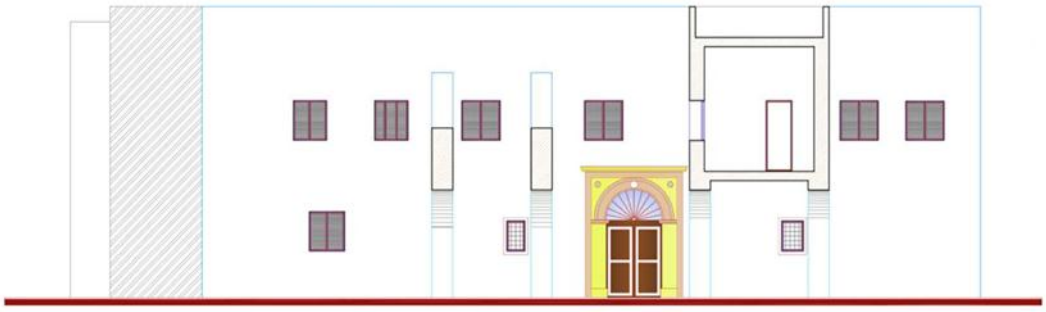


Figure 7.27 Front elevation situation (Cities, 2008)

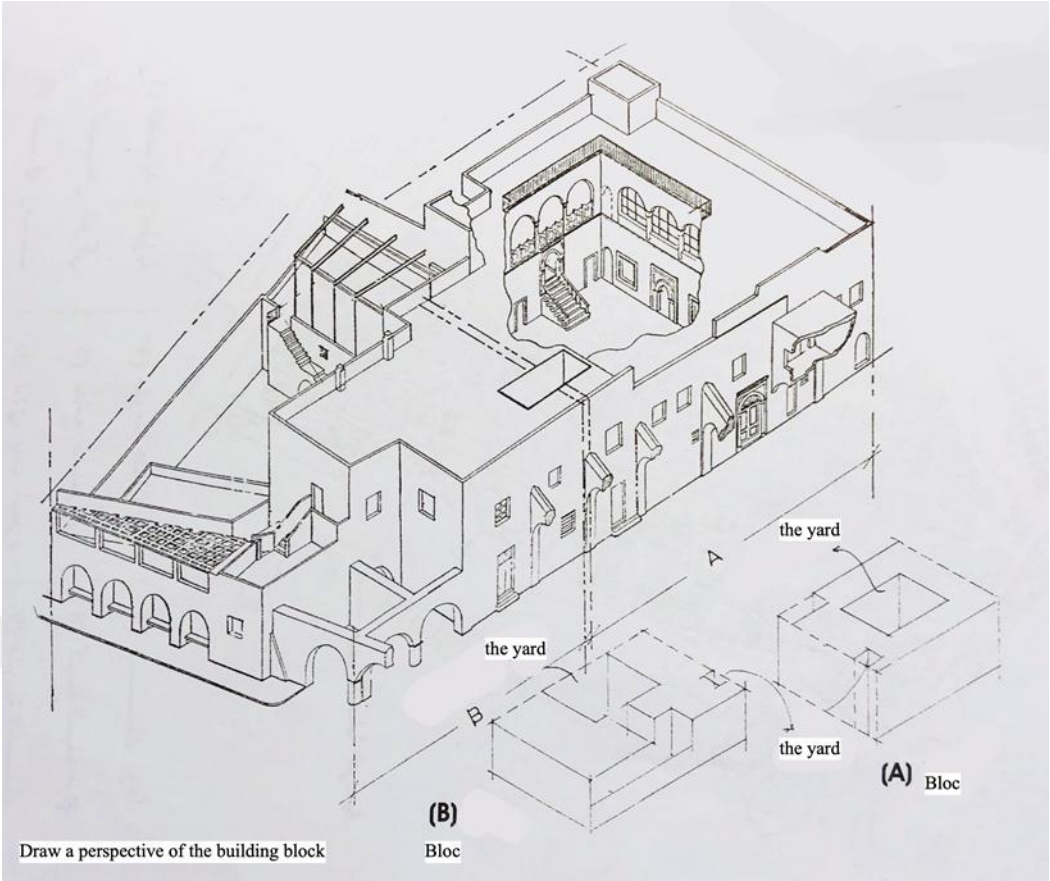


Figure 7.28 A perspective drawing of the building block (1912 AD) (Gebran, 2005)

b. The Current Housh Situation:

The building of Housh Hassan AL-Faqih represents the architecture of the Mediterranean basin, a mixture of Arab and Andalusian influences. The courtyard of the building is considered an Arab architectural phenomenon. As for the entrance of the consulate, it is welcomed, but for the rooms, the Andalusian architecture is especially on the ground floor, it gives the merit and official character of the building.

Al-Madkhal (The Entrance): These doors feature marble frames topped with ornamental motifs that mimic the belt decorations.

Figure 7.29 The form of Entrance.

Al-Fenaa (The Courtyard): If you stand in the courtyard almost in the middle of the courtyard, you will be surprised by the scene turn around yourself and keep gazing to the sky in an attempt to capture the most accurate details of the place is a bright white and an underbelly embellished with a very brilliant floral decoration.

Figure 7.30 The Courtyard's (The old image of the reference) (Gebran, 2005)

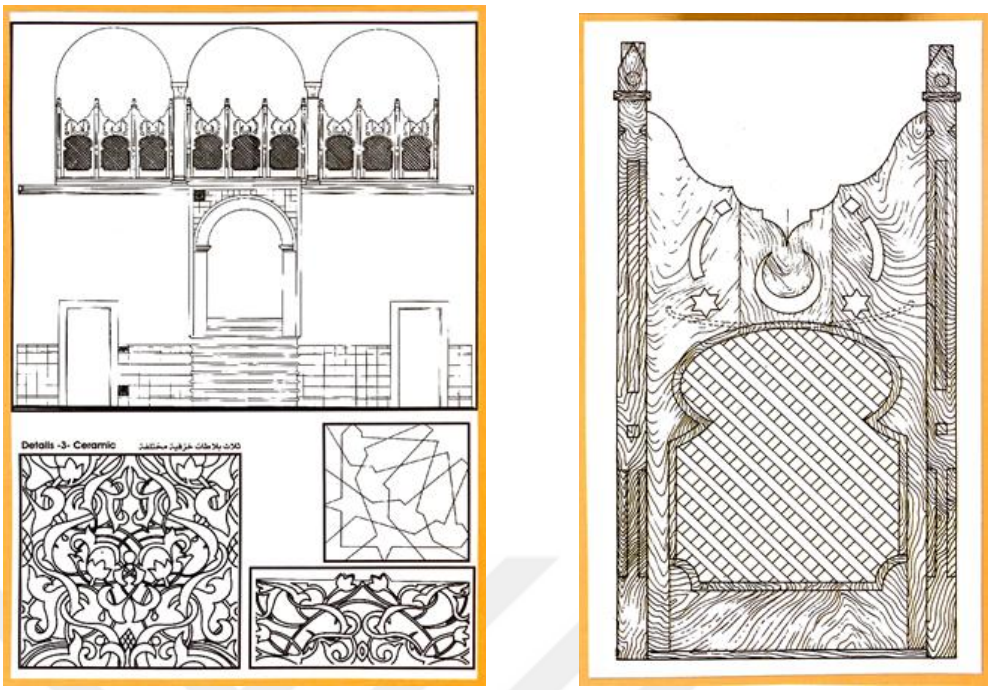


Figure 7.31 The form of Interior courtyard facade Details of woodwork (Tripoly, 1998)

Al-Rewak (The Gallery): The gallery is located on the upper floor, which is entirely in the form of semi-circular arches adorned by glass windows in a color that gives the corridor more brilliant than before and also a wooden barrier with Andalusian decoration which makes the scene more brilliant than anything else.

Figure 7.32 The form of the Gallery.

Al-Ghurfa (The Rooms): The building has many rooms, spaces and an annex to the building. Many of the facilities were accommodation for the French workers during

the exploitation of the building as a consulate. Hence there are many brilliant doors with inscriptions and a different details،The building has a stable for horses and is located adjacent to the park and was built in the manner of Arab-Islamic contracts.

Figure 7.33 The form of the Rooms

Al-Shebbak (The Windows): For window openings, it is a common phenomenon in the buildings that belong to the architecture of the Mediterranean Sea.

Figure 7.34 The form of the Windows

Al-Sellam (The Stairs): The perfect scene is the façade of the marble staircase, which leads to another staircase, the staircase similar to the other doors in the courtyard. The gate is topped by a three-arched balcony by arches separated by marble columns with Hafsian capitals. These balconies are decorated with a wooden barrier with exquisite decoration that reflects the design's precision.

Figure 7.35 The form of the Stairs.

Al-Qous (The Arches): The arches have structural functions to enhance the walls of buildings in the Housh to the aesthetic side that gives it to the building, especially when looking at it. It gives the courtyard its brilliant halo, which gave the Housh aesthetic privacy.

Figure 7.36 The form of the arches.

7.2.Bad Condition Housh

In these Housh(s) lacked periodic maintenance and most of the maintenance that has been the maintenance of static by its inhabitants and for this reason was in a state of Bad Condition Examples of these Housh(s) are:

A. Housh Bait AL-Maal

In the era of Yusuf Pasha Al-Qaramanli built a series of Housh(s) in the alley of the Housh of Finance, which extends from the exit overlooking the Mosque of the Druze to exit overlooking the Turk market.

These brilliant decorated Housh(s) were used by Mohammed Shalabi, the minister in the reign of Yusuf Pasha as a residence for himself and his relatives. The total area of the Housh is approximately 643 m^2.

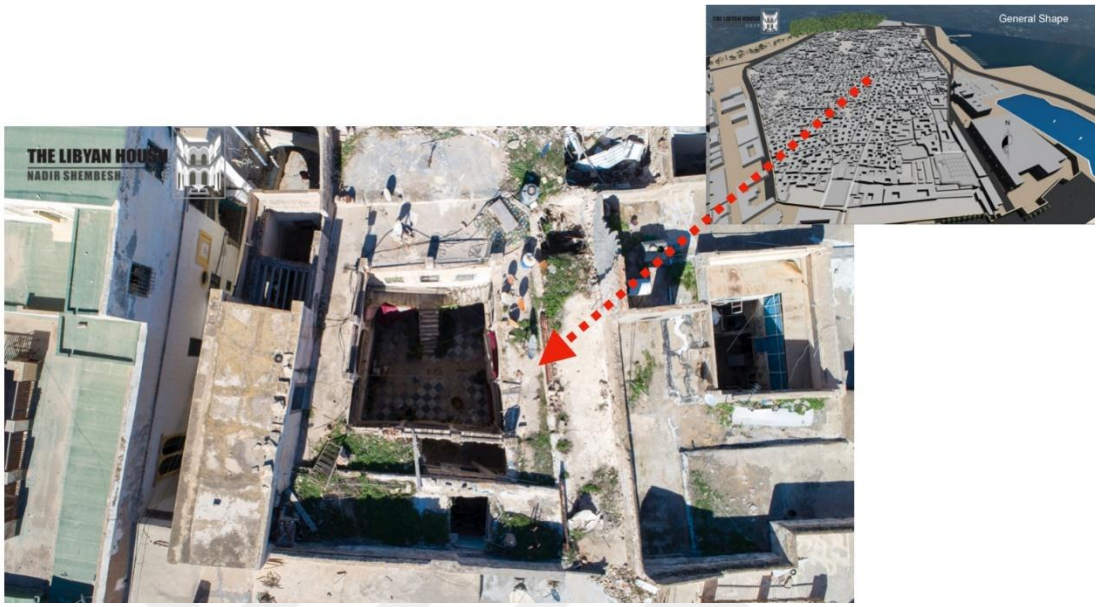


Figure 7.37 General location

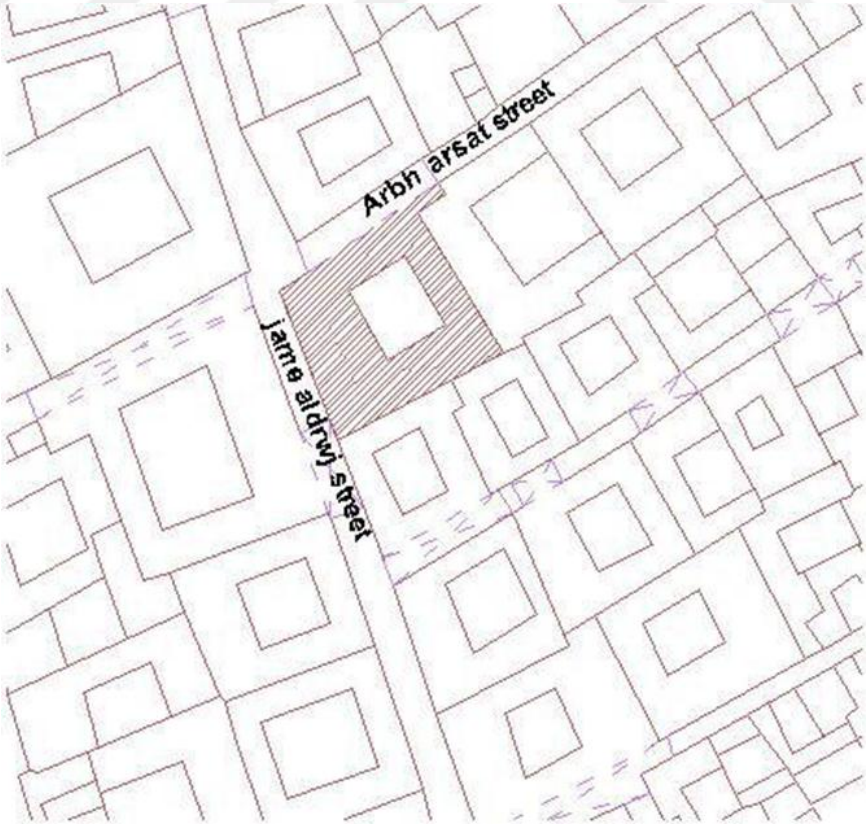


Figure 7.38 General site

a. Plan / Section / Elevation

The original architectural drawings from the archives of the old city of Tripoli, which is cadastral and was redrawn and modified by the researcher.

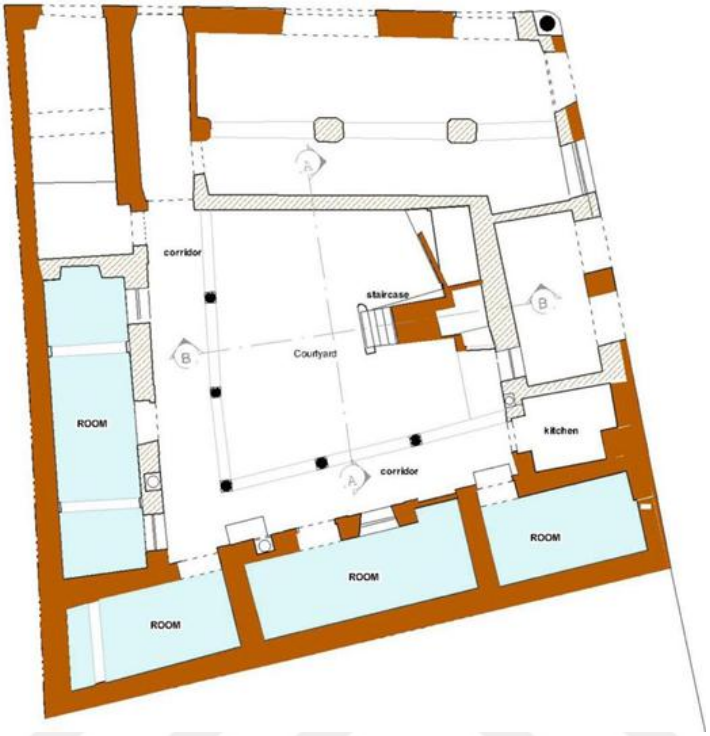


Figure 7.39 The first floor

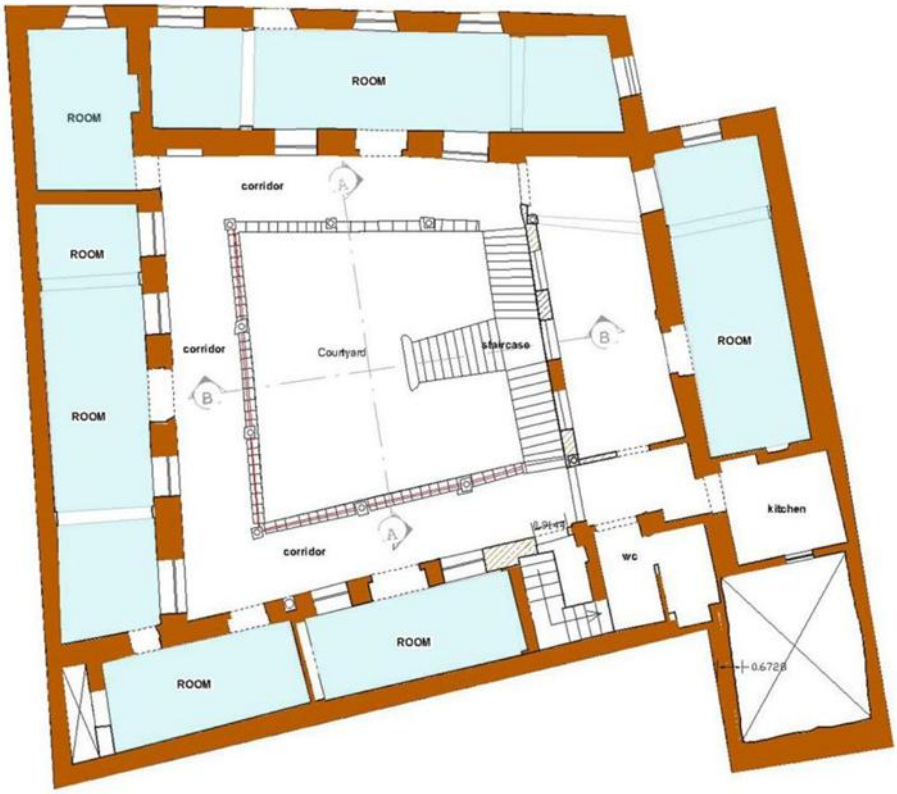


Figure 7.40 The second floor

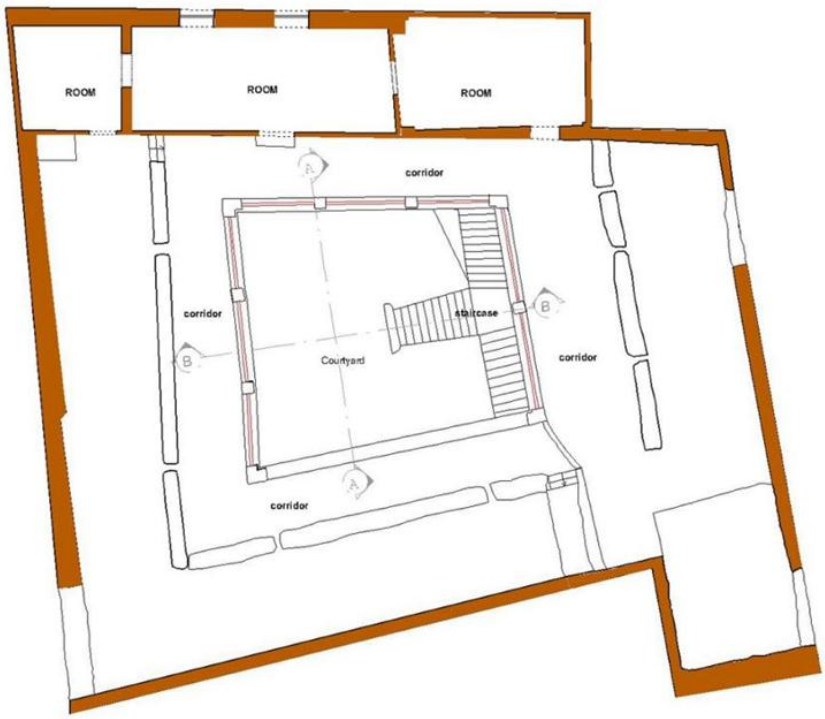


Figure 7.41 The Roof

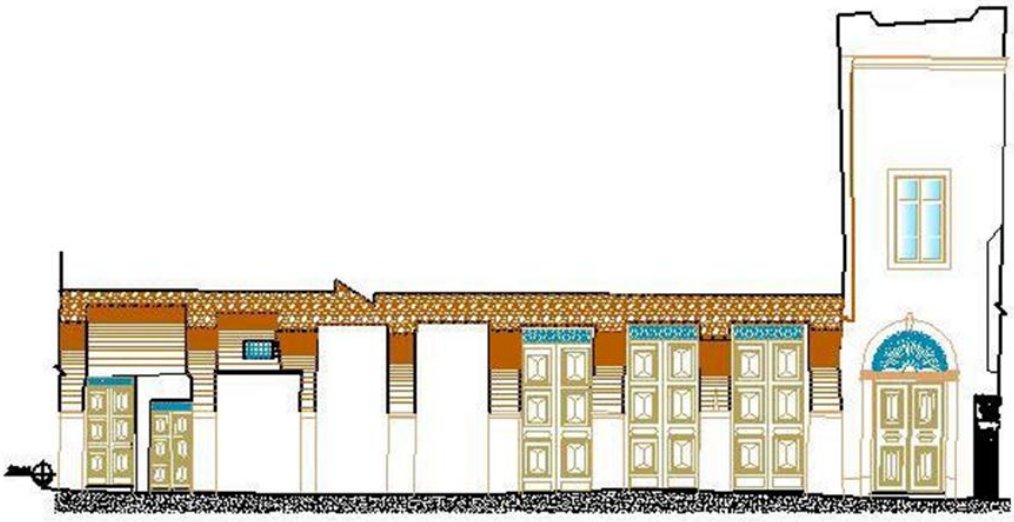


Figure 7.42 Front elevation current situation

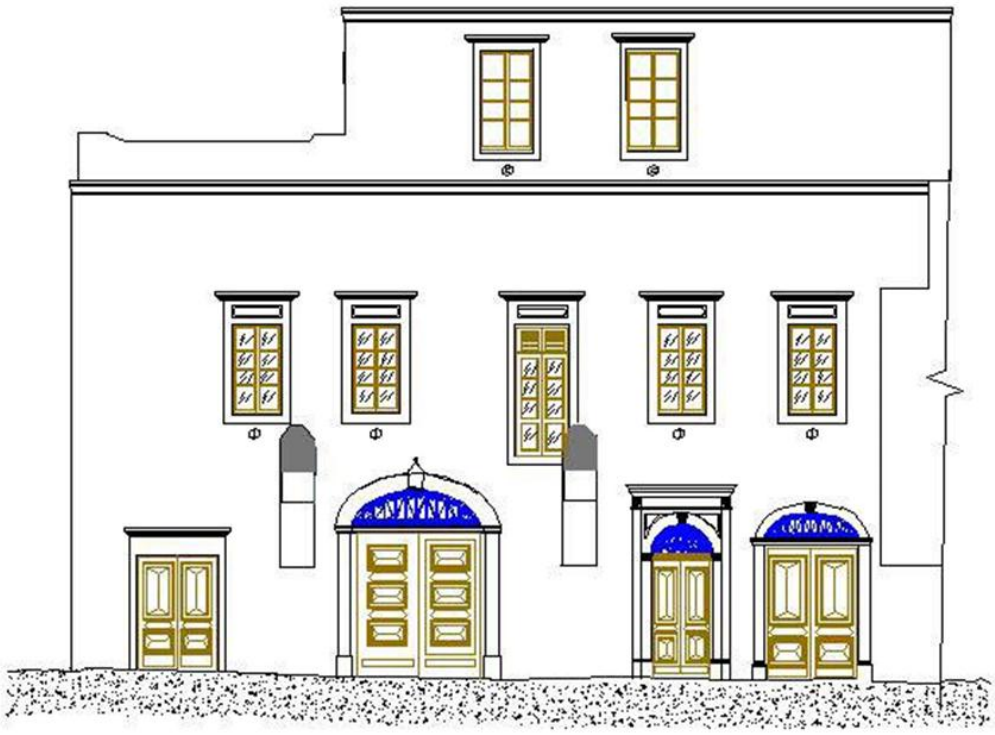


Figure 7.43 Side elevation current situation

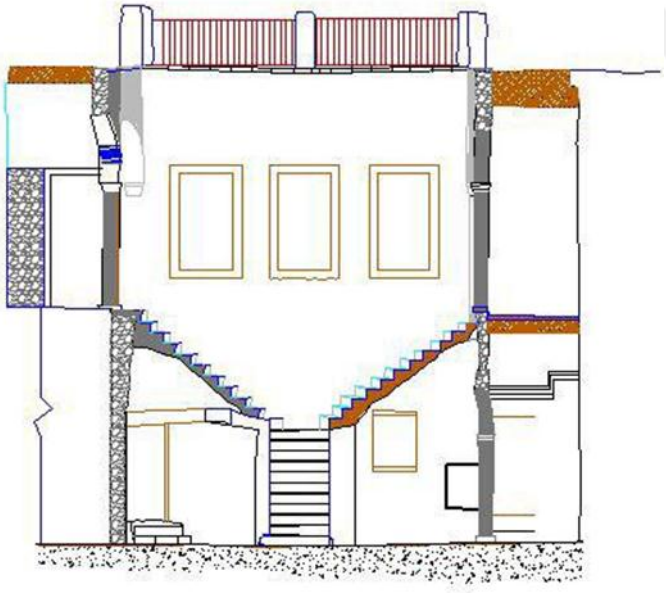


Figure 7.44 Section A-A

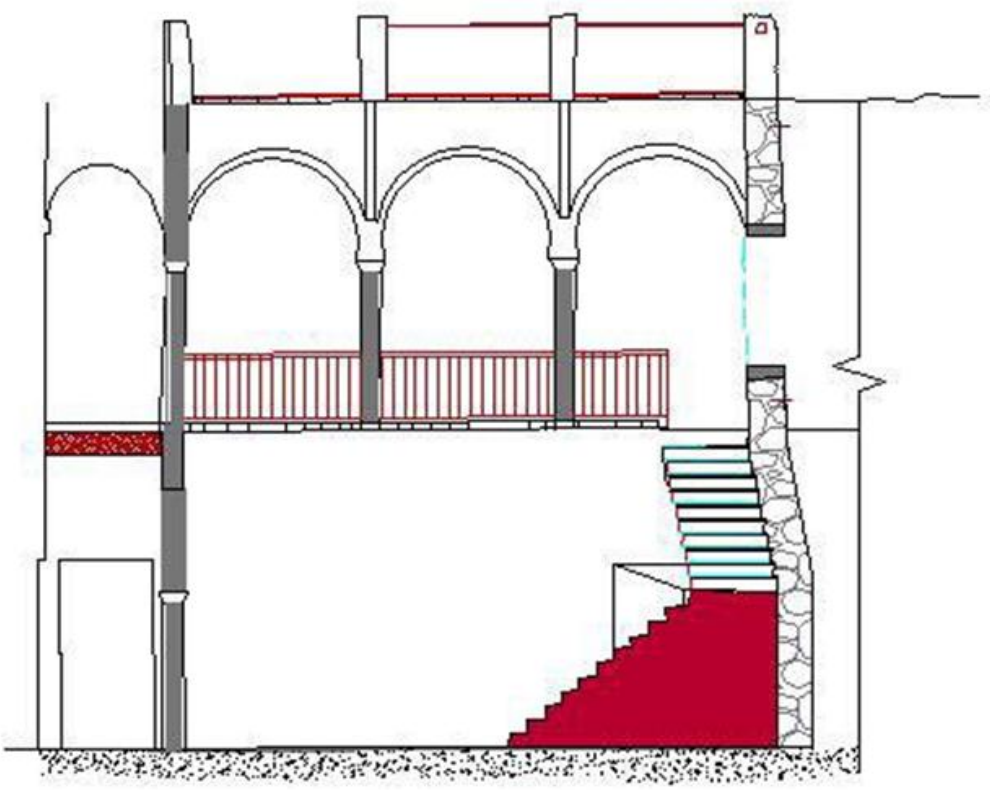


Figure 7.45 Section B-B

b. The Current Housh Situation

In the traditional historical Housh(s), after decades of collapse and devastation, which has lived between its sides and pushed its inhabitants to move away from it, life has re-emerged as difficult security, Here is the Housh Bait AL-Maal in his miserable situation because of the migration through many years and because of lack of maintenance and attention, which was presented by the suit of historical damage. Beginning with the entrance in the figure (7.46) and adorned by those ancient Ottoman inscriptions with a long history and give the Housh its historical value, which is almost lost due to negligence and lack of maintenance as shown in the figure below.

Figure 7.46 Images of the Entrance from the Outside

Here, in Figure(7.47), the state of inferiority reached by the Housh from neglect in all parts without exception of walls, windows and doors, and floor tiles, stairs, supports, arches, corridors.

This is the state of ruin and chaos that the Housh is going to achieve in a near-term and clear result in the near term because of the constant neglect of the periodic maintenance of these landmarks. There will be remorse from the people who lived in that area and the history will never forgive and will talk about how the Libyan people lost their heritage because of lack of maintenance to their buildings, this loss will be the same as like lost the Libyan identity.

Figure 7.47 Images of inside

The bishop of the courtyard on the ground floor and hallway on the first floor. Here, in figure (7.48), the rotted and decay by the ceiling and due to neglect of its periodic maintenance it's clearly shown a partial collapse of the roof in the corridor to the courtyard of the ground floor, The maintenance of this will cause the collapse of the rest of the roof, which dominated the inhabitants of this historic lowly mausoleum, which had a brilliant historical value in his reign of his disgrace and make it collapse completely before their eyes.

Figure 7.48 Images of inside

When looking at the architectural elements of the decorative and stent and arches stilts, as shown in figure (7.49), which shows the state of affairs that these symbols of ancient history have undergone.

Figure 7.49 Archaeological Architectural Elements

B. Housh AL-Bashawat (Dar AL-Qadi)

It is likely that the first use of the building of (Dar AL-Qadi) was a Housh of hospitality, or known in our historical sources are the AL-Bashawat, in accordance with the period of its establishment in the Qaramanli era. This is evidenced by the style of the existing architecture, as well as the buildings that are located in that area dates back to the same period, which formed a residential complex for large families of the aristocracy, and the oldest historical texts dwindled the history of Libyan diary that uses the building as a Housh of hospitality due to The al-Qaramanli era, specifically the era of the rule of Yusuf Pasha al-Qaramanli.

Al-Ayala is one of the great men of the Ottoman Empire and has positions in friendly countries in addition to the state's people who come to the city Tripoli from the provinces.

The establishment of the Housh of AL-Bashawat (Dar AL-Qadi) dates back to the Qaramanli in 1709 AH - 1835 AD, consisting of a group of rooms surrounded by the inner courtyard and open to the sky, and consists of two floors, a special suite for the reception of guests, which is the finest and most brilliant architectural buildings, the total area of 680 square meters, Libya map shows the location of the Housh in Tripoli as in figure (7.50). (Zubaydah, 2002)

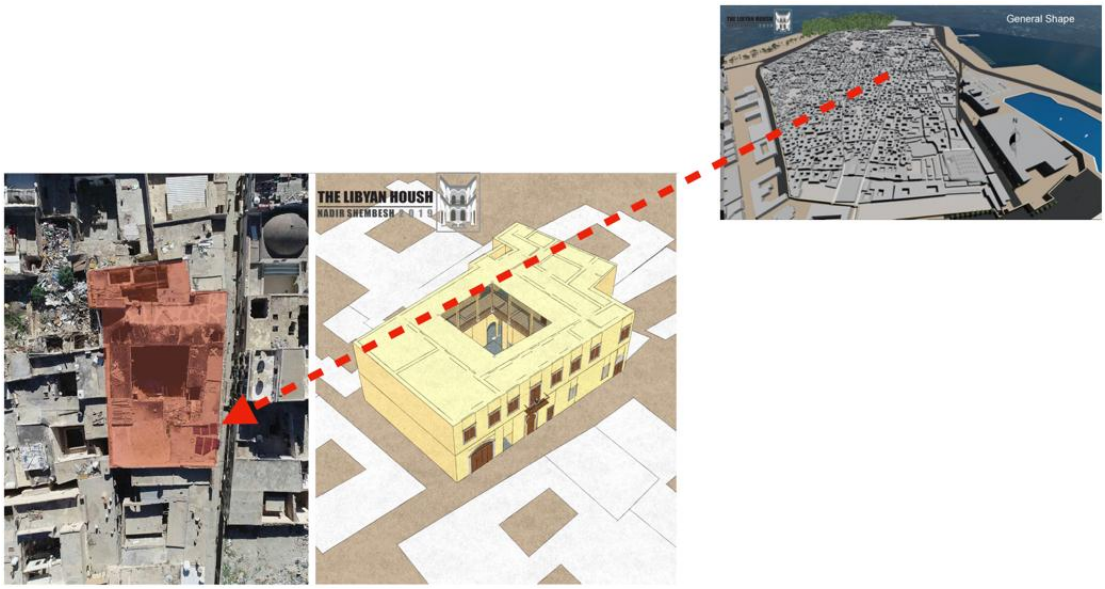


Figure 7.50 General location

a. Plan / Section / Elevation

These drawings and drawings illustrate the detailed distributions in the Housh AL-Bashawat (Dar AL-Qadi), which was designed in the Ottoman architectural style, as shown in the following architectural plans:

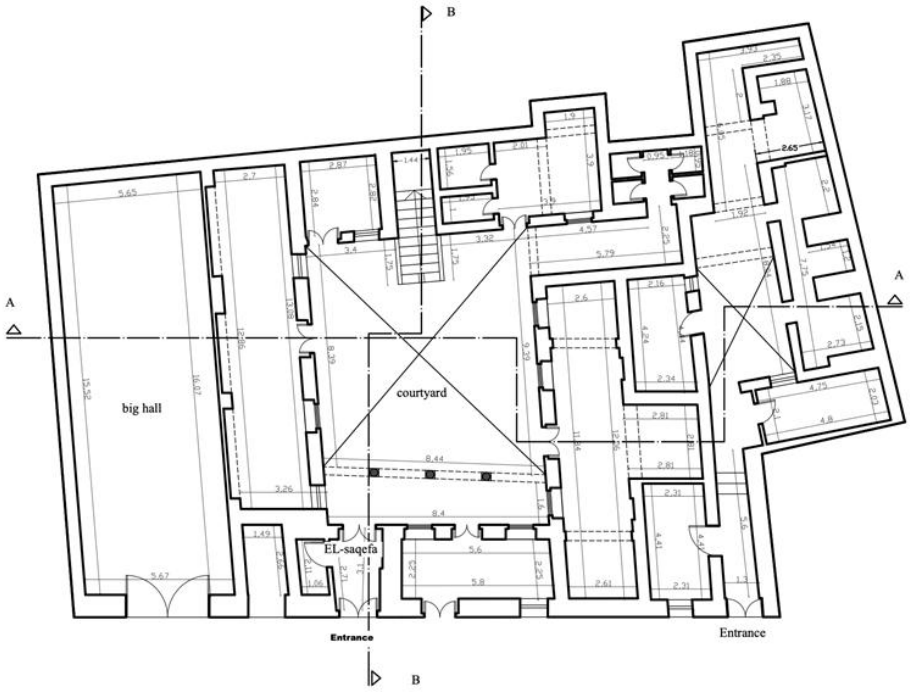


Figure 7.51 the ground floor

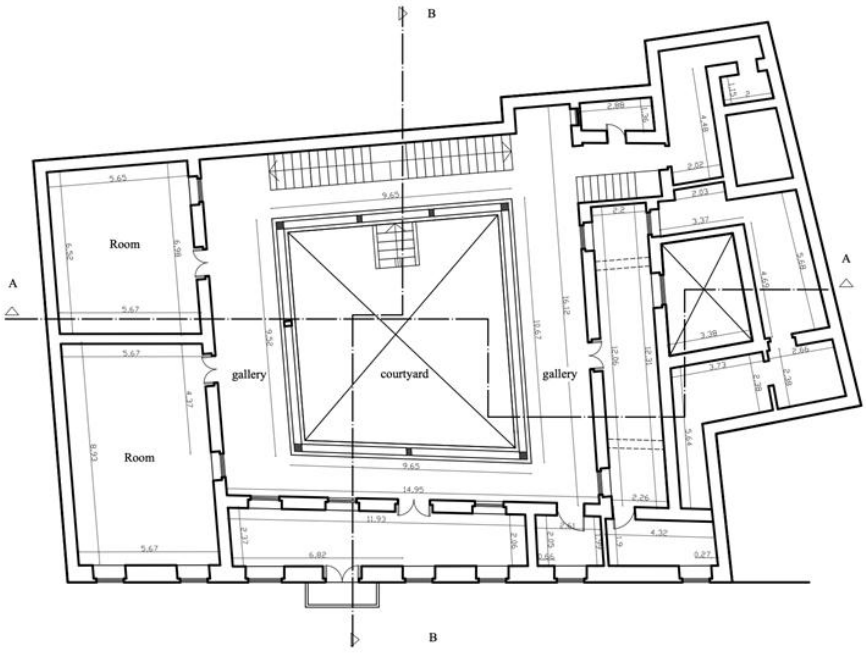


Figure 7.52 The first floor

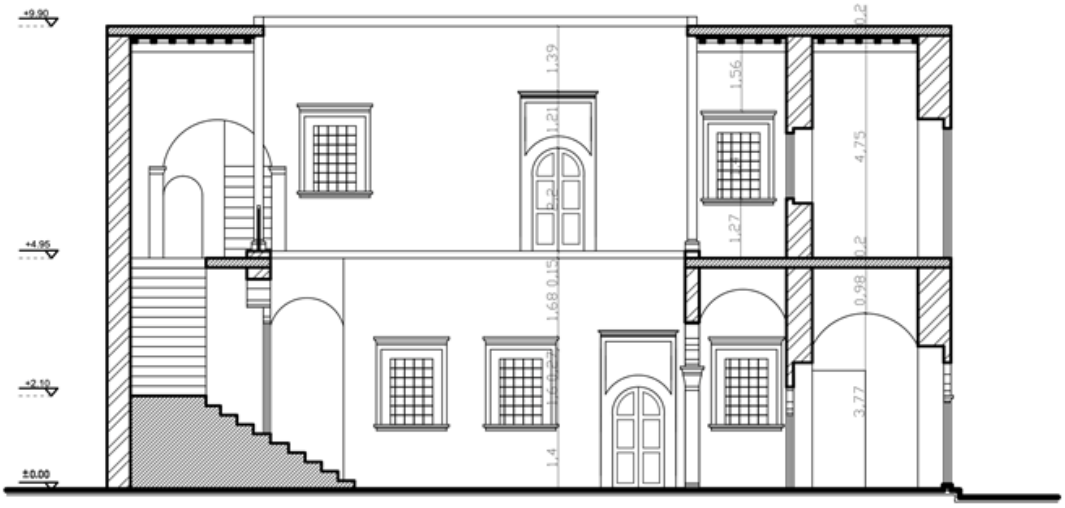


Figure 7.53 Front Elevation.

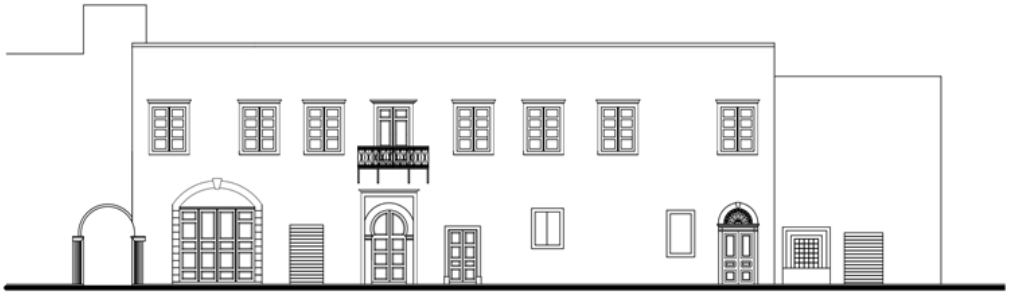


Figure 7.54 Section A-A

Figure 7.55 Section B-B

b. The Current Housh Situation

The style of Arabic Islamic architecture in the Qaramanli era was similar in the old city of Tripoli and was the elements of the architectural and detailed distribution of the housh, the main façade contains a total area of 964 m 2, the main building area is 786

m 2, the roof 680 m 2, the area of the adjacent building is "178 m 2" called hush alkhadam (servants Housh). And the main interface contains a large number of openings "windows and doors" (60%) of the total area of the facade. Surrounded by prominent architectural styles (ornamentations) as well as decorative elements, whether metal or stone and the architecture consisted of elements distributed as follows:

Al-Madkhal (The entrance): the building triangular entrances:

First Entrance:

Holds a number (46). It has a wooden door with 4 height, 3.20m in wide. It is topped by a semi-circular necklace with a metal ornament.

These motifs are also found in the upper part of the wooden door and in the middle of it. It is with the entrance to the entrance made of Maltese stone and there is a wooden cornice in the entrance that separates the necklace from the door

The door consists of two flaps, each of two parts connected to the joints of the border to match with the movement of the opening and closing the door, and the wooden door free of decoration Vin - some simple geometric shapes, "squares - rectangles - Oval forms are uneven in the Overcoming of drilling. And the door has a small copper door, leading to a rectangular "hall" room (15.7x5.50 m) as in figure (7.56).

Figure 7.56 First Entrance

Second Entrance:

Is the main entrance to the building and is number (42), and above the entrance is the horseshoe, decorated with a group of carved located at the top of the door "4 veins", in the center of which is the carved crescent element. In addition to these vases, there are no other decorations on the entrance or above the shoulders. The entrance has a prominent pedestal, and the entire entrance, including the frame, which is lined with a colored's metallic stone door, is colored's in brown as in figure (7.57).

Figure 7.57 The form of Second Entrance.

Third Entrance:

It holds a number (38) and leads to the servant's Housh, which is medium in size with a semicircle, with the key to the necklace, the formulation and the minimum income from the Maltese stone. The door is porous and consists of two flaps, with the exception of some very simple ornaments of squares, Copper handles, as well as on the left side of the door (Taqtaqp) of Copper, as in figure (7.58).

Figure 7.58 The form of Third Entrance of the Housh

Al-Fenaa (The courtyard): It is a semi-square shape, with an area of (76 square meters), with marble tiles, and the courtyard has a gallery and surrounded by semi-circular arches mounted on columns with crowns, as in figure (7.59). (Zubaydah, 2002)

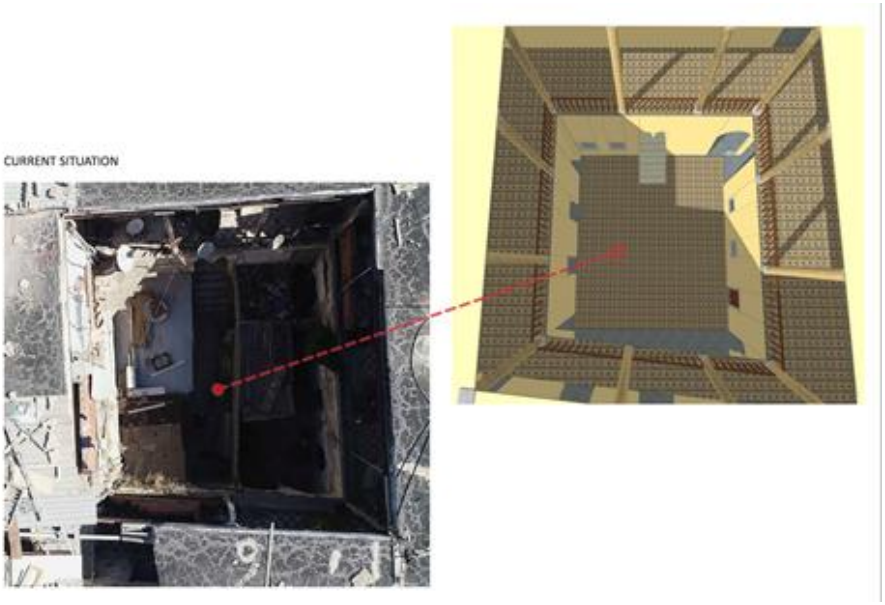


Figure 7.59 The form of the courtyard.

Al-Rewak (The gallery): The gallery is located at the entrance to the ground floor, and as the upper floor, which came in its entirety in the form of semi-circular arches.

The hallway has rooms each with a window overlooking the hallway, as in figure (7.60).

Figure 7.60 The form of the gallery (Zubaydah, 2002)

Al-Ghurfa (The rooms): The ground floor has 4 rooms, one of these rooms, Which is located to the right of the courtyard, and there is an intermittent vaulted roof, as well as the wooden ceiling, the entrance to the room, are two columns crowned inside, Some of which appeared outside, and on both sides of the entrance two sealed gates of Maltese stone. The traces of the slabs are shown on their top. The walls have a decoration wall, while the rest of the rooms have the same roof. The roof is vermeil or caramel and wood. They were given semi-circular arches, it is decorated with floral motifs of plaster, some of which have a crown, as in figure (7.61).

Figure 7.61 The form of the room (Zubaydah, 2002)

Al-Shebbak (The windows): The windows of the rooms are made up of several helical iron columns, and the windows have two frames. Each width is 15 cm, the inner frame is a vegetal decoration of plaster, while the outer frame is the veins of a separated by a century, as in figure (7.62).

Figure 7.62 The windows (Zubaydah, 2002)

Al-Sellam (The stairs): The first floor is reached by a staircase located in the middle of the side that faces the entrance to the building. The staircase is topped by two nodes with plaster decorations. The stairway consists of 10 marble staircases, with two sandstone pillars with decorative inscriptions on them. These grades are small square-

shaped tiled with white and black marble. This lobby is divided in two directions: to the right at 14° N and to the security corridor in the left lane at 15° (52°) towards the left gallery as in figure (7.63). (Zubaydah, 2002)

Figure 7.63 The form of the stairs

The arches are considered to be the archaeological monuments of the old city, especially the Libyan Housh. These arches have architectural functions to strengthen the walls of the buildings in the Housh to the aesthetic aspect, which gave the Housh an aesthetic peculiarity. Most of them were built in the Qaramanli era, some in the Second Ottoman period.

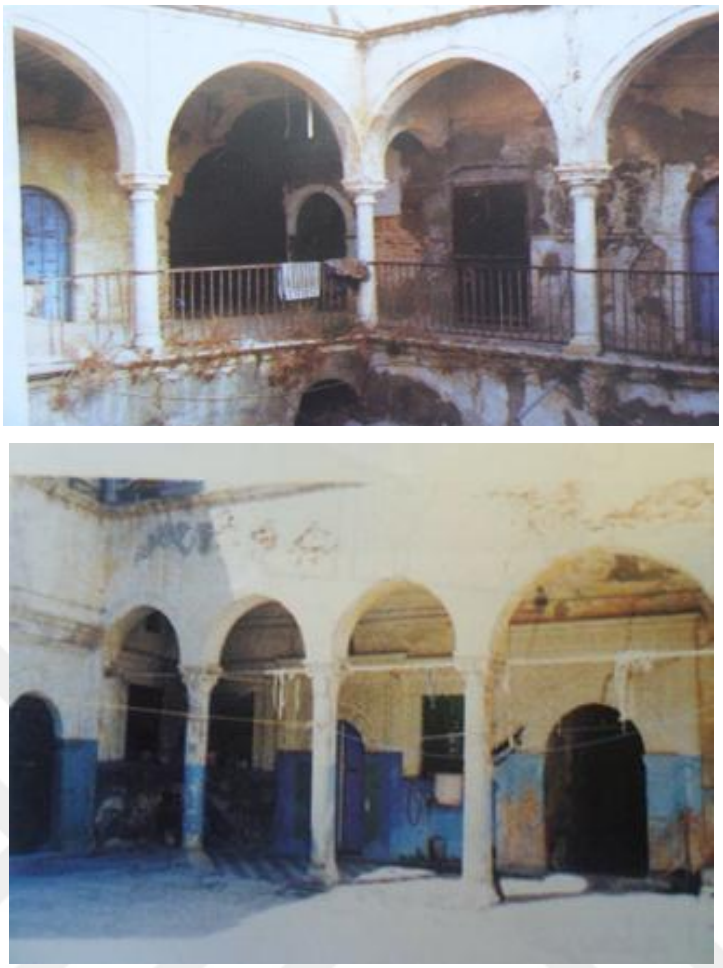


Figure 7.64 The form of the windows (Zubaydah, 2002)

7.3.Partially or Totally Collapsed Housh

In these Housh(s), the lack of maintenance in some places and there are those maintained with unsustainable material and non-studied quality and quality. And a lot of landslides suffered by these historic Housh(s), including what collapsed collapse, including the collapse of a total collapse of Hua, leaving only the anniversary in historical books only with regret. Examples of these Housh(s) are:

A. Housh AL-Qurji

The date of “Housh Al Qurji” construction back to the reign of Yusuf Pasha al-Qaramanli by the prominent naval commander Mustafa AL-Qurji. It is located at the intersection of Al Arba'a Al Arba Street and Al-Adra Square. The entrance door is No. 39. It consists of two floors. The ground floor is made of two marble columns and the

first floor contains a solar clock of marble was used as a civil court for the Italian occupation. (Engineers, 2016)

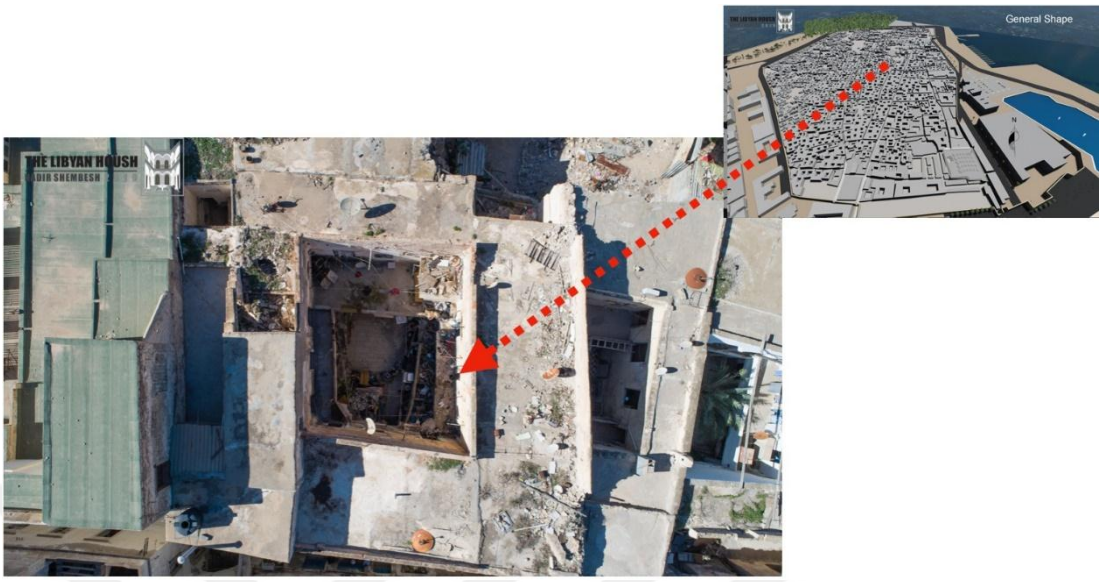


Figure 7.65 General location of Housh AL-Qurji

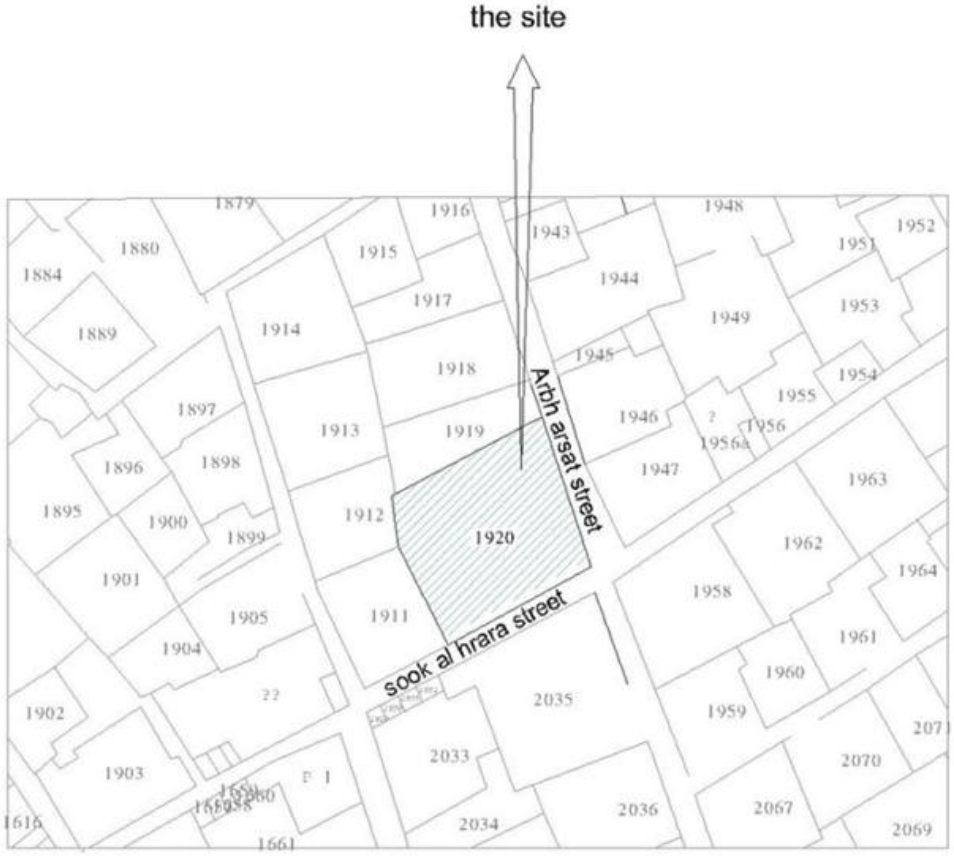


Figure 7.66 General site of Housh AL-Qurji

a. Plan / Section / Elevation

The original architectural drawings from the archives of the old city of Tripoli, which is cadastral and was redrawn and modified by the researchers.

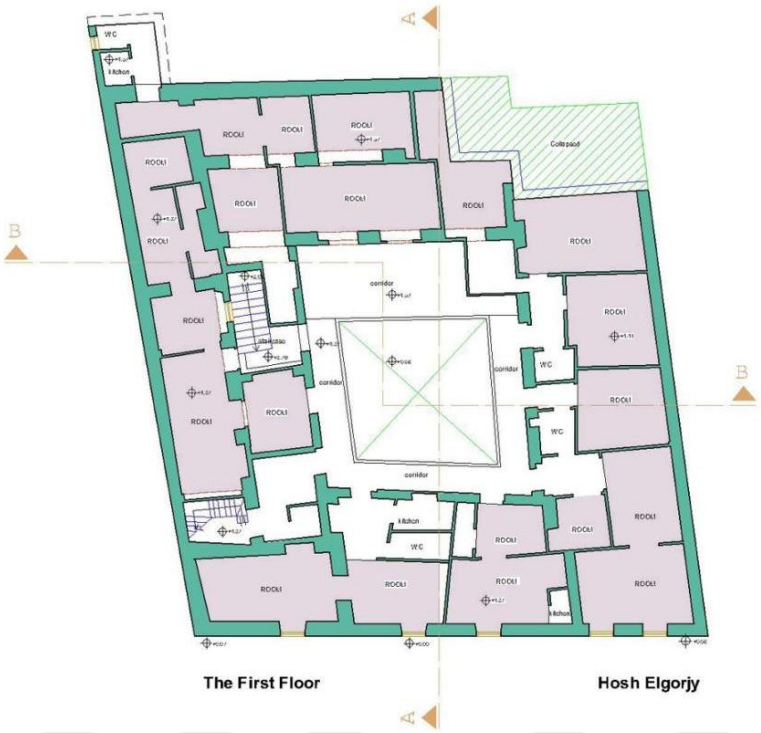


Figure 7.67 The First floor

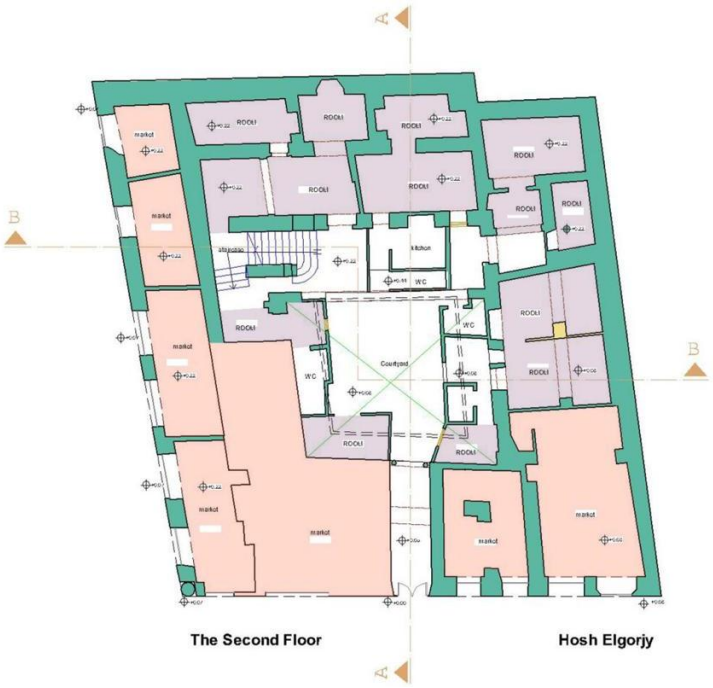


Figure 7.68 The Second floor

Figure 7.69 The Third floor

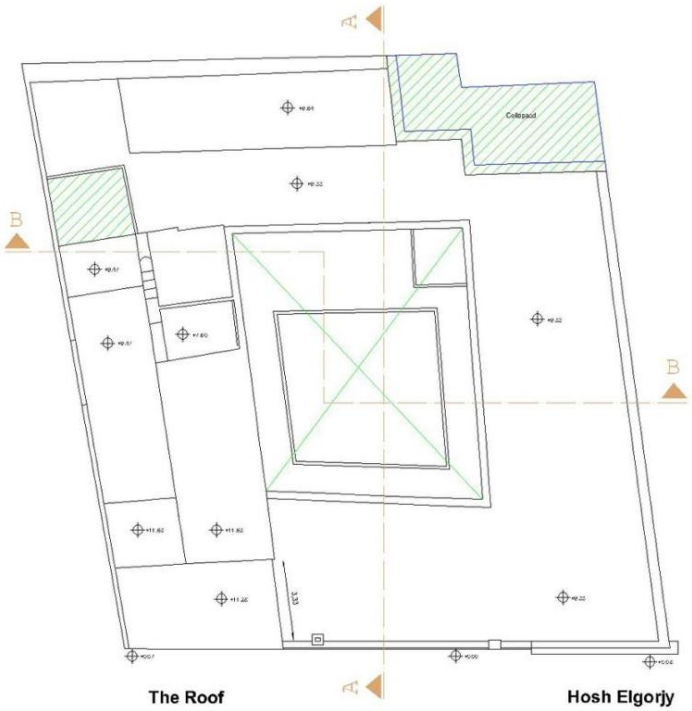


Figure 7.70 The Roof

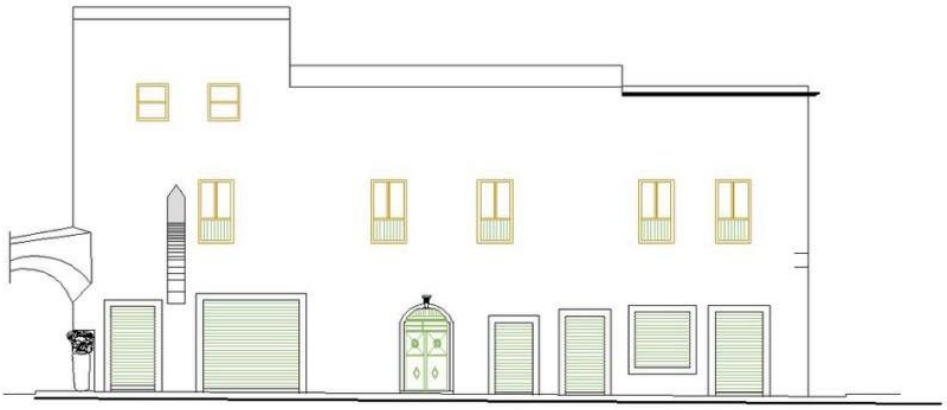


Figure 7.71 Front Elevation situation

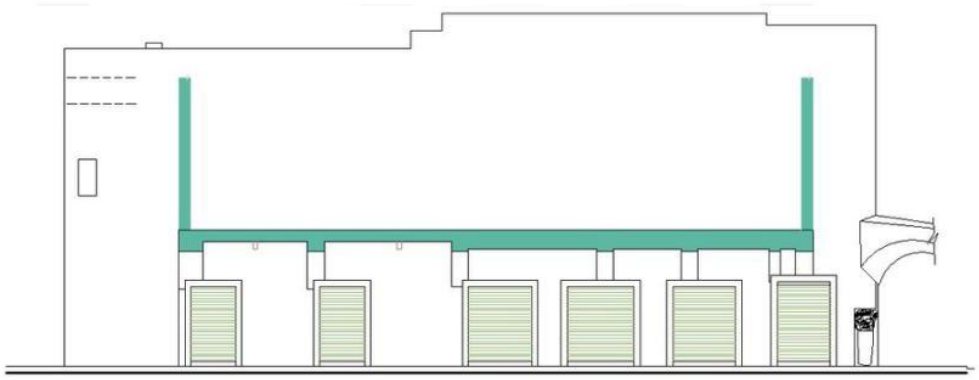


Figure 7.72 Side Elevation current situation

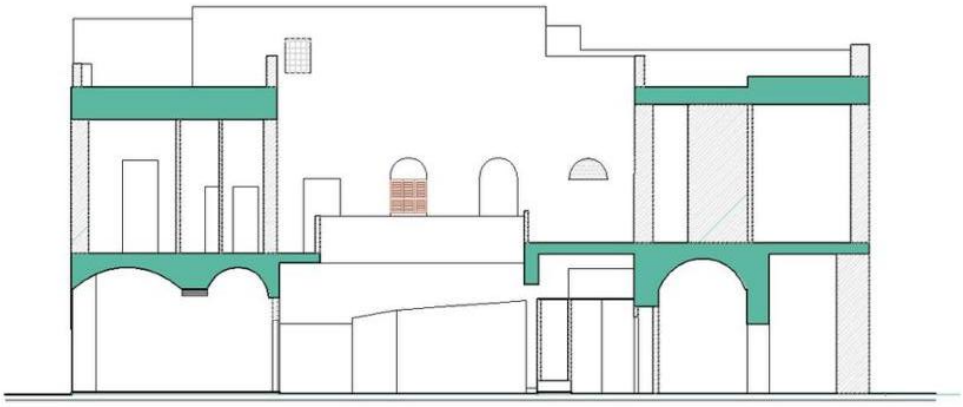


Figure 7.73 Section A-A

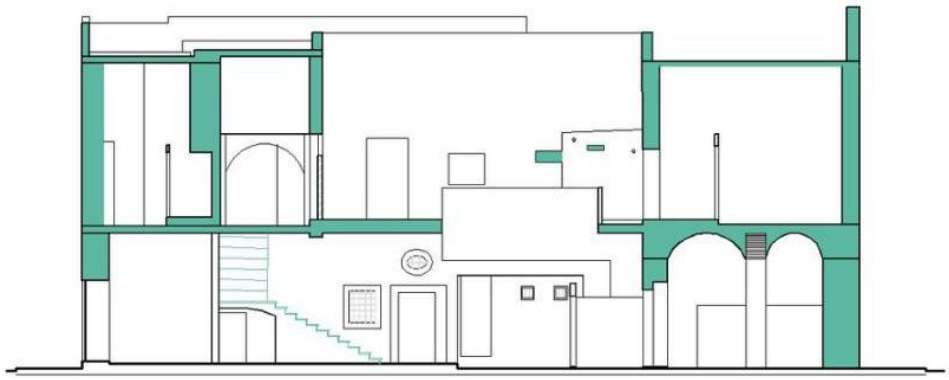


Figure 7.74 Section B-B

b. The Current Housh Situation:

The restoration philosophy was based on the reuse of traditional Housh(s). The process of reconstruction and rehabilitation started from the concept of preserving the historical and archaeological values of the old buildings as they are to be suitable accommodation that meets the requirements of modern family life.

The necessary services and meet the needs of the contemporary family, through the necessary adjustments and the minimal possible change in the elements of architecture and construction, in order to preserve the importance of these buildings and their historical value and archaeological. There are a lot of wrong practices in the maintenance of buildings Old and restored, which negatively reflected on the condition of these buildings.

The figure 7.75, illustrates the situation reached by Housh AL-Qurji because of the obvious negligence of the inability to maintain either from the owner or from the competent authority, which over time may cause the partial collapse Of the building and the total collapse of it too, This has happened to some of its parts as is the case in the architecture of the first floor. The figure clearly shows the collapse of the part of the building by negligence and the lack of the availability of continuous maintenance.

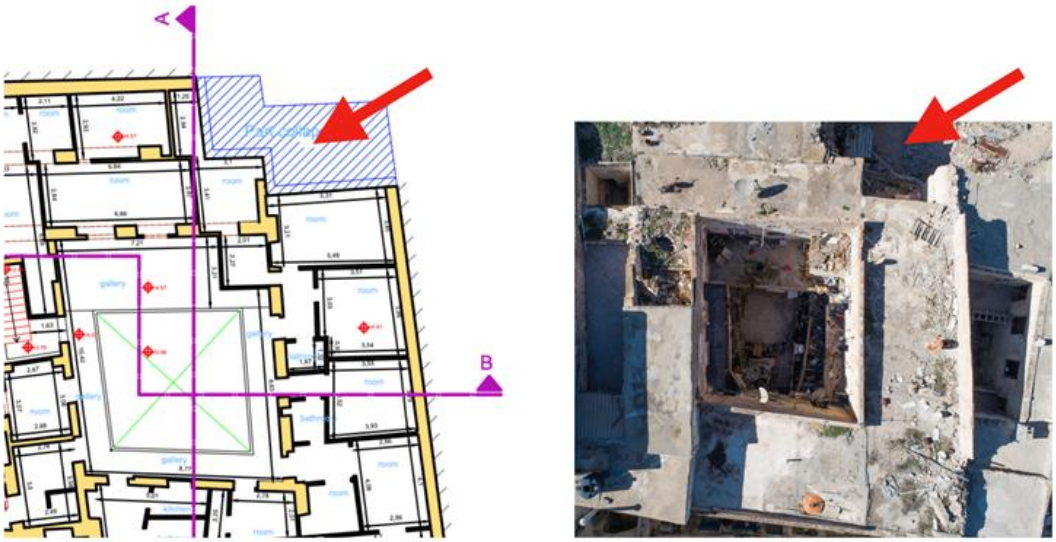


Figure 7.75 Aerial Photograph of Housh AL-Qurji

Here, in figure (7.76) of the outer entrance of the Housh, the collapse of the outer layer of the cement mortar, i.e. the outer layer of the plaster due to the lack of periodic maintenance, which led to the exposure of bricks and over time and exposed these bricks to the factors of erosion during the seasons Will cause the expected avalanches. The collapse of part of the brilliant decor that adorned the main door.

Figure 7.76 Images of the Entrance from the Outside

Entering inside of the Housh through the corridor, will be surprised by the bad condition that passes through the ceiling and the walls and the ground of cracks and

the collapse of the layer of the cover of the interior because of this neglect as in figure (7.77).

Figure 7.77 Images of the Entrance from the inside of Housh AL-Qurji

Despite the archaeological value carried by Housh AL-Qurji, the neglect of the phases of periodic maintenance is clear and clear, and through the figure (7.78), which illustrates the internal construction of the Housh courtyard and the collapses of the outer layer of plaster that encircles the walls as well as collapses of the gallery and cracks And the construction of materials that do not affect the restoration of Housh(s) that carry historical and archaeological value like the Housh of AL-Qurji.

Figure 7.78 Images of the Yard of Housh AL-Qurji

The figure (7.79) illustrates the greatness of the history of this mansion and its brilliant shape in the custody of the wall. This figure shows the wall shadow clock that dates back to the Qaramanli period and through it, the sun and shade were determined in the time of day by entering the sunshine to the courtyard area.

Figure 7.79 The form of the wall Shadow Clock

As shown in figure (7.80), the stairs and the cracks in the walls and the change of the floor tiles, which were restored with marble, contrary to the type and shape of the original floor of the courtyard of the courtyard. This reason is not only due to neglect, but also due to lack of awareness and culture restoration and preservation of historical buildings and quests its inhabitants.

Figure 7.80 The form of The Stairs.

All Wood and iron works from windows, doors, and mshrabya are in very poor condition of fragmentation, decay and loss of some parts and there is what has been changed by new types that do not meet the specifications and standards of treatment and restoration of old historic buildings, which led to damage, as shown in figure (7.81).

Figure 7.81 The form of Wood and Iron Works

It is also noted that there are large amounts of dust, waste, and dirt in many parts of the building, as shown in figure (7.82).

Figure 7.82 Dust and Waste Accumulation

There are some archaeological architectural elements that symbolize the greatness of the history of this ancient mansion, which is still very good, such as the decorative

column capitals and the floating pillars, and the arches in the corridor of the main entrance, as shown in figure (7.83).

Figure 7.83 The form of Archaeological Architectural Elements.

B. Housh Al-Qarqani

It is built on two floors and was used by Al-Qarqani. It dates back to the Qaramanli family. It is located on the street of the EL-Sarai Arch de. It is numbered 79 and keeps this building as a witness to the great Duke of its design, especially the wooden roof decorated with one of the summer rooms on the first floor and the marble fireplace in one of the winter rooms. Ali Al-Qarqani, this is the Housh it was to host dignitaries and celebrate his official events.

But unfortunately with the passage of days and without the periodic maintenance of this ancient great edifice with its historical origins, was left of this Housh only a residue from the entrance of an interior room because of unjustified neglect. When passing by this great edifice in his time, he was shocked to see the area allocated to this mansion transformed into a piece of land to turn into a parking lot. As shown in figure (7.84). And this is called the authorities responsible for the speed of maintenance and restoration of the rest of these historical landmarks. And as an architectural researcher interested in this matter it is imperative to highlight this matter, which is not negligible and save what can be saved.

Figure 7.84 The remaining Housh Al-Qarqani

7.4.Conclusion for Chapter Seven

In this chapter of the study shows that the ancient city of Tripoli contains many historical Housh(s) of outstanding architectural character with unremarkable details in the traditional Libyan Housh (Housh) in view of its architectural plans and its general location, in addition to its architectural elements.

And the method of construction and furnishing that provide comfort to its inhabitants as well as its treatments for the various weather conditions that pass through the seasons of the year, which are in the courtyard, balcony and corridor, and through the rise of the sun and shade in the building.

This makes them sustainable and environmentally friendly. As well as the decorations that adorn the walls and brilliant ceilings alone, which distinguish those from other modern Housh(s), but unfortunately due to negligence, and due to lack of maintenance began to reduce these Housh(s) because of the partial and total collapse of many of them.

In essence, the elements of the traditional Libyan housh, which consists of stone, brick, and marble, are primarily a collection of cultural values by looking at it aspects in terms of overall design. Unfortunately, modern social culture has destroyed many traditional buildings and replaced them with new buildings that have nothing to do with the social environment.

Traditional historic Housh(s) have become intertwined in their design outside the historical and social character. In addition, all these old Housh(s) are often rejected, Even if it has a high historical value. Since many of the traditional Housh(s) within the walls of the old city of Tripoli are in poor condition, the infrastructure is so poor that

some of them are destroyed and others are a road to fall and the other does not leave a bad memory for some pictures.

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CHAPTER EİGHT: CONCLUSION

The condensation of the buildings which distinguishes the city of Tripoli whereas there are for example more than 480 Housh(s) at a distance of one hectare that refers to the measurement or size of the internal Housh and then constitution of the Housh from one, two or three stories shall be subject to certain rules not to be transcended by the component of this Housh no matter the reasons.

Hence, there are positive and required conditions in the Moroccan buildings in the Islamic city as per the following:

A. Appropriateness of height or altitude of such Housh(s) with each other. Hence, the Housh shall not rise over the general pursued height.
B. Equilibrium and equality of all the measurements of the constructional elements to the size of the ordinary building.
C. Conformity of the rates of building in such a way that man is able to see the other neighboring building from lower to the upper in the quarter of closely packed buildings and consequently, he cannot see anyone inside the neighboring Housh(s).

The functional relationship that characterizes Arab Islamic architecture does not always preclude the possibility of decorating buildings. The facades of the old city of Tripoli are adorned with decorations for many architectural buildings. Doors and windows are decorated with iron windows, wooden windows, and thick wooden doors, white marble and enameled tiles used for architectural or decorative finishes on the facades.

The design of the traditional Arab Housh also preserves its privacy and intimacy. Its overall layout, connection, and center of attraction is the inside, making the Housh not overlooking the neighbors and cannot be seen by neighbors. Guests are allowed access, but with privacy inside of it, usually, the guest's room overlooks the street.

It represents absolute freedom more than people from other parts of the Housh, who move freely inside and outside without violating the intimate privacy principle. The windows are usually narrow and small on top of the walls, unlike modern homes whether they are apartments in self-contained large buildings or Housh(s) Central walls. It hides over shows and obscures more attention.

Thus, the Arab Islamic building is not lacking in finding new, vital and environmentally sustainable solutions to its functional mission, which built upon it the appearance and shape of the architectural city which was composed and designed with a voluntary purpose in conscious humility and based on traditional knowledge.

The ability of Housh(s) to adapt to different urban conditions, such as the importance of air above public and private space, are the main components of urban heritage because they are the source of the characteristics of the structural fabric (covered corridors, narrow streets, open to the street, with or without an exhibition or gallery) Even among the historical heritage must be preserved.... The old city of Tripoli had many historical Housh(s) of distinctive architectural character, but unfortunately due to negligence and lack of maintenance began to diminish and decrease due to the partial and total collapse of many of them. As mentioned earlier in this study, some of these maps show the large spaces that caused the total collapse of buildings and historic Housh(s). The study of some of the architectural study documented and accompanied by recent photographic images of the work made by the researchers.

8.1.Architectural Processors of Libyan Housh

Through the architecture engineering history, the engineers dealt with residence introducing several architectural elements that emphasize the engineer's skills, such as the yard which gave the home and the inhabitant privacy, as well it can make the Housh colder in the hot summer seasons, and warm in the cold winter days, and it provides the Housh with fresh air which makes living through this Housh(s) healthy, this is one of the advantages of sustainability of traditional Housh(s) which distinguishes Libyan Housh from another kind of Housh(s), there are many other reasons for that like:

Fountain: cooling the atmosphere of the Housh.

Air Purifier: cooling the atmosphere and exclude -air the hot wind which accompanied with dust, as we noted in this study.

Small openings or holes: to soften the air and protecting from the sunlight as well as it gives privacy.

Density and use: Al-Housh provide the inhabitants a suitable solution by taking a small area to build it, it doesn't want a huge place to build Housh, where the inhabitant achieve the best possible spatial distribution and the smallest possible area of the city.

Lighting: the residents of Al-Housh have a chance of lighting through two ways the direct and indirect and that does belong to the Housh constructed way, and how windows placed in it, but the Housh gave a good chance for the residents to have a light in their Housh(s) gradually.

All of this distinguishes the Libyan Housh and make the Housh a good place to live in for a long time, and gave it sustainability.

8.2.Architectural Heritage Preservation

When it came to mind the word "preservation" we can find it is not a simple word or a word with one meaning, it is a word full of meanings it means Maintenance and prolongation of traditional Housh, and preserving the elements which contained by Housh, whether historical or artistic elements, Preservation of heritage it is a kind of work which done to keep the identity of the Housh.

The maintenance: repairing and restoration job, considered as one of the most important jobs which makes Housh a better place for living, all these jobs are done to fix the bad effects on the Housh, which happened by natural factors or by years is considered as a better job to do, more than reconstruction of the Housh. The preservation job have a good effect on the traditional buildings, because the maintenance and restoration job both considered a very capable of reconstruction, and by giving the best results, whether if it's used for Housh itself which can be used through the years as a museum, hotel or a café, the most important part here is giving back the identity or the historical importance of these buildings.

The visual protection: In addition to protecting the physical and historical aspects of the building, the visual character of the Housh must be protected which give specialty to the Housh and make it different from other Housh(s) by taking care of electric cables and giving a special number to the Housh(s) at last taking care of external lighting which will give a good impression about the Housh or the whole area.

Adaptation to reuse the functional relation: using traditional Housh(s) or Housh have a good effect on the economic, it considered as an effective policy to protect the architectural heritage from vanishing, Due to a lack of regular structure and not being used as a Housh for many reasons, it is better to use this Housh another functional which will make use of it financially and preserve this historical heritage.

Using local materials and traditional techniques: Using the local materials and traditional techniques should be more preferable than using new the materials, but that's don't make the new materials as something forbidden in constructing this traditional building it also can be used when there is need to use it.

Sustainability: The purpose of Preservation is to achieve more sustainability of the building by traditional skills, this movement has been developed over time and tested by using materials which considered as an environmentally friendly which make this kind of Housh(s) more sustainable, as well as the positive contribution to the quality of life of the community. For example, Housh Hassan al-Faki is still charming and still hasn't lost the historical identity because of taking care of it and maintenance.

This study dealt with number of examples about the traditional Housh(s) some of these Housh(s) were maintained and repaired, while other Housh(s) were neglected which led to collapse a huge number of these Housh(s).

8.3.The Challenges Facing Housh

The most important challenges facing traditional heritage Housh(s)

1. The lack of a legal framework to protect against the abusers.
2. The guidelines are limited and unclear to make more awareness for the importance of this heritage.
3. Family property rights are not clear and considered as a complex process for these historic Housh(s) especially the lack of accurate documents over time.
4. Unplanned urbanization, by owners or investors and neglecting the rules of Supervisory bodies.
5. Lack of social and cultural awareness to the importance and value of cultural heritage as a source of economic and historical development.

8.4.The Reasons of Disappearance

Using cement and other modern materials in constructing the Housh, can be considered as a line which dividing between modern building or a traditional building or even as heritage these new materials have facilitated and make the construction procedure going faster, while in the past it used to take more time, which gave a chance for new generation to show up which contains engineers with new way of thinking, Which accumulated the construction experiences, as well as the great influence of the Western building patterns which entered Arabian or Libyan country because of the emergence of oil and because of foreign offices which opened to serve this foreign people this offices came from different architectural schools this also caused the loss of architectural identity outside the boundaries of the old city, which led to the city lost the architectural identity outside the boundaries of the old city, which hastened the residence to move out the old city and start living in new and modern building, which led to neglect their old and traditional Housh, at last the loss of the legacy of their ancestors and leaving it to the various to the weather factors, these will lead to the disappearance of these old Housh, which will lead to losing the identity of the city This is what we tried to mention in the study.

What made Libya Housh(s) an excellent environmental and social building, it is not only about the materials environmentally friendly methods, but because the palace was designed to perform many tasks not only to provide a place to sleep and live for its people but also it's considered as an organism in the body of the city and various social events. All of which made it one of the smartest and most beautiful sustainable architectural solutions to live that the architect could not have overlooked.

8.5.Recommendations

1. The need to preserve the cultural and social heritage, on the basis of communication and continuity with this heritage through specialized devices.
2. Conducting special courses and seminars to identify this heritage and how to protect it.
3. Any valuable urban environment must respond to the cultural and social requirements of its inhabitant's traditions, values, and principles.

4. Taking care about the building materials which used to construct the heritage buildings, which have a significant impact on the environment in addition to the importance of highlighting the architectural and decorative elements in the heritage facades in proportion to modern construction techniques.
5. Taking care of the elements which give the Housh the historical shape and the inhabitant sustainability to live in these Housh(s).
6. Reviving the architectural character of the modern building by introducing the architectural and decorative elements that characterized the heritage architecture in order to preserve the unique architectural character of this city.
7. The needs to preserve the Arabian architectural character by constructing an open system of the horizontal plan and by the preservation of the general configuration of the Housh, including architectural spaces and distinctive elements of heritage architecture.
8. Providing the special materials for restoration in the local market and providing the necessary staff to enable the residents of Al-Housh to maintain the specifications and revive this heritage and the ease of living there.

8.6.Conclusion

Cultural heritage is what the nation inherits from the ancestor's, as inheritance is distributed, as well as the heritage that is the historical, cultural and spiritual experiences to the coming generations. The city of Tripoli was a great opportunity for the emergence of the arts and its diversity, due to the history of the city, which witnessed different ancient civilizations Phoenician, Greek, Roman, Arab, Islamic, and Ottoman, as well as many countries, colonized the city for a few years, the Islamic and local culture is considered as a civilization that is often unknown to Moroccan art in North African at other times.

The most important artistic achievements that emerged during and after about four centuries in terms of architecture, aesthetics and peculiarities, as follows:

1. There are three methods which combined and melted with each other just to form a distinctive part of this historic city. The local environmental influence is the art of Andalusian Morocco and finally the Turkish-Ottoman influence. The style and artistic taste which developed and generated aesthetic and artistic values that helped

the development of the city's plastic arts due to its historical and cultural extension Where the influence of the Turks and their influence on the local arts and local Tripoli, especially in some architectural designs and the rest of the other decorative arts.

2. The local environment has been an important factor for the evolution of the visual aspects of the historical era and the logical expression of the country's religious, social and political conditions.
3. The heritage of architecture has shown many treatments at the general level of urban design and architectural design, which have formed successful solutions that have contributed to the creation of a livable environment benefiting from natural energy. Traditional architecture has provided solutions to climatic problems facing the communities in which they have emerged, harmonized with them and overcome their acute environmental influences. It has proven that these traditional technological methods are rarely expensive either in terms of material creation or use of energy to operate them, as well as being comprehensible and understood by their users.
4. Each civilized and cultural entity works to develop a distinctive urban environment related to that civilization or culture, which conforms to the beliefs, methods of living in this entity. There is no urban environment to contain distinctive architectural characteristics that express a particular heritage.
5. phenomenon of light and shadow is very important in building the relationship of the shapes, the elements and thus controlled the intensity of light by creating high white walls with small holes to block the light and soften the heat through the decorations play a role of floor sometimes and as an air condition at other times with the possibility of make space for the flowing air through it.
6. The fine art of decoration and architecture in the city of Tripoli has fully coincided with the nature of the country's climate in terms of light and extreme heat in most of the seasons of the year, one of these solutions were embodied in white color, that painted by the walls of the city of both side the external one and the internal one, while the other one was the small size of windows, and the space between the buildings it can be considered as a single object, which reflects the shadows that contributed greatly to lowering the temperature and give a comfortable feeling.
7. The style of conscious simplicity that dominated most of the city's architecture and arts, which has played a major role in producing forms of splendor. Hafez Al-Hosh

Al-Trabelsi, a local artist in the architecture arts plays a great role in producing forms of beauty and splendor.

8. Urban communication is very important for the successive generations in the cultural entity of any human being. The most important goal of this urban approach is to obtain an authentic and reliable present, which represents honor and respect, as well as it based on a strong foundation which derived from the past. In addition, there is a kind of sense to make a connection between the past and future of this civilized entity Nations and the other entities.

Elements in the vicinity of an urban environment are closely linked to the customs, traditions and cultural and social values of society. Any society in this word has a right to create an appropriate urban environment that suits its cultural and social identity.

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ANNEX 1: ARCHITECTURAL VOCABULARY OF LIBYAN HOUSH

	Arabic Pronunciation	The Meaning
1.	**Al-Housh**	House
2.	**Al-Kheama**	The Tent
3.	**Al-Kahef**	The Cave
4.	**Al- Jabel**	The Mountain
5.	**Al-Qoba**	The Mud Domes
6.	**Al-Haaet**	Walls
7.	**Al-Akatef**	The Shoulders
8.	**Al-Sakef**	The Ceiling
9.	**Al-Qarneizah**	Al-Qarneizah
10.	**Al-Chechia**	Chechia
11.	**Al- Mizab**	Waterspout
12.	**Al-Madkhal**	Entrances
13.	**El-Bab**	Door
14.	**Al-Aataba**	Door step
15.	**Al-Haded**	Ironwork
16.	**Al-Zilaiz**	Tile Flooring
17.	**Al-Shebbak**	The Window
18.	**Al-Dawaya**	Daylighting
19.	**Ein Al-Zerzur**	Ein Al-Zerzur
20.	**Al-Fenaa**	The Courtyard
21.	**Al- Amowd**	Columns
22.	**Al- Taj**	Crowns
23.	**Al- Qatron**	Handrail
24.	**Ceramic**	Tiles
25.	**Al-Athath**	Furnishing
26.	**Al-Haseer**	The Mat
27.	**Al-Hamel**	The Rug
28.	**Kilim**	Woolen Carpets
29.	**Al-Bettanah**	Lining

30. Al-Wessadah	The Pillow
31. Al-Menddar	The Mattress
32. Al-Haaettiyyah	EL-Haaettiyyah
33. Al-Sedda	EL-Sedda
34. Al-khezanah El-haaeteya	Wall Closet
35. Al-Qalaliyyah	External Balcony
36. Al-Nabatat	Plants
37. Al-Sellam	Ladder
38. Al- Nafora	The Fountain
39. Al-Qous	Archs
40. Al-Mengar	Picker
41. Al-Rewak	The Gallery
42. Al-Iwan	Sitting Room
43. Al-Nkowsh	Decorations
44. Al-Ghurfa	The Rooms

ANNEX 2: ELEMENTS OF THE TRADITIONAL LIBYAN ARCHITECTURAL

The local architecture and climatic conditions have identified the basic characteristics of architecture in the Old City. They are represented by the fact that the facades of the buildings overlooking the street contain small holes of the openings. The lighting and ventilation reach the residents of the Housh(s) through an inner courtyard and the buildings are adjacent one to another. However, elements of lighting and shadows were, also used for engraving purposes in engraved forms in the facades and in the openings.

The Islamic culture, coupled with the monotony of the two capitals and the multiple Mediterranean capitals, has been engraved and decorated, often abstract. The forms of the natural elements sometimes seem to dominate (especially the flowers).

A.2.1. Architectural Elements

Architectural elements can be classified as follows:

Walls: They used the walls to protect the Housh from natural factors, and also separates rooms and give privacy to the people, between rooms and the hall, kitchen, and bathroom, and protects the sanctity and contents, and also it holds the building, as in the figure (A2.1). (Adeema, 2015)

Figure A2.1 The form of the wall Illustrates internal materials (Adeema, 2015)

The shoulders: The shoulders were used for the purpose of construction which is to support the high wall of the opposite building, as in the figure (A2.2)

Figure A2. 2 The form of the shoulders support the walls

The ceiling: The roof of the Housh consists of palm trunks, which are used as vaults. They are either full trunks or divided into two pieces. The logs are placed on both sides of the walls and arranged between 50 and 70 cm between every two planes. Above these columns are the palm leaf columns that follow in the direction of the orthogonal or slightly tilted on the walls in the form of good decoration is followed by a layer of palm fronds covered by the clay and light stones, and finally cover the ceiling with gypsum, as in figure (A2.3) represents the roofing and materials used for that Libyan Housh.

Figure A2.3 The form of ceiling with palm trees Illustrates internal materials (Adeema, 2015)

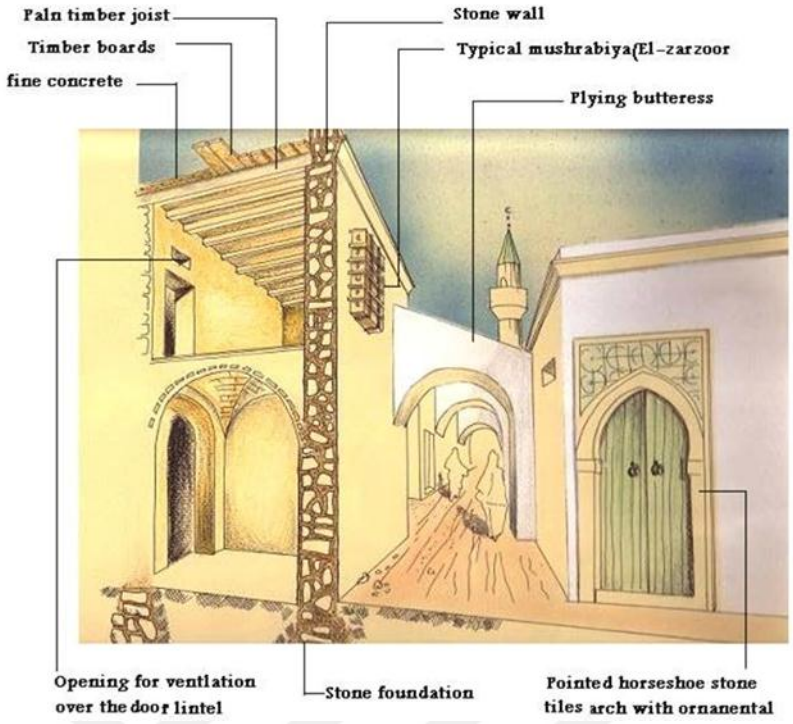

Figure A2.4 The form of Sector perspective shows how to build roof and wall (Adeema, 2015)

Al-Qarneizah: It has a relative appearance that takes a horizontal shape along the front of the Housh.

Figure A2.5 The form of Al-Qarneizah

Chechia: It placed in the top of the walls in the front and back of the Housh.

Figure A2.6 The form of Chechia

The Mizab (waterspout): It placed in the top of the walls in the front and back of the Housh. The waterspout on the surface were designed in such a way as not to allow the first plow to flow to the well, but the second and subsequent eruptions flow to ensure that the surface of the Housh has been washed away from it throughout the year. In addition, the plant was used to filter water from impurities before entering the well.

Figure A2.7 The form of The Mizab (waterspout)

EL-Bab, EL-Madkhal (Entrances): It gave a possibility to enter the Housh directly from the street by a tortuous entrance it usually located in the center of the Housh, It can be used as a waiting hall for visitors in large Housh(s). The service functions (toilets and kitchen) are separated (hence the name of the small Housh). The dwelling

can include two or two actual apartments, and the simple Housh will be doubled to become a basement Housh by reference to the basement that covers the basic spaces in the Housh. The Housh of the vault comes from a letter “T” and connected to the central space three spaces that form the t-fences and form the arena of family life but also used to receive visitors. (Adeema, 2015)

External doors: Often the old doors contain a rectangular part end with a semi-circular arch. Within the framework of a rectangle embossed and the doors of entrances to the interior open Sometimes the upper part of the door frame is embossed with ornate ornamentals, Another kind of entrance door is characterized by a half circle made of iron hammered in the arch, while only the anchors are located in the straight part of the door. (Engineers, 2016)

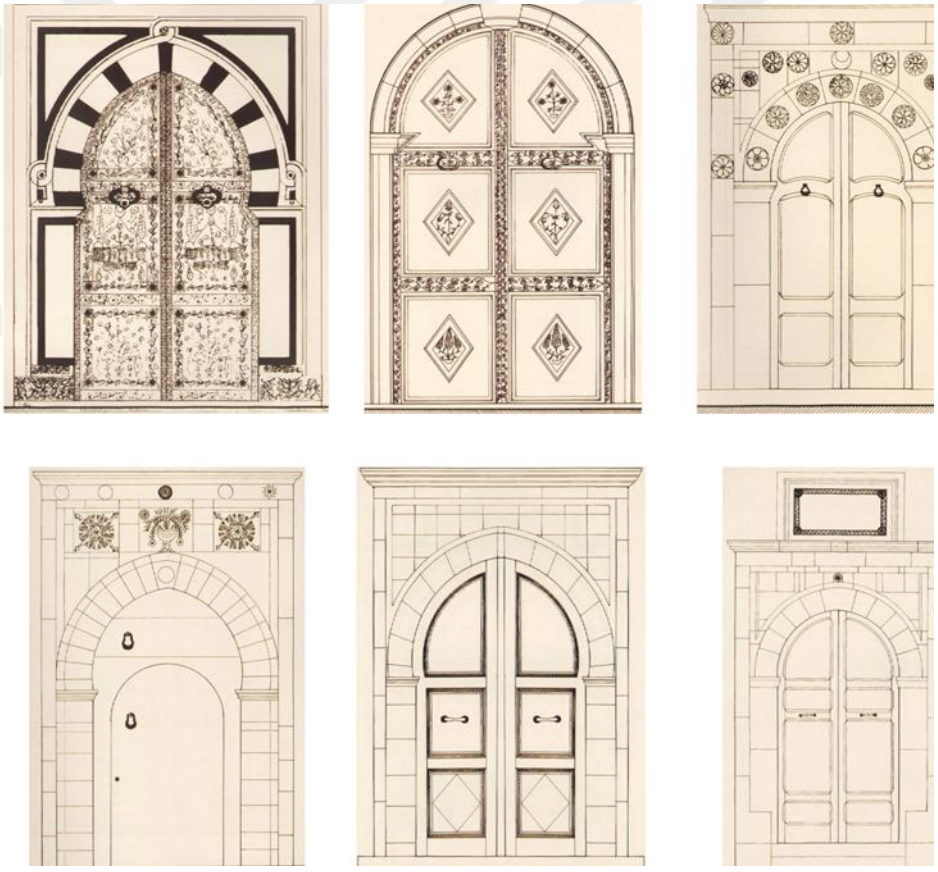

Figure A2.8 The form of External doors (Engineers, 2016)

A prominent inscription is placed at the top of the arch these doors are usually less than the previous type. The two doors they are similar to each other, are a common element in the façade. The two doors lead to the floor where the reception hall is located, while the other leads to the upper floor where the private rooms are located.

Sometimes one of the doors leads to the owner's Housh by driving. The oblique arch of the modern art era (dating back to the end of the nineteenth century). A large number of doors are simply rectangular and its frame is decorated with ornamentation. (Engineers, 2016)

Figure A2.9 The form of External doors (Engineers, 2016)

EL-Aataba (Door step): It is a slab placed in front of the entrance of the Housh, and it can be found in front of any other different rooms in the Housh, it can be founded in front of every room in the Housh.

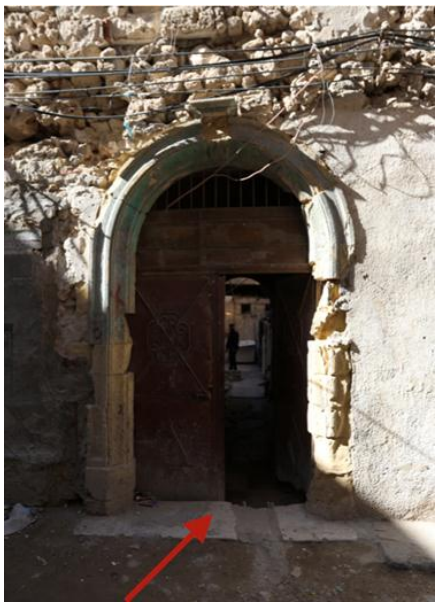

Figure A2.10 The form of EL-Aataba (Door step)

The internal door: The internal door of the Housh (the doors of the rooms) is considered the element associated with the room and the open gallery on the sahn (courtyard), the interior door of the room is rectangular as shown in the figure (A2.11)

Figure A2.11 The open door on the courtyard.

Ironwork: Iron is used in some architectural works such as ceilings, columns, and bases, but there are other uses such of metal works such as doors, windows, handrails, and door shutters, as shown in the figure (A2.12).

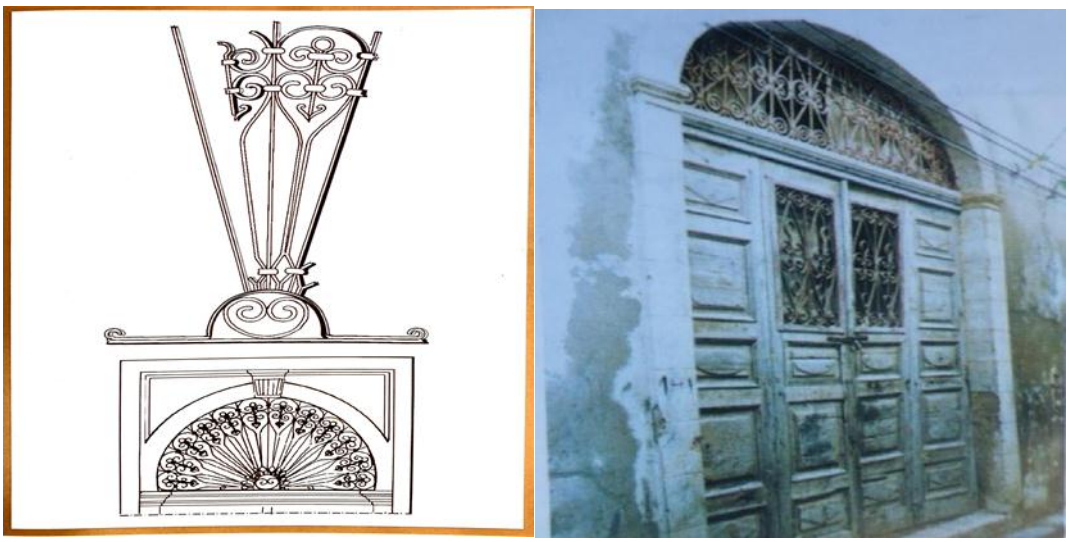

Figure A2.12 The form of Ironwork works in the door shutter (Tripoly, 1998)

Al Zilaiz (Tile flooring): It is a colored pavement used in corridors, courtyard floors and the hall in the Housh, thus forming geometric patterns, as shown in the figure (A2.13) (Adeema, 2015)

Figure A2.13 Al zilaiz (Tile flooring)

EL-Shebbak (The window): This considered as an important element of the Housh, and the windows were since a long time ago linked to certain conditions granted it, its shape width, and height, which are usually rectangular in shape and separated by a wooden doors, and controlled by an external window of the iron bars, as shown in the figure (A2.14).

Figure A2.14 The form of EL-Shebbak (The window)

EL-Dawaya (Daylighting): A small opening at the top of the entrance door, its purpose is to provide lighting and ventilation of the shed, as in the figure (A2.15) drain it into the tank or outside it. (Adeema, 2015)

Figure A2.15 The form of EL-Dawaya (Daylighting)

Ein Al-Zerzur: It is like Mashrabiya in the form and used in the openings used for lighting to isolate it from the outside, and has a high window through which give a view of the street, as in the figure (A2.16). (Adeema, 2015)

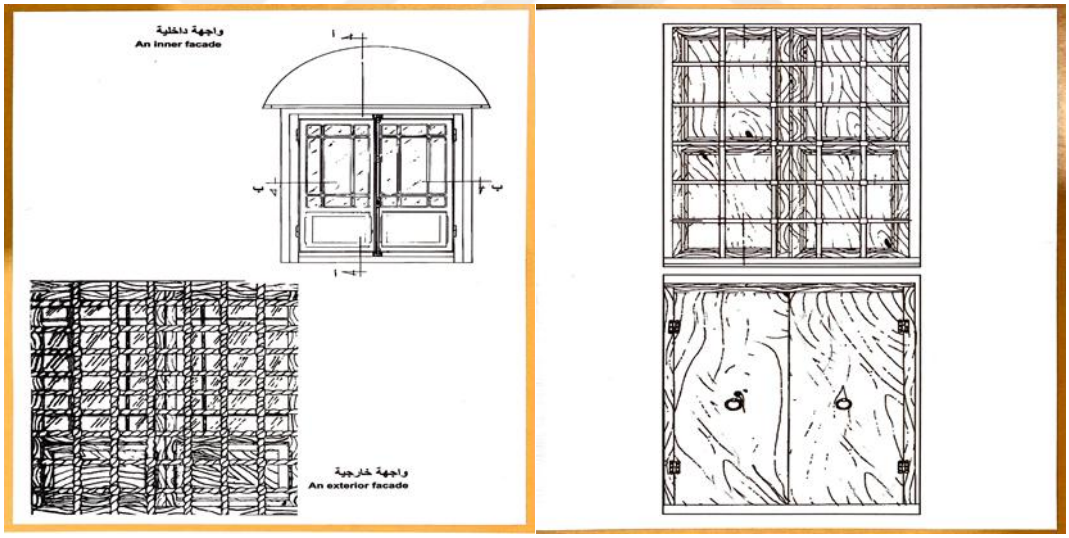

Figure A2.16 The shape of Ein Al-Zerzur (Tripoly, 1998)

Al-Fenaa (The courtyard): The traditional Housh of the nomads in the old city of Tripoli is called Al-Housh. Al-Housh is characterized by an initial characteristic. It is built around an inner courtyard or a courtyard that claims to be at the center of the Al-Housh, It is a distribution area for the rooms, the source of ventilation and the lighting of the rooms and a place of communication between the inhabitants of Al-Housh and rests or entertainment. It's a place to store food supplies Because the rooms that consist

of Housh and light and air from the internal courtyard, it is allowed to reduce the open facades on the road and thus obscures the inhabitants of the Housh(s) from the spying eyes of the neighbors and protects them at the same time from the noise and dust which came from the street, in addition, the introversion of the Housh based on the four sides Other semi-circular buildings. This is explained by the possibility of forming groups of Housh(s) and the existence of empty alleys.

Figure A2.17 The form of The Courtyard

AL- Amod (Columns and crowns): The traditional Housh of the nomads in the old city of Tripoli is called Al-Housh. Al-Housh is characterized by an initial characteristic. It is built around an inner courtyard or a courtyard that claims to be at the center of the Al-Housh, It is a distribution area for the rooms, the source of ventilation and the lighting of the rooms and a place of communication between the inhabitants of Al-Housh and rests or entertainment. It's a place to store food supplies Because the rooms that consist of Housh and light and air from the internal courtyard, it is allowed to reduce the open facades on the road and thus obscures the inhabitants of the Housh(s) from the spying eyes of the neighbors and protects them at the same time from the noise and dust which came from the street, in addition, the introversion of the Housh based on the four sides Other semi-circular buildings. This is explained by the possibility of forming groups of Housh(s) and the existence of empty alleys. (Engineers, 2016)

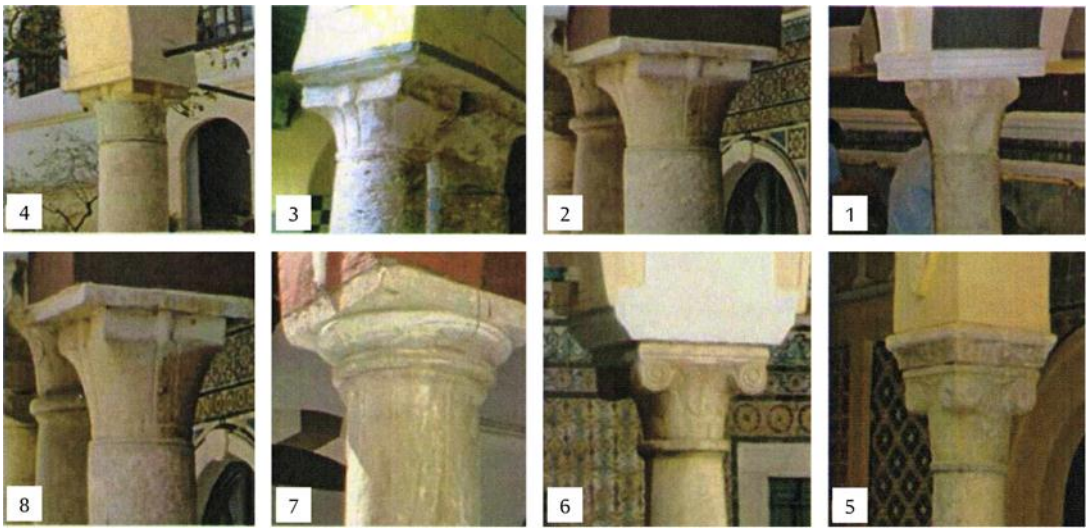

Figure A2.18 Columns and crowns (Engineers, 2016)

1. The crown may be an original column of the Hafsid style in the Kharuba Mosque.
2. A column of the Hafsid type in the 18th-century Ahmed Pasha Mosque.
3. Column of Hafs style in Ben Zakri hotel.
4. A copy of a 19th-century Hafsian column crown.
5. Local model in Al-Qarmanli.
6. A model of the Qarmani era in the Mosque of Ahmed Pasha.
7. Tuscan model in Ahmed Pasha Mosque.
8. Hafsa model in Ahmed Pasha Mosque. (Engineers, 2016)

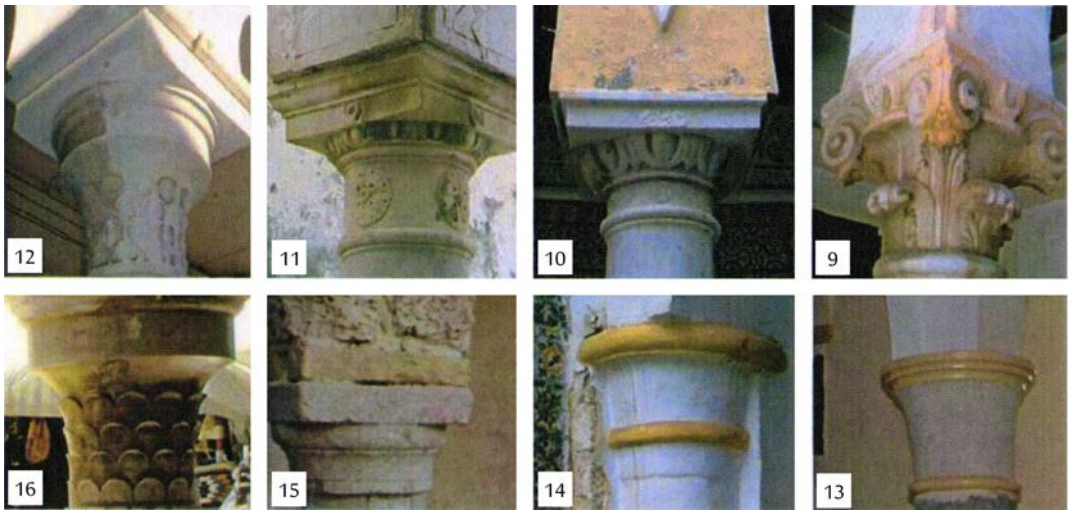

Figure A2.19 Columns and crowns (Engineers, 2016)

9. Baroque style with the twelfth and nineteenth-century crescent (similar to the Bosphorus bridge)

10. Grecian style of the eighteenth or nineteenth century, which is a cyclical pattern with an ornate crescent decoration and floral patterns on the neck of the crown of the column.
11. The twelfth or nineteenth century is a cyclical pattern with elliptical ornamentation and floral shapes on the neck of the crown of the column in addition to the forms of the crescent
12. Model of the twelfth and nineteenth centuries
13. Al-Kharouba Mosque / the reconstructed part / 18th or 19th century
14. Eighteenth or Nineteenth Century / Dove without inscriptions
15. Tuscan style of the courtyard / Al-Badawi street
16. Eighteenth or nineteenth century / ALATARA market (Engineers 2016)

The Qatron (Handrail): It is the supporting material is used for stairs and ladders and it used to supports the courtyard balconies, it consists of pure only wood or it also can be wood concrete with iron bars, as in the figure (A2.20).

Figure A2.20 The form of The Qatron (Handrail)

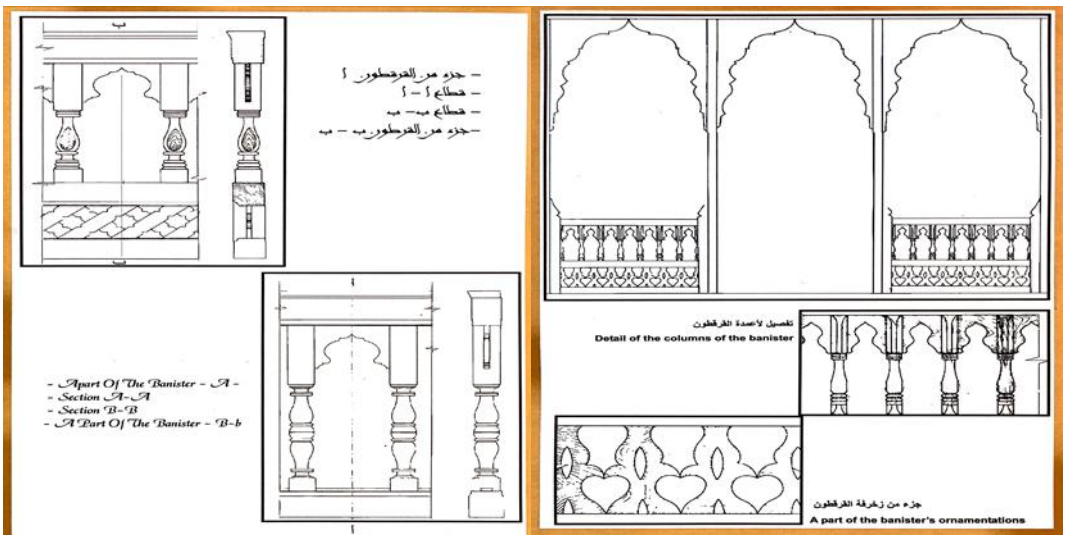

Figure A2.21 The form of Details of The Qatron. (Tripoly, 1998)

A.2.2. Ceramic and Decorative Tiles

Decorations above doors: The ornate decorations reveal the splendor of a sample that has been dedicated to the decoration of the entrances to the Houshs. They generally carry symbols such as the crescent, the stars or the Ghadames symbols, or sometimes even a more mysterious form composed of three balls. The door decorations can give social, religious and economic indicators about the home's original inhabitants. (Engineers, 2016)

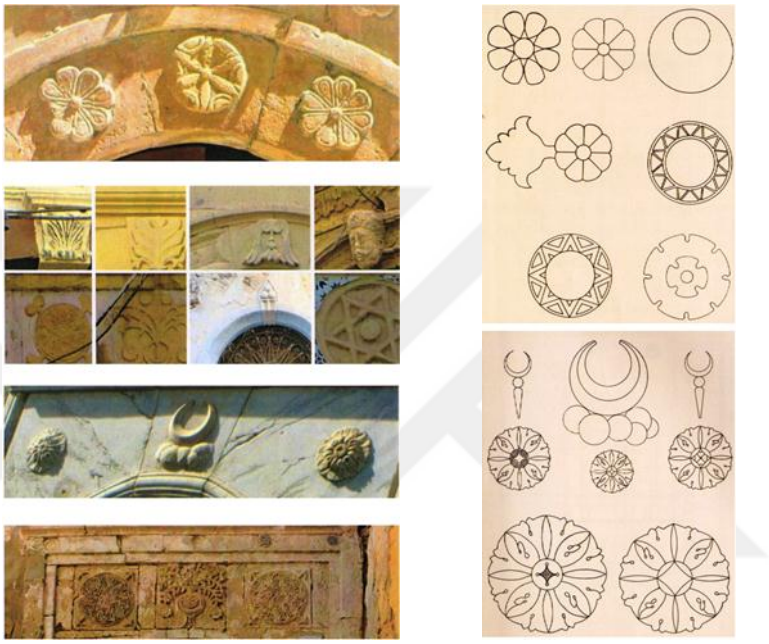

Figure A2.22 Decorations above doors (Engineers, 2016)

The ceramics produced in the twelfth and nineteenth centuries are rich in abstract inscriptions, these inscriptions, which are in the shape of a flower or a star or a rose or a prophecy about the tatters of the dominant Turkish and Ottoman art (The common use of floral or pomegranate relief inscriptions. The inscriptions are often in blue, yellow, green, and many other colors. (Engineers, 2016)

Figure A2.23 Ceramic and decorative tiles (Engineers, 2016)

A.2.3. Al-Athath (Furnishing)

Architecture is the structure of the Housh beauty, while the decoration and furnishing both of them represent the spirit and beauty of any Housh, Furniture is one of the elements of interior design and arrangement, within the building spaces, which is a key function of design, as furniture in the household and all what the human use in his Housh of furnishings and decorations, the Libyan furniture was very simple, people at that time found it comfort by sitting on the ground.

It is certain that any architectural space does not carry out its functional activity in everyday life except by the completion of all its elements and the identification of furniture and the internal supplement. As the beginning of the movement of arts and crafts, were the architects met with artists and focused their attention on the internal space of the Housh and the relation between the designer and the craftsman and the relation between the designing with the implementation in bulk taking into account the role of furniture as a sign of wealth and high social status and taste and identity.

EL-Haseer (The mat): It is a local Libyan fabrication, made or assembled from consumer cloths, covered or coated with a brilliant cloth. It covers a thickness of 5 cm and is used in the guest lounge and the family room to sit on it, as in the figure (A2.24).

Figure A2.24 EL-Haseer (The mat) in the Libyan Housh (Adeema, 2015)

EL-Hamel: It is a rug which made of a heavy fabric, was widespread in the past, whether in the city or village or "Badia". It is manufactured by the tapestry Loom used by Bedouin women, and its fabric is a mixture of remaining non- dyed and locally dyed wool and from goat and camel's hair. The polygon, path, or square character prevailed on its decorations. Its boundary has no mentionable hems. (Adeema, 2015)

Figure A2.25 EL-Hamel in the Libyan Housh (Adeema, 2015)

Kilim: It is a type of woolen carpets, which has been known in this country since ancient times Kalim (Klim) "is a Turkish word which also used on other types similar to this carpet in Turkey.

These carpets are woven by handlooms, with different sizes, colors, and decorations. One of them is the (KILIM) with the decorations that are kept in their natural state without dyes, while the other ones characterized by their bright colors which are locally dyed, while the referred decorations are the geometrically shaped, the showing different terraces, daisies and stars, and drawings of decorative environmental animals such as deer, camel, etc. (Adeema, 2015)

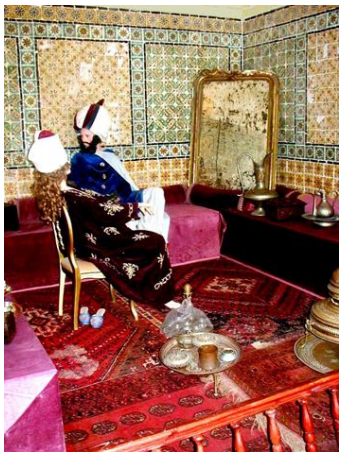

Figure A2.26 Kilim in the Libyan Housh (Cities, 2008)

EL-Bettanah (Lining): It is made from sheepskin which dipped in salt, wool is carded to be soft and clean and placed on the ground to sit on it in winter, as in the figure (A2.27). (Adeema, 2015)

Figure A2.27 EL-bettanah (Lining) in the Libyan Housh (Adeema, 2015)

EL-Wessadah (The pillow): The pad, it is cut from the cloth and sewn and an opening if left to be stuffed and packaged with sheep wool and feathers, wrapped in brilliant cloth, and it used in the guest salon and the family room to sit down, as in the figure (A2.28). (Adeema, 2015)

Figure A2.28 EL-wessadah (The pillow) in the Libyan Housh (Adeema, 2015)

EL-Menddar (Mattress): It's made of wool or sponge and covered or dressed by a cloth of light colors, with decorations and engravings in the form of flowers or plants and others. (Adeema, 2015)

Figure A2.29 EL-Menddar (Mattress) in the Libyan Housh (Cities, 2008)

EL-Haaettiyyah: It is the cushion behind the seat and it is the separation between the sitting and the wall, with a thickness of (5 - 8 cm), and they used light colors for it, as in the figure (A2.30). (Adeema, 2015)

Figure A2.30 Haaettiyyah in the Libyan Housh (Cities, 2008)

EL-Sedda: Considered as an important element of furnishing for the old Libyan Housh(s) where it is considered as a feature of its advantages, and it plays a functional utilitarian role by the people who used it, where it performs several functions overlapping in a single functional level. The Sedda takes an extreme side position inside the inner space of the room, and it takes two levels, which they are:

A. The first level: starts from the surface this level are occupied by the storage function of the luggage and other needs of daily life. The proportion height for the surface is about (60-100 cm).

B. The second level: It can be ascended by a staircase in the middle of the width of the Sedda and this level is used as the space for sleeping, and the Sedda is made of wood, as in the figure (A2.31). (Adeema, 2015)

Figure A2.31 Sedda in the Libyan housh (Cities, 2008)

EL-khezanah EL-haaeteya (Wall Closet): it is the closet where valuable objects of the family and other clothes and women stuff are stored it usually placed closet, but the specialty of it that the closet located in the wall “they used to make a free space inside the walls for closets” this closet located in the sleeping room. (Adeema, 2015)

Figure A2.32 EL-khezanah EL-haaeteya (Wall Closet) in the Libyan Housh (Cities, 2008)

Al-Qalaliyyah: It is an external balcony overlooking the building. This terrace sometimes made and surrounded by a wooden window known as(ain zarzor) or by ribbed wood or surrounded by a short band of well-known iron bars (Handrail), as shown in the figure (A2.33, A2.34). (Adeema, 2015)

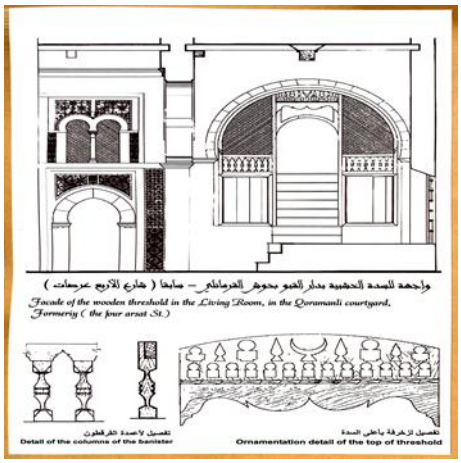

Figure A2.33 The form of Al-Qalaliyyah (Tripoly, 1998)

Figure A2.34 The form of Al-Qalaliyyah (Cities, 2008)

ANNEX 3: UNESCO's REPORT

After searching on the UNESCO website, no information was found on Libyan Housh(s) in the old city of Tripoli, and the only plans were found for just two Housh(s): the Housh AL-Qaramanli and Housh Hassan AL-Faqih. The plans which have been found are horizontal projections of houses drawn by hand by a technical staff which works for organizational projects in the Old City of Tripoli. In the following figures A3.1 – A3. 5, hand drawn plans of the Housh AL-Qaramanli and Housh Hassan AL-Faqih.

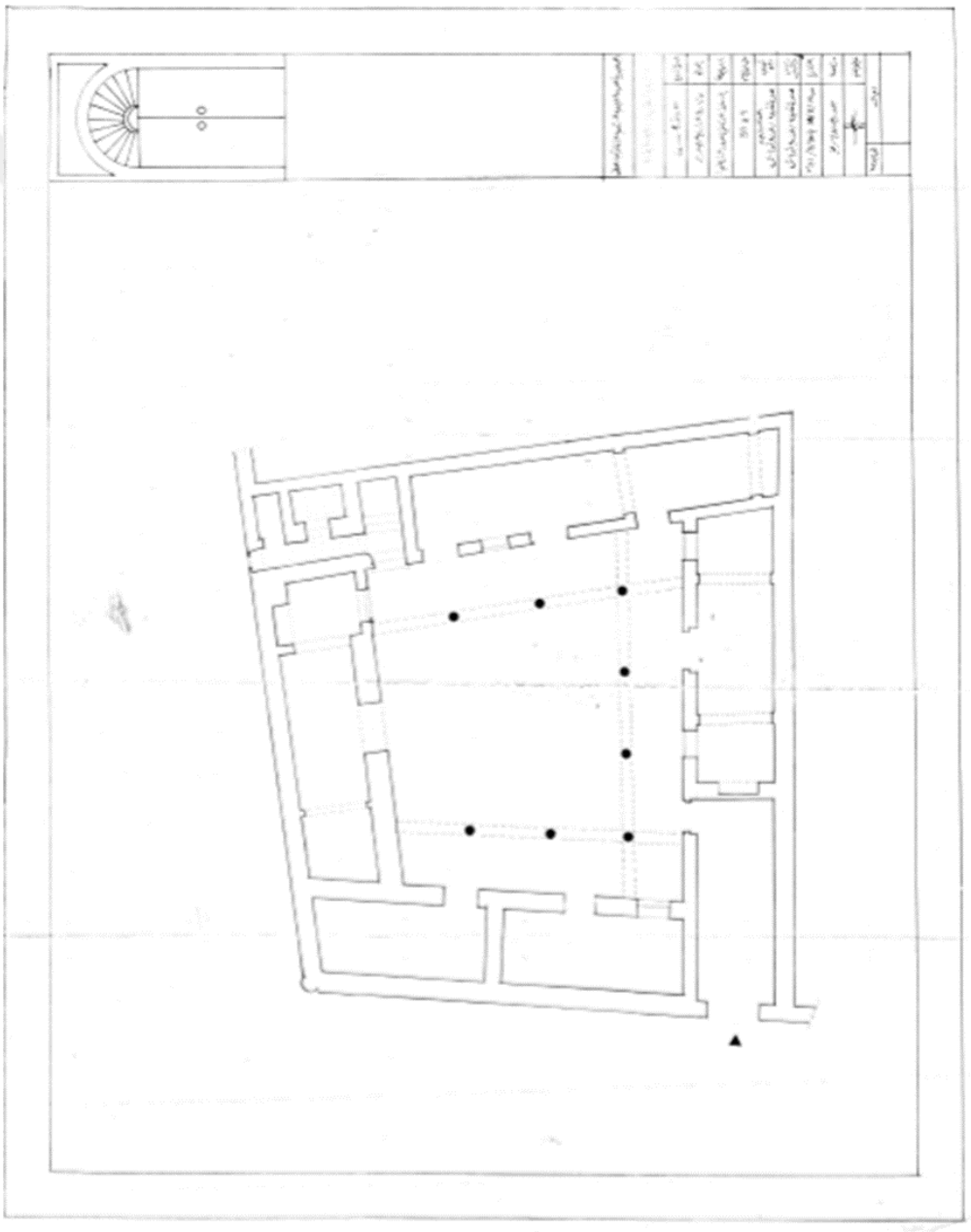

Figure A3. 1 Hand drawn plans of the Housh Hassan AL-Faqih 1

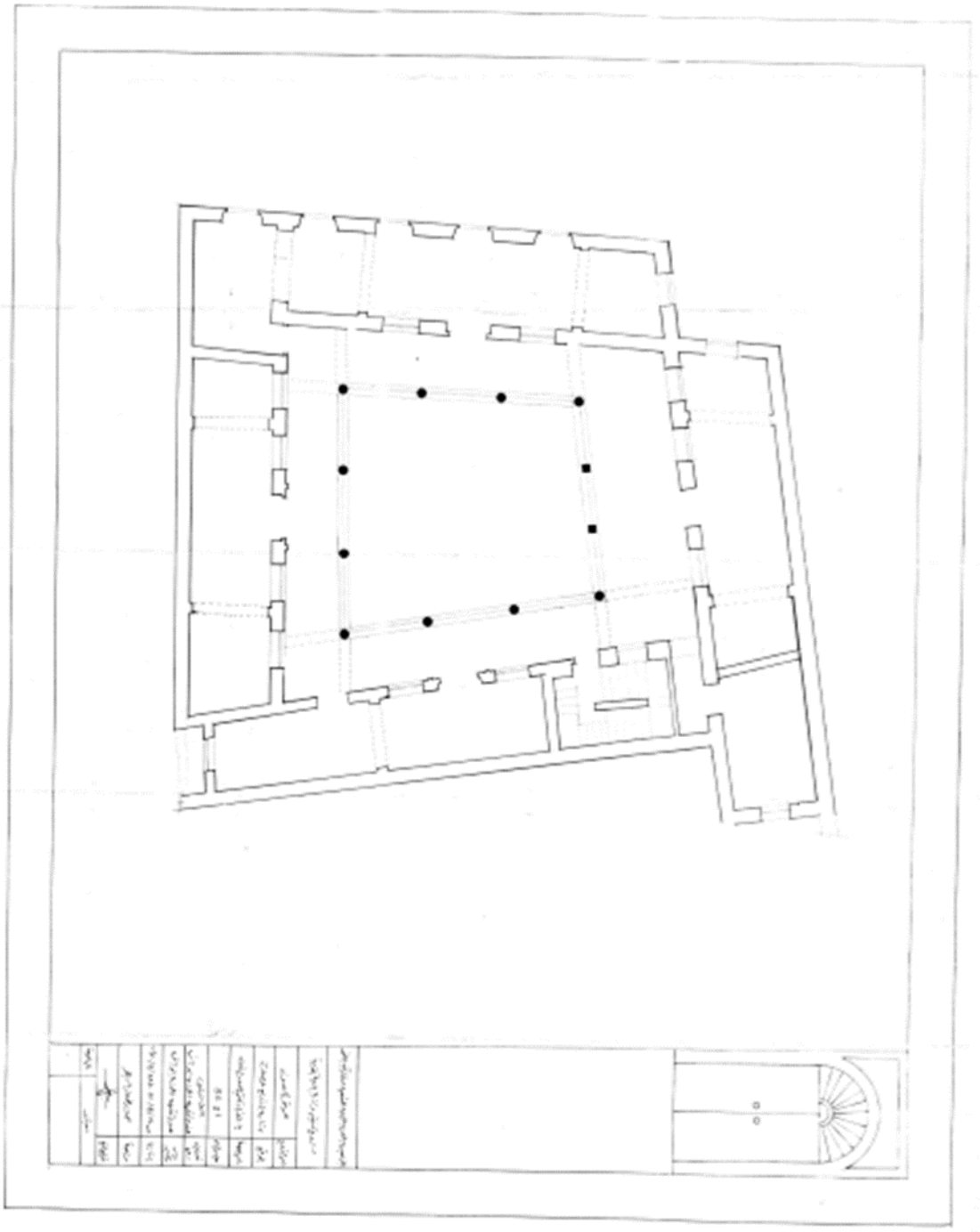

Figure A3. 2 Hand drawn plans of the Housh Hassan AL-Faqih 2

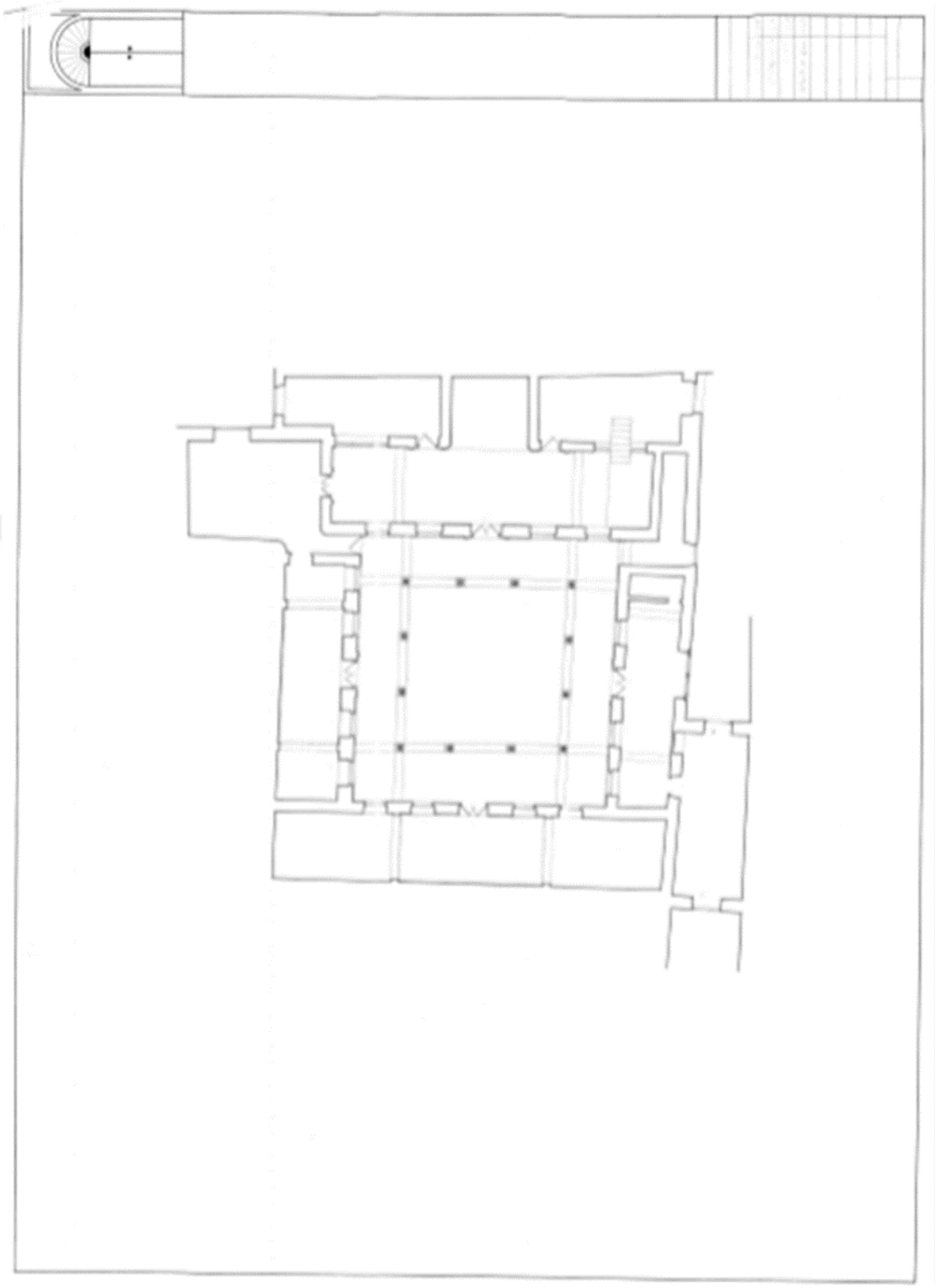

Figure A3. 3 Hand drawn plans of the Housh AL-Qaramanli 1

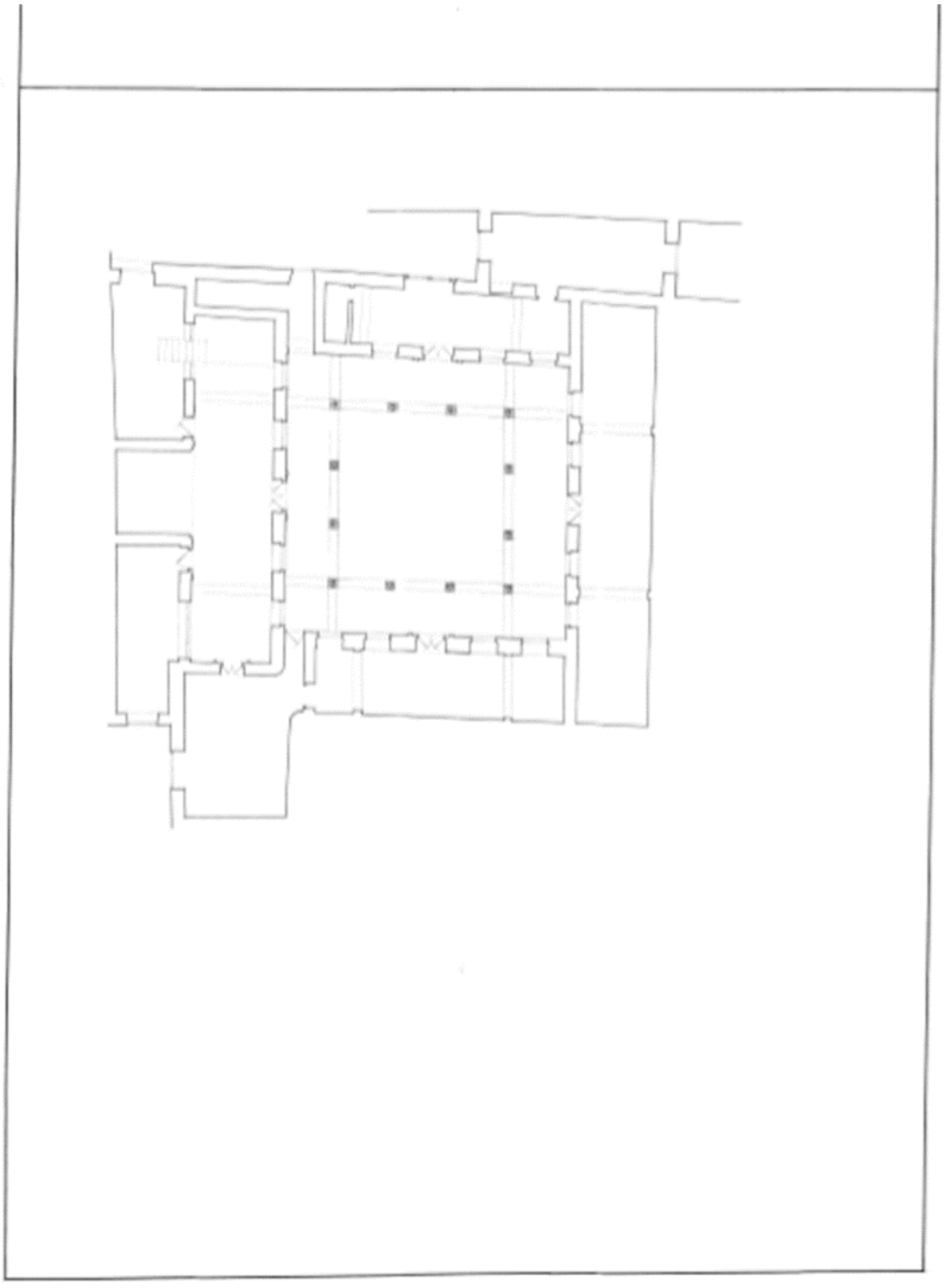

Figure A3. 4 Hand drawn plans of the Housh AL-Qaramanli 2

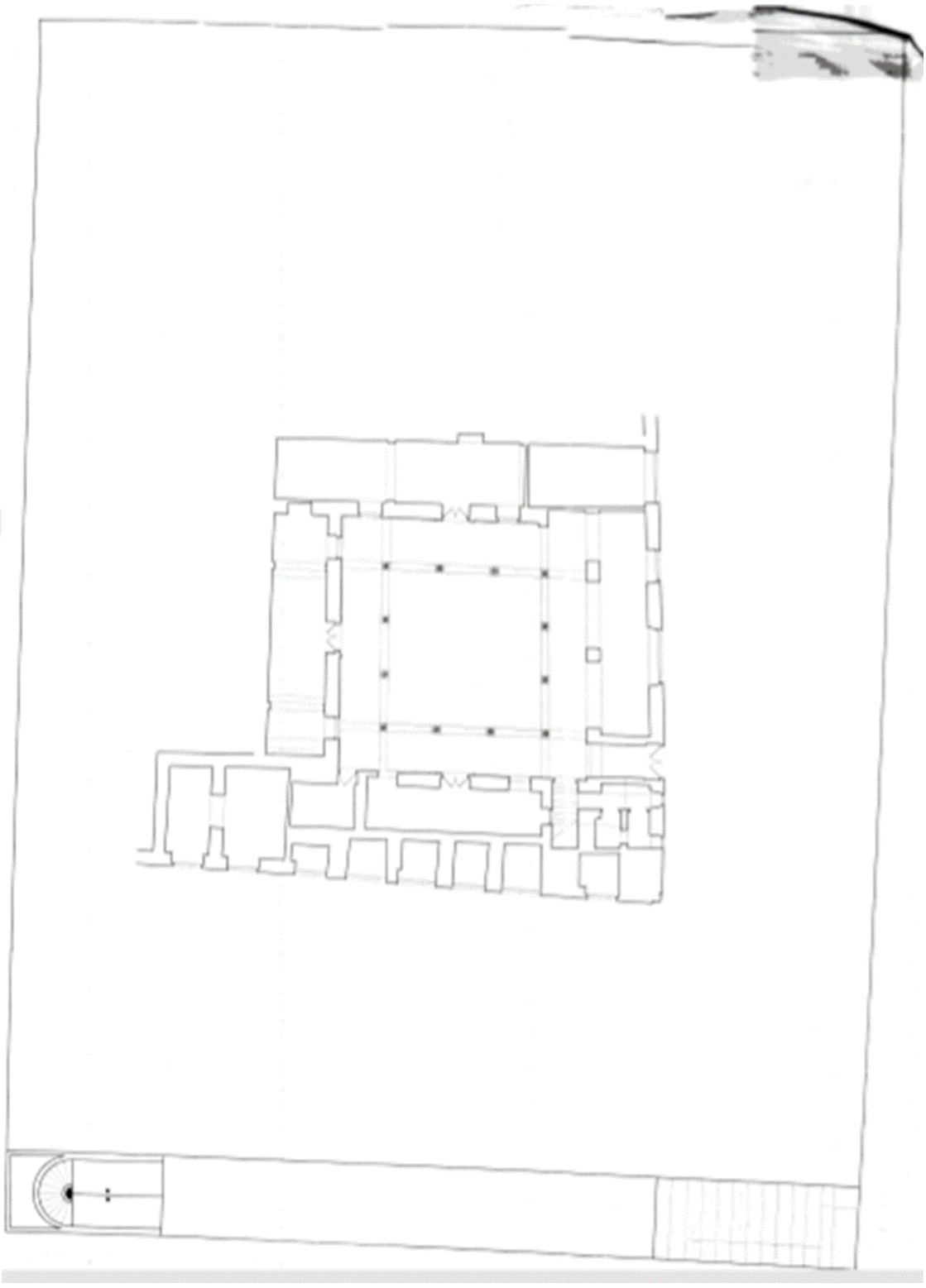

Figure A3. 5 Hand drawn plans of the Housh AL-Qaramanli 3

The following figures show a Copy of UNESCO's report through the field visit to the Old City of Tripoli, which was commissioned by the Libyan State in 1988. It included the study of the public site, historic buildings, architectural and cultural buildings and public buildings within the old city.

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SOCIALIST PEOPLE'S LIBYAN ARAB JAMAHIRIYA

CONSERVATION, REHABILITATION AND REVITALIZATION OF THE OLD CITY OF TRIPOLI

Report of the Unesco Mission to Tripoli, 11-17 December 1988

تقرير عن زيارة اليونسكو لطرابلس في الفترة من 11 إلى 17 / 12 / 88م

by Samir ABDULAC & Wolfgang TOCHTERMANN

(Version 8.3.89)

التوثيق
10.1.95

ملف المنظمة الدولية
(اليونسكو)

SUMMARY

I. DESCRIPTION OF THE MISSION

At the request of the Libyan authorities, Unesco undertook a mission (11-17 December 1988) to explore the possibility of cooperation in the rehabilitation of the Old City of Tripoli.

The members of the mission visited the site and were able to measure the scope of demolition and the seriousness of all the problems that the Old City is confronted with. Heavy rains gave particular evidence of the breakdown of the sewage system, one of the weakest points in this area.

Some of the first practical measures undertaken by the newly set-up Project team were also visited (flying buttresses, restoration works, etc.).

Meetings arranged in the newly occupied headquarters of the Project Team were arranged to allow the members of the mission to become acquainted with the organization, its employees as well as the work already under way. Overall explanations of the structure, population and history of the city were also provided.

Daily productive meetings were held with a group of designated Libyan Officials including Mr. Ali Miludi AMURA, Chairman of the Engineering Consultancy Office for Utilities, Dr. Abdulla SHAIBUB, National Coordinator for Unesco, Mr. Muhamad EL AL-LUS, Director of the Office for Studies, Design and Urban Planning at the Municipality of Tripoli, Mr. Mustafa HAGHEYA, Member of the Project's Cultural Executive Committee and Mr. Abdul Rahman NAAS, Acting Head of the Project's Architecture and Engineering Section.

On the morning of Wednesday 14 December, the members of the mission visited the Municipality Building to meet with Mr. Khalil El DABBAR, Secretary of the People's Committee for

Utilities at the Municipality, who expressed the wish to see Unesco deeply involved in the Old City Project.

In the evening of the same day, Mrs. Fawzia SHALABI, Chairlady of the Executive Committee of the Project for Planning and Managing the Old City, presented a highly elaborated practical and philosophical view of the tasks to be undertaken by the Project. She also listed a number of precise requests presented to Unesco.

A final meeting at the Municipality was scheduled on Saturday 17 December with Mr. Abdul Majid El GHAUD, Chairman of the People's Committee of the Municipality of Tripoli.

During their stay in Tripoli, the members of the mission outlined some directions for possible future cooperation with Unesco on this project. They also provided some general recommendations for the rehabilitation of historic cities and added a few more specific recommendations for the Old City of Tripoli.

A provisional report was drawn up in Tripoli by the members of the mission and received the agreement of their Libyan counterparts.

The present report aims at adding a synthesis of the information collected during the mission (which is certainly incomplete because of limited duration of the stay), as well as to expand on the practical recommendations and the possible follow-up.

2. THE OLD CITY OF TRIPOLI

2.1. Site

Tripoli is situated on a triangular shaped coastal plain, the Jufara, which extends southwards to low mountains, the Jabal Tarabulus (between 300-600 meters in altitude). The Jufara plain receives usually erratic but adequate rainfall and is the most productive agricultural region in Libya. It also contains 70% of the country's population.

Tripolitania's coastline is rather straight and has a limited number of natural harbours. The site of the Old City of Tripoli was located on a peninsula, with a number of small islands to the north-east protecting a sheltered harbour. Its highest part was to the north-west, where a water tower is presently located. A creek and marshland used to offer natural protection to the west. Water was easily available. The area of the walled historic city measured about 45 hectares and its longest dimension was about 900 meters.

2.2. History

In addition to the resources of its hinterland, Tripoli historically benefitted from its location at the crossroads of commercial routes between eastern and western mainland countries as well as between Central Africa south of the Sahara and Europe, north of the Mediterranean Sea.

Called then Oea, the city probably started as a simple Phoenician trading post in the 6th century B.C. It became Carthagenian later with the other cities of Tripolitania, Sabrata and Leptis Magna. Roman domination started in the 2nd century B.C.

The area covered by the Roman city is uncertain, although the Roman rectangular lay-out seems still reflected in the Old City street pattern. The long streets meeting at the arch of

Marcus Aurelius probably used to be the Cardo and the Decumanus. The first city wall has been dated back to the 4th century A.D. It surrounded the city with the exception of the sea-shore.

The Arab conquest in 643 A.D. followed the Vandal and the Byzantine rules. Other states continued until the 16th century as Umayads, Abbasids, Aglabids, Ibadits, Fatimids, Hilahians, Hafsids, Almohads, Berbers, Marinids, etc.

A wall facing the sea was added at the end of the 8th century. Al Tijani, a traveller, already mentions a Qasba in 1308, probably where the present fortress is located, at the south-eastern angle of the city. He also records that another smaller wall (fasil) surrounding the bigger wall (al sitara) was built in 1217.

The fortifications of the city as well as those of the castle were rebuilt and improved particularly during the Spanish conquest (1510-1530) and under the rule of the Knights of Malta (1530-1551). The Ottoman domination followed and lasted until 1911. Most remaining mosques and other public facility buildings were erected during this period. Suburbs outside the city walls were even starting to develop by the end of the 19th century. During th Italian occupation, important parts of the city wall were knocked down, but smaller sections were restored. The shoreline was drastically modified by the construction of a modern harbour with jetties. Some bombing also contributed to destruction during the Second World War.

2.3 Population

According to Italian statistics from 1914, the population of the city and suburbs included 19,907 Moslems, 10,471 Jews and 14,180 Europeans. In 1925 the total population was 60,000, including 25,000 Europeans. At the end of the war in 1945, the total population reached 121,500 including 41,200 Europeans.

The Old City's population probably never exceeded 15,000, which meant an average density of between 300-350 persons per hectare. A recent population census shows now only 6,000.

The wealthy Moslem community traditionally lived in the south-eastern sector of the city near to the seat of power (the "Seraya") and around suqs, mosques, madrassas, hammams, etc. Poor Moslems used to live in the south-western area, Jewish communities in the north-western area and finally the Christians (mostly Maltese and Greeks) to the north-east.

The last Italians (and Europeans) moved out of the country at the beginning of the 1970s. The Jewish community also left, mainly in 1948 and 1967. Remaining inhabitants gradually left the Old City and settled in modern neighbourhoods as soon as their economic conditions improved. They were replaced by rural migrants. Oil wealth also attracted many foreign workers from other Arab countries, as well as from Africa and Asia (Bangladesh, Egypt, Niger, Tunisia, Turkey, etc). Foreign workers in the Old City may now total as many as 4,000, most of them living as bachelors with very low standards of comfort.

2.4. Architecture

The Old City of Tripoli is, in many aspects, similar to other fine traditional cities of the Arab world. Its streets are characterized by exceptionally frequent arch-draped flying buttresses over the streets so as to keep the buildings' walls from leaning or bulging and then collapsing.

All traditional houses belong to the courtyard type, even when facades have a European influence. They have only one or two storeys and the courtyard can take up to between 1/5 and 1/3 of the total surface. One of the finest examples is Yusuf Pasha house which dates back to the beginning of the 19th century.

A distinctive character of the mosques is the presence of a number of small-sized cupolas, supported by a forest of columns in the prayer rooms below. We may quote the Khruba Mosque (16th century), the Dragut Mosque (16th century), the an-Naqah Mosque (17th century), the Ahmad Pasha al-Qaramanli Mosque (18th century), and the Gurgi Mosque (19th century).

Some of the minarets are typically North African with a square plan, others show an Ottoman influence with their octagonal or circular shape with tapered finials.

Sometimes madrassah (schools), hammams (baths) and even shops are linked to mosques. Madrassah Osman Pasha is particularly beautiful. Kuttab are just small schools. Funduqs also include internal courtyards, Az-Zaheli (19th century) being one of the finest examples.

The longest suq is Suq El-Turk, however Suq al-Rabaa is the only one covered with vaults.

The City also includes synagogues and even two churches (one Latin, one Greek) belonging to the late 17th and early 18th centuries. Grain mills and public fountains were also worth a mention sometime ago.

Construction was traditionally based on local limestone with joists supporting a combination of earth and lime. Maltese "marble" was imported for monuments and wealthy houses. Finishings included whitewash and sometimes patterns of coloured glazed ceramics over the walls.

2.5. Deterioration

Only two sections of the city wall remain today : a south-eastern portion extending from the Suq al Mushir to Bab al Hurriya and a south-western one extending from Bab al Jadid to the sea.

The urban fabric has not so far been subject to any major damage. It is still mainly characterized by its network of narrow winding streets.

Mosques and many monuments which are linked to them have been maintained as they have been under the responsibility of the administration of Waqfs. Many houses, however, are vacant and closed down. According to a 1987 survey, 368 out of 3,071 houses (about 12%) have already collapsed. Large areas of the north-western sector of the city remain unbuilt upon after the removal of debris and rubble from the former houses. This area covers about two hectares. Many other buildings are beyond repair. Vacant or still occupied dwellings are inexorably deteriorating. Very few new structures are being built to replace them.

The status of properties is often very difficult to ascertain in old cities anywhere in the world, especially when an old house is owned by many descendants. The case of Tripoli is possibly even more complex because of the local laws on dwelling ownership and the fact that many owners are abroad.

Stone masons are no longer available and limited teams of construction workers around continue to work around a "maalem", especially for Waqf properties.

Many shops have been closed down, not only in the residential streets, but also in the suq areas. Facilities for education, health and culture did not particularly develop within the Old City, with the exception of the new National Museum in the Castle (with a major involvement of Unesco).

Street paving is often non-existent. On rainy days, people have to walk in the mud between water puddles. Drainage and sewage systems seem badly maintained. The existing water network is more than 40 years old and was designed with now outdated techniques. Underground leakages are raising the water table and endangering the foundations of the buildings.

The capacity of the electricity network was not foreseen to accommodate the population's increasing needs. There are about 6,000 watts per house now instead of 200 or 300 in the 1940s.

Waste is collected once a day, but nobody sees to the removal of car wrecks which have probably been parked on some streets or vacant plots for years.

3. - THE MODERN TOWN OF TRIPOLI

3.1. Town Development

The modern town of Tripoli extends over more than 11,000 hectares, which is about 250 times the area of the Old City. It now includes :

- the services and business district which incorporates residential and commercial buildings;
- modern residential high-rise units located in central parts of the town;
- organized residential estates in the form of multi-family housing, mostly located in peripheral areas.

3.2. Population

The total population of the country was 3,637,000 in 1984 and is still expected to rise to 6,150,000 by the year 2000. The urban population has been rising from 25% of the total in 1954 to 77% in 1984, which has caused a high rate of rural influx to the cities.

The total population of Tripoli has been quite steadily increasing :

179,000 in 1954
297,000 in 1964
550,000 in 1973
784,000 in 1980
1,125,000 in 1988

The population of Tripoli is expected to reach 1,600,000 by the year 2000.

The average annual population growth rate of Tripoli has been fluctuating between 5% and 7% since the 1950's although this rate has remained between 3,3% and 3,5% (which is still very high) in the country as a whole. The town's foreign population reached 110,000 in 1980.

3.3. Planning Projects

A Master Plan was established in 1969 by Whiting Associates and Henningson, Durham and Richardson Consultants with a time horizon of the year 1988. It constituted a legal basis for guiding and controlling the current development of Tripoli. This Plan showed two twelve meter wide avenues meeting at right angles within the Old City.

Another Plan by Atkins Consultants was produced later in the 1970s. The latest Master Plan has been elaborated by Polservice-Wadeco, a Polish consultant. Its final report is dated 1983 although it is still awaiting approval. Once again, the Old City has been excluded from the consultant's brief.

3.4. The Old City's Surroundings

Small or medium-scale projects in the vicinity of the Old City have had much impact.

A corniche road has contributed to the increasing isolation of the Old City from the sea. Additional projects under study will aggravate the situation even further.

An industrial zone was torn down to the west of the Old City and plans for an amusement park are under study. Further west, four high-rise towers are already damaging the landscape.

An artificial pond has been built just below the eastern flank of the castle where the sea used to be. The humidity from the water is supposed to improve the physical condition of the castle's stones. Facilities for pedestrians and for "sound

and light" presentations (with Unesco's participation) are scheduled.

The green square to the south should be redeveloped and a major state mosque is to be built to the south-east.

Small scale "out of place" buildings have recently been added (a kiosk near Bab el Jedid and an arcaded wall to the north east of the city). Others are being designed.

4. - EXISTING REHABILITATION PROJECT

4.1. Former Situation

The Antiquities Law of 1983 gave more power to the Department of Antiquities than that of 1968. The Department is now in charge not only of individual monuments, but also of historic areas. In this case, no demolitions or changes of style can take place without its consent. The Department takes over if historical remains are uncovered. In spite of this, the actual influence of the Department over the present project seems rather weak.

A Director from the Municipality had also been in charge of the Old City project, but was not able to go very far.

In 1974, the Libyan Government decided to set up within the Ministry of Education, a Standing Committee under the Chairmanship of the Director-General of Antiquities with representatives from the Ministry of Housing and Public Works, the Director-General of Tourism, the Waqf Administration and the Faculty of Architecture of the University of Tripoli. The Committee followed a 1969 Permanent Committee for the Conservation of the Old City of Tripoli whose aim was to produce an inventory of historical and archaeological sites and to prepare maps and surveys.

It seems that such committees were mainly given a consultative role only ; none had executive powers. Many reports, opinions and recommendations were produced, but apparently without the development of any ideas on their implementation.

4.2. Project Agency

4.2.1. Setting Up and Installation

A marked transition towards an execution phase occurred after the Leader of the Revolution proposed in 1984, during the Congress of Popular Committees at the Municipality of Tripoli, a new vision for the Old City as a place showing how previous generations lived.

The Project for Planning and Managing the Old City was then set up as an independent agency directly connected to the Prime Minister and then, after the power of local authorities increased, to the Mayor of Tripoli himself, without intermediaries within the Municipality. No other government offices are represented within the Agency, even the Department of Antiquities.

The Headquarters of the Project Agency have recently moved to newly refurbished tobacco factory, to the west of the Old City. The ground floor is used by carpenters and boat-building workshops, while the first floor accommodates offices, drawing rooms, library, etc. The scale of the library is quite impressive.

A branch of the Agency remains in a small recent building to the north of the city. This branch is more directly in touch with the population as it includes offices for the management and control of rents, social assistance, etc.

An equipment depot has been set up in a nearby cleared area and houses small bulldozers adapted for the streets of the Old City, wooden frameworks for arches, etc.

4.2.2. Philosophy

For the new Agency, the Old City represents a historical heritage which has been building up over centuries, a cultural heritage not only for Libyans or Arabs but for all mankind.

Henceforth, the project should be based on a comprehensive strategy to revitalize and develop the Old City as an ideal Arab historic city and to be used as an innovative model from the scientific, historic and cultural points of view.

Revitalization and development operations cannot however be drawn up from other foreign experiences in this field "as most of them were based on tourism and consumerism with the objective of using old cities as showcases for the commercial market" and for the "leisure of battalions of tourists".

As this city is the creation of Man,he should participate in the rehabilitation process and take on direct responsibilities especially from the economic point of view. Unfortunately citizens who remained in the Old City have quite often a limited income. It is therefore the responsibility of the society to help then repair their homes.

4.2.3.- Objectives

As stated in a booklet from the Agency (dated 1988), the objectives of the project are developing along the following lines :

A. Development of Production

The traditional activities of neighbourhoods, suqs and streets with the production of crafts and small industries (leather, weaving, embroidery, tinting, ceramics, mosaics, tiling, carpentry, ironwork, gold

and silver jewellery, light transformation industries, etc) should be revived and linked to new manufacturing programme within the context of "new socialist values".

Existing traditional handicrafts should therefore be preserved and a new generation of craftsmen should contribute to the "protection of the Arab-Islamic personality through their creations". Economical production within the Old City should be given a "civilizational and historical dimension" so as to conserve its architectural personality and its cultural characteristics.

B. Development of Cultural and Artistic Activities

Some aspects of this objective are linked to the present development of cultural and artistic activities, while others are related to the gathering of information, studies and research, so as to set up a scientific basis to further develop these activities.

C. Beginning of Conservation and Rehabilitation Projects

All historical and archaeological buildings in the Old City should be surveyed, studied and documented. Degradation and demolition should be stopped and restoration, rehabilitation and conservation of the historical personality of the city undertaken. Redevelopment plans should eventually be prepared.

Comment : Emphasis on economical and cultural objectives before the rehabilitation process is rather infrequent in similar situations elsewhere, but quite interesting and promising.

4.2.4.- Work Plan

A rough schedule outlined in the Agency's booklet is as follows :

A. - Short-term (3 years) : Restoration and rehabilitation. Implementation programme. Bill of quantities and specifications. Monitoring of progress.

B. - Medium-term (5 years) : Development of economic life. Concentration on handicrafts and manufacture cooperatives. Commercialization of shops.

C. - Long-term (10 years) : Cultural and social programme. Artistic production. Training. Clubs. Exhibitions and exhibition halls. Conference rooms.

4.2.5.- Project Agency

The project is headed by a Chairman assisted by an Executive Committee composed of all heads of sections.

A. Section of Documentation and Information

This Section began its activities in August 1986. Its tasks are :

1. To gather sources of information
2. To file existing documentation
3. To collect old maps and prepare a historical atlas
4. To prepare monographical studies
5. To record oral history
6. To prepare and present exhibitions
7. To survey all buildings with possible historical value
8. To translate reports and studies related to the Old City

9. To restore and conserve documents and manuscripts found in the Old City
10. To collect and study traditional objects from the Old City
11. To undertake specialized studies on Arabic, Turkish, Latin and Punic inscriptions
12. To provide services and information to persons undertaking studies and research on the Old City

B. Section of Architecture and Engineering

This Section was the first to be operational and is to be considered as the "vertical column" of the Project for the conservation of the physical personality of the City as well as for setting development plans. Its tasks are to :

1. undertake surveys of the Old City including the condition and the height of buildings, the determination of the street names and numbers, the designation of the buildings with a historical value, the study of water, sanitation and electricity networks.
2. set up a programme for the development of the Old City
3. establish maps and reports for the implementation of the programme for the development of the Old City including :
   a) localization of collapsed buildings or of buildings ready to collapse and a measure of their dimensions;
   b) an evaluation of water and sewage networks;
   c) precisions on existing public utilities in the Old City;
   d) planning hypotheses for development and revitalization
4. prepare architectural and structural plans of dwellings and public facilities
5. prepare drawings for the connection of buildings to water and sewage systems

6. prepare plans of partial or comprehensive modifications
7. prepare execution drawing with some structural details
8. prepare survey plans of historical buildings and sites
9. prepare a cadastral survey for citizens within the Old City
10. establish statistics, comparisons and reports together with other sections of the Agency
11. supervise the implementation of new projects based on designs prepared in the section
12. supervise rehabilitation works
13. ensure coordination with the municipality and on technical structures for some projects
14. workshops :

a) Carpentry workshop :
Equipped with all sorts of machinery for the provision of supports and frames needed in construction and repairs of doors and windows similar to the traditional ones, and of material needed for cultural activities (theater, kiosks, showcases, etc)

b) mechanical workshop :
For the periodical maintenance of bulldozers as well as other vehicles used for the project

c) Ironmongery workshop :
To maintain and renew various ironworks found in traditional internal and external entrances, as well as ironwork used in reinforced concrete

d) boat building workshop :
to build and repair fishermen boats at a much lower cost

Other workshops are also foreseen for carriage building or for wooden home tools manufacturing.

C. Section of Social Affairs

This is the most recent section. Its activities are to start shortly with a survey of the families living in the old city and of their needs.

D. Section of Management and Finance

This section has twofold activities :

1. management activities (mail, reports, archives, recruitment of the technical staff, administration of employees, care of the foreign technical group, etc)

2. financial aspects (incomes and expenses, budget, reports, etc)

Comments : This outline has at the moment not provided for a Director, lacks an economic section (able to develop economic planning, evaluate the viability of existing economic activities, and set up new economic projects), as well as clear objectives for housing as such. The role of the Social Section has not be expressed in detail either.

4.2.6.- Means

A. Financial

From previous experience from other similar projects, it can be seen that estimates for the overall cost of the project are actually impossible to calculate at this stage. The budget of the Agency was not thoroughly investigated during the December mission. The following indications are therefore merely provisional and need to be confirmed as yet:

- A budget of 20 million LD[1] has been allocated by the Municipality to the project, but as yet has not been received.

- The Agency has been entitled to manage the properties of landlords owning more than one house or shop. They may rent them and cash rents from tenants as an income. Rents are approximately LD 10 per month.

- The Agency also manages Waqf properties in the Old City. In exchange, it does maintain and repair mosques.

- Income from local properties was LD 400.000 last year, but this should steadily increase in the future.

- Salaries of the Agency employees are paid by the Municipality. Their present monthly income is 1 million LD per month.

B. Manpower

The Section of Documentation and Information has a staff of 10. That of Architecture and Engineering 17 (including one Egyptian, 3 Moroccans, 2 Turks), Management and Finance has 15. The local branch in the Old City has 45 employees and there are more than 400 construction workers (170 Turks, 140 Moroccans, 30 Egyptians, 70 Libyans, etc).

The Head and the Acting Head of the Section of Architecture and Engineering are technicians. The foreign staff of this section are also only technicians. Young Libyan architects have been graduating from the Faculty of Architecture at the University of Tripoli since 1974.

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[1] One Libyan Dinar = 3 US Dollars approximately

The technical guidance of workers seems quite understaffed as well.

4.2.7.- Undertakings

A. Development of the Local Economy

From the second half of 1985 to the end of 1987, the Agency allocated 940 shops to various commercial activities in different parts of the Old City.

A table of rents has been established by the Agency for its tenants in 1985. The modulation of this table aimed at protecting and encouraging traditional handicrafts with "symbolic" rents (from LD 250 to 750 per m^2), while "undesirable" activities (alien, modernist, consumer orientated, etc) were compelled to pay higher rents.

Fishing activities have been encouraged through the boat building workshop which provides boats and repairs at very competitive prices, lower than other countries.

After restoration has taken place, hammams will be reopened to the public under management from the Agency.

It is foreseen to restore funduqs and the former French Consulate building to be converted into hotel accommodation.

B. Development of Cultural and Artistic Activities

Many cultural activities have been organized during the past four years. They are usually aimed at illustrating the different stages through which the city passed since the Ottoman period. These activities have included :

- cultural performances such as traditional arts and dances, folklore groups, marriage and circumcision ceremonies, children's games, etc. 1300 artists and assistants from Libya and other Arab countries have participated in these performances between 1985 and 1987.

- photographic exhibitions, exhibitions of documents and manuscripts, ornaments, architectural plans, acquisitions, etc.

- marketing of home crafts made by citizens of the Old Town.

A brief also mentions the project of setting up the following cultural facilities :

- a permanent exhibition area for graphic arts ;
- a library specializing in graphic arts ;
- a network of four cultural centres in the Old City ;
- a cultural centre for children ;
- a permanent exhibition on the September 1st Revolution ;
- a permanent exhibition on fishing ;
- ten homes for artists.

C. Rehabilitation and Restoration Works

Work started at the beginning of February 1986 as soon as the Moroccan technical group arrived. The following list of undertakings have taken place :

1) Achievements by the end of 1987 :

- evacuation of ruins and mud (the equivalent of about 965 lorry loads) from collapsed buildings and levelling off of about 157 sites.

- provision of building materials and manpower to 300 citizens enabling them to undertake necessary maintenance of their houses themselves.

- All of the 128 arches (flying buttresses) over the Old City's streets have been reinforced.

- technical investigation of more than 700 buildings.

- restoration and rehabilitation of mosques : Al Shaikh abu Rayana, Gurji, Sidi Al Hadar, Al Kharrouba, Sidi Al Hattab, Mahmud, Al Naqah, Sidi Salem, Dargut.

- Restoration and rehabilitation of schools including the madrassa of Othman Pasha, Al Khansaa Middle School and two schools in Bab Al Hurriya.

- Work has started on the rehabilitation of the British Consulate which will later be converted into a reading library.

- Laying out a pedestrian walkway above the western remaining section of the wall.

- enlargement and landscaping of the square around the Ottoman fountain at Bab Al Jadid as well as the renewal and conversion of a former house into a restaurant.

- rehabilitation and restoration of Al Balayek and Al Espagnol Streets.

- Work has started on the rehabilitation of the square surrounding Marcus Aurelius Arch as well as Al Francis

Street, Al Akuash Street, Beik Benghazi Street, Al Makni Street, Zamit Street as well as Funduq Zamit.

- Reorganization and revitalization of traditional suqs such as Suq al Qawiaa and two sections of Suq al Rabaa.

2) Work Scheduled to be Completed in 1988 :

- second phase of the Western City Wall.

- synagogue in Abu Rayana (to be transformed later into an exhibition hall for graphic arts).

- restoration of arches and walls in Abu Rayana Street.

- restoration of one of the historic houses in Homet Ghariyan Street.

3) Work Scheduled for the Second Half of 1988 :

- beginning of restoration and rehabilitation on historical houses in the Four Arches area, including the Turkish and Qaramanli Pashas houses, to be reused as cultural centres.

Comment : This list looks of course already very impressive, but there is still so much to do. Only the cultural objectives seem clear so far and rehabilitation techniques should yet be improved by specialists.

5. RECOMMENDATIONS

5.1. Comparison with other Historical Cities

The surface area of the old city of Tripoli (45 hectares) could easily be compared with the conservation areas of Algiers Casbah (30 ha), Jeddah's old District (58 ha), and even with the Medina of Tunis (87 ha). The Medina of Fes (280 ha)

and Old Cairo (370 ha) look, of course, considerably larger. Its actual population of 6.000 is however considerably easier to deal with than the 20.000 of Jeddah's Old District, 50.000 of Algier's Casbah, 250.000 of Fes Medina, and 300.000 of Old Cairo.

Based on previous experience in other cities and benefitting from easier material and human factors, the safeguard, rehabilitation and revitalization of the Old City of Tripoli should develop into an exciting and challenging undertaking.

5.2. Experience of Similar Projects

During such a short stay of the mission, all aspects of the specific problems of the Old City of Tripoli cannot be grasped. The general recommendations listed hereafter are mainly based on the experience of many of the actions undertaken in other historic cities in developing countries :

A. Develop a strong will to carry out and achieve the project, together with a wide mobilization of all financial means, public and others, adapted to the scale and scope of the problems to be addressed.

B. The Old City being considered as a living organism, establish clear objectives on the social, economic, cultural and scientific levels for any programme aiming at keeping it alive.

C. Set up a strong-minded, coherent, multidisciplinary team with adequate experience and/or training, which would be able to respond effectively in the following areas : city planning, urban design, architecture, landscaping, civil engineering, history, ethnology, archaeology, sociology, documentation, economy, budget, law, etc.

D. Elaborate a comprehensive plan as an integrated planning framework, including combination and interaction

of the solutions found for the various problems : preservation of buildings, infrastructure, traffic, housing, facilities, economic and cultural life, etc.

E. Link the actions and activities proposed within the Old City to the development of the town as a whole.

F. Initiate a rehabilitation and revitalization process allowing public authorities and local interests to support each other within a carefully devised economic policy including financial incentives, cost recovery and cross-subsidies leverage.

G. Based on the conviction that the inhabitants of the Old City have the right to benefit from the same advantages as those of the more recently developed neighbourhoods :

i) Ensure a similar standard of infrastructures (water, sewage, drainage, electricity, telephone, traffic (pedestrians, cars, deliveries, etc) and services (waste disposal, etc).

ii) Enhance the quality of life within the Old City through the provision of such elements as landscaping of the streets and squares, children's playgrounds, nearby facilities (health, educational and cultural);

H. Improve the standards of living conditions and comfort in the existing stock of housing and devise a social and economic policy for the provision of new housing (large and small-scale projects based on affordability studies).

I. Raise information, awareness, participation and positive response among the local community, without which no long-term endeavour could be expected to succeed.

J. Combine the normally lengthy design of the comprehensive plan with the implementation of a series of easily manageable action plans to the immediate profit of the local community's interests and the Project's visibility (urgent work, improvement of services, demonstration projects, etc).

K. Improve and refine the comprehensive plan through an accumulation of practical expertise and feedback from demonstration projects.

L. Provide continuing maintenance to all implemented projects within the area (infrastructure, restoration and rehabilitation, etc).

M. Ascertain availability of competent workers and craftsmen under the guidance of qualified foremen monitored by specialists in restoration and rehabilitation.

N. Provide, when necessary, adequately designed training programmes to all those involved in the rehabilitation, restructuring and revitalization processes (decision makers, administrators, architects, engineers, librarians, technicians, craftsmen, etc).

O. Organize or participate in exchanges and reflection on an international level among those who are involved on the practical side in similar processes.

Possible ambiguity between public and individual responsibilities in the rehabilitation process may be raised, if it is considered that anything related to national heritage is the Government's responsibility, that the municipality has to provide standard utilities, housing, facilities and services, and that old and new resident-owners should normally contribute to any additional advantages they may benefit from.

5.3. Priorities in Tripoli

In addition, a few more specific recommendations for the Old City of Tripoli were also made by the mission as follows :

1. The design and implementation of a new network of utilities (water, sewage, drainage, electricity, etc) is most urgently needed in order to prevent further decay and to avoid the departure of remaining members of the original community.

2. Archaeological surveys may be carried out on vacant sites provided that they are undertaken within a limited time and that they do not hamper the subsequent implementation of renewal programmes. A major archaeological discovery like unearthing a Roman theater, would however remain a special case.

3. Most careful consideration should be given to any small or large-scale projects to be carried out in the vicinity of the project perimeters however well-intentioned its designers are.

6. - POSSIBLE ASSISTANCE FROM UNESCO

6.1. Principles :

The case of the Old City of Tripoli is rather unique in more than one sense and can hardly be compared with other restoration or rehabilitation projects in urban areas carried out so far by Unesco. The Libyan authorities very strongly request Unesco to play a decisive role in this project, to accept an overall responsibility and to "accompany" its development until the full rehabilitation of the Old City is completed. What is mainly needed from Unesco is not a financial involvement but the provision of a highly specialized expertise in the fields of planning, rehabilitation and documentation. A new approach will be needed and there is no doubt that all

Programme Sectors of Unesco will have to contribute to such an undertaking. Adequate structures will have to be developed if such a project is to be successfully carried out.

As Unesco's aim is to ensure what cannot be provided on a national level, Libyan endeavours and international assistance will not only be complementary but also tightly interwoven and together will have to aim at the success of the Project. Any shortcoming from one of the partners will consequently affect the performance of the other.

The Project Agency should gradually be able to improve its own operational efficiency. This is why Unesco's involvement should be designed as to imply less and less direct (e.g.experts) and then indirect (e.g.training) inputs on the long-term.

Funds-in-Trust from the Libyan Government at Unesco will allow the development of the international input into the Project Agency. In addition, some turnkey projects may also be foreseen.

Dialogue and flexibility should be the keywords for a process to be jointly defined as part of a comprehensive rehabilitation programme. The implementation of this programme should hopefully permit the Old City of Tripoli to be included in the World Heritage List.

6.2. List of Requests

The Unesco mission and its Libyan counterparts were in agreement with the items mentioned below :

1. To elaborate a comprehensive plan for the safeguard, rehabilitation and revitalization of the Old City.

2. Provide regular advisory services to the Project Agency and maintain contact during the different phases of the project.

3. Select and provide specialized experts to the Project Agency according to the needs of each stage of implementation and of each Section of the Agency.

4. Define and carry out one or several turnkey, demonstration or very specialized projects (infrastructures, urban renewal, documentation centre, training workshop, etc).

5. Organize or advertise meetings designed to exchange information on similar programmes and experiences in order to supply the orientation and programming of the project as well as to improve its implementation.

6. Provide grants or training programmes designed to improve the operational capacities of the staff from all specialities and at all levels.

7. Provide adequate technical equipment for documentation and architectural sections as well as for site surveys and works.

8. Prepare an exhibition of the Old City of Tripoli to be presented at Unesco Headquarters.

Answers to these requests are tentatively developed under the following headings in this report :

- **Comprehensive Plan**
- **Field personnel**
- **Training**
- **Equipment**
- **Exhibition**
- **Structures**
- **Agreement**
- **Further agreements**

The first draft of a technical time schedule and of a calendar of agreement is also proposed.

6.3. Comprehensive Plan

A Comprehensive Plan should be prepared within the Architecture and Engineering Section of the Project Agency under the supervision of the Chief Technical Advisor assisted by planners, architects, engineers and draughtsmen from the Section, as well as by other members of the Field Personnel.

This Comprehensive Plan should encompass the following aspects:

- utilities and services ;
  - water, sewage, electricity, telephone, streets, traffic control, transportation, solid waste disposal, etc.
- housing ;
  - target population, costs, types, quantities.
  - institutional and financial aspects.
  - rehabilitation, small or large scale renewal projects.
- economic activities ;
  - commerce, handicrafts, tourism and others.
- facilities ;
  - education, health, culture and leisure.
- landscaping ;
  - sequence of streetscapes.
  - streets, squares, playgrounds, etc.

The Comprehensive Plan report should include :

- an analysis of the existing situation ;
- a diagnostic followed by objectives and the definition of a strategy ;
- the linking of the Old City to the town of Tripoli as a whole ;
- the provision of utilities, housing, economic activities, facilities, landscaping ;

- the definition of urban sectors based on archaeological and historical importance, architectural interest, rehabilitation or renewal potential ;
- the listing of building regulations ;
- the identification of sequences of implementation including action areas and pilot projects.

6.4. Field Personnel

The international field team would include a single long-term expert assisted by highly experienced medium or short-term consultants. A list of these consultants is listed hereafter, with the total length of their missions and a description of their requirements. Most of the listed specialists would need a background of experience in :

- historic areas
- urban problems
- developing countries

An ability to communicate and explain would be an asset. Proficiency in Arabic and/or English languages will be requested.

City Planner — 36 months

He would be the Chief Technical Advisor and the permanent member of the team. He would participate in various activities of the Project and would particularly be responsible for establishing a Comprehensive Plan. He would also designate pilot projects and target areas. In addition to his personal tasks, he will prepare and coordinate the work of the international field staff. He will directly work with the Director of the Project Agency.

Traffic and Transportation Specialist — 6 months

He would be in charge of the study of the traffic (pedestrians, cars, deliveries, emergencies, etc) within the Old

City. After a survey, he would have to produce a traffic project to be included in the Comprehensive Plan, as well as a proposal for transportation between the Old City and its surrounding areas as well as with the rest of the town of Tripoli.

Urban Designer — 18 months

He would directly assist the City Planner in preparing the Comprehensive Plan. He would also be more design-orientated and more directly responsible for the development of pilot projects and target areas, which, unlike demonstration projects, will be entirely programmed and designed in Tripoli.

Architect — 18 months

He would carry out typological studies of traditional houses and propose typical rehabilitation or renewal plans for individual buildings. His work would be one of the bases for establishing new urban regulations in the Old City and for evaluating overall costs of rehabilitation.

Conservation Specialist — 12 months

He would work on the restoration of monumental structures and provide a specialized expertise on the treatment of old building materials, renderings and ornaments.

Landscape Architect — 6 months

He would have to work with the City Planner and Urban Designer to design open areas (pedestrian squares, playgrounds, parking lots, etc), pavement patterns, vegetation, urban furniture, etc.

Engineer in Infrastructures — 6 months

He would provide limited assistance in the renewal of water adduction and electricity networks as well as in solid waste

disposal. His expertise would be complementary to others more related to the provision of a new network to be implemented for sewage and drainage under a separate agreement.

Soil Specialist — 3 months

He would orientate geological and geotechnical surveys and would provide conclusions based on their findings both at the levels of the Old City and of particular projects or limited areas.

Structural Engineer — 6 months

He would contribute, together with his fellow architect, conservation specialist and soil specialist, to all work to be carried out on foundations, consolidation of buildings and resistance of materials.

Archaeologist — 12 months

He would direct and eventually report on serious archaeological excavations that could not be undertaken by the Department of Antiquities within a short period of time.

Ethnologist — 6 months

He would work, together with the architect, in connection with the documentation centre and with the help of field interviews, at the reconstitution of the life patterns of the inhabitants of the Old City at the turn of the century.

Sociologist — 6 months

He would direct surveys and work together with the architect, urban designer and city planner, as well as with the Social Section of the Project Agency, at determining the present characteristics of the Old City population, at defining a new target population, and at setting up new standards of housing for this population.

Documentation Specialist — 18 months

He would have to appraise the present undertakings and objectives of the Documentation Section, to define new goals and to propose in coherence with these goals, a management organization, a physical organization, a list of documents and specialized equipment to be purchased.

He would organize training opportunities abroad and train himself in Tripoli the staff of the Documentation Section to use new methods of documentation and equipment.

Urban Economist — 12 months

He would direct surveys and work with the City Planner, the Urban Designer, and the Architect, as well as with the Economic Section to define an economic strategy for the rehabilitation and revitalization of the Old City. He would participate in the definition and the appraisal of economic projects and financial incentives. He would evaluate in particular the affordability of the housing component of the Project.

Accounting Specialist — 6 months

He would appraise, together with the Urban Economist and Quantity Surveyor, as well as the Section of Management and Finance, the present accounting methods used by the Agency for monitoring its own income and expenses. Computerized techniques could be proposed.

Quantity Surveyor — 6 months

He would appraise, together with the Architect and Accountant, the present methods used by the Agency for establishing specifications and bills of quantities. He would propose a rationalization of these methods if necessary in order to save time and budget and to make overall evaluations easier.

Law Specialist — 3 months

He would study existing regulations and propose new ones adapted to the Old City problems as well as to the objectives of the Comprehensive Plan, in collaboration with the City Planner and Urban Economist. He would also propose new statutes for the Project Agency.

Management Specialist — 6 months

He would appraise the organizational structure of the Project Agency together with its Chairman, its Director and the Chief Project Advisor, and would make proposals for improvement.

Unforeseen needs require a flexible provision for as yet unspecified specialists (24 man/months at least).

6.5 Training :

Short or medium length (e.g.one week or one month) rather than long (e.g.one year) training sessions, should be arranged for the Project Agency personnel (technicians and above).

This training should preferably be given in Tripoli.

A one-week training seminar each year may be considered for example. The seminar may involve 5 or 6 foreign specialists who would present other experiences from abroad and exchange ideas with the Agency team as well as with the decision makers.

The salaries and travel expenses of these specialists would have to be included in the first contract. Local expenses would be taken care of by the Agency's or the Municipality's budget.

International meetings (conference, colloquia, seminars, etc) related to the concerns of the project should be brought to the attention of the Project Agency who would then take the

decision to send representatives or not at the Agency's expense.

Medium-length training sessions (between two weeks and three months) could be arranged abroad within specialized institutions for Agency personnel upon request. The Agency would then cover all expenses for its personnel.

Given the fact that many traditional building techniques have been lost, the Project Agency personnel (technicians and under) may also need on-site training. Different trades associated with rehabilitation techniques (masonry, tiling, etc) could form part of a training workshop based on teaching as well as on field practical exercises for restoration and rehabilitation. This particular project needs further discussion yet. If this is considered worthwhile, i.e. that there are a sufficient amount of structures to be saved in the Old City to justify a training workshop, an additional agreement would be necessary (see para. 7.2.4.).

6.6 Equipment :

Adequate technical equipment will certainly be needed at the Project Agency headquarters (sections of documentation and architecture) like computers (hardware and software), drawing equipment, books, etc. as well as on the restoration and rehabilitation sites like surveys and siteworks.

The financing of this equipment should be provided within the first agreement. Additional meetings with Libyan counterparts are however necessary to draw up a list of material to be acquired. The Chief Technical Advisor (CTA) as well as other international consultants may also suggest later on other useful equipment for the Project. Flexibility is therefore important.

6.7 Exhibition :

An exhibition on the Old City of Tripoli should be prepared by Unesco and exhibited at its Headquarters.

It would present the history of the Old City, its urban and architectural personality, its life and activities as well as the present projects for its conservation, rehabilitation and revitalization.

6.8. Structures :

6.8.1. Structures at the International Level

A. International Consultative Committee

An International Consultative Committee should be set up with the mission of appraising programmes and projects to be implemented inside as well as at the periphery of the Old City, of evaluating work and activities, whether in progress or completed, and of informing the Libyan Government as well as Unesco if the conservation, rehabilitation and revitalization of the Old City of Tripoli is encountering major threats or difficulties.

The International Consultative Committee would include five international personalities with knowledge and experience in City Planning, Architecture, Economy, Sociology and History. Its members would be jointly chosen by the Libyan Government and Unesco. Its meetings may be held on a biennial basis, alternatively in Tripoli and Paris for example. The funding of its activities would be specifically included in the first agreement.

B. Unesco Task Force

As an agreement would imply direct involvement or

simply a provision of information and experience from several specialized departments within Unesco, an internal Task Force including representatives of all these Sectors would be set up with the objective of ensuring better permanent coordination.

c. Unesco Headquarters Project Team

A Headquarters project team would be necessary in Paris in order to perform the following activities :

- Secretariat of the Task Force and of the International Consultative Committee ;
- Assistance in recruitment of experts, travel expenses and fees ;
- Monitoring and evaluation of progress of projects ;
- Organization of training sessions ;
- Acquisition of requested equipment ;
- Preparation of further agreements ;
- Monitoring of turn key projects ;
- Preparation of the exhibition on the Old City of Tripoli at Unesco Headquarters:

The permanent staff would include one or several persons on a full or part-time basis. These persons should have professional experience in management, planning, bidding, education, etc. as well as a good knowledge of developing countries.

Associate experts may assist the team in its activities.

Technical advisors may also be needed in some specialized fields for short-term consultations.

The Headquarters Project Team would be placed under the authority of the Division of Population and Human Settlements and would be funded under the agreements mentioned in the present report.

6.8.2. Structures in Libya

A. National Consultative Committee

This Consultative Committee would include representatives of all institutions involved in activities in the Old City : Project Agency, Municipality, Department of Antiquities, Waqfs, Electricity Company, etc.

This Committee would meet regularly to give opinions on major projects or decisions.

B. Project for Planning and Managing the Old City of Tripoli

The Project Agency already exists and undertakes very interesting and useful activities. The Agency will be Unesco's main partner for future action in the Old City. It will provide a working environment for long, medium or short-term international experts or consultants. The agency staff will work closely with these consultants and learn directly from their experience, apart from any organized training sessions.

The following suggestions may contribute to the improvement of its efficiency :

Statutes : The Project Agency should be able to undertake profit-making activities, independently of usual administrative rules and more rapidly. It should also offer more attractive working conditions to young professionals. This is why the transformation of its statutes into a Development Authority still linked to the Municipality is worth consideration.

Funding : The new Development Authority may receive from the Municipality a Capital Fund plus Regular

Funds on an annual basis or according to a multi-annual programme.

Structure : The organizational structure may develop along the following lines :

.Chairman : nominated by the Government
.Board of Administration : nominated by the Municipality
.Director : appointed by the Chairman
.Head of Sections : appointed by the Chairman

The Director's role to be created requires both high management and technical abilities. The role of Head of Section requests a specialized high level of qualification.

It would also be useful to add an economic section to existing ones which would be responsible for the development of the economic life in the city as well as of existing workshops.

The Section of Social Affairs should also be entrusted with the development of housing whether through rehabilitation or renewal projects.

Recruitment : A higher level of recruitment in technical sectors is urgently needed (town planners, architects, etc.). Better supervision at all levels is also needed. Contacts with national and foreign schools of architecture and planning are to be developed.

6.9. Technical Time-Schedule

A time-schedule for the implementation of the agreement is difficult to define precisely because :

- some requests are not accurately made yet
- further investigation is still needed
- much diversity of activities is involved, some of them very specialized
- non-technical delays are hard to predict and evaluate.

A first working phase of three years may however be scheduled, followed by a second phase of three years also, to be defined later.

To be realistic, the first phase should start three months after the signature of an agreement by all partners and after reception of the Funds-in-Trust. Other agreements may follow or accompany the first one.

The following technical time-schedule may be suggested for technical activities during Phase I, if non-technical interferences are excluded :

Year One : Evaluation of existing studies and complementary surveys. Analyses and diagnostics. Improvement of the Project Agency organization. List of equipment to be purchased. Setting up and start of training programme. Nomination of the International Consultative Committee and first meetings. Preparation and signature of further agreements.

Year Two : Setting up of a Comprehensive Plan with all necessary planning and building regulations. Improvement of the Project Agency activities. Training of documentation staff. Training seminar.

Year Three : Start of the implementation of the Comprehensive Plan, action plans or pilot projects. Training seminar. Preparation of the next 3-year programme and agreement.

Preparation and presentation of the Exhibition at Unesco Headquarters.

N.B. After the first three months after the start of the agreement, one will be able to better define the activities to be undertaken. See also Annexes 1 and 2.

7. FOLLOW-UP OF THE MISSION

7.1. Agreement :

A first agreement between the Socialist People's Libyan Arab Jamahiriya and the United Nations Educational, Scientific and Cultural Organization may be proposed along the following lines:

Title : Conservation, Rehabilitation and Revitalization of the Old City of Tripoli

Duration : 6 years, with a first phase of 3 years defined now and a second phase of 3 years to be defined later.

Government Implementing Agency : The People's Committee of the Municipality of Tripoli

Justification : The Old City of Tripoli represents a historical heritage which has been built up over centuries by successive civilizations. Over the years, it has been subject to dramatical physical decay and social change. Aware of this most preoccupying situation, the Libyan Government has set up a new Agency within the Municipality of Tripoli, the Project for Planning and Managing the old City of Tripoli.

Needs : in order to fulfill its missions, the Project Agency needs recognition, counselling, expertise, training and equipment which can be provi-

ded where needed through the international community.

Objectives: The conservation of historical monuments and of interesting parts of the traditional urban fabric are to be linked to rehabilitation, re-use and renewal projects aiming at :

- offering a decent environment to the present and future inhabitants of the Old City.
- preserving a significant part of the national and world heritage.
- providing cultural activities at the level of the whole town of Tripoli.
- imitating a self-sustaining revitalization process including the development of economical activities.

Outputs :

- the preparation of further agreements on turn-key projects
- the addition of polyvalent assistance to the undertakings of the Project Agency
- the preparation of a Comprehensive Plan
- the organization of a Documentation Centre
- the preparation of an exhibition on the Old City of Tripoli

Criteria for the evaluation of success would include :

- a major improvement of the Project Agency's potential in management, technical expertise, documentation and equipment
- the setting up of a comprehensive revitalization process in the Old City in relation to population, housing, economic activities and cultural life.
- the conservation of major monuments, the rehabilitation of significant buildings and the preservation of the Old City's urban personality.

Input : The first agreement would include the following items :

- Field personnel
- Training
- Equipment
- International Consultative Committee
- Headquarters Project Team
- Exhibition

Funding : By the Libyan Government through a contribution to the Unesco Funds-in-Trust programme.

Budget : It is estimated that a revolving fund of US$1m is needed. This amount would include an overhead provision calculated at a non revisable rate of 13% of all the project expenses.

A contingency reserve of 15% (US$150.000) is to be added to the above-mentioned figure. The first sum to be paid to Unesco is therefore of US$1,150,000.

Services to be provided by the Municipality :

The People's Committee of the Municipality of Tripoli will :

(i) Provide Unesco with all the information and documents required and pertinent to the project.

(ii) Provide suitable space for the personnel of the project in Tripoli throughout the project duration.

(iii) Assume full responsibility for customs clearance and transportation of all equipment from point of entry to the site, all customs handling, storage and transport to site, fees and costs being paid by the Municipality.

(iv) Assume all local expenses of training sessions organized in Tripoli.

(v) Nominate suitably qualified staff for the management and operation of the project.

Other Agreements : Any turnkey project (e.g. utilities, demonstration project, etc) or any major addition to this first agreement (e.g. field training workshop) could be included in a separate agreement, with a separate budget. The expertise needed for the preparation of additional agreements would however be financed within the present agreement.

7.2 Further Agreements

7.2.1. Additional Investigation

Three additional agreements may presently be considered :

- Implementation of a sewage network
- Implementation of a renewal demonstration project
- Setting up of a field training workshop.

Additional investigation and a feasibility study would be necessary before undertaking their preparation and budget. A first approach towards a definition of their schedule and difficulties may however be made as follows :

7.2.2. Project for a New Sewage Network

A. Work schedule over approximately 3-4 years :

i) exploratory mission by a specialized consultant ;
ii) setting up of an agreement if both partners decide to carry on ;
iii) on-site survey and preparation of a comprehensive technical portfolio, by the consultant;
iv) production of the brief to be given to the consulting firm ;
v) choice of consulting firm ;
vi) production of a project and tender documents by the consulting firm ;

vii) bids to contractors and managements firms ;
viii) implementation of contracts.

B. Technical difficulties :

i) Drainage and sewage networks should be studied together ; all networks (sewage, drainage, water adduction, electricity, telephone, TV cables, etc) should preferably be integrated together ;
ii) laying underground networks is usually difficult in historic areas. It is even more difficult in Islamic traditional urban fabrics ;
iii) archaeological sites buried below existing cities may cause major surprises and delays when underground networks are laid out ;
iv) an additional difficulty may be due to insufficient definition of renewal operations on a small, medium or large scale. Would, for example, a collapsed house be replaced by another house or by a parking lot ? Where are future streets to be located in an area designated for renewal ?
v) A new sewage network is urgently needed even before completion of any comprehensive plan.

7.2.3. Renewal Demonstration Project

A. Work schedule over approximately 3-4 years :

i) exploratory mission by a specialized consultant ;
ii) setting up of an agreement if both partners decide to carry on ;
iii) on-site survey (if needed) and preparation of a comprehensive technical portfolio by the consultant;
iv) production of the brief to be given to the consulting firm ;
v) choice of consulting firm ;
vi) production of a project and tender documents by the consulting firm ;
vii) bids to contractors and managements firms ;

viii) implementation of contracts.

B. Technical difficulties :

i) a limited and rapid archaeological investigation would be necessary before any final decisions regarding the site to be chosen. Would the Department of Antiquities be willing and able to mobilize enough manpower and funds for that purpose ?
ii) unavoidable, but hopefully limited, contradictions may arise between the demonstration project options and the Comprehensive Plan, as both will proceed simultaneously.

7.2.4. Project for a Field Training Workshop

A. Work schedule, over approximately 3-4 years :

i) exploratory mission by a consultant ;
ii) setting up of an agreement if both partners decide to carry on ;
iii) recruitment of a CTA
iv) setting up of a training programme and budget ;
v) choice and arrangement of headquarters ;
vi) choice and acquisition of technical equipment ;
vii) recruitment of remaining international staff and nomination of Libyan counterparts ;
viii) choice of sites ;
ix) beginning of training session with simple workers and basic techniques (masonry, reinforced concrete, scaffoldings, frameworks, carpentry, doors and windows, tie-beams, wire meshes, tiling, mosaics, etc. ;
x) training sessions for foremen and construction executives ;
xi) evaluation and proposition for a subsequent 3-year period, with less international involvement.

B. Technical difficulties :

i) Although a separate agreement, with independent programmes and a different CTA should provide autonomy and better efficiency, adequate coordination is to be maintained with the Project Agency and the other Unesco team.

ii) Libyan workers and technicians following such a training programme should be rewarded with a recognized educational diploma.

7.3 Agreement Calendar

As a follow-up to the Unesco mission, it was agreed that the following steps could be considered, as mentioned in the provisional report :

1. On the basis of the preliminary report, Libyan authorities will rapidly send a letter stating their wish to see Unesco closely involved in the Old City project and particularly along the lines described above (see para. 6.2).

2. Unesco will subsequently reply with a letter of intent announcing the preparation of a draft protocol which will define the scope of it possible involvement in this project (hopefully two months after the end of the mission at the latest).

3. A meeting could then be arranged between the counterparts in order to finalize the document and set up the framework for a first agreement (based on the present final mission report).

The preparation of further agreements may proceed as soon as the first agreement will reach the operational phase, unless quicker arrangements are found.

ANNEX I : TENTATIVE CALENDAR OF FIELD EXPERTS' INVOLVEMENT

ITEMS	TOTAL	YEAR 1	YEAR 2	YEAR 3
City Planner (C.T.A.)	36	12	12	12
Traffic Specialist	6	3	3	0
Urban Designer	18	6	6	6
Architect	18	6	6	6
Conservation Specialist	12	4	4	4
Landscape Architect	6	0	3	3
Eng. in Infrastructures	6	3	3	0
Soil Specialist	3	3	0	0
Structural Engineer	6	0	3	3
Archaeologist	12	4	4	4
Ethnologist	6	6	0	0
Sociologist	6	4	2	0
Documentation Spec.	18	12	6	0
Urban Economist	12	4	4	4
Accounting Specialist	6	2	2	2
Quantity Surveyor	6	2	2	2
Law Specialist	3	2	1	0
Management Specialist	6	3	3	0
Unforeseen	24	8	8	8
TOTAL m/m	210	84	72	54

United Nations Educational, Scientific and Cultural Organization

ICCROM

1. Context and rationale

Libya is the depository of a very rich and diverse cultural heritage with five sites inscribed on the World Heritage List (the archaeological sites of Leptis Magna, Sabratha and Cyrene, the rock-art sites of Tadrart Acacus and the Old Town of Ghadames), and numerous historical and traditional cities, archaeological sites (including underwater heritage), modern architecture masterpieces, museums and collections, cultural and research institutions, libraries and archives. Libya also has a rich intangible cultural heritage that reflects substantial cultural diversity and creativity.

While the end of 2015 witnessed the signing of the UN-brokered Political Agreement which in turn has opened the door for the formation of a Government of National Accord (GNA), instability and conflict continued to affect many parts of Libya. A consistent pattern of deliberate vandalism and destruction of Libyan cultural property had been observed since the outbreak of widespread fighting in July 2014. The growing strength of armed groups coupled with the general breakdown of effective national institutions implied that the cultural assets, values and traditions of the country now face a multiplicity of existential threats. Efforts of the international community have been mobilized purposefully and efficiently around the nascent GNA. The grave situation in the country continue to call for a higher level of efforts.

Since the events which brought to the 17th February Revolution 2011, the Department of Antiquities of Libya (DoA) took in his account all the necessary procedures to protect and reduce the risks, with the assistance of international institutions and foreign archaeological missions.

UNESCO is deeply committed in assisting Libyan institutions and authorities in enforcing the protection of cultural heritage in Libya. Since 2013, through two projects, financed by the Governments of Italy and Libya, so far more than 350 professionals from the different territorial offices of the Department of Antiquities (DoA), the Historic City Authority (HCA), universities, heritage managers, police and customs officials, in addition to municipalities, cultural institutions and associations were involved into capacity building trainings and activities in Libya and abroad. Only in 2013, through an introductory workshop (Tripoli) and two technical training cycles (Sabratha and Cyrene/Shahat), more than 200 participants from border patrol, customs and tourist police, criminal investigation departments, Libyan INTERPOL, as well as civil society associations, in addition to the DoA, archaeologists, university researchers were involved in the definition of coordination mechanisms, procedures and technical knowledge on the prevention and fight against illicit trafficking of Libyan cultural heritage. These training programmes were equally attended by international bodies, such as INTERPOL, WCO and ICOM. Trainings have been mainly addressed to strengthen professional capacity in the field of documentation, in-situ protection, risk preparedness and disaster management, preventive conservation and security enforcement. Among these trainings, between 2013 and 2015 more than 35 conservators were trained in preventive conservation of collections, 40 professionals were trained in

plenary showed a number of monuments and historic cities which have already been identified. The Historic Cities Authority relies on regional offices (Fezzan, Tripolitania and Cyrenaica) to support and relay its action. Its mission includes a human sciences component as well as a work on key technical aspects such the cadastre. A series of projects has been carried out between 1987 and 2006, including some interesting reconversion operations (ancient French consulate into a cultural centre, a library, etc.). Several other projects are ready to be implemented but they are lacking funding.

A major urban regeneration project was planned for the city of Tripoli (48 hectares), including an itinerary formed by eight avenues. The major challenge in the cities is the fact that they are inhabited and this can be an obstacle to the proper achievement of the objectives set in such a regeneration project. Other challenges like the illegal occupation of abandoned houses and the pauperization of some districts also contribute to the complexity of the situation. The Historic Cities Authority aimed at reintegrating the ancient urban districts of Tripoli in the city's life by reintroducing some functions, either previously lost or new (baths, handicraft shops, art schools, etc.). The rehabilitation of old buildings was also an option.

The Historic Cities Authority plays a key role in the field of research and studies (including in the field of human sciences), using its documentation work, to establish the historical background of each building and urban area, as well as the publication of reference documents.

In terms of priorities, the Historic Cities Authority needs support to update and modernize the national inventory of historic cities and monuments.

The prevailing situation raises security issues and generates collateral damages, intentional destruction and also vandalism, by non-armed people, due land-use and financial speculation. The illegal constructions are also a major issue, especially in a context of a weak legal framework.

The conclusion is that the change is possible if the government takes ownership of the issue of cultural heritage safeguarding as a national project for the society and the country.

Actions proposed to address the issues raised: The group came up with a set of eleven actions to tackle the issues raised during the first plenary session and the discussions with the representative of the Historic Cities Authority. These actions are (by order of priority):

1- To launch a new vision of urban heritage:
The conservation of urban heritage (as well as cultural heritage in general) has to be a national project, based on the most up-to-date international standards. This first step does not have any financial implication. It is more a political positioning and a responsibility sharing. Practically, this vision could be the result of a meeting in Tunis, bringing together the key institutional actors (the Historic Cities Authorities, the Ministry of Urban Planning, the Ministry of Housing, the University of Tripoli, etc.) and civil society representatives in Libya, as well as international organizations and experts. A text could be adopted at the end of the meeting by the Libyan parties and

ANNEX 4: RESEARCHER PHOTOGRAPHING PERMISSION

A copy of the letter addressed to the researcher as a permit for the work of the study and taking pictures that would help clarify the study.

2018/11/1م
ج م ط/17/217

جهاز إدارة المدينة القديمة اطرابلس
Old Tripoli City Administration Board

السادة / الإدارة العامة للأمن المركزي /مكتب المدينة القديمة اطرابلس

بعد التحية،،

بالإشارة إلى الطلب المقدم من الطالب / نادر ناصر محمد شمبش حامل زواج سفر رقم (COTF6HMO) بشأن موضوع الدراسة (كيف توضح الإستدامة في البيت الليبي التقليدي في المدينة القديمة) والذي يرغب في تصوير بعض منازل المدينة القديمة اطرابلس .

ونظراً لأهمية الموظوع وحصولنا على نسخة من هذا العمل ، نفيدكم بأنه لا مانع لدينا من منح المعني إذن تصوير.

نحيل إليكم طلب المعني وذلك للعلم والاختصاص

والسلام عليكم

م.محمود الهاشمي النعاس
رئيس لجنة الإدارة

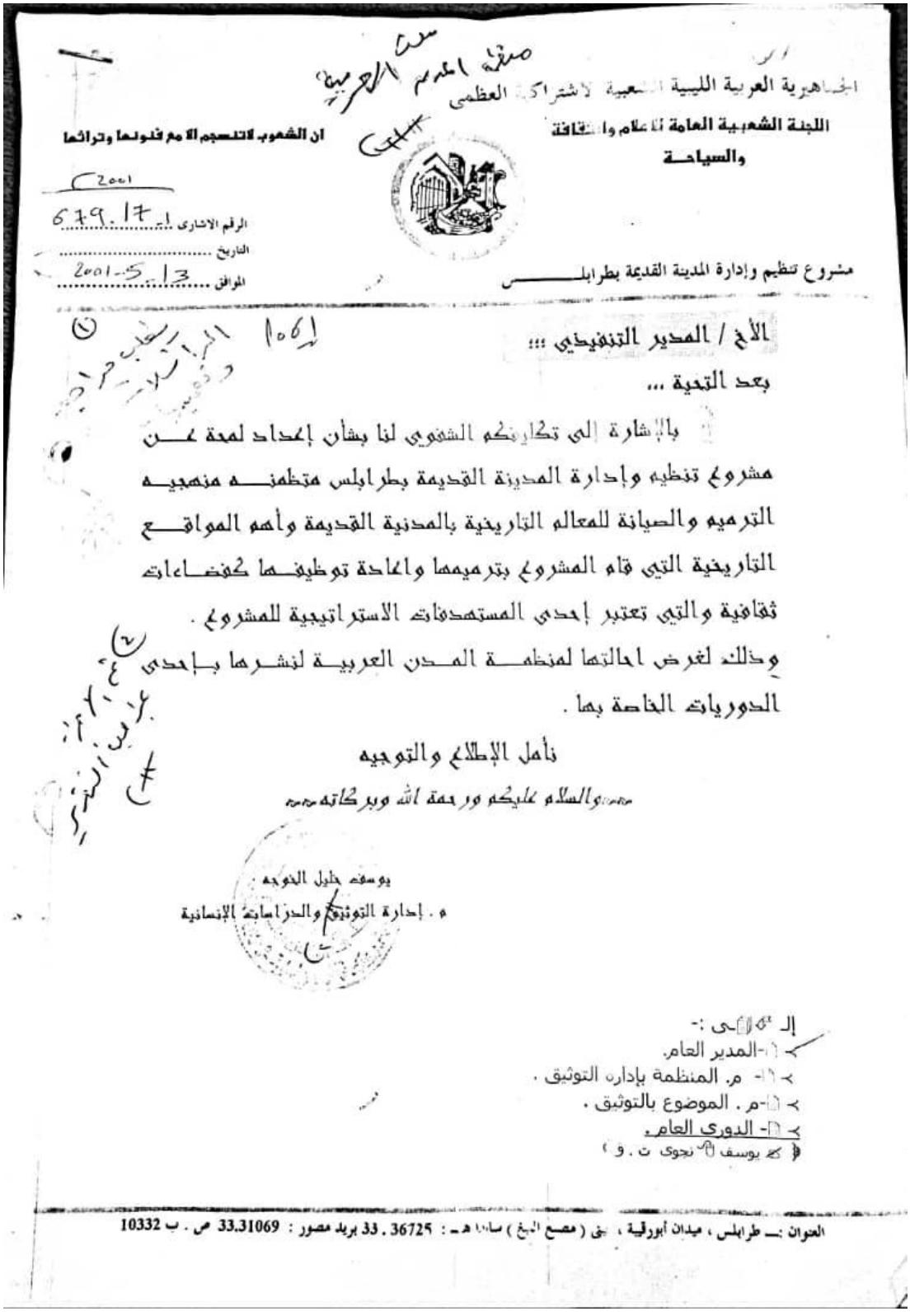
صورة إلى:
مكتب شؤون اللجنة
الدوري العام

صورة للمعنى للعلم

www.otcab.ly

ANNEX 5: OLD CITY OF TRIPOLI DEPARTMENT REQUEST

A request from the Department of Documentation and Humanities to prepare a report on organizational projects in the Old City of Tripoli.



الجماهيرية العربية الليبية الشعبية الاشتراكية العظمى

اللجنة الشعبية العامة للاعلام والثقافة والسياحة

ان الشعوب لاتنسحق الا مع فنونها وتراثها

2001

الرقم الاشاري : 679.17

التاريخ :

الموافق : 2001-5-13

مشروع تنظيم وإدارة المدينة القديمة بطرابلس

1061

الأخ / المدير التنفيذي :::

بعد التحية ...

بالإشارة الى تكاريكم الشفوي لنا بشأن إعداد لمحة عن مشروع تنظيم وإدارة المدينة القديمة بطرابلس متضمنه منهجيه الترميم والصيانة للمعالم التاريخية بالمدنية القديمة وأهم المواقع التاريخية التي قام المشروع بترميمها واعادة توظيفها كفضاءات ثقافية والتي تعتبر إحدى المستهدفات الاستراتيجية للمشروع .

وذلك لغرض احالتها لمنظمة المدن العربية لنشرها بإحدى الدوريات الخاصة بها .

نأمل الإطلاع والتوجيه

ومع السلام عليكم ورحمة الله وبركاته ،،،

يوسف خليل الخوجه

م . إدارة التوثيق والدراسات الإنسانية

إلى :-

1- المدير العام.

2- م. المنظمة بإدارة التوثيق .

3- م . الموضوع بالتوثيق .

4- الدوري العام .

ك/ يوسف نجوى ت . و)

العنوان :- طرابلس ، ميدان أبورقيبة ، حي (مصبغ البخ) ساحة هـ : 36729 . 33 بريد مصور : 33.31069 ص . ب 10332

ANNEX 6: CURRICULUM VITAE

Nadir Nasir Mohammed SHEMBESH was born in Benghazi –Libya 1977, Libyan, married and graduated, for higher diploma in engineering vocations, specialization of construction and architectural in spring 2000, after that, in 2015 he moved to OKAN University, Art Faculty, Department of Art / Design and Architecture to study master program. His work experience, 2000-2004 worked for Alnairooz Company for Construction and Engineering Consultations as site Engineer, and 2004-2006 worked for Alsuruh Company for Construction and Engineering Consultations as project Engineer, 2008-2010 worked for Assarh Company for Engineering Consultation as Consultant Engineer, 2012-2014 worked for Hadi Eltarek for Engineering Consultation as chairman of board, 2014 – 2015 Topyapi as Consultant Engineer.

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