



UNIVERSIDADE
LUSÓFONA
DO PORTO

Yara Aboasfour

**RECONSTRUCTION AFTER CONFLICTS
(THE STUDY CASE OF ALEPPO)**

A thesis submitted for the degree of
Master of Architecture

Supervised by

Prof.Dr Vítor Manuel Araújo de Oliveira

October 2019

E autorizada a reprodução integral desta dissertação apenas para efeitos de investigação, mediante declaração escrita do interessado, que a fa se compromete E autorizada.



Yara Aboasfour

**RECONSTRUCTION AFTER CONFLICTS
(THE STUDY CASE OF ALEPPO)**

A thesis submitted for the degree of
Master of Architecture

Dissertação defendida em provas públicas na Universidade
Lusófona do Porto no dia 30/10/2019 perante o júri seguinte :

Presidente: Prof. Doutora Maria da Graça Ribeiro Correia Ragazzi

Arguente : Prof. Doutora Ligia Paula Simões Nunes Pereira da Silva

Orientador: Prof. Doutor Vítor Manuel Araújo de Oliveira

October 2019

Declaration

Nos exemplares das teses de doutoramento ou dissertações de mestrado ou de outros trabalhos entregues para prestação de provas públicas nas universidades ou outros estabelecimentos de ensino, e dos quais é enviado um exemplar para depósito legal na Biblioteca da Universidade Lusófona do Porto, deve constar uma das seguintes declarações:

1. É autorizada a reprodução integral desta tese/dissertação apenas para efeitos de investigação, mediante declaração escrita do interessado, que a tal se compromete.
2. É autorizada a reprodução parcial desta tese/dissertação (indicar, caso tal seja necessário, nº máximo de páginas, ilustrações, gráficos, etc.), apenas para efeitos de investigação, mediante declaração escrita do interessado, que a tal se compromete.
3. Não é autorizada, por um prazo de 3 anos, a reprodução de qualquer parte desta tese/dissertação.
4. De acordo com a legislação em vigor, não é permitida a reprodução de reprodução de qualquer parte desta tese/dissertação.

Acknowledgment

Firstly, I am sincerely grateful to be supported by the "**Global Platform for Syrian Students**" scholarship. I would like to thank you for all the effort you did for me especially, Professor Helena Barroco as she was very supportive and inspirational to me.

I also would like to thank my supervisor Professor Vítor Manuel Araújo de Oliveira for all the support, availability, motivation, and guidance during this work, without which I could not get this result.

And I am using this opportunity to express my gratitude to all the professors of the Integrated Master in Architecture who supported me throughout this course. I am thankful for their aspiring guidance, invaluable constructive criticism and friendly advice - for Professor Nuno Graca Moura In particular.

Finally, I express my warm thanks to the dean Mrs. Isabel Babo and Mrs. Elisabete Costa for their kindness; support and guidance at Universidade Lusófona do Porto.

Dedication

In every line I wrote this research you always came back to my mind ... in every lane, every door and every stone.

I spent the most beautiful and difficult times in you and I missed you a lot.

I dedicate this work to my beloved country Syria and my city "Aleppo" in particular.

To the one who is the source of my strength, inspiration, and energy and who believed in me and in my ability to reach my goal, to my spirit and life partner.

My husband "Ahmad "

To my Family who gave me love and care throughout my whole life, and gave me endless support to complete this stage of my life

Abstract

Wars and armed conflicts are one of the greatest threats to the social, cultural, economic and political structures of countries. Urban and architectural damage may be the living proof of the devastation caused by wars and armed conflicts.

In the forefront is the destruction of architecture and urbanization associated with the community, which represents the memory and identity of this society, especially the destruction of heritage architecture, which generally includes different types of buildings depicting the climax of humanitarian activities at different periods of history, and each type of these buildings requires a different approach depending on the importance of the building and its historical value and potential.

The research aims to reflect on the reconstruction of historical buildings that have been destroyed by wars and armed conflicts as a symbolic value that must be preserved. It will present theoretical concepts related to post-war reconstruction discussing the possibility of applying them in the old city of Aleppo, by monitoring some of the Arab and Western cases affected by wars, which have been applied to these trends. In synthesis this work is an attempt to prepare a preliminary study for the reconstruction of historic buildings in historic cities, which are currently being destroyed and damaged by the events taking place in the Arab region, in general, and its historic cities, in particular.

Keywords: Syria, Aleppo City, Historical Buildings, Architecture Heritage.

TABLE OF CONTENTS

Introduction	1
Objectives.....	2
The importance of the research.....	2
Methodology	2
Geographical & Temporal Scope.....	3
Chapter 1 – The Reconstruction of Historical Cities	4
1-1 The Experience of Beirut.....	5
1-1-1 The impact of the civil war and its results on the traditional center of the city of Beirut.....	7
1-1-2 The reconstruction of the traditional center in Beirut and the conditions governing construction.....	8
1-1-3 The followed reconstruction strategies of the traditional center in Beirut.....	10
1-2 The Experience of Dresden.....	13
1-2-1 Dresden bombing	14
1-2-2 The impact of the war and its consequences on the historic city of Dresden.....	15
1-2-3 Reconstruction of the historic city of Dresden.....	16
1-2-4 Strategy for the reconstruction of the historic city of Dresden.....	18
1-3 Conclusions.....	19
1-4 Compared to the Reconstruction Strategies of the two Historic Cities.....	20
Chapter 2- The Long History of Aleppo	22

2-1	The City of Aleppo over Time	23
2-1-1	Islamic Aleppo.....	24
2-1-2	Mongol invasion.....	25
2-1-3	Ottoman period.....	26
2-1-4	The French occupation.....	28
2-1-5	After independence.....	31
2-1-6	Aleppo before the conflict.....	32
2-1-7	Five Years of Destruction: Overview (2012 - 2017).....	33
2-2	The Stages of Aleppo’s Urban Growth	35
2-3	Conclusions	40
 Chapter 3- Aleppo and the Destruction of the War.....		41
3-1	The Effects of Armed Conflict and the Percentage of Destruction.....	41
3-2	The Cultural Heritage Sites Analysis.....	44
3-3	Losses of the Cultural Heritage in the Old City	46
3-4	Conclusions.....	56
 Chapter 4- The learned Lessons and their Influence on the Reconstruction Process.....		57
4-1	Create a Qualified Corporate Structure to Manage Business Activities.....	58
4-2	Prepare a Plan to Rebuild and Maintain.....	59
4-2-1	Before the crisis ends.....	59
4-2-2	Steps should be taken in the old city (emergency solutions).....	60
4-2-3	Strategies for the conservation of rubble in the old city of Aleppo after the end of the armed conflict.....	61
4-2-4	After the crisis.....	62
4-3	Legislative/ Legal Dimension.....	63
4-4	Financing of the Action Plan.....	64

4-5 Funding Schedules.....	65
4-6 Population Participation.....	65
4-7 In Conclusion.....	66
 Chapter 5-The Preservation Project.....	 67
5-1The Reason for Choosing the Studied Area.....	67
5-2The Destruction in the Vicinity of Aleppo Castle.....	69
5-3 Evaluate the Destruction Size and the Value of the Studied Buildings.....	74
5-4 Site Proposal.....	77
 5-5 The Carlton Hotel as a Sample of Buildings Damaged by More than 90%.....	 79
5-5-1-The historical study and architectural description of the building.....	79
5-5-2-Architectural documentation of thbuilding.....	81
5-5-3-Building materials used in the Carlton building.....	88
5-5-4-Physical state of the building -the currentsituation.....	88
5-5-5- Reconstruction strategies to follow.....	90
5-5-6- The Proposed steps for the reconstruction of the Carlton Hotel.....	90
 Chapter 6- Conclusions and Recommendations.....	 91
 Bibliography.....	 94
 Appendix A.....	 98
 Appendix B.....	 102

Introduction

For more than seven years, Syria endured an international war that transformed it into a bloody battleground of rival factions that caused huge damage in different areas. During this war, Syrian cities and historical areas have been heavily and continuously destroyed by armed conflict which has been affecting various aspects of life and causing great effects such as the loss of human life, the displacement of populations and the destruction of property, buildings and cultural heritage sites. Reconstruction is, therefore, one of the most important means of preserving heritage, history and collective memory.

Against this background, it is necessary to design disaster management approaches and strategies and subsequent reconstruction processes, as much of the damage is caused by the lack of management practices for these disasters, insufficient planning to resolve the resulting problems, and the lack of clarity in the post-reconstruction strategy.

Despite the devastation caused by wars, these disasters can provide opportunities for research into ways of articulating a clear strategy for reconstruction. Given the unstable conditions in Syria, the development of such strategies is highly important, taking a very deep national and symbolic dimension.

The public buildings have been selected because they are the most important landmarks of the old city of Aleppo. They bear religious, historical, social and artistic values and are currently being destroyed by events in the city in general and the Old City in particular.

Objectives

This dissertation aspires to present information that contributes to the rebuilding process of Aleppo by providing a description of the relevant structures and spaces seen in different Aleppine architectural styles. This explanation should provide a resource for seeking clarification regarding the distinctive characteristics and distribution of architectural styles in the city of Aleppo. Additionally, it will contain a thorough study of the city's pre-war and wartime that includes the spatial, historical, and social aspects at play in the different Aleppine architectural styles. It will also provide a brief review of the history of Aleppo and examine the case of the post-reconstruction of some cites and recommend approaches for the reconstruction of the old city through information collection and the results of the research.

The importance of the research

The research aims at highlighting the different ways that can be followed for the reconstruction of historic buildings in the old city of Aleppo, as these buildings reflect the civilized face of the city during the various historical periods, which would emphasize the identity of Aleppo civilization and subjected to the attack on several fronts.

On the other hand, it will document a number of important historical buildings in the ancient city of Aleppo and describe the most important damage suffered during the events and disturbances that have taken place in the city in the past years.

Methodology

The following methodological procedures have been adopted:

1. An Inductive Approach: Through the examination of what is related to the research of references and books on the subject of preservation and reconstruction.

-The study will also include of pertinent information that is only available in Arabic as well as information known only to the inhabitants of the city. Therefore, it is important for this research to utilize diverse research methods and to compile information and opinions from national and international researchers as well as Aleppines to ensure that the complexity and sensitivity of Aleppo's post-war urban issues are dealt with in an appropriate way.

-Data sources include remote sensing and satellite imagery; social media analytics; existing public information; and data from partner humanitarian agencies.

2. An Analytical Approach: By definition of the area to be studied and classification of problems and damage and analysis reality.

3. A Comparative Approach: through the study of global experiences in the reconstruction field.

4. A Practical Approach: through the development of guidance for reconstruction and reduce the distortion and abuse of urban infrastructure.

- Presentation of possible proposals for the reconstruction of historic buildings (public) in the old city of Aleppo.

- Reach results and come up with suggestions and recommendations based on previous studies and analyzes.

Geographical & Temporal Scope

1-Sheds light on the historical buildings in the ancient city of Aleppo and examines the condition of part of the surrounding of the castle, which was damaged by the unrest in the city in last years.

2-The Syrian crisis started in 2011; therefore, the damage is calculated according to the actual or estimated pre-2011 baseline of the physical assets, established in the December 2014 assessment. In the first phase, the damage was assessed as of December 2014; the second phase was conducted in March 2016, and the current and third phase in February 2017.

Chapter 1

The Reconstruction of Historical Cities

During wars, cultural heritage and its urban environment often act as a target. The extent of destruction of this heritage during the twentieth century is horrific and non-preceded by what is known in human history. World War II reduced European cities to rubble, among which were Berlin, Dresden, and Warsaw. The Lebanese capital Beirut was destroyed after a lengthy civil war followed by the Israeli invasion. Syrian cities are the latest to have substantial damage after man-made disasters.

In theory, there are many post-war rehabilitation techniques, some more practical than others. Models of reconstruction have been followed in devastated cities around the world, some of which have been successful. Unfortunately, some of the results have caused greater loss to the city and its cultural heritage. In any case, war destroys cities, each one pursuing its own strategy of recovery its prosperity and its potential to sustain life. Cities ravaged by conflict face a unique challenge as they move forward and rebuild: To what extent do they work to commemorate these events, and to what extent do they focus on building anew? How do they balance past tragedy with plans for a more hopeful future?

In this chapter, two international experiments were selected, which adopted different strategies in dealing with post-war historical architecture. The history of these areas and the destruction they have suffered during the war and its impact on the urban environment will be highlighted, identify the lessons learned from these cases and conclude the different trends in the reconstruction process.

1-1 The Experience of Beirut

The history of Beirut dates back five thousand years. The city has witnessed many earthquakes and wars, whether civil war or foreign war such as the Lebanese Civil War (1975-1990) and the Israeli invasion of Lebanon in 1982, The last of these wars was the devastating July War of 2006. However, as of 1992, the state began the restoration and reconstruction work in the whole country. The most prominent project was the reconstruction of the city center which shown in figure 1.1.



Figure 1.1: The city center of Beirut. (<http://www.ebesm.eu>)

The traditional center of Beirut is located on the waterfront of the city, as it is a coastal city that grew and developed from the position of the port. The city's traditional center was destroyed following the Lebanese civil war 1975-1990 which resulted in the separation of the whole city from north to south; the city was divided into East and West Beirut and the center was considered as a buffer zone and a service area of the two parties of the conflict. In addition to the total destruction of infrastructure and surrounding buildings, where 83% of the historical center for the city (Khans-Souks-water fountains ...) was destroyed, as shown in Figure 1.2.



Figure 1.2: *The level of destruction of the city center of Beirut after the civil war (Gabriel 1992_ Peter&Sarkis1998)*

France occupied Beirut in 1918 and its policy was then part of a policy of colonial expansion that combines the search for national status and the consolidation of its cultural mission in the Levant, which Beirut has become a symbol for it.

It has used the architectural designs that the Ottomans had set up and began to destroy the old harbor neighborhoods. This led to the demise of the southern part of the city within the walls and the corridors and markets that characterized it in favor of a modern central French city centered on the Nejme Square. These buildings combine modern, Baroque and Arab-Moroccan architecture (Barakat, 2004).

Thus, in less than a decade, the mandate authorities eroded the historical center of the city inherited from previous civilizations. A new city was born but Beirut lost places that were characterized by its hospitable nature and its traditional dialogue centers.

In the meantime, the Ottoman Arab heritage disappeared in favor of vertical architecture, the result of the work of young engineers who followed their studies in the West. Thus, construction contractors have tried to replace entire neighborhoods with towers.

The city expanded along the narrow coastal plain, this period, which witnessed the city's expansion and apparent prosperity, did not erase the great disparity between social classes and sects, which contributed to the division of the Lebanese people and led to civil war (Barakat, 2004).

1-1-1- The impact of the civil war and its results on the traditional center of the city of Beirut

Beirut is a city that has been cut off since the early days of the conflict. The commercial center has been transformed into a buffer zone with daily battles and an empty space in the heart of the Lebanese capital, which has split into two sections along the Sham Road, known as the Green Line.

Where the Lebanese war and Beirut topped the media due to the size of the destruction and victims, as shown in Figure 1.3, and since 1992 the state began renovation work in the whole country to raise the standards of infrastructure and equipment. The most prominent project was the reconstruction of the city center. The resources available to the authorities at that time were insufficient and the 140,000 people were unable to afford the costs of this process alone.

The executive tried as quickly as possible to erase the stigma of war, to turn the page of the past and to revive the historical heart, which before 1975 was a symbol of prosperity and a melting pot for the Lebanese of all social strata and sects.

Here the government proposal came in (1992-1996) which delegated of the reconstruction to a real estate company that finances and handles all infrastructure work. Strong opposition emerged, but that did not prevent the adoption of Law No. 1991/117, which allows the company to build neighborhoods destroyed by the war. Thus, the Lebanese Company for the Development and Reconstruction of the City of Beirut (Solidere) was established in 1994.



Figure 1.3: The destruction of the center of Beirut in 1991 (Magnum photos)

1-1-2- The reconstruction of the traditional center in Beirut and the conditions governing construction

The government decree issued in 1994 included the amendment of the design and the general guideline. The design of the commercial district of Beirut City is a set of conditions governing construction, modification or rehabilitation as follows: (Abd el Moneim El Taweel, Hatem).

Determining the area of the commercial center with clear borders, bordered at north by the sea, at west by Fakhr al-Din Street, at south by Fuad Chehab Avenue, and at east by George Haddad Street.

Dividing the region into ten organizational sectors with rules Conditions for land use that reflect the functions and urban character desired in each sector and conditions include characteristics Construction and land use, and prohibited uses within buildings, real estate and areas minimum real estate measurements, investment rate and concentration of buildings relative to roads and limits of surrounding buildings Cover and maximum height and architectural treatments for facades and conservatory buildings.

The conditions for prospecting in the Center area has been put under the supervision of the Directorate General of Antiquities; conditions include the need to inform any exploration process through which the target, the size of the work and the duration of implementation and the expected cost and means of funding assumed; a committee that includes representatives of the civil organization and archeology, the Council for Development and Reconstruction and the real estate company.

The conditions relating to the buildings have been based on several considerations, including the future arrangement of the transport and infrastructure network, and the classification of the buildings into buildings that are preserved for their architectural or historical character or their existence within a group of buildings of a distinctive architectural nature. The built-up area, the size, and the architectural nature are not allowed to demolish this structure, and if destroyed for catastrophic reasons, they are reconstructed according to the original construction of size, height and architectural character and according to the book of conditions of civil organization.

The new buildings have been allocated a set of regulatory provisions in the law which set conditions and regulatory regulations for the construction in the central Beirut commercial area, which relied on the determination of all possible controls that accurately coordinate the relationship. It also included determining the building density of the property, Services and balconies and the lower floors of the calculated areas. The heights were also determined in coordination with roadshows and areas for construction and parking in proportion to the proposed uses and areas.

The re-design of the area of Al Shouhada Square within the various stages of development of the project where it was directed as an open urban space towards the sea without limits and its adoption as a sea gate for Beirut overlooking the sea as a natural extension of the Al Shouhada Square and the central highway from the city center to the airport as shown in Figure 1.4

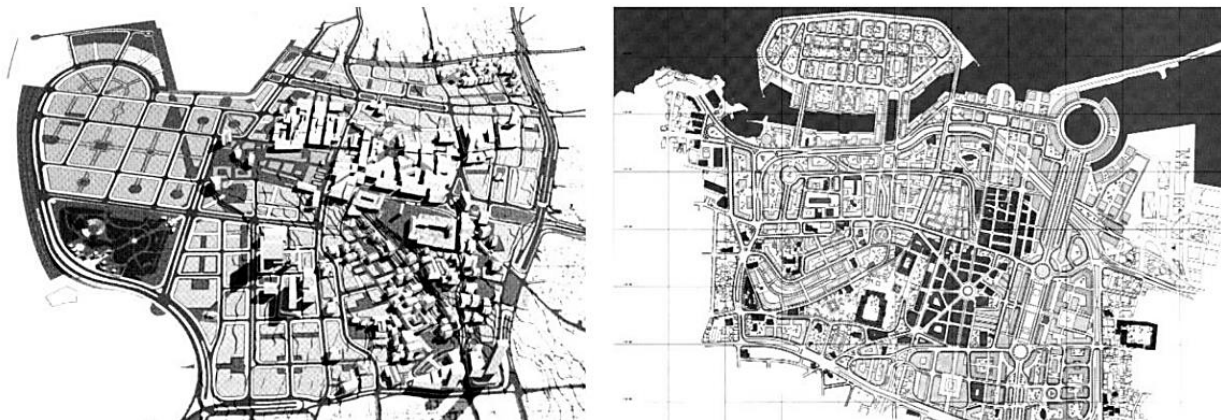


Figure 1.4: Initial proposal for the city center (Angus& Maluf 1996)

A part was added to the waterfront of the center of the city as shown in Figure (4). This part is considered as an investment factor to raise the economic performance of the project. It is the beginning of an island for housing and recreation activities. The project is part of the city center and has been re-allocated to the luxurious level with some recreational and tourist activities. In all cases, this is a negative addition to the environmental level and reduces the value of this pilot project in the rehabilitation areas of historic centers with environmental damage.

1-1-3- The followed reconstruction strategies of the traditional center in Beirut

- a. **Post-war preparedness:** due to the ignorance of the architectural country's history the survivors did not understand the reality of reconstruction and its future consequences. With the exception of some intellectuals and NGOs who attacked non-planning plans at that time but did not constitute a powerful deterrent mechanism to the extent of the seriousness of the situation to stop the re-destruction, only succeeded in preserving a number of heritage buildings.
- b. **Maintaining identity in some exceptional buildings:** The new design isolates the historic center of the city from the sea and the city, and turns it into a new facade of Beirut after the war (Figure 1. 5). It ruled out everything that happened before the war, as the strategy of redrawing the features of downtown Beirut was not affected by the concepts of memory and heritage that date back thousands of years. Except for some buildings where the emphasis on the local character and reconstruction of heritage according to the original architectural designs as they were before the war in addition to keeping pace with contemporary



architectural development.

Figure 1.5: Beirut Waterfront in 1940 and after reconstruction.(awalcentre.com)

- c. **Destruction of collective memory:** the destruction of the civil and social organizational structure and the destruction of collective memory through the imposition of a new civilian landscape through the destruction of part of the urban heritage in favor of high-rise vertical architectural towers as shown in Figure 1.6

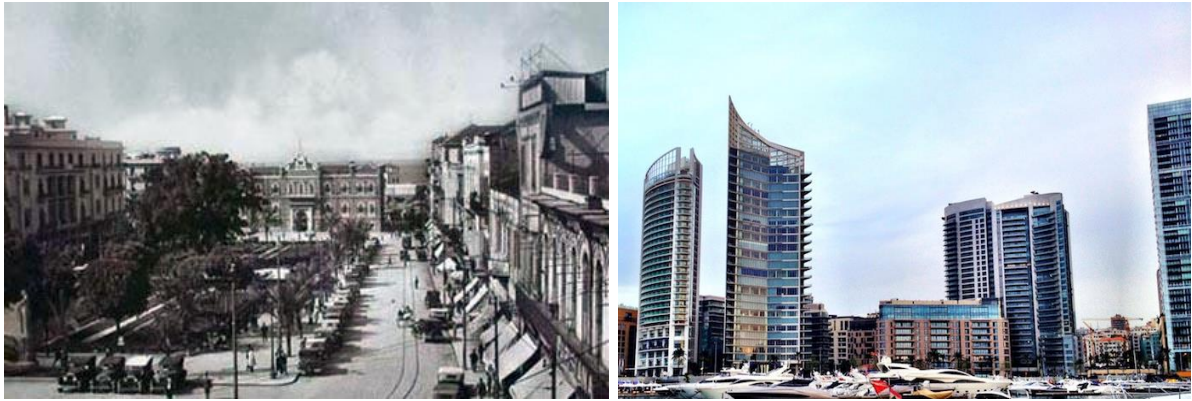


Figure 1.6: *Downtown Beirut before the war and the towers in it after reconstruction.*
(Downtownbeirut.com)

- d. **The use of construction methods and modern materials:** the development of buildings of historical value with some modern additions (as shown in the figure 1.7) through the use of sophisticated architectural formations for some of the rundown parts but retaining the traditional architectural character of the Lebanese architecture and the use of glass facades which are soulless and no longer reflect Any detail of the history of Beirut, which dates back thousands of years.



Figure 1.7: *Sketch illustrates the methods of architectural treatments and parts added after the demolition by the war in the traditional center Beirut after rehabilitation, where it was treated using the sophisticated architectural form of some of the rundown parts) Abd el Moneim El Taweel, Hatem)*

- e. **Cost:** Creating a world-class infrastructure, for example, would be more expensive than rebuilding and rehabilitating existing ones.

- f. **Providing basic comfort and needs:** The latest technology and global production of companies have taken the cornerstone of expressing the traditional center of Beirut with modern requirements and user needs.
- g. **History of the city:** Merging some historical archaeological sites into one of the tourist attraction points.



Figure 1.8: Al Nejmeh Square after the reconstruction. (Pinterest)

- h. **Private Sector Authorization (Solidere) to manage the key aspects of reconstruction operations:** the work has been confirmed on the approach of neglecting the idea of public service and the public sector, and rehabilitation of the city center was based on the allocation of real estate company to contribute to the process of investment and development and in collaboration with the official and governmental authorities to reorganize the urbanization in the city center and the involvement of external actors.

“The older generations, who had a more emotional relationship to the place, considered us harsh in our outlook. We believed the city center needed more than plastic surgery; it required major surgery to be resuscitated. We realized that times had changed and that we had to let go of certain nostalgic emotions. The nature of youth is to have a margin of maneuverability between the old and the new without sacrificing the integrity of either. We had the ability to move forward, to make what others considered harsh decisions, yet we maintained the relationship with the memory of the place without being hostage to it. We were also the link between the older generations and the younger ones, who had no memory of the place at all.” Oussama Kabbani, Member of the Board of Directors of Solider.

1-2 The Experience of Dresden

Dresden is the capital city and the second-largest city of the State of Saxony in Germany. It is situated in a valley on the River Elbe, near the border with the Czech Republic. Dresden in the 20th century was a major communications hub and manufacturing center with 127 factories and major workshops and was designated by the German Military as a defensive strongpoint. Though many World War II Cities saw their historical quarters destroyed, one of the most cited examples in postwar heritage reconstruction is the German city of Dresden (Saxony).



Figure 1.9: The city of Dresden (Wikipedia)

Dresden has a long history as the capital and royal residence for the Kings of Saxony, who for centuries furnished the city with cultural and artistic splendor, and was once by personal union the family seat of Polish monarchs. The city was known as the Jewel Box, because of its baroque and rococo city Centre. The controversial American and British bombing of Dresden in World War II towards the end of the war killed approximately 25,000 people, many of whom were civilians, and destroyed the entire city Centre.

1-2-1 Dresden bombing

Dresden was carpet-bombed by allied planes in 1945 (Figure 1.10). An estimated 35,000 were killed and the historic heart of the city was destroyed, which was once known as one of Germany's cultural centers for years, with Baroque-style architecture, gardens, and Elbe River. During the war, the American Forces blasted the city, destroying everything in the area. Every historic, cultural, and social building was dispersed to the ground. American author Kurt Vonnegut (1922-2007), who was a prisoner of war in Dresden during the Allied attack and tackled the controversial event in his book "Slaughterhouse-Five," said of postwar Dresden: "It looked a lot like Dayton, Ohio, more open spaces than Dayton has. There must be tons of human bone meal in the ground".

After the conclusion of WW2, the city underwent 14 repairmen but the buildings were preserved in terms of architectural style. Iconic buildings in the area such as the Opera House and Zwinger Palace were designed to look just as they were before the war took place. Some buildings, such as the Military History Museum by Studio Libeskind, were designed to show the fusion of historic and contemporary architecture.



Figure 1.10: The demolished city of Dresden-over ninety percent of the city center was destroyed. (arch.daily)

1-2-2 The impact of the war and its consequences on the historic city of Dresden:

The political scene in Germany changed depending on the outcome of the war, divided into two: East Western, Dresden, which was located in East Germany, underwent a new political climate: the regime Communist Party. The Communists were in power and wanted to create a communist-style communist city on the ruins of the destroyed Baroque city.

The image of the new urban and architectural fabric was affected by the communist regime: the new ruler, where the first step was to make thousands of volunteers who survived the tragedy to clean the debris from the affected areas.

Wolff wolfgangKil points out that under the Soviet rule took the reconstruction of the city Destructive Dresden is a fairly negative path, with large empty areas left behind after cleaned it of the rubble, not improved for five years after the bombing and the end of the war in 1945, The city surrendered to its abyss, for this reason, many have dreamed of a whole new city.

An article in The Economist in 1993, entitled "The German phoenix," made equality between communists and coalition raids in terms of destruction and damage to historic cities. Communists were simply not interested in rebuilding churches, castles, symbolic buildings and icons from the Nazi period; In addition, they were constrained by a lack of funding, financial resources, and political administration.

Despite paying attention to some of the city's characteristic buildings, the Communists have demolished a large number of architectural monuments and left large neglected parts over a long period of time.

Figure 1.11: *Dresden before and after*
(Pinterest)



Studies have documented that the surviving buildings of bombing and bombs fell at the hands of communist planners after the end of the war. Giovanni asserts that the remaining buildings in Dresden after the war, the road infrastructure and the infrastructure were sufficient to reshape the old fabric of the city.

Anyway, the communist planners chose instead to erase many of the surviving buildings with the intention of surveying the land to build a model communist city: a political field was built that included the Stalinist-style government and service buildings known as ugly and monotonous. The new construction technique invaded the memory of the city's architecture before the war, thus erasing the memory of the place and the memory of the people.

1-2-3 Reconstruction of the historic city of Dresden

Dresden has experienced dramatic changes since the reunification of Germany in the early 1990s. The city still bears many wounds from the bombing raids of 1945, but it has undergone significant reconstruction in recent decades. The urban renewal process, which includes the reconstruction of the area around the Neumarkt square, will continue for many decades, but public and government interest remains high, and there are numerous large projects underway-both historic reconstructions and modern plans-that will continue the city's recent architectural renaissance.



Figure1.12: Neumarkt Square (Pinterest)

One of the most important monuments that were restored and built was the OpéraSemper building that collapsed under the bombardment, leaving only some of the outer walls and some carvings, the classification of losses began in 1952 and began restoration work in 1977. The opera reopened in 1985 on the 40th anniversary of the raids. The restoration method was followed as a replica, with a slight change in the seating capacity of 1,400 seats.



Figure 1.13: The Opéra Semper building (Asfour,2019)

The most important monument was The Baroque Catholic Church, l'église Frauenkirche, The Baroque temple of the Church, which was built in 1726 was burned down and completely destroyed in World War II, After the war, the Communists left the ruins of the church as a memorial to the horrors of war and its tragedies., as shown in Figure 127, then many countries participated in rebuilding it, headed by Britain, and turned into a symbol of reconciliation and peace.

The funds for the church's reconstruction have been collected by the city's residents in recent years of communist rule and the early years of the unification of the two German states. An association was formed to raise funds from around the world, although it was not a lack of funds is the only obstacle to the completion of work, the main problem was the form that will be

rebuilding the church and jurisprudence; some thought the need to change the architectural shape of the church to reflect all the events that affected the construction.

From this idea the decision of the Assembly came, which decided to rebuild the church as a replica of the old destroyed, based on original detailed plans and the architectural survey of 1930. Some of the original materials recovered from the rubble were also used for restoration. The church was reopened to the public in 2005, a year before the date for the completion of restoration work.



*Figure 1.14: Frauenkirche church before the war and after the reconstruction
(<http://www.judgmentofparis.com>)*

1-2-4 Strategy for the reconstruction of the historic city of Dresden

With the aim of restoring the city of Dresden as an urban fabric and reviving it in accordance with the original skyline of the city, the German government has taken strict measures to control construction activities in the city.

- It was important to emphasize the sensitivity of the building's architectural environment to the city's historic fabric and heritage.
- The height was limited on the banks of the Elbe River; Government buildings were organized to preserve the model Traditional

- The streets of Dresden were expanded during Communist rule, later and after the reunification of the two Germanys, the streets were returned to their original appearance.
- The reconstruction of eastern Dresden was indeed a replica of what existed before the war; some of the selected historic buildings were rebuilt selectively to complement the prevailing nature.
- After the destruction of the city, leaving a large number of blocks of the old town in the rubble for more than 50 years during communist rule. Over time, the state of neglect and deterioration of the rubble and debris of the destroyed historic buildings has contributed to the removal of many of them from the scene and from the memory of the people.
- Dresden planners were interested in the construction of modern buildings in conjunction with the restoration processes, where they crossed the new monuments are a new state of architectural exclusivity that has been created harmoniously within the region historical

1-3 Conclusions

From the above we can draw some of the criteria and lessons learned from the tow experiences that affect post-conflict reconstruction:

- The old city is the place of collective memory with distinction, and this memory can't be canceled by the decision.
- Minority-run reconstruction to serve the minority is doomed to failure.
- Economic resilience should be one of the keys to reconstruction.
- Reconstruction cannot heal the deep political rifts between people, but it can rebuild open spaces common to the public by promoting reconciliation.
- The reconstruction of part or all of the historic buildings can be accomplished if this work will re-highlight an important element in the history of the region and when the work of a modern design solution is unacceptable to that location.
- From reconstruction trends to historical buildings after disasters and wars Reconstruction as replicas of old buildings, that is, to produce identical copies as if war never happened or to move radically away from prewar architecture: radical modernism means ignoring centuries of pre-war city history and in some cases the balance between these two visions is so that the building combines elements of the Crusader building with modern impressions.

- The reconstruction of the whole or part of the historic building is appropriate if it leads to a more comprehensive understanding of the historical value of the place or if there is no parallel to the building at all in terms of construction, architectural elements or urban organization and there are sources and documents on which to base In the restoration of the original image of the building.
- The reconstruction of missing parts must be done in a manner or manner so that it does not harm the integrity and general appearance of the existing elements.
- The reconstruction process must be accompanied by the establishment of all controls to maintain any foundations or elements under the ground.
- There can be no significant ownership as Solidere property in distinct locations of the historical part of the city and the impact of this type of ownership on the reconstruction process.
- Reconstruction may take longer, but it will do better and reduce prospects for social divisions.
- The importance of the use of traditional building materials.

1-4 Compared to the Reconstruction Strategies of the two Historic Cities

The lessons learned from the two experiments can be summarized in the following table:

Compared to the Reconstruction Strategies of the two Historic Cities (Beirut, Lebanon- Dresden, Germany)
In both experiences, the destruction is a direct result of the war as well as the extent of destruction within the historic center.
In the experience of Dresden, there was a determination to rebuild the destroyed city as it was which emphasizes the identity, history and heritage of the population, their originality, the depth of their roots in their land and their refusal to assimilate with any new identity imposed on them. In Beirut there was a great tendency to change, including the redesign of the historic center of the city, the establishment of large commercial centers in the postwar era. Nevertheless, the new design has preserved the divisions of the civil war and the new city center, which in turn embodies the division of Lebanese society.
In the Dresden experience, the formal reconstruction of the destroyed historical architecture was restored, and the memory and identity of the place was preserved in order to preserve the collective memory of the German people. In Beirut, there were tendencies to erode the hallmarks of war, to erase the last page and to revive the historic heart through modern architecture, while preserving some heritage buildings.
In the Dresden, traditional building materials or similar materials were used; in Beirut, modern building materials were used.
Dresden's experience is more economic than the Beirut experience.
In both experiences, the history of the country has been mentioned in the Dresden experience by returning to the oldest historical stage. Beirut preserves some of the historical buildings that reflect the history of the city.
In the Dresden experience, the local community was involved because it was more aware of its needs, culture, material and moral requirements and therefore the preservation of the city's identity. This was not observed in Beirut due to the involvement of a third party that imposed its ideas.

Table 1.1: Compared to the Reconstruction Strategies of the two Historic Cities (Asfour)

Chapter 2

The Long History of Aleppo

Aleppo was the largest city in the Syrian Arab Republic prior to the conflict. Now, Aleppo is probably the second-largest city after the capital Damascus. The city is located in the northern part of Syria, with a population of over 2 million and an overall area of 70 square miles.

It is one of the oldest continually inhabited cities in the world. Before the war, the Old City was a UNESCO heritage site that sized about 360ha, looks back to more than a 5000 years old continuous urban history dating back to the third millennium BC. Outsiders and visitors have admired the city's urban heritage ever since. Throughout the centuries, old city's inhabitants pragmatically considered the ancient urban fabric and its architecture as home and economic platform. Being one of the oldest inhabited cities in the World, Aleppo has witnessed various Dynasties - Wars - Empires - Cultures throughout history. That has also earmarked its essential place in the silk route where its influence extended in countries beyond its geographic borders. Historically; one of the most desired places in terms of quality of life and trade, this place has been a clear example in history. No matter how many times it has been destroyed, it has been built back again. Aleppo's layered past and sophisticated identity is quite evident in its architecture even under the fire of the brutal war. This chapter will provide some insight into Aleppo.



The name "Aleppo" is due to several reasons. According to many sources, its name is originally due to the word "Halba" which means whiteness. This is the reason that led to its name Shahba. In addition, others say it is Aramaic, where they called it Halbo.

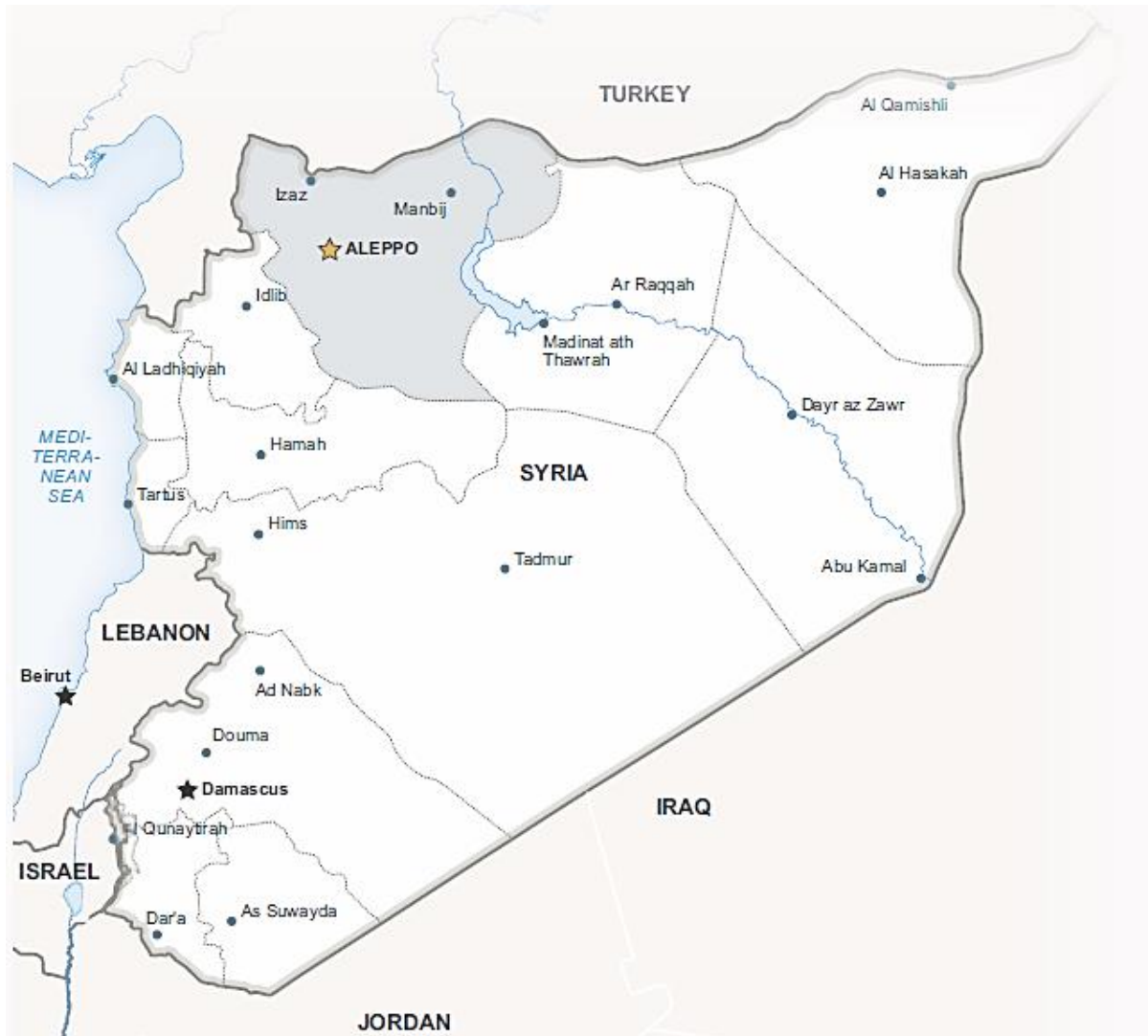


Figure 2.1: Aleppo Location (UNESCO_UNITAR-UNOSAT, 2017)

2-1 The City of Aleppo over Time: A History of Destruction and Reconstruction

Aleppo is situated between the northern stretch of the Euphrates and the Mediterranean, making it an intrinsic part of the trade routes from the east. The city of Aleppo was mentioned in historical sources and archaeological inscriptions. It was the first mention of this city in inscriptions and travel dating back to about the middle of the third millennium BC, and then flourished and extended its civilization to include a large area of land and continued in

urbanization through successive periods, This is evidenced by the number of two cites (Ur and Mary) previously, the city of Ibla. Aleppo was mentioned during the reign of Rimoush al-Akkadi ibn Sarghun (2530-2515) BC, the founder of the first Semitic empire in the east when he took Aleppo and captured its king Lukal Oskumkal. (Sawaf,1952)

Aleppo was blessed by its golden age at the time of the Babylonian Hamorabi and the king of Mary in the year 2000 BC. When the Hittites Their vast march was resisted by Aleppo, but they seized it in 1820 BC, but Aleppo liberated them in 1650 BC, where they joined the Mitaniyans. The city of Aleppo was then ruled by the Egyptians. It was opened by Thutmose III Pharaoh Egypt (1473 BC). Then Aleppo returned as the capital of the Hittites (1370 BC). Aleppo remained swaying between the Mitani and the Hittites, and the city continued to be hasty until 1200 BC, when the Hittite state collapsed.

After the emergence of the Assyrians, all Syria underwent their rule. It was opened by Salmonzer III (853 BC) without resistance, and Aleppo remained until it was opened by Sarodri III. Then the Assyrian king invaded and conquered it (743 BC). Aleppo fell under the Babylonians after The Collapse of the Assyrian State (612 BC) Less than a century later, the Persians opened Aleppo. The Persians took care of the city of Aleppo. They set up stations along the roads, dug wells and built dams to expand the irrigation area. After the Battle of Isos (333 BC), which was led by Alexander the Macedonian, the rule of Aleppo for Macedonians, the period of Macedonians began to loot and plunder after the invasion, but this period did not last long as the Greeks quickly went to urbanization and organization. (Sawaf,1952)

In the last era of the Salukists spread corruption and the leak of Roman influence a year ago (64) BC. The period of Roman rule was marked by the spread of Christianity in Syria, where attention began to be paid to the construction of Christian religious buildings, and in 540 CE Kikhsro attacked Syria, burning the entire city of Aleppo and reconciling the Aleppo people with Heraclius (630).

2-1-1 Islamic Aleppo

The Muslims armies of the Muslims entered Aleppo in 637 AD, from through the door of Antioch, under the leadership of Khalid ibn al-Walid. The Muslims were able to spread Arabic and Islam quickly because Syriac was not far from classical Arabic and continued to be present in

the Umayyad and Abbasid periods. In the Abbasid era, with the Islamic civilization reaching its climax, Aleppo witnessed a great boom at all intellectual, cultural level, characterized by clothing, buildings, and mosques. The city lived its golden age during the days of the Kingdom of Hamdania, which was the capital of the Kingdom, in 944 CE, especially the days of Prince Saif al-Dawla, which was an important factor in defending the Muslim world against the Byzantine tide. (Sawaf,1952)

The city suffered a suffocating siege of the Romans in 974 during the Byzantine Seljuk conflict, ended with occupation, burning, destruction, and impoverishment of its people between dead and captive. When Saif al-Dawah returned to his city, where he was absent during the siege, and brought some of the people of Qansreen to help restore Aleppo to its glory.

The sword of the state died after it left Aleppo for two centuries of loss and chaos, during which the Fatimids and the Marais ruled during the period during which the Turkish influence increased, and the Seljuks saw the city during this period as a sad submission to the Romans and then came the crusades that they had invaded twice, but they could not conquer them.

Aleppo was the center of the Islamic resistance against the Franks, and the conditions of Aleppo began to improve. However, the devastating earthquake of Aleppo in 1138, the fourth most powerful earthquake in history in terms of losses and the death of More than 230 thousand people, not to mention the near-complete destruction of the city, In the wake of this earthquake, Nouredine undertook large architectural works inside the city and in the walls and re-built the castle until it took its final form, which we see today. Then the city entered the rule of Saladin in the Ayyubid state since 1183 AD.

2-1-2 Mongol invasion

In 1260, the city was conquered by the Mongols under the leadership of Hulagu in cooperation with the governor of Antioch Bohemian VI. The city was defended by a modest garrison by Ayyubid Ghiyathuddin Turan Shah, but it fell after six days of continuous bombardment. The castle fell after four weeks and brutally slaughtered the population. After the site of Goliath 1260 / under the reign of King Muzaffar Saifuddin Qatz, the Mamluks were able to restore Damascus and Aleppo.

Aleppo resigned from the central Mamluk state of Cairo when King Al-Zaher Baybars of Mamluks declared secession and sent troops in the fall of 1261 to restore the city. In October 1271, the Mongols again attacked Aleppo with an army of 10,000 knights from Anatolia after defeating the Turkmans who tried to help protect the city. They succeeded in conquering it and advancing towards Hama. But the invaders set up a powerful army that forced the Mongols to evacuate Aleppo one more time. The Mongols took over the city on October 20, 1280, causing corruption and destruction in the mosques and markets. The population fled to Damascus, where the Mamluk leader Saifuddin Qalawun prepared his forces to retaliate, and when the Mongols saw hordes, they fled to the Euphrates.

Aleppo returned to self-rule in 1317. In 1400, the Mongol leader Tamerlán captured the city and slaughtered many residents. After the retreat of the Mongols, the Muslim population returned, especially to the city. Christians, some of whom could not enter again, established a new neighborhood in 1420 outside the northern wall, called the New or New Neighborhood. And they played the role of a link in the trade between the merchants of Aleppo and the outer ocean for their relative protection by the Crusader kingdoms in Jerusalem and Antioch.

2-1-3 Ottoman period

On August 24, 1516, a battle broke out between the Ottoman army led by Sultan Selim I and the Mamluk army led by Gansu Ghorri. During the battle, a number of local princes and Mamluk rulers withdrew and joined the Ottomans. The process of withdrawal began when the titans were in favor of the Ottomans. After the battle, these princes marched with the Ottoman sultan to Aleppo, which was the first city on their way. The people went out to greet him in 1516 and gathered in the blue square where the governor of the castle handed over his keys to him. The Sultan performed Friday prayers at the Great Mosque where he was mentioned by the Khatib of the Mosque as the Custodian of the Two Holy Mosques. Aleppo became part of the Ottoman Empire. It had a population of about 50,000 and was the center of the state of Aleppo and the capital of Syria, and played a central role in its strategic location near Anatolia (Watenpauh, 2005).

Aleppo was the second city after Constantinople, the main trade city between East and West. If Western embassies were located in Istanbul, the main consular missions were in Aleppo.

Starting in the 18th century, in particular, European consuls and merchants began to wish to live in Aleppo with their families, establishing established breeds. However, the economy of the city was severely affected by the opening of the Suez Canal in 1869. Damascus flourished economically and became as vital as the center of the Syrian capital once again. (Mansel, 2016)

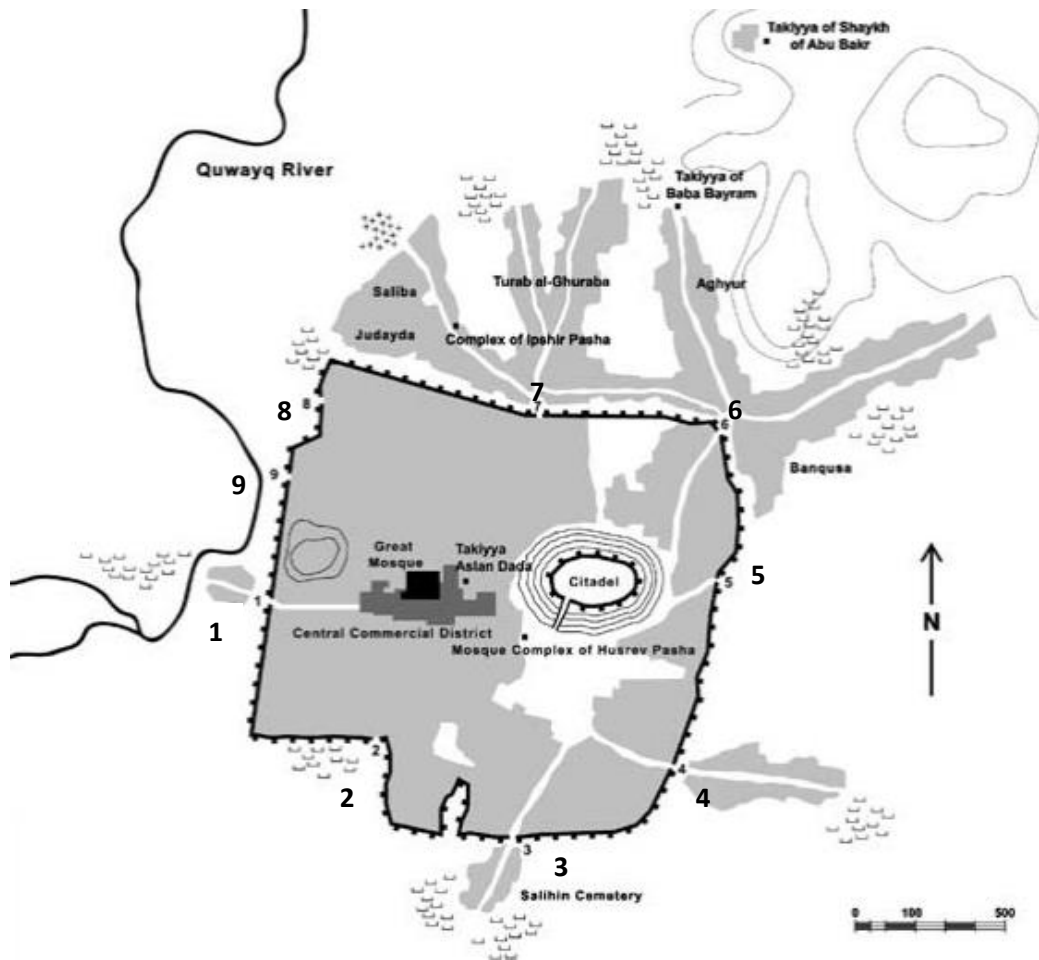


Figure2.2: Map of Aleppo in the early 17th century. After Sauvaget, (Watenpaugh.2005)

Important City gates: (1) Bab Antakiyya, (2) Bab Qinnesrin, (3) Bab al-Maqam, (4) Bab al-Nayrab, (5) Bab al-Ahmar, (6) Bab al-Hadid, (7) Bab al-Nasr, (8) Bab al-Faraj, (9) Bab al-Jinan.

The city continued under Ottoman rule until the collapse of the empire at the end of the First World War. The Treaty of Sevres was established in the province of Aleppo as part of Syria, but Mustafa Kemal Atatürk rejected this treaty and continued to annex Aleppo to Turkey and fought the wars of support of the Arab population and Kurds in the city. Turkish struggle against the French will bring them independence and the most famous Ibrahim Hanano, who coordinated with the time of Kamal Atatürk, but the end was not.

With the Treaty of Lausanne in 1923, most of the province of Aleppo was expropriated, with the exception of Aleppo itself and the Iskenderun Brigade. Aleppo was thus cut off from Anatolia and its cities, which had extensive commercial relations. The worst was the Treaty of Sykes-Picot, Aleppo was further isolated after the Iskenderun Brigade was also plundered in 1939. Aleppo was deprived of its main harbor, making it completely isolated.

2-1-4 The French occupation

After the declaration of French General Henri Gourou in September 1920, the French mandate of Syria, divided the country into states for the purpose of facilitating its control, and to discipline the Syrians on their response to France in the Battle of Maysaloun.

In 1923, France proposed the establishment of a federation of the states of Syria, including the states of Lebanon, to eventually include the three states of Aleppo, Damascus, and Latakia. Aleppo was identified as the capital of Bidaya and was later returned to Damascus (Mansel, 2016).

The federation was suspended in 1924 when France, sensing the danger of independence, separated Aleppo and Damascus in a state and made Latakia a separate province for the Alawites. In 1925, the Great Druze Revolt led by Sultan Pasha al-Atrash was established in Suwayda, Jabal Al-Druze, and the Halabi Parliament announced the separation from Damascus.

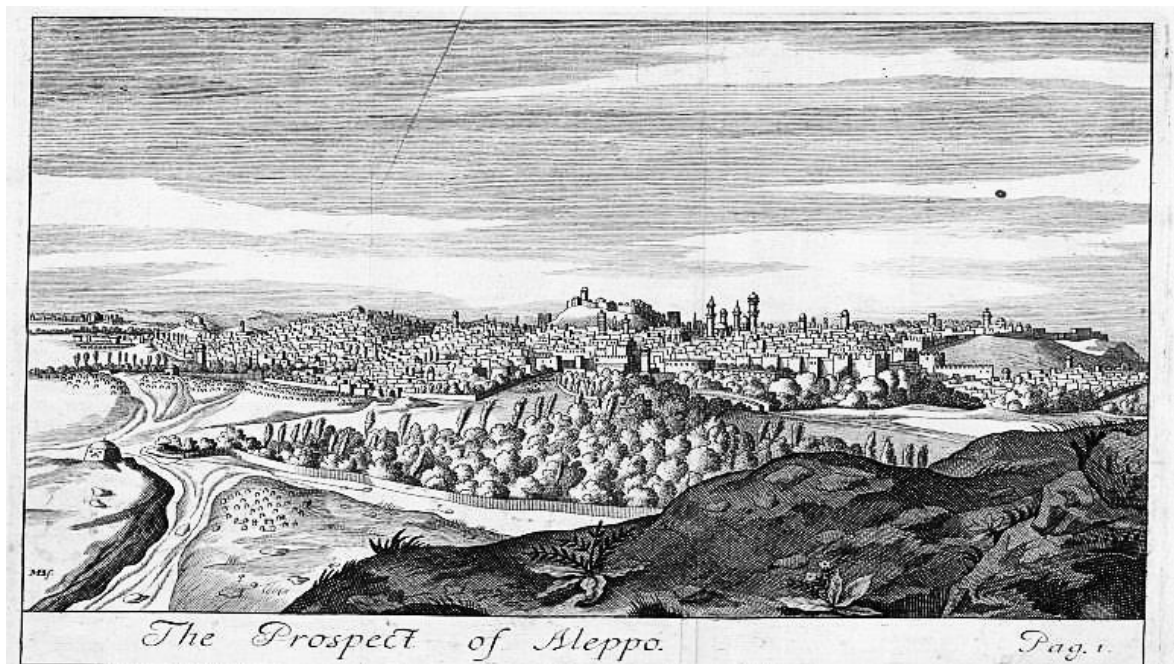


Figure2.3: Aleppo in 1703(Aleppo Photographic Museum)

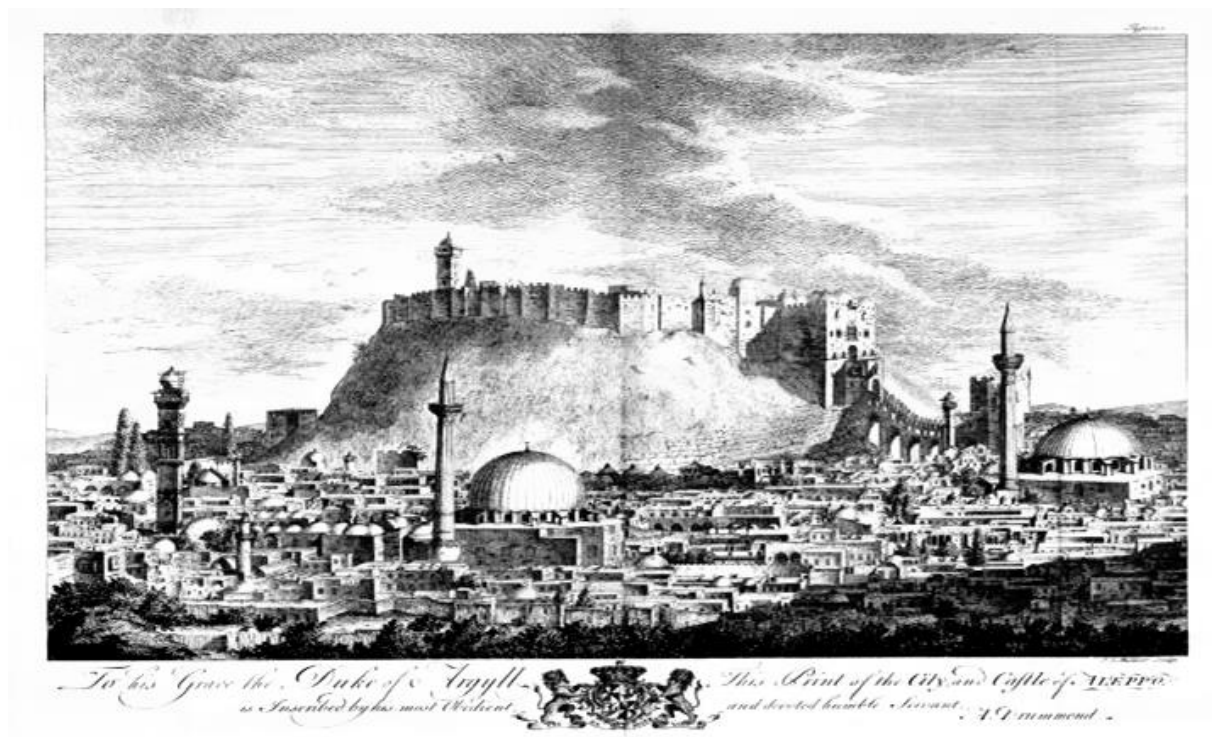


Figure2.4: Aleppo in 1754(Aleppo Photographic Museum)



Figure 2.5: Aerial photograph taken on 12 January 1936 by the thirty-ninth Regiment of the French Observation Aviation in the Levant. (UNESCO_UNITAR-UNOSAT, 2017)

The Nationalists in Aleppo, led by Ibrahim Hanano, foiled the French project after they organized protests and demonstrations and cut off roads leading to Parliament on the day of the vote to prevent its members from reaching and voting on their expected decision. In 1930, Aleppo was part of the Syrian Republic (Del Fabbro, 2012).

In 1936, the Treaty of Independence was signed with France and the King Faisal government. Aleppo gained its independence as part of Syria again in 1946.

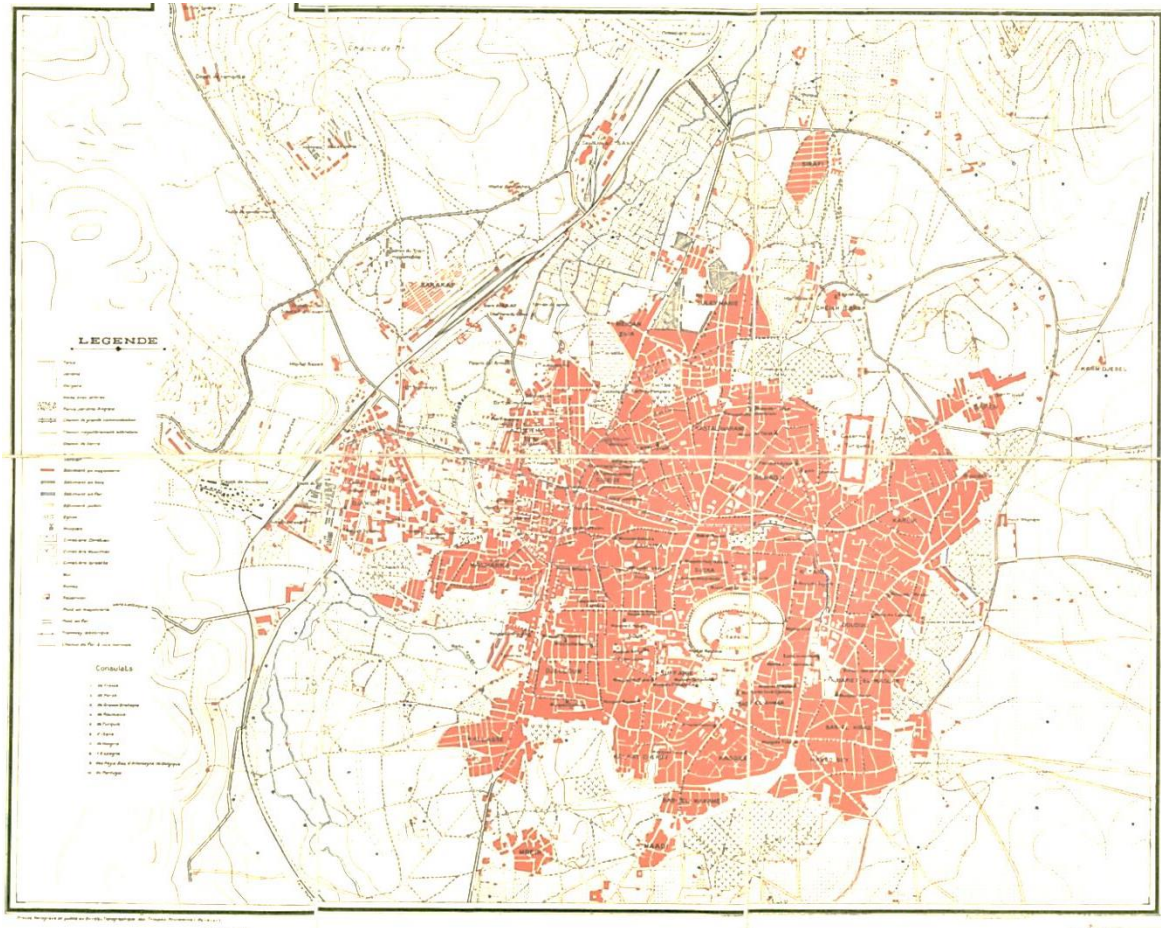


Figure 2.6: This French military map of the city of Aleppo from the early period of the French Mandate of Syria (1929) offers a detailed look at the layout of the city, which had flourished for most of the Ottoman period. (<http://www.midafternoonmap.com>)

2-1-5 After independence

Aleppo participated strongly in the post-independence political life. The first head of a national government Saadullah al-Jabri, was from Aleppo , and a period later followed by Nazem al-Qodsi and Maarouf al-Dawalibi, and Muhammad Naji Otriakher was the head of government from the city of Aleppo. The only Halabi who reached the post of President of the Republic is Amin Al-Hafiz with the support of the Baath party on 27 July 1963.

The city suffered an armed conflict between the Muslim Brotherhood and the Syrian government between 1979 and 1982, and it is believed to be the second suffered city after Hama had in the conflict. After the events of the eighties, Aleppo entered the rule of President Hafez al-Assad. In 1992; the German government (GTZ / BMZ) and the Syrian government (Aleppo City Council) participated in the opening of the project to revive the old city of Aleppo.

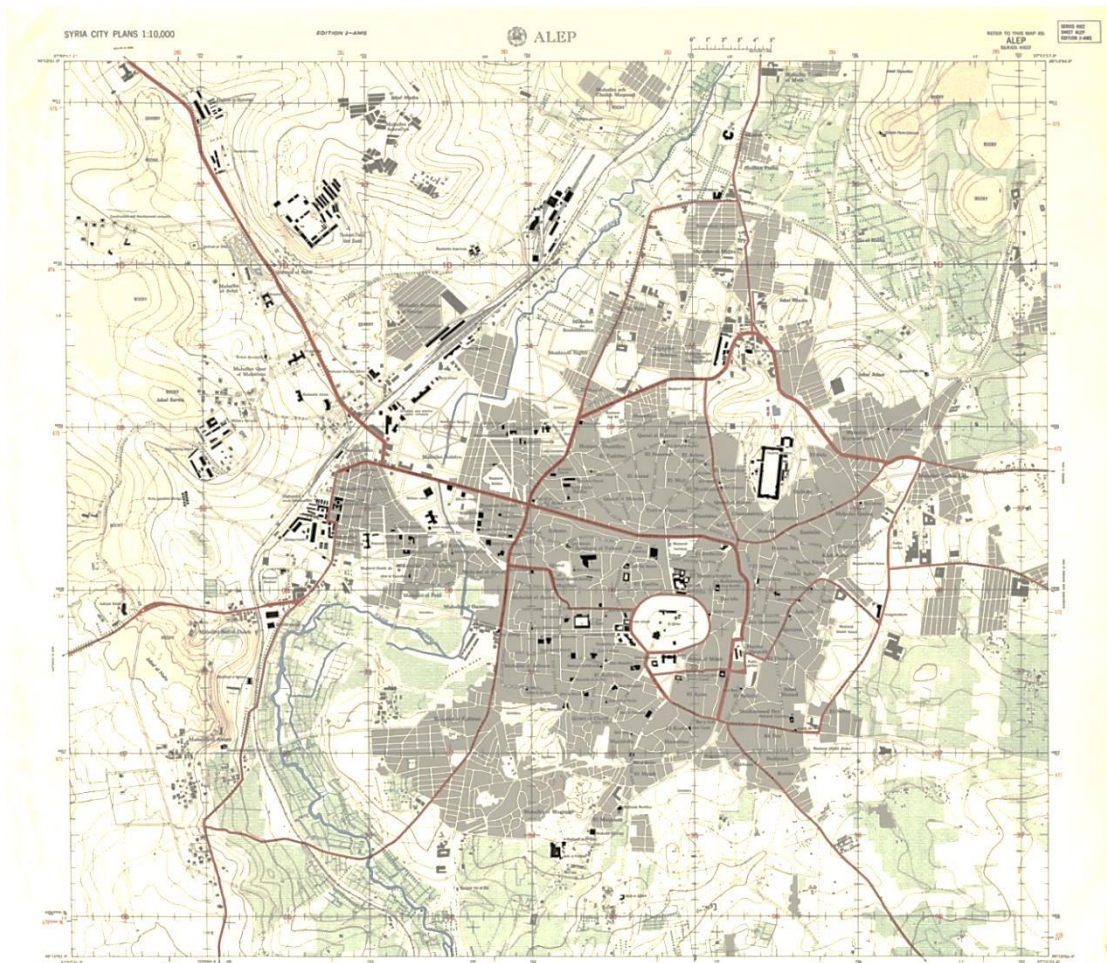


Figure2.7: Aleppo map in 1956

(Source: University of Texas Libraries, Austi)

2-1-6 Aleppo before the conflict (2000 - 2011)

During this period, Aleppo made again considerable progress as a thriving metropolis and tourist destination known for its medieval architecture and rich cultural history. As it is one of the most important Islamic cities, preserving its urban heritage, it was chosen to be the capital of Islamic culture in 2006.

2-1-7 Five Years of Destruction: Overview (2012 - 2017)

The battles in Syria over the past years have destroyed the city of Aleppo which was Syria's economic capital. Today, many monuments and historical sites have been lost due to the battles and bombardments. It has become a city of ghosts that was devastated after it was a tourist attraction from all over the world.

Syria's civil war reached Aleppo in July 2012 when the rebels, who had already taken control of most of the northern areas of the province, entered the city. Aleppo was soon divided between a western half, under government control, and an eastern part, held by the rebels. Up until December 2016, the frontline that split the city changed little. Most battles took place around the city, in the northern and southern countryside, driving out most of the population and killing thousands of lives (BBC, 2016).

The tremendous escalation of the conflict during five years resulted in a vast humanitarian crisis with a huge loss of life and the displacement of large sections of the community. It has also resulted in the major destruction of the urban fabric as a result of bombardments, underground bombs, shelling, fires, and street combats.

In December 2016, Aleppo was reunited after the Syrian government forces controlled the whole city after an evacuation agreement with rebels in eastern Aleppo.

Following the intensified conflict at the end of 2016, a huge number of people fled Eastern Aleppo; around 121,350 people from Eastern Aleppo were registered as displaced as of 20 January 2017. Most displaced reportedly chose to stay close to their place of origin so they can return after cessation of hostilities. The urban footprint is affected by the conflict and population movement, as is visible through halted construction projects or new settlements on the outskirts of the studied cities. Aleppo became partly accessible, which allowed UNESCO to undertake a Characterization of Housing Damages In February 2017.

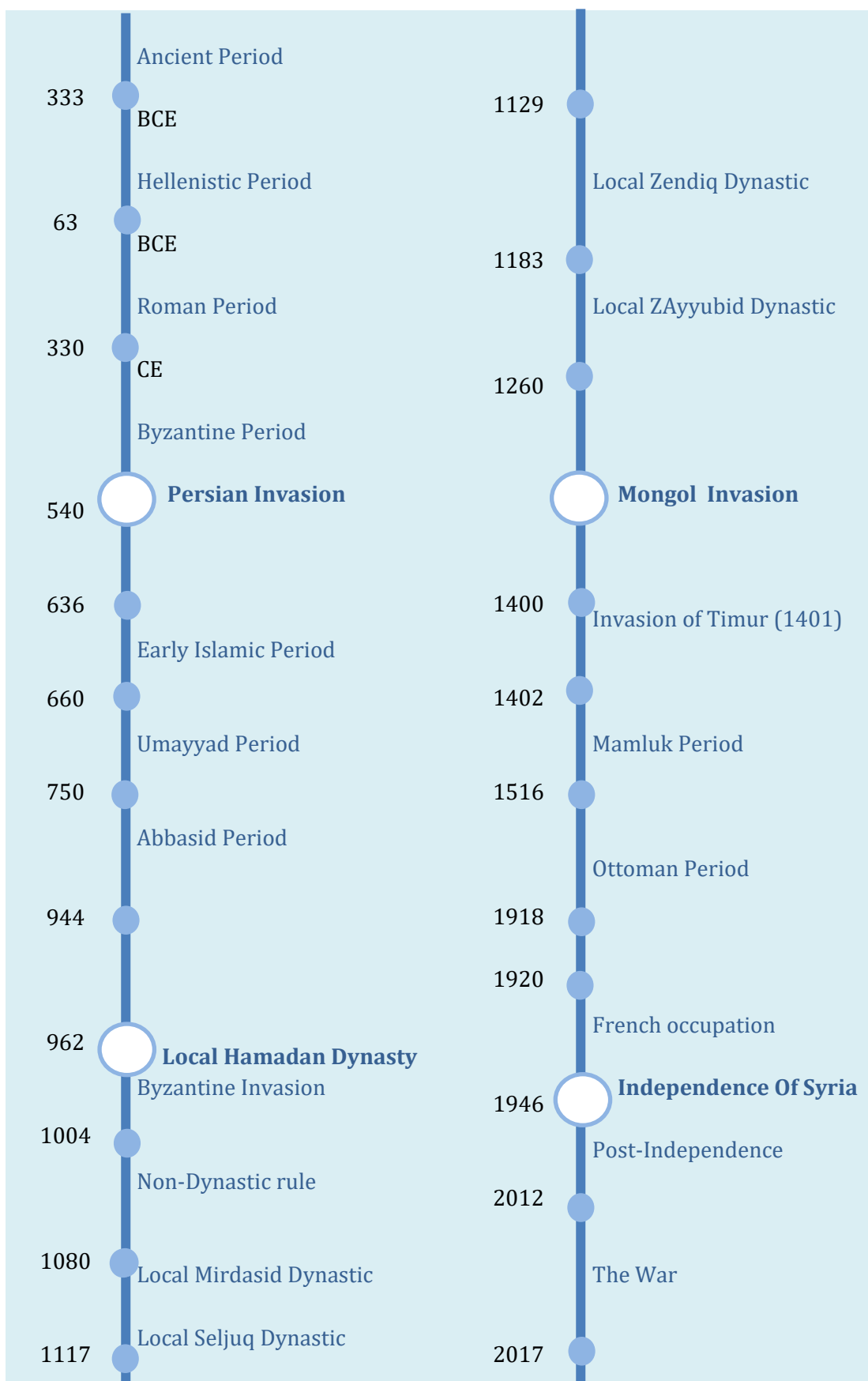


Table 2.1: Historic timeline (Asfour)

2-2 The Stages of Aleppo's Urban Growth

It seems that the natural factors that characterize the topography of the city have had a major impact on the emergence of the city and its continuation and in view of the outline of the city of Aleppo can confirm the validity of this hypothesis, the presence of the city within the basin of the Quiq River in addition to the presence of the plateau The rock built above the castle, can be considered as one of the most important factors that contributed to the continuity of the city and its revival after all that has been exposed over time of natural disasters in addition to the destruction ,burning and looting repeated.

The history of the city of Aleppo can be identified through the archaeological finds that emerged during the archaeological excavations. The name of the city of Aleppo is also mentioned in historical documents, archaeological manuscripts and various names associated with the properties it passed. However, the identification of the city plan was possible only from describing reports of some of the travelers who visited this city.

Because of its long history, the city of Aleppo has achieved great urban expansion in different stages and in all directions for the old city, which constituted its old and basic center. This expansion necessitated the development of new organizational plans according to its expansion from time to time.

The city's expansion began outside its walls in the 16th century. In 1794, the British doctors Patrick and Alexander Russell published a plan by the traveler Nippur to show the evolution of Aleppo throughout history, which can be considered the oldest plan for the city of Aleppo, showing the castle, the river and the main neighborhoods and buildings inside and outside the walls at that time. (figure 2.8)

The French Consul, Joseph Louis Rousseau, was published a plan in 1825 shows the regions, neighborhoods and buildings.(figure 2.9) . After the French mandate, he conducted a general survey of the country and its cities and drew up the records and gave them figures of suitable plans between 1927 and 1929. Municipality of "Aleppo" in 1931 researcher "Jean Suvagih" to make an inventory of Islamic monuments in "Aleppo" (figure 2.10).

Figure 2.8: Nippur plan
(<http://esyria.sy>)

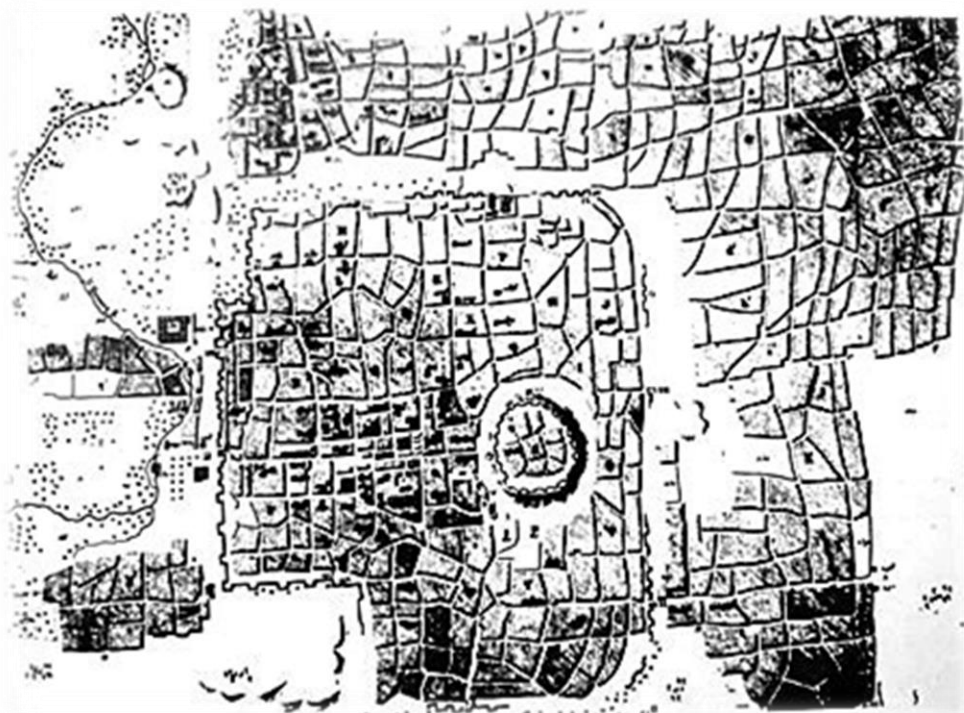


Figure 2.9: Rousseau Plan (<http://esyria.sy>)

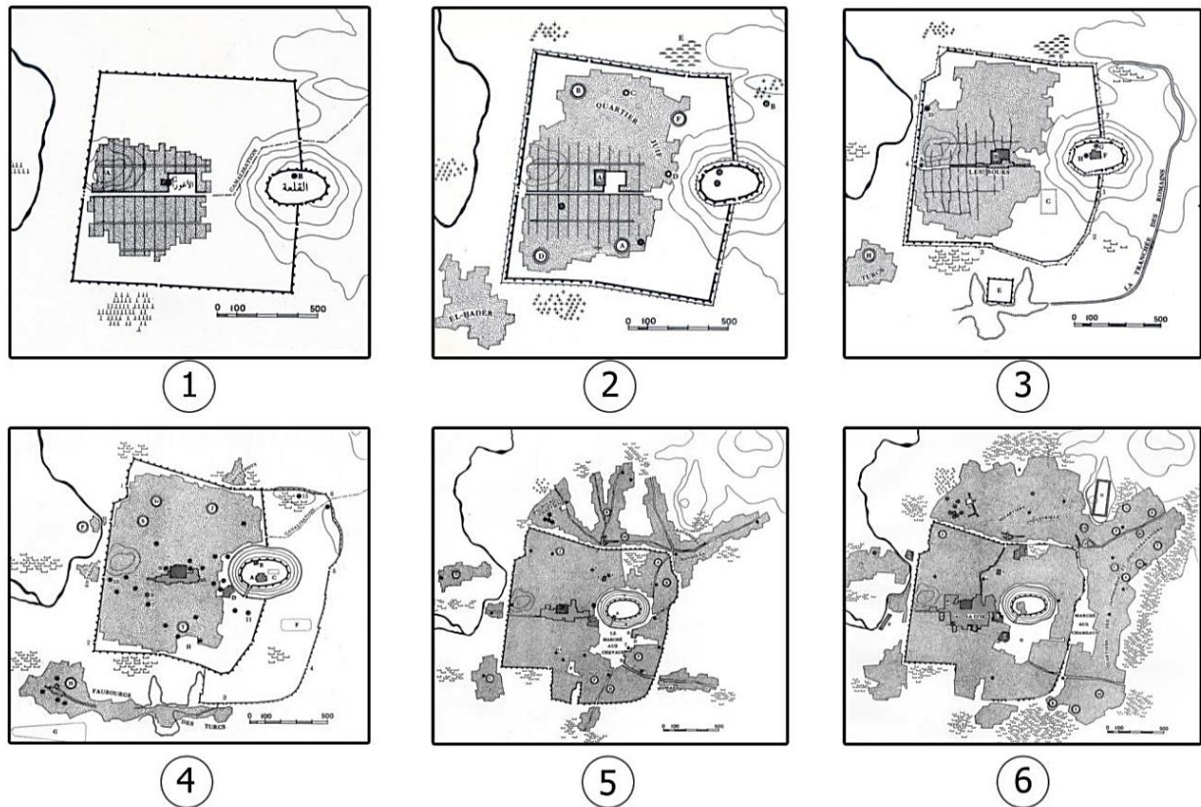


Figure 2.10: Aleppo development according to Suvagih (<http://esyria.sy>)

- | | | |
|------------------------------|----------------------------|-----------------------------|
| 1- Greek period | 2-Byzantine period | 3-In the eleventh century |
| 4- In the thirteenth century | 5-In the sixteenth century | 6-In the nineteenth century |

The first municipality was established in the city of Aleppo in 1867 and upon the mandate of the Ottoman government in 1882, the German engineer "Young" made the first organizational plan for the city of Aleppo to develop the new neighborhoods of the city in the west. 1/10/1899 The days of the governor "Raif Pasha" The Department of Technical Affairs in Aleppo adopted the plan on 29/1/1915 signed by "Gabri Nafie Effendi Zada Kamal Eddin Fathi", and was adopted in the scheme of the European-style sandwich of the parallel and perpendicular streets and the opening of the facades and the establishment of multiple layers after the arrival of the age Beech Metal Crafts I Made in Europe. The diagram was drawn on a panel measuring 65 × 100 cm at the scale 1/5000. In the northeast corner of it, 60 names are mentioned for mosques and blessed buildings. In the western corner, about 60 names for high buildings and in the south-western corner are 48 names.

In 1912, it was decided for the first time to prepare a tourist map for the city of Aleppo, containing the most important government buildings, religious temples, consulates, and stations. This map was adopted on the map of the above mentioned organizational chart.

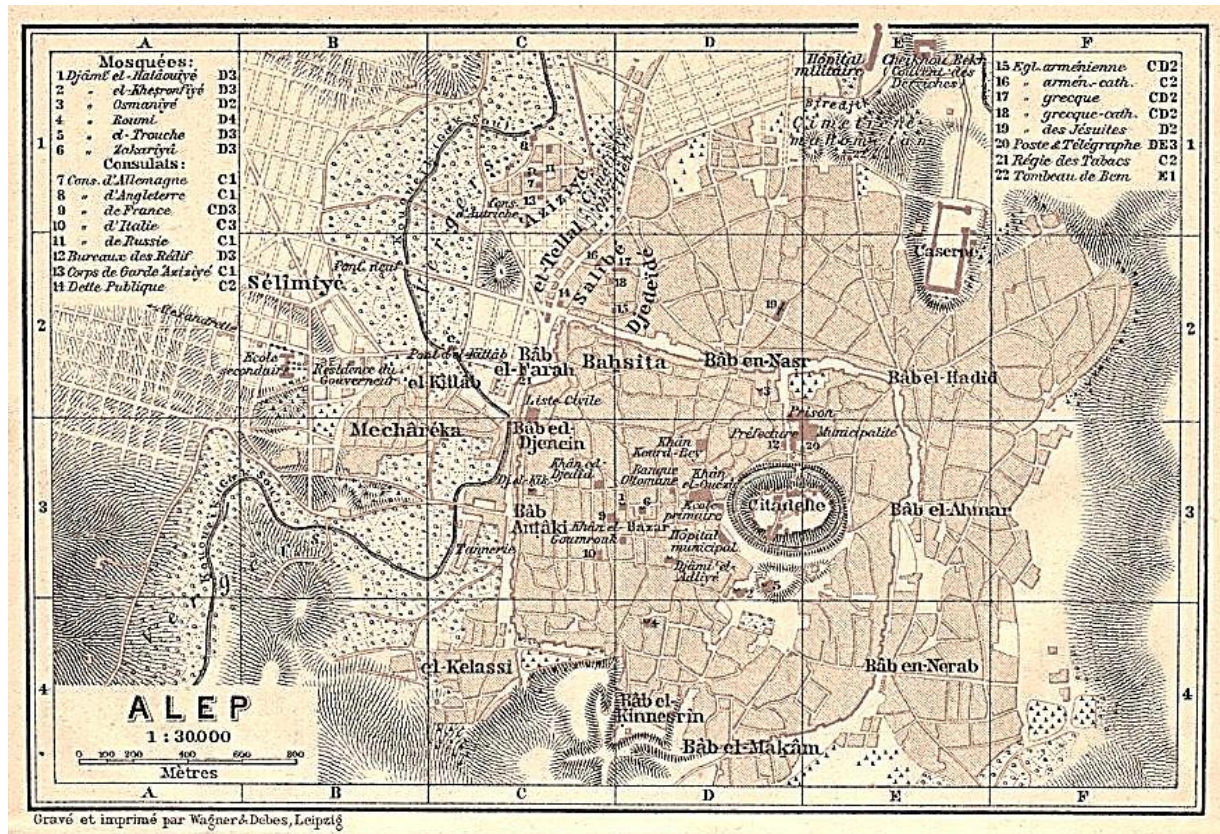


Figure 2.11: Aleppo Map in 1912 (Alafandi ,2016)

In the 1930s, the architects Echocar and Dangeh commissioned a plan to organize, beautify, expand and develop an urban project for the city of Aleppo, in which the new expansion areas were laid down in new streets that extended into the Old City to impose modern laws derived from European planning. In 1954, the French architect Gutton laid out a new organizational plan under which the street leading eastward in front of the Umayyad Mosque was opened to the citadel so that the inhabitants of the city could contact the administrative center of Saraya and the municipality, the old National Hospital and the Palace of Justice.

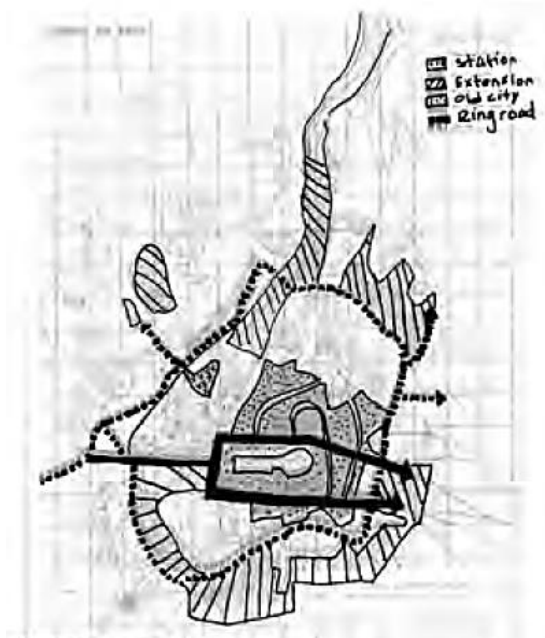


Figure 2.12: Gutton Project 1954(<http://esyria.sy>)



Figure 2.13: Banshoyia 1974 (<http://esyria.sy>)

The organizational chart of the city of Aleppo, organized by the Japanese expert Banshoyia in 1974, shows the importance of historical and archaeological buildings within the old city and suggests the streets of the break-up of the Old City if implemented. The project, which was implemented in the blocks of the buildings of Abdel Moneim Riad Street with seven and nine layers according to its plan, and as a result of the reports of UNESCO in 1979-1980 on the preservation of the old city of Aleppo and the project of Bab El Farag "Presented by the Swiss expert "Stefano Bianca" and the experts working with him, such as architect Adly Qudsi and Jean Claude David, and after the convening of the World Symposium for the protection of Aleppo, the old "Aleppo" in 1983 on the initiative of the Aleppo branch of the Engineers Union, which was the result of the idea of preserving the fabric The old wall of the city of "Aleppo" old was after the emergence of the old wall and under the guidance of the political leadership to adopt new ideas for the project "Bab al-Faraj" to secure the services of the city fit the buildings with the urban fabric of the old city, the project was canceled, "Bab al-Faraj" Destroying the old urban fabric.

In 2001, the General Company for Technical Studies and Consultations was commissioned to study the new organizational chart. In addition, 20000 ha were added to cover the needs of the expansion until 2015. A large industrial area of 4000 hectares / Sheikh Najjar / 8000 ha was allocated for population expansion, Ha areas of protection around the city.

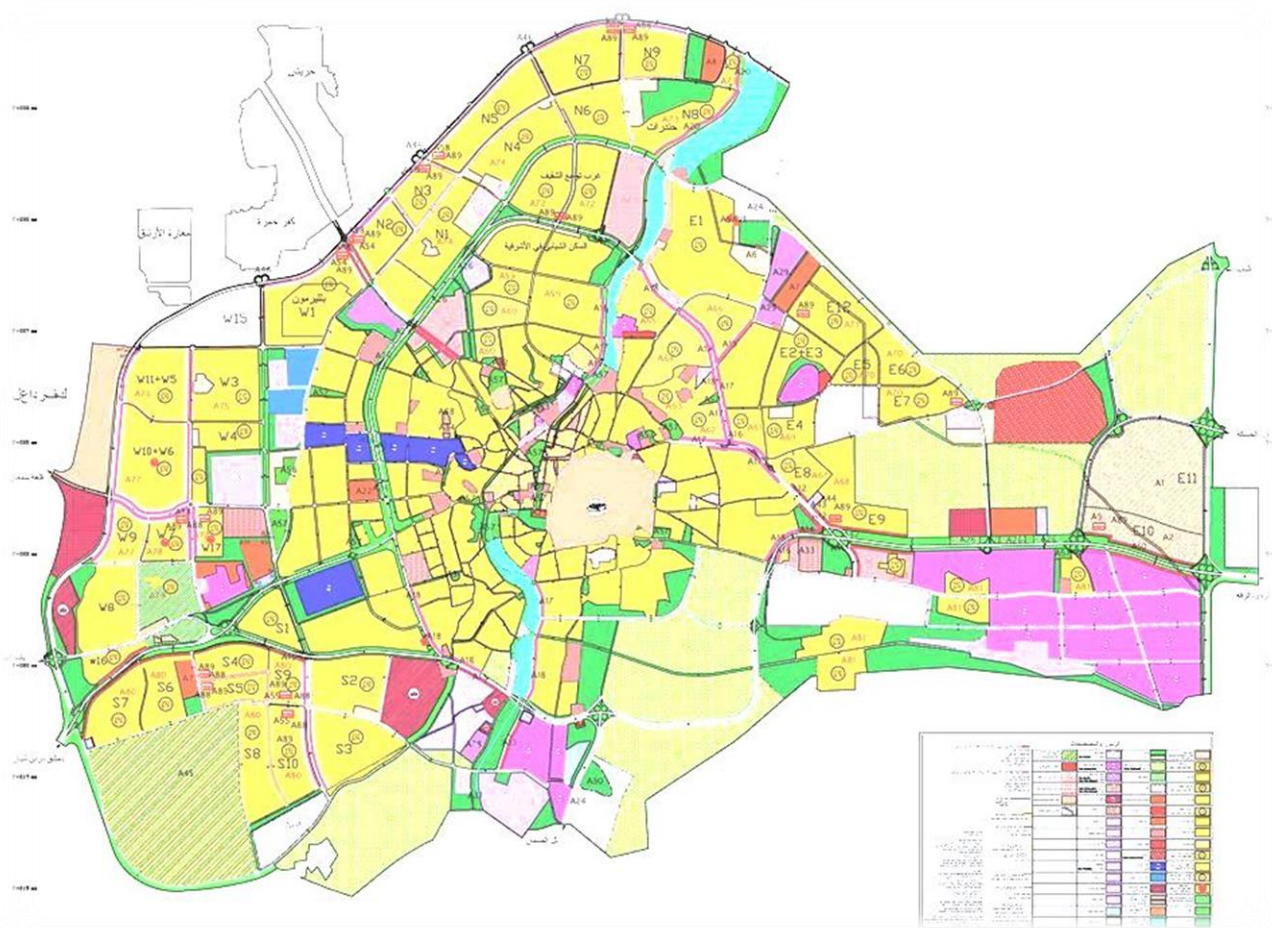


Figure 2.14: The Organizational Chart of Aleppo City 2018 (Aleppo University)

2-3 Conclusions:

By virtue of the history and geography of Aleppo, it has always been under the influence of the global and local political changes and the associated social and economic changes. This has reflected on the city's urban areas, leaving clear effects indicating the different planning transformations that have been taken place in this city.

The expansion of the city of Aleppo outside the walls and continued to expand until today, but this expansion was not since the beginning radial homogeneous but appeared in several stages and different directions and the geographical factor is also the reason for taking this expansion and shape and direction. In the return to the plans of the old city of Aleppo within the walls, it is clear that it was limited to the south by orchards and vineyards and from the west by the course of the River Quiq. Thus, the possibility of expansion was limited in the northern and eastern directions.

Chapter 3

Aleppo and the Destruction of the War

Wars and armed conflicts have changed the features of civilizations throughout the ages. They are the most visible signs of history and the boundaries that characterize the great transformations of events at the same time. Its effects extend beyond the destruction of the environment, which has been one of the most important victims of war throughout history, affecting human health and causing short and long psychological trauma and family and community disintegration.

War is also damaging to the reconstruction and development processes, wasting scarce resources and leading to a deteriorating economic situation and to the lack of social justice and environmental stability, and thus the deterioration of the architectural and urban situation in addition to the systematic destruction of the site resulting from the military targeting of the sites. This chapter presents a situation analysis of the cultural crisis that has been escalating during the last four years in Aleppo.

3-1 The Effects of Armed Conflict and the Percentage of Destruction

Shells, rockets, bombs and explosive barrels have been the major factor in the weakening of both licensed and indiscriminate buildings. Explosions and resulting pressure affect directly exposed buildings. (Figure 3.2)

The buildings are designed to withstand a variety of natural factors such as earthquakes, winds, etc., but they are not designed to receive abnormal shocks, such as bombs and rockets, as the rockets may be equivalent to a 6-seismic strike (Naval facilities engineering service center, 1998). Aleppo became partly accessible, which allowed UNESCO to undertake a Characterization of Housing Damages In February 2017, a damage assessment of housing assets was carried out for Aleppo, updating a previous assessment conducted in March 2016. The February update relied on a percentage-based assessment methodology that applied damage estimates at the neighborhood-level to the city's housing stock (baseline). The housing stock was categorized into three states, namely "undamaged", "completely destroyed", and "partially damaged". To assess "partial damage," multiple scenarios assuming uniform destruction (versus a collateral method

that tied estimations to neighborhood density) were applied to generate low, medium, and high impact estimations. The assessment is primarily based on satellite imagery, corroborated by social media analytics and

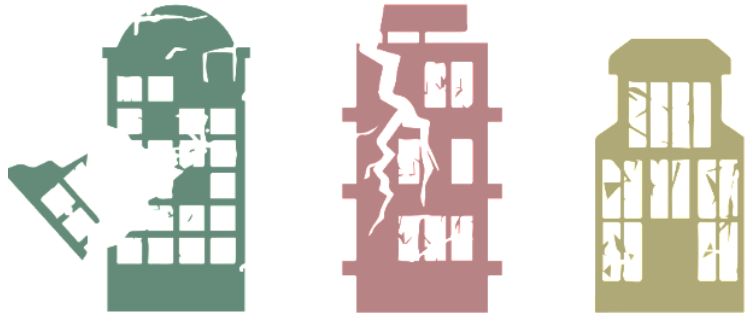


Figure 3.1: The three categories of buildings damage

publicly available information whenever available. The baseline housing data stems from the 2015 damage assessment. The housing typology remains the same as previous assessments, which covered five housing types: apartment buildings, popular housing (Sha'bi), villas, traditional Arab homes (Dar' Arabi) and country houses.

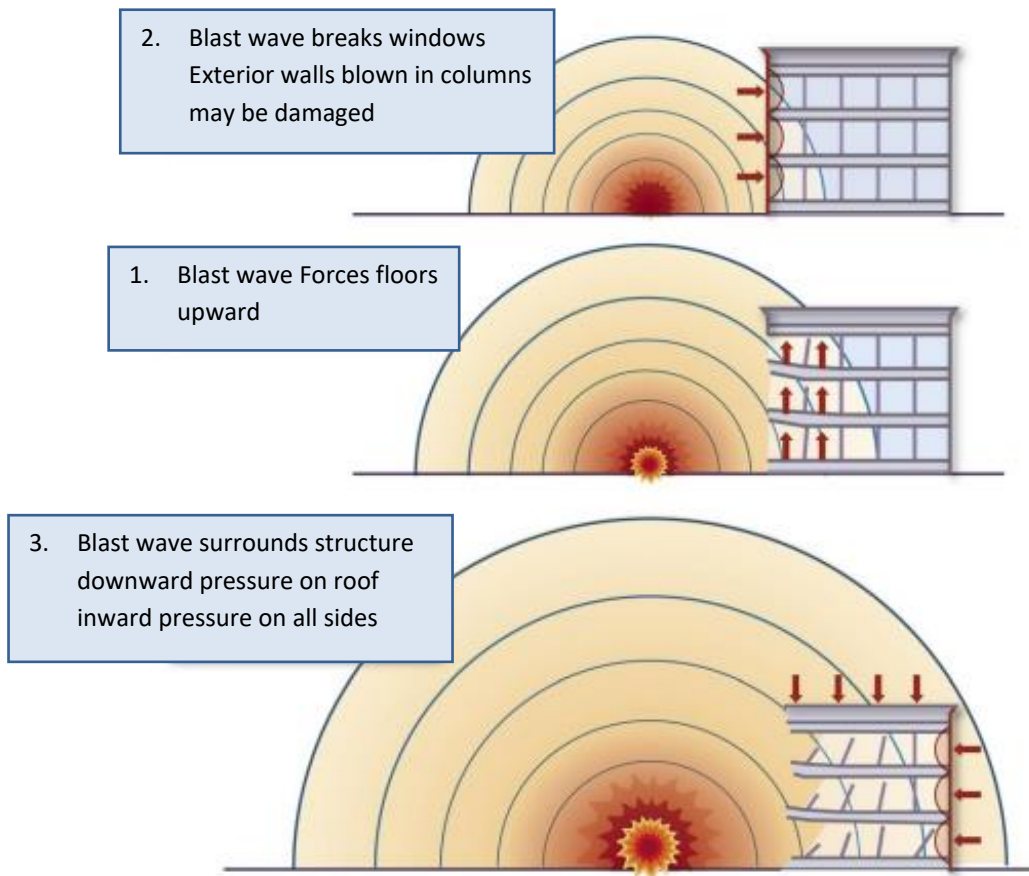


Figure 3.2: Blast pressure effects on structure (Naval facilities engineering service center, 1998)

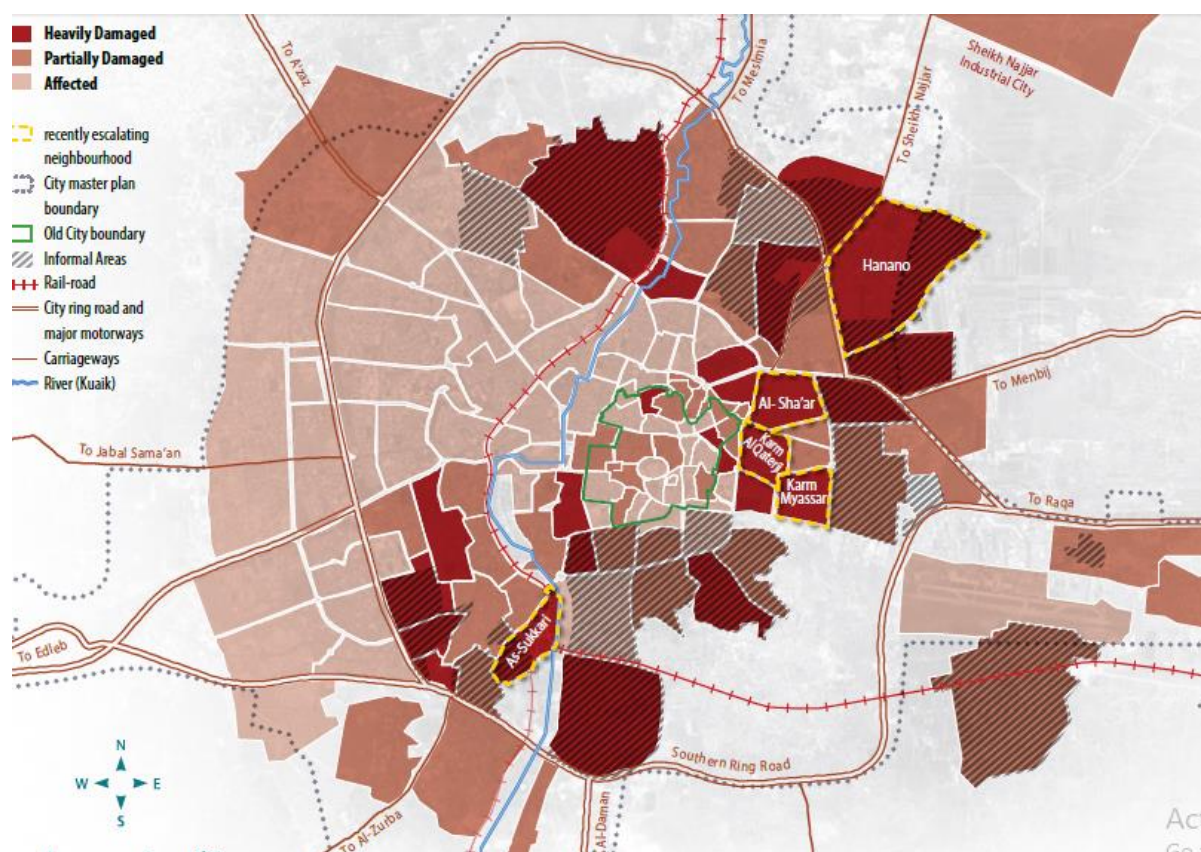


Figure3.3: Damage Analysis (UN,2014)

According to *World Bank Group* Aleppo has the biggest housing damage during the Syrian war comparing to the other Syrian cities (Table 3.1).

City	Units in 2010	Damaged units in 2017		Damaged units in 2017 (% of 2010 value)	
		Partial damage	Destroyed	Partial damage	Destroyed
Aleppo	662,323	154,465	49,830	23.3	7.5
Raqqqa	55,746	7,214	2,418	12.9	4.3
Dar'a	30,532	3,678	922	12.0	3.0
Douma	18,786	3,476	884	18.5	4.7
Dayr az-Zawr	48,430	15,107	4,849	31.2	10.0
Homs	216,191	37,350	12,526	17.3	5.8
Hama	101,902	2,531	3,020	2.5	3.0
Idlib	46,014	1,164	2,916	25.3	6.3
Tadmur	3,178	1,042	272	32.8	8.6
Kobani	20,801	2,226	814	10.7	3.9
Total	1,181,813	238,311	78,339	19.8	6.5

Table3.1: The table compares the percentage of the destruction between the Syrian cities. (World Bank Group)

3-2 The Cultural Heritage Sites Analysis.

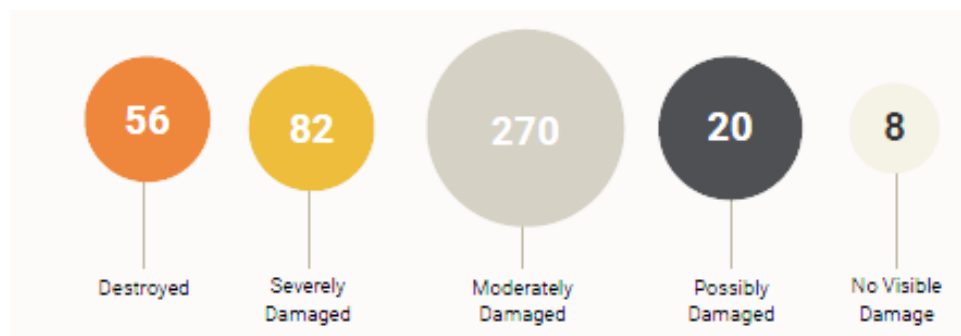
There is no doubt that the nucleus of cities in any era begins small and then grows (with different rhythms overtime) and expands to become great throughout the ages of history. That is the case of Aleppo, which began on the heights of the castle and the Archipelago and the oldest archaeological witness we have now back to three thousand and eight hundred years before. Naturally, important buildings gather around the nucleus - the citadel the center of power, the sanctuary, and refuge when the city had an external enemy. If we return to the history of old Aleppo and to a site around the castle itself or as is known today in the neighborhood under the castle to see many of the important buildings built in this camp, such as schools, hacks, hospitals, bathrooms and so on. And the buildings built around the citadel of Aleppo and the rest of them today are a witness to its importance and the role played by the Old City.

But we cannot determine its location because most of them have been destroyed over time and there is in the historical sources only the name and some information as well as other buildings built on the ruins, but the names that remained today a significant sign of it and the contemporary buildings remain evidence of their importance.

The area of the city within the walls of 42 hectares and the French researcher, "Jean Suvagih" the Islamic historical monuments and classified within two groups:

First: It includes 99 buildings that embody Islamic architecture and recommended to preservation.

Second: It includes 44 less important and recommended by restoration and non-demolition of the importance of documentation, but it was adopted in the classification on the Western standards applied in the classification of buildings without any consideration to the environment to these historical monuments which covering the whole urban fabric of the city.



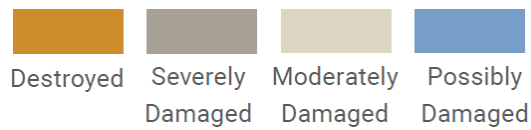


Figure 3.3: Ancient City of Aleppo: Total damage to historic buildings (2013-2017) (UNESCO.2017)

2013 - 2017 Gaube & Wirth Land Plot Damage Assessment	
Damage Levels	Number of Land Plots
Destroyed	723
Severely damaged	2,168
Moderately damaged	2,287
Possibly damaged	624
Total Damage to Land Points	5,802

Table 3.2:
Ancient City of Aleppo: Total damage to historic buildings (2013-2017) (UNESCO.2017)

3-3 The Losses of the Cultural Heritage in the Old City

In the 1980s, an important part of Aleppo's historic center was destroyed as part of a project designed by conservatives and mayors for the city and its social and cultural fabric. The argument was for the establishment of modern commercial centers, and administrative measures to accommodate the size of population development. This destruction, which removed the features dating back to the centuries of absence, the most important part of it was the wall of the city, as well as the archaeological role and the taverns and baths. In parallel, several archaeological eras were destroyed in the citadel of Aleppo, to establish a concrete theater and other interventions in the city. In the summer of 2012, the city was again subjected to the systematic destruction of its historical center to obliterate its identity and cultural value through the ages. Where the fighters were holed up in their old neighborhoods, and their leaders stressed that humans are more important than stone, but people were killed and the stone destroyed. **"More than 70% of the historic center of Aleppo was destroyed".** (The Directorate of Antiquities and Museums in Aleppo.2017)

As a result of the armed conflict in the city, where the sites suffered from the effects of bombing and clashes, which caused severe damage to a large number of historic shrines and public buildings and administrative, burned the old markets with their cells and houses and baths. As well as the exposure of the old city to looting and smuggling of antiquities out of the country and here below we show a small part of the most famous monuments that were vandalized. For example, but not limited:

A. The Covered market (Almadina Souq)

Aleppo has long been known for its ancient commercial market, which is one of the oldest in the world. It extends from the door of Antioch in the west to the entrance of the Aleppo Citadel in the east, on an area of more than 160,000 square meters. (Figure 3.4)

Some studies show that the old Aleppo markets date back to "300 BC, more than two thousand years old." The city has been subjected to a large number of earthquakes and invasions throughout the ages destroyed its markets, but "rebuilt every time"

It houses hundreds of shops, bars, bathrooms, schools, mosques and social events. It is a major commercial center for imported luxury goods, such as raw silk from Iran, spices and dyes

from India and many other products. The city market is also home to local products such as wool, agricultural products and soaps. (Alfa, 2015)

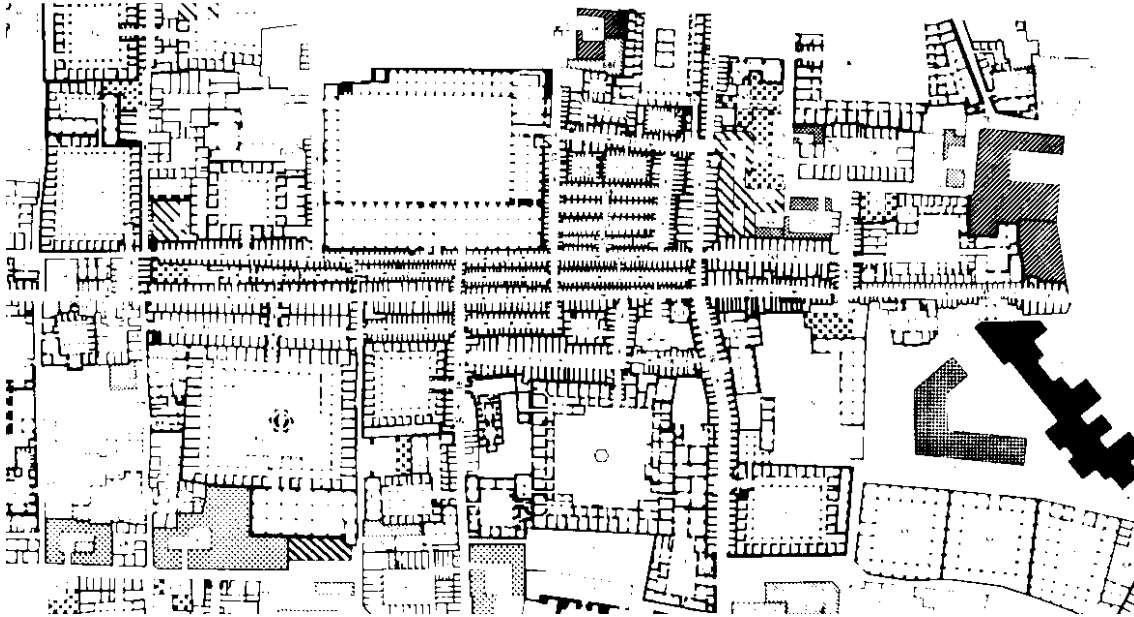


Figure 3.4: The Archaeological map of the souks (The Directorate of Antiquities and Museums in Aleppo.2017)



Figure 3.5: Photo for Aleppo souq before the war (Wikipedia)

The caused damages: Many sections of the Souq and other medieval buildings in the ancient city were destroyed, ruined or burnt, after 25 September 2012. (Unitar. 2014). This market is the worst loss of architectural heritage in Aleppo (Figure3.6).



Figure 3.6: destruction of Aleppo market (apsa2011.com)

B. Aleppo Citadel

The Citadel of Aleppo is a large medieval fortified palace in the center of the old city of Aleppo, northern Syria. And is one of the largest castles of the world and oldest, located on a plateau up to 40 meters high, and is characterized by elliptical, surrounded by a trench were filled with water in the case of wars and civilizations and are accessed through a front entrance tower with defensive balconies, and there was in the past, before Zahir Ghazi rule, a wooden staircase connecting the front entrance and the trench, which is liftable in war situations, and then turned into a permanent stone staircase (Gonnella, 2008).

It is certain that the location of Aleppo's main fortress is a natural high and artificial height was added to it, taking the shape of the high hill in the center of the city. The archaeological excavations revealed the remains of the Hittite period through the temple of the god Teashop, The Arami, and other temples built in later times, confirm the existence of the castle since the second millennium BC, or at least the presence of the center "Acropolis", but the oldest remaining

facilities date back to the Ayyubid and Mamluk times, through the towers and doors constructed in the Ayyubid period, which were renovated in the AD era Mamluk.



Figure 3.7: The citadel of Aleppo (Asfour,2018)

The architecture of the citadel reflects the development of the military architecture through its architecture, its square, rectangular and hexagonal towers, the curving entrance and wide columns in the wall, which makes the wall coherent, as well as the stone spikes in the huge wall, the multi-arches of arches, armored metal doors, The decoration is aesthetically pleasing in civil facilities such as the Royal Palace, the Throne Hall, and the highest doors (Gonnella, 2008).

In addition to the use of the open outdoor corridor, so that the defenders so heard of striking attackers who are able to break the first line of defense. The bridge does not lead directly to the main entrance, but it deviates at a corner to lead to the entrance. The corner consists of two walls equipped with projections, arrowheads that allow the enemy to be eliminated, and the

old tool is not used to smash doors. This type of entrances is called entrances Al-Bashura, "which is the main entrance points of the Arab architecture.

The caused damages:

The iron door of main gate is comp destroyed. It originally dates back to Ayubi period (Figure3.8) some damages noted on the slope of citadel (UNESCWA, 2016).



Figure 3.8: *The Destruction in the vicinity of the castle wall*
(Apsa2011/Protect Syrian Heritage)

C. Umayyad Mosque of Aleppo

The Aleppo Grand Mosque or the Umayyad Mosque in Aleppo or the Mosque of the Great Umayyad Mosque in Aleppo is one of the largest and oldest mosques in the Syrian city of Aleppo, where the mosque is located in the neighborhood of Al Jaloum in the Old City of Aleppo, which was listed on World Heritage Sites in 1986, Part of the World Heritage, it is located near the city market. The mosque also knows what remains of the body of the prophet Zakaria (the father of John the Baptist according to Christianity). The mosque today covers an area of 105 meters from east to west. It is about 77.75 meters from the south to the north. The mosque was built on confiscated land previously used as a cemetery for the cathedral. It is very similar to the plan and model of the Great Umayyad Mosque in Damascus. The mosque was built in the eighth century AD, but the present form dates back to the eleventh century AD until the fourteenth century AD, the minaret was built in 1090 AD, and was destroyed in April 2013 as a result of the battles that broke out there in the events of the Syrian crisis.



Figure 3.9: *The mosque courtyard (Wikipedia)*

The mosque was restored and expanded by Zengid sultan Nur al-Din in 1159 after a great fire that had destroyed the earlier Ummayyad structure. In 1260 the mosque was razed by the Mongols. The Mamluks (1260-1516) made repairs and alterations. Carved Kufic and nashki inscriptions decorated the entire minaret along with alternate bands of stylized ornaments in patterns and muganas. Sultan Qalawun replaced the burnt out mihrab(niche indicating the qibla, or direction to Mecca) in 1285. Later, Sultan al-Nasir Muhanmad (1293-1341) had the new minbar constructed during his reign.

The minaret's shaft, which protruded out of the flat roof of one of the halls, consisted of five levels with a crowning top encircled with a veranda. A muqarnas-style cornice divided the veranda top from the shaft. The structure was largely built of fine ashlar. The minaret was heavily decorated in relief ornament, more so than any other Islamic-era structure in Aleppo with the exception of the Shu'aybiyah Madrasa. Its stories contained cusped arches and continuous mouldings. The masonry of the minaret varied throughout, with a mix of light and

heavy usage of toothed tools, short, long, vertical and horizontal strokes, fine and rough finishes, and small and large stones.

According to E.J. Brill's First Encyclopaedia of Islam, the minaret was "quite unique in the whole of Muslim architecture." Archaeologist Ernst Herzfeld described the architectural style of the minaret as being "the product of Mediterranean civilization," writing that its four facades carried elements of Gothic architecture. Meanwhile, anthropologist Yasser Tabbaa stated the mosque was a continuation of the ancient North Syrian churches and "an entirely localized phenomenon.

The caused damages: (Unitar. 2014)



Figure 3.10: *destruction in the courtyard and derbies of minaret (apsa2011)*

1. North gate (main gate) destroyed.
2. South gate (for main prayer hall) destroyed.
3. Alhijaziha (women prayer hall) destroyed.
4. Many parts of arcades burned.

5. The great loss of Umayyad mosque is the minaret, it is completely destroyed and this minaret was the symbol of Aleppo city.
6. The door of wood minber lost and many wood doors burned.
7. The general situation of Umayyad mosque was very dangerous. (Figure3.10)



Figure 3.11: destruction in the courtyard and derbies of minaret (apsa2011/Protect Syrian Heritage)

D. Bab al-Nasr (the gate of victory)

Bab al-Nasr meaning the Gate of Victory, is one of the nine historical gates of the Ancient City of Aleppo, Syria was originally called Bab al- Yahud because of its location next to the Jewish Quarter. But it was rebuilt and renamed by Az-Zahir Ghazi in 1212 it became the most important northern gate of the city. The structure was partially modified during Ottoman times and its role affected by mid-20th-century French urban planners.

Current damages (2012-2013): The location around the gate have destroyed, especially the old shops (Figure3.12)



Figure 3.12: Bab al-Nasr destruction (apsa2011/Protect Syrian Heritage)

E. Abu Alhuda Alsayadi Residence

This residence used as the research department for the directorate of Foundation, and the center for religious affairs. There is also a prayer room and a tomb. Construction of the building was started by Sheikh Mohammed Abu Al Huda, the son of Shiekh Wadi Al Sayadi in 1877, and completed in 1909. There are two entrances one on the Aleppo citadel, the other on the Oglabek Mosque side. There are three parts to the building. The exterior of the part near the citadel resembles western architecture. In the central section, to the south of the courtyard and the west of the prayer hall, the tomb of Sheik Hasan Wadi can be found The interior is that of a traditional Aleppo house, with a courtyard, steps, Iwan(vaulted recesses), and rooms on both the upper and lower levels. The caused damages: The most beautiful part of Abu Alhuda Alsayadi Residence has been shelled, the inner courtyard, which includes double stairs leading to the upper hall, has been completely destroyed (Figure 3.13)



Figure 3.13: Abu Alhuda Alsayadi Residence before and after (apsa2011/Protect Syrian Heritage)

F. Haj Mousa Mosque

The mosque built in 1762 by Hajj Mousa Ibn Al-miry, displays the architectural characteristics of both the Mamluk and Ottoman mosques found in Aleppo. In 1986 the acute-arched portico on the north side of the courtyard was converted into Hijazya" (a private place of prayer or reflection) and a fountain for ablution. Rooms were also built on the east side of the courtyard for the use of those on duty at the mosque. The northwest corner of the courtyard became an Ottoman elementary school for children The Ottoman style minaret is located at the southwest corner of the mosque. The main shaft is a 16-sided design and it is crowned with a lead-plated cone.



Figure 3.14: Haj Mousa Mosque before and after (apsa2011.com)

The caused damages: The photos show how much the damage and destruction actually are (Figure3.14). No details or more information about the status inside the mosque.

G. Junblatt Palace

It is a historic mansion in Aleppo, Syria, built during the 2nd half of the 16th century by a Kurdish emir of the Jumblatt family, Jumblatt ibn Qasim. In 1604-1605, it briefly served as a residence for the Ottoman wālī of Aleppo Hussein Pasha Janpolad.

The mansion is located at al-Bandarāh area of al-Farafira district, within the walls of the Ancient City of Aleppo. According to the Aleppine historian sheikh Kamel al-Ghazzi, emir Janpolad spent 1,000 Ottoman gold lira to build the palace. Since 1766, the palace became the property of al-

Kawakibi family. In 1814, it then served as the residence of the mufti of Aleppo sheikh Hasan Afandi al-Kawakibi.

Junblatt Palace is believed to have the largest iwan(vaulted recesses) in Aleppo, decorated with fine qashani ceramic-tiled mosaic wall, depicting several Persian-type inscriptions. Like the vast majority of Arabic traditional houses, the square-shaped courtyard of the palace has a large water fountain in the centre mainly used for wudu. It has been described as one of the most beautiful palaces built in the city.

The caused damages: the inner courtyard, which includes double stairs leading to the upper hall, has been completely destroyed (Figure 3.13)



Figure 3.15: Jinblat Palace Mosque before and after (apsa2011.com)

3-4 Conclusions

The city of Aleppo is characterized by its many architectural styles, combining the architectural styles of Seljuk and Byzantine as well as Mamluk and Ottoman styles, which have been followed over the years. The city has many old buildings of the 3rd and 14th centuries AD, such as khans, madrasas and baths, in addition to religious buildings such as mosques and churches. In Aleppo, in the 6th and 17th centuries, houses belonging to many wealthy Aleppo families were characterized by their remarkable stone façades. In the 19th and early 20th centuries, Baroque architecture was dominant.

Chapter 4

The learned Lessons and their Influence on the Reconstruction Process

In light of the difficult situation which Aleppo still afflicts, it should be emphasized that reconstruction is a complementary phase; a stage during crisis and an emergency rescue operation aimed at alleviating the damage caused by the armed conflict within the boundaries of the Old City. Hence, there is a phase of comprehensive reconstruction when the war on Syrian territory ends.

The concept of preservation of the heritage generally includes all the methods used to preserve and prevent damage or loss a part or all of the elements of the historical building and affect the total urban, historical, artistic or archaeological. Under this item, there are levels and degrees that constitute an integrated system of handling and treatment of buildings the historical value, from documentation, protection, repair and restoration, maintenance of the construction sentence, re-employment and rehabilitation and ends with construction and reconstruction.

The management of the proposed system is based on a number of foundations and activities that help to achieve this plan, the most important of which can be summarized as follows: (Silva, 2010).

- Establish a qualified corporate governance structure for doing activities and business whose primary task is to prepare the action plan for reconstruction and preservation and shall be responsible for:
- Implementation of the proposed plan of action based on training and qualification of technical cadres, and finding the legislative dimension and legal for the implementation of business.
- Finding funding for the action plan: by looking for local and international sources of funding, and setting time programs for this funding.

- Promotion and social development through awareness and information, population participation, the role of organizations and NGOs.

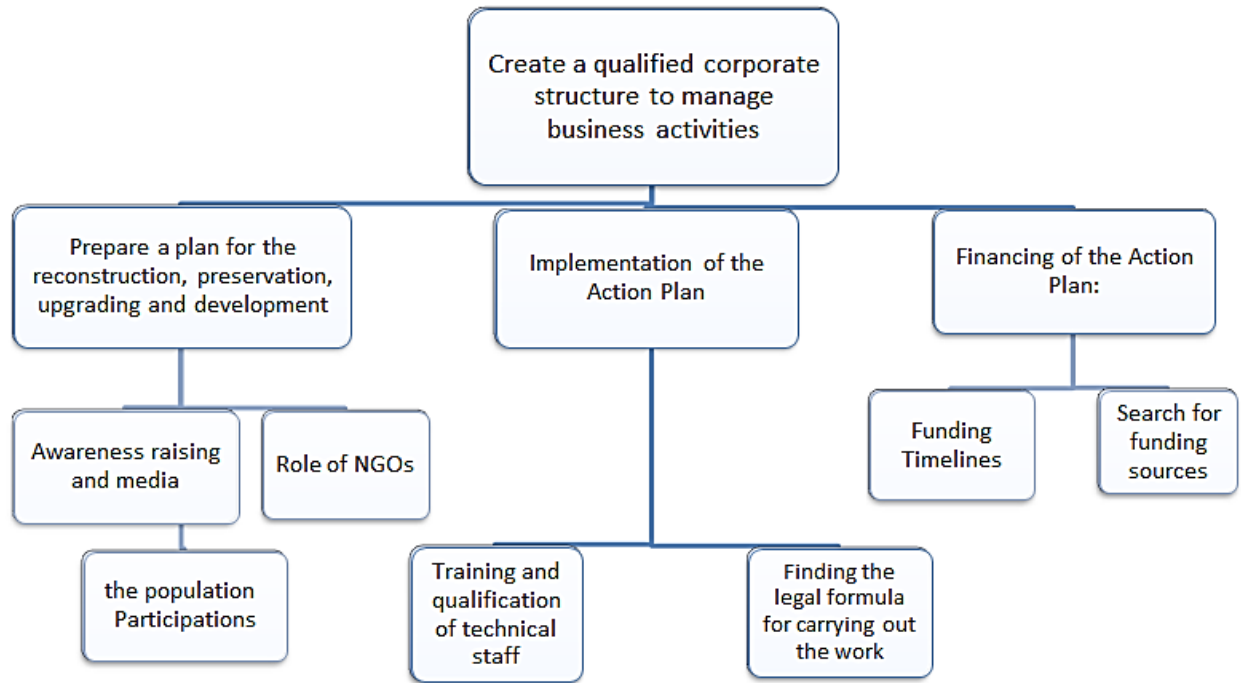


Figure 4.1: Vision for the reconstruction phase (Asfour)

4-1 Create a Qualified Corporate Structure to Manage Business Activities

The question that now imposes itself before the start of the process of restoration, reconstruction and rehabilitation of archaeological buildings: Who is the administrative authority responsible for studies, supervision, implementation and then follow-up, which is the task of developing strategies, which will answer the following question: Why and to whom and how reconstructed this urban environment And architectural buildings, renovate and employ them?

The basic proposal is the establishment of a Directorate for the Reconstruction of the Old City, which is directly affiliated to a proposed supreme body responsible for the reconstruction. The Directorate is responsible for rehabilitating the historic city.

- Include the following sections:

Information Management Department - Planning Studies Department - Infrastructure Section - Labor Zones Section - Finance Regulation Section - Participation Section: Creating an independent institutional system capable of managing all day-to-day municipal work. The department includes representatives of the competent authorities such as Antiquities, Endowments, Municipalities, and Tourism, in order to prevent multiple supervision and conflict of competences against any historical site or building. Accordingly, all the necessary and necessary powers must be given to the supervising authority, which reduces the conflict of positions and helps to speed decision-making and determine the procedures to be followed at the legal, administrative and financial level.

4-2 Prepare a Plan to Rebuild and Maintain

It should be noted that an integrated policy of rehabilitation and reconstruction is needed. The method and methodology of the work include the principle of the summit of the base and vice versa. The mission of the proposed department is defined in two phases **before the end of the crisis** and **after the crisis**.

4-2-1 Before the crisis ends (Qudsi.J ,2016)

- Archiving slides and collecting documentary material on historic buildings and urban fabric in historical areas, before and during the crisis, including historical and engineering studies, photographs, and architectural plans, aerial mapping of the current situation and comparison with old maps owned by official and private bodies. These documents can provide reliable information on reconstruction and rehabilitation.
- To begin the process of identifying and assessing the damage based on the available data, with the subsequent assessment of damages on the ground to arrive at a real and realistic assessment of the extent of the destruction and damage to the urban and architectural structure of the area under study.
- Cooperating with universities in all its branches to prepare plans and studies that can contribute to reducing the size and cost of future work.
- Study the economic feasibility of the use and recycling of ancient ruins, in order not to falsify the history and preserve the vocabulary of traditional architecture and construction, as this

process contributes to the protection of the environment from the effects of waste and availability of the area of landfills needed to get rid of them,

- Preserving movable items such as statues, ornaments, etc., according to available possibilities.
- Prepare an administrative system that achieves social and residential justice for the residents, in order to guarantee the heritage of the building and the urban fabric of the area.
- The facts that have existed throughout the years of the Syrian crisis show that there are insufficient experience and knowledge for heritage workers in the face of disasters. It is, therefore, necessary to train a team of qualified local urban managers and prepare them to lead the pilot projects throughout the Old City that can contribute to the reconstruction of the same area and to disseminate their knowledge to other regions. And start with:
 - Taking advantage of international experiences in the reconstruction of historic cities such as those that took place in European cities and after World War II, through criticism negatives and lighting pros. With the adoption of comparative analytical studies as a method, we apply in Aleppo, which will increase the efficiency of our dealing with our buildings and our traditional cities taking care of the specificity of the local character.

4-2-2 Steps should be taken in the old city (emergency solutions)

- Before starting any fieldwork of any kind within the Old City, the Demining of mines should be undertaken if they exist, should be demobilized by an engineering team that removes the unexploded sub munitions from the rubble which are a threat to the workers in the historic sites.
- Conducting a post-conflict field archaeological survey in the historical areas to be protected to identify, and document the extent of the damage done to it;
- Removal of rubble, cleaning of the site and removal of stones (non-reusable) to provide a sense of safety and cleanliness of the place.
- The establishment of a structural safety committee and the demand of specialists from experts, engineers, and architects to develop a detailed assessment and study of the stability of its load of foundations, contracts, and columns ... based mainly on risk analysis and its future implications for the development of emergency plans and protection against loosing and theft.

- Restoration of historic buildings, in accordance with international standards and conditions for restoration work, It should be noted that the delay in the implementation of the renovation of the damaged buildings harms the construction of buildings adjacent to its which did not affect by the violence.
- Studying the preference for the reconstruction of ancient buildings according to the architectural style, with the study stages of the implementation of the work so as not to interfere or intersect with each other.

It is worth mentioning that the conditions for reconstruction according to the system of building officer in the old city of Aleppo include the following items: without addressing the issue of reconstruction after the wars and disasters:

- The damaged parts shall be reconstructed according to the conditions and basic building materials.
- In the case of reconstruction completely there are two cases:
 1. Buildings containing distinct elements to be applied to the building conditions according to the plan (cadastral cartography) and according to the land use scheme and according to the original height of the non-modern or taken height consistent with the neighborhood.
 2. Buildings that are part of the urban fabric of the old city and do not contain distinct architectural elements to which the previous conditions apply (and the distribution of its blocks and the area of the heavenly expanse are reviewed according to the conditions in question)
- The use of traditional building materials is required.

4-2-3 Strategies for the conservation of rubble in the old city of Aleppo after the end of the armed conflict

The removal of rubble after the war is an important task primarily undertaken by construction companies that have made beneficial deals with cities. Of course, these companies need to support the population. On the whole of Syria, millions of cubic meters of rubble must be removed. On the level of our historic cities, more than 70% of the historical center of Aleppo has been destroyed as a result of the armed struggle in the city. Once the violence stops, the demolition of the buildings is started, and then the rubble is carefully stored so that it can be used again. In other words, removing the rubble, in this case, is equivalent to preserving what

can be preserved from the original building materials for re-use. The conservation of debris is done on two levels:

1. At the level of the historic building through the imposition of a protected area of the building cannot be bypassed or tampering with the destruction of the building destroyed within a legal framework and under the supervision of the competent authorities as to the director of the old city in Aleppo and other contributors. Until the original building materials are removed from the rubble and repaired, and then attempted to identify and return to the original places after all the evidence of the past have been collected for reconstruction.

2. At the historic city level as a whole, through the evacuation of buildings and streets from the rubble and moving them out of historic cities "also within a legal framework", by forming human chains to pass the usable building materials back to a certain assembly point, And collected so that they can be reused, As well as, the development of routes to work in patrols to accelerate the removal of rubble and their collection after the war. Thus removing the effects of destruction and rebuilding what can be built by extracting sound stones from the rubble for re-use in construction.

4-2-4 After the crisis: (Sandes, 2017)

- Develop a program of work and identify and estimate the scale of work and the provision of supplies.
- Based on the damage that documented, the number of applicants for restoration, reconstruction and rehabilitation in the old city of Aleppo will be very large, this entails the need to provide a sufficient staff of institutions of the Aleppo Rehabilitation Department, which determines its mission to receive, sort and prioritize these requests.
- Cooperate with the scientific authorities in the process of sorting debris and recycling and the use of some, according to laboratory experiments and special construction studies, to achieve the general interest and maintain the distinctive building style in the region.
- Setting a specific time-frame for reconstruction in each segment according to housing and service priorities and humanity with the need to adhere to the duration in cooperation with urban planners and the Engineers Union and the circles of relics.

- Benefiting from the experience of the pilot project in Aleppo, where the poor distribution of economic activities was noticed prior to the crisis, which requires cooperation with the Chamber of Commerce, Industry and Tourism and the City Council to determine the commercial and industrial trades and tourism allowed within the shops that do not harm the environment and urban and cultural fabric in the region..
- A successful urban economic policy and financial management should be mainstreamed for adoption in the context of housing finance, SME support and long-term loans.
- Inadequate laws and regulations in force with the requirements of the next stage of reconstruction. Therefore, it is necessary to form a committee to propose legislation and enact the laws that are necessary to legislate as a result of direct action and characterized by its specificity and flexibility to deal with each situation on its own.

For example, local materials and traditional techniques should be used, giving the process of reconstruction and restoration greater credibility in restoring the architectural edifice to its old one, and not using the techniques Modern and sophisticated materials, unless the use does not affect the historical building or abuse or lead to the falsification of historical data, according to Article V of the Charter of Venice (*according to Amsterdam in 1975, which emphasis on the need for traditional building materials and the continued use of the same techniques and traditional crafts, maintenance of urban heritage should not be marginal but overlapping with local and national planning*).

4-3 Legislative /Legal Dimension

The study includes real estate and judicial problems and the preservation of property rights, based on procedures proposed the following:

- Taking advantage of the current situation and work to remove irregularities and buildings that do not meet the specifications and the system of control of the Old City. Taking into account the area of the influence presence (the ratio - the slopes - the facades), taking into consideration the shape and installation of the vacuum so that the added units do not affect the visual properties of the different spaces within the archaeological building.

- Preventing the repair of any undisturbed, irregular buildings within the city's historical boundaries.
- Prevent the return of residents of infringing buildings as a first step to remove them, and find temporary alternative housing for them.
- Determining previously abandoned properties owned by non-Syrians (during Ottoman and French rule) for acquisition and settlement of their status by official institutions and conducting engineering studies in accordance with the requirements of the old area so that all studies are ready for implementation.
- In cooperation with the Ministry of Justice, a small judicial committee needs to set up to examine the overlapping of real estate

And follow-up problems for multiple cases of remote heirs and give a real estate and financial solution in order to preserve the speed of business termination in the old city and not leave real estate problems.

- Traditional houses were divided between families and heirs or sold as smaller units, as well as new unlicensed and unclassified floors, in addition to covering open courtyards and removing some architectural elements such as balconies ... resulting in the absence of documentation of real estate properties. Specialist in this type of issues (real estate survey re-examination).
- Securing the community's use of its cultural heritage by studying the possibility of the state acquiring the buildings with high archeological value and paying the owners value according to the price in the local market while exempting them from the real estate tax.

4-4 Financing of the Action Plan

Despite the gravity of the challenges after the end of the Syrian crisis, securing the funding is the basic step for reconstruction, whether through reliance on local sources or recourse to external sources. Regardless of this aspect, the financing of restoration in historic cities is through the state's relationship with Citizens across:

- Provide long-term loans with exemption from all fees and taxes.
- Providing the State in cooperation with the international organizations' free grants for the construction and cladding of archaeological buildings.

- Encouraging the owners of local economic activities to contribute and invest in the work of restoration and rehabilitation and preservation of the urban heritage, as relying on local money in a manner consistent with external support in addition to the participation of real estate owners at cost gives a sense of commitment and ownership of the project, which may lead later to maintain the products and outputs of this project.
- Benefiting from the economic and financial policy of pilot project experience, and spreading it through the establishment of a fund to support small and medium investments, which will support the economic environment and economic base of these investments according to the planned economic approach of the old city.

4-5 Funding Schedules

It is expected that the completion of the supposed work of the reconstruction, construction, restoration of old buildings, buildings, infrastructure, and public squares, within the borders of all Syrian historical cities, will require a long period of time in the event of sufficient funding from the public, private, local and international sectors. The department's work program is related to the number of employees and the amounts allocated for the work. It accomplishes its mission on three levels:

Immediate program: to find solutions to problems that require emergency intervention to prevent urgent danger. Therefore, there must be financial sources for direct disbursement without waiting for approvals from the financial organs of the public administration, and disbursement is based on the report of the technical officer.

- A rapid program aimed at overcoming some sources of damage.
- Long-term strategic program: A future program that extends over 5-8 years and has to be arranged during these years for partial or total development in the surrounding area or in the building or site in order to improve the work outputs.

4-6 Population Participation

Reconstruction means primarily preventing the loss of the social, architectural and urban fabric of the historic Syrian city (The population who reside and work in the Old City)

They are the main target group of the project. Their living environment must be preserved and improved. Rehabilitation can be carried out successfully only with their support and commitment.

As a result, the community and the residents of the region must be involved in rebuilding from an expert labor force, trained or auxiliary workers, and setting hours for voluntary work and increasing the role of women and youth in this area.

4-7 In Conclusion

It should be noted that reconstruction in the stages of stability and security is difficult and multifaceted, as in the case of the devastation experienced by my country, Syria. I tried in this chapter to clarify a vision for the reconstruction phase, but with the assurance that every item that was put forward deserves a long pause of study and scrutiny.

The objective of preserving the identity of historical cities is not to transform them into a museum place, nor to a place where economic return, but to a place that reconnect people to the land and life in a way that resist the domination of one ideology, one language and one architecture.

Chapter 5

The Preservation Project

The bloody last years in the history of Aleppo destroyed the most important historical areas in the heart of the city. One of them is the square or the area located in the opposite of the citadel's entrance, which is a living museum of past civilizations that left its marks for centuries - as a result of the war, it has unfortunately destroyed.

This chapter will illustrate a survey of the buildings in this area through photos, plans, sections and elevations showing the current and past design and implement the reconstruction strategies described in the previous chapter on it and on one of the selected buildings in the region.

5.1 The Reason for Choosing the Studied Area

The importance of this region is due to its location in the vicinity of the castle, which was the first tourist destination in Aleppo and as a center for various artistic and tourist activities. It also contains important historical buildings, dating back to different periods of time. It is a harmonious cultural mix. It also represents the first typical image that comes to the minds of Syrians and others when you say Aleppo. In short, it is an important part of the memory of the Syrians and the Aleppines in particular.



Figure 5.1: Panoramic view of the studied area from Citadel before the war ([flickr.com/craigjenkins](https://www.flickr.com/photos/craigjenkins/))

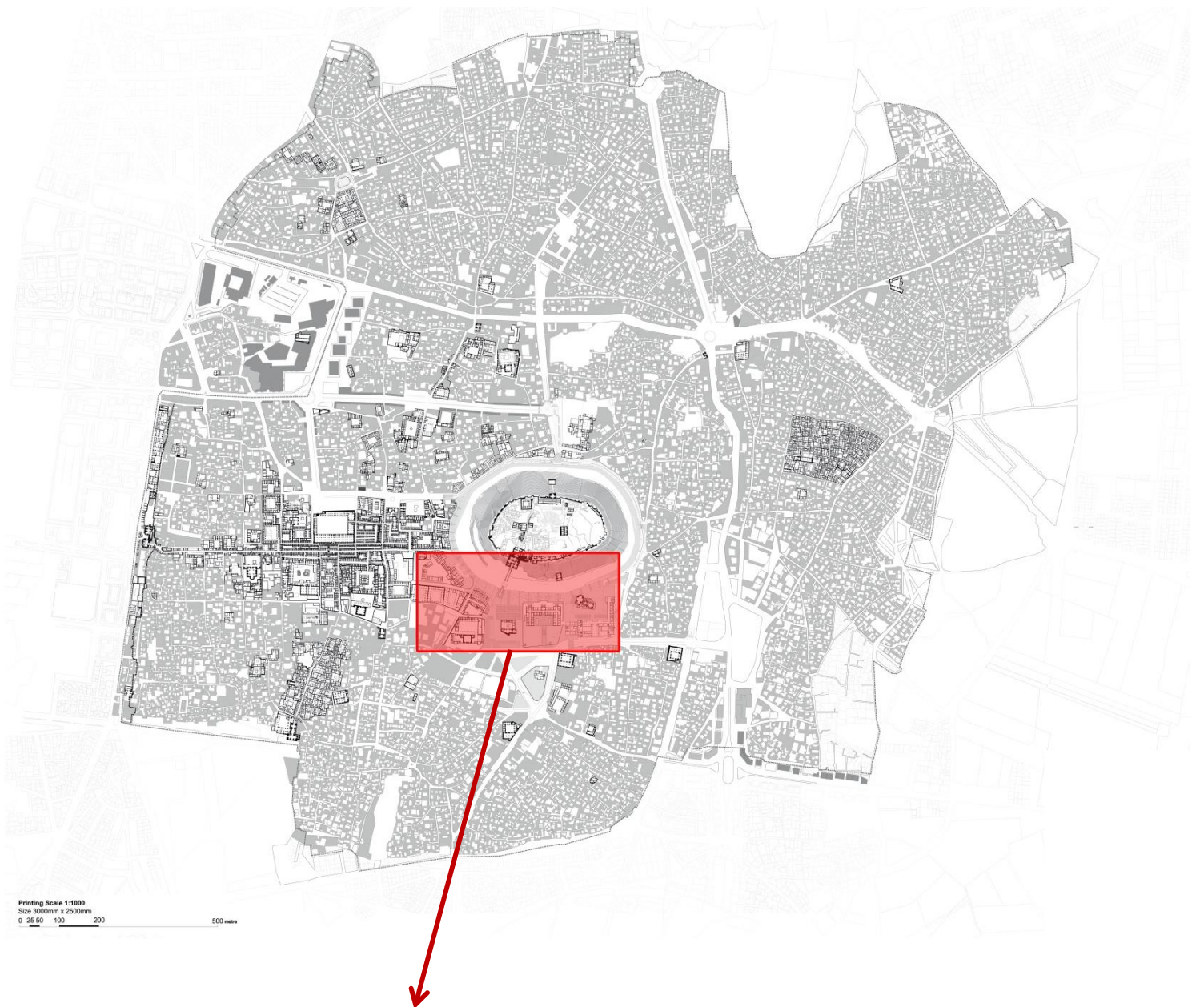


Figure 5.2: The location of the studied area regarding to Aleppo map (Asfour)

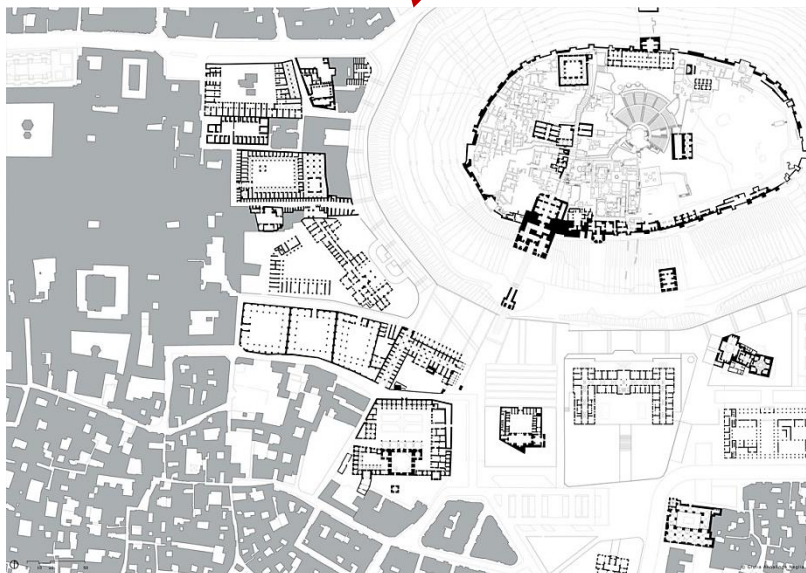


Figure 5.3: the site section for the studied region before the war. (btu,2016)

5-2 The Destruction in the Vicinity of Aleppo Castle

Terrorist organizations have blown up tunnels in the city of Aleppo since the summer of 2012, digging tunnels from areas under their control, blowing them up or infiltrating them to carry out attacks. They detonated several tunnels around the fortress, the most notable was on May 2014, and another in 2015 caused the collapse of part of the wall of the castle led to significant damage in the area around the castle (SANA: Syrian official news agency)



Figure 5.4: A satellite image of the courtyard at the height of its brilliance after a series of renovations and improvements made on the place on 6 January 2010 (Apsa 2011/Protect Syrian Heritage)



Figure 5.5: A satellite image of the square after the repeated explosions that hit the place on 2 January 2012. (Apsa 2011/Protect Syrian Heritage)

1- The Carlton Hotel

2- Khusrawiyah Mosque

3- Sultaniyah Mosque

4 - The New Serail

5- Yalbga Bath

6- The judicial palace

The following are the series of the explosions dates and their impact on the studying area
(*Aleppo Photographic Museum*):

1. **8-2-2014** : Explosion of part of the judicial palace (from the era of independence)
2. **15-2-2014**: The first bombing of the Carlton Hotel or the Hospital of Strangers (from the end of the Ottoman era)
3. **8.5.2014**: Destruction of the rest of the Carlton Hotel.
4. **29.7.2014**: The bombing of the new Serail (from the French mandate)
5. **2.10.2014**: The bombing of the Khusrawiyah Mosque (from the early Ottoman period).
6. **7.12.2014**: The bombing of the Sultaniyah School (from the Ayyubi era) Only Khan al-Shunah, from the Ottoman era, survived, as shown in the pictures.



Figure 5.6: A picture taken from the front of the castle door shows the extent of the destruction at both the Carlton Hotel and the Sultaniyah School (Yara, 2018)



Figure 5.7:
The damage of Sultaniyah Mosque and Khan al-Shouneh (DGAM, 2016)



Figure 5.8: The Khusrawiyah Mosque (from the early Ottoman period) after the last Explosion
(Yara, 2018)



Figure 5.9: the new Serail Before and after (Yara, Apsa 2011/Protect Syrian Heritage)



Figure 5.10: The ruins of the archaeological Yalbga (Apsa 2011/Protect Syrian Heritage)



Figure 5.11: The Carlton Hotel before and after
(Apsa 2011/Protect Syrian Heritage)

Figure 5.12: Khan el shoneh after
the explosions (Asfou,2018)



Figure 5.13: the destruction in Sultaniyah Mosque (Asfour,2018)



Figure 5.14: The new Serail before and afte (Asfour,2018)

5-3 Evaluate the Destruction Size and the Value of the Studied Buildings

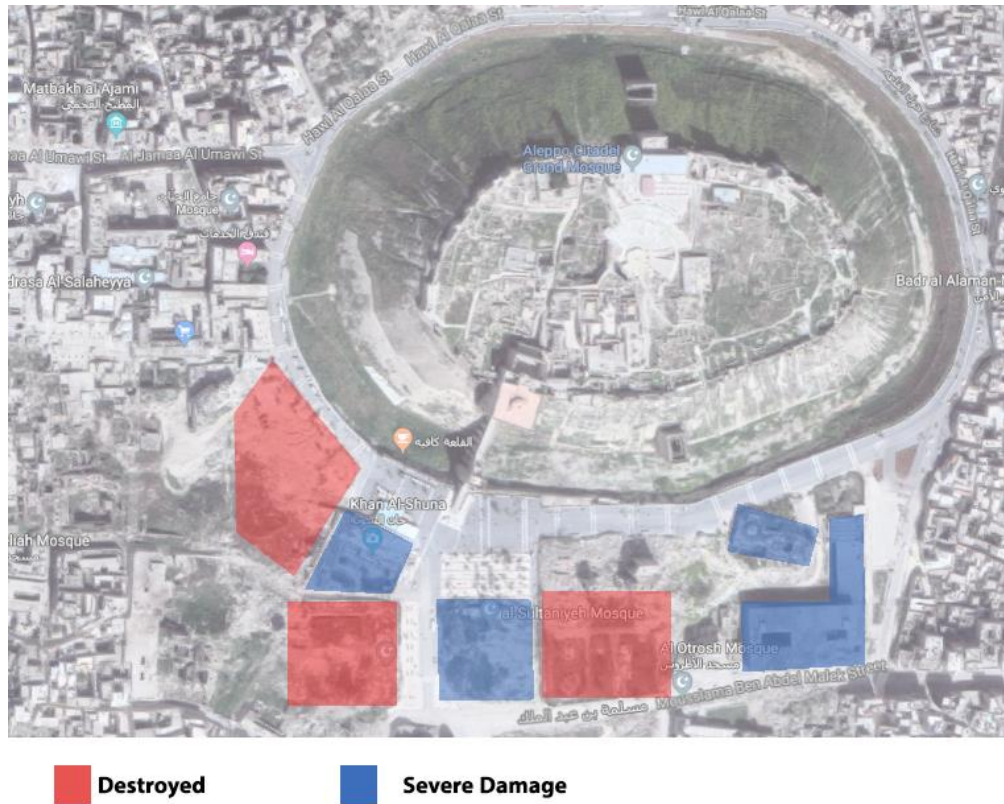


Figure 5.15: Comparison between buildings in the studied area(Asfour)

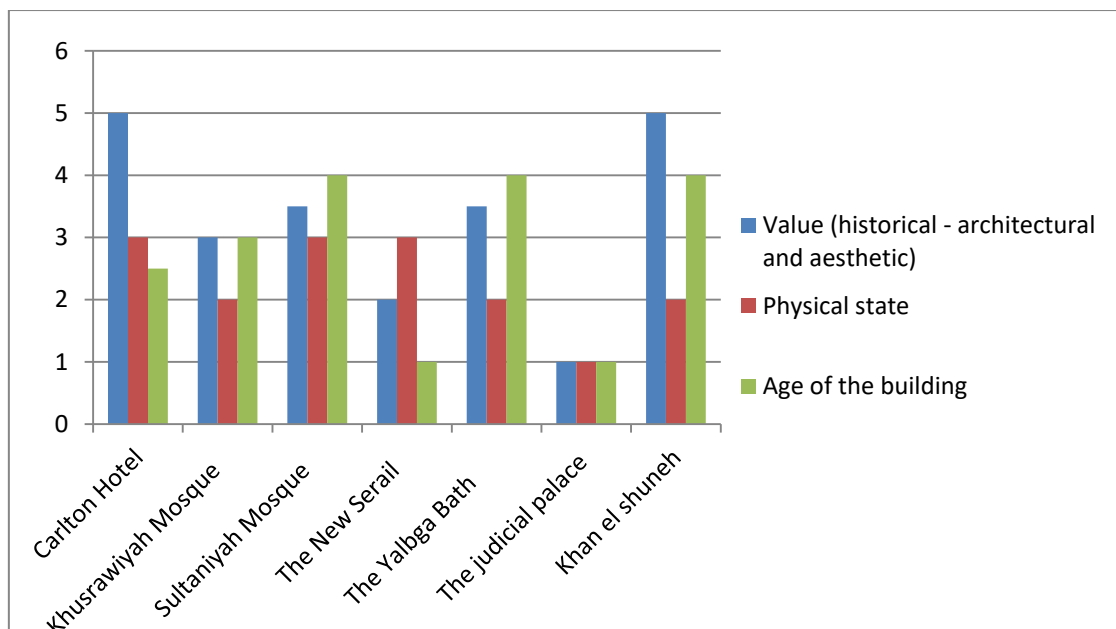


Chart 5.1: Comparison between the physical damage size(Asfour)

Name of building	Carlton Hotel	Khusrawiyah Mosque	Sultaniyah Mosque
Building age	<ul style="list-style-type: none"> - It was decided in 1883, the time of the governor Jameel Pasha. - Construction completed in 1897. 	<ul style="list-style-type: none"> - recommended the sons of Aleppo Governor Khusraw Pasha. - Construction was completed in 1544. 	<ul style="list-style-type: none"> -The founder of this school is King Al-Zaher Ghazi ibn Salah al-Din al-Ayyubi, who died in 1216 and it has not yet finished. -It was completed in the period after his death by Shihab al-Din Tegrel in 1223.
Architectural value	<ul style="list-style-type: none"> - It is built in a great Ottoman style characterized by arches and the method of construction with a wide hallway and lobby. 	<ul style="list-style-type: none"> - Features a beautiful marble-colored niche, stone-patterned and decoration stone. - On both sides of the entrance to the door under its great dome are two columns of marble with exquisite engravings. 	<ul style="list-style-type: none"> - The otherwise modest entryway, on the northern side of the building, features beautiful stone-carved Arabic inscriptions and is overlooked by a particularly short octagonal minaret. - The mihrab is particularly noteworthy and features impressive stonework.
Aesthetic and historical value	<ul style="list-style-type: none"> - The first public hospital in Aleppo in the modern era. - Built primarily to help the poor and strangers who do not afford the treatment. 		
Religious value		<ul style="list-style-type: none"> - Known as the religious secondary - dubbed as Azhar of Aleppo 	<ul style="list-style-type: none"> -Several rooms around the central courtyard serve as a religious school known as al-Madrassa al-Zahariyeh.
Uniqueness and scarcity	<ul style="list-style-type: none"> - The hospital was built from donor funds. 	<ul style="list-style-type: none"> - The first mosque in the style of the Church of Hagia Sophia (Istanbul) 	
Political Value	<ul style="list-style-type: none"> - In 1892 was the seat of the municipality. 		

Table 5.1: A general comparison between the studied buildings (Asfour)

The New Serail	Yalbga Bath	Khan el shoneh
<ul style="list-style-type: none"> - Thought to build in the late Ottoman period. - The construction of the building was suspended for the duration of the French mandate. - Construction was completed in 1936. 	<ul style="list-style-type: none"> - Back to the Mamluk era.(1495) - Created by Prince Yelbga Naciri. 	<ul style="list-style-type: none"> - recommended the sons of Aleppo Governor Khusraw Pasha. - Construction was completed in 1548.
<ul style="list-style-type: none"> - Inspired in the style of its beautiful facades, the simulation of the defensive balconies in the castle towers facing it. 	<ul style="list-style-type: none"> - The facades are decorated with alternating counters with black and yellow monomers. - The dome of the outer section is based on the shoulders of the Iwan arcades by spherical and spherical angles decorated with floral motifs, which are red and blue. - Domes with circular openings covered with pieces of glass for lighting and for steam surges. 	<ul style="list-style-type: none"> -The old-fashioned building, decoration, ornaments, oriental antiques, and plants planted in the courtyard and ground inscriptions.
		<ul style="list-style-type: none"> -Khan al-Shuneh differs from other khans in that it consists of one-storey and two perpendicular souks. - There were 46 shops in the souk, each one representing a special popular craft in the city of Aleppo
	<ul style="list-style-type: none"> - It is one of the unique baths that were known in Aleppo and spread in its neighborhoods and reached to a hundred and seventy bathrooms. 	<ul style="list-style-type: none"> -it is one of the most important tourist attractions in Aleppo.
<ul style="list-style-type: none"> -It included The headquarters of the Governor of Aleppo and the offices of the local administration before being evacuated. 		

Table 5.1: A general comparison between the studied buildings (Asfour)

5-4 Site Proposal

After evaluating the buildings, the amount of damage suffered and analyzing the results, a new vision can be developed to reconstruct the studied area.

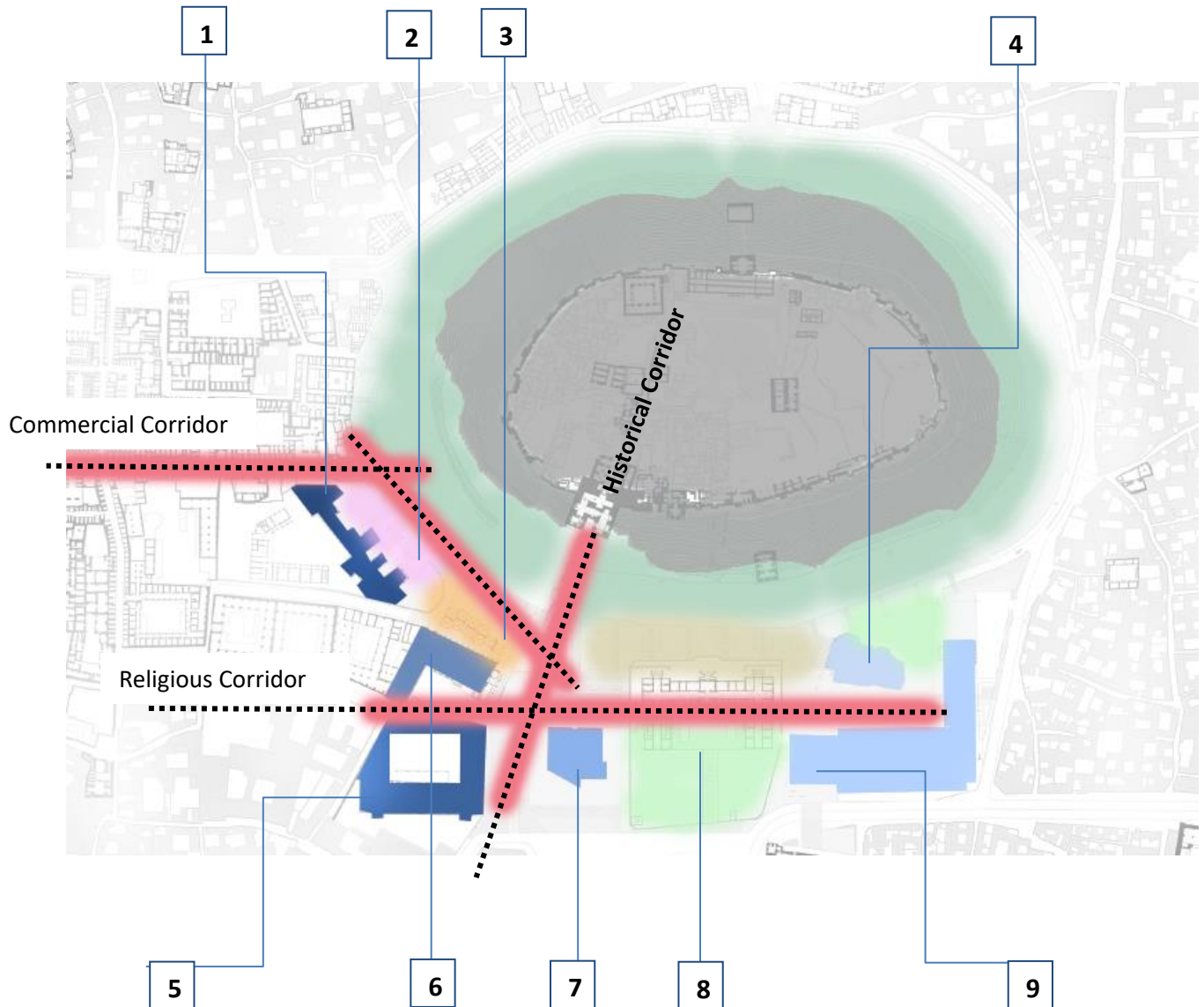


Figure 5.16: The site analyze (Asfour)

- 1- **The Carlton Hotel:** To be restored it as a hotel but it could be within a Khan typology.
- 2- **Crafts shops** on the ground floor as a continuity of the souks.
- 3- **Cafes Zoon.**

- 4- **Yalbga Bath:** Maintain the building as it is as an attracts all the community and tourists (preserve the cultural heritage)
- 5- **Khusrawiyah Mosque:** to restore the building as a mosque due to its historic and religious importance.
- 6- **Khan el shuneh:** to restore as shops for the traditional crafts with zoon for cafes and restaurants serve the traditional food.
- 7- **Sultaniyah Mosque:** a craft school as it was a school as well it could be restored.
- 8- **New building:** instead of the serial we can create an open gallery keeping parts of the building (follows the existing urban morphology).
- 9- **The judicial palace:** because there is now a new building for this function, we can transfer it into community center: space can be rented for family occasions, NGO offices, celebrations, community gatherings....etc.
- 10- Allocation of parking spaces as shown in the following plan.



Figure 5.17: The site proposal (Asfour)

5-5 The Carlton Hotel as a sample of buildings damaged by more than 90%

5-5-1-The historical study and architectural description of the building

It was decided to build an al-Hamidi hospital (stranger hospital) in 1883 on the front ground of the entrance of the castle, which was the base of the Palace of Justice, which was destroyed as a result of the earthquake in 1822. It was the first general hospital in Aleppo in the modern era, built mainly to help the poor and strangers who do not have the cost of treatment. (Directorate of Tourism in Aleppo)

The hospital was built from donors' funds. Governor Gamil Pasha started building it until the date of its isolation from the state in 1886. The hospital buildings rose to three floors in 1896 and it was completed in 1897. In 1892, it became the seat of the municipality. The roof of the building consisted of a slanting red brick, as shown before it was removed and the ceiling became level during the French mandate. The hospital was officially opened in 1900. (Directorate of Tourism in Aleppo)

Later it named the National Hospital and then turned into a school for the graduation of nurses (Institute of Health) in 1988. The total area of the hospital was about 20 thousand square meters, including 32 rooms, some of them for men and women in addition to the examination and waiting rooms, doctors and nurses, And two large orchards, each 84 meters long and 20 meters wide, around the hospital.



Figure 5.18: The stranger hospital (Aleppo Photographic Museum)

With the development of tourism in Aleppo and the location of the distinctive building at the south-west end of the castle in the area, that is only separated by the general street ring surrounding it as shown.

In addition to the historical value of the buildings adjacent to the headquarters of knowledge management / technical services building / which dates back to 1882, the Khasrawiya School and the Royal Mosque, as well as 300-year-old buildings and chambers located behind him Khan Al-Nasser. In addition to its magnificent building in the Ottoman style, this is characterized by arches and the way of construction with the corridors and a large hall. All of this led to his evacuation in preparation for the restoration and converted into a tourist hotel called the Carlton Hotel "Castle Aleppo" as shown in the pictures, where it was awarded the final license of tourism in 2011 as a 4-star hotel. It had 90 rooms and lounges for all occasions, a meeting room and a rooftop terrace with a panoramic view of the Aleppo Citadel, a health club, and an open swimming pool. Finally, in 2014 it was converted into a mass of rubble. (BBC, 2016)



Figure 5.19: The Carlton hotel (Google map)

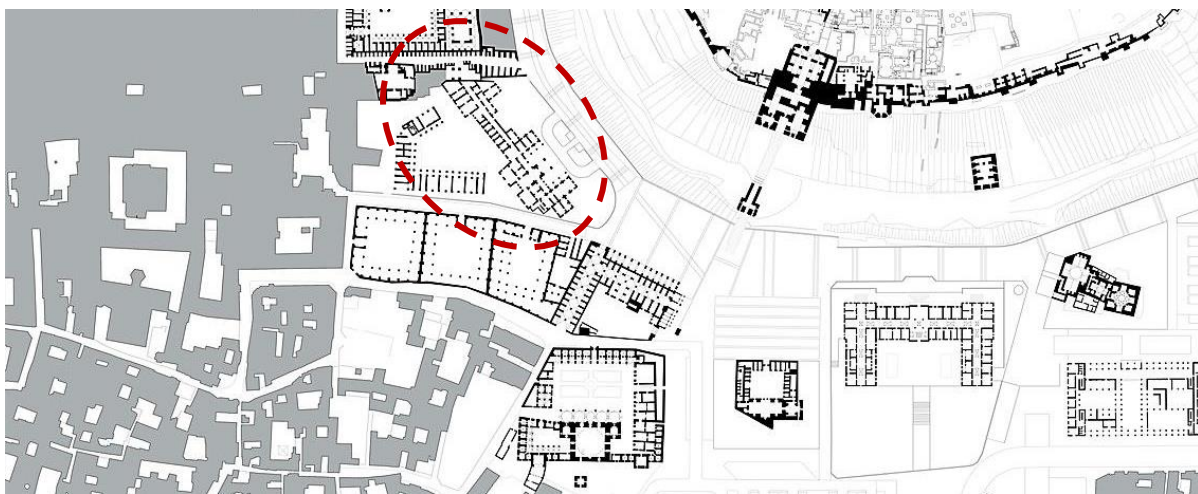


Figure 5.20: the Hotel location regarding the studied area (Asfour)

5-5-2- Architectural documentation of the building

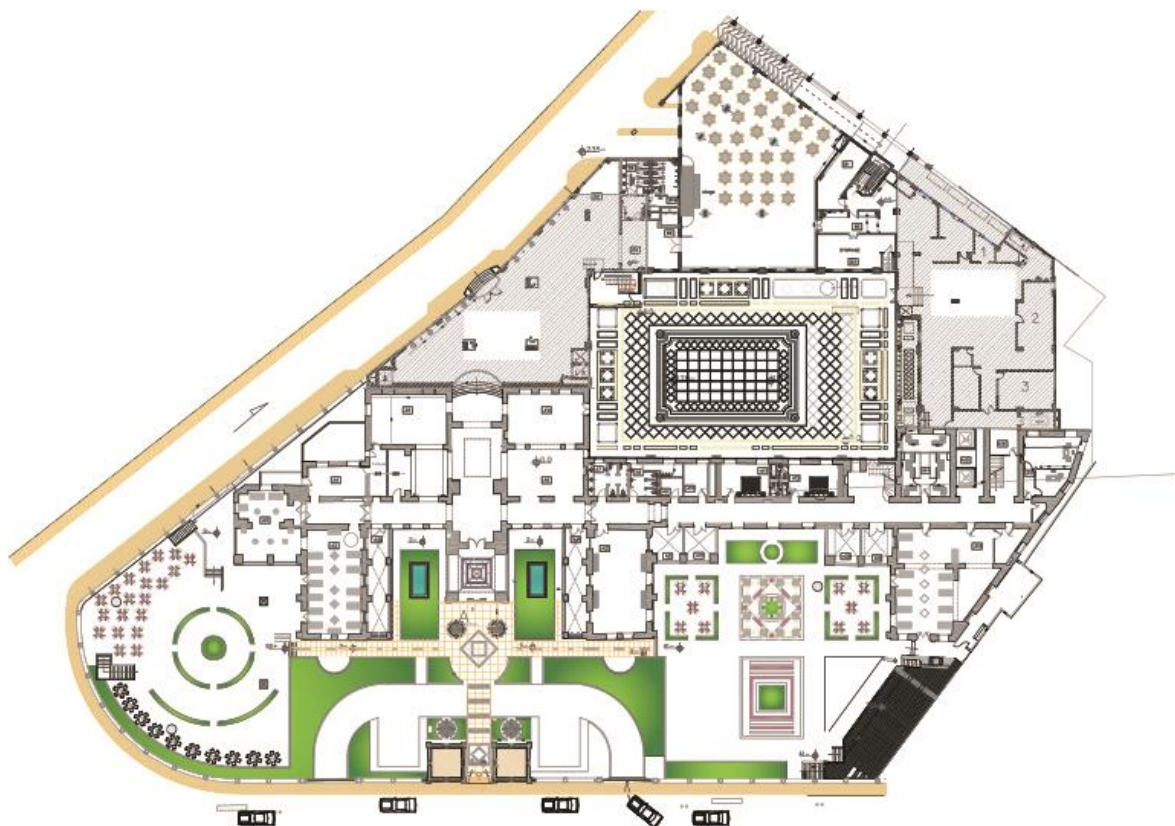


Figure 5.21: The Ground floor (Directorate of Tourism in Aleppo)

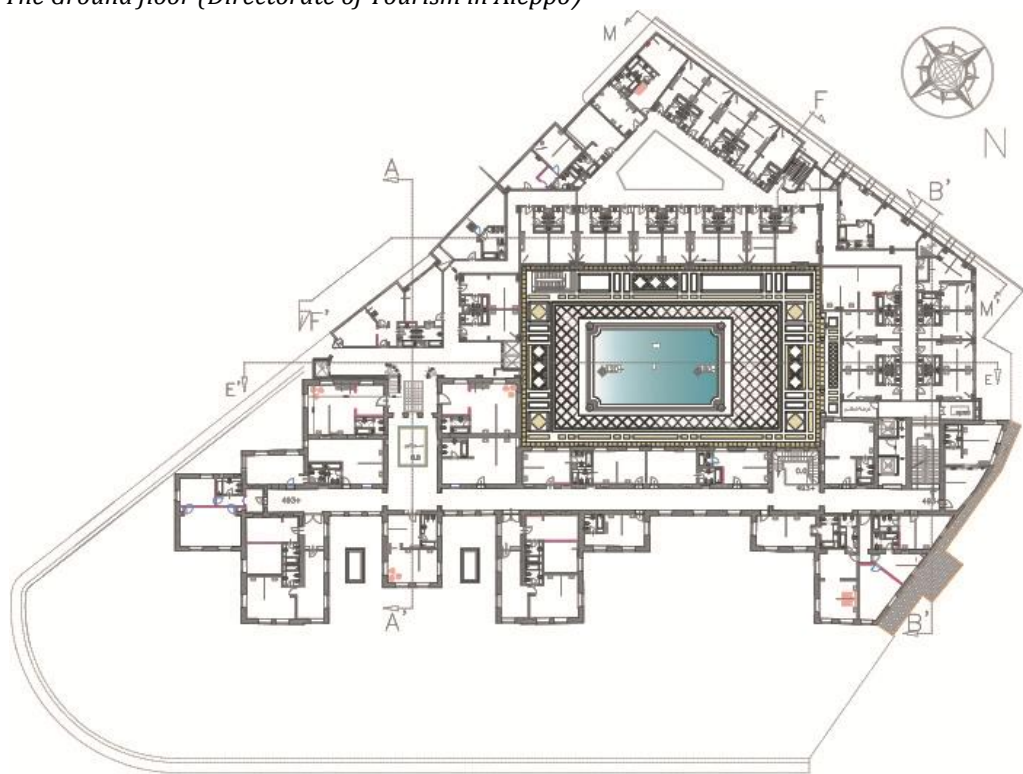


Figure 5.22: The First floor (Directorate of Tourism in Aleppo)

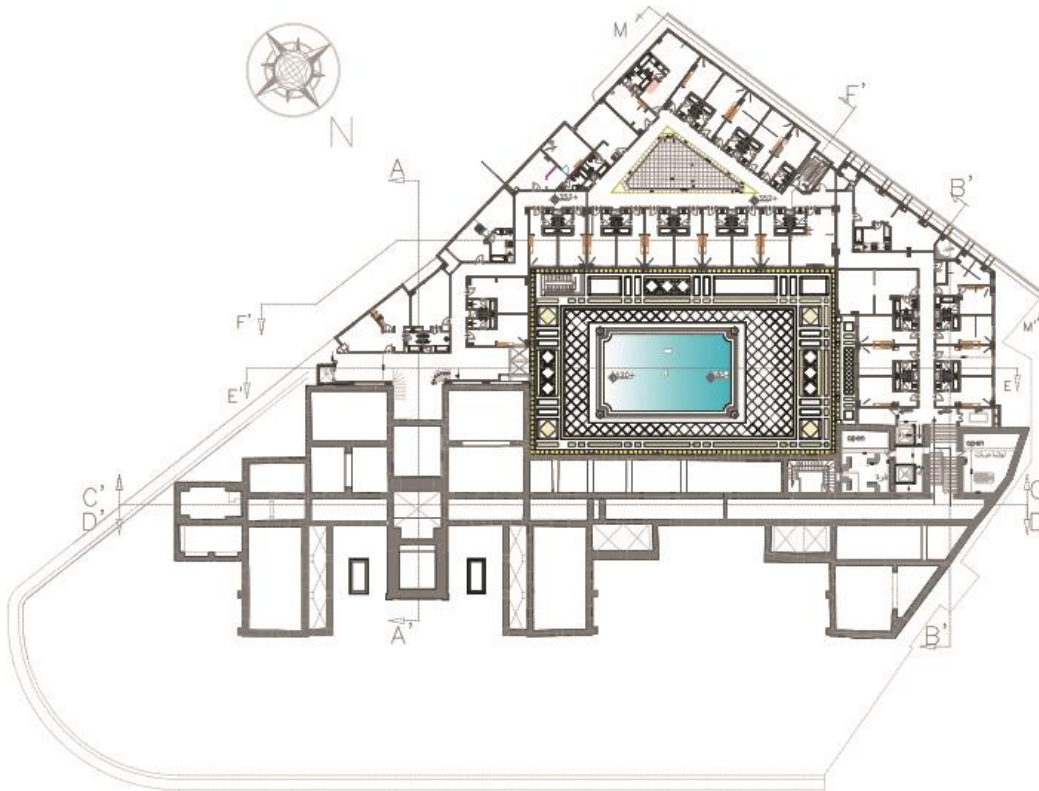


Figure 5.23: The second floor (Directorate of Tourism in Aleppo)

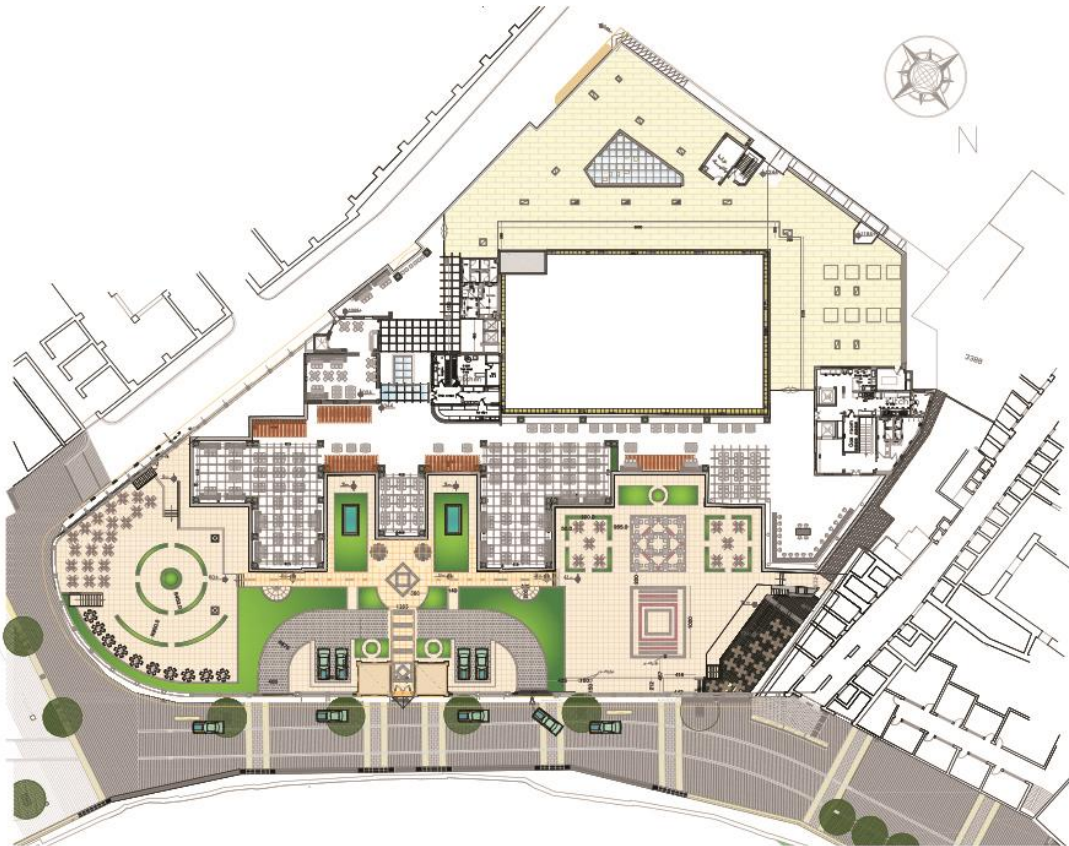


Figure 5.24: The roof floor (Directorate of Tourism in Aleppo)

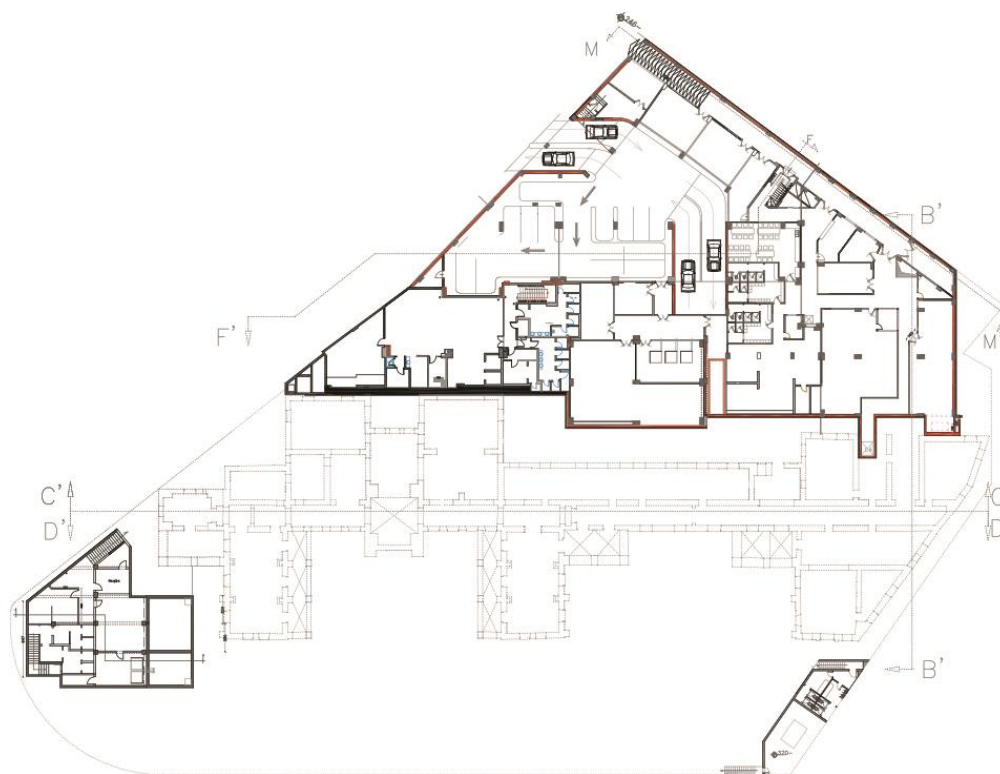


Figure 5.25: The First basement (Directorate of Tourism in Aleppo)

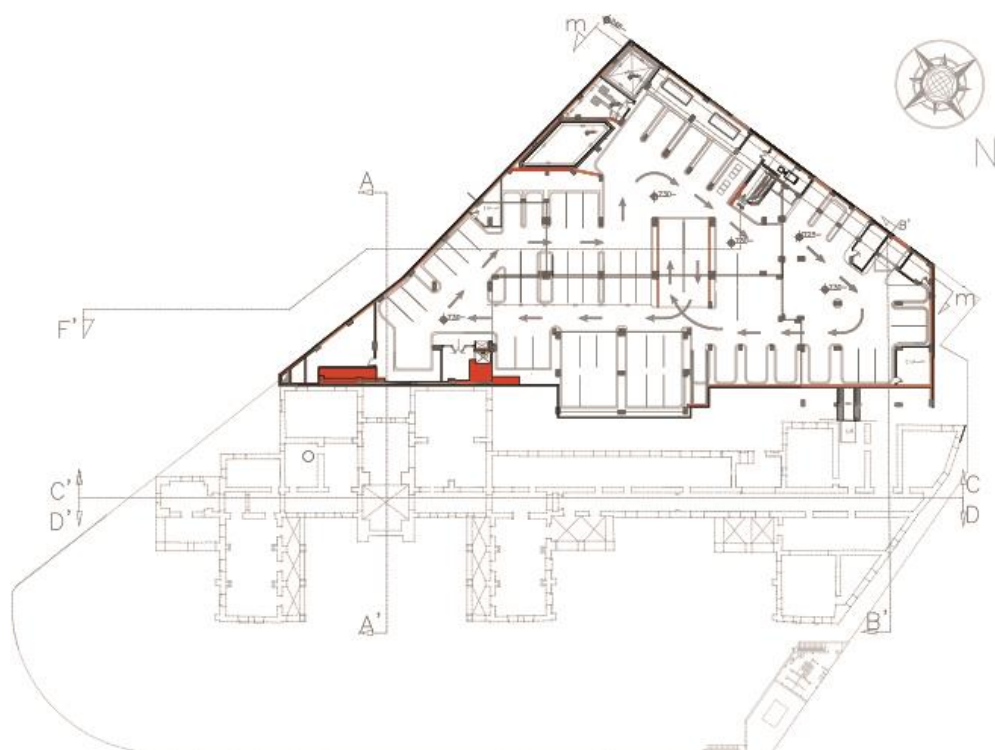


Figure 5.26: The second basement (Directorate of Tourism in Aleppo)

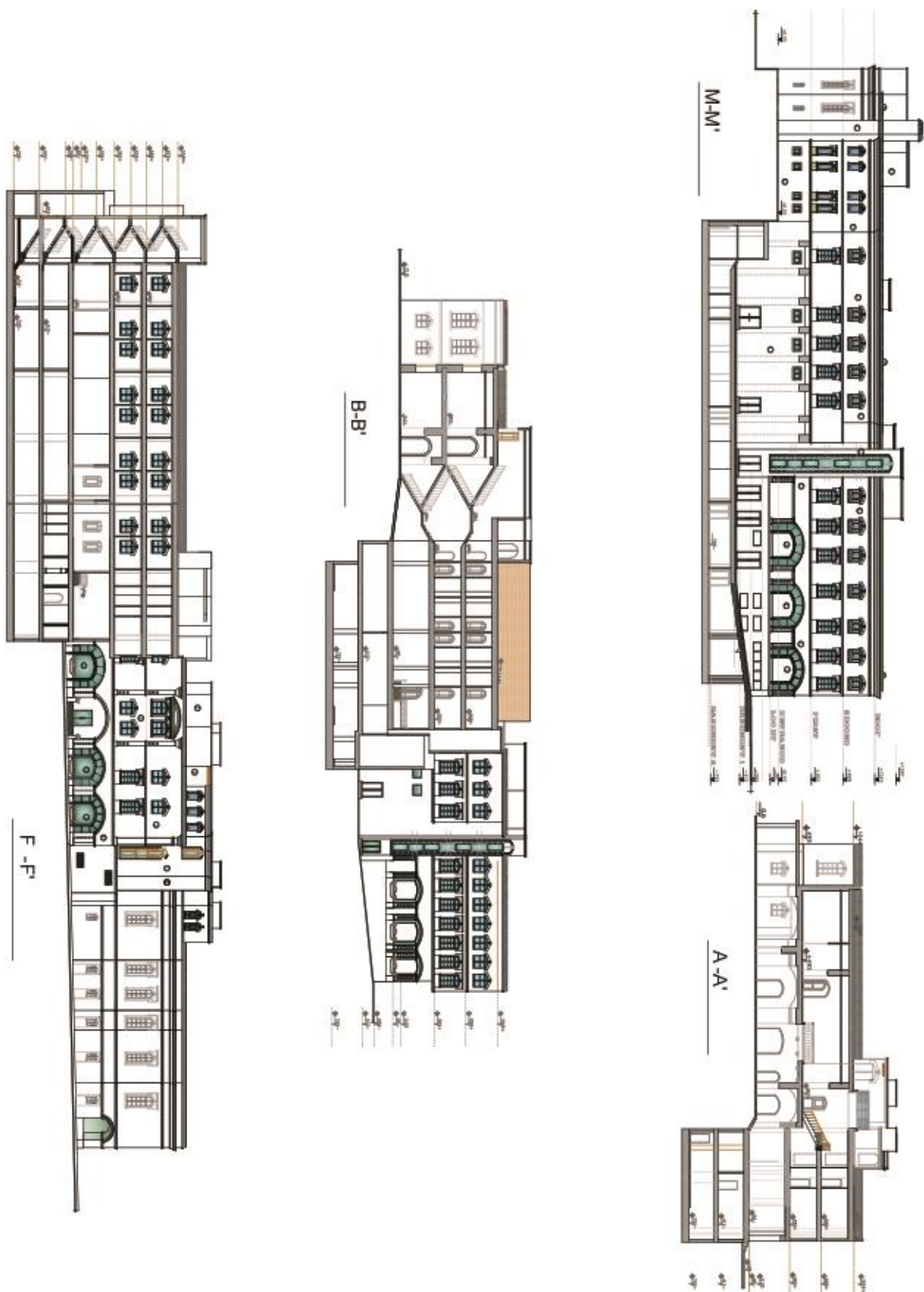


Figure 5.28: Sections (Directorate of Tourism in Aleppo)

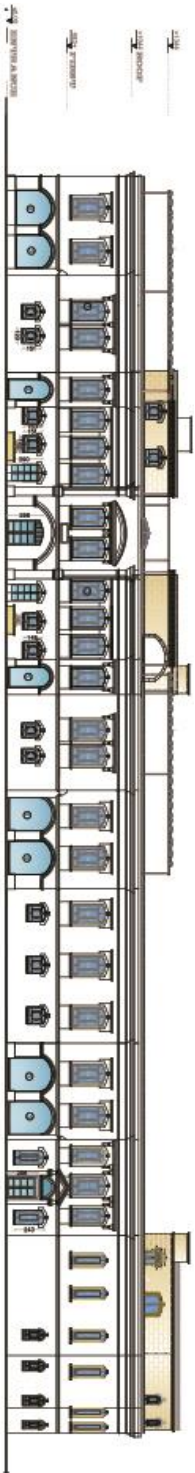


Figure 5.29: The main facade (Directorate of Tourism in Aleppo)

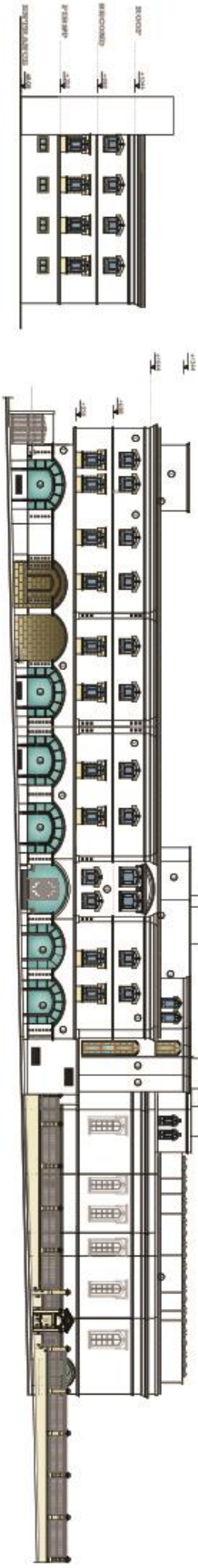


Figure 5.31: The southern facade (Directorate of Tourism in Aleppo)

Figure 5.30: The Northwest facade
(Directorate of Tourism in Aleppo)

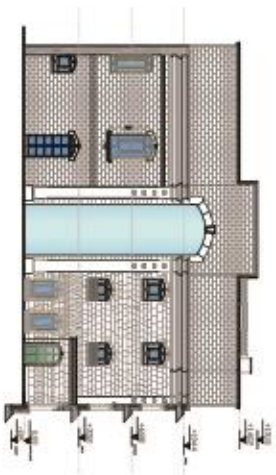


Figure 5.32: Internal façade (Directorate of Tourism in Aleppo)

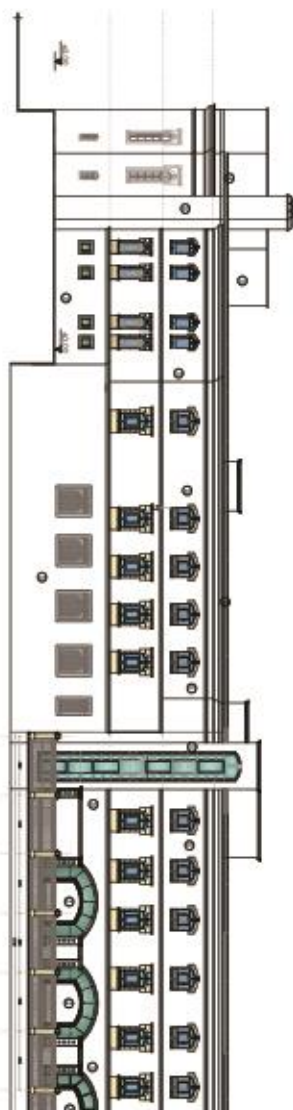


Figure 5.33: The western façade (Directorate of Tourism in Aleppo)



Figure 5.34: Internal façade (Directorate of Tourism in Aleppo)



Figure 5.35: Internal façade (Directorate of Tourism in Aleppo)

5-5-3- Building materials used in the Carlton building

1. Stones: The main material adopted in the bearing walls, arches, and ceilings.

2. Wood: This material has been used in the internal and external exteriors.

3. Bonding materials: The mortar was used as a link between the stone pieces in the foundations and the suspended walls.

4. Iron: Used as bridge bearing roofs as well as steel profiles as interconnected elements between the stones

5-5-4 Physical state of the building -the current situation

The Carlton Hotel has been subjected to two consecutive explosives as mentioned earlier, the destruction of the armed conflict and repeated bombing attempts of the Carlton Hotel can be shown in the following pictures:



Figure 5.36: The destruction of the Carlton Hotel before the Last bombing (Georgi Urglian photographer)

The Carleton Archaeological Hotel - the last bombing - was blown up in 8/5/2014 by a massive mine blast under the foundations of the back section that led to the collapse of the building, with several surrounding buildings damaged.

The physical state of the building is bad. The building is completely destroyed and cannot be repaired, and the damage can be described and characterized by a total collapse in the structural and non-structural elements except for a part of the building that has not been completely destroyed and one of the two sides of the entrance.



Figure 5.37: The destruction of the Carlton Hotel before the Last bombing (Georgi Urglian photographer)

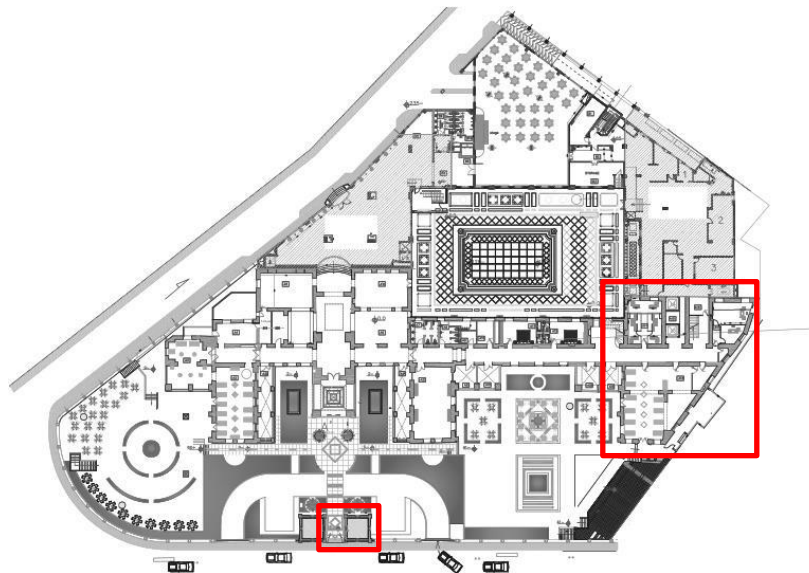


Figure 5.38: The remaining parts of the entrance and the building (Yara)

5-5-5 Reconstruction strategies to follow

After a comprehensive study of trends in the historical buildings reconstruction after the wars and how to apply them and mention Western and Arab examples and how to deal with these trends, we will apply them on the building (Carlton Hotel), which emphasizes the respect of the old building because of the symbolic value of the people of Aleppo as the first General hospital in Aleppo in the modern era.

5-5-6 The Proposed steps for the reconstruction of the Carlton Hotel

1. To restore the building to its original form and restore the original shape according to the state of the building during the French mandate in the parts of the old building and modern, taking into account that interventions are minimal as possible because of the historical importance of the building itself.

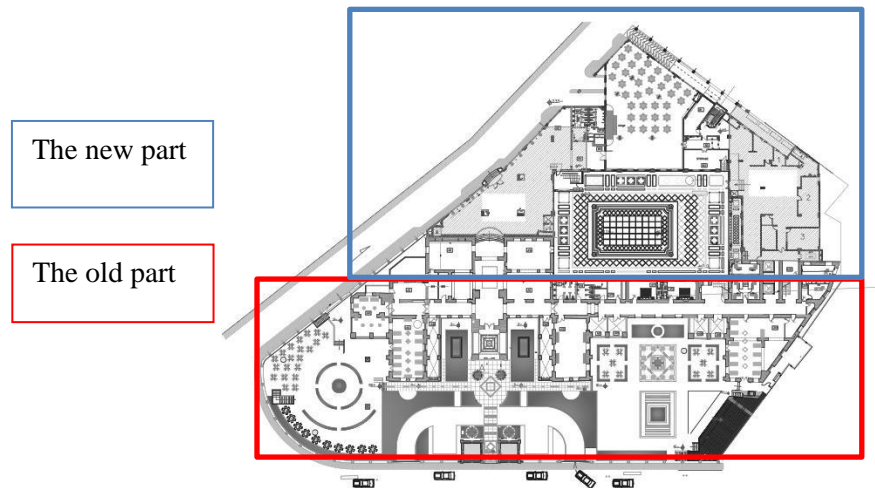


Figure 5.38: The figure shows both the old and the new part (Yara)

2. Save what can be salvaged from building stones and then clean and collect them in a safe place for reuse in reconstruction operations as well as try to use materials matching the materials used in the original building.
3. Use the same model for the original building.
4. The format of the openings and windows is similar to that used in the original facades.
5. Use the same final height and roof shape of the building according to the state of the French Mandate.
6. The building can be changed to another function, taking into account the general features of the building.

Chapter 6

Conclusions and Recommendations

The issue of the reconstruction of buildings, in general, and historical buildings, in particular, has become an urgent necessity and a subject at the political, administrative, economic and social levels as well as at the level of scientific research, where attention is now focused on the old city of Aleppo, especially after the destruction of more than 70 % of its historical fabric.

This research sheds light on this subject, reviewing the reality of a number of historical buildings in the old city of Aleppo under the current circumstances and the directions of its reconstruction and the approach followed in similar real experiences and thus the vision of the new building after the reconstruction, which will be added to the old center to obtain an integrated and balanced urban architecture at the level of the old city. Through a series of proposals to add to what has been accomplished in the reconstruction of old cities and on several levels.

Taking into consideration that the priority after the end of the armed conflict is to secure housing at full speed at the level of the Syrian cities as a whole, but without losing sight of the importance of restoration and reconstruction of historical centers as a later stage. The results of the research can be categorized into five levels as follows.

At the urban level:

- The reconstruction of historical buildings alone is not enough to restore the features of the old city to its original form before the destruction, but must include the surrounding urban environment through the identification of work areas, taking into account the entire areas of preservation and reconstruction, not just individual buildings.
- And thus include methods of intervention and treatment in the old city at the level of urban fabric:

1. Maintain all that is old in the city.

2. Emphasize the local character of heritage while keeping pace with modern architectural development.

These methods differ from one area to another, depending on their importance and location, and are closely related to the reconstruction objective and the proposed function.

- Some reconstruction processes ignore a large part of history and identity, where the focus is on the basic needs of the population at the expense of the rest of the elements of the urban environment because of the large volume of work in a short time and the lack of a clear strategic plan of action to deal with the reconstruction of historic buildings after the wars and disasters.

At the social level

- The importance of the integration of policies and governmental efforts, academic and popular in the preservation of historic buildings.

On the economic level

- Funding is one of the basic requirements for reconstruction and may be (local or global) or both.

- Reconstruction operations will create a growing demand for many materials and commodities, especially local building materials and wood products, which in turn will create many jobs for construction workers.

At the legislative and administrative level

- The similarity of situations inside Syria with many cases of the countries of the world, which leads to give a good idea and perception of the disaster and its impact and the process of management and reconstruction after.

- The need to pay attention to documenting historical cities in Syria to create a database of Syrian cities in preparation for the reconstruction phase.

At the architectural level

- Reconstruction may have a different effect on the identity of historic buildings (positive or negative), which may take into account this identity, including what may harm them and lose their architectural and historical value, because these operations may be subject to the tendency of scholars and architects.

- Intervention and treatment methods in the old city at the level of one building therefore include several options:

1. Reconstruction as a replica of the old buildings.
2. Get away radically from ancient architecture.
3. Gather elements of the original building with modern impressions.
4. To preserve the destroyed building as an archaeological monument and as a reminder of the devastation caused by the war. So when rebuilding a historic building destroyed by war, the resulting building may not be exactly like the old building but should not be completely different from the surrounding environment.

- Re-establishment of missing parts using new materials must be done in a homogenous manner in design, color, texture and all other visual manifestations, as this should be done in accordance with photographs or historical elements and not inspired by the elements of architectural and artistic aspects of other buildings so as not to damage integration Or the general shape of the original elements present.

- Interventions in destroyed historic buildings range from total or partial reconstruction depending on the physical condition of the building to be reconstructed and the nature of the damage in the structural and non-structural elements. In war and unstable situations, interventions may be restricted to structural action primarily to halt the existing deterioration.

Bibliography

Abd el Moneim El Taweel, H. Rehabilitation for Traditional Centers of Arab Cities Lebanese Experiment – Case Study.

Abou Bakar, Hiba. (2012). Contesting Beirut's Frontiers.

Akyürek, B. (2017). Replacement of Memories via Reconstruction of Historical Buildings.

Alafandi, R & Abdul R, Asiah, (2015), The Lost Treasure of The Polychrome Wooden ('ajami) Interior of Ghazalyeh House, Aleppo, Syria, International Islamic University Malaysia.

Alfa, S. (2015). Upgrading of Architectural Facades in Old Aleppo as an Introduction to Cultural Tourism Development, Master Thesis in Architecture, Aleppo.

Al-Khalaf, A. (2014). The Production of New Affordable Housing in the Syrian Cities: The Possible Role of Procurement Processes in Improving Construction Efficiency.

Al Aloul, M. (2007). the destruction of cultural heritages by warfare and reconstruction Strategies: lessons learned from case studies of rebuilt cities, MA Thesis, University of Florid

“Analysis of the Post-Disaster Reconstruction Process Following Turkish Earthquakes, 1999”, Berna Baradan, International Conference on post-disaster reconstruction Meeting stakeholder interests. (2006).

Annual Report – Solidere. (2001). the Lebanese Company for the Development and Reconstruction of Beirut Central District S.a.l.

Arshad, Raja Rehan; Aoun, Joy-Fares. 2017. Syria damage assessment of selected cities Aleppo, Hama, Idlib (English). Washington, D.C.: World Bank Group.

A. Sandes, Caroline. (2017) .Remembering Beirut: Lessons for Archaeology and (Post-) Conflict Urban Redevelopment in Aleppo.

Aygen, Z. (2005) the Protection of Cultural Landscapes in Postwar Zones, Forum UNESCO University and Heritage 10th International Seminar.

Barakat, L. (2004). Beirut – a city with so many faces.

Basilico, Gabriel (1992) Beirut City Center, Les Editions du Cyprus.

*BBC, 2014. Syria: The story of the conflict. accessed 19-08-2017
<http://www.bbc.com/news/world-middleeast-26116868>*

BTI (2010) Syria Country Report. Retrieved from: https://www.bti-project.org/fileadmin/files/BTI/Downloads/Reports/2010/pdf/BTI_2010_Syria.pdf

Calame, J. (2005). *Post-war Reconstruction: Concerns, Models and Approaches*.

Collins B, Williams D, Haak R, Trux M, Herz H, Genevriez L, Nicot P, Brault P, Coyere X, Krause B, Kluckow J, Paffenholz A .1993 (1995.) *Computer applications and quantitative methods in archaeology*, P 19-24.

Dehna, N. (2015), *reshaping of Facades of the New Building Overlooking the Old City of Aleppo*, Master Thesis in Architecture, Aleppo.

Del Fabbro ,R. (2012), *the Roads from and to Aleppo: Some Historical-geographical Considerations in Light of New Archaeological Data*.

Deutsches Archäologisches Institut (DAZ), "Syrian Heritage Archive Project,"

Diefendorf, J (1990). *Rebuilding Europe's Bombed Cities*. Unpublished Master Thesis.

Directorate General of Antiquities and Museums (2017), *Syrian Archaeological Heritage during Five Years of Crisis (2011-2015)*. Damascus.

Directorate of Tourism in Aleppo. (Plans)

Gonnella, J. (2008). *The citadel of Aleppo, description, history, site plan & visitor tour*.

Grussenmeyer, P & Al Khalil, O. (2017). *From Metric Image Archives To Point Cloud Reconstruction: Case Study Of The Great Mosque Of Aleppo In Syria*.

Harrmann, A. (2006). *Architectural reconstructions: the current developments in Germany*.

Hourani, A. (1946). *Syria and Lebanon: A Political Essay*. London: Oxford University Press.

Ibrahim, E & Yamine, J & Zreika, N. (2017) .*Heritage Preservation in Post War scenarios the case of the Egg, Beirut*, Master Thesis in Architecture, Milano.

Jäger, W & Burkert, T (2001) . *The reconstruction of the Frauenkirche in Dresden*.

Kabbani, O. (1992). *The Reconstruction of Beirut*.

Kanjou, Youssef (2016), *a history of Syria in one hundred Sites*, University of Tuebingen

Khaddour, K. (2017). *Consumed by War: The End of Aleppo and Northern Syria's Political Order*.

Lababidi, R. (2017) *the old city of Aleppo. Situation analysis*, e-dialogos, n 6, pp. 8-19.

Larkin, C. (2009) *Reconstructing and Deconstructing Beirut: Space, Memory and Lebanese Youth*.

Leclair-Paquet, Benjamin, J. (2013). *Beirut Divided: The potential of urban design in reuniting a culturally divided city*.

Mansel, p. (2016). *Aleppo: the rise and fall of Syria's great merchant city*.

Munawar, Nour A. (2018). *Rebuilding Aleppo: Public Engagement in Post-Conflict Reconstruction*. ICOMOS University Forum, 1. pp. 1-18. ISSN 2616-6968 [Article].

Neglia, G. (2010). *the forma Urbis of Aleppo (Syria) during the Middle Ages, Studies in the Archaeology of the Medieval Mediterranean, Chapter 5*.

Qudsi, J. (2016). *Rebuilding Old Aleppo: Postwar Sustainable Recovery and Urban Refugee Resettlement*.

Sauvaget, Jean, *Alep, essai sur le developpement d une grande ville syrienne des origines au milieu de XIXe siècle*, Paris 1941. P109.

Silva, J. (2010). *Lessons from Aceh: Key Considerations in Post-Disaster Reconstruction*. Retrieved from: <https://mitigation.eeri.org/wp-content/uploads/LessonsFromAceh.pdf>.

Slater, J. (2014). "Urban Systems of the Refugee Camp". *Architecture Thesis Prep*. 272. https://surface.syr.edu/architecture_tpreps/272

The Aleppo project, Hungary, Center European University (www.thealeppoproject.com).

The Aleppo project, Hungary, rebuilding downtown Beirut (www.thealeppoproject.com)

The Aleppo project, Hungary, rebuilding downtown Beirut extended bibliography (www.thealeppoproject.com).

The Archaeological Society of Aleppo (Facebook page).

The Institute of Structural Engineers. The Structural Engineer's Response to Explosive Damage. SETO, Ltd., 11 Upper Belgrave Street, London SW1X8BH. (1995).

Traboulsi, F. (2007). *A History of Modern Lebanon*.

Traditional Syrian Architecture (2004), by Ecole d'Avignon for the CORPUS Levant Team.

UNESCWA (United Nations Economic and Social Commission for Western Asia). (2016).

Unitar. (2014). *Satellite-based Damage Assessment to Historical Sites in Syria*.

UNHCR (United Nations High Commissioner for Refugees). 2017. "Syria in Focus." *Situation Report* (February 2017).

UN-OCHA (United Nations Office for the Coordination of Humanitarian Affairs). 2017. "Syrian Arab Republic: Aleppo, Situation Report No. 14." (2017, January 20).

Sawaf ,Sobhi .(1952) The oldest known history of Aleppo from the third millennium until the Seljuk era (Arabic Version).

Syria at War. UNESCWA and University of St. Andrews Publication. UNESCWA, Beirut.

Watenpaugh,H .(2005). Deviant dervishes: Space, gender, and the construction of antinomian piety in Ottoman Aleppo, International Journal Middle East Studies, P 538.

Word Bank Group. (2017). Syria damage assessment of selected cities: Aleppo, Hama, Idlib.

Word Bank Group. (2017). the toll of war the economic and social consequences of the conflict in Syria.

Appendix A: List of Figures:

Figure 1.1: The city center of Beirut.....	13
Figure 1.2: The level of destruction of the city center of Beirut after the civil.....	14
Figure 1.3: The destruction of the center of Beirut in1991.....	15
Figure 1.4: Initial proposal for the city center.....	17
Figure 1.5: Waterfront for Beirut before and after.....	18
Figure 1.6: Downtown Beirut before the war and after reconstruction.....	19
Figure 1.7: Sketch illustrates the methods of architectural treatments and parts added after the demolition by the war in the traditional center Beirut after rehabilitation.....	19
Figure 1.8: Al Nejme Square after the reconstruction.....	20
Figure 1.9: The city of Dresden.....	21
Figure 1.10: The demolished city of Dresden.....	22
Figure 1.11: Dresden before and after.....	23
Figure1.12: Neumarket Square.....	24
Figure 1.13: the Opéra Semper building.....	25
Figure 1.14: Frauenkirche church before the war and after the reconstruction	26
Figure 2.1: Aleppo Location.....	31
Figure2.2: Map of Aleppo in the early 17th century.....	35
Figure2.3: Aleppo in 1703.....	37
Figure2.4: Aleppo in 1754.....	37

Figure 2.5: Aerial photograph by the French Observation Aviation in the Levant.....	38
Figure 2.6: This French military map of the city of Aleppo.....	39
Figure 2.7: Aleppo map in 1956.....	40
Figure 2.8: Nippur plan.....	43
Figure 2.9: Rousseau Plan.....	44
Figure 2.10: Aleppo development according to Suvagih.....	44
Figure 2.11: Aleppo Map in 1912.....	45
Figure 2.12: Gutton Project 1954.....	46
Figure 2.13: Banshoyia 1974.....	46
Figure 2.14: The Organizational Chart of Aleppo City 2018.....	47
Figure 3.1: The three categories of buildings damage	50
Figure 3.2: Blast pressure effects on structure.....	50
Figure 3.3: Damage Analysis	51
Figure 3.3: Ancient City of Aleppo: Total damage to historic buildings (2013-2017).....	53
Figure 3.4: The Archaeological map of the souks.....	55
Figure 3.5: Photo for Aleppo souq before the war.....	55
Figure 3.6: destruction of Aleppo market.....	56
Figure 3.7: the citadel of Aleppo.....	57
Figure 3.8: The Destruction in the vicinity of the castle wall.....	58
Figure 3.9: The mosque courtyard.....	59
Figure 3.10: destruction in the courtyard and derbies of minaret.....	60

Figure 3.11: destruction in the courtyard and derbies of minaret.....	61
Figure 3.12: Bab al-Nasr destruction.....	62
Figure 3.13: Abu Alhuda Alsayadi Residence before and after.....	62
Figure 3.14: Haj Mousa Mosque before and after.....	63
Figure 3.15: Jinblat Palace Mosque before and after.....	64
Figure 4.1: Vision for the reconstruction phase.....	66
Figure 5.1: Panoramic view of the surrender from Citadel before the war.....	75
Figure 5.2: The location of the studied area regarding to Aleppo map.....	76
Figure 5.3: the site section for the studied region before the war.....	76
Figure 5.4: A satellite image of the courtyard at the height of its brilliance after a series of renovations and improvements made on the place on 6 January 2010.....	77
Figure 5.5: A satellite image of the square after the repeated explosions that hit the place on 2 January 2012.....	77
Figure 5.6: A picture taken from the front of the castle door shows the extent of the destruction at both the Carlton Hotel and the Sultaniyah School.....	78
Figure 5.7: The damage of Sultaniyah Mosque and Khan al-Shouneh.....	78
Figure 5.8: The Khusrawiyah Mosque after the last Explosion.....	79
Figure 5.9: the new Serail Before and after.....	79
Figure 5.10: The ruins of the archaeological Yalbga.....	80
Figure 5.11: The Carlton Hotel before and after.....	80
Figure 5.12: Khan el shoneh after the explosions.....	80
Figure 5.13: the destruction in Sultaniyah Mosque.....	81

Figure 5.14: the new Serail Before and after	81
Figure 5.15: Comparison between buildings in the studied area.....	82
Figure 5.16: The site analyze.....	85
Figure 5.17: The site proposal.....	86
Figure 5.18: The stranger hospital.....	87
Figure 5.19: The Carlton hotel.....	88
Figure 5.20: the Hotel location regarding the studied area.....	88
Figure 5.21: The Hotel Ground floor Hotel	89
Figure 5.22: The First floor.....	89
Figure 5.23: The second floor	90
Figure 5.24: The roof floor	90
Figure 5.25: The First basement	91
Figure 5.26: The second basement	91
Figure 5.27: Sections	92
Figure 5.28: Sections	93
Figure 5.29: The main facade	94
Figure 5.30: The Northwest facade.....	94
Figure 5.31: The southern facade.....	94
Figure 5.32: Internal facade.....	95
Figure 5.33: The western façade.....	95
Figure 5.34: Internal façade.....	95
Figure 5.35: Internal façade.....	95

Figure 36: The destruction of the Carlton Hotel before the Last bombing.....96

Figure 37: The destruction of the Carlton Hotel before the Last bombing.....97

Figure 38: The remaining parts of the entrance and the building.....97

Appendix B: List of Tables and Charts:

Table 1.1: Compared to the Reconstruction Strategies of the two Historic Cities.....29

Table 2.1: Historic timeline.....42

Table 3.1: The table compares the percentage of the destruction between the Syrian cities.....51

Table 3.2: Ancient City of Aleppo: Total damage to historic buildings (2013-2017).....53

Table 5.1: A general comparison between the studied buildings.....83

Chart 5.1: Comparison between the physical damage size.....82



